MODEL NO.	MP-A-1012	SERIAL NO.	103R
+ 12 VDC Min +15 VDC Max @	900 mA NOM	Actual +12 VDC @	886 mA
		Actual +15 VDC @	886 mA

TEST DATA SHEET

MICROWAVE PHOTONIC SYSTEMS, INC.

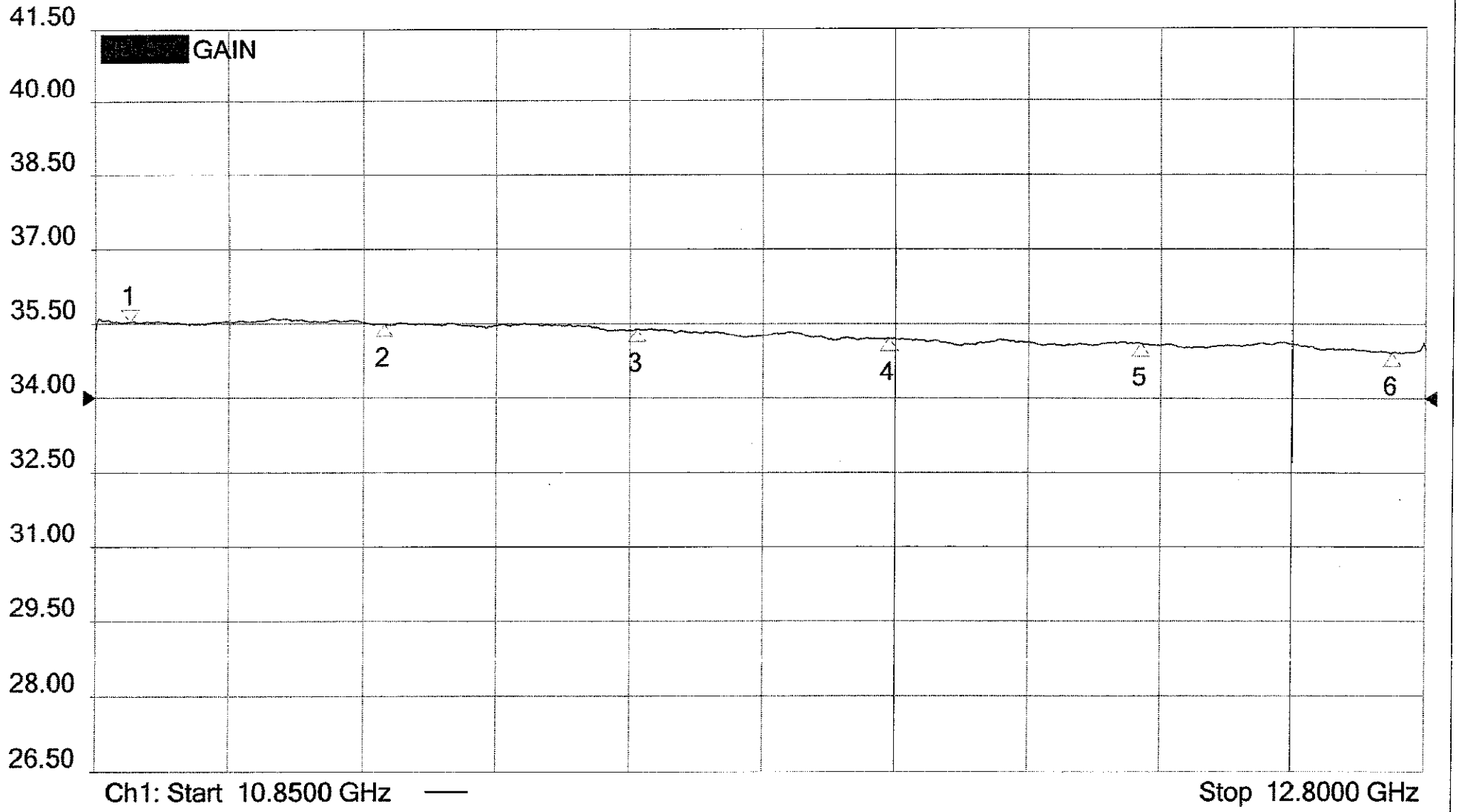
882 SOUTH MATLACK ST. UNIT 104

WEST CHESTER, PA 19382

FREQUENCY (GHz)	GAIN (dB)	INPUT VSWR	OUTPUT VSWR	NOISE FIGURE (dB)	IP3	OUTPUT POWER COMPRESSION @ +28 dBm MIN
10.9	REFER TO "S21" PLOTTED DATA	REFER TO "S11" PLOTTED DATA	REFER TO "S22" PLOTTED DATA	1.81	36.41	0.7
11.27				1.88	—	0.7
11.64				2.01	36.00	0.6
12.38				1.95	—	0.6
12.75				1.88	36.25	0.6
SPECIFICATION LIMITS	34 dB MIN 36.5 dB MAX	2.0:1 MAX	2.0:0 MAX	2.5 dB MAX @ +23 DEG C	+36 dBm MIN +38 dBm TYP	1.0 dB MAX

DATE	7/7/06	TEST ENGR		PROJECT ENGR	
QUALITY		MFG		CSI	

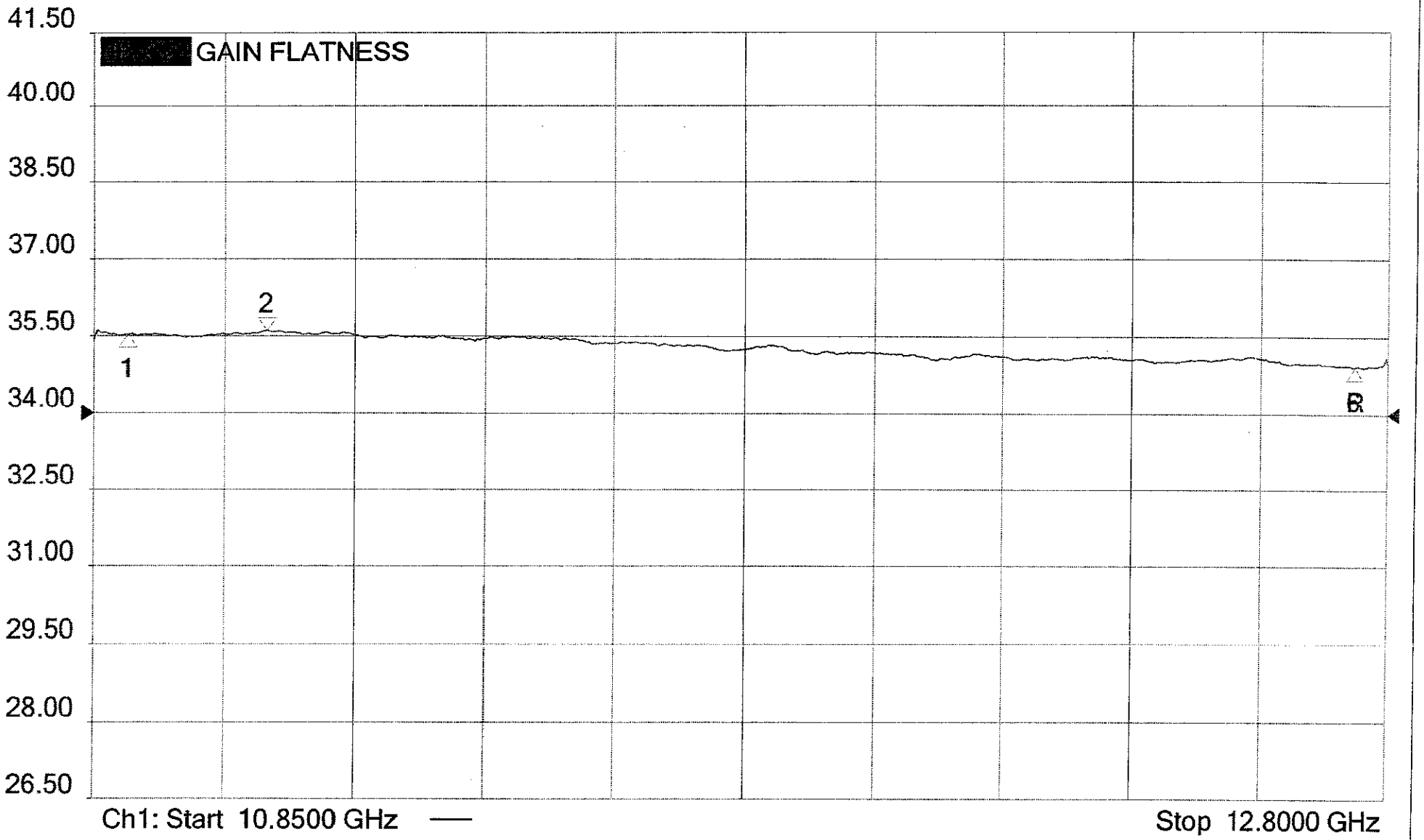
Window 1 (1) S21 dB
LogMag C 2-Port



Trace Attributes

Window	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
	1	S21	1	C 2-Port	2.87		1	10900 MHz	35.530 dB
							2	11270 MHz	35.494 dB
							3	11640 MHz	35.391 dB
							4	12010 MHz	35.203 dB
							5	12380 MHz	35.103 dB
							6	12750 MHz	34.921 dB

