FCC PART 22 TEST REPORT

for

Telit-GPS
FCC ID: RI7TELITC1
Model No.: Telit-C1

of

Applicant: **Telit Wireless Solutions Ltd., co.**
Address: **9th Fl.,Daewoo Securities Bld., 34-3 Yeouido-dong, Yeongdeungpo-gu, Seoul150-716, KOREA**

Tested and Prepared

by

ETS PRODUCT SERVICE (TAIWAN) CO., LTD

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU
TAIPEI 114, TAIWAN, R.O.C.

TEL: 886-2-66068877
FAX: 886-2-66068879

E-mail: ets@ets-bzt.com.tw

Report Number: W6M20707-8307-P-22

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FCC ID: RI7TELITC1

Certification of Test Report

Applicant : Telit Wireless Solutions Ltd., co.

Manufacturer : Telit Wireless Solutions Ltd., co.

Tested Equipment :

Type Description	: Telit-GPS
Model Number	: Telit-C1
Series Number	: N/A
Trade Name	: Telit
Operation Frequency	: 824.7-848.31 MHz
RF Output Power	: 22.58 dBm
Power Supply	: 12VDC

Regulation Applied : 47CFR Part 22 (2005-10)

Test Method : 47CFR Part 2 (2005), TIA/EIA-603B (2002) and ANSI C63.4 (2003)

I HEREBY CERTIFY THAT: The test results written in this report were derived conscientiously in accordance with the requirements and procedures of 47CFR Part 2(2005) and TIA-603-B(2002), and it was found that the device described above is in compliance with the applicable limits specified in 47CFR Part 22.

Note:

1. The result of this test report is valid only in connection to the sample has been tested at the laboratory of ETS Product Service (Taiwan).
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.

Test Engineer:

Date	ETS-Lab.	Name	Signature
August 22, 2007		Jay Chaing	Jay Chaing

Technical responsibility for area of testing:

Date	ETS	Name	Signature
August 22, 2007		Steven Chuang	Steven Chuang

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1. Summary

1.1 Description of tested equipment

This equipment under test (EUT) is a CDMA (800Mz) cellular phone. The operation frequency bands and maximum rated RF output power are listed as follows:

824.7-848.31 MHz (Cellular, Part 22), 0.182 W (22.58 dBm)

This test report only contains test requirements specified in 47CFR Part 22 for Cellular Phone function; for other functions, please refer to separate test report with respect to the relevant test standard and specification.

1.2 Date of testing processing

Test sample received: July 13, 2007

Test finished: August 22, 2007

Other Information: None

1.3 Modification Information

No modification was made during the all test items been performed.

1.4 Test standards

Technical standard : FCC Part 2(2005), TIA-603-B(2002), ANSI C63.4(2003)

Deviation from test standard: None

1.5 Summary of test result

Band: 850MHz

Section in this Report	Test Item	Relevant Section	Verdict
3.2	RF power output	2.1046(a), 22.913(a)	Pass
4.2	Modulation characteristics	2.1047	N/A
5.2	Occupied bandwidth	2.1049(h)	Pass
6.2	Spurious emissions at antenna terminals	22.917(a), 2.1051	Pass
7.2	Field strength of spurious radiation	22.917(a), 2.1053	Pass
8.2	Frequency stability	2.1055(a) 2.1055(d)	Pass

2. General Information

2.1 Testing laboratory

2.1.1 Location

OATS
No.5-1, Shuang Sing Village,
LiShuei Rd., Wanli Township,
Taipei County 207, Taiwan (R.O.C.)

Company
ETS Product Service (Taiwan) Co., Ltd..
6F, NO. 58, LANE 188, RUEY-KUANG RD.
NEIHU, TAIPEI 114, TAIWAN R.O.C.
Tel : 886-2-66068877
Fax : 886-2-66068879

2.1.2 Details of accreditation status

Accredited testing laboratory
A2LA Accredited number: 2300.01
FCC filed test laboratory Reg. No. 930600
Industry Canada filed test laboratory Reg. No. IC 5679
PTCRB Accredited Type Certification Test House

2.2 Details of approval holder

Name	: Telit Wireless Solutions Ltd., co.
Street	: 9th Fl.,Daewoo Securities Bld., 34-3 Yeouido-dong, Yeongdeungpo-gu,
Town	: Seoul150-716,
Country	: KOREA
Telephone	: ./.
Fax	: ./.

Manufacturer:
(if applicable)

Name	: ./.
Street	: ./.
Town	: ./.
Country	: ./.

2.3 Description of Tested System

The EUT was tested alone without the Accessories or Peripherals.

Equipment	Model No.	Series No.	Software	Cable information	Note
No accessories were used with this EUT					

Frequency Range:

Band: CDMA (850MHz)
Tx frequency range: 824.7~848.31 MHz

Frequencies Selected to be investigated:

Band: CDMA (800MHz)
Low Frequency (ch 1013) : 824.70 MHz
Mid Frequency (ch 383) : 836.48 MHz
High Frequency (ch 777) : 848.31 MHz

Air Interface : IS-95A/B, CDMA 2000 1xRTT

Occupied Bandwidth : 1.23 MHz

Duplex Separation : 45 MHz

Type of Emission : 1M25F9W

Channel Spacing : 30 kHz

Number of Channel : 832

Antenna Type : Specific External Antenna

Antenna Gain : 1 dBi (the cable loss and coupling loss is around 3dB)

Power supply : 12 VDC

2.4 Test environment

Temperature	:	27 °C
Relative humidity content	:	54 %
Air pressure	:	86-103 Kpa

2.5 General Test Requirement

Radiated Emission: For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

2.6 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2006/10/16	2007/10/15
ETSTW-CE 002	PREREULATOR MODE DC POWER SUPPLY	None	None		Function Test	
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2006/10/16	2007/10/15
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2006/10/16	2007/10/15
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	In House Certificate	
ETSTW-CE 008	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2005/10/24	2007/10/23
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2007/8/2	2008/8/1
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2005/12/8	2007/12/7
ETSTW-CE 014	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T2-02	20241	FCC	2005/12/7	2007/12/6
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2006/11/7	2008/11/6
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2006/11/21	2007/11/20
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	2005/10/14	2007/10/13
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2006/10/20	2007/10/19
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2006/10/30	2007/10/29
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2006/10/12	2007/10/11
ETSTW-RE 010	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070181	MOTECH	Function Test	
ETSTW-RE 011	PROGRAMMABLE LINEAR POWER SUPPLY	LPS-305	30503070165	MOTECH	Function Test	
ETSTW-RE 017	Log-Periodic Antenna	HL025	352886/001	R&S	2006/5/4	2008/5/3
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2004/11/8	2007/11/7
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2006/10/11	2007/10/10
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	In House Certificate	
ETSTW-RE 028	Log-Periodic DipoleArray Antenna	3148	34429	EMCO	2006/5/26	2008/5/25
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2006/5/26	2008/5/25
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2006/5/3	2008/5/2
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2006/10/11	2007/10/10
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2005/10/17	2007/10/16
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2007/1/11	2009/1/10
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2006/5/8	2008/5/7
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2006/5/29	2008/5/28
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2005/3/22	2008/3/21

ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2007/5/2	2009/5/1
ETSTW-RE 055	SPECTRUM ANALYZER	FSU-26	200074	R&S	2007/7/16	2008/7/15
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2007/7/2	2009/7/1
ETSTW-GSM 01	SIM Simulator	IT3	B2004-50106	ORGA	2007/7/20	2008/7/19
ETSTW-GSM 02	Universal Radio Communication Tester	CMU 200	109439	R&S	2006/10/18	2007/10/17
ETSTW-GSM 03	Agilent 8960 Test Set 1	E5515C	GB44052675	Agilent	2006/6/26	2008/6/25
ETSTW-GSM 04	Agilent 8960 Test Set 2	E5515C	GB44052665	Agilent	2006/6/29	2008/6/28
ETSTW-GSM 05	Agilent 8960 Test Set 3	E5515C	GB44052652	Agilent	2006/7/11	2008/7/10
ETSTW-GSM 06	Agilent 8960 Test Set 4	E5515C	GB44052684	Agilent	2006/7/4	2008/4/3
ETSTW-GSM 07	Agilent 8960 Test Set 5	E5515C	GB44052658	Agilent	2006/7/12	2008/7/11
ETSTW-GSM 08	Agilent 8960 Test Set 6	E5515C	GB44052666	Agilent	2006/7/6	2008/7/5
ETSTW-GSM 09	Controller PC	Dell GX 270	700F61J	Dell	Function Test	
ETSTW-GSM 10	Anite Combiner	B4605/100	0053	Wessex / Anite	2006/9/22	2008/9/21
ETSTW-GSM 11	GSM 850,900,1800,1900 Test system	TS8950G	100039	R&S	2004/12/3	2007/12/2
ETSTW-GSM 12	Acoustical Calibrator	4231	2463874	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 13	Conditioning Amplifier	2690--0S2	2437856	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 14	Telephone Test Head	4602B	2465324	Brüel&Kjær	Function Test	
ETSTW-GSM 15	Mouth Simulator	4227	2462516	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 16	TEMP.&HUMIDITY CHAMBER	GTH-120-40-1P-U	MAA0501002	GIANT FORCE	2006/12/28	2007/12/27
ETSTW-GSM 17	ANTENNT COPLER	CMU-Z10	100988	R&S	Function Test	
ETSTW-GSM 18	AUDIO ANALYZER	UPL16	100173	R&S	2006/10/26	2007/10/25
ETSTW-GSM 23	SPLITTER	4901.19.A	None	SUHNER	Function Test	
ETSTW-GSM 24	Vibration Testing System	VS-100V	5494	Vibration	2006/12/19	2007/12/18
ETSTW-GSM 29	Microphone	4185	2463004	Brüel&Kjær	2007/8/2	2008/8/1
ETSTW-GSM 30	Ear Simulator	4195	2457416	Brüel&Kjær	2007/8/2	2008/8/1

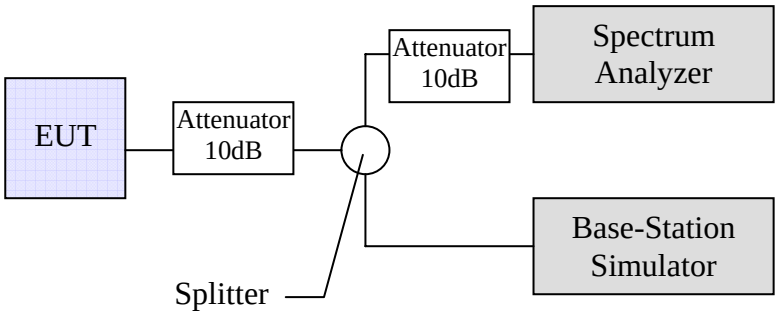
3. RF Power Output

3.1 Test procedure

3.1.1 Conducted Method

Per 47CFR Part 2.1046, the RF power output shall be measured at the RF output terminals and following procedure is employed:

The transmitter output was connected as the following figure:



The whole connection system is calibrated with a standard signal generator. Power on and make a link form simulator to EUT and then set the EUT to maximum output power.
Measure the RF power with the spectrum analyzer in accordance the following settings:

RBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.
VBW: 300 kHz for Frequency below 1GHz and 1MHz for Frequency equal to and above 1GHz.
Span: 2MHz
Sweep: 3s

The power output at the transmitter antenna terminal is then determined by assign the value of the corrected factor to the spectrum analyzer reading.

Tests were performed at three frequencies (low, middle, and high channels) and operation mode selected.

3.1.2 Radiated Method

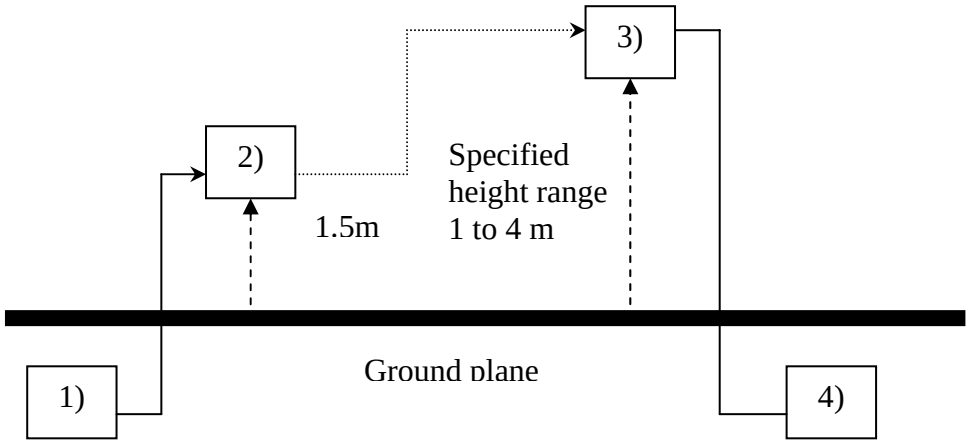
If the conducted measurement is not practical due to the integral antenna, the radiated measurement will be performed in accordance the following procedure:

The EUT was positioned on a non-conductive turntable, 0.8m above the ground on an open test site.
The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer.

Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna.

Substitution RF power Measurement at ETS Taiwan
General :

The applied substitution method follows ANSI/TIA/EIA-603,ANSI/TIA/EIA-102.CAAA or the appropriate ETSI rules respectively.
The actual signal generated by the EUT can be determined by means of a substitution measurement in which a known signal source replaces the device to be measured.



1) Signal generator ;
2) Substitution antenna ;
3) Test antenna ;
4) Spectrum analyzer or selective voltmeter.

The substitution antenna replaces the transmitter antenna at the same position and in vertical polarization. The frequency of the signal generator shall be adjusted to the measurement frequency.
The test antenna shall be raised or lowered, if necessary, to ensure that the maximum signal is still received. The input signal to the substitution antenna shall be adjusted in level until an equal or a known related level to that detected from the transmitter is obtained in the measurement receiver.
If a fully anechoic chamber is used as test site in order to provide free space conditions there is no need to change the height of the antenna.
The measurement will be repeated in horizontal position.
Calibration :
In order to make this kind of measurement more effective and to avoid subjective measurement faults ETS has installed automatic computer controlled measurement procedures.
With the above described substitution method a test site is calibrated over the full frequency range which is used in suitable frequency steps. For a certain power level on the substitution antenna the received power over the whole frequency range is documented. All necessary antenna gains, cable losses, filter losses and amplifications of preamplifiers are taken in

consideration. The summary of this calibration measurement performs a transducer factor that is related to the considered test site and a certain measurement distance. Differences of the radiated power levels of different test samples are determined by internal attenuation of measurement receiver. The proper function of such test site will be maintained by short term plausibility checks and periodical re-calibration.

Testing :
The test sample will be putted on the table at the defined position and the radiated power will be receiver and documented by the measurement receiver.
On test sites with ground plane the measurement antenna will be lowered and raised to maximum values at significant frequencies.
For peak power measurements the sample is turned by the turntable over 360 degree in order to find the direction with the maximum radiation or to document the max reading with the MAXHOLD function during the rotation.

3.2 Test Results

☐ Conducted Measurement
☑ Radiated Measurement

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
825.031	20.44	22.58	38.45	Pass
836.821	20.30	22.44	38.45	Pass
848.160	19.21	21.35	38.45	Pass

Note: Please refer to appendix for plot data.

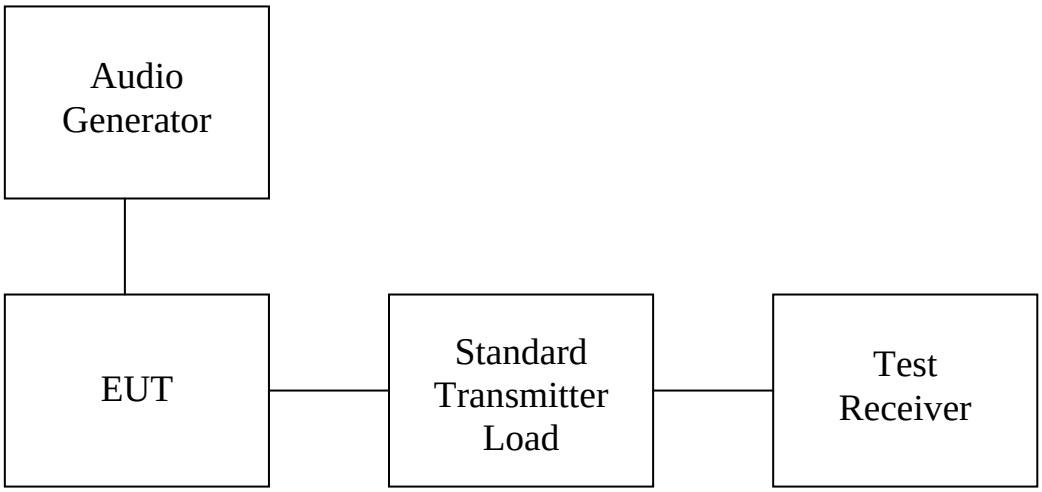
Test equipment: ETSTW-RE 003, ETSTW-RE 043, ETSTW-GSM 02

4. Modulation Characteristics

4.1 Test procedure

☐ A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.
The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation response is measured at certain modulation frequencies, related to 1000Hz reference signal. Tests are performed for positive and negative modulation.

☐ Equipment which employs modulation Limiting: A curve or family of curves showing the percentage of modulation versus the modulation input voltage shall be supplied. The audio signal generator is connected to the audio input of the EUT with its full rating. The modulation limiting is measured at certain modulation frequencies from 100Hz to 15kHz.



4.2 Test Results

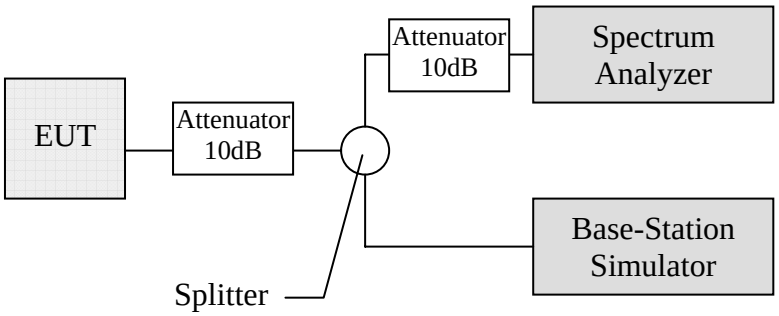
For digital modulation employed, this test item is not applicable.

5. Occupied Bandwidth

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power. Near the carrier an Emission Mask is defined by the standard.

5.1 Test procedure

The RF output of the transceiver was connected as the following figure.
Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer at 99% power was occupied. Then set the spectrum analyzer to cover the upper and lower band edges to measure emission mask.



5.2 Test Results

Occupied Channel Bandwidth (kHz)	
Channel 1013	1274.038462
Channel 383	1274.038462
Channel 777	1274.038462
-26dB Channel Bandwidth (kHz)	
Channel 1013	1418.269231
Channel 383	1426.282051
Channel 777	1410.256410

Note: Please refer to appendix for plot data.

Test equipment: ETSTW-RE 003, ETSTW-GSM 02, ETSTW-GSM 23

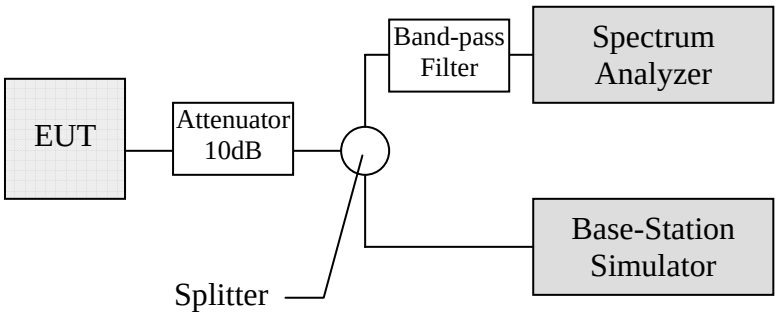
6. Spurious Emissions at Antenna Terminals

6.1 Test procedure

This transmitter output was connected to a calibrated coaxial attenuator, the other end of which was connected to a spectrum analyzer via a three-port splitter. Please refer to the following figure. Transmitter output was derived with the spectrum analyzer in dBm.

The Spurious Emissions at Antenna Terminals was measured by the spectrum analyzer with a suitable notch filter and/or Band-pass filter.

Tests were performed with an unmodulated carrier at three frequencies (low , middle and high channels) and on all power levels , which can be set-up on the transmitters.



6.2 Test Results

CH 1013

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
112.821	-49.40	-13	-36.40
494.872	-49.30	-13	-36.30
3533.654	-47.63	-13	-34.63
5141.026	-48.74	-13	-35.74
11379.808	-48.17	-13	-35.17
15282.452	-48.24	-13	-35.24
24443.109	-45.75	-13	-34.75

CH 383

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
120.994	-49.82	-13	-36.82
469.231	-49.42	-13	-36.42
3413.462	-47.47	-13	-34.47
7275.641	-48.67	-13	-35.67
10542.468	-48.50	-13	-35.50
16376.202	-47.04	-13	-34.04
25519.231	-46.05	-13	-33.05

CH 777

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
114.183	-50.03	-13	-37.03
415.385	-49.74	-13	-36.74
3509.615	-47.67	-13	-34.67
7525.641	-49.39	-13	-36.39
10169.471	-48.12	-13	-35.12
17503.606	-48.08	-13	-35.08
24974.359	-46.08	-13	-33.08

Note: Please refer to appendix C for plot data.
Test equipment: ETSTW-RE 003, ETSTW-GSM 02, ETSTW-GSM 23

6.3 Explanation of test result

All factors like cable loss and external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

6.4 Calculation of Limit for Spurious at Antenna Terminals

Compliance with § 22.917(a) requires that any emission be attenuated below the transmitter power at least 43 + 10 log10 P (P = transmitter power in Watts).

The compliance limit was calculated as an example per the following:

Maximum transmitter output power: P=0.182 Watts
Required attenuation: A=43 + 10 log10 P
Limit for Spurious Emissions at Antenna Terminals: L=P-A=-13dBm

7. Field Strength of Spurious Radiation

7.1 Test procedure

The test procedure for filed strength measurement is same as radiated power except for a notch filter or band pass filter is used to avoid the influence of fundamental to the pre-amplifier.

The measurements below 1GHz were performed with a measurement bandwidth of 100kHz, above 1GHz with a bandwidth of 1 MHz.

7.2 Test Results

The measurements of the spurious emission at the upper, center and lower channel.

CH 1013

Frequency (MHz)	Polarization (H/V)	Reading Level (dBm)	Corrected Factor (dB)	Result Level (dBm)	Limit (dBm)	Margin
40.2805	H	-69.23	27.53	-41.70	-13	-28.70
58.6773	H	-71.99	27.63	-44.36	-13	-31.36
606.6292	H	-91.10	36.11	-54.99	-13	-41.99
995.4609	H	-91.82	38.51	-53.31	-13	-40.31
3416.834	H	-61.23	12.11	-49.12	-13	-36.12
5531.062	H	-58.92	18.56	-40.36	-13	-27.36
30.0000	V	-68.62	26.59	-42.03	-13	-29.03
89.5190	V	-68.66	27.77	-40.89	-13	-27.89
714.7895	V	-91.52	39.18	-52.34	-13	-39.34
999.3948	V	-91.98	41.50	-50.48	-13	-37.48
3470.942	V	-62.45	11.54	-50.91	-13	-37.91
5699.399	V	-58.74	16.49	-42.25	-13	-29.25

CH 383

Frequency (MHz)	Polarization (H/V)	Reading Level (dBm)	Corrected Factor (dB)	Result Level (dBm)	Limit (dBm)	Margin
40.2805	H	-69.55	27.53	-42.02	-13	-29.02
59.2184	H	-72.11	27.58	-44.53	-13	-31.53
742.0922	H	-91.59	36.92	-54.67	-13	-41.67
998.1843	H	-91.46	38.80	-52.66	-13	-39.66
3410.822	H	-62.41	12.18	-50.23	-13	-37.23
4809.619	H	-57.24	17.32	-39.92	-13	-26.92
30.0000	V	-68.51	26.59	-41.92	-13	-28.92
88.4368	V	-69.38	27.80	-41.58	-13	-28.58
720.0401	V	-91.95	39.10	-52.85	-13	-39.85
997.2766	V	-91.42	41.23	-50.19	-13	-37.19
3404.810	V	-60.82	11.54	-49.28	-13	-36.28
7991.984	V	-54.21	12.08	-42.13	-13	-29.13

CH 777

Frequency (MHz)	Polarization (H/V)	Reading Level (dBm)	Corrected Factor (dB)	Result Level (dBm)	Limit (dBm)	Margin
39.7394	H	-69.44	27.50	-41.94	-13	-28.94
58.6773	H	-72.19	27.63	-44.56	-13	-31.56
716.8898	H	-91.70	36.97	-54.73	-13	-41.73
998.7895	H	-91.87	38.85	-53.02	-13	-40.02
3410.822	H	-62.41	12.18	-50.23	-13	-37.23
5595.190	H	-58.64	18.88	-39.76	-13	-26.76
30.0000	V	-68.44	26.59	-41.85	-13	-28.85
91.6834	V	-70.11	27.72	-42.39	-13	-29.39
706.3887	V	-92.04	39.32	-52.72	-13	-39.72
999.0922	V	-91.94	41.46	-50.48	-13	-37.48
3404.810	V	-61.82	11.54	-50.28	-13	-37.28
7414.830	V	-53.58	11.36	-42.22	-13	-29.22

Note: Please refer to appendix D for plot data.

7.3 Explanation of test result

Result Level = Reading Level + Corrected Factor

Corrected Factor = SG level – Received level-Cable loss + substitution antenna gain

7.4 Calculation of Limit for Field Strength of Spurious

Compliance with § 22.917(a) requires that any emission be attenuated below the transmitter power at least 43 + 10 log10 P (P = transmitter power in Watts).

The compliance limit was calculated as an example per the following:

Maximum transmitter radiated power: P=0.182 watt

Required attenuation: A=43 + 10 log10 P

Limit for Spurious Emissions at Antenna Terminals: L=P-A=-13dBm

Test equipment: ETSTW-RE 003, ETSTW-RE 017, ETSTW-RE 042, ETSTW-RE 043, ETSTW-RE 044, ETSTW-GSM 02

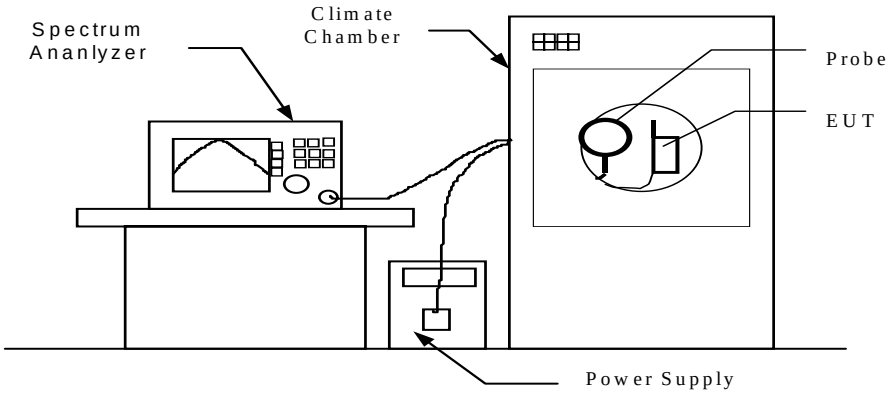
8. Frequency Stability

8.1 Test procedure

☑ The equipment under test was supplied with rated power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable, exited the chamber through an opening made for that purpose.
After the temperature stabilized the frequency output was recorded from the counter.

☐ An external variable power supply was used to supply nominal voltage and 85% to 115% of nominal voltage to the EUT under room temperature. Record the frequencies measured from the counter.

☑ End point voltage: For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer. Then record the frequencies measured from the counter.



