FCC PART 22 / 24 TEST REPORT

for

Tracker

Model No.: AAGPSV3

FCC ID: XMSAAGPSV3

of

Applicant: **Amber Alert GPS**
Address: **1196 W So Jordan Pkway Suite B So Jordan,UT 84095, United States**

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1

A2LA Accredited No.: 2732.01

Report No.: W6M21009-10913-P-2224

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
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Worldwide Testing Services(Taiwan) Co., Ltd.

REPORT NUMBER: W6M21009-10913-P-2224
FCC ID: XMSAAGPSV3

Certification of Test Report

Applicant : Amber Alert GPS.
1196 W So Jordan Pkway Suite B So Jordan,UT 84095, United States

Manufacturer : Amber Alert GPS.
1196 W So Jordan Pkway Suite B So Jordan,UT 84095, United States

Tested Equipment :

Type Description	: Tracker
Model Number	: AAGPSV3
Brand Name	: Amber Alert GPS
Operation Frequency	: 824.2-848.8 MHz / 1850.2 - 1909.8 MHz
RF Output Power	1)824.2 - 848.8 MHz :19.79 dBm (ERP) 2)1850.2 - 1909.8 MHz : 22.84 dBm (EIRP)
Power Supply	: Adapter (I/P: 100-240VAC, 50/60Hz, O/P: 5 V, 650 mA) USB 5 VDC Battery (3.7 V, 530mAh)

Regulation Applied : 47CFR Part 22 (2009-10) and Part 24 (2009-10)

Test Method : 47CFR Part 2 (2009), 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(2009), TIA-603-B(2002) and it was found that the device described above is in compliance with the applicable limits specified in 47CFR Part 22/24.

Note:

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

Test Engineer:

Date	WTS-Lab.	Name	Signature
October 15, 2010		Danny Sung	Danny Sung

Technical responsibility for area of testing:

Date	WTS	Name	Signature
October 15, 2010		Chang Tse-Ming	Chang Tse-Ming

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1. Summary

1.1 Description of tested equipment

This equipment under tested, AAGPSV3, is a GSM/GPRS tracking device. AAGPSV3 is suitable for many applications such as human body or vehicle security etc. Instantly locate and report your position by using GSM/GPRS solution.

The operation frequency bands and rated RF output power are listed as follows:

824.2-848.8 MHz (Cellular, Part 22), 0.09527 W (ERP)
1850.2-1909.8 MHz (Cellular, Part 24), 0.1923 W (EIRP)

This test report only contains test requirements specified in 47CFR Part 22 and Part 24 for GSM 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: September 29, 2010

Test finished: October 15, 2010

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(2009), TIA-603-B (2002), ANSI C63.4(2003)**
47CFR Part 22 (2009-10), and Part 24 (2009-10)

Deviation from test standard: None

1.5 Summary of test result

Band: 850 MHz

Section in this Report	Test Item	FCC Relevant Section	Verdict
3.2	RF power output	2.1046(a), 22.913(a)	Pass
4.2	Modulation characteristics	2.1047	Not Required
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
7.5	Band Edge emissions	22.917(a)	Pass
8.2	Frequency stability	2.1055(a) 2.1055(d)	Pass

Band: 1900 MHz

Section in this Report	Test Item	FCC Relevant Section	Verdict
3.2	RF power output	2.1046(a), 24.232(b)	Pass
4.2	Modulation characteristics	2.1047	Not Required
5.2	Occupied bandwidth	2.1049(h)	Pass
6.2	Spurious emissions at antenna terminals	24.238(a), 2.1051	Pass
7.2	Field strength of spurious radiation	24.238(a), 2.1053	Pass
7.5	Band Edge emissions	24.238(a),	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
Worldwide Testing Services (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-registration number: 2732.01

FCC filed test laboratory Reg. No. 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1

2.1.3 Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.

Name:	./.
Accredited number:	./.
Street:	./.
Town:	./.
Country:	./.
Telephone:	./.
Fax:	./.

2.2 Details of approval holder

Name:	Amber Alert GPS.
Street:	1196 W So Jordan Pkway Suite B
Town:	So Jordan,UT 84095,
Country:	United States
Telephone:	888-334-3958
Fax:	801-466-4822

Manufacturer: (if different from applicant)

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: 850 MHz

Band: 1900 MHz

Frequencies Selected to be investigated:

Band: 850 MHz

Low Frequency (ch 128)	: 824.2 MHz
Mid Frequency (ch 188)	: 836.2 MHz
High Frequency (ch 251)	: 848.8 MHz

Band: 1900 MHz

Low Frequency (ch 512)	: 1850.2 MHz
Mid Frequency (ch 661)	: 1880.0 MHz
High Frequency (ch 810)	: 1909.8 MHz

Antenna Type: PIFA Antenna

Antenna Gain: -6 dBi

Power supply: Adapter (I/P: 100-240VAC, 50/60Hz, O/P: 5 V, 650 mA)
USB 5 VDC
Battery (3.7 V, 530mAh)

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 100 kHz and 100 kHz 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	2010/9/2	2011/9/1
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2010/3/2	2011/3/1
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2010/9/8	2011/9/7
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2010/5/8	2011/5/7
ETSTW-CE 007	SPECTRUM ANALYZER 5GHz	FSB	849670/001	R&S	Pre-test Use NCR	
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2010/7/21	2011/7/19
ETSTW-CE 015	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T8-02	20307	FCC	2010/9/6	2011/9/5
ETSTW-RE 002	Function Generator	33220A	MY43004982	Agilent	Function Test	
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2010/8/10	2011/8/9
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2010/9/14	2011/9/13
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2010/9/2	2011/9/1
ETSTW-RE 006	Attenuator 10dB	50HF-010-5N-1	None	STEP	2010/3/5	2011/3/4
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	3469	Schwarzbeck	2010/9/6	2011/9/5
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2010/9/8	2011/9/7
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 021	SWEEP GENERATOR	SWM05	835130/010	R&S	2010/8/20	2011/8/19
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	EMCO	2010/7/22	2011/7/21
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	EMCO	2010/4/14	2011/4/13
ETSTW-RE 029	Biconical Antenna	3109	33524	EMCO	2010/4/14	2011/4/13
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	EMCO	2010/3/2	2011/3/1
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2010/8/17	2011/8/16
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	Function Test	
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2010/8/17	2011/8/16
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2010/5/11	2011/5/10
ETSTW-RE 047	PSA SERIES SPECTRUM ANALYZER	E4445A	MY46181369	Agilent	Pre-test Use NCR	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2010/8/30	2011/8/29
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2010/4/13	2011/4/12
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2010/3/5	2011/3/4
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2010/3/5	2011/3/4
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2010/6/3	2011/6/2

ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	Pre-test Use NCR	
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2010/9/27	2011/9/26
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2009/11/12	2010/11/11
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2010/4/13	2011/4/12
ETSTW-RE 066	Highpass Filter	H1G013G1	206015	MICROWAVE CIRCUITS, INC.	2010/3/5	2011/3/4
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2010/9/30	2011/9/29
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2010/1/7	2011/1/6
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2010/1/7	2011/1/6
ETSTW-RE 081	Highpass Filter	H03G13G1	4260-02 DC0428	MICROWAVE CIRCUITS, INC.	2010/3/5	2011/3/4
ETSTW-RE 096	SIGNAL GENERATOR	SMIQ 03B	102274	R&S	2010/5/31	2011/5/30
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2010/3/5	2011/3/4
ETSTW-RE 105	2.4GHz Notch Filter	NO124411	39555	MICROWAVE CIRCUITS, INC.	2010/3/25	2011/3/24
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2010/3/25	2011/3/24
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2010/9/8	2011/9/7
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	Function Test	
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	Function Test	
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	Function Test	
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	Function Test	
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2010/9/20	2011/9/19
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104（S_Cable 7）	238093	HUBER+SUHNER	2010/9/27	2011/9/26
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104（S_Cable 11）	209953	HUBER+SUHNER	2010/9/27	2011/9/26
ETSTW-Cable 006	Microwave Cable	SUCOFLEX 104（S_Cable 8）	238095	HUBER+SUHNER	2010/3/5	2011/3/4
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2010/3/5	2011/3/4
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	2010/8/19	2011/8/18
ETSTW-Cable 012	BNC Cable	BNC Cable 2	None	JYE BAO CO.,LTD.	2010/8/19	2011/8/18
ETSTW-Cable 013	Microwave Cable	SUCOFLEX 104（S_Cable 5）	232345	HUBER+SUHNER	2010/3/5	2011/3/4
ETSTW-Cable 022	N TYPE Cable	OATS Cable 3	0002	JYE BAO CO.,LTD.	2010/3/5	2011/3/4
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2010/9/13	2011/9/12
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2010/9/13	2011/9/12
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104（S_Cable 19）	316739	HUBER+SUHNER	2010/3/5	2011/3/4
WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.16 Firmware Version 2.18	
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1	
WTSTW-SW 003	EMS TEST SOFTWARE	i2	None	AUDIX	Version 3.2007-8-17b	
WTSTW-SW 005	GSM Fading Level Correction	GSMFadLevCor	None	R&S	Version 1.66	

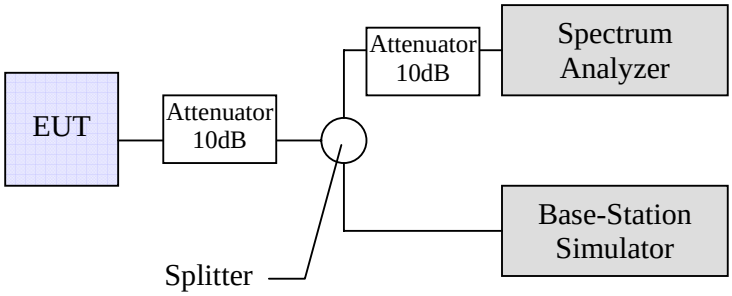
3. RF Power Output

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

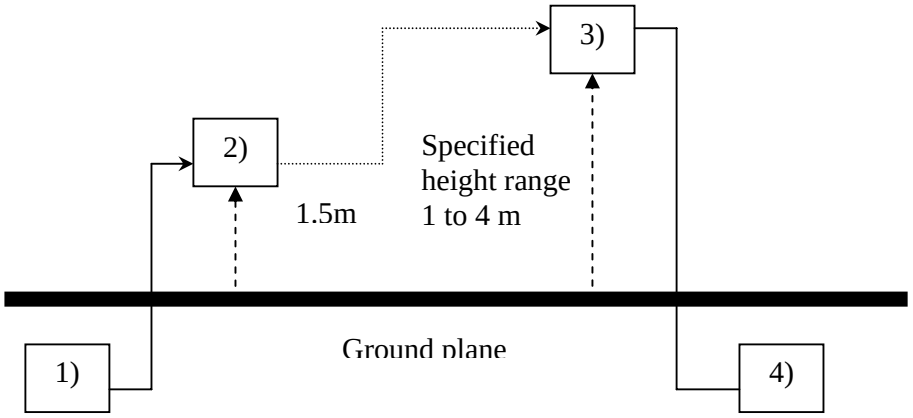
If the conducted measurement is not practical due to the integral antenna, the radiated measurement will be performed in accordance the following procedure:

The EUT was positioned on a non-conductive turntable, 0.8mabove 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 WTS 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

3.7 V

Frequency (MHz)	Test result (dBm)
824.2	28.89
836.2	29.37
848.8	29.56
1850.2	25.61
1880.0	25.12
1909.8	24.46

3.6 V

Frequency (MHz)	Test result (dBm)
824.2	28.89
836.2	29.36
848.8	29.55
1850.2	25.63
1880.0	25.14
1909.8	24.44

☐ Conducted Measurement
☑ Radiated Measurement

3.7 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.1098	19.07	21.22	38.45	Pass
836.1300	19.47	21.62	38.45	Pass
848.7500	19.79	21.94	38.45	Pass
1850.1900	20.69	22.84	33	Pass
1879.9700	18.71	20.86	33	Pass
1909.6700	13.48	15.63	33	Pass

3.6 V

Frequency (MHz)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Result
824.2100	18.97	21.12	38.45	Pass
836.0898	19.53	21.68	38.45	Pass
848.7700	19.73	21.88	38.45	Pass
1850.2100	20.68	22.83	33	Pass
1879.9900	18.72	20.87	33	Pass
1909.4290	13.30	15.45	33	Pass

Test equipment: ETSTW-RE 003, ETSTW-RE 028, ETSTW-RE 030, ETSTW-GSM 02

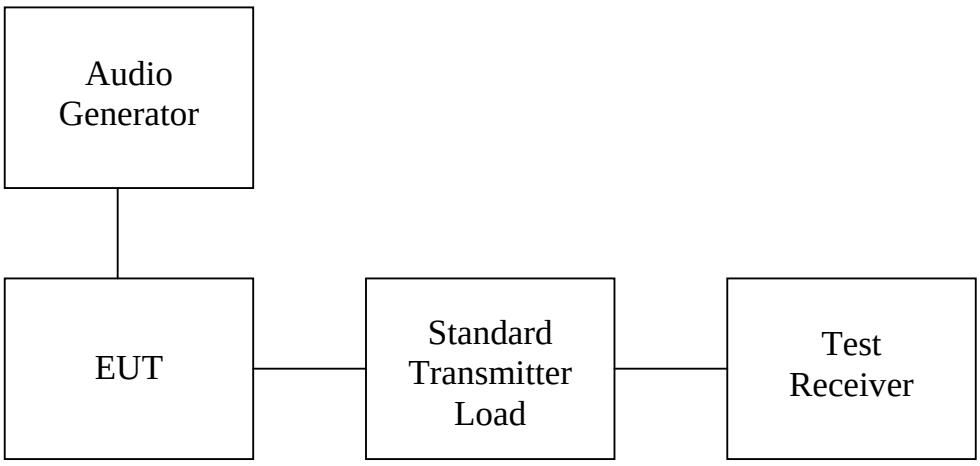
Note: Please refer to appendix for plot data.

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

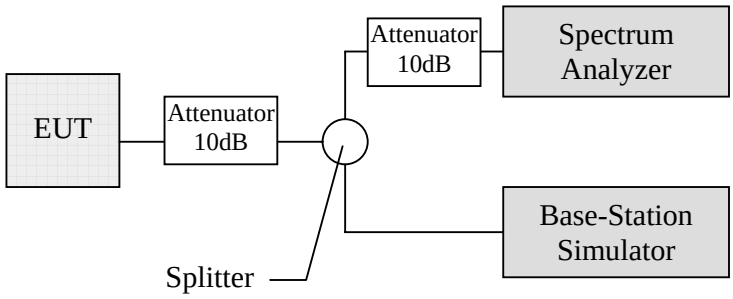
For digital modulation employed, this test item is not applicable.

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 128	253.205128205 kHz
Channel 188	250.000000000 kHz
Channel 251	246.794871795 kHz
Channel 512	251.602564103 kHz
Channel 661	250.000000000 kHz
Channel 810	248.397435897 kHz
-26dB Channel Bandwidth (kHz)	
Channel 128	333.333333333 kHz
Channel 188	331.730769231 kHz
Channel 251	331.730769231 kHz
Channel 512	333.333333333 kHz
Channel 661	330.128205128 kHz
Channel 810	328.525641026 kHz

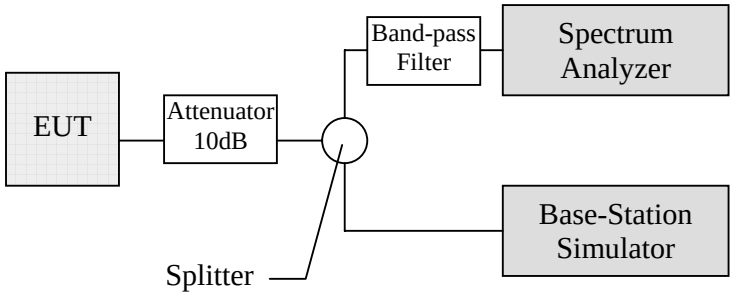
Test equipment: ETSTW-RE 055, ETSTW-GSM 02

Note: Please refer to appendix for plot data.

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

CH128

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
84.086538462	-44.81	-13	-31.81
965.224358974	-45.40	-13	-32.40
1648.4000	-42.57	-13	-29.57
2472.6000	-41.19	-13	-28.19
3296.8000	-40.34	-13	-27.34
4121.0000	-42.92	-13	-29.92
4945.2000	-43.34	-13	-30.34
5769.4000	-42.87	-13	-29.87
6593.6000	-42.77	-13	-29.77
8242.0000	-42.94	-13	-29.94
9066.2000	-42.05	-13	-29.05
9890.4000	-40.74	-13	-27.74
10714.6000	-42.15	-13	-29.15
13187.2000	-42.74	-13	-29.74
14011.4000	-41.77	-13	-28.77
14835.6000	-41.60	-13	-28.60
15659.8000	-41.52	-13	-28.52
18132.4000	-39.25	-13	-26.25
18956.6000	-41.31	-13	-28.31
19780.8000	-40.17	-13	-27.17
20605.0000	-40.55	-13	-27.55

CH188

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
145.096153846	-45.11	-13	-32.11
795.833333333	-44.71	-13	-31.71
1672.4000	-42.97	-13	-29.97
2508.6000	-41.33	-13	-28.33
3344.8000	-41.58	-13	-28.58
4181.0000	-42.81	-13	-29.81
5017.2000	-42.23	-13	-29.23
5853.4000	-42.73	-13	-29.73
6689.6000	-40.89	-13	-27.89
8362.0000	-41.89	-13	-28.89
9198.2000	-41.95	-13	-28.95
10034.4000	-42.28	-13	-29.28
10870.6000	-41.45	-13	-28.45
13379.2000	-41.59	-13	-28.59
14215.4000	-42.72	-13	-29.72
15051.6000	-41.10	-13	-28.10
15887.8000	-41.60	-13	-28.60
18396.4000	-40.10	-13	-27.10
19232.6000	-40.67	-13	-27.67
20068.8000	-40.88	-13	-27.88
20905.0000	-39.36	-13	-26.36

CH251

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
191.394230769	-45.30	-13	-32.30
969.711538462	-45.43	-13	-32.43
1697.6000	-43.16	-13	-30.16
2546.4000	-41.10	-13	-28.10
3395.2000	-40.26	-13	-27.26
4244.0000	-42.70	-13	-29.70
5092.8000	-42.84	-13	-29.84
5941.6000	-43.07	-13	-30.07
6790.4000	-43.35	-13	-30.35
8488.0000	-42.99	-13	-29.99
9336.8000	-42.76	-13	-29.76
10185.6000	-42.86	-13	-29.86
11034.4000	-41.48	-13	-28.48
13580.8000	-41.80	-13	-28.80
14429.6000	-41.95	-13	-28.95
15278.4000	-40.73	-13	-27.73
16127.2000	-41.93	-13	-28.93
18673.6000	-41.03	-13	-28.03
19522.4000	-41.38	-13	-28.38
20371.2000	-40.74	-13	-27.74
21220.0000	-40.88	-13	-27.88

850 Band Idle

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
124.759615385	-69.72	-13	-56.72
882.211538462	-61.50	-13	-48.50
3552.884615	-60.37	-13	-47.37
7878.205128	-64.13	-13	-51.13
11684.294872	-62.70	-13	-49.70
17326.923077	-61.11	-13	-48.11
24456.730769	-56.50	-13	-43.50

CH512

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
183.605769231	-44.39	-13	-31.39
974.198717949	-45.45	-13	-32.45
3700.4000	-41.69	-13	-28.69
5550.6000	-43.08	-13	-30.08
7400.8000	-43.03	-13	-30.03
9251.0000	-42.06	-13	-29.06
11101.2000	-40.96	-13	-27.96
12951.4000	-42.01	-13	-29.01
14801.6000	-42.36	-13	-29.36
16651.8000	-40.63	-13	-27.63
18502.0000	-40.16	-13	-27.16
20352.2000	-40.22	-13	-27.22
22202.4000	-39.21	-13	-26.21
24052.6000	-40.26	-13	-27.26

CH661

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
148.557692308	-45.07	-13	-32.07
453.685897436	-44.98	-13	-31.98
3764.8077	-39.84	-13	-26.84
5640.0000	-43.79	-13	-30.79
7520.0000	-42.45	-13	-29.45
9400.0000	-42.72	-13	-29.72
11280.0000	-41.27	-13	-28.27
13160.0000	-42.71	-13	-29.71
15040.0000	-41.68	-13	-28.68
16920.0000	-41.85	-13	-28.85
18800.0000	-41.15	-13	-28.15
20680.0000	-41.29	-13	-28.29
22560.0000	-39.55	-13	-26.55
24440.0000	-37.36	-13	-24.36

CH810

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
37.788461538	-45.62	-13	-32.62
675.801282051	-44.69	-13	-31.69
3819.6000	-43.29	-13	-30.29
5729.4000	-43.61	-13	-30.61
7639.2000	-43.20	-13	-30.20
9549.0000	-42.69	-13	-29.69
11458.8000	-42.40	-13	-29.40
13368.6000	-42.34	-13	-29.34
15278.4000	-40.46	-13	-27.46
17188.2000	-42.01	-13	-29.01
19098.0000	-40.12	-13	-27.12
21007.8000	-40.66	-13	-27.66
22917.6000	-39.30	-13	-26.30
24827.4000	-38.33	-13	-25.33

1900 Band Idle

Frequency (MHz)	Power Measured (dBm)	Compliance Limit (dBm)	Margin (dB)
248.509615385	-70.38	-13	-57.38
597.275641026	-69.88	-13	-56.88
3591.346154	-60.36	-13	-47.36
7474.358974	-63.89	-13	-50.89
11120.993590	-62.03	-13	-49.03
17856.971154	-60.77	-13	-47.77
24388.621795	-57.51	-13	-44.51

Test equipment: ETSTW-RE 055, ETSTW-GSM 02

Note: Please refer to appendix for plot data.

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 log P (P = transmitter power in Watts).

The compliance limit was calculated as an example per the following:
Maximum transmitter output power: P= 0.0952 Watts
Required attenuation: A=43 + 10 log P
Limit for Spurious Emissions at Antenna Terminals: L=P-A=-13 dBm

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.

CH128_ DC 3.7 V

Model: AAGPSV3 Date: 2010/10-8-2010/10/11
Mode: Active ch128 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
156.0721	-93.98	23.33	-70.65	-13.00	-57.65	125	150
845.6914	-102.44	35.69	-66.75	-13.00	-53.75	130	150
1649.2990	-35.08	4.05	-31.03	-13.00	-18.03	145	150
2472.9460	-45.56	6.75	-38.81	-13.00	-25.81	150	150
3296.5930	-51.10	11.26	-39.84	-13.00	-26.84	155	150
5771.5430	-52.65	13.73	-38.92	-13.00	-25.92	140	150
6597.1940	-54.27	14.97	-39.30	-13.00	-26.30	150	150
7422.8460	-51.35	11.64	-39.71	-13.00	-26.71	155	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
47.8557	-81.97	22.66	-59.31	-13.00	-46.31	115	150
948.0962	-102.65	35.31	-67.34	-13.00	-54.34	130	150
1649.2990	-32.94	3.60	-29.34	-13.00	-16.34	140	150
2472.9460	-49.09	4.66	-44.43	-13.00	-31.43	150	150
3296.5930	-52.83	9.04	-43.79	-13.00	-30.79	155	150
6597.1940	-53.77	12.79	-40.98	-13.00	-27.98	165	150

CH188_ DC 3.7 V

Mode: Active ch188 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.7735	-94.97	24.19	-70.78	-13.00	-57.78	120	150
977.5551	-102.17	35.40	-66.77	-13.00	-53.77	135	150
1673.3470	-38.45	5.09	-33.36	-13.00	-20.36	160	150
2509.0180	-41.66	7.22	-34.44	-13.00	-21.44	150	150
3344.6890	-54.71	11.52	-43.19	-13.00	-30.19	155	150
5851.7030	-56.85	14.22	-42.63	-13.00	-29.63	150	150
6693.3870	-52.90	15.37	-37.53	-13.00	-24.53	155	150
7527.0540	-53.12	11.94	-41.18	-13.00	-28.18	150	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.7735	-83.31	22.59	-60.72	-13.00	-47.72	110	150
900.4008	-101.94	35.73	-66.21	-13.00	-53.21	120	150
1673.3470	-34.02	4.33	-29.69	-13.00	-16.69	140	150
2509.0180	-46.86	4.85	-42.01	-13.00	-29.01	150	150
3344.6890	-55.37	9.38	-45.99	-13.00	-32.99	155	150
6693.3870	-55.16	12.96	-42.20	-13.00	-29.20	150	150

CH251_ DC 3.7 V

Mode: Active ch 251 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
89.5190	-92.52	24.87	-67.65	-13.00	-54.65	115	150
997.1944	-101.62	36.32	-65.30	-13.00	-52.30	145	150
1697.3950	-40.76	6.13	-34.63	-13.00	-21.63	145	150
2545.0900	-43.56	8.04	-35.52	-13.00	-22.52	140	150
3398.7980	-48.21	11.76	-36.45	-13.00	-23.45	150	150
5907.8160	-57.51	14.35	-43.16	-13.00	-30.16	145	150
6789.5790	-54.18	14.80	-39.38	-13.00	-26.38	140	150
7639.2790	-54.00	11.58	-42.42	-13.00	-29.42	135	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
45.6914	-83.62	22.52	-61.10	-13.00	-48.10	120	150
941.0822	-101.71	35.37	-66.34	-13.00	-53.34	130	150
1697.3950	-40.50	5.07	-35.43	-13.00	-22.43	140	150
2545.0900	-44.24	5.30	-38.94	-13.00	-25.94	150	150
3398.7980	-48.26	9.77	-38.49	-13.00	-25.49	160	150
6789.5790	-53.70	12.72	-40.98	-13.00	-27.98	140	150

CH512_ DC 3.7 V

Mode: Active ch 512 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
170.6814	-96.35	24.57	-71.78	-13.00	-58.78	110	150
998.5972	-103.60	36.38	-67.22	-13.00	-54.22	140	150
3705.4110	-49.46	11.63	-37.83	-13.00	-24.83	145	150
5547.0940	-53.29	12.76	-40.53	-13.00	-27.53	145	150
7406.8140	-53.17	11.59	-41.58	-13.00	-28.58	150	150
9246.9940	-57.58	31.12	-26.46	-13.00	-13.46	150	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
47.3146	-82.90	22.63	-60.27	-13.00	-47.27	125	150
903.2064	-102.11	35.70	-66.41	-13.00	-53.41	145	150
3705.4110	-46.10	9.98	-36.12	-13.00	-23.12	140	150
5547.0940	-53.67	10.90	-42.77	-13.00	-29.77	135	150
7406.8140	-52.67	10.97	-41.70	-13.00	-28.70	140	150
9246.9940	-65.53	30.21	-35.32	-13.00	-22.32	145	150

CH661_ DC 3.7 V

Mode: Active ch 661 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
103.0461	-93.11	23.20	-69.91	-13.00	-56.91	125	150
985.9720	-102.87	35.79	-67.08	-13.00	-54.08	120	150
3765.5310	-50.52	11.91	-38.61	-13.00	-25.61	145	150
5643.2870	-50.45	12.40	-38.05	-13.00	-25.05	145	150
7527.0540	-49.27	11.94	-37.33	-13.00	-24.33	150	150
9399.2990	-57.88	30.08	-27.80	-13.00	-14.80	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.7735	-85.47	22.59	-62.88	-13.00	-49.88	105	150
952.3046	-103.13	35.28	-67.85	-13.00	-54.85	125	150
3765.5310	-50.07	9.62	-40.45	-13.00	-27.45	150	150
5643.2870	-54.13	10.50	-43.63	-13.00	-30.63	135	150
7519.0380	-49.33	11.33	-38.00	-13.00	-25.00	145	150
9399.2990	-70.68	29.88	-40.80	-13.00	-27.80	160	150

CH810_ DC 3.7 V

Mode: Active ch 810 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
88.4370	-91.35	24.97	-66.38	-13.00	-53.38	110	150
978.9580	-101.97	35.47	-66.50	-13.00	-53.50	120	150
3819.6390	-51.96	12.20	-39.76	-13.00	-26.76	155	150
5729.4000	-57.76	13.12	-44.64	-13.00	-31.64	150	150
7639.2790	-52.86	11.58	-41.28	-13.00	-28.28	140	150
9551.6030	-63.77	31.71	-32.06	-13.00	-19.06	145	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.2325	-85.88	22.55	-63.33	-13.00	-50.33	110	150
922.8457	-102.70	35.53	-67.17	-13.00	-54.17	125	150
3819.6390	-48.97	9.77	-39.20	-13.00	-26.20	150	150
5731.4630	-56.76	10.88	-45.88	-13.00	-32.88	160	150
7639.2790	-53.39	11.07	-42.32	-13.00	-29.32	150	150
9551.6030	-67.76	29.21	-38.55	-13.00	-25.55	165	150

CH128_ DC 3.6 V

Mode: Active ch128 Temperature: 24 °C
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
164.1884	-94.09	24.04	-70.05	-13.00	-57.05	140	150
998.5972	-102.33	36.38	-65.95	-13.00	-52.95	125	150
1649.2990	-38.49	4.05	-34.44	-13.00	-21.44	160	150
2472.9460	-45.03	6.75	-38.28	-13.00	-25.28	150	150
3296.5930	-49.74	11.26	-38.48	-13.00	-25.48	155	150
5771.5430	-53.12	13.73	-39.39	-13.00	-26.39	160	150
6597.1940	-52.74	14.97	-37.77	-13.00	-24.77	150	150
7422.8460	-51.66	11.64	-40.02	-13.00	-27.02	165	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
47.3146	-85.46	22.63	-62.83	-13.00	-49.83	110	150
890.5812	-101.77	35.36	-66.41	-13.00	-53.41	125	150
1649.2990	-32.33	3.60	-28.73	-13.00	-15.73	145	150
2472.9460	-48.23	4.66	-43.57	-13.00	-30.57	140	150
3296.5930	-54.47	9.04	-45.43	-13.00	-32.43	150	150
6597.1940	-53.75	12.79	-40.96	-13.00	-27.96	140	150

CH188_ DC 3.6 V

Mode: Active ch188 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.2325	-92.86	24.16	-68.70	-13.00	-55.70	115	150
995.7916	-102.87	36.25	-66.62	-13.00	-53.62	125	150
1673.3470	-37.51	5.09	-32.42	-13.00	-19.42	145	150
2509.0180	-42.51	7.22	-35.29	-13.00	-22.29	130	150
3344.6890	-52.08	11.52	-40.56	-13.00	-27.56	135	150
5851.7030	-55.44	14.22	-41.22	-13.00	-28.22	155	150
6693.3870	-54.03	15.37	-38.66	-13.00	-25.66	150	150
7527.0540	-51.92	11.94	-39.98	-13.00	-26.98	160	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.7735	-84.99	22.59	-62.40	-13.00	-49.40	105	150
896.1924	-102.31	35.58	-66.73	-13.00	-53.73	145	150
1673.3470	-33.90	4.33	-29.57	-13.00	-16.57	135	150
2509.0180	-50.50	4.85	-45.65	-13.00	-32.65	150	150
3344.6890	-55.22	9.38	-45.84	-13.00	-32.84	140	150
6693.3870	-54.52	12.96	-41.56	-13.00	-28.56	130	150

CH251_ DC 3.6 V

Mode: Active ch251 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
257.2545	-102.36	31.43	-70.93	-13.00	-57.93	120	150
988.7776	-102.76	35.92	-66.84	-13.00	-53.84	135	150
1697.3950	-38.46	6.13	-32.33	-13.00	-19.33	160	150
2545.0900	-42.67	8.04	-34.63	-13.00	-21.63	150	150
3398.7980	-48.29	11.76	-36.53	-13.00	-23.53	155	150
5939.8800	-55.11	14.58	-40.53	-13.00	-27.53	140	150
6789.5790	-55.56	14.80	-40.76	-13.00	-27.76	150	150
7639.2790	-54.79	11.58	-43.21	-13.00	-30.21	140	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.7735	-81.23	22.59	-58.64	-13.00	-45.64	115	150
913.0261	-102.17	35.62	-66.55	-13.00	-53.55	130	150
1697.3950	-39.00	5.07	-33.93	-13.00	-20.93	135	150
2545.0900	-45.53	5.30	-40.23	-13.00	-27.23	140	150
3398.7980	-50.46	9.77	-40.69	-13.00	-27.69	150	150
6789.5790	-51.80	12.72	-39.08	-13.00	-26.08	135	150

CH512_ DC 3.6 V

Mode: Active ch 512 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
71.6633	-95.58	24.67	-70.91	-13.00	-57.91	110	150
849.8998	-103.16	35.87	-67.29	-13.00	-54.29	130	150
3705.4110	-48.97	11.63	-37.34	-13.00	-24.34	140	150
5547.0940	-53.10	12.76	-40.34	-13.00	-27.34	135	150
7406.8140	-53.22	11.59	-41.63	-13.00	-28.63	140	150
9246.9940	-56.88	31.12	-25.76	-13.00	-12.76	155	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
46.2325	-84.15	22.55	-61.60	-13.00	-48.60	105	150
924.2485	-102.13	35.52	-66.61	-13.00	-53.61	135	150
3705.4110	-47.65	9.98	-37.67	-13.00	-24.67	160	150
5547.0940	-52.31	10.90	-41.41	-13.00	-28.41	150	150
7406.8140	-53.53	10.97	-42.56	-13.00	-29.56	160	150
9246.9940	-68.30	30.21	-38.09	-13.00	-25.09	145	150

CH661_ DC 3.6 V

Mode: Active ch 661 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
49.4790	-95.39	24.34	-71.05	-13.00	-58.05	100	150
998.5972	-103.24	36.38	-66.86	-13.00	-53.86	135	150
3765.5310	-50.91	11.91	-39.00	-13.00	-26.00	135	150
5643.2870	-51.08	12.40	-38.68	-13.00	-25.68	145	150
7527.0540	-50.21	11.94	-38.27	-13.00	-25.27	150	150
9399.2990	-58.26	30.08	-28.18	-13.00	-15.18	165	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
48.3968	-84.62	22.70	-61.92	-13.00	-48.92	110	150
994.3888	-102.02	35.13	-66.89	-13.00	-53.89	140	150
3765.5310	-51.26	9.62	-41.64	-13.00	-28.64	155	150
5643.2870	-53.39	10.50	-42.89	-13.00	-29.89	155	150
7527.0540	-48.61	11.33	-37.28	-13.00	-24.28	145	150
9399.2990	-69.21	29.88	-39.33	-13.00	-26.33	160	150

CH810_ DC 3.6 V

Mode: Active ch 810 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
237.2345	-95.79	27.21	-68.58	-13.00	-55.58	110	150
997.1944	-103.38	36.32	-67.06	-13.00	-54.06	135	150
3819.6390	-50.92	12.20	-38.72	-13.00	-25.72	160	150
5731.4630	-56.79	13.15	-43.64	-13.00	-30.64	140	150
7639.2790	-54.73	11.58	-43.15	-13.00	-30.15	130	150
9551.6030	-60.96	31.71	-29.25	-13.00	-16.25	155	150

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
45.6914	-84.72	22.52	-62.20	-13.00	-49.20	115	150
918.6373	-102.17	35.57	-66.60	-13.00	-53.60	130	150
3819.6390	-50.57	9.77	-40.80	-13.00	-27.80	145	150
5731.4630	-56.13	10.88	-45.25	-13.00	-32.25	145	150
7639.2790	-53.99	11.07	-42.92	-13.00	-29.92	155	150
9551.6030	-71.14	29.21	-41.93	-13.00	-28.93	170	150

Note: Please refer to appendix 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 log P (P = transmitter power in Watts).

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

Maximum transmitter radiated power: P=0.1923 watt

Required attenuation: A=43 + 10 log P

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

Test equipment: ETSTW-RE 003, ETSTW-RE 018, ETSTW-GSM 02

7.5 Test result of band edge emissions

RBW: 3 kHz, VBW: 10 kHz

850 MHz band

Model: AAGPSV3 Date: 2010/10/8
Mode: 850band Ch128 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
823.9960	-59.52	34.76	-24.76	-13.00	-11.76

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
823.9960	-58.63	33.02	-25.61	-13.00	-12.61

Mode: 850band Ch251 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
849.0100	-58.18	35.83	-22.35	-13.00	-9.35

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
849.0040	-53.38	33.71	-19.67	-13.00	-6.67

RBW: 3 kHz, VBW: 10 kHz

1900 MHz band

Model: AAGPSV3 Date: 2010/10/7
Mode: 1900band Ch512 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
1849.9800	-63.02	44.70	-18.32	-13.00	-5.32

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
1849.9960	-62.63	43.71	-18.92	-13.00	-5.92

Mode: 1900band Ch810 Temperature: 24 °C Engineer: Danny
Polarization: Horizontal Humidity: 60 %

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
1910.0120	-69.01	44.25	-24.76	-13.00	-11.76

Polarization: Vertical

Frequency (MHz)	Reading (dBm) Peak	Factor (dB) Corr.	Result (dBm)	Limit (dBm)	Margin (dB)
1910.0040	-69.36	43.71	-25.65	-13.00	-12.65

Note: Please refer to appendix for plot data.

Test equipment: ETSTW-RE 003, ETSTW-RE 018, ETSTW-GSM 02

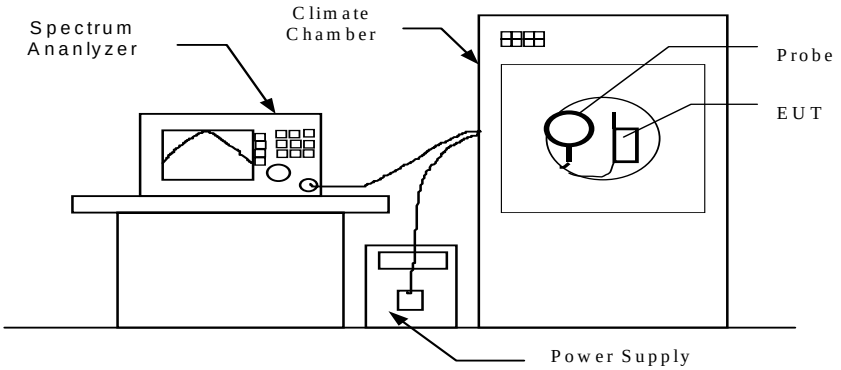
8. Frequency Stability

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

CH128 824.2 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 3.7 V	-30	0.021	0.025	±2.5
	-20	0.019	0.023	
	-10	0.019	0.023	
	0	0.014	0.017	
	10	0.018	0.022	
	20	0.014	0.017	
	30	0.020	0.024	
	40	0.015	0.018	
	50	0.015	0.018	

CH188 836.2 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 3.7 V	-30	0.023	0.028	±2.5
	-20	0.020	0.024	
	-10	0.022	0.026	
	0	0.015	0.018	
	10	0.019	0.023	
	20	0.015	0.018	
	30	0.015	0.018	
	40	0.018	0.022	
	50	0.016	0.019	

CH251 848.8 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 3.7 V	-30	0.023	0.027	±2.5
	-20	0.022	0.026	
	-10	0.017	0.020	
	0	0.013	0.015	
	10	0.016	0.019	
	20	-0.012	-0.014	
	30	0.015	0.018	
	40	0.012	0.014	
	50	0.015	0.018	

CH512 1850.2 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 3.7 V	-30	0.063	0.034	±2.5
	-20	0.062	0.034	
	-10	0.055	0.030	
	0	0.052	0.028	
	10	0.069	0.037	
	20	0.056	0.030	
	30	0.073	0.039	
	40	0.057	0.031	
	50	0.049	0.026	

CH661 1880.0 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 3.7 V	-30	0.060	0.032	±2.5
	-20	0.067	0.036	
	-10	0.064	0.034	
	0	0.057	0.030	
	10	0.062	0.033	
	20	0.063	0.034	
	30	0.064	0.034	
	40	0.062	0.033	
	50	0.050	0.027	

CH810 1909.8 MHz

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
DC 3.7 V	-30	0.059	0.031	±2.5
	-20	0.063	0.033	
	-10	0.061	0.032	
	0	0.058	0.030	
	10	0.072	0.038	
	20	0.059	0.031	
	30	0.060	0.031	
	40	0.055	0.029	
	50	0.052	0.027	

8.2.2 Frequency Stability vs. Voltage

CH128

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.017	0.021	±2.5

CH188

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.014	0.017	±2.5

CH251

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.011	0.013	±2.5

CH512

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.047	0.025	±2.5

CH661

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.054	0.029	±2.5

CH810

Supplied Voltage	Temperature (°C)	Frequency Drift (kHz)	Frequency Drift (ppm)	Limit (ppm)
End Point Voltage DC 3.6 V	25	0.059	0.031	±2.5

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

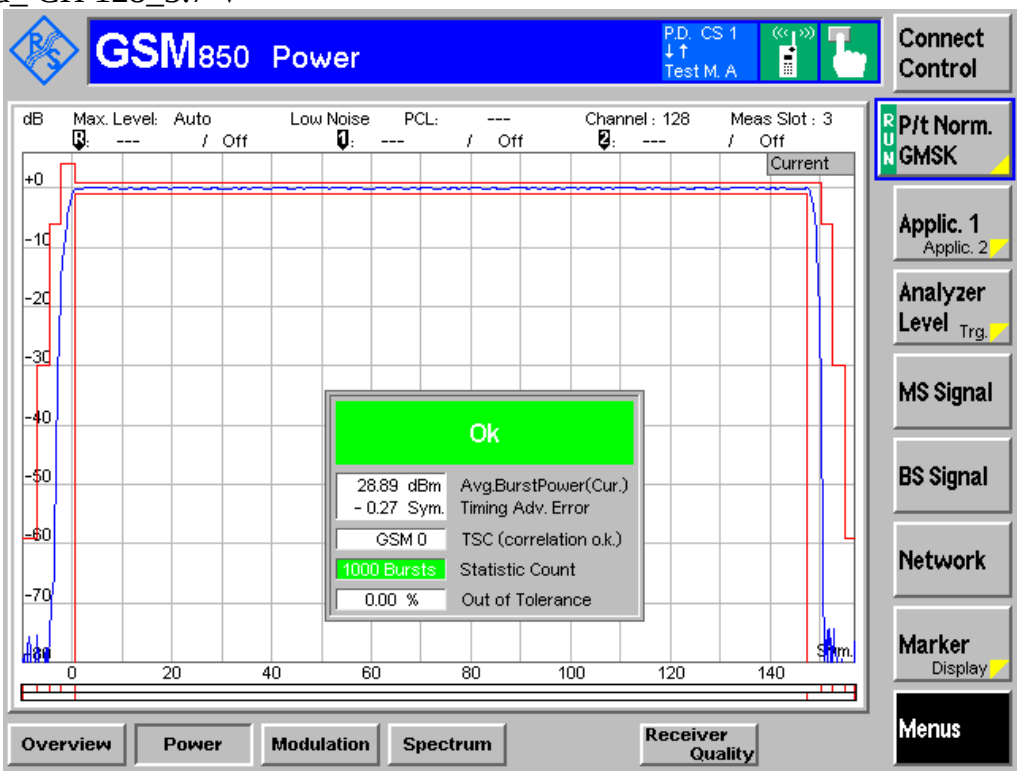
Appendix

Measurement diagrams

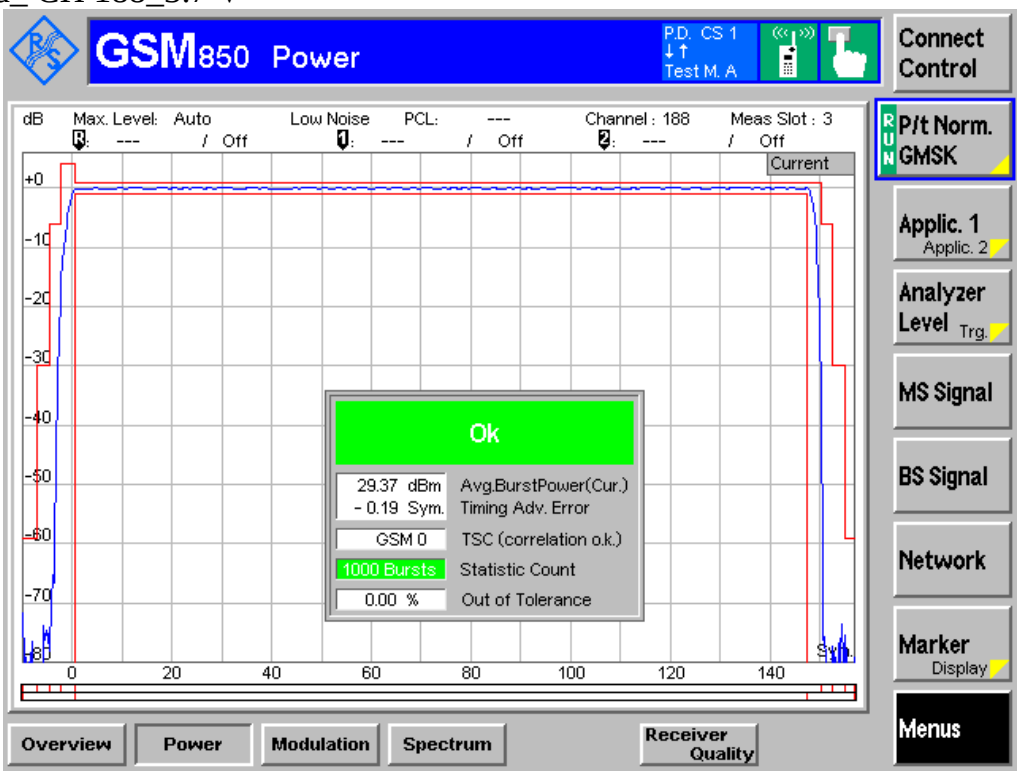
1. RF Power Output
2. Occupied Bandwidth / Emission Mask
3. Spurious Emissions at Antenna Terminals
4. Filed Strength of Spurious Emission
5. Band edge emissions

Report Number: W6M21009-10913-P-2224
FCC ID: XMSAAGPSV3

RF Power Output
Conducted Measurement
850 band_ CH 128_3.7 V



850 band_ CH 188_3.7 V



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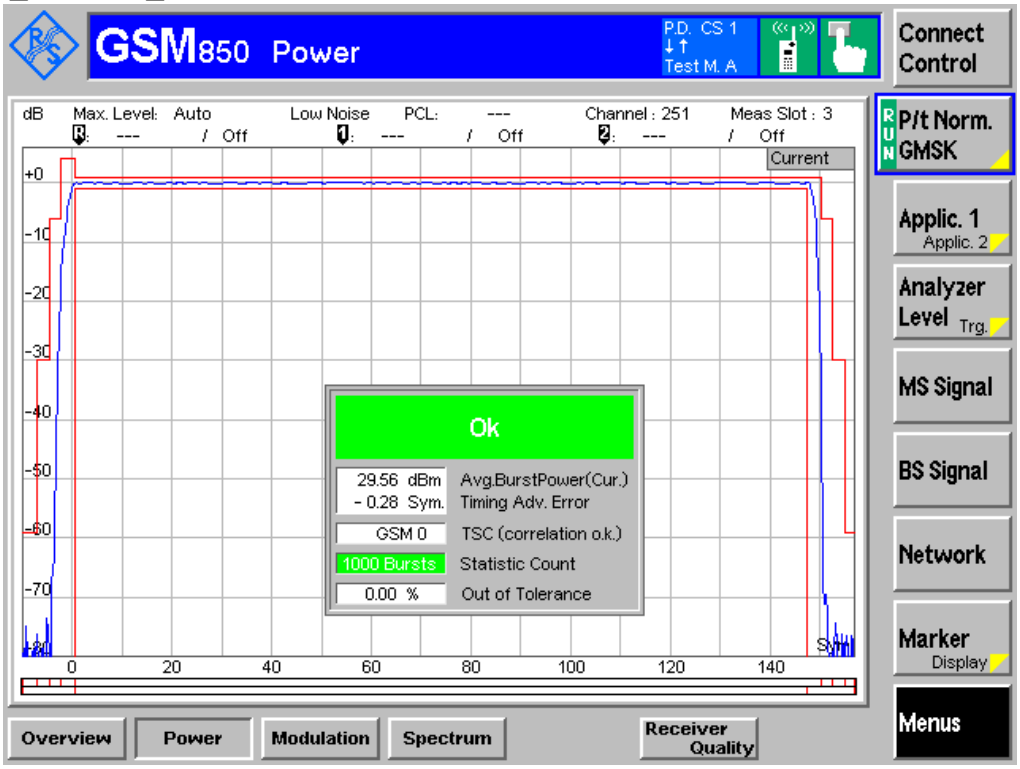
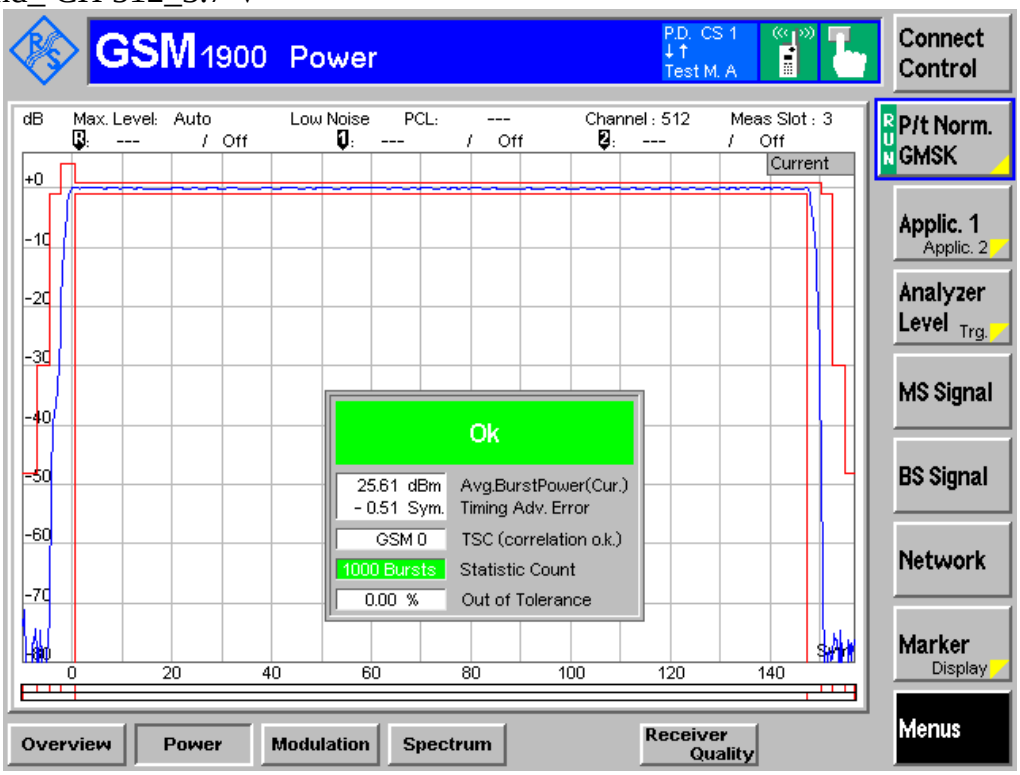


1900 band_ CH 512_3.7 V



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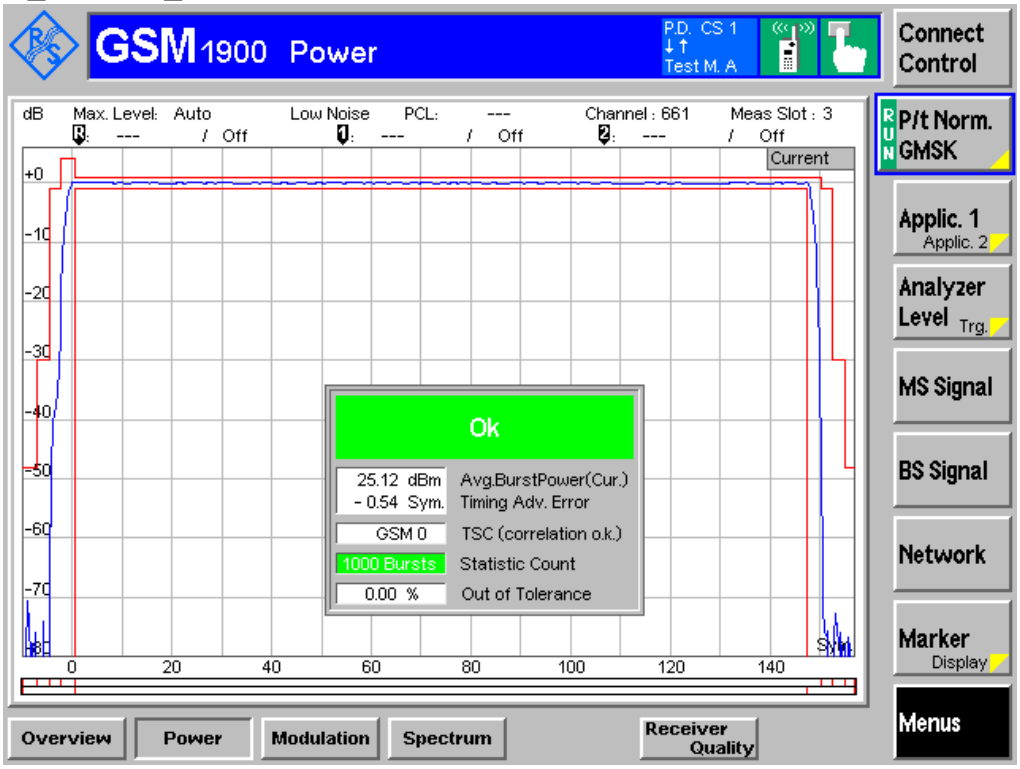
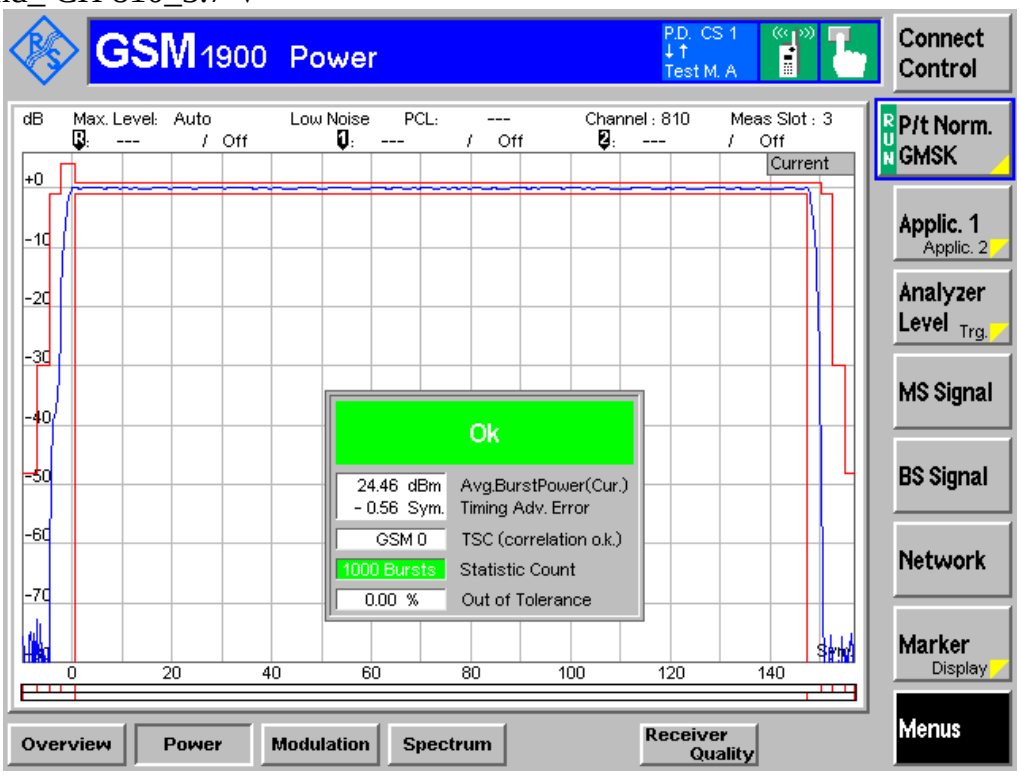
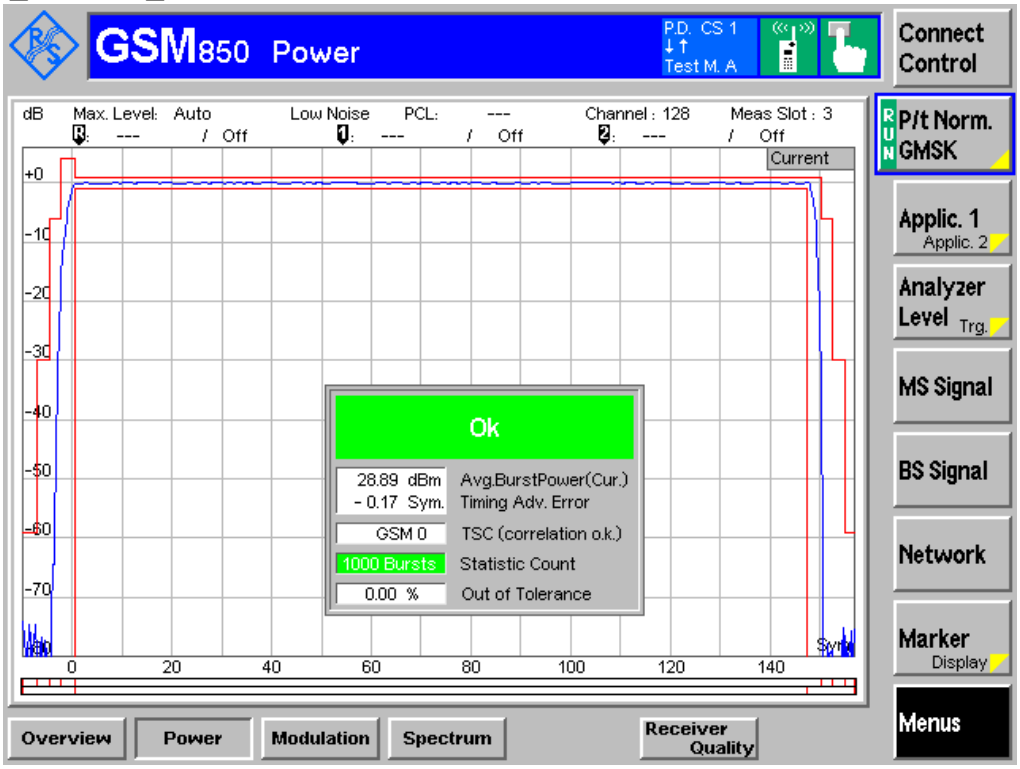


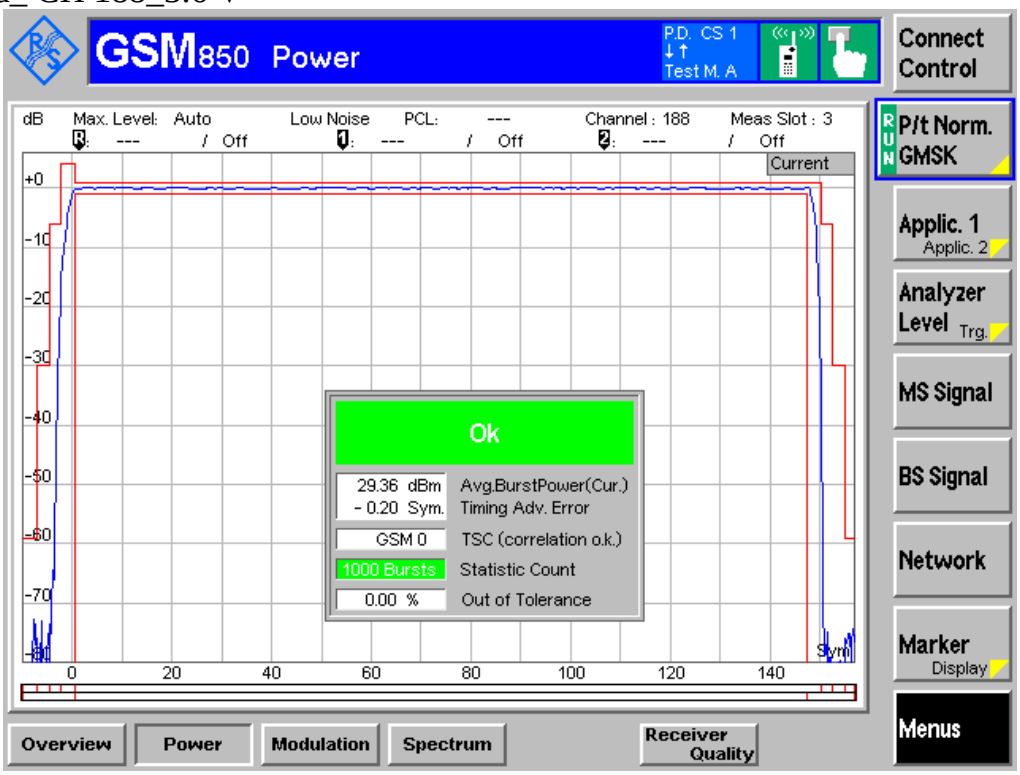
1900 band_ CH 810_3.7 V



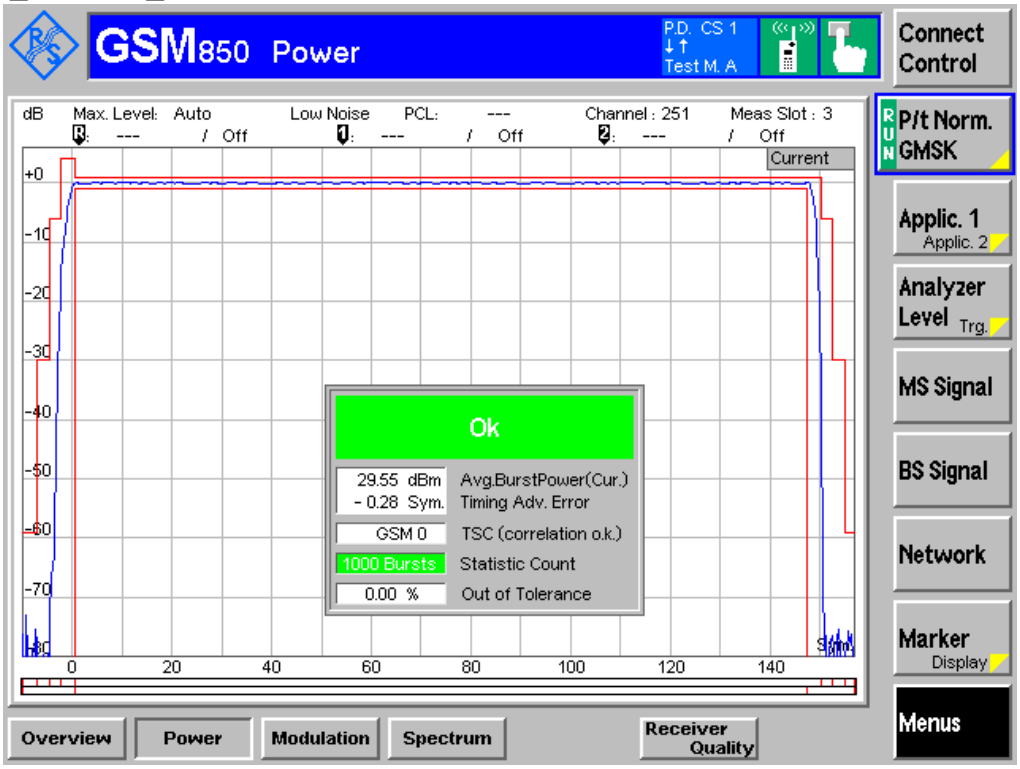
850 band_ CH 128_3.6 V



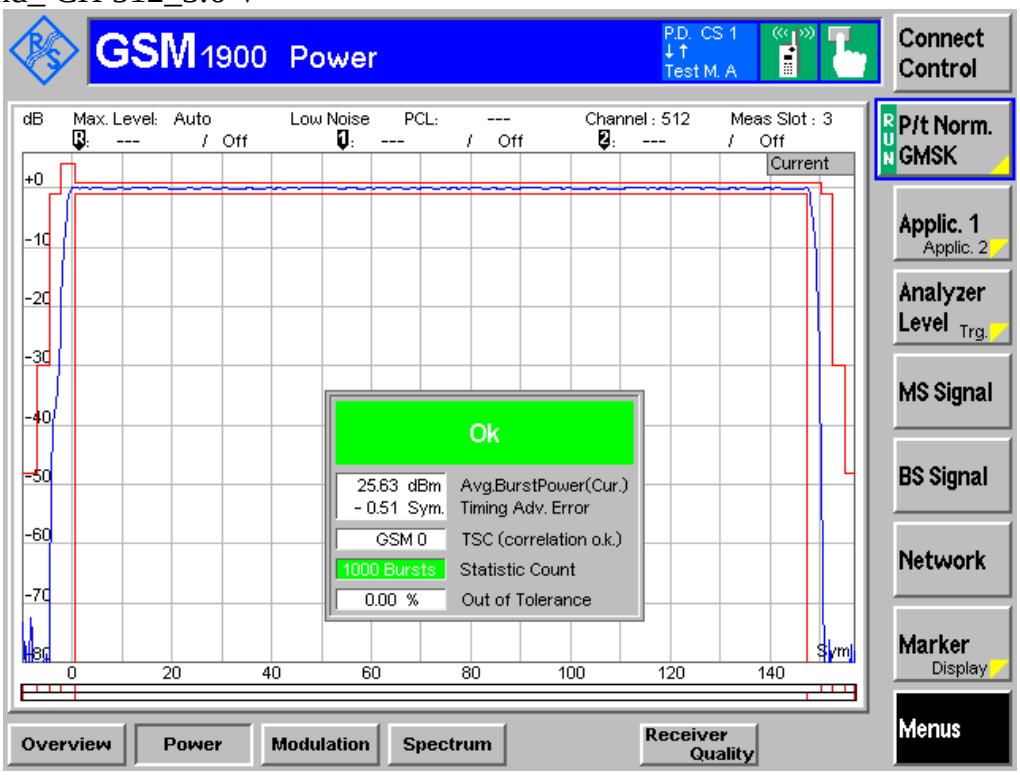
850 band_ CH 188_3.6 V



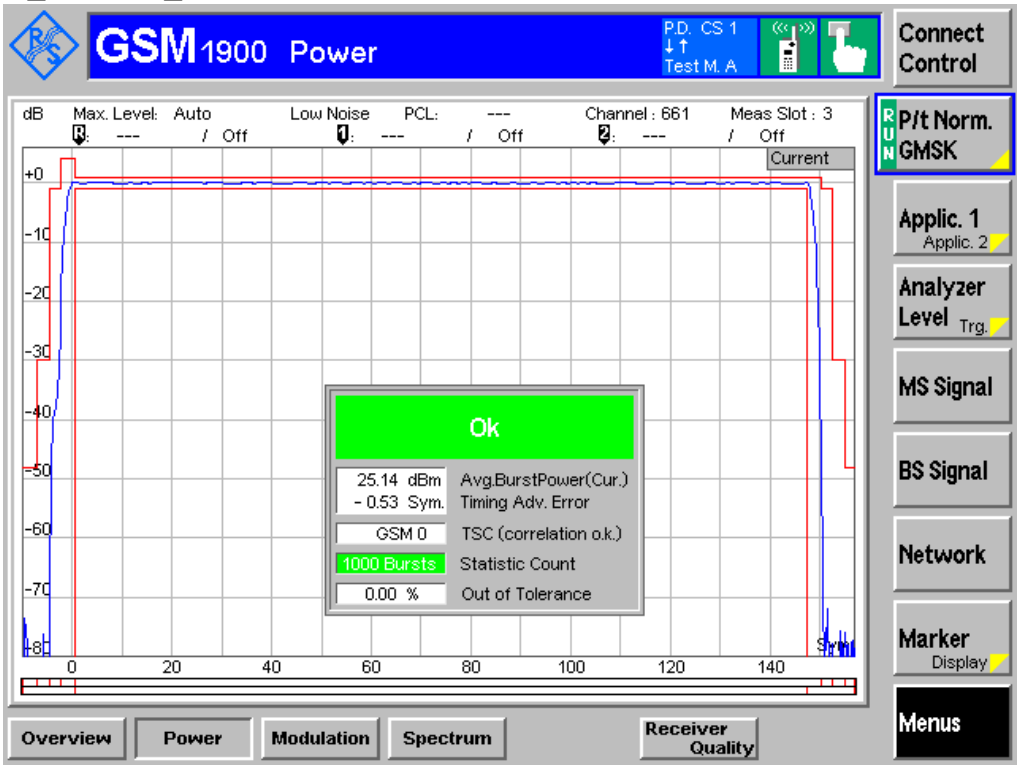
850 band_ CH 251_3.6 V



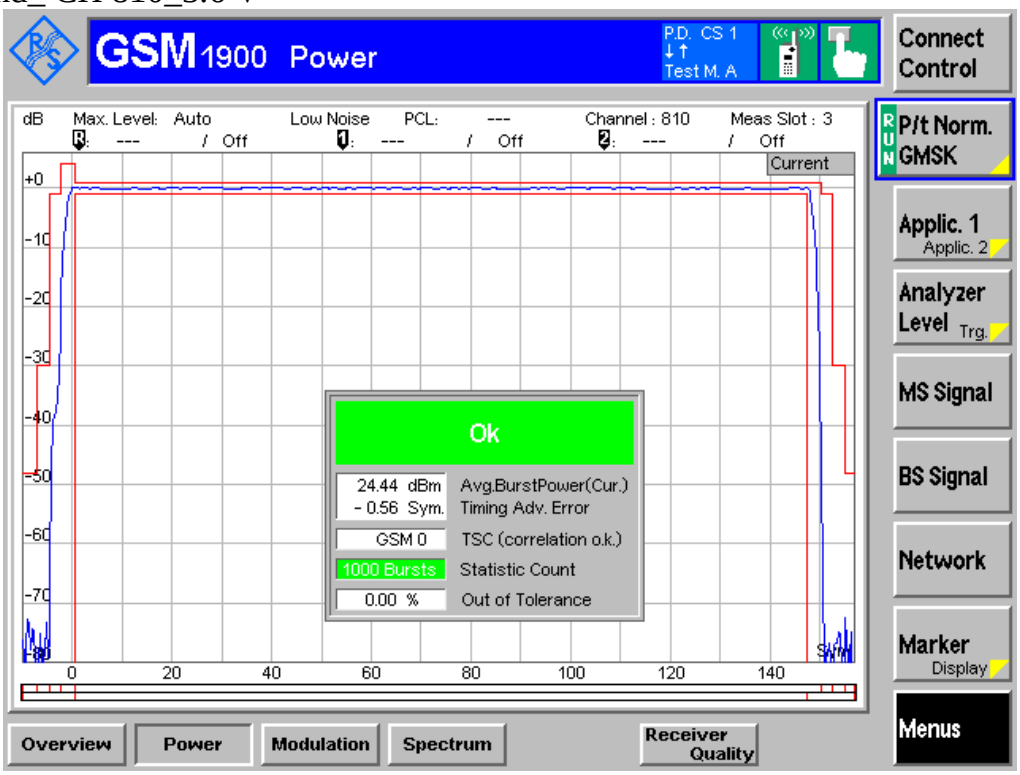
1900 band_ CH 512_3.6 V



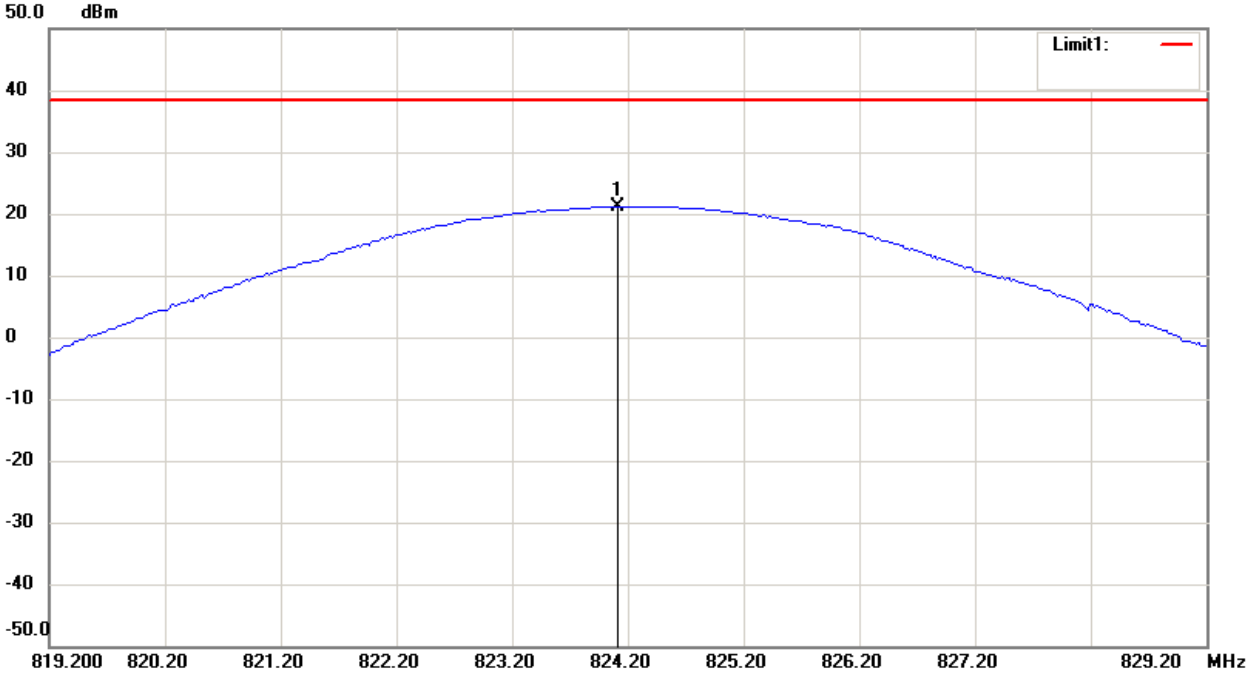
1900 band_ CH 661_3.6 V



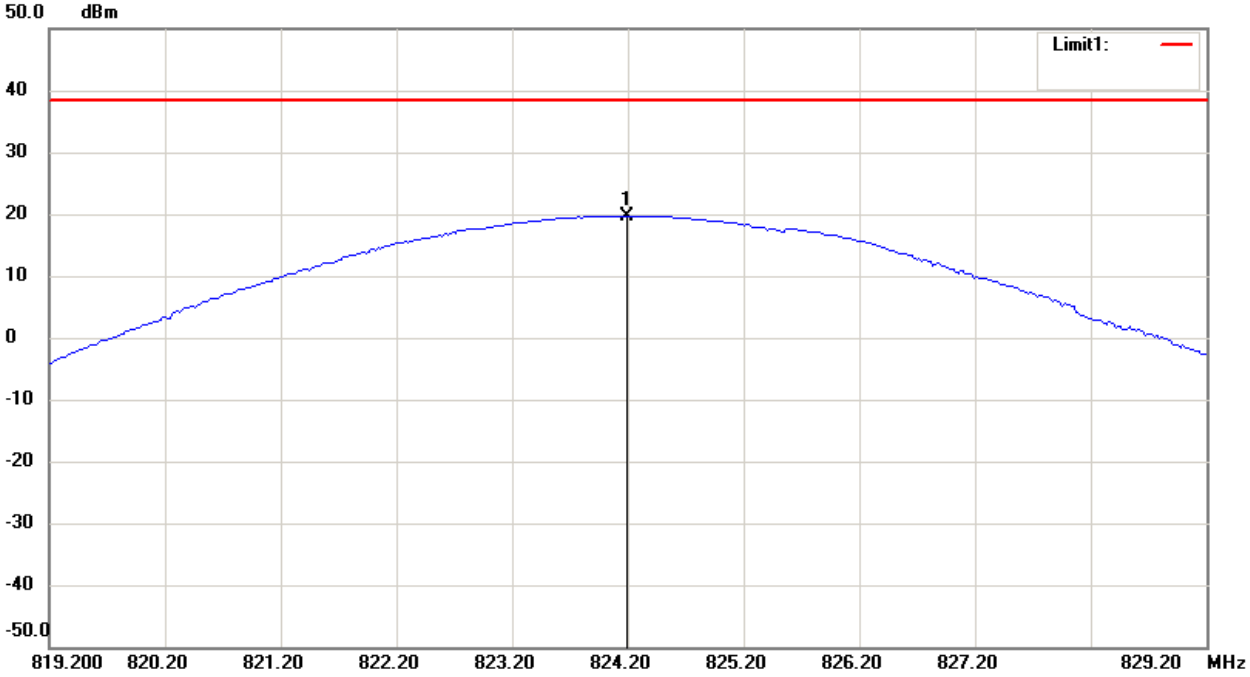
1900 band_ CH 810_3.6 V



Radiated Measurement
850 band_ CH 128_3.7 V
Antenna Polarization H

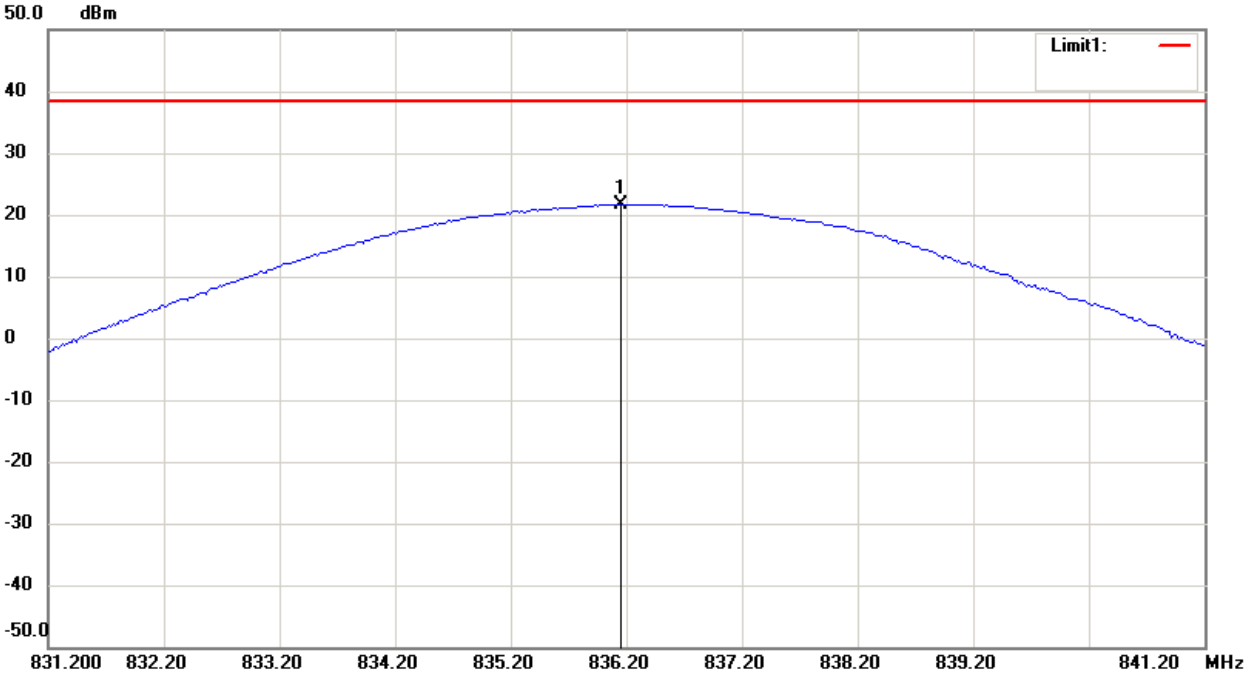


Antenna Polarization V



850 band_ CH 188_3.7 V

Antenna Polarization H



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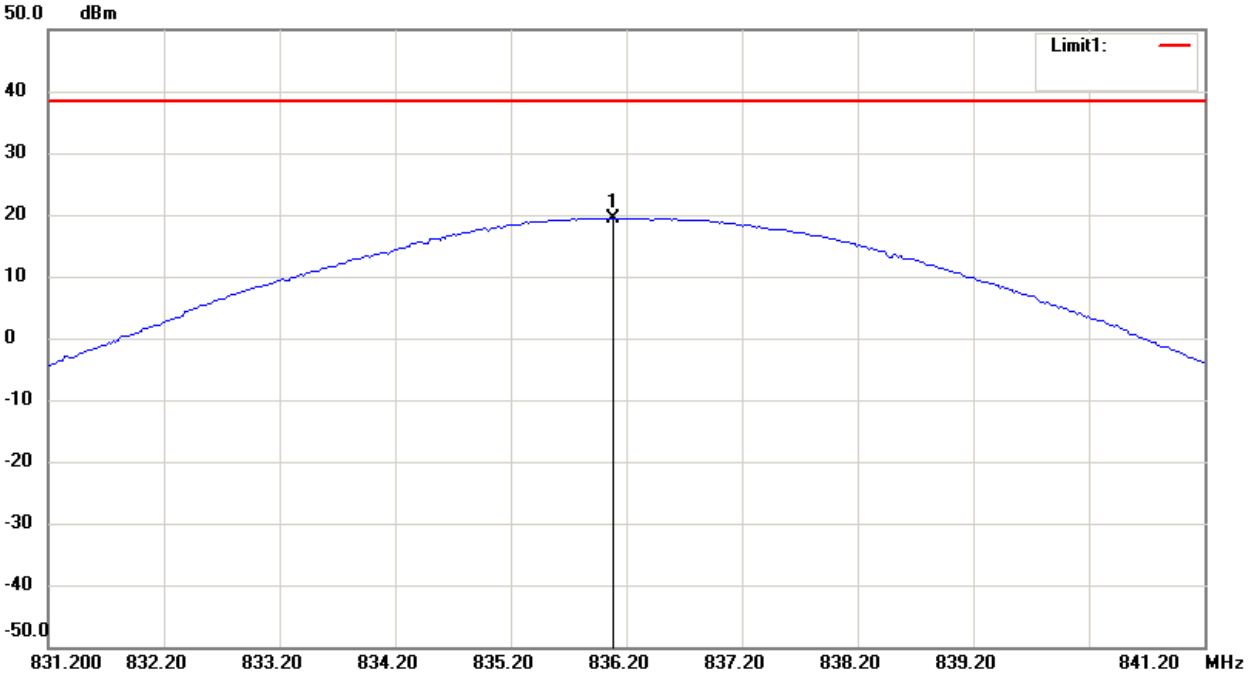
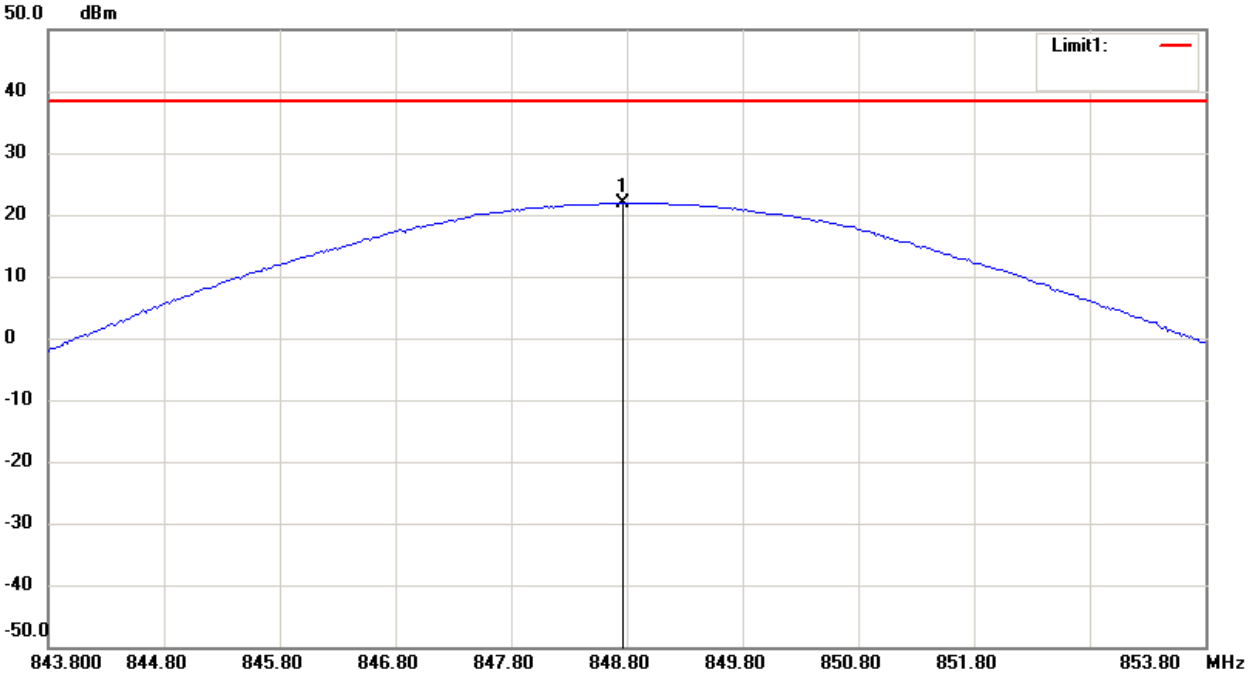


850 band_ CH 251_3.7 V

Antenna Polarization H



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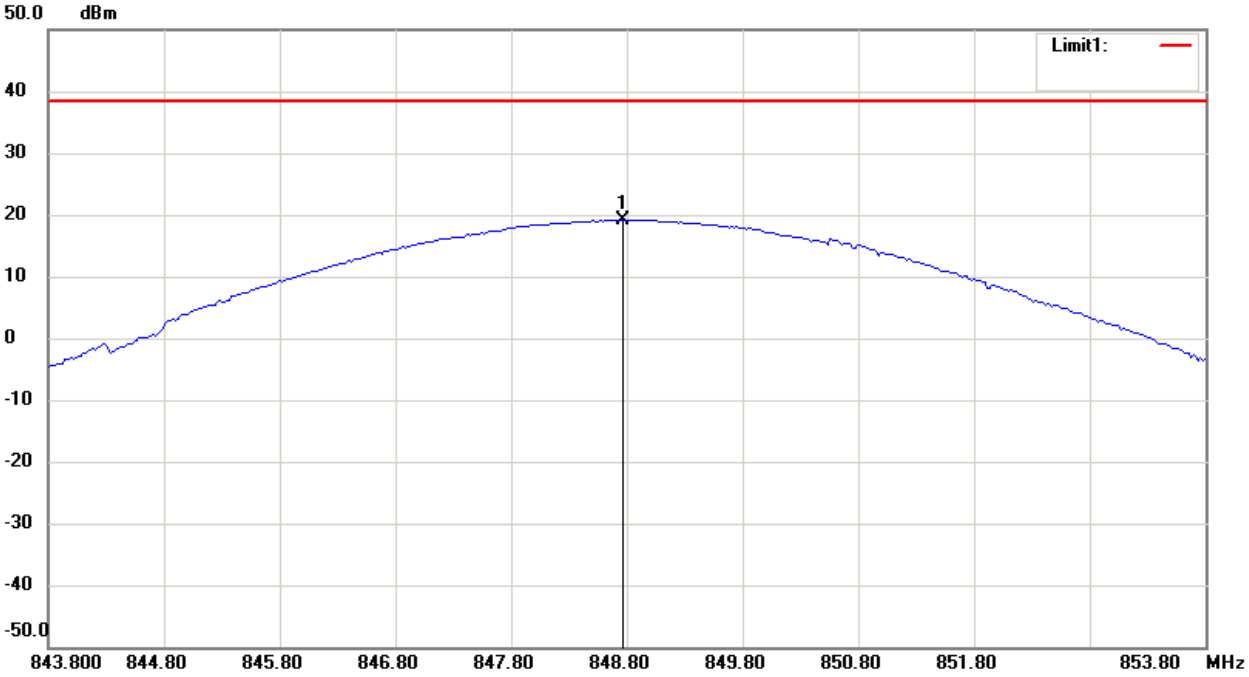
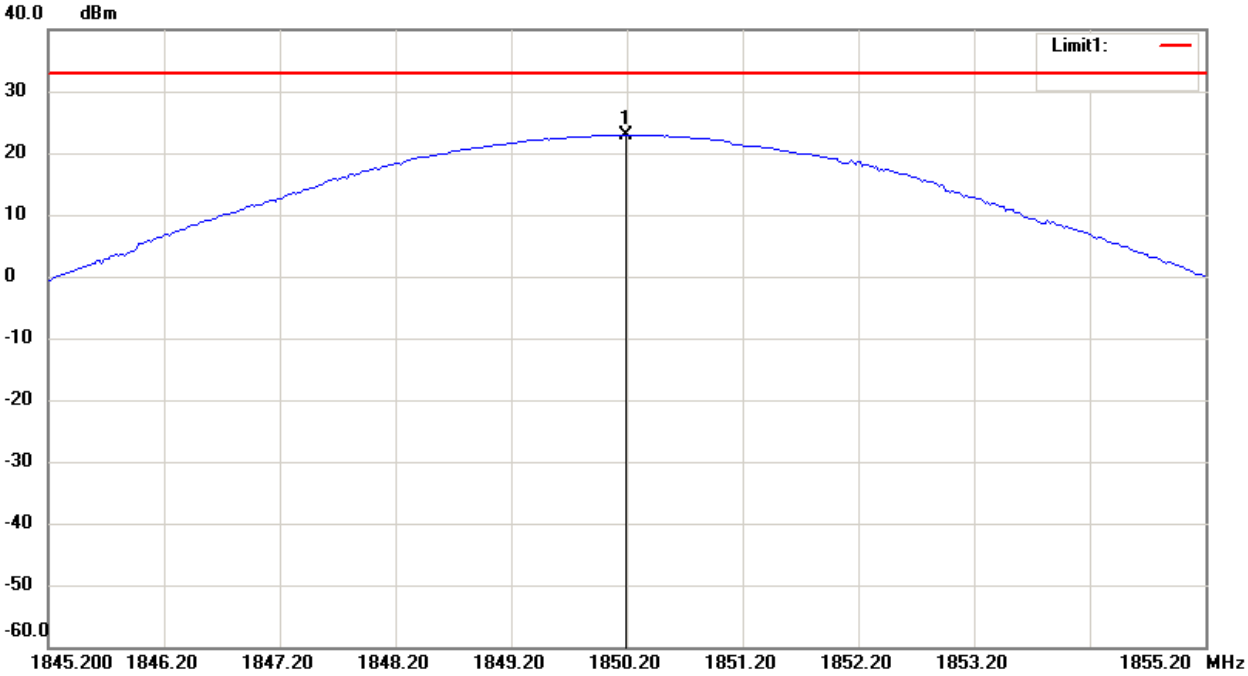
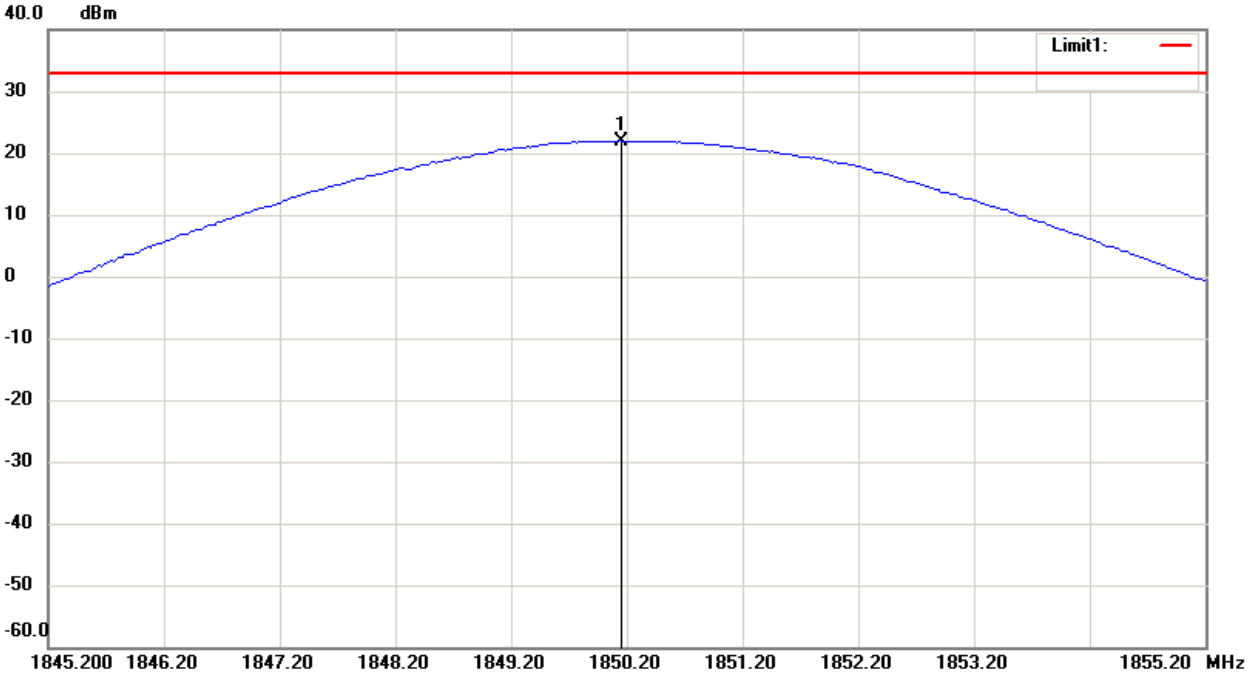