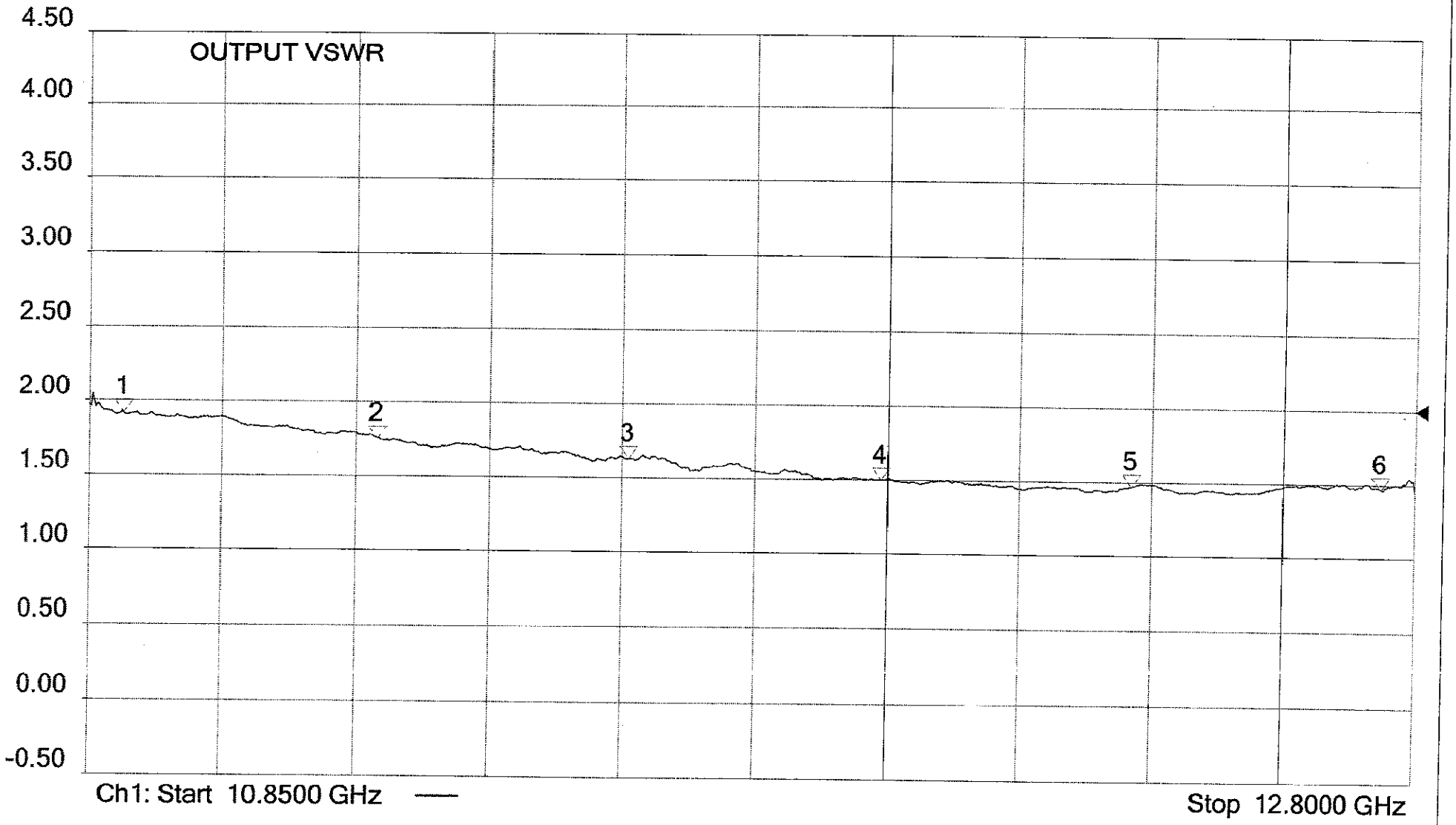
Window 2 (1) S21 dB
LogMag C 2-Port



Trace Attributes

Window	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
2	1	S21	1	C 2-Port	2.87		1	10900 MHz	35.530 dB
							2	-1641.625 MHz	0.68638 dB
							6	12750 MHz	34.921 dB
							R	12750 MHz	34.921 dB

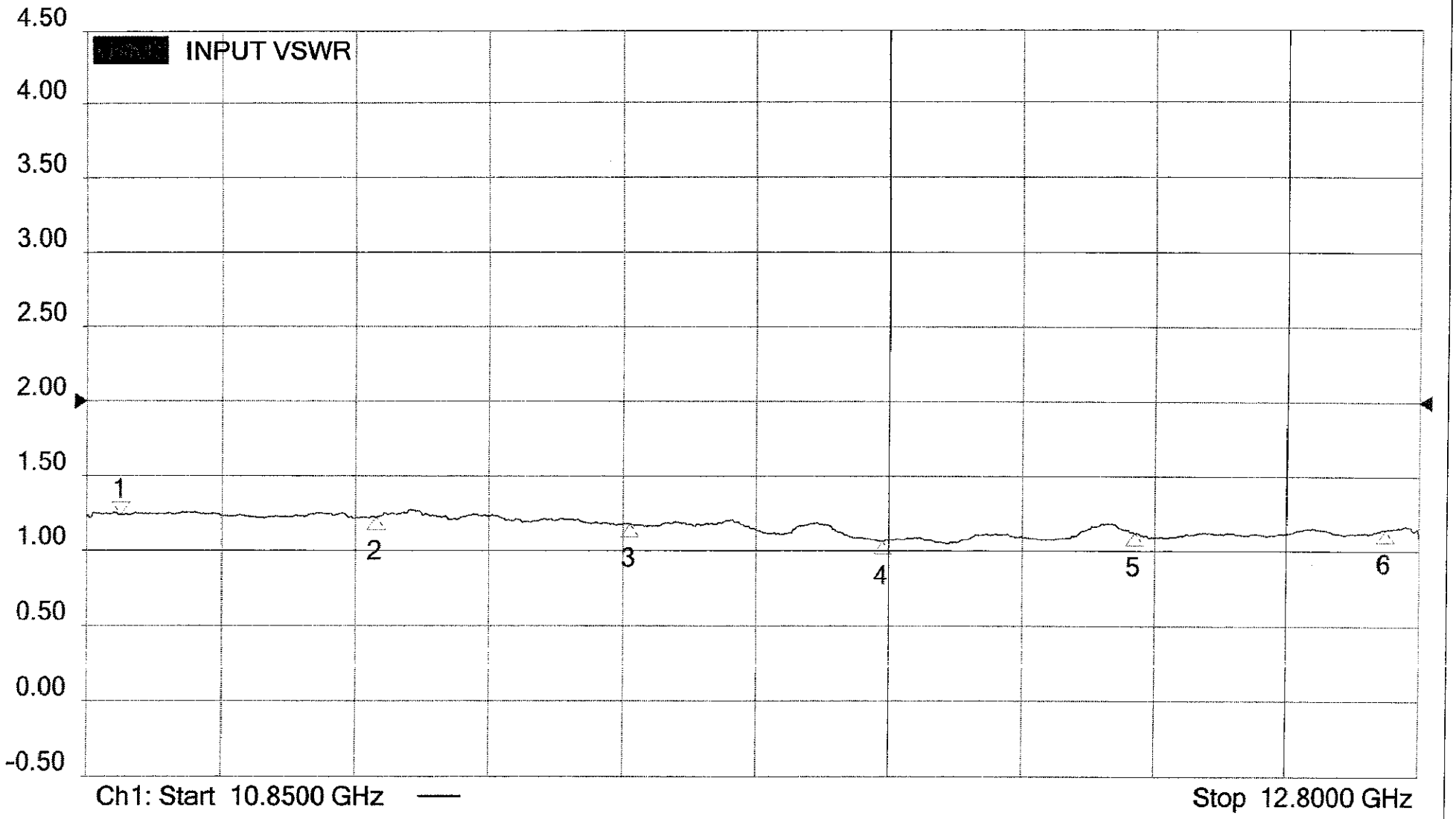
Window 4 (1) S22 NV M Units
SWR C 2-Port



Trace Attributes

Window	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
	1	S22 NV M	1	C 2-Port	2.87		1	10900 MHz	1.9192
							2	11270 MHz	1.7546
							3	11640 MHz	1.6308
							4	12010 MHz	1.4982
							5	12380 MHz	1.4695
							6	12750 MHz	1.4661