8.2 Test Results

8.2.1 Frequency Stability vs. Temperature

CH 1013 824.667948 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
12 VDC	-30	-1.235	-1.50	±2.5
	-20	-1.024	-1.24	
	-10	-0.578	-0.70	
	0	-0.256	-0.31	
	10	-0.144	-0.17	
	*20	0	0	
	30	0.582	0.71	
	40	1.107	1.34	
	50	1.325	1.61	
	60	1.498	1.82	

CH 383 836.484355 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
12 VDC	-30	-1.224	-1.46	±2.5
	-20	-1.068	-1.28	
	-10	-0.732	-0.88	
	0	-0.458	-0.55	
	10	-0.267	-0.32	
	*20	0	0	
	30	0.335	0.40	
	40	0.986	1.18	
	50	1.157	1.38	
	60	1.336	1.60	

CH 777 848.302511 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
12 VDC	-30	-1.183	-1.39	±2.5
	-20	-0.934	-1.10	
	-10	-0.799	-0.94	
	0	-0.578	-0.68	
	10	-0.233	-0.27	
	*20	0	0	
	30	0.545	0.64	
	40	0.968	1.14	
	50	1.127	1.33	
	60	1.443	1.70	

8.2.2 Frequency Stability vs. Voltage

CH 1013 824.667948 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage 6.3 VDC	23.9	0.545	0.66	±2.5

CH 383 836.484355 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage 6.3 VDC	23.9	0.627	0.75	±2.5

CH 777 848.302511 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage 6.3 VDC	23.9	0.548	0.65	±2.5

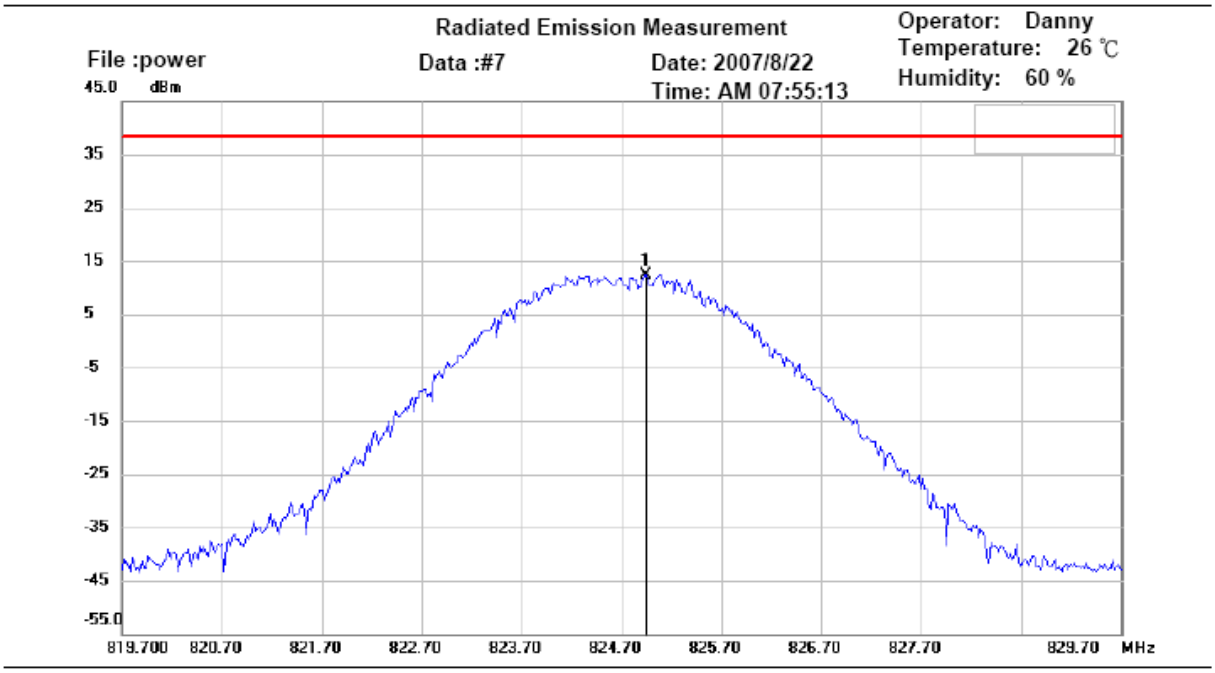
Test equipment: ETSTW-CE009, ETSTW-RE 003, ETSTW-RE055, ETSTW-GSM 02

Appendix

A RF Power Output
B Occupied Bandwidth
C Spurious Emissions at Antenna Terminals
D Filed Strength of Spurious Emission
E EUT Photos

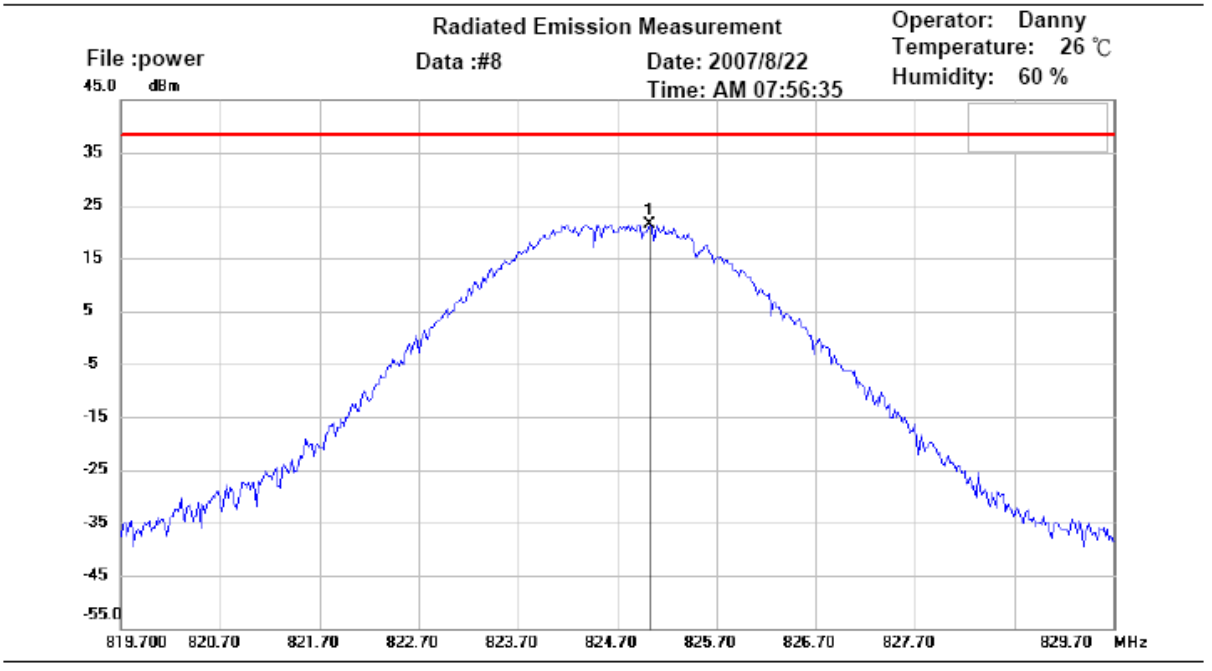
Appendix A

RF Power Output



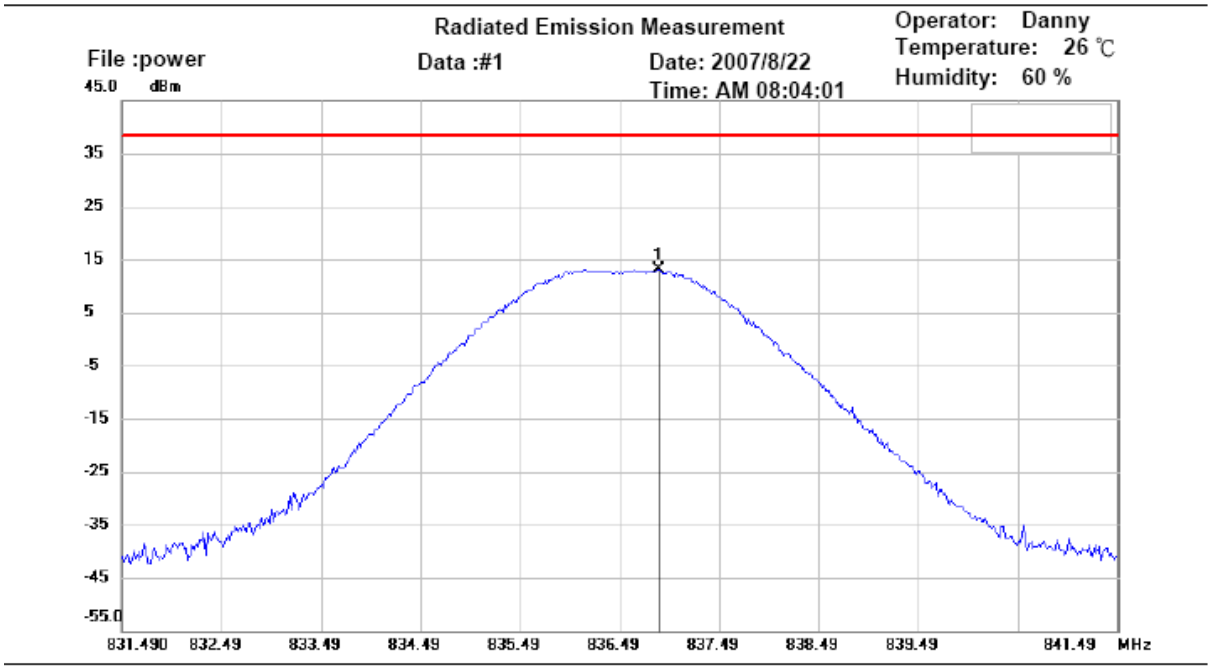
Site : site #1
Condition : FCC_22_POWER
Company : W6M20707-8307
EUT Model: Telit C1
Execute Program : CDMA CH1013

Polarization: *Horizontal*
Power :
Distance: 3m

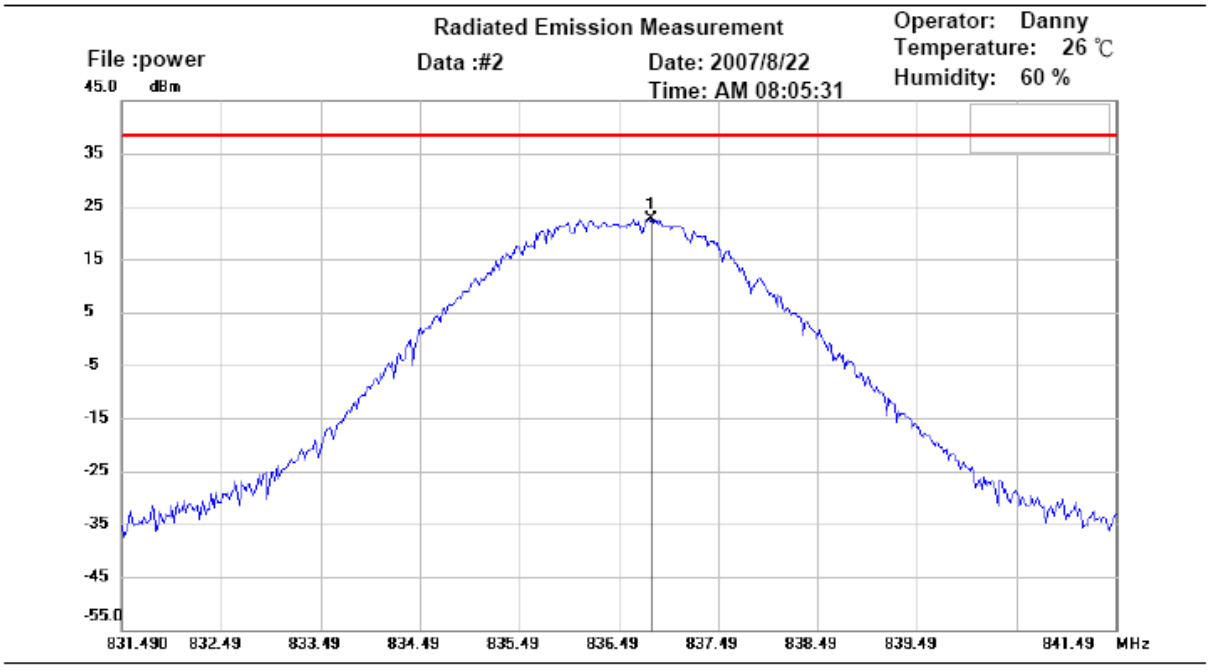


Site : site #1
Condition : FCC_22_POWER
Company : W6M20707-8307
EUT Model: Telit C1
Execute Program : CDMA CH1013

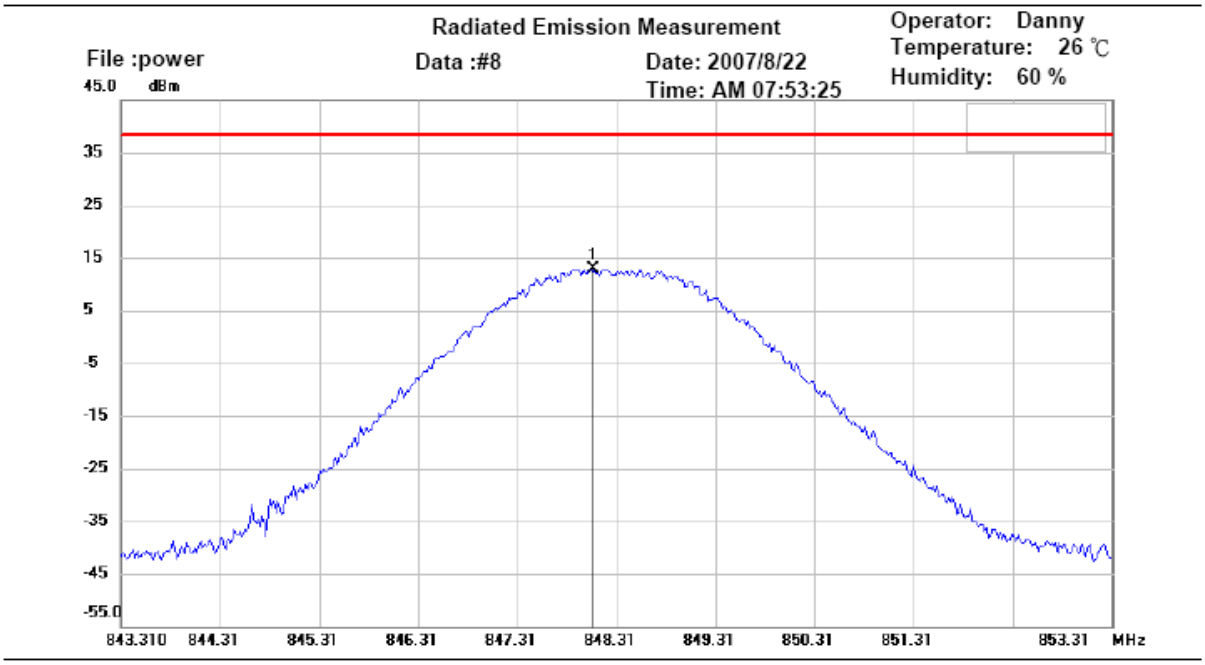
Polarization: *Vertical*
Power :
Distance: 3m



Site : site #1
Condition : FCC_22_POWER
Company : W6M20707-8307
EUT Model: Telit C1
Execute Program : CDMA CH383
Polarization: *Horizontal*
Power :
Distance: 3m

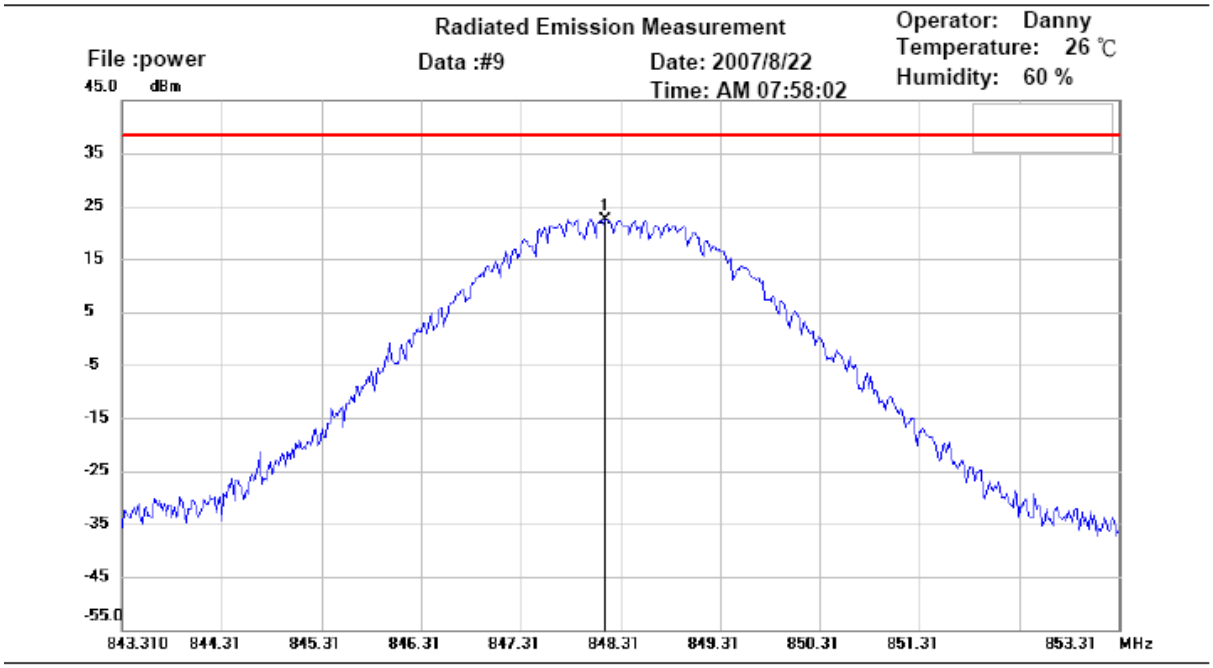


Site : site #1
Condition : FCC_22_POWER
Company : W6M20707-8307
EUT Model: Telit C1
Execute Program : CDMA CH383
Polarization: *Vertical*
Power :
Distance: 3m



Site : site #1
Condition : FCC_22_POWER
Company : W6M20707-8307
EUT Model: Telit C1
Execute Program : CDMA CH777

Polarization: *Horizontal*
Power :
Distance: 3m

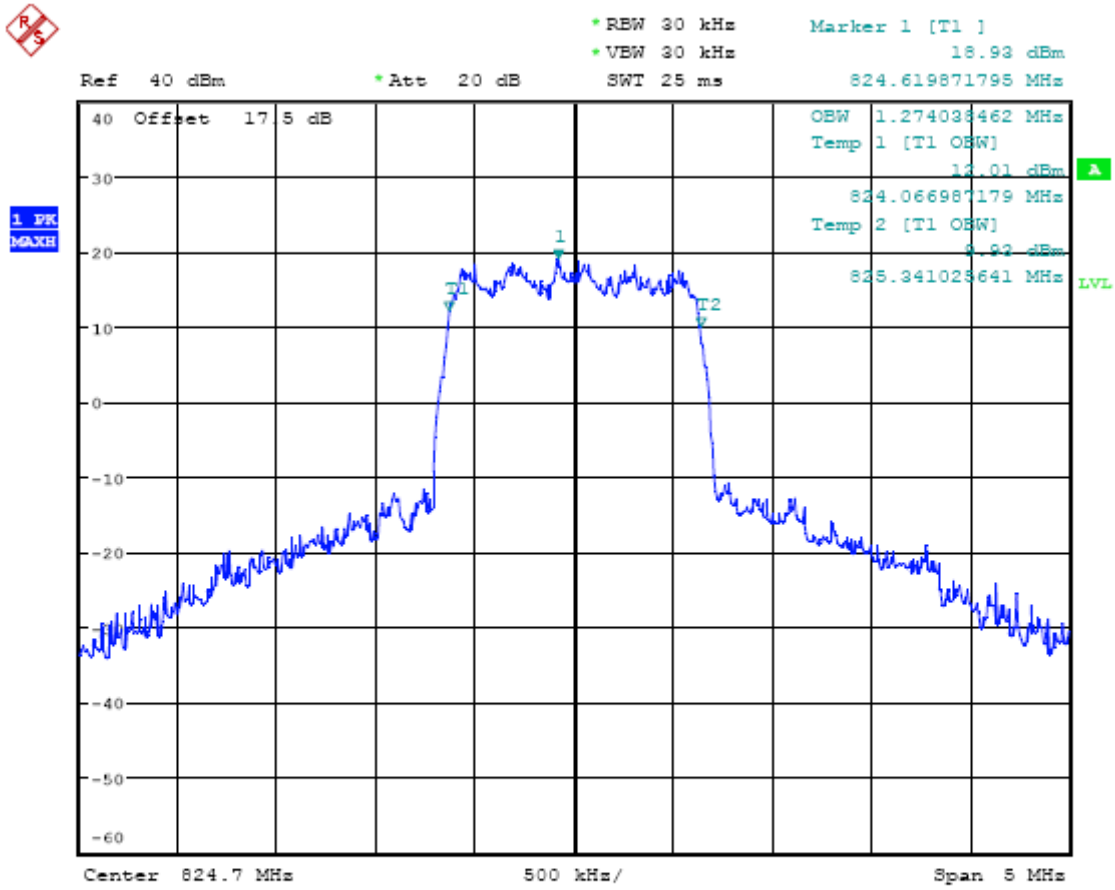


Site : site #1
Condition : FCC_22_POWER
Company : W6M20707-8307
EUT Model: Telit C1
Execute Program : CDMA CH777

Polarization: *Vertical*
Power :
Distance: 3m

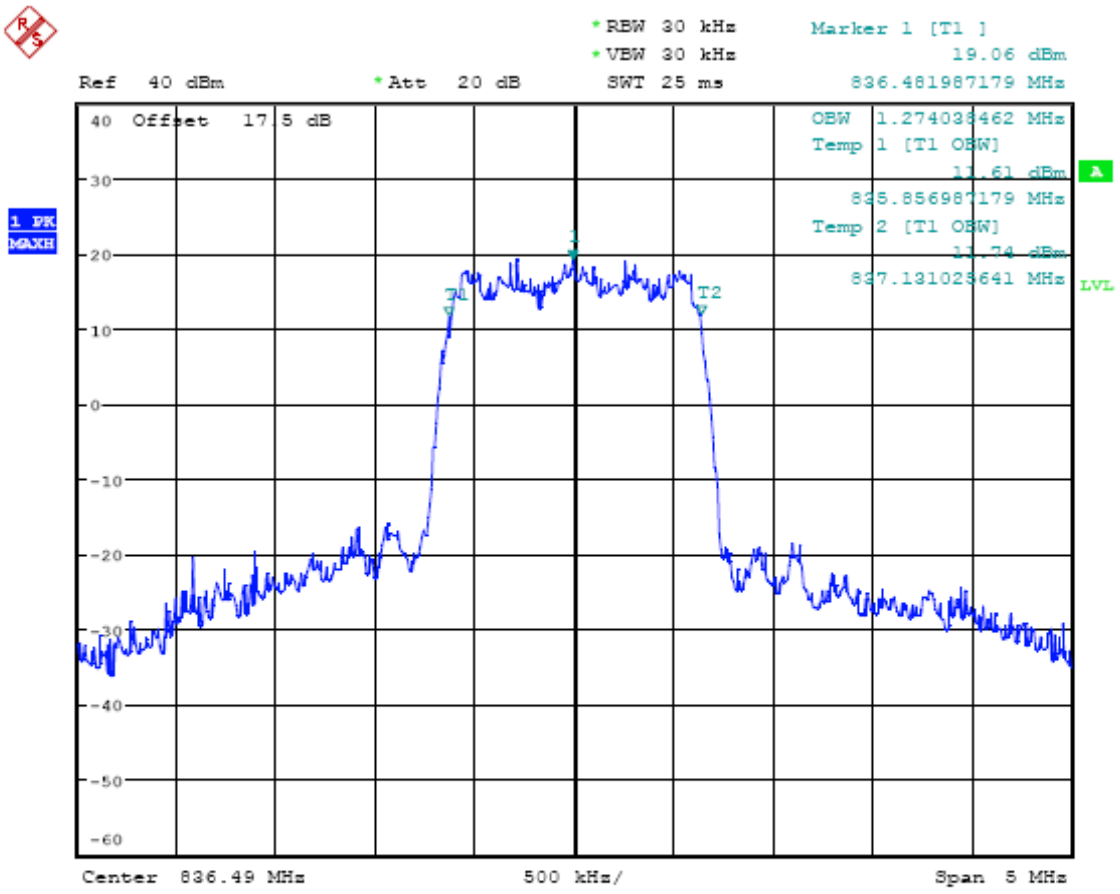
Appendix B

Occupied Bandwidth



OCCUPIED BANDWIDTH CH 1013

Date: 22.AUG.2007 06:18:52



OCCUPIED BANDWIDTH CH 383

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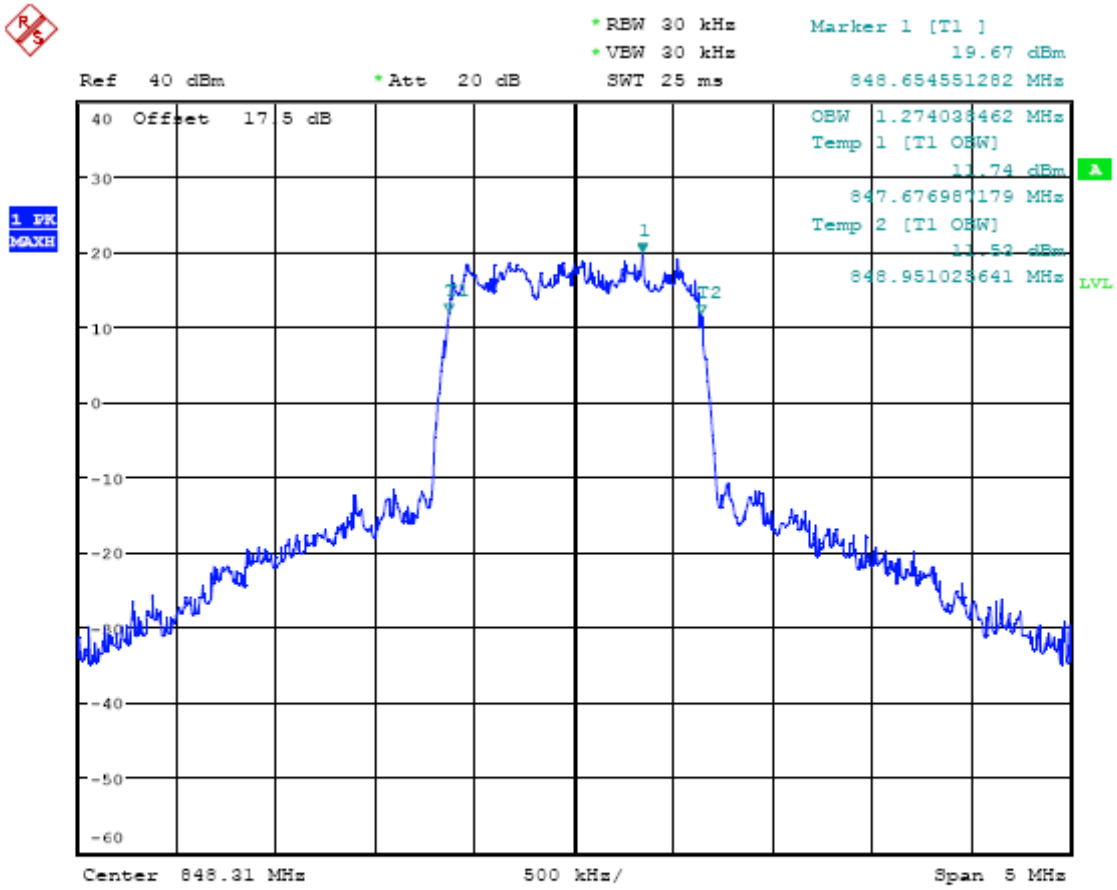

OCCUPIED BANDWIDTH CH 777

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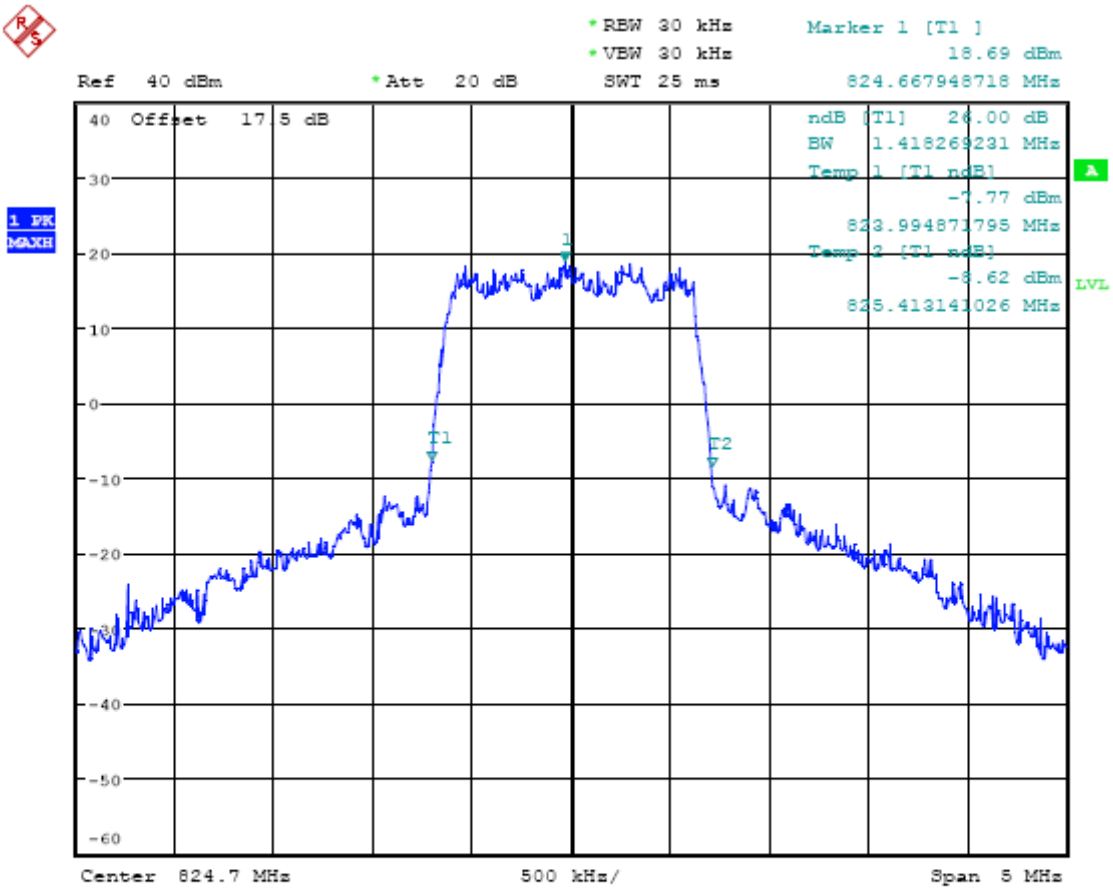

26DB BANDWIDTH CH 1013

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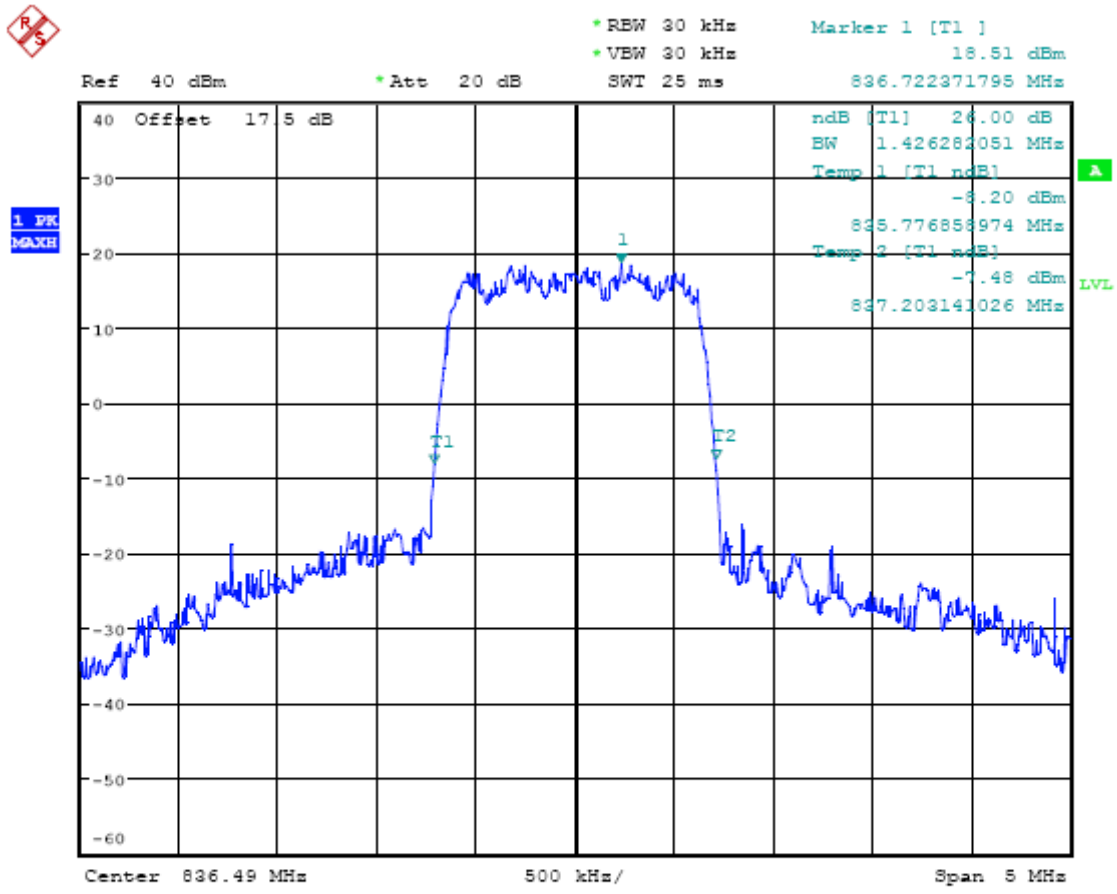

