

# FCC REPORT

**FCC ID**..... : 2AIZZKY-T600PDA

**Applicant's name**..... : Shenzhen Kang Ying Technology Co., Ltd.

**Address**..... : Units 608, Saiba Electronic tower, No.6,Langshan 2Rd., Hi-Tech Industrial Park North, Nanshan, Shenzhen China

**Manufacturer**..... : Shenzhen Kang Ying Technology Co., Ltd.

**Address**..... : Units 608, Saiba Electronic tower, No.6,Langshan 2Rd., Hi-Tech Industrial Park North, Nanshan, Shenzhen China

**Test item description** ..... : mobile communication terminal

**Trade Mark** ..... : Konying

**Model/Type reference**..... : KY-T600PDA

**List Model** ..... : N/A

**Standard** ..... : **FCC Part 15.407**

**Date of receipt of test sample**..... : Jun. 15 2016

**Date of testing**..... : Jun. 16 2016 ~ Jun. 30 2016

**Date of issue**..... : Jun. 30 2016

**Result**..... : **Pass**

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**Testing Laboratory Name** ..... : **Dongguan Yaxu (AiT) Technology Limited**

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## 1. TEST STANDARDS AND TEST DESCRIPTION

### 1.1. Test Standards

The tests were performed according to following standards:

[FCC Part 15, Subpart E \(Section 15.407\)](#)

[ANSI C63.10](#): American National Standard for Testing Unlicensed Wireless Devices

### 1.2. Test Description

FCC Part 15, Subpart E (Section 15.407)		
15.407(b)(5)	AC Power Conducted Emission	PASS
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS
15.407(a/1/2/3)	Peak Transmit Power	PASS
15.407(a/1/2/3)	Peak Power Spectral Density	PASS
15.407(g)	Frequency Stability	PASS

## 2. SUMMARY

### 2.1. Product Description

Name of EUT	mobile communication terminal
Trade Mark:	Konying
Model No.:	KY-T600PDA
List Model:	N/A
Power supply:	DC 3.80V
Adapter information:	M/N:MX520U,Input:100-240V, 50/60Hz, 0.35A, Output:DC 5V, 2A
<b>WIFI</b>	
Supported type:	802.11a/b/g/n
Modulation:	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Operation frequency:	802.11b/802.11g/802.11n(H20): 2412MHz~2462MHz 802.11a: 5.150 ~ 5.250GHz and 5.725 ~ 5.850GHz
Channel number:	802.11b/802.11g/802.11n(H20): 11 802.11a: 20MHz for Normal mode
Channel separation:	802.11b/802.11g/802.11n(H20): 5MHz 802.11a: 20MHz for Normal mode
Antenna type:	Internal Antenna
Antenna gain:	0 dBi

## 2.2. EUT operation mode

The EUT has been tested under typical operating condition. The Applicant provides command to control the EUT for staying in continuous transmitting and receiving mode for testing.

Frequency band	5150 - 5250 MHz	5250 -5350 MHz	5470-5725 MHz	5725 - 5825
Frequency (ch A)	5180 MHz	--	--	5745 MHz
Frequency (ch B)	5220 MHz	--	--	5765 MHz
Frequency (ch C)	5240 MHz	--	--	5802 MHz
Number of channels	4	--	--	4

## 2.3. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

○ Power Cable	Length (m) :	/
	Shield :	/
	Detachable :	/
○ Multimeter	Manufacturer :	/
	Model No. :	/

## 2.4. Test mode applicability and tested channel detail

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
--	x	x	x	x	--
Where PLC: Power Line Conducted Emission					
RE≥1G: Radiated Emission above 1GHz			RE<1G RE: Radiated Emission below 1GHz		
			APCM: Antenna Port Conducted Measurement		

### Power Line Conducted Emission Test:

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ Axis and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Axis
802.11a	1 to 8	3	OFDM	BPSK	6	Z

### Radiated Emission Test (Below 1 GHz):

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ Axis and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Mode	Available	Tested	Modulation	Modulation	Data Rate	Axis
------	-----------	--------	------------	------------	-----------	------



	Channel	Channel	Technology	Type	(Mbps)	
802.11a	1 to 8	3	OFDM	BPSK	6	Z

#### Radiated Emission Test (Above 1 GHz):

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ Axis and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Axis
802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6	Z

#### Bandedge Measurement:

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ Axis and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Axis
802.11a	1 to 8	1, 8	OFDM	BPSK	6	Z

#### Antenna Port Conducted Measurement:

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ Axis and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Axis
802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6	Z

### 3. TEST ENVIRONMENT

#### 3.1. Address of the test laboratory

**FCC- Registration No: 248337**

DongGuan Yaxu(AiT) Technology Limited  
No. 22,JinQianLing Street 3, JiTiGang Village, Huang-Jiang Town, DongGuan,  
Guangdong, 523757 China.

The sites are constructed in conformance with the requirements  
of ANSI C63.7, ANSI C63.10:2013 and CISPR Publication 22.

#### 3.2. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

<b>Temperature</b>	Normal Temperature:	25°C
	High Temperature:	55°C
	Low Temperature:	-20°C
<b>Voltage</b>	Normal Voltage	DC 3.80V
	High Voltage	DC 4.20V
	Low Voltage	DC 3.30V
<b>Other</b>	lative Humidity	55 %
	Air Pressure	989 hPa

#### 3.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Asia Test Technology Co.,Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)
Radiated spurious emission 9KHz-12.75 GHz	2.20 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emissio 1~18GHz	3.54 dB	(1)
Radiated Emissio 18-40GHz	2.86 dB	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

#### 3.4. Equipments Used during the Test

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	ADVANTEST	R3182	150900201	2015.06.29	2016.06.28
2	EMI Measuring Receiver	R&S	ESR	101660	2015.06.29	2016.06.28
3	Low Noise Pre Amplifier	Tsj	MLA-10K01-B01-27	1205323	2015.06.29	2016.06.28
4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2015.06.29	2016.06.28
5	Low Noise Pre Amplifier	Tsj	MLA-0700-A04-44	1145227	2015.06.29	2016.06.28
6	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2015.06.29	2016.06.28
7	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	452	2015.06.29	2016.06.28
8	SHF-EHF Horn	SCHWARZBECK	BBHA9170	BBHA9170367	2015.06.29	2016.06.28
9	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2015.06.29	2016.06.28
10	EMI Test Receiver	R&S	ESCI	100124	2015.06.29	2016.06.28
11	LISN	Kyoritsu	KNW-242	8-837-4	2015.06.29	2016.06.28
12	LISN	Kyoritsu	KNW-407	8-1789-3	2015.06.29	2016.06.28
13	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2015.06.29	2016.06.28
14	Loop Antenna	ARA	PLA-1030/B	1029	2015.06.29	2016.06.28
15	Radiated Cable 1# (30MHz-1GHz)	FUJIKURA	5D-2W	01	2015.06.29	2016.06.28
16	Radiated Cable 2# (1GHz -25GHz)	FUJIKURA	10D2W	02	2015.06.29	2016.06.28
17	Conducted Cable 1#(9KHz-30MHz)	FUJIKURA	1D-2W	01	2015.06.29	2016.06.28
18	SMA Antenna connector	Dosin	Dosin-SMA	N/A	N/A	N/A
19	Power Meter	Anritsu	ML2495A	N/A	2015.06.29	2016.06.28
20	Power sensor	Anritsu	MA2411B	N/A	2015.06.29	2016.06.28
<p>Note: The SMA antenna connector is soldered on the PCB board in order to perform conducted tests and this SMA antenna connector is listed in the equipment list.</p> <p>Low Noise Pre Amplifier :</p> <p>MLA-10K01-B01-27: gain :27db, frequency range:9kHz~1000MHz</p> <p>MLA-0120-A02-34: gain :34db, frequency range:1GHz~26.5GHz</p> <p>MLA-0700-A04-44: gain :44db, frequency range:18GHz~40GHz</p>						

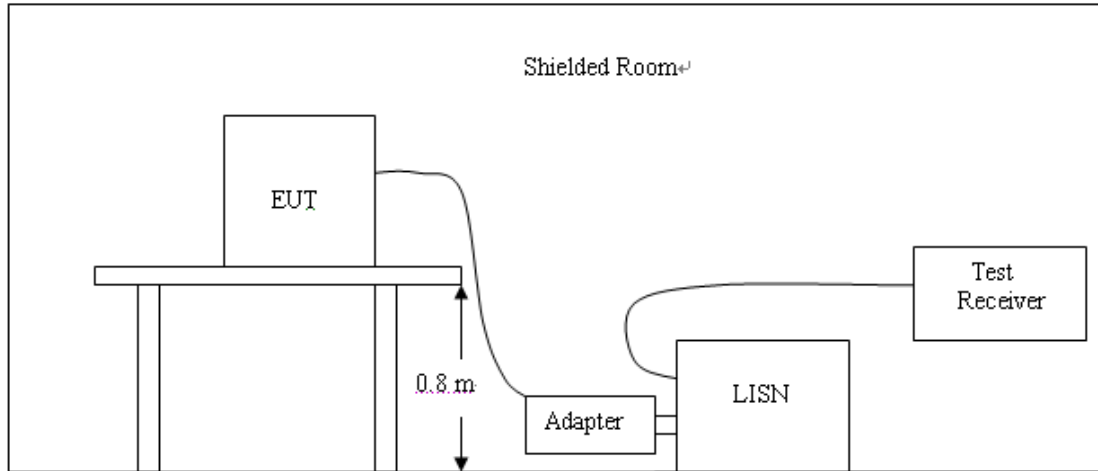
The Cal.Interval was one year



## 4. TEST CONDITIONS AND RESULTS

### 4.1. AC Power Conducted Emission

#### TEST CONFIGURATION



#### TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10:2013.
2. Support equipment, if needed, was placed as per ANSI C63.10:2013
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2013
4. The EUT received DC3.80V power from the adapter, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

#### AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

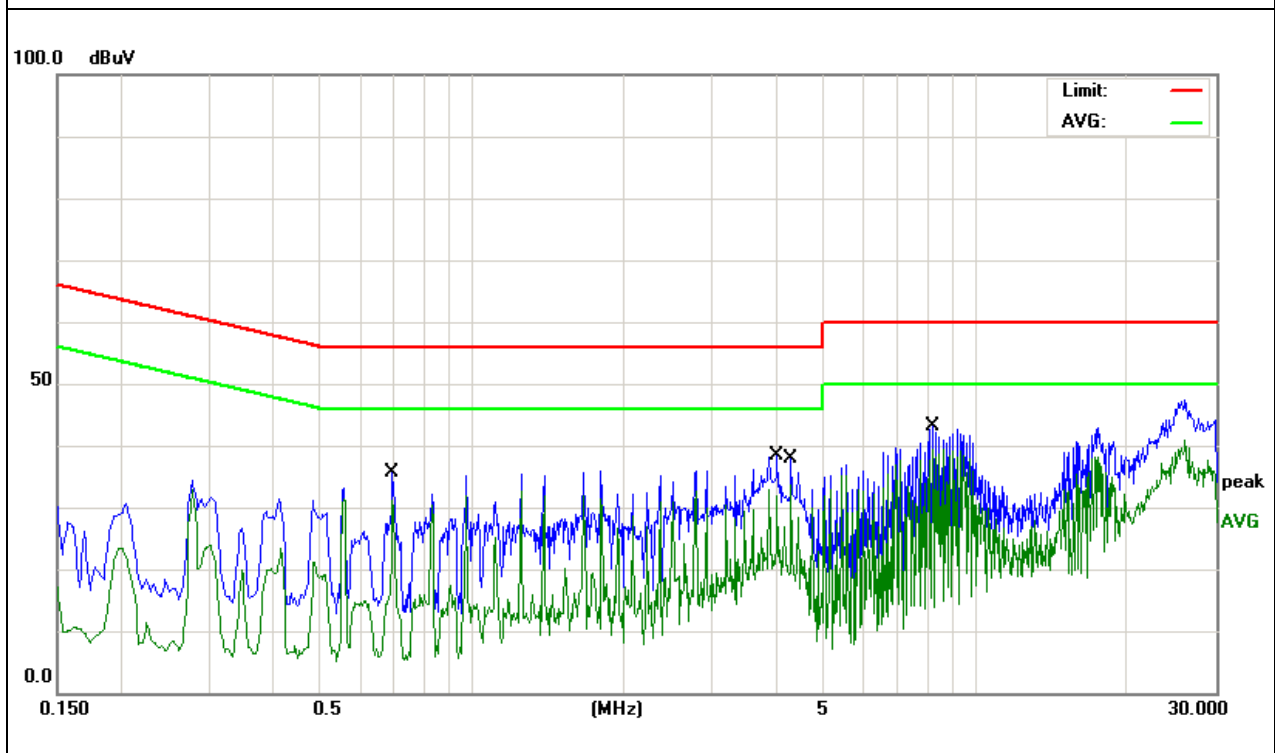
\* Decreasing linearly with the logarithm of the frequency

### Phase :L

No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.6940	25.44	10.27	35.71	56.00	-20.29	QP	
2	0.6940	20.77	10.27	31.04	46.00	-14.96	AVG	
3	4.0300	28.16	10.17	38.33	56.00	-17.67	QP	
4	4.3100	23.47	10.18	33.65	46.00	-12.35	AVG	
5	8.2020	32.90	10.24	43.14	60.00	-16.86	QP	
6 *	8.2020	29.16	10.24	39.40	50.00	-10.60	AVG	

Remark:

Factor = Insertion Loss + Cable Loss.

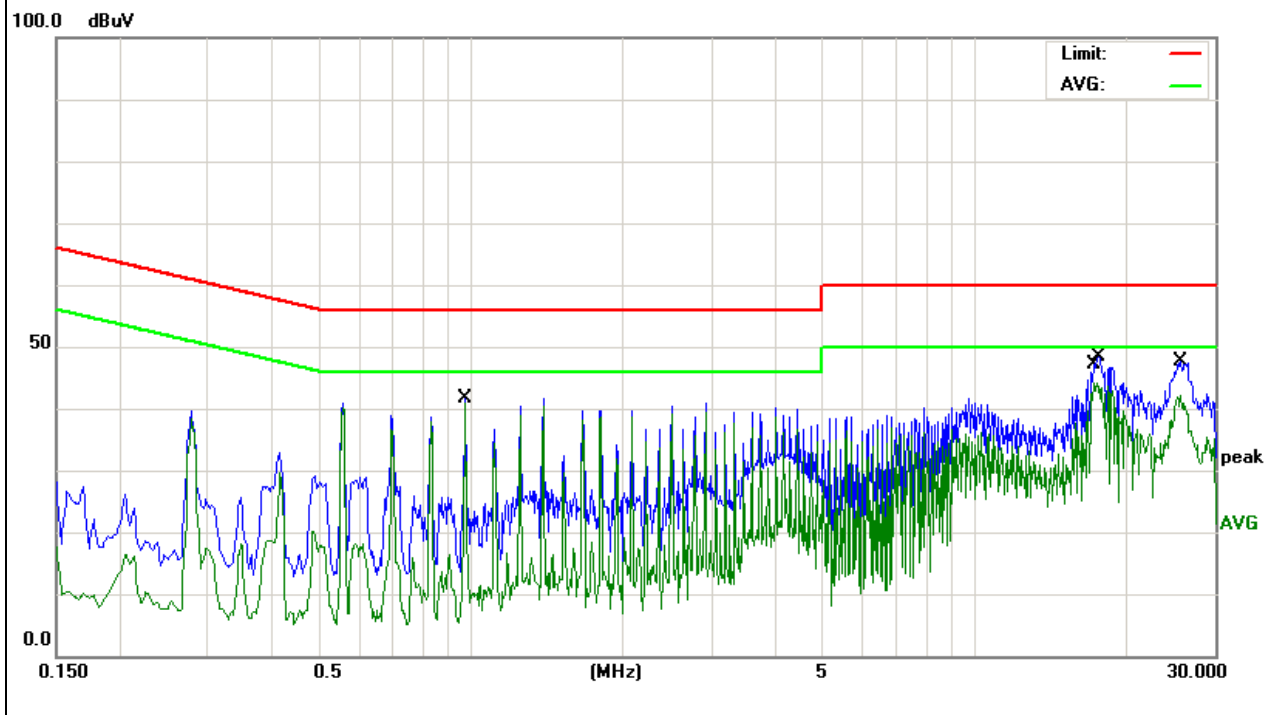


### Phase :N

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.9740	30.61	10.18	40.79	56.00	-15.21	QP	
2	*	0.9740	30.61	10.18	40.79	46.00	-5.21	AVG	
3		17.2420	33.79	10.42	44.21	50.00	-5.79	AVG	
4		17.6580	38.02	10.43	48.45	60.00	-11.55	QP	
5		25.5940	37.06	10.60	47.66	60.00	-12.34	QP	
6		25.5940	31.60	10.60	42.20	50.00	-7.80	AVG	

Remark:

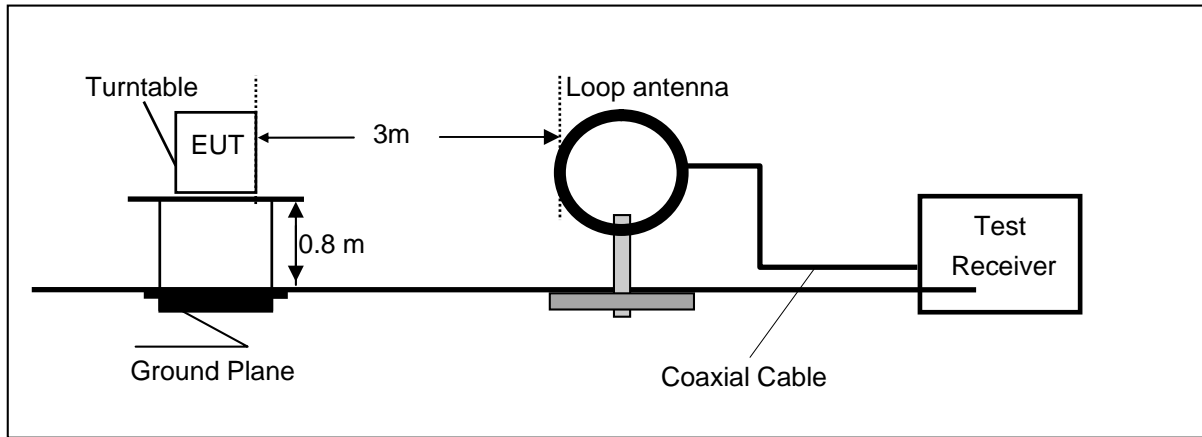
Factor = Insertion Loss + Cable Loss.



