FCC PROOF OF PERFORMANCE TEST

Sayre

TIME WARNER CABLE SYRACUSE DIVISION

JULY / AUGUST 2013

TIME WARNER CABLE - SYRACUSE DIVISION

FCC Proof - of - Performance Tests

System Name	:	Sayre			
Plant Mileage	:	207.8000	***As of***	:	07/17/2013
Basic Subscribers	:	6591	***As of***	:	08/09/2013
System Bandwidth	:	550.0000			
Number of Channels Tested	:	9			
Number of Test Points	:	6			
Test Start Date	:	07/17/2013			
Test Completion Date	:	08/09/2013			

PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

Statement of Qualifications

System Name : Sayre

Date : 08/09/2013

FCC Testing Summary

Changes Since Last Proof of Performance Test :

Moved the local access channel 18 to digital format only. We moved our forward data carrier for our Boxs to 74MHz. and we removed all un-momodulated analog carriers.

Test Results :

Passed all FCC specs

Miscellaneous :

Sayre Hub has all of its signals generated in the Sayre hub by RGB SEPs, and two harmonic NSGs.

PAGE 3 MAIN

TIME WARNER CABLE - SYRACUSE DIVISION

System Name : Sayre ***Date*** : 08/09/2013

Sub System Name :

ACTUAL CHANNEL	CARRIER FREQ	CONV CH.	TYPE	SC ("Y")	VITS ("Y")	CALL LTR	PROG SOURCE	ACTUAL CHANNEL	CARRIER FREQ	CONV CH.	TYPE	SC ("Y")	VITS ("Y")	CALL LTR	PROG SOURCE
2	55.2500	2	TV		N	WETM	Fiber	DD (40)	319.2625	40	TV		N	TVL	Sat.
3	61.2500	3	TV		N	WBNG	Direct	EE (41)	325.2625	41	TV		N	E	Sat.
4	67.2500	4	TV		N	WIVT	Direct	FF (42)	331.2750	42	TV		N	HGTV	Sat.
5	77.2500	5	TV		N	QVC	Sat.	GG (43)	337.2625	43	TV		N	LIFE	Sat.
6	83.2500	6	TV		N	WENY	Fiber	HH (44)	343.2625	44	TV		N	FAMILY	Sat.
A-5 (95)	91.2500							II (45)	349.2625	45	TV		N	MTV	Sat.
A-4 (96)	97.2500							JJ (46)	355.2625	46	TV		N	ESPN2	Sat.
A-3 (97)	103.2500							KK (47)	361.2625	47	TV		N	TOON	Sat.
A-2 (98)	109.2750	98	TV		N	HSN	Sat.	LL (48)	367.2625	48					
A-1 (99)	115.2750	99	TV		N			MM (49)	373.2625	49	TV		N	TCM	Sat.
A (14)	121.2625	14	TV		N	CNN	Sat.	NN (50)	379.2625	50	TV		N	TLC	Sat.
B (15)	127.2625	15	TV		N	Spike	Sat.	OO (51)	385.2625	51	TV		N	HIST	Sat.
C (16)	133.2625	16	TV		N	TNT	Sat.	PP (52)	391.2625	50					
D (17)	139.2500	17	TV		N	ION	Sat.	QQ (53)	397.2625	53	TV		N	AP	Sat.
E (18)	145.2500							RR (54)	403.2500	54					
F (19)	151.3210	19	TV		N	SNY	Direct	SS (55)	409.2500	55	TV		N	NBATV	Sat.
G (20)	157.2500	20	TV		N	YNN	Direct	TT (56)	415.2500	56	TV		N	FX	Sat.
H (21)	163.2500	21	TV		N	TWSP	Direct	UU (57)	421.2500	57	TV		N	MSNBC	Sat.
I (22)	169.2500	22						VV (58)	427.2500	58	TV		N	DISN	Sat.
7	175.2500	7	TV		N	WSKG	Direct	WW (59)	433.2500	59	TV		N	YES	Sat.
8	181.2500	8	TV		N	WBPN	Direct	XX (60)	439.2500	60	TV		N	NGC	Sat.
9	187.2500	9	TV		N	TVGC	Sat.	YY (61)	445.2500	61	TV		N	BRAVO	Sat.
10	193.2500	10	TV		N	WVIA	Direct	ZZ (62)	451.2500	62					
11	199.2500	11	TV		N	WBNG2	Direct	63	457.2500	63	TV		N	SOAP	Sat.
12	205.2500	12	TV		N	WICZ	Direct	64	463.2500	64					
13	211.2500	13	TV		N	WYOU	Direct	65	469.2500	65	TV		N	TRAV	Sat.
J (23)	217.2500	23	TV		N	WGN	Sat.	66	475.2500	66					
K (24)	223.2500	24	TV		N	ESPN	Sat.	67	481.2500	67	TV		N	FNC	Sat.
L (25)	229.2625	25	TV		N	NHLTV	Sat.	68	487.2500	68	TV		N		
M (26)	235.2625	26	TV		N	DISC	Sat.	69	493.2500	69			N	NBCS	Sat.
N (27)	241.2625	27	TV		N	A&E	Sat.	70	499.2500	70	TV		N	FIT	Sat.
O (28)	247.2625	28	TV		N	NICK	Sat.	71	505.2500	71	TV		N	OXYG	Sat.
P (29)	253.2625	29	TV		N	USA	Sat.	72	511.2500	72	TV		N	WE	Sat.
Q (30)	259.2625	30	TV		N	VH-1	Sat.	73	517.2500	73					
R (31)	265.2625	31	TV		N	AMC	Sat.	74	523.2500	74					
S (32)	271.2625	32						75	529.2500	75					
T (33)	277.2625	33	TV		N	TWC	Sat.	76	535.2500	76					
U (34)	283.2625	34	TV		N	TBS	Sat.	77	541.2500	77					
V (35)	289.2625	35	TV		N	CNBC	Sat.	78	547.2500	78					
W (36)	295.2625	36	TV		N	CMDY	Sat.	79	553.2500	79					
AA (37)	301.2625	37	TV		N	FOOD	Sat.	80	559.2500	80					
BB (38)	307.2625	38	TV		N	CNNHN	Sat.	81	565.2500	81					
CC (39)	313.2625	39	TV		N	SyFy	Sat.								

PAGE 3 A

TIME WARNER CABLE - SYRACUSE DIVISION

System Name : Sayre ***Date*** : 08/09/2013

Sub System Name : Waverly

ACTUAL CHANNEL	CARRIER FREQ	CONV CH.	TYPE	SC ("Y")	VITS ("Y")	CALL LTR	PROG SOURCE	ACTUAL CHANNEL	CARRIER FREQ	CONV CH.	TYPE	SC ("Y")	VITS ("Y")	CALL LTR	PROG SOURCE
2	55.2500	2	TV		N	WETM	Fiber	DD (40)	319.2625	40	TV		N	TVL	Sat.
3	61.2500	3	TV		N	WBNG	Fiber	EE (41)	325.2625	41	TV		N	E	Sat.
4	67.2500	4	TV		N	WIVT	Direct	FF (42)	331.2750	42	TV		N	HGTV	Sat.
5	77.2500	5	TV		N	QVC	Sat.	GG (43)	337.2625	43	TV		N	LIFE	Sat.
6	83.2500	6	TV		N	WENY	Fiber	HH (44)	343.2625	44	TV		N	FAMILY	Sat.
A-5 (95)	91.2500							II (45)	349.2625	45	TV		N	MTV	Sat.
A-4 (96)	97.2500							JJ (46)	355.2625	46	TV		N	ESPN2	Sat.
A-3 (97)	103.2500							KK (47)	361.2625	47	TV		N	TOON	Sat.
A-2 (98)	109.2750	98			N	HSN	Sat.	LL (48)	367.2625	48					
A-1 (99)	115.2750	99			N			MM (49)	373.2625	49	TV		N	TCM	Sat.
A (14)	121.2625	14	TV		N	CNN	Sat.	NN (50)	379.2625	50	TV		N	TLC	Sat.
B (15)	127.2625	15	TV		N	Spike	Sat.	OO (51)	385.2625	51	TV		N	HIST	Sat.
C (16)	133.2625	16	TV		N	TNT	Sat.	PP (52)	391.2625	52					
D (17)	139.2500	17	TV		N	ION	Sat.	QQ (53)	397.2625	53	TV		N	AP	Sat.
E (18)	145.2500							RR (54)	403.2500	54					
F (19)	151.3210	19	TV		N	SNY	Direct	SS (55)	409.2500	55	TV		N	MSG	Sat.
G (20)	157.2500	20	TV		N	YNN	Direct	TT (56)	415.2500	56	TV		N	FX	Sat.
H (21)	163.2500	21	TV		N	TWSP	Direct	UU (57)	421.2500	57	TV		N	MSNBC	Sat.
I (22)	169.2500	22						VV (58)	427.2500	58	TV		N	DISN	Sat.
7	175.2500	7	TV		N	WSKG	Direct	WW (59)	433.2500	59	TV		N	YES	Sat.
8	181.2500	8	TV		N	WBPN	Direct	XX (60)	439.2500	60	TV		N	NGC	Sat.
9	187.2500	9	TV		N	TVGC	Sat.	YY (61)	445.2500	61	TV		N	BRAVO	Sat.
10	193.2500	10	TV		N	WVIA	Direct	ZZ (62)	451.2500	62					
11	199.2500	11	TV		N	WBNG2	Direct	63	457.2500	63	TV		N	WE	Sat.
12	205.2500	12	TV		N	WICZ	Direct	64	463.2500	64					
13	211.2500	13	TV		N	WYOU	Direct	65	469.2500	65	TV		N	TRAV	Sat.
J (23)	217.2500	23	TV		N	WGN	Sat.	66	475.2500	66					
K (24)	223.2500	24	TV		N	ESPN	Sat.	67	481.2500	67	TV		N	FNC	Sat.
L (25)	229.2625	25	TV		N	MSG +	Sat.	68	487.2500	68	TV		N	NBCS	Sat.
M (26)	235.2625	26	TV		N	DISC	Sat.	69	493.2500	69	TV		N	FIT	Sat.
N (27)	241.2625	27	TV		N	A&E	Sat.	70	499.2500	70	TV		N		
O (28)	247.2625	28	TV		N	NICK	Sat.	71	505.2500	71	TV		N		
P (29)	253.2625	29	TV		N	USA	Sat.	72	511.2500	72	TV		N		
Q (30)	259.2625	30	TV		N	VH-1	Sat.	73	517.2500						
R (31)	265.2625	31	TV		N	AMC	Sat.	74	523.2500						
S (32)	271.2625	32						75	529.2500						
T (33)	277.2625	33	TV		N	TWC	Sat.	76	535.2500						
U (34)	283.2625	34	TV		N	TBS	Sat.	77	541.2500						
V (35)	289.2625	35	TV		N	CNBC	Sat.	78	547.2500						
W (36)	295.2625	36	TV		N	CMDY	Sat.	79	553.2500						
AA (37)	301.2625	37	TV		N	FOOD	Sat.	80	559.2500						
BB (38)	307.2625	38	TV		N	CNNHN	Sat.	81	565.2500						
CC (39)	313.2625	39	TV		N	SyFy	Sat.								

TIME WARNER CABLE - SYRACUSE DIVISION

System Name : Sayre **Date** : 8/9/2013

Sub System :

Non Video Services

CARRIER FREQ	DESCRIPTION	BANDWIDTH	PROG SOURCE
51.00	Trilithic Pilot	51Khz	Headend
52.00	SST Sweep Pilot	50Khz	Headend
75.75	SST Reverse Pilot	50Khz	Headend
74.00	QPSK Data	1.25Khz	Headend
621	BFS	6.0 MHZ	Headend
747	QDN	6.0 MHZ	Headend
597	DOCSIS CARRIER	6 MHZ	Headend
603	DOCSIS CARRIER	6 MHZ	Headend
609	DOCSIS CARRIER	6 MHZ	Headend
615	DOCSIS CARRIER	6 MHZ	Headend

PAGE 5

TIME WARNER CABLE - SYRACUSE DIVISION

Statement of Qualifications

System Name : Sayre

Employee Name : Derek Cordilione ***Title*** : Headend Tech

System : Sayre

Qualifications :

12 Years in the cable business.
Various in house training.

PAGE 6

TIME WARNER CABLE - SYRACUSE DIVISION

Test Equipment Listings

System Name : Sayre ***Date*** : 8/9/2013

	Test Equipment			
EQUIPMENT DESCRIPTION	**MODEL NUMBER**	**MANUFACTURER**	**SERIAL NUMBER**	**LAST CALIB**
Avantron Spectrum Analyzer	AT2500RQv	Sunrise Telcom	8725-0310	5/29/2013
Wavetek SLM	3SR	Wavetek	9343240	05/18/2011
Wavetek SLM	3SR	Wavetek	9343237	05/18/2011
Wavetek SLM	3SR	Wavetek	6033315	05/18/2011
Wavetek SLM	3SR	Wavetek	9343239	05/18/2011
Wavetek SLM	3SR	Wavetek	9343238	05/18/2011
Wavetek SLM	3SR	Wavetek	9343238	5/18/2011

TIME WARNER CABLE - SYRACUSE DIVISION

Terminal Isolation Test

System Name : Sayre ***Date*** : 8/2/2013

The terminal isolation provided to each subscriber terminal shall not be less than 18 decibels. In lieu of periodic testing, the cable operator may use specifications provided by the manufacturer for the terminal isolation equipment to meet this standard.

Instructions:

Attach a copy of the manufacturer's specifications covering all directional taps used in the system. The specification sheet must show the minimum tap-to-tap isolation. In lieu of a specification sheet, attach a letter from the manufacturer(s) certifying that the directional taps used in the system do exhibit a minimum tap-to-tap isolation of 18dB.

Four-way – Revision A

		Tap Value							
	Frequency	8	11	14	17	20	23	26	29
Insertion Loss (dB, max)	5	–	3.7	2.2	1.5	1.2	1.1	1.1	1.1
	10	–	3.7	2.2	1.5	1.2	1.1	1.1	1.1
	50	–	3.5	1.7	1.2	0.9	0.8	0.8	0.8
	300	–	4.1	2.5	1.8	1.5	1.4	1.2	1.2
	450	–	4.2	2.7	1.8	1.6	1.5	1.3	1.3
	550	–	4.3	2.8	1.9	1.8	1.5	1.3	1.3
	750	–	4.5	3.2	2.0	1.7	1.5	1.4	1.4
	860	–	4.6	3.3	2.1	1.7	1.5	1.4	1.4
	1000	–	4.7	3.4	2.2	1.8	1.6	1.5	1.5
Tap Loss (±1 dB, max)	5	8.0	11.0	15.0	17.0	20.0	22.5	25.5	28.5
	10	8.0	11.0	15.0	17.0	20.0	22.5	25.5	28.5
	50	8.0	11.0	15.0	17.0	20.0	22.5	25.5	28.5
	300	8.0	11.0	15.0	17.0	20.0	22.5	25.5	28.5
	450	8.0	11.0	15.0	17.0	20.0	22.5	25.5	28.5
	550	8.0	11.5	15.0	17.0	20.0	22.5	25.5	28.5
	750	8.0	11.5	15.0	17.0	20.0	22.5	25.5	28.5
	860	8.0	11.5	15.0	17.0	20.0	22.5	25.5	28.5
	1000	8.0	12.0	15.0	17.0	20.0	22.5	25.5	28.5
Tap-to Tap Isolation (dB, min)	5	18	18	18	18	18	18	18	18
	750	18	18	18	18	18	18	18	18
	1000	18	18	18	18	18	18	18	18
Out-to-Tap Isolation (dB, min)	5	–	25	25	25	25	35	35	35
	750	–	25	25	25	25	35	35	35
	1000	–	25	25	25	25	35	35	35
Return Loss (dB, min)	5	16	14	13	15	15	15	15	15
	10	14	16	15	16	16	16	16	16
	50	16	16	16	16	16	16	16	16
	750	15	16	16	16	16	16	16	16
	860	16	16	16	16	16	16	16	16
	1000	16	16	16	16	15	15	16	15

The Multimedia Stretch Tap consists of a housing and faceplate assemblies and a plug-in directional coupler module. Part numbers are listed below for complete taps as well as for the major components.

Product	Model Number	Part Number	Description
Complete Tap Assembly	SAT ST4-8	562742	Multimedia Stretch Tap 4-Way @ 8 dB
	SAT ST4-11	562743	Multimedia Stretch Tap 4-Way @ 11 dB
	SAT ST4-14	562744	Multimedia Stretch Tap 4-Way @ 14 dB
	SAT ST4-17	562745	Multimedia Stretch Tap 4-Way @ 17 dB
	SAT ST4-20	562746	Multimedia Stretch Tap 4-Way @ 20 dB
	SAT ST4-23	562747	Multimedia Stretch Tap 4-Way @ 23 dB
	SAT ST4-26	562748	Multimedia Stretch Tap 4-Way @ 26 dB
	SAT ST4-29	562749	Multimedia Stretch Tap 4-Way @ 29 dB
Faceplate Assembly	SAT STF-4	543485	Multimedia Stretch Tap 4-Way Faceplate Assembly
Directional Coupler Module	SAT STM-0	543487	Multimedia Stretch Tap Module @ 0 dB
	SAT STM-4	562108	Multimedia Stretch Tap Module @ 4 dB
	SAT STM-7	562109	Multimedia Stretch Tap Module @ 7 dB
	SAT STM-10	562110	Multimedia Stretch Tap Module @ 10 dB
	SAT STM-13	562111	Multimedia Stretch Tap Module @ 13 dB
	SAT STM-16	562112	Multimedia Stretch Tap Module @ 16 dB
	SAT STM-19	562113	Multimedia Stretch Tap Module @ 19 dB
	SAT STM-22	562114	Multimedia Stretch Tap Module @ 22 dB
	SAT STM-25	562115	Multimedia Stretch Tap Module @ 25 dB

	Frequency	Tap Value 11	14	17	20	23	26	29
Insertion Loss (dB, max)	5	–	3.7	2.2	1.5	1.2	1.1	1.1
	10	–	3.7	2.2	1.5	1.2	1.1	1.1
	50	–	3.5	1.7	1.2	0.9	0.8	0.8
	300	–	4.1	2.9	1.8	1.5	1.4	1.3
	450	–	4.2	3.0	1.8	1.6	1.4	1.3
	550	–	4.3	3.0	1.9	1.6	1.5	1.3
	750	–	4.4	3.0	2.0	1.7	1.5	1.4
	860	–	4.5	3.0	2.1	1.8	1.5	1.5
	1000	–	4.7	3.0	2.2	1.9	1.6	1.6
Tap Loss (±1 dB, max)	5	11.0	14.0	18.0	20.0	23.0	26.0	29.0
	10	11.0	14.5	18.0	20.0	23.0	26.0	29.0
	50	11.0	14.5	18.0	20.0	23.0	26.0	29.0
	300	11.0	14.5	18.0	20.0	23.0	26.0	29.0
	450	11.0	14.5	18.0	20.0	23.0	26.0	29.0
	550	11.0	15.0	18.0	20.0	23.0	26.0	29.0
	750	11.0	15.5	18.0	20.0	23.0	26.0	29.0
	860	11.5	15.5	18.0	20.0	23.0	26.0	29.0
	1000	12.0	16.0	18.0	20.0	23.0	26.0	29.0
Tap-to Tap Isolation (dB, min)	5	18	18	18	18	18	18	18
	750	18	18	18	18	18	18	18
	1000	18	18	18	18	18	18	18
Out-to-Tap Isolation (dB, min)	5	–	25	25	25	30	35	35
	750	–	25	25	25	30	35	35
	1000	–	25	25	25	30	35	35
Return Loss (dB, min)	5	15	15	13	14	15	14	14
	10	14	16	16	16	16	16	16
	50	16	16	16	16	16	16	16
	750	16	16	16	16	16	16	16
	860	16	16	16	16	16	16	16
	1000	16	16	16	16	16	16	16

The Multimedia Stretch Tap consists of a housing and faceplate assemblies and a plug-in directional coupler module. Part numbers are listed below for complete taps as well as for the major components.

Product	Model Number	Part Number	Description
Complete Tap Assembly	SAT ST8-11	562751	Multimedia Stretch Tap 8-Way @ 11 dB
	SAT ST8-14	562752	Multimedia Stretch Tap 8-Way @ 14 dB
	SAT ST8-17	562753	Multimedia Stretch Tap 8-Way @ 17 dB
	SAT ST8-20	562754	Multimedia Stretch Tap 8-Way @ 20 dB
	SAT ST8-23	562755	Multimedia Stretch Tap 8-Way @ 23 dB
	SAT ST8-26	562756	Multimedia Stretch Tap 8-Way @ 26 dB
	SAT ST8-29	562757	Multimedia Stretch Tap 8-Way @ 29 dB
Faceplate Assembly	SAT STF-8	543486	Multimedia Stretch Tap 8-Way Faceplate Assembly
Directional Coupler Module	SAT STM-0	543487	Multimedia Stretch Tap Module @ 0 dB
	SAT STM-4	562108	Multimedia Stretch Tap Module @ 4 dB
	SAT STM-7	562109	Multimedia Stretch Tap Module @ 7 dB
	SAT STM-10	562110	Multimedia Stretch Tap Module @ 10 dB
	SAT STM-13	562111	Multimedia Stretch Tap Module @ 13 dB
	SAT STM-16	562112	Multimedia Stretch Tap Module @ 16 dB
	SAT STM-19	562113	Multimedia Stretch Tap Module @ 19 dB
	SAT STM-22	562114	Multimedia Stretch Tap Module @ 22 dB
	SAT STM-25	562115	Multimedia Stretch Tap Module @ 25 dB

		Tap Value								
	Frequency	4	8	11	14	17	20	23	26	29
Insertion Loss (dB, max)	5	–	3.6	2.2	1.5	1.1	1.1	1.1	1.1	1.1
	10	–	3.6	2.2	1.5	1.1	1.1	1.1	1.1	1.1
	50	–	3.5	1.7	1.2	0.9	0.8	0.8	0.8	0.8
	300	–	4.1	2.2	1.8	1.5	1.2	1.2	1.2	1.2
	450	–	4.3	2.7	1.9	1.6	1.4	1.4	1.4	1.4
	550	–	4.1	2.8	2.0	1.8	1.4	1.4	1.4	1.4
	750	–	4.4	3.0	2.1	1.8	1.6	1.4	1.4	1.4
	860	–	4.6	3.2	2.1	1.9	1.6	1.4	1.4	1.4
	1000	–	4.8	3.4	2.2	2.0	1.6	1.5	1.5	1.5
Tap Loss (±1 dB, max)	5	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.5	29.0
	10	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	50	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	300	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	450	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	550	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	750	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	860	4.0	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
	1000	4.5	8.0	11.0	13.5	17.0	19.0	22.5	25.0	29.0
Tap-to Tap Isolation (dB, min)	5	18	18	18	18	18	18	18	18	18
	750	18	18	18	18	18	18	18	18	18
	1000	18	18	18	18	18	18	18	18	18
Out-to-Tap Isolation (dB, min)	5	–	20	20	20	25	25	35	35	35
	750	–	20	20	25	25	25	35	35	35
	1000	–	20	20	25	25	25	35	35	35
Return Loss (dB, min)	5	16	15	13	13	15	15	15	15	15
	10	16	16	16	16	16	16	16	16	16
	50	16	16	16	16	16	16	16	16	16
	750	14	16	16	16	16	16	16	16	16
	860	16	16	16	16	16	16	16	16	16
	1000	16	16	16	16	16	16	16	16	16

The Multimedia Stretch Tap consists of a housing and faceplate assemblies and a plug-in directional coupler module. Part numbers are listed below for complete taps as well as for the major components.

Product	Model Number	Part Number	Description
Complete Tap Assembly	SAT ST2-4	562732	Multimedia Stretch Tap 2-Way @ 4 dB
	SAT ST2-8	562733	Multimedia Stretch Tap 2-Way @ 8 dB
	SAT ST2-11	562734	Multimedia Stretch Tap 2-Way @ 11 dB
	SAT ST2-14	562735	Multimedia Stretch Tap 2-Way @ 14 dB
	SAT ST2-17	562736	Multimedia Stretch Tap 2-Way @ 17 dB
	SAT ST2-20	562737	Multimedia Stretch Tap 2-Way @ 20 dB
	SAT ST2-23	562738	Multimedia Stretch Tap 2-Way @ 23 dB
	SAT ST2-26	562739	Multimedia Stretch Tap 2-Way @ 26 dB
	SAT ST2-29	562740	Multimedia Stretch Tap 2-Way @ 29 dB
Faceplate Assembly	SAT STF-2	543484	Multimedia Stretch Tap 2-Way Faceplate Assembly
Directional Coupler Module	SAT STM2-0	543487	Multimedia Stretch Tap Module @ 0 dB
	SAT STM2-4	562108	Multimedia Stretch Tap Module @ 4 dB
	SAT STM2-7	562109	Multimedia Stretch Tap Module @ 7 dB
	SAT STM2-10	562110	Multimedia Stretch Tap Module @ 10 dB
	SAT STM2-13	562111	Multimedia Stretch Tap Module @ 13 dB
	SAT STM2-16	562112	Multimedia Stretch Tap Module @ 16 dB
	SAT STM2-19	562113	Multimedia Stretch Tap Module @ 19 dB
	SAT STM2-22	562114	Multimedia Stretch Tap Module @ 22 dB

9800 Series Eight-Way Multi-Taps

Worst Case Specifications*

	9812	9815	9818	9821	9824	9827	9830	9833	9836	Units
Tap Value	12.0	15.5	18.0	21.0	24.0	27.0	30.0	33.0	36.0	dB
Bandwidth	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	MHz
Color Code	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Tolerance										
10-19 MHz	1.7	2.0	1.5	2.5	2.5	2.5	2.5	2.5	2.5	± dB
20-899 MHz	1.8	2.0	1.5	1.5	1.5	1.5	1.5	2.1	1.8	± dB
900-1000 MHz	2.3	2.5	1.9	2.4	2.1	2.1	1.9	1.8	2.3	± dB
Insertion Loss (max)										
10 MHz	—	3.8	1.9	1.2	1.0	0.8	0.5	0.5	0.5	dB
30 MHz	—	3.5	1.5	1.0	0.9	0.7	0.4	0.4	0.4	dB
54 MHz	—	3.5	1.6	1.0	0.8	0.7	0.4	0.4	0.4	dB
112 MHz	—	4.0	1.9	1.2	0.9	0.8	0.6	0.6	0.6	dB
150 MHz	—	4.0	1.9	1.2	0.9	0.8	0.6	0.6	0.6	dB
186 MHz	—	4.1	2.0	1.3	1.0	0.8	0.6	0.6	0.6	dB
222 MHz	—	4.1	2.0	1.3	1.0	0.8	0.6	0.6	0.6	dB
330 MHz	—	4.2	2.1	1.4	1.0	0.8	0.6	0.6	0.6	dB
400 MHz	—	4.3	2.2	1.4	1.0	0.8	0.6	0.6	0.6	dB
450 MHz	—	4.4	2.2	1.4	1.0	0.8	0.7	0.7	0.7	dB
550 MHz	—	4.5	2.3	1.3	1.0	0.8	0.7	0.7	0.7	dB
600 MHz	—	4.7	2.4	1.4	1.1	0.9	0.8	0.8	0.8	dB
750 MHz	—	5.1	2.8	1.6	1.3	1.0	0.9	0.9	0.9	dB
860 MHz	—	5.3	3.2	1.8	1.6	1.2	1.2	1.2	1.2	dB
1000 MHz	—	5.4	3.9	2.3	1.8	1.4	1.4	1.4	1.4	dB
Flatness (max)										
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
In-to-Out Isolation (min)										
10-29 MHz	—	21	24	27	30	34	34	36	38	dB
30-749 MHz	—	27	30	32	34	38	40	42	44	dB
750-899 MHz	—	25	28	30	33	36	38	40	41	dB
900-1000 MHz	—	25	28	28	33	34	36	38	39	dB
Tap-to-Tap Isolation (min)										
10-29 MHz	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min)										
10-29 MHz	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min)										
10-29 MHz	—	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min)										
10-29 MHz	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max)										
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	dB
T Isolation	Exceeds FCC requirements									
nL	0	8	8	8	8	8	8	8	8	amps
Surge Rating	IEEE 587 Class B 2500 Volts									

All specifications are subject to change without notice.

9400 Series Four-Way Multi-Taps

Worst Case Specifications*

	9408	9411	9414	9417	9420	9423	9426	9429	9432	9435	Units
Tap Value	8.0	11.5	14.5	17.0	20.0	23.0	26.0	29.0	32.0	35.0	dB
Bandwidth	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	MHz
Color Code	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	Brown	
Tolerance											
10-19 MHz	1.5	1.5	1.5	2.1	1.9	2.2	2.5	2.5	2.3	1.9	± dB
20-899 MHz	1.5	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	± dB
900-1000 MHz	1.5	2.5	2.3	2.2	2.0	1.9	1.7	1.6	1.8	2.0	± dB
Insertion Loss (max)											
10 MHz	—	3.6	1.9	1.2	1.0	0.8	0.5	0.4	0.4	0.4	dB
30 MHz	—	3.5	1.5	0.9	0.8	0.7	0.4	0.3	0.3	0.3	dB
54 MHz	—	3.5	1.5	0.9	0.8	0.7	0.4	0.3	0.3	0.3	dB
112 MHz	—	4.0	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
150 MHz	—	4.1	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
186 MHz	—	4.1	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
222 MHz	—	4.2	1.8	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
330 MHz	—	4.3	1.9	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
400 MHz	—	4.3	2.0	1.1	1.1	0.9	0.6	0.6	0.6	0.6	dB
450 MHz	—	4.3	2.0	1.1	1.1	0.9	0.7	0.7	0.7	0.7	dB
550 MHz	—	4.4	2.1	1.2	1.1	0.9	0.7	0.7	0.7	0.7	dB
600 MHz	—	4.7	2.4	1.4	1.1	0.9	0.7	0.7	0.7	0.7	dB
750 MHz	—	5.1	2.9	1.6	1.4	1.0	0.8	0.8	0.8	0.8	dB
860 MHz	—	5.2	3.3	1.8	1.6	1.3	1.1	1.1	1.1	1.1	dB
1000 MHz	—	5.4	4.0	2.2	1.8	1.5	1.2	1.2	1.2	1.2	dB
Flatness (max)											
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
p-to-Out Isolation (min)											
10-29 MHz	—	20	21	22	27	30	34	34	36	38	dB
30-749 MHz	—	24	27	30	33	36	38	40	42	44	dB
750-899 MHz	—	22	25	28	31	34	36	38	40	42	dB
900-1000 MHz	—	22	25	28	31	34	36	38	40	42	dB
Tap-to-Tap Isolation (min)											
10-29 MHz	20	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min)											
10-29 MHz	17	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min)											
10-29 MHz	—	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min)											
10-29 MHz	16	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max)											
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	-60	dB
-to Isolation	Exceeds FCC requirements										
ent	0	8	8	8	8	8	8	8	8	8	amps
ge Rating	IEEE 587 Class B 2500 Volts										

*All specifications are subject change without notice.

9200 Series Two-Way Multi-Taps

Worst Case Specifications*

	9204	9208	9211	9214	9217	9220	9223	9226	9229	9232	Units
Tap Value	4.0	8.5	11.0	14.0	17.0	20.0	23.0	26.0	29.0	32.0	dB
Bandwidth	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	10-1000	MHz
Color Code	Black	Orange	Gold	White	Blue	Green	Purple	Yellow	Red	Silver	
Tolerance											
10-19 MHz	1.5	1.5	1.5	1.5	2.5	2.5	2.5	2.5	2.5	2.5	± dB
20-899 MHz	1.5	2.0	1.5	1.5	1.5	1.6	1.5	1.5	2.0	1.8	± dB
900-1000 MHz	2.0	2.0	1.5	2.0	1.6	1.7	1.7	2.0	2.0	2.0	± dB
Insertion Loss (max)											
10 MHz	—	3.6	1.9	1.0	1.0	0.8	0.5	0.5	0.4	0.4	dB
30 MHz	—	3.1	1.5	0.8	0.8	0.7	0.5	0.4	0.3	0.3	dB
54 MHz	—	3.3	1.5	0.8	0.8	0.7	0.4	0.4	0.3	0.3	dB
112 MHz	—	3.3	1.8	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
150 MHz	—	3.3	1.8	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
186 MHz	—	3.4	1.9	1.0	0.9	0.8	0.5	0.5	0.5	0.5	dB
222 MHz	—	3.5	1.9	1.0	1.0	0.8	0.5	0.5	0.5	0.5	dB
330 MHz	—	3.6	2.0	1.0	1.0	0.8	0.6	0.6	0.6	0.6	dB
400 MHz	—	3.7	2.1	1.1	1.0	0.9	0.7	0.7	0.6	0.6	dB
450 MHz	—	3.8	2.1	1.1	1.0	0.9	0.7	0.7	0.6	0.6	dB
550 MHz	—	3.9	2.1	1.2	1.1	0.9	0.7	0.7	0.7	0.7	dB
600 MHz	—	4.1	2.4	1.4	1.2	1.0	0.8	0.8	0.8	0.8	dB
750 MHz	—	4.7	3.0	1.6	1.4	1.2	1.0	1.0	0.9	0.9	dB
860 MHz	—	5.0	3.5	1.8	1.6	1.4	1.2	1.2	1.1	1.1	dB
1000 MHz	—	5.5	4.1	2.0	1.8	1.6	1.4	1.3	1.3	1.3	dB
Flatness (max)											
10-1000 MHz	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	± dB
Tap-to-Out Isolation (min)											
10-29 MHz	—	20	20	20	24	29	30	34	34	36	dB
30-749 MHz	—	22	24	26	30	33	36	38	40	42	dB
750-899 MHz	—	20	22	25	28	31	34	36	38	40	dB
900-1000 MHz	—	20	22	24	28	31	34	36	38	40	dB
Tap-to-Tap Isolation (min)											
10-29 MHz	20	20	20	20	20	20	20	20	20	20	dB
30-449 MHz	25	25	25	25	25	25	25	25	25	25	dB
450-749 MHz	23	23	23	23	23	23	23	23	23	23	dB
750-1000 MHz	20	20	20	20	20	20	20	20	20	20	dB
Return Loss In (min)											
10-29 MHz	17	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	17	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Return Loss Out (min)											
10-29 MHz	—	17	17	17	17	17	17	17	17	17	dB
30-599 MHz	—	18	18	18	18	18	18	18	18	18	dB
600-899 MHz	—	17	17	17	17	17	17	17	17	17	dB
900-1000 MHz	—	16	16	16	16	16	16	16	16	16	dB
Return Loss Tap (min)											
10-29 MHz	16	16	16	16	16	16	16	16	16	16	dB
30-599 MHz	18	18	18	18	18	18	18	18	18	18	dB
600-1000 MHz	16	16	16	16	16	16	16	16	16	16	dB
Hum Modulation @ 8 amps (max)											
10-49 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
50-599 MHz	—	-70	-70	-70	-70	-70	-70	-70	-70	-70	dB
600-749 MHz	—	-64	-64	-64	-64	-64	-64	-64	-64	-64	dB
750-1000 MHz	—	-60	-60	-60	-60	-60	-60	-60	-60	-60	dB
Isolation				Exceeds FCC requirements							
nt (continuous)	0	8	8	8	8	8	8	8	8	8	amps

Surge Rating: IEEE 587 Class B 2500 Volts

*All specifications are subject to change without notice.

COMPARE EAGLE'S ELECTRICAL SPECIFICATIONS WITH THOSE OF OTHER MANUFACTURER

2-WAY

VALUE	4	8	11	14	17	20	23	26	29	32
MODEL	EC7-504	EC7-508	EC7-511	EC7-514	EC7-517	EC7-520	EC7-523	EC7-526	EC7-529	EC7-532
COLOR CODE	pink	orange	gold	white	black	green	purple	yellow	red	silver
TAP LOSS 5-500	4 ± 1	8 ± 1	11 ± 1	14 ± 1	17 ± 1	20 ± 1	23 ± 1	26 ± 1	29 ± 1	32 ± 1
INSERTION LOSS										
5 MHZ	T	2.3	1.3	.6	.5	.4	.3	.3	.3	.3
300 MHZ	T	2.8	1.5	.8	.6	.5	.4	.4	.4	.4
400 MHZ	T	3.3	1.8	1.0	.8	.7	.5	.5	.5	.5
450 MHZ	T	3.4	1.9	1.1	.9	.8	.6	.6	.6	0.6
500 MHZ	T	3.7	2.2	1.3	1.2	1.1	0.9	0.9	0.9	0.9
ISOLATION-										
out to tap										
5 MHZ	·	28	30	30	34	40	43	46	49	52
10 MHZ	·	28	30	32	34	40	43	46	49	52
300 MHZ	·	26	28	30	32	38	41	44	47	50
400 MHZ	·	23	25	27	29	32	35	38	41	44
450 MHZ	·	17	20	23	26	29	32	35	38	41

8-WAY

VALUE	11	14	17	20	23	26	29	
MODEL	EC8-511	EC8-514	EC8-517	EC8-520	EC8-523	EC8-526	EC8-529	EC
COLOR CODE	gold	white	black	green	purple	yellow	red	sil
TAP LOSS 5-500	11 ± 1	14 ± 1	17 ± 1	20 ± 1	23 ± 1	26 ± 1	29 ± 1	32
INSERTION LOSS								
5 MHZ	T	2.5	1.4	.8	.6	.5	.4	.4
300 MHZ	T	2.8	1.5	.8	.6	.5	.4	.4
400 MHZ	T	3.3	1.8	1.0	.8	.7	.5	.5
450 MHZ	T	3.4	1.9	1.1	.9	.8	.6	.6
500 MHZ	T	4.0	2.2	1.3	1.2	1.1	.9	.9
ISOLATION-								
out to tap								
5MHZ	·	32	34	34	43	46	49	52
10 MHZ	·	33	35	37	43	46	49	52
300 MHZ	·	33	35	37	41	44	47	50
400 MHZ	·	31	33	35	38	41	44	47
450 MHZ	·	28	30	32	35	38	41	44
500 MHZ	·	23	26	29	32	35	38	41

4-WAY

VALUE	8	11	14	17	20	23	26	29	32	35
MODEL	EC4-508	EC4-511	EC4-514	EC4-517	EC4-520	EC4-523	EC4-526	EC4-529	EC4-532	EC4-535
COLOR CODE	orange	gold	white	black	green	purple	Yellow	red	silver	blue
TAP LOSS 5-500	8 ± 1	11 ± 1	14 ± 1	17 ± 1	20 ± 1	23 ± 1	26 ± 1	29 ± 1	32 ± 1	35 ± 1
INSERTION LOSS										
5 MHZ	T	2.3	1.3	.6	.5	.4	.3	.3	.3	.3
300 MHZ	T	2.8	1.5	.8	.6	.5	.4	.4	.4	.4
400 MHZ	T	3.3	1.8	1.0	.8	.7	.5	.5	.6	.5
450 MHZ	T	3.4	1.9	1.1	.9	.8	.6	.6	.6	0.6
500 MHZ	T	3.7	2.2	1.3	1.2	1.1	0.9	0.9	0.9	0.9
ISOLATION-										
out to tap										
5 MHZ	·	30	32	32	40	43	46	49	52	55
10 MHZ	·	30	32	34	40	43	46	49	52	55
300 MHZ	·	30	32	34	38	41	44	47	50	53
400 MHZ	·	28	30	32	35	38	41	44	47	50
450 MHZ	·	25	27	29	32	35	38	41	44	47

COMMON SPECIFICATIONS 2, 4, 8-WAY TAPS

TAP-TO-TAP

5 MHz through 400 MHz - 30 db
500 MHz - 20 db

RETURN LOSS

IN

5 MHz through 400 MHz - 20 db
500 MHz - 18 db

OUT

5 MHz through 400 MHz - 20 db
500 MHz - 18 db

TAP

5 MHz - 18 db
10 MHz through 400 MHz - 20 db
500 MHz - 18 db

Power Passing Capability - 6 amps RMS
HUM Modulation - 76 db at 6 amps

PAGE 8

TIME WARNER CABLE - SYRACUSE DIVISION

Converter and Trap Specifications

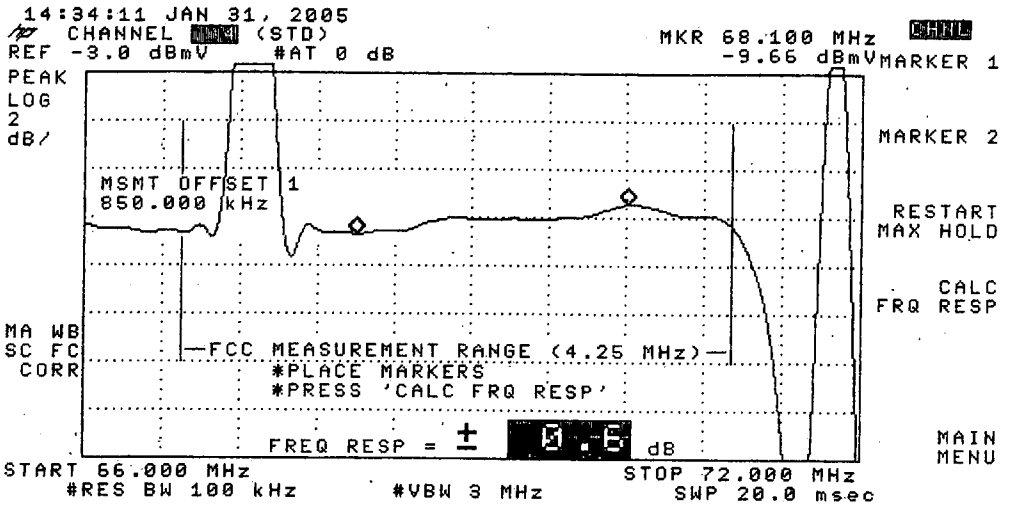
System Name : Sayre ***Date*** : 8/2/2013

All testing is done at the end of a 100ft drop cable (RG-6) without a converter. Converter specification sheets are attached for "After Converter" numbers, if so desired.

Instructions:

Attach a copy of the manufacturer's specifications covering all converters used in the system. The specification sheet must show the converters carrier- to- noise (C/N) and distortion figures. Attach a copy of the manufacturer's specifications covering all traps that are in use in the cable plant. This should include basic traps, individual channel traps, high pass filters, etc.

In-Channel Frequency Response Taken Through a SA Explorer 8300 Digital Converter



THE RESPONSE SHOWN IS FROM CH. 32 (Analog)

EXPLORER® 2000
Digital Home Communications Terminal

Appendix B
Specifications

Overview

Introduction

This appendix provides the specifications for the EXPLORER 2000 Digital Home Communications Terminal (DHCT), and the remote control.

In this Appendix

This appendix contains the following topics.

EXPLORER 2000 DHCT Specifications

Introduction

This section contains operating and other specifications for the EXPLORER 2000 Digital Home Communications Terminal (DHCT).

Electrical Overstress Protection

The EXPLORER 2000 DHCT withstands the following electrical currents without damage:

- hits at 3.5 kV to the RF and AC input ports
- 10 hits of 15 kV from a 150 pF capacitor through a 150 ohm series resistor on all external ports

RF and Baseband Output Performance

The following table provides output measurements based on a +15 dBmV Input signal.

Item	Output
Cross modulation distortion (XMOD)	-54 dBc
Composite second order distortion (CSO)	-54 dBc
Composite triple beat distortion (CTB)	-55 dBc

Frequency Resolution

Frequency assignments comply with *STD*, *HRC*, and *IRC* frequency lineups.

Channel	Steps
QAM (digital)	250 kHz
NTSC (analog)	62.5 kHz

Continued on next page

Power

Item	Power
Consumption	35 Watts maximum
AC Input	Standard residential AC line voltage of 103.5 V AC to 126.5 V AC at 60 Hz
AC Outlet	Supplies 400 Watts maximum at the AC input line voltage. User controls on/off function through EXPLORER 2000 DHCT interface.

Analog Channel RF Input

Item	Specification
Connector	Threaded female F-connector
Frequency range	54 MHz to 860 MHz
RF input level	0 dBmV to +15 dBmV (meets NTSC specs)
Functional operation without damage	-7 dBmV to +20 dBmV (minimum)
Input return loss	7 dB minimum
Noise figure	<12 dB at maximum gain
C/N (at input)	57 dB minimum (meets all specs) 40 dB minimum (minimum)

Continued on next page

Digital Channel Input

Item	Specification
Frequency range	54 MHz to 869 MHz
Input return loss	7 dB minimum
Noise figure	<12 dB at maximum gain
Modulation technique	ITUJ.83 Annex A 64 QAM and 256 QAM
Transmission rate	• Approximately 30 Mbps at 64 QAM • Approximately 40 Mbps at 256 QAM
Transport	DAVIC structure - convolutional de-interleaving and Reed Solomon FEC with T=8
Average private data rate	3 Mbps (from QAM demodulated input to DRAM)
Private data format	per MPEG-2 (ISO/IEC 13818)

RF Input Levels

Item	Modulation Rate	Level
Typical for BER after FEC $<10^{-9}$	64 QAM	-20 dBmV to +14 dBmV
	256 QAM	-14 dBmV to +14 dBmV
Meets specifications of BER after FEC $<10^{-9}$	64 QAM	-15 dBmV to +14 dBmV
	256 QAM	-9 dBmV to +14 dBmV
C/N (at input) - to meet BER at input levels above	64 QAM	>32 dB in 6 MHz BW
	256 QAM	>38 dB in 6 MHz BW

Continued on next page

Digital Audio

Item	Specification
Data rate	384 Kbps maximum
Formats	• MPEG-1 • Layer 2 • 2 channel Musicam • AC-3
Supported sampling rates	• 32 kHz • 48 kHz • 44.1 kHz

Computer Generated Audio

The EXPLORER 2000 DHCT supports the following computer audio sampling rates:

- 8 kHz
- 11.025 kHz
- 22.05 kHz
- 24 kHz
- 32 kHz
- 44.1 kHz
- 48 kHz

Continued on next page

Baseband Audio Output

Category	Item	Specification
General	Connector	2 female RCA-type phono jacks: • Right channel - red insulation • Left channel - white insulation
	Output level	1.3 V p-p ± 10% with 10 kΩ load
	Output impedance	600 Ω nominal
	Mute	-50 dB
ResApp Controlled	Volume control	30 steps from 0 dB (maximum volume) to -63 dB nominal
Analog service (BTSC selected)	Frequency response	50 Hz to 10 kHz ± 2 dB
	Stereo channel separation	• 25 dB at 3 kHz • 15 dB at 10 kHz
	Total harmonic distortion	1 kHz <3.5%
	Signal-to-noise ratio	• > 45 dB A-weighted • 25 kHz L+R deviation at 1 kHz
Analog service (SAP selected)	Frequency response	100 Hz to 8 kHz ± 2 dB
	Total harmonic distortion	1 kHz < 3.0%
Digital service	Frequency response	20 Hz to 20 kHz ± 1.0 dB
	Signal to noise ratio	• >80 dB A-weighted • >80 dB at 1 kHz (dynamic range)
	Total harmonic distortion - 20 Hz to 20 kHz bandwidth	< 0.2% at 1 kHz
	Stereo channel separation	> 80 dB at 1 kHz

Continued on next page

Baseband Video Output

Item	Specification
Connector	Female RCA type with yellow insulation
Output	1.0 V p-p ± 10% at 75 Ω nominal
Frequency response - 220 kHz to 3.75 MHz (can change based on FCC part 76)	± 3 dB p-p
S/N with input +5 dBmV, input C/N 57 dB min. (55-550 MHz)	42 dB minimum unweighted
S/N with input +5 dBmV, input C/N 57 dB min. (55-860 MHz)	41 dB minimum unweighted

RF Output

Item	Specification
Connector	F type
Frequency	• Channel 3 - 61.25 MHz • Channel 4 - 67.25 MHz (channels are switchable)
RF output level	• +9 ± 4.5 dBmV Video • ± 13.5 ± 3.5 dBc Audio
Frequency response - 220 kHz to 3.75 MHz (can change based on FCC part 76)	± 3 dB p-p
Return loss	10 dB minimum
S/N with input +5 dBmV, input C/N 57 dB min. (55-550 MHz)	42 dB minimum unweighted equivalent to a 49 dB C/N, assuming 7 dB correction factor
S/N with input +5 dBmV, input C/N 57 dB min. (550-850 MHz)	41 dB minimum unweighted equivalent to a 48 dB C/N, assuming 7 dB correction factor

Continued on next page

S-Video Output

Part	Function
Connector	4-position mini-DIN
S/N with input +5 dBmV, input C/N 57 dB min. (55-550 MHz)	42 dB minimum unweighted
S/N with input +5 dBmV, input C/N 57 dB min. (550-860 MHz)	41 dB minimum unweighted
Output levels	• Y: 1 V p-p ±10% • C: 0.29 V p-p ±10%

Forward Control Channel RF Input

Item	Specification
Modulation technique	Differential QPSK
Frequency	70 MHz to 130 MHz agile in 250 kHz steps
Transmission rate	1.544 Mbps
Channel bandwidth	1 MHz
Channel spacing	1 MHz
Adjacent channel performance (data)	Meets BER performance at +6 dBc 1.00 MHz from center
Mode	Continuous
Transmission format	DS1 extended Superframe - 53 byte ATM cells with AAL5 layer T=1 Reed Solomon
RF input level	-16 dBm VRMS to +15 dBm VRMS (6 dB to 16 dB below NTSC video)
BER performance at C/N=18 dB (in 772 kHz BW) at RF level above	< 10^{-9} after Reed Solomon

Continued on next page

Reverse Control and Interactive Channel RF Output

Item	Specification
Modulation technique	Differential QPSK
Frequency	8 MHz to 26.5 MHz
Channel bandwidth	1 MHz
Channel step size	50 kHz
Forward error correction	Shortened Reed Solomon (59,53), T=3
Mode	Burst mode
Transmission rate	256 Kbps or 1.544 Mbps (maximum burst rate)
Transmission format	53 byte ATM cells
Channel sharing protocol	Slotted ALOHA, TDMA and Reservation
Maximum RF output level	Variable +55 dBm VRMS minimum
C/N0, 2 MHz from carrier (Output level >40 dbm VRMS)	120 dB/Hz
Spurious output (5-42 MHz)	-45 dBC
Channel tuning time	< 5 mS

Memory Configuration

Memory Type	Capacity
CPU DRAM	4 MB standard, MB expandable to 16 MB at factory
CPU Flash	2 MB
CPU ROM	2 MB
Decompression/Graphics SDRAM	2 MB (shared by CPU for application processing)
CPU EEPROM	16 kb

Continued on next page

Eagle Graphics/Video Processing Specifications

Item	Specification
Video resolution	Up to 720 x 480 VGA
Graphics resolution	Up to 640 x 480 VGA non-interlaced
Color graphics display mode	256 or 65,000
Graphics features	• Video scaling and capturing • Alpha blending • 8 or 16 bit color • Square and round pixel display • Anti-flutter filter • Anti-aliasing fonts • Supports transparent, translucent, and opaque graphics and overlays

Environmental Specifications

Item	Specification
Operational temperature range	0°C to 40°C (32°F to 104°F)
Humidity	5% to 95%, non-condensing

Regulatory Specifications

The EXPLORER 2000 Digital Home Communications Terminal (DHCT) meets FCC Part 15, subpart B, class B, applicable parts of Part 76, and UL rule #1409 under the required category of Cable Terminal Devices.

Remote Control Specifications

Introduction

This section contains specifications for the Model 2050-ER1 remote control.

Remote Control Specifications

Item	Specification
IR wavelength	940 nm
Transmitting Range to EXPLORER 2000 DHCT at 2.8 V minimum voltage	• Straight to STT - 8 meters • Remote 30 degrees off center (all directions) • Remote 80 degrees up
Power	• Operational at a minimum battery voltage of 2.4 V • Meets specifications at 2.8 V • The microprocessor remains in stop mode to conserve power until the user presses a button.
Batteries	Uses 2 AA alkaline batteries
Operating temperature	0°C to 40°C (32°F to 104°F)

ESN* Single Channel Negative Traps

Typical Response

Model	Channel		Notch Depth	L.A.S.	Upper Video	High Frequency Loss
ESN-A-2*	A-2	98	-75 dB	-3.2 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-A-1	A-1	99	-75 dB	-3.5 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-A	A	14	-75 dB	-3.7 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-B	B	15	-75 dB	-4.0 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-C	C	16	-75 dB	-4.3 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-D	D	17	-75 dB	-4.6 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-E	E	18	-75 dB	-4.8 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-F	F	19	-75 dB	-5.1 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-G	G	20	-75 dB	-5.4 dB	-1.0 dB	-1.5 dB @ 860 MHz
ESN-H	H	21	-75 dB	-5.6 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-I	I	22	-75 dB	-5.9 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-7	7	7	-75 dB	-6.1 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-8	8	8	-75 dB	-6.3 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-9	9	9	-75 dB	-6.5 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-10	10	10	-75 dB	-6.6 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-11	11	11	-75 dB	-6.8 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-12	12	12	-75 dB	-7.0 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-13	13	13	-75 dB	-7.2 dB	-1.2 dB	-1.5 dB @ 860 MHz
ESN-J	J	23	-70 dB	-7.4 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-K	K	24	-70 dB	-7.6 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-L	L	25	-70 dB	-7.8 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-M	M	26	-70 dB	-8.1 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-N	N	27	-70 dB	-8.2 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-O	O	28	-70 dB	-8.4 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-P	P	29	-70 dB	-8.7 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-Q	Q	30	-70 dB	-9.0 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-R	R	31	-70 dB	-9.3 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-S	S	32	-70 dB	-9.6 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-T	T	33	-70 dB	-9.9 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-U	U	34	-70 dB	-10.1 dB	-1.4 dB	-2.0 dB @ 1 GHz
ESN-V	V	35	-70 dB	-10.3 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-W	W	36	-70 dB	-10.5 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-AA	AA	37	-70 dB	-10.6 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-BB	BB	38	-70 dB	-10.8 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-CC	CC	39	-70 dB	-11.0 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-DD	DD	40	-70 dB	-11.2 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-EE	EE	41	-70 dB	-11.3 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-FF	FF	42	-70 dB	-11.4 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-GG	GG	43	-70 dB	-11.5 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-HH	HH	44	-70 dB	-11.7 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-II	II	45	-70 dB	-12.0 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-JJ	JJ	46	-70 dB	-12.3 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-KK	KK	47	-70 dB	-12.6 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-LL	LL	48	-70 dB	-12.9 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-MM	MM	49	-70 dB	-13.2 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-NN	NN	50	-70 dB	-13.5 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-OO	OO	51	-70 dB	-13.8 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-PP	PP	52	-70 dB	-14.1 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-QQ	QQ	53	-70 dB	-14.3 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-RR	RR	54	-70 dB	-14.5 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-SS	SS	55	-70 dB	-14.8 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-TT	TT	56	-70 dB	-14.9 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-UU	UU	57	-70 dB	-15.1 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-VV	VV	58	-70 dB	-15.3 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-WW	WW	59	-70 dB	-15.5 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-XX	XX	60	-70 dB	-15.7 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-YY	YY	61	-70 dB	-15.9 dB	-1.8 dB	-2.0 dB @ 1 GHz
ESN-ZZ	ZZ	62	-70 dB	-16.1 dB	-1.8 dB	-2.0 dB @ 1 GHz

*Patents #5148133, 5168251 **Trap: Length is 3.56" / Diameter .825 / Specifications subject to change without notice**

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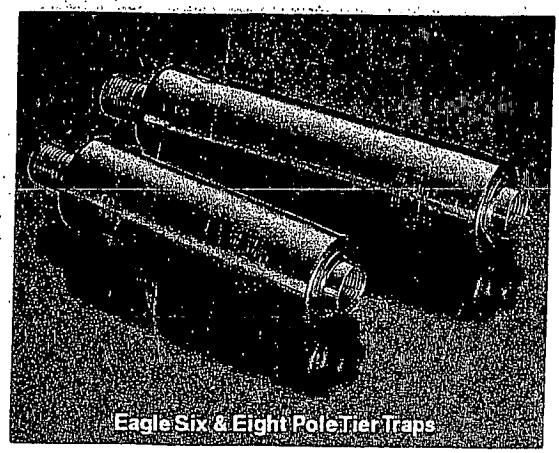
Tier Traps

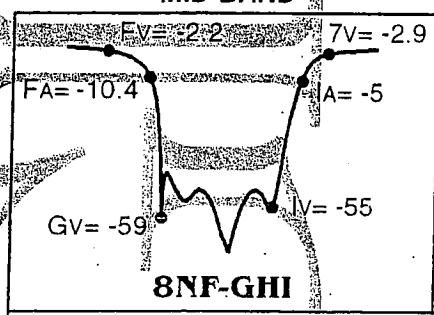
Eagle Comtronics, Inc., a Trap and Filter Manufacturing Company, with headquarters in Clay, New York, invented the widely accepted cylindrical trap format. We have successfully supplied these products to the Cable Television Industry for better than 20 years. Eagle has pioneered the Tier Traps as well and leads the industry in performance with the sharpest slopes, fewest bumper channels, and the largest number of designs. This is backed up with an astounding 98 percent *"on-time"* delivery performance. Our experienced sales staff will assist you in trap selections, free trap samples and plots of your next tiering assignment.



TYPICAL PLOTS

3 CHANNELS

MID BAND



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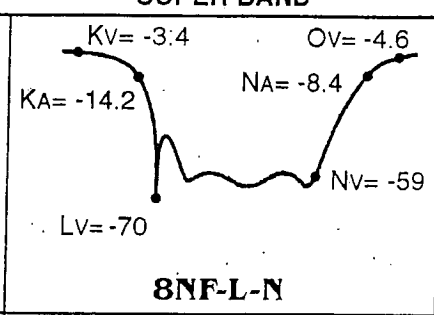
SUPER BAND



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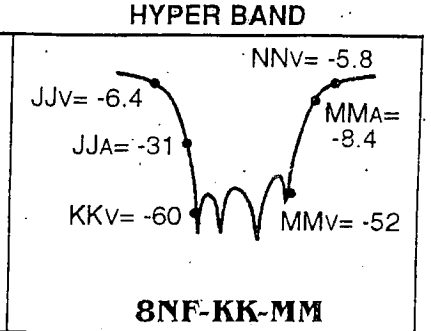
HYPER BAND



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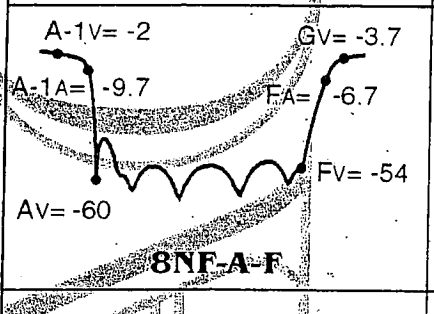
6 CHANNELS



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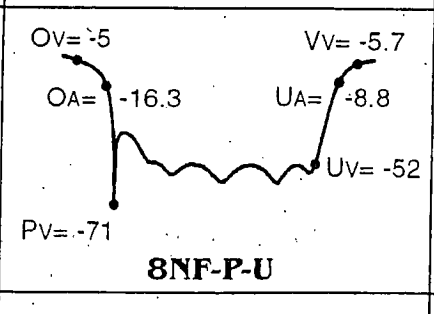

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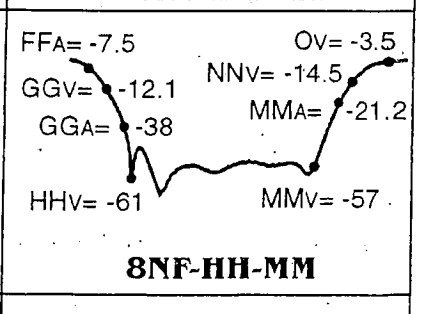

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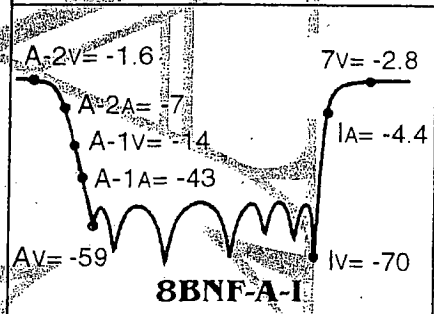
9 CHANNELS



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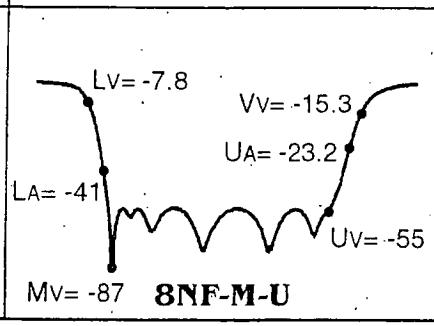

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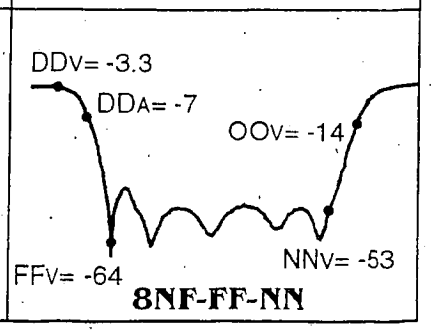

8NF-FF-NN

Tier Trap Features:

- Improved **Patent Pending Moisture and Environmental Stability.**
- Over **700 current designs** to select from.
- **Fewer bumper channels required because of extremely sharp slopes.**
- **Permanent Channel Markings.**
- **Four, six, eight, twelve and sixteen pole** units available.

