FCC PART 27
FCC PART 22H, PART 24E
TEST REPORT

For

PROMETHEUS GROUP LLC

PO BOX 130100 BIRMINGHAM, ALABAMA 35213-0100 USA

FCC ID: 2ALGTBTC-4G-RLDC

Report Type:	**Product Type:**
Original Report	Trail Camera

Report Number:	RTZ201211002-00B
Report Date:	2021-02-08
Reviewed By:	Candy Li RF Engineer
Prepared By:	Shenzhen Accurate Technology Co., Ltd. 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China Tel: (0755) 26503290 Fax: (0755) 26503396 Http://www.atc-lab.com

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★".

Shenzhen Accurate Technology Co., Ltd. is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Trail Camera
Tested Model	BTC-4G-RLDC
Frequency Range	WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 13: 777-787MHz(TX); 746-756MHz(RX) LTE Band 66: 1710-1780MHz(TX); 2110-2200MHz(RX) LTE Band 71: 663-698MHz(TX); 617-652MHz(RX)
Maximum Target Output Power (Conducted power)	WCDMA Band 2: 24dBm WCDMA Band 4: 24dBm WCDMA Band 5: 24dBm LTE Band 2:22.5dBm LTE Band 4:22.5dBm LTE Band 5:23.5dBm LTE Band 12:23.5dBm LTE Band 13:23.5dBm LTE Band 66:22.5dBm LTE Band 71:22.5dBm
Modulation Technique	3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	FPC Main Antenna: WCDMA Band 5: 0.6dBi* WCDMA Band 4: 1.3dBi* WCDMA Band 2:1.3dBi * LTE Band 5: 0.6dBi * LTE Band 2 :1.3dBi * LTE Band 4: 1.3dBi * LTE Band 12: 0.35dBi * LTE Band 13: 0.35dBi * LTE Band 66: 1.3dBi * LTE Band 71: 0.19dBi * (provided by the applicant)
Voltage Range	DC12V from battery
Date of Test	2021-01-06 to 2021-01-30
Sample serial number	RTZ201211002-RF-S1(Assigned by ATC)
Received date	2020-12-22
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part 24-Subpart E, and Subpart 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
RF Frequency		$\pm 0.082*10^{-7}$
Emissions, Radiated	30MHz - 1GHz	±4.28dB
	1GHz- 18GHz	±4.98dB
	18GHz- 26.5GHz	±5.06dB
Temperature		±1℃
Humidity		±6%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A-2.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

The test items were performed with the EUT operating at testing mode. Test was performed with channels as below table:

Band	Channel Bandwidth	Frequency
WCDMA Band 2	4.2 MHz	1852.4MHz, 1880.0 MHz, 1907.6MHz
WCDMA Band 4	4.2 MHz	826.4MHz, 836.6MHz, 846.6MHz
WCDMA Band 5	1.4 MHz	1712.4MHz, 1732.6 MHz, 1752.6MHz
LTE Band 2	1.4 MHz	1850.7MHz, 1880.0 MHz, 1909.3 MHz;
	3.0 MHz	1851.5MHz, 1880.0 MHz, 1908.5 MHz;
	5.0 MHz	1852.5MHz, 1880.0 MHz, 1907.5 MHz;
	10.0 MHz	1855MHz, 1880.0 MHz, 1905 MHz;
	15.0 MHz	1857.5MHz, 1880.0 MHz, 1902.5 MHz;
	20.0 MHz	1860MHz, 1880.0 MHz, 1900MHz;
LTE Band 4	1.4 MHz	1710.7MHz, 1732.5MHz, 1754.3MHz;
	3.0 MHz	1711.5MHz, 1732.5MHz, 1753.5MHz
	5.0 MHz	1712.5MHz, 1732.5MHz, 1752.5MHz
	10.0 MHz	1715MHz, 1732.5MHz, 1750MHz
	15.0 MHz	1717.5MHz, 1732.5MHz, 1747.5MHz
	20.0 MHz	1720MHz, 1732.5MHz, 1745MHz
LTE Band 5	1.4 MHz	824.7MHz, 836.5MHz, 848.3MHz
	3.0 MHz	825.5MHz, 836.5MHz, 847.5MHz
	5.0 MHz	826.5MHz, 836.5MHz, 846.5MHz
	10.0 MHz	829MHz, 836.5MHz, 844MHz
LTE Band 12	1.4 MHz	699.7MHz, 707.5MHz, 715.3MHz
	3.0 MHz	700.5MHz, 707.5MHz, 714.5MHz
	5.0 MHz	701.5MHz, 707.5MHz, 713.5MHz
	10.0 MHz	704MHz, 707.5MHz, 711MHz
LTE Band 13	5.0 MHz	779.5MHz, 782MHz, 784.5MHz
	10.0 MHz	782MHz
LTE Band 66	1.4 MHz	1710.7MHz, 1745 MHz, 1779.3MHz;
	3.0 MHz	1711.5MHz, 1745MHz, 1778.5MHz;
	5.0 MHz	1712.5MHz, 1745MHz, 1777.5 MHz;
	10.0 MHz	1715MHz, 1745MHz, 1775 MHz;
	15.0 MHz	1857.5MHz, 1745MHz, 1772.5MHz;
	20.0 MHz	1720MHz, 1745 MHz, 1770MHz;
LTE Band 71	5.0 MHz	665.5MHz, 680.5MHz, 695.5MHz
	10.0 MHz	668MHz, 680.5MHz, 693MHz
	15.0 MHz	670.5MHz, 680.5MHz, 690.5MHz
	20.0 MHz	673.0MHz, 680.5MHz, 688MHz

Equipment Modifications

No modification was made to the EUT.

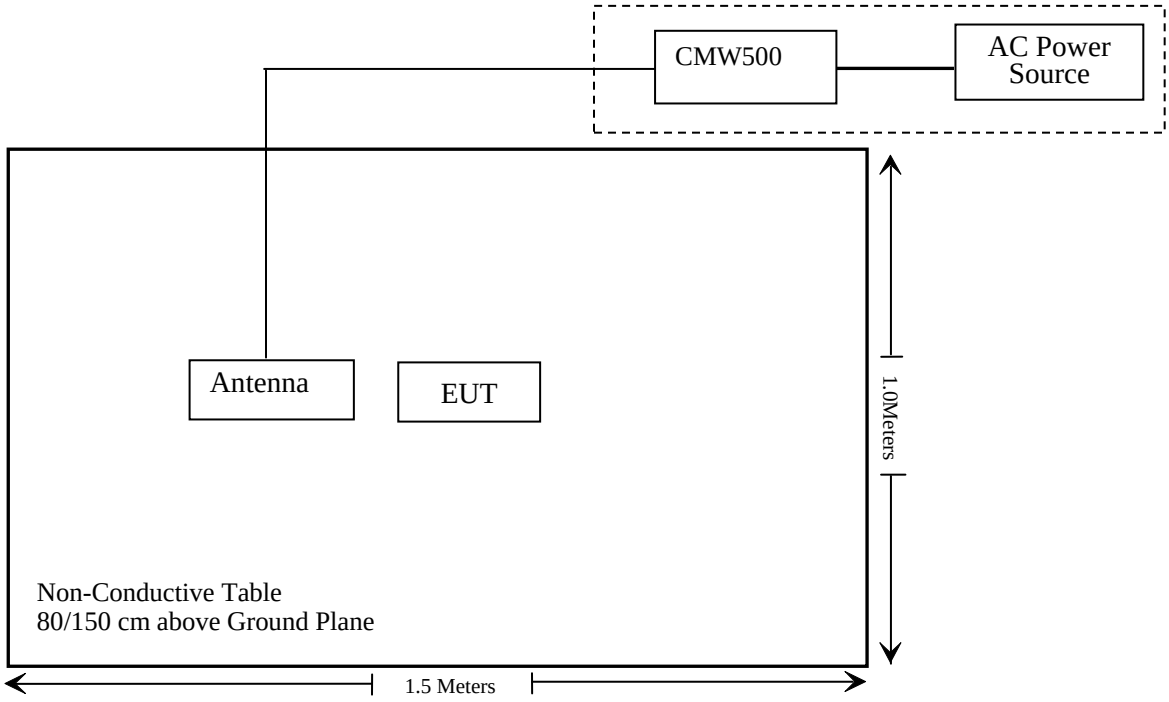
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606

Support Cable Description

Cable Description	Length (m)	From / Port	To
/	/	/	/

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (1) & §2.1091	Maximum Permissible exposure (MPE)	Compliance
§2.1046; § 22.913 (a); § 24.232 (c); §27.50 (b) (c) (d) (h);	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliance
§ 2.1051; § 22.917 (a); § 24.238 (a); §27.53;	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a); §27.53 (c) (h) (m)	Band Edge	Compliance
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Vector Signal Generator	AGILENT	N5182A	MY50143401	2020/12/25	2021/12/24
V.R. of Signal Generators	Anritsu	68369B	004114	2020/07/31	2020/0730
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
SCHWARZBECK	HORN ANTENNA	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Ducommun Technolagies	Horn antenna	ARH-4223-02	1007726-01 1304	2020/12/06	2023/12/05
A.H. Systems, inc.	Preamplifier	PAM-0118P	531	2020/07/08	2021/07/07
Quinstar	Amplifier	QLW-184055 36-J0	15964001002	2020/11/28	2021/11/27
Rohde& Schwarz	Test Receiver	ESR	101817	2020/12/24	2021/12/23
SONOMA INSTRUMENT	Amplifier	310 N	186131	2020/12/25	2021/12/24
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2020/12/25	2021/12/24
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
RF Coaxial Cable	Unknown	N-5m	No.1	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-1m	No.6	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-6m	No.10	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-2m	No.11	2020/12/25	2021/12/24
RF Coaxial Cable	Unknown	N-8m	No.15	2020/12/25	2021/12/24

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Unknown	Band Reject Filter	MSF1850-1910MS-1148	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF1710-1785MS-1150	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF824-862 MS-1147	201706003	2020/12/25	2021/12/24
Unknown	Band Reject Filter	MSF700-800 MS-1153	201706003	2020/12/25	2021/12/24
Unknown	High Pass Filter	HPM-1.2/18G-60	110	2020/12/25	2021/12/24
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101495	2020/12/24	2021/12/23
Rohde & Schwarz	Test Receiver	ESPI	100396/003	2020/12/24	2021/12/23
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	154606	2020/12/25	2021/12/24
Fluke	Desktop Multi Meter	45	7664009	2020/12/25	2021/12/24
Mini-Circuits	Power Splitter	DC-18000MHz	SF10944151S	2020/12/25	2021/12/24
UNI-T	DC Power Supply	UTP8305B	10584	NCR	NCR
Gongwen	Temp. & Humid. Chamber	HSD-500	109	2020/12/25	2021/12/24
WEINSCHEL	10dB Attenuator	5324	AU 3842	Each time	

* Statement of Traceability: Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

§1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

Result

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

For worst case:

Mode	Frequency (MHz)	Antenna Gain		Tune up conducted power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
WCDMA B2	1850-1910	1.3	1.35	24.0	251.19	20	0.067	1
WCDMA B4	1710-1755	1.3	1.35	24.0	251.19	20	0.067	1
WCDMA B5	824-849	0.6	1.15	24.0	251.19	20	0.057	0.549
LTE B2	1850-1910	1.3	1.35	22.5	177.83	20	0.048	1
LTE B4	1710-1755	1.3	1.35	22.5	177.83	20	0.048	1
LTE B5	824-849	0.6	1.15	23.5	223.87	20	0.051	0.549
LTE B12	699-716	0.35	1.08	23.5	223.87	20	0.048	0.466
LTE B13	777-787	0.35	1.08	23.5	223.87	20	0.048	0.518
LTE B14	788-798	0.6	1.15	23.5	223.87	20	0.051	0.525
LTE B66	1710-1780	1.3	1.35	22.5	177.83	20	0.048	1
LTE B71	663-698	0.19	1.04	22.5	177.83	20	0.037	0.442

Note 1: The tune up conducted power was declared by the applicant.
Note: 2: The information about LTE B14, please refer to Report No. RTZ201211002-00C.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliance

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E & 27, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046, § 22.913 (a) & § 24.232 (c); §27.50 (b) (c) (d) (h) - RF OUTPUT POWER

Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

According to §27.50(b), Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands and fixed stations transmitting in the 787-788 MHz and 805-806 MHz bands are limited to 30 watts ERP.

According to §27.50(c), Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP. And Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

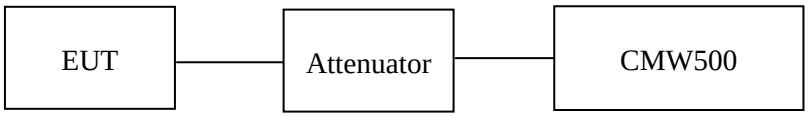
According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2500-2570MHz.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Radiated method:

ANSI C63.26-2015 Section 5.5.

Test Data

Environmental Conditions

Temperature:	28~29.3 ℃
Relative Humidity:	50~58 %
ATM Pressure:	101.0~101.1 kPa

The testing was performed by Fan Yang on 2021-01-13 to 2021-01-30.

Conducted Power

Cellular Band (Part 22H)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		23.23	23.36	23.29	21.18	21.31	21.24
	HSDPA	1	23.05	23.22	23.10	21.00	21.17	21.05
		2	23.92	23.16	23.14	21.87	21.11	21.09
		3	23.58	23.37	23.53	21.53	21.32	21.48
		4	23.79	23.15	23.97	21.74	21.10	21.92
	HSUPA	1	23.36	23.09	23.87	21.31	21.04	21.82
		2	23.68	23.66	23.14	21.63	21.61	21.09
		3	23.84	23.95	23.97	21.79	21.90	21.92
		4	23.15	23.34	23.14	21.10	21.29	21.09
		5	23.11	23.34	23.73	21.06	21.29	21.68
	DC-HSDPA	1	22.16	22.37	22.32	20.11	20.32	20.27
		2	22.71	22.22	22.23	20.66	20.17	20.18
		3	22.77	22.76	22.19	20.72	20.71	20.14
		4	21.32	22.51	22.11	19.27	20.46	20.06
	HSPA+	1	22.20	22.18	22.54	20.15	20.13	20.49

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For WCDMA Band5: Antenna Gain = 0.6dBi = -1.55dBd (0dBd=2.15dBi)
For 600-1000MHz, Cable Loss=0.5dB* (provided by the applicant)
Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		23.06	22.93	22.97	23.56	23.43	23.47
	HSDPA	1	22.92	22.62	22.73	23.42	23.12	23.23
		2	22.34	22.89	22.57	22.84	23.39	23.07
		3	22.68	22.94	22.66	23.18	23.44	23.16
		4	22.37	22.63	22.79	22.87	23.13	23.29
	HSUPA	1	22.43	22.74	22.95	22.93	23.24	23.45
		2	22.41	22.77	22.84	22.91	23.27	23.34
		3	22.51	22.71	22.66	23.01	23.21	23.16
		4	22.02	22.75	22.86	22.52	23.25	23.36
		5	22.78	22.97	22.61	23.28	23.47	23.11
	DC-HSDPA	1	21.34	21.58	21.76	21.84	22.08	22.26
		2	22.22	21.21	21.76	22.72	21.71	22.26
		3	21.63	20.90	21.43	22.13	21.4	21.93
		4	22.45	21.39	20.85	22.95	21.89	21.35
	HSPA+	1	21.13	22.16	21.17	21.63	22.66	21.67

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For WCDMA Band2: Antenna Gain = 1.3dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

AWS Band (Part 27)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		23.20	23.24	23.15	23.70	23.74	23.65
	HSDPA	1	23.35	23.78	23.68	23.85	24.28	24.18
		2	23.92	23.04	23.51	24.42	23.54	24.01
		3	23.56	23.55	23.42	24.06	24.05	23.92
		4	23.72	23.13	23.83	24.22	23.63	24.33
	HSUPA	1	23.81	23.71	23.79	24.31	24.21	24.29
		2	23.26	23.66	23.60	23.76	24.16	24.10
		3	23.59	23.26	23.21	24.09	23.76	23.71
		4	23.33	23.08	23.15	23.83	23.58	23.65
		5	23.09	23.11	23.90	23.59	23.61	24.40
	DC-HSDPA	1	22.01	21.65	22.37	22.51	22.15	22.87
		2	21.91	22.41	22.28	22.41	22.91	22.78
		3	22.37	22.86	22.33	22.87	23.36	22.83
		4	22.74	22.45	22.62	23.24	22.95	23.12
	HSPA+	1	22.83	22.64	22.51	23.33	23.14	23.01

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band4: Antenna Gain = 1.3dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC	Low	2.85	13
	Middle	3.37	13
	High	2.73	13
HSDPA	Low	3.27	13
	Middle	2.04	13
	High	3.53	13
HSUPA	Low	2.12	13
	Middle	3.35	13
	High	2.88	13
DC-HSDPA	Low	2.69	13
	Middle	3.54	13
	High	2.58	13
HSPA+	Low	3.21	13
	Middle	2.90	13
	High	3.42	13

PCS Band (Part 24E)

Mode	Channel	PAR (dB)	Limit (dB)
RMC	Low	3.91	13
	Middle	2.51	13
	High	2.65	13
HSDPA	Low	2.43	13
	Middle	3.48	13
	High	3.86	13
HSUPA	Low	2.03	13
	Middle	2.15	13
	High	2.88	13
DC-HSDPA	Low	3.35	13
	Middle	2.30	13
	High	2.88	13
HSPA+	Low	2.47	13
	Middle	3.55	13
	High	3.78	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC	Low	3.12	13
	Middle	3.52	13
	High	3.47	13
HSDPA	Low	3.16	13
	Middle	3.27	13
	High	3.68	13
HSUPA	Low	3.31	13
	Middle	3.75	13
	High	3.53	13
DC-HSDPA	Low	3.20	13
	Middle	3.48	13
	High	2.78	13
HSPA+	Low	2.55	13
	Middle	3.42	13
	High	3.04	13

LTE Band 2:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.25	20.98	21.59	21.75	21.48	22.09
		RB1#2	21.44	21.69	20.93	21.94	22.19	21.43
		RB1#5	20.88	21.13	21.29	21.38	21.63	21.79
		RB3#0	21.34	21.20	21.95	21.84	21.70	22.45
		RB3#1	21.89	21.62	21.70	22.39	22.12	22.20
		RB3#2	21.63	21.91	20.81	22.13	22.41	21.31
		RB6#0	21.82	21.37	21.65	22.32	21.87	22.15
	16QAM	RB1#0	20.91	21.08	21.12	21.41	21.58	21.62
		RB1#2	21.68	21.84	21.78	22.18	22.34	22.28
		RB1#5	21.85	21.13	21.05	22.35	21.63	21.55
		RB3#0	21.66	21.44	21.82	22.16	21.94	22.32
		RB3#1	20.96	21.40	21.49	21.46	21.90	21.99
		RB3#2	21.72	21.72	21.45	22.22	22.22	21.95
		RB6#0	20.82	20.83	21.30	21.32	21.33	21.80
3.0	QPSK	RB1#0	21.39	21.99	20.83	21.89	22.49	21.33
		RB1#7	21.91	21.14	20.94	22.41	21.64	21.44
		RB1#14	21.91	20.93	21.47	22.41	21.43	21.97
		RB8#0	21.71	21.66	21.97	22.21	22.16	22.47
		RB8#4	21.95	20.96	21.25	22.45	21.46	21.75
		RB8#7	21.21	20.89	21.86	21.71	21.39	22.36
		RB15#0	21.51	20.82	21.30	22.01	21.32	21.80
	16QAM	RB1#0	21.95	21.31	21.92	22.45	21.81	22.42
		RB1#7	21.03	21.17	21.59	21.53	21.67	22.09
		RB1#14	21.49	21.66	21.24	21.99	22.16	21.74
		RB8#0	21.72	21.15	21.95	22.22	21.65	22.45
		RB8#4	21.88	21.83	21.20	22.38	22.33	21.70
		RB8#7	21.92	21.26	21.34	22.42	21.76	21.84
		RB15#0	21.12	21.54	21.32	21.62	22.04	21.82

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.61	20.88	21.63	22.11	21.38	22.13
		RB1#12	21.65	21.56	21.10	22.15	22.06	21.60
		RB1#24	21.37	21.03	21.05	21.87	21.53	21.55
		RB12#0	21.48	21.60	21.17	21.98	22.10	21.67
		RB12#6	21.88	21.33	21.09	22.38	21.83	21.59
		RB12#11	21.71	21.33	21.56	22.21	21.83	22.06
		RB25#0	21.96	21.32	21.26	22.46	21.82	21.76
	16QAM	RB1#0	21.10	20.86	20.89	21.60	21.36	21.39
		RB1#12	20.86	21.46	21.69	21.36	21.96	22.19
		RB1#24	21.30	21.64	21.76	21.80	22.14	22.26
		RB12#0	21.44	21.52	21.64	21.94	22.02	22.14
		RB12#6	21.96	21.07	21.57	22.46	21.57	22.07
		RB12#11	20.97	20.84	21.59	21.47	21.34	22.09
		RB25#0	21.24	21.59	21.87	21.74	22.09	22.37
10.0	QPSK	RB1#0	21.48	21.57	21.66	21.98	22.07	22.16
		RB1#24	21.45	21.71	21.81	21.95	22.21	22.31
		RB1#49	21.29	20.88	21.65	21.79	21.38	22.15
		RB25#0	20.84	21.34	21.27	21.34	21.84	21.77
		RB25#12	21.10	20.92	21.68	21.60	21.42	22.18
		RB25#24	21.39	21.11	21.92	21.89	21.61	22.42
		RB50#0	21.83	21.22	21.14	22.33	21.72	21.64
	16QAM	RB1#0	20.92	21.45	21.30	21.42	21.95	21.80
		RB1#24	21.78	20.83	21.50	22.28	21.33	22.00
		RB1#49	20.98	21.93	21.87	21.48	22.43	22.37
		RB25#0	21.70	21.42	21.66	22.20	21.92	22.16
		RB25#12	21.42	21.20	21.02	21.92	21.70	21.52
		RB25#24	21.11	21.79	21.12	21.61	22.29	21.62
		RB50#0	21.61	20.88	21.63	22.11	21.38	22.13

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.23	21.16	21.15	21.73	21.66	21.65
		RB1#37	20.86	21.99	21.48	21.36	22.49	21.98
		RB1#74	21.44	21.86	21.89	21.94	22.36	22.39
		RB36#0	21.12	21.92	21.64	21.62	22.42	22.14
		RB36#18	21.97	21.16	21.18	22.47	21.66	21.68
		RB36#37	21.75	21.51	21.20	22.25	22.01	21.70
		RB75#0	21.93	21.50	21.56	22.43	22.00	22.06
	16QAM	RB1#0	21.53	21.97	21.90	22.03	22.47	22.40
		RB1#37	21.12	20.96	21.24	21.62	21.46	21.74
		RB1#74	20.86	22.00	21.34	21.36	22.50	21.84
		RB36#0	21.99	21.15	21.82	22.49	21.65	22.32
		RB36#18	21.21	21.27	21.47	21.71	21.77	21.97
		RB36#37	21.78	21.59	21.04	22.28	22.09	21.54
		RB75#0	21.90	21.56	21.25	22.40	22.06	21.75
20.0	QPSK	RB1#0	21.10	21.21	21.07	21.60	21.71	21.57
		RB1#49	21.58	20.81	21.35	22.08	21.31	21.85
		RB1#99	20.98	20.81	21.81	21.48	21.31	22.31
		RB50#0	21.20	21.45	21.21	21.70	21.95	21.71
		RB50#24	21.02	21.19	20.86	21.52	21.69	21.36
		RB50#49	21.59	21.15	21.74	22.09	21.65	22.24
		RB100#0	21.95	21.34	20.85	22.45	21.84	21.35
	16QAM	RB1#0	21.71	21.89	21.86	22.21	22.39	22.36
		RB1#49	21.89	21.03	21.57	22.39	21.53	22.07
		RB1#99	21.25	21.45	21.27	21.75	21.95	21.77
		RB50#0	21.08	21.14	20.93	21.58	21.64	21.43
		RB50#24	20.96	21.36	20.82	21.46	21.86	21.32
		RB50#49	21.47	21.99	21.84	21.97	22.49	22.34
		RB100#0	21.25	21.42	21.02	21.75	21.92	21.52

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band2: Antenna Gain = 1.3dBi，
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤33dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	3.58	4.04	3.99	13	Pass
QPSK (100RB Size)	5.92	5.68	5.15	13	Pass
16QAM (1RB Size)	4.16	4.87	4.58	13	Pass
16QAM (100RB Size)	6.09	6.57	6.29	13	Pass

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.23	20.97	20.93	21.73	21.47	21.43
		RB1#2	20.82	21.95	21.70	21.32	22.45	22.2
		RB1#5	21.10	21.48	21.72	21.6	21.98	22.22
		RB3#0	21.94	21.32	21.96	22.44	21.82	22.46
		RB3#1	21.12	21.45	21.49	21.62	21.95	21.99
		RB3#2	21.48	21.81	22.00	21.98	22.31	22.5
		RB6#0	21.81	21.07	20.99	22.31	21.57	21.49
	16QAM	RB1#0	21.43	21.08	21.86	21.93	21.58	22.36
		RB1#2	21.25	21.38	21.95	21.75	21.88	22.45
		RB1#5	21.72	21.39	21.98	22.22	21.89	22.48
		RB3#0	21.88	21.87	21.09	22.38	22.37	21.59
		RB3#1	21.69	21.49	21.35	22.19	21.99	21.85
		RB3#2	21.75	21.60	21.16	22.25	22.1	21.66
		RB6#0	20.95	21.30	21.24	21.45	21.8	21.74
3.0	QPSK	RB1#0	21.15	21.02	20.97	21.65	21.52	21.47
		RB1#7	21.95	21.49	21.43	22.45	21.99	21.93
		RB1#14	21.19	20.99	21.70	21.69	21.49	22.2
		RB8#0	21.52	20.80	21.21	22.02	21.3	21.71
		RB8#4	21.40	21.84	20.98	21.9	22.34	21.48
		RB8#7	21.04	21.23	21.42	21.54	21.73	21.92
		RB15#0	21.29	21.17	21.40	21.79	21.67	21.9
	16QAM	RB1#0	21.28	21.25	21.11	21.78	21.75	21.61
		RB1#7	21.46	21.04	21.74	21.96	21.54	22.24
		RB1#14	21.00	21.94	21.17	21.5	22.44	21.67
		RB8#0	21.76	21.61	21.76	22.26	22.11	22.26
		RB8#4	21.95	21.65	21.74	22.45	22.15	22.24
		RB8#7	21.77	21.32	21.61	22.27	21.82	22.11
		RB15#0	21.92	21.77	21.05	22.42	22.27	21.55

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.14	20.96	21.13	21.64	21.46	21.63
		RB1#12	21.67	21.14	21.78	22.17	21.64	22.28
		RB1#24	21.88	20.96	21.60	22.38	21.46	22.1
		RB12#0	21.19	20.84	21.70	21.69	21.34	22.2
		RB12#6	21.97	21.37	21.67	22.47	21.87	22.17
		RB12#11	20.89	21.34	21.98	21.39	21.84	22.48
		RB25#0	21.01	21.14	21.04	21.51	21.64	21.54
	16QAM	RB1#0	21.98	21.46	20.99	22.48	21.96	21.49
		RB1#12	21.17	21.92	21.38	21.67	22.42	21.88
		RB1#24	21.29	21.16	20.99	21.79	21.66	21.49
		RB12#0	21.92	21.75	21.86	22.42	22.25	22.36
		RB12#6	21.06	21.22	21.93	21.56	21.72	22.43
		RB12#11	20.80	21.33	21.02	21.3	21.83	21.52
		RB25#0	21.66	21.44	21.05	22.16	21.94	21.55
10.0	QPSK	RB1#0	20.93	21.10	21.02	21.43	21.6	21.52
		RB1#24	21.58	21.61	21.42	22.08	22.11	21.92
		RB1#49	21.18	21.85	21.41	21.68	22.35	21.91
		RB25#0	21.54	21.99	21.29	22.04	22.49	21.79
		RB25#12	21.51	21.90	21.20	22.01	22.4	21.7
		RB25#24	21.02	21.10	20.91	21.52	21.6	21.41
		RB50#0	20.83	21.89	21.46	21.33	22.39	21.96
	16QAM	RB1#0	20.85	21.39	21.67	21.35	21.89	22.17
		RB1#24	20.90	21.29	21.13	21.4	21.79	21.63
		RB1#49	21.35	21.96	21.36	21.85	22.46	21.86
		RB25#0	21.01	21.26	21.85	21.51	21.76	22.35
		RB25#12	21.11	20.97	20.82	21.61	21.47	21.32
		RB25#24	21.65	20.90	21.83	22.15	21.4	22.33
		RB50#0	21.36	21.23	21.88	21.86	21.73	22.38

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	20.91	20.92	20.99	21.41	21.42	21.49
		RB1#37	21.80	21.63	20.52	22.3	22.13	21.02
		RB1#74	20.57	21.25	21.06	21.07	21.75	21.56
		RB36#0	21.49	20.84	20.71	21.99	21.34	21.21
		RB36#18	20.85	21.52	21.52	21.35	22.02	22.02
		RB36#37	21.40	21.40	21.48	21.9	21.9	21.98
		RB75#0	21.35	21.11	21.02	21.85	21.61	21.52
	16QAM	RB1#0	21.33	21.62	20.93	21.83	22.12	21.43
		RB1#37	20.76	20.97	20.97	21.26	21.47	21.47
		RB1#74	21.52	20.77	21.66	22.02	21.27	22.16
		RB36#0	21.36	21.15	20.95	21.86	21.65	21.45
		RB36#18	21.53	21.47	21.52	22.03	21.97	22.02
		RB36#37	21.01	21.10	20.77	21.51	21.6	21.27
		RB75#0	21.64	21.49	21.21	22.14	21.99	21.71
20.0	QPSK	RB1#0	20.96	20.92	21.15	21.46	21.42	21.65
		RB1#49	21.67	20.83	20.74	22.17	21.33	21.24
		RB1#99	21.34	21.22	20.65	21.84	21.72	21.15
		RB50#0	20.63	21.23	20.59	21.13	21.73	21.09
		RB50#24	21.77	21.15	21.77	22.27	21.65	22.27
		RB50#49	21.21	20.64	21.62	21.71	21.14	22.12
		RB100#0	21.34	21.24	21.15	21.84	21.74	21.65
	16QAM	RB1#0	21.41	21.15	21.14	21.91	21.65	21.64
		RB1#49	21.78	21.30	21.34	22.28	21.8	21.84
		RB1#99	20.98	20.57	20.61	21.48	21.07	21.11
		RB50#0	21.40	21.47	21.57	21.9	21.97	22.07
		RB50#24	21.73	21.29	20.84	22.23	21.79	21.34
		RB50#49	21.08	21.15	21.51	21.58	21.65	22.01
		RB100#0	20.91	21.30	21.46	21.41	21.8	21.96

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band4: Antenna Gain = 1.3dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.25	4.14	3.89	13	Pass
QPSK (100RB Size)	4.74	5.51	6.08	13	Pass
16QAM (1RB Size)	5.07	4.52	4.17	13	Pass
16QAM (100RB Size)	5.61	5.62	5.49	13	Pass

LTE Band 5:

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.20	22.08	22.11	20.15	20.03	20.06
		RB1#2	22.75	22.85	22.73	20.70	20.80	20.68
		RB1#5	22.07	22.72	22.19	20.02	20.67	20.14
		RB3#0	22.88	22.03	22.07	20.83	19.98	20.02
		RB3#1	22.95	22.37	22.81	20.90	20.32	20.76
		RB3#2	22.07	22.49	22.66	20.02	20.44	20.61
		RB6#0	22.59	22.69	22.83	20.54	20.64	20.78
	16QAM	RB1#0	22.59	22.43	22.89	20.54	20.38	20.84
		RB1#2	22.27	22.80	22.27	20.22	20.75	20.22
		RB1#5	22.66	22.13	22.74	20.61	20.08	20.69
		RB3#0	22.36	22.33	22.51	20.31	20.28	20.46
		RB3#1	22.39	22.74	22.27	20.34	20.69	20.22
		RB3#2	22.15	22.64	22.06	20.10	20.59	20.01
		RB6#0	22.43	22.93	22.38	20.38	20.88	20.33
3.0	QPSK	RB1#0	22.32	22.19	22.11	20.27	20.14	20.06
		RB1#7	22.08	22.63	22.00	20.03	20.58	19.95
		RB1#14	22.99	22.56	22.26	20.94	20.51	20.21
		RB8#0	22.64	22.29	22.82	20.59	20.24	20.77
		RB8#4	22.27	22.33	22.45	20.22	20.28	20.40
		RB8#7	22.27	22.16	22.31	20.22	20.11	20.26
		RB15#0	22.45	22.46	22.01	20.40	20.41	19.96
	16QAM	RB1#0	22.87	22.35	22.33	20.82	20.30	20.28
		RB1#7	22.99	22.91	22.90	20.94	20.86	20.85
		RB1#14	22.23	22.02	22.02	20.18	19.97	19.97
		RB8#0	22.75	22.94	22.89	20.70	20.89	20.84
		RB8#4	22.93	22.33	22.12	20.88	20.28	20.07
		RB8#7	22.12	22.57	22.83	20.07	20.52	20.78
		RB15#0	22.78	22.73	22.41	20.73	20.68	20.36

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.13	22.18	22.12	20.08	20.13	20.07
		RB1#12	22.17	22.73	22.34	20.12	20.68	20.29
		RB1#24	22.95	22.45	22.17	20.90	20.40	20.12
		RB12#0	22.48	22.24	22.17	20.43	20.19	20.12
		RB12#6	22.21	22.41	22.34	20.16	20.36	20.29
		RB12#11	22.09	22.22	22.05	20.04	20.17	20.00
		RB25#0	22.58	22.92	22.53	20.53	20.87	20.48
	16QAM	RB1#0	22.19	22.86	22.31	20.14	20.81	20.26
		RB1#12	22.88	22.15	22.53	20.83	20.10	20.48
		RB1#24	22.95	22.94	22.98	20.90	20.89	20.93
		RB12#0	22.30	22.99	22.25	20.25	20.94	20.20
		RB12#6	22.53	22.44	22.56	20.48	20.39	20.51
		RB12#11	22.84	22.46	22.38	20.79	20.41	20.33
		RB25#0	22.44	22.58	22.38	20.39	20.53	20.33
10.0	QPSK	RB1#0	22.17	22.26	22.19	20.12	20.21	20.14
		RB1#24	22.17	22.62	22.73	20.12	20.57	20.68
		RB1#49	22.99	22.71	22.47	20.94	20.66	20.42
		RB25#0	22.17	22.61	22.76	20.12	20.56	20.71
		RB25#12	22.21	22.80	22.49	20.16	20.75	20.44
		RB25#24	22.25	22.17	22.89	20.20	20.12	20.84
		RB50#0	22.23	22.64	22.77	20.18	20.59	20.72
	16QAM	RB1#0	22.48	22.53	22.60	20.43	20.48	20.55
		RB1#24	22.82	22.97	22.75	20.77	20.92	20.70
		RB1#49	22.78	22.62	22.95	20.73	20.57	20.90
		RB25#0	22.29	22.05	22.35	20.24	20.00	20.30
		RB25#12	22.63	22.34	22.69	20.58	20.29	20.64
		RB25#24	22.24	22.88	22.44	20.19	20.83	20.39
		RB50#0	22.81	22.93	22.97	20.76	20.88	20.92

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For Band5: Antenna Gain =0.6dBi = -1.55dBd (0dBd=2.15dBi)
For 600-1000MHz, Cable Loss=0.5dB*(provided by the applicant)
Limit: ERP≤38.45dBm

Peak-to-average ratio (PAR)

10MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.25	4.30	4.27	13	Pass
QPSK (50RB Size)	5.34	5.74	5.18	13	Pass
16QAM (1RB Size)	5.32	4.83	5.00	13	Pass
16QAM (50RB Size)	6.67	6.23	6.18	13	Pass

LTE Band 12

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.03	22.18	22.11	19.73	19.88	19.81
		RB1#2	22.19	22.61	22.41	19.89	20.31	20.11
		RB1#5	22.17	22.01	22.82	19.87	19.71	20.52
		RB3#0	22.83	22.20	22.05	20.53	19.90	19.75
		RB3#1	22.91	22.55	22.61	20.61	20.25	20.31
		RB3#2	22.67	22.44	22.84	20.37	20.14	20.54
		RB6#0	22.44	22.53	22.63	20.14	20.23	20.33
	16QAM	RB1#0	22.51	22.79	22.21	20.21	20.49	19.91
		RB1#2	22.94	22.75	22.34	20.64	20.45	20.04
		RB1#5	22.14	22.56	22.36	19.84	20.26	20.06
		RB3#0	22.11	22.78	22.06	19.81	20.48	19.76
		RB3#1	22.53	22.24	22.57	20.23	19.94	20.27
		RB3#2	22.18	22.22	22.17	19.88	19.92	19.87
		RB6#0	22.64	22.53	22.33	20.34	20.23	20.03
3.0	QPSK	RB1#0	22.31	22.31	22.09	20.01	20.01	19.79
		RB1#7	22.95	22.66	22.90	20.65	20.36	20.60
		RB1#14	22.02	22.16	22.09	19.72	19.86	19.79
		RB8#0	22.34	22.95	22.64	20.04	20.65	20.34
		RB8#4	22.66	22.57	22.44	20.36	20.27	20.14
		RB8#7	22.08	22.48	22.49	19.78	20.18	20.19
		RB15#0	22.15	22.72	22.66	19.85	20.42	20.36
	16QAM	RB1#0	22.48	22.35	22.74	20.18	20.05	20.44
		RB1#7	22.10	22.16	22.06	19.80	19.86	19.76
		RB1#14	22.45	22.00	22.59	20.15	19.70	20.29
		RB8#0	22.64	22.15	22.19	20.34	19.85	19.89
		RB8#4	23.00	22.82	22.27	20.70	20.52	19.97
		RB8#7	22.97	22.89	22.05	20.67	20.59	19.75
		RB15#0	22.67	22.11	22.04	20.37	19.81	19.74