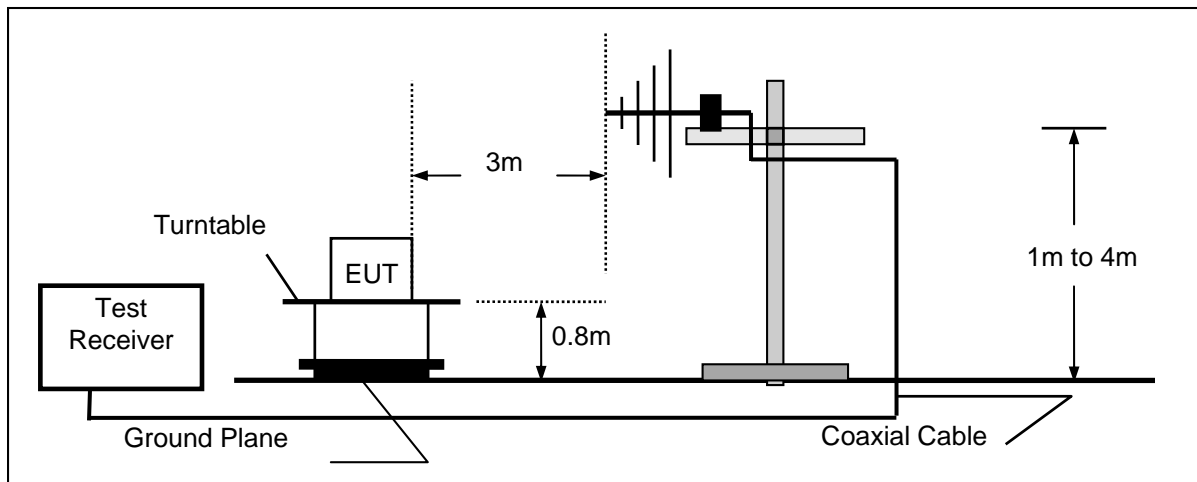
## 4.2. Radiated Emission

### TEST CONFIGURATION

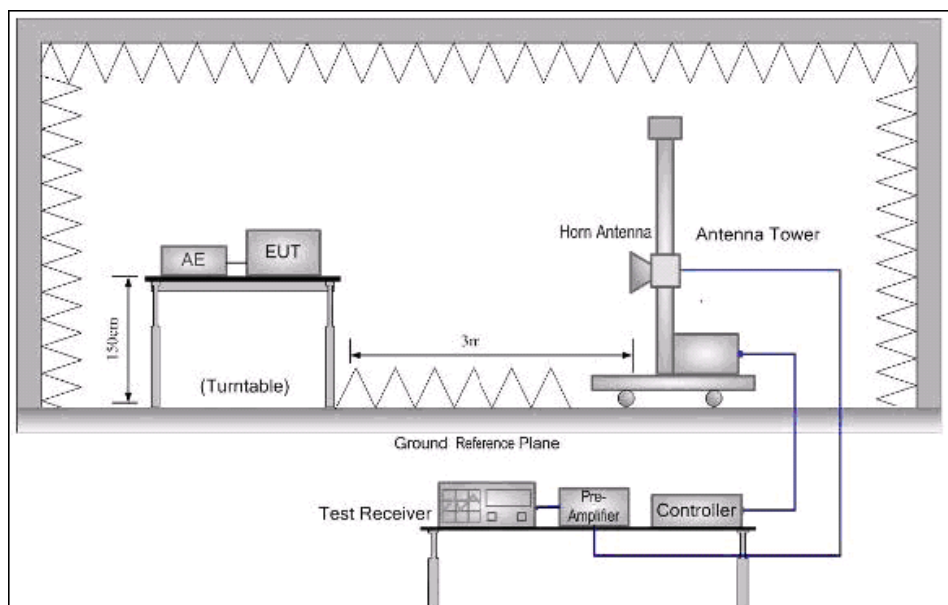
Frequency range 9KHz – 30MHz



Frequency range 30MHz – 1000MHz



Frequency range above 1GHz-25GHz



1. The EUT was placed on a turn table which is 0.8m(1.5m above 1G) above ground plane.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.

Note: For radiated emission test above 1GHz:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis.

The worst case emissions were reported.

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

### **Field Strength Calculation**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

### **RADIATION LIMIT**

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.247(d), in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of desired power.

The frequency spectrum above 1 GHz for Transmitter was investigated. All emission not reported are much lower than the prescribed limits. Set the RBW=1MHz, VBW=3MHz for Peak Detector while the RBW=1MHz, VBW=10Hz for Average Detector, Readings are both peak and average values.

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	300	$20\log(2400/F(KHz))+80$	$2400/F(KHz)$
0.49-1.705	30	$20\log(24000/F(KHz))+40$	$24000/F(KHz)$
1.705-30	30	$20\log(30)+40$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

### **LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS**

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

### **NOTE:**

1. For frequencies 10MHz or greater above or below the band edge.



2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field Strength

$$E = \frac{1000000\sqrt{30P}}{\beta} \mu\text{V/m, where P is the eirp (Watts)}$$

### **TEST RESULTS**

Remark:

1. The radiated measurement are performed the each test mode and channel (low/mid/high), the datum recorded below is the worst case for all the test mode and channel.
2. ULTRA-BROADBAND ANTENNA for the radiation emission test below 1G.
3. HORN ANTENNA for the radiation emission test above 1G.

**For 9KHz to 30MHz**

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

**Note:**

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =  $40 \log (\text{specific distance/test distance})(\text{dB})$ ;

Limit line = specific limits(dBuV) + distance extrapolation factor.

**For 30MHz to 1000MHz**

**Polarization :H**

Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height
MHz	dBuV	dB	dBuV	dBuV	dB	Detector
65.1145	43.24	-17.44	25.8	40	-14.2	QP
104.1701	46.85	-15.63	31.22	43.5	-12.28	QP
182.5592	35.27	-10.55	24.72	43.5	-18.78	QP
255.623	44.78	-10.95	33.83	46	-12.17	QP
434.065	42.15	-6.61	35.54	46	-10.46	QP
701.7609	38.75	0.32	39.07	46	-6.93	QP

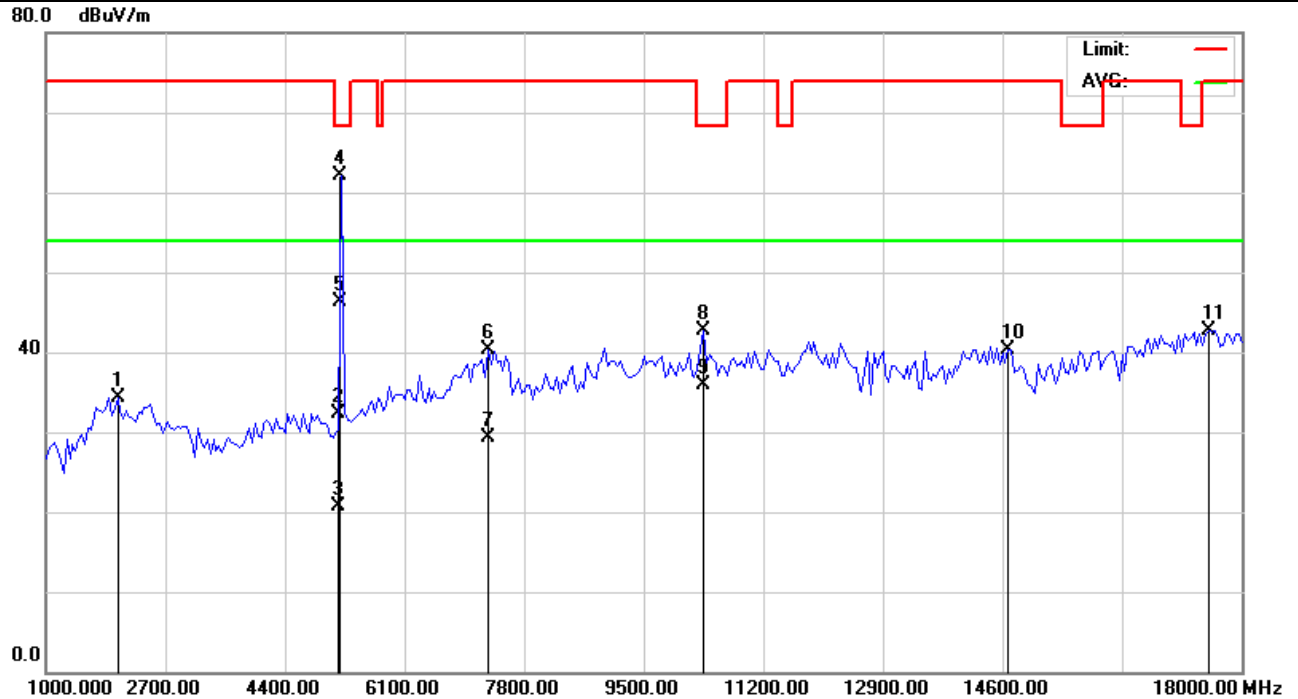
**Polarization :V**

Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height
MHz	dBuV	dB	dBuV	dBuV	dB	Detector
41.2765	45.25	-16.91	28.34	40	-11.66	QP
71.5806	46.21	-19.06	27.15	40	-12.85	QP
114.9169	40.18	-14.15	26.03	43.5	-17.47	QP
245.09	37.52	-11.51	26.01	46	-19.99	QP
441.7426	40.92	-6.71	34.21	46	-11.79	QP
687.1507	41.15	-0.56	40.59	46	-5.41	QP

**Remark:**

1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit

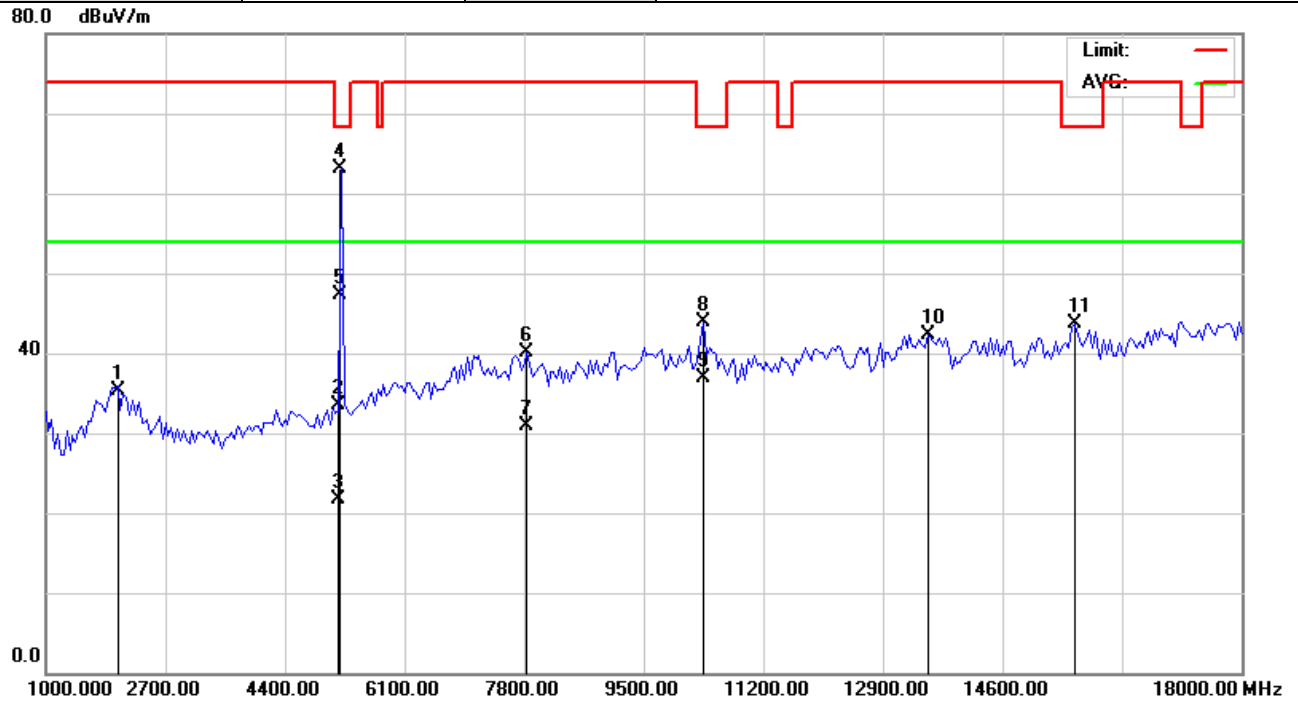
Test mode:	TX 5180 MHz	Polarization:	Horizontal
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
2020.00	43.33	-9.05	34.28	2.17	23.13	34.35	74	-39.72	peak	H
5150.00	36.7	-4.3	32.4	6.57	23.74	34.61	68.3	-35.9	peak	H
5150.00	25.03	-4.3	20.73	6.57	23.74	34.61	54	-33.27	AVG	H
5180.00	66.33	-4.25	62.08	6.74	23.58	34.57	68.3	-6.22	peak	H
5180.00	50.54	-4.25	46.29	6.74	23.58	34.57	54	-7.71	AVG	H
7290.00	40.66	-0.38	40.28	6.89	27.42	34.69	74	-33.72	peak	H
7290.00	29.68	-0.38	29.3	6.89	27.42	34.69	54	-24.7	AVG	H
10360.00	36.1	6.68	42.78	9.83	32.06	35.21	68.3	-25.52	peak	H
10360.00	29.22	6.68	35.9	9.83	32.06	35.21	54	-18.1	AVG	H
14685.00	24.83	15.55	40.38	10.27	40.7	35.42	74	-33.62	peak	H