ETN* MICRO-SERIES Single Channel Negative Traps

Typical Response

MODEL	CHANNEL		NOTCH-DEPTH	L.A.S.	UPPER VIDEO	HIGH FREQUENCY LOSS
ETN-2*	2	2	-75 dB	-2.0 dB	-0.5 dB	-2.5dB @ 800 MHz
ETN-3	3	3	-75 dB	-2.5 dB	-0.5 dB	-2.5dB @ 860 MHz
ETN-4	4	4	-75 dB	-2.5 dB	-0.5 dB	-2.5dB @ 860 MHz
ETN-5	5	5	-75 dB	-0.5 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-6	6	6	-75 dB	-3.5 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-A-2	A-2	98	-75 dB		-1.0 dB	-2.5dB @ 860 MHz
ETN-A-1	A-1	99	-75 dB	-5.5 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-A	A	14	-75 dB	-5.8 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-B	B	15	-75 dB	-5.8 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-C	C	16	-75 dB	-5.8 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-D	D	17	-75 dB	-6.0 dB	-1.0 dB	-2.5dB @ 860 MHz
ETN-E	E	18	-75 dB	-6.2 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-F	F	19	-75 dB	-6.5 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-G	G	20	-75 dB	-6.8 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-H	H	21	-75 dB	-7.0 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-I	I	22	-75 dB	-7.2 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-7	7	7	-75 dB	-7.5 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-8	8	8	-75 dB	-8.0 dB	-1.2 dB	-2.5dB @ 860 MHz
ETN-9	9	9	-75 dB	-8.2 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-10	10	10	-75 dB	-9.0 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-11	11	11	-75 dB	-9.5 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-12	12	12	-75 dB	-10.0 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-13	13	13	-75 dB	-10.5 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-J	J	23	-70 dB	-11.5 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-K	K	24	-70 dB	-12.5 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-L	L	25	-70 dB	-13.5 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-M	M	26	-70 dB	-14.5 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-N	N	27	-70 dB	-15.0 dB	-1.5 dB	-2.5dB @ 860 MHz
ETN-O	O	28	-70 dB	-15.5 dB	-2.0 dB	-2.5dB @ 860 MHz
ETN-P	P	29	-70 dB	-16.0 dB	-2.0 dB	-2.5dB @ 860 MHz
ETN-Q	Q	30	-70 dB	-16.5 dB	-2.0 dB	-2.5dB @ 860 MHz
ETN-R	R	31	-70 dB	-17.0 dB	-2.0 dB	-2.5dB @ 860 MHz
ETN-S	S	32	-70 dB	-17.5 dB	-2.0 dB	-2.5dB @ 860 MHz
ETN-T	T	33	-70 dB	-18.5 dB	-2.5 dB	-2.5dB @ 860 MHz
ETN-U	U	34	-70 dB	-20.0 dB	-2.5 dB	-2.5dB @ 860 MHz
ETN-V	V	35	-70 dB	-21.5 dB	-2.5 dB	-2.5dB @ 860 MHz
ETN-W**	W	36	-70 dB	-23.0 dB	-2.5 dB	-2.5dB @ 860 MHz

*** Patents #4451803, 5202656** ****Higher channels available upon request.**

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Printed in USA

System M (NTSC, PAL M, PAL N)					Typical Response in dB		
Channel		Video Carrier (MHz)	Decoding Frequency (MHz)	Audio Carrier (MHz)	EMN -CH L.A.S.	EMN -CH Upper Video	EMD -CH Video Loss
2	2	55.25	57.5	59.75	–	-0.7	-1.7
3	3	61.25	63.5	65.75	-2.7	-0.7	-1.8
4	4	67.25	69.5	71.75	-3.0	-0.7	-1.9
5	5	77.25	79.5	81.75	-0.5	-1.0	-2.0
6	6	83.25	85.5	87.75	-3.5	-1.0	-2.1
A-5	95	91.25	93.5	95.75	-4.0	-1.0	-2.2
A-4	96	97.25	99.5	101.75	-4.1	-1.0	-2.3
A-3	97	103.25	105.5	107.75	-4.2	-1.0	-2.4
A-2	98	109.25	111.5	113.75	-4.3	-1.0	-2.5
A-1	99	115.25	117.5	119.75	-4.4	-1.0	-2.6
A	14	121.25	123.5	125.75	-4.5	-1.0	-2.7
B	15	127.25	129.5	131.75	-4.7	-1.0	-2.9
C	16	133.25	135.5	137.75	-5.0	-1.0	-3.0
D	17	139.25	141.5	143.75	-5.3	-1.0	-3.1
E	18	145.25	147.5	149.75	-5.5	-1.2	-3.3
F	19	151.25	153.5	155.75	-5.7	-1.2	-3.4
G	20	157.25	159.5	161.75	-5.9	-1.2	-3.5
H	21	163.25	165.5	167.75	-6.1	-1.2	3.7
I	22	169.25	171.5	173.75	-6.4	-1.2	-3.7
7	7	175.25	177.5	179.75	-6.6	-1.2	-3.8
8	8	181.25	183.5	185.75	-6.8	-1.2	-4.0
9	9	187.25	189.5	191.75	-7.0	-1.2	-4.2
10	10	193.25	195.5	197.75	-7.3	-1.5	-4.5
11	11	199.25	201.5	203.75	-7.5	-1.5	-4.8
12	12	205.25	207.5	209.75	-7.7	-1.5	-5.0
13	13	211.25	213.5	215.75	-7.9	-1.5	-5.1
J	23	217.25	219.5	221.75	-8.1	-1.5	-5.2
K	24	223.25	225.5	227.75	-8.3	-1.5	-5.3
L	25	229.25	231.5	231.75	-8.6	-1.5	-5.4
M	26	235.25	237.5	239.75	-8.9	-1.5	-5.5
N	27	241.25	243.5	245.75	-9.1	-1.7	-5.6
O	28	247.25	249.5	251.75	-9.4	-1.7	-5.7
P	29	253.25	255.5	257.75	-9.6	-1.7	-5.8
Q	30	259.25	261.5	263.75	-9.8	-1.7	-5.9
R	31	265.25	267.5	269.75	-10.1	-1.7	-6.0
S	32	271.25	273.5	275.75	-10.4	-1.7	-6.2
T	33	277.25	279.5	281.75	-10.7	-1.7	-6.4
U	34	283.25	285.5	287.75	-11.1	-1.7	-6.6
V	35	289.25	291.5	293.75	-11.5	-1.7	-6.8
W	36	295.25	297.5	299.75	-11.9	-1.7	-7.0
AA	37	301.25	303.5	305.75	-12.3	-1.9	-7.2
BB	38	307.25	309.5	311.75	-12.6	-1.9	-7.5
CC	39	313.25	315.5	317.75	-12.8	-1.9	-7.9
DD	40	319.25	321.5	323.75	-13.0	-1.9	-8.1
EE	41	325.25	327.5	329.75	-13.2	-1.9	-8.3
FF	42	331.25	333.5	335.75	-13.4	-1.9	-8.5
GG	43	337.25	339.5	341.75	-13.6	-1.9	–
HH	44	343.25	345.5	347.75	-13.8	-2.1	–
II	45	349.25	351.5	353.75	-14.0	-2.1	–
JJ	46	355.25	357.5	359.75	-14.2	-2.1	–
KK	47	361.25	363.5	365.75	-14.4	-2.1	–
LL	48	367.25	369.5	371.75	-14.6	-2.1	–
MM	49	373.25	375.5	377.75	-14.8	-2.1	–
NN	50	379.25	381.5	383.75	-15.0	-2.1	–
OO	51	385.25	387.5	389.75	-15.2	-2.1	–
PP	52	391.25	393.5	395.75	-15.4	-2.1	–
QQ	53	397.25	399.5	401.75	-15.6	-2.1	–
RR	54	403.25	405.5	407.75	-15.9	-2.1	–

Specifications subject to change without notice.

System M Typical Response

EMN-CH Negative EMD-CH Positive

Single Channel Notch Filters

EAGLEelite™
Eagle Comtronics, Inc.
4562 Waterhouse Road, Clay, NY 13041
800.448.7474 • 315.622.3402
Fax 315.622.3800 or • 315.622.3100
E-Mail: eagle@eaglefilters.com
Web Site: www.eagle@eaglefilters.com

ETD* MICRO-SERIES Single Channel Decoding Filters

Typical Response

MODEL	CHANNEL		NOTCH DEPTH	VIDEO LOSS***	HIGH FREQUENCY LOSS
ETD-2*	2	2	-80dB	-1.5 dB	-2.5dB @ 800 MHz
ETD-3	3	3	-80dB	-1.7 dB	-2.5dB @ 860 MHz
ETD-4	4	4	-80dB	-1.8 dB	-2.5dB @ 860 MHz
ETD-5	5	5	-80dB	-1.9 dB	-2.5dB @ 860 MHz
ETD-6	6	6	-80dB	-2.0 dB	-2.5dB @ 860 MHz
ETD-A-2	A-2	98	-80dB	-3.0 dB	-2.5dB @ 860 MHz
ETD-A-1	A-1	99	-80dB	-3.0 dB	-2.5dB @ 860 MHz
ETD-A	A	14	-80dB	-3.1 dB	-2.5dB @ 860 MHz
ETD-B	B	15	-80dB	-3.3 dB	-2.5dB @ 860 MHz
ETD-C	C	16	-80dB	-3.4 dB	-2.5dB @ 860 MHz
ETD-D	D	17	-80dB	-3.5 dB	-2.5dB @ 860 MHz
ETD-E	E	18	-80dB	-3.5 dB	-2.5dB @ 860 MHz
ETD-F	F	19	-80dB	-3.6 dB	-2.5dB @ 860 MHz
ETD-G	G	20	-80dB	-3.9 dB	-2.5dB @ 860 MHz
ETD-H	H	21	-80dB	-4.0 dB	-2.5dB @ 860 MHz
ETD-I	I	22	-80dB	-4.2 dB	-2.5dB @ 860 MHz
ETD-7	7	7	-80dB	-4.3 dB	-2.5dB @ 860 MHz
ETD-8	8	8	-80dB	-4.5 dB	-2.5dB @ 860 MHz
ETD-9	9	9	-80dB	-5.0 dB	-2.5dB @ 860 MHz
ETD-10	10	10	-80dB	-5.2 dB	-2.5dB @ 860 MHz
ETD-11	11	11	-80dB	-5.5 dB	-2.5dB @ 860 MHz
ETD-12	12	12	-80dB	-6.0 dB	-2.5dB @ 860 MHz
ETD-13**	13	13	-80dB	-6.4 dB	-2.5dB @ 860 MHz

*** Patents #4451803, 5202656** **** Higher channels available upon request.** ***** Model 2002 Encoder will add an adjustable pre-emphasis gain of : 3dB at video, 30dB at the jamming carrier and 5dB at audio.**

EAGLE COMTRONICS INC.

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Telephone: (315) 622-3402 Toll Free 1 800-448-7474 *Fax:* (315) 622-3800
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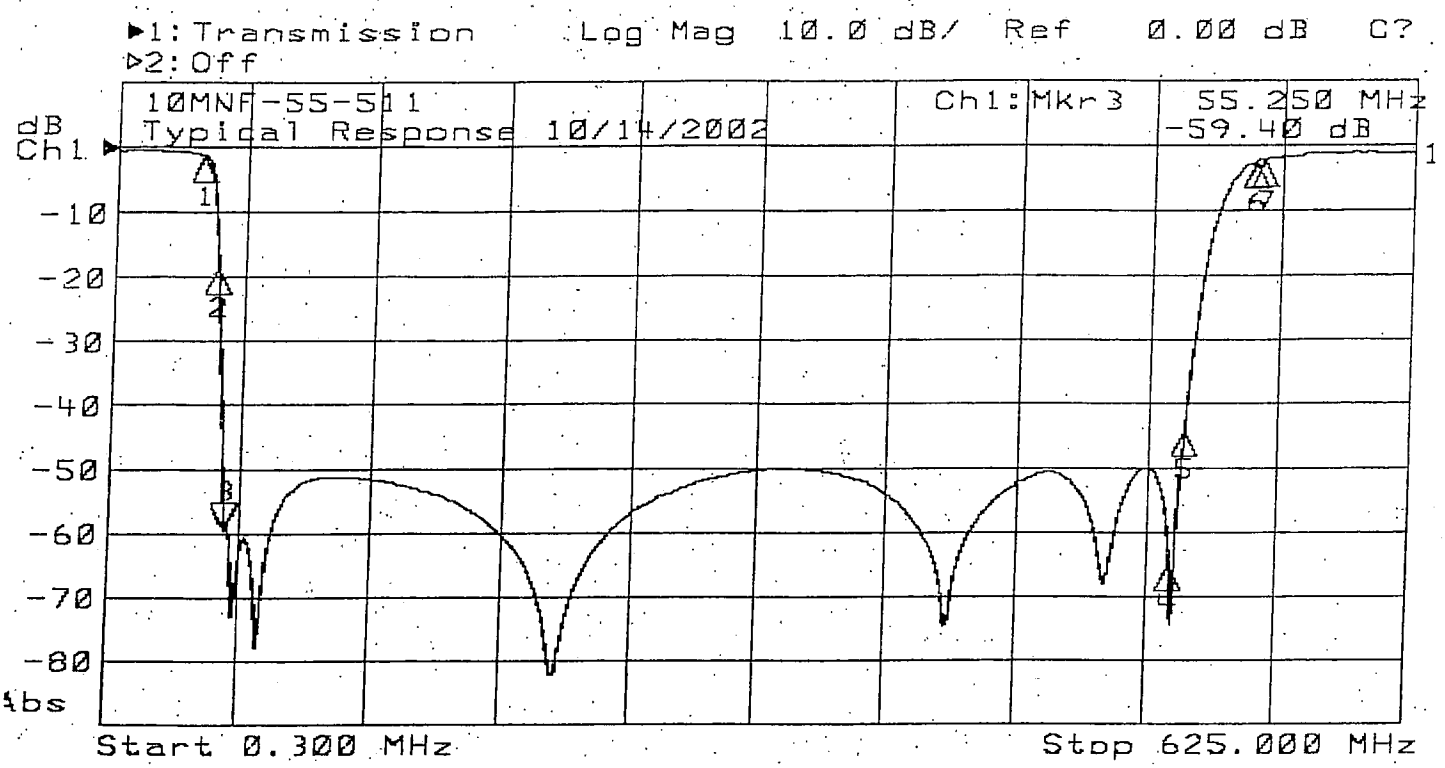
Printed in USA

EAGLE COMTRONICS INC.

odel: 10MNF-55-511 (2.6)

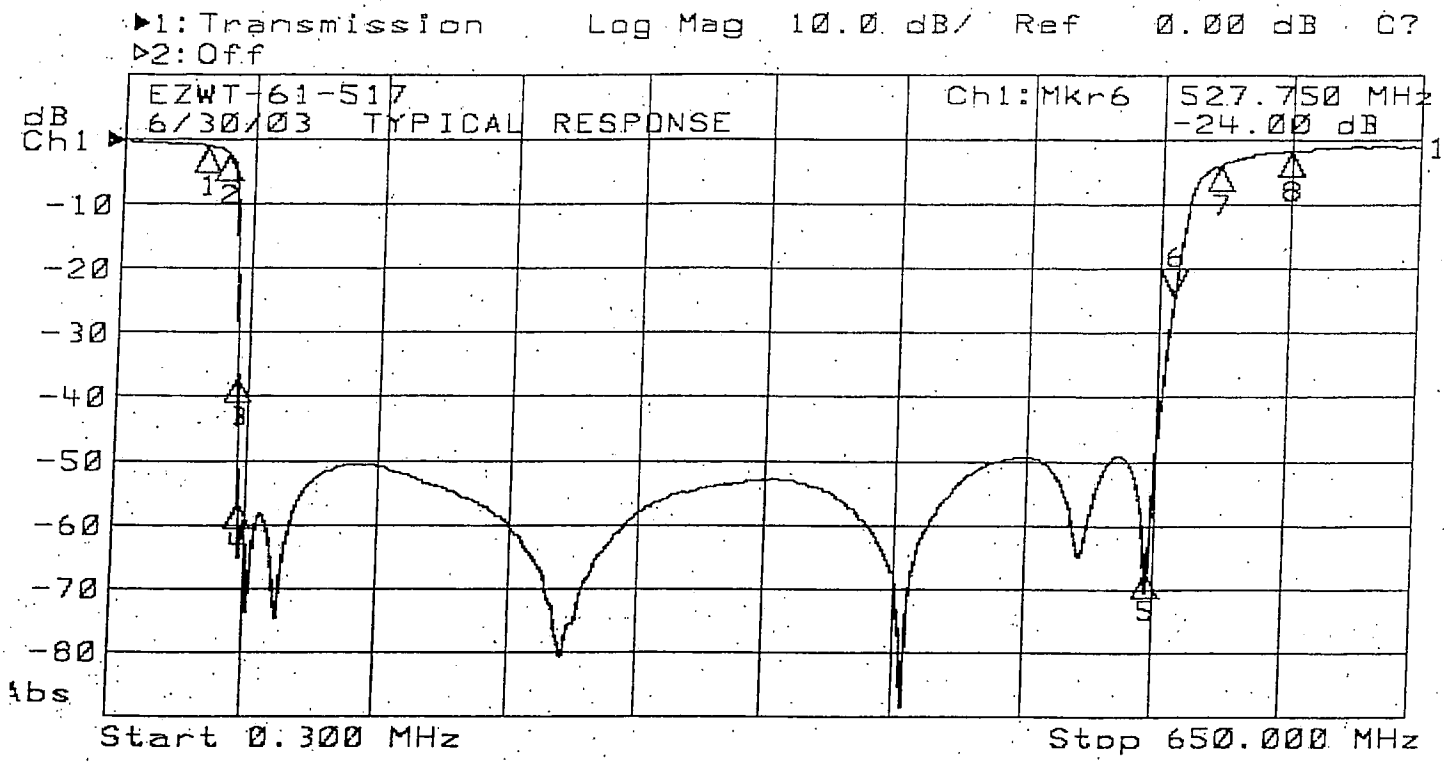


Channel 1 Markers				
k #	Channel #		Frequency	Loss
1			42.000	-1.31
2			50.000	-18.31
3	2 = 2	Video	55.250	-59.40
4	JJJ = 72	Video	511.250	-64.98
5	KKK = 73	Video	517.250	-43.91
6			550.000	-2.35
7	QQQ = 79	Video	553.250	-2.09

Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				
5				
6				
7				

EAGLE COMTRONICS INC.

Model: EZWT-61-517

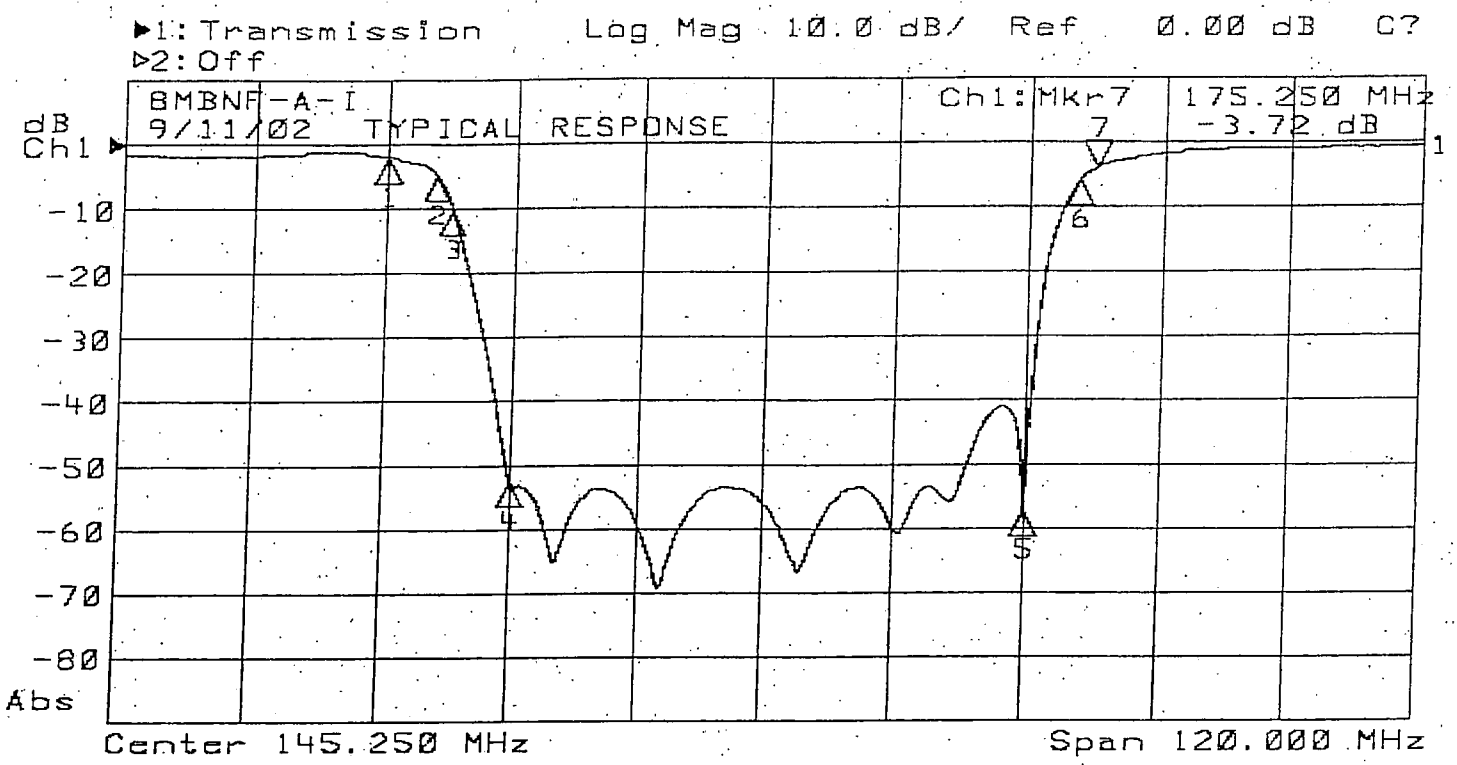


Channel 1 Markers				
Mk #	Channel #		Frequency	Loss
1			42.000	-0.85
2			53.000	-2.09
3	2 = 2	Audio	59.750	-36.94
4	3 = 3	Video	61.250	-56.52
5	KKK = 73	Video	517.250	-67.19
6	LLL = 74	Audio	527.750	-24.00
7			550.000	-3.60
8			585.000	-1.60

Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				
5				
6				
7				
8				

EAGLE COMTRONICS INC.

odel: 8MBNF-A-I



Channel 1 Markers				
k #	Channel #		Frequency	Loss
1	A-2 = 98	Video	109.250	-1.96
2	A-2 = 98	Audio	113.750	-4.61
3	A-1 = 99	Video	115.250	-9.94
4	A = 14	Video	121.250	-52.60
5	I = 22	Video	169.250	-57.27
6	I = 22	Audio	173.750	-5.58
7	7 = 7	Video	175.250	-3.72

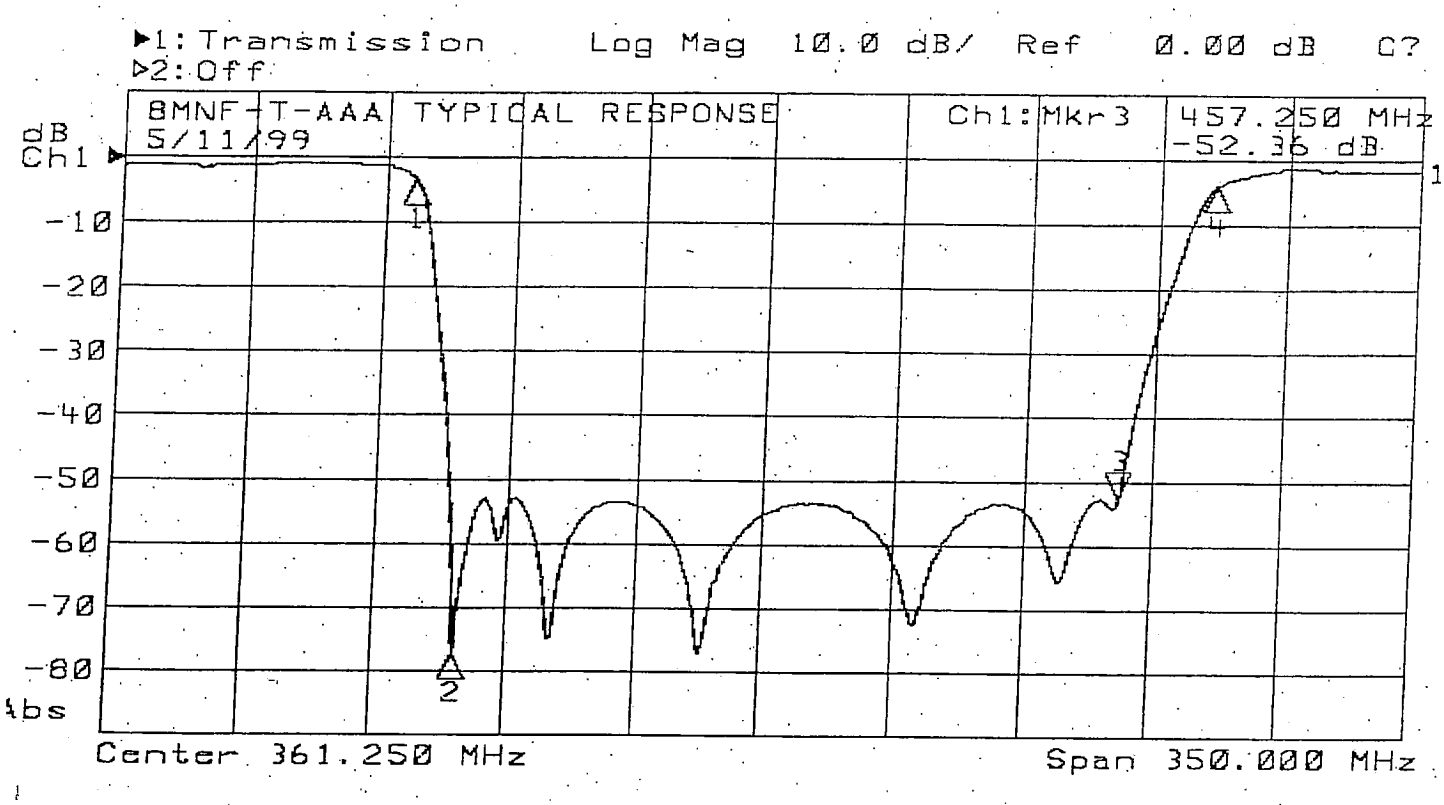
Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				
5				
6				
7				

Eagle Comtronics, Inc Confidential Production Variances May Occur

Customer Approval _____ Date _____

EAGLE COMTRONICS INC.

'odel: 8MNF-T-AAA



Channel 1 Markers				
Mk #	Channel #		Frequency	Loss
1	Q = 30	Audio	263.750	-3.11
2	T = 33	Video	277.250	-77.30
3	AAA = 63	Video	457.250	-52.36
4	EEE = 67	Video	481.250	-3.88

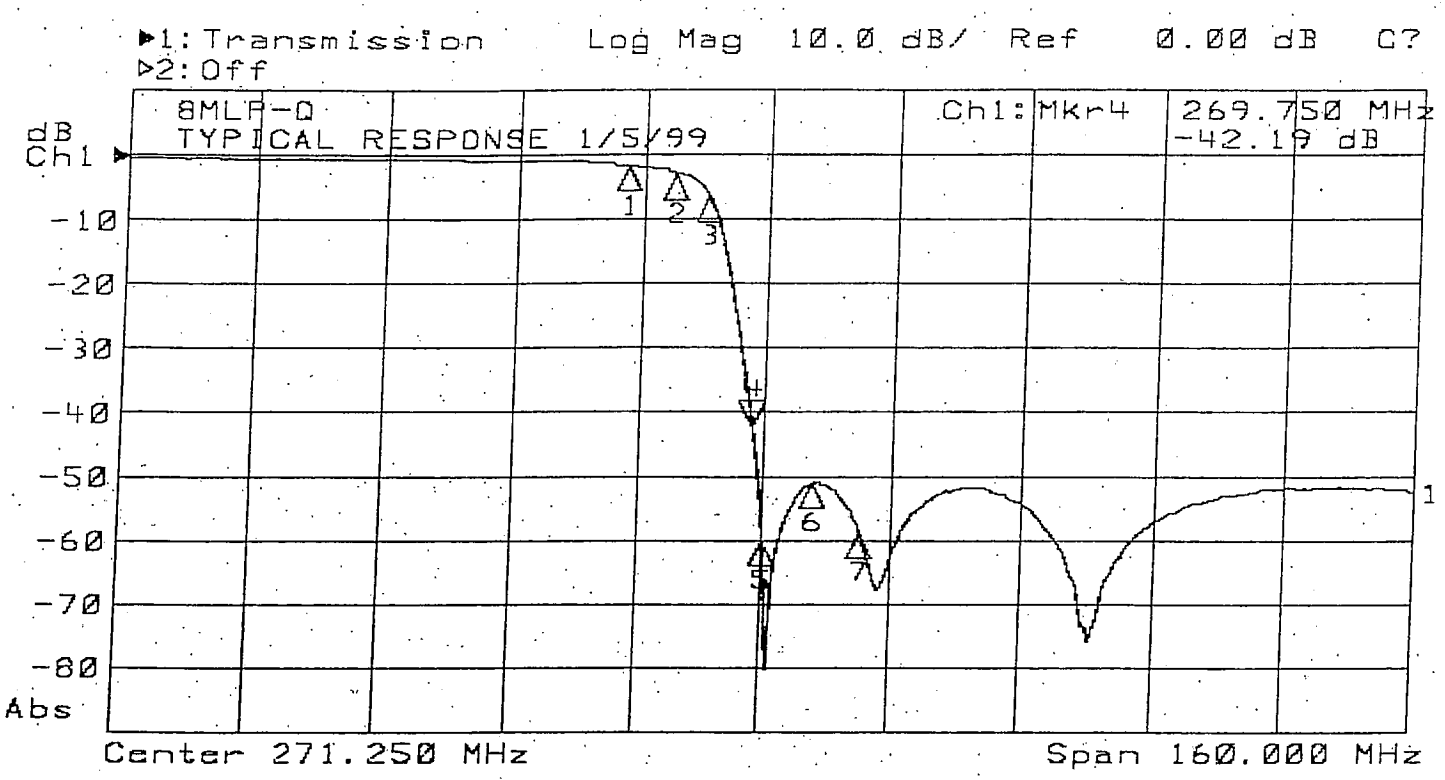
Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				

agle Comtronics, Inc Confidential Production Variances May Occur

ustomer Approval _____ Date _____

EAGLE COMTRONICS INC.

Model: 8MLP-Q



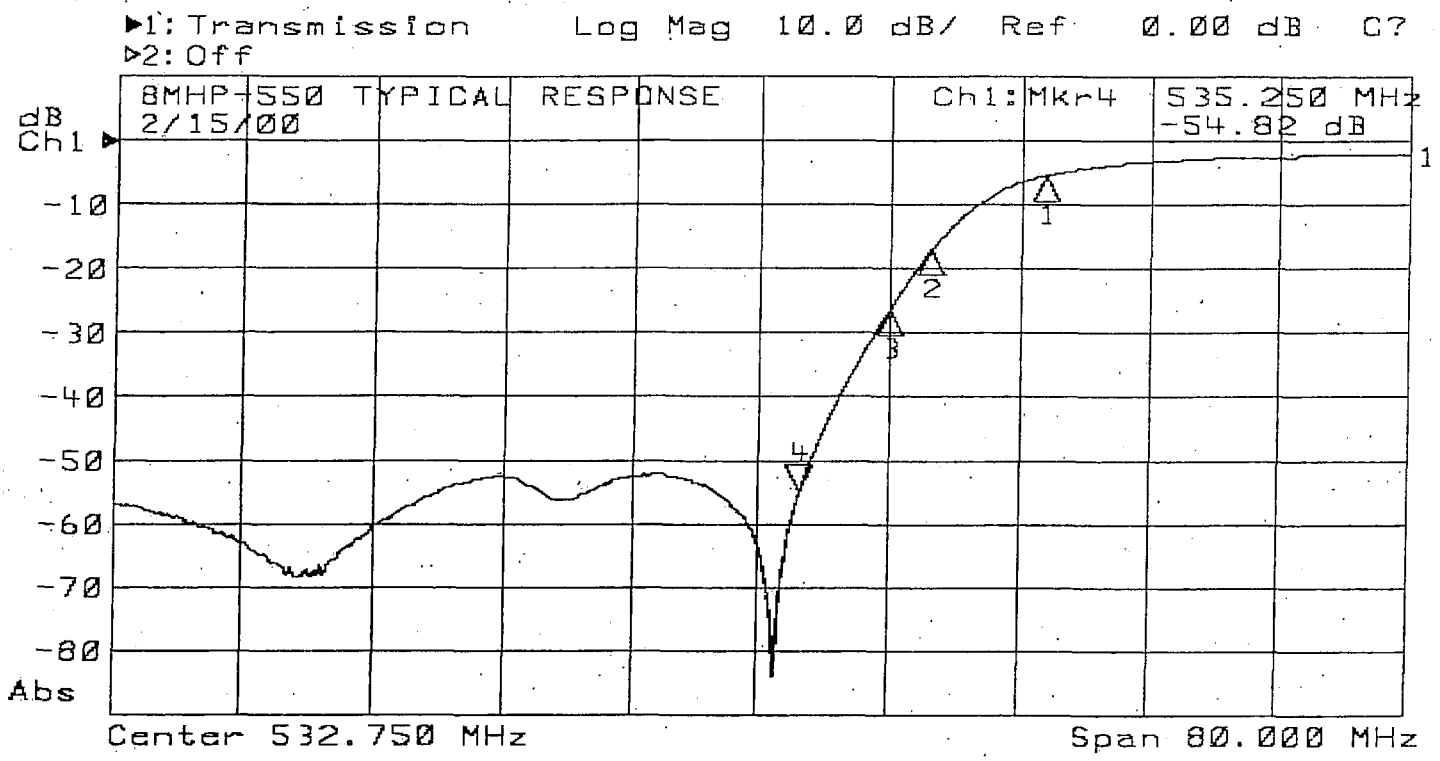
Channel 1 Markers				
k #	Channel #		Frequency	Loss
1	P = 29	Video	253.250	-1.56
2	Q = 30	Video	259.250	-2.66
3	Q = 30	Audio	263.750	-6.14
4	R = 31	Audio	269.750	-42.19
5	S = 32	Video	271.250	-59.98
6	T = 33	Video	277.250	-51.07
7	U = 34	Video	283.250	-58.74

Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				
5				
6				
7				

Customer Approval _____ Date _____

EAGLE COMTRONICS INC.

Model: 8MHP-550



Channel 1 Markers				
Mk #	Channel #		Frequency	Loss
1			550.250	-5.33
2			543.250	-16.98
3			540.750	-26.10
4	NNN = 76	Video	535.250	-54.82

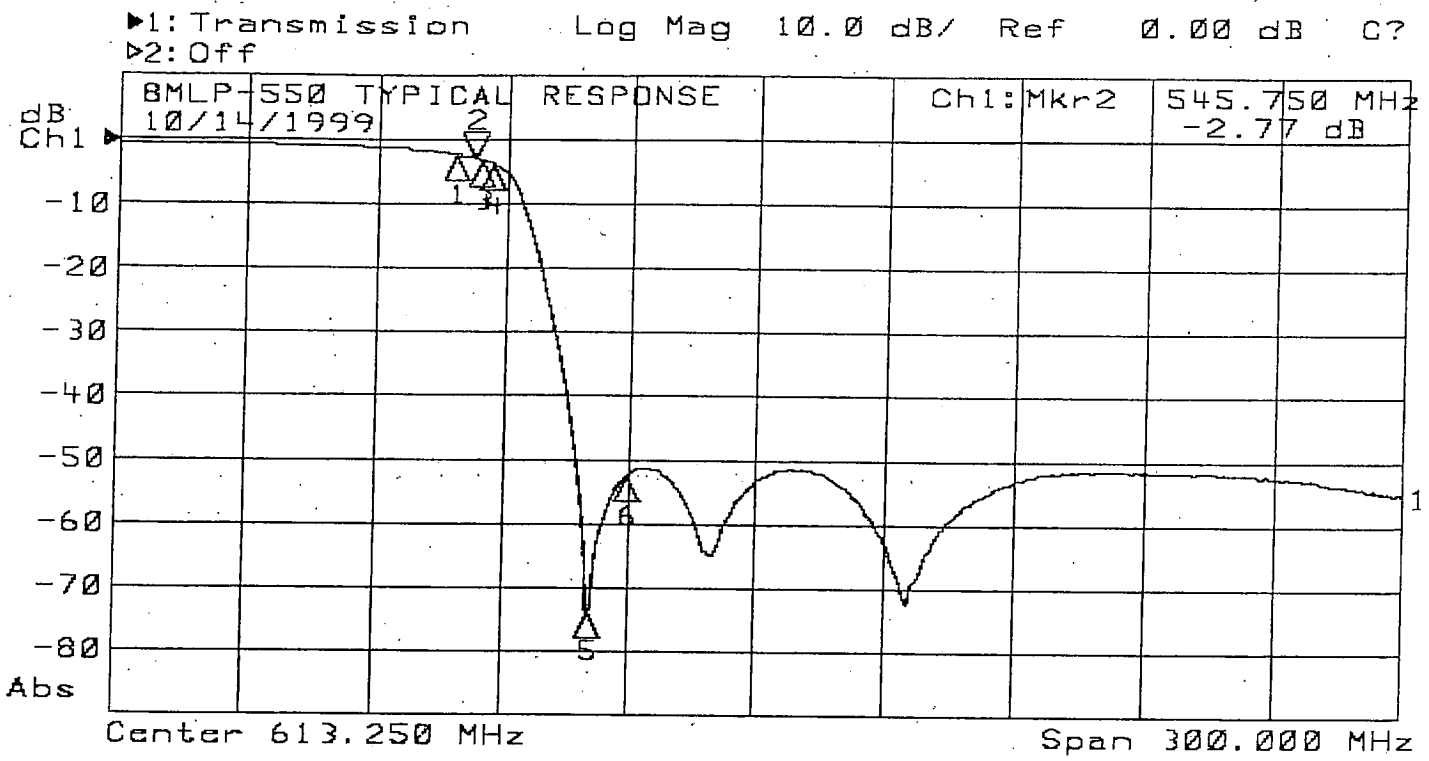
Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				

Eagle Comtronics, Inc Confidential Production Variances May Occur

Customer Approval _____ Date _____

EAGLE COMTRONICS INC.

Model: 8MLP-550



Channel 1 Markers				
Mk #	Channel #		Frequency	Loss
1	000 = 77	Video	541.250	-2.16
2	000 = 77	Audio	545.750	-2.77
3	PPP = 78	Video	547.250	-3.04
4			550.000	-3.66
5			574.000	-73.70
6			583.000	-52.41

Channel 2 Markers				
Mk #	Channel #		Frequency	Loss
1				
2				
3				
4				
5				
6				

Eagle Comtronics, Inc Confidential Production Variances May Occur

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TIME WARNER CABLE - SYRACUSE DIVISION

Headend Tests

System Name : Sayre

HE Location : Round Top Rd.

PAGE 10 MAIN

TIME WARNER CABLE - SYRACUSE DIVISION

Visual Carrier and Aural Carrier Difference Frequency Tests (at Headend)

System Name : Sayre
HE Location : Rount top Rd. ***Date*** : 07/18/2013
Performed By : Derek Cordilione

ACTUAL CHANNEL	CARRIER FREQ	VISUAL FREQUENCY (MHZ)	AURAL FREQUENCY DIFF (MHZ)	ACTUAL CHANNEL	CARRIER FREQ	VISUAL FREQUENCY (MHZ)	AURAL FREQUENCY DIFF (MHZ)
2	55.2500	55.2505	4.4996	DD (40)	319.2625	319.2626	4.5001
3	61.2500			EE (41)	325.2625	325.2623	4.5001
4	67.2500	67.2504	4.5001	FF (42)	331.2750	331.2749	4.5001
5	77.2500	77.2501	4.4999	GG (43)	337.2625	337.2627	4.4996
6	83.2500	83.2501	4.5001	HH (44)	343.2625	343.2627	4.4996
A-5 (95)	91.2500			II (45)	349.2625	349.2626	4.4996
A-4 (96)	97.2500			JJ (46)	355.2625	355.2626	4.5001
A-3 (97)	103.2500			KK (47)	361.2625	361.2625	4.5001
A-2 (98)	109.2750	109.2753	4.5001	LL (48)	367.2625		
A-1 (99)	115.2750			MM (49)	373.2625	373.2624	4.5001
A (14)	121.2625	121.2626	4.5000	NN (50)	379.2625	379.2624	4.5001
B (15)	127.2625	127.2626	4.5001	OO (51)	385.2625	385.2623	4.5001
C (16)	133.2625	133.2630	4.4996	PP (52)	391.2625		
D (17)	139.2500	139.2503	4.5001	QQ (53)	397.2625	397.2623	4.5000
E (18)	145.2500	145.2503	4.5001	RR (54)	403.2500		
F (19)	151.3210	151.3200	4.5000	SS (55)	409.2500	409.2500	4.5001
G (20)	157.2500	157.2502	4.5001	TT (56)	415.2500	415.2500	4.5001
H (21)	163.2500	163.2502	4.5001	UU (57)	421.2500	421.2499	4.5000
I (22)	169.2500			VV (58)	427.2500	427.2499	4.5000
7	175.2500	175.2501	4.5002	WW (59)	433.2500	433.2499	4.5000
8	181.2500	181.2501	4.5002	XX (60)	439.2500	439.2498	4.5001
9	187.2500	187.2505	4.4995	YY (61)	445.2500	445.2498	4.5001
10	193.2500	193.2504	4.4995	ZZ (62)	451.2500		
11	199.2500	199.2504	4.5000	63	457.2500	457.2497	4.5002
12	205.2500	205.2504	4.5001	64	463.2500		
13	211.2500	211.2503	4.5001	65	469.2500	469.2501	4.4995
J (23)	217.2500	217.2503	4.5001	66	475.2500		
K (24)	223.2500	223.2502	4.5001	67	481.2500	481.2500	4.5001
L (25)	229.2625	229.2628	4.5001	68	487.2500		
M (26)	235.2625	235.2628	4.5000	69	493.2500	493.2499	4.5001
N (27)	241.2625	241.2627	4.5000	70	499.2500	499.2498	4.5001
O (28)	247.2625	247.2627	4.5002	71	505.2500		
P (29)	253.2625	253.2626	4.5001	72	511.2500		
Q (30)	259.2625	259.2626	4.5000	73	517.2500		
R (31)	265.2625	265.2625	4.5001	74	523.2500		
S (32)	271.2625			75	529.2500		
T (33)	277.2625	277.2629	4.4996	76	535.2500		
U (34)	283.2625	283.2629	4.5001	77	541.2500		
V (35)	289.2625	289.2629	4.5002	78	547.2500		
W (36)	295.2625	295.2628	4.5005	79	553.2500		
AA (37)	301.2625	301.2628	4.5000	80	559.2500		
BB (38)	307.2625	307.2627	4.5002	81	565.2500		
CC (39)	313.2625	313.2627	4.5002				

PAGE 10 A

TIME WARNER CABLE - SYRACUSE DIVISION

Visual Carrier and Aural Carrier Difference Frequency Tests (at Headend)

System Name : Sayre
HE Location : Waverly ***Date*** : 07/18/2013
Performed By : Derek Cordilione

ACTUAL CHANNEL	CARRIER FREQ	VISUAL FREQUENCY (MHZ)	AURAL FREQUENCY DIFF (MHZ)	ACTUAL CHANNEL	CARRIER FREQ	VISUAL FREQUENCY (MHZ)	AURAL FREQUENCY DIFF (MHZ)
2	55.2500	55.2504	4.4996	DD (40)	319.2625	319.2626	4.5001
3	61.2500			EE (41)	325.2625	325.2623	4.5003
4	67.2500	67.2504	4.5001	FF (42)	331.2750	331.2749	4.5001
5	77.2500	77.2501	4.5001	GG (43)	337.2625	337.2627	4.4995
6	83.2500	83.2501	4.5001	HH (44)	343.2625	343.2627	4.4996
A-5 (95)	91.2500			II (45)	349.2625	349.2626	4.4996
A-4 (96)	97.2500			JJ (46)	355.2625	355.2626	4.5000
A-3 (97)	103.2500			KK (47)	361.2625	361.2625	4.5000
A-2 (98)	109.2750	109.2753	4.5001	LL (48)	367.2625		
A-1 (99)	115.2750			MM (49)	373.2625	373.2625	4.5001
A (14)	121.2625	121.2626	4.5001	NN (50)	379.2625	379.2624	4.5001
B (15)	127.2625	127.2625	4.5001	OO (51)	385.2625	385.2624	4.5000
C (16)	133.2625	133.2630	4.4996	PP (52)	391.2625		
D (17)	139.2500	139.2503	4.5001	QQ (53)	397.2625	397.2623	4.5001
E (18)	145.2500	145.2503	4.5001	RR (54)	403.2500		
F (19)	151.3210	151.3200	4.5001	SS (55)	409.2500	409.2500	4.5002
G (20)	157.2500	157.2502	4.5001	TT (56)	415.2500	415.2500	4.5001
H (21)	163.2500	163.2502	4.5000	UU (57)	421.2500	421.2499	4.5001
I (22)	169.2500			VV (58)	427.2500	427.2499	4.5001
7	175.2500	175.2501	4.5001	WW (59)	433.2500	433.2499	4.5000
8	181.2500	181.2500	4.5000	XX (60)	439.2500	439.2498	4.5001
9	187.2500	187.2505	4.4996	YY (61)	445.2500	445.2498	4.5001
10	193.2500	193.2504	4.4996	ZZ (62)	451.2500		
11	199.2500	199.2504	4.5000	63	457.2500	457.2497	4.5001
12	205.2500	205.2503	4.5000	64	463.2500		
13	211.2500			65	469.2500	469.2500	4.4996
J (23)	217.2500	217.2503	4.5001	66	475.2500		
K (24)	223.2500	223.2502	4.5000	67	481.2500	481.2500	4.5000
L (25)	229.2625	229.2628	4.5001	68	487.2500		
M (26)	235.2625	235.2627	4.5000	69	493.2500	493.2499	4.5001
N (27)	241.2625	241.2627	4.5000	70	499.2500	499.2498	4.5001
O (28)	247.2625	247.2626	4.5001	71	505.2500		
P (29)	253.2625	253.2626	4.5000	72	511.2500		
Q (30)	259.2625	259.2626	4.5000	73	517.2500		
R (31)	265.2625	265.2625	4.5001	74	523.2500		
S (32)	271.2625			75	529.2500		
T (33)	277.2625	277.2629	4.4997	76	535.2500		
U (34)	283.2625	283.2629	4.5000	77	541.2500		
V (35)	289.2625	289.2628	4.5001	78	547.2500		
W (36)	295.2625	295.2628	4.5003	79	553.2500		
AA (37)	301.2625	301.2627	4.5001	80	559.2500		
BB (38)	307.2625	307.2627	4.5001	81	565.2500		
CC (39)	313.2625	313.2626	4.5000				

PAGE 11 MAIN

TIME WARNER CABLE - SYRACUSE DIVISION

Visual / Aural Level Difference Test (at Headend)

System Name	: Sayre	***Meter / Serial Number***	: 6033315
HE Location	: Round Top Rd.	***Performed By***	: Derek Cordilione
Date	: 07/18/2013	***Time***	: 07:21:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	19.6	6.2		13.4	DD (40)	319.2625	20.5	6.4		14.1
3	61.2500	N/A	N/A		N/A	EE (41)	325.2625	21.1	7.6		13.5
4	67.2500	19.7	6.1		13.6	FF (42)	331.2750	22.0	7.6		14.4
5	77.2500	19.6	5.9		13.7	GG (43)	337.2625	20.8	7.6		13.2
6	83.2500	19.6	5.3		14.3	HH (44)	343.2625	21.1	7.2		13.9
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	21.3	7.9		13.4
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	21.3	7.6		13.7
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	21.0	7.3		13.7
A-2 (98)	109.2750	19.9	5.6		14.3	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	21.2	7.4		13.8
A (14)	121.2625	19.8	5.9		13.9	NN (50)	379.2625	21.3	7.8		13.5
B (15)	127.2625	19.8	5.6		14.2	OO (51)	385.2625	21.5	7.7		13.8
C (16)	133.2625	19.6	5.4		14.2	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	20.2	6.0		14.2	QQ (53)	397.2625	20.8	7.5		13.3
E (18)	145.2500	19.9	5.4		14.5	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	20.2	6.1		14.1	SS (55)	409.2500	21.0	7.4		13.6
G (20)	157.2500	20.2	5.6		14.6	TT (56)	415.2500	21.2	7.7		13.5
H (21)	163.2500	19.6	5.4		14.2	UU (57)	421.2500	21.4	7.5		13.9
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	21.2	7.6		13.6
7	175.2500	20.2	5.9		14.3	WW (59)	433.2500	21.2	8.1		13.1
8	181.2500	19.8	5.4		14.4	XX (60)	439.2500	21.5	7.5		14
9	187.2500	19.9	6.1		13.8	YY (61)	445.2500	21.1	7.2		13.9
10	193.2500	20.0	6.0		14	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	20.1	6.3		13.8	63	457.2500	21.4	7.6		13.8
12	205.2500	19.8	5.7		14.1	64	463.2500	N/A	N/A		N/A
13	211.2500	19.4	5.8		13.6	65	469.2500	21.5	7.9		13.6
J (23)	217.2500	19.7	5.5		14.2	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	19.9	5.5		14.4	67	481.2500	20.8	7.3		13.5
L (25)	229.2625	19.4	6.2		13.2	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	19.3	6.1		13.2	69	493.2500	20.9	6.6		14.3
N (27)	241.2625	19.5	6.2		13.3	70	499.2500	20.4	7.1		13.3
O (28)	247.2625	19.9	5.5		14.4	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	20.4	7.0		13.4	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	20.3	7.0		13.3	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	19.9	6.2		13.7	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	19.9	6.2		13.7	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	20.1	6.3		13.8	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	19.9	6.1		13.8	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	19.9	6.0		13.9	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	20.6	6.6		14	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	20.3	6.5		13.8	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	20.6	6.5		14.1						

Min Channel	:	M(26)	19.3
Max Channel	:	FF(42)>	22.0
Peak to Valley	:	2.7	

PAGE 11 A

TIME WARNER CABLE - SYRACUSE DIVISION

Visual / Aural Level Difference Test (at Headend)

System Name	: Sayre	***Meter / Serial Number***	: 6033315
HE Location	: Waverly	***Performed By***	: Derek Cordilione
Date	: 07/18/2013	***Time***	: 07:23:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	19.4	5.6		13.8	DD (40)	319.2625	19.8	5.1		14.7
3	61.2500	19.4	5.4		14	EE (41)	325.2625	19.1	5.6		13.5
4	67.2500	19.0	5.2		13.8	FF (42)	331.2750	20.0	6.6		13.4
5	77.2500	19.5	5.8		13.7	GG (43)	337.2625	19.5	5.6		13.9
6	83.2500	19.5	5.1		14.4	HH (44)	343.2625	18.9	4.8		14.1
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	19.0	5.9		13.1
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	20.0	6.0		14
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	19.5	5.4		14.1
A-2 (98)	109.2750	19.4	5.3		14.1	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	19.8	6.1		13.7
A (14)	121.2625	19.6	5.2		14.4	NN (50)	379.2625	19.7	5.6		14.1
B (15)	127.2625	19.6	5.6		14	OO (51)	385.2625	19.4	6.3		13.1
C (16)	133.2625	19.9	5.0		14.9	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	19.7	5.5		14.2	QQ (53)	397.2625	19.7	5.7		14
E (18)	145.2500	19.5	5.4		14.1	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	19.5	5.4		14.1	SS (55)	409.2500	19.8	6.4		13.4
G (20)	157.2500	19.8	5.3		14.5	TT (56)	415.2500	20.2	5.7		14.5
H (21)	163.2500	19.4	5.3		14.1	UU (57)	421.2500	19.3	6.5		12.8
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	20.4	7.2		13.2
7	175.2500	19.4	4.7		14.7	WW (59)	433.2500	20.3	5.9		14.4
8	181.2500	19.6	5.0		14.6	XX (60)	439.2500	20.1	6.5		13.6
9	187.2500	19.6	6.3		13.3	YY (61)	445.2500	20.5	6.3		14.2
10	193.2500	19.5	5.3		14.2	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	19.5	6.0		13.5	63	457.2500	20.0	6.7		13.3
12	205.2500	19.4	5.6		13.8	64	463.2500	N/A	N/A		N/A
13	211.2500	N/A	N/A		N/A	65	469.2500	20.8	6.7		14.1
J (23)	217.2500	19.5	5.9		13.6	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	20.0	6.0		14	67	481.2500	20.0	6.2		13.8
L (25)	229.2625	19.9	5.5		14.4	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	19.8	6.0		13.8	69	493.2500	18.9	5.1		13.8
N (27)	241.2625	19.9	6.3		13.6	70	499.2500	19.1	5.9		13.2
O (28)	247.2625	20.0	5.2		14.8	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	19.6	5.6		14	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	19.2	5.8		13.4	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	19.6	4.7		14.9	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	20.1	6.6		13.5	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	20.2	5.8		14.4	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	19.7	5.4		14.3	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	20.4	5.8		14.6	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	20.1	4.8		15.3	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	19.4	4.9		14.5	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	19.7	5.7		14						

Min Channel	:	HH(44)	18.9
Max Channel	:	65	20.8
Peak to Valley	:	1.9	

TIME WARNER CABLE - SYRACUSE DIVISION

System Name	:	Sayre
System Test Point #	:	1
Hub Name	:	Sayre
Location	:	2 Edward st Athens, PA
Map Number	:	114-113
Pole Number	:	102
D.T. Value	:	9420
OR Number	:	SA045
GNA Cascade	:	1
LE Cscade	:	2

TESTPOINT 1, PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL
VISUAL / AURAL LEVEL DIFFERENCE
(at Test Point, at the end of a 100' Drop)

System Name	: Sayre	***Test Location***	: 2 Edward st Athens, PA
Date	: 08/02/2013	***Time***	: 01:07:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	13.40	-0.30		13.7	DD (40)	319.2625	12.40	-2.60		15
3	61.2500	N/A	N/A		N/A	EE (41)	325.2625	12.70	-1.60		14.3
4	67.2500	13.40	-0.90		14.3	FF (42)	331.2750	13.80	-1.10		14.9
5	77.2500	13.00	-1.30		14.3	GG (43)	337.2625	12.50	-1.10		13.6
6	83.2500	12.60	-1.80		14.4	HH (44)	343.2625	12.80	-1.70		14.5
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	13.30	-0.70		14
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	13.10	-0.70		13.8
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	13.30	-0.90		14.2
A-2 (98)	109.2750	12.70	-2.10		14.8	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	13.50	-1.10		14.6
A (14)	121.2625	12.60	-2.30		14.9	NN (50)	379.2625	13.10	-0.70		13.8
B (15)	127.2625	12.50	-2.00		14.5	OO (51)	385.2625	13.10	-0.60		13.7
C (16)	133.2625	12.20	-2.00		14.2	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	13.40	-1.20		14.6	QQ (53)	397.2625	13.30	-0.50		13.8
E (18)	145.2500	N/A	N/A		N/A	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	13.80	-0.80		14.6	SS (55)	409.2500	14.10	-0.20		14.3
G (20)	157.2500	13.60	-1.40		15	TT (56)	415.2500	14.10	-0.20		14.3
H (21)	163.2500	13.10	-1.50		14.6	UU (57)	421.2500	13.90	-0.40		14.3
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	13.60	-0.60		14.2
7	175.2500	14.40	-1.20		15.6	WW (59)	433.2500	13.70	-0.60		14.3
8	181.2500	13.60	-1.10		14.7	XX (60)	439.2500	14.00	-1.10		15.1
9	187.2500	13.30	-0.70		14	YY (61)	445.2500	13.50	-1.10		14.6
10	193.2500	14.10	-0.60		14.7	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	14.00	-0.70		14.7	63	457.2500	12.50	-3.10		15.6
12	205.2500	13.80	-0.90		14.7	64	463.2500	N/A	N/A		N/A
13	211.2500	13.80	-0.90		14.7	65	469.2500	11.60	-2.20		13.8
J (23)	217.2500	14.10	-0.90		15	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	13.40	-1.60		15	67	481.2500	11.40	-1.90		13.3
L (25)	229.2625	13.10	-1.10		14.2	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	12.30	-1.00		13.3	69	493.2500	11.70	-2.90		14.6
N (27)	241.2625	12.80	-1.60		14.4	70	499.2500	11.40	-3.00		14.4
O (28)	247.2625	12.30	-2.60		14.9	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	13.10	-0.90		14	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	12.40	-1.10		13.5	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	11.80	-2.50		14.3	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	12.10	-2.10		14.2	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	12.30	-2.00		14.3	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	12.10	-2.10		14.2	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	12.00	-2.60		14.6	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	12.40	-2.40		14.8	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	12.00	-1.80		13.8	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	12.40	-2.10		14.5						

Min Channel	:	67	11.400
Max Channel	:	7	14.400
Peak to Valley	:	3	

TESTPOINT 1, PAGE 3

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL RESPONSE TEST
CARRIER - TO - NOISE TEST
COHERENT DISTURBANCES TEST
LOW FREQUENCY DISTURBANCES TEST

System Name : Sayre ***Date*** : 7/17/2013

Performed By : Derek Cordilione

Location : 2 Edward st Athens, PA

Note: Make Measurements through a 100 ft. test drop cable without converter.