1900 band_ CH 512_3.7 V

Antenna Polarization H

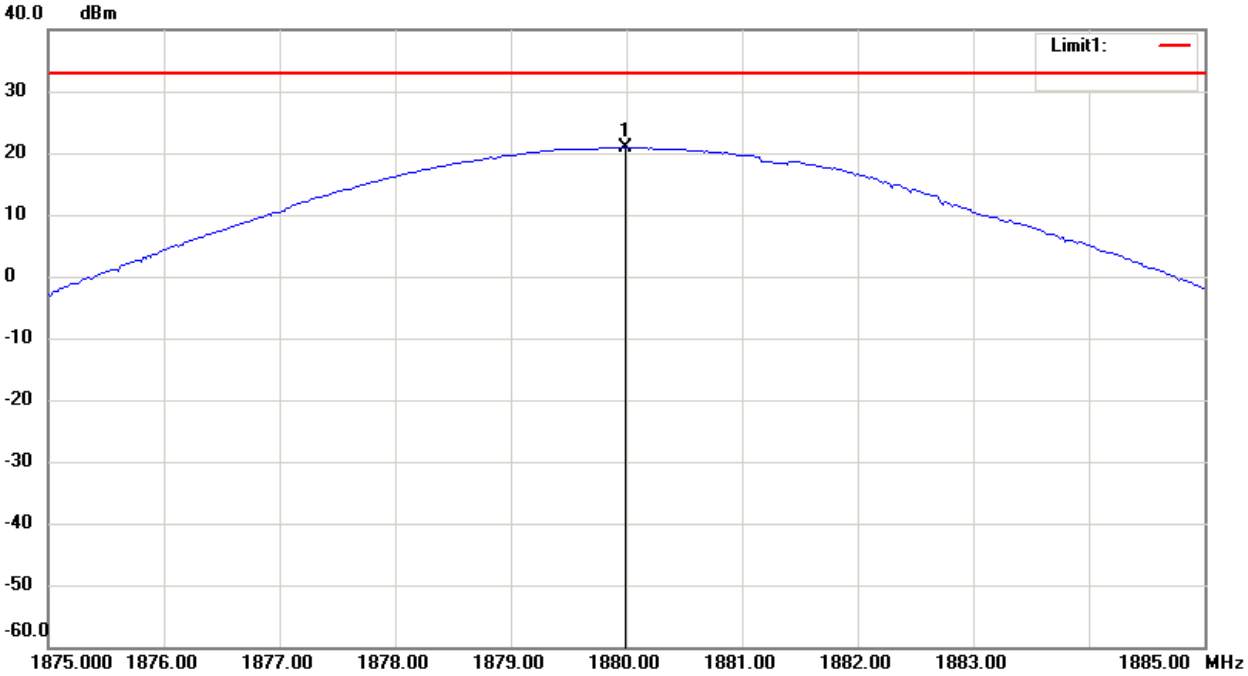


Antenna Polarization V

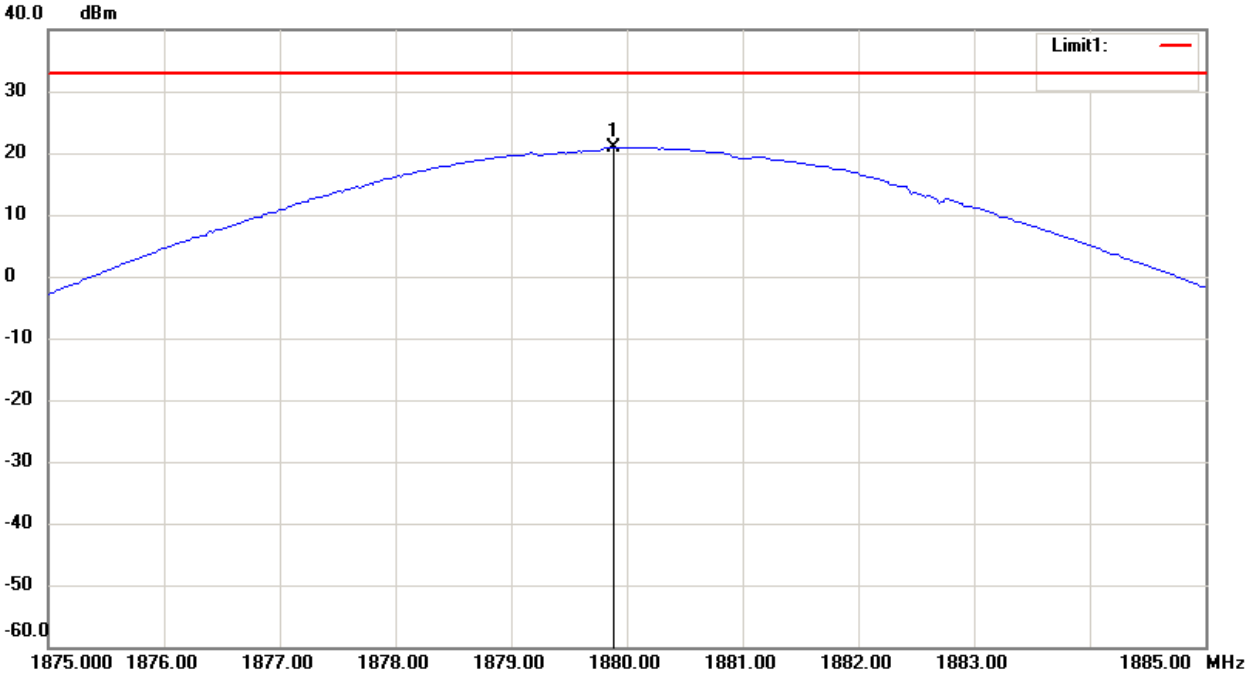


1900 band_ CH 661_3.7 V

Antenna Polarization H

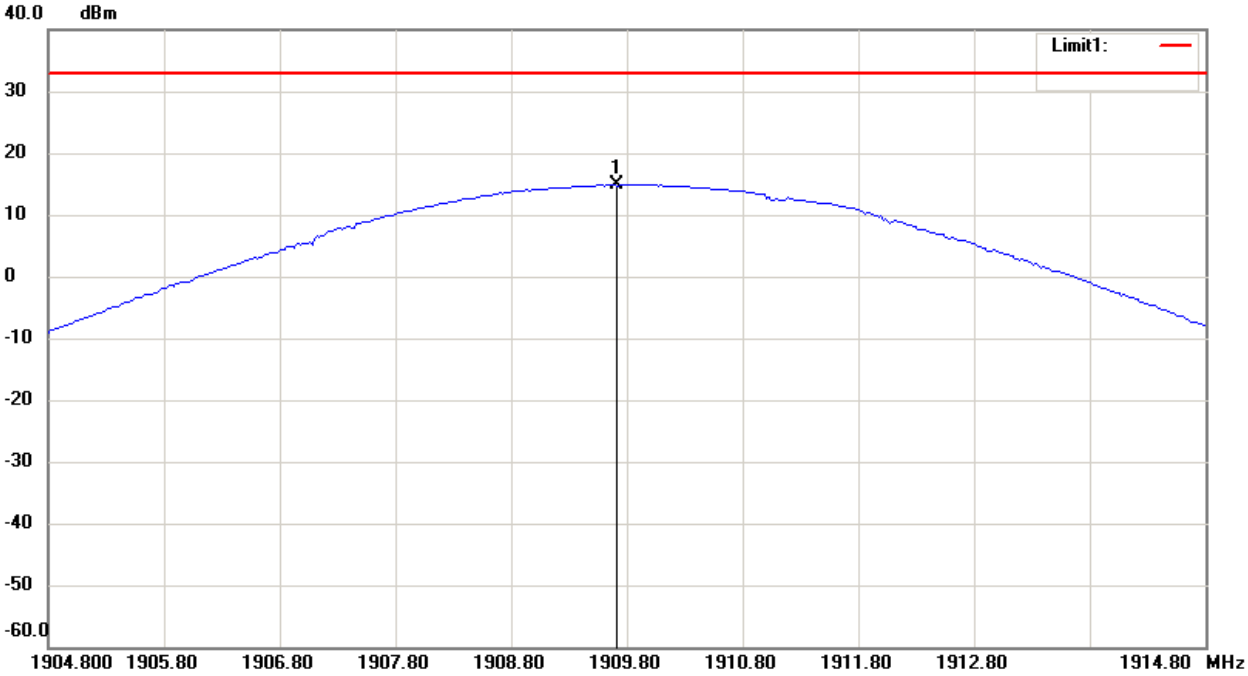


Antenna Polarization V

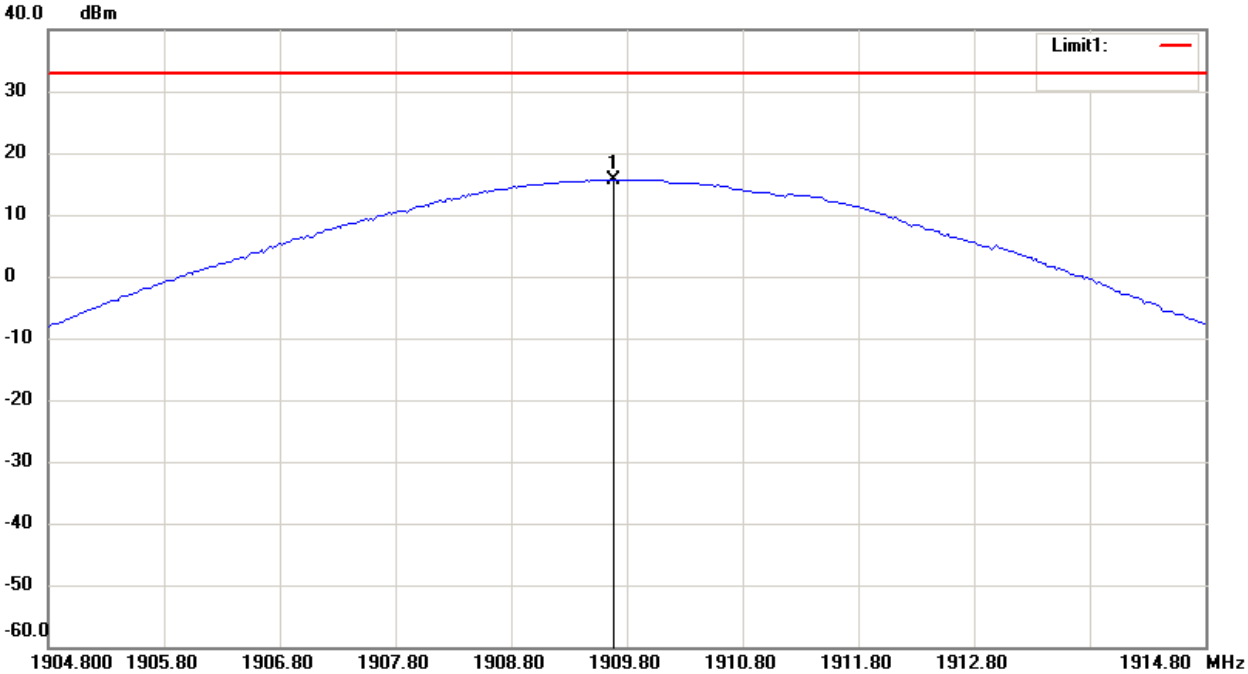


1900 band_ CH 810_3.7 V

Antenna Polarization H

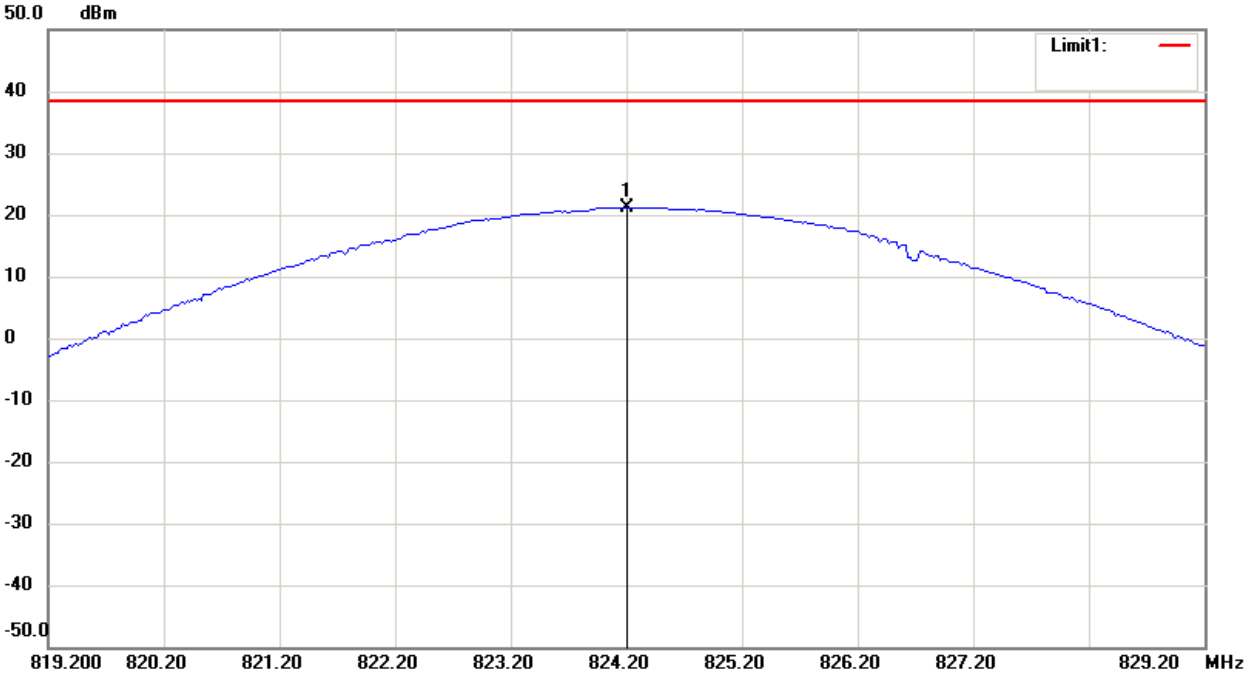


Antenna Polarization V



850 band_ CH 128_3.6 V

Antenna Polarization H



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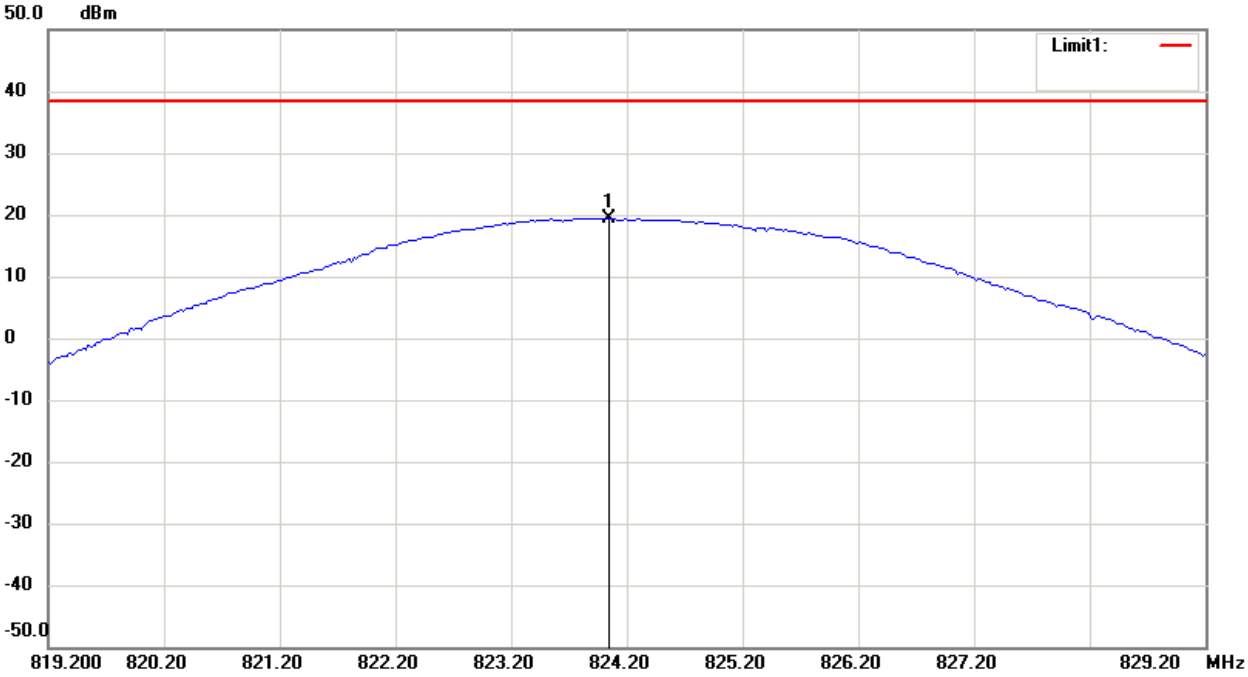
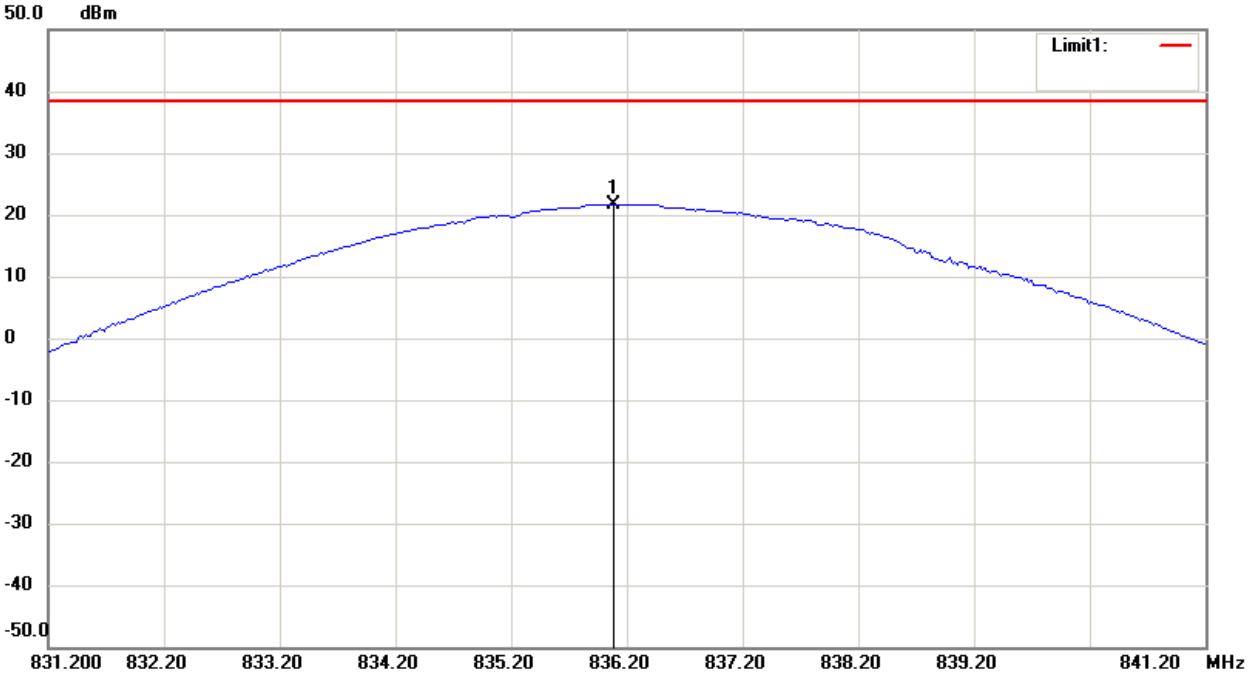
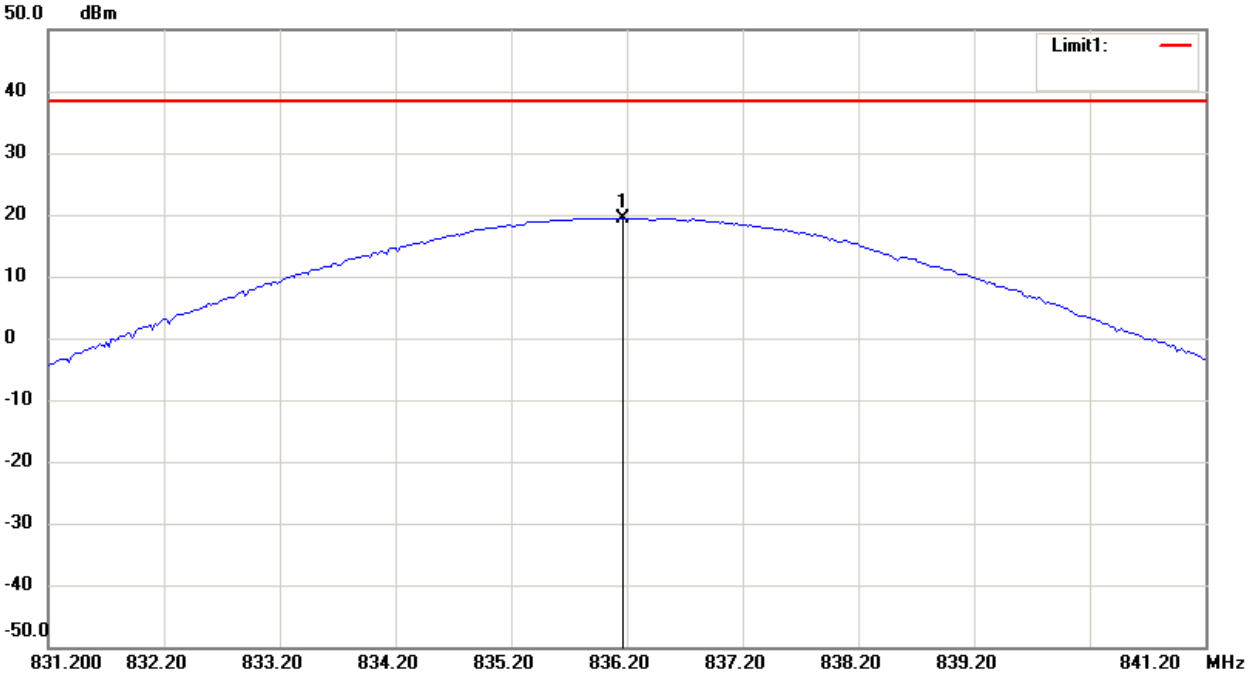


850 band_ CH 188_3.6 V

Antenna Polarization H

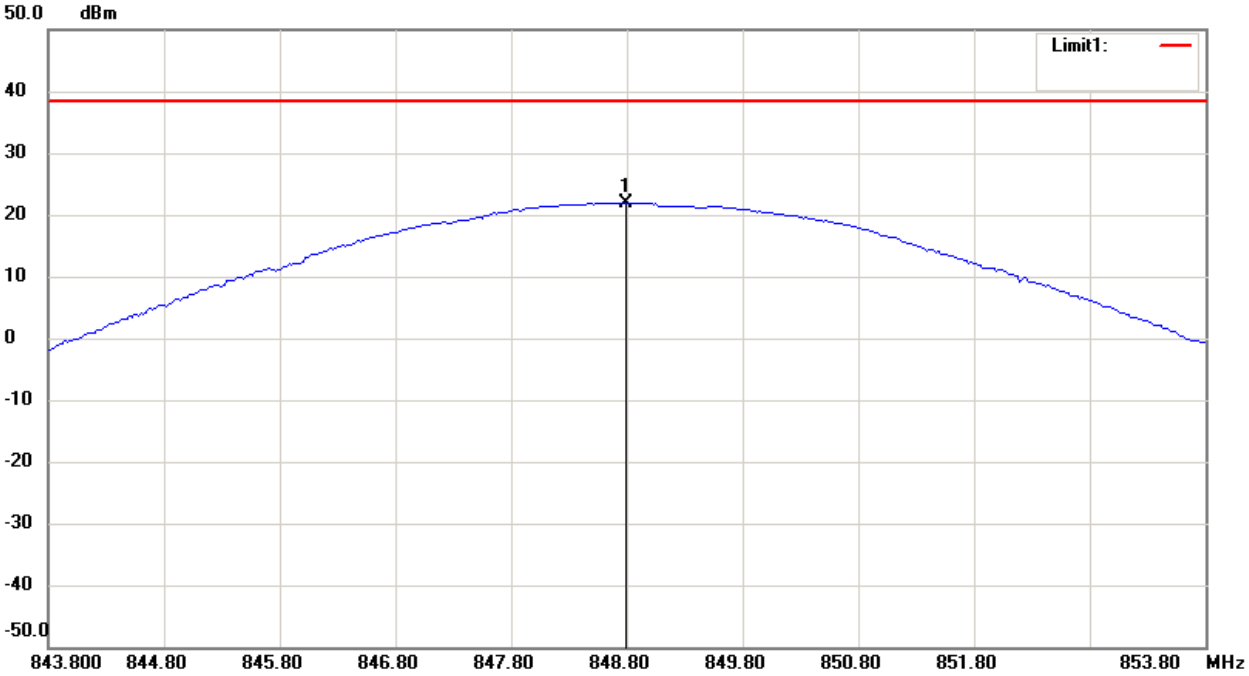


Antenna Polarization V

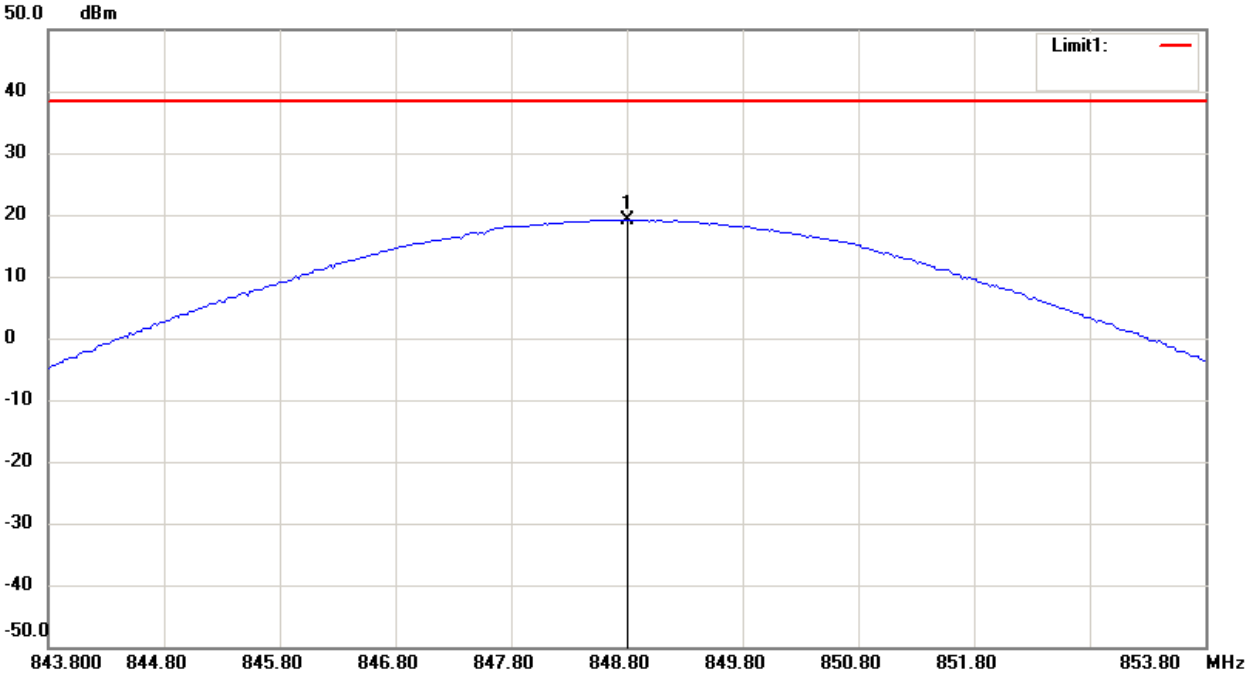


850 band_ CH 251_3.6 V

Antenna Polarization H

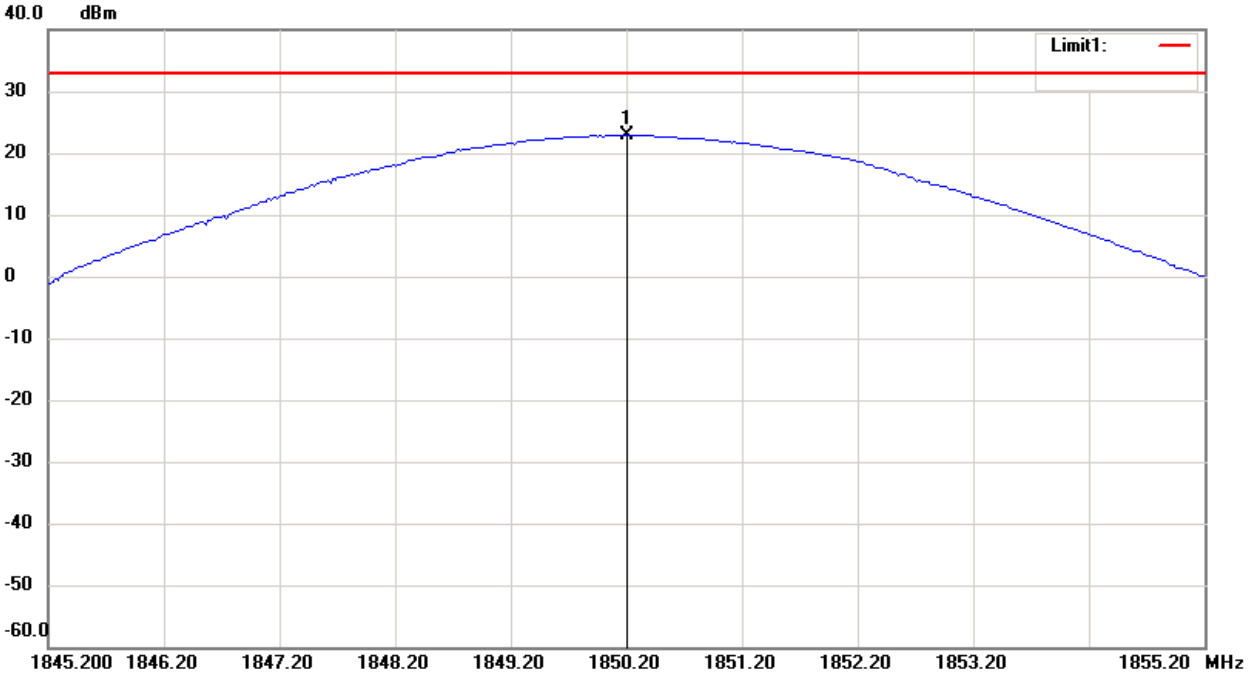


Antenna Polarization V

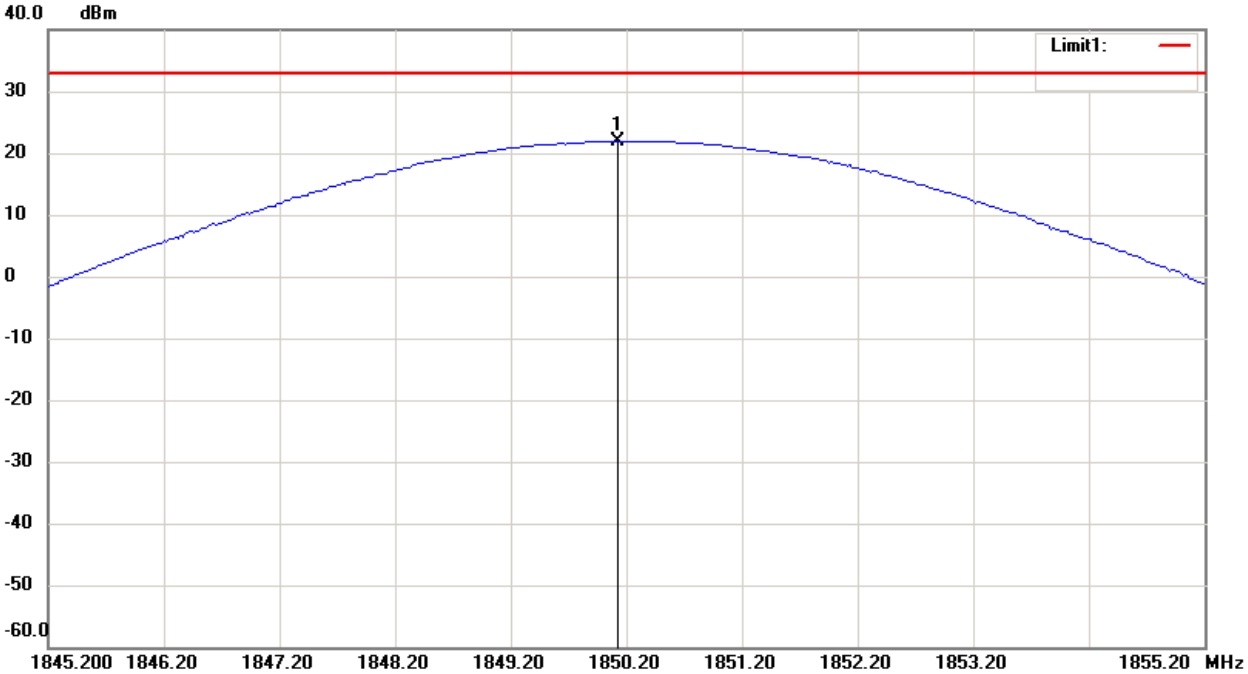


1900 band_ CH 512_3.6 V

Antenna Polarization H

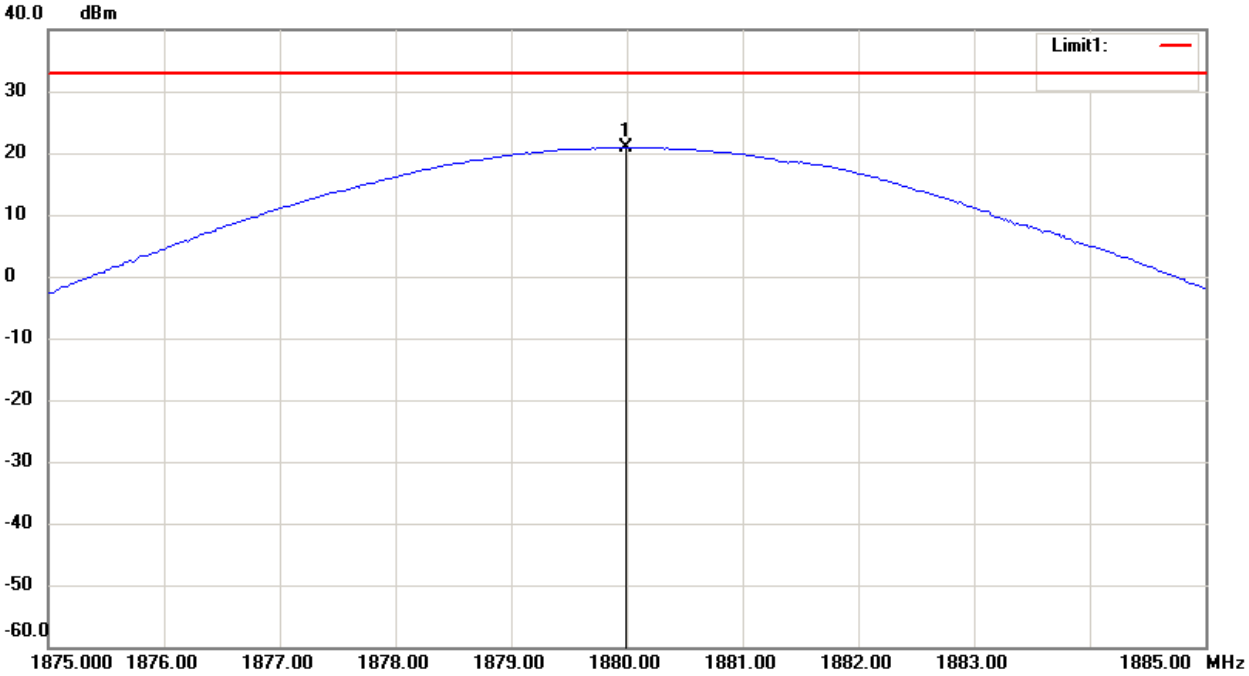


Antenna Polarization V

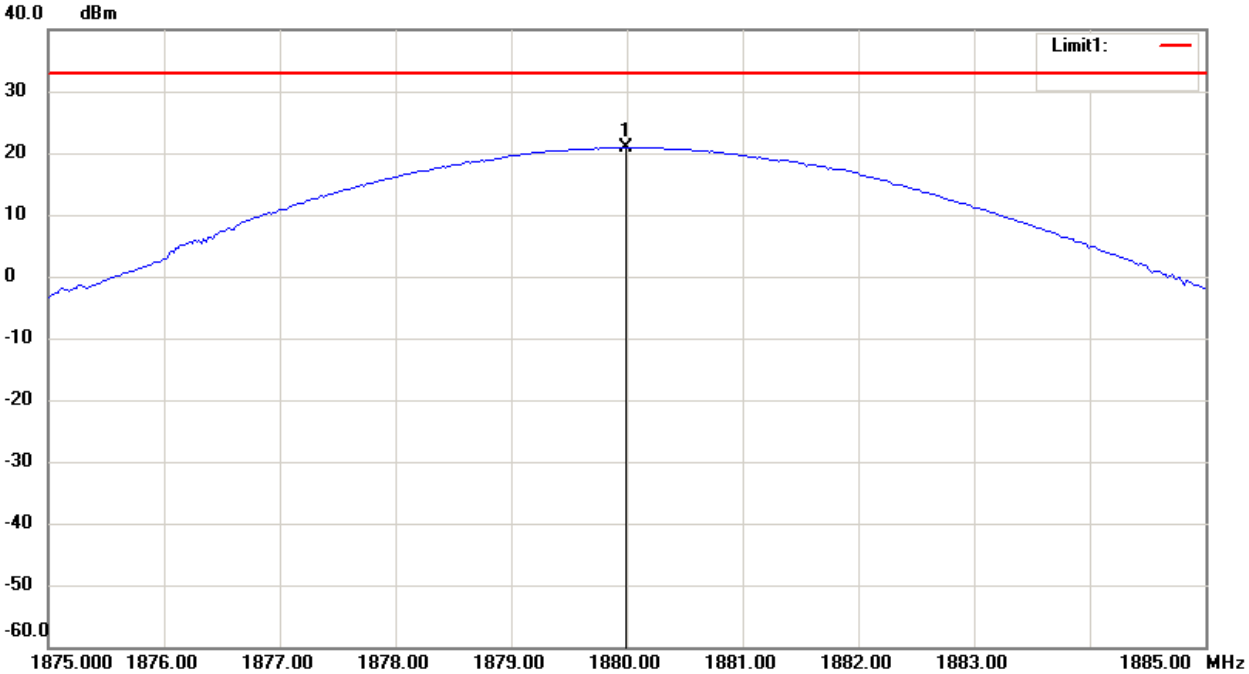


1900 band_ CH 661_3.6 V

Antenna Polarization H

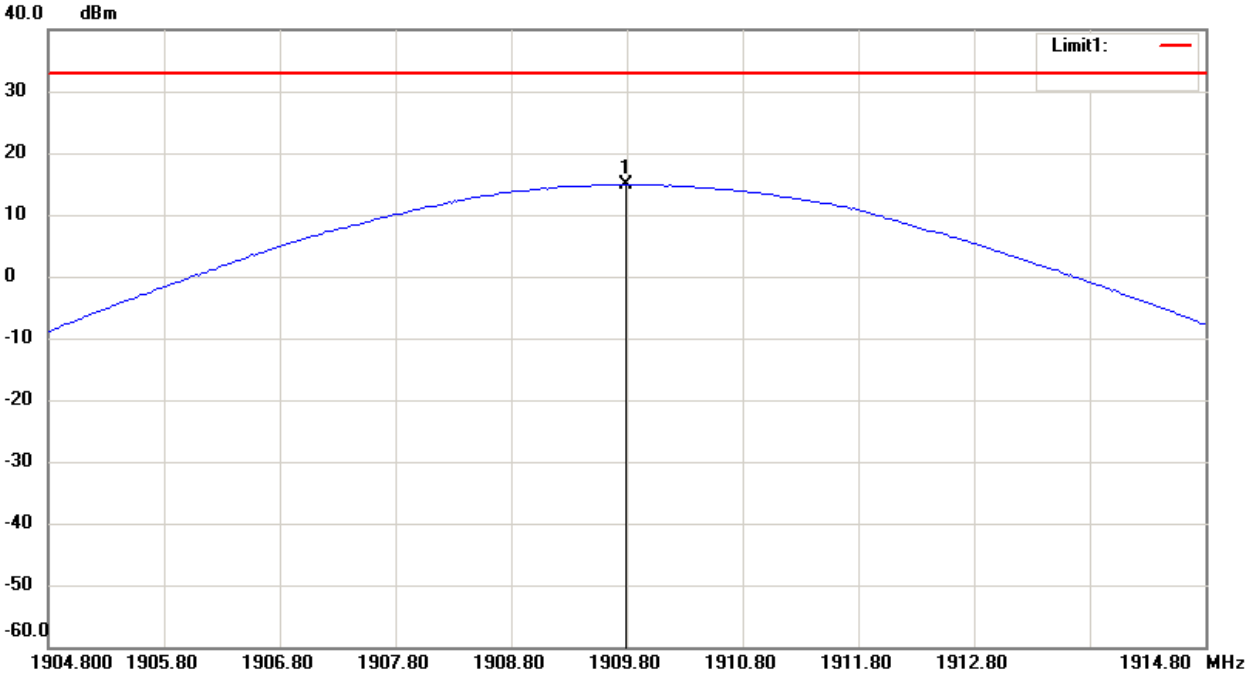


Antenna Polarization V

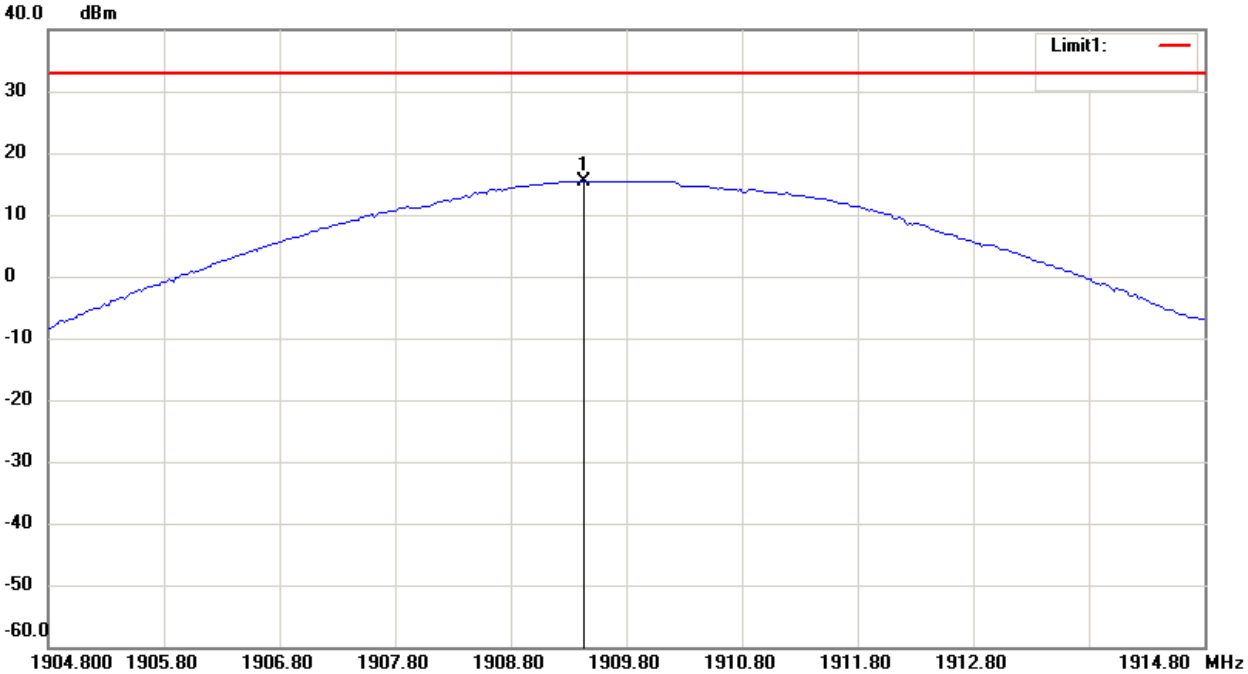


1900 band_ CH 810_3.6 V

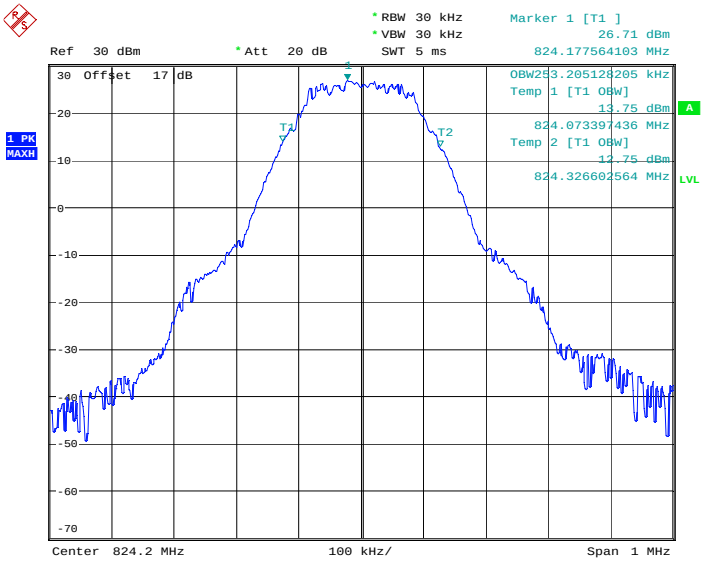
Antenna Polarization H



Antenna Polarization V

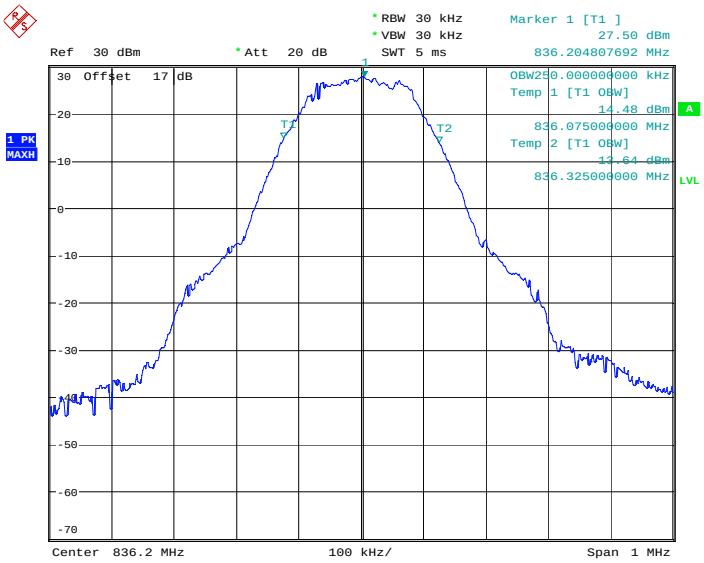


Occupied Bandwidth / Emission Mask



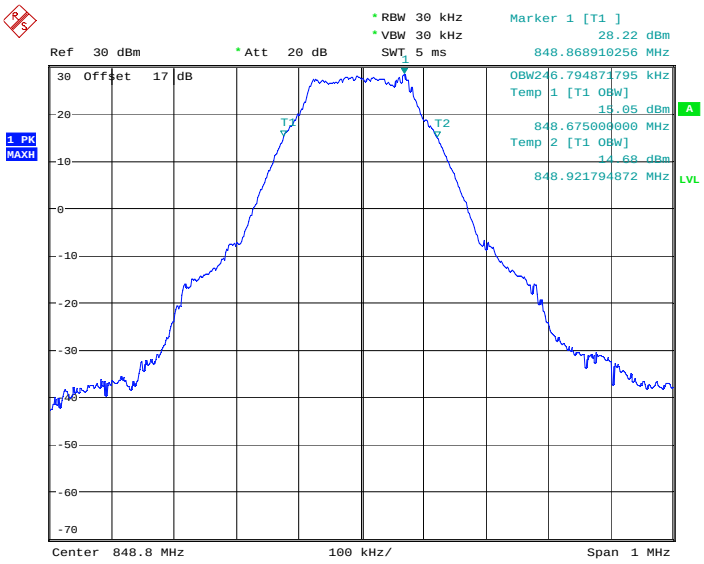
OCCUPIED BANDWIDTH 850BAND CH128

Date: 13.OCT.2010 17:54:21

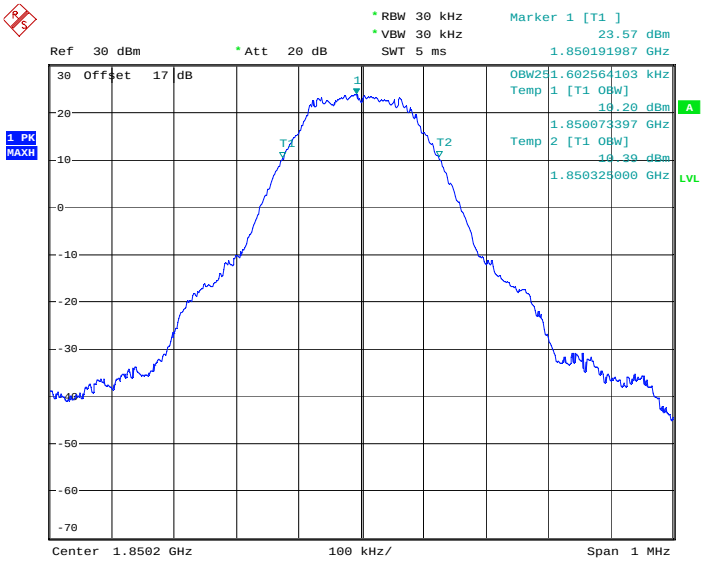


OCCUPIED BANDWIDTH 850BAND CH188

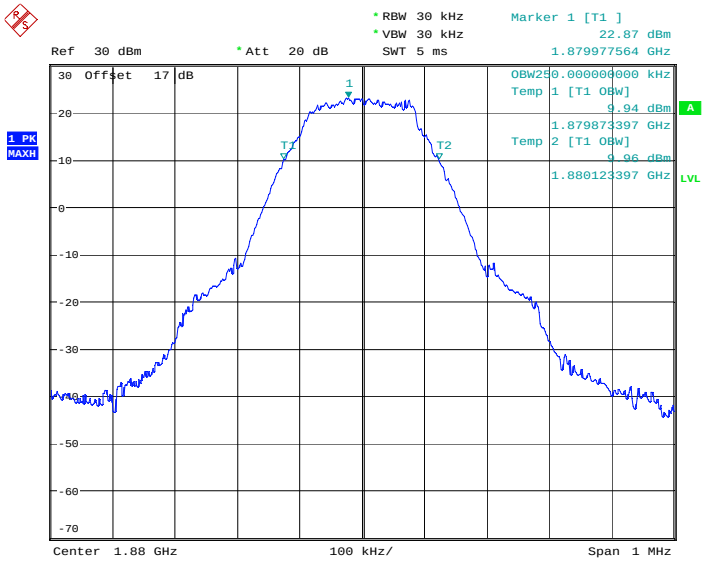
Date: 13.OCT.2010 17:54:03



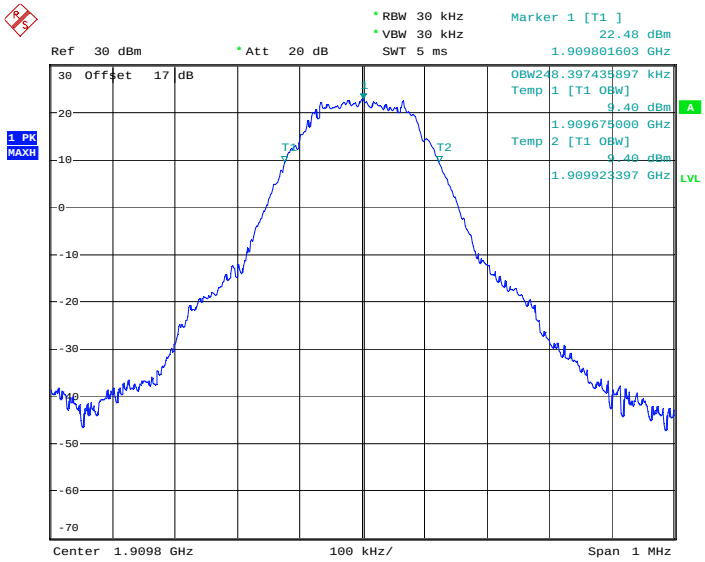
OCCUPIED BANDWIDTH 850BAND CH251
Date: 13.OCT.2010 17:53:39



OCCUPIED BANDWIDTH 1900BAND CH512
Date: 13.OCT.2010 17:55:09

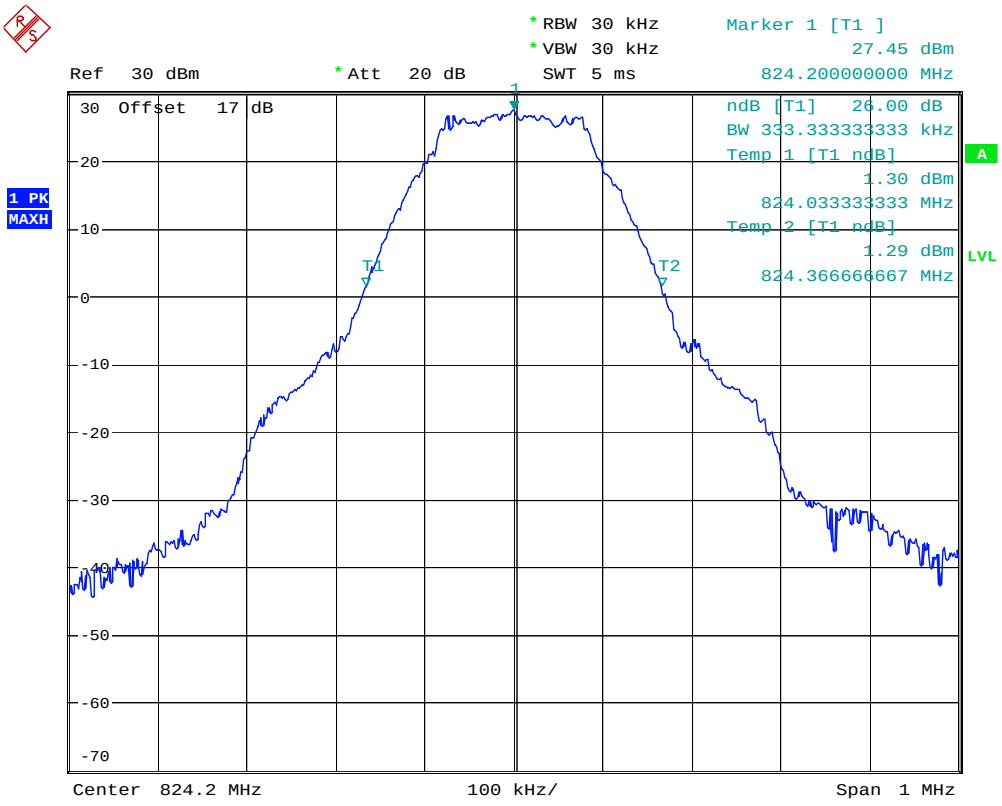


OCCUPIED BANDWIDTH 1900BAND CH661
Date: 13.OCT.2010 17:55:31



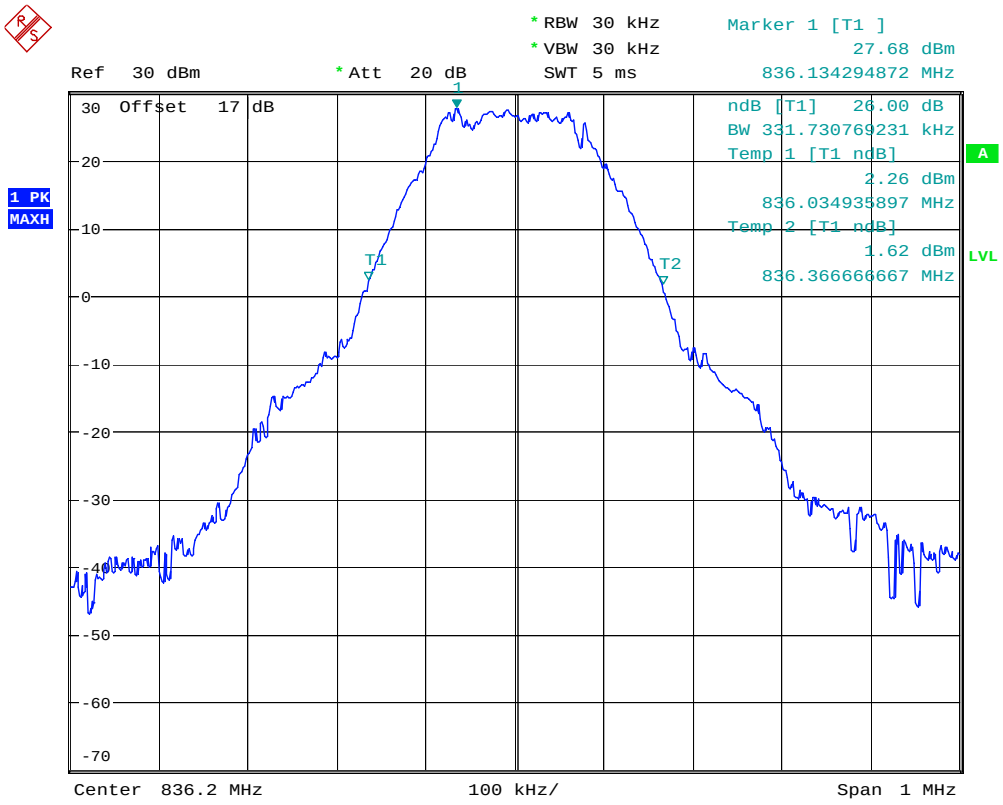
OCCUPIED BANDWIDTH 1900BAND CH810
Date: 13.OCT.2010 17:56:00