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.06	22.15	22.04	19.76	19.85	19.74
		RB1#12	22.78	22.05	22.91	20.48	19.75	20.61
		RB1#24	22.59	22.46	22.63	20.29	20.16	20.33
		RB12#0	22.01	22.07	22.91	19.71	19.77	20.61
		RB12#6	22.81	22.25	22.37	20.51	19.95	20.07
		RB12#11	22.27	22.43	22.68	19.97	20.13	20.38
		RB25#0	22.35	22.45	22.30	20.05	20.15	20.00
	16QAM	RB1#0	22.30	22.13	22.66	20.00	19.83	20.36
		RB1#12	22.18	22.82	22.68	19.88	20.52	20.38
		RB1#24	22.04	22.27	22.18	19.74	19.97	19.88
		RB12#0	22.42	22.35	22.35	20.12	20.05	20.05
		RB12#6	22.77	22.55	22.21	20.47	20.25	19.91
		RB12#11	22.46	22.83	22.84	20.16	20.53	20.54
		RB25#0	22.96	22.81	22.34	20.66	20.51	20.04
10.0	QPSK	RB1#0	22.01	22.21	22.25	19.71	19.91	19.95
		RB1#24	22.95	22.80	22.88	20.65	20.50	20.58
		RB1#49	22.93	22.42	22.33	20.63	20.12	20.03
		RB25#0	22.92	22.19	22.01	20.62	19.89	19.71
		RB25#12	22.46	22.31	22.30	20.16	20.01	20.00
		RB25#24	22.94	22.74	22.53	20.64	20.44	20.23
		RB50#0	22.97	22.72	22.52	20.67	20.42	20.22
	16QAM	RB1#0	22.14	22.35	22.28	19.84	20.05	19.98
		RB1#24	22.78	22.73	22.97	20.48	20.43	20.67
		RB1#49	22.40	22.03	22.01	20.10	19.73	19.71
		RB25#0	22.98	22.88	22.97	20.68	20.58	20.67
		RB25#12	22.13	22.80	22.43	19.83	20.50	20.13
		RB25#24	22.21	22.30	22.80	19.91	20.00	20.50
		RB50#0	22.66	22.60	22.61	20.36	20.30	20.31

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For Band12: Antenna Gain = 0.35dBi = -1.8dBd (0dBd=2.15dBi)
For 600-1000MHz, Cable Loss=0.5dB*(provided by the applicant)
Limit: ERP≤44.77dBm

Peak-to-average ratio (PAR)

10MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.33	4.34	4.57	13	Pass
QPSK (50RB Size)	5.19	5.54	5.58	13	Pass
16QAM (1RB Size)	5.10	5.43	5.17	13	Pass
16QAM (50RB Size)	6.72	6.72	6.19	13	Pass

LTE Band 13

Maximum Output Power

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	22.29	22.32	22.32	19.99	20.02	20.02
		RB1#12	22.60	22.19	22.85	20.30	19.89	20.55
		RB1#24	22.57	22.33	22.79	20.27	20.03	20.49
		RB12#0	22.97	22.89	23.00	20.67	20.59	20.70
		RB12#6	22.10	22.74	22.79	19.80	20.44	20.49
		RB12#11	22.37	22.74	22.97	20.07	20.44	20.67
		RB25#0	22.82	22.83	22.56	20.52	20.53	20.26
	16QAM	RB1#0	22.29	22.28	22.10	19.99	19.98	19.80
		RB1#12	22.72	22.67	22.17	20.42	20.37	19.87
		RB1#24	22.88	22.20	22.41	20.58	19.90	20.11
		RB12#0	22.14	22.52	22.61	19.84	20.22	20.31
		RB12#6	22.54	22.18	22.59	20.24	19.88	20.29
		RB12#11	22.60	22.57	22.84	20.30	20.27	20.54
		RB25#0	22.73	22.20	22.51	20.43	19.90	20.21
10.0	QPSK	RB1#0	/	22.28	/	/	19.98	/
		RB1#24	/	22.57	/	/	20.27	/
		RB1#49	/	22.42	/	/	20.12	/
		RB25#0	/	22.97	/	/	20.67	/
		RB25#12	/	22.39	/	/	20.09	/
		RB25#24	/	22.42	/	/	20.12	/
		RB50#0	/	22.69	/	/	20.39	/
	16QAM	RB1#0	/	22.46	/	/	20.16	/
		RB1#24	/	22.17	/	/	19.87	/
		RB1#49	/	22.73	/	/	20.43	/
		RB25#0	/	22.20	/	/	19.90	/
		RB25#12	/	22.33	/	/	20.03	/
		RB25#24	/	22.93	/	/	20.63	/
		RB50#0	/	22.04	/	/	19.74	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
For Band13: Antenna Gain =0.35dBi = -1.8dBd (0dBd=2.15dBi)
For 600-1000MHz, Cable Loss=0.5dB*(provided by the applicant)
Limit: ERP≤44.77dBm

Peak-to-average ratio (PAR)

10MHz bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.13	4.09	4.40	13	Pass
QPSK (50RB Size)	5.48	5.85	5.12	13	Pass
16QAM (1RB Size)	5.28	5.15	5.05	13	Pass
16QAM (50RB Size)	6.19	6.19	6.14	13	Pass

LTE Band 66

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.35	21.33	21.29	21.85	21.83	21.79
		RB1#2	21.54	21.11	21.29	22.04	21.61	21.79
		RB1#5	21.86	21.19	21.47	22.36	21.69	21.97
		RB3#0	21.04	21.56	21.10	21.54	22.06	21.6
		RB3#1	21.44	21.08	21.90	21.94	21.58	22.4
		RB3#2	21.30	21.31	21.70	21.8	21.81	22.2
		RB6#0	21.39	21.93	21.06	21.89	22.43	21.56
	16QAM	RB1#0	21.45	21.43	21.45	21.95	21.93	21.95
		RB1#2	21.14	21.15	21.10	21.64	21.65	21.6
		RB1#5	21.76	21.94	21.82	22.26	22.44	22.32
		RB3#0	21.10	21.82	21.39	21.6	22.32	21.89
		RB3#1	21.02	21.69	21.07	21.52	22.19	21.57
		RB3#2	21.72	21.31	21.73	22.22	21.81	22.23
		RB6#0	21.52	21.40	21.38	22.02	21.9	21.88
3.0	QPSK	RB1#0	21.30	21.46	21.41	21.8	21.96	21.91
		RB1#7	21.04	21.12	21.01	21.54	21.62	21.51
		RB1#14	21.41	21.42	21.66	21.91	21.92	22.16
		RB8#0	21.19	21.84	21.10	21.69	22.34	21.6
		RB8#4	21.65	21.90	21.85	22.15	22.4	22.35
		RB8#7	21.16	21.10	21.81	21.66	21.6	22.31
		RB15#0	21.33	21.56	21.01	21.83	22.06	21.51
	16QAM	RB1#0	21.83	21.85	21.56	22.33	22.35	22.06
		RB1#7	21.69	21.34	21.33	22.19	21.84	21.83
		RB1#14	21.89	21.41	21.61	22.39	21.91	22.11
		RB8#0	21.03	21.53	21.87	21.53	22.03	22.37
		RB8#4	21.19	21.04	21.95	21.69	21.54	22.45
		RB8#7	21.21	21.77	21.73	21.71	22.27	22.23
		RB15#0	21.70	21.98	21.91	22.2	22.48	22.41

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.31	21.44	21.41	21.81	21.94	21.91
		RB1#12	21.13	21.55	21.44	21.63	22.05	21.94
		RB1#24	21.41	21.34	21.61	21.91	21.84	22.11
		RB12#0	21.69	21.08	21.78	22.19	21.58	22.28
		RB12#6	21.91	21.45	21.16	22.41	21.95	21.66
		RB12#11	21.05	21.22	21.14	21.55	21.72	21.64
		RB25#0	21.41	21.69	21.53	21.91	22.19	22.03
	16QAM	RB1#0	21.12	21.72	21.47	21.62	22.22	21.97
		RB1#12	21.63	21.86	21.05	22.13	22.36	21.55
		RB1#24	21.50	21.35	21.01	22	21.85	21.51
		RB12#0	21.50	21.28	21.51	22	21.78	22.01
		RB12#6	21.49	21.24	21.08	21.99	21.74	21.58
		RB12#11	21.10	21.56	21.39	21.6	22.06	21.89
		RB25#0	21.77	21.11	21.04	22.27	21.61	21.54
10.0	QPSK	RB1#0	21.37	21.57	21.36	21.87	22.07	21.86
		RB1#24	21.48	21.23	21.26	21.98	21.73	21.76
		RB1#49	21.71	21.29	21.43	22.21	21.79	21.93
		RB25#0	21.34	21.68	22.00	21.84	22.18	22.5
		RB25#12	21.26	21.04	21.23	21.76	21.54	21.73
		RB25#24	21.72	21.98	21.52	22.22	22.48	22.02
		RB50#0	21.67	21.67	21.29	22.17	22.17	21.79
	16QAM	RB1#0	21.99	21.13	21.64	22.49	21.63	22.14
		RB1#24	21.44	21.07	21.81	21.94	21.57	22.31
		RB1#49	21.71	21.20	21.42	22.21	21.7	21.92
		RB25#0	21.97	21.42	21.26	22.47	21.92	21.76
		RB25#12	21.67	21.55	21.67	22.17	22.05	22.17
		RB25#24	21.55	21.21	21.15	22.05	21.71	21.65
		RB50#0	21.79	21.31	21.87	22.29	21.81	22.37

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.23	21.42	21.34	21.73	21.92	21.84
		RB1#37	21.94	21.72	21.81	22.44	22.22	22.31
		RB1#74	21.08	21.55	21.29	21.58	22.05	21.79
		RB36#0	21.90	21.06	21.37	22.4	21.56	21.87
		RB36#18	21.23	21.89	21.68	21.73	22.39	22.18
		RB36#37	21.28	21.88	21.36	21.78	22.38	21.86
		RB75#0	21.09	21.36	21.17	21.59	21.86	21.67
	16QAM	RB1#0	21.95	21.80	21.09	22.45	22.3	21.59
		RB1#37	21.53	21.44	21.92	22.03	21.94	22.42
		RB1#74	21.74	21.08	21.49	22.24	21.58	21.99
		RB36#0	21.29	21.39	21.37	21.79	21.89	21.87
		RB36#18	21.83	21.85	21.82	22.33	22.35	22.32
		RB36#37	21.06	21.03	21.09	21.56	21.53	21.59
		RB75#0	21.45	21.65	21.91	21.95	22.15	22.41
20.0	QPSK	RB1#0	21.26	21.37	21.20	21.76	21.87	21.7
		RB1#49	21.20	21.21	21.54	21.7	21.71	22.04
		RB1#99	21.31	21.99	21.37	21.81	22.49	21.87
		RB50#0	21.66	21.60	21.02	22.16	22.1	21.52
		RB50#24	21.89	21.62	21.25	22.39	22.12	21.75
		RB50#49	21.62	21.20	21.88	22.12	21.7	22.38
		RB100#0	21.05	21.50	21.49	21.55	22	21.99
	16QAM	RB1#0	21.65	21.33	21.83	22.15	21.83	22.33
		RB1#49	21.05	21.87	21.08	21.55	22.37	21.58
		RB1#99	21.69	21.22	21.47	22.19	21.72	21.97
		RB50#0	21.98	21.43	21.01	22.48	21.93	21.51
		RB50#24	21.00	21.85	21.50	21.5	22.35	22
		RB50#49	21.88	21.10	21.06	22.38	21.6	21.56
		RB100#0	21.45	21.86	21.78	21.95	22.36	22.28

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 66: Antenna Gain = 1.3dBi
For 1700-2200MHz, Cable Loss=0.8dB*(provided by the applicant)
Limit: EIRP≤30dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.12	4.45	3.84	13	Pass
QPSK (100RB Size)	4.37	5.62	6.41	13	Pass
16QAM (1RB Size)	5.04	4.72	4.75	13	Pass
16QAM (100RB Size)	5.46	5.88	5.90	13	Pass

LTE Band 71

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.82	21.75	21.77	19.36	19.29	19.31
		RB1#12	21.24	21.59	21.58	18.78	19.13	19.12
		RB1#24	21.60	21.64	21.27	19.14	19.18	18.81
		RB12#0	21.42	21.76	21.08	18.96	19.3	18.62
		RB12#6	21.34	21.51	21.22	18.88	19.05	18.76
		RB12#11	21.56	21.33	21.10	19.1	18.87	18.64
		RB25#0	21.41	21.46	21.13	18.95	19	18.67
	16QAM	RB1#0	21.69	21.23	21.10	19.23	18.77	18.64
		RB1#12	21.03	21.78	21.77	18.57	19.32	19.31
		RB1#24	21.84	21.06	21.65	19.38	18.6	19.19
		RB12#0	21.84	21.41	21.09	19.38	18.95	18.63
		RB12#6	21.46	21.99	21.96	19	19.53	19.5
		RB12#11	21.72	21.41	21.87	19.26	18.95	19.41
		RB25#0	21.65	21.66	21.98	19.19	19.2	19.52
10.0	QPSK	RB1#0	21.81	21.69	21.94	19.35	19.23	19.48
		RB1#24	21.64	21.15	21.26	19.18	18.69	18.8
		RB1#49	21.28	21.45	21.52	18.82	18.99	19.06
		RB25#0	21.23	21.77	21.76	18.77	19.31	19.3
		RB25#12	21.69	21.76	21.98	19.23	19.3	19.52
		RB25#24	21.97	21.57	21.55	19.51	19.11	19.09
		RB50#0	21.57	21.30	21.81	19.11	18.84	19.35
	16QAM	RB1#0	21.17	21.39	21.83	18.71	18.93	19.37
		RB1#24	21.41	21.11	21.22	18.95	18.65	18.76
		RB1#49	21.53	21.71	21.37	19.07	19.25	18.91
		RB25#0	21.73	21.61	21.72	19.27	19.15	19.26
		RB25#12	21.78	21.84	21.83	19.32	19.38	19.37
		RB25#24	21.64	21.65	21.37	19.18	19.19	18.91
		RB50#0	21.63	21.78	21.75	19.17	19.32	19.29

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.23	21.42	21.34	18.77	18.96	18.88
		RB1#37	21.30	21.06	21.76	18.84	18.6	19.3
		RB1#74	21.47	21.45	21.99	19.01	18.99	19.53
		RB36#0	21.79	21.45	21.61	19.33	18.99	19.15
		RB36#18	21.33	21.78	21.24	18.87	19.32	18.78
		RB36#37	21.33	21.27	21.76	18.87	18.81	19.3
		RB75#0	21.02	21.50	21.47	18.56	19.04	19.01
	16QAM	RB1#0	21.96	21.97	21.35	19.5	19.51	18.89
		RB1#37	21.05	21.37	21.47	18.59	18.91	19.01
		RB1#74	21.51	21.24	21.21	19.05	18.78	18.75
		RB36#0	21.15	21.77	21.46	18.69	19.31	19
		RB36#18	21.70	21.82	21.95	19.24	19.36	19.49
		RB36#37	21.45	21.51	22.00	18.99	19.05	19.54
		RB75#0	21.09	21.37	21.18	18.63	18.91	18.72
20.0	QPSK	RB1#0	21.71	21.86	21.43	19.25	19.4	18.97
		RB1#49	21.71	21.41	21.62	19.25	18.95	19.16
		RB1#99	21.20	21.43	21.04	18.74	18.97	18.58
		RB50#0	21.01	21.56	21.92	18.55	19.1	19.46
		RB50#24	21.28	21.50	21.10	18.82	19.04	18.64
		RB50#49	21.20	21.09	21.93	18.74	18.63	19.47
		RB100#0	21.09	21.52	21.93	18.63	19.06	19.47
	16QAM	RB1#0	22.00	21.06	21.95	19.54	18.6	19.49
		RB1#49	21.61	21.26	21.99	19.15	18.8	19.53
		RB1#99	21.90	21.23	21.34	19.44	18.77	18.88
		RB50#0	21.79	21.05	21.67	19.33	18.59	19.21
		RB50#24	21.25	21.99	21.77	18.79	19.53	19.31
		RB50#49	21.12	21.34	21.17	18.66	18.88	18.71
		RB100#0	21.71	21.86	21.43	19.25	19.4	18.97

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
For Band 71: Antenna Gain =0.19dBi = -1.96dBd (0dBd=2.15dBi)
For 600-1000MHz, Cable Loss=0.5dB*(provided by the applicant)
Limit: EIRP≤34.77dBm

Peak-to-average ratio (PAR)

20MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	4.26	4.41	3.92	13	Pass
QPSK (100RB Size)	4.81	5.27	6.39	13	Pass
16QAM (1RB Size)	5.10	4.63	4.77	13	Pass
16QAM (100RB Size)	5.32	5.46	5.98	13	Pass

FCC §2.1049, §22.917, §22.905 & §24.238 & §27.53 - OCCUPIED BANDWIDTH

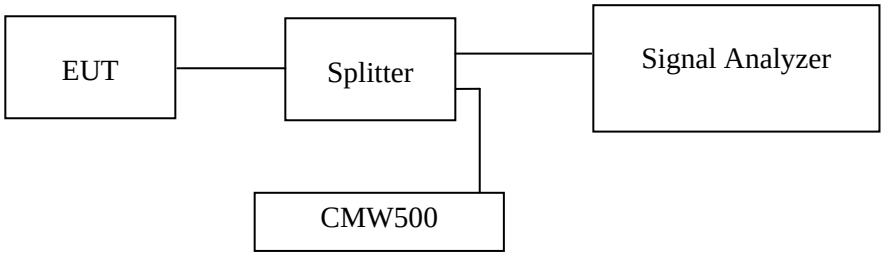
Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238, and §27.53.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Test Data

Environmental Conditions

Temperature:	23 - 25 ℃
Relative Humidity:	51- 55 %
ATM Pressure:	100.8 - 101.3 kPa

The testing was performed by Fan Yang from 2021-01-13 to 2021-01-29.

EUT operation mode: Transmitting

Test Result: Pass

Test plots refer to the Appendix A.

FCC §2.1051, §22.917(a) & §24.238(a) & §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

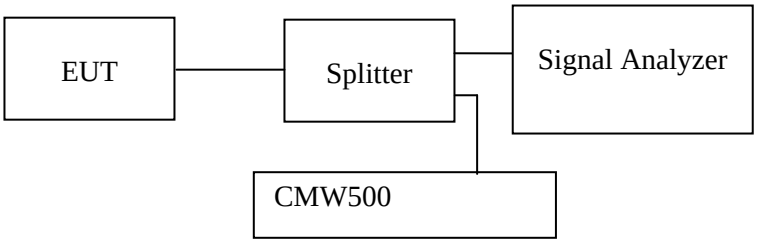
Applicable Standard

FCC §2.1051, §22.917(a) & §24.238(a) & §27.53.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10^{th} harmonic.



Test Data

Environmental Conditions

Temperature:	23-25 ℃
Relative Humidity:	51-55 %
ATM Pressure:	100.8 - 101.0 kPa

The testing was performed by Fan Yang on 2021-01-11 to 2021-01-30.

EUT operation mode: Transmitting

Test result: Pass

Test plots refer to the Appendix B.

FCC § 2.1053; § 22.917 (a);§ 24.238 (a); §27.53 - SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, §22.917(a) & § 24.238(a) & § 27.53.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	28~29.3 ℃
Relative Humidity:	50~58 %
ATM Pressure:	101.0~101.1 kPa

The testing was performed by Fan Yang from 2020-01-06 to 2021-01-14.

EUT operation mode: Transmitting

Pre-scan with Low, Middle and High channel, the worst case is as below:

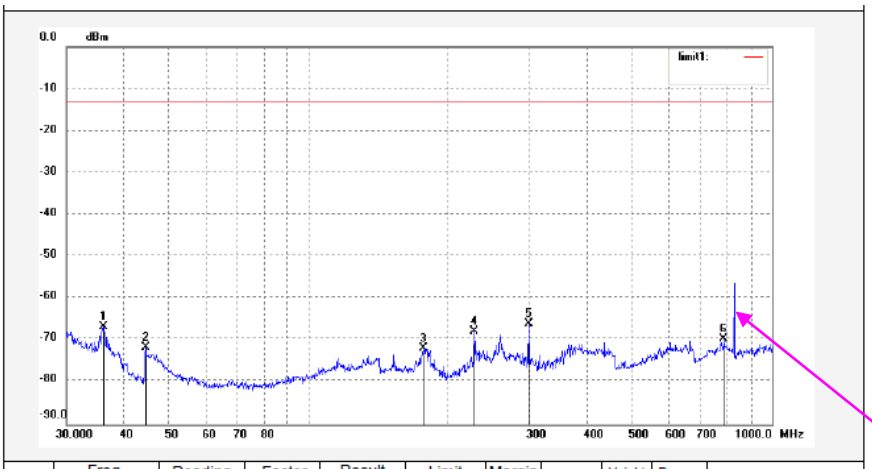
30 MHz ~ 1GHz:

Cellular Band (Part 22H)

WCDMA Mode

Low channel

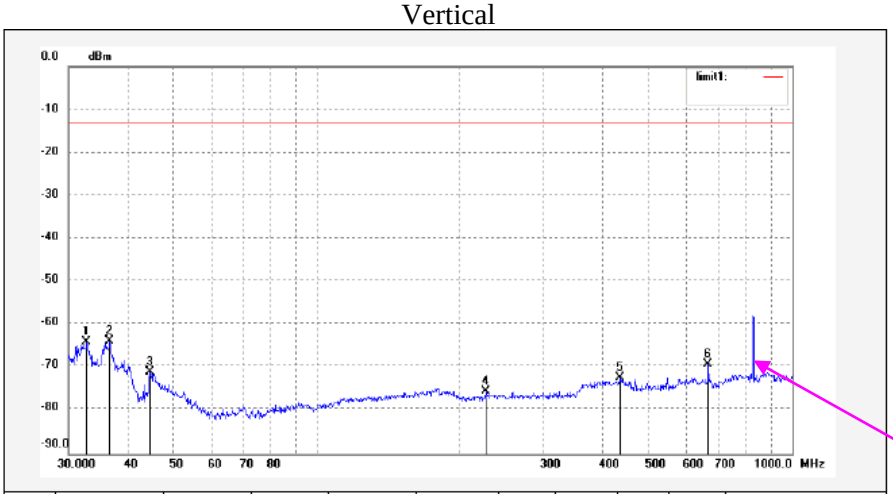
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.33	-9.31	-66.64	-13.00	-53.64	peak			
2	44.4656	-56.98	-14.77	-71.75	-13.00	-58.75	peak			
3	176.8951	-56.01	-15.82	-71.83	-13.00	-58.83	peak			
4	227.8154	-52.94	-15.00	-67.94	-13.00	-54.94	peak			
5	298.5932	-52.94	-13.10	-66.04	-13.00	-53.04	peak			
6	787.4749	-68.87	-0.72	-69.59	-13.00	-56.59	peak			

Fundamental test

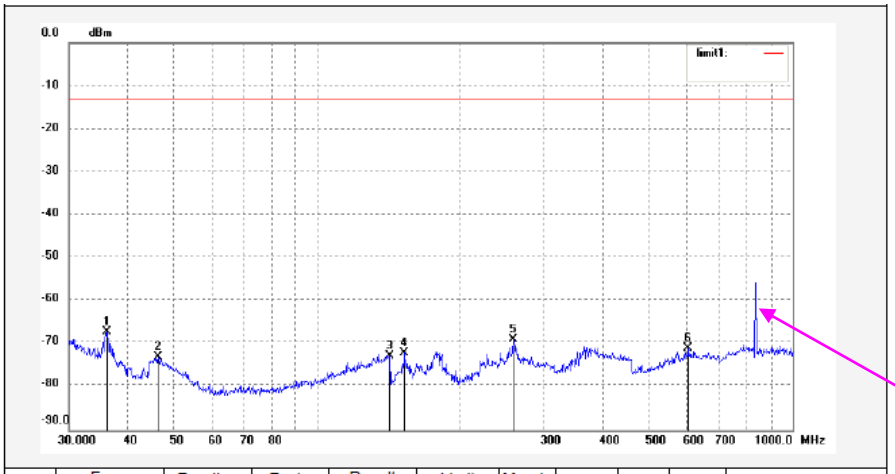
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.7542	-57.19	-6.82	-64.01	-13.00	-51.01	peak			
2	36.6520	-54.16	-9.65	-63.81	-13.00	-50.81	peak			
3	44.6221	-56.16	-14.86	-71.02	-13.00	-58.02	peak			
4	226.2202	-60.32	-15.09	-75.41	-13.00	-62.41	peak			
5	434.8650	-63.62	-8.68	-72.30	-13.00	-59.30	peak			
6	665.2607	-64.42	-4.87	-69.29	-13.00	-56.29	peak			

Fundamental test

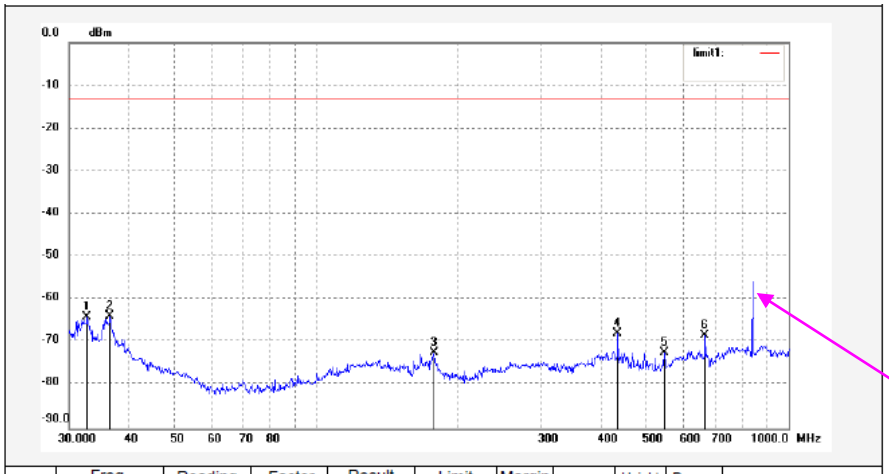
Middle channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.83	-9.31	-67.14	-13.00	-54.14	peak			
2	46.2180	-57.17	-15.90	-73.07	-13.00	-60.07	peak			
3	141.7692	-57.48	-15.34	-72.82	-13.00	-59.82	peak			
4	152.6254	-57.22	-14.82	-72.04	-13.00	-59.04	peak			
5	258.5332	-56.80	-12.15	-68.95	-13.00	-55.95	peak			
6	602.9287	-65.98	-5.04	-71.02	-13.00	-58.02	peak			

Fundamental test

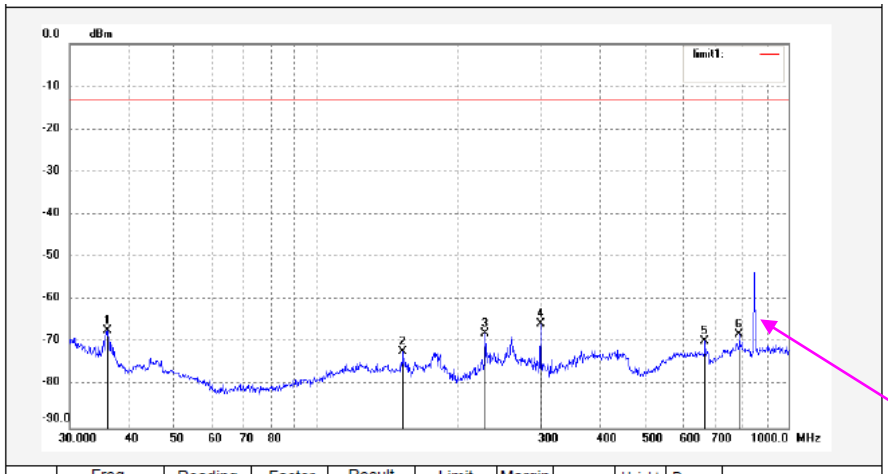
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.7542	-57.19	-6.82	-64.01	-13.00	-51.01	peak			
2	36.6520	-54.16	-9.65	-63.81	-13.00	-50.81	peak			
3	177.5175	-56.39	-15.86	-72.25	-13.00	-59.25	peak			
4	434.8650	-59.12	-8.68	-67.80	-13.00	-54.80	peak			
5	546.4365	-65.69	-6.55	-72.24	-13.00	-59.24	peak			
6	665.2607	-63.42	-4.87	-68.29	-13.00	-55.29	peak			

Fundamental test

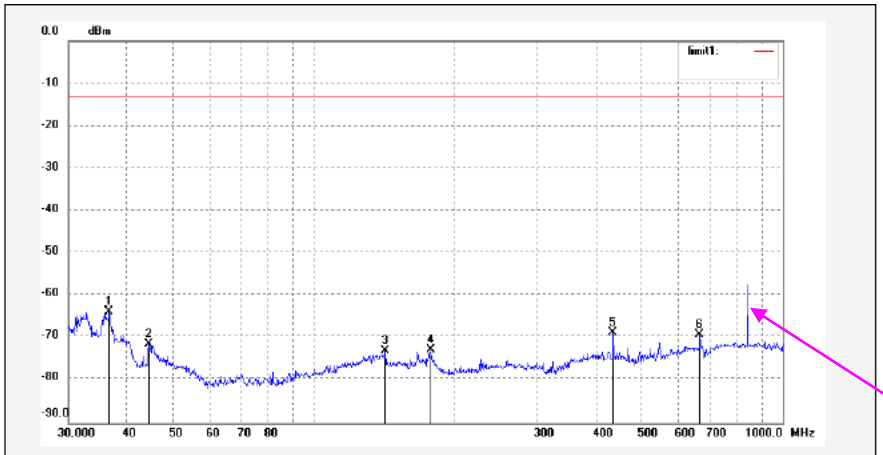
High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.83	-9.31	-67.14	-13.00	-54.14	peak			
2	152.6254	-57.22	-14.82	-72.04	-13.00	-59.04	peak			
3	227.8154	-52.94	-15.00	-67.94	-13.00	-54.94	peak			
4	298.5932	-52.44	-13.10	-65.54	-13.00	-52.54	peak			
5	665.2607	-64.70	-4.87	-69.57	-13.00	-56.57	peak			
6	787.4749	-67.37	-0.72	-68.09	-13.00	-55.09	peak			

Fundamental test

Vertical



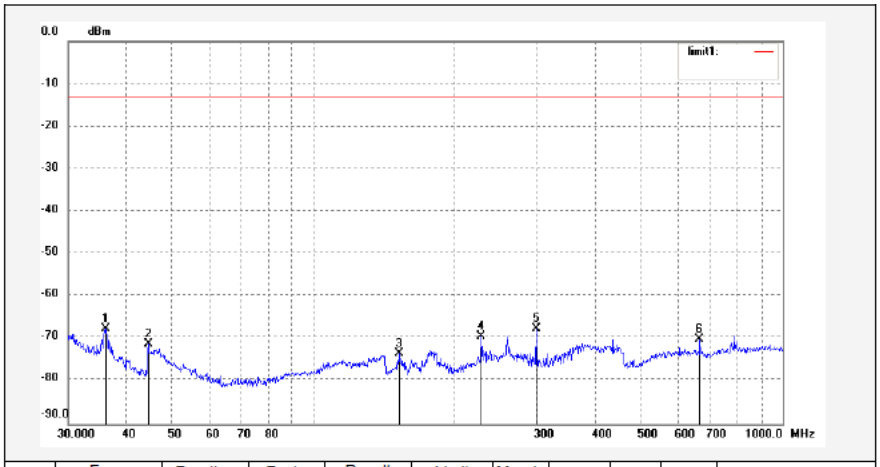
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.6520	-54.16	-9.65	-63.81	-13.00	-50.81	peak			
2	44.6221	-56.66	-14.86	-71.52	-13.00	-58.52	peak			
3	142.2684	-57.75	-15.31	-73.06	-13.00	-60.06	peak			
4	177.5175	-56.89	-15.86	-72.75	-13.00	-59.75	peak			
5	434.8650	-60.12	-8.68	-68.80	-13.00	-55.80	peak			
6	665.2607	-64.42	-4.87	-69.29	-13.00	-56.29	peak			

Fundamental test

PCS Band (Part 24E)

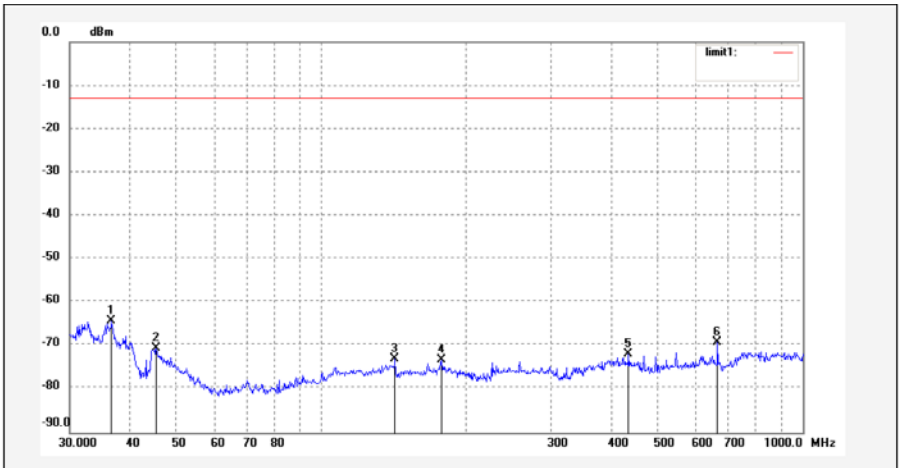
Low channel

Horizontal



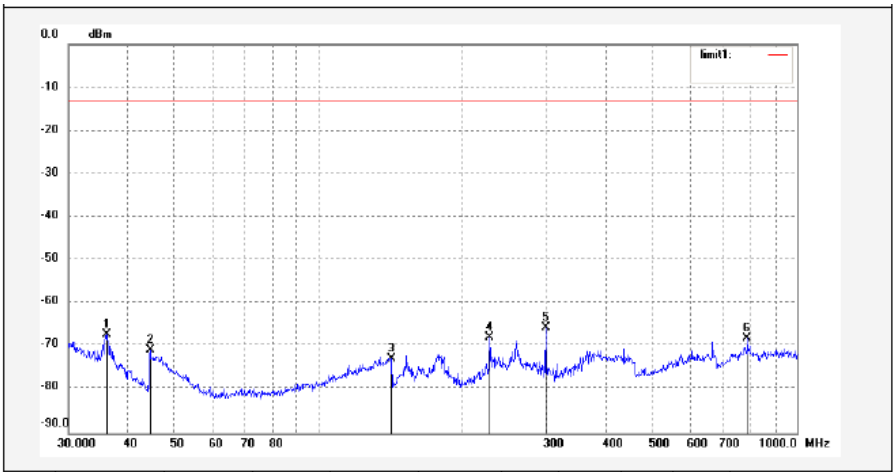
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-58.33	-9.31	-67.64	-13.00	-54.64	peak			
2	44.4656	-56.48	-14.77	-71.25	-13.00	-58.25	peak			
3	152.6254	-58.72	-14.82	-73.54	-13.00	-60.54	peak			
4	227.8154	-54.44	-15.00	-69.44	-13.00	-56.44	peak			
5	298.5932	-54.44	-13.10	-67.54	-13.00	-54.54	peak			
6	665.2607	-65.20	-4.87	-70.07	-13.00	-57.07	peak			

Vertical



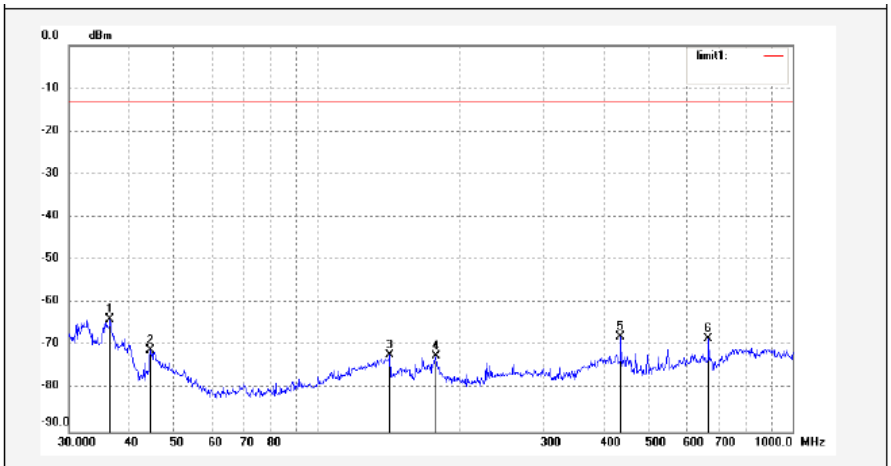
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.6520	-54.66	-9.65	-64.31	-13.00	-51.31	peak			
2	45.4130	-55.08	-15.38	-70.46	-13.00	-57.46	peak			
3	142.2684	-57.75	-15.31	-73.06	-13.00	-60.06	peak			
4	177.5175	-57.39	-15.86	-73.25	-13.00	-60.25	peak			
5	434.8650	-63.12	-8.68	-71.80	-13.00	-58.80	peak			
6	665.2607	-64.42	-4.87	-69.29	-13.00	-56.29	peak			