CHANNEL NUMBER	IN CHANNEL RESPONSE	CARRIER TO NOISE RATIO	DISTORTIONS	CSO	HUM
	(+/- DB)	(DB)	(-DBC) CTB		(%)
2	0.60	51.3	66.0	66.0	0.6
14	0.30	51.9	64.5	66.1	
9	0.30	51.2	65.0	65.5	
23	0.15	50.9	64.2	65.1	
37	0.10	50.7	65.4	65.2	
44	0.35	50.8	62.9	65.8	
56	0.30	52.1	66.2	66.0	
61	0.40	52.1	66.0	66.9	
69	0.20	51.3	66.2	65.9	

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL FREQUENCY RESPONSE TEST
(76.605) (a) (6)

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

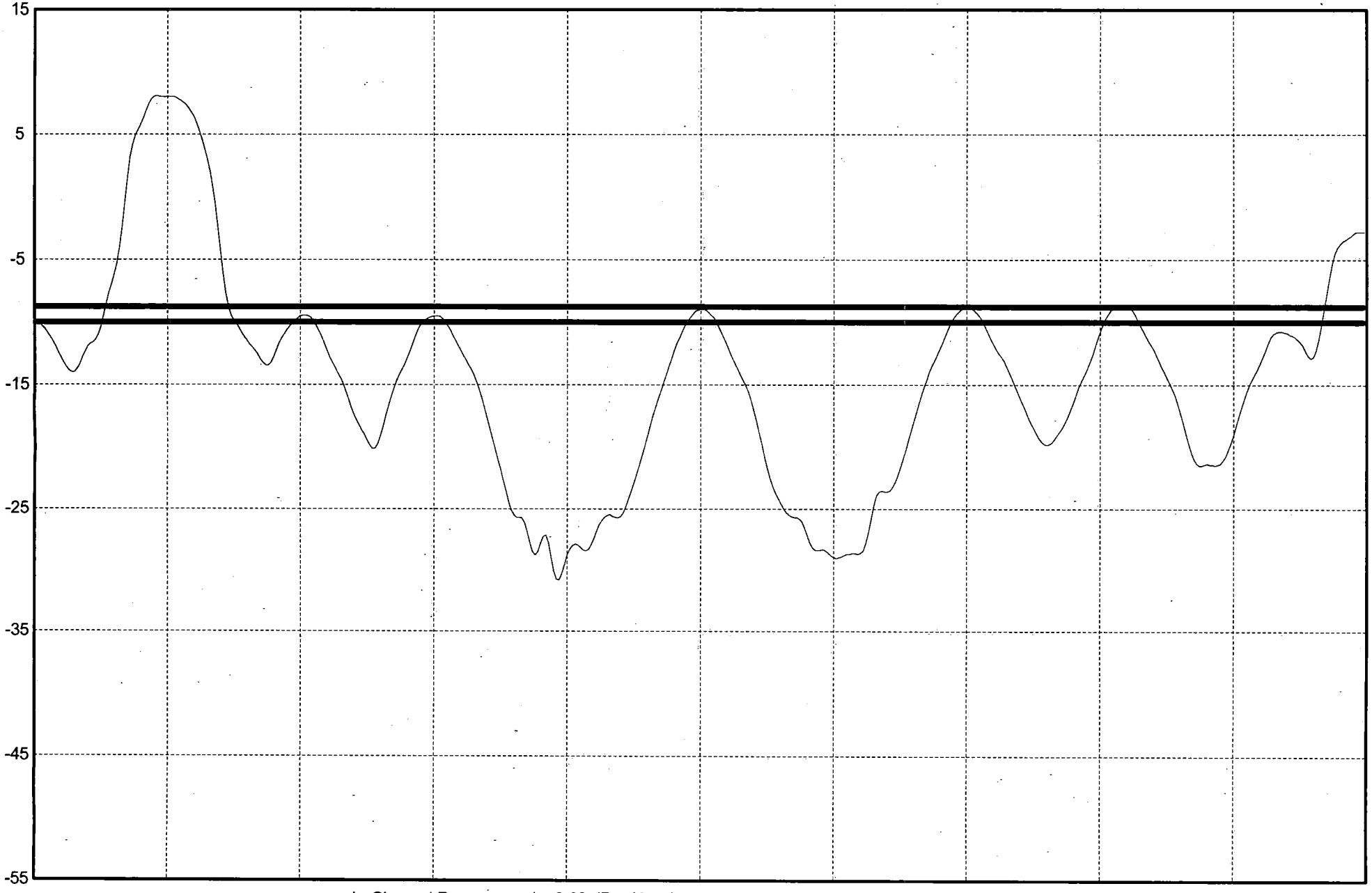
Location : 2 Edward st Athens, PA

(SEE THE ATTACHED SWEEP TRACES)

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH2-ICR Mode : FR
Date : 17/07/13 Time : 05:29:57 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 2 CF: 55.250 MHz SPAN: 5 MHz

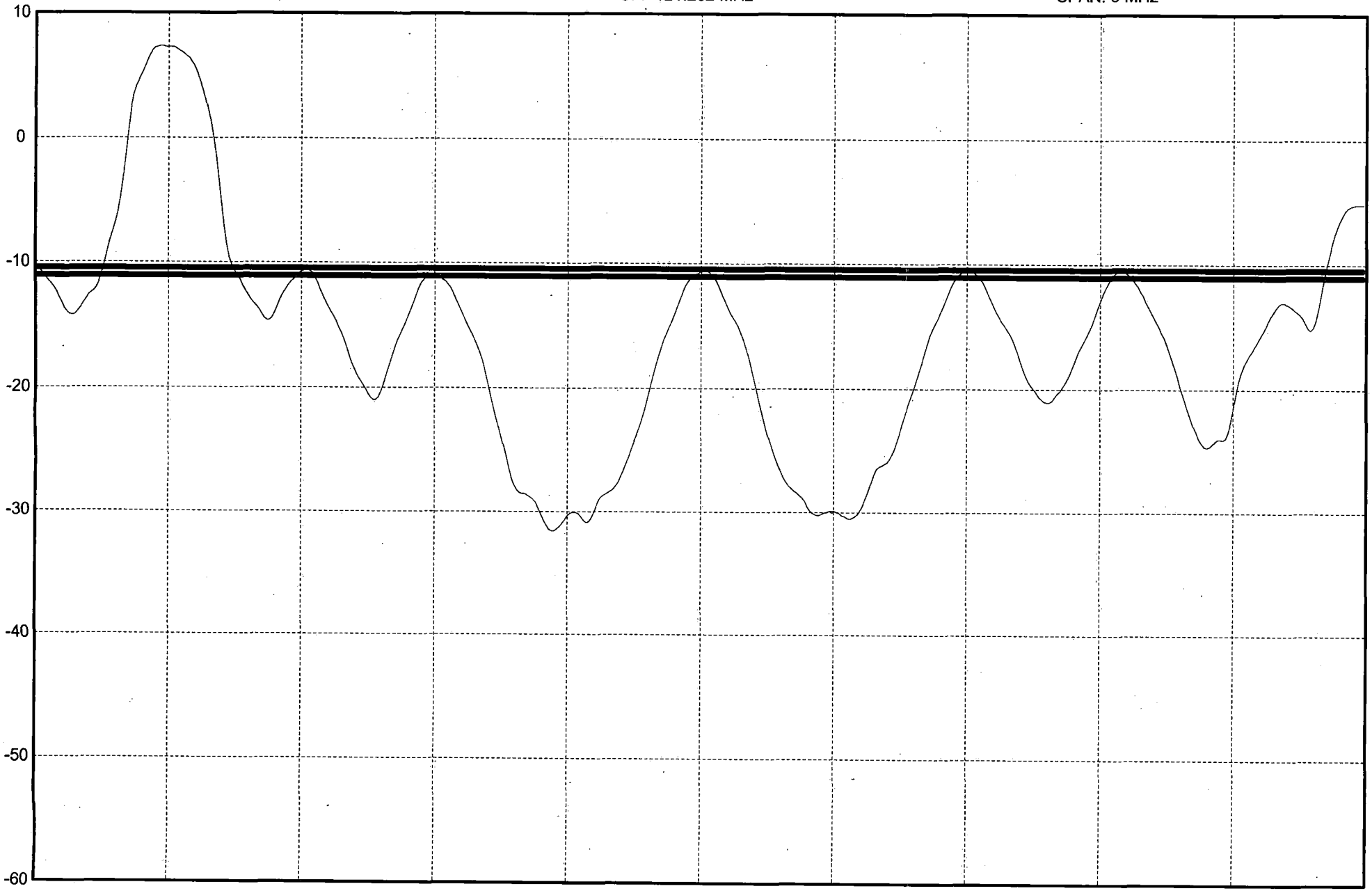


In-Channel Response: +/- 0.60 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH14-ICR Mode : FR
Date : 17/07/13 Time : 05:30:57 Temp 30 C

ATT: 10 dB
dBmV Video Channel: 14 CF: 121.262 MHz SPAN: 5 MHz

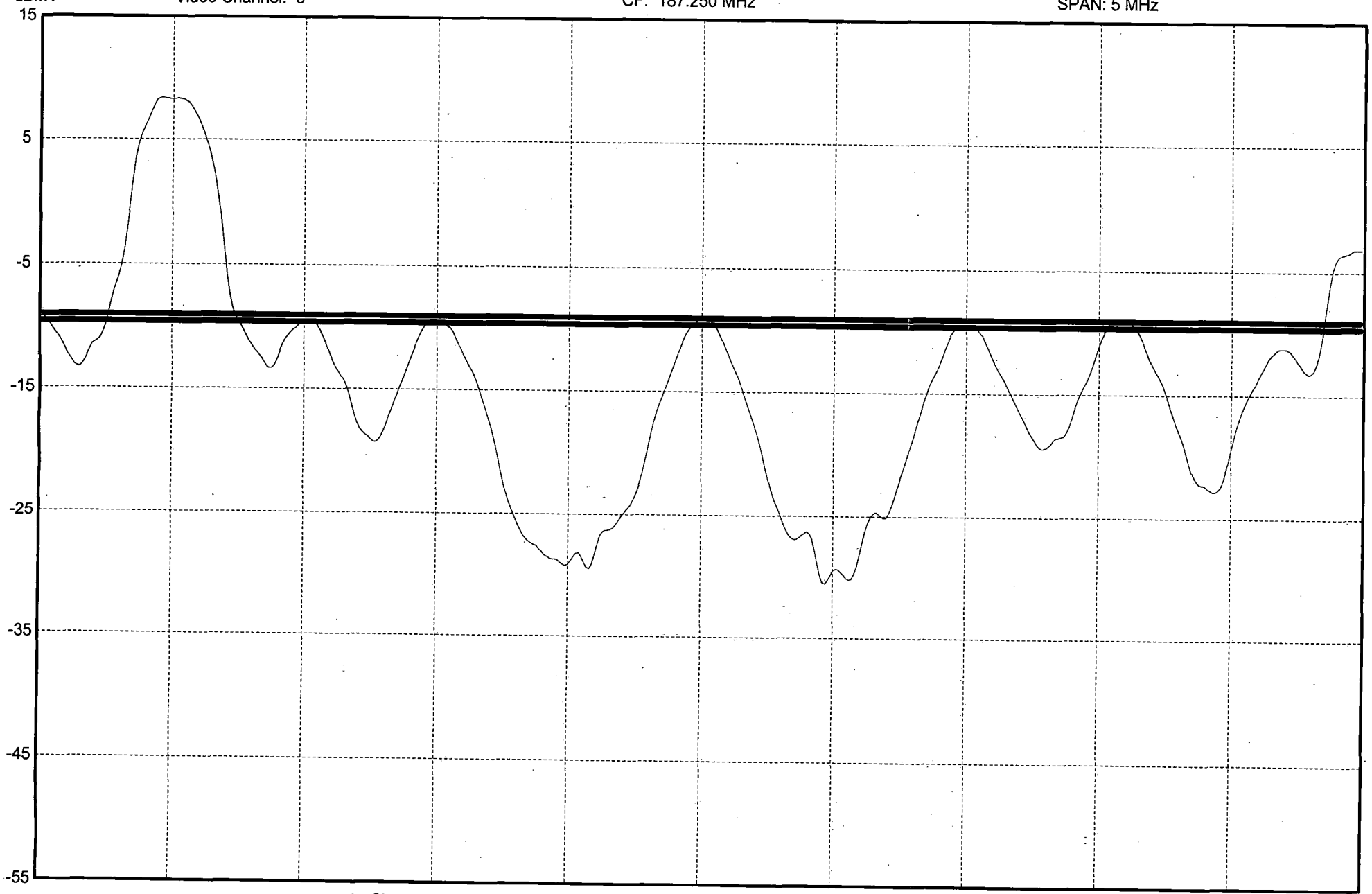


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH9-ICR Mode : FR
Date : 17/07/13 Time : 05:32:19 Temp 27 C

ATT: 15 dB
dBmV Video Channel: 9 CF: 187.250 MHz SPAN: 5 MHz

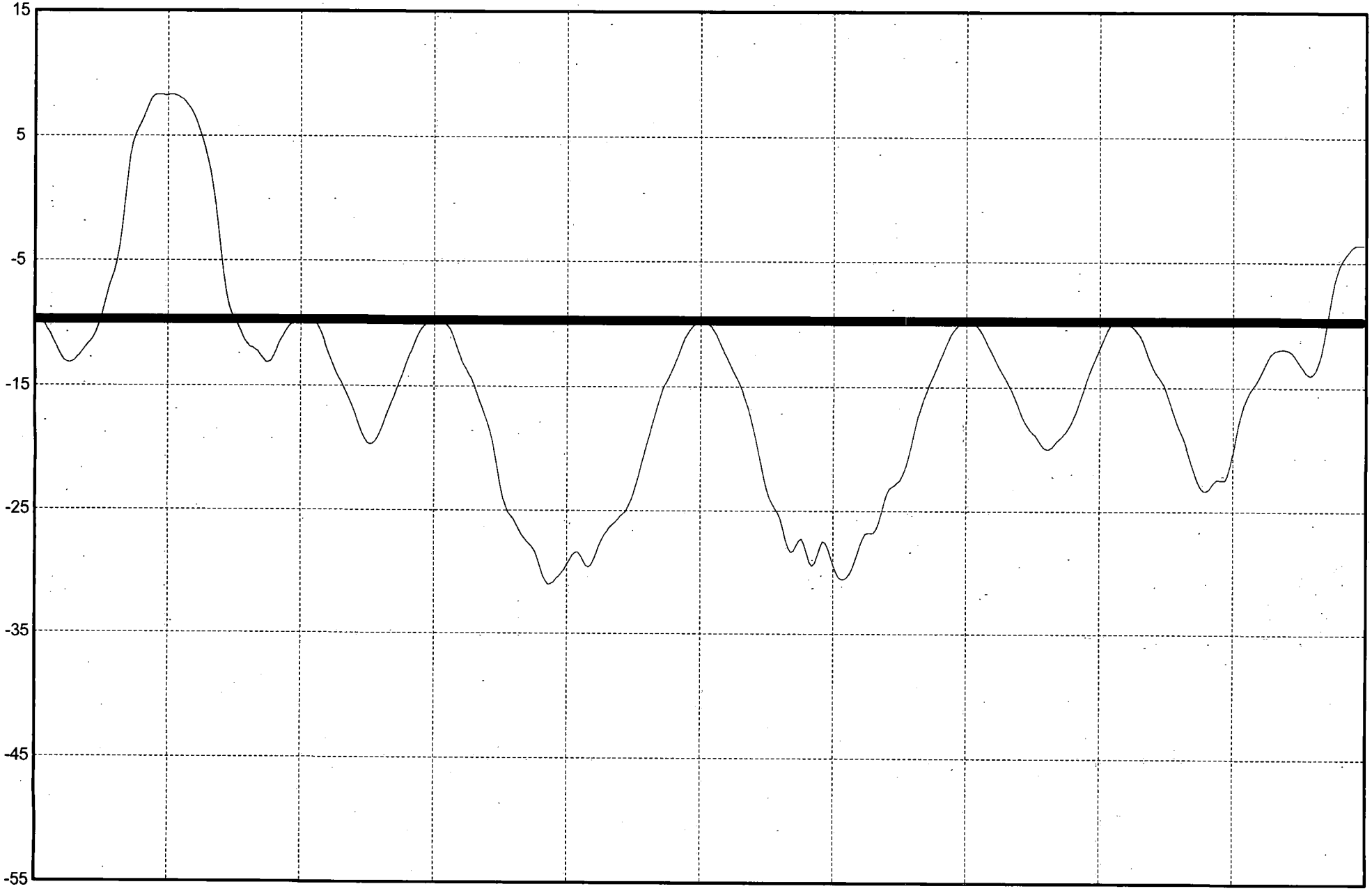


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH23-ICR Mode : FR
Date : 17/07/13 Time : 05:33:50 Temp 27 C

ATT: 15 dB
dBmV Video Channel: 23 CF: 217.250 MHz SPAN: 5 MHz

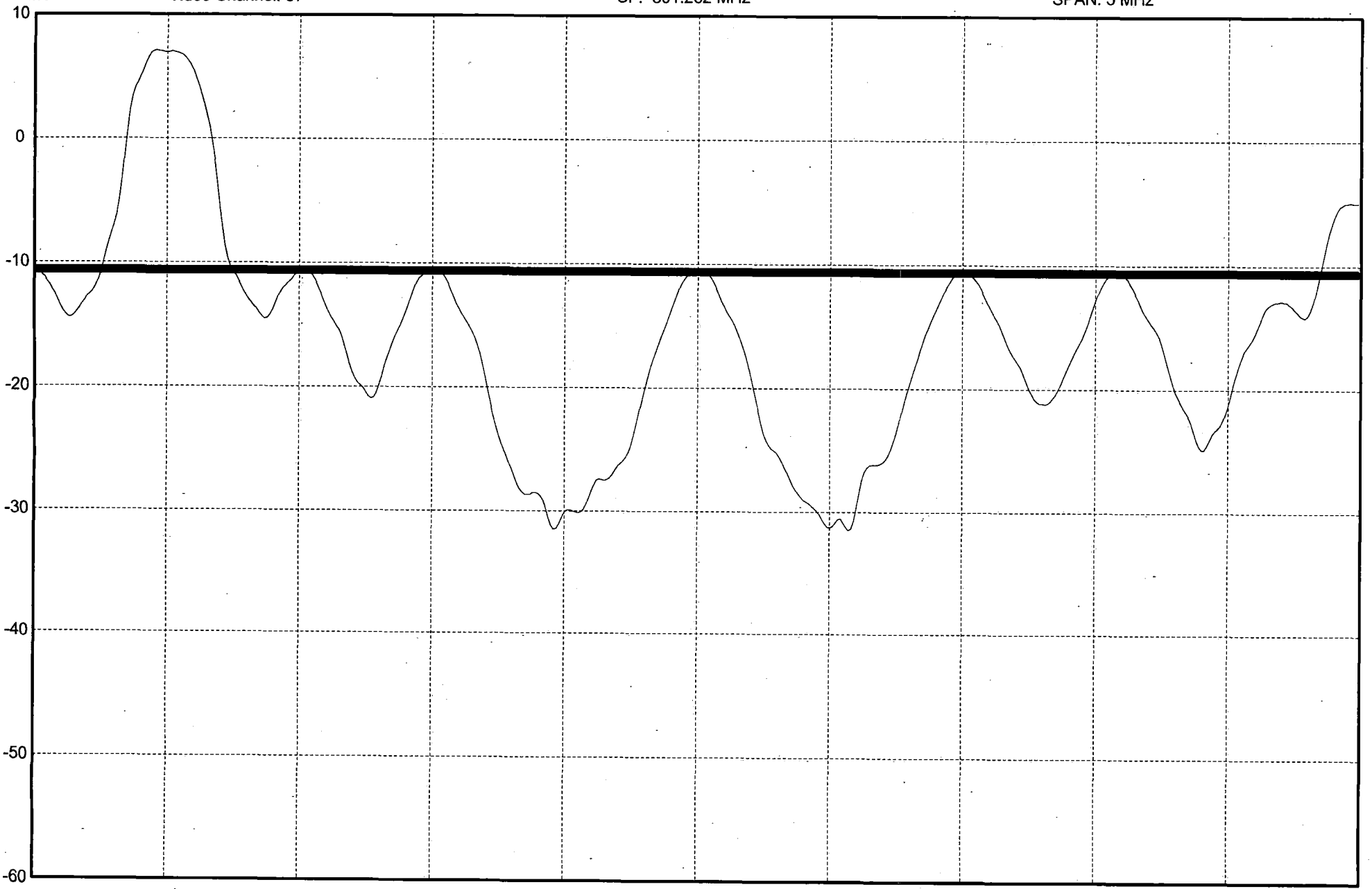


In-Channel Response: +/- 0.15 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH37 Mode : FR
Date : 17/07/13 Time : 05:34:48 Temp 27 C

ATT: 10 dB
dBmV Video Channel: 37 CF: 301.262 MHz SPAN: 5 MHz

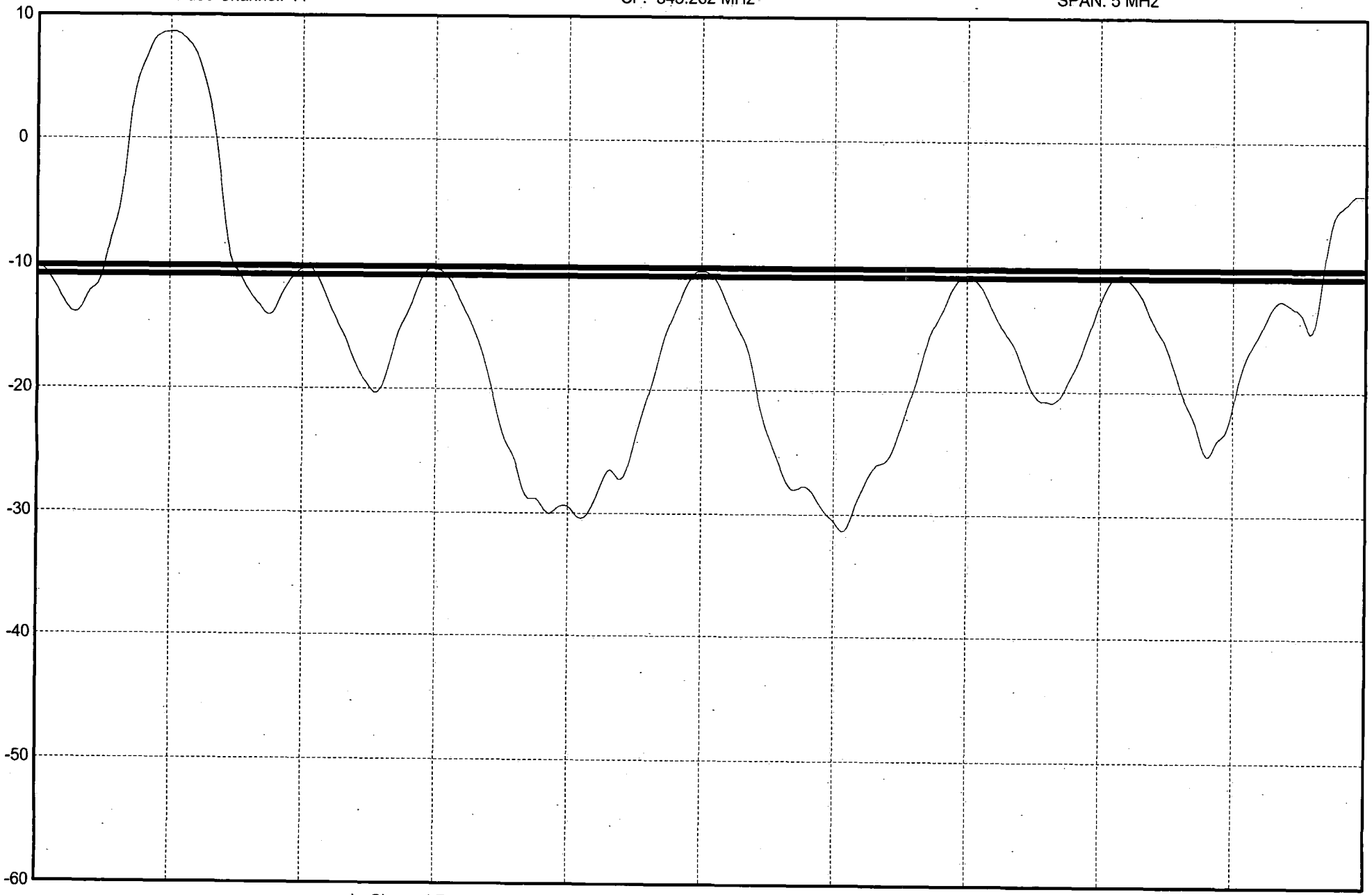


In-Channel Response: +/- 0.10 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH44-ICR Mode : FR
Date : 17/07/13 Time : 05:37:14 Temp 27 C

ATT: 10 dB
dBmV Video Channel: 44 CF: 343.262 MHz SPAN: 5 MHz

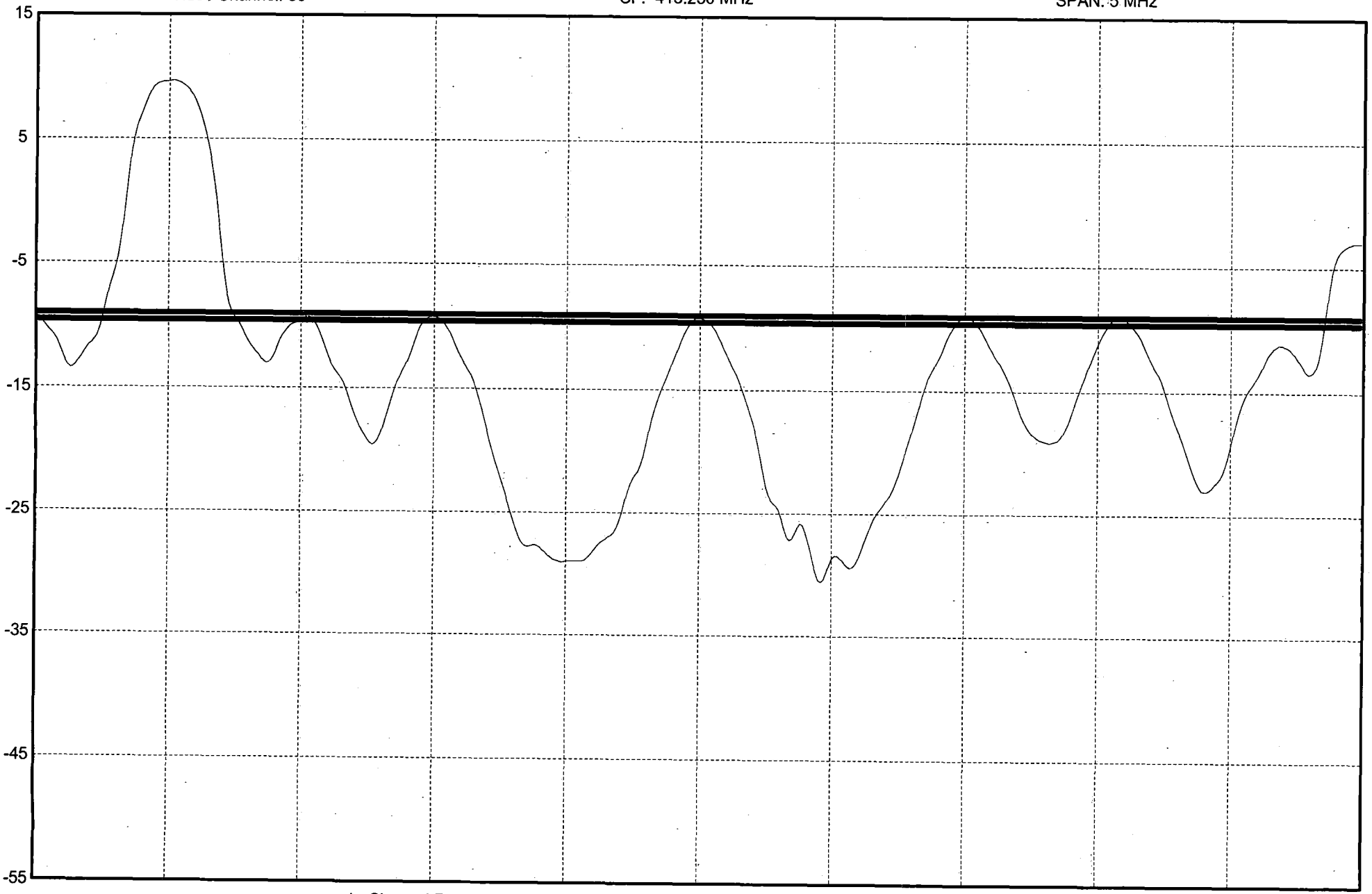


In-Channel Response: +/- 0.35 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH56-ICR Mode : FR
Date : 17/07/13 Time : 05:38:43 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 56 CF: 415.250 MHz SPAN: 5 MHz

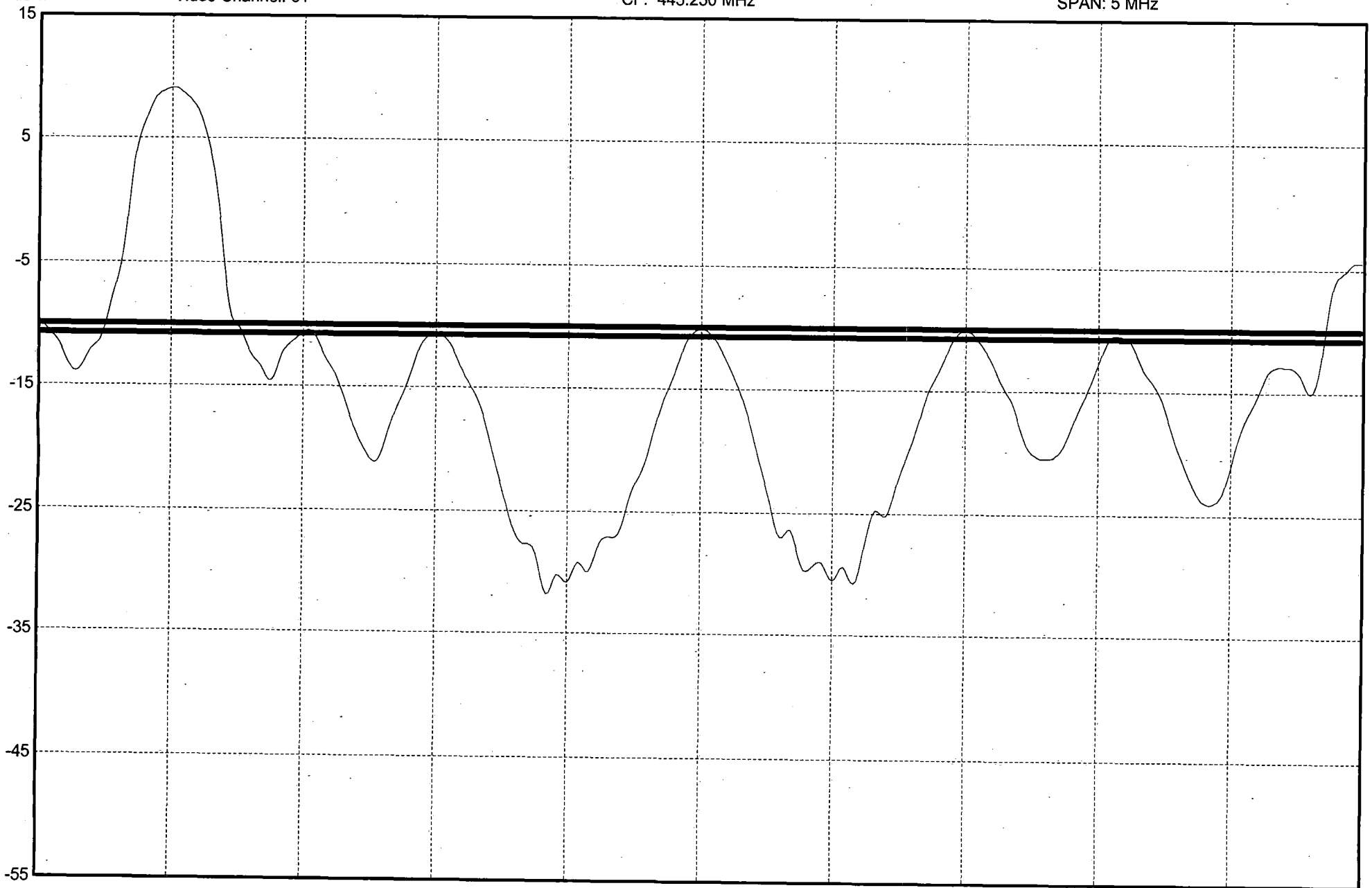


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH61-ICR Mode : FR
Date : 17/07/13 Time : 05:39:44 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 61 CF: 445.250 MHz SPAN: 5 MHz

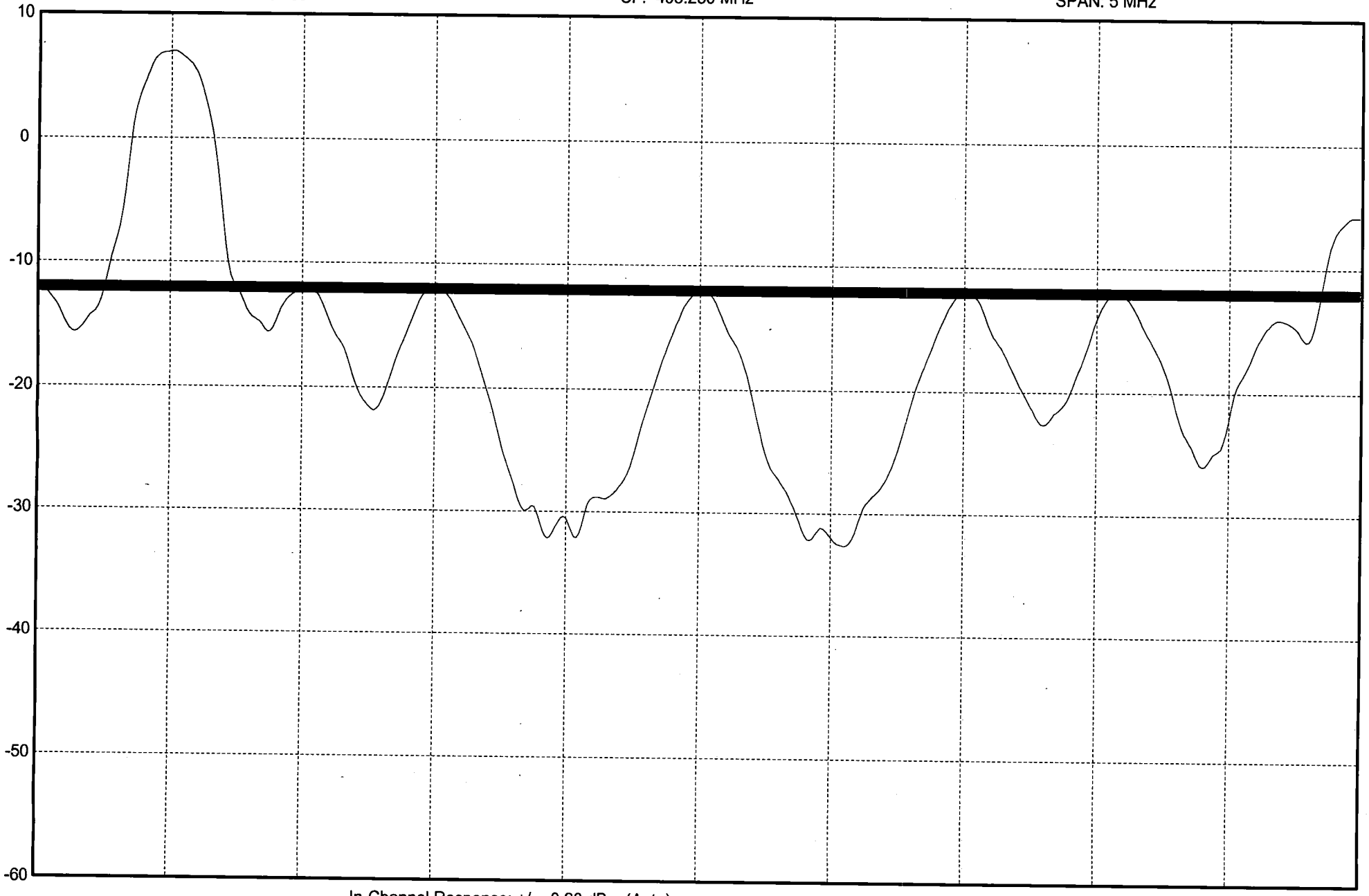


In-Channel Response: +/- 0.40 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH69 Mode : FR
Date : 17/07/13 Time : 05:40:40 Temp 28 C

ATT: 10 dB
dBmV Video Channel: 69 CF: 493.250 MHz SPAN: 5 MHz

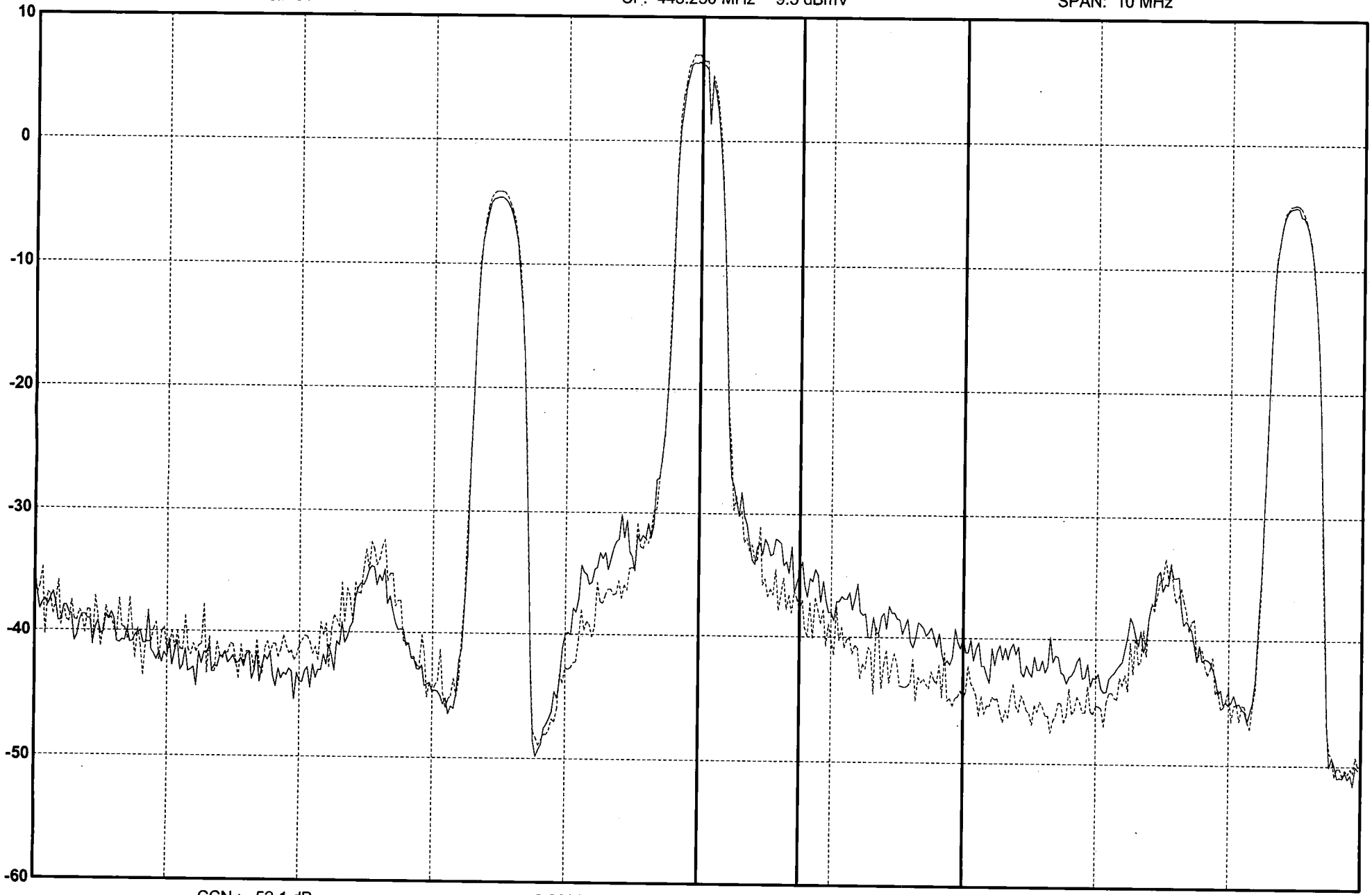


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH61-CN Mode : DIST
Date : 18/07/13 Time : 04:00:25 Temp 28 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 61 CF: 445.250 MHz 9.5 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 52.1 dB
CSO : 66.9 dB
CTB : 66.0 dB

2.0000 MHz
0.7500 MHz
0.0000 MHz

4.2 dB
4.1 dB
3.5 dB

Average 2

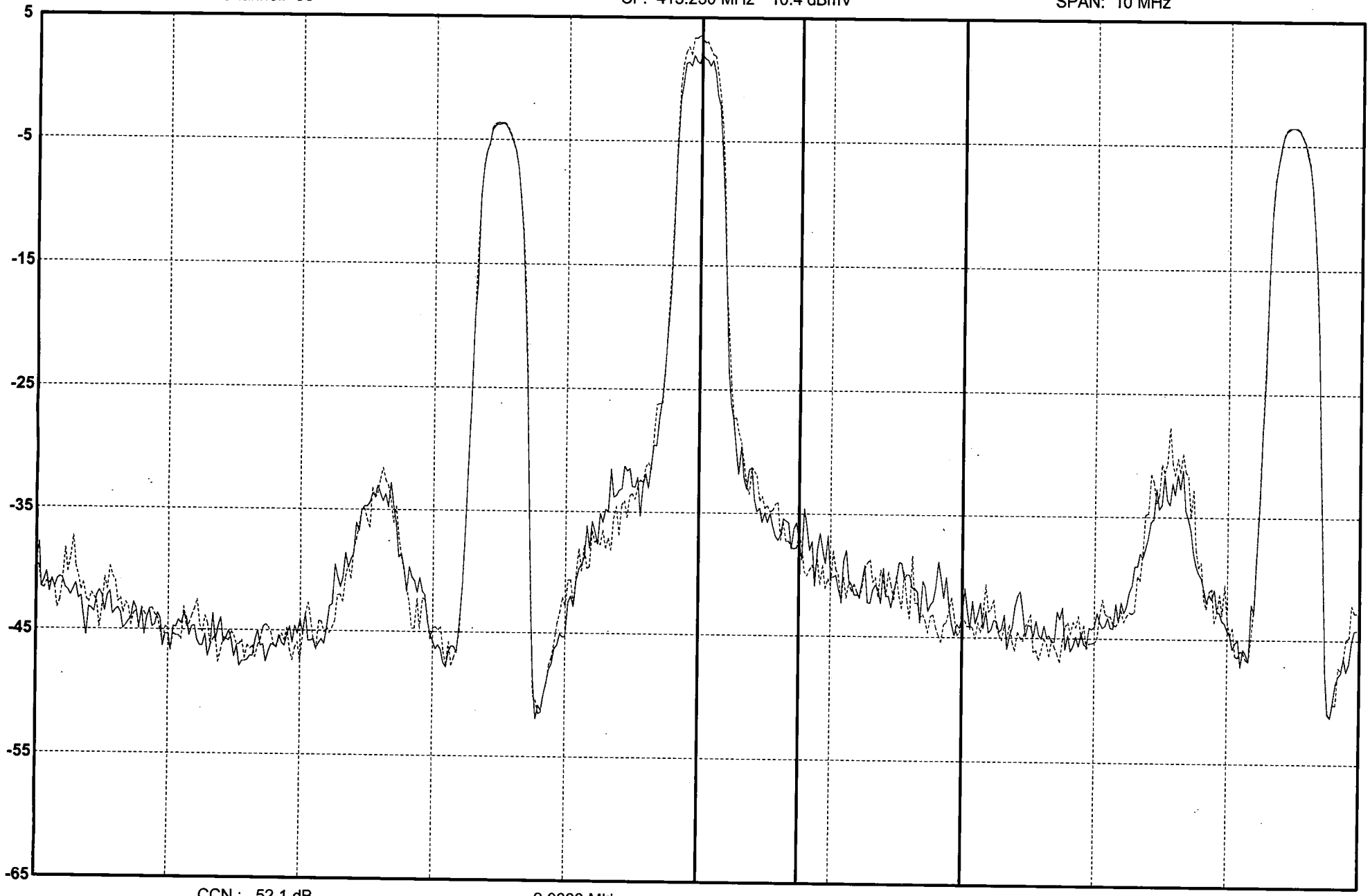
Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH56-CSO Mode : DIST
Date : 18/07/13 Time : 03:58:45 Temp 28 C

ATT: 5 dB OFS: 0 dB
dBmV Video Channel: 56

CF: 415.250 MHz 10.4 dBmV

Field : 1 Line : 23
SPAN: 10 MHz



CCN : 52.1 dB
CSO : 66.0 dB
CTB : 66.2 dB

2.0000 MHz
0.7500 MHz
0.0000 MHz

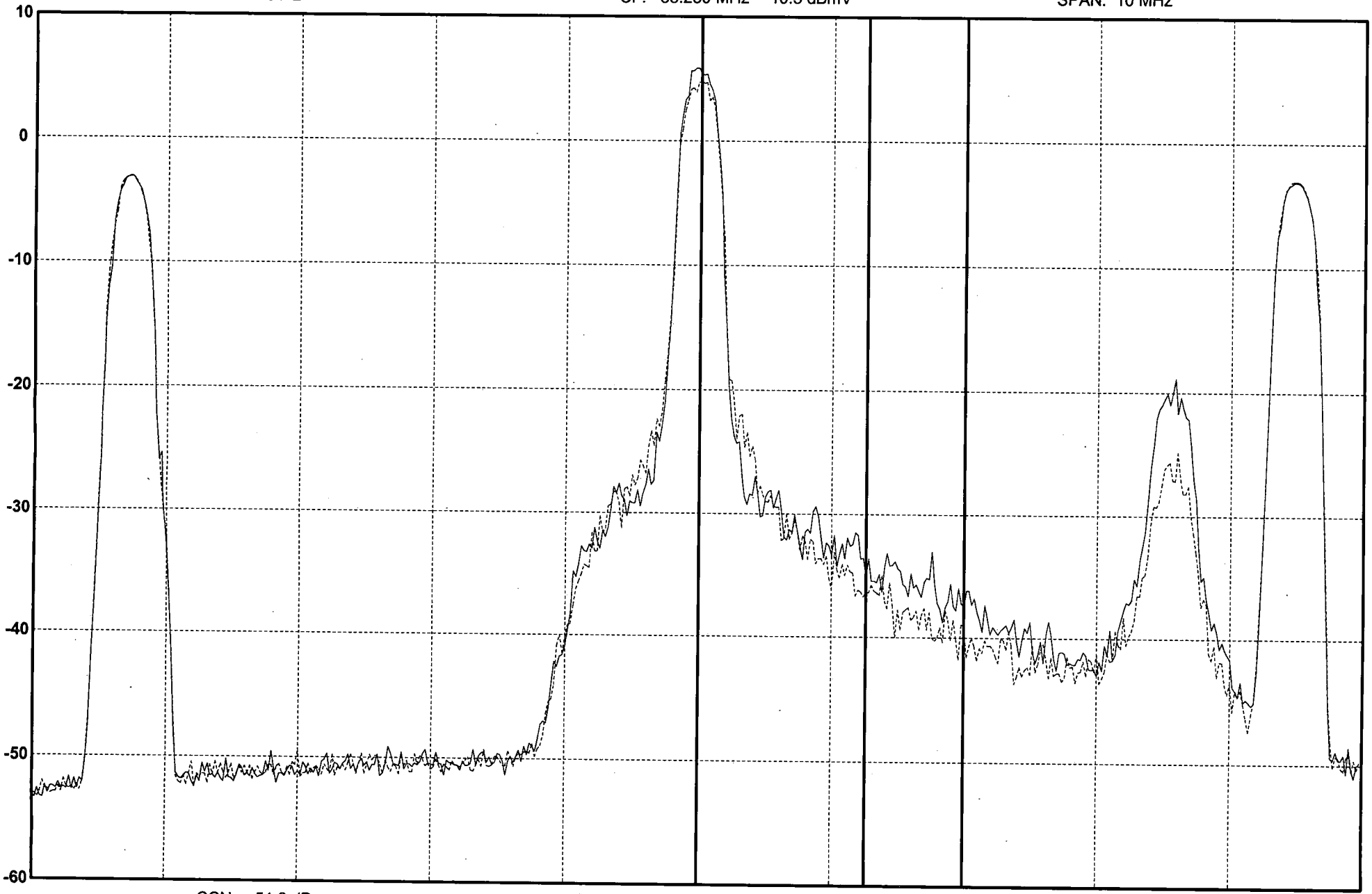
1.4 dB
1.1 dB
1.1 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH2-CTB Mode : DIST
Date : 18/07/13 Time : 03:49:07 Temp 28 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 2
CF: 55.250 MHz 10.3 dBmV
Field : 1 Line : 23
SPAN: 10 MHz



CCN : 51.3 dB
CSO : 66.0 dB
CTB : 66.0 dB

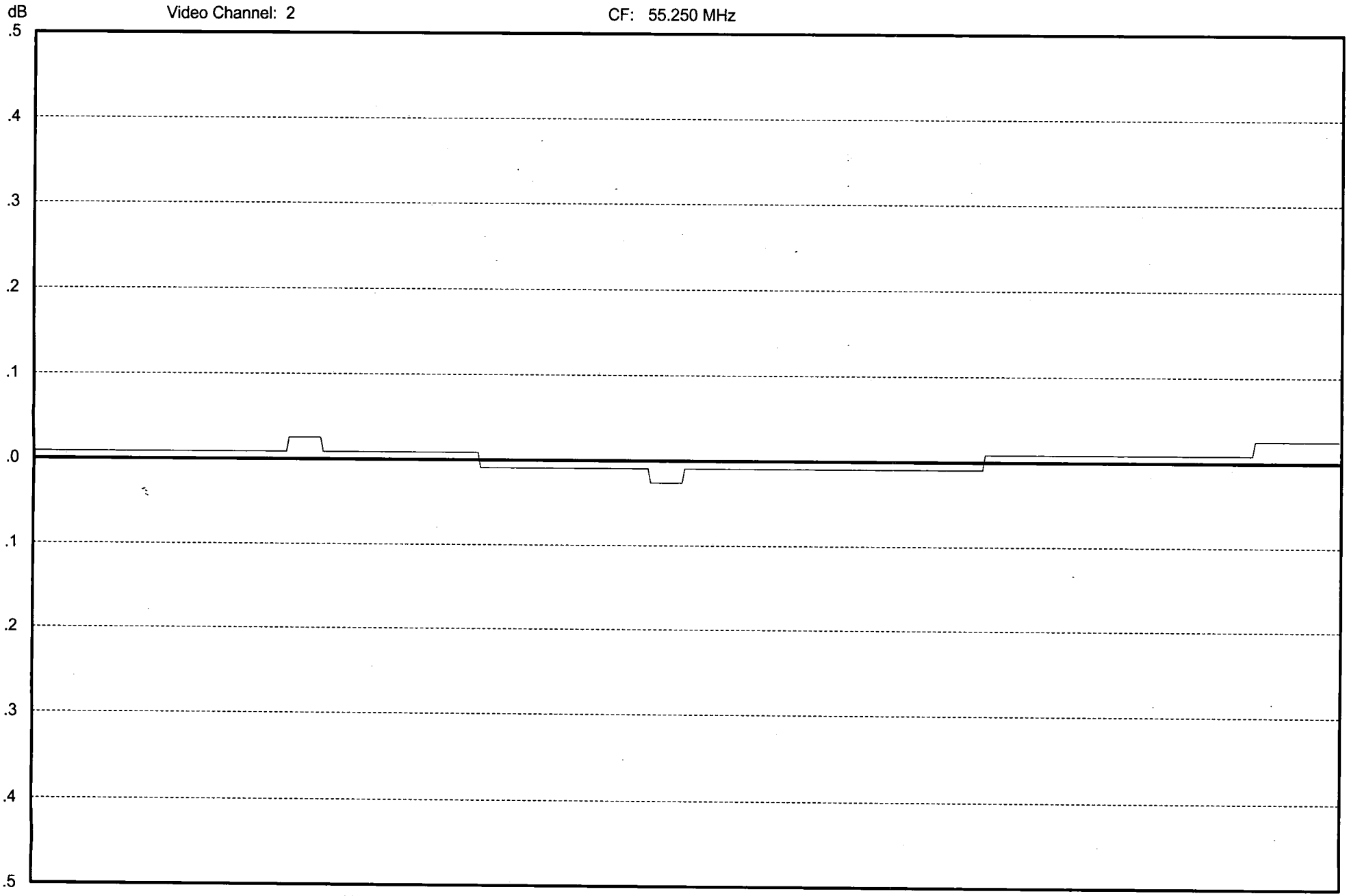
2.0000 MHz
1.2500 MHz
0.0000 MHz

2.8 dB
2.7 dB
2.7 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP1-CH2-HUM Mode : HUM
Date : 17/07/13 Time : 05:28:11 Temp 31 C



Hum (Signal): 0.6 % 56 dBC
Hum (Marker): 0.0 % 99 dBC

TESTPOINT 1, PAGE 5

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL VARIATION TEST

System Name : Sayre
Test Location : 2 Edward st Athens, PA
Date : 08/02/2013
Performed By : Derek Cordillone
Meter Serial Number : 9343239

		TEMP F							TEMP F				
		68.20	45.30	48.60	78.60				68.20	45.30	48.60	78.60	
		TIME							TIME				
		01:07:00	07:06:00	13:06:00	19:06:00				01:07:00	07:06:00	13:06:00	19:06:00	
CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR	CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR
2	55.2500	13.40	13.40	12.20	12.90	1.2	DD(40)	319.2625	12.40	13.00	11.30	11.60	1.7
3	61.2500						EE(41)	325.2625	12.70	13.30	11.70	12.50	1.6
4	67.2500	13.40	13.90	12.70	13.30	1.2	FF(42)	331.2750	13.80	14.30	12.70	13.20	1.6
5	77.2500	13.00	13.00	11.90	12.30	1.1	GG(43)	337.2625	12.50	13.10	11.30	11.90	1.8
6	83.2500	12.60	13.10	11.50	12.40	1.6	HH(44)	343.2625	12.80	13.50	11.90	12.20	1.6
A-5(95)	91.2500						II(45)	349.2625	13.30	14.00	12.10	12.90	1.9
A-4(96)	97.2500						JJ(46)	355.2625	13.10	13.80	12.10	13.00	1.7
A-3(97)	103.2500						KK(47)	361.2625	13.30	13.40	11.50	12.40	1.9
A-2(98)	109.2750	12.70	12.50	11.70	12.00	1	LL(48)	367.2625					
A-1(99)	115.2750						MM(49)	373.2625	13.50	13.80	11.90	12.60	1.9
A(14)	121.2625	12.60	13.10	11.90	12.40	1.2	NN(50)	379.2625	13.10	13.40	11.70	12.30	1.7
B(15)	127.2625	12.50	13.00	11.80	12.10	1.2	OO(51)	385.2625	13.10	13.90	11.60	12.30	2.3
C(16)	133.2625	12.20	12.80	11.60	11.90	1.2	PP(52)	391.2625					
D(17)	139.2500	13.40	13.90	12.60	13.40	1.3	QQ(53)	397.2625	13.30	14.10	12.10	12.90	2
E(18)	145.2500						RR(54)	403.2500					
F(19)	151.3210	13.80	14.50	12.80	13.60	1.7	SS(55)	409.2500	14.10	14.30	12.40	13.10	1.9
G(20)	157.2500	13.60	14.20	13.10	13.70	1.1	TT(56)	415.2500	14.10	14.40	12.40	13.40	2
H(21)	163.2500	13.10	13.30	12.10	12.80	1.2	UU(57)	421.2500	13.90	14.60	12.30	13.50	2.3
I(22)	169.2500						VV(58)	427.2500	13.60	14.30	11.90	12.90	2.4
7	175.2500	14.40	14.70	13.40	14.00	1.3	WW(59)	433.2500	13.70	14.40	12.40	13.10	2
8	181.2500	13.60	14.20	13.00	13.60	1.2	XX(60)	439.2500	14.00	14.50	12.30	13.30	2.2
9	187.2500	13.30	13.50	12.50	13.00	1	YY(61)	445.2500	13.50	13.90	11.40	12.60	2.5
10	193.2500	14.10	14.10	13.10	13.50	1	ZZ(62)	451.2500					
11	199.2500	14.00	14.40	13.40	14.00	1	63	457.2500	12.50	13.20	10.40	11.60	2.8
12	205.2500	13.80	13.70	12.80	13.20	1	64	463.2500					
13	211.2500	13.80	13.80	12.80	13.40	1	65	469.2500	11.60	12.00	10.60	11.40	1.4
J(23)	217.2500	14.10	14.10	13.10	13.40	1	66	475.2500					
K(24)	223.2500	13.40	13.50	12.40	12.80	1.1	67	481.2500	11.40	12.30	9.90	11.10	2.4
L(25)	229.2625	13.10	13.10	11.80	12.60	1.3	68	487.2500					
M(26)	235.2625	12.30	13.20	11.50	12.00	1.7	69	493.2500	11.70	12.10	10.20	10.90	1.9
N(27)	241.2625	12.80	12.70	11.30	12.00	1.5	70	499.2500	11.40	12.10	9.80	10.80	2.3
O(28)	247.2625	12.30	13.20	11.80	11.90	1.4	71	505.2500					
P(29)	253.2625	13.10	13.10	12.30	12.20	0.9	72	511.2500					
Q(30)	259.2625	12.40	13.30	11.40	12.30	1.9	73	517.2500					
R(31)	265.2625	11.80	12.10	10.90	10.90	1.2	74	523.2500					
S(32)	271.2625						75	529.2500					
T(33)	277.2625	12.10	12.40	11.10	11.90	1.3	76	535.2500					
U(34)	283.2625	12.30	12.20	11.40	11.50	0.9	77	541.2500					
V(35)	289.2625	12.10	12.50	11.10	11.60	1.4	78	547.2500					
W(36)	295.2625	12.00	12.30	11.00	11.40	1.3	79	553.2500					
AA(37)	301.2625	12.40	13.20	11.60	12.00	1.6	80	559.2500					
BB(38)	307.2625	12.00	12.20	10.70	11.10	1.5	81	565.2500					
CC(39)	313.2625	12.40	12.90	11.20	11.60	1.7							

Max Non Adjacent Channel Level Diff :- 3.6
Max Adjacent Channel Level Diff :- 1.5
Max Variance from last proof of performance test :- 6.6

TIME WARNER CABLE - SYRACUSE DIVISION

System Name	:	Sayre
System Test Point #	:	2
Hub Name	:	Sayre
Location	:	1272 round top Rd athens pa
Map Number	:	115-112
Pole Number	:	NT
D.T. Value	:	9217
OR Number	:	SA015
GNA Cascade	:	3
LE Cscade	:	1

TESTPOINT 2, PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL
VISUAL / AURAL LEVEL DIFFERENCE
(at Test Point, at the end of a 100' Drop)

System Name	: Sayre	***Test Location***	: 1272 round top Rd athens pa
Date	: 08/02/2013	***Time***	: 02:01:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	15.40	2.60		12.8	DD (40)	319.2625	13.60	-1.10		14.7
3	61.2500	N/A	N/A		N/A	EE (41)	325.2625	14.10	0.20		13.9
4	67.2500	16.50	2.50		14	FF (42)	331.2750	14.90	0.30		14.6
5	77.2500	15.50	1.70		13.8	GG (43)	337.2625	13.50	0.20		13:3
6	83.2500	15.10	0.80		14.3	HH (44)	343.2625	14.10	0.20		13.9
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	14.90	0.40		14.5
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	14.20	0.50		13.7
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	14.10	-0.10		14.2
A-2 (98)	109.2750	14.10	-0.30		14.4	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	13.80	0		13.8
A (14)	121.2625	13.30	-0.80		14.1	NN (50)	379.2625	14.10	0		14.1
B (15)	127.2625	13.30	-0.70		14	OO (51)	385.2625	13.70	0.30		13.4
C (16)	133.2625	13.10	-1.40		14.5	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	13.60	-0.60		14.2	QQ (53)	397.2625	13.60	-0.10		13.7
E (18)	145.2500	N/A	N/A		N/A	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	12.60	-1.40		14	SS (55)	409.2500	14.00	0.20		13.8
G (20)	157.2500	13.30	-1.20		14.5	TT (56)	415.2500	14.10	0.30		13.8
H (21)	163.2500	12.50	-1.30		13.8	UU (57)	421.2500	13.70	0.10		13.6
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	13.60	0.40		13.2
7	175.2500	14.10	0.60		13.5	WW (59)	433.2500	14.10	0.50		13.6
8	181.2500	15.30	0.20		15.1	XX (60)	439.2500	14.70	0.40		14.3
9	187.2500	14.80	-0.10		14.9	YY (61)	445.2500	14.20	0.30		13.9
10	193.2500	13.90	0.20		13.7	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	13.80	-0.20		14	63	457.2500	14.70	1.50		13.2
12	205.2500	13.90	-0.40		14.3	64	463.2500	N/A	N/A		N/A
13	211.2500	N/A	N/A		N/A	65	469.2500	15.30	2.00		13.3
J (23)	217.2500	13.20	-2.00		15.2	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	11.70	-2.50		14.2	67	481.2500	14.80	1.10		13.7
L (25)	229.2625	12.00	-1.50		13.5	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	11.40	-1.80		13.2	69	493.2500	14.60	0.50		14.1
N (27)	241.2625	11.50	-2.00		13.5	70	499.2500	14.40	0.60		13.8
O (28)	247.2625	11.90	-2.30		14.2	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	12.70	-0.50		13.2	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	12.50	-0.60		13.1	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	12.40	-0.80		13.2	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	13.00	-0.60		13.6	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	13.20	-0.60		13.8	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	13.30	-0.60		13.9	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	12.90	-0.90		13.8	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	13.50	-0.60		14.1	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	13.40	-0.30		13.7	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	13.80	-0.40		14.2						

Min Channel	:	M(26)	11.400
Max Channel	:	4	16.500
Peak to Valley	:	5.1	

TESTPOINT 2, PAGE 3

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL RESPONSE TEST
CARRIER - TO - NOISE TEST
COHERENT DISTURBANCES TEST
LOW FREQUENCY DISTURBANCES TEST

System Name : Sayre ***Date*** : 7/17/2013

Performed By : Derek

Location : 1272 round top Rd athens pa

Note: Make Measurements through a 100 ft. test drop cable without converter.