26dB Channel Bandwidth



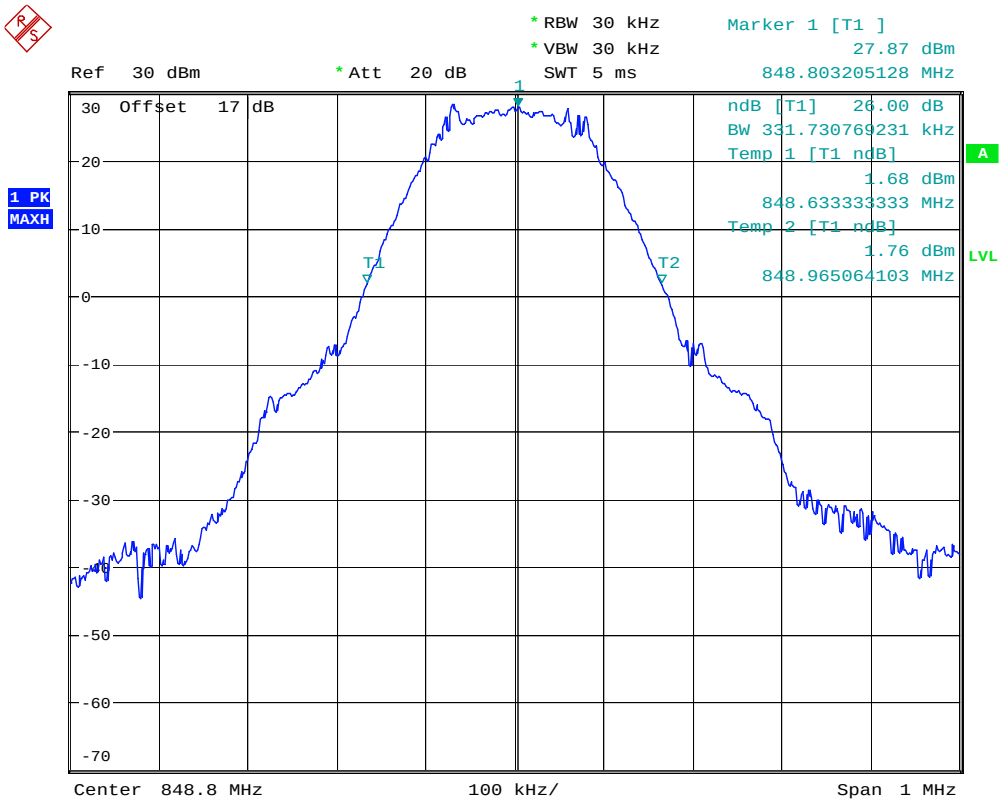
26DB BANDWIDTH 850BAND CH128

Date: 13.OCT.2010 17:52:25



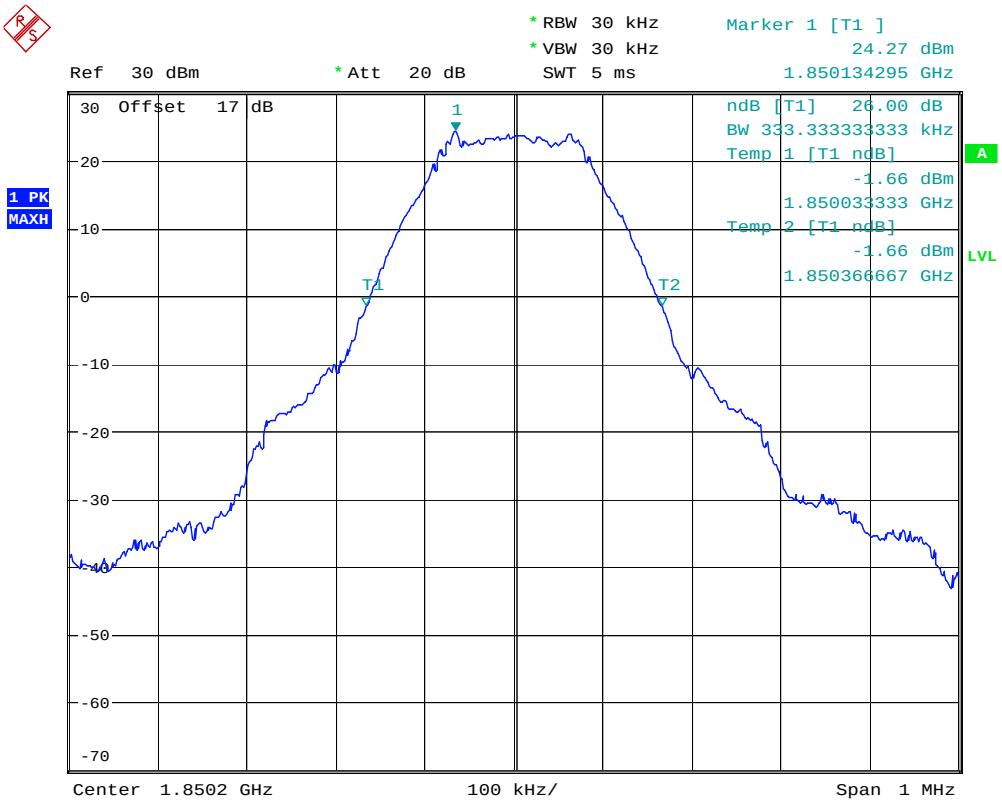
26DB BANDWIDTH 850BAND CH188

Date: 13.OCT.2010 17:52:47



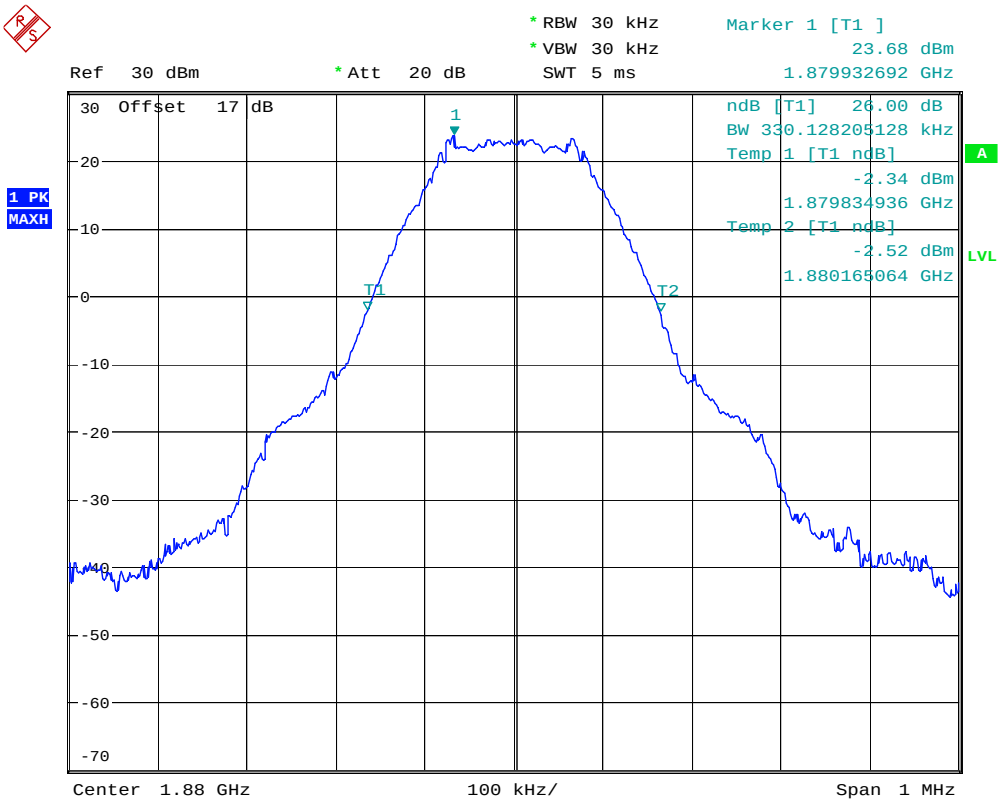
26DB BANDWIDTH 850BAND CH251

Date: 13.OCT.2010 17:53:09



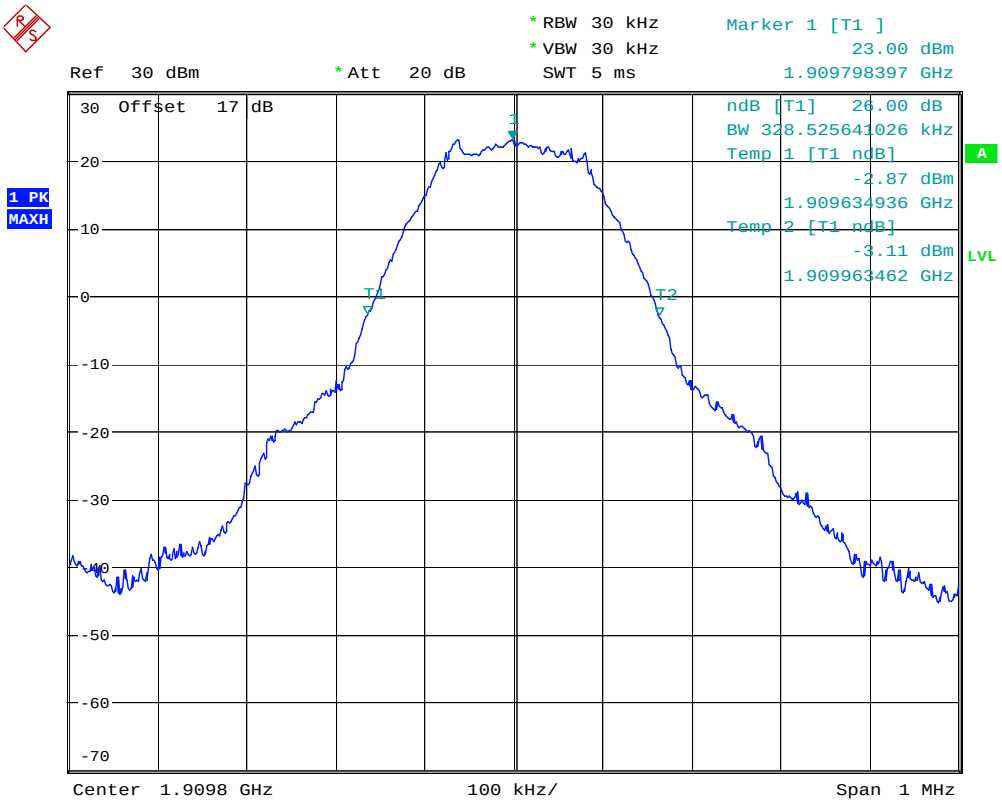
26DB BANDWIDTH 1900BAND CH512

Date: 13.OCT.2010 17:50:39



26DB BANDWIDTH 1900BAND CH661

Date: 13.OCT.2010 17:51:13

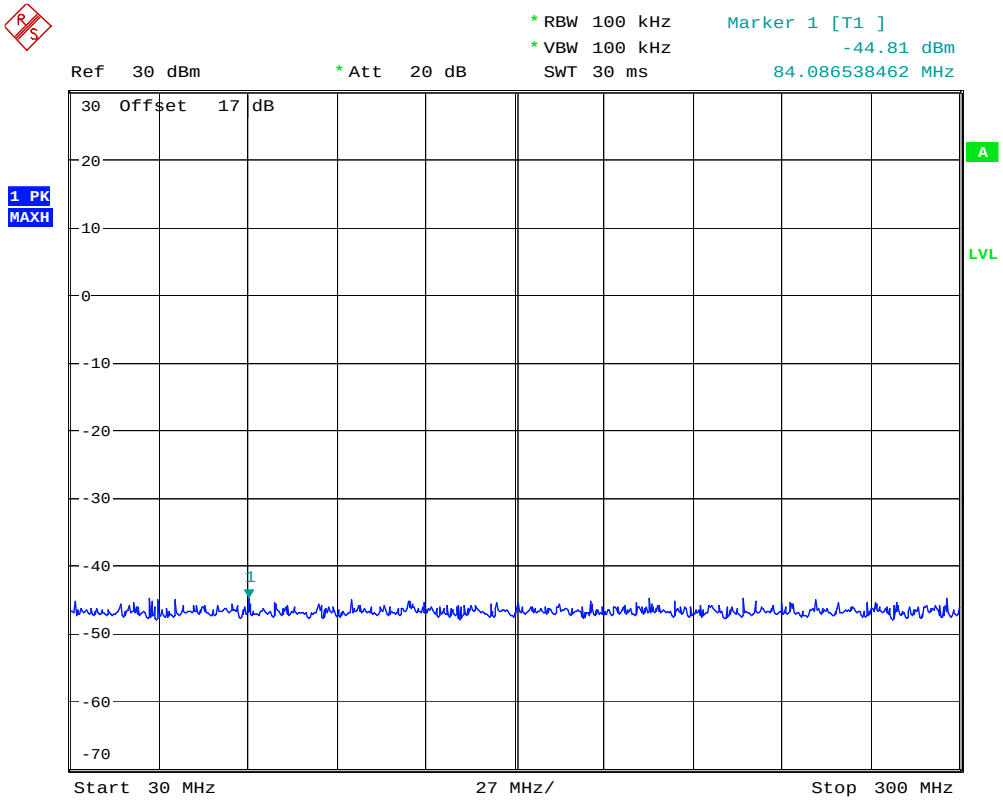


26DB BANDWIDTH 1900BAND CH810

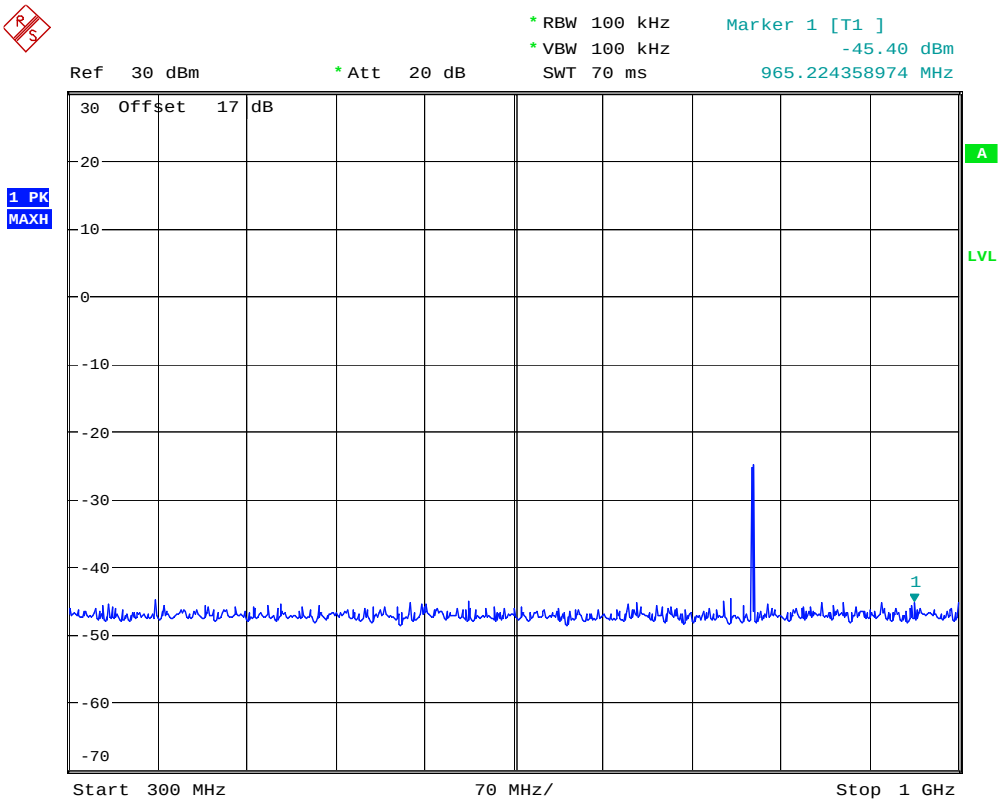
Date: 13.OCT.2010 17:51:41

Report Number: W6M21009-10913-P-2224
FCC ID: XMSAAGPSV3

Spurious Emissions at Antenna Terminals
CH 128

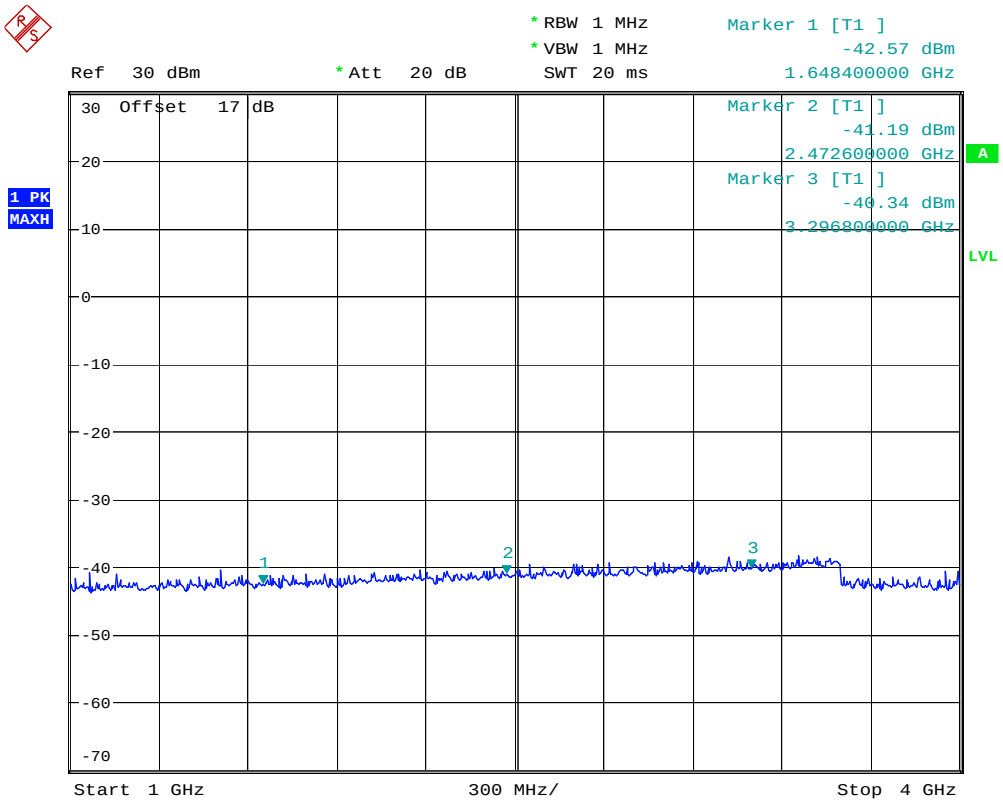


SPURIOUS EMISSION 850BAND CH128
Date: 13.OCT.2010 17:57:56



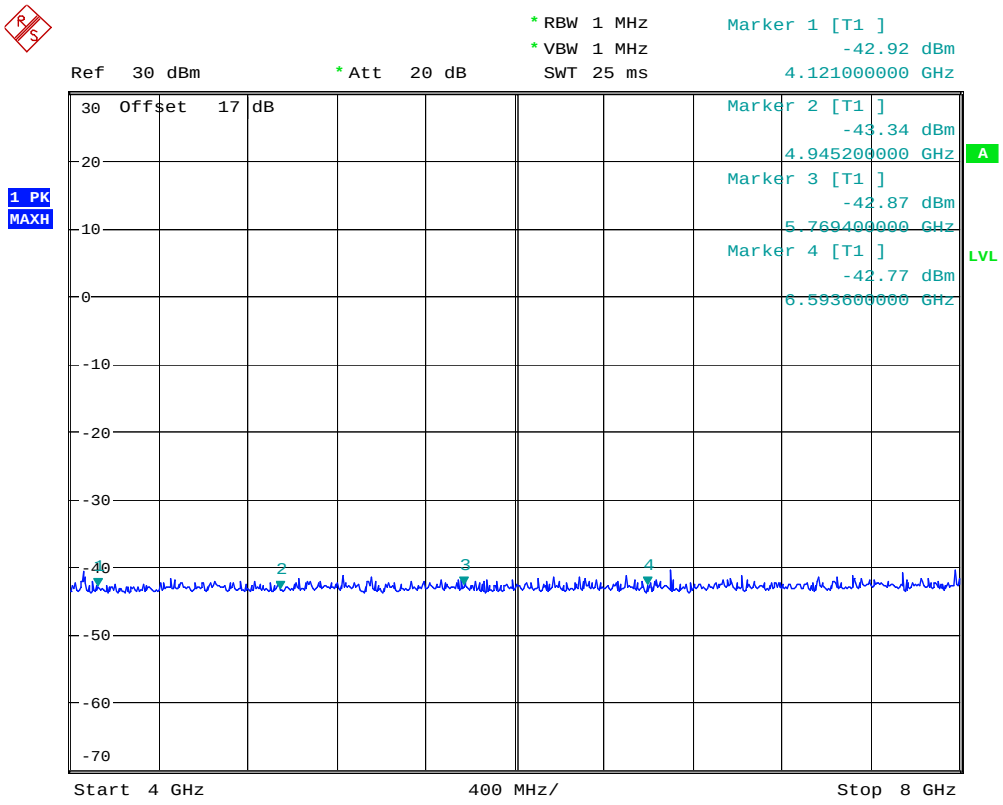
SPURIOUS EMISSION 850BAND CH128

Date: 13.OCT.2010 17:58:52



SPURIOUS EMISSION 850BAND CH128

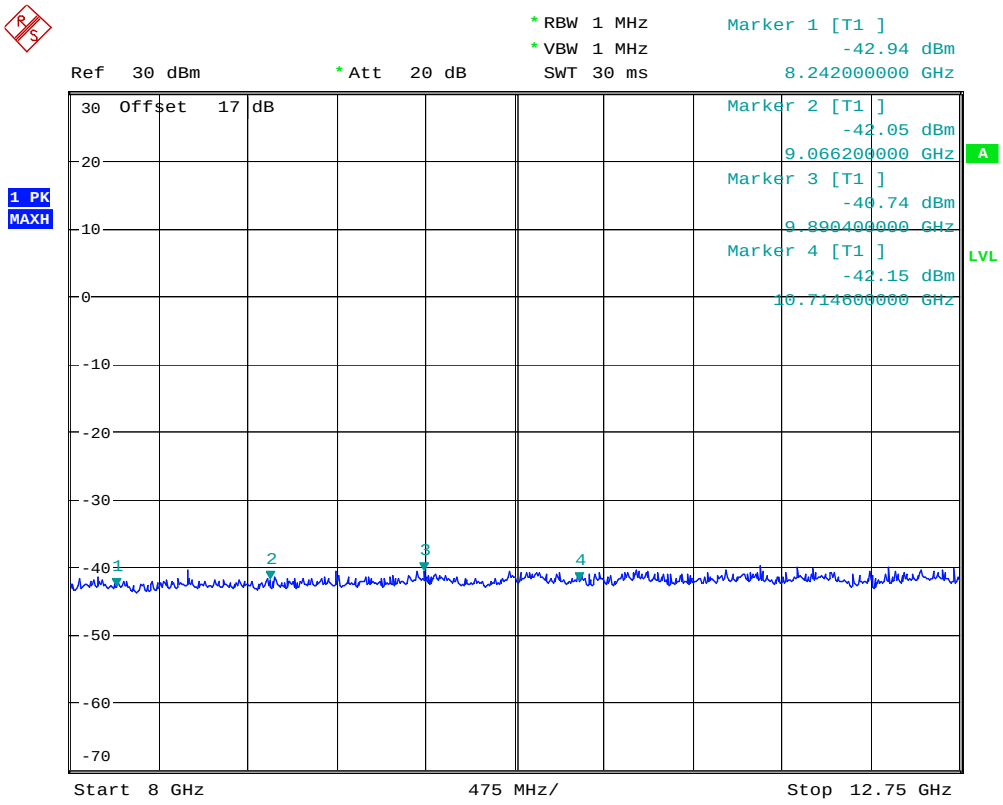
Date: 13.OCT.2010 18:00:08



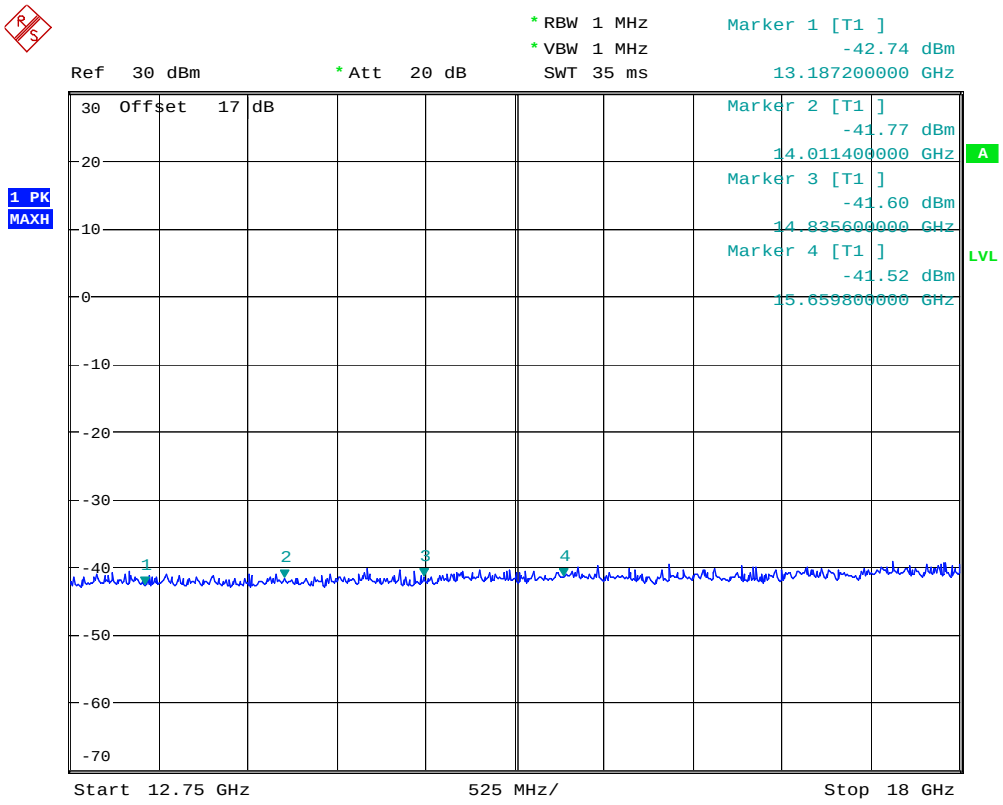
SPURIOUS EMISSION 850BAND CH128

Date: 13.OCT.2010 18:00:43

Report Number: W6M21009-10913-P-2224
FCC ID: XMSAAGPSV3

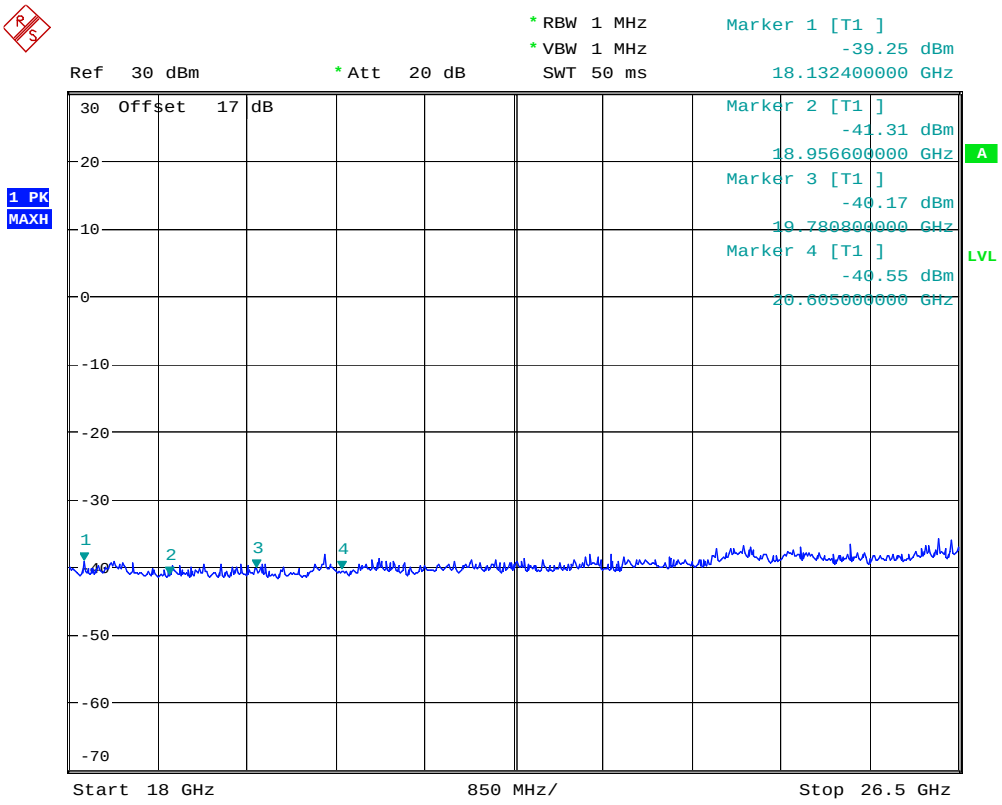


SPURIOUS EMISSION 850BAND CH128
Date: 13.OCT.2010 18:01:09



SPURIOUS EMISSION 850BAND CH128

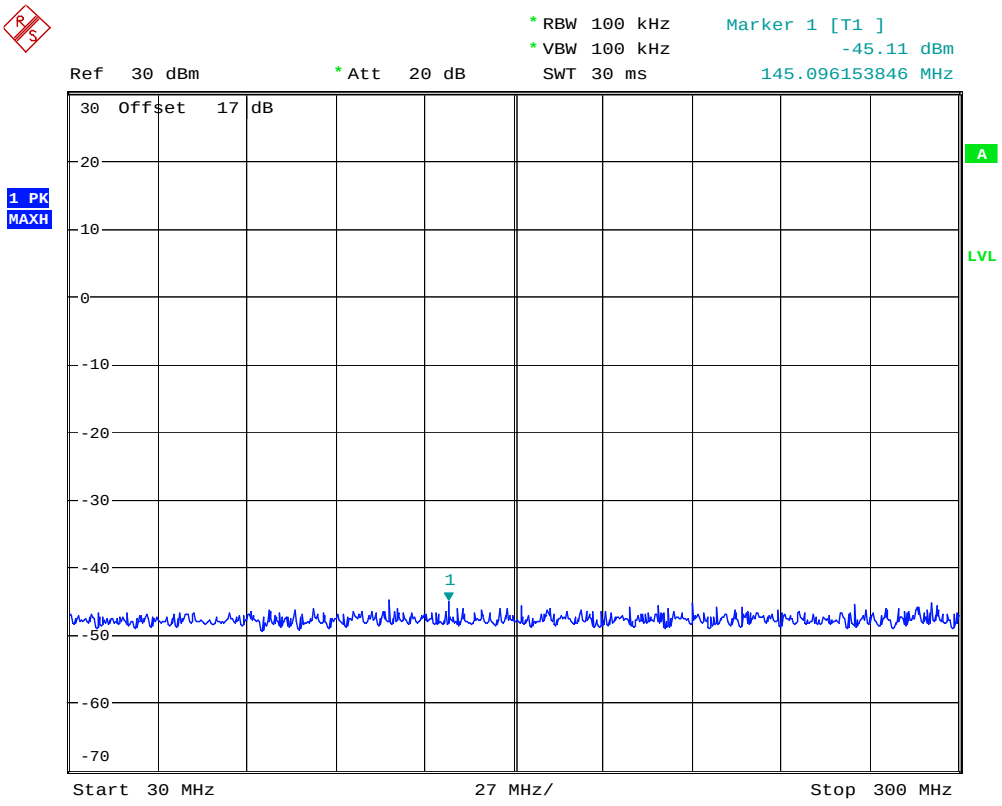
Date: 13.OCT.2010 18:01:39



SPURIOUS EMISSION 850BAND CH128

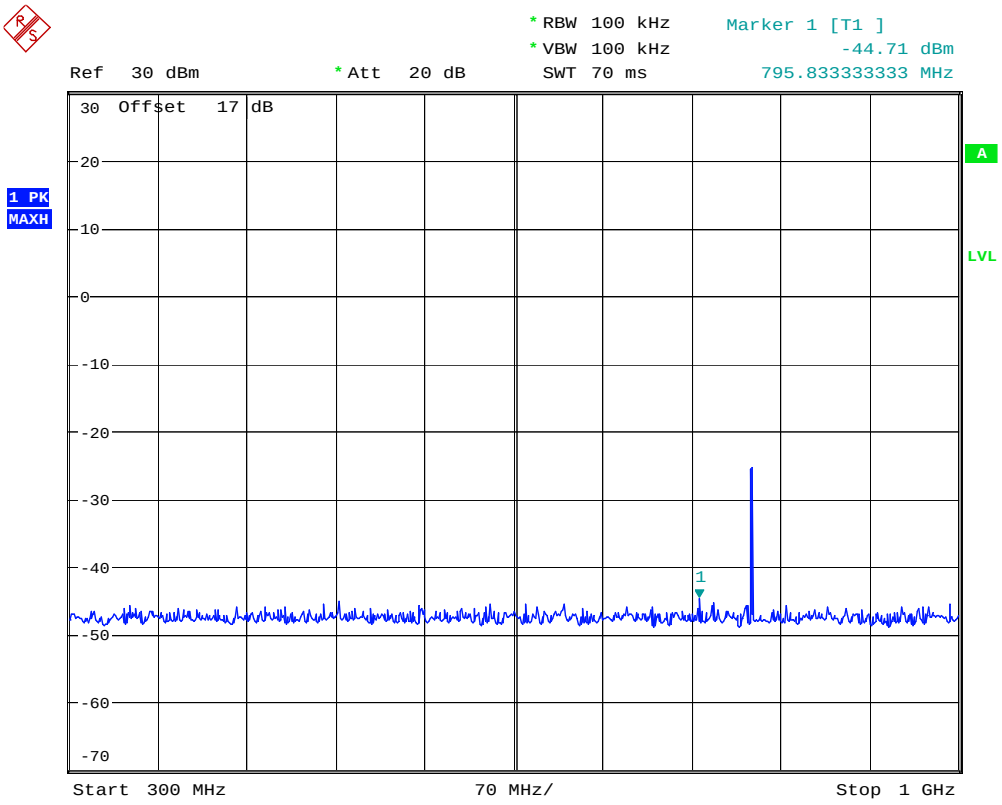
Date: 13.OCT.2010 18:02:05

CH 188



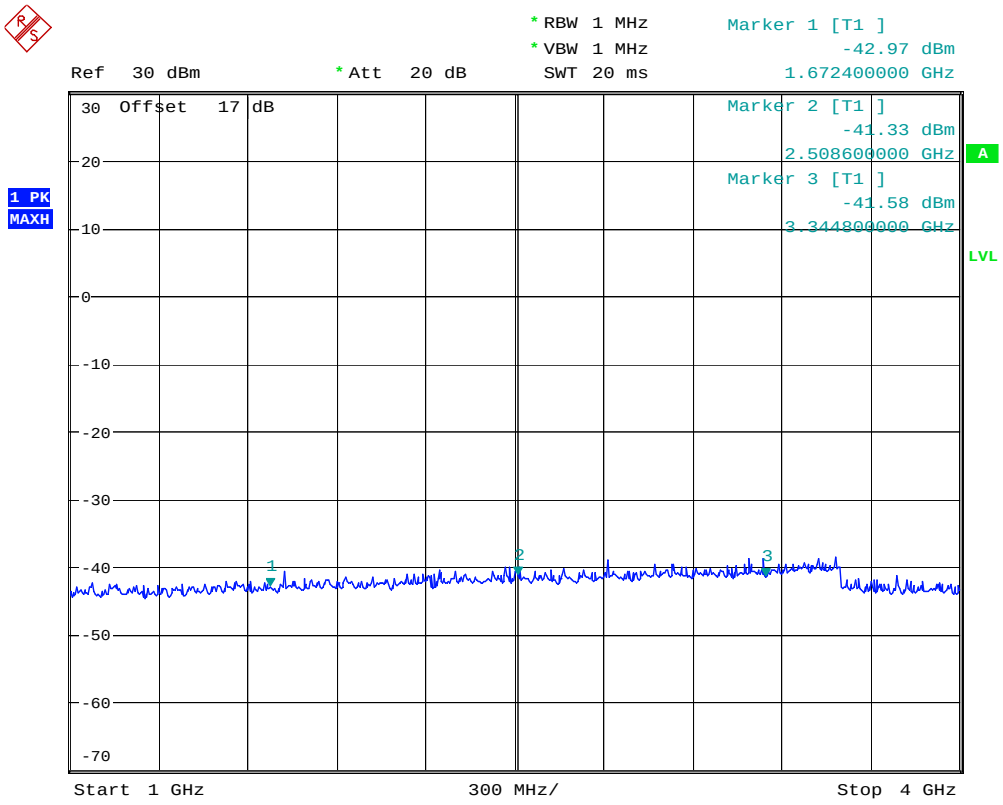
SPURIOUS EMISSION 850BAND CH188

Date: 13.OCT.2010 18:04:49



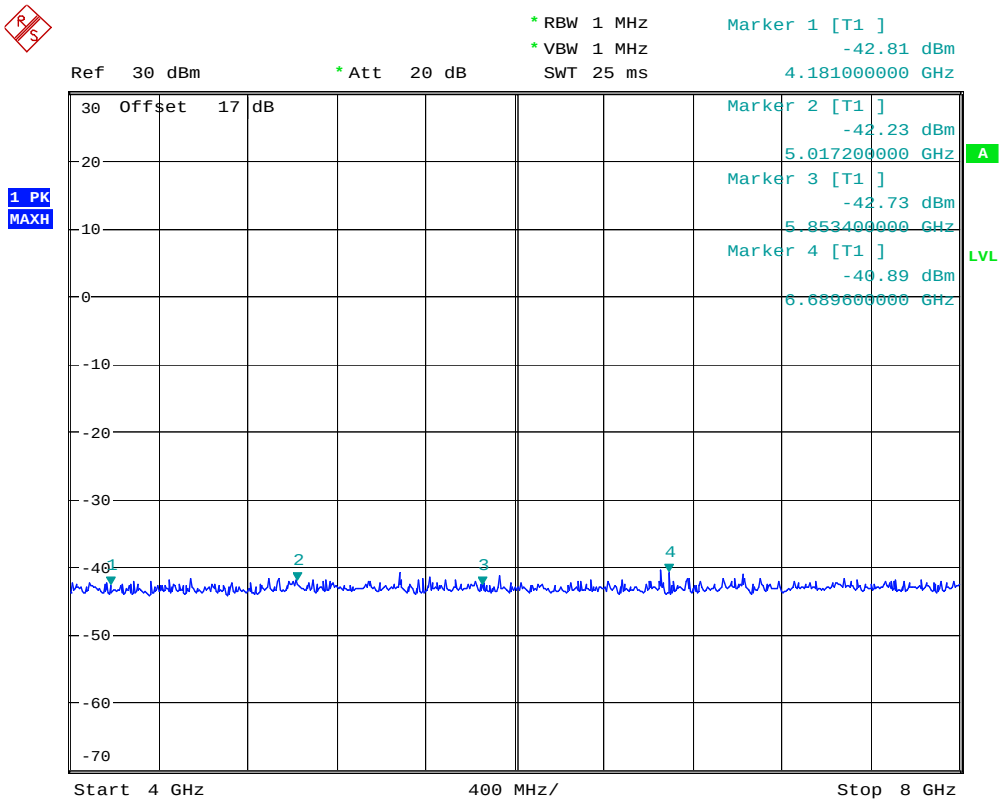
SPURIOUS EMISSION 850BAND CH188

Date: 13.OCT.2010 18:04:38



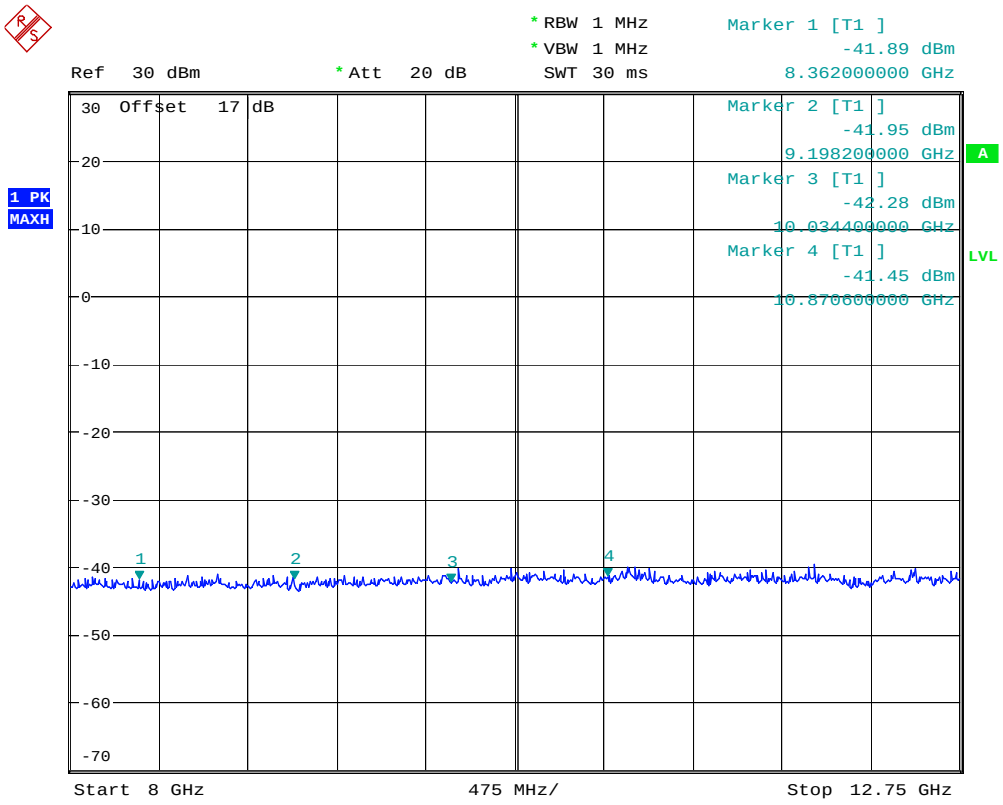
SPURIOUS EMISSION 850BAND CH188

Date: 13.OCT.2010 18:04:16



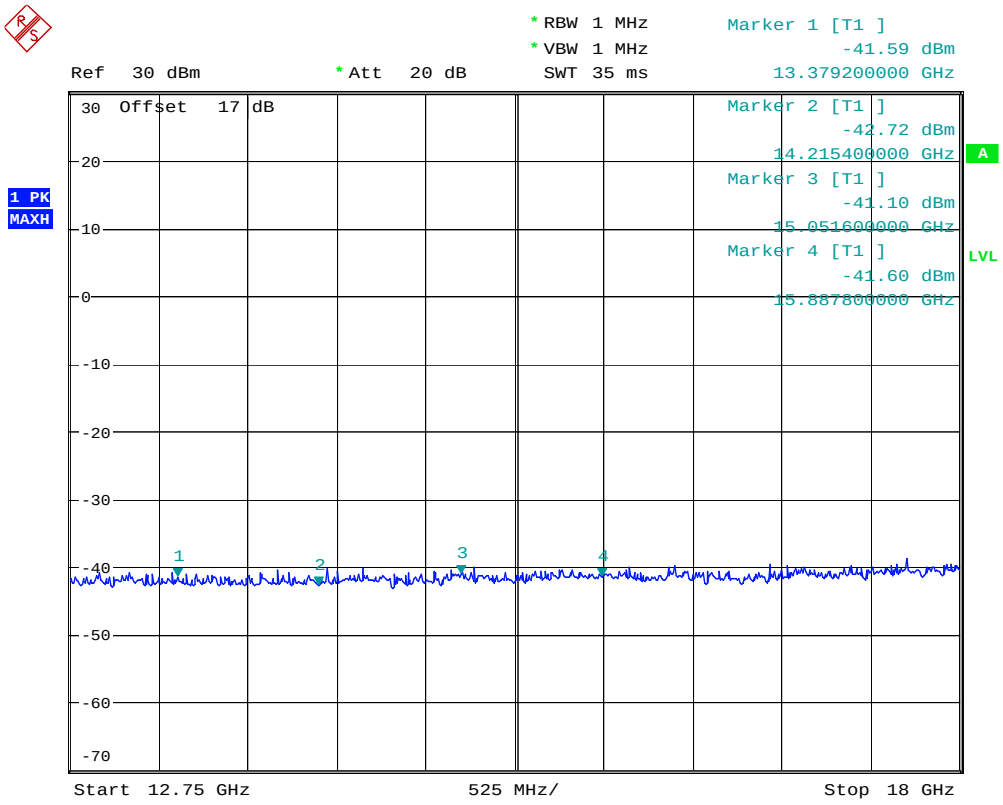
SPURIOUS EMISSION 850BAND CH188

Date: 13.OCT.2010 18:03:55



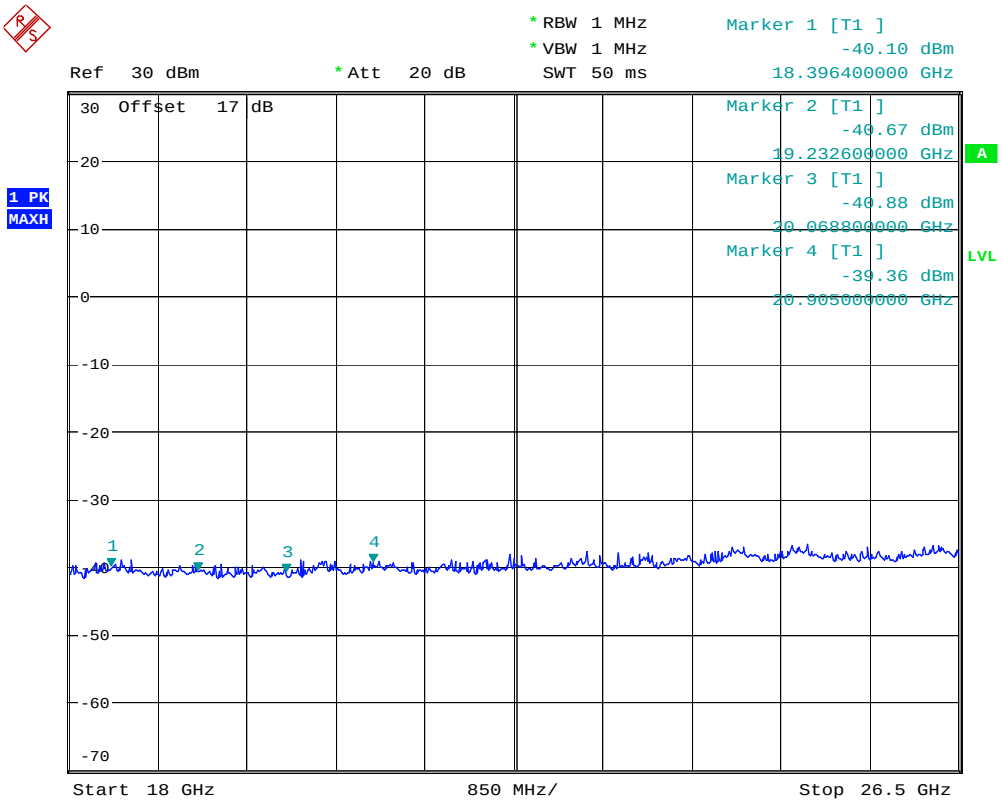
SPURIOUS EMISSION 850BAND CH188

Date: 13.OCT.2010 18:03:30



SPURIOUS EMISSION 850BAND CH188

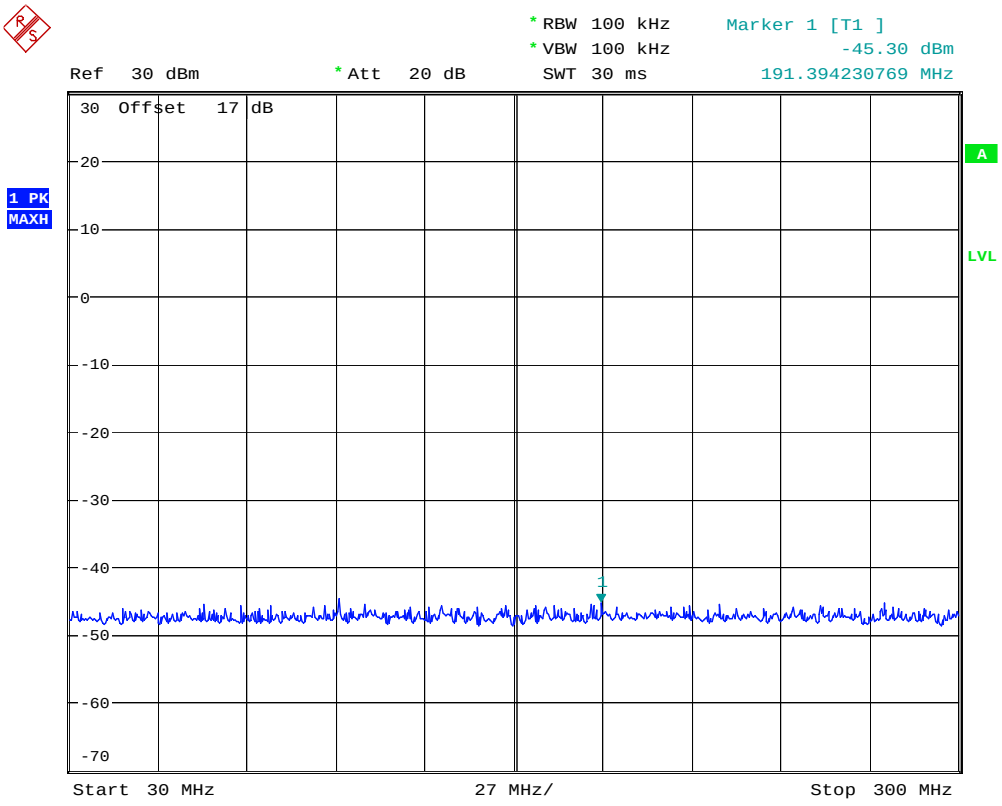
Date: 13.OCT.2010 18:03:04



SPURIOUS EMISSION 850BAND CH188

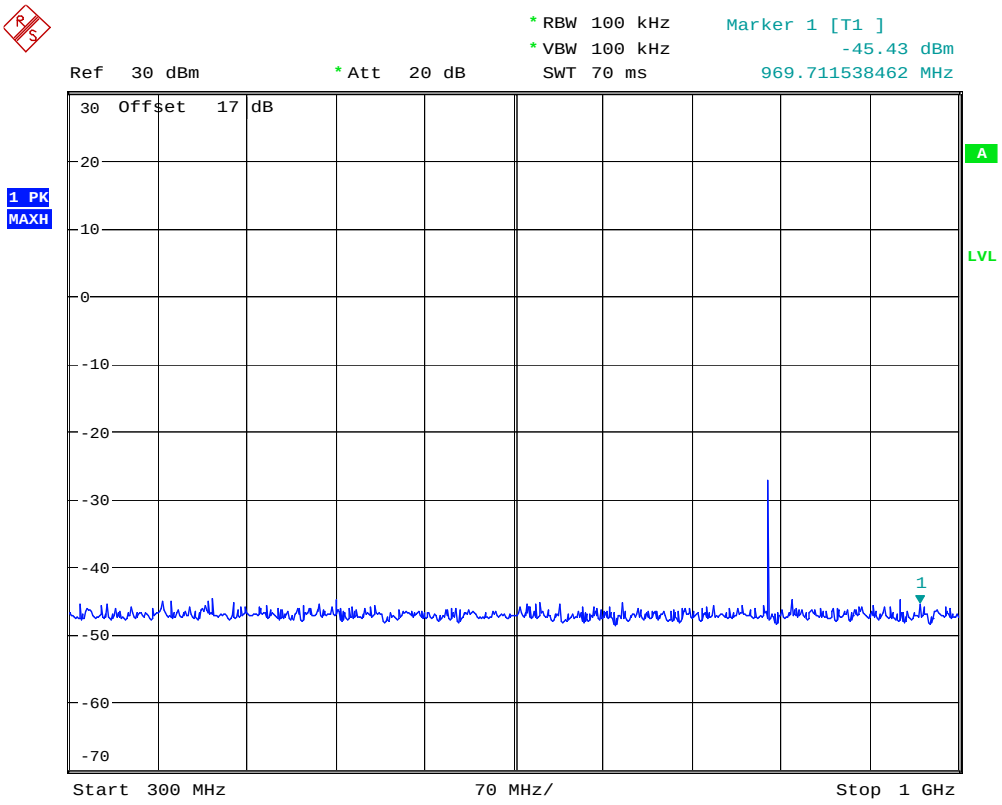
Date: 13.OCT.2010 18:02:36

CH 251



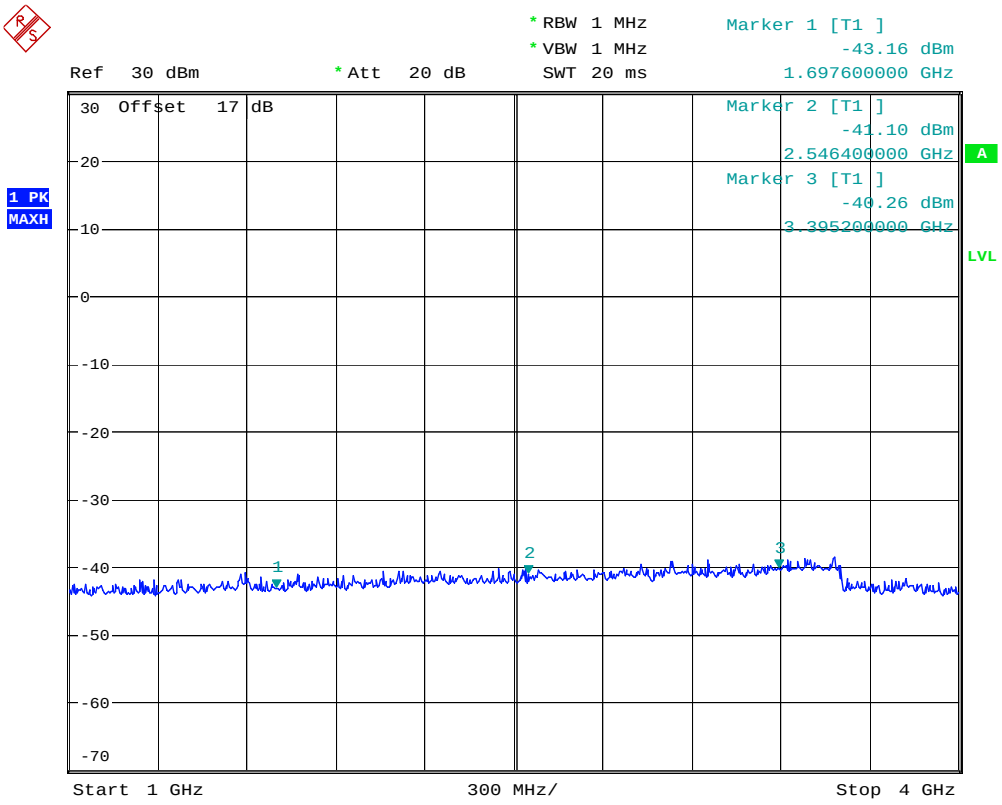
SPURIOUS EMISSION 850BAND CH251

Date: 13.OCT.2010 18:05:05



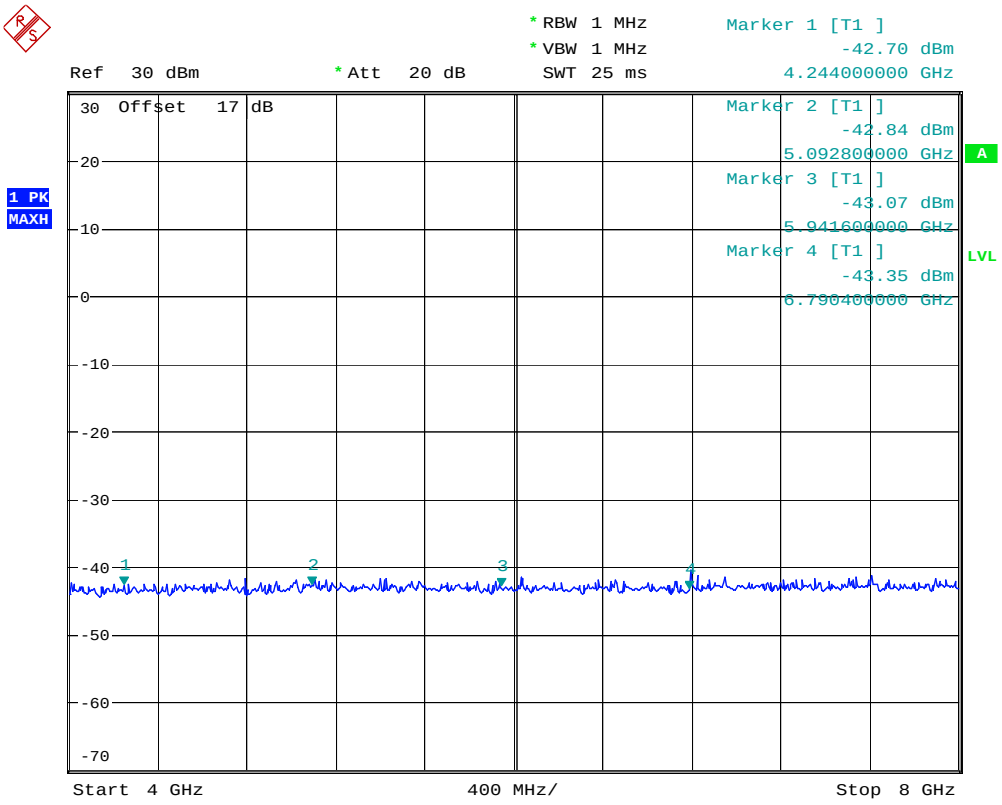
SPURIOUS EMISSION 850BAND CH251

Date: 13.OCT.2010 18:05:30



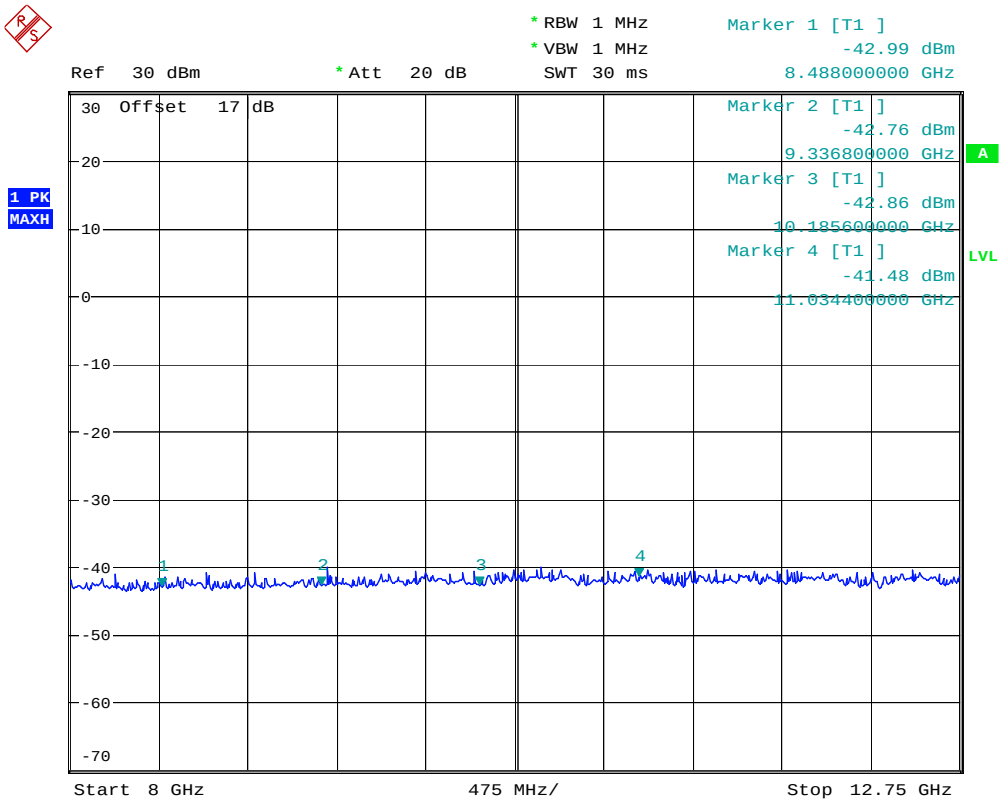
SPURIOUS EMISSION 850BAND CH251

Date: 13.OCT.2010 18:05:59



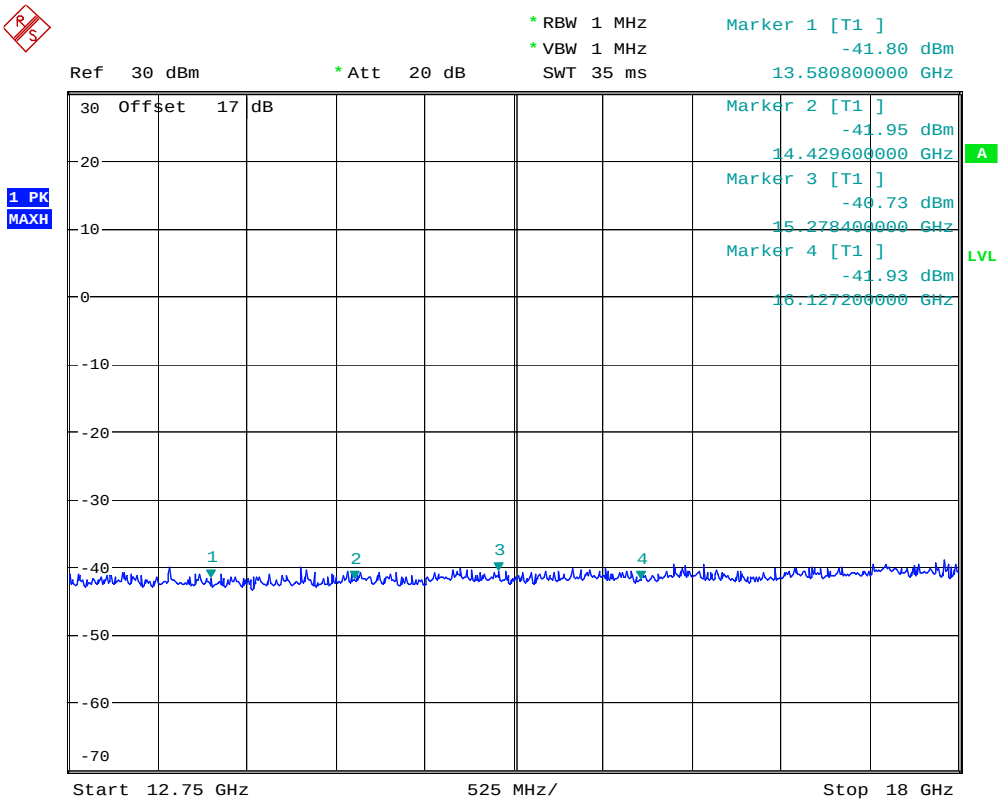
SPURIOUS EMISSION 850BAND CH251

Date: 13.OCT.2010 18:06:23



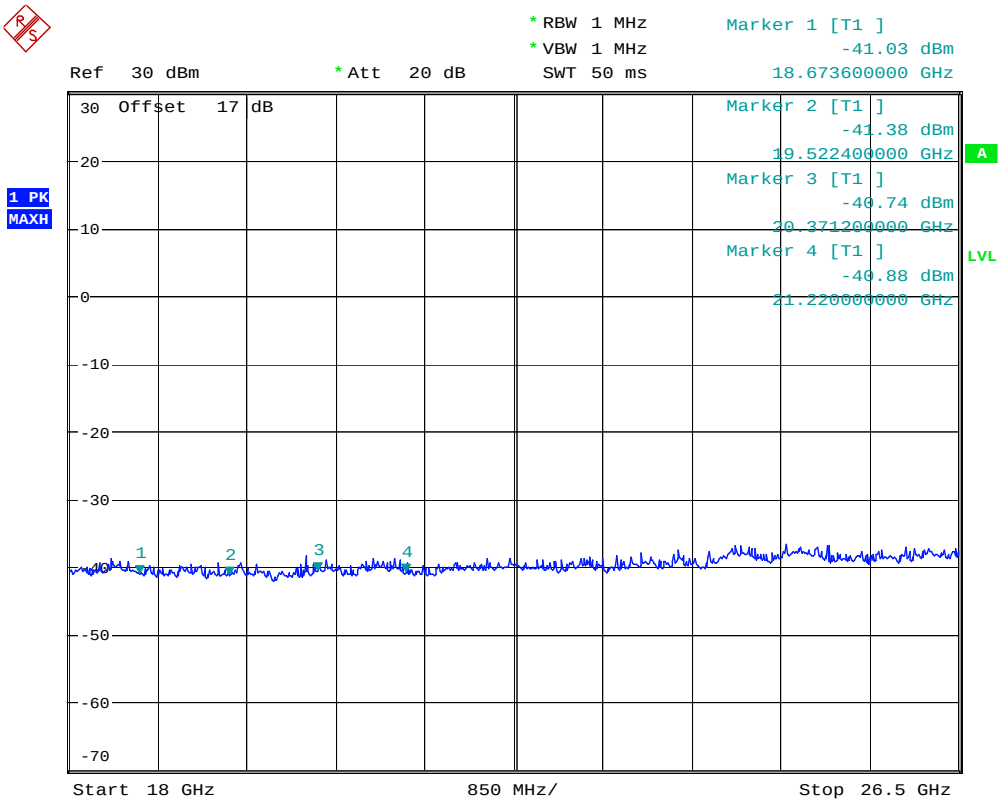
SPURIOUS EMISSION 850BAND CH251

Date: 13.OCT.2010 18:06:48



SPURIOUS EMISSION 850BAND CH251

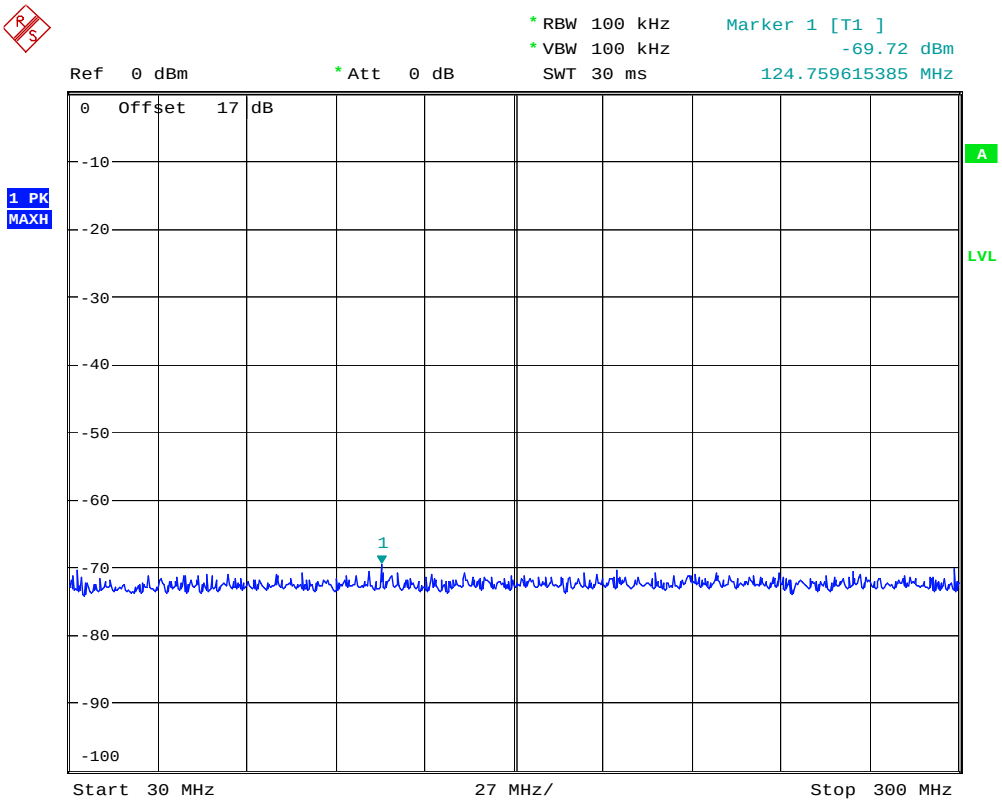
Date: 13.OCT.2010 18:07:14



SPURIOUS EMISSION 850BAND CH251

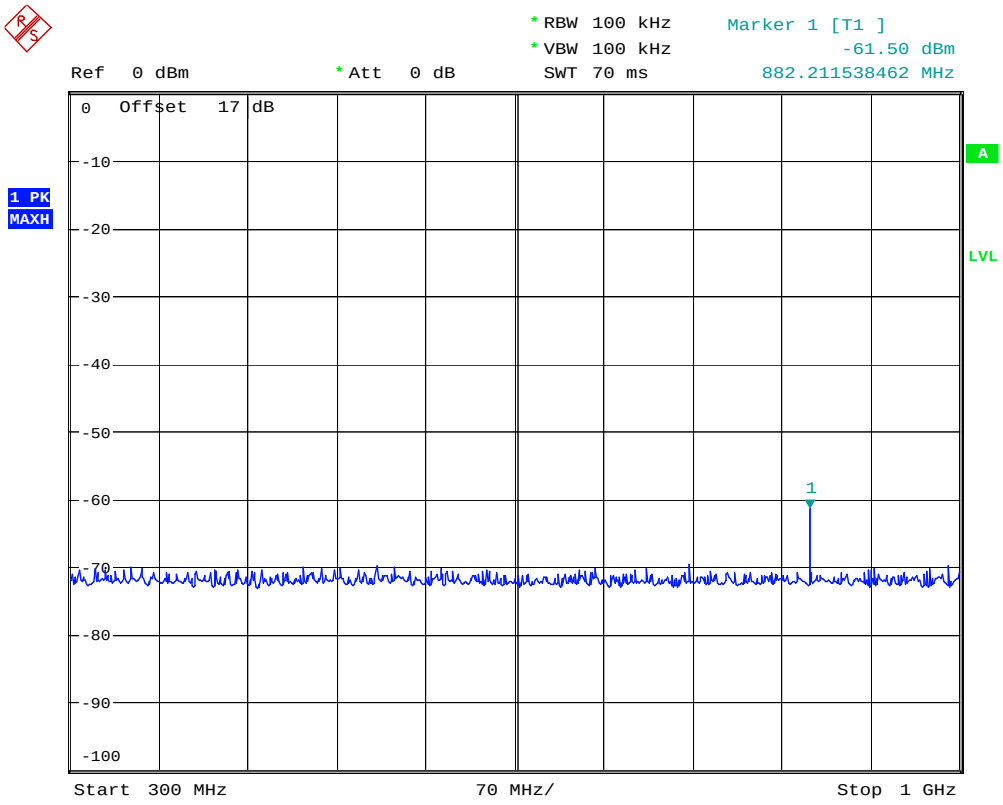
Date: 13.OCT.2010 18:07:39

850MHz Band Idle



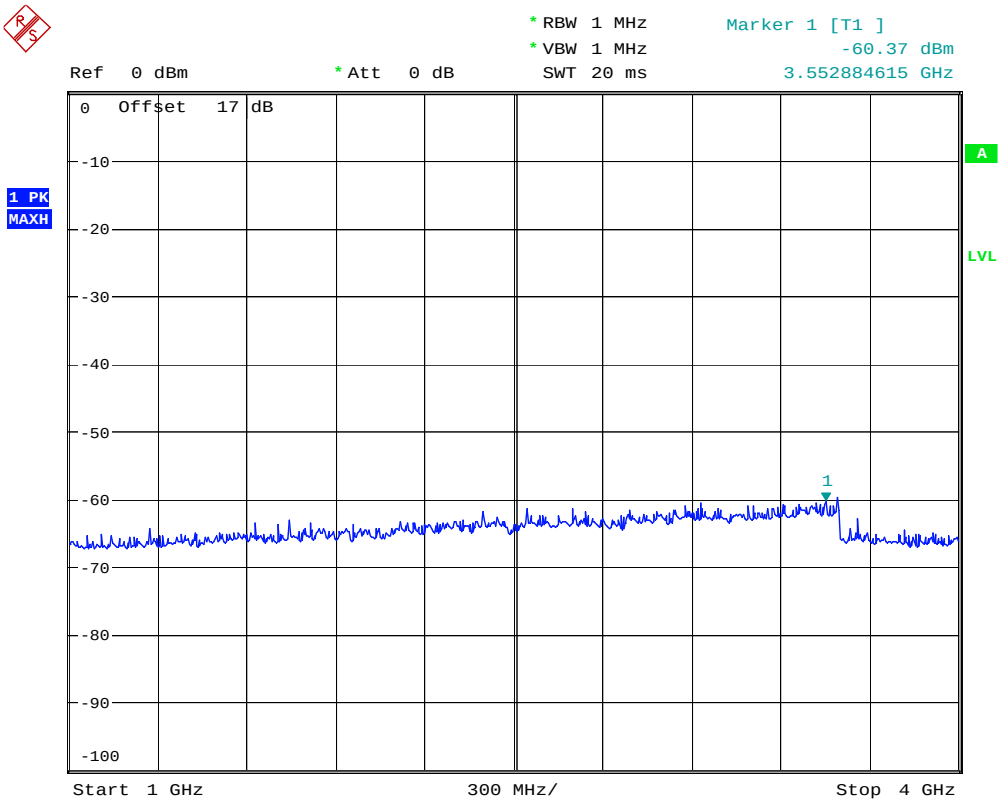
SPURIOUS EMISSION 850BAND IDLE

Date: 14.OCT.2010 14:18:12



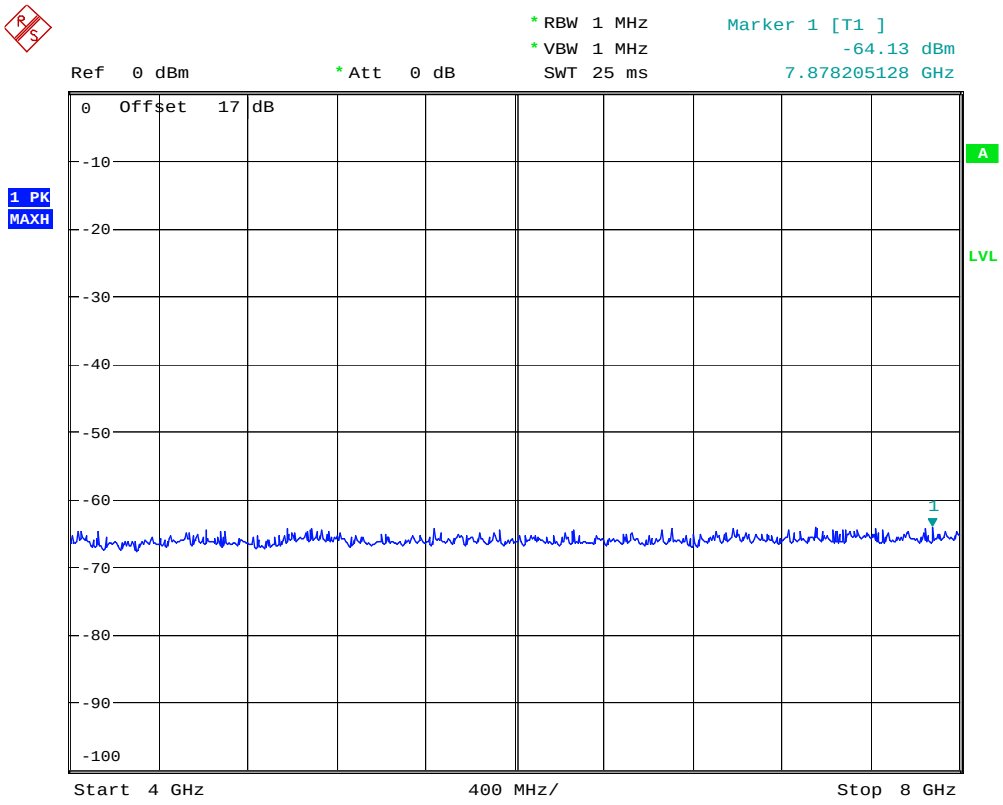
SPURIOUS EMISSION 850BAND IDLE

Date: 14.OCT.2010 14:18:01



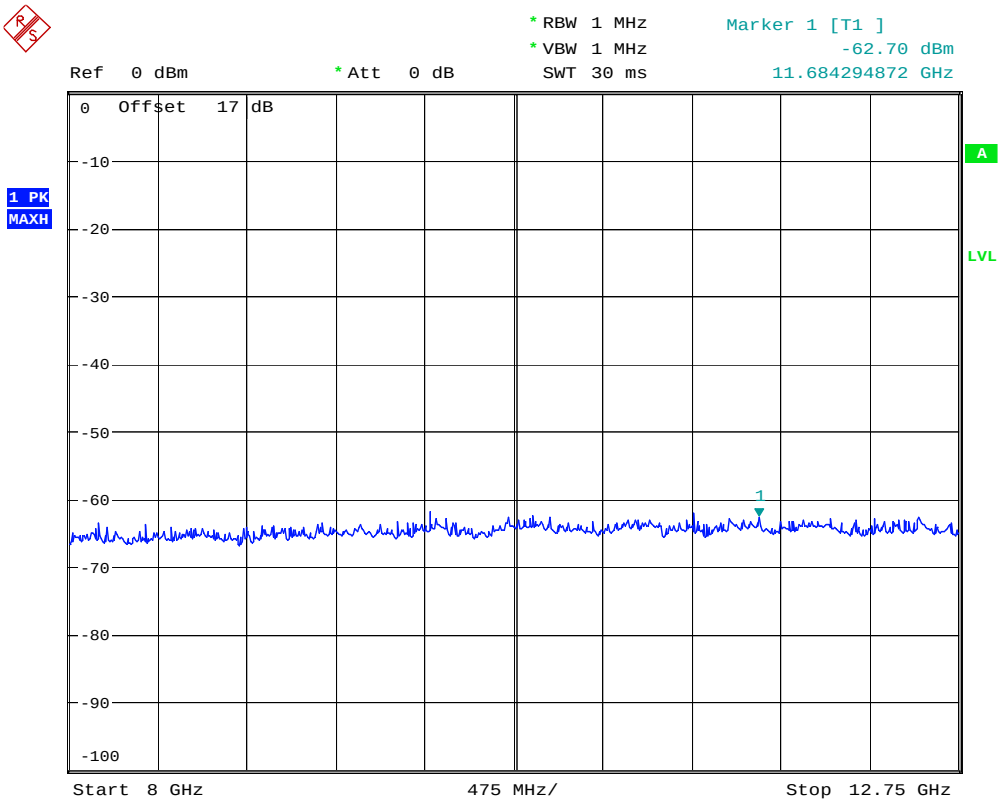
SPURIOUS EMISSION 850BAND IDLE

Date: 14.OCT.2010 14:17:23



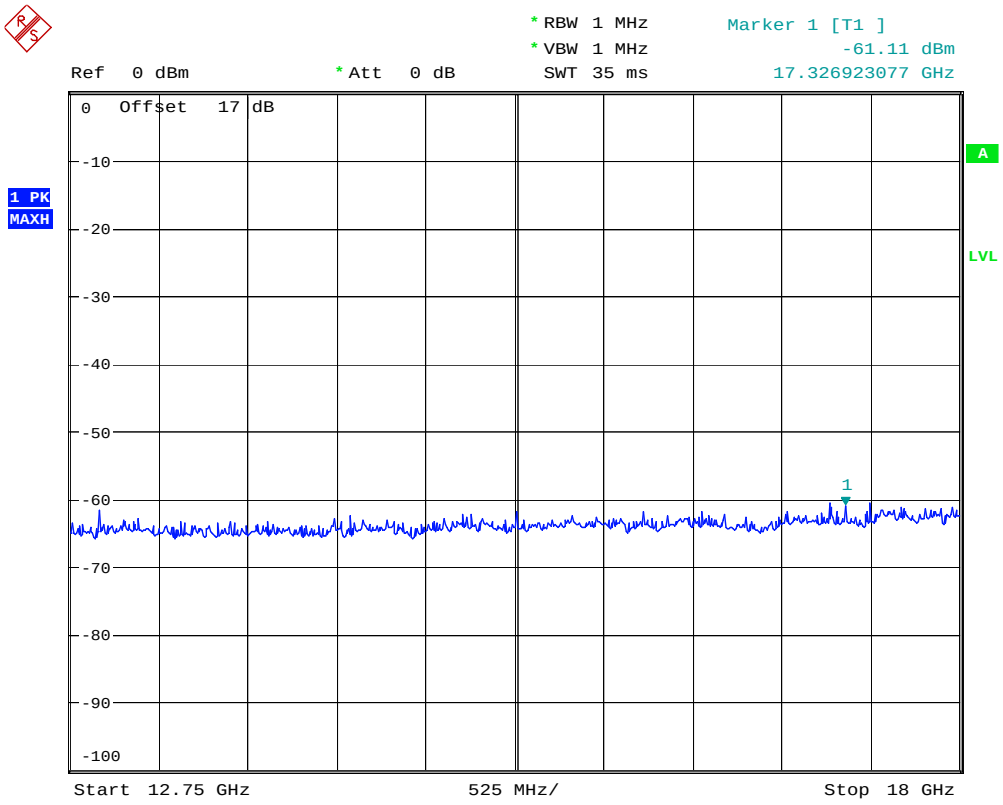
SPURIOUS EMISSION 850BAND IDLE

Date: 14.OCT.2010 14:17:10



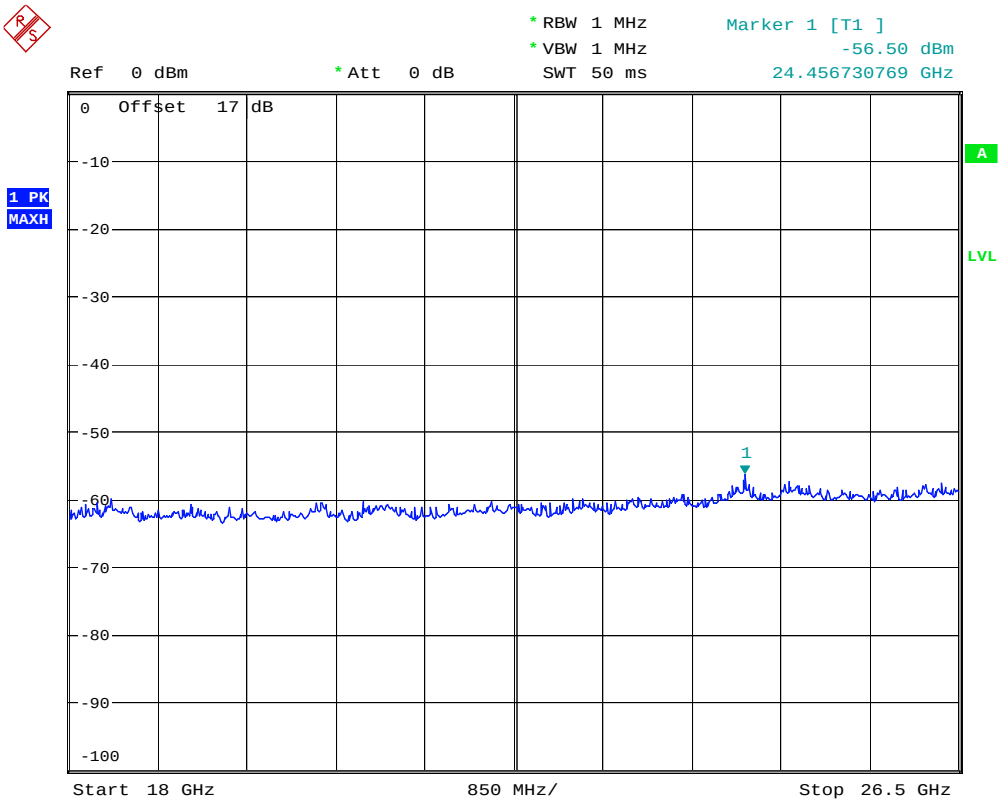
SPURIOUS EMISSION 850BAND IDLE

Date: 14.OCT.2010 14:16:54



SPURIOUS EMISSION 850BAND IDLE

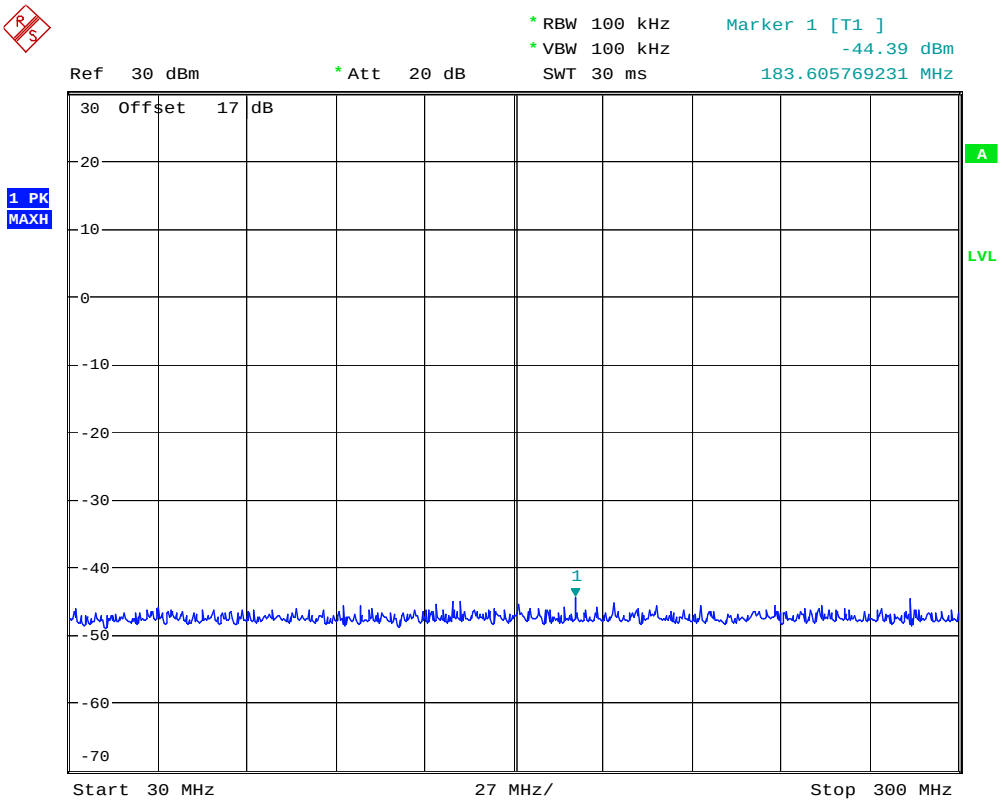
Date: 14.OCT.2010 14:16:43



SPURIOUS EMISSION 850BAND IDLE

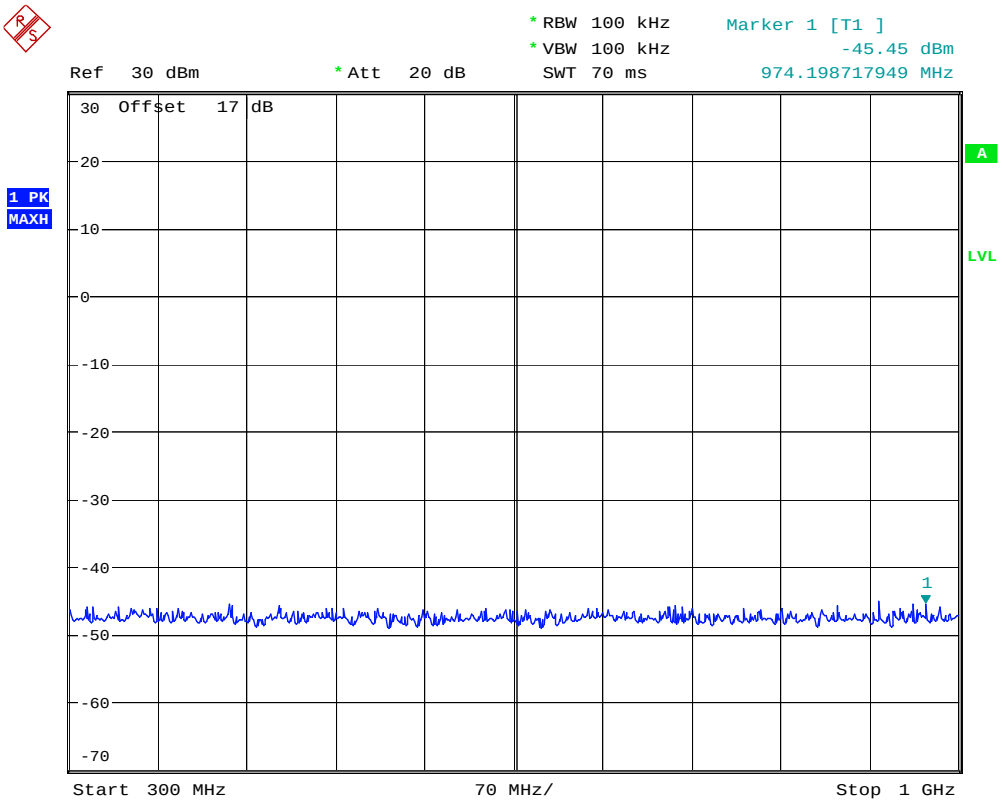
Date: 14.OCT.2010 14:16:31

CH512



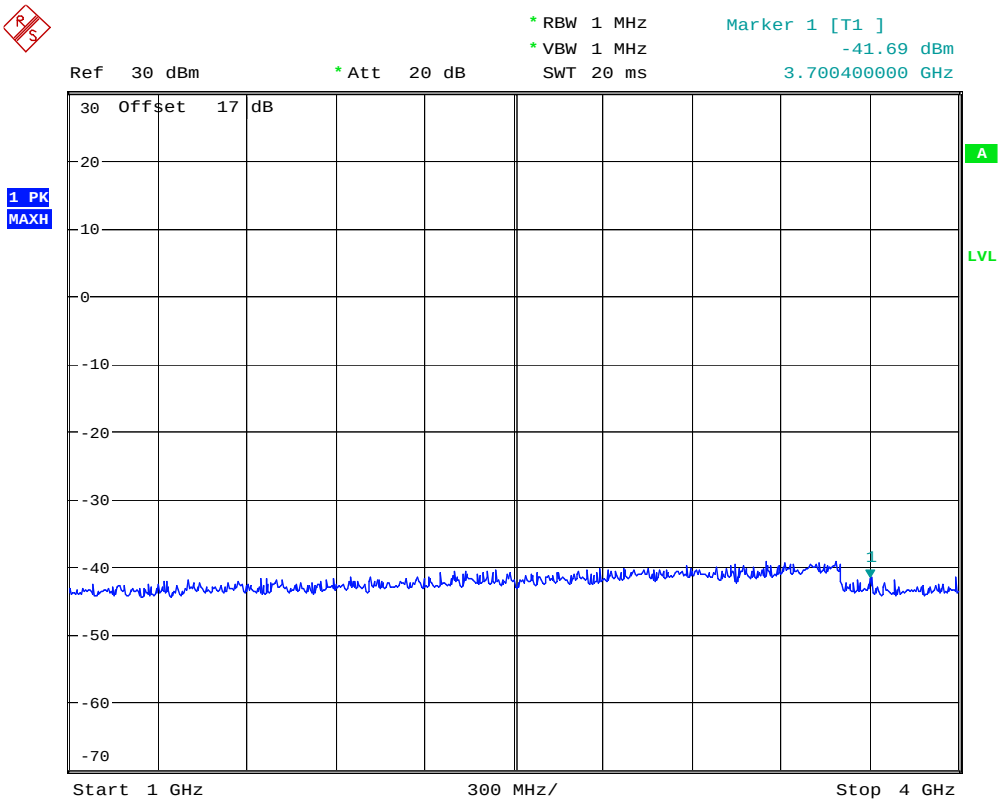
SPURIOUS EMISSION 1900BAND CH512

Date: 13.OCT.2010 18:09:39



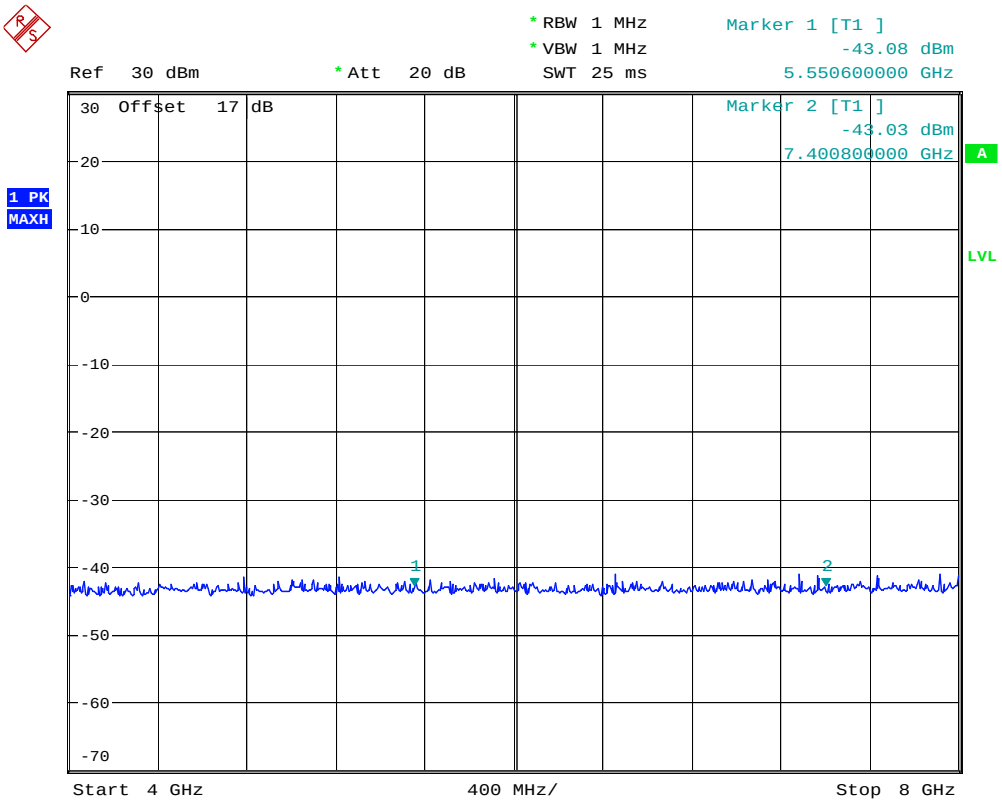
SPURIOUS EMISSION 1900BAND CH512

Date: 13.OCT.2010 18:09:51



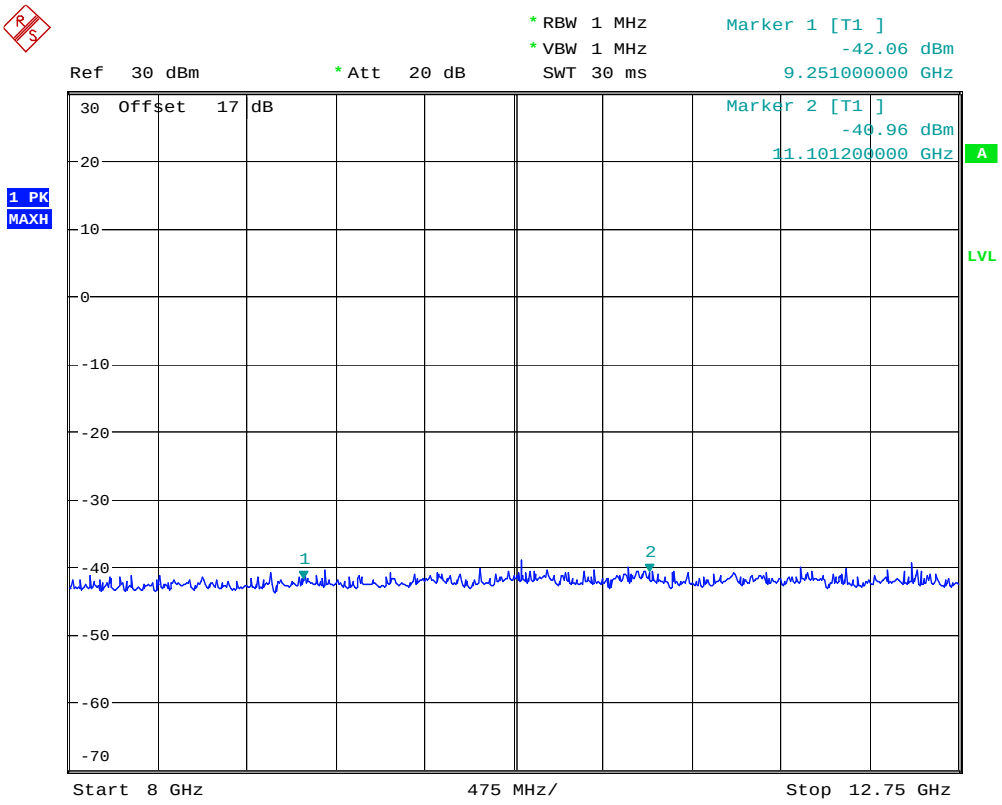
SPURIOUS EMISSION 1900BAND CH512

Date: 13.OCT.2010 18:11:43