Middle channel
Horizontal



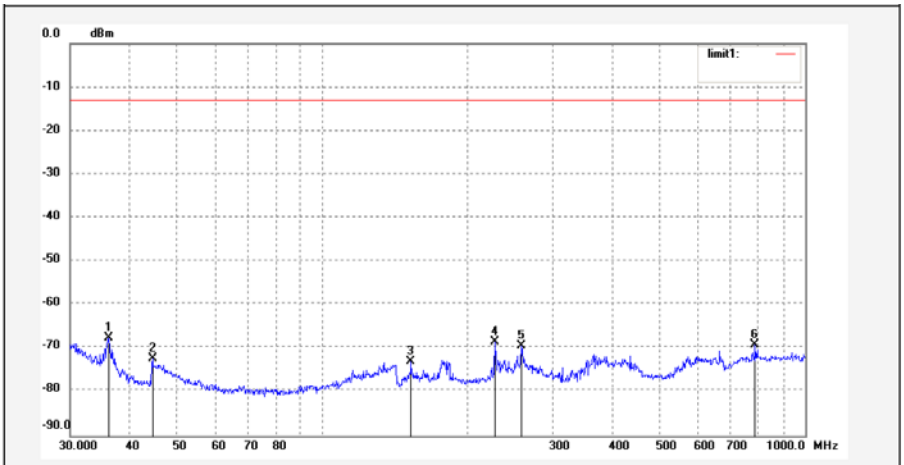
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.83	-9.31	-67.14	-13.00	-54.14	peak			
2	44.4656	-55.98	-14.77	-70.75	-13.00	-57.75	peak			
3	141.7692	-57.48	-15.34	-72.82	-13.00	-59.82	peak			
4	227.8154	-52.94	-15.00	-67.94	-13.00	-54.94	peak			
5	298.5932	-52.44	-13.10	-65.54	-13.00	-52.54	peak			
6	787.4749	-67.37	-0.72	-68.09	-13.00	-55.09	peak			

Vertical



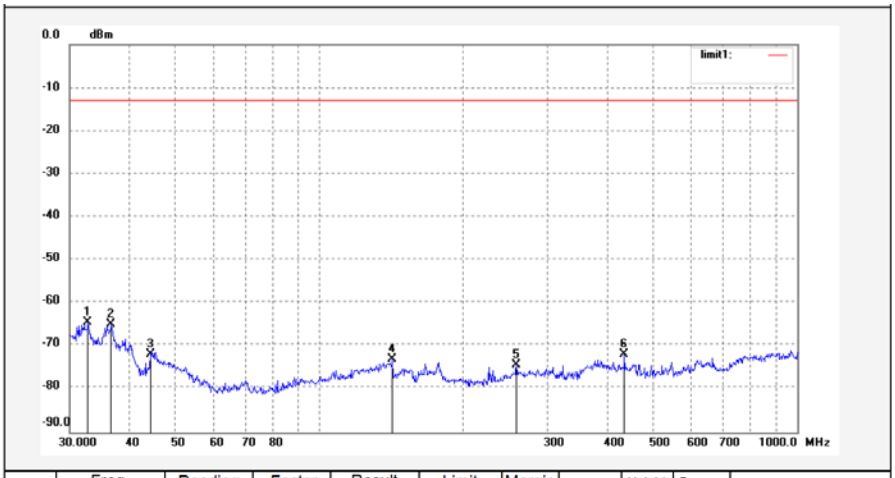
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.6520	-54.16	-9.65	-63.81	-13.00	-50.81	peak			
2	44.6221	-56.16	-14.86	-71.02	-13.00	-58.02	peak			
3	142.2684	-56.75	-15.31	-72.06	-13.00	-59.06	peak			
4	177.5175	-56.39	-15.86	-72.25	-13.00	-59.25	peak			
5	434.8650	-59.12	-8.68	-67.80	-13.00	-54.80	peak			
6	665.2607	-63.42	-4.87	-68.29	-13.00	-55.29	peak			

High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-58.33	-9.31	-67.64	-13.00	-54.64	peak			
2	44.4656	-57.48	-14.77	-72.25	-13.00	-59.25	peak			
3	152.6254	-58.22	-14.82	-73.04	-13.00	-60.04	peak			
4	227.8154	-53.44	-15.00	-68.44	-13.00	-55.44	peak			
5	258.5332	-57.30	-12.15	-69.45	-13.00	-56.45	peak			
6	787.4749	-68.37	-0.72	-69.09	-13.00	-56.09	peak			

Vertical



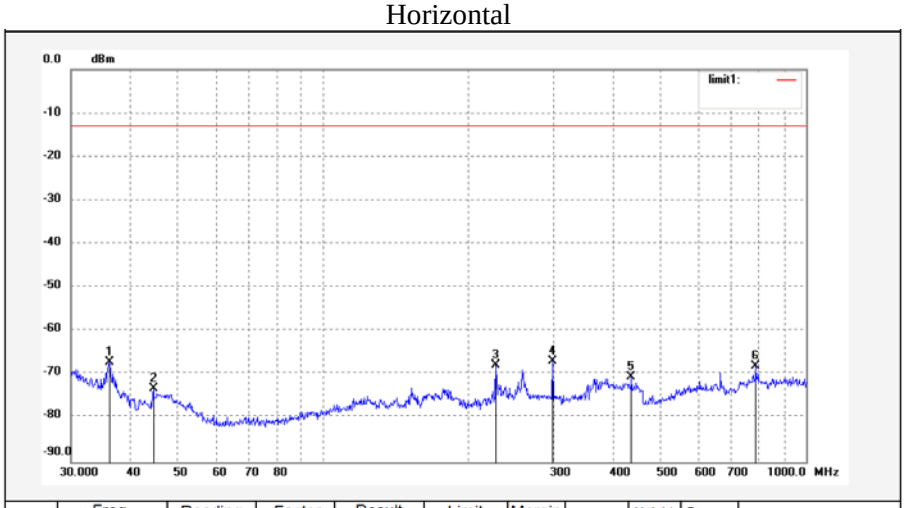
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.7542	-57.69	-6.82	-64.51	-13.00	-51.51	peak			
2	36.6520	-55.16	-9.65	-64.81	-13.00	-51.81	peak			
3	44.3098	-57.19	-14.67	-71.86	-13.00	-58.86	peak			
4	142.2684	-57.75	-15.31	-73.06	-13.00	-60.06	peak			
5	258.5332	-62.11	-12.15	-74.26	-13.00	-61.26	peak			
6	434.8650	-63.12	-8.68	-71.80	-13.00	-58.80	peak			

AWS Band (Part 27)

WCDMA Mode

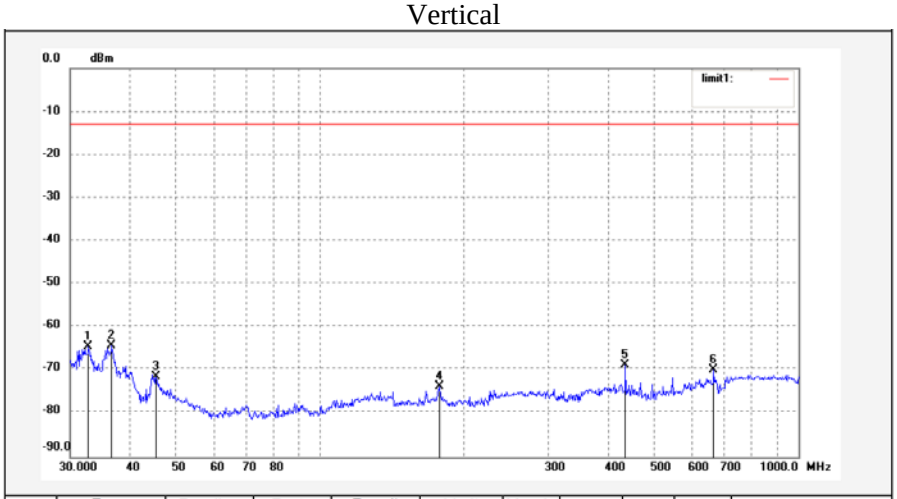
Low channel

Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.83	-9.31	-67.14	-13.00	-54.14	peak			
2	44.4656	-58.48	-14.77	-73.25	-13.00	-60.25	peak			
3	227.8154	-52.94	-15.00	-67.94	-13.00	-54.94	peak			
4	298.5932	-53.94	-13.10	-67.04	-13.00	-54.04	peak			
5	434.8650	-61.88	-8.68	-70.56	-13.00	-57.56	peak			
6	787.4749	-67.37	-0.72	-68.09	-13.00	-55.09	peak			

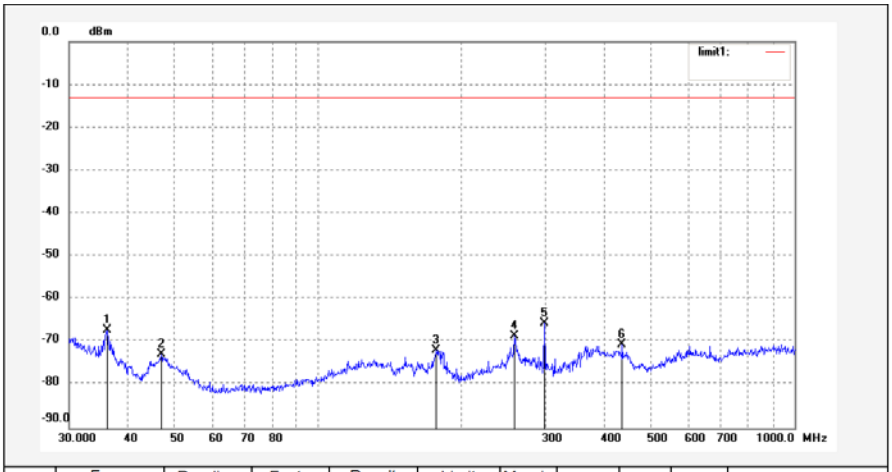
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.7542	-57.69	-6.82	-64.51	-13.00	-51.51	peak			
2	36.6520	-54.66	-9.65	-64.31	-13.00	-51.31	peak			
3	45.4130	-56.08	-15.38	-71.46	-13.00	-58.46	peak			
4	177.5175	-57.89	-15.86	-73.75	-13.00	-60.75	peak			
5	434.8650	-60.12	-8.68	-68.80	-13.00	-55.80	peak			
6	665.2607	-64.92	-4.87	-69.79	-13.00	-56.79	peak			

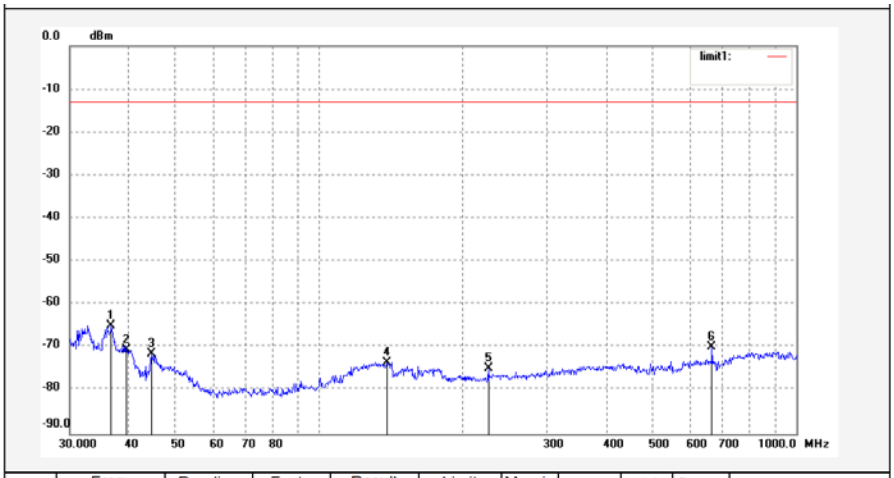
Middle channel

Horizontal



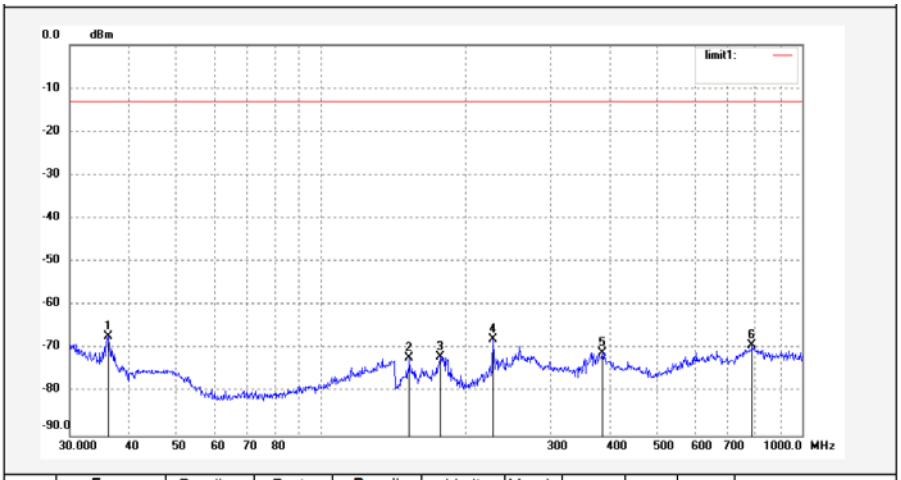
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.83	-9.31	-67.14	-13.00	-54.14	peak			
2	46.8721	-56.57	-16.31	-72.88	-13.00	-59.88	peak			
3	176.8951	-56.01	-15.82	-71.83	-13.00	-58.83	peak			
4	258.5332	-56.30	-12.15	-68.45	-13.00	-55.45	peak			
5	298.5932	-52.44	-13.10	-65.54	-13.00	-52.54	peak			
6	434.8650	-61.88	-8.68	-70.56	-13.00	-57.56	peak			

Vertical



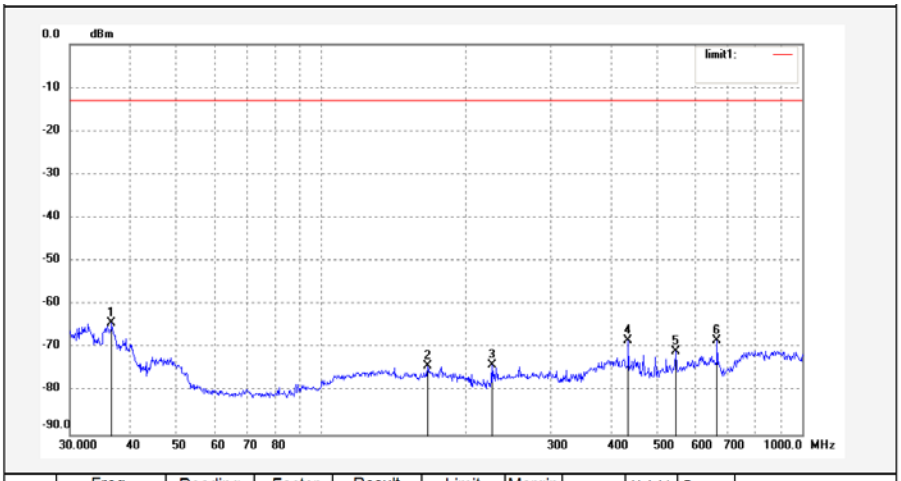
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.6520	-55.16	-9.65	-64.81	-13.00	-51.81	peak			
2	39.4587	-58.94	-11.52	-70.46	-13.00	-57.46	peak			
3	44.6221	-56.66	-14.86	-71.52	-13.00	-58.52	peak			
4	138.8120	-58.03	-15.50	-73.53	-13.00	-60.53	peak			
5	226.2202	-59.82	-15.09	-74.91	-13.00	-61.91	peak			
6	665.2607	-64.92	-4.87	-69.79	-13.00	-56.79	peak			

High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1405	-57.83	-9.31	-67.14	-13.00	-54.14	peak			
2	152.6254	-57.22	-14.82	-72.04	-13.00	-59.04	peak			
3	176.8951	-56.01	-15.82	-71.83	-13.00	-58.83	peak			
4	227.8154	-52.94	-15.00	-67.94	-13.00	-54.94	peak			
5	384.5446	-62.25	-8.63	-70.88	-13.00	-57.88	peak			
6	787.4749	-68.37	-0.72	-69.09	-13.00	-56.09	peak			

Vertical



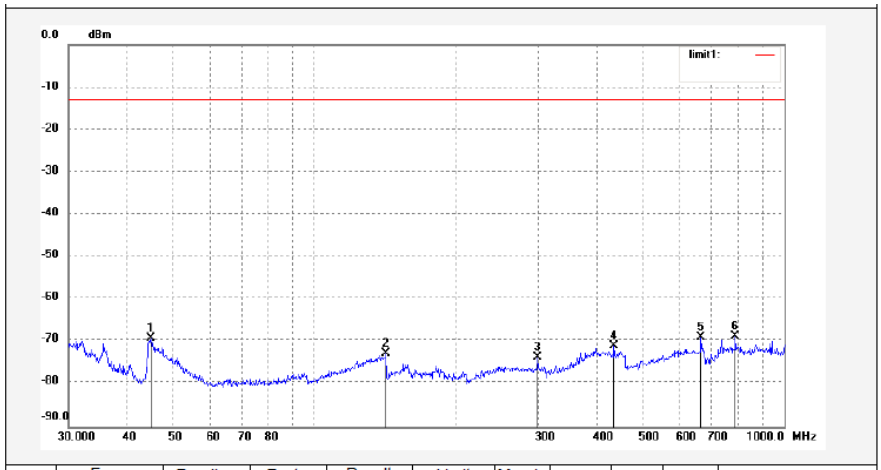
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.6520	-54.66	-9.65	-64.31	-13.00	-51.31	peak			
2	166.6382	-59.15	-15.07	-74.22	-13.00	-61.22	peak			
3	226.2202	-58.82	-15.09	-73.91	-13.00	-60.91	peak			
4	434.8650	-59.62	-8.68	-68.30	-13.00	-55.30	peak			
5	546.4365	-64.19	-6.55	-70.74	-13.00	-57.74	peak			
6	665.2607	-63.42	-4.87	-68.29	-13.00	-55.29	peak			

LTE Band: *(Pre-scan with all the bandwidth, and worst case as below)*

Band 2

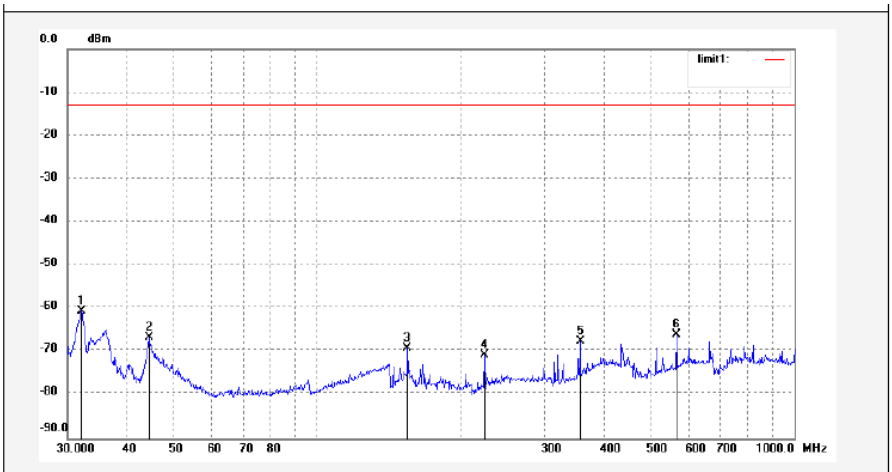
1.4 MHz, Low channel

Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	44.9369	-54.07	-15.07	-69.14	-13.00	-56.14	peak			
2	142.2684	-57.54	-15.31	-72.85	-13.00	-59.85	peak			
3	298.5932	-60.52	-13.10	-73.62	-13.00	-60.62	peak			
4	434.8650	-62.28	-8.68	-70.96	-13.00	-57.96	peak			
5	665.2610	-64.13	-4.87	-69.00	-13.00	-56.00	peak			
6	787.4749	-68.10	-0.72	-68.82	-13.00	-55.82	peak			

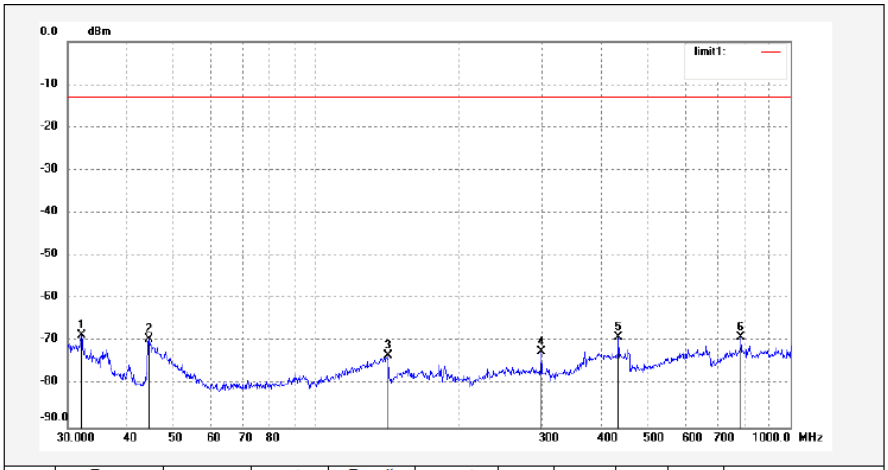
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.0711	-54.37	-6.30	-60.67	-13.00	-47.67	peak			
2	44.4657	-51.88	-14.77	-66.65	-13.00	-53.65	peak			
3	154.7857	-54.41	-14.75	-69.16	-13.00	-56.16	peak			
4	224.6361	-55.67	-15.16	-70.83	-13.00	-57.83	peak			
5	355.9397	-56.07	-11.52	-67.59	-13.00	-54.59	peak			
6	565.9776	-60.09	-6.03	-66.12	-13.00	-53.12	peak			

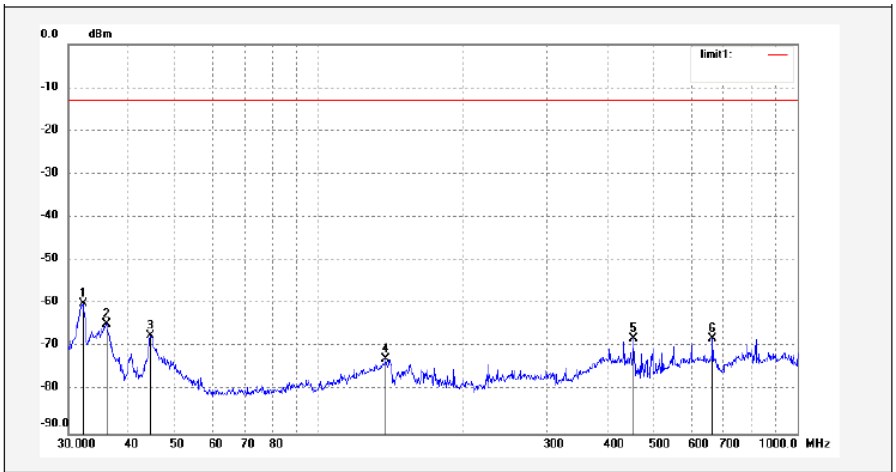
1.4 MHz, Middle channel

Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.0711	-62.14	-6.30	-68.44	-13.00	-55.44	peak			
2	44.6222	-54.59	-14.86	-69.45	-13.00	-56.45	peak			
3	142.2684	-57.98	-15.31	-73.29	-13.00	-60.29	peak			
4	298.5932	-59.21	-13.10	-72.31	-13.00	-59.31	peak			
5	434.8650	-60.38	-8.68	-69.06	-13.00	-56.06	peak			
6	787.4749	-68.18	-0.72	-68.90	-13.00	-55.90	peak			

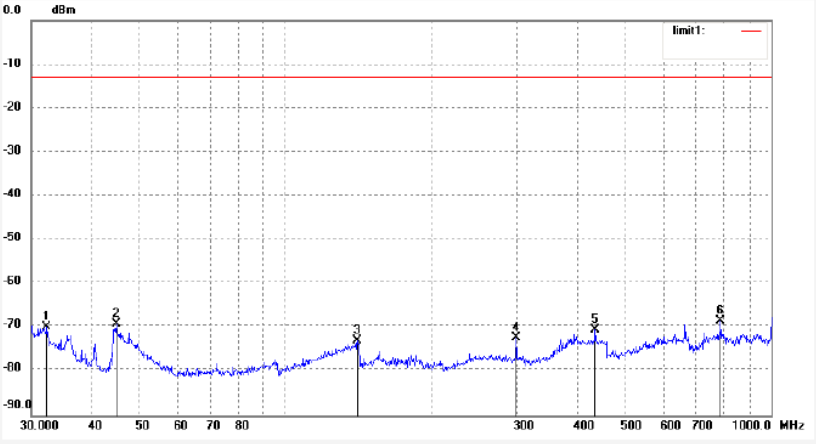
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.1840	-53.57	-6.38	-59.95	-13.00	-46.95	peak			
2	36.0139	-55.52	-9.22	-64.74	-13.00	-51.74	peak			
3	44.4657	-52.56	-14.77	-67.33	-13.00	-54.33	peak			
4	138.3251	-57.23	-15.51	-72.74	-13.00	-59.74	peak			
5	455.1888	-59.86	-8.29	-68.15	-13.00	-55.15	peak			
6	665.2610	-63.20	-4.87	-68.07	-13.00	-55.07	peak			

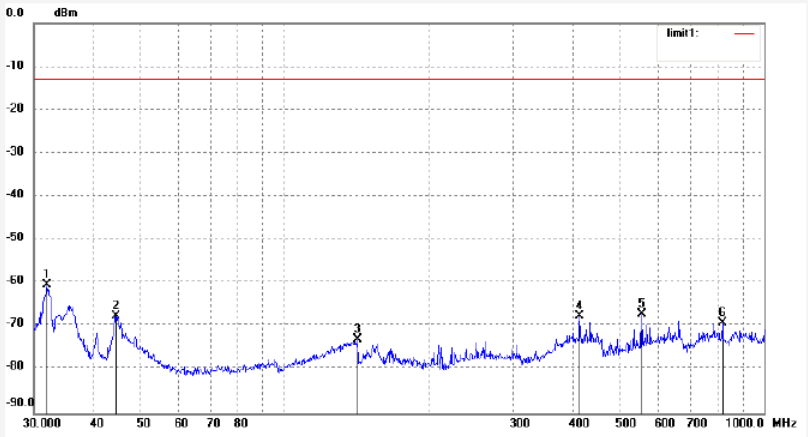
1.4 MHz, High channel

Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.2972	-63.38	-6.47	-69.85	-13.00	-56.85	peak			
2	44.9369	-54.14	-15.06	-69.20	-13.00	-56.20	peak			
3	140.7767	-57.70	-15.38	-73.08	-13.00	-60.08	peak			
4	298.5932	-59.18	-13.10	-72.28	-13.00	-59.28	peak			
5	434.8650	-61.84	-8.68	-70.52	-13.00	-57.52	peak			
6	787.4749	-67.82	-0.72	-68.54	-13.00	-55.54	peak			

Vertical

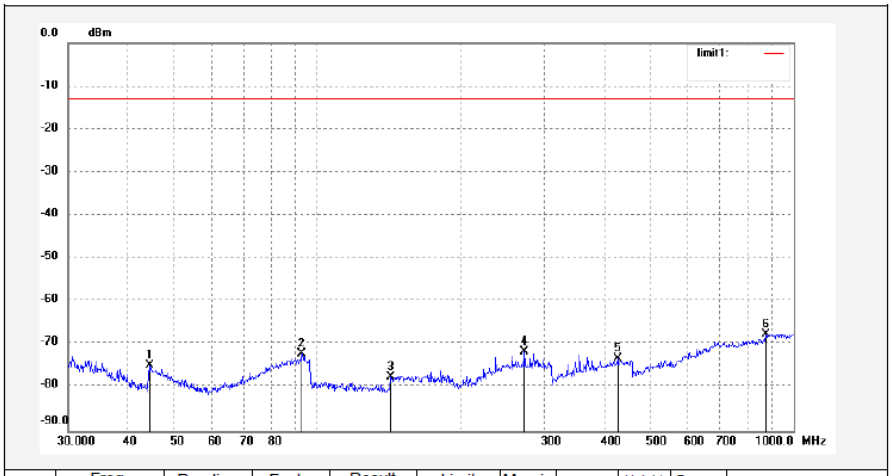


No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.9586	-54.11	-6.21	-60.32	-13.00	-47.32	peak			
2	44.4657	-52.76	-14.77	-67.53	-13.00	-54.53	peak			
3	142.2684	-57.81	-15.31	-73.12	-13.00	-60.12	peak			
4	412.5395	-59.94	-7.70	-67.64	-13.00	-54.64	peak			
5	556.1214	-60.77	-6.40	-67.17	-13.00	-54.17	peak			
6	818.5062	-68.11	-1.17	-69.28	-13.00	-56.28	peak			

Band 4

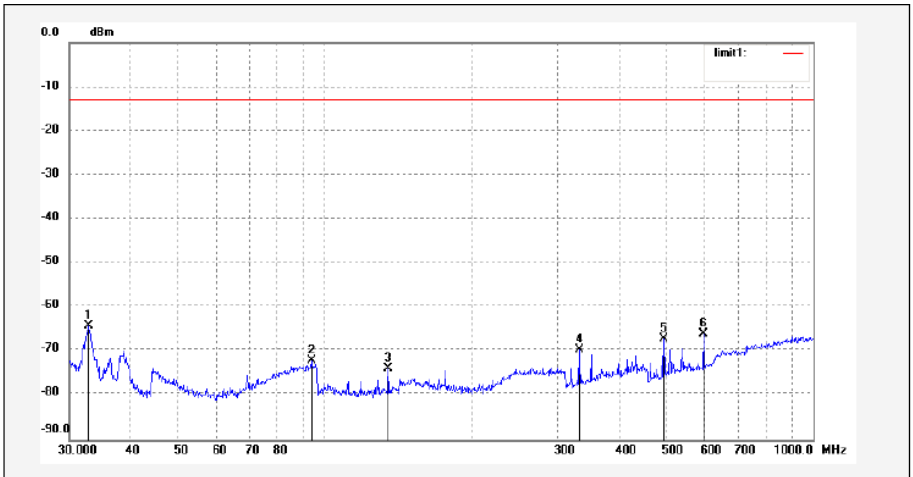
1.4 MHz, Low channel

Horizontal



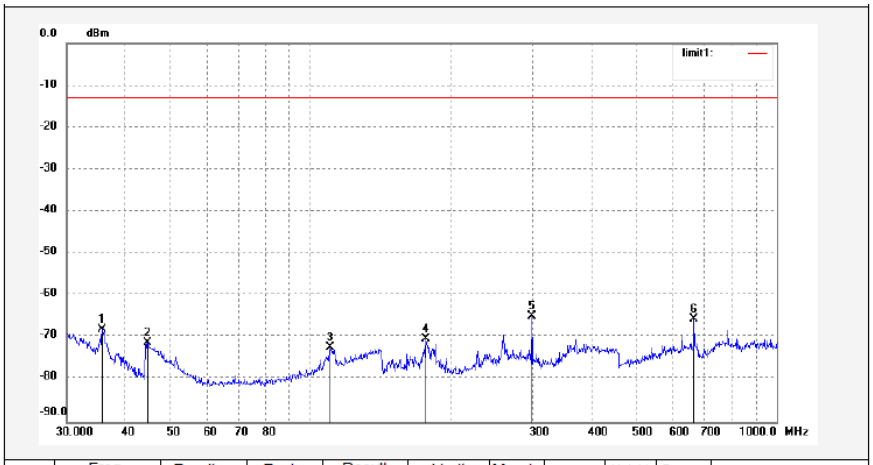
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	44.6222	-57.59	-17.24	-74.83	-13.00	-61.83	peak			
2	92.6712	-56.99	-15.09	-72.08	-13.00	-59.08	peak			
3	142.7692	-61.75	-15.77	-77.52	-13.00	-64.52	peak			
4	272.5246	-59.58	-12.13	-71.71	-13.00	-58.71	peak			
5	427.2920	-63.86	-9.40	-73.26	-13.00	-60.26	peak			
6	875.0133	-65.58	-1.96	-67.54	-13.00	-54.54	peak			

Vertical



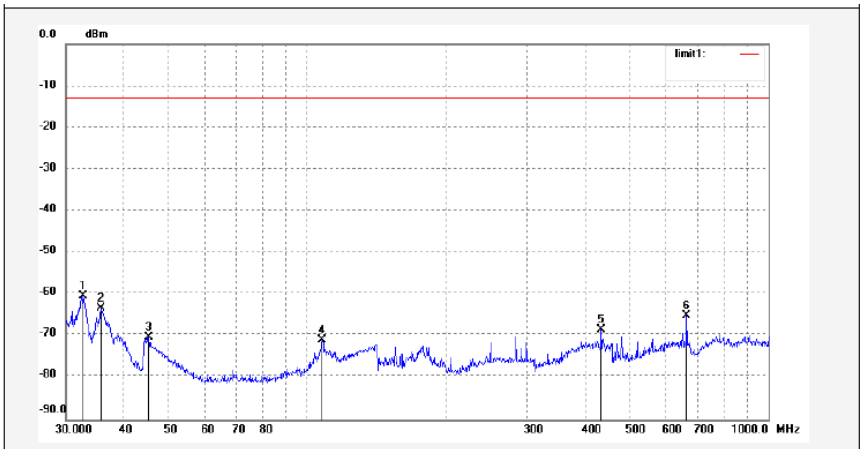
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.8697	-51.40	-12.88	-64.28	-13.00	-51.28	peak			
2	93.9829	-57.06	-15.02	-72.08	-13.00	-59.08	peak			
3	134.9645	-58.22	-15.60	-73.82	-13.00	-60.82	peak			
4	331.7858	-59.35	-10.38	-69.73	-13.00	-56.73	peak			
5	495.2379	-59.44	-7.81	-67.25	-13.00	-54.25	peak			
6	596.6068	-60.19	-5.85	-66.04	-13.00	-53.04	peak			

1.4 MHz, Middle channel
Horizontal



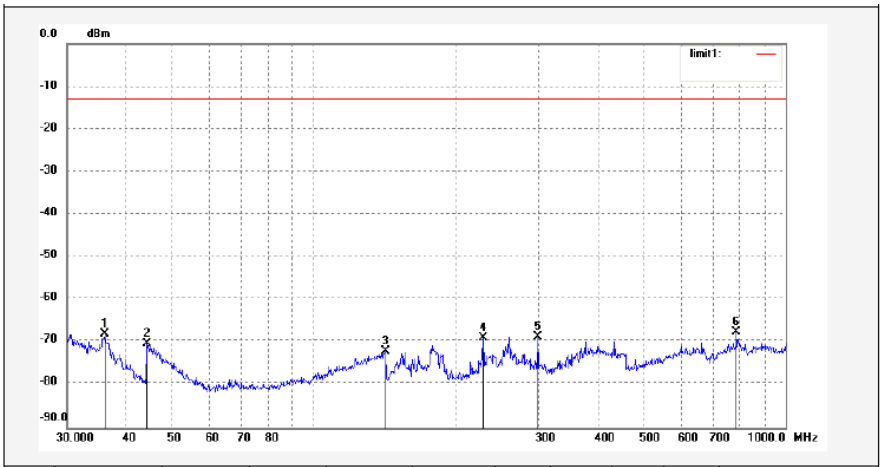
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.7617	-58.95	-9.05	-68.00	-13.00	-55.00	peak			
2	44.7793	-56.30	-14.97	-71.27	-13.00	-58.27	peak			
3	110.4693	-52.18	-20.15	-72.33	-13.00	-59.33	peak			
4	176.8953	-54.44	-15.82	-70.26	-13.00	-57.26	peak			
5	298.5932	-51.88	-13.10	-64.98	-13.00	-51.98	peak			
6	665.2610	-60.69	-4.87	-65.56	-13.00	-52.56	peak			

Vertical



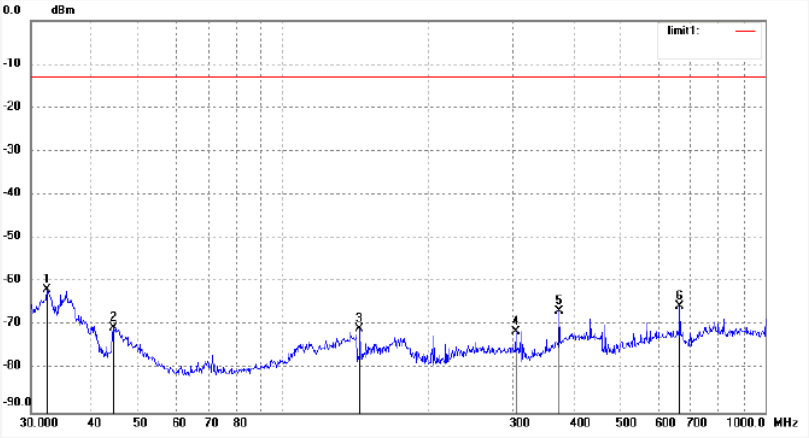
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.6395	-53.69	-6.73	-60.42	-13.00	-47.42	peak			
2	35.7617	-54.36	-9.05	-63.41	-13.00	-50.41	peak			
3	45.4130	-54.89	-15.38	-70.27	-13.00	-57.27	peak			
4	107.7854	-50.46	-20.57	-71.03	-13.00	-58.03	peak			
5	434.8650	-59.89	-8.68	-68.57	-13.00	-55.57	peak			
6	665.2610	-60.29	-4.87	-65.16	-13.00	-52.16	peak			