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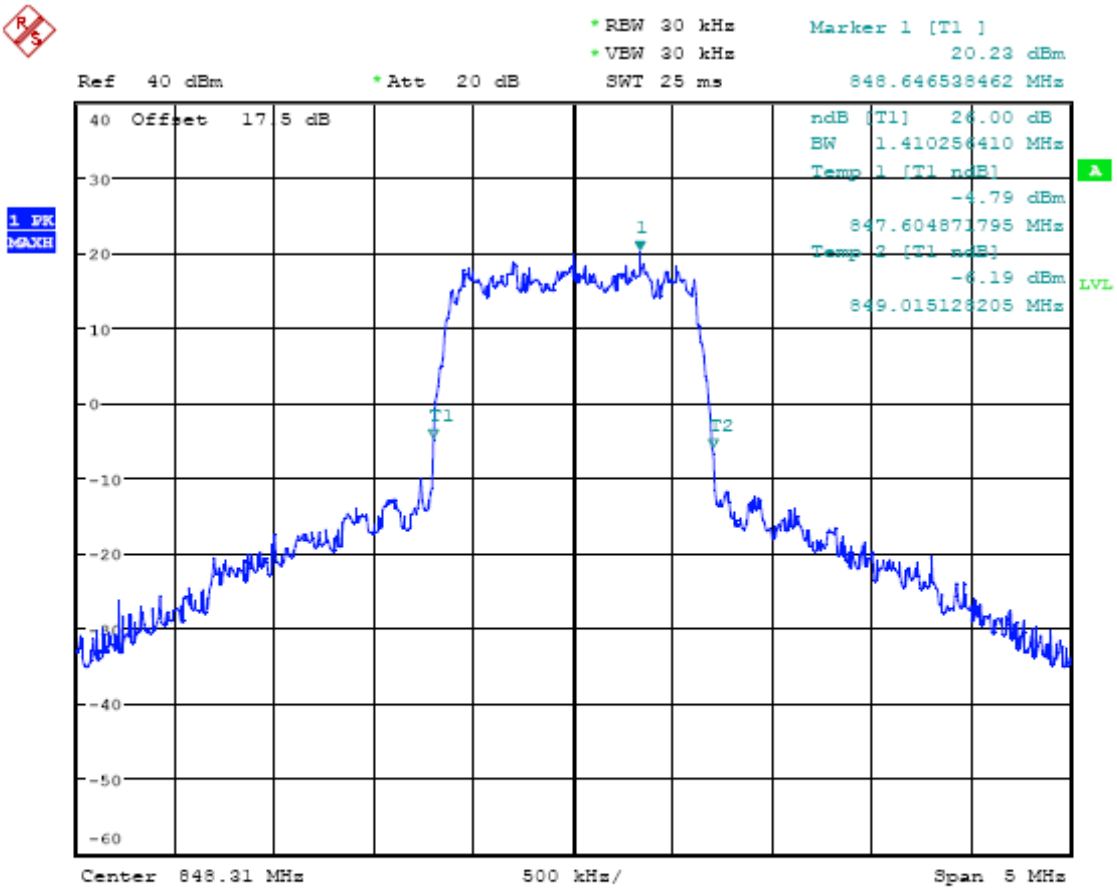
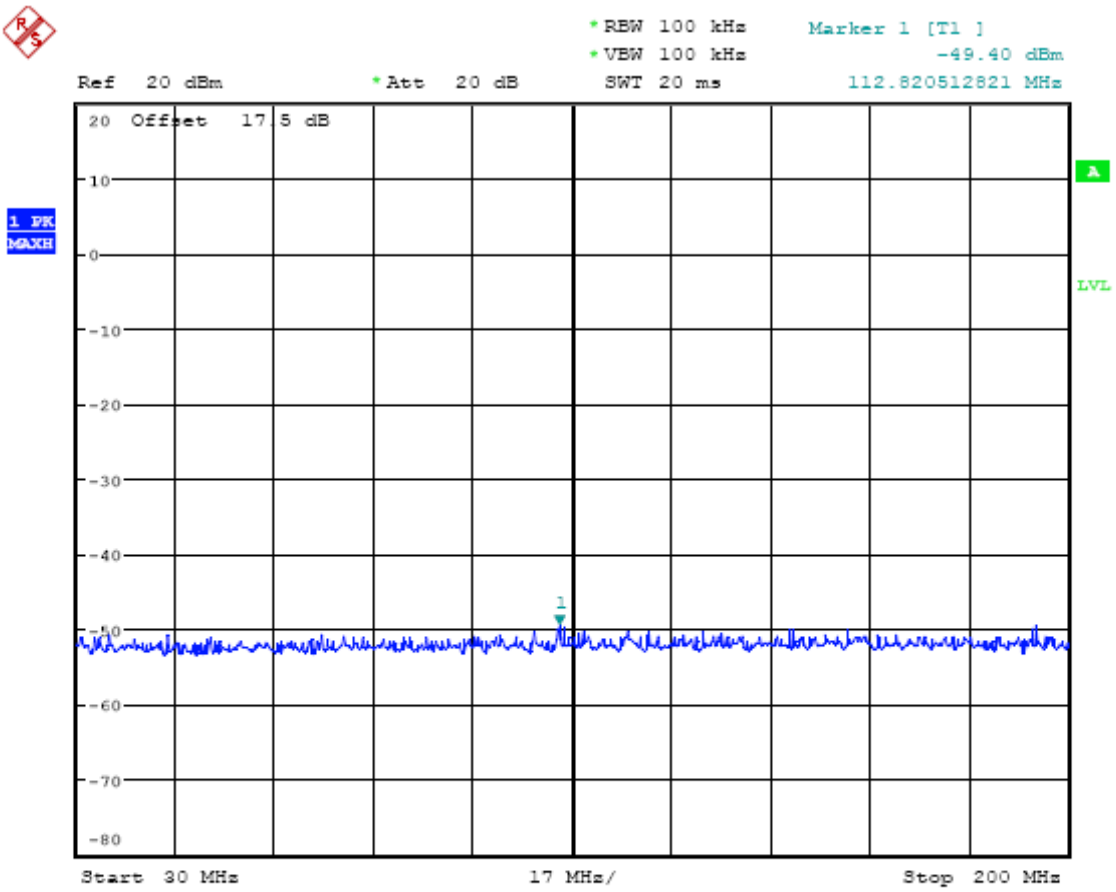


26DB BANDWIDTH CH 777

Date: 22.AUG.2007 06:13:41

Appendix C

Spurious Emissions at Antenna Terminals



CONDUCTED SPURIOUS EMISSION CH 1013

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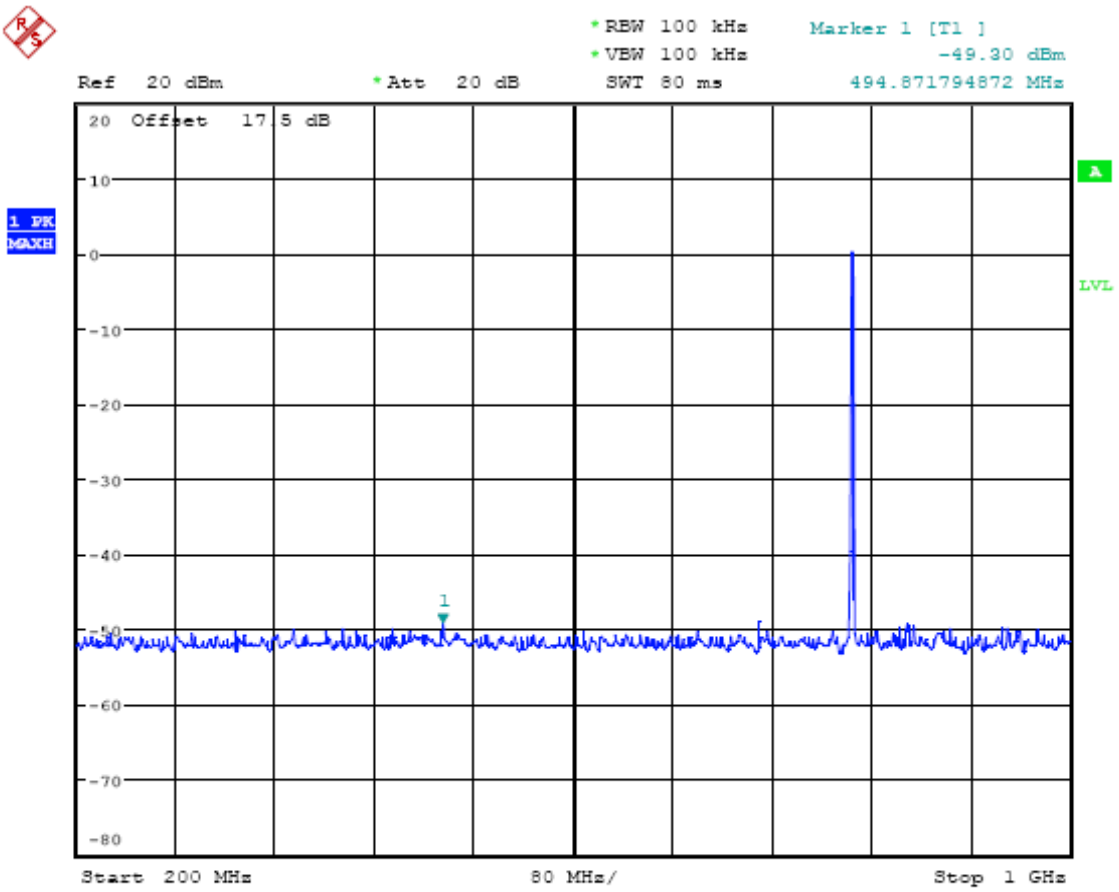

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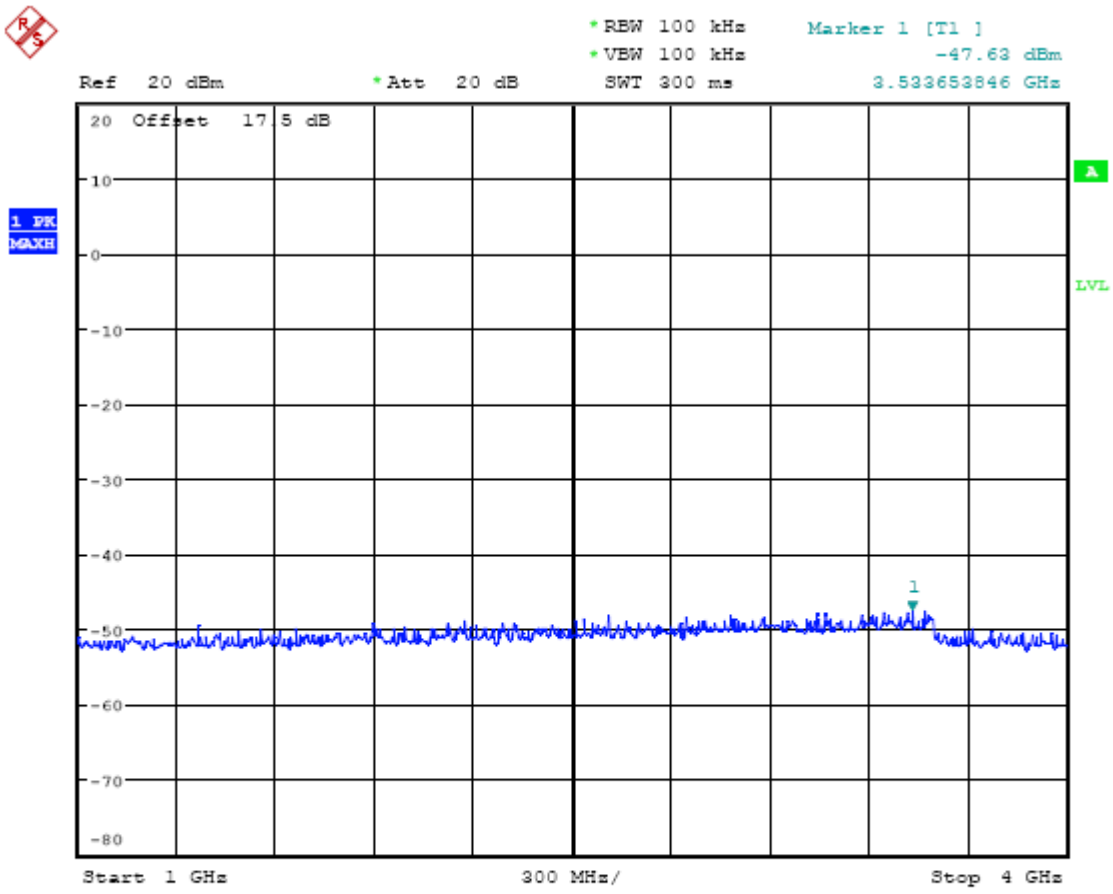

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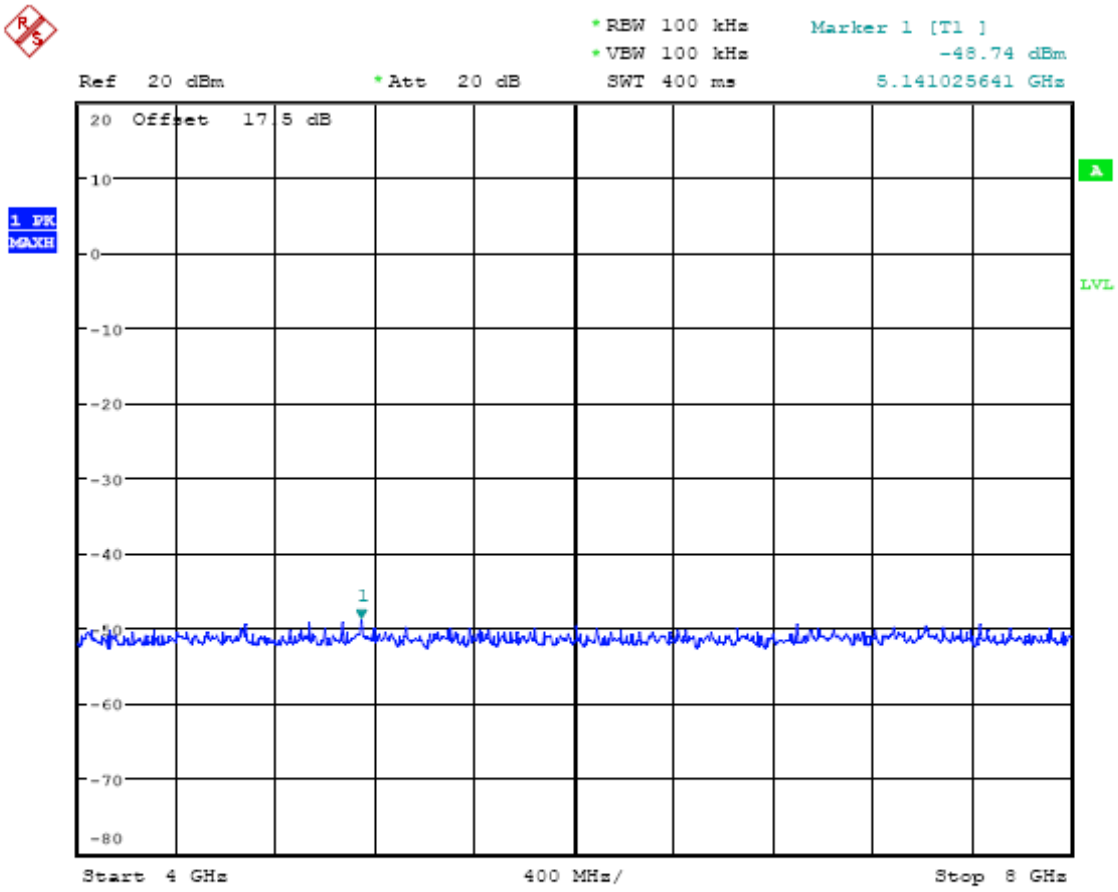

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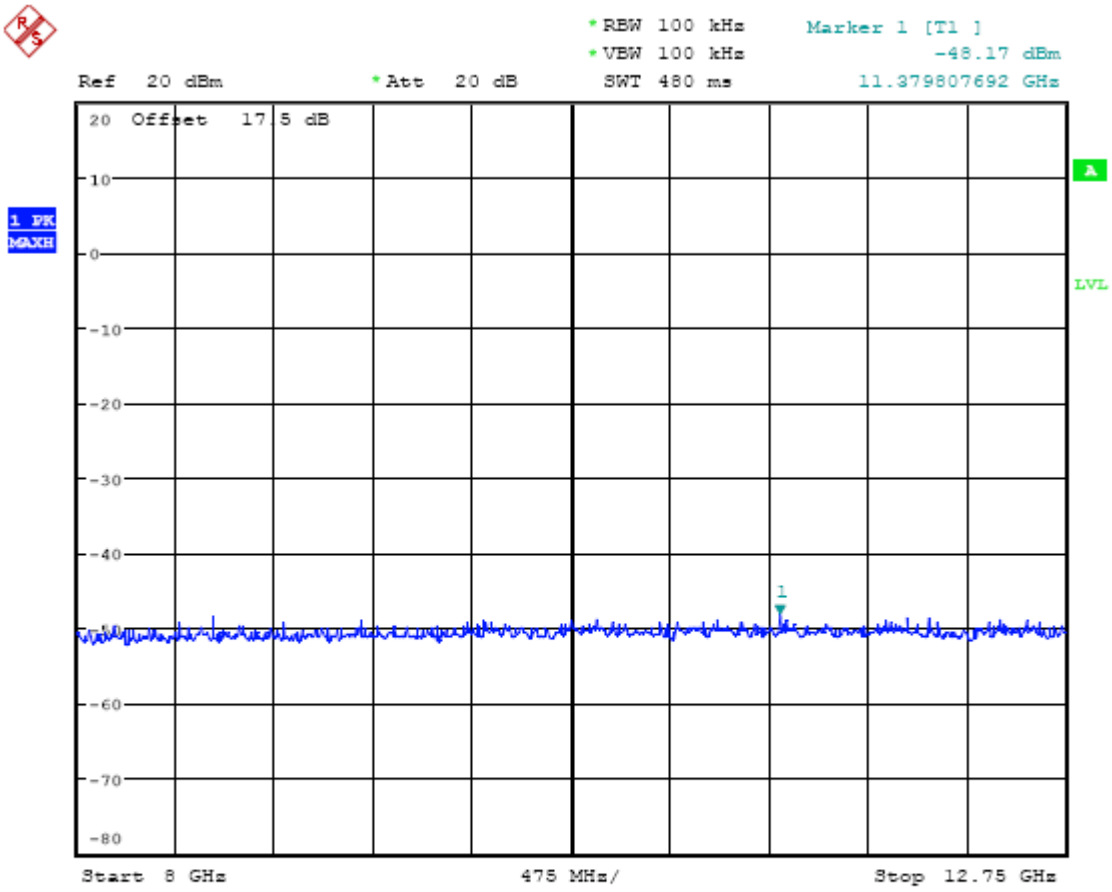

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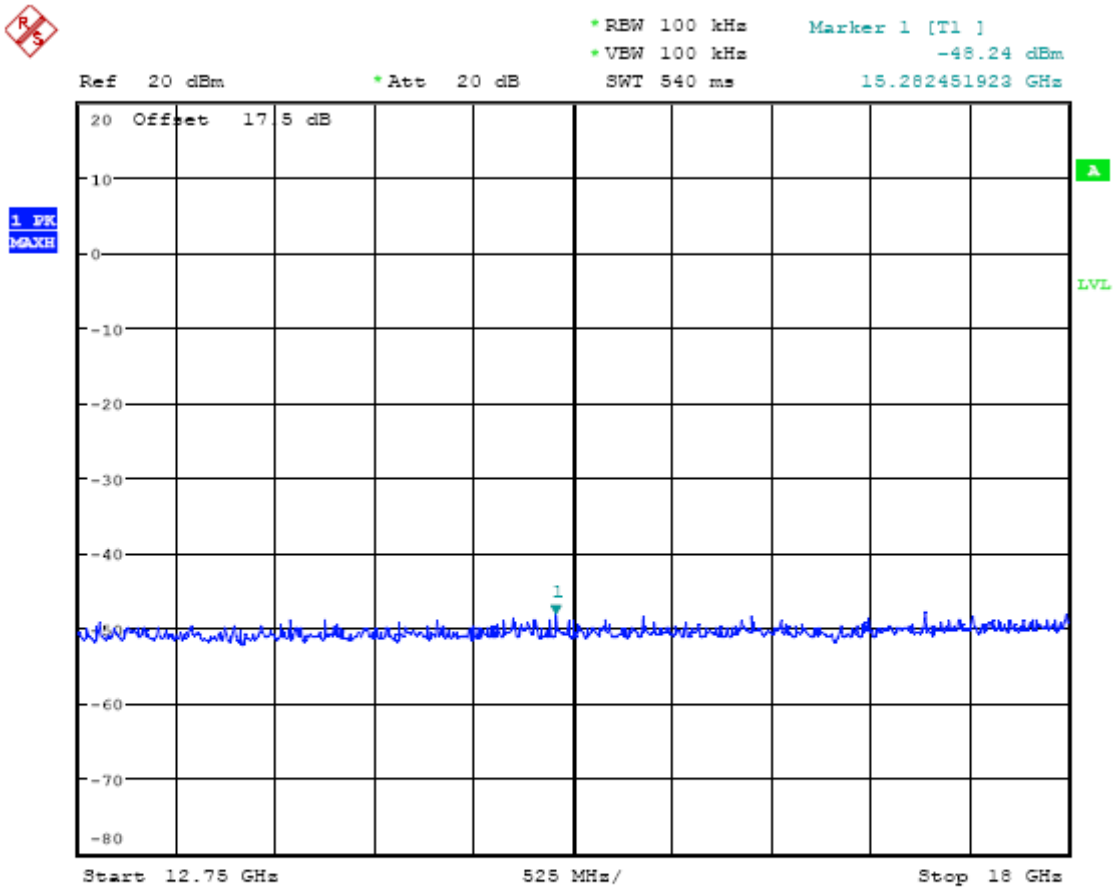

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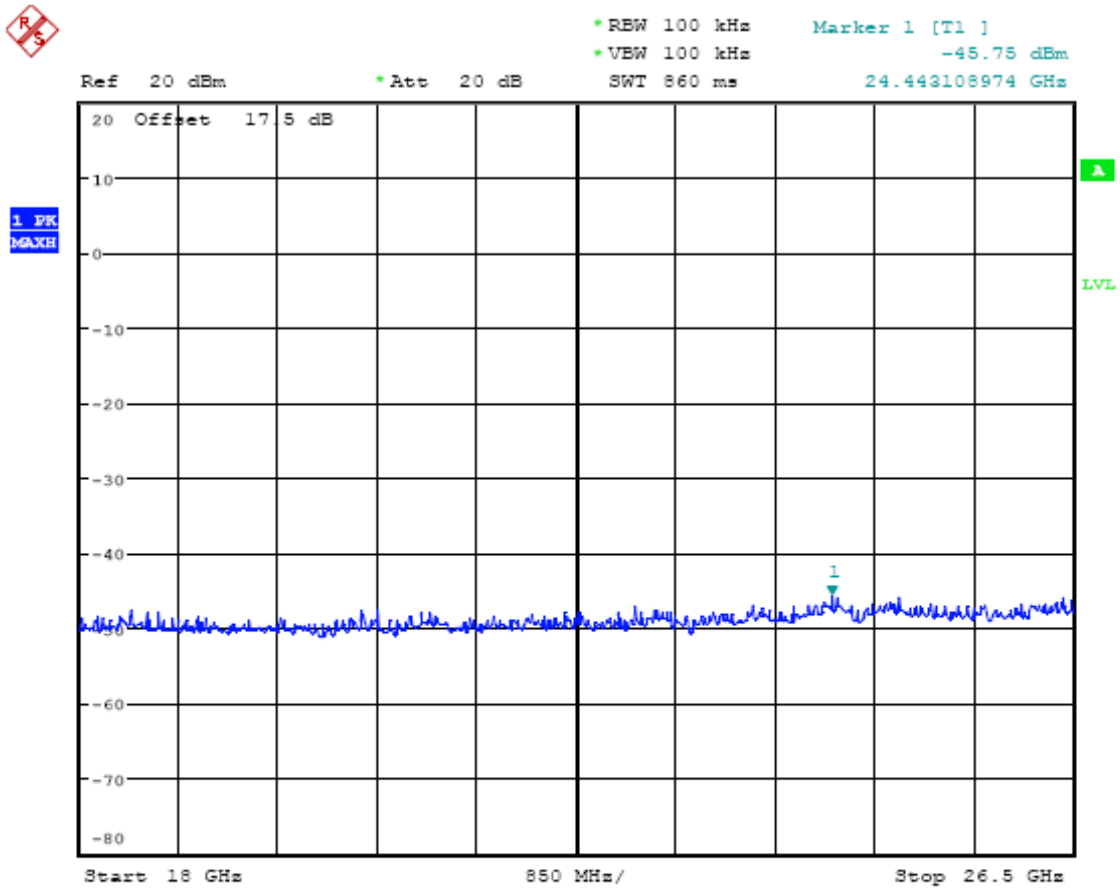

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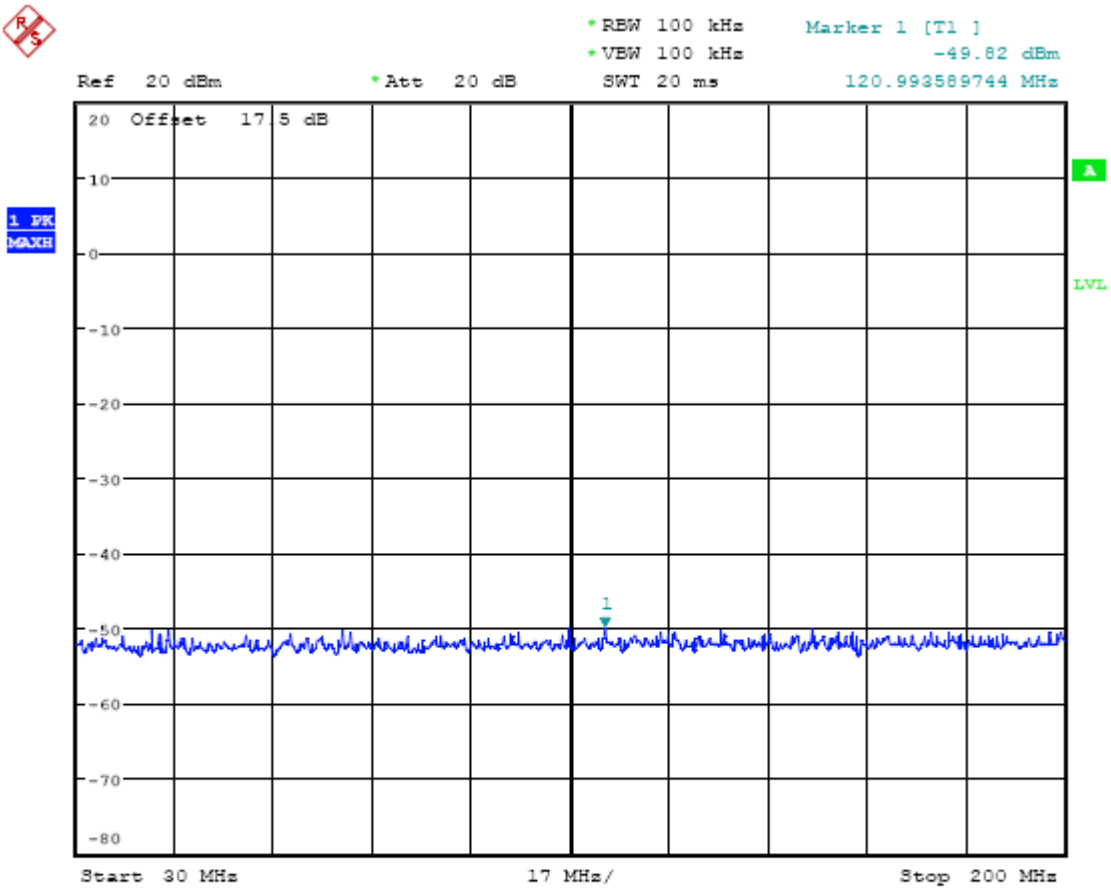