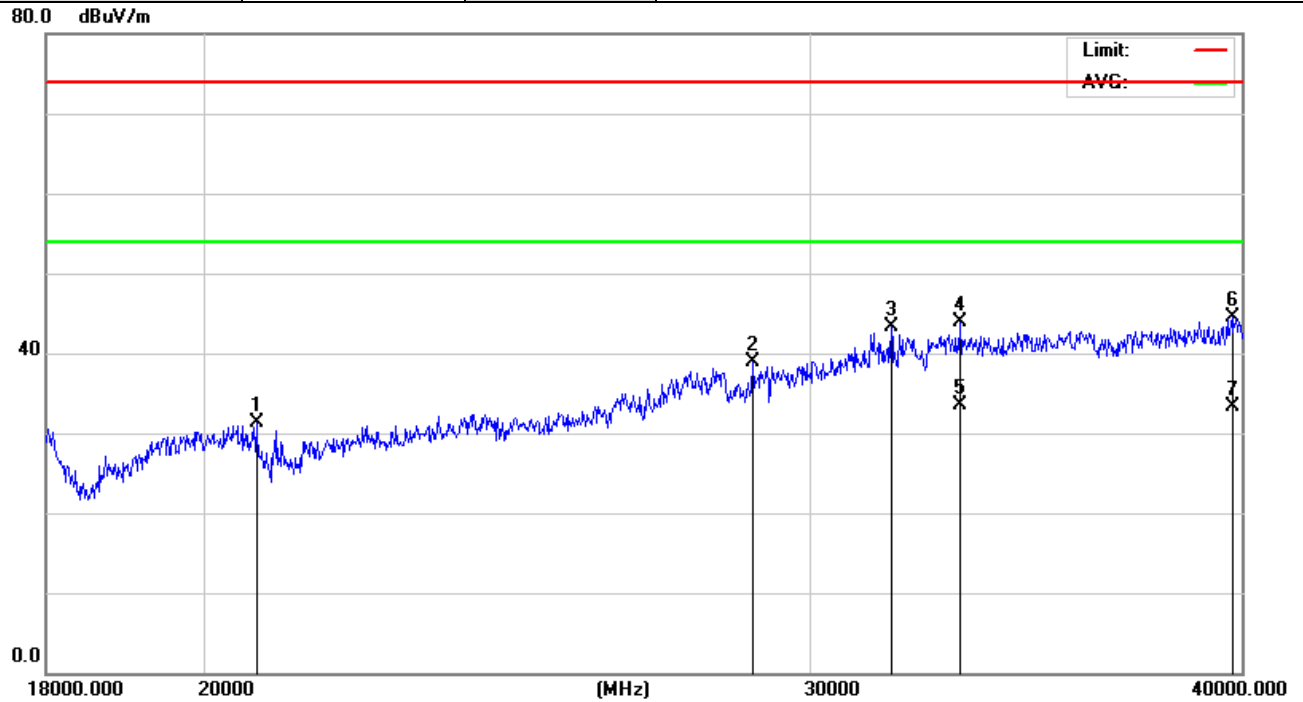
Test mode:	TX 5180 MHz	Polarization:	Vertical
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
2020	44.39	-9.05	35.34	2.17	23.1	34.32	74	-38.66	peak	V
5150	37.76	-4.3	33.46	6.57	23.74	34.61	68.3	-34.84	peak	V
5150	26.09	-4.3	21.79	6.57	23.74	34.61	54	-32.21	AVG	V
5180	67.39	-4.25	63.14	6.74	23.58	34.57	68.3	-5.16	peak	V
5180	51.6	-4.25	47.35	6.74	23.58	34.57	54	-6.65	AVG	V
7842.5	39.53	0.57	40.1	6.93	27.99	34.35	74	-33.9	peak	V
7842.5	30.38	0.57	30.95	6.93	27.99	34.35	54	-23.05	AVG	V
10360	37.16	6.68	43.84	9.83	32.06	35.21	68.3	-24.46	peak	V
10360	30.28	6.68	36.96	9.83	32.06	35.21	54	-17.04	AVG	V
13537.5	27.43	14.87	42.3	10.12	40	35.25	74	-31.7	peak	V
15620	26.5	17.2	43.7	11.45	41.28	35.53	68.3	-24.6	peak	V

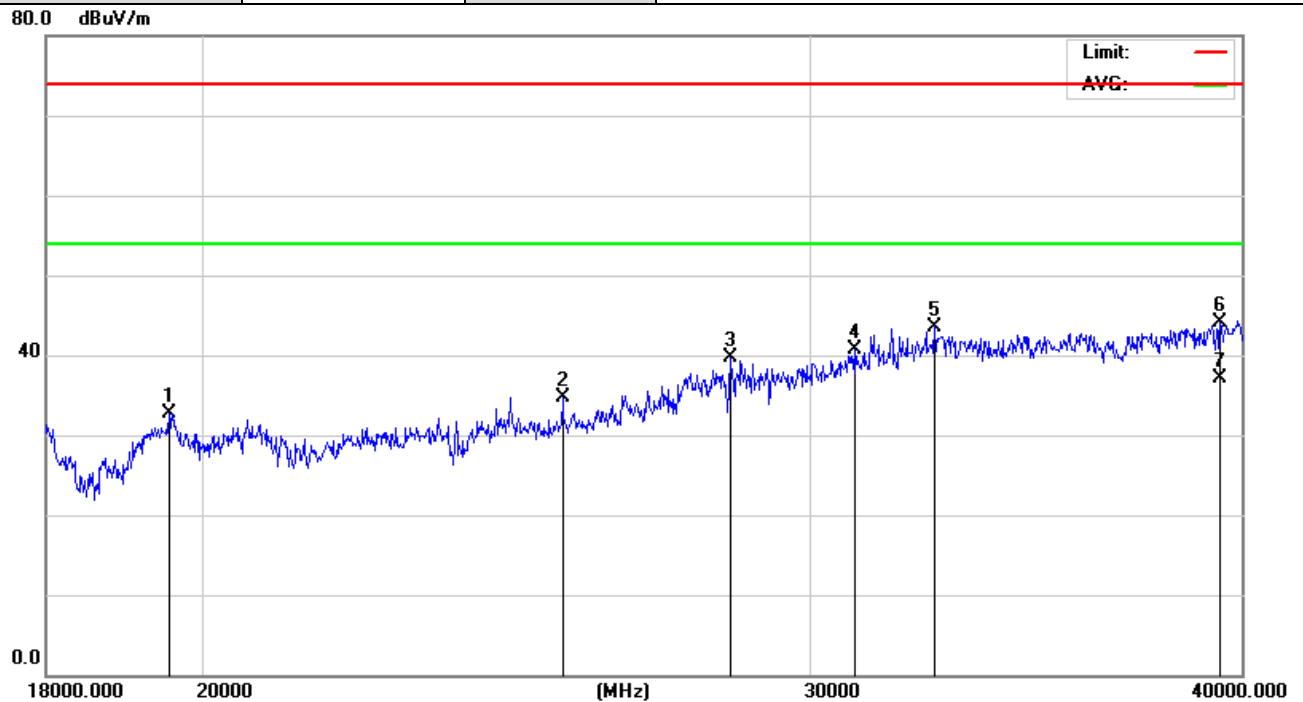
NOTE: No detected above 18GHz

Test mode:	TX 5180 MHz	Polarization:	Horizontal
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



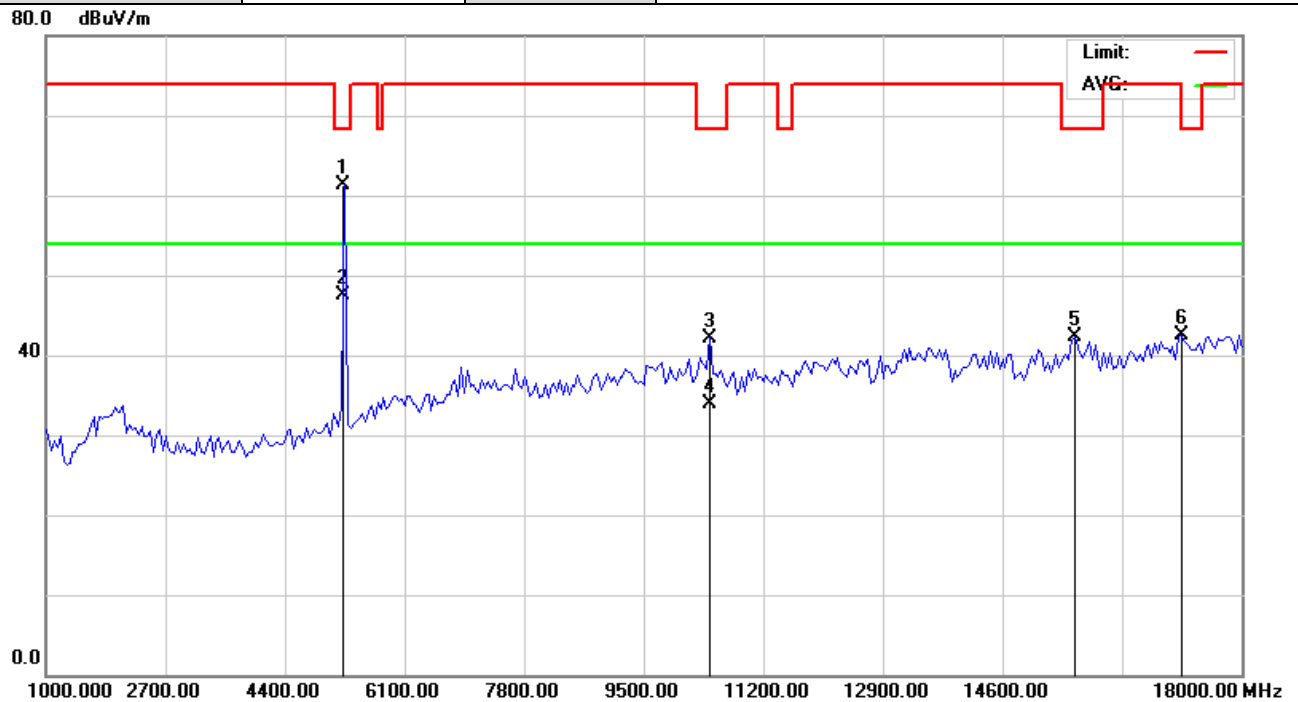
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20716.06	38.87	-7.47	31.4	9.72	27.15	44.34	74	-42.6	peak	H
28855.19	35.53	3.37	38.9	10.37	37.35	44.35	74	-35.1	peak	H
31655.62	35.01	8.39	43.4	13.57	39.55	44.73	74	-30.6	AVG	H
33156.21	30.7	13.2	43.9	13.57	44.49	44.86	74	-30.1	peak	H
33156.21	20.38	13.2	33.58	13.68	44.86	45.34	54	-20.42	AVG	H
39777.04	23.77	20.73	44.5	16.39	49.52	45.18	74	-29.5	peak	H
39777.04	12.62	20.73	33.35	16.39	50.02	45.68	54	-20.65	AVG	H