CHANNEL NUMBER	IN CHANNEL RESPONSE	CARRIER TO NOISE RATIO	DISTORTIONS	CSO	HUM
	(+/- DB)	(DB)	(-DBC) CTB		(%)
2	0.45	49.5	63.9	63.8	0.4
14	0.25	49.1	63.1	64.1	
9	0.40	49.9	64.1	65.3	
23	0.30	50.3	62.0	63.8	
37	0.20	50.3	63.6	63.6	
44	0.10	51.4	63.3	64.3	
56	0.10	49.8	64.5	64.8	
61	0.25	50.2	63.9	64.6	
69	0.25	49.4	64.2	64.2	

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL FREQUENCY RESPONSE TEST (76.605) (a) (6)

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

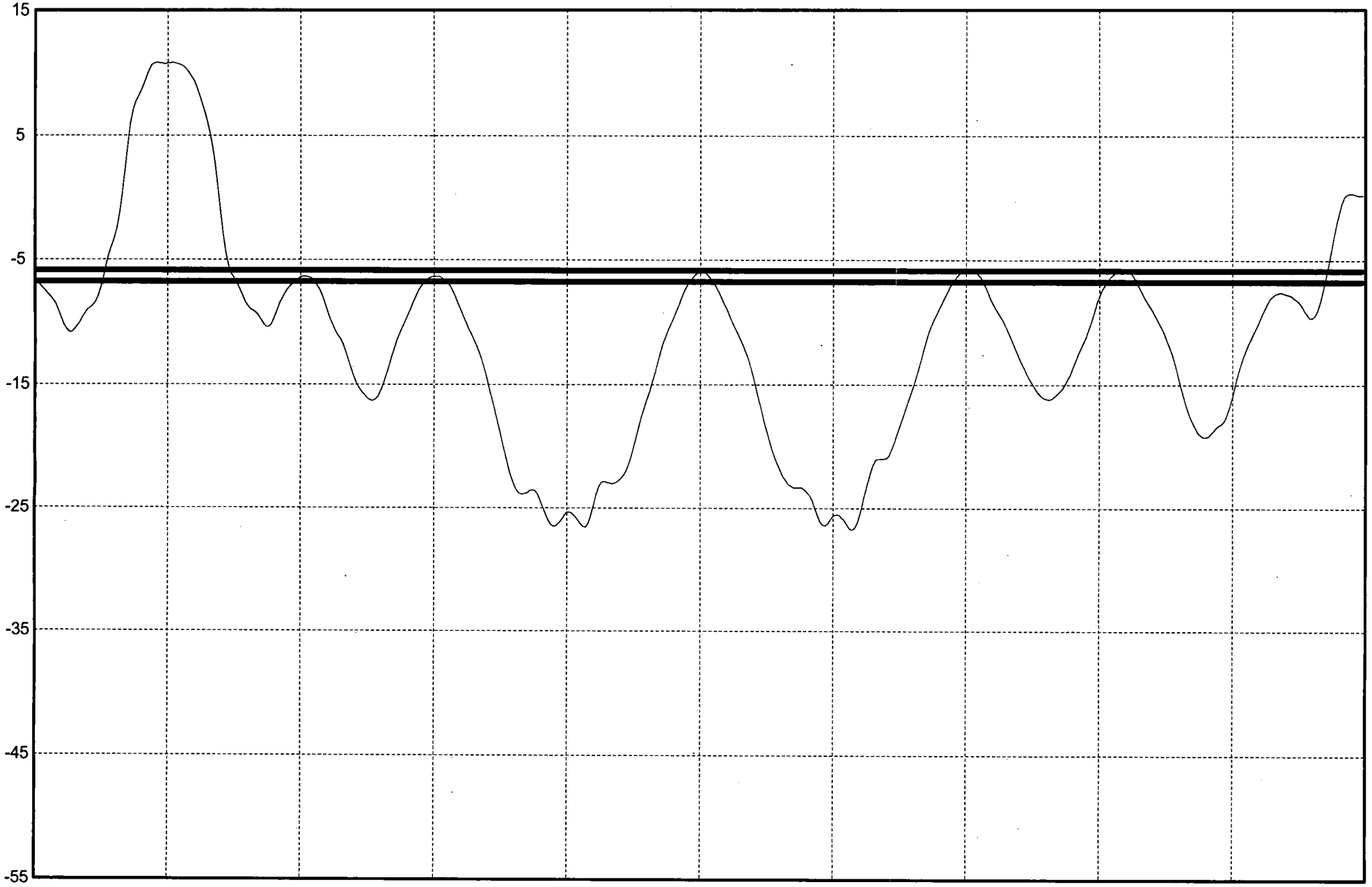
Location : 1272 round top Rd athens pa

(SEE THE ATTACHED SWEEP TRACES)

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : SATP2-CH2-ICR Mode : FR
Date : 17/07/13 Time : 03:58:04 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 2 CF: 55.250 MHz SPAN: 5 MHz

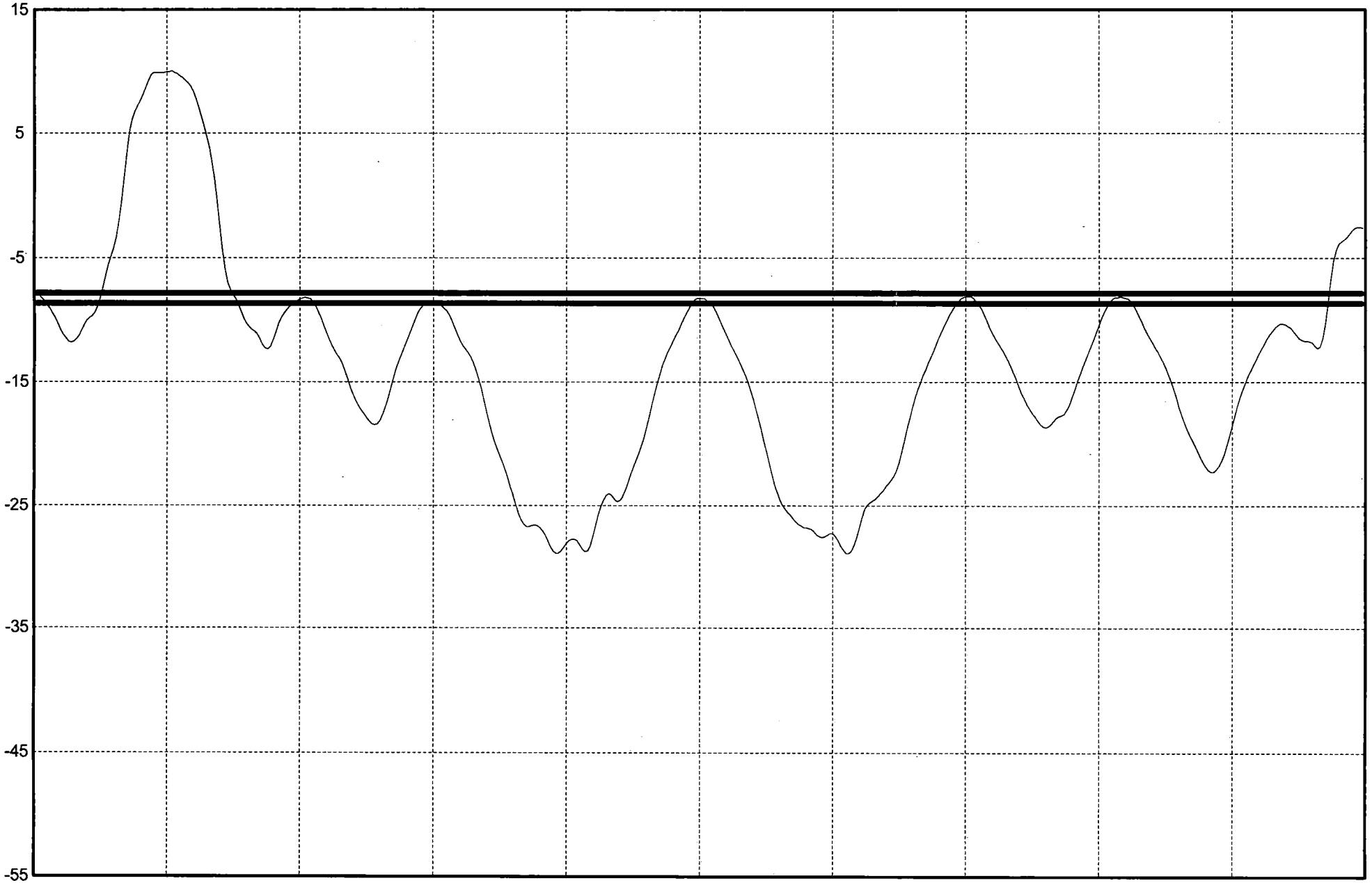


In-Channel Response: +/- 0.45 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH9-ICR Mode : FR
Date : 17/07/13 Time : 04:07:07 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 9 CF: 187.250 MHz SPAN: 5 MHz

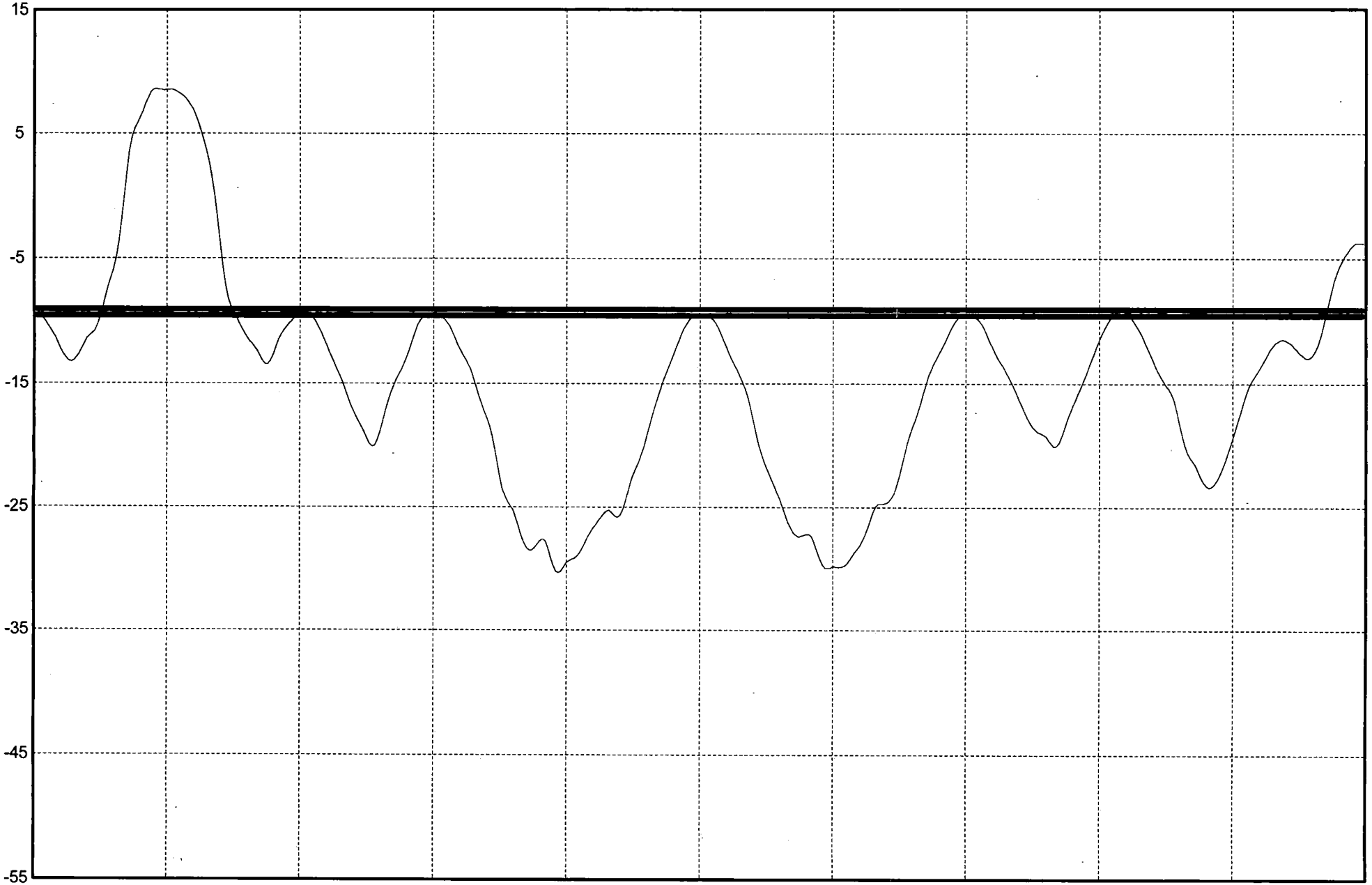


In-Channel Response: +/- 0.40 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH14-ICR Mode : FR
Date : 17/07/13 Time : 04:05:52 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 14 CF: 121.262 MHz SPAN: 5 MHz

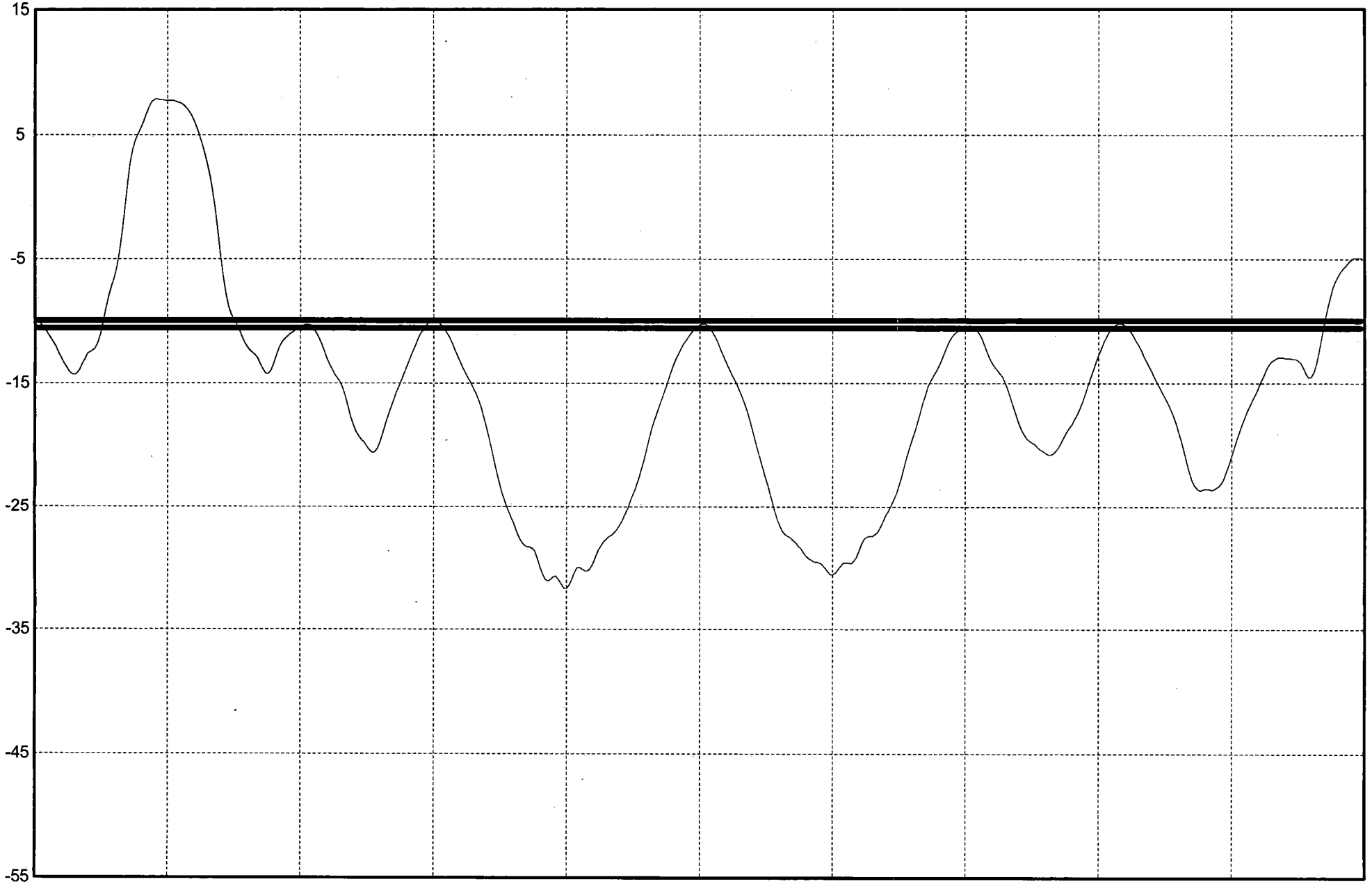


In-Channel Response: +/- 0.25 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH23-ICR Mode : FR
Date : 17/07/13 Time : 04:08:24 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 23 CF: 217.250 MHz SPAN: 5 MHz

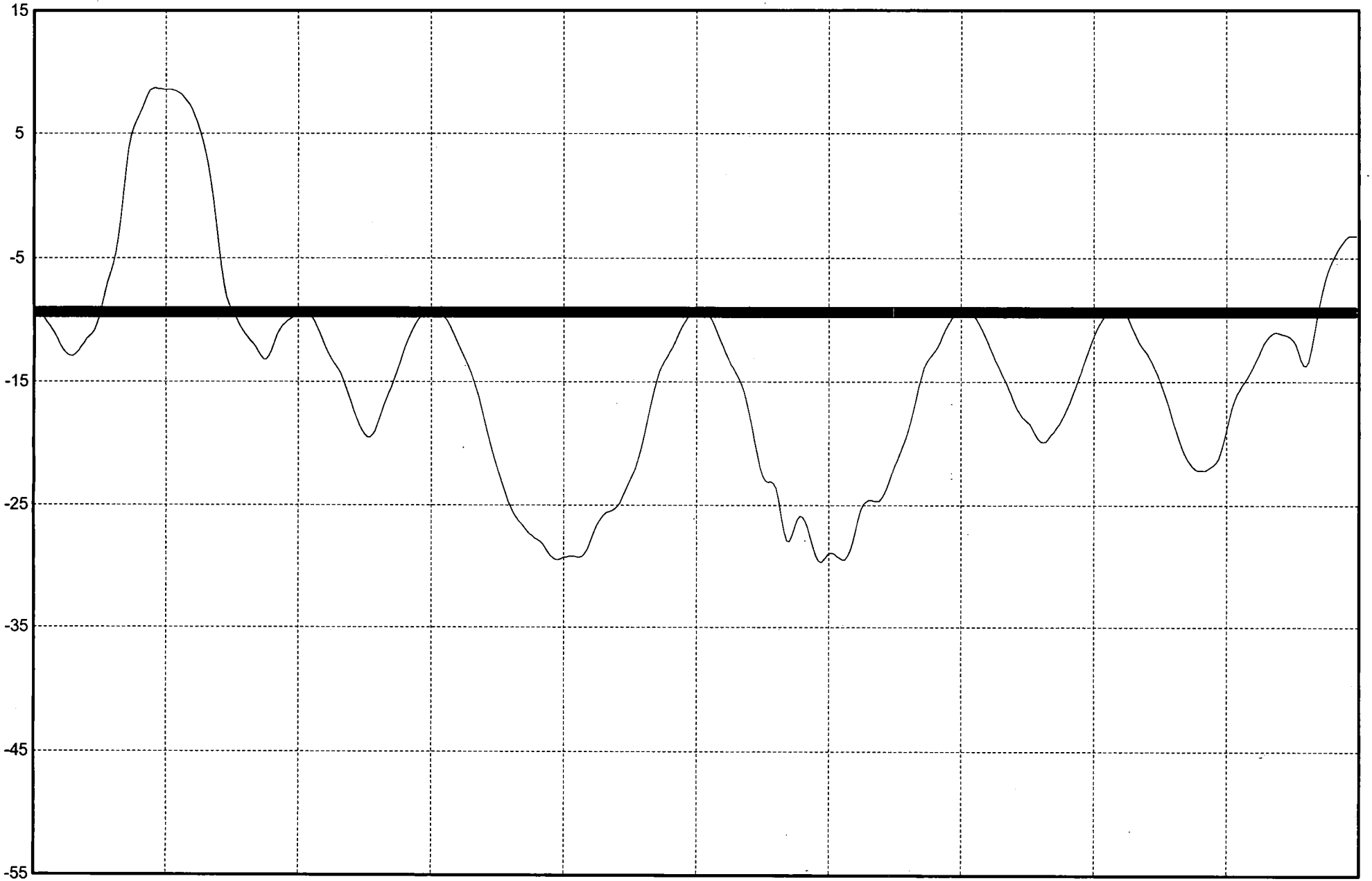


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH37-ICR Mode : FR
Date : 17/07/13 Time : 04:09:37 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 37 CF: 301.262 MHz SPAN: 5 MHz

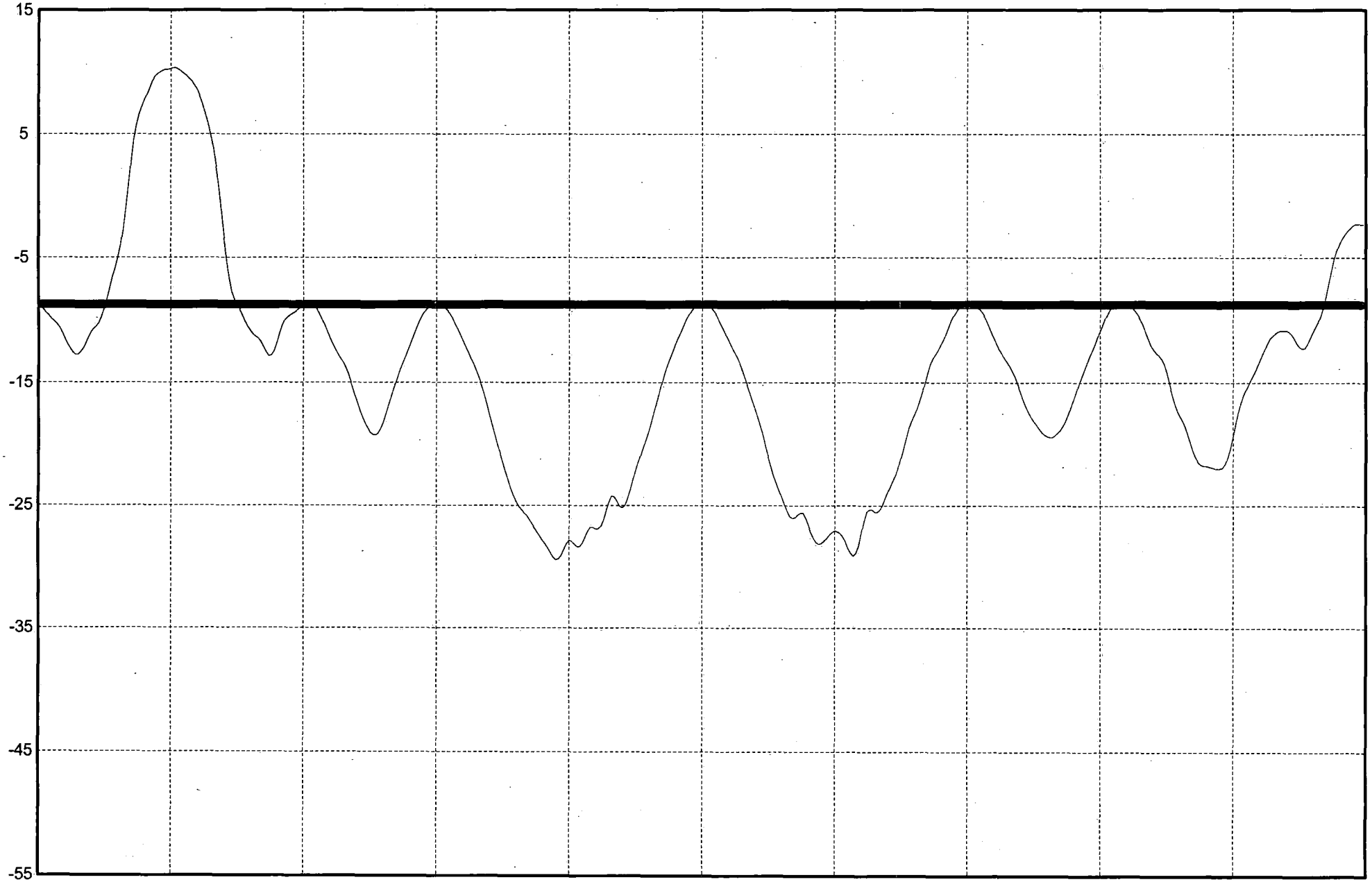


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH44-ICR Mode : FR
Date : 17/07/13 Time : 04:10:42 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 44 CF: 343.262 MHz SPAN: 5 MHz

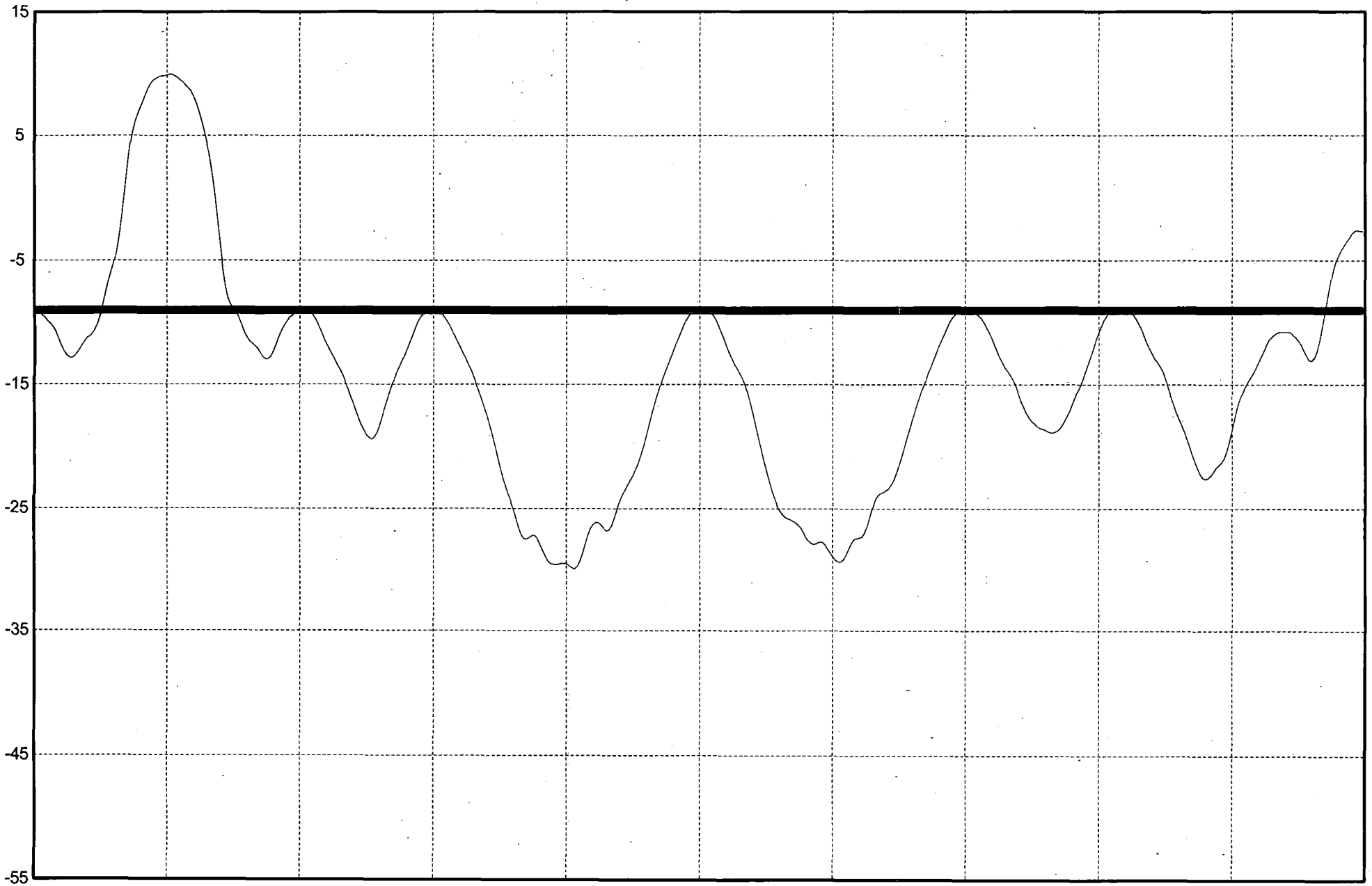


In-Channel Response: +/- 0.10 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH56-ICR Mode : FR
Date : 17/07/13 Time : 04:11:52 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 56 CF: 415.250 MHz SPAN: 5 MHz

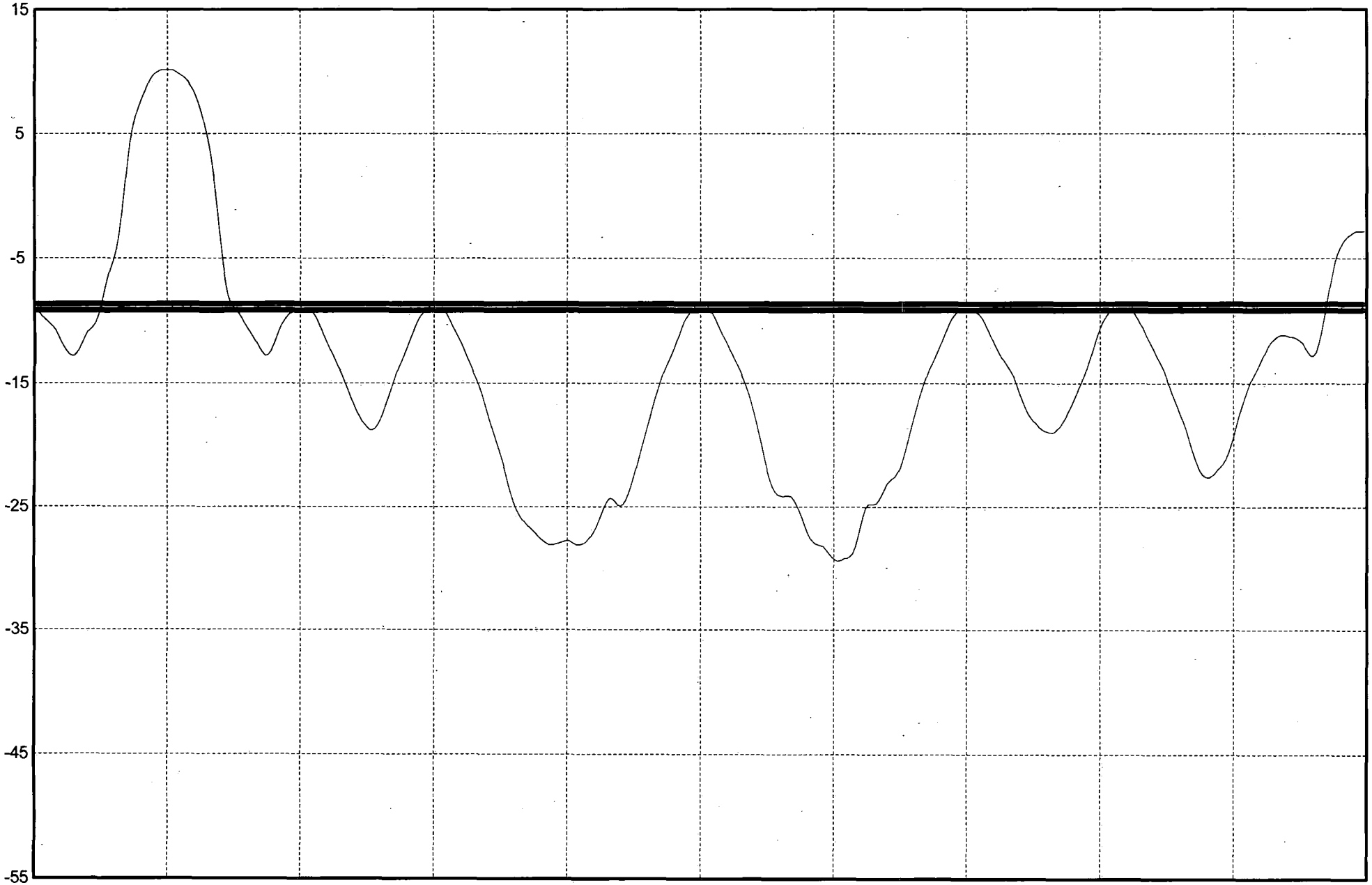


In-Channel Response: +/- 0.10 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH61-ICR Mode : FR
Date : 17/07/13 Time : 04:13:05 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 61 CF: 445.250 MHz SPAN: 5 MHz

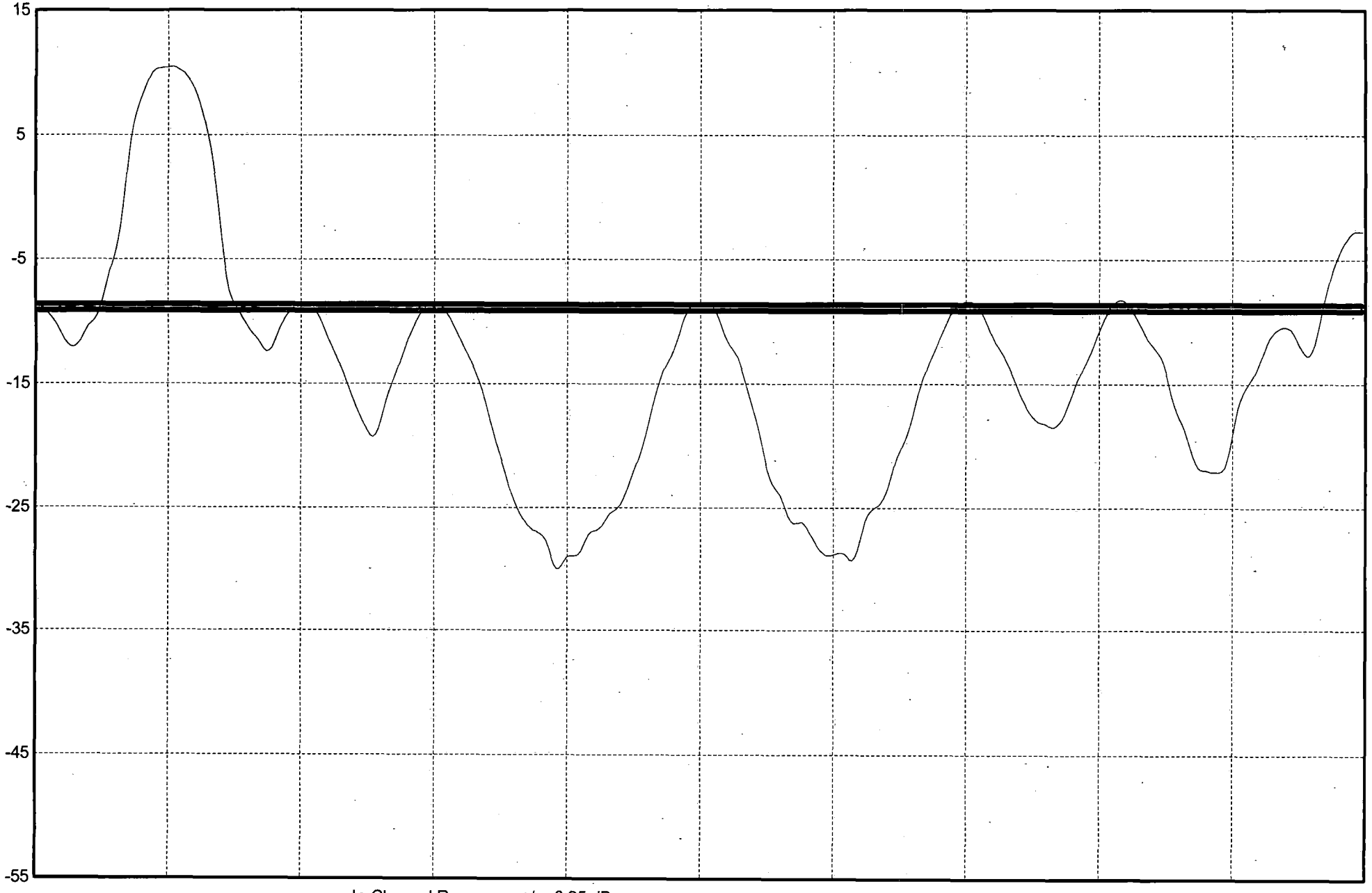


In-Channel Response: +/- 0.25 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH69-ICR Mode : FR
Date : 17/07/13 Time : 04:15:14 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 69 CF: 493.250 MHz SPAN: 5 MHz

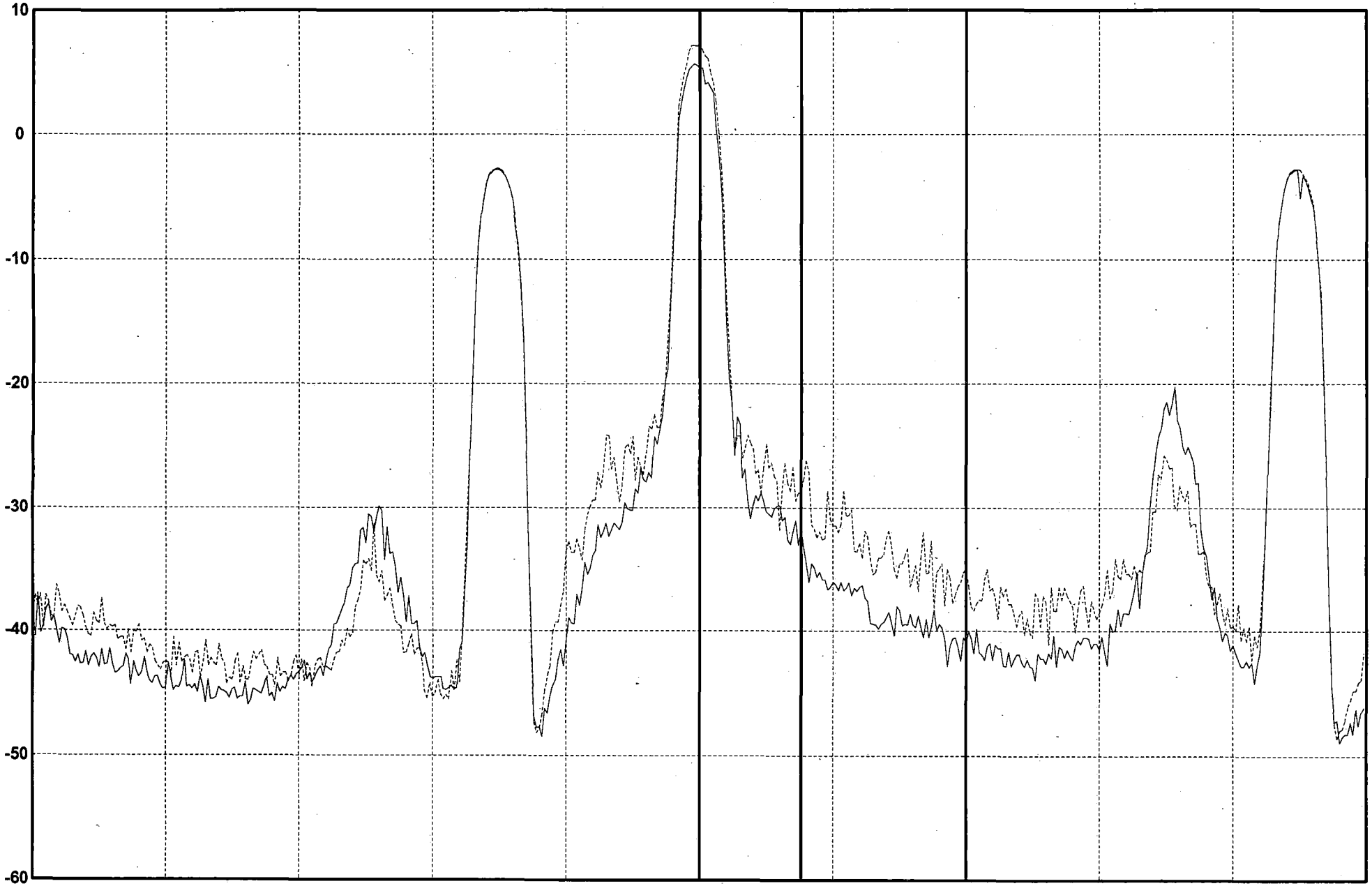


In-Channel Response: +/- 0.25 dB
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH44-CN Mode : DIST
Date : 17/07/13 Time : 04:30:32 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 44 CF: 343.262 MHz 11.1 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 51.4 dB
CSO : 64.3 dB
CTB : 63.3 dB

2.0000 MHz
0.7500 MHz
0.0000 MHz

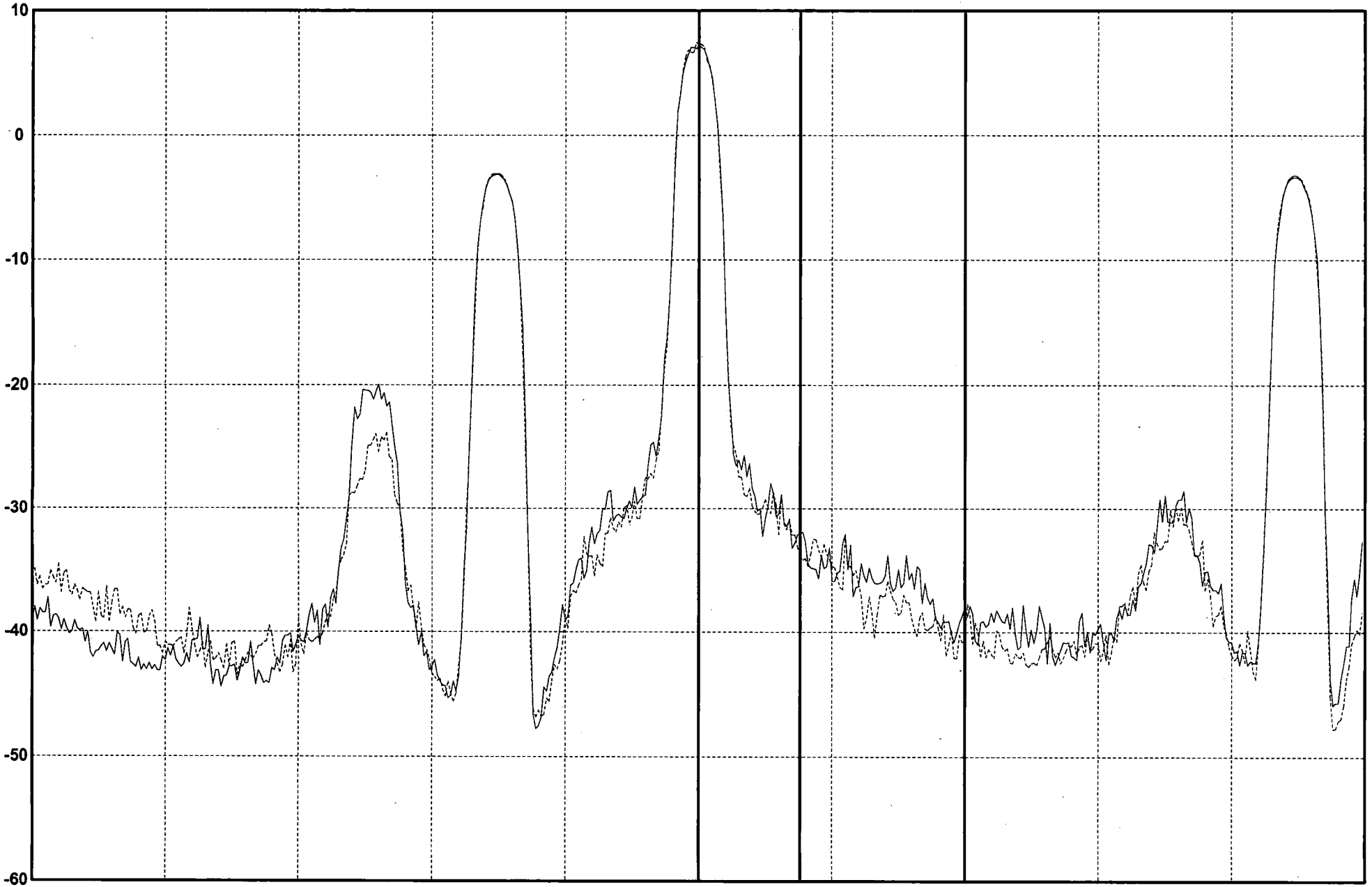
2.9 dB
2.0 dB
1.6 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH9-CSO Mode : DIST
Date : 17/07/13 Time : 04:25:17 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 9 CF: 187.250 MHz 11.7 dBmV Field : 1 Line : 23
SPAN: 10 MHz



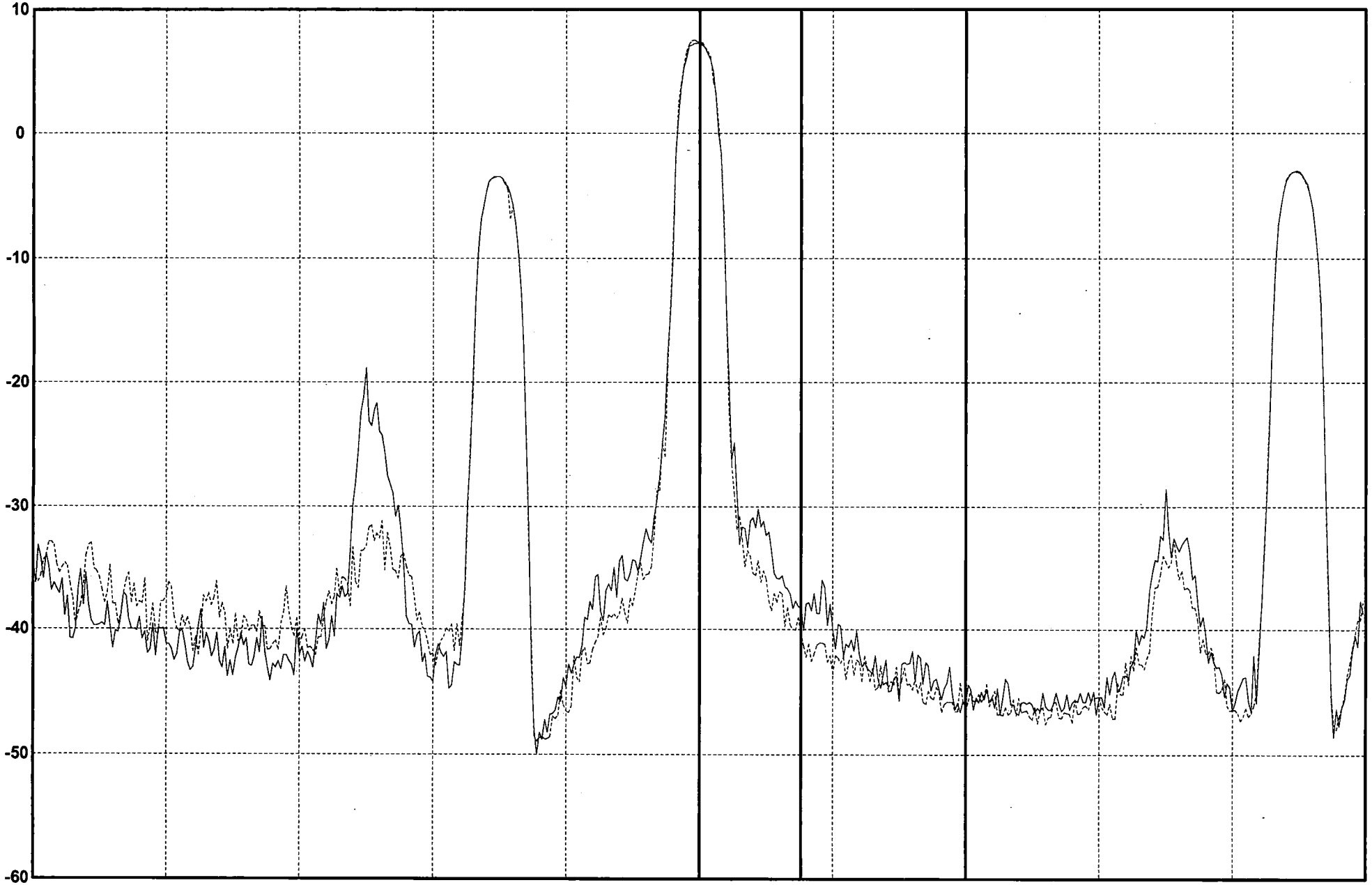
CCN : 49.9 dB 2.0000 MHz 1.8 dB
CSO : 65.3 dB 0.7500 MHz 1.9 dB
CTB : 64.1 dB 0.0000 MHz 1.5 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH56-CTB Mode : DIST
Date : 17/07/13 Time : 04:32:00 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 56 CF: 415.250 MHz 10.6 dBmV Field : 1 Line : 23
SPAN: 10 MHz

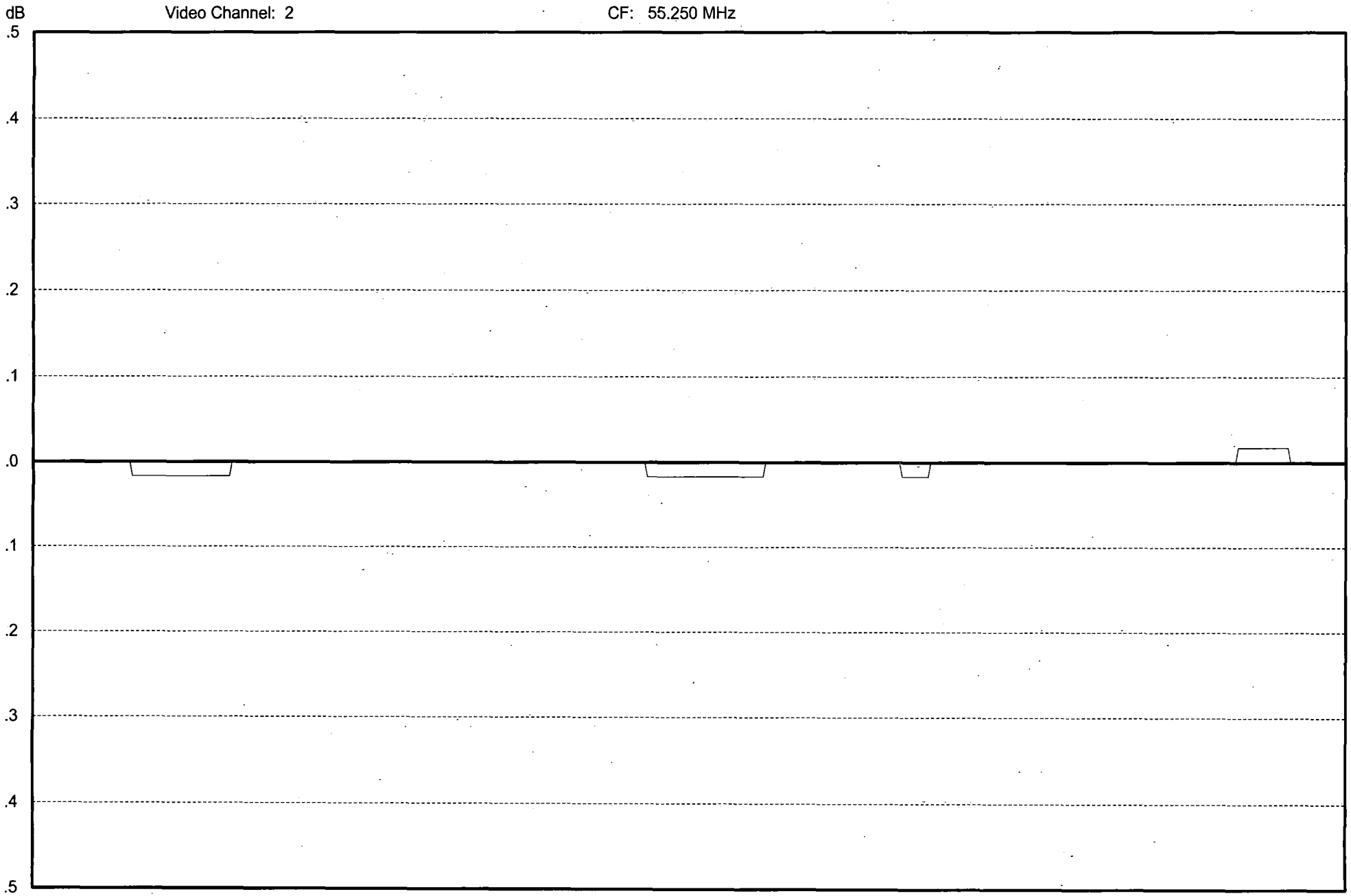


CCN : 49.8 dB 2.0000 MHz 2.3 dB
CSO : 64.8 dB 0.7500 MHz 2.3 dB
CTB : 64.5 dB 0.0000 MHz 2.2 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH2-HUM Mode : HUM
Date : 17/07/13 Time : 04:16:12 Temp 26 C



Hum (Signal): 0.4 % 59 dBC
Hum (Marker): 0.0 % 99 dBC

TESTPOINT 2, PAGE 5

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL VARIATION TEST

System Name	: Sayre	***Test Location***	: 1272 round top Rd athens pa
Date	: 08/02/2013	***Performed By***	: Derek Cordilione
Meter Serial Number	: 9343237		

		TEMP F							TEMP F				
		60.80	75.30	91.20	86.20				60.80	75.30	91.20	86.20	
		TIME							TIME				
		02:01:00	08:01:00	14:01:00	20:01:00				02:01:00	08:01:00	14:01:00	20:01:00	
CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR	CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR
2	55.2500	15.40	15.00	14.80	14.90	0.6	DD(40)	319.2625	13.60	13.40	13.30	13.40	0.3
3	61.2500						EE(41)	325.2625	14.10	14.00	13.70	13.70	0.4
4	67.2500	16.50	16.30	16.00	16.10	0.5	FF(42)	331.2750	14.90	14.70	14.40	14.70	0.5
5	77.2500	15.50	15.30	15.10	15.20	0.4	GG(43)	337.2625	13.50	13.40	13.10	13.30	0.4
6	83.2500	15.10	15.30	15.00	15.00	0.3	HH(44)	343.2625	14.10	13.90	13.80	13.80	0.3
A-5(95)	91.2500						II(45)	349.2625	14.90	14.50	14.40	14.50	0.5
A-4(96)	97.2500						JJ(46)	355.2625	14.20	14.10	13.90	14.10	0.3
A-3(97)	103.2500						KK(47)	361.2625	14.10	13.90	13.80	13.90	0.3
A-2(98)	109.2750	14.10	13.80	13.80	13.80	0.3	LL(48)	367.2625					
A-1(99)	115.2750						MM(49)	373.2625	13.80	13.60	13.40	13.50	0.4
A(14)	121.2625	13.30	13.30	13.00	13.00	0.3	NN(50)	379.2625	14.10	13.60	13.50	13.80	0.6
B(15)	127.2625	13.30	13.30	13.10	13.10	0.2	OO(51)	385.2625	13.70	13.70	13.50	13.80	0.3
C(16)	133.2625	13.10	13.10	12.90	12.90	0.2	PP(52)	391.2625					
D(17)	139.2500	13.60	13.50	13.40	13.30	0.3	QQ(53)	397.2625	13.60	13.30	13.10	13.40	0.5
E(18)	145.2500						RR(54)	403.2500					
F(19)	151.3210	12.60	12.80	12.40	12.60	0.4	SS(55)	409.2500	14.00	13.70	13.60	13.70	0.4
G(20)	157.2500	13.30	13.30	12.90	13.00	0.4	TT(56)	415.2500	14.10	13.70	13.70	13.80	0.4
H(21)	163.2500	12.50	12.60	12.40	12.50	0.2	UU(57)	421.2500	13.70	13.30	13.30	13.40	0.4
I(22)	169.2500						VV(58)	427.2500	13.60	13.30	13.20	13.40	0.4
7	175.2500	14.10	13.90	13.80	14.00	0.3	WW(59)	433.2500	14.10	13.70	13.40	13.70	0.7
8	181.2500	15.30	15.20	14.80	15.10	0.5	XX(60)	439.2500	14.70	14.20	14.10	14.40	0.6
9	187.2500	14.80	14.60	14.50	14.60	0.3	YY(61)	445.2500	14.20	14.00	13.70	13.90	0.5
10	193.2500	13.90	13.80	13.70	13.80	0.2	ZZ(62)	451.2500					
11	199.2500	13.80	13.70	13.50	13.60	0.3	63	457.2500	14.70	14.40	14.20	14.50	0.5
12	205.2500	13.90	13.70	13.60	13.70	0.3	64	463.2500					
13	211.2500						65	469.2500	15.30	15.00	14.80	15.00	0.5
J(23)	217.2500	13.20	13.20	13.10	13.10	0.1	66	475.2500					
K(24)	223.2500	11.70	11.60	12.20	11.60	0.6	67	481.2500	14.80	14.60	14.30	14.70	0.5
L(25)	229.2625	12.00	11.80	11.70	11.90	0.3	68	487.2500					
M(26)	235.2625	11.40	11.30	11.00	11.30	0.4	69	493.2500	14.60	14.40	14.20	14.50	0.4
N(27)	241.2625	11.50	11.40	11.20	11.40	0.3	70	499.2500	14.40	14.10	13.90	14.00	0.5
O(28)	247.2625	11.90	11.90	11.60	11.70	0.3	71	505.2500					
P(29)	253.2625	12.70	12.60	12.50	12.60	0.2	72	511.2500					
Q(30)	259.2625	12.50	12.30	12.10	12.30	0.4	73	517.2500					
R(31)	265.2625	12.40	12.20	12.30	12.30	0.2	74	523.2500					
S(32)	271.2625						75	529.2500					
T(33)	277.2625	13.00	12.80	12.80	12.90	0.2	76	535.2500					
U(34)	283.2625	13.20	13.10	12.80	13.10	0.4	77	541.2500					
V(35)	289.2625	13.30	13.20	13.00	13.10	0.3	78	547.2500					
W(36)	295.2625	12.90	12.80	12.70	12.90	0.2	79	553.2500					
AA(37)	301.2625	13.50	13.40	13.20	13.30	0.3	80	559.2500					
BB(38)	307.2625	13.40	13.10	13.00	13.10	0.4	81	565.2500					
CC(39)	313.2625	13.80	13.70	13.60	13.70	0.2							

Max Non Adjacent Channel Level Diff :- 5.1
Max Adjacent Channel Level Diff :- 1.6
Max Variance from last proof of performance test :- 3.8

TIME WARNER CABLE - SYRACUSE DIVISION

System Name	:	Sayre
System Test Point #	:	3
Hub Name	:	Sayre
Location	:	711 route 199 Athens, PA
Map Number	:	115-113
Pole Number	:	14
D.T. Value	:	9211
OR Number	:	SA014
GNA Cascade	:	6
LE Cscade	:	0

TESTPOINT 3, PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL
VISUAL / AURAL LEVEL DIFFERENCE
(at Test Point, at the end of a 100' Drop)

System Name	: Sayre	***Test Location***	: 711 route 199 Athens, PA
Date	: 08/02/2013	***Time***	: 01:33:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	19.90	7.00		12.9	DD (40)	319.2625	17.60	3.30		14.3
3	61.2500	N/A	N/A		N/A	EE (41)	325.2625	18.20	4.60		13.6
4	67.2500	20.10	7.00		13.1	FF (42)	331.2750	19.00	5.10		13.9
5	77.2500	19.80	5.80		14	GG (43)	337.2625	17.80	3.80		14
6	83.2500	19.10	4.90		14.2	HH (44)	343.2625	17.80	4.10		13.7
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	18.40	4.60		13.8
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	18.30	4.80		13.5
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	17.80	4.40		13.4
A-2 (98)	109.2750	18.70	3.40		15.3	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	17.10	3.70		13.4
A (14)	121.2625	17.20	3.20		14	NN (50)	379.2625	17.30	4.10		13.2
B (15)	127.2625	17.00	3.10		13.9	OO (51)	385.2625	17.70	3.80		13.9
C (16)	133.2625	17.00	2.90		14.1	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	17.80	3.70		14.1	QQ (53)	397.2625	17.20	4.20		13
E (18)	145.2500	N/A	N/A		N/A	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	17.40	3.30		14.1	SS (55)	409.2500	17.30	3.70		13.6
G (20)	157.2500	17.40	2.50		14.9	TT (56)	415.2500	17.30	3.00		14.3
H (21)	163.2500	16.70	4.40		12.3	UU (57)	421.2500	16.50	2.60		13.9
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	16.30	3.10		13.2
7	175.2500	18.80	4.00		14.8	WW (59)	433.2500	16.40	2.90		13.5
8	181.2500	18.40	3.70		14.7	XX (60)	439.2500	16.50	2.60		13.9
9	187.2500	17.90	4.10		13.8	YY (61)	445.2500	16.40	2.70		13.7
10	193.2500	17.80	3.60		14.2	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	17.50	4.20		13.3	63	457.2500	17.10	3.20		13.9
12	205.2500	17.50	3.30		14.2	64	463.2500	N/A	N/A		N/A
13	211.2500	16.90	3.00		13.9	65	469.2500	17.00	3.70		13.3
J (23)	217.2500	16.60	2.10		14.5	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	15.70	1.90		13.8	67	481.2500	16.50	2.90		13.6
L (25)	229.2625	15.40	2.50		12.9	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	15.40	1.90		13.5	69	493.2500	16.60	2.60		14
N (27)	241.2625	15.30	2.10		13.2	70	499.2500	16.10	2.80		13.3
O (28)	247.2625	15.70	2.00		13.7	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	16.60	4.30		12.3	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	17.30	3.70		13.6	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	16.40	3.30		13.1	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	16.70	3.30		13.4	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	16.90	3.40		13.5	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	17.00	3.40		13.6	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	16.80	3.10		13.7	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	17.40	3.70		13.7	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	17.00	3.80		13.2	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	17.70	3.80		13.9						

Min Channel	:	N(27)	15.300
Max Channel	:	4	20.100
Peak to Valley	:	4.8	

TESTPOINT 3, PAGE 3

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL RESPONSE TEST
CARRIER - TO - NOISE TEST
COHERENT DISTURBANCES TEST
LOW FREQUENCY DISTURBANCES TEST

System Name : Sayre ***Date*** : 7/17/2013

Performed By : Derek Cordilione

Location : 711 route 199 Athens, PA

Note: Make Measurements through a 100 ft. test drop cable without converter.

CHANNEL NUMBER	IN CHANNEL RESPONSE	CARRIER TO NOISE RATIO	DISTORTIONS	CSO	HUM
	(+/- DB)	(DB)	(-DBC) CTB		(%)
2	0.60	50.5	65.7	65.1	0.4
14	0.30	49.2	61.2	63.6	
9	0.20	49.0	62.8	64.7	
23	0.15	49.0	60.7	63.5	
37	0.05	49.6	62.8	64.4	
44	0.10	49.6	63.0	65.0	
56	0.20	50.6	62.9	63.6	
61	0.20	49.5	62.5	63.8	
69	0.15	48.5	62.1	62.8	

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL FREQUENCY RESPONSE TEST
(76.605) (a) (6)

System Name : Sayre ***Date*** : 7/17/2013

Performed By : Derek Cordilione

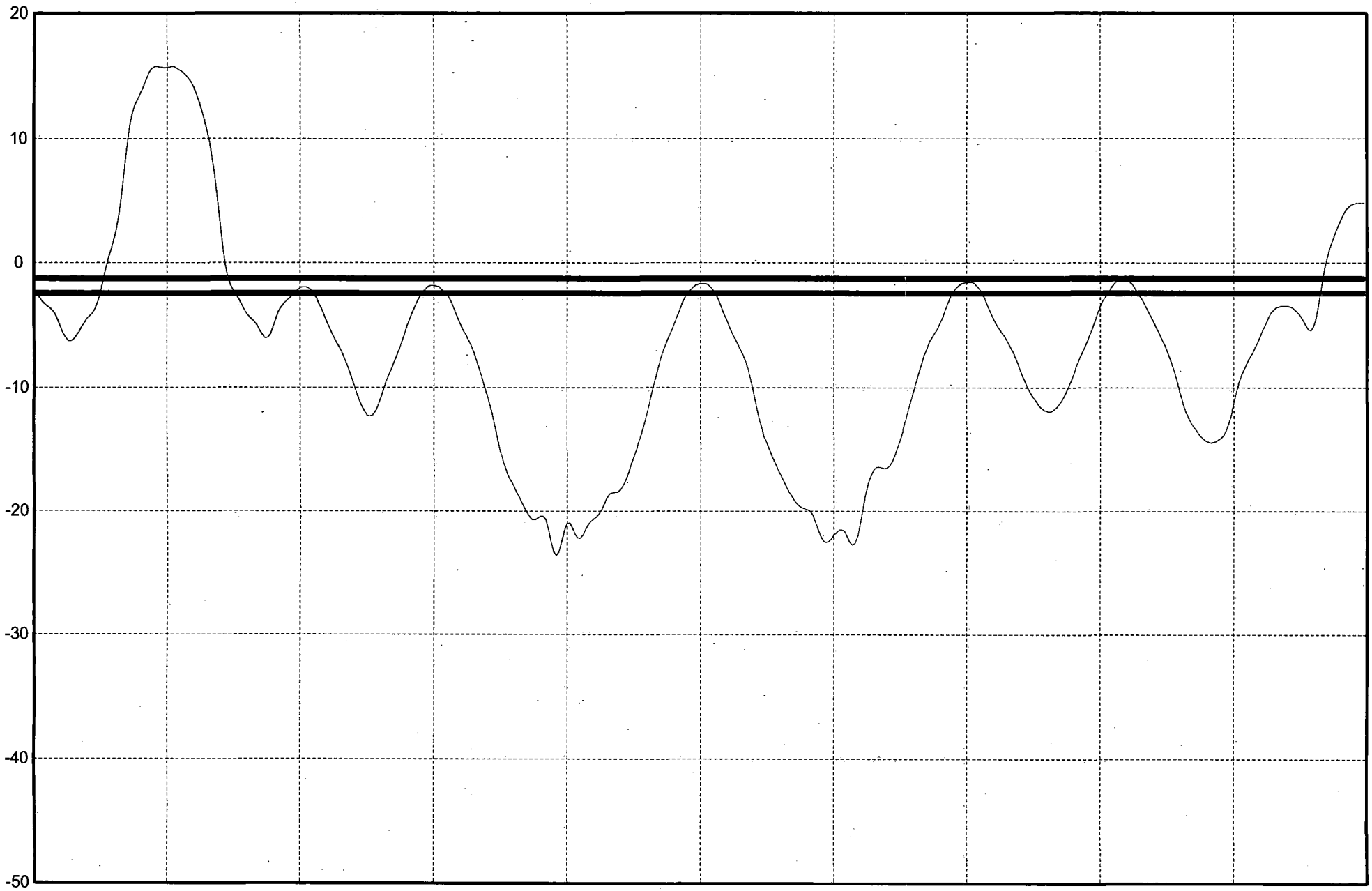
Location : 711 route 199 Athens, PA

(SEE THE ATTACHED SWEEP TRACES)

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH2-ICR Mode : FR
Date : 17/07/13 Time : 04:53:42 Temp 30 C

ATT: 20 dB
dBmV Video Channel: 2 CF: 55.250 MHz SPAN: 5 MHz

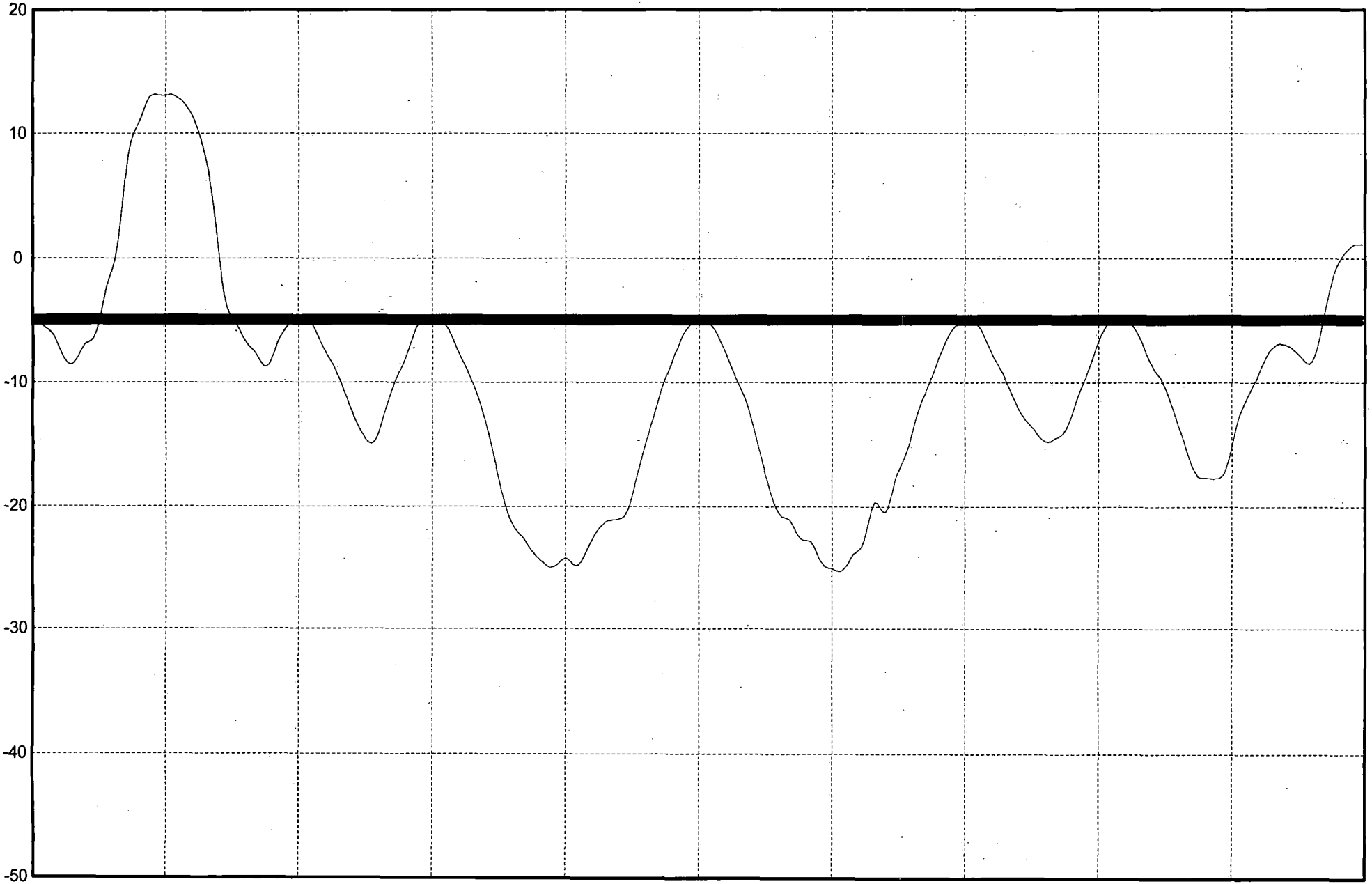


In-Channel Response: +/- 0.60 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH9-ICR Mode : FR
Date : 17/07/13 Time : 04:56:13 Temp 30 C