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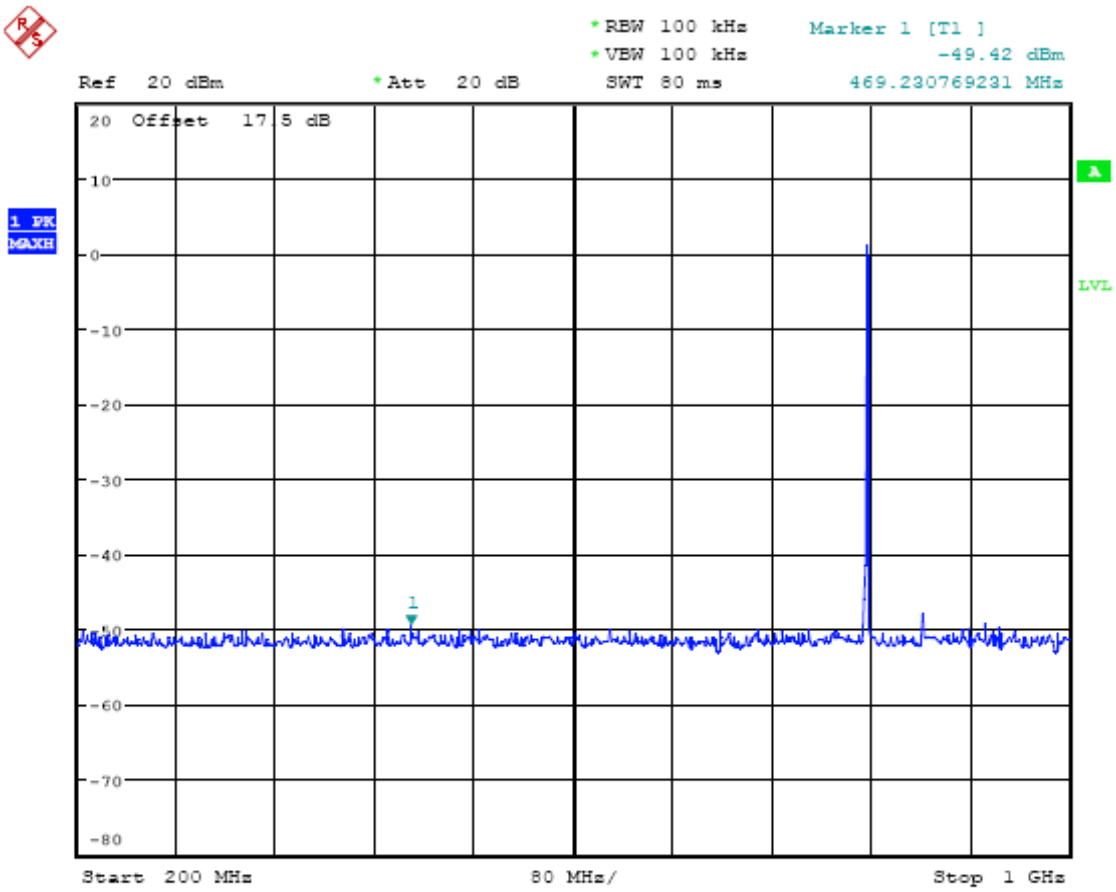

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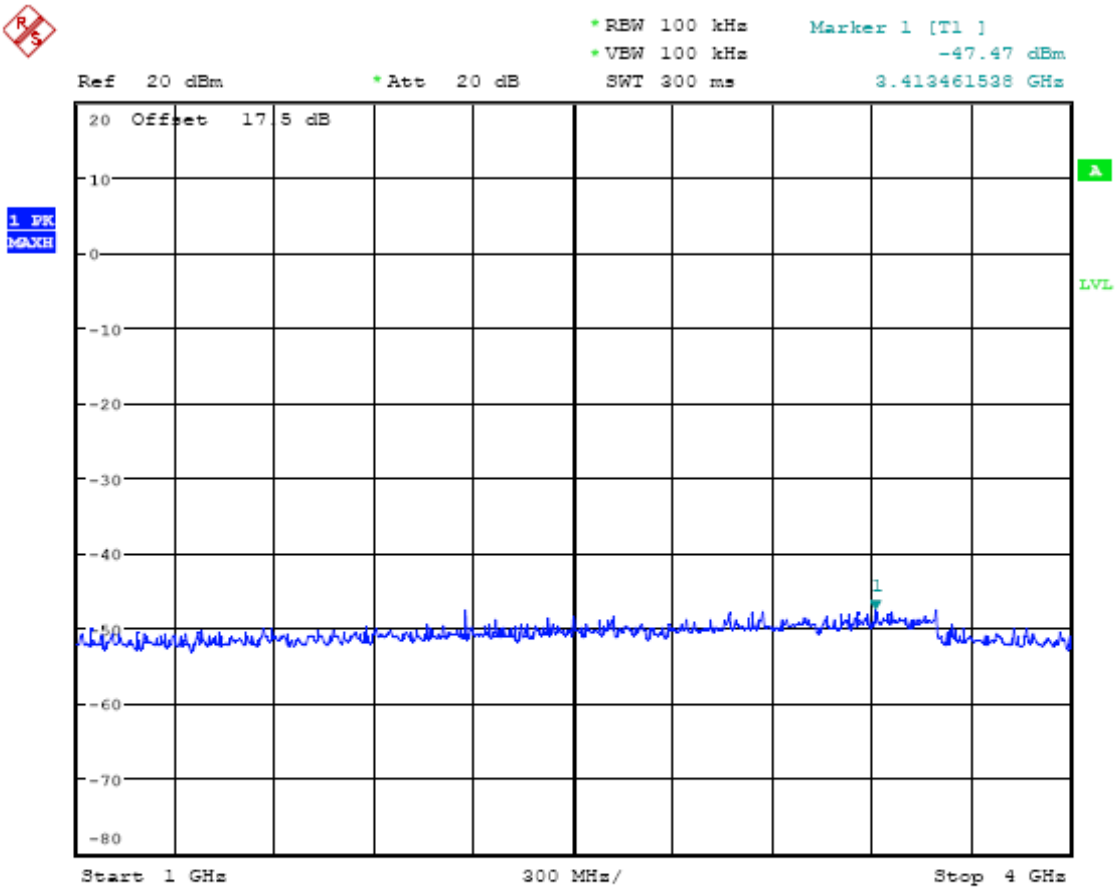

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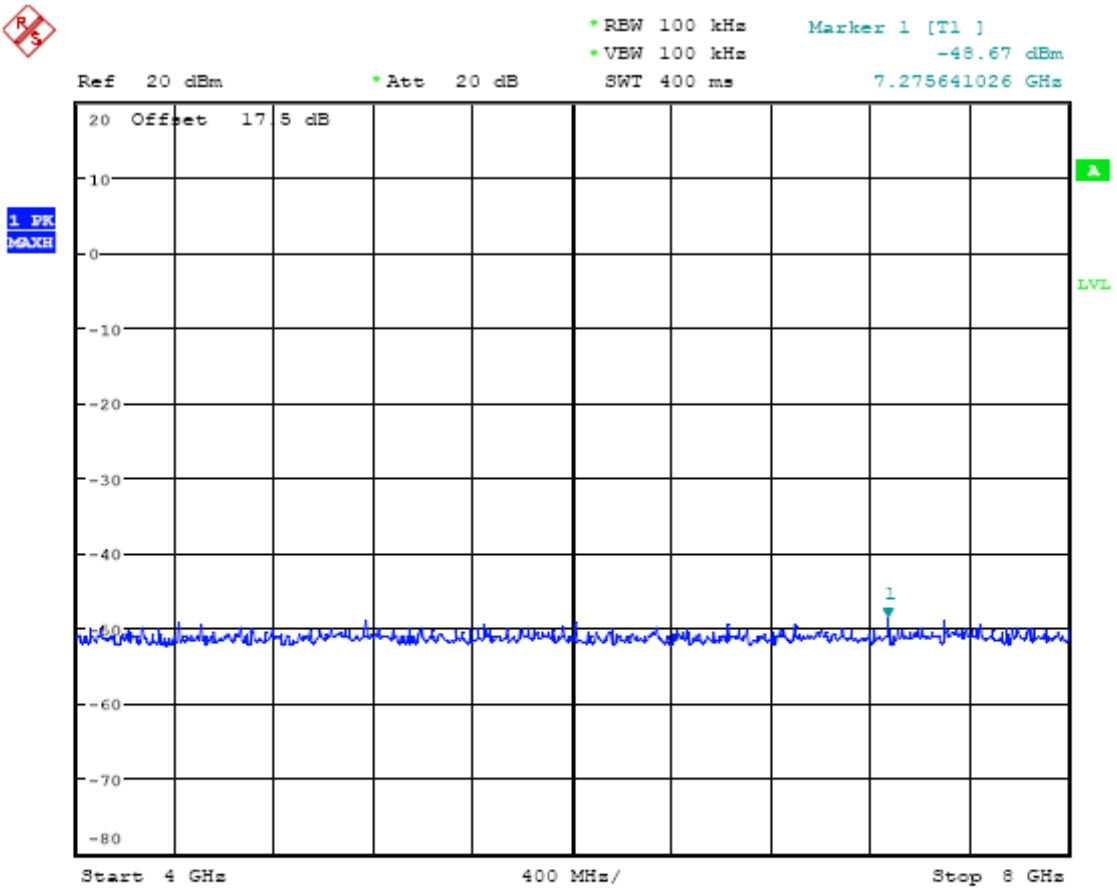

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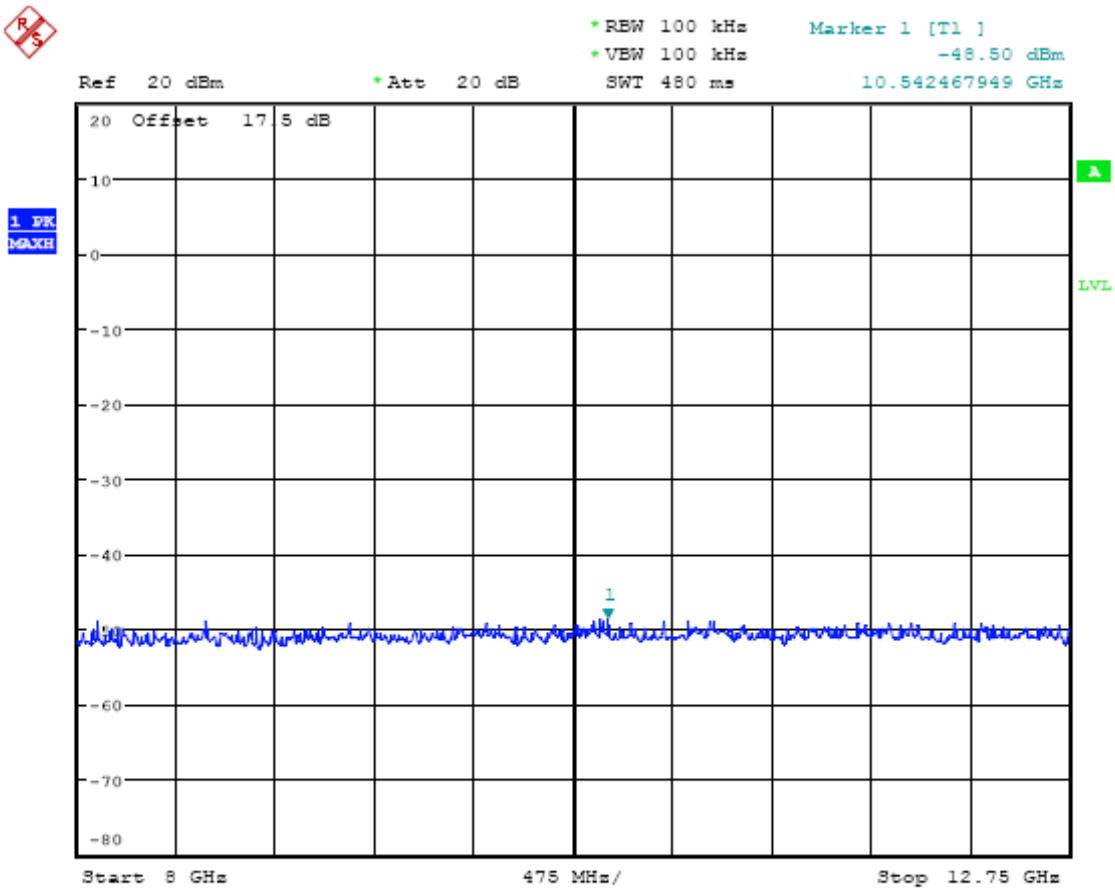

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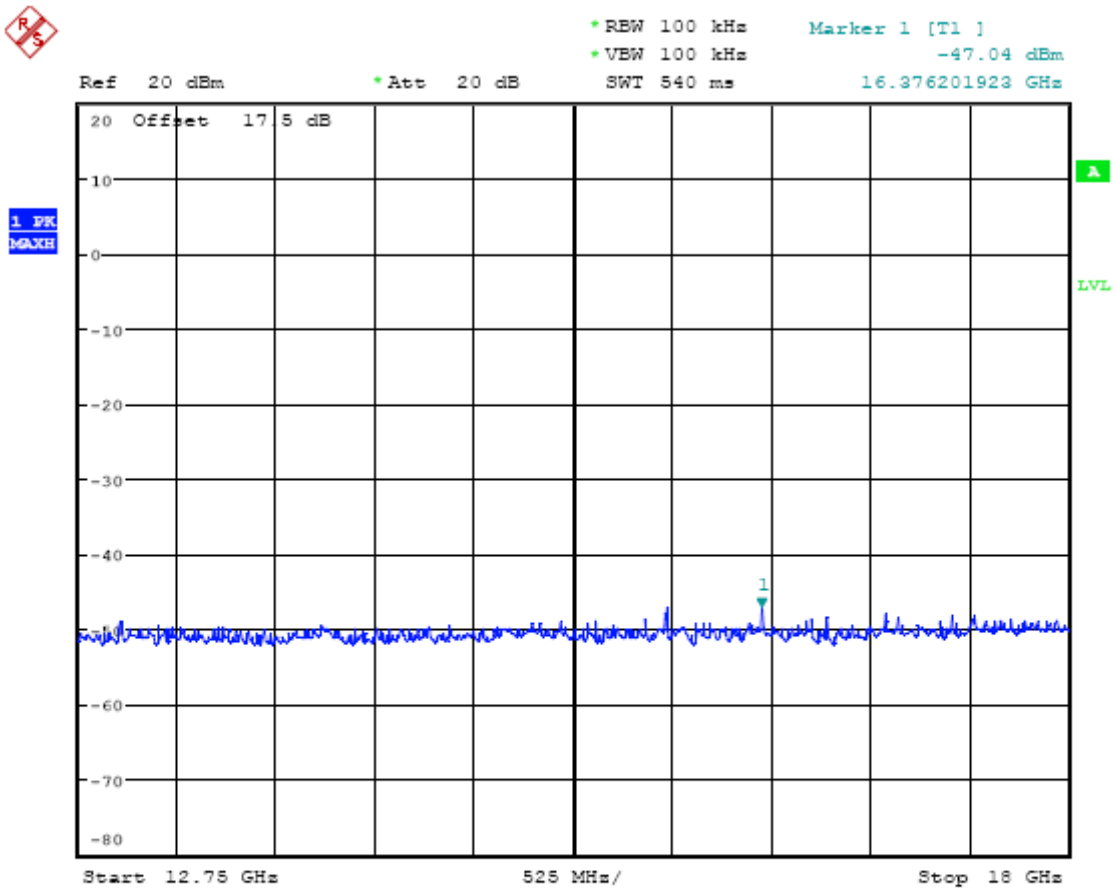

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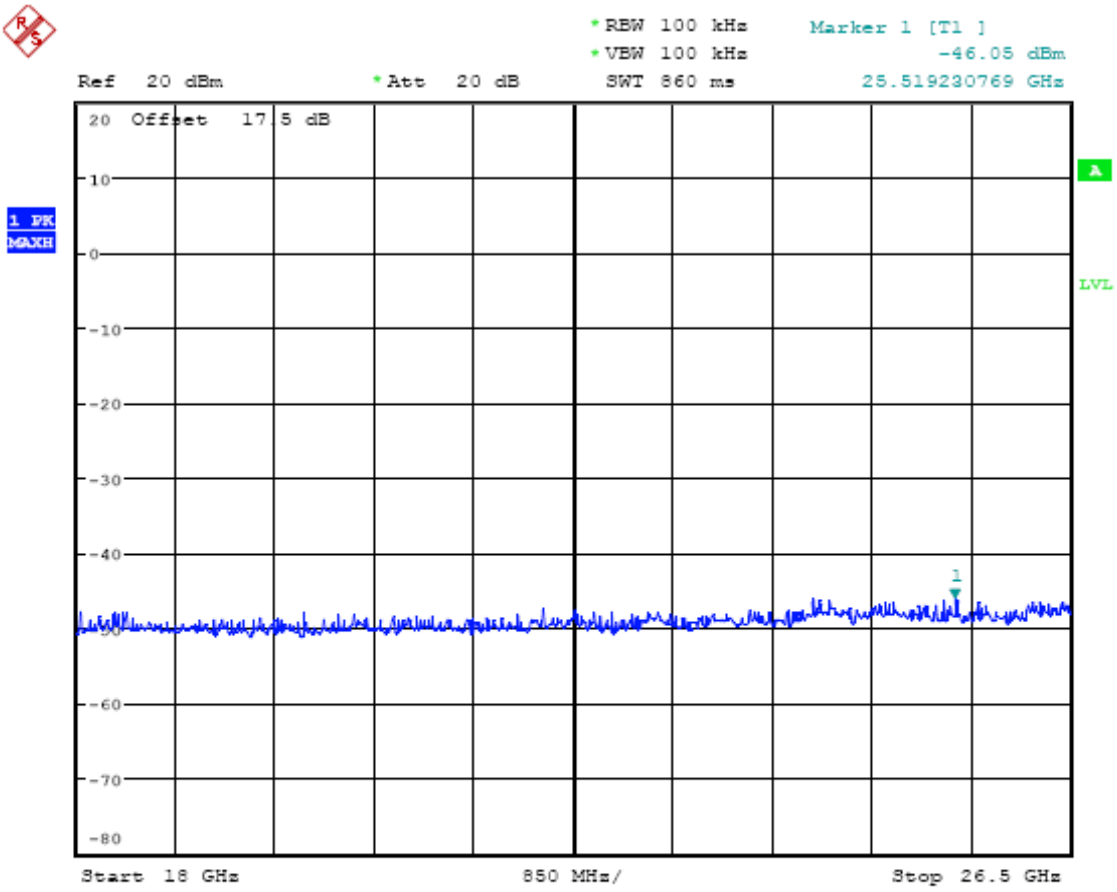

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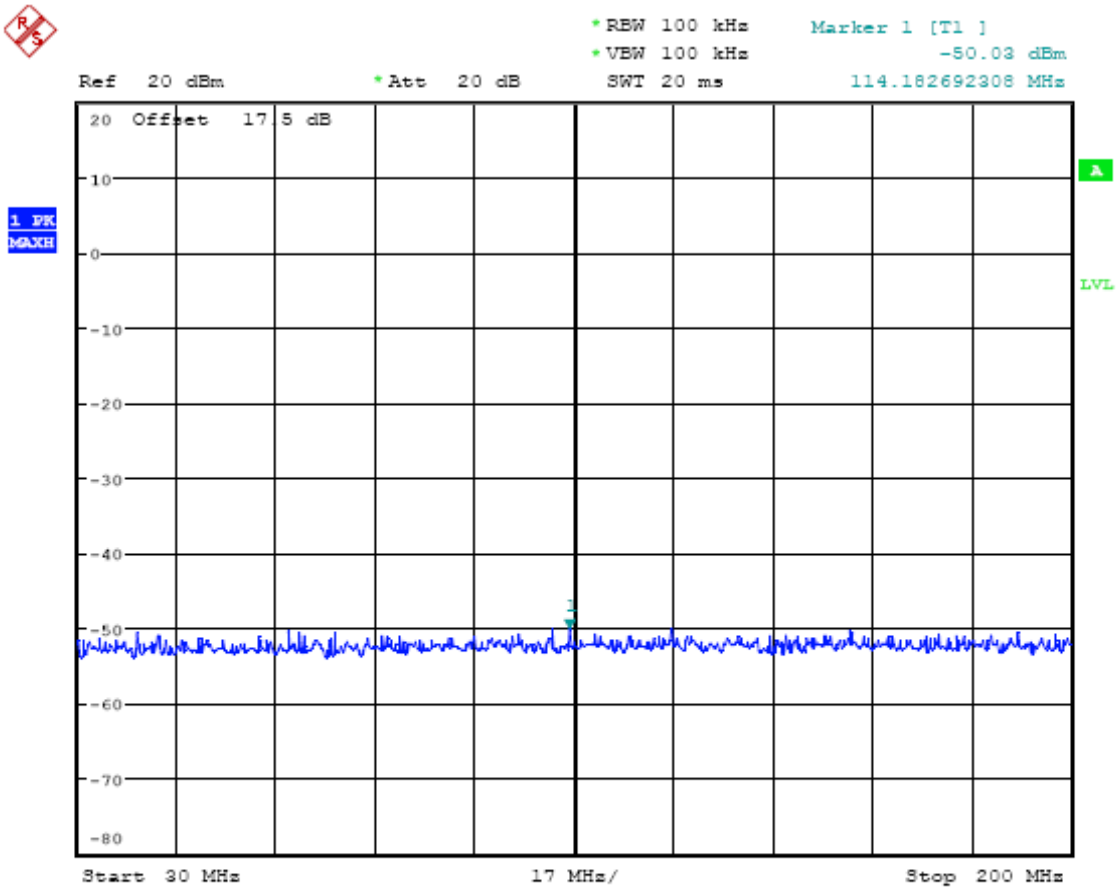

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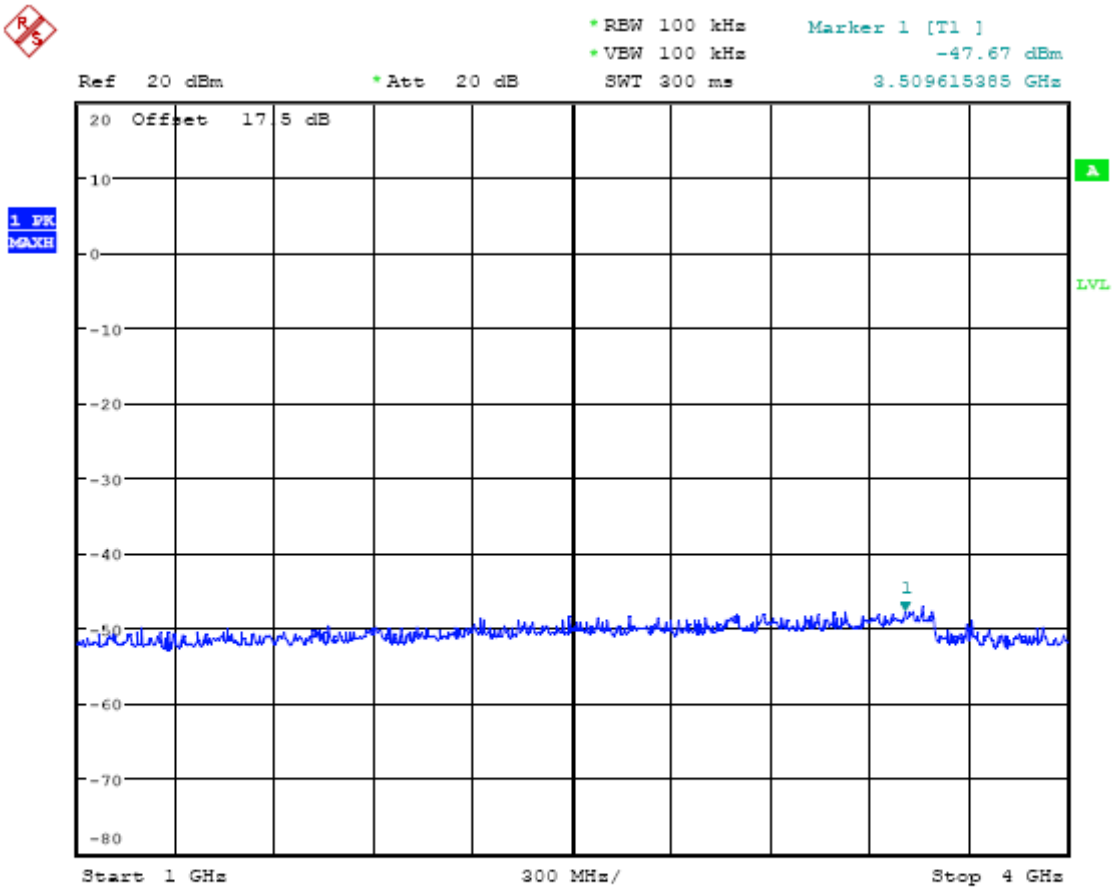

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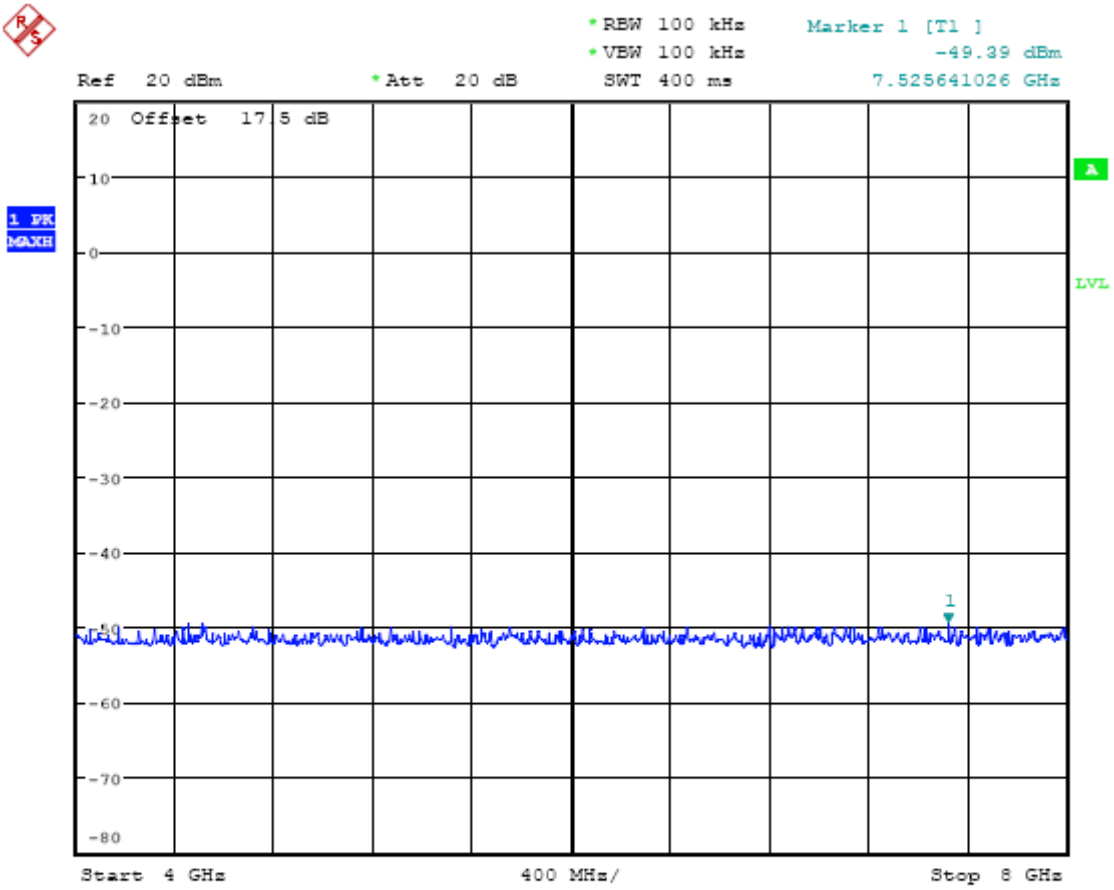

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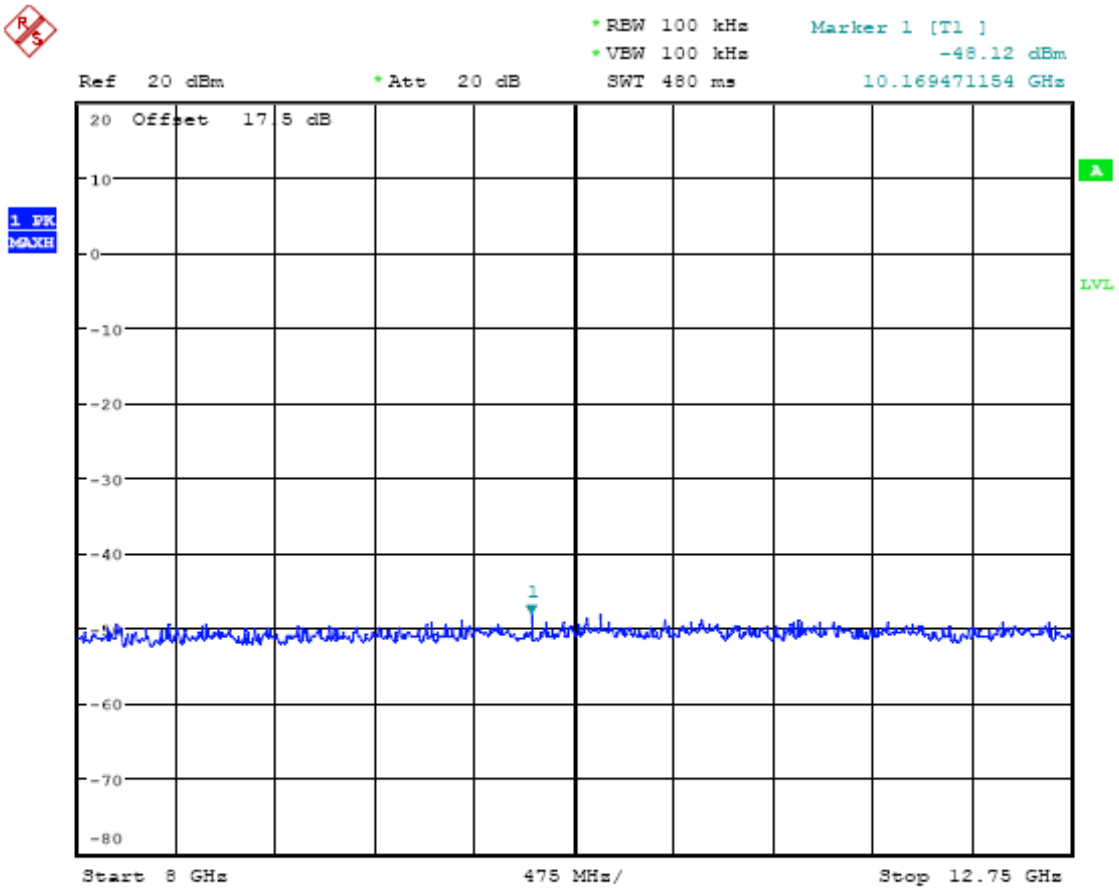