Test mode:	TX 5180 MHz	Polarization:	Vertical
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



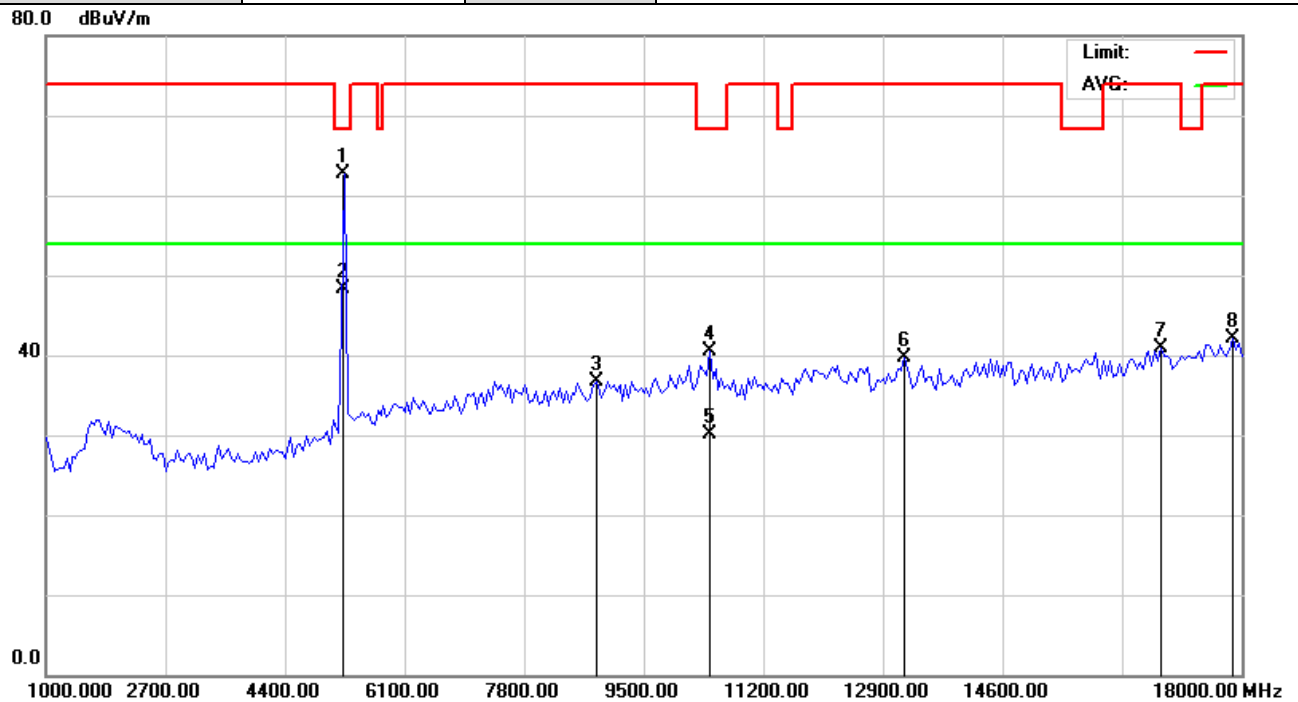
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
19543.02	41.97	-9.27	32.7	9.64	25.51	44.42	74	-41.3	peak	V
25414.63	37.64	-2.84	34.8	10.28	31.26	44.38	74	-39.2	peak	V
28420.71	37.38	2.32	39.7	10.45	36.54	44.67	74	-34.3	peak	V
30881.68	34.22	6.58	40.8	13.47	38.23	45.12	74	-33.2	peak	V
32578.84	31.47	12.13	43.6	15.33	42.53	45.73	74	-30.4	peak	V
39429.19	23.79	20.31	44.1	16.74	49.23	45.66	74	-29.9	peak	V
39429.18	16.75	20.31	37.06	16.74	49.23	45.66	54	-16.94	AVG	V

Test mode:	TX 5220 MHz	Polarization:	Horizontal
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



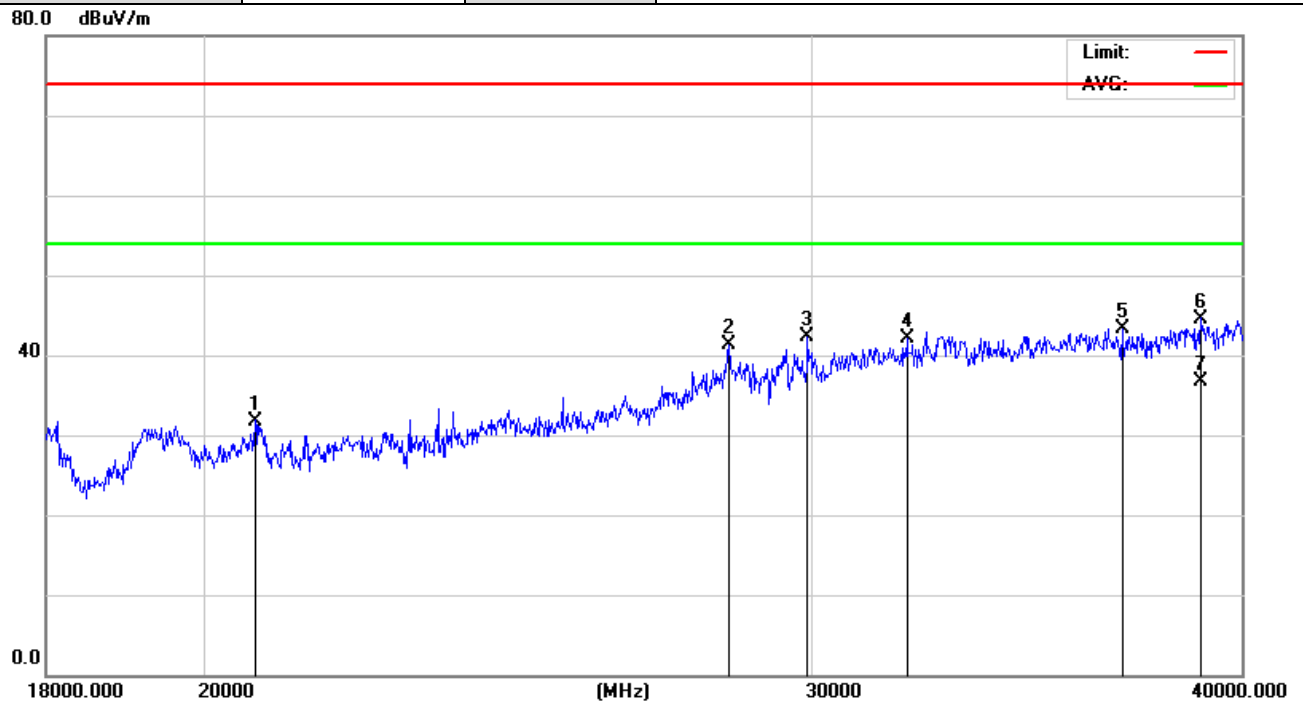
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5220	65.57	-4.17	61.4	6.89	23.09	34.15	68.3	-6.9	peak	H
5220	51.62	-4.17	47.45	6.89	23.58	34.64	54	-6.55	AVG	H
10440	35.28	6.92	42.2	8.47	33.09	34.64	68.3	-26.1	peak	H
10440	26.98	6.92	33.9	8.47	33.13	34.68	54	-20.1	AVG	H
15620	25.15	17.2	42.35	12.64	39.24	34.68	68.3	-25.95	peak	H
17150	22.19	20.36	42.55	12.64	43.27	35.55	74	-31.45	peak	H

Test mode:	TX 5220 MHz	Polarization:	Vertical
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