ATT: 20 dB
dBmV Video Channel: 9 CF: 187.250 MHz SPAN: 5 MHz

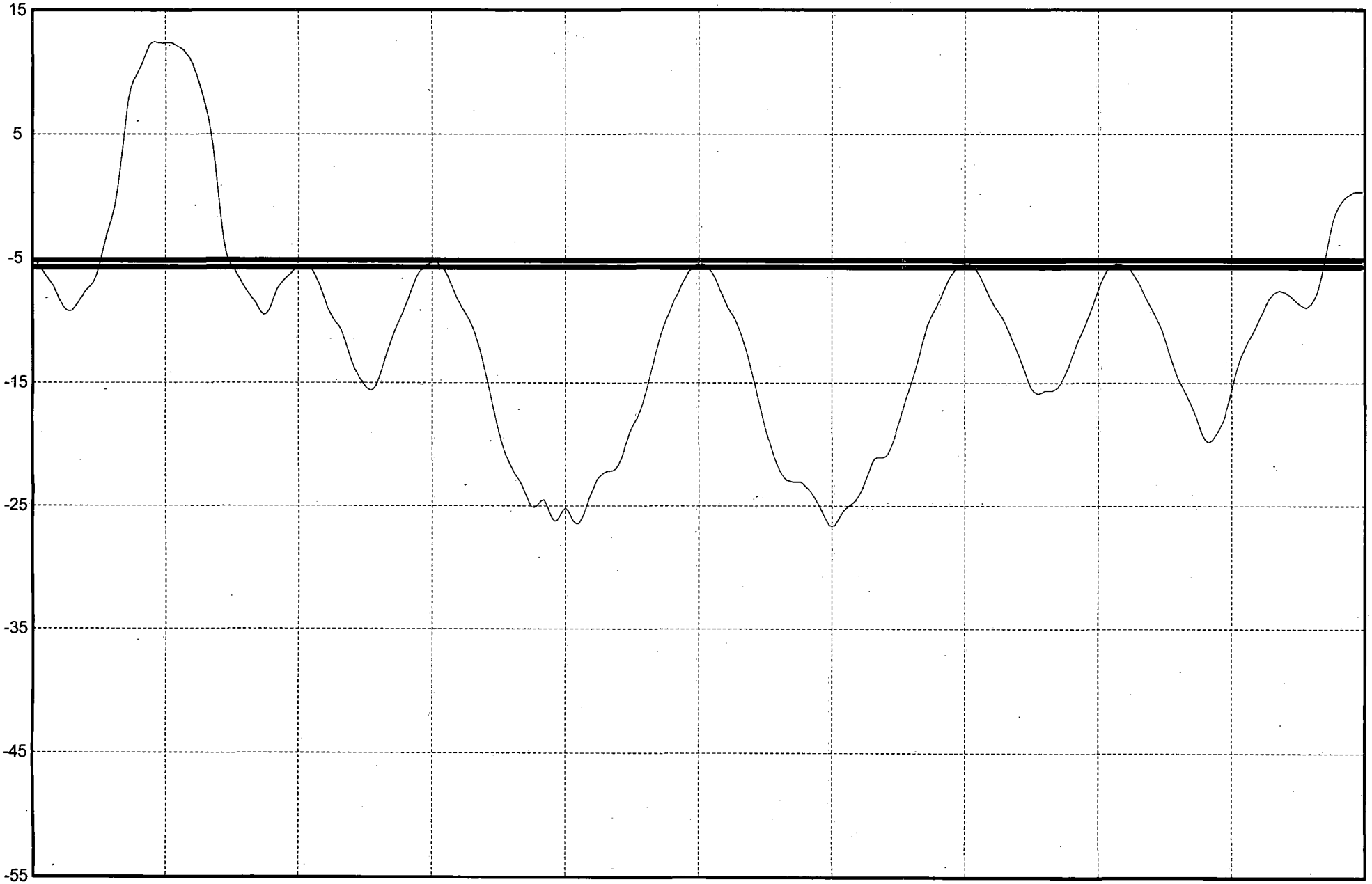


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH14-ICR Mode : FR
Date : 17/07/13 Time : 04:55:08 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 14 CF: 121.262 MHz SPAN: 5 MHz

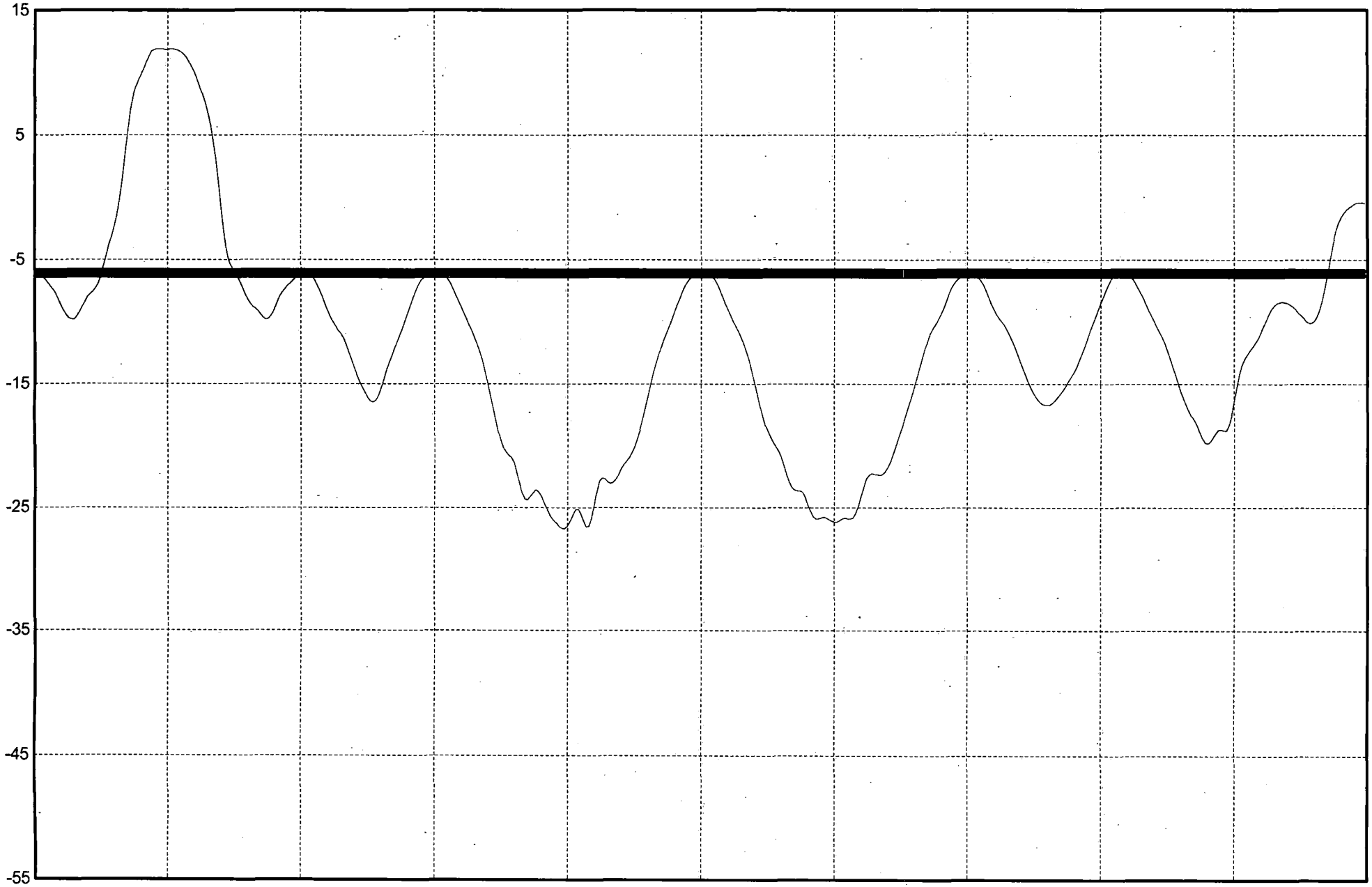


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH23-ICR Mode : FR
Date : 17/07/13 Time : 04:57:22 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 23 CF: 217.250 MHz SPAN: 5 MHz

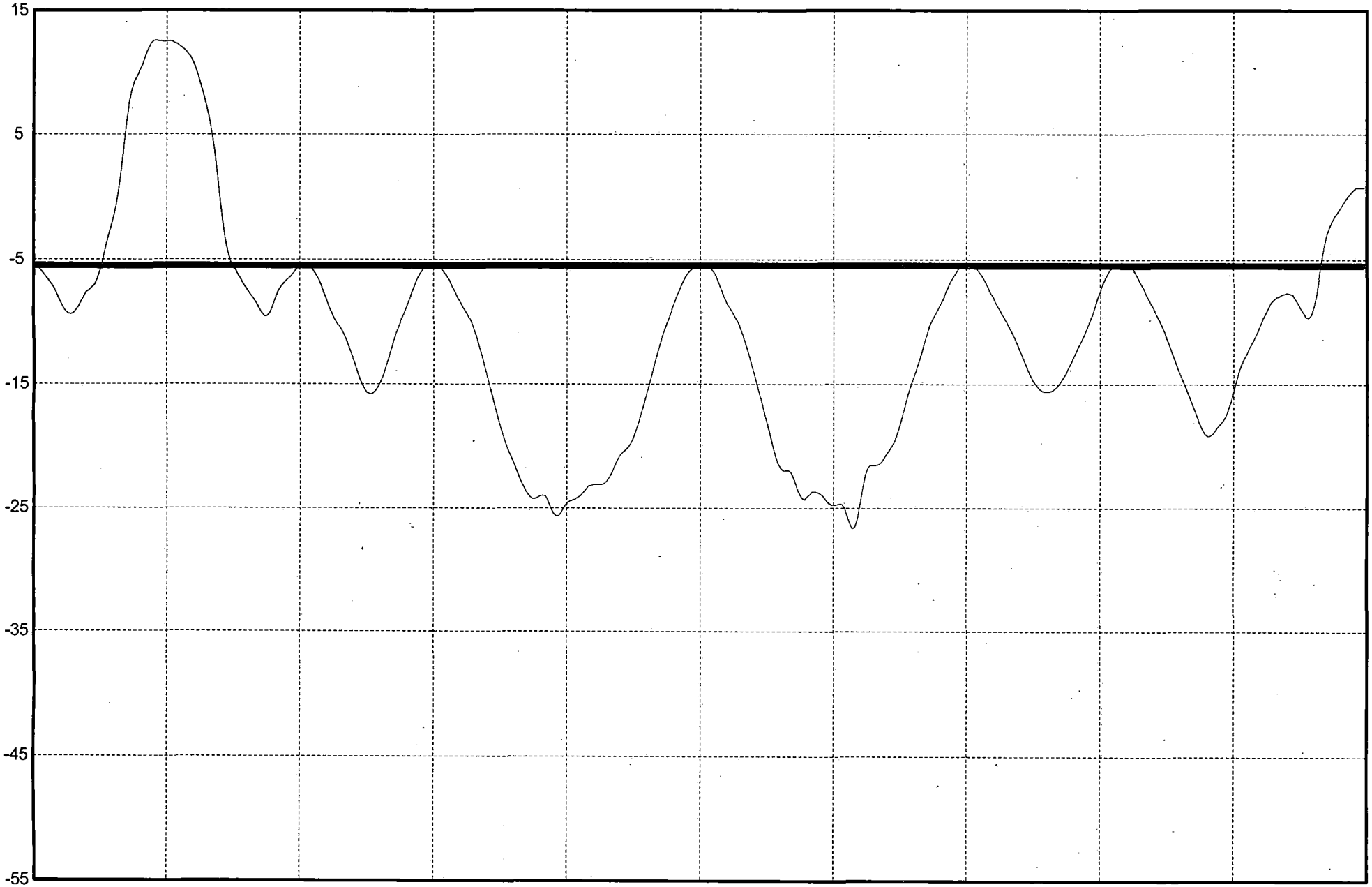


In-Channel Response: +/- 0.15 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH37 Mode : FR
Date : 17/07/13 Time : 04:58:57 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 37 CF: 301.262 MHz SPAN: 5 MHz

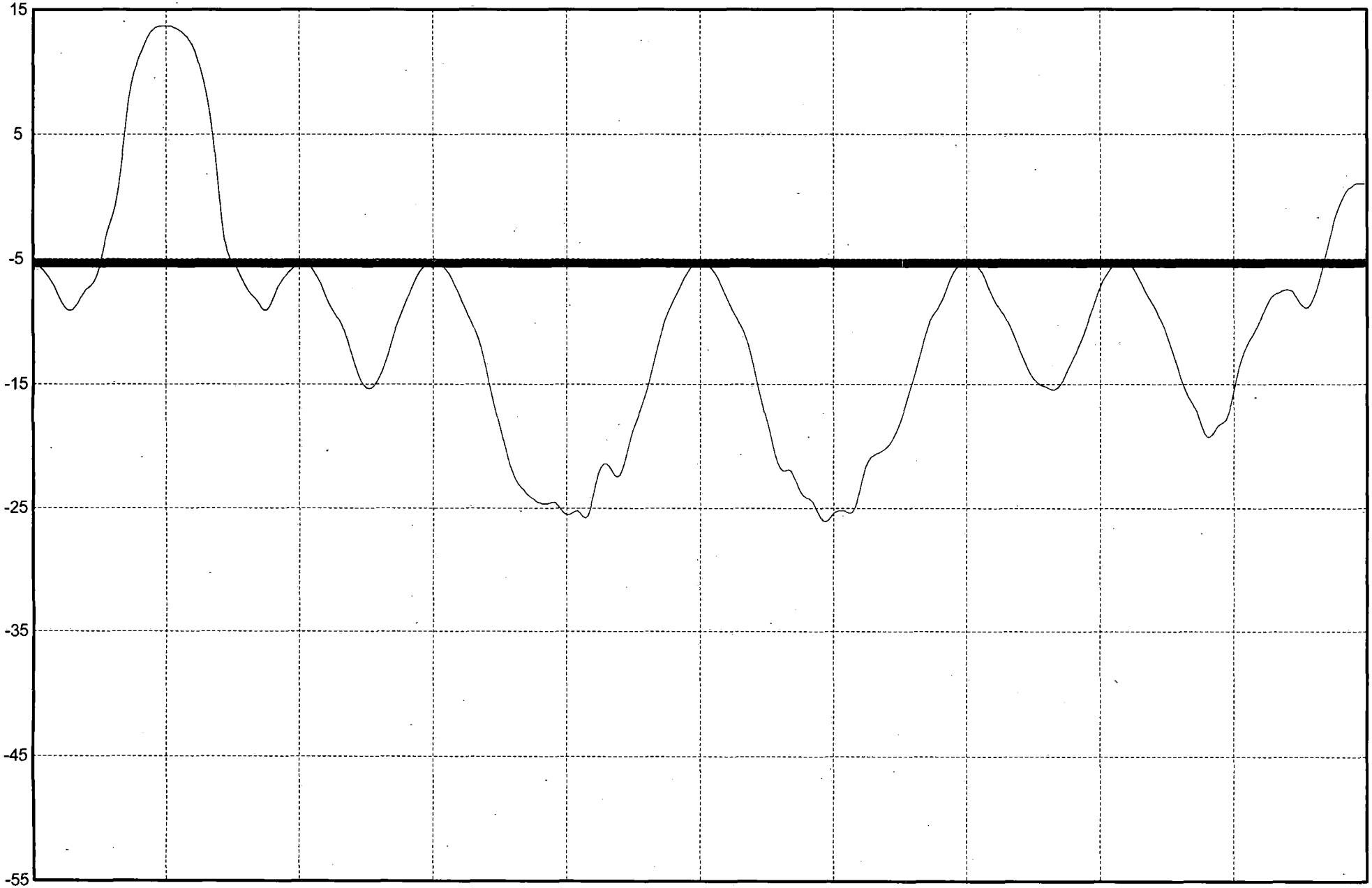


In-Channel Response: +/- 0.05 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH44-ICR Mode : FR
Date : 17/07/13 Time : 05:00:07 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 44 CF: 343.262 MHz SPAN: 5 MHz

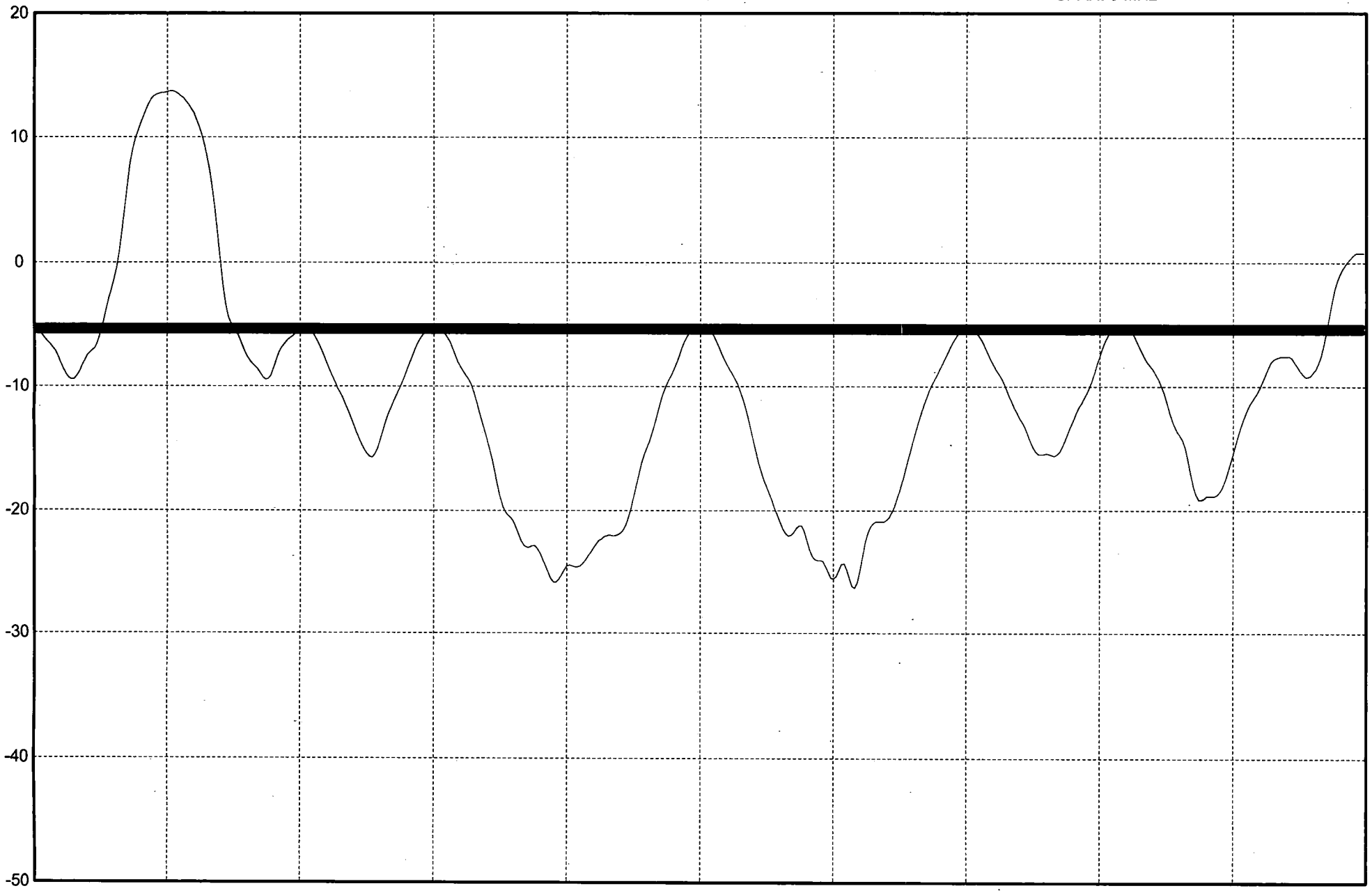


In-Channel Response: +/- 0.10 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH56-ICR Mode : FR
Date : 17/07/13 Time : 05:01:14 Temp 30 C

ATT: 20 dB
dBmV Video Channel: 56 CF: 415.250 MHz SPAN: 5 MHz

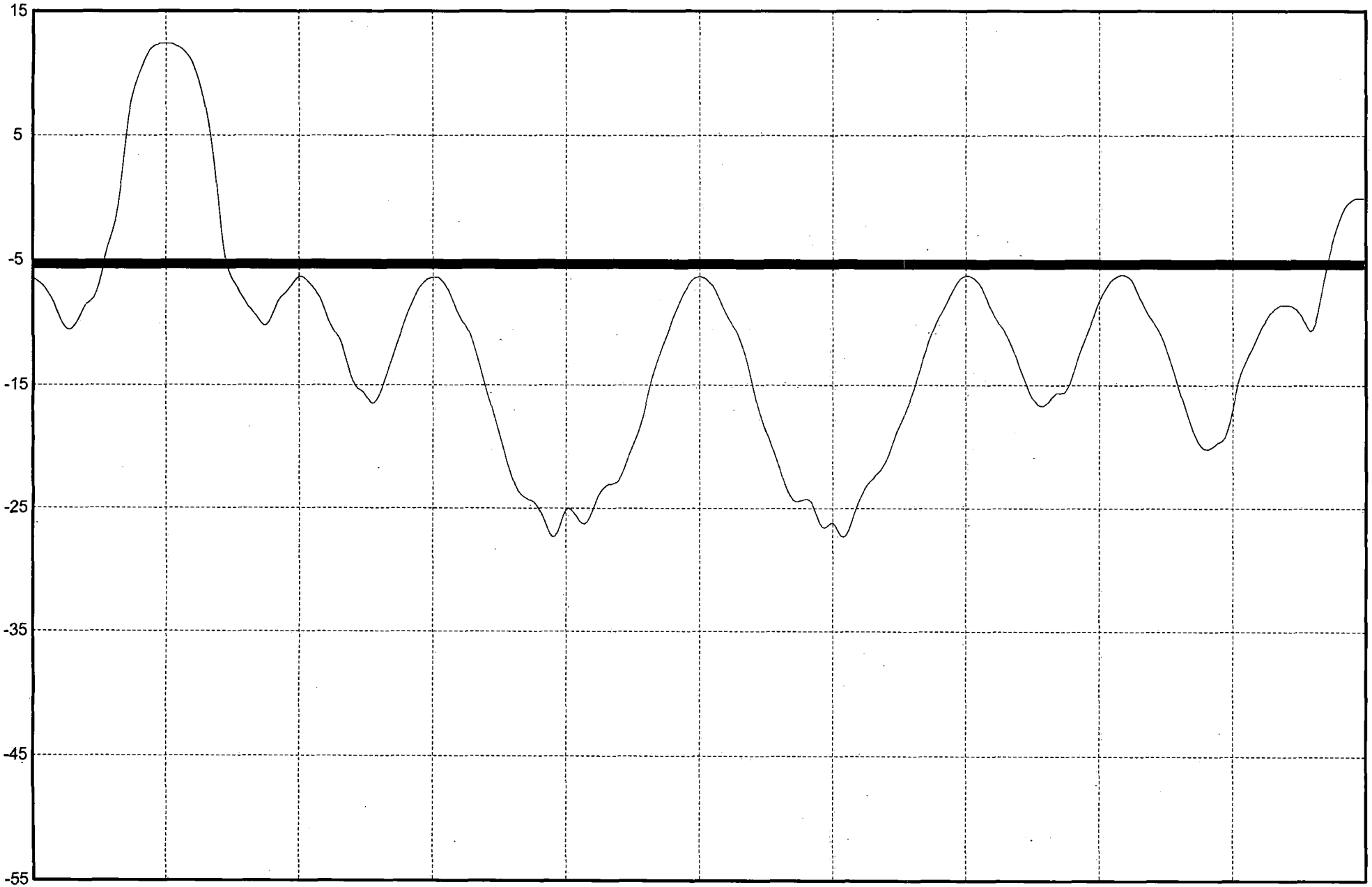


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH61-ICR Mode : FR
Date : 17/07/13 Time : 05:02:29 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 61 CF: 445.250 MHz SPAN: 5 MHz

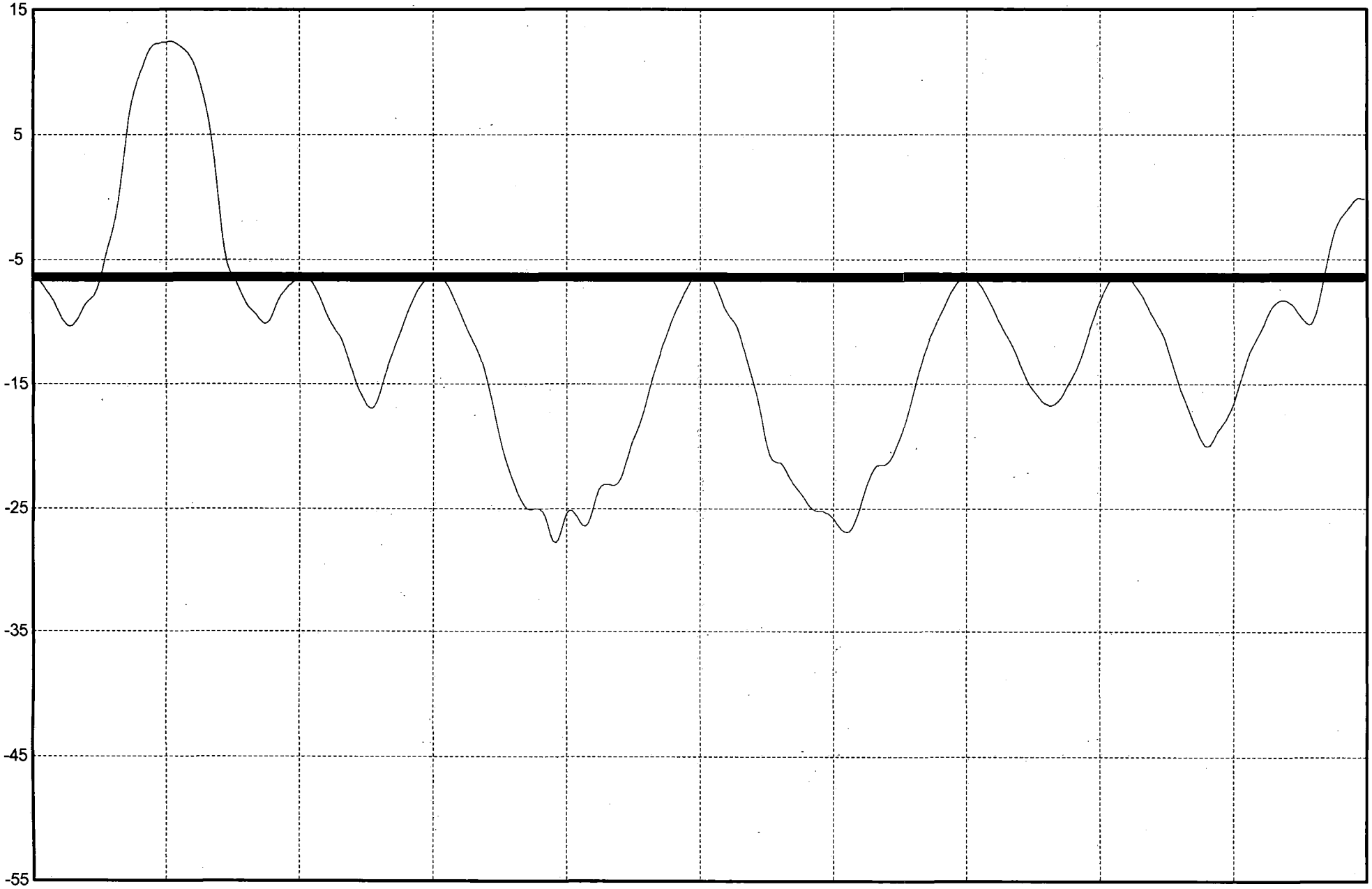


In-Channel Response: +/- 0.20 dB
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH69 Mode : FR
Date : 17/07/13 Time : 05:04:02 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 69 CF: 493.250 MHz SPAN: 5 MHz

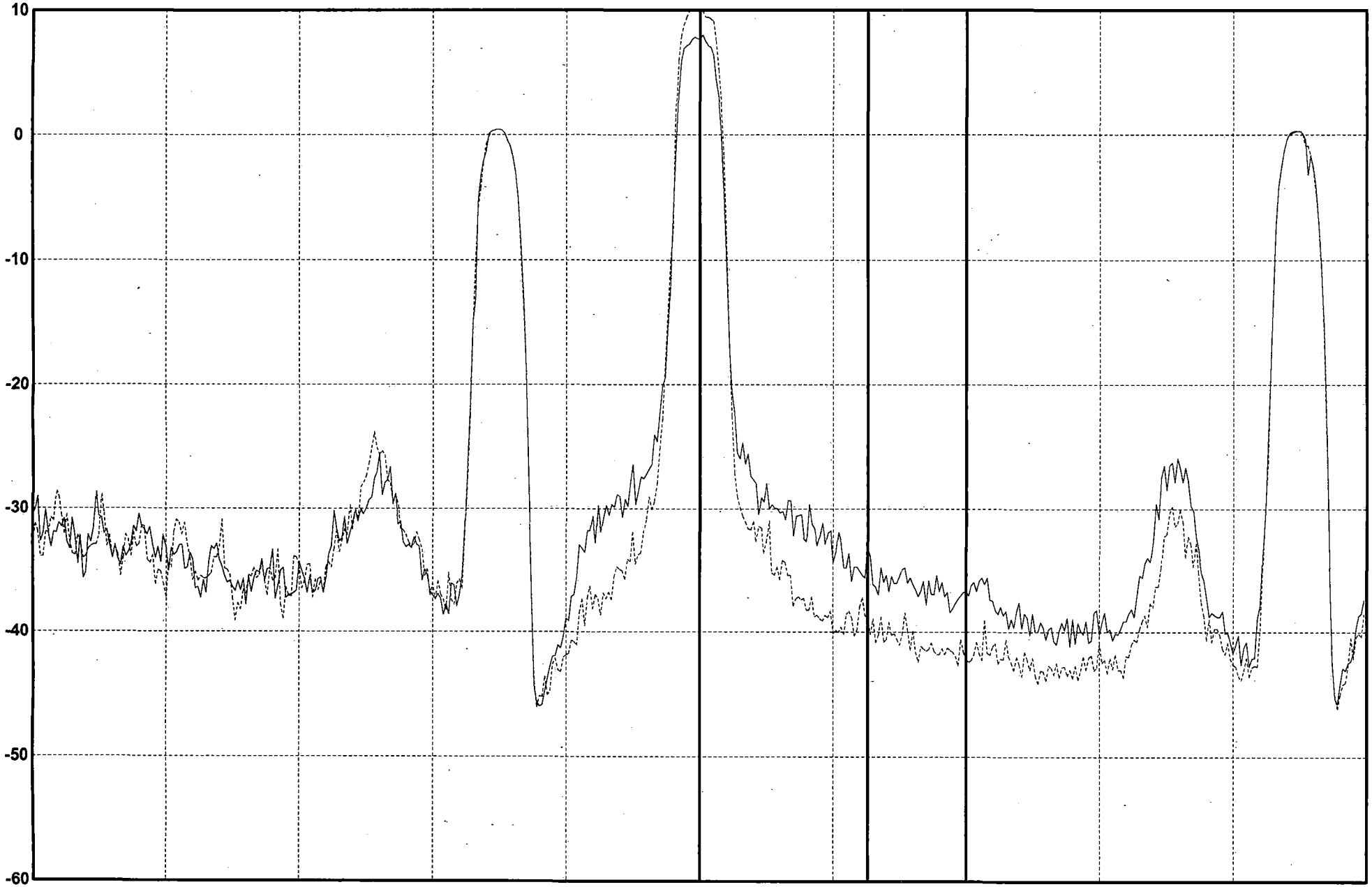


In-Channel Response: +/- 0.15 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH56-CN Mode : DIST
Date : 17/07/13 Time : 05:15:22 Temp 27 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 56 CF: 415.250 MHz 14.4 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 50.6 dB
CSO : 63.6 dB
CTB : 62.9 dB

2.0000 MHz
1.2500 MHz
0.0000 MHz

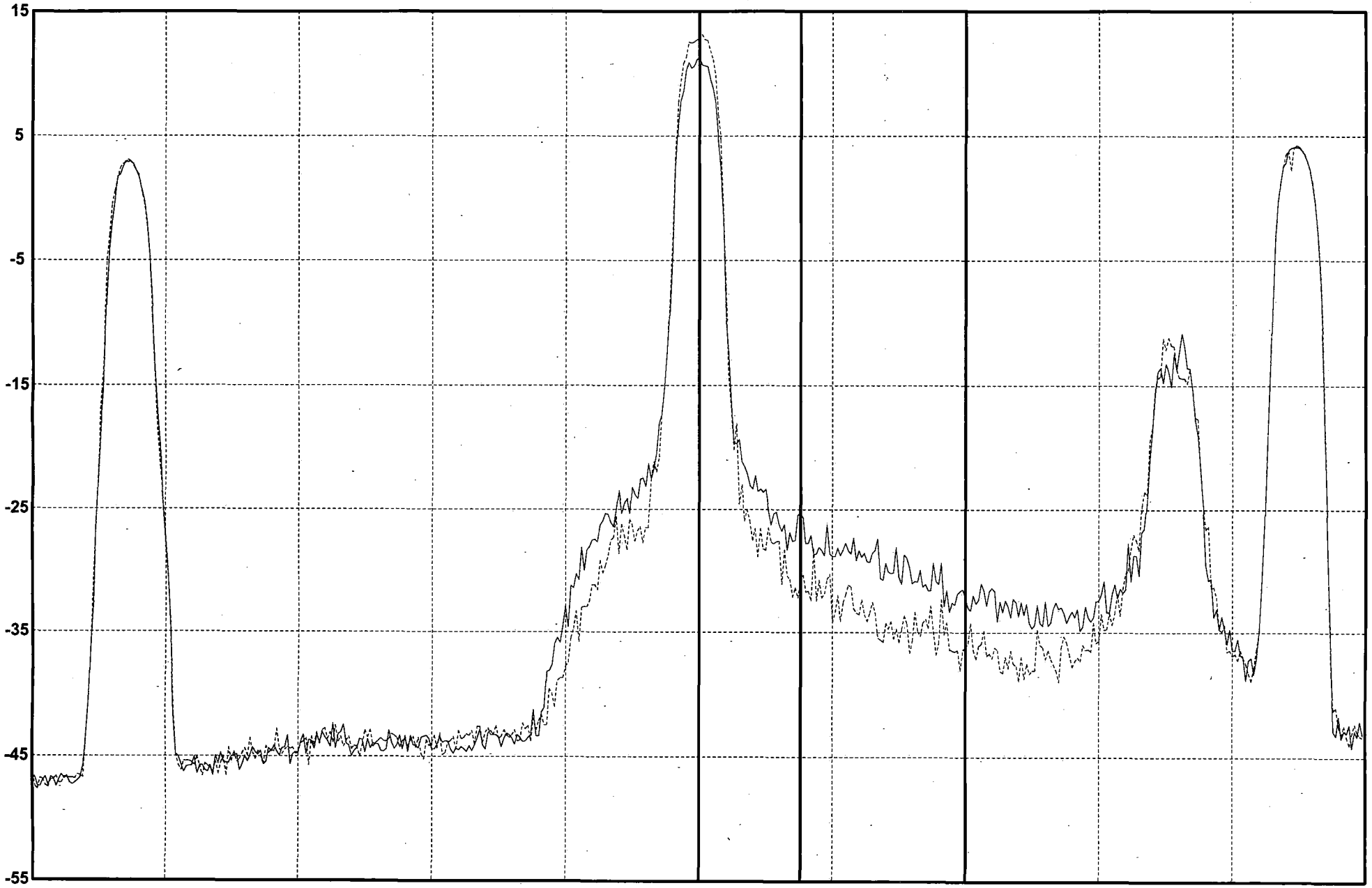
1.4 dB
0.9 dB
0.7 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH2-CSO Mode : DIST
Date : 17/07/13 Time : 05:05:48 Temp 27 C

ATT: 15 dB OFS: 0 dB
dBmV Video Channel: 2 CF: 55.250 MHz 17.9 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 50.5 dB
CSO : 65.1 dB
CTB : 65.7 dB

2.0000 MHz
0.7500 MHz
0.0000 MHz

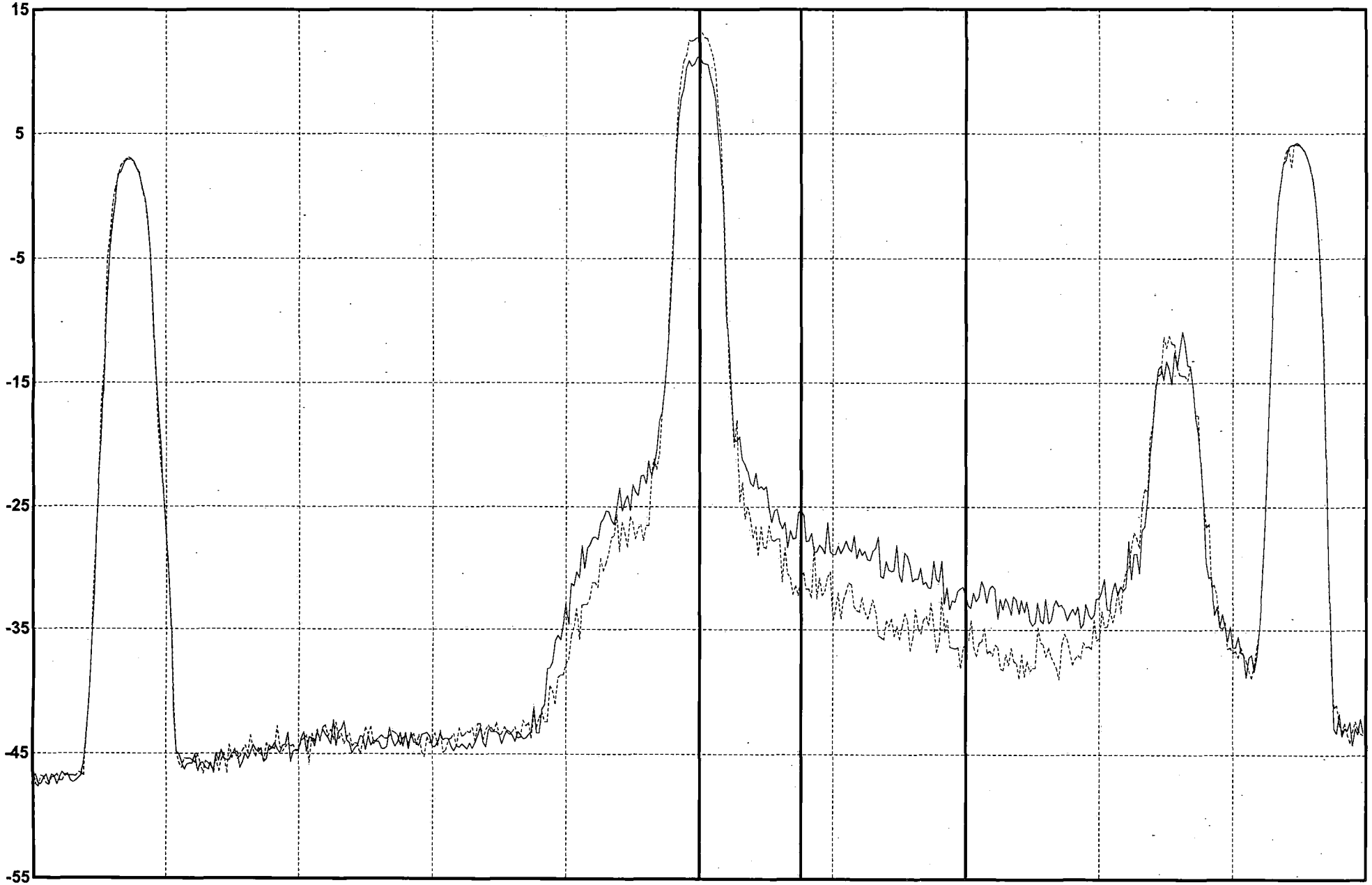
1.5 dB
1.4 dB
1.6 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP3-CH2-CTB Mode : DIST
Date : 17/07/13 Time : 05:05:48 Temp 27 C

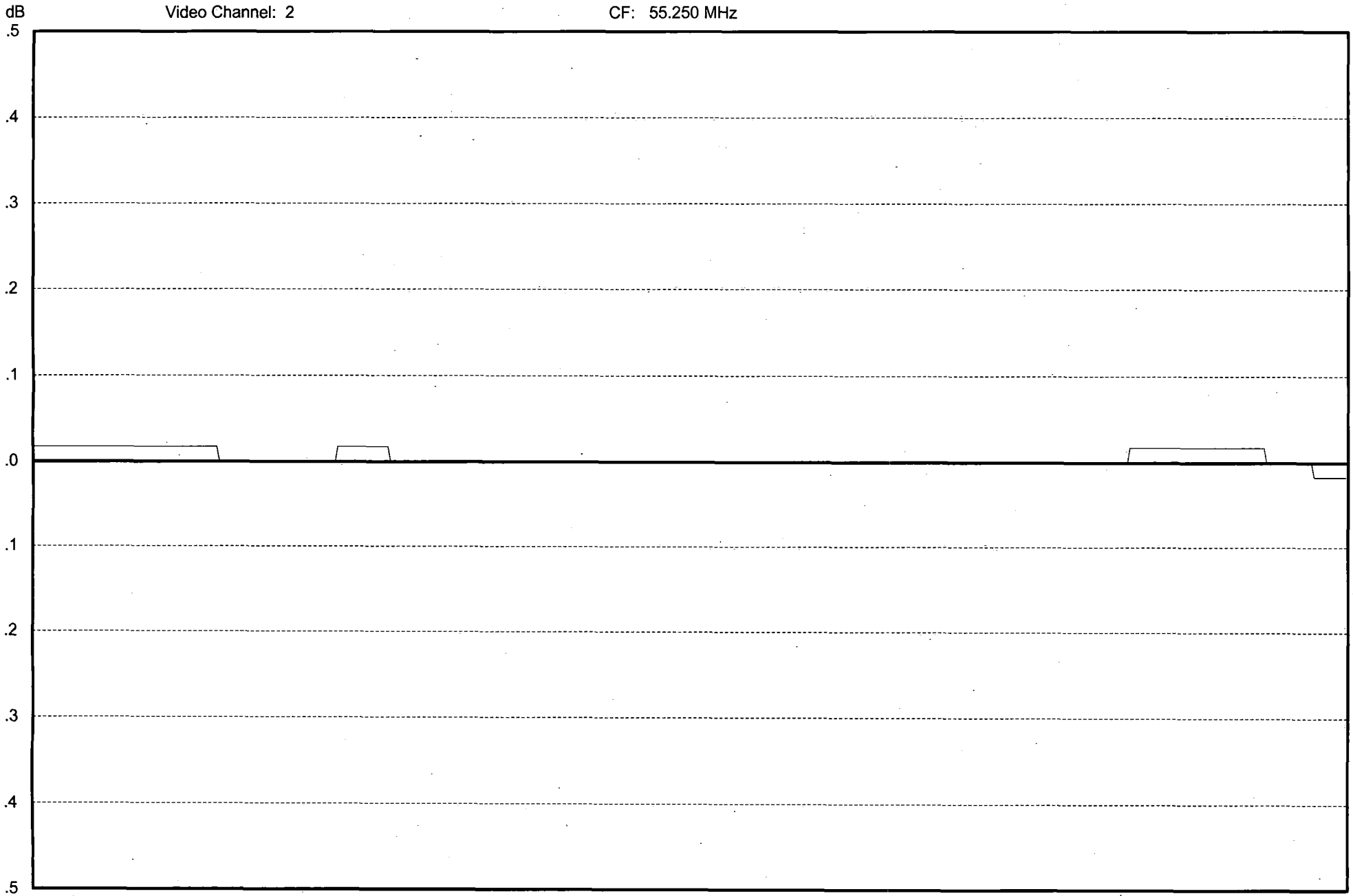
ATT: 15 dB OFS: 0 dB Field : 1 Line : 23
dBmV Video Channel: 2 CF: 55.250 MHz 17.9 dBmV SPAN: 10 MHz



CCN : 50.5 dB 2.0000 MHz 1.5 dB Average 2
CSO : 65.1 dB 0.7500 MHz 1.4 dB
CTB : 65.7 dB 0.0000 MHz 1.6 dB

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : *of :* TIME WARNER CABLE
Site Id : SA Comments : STP3-CH2-HUM Mode : HUM
Date : 17/07/13 Time : 04:52:44 Temp 30 C



Hum (Signal): 0.4 % 59 dBC
Hum (Marker): 0.0 % 99 dBC

TestPoint 3, Page 5

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL VARIATION TEST

System Name : Sayre
Date : 08/02/2013
Meter Serial Number : 6033315
Test Location : 711 route 199 Athens, PA
Performed By : Derek Cordillone

		TEMP F							TEMP F				
		62.20	42.80	77.20	73.40				62.20	42.80	77.20	73.40	
		TIME							TIME				
		01:33:00	07:33:00	13:33:00	19:33:00				01:33:00	07:33:00	13:33:00	19:33:00	
CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR	CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR
2	55.2500	19.90	20.20	19.10	19.40	1.1	DD(40)	319.2625	17.60	17.60	16.60	17.40	1
3	61.2500						EE(41)	325.2625	18.20	18.30	17.20	17.70	1.1
4	67.2500	20.10	20.70	19.80	20.10	0.9	FF(42)	331.2750	19.00	19.10	18.00	18.60	1.1
5	77.2500	19.80	19.90	19.10	19.40	0.8	GG(43)	337.2625	17.80	17.80	16.70	17.20	1.1
6	83.2500	19.10	19.40	18.30	18.70	1.1	HH(44)	343.2625	17.80	17.80	16.70	17.40	1.1
A-5(95)	91.2500						II(45)	349.2625	18.40	18.40	17.00	17.60	1.4
A-4(96)	97.2500						JJ(46)	355.2625	18.30	18.00	17.00	17.80	1.3
A-3(97)	103.2500						KK(47)	361.2625	17.80	18.10	16.80	17.20	1.3
A-2(98)	109.2750	18.70	18.60	17.30	18.00	1.4	LL(48)	367.2625					
A-1(99)	115.2750						MM(49)	373.2625	17.10	17.20	15.90	16.70	1.3
A(14)	121.2625	17.20	17.30	16.20	16.80	1.1	NN(50)	379.2625	17.30	17.10	16.30	17.00	1
B(15)	127.2625	17.00	17.40	16.00	16.90	1.4	OO(51)	385.2625	17.70	17.40	16.50	17.00	1.2
C(16)	133.2625	17.00	17.20	16.00	16.70	1.2	PP(52)	391.2625					
D(17)	139.2500	17.80	18.40	17.10	17.60	1.3	QQ(53)	397.2625	17.20	17.20	16.30	16.60	0.9
E(18)	145.2500						RR(54)	403.2500					
F(19)	151.3210	17.40	17.40	16.30	17.00	1.1	SS(55)	409.2500	17.30	17.20	16.40	16.70	0.9
G(20)	157.2500	17.40	17.50	16.40	16.80	1.1	TT(56)	415.2500	17.30	17.30	15.80	16.90	1.5
H(21)	163.2500	16.70	16.80	15.70	16.30	1.1	UU(57)	421.2500	16.50	16.20	15.50	15.80	1
I(22)	169.2500						VV(58)	427.2500	16.30	16.10	14.80	15.60	1.5
7	175.2500	18.80	18.60	17.80	18.40	1	WW(59)	433.2500	16.40	16.20	15.20	15.90	1.2
8	181.2500	18.40	18.00	17.60	18.00	0.8	XX(60)	439.2500	16.50	16.60	15.40	16.20	1.2
9	187.2500	17.90	18.00	16.80	17.30	1.2	YY(61)	445.2500	16.40	16.30	15.00	15.70	1.4
10	193.2500	17.80	18.00	17.00	17.20	1	ZZ(62)	451.2500					
11	199.2500	17.50	17.90	17.20	17.40	0.7	63	457.2500	17.10	16.70	15.80	16.60	1.3
12	205.2500	17.50	17.50	16.60	17.10	0.9	64	463.2500					
13	211.2500	16.90	17.10	15.90	16.50	1.2	65	469.2500	17.00	17.20	15.90	16.50	1.3
J(23)	217.2500	16.60	16.60	15.60	16.10	1	66	475.2500					
K(24)	223.2500	15.70	15.80	14.80	15.40	1	67	481.2500	16.50	16.60	15.20	16.20	1.4
L(25)	229.2625	15.40	15.60	14.50	15.30	1.1	68	487.2500					
M(26)	235.2625	15.40	15.40	14.50	14.90	0.9	69	493.2500	16.60	16.40	15.20	15.60	1.4
N(27)	241.2625	15.30	15.50	14.50	15.00	1	70	499.2500	16.10	16.40	14.80	15.70	1.6
O(28)	247.2625	15.70	15.70	14.90	15.30	0.8	71	505.2500					
P(29)	253.2625	16.60	16.50	16.00	16.50	0.6	72	511.2500					
Q(30)	259.2625	17.30	17.40	15.90	16.60	1.5	73	517.2500					
R(31)	265.2625	16.40	16.40	15.40	15.90	1	74	523.2500					
S(32)	271.2625						75	529.2500					
T(33)	277.2625	16.70	16.60	15.80	16.30	0.9	76	535.2500					
U(34)	283.2625	16.90	17.00	16.20	16.60	0.8	77	541.2500					
V(35)	289.2625	17.00	17.00	15.90	16.30	1.1	78	547.2500					
W(36)	295.2625	16.80	16.70	16.10	16.40	0.7	79	553.2500					
AA(37)	301.2625	17.40	17.40	16.40	16.80	1	80	559.2500					
BB(38)	307.2625	17.00	17.10	15.90	16.70	1.2	81	565.2500					
CC(39)	313.2625	17.70	18.00	16.80	17.30	1.2							

Max Non Adjacent Channel Level Diff :- 5.3
Max Adjacent Channel Level Diff :- 1.4
Max Variance from last proof of performance test :- 4.6

TIME WARNER CABLE - SYRACUSE DIVISION

System Name	:	Sayre
System Test Point #	:	4
Hub Name	:	Sayre
Location	:	205 center st Waverly, NY
Map Number	:	109-113
Pole Number	:	L23
D.T. Value	:	9417
OR Number	:	SA056
GNA Cascade	:	0
LE Cscade	:	3

TESTPOINT 4, PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL
VISUAL / AURAL LEVEL DIFFERENCE
(at Test Point, at the end of a 100' Drop)

System Name : Sayre ***Test Location*** : 205 center st Waverly, NY

Date : 08/01/2013 ***Time*** : 01:09:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	14.30	0.80		13.5	DD (40)	319.2625	15.40	0.20		15.2
3	61.2500	14.60	0.90		13.7	EE (41)	325.2625	14.70	0.80		13.9
4	67.2500	14.60	0.50		14.1	FF (42)	331.2750	15.60	1.40		14.2
5	77.2500	14.90	0.80		14.1	GG (43)	337.2625	14.80	1.50		13.3
6	83.2500	15.20	0.60		14.6	HH (44)	343.2625	14.50	0.50		14
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	15.20	2.30		12.9
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	16.00	2.10		13.9
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	15.60	1.60		14
A-2 (98)	109.2750	15.00	0.90		14.1	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	16.10	2.20		13.9
A (14)	121.2625	15.30	0.90		14.4	NN (50)	379.2625	16.20	2.00		14.2
B (15)	127.2625	15.10	1.40		13.7	OO (51)	385.2625	15.50	2.80		12.7
C (16)	133.2625	15.40	1.00		14.4	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	15.50	1.30		14.2	QQ (53)	397.2625	16.50	2.60		13.9
E (18)	145.2500	N/A	N/A		N/A	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	15.40	0.90		14.5	SS (55)	409.2500	17.20	3.80		13.4
G (20)	157.2500	15.50	1.40		14.1	TT (56)	415.2500	17.30	3.30		14
H (21)	163.2500	15.30	2.00		13.3	UU (57)	421.2500	16.50	3.90		12.6
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	17.50	4.30		13.2
7	175.2500	15.70	1.10		14.6	WW (59)	433.2500	17.70	3.40		14.3
8	181.2500	16.30	1.50		14.8	XX (60)	439.2500	17.30	3.70		13.6
9	187.2500	16.10	2.60		13.5	YY (61)	445.2500	17.90	3.70		14.2
10	193.2500	15.60	2.00		13.6	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	15.80	2.40		13.4	63	457.2500	17.50	4.00		13.5
12	205.2500	16.40	2.10		14.3	64	463.2500	N/A	N/A		N/A
13	211.2500	N/A	N/A		N/A	65	469.2500	17.90	3.40		14.5
J (23)	217.2500	15.90	2.40		13.5	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	16.20	2.40		13.8	67	481.2500	16.70	3.00		13.7
L (25)	229.2625	16.20	1.60		14.6	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	15.80	2.00		13.8	69	493.2500	15.50	1.70		13.8
N (27)	241.2625	15.40	1.90		13.5	70	499.2500	15.90	2.60		13.3
O (28)	247.2625	15.40	0.80		14.6	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	15.00	1.10		13.9	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	14.80	1.10		13.7	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	15.10	0.10		15	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	15.30	1.80		13.5	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	15.40	0.70		14.7	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	15.30	0.50		14.8	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	15.70	0.90		14.8	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	15.40	0.20		15.2	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	14.80	0		14.8	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	14.90	0.90		14						

Min Channel	:	2	14.300
Max Channel	:	YY(61)	17.900
Peak to Valley	:	3.6	

TESTPOINT 4, PAGE 3

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL RESPONSE TEST
CARRIER - TO - NOISE TEST
COHERENT DISTURBANCES TEST
LOW FREQUENCY DISTURBANCES TEST

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

Location : 205 center st Waverly, NY

Note: Make Measurements through a 100 ft. test drop cable without converter.

CHANNEL NUMBER	IN CHANNEL RESPONSE	CARRIER TO NOISE RATIO	DISTORTIONS	CSO	HUM
	(+/- DB)	(DB)	(-DBC) CTB		(%)
2	0.55	50.6	65.7	65.4	0.6
14	0.25	49.9	64.4	64.9	
9	0.25	50.8	64.8	65.4	
23	0.35	51.0	65.0	65.7	
37	0.40	50.6	65.0	63.7	
44	0.40	50.6	65.0	63.7	
56	0.20	51.6	64.1	65.6	
61	0.05	51.6	65.5	66.4	
69	0.20	50.8	63.0	62.3	

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL FREQUENCY RESPONSE TEST
(76.605) (a) (6)

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

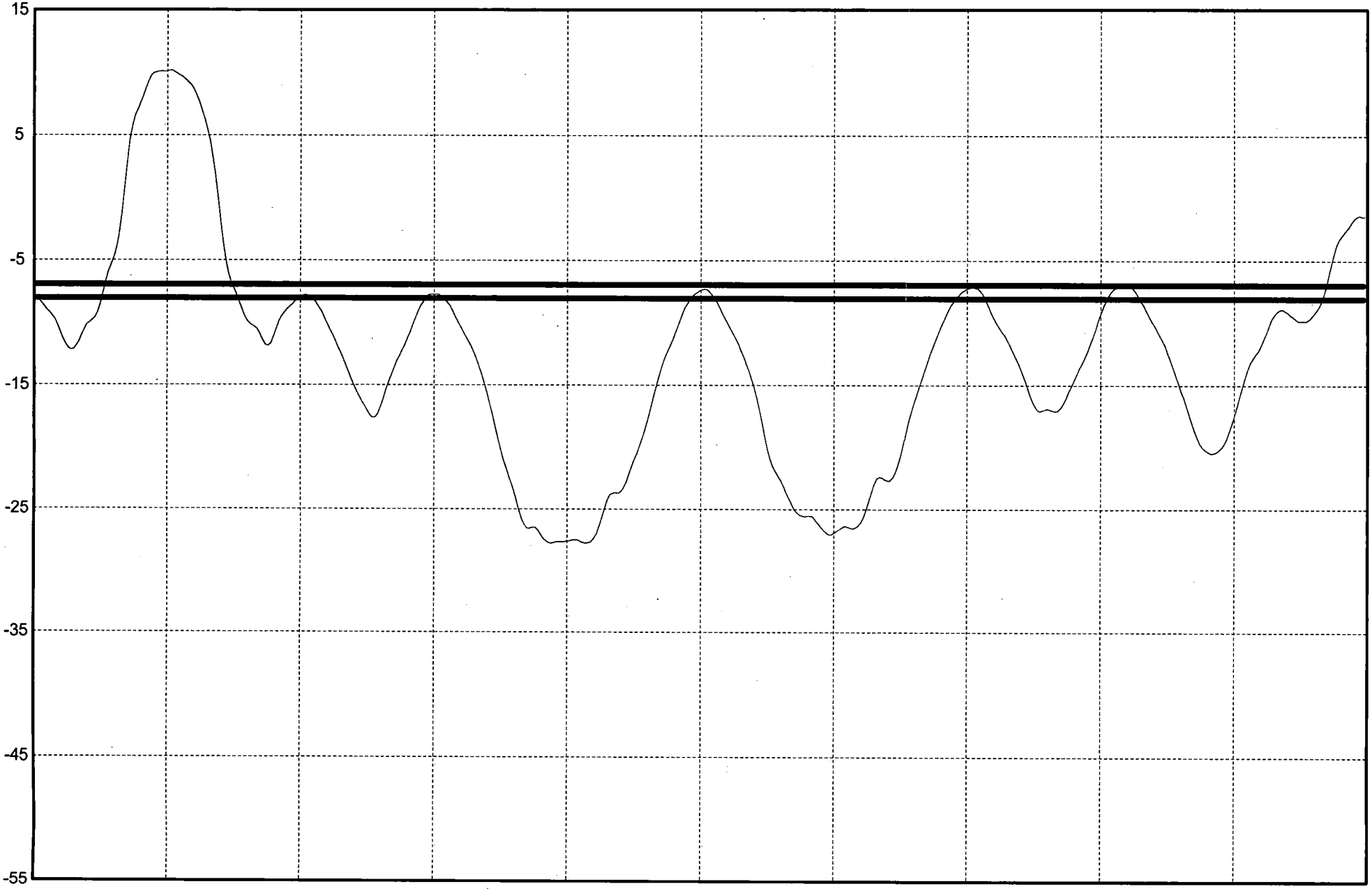
Location : 205 center st Waverly, NY

(SEE THE ATTACHED SWEEP TRACES)

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH2-ICR Mode : FR
Date : 18/07/13 Time : 01:19:06 Temp 23 C

ATT: 15 dB
dBmV Video Channel: 2 CF: 55.250 MHz SPAN: 5 MHz

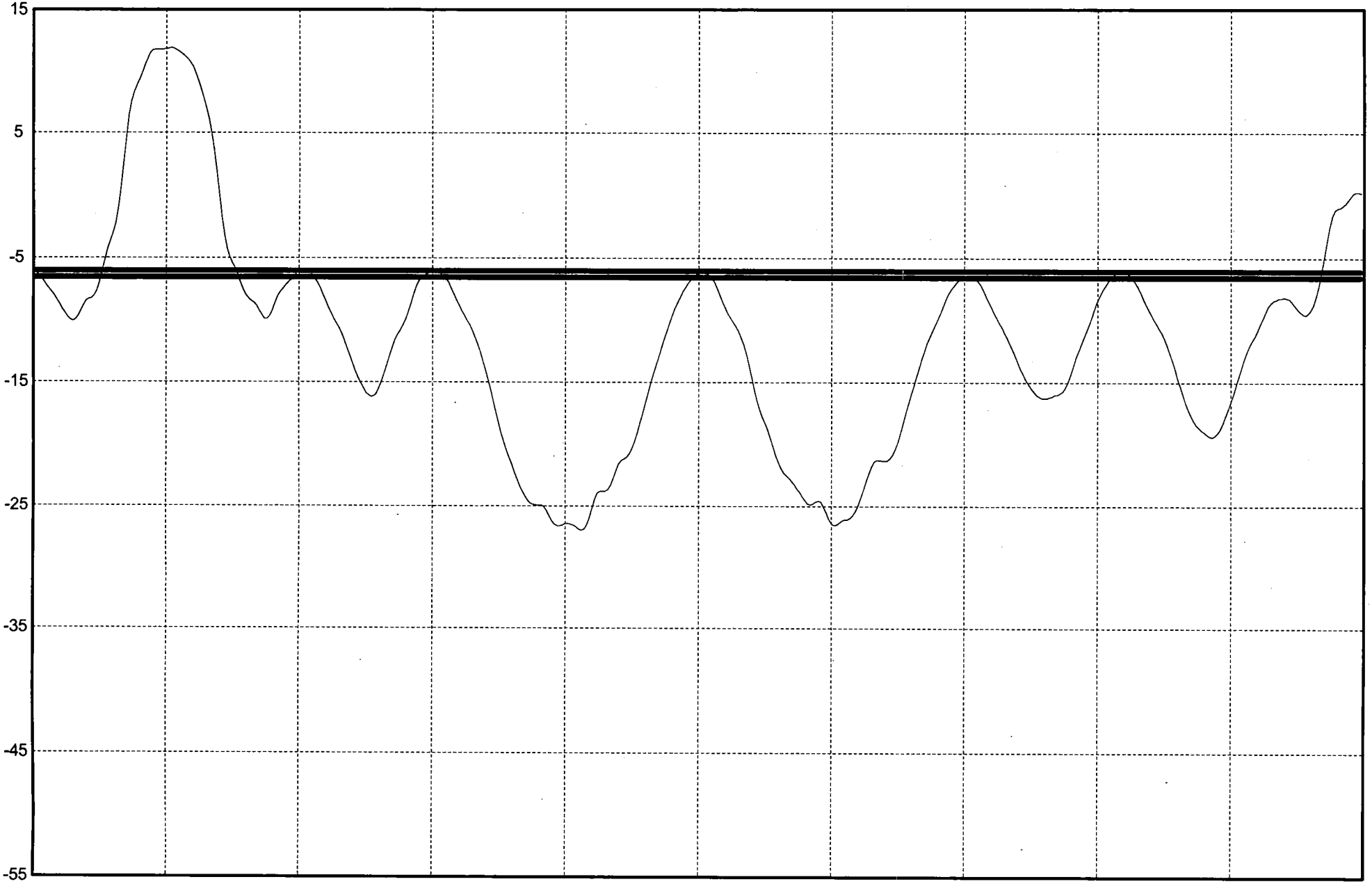


In-Channel Response: +/- 0.55 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH9-ICR Mode : FR
Date : 18/07/13 Time : 01:21:11 Temp 23 C

ATT: 15 dB
dBmV Video Channel: 9 CF: 187.250 MHz SPAN: 5 MHz

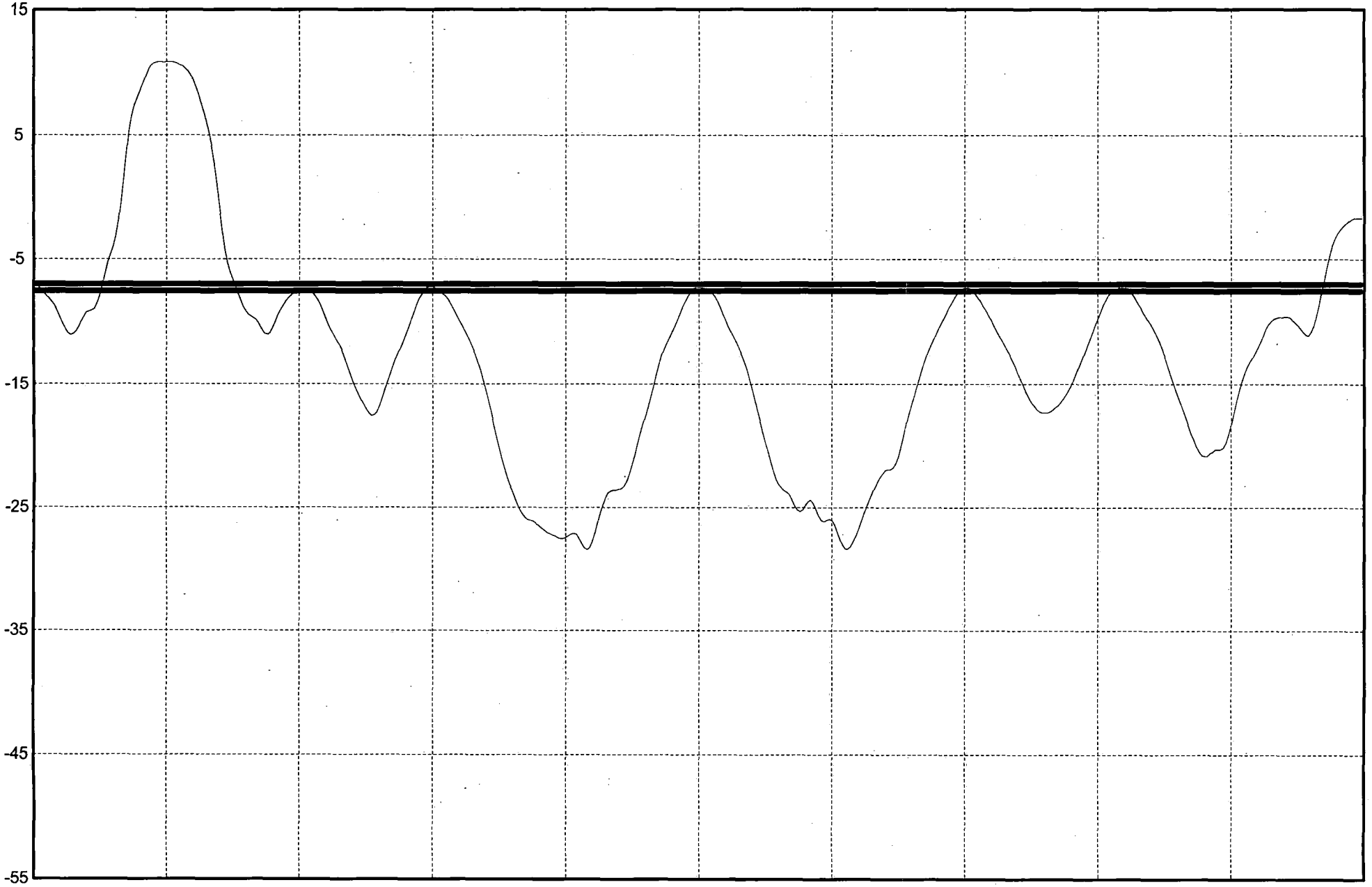


In-Channel Response: +/- 0.25 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH14-ICR Mode : FR
Date : 18/07/13 Time : 01:20:11 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 14 CF: 121.262 MHz SPAN: 5 MHz