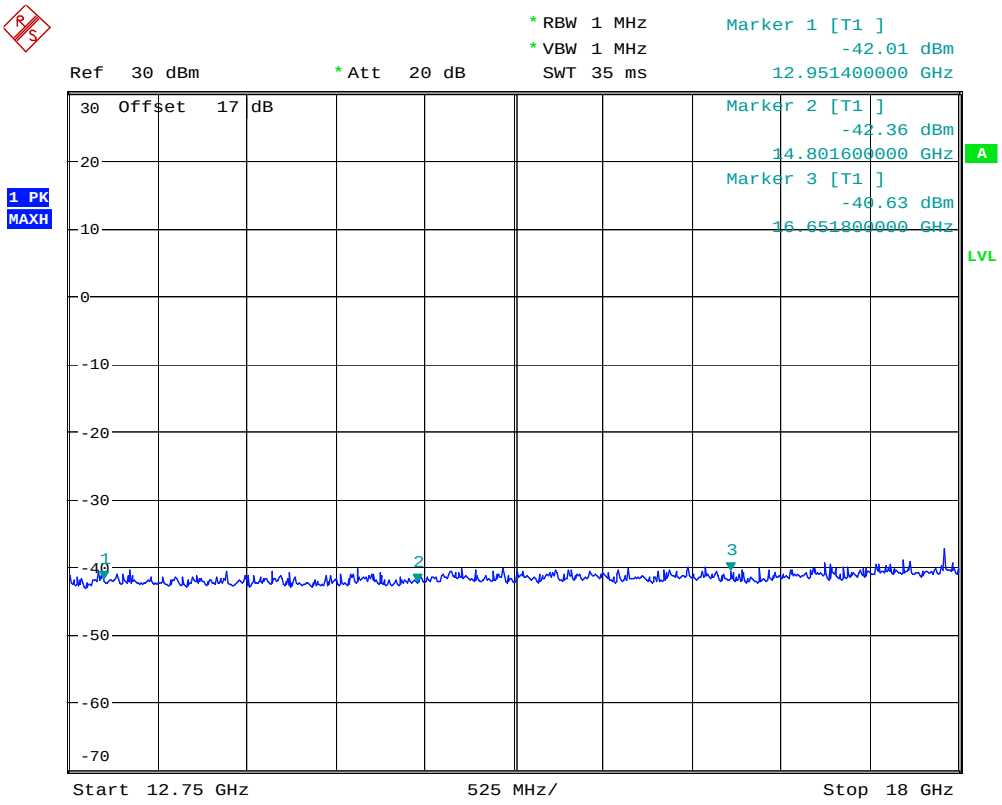
SPURIOUS EMISSION 1900BAND CH512

Date: 13.OCT.2010 18:12:03



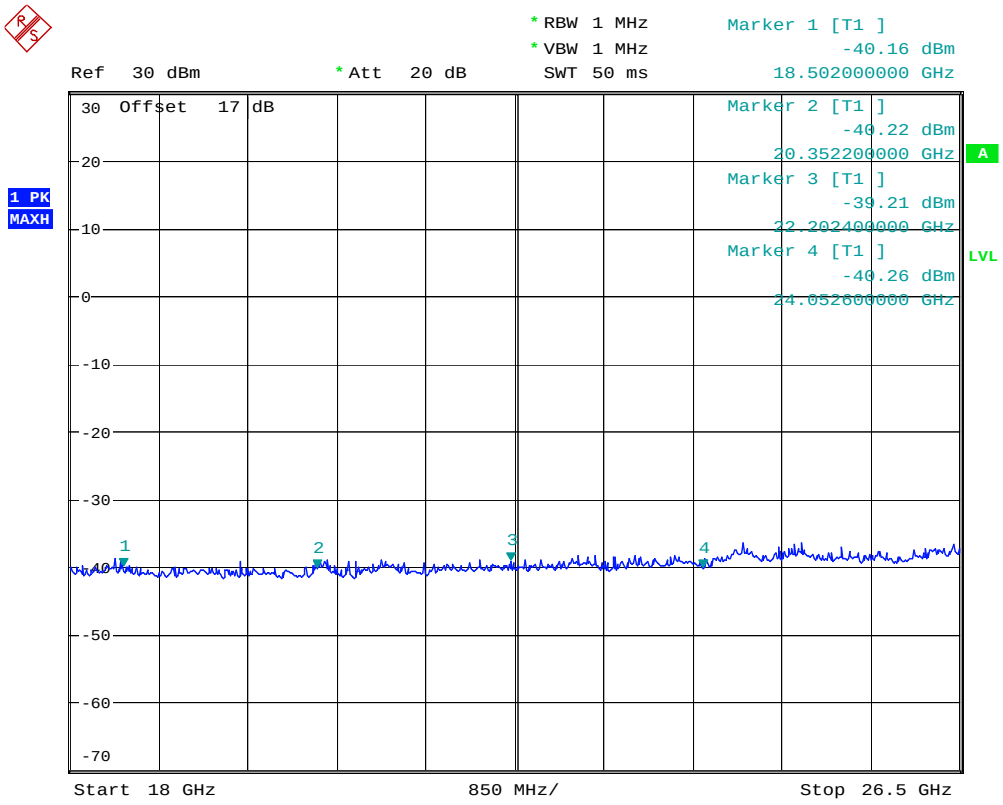
SPURIOUS EMISSION 1900BAND CH512

Date: 13.OCT.2010 18:12:21



SPURIOUS EMISSION 1900BAND CH512

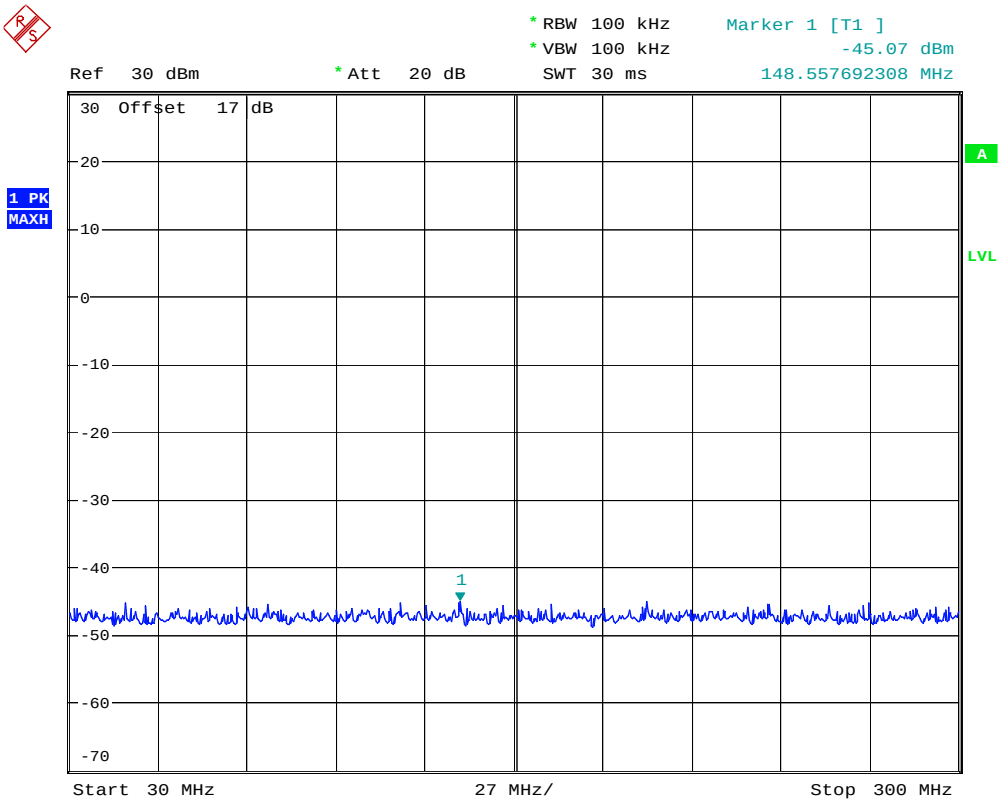
Date: 13.OCT.2010 18:12:45



SPURIOUS EMISSION 1900BAND CH512

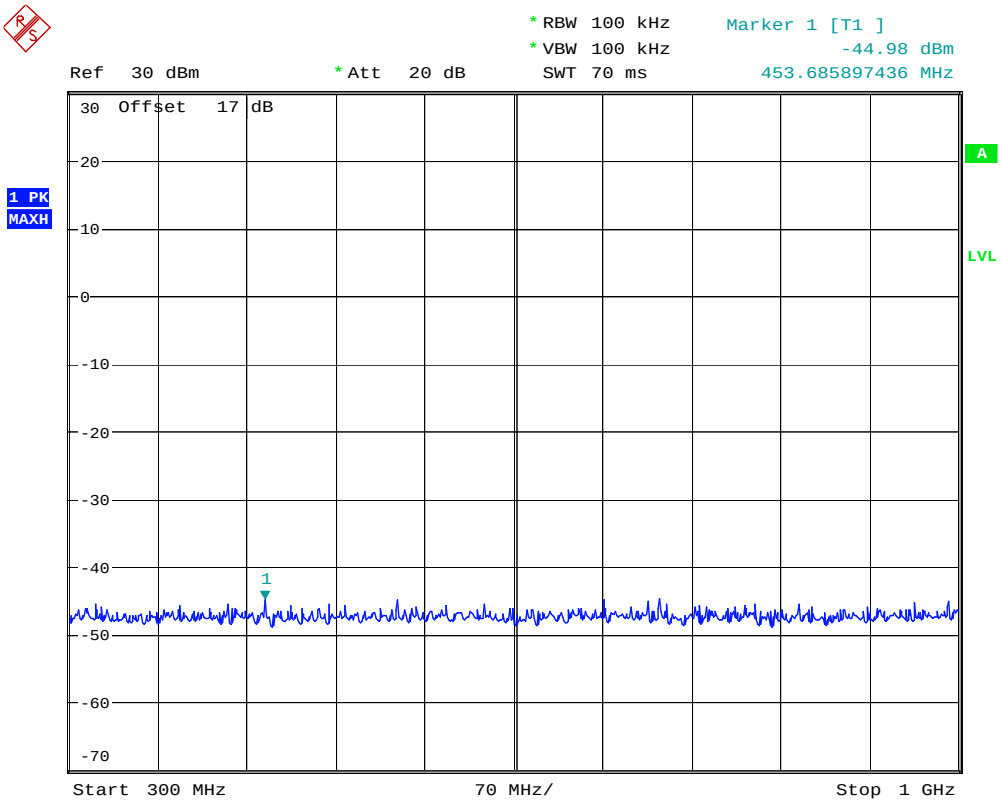
Date: 13.OCT.2010 18:13:10

CH661



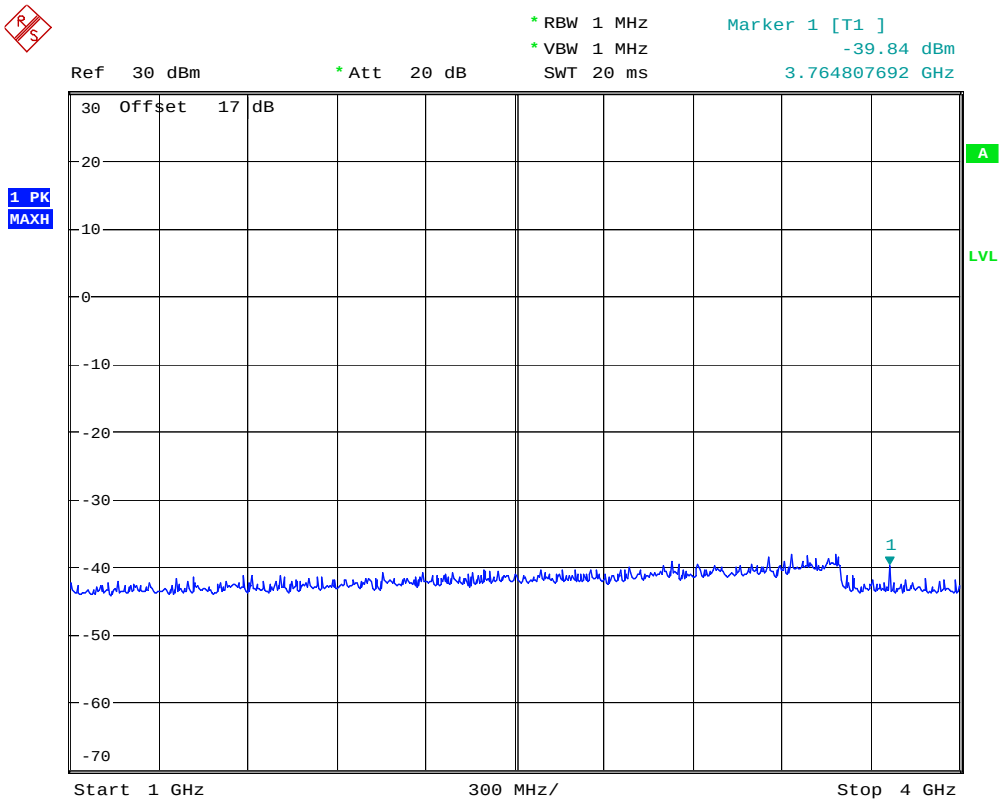
SPURIOUS EMISSION 1900BAND CH661

Date: 13.OCT.2010 18:09:26



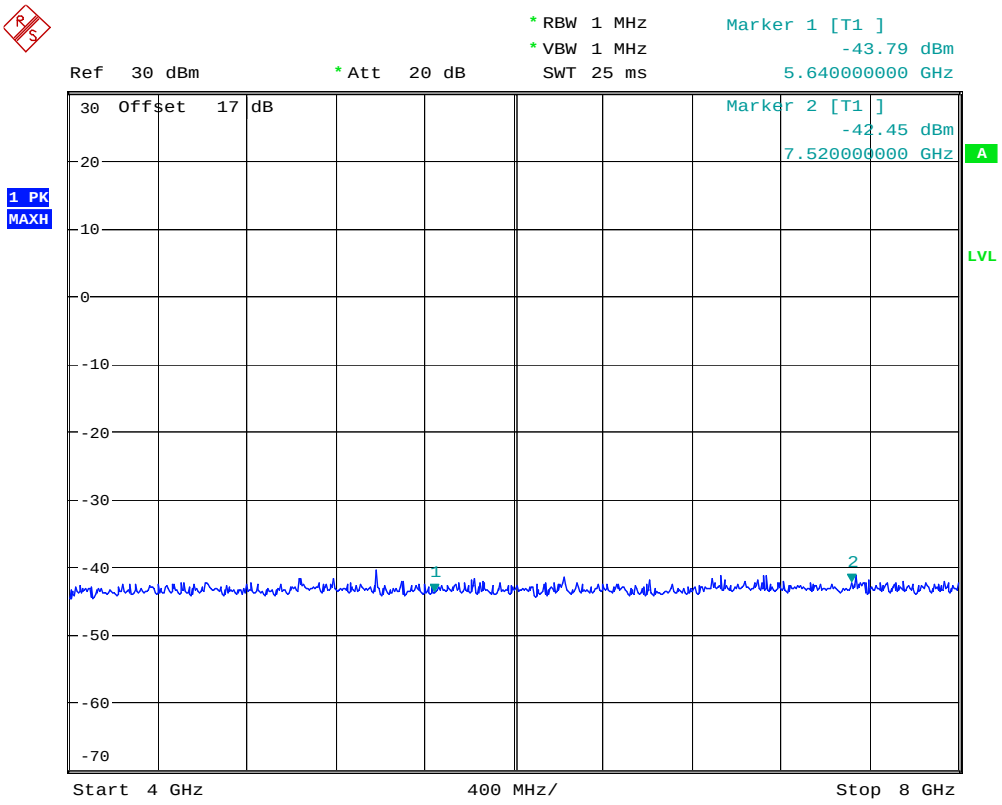
SPURIOUS EMISSION 1900BAND CH661

Date: 13.OCT.2010 18:10:02



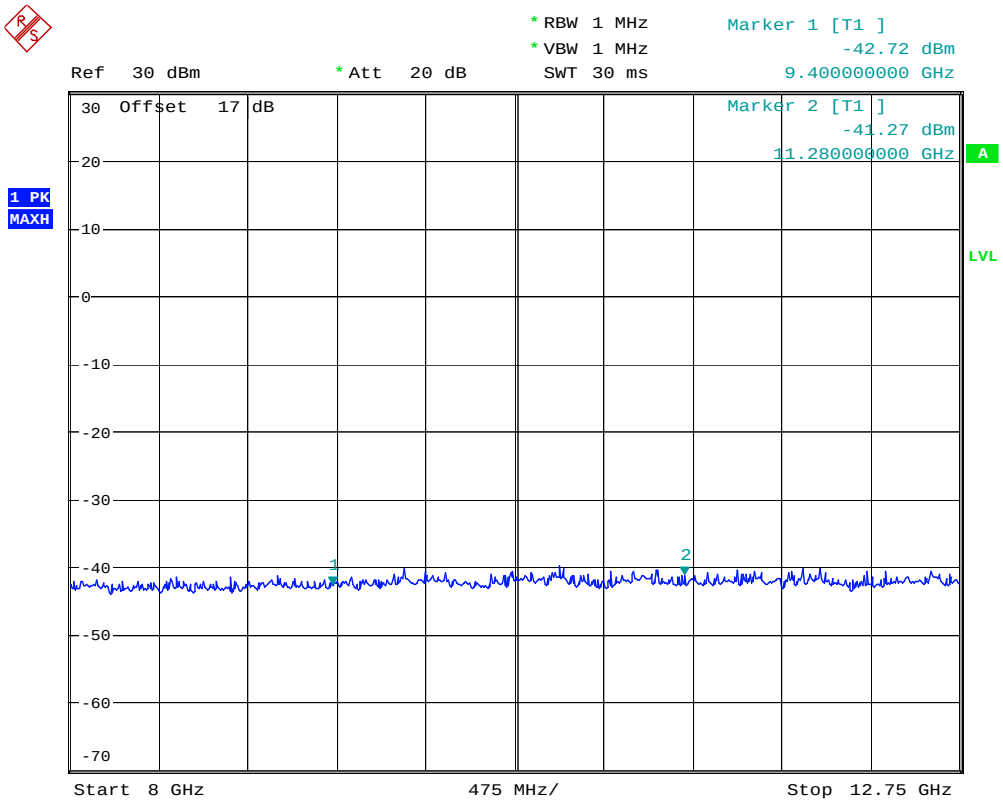
SPURIOUS EMISSION 1900BAND CH661

Date: 13.OCT.2010 18:14:55



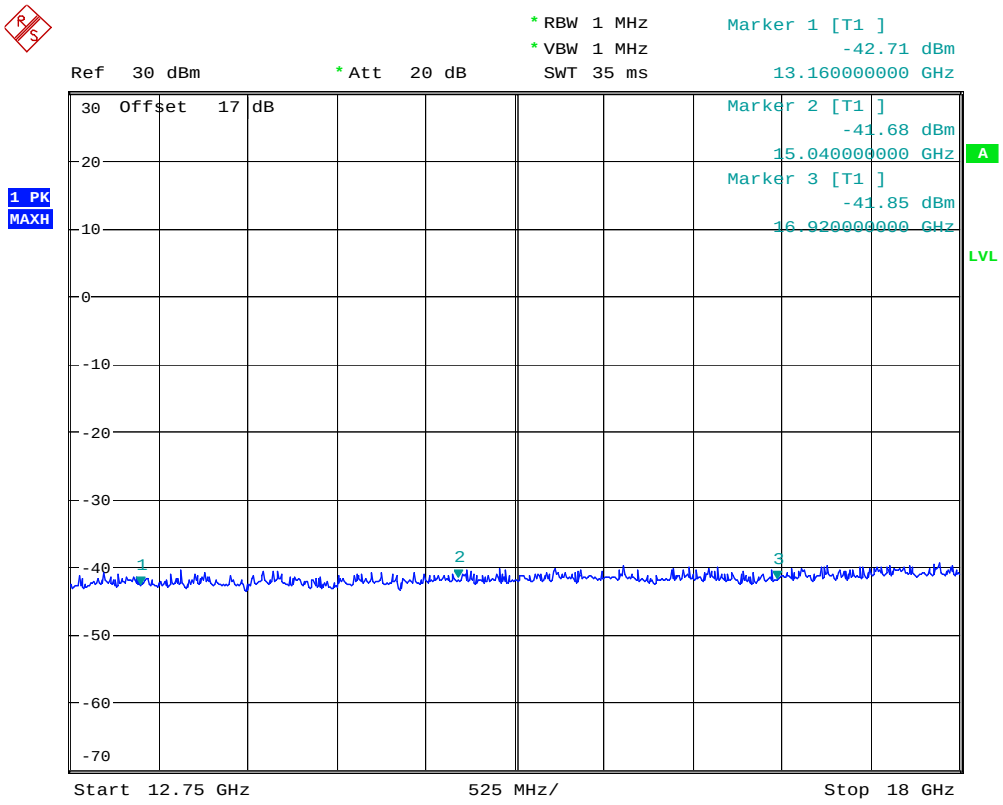
SPURIOUS EMISSION 1900BAND CH661

Date: 13.OCT.2010 18:14:33



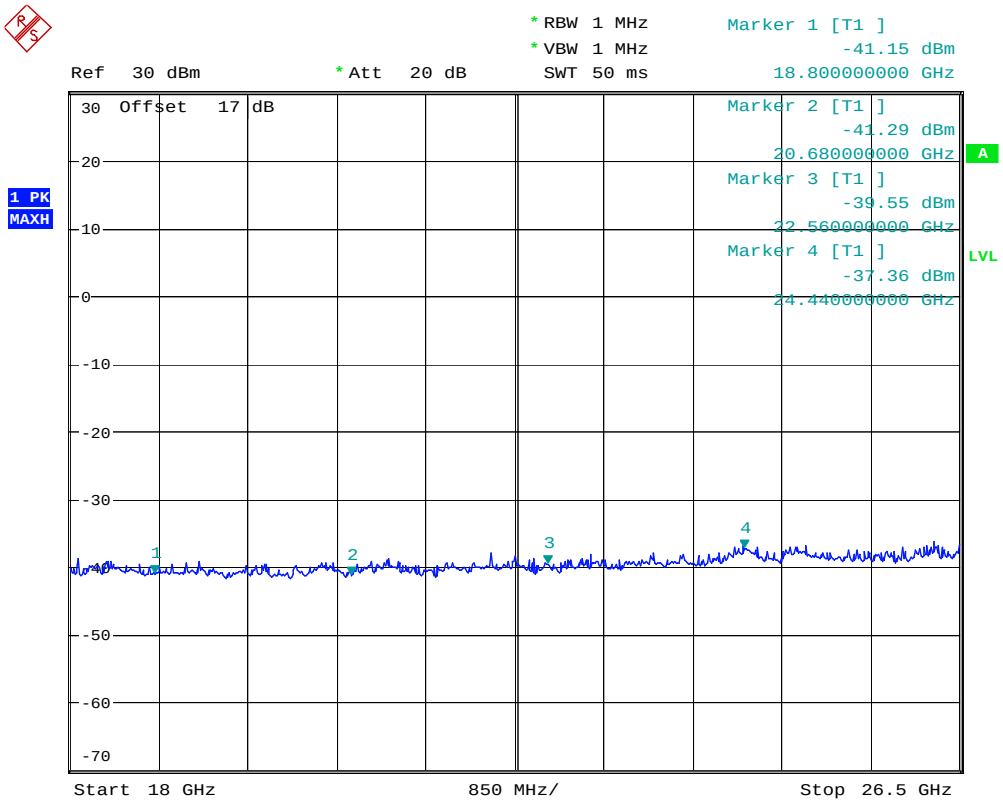
SPURIOUS EMISSION 1900BAND CH661

Date: 13.OCT.2010 18:14:17



SPURIOUS EMISSION 1900BAND CH661

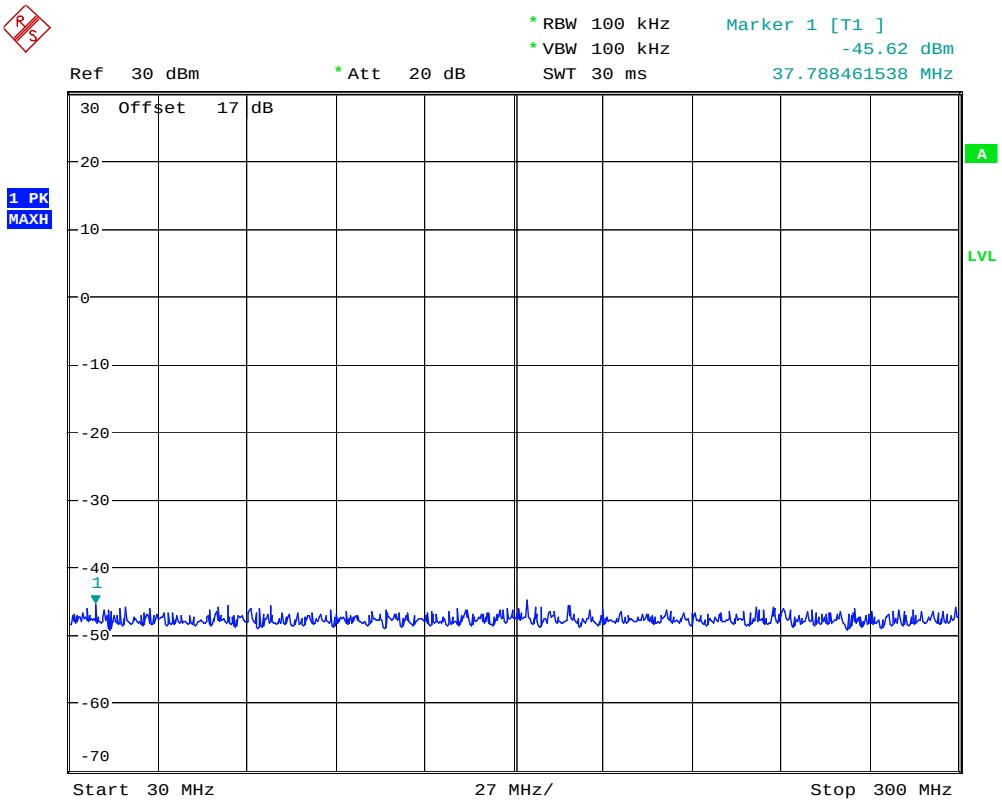
Date: 13.OCT.2010 18:14:00



SPURIOUS EMISSION 1900BAND CH661

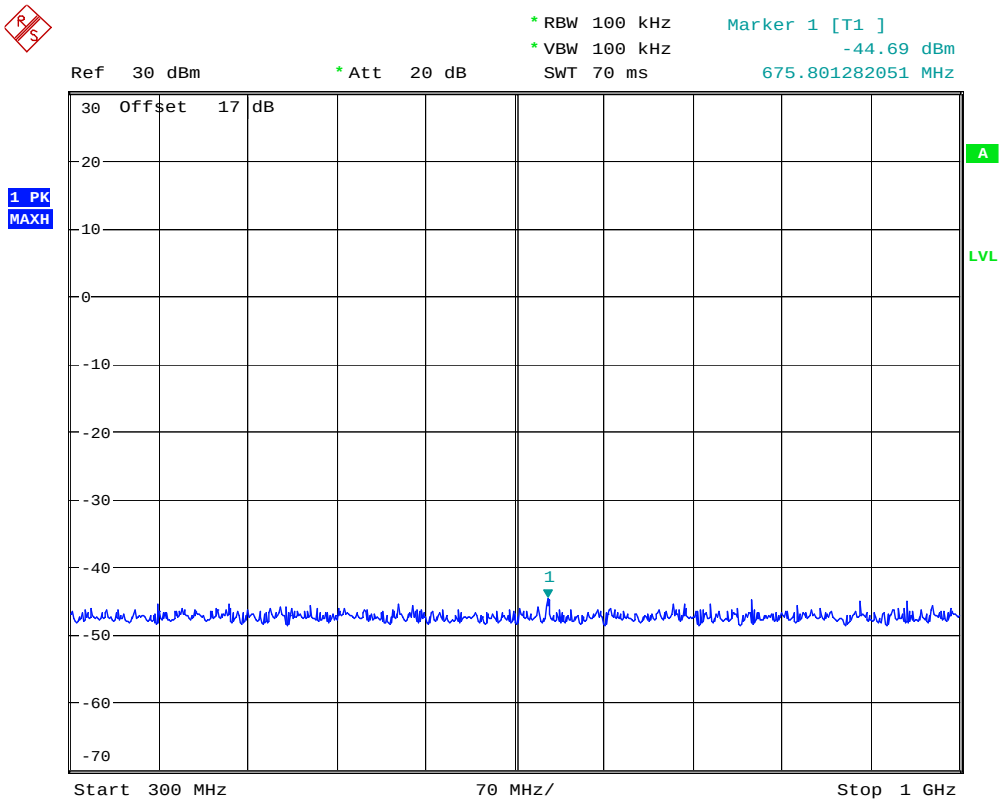
Date: 13.OCT.2010 18:13:38

CH 810



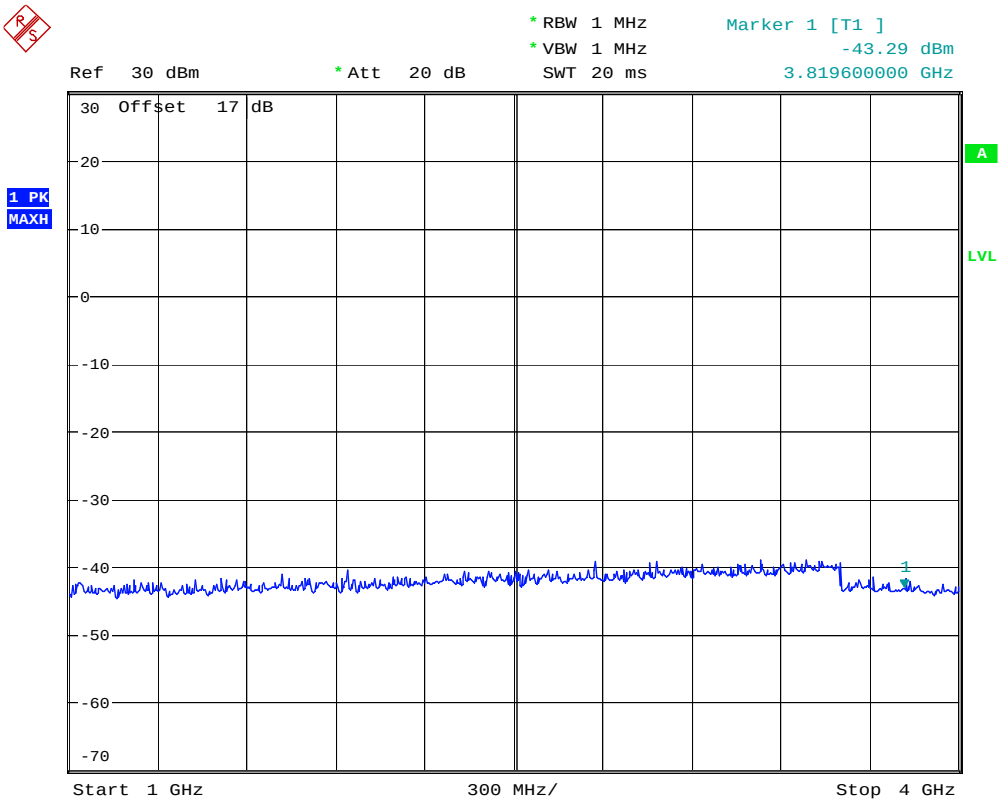
SPURIOUS EMISSION 1900BAND CH810

Date: 13.OCT.2010 18:09:13



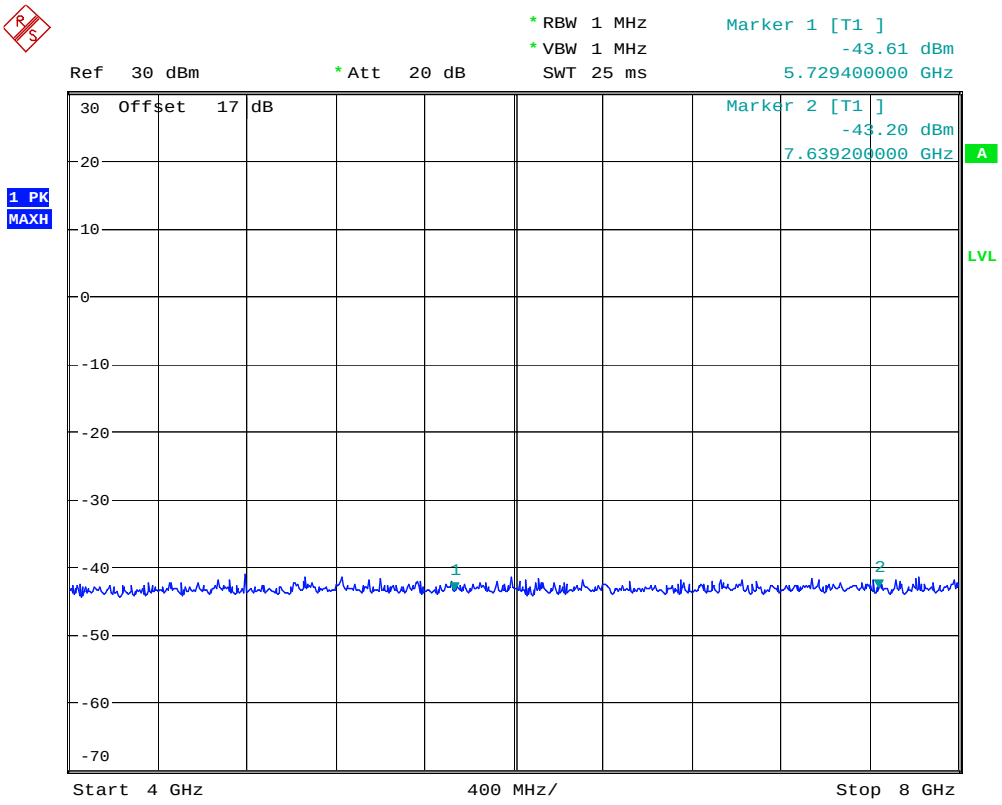
SPURIOUS EMISSION 1900BAND CH810

Date: 13.OCT.2010 18:10:14



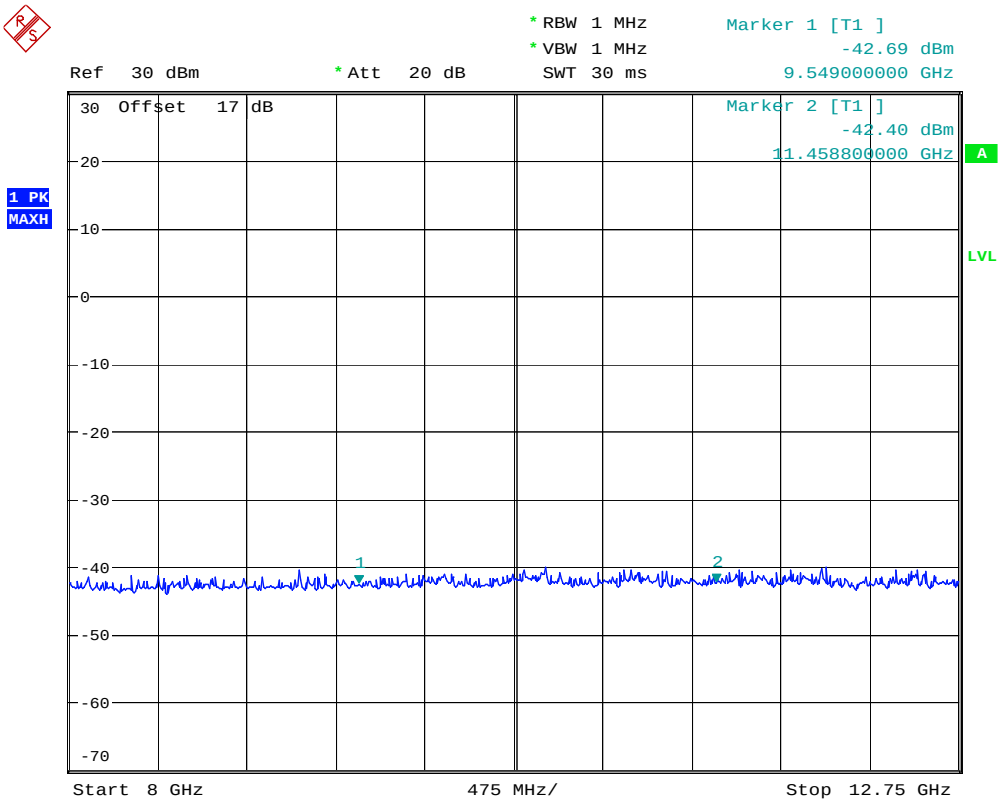
SPURIOUS EMISSION 1900BAND CH810

Date: 13.OCT.2010 18:15:14



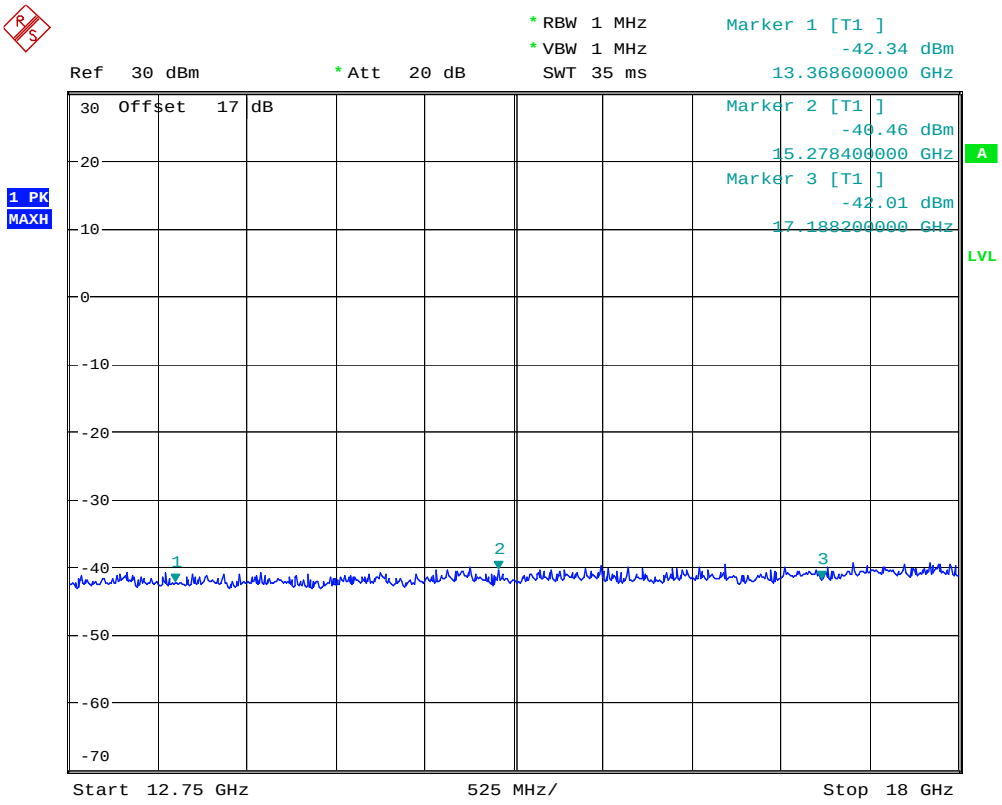
SPURIOUS EMISSION 1900BAND CH810

Date: 13.OCT.2010 18:15:32



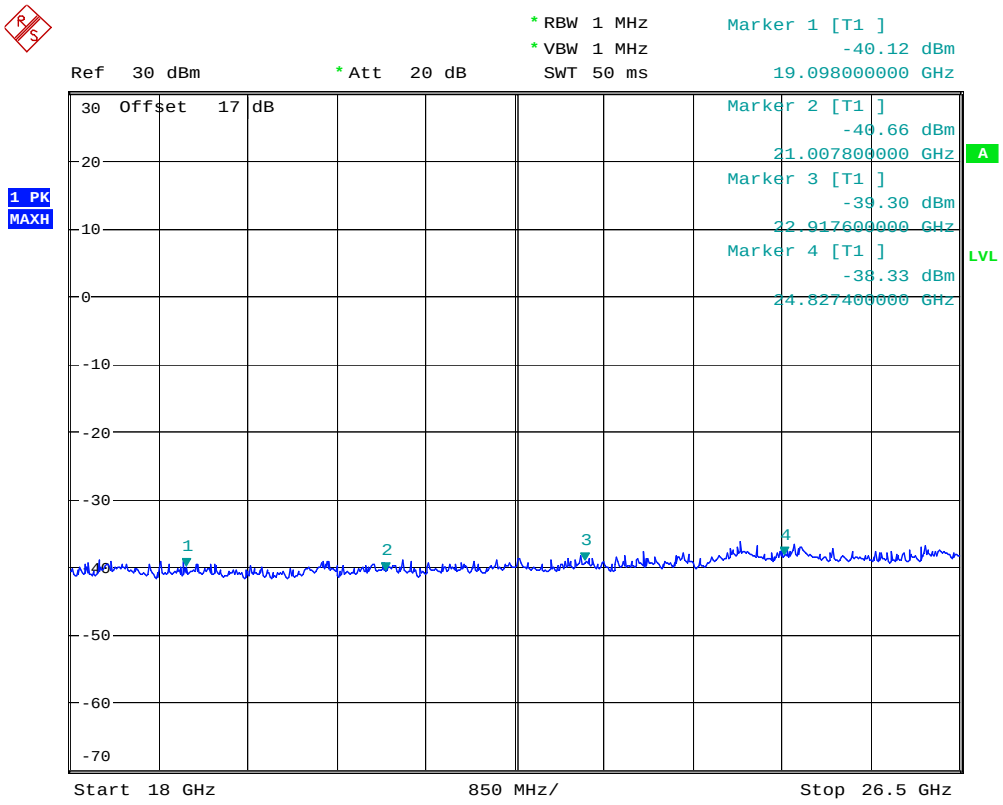
SPURIOUS EMISSION 1900BAND CH810

Date: 13.OCT.2010 18:15:48



SPURIOUS EMISSION 1900BAND CH810

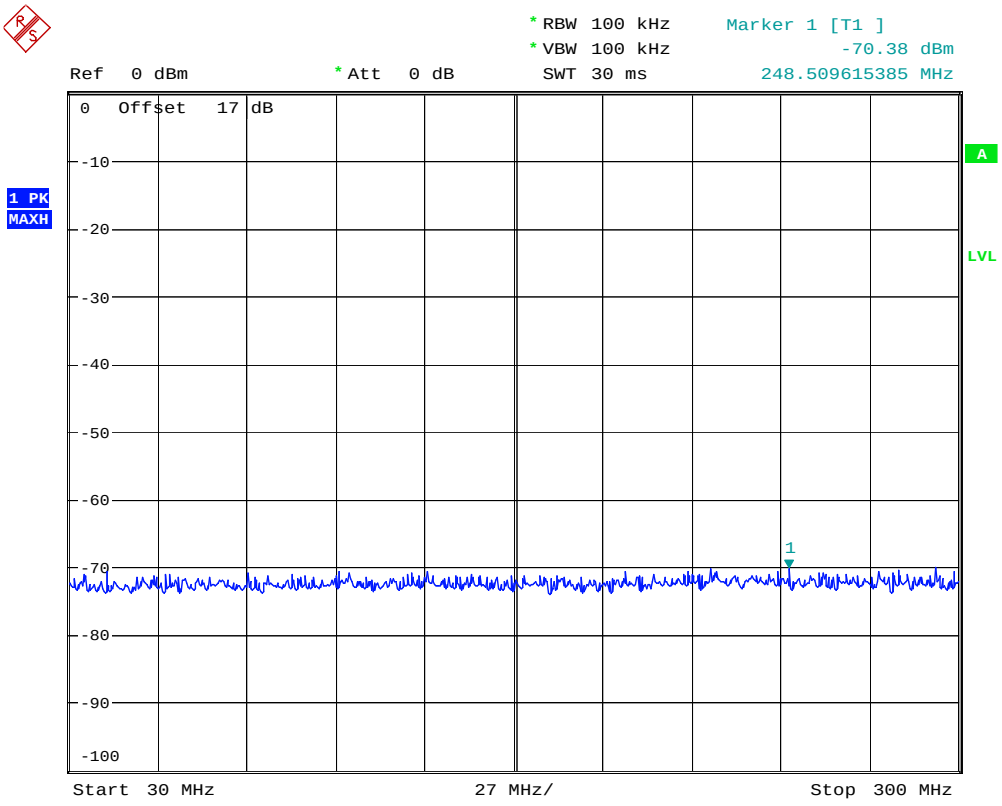
Date: 13.OCT.2010 18:16:10



SPURIOUS EMISSION 1900BAND CH810

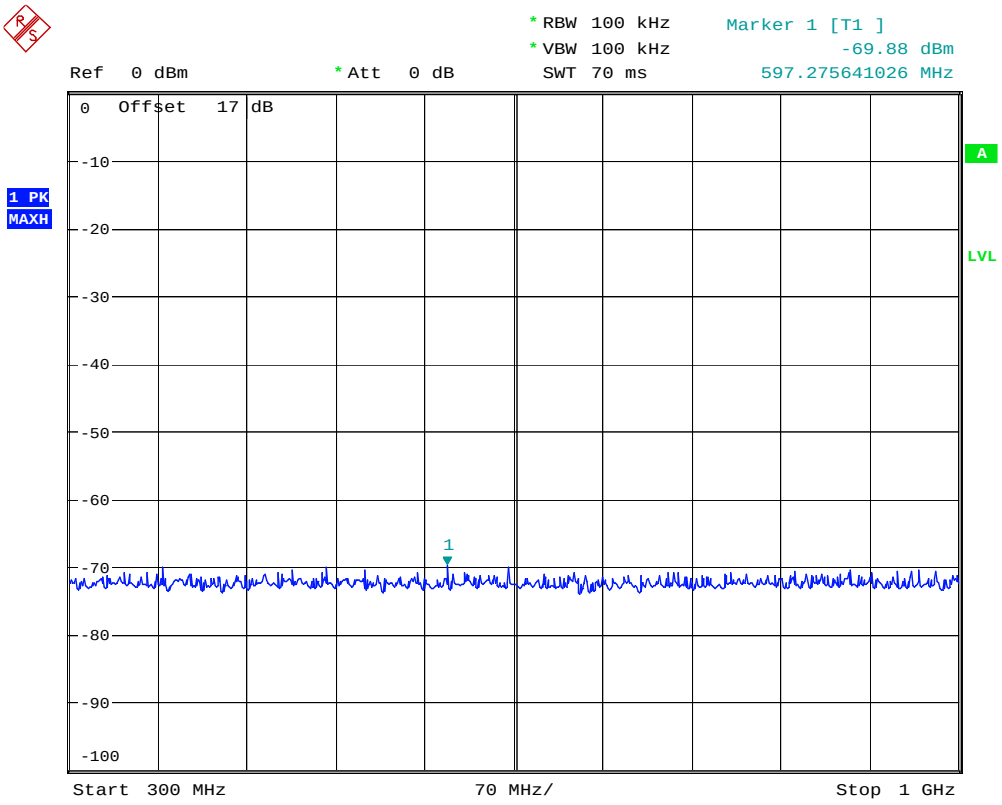
Date: 13.OCT.2010 18:16:36

1900MHz Band Idle



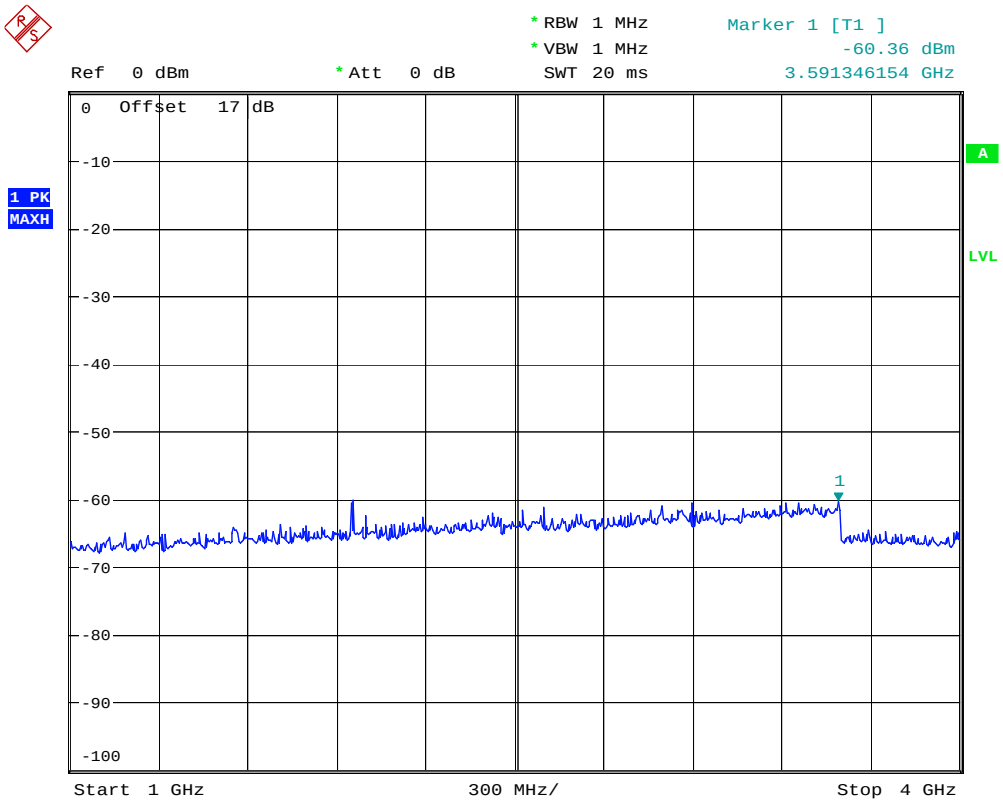
SPURIOUS EMISSION 1900BAND IDLE

Date: 14.OCT.2010 14:15:01



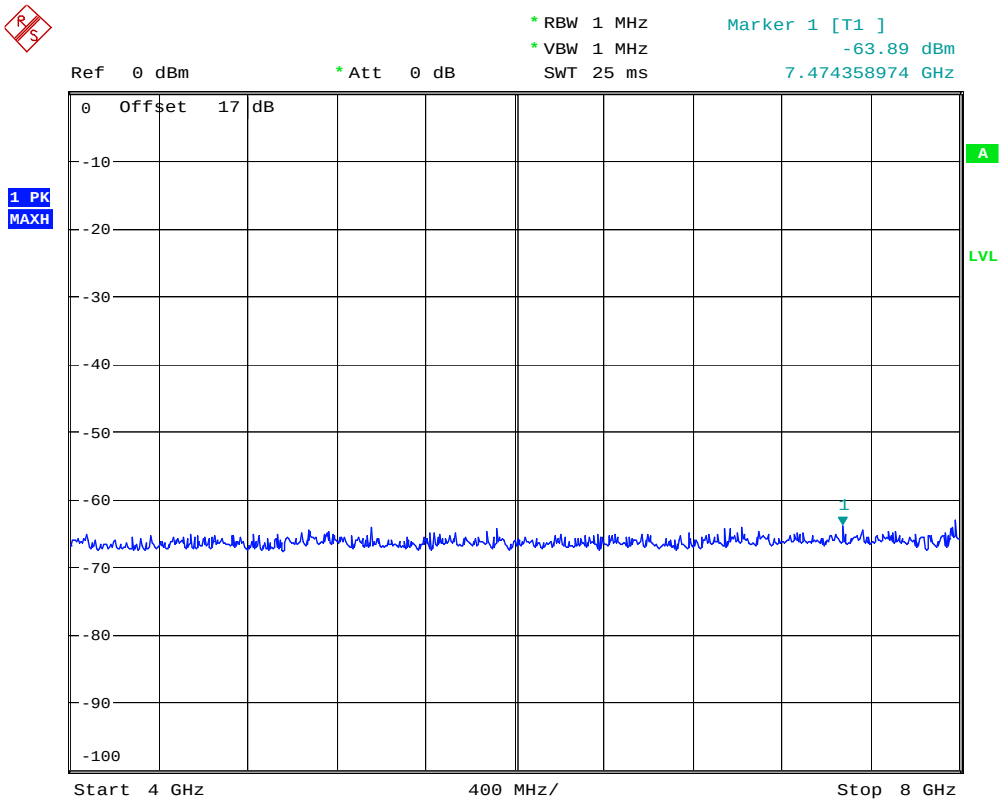
SPURIOUS EMISSION 1900BAND IDLE

Date: 14.OCT.2010 14:15:13



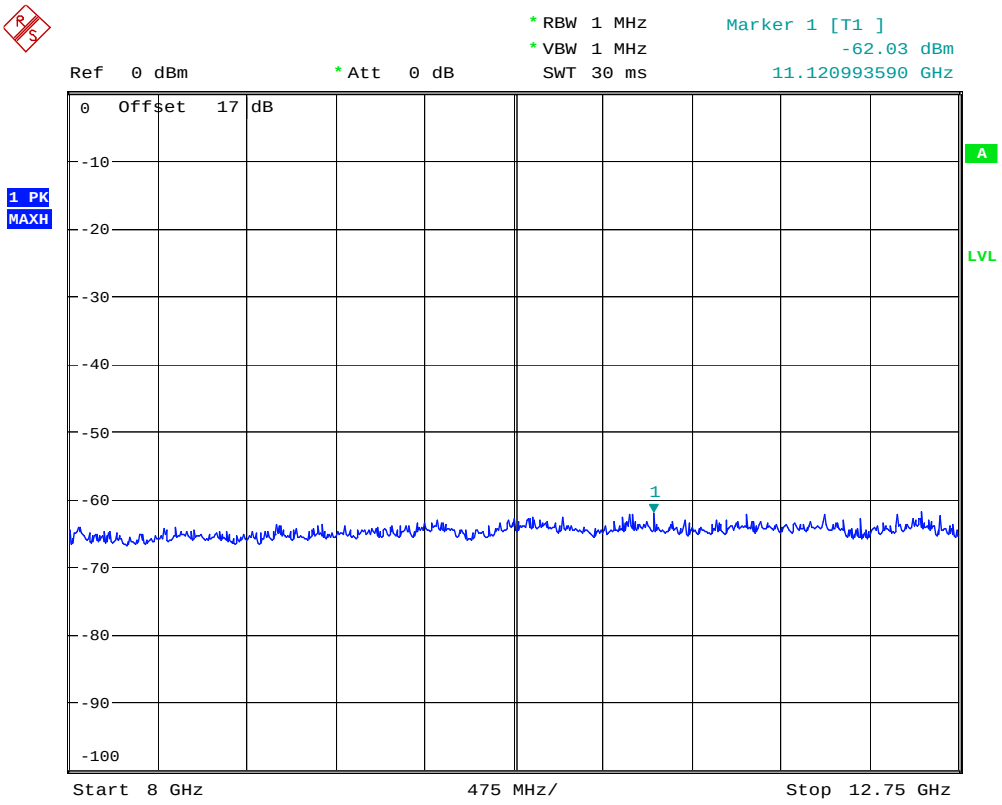
SPURIOUS EMISSION 1900BAND IDLE

Date: 14.OCT.2010 14:15:27



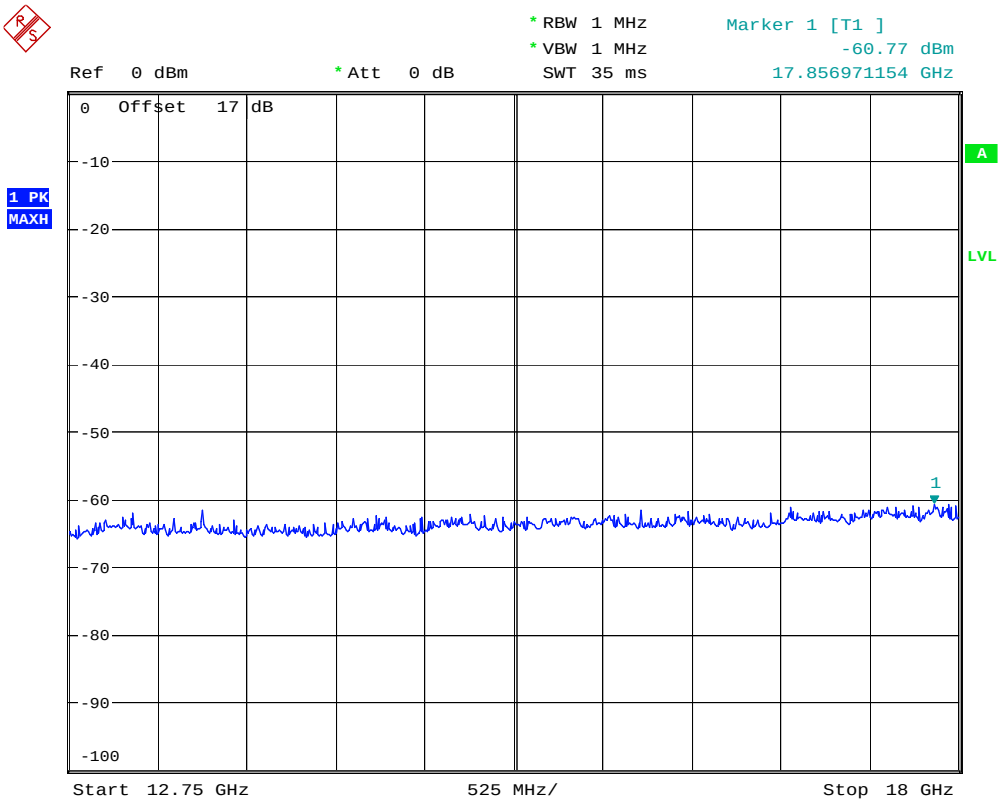
SPURIOUS EMISSION 1900BAND IDLE

Date: 14.OCT.2010 14:15:37



SPURIOUS EMISSION 1900BAND IDLE

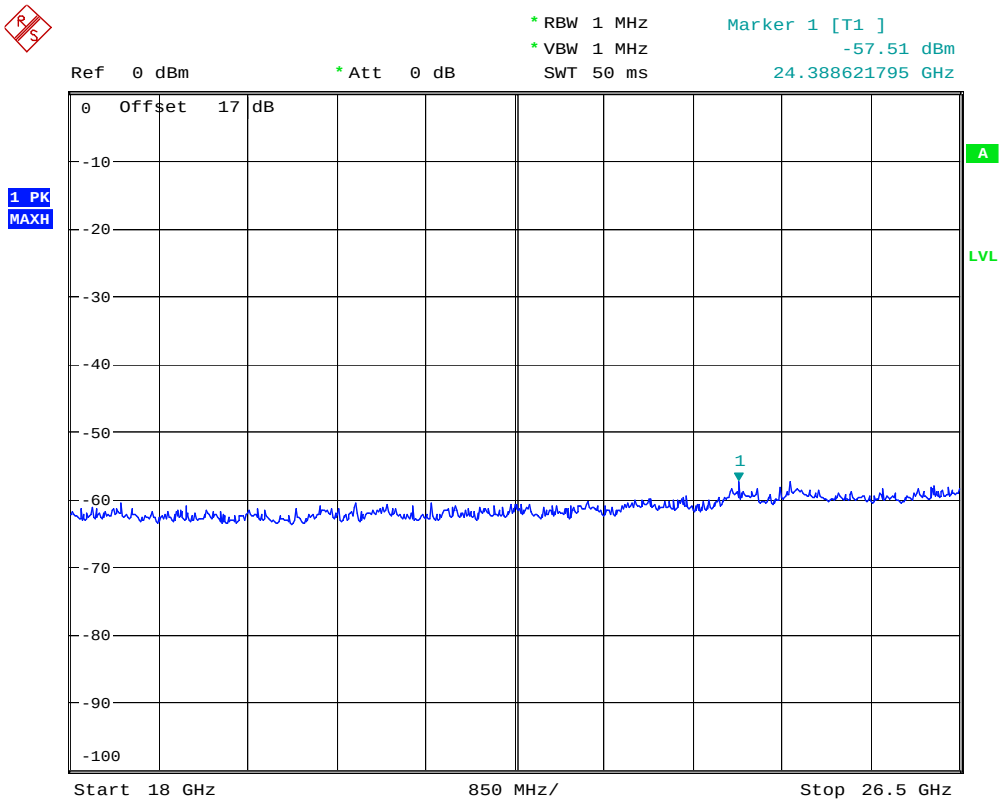
Date: 14.OCT.2010 14:15:48



SPURIOUS EMISSION 1900BAND IDLE

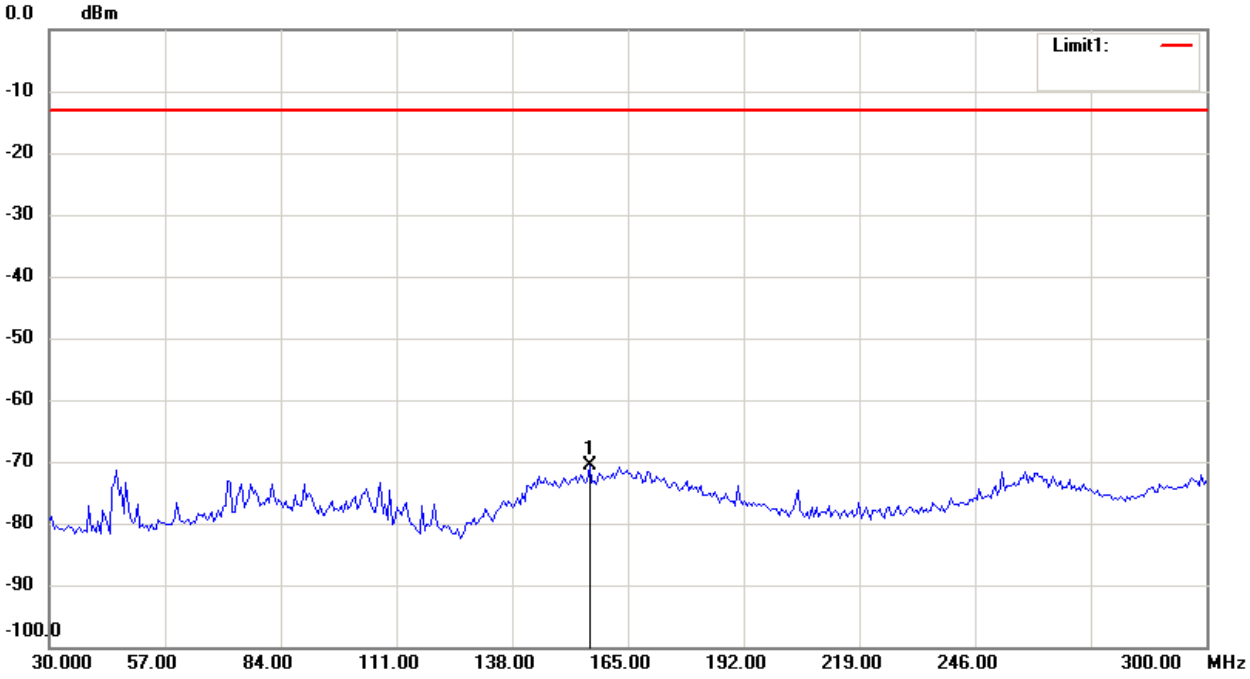
Date: 14.OCT.2010 14:16:04

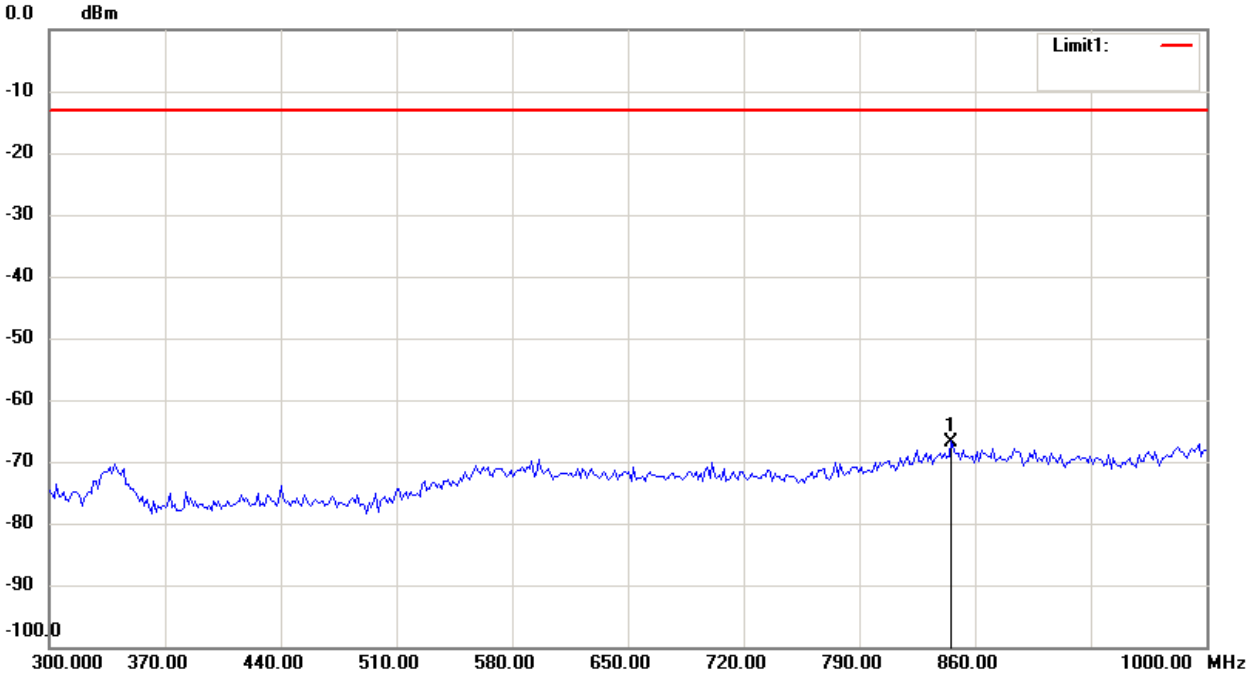
Report Number: W6M21009-10913-P-2224
FCC ID: XMSAAGPSV3



SPURIOUS EMISSION 1900BAND IDLE
Date: 14.OCT.2010 14:16:15

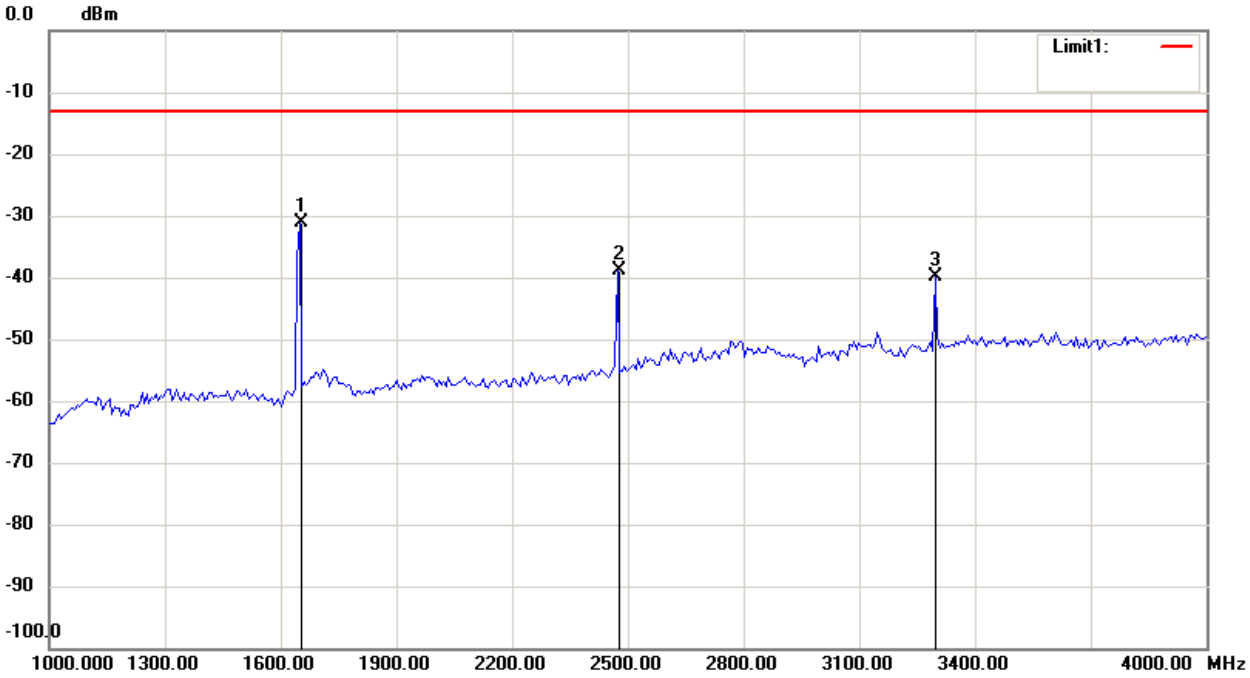
Filed Strength of Spurious Emission
850 band_ CH 128_3.7 V
Antenna Polarization H

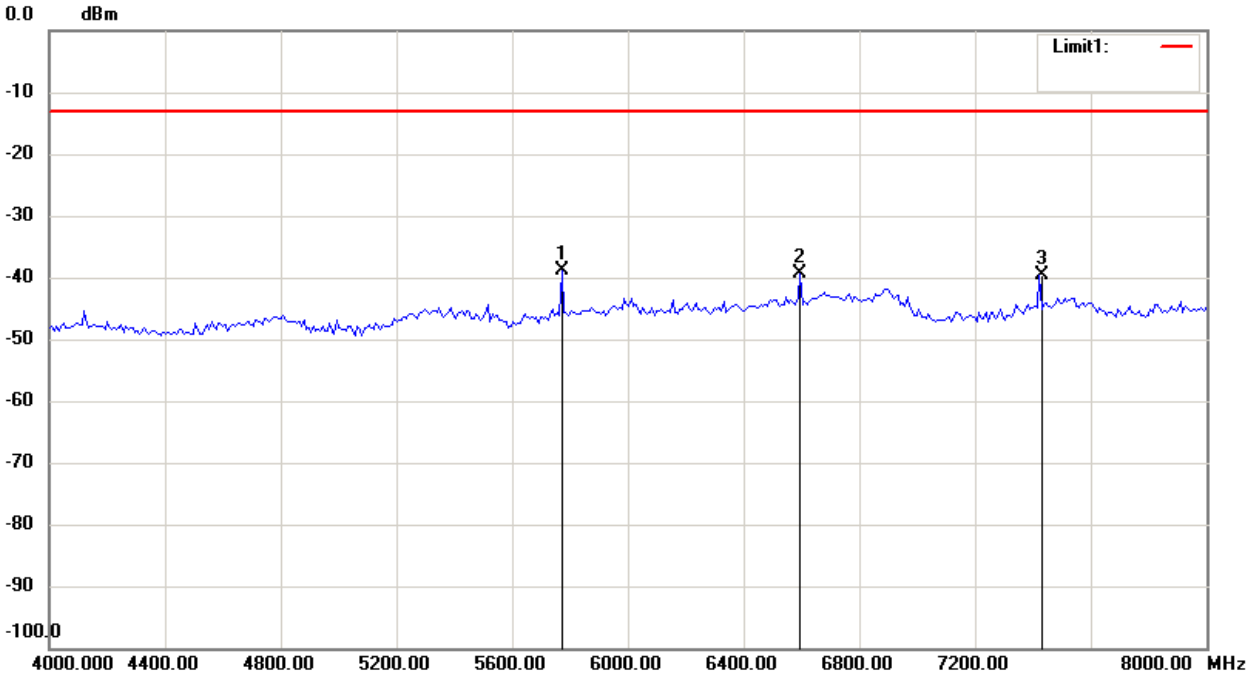




Note:

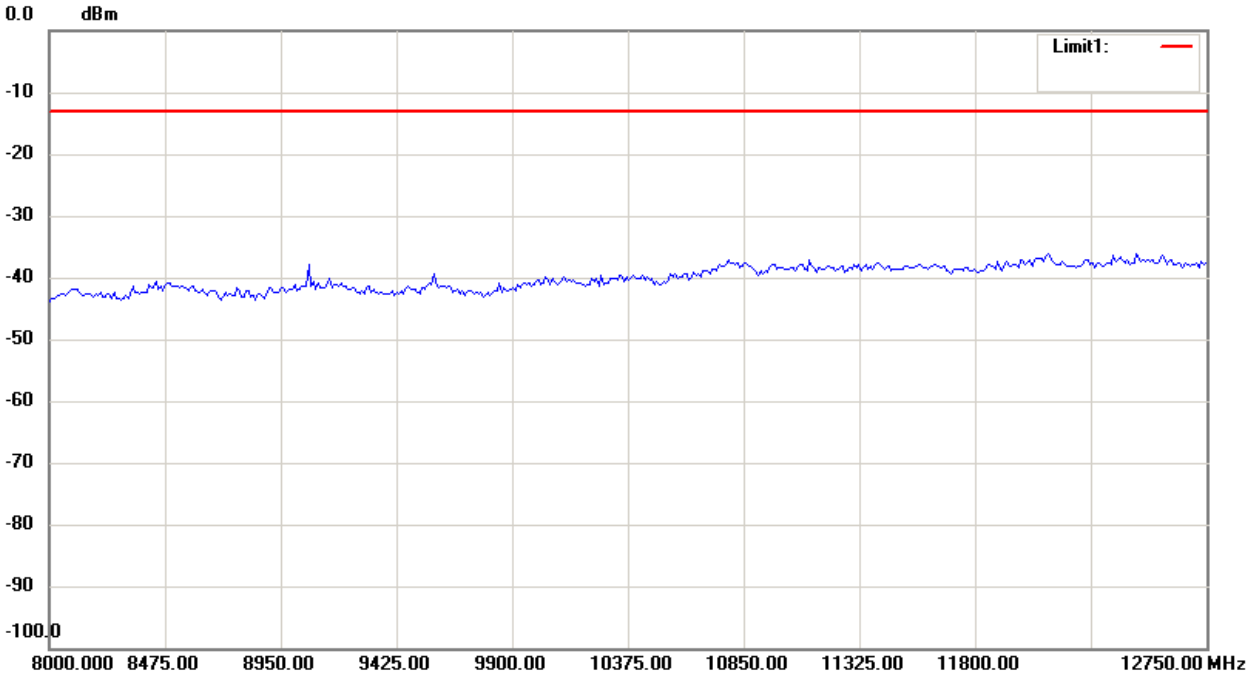
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



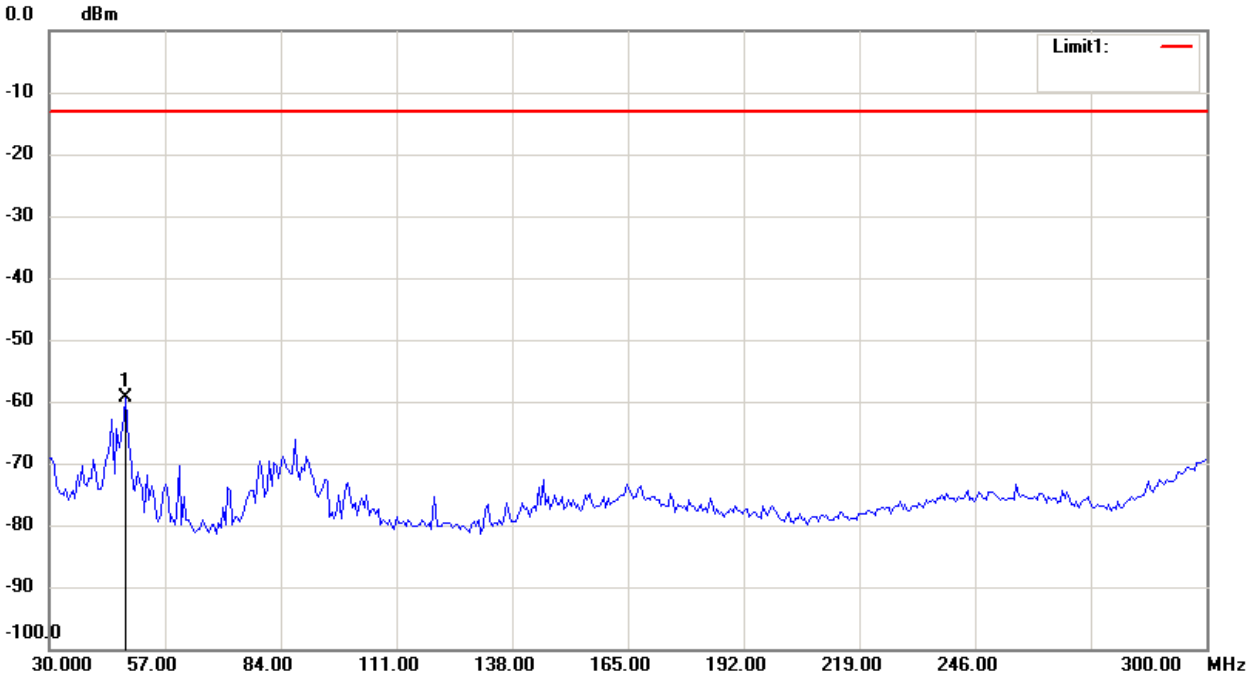


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

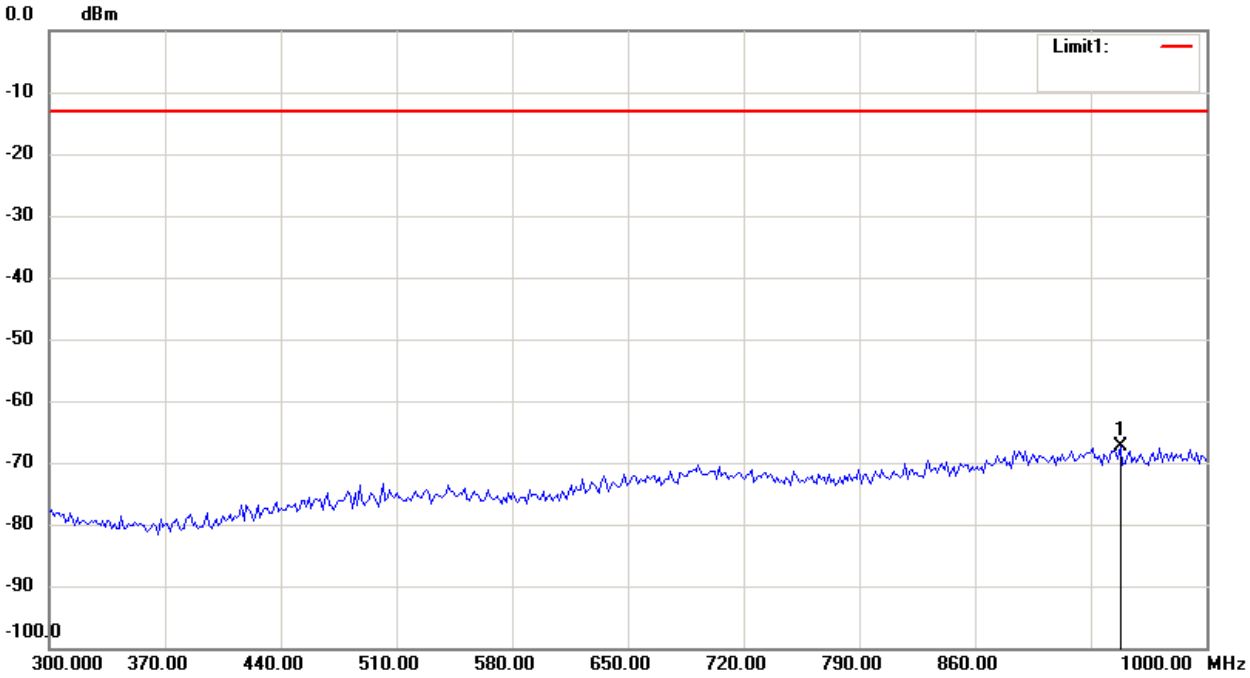


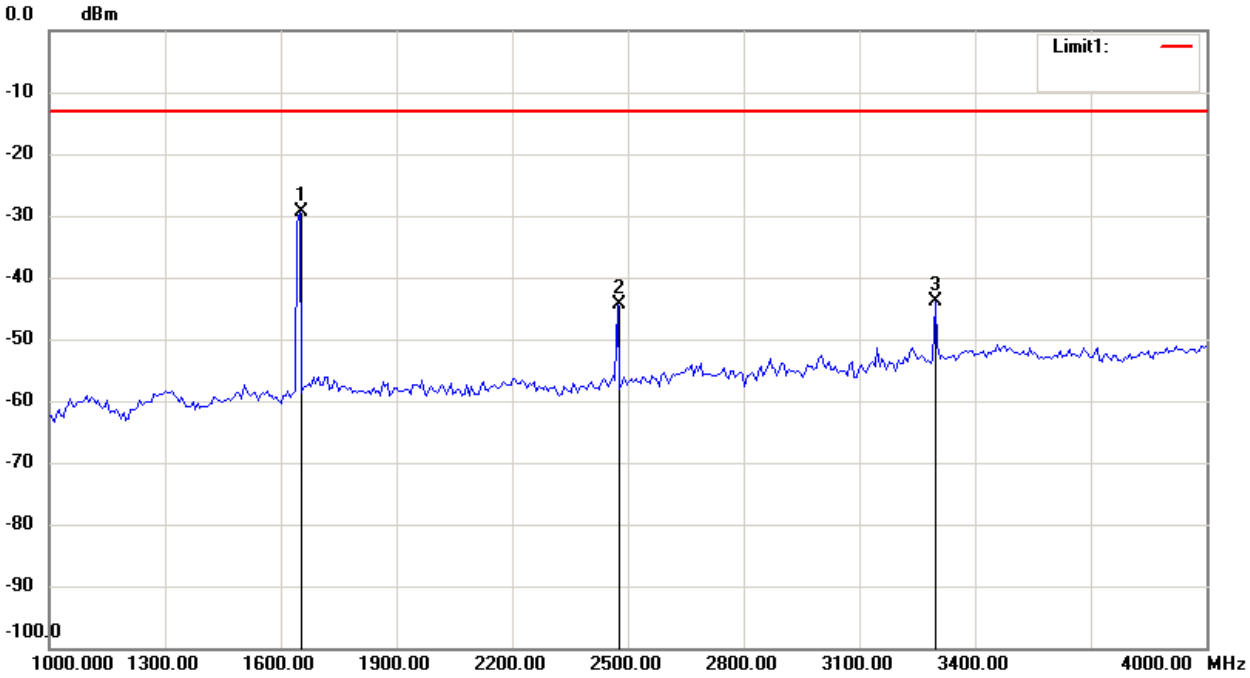
Antenna Polarization V



Note:

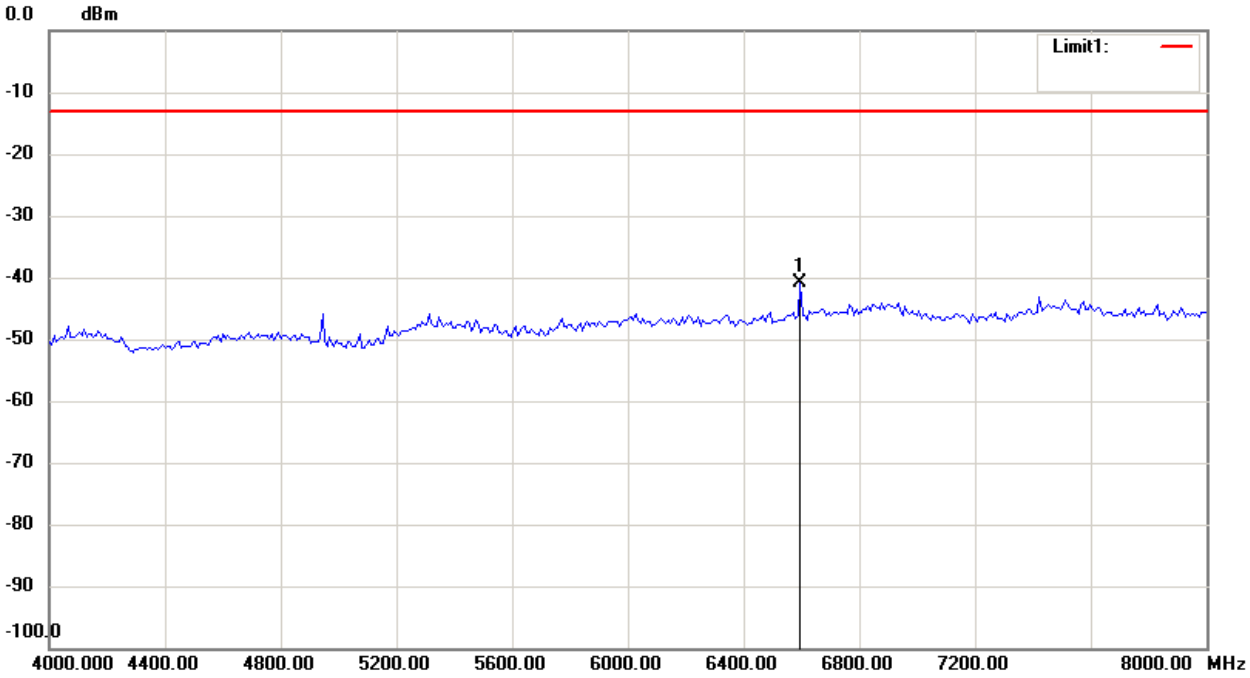
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

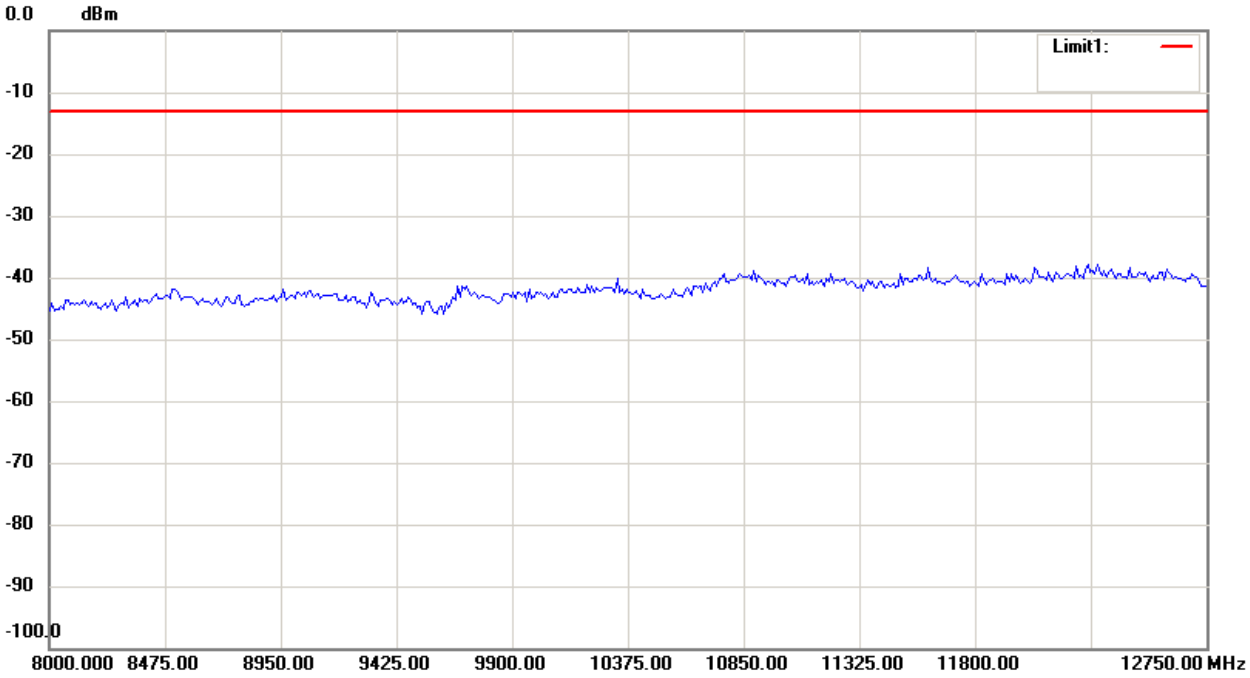




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

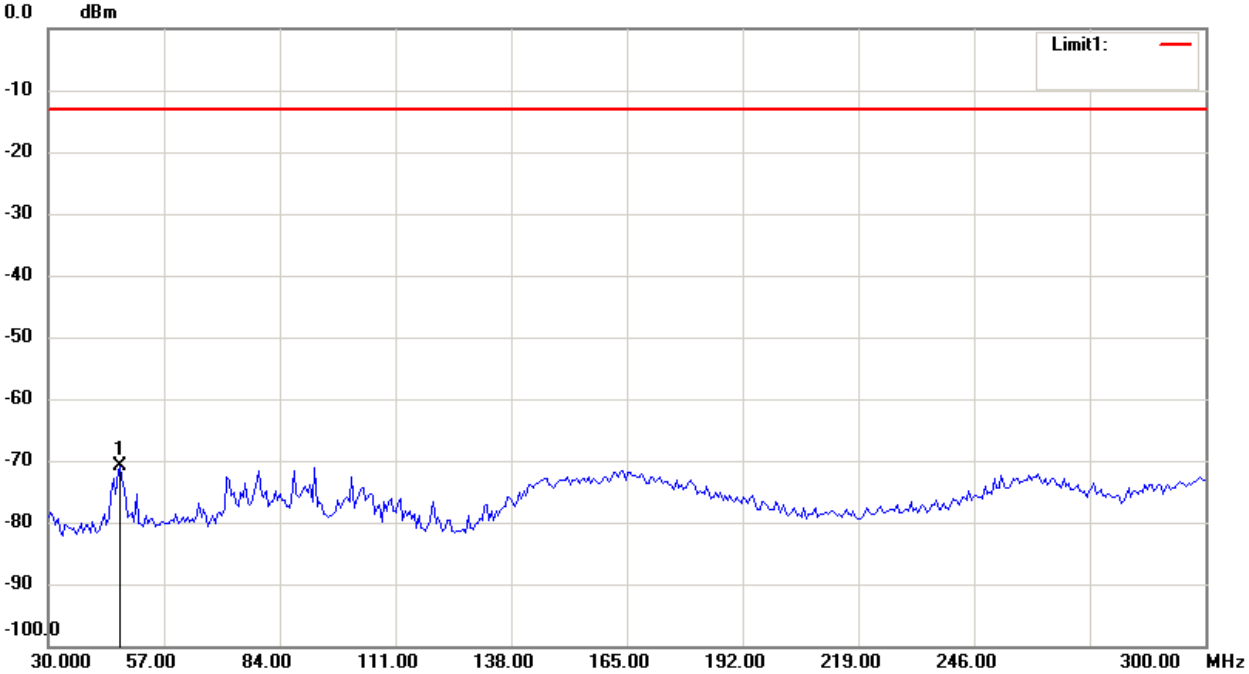


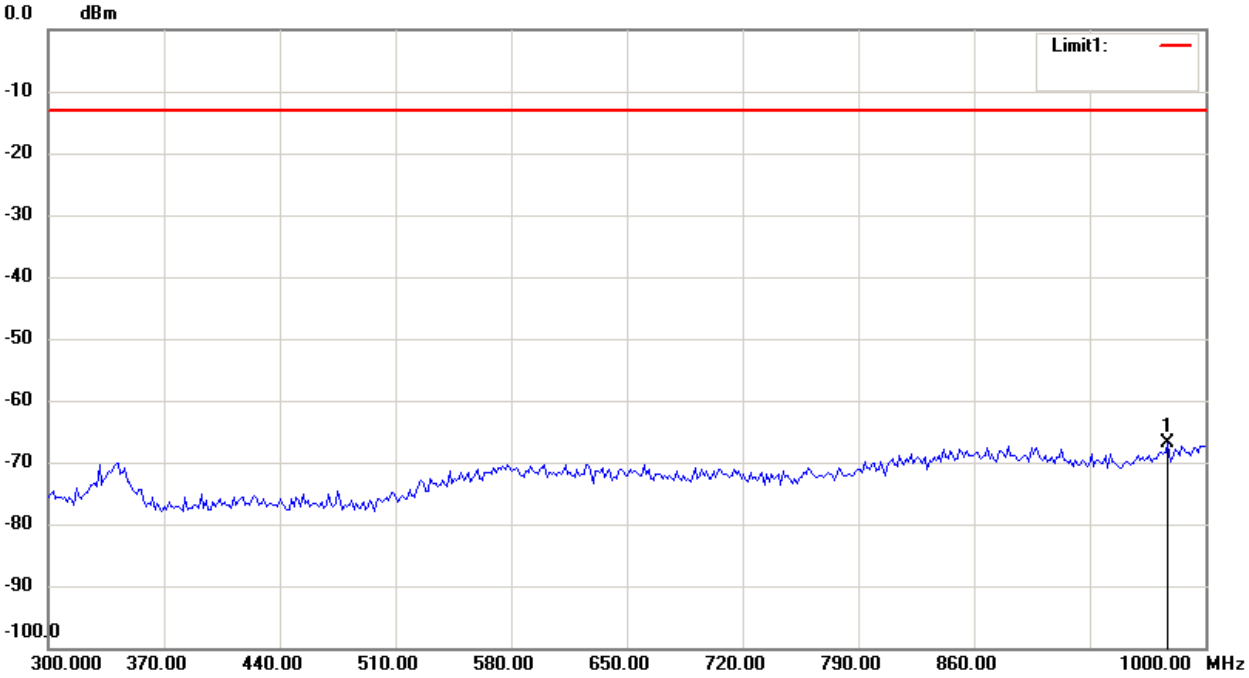


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

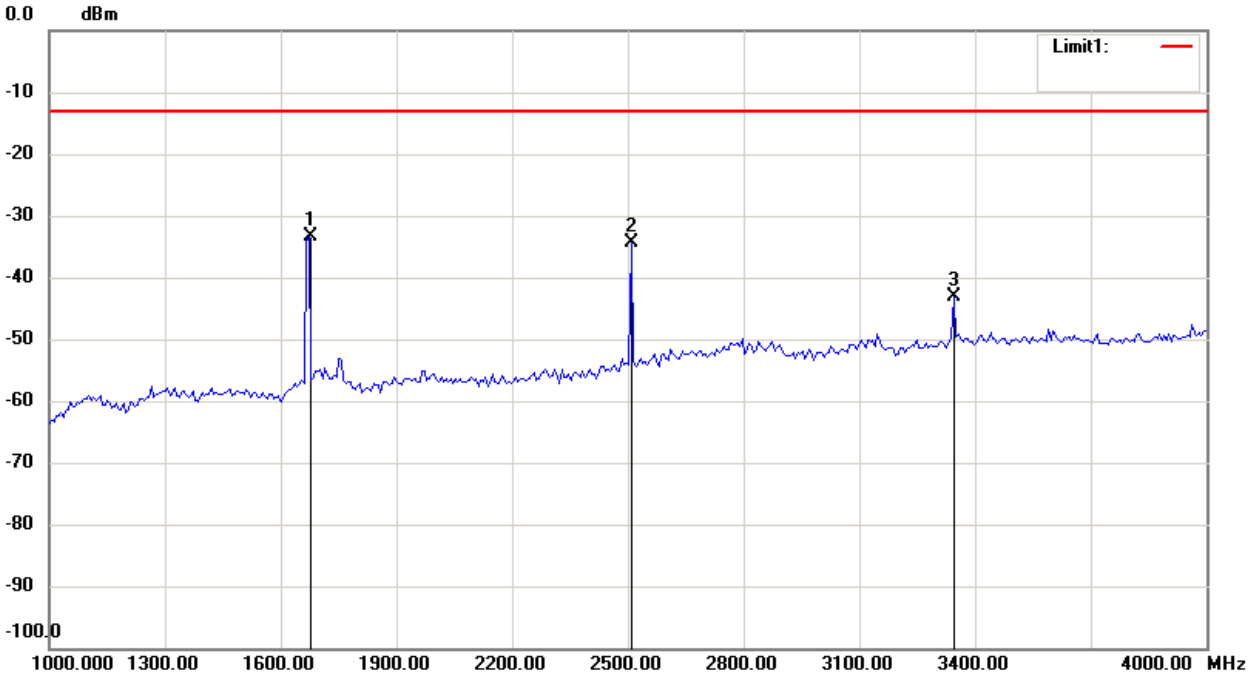
850 band_ CH 188_3.7 V
Antenna Polarization H

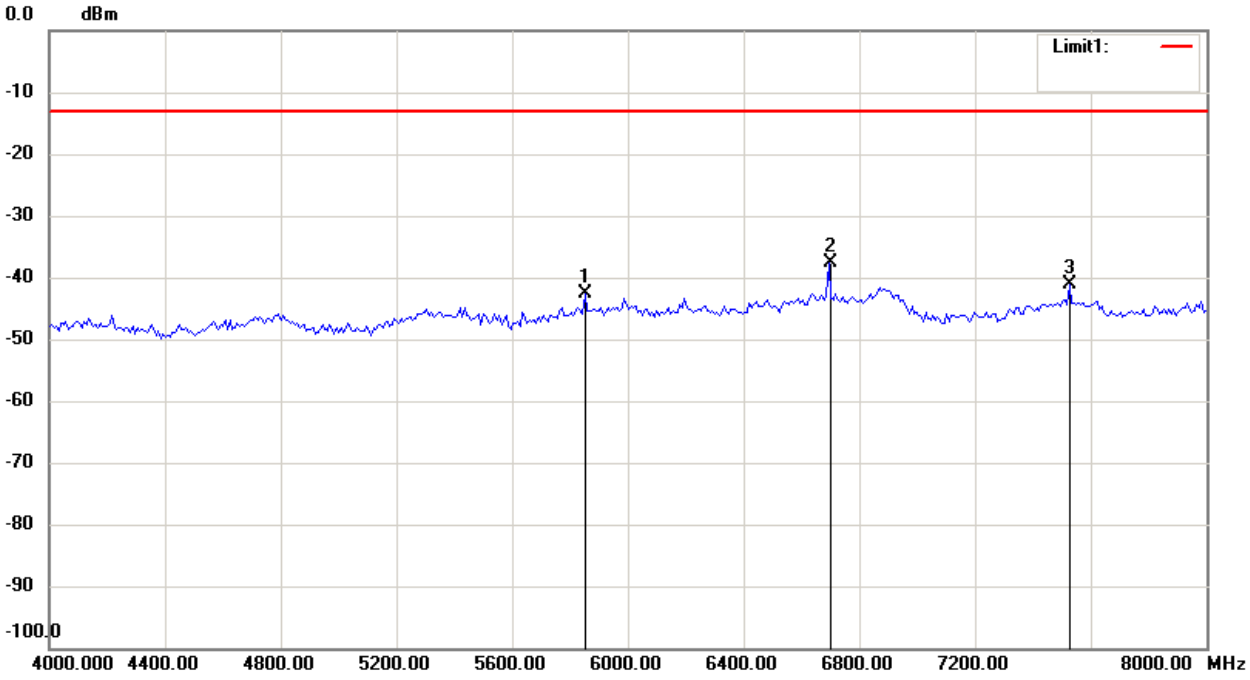




Note:

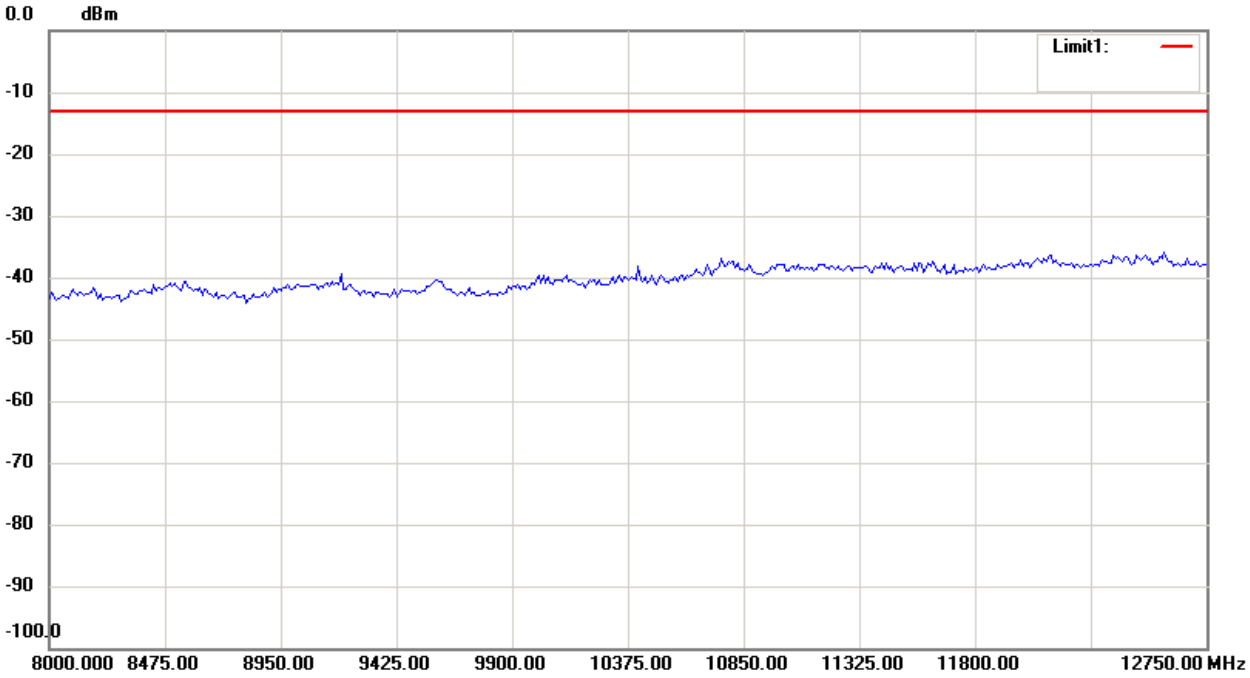
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



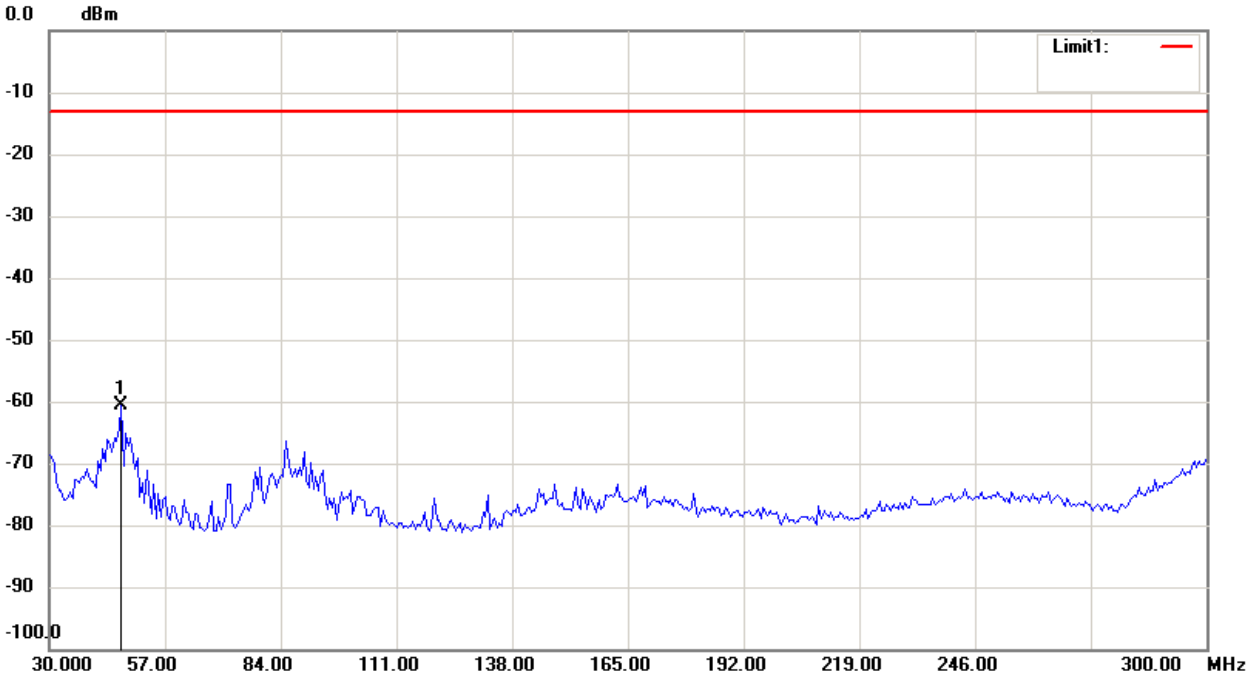


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

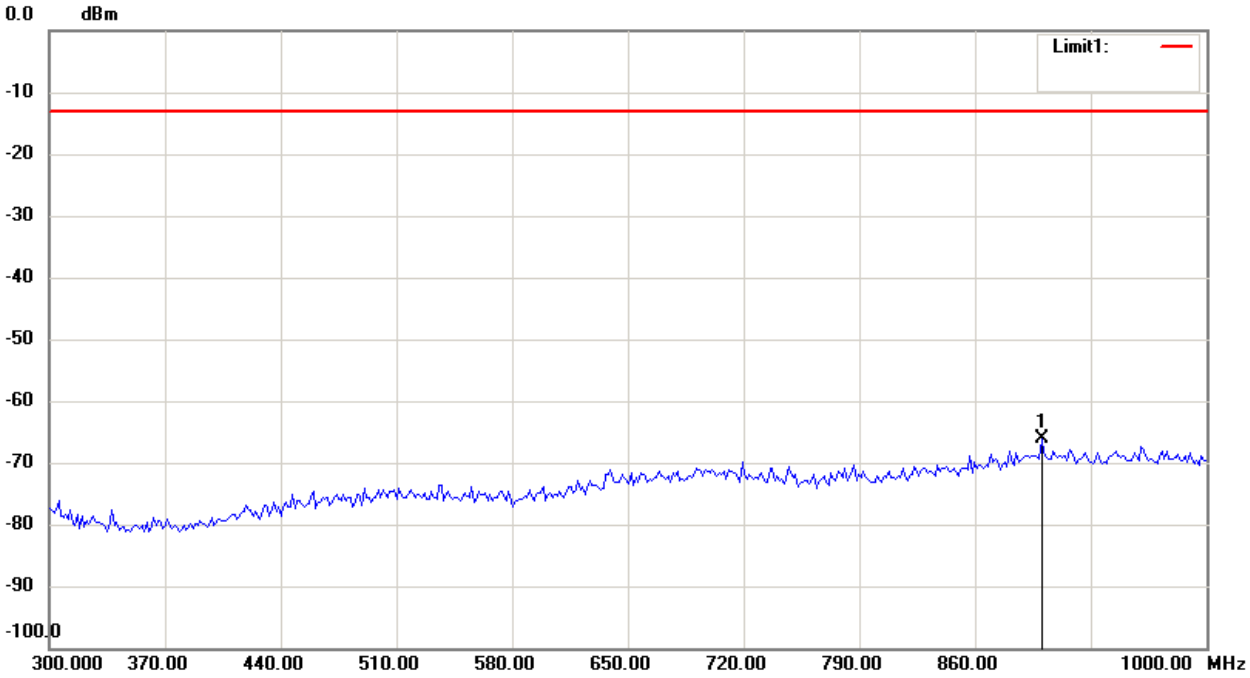


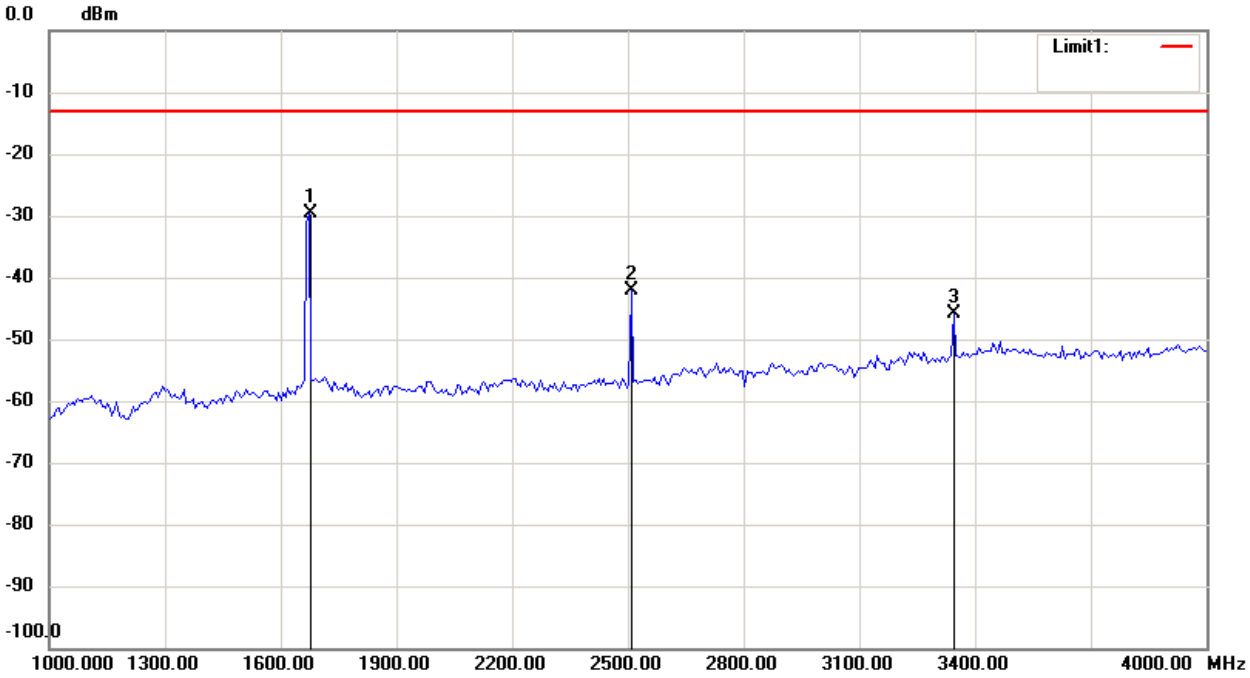
Antenna Polarization V



Note:

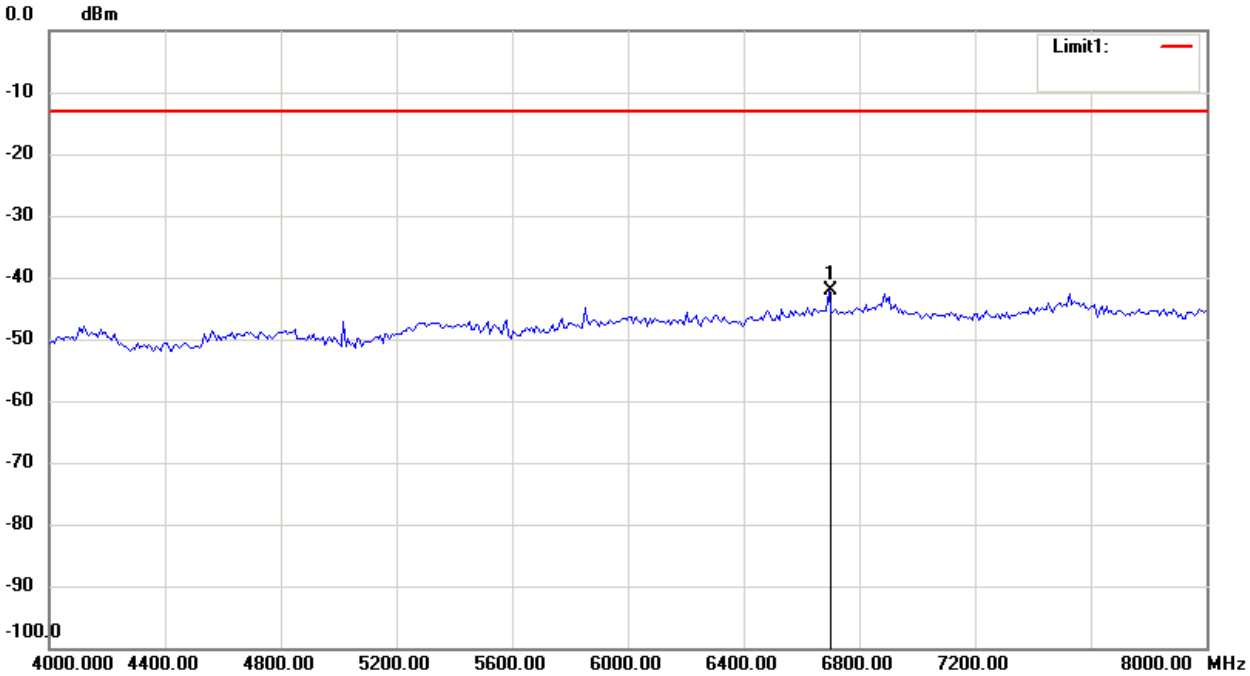
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