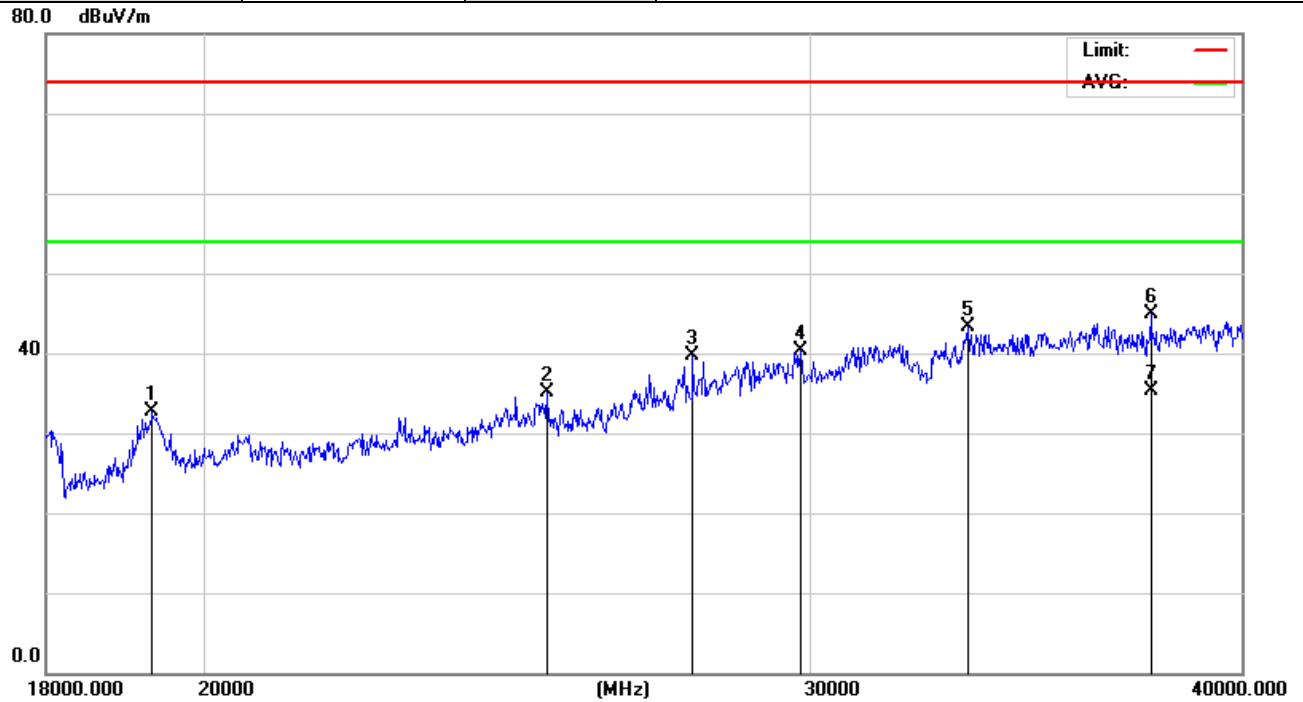
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5220	66.87	-4.17	62.7	6.89	23.09	34.15	68.3	-5.6	peak	V
5220	52.47	-4.17	48.3	6.89	23.58	34.64	54	-5.7	AVG	V
8820	34.12	2.66	36.78	8.56	28.81	34.71	74	-37.22	peak	V
10440	33.58	6.92	40.5	9.14	32.46	34.68	68.3	-27.8	peak	V
10440	23.18	6.92	30.1	9.14	32.46	34.68	54	-23.9	AVG	V
13197.5	25.24	14.54	39.78	10.65	39.44	35.55	74	-34.22	peak	V
16852.5	20.68	20.14	40.82	11.66	43.17	34.69	74	-33.18	peak	V
17872.5	21.22	20.88	42.1	12.47	43.62	35.21	74	-31.9	peak	V

Test mode:	TX 5220 MHz	Polarization:	Horizontal
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



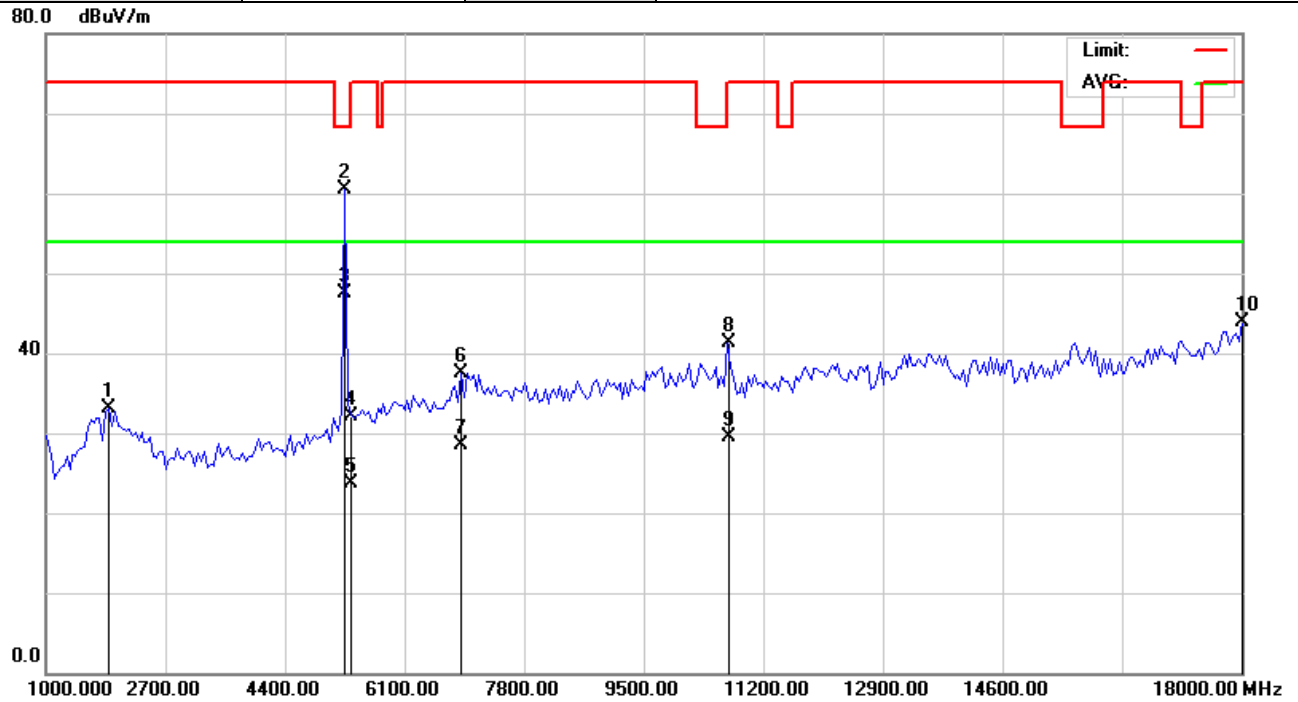
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20699.522	39.3	-7.5	31.8	9.48	27.28	44.26	74	-42.2	peak	H
28398.02	39.13	2.27	41.4	10.34	36.51	44.58	74	-32.6	peak	H
29934.78	37.72	4.58	42.3	10.34	38.66	44.42	74	-31.7	peak	H
31985.96	32.92	9.18	42.1	14.95	38.61	44.38	74	-31.9	peak	H
36930.16	25.84	17.56	43.4	14.95	48.28	45.67	74	-30.6	peak	H
38928.63	24.86	19.74	44.6	16.12	49.34	45.72	74	-29.4	peak	H
38928.63	16.88	19.74	36.62	16.12	49.34	45.72	54	-17.38	AVG	H

Test mode:	TX 5220 MHz	Polarization:	Vertical
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
19325.76	42.12	-9.32	32.8	9.64	25.66	44.62	74	-41.2	peak	V
25152.228	38.2	-3.1	35.1	10.28	31.37	44.75	74	-38.9	peak	V
27725.829	38.51	1.19	39.7	10.45	36.01	45.27	74	-34.3	peak	V
29791.708	35.85	4.45	40.3	13.47	36.57	45.59	74	-33.7	peak	V
33315.448	29.91	13.39	43.3	15.33	43.73	45.67	74	-30.7	peak	V
37644.72	26.5	18.5	45	16.74	46.48	44.72	74	-29	peak	V
37644.72	16.85	18.5	35.35	16.74	47.45	45.69	54	-18.65	AVG	V

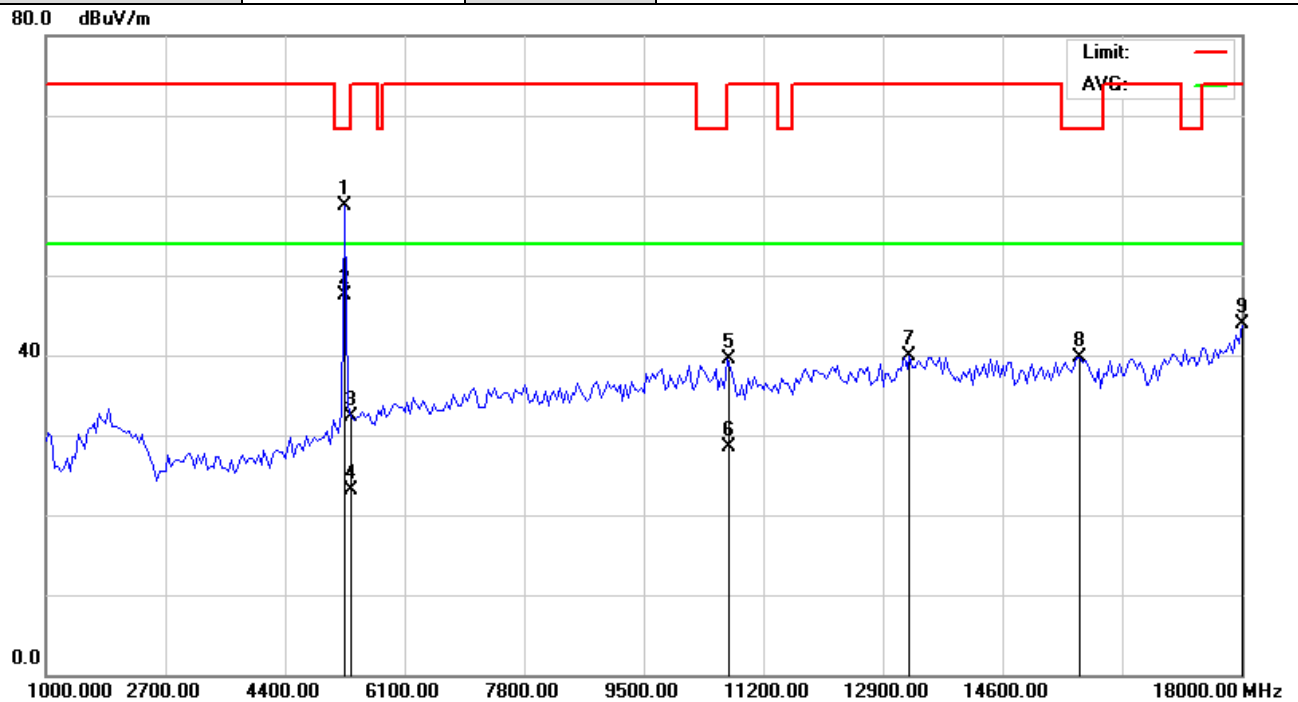
Test mode:	TX 5240 MHz	Polarization:	Horizontal
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
1892.5	42.61	-9.51	33.1	2.45	22.19	34.15	74	-40.9	peak	H
5240	64.61	-4.11	60.5	7.12	23.41	34.64	68.3	-7.8	peak	H
5240	51.68	-4.11	47.57	7.12	23.41	34.64	54	-6.43	AVG	H
5350	36	-3.82	32.18	7.26	23.6	34.68	68.3	-36.12	peak	H
5350	27.51	-3.82	23.69	7.26	23.6	34.68	54	-30.31	AVG	H
6907.5	38.79	-1.26	37.53	9.88	24.41	35.55	74	-36.47	peak	H
6907.5	29.72	-1.26	28.46	9.88	24.41	35.55	54	-25.54	AVG	H
10720	33.66	7.74	41.4	10.37	32.58	35.21	74	-32.6	peak	H
10720	21.71	7.74	29.45	10.37	32.58	35.21	54	-24.55	AVG	H
18000	22.95	21.05	44	12.58	43.89	35.42	74	-30	peak	H