1.4 MHz, High channel
Horizontal



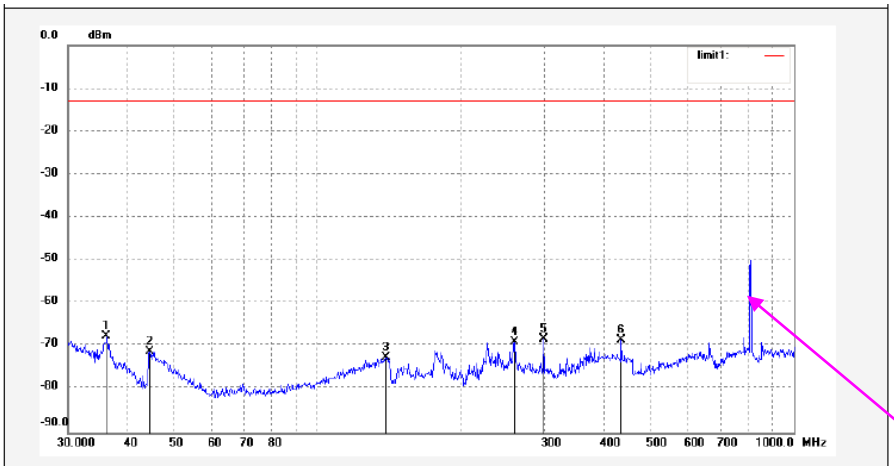
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.0139	-58.81	-9.22	-68.03	-13.00	-55.03	peak			
2	44.3098	-55.69	-14.67	-70.36	-13.00	-57.36	peak			
3	142.2684	-56.80	-15.31	-72.11	-13.00	-59.11	peak			
4	228.6173	-53.89	-14.97	-68.86	-13.00	-55.86	peak			
5	298.5932	-55.68	-13.10	-68.78	-13.00	-55.78	peak			
6	787.4749	-66.81	-0.72	-67.53	-13.00	-54.53	peak			

Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.4109	-55.17	-6.56	-61.73	-13.00	-48.73	peak			
2	44.6222	-55.70	-14.86	-70.56	-13.00	-57.56	peak			
3	144.2820	-55.51	-15.20	-70.71	-13.00	-57.71	peak			
4	303.8851	-58.29	-13.10	-71.39	-13.00	-58.39	peak			
5	373.8861	-56.95	-9.82	-66.77	-13.00	-53.77	peak			
6	665.2610	-60.63	-4.87	-65.50	-13.00	-52.50	peak			

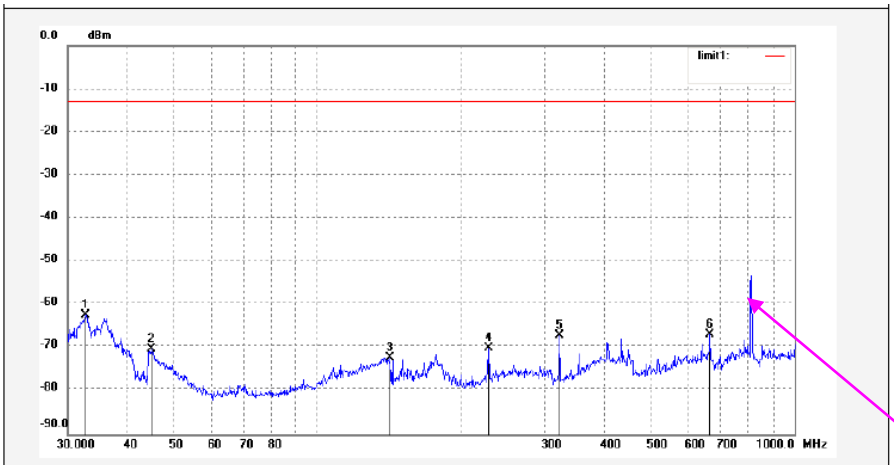
Band 5
1.4 MHz, Low channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1406	-58.28	-9.31	-67.59	-13.00	-54.59	peak			
2	44.6222	-56.46	-14.86	-71.32	-13.00	-58.32	peak			
3	139.3006	-57.05	-15.47	-72.52	-13.00	-59.52	peak			
4	259.4433	-56.83	-12.05	-68.88	-13.00	-55.88	peak			
5	298.5932	-55.23	-13.10	-68.33	-13.00	-55.33	peak			
6	434.8650	-59.75	-8.68	-68.43	-13.00	-55.43	peak			

Fundamental test

Vertical

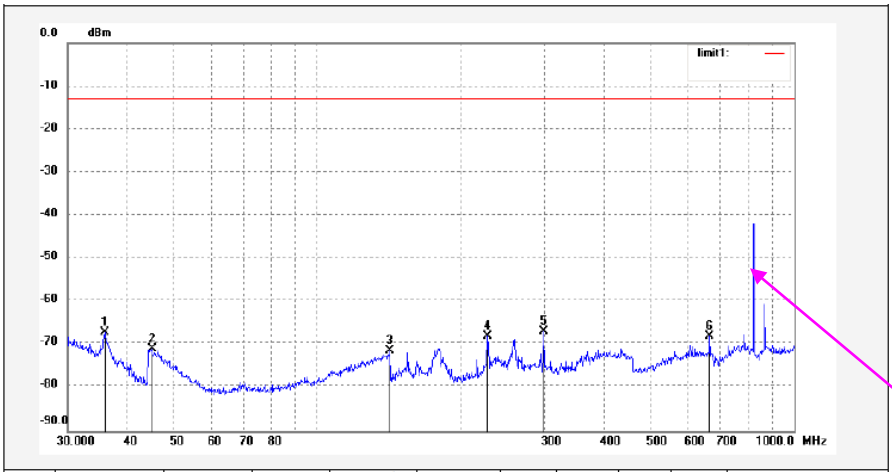


No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.6395	-55.80	-6.73	-62.53	-13.00	-49.53	peak			
2	44.9369	-55.19	-15.06	-70.25	-13.00	-57.25	peak			
3	142.2684	-56.93	-15.31	-72.24	-13.00	-59.24	peak			
4	228.6173	-55.16	-14.97	-70.13	-13.00	-57.13	peak			
5	321.4581	-54.38	-12.76	-67.14	-13.00	-54.14	peak			
6	665.2610	-62.18	-4.87	-67.05	-13.00	-54.05	peak			

Fundamental test

1.4 MHz, Middle channel

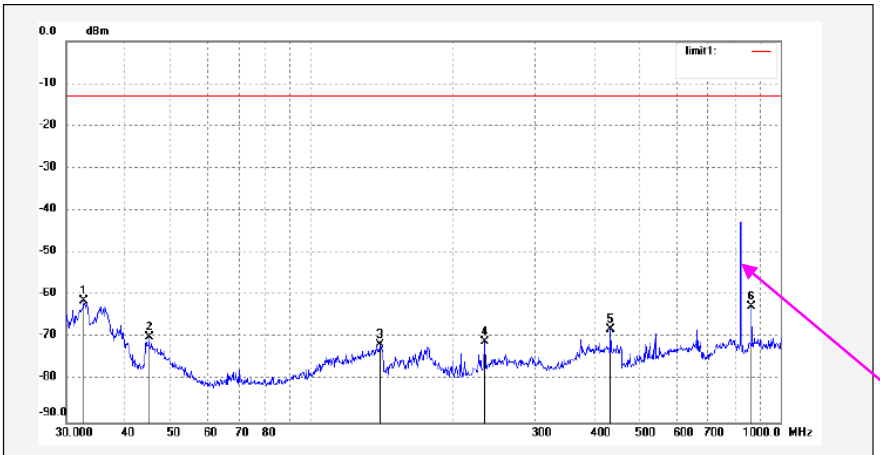
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.8875	-58.09	-9.14	-67.23	-13.00	-54.23	peak			
2	45.0951	-55.73	-15.17	-70.90	-13.00	-57.90	peak			
3	142.2684	-56.11	-15.31	-71.42	-13.00	-58.42	peak			
4	227.8155	-53.03	-15.00	-68.03	-13.00	-55.03	peak			
5	298.5932	-53.76	-13.10	-66.86	-13.00	-53.86	peak			
6	665.2610	-63.26	-4.87	-68.13	-13.00	-55.13	peak			

Fundamental test

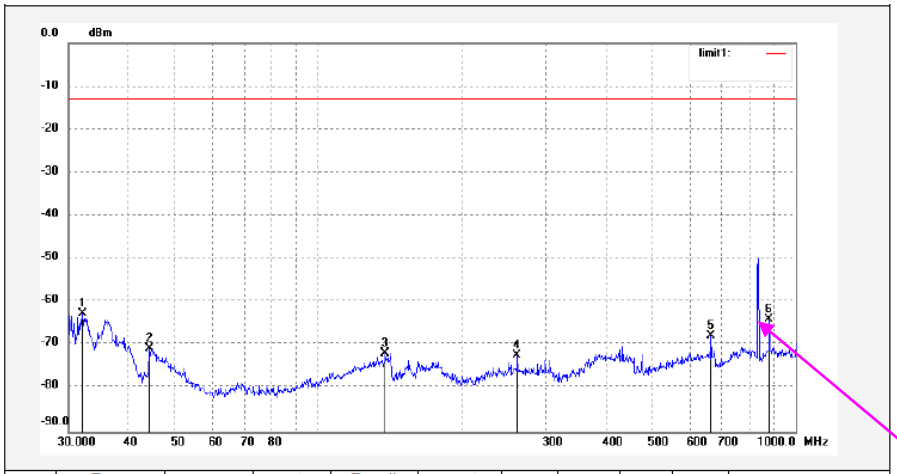
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.6395	-54.54	-6.73	-61.27	-13.00	-48.27	peak			
2	45.0951	-54.58	-15.17	-69.75	-13.00	-56.75	peak			
3	140.2829	-56.33	-15.41	-71.74	-13.00	-58.74	peak			
4	234.3099	-56.35	-14.68	-71.03	-13.00	-58.03	peak			
5	434.8650	-59.41	-8.68	-68.09	-13.00	-55.09	peak			
6	868.8860	-60.85	-1.92	-62.77	-13.00	-49.77	peak			

Fundamental test

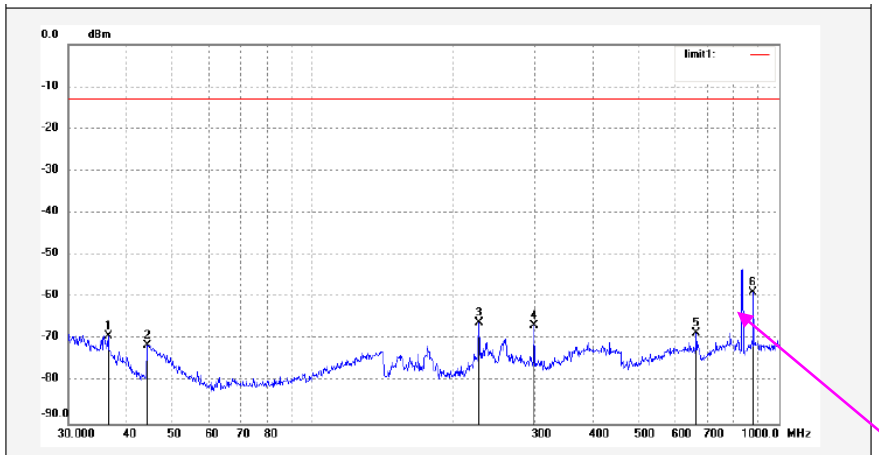
1.4 MHz, High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.0711	-56.46	-6.30	-62.76	-13.00	-49.76	peak			
2	44.3098	-56.04	-14.67	-70.71	-13.00	-57.71	peak			
3	138.3251	-56.37	-15.51	-71.88	-13.00	-58.88	peak			
4	261.2730	-60.36	-12.05	-72.41	-13.00	-59.41	peak			
5	665.2610	-62.93	-4.87	-67.80	-13.00	-54.80	peak			
6	881.1838	-62.62	-1.33	-63.95	-13.00	-50.95	peak			

Fundamental test

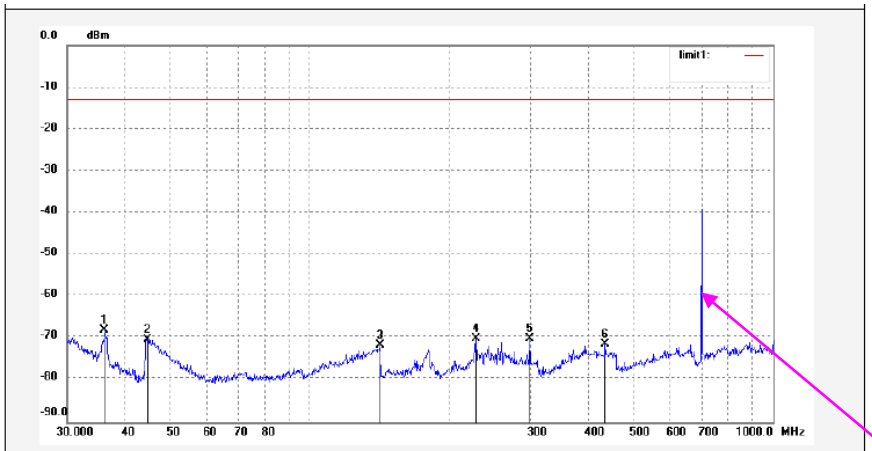
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.5236	-59.56	-9.56	-69.12	-13.00	-56.12	peak			
2	44.3098	-56.83	-14.67	-71.50	-13.00	-58.50	peak			
3	227.8155	-50.94	-15.00	-65.94	-13.00	-52.94	peak			
4	298.5932	-53.53	-13.10	-66.63	-13.00	-53.63	peak			
5	665.2610	-63.54	-4.87	-68.41	-13.00	-55.41	peak			
6	881.1838	-57.42	-1.33	-58.75	-13.00	-45.75	peak			

Fundamental test

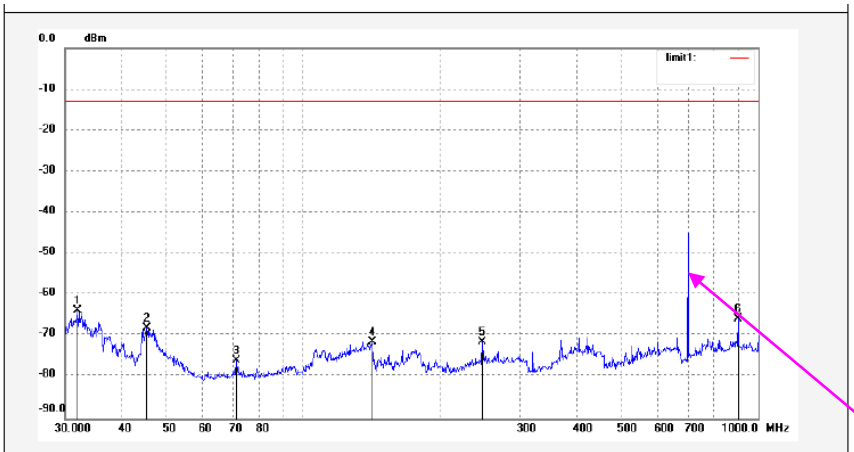
Band 12
1.4 MHz, Low channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1406	-58.81	-9.31	-68.12	-13.00	-55.12	peak			
2	44.7793	-55.26	-14.97	-70.23	-13.00	-57.23	peak			
3	141.7694	-56.37	-15.34	-71.71	-13.00	-58.71	peak			
4	228.6173	-55.10	-14.97	-70.07	-13.00	-57.07	peak			
5	298.5932	-57.07	-13.10	-70.17	-13.00	-57.17	peak			
6	434.8650	-62.79	-8.68	-71.47	-13.00	-58.47	peak			

Fundamental test

Vertical

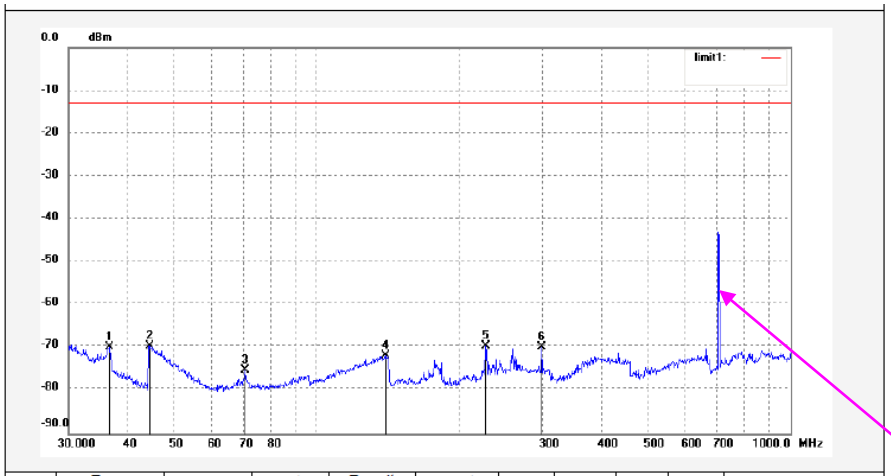


No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.9586	-57.61	-6.21	-63.82	-13.00	-50.82	peak			
2	45.4130	-52.65	-15.38	-68.03	-13.00	-55.03	peak			
3	71.4539	-51.58	-24.36	-75.94	-13.00	-62.94	peak			
4	142.2684	-56.10	-15.31	-71.41	-13.00	-58.41	peak			
5	247.8595	-58.17	-13.25	-71.42	-13.00	-58.42	peak			
6	903.1253	-64.87	-0.99	-65.86	-13.00	-52.86	peak			

Fundamental test

1.4 MHz, Middle channel

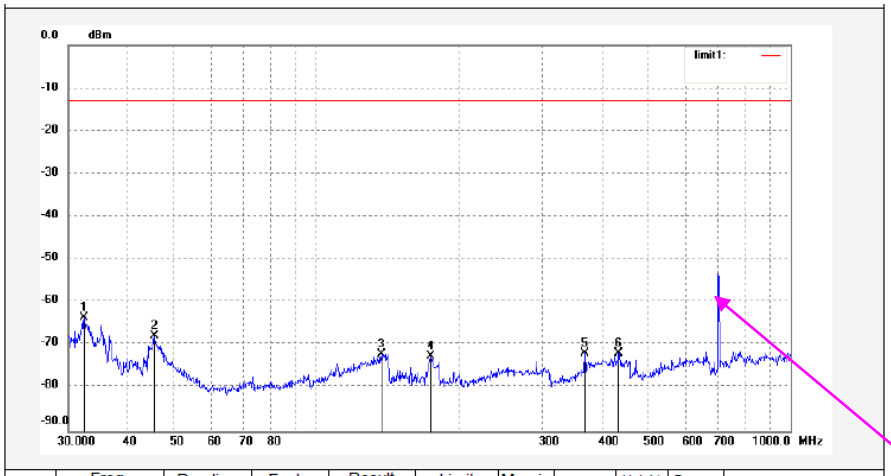
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.5236	-60.24	-9.56	-69.80	-13.00	-56.80	peak			
2	44.6222	-54.84	-14.86	-69.70	-13.00	-56.70	peak			
3	70.7047	-50.95	-24.38	-75.33	-13.00	-62.33	peak			
4	139.7909	-56.37	-15.44	-71.81	-13.00	-58.81	peak			
5	227.8155	-54.73	-15.00	-69.73	-13.00	-56.73	peak			
6	298.5932	-56.83	-13.10	-69.93	-13.00	-56.93	peak			

Fundamental test

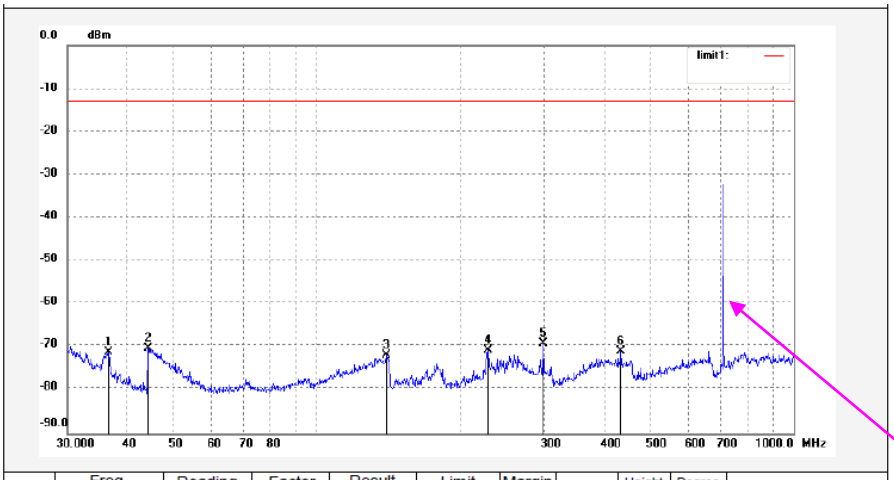
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.4109	-56.91	-6.56	-63.47	-13.00	-50.47	peak			
2	45.5729	-52.35	-15.48	-67.83	-13.00	-54.83	peak			
3	137.3565	-56.53	-15.56	-72.09	-13.00	-59.09	peak			
4	174.4265	-56.86	-15.64	-72.50	-13.00	-59.50	peak			
5	368.6681	-61.49	-10.41	-71.90	-13.00	-58.90	peak			
6	434.8650	-63.25	-8.68	-71.93	-13.00	-58.93	peak			

Fundamental test

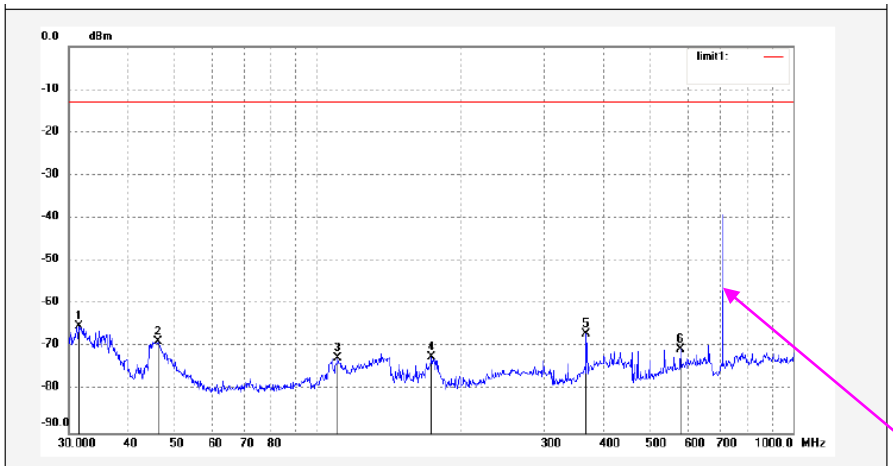
1.4 MHz, High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.6521	-61.65	-9.65	-71.30	-13.00	-58.30	peak			
2	44.3098	-55.55	-14.67	-70.22	-13.00	-57.22	peak			
3	140.2829	-56.52	-15.41	-71.93	-13.00	-58.93	peak			
4	228.6173	-55.89	-14.97	-70.86	-13.00	-57.86	peak			
5	298.5932	-56.03	-13.10	-69.13	-13.00	-56.13	peak			
6	434.8650	-62.20	-8.68	-70.88	-13.00	-57.88	peak			

Fundamental test

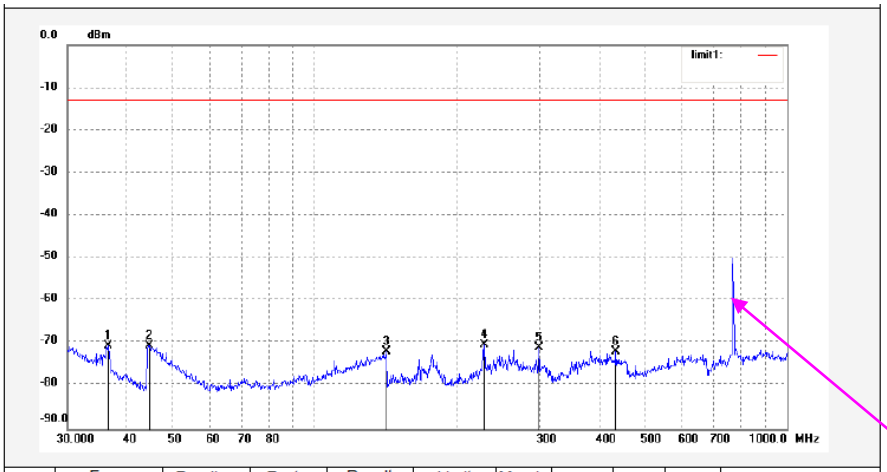
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.5126	-59.19	-5.86	-65.05	-13.00	-52.05	peak			
2	46.2180	-52.79	-15.90	-68.69	-13.00	-55.69	peak			
3	110.4693	-52.52	-20.15	-72.67	-13.00	-59.67	peak			
4	173.8146	-56.63	-15.60	-72.23	-13.00	-59.23	peak			
5	367.3752	-56.40	-10.55	-66.95	-13.00	-53.95	peak			
6	580.0705	-65.25	-5.24	-70.49	-13.00	-57.49	peak			

Fundamental test

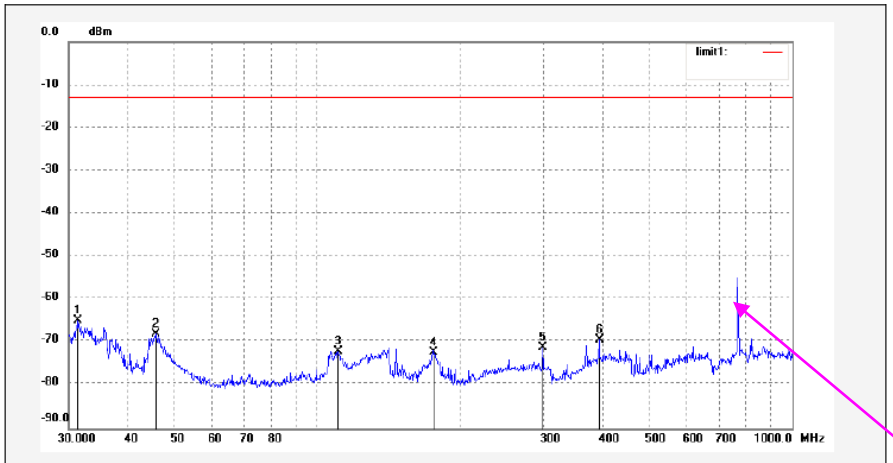
Band 13
5 MHz, Low channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.5236	-61.00	-9.56	-70.56	-13.00	-57.56	peak			
2	44.7793	-55.48	-14.97	-70.45	-13.00	-57.45	peak			
3	141.7694	-56.60	-15.34	-71.94	-13.00	-58.94	peak			
4	228.6173	-55.44	-14.97	-70.41	-13.00	-57.41	peak			
5	298.5932	-57.98	-13.10	-71.08	-13.00	-58.08	peak			
6	434.8650	-63.18	-8.68	-71.86	-13.00	-58.86	peak			

Fundamental test

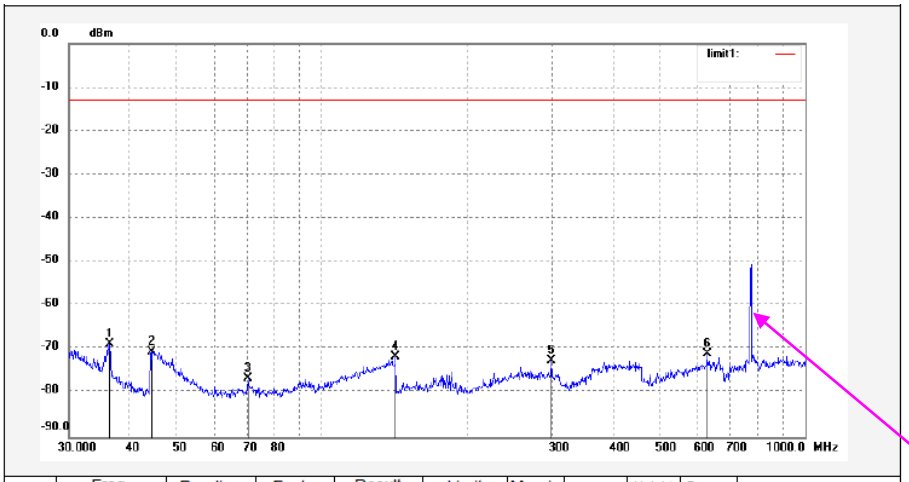
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.4021	-59.13	-5.78	-64.91	-13.00	-51.91	peak			
2	45.8943	-52.26	-15.69	-67.95	-13.00	-54.95	peak			
3	110.8581	-52.05	-20.08	-72.13	-13.00	-59.13	peak			
4	175.6566	-56.70	-15.72	-72.42	-13.00	-59.42	peak			
5	298.5932	-58.16	-13.10	-71.26	-13.00	-58.26	peak			
6	392.7376	-61.15	-8.27	-69.42	-13.00	-56.42	peak			

Fundamental test

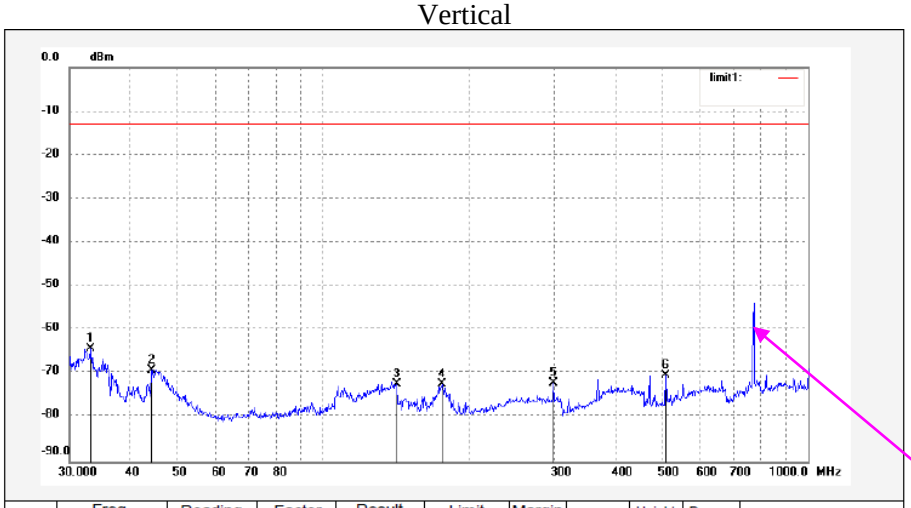
5 MHz, Middle channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.3955	-59.29	-9.49	-68.78	-13.00	-55.78	peak			
2	44.6222	-55.65	-14.86	-70.51	-13.00	-57.51	peak			
3	70.4567	-52.17	-24.37	-76.54	-13.00	-63.54	peak			
4	142.2684	-56.39	-15.31	-71.70	-13.00	-58.70	peak			
5	298.5932	-59.50	-13.10	-72.60	-13.00	-59.60	peak			
6	626.6878	-67.25	-3.81	-71.06	-13.00	-58.06	peak			

Fundamental test

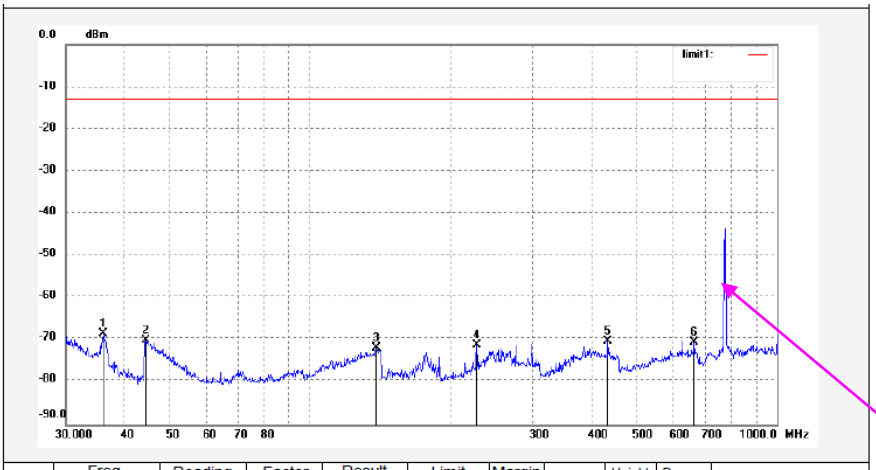
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.1015	-57.13	-7.09	-64.22	-13.00	-51.22	peak			
2	44.3098	-54.44	-14.67	-69.11	-13.00	-56.11	peak			
3	142.2684	-57.02	-15.31	-72.33	-13.00	-59.33	peak			
4	176.2748	-56.51	-15.77	-72.28	-13.00	-59.28	peak			
5	298.5932	-59.05	-13.10	-72.15	-13.00	-59.15	peak			
6	509.3559	-62.58	-7.81	-70.39	-13.00	-57.39	peak			

Fundamental test

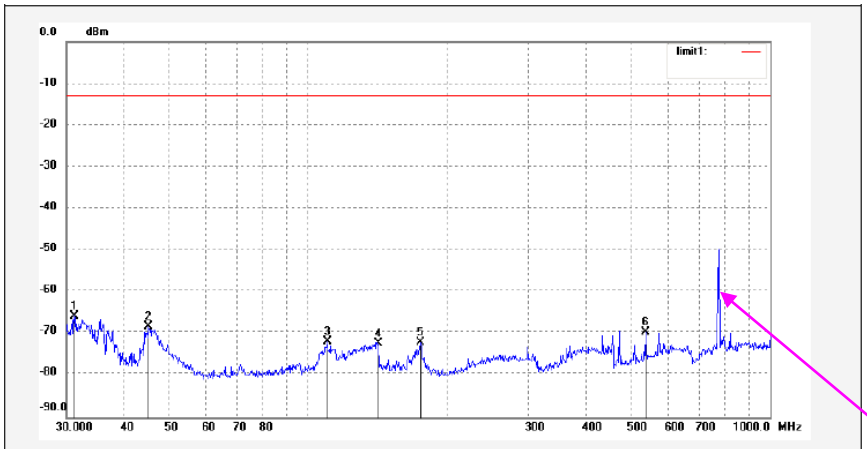
5 MHz, High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.1406	-59.11	-9.31	-68.42	-13.00	-55.42	peak			
2	44.6222	-55.25	-14.86	-70.11	-13.00	-57.11	peak			
3	138.8120	-56.49	-15.50	-71.99	-13.00	-58.99	peak			
4	227.8155	-56.20	-15.00	-71.20	-13.00	-58.20	peak			
5	434.8650	-61.52	-8.68	-70.20	-13.00	-57.20	peak			
6	665.2610	-65.66	-4.87	-70.53	-13.00	-57.53	peak			

Fundamental test

Vertical



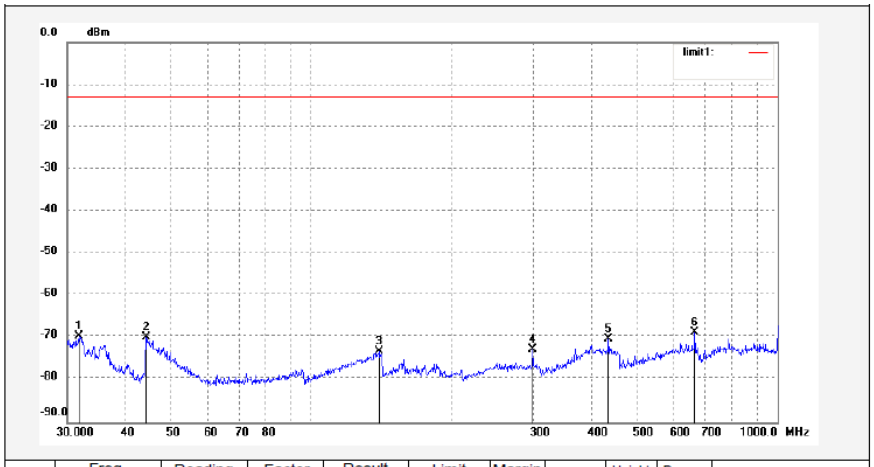
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.1822	-60.10	-5.60	-65.70	-13.00	-52.70	peak			
2	45.2538	-53.12	-15.27	-68.39	-13.00	-55.39	peak			
3	110.0818	-51.70	-20.22	-71.92	-13.00	-58.92	peak			
4	142.2684	-56.97	-15.31	-72.28	-13.00	-59.28	peak			
5	175.0404	-56.42	-15.68	-72.10	-13.00	-59.10	peak			
6	538.8106	-63.02	-6.67	-69.69	-13.00	-56.69	peak			