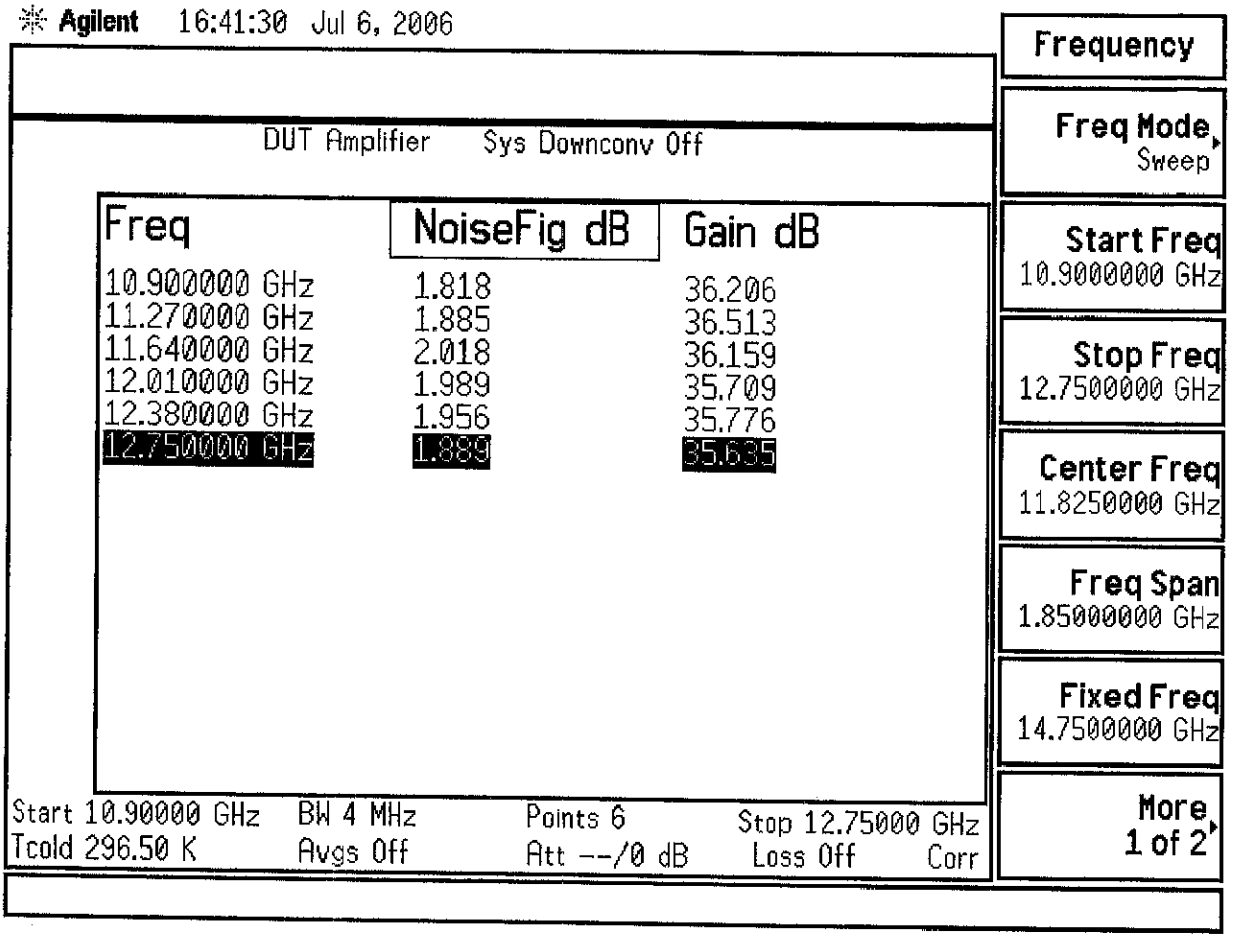
Window 3 (1) S11 Units
SWR C 2-Port



Trace Attributes

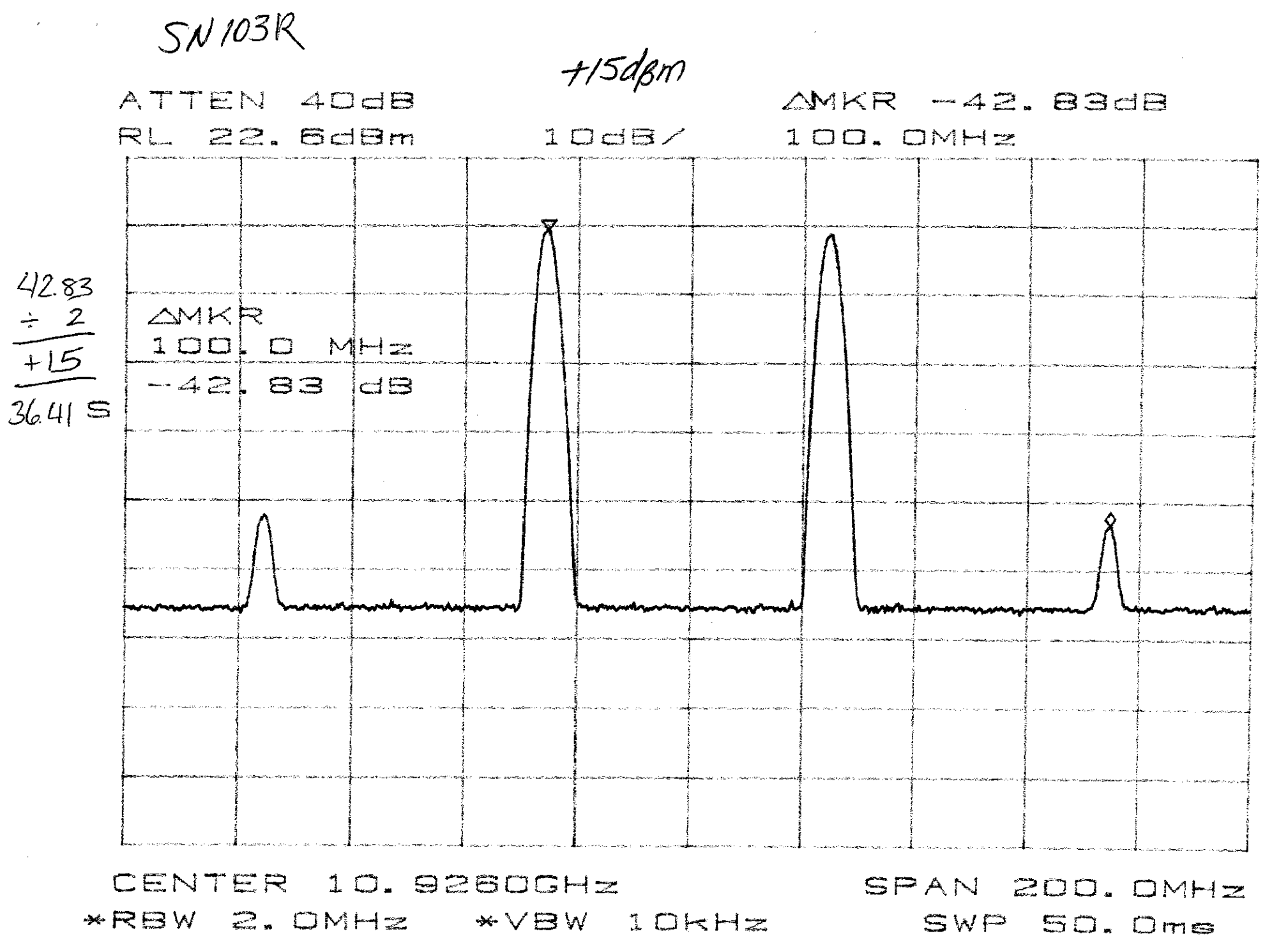
Window	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
4	1	S11	1	C 2-Port	2.87		1	10900 MHz	1.2378
							2	11270 MHz	1.2231
							3	11640 MHz	1.1778
							4	12010 MHz	1.0612
							5	12380 MHz	1.1206
							6	12750 MHz	1.1406

SN 103R


Agilent 16:41:30 Jul 6, 2006
DUT Amplifier Sys Downconv Off
Freq
NoiseFig dB
Gain dB
10.900000 GHz 1.818 36.206
11.270000 GHz 1.885 36.513
11.640000 GHz 2.018 36.159
12.010000 GHz 1.989 35.709
12.380000 GHz 1.956 35.776
12.750000 GHz 1.889 35.635
Start 10.90000 GHz
BW 4 MHz
Points 6
Stop 12.75000 GHz
Tcold 296.50 K
Avgs Off
Att --/0 dB
Loss Off
Corr
Frequency
Freq Mode Sweep
Start Freq 10.9000000 GHz
Stop Freq 12.7500000 GHz
Center Freq 11.8250000 GHz
Freq Span 1.85000000 GHz
Fixed Freq 14.7500000 GHz
More 1 of 2