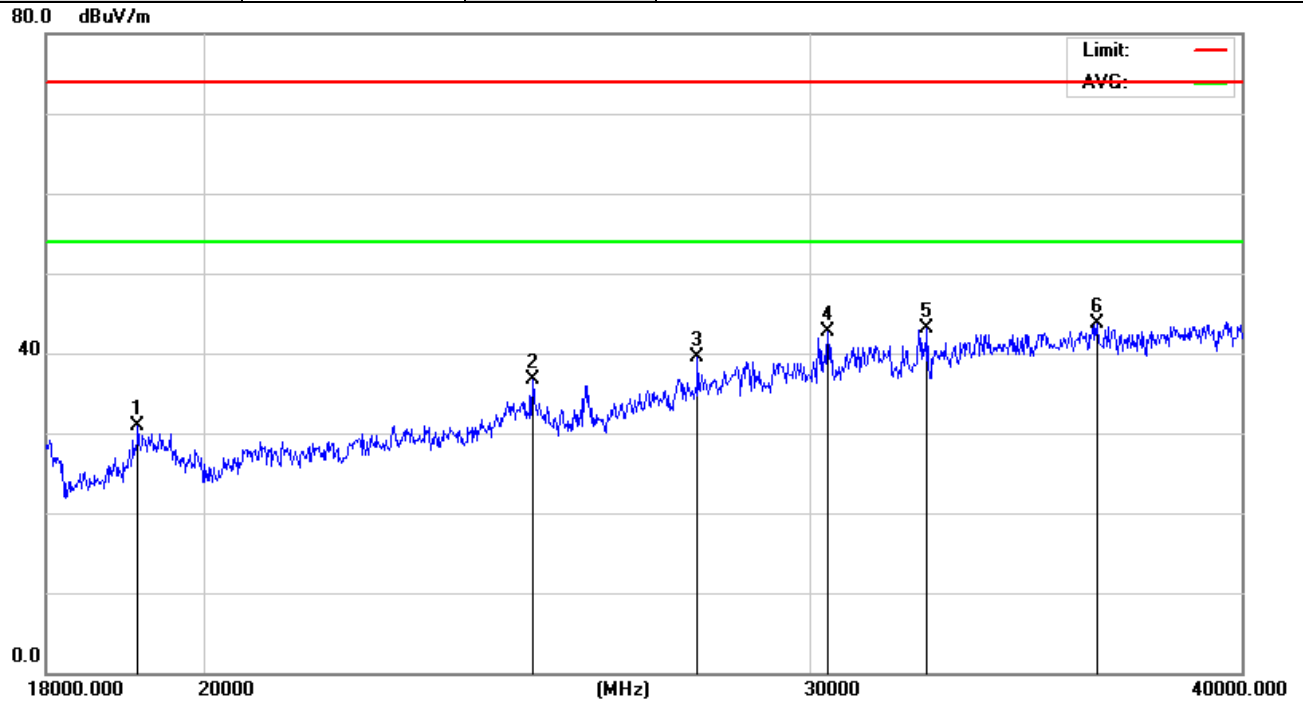


Test mode:	TX 5240 MHz	Polarization:	Vertical
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



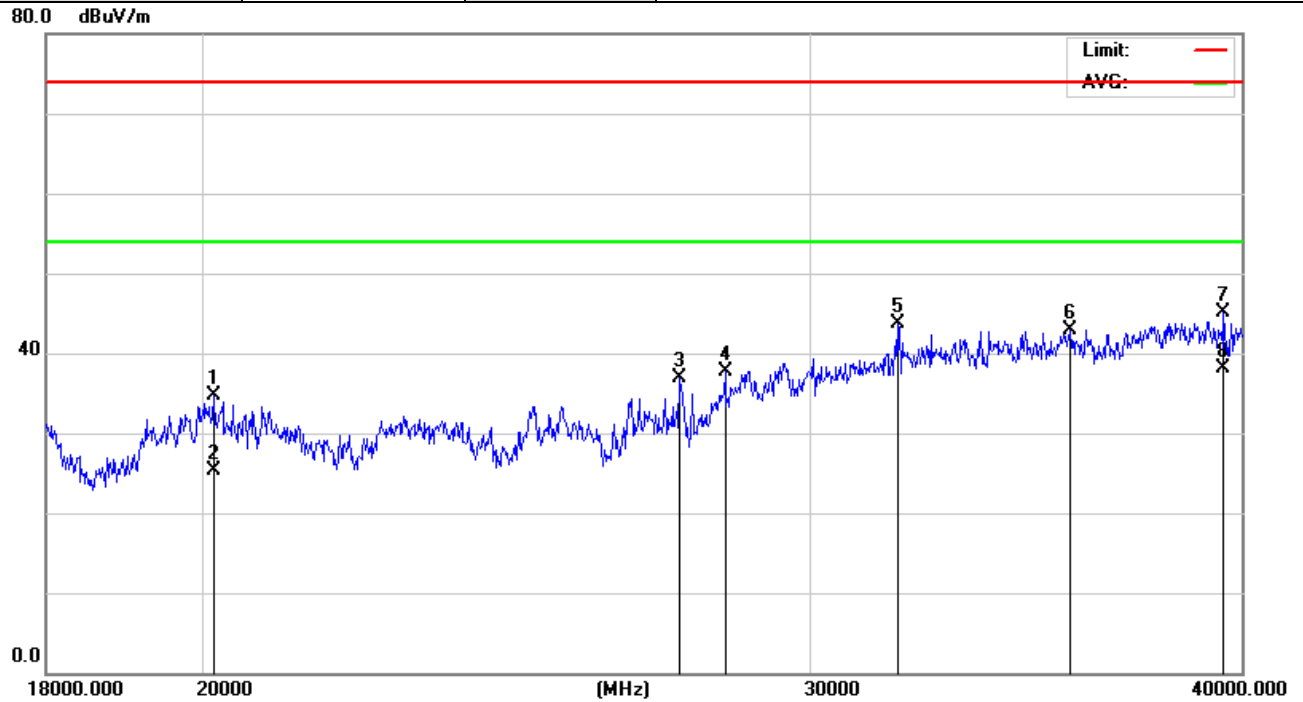
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5240	62.81	-4.11	58.7	7.12	23.41	34.64	68.3	-9.6	peak	V
5240	51.68	-4.11	47.57	7.12	23.41	34.64	54	-6.43	AVG	V
5335	36.26	-3.86	32.4	7.26	23.56	34.68	68.3	-35.9	peak	V
5350	26.89	-3.82	23.07	7.26	23.6	34.68	54	-30.93	AVG	V
10720	31.76	7.74	39.5	10.37	32.92	35.55	74	-34.5	peak	V
10720	20.86	7.74	28.6	10.37	31.92	34.55	54	-25.4	AVG	V
13282.5	25.33	14.65	39.98	11.26	38.6	35.21	74	-34.02	peak	V
15705	22.46	17.34	39.8	11.26	41.54	35.46	68.3	-28.5	peak	V
18000	22.95	21.05	44	12.58	43.89	35.42	74	-30	peak	V

Test mode:	TX 5240 MHz	Polarization:	Horizontal
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



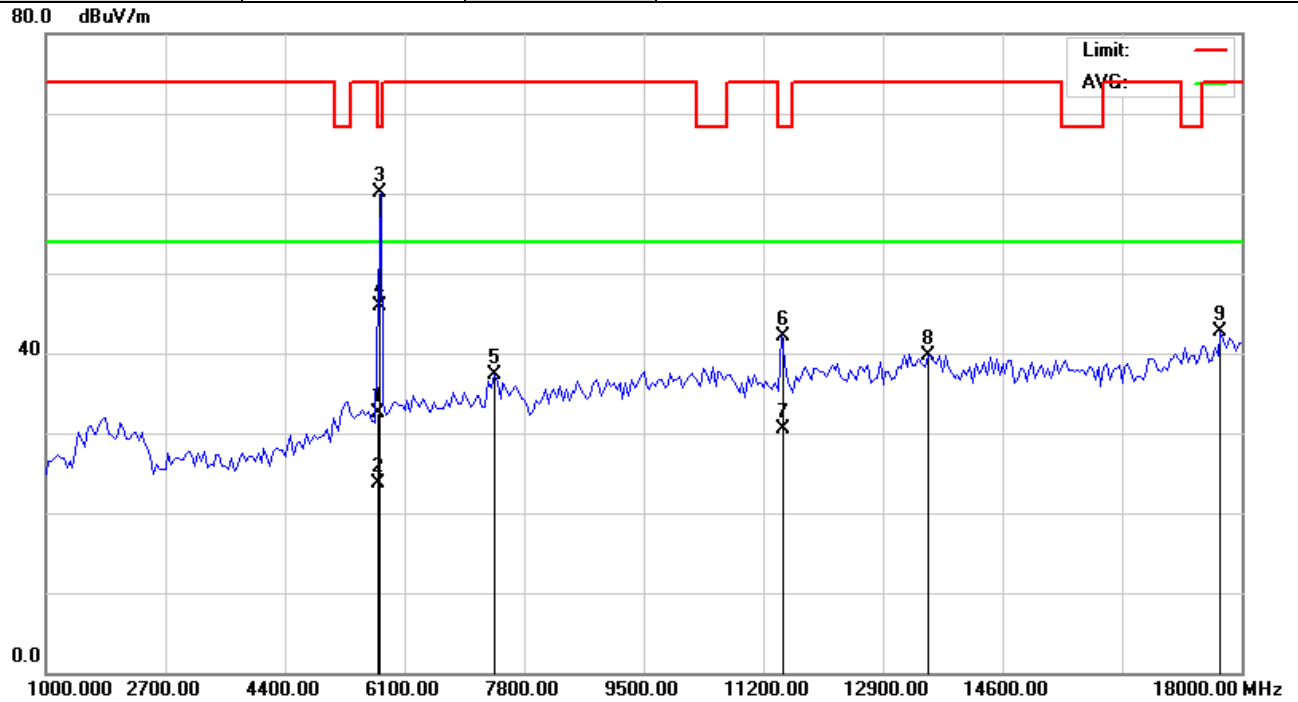
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
19141.464	40.28	-9.38	30.9	9.57	25.63	44.58	74	-43.1	peak	H
24912.368	40.1	-3.3	36.8	10.15	30.93	44.38	74	-37.2	peak	H
27814.527	38.27	1.23	39.5	10.59	35.76	45.12	74	-34.5	peak	H
30343.909	37.3	5.4	42.7	13.49	37.26	45.35	74	-31.3	peak	H
32423.126	31.28	11.82	43.1	15.42	42.14	45.74	74	-30.9	peak	H
36316.058	26.7	17	43.7	16.37	45.88	45.25	74	-30.3	peak	H
19141.464	40.28	-9.38	30.9	9.57	25.63	44.58	74	-43.1	peak	H
24912.368	40.1	-3.3	36.8	10.15	30.93	44.38	74	-37.2	peak	H