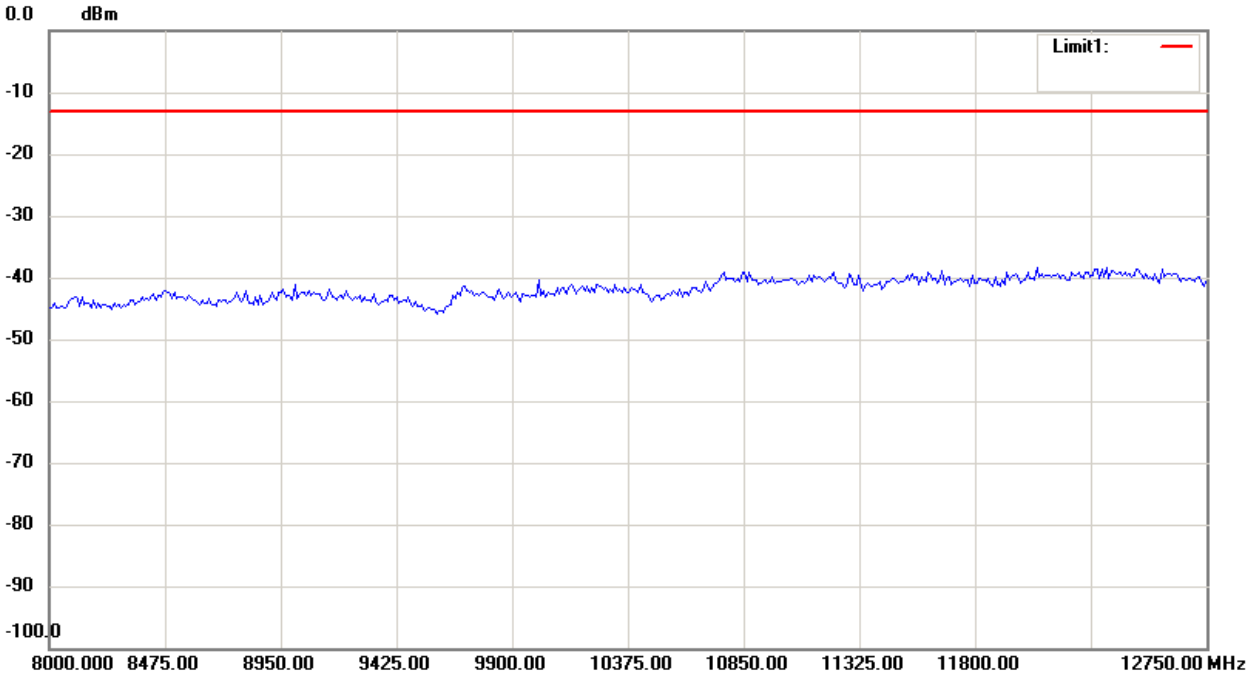




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

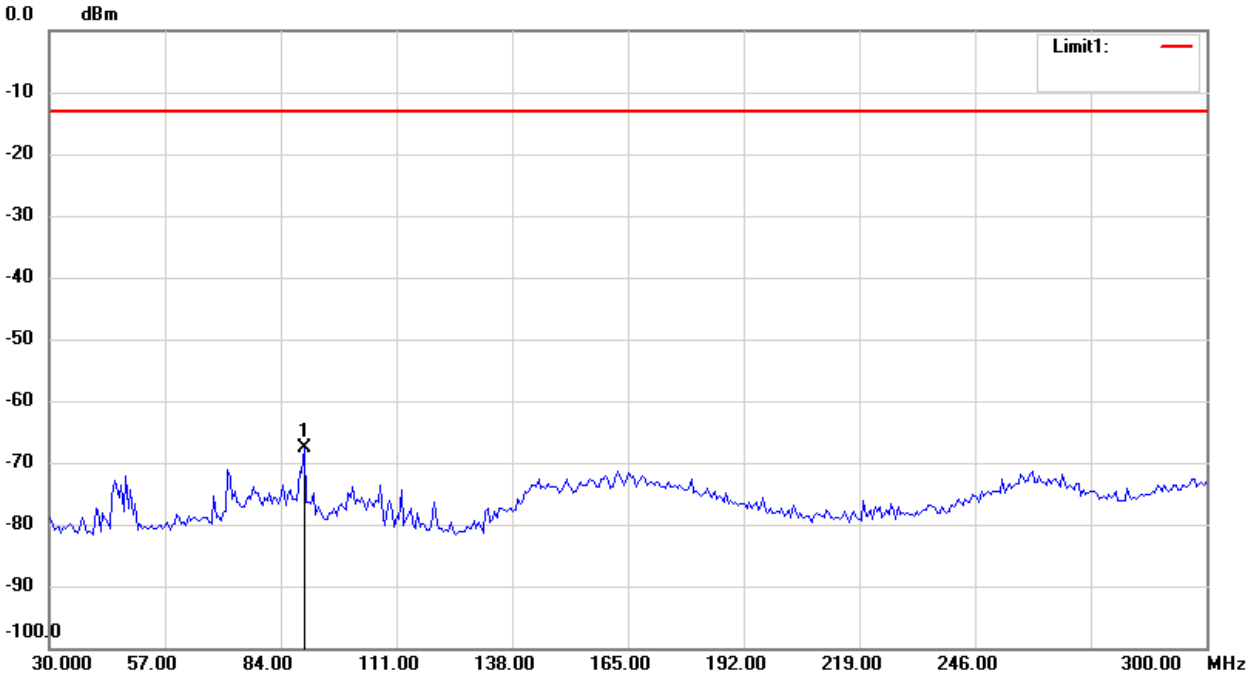


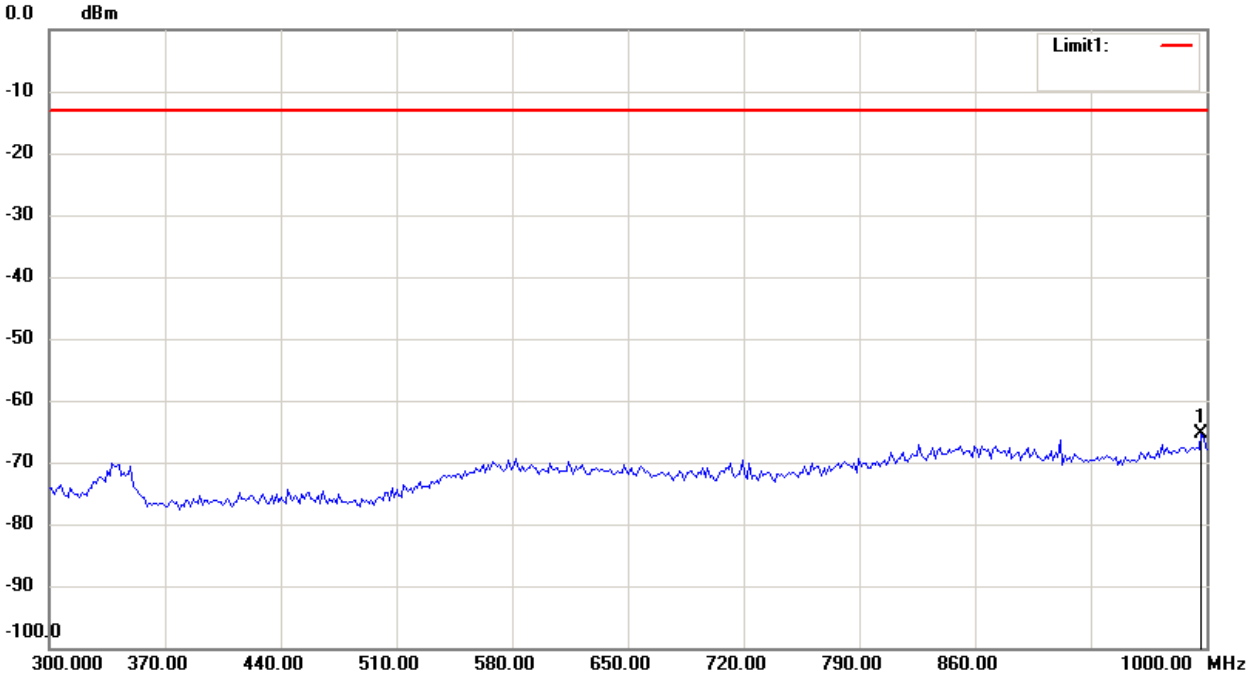


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

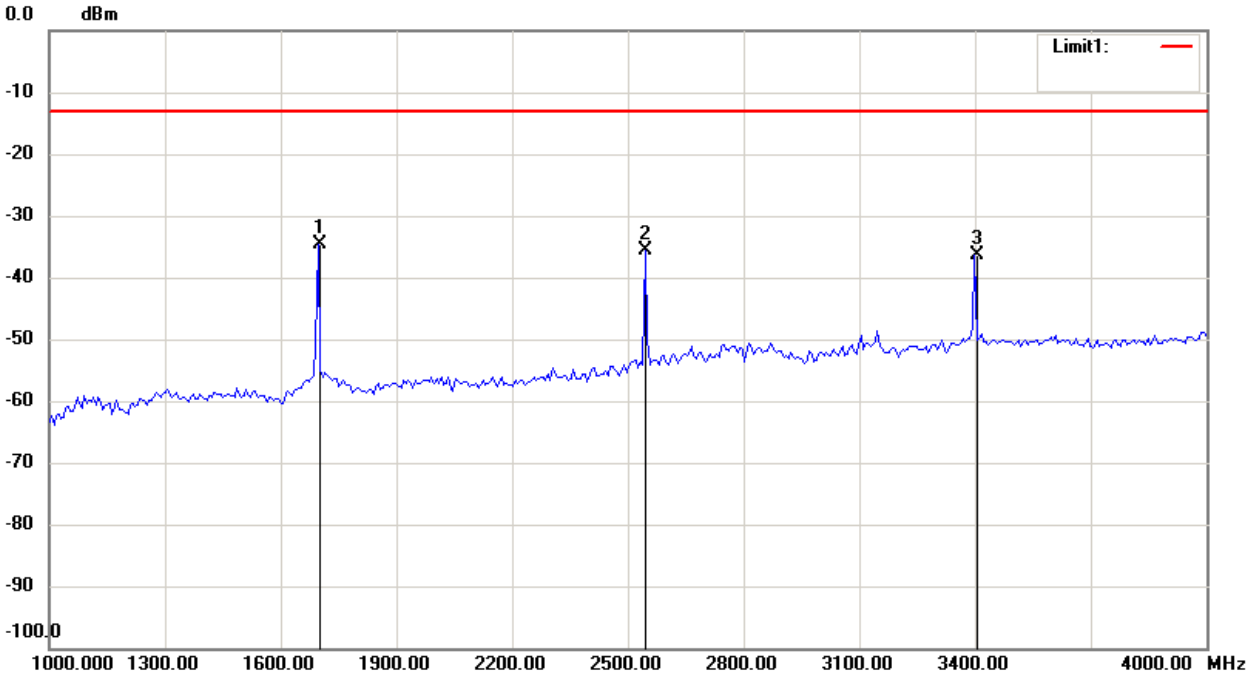
850 band_ CH 251_3.7 V
Antenna Polarization H

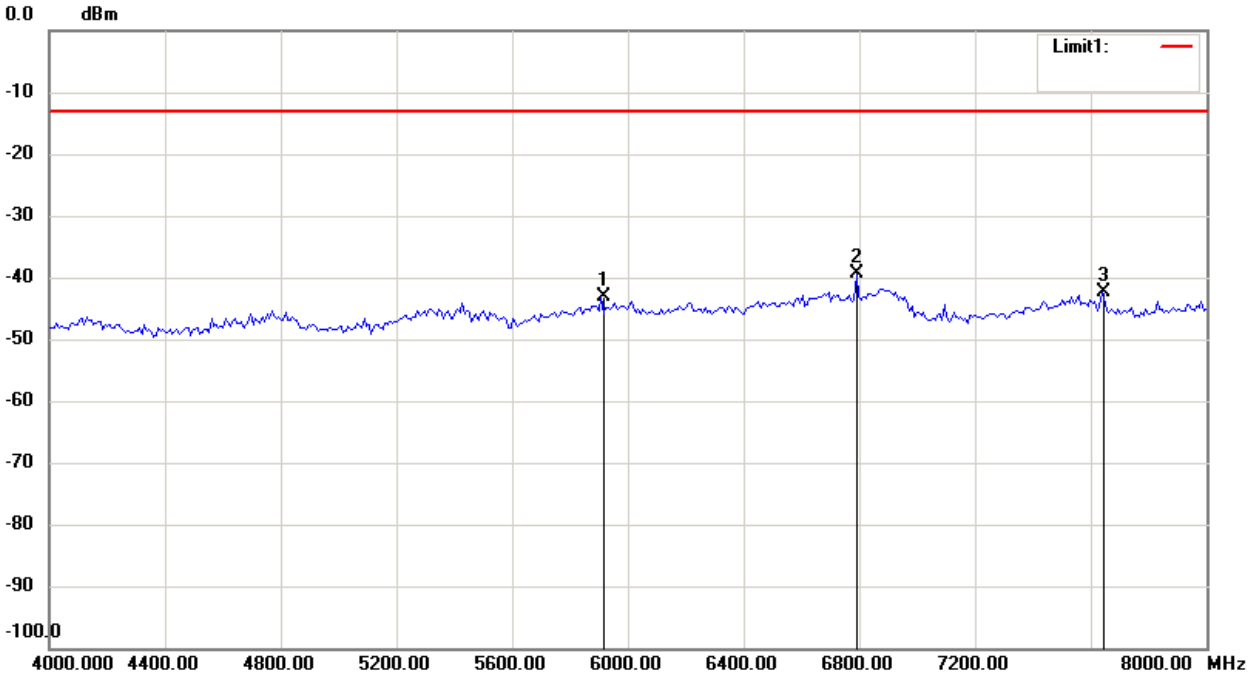




Note:

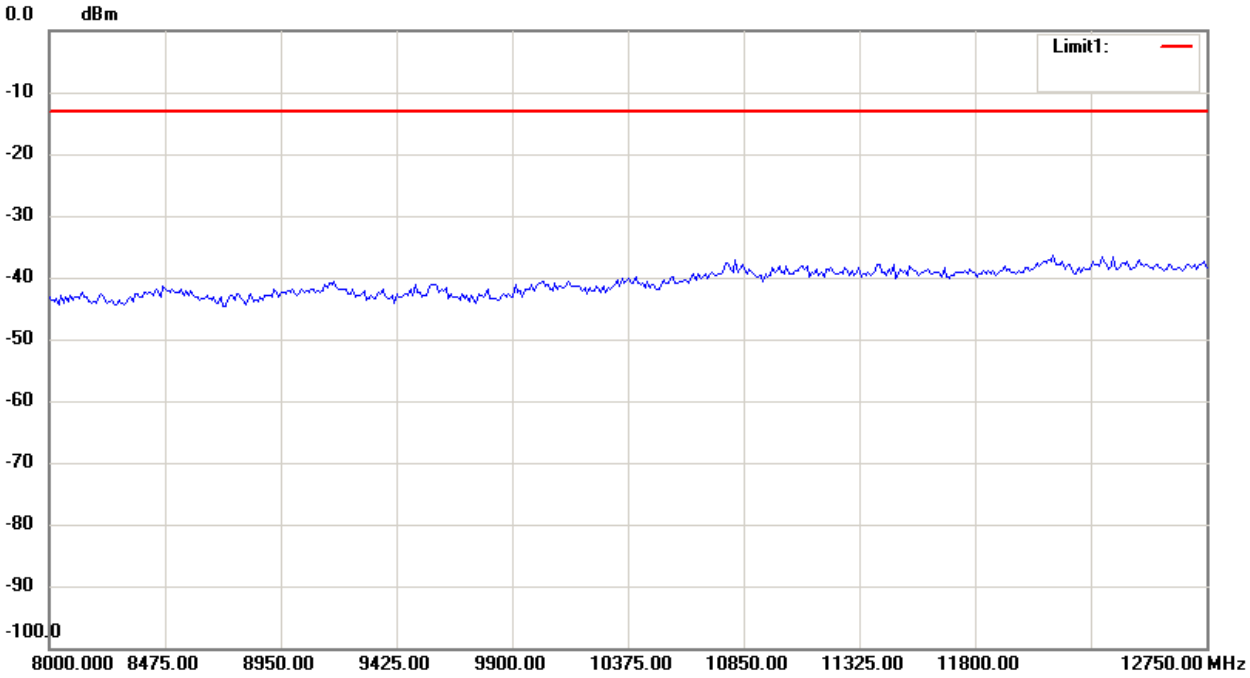
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



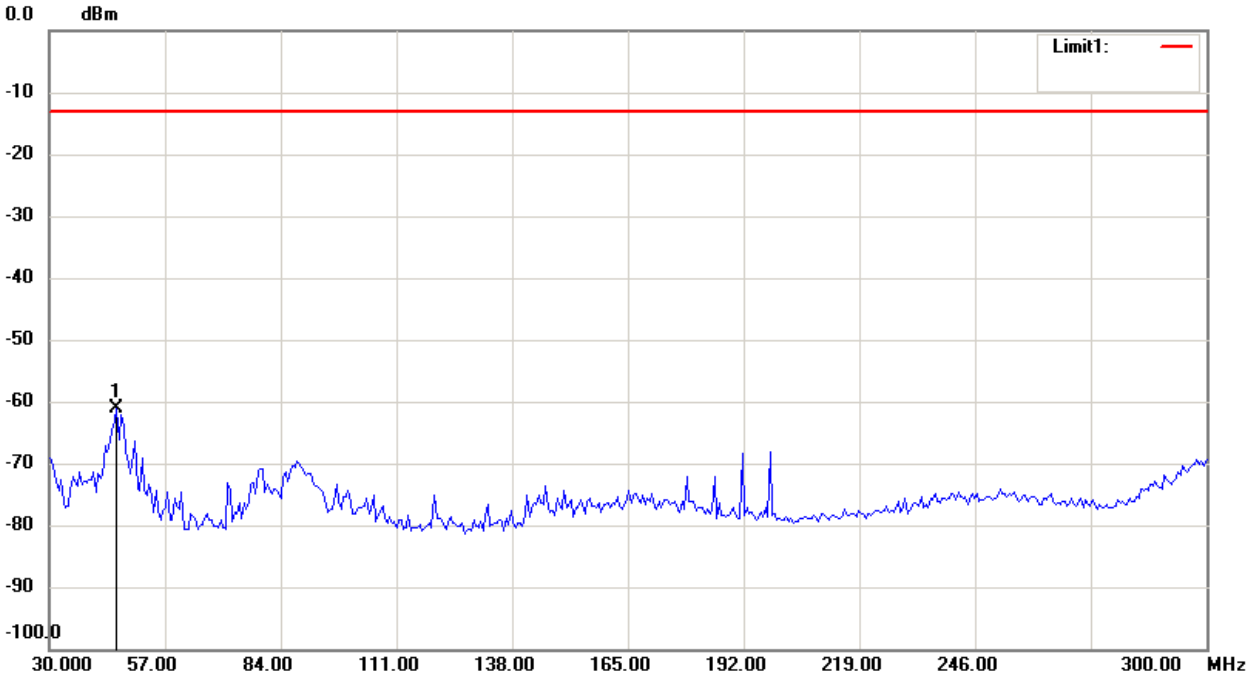


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

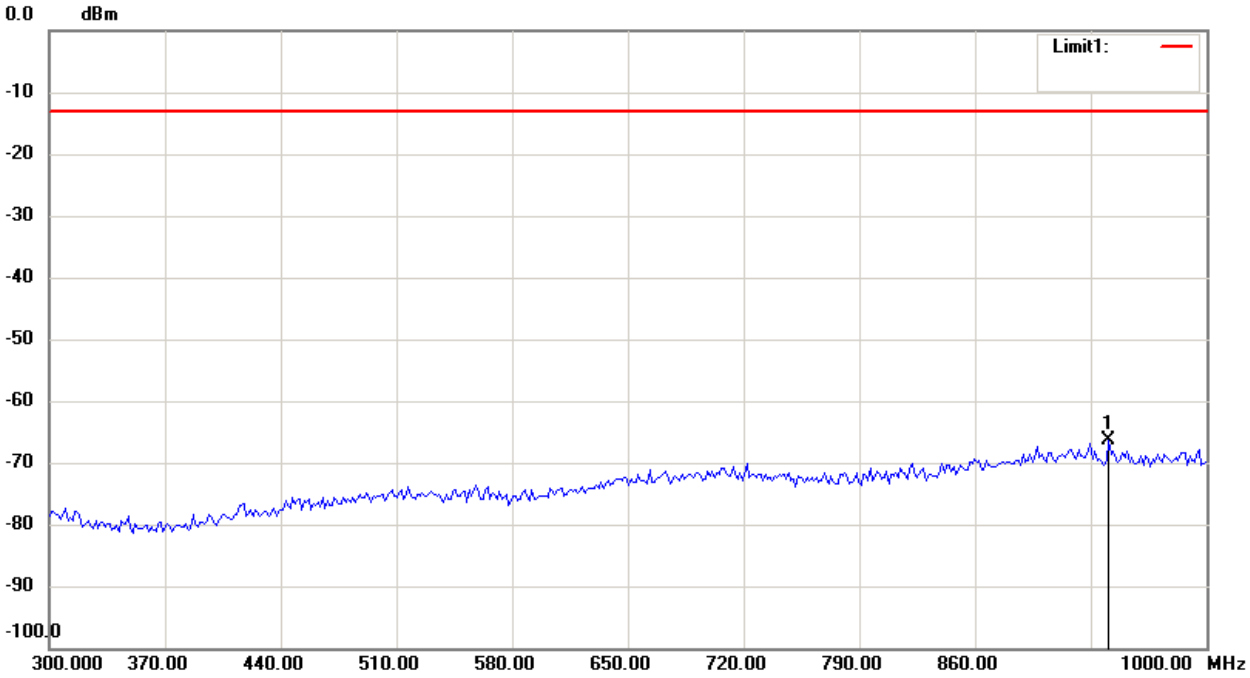


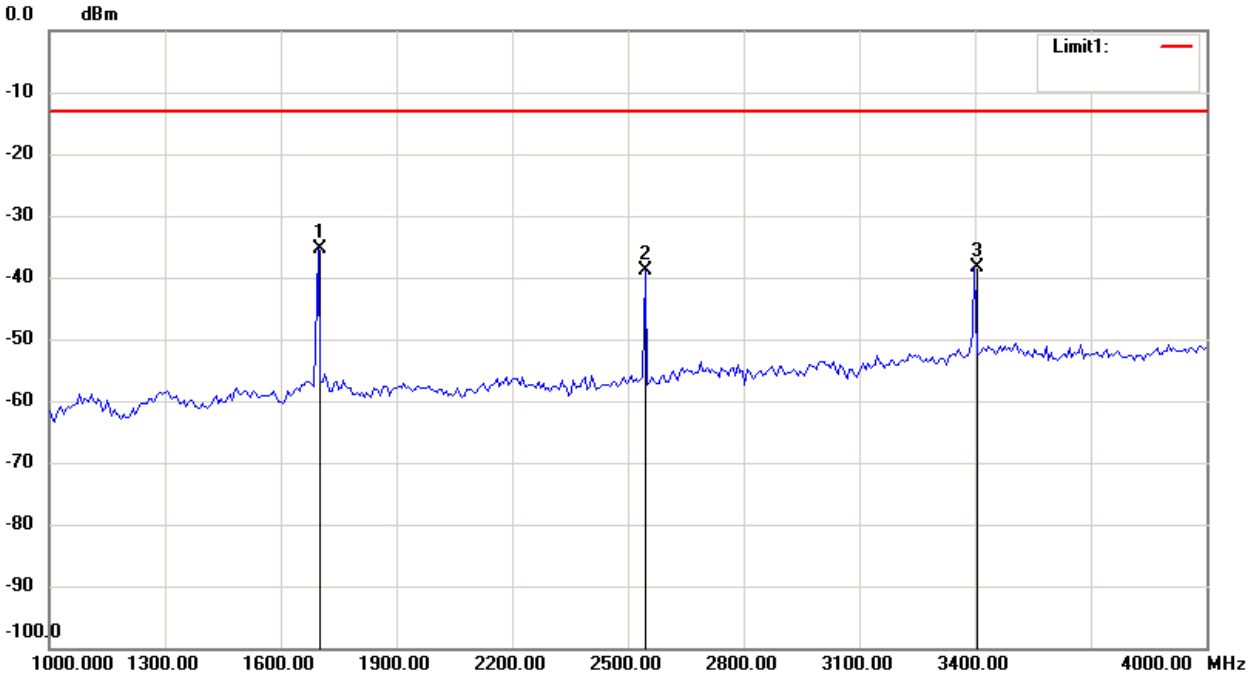
Antenna Polarization V



Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





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1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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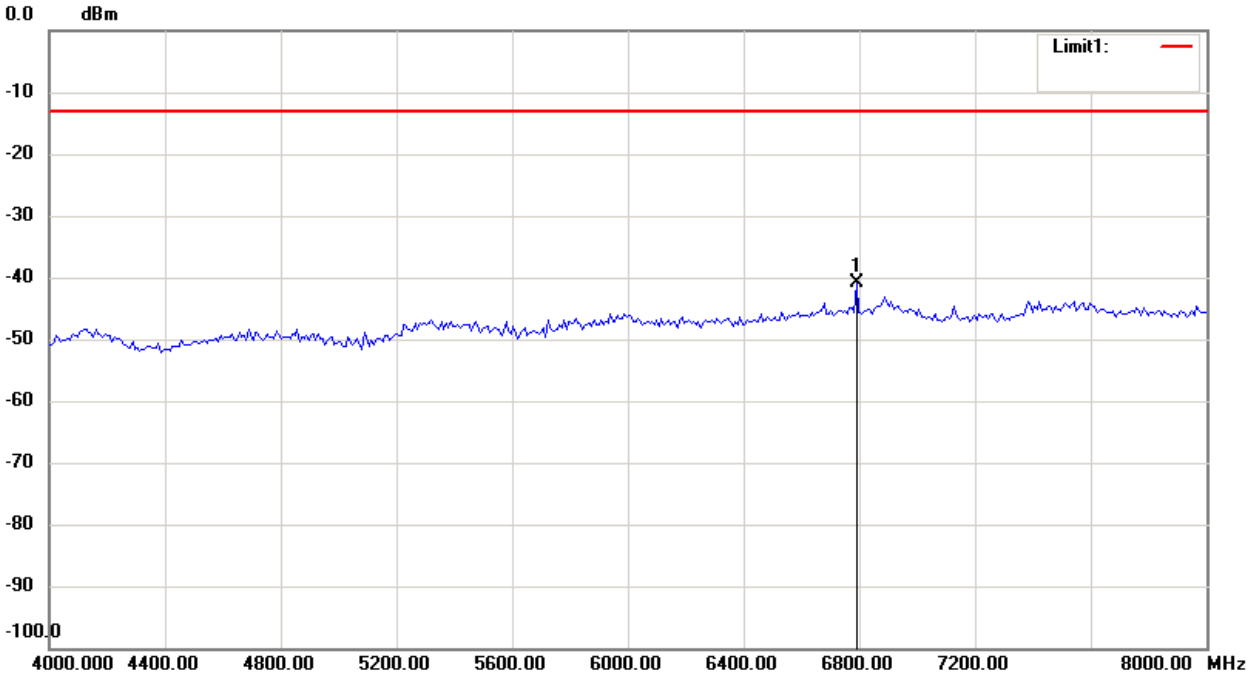
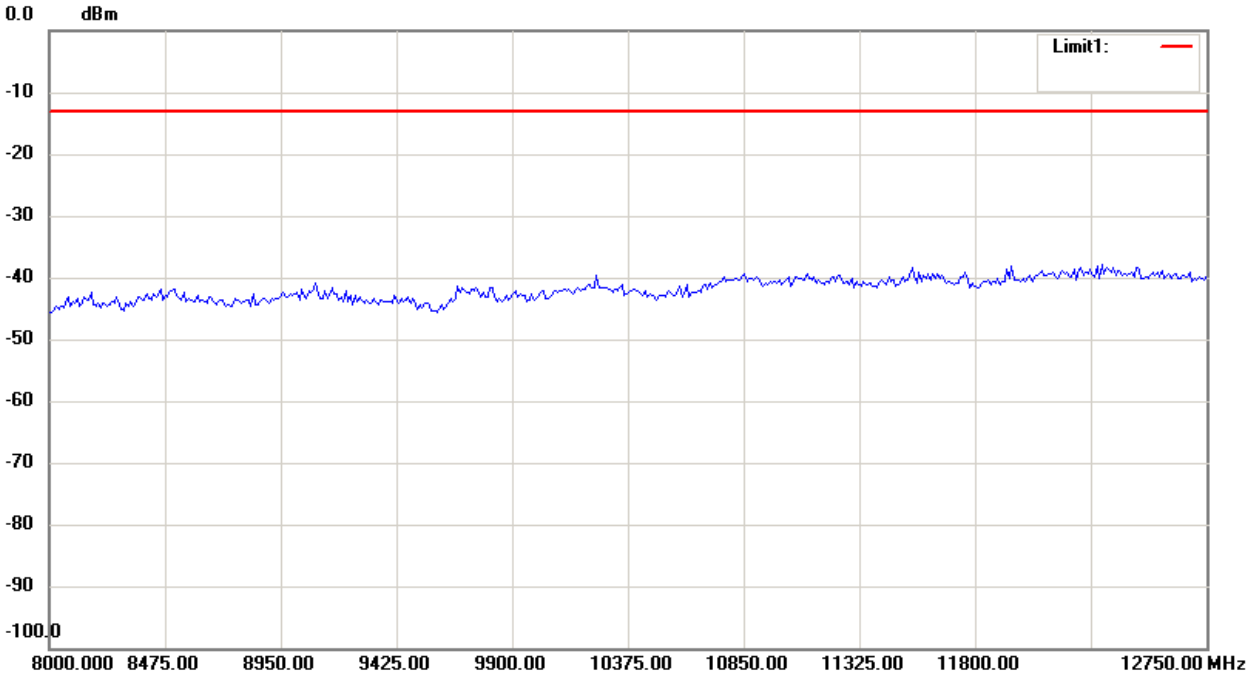
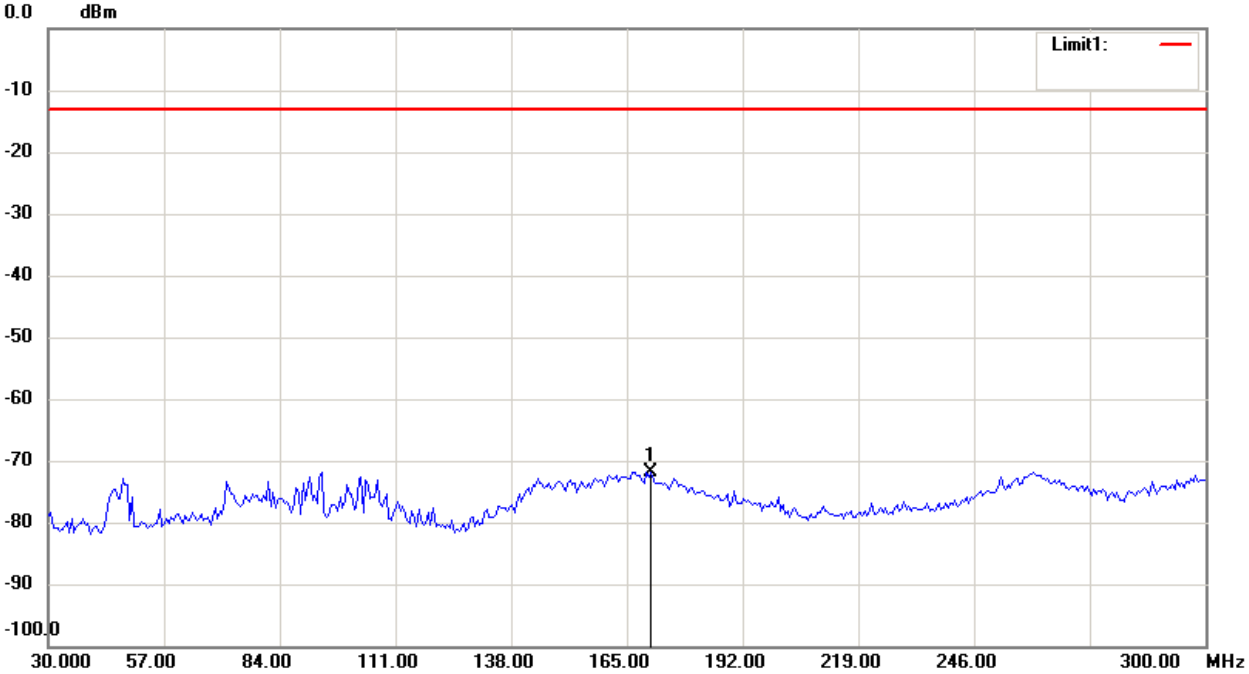


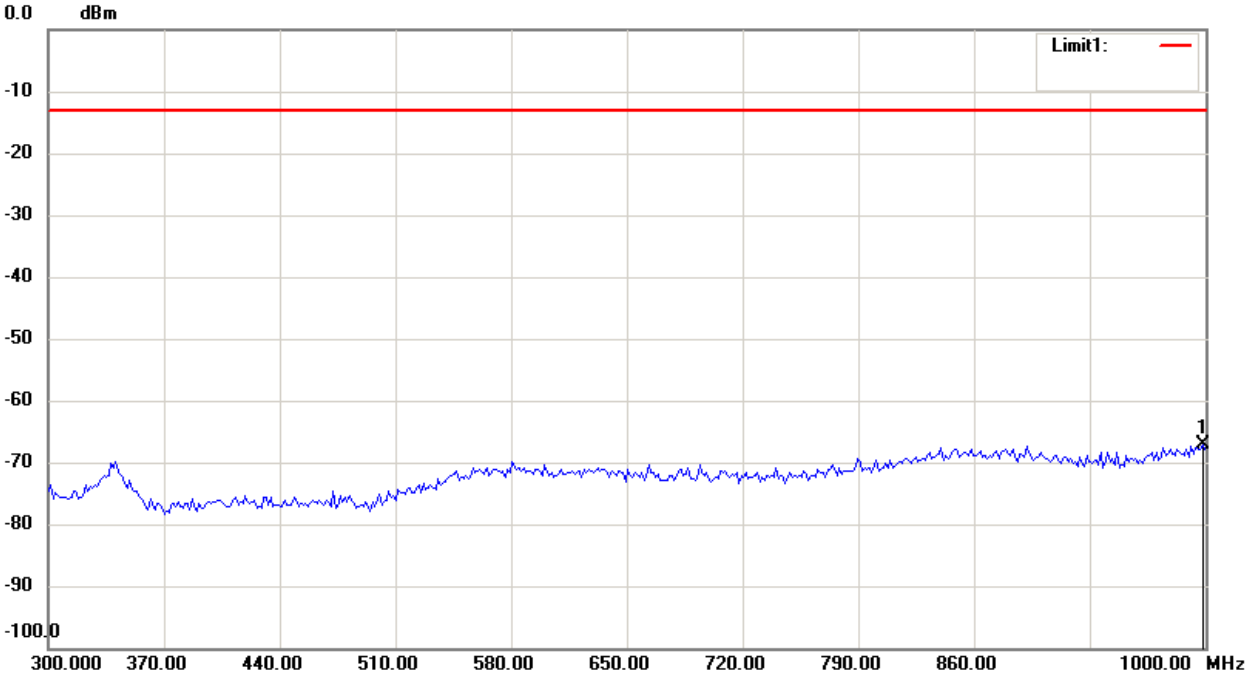


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

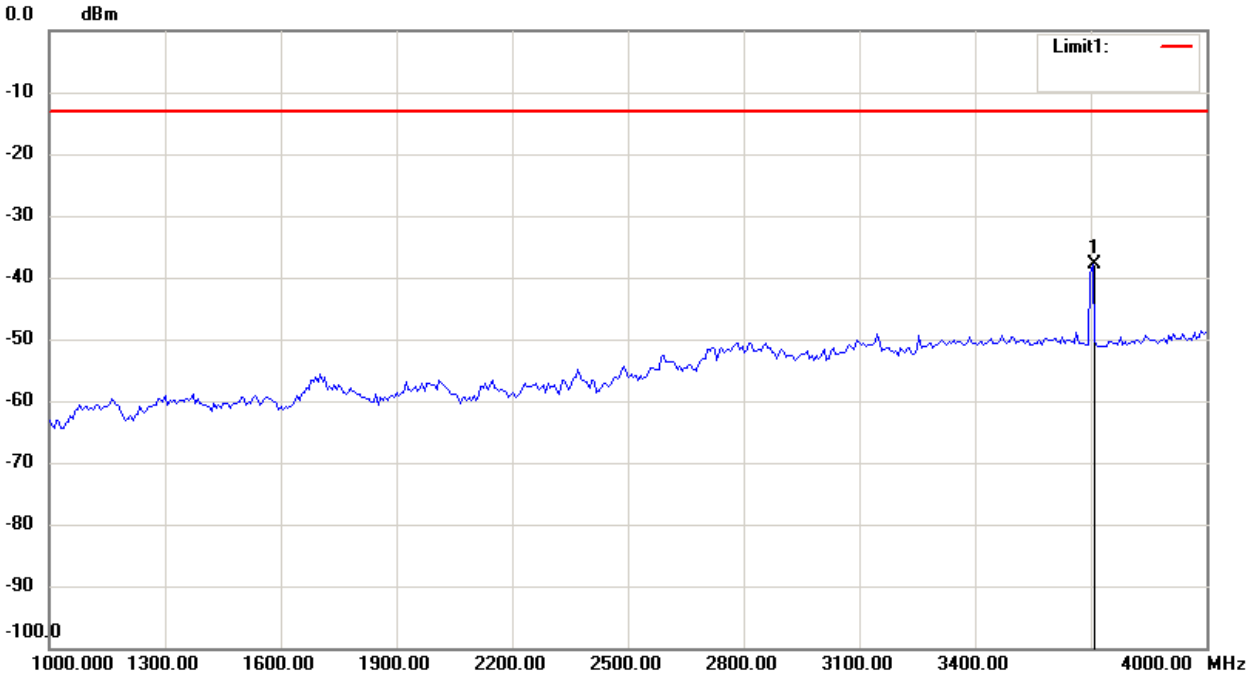
1900 band_ CH 512_3.7 V
Antenna Polarization H

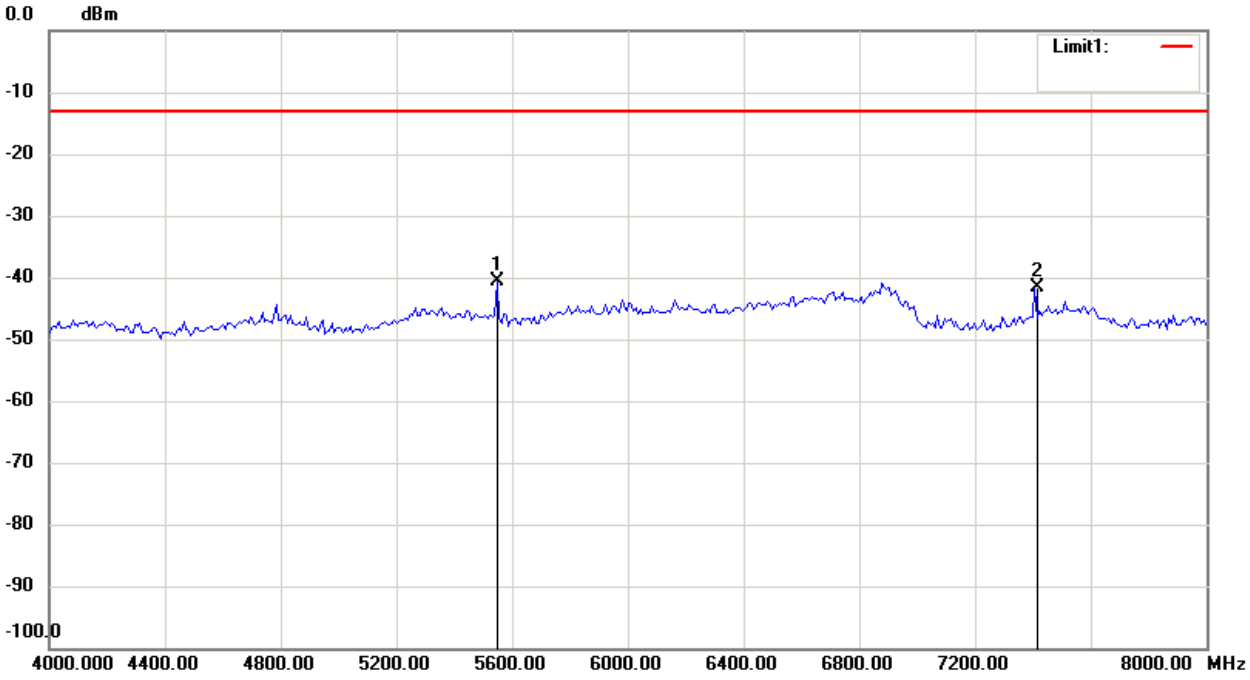




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

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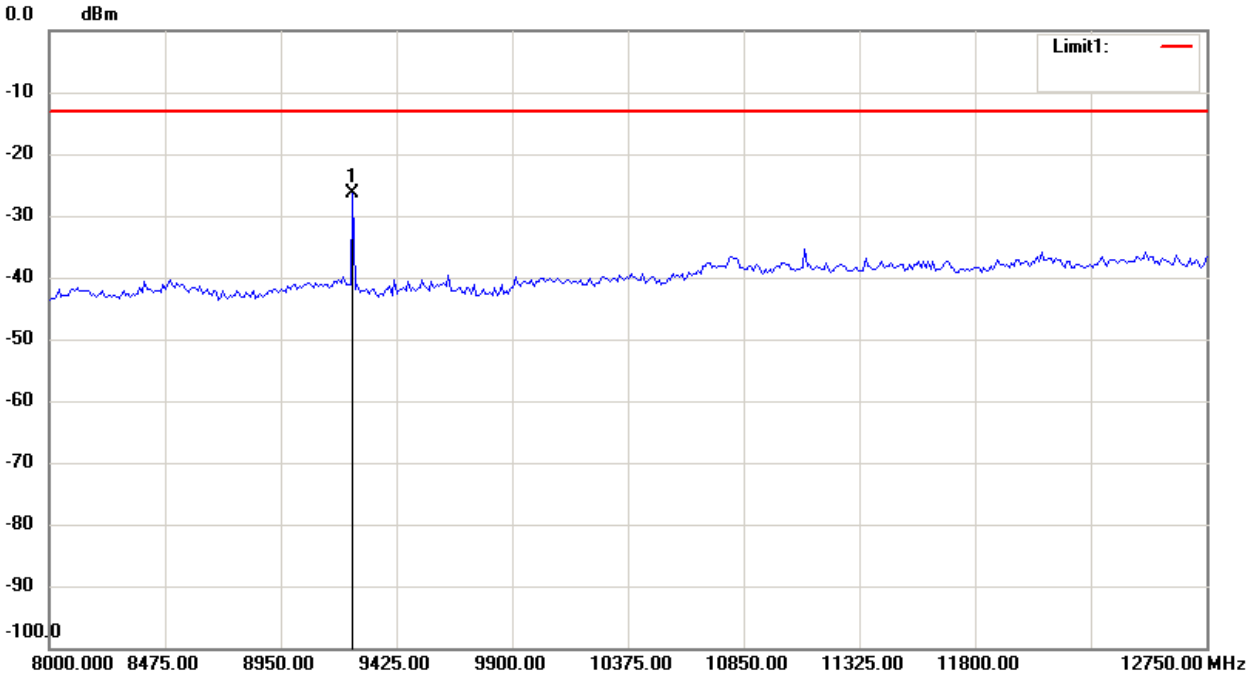

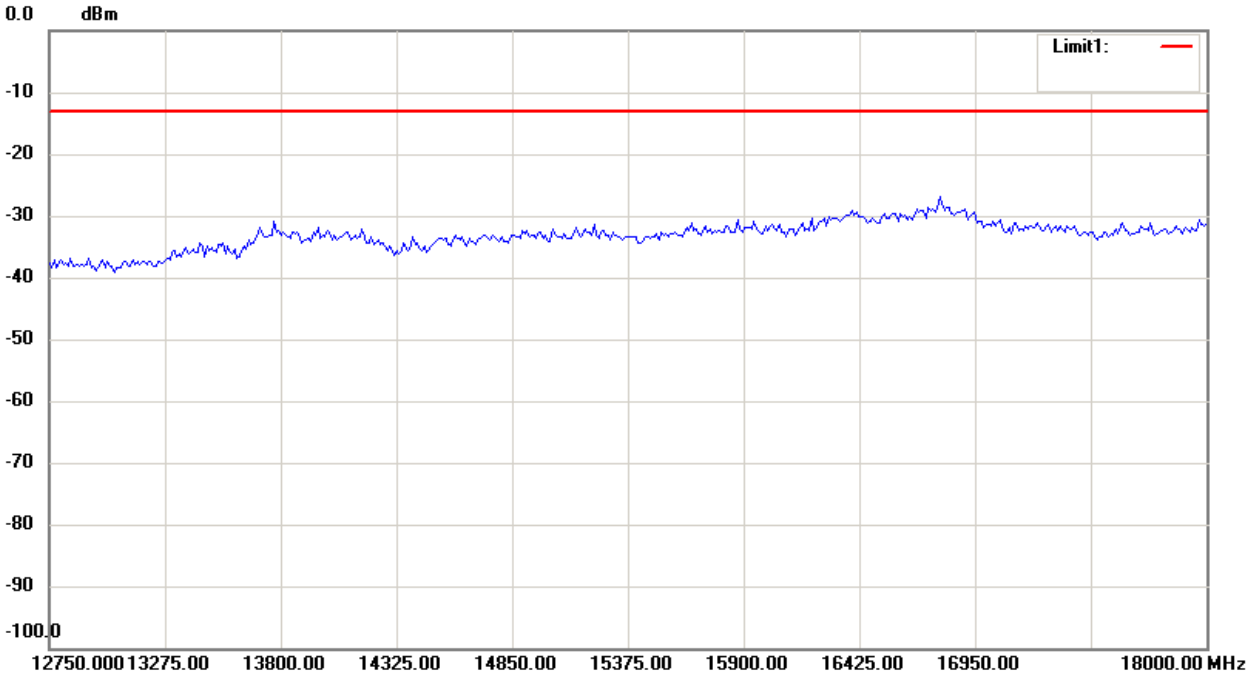

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1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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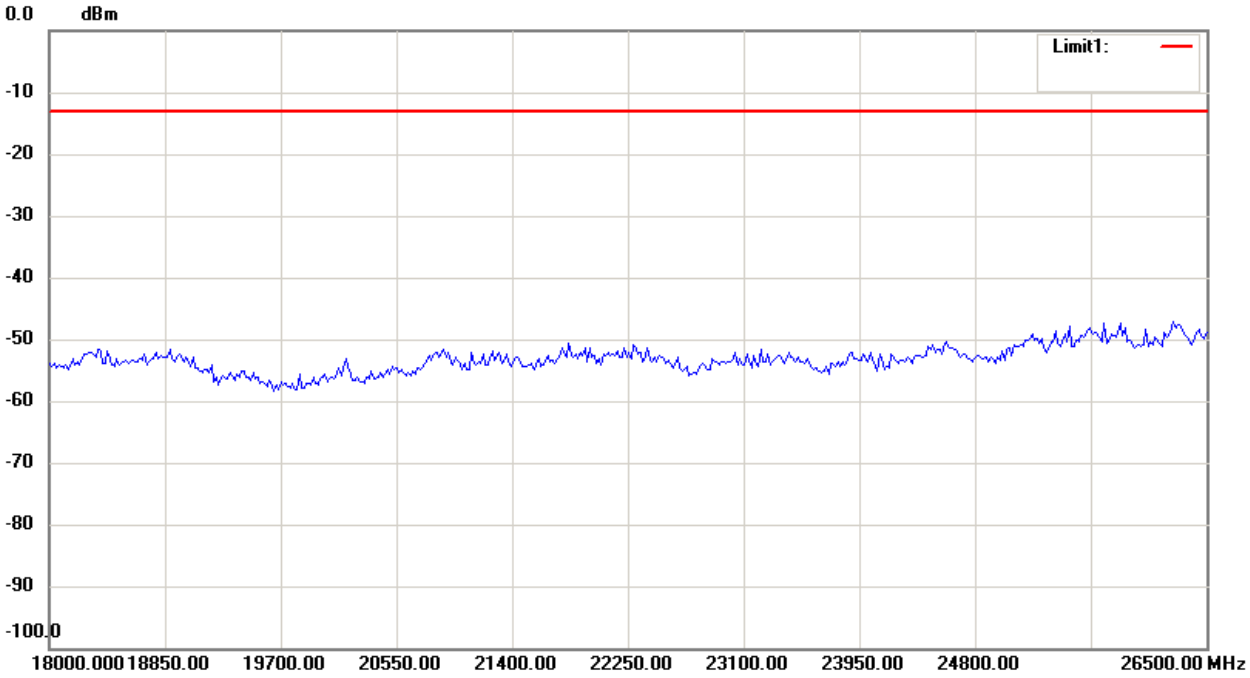
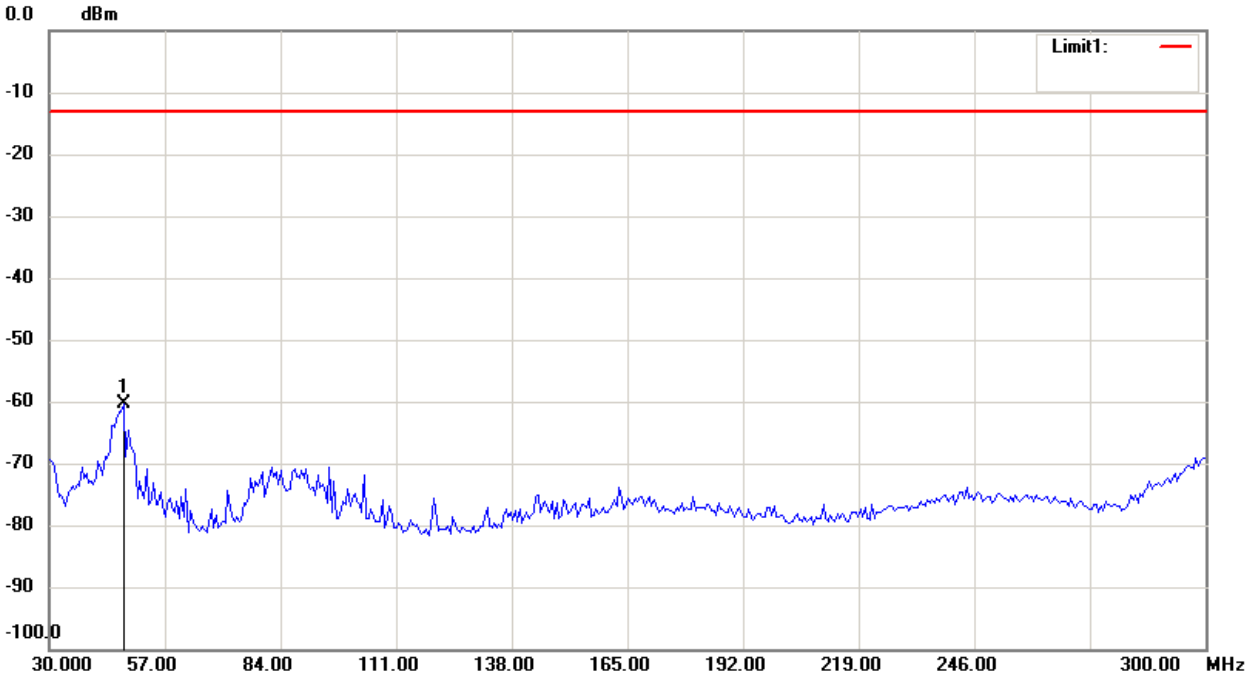
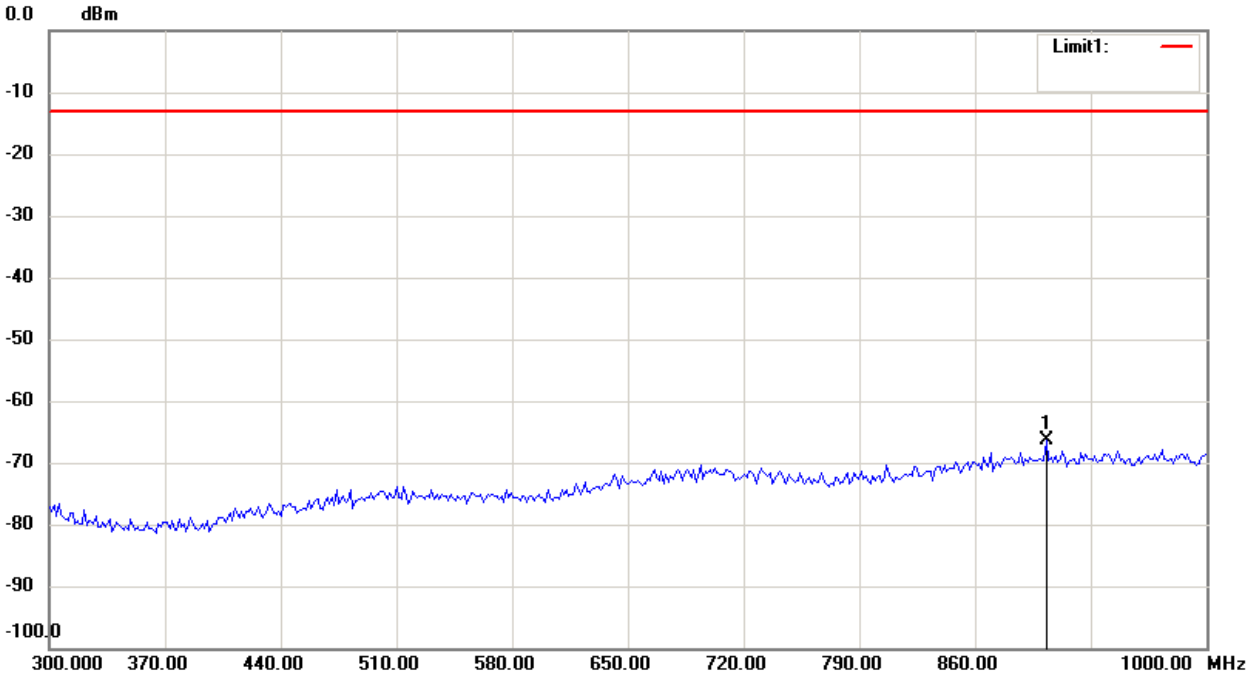


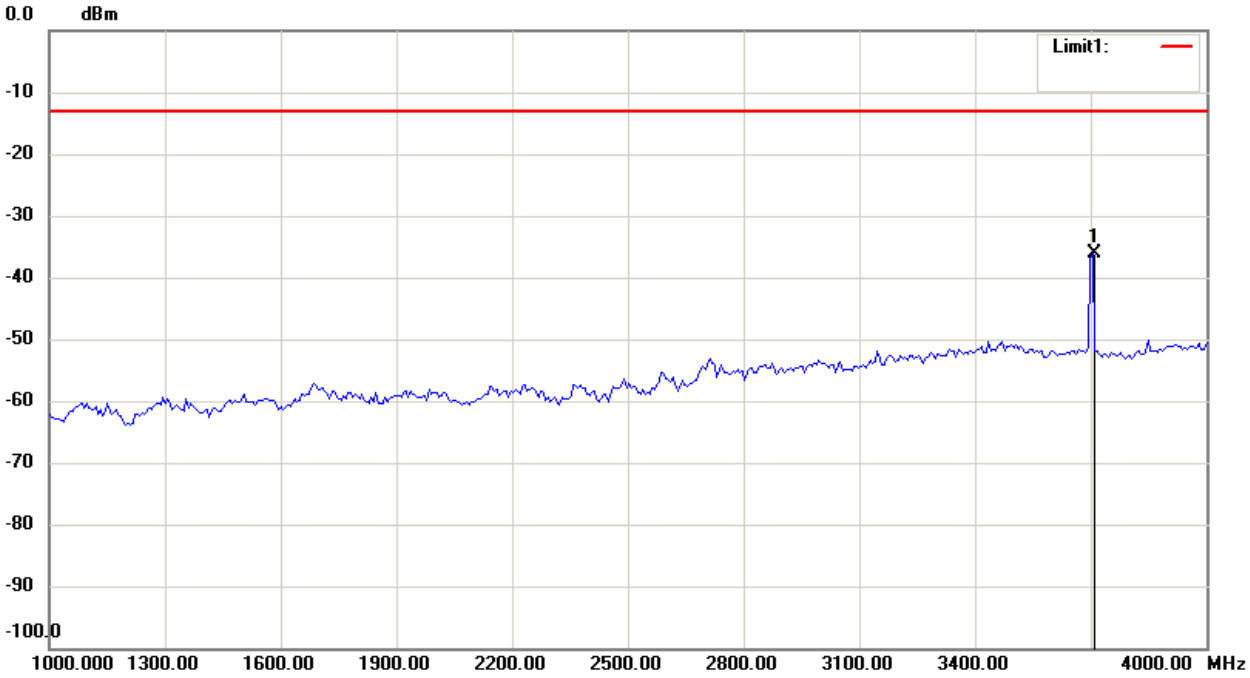
Antenna Polarization V



Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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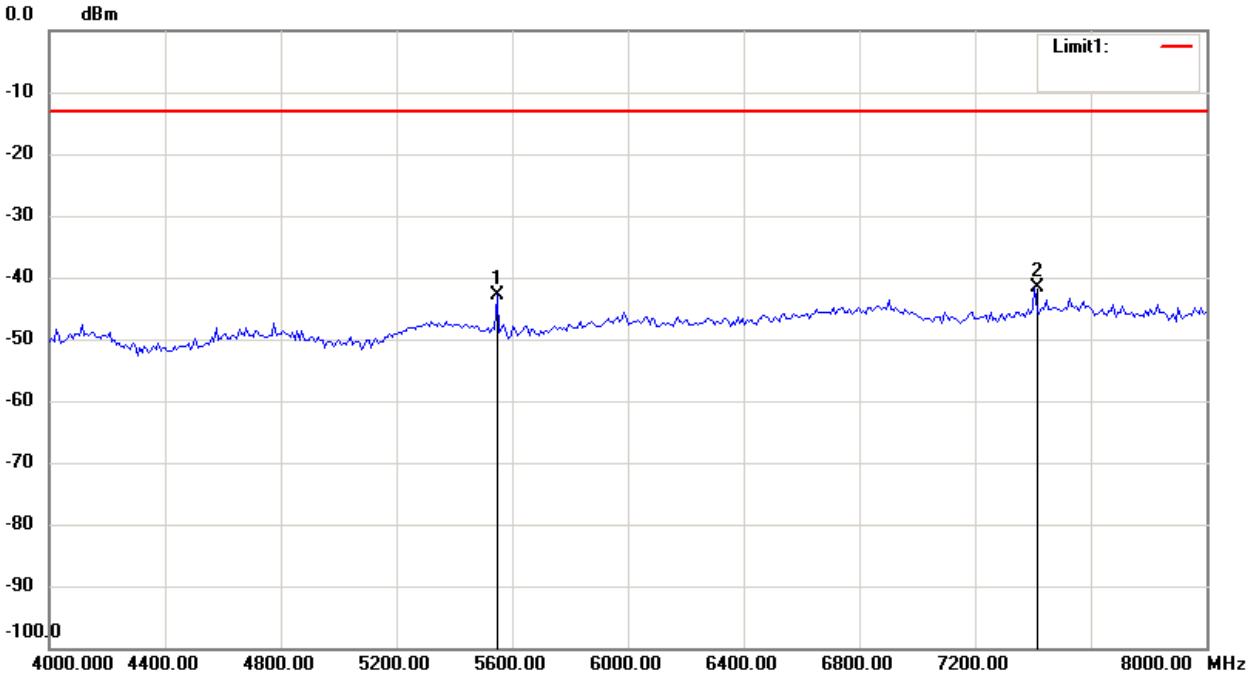

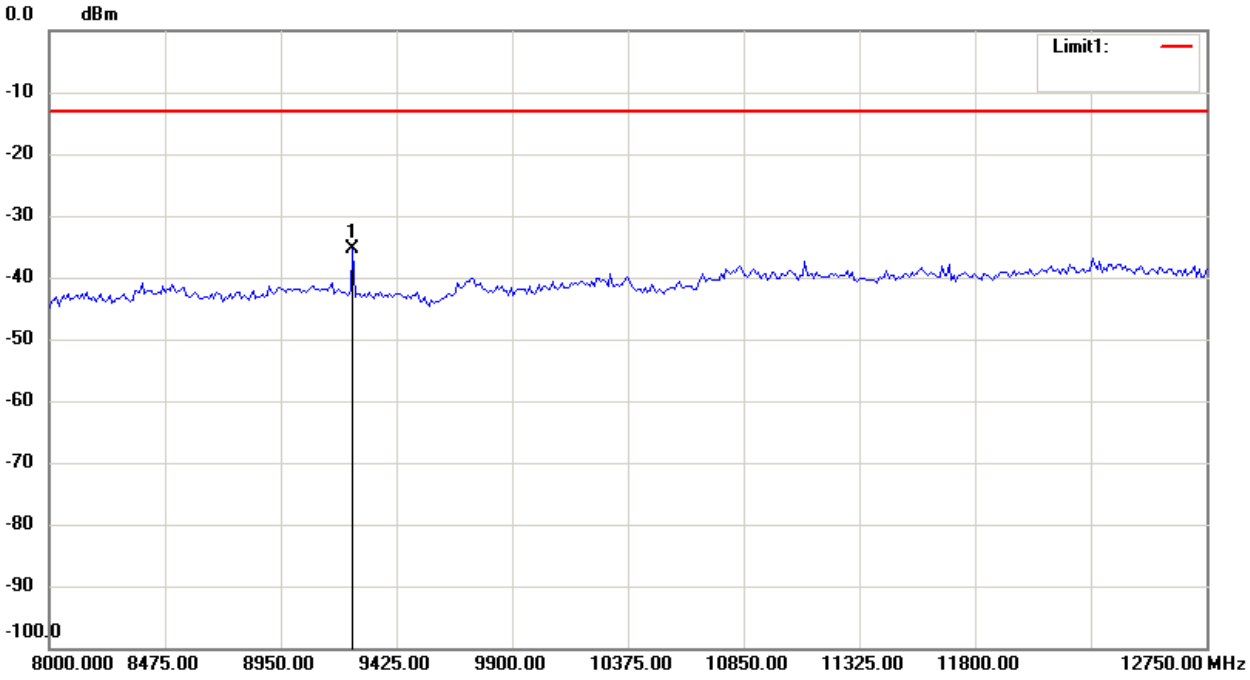

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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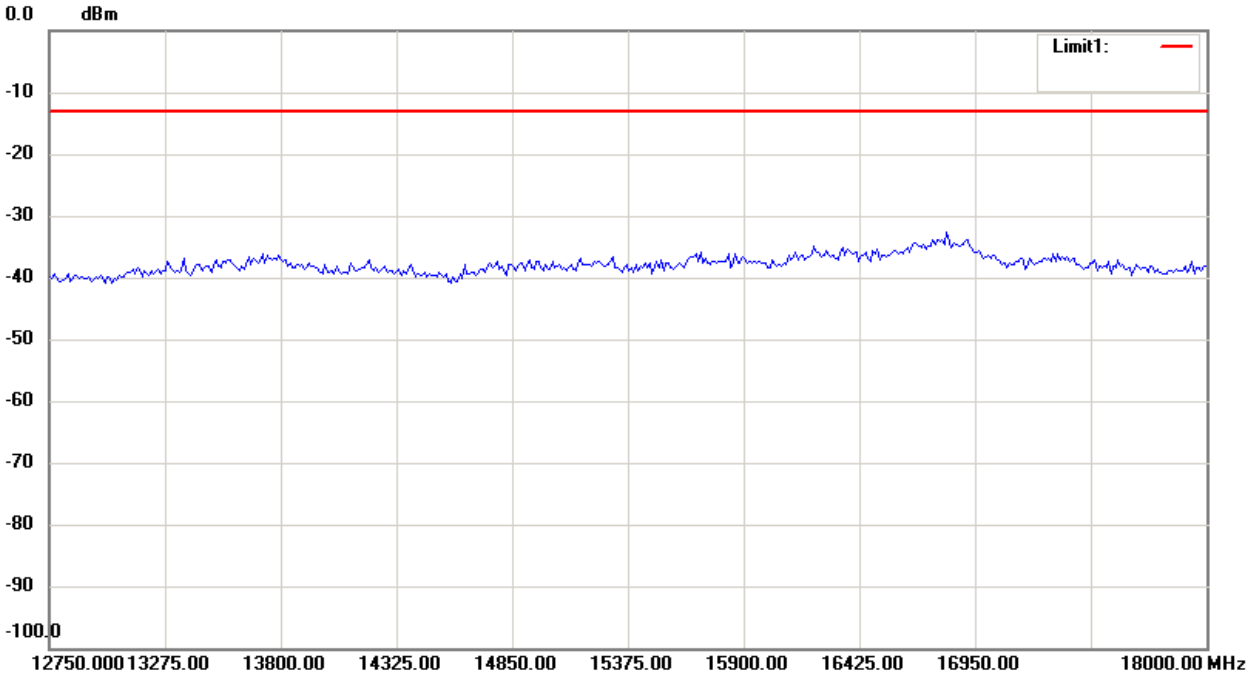
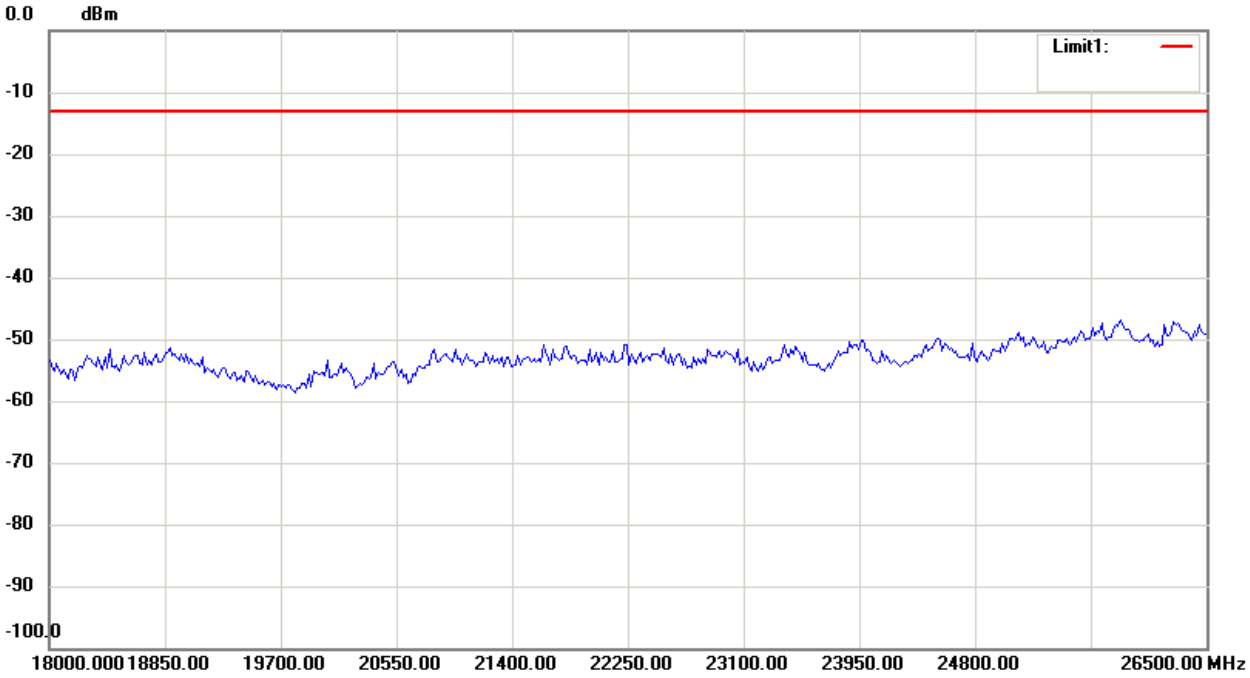
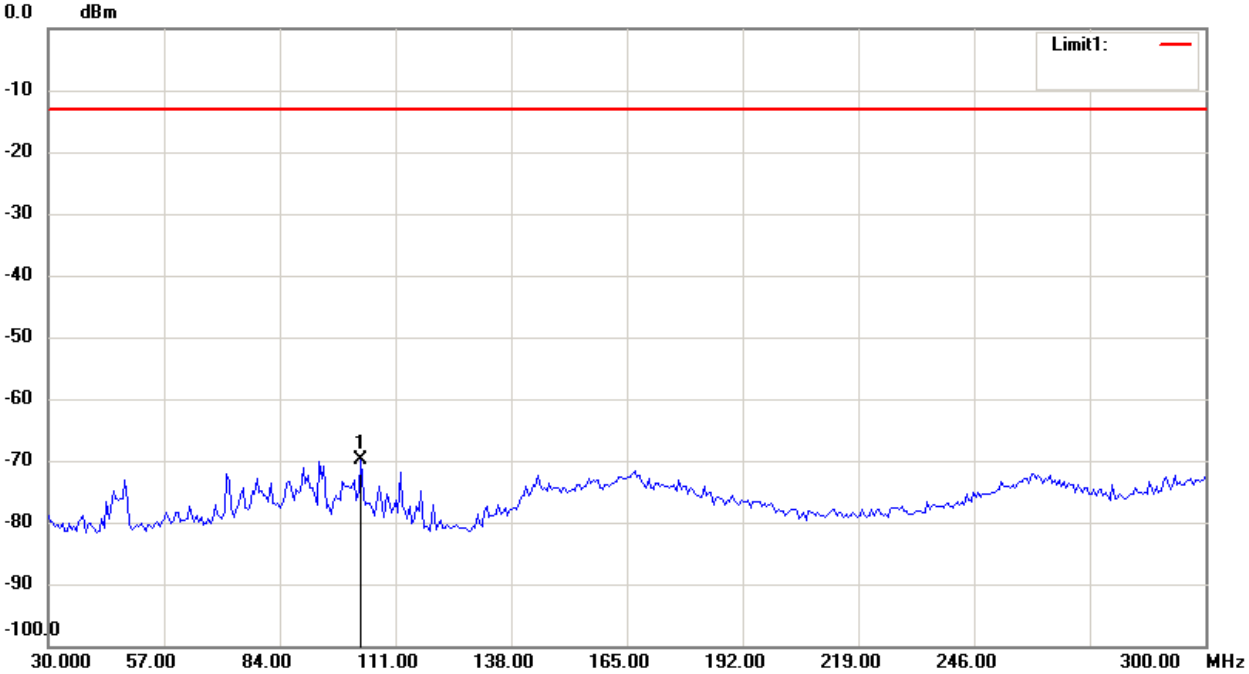


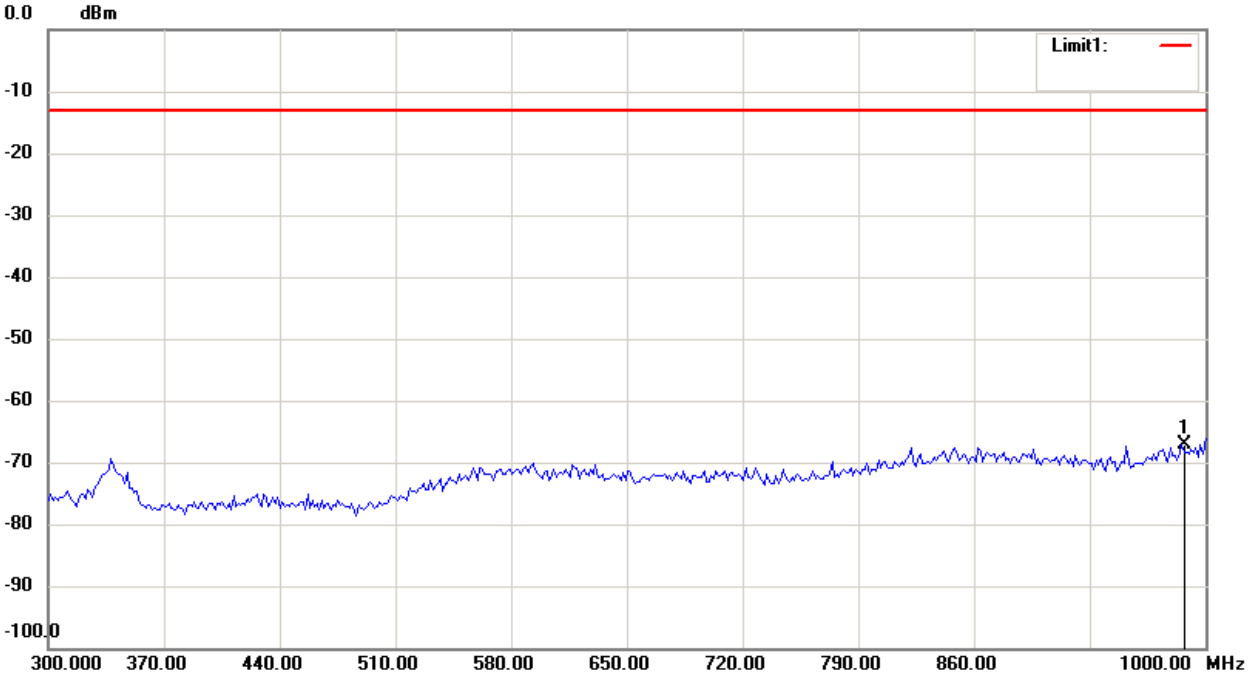


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

1900 band_ CH 661_3.7 V
Antenna Polarization H





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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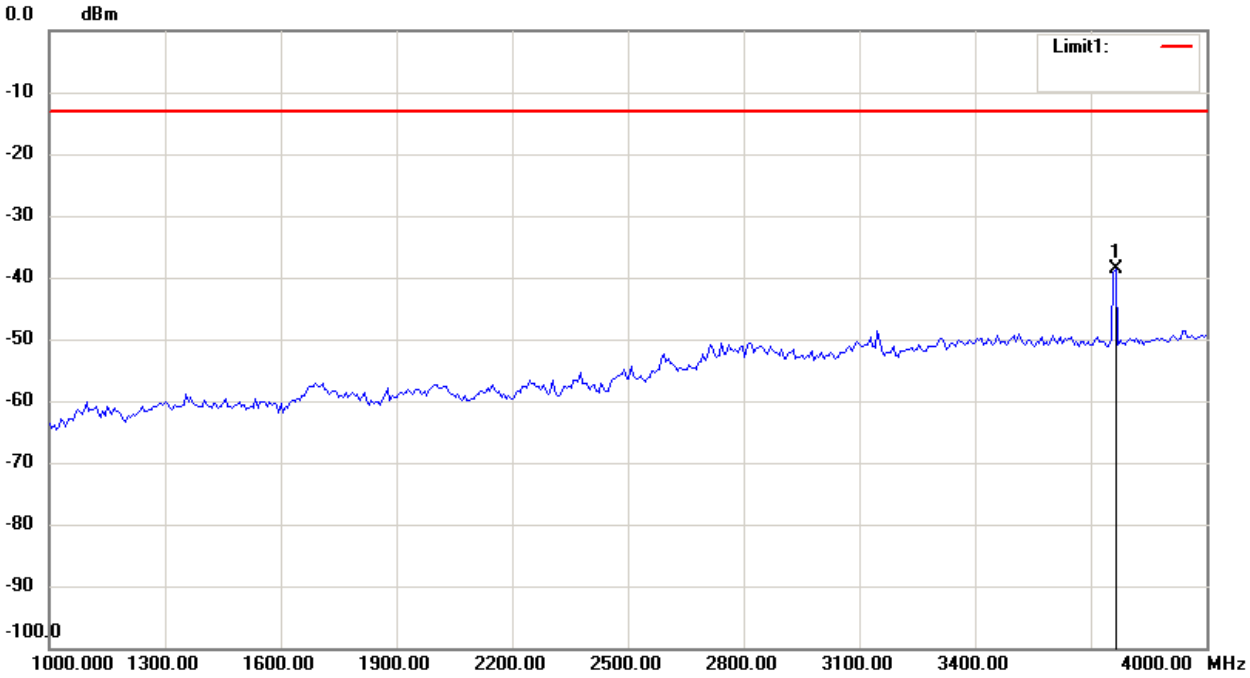

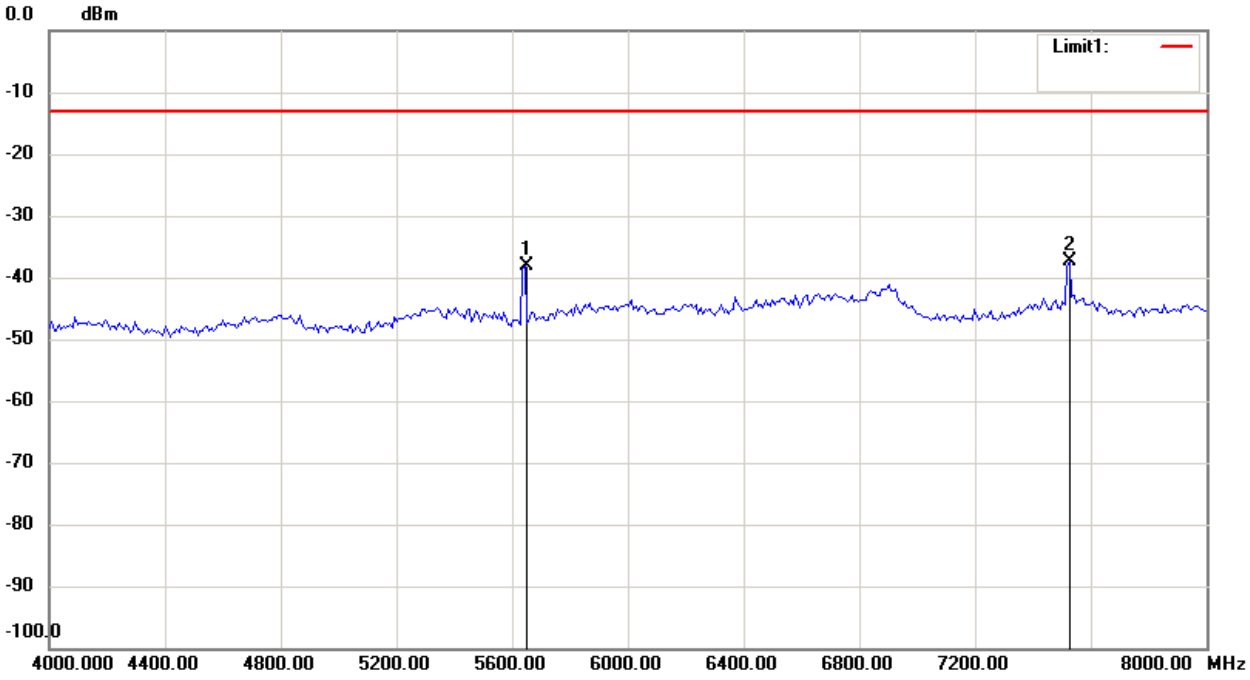

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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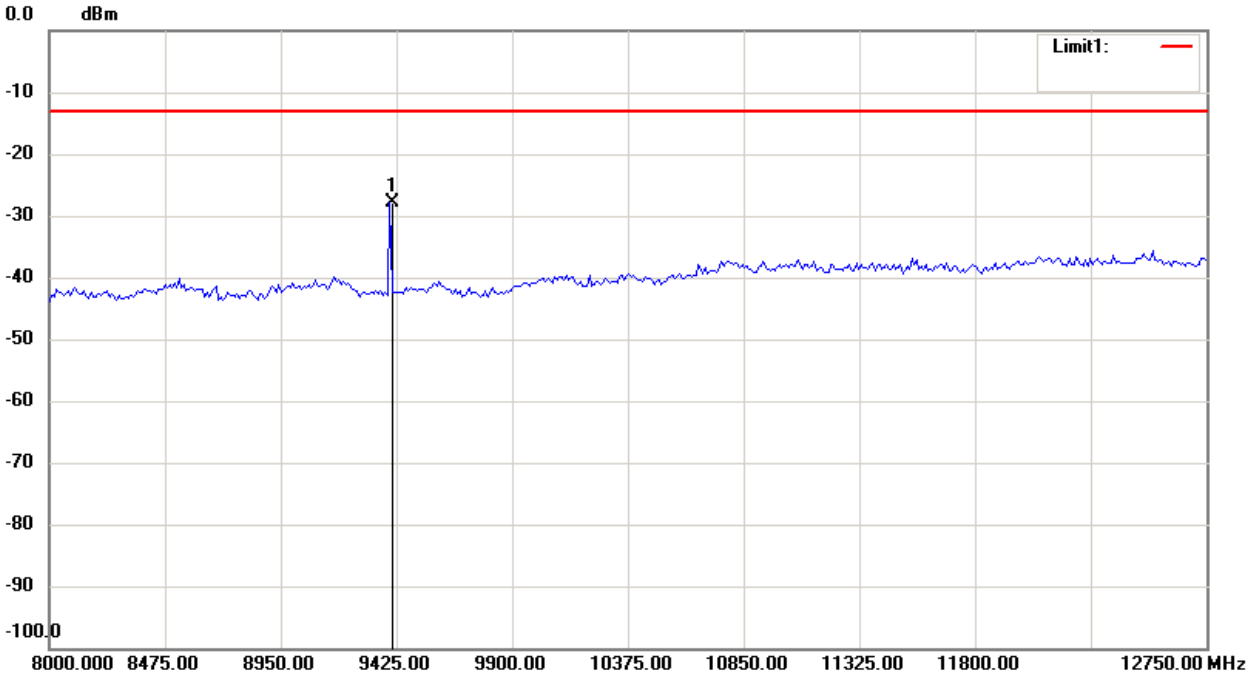

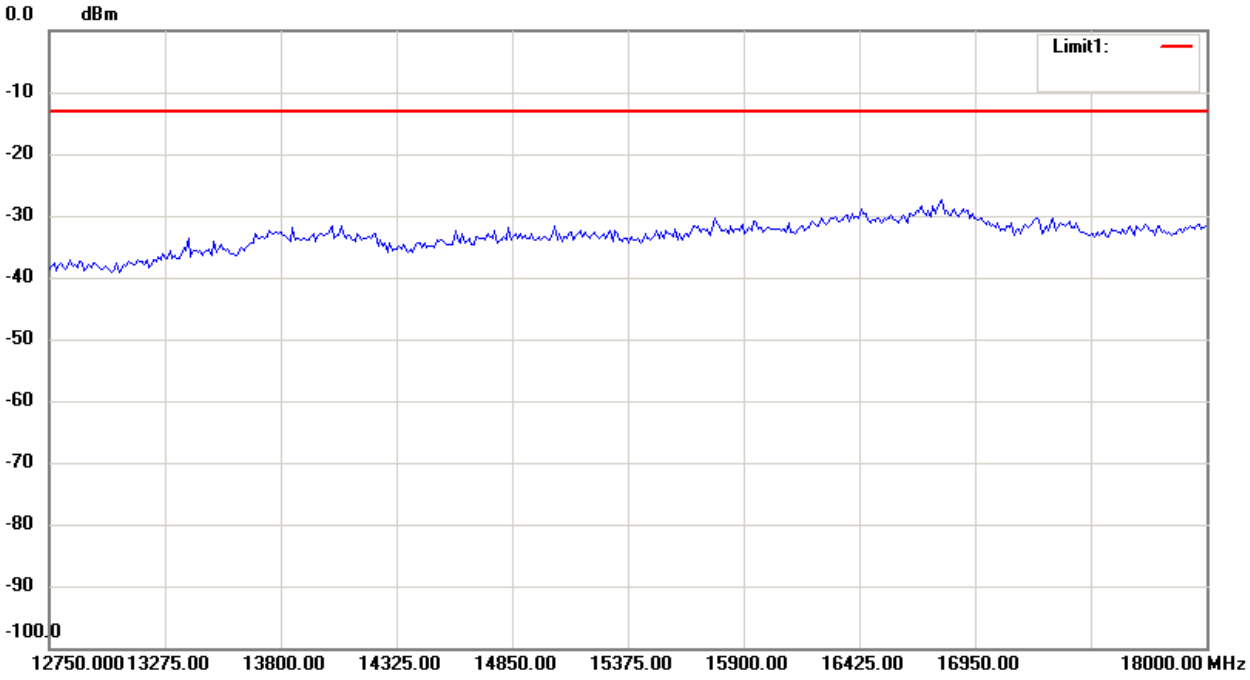

Note:

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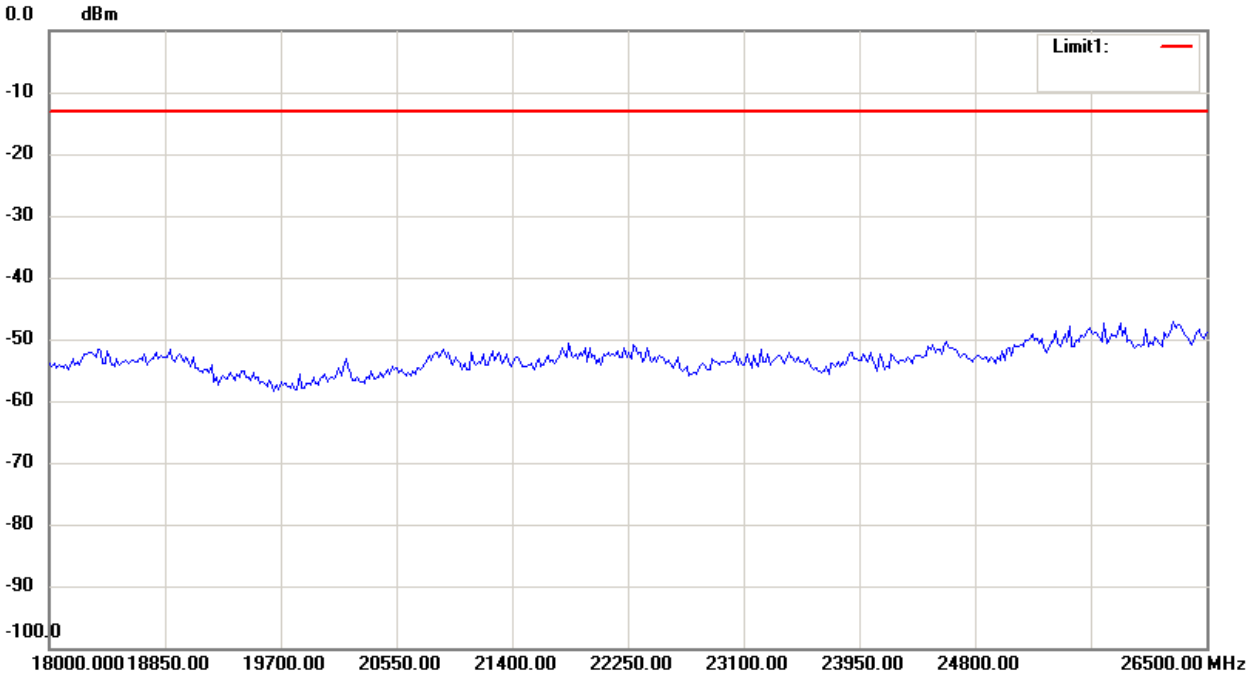
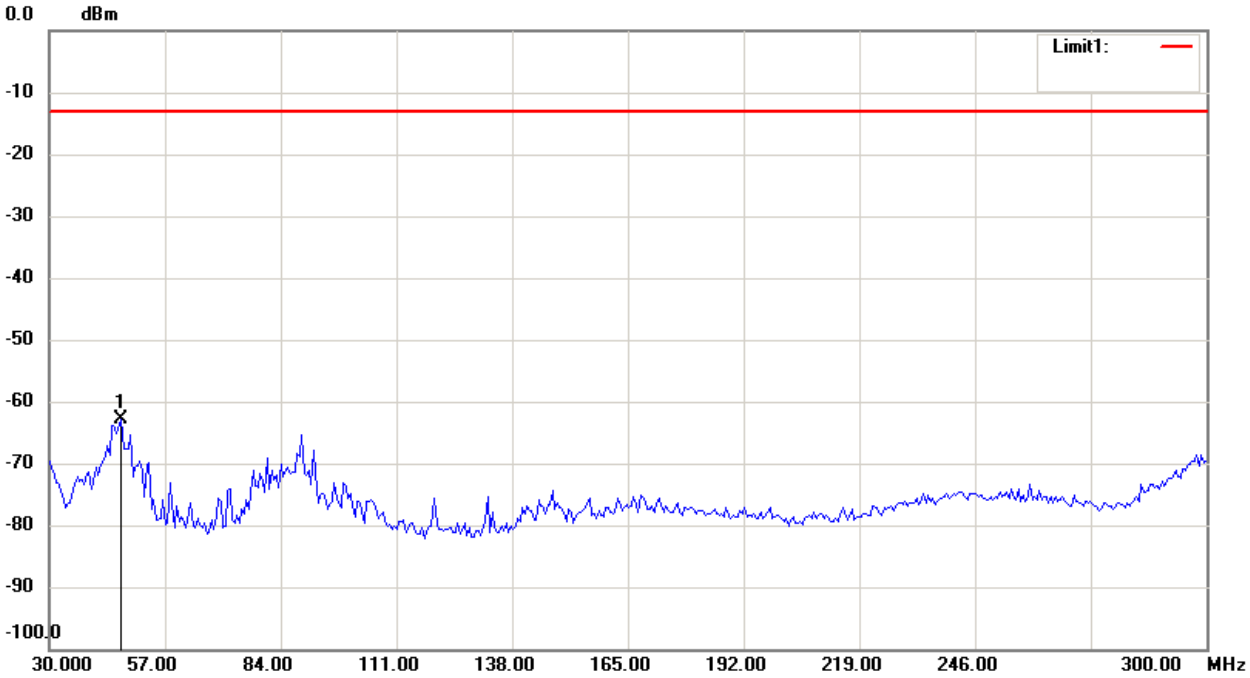