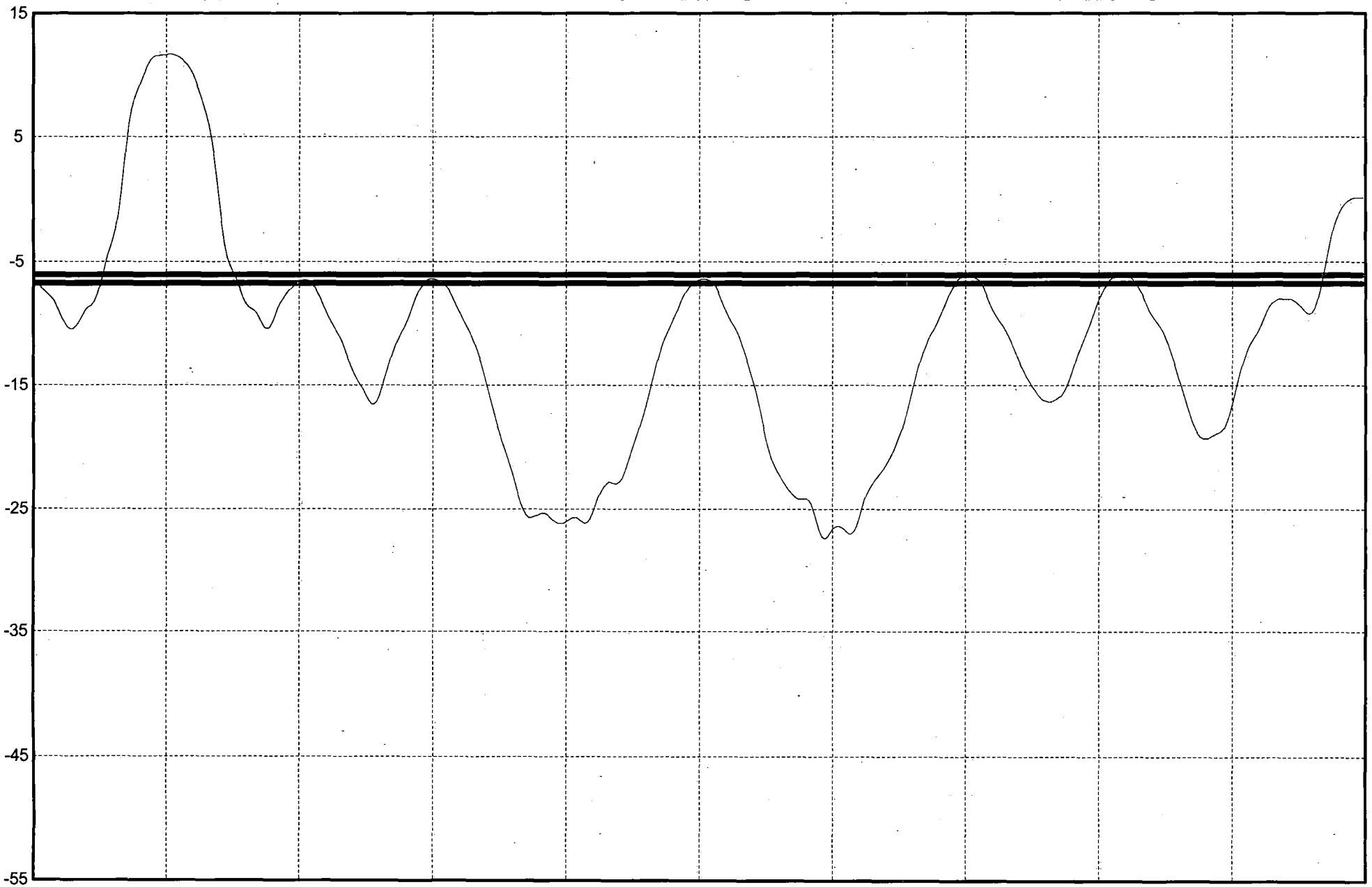


In-Channel Response: +/- 0.25 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH23-ICR Mode : FR
Date : 18/07/13 Time : 01:22:16 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 23 CF: 217.250 MHz SPAN: 5 MHz

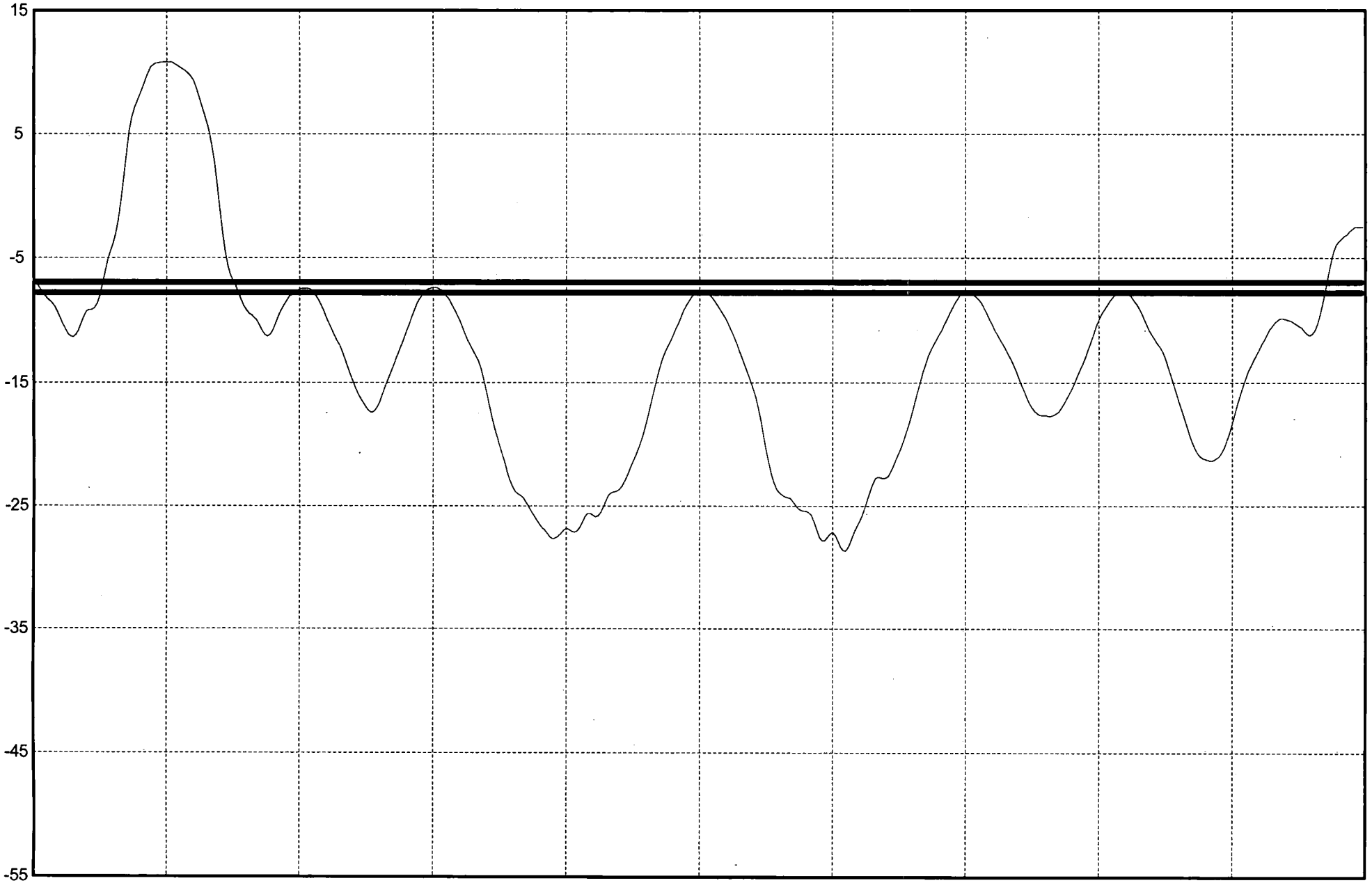


In-Channel Response: +/- 0.35 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH37-ICR Mode : FR
Date : 18/07/13 Time : 01:23:22 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 37 CF: 301.262 MHz SPAN: 5 MHz

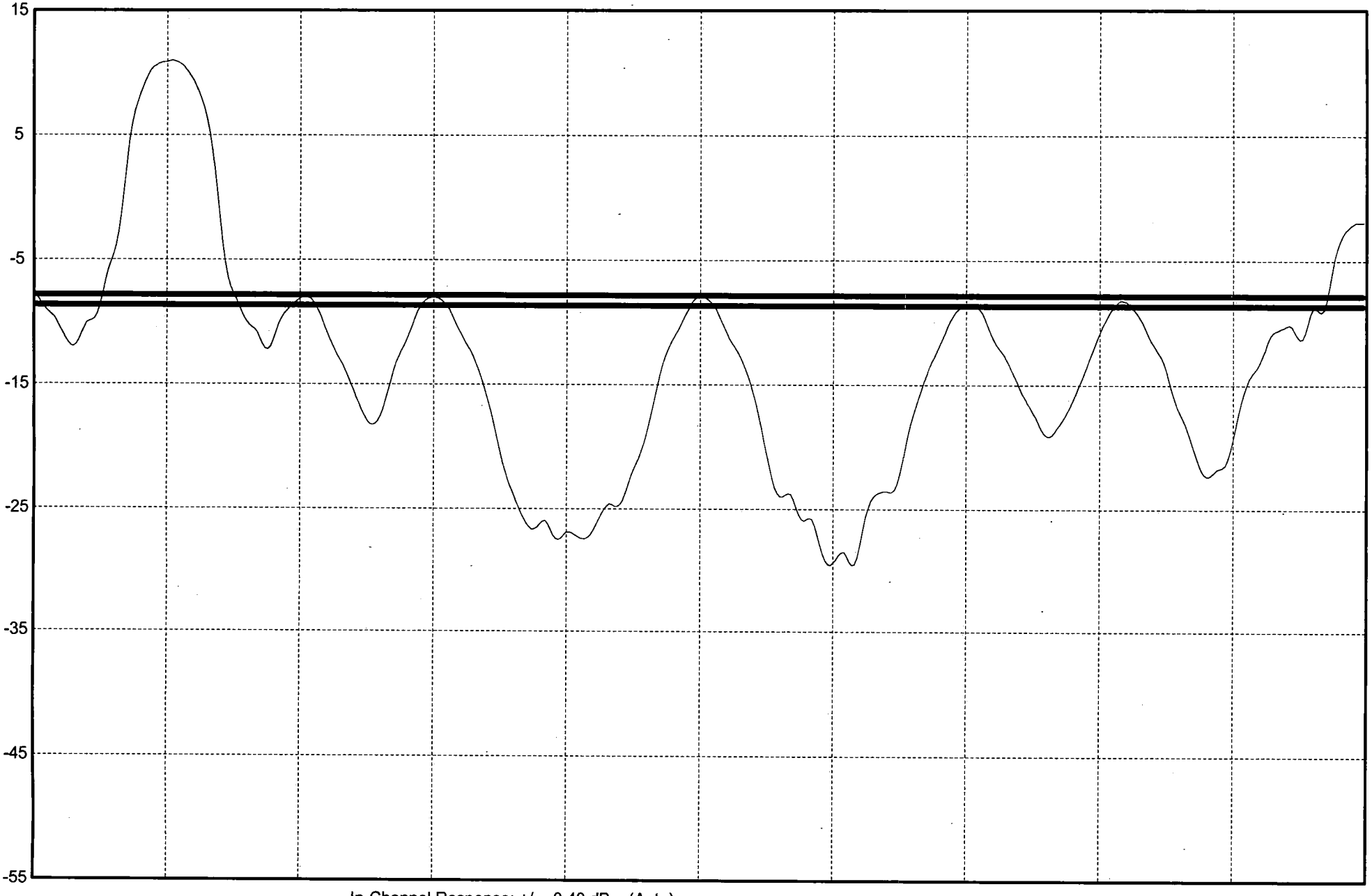


In-Channel Response: +/- 0.40 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH44-ICR Mode : FR
Date : 18/07/13 Time : 01:24:27 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 44 CF: 343.262 MHz SPAN: 5 MHz

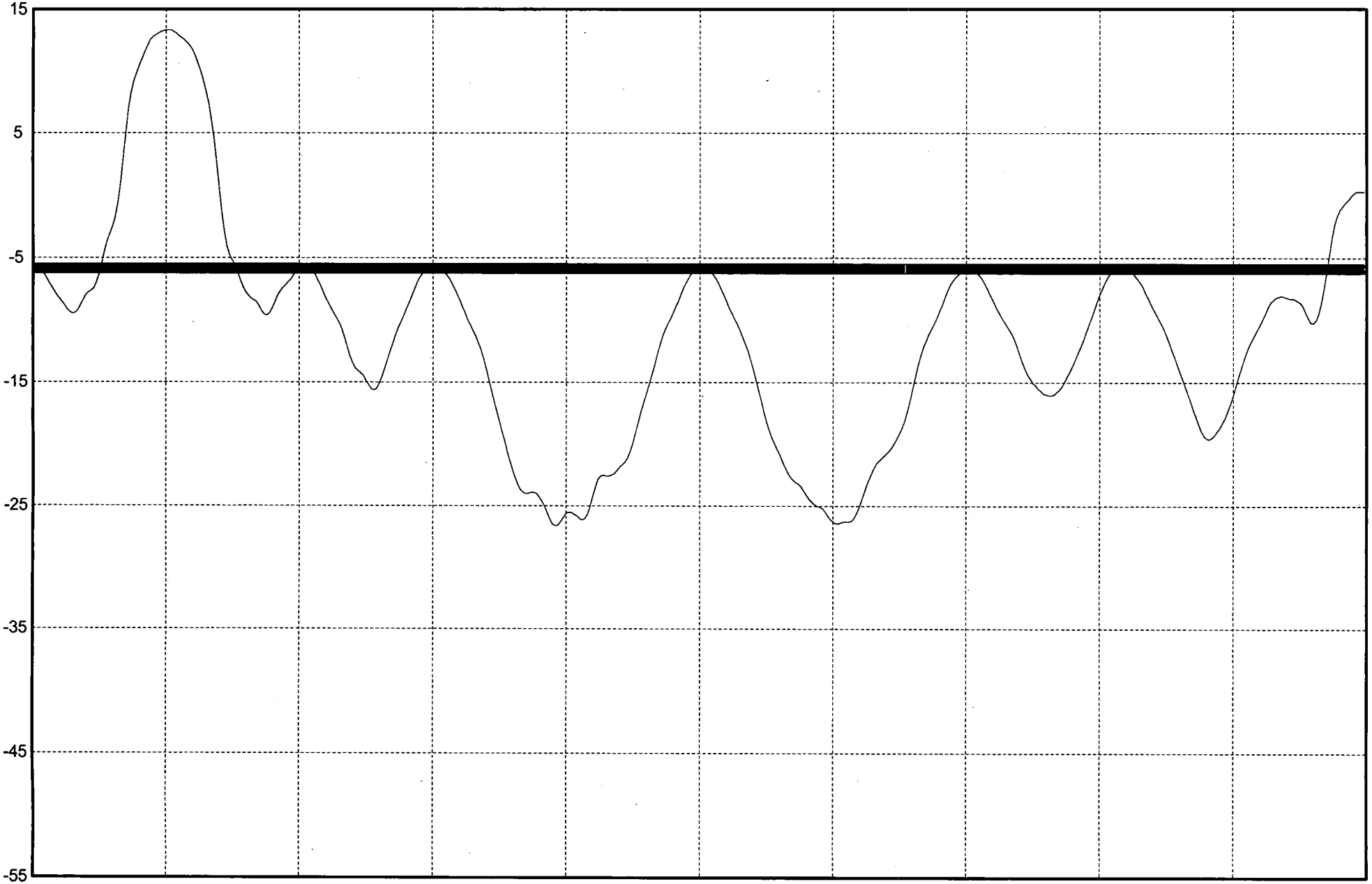


In-Channel Response: +/- 0.40 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH56-ICR Mode : FR
Date : 18/07/13 Time : 01:25:23 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 56 CF: 415.250 MHz SPAN: 5 MHz

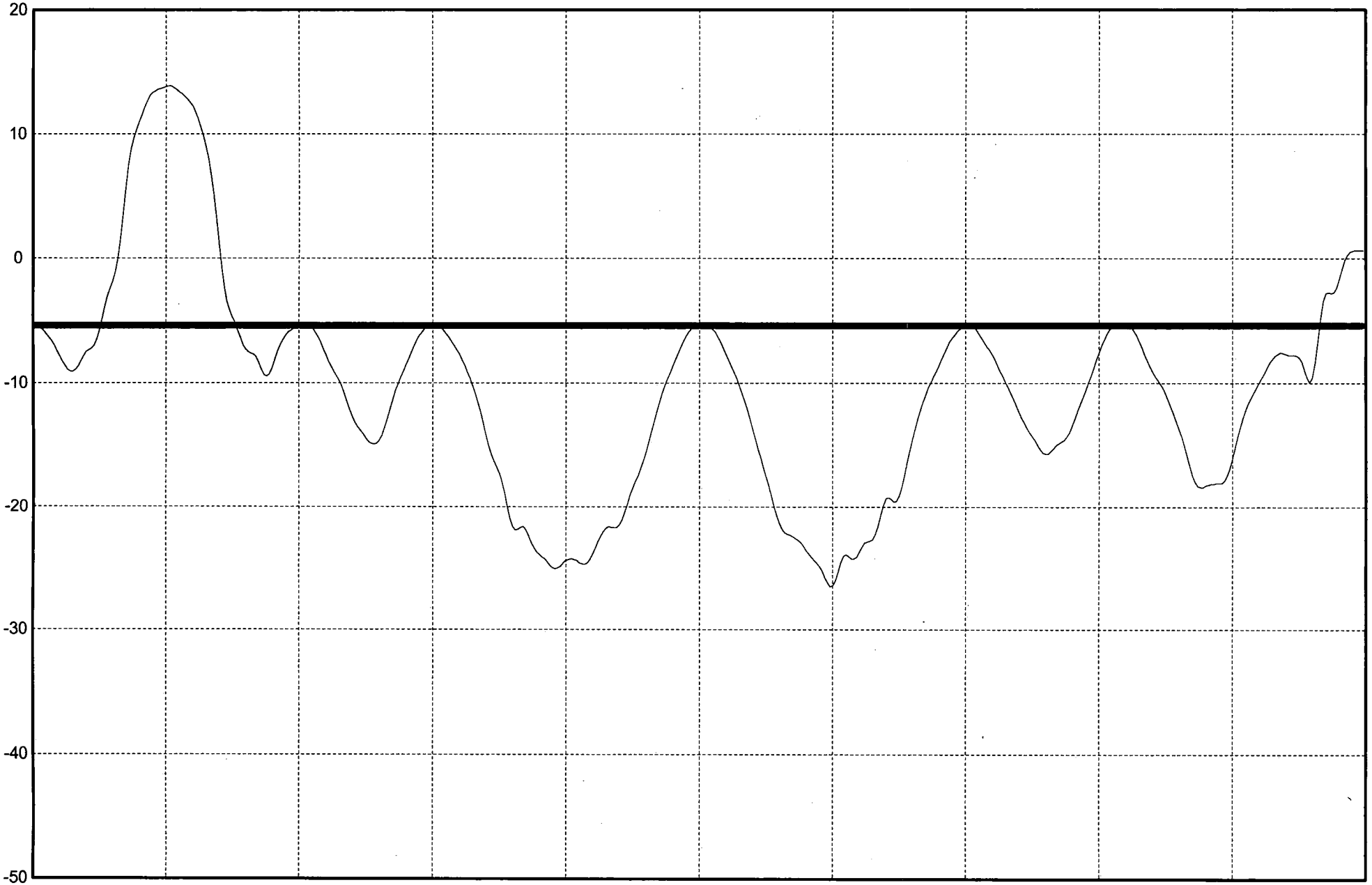


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH61-ICR Mode : FR
Date : 18/07/13 Time : 01:26:32 Temp 25 C

ATT: 20 dB
dBmV Video Channel: 61 CF: 445.250 MHz SPAN: 5 MHz

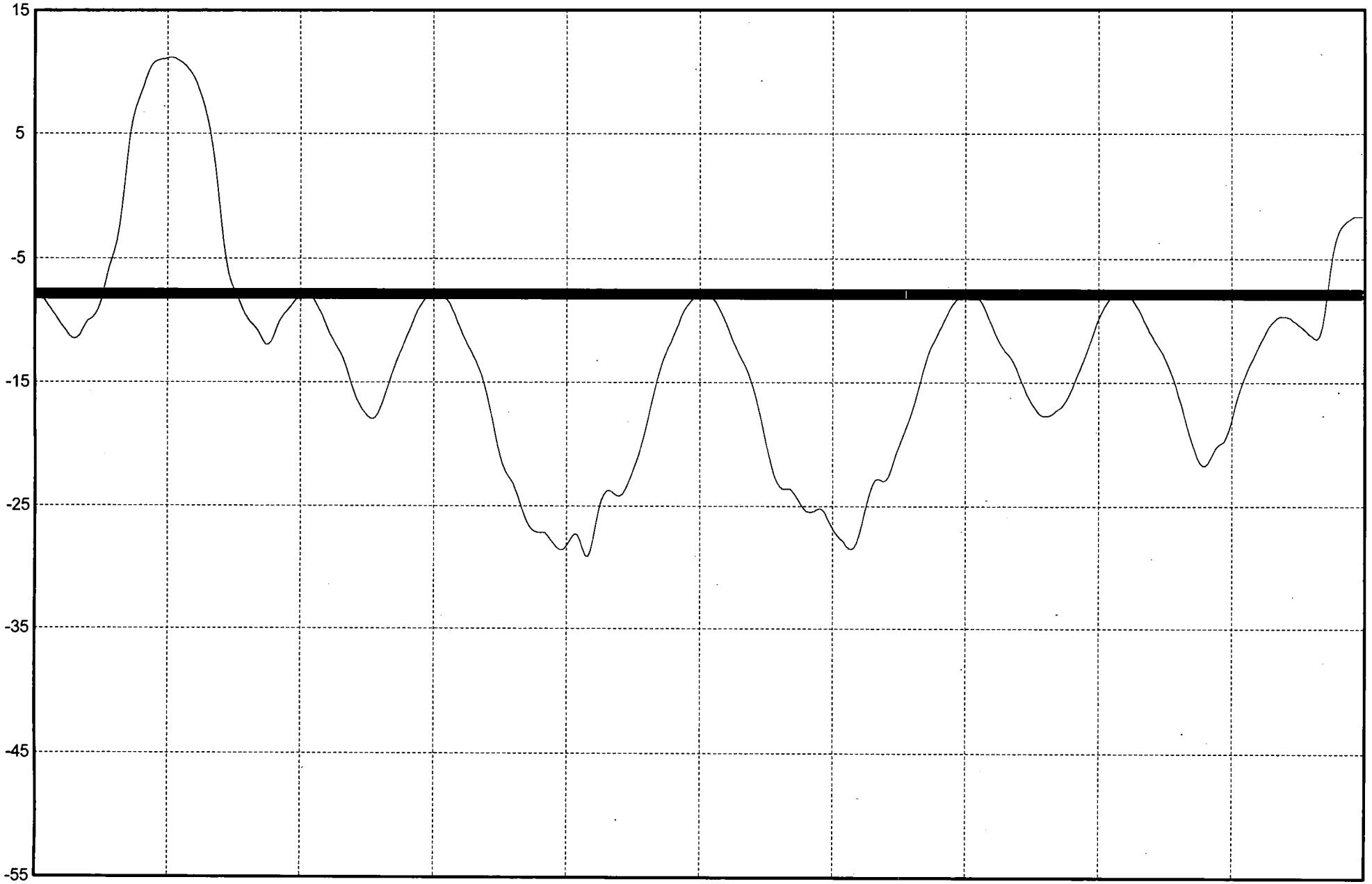


In-Channel Response: +/- 0.05 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : TP4-CH69-ICR Mode : FR
Date : 18/07/13 Time : 01:32:27 Temp 25 C

ATT: 15 dB
dBmV Video Channel: 69 CF: 493.250 MHz SPAN: 5 MHz

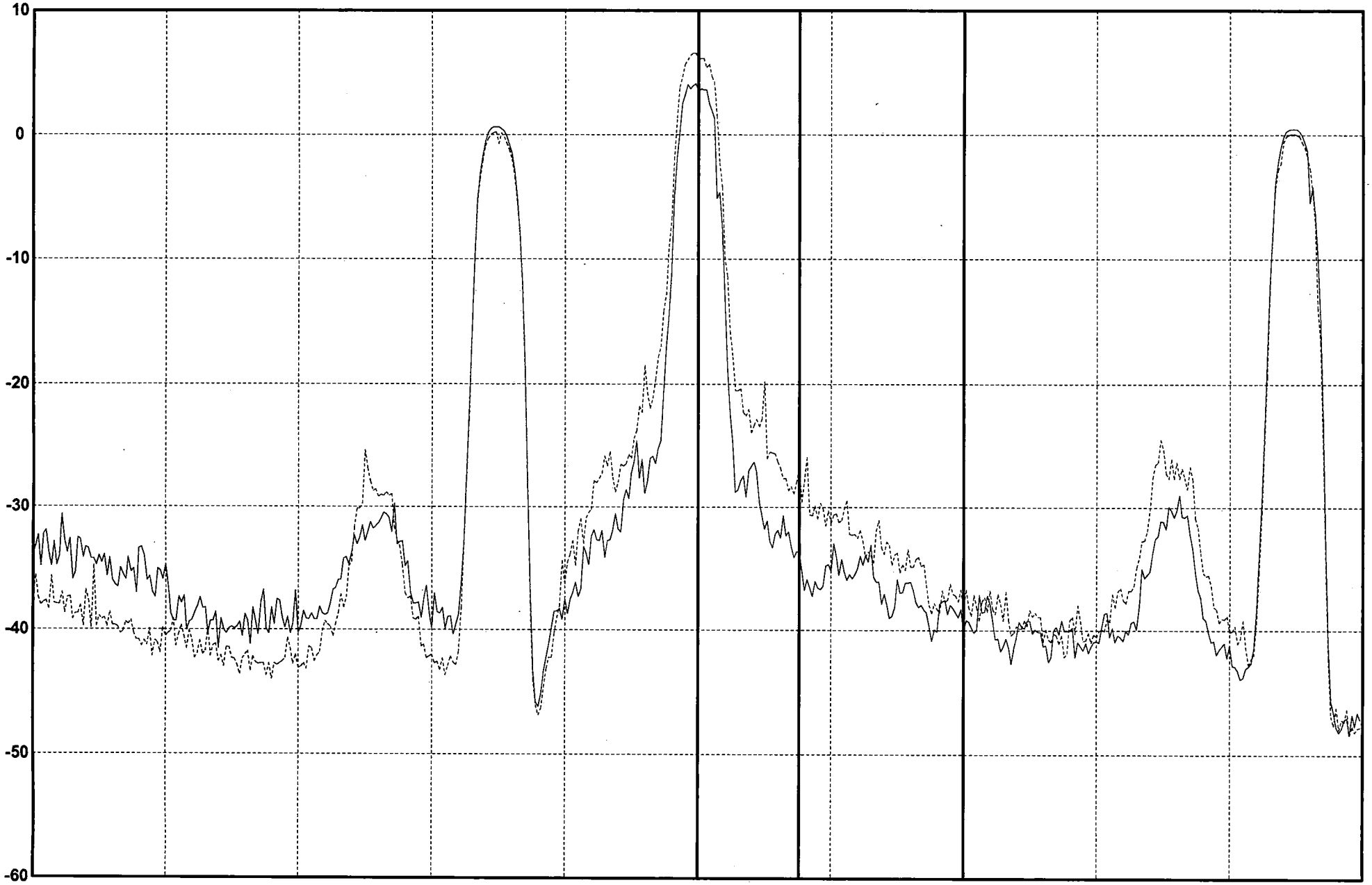


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP61-CH61-CN Mode : DIST
Date : 18/07/13 Time : 01:52:13 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 61 CF: 445.250 MHz 14.5 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 51.5 dB
CSO : 66.4 dB
CTB : 65.5 dB

2.0000 MHz
0.7500 MHz
0.0000 MHz

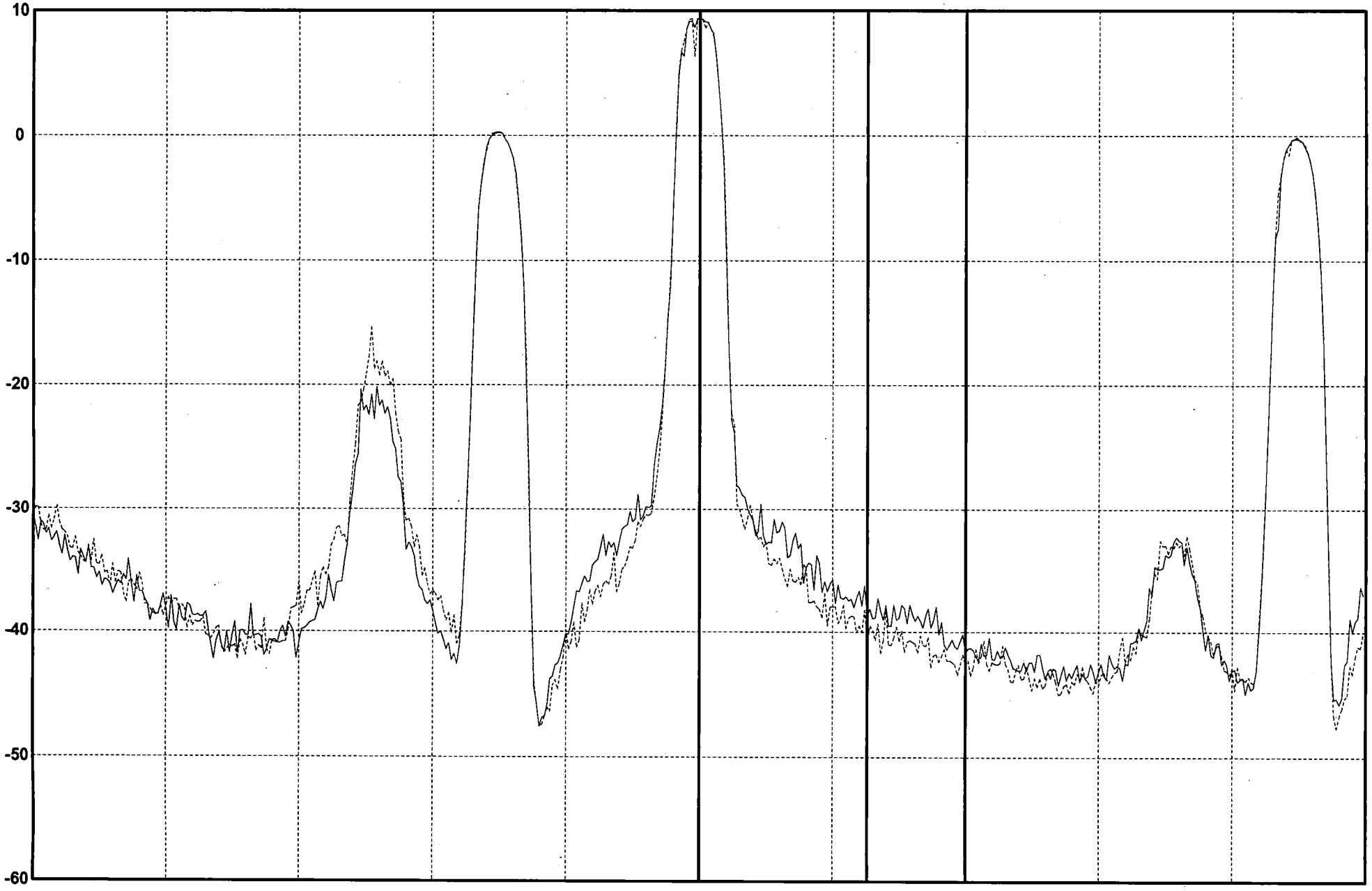
1.5 dB
1.5 dB
1.3 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP4-CH56-CSO Mode : DIST
Date : 18/07/13 Time : 01:49:19 Temp 26 C

ATT: 10 dB OFS: 0 dB Field : 1 Line : 23
dBmV Video Channel: 56 CF: 415.250 MHz 14.0 dBmV SPAN: 10 MHz



CCN : 51.6 dB
CSO : 65.6 dB
CTB : 64.1 dB

2.0000 MHz
1.2500 MHz
0.0000 MHz

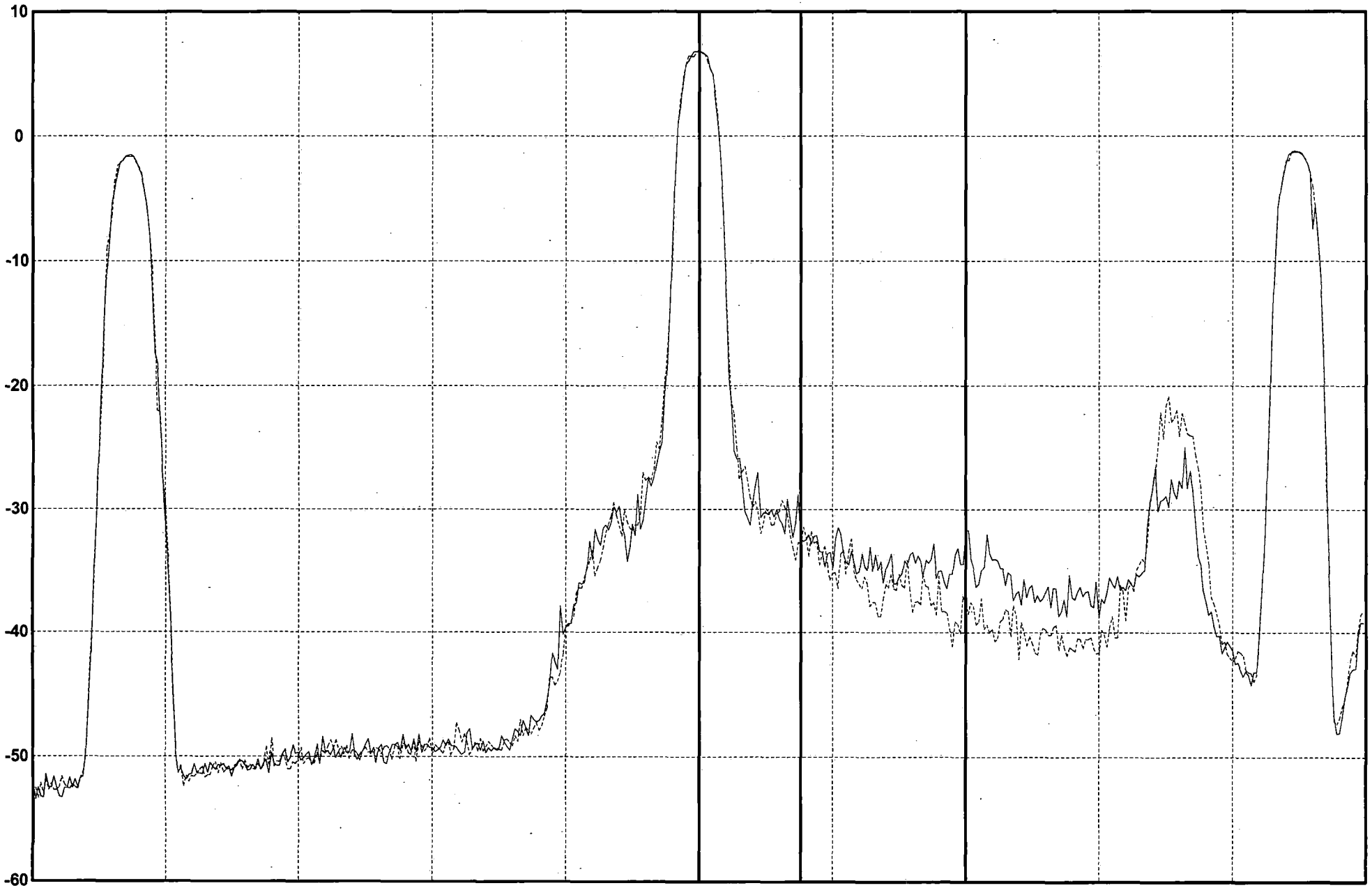
1.6 dB
1.4 dB
1.0 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP4-CH2-CTB Mode : DIST
Date : 18/07/13 Time : 01:35:08 Temp 26 C

ATT: 10 dB OFS: 0 dB Field : 1 Line : 23
dBmV Video Channel: 2 CF: 55.250 MHz 12.6 dBmV SPAN: 10 MHz

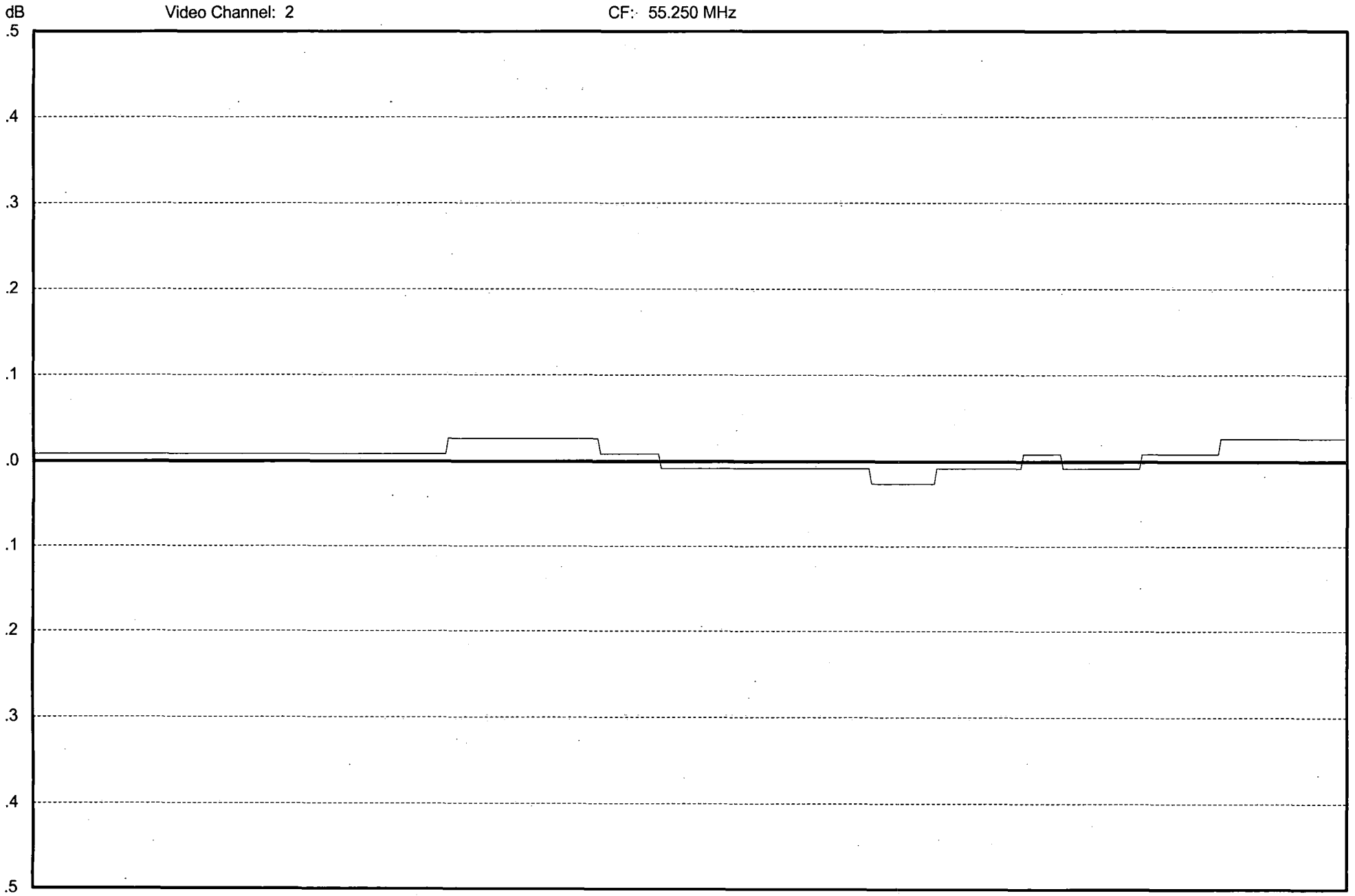


CCN : 50.6 dB 2.0000 MHz 1.6 dB
CSO : 65.4 dB 0.7500 MHz 1.5 dB
CTB : 65.7 dB 0.0000 MHz 1.6 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP4-CH2-HUM Mode : HUM
Date : 18/07/13 Time : 01:33:22 Temp 25 C



Hum (Signal): 0.6 % 56 dBC
Hum (Marker): 0.0 % 99 dBC

TestPoint 4, Page 5

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL VARIATION TEST

System Name : Sayre
Date : 08/01/2013
Meter Serial Number : 9343240
Test Location : 205 center st Waverly, NY
Performed By : Derek Cordilione

		TEMP F							TEMP F				
		69.80	75.30	86.50	91.40				69.80	75.30	86.50	91.40	
		TIME							TIME				
		01:09:00	07:06:00	13:06:00	19:06:00				01:09:00	07:06:00	13:06:00	19:06:00	
CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR	CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR
2	55.2500	14.30	14.40	14.40	14.30	0.1	DD(40)	319.2625	15.40	15.30	15.10	15.30	0.3
3	61.2500	14.60	14.70	14.70	14.80	0.2	EE(41)	325.2625	14.70	14.50	14.50	14.40	0.3
4	67.2500	14.60	14.60	14.80	14.40	0.4	FF(42)	331.2750	15.60	15.30	15.40	15.60	0.3
5	77.2500	14.90	15.00	15.10	15.10	0.2	GG(43)	337.2625	14.80	14.60	15.00	14.80	0.4
6	83.2500	15.20	15.30	15.40	15.20	0.2	HH(44)	343.2625	14.50	14.20	14.50	14.80	0.6
A-5(95)	91.2500						II(45)	349.2625	15.20	15.00	15.20	15.00	0.2
A-4(96)	97.2500						JJ(46)	355.2625	16.00	15.60	15.70	15.70	0.4
A-3(97)	103.2500						KK(47)	361.2625	15.60	15.40	15.40	15.50	0.2
A-2(98)	109.2750	15.00	14.80	14.80	14.90	0.2	LL(48)	367.2625					
A-1(99)	115.2750						MM(49)	373.2625	16.10	16.10	16.00	15.90	0.2
A(14)	121.2625	15.30	15.30	15.20	15.10	0.2	NN(50)	379.2625	16.20	15.90	15.80	16.00	0.4
B(15)	127.2625	15.10	15.10	15.00	14.90	0.2	OO(51)	385.2625	15.50	15.50	15.40	15.30	0.2
C(16)	133.2625	15.40	15.30	15.30	15.30	0.1	PP(52)	391.2625					
D(17)	139.2500	15.50	15.40	15.50	15.50	0.1	QQ(53)	397.2625	16.50	16.40	16.20	16.30	0.3
E(18)	145.2500						RR(54)	403.2500					
F(19)	151.3210	15.40	15.20	15.10	15.30	0.3	SS(55)	409.2500	17.20	16.90	16.80	16.90	0.4
G(20)	157.2500	15.50	15.50	15.50	15.90	0.4	TT(56)	415.2500	17.30	17.10	16.90	17.00	0.4
H(21)	163.2500	15.30	15.20	15.10	15.30	0.2	UU(57)	421.2500	16.50	16.30	16.20	16.20	0.3
I(22)	169.2500						VV(58)	427.2500	17.50	17.30	17.10	17.20	0.4
7	175.2500	15.70	15.50	15.70	15.60	0.2	WW(59)	433.2500	17.70	17.50	17.40	17.30	0.4
8	181.2500	16.30	16.10	16.10	16.20	0.2	XX(60)	439.2500	17.30	17.30	17.00	17.10	0.3
9	187.2500	16.10	16.00	15.80	16.10	0.3	YY(61)	445.2500	17.90	17.70	17.40	17.50	0.5
10	193.2500	15.60	15.70	15.80	15.90	0.3	ZZ(62)	451.2500					
11	199.2500	15.80	15.60	15.60	15.90	0.3	63	457.2500	17.50	17.30	16.90	17.00	0.6
12	205.2500	16.40	16.00	16.00	16.30	0.4	64	463.2500					
13	211.2500						65	469.2500	17.90	17.60	17.50	17.40	0.5
J(23)	217.2500	15.90	15.60	15.70	16.00	0.4	66	475.2500					
K(24)	223.2500	16.20	15.90	16.00	16.20	0.3	67	481.2500	16.70	16.60	16.20	16.30	0.5
L(25)	229.2625	16.20	15.90	16.00	16.30	0.4	68	487.2500					
M(26)	235.2625	15.80	15.60	15.80	16.00	0.4	69	493.2500	15.50	15.30	14.90	14.90	0.6
N(27)	241.2625	15.40	15.30	15.30	15.70	0.4	70	499.2500	15.90	15.80	15.50	15.30	0.6
O(28)	247.2625	15.40	15.10	15.20	15.50	0.4	71	505.2500					
P(29)	253.2625	15.00	14.90	15.00	15.10	0.2	72	511.2500					
Q(30)	259.2625	14.80	14.70	14.90	15.10	0.4	73	517.2500					
R(31)	265.2625	15.10	14.90	15.00	14.90	0.2	74	523.2500					
S(32)	271.2625						75	529.2500					
T(33)	277.2625	15.30	14.90	15.20	15.30	0.4	76	535.2500					
U(34)	283.2625	15.40	15.40	15.50	15.40	0.1	77	541.2500					
V(35)	289.2625	15.30	15.00	15.00	15.20	0.3	78	547.2500					
W(36)	295.2625	15.70	15.40	15.50	15.10	0.6	79	553.2500					
AA(37)	301.2625	15.40	15.10	15.30	15.20	0.3	80	559.2500					
BB(38)	307.2625	14.80	14.80	14.80	14.70	0.1	81	565.2500					
CC(39)	313.2625	14.90	14.80	14.70	14.70	0.2							

Max Non Adjacent Channel Level Diff :- 3.6
Max Adjacent Channel Level Diff :- 1.2
Max Variance from last proof of performance test :- 3.8

TIME WARNER CABLE - SYRACUSE DIVISION

System Name	:	Sayre
System Test Point #	:	5
Hub Name	:	Sayre
Location	:	482 waverly st waverly ny
Map Number	:	110-112
Pole Number	:	14
D.T. Value	:	9815
OR Number	:	SA038
GNA Cascade	:	1
LE Cscade	:	2

TESTPOINT 5, PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL
VISUAL / AURAL LEVEL DIFFERENCE
(at Test Point, at the end of a 100' Drop)

System Name	: Sayre	***Test Location***	: 482 waverly st waverly ny
Date	: 08/01/2013	***Time***	: 03:45:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	13.70	0.10		13.6	DD (40)	319.2625	15.00	-0.60		15.6
3	61.2500	14.10	0.20		13.9	EE (41)	325.2625	13.90	0.10		13.8
4	67.2500	13.90	-0.70		14.6	FF (42)	331.2750	15.00	1.30		13.7
5	77.2500	13.60	-0.20		13.8	GG (43)	337.2625	14.90	0.90		14
6	83.2500	13.60	-0.70		14.3	HH (44)	343.2625	14.50	-0.30		14.8
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	14.90	1.30		13.6
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	15.70	1.40		14.3
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	15.10	0.90		14.2
A-2 (98)	109.2750	13.10	-0.90		14	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	15.60	2.00		13.6
A (14)	121.2625	12.80	-1.40		14.2	NN (50)	379.2625	15.40	1.10		14.3
B (15)	127.2625	12.70	-1.80		14.5	OO (51)	385.2625	15.00	1.60		13.4
C (16)	133.2625	13.00	-1.40		14.4	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	13.50	-0.30		13.8	QQ (53)	397.2625	15.50	1.60		13.9
E (18)	145.2500	N/A	N/A		N/A	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	13.30	-1.40		14.7	SS (55)	409.2500	15.50	1.90		13.6
G (20)	157.2500	13.30	-1.30		14.6	TT (56)	415.2500	15.60	1.10		14.5
H (21)	163.2500	13.60	0.40		13.2	UU (57)	421.2500	14.80	1.50		13.3
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	15.00	1.30		13.7
7	175.2500	14.10	-0.60		14.7	WW (59)	433.2500	15.30	0.80		14.5
8	181.2500	13.80	-0.80		14.6	XX (60)	439.2500	15.00	1.70		13.3
9	187.2500	14.30	0.30		14	YY (61)	445.2500	15.90	1.50		14.4
10	193.2500	14.00	-0.50		14.5	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	14.10	0.40		13.7	63	457.2500	15.10	2.00		13.1
12	205.2500	13.90	0		13.9	64	463.2500	N/A	N/A		N/A
13	211.2500	N/A	N/A		N/A	65	469.2500	15.70	1.90		13.8
J (23)	217.2500	14.30	0.60		13.7	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	14.70	0.30		14.4	67	481.2500	14.90	1.50		13.4
L (25)	229.2625	13.90	-0.60		14.5	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	14.10	0.30		13.8	69	493.2500	13.40	0.30		13.1
N (27)	241.2625	14.50	0.10		14.4	70	499.2500	13.80	0.70		13.1
O (28)	247.2625	13.70	-1.00		14.7	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	13.60	-0.70		14.3	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	13.50	-0.50		14	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	13.90	-1.20		15.1	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	14.00	0.10		13.9	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	14.20	-0.40		14.6	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	14.10	-0.40		14.5	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	14.50	0		14.5	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	14.60	-0.70		15.3	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	14.50	-0.70		15.2	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	14.60	0.20		14.4						

Min Channel	:	B(15)	12.700
Max Channel	:	YY(61)	15.900
Peak to Valley	:	3.2	

TESTPOINT 5, PAGE 3

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL RESPONSE TEST
CARRIER - TO - NOISE TEST
COHERENT DISTURBANCES TEST
LOW FREQUENCY DISTURBANCES TEST

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

Location : 482 waverly st waverly ny

Note: Make Measurements through a 100 ft. test drop cable without converter.

CHANNEL NUMBER	IN CHANNEL RESPONSE	CARRIER TO NOISE RATIO	DISTORTIONS	CSO	HUM
	(+/- DB)	(DB)	(-DBC) CTB		(%)
2	0.60	50.8	66.3	65.6	0.2
14	0.35	51.2	64.3	65.2	
9	0.20	51.0	64.4	66.3	
23	0.40	49.2	63.7	63.9	
37	0.15	51.1	64.7	64.3	
44	0.10	50.4	62.6	63.8	
56	0.20	51.5	65.4	65.3	
61	0.05	52.2	65.6	66.4	
69	0.25	48.7	62.7	62.4	

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL FREQUENCY RESPONSE TEST
(76.605) (a) (6)

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

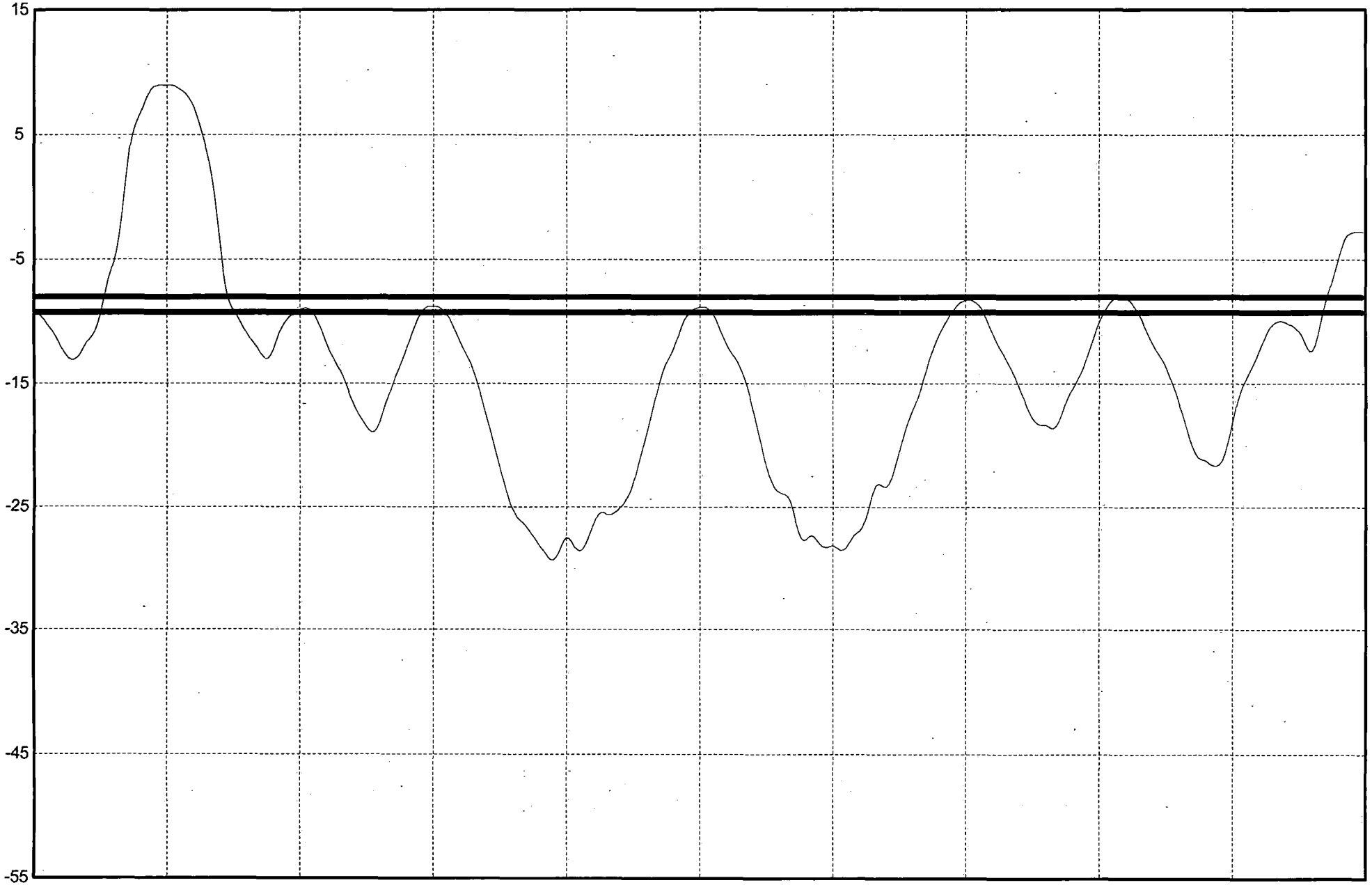
Location : 482 waverly st waverly ny

(SEE THE ATTACHED SWEEP TRACES)

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH2-ICR Mode : FR
Date : 18/07/13 Time : 03:04:22 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 2 CF: 55.250 MHz SPAN: 5 MHz

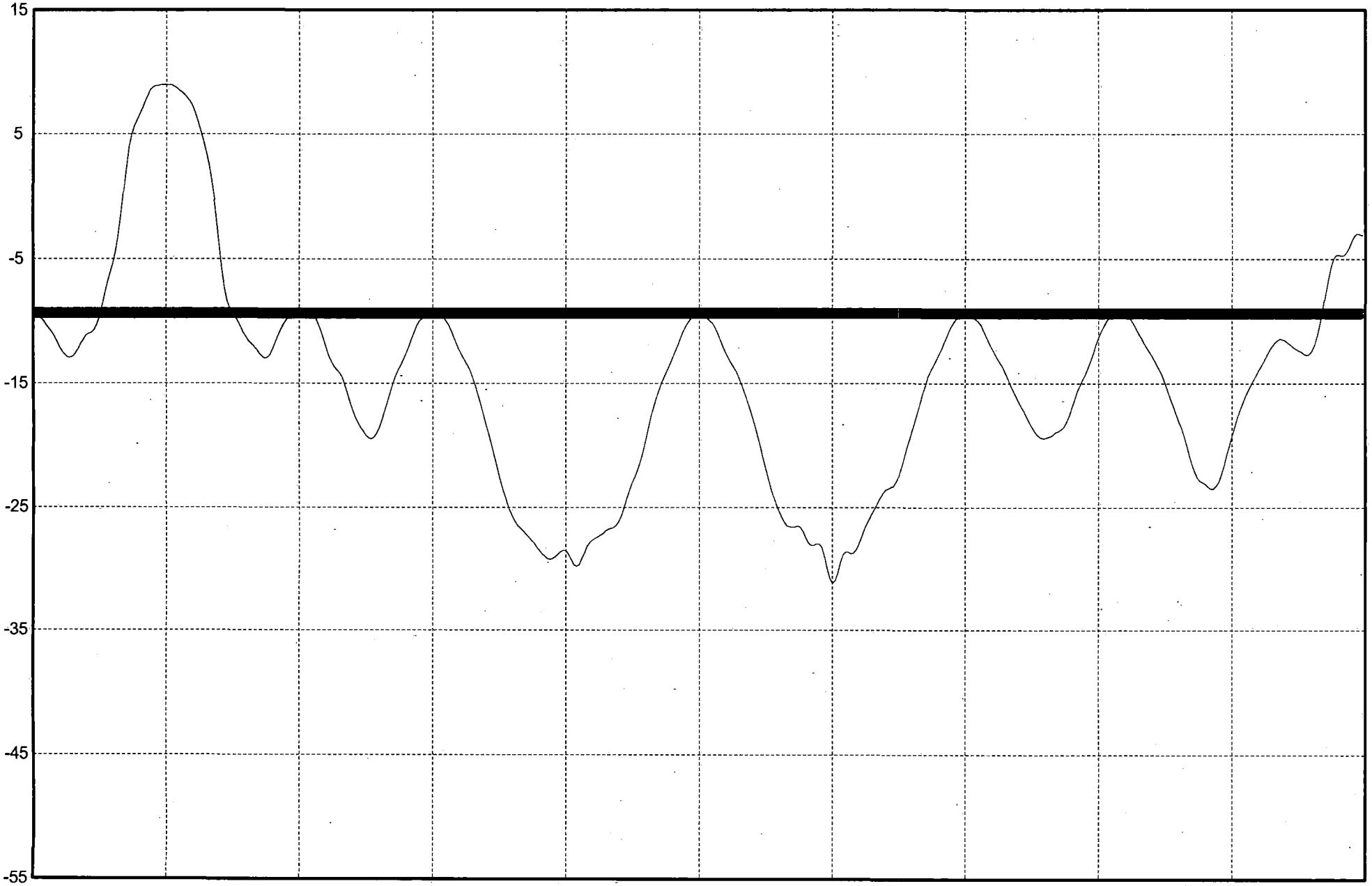


In-Channel Response: +/- 0.60 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH9-ICR Mode : FR
Date : 18/07/13 Time : 03:06:59 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 9 CF: 187.250 MHz SPAN: 5 MHz

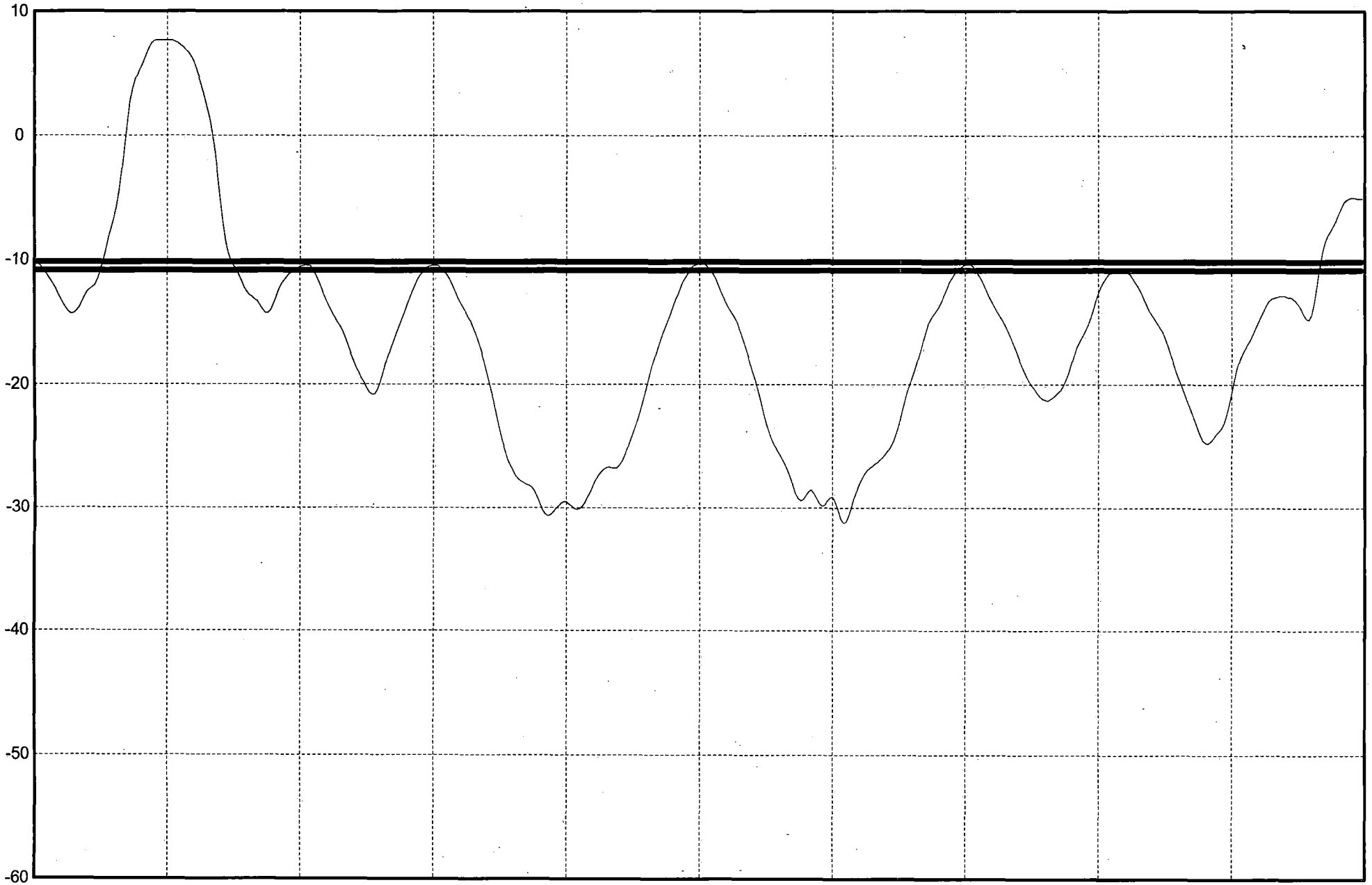


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH14-ICR Mode : FR
Date : 18/07/13 Time : 03:05:56 Temp 27 C