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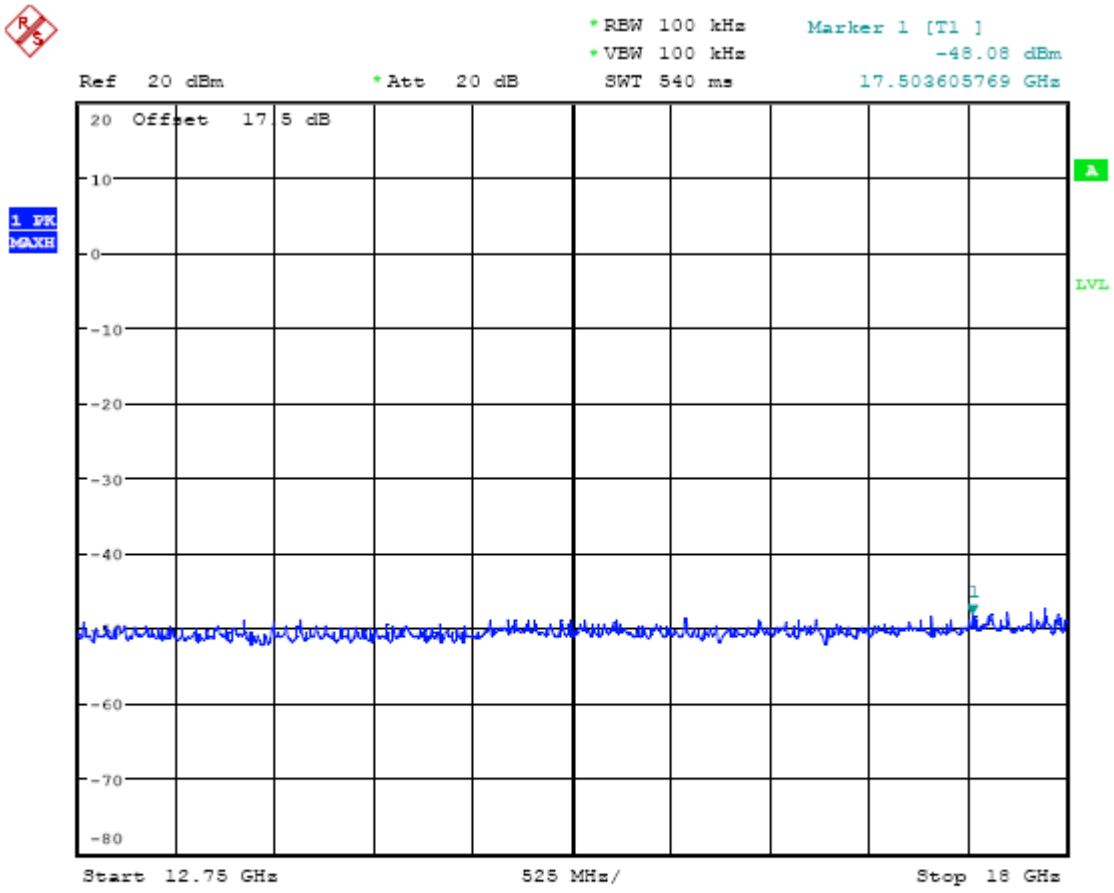

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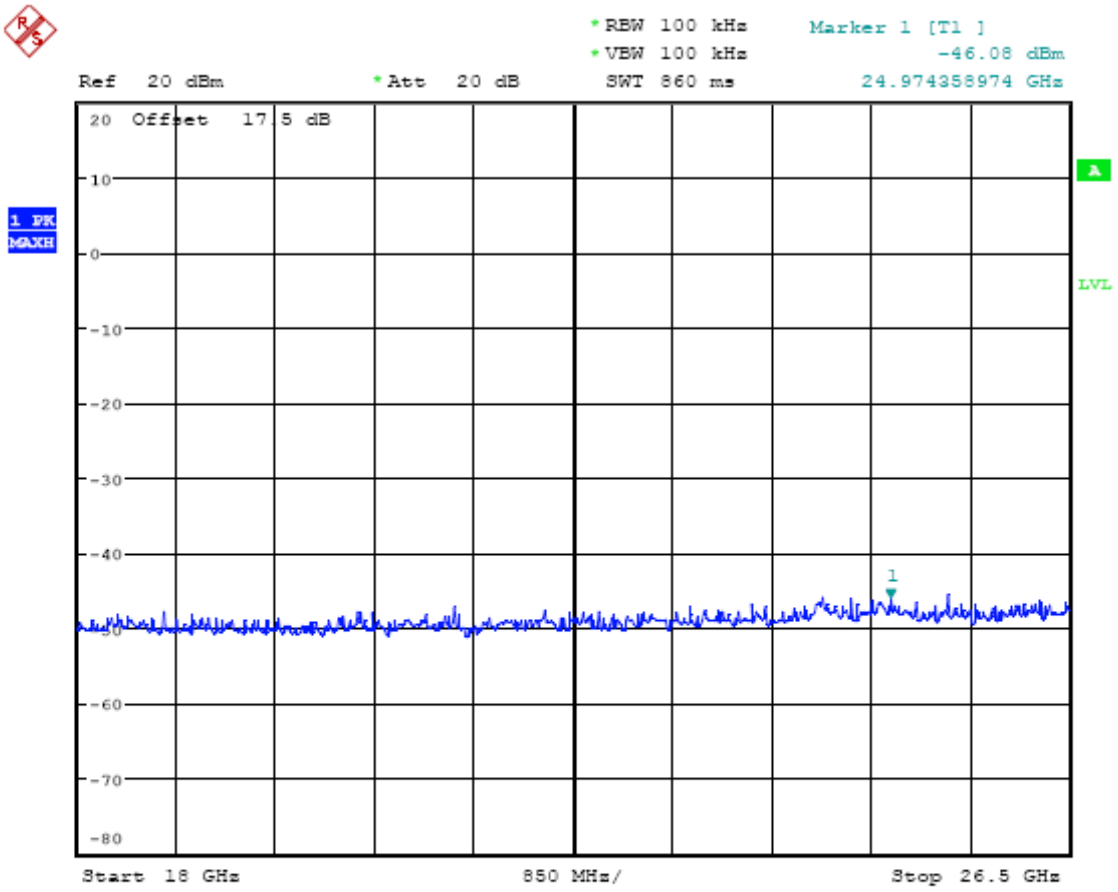

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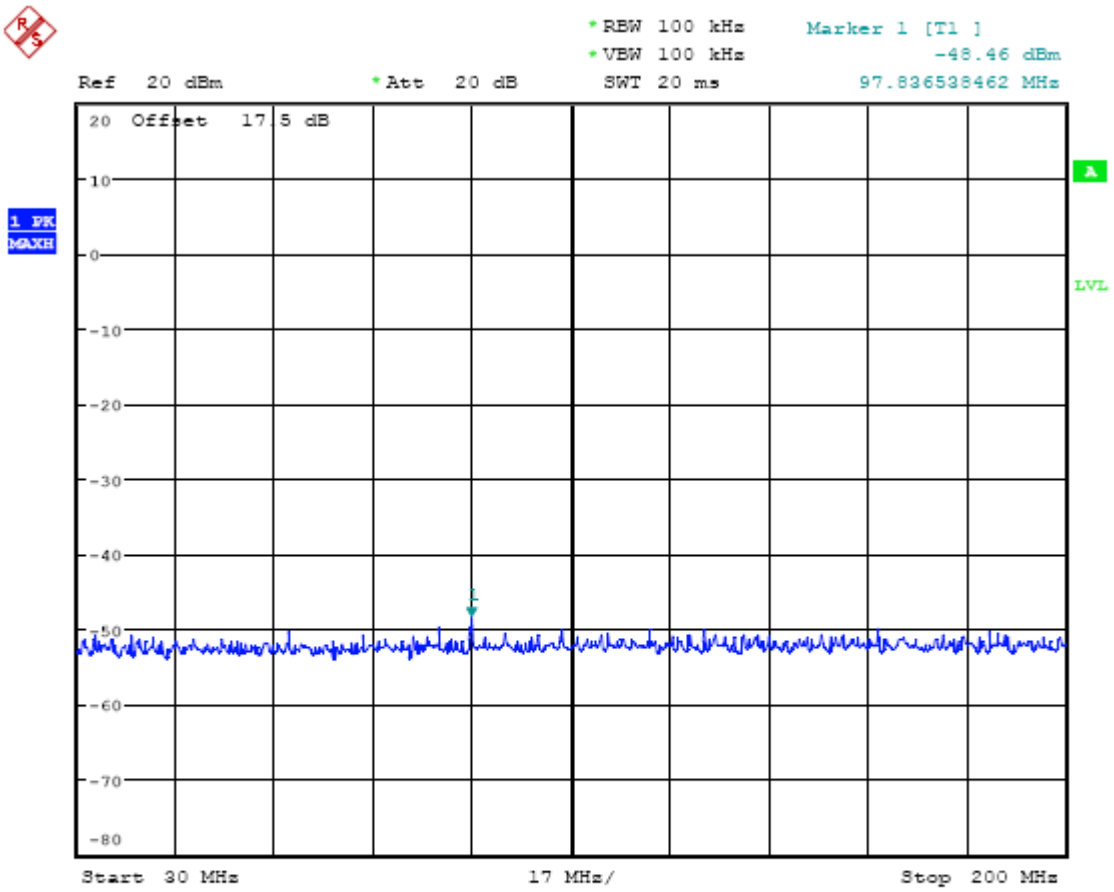

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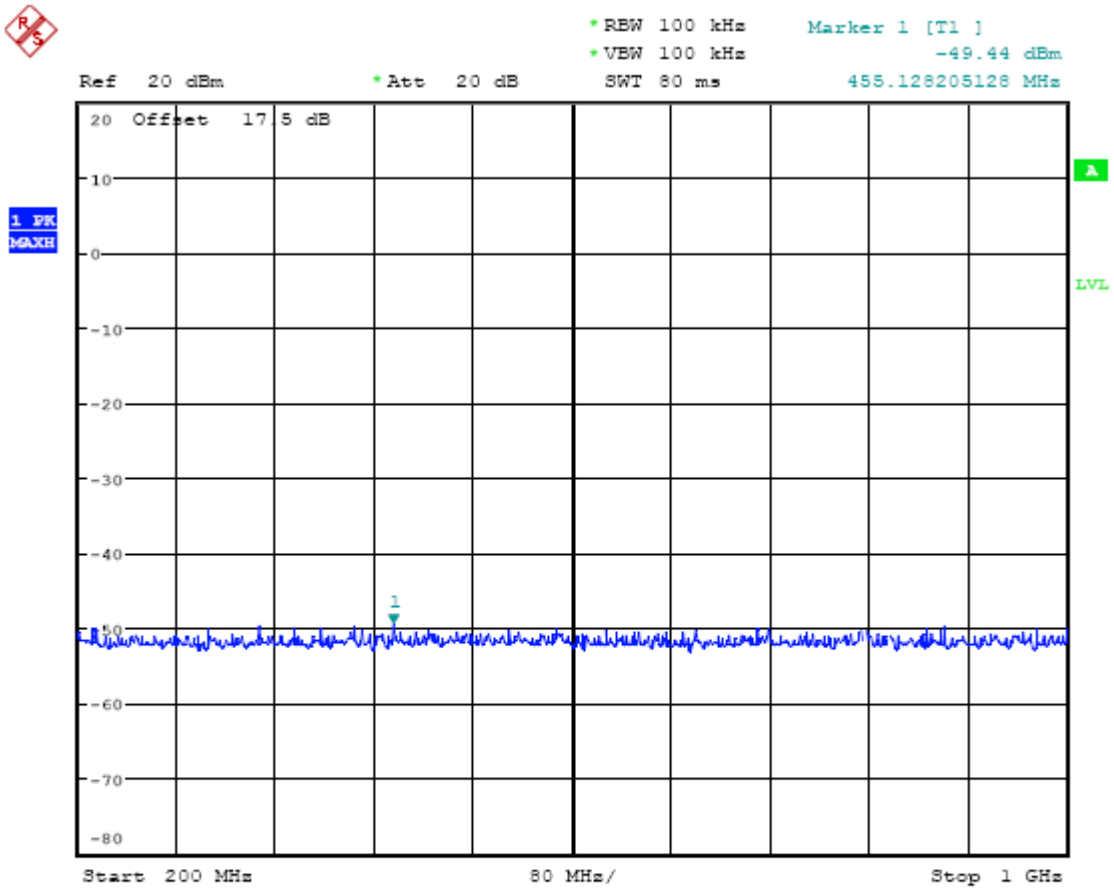

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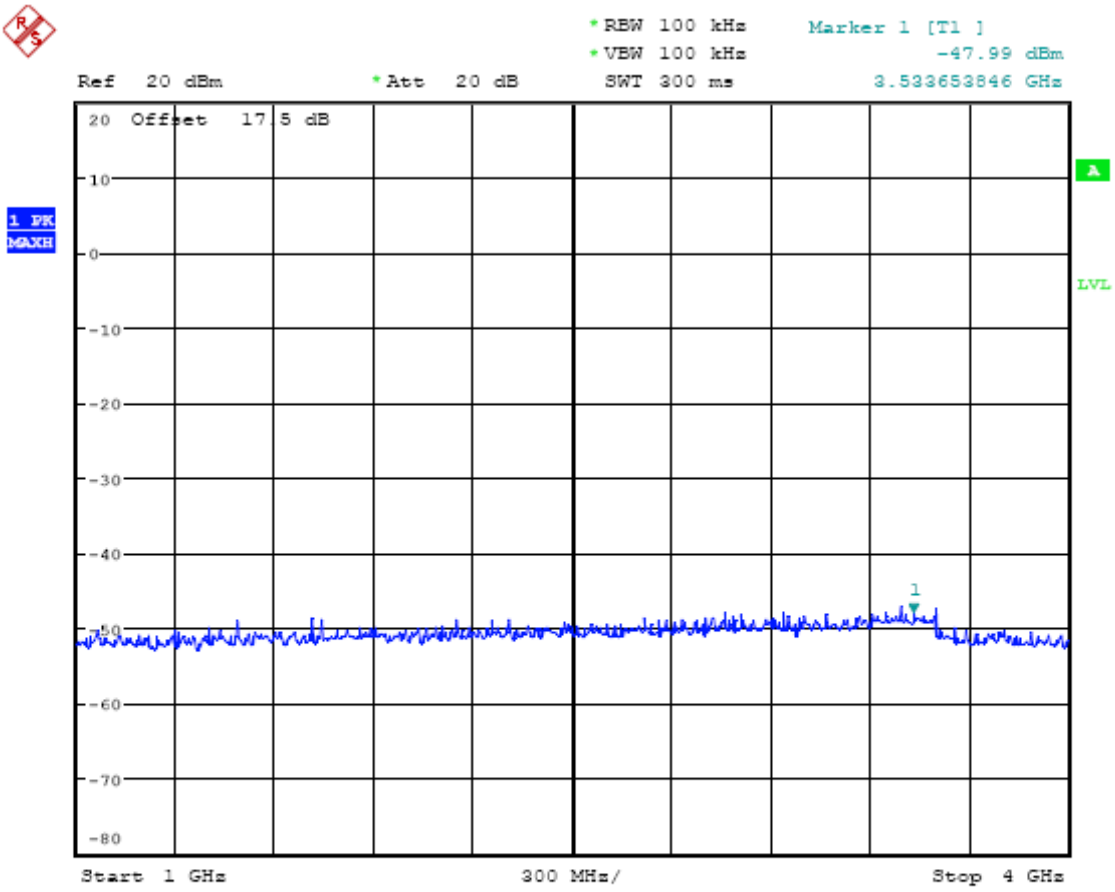

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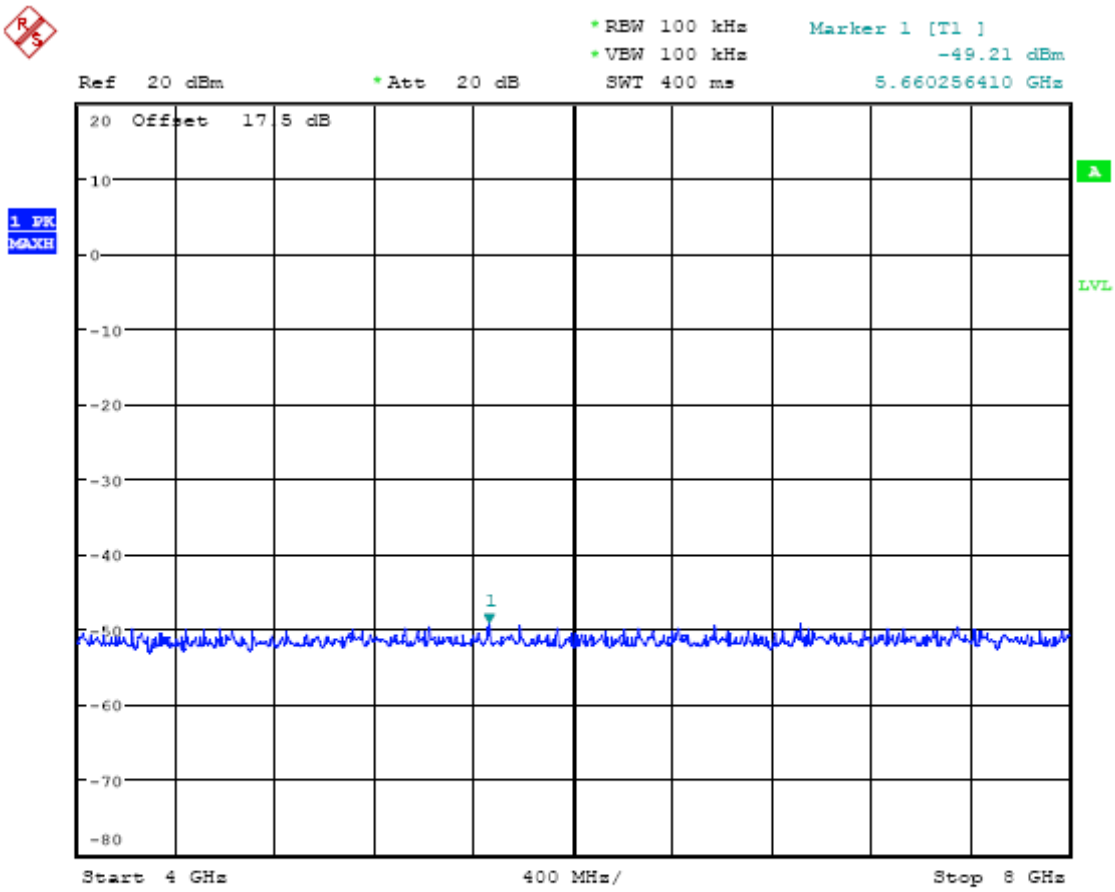
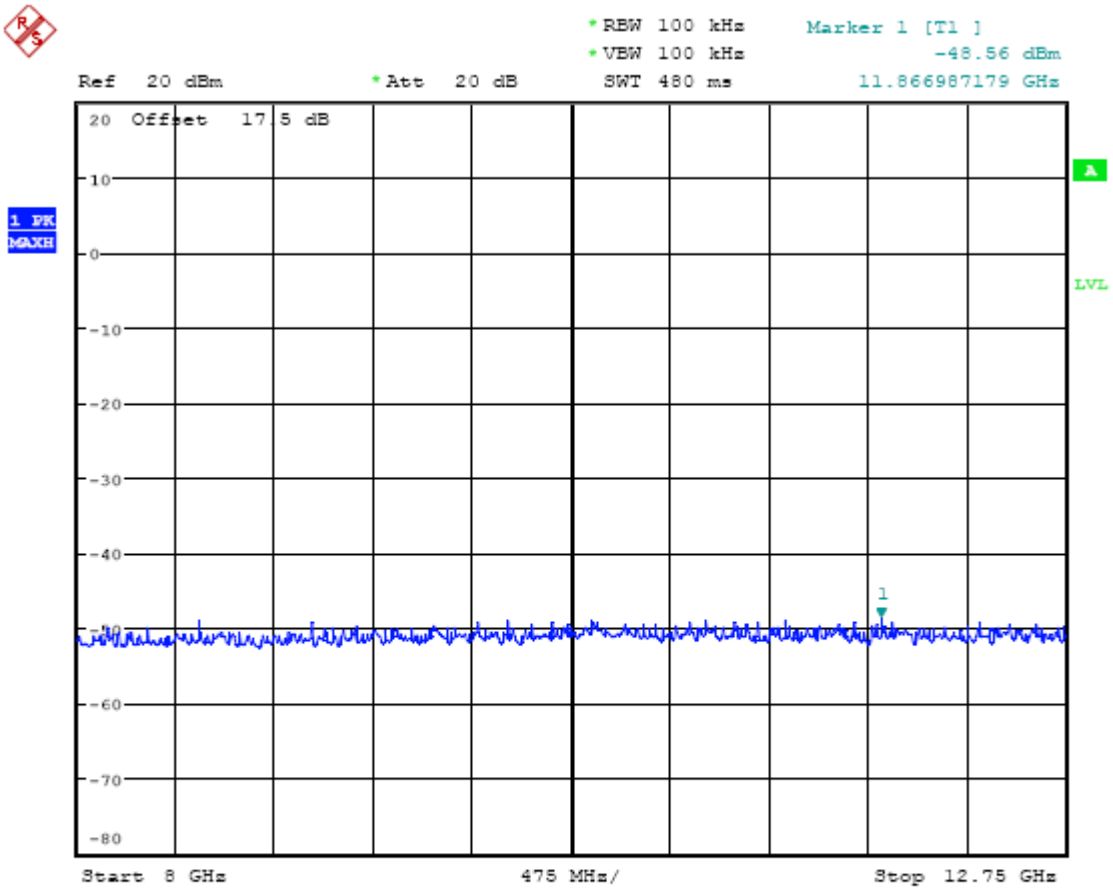


CONDUCTED SPURIOUS EMISSION IDLE

Date: 21.AUG.2007 20:47:55



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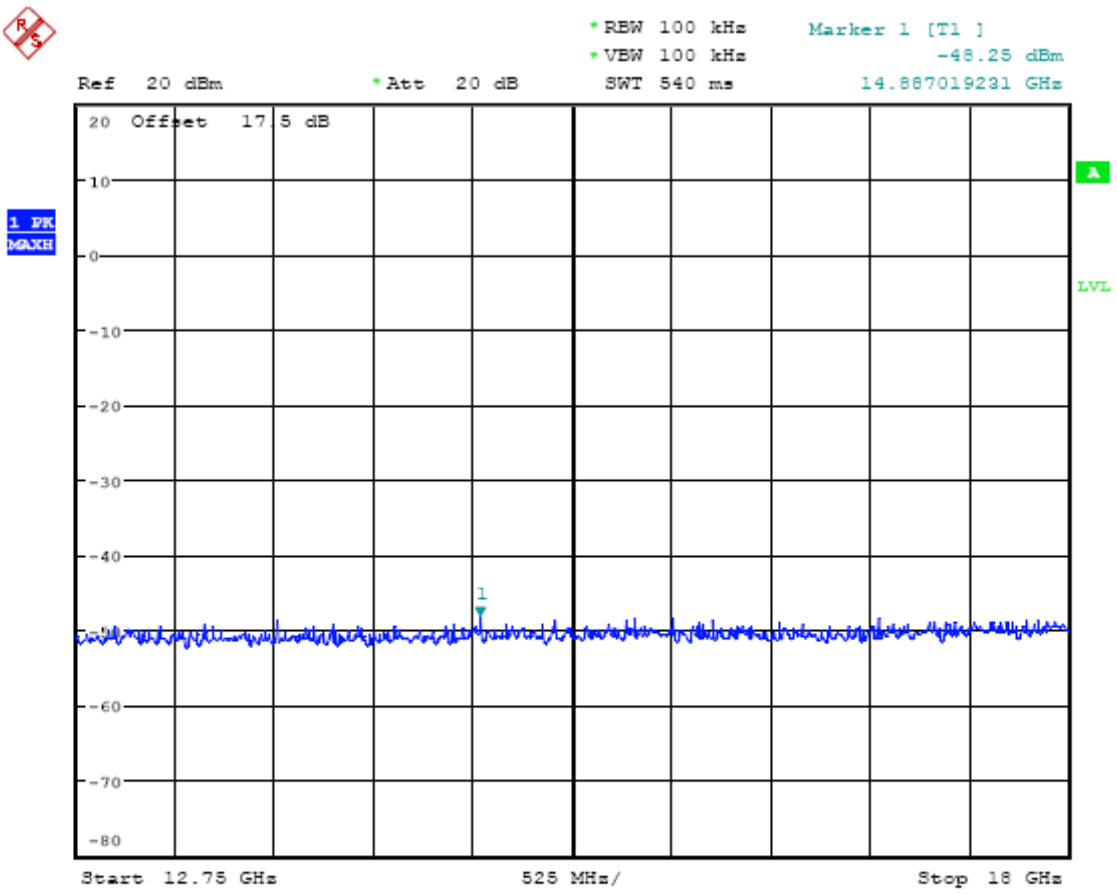

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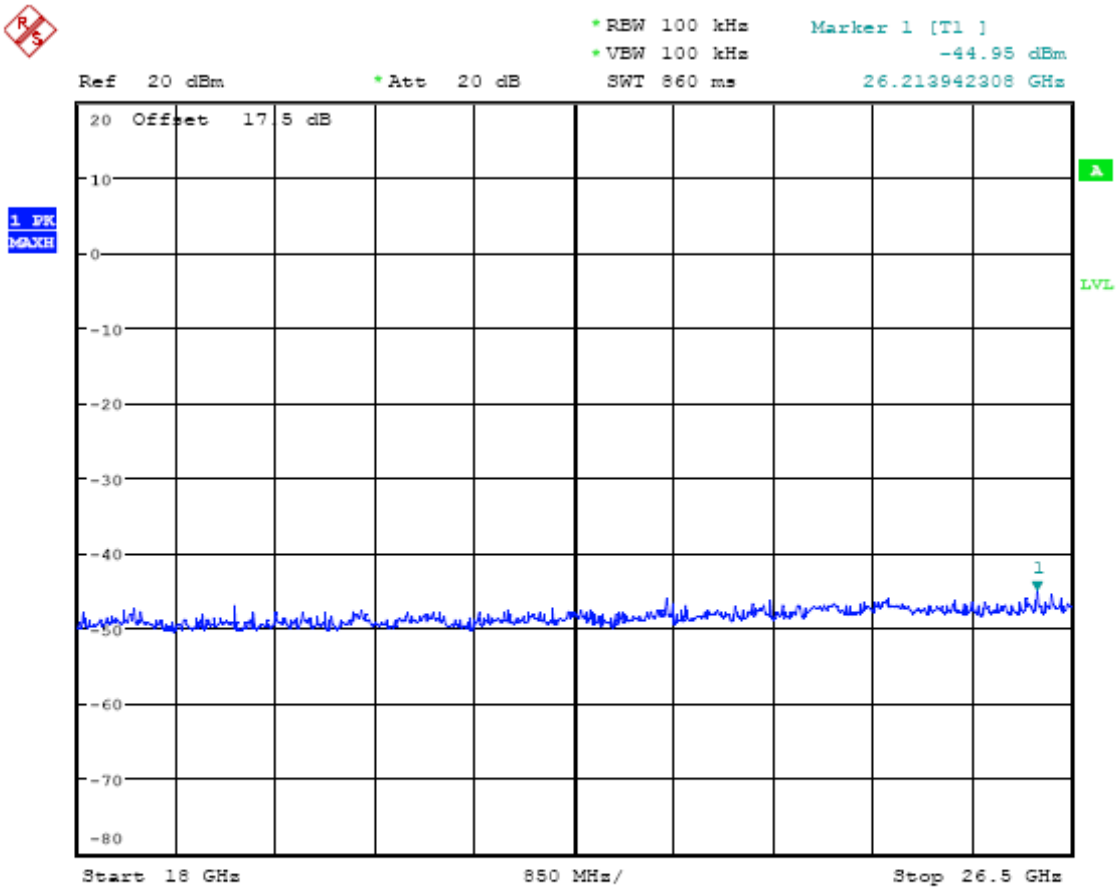