Antenna Polarization V



Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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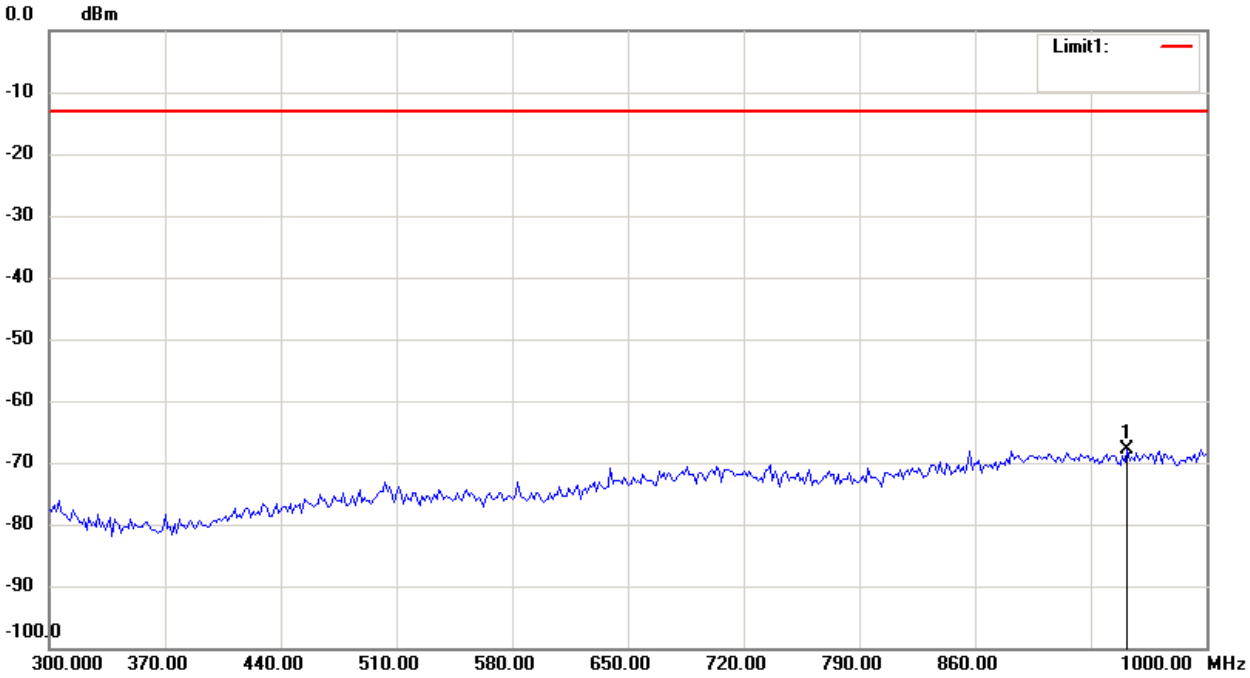

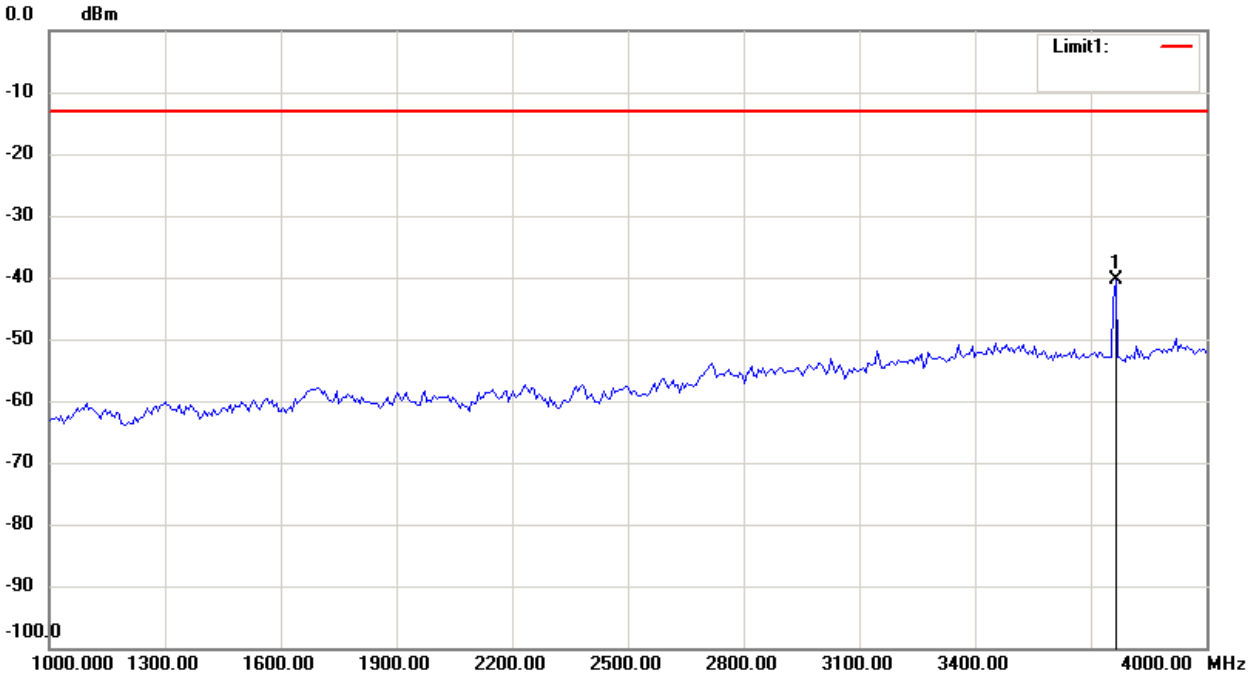

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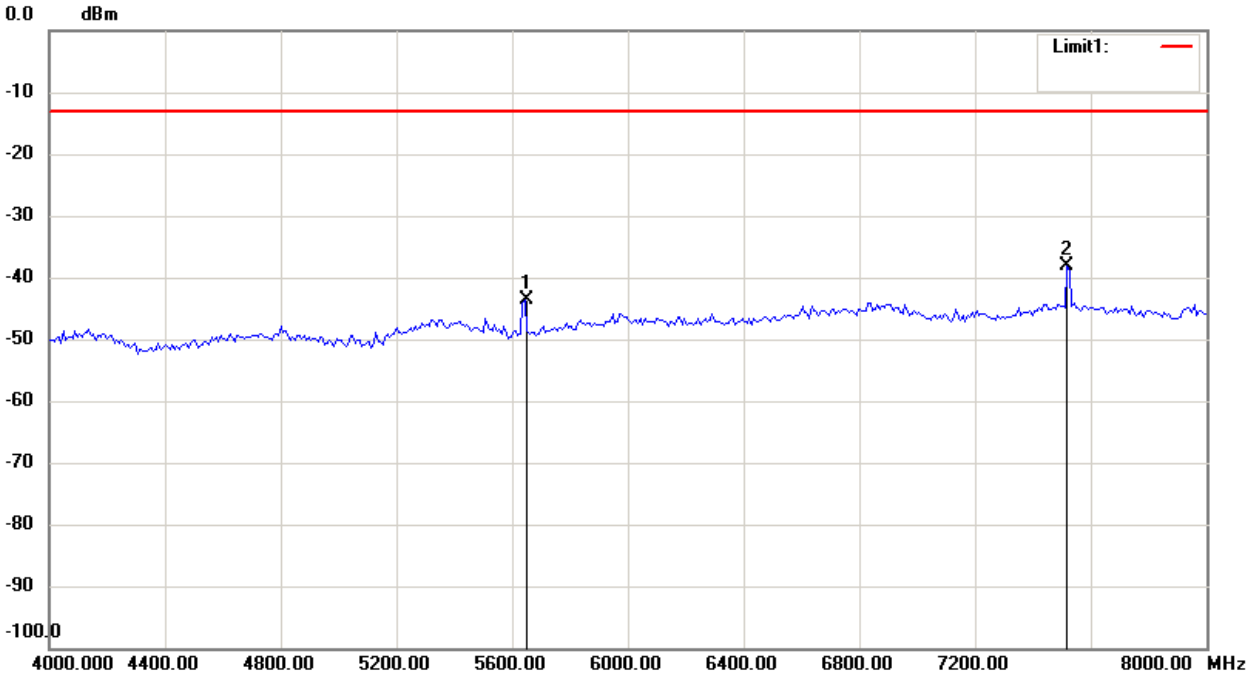

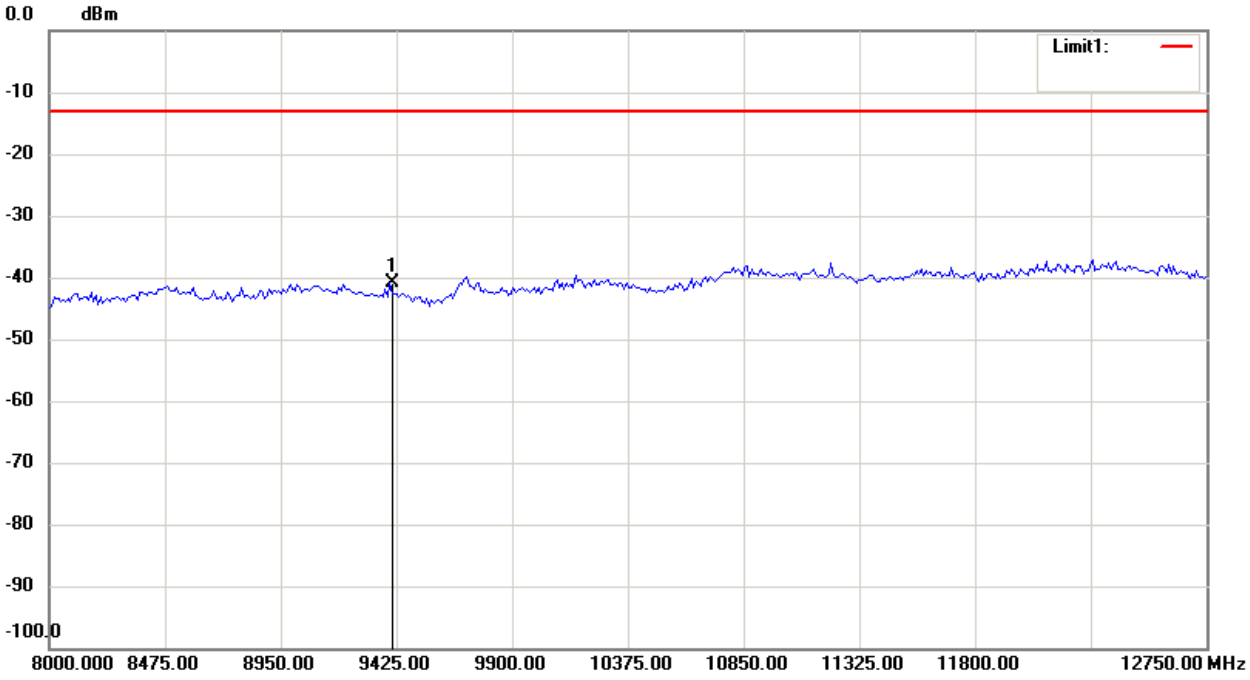

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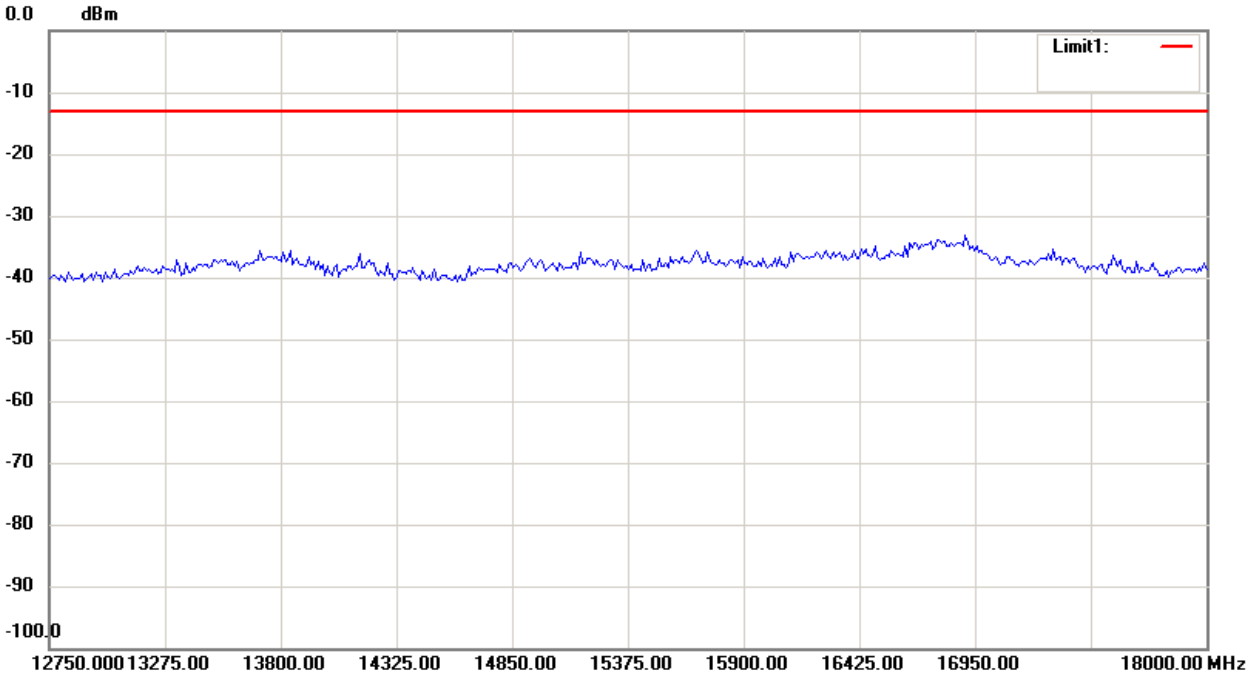

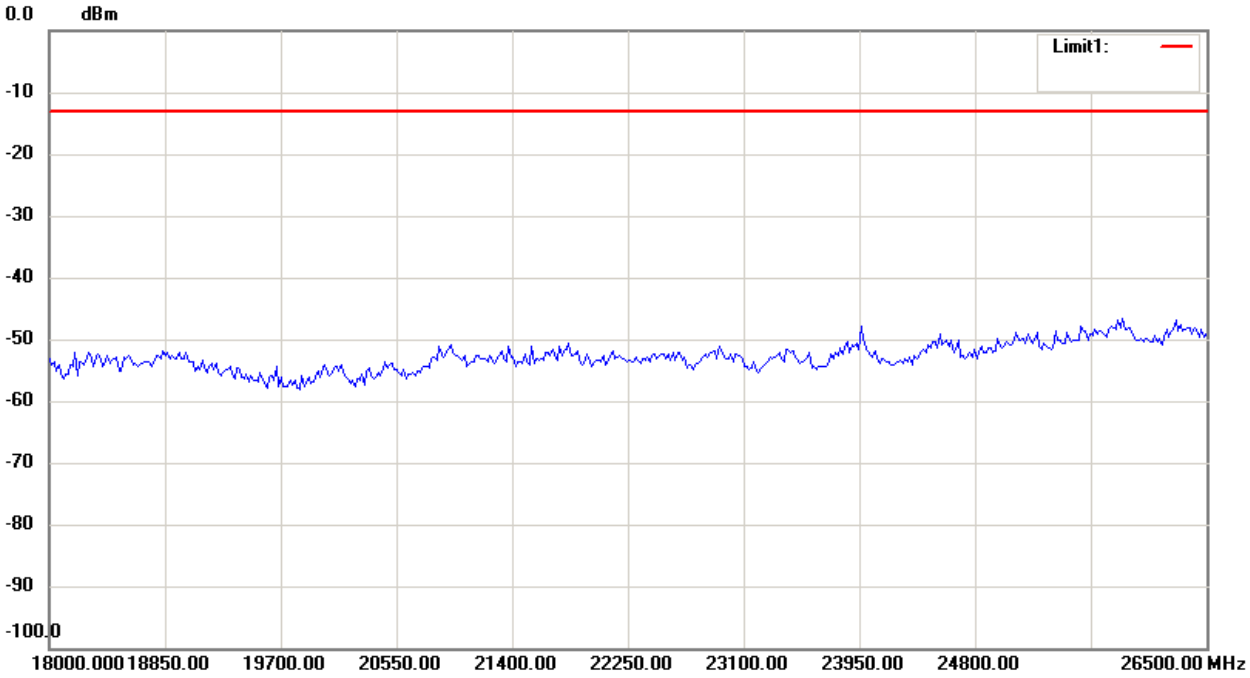

Note:

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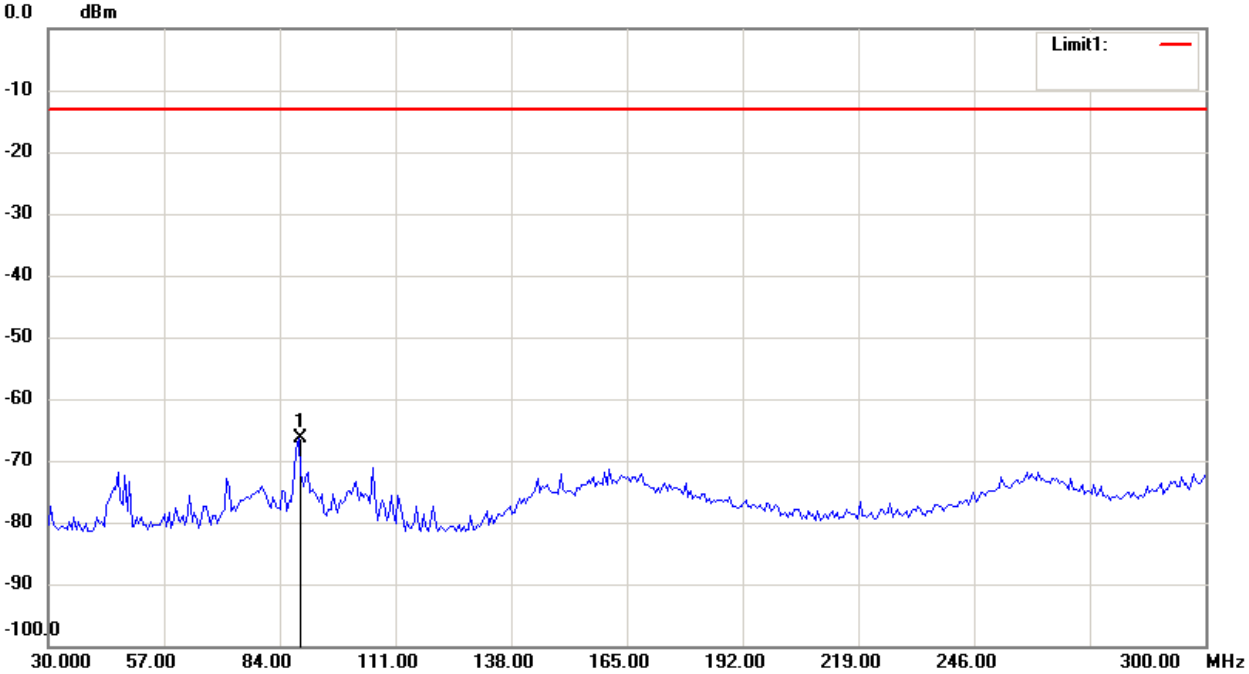
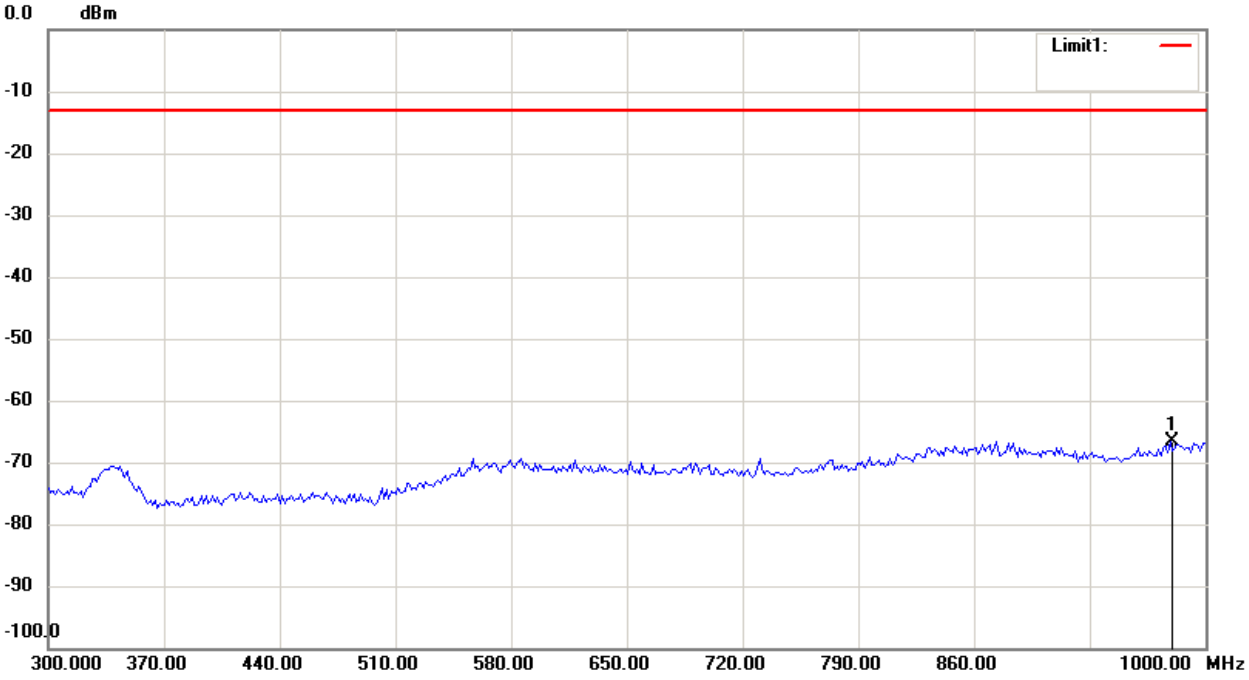
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

1900 band_ CH 810_3.7 V
Antenna Polarization H





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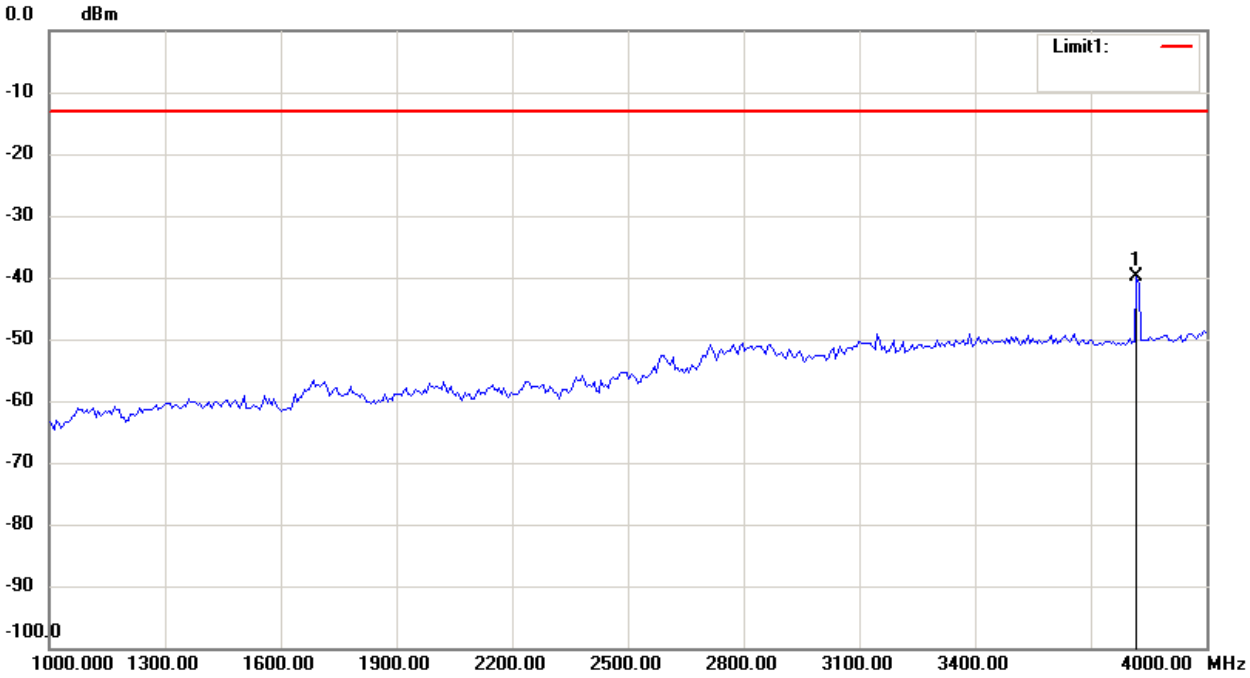

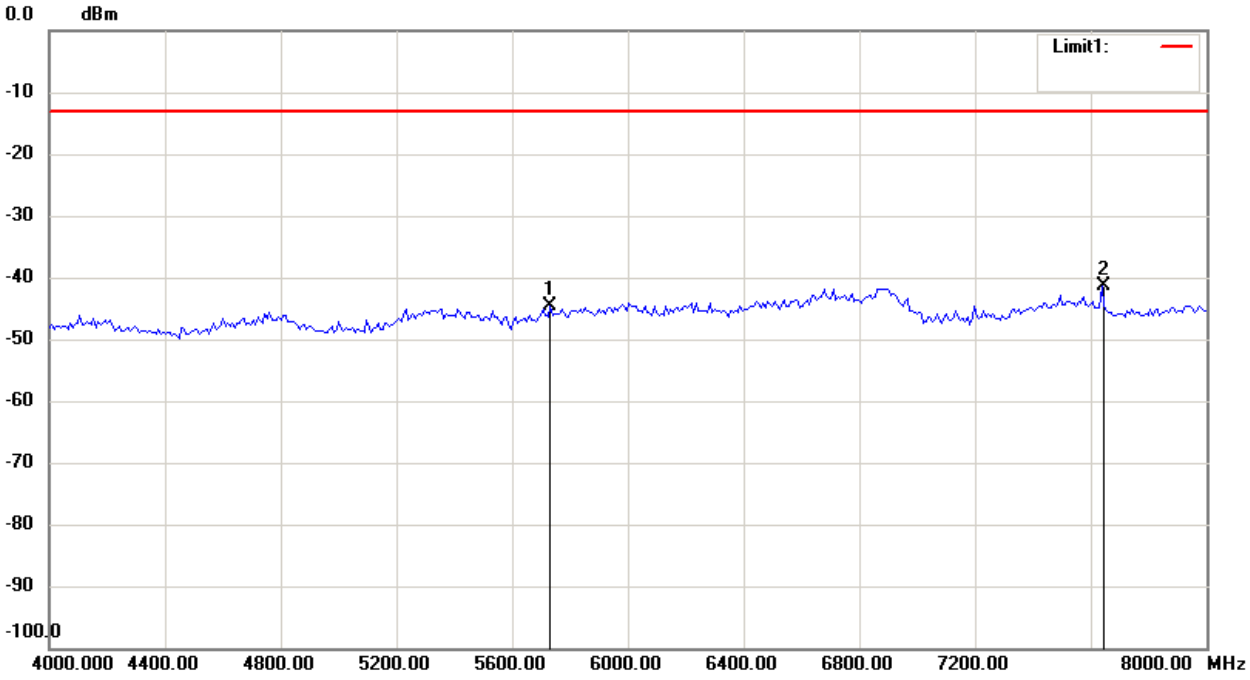

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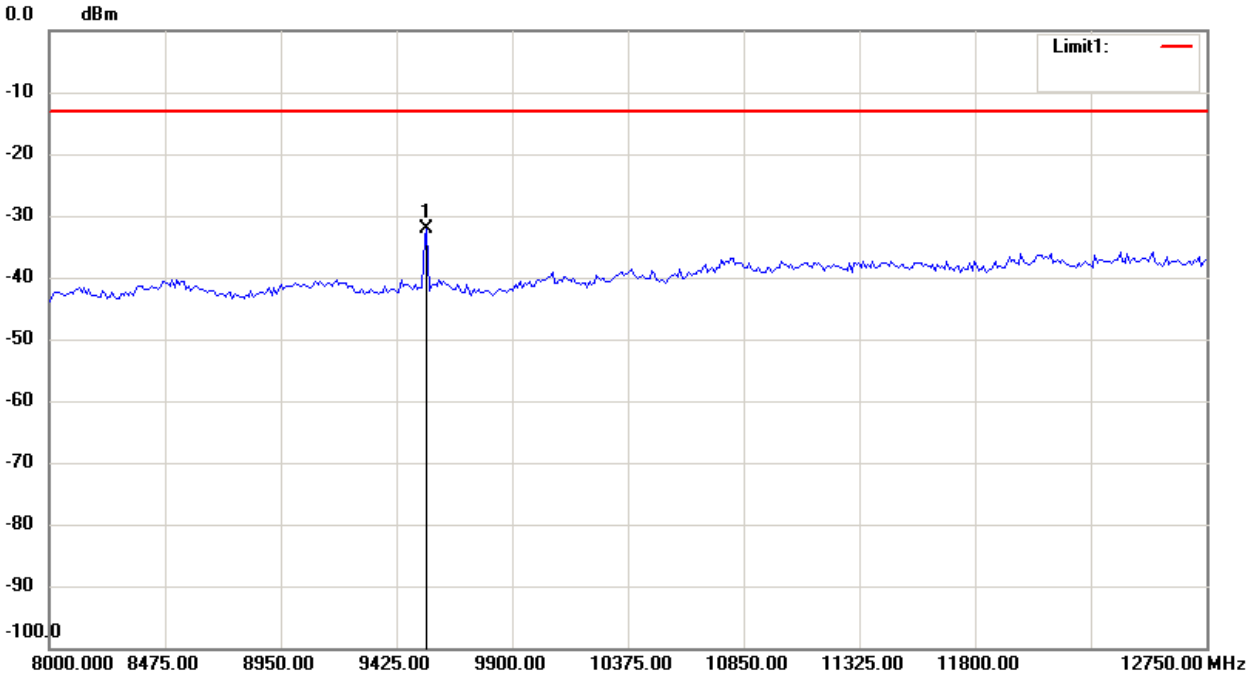

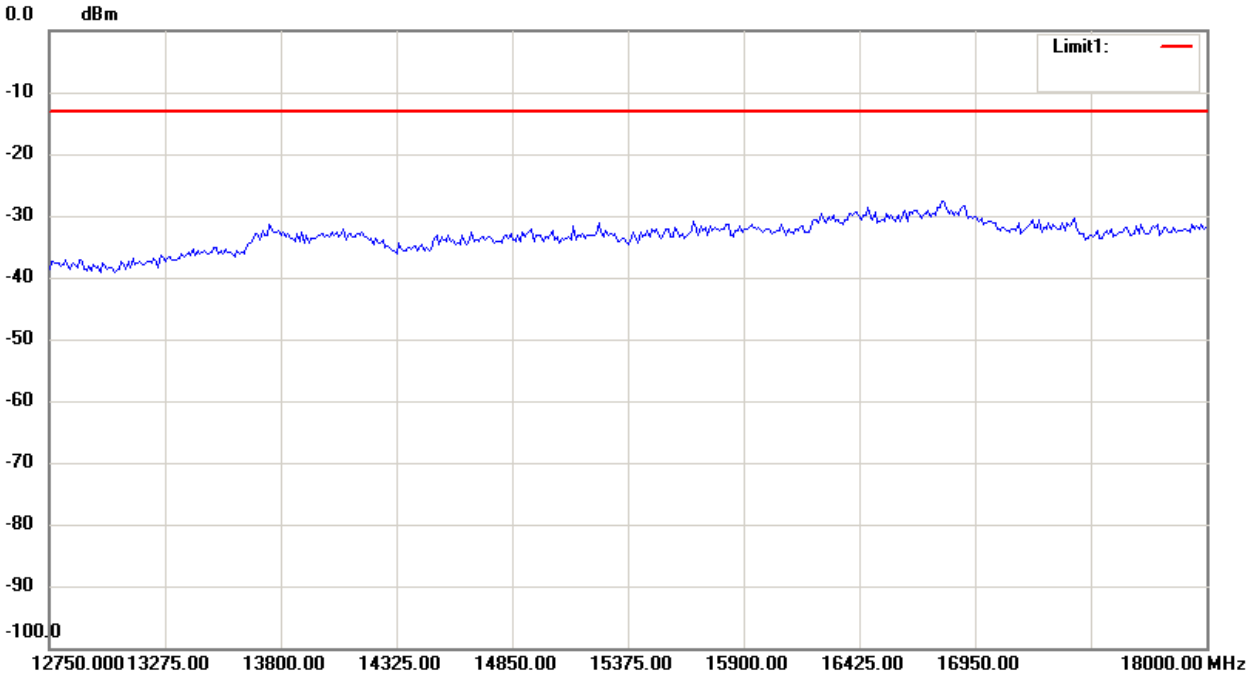

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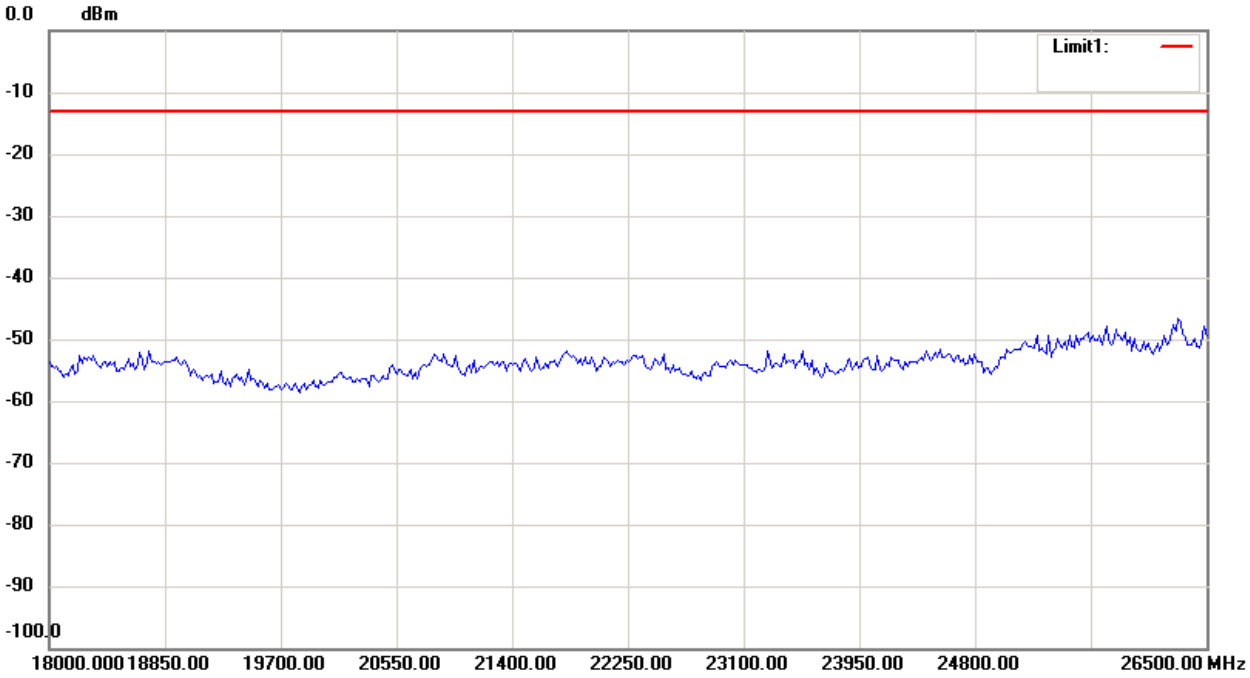
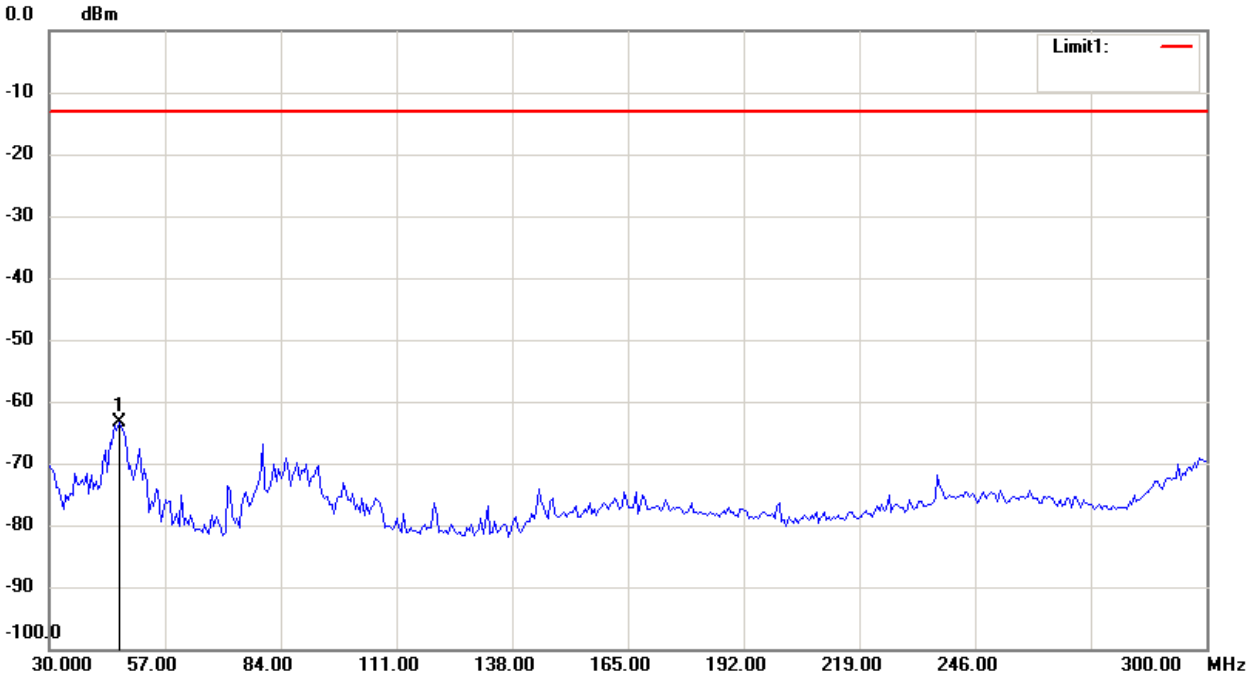
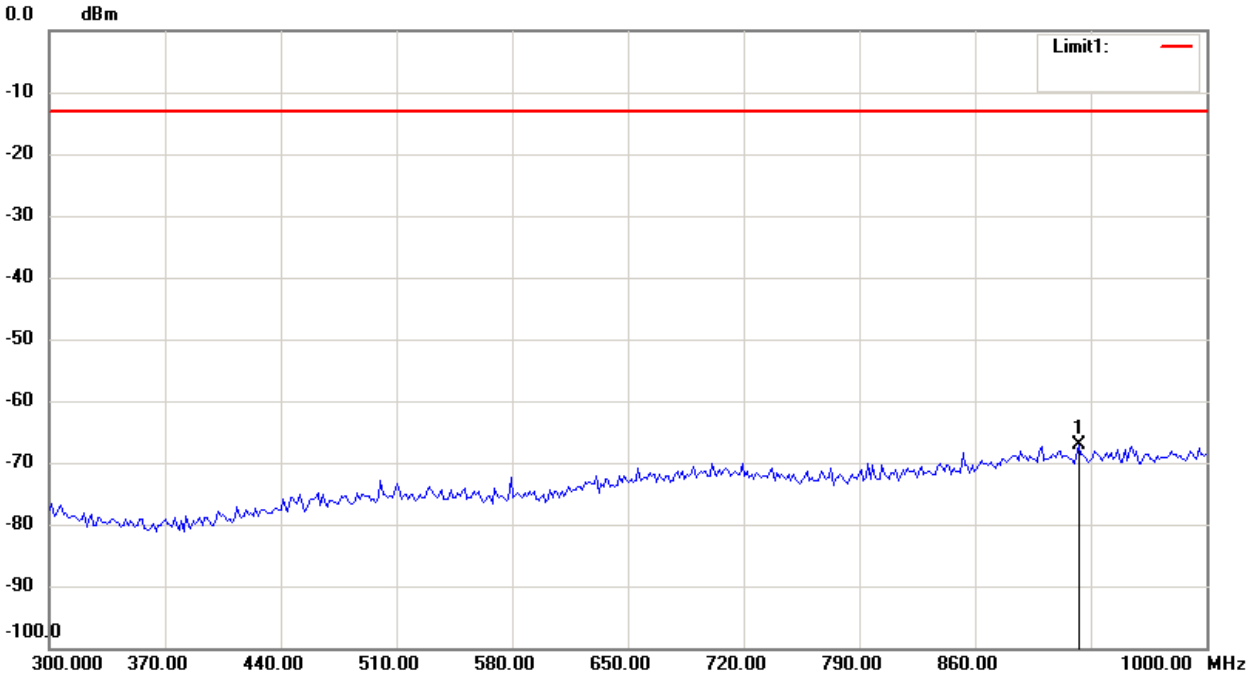


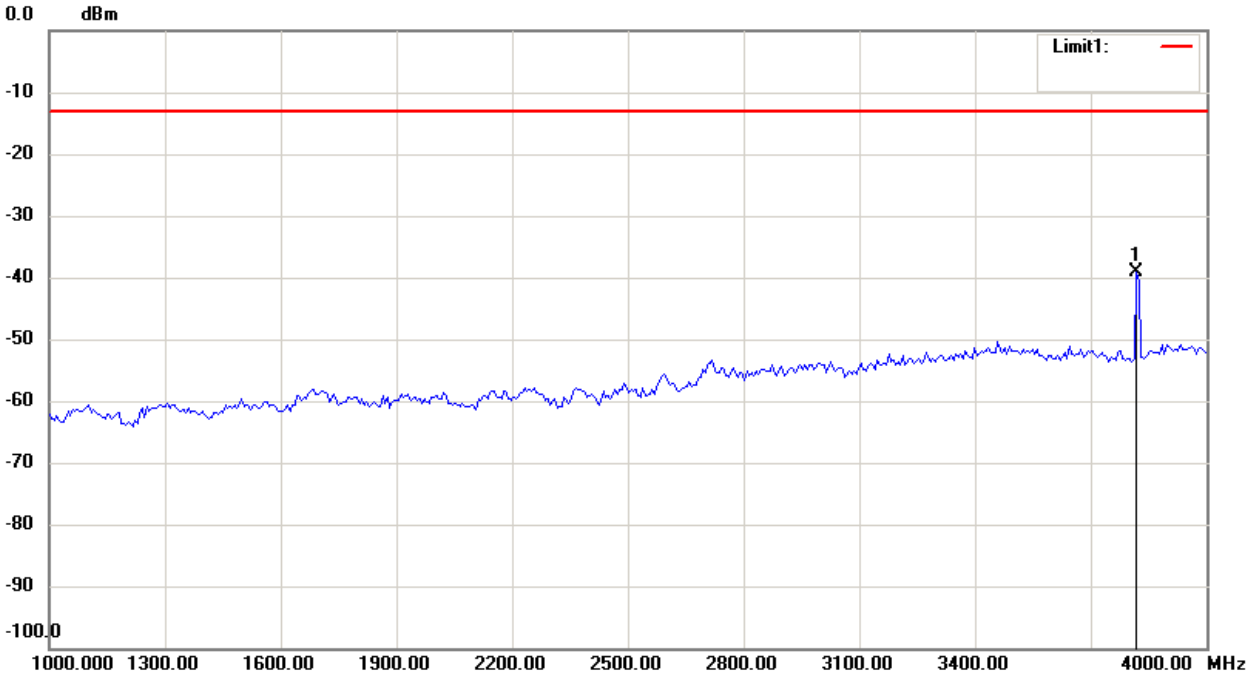
Antenna Polarization V



Note:

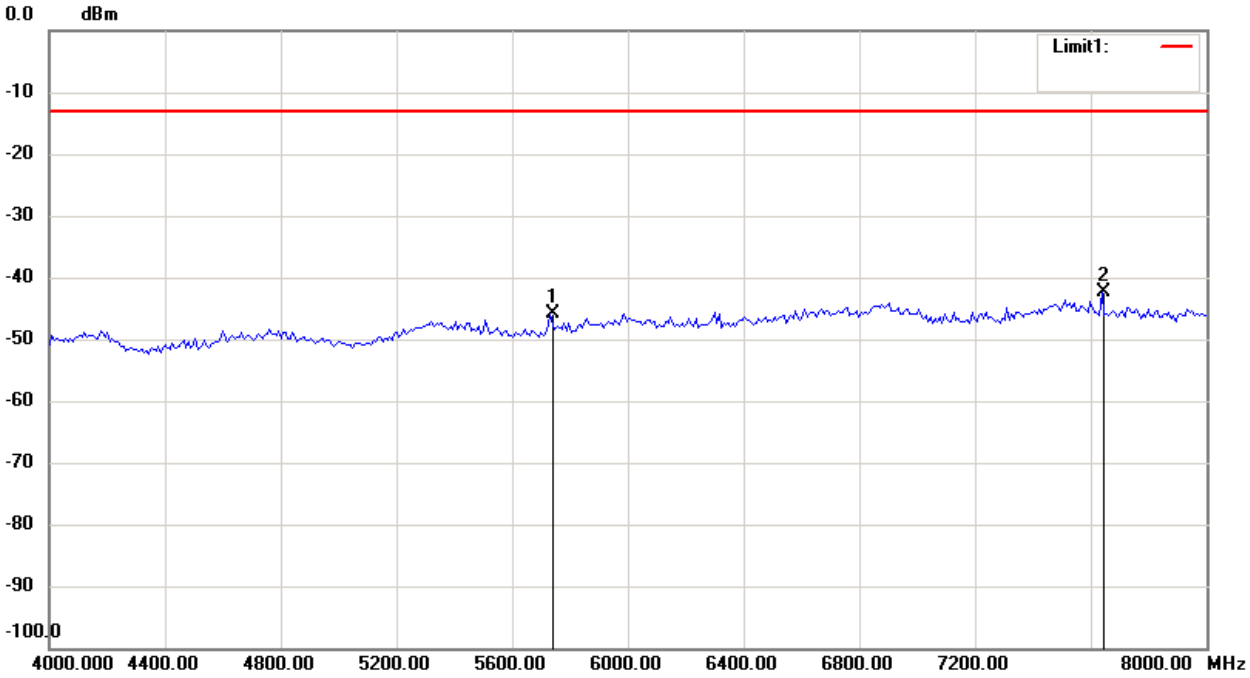
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

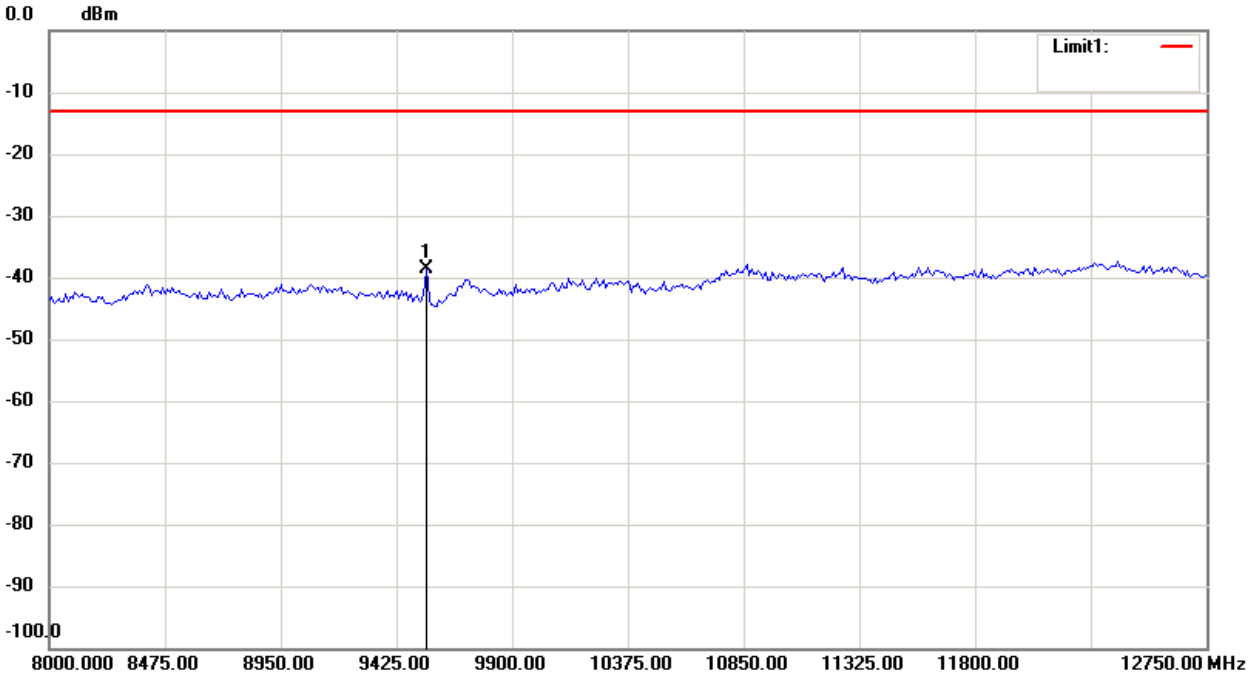




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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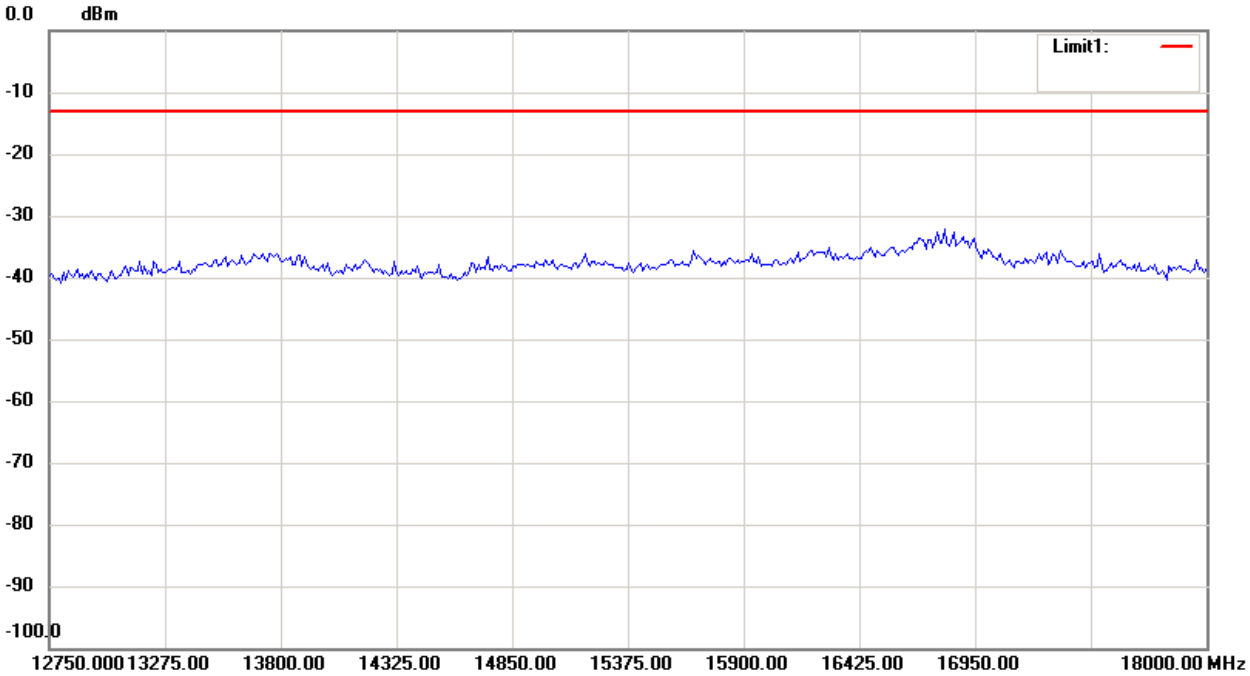
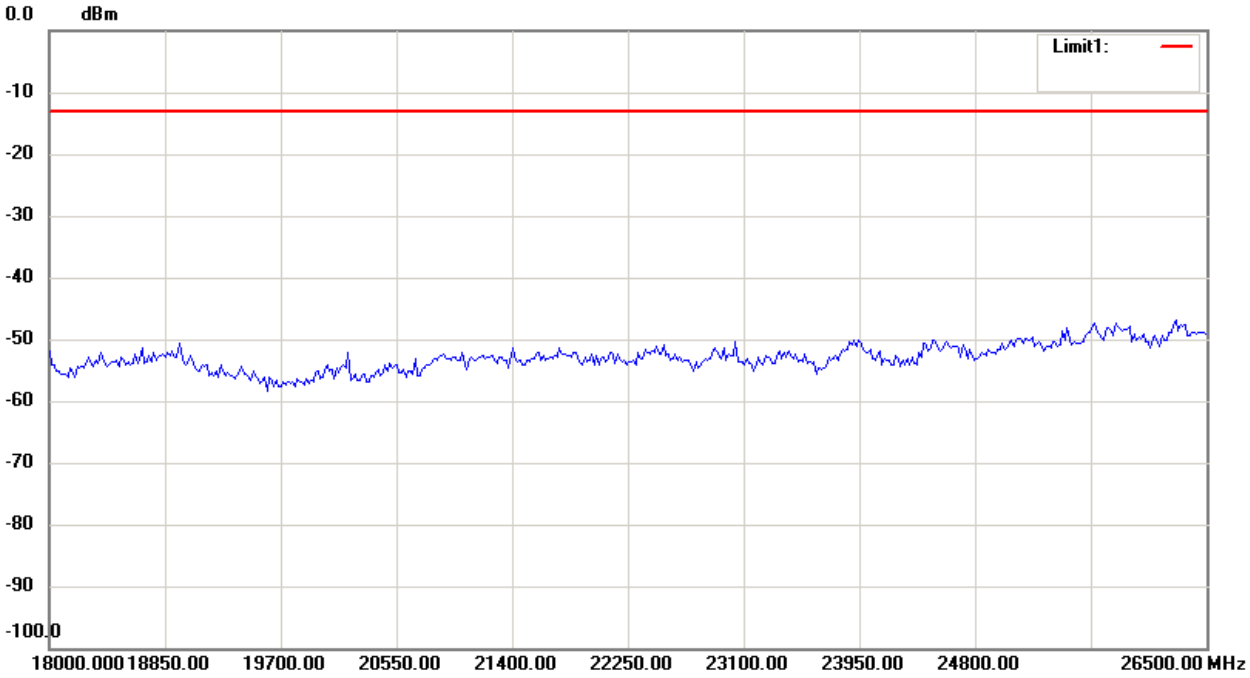
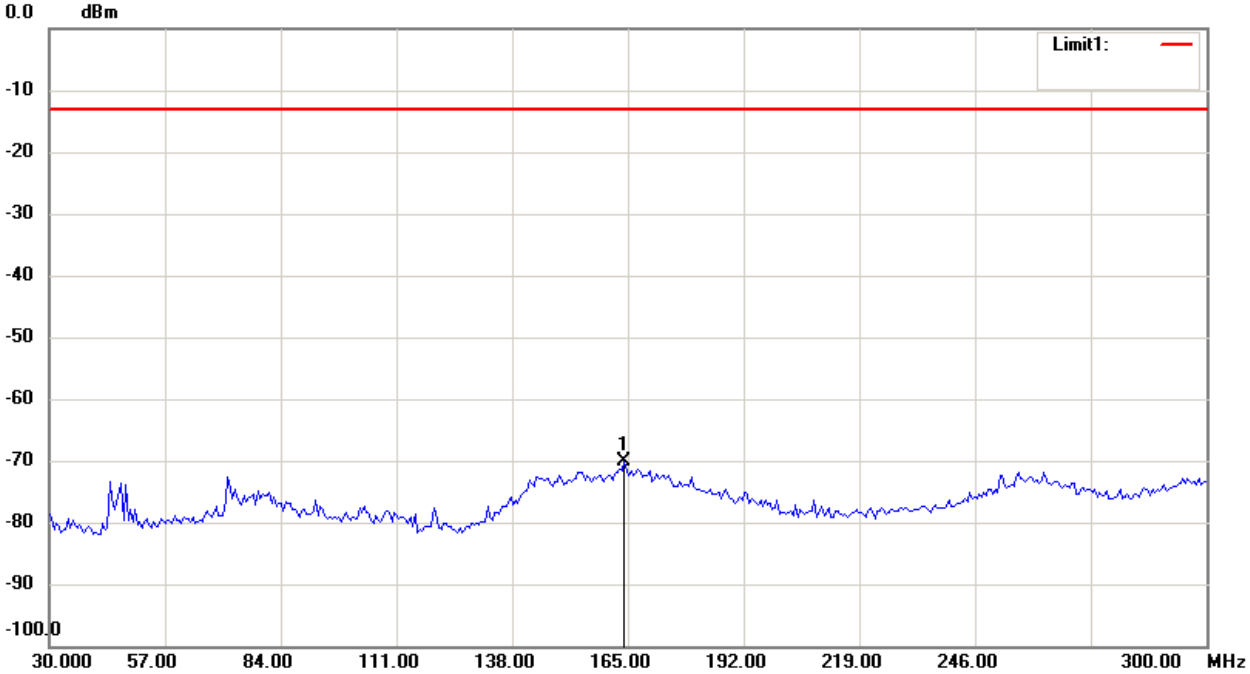


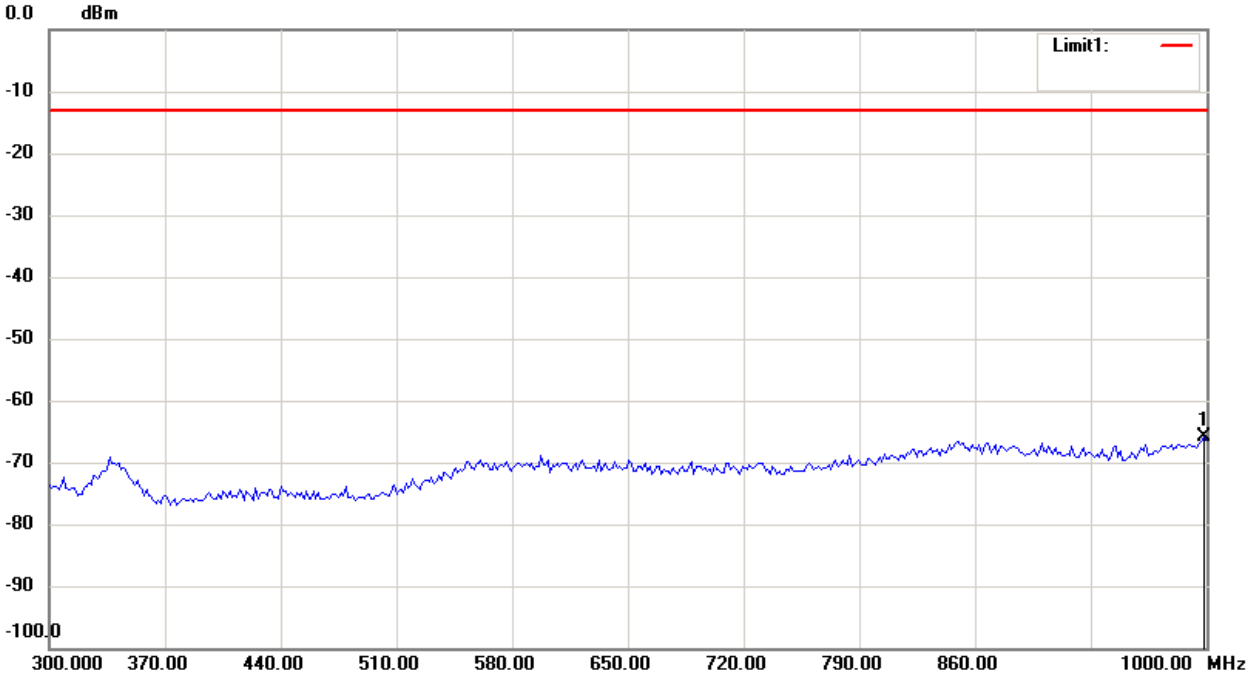


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

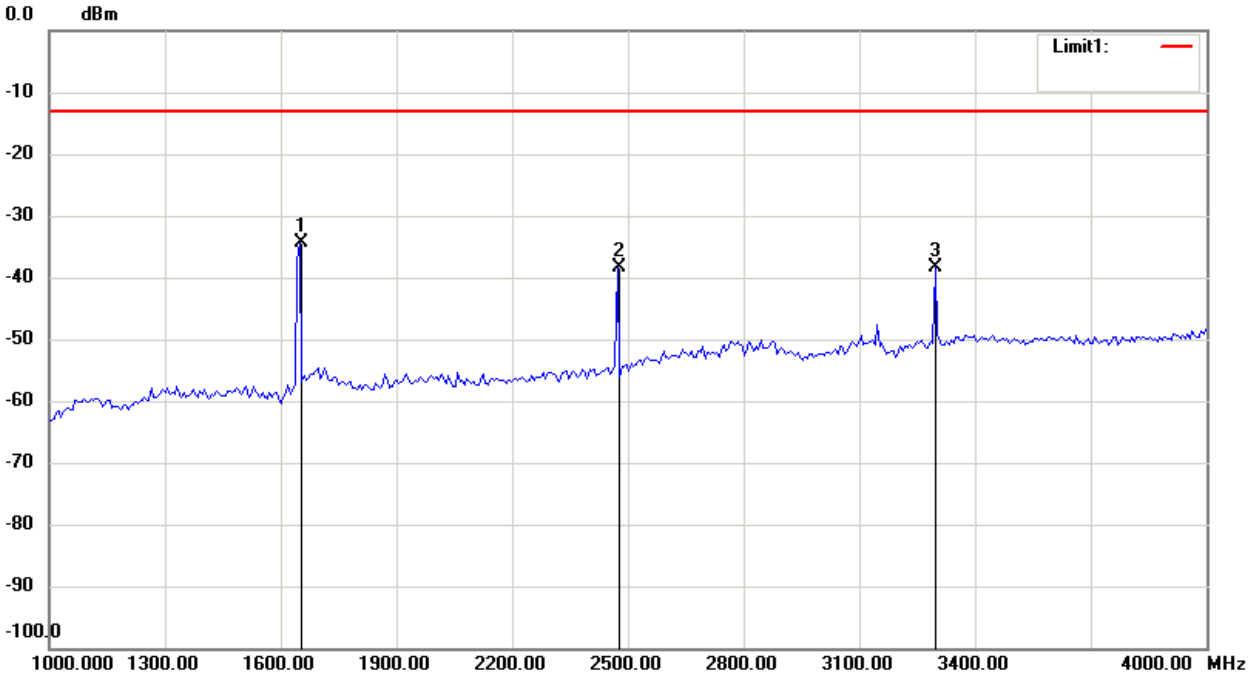
850 band_ CH 128_3.6 V
Antenna Polarization H

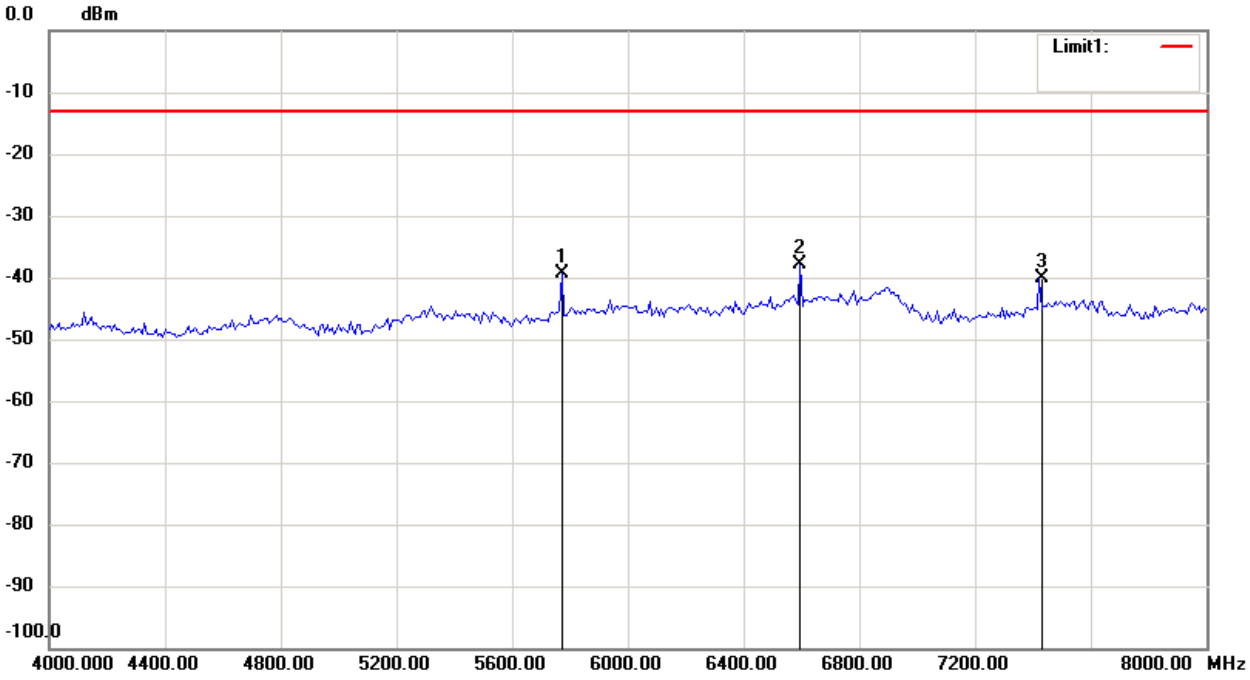




Note:

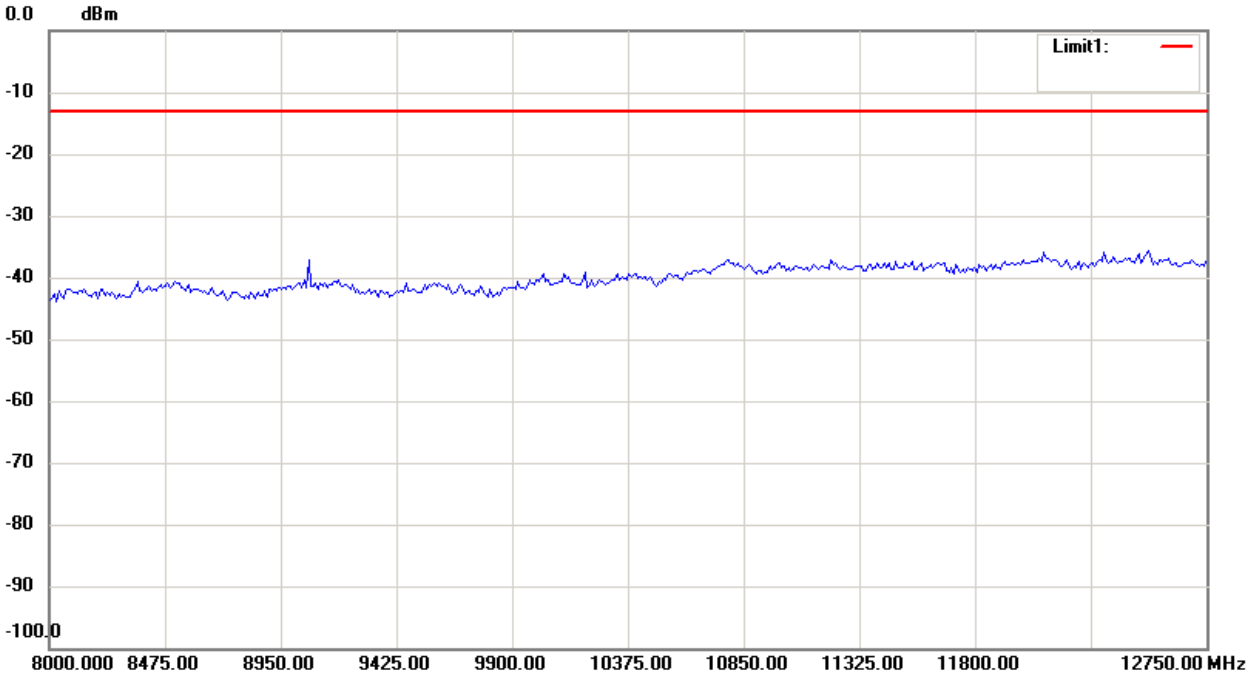
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



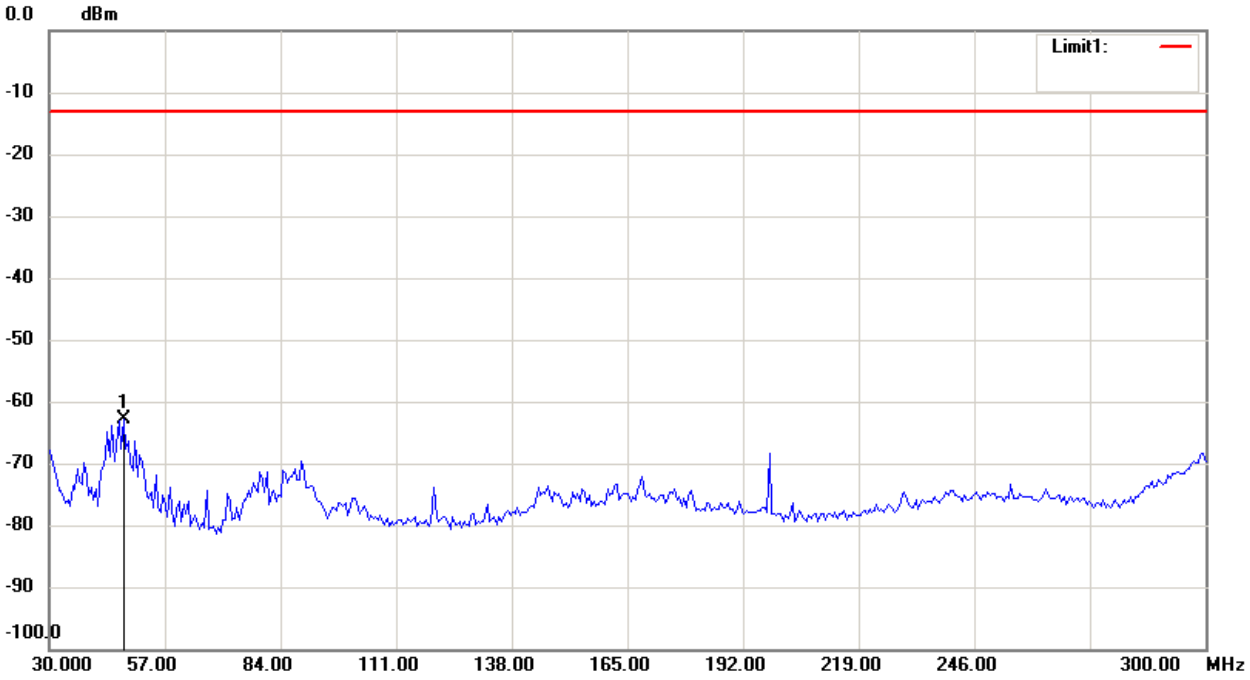


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

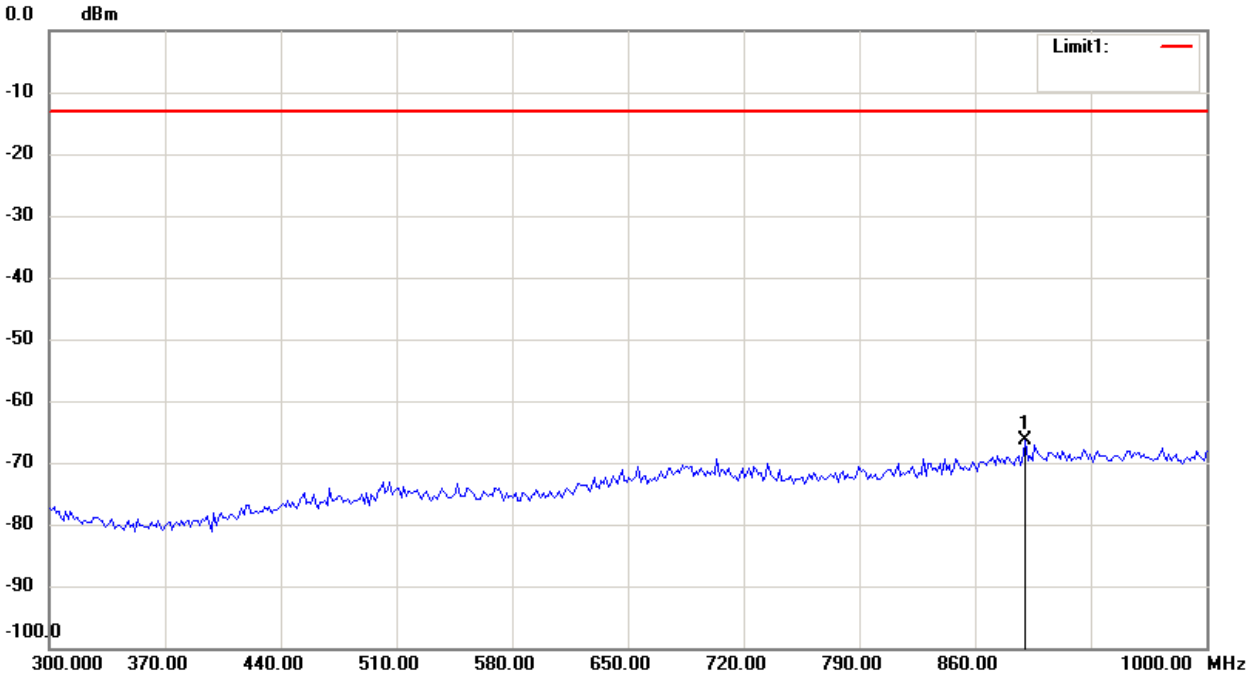


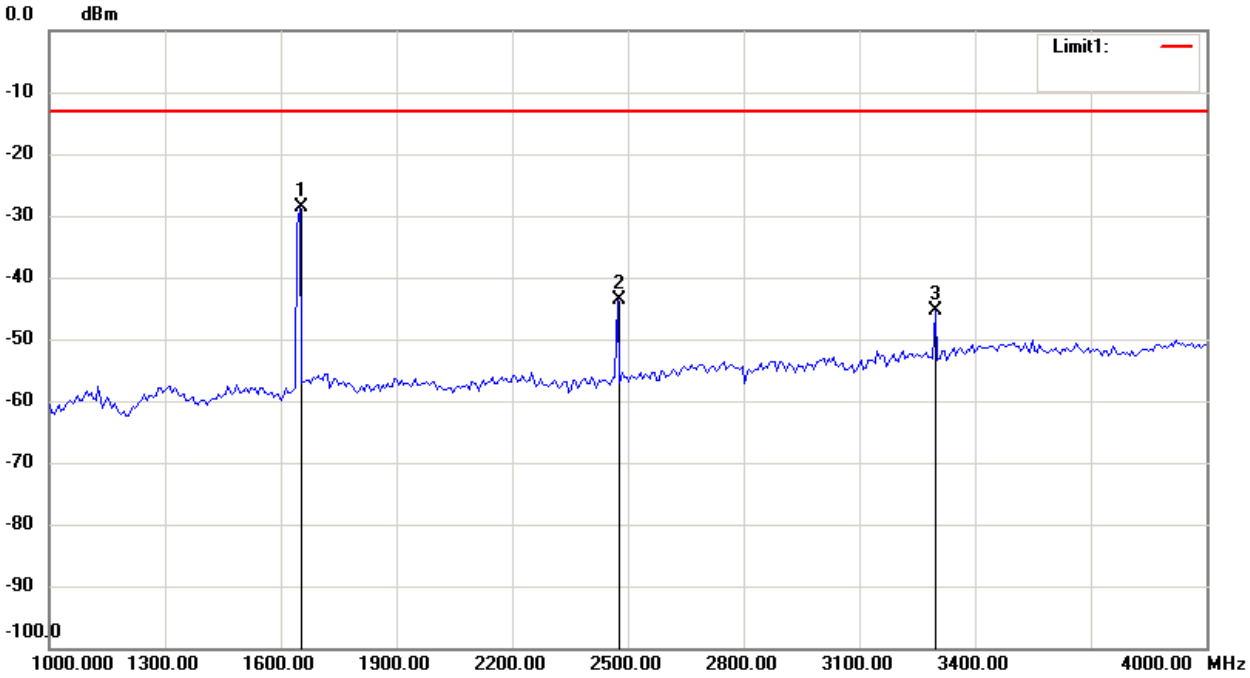
Antenna Polarization V



Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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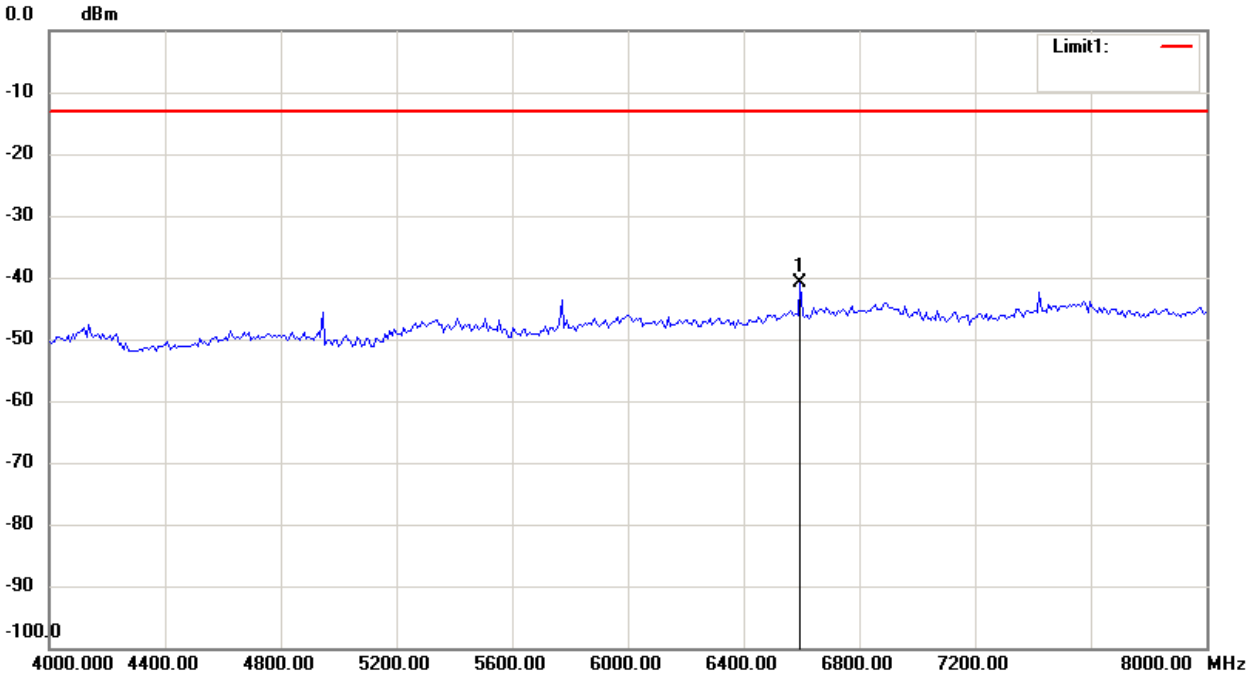
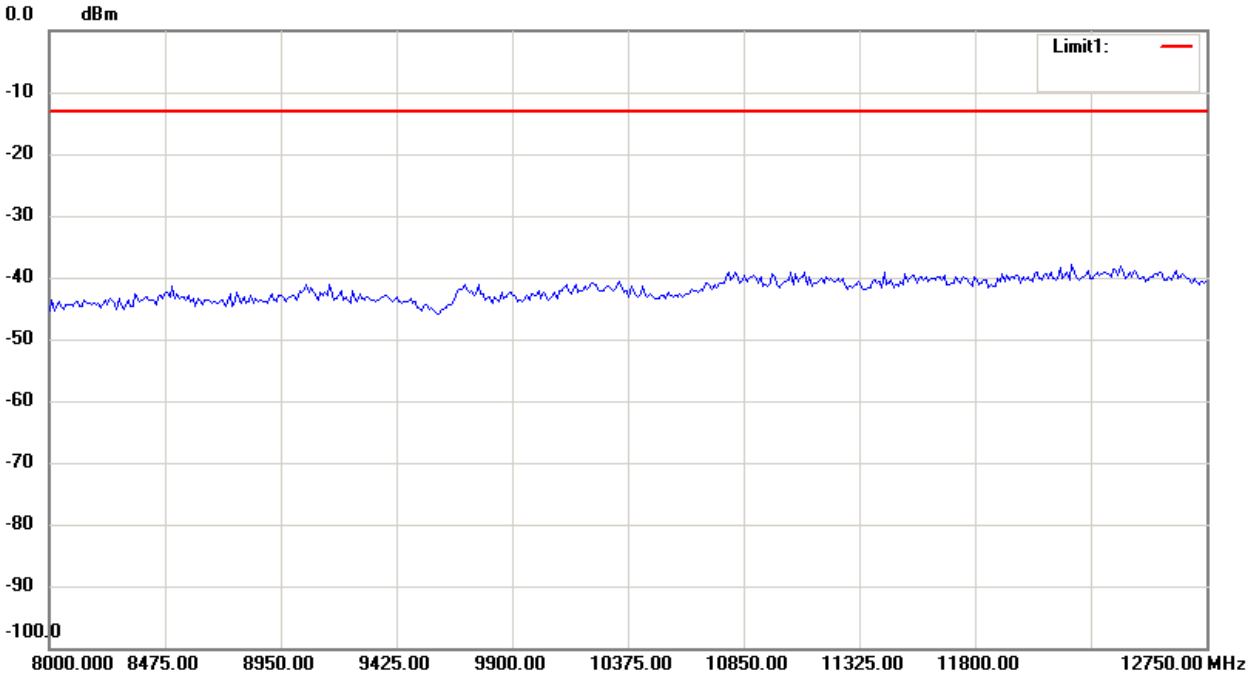
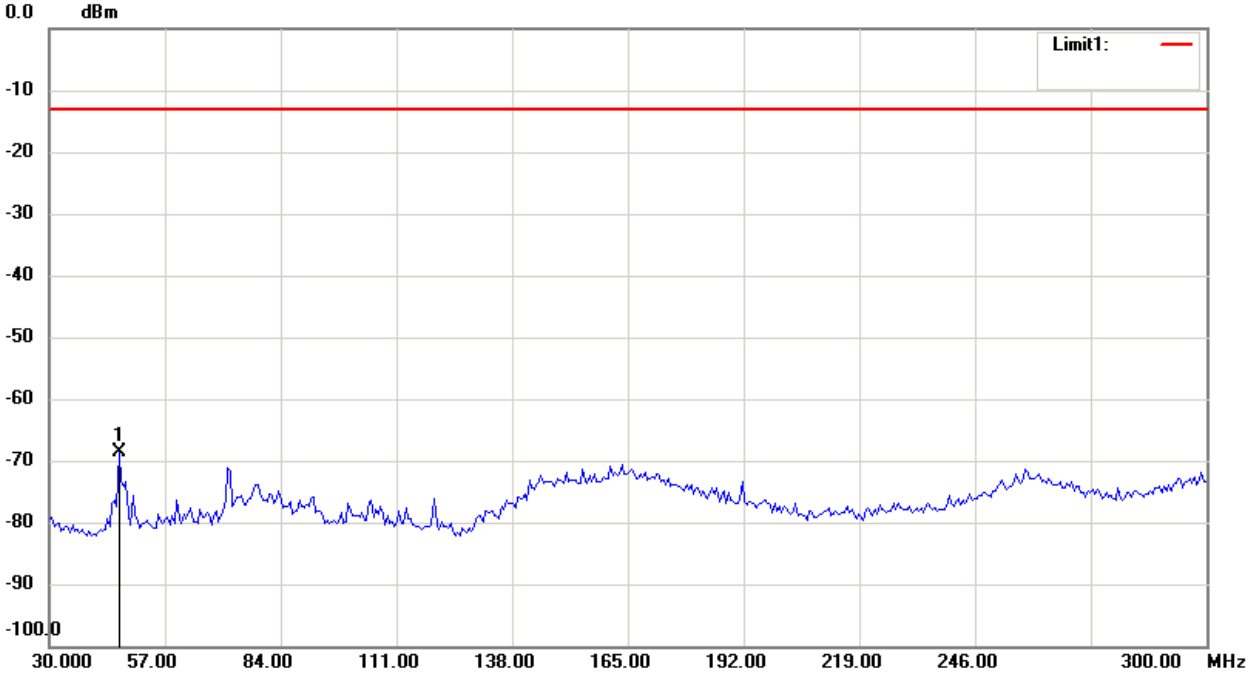


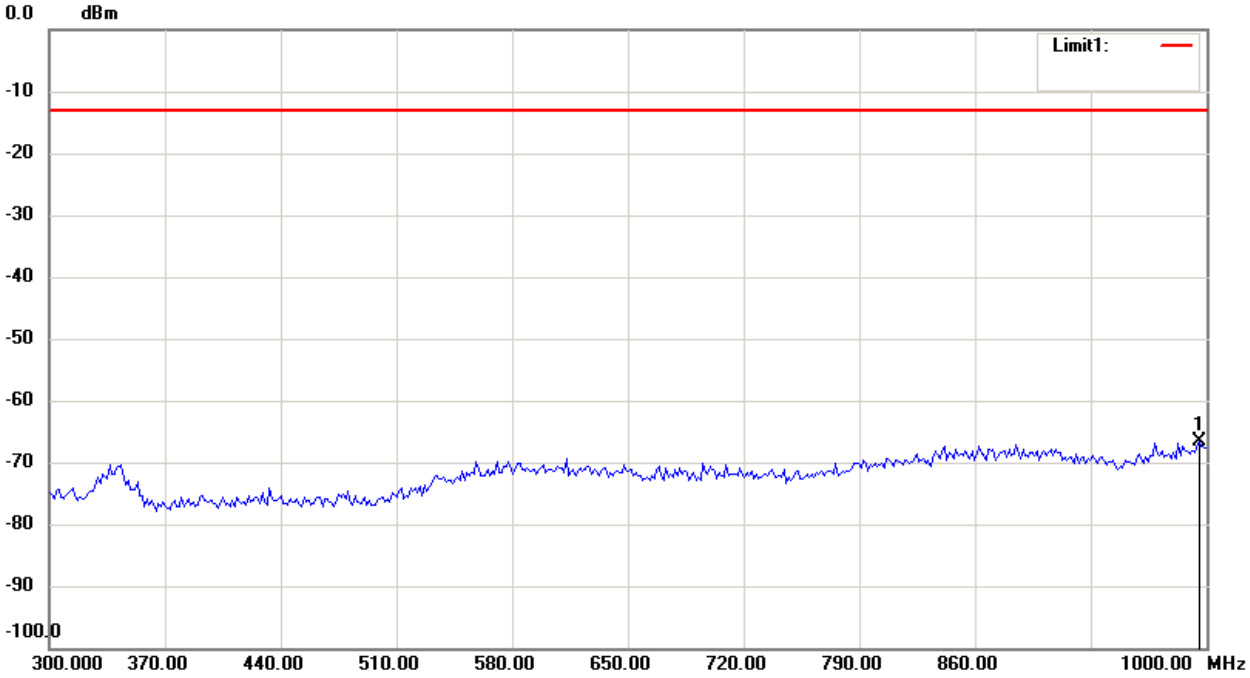


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

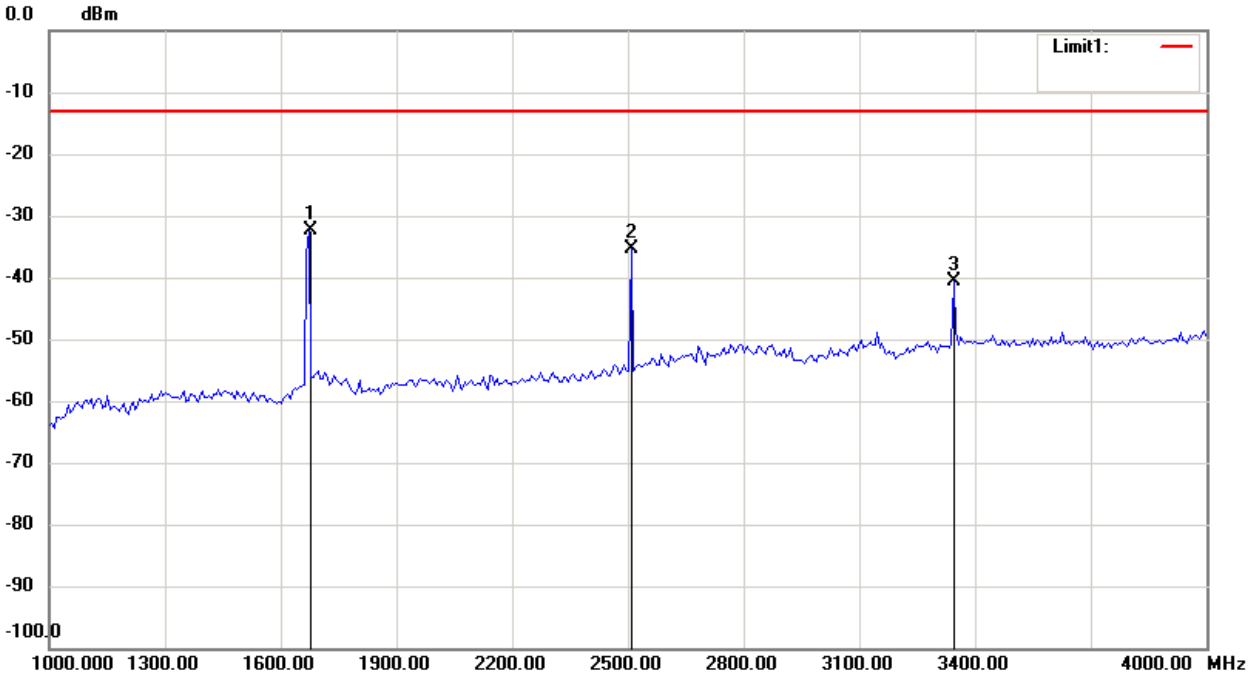
850 band_ CH 188_3.6 V
Antenna Polarization H