ATT: 10 dB
dBmV Video Channel: 14 CF: 121.262 MHz SPAN: 5 MHz

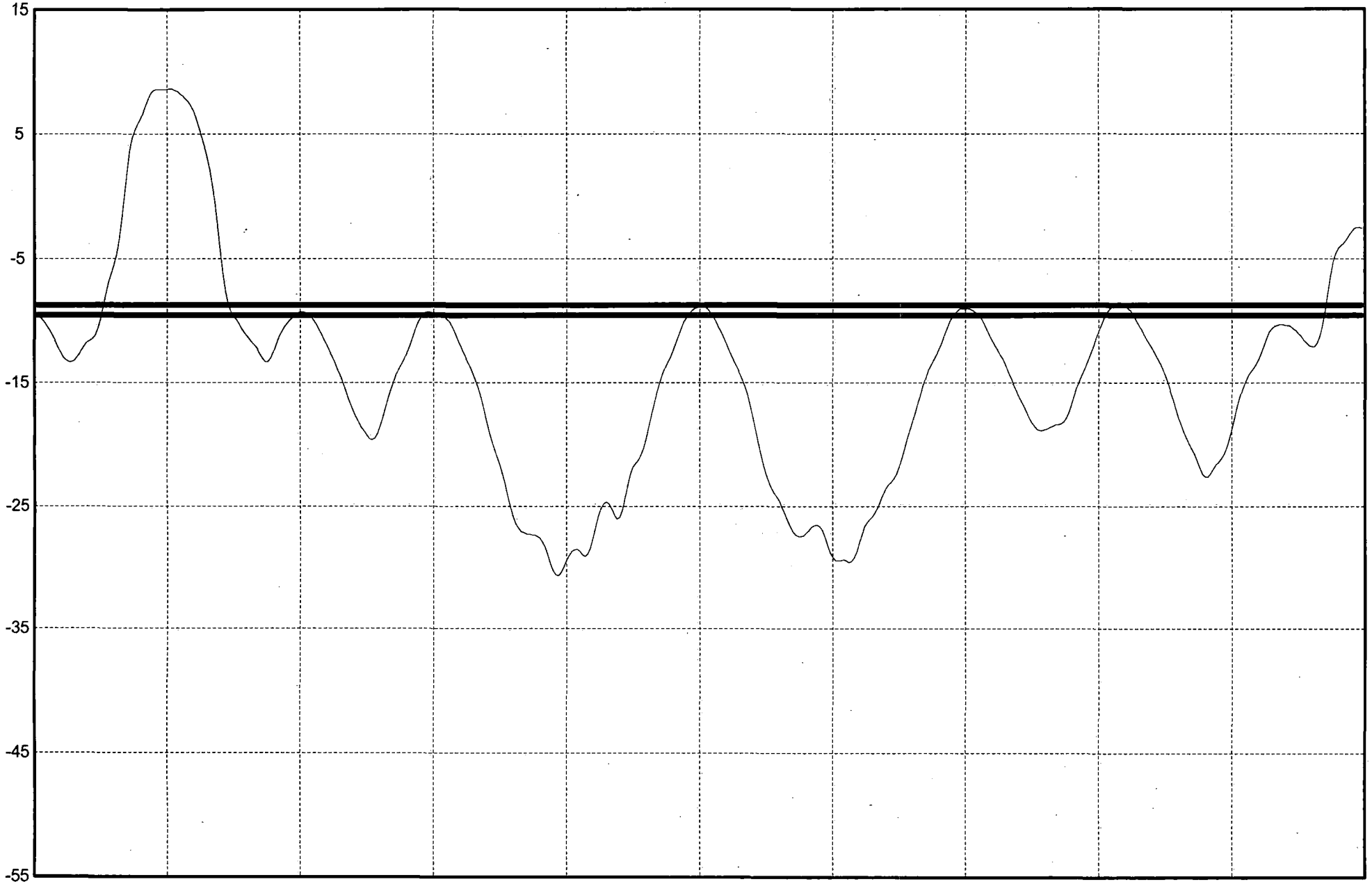


In-Channel Response: +/- 0.35 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH23-IRC Mode : FR
Date : 18/07/13 Time : 03:08:02 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 23 CF: 217.250 MHz SPAN: 5 MHz

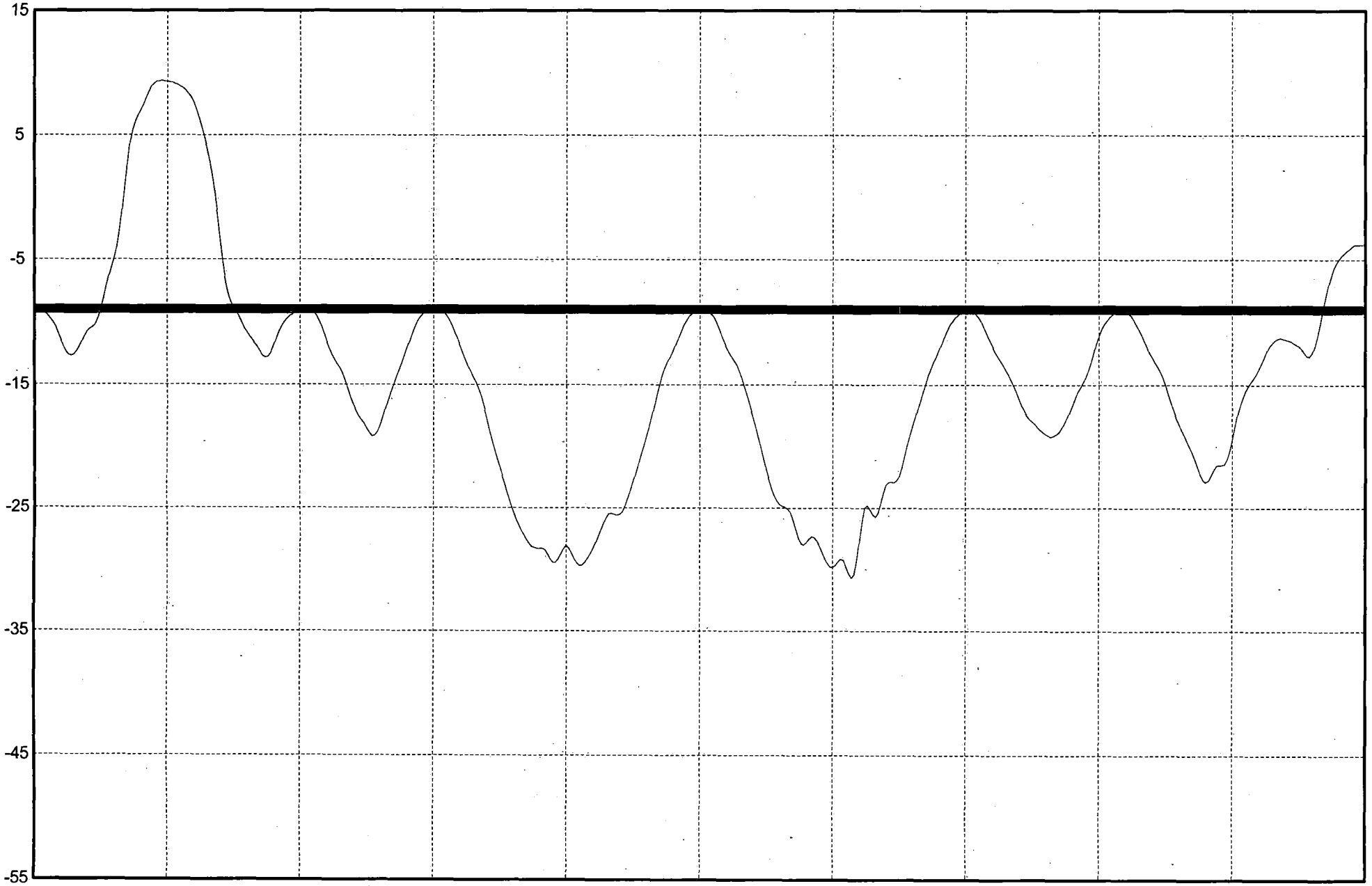


In-Channel Response: +/- 0.40 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH37-ICR Mode : FR
Date : 18/07/13 Time : 03:09:07 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 37 CF: 301.262 MHz SPAN: 5 MHz

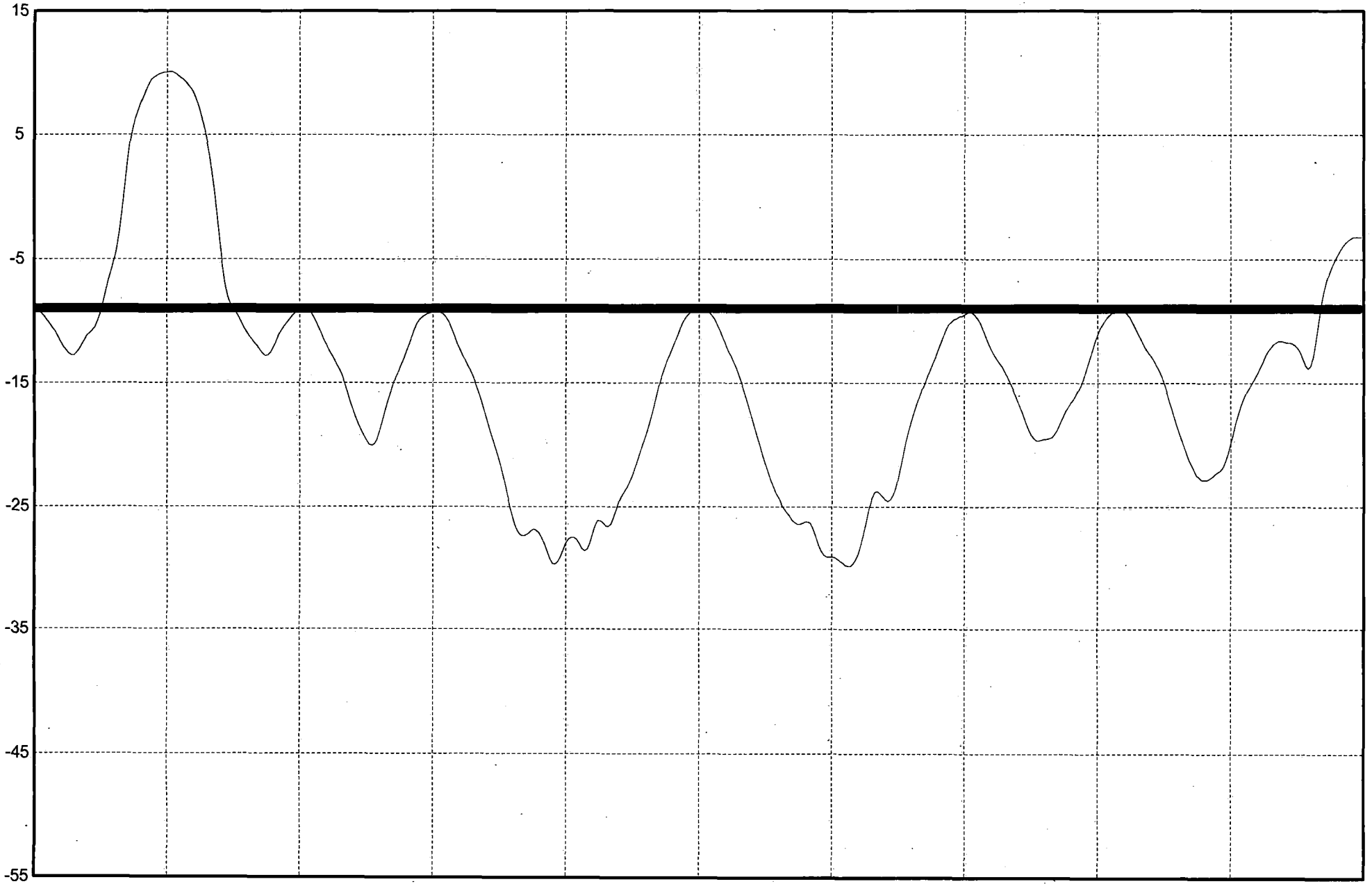


In-Channel Response: +/- 0.15 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH44-ICR Mode : FR
Date : 18/07/13 Time : 03:10:51 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 44 CF: 343.262 MHz SPAN: 5 MHz

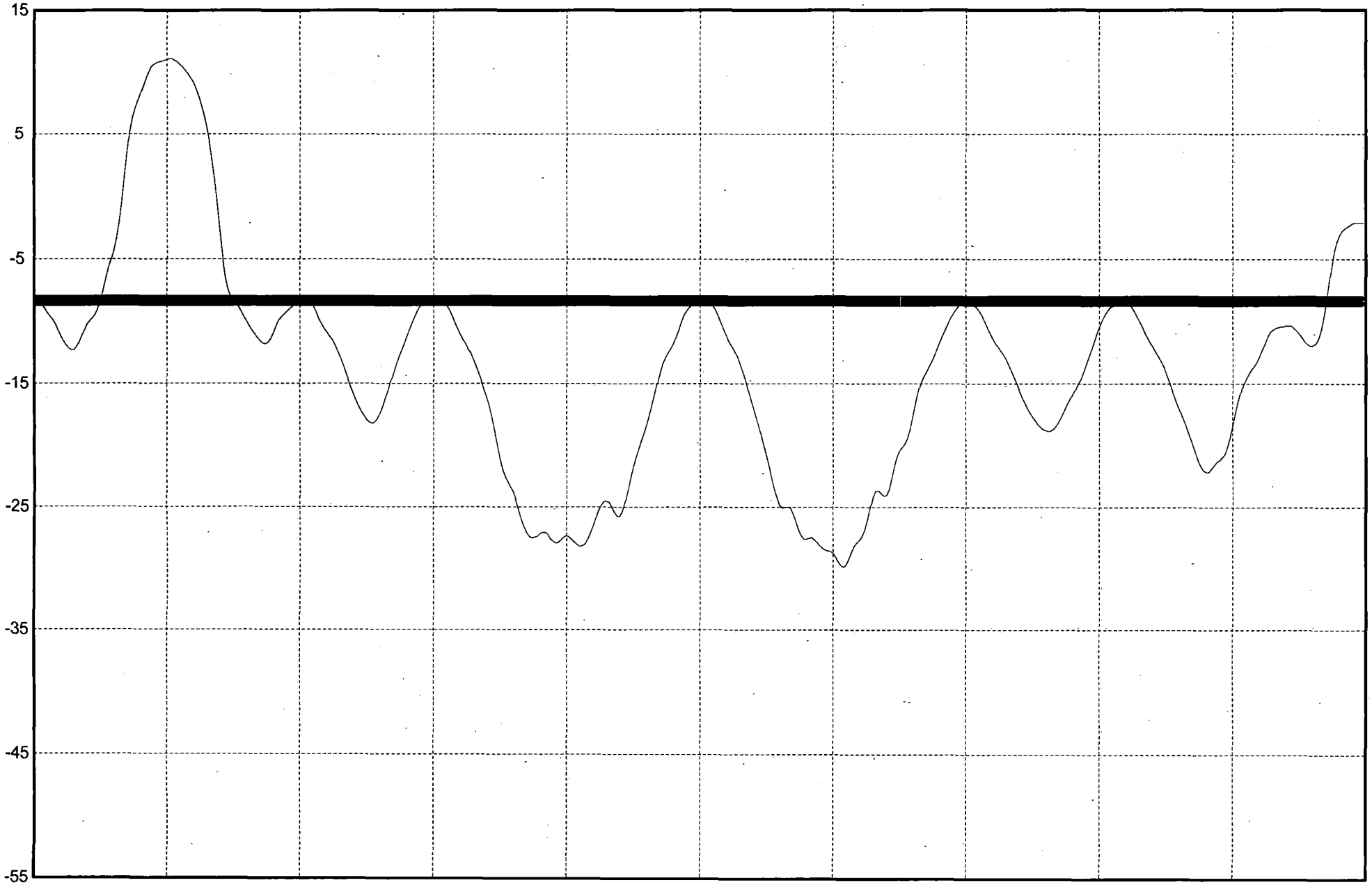


In-Channel Response: +/- 0.15 dB
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH56-ICR Mode : FR
Date : 18/07/13 Time : 03:13:32 Temp 27 C

ATT: 15 dB
dBmV Video Channel: 56 CF: 415.250 MHz SPAN: 5 MHz

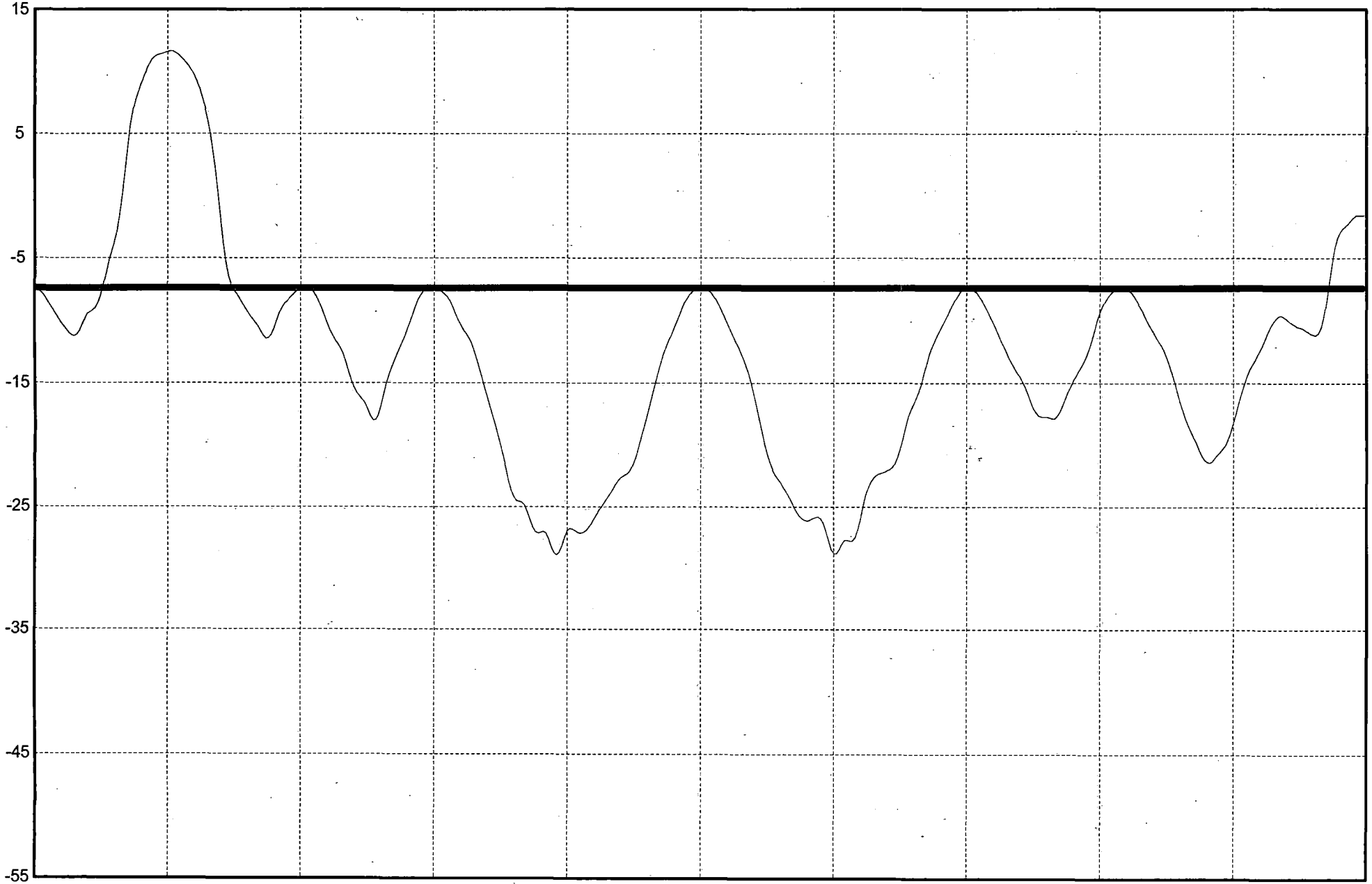


In-Channel Response: +/- 0.20 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH61-ICR Mode : FR
Date : 18/07/13 Time : 03:14:39 Temp 27 C

ATT: 15 dB
dBmV Video Channel: 61 CF: 445.250 MHz SPAN: 5 MHz

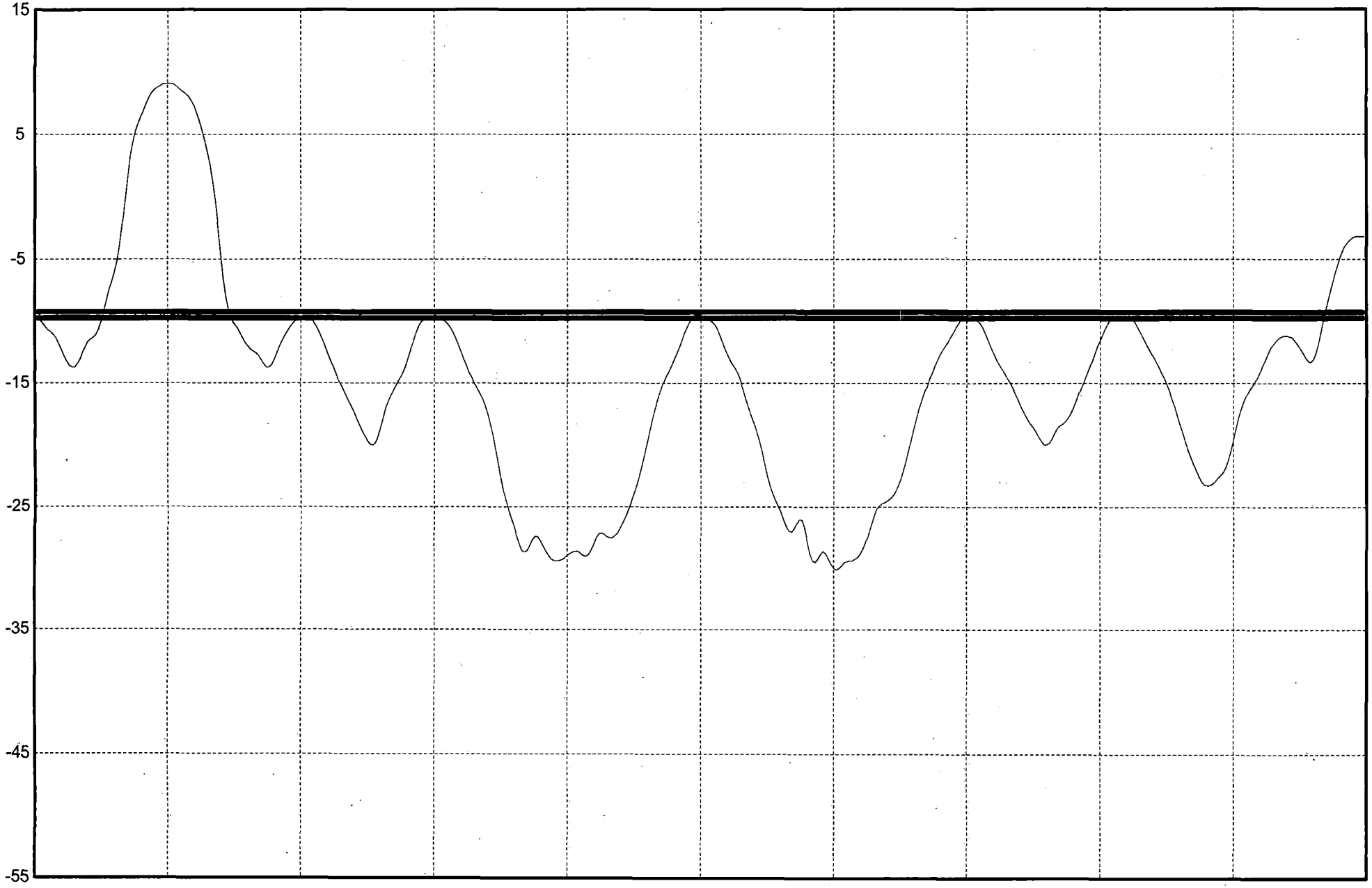


In-Channel Response: +/- 0.05 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH69-ICR Mode : FR
Date : 18/07/13 Time : 03:16:10 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 69 CF: 493.250 MHz SPAN: 5 MHz

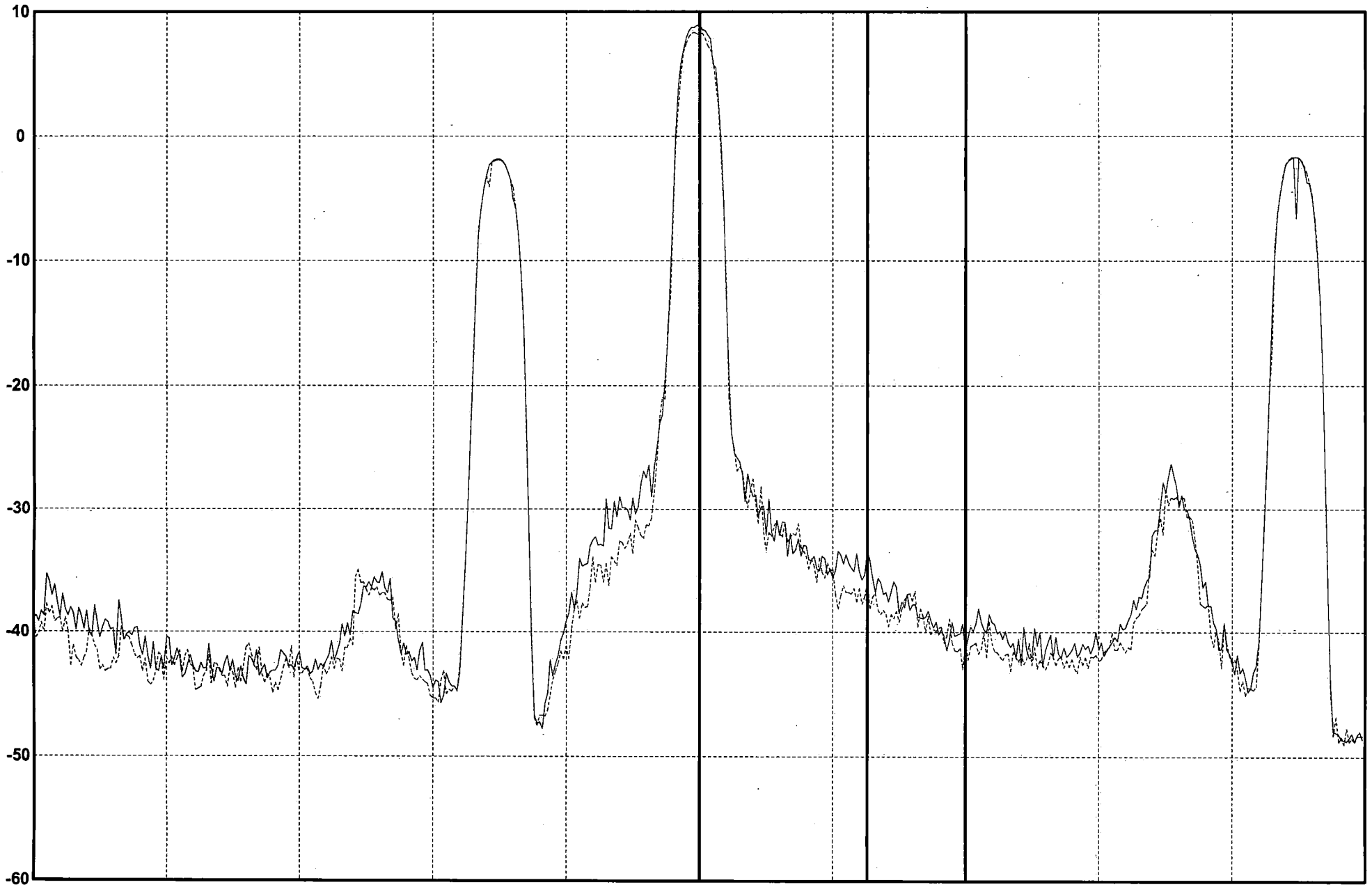


In-Channel Response: +/- 0.25 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH61-CN Mode : DIST
Date : 18/07/13 Time : 03:32:00 Temp 30 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 61 CF: 445.250 MHz 12.7 dBmV Field : 1 Line : 23
SPAN: 10 MHz



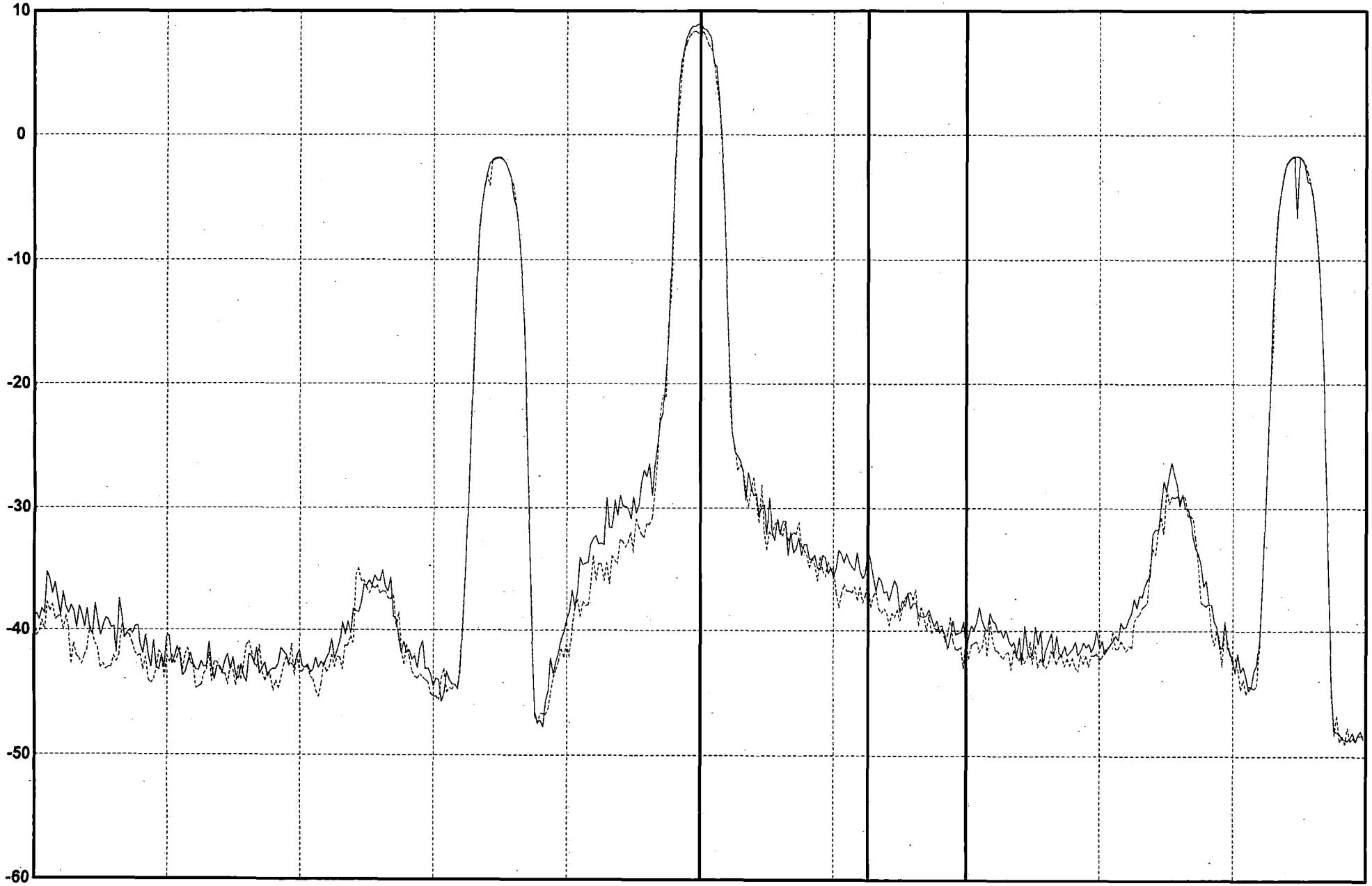
CCN : 52.2 dB 2.0000 MHz 2.7 dB
CSO : 66.4 dB 1.2500 MHz 2.3 dB
CTB : 65.6 dB 0.0000 MHz 2.0 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH61-CSO Mode : DIST
Date : 18/07/13 Time : 03:32:00 Temp 30 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 61 CF: 445.250 MHz 12.7 dBmV Field : 1 Line : 23 SPAN: 10 MHz



CCN : 52.2 dB
CSO : 66.4 dB
CTB : 65.6 dB

2.0000 MHz
1.2500 MHz
0.0000 MHz

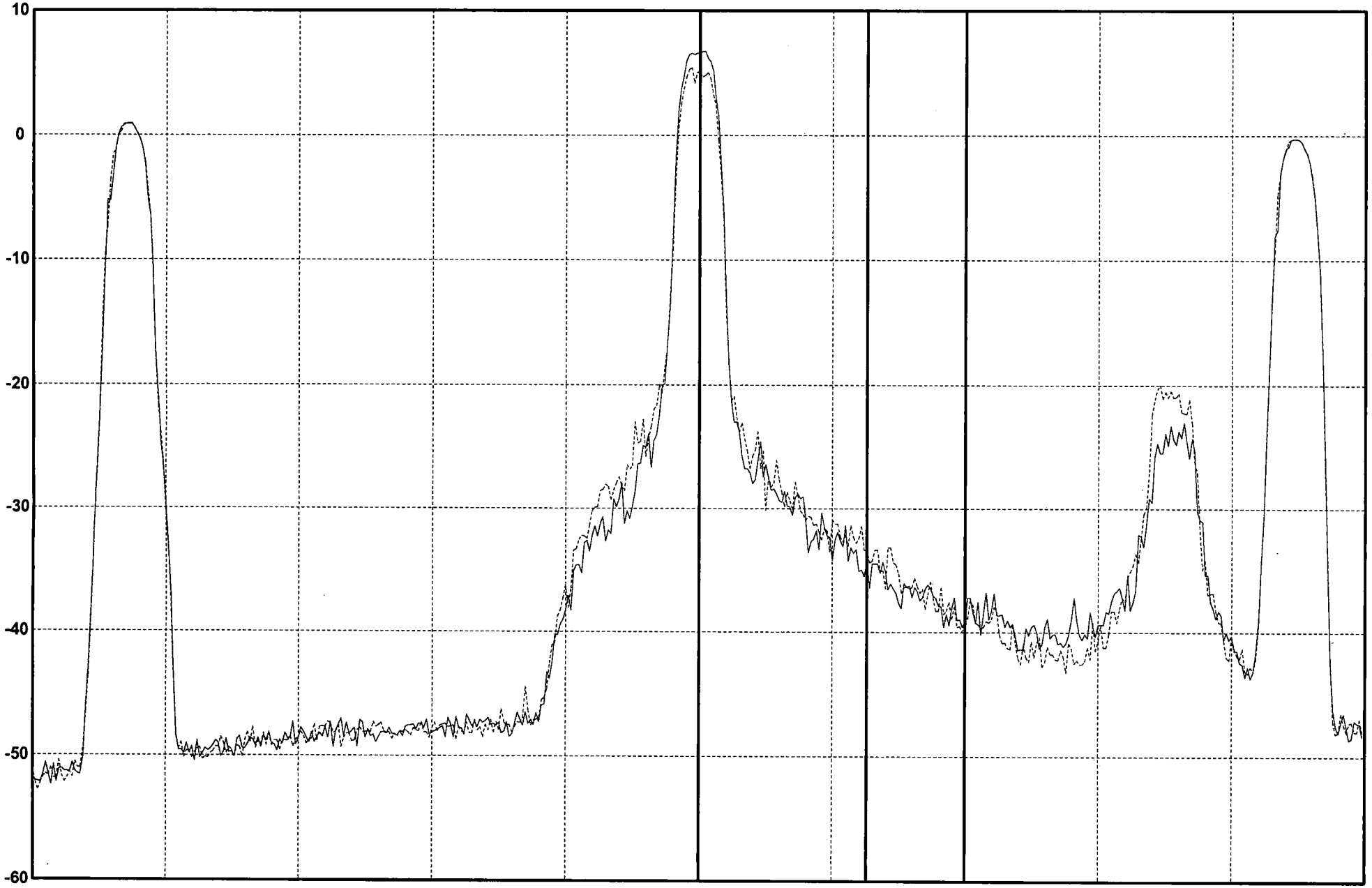
2.7 dB
2.3 dB
2.0 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : SA Comments : STP2-CH2 - CTB Mode : DIST
Date : July 17, 2013 Time : 04:21:43 AM Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 2 CF: 55.250 MHz 12.8 dBmV Field : 1 Line : 23 SPAN: 10 MHz



CCN : 49.5 dB
CSO : 63.8 dB
CTB : 63.9 dB

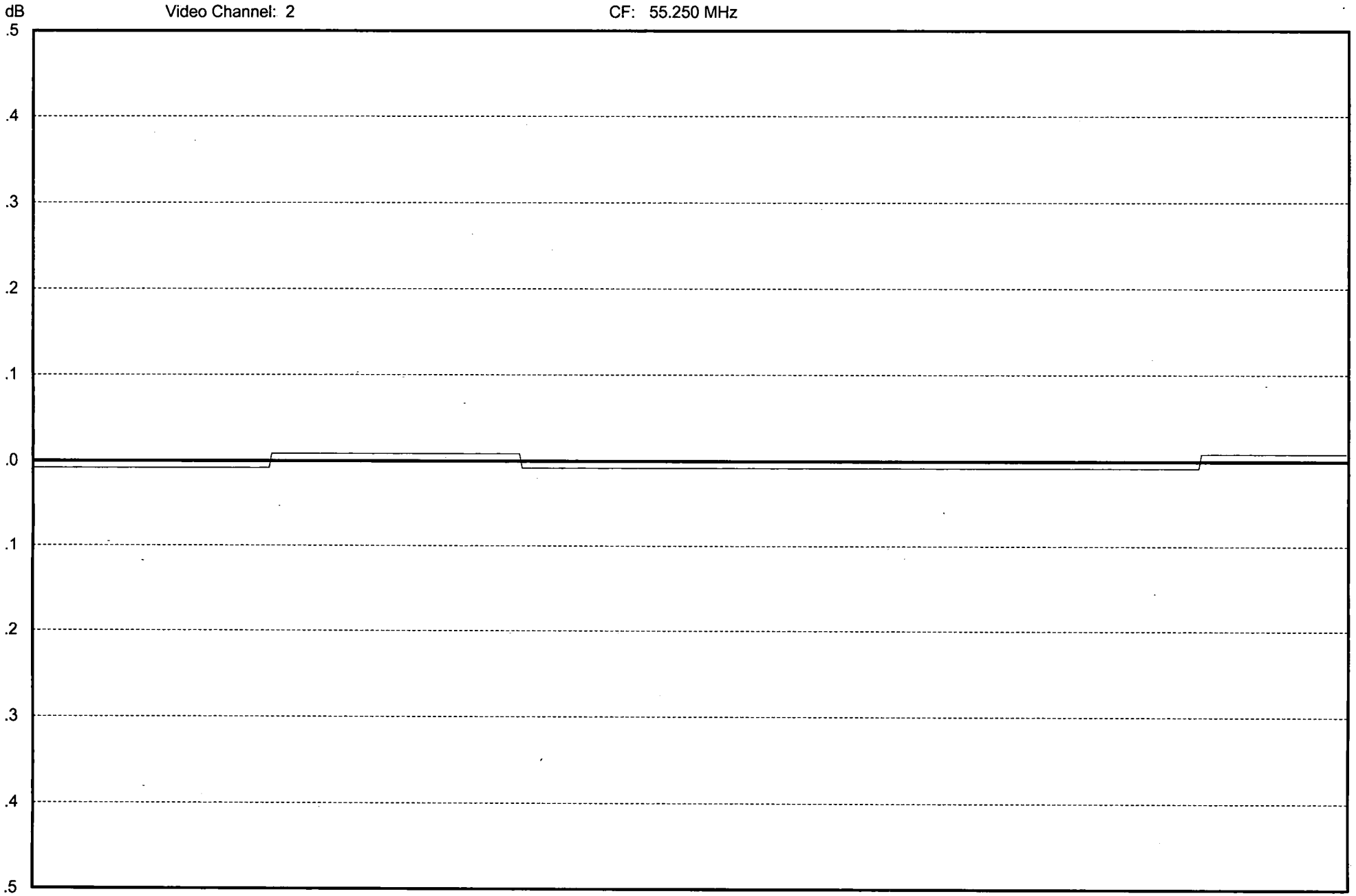
2.0000 MHz
1.2500 MHz
0.0000 MHz

1.3 dB
1.1 dB
1.1 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP5-CH2-ICR Mode : HUM
Date : 18/07/13 Time : 03:17:04 Temp 28 C



Hum (Signal): 0.2 % 66 dBC
Hum (Marker): 0.0 % 99 dBC

TestPoint 5, Page 5

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL VARIATION TEST

System Name : Sayre
Date : 08/01/2013
Meter Serial Number : 9343237
Test Location : 482 waverly st waverly ny
Performed By : Derek Cordilione

		TEMP F							TEMP F				
		69.90	80.60	89.60	84.20				69.90	80.60	89.60	84.20	
		TIME							TIME				
		03:45:00	09:45:00	15:45:00	21:45:00				03:45:00	09:45:00	15:45:00	21:45:00	
CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR	CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR
2	55.2500	13.70	13.20	13.10	13.40	0.6	DD(40)	319.2625	15.00	14.20	14.10	14.70	0.9
3	61.2500	14.10	13.60	13.80	14.00	0.5	EE(41)	325.2625	13.90	13.30	13.30	13.80	0.6
4	67.2500	13.90	13.40	13.30	13.80	0.6	FF(42)	331.2750	15.00	14.40	14.40	14.70	0.6
5	77.2500	13.60	13.10	13.20	13.60	0.5	GG(43)	337.2625	14.90	14.60	14.40	14.90	0.5
6	83.2500	13.60	13.50	13.10	13.70	0.6	HH(44)	343.2625	14.50	13.90	13.90	14.40	0.6
A-5(95)	91.2500						II(45)	349.2625	14.90	14.30	14.20	14.80	0.7
A-4(96)	97.2500						JJ(46)	355.2625	15.70	15.00	15.00	15.40	0.7
A-3(97)	103.2500						KK(47)	361.2625	15.10	14.40	14.60	14.90	0.7
A-2(98)	109.2750	13.10	12.40	12.20	12.60	0.9	LL(48)	367.2625					
A-1(99)	115.2750						MM(49)	373.2625	15.60	15.10	15.10	15.60	0.5
A(14)	121.2625	12.80	12.30	12.20	12.40	0.6	NN(50)	379.2625	15.40	15.00	14.90	15.30	0.5
B(15)	127.2625	12.70	11.80	11.70	12.20	1	OO(51)	385.2625	15.00	14.30	14.30	14.80	0.7
C(16)	133.2625	13.00	12.00	11.80	12.10	1.2	PP(52)	391.2625					
D(17)	139.2500	13.50	12.60	12.30	12.70	1.2	QQ(53)	397.2625	15.50	15.00	15.10	15.30	0.5
E(18)	145.2500						RR(54)	403.2500					
F(19)	151.3210	13.30	12.30	12.30	12.70	1	SS(55)	409.2500	15.50	14.90	14.90	15.50	0.6
G(20)	157.2500	13.30	12.40	12.10	12.50	1.2	TT(56)	415.2500	15.60	14.90	14.90	15.30	0.7
H(21)	163.2500	13.60	13.00	13.00	13.30	0.6	UU(57)	421.2500	14.80	14.10	14.30	14.80	0.7
I(22)	169.2500						VV(58)	427.2500	15.00	14.60	14.80	15.00	0.4
7	175.2500	14.10	13.20	13.20	13.70	0.9	WW(59)	433.2500	15.30	15.00	15.10	15.60	0.6
8	181.2500	13.80	13.10	12.90	13.20	0.9	XX(60)	439.2500	15.00	14.70	14.50	15.40	0.9
9	187.2500	14.30	13.30	13.20	13.70	1.1	YY(61)	445.2500	15.90	15.10	15.40	15.60	0.8
10	193.2500	14.00	13.20	13.00	13.50	1	ZZ(62)	451.2500					
11	199.2500	14.10	13.30	13.20	13.50	0.9	63	457.2500	15.10	14.60	14.50	15.10	0.6
12	205.2500	13.90	13.20	13.00	13.50	0.9	64	463.2500					
13	211.2500						65	469.2500	15.70	15.20	15.50	15.50	0.5
J(23)	217.2500	14.30	13.60	13.40	13.90	0.9	66	475.2500					
K(24)	223.2500	14.70	13.90	13.80	14.30	0.9	67	481.2500	14.90	14.10	14.30	14.70	0.8
L(25)	229.2625	13.90	13.30	13.40	13.60	0.6	68	487.2500					
M(26)	235.2625	14.10	13.60	13.70	13.80	0.5	69	493.2500	13.40	12.70	13.00	13.10	0.7
N(27)	241.2625	14.50	13.90	13.80	14.40	0.7	70	499.2500	13.80	13.10	13.30	13.40	0.7
O(28)	247.2625	13.70	13.00	13.20	13.10	0.7	71	505.2500					
P(29)	253.2625	13.60	13.00	13.10	13.40	0.6	72	511.2500					
Q(30)	259.2625	13.50	12.80	12.90	13.10	0.7	73	517.2500					
R(31)	265.2625	13.90	13.30	13.40	13.60	0.6	74	523.2500					
S(32)	271.2625						75	529.2500					
T(33)	277.2625	14.00	13.50	13.50	14.00	0.5	76	535.2500					
U(34)	283.2625	14.20	13.70	13.70	14.10	0.5	77	541.2500					
V(35)	289.2625	14.10	13.50	13.40	13.90	0.7	78	547.2500					
W(36)	295.2625	14.50	13.90	14.00	14.30	0.6	79	553.2500					
AA(37)	301.2625	14.60	14.10	14.00	14.50	0.6	80	559.2500					
BB(38)	307.2625	14.50	14.00	14.00	14.50	0.5	81	565.2500					
CC(39)	313.2625	14.60	14.10	14.00	14.20	0.6							

Max Non Adjacent Channel Level Diff :- 3.8
Max Adjacent Channel Level Diff :- 1.3
Max Variance from last proof of performance test :- 3.3

TIME WARNER CABLE - SYRACUSE DIVISION

System Name	:	Sayre
System Test Point #	:	6
Hub Name	:	Sayre
Location	:	207 Moore st waverly, ny
Map Number	:	109-112
Pole Number	:	15
D.T. Value	:	9414
OR Number	:	SA003
GNA Cascade	:	0
LE Cscade	:	3

TESTPOINT 6, PAGE 2

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL
VISUAL / AURAL LEVEL DIFFERENCE
(at Test Point, at the end of a 100' Drop)

System Name	: Sayre	***Test Location***	: 207 Moore st waverly, ny
Date	: 08/01/2013	***Time***	: 02:06:00

CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)	CHANNEL	FREQ (MHZ)	VISUAL LEVEL (DBMV)	AURAL LEVEL (DBMV)	SC "S"	DIFF (DBMV)
2	55.2500	13.60	1.00		12.6	DD (40)	319.2625	13.10	-1.60		14.7
3	61.2500	15.00	1.30		13.7	EE (41)	325.2625	12.20	-0.90		13.1
4	67.2500	14.90	0.80		14.1	FF (42)	331.2750	13.10	-0.10		13.2
5	77.2500	15.30	1.10		14.2	GG (43)	337.2625	12.80	-0.90		13.7
6	83.2500	14.80	0.70		14.1	HH (44)	343.2625	12.30	-1.70		14
A-5 (95)	91.2500	N/A	N/A		N/A	II (45)	349.2625	12.40	-0.50		12.9
A-4 (96)	97.2500	N/A	N/A		N/A	JJ (46)	355.2625	13.00	-0.30		13.3
A-3 (97)	103.2500	N/A	N/A		N/A	KK (47)	361.2625	12.80	-1.30		14.1
A-2 (98)	109.2750	14.60	1.10		13.5	LL (48)	367.2625	N/A	N/A		N/A
A-1 (99)	115.2750	N/A	N/A		N/A	MM (49)	373.2625	12.80	-0.70		13.5
A (14)	121.2625	15.40	0.90		14.5	NN (50)	379.2625	12.80	-0.90		13.7
B (15)	127.2625	15.20	1.50		13.7	OO (51)	385.2625	12.10	-0.40		12.5
C (16)	133.2625	15.70	1.40		14.3	PP (52)	391.2625	N/A	N/A		N/A
D (17)	139.2500	15.50	1.50		14	QQ (53)	397.2625	12.80	-0.70		13.5
E (18)	145.2500	N/A	N/A		N/A	RR (54)	403.2500	N/A	N/A		N/A
F (19)	151.3210	15.40	1.80		13.6	SS (55)	409.2500	13.00	-0.10		13.1
G (20)	157.2500	15.60	1.30		14.3	TT (56)	415.2500	13.40	-0.70		14.1
H (21)	163.2500	15.50	2.40		13.1	UU (57)	421.2500	12.60	-0.10		12.7
I (22)	169.2500	N/A	N/A		N/A	VV (58)	427.2500	13.20	0.30		12.9
7	175.2500	15.90	1.60		14.3	WW (59)	433.2500	13.90	-0.80		14.7
8	181.2500	16.00	1.50		14.5	XX (60)	439.2500	12.70	-0.40		13.1
9	187.2500	16.00	3.20		12.8	YY (61)	445.2500	13.70	-0.10		13.8
10	193.2500	15.90	1.90		14	ZZ (62)	451.2500	N/A	N/A		N/A
11	199.2500	15.90	2.70		13.2	63	457.2500	13.10	0.40		12.7
12	205.2500	16.00	2.20		13.8	64	463.2500	N/A	N/A		N/A
13	211.2500	N/A	N/A		N/A	65	469.2500	14.30	0		14.3
J (23)	217.2500	15.30	2.60		12.7	66	475.2500	N/A	N/A		N/A
K (24)	223.2500	15.70	2.10		13.6	67	481.2500	12.60	-1.30		13.9
L (25)	229.2625	15.60	1.40		14.2	68	487.2500	N/A	N/A		N/A
M (26)	235.2625	15.20	1.60		13.6	69	493.2500	11.70	-1.40		13.1
N (27)	241.2625	15.30	1.40		13.9	70	499.2500	12.80	-0.50		13.3
O (28)	247.2625	14.70	0.50		14.2	71	505.2500	N/A	N/A		N/A
P (29)	253.2625	14.40	0.10		14.3	72	511.2500	N/A	N/A		N/A
Q (30)	259.2625	13.80	0.60		13.2	73	517.2500	N/A	N/A		N/A
R (31)	265.2625	14.30	-0.80		15.1	74	523.2500	N/A	N/A		N/A
S (32)	271.2625	N/A	N/A		N/A	75	529.2500	N/A	N/A		N/A
T (33)	277.2625	14.30	0.60		13.7	76	535.2500	N/A	N/A		N/A
U (34)	283.2625	14.40	-0.60		15	77	541.2500	N/A	N/A		N/A
V (35)	289.2625	13.40	-1.10		14.5	78	547.2500	N/A	N/A		N/A
W (36)	295.2625	13.40	-0.40		13.8	79	553.2500	N/A	N/A		N/A
AA (37)	301.2625	13.80	-1.40		15.2	80	559.2500	N/A	N/A		N/A
BB (38)	307.2625	12.90	-1.50		14.4	81	565.2500	N/A	N/A		N/A
CC (39)	313.2625	12.60	-0.70		13.3						

Min Channel	:	69	11.700
Max Channel	:	12	16.000
Peak to Valley	:	4.3	

TESTPOINT 6, PAGE 3

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL RESPONSE TEST
CARRIER - TO - NOISE TEST
COHERENT DISTURBANCES TEST
LOW FREQUENCY DISTURBANCES TEST

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

Location : 207 Moore st waverly, ny

Note: Make Measurements through a 100 ft. test drop cable without converter.

CHANNEL NUMBER	IN CHANNEL RESPONSE	CARRIER TO NOISE RATIO	DISTORTIONS	CSO	HUM
	(+/- DB)	(DB)	(-DBC) CTB		(%)
2	0.20	51.7	66.0	66.1	0.2
14	0.30	52.0	65.2	66.0	
9	0.35	49.1	64.5	63.7	
23	0.30	50.3	64.4	64.4	
37	0.30	52.2	65.1	63.7	
44	0.35	51.5	62.7	65.0	
56	0.3	52.1	64.7	66.5	
61	0.25	51.4	65.7	66.3	
69	0.35	49.4	64.1	64	

TIME WARNER CABLE - SYRACUSE DIVISION

IN CHANNEL FREQUENCY RESPONSE TEST (76.605) (a) (6)

System Name : Sayre ***Date*** : 7/18/2013

Performed By : Derek Cordilione

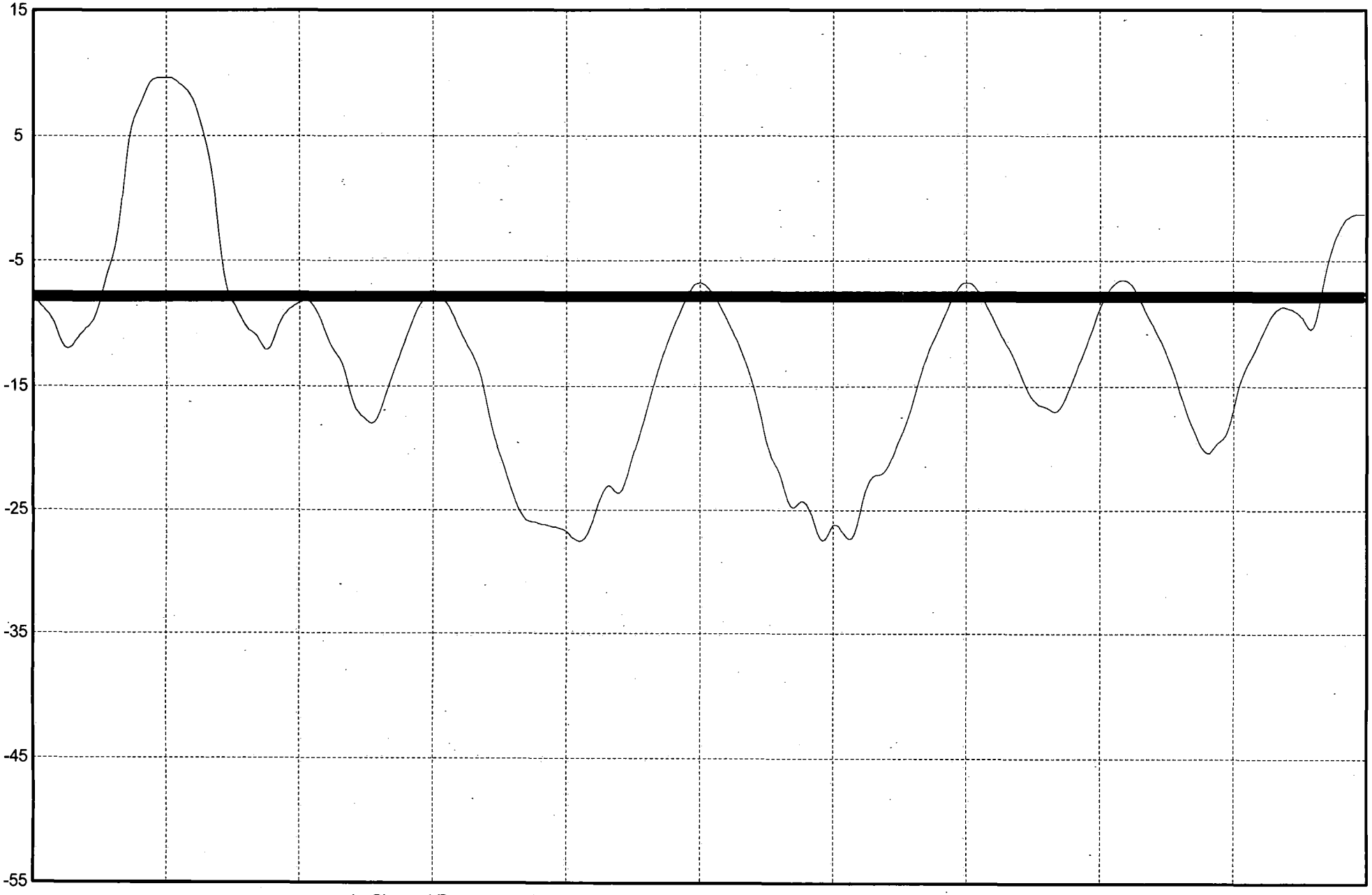
Location : 207 Moore st waverly, ny

(SEE THE ATTACHED SWEEP TRACES)

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH2-ICR Mode : FR
Date : 18/07/13 Time : 02:14:41 Temp 27 C

ATT: 15 dB
dBmV Video Channel: 2 CF: 55.250 MHz SPAN: 5 MHz

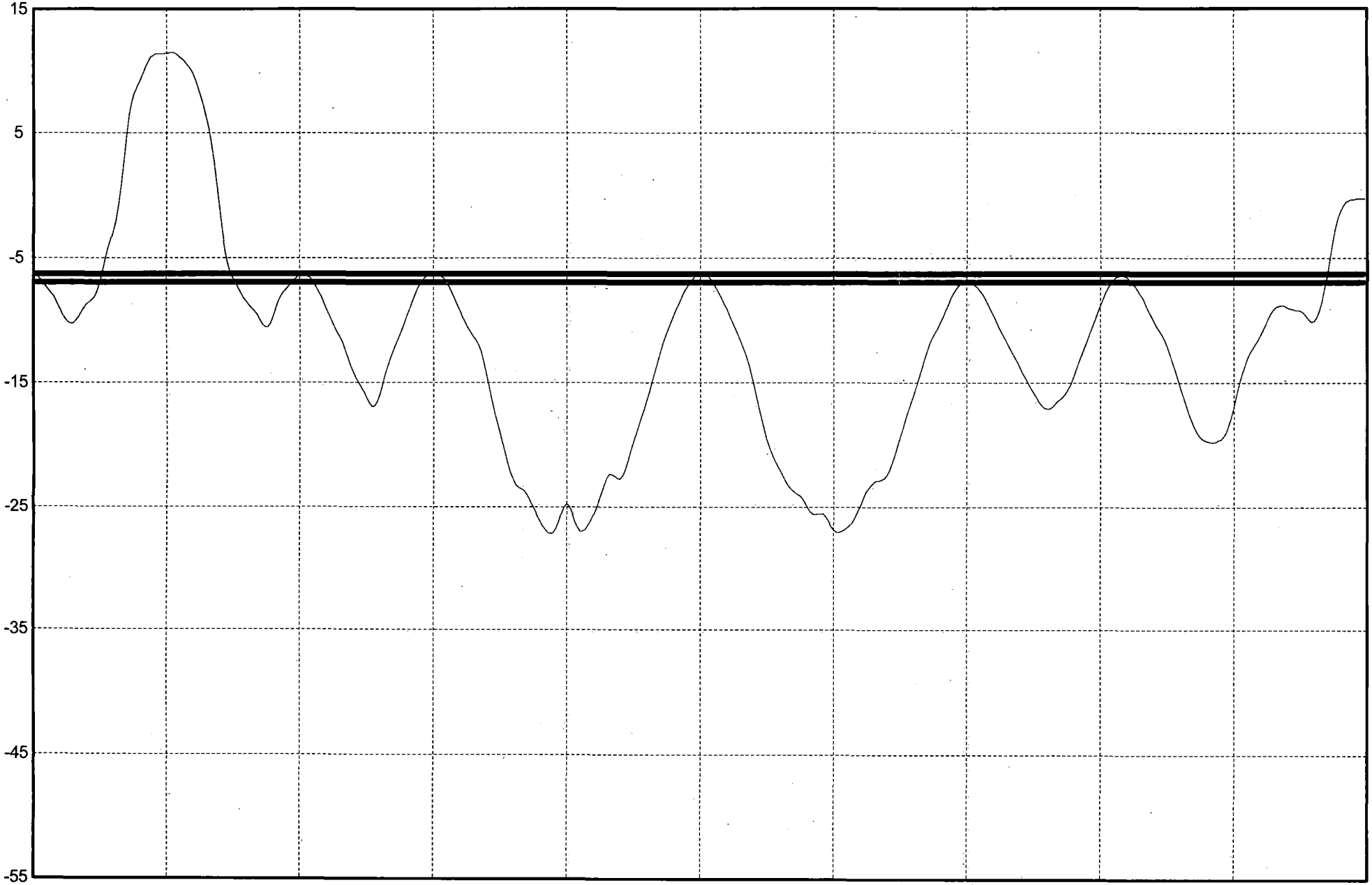


In-Channel Response: +/- 0.20 dB
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH9-ICR Mode : FR
Date : 18/07/13 Time : 02:20:00 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 9 CF: 187.250 MHz SPAN: 5 MHz

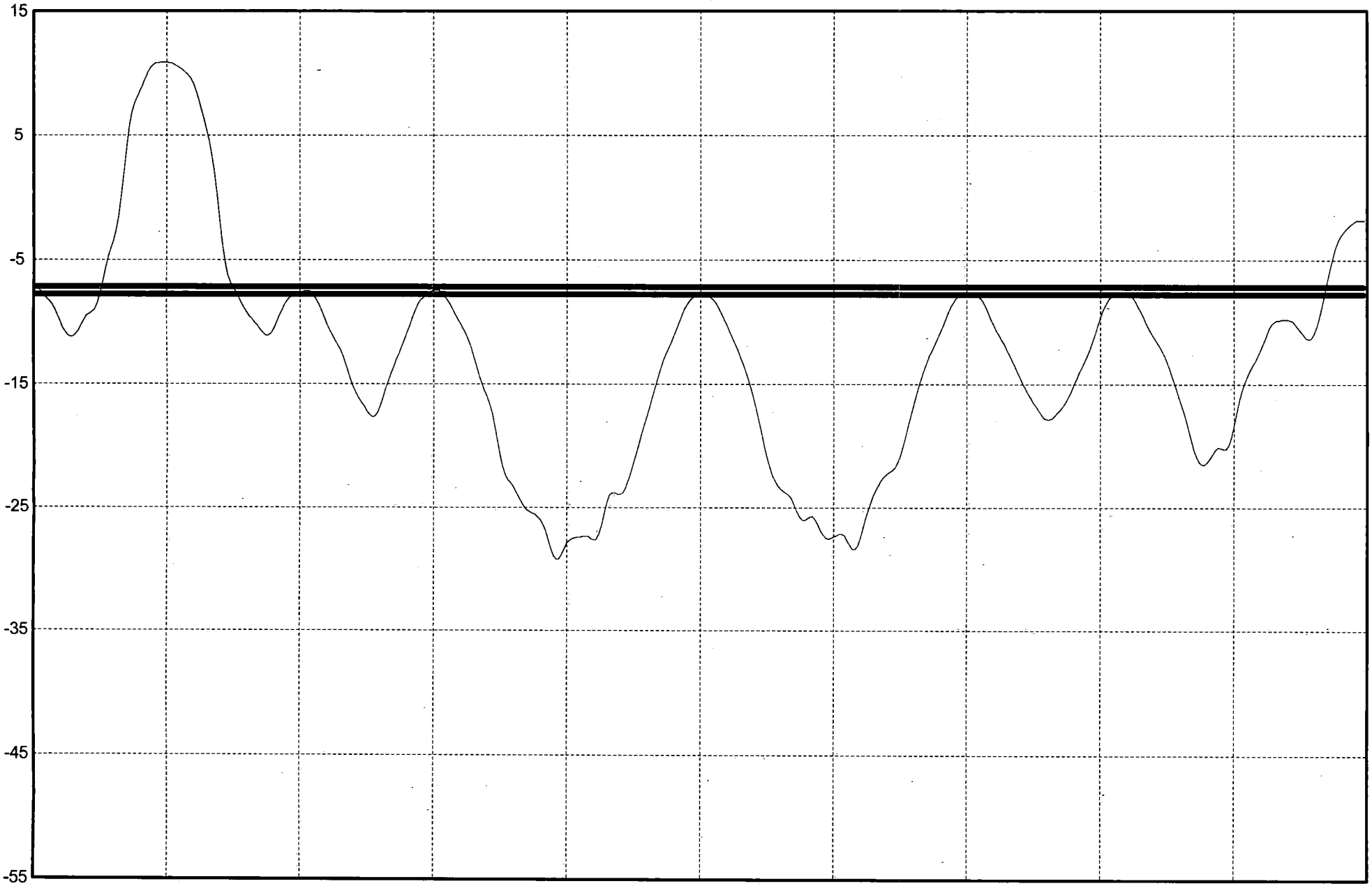


In-Channel Response: +/- 0.35 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH14-ICR Mode : FR
Date : 18/07/13 Time : 02:16:15 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 14 CF: 121.262 MHz SPAN: 5 MHz