CONDUCTED SPURIOUS EMISSION IDLE

Date: 21.AUG.2007 20:46:45

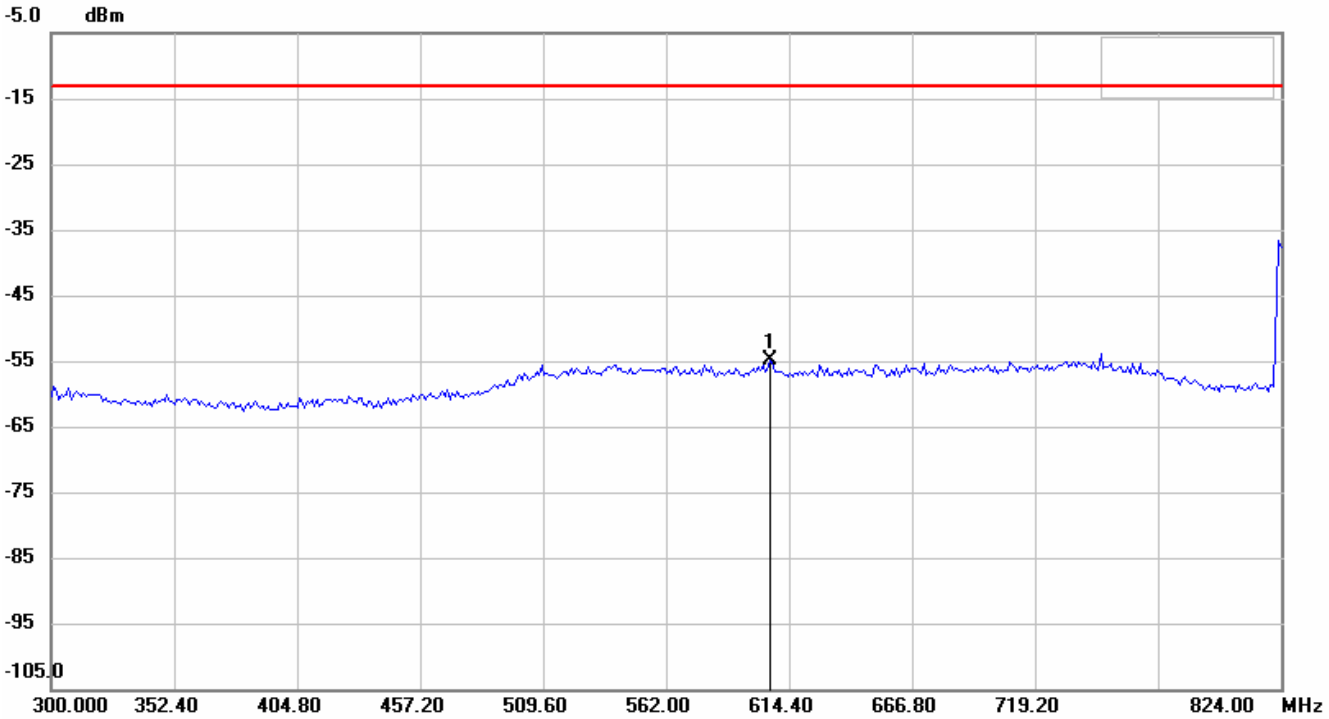
Appendix D

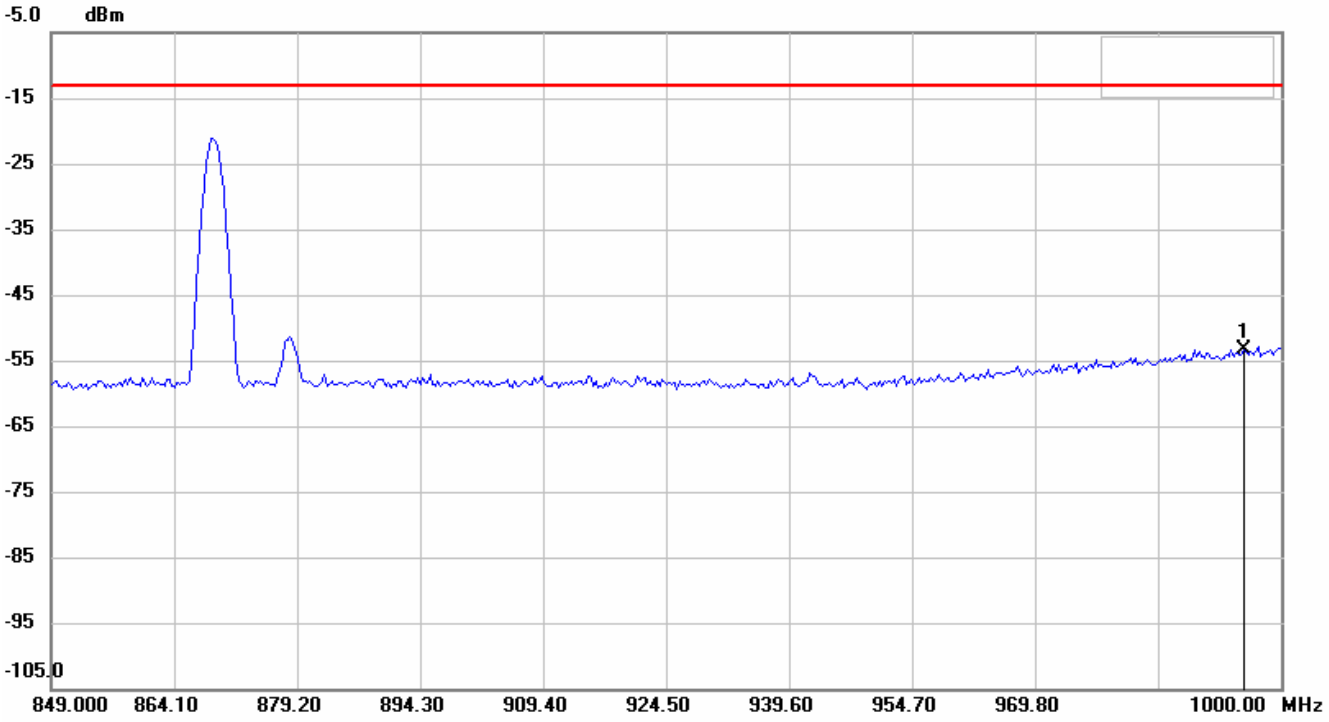
Filed Strength of Spurious Emission

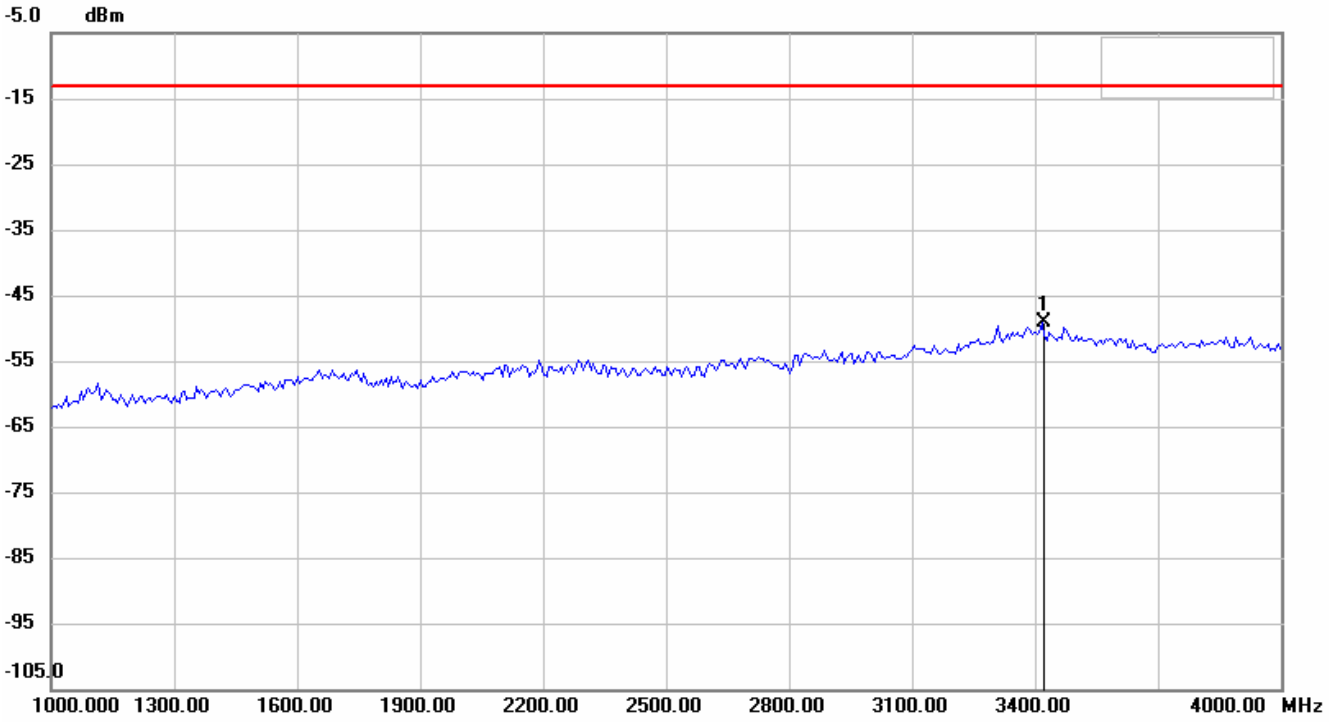
The measurement diagram are wideband pre-scan results; only for reference.

CH 1013

Antenna Polarization H




-5.0 dBm
-15
-25
-35
-45
-55
-65
-75
-85
-95
-105.0
1
849.000 864.10 879.20 894.30 909.40 924.50 939.60 954.70 969.80 1000.00 MHz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-95
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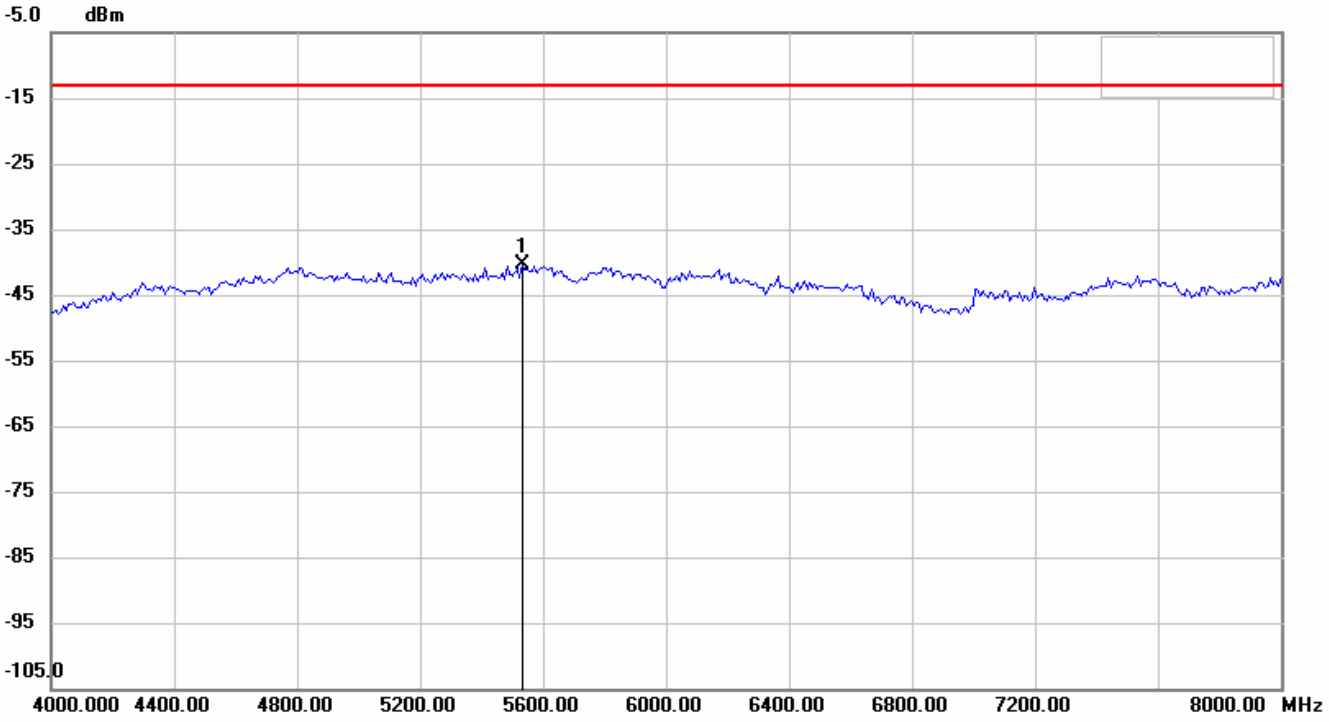
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-105.0
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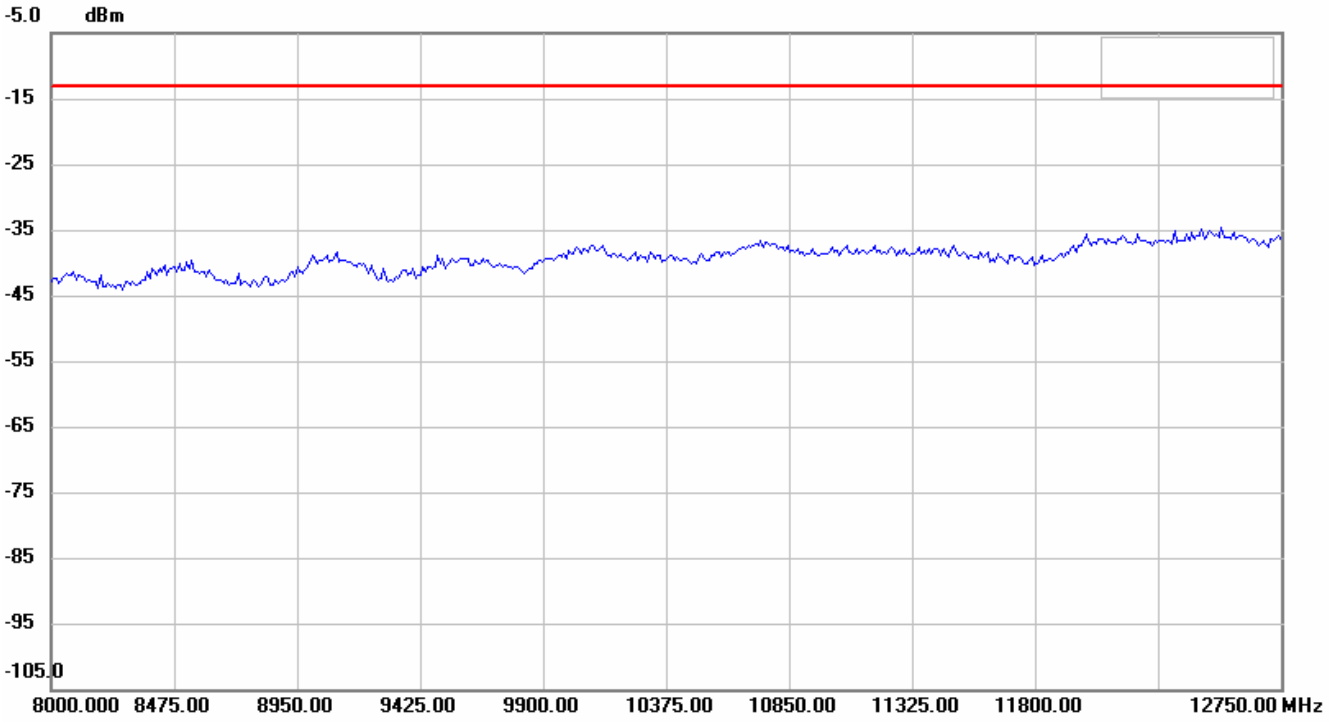
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-65
-75
-85
-95
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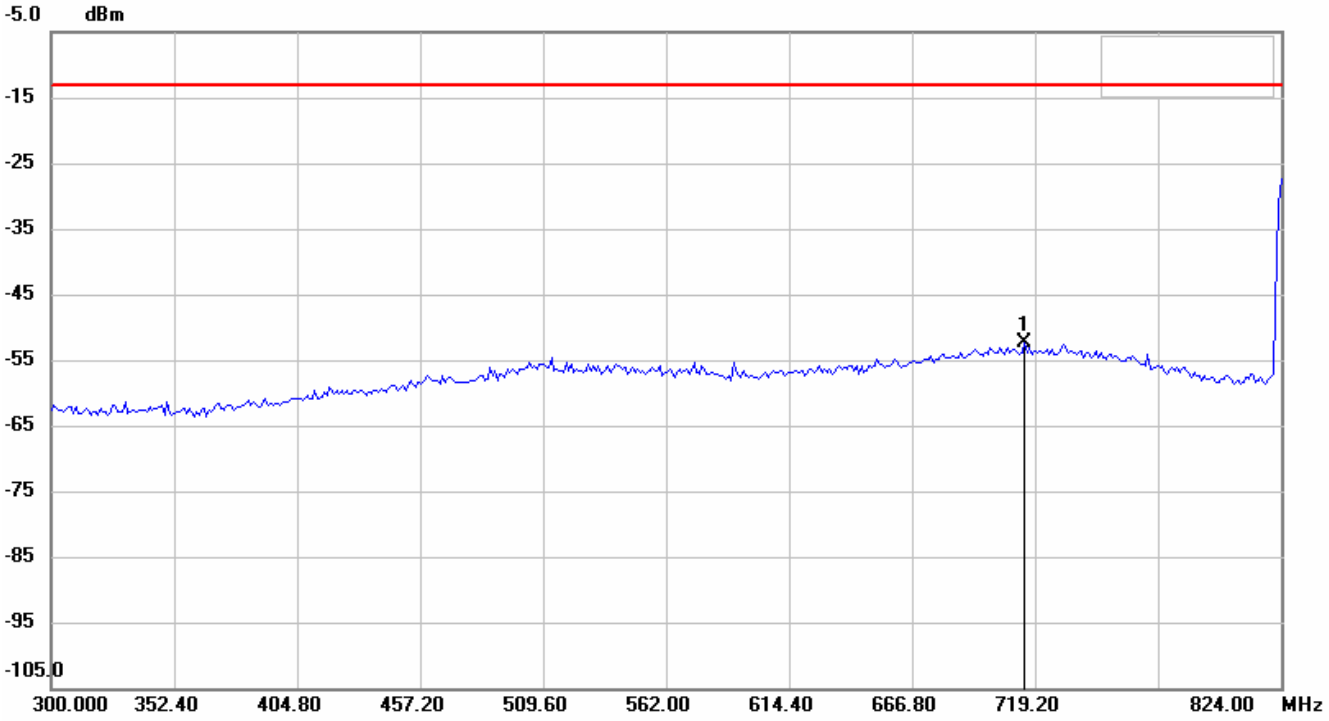
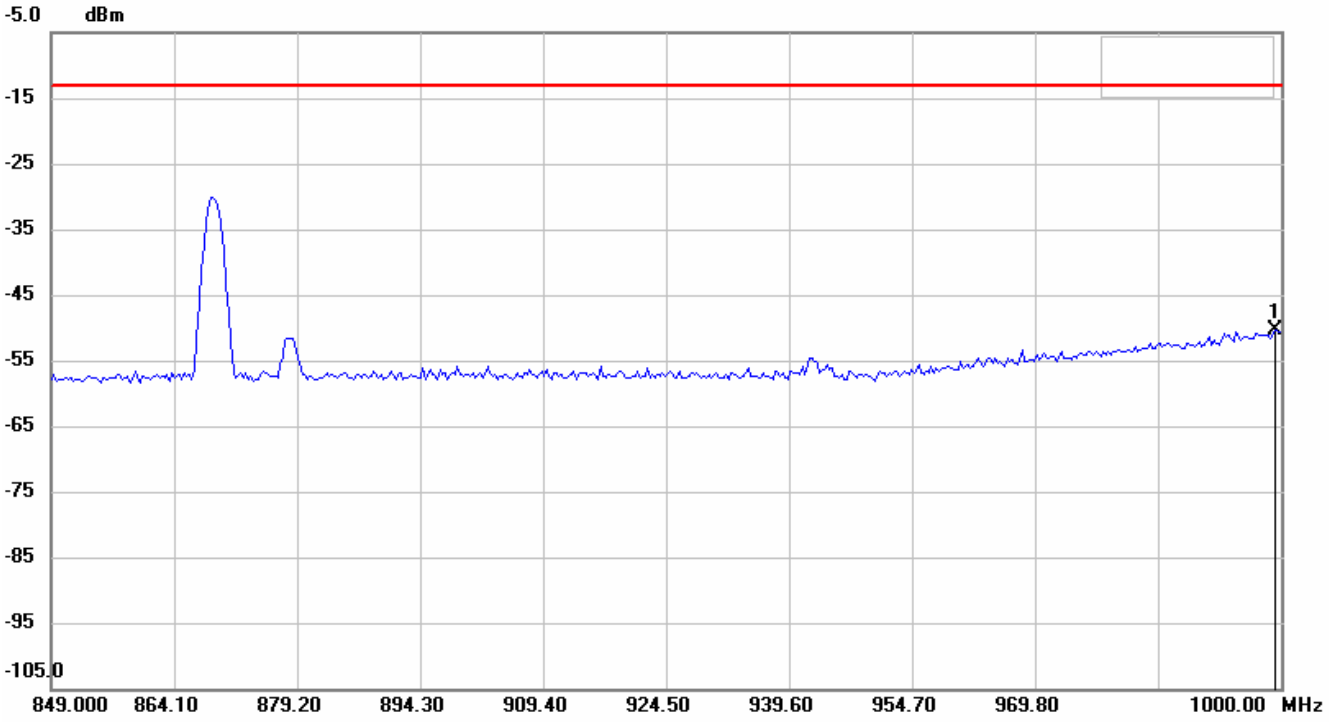
Antenna Polarization V

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-25
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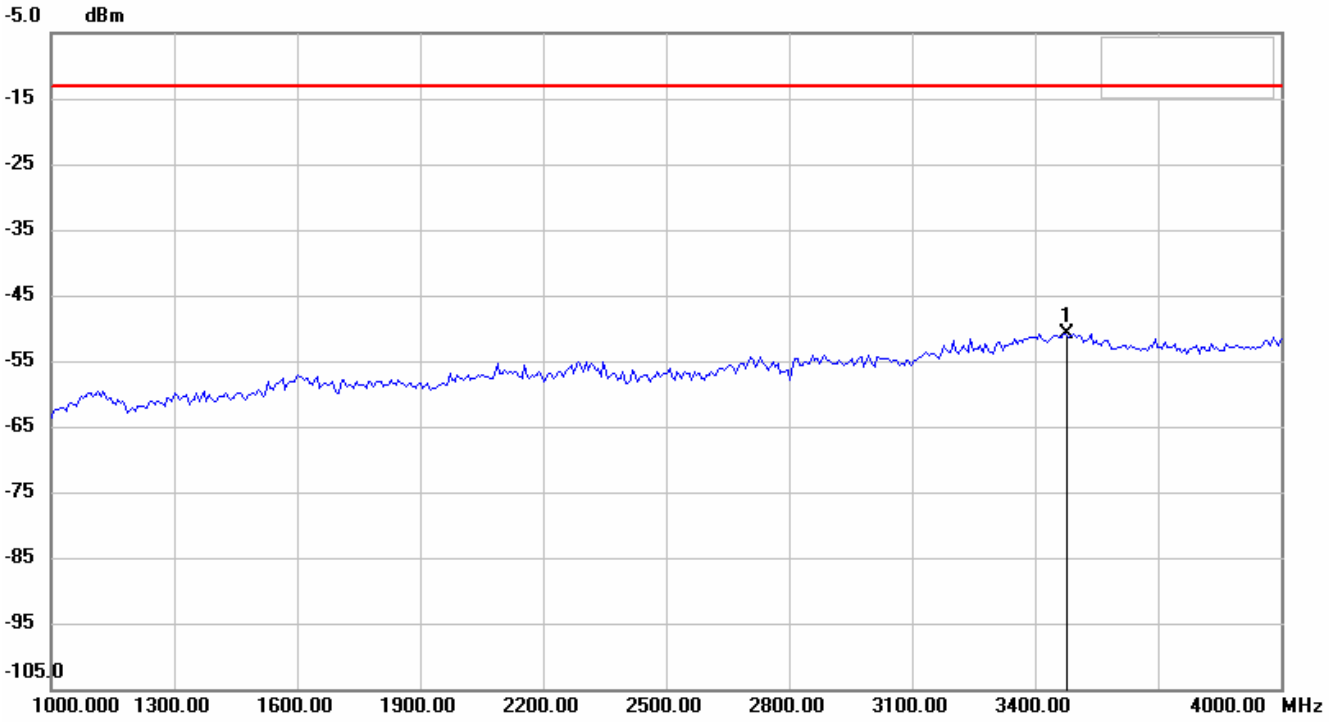
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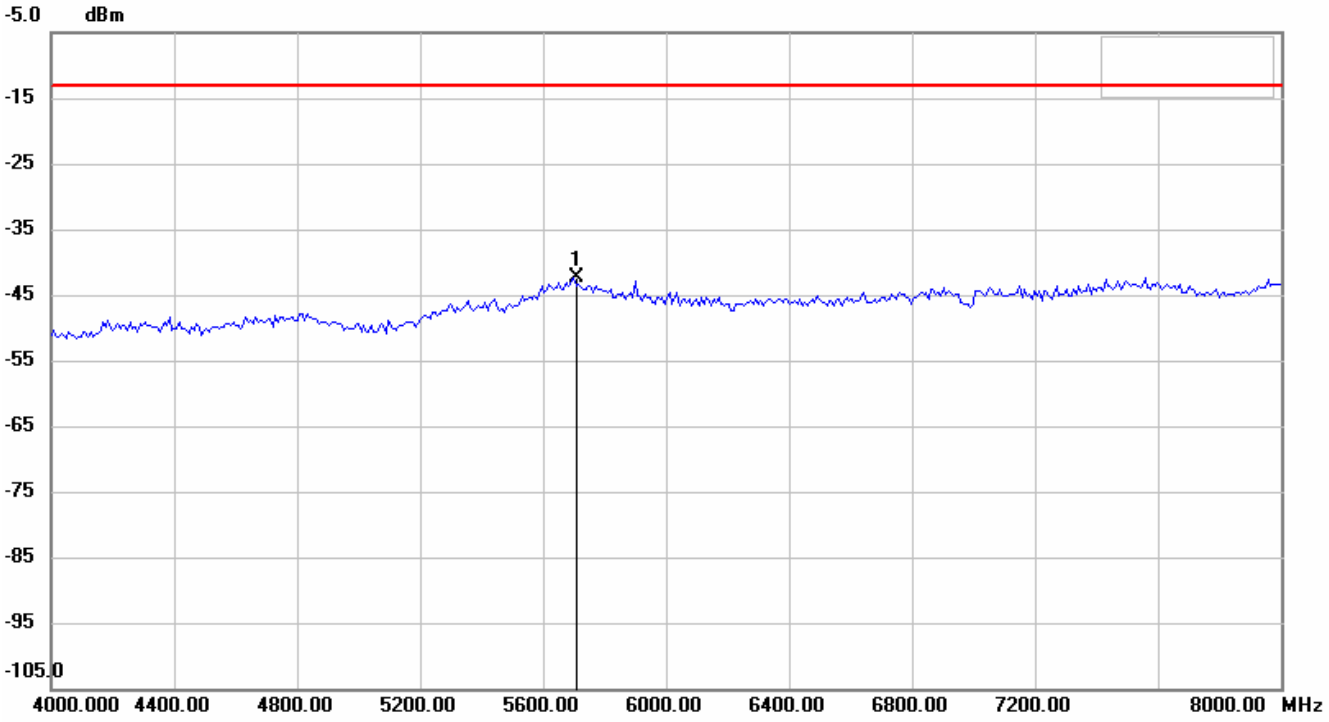
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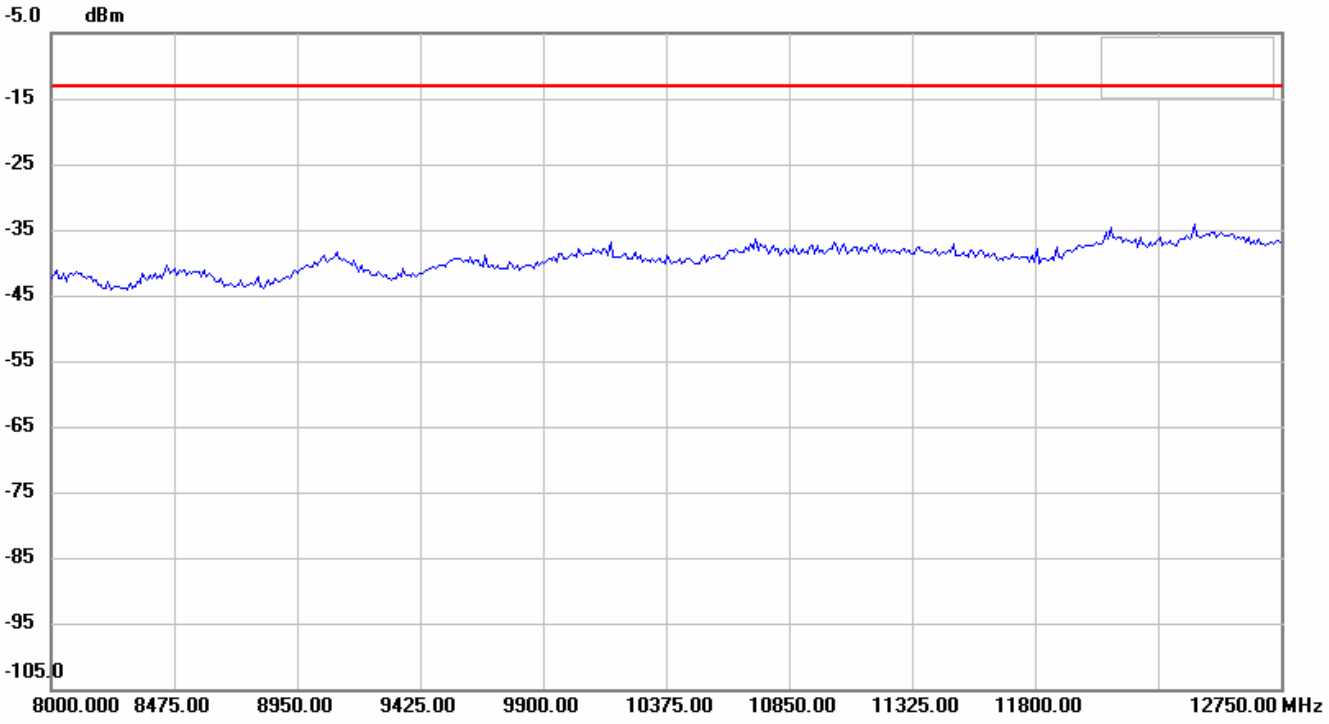
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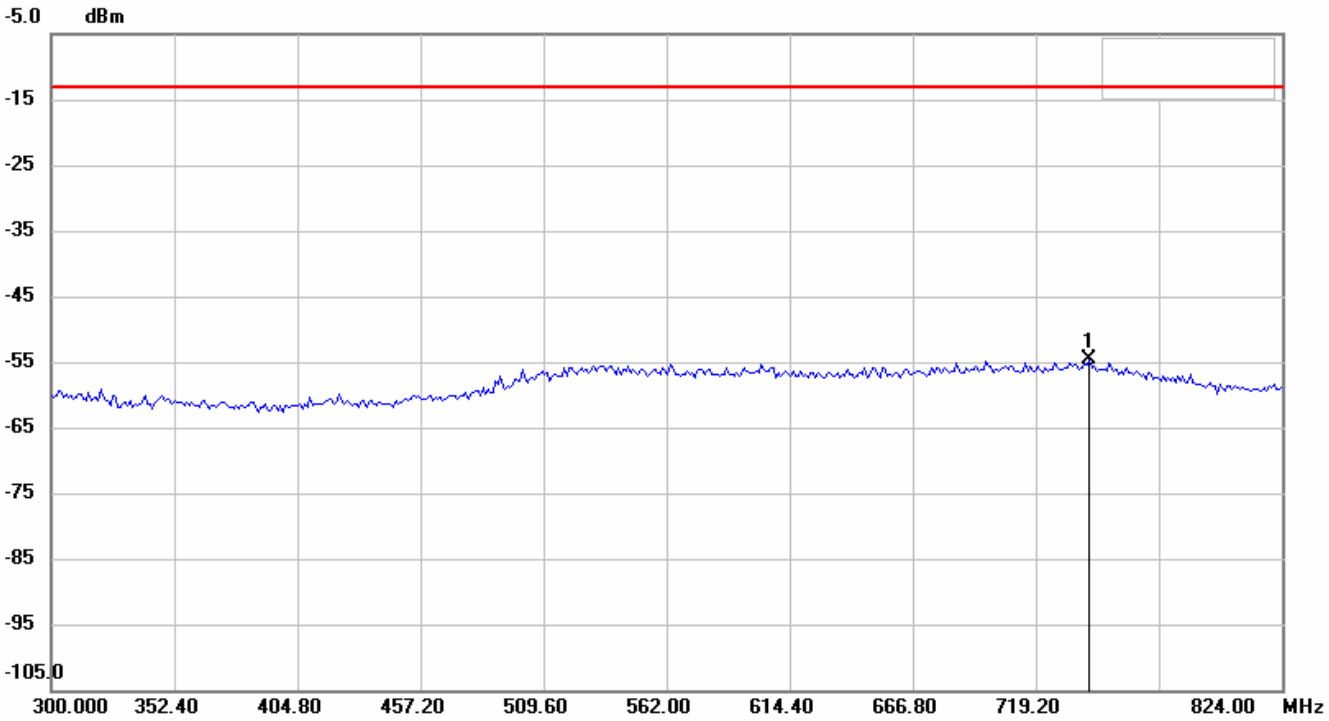
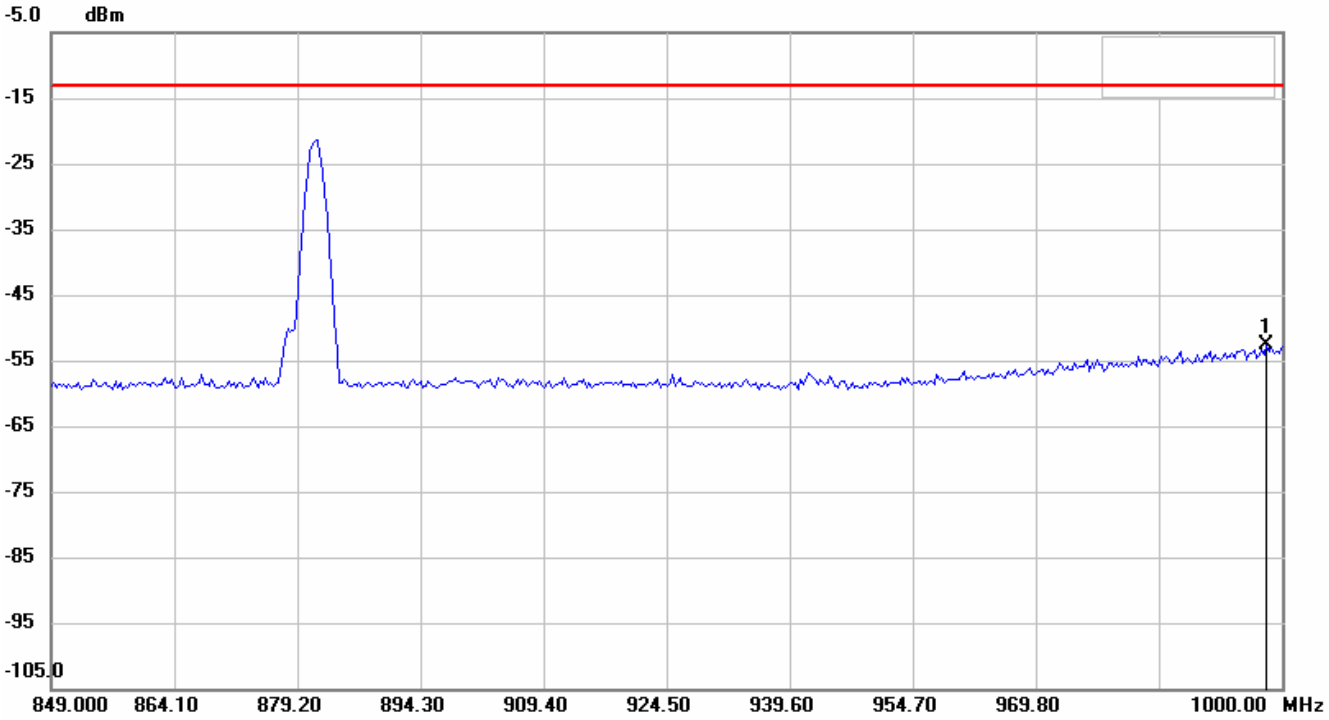
CH 383
Antenna Polarization H