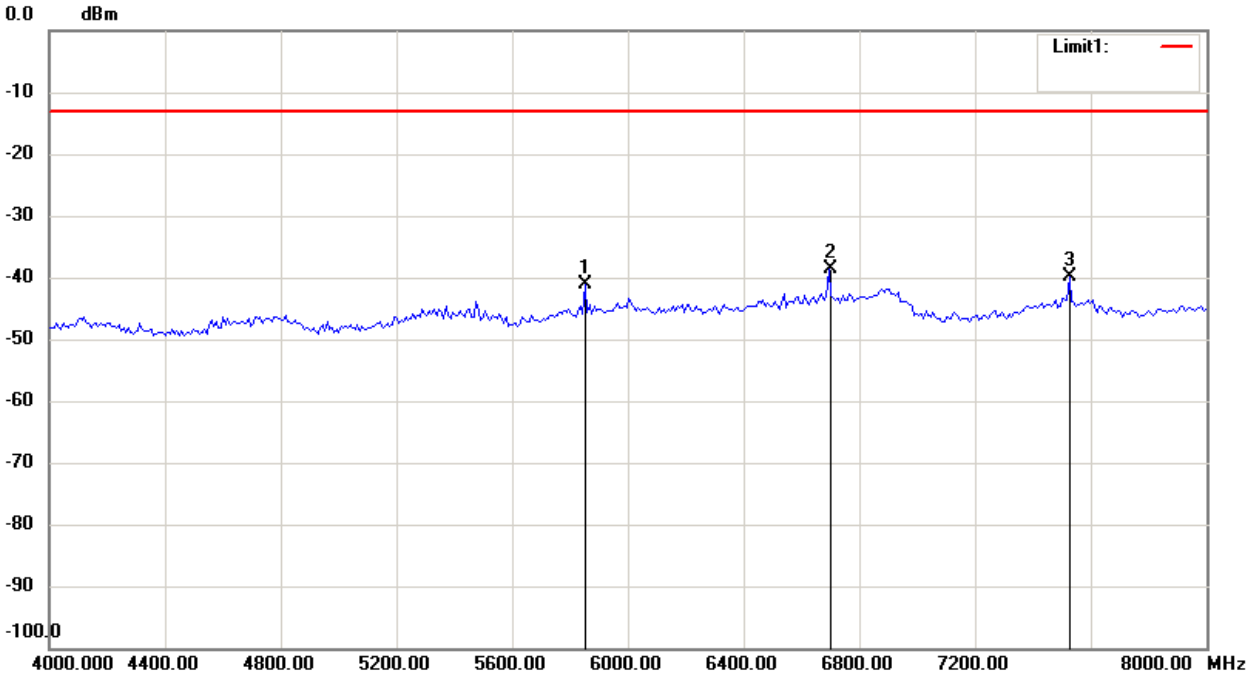




Note:

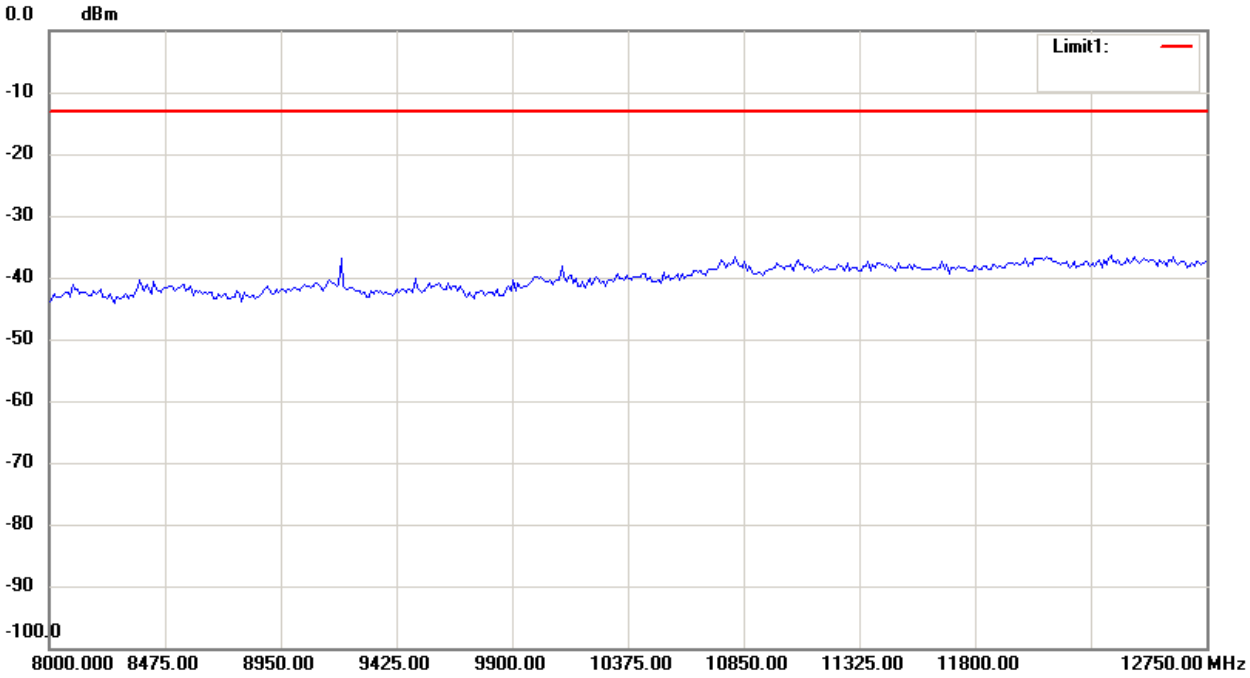
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



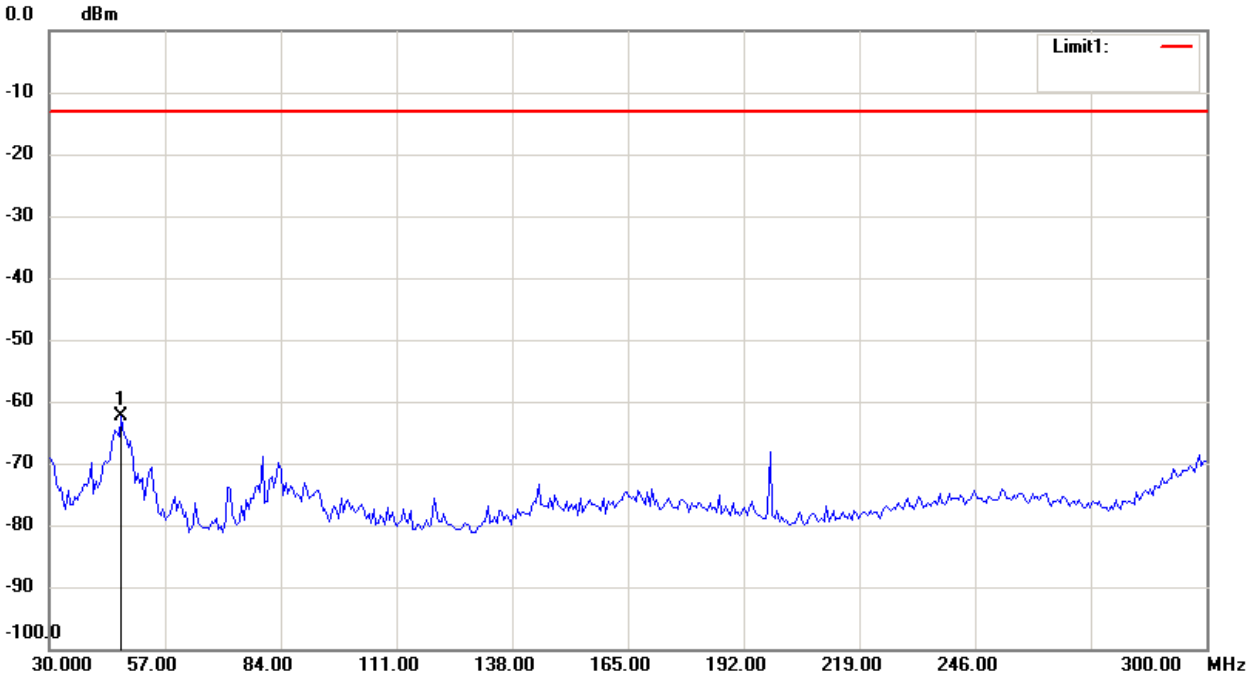


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



Antenna Polarization V



Note:

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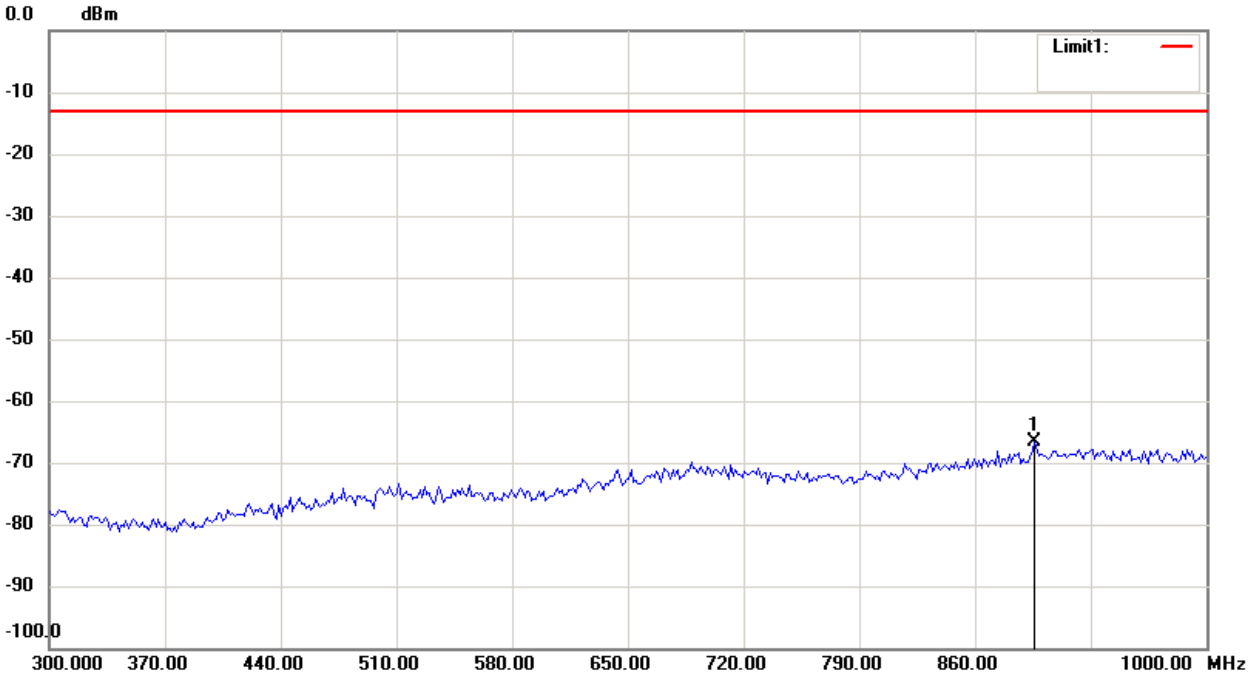

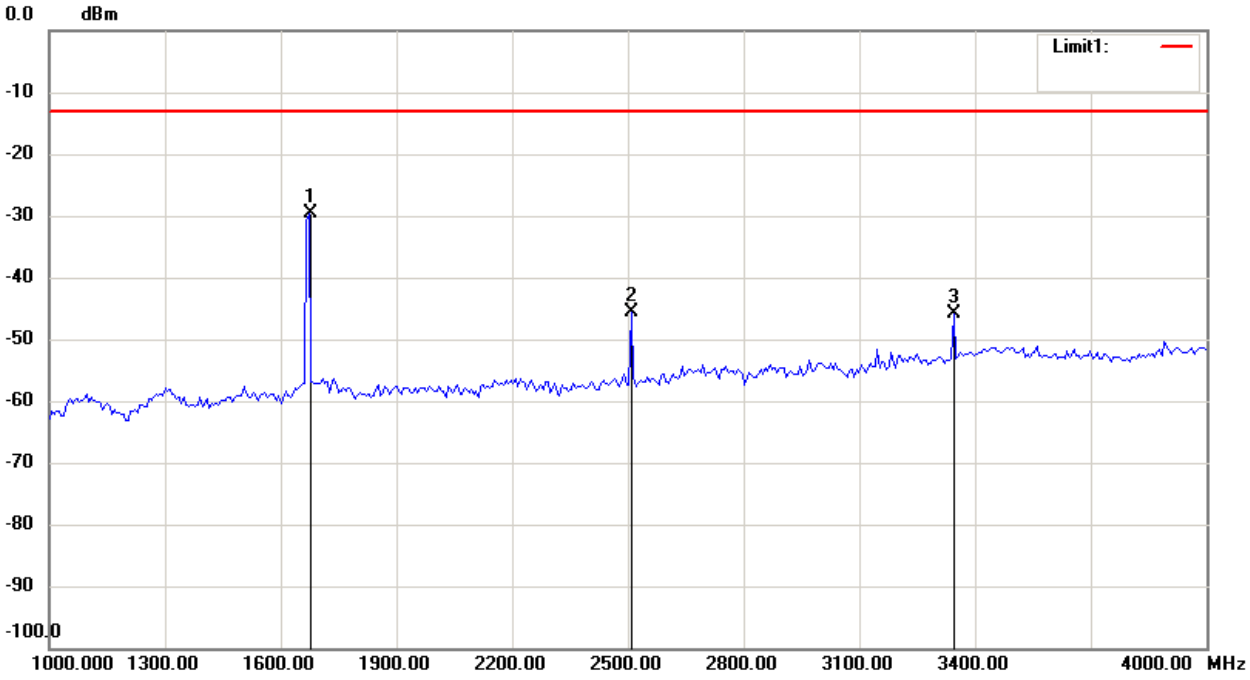

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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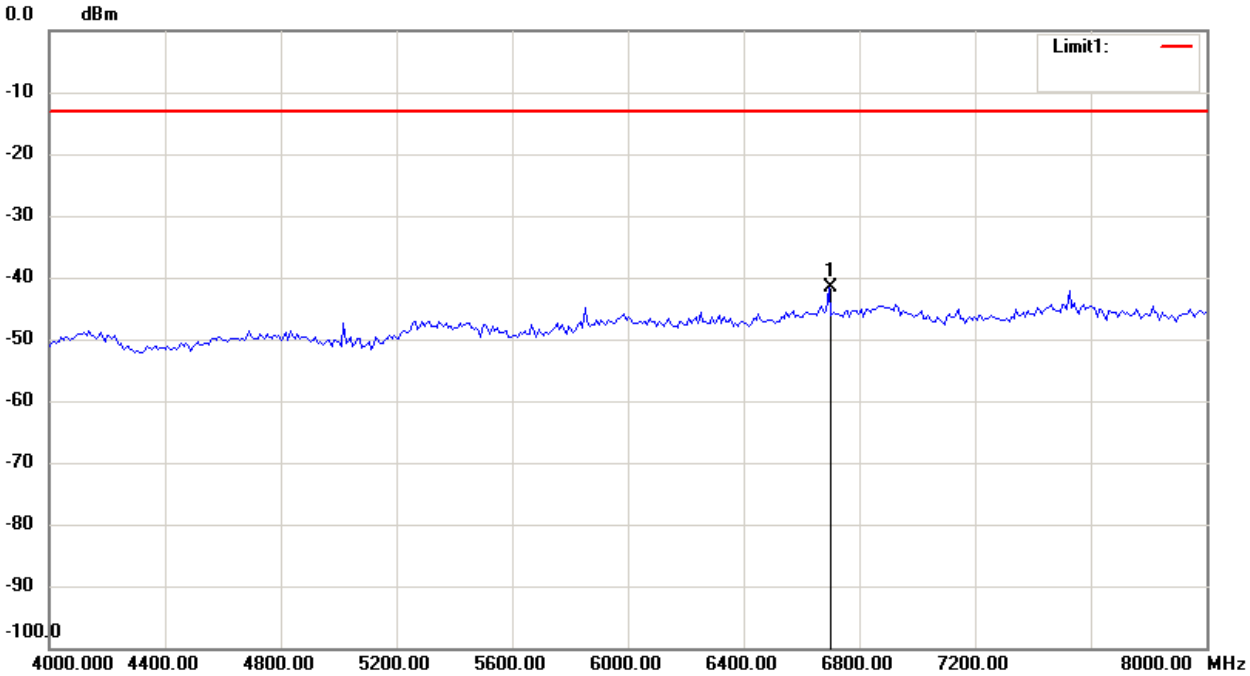

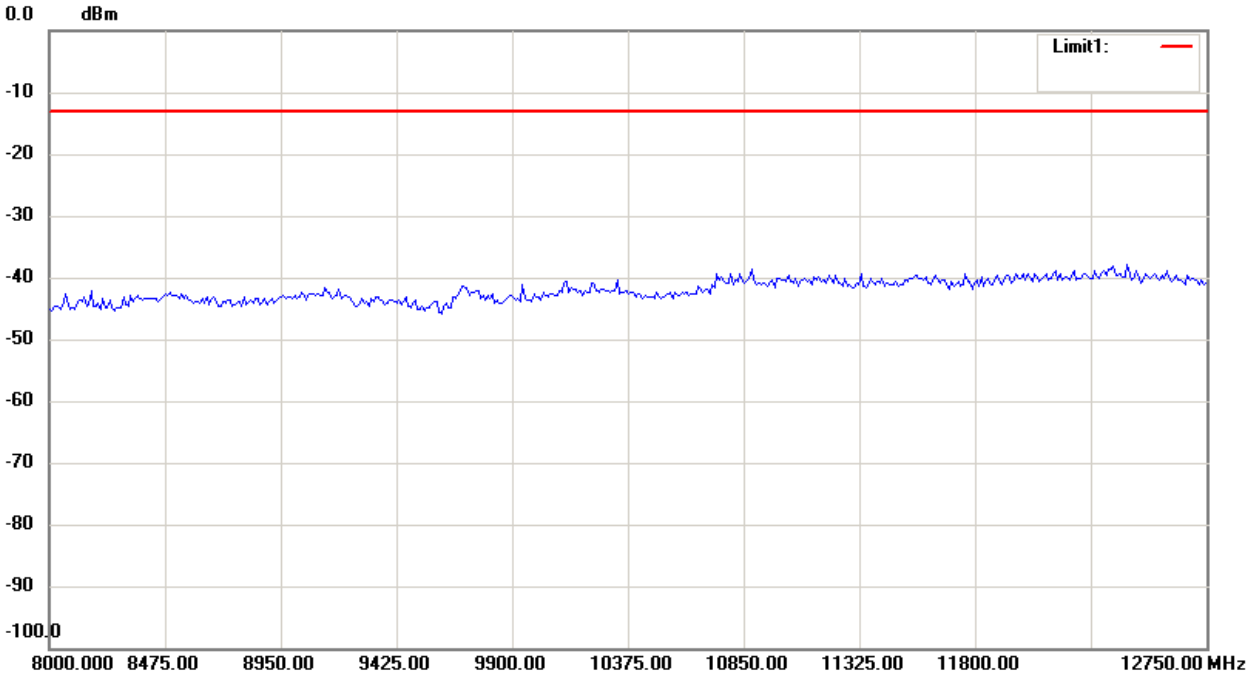

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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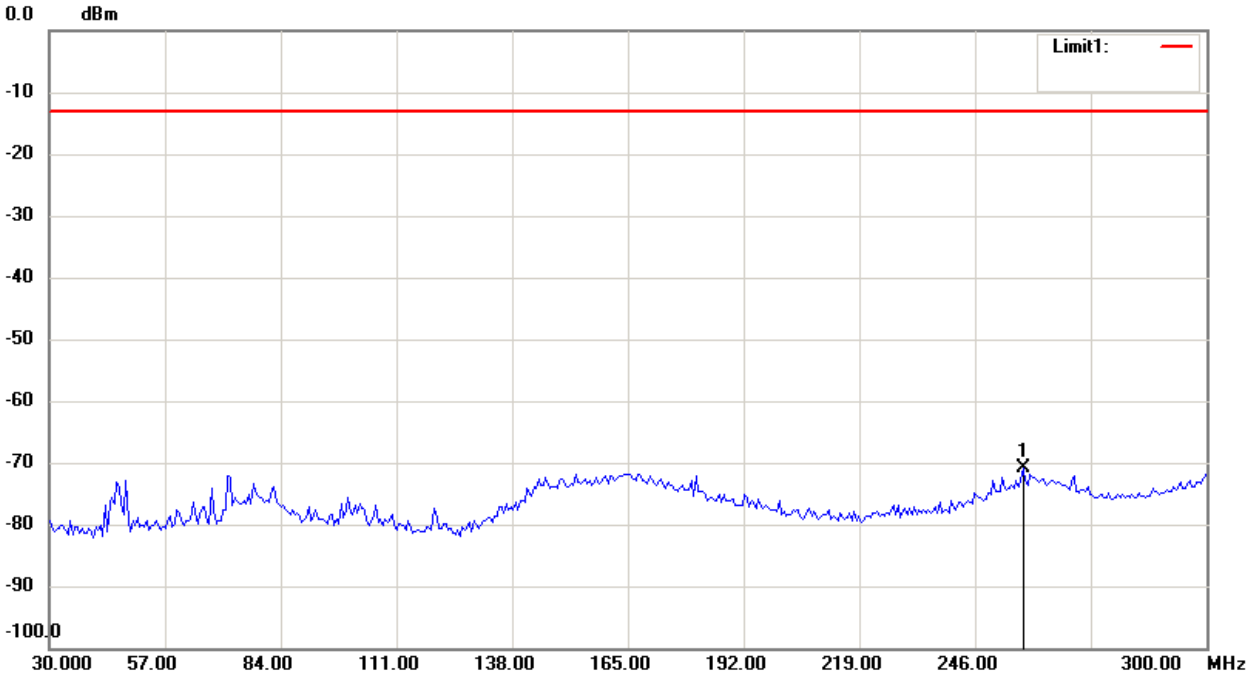
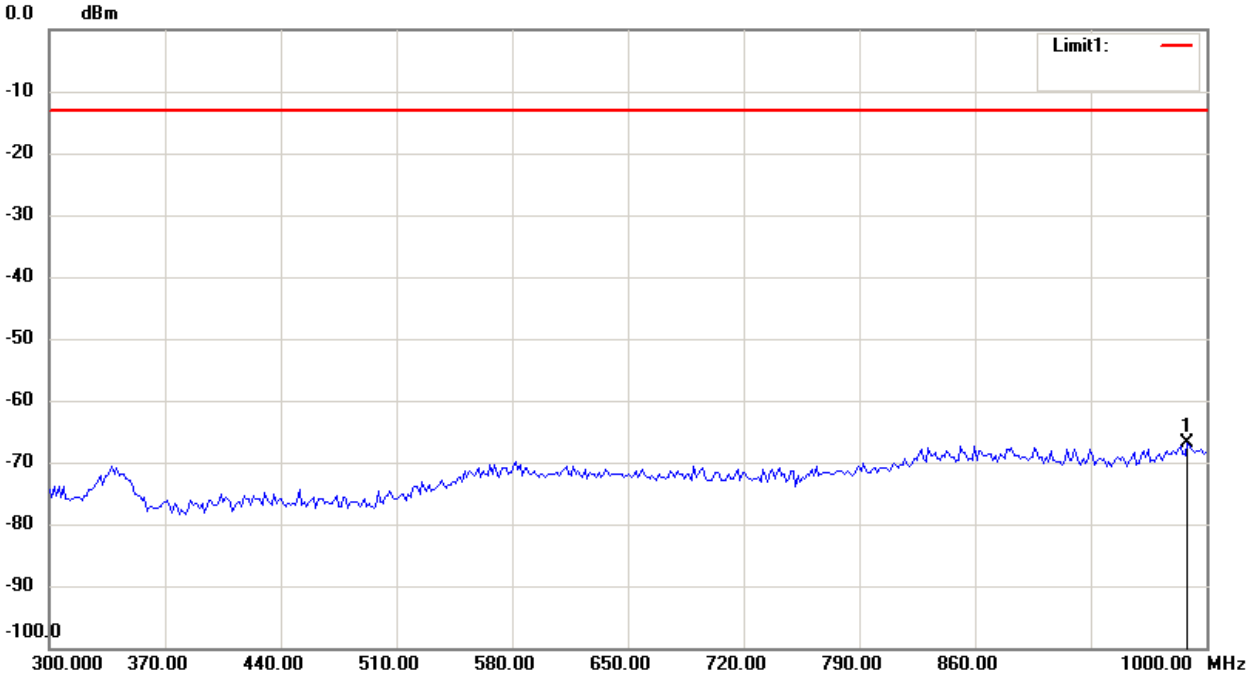
850 band_ CH 251_3.6 V
Antenna Polarization H





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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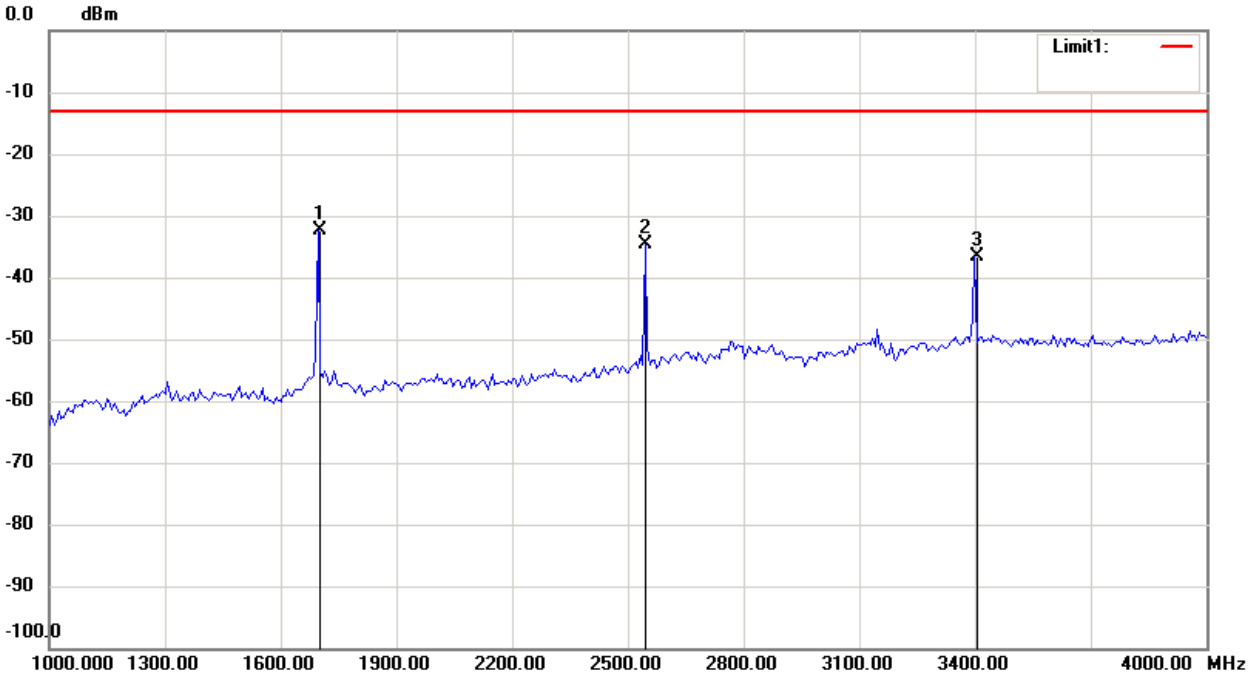

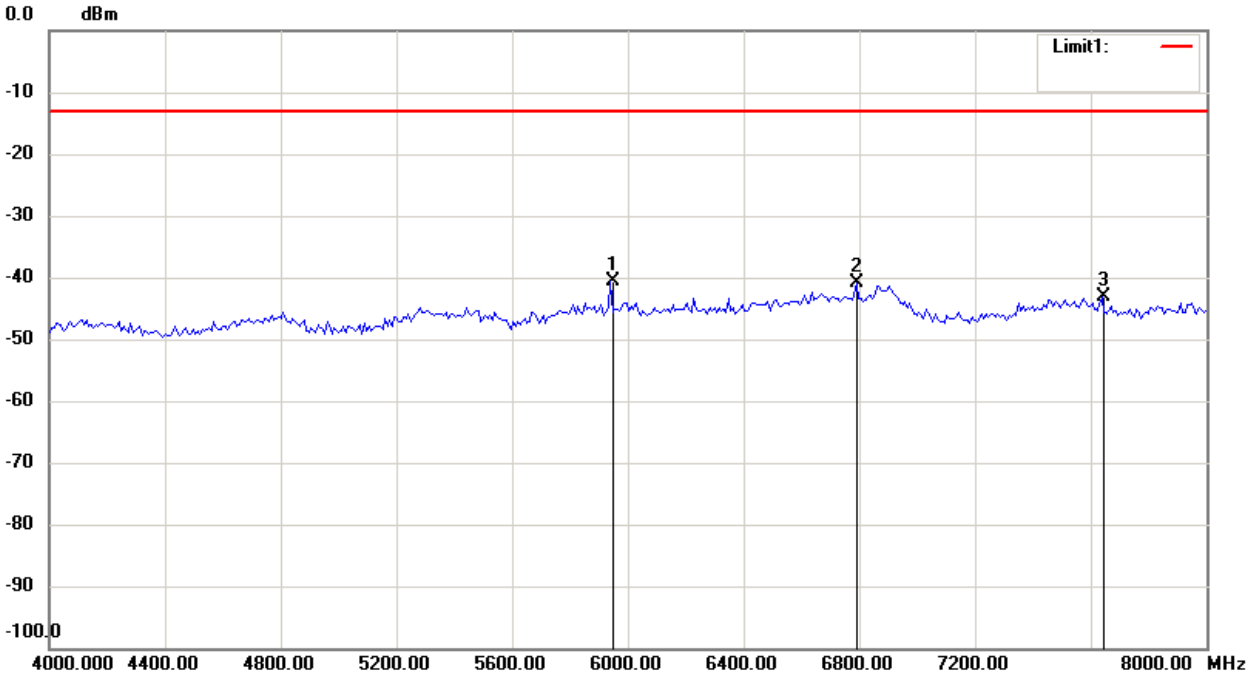

Note:

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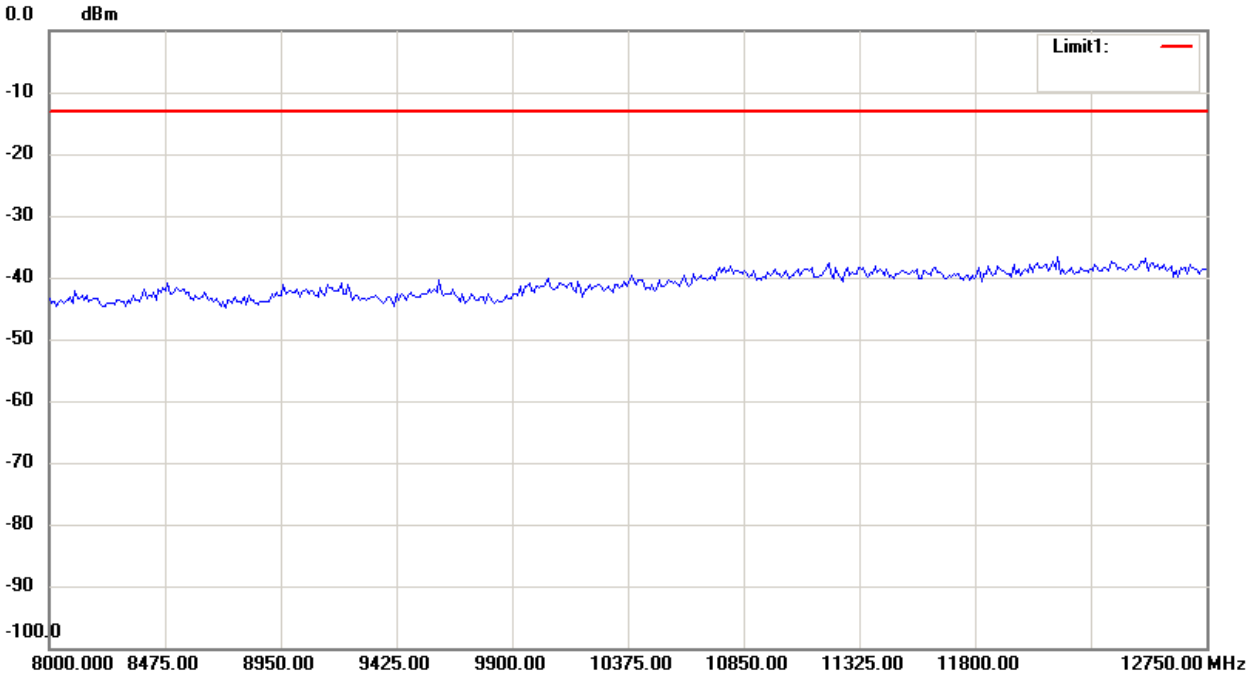
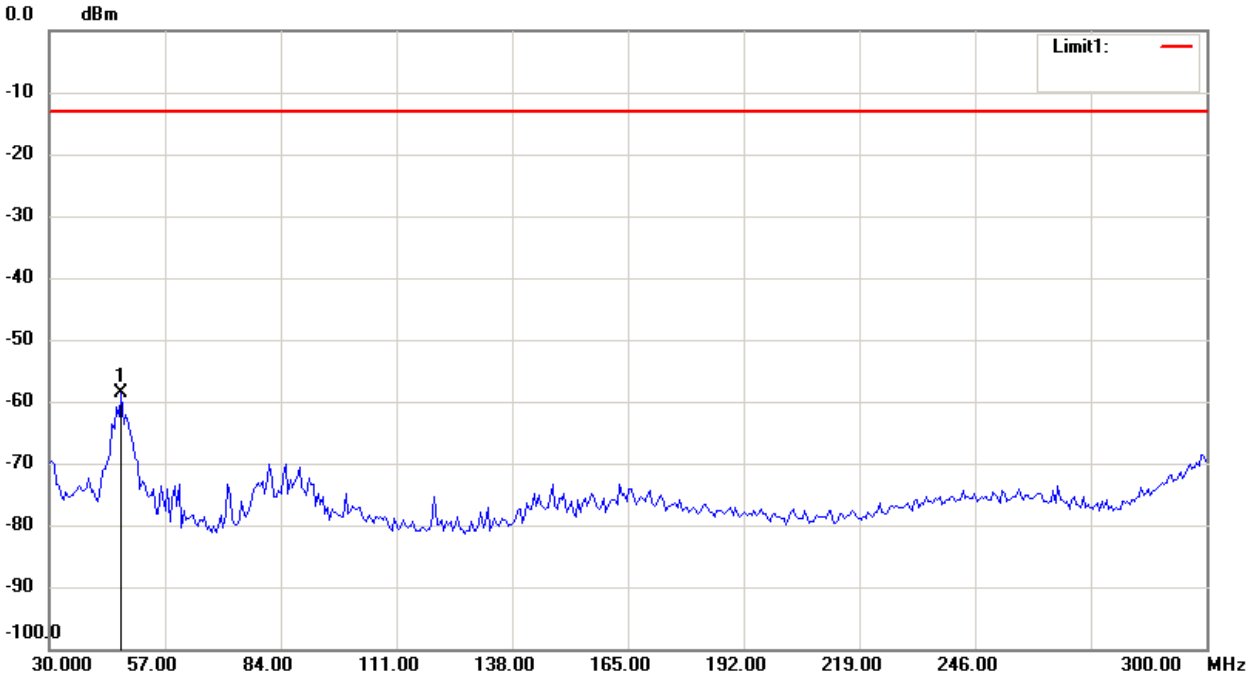


Antenna Polarization V



Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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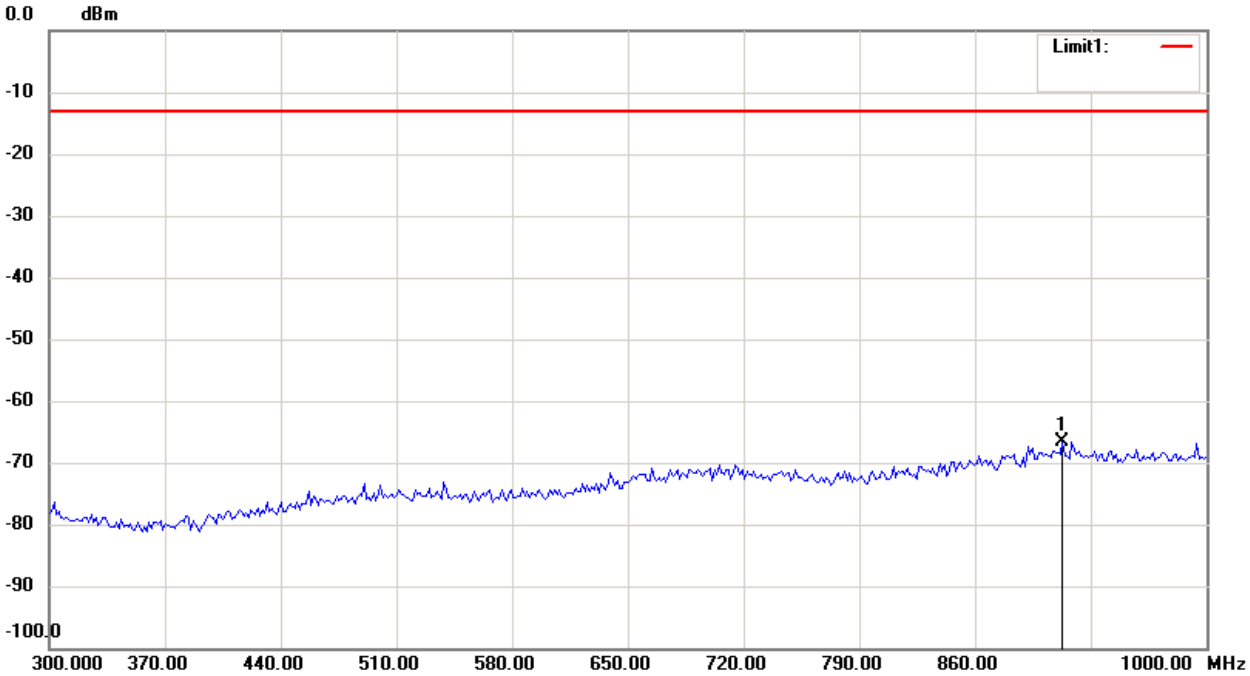

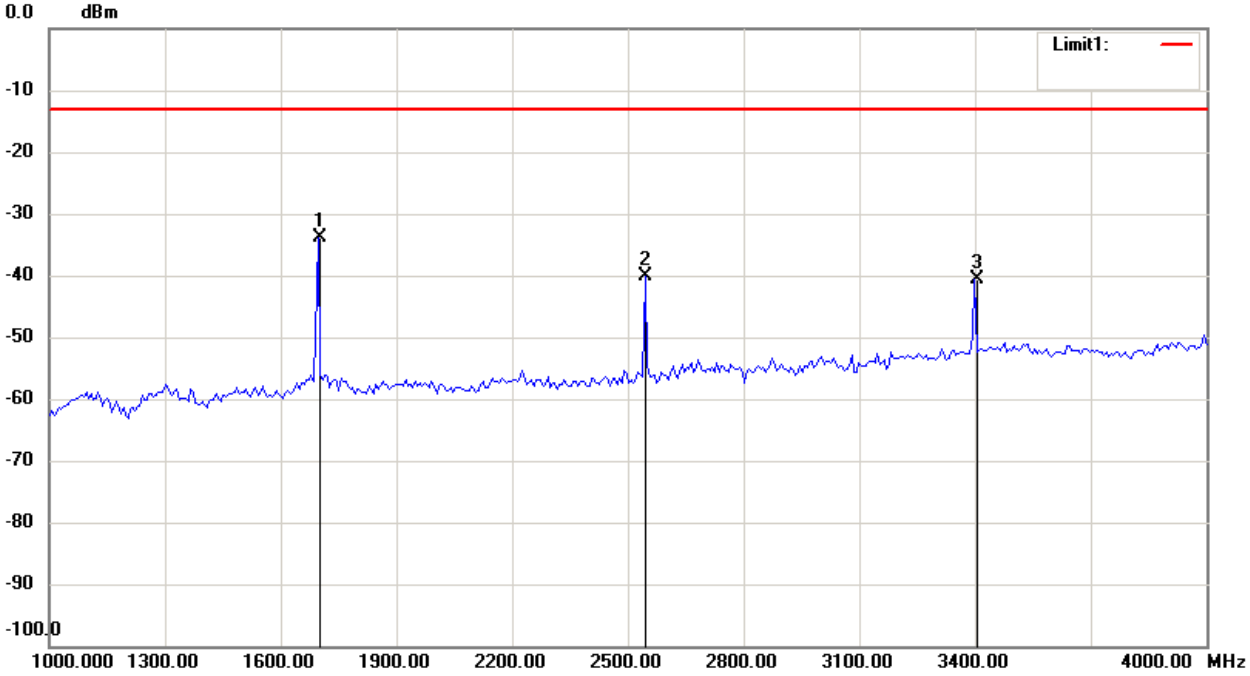

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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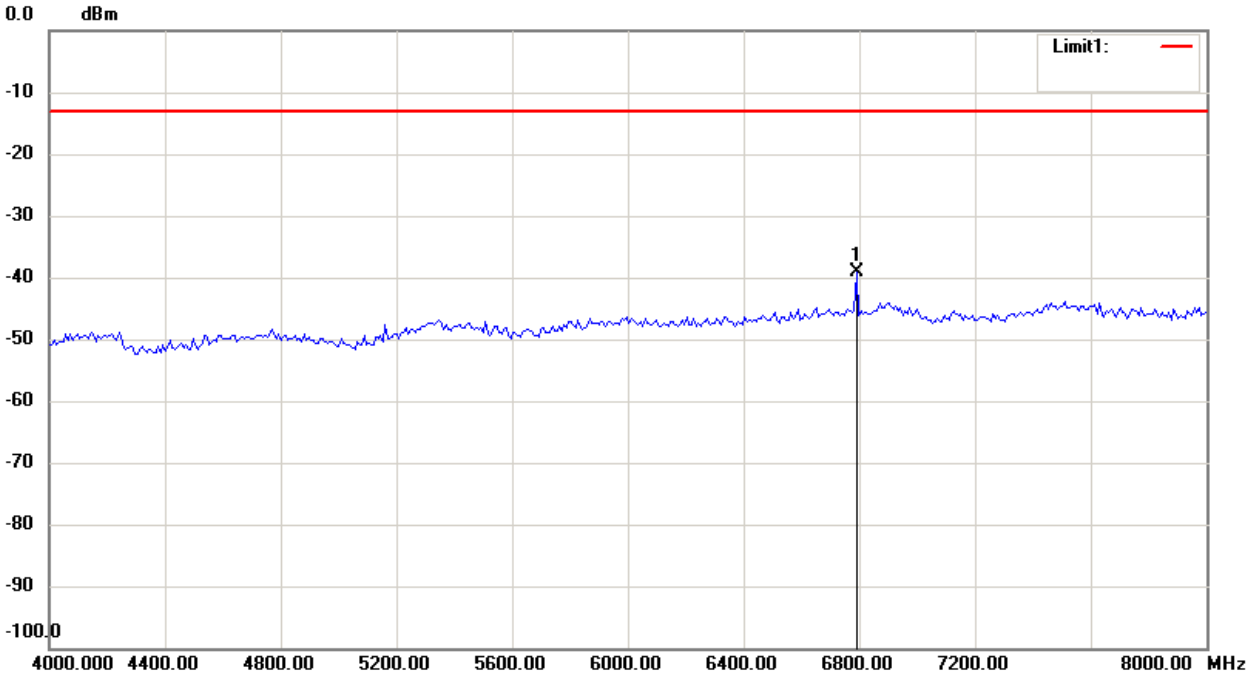

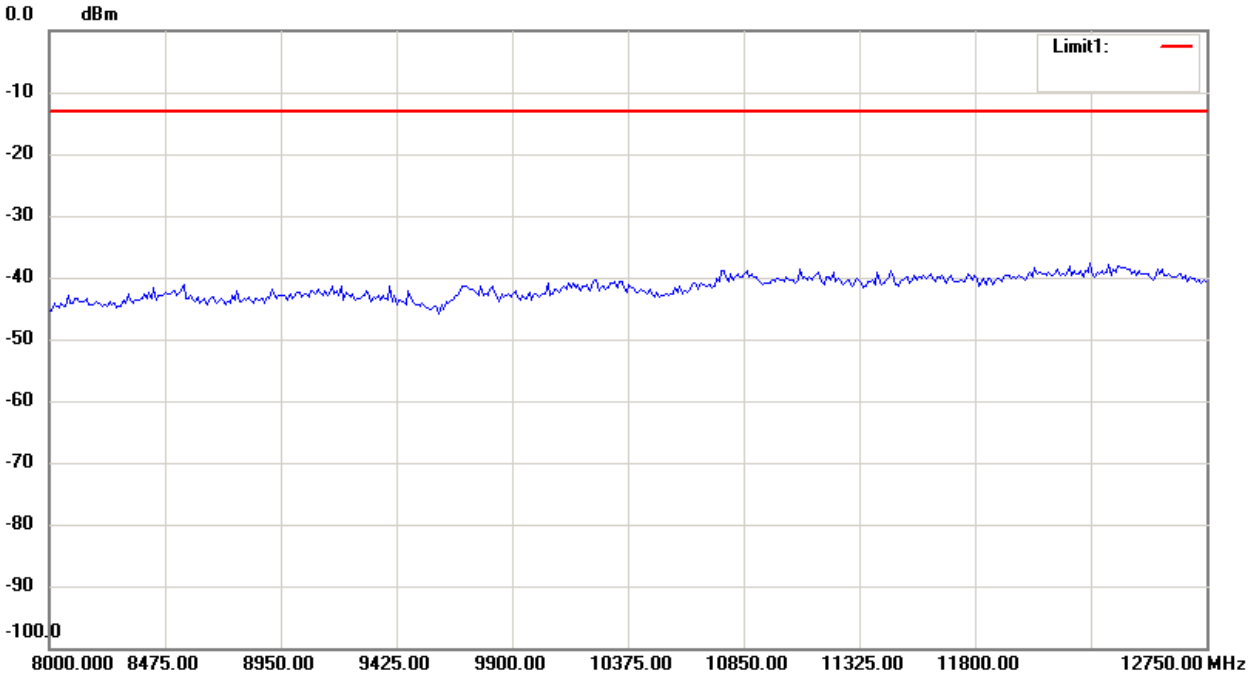

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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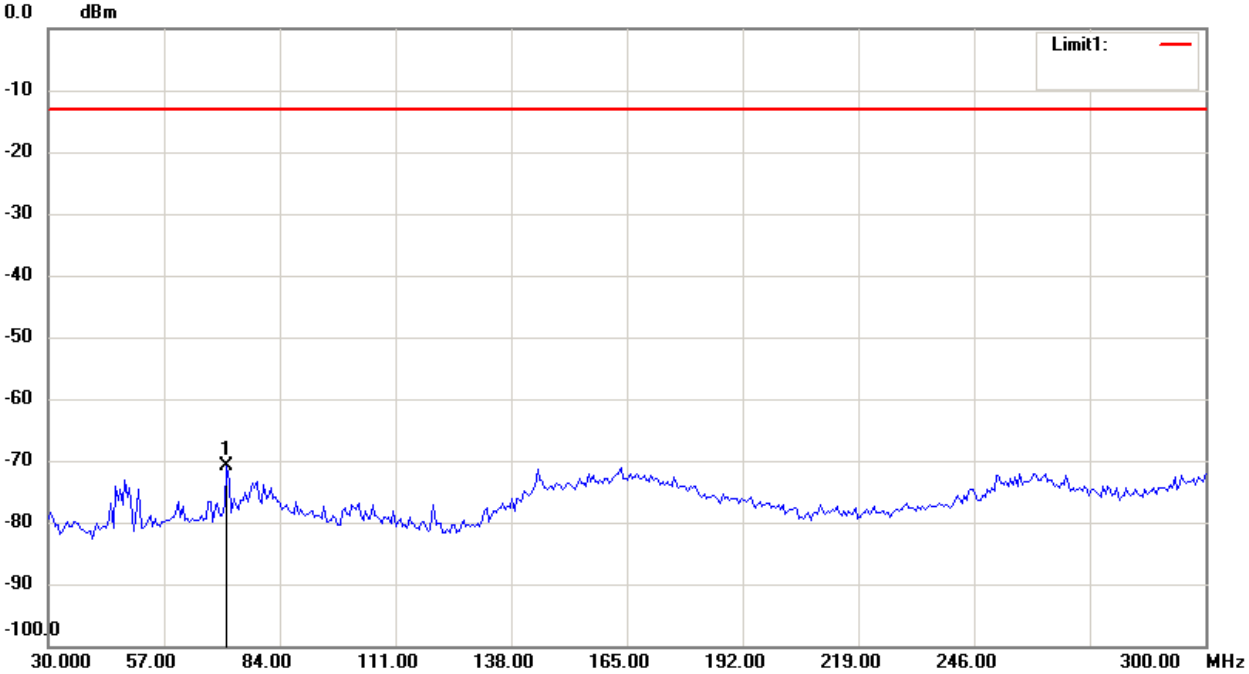
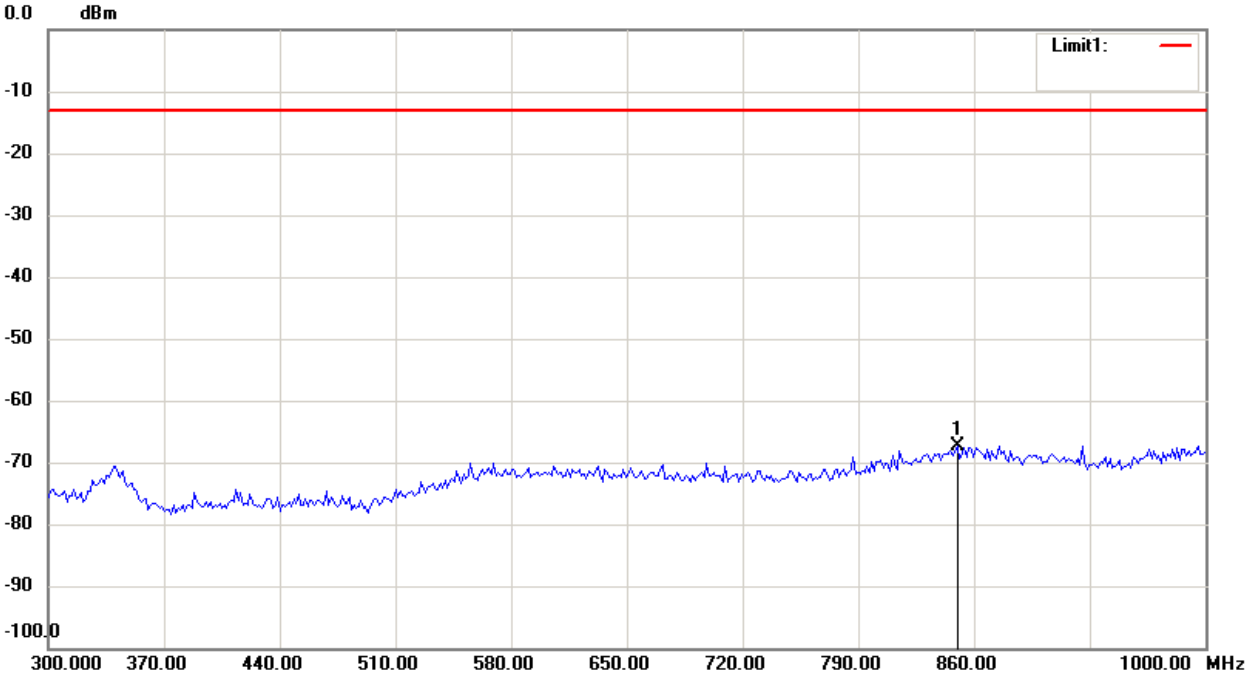
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

1900 band_ CH 512_3.6 V
Antenna Polarization H





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
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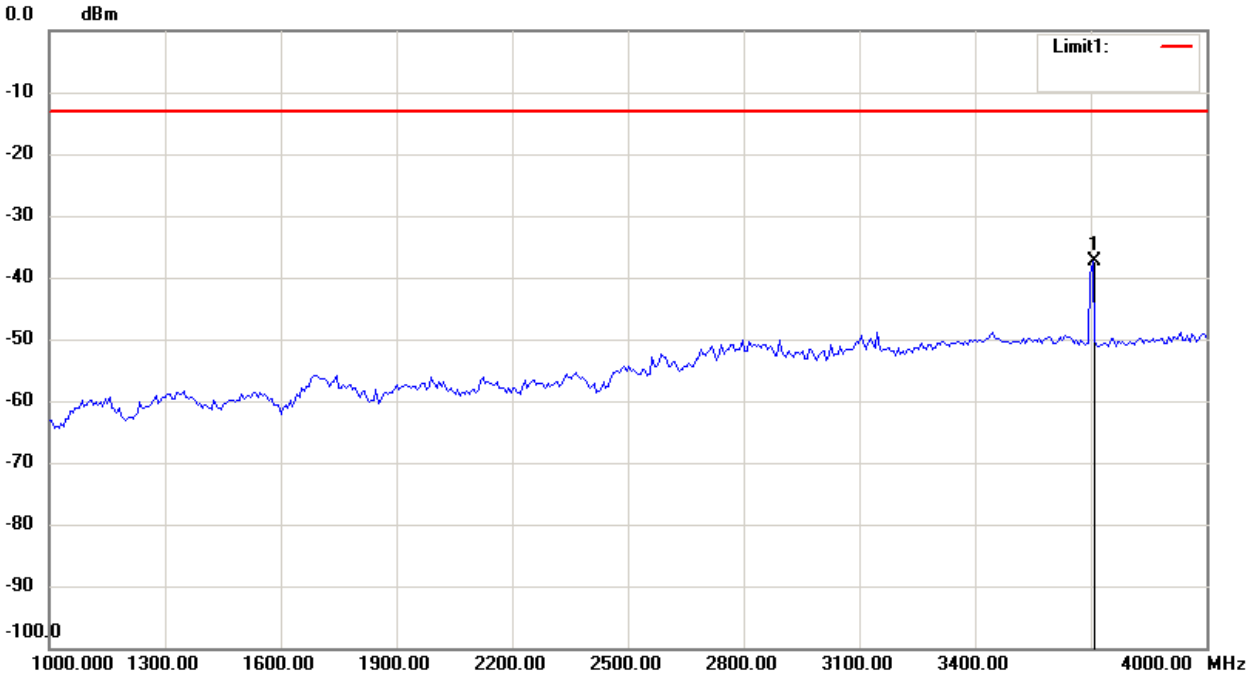

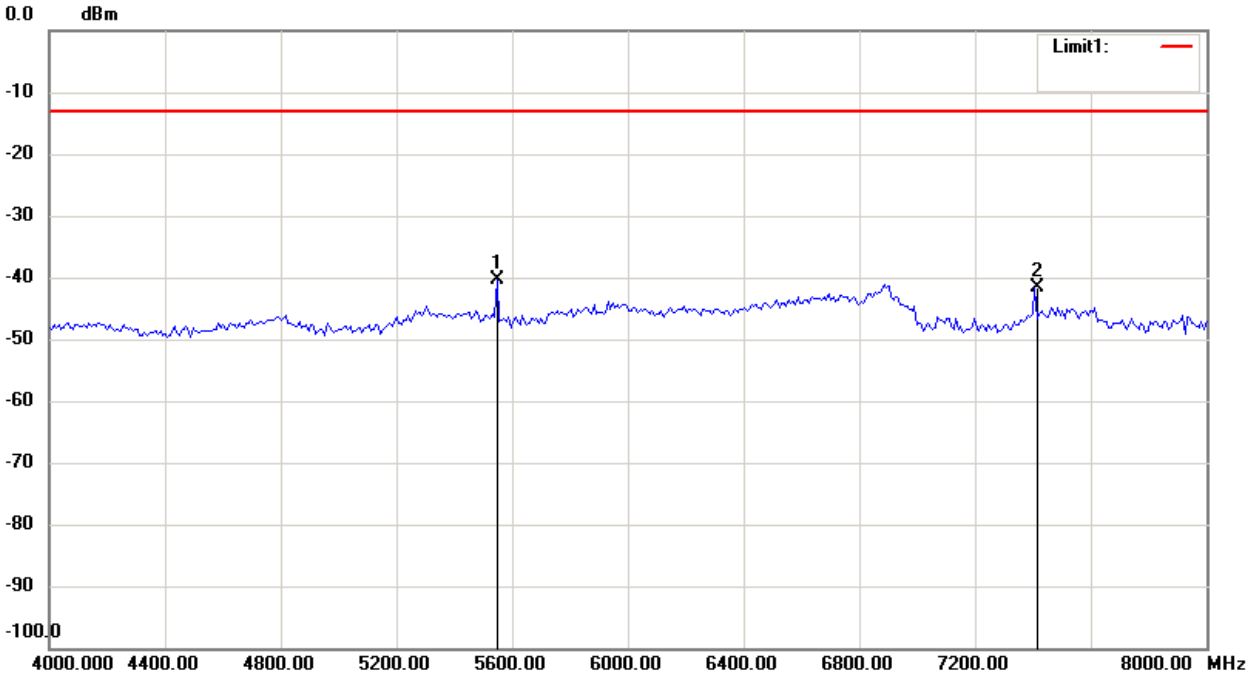

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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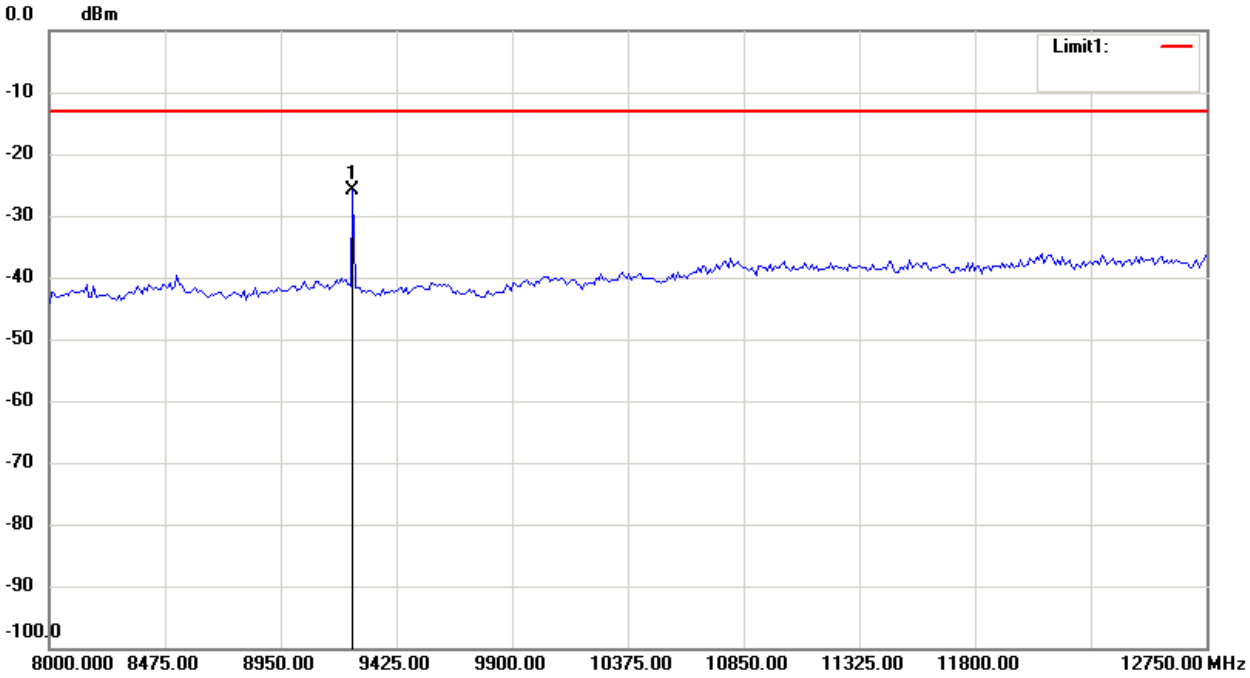

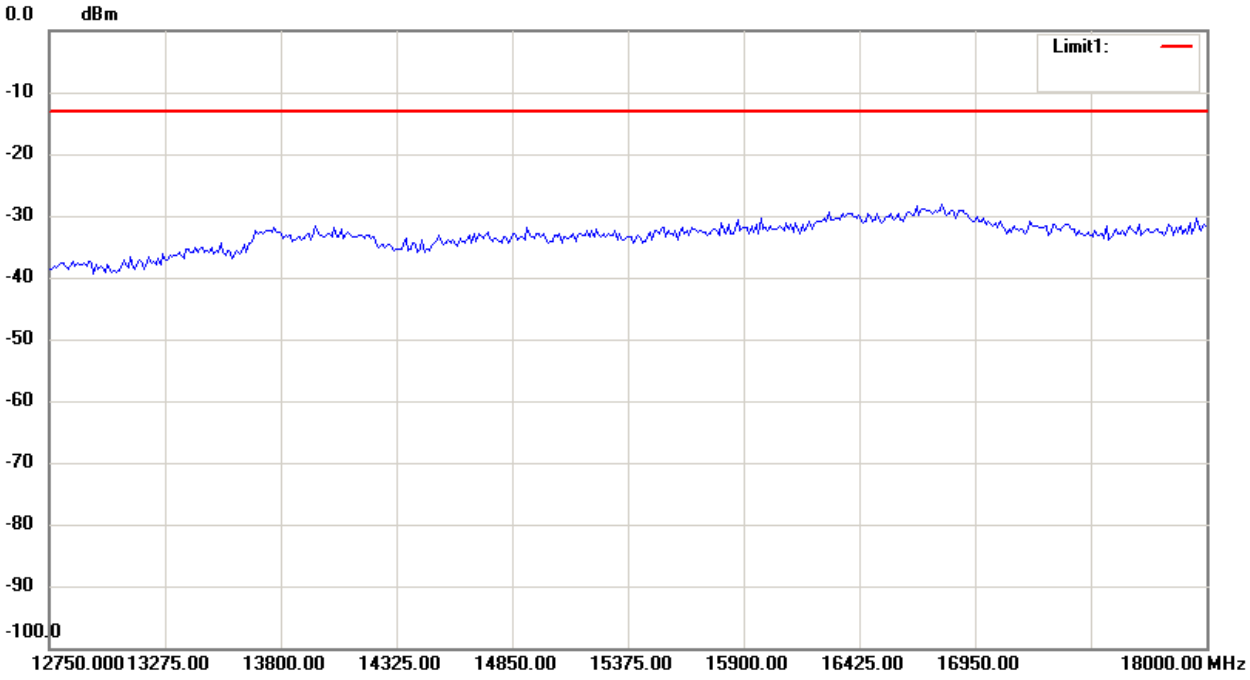

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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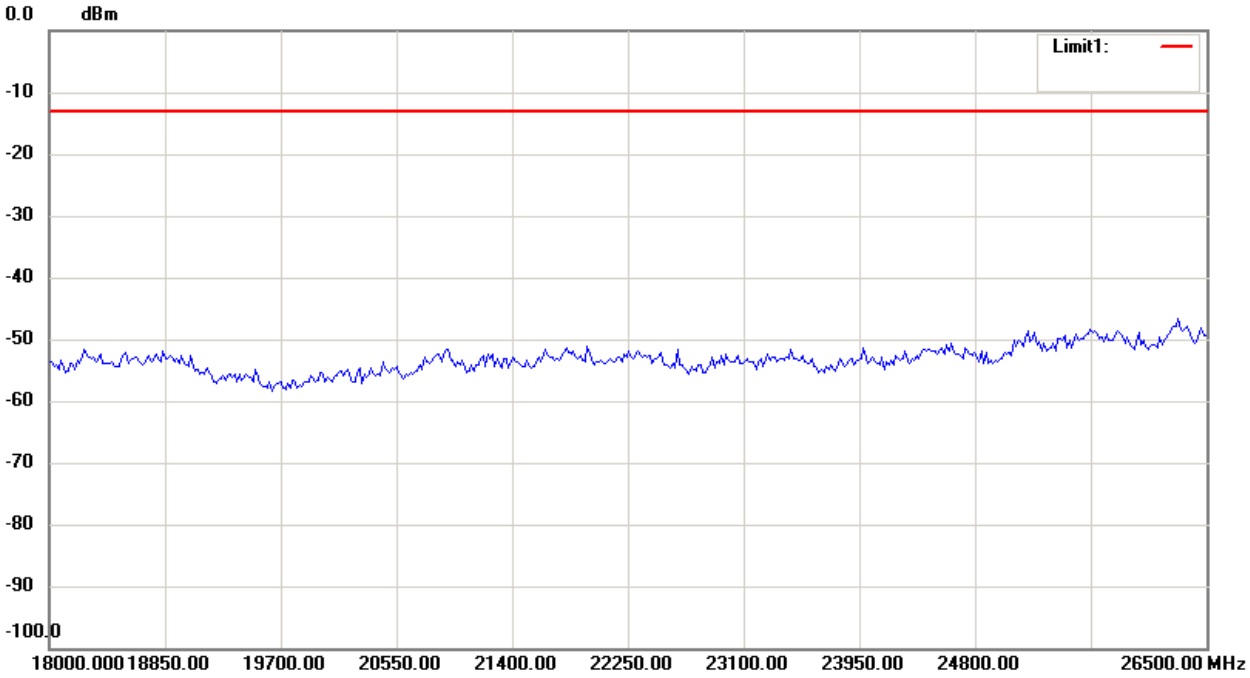
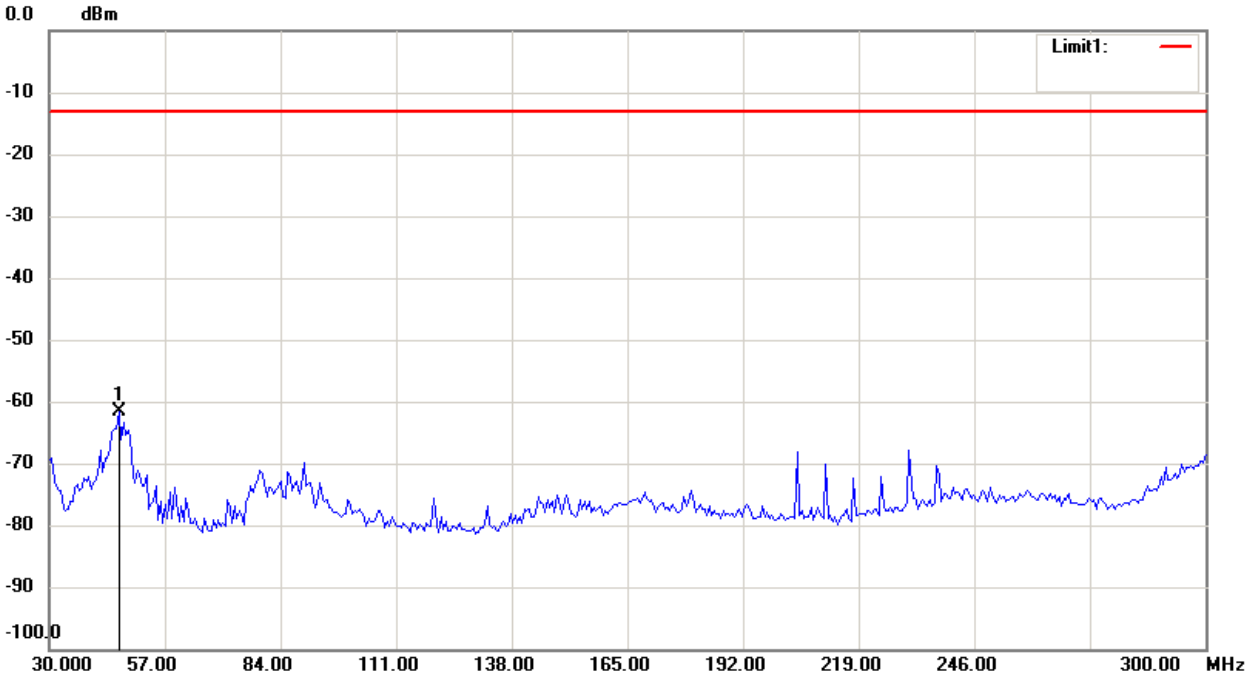
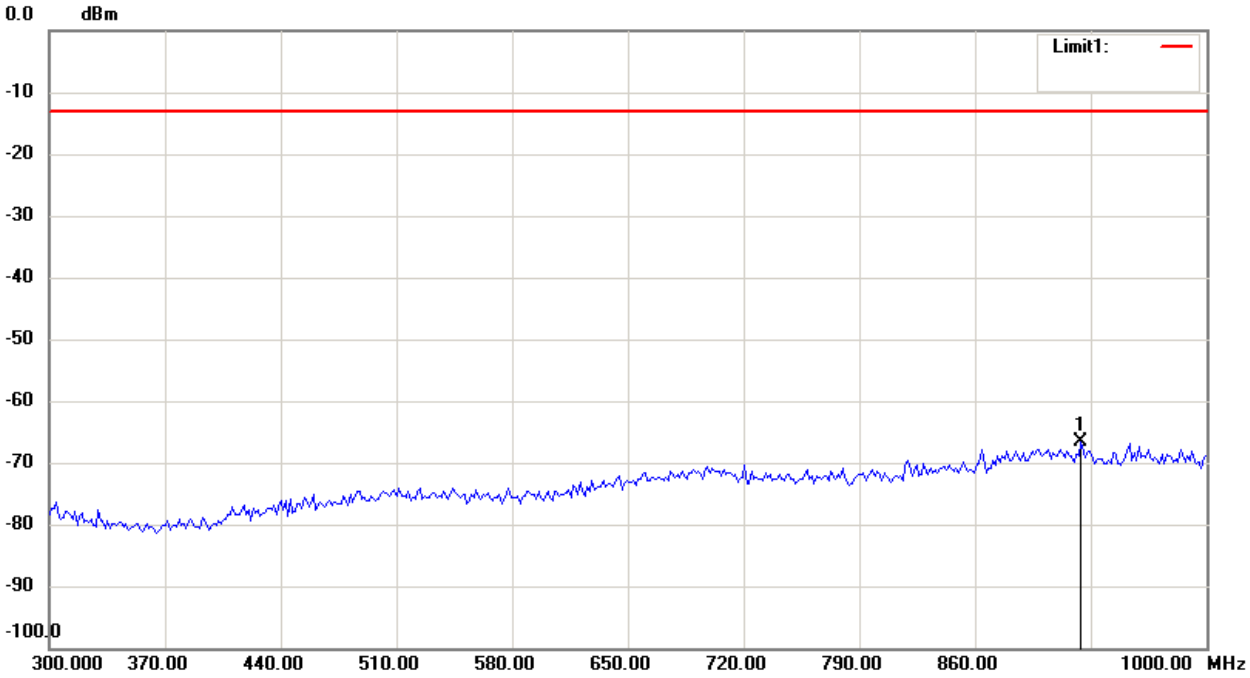


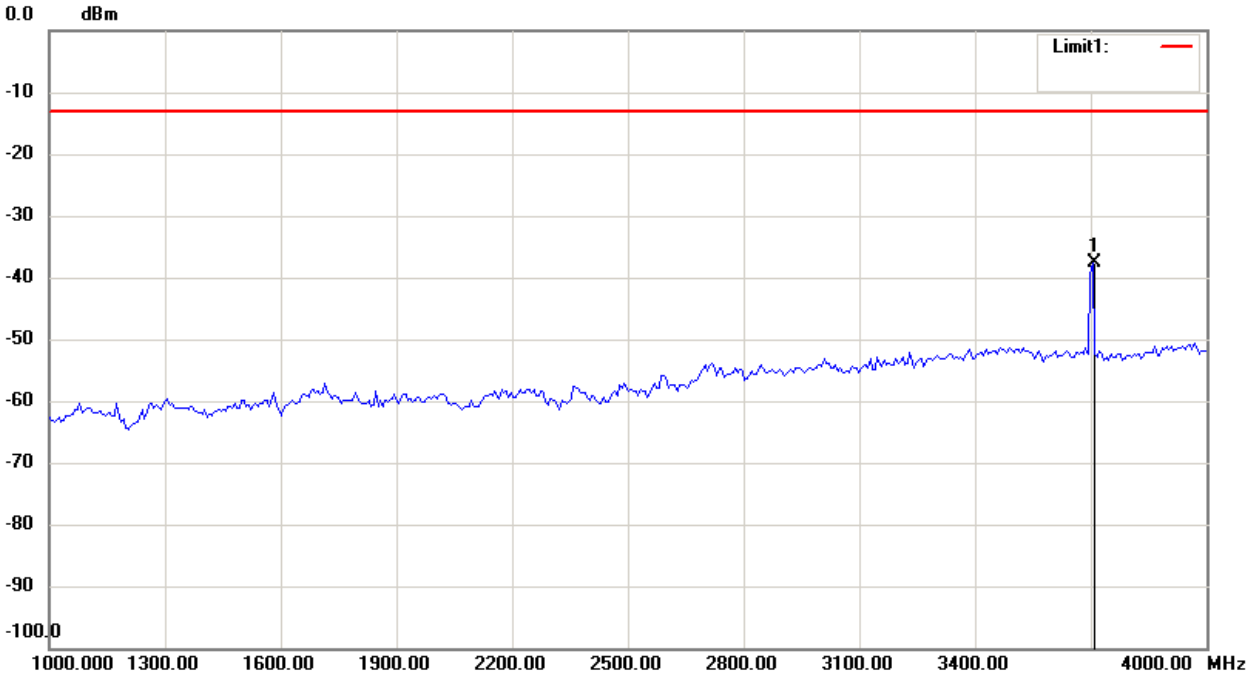
Antenna Polarization V



Note:

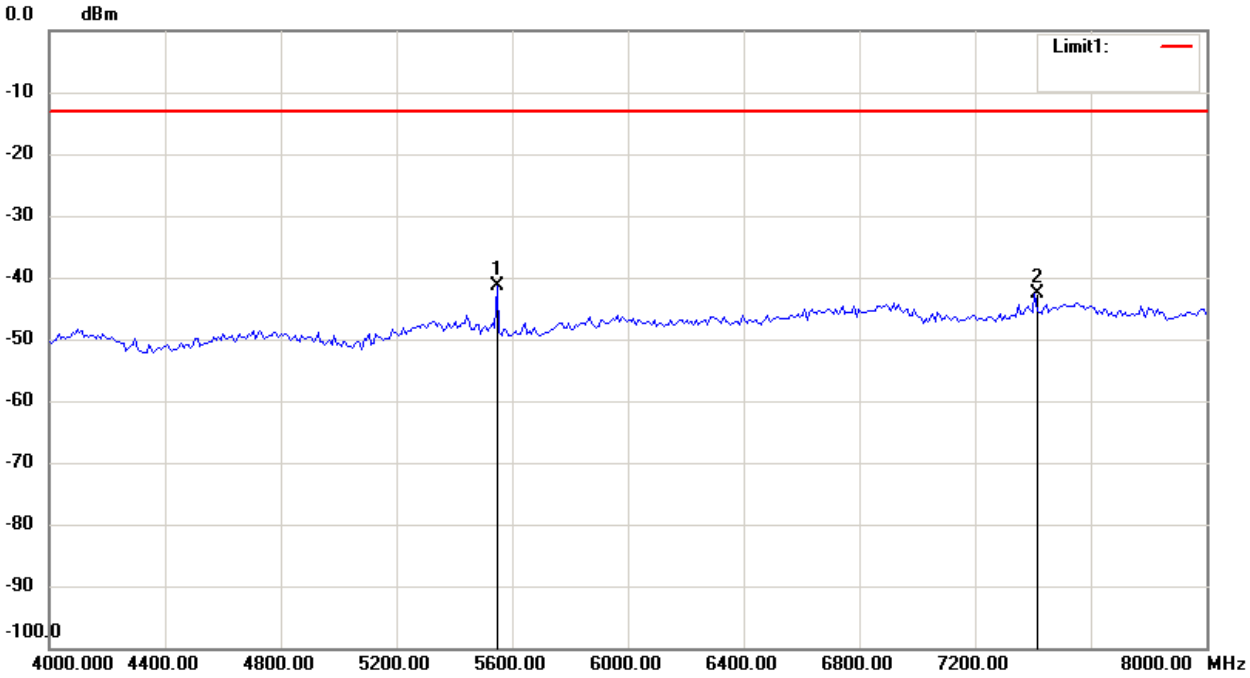
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

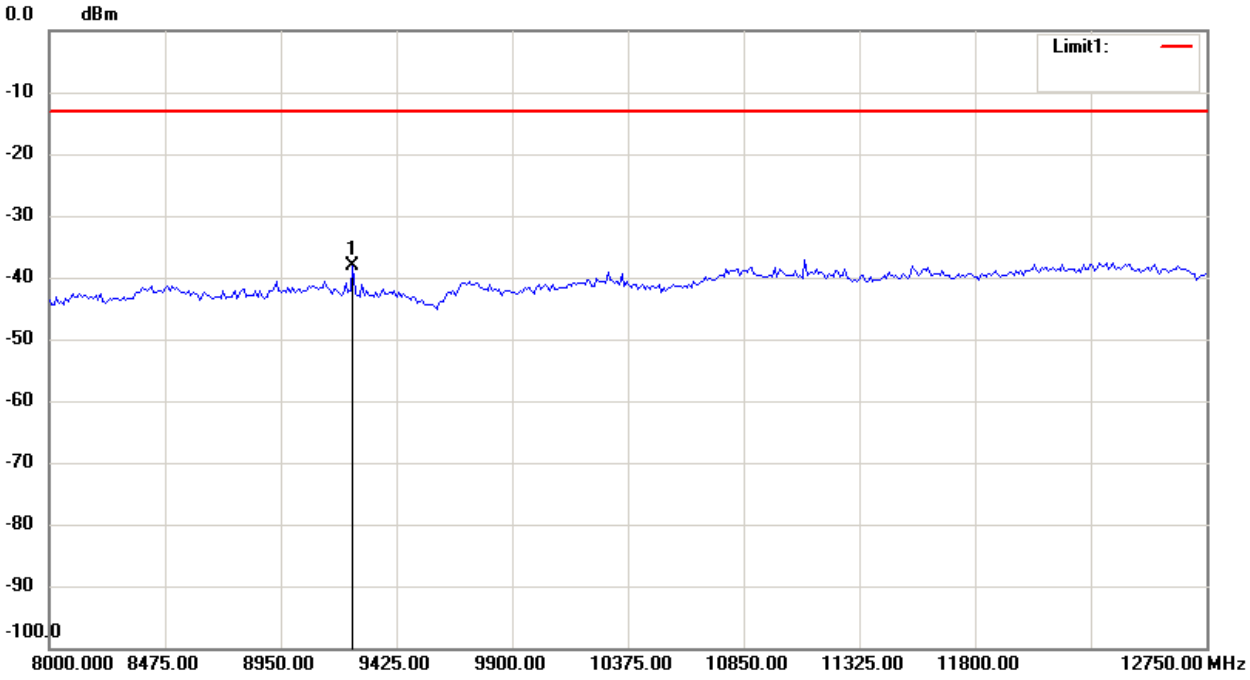




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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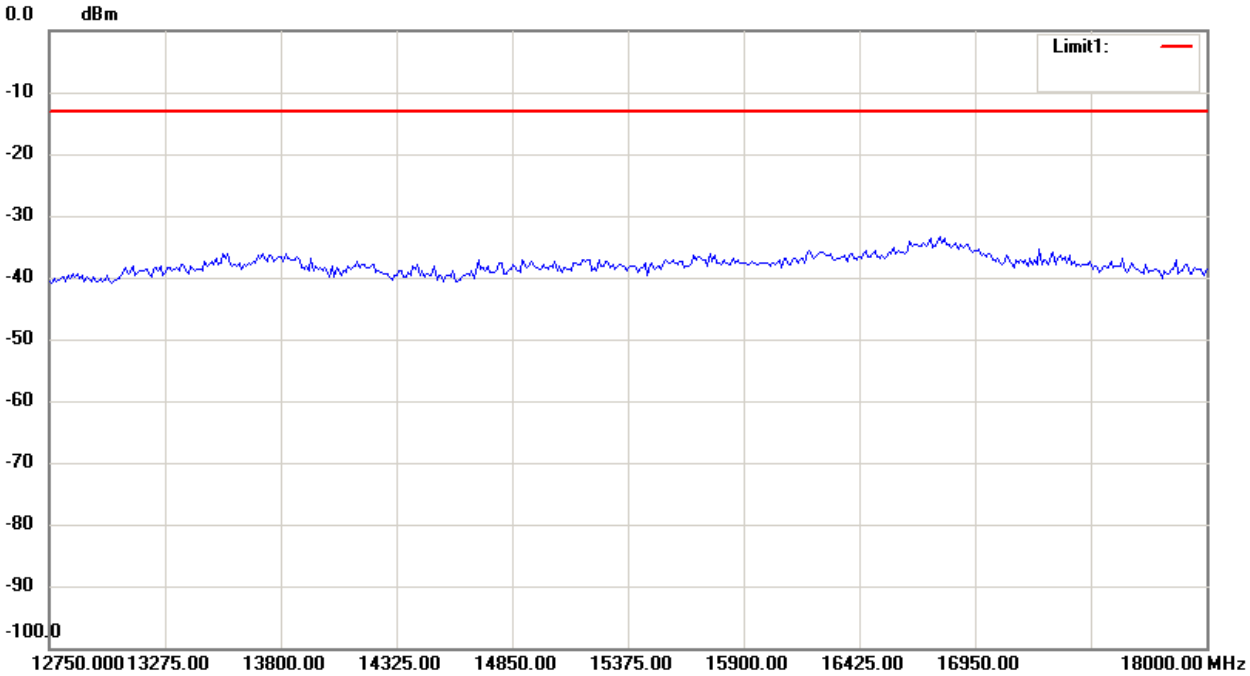
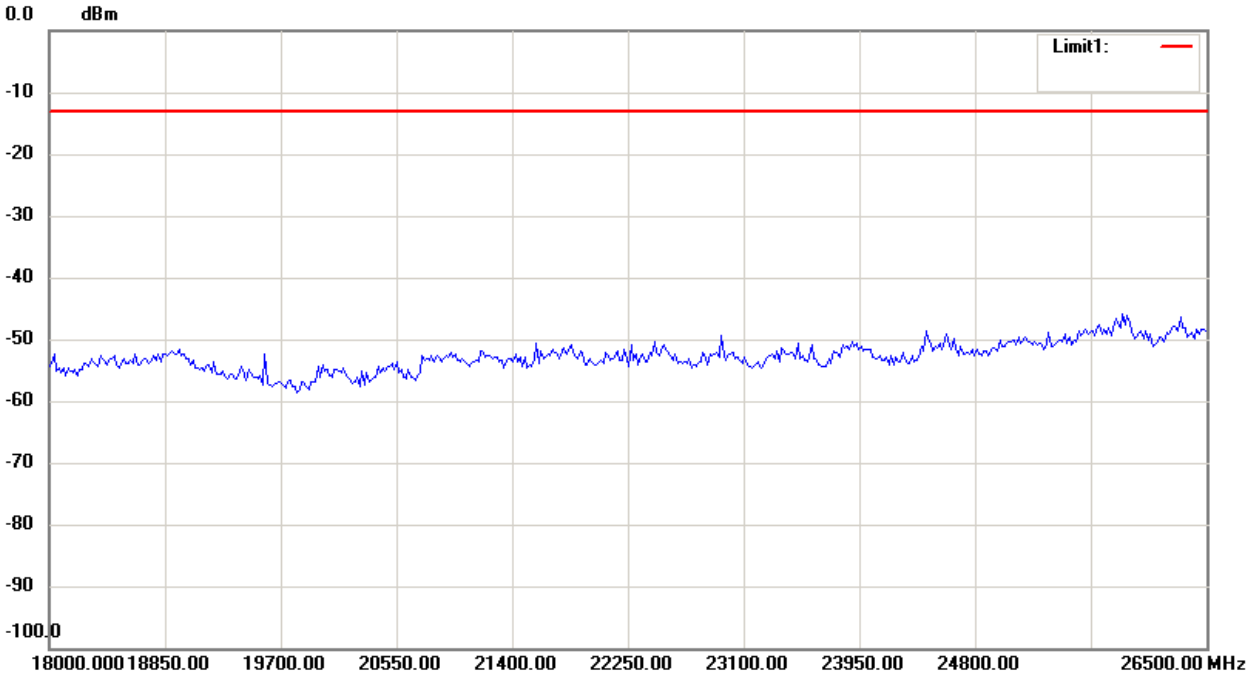
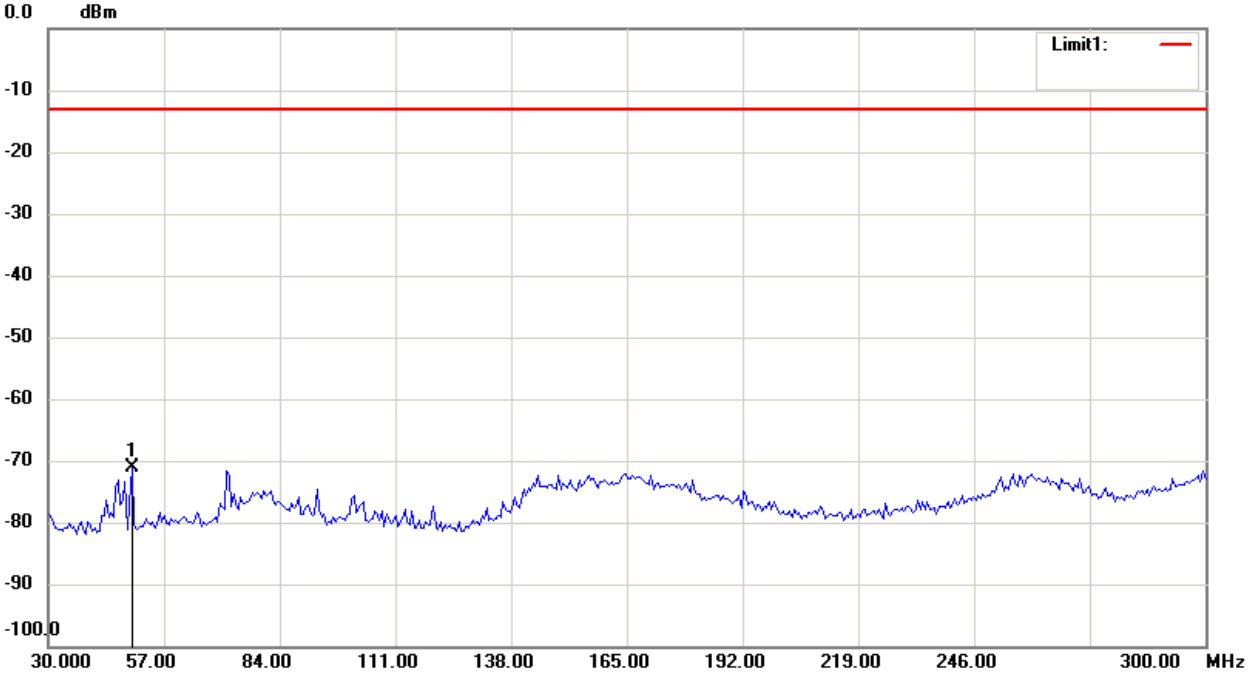


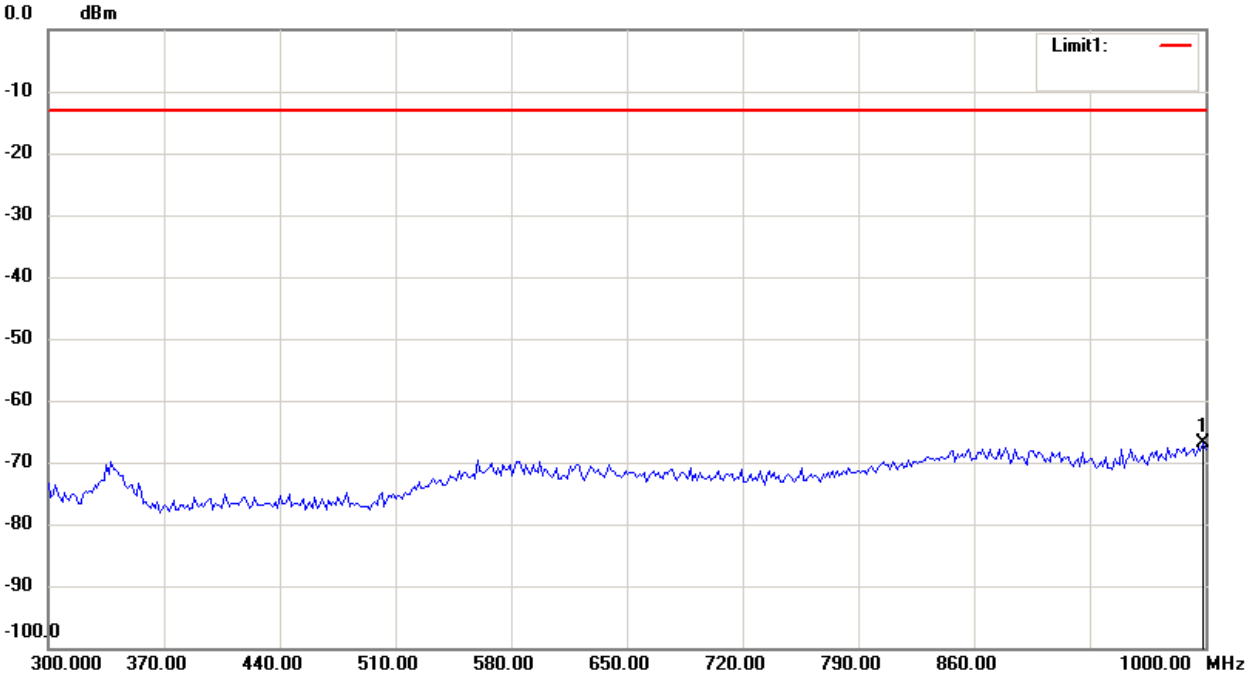


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

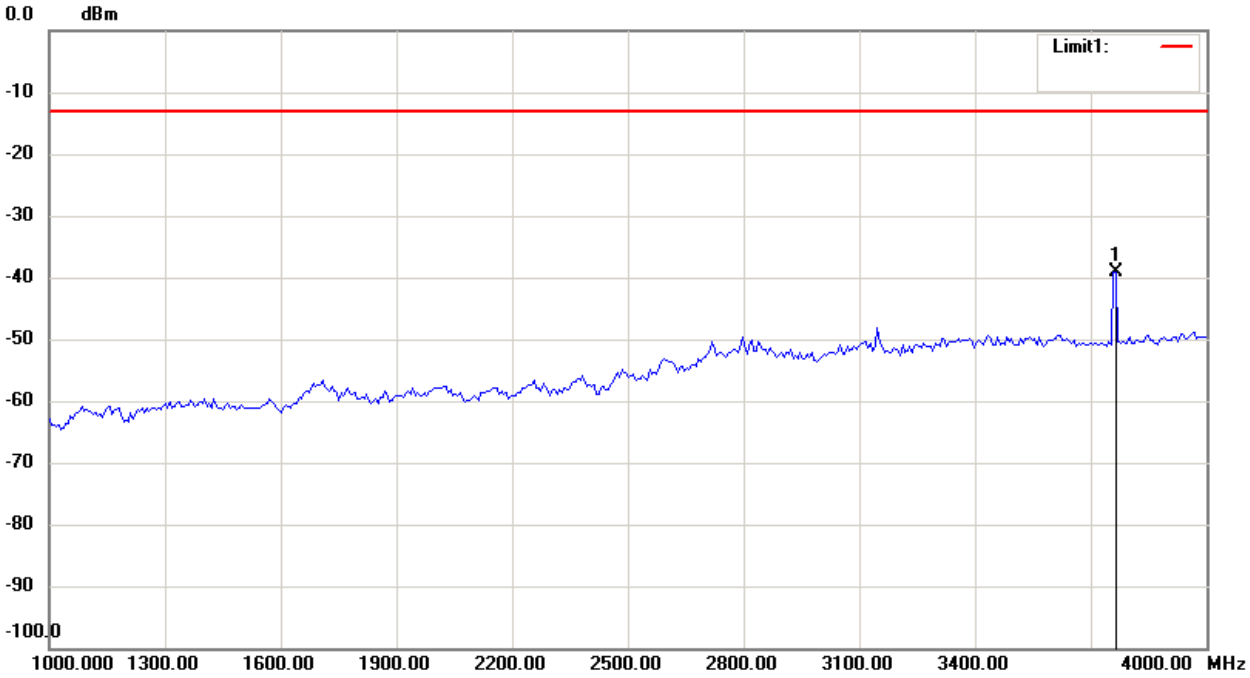
1900 band_ CH 661_3.6 V
Antenna Polarization H