SN 103R

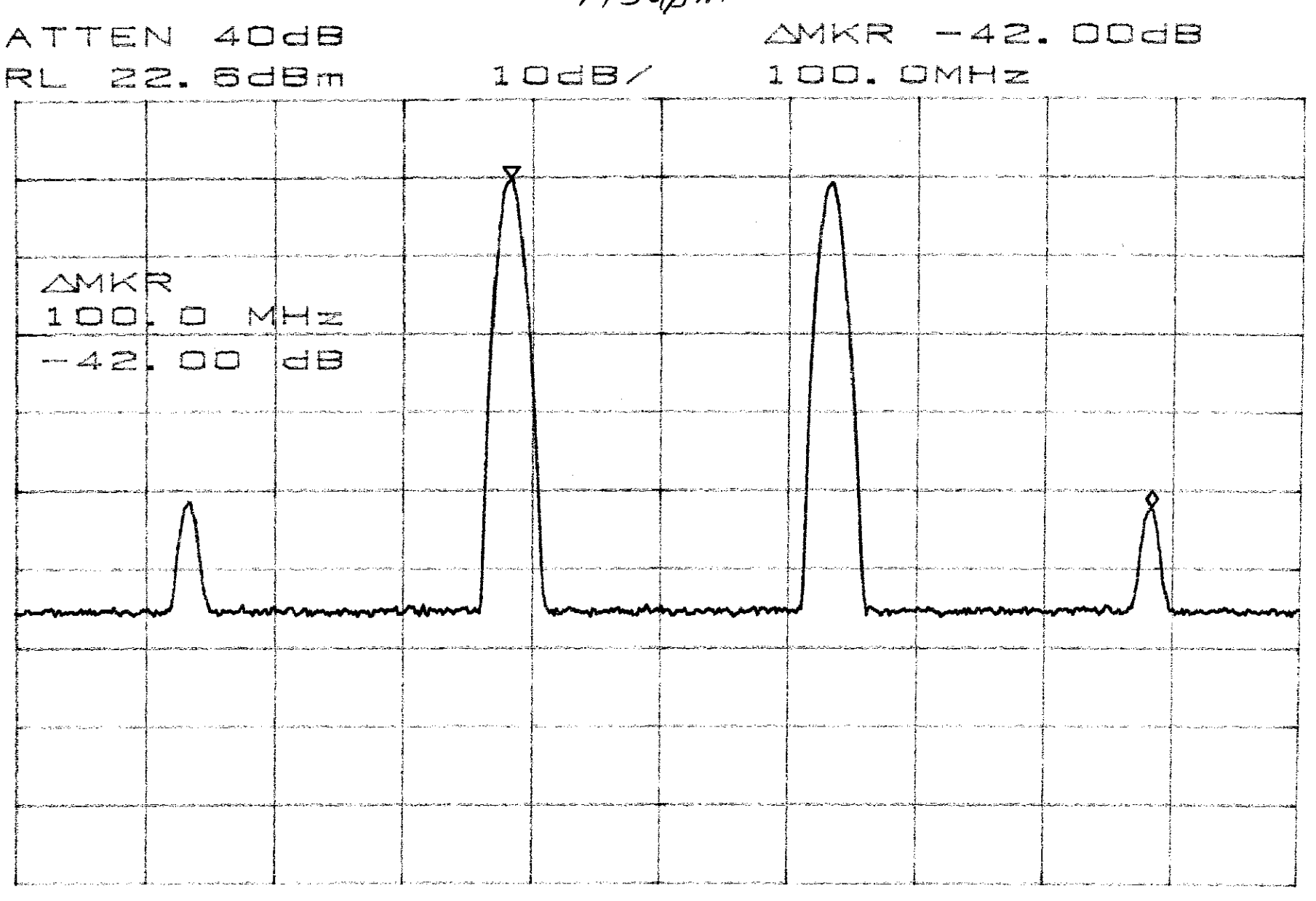
+15dBm



42.83
÷ 2
+15
36.41 S

SN 103R

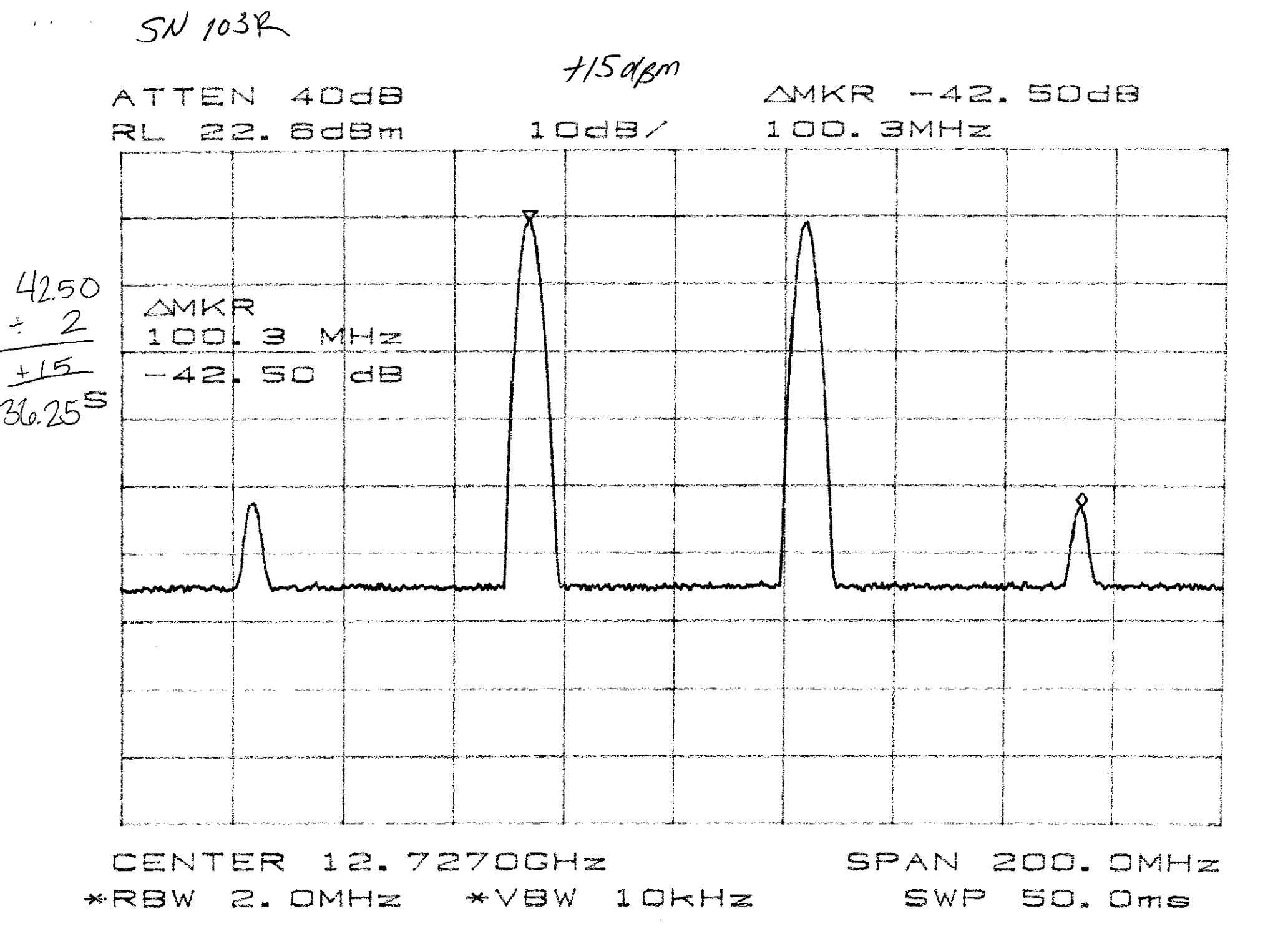
+15dBm



42.00
÷ 2
+15
36.00 dB

SN 103R

+15dBm



42.50
÷ 2
+15
36.25 S

MODEL NO.	MP-A-1012	SERIAL NO.	104R
+ 12 VDC Min +15 VDC Max @	900 mA NOM	Actual +12 VDC @	886 mA
		Actual +15 VDC @	886 mA

TEST DATA SHEET

MICROWAVE PHOTONIC SYSTEMS, INC.

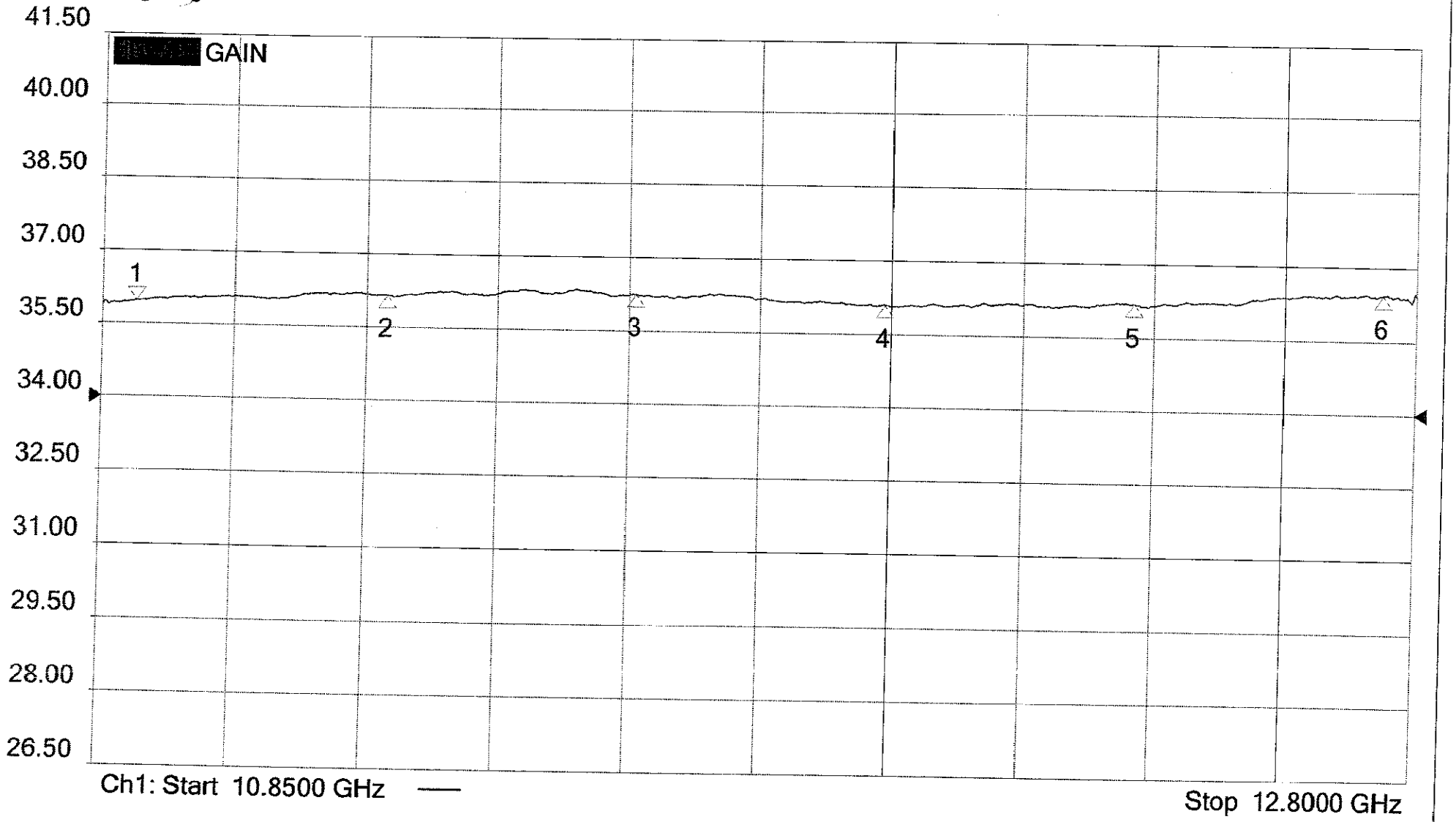
882 SOUTH MATLACK ST. UNIT 104

WEST CHESTER, PA 19382

FREQUENCY (GHz)	GAIN (dB)	INPUT VSWR	OUTPUT VSWR	NOISE FIGURE (dB)	IP3	OUTPUT POWER COMPRESSION @ +28 dBm MIN
10.9	REFER TO "S21" PLOTTED DATA	REFER TO "S11" PLOTTED DATA	REFER TO "S22" PLOTTED DATA	2.02	36.33	0.7
11.27				2.11	—	0.7
11.64				2.21	36.33	0.7
12.38				2.27	—	0.6
12.75				2.09	37.00	0.7
SPECIFICATION LIMITS	34 dB MIN 36.5 dB MAX	2.0:1 MAX	2.0:0 MAX	2.5 dB MAX @ +23 DEG C	+36 dBm MIN +38 dBm TYP	1.0 dB MAX

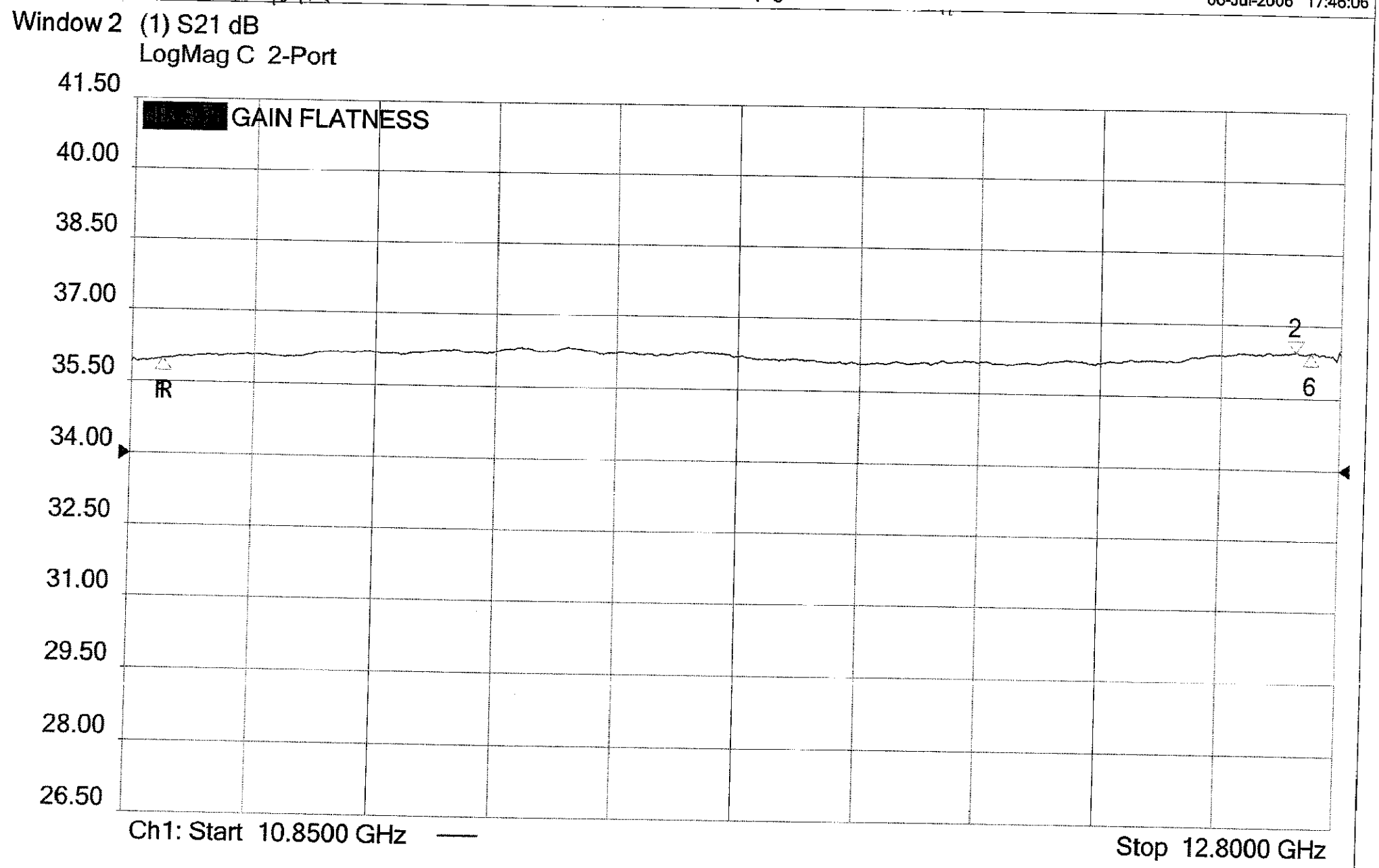
DATE	7/7/06	TEST ENGR		PROJECT ENGR	
QUALITY		MFG		CSI	