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-25
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-65
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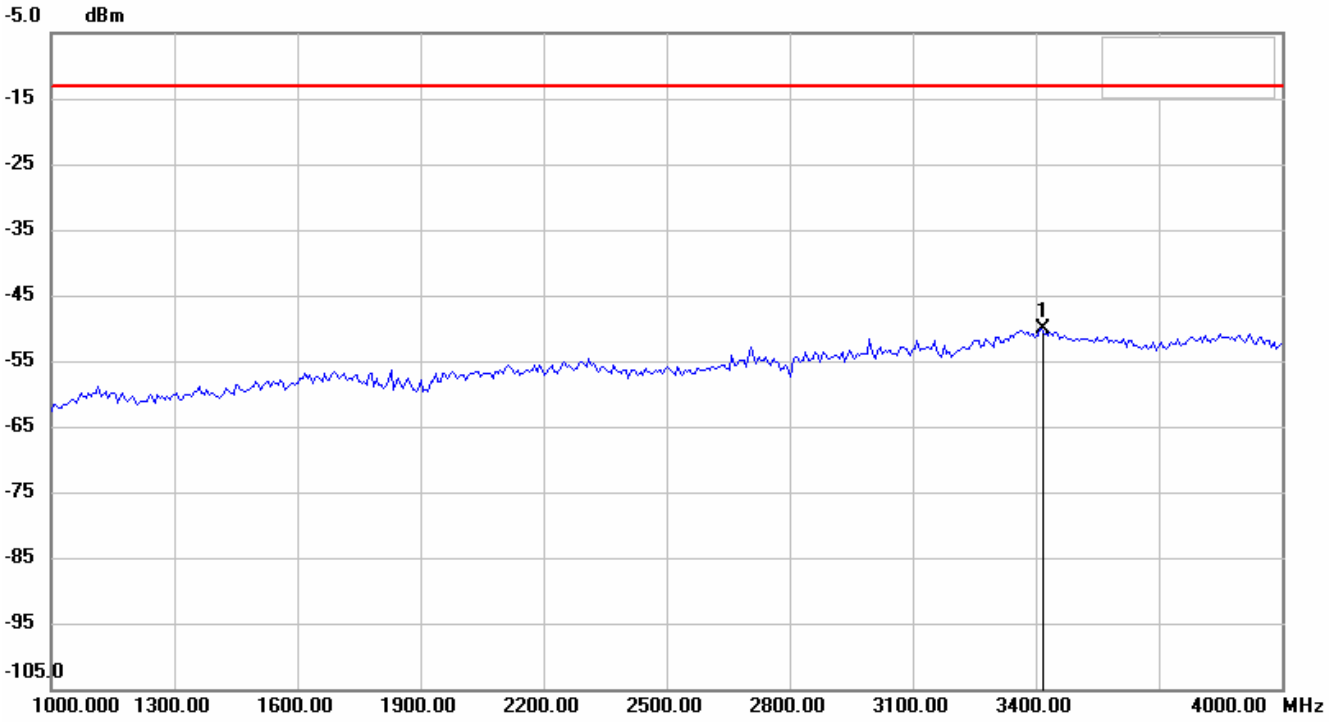
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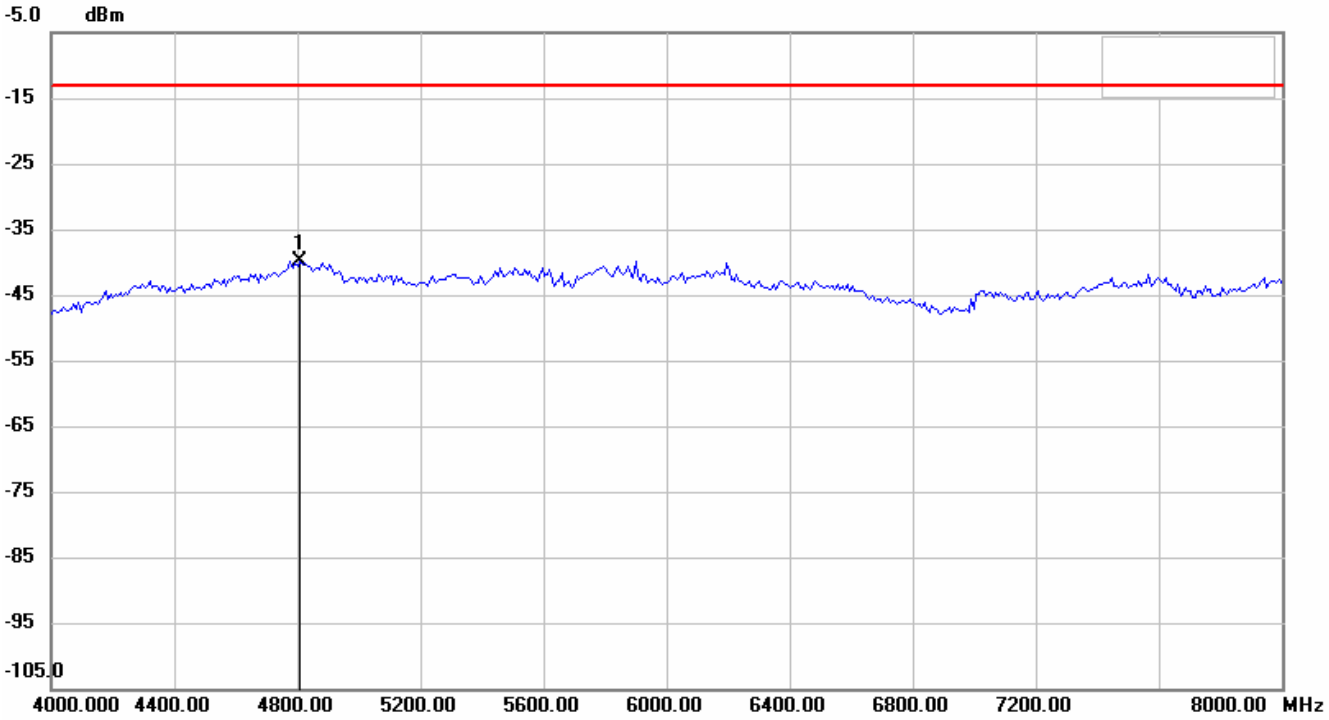
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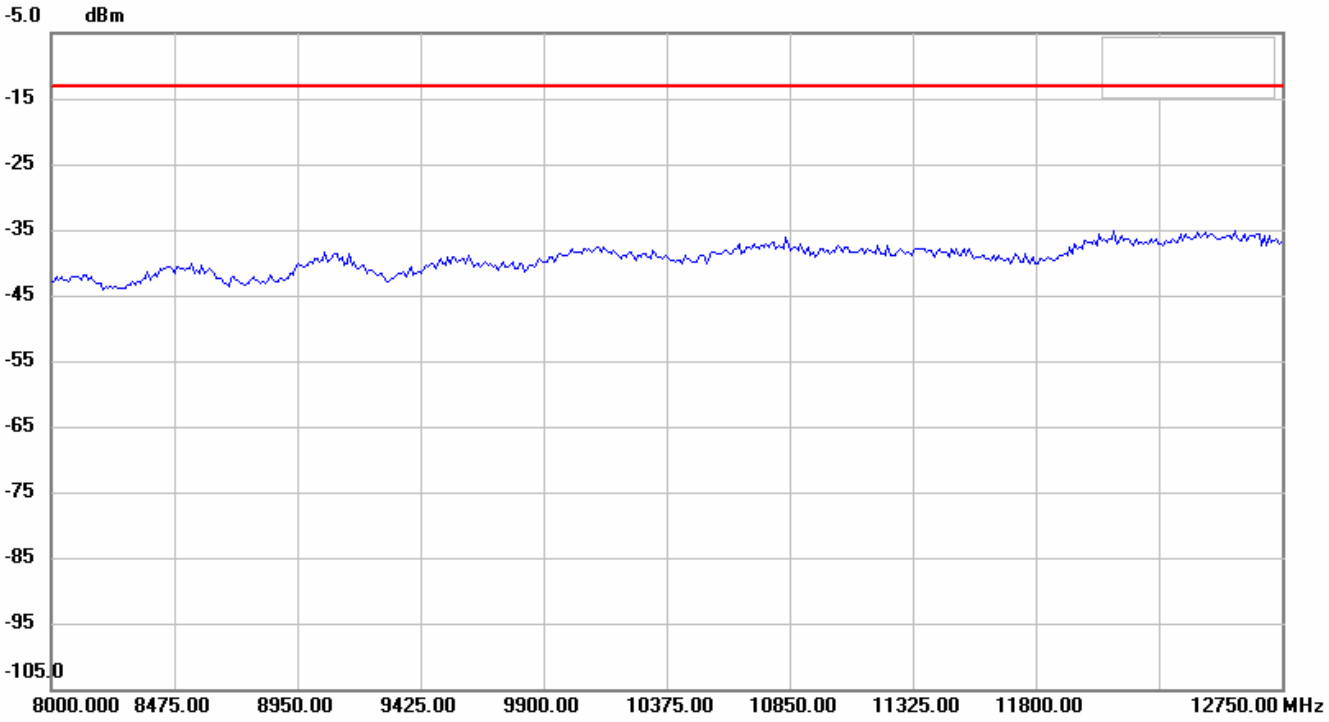
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-25
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-65
-75
-85
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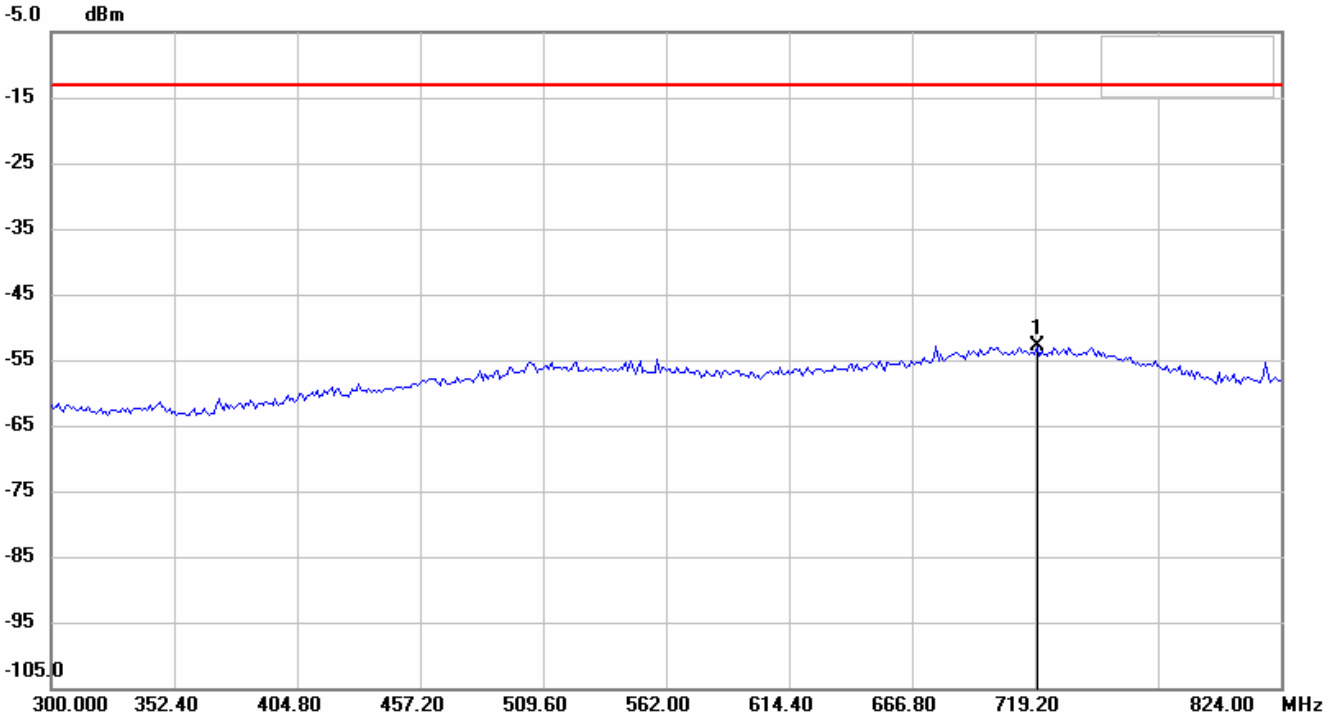
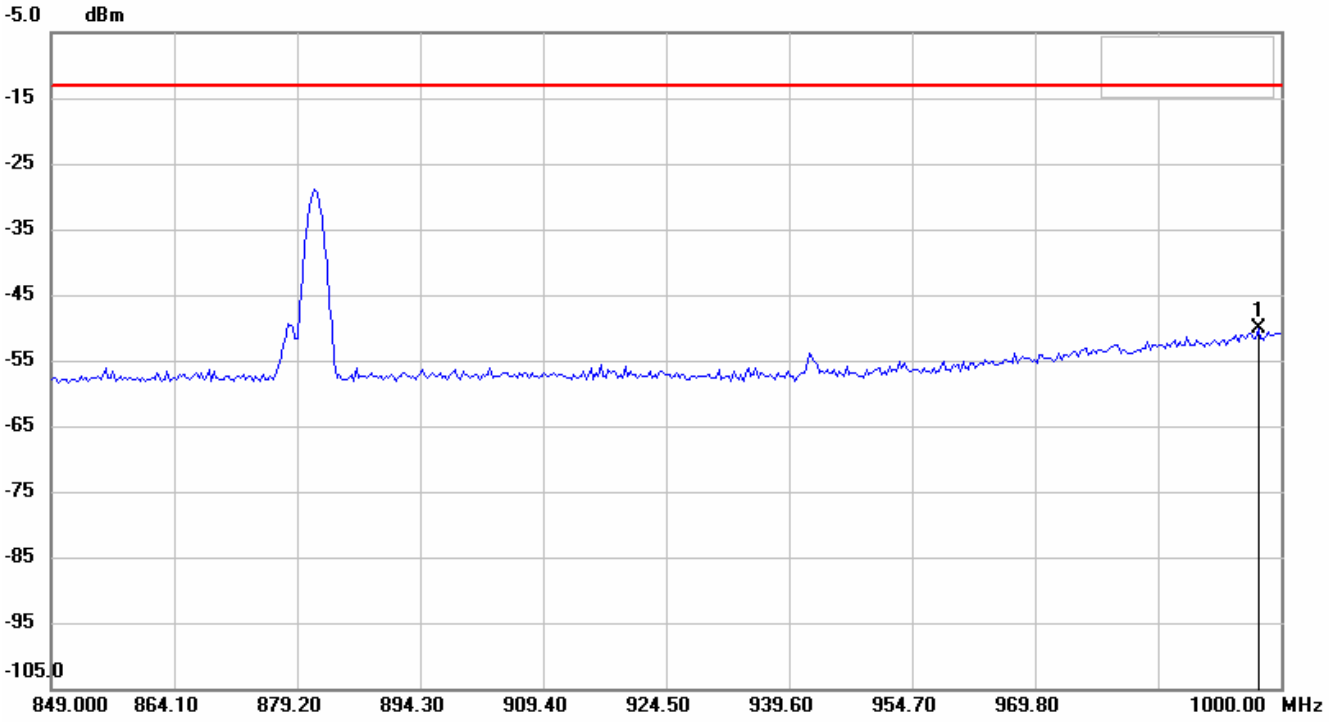
Antenna Polarization V

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-15
-25
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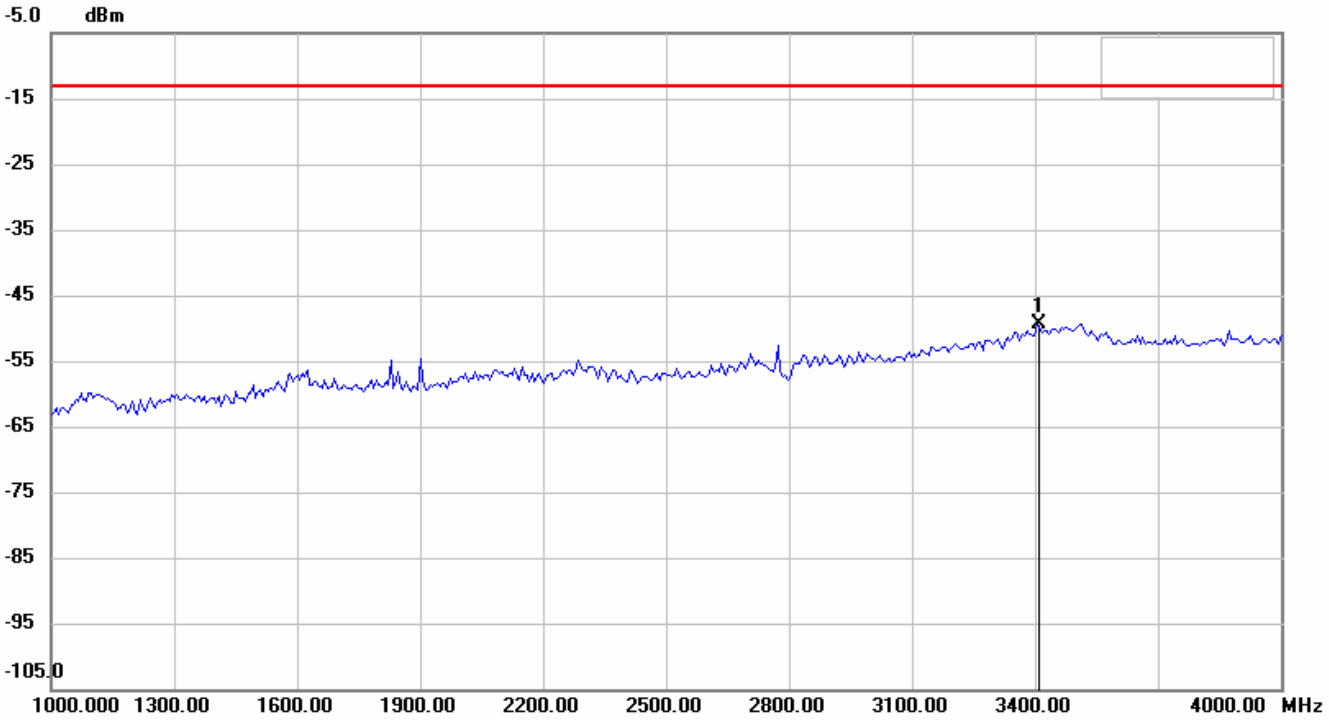
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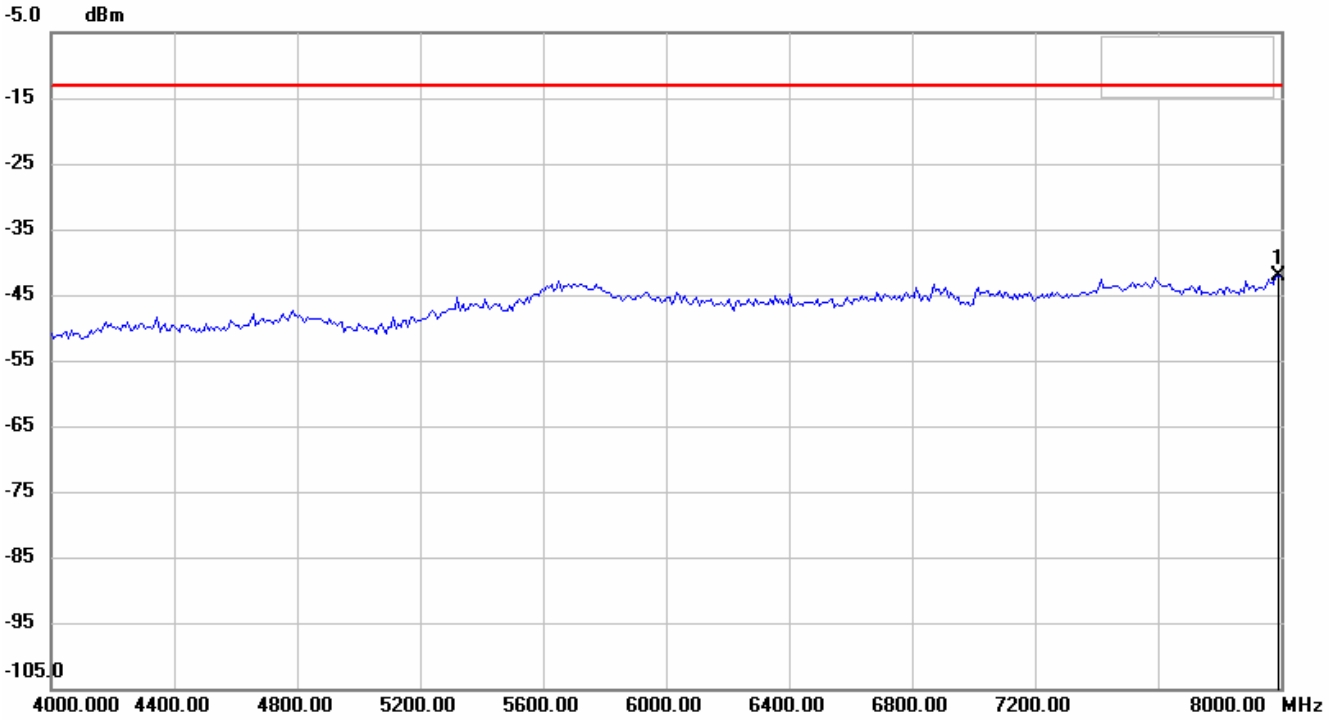
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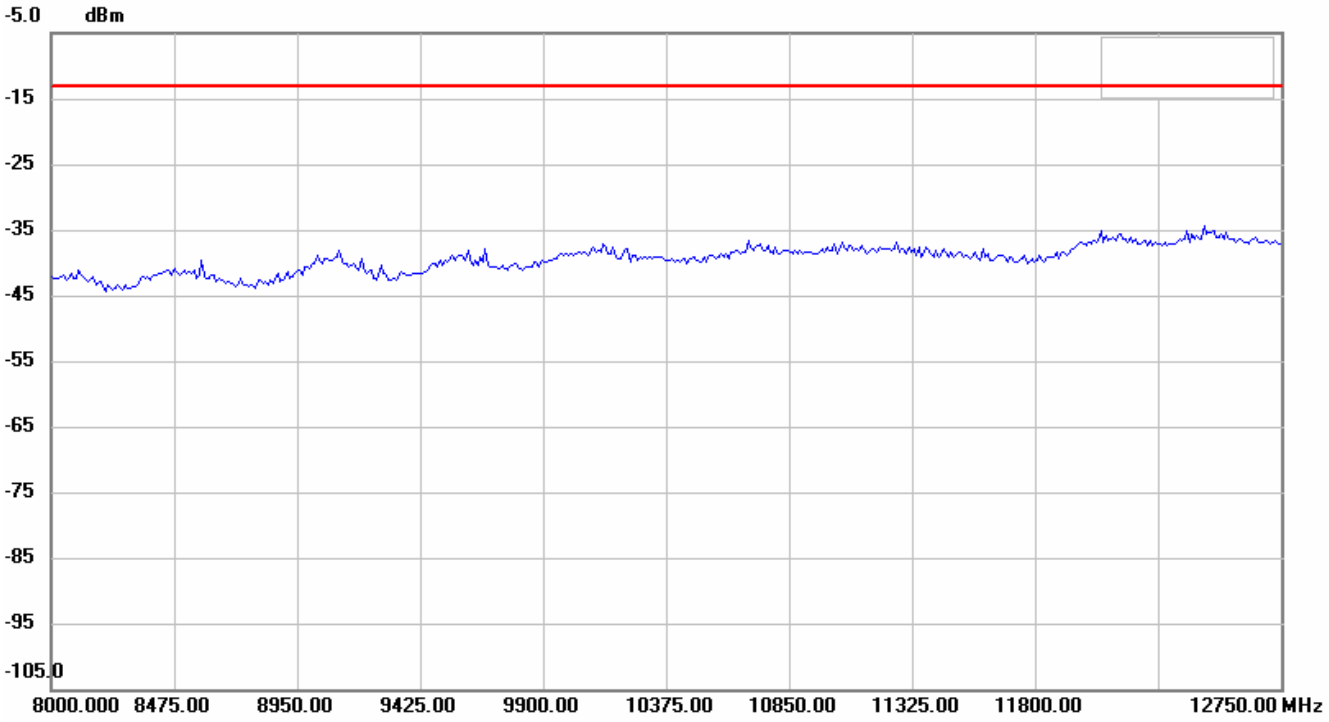
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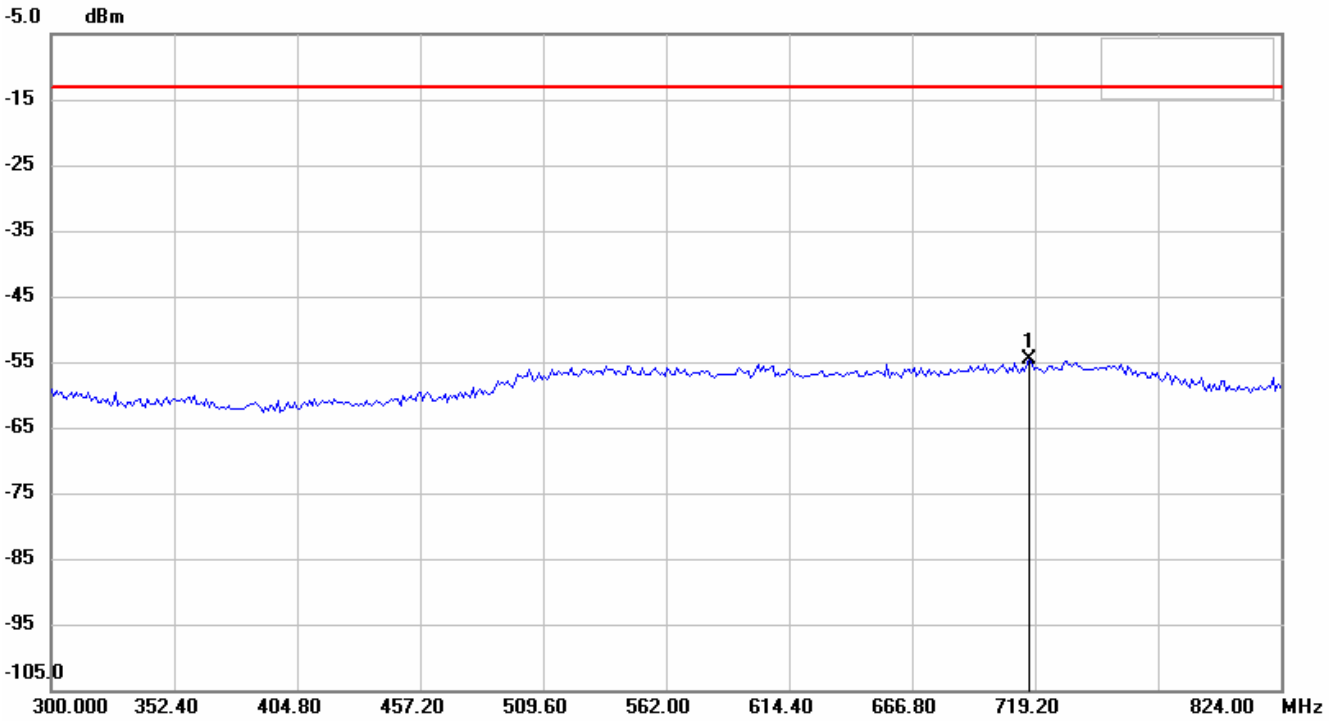
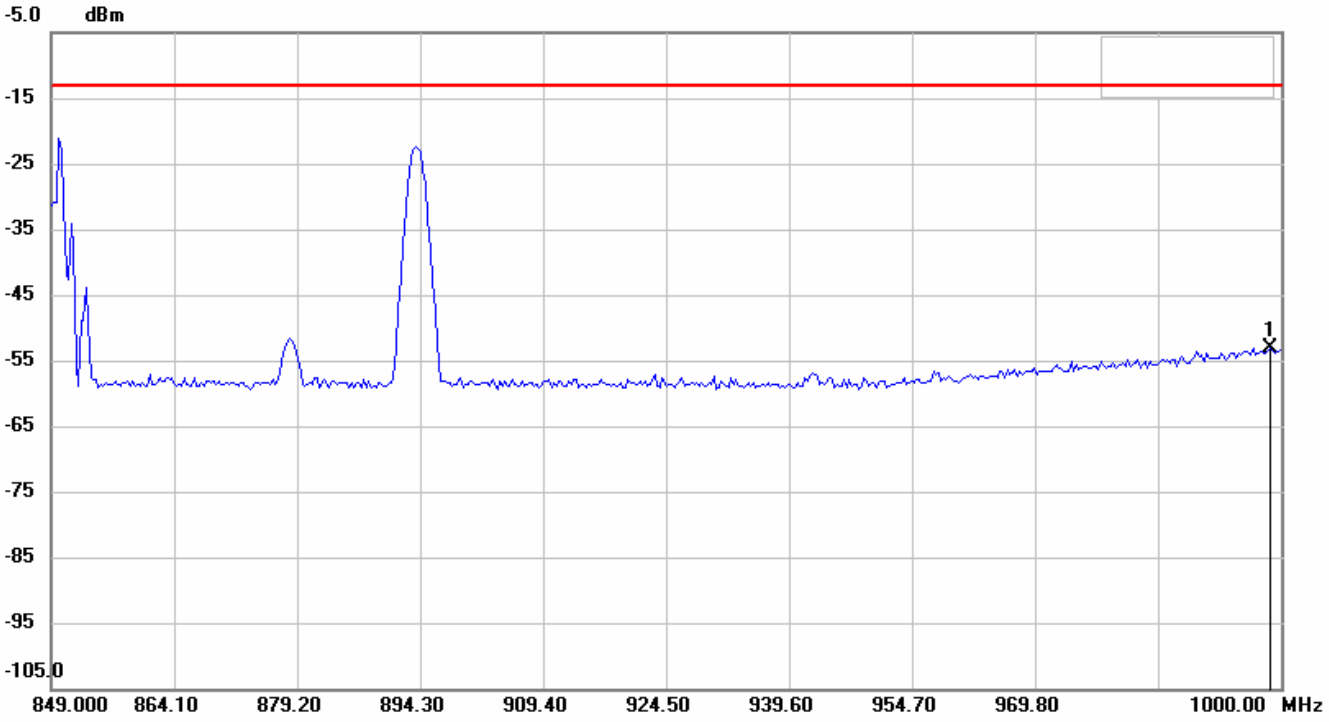
CH 777
Antenna Polarization H