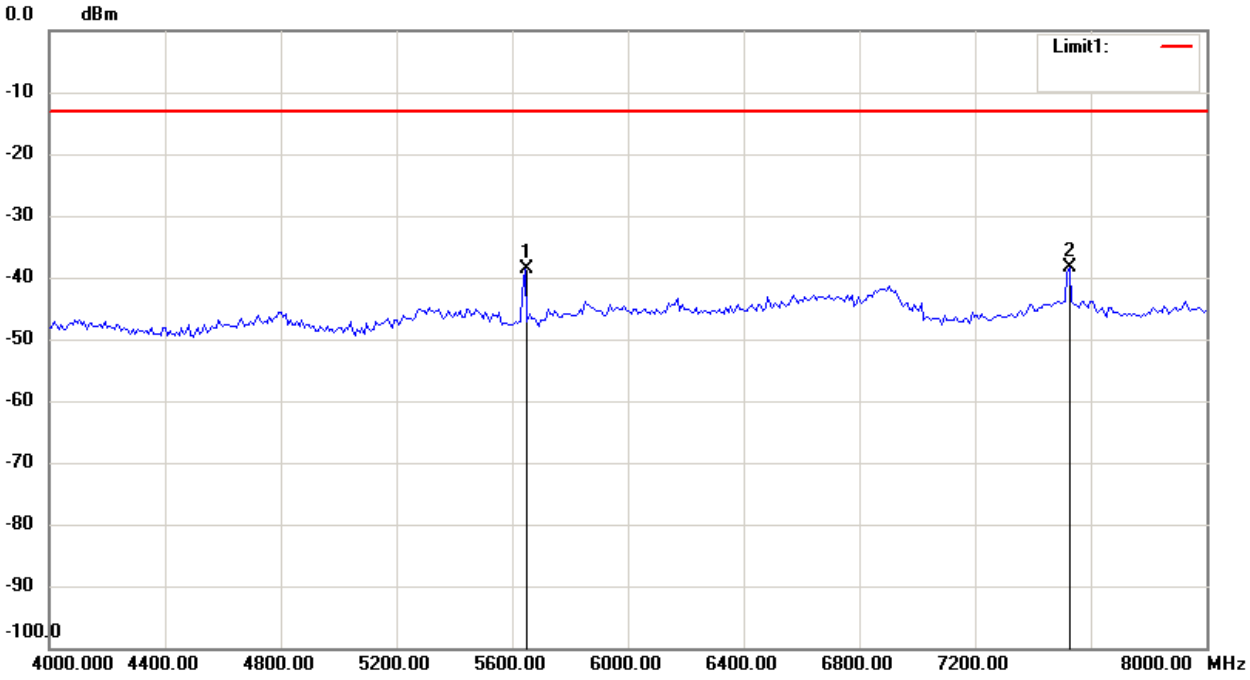




Note:

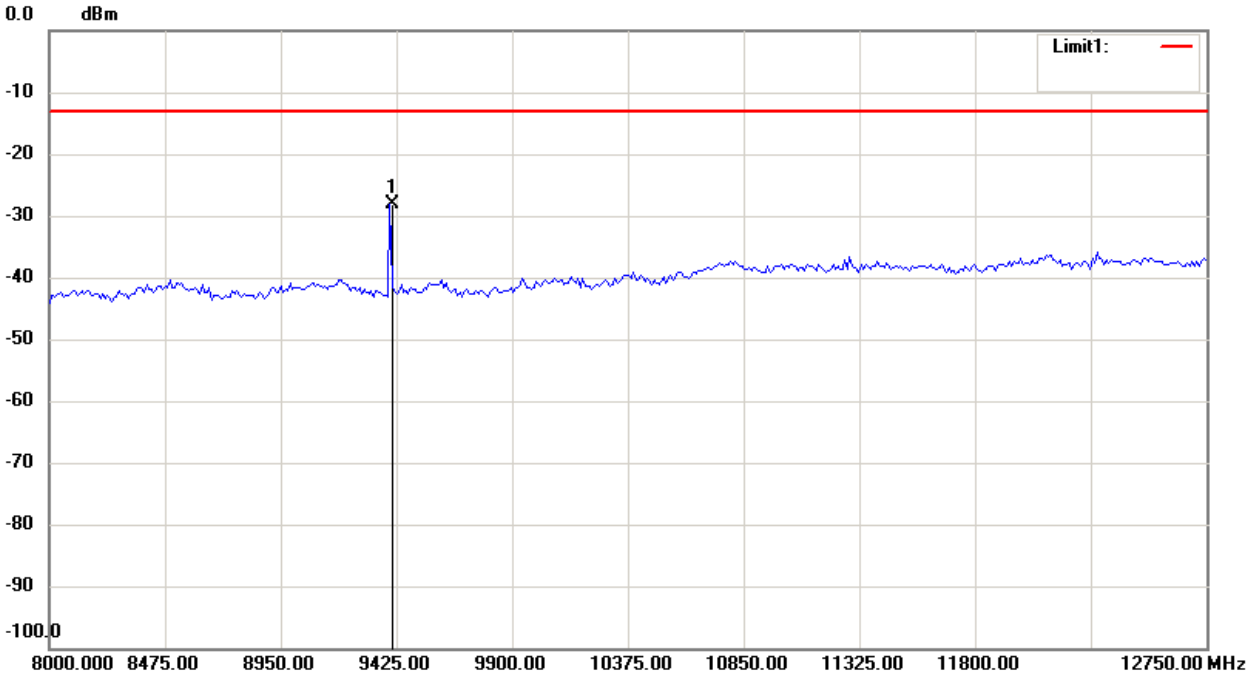
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

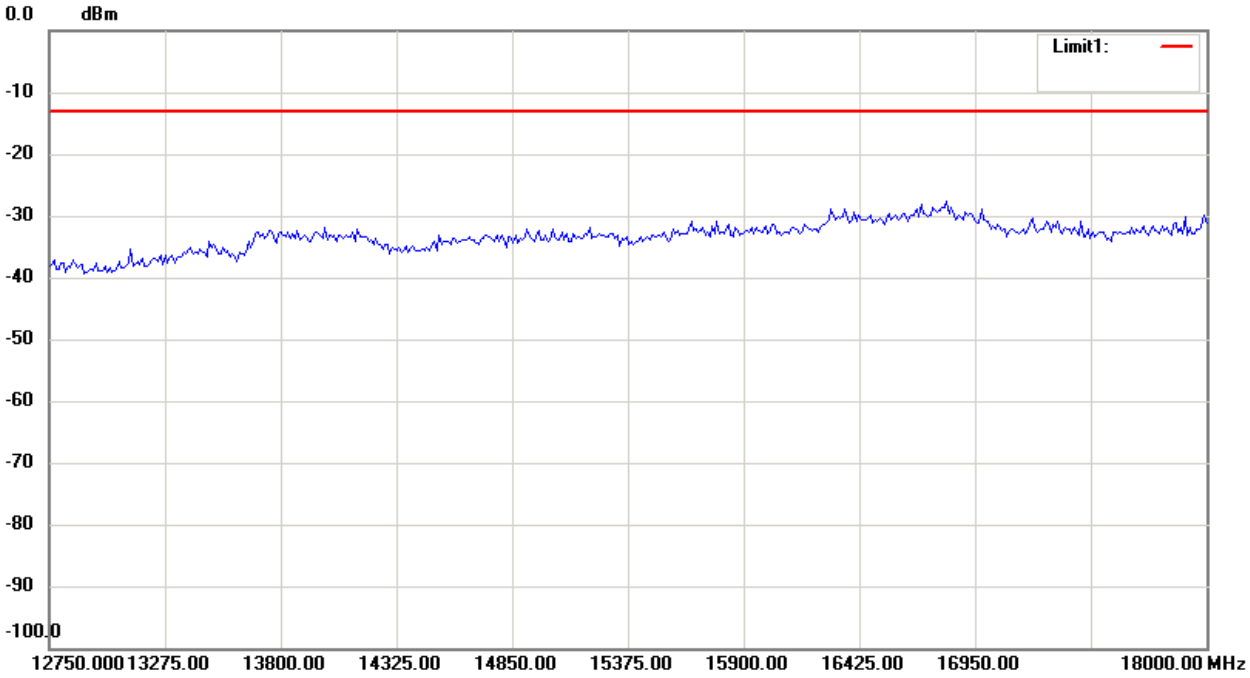




Note:

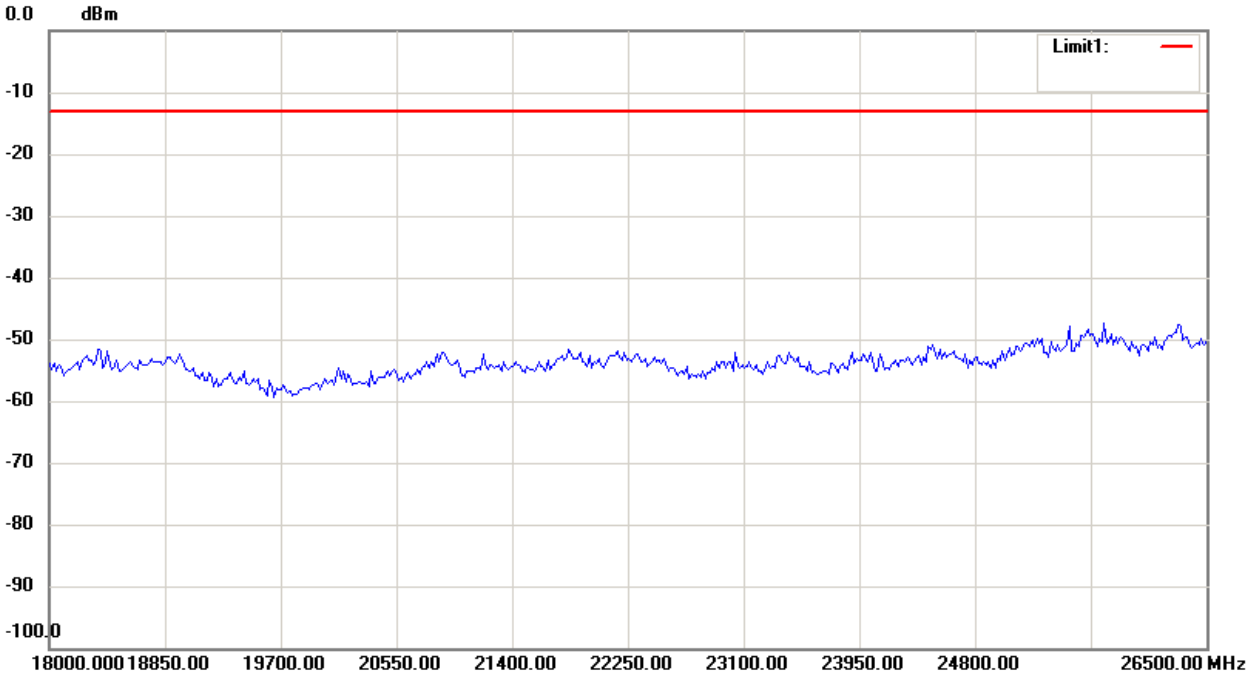
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**



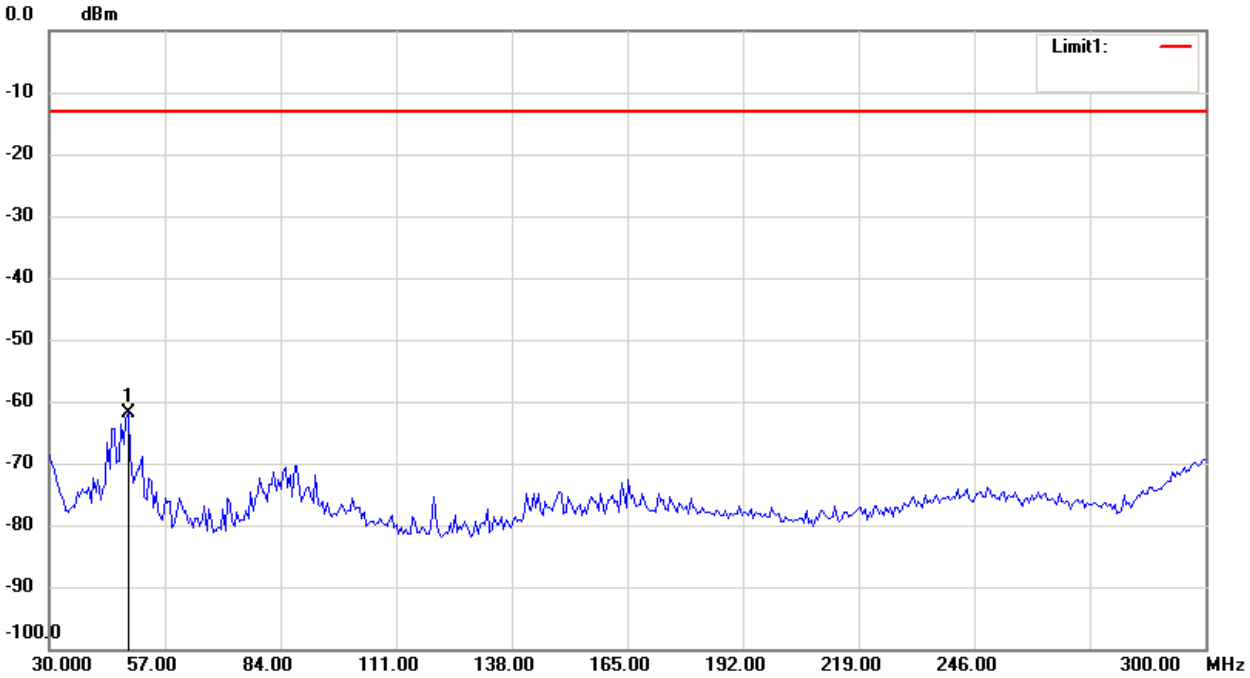


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

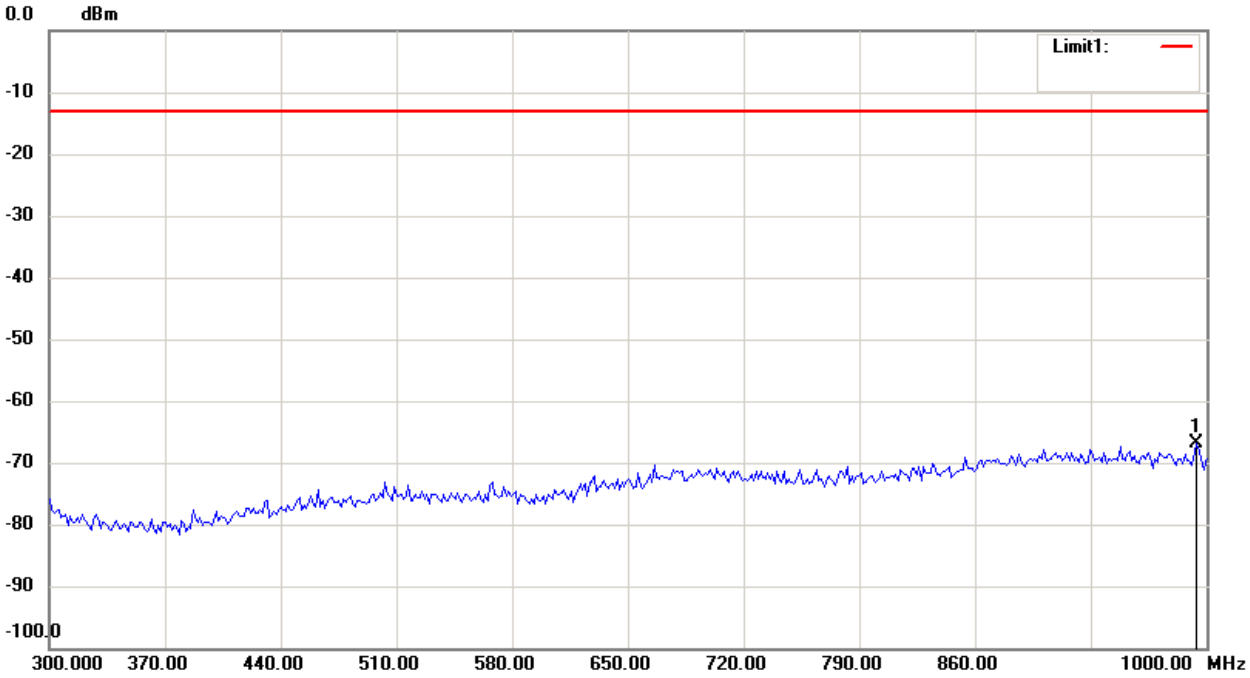


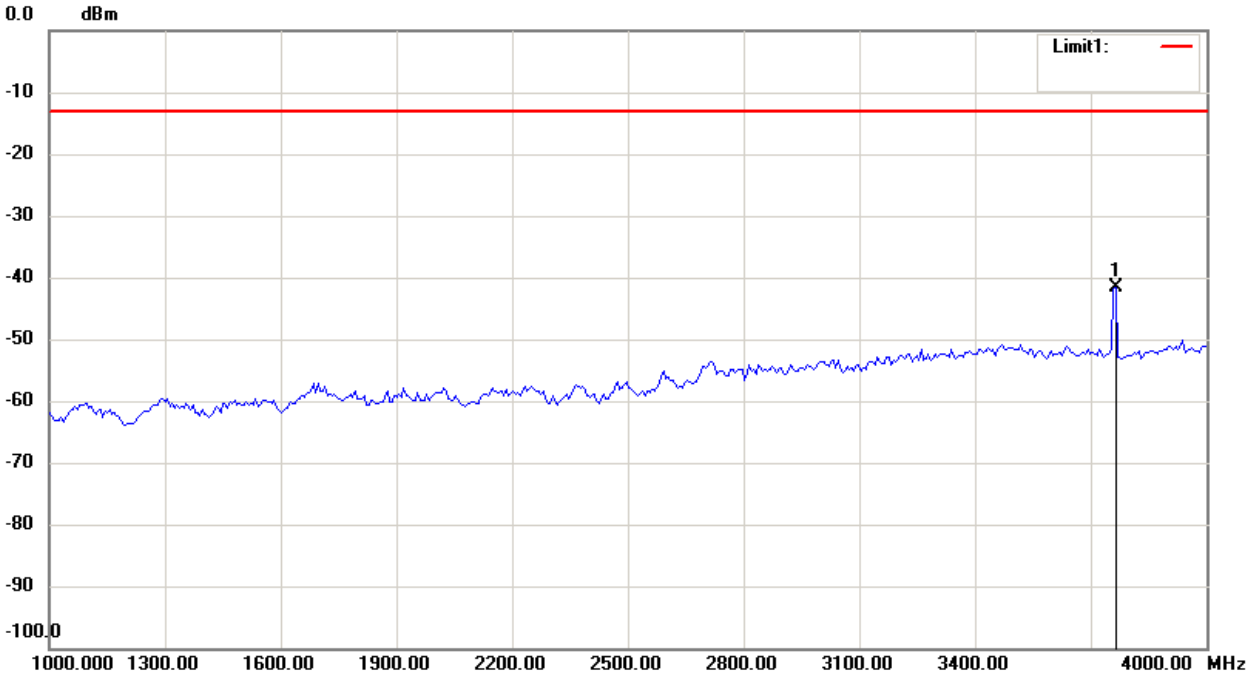
Antenna Polarization V



Note:

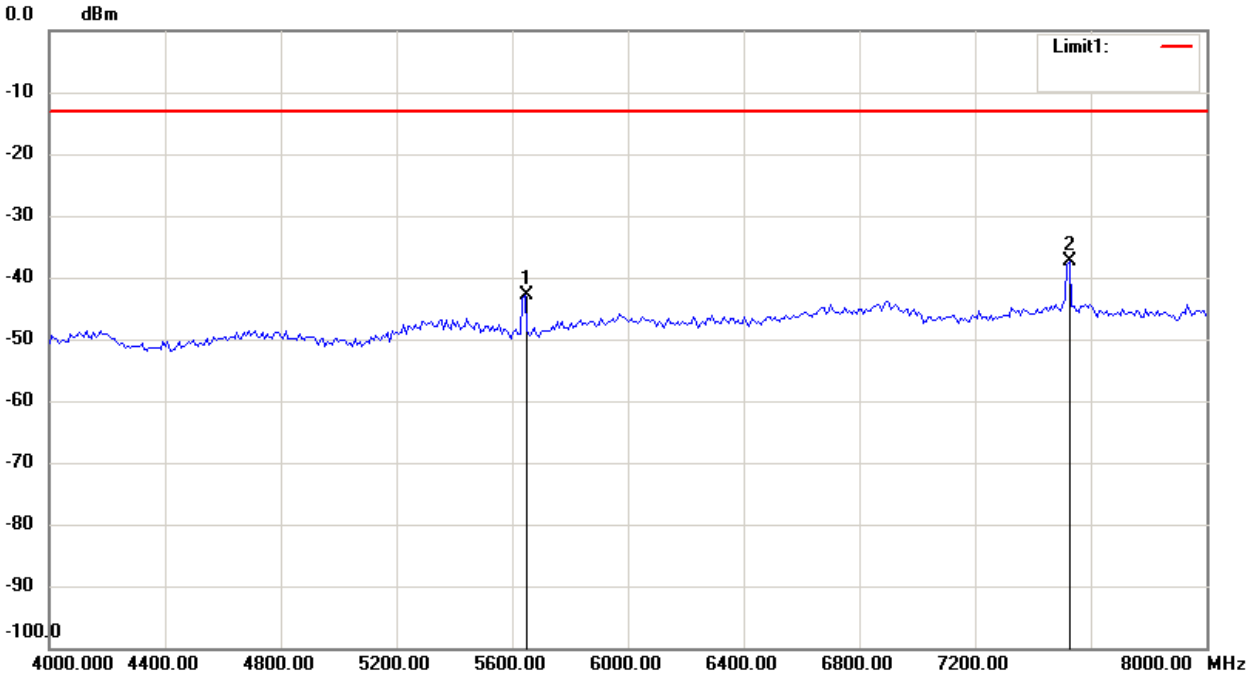
1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

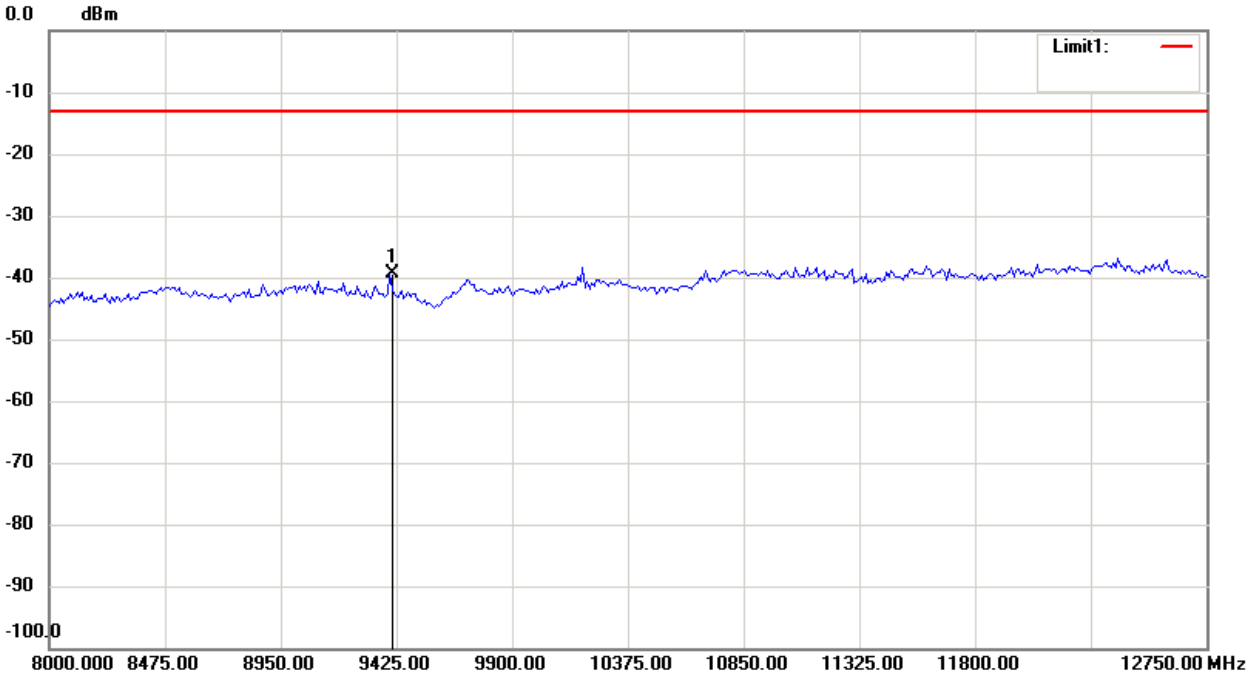




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

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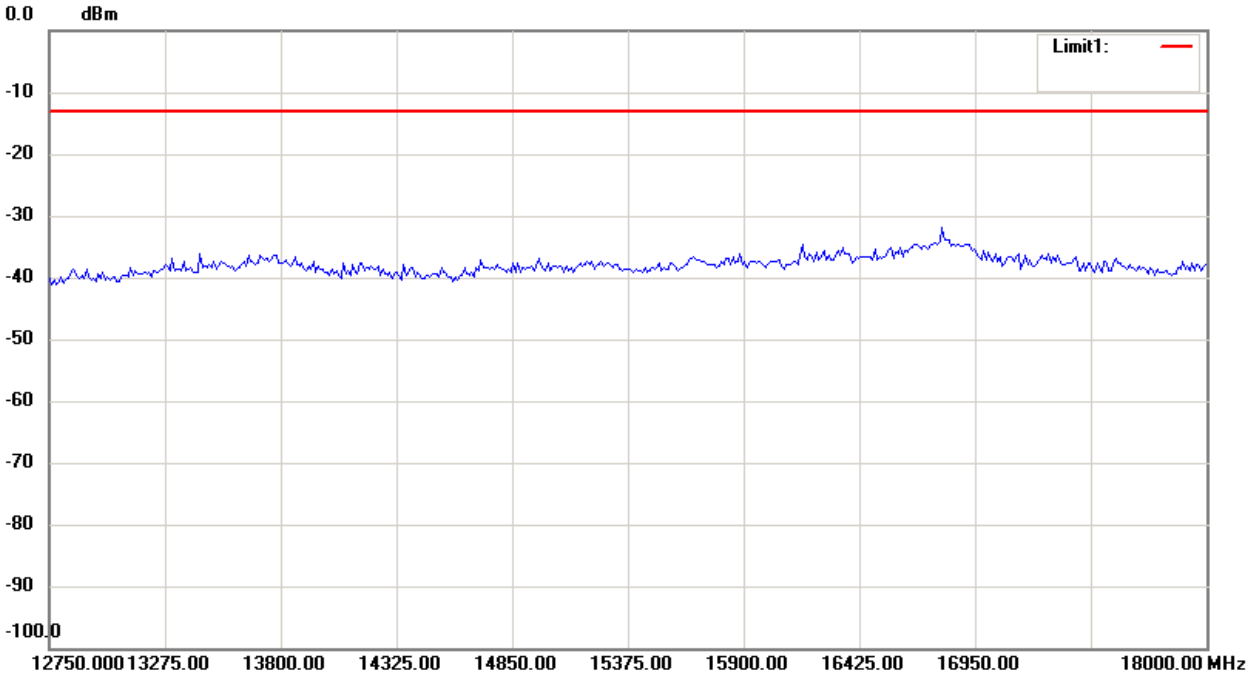
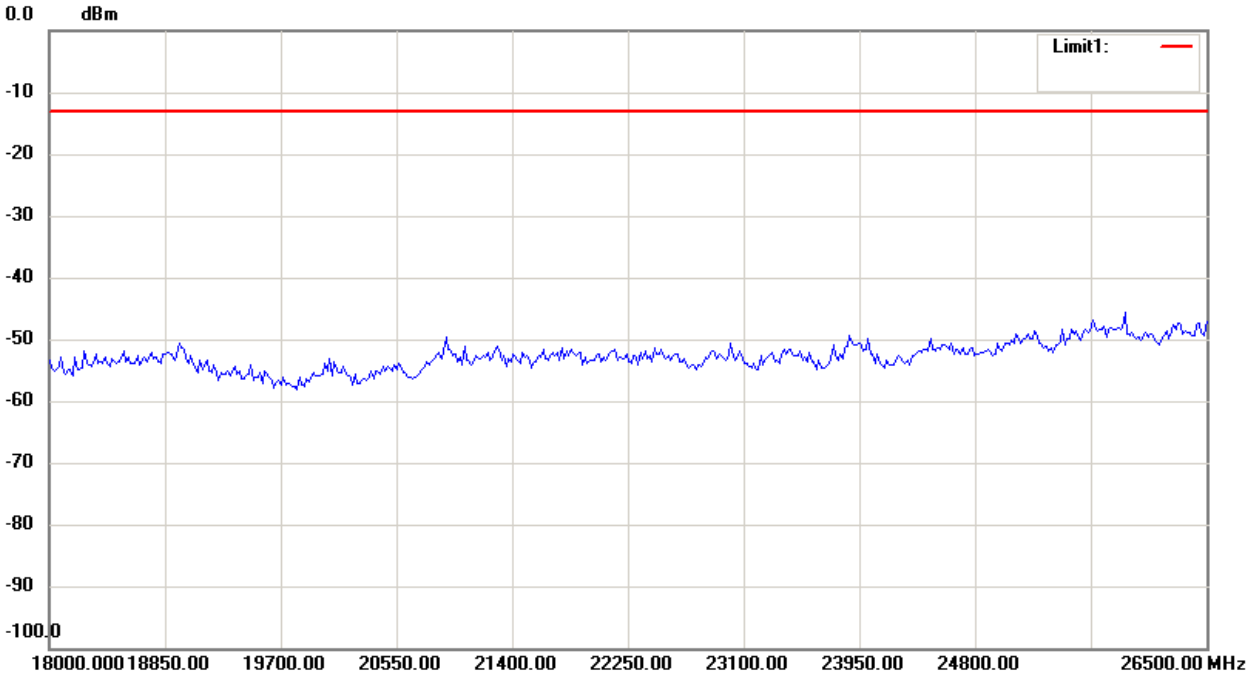
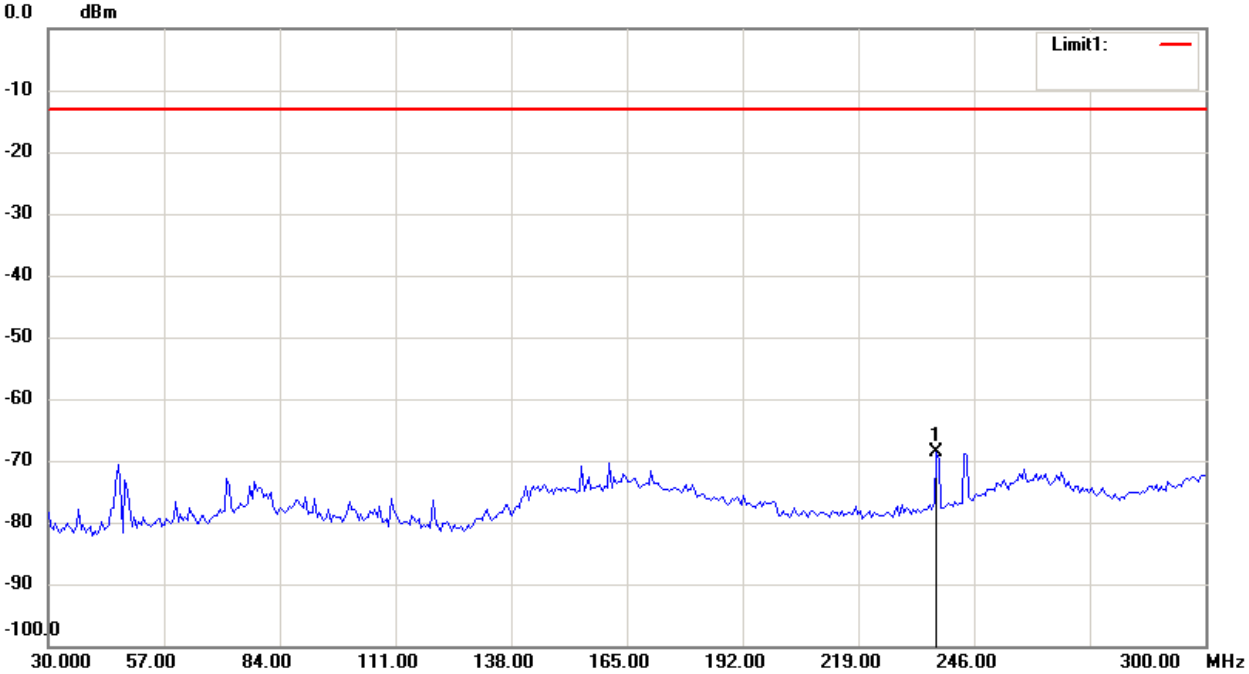


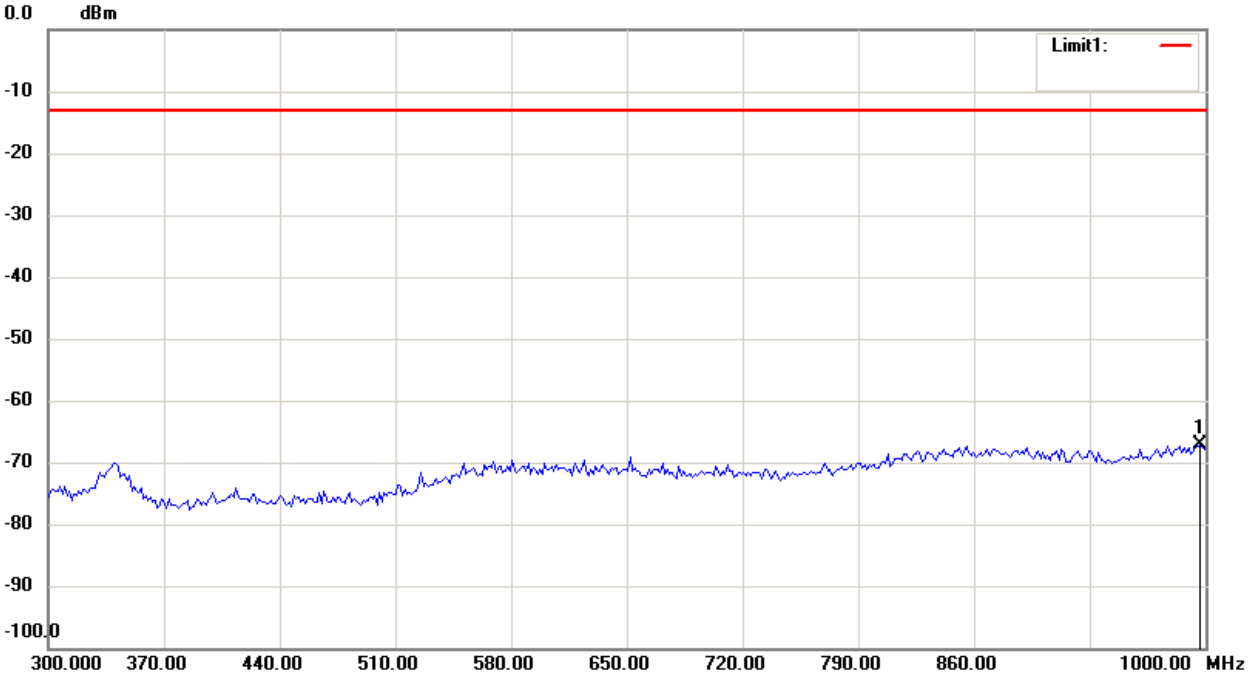


Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

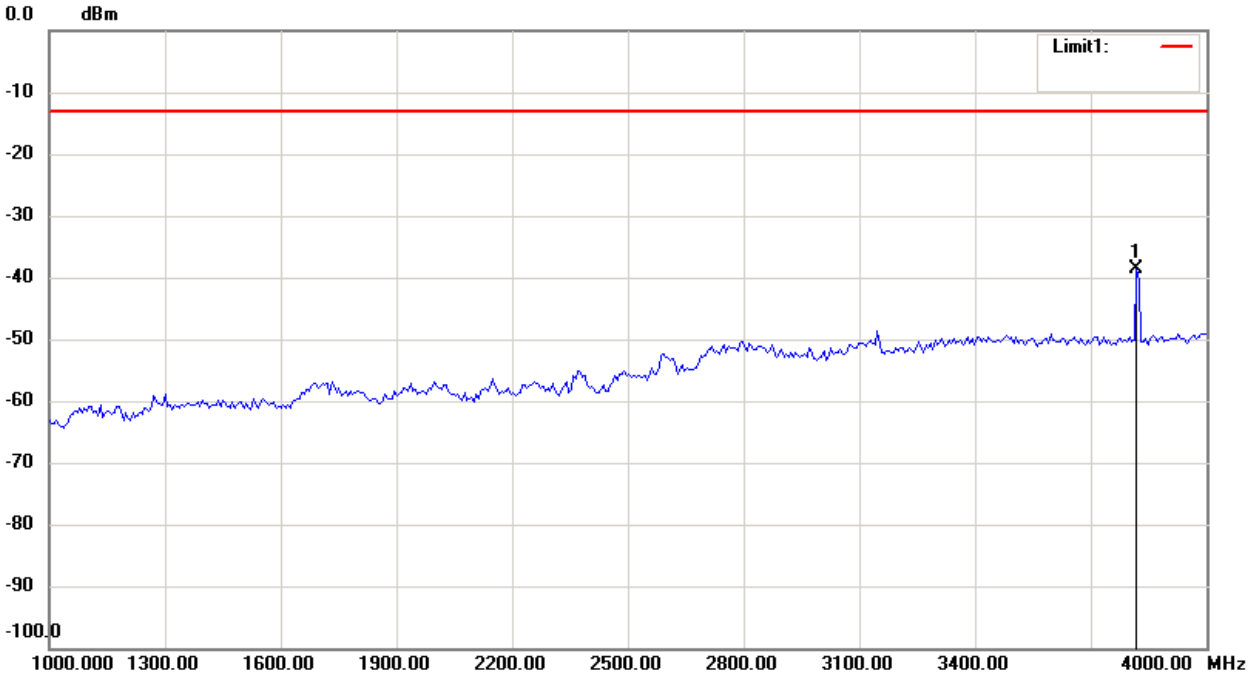
1900 band_ CH 810_3.6 V
Antenna Polarization H

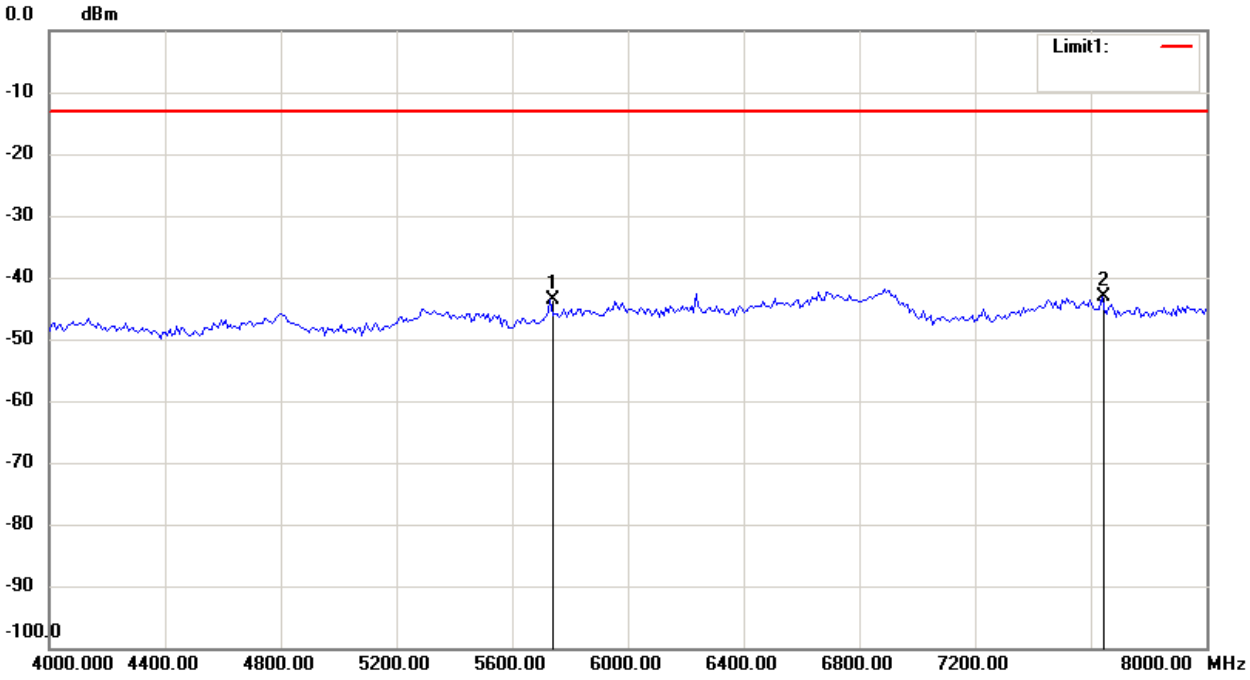




Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
2. **The some frequencies may exceed the limit line without the specified detectors, but that cannot present the results are failed to the specification of test standard.**
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**





Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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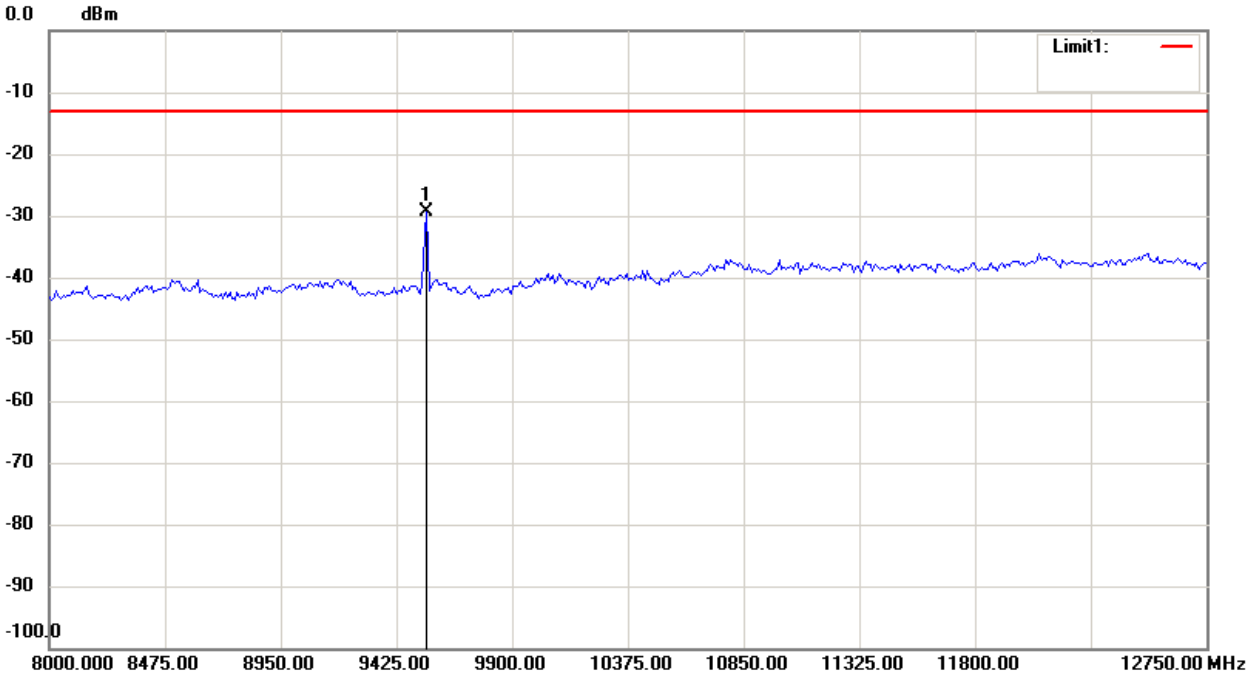

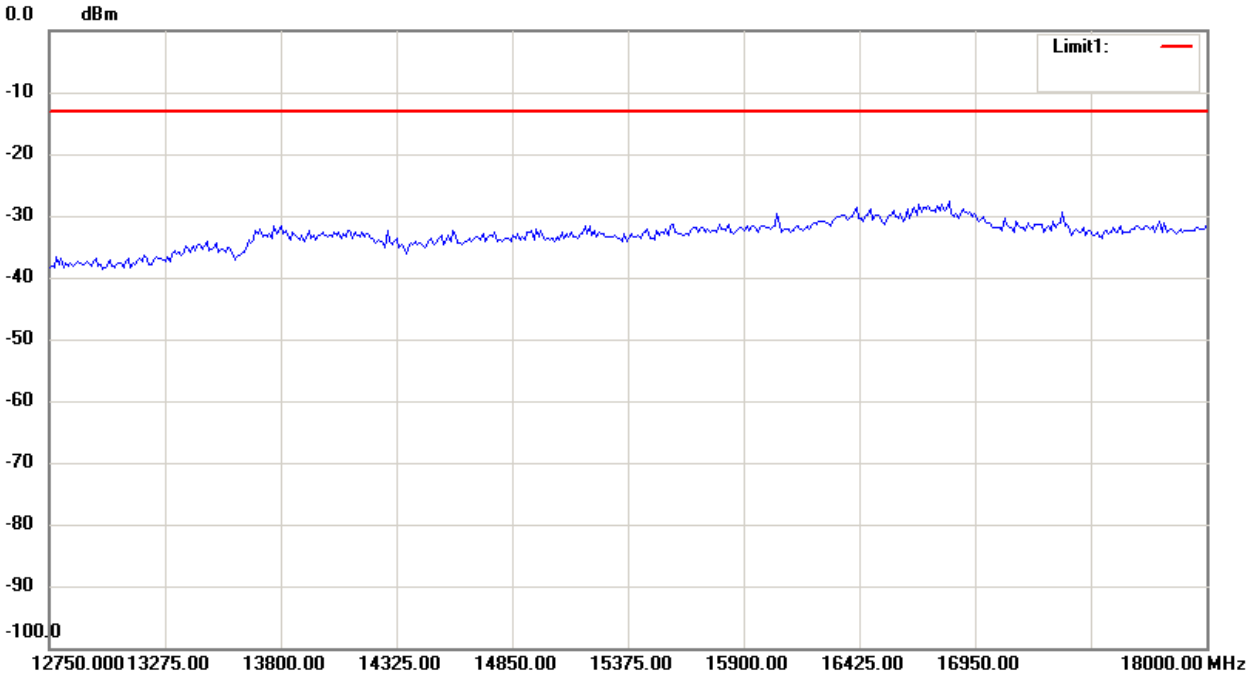

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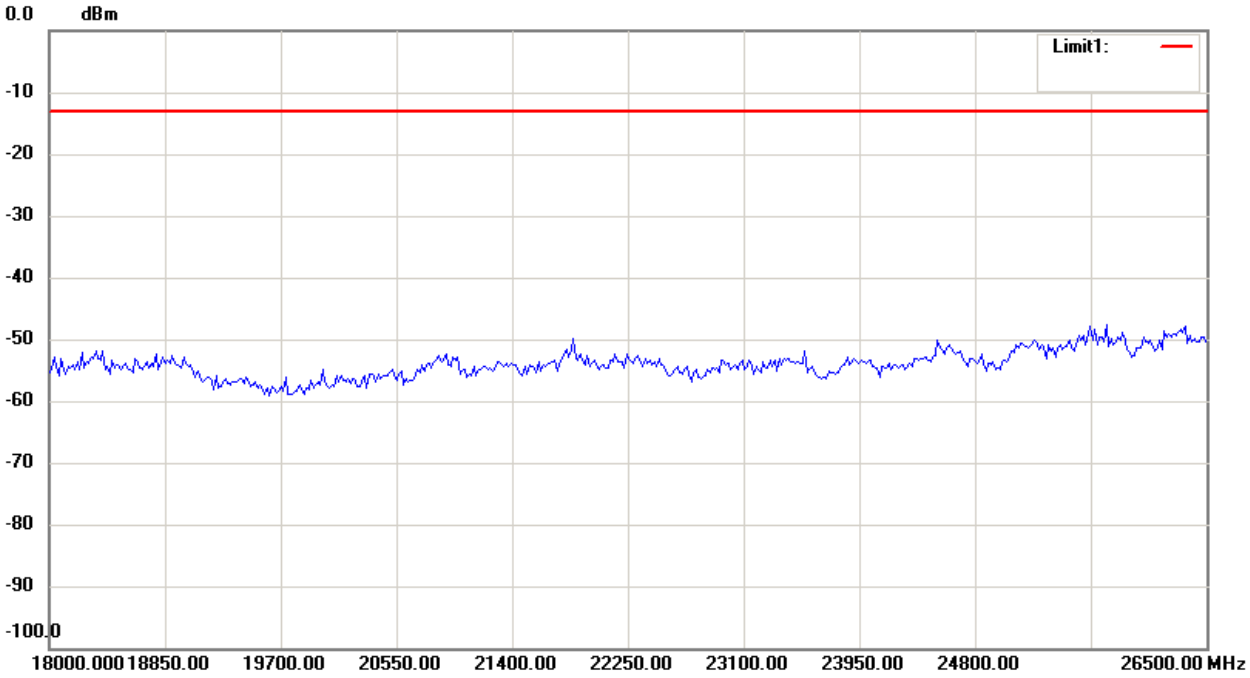
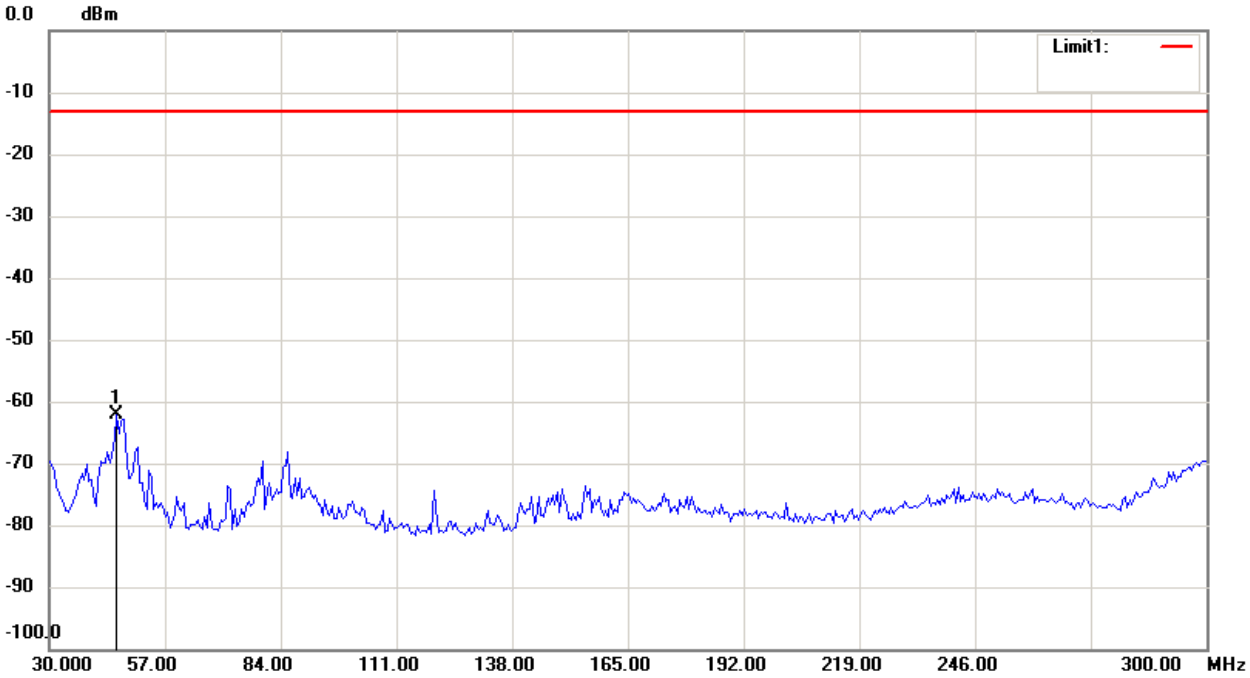


Antenna Polarization V



Note:

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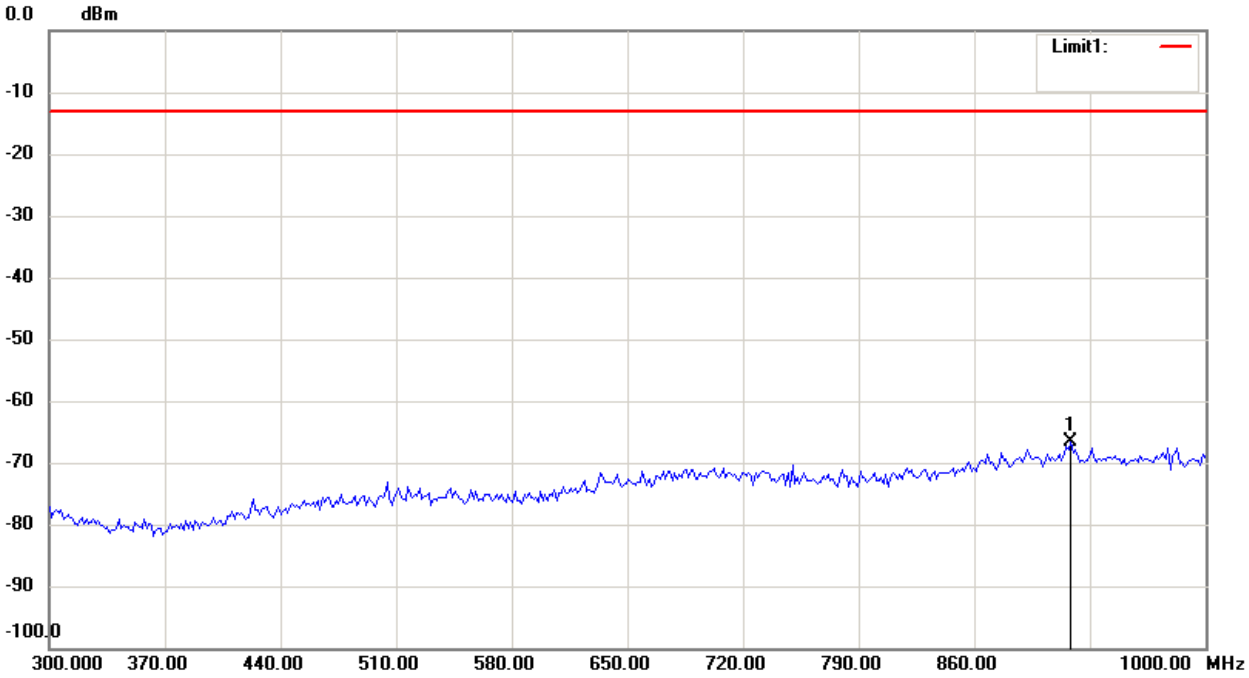

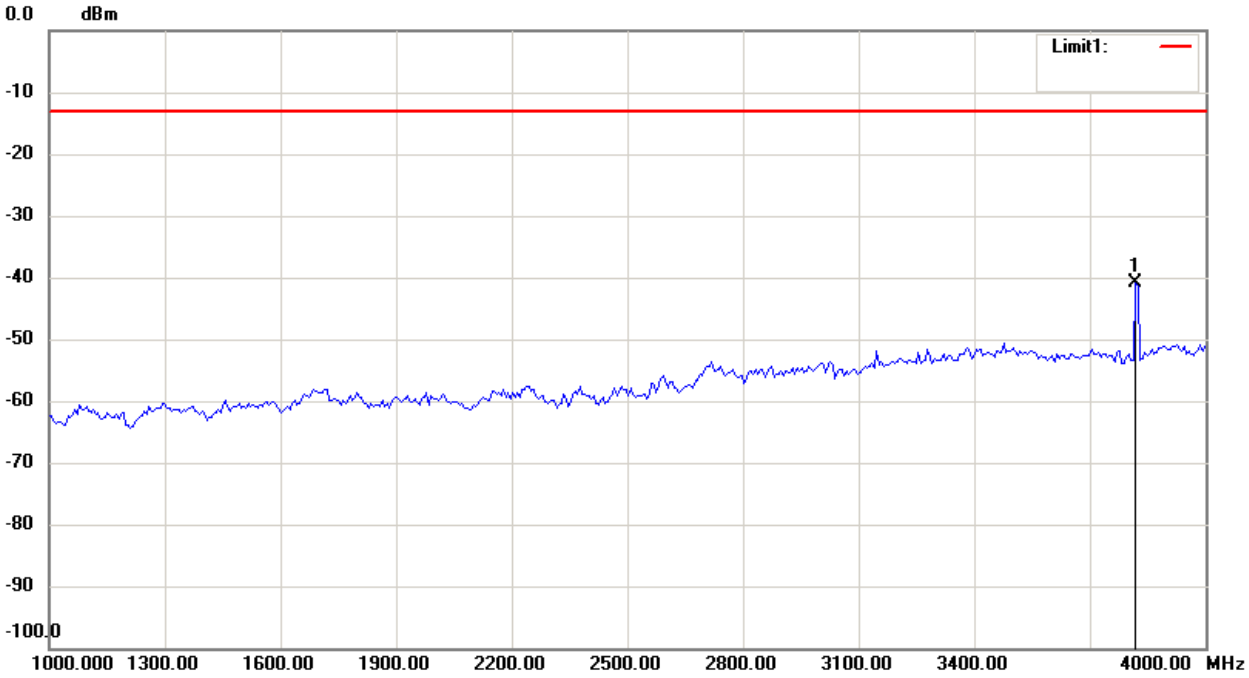

Note:

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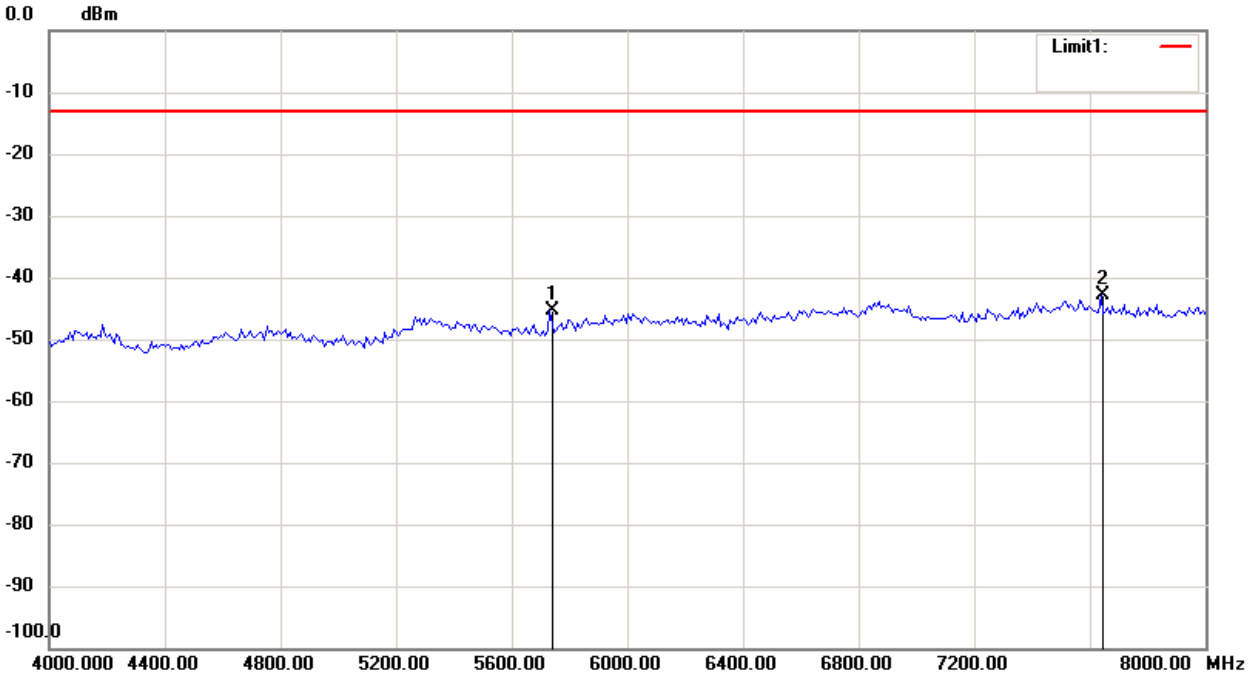

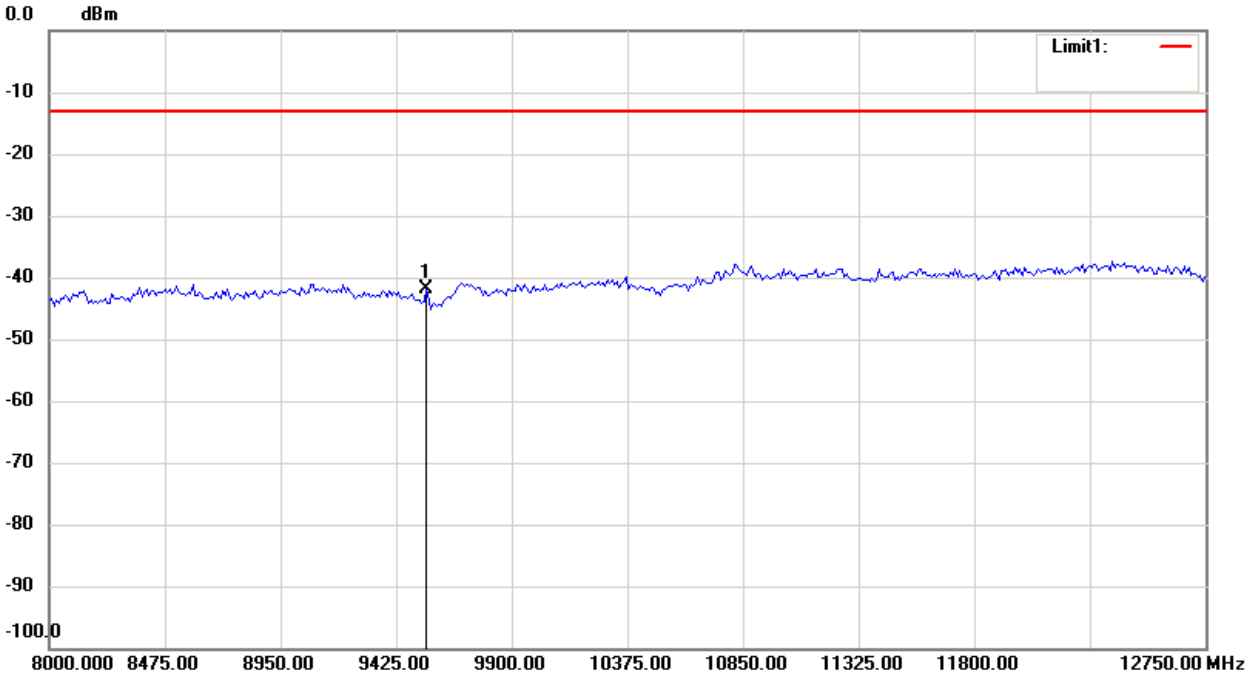

Note:

1. **The attached measurement plots are preliminarily pre-scanned with peak detector for determining the final checking frequencies and are for reference only.**
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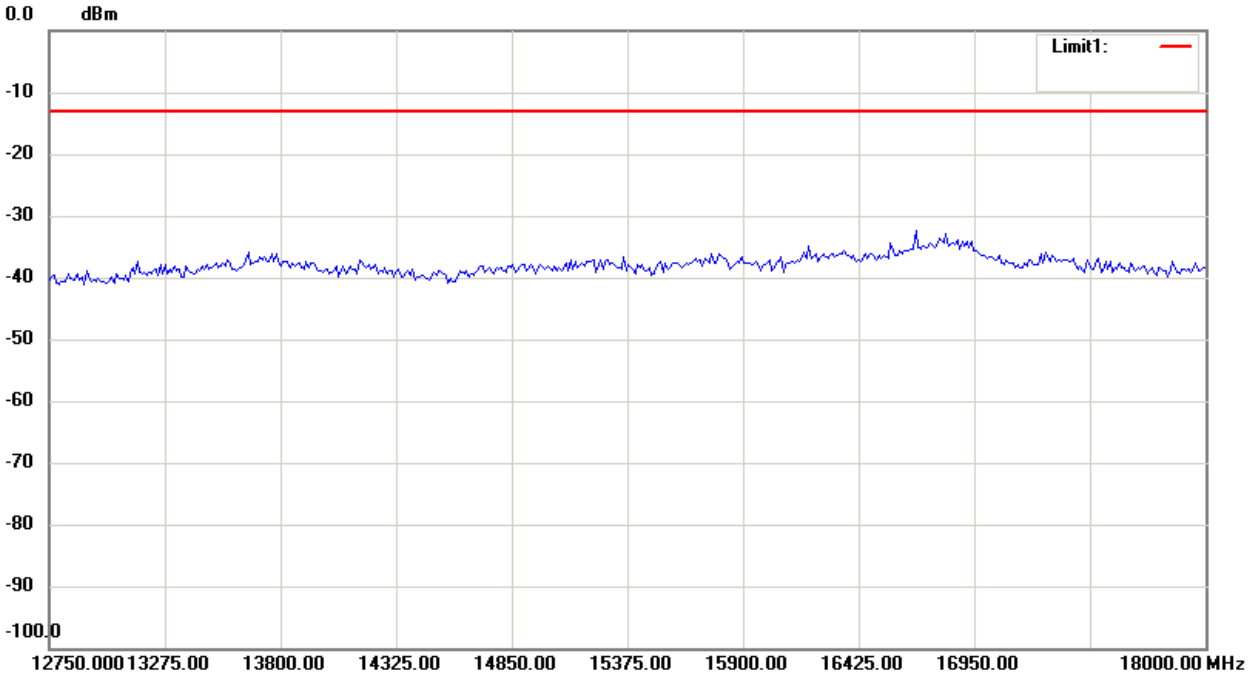

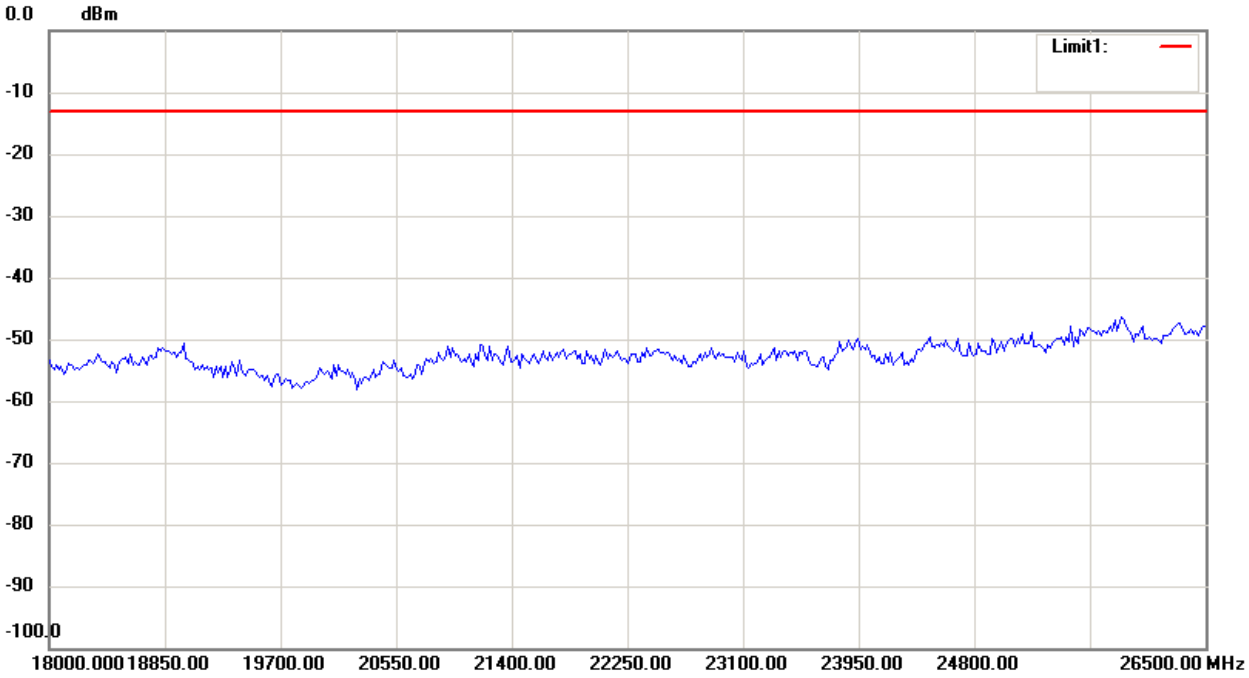

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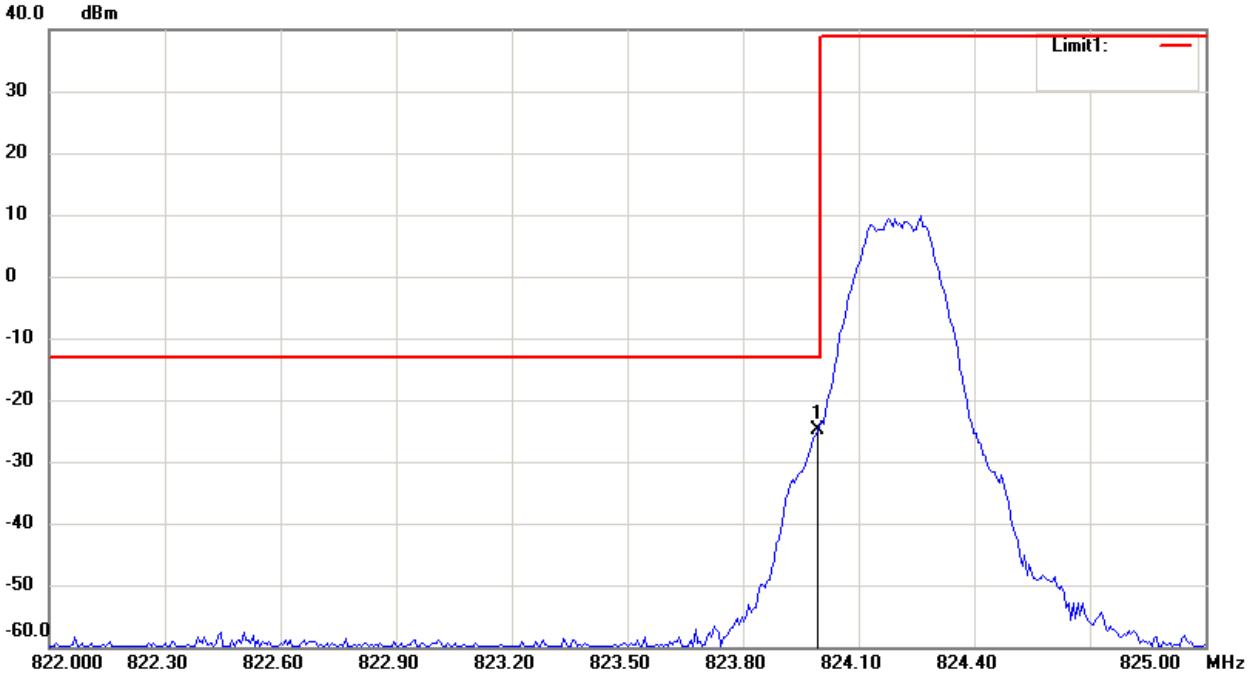
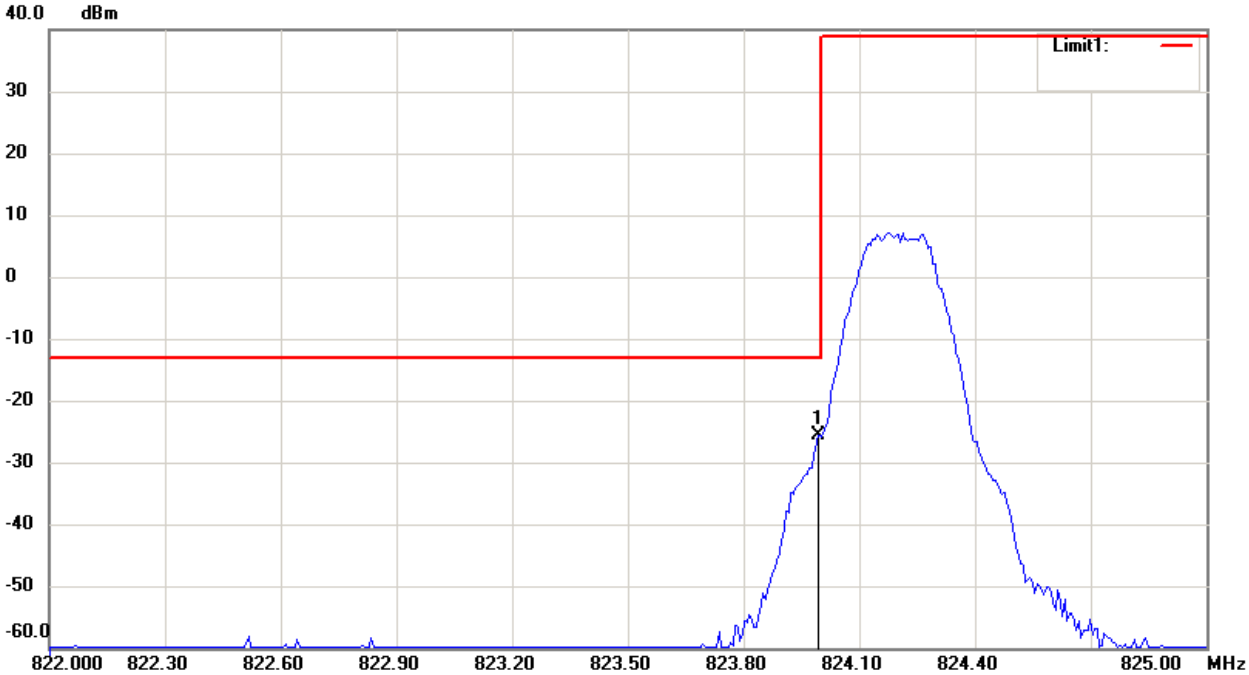
3. **For corrected test results are listed in the relevant table of radiated test data of this test report.**

Band edge emissions
850 Band – channel 128
Antenna Polarization H

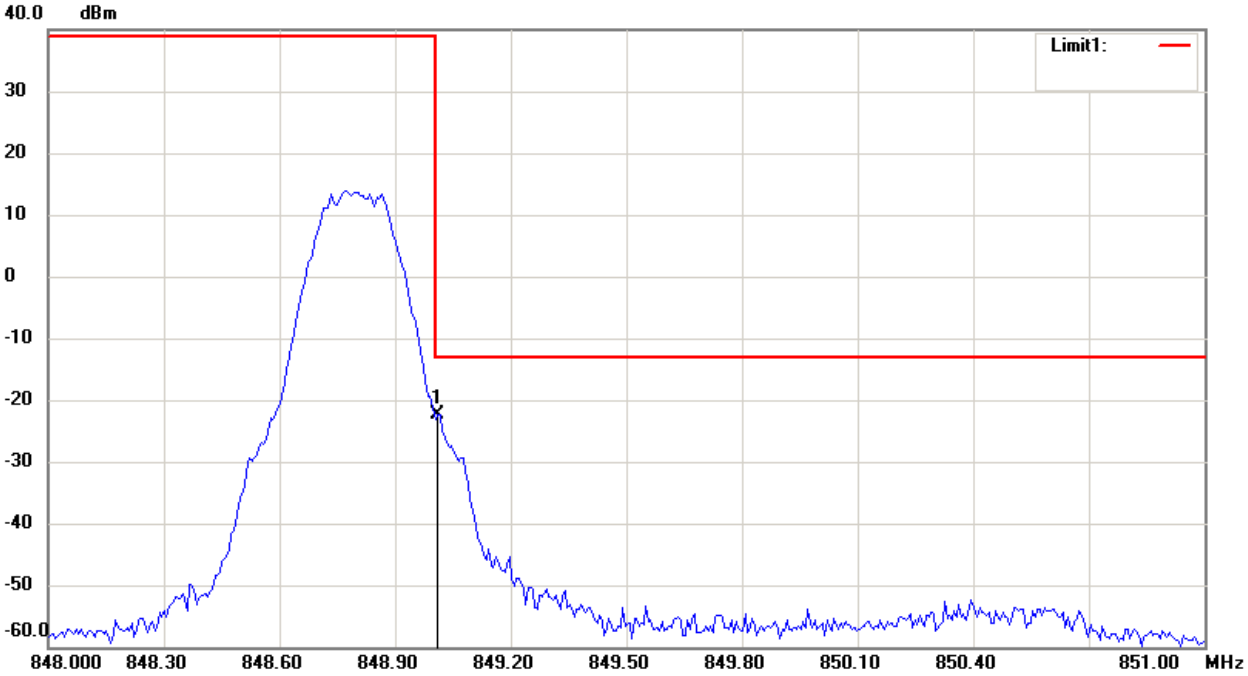


Antenna Polarization V

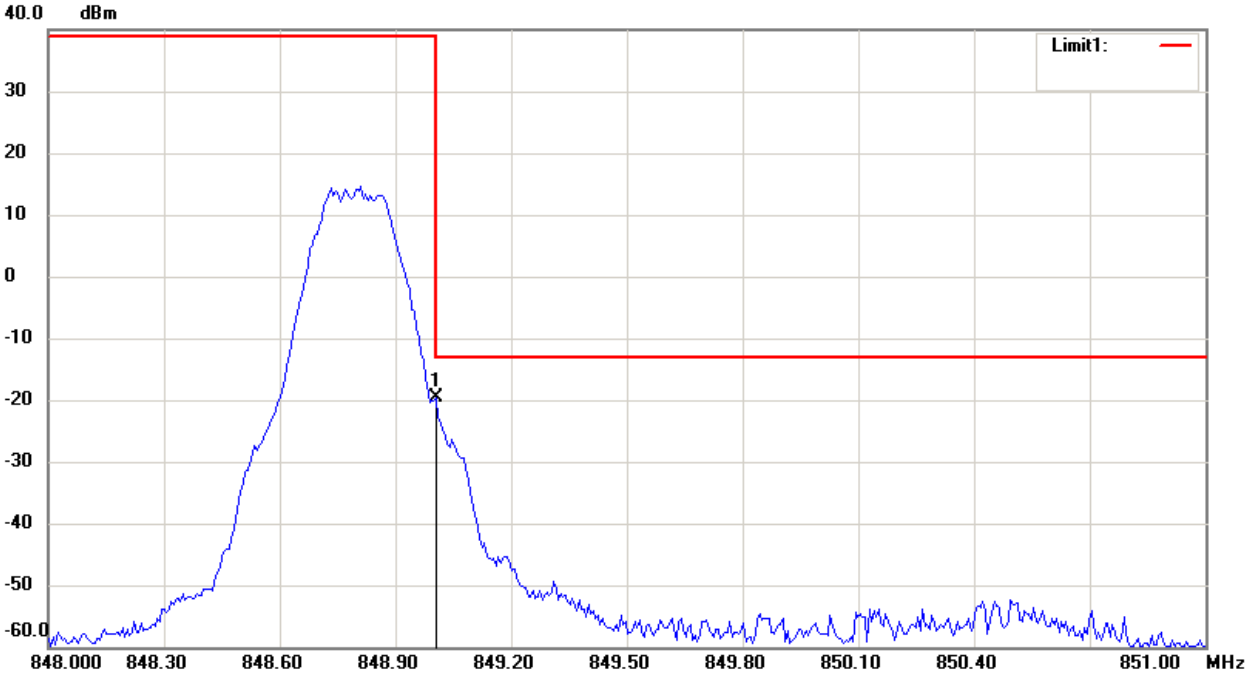


850 Band – channel 251

Antenna Polarization H

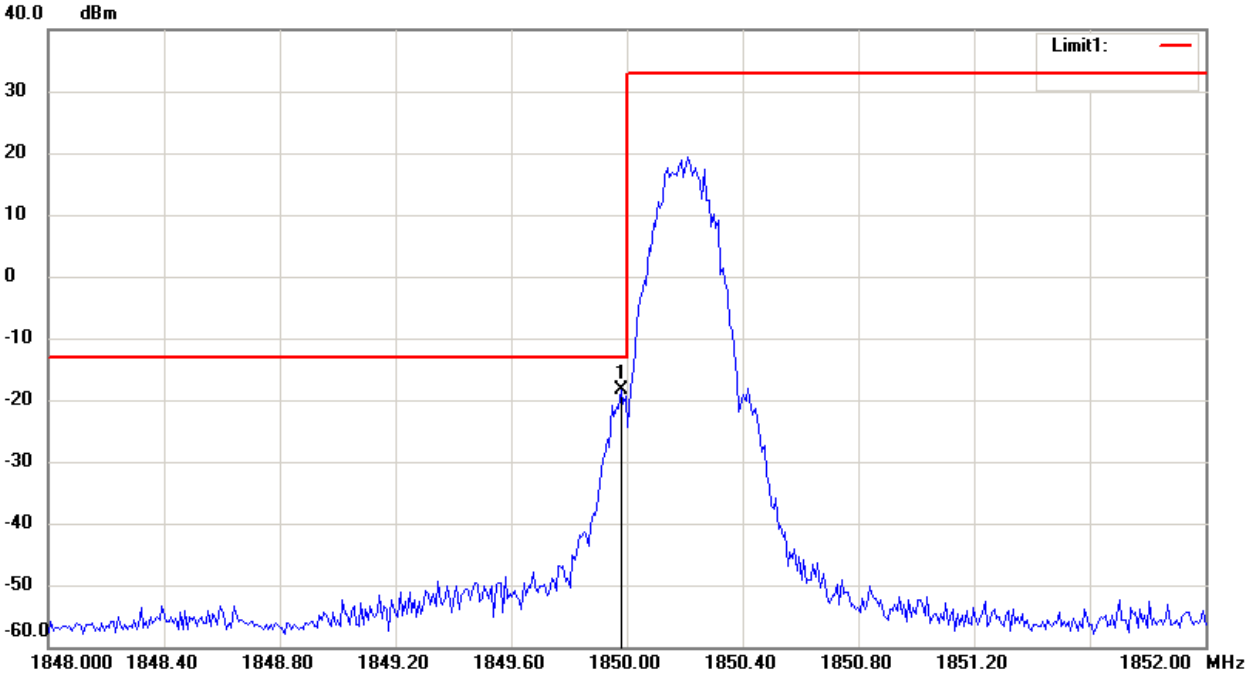


Antenna Polarization V

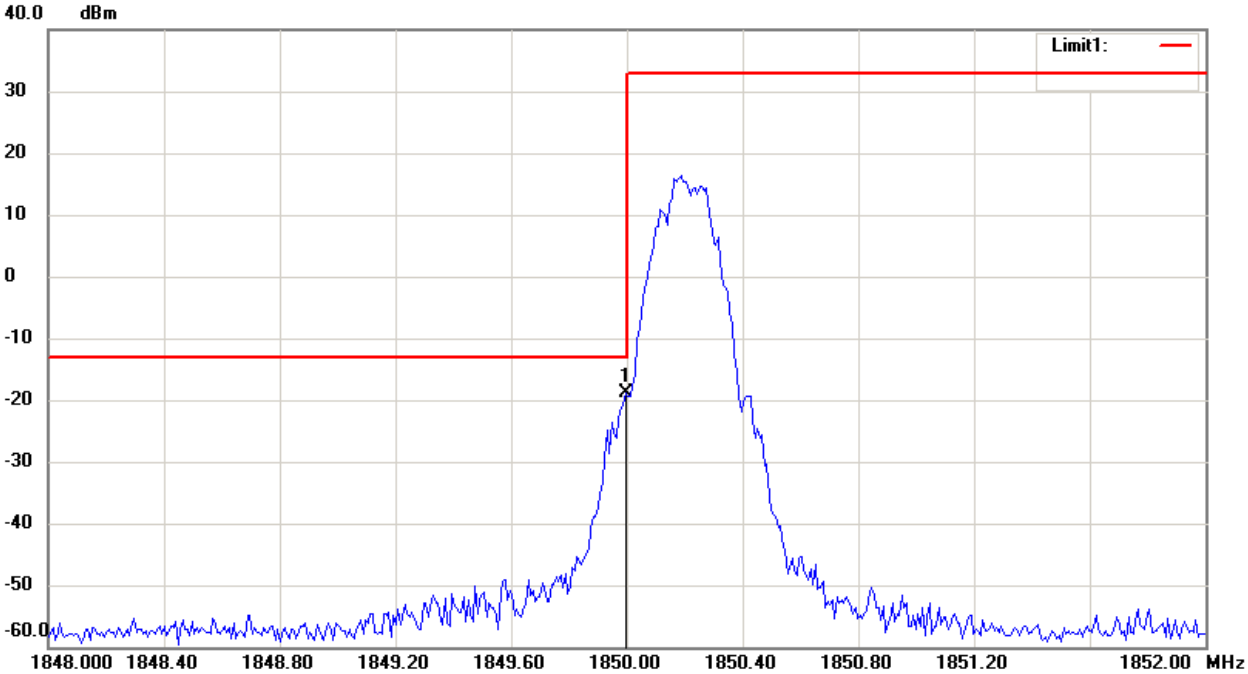


1900 Band – channel 512

Antenna Polarization H

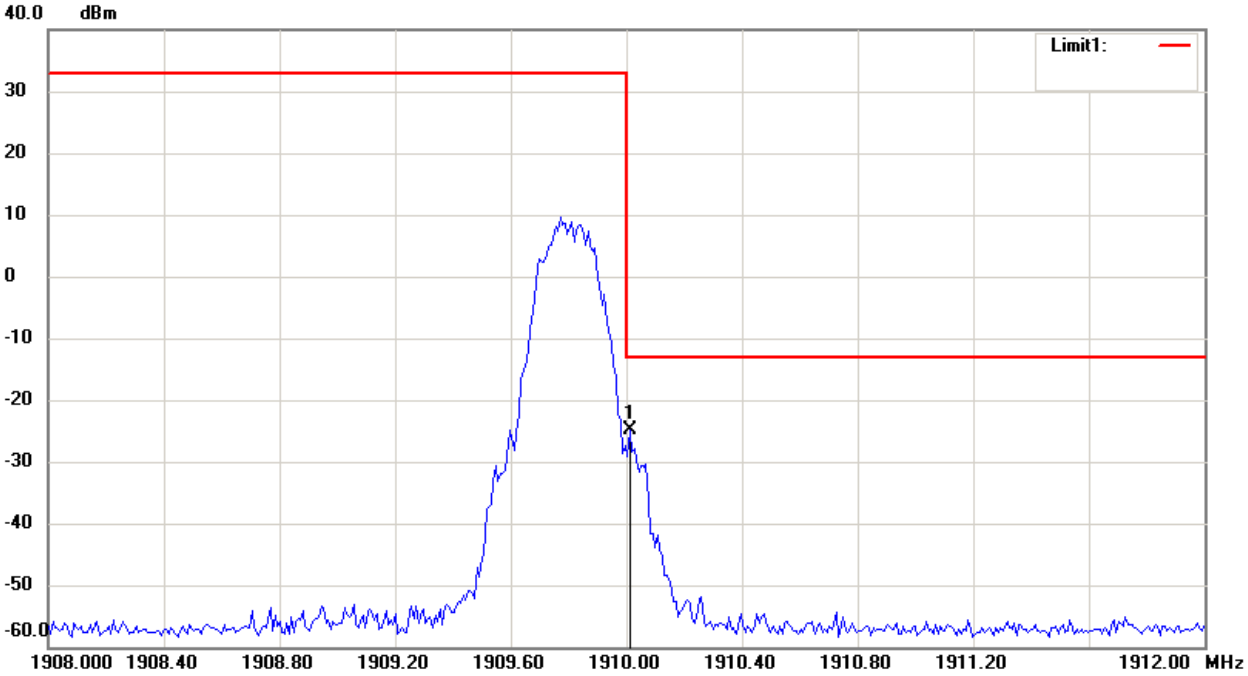


Antenna Polarization V



1900 Band – channel 810

Antenna Polarization H



Antenna Polarization V