Fundamental test

Band 66

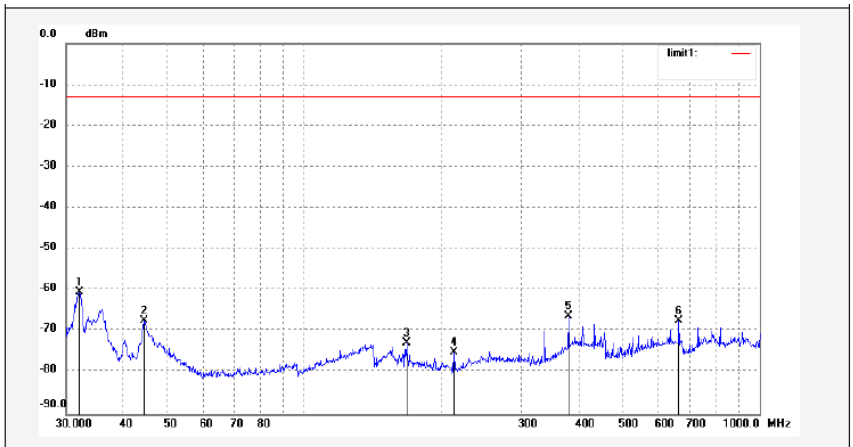
1.4 MHz, Low channel

Horizontal



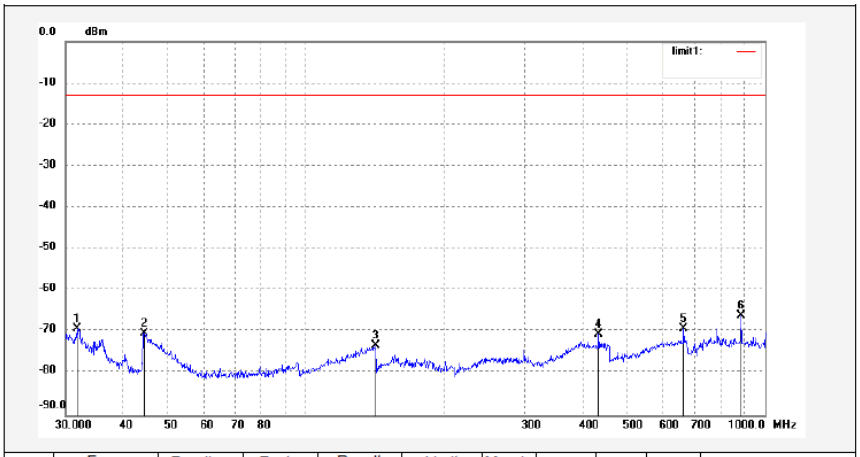
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.7348	-63.54	-6.04	-69.58	-13.00	-56.58	peak			
2	44.3098	-55.30	-14.67	-69.97	-13.00	-56.97	peak			
3	139.7909	-57.69	-15.44	-73.13	-13.00	-60.13	peak			
4	298.5932	-59.70	-13.10	-72.80	-13.00	-59.80	peak			
5	434.8650	-61.70	-8.68	-70.38	-13.00	-57.38	peak			
6	665.2610	-63.86	-4.87	-68.73	-13.00	-55.73	peak			

Vertical



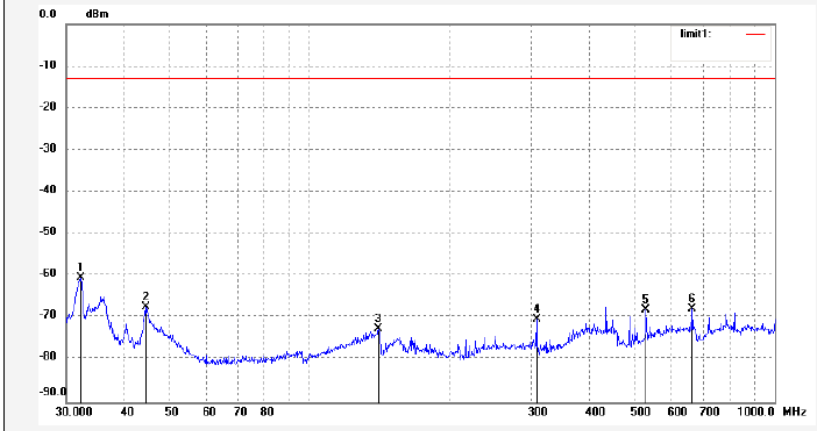
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.0711	-54.01	-6.30	-60.31	-13.00	-47.31	peak			
2	44.6222	-52.54	-14.86	-67.40	-13.00	-54.40	peak			
3	167.8136	-57.65	-15.16	-72.81	-13.00	-59.81	peak			
4	213.1035	-59.25	-15.72	-74.97	-13.00	-61.97	peak			
5	380.5126	-57.25	-9.08	-66.33	-13.00	-53.33	peak			
6	665.2610	-62.55	-4.87	-67.42	-13.00	-54.42	peak			

1.4 MHz, Middle channel
Horizontal



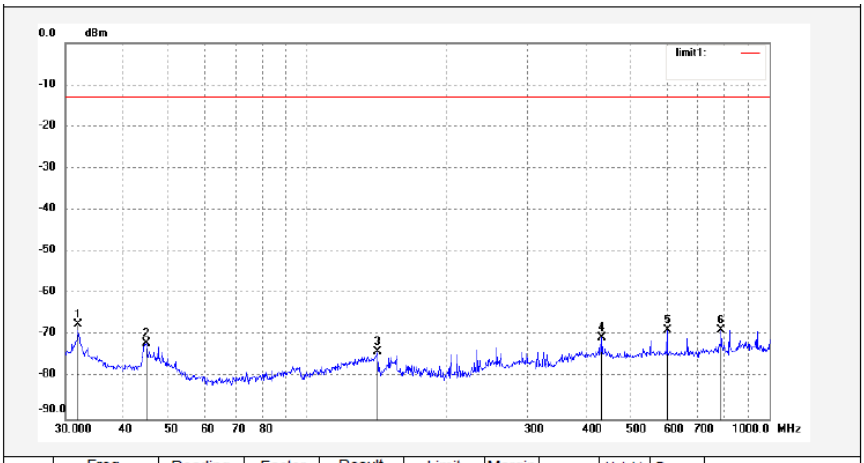
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.7348	-63.21	-6.04	-69.25	-13.00	-56.25	peak			
2	44.6222	-55.44	-14.86	-70.30	-13.00	-57.30	peak			
3	142.2684	-57.82	-15.31	-73.13	-13.00	-60.13	peak			
4	434.8650	-61.84	-8.68	-70.52	-13.00	-57.52	peak			
5	665.2610	-64.36	-4.87	-69.23	-13.00	-56.23	peak			
6	887.3978	-64.99	-1.12	-66.11	-13.00	-53.11	peak			

Vertical



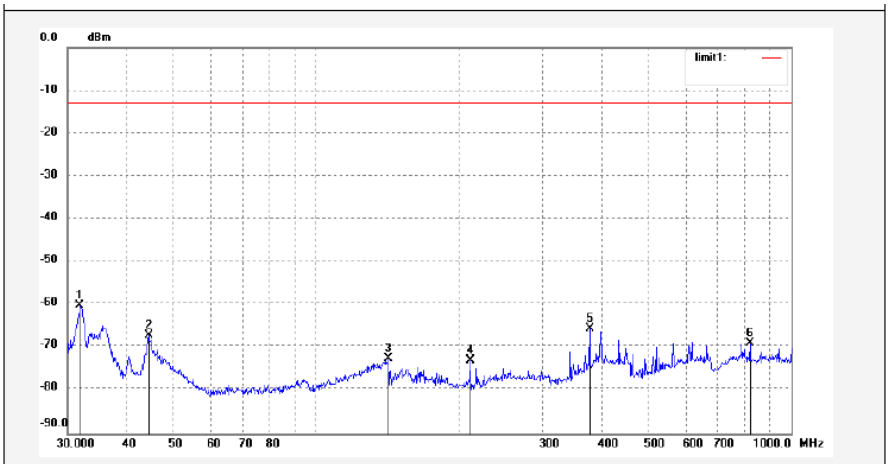
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.2972	-53.92	-6.47	-60.39	-13.00	-47.39	peak			
2	44.6222	-52.57	-14.86	-67.43	-13.00	-54.43	peak			
3	140.7767	-57.23	-15.38	-72.61	-13.00	-59.61	peak			
4	308.1862	-57.20	-13.11	-70.31	-13.00	-57.31	peak			
5	529.4276	-61.17	-6.98	-68.15	-13.00	-55.15	peak			
6	665.2610	-62.92	-4.87	-67.79	-13.00	-54.79	peak			

1.4 MHz, High channel
Horizontal



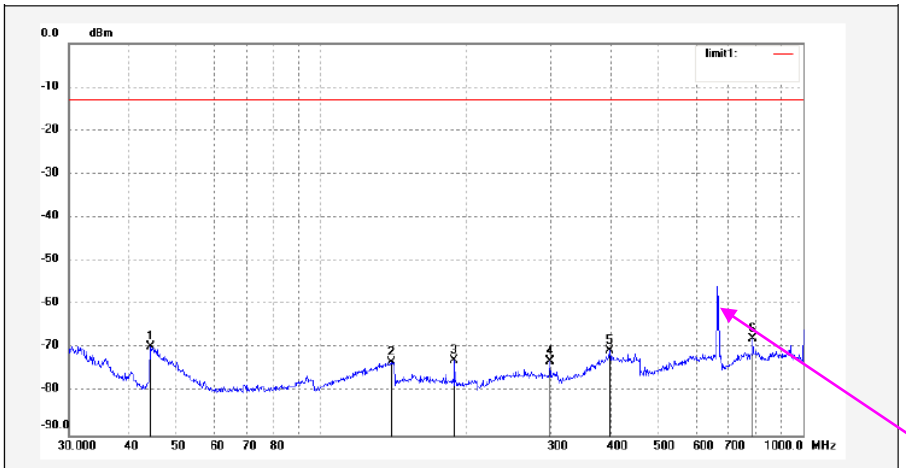
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.9586	-61.11	-6.21	-67.32	-13.00	-54.32	peak			
2	44.9369	-56.73	-15.07	-71.80	-13.00	-58.80	peak			
3	141.7692	-58.54	-15.34	-73.88	-13.00	-60.88	peak			
4	434.8650	-61.86	-8.68	-70.54	-13.00	-57.54	peak			
5	600.8138	-63.65	-5.03	-68.68	-13.00	-55.68	peak			
6	787.4749	-68.02	-0.72	-68.74	-13.00	-55.74	peak			

Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8465	-53.99	-6.12	-60.11	-13.00	-47.11	peak			
2	44.4657	-52.42	-14.77	-67.19	-13.00	-54.19	peak			
3	142.2684	-57.19	-15.31	-72.50	-13.00	-59.50	peak			
4	210.8690	-57.26	-15.82	-73.08	-13.00	-60.08	peak			
5	376.5227	-56.17	-9.52	-65.69	-13.00	-52.69	peak			
6	818.5062	-67.73	-1.17	-68.90	-13.00	-55.90	peak			

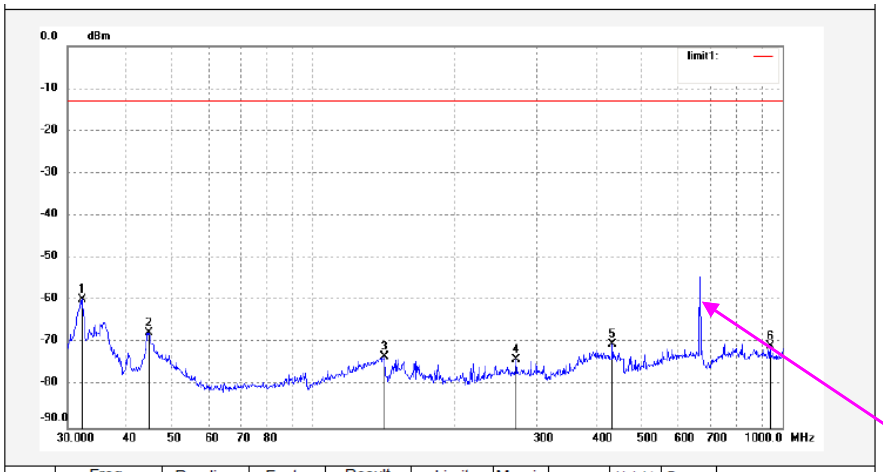
Band 71
5 MHz, Low channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	44.3098	-55.02	-14.67	-69.69	-13.00	-56.69	peak			
2	139.7909	-57.69	-15.44	-73.13	-13.00	-60.13	peak			
3	189.1076	-56.46	-16.31	-72.77	-13.00	-59.77	peak			
4	298.5932	-60.00	-13.10	-73.10	-13.00	-60.10	peak			
5	396.8992	-62.40	-8.10	-70.50	-13.00	-57.50	peak			
6	787.4749	-67.12	-0.72	-67.84	-13.00	-54.84	peak			

Fundamental test

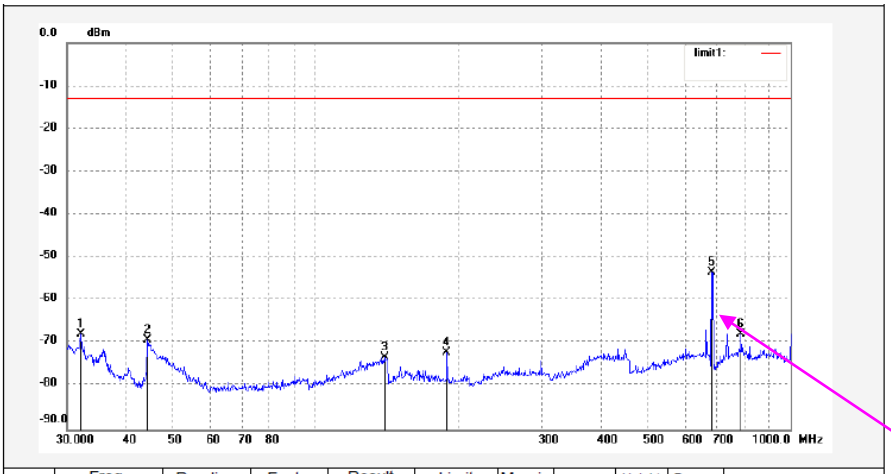
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.1840	-53.40	-6.38	-59.78	-13.00	-46.78	peak			
2	44.7793	-52.57	-14.97	-67.54	-13.00	-54.54	peak			
3	141.7694	-57.90	-15.34	-73.24	-13.00	-60.24	peak			
4	270.6162	-61.28	-12.58	-73.86	-13.00	-60.86	peak			
5	434.8650	-61.52	-8.68	-70.20	-13.00	-57.20	peak			
6	942.0180	-70.68	0.02	-70.66	-13.00	-57.66	peak			

Fundamental test

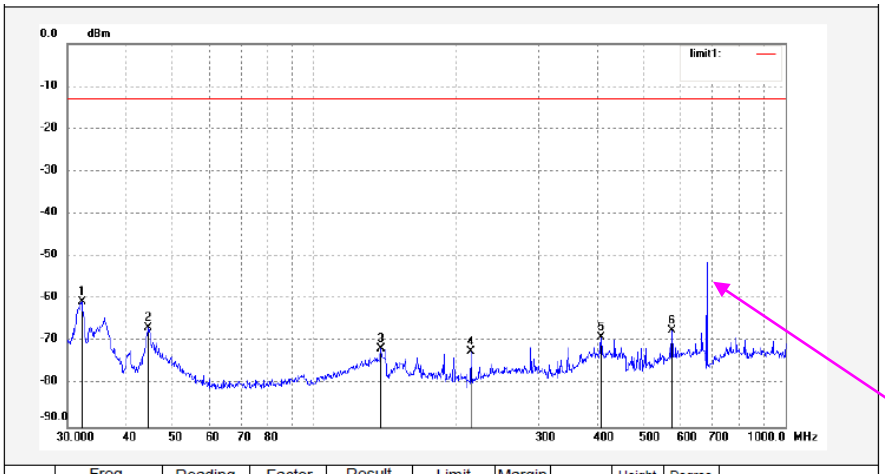
5 MHz, Middle channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.0711	-61.62	-6.30	-67.92	-13.00	-54.92	peak			
2	44.3098	-54.56	-14.67	-69.23	-13.00	-56.23	peak			
3	139.7909	-57.75	-15.44	-73.19	-13.00	-60.19	peak			
4	189.1076	-55.82	-16.31	-72.13	-13.00	-59.13	peak			
5	684.2259	-48.43	-4.95	-53.38	-13.00	-40.38	peak			
6	787.4749	-67.17	-0.72	-67.89	-13.00	-54.89	peak			

Fundamental test

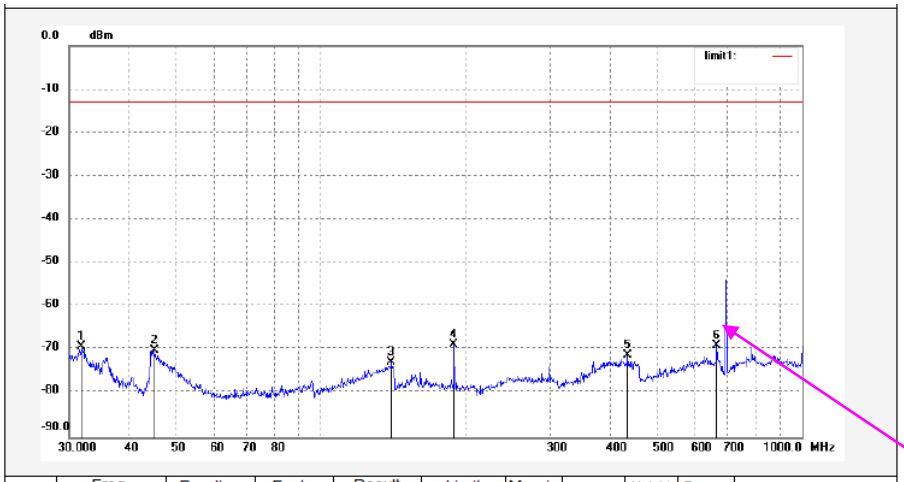
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.1840	-54.15	-6.38	-60.53	-13.00	-47.53	peak			
2	44.6222	-51.85	-14.86	-66.71	-13.00	-53.71	peak			
3	138.8120	-56.26	-15.50	-71.76	-13.00	-58.76	peak			
4	215.3616	-56.82	-15.61	-72.43	-13.00	-59.43	peak			
5	406.7820	-61.22	-7.71	-68.93	-13.00	-55.93	peak			
6	573.9882	-61.73	-5.57	-67.30	-13.00	-54.30	peak			

Fundamental test

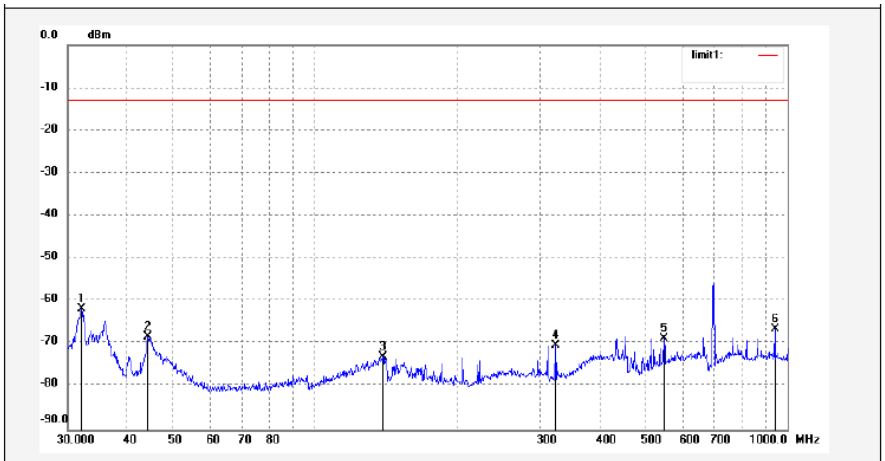
5 MHz, High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.8465	-63.02	-6.12	-69.14	-13.00	-56.14	peak			
2	45.2538	-54.87	-15.27	-70.14	-13.00	-57.14	peak			
3	140.2829	-57.47	-15.41	-72.88	-13.00	-59.88	peak			
4	189.1076	-52.50	-16.31	-68.81	-13.00	-55.81	peak			
5	434.8650	-62.52	-8.68	-71.20	-13.00	-58.20	peak			
6	665.2610	-64.13	-4.87	-69.00	-13.00	-56.00	peak			

Fundamental test

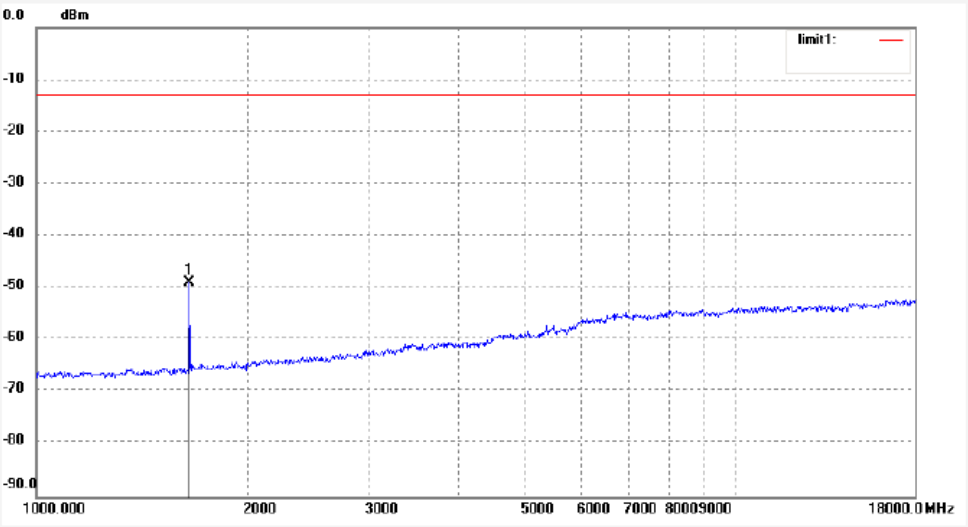
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.0711	-55.39	-6.30	-61.69	-13.00	-48.69	peak			
2	44.3098	-53.67	-14.67	-68.34	-13.00	-55.34	peak			
3	139.3006	-57.59	-15.47	-73.06	-13.00	-60.06	peak			
4	323.7250	-57.66	-12.69	-70.35	-13.00	-57.35	peak			
5	548.3600	-62.22	-6.51	-68.73	-13.00	-55.73	peak			
6	942.0180	-66.57	0.02	-66.55	-13.00	-53.55	peak			

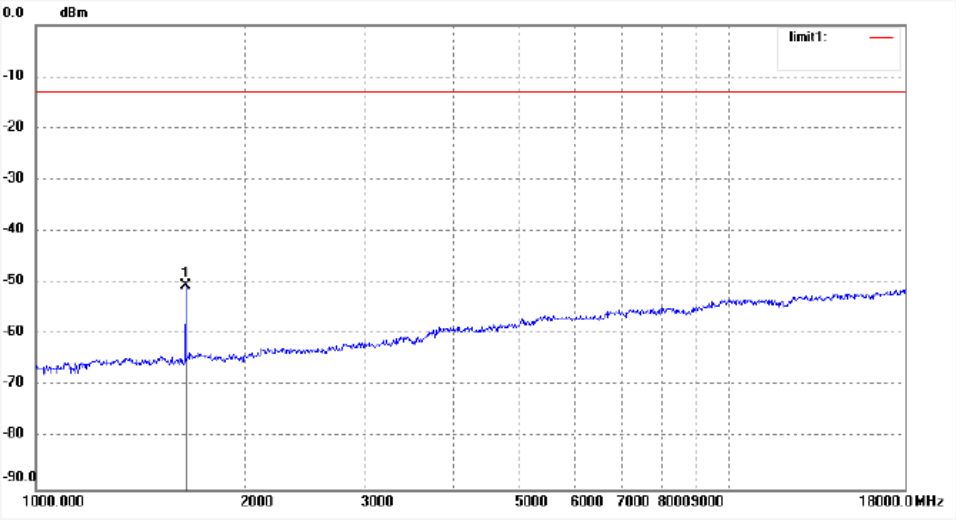
Above 1 GHz:
Test frequency range: 1 MHz ~ 18 GHz

Cellular Band (Part 22H)
WCDMA Mode
Low channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1652.812	-48.95	-0.04	-48.99	-13.00	-35.99	peak			

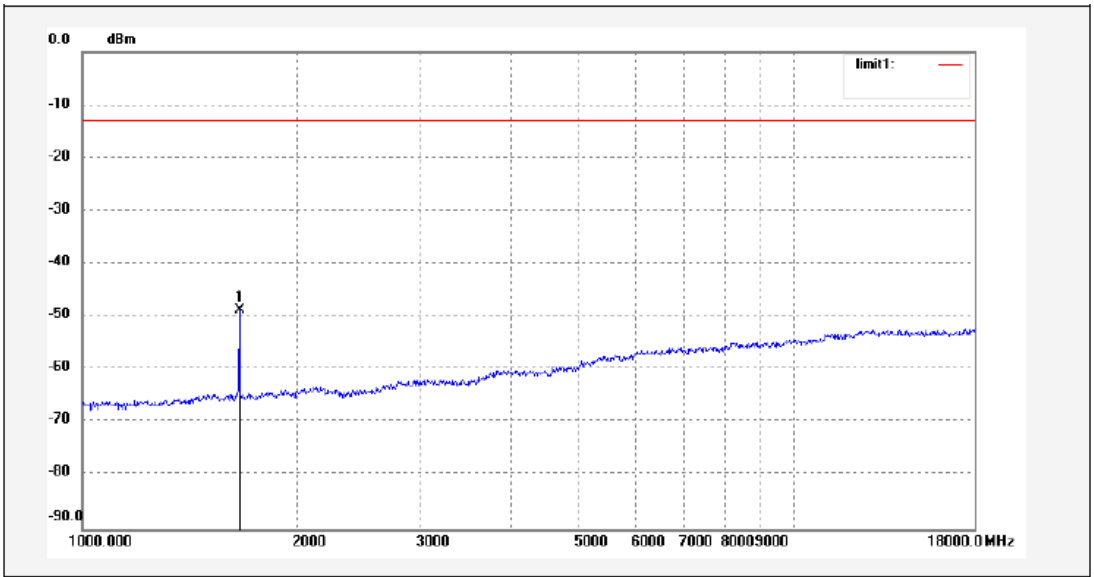
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1652.895	-50.31	-0.04	-50.35	-13.00	-37.35	peak			

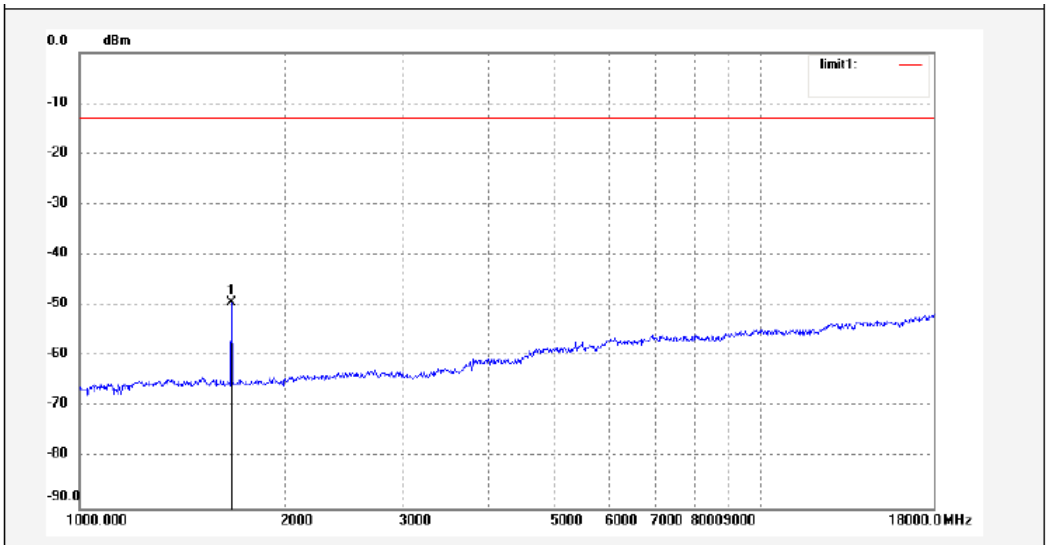
Middle channel

Horizontal



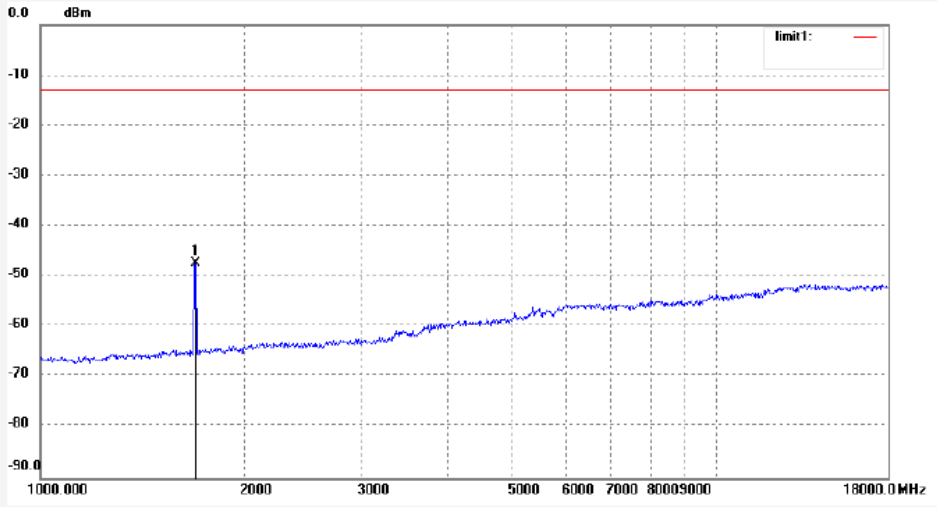
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1673.260	-49.19	0.75	-48.44	-13.00	-35.44	peak			

Vertical



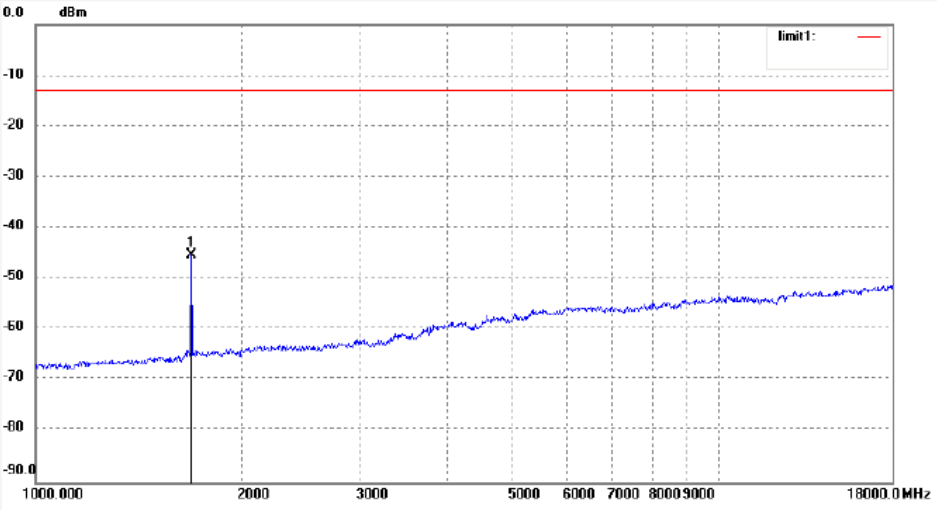
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1673.277	-50.11	0.75	-49.36	-13.00	-36.36	peak			

High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1693.218	-48.98	1.45	-47.53	-13.00	-34.53	peak			

Vertical



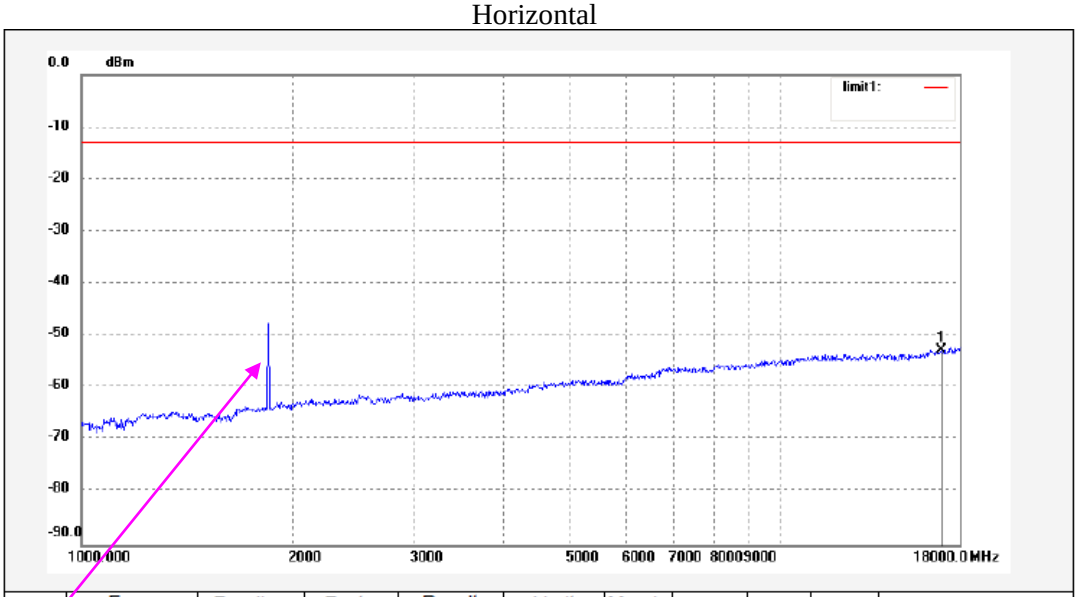
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1693.281	-46.87	1.45	-45.42	-13.00	-32.42	peak			

PCS Band (Part 24E)

WCDMA Mode

Low channel

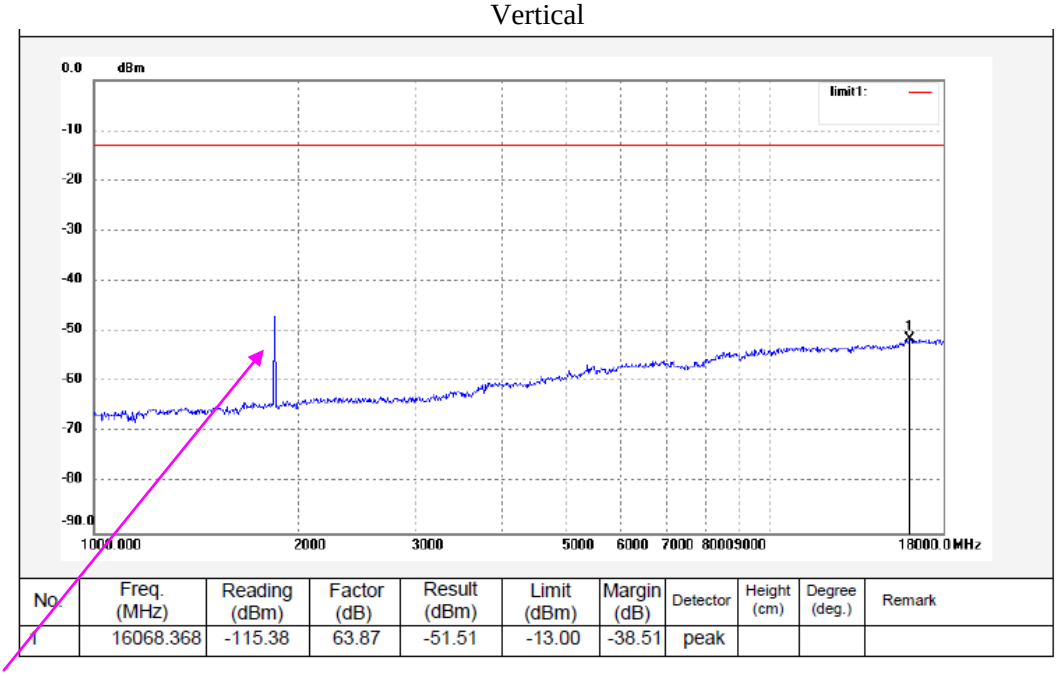
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	16982.049	-117.30	64.57	-52.73	-13.00	-39.73	peak			

Fundamental test

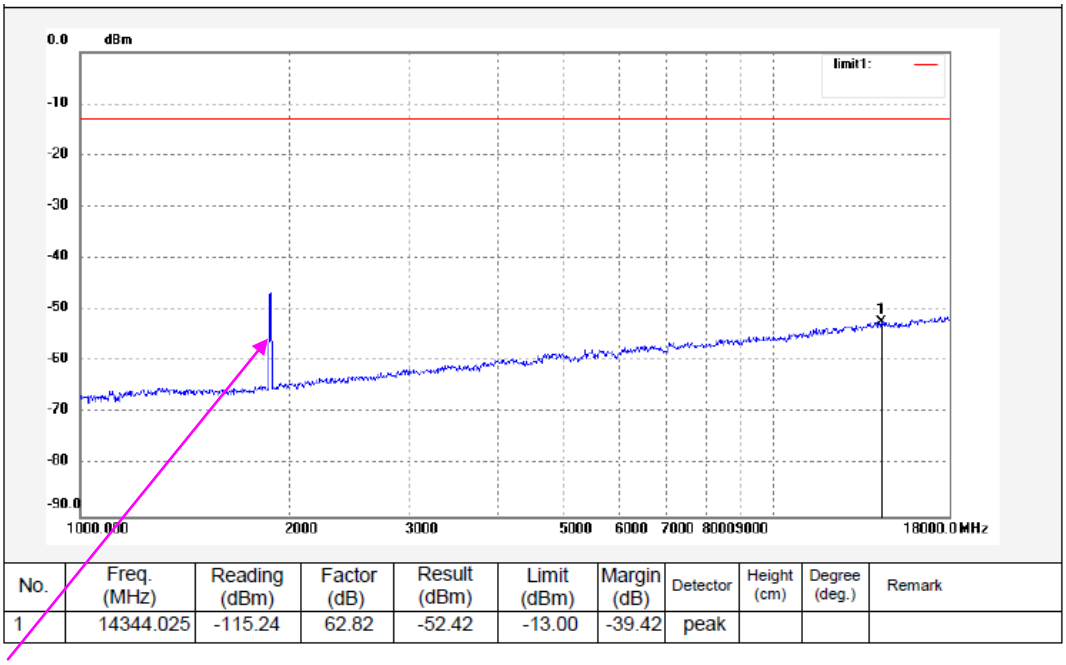
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	16068.368	-115.38	63.87	-51.51	-13.00	-38.51	peak			