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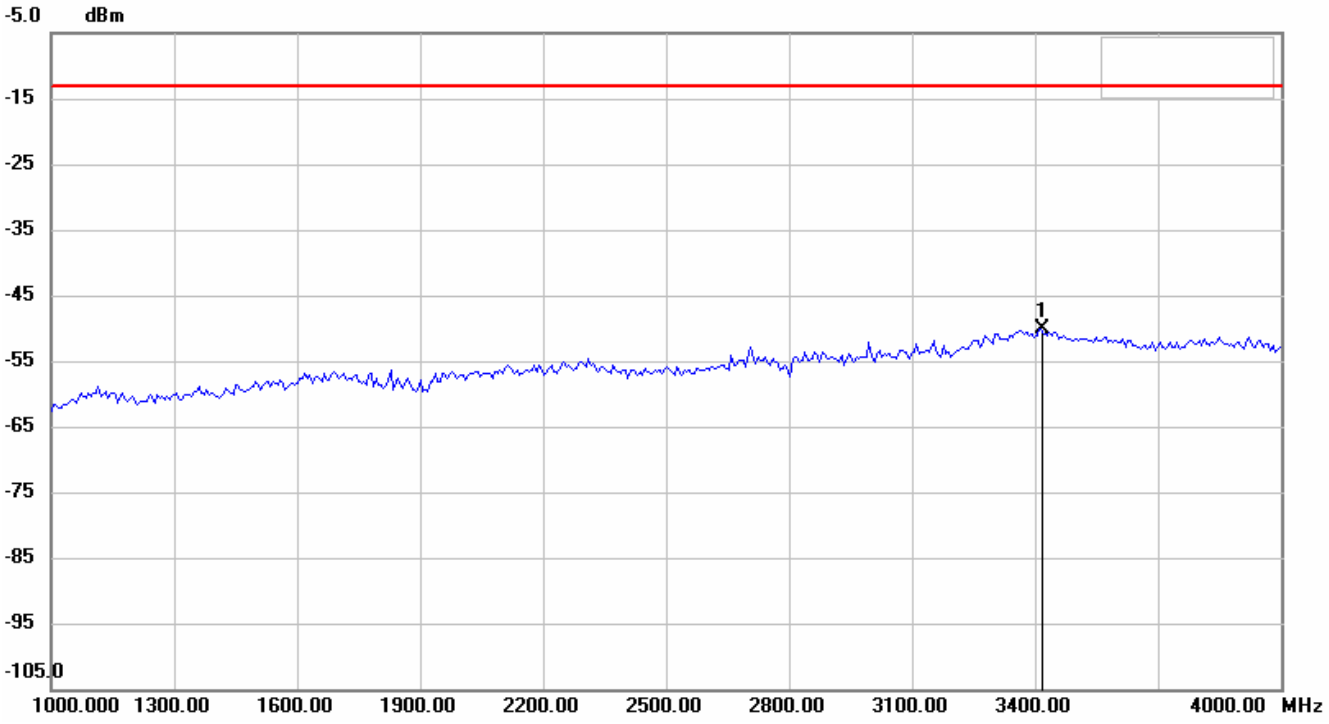
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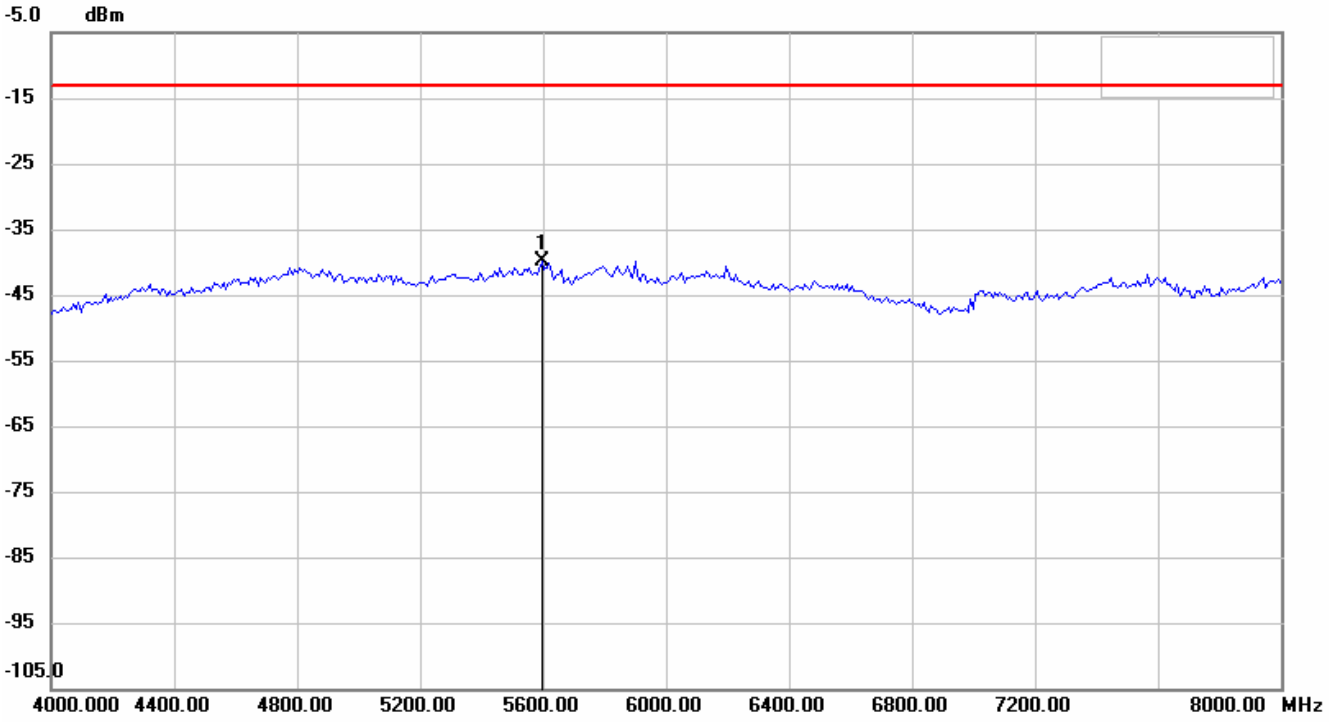
-5.0 dBm
-15
-25
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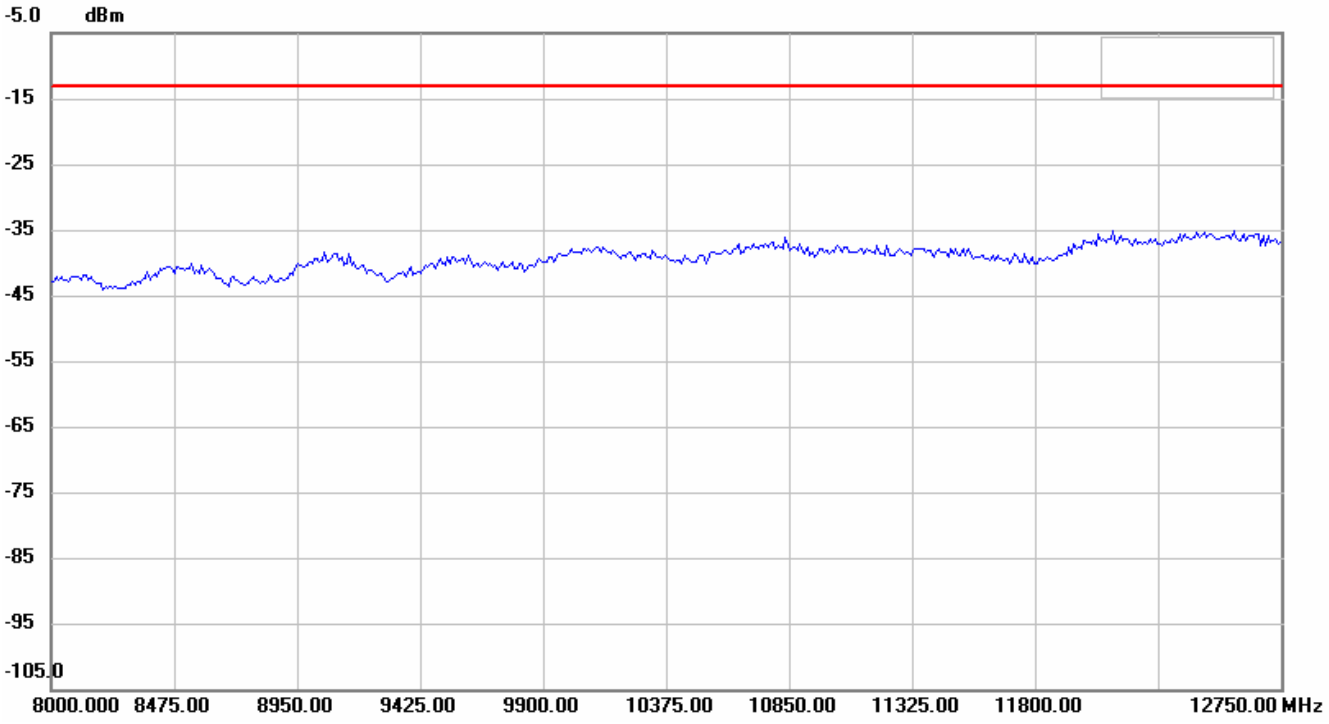
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-75
-85
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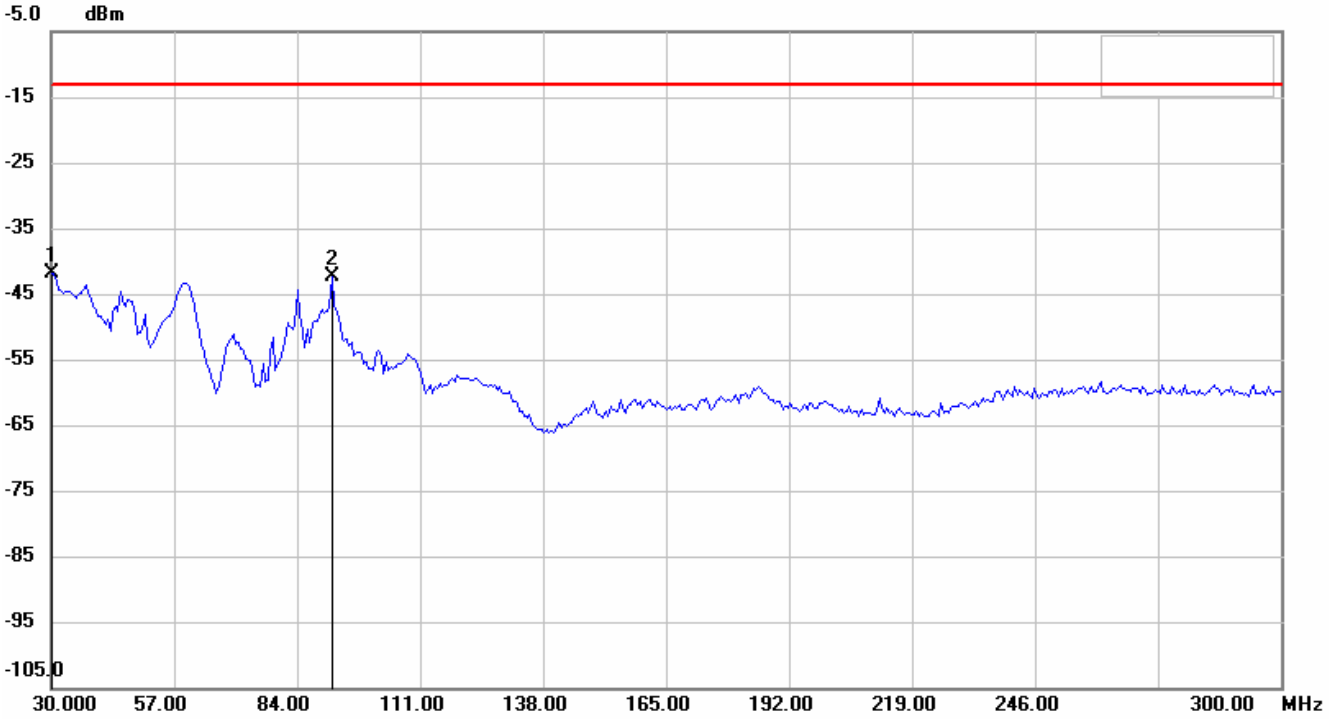
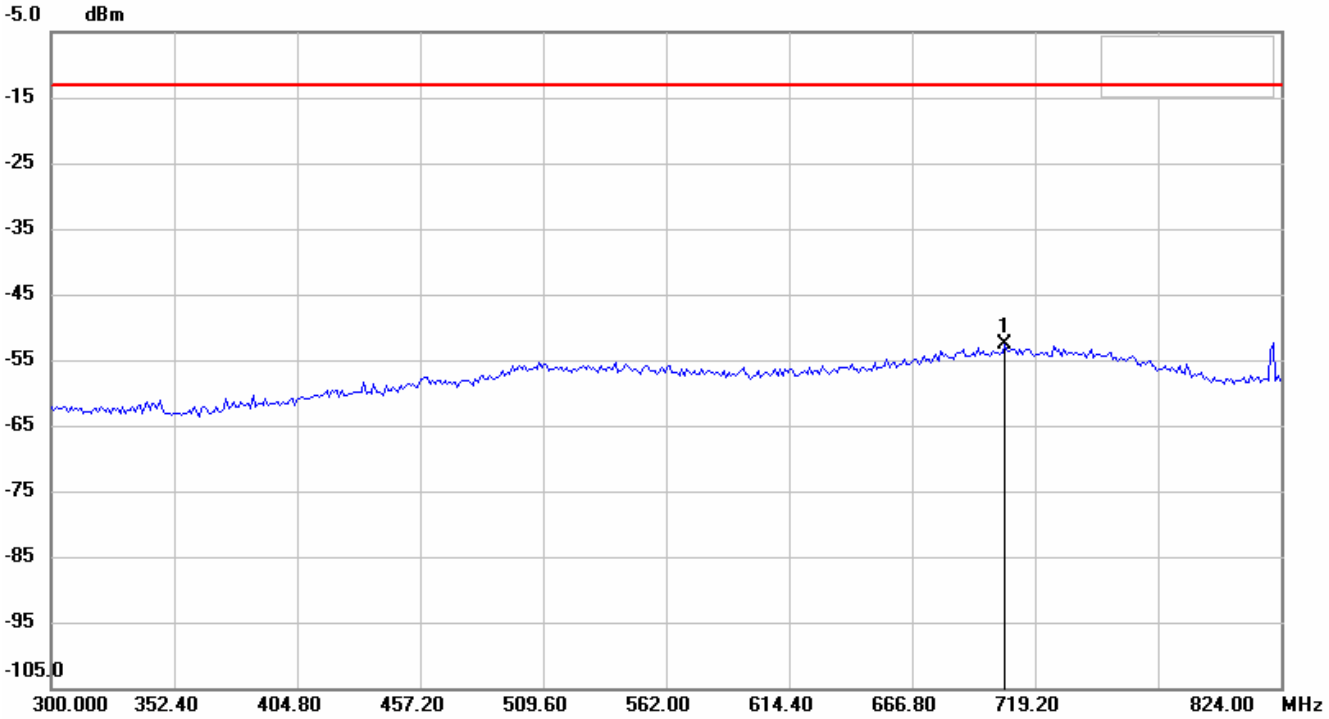
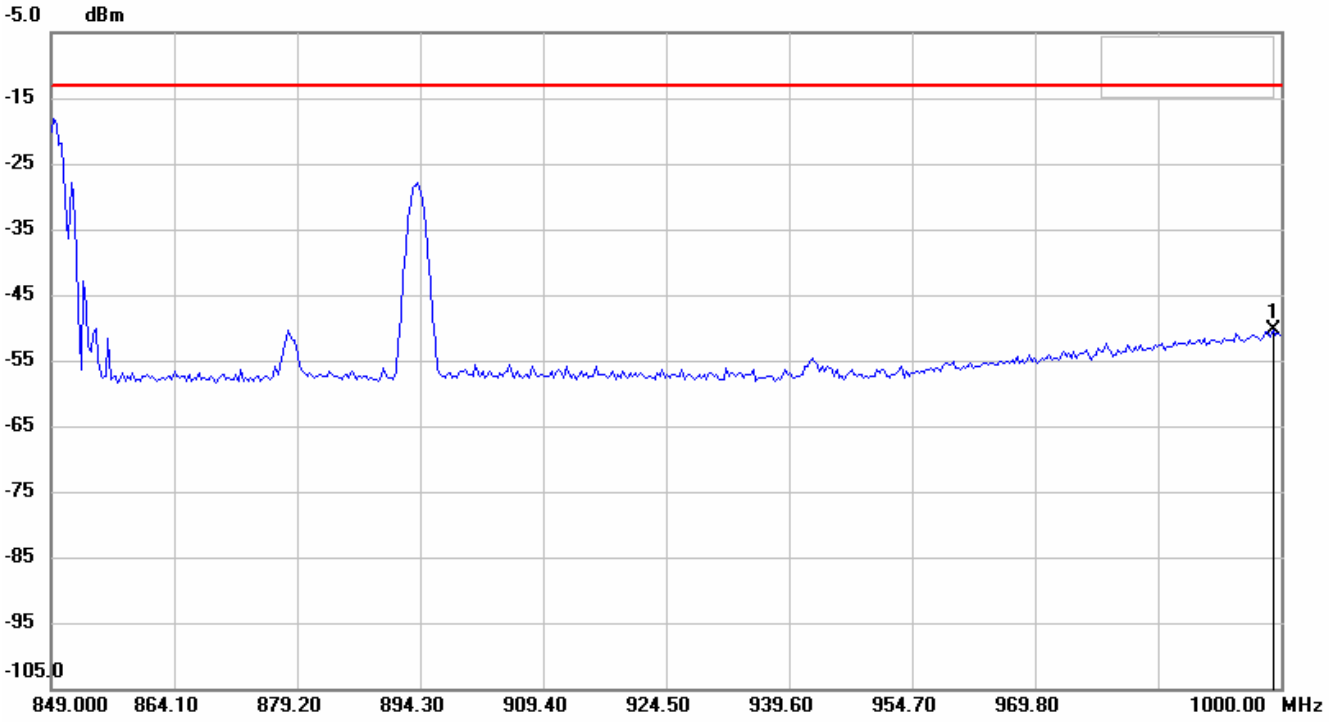
Antenna Polarization V



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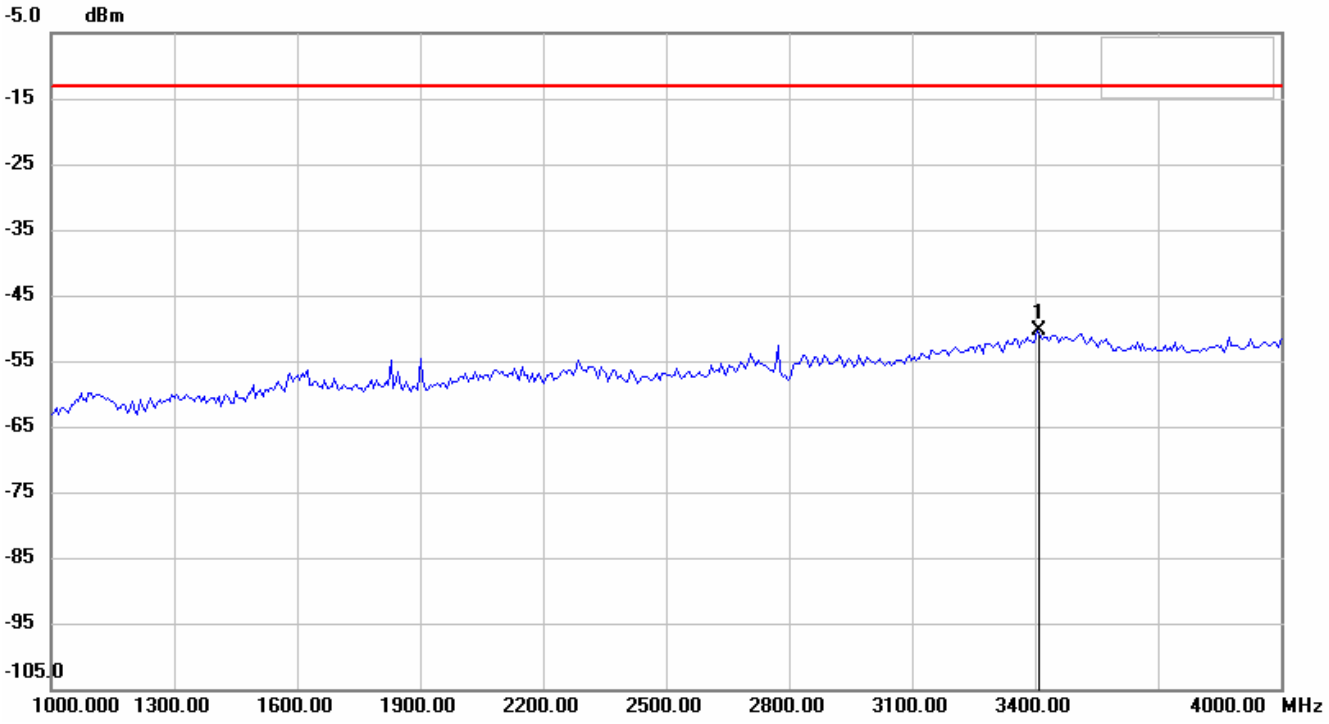
-5.0 dBm
-15
-25
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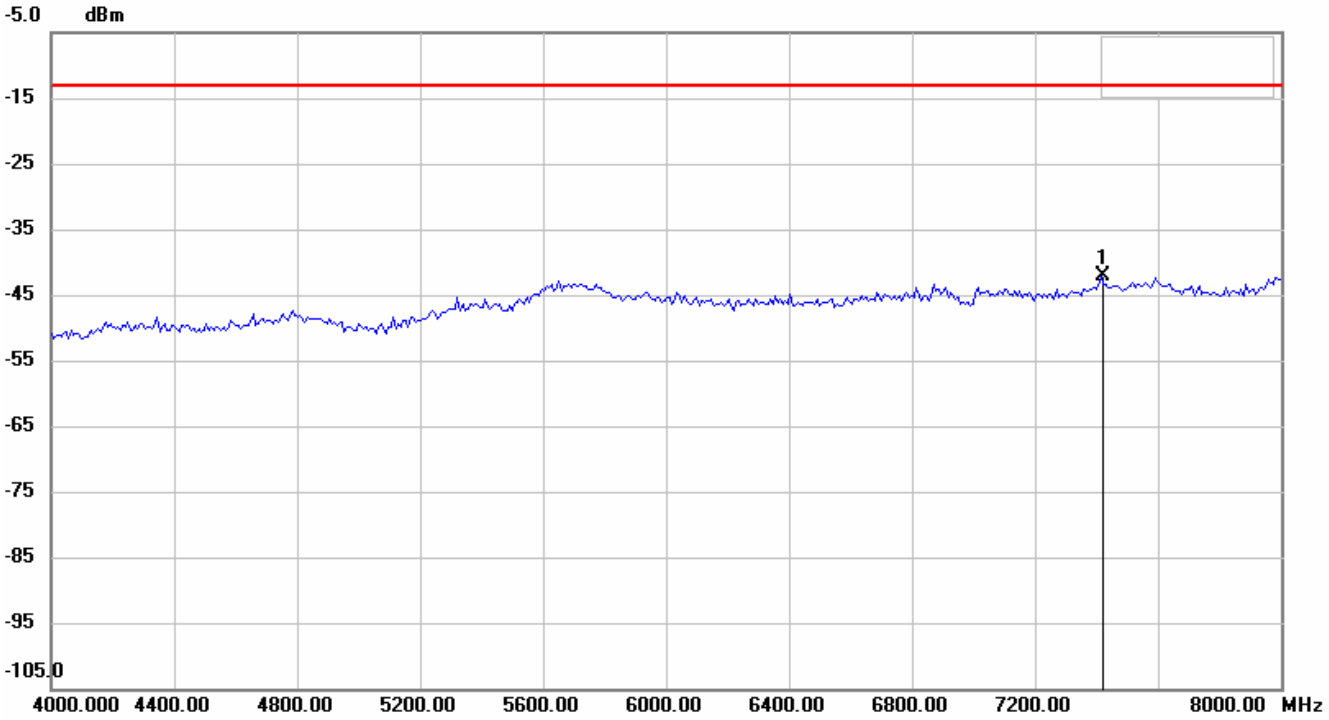
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-15
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-105.0
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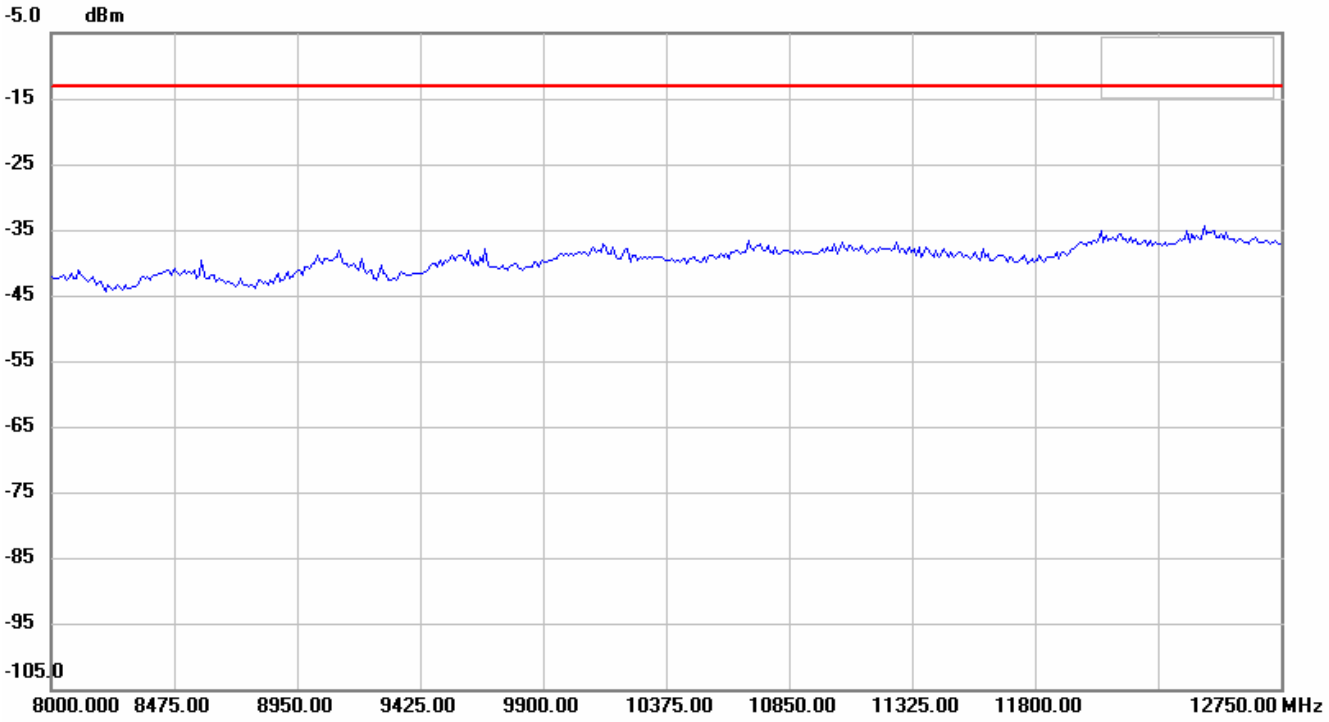
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-95
-105.0
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