Window 1 (1) S21 dB
LogMag C 2-Port



Trace Attributes

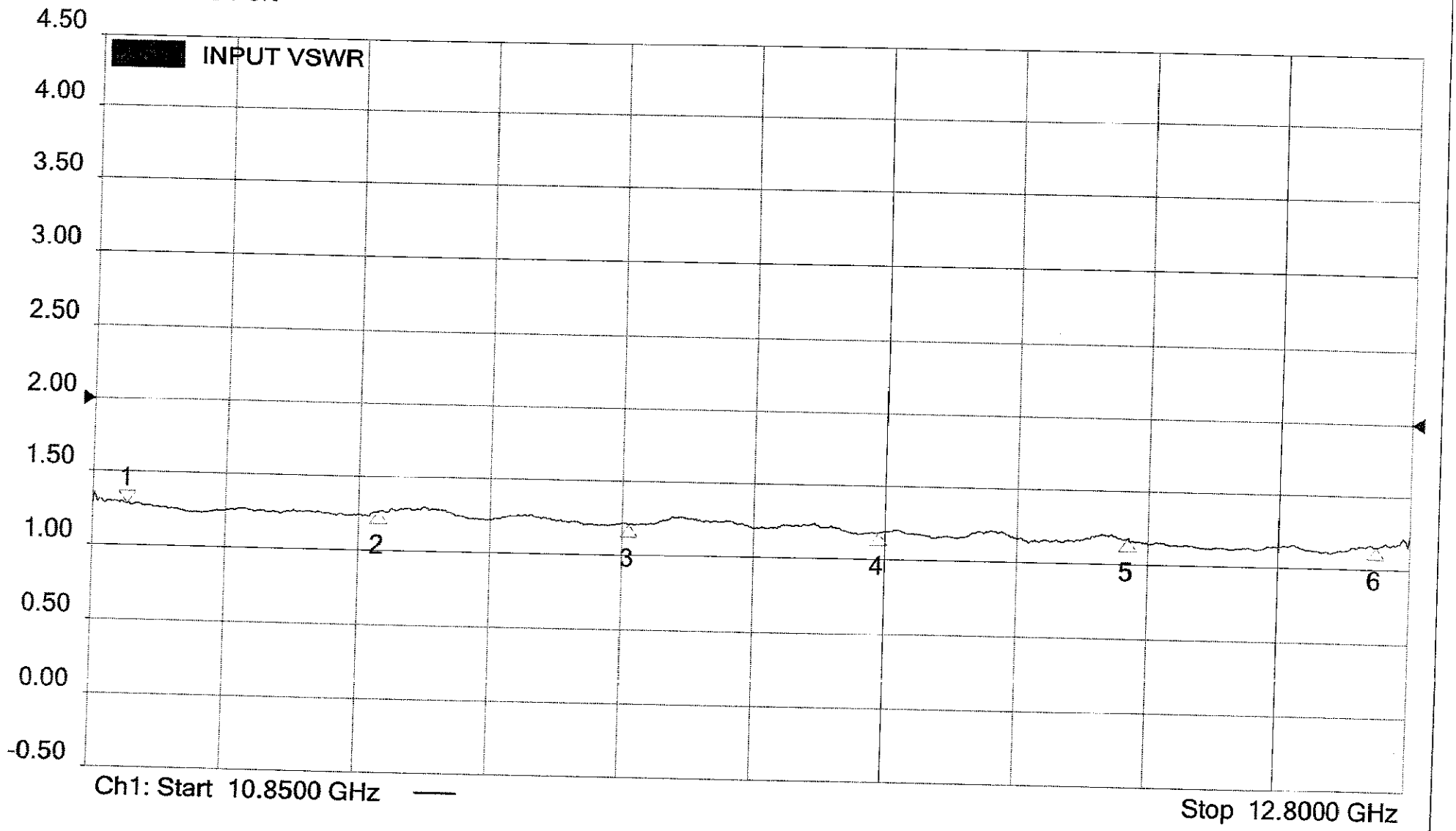
ndow	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
	1	S21	1	C 2-Port	2.87		1	10900 MHz	35.981 dB
							2	11270 MHz	36.154 dB
							3	11640 MHz	36.249 dB
							4	12010 MHz	36.095 dB
							5	12380 MHz	36.180 dB
							6	12750 MHz	36.430 dB



Trace Attributes

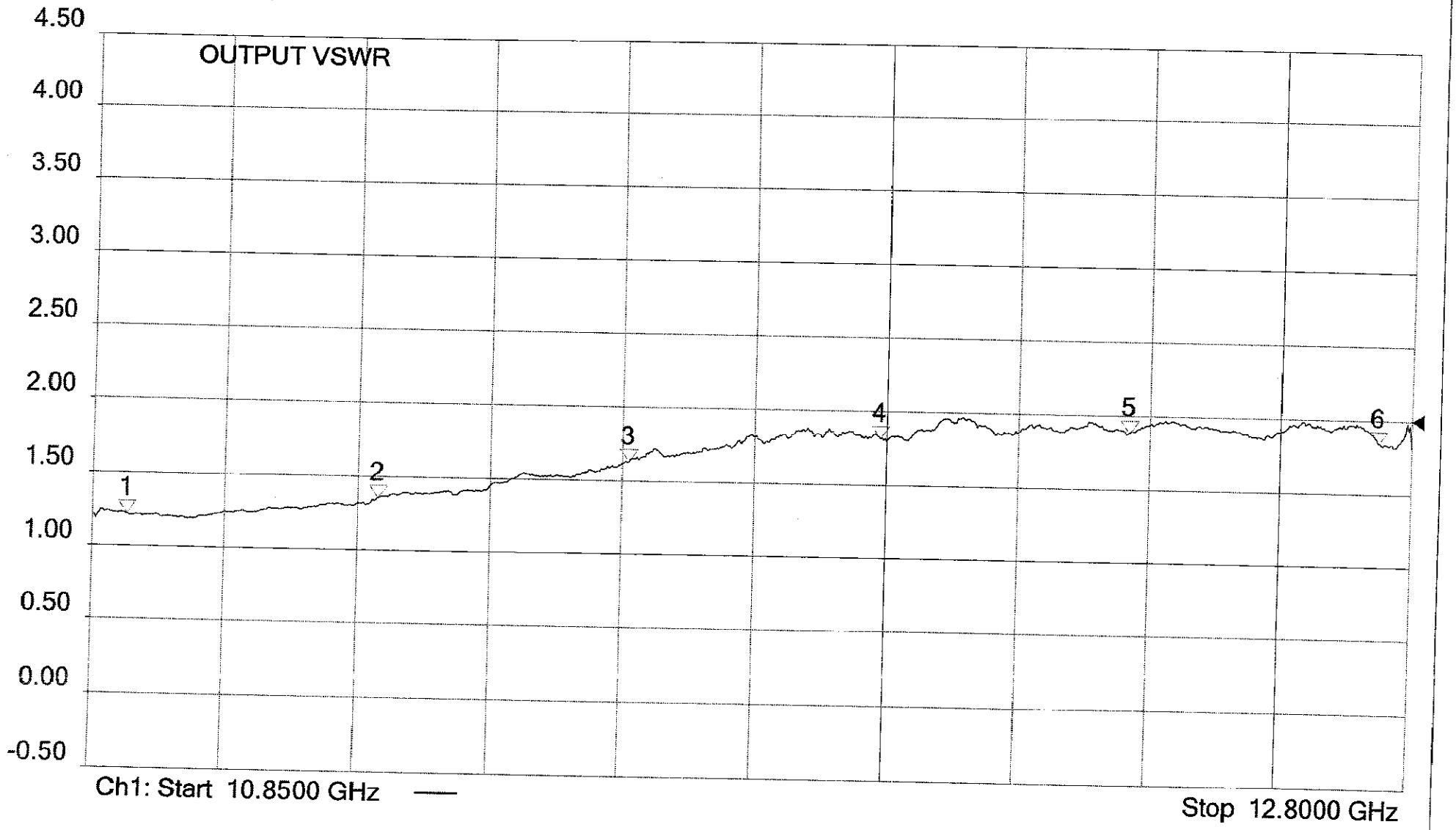
ndow	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
	1	S21	1	C 2-Port	2.87		1	10900 MHz	35.981 dB
							2	1825.4125 MHz	0.45975 dB
							6	12750 MHz	36.430 dB
							R	10900 MHz	35.981 dB

Window 3 (1) S11 Units
SWR C 2-Port



Trace Attributes									
ndow	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
	1	S11	1	C 2-Port	2.87		1	10900 MHz	1.2809
							2	11270 MHz	1.2613
							3	11640 MHz	1.2052
							4	12010 MHz	1.1807
							5	12380 MHz	1.1750
							6	12750 MHz	1.1506

Window 4 (1) S22 NV M Units
SWR C 2-Port



Trace Attributes

ndow	ID	Trace	Channel	Correction	Smooth	Options	Marker	Position	Response
	1	S22 NV M	1	C 2-Port	2.87		1	10900 MHz	1.2214
							2	11270 MHz	1.3573
							3	11640 MHz	1.6305
							4	12010 MHz	1.8171
							5	12380 MHz	1.8859
							6	12750 MHz	1.8434

Agilent 16:42:23 Jul 6, 2006

DUT Amplifier Sys Downconv Off

Freq	NoiseFig dB	Gain dB
10.900000 GHz	2.026	36.305
11.270000 GHz	2.115	36.309
11.640000 GHz	2.210	36.378
12.010000 GHz	2.260	37.048
12.380000 GHz	2.272	37.608
12.750000 GHz	2.098	37.766

Start 10.90000 GHz BW 4 MHz Points 6 Stop 12.75000 GHz
Tcold 296.50 K Avgs Off Att --/0 dB Loss Off Corr

Frequency

Freq Mode Sweep

Start Freq 10.9000000 GHz

Stop Freq 12.7500000 GHz

Center Freq 11.8250000 GHz

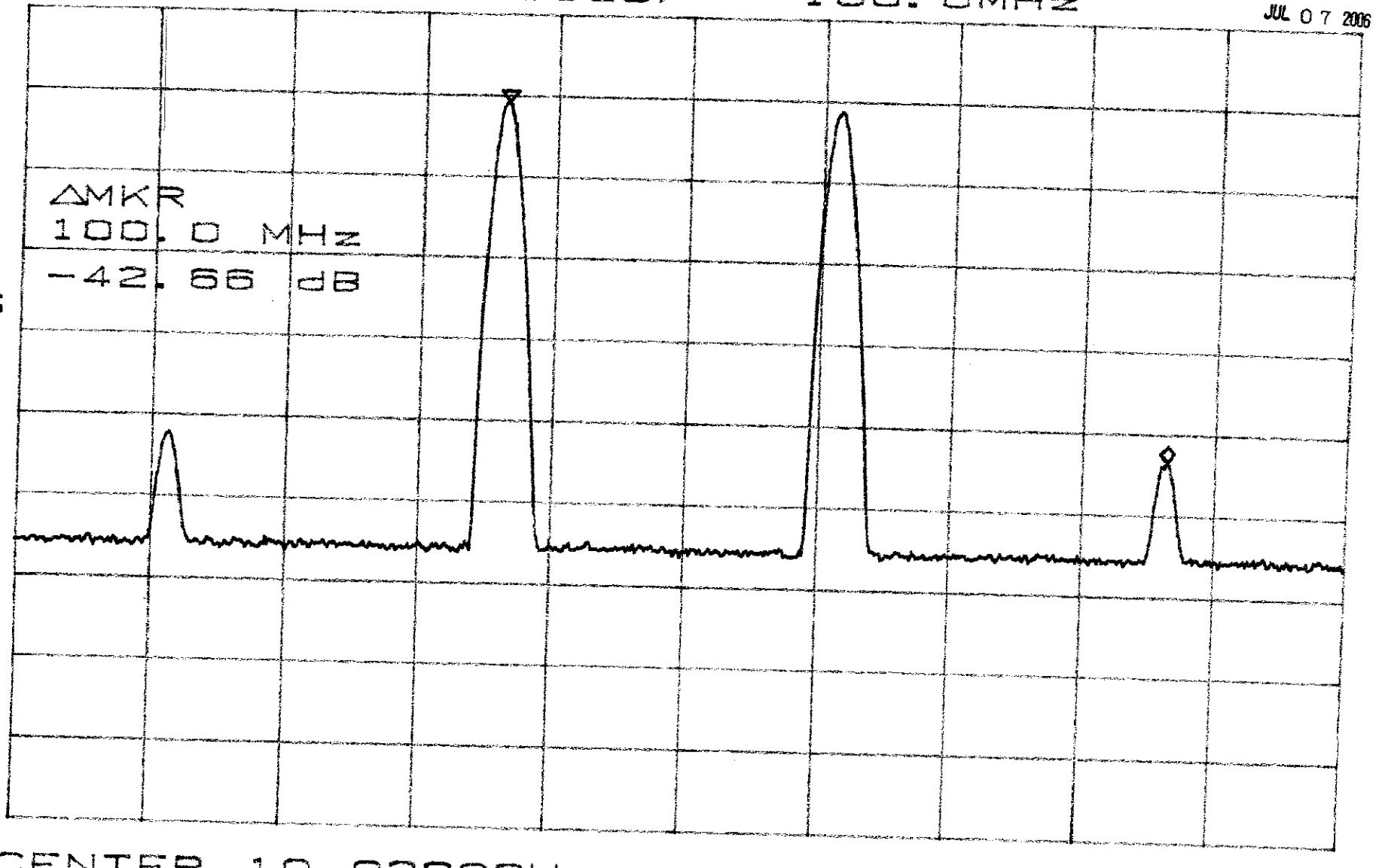
Freq Span 1.85000000 GHz

Fixed Freq 14.7500000 GHz

More 1 of 2

SN 104R

+15dBm



42.66
÷ 2
+15
36.33 S

MODEL NO.	MP-A-1012	SERIAL NO.	105
+ 12 VDC Min +15 VDC Max @	900 mA NOM	Actual +12 VDC @	943 mA
		Actual +15 VDC @	943 mA

TEST DATA SHEET

MICROWAVE PHOTONIC SYSTEMS, INC.

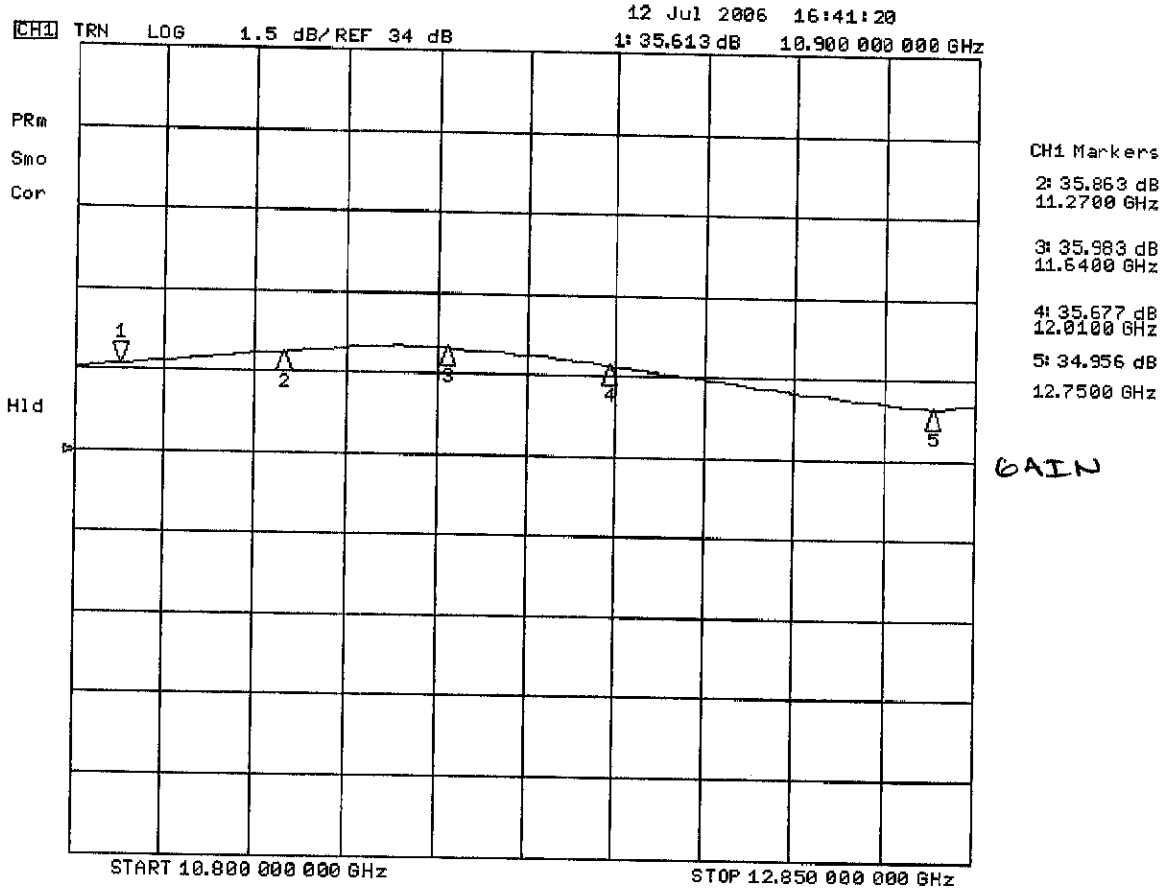
882 SOUTH MATLACK ST. UNIT 104

WEST CHESTER, PA 19382

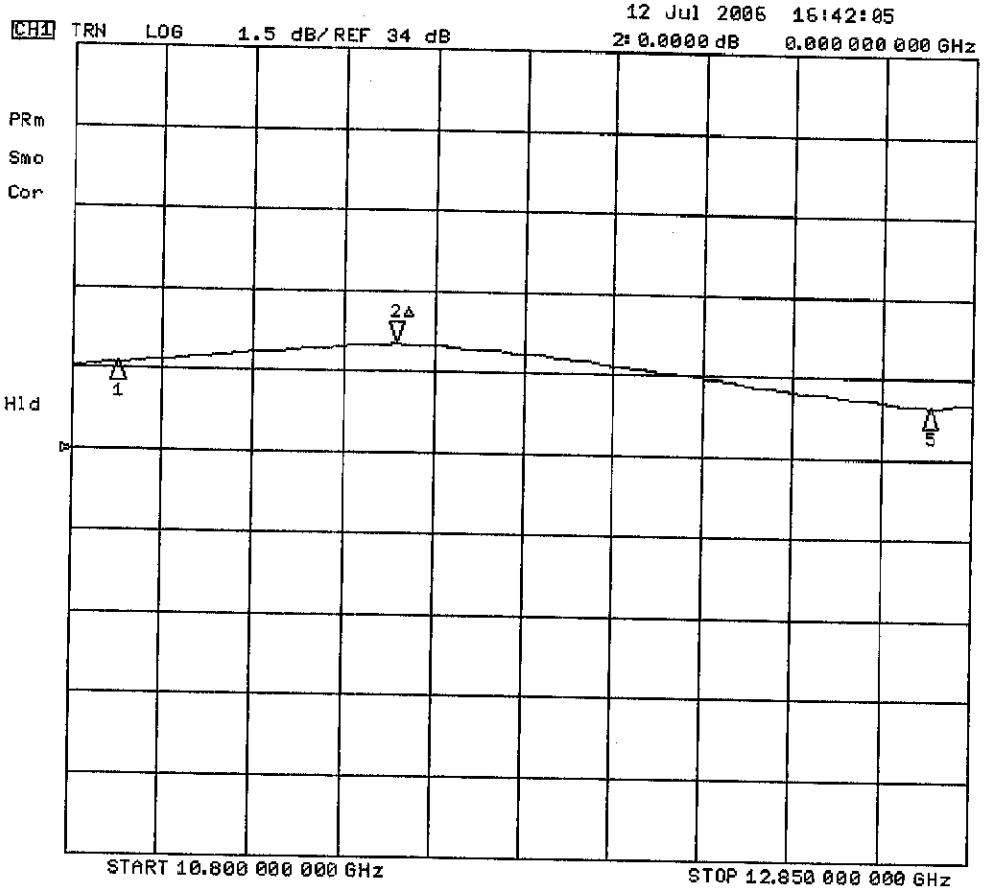
FREQUENCY (GHz)	GAIN (dB)	INPUT VSWR	OUTPUT VSWR	NOISE FIGURE (dB)	IP3	OUTPUT POWER COMPRESSION @ +28 dBm MIN
10.9	REFER TO "S21" PLOTTED DATA	REFER TO "S11" PLOTTED DATA	REFER TO "S22" PLOTTED DATA	<2.5	—	0.4
11.27				<2.5	—	0.3
11.64				<2.5	37.67	0.3
12.38				<2.5	—	0.2
12.75				<2.5	—	0.2
SPECIFICATION LIMITS	34 dB MIN 36.5 dB MAX	2.0:1 MAX	2.0:0 MAX	2.5 dB MAX @ +23 DEG C	+36 dBm MIN +38 dBm TYP	1.0 dB MAX

DATE	7/12/06	TEST ENGR		PROJECT ENGR	
QUALITY		MFG		CSI	

S/N 105

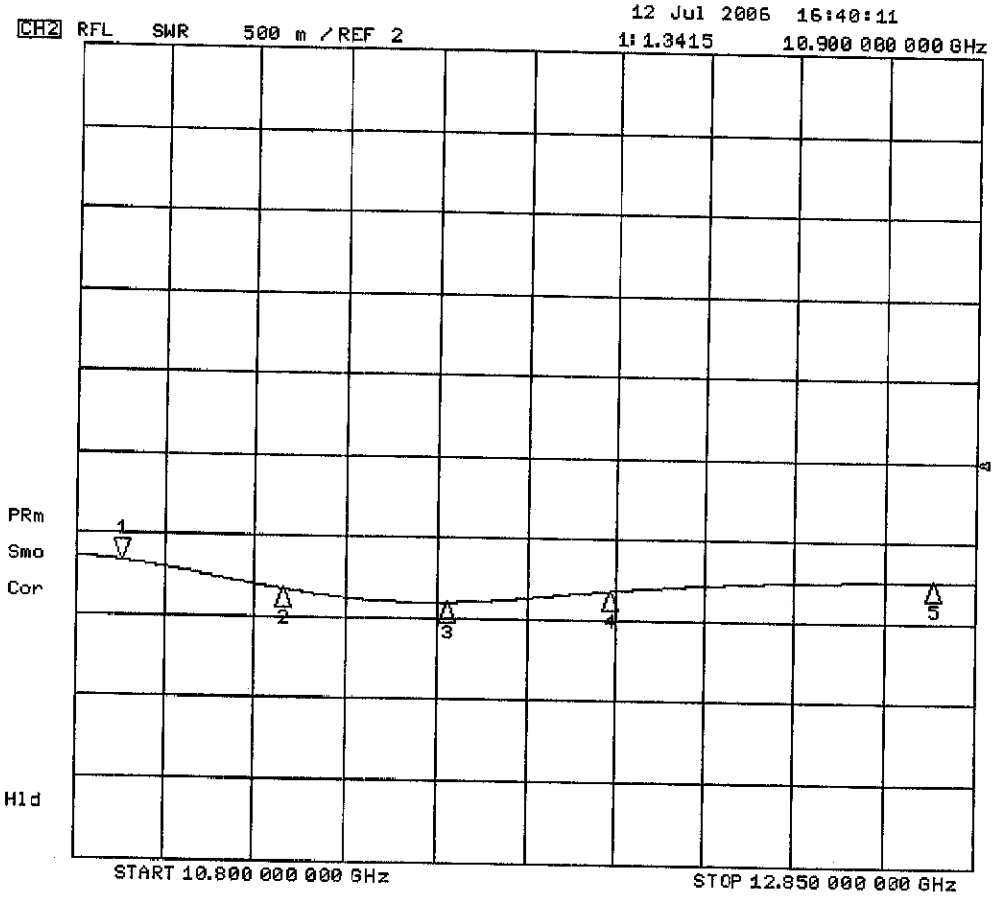

12 Jul 2006 16:41:20
CH1 TRN LOG 1.5 dB/ REF 34 dB
1: 35.613 dB 10.900 000 000 GHz
PRm
Smo
Cor
Hld
CH1 Markers
2: 35.863 dB
11.2700 GHz
3: 35.983 dB
11.6400 GHz
4: 35.677 dB
12.0100 GHz
5: 34.956 dB
12.7500 GHz
GAIN
START 10.800 000 000 GHz
STOP 12.850 000 000 GHz

S/N105



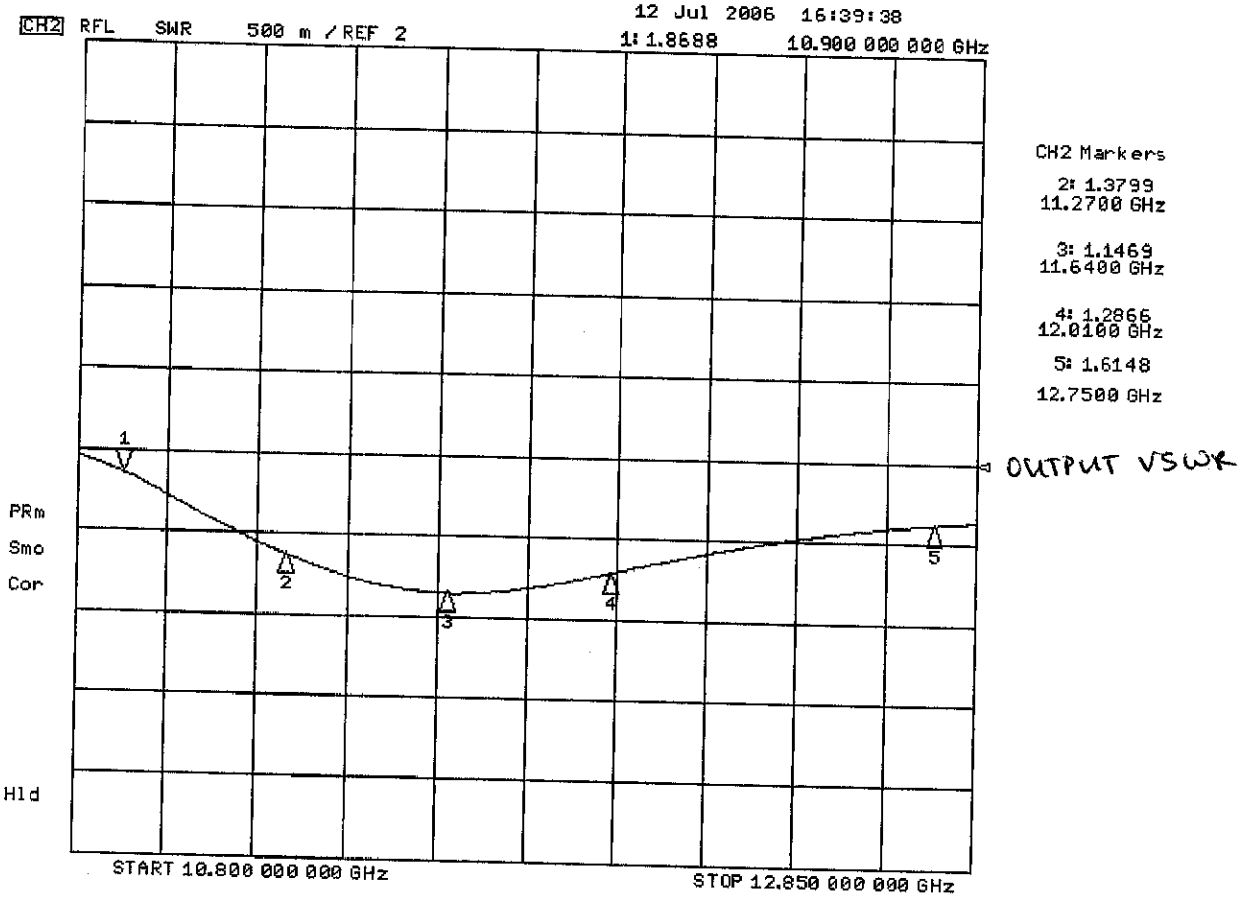
GAIN FLATNESS

S/N 105



INPUT VSWR

S/N 105



OUTPUT VSWR

MODEL NO.	MP-A-1012	SERIAL NO.	108
+ 12 VDC Min +15 VDC Max @	900 mA NOM	Actual +12 VDC @	952 mA
		Actual +15 VDC @	952 mA

TEST DATA SHEET

MICROWAVE PHOTONIC SYSTEMS, INC.

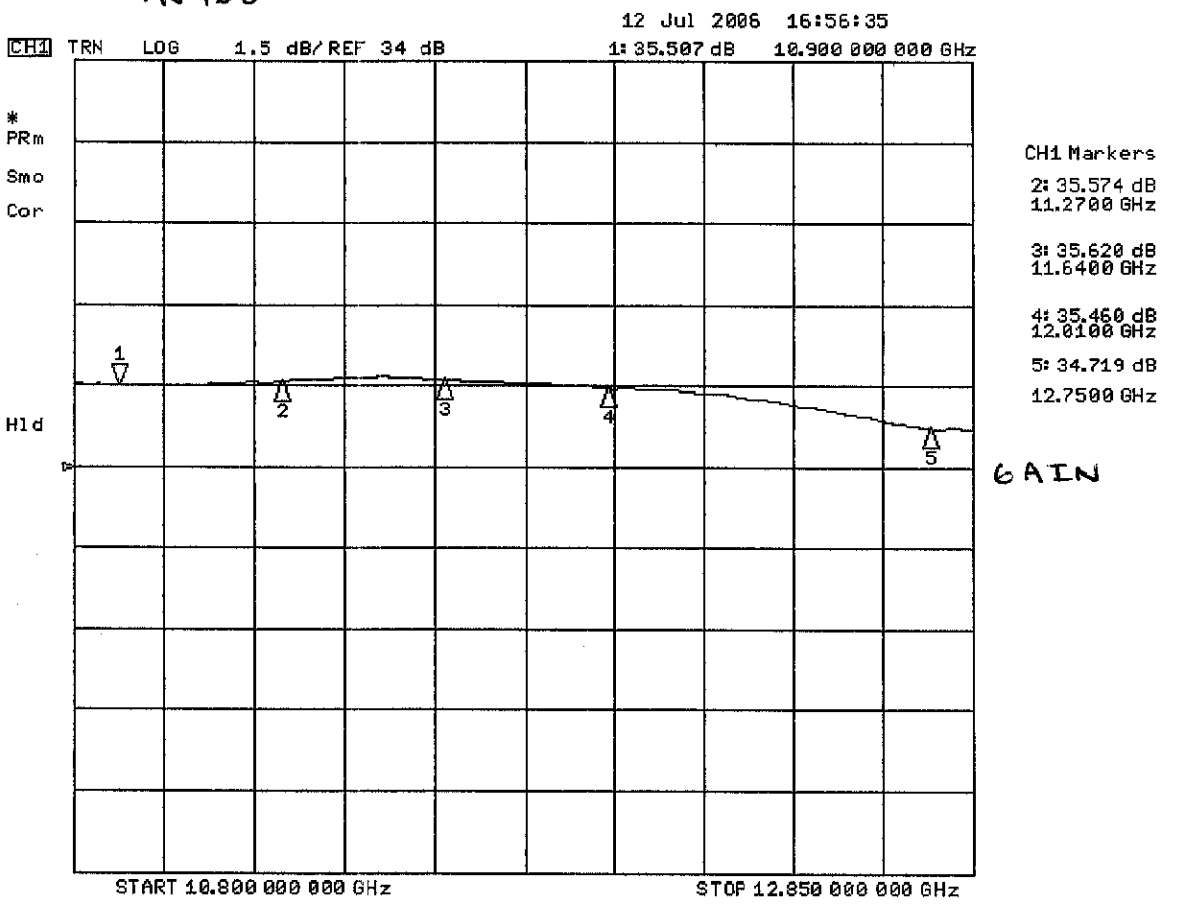
882 SOUTH MATLACK ST. UNIT 104

WEST CHESTER, PA 19382

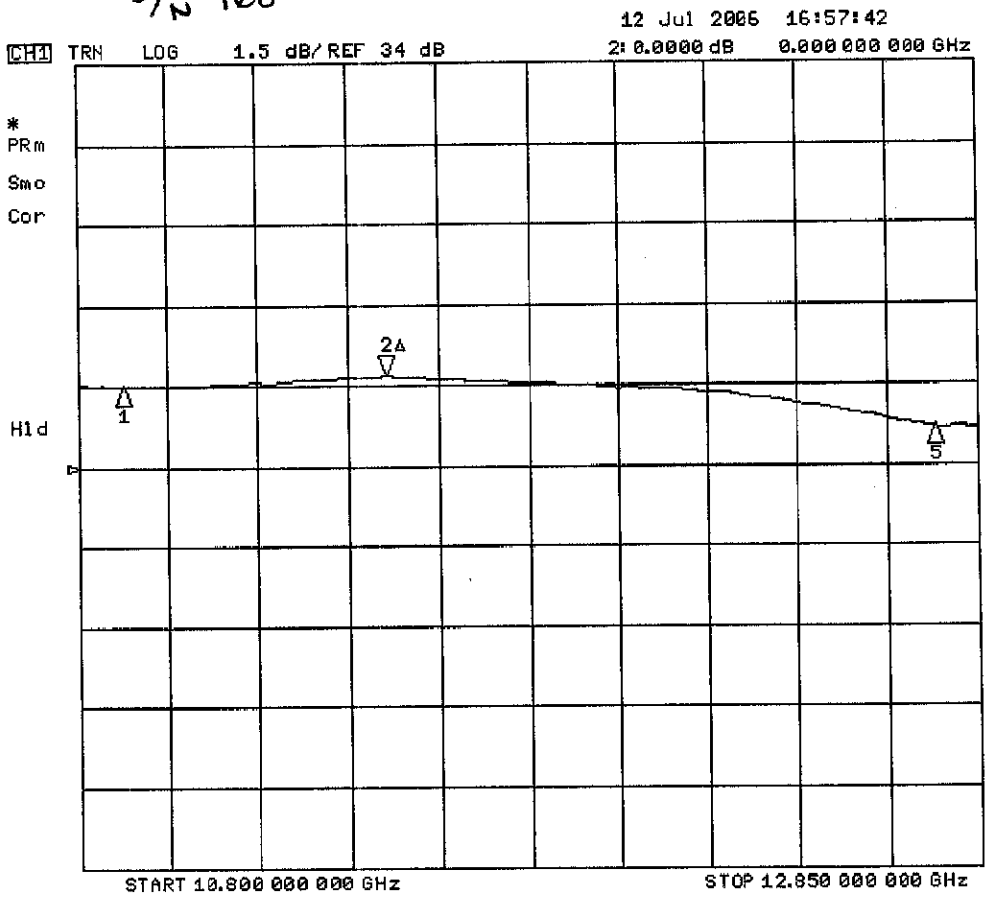
FREQUENCY (GHz)	GAIN (dB)	INPUT VSWR	OUTPUT VSWR	NOISE FIGURE (dB)	IP3	OUTPUT POWER COMPRESSION @ +28 dBm MIN
10.9	REFER TO "S21" PLOTTED DATA	REFER TO "S11" PLOTTED DATA	REFER TO "S22" PLOTTED DATA	< 2.5	—	0.5
11.27				<2.5	—	0.5
11.64				<2.5	37.83	0.4
12.38				<2.5	—	0.4
12.75				<2.5	—	0.4
SPECIFICATION LIMITS	34 dB MIN 36.5 dB MAX	2.0:1 MAX	2.0:0 MAX	2.5 dB MAX @ +23 DEG C	+36 dBm MIN +38 dBm TYP	1.0 dB MAX

DATE	7/12/06	TEST ENGR		PROJECT ENGR	
QUALITY		MFG		CSI	

S/N 108

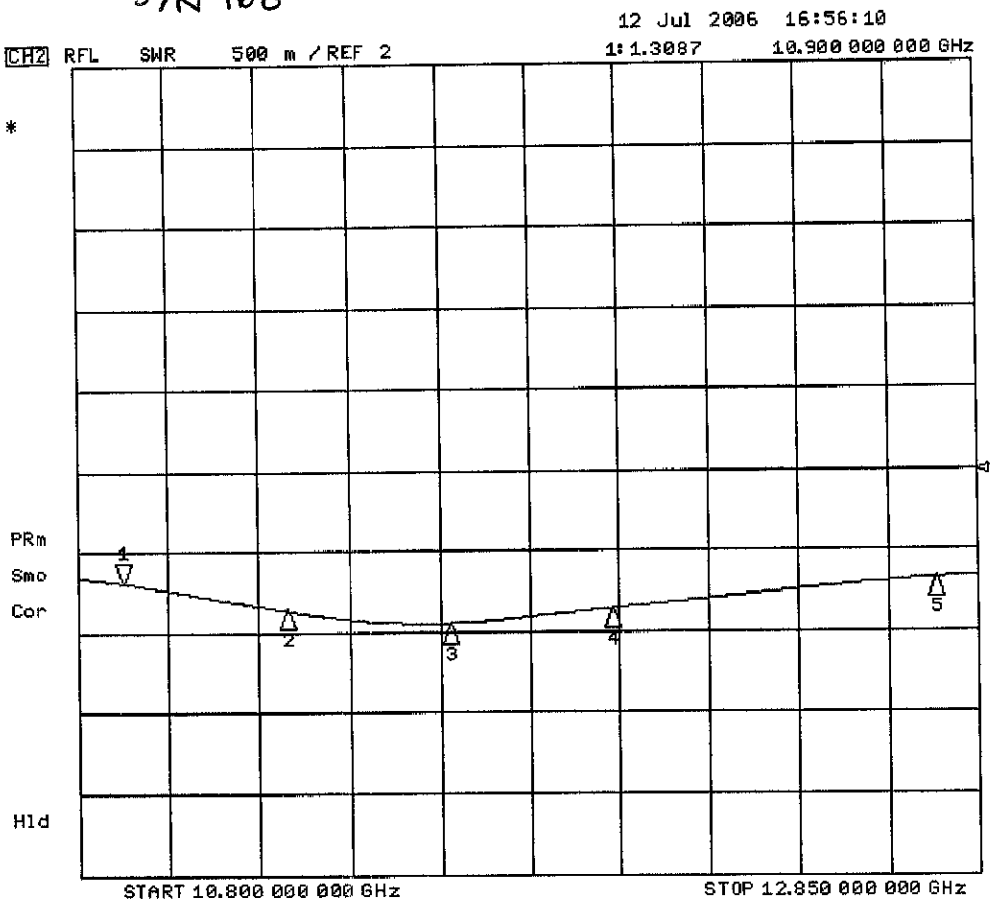

12 Jul 2006 16:56:35
CH1 TRN LOG 1.5 dB/ REF 34 dB
1: 35.507 dB 10.900 000 000 GHz
*
PRm
Smo
Cor
Hld
CH1 Markers
2: 35.574 dB
11.2700 GHz
3: 35.620 dB
11.6400 GHz
4: 35.460 dB
12.0100 GHz
5: 34.719 dB
12.7500 GHz
GAIN
START 10.800 000 000 GHz
STOP 12.850 000 000 GHz

S/N 108



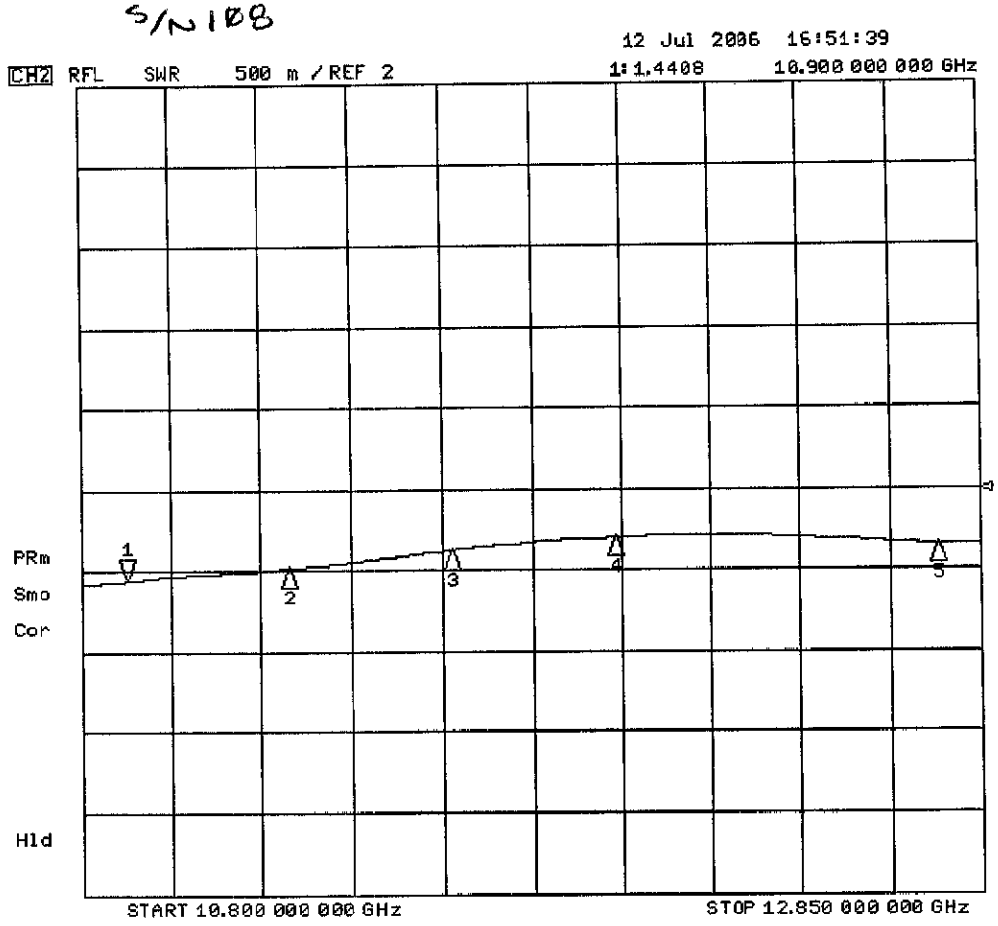
GAIN FLATNESS

S/N 108



INPUT VSWR

S/N 108



OUTPUT VSWR