Fundamental test

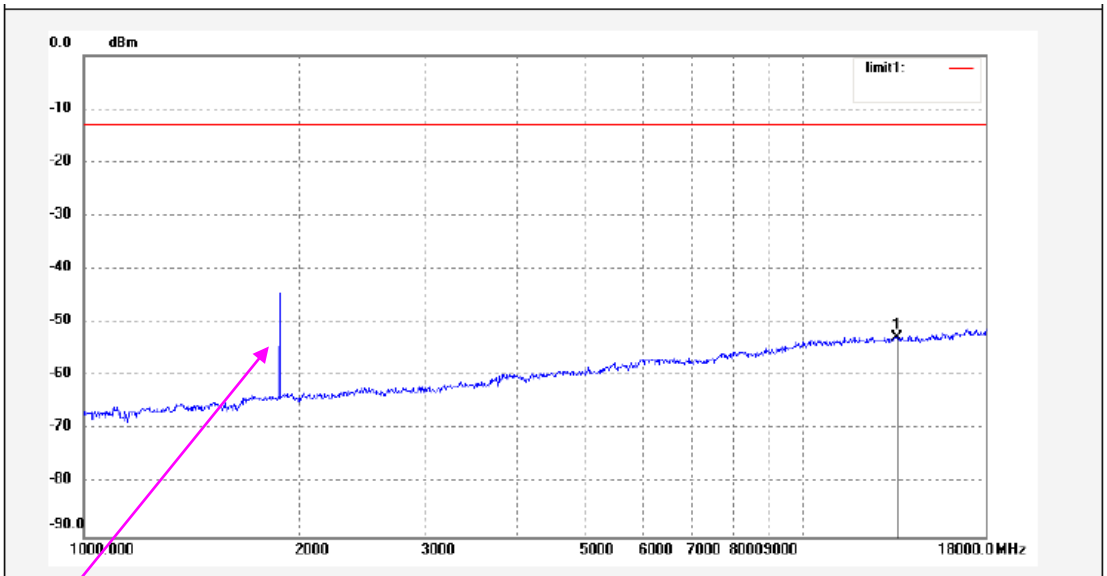
Middle channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	14344.025	-115.24	62.82	-52.42	-13.00	-39.42	peak			

Fundamental test

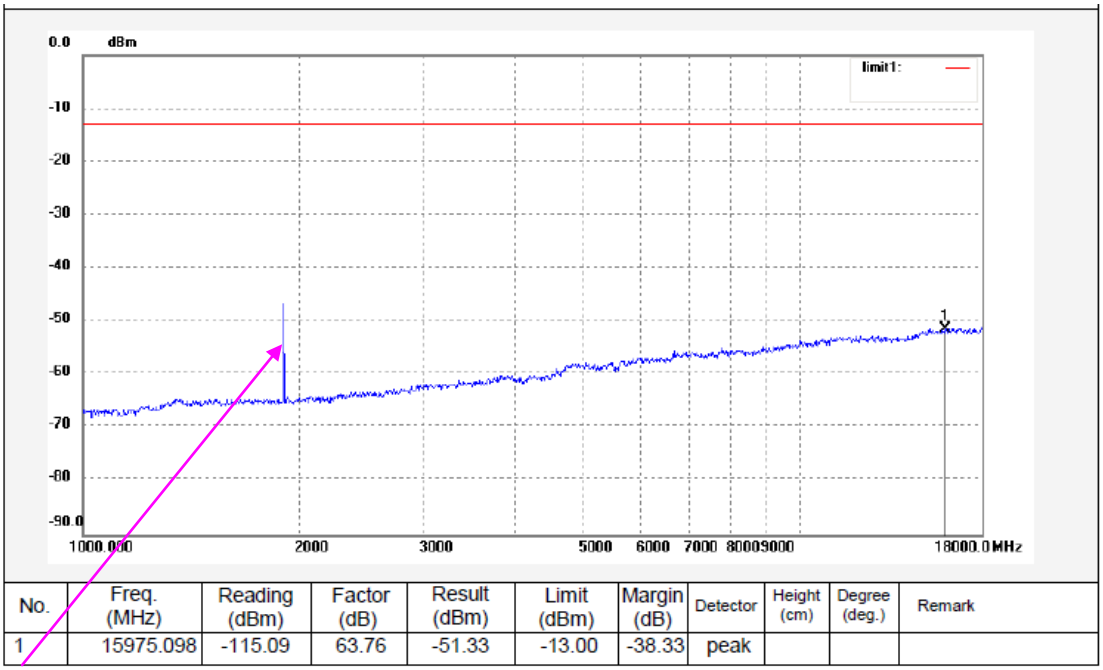
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	13572.278	-114.04	61.39	-52.65	-13.00	-39.65	peak			

Fundamental test

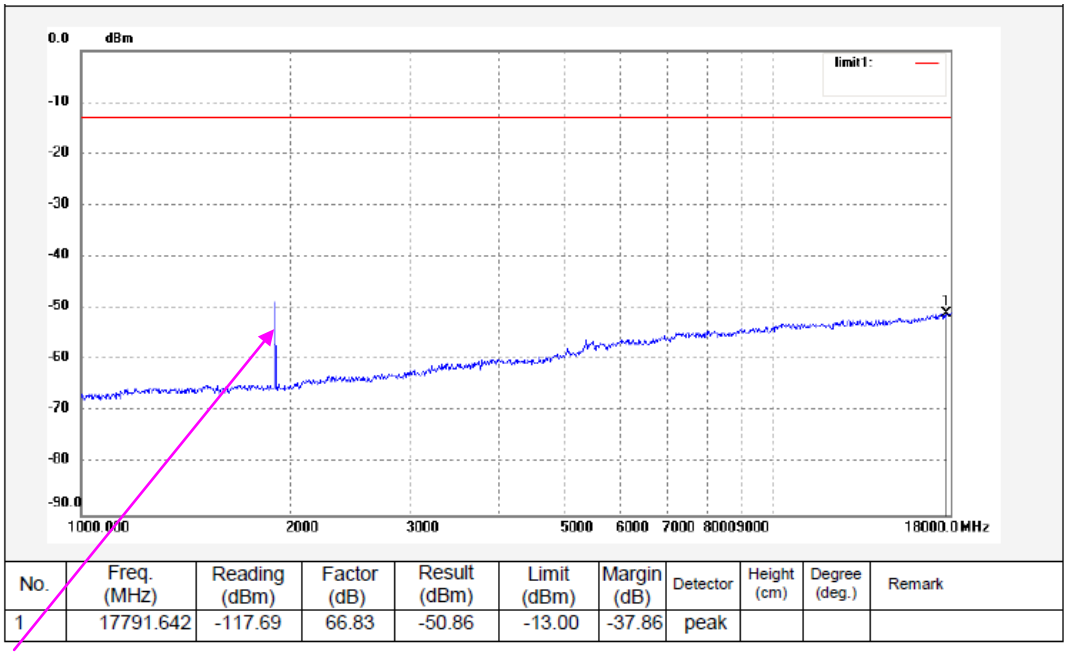
High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	15975.098	-115.09	63.76	-51.33	-13.00	-38.33	peak			

Fundamental test

Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	17791.642	-117.69	66.83	-50.86	-13.00	-37.86	peak			

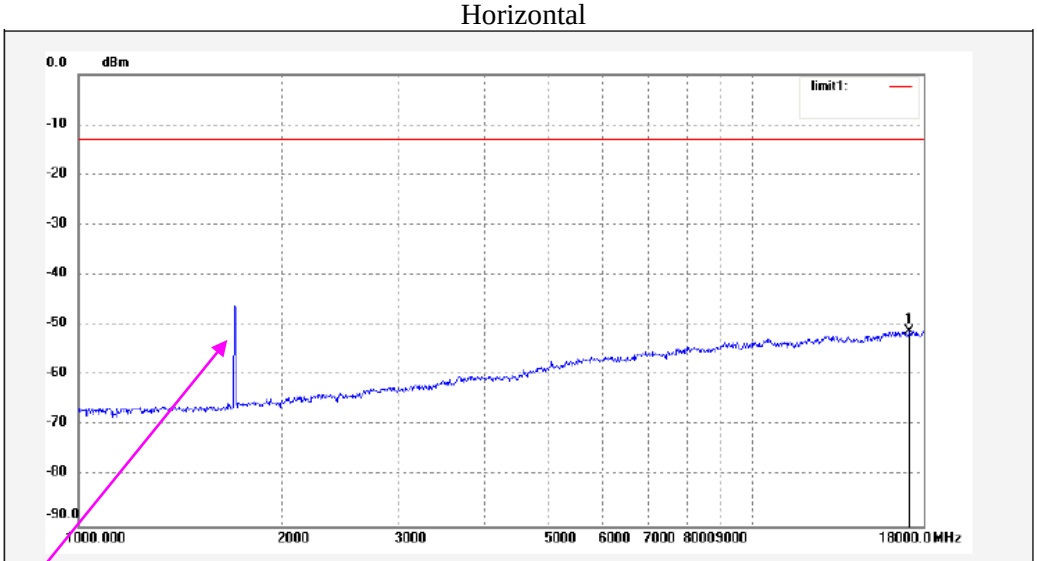
Fundamental test

AWS Band (Part 27)

WCDMA Mode

Low channel

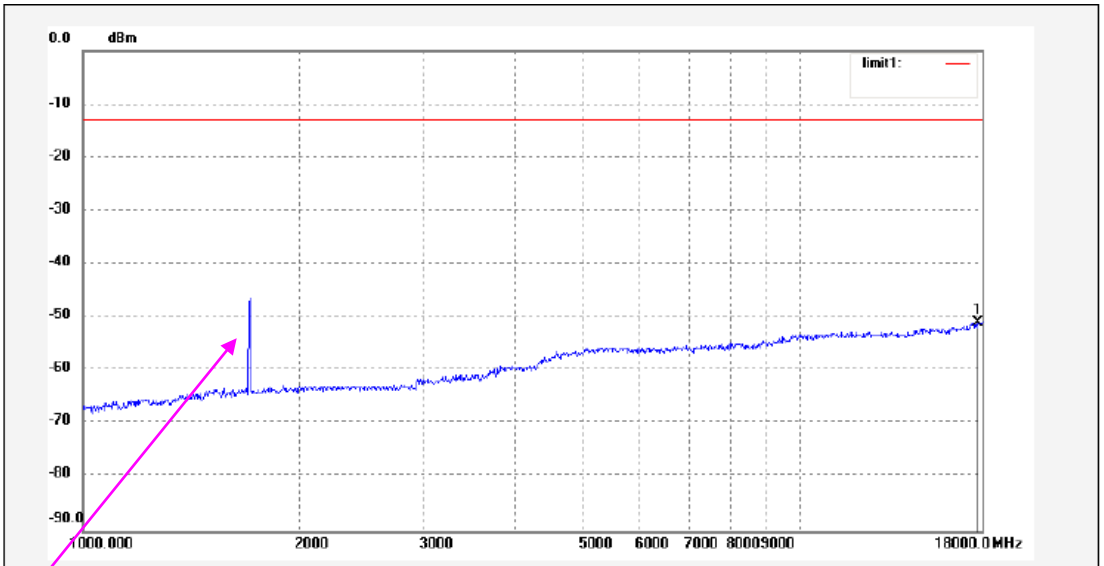
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	17180.926	-115.98	64.74	-51.24	-13.00	-38.24	peak			

Fundamental test

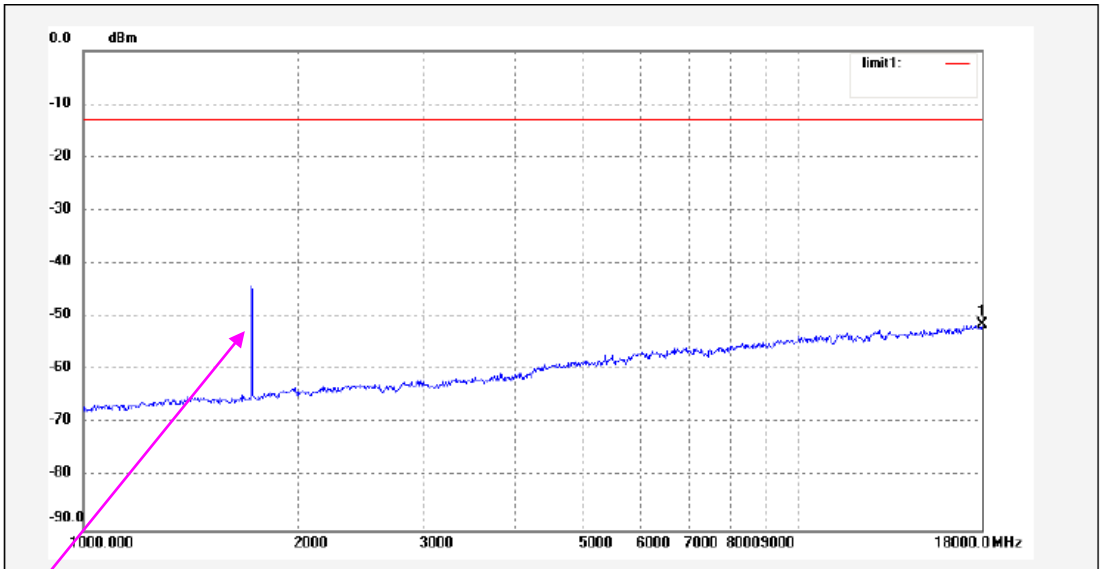
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	17791.642	-117.69	66.83	-50.86	-13.00	-37.86	peak			

Fundamental test

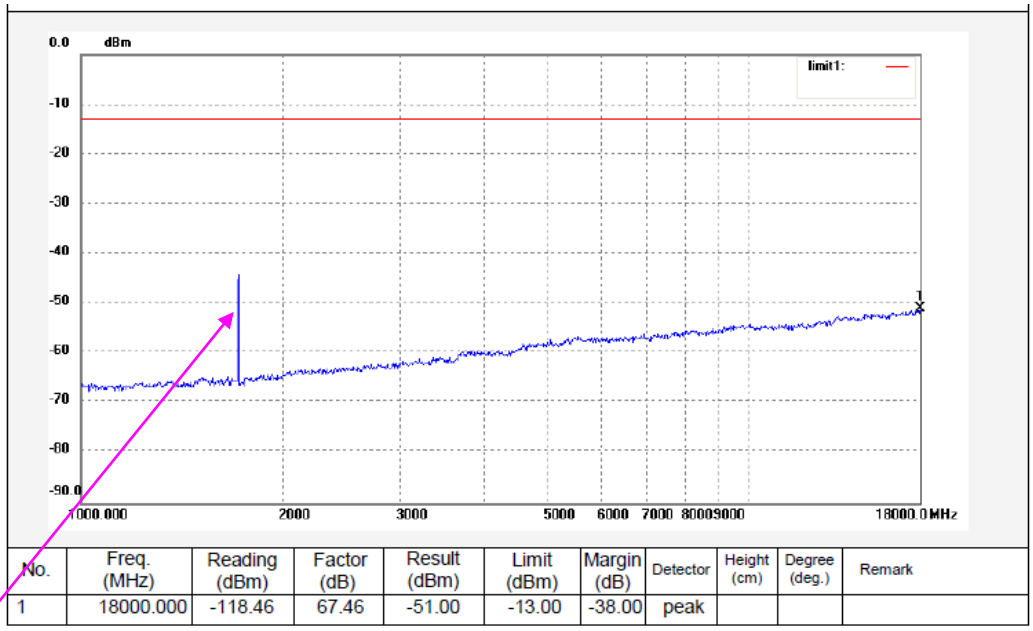
Middle channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	18000.000	-118.96	67.46	-51.50	-13.00	-38.50	peak			

Fundamental test

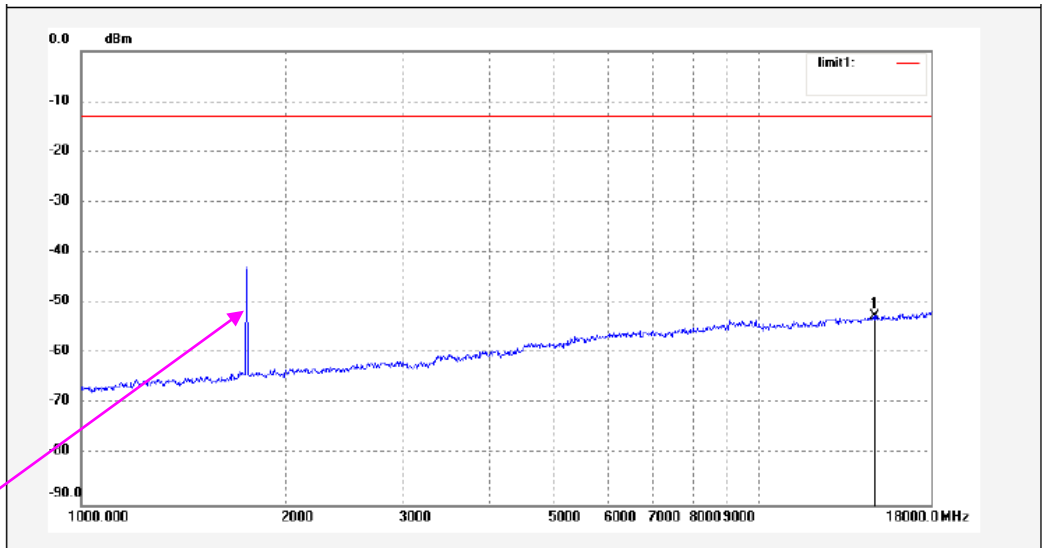
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	18000.000	-118.46	67.46	-51.00	-13.00	-38.00	peak			

Fundamental test

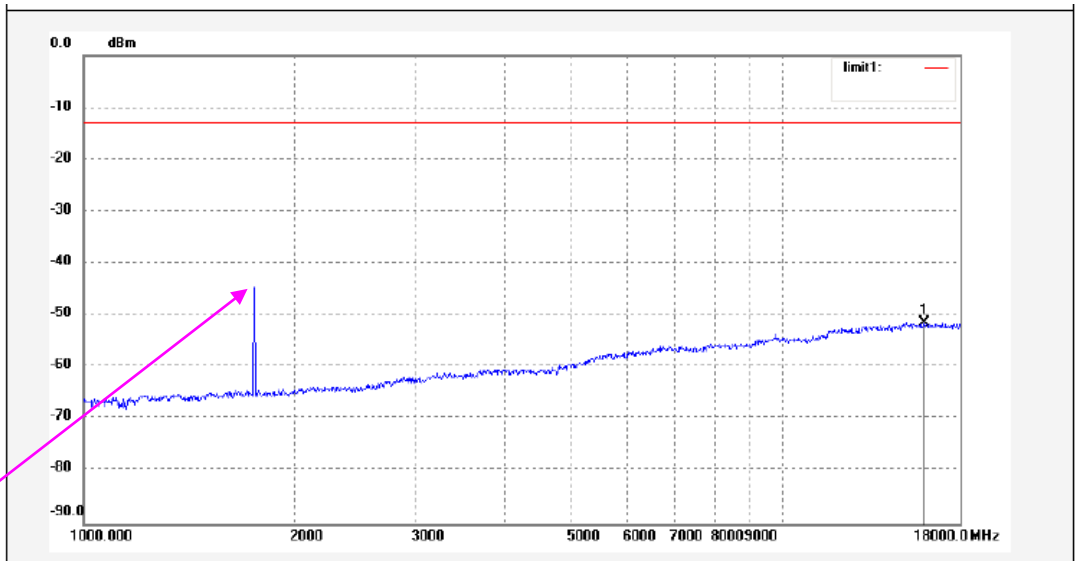
High channel
Horizontal



Fundamental test

No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	14897.199	-115.76	63.17	-52.59	-13.00	-39.59	peak			

Vertical

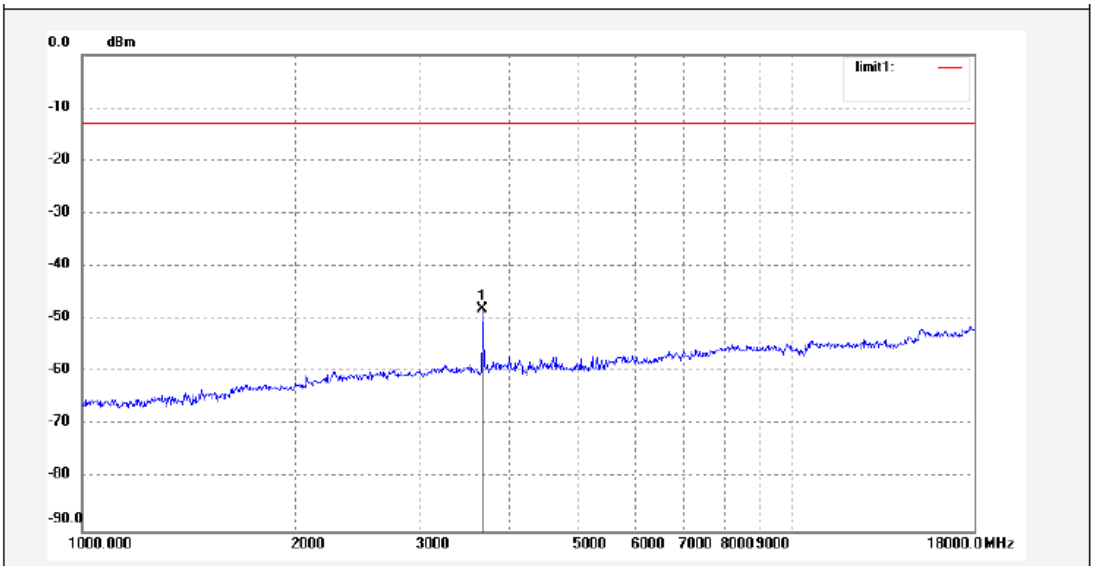


Fundamental test

No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	16021.665	-115.30	63.80	-51.50	-13.00	-38.50	peak			

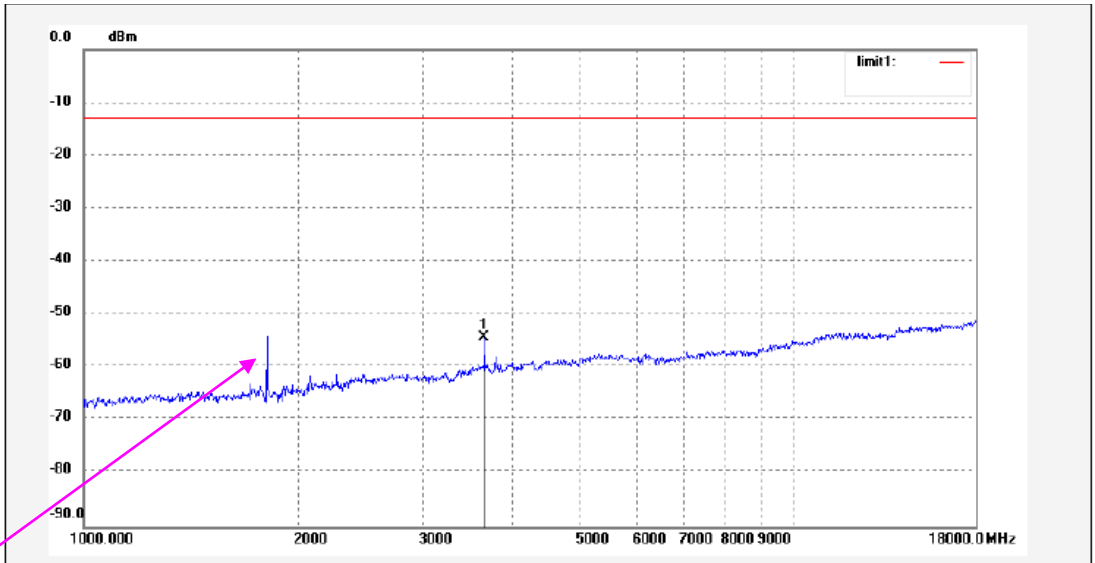
LTE Band: *(Pre-scan with all the bandwidth, and worst case as below)*
Test frequency range: 1 GHz ~ 18 GHz

Band 2
1.4 MHz, Low channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3710.473	-57.58	10.19	-47.39	-13.00	-34.39	peak			

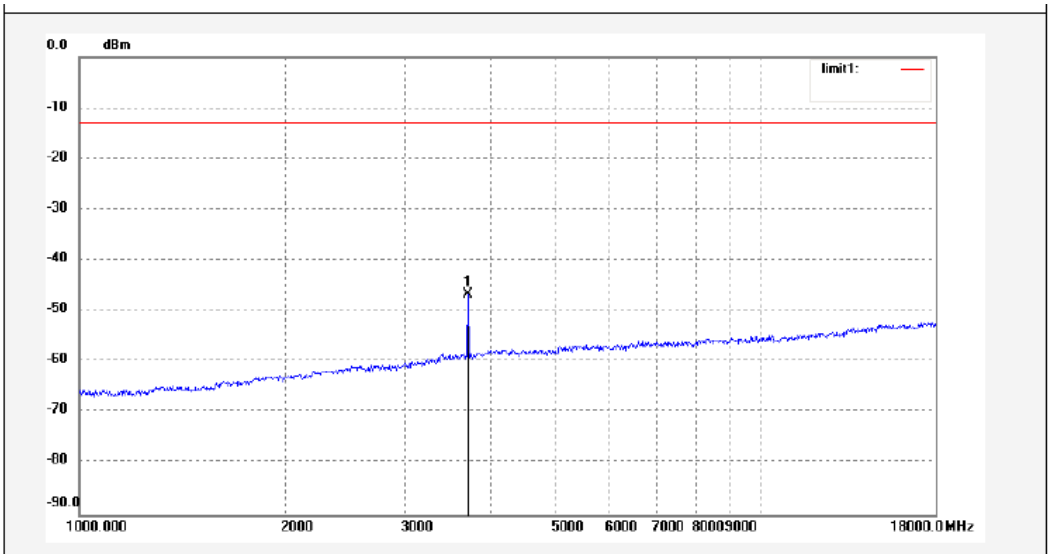
Vertical



Fundamental test

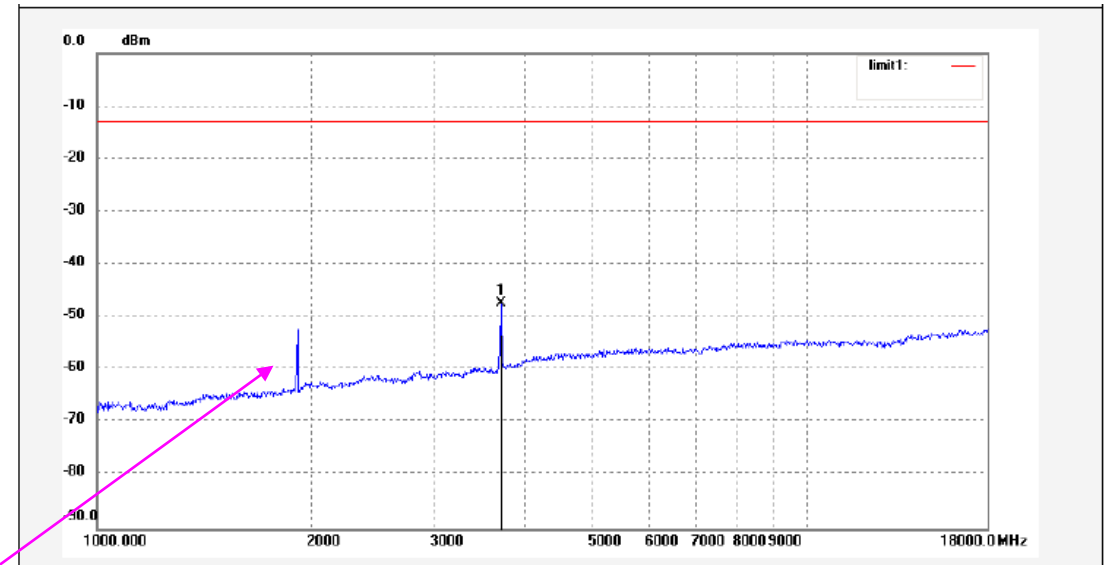
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3710.473	-63.96	10.19	-53.79	-13.00	-41.79	peak			

1.4 MHz, Middle channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3760.368	-56.95	10.48	-46.47	-13.00	-33.47	peak			

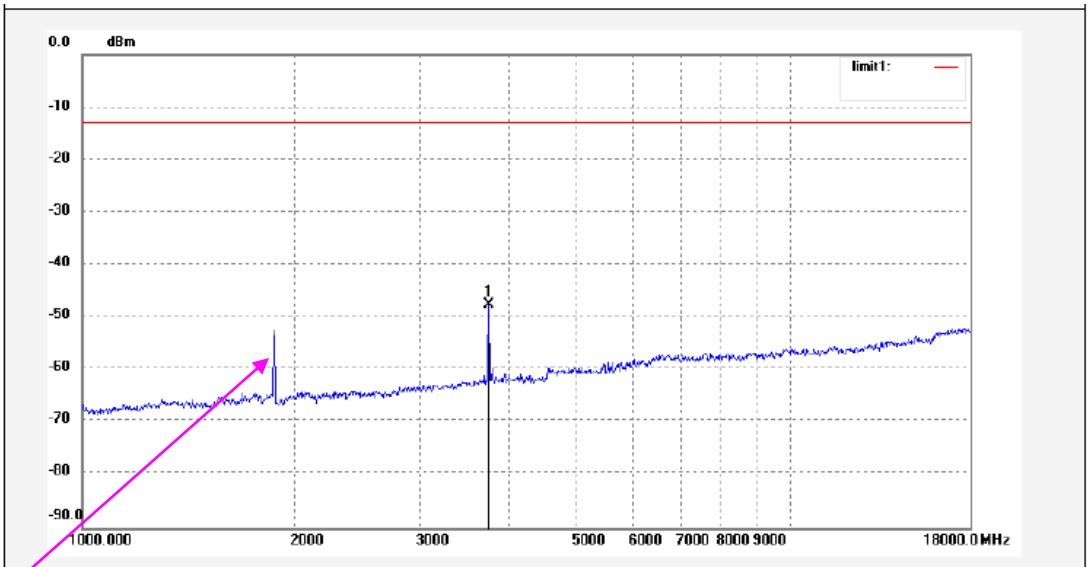
Vertical



Fundamental test

No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3760.368	-57.67	10.48	-47.19	-13.00	-34.19	peak			

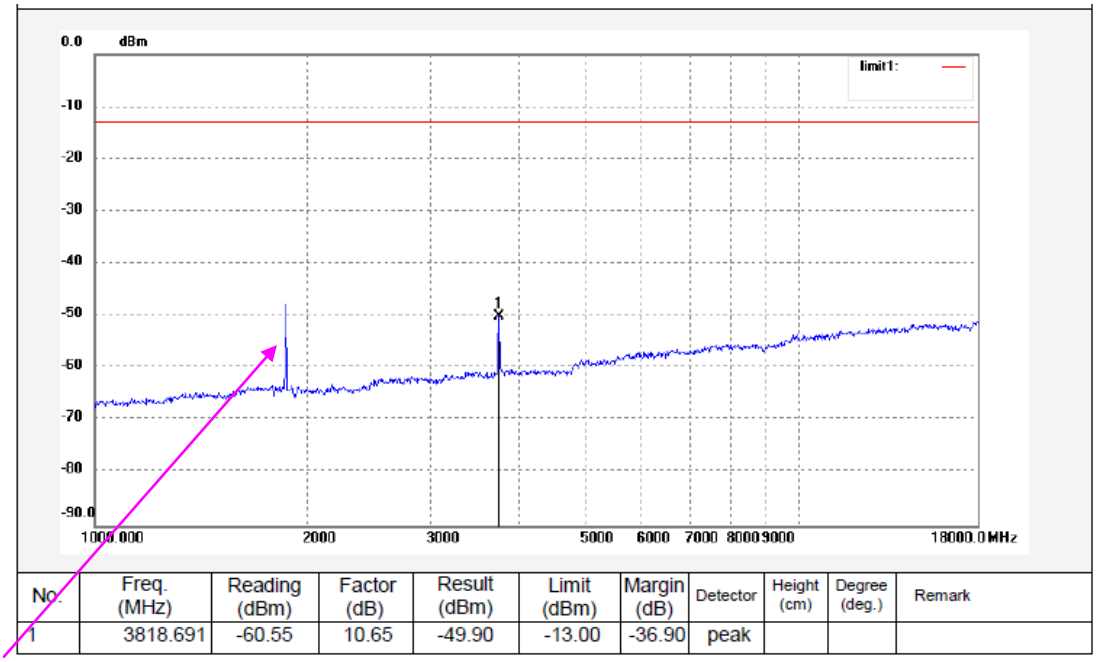
1.4 MHz, High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3818.691	-58.10	10.65	-47.45	-13.00	-34.45	peak			

Fundamental test

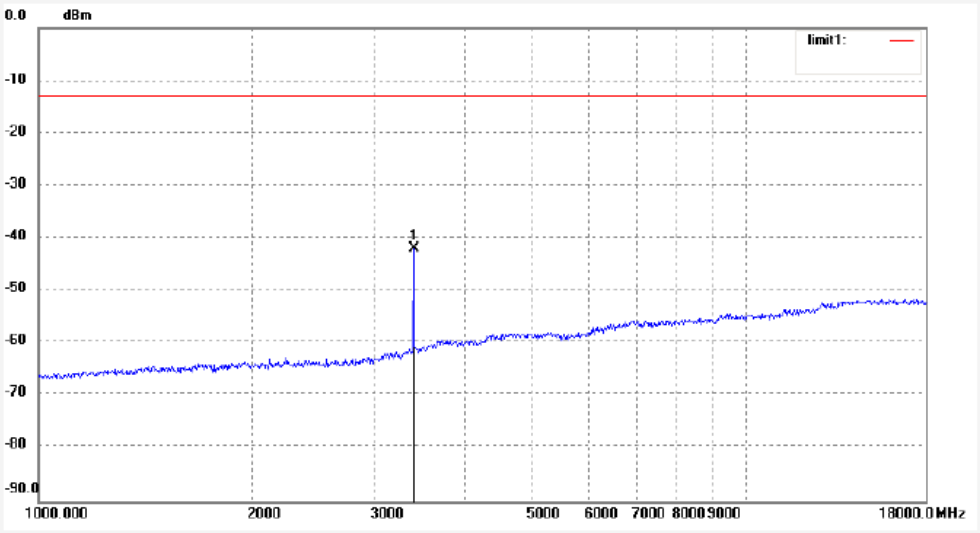
Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3818.691	-60.55	10.65	-49.90	-13.00	-36.90	peak			

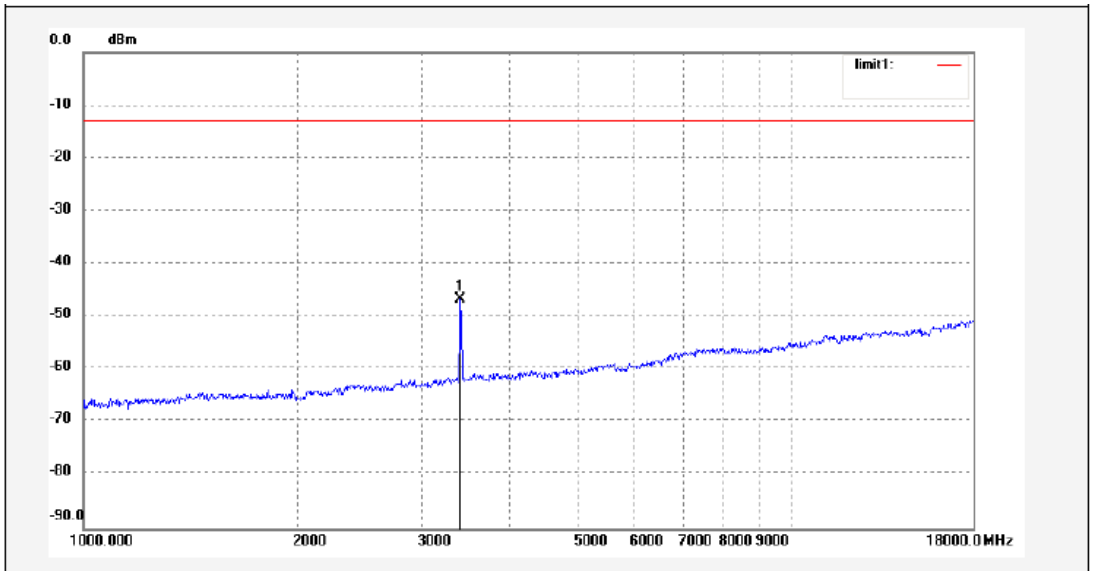
Fundamental test

Band 4
1.4 MHz, Low channel
Horizontal



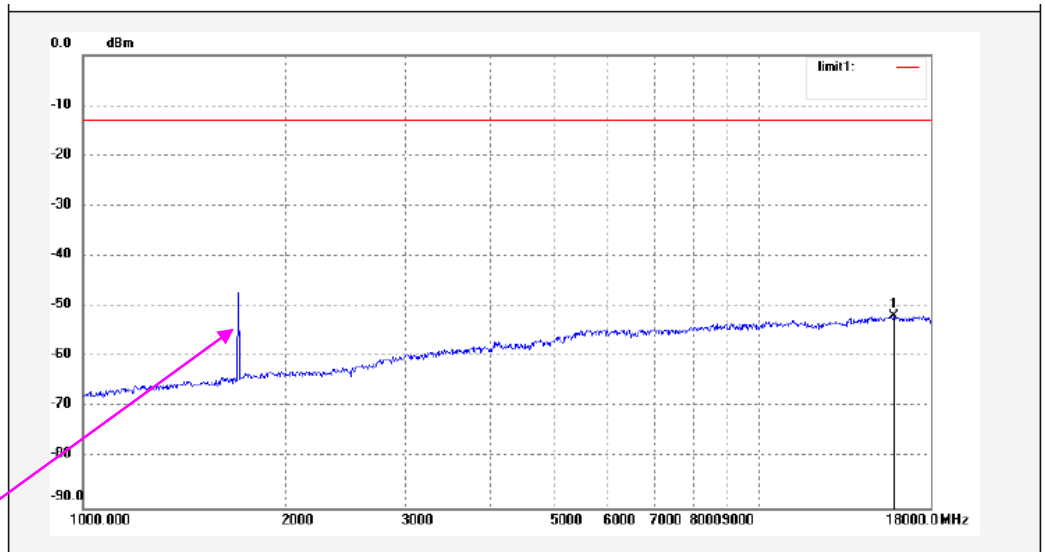
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3421.413	-50.29	8.59	-41.70	-13.00	-28.70	peak			

Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3421.411	-55.20	8.59	-46.61	-13.00	-33.61	peak			

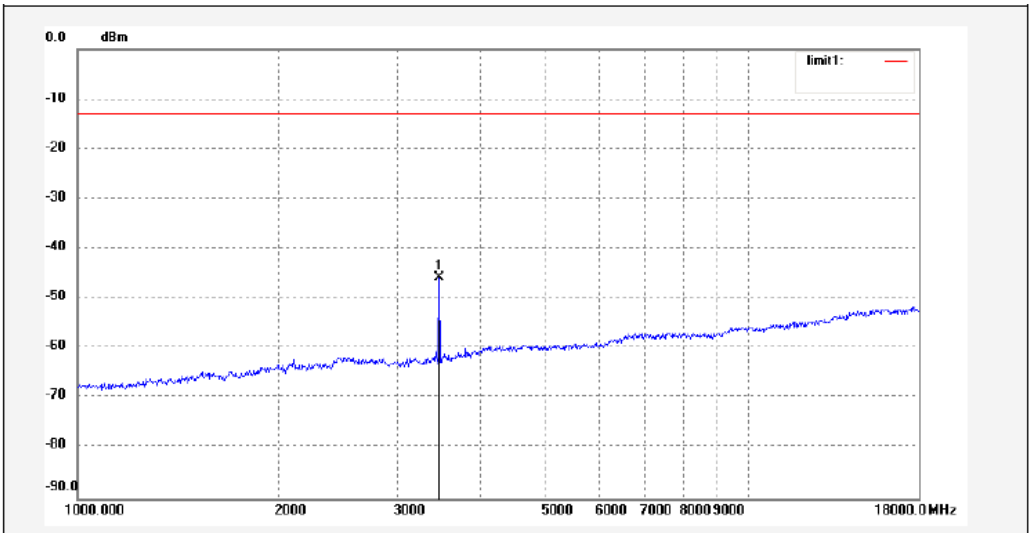
1.4 MHz, Middle channel
Horizontal



Fundamental test

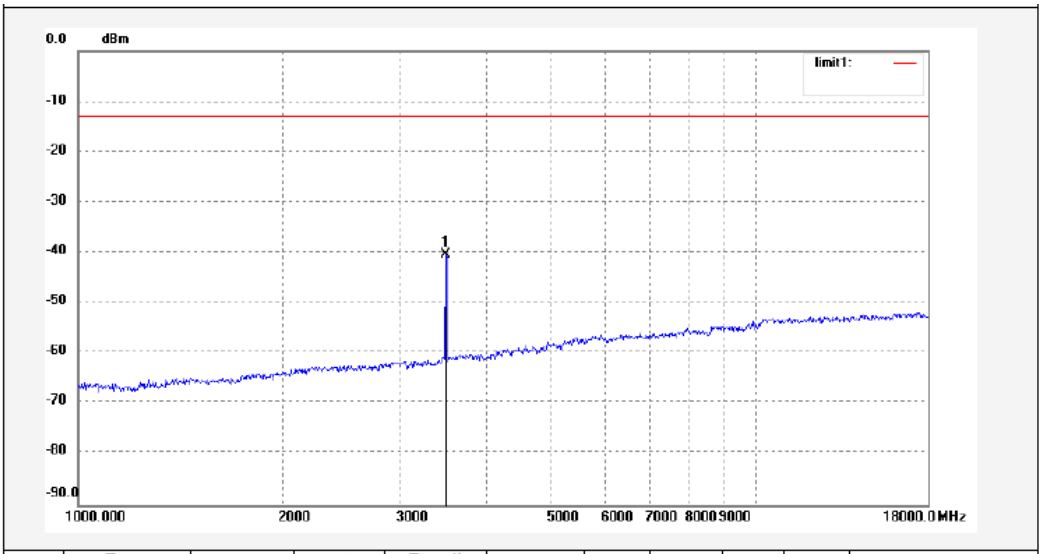
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	15882.369	-115.44	63.55	-51.89	-13.00	-38.89	peak			

Vertical



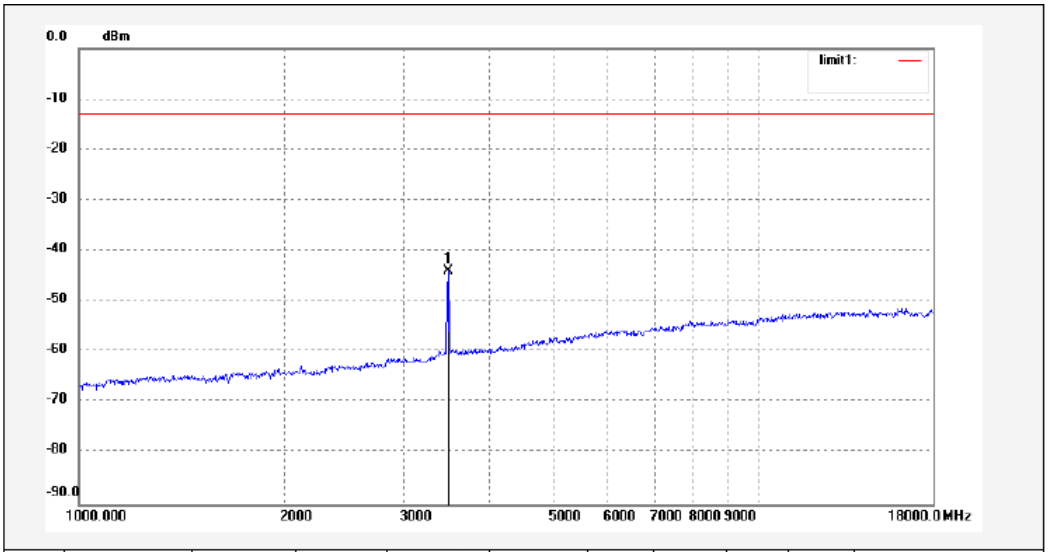
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3465.611	-54.57	8.74	-45.83	-13.00	-32.83	peak			

1.4 MHz, High channel
Horizontal



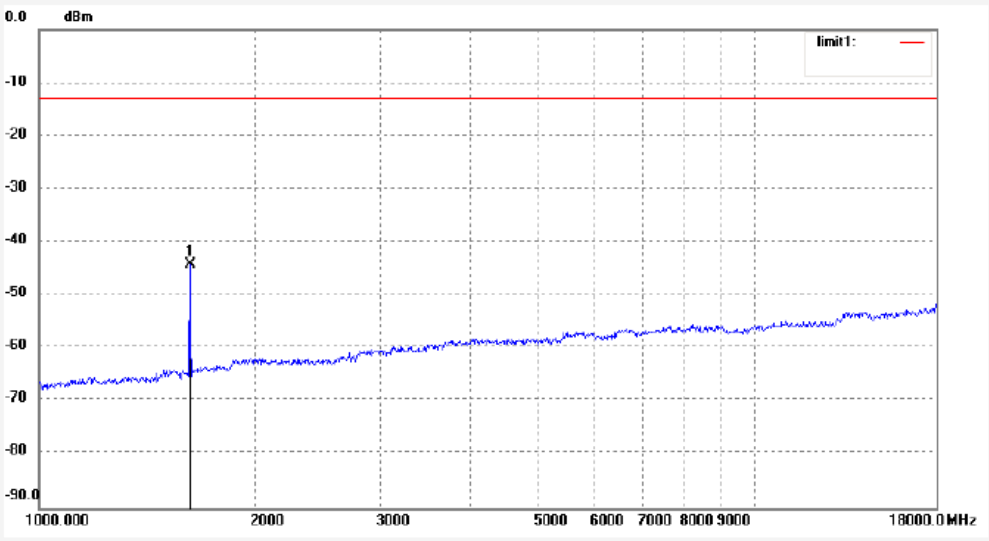
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3508.645	-49.27	8.86	-40.41	-13.00	-27.41	peak			

Vertical



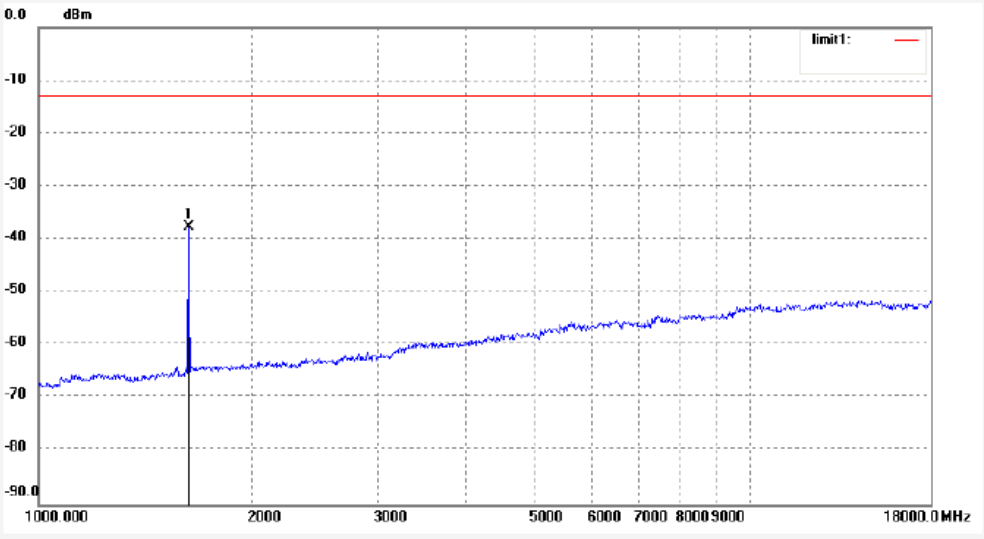
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3508.645	-52.72	8.86	-43.86	-13.00	-30.86	peak			

Band 5
1.4 MHz, Low channel
Horizontal



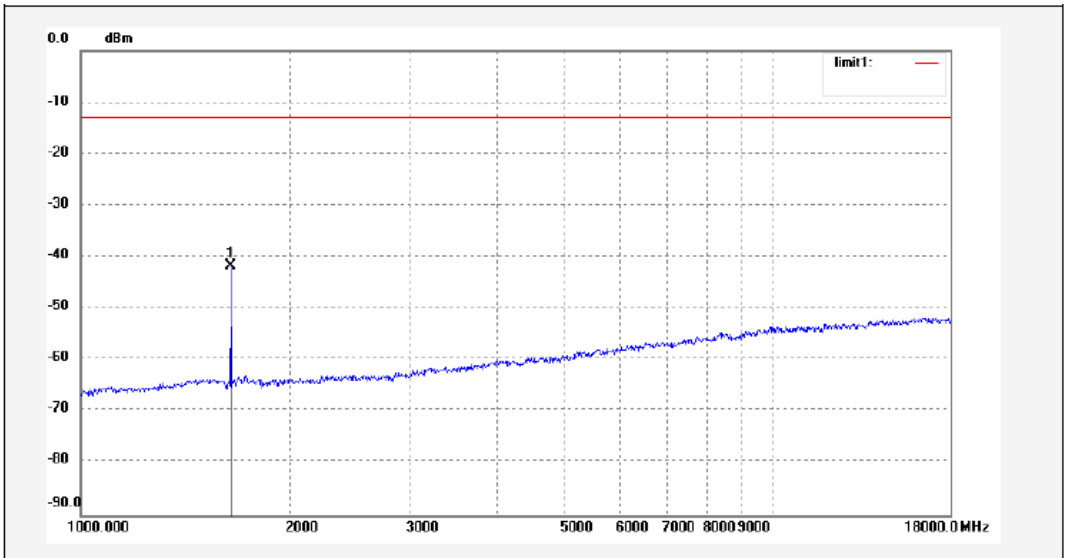
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1649.454	-43.36	-0.08	-43.44	-13.00	-30.44	peak			

Vertical



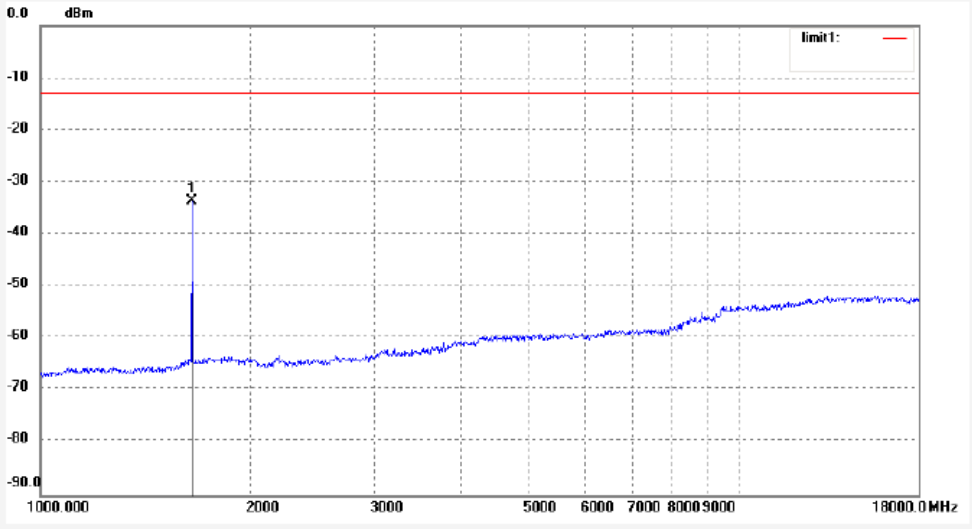
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1649.454	-36.82	-0.08	-36.90	-13.00	-23.90	peak			

1.4 MHz, Middle channel
Horizontal



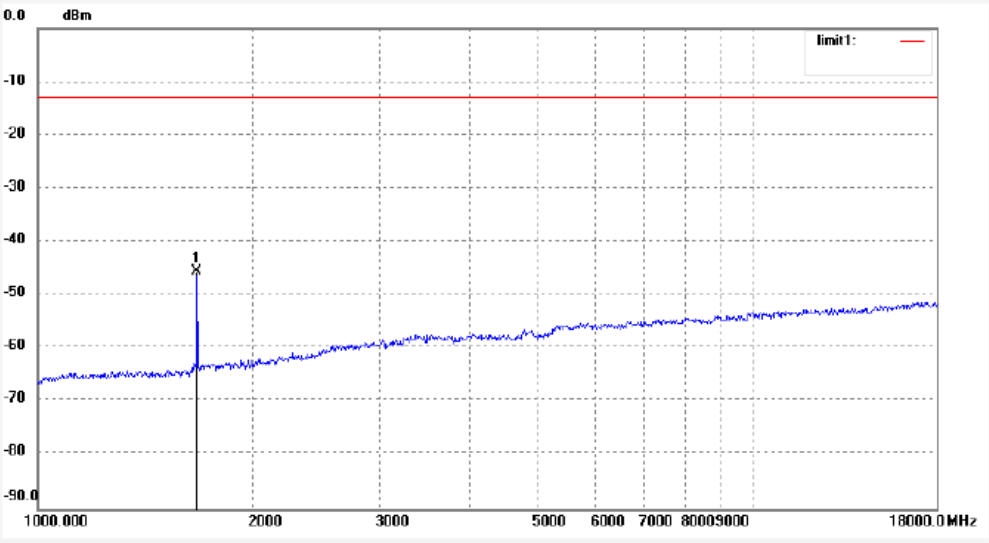
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1673.491	-41.69	0.74	-40.95	-13.00	-27.95	peak			

Vertical



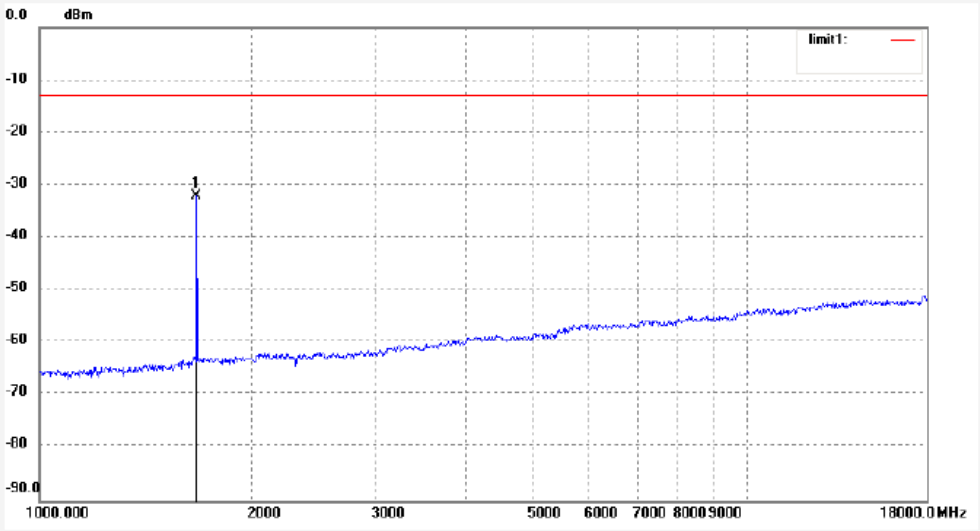
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1673.791	-33.48	0.74	-32.74	-13.00	-19.74	peak			

1.4 MHz, High channel
Horizontal



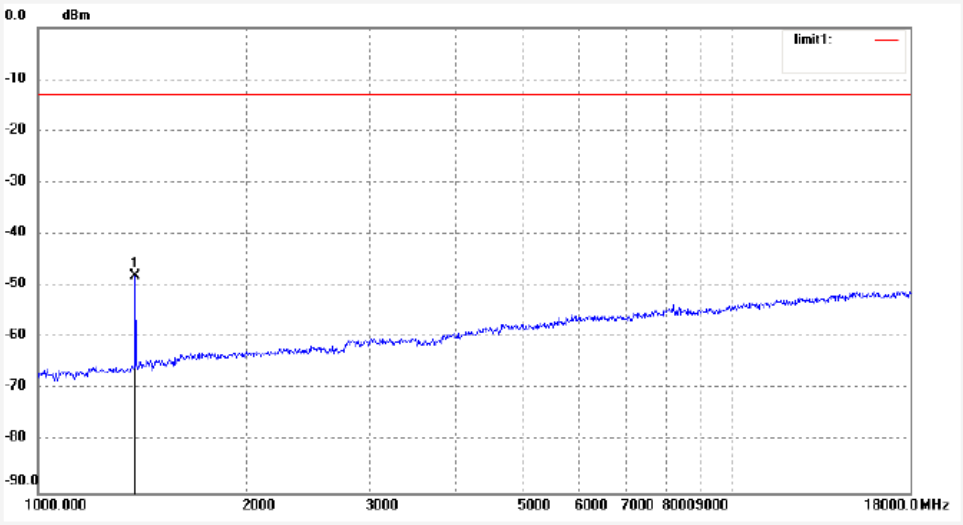
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1696.611	-46.07	1.57	-44.50	-13.00	-31.50	peak			

Vertical



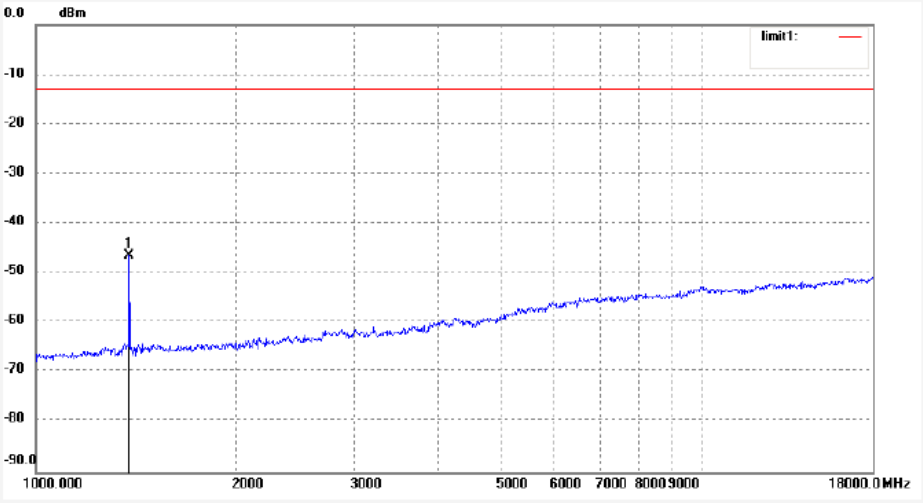
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1696.611	-32.57	1.57	-31.00	-13.00	-18.00	peak			

Band 12
1.4 MHz, Low channel
Horizontal



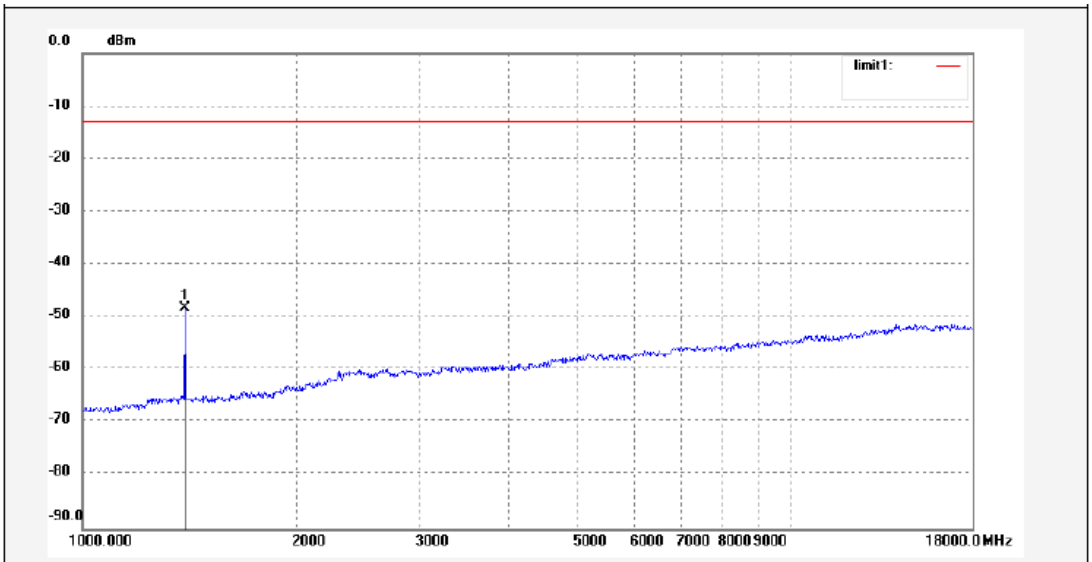
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1399.494	-45.53	-2.48	-48.01	-13.00	-35.01	peak			

Vertical



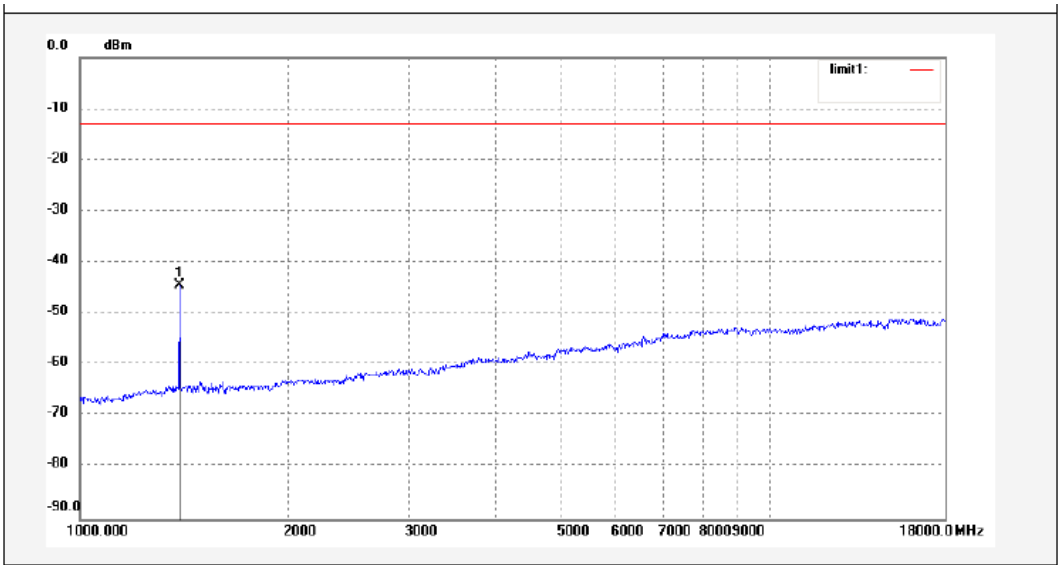
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1399.494	-43.96	-2.48	-46.44	-13.00	-33.44	peak			

1.4 MHz, Middle channel
Horizontal



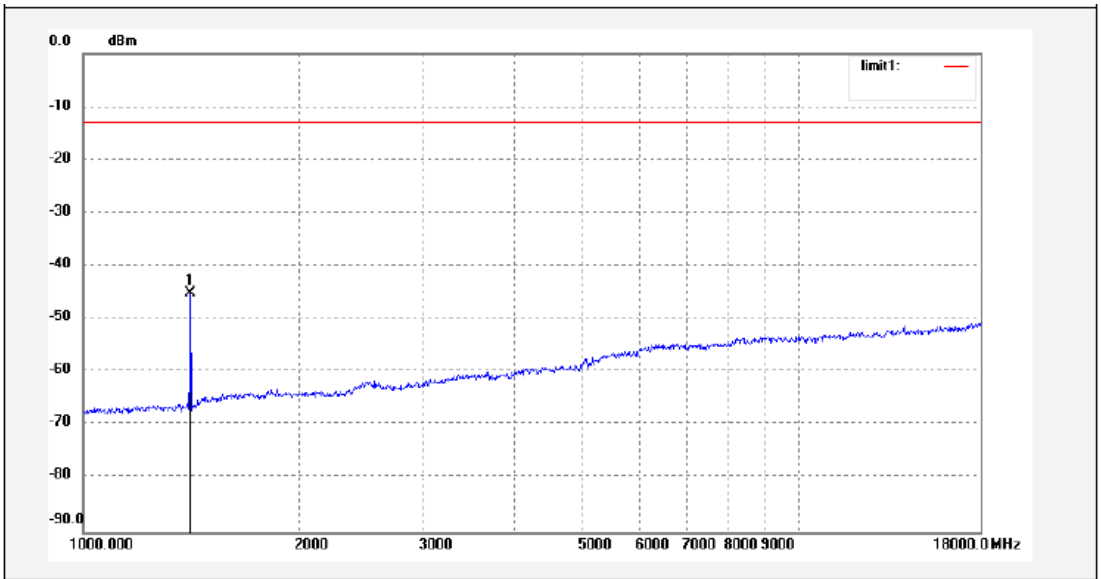
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1415.571	-45.87	-2.36	-48.23	-13.00	-35.23	peak			

Vertical



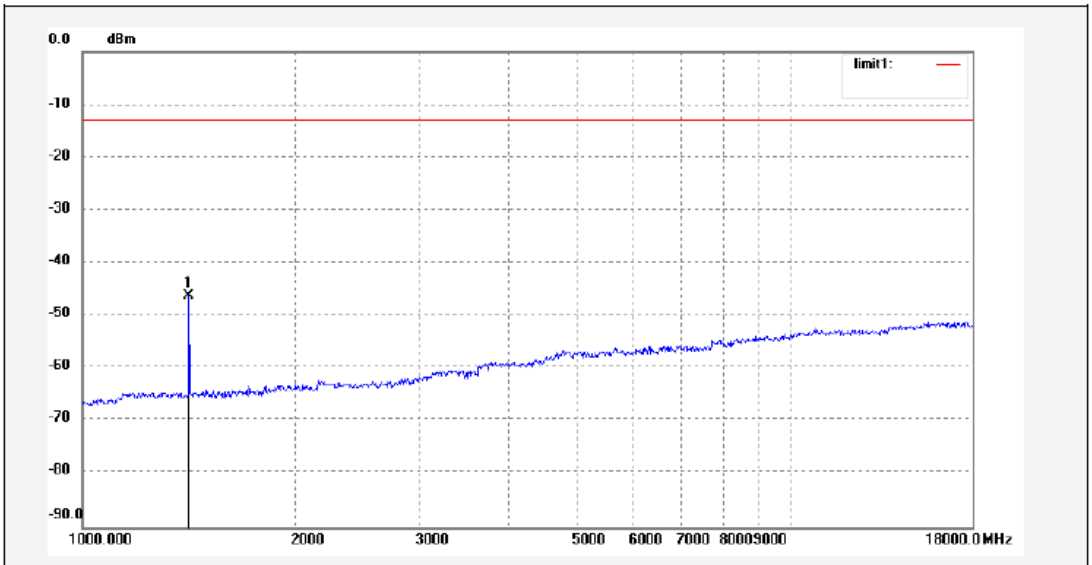
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1415.571	-41.88	-2.36	-44.24	-13.00	-31.24	peak			

1.4 MHz, High channel
Horizontal



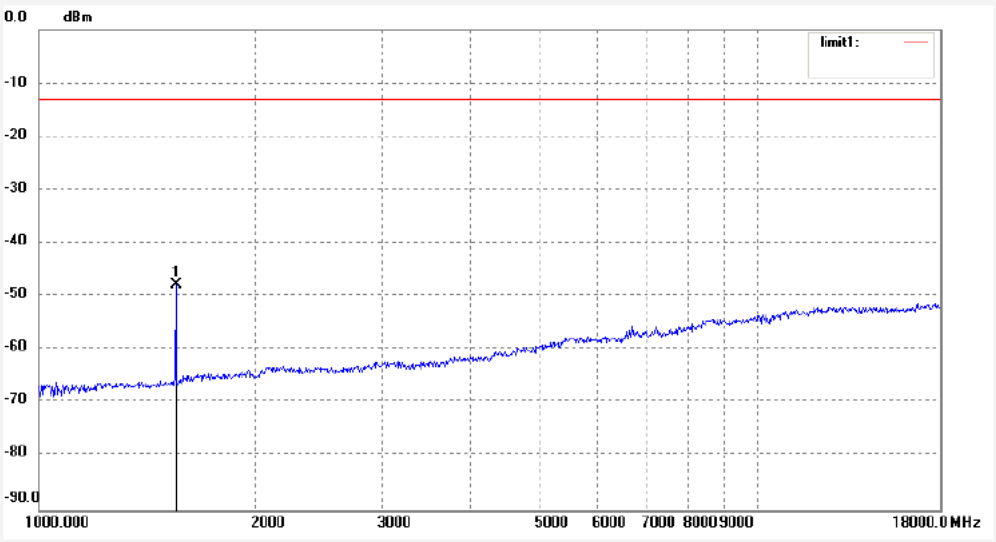
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1430.638	-42.63	-2.25	-44.88	-13.00	-31.88	peak			

Vertical



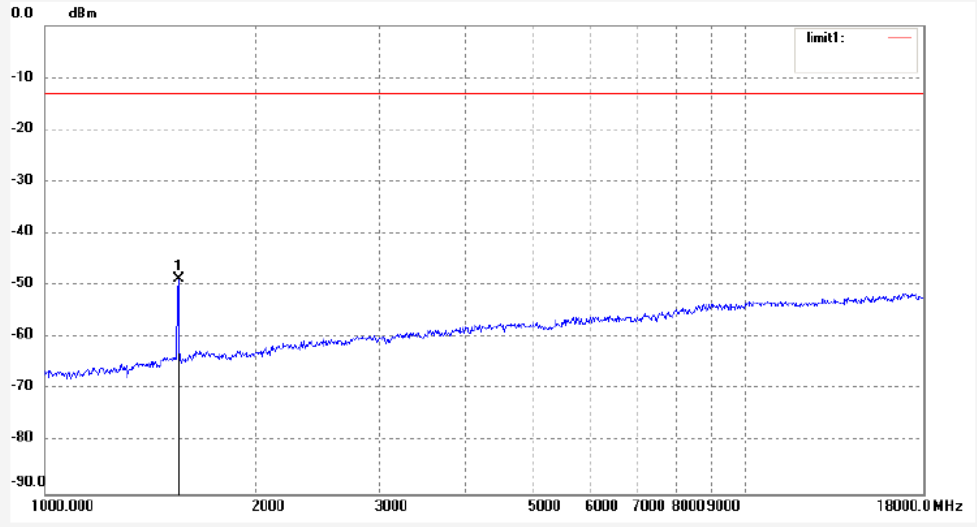
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1430.638	-43.86	-2.25	-46.11	-13.00	-33.11	peak			

Band 13
5 MHz, Low channel
Horizontal



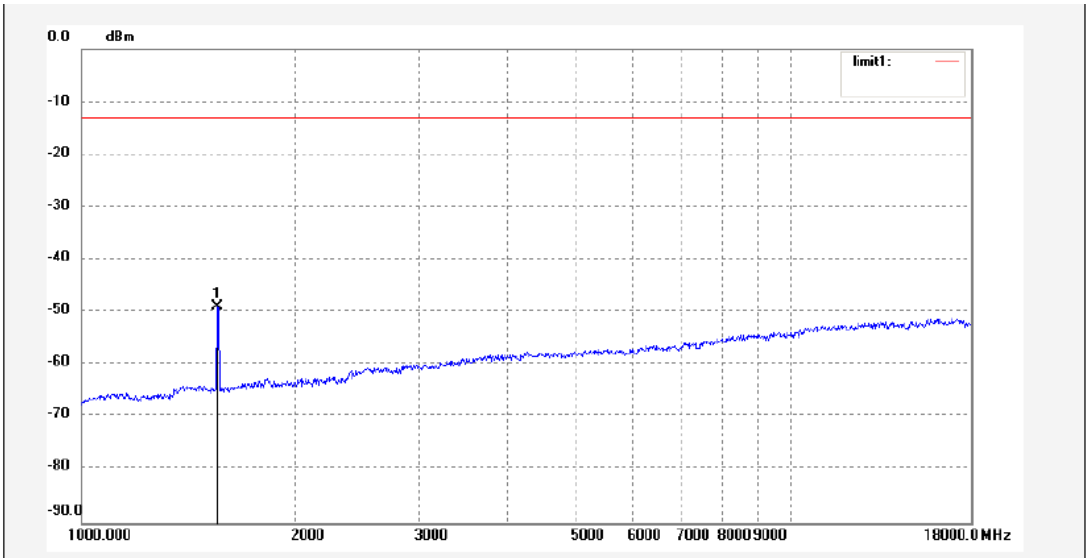
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1559.966	-46.55	-1.29	-47.84	-40.00	-7.84	peak			

Vertical



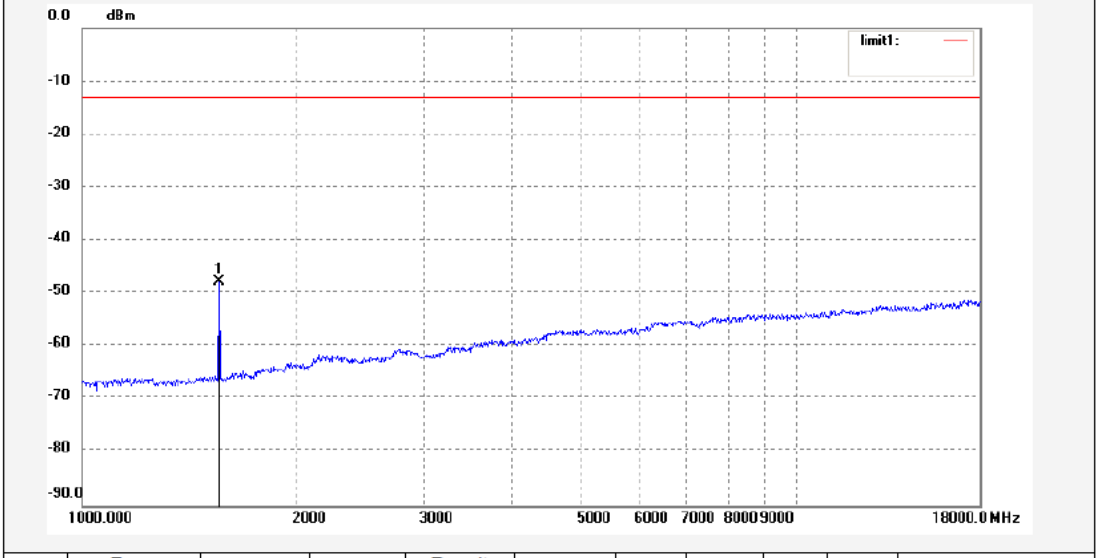
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1559.966	-47.49	-1.29	-48.78	-40.00	-8.78	peak			

5 MHz, Middle channel
Horizontal



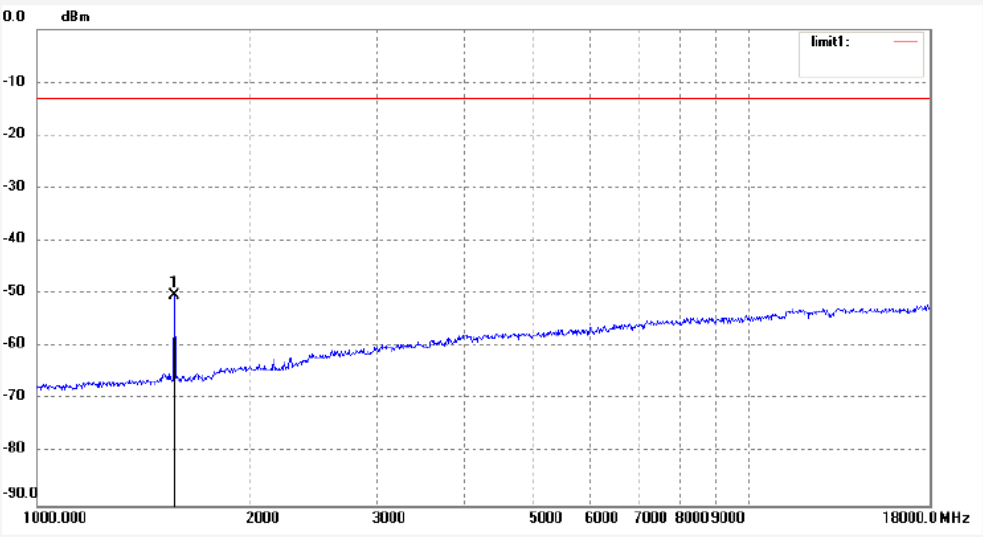
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1564.490	-47.54	-1.31	-48.85	-40.00	-8.85	peak			

Vertical



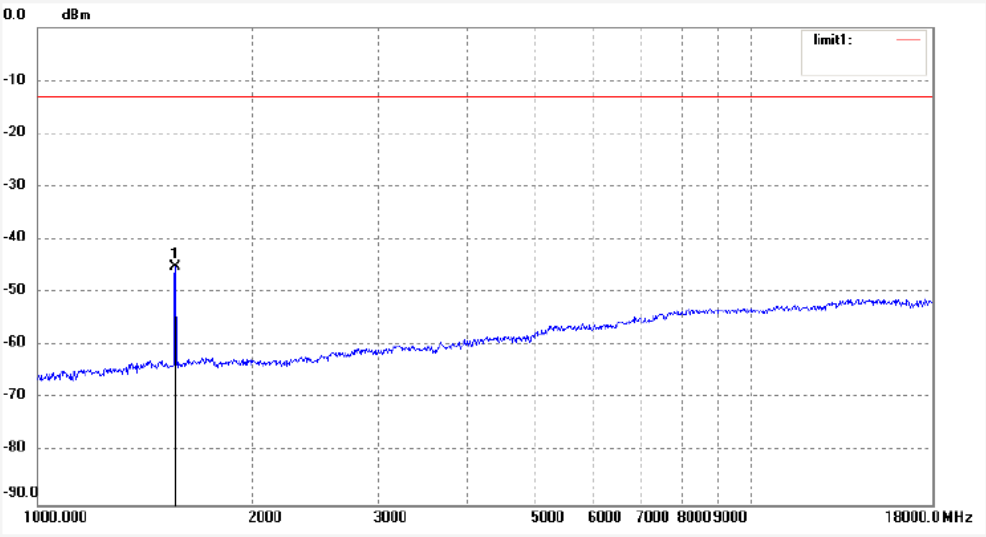
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1564.490	-46.58	-1.31	-47.89	-40.00	-7.89	peak			

5 MHz, High channel
Horizontal



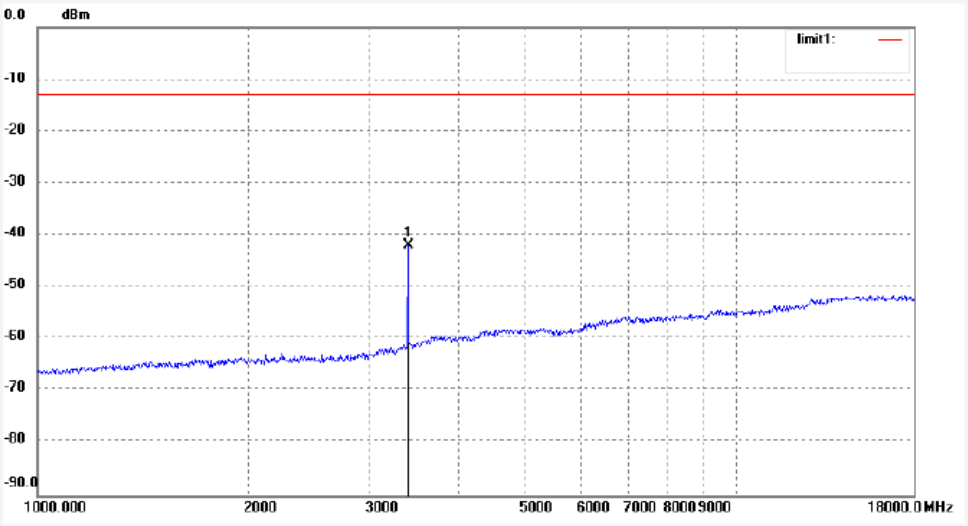
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1569.027	-49.00	-1.32	-50.32	-40.00	-10.32	peak			

Vertical



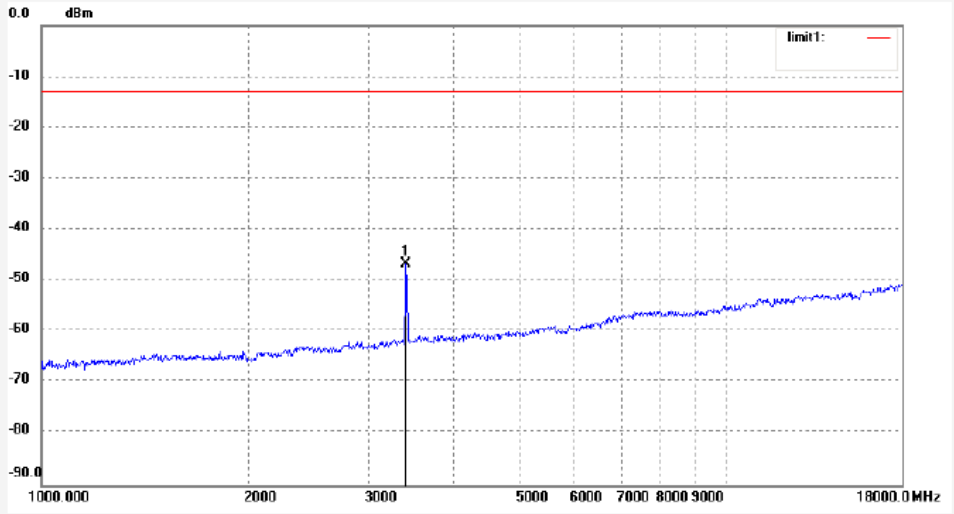
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1569.027	-43.91	-1.32	-45.23	-40.00	-5.23	peak			

Band 66
1.4 MHz, Low channel
Horizontal



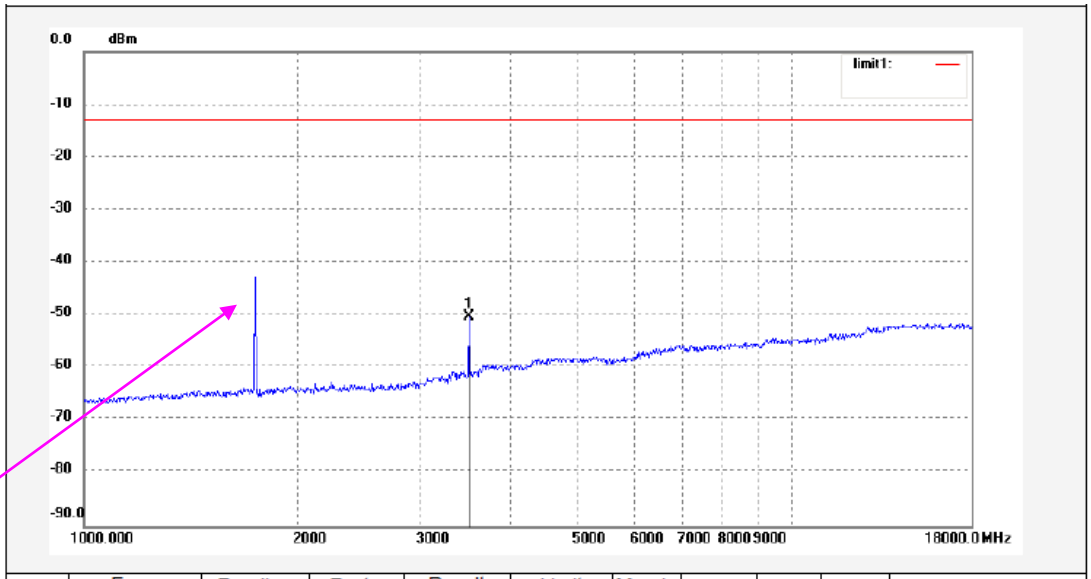
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3421.413	-50.29	8.59	-41.70	-13.00	-28.70	peak			

Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3421.411	-55.20	8.59	-46.61	-13.00	-33.61	peak			

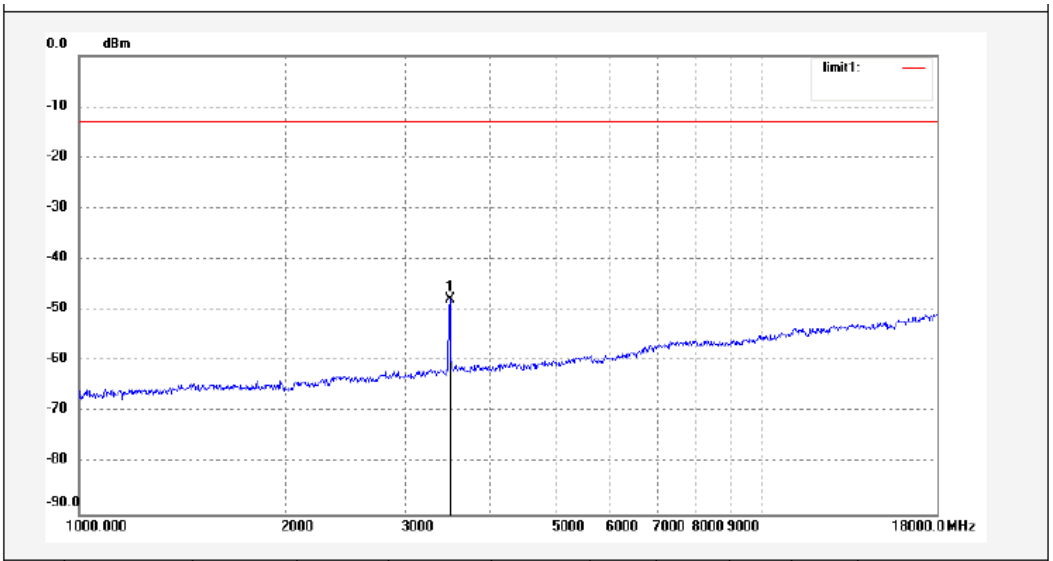
1.4 MHz, Middle channel
Horizontal



Fundamental test

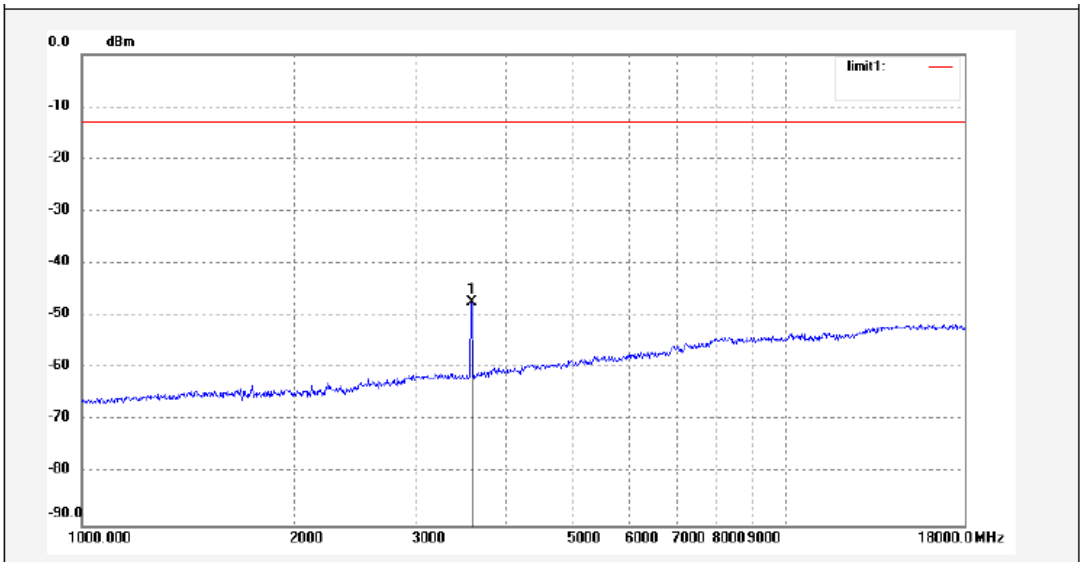
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3490.197	-59.07	8.82	-50.25	-13.00	-37.25	peak			

Vertical



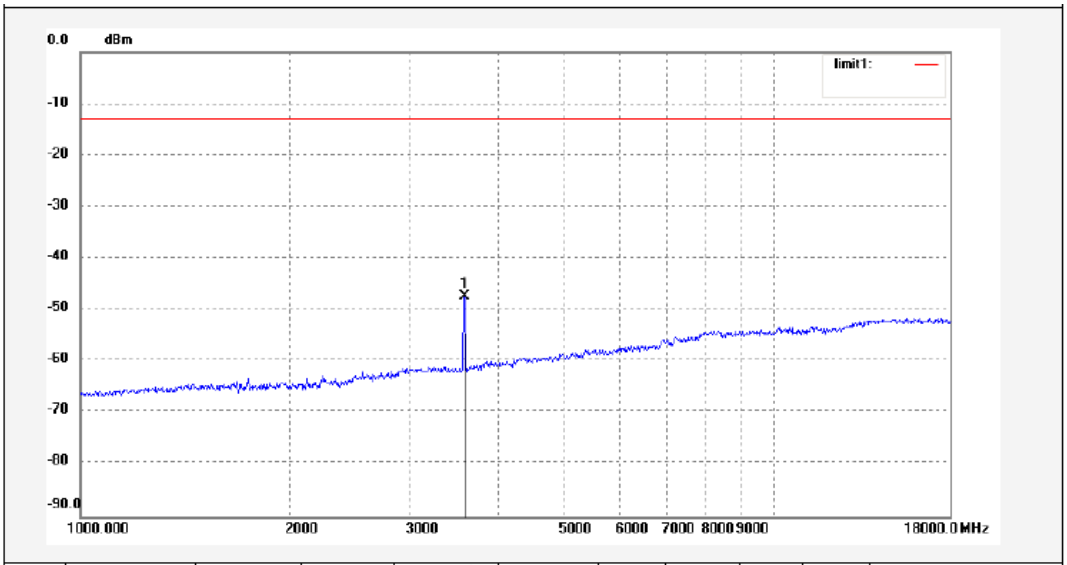
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3490.845	-56.57	8.82	-47.75	-13.00	-34.75	peak			

1.4 MHz, High channel
Horizontal



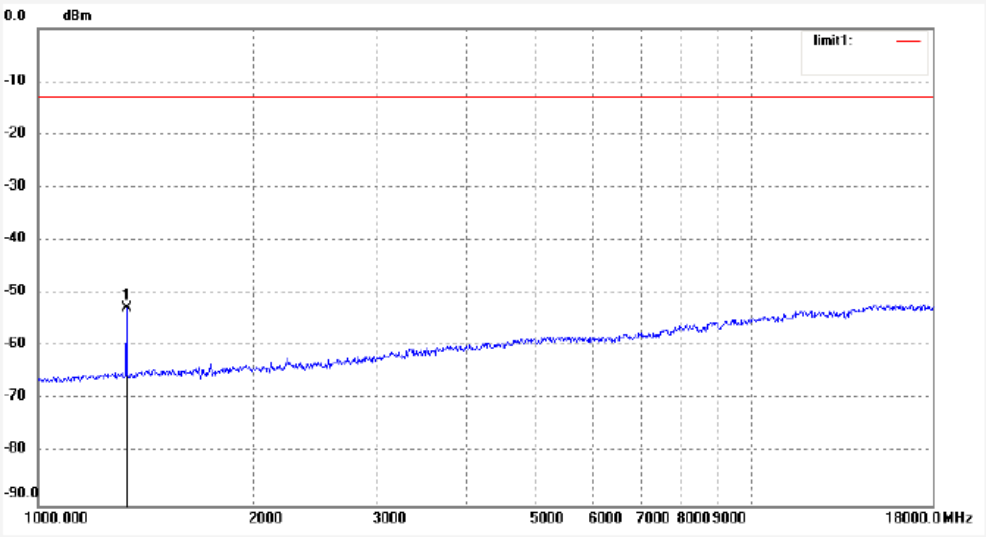
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3558.610	-56.10	8.83	-47.27	-13.00	-34.27	peak			

Vertical



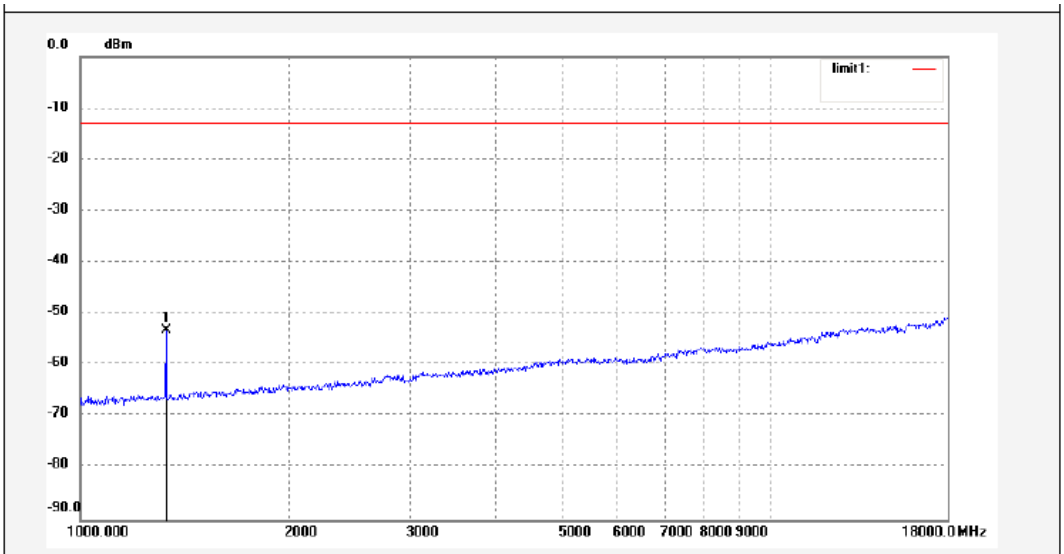
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3558.610	-56.10	8.83	-47.27	-13.00	-34.27	peak			

Band 71
5 MHz, Low channel
Horizontal



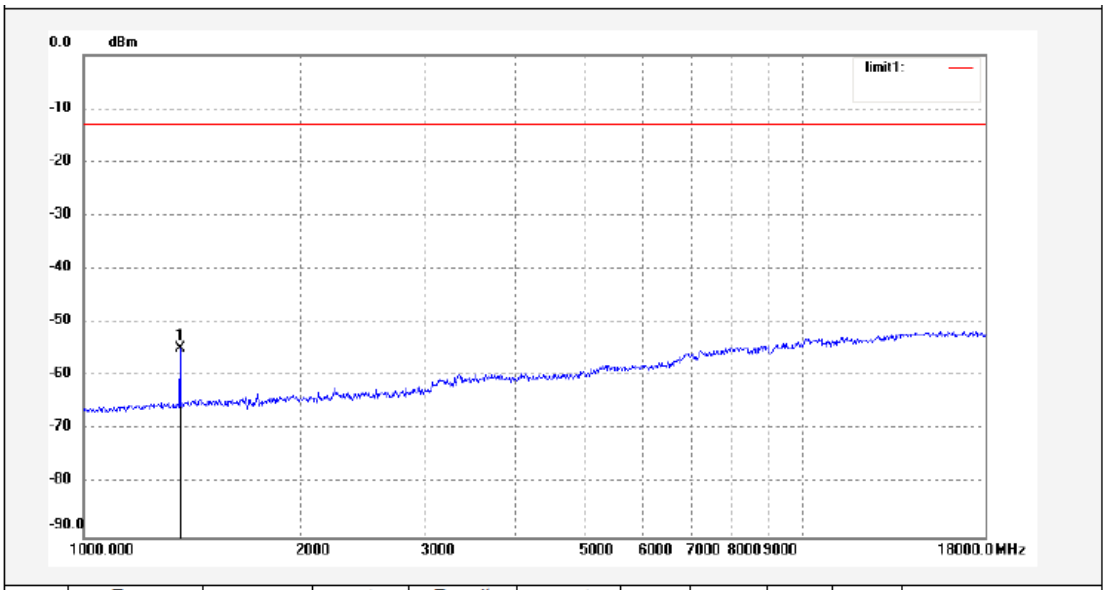
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1331.099	-50.65	-2.15	-52.80	-13.00	-39.80	peak			

Vertical



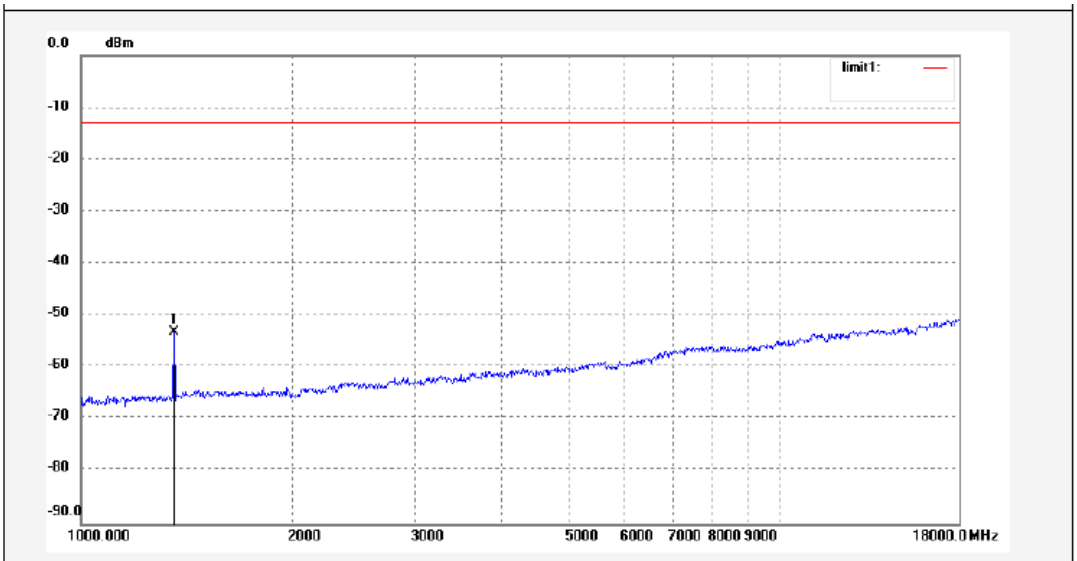
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1331.099	-51.02	-2.15	-53.17	-13.00	-40.17	peak			

5 MHz, Middle channel
Horizontal



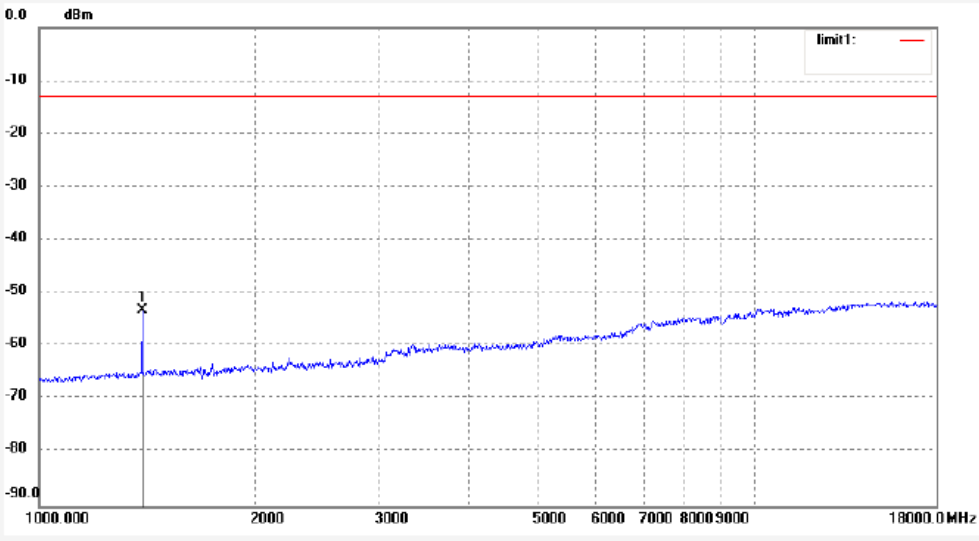
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1361.435	-52.36	-2.36	-54.72	-13.00	-41.72	peak			

Vertical



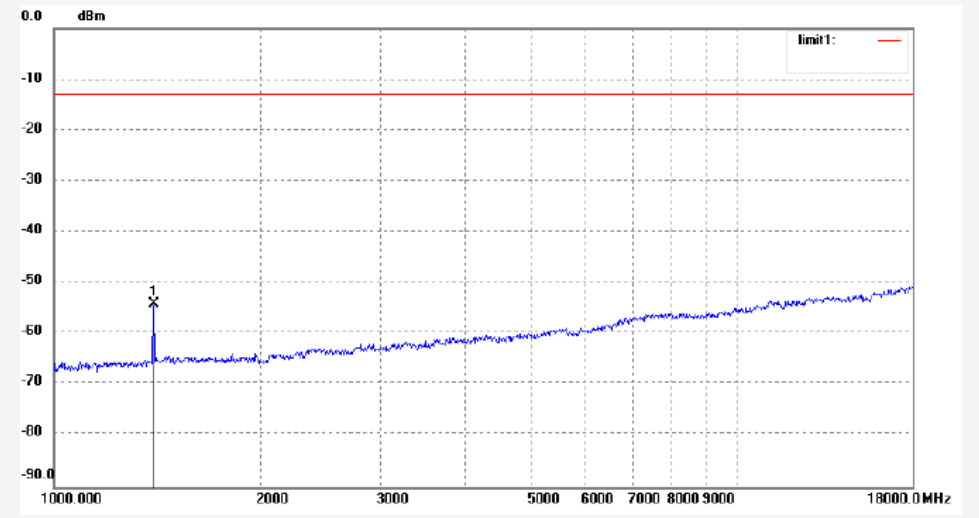
No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1361.477	-50.90	-2.36	-53.26	-13.00	-40.26	peak			

5 MHz, High channel
Horizontal



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1391.509	-50.76	-2.46	-53.22	-13.00	-40.22	peak			

Vertical



No.	Freq. (MHz)	Reading (dBm)	Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1391.645	-51.62	-2.46	-54.08	-13.00	-41.08	peak			

Note:

1) Result = Reading + Factor (Air loss + RX ant Gain + RX cable loss- RX Amp gain)
2) Margin = Result – Limit
3) Factor = SG power-TX cable loss+TX antenna gain-Spectrum Reading value (Refer to CISPR 16-1-4)
4) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.

FCC § 22.917 (a);§ 24.238 (a); §27.53 (c)(h)(m) - BAND EDGES

Applicable Standard

According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

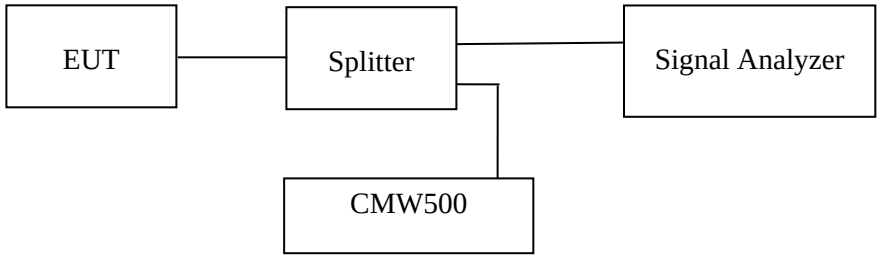
According to FCC §27.53 (c), For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

According to FCC §27.53 (h)(m), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Test Data

Environmental Conditions

Temperature:	23-25 ℃
Relative Humidity:	50-55 %
ATM Pressure:	100.8- 101.3 kPa

The testing was performed by Fan Yang from 2021-01-09 to 2021-01-30.

EUT operation mode: Transmitting (Worst case)

Test Result: Pass

Test plots refer to the Appendix C.

FCC § 2.1055; § 22.355; § 24.235; §27.54 - FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §22.355, §24.235 & §27.54.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile > 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

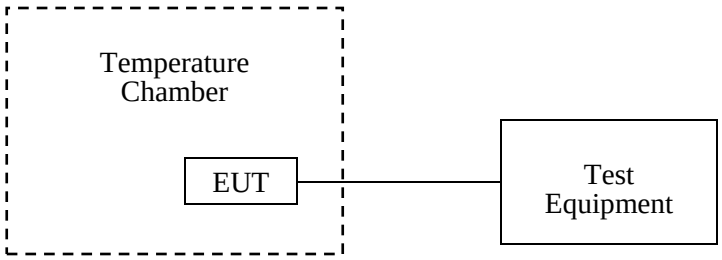
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set 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 the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	20 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Fan Yang on 2021-01-06.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables.

Cellular Band (Part 22H)

WCDMA Mode

Middle Channel, f_o =836.6MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	12	-2	-0.0024	2.5
-20		2	0.0024	2.5
-10		-4	-0.0048	2.5
0		5	0.0060	2.5
10		4	0.0048	2.5
20		5	0.0060	2.5
30		3	0.0036	2.5
40		6	0.0072	2.5
50		4	0.0048	2.5
20	V min.= 10.8	4	0.0048	2.5
	V max.= 13.2	3	0.0036	2.5

PCS Band (Part 24E)

WCDMA Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	12	4	0.0021	pass
-20		4	0.0021	pass
-10		2	0.0011	pass
0		6	0.0032	pass
10		2	0.0011	pass
20		3	0.0016	pass
30		6	0.0032	pass
40		5	0.0027	pass
50		3	0.0016	pass
20	V min.= 10.8	3	0.0016	pass
	V max.= 13.2	4	0.0021	pass

AWS Band (Part 27)

Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	1710.0136	1754.9719	1710	1755
-20		1710.0152	1754.9780	1710	1755
-10		1710.0121	1754.9764	1710	1755
0		1710.0141	1754.9752	1710	1755
10		1710.0134	1754.9735	1710	1755
20		1710.0158	1754.9724	1710	1755
30		1710.0162	1754.9719	1710	1755
40		1710.0149	1754.9787	1710	1755
50		1710.0115	1754.9732	1710	1755
20	V min.= 10.8	1710.0141	1754.9711	1710	1755
	V max.= 13.2	1710.0169	1754.9724	1710	1755

LTE:
QPSK:
Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	12	-5	-0.0027	pass
-20		4	0.0021	pass
-10		8	0.0043	pass
0		9	0.0048	pass
10		4	0.0021	pass
20		3	0.0016	pass
30		-5	-0.0027	pass
40		6	0.0032	pass
50		-6	-0.0032	pass
20	V min.= 10.8	-9	-0.0048	pass
	V max.= 13.2	-5	-0.0027	pass

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	1710.0435	1754.9731	1710	1755
-20		1710.0462	1754.9720	1710	1755
-10		1710.0440	1754.9735	1710	1755
0		1710.0419	1754.9714	1710	1755
10		1710.0422	1754.9752	1710	1755
20		1710.0425	1754.9763	1710	1755
30		1710.0462	1754.9749	1710	1755
40		1710.0409	1754.9733	1710	1755
50		1710.0441	1754.9756	1710	1755
20	V min.= 10.8	1710.0475	1754.9755	1710	1755
	V max.= 13.2	1710.0398	1754.9726	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o =836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	12	-5	-0.0060	2.5
-20		3	0.0036	2.5
-10		-6	-0.0072	2.5
0		2	0.0024	2.5
10		3	0.0036	2.5
20		7	0.0084	2.5
30		3	0.0036	2.5
40		8	0.0096	2.5
50		2	0.0024	2.5
20	V min.= 10.8	7	0.0084	2.5
	V max.= 13.2	3	0.0036	2.5

Band 12:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	699.1132	715.9836	699	716
-20		699.1221	715.9832	699	716
-10		699.1165	715.9850	699	716
0		699.1214	715.9839	699	716
10		699.1132	715.9820	699	716
20		699.1161	715.9862	699	716
30		699.1195	715.9844	699	716
40		699.1132	715.9846	699	716
50		699.1191	715.9846	699	716
20	V min.= 10.8	699.1225	715.9794	699	716
	V max.= 13.2	699.1132	715.9819	699	716

Band 13:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	777.0914	786.9437	777	787
-20		777.0903	786.9457	777	787
-10		777.0968	786.9432	777	787
0		777.0932	786.9445	777	787
10		777.0964	786.9462	777	787
20		777.0940	786.9470	777	787
30		777.0961	786.9468	777	787
40		777.0987	786.9457	777	787
50		777.0936	786.9424	777	787
20	V min.= 10.8	777.0941	786.9419	777	787
	V max.= 13.2	777.0962	786.9404	777	787

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	1710.0658	1779.9425	1710	1780
-20		1710.0641	1779.9451	1710	1780
-10		1710.0656	1779.9462	1710	1780
0		1710.0641	1779.9447	1710	1780
10		1710.0632	1779.9497	1710	1780
20		1710.0665	1779.9464	1710	1780
30		1710.0671	1779.9447	1710	1780
40		1710.0669	1779.9485	1710	1780
50		1710.0655	1779.9446	1710	1780
20	V min.= 10.8	1710.0657	1779.9470	1710	1780
	V max.= 13.2	1710.0660	1779.9463	1710	1780

Band 71:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	663.0784	697.9251	663	698
-20		663.0782	697.9268	663	698
-10		663.0766	697.9264	663	698
0		663.0741	697.9274	663	698
10		663.0769	697.9261	663	698
20		663.0752	697.9275	663	698
30		663.0741	697.9284	663	698
40		663.0774	697.9297	663	698
50		663.0767	697.9266	663	698
20	V min.= 10.8	663.0710	697.9257	663	698
	V max.= 13.2	663.0795	697.9260	663	698

16QAM:

Band 2:

10.0 MHz Middle Channel, f_o =1880MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	12	-9	-0.0048	pass
-20		-7	-0.0037	pass
-10		10	0.0053	pass
0		-8	-0.0043	pass
10		-10	-0.0053	pass
20		-10	-0.0053	pass
30		-7	-0.0037	pass
40		-9	-0.0048	pass
50		6	0.0032	pass
20	V min.= 10.8	6	0.0032	pass
	V max.= 13.2	8	0.0043	pass

Band 4:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	1710.0369	1754.9631	1710	1755
-20		1710.0363	1754.9625	1710	1755
-10		1710.0330	1754.9662	1710	1755
0		1710.0341	1754.9630	1710	1755
10		1710.0341	1754.9625	1710	1755
20		1710.0424	1754.9662	1710	1755
30		1710.0362	1754.9662	1710	1755
40		1710.0361	1754.9665	1710	1755
50		1710.0345	1754.9694	1710	1755
20	V min.= 10.8	1710.0398	1754.9652	1710	1755
	V max.= 13.2	1710.0336	1754.9667	1710	1755

Band 5:

10.0 MHz Middle Channel, f_o =836.5MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	12	-8	-0.0096	2.5
-20		8	0.0096	2.5
-10		-9	-0.0108	2.5
0		9	0.0108	2.5
10		-7	-0.0084	2.5
20		8	0.0096	2.5
30		6	0.0072	2.5
40		-6	-0.0072	2.5
50		-6	-0.0072	2.5
20	V min.= 10.8	6	0.0072	2.5
	V max.= 13.2	-7	-0.0084	2.5

Band 12:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	699.1162	715.9891	699	716
-20		699.1121	715.9865	699	716
-10		699.1130	715.9833	699	716
0		699.1141	715.9842	699	716
10		699.1160	715.9852	699	716
20		699.1162	715.9854	699	716
30		699.1141	715.9862	699	716
40		699.1162	715.9841	699	716
50		699.1266	715.9857	699	716
20	V min.= 10.8	699.1171	715.9869	699	716
	V max.= 13.2	699.1132	715.9887	699	716

Band 13:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	777.0974	786.9243	777	787
-20		777.0965	786.9258	777	787
-10		777.0995	786.9267	777	787
0		777.0921	786.9205	777	787
10		777.0932	786.9213	777	787
20		777.0941	786.9283	777	787
30		777.0941	786.9242	777	787
40		777.0935	786.9226	777	787
50		777.0963	786.9204	777	787
20	V min.= 10.8	777.0961	786.9221	777	787
	V max.= 13.2	777.0987	786.9284	777	787

Band 66:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	1710.0582	1779.9580	1710	1780
-20		1710.0569	1779.9574	1710	1780
-10		1710.0574	1779.9955	1710	1780
0		1710.0593	1779.9587	1710	1780
10		1710.0531	1779.9570	1710	1780
20		1710.0567	1779.9569	1710	1780
30		1710.0575	1779.9551	1710	1780
40		1710.0570	1779.9581	1710	1780
50		1710.0568	1779.9559	1710	1780
20	V min.= 10.8	1710.0574	1779.9564	1710	1780
	V max.= 13.2	1710.0557	1779.9551	1710	1780

Band 71:

10 MHz Bandwidth					
Temperature (℃)	**Power Supplied (V_{DC})**	**F_L (MHz)**	**F_H (MHz)**	**F_L Limit (MHz)**	**F_H Limit (MHz)**
-30	12	663.0865	697.9256	663	698
-20		663.0860	697.9260	663	698
-10		663.0848	697.9259	663	698
0		663.0861	697.9261	663	698
10		663.0892	697.9241	663	698
20		663.0836	697.9257	663	698
30		663.0857	697.9239	663	698
40		663.0891	697.9228	663	698
50		663.0864	697.9249	663	698
20	V min.= 10.8	663.0860	697.9267	663	698
	V max.= 13.2	663.0871	697.9284	663	698

******* END OF REPORT *******