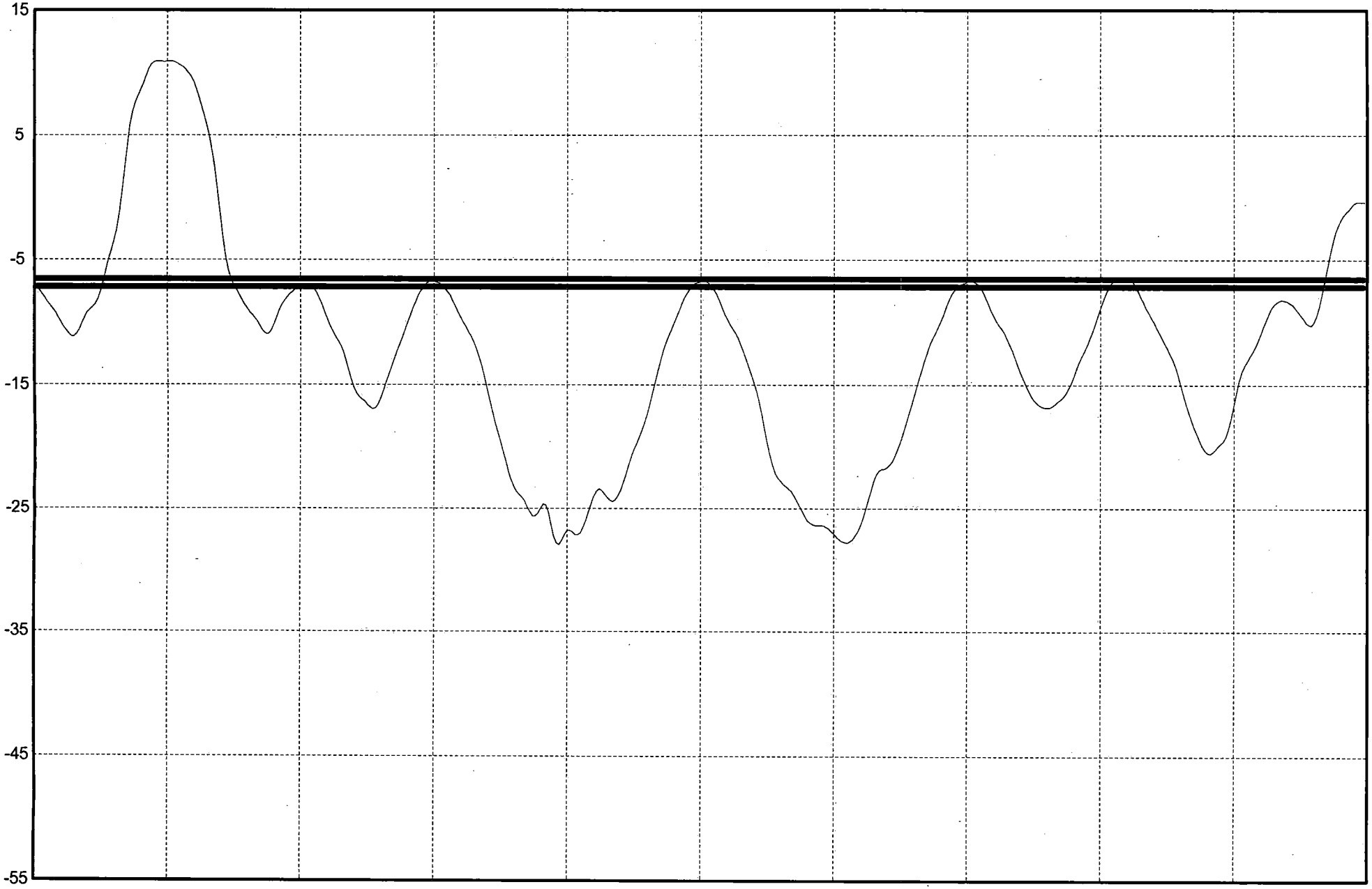


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH23-ICR Mode : FR
Date : 18/07/13 Time : 02:21:14 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 23 CF: 217.250 MHz SPAN: 5 MHz

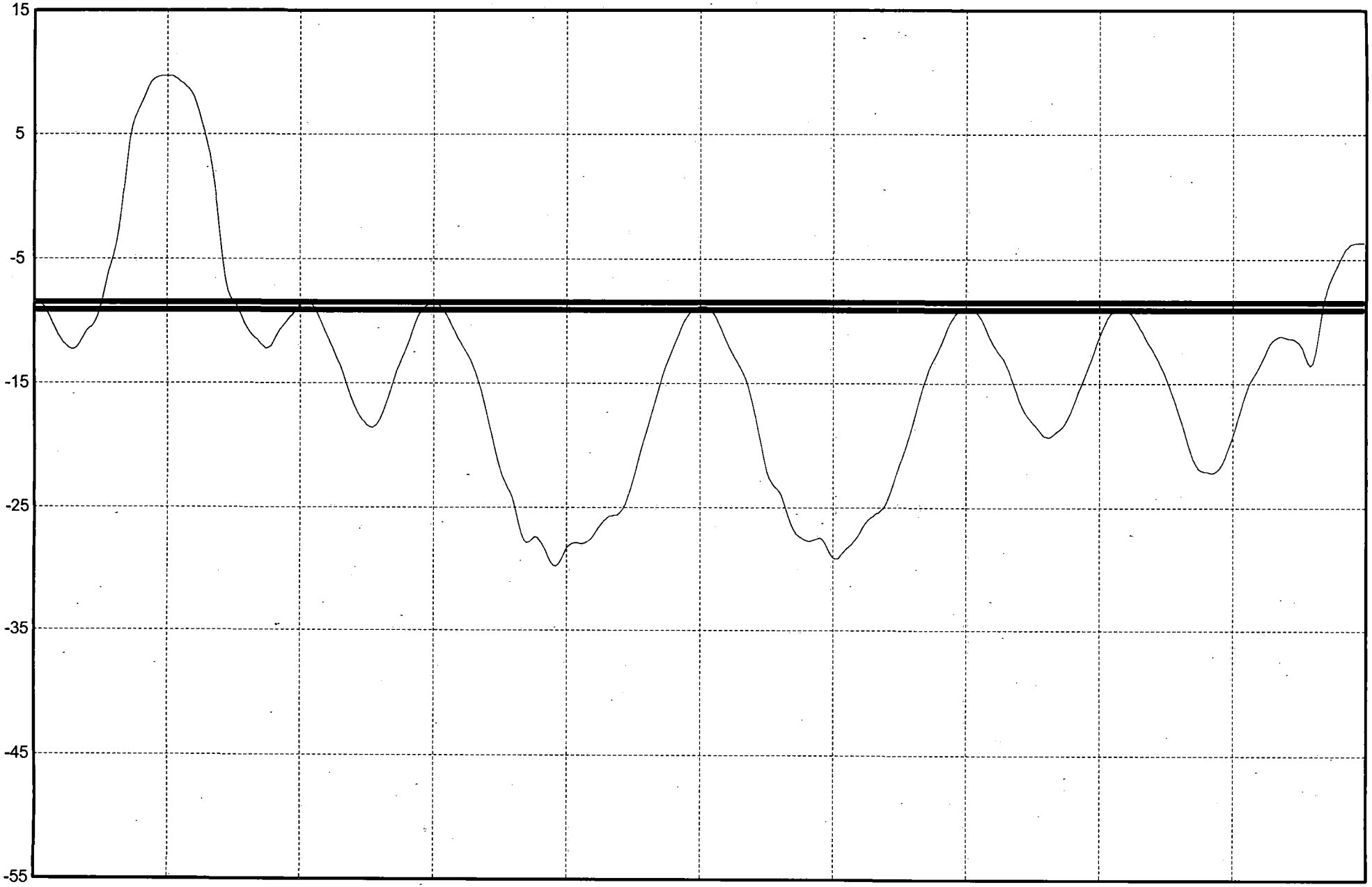


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH37-ICR Mode : FR
Date : 18/07/13 Time : 02:23:09 Temp 30 C

ATT: 15 dB
dBmV Video Channel: 37 CF: 301.262 MHz SPAN: 5 MHz

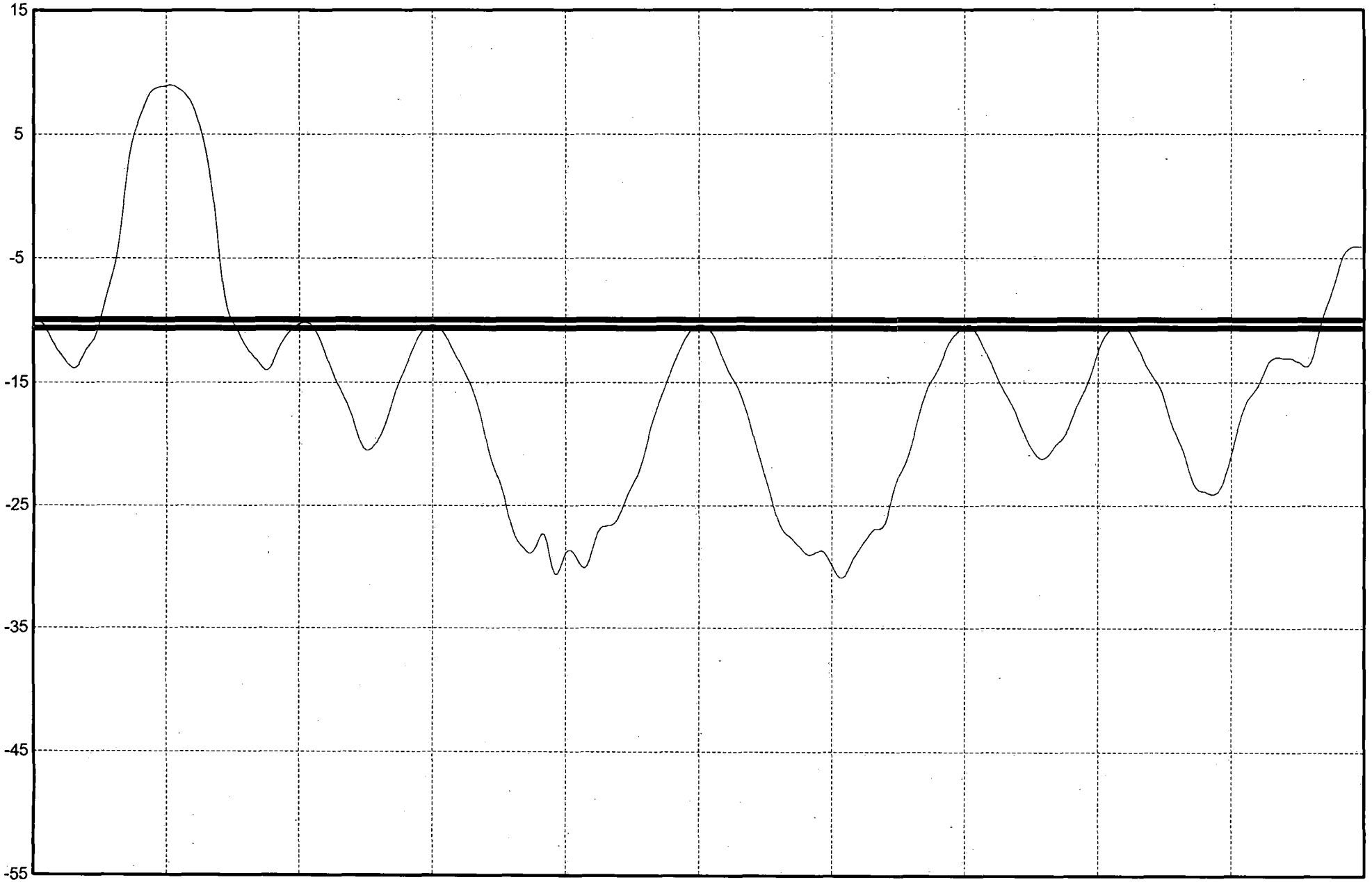


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH44 Mode : FR
Date : 18/07/13 Time : 02:26:07 Temp 28 C

ATT: 15 dB
dBmV Video Channel: 44 CF: 343.262 MHz SPAN: 5 MHz

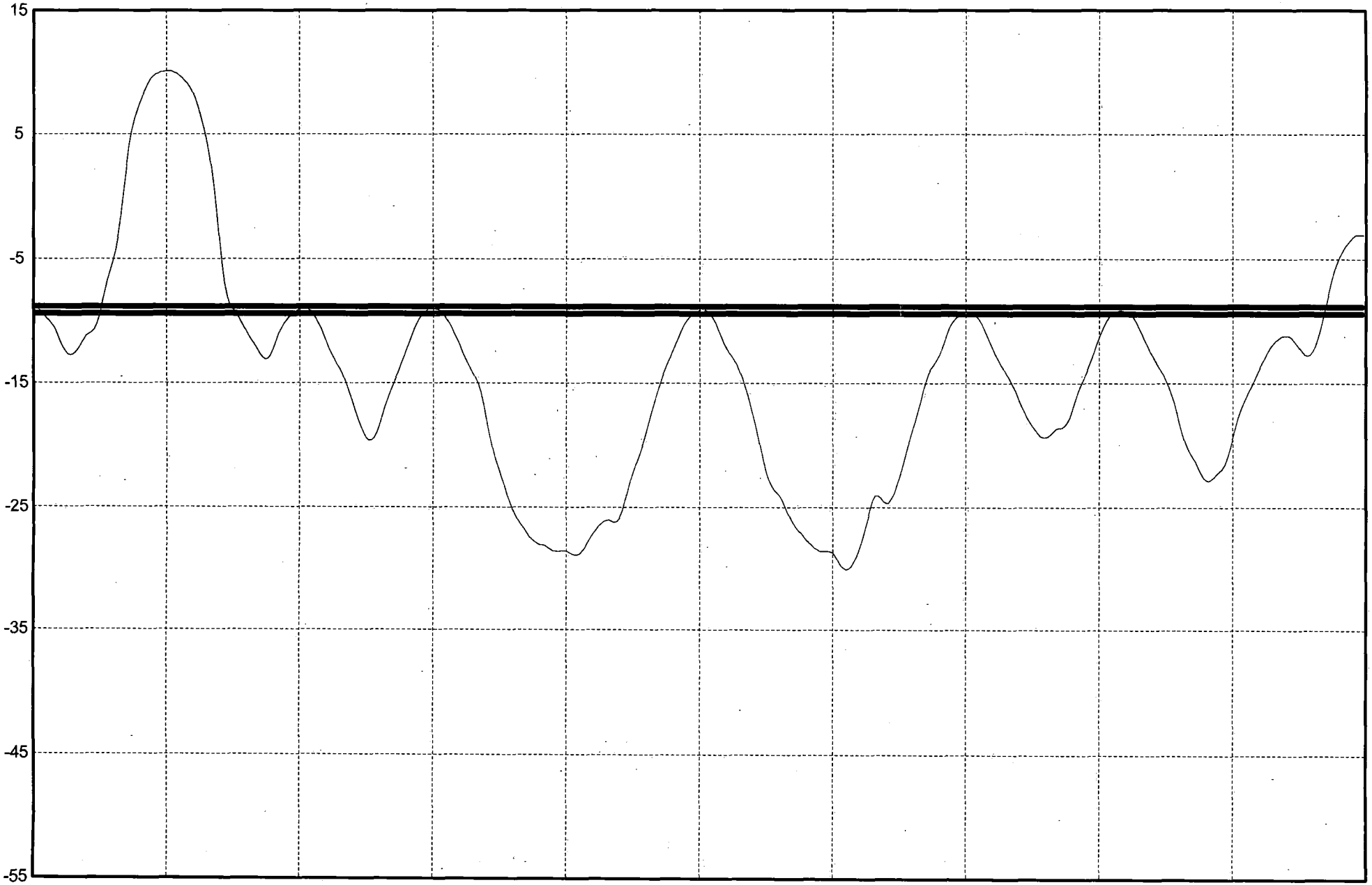


In-Channel Response: +/- 0.35 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH56-ICR Mode : FR
Date : 18/07/13 Time : 02:27:23 Temp 27 C

ATT: 15 dB
dBmV Video Channel: 56 CF: 415.250 MHz SPAN: 5 MHz

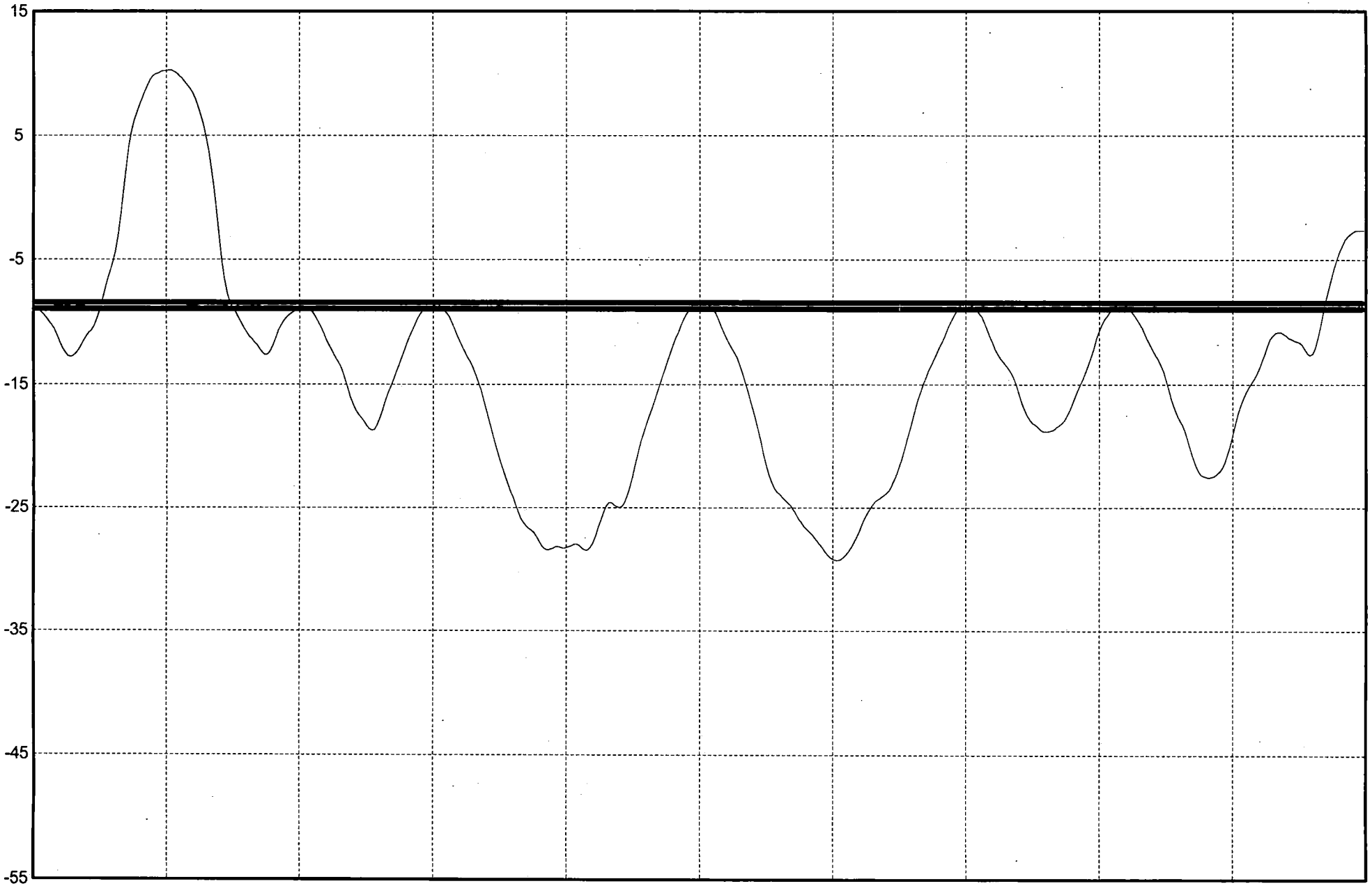


In-Channel Response: +/- 0.30 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH61-ICR Mode : FR
Date : 18/07/13 Time : 02:28:29 Temp 26 C

ATT: 15 dB
dBmV Video Channel: 61 CF: 445.250 MHz SPAN: 5 MHz

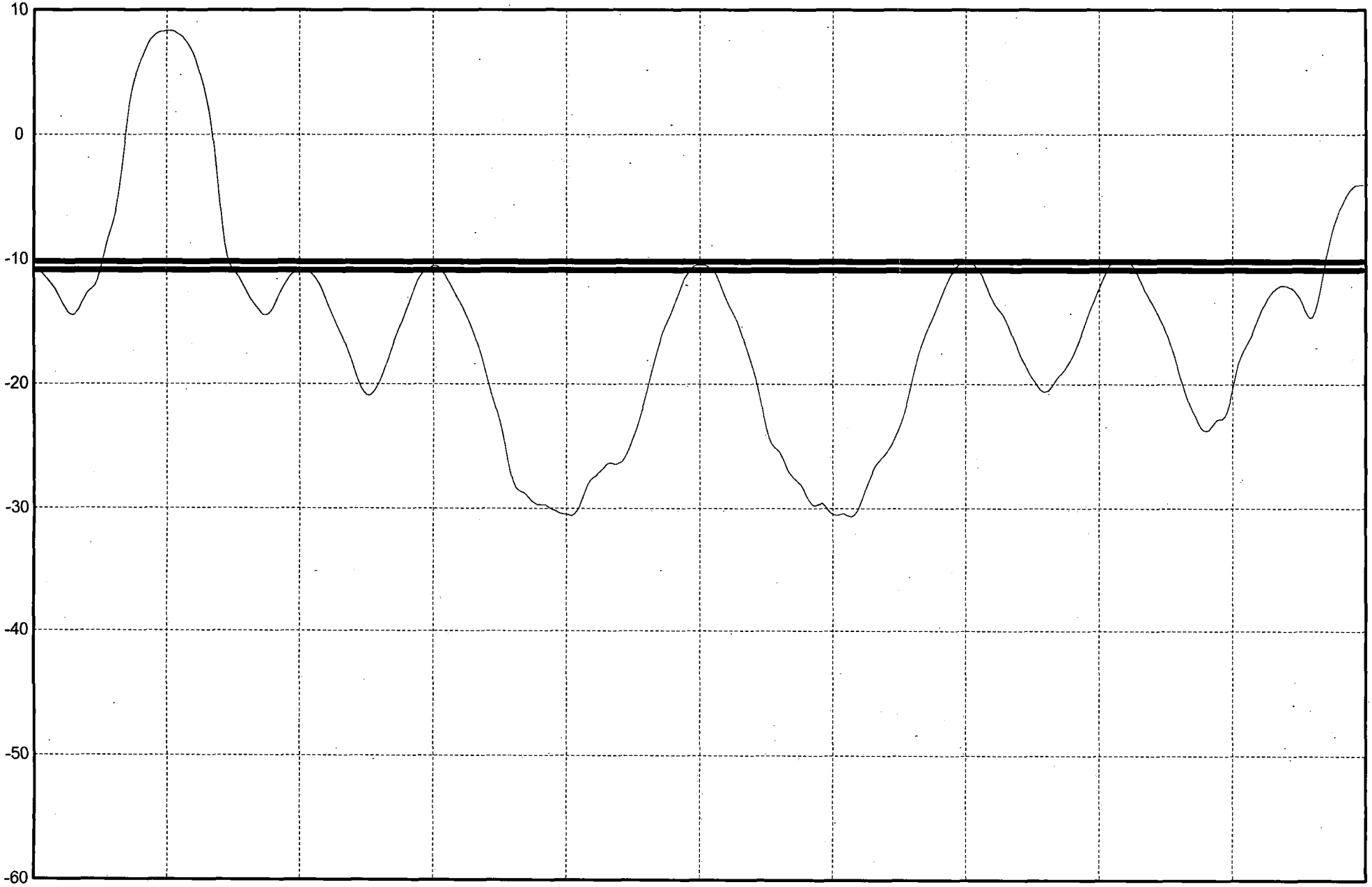


In-Channel Response: +/- 0.25 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH69-ICR Mode : FR
Date : 18/07/13 Time : 02:29:53 Temp 26 C

ATT: 10 dB
dBmV Video Channel: 69 CF: 493.250 MHz SPAN: 5 MHz

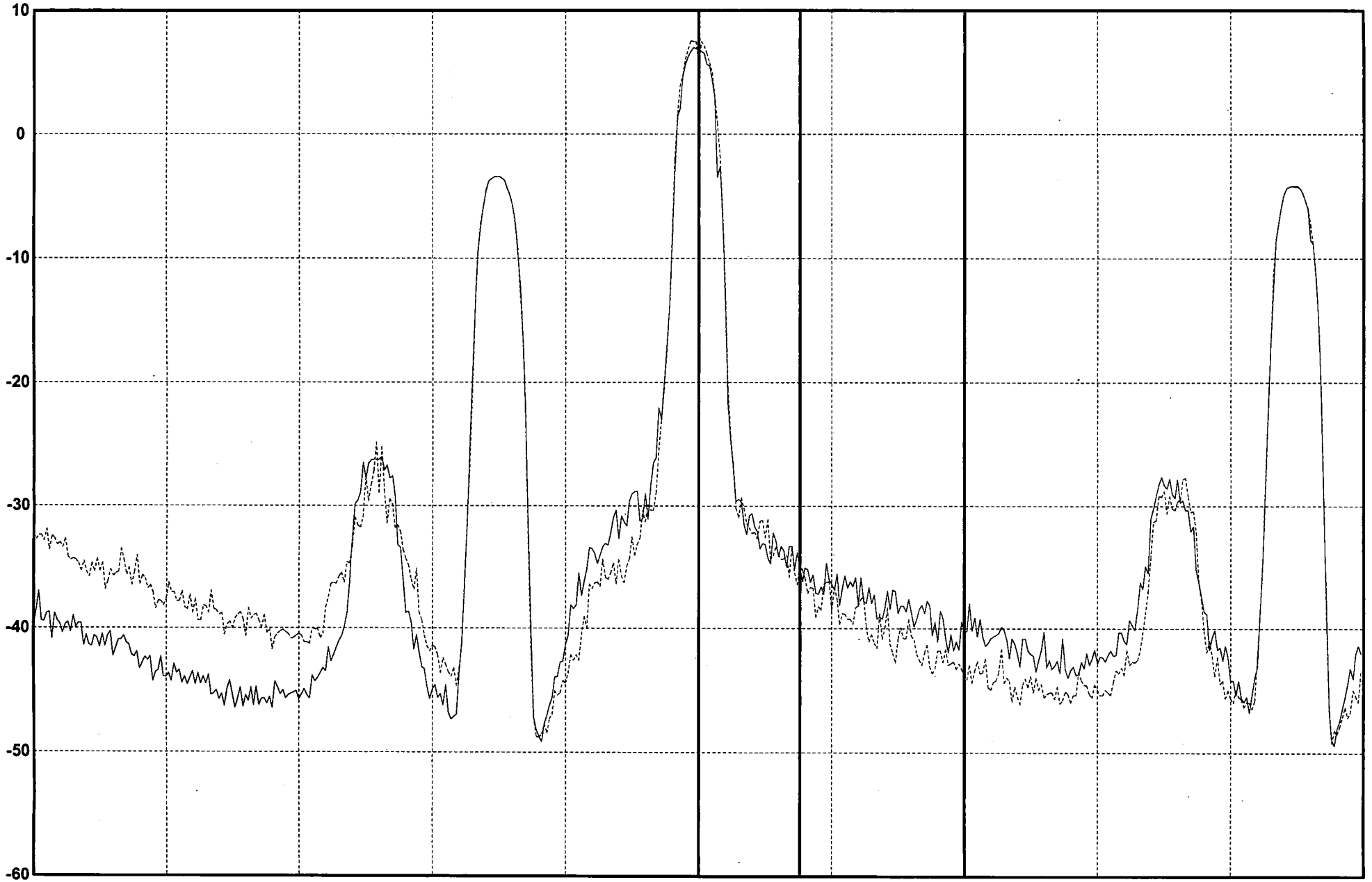


In-Channel Response: +/- 0.35 dB (Auto)
Field : 1 Line : 17
MultiBurst : 0.50 1.00 2.00 3.00 3.60 MHz

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH3-CN Mode : DIST
Date : 18/07/13 Time : 02:41:16 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 37 CF: 301.262 MHz 11.4 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 52.2 dB
CSO : 63.7 dB
CTB : 65.1 dB

2.0000 MHz
0.7500 MHz
0.0000 MHz

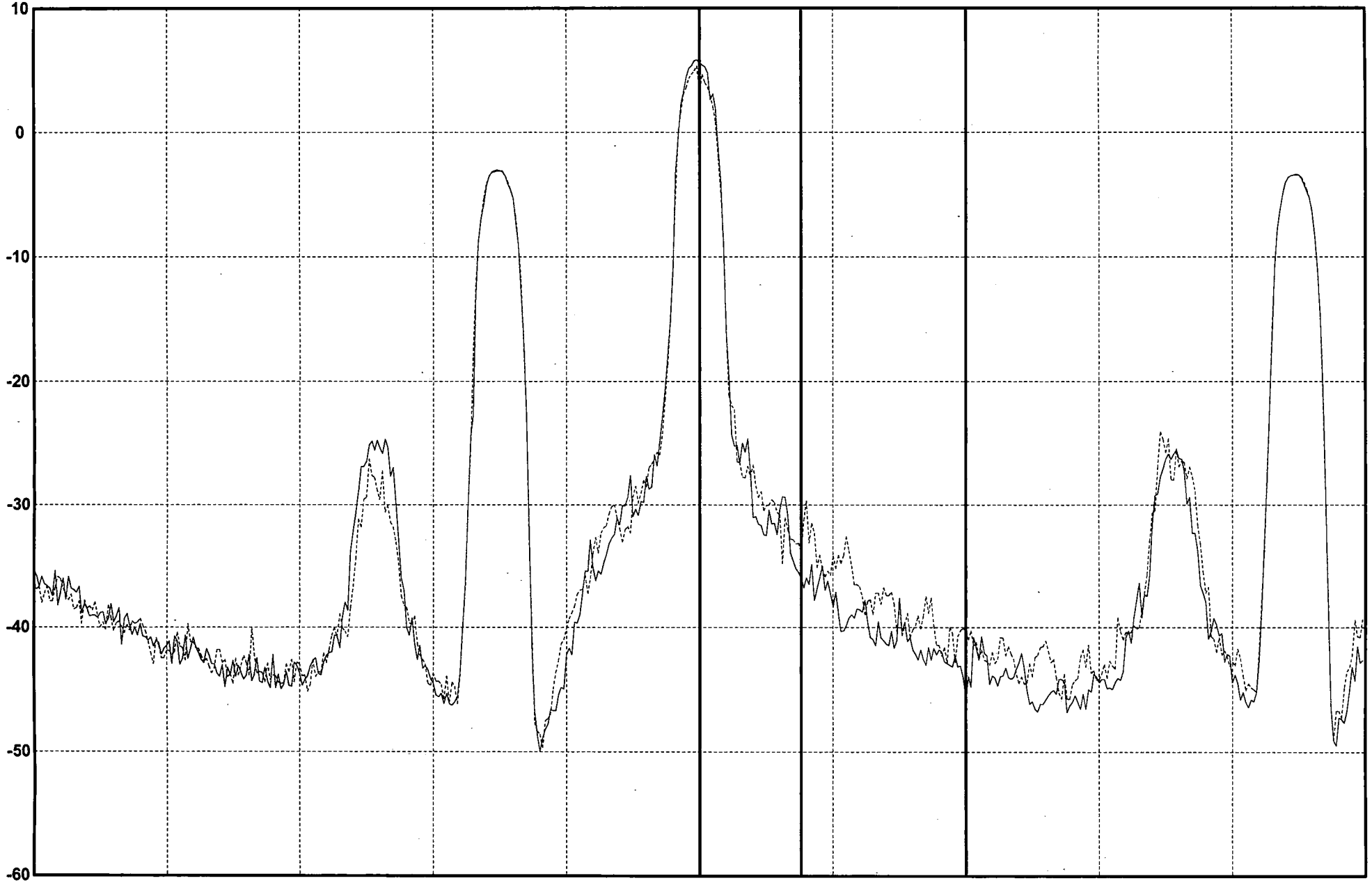
3.2 dB
1.7 dB
2.3 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH56-CSO Mode : DIST
Date : 18/07/13 Time : 02:46:46 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 56 CF: 415.250 MHz 11.0 dBmV Field : 1 Line : 23
SPAN: 10 MHz

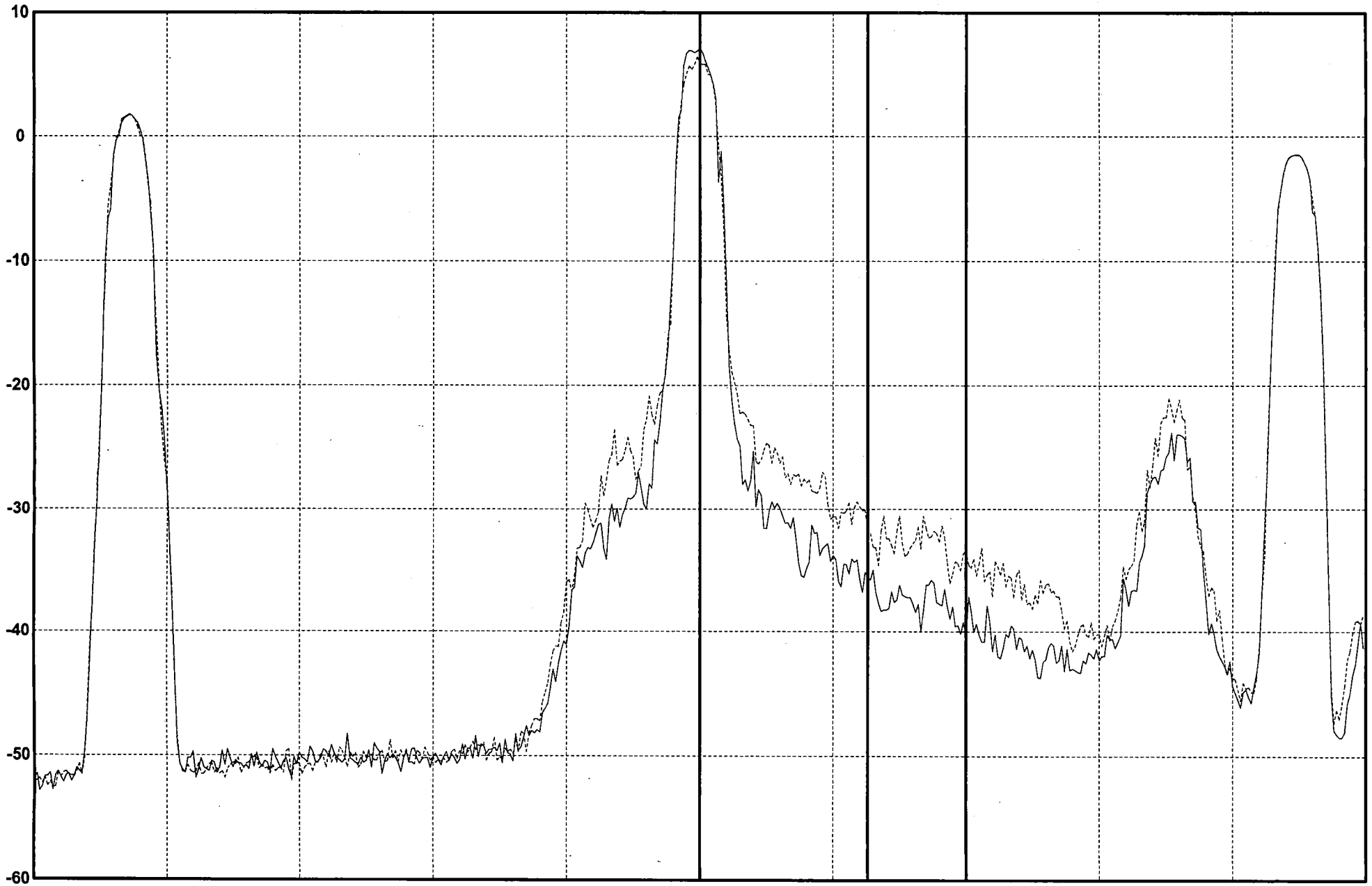


CCN : 52.1 dB 2.0000 MHz 3.1 dB Average 2
CSO : 66.5 dB 0.7500 MHz 2.8 dB
CTB : 64.7 dB 0.0000 MHz 2.1 dB

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH2-CTB Mode : DIST
Date : 18/07/13 Time : 02:33:29 Temp 26 C

ATT: 10 dB OFS: 0 dB
dBmV Video Channel: 2 CF: 55.250 MHz 11.5 dBmV Field : 1 Line : 23
SPAN: 10 MHz



CCN : 51.7 dB
CSO : 66.1 dB
CTB : 66.0 dB

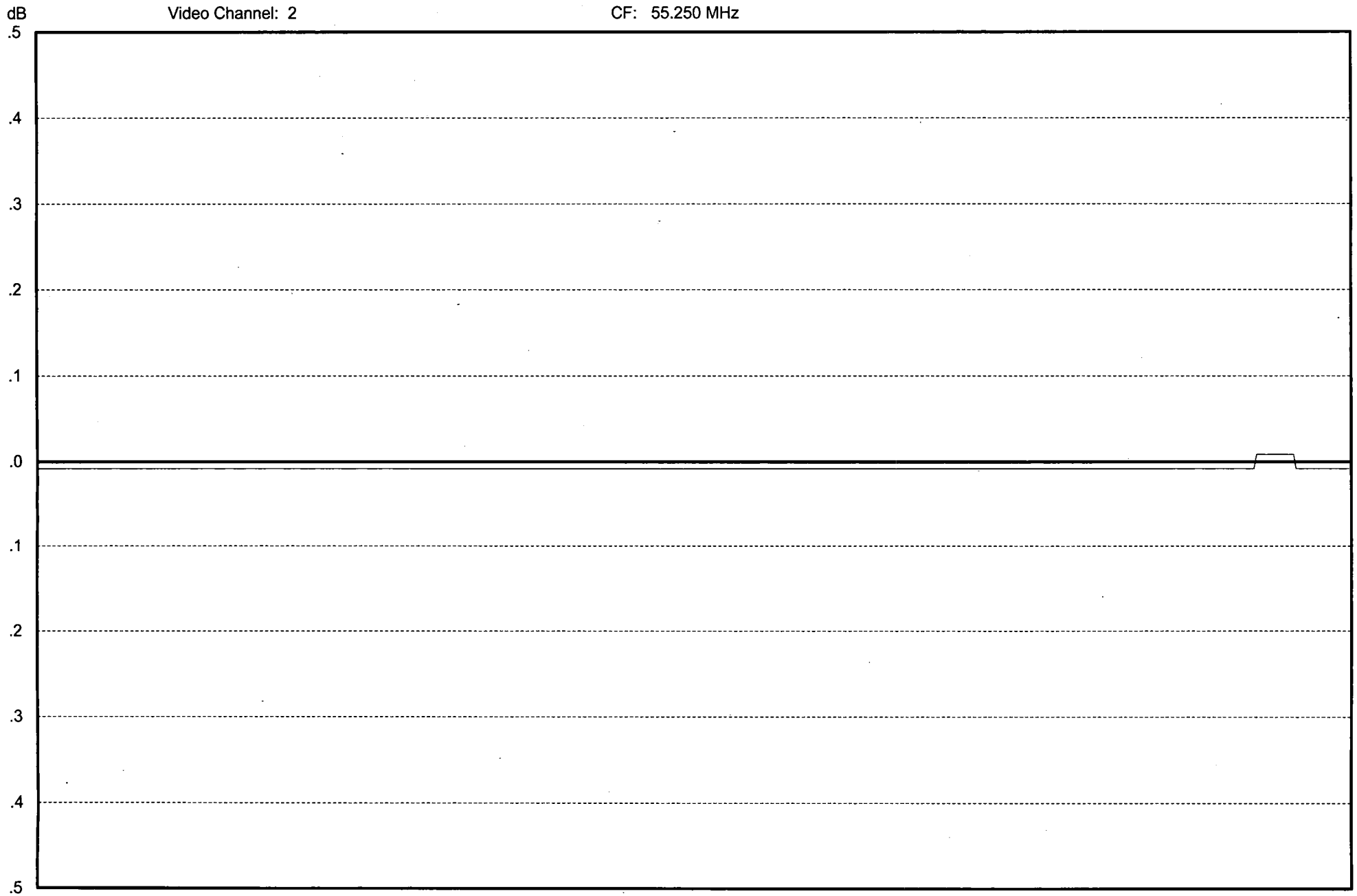
2.0000 MHz
1.2500 MHz
0.0000 MHz

2.5 dB
2.3 dB
2.2 dB

Average 2

Unit Calibration Date : 5/29/2013 Unit Serial Number : 8725-0310

Tech. Name : of : TIME WARNER CABLE
Site Id : WV Comments : STP6-CH2-HUM Mode : HUM
Date : 18/07/13 Time : 02:13:17 Temp 28 C



Hum (Signal): 0.2 % 66 dBC
Hum (Marker): 0.0 % 99 dBC

TESTPOINT 6, PAGE 5

TIME WARNER CABLE - SYRACUSE DIVISION

VISUAL CARRIER LEVEL VARIATION TEST

System Name : Sayre
Date : 08/01/2013
Meter Serial Number : 6033315
Test Location : 207 Moore st waverly, ny
Performed By : Derek Cordilione

		TEMP F							TEMP F				
		69.80	46.40	73.40	75.20				69.80	46.40	73.40	75.20	
		TIME							TIME				
		02:06:00	08:06:00	14:06:00	20:06:00				02:06:00	08:06:00	14:06:00	20:06:00	
CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR	CHAN	FREQ (MHZ)	VISUAL LEVEL (DBMV)				MAX VAR
2	55.2500	13.60	13.70	13.40	13.50	0.3	DD(40)	319.2625	13.10	13.60	13.40	13.20	0.5
3	61.2500	15.00	15.20	14.80	14.60	0.6	EE(41)	325.2625	12.20	12.40	12.40	12.20	0.2
4	67.2500	14.90	14.50	14.60	14.50	0.4	FF(42)	331.2750	13.10	13.60	13.50	13.20	0.5
5	77.2500	15.30	15.40	14.80	15.10	0.6	GG(43)	337.2625	12.80	13.00	13.20	13.00	0.4
6	83.2500	14.80	15.10	14.60	14.80	0.5	HH(44)	343.2625	12.30	12.40	12.70	12.40	0.4
A-5(95)	91.2500						II(45)	349.2625	12.40	12.70	12.40	12.40	0.3
A-4(96)	97.2500						JJ(46)	355.2625	13.00	13.40	13.60	13.20	0.6
A-3(97)	103.2500						KK(47)	361.2625	12.80	13.00	13.10	12.80	0.3
A-2(98)	109.2750	14.60	14.90	14.70	14.60	0.3	LL(48)	367.2625					
A-1(99)	115.2750						MM(49)	373.2625	12.80	12.70	12.90	12.70	0.2
A(14)	121.2625	15.40	15.40	14.90	15.00	0.5	NN(50)	379.2625	12.80	13.20	13.00	12.90	0.4
B(15)	127.2625	15.20	15.10	14.70	14.80	0.5	OO(51)	385.2625	12.10	12.40	12.50	12.40	0.4
C(16)	133.2625	15.70	15.70	15.30	15.50	0.4	PP(52)	391.2625					
D(17)	139.2500	15.50	15.70	15.10	15.40	0.6	QQ(53)	397.2625	12.80	13.10	13.30	13.20	0.5
E(18)	145.2500						RR(54)	403.2500					
F(19)	151.3210	15.40	15.70	15.00	15.30	0.7	SS(55)	409.2500	13.00	13.10	13.50	13.00	0.5
G(20)	157.2500	15.60	15.60	15.10	15.30	0.5	TT(56)	415.2500	13.40	13.40	13.60	13.30	0.3
H(21)	163.2500	15.50	15.50	15.40	15.60	0.2	UU(57)	421.2500	12.60	12.40	12.80	12.60	0.4
I(22)	169.2500						VV(58)	427.2500	13.20	13.30	13.60	13.10	0.5
7	175.2500	15.90	15.70	15.30	15.10	0.8	WW(59)	433.2500	13.90	13.60	13.90	13.60	0.3
8	181.2500	16.00	15.70	15.60	15.50	0.5	XX(60)	439.2500	12.70	12.80	12.90	12.60	0.3
9	187.2500	16.00	16.00	15.50	15.60	0.5	YY(61)	445.2500	13.70	13.80	13.70	13.60	0.2
10	193.2500	15.90	15.70	15.60	15.50	0.4	ZZ(62)	451.2500					
11	199.2500	15.90	15.80	15.70	15.60	0.3	63	457.2500	13.10	12.80	13.50	12.80	0.7
12	205.2500	16.00	16.00	15.30	15.50	0.7	64	463.2500					
13	211.2500						65	469.2500	14.30	14.30	14.20	14.00	0.3
J(23)	217.2500	15.30	15.50	15.10	15.10	0.4	66	475.2500					
K(24)	223.2500	15.70	15.80	15.70	15.60	0.2	67	481.2500	12.60	12.60	12.30	11.80	0.8
L(25)	229.2625	15.60	15.80	15.60	15.50	0.3	68	487.2500					
M(26)	235.2625	15.20	15.40	15.20	15.10	0.3	69	493.2500	11.70	11.70	12.00	11.40	0.6
N(27)	241.2625	15.30	15.30	15.20	15.20	0.1	70	499.2500	12.80	12.60	12.60	12.20	0.6
O(28)	247.2625	14.70	15.00	14.80	14.50	0.5	71	505.2500					
P(29)	253.2625	14.40	14.30	14.30	14.40	0.1	72	511.2500					
Q(30)	259.2625	13.80	14.30	14.10	13.90	0.5	73	517.2500					
R(31)	265.2625	14.30	14.40	14.30	14.30	0.1	74	523.2500					
S(32)	271.2625						75	529.2500					
T(33)	277.2625	14.30	14.20	14.20	13.80	0.5	76	535.2500					
U(34)	283.2625	14.40	14.30	14.60	14.40	0.3	77	541.2500					
V(35)	289.2625	13.40	13.80	13.60	13.40	0.4	78	547.2500					
W(36)	295.2625	13.40	13.60	13.70	13.60	0.3	79	553.2500					
AA(37)	301.2625	13.80	14.00	13.90	13.50	0.5	80	559.2500					
BB(38)	307.2625	12.90	13.40	12.90	12.90	0.5	81	565.2500					
CC(39)	313.2625	12.60	13.20	13.30	13.00	0.7							

Max Non Adjacent Channel Level Diff :- 4.3
Max Adjacent Channel Level Diff :- 1.5
Max Variance from last proof of performance test :- 4.5

TIME WARNER CABLE

SYRACUSE DIVISION

FCC TECHNICAL TESTING STANDARDS AND PROCEDURES

7 – 15 – 2002
FCC Part 76 (2001)
Rev 2

VISUAL CARRIER FREQUENCY AND AURAL CARRIER CENTER FREQUENCY FCC 76.612 (a) (b) and 76.605 (a) (2)

Specification:

FCC:	Visual carrier frequency part 76.612 (a) and (b). The center frequency of the aural carrier part 76.605 (a) (2).
Syracuse Division:	+/- 25 Khz on all non air-nav video carriers +/- 3.5 Khz on air-nav visual carriers. The center frequency of the aural carrier must be 4.5 MHz, +/- 1 KHz above the frequency of the visual carrier.

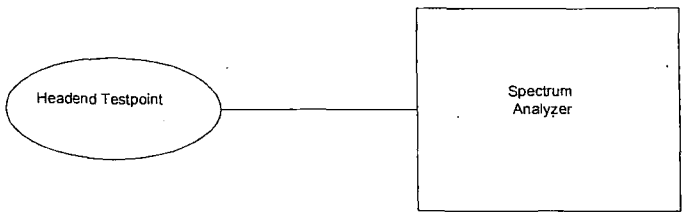
Picture Effect:

Various impairments

Recommended Procedures:

- All measurements to be made at the headend test point.
- Connect equipment as shown in block diagram below.
- Use a spectrum analyzer with a precision frequency option.
- Follow the manufacturers recommended methods for performing this measurement.
- Record the visual carrier frequency and intercarrier frequency difference of all system channels.
- Visual carrier frequencies in the frequency bands 108.0-137.0 Mhz and 225.0-400.00 Mhz need to be properly offset as per FCC Rule 76.612.
- For non-air nav visual frequencies you should observe the +/- 25 Khz tolerance.
- Lastly, follow sound engineering practices as outlined in the NCTA Recommended Practices for Measurements on Cable Television Systems.

Block Diagram:



VISUAL, AURAL CARRIER LEVELS AND 24 HR. VARIATION TESTS (LEVEL REQUIREMENTS) FCC 76.605 (a) (3), (4), (5)

Specification:

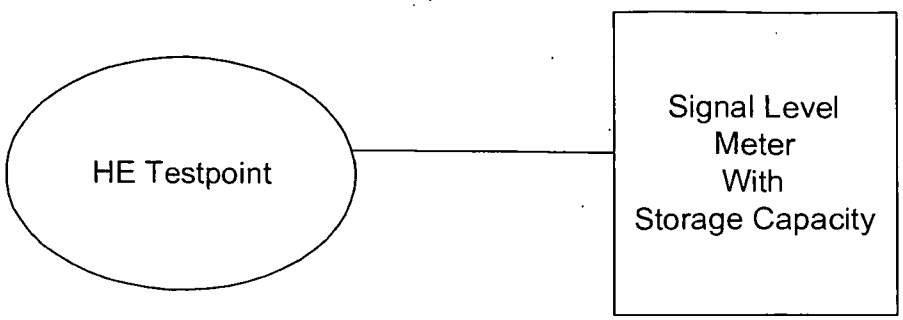
FCC: Levels and Variation Testing

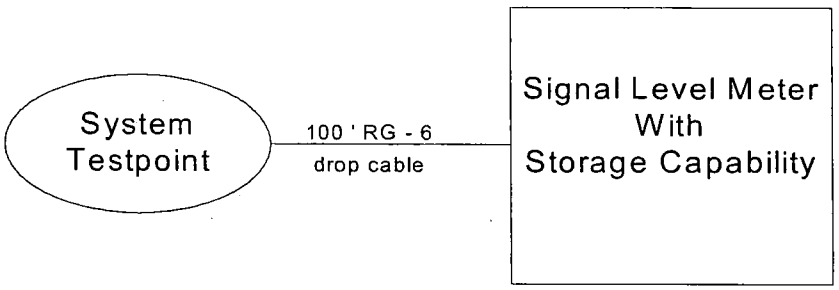
- Visual carrier level shall be no less than 0 dbmv at subscriber terminal and no less than +3 dbmv at the end of a 100' drop. FCC 76.605 (a)(3)
- Variance of adjacent (6 Mhz) visual carriers shall not vary by more than 3 db FCC 76.605(a)(4)
- Variance of non-adjacent channels video carrier levels shall not vary by more than 10 db plus 1 db for every 100 Mhz above 300 Mhz. FCC 76.605(a)(4)
- The aural carrier amplitude shall be between 10 db and 17 db down from the visual carrier FCC 76.605 (a)(5)
- For 24 hr variation testing, the visual signal level of each channel must be measured and recorded, along with the date, time of measurement, and temperature, once every 6 hours (at intervals of not less than 5 hours or no more than 7 hours after the last measurement), which shall include the coldest and warmest months (January or February and in July or August) during a 24 hour period. Visual signal level for each channel shall not vary by more than 8 db within 24 hours or in any 6 month interval. FCC 76.605 (a)(4). The level must also meet the requirements of FCC 76.605 (a)(3)(4)(5).

Recommended Procedures:

- Prior to the start of testing the Headend levels should be checked and adjusted to obtain no more than 1 db max peak to valley with all non-scrambled aural carriers approximately 13 to 14 db down from video.
- Store the Headend levels in the same meter that will be used for your system test point testing, note the time from the meter and the bin number that this was stored in. This will be entered into the Headend test forms at a later time.
- If you use more than one meter for your 24 hour test, then you should verify its response against the response of the meter used for headed and test point testing.
- At each test point you should again store the recorded levels prior to the converter. The Syracuse Division has decided to test prior to the converter and insert an attachment stating the specifications of the converter.
- For the 24 hour testing you should have a watch to note the time (or use automated time function on signal level meter) and should use either a thermometer to record the temperature or obtain this from the weather channel as the temperature reading from the meter will only indicate the temperature of the meter.

Block Diagram:





IN-CHANNEL FREQUENCY RESPONSE
FCC 76.605 (a) (6)

Specification:

FCC and Syracuse Division: +/- 2 db from 750 Khz to 5 Mhz above the lower frequency boundary of the cable television channel.

Picture Effect:

Variations can not only affect the relative amplitude of different frequency components of the visual signal, but relative visual carrier level and chroma delay. This could cause improper colors and poor picture quality.

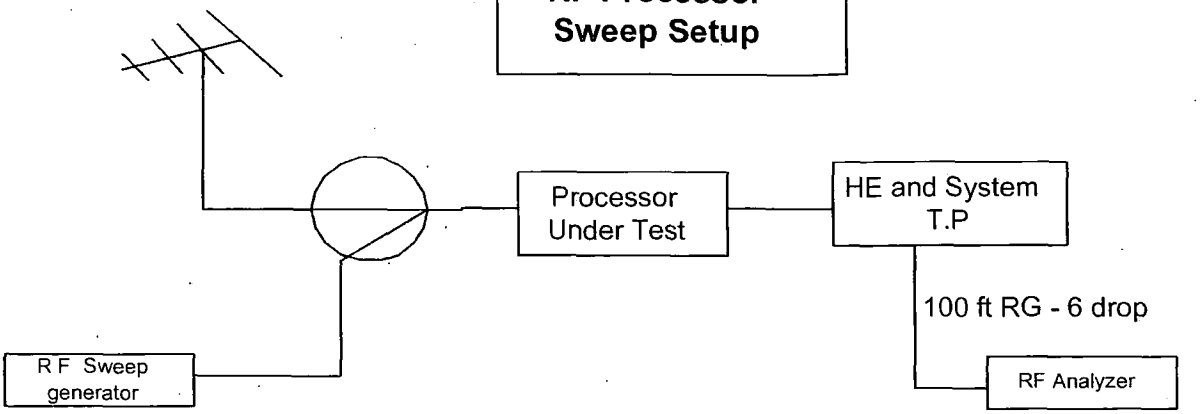
Recommended Procedures:

- Measurements should be made on all FCC designated test channels at each system test point. The frequency response of all other channels should be verified periodically at the headend test point.
- Connect equipment as shown in the block diagrams .
- This procedure varies based on the type of analyzer used and the type of channel, ie; modulator or processor. The block diagrams show the two most common setups for making this measurement.
- Record the +/- db number [(peak to valley) / (2)] on page 3 of 5 for each testpoint.
- Lastly, follow sound engineering practices as outlined in the NCTA Recommended Practices for Measurements on Cable Television Systems.

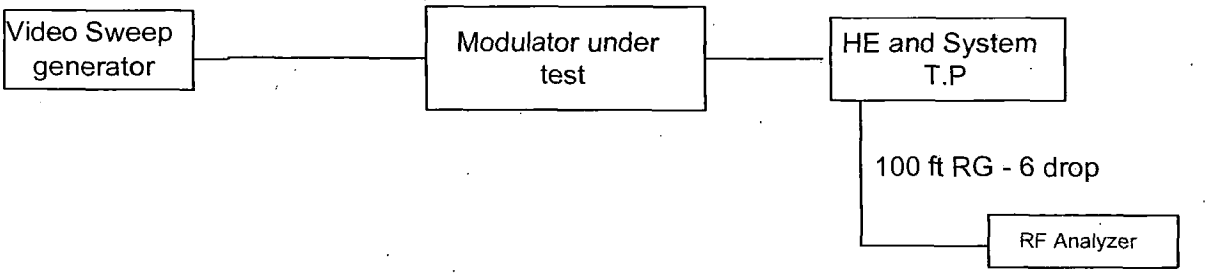
Note :- The FCC Rules state that this test be done after a converter. The Syracuse Division does the field test without a converter but includes a "typical" frequency response trace of the converter used in the system. The system and converter traces will show system total response.

Block Diagrams

RF Processor Sweep Setup



Video Sweep of Modulator



CARRIER TO NOISE RATIO
(C/N)
FCC 76.605 (a) (7)

Specification:

FCC: Minimum of 43 db

Syracuse Division: Minimum of 47 db prior to converter

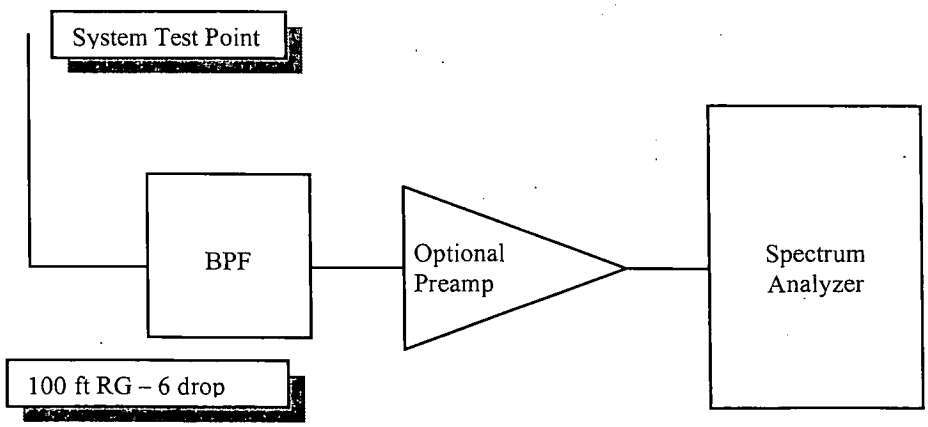
Picture Effect:

Noisy or snowy pictures. This can range from "imperceptible" at ratios above 47 db to "annoying" at levels less than 43 db.

Recommended Procedures:

- Measurements should be made on all of the test channels at each test point
- Connect equipment as shown in block diagram .
- Since most systems now have analyzers or signal level meters that automate this measurement, you should follow the manufacturers recommended method for this measurement. This would include such items as the proper RF input level required for measurement, the system noise floor higher than the analyzer noise floor, etc.
- Lastly, follow sound engineering practices as outlined in the NCTA Recommended Practices for Measurements on Cable Television Systems.

Block Diagrams



COHERENT DISTURBANCES
(CTB, CSO, INTERMOD)
FCC 76.605 (a) (8)

Specification:

FCC: Ratio of visual signal level to coherent disturbances shall not be less than 51db. Syracuse Division: Minimum intermod, CSO and CTB is 55db

Picture Effect:

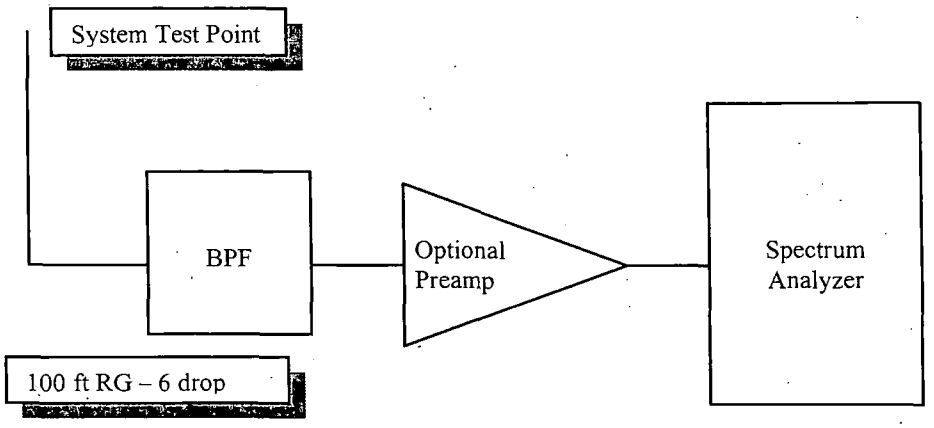
Interfering line patterns, horizontal line streaks, beats in the picture, etc.

Recommended Procedures:

- Measurements should be made on all test channels at each test point
- Connect equipment as shown in block diagram.
- Since most systems now have analyzers that automate these measurements, you should follow the manufacturers recommended method for performing these measurements. This would include such items as the proper RF input level that is required for the measurement, insuring that you are not overloading the front end of the analyzer, etc.
- Lastly, follow sound engineering practices as outlined in the NCTA Recommended Practices for Measurements on Cable Television Systems.

Note:

1) Intermod products can fall anywhere within a 6 Mhz bandwidth
2) CSO falls at +/- .75 Mhz and +/- 1.25 Mhz, we only need to record the positive offset numbers. If this measurement is automated, then it will give you the worst case number. This is fine as long as it meets or exceeds spec.
3) CTB will fall at the visual carrier frequency. When picking test channels for the FCC proof, you should pick one channel that yields worst case CTB for your specific channel loading. Because you have to turn the video carrier off at the headend to make the CTB measurement, make sure you are not testing any AGC pilot frequencies.
4) If testing a channel that falls in an off-air spectrum insure that CTB measurement is not measuring direct pick-up.



LOW FREQUENCY DISTURBANCES (HUM MODULATION) FCC 76.605 (a) (10)

Specification:

FCC: Less than 3%

Syracuse Division: Less than 1%

Picture Effect:

Horizontal bars or stripes slowly moving from the bottom of the screen to the top.

Recommended Procedures:

- Measurement must be made on at least one of the FCC designated test channels.
- Connect equipment as shown in block diagram below.
- Since all systems now have analyzers that automate this measurement, you should follow the manufacturers recommended method for this measurement. This would include such items as the proper RF input level required for measurement, and measurements made on a cw carrier etc.
- Lastly, follow sound engineering practices as outlined in the NCTA Recommended Practices for Measurements on Cable Television Systems.

Block Diagram: