

February 15, 2014

Mr. Brad Lightner
GOJO Industries
1 GOJO Plaza-Suite 500
Akron, OH 44311

Dear Mr. Lightner:

Enclosed is the test report for the GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is the Smartlink Ready LTX-12 19XX-##-YYY dispenser which was tested at our facility located at 4675 Burr Drive in Liverpool, NY. This facility is on file with the Federal Communications Commission (FCC) per 47 CFR 2.948. (Site File Registration Number: 306552) Please see attached annex for information on the Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC.

As narrated in the report, the product configuration meets the requirements of the FCC per CFR 47 Part 15.249 Class C for Intentional Radiators. Additionally, all spurious emissions signals are greater than 20 dB below the limit of FCC Part 15.209 and are not reported. Therefore, the unit under test meets the FCC Part 15.209 requirements. The plots indicated ambient scans.

Thank you for selecting Diversified T.E.S.T. Technologies, Inc. for your testing needs. We look forward to working with you on future projects. Should you have any questions or concerns regarding this report, contact me at 315-457-0245. Please feel free to visit our website at www.dttlabs.com.

Sincerely,



Michael McElroy
Technical Associate

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

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Emissions Testing

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DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Test Report

Laboratory

Diversified TEST Technologies, Inc.
4675 Burr Drive
Liverpool, NY 13088
315-457-0245

Manufacturer

GOJO Industries
1 GOJO Plaza, Suite 500
Akron, OH. 44311

Report Issue Date: **February 14, 2014**
Project Number: **6425**
Report Number: **6425-070913 (Edition 2) FCCC LTX 12 with Limited Approval Wireless Transmitter Module**

Date Received: **June 24, 2013**
Date Tested: **June 24, 2013 – June 26, 2013**
Model Numbers: **Limited Approval Wireless Transmitter Module 1960-501-WHT and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser.**

FCC ID: O76-T4SG0910A

Traceability: *Reference standards of measurement have been calibrated by a competent body using standards traceable to NIST.*

The testing performed by Diversified TEST Technologies, Inc. has shown that the product referenced above complies with the electromagnetic compatibility requirements according to the standard(s) specified on page 3 of the test report. The results in this test report apply only to the product denoted above. The manufacturer is responsible for ensuring that additional units are manufactured with identical mechanical and electrical characteristics.

The equipment listed above conforms to the specified requirements of the test standards listed on page 3 of this report.

Complied by:
Signature:



Michael McElroy
Technical Associate

Date: February 15, 2014

Reviewed by:
Signature:



Annelle Frierson
Vice- President

Date: February 15, 2014

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Emissions Test Regulations

The emissions tests were performed according to the following regulations:

☐ EN 50081-1:1992

☐ EN 50081-2:1995

☐ EN 55011:1998 / A1:1999 / A2:2001

☐ Group 1

☐ Group 2

☐ Class A

☐ Class B

☐ EN 55013:1990 / A12:1994 / A13:1996 / A14:1999

☐ EN 55014:1993 / A1: 1997

☐ Household appliances and similar

☐ Portable tools

☐ Semiconductor devices

☐ EN 55022:1998

☐ Class A

☐ Class B

☒ **FCC Part 15.249**

☐ Class A

☐ Class B

☒ **Class C**

☒ **Certification**

☐ Verification

☐ Declaration of Conformity

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Emissions Test Conditions: FCC PART 15.249 CLASS C

The Harmonics, Bandwidth, and Spurious Emissions measurements were tested in a horizontal and vertical polarization at the following test location:

- ☒ Diversified TEST Technologies, Inc. Open Area Test Site
☐ Diversified TEST Technologies, Inc. Lab

at a test distance of:

- ☒ 1 meter
☒ 3 meters
☐ 30 meters

Test equipment used:

Manufacturer	Model	Description	Serial #	Cal.	Cal. Due
Hewlett Packard	8593EM	Spectrum Analyzer	3536A00139	6/19/13	6/19/14
Electro-Metrics	RGA60	Ridge Horn Antenna	2981	8/25/12	8/25/13
Hewlett Packard	7550A	Plotter	2407A00476	CNR	CNR
Electro-Metrics	LPA-25	Log Periodic Antenna 200-1000 MHz	1242	9/11/12	9/11/13
	MFR-57500	Blue low-loss transmit cable	337	CNR	CNR
		Non-conductive wooden turntable		CNR	CNR
		10-meter open field test range, grounded with ¼" x ¼" hardware cloth		CNR	CNR
Hewlett Packard	8595E	Spectrum Analyzer	3746A03177	7/23/12	7/23/13
EMCO	6520	Active Loop Antenna	9110-2685	7/19/12	7/19/13
Agilent	E7402A	Spectrum Analyzer	MY45103221	3/25/13	3/25/14
Electro-Metrics	BIA-30W	Biconical Antenna	103	9/1/12	9/1/13

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Equipment under Test (EUT) Test Operation Mode – Emissions Tests:

The device under test was operated under the following conditions during emissions testing:

- ☐ Standby
- ☒ Normal Operating Mode
- ☐ Practice Operation

Description / Configuration of the device under test:

Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY dispenser. The unit was powered by a 6 VDC Battery during the collection of data.

Rationale for EUT setup / configuration:

After numerous trial runs with a full bottle and an empty bottle it was found an empty bottle was worst case so therefore the dispenser was tested with the empty bottle for the entire test.

ANSI C63.4

Deviations from test method:

Testing performed at 1 meter test distance above 1 GHz to better represent harmonic emissions caused by the equipment under test. Testing using Loop Antenna was performed on 6/26/13.

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Emissions Test Results:

FCC Part 15.249 Part C 910 MHz – 9100 MHz

The requirements are ☒ MET ☐ NOT MET

Spurious Emissions Test

The requirements are ☒ MET ☐ NOT MET

General Remarks:

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be less than 500 kHz.

Measurements were taken up to the tenth harmonic.

The EUT was evaluated in 1 orthogonal orientation and the worst case data is reflected in the test report.

Radiated Measurements on the EUT were performed from 10 MHz up to the 10th Harmonic and any emission found were more than 20 dB below the limit have not been reported.

The transmitter module transmits an OOK modulated data packet following a 10 second delay after an event trigger coming from the LTX dispenser. The use of the LTX dispenser to dispense soap to a customer constitutes an event and once an event occurs a trigger pulse is sent from the LTX dispenser to a microcontroller in the transmitter module. The microcontroller in the module uses the 10 second delay period to watch for additional events during that period of time. After the 10 second period has expired the total number of events that occurred during that 10 second period are sent in the transmitted data packet along with the transmitter module serial (ID) number and other information like the battery level. A drawing of the transmit packet is shown on last page of this report.

The transmitter packet starts with a 50% duty cycle Preamble for 38.76mSec followed by an off Space of 3.04mSec. After the Space, the payload is sent twice for redundancy. Each payload time is 63.84mSec in length and consists of an equal numbers of 1's and 0's. Where each of the 1's has a 25% duty cycle and each of the 0's has a 75% duty cycle. Together the payload has a combined 50% duty cycle. The total packet length is therefore the addition of the 38.76msec Preamble followed by the 3.04mSec Space followed by the two redundant payloads of 63.86mSec each for total packet length of 169.48mSec. The total packet duty cycle consists of 83.22mSec "on" bits and 86.26mSec "off" bits for a total percentage of "on" bits of 0.491%.

Therefore the duty cycle correction in terms of dB is: $20\log(0.491) = -6\text{dB}$.

Summary:

The requirements according to the technical regulations are

- ☒ Met.
☐ Not met.

The device under test does

- ☒ fulfill the general approval requirements mentioned on page 3.
☐ not fulfill the general approval requirements mentioned on page 3.

Testing Start Date: June 24, 2013

Testing End Date: June 26, 2013

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT

GOJO Industries

Limited Approval Wireless Transmitter Module 1960-501-WHT
Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is
Smartlink Ready LTX-12 19XX-##-YYY Dispenser

Project Number:
6425

Test Setup Photographs:

FCC PART 15.249 CLASS C – 910 MHZ

Photograph 1: FCC Part 15.249 Class C



<i>DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT</i>	
GOJO Industries	Project Number: 6368

Test Datasheets – 910 MHz- 9100 MHz

21 pages of data sheets to follow.

Limits for transmitters
USA

FCC Part 15.249 Transmitter Test												
						GOJO	6425					
Measured	Res.	DUT	Measured	Azimuth	Cable	Antenna	Measurement	Duty Cycle	FCC	Corrected	Delta	
Field Strength	Bandwidth	Frequency	Frequency	degrees	Factor	Gain	Distance	Correction	Limit	Field Strength	Limit	Polarity
(dBμV)	(Khz)	(Mhz)	(Mhz)		(dB)	(dB)	(Meters)	(dB)	(uV/M)	to 3M	(dB)	
Peak									at 3M	in uV/M Peak		
41.27	120	910	910	145	17.2	19.6	3	-6	50000	4,013.28	-21.91	H
52.46	1000	910	1820	0.00	2.1	7.6	1	-6	500	214.23	-7.36	H
37.10	1000	910	2730	0	2.2	9.2	1	-6	500	44.45	-21.02	H
29.14	1000	910	3640	0	2.4	8.9	1	-6	500	17.57	-29.08	H
29.56	1000	910	4550	0	2.5	10	1	-6	500	21.18	-27.46	H
29.28	1000	910	5460	0	2.7	10	1	-6	500	20.98	-27.54	H
30.72	1000	910	6370	0	2.8	12	1	-6	500	31.54	-24.00	H
28.23	1000	910	7280	0	2.8	10.5	1	-6	500	19.92	-27.99	H
28.44	1000	910	8190	0	3.0	10.3	1	-6	500	20.41	-27.78	H
28.63	1000	910	9100	0	3.1	11.2	1	-6	500	23.41	-26.59	H
*Antenna factors are pre-calculated into Measured Field Strength (dBμV)												
Unit Under Tes	Gojo	LTX-12		19XX-##-YYY			6/24/2013		Empty Bottle			

Limits for transmitters
USA

FCC Part 15.249 Transmitter Test												
						GOJO	6425					
Measured	Res.	DUT	Measured	Azimuth	Cable	Antenna	Measurement	Duty Cycle	FCC	Corrected	Delta	
Field Strength (dBμV)	Bandwidth (Khz)	Frequency (Mhz)	Frequency (Mhz)	degrees	Factor (dB)	Gain (dB)	Distance (Meters)	Correction (dB)	Limit (uV/M)	Field Strength to 3M	Limit (dB)	Polarity
Peak									at 3M	in uV/M Peak		
51.28	120	910	910	145	17.2	19.6	3	-6	50000	12,705.74	-11.90	V
56.19	1000	910	1820	0.00	2.1	7.6	1	-6	500	329.14	-3.63	V
31.06	1000	910	2730	0	2.2	9.2	1	-6	500	22.18	-27.06	V
29.09	1000	910	3640	0	2.4	8.9	1	-6	500	17.47	-29.13	V
29.00	1000	910	4550	0	2.5	10	1	-6	500	19.86	-28.02	V
28.07	1000	910	5460	0	2.7	10	1	-6	500	18.25	-28.75	V
29.70	1000	910	6370	0	2.8	12	1	-6	500	28.05	-25.02	V
29.77	1000	910	7280	0	2.8	10.5	1	-6	500	23.79	-26.45	V
29.35	1000	910	8190	0	3.0	10.3	1	-6	500	22.67	-26.87	V
30.19	1000	910	9100	0	3.1	11.2	1	-6	500	28.01	-25.03	V
*Antenna factors are pre-calculated into Measured Field Strength (dBμV)												
Unit Under Test:		Gojo	LTX-12	19XX-##-YYY			6/24/2013		Empty Bottle			

Agilent 12:52:44 Jun 24, 2013

G0J0#6425 LTX-SHORT FCCC HARM 1 H *3Meter*

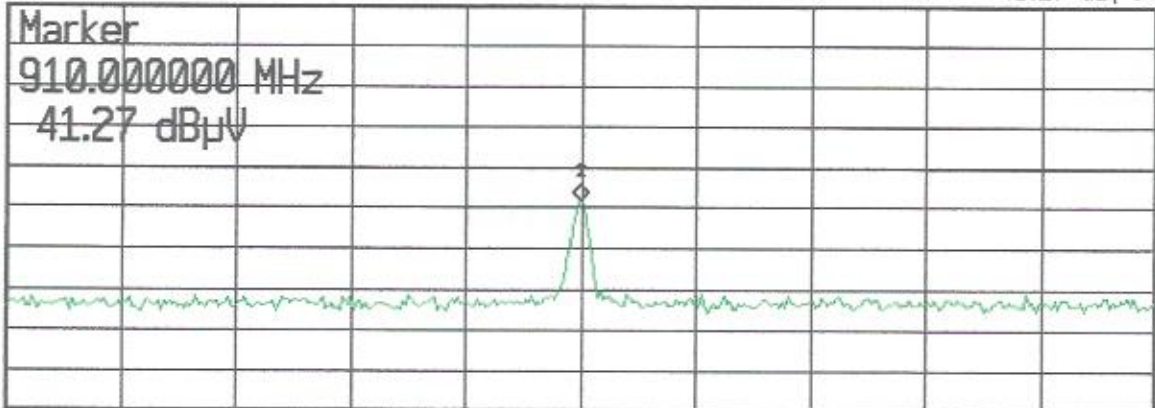
Mkr2 910.000 MHz

Ref 80 dBμV

Atten 5 dB

41.27 dBμV

Peak
Log
8
dB/



Center 910 MHz

Span 10 MHz

Res BW 120 kHz

VBW 300 kHz

Sweep 4 ms (401 pts)

Signal (0)	Freq	Peak Ampl dBμV	Qp Ampl dBμV	Avg Ampl dBμV	Peak Δ dB	LL1 dB	Peak Δ dB	LL2 dB

✱ Agilent 14:29:57 Jun 24, 2013

G0J0#6425 LTX-SHORT FCCC 1M HARM 2 H

Ref 80 dB μ V

Atten 5 dB

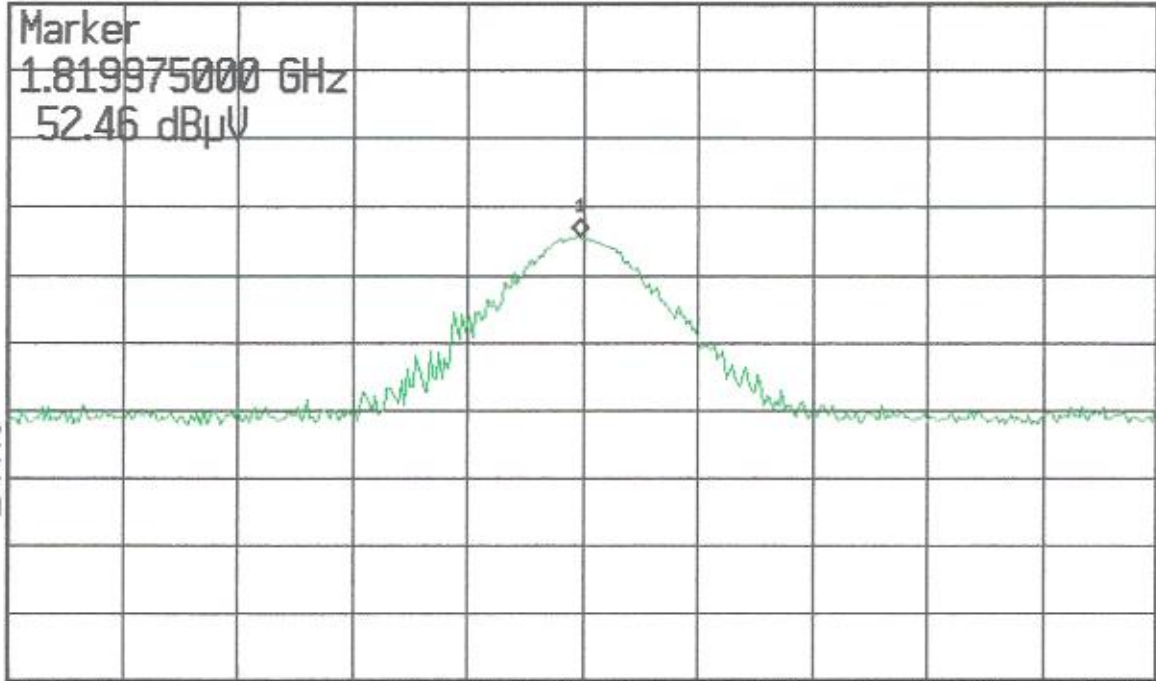
Mkr1 1.819975 GHz

52.46 dB μ V

Peak
Log
8
dB/

Marker
1.819975000 GHz
52.46 dB μ V

V1 S2
S3 FC
AA



Center 1.82 GHz

Res BW 1 MHz

VBW 3 MHz

Span 10 MHz

Sweep 4 ms (401 pts)

* Agilent 14:35:50 Jun 24, 2013

GOJ0#6425 LTX-SHORT FCCC 1M HARM 3 H

Ref 80 dB μ V

Atten 5 dB

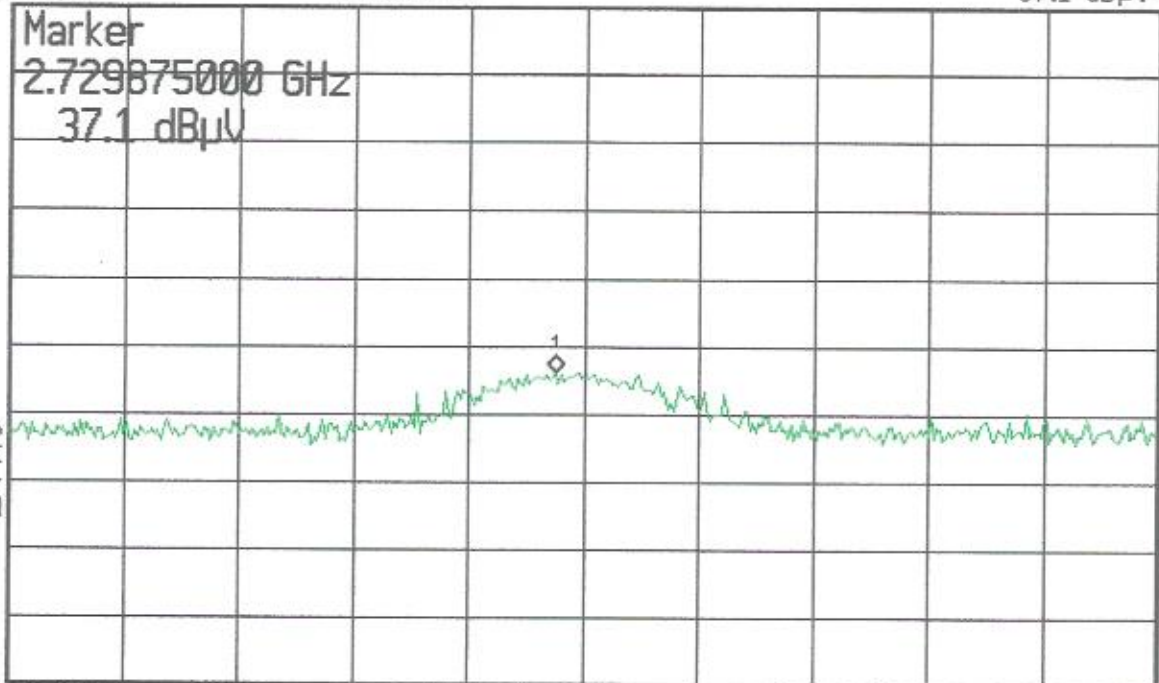
Mkr1 2.7298750 GHz

37.1 dB μ V

Peak
Log
8
dB/

Marker
2.729875000 GHz
37.1 dB μ V

V1 S2
S3 FC
AA



Center 2.73 GHz

Res BW 1 MHz

VBW 3 MHz

Span 5 MHz

Sweep 5 ms (401 pts)

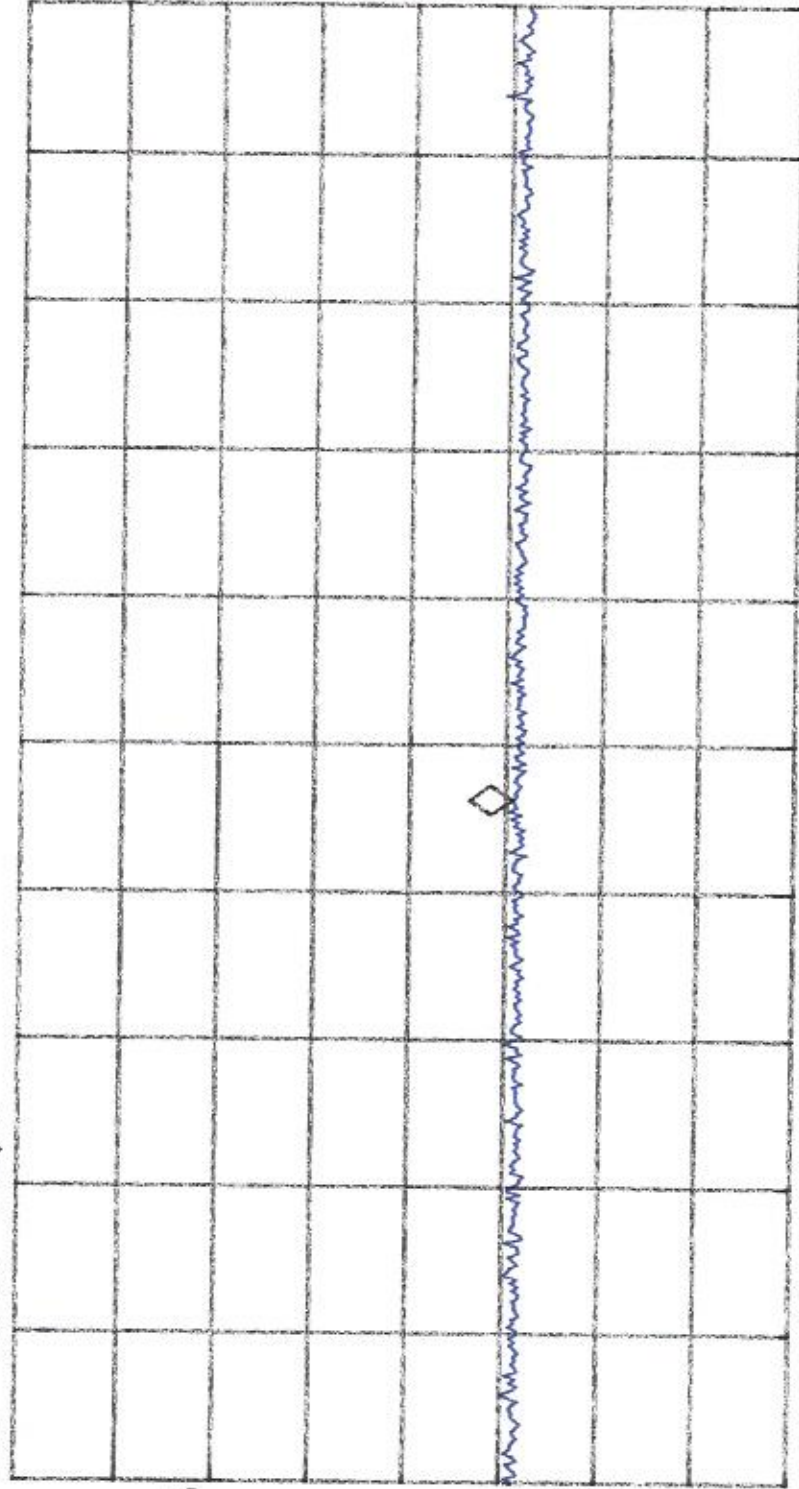
09:17:04 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 4 H

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 3.63963 GHz
29.14 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V

10
dB/
ATN
10 dB



VA SB
SC FC
CORR

CENTER 3.64000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

SWP 20.0 msec

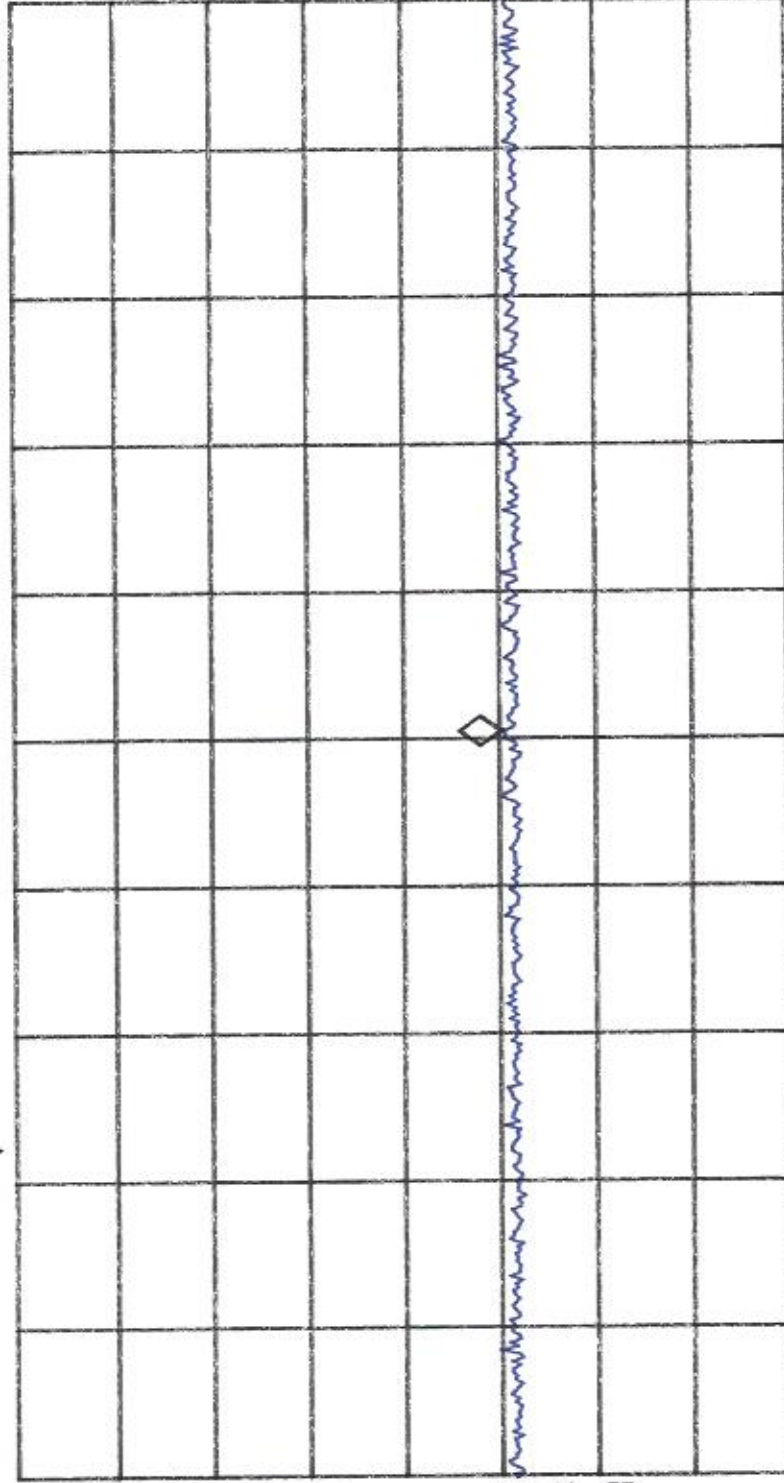
09:23:27 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 5 H

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 4.55005 GHz
29.56 dBμV
PREAMP ON

LOG REF 80.0 dBμV

10
dB/
ATN
10 dB



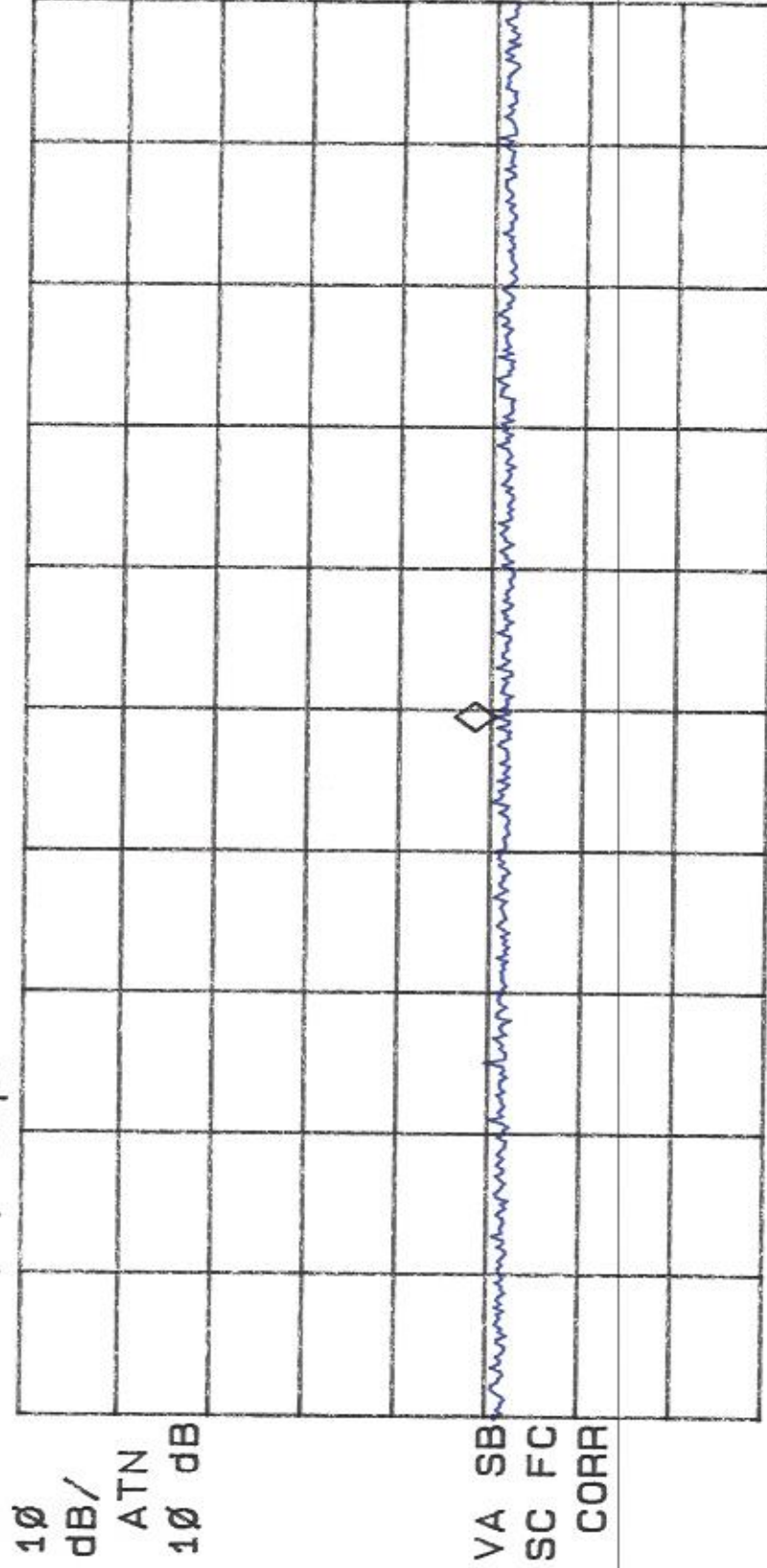
CENTER 4.55000 GHz SPAN 10.00 MHz
#IF BW 1.0 MHz AVG BW 300 kHz SWP 20.0 msec

09:27:19 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 6 H

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 5.45995 GHz
29.28 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V



CENTER 5.46000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

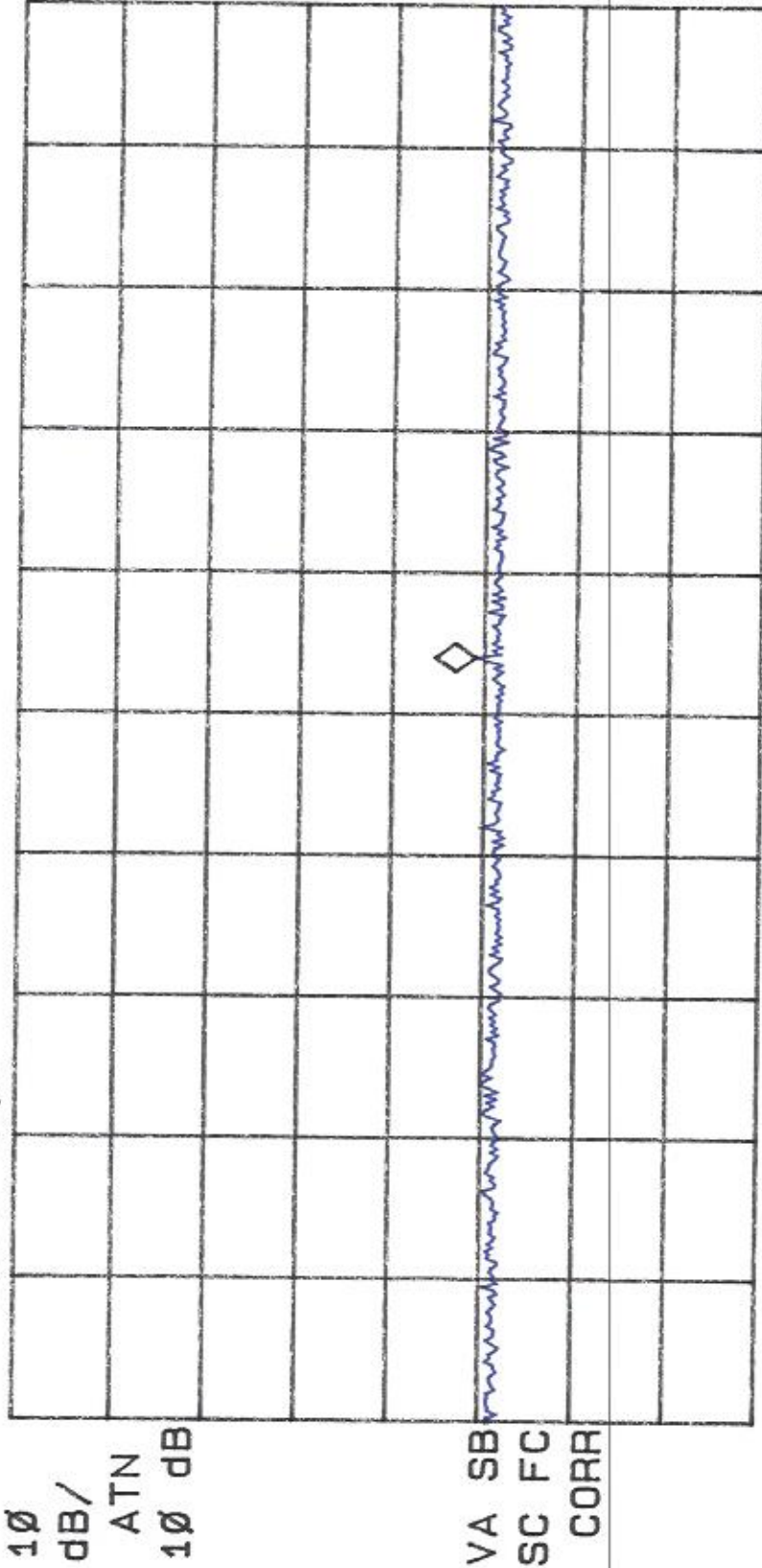
SWP 20.0 msec

09:34:56 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 7 H

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 6.37040 GHz
30.72 dBμV
PREAMP ON

LOG REF 80.0 dBμV



CENTER 6.37000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

SWP 20.0 msec

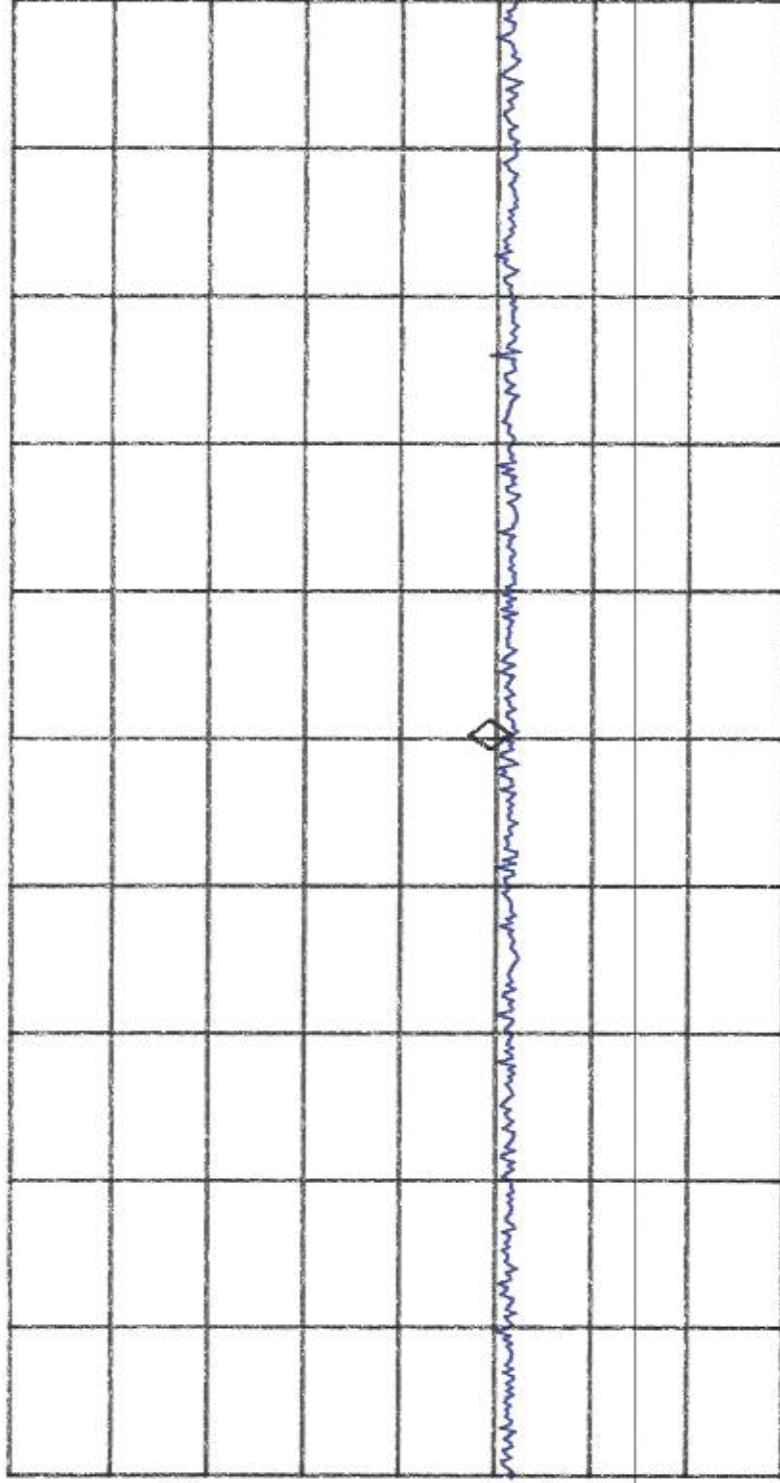
09:38:24 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 8 H

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 7.28003 GHz
28.23 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V

10
dB/
ATN
10 dB



VA SB
SC FC
CORR

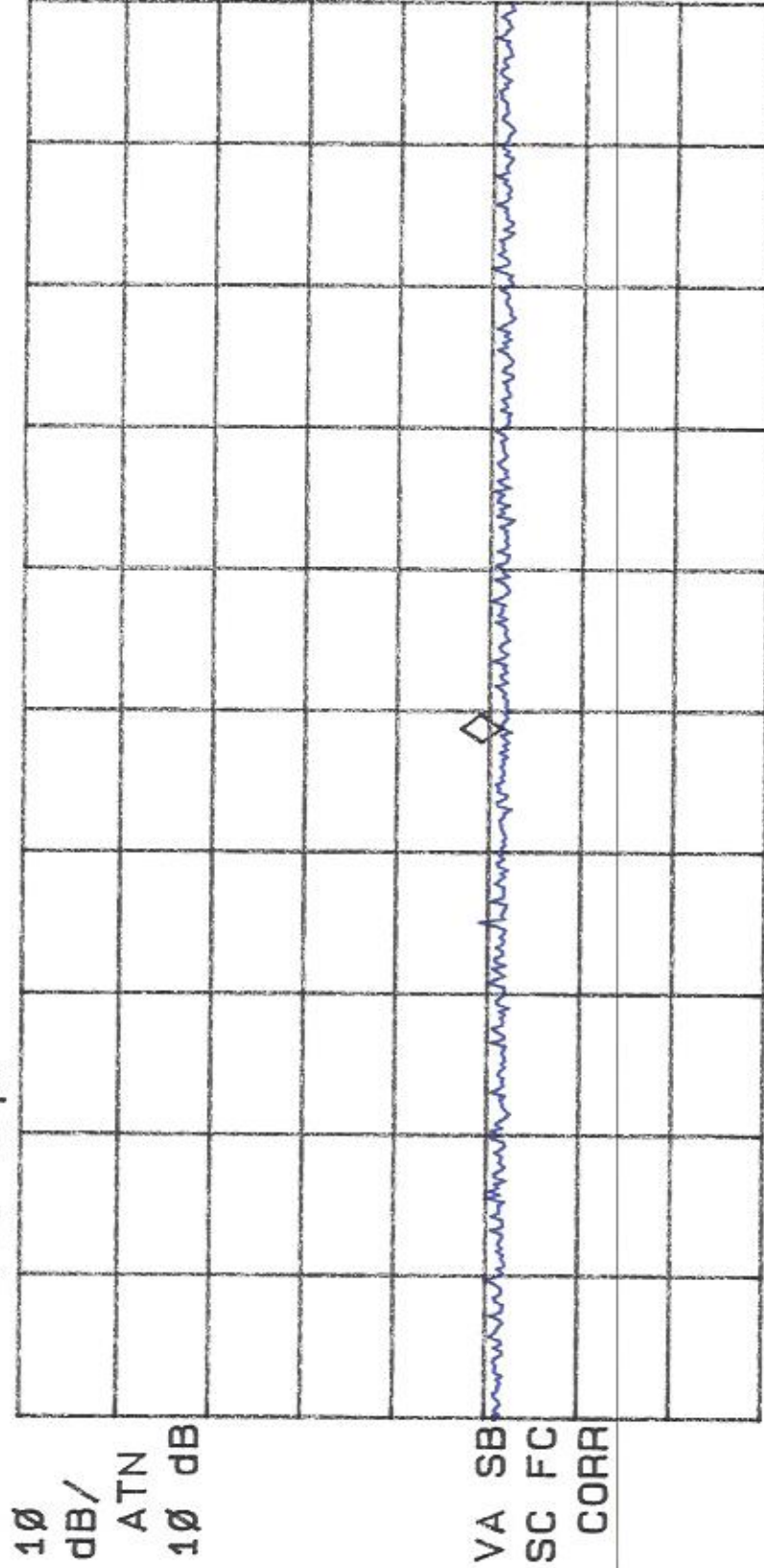
CENTER 7.28003 GHz
#IF BW 1.0 MHz
SPAN 10.00 MHz
SWP 20.0 msec
AVG BW 300 KHz

09: 46: 05 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 9 H

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 8.18988 GHz
28.44 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V



CENTER 8.19000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

SWP 20.0 msec

09: 48: 42 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 10 H

ACTV DET: PEAK

MEAS DET: PEAK QP AVG

MKR 9.10018 GHz

28.63 dB μ V

PREAMP ON

LOG REF 80.0 dB μ V

10

dB/

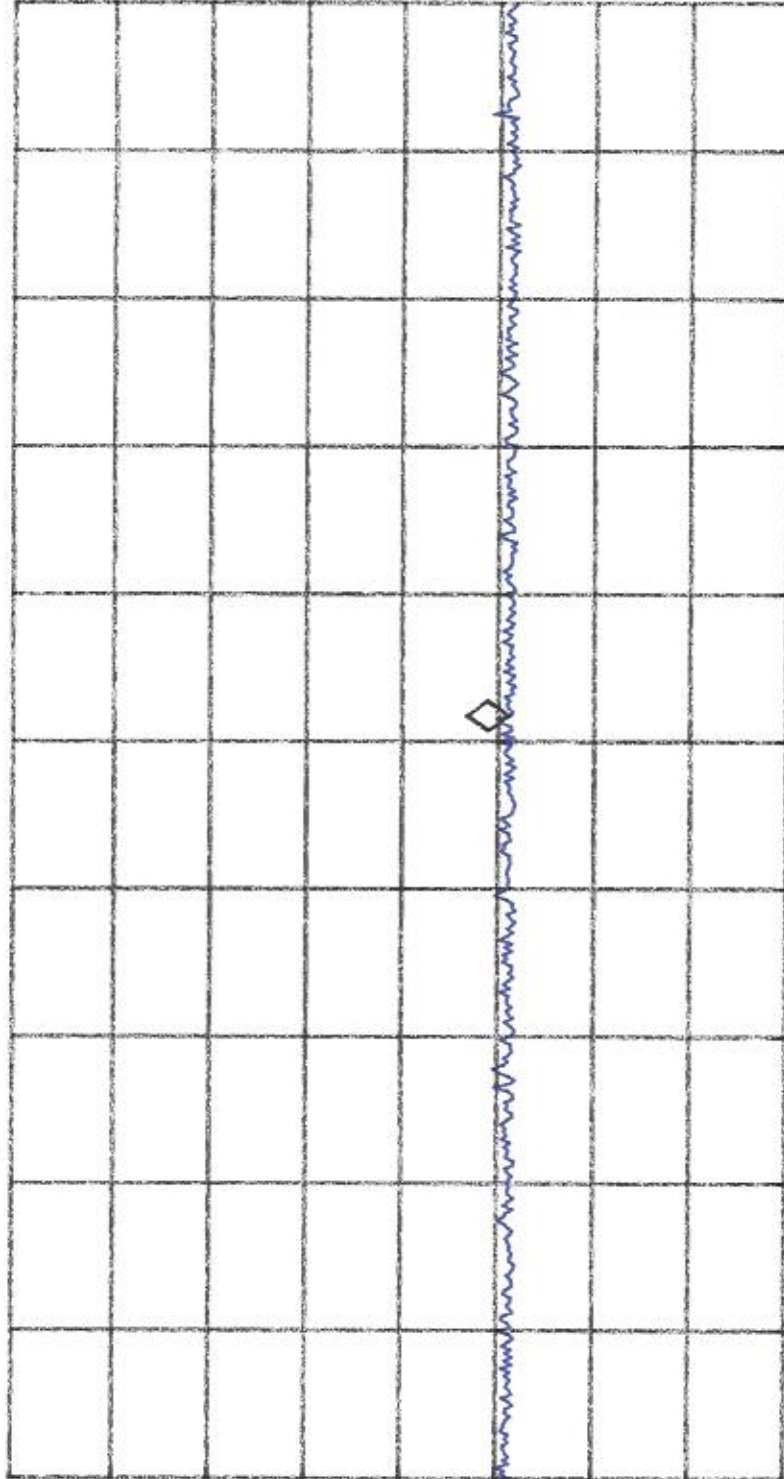
ATN

10 dB

MA SB

SC FC

CORR



CENTER 9.10000 GHz

#IF BW 1.0 MHz

AVG BW 300 KHz

SPAN 10.00 MHz

SWP 20.0 msec

Agilent 12:38:25 Jun 24, 2013

GOJO#6425 LTX-SHORT FCCC HARM 1 V 3 Meter

Mkr1 910.000 MHz

Ref 80 dB μ V

Atten 5 dB

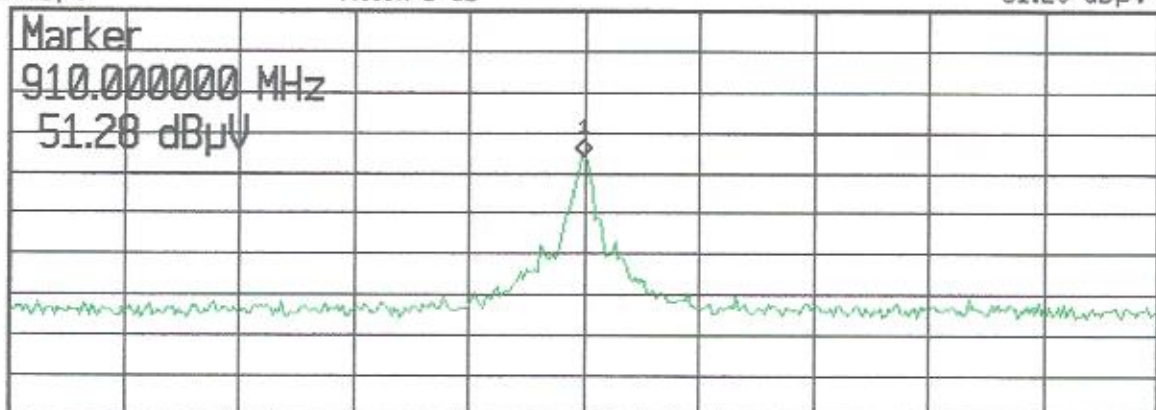
51.28 dB μ V

Peak

Log

8

dB/



Center 910 MHz

Span 10 MHz

Res BW 120 kHz

VBW 300 kHz

Sweep 4 ms (401 pts)

Signal (0)	Freq	Peak Ampl dBμV	Op Ampl dBμV	Avg Ampl dBμV	Peak Δ LL1 dB	Peak Δ LL2 dB

Deleted all signals.

Agilent 14:31:26 Jun 24, 2013

G0J0#6425 LTX-SHORT FCCC 1M HARM 2 V

Ref 80 dB μ V

Atten 5 dB

Mkr1 1.819975 GHz

56.19 dB μ V

Peak
Log
8
dB/

M1 S2
S3 FC
AA

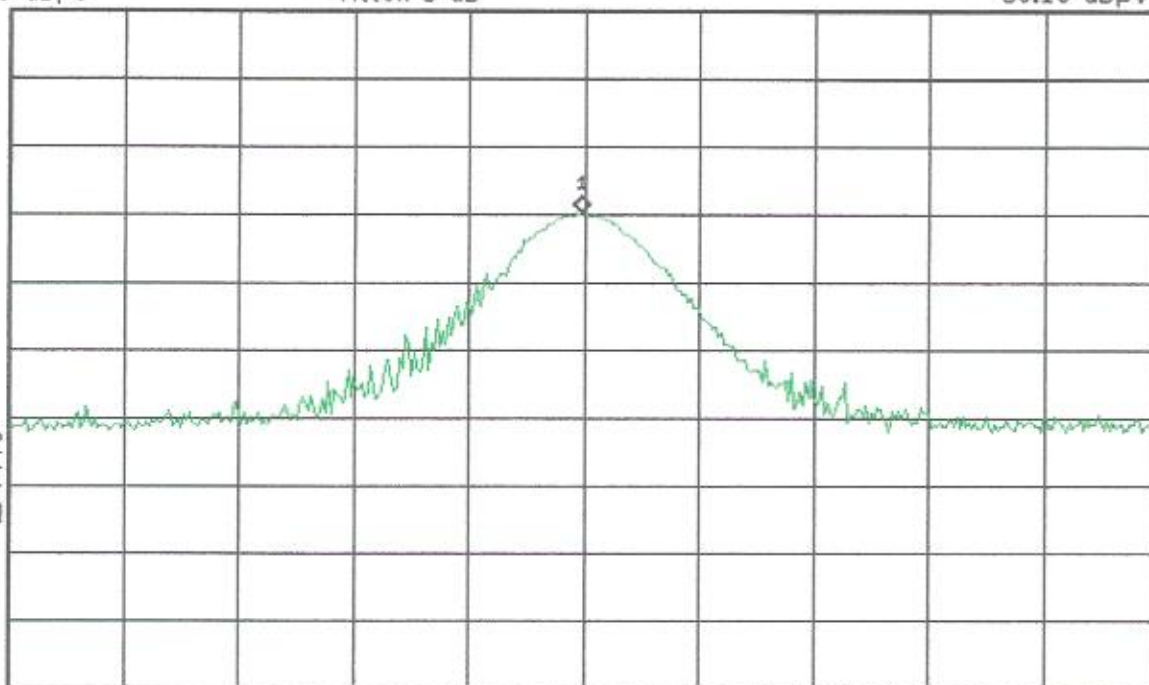
Center 1.82 GHz

Res BW 1 MHz

VBW 3 MHz

Span 10 MHz

Sweep 4 ms (401 pts)



✱ Agilent 14:33:06 Jun 24, 2013

GOJ0#6425 LTX-SHORT FCCC 1M HARM 3 V

Ref 80 dB μ V

Atten 5 dB

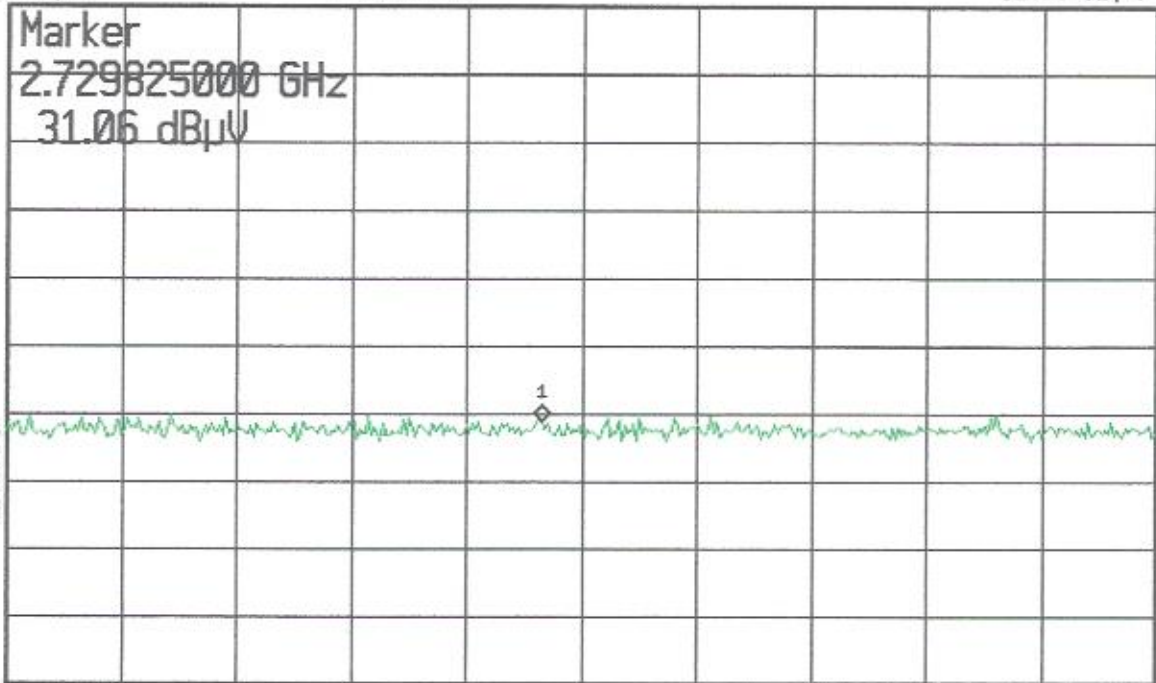
Mkr1 2.7298250 GHz

31.06 dB μ V

Peak
Log
8
dB/

Marker
2.729825000 GHz
31.06 dB μ V

V1 S2
S3 FC
AA



Center 2.73 GHz

Res BW 1 MHz

VBW 3 MHz

Span 5 MHz

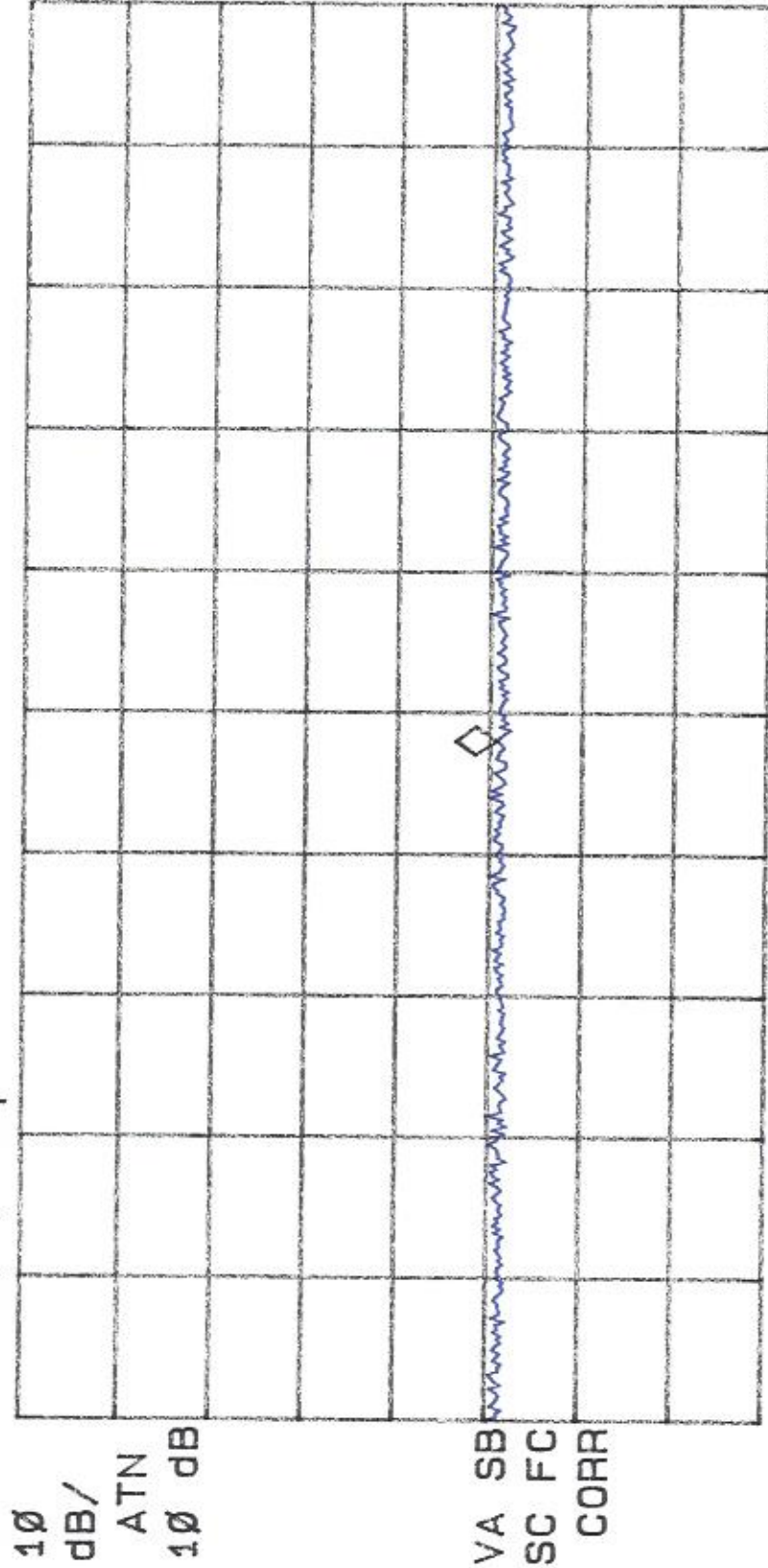
Sweep 5 ms (401 pts)

09:14:21 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 4 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 3.63980 GHz
29.09 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V



CENTER 3.64000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

SWP 20.0 msec

09: 19: 53 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 5 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 4.54998 GHz
29.00 dBμV
PREAMP ON

LOG REF 80.0 dBμV

10

dB/

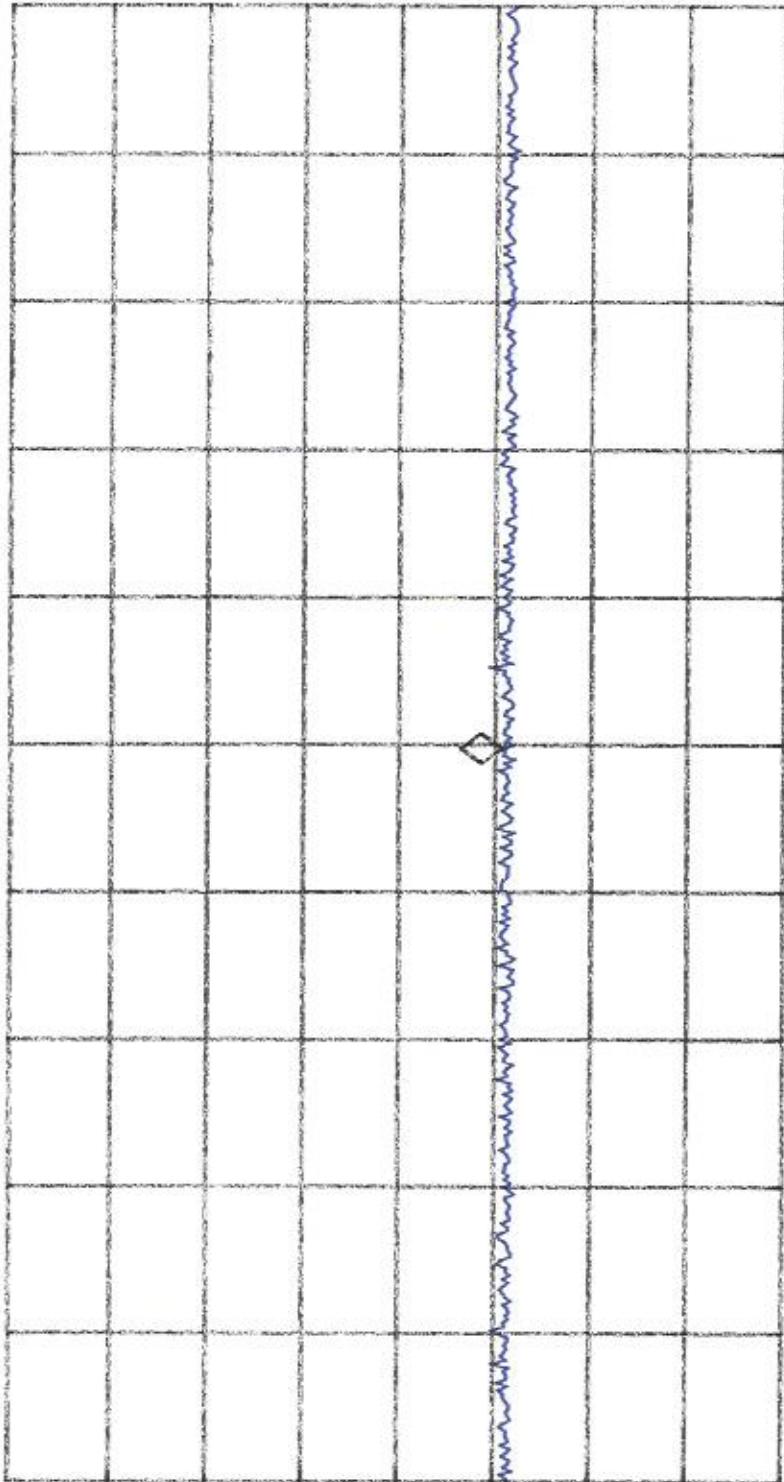
ATN

10 dB

VA SB

SC FC

CORR



CENTER 4.55000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

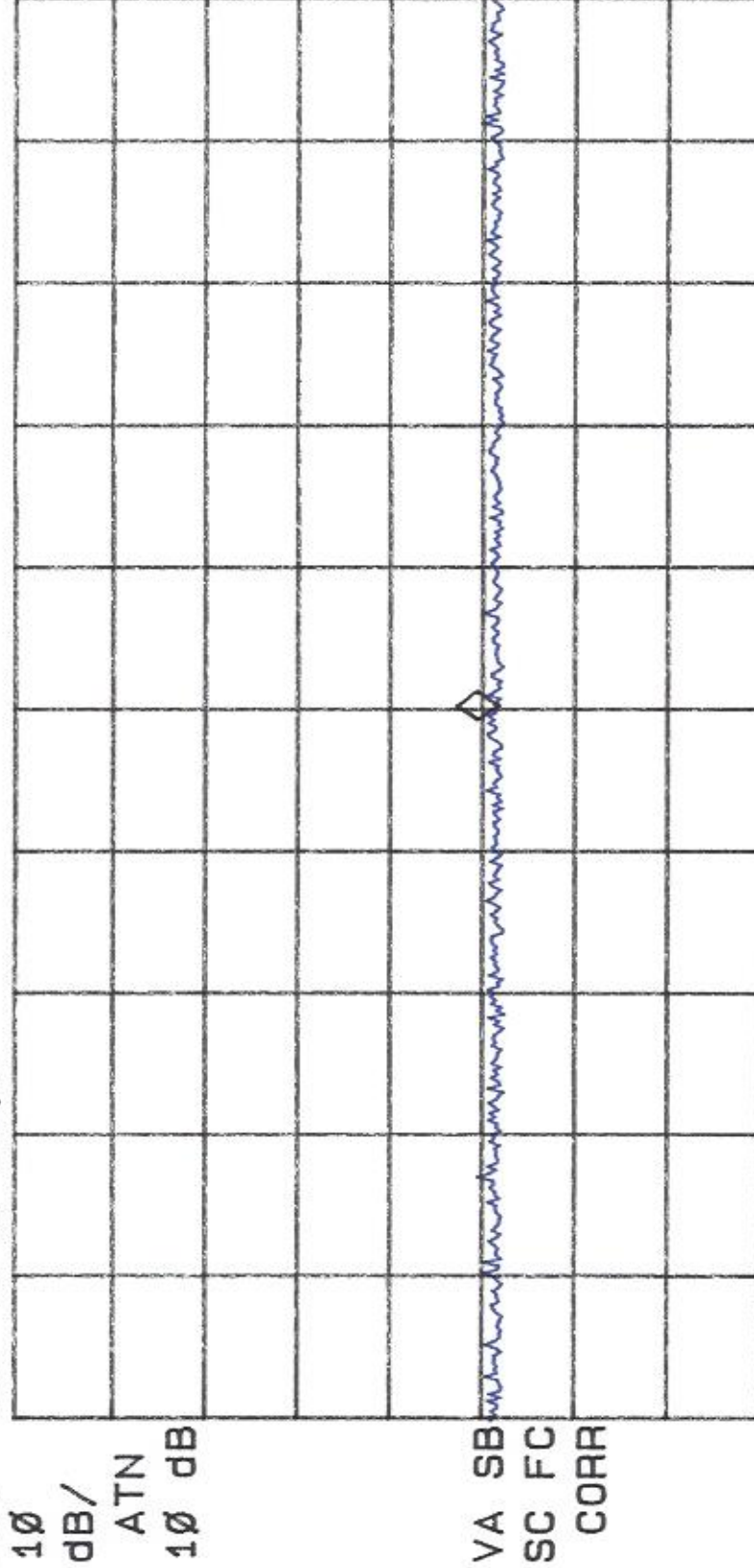
SWP 20.0 msec

09: 30: 01 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 6 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 5.46003 GHz
28.07 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V



CENTER 5.46000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

SWP 20.0 msec

09: 32: 44 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 7 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 6.36983 GHz
29.70 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V

10

dB/

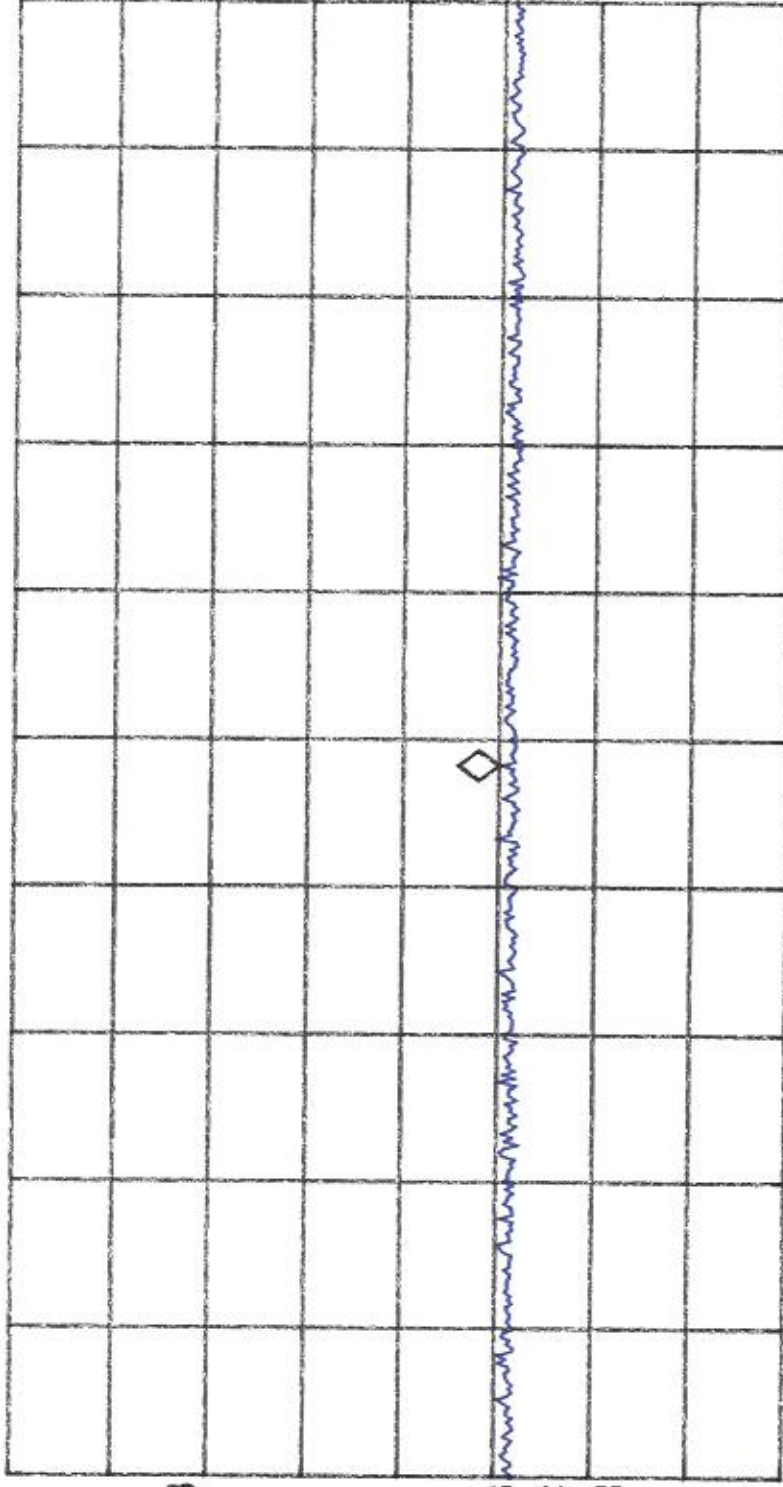
ATN

10 dB

VA SB

SC FC

CORR



CENTER 6.37000 GHz

#IF BW 1.0 MHz

AVG BW 300 kHz

SPAN 10.00 MHz

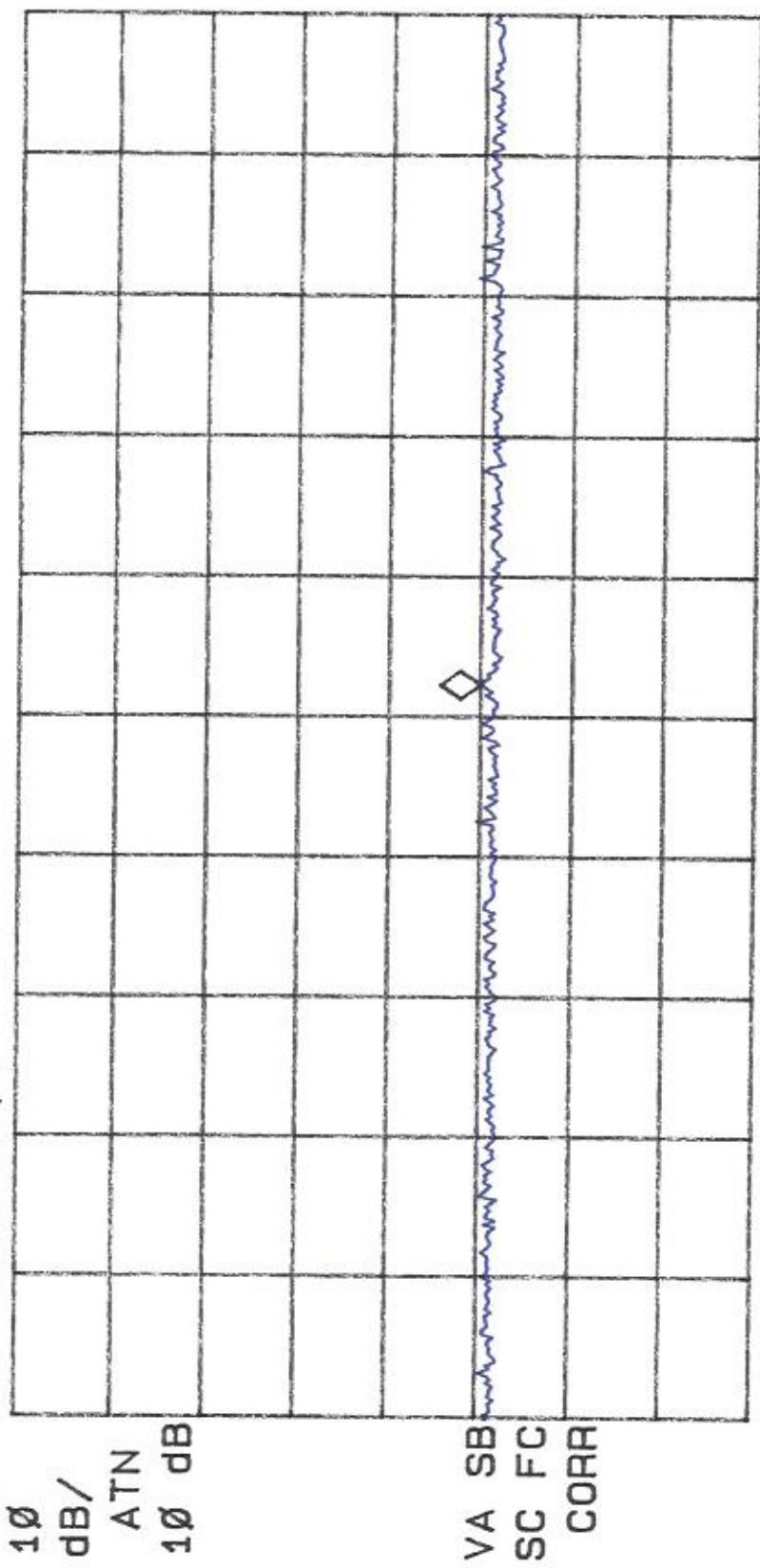
SWP 20.0 msec

09: 40: 39 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 8 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 7.28023 GHz
29.77 dBμV
PREAMP ON

LOG REF 80.0 dBμV



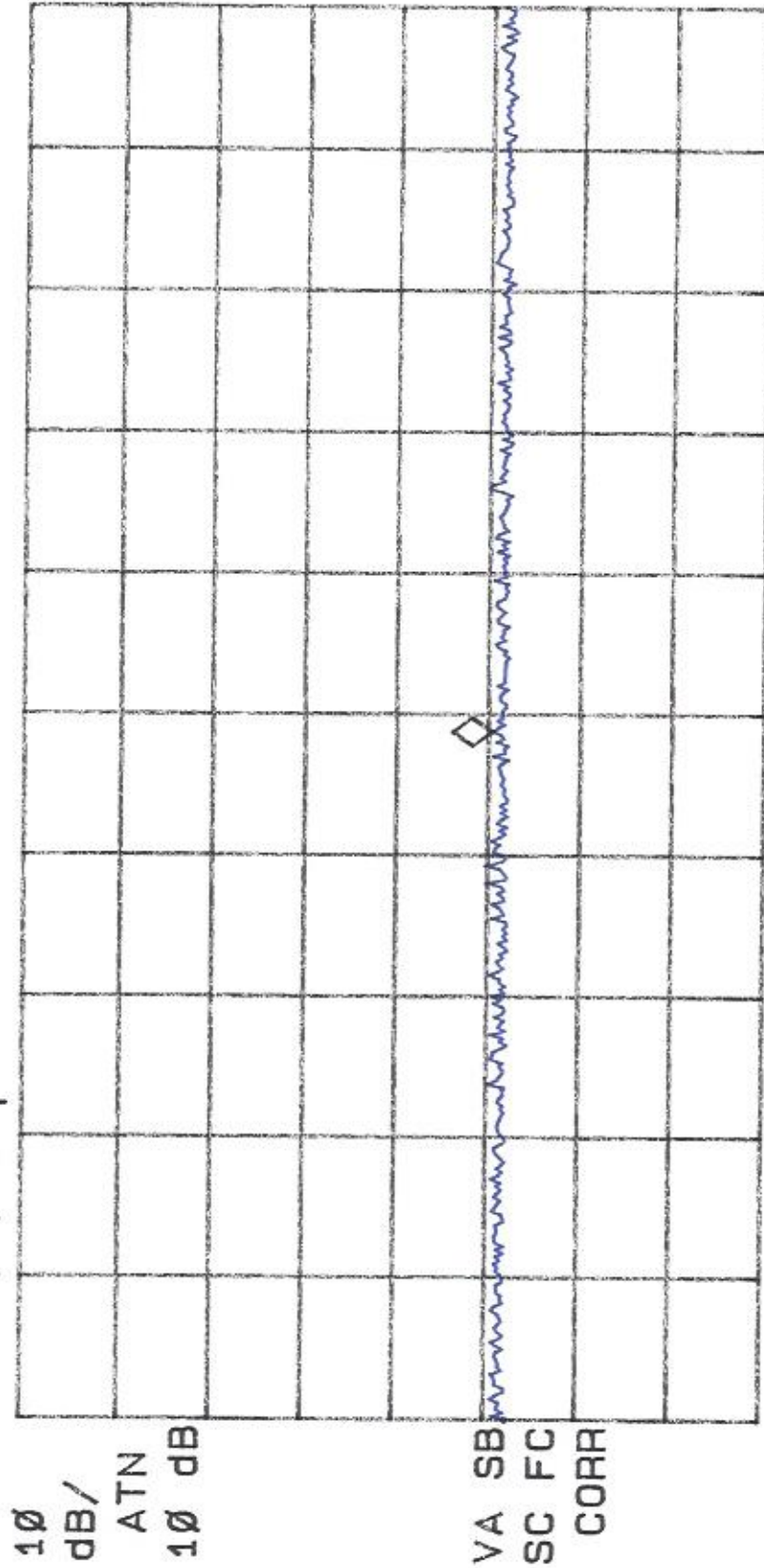
CENTER 7.28000 GHz
#IF BW 1.0 MHz
SPAN 10.00 MHz
SWP 20.0 msec
AVG BW 300 kHz

09: 43: 39 JUN 25, 2013

GOJO#6425 LTX SMALL FCCC HARM 9 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 8.18988 GHz
29.35 dB μ V
PREAMP ON

LOG REF 80.0 dB μ V



CENTER 8.19000 GHz

#IF BW 1.0 MHz

AVG BW 300 KHz

SPAN 10.00 MHz

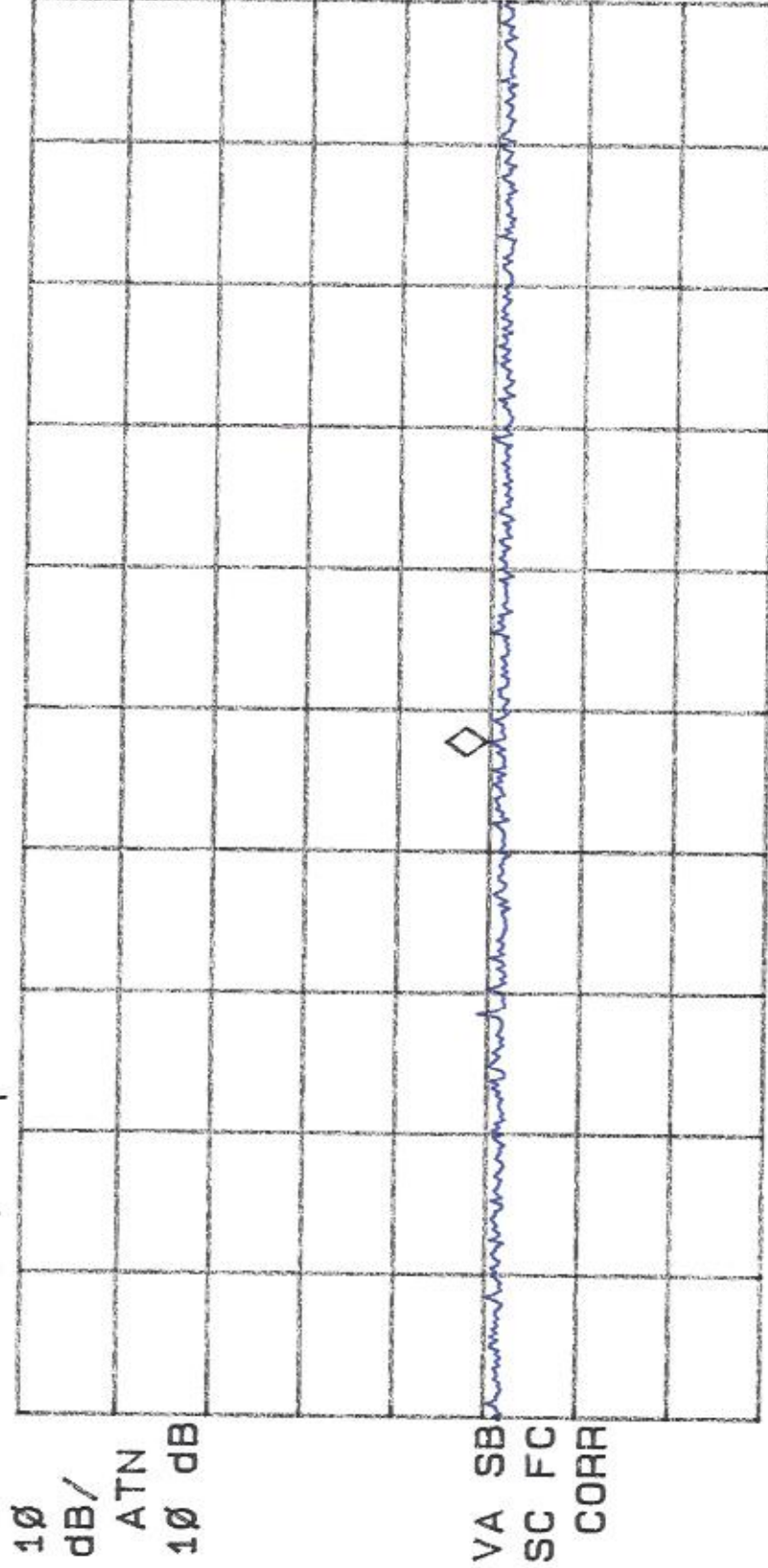
SWP 20.0 msec

09:51:14 JUN 25. 2013

GOJO#6425 LTX SMALL FCCC HARM 10 V

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 9.09978 GHz
30.19 dBμV
PREAMP ON

LOG REF 80.0 dBμV



CENTER 9.10000 GHz

#IF BW 1.0 MHz

AVG BW 300 KHz

SPAN 10.00 MHz

SWP 20.0 msec

<i>DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT</i>	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Test Datasheets-Bandwidth Test Minimum 6dB Bandwidth less than 500 KHz

2 Pages of Data to Follow

Agilent 12:51:44 Jun 24, 2013

G0J0*6425 LTX-SHORT FCCC BANDWIDTH H

Mkr2 Δ -150 kHz

Ref 80 dB μ V

Atten 5 dB

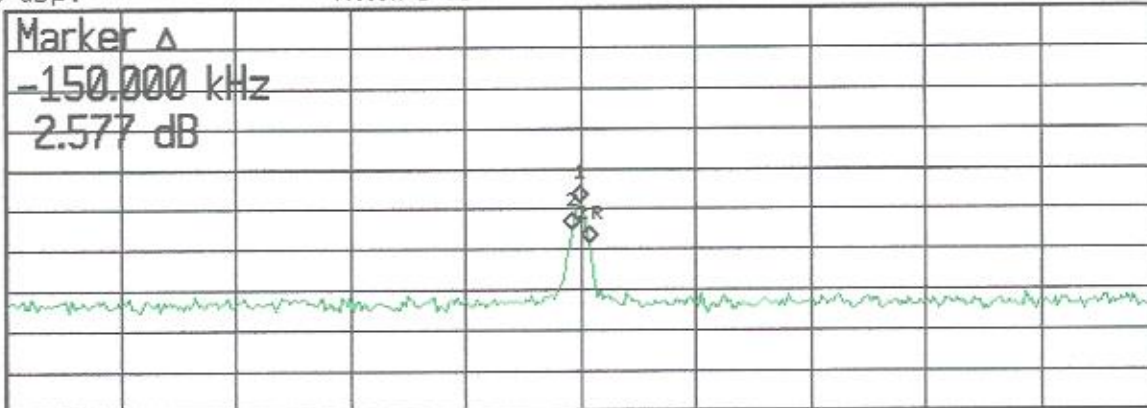
2.577 dB

Peak

Log

8

dB/



Center 910 MHz

Span 10 MHz

Res BW 120 kHz

VBW 300 kHz

Sweep 4 ms (401 pts)

Signal (3)	Freq	Peak Ampl dB μ V	Qp Ampl dB μ V	Avg Ampl dB μ V	Peak Δ dB	LL1 Peak Δ dB	LL2 dB
1	910 MHz	41.27					
2	909.9 MHz	36.02					
3	910.1 MHz	33.45					

Signal Added To List

Agilent 12:44:28 Jun 24, 2013

G0J0#6425 LTX-SHORT FCCC BANDWIDTH V

Mkr2 Δ -175 kHz

Ref 80 dBμV

Atten 5 dB

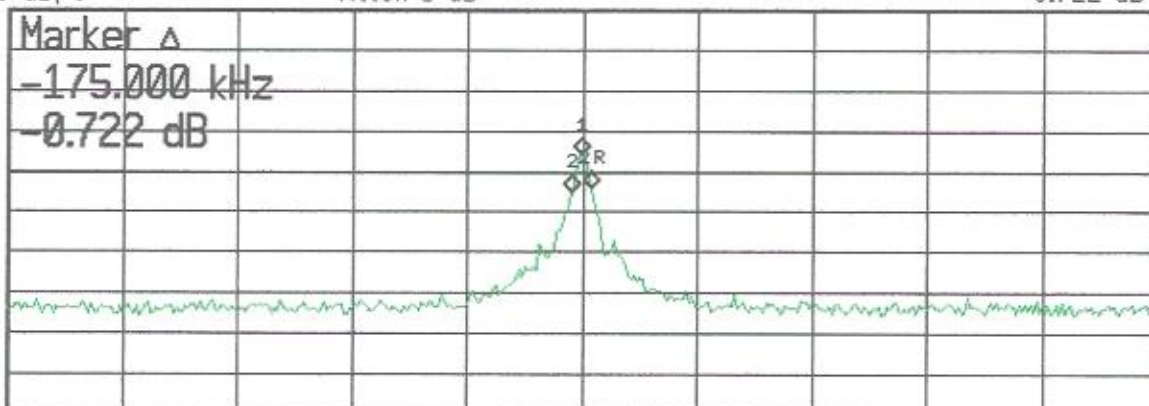
-0.722 dB

Peak

Log

8

dB/



Center 910 MHz

Span 10 MHz

Res BW 120 kHz

VBW 300 kHz

Sweep 4 ms (401 pts)

Signal	Freq	Peak Ampl	Op Ampl	Avg Ampl	Peak Δ	LL1	Peak Δ	LL2
(3)		dBμV	dBμV	dBμV	dB		dB	
1	910 MHz	51.28						
2	909.9 MHz	43.95						
3	910.1 MHz	44.67						

Signal Added To List

DIVERSIFIED T.E.S.T. TECHNOLOGIES, INC. TEST REPORT	
GOJO Industries Limited Approval Wireless Transmitter Module 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC in the host where the host is Smartlink Ready LTX-12 19XX-##-YYY Dispenser	Project Number: 6425

Measurement Protocol

The methodology used during the testing performed on the EUT in this report was ANSI C63.4:2009.

The EUT was powered with 6 Volts DC during the collection of data included within this report.

The data is compared to FCC Part 15.249 C limits.

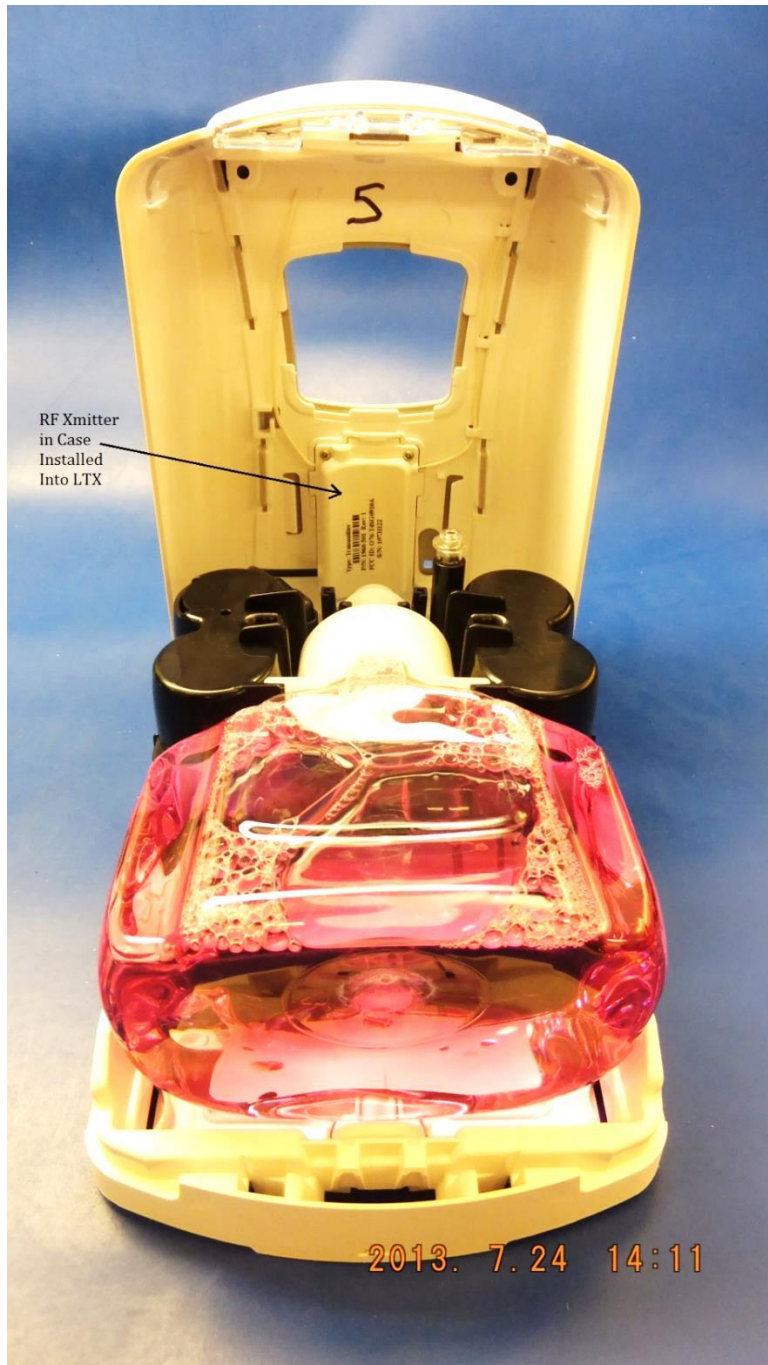
Please have a company official review this report and sign.



Annex

Limited Approval Wireless Transmitter Module P/N: 1960-501-WHT Rev. 004 and 1930-513-910 Rev. ABC February 15, 2014

Limited Approval Wireless Transmitter Module Installed into Smartlink Ready LTX-12 19XX-##-YYY Dispenser



1

4

3

2

1

XXXXX
DWG. NO.

REV

ECO ECR

REVISION

APRVD. BY

DATE _____

APPROVAL SIGNATURES ON FILE

19XX-##-YYYY

(blank) = Standard color
BLK = Chrome and black

EA = Individual unit
= Pack-out quantity

30 = PURELL®
31 = PROVON®
33 = PROVON® Waterless Surgical Scrub

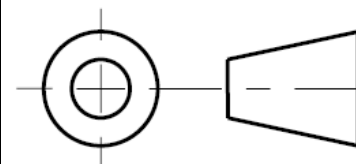
19 = SMARTLINK™ Ready LTX-12™ dispenser family

Example:

1931-04-BLK = PROVON® SMARTLINK™ Ready LTX-12™ dispenser chrome and black, 4-pack

INTERPRET DRAWING PER
ASME Y14.100
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES

THIRD ANGLE PROJECTION



TITLE: SMARTLINK™ Ready LTX-12™ dispenser part numbering
STATE: Developmental

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GOJO INDUSTRIES, INC.

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DRAWN BY: M. BULLOCK

SCALE 1:1

SHEET

DATE: 1/22/14

DO NOT SCALE

1 of 1

CHKD BY:

SIZE

DWG. NO.	
----------	--

REV

DATE:

B

XXXXX

1

4

3

2

1

Duty Cycle Chart