Test mode:	TX 5240 MHz	Polarization:	Vertical
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



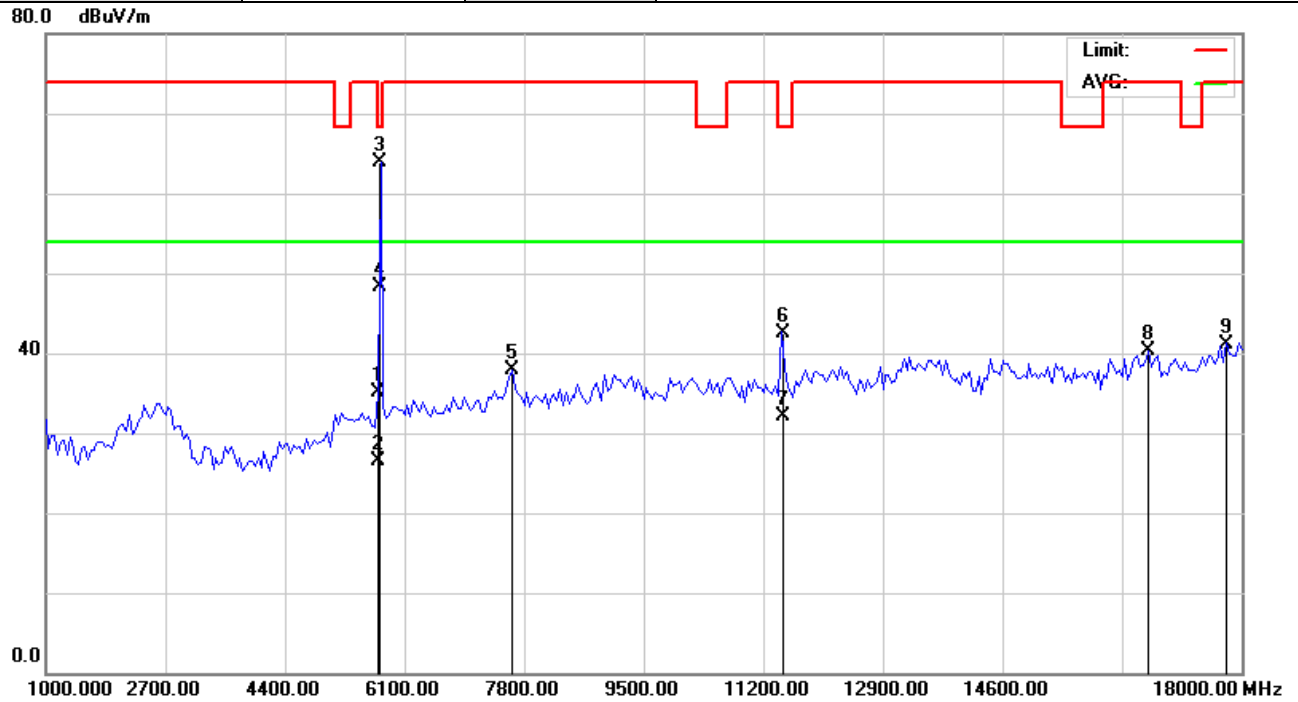
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20129.026	43.61	-8.84	34.77	9.87	25.61	44.32	74	-39.23	peak	V
20129.02	34.17	-8.84	25.33	9.98	25.5	44.32	54	-28.67	AVG	V
27483.363	35.88	1.09	36.97	11.37	34.61	44.89	74	-37.03	peak	V
28330.08	35.57	2.1	37.67	11.37	35.94	45.21	74	-36.33	peak	V
31782.291	35.11	8.69	43.8	13.69	39.78	44.78	74	-30.2	peak	V
35683.659	26.56	16.41	42.97	15.42	46.44	45.45	74	-31.03	peak	V
39523.753	24.67	20.43	45.1	16.34	49.85	45.76	74	-28.9	peak	V
39523.75	17.77	20.43	38.2	16.34	49.85	45.76	54	-15.8	AVG	V

Test mode:	TX 5745 MHz	Polarization:	Horizontal
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5725	35.6	-3.09	32.51	6.85	24.31	34.25	68.3	-35.79	peak	H
5725	26.74	-3.09	23.65	6.85	24.31	34.25	54	-30.35	AVG	H
5745	63.16	-3.06	60.1	7.02	24.19	34.27	68.3	-8.2	peak	H
5745	48.97	-3.06	45.91	7.02	24.17	34.25	54	-8.09	AVG	H
7375	37.48	-0.18	37.3	8.57	26.39	35.14	74	-36.7	peak	H
11490	31.93	10.27	42.2	9.43	36.26	35.42	68.3	-26.1	peak	H
11490	20.33	10.27	30.6	9.43	36.26	35.42	54	-23.4	AVG	H
13537.5	24.83	14.87	39.7	10.23	40.26	35.62	74	-34.3	peak	H
17702.5 0	22.04	20.66	42.7	11.69	44.41	35.44	74	-31.3	peak	H
18000	22.95	21.05	44	12.65	44.25	35.85	74	-30	peak	H

Test mode:	TX 5745 MHz	Polarization:	Vertical
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5725	38.19	-3.09	35.1	6.85	24.31	34.25	68.3	-33.2	peak	V
5725	29.67	-3.09	26.58	6.85	24.31	34.25	54	-27.42	AVG	V
5745	67.06	-3.06	64	7.02	24.19	34.27	68.3	-4.3	peak	V
5745	51.35	-3.06	48.29	7.02	24.17	34.25	54	-5.71	AVG	V
7630	37.71	0.29	38	8.68	26.87	35.26	74	-36	peak	V
11490	32.33	10.27	42.6	9.43	36.26	35.42	68.3	-25.7	peak	V
11490	21.76	10.27	32.03	9.43	36.26	35.42	54	-21.97	AVG	V
16682.5	20.42	19.88	40.3	10.75	44.57	35.44	74	-33.7	peak	V
17787.5	20.42	20.78	41.2	11.35	45.12	35.69	74	-32.8	peak	V



Test mode:	TX 5745 MHz	Polarization:	Horizontal
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



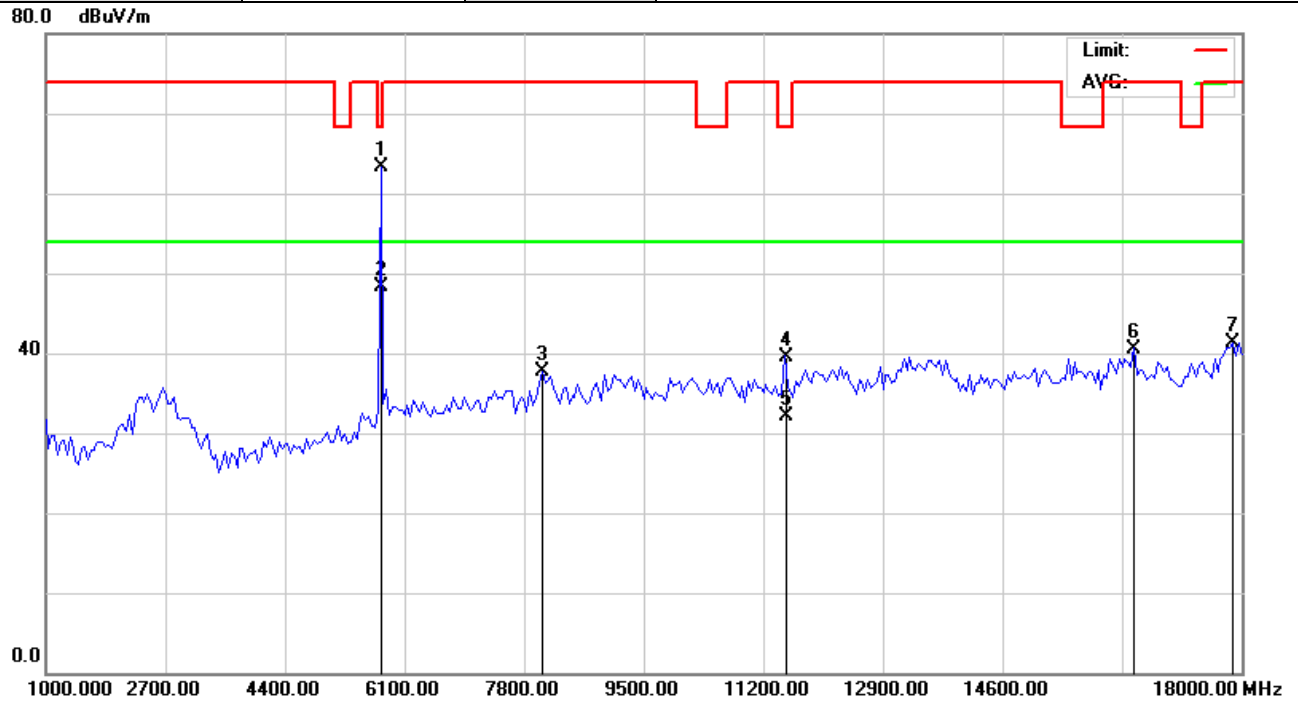
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
27395.72 0	36.53	1.07	37.6	9.72	35.71	44.36	74	-36.4	peak	H
29437.00 3	34.55	4.12	38.67	11.27	37.43	44.58	74	-35.33	peak	H
32500.88 9	30.42	11.98	42.4	13.61	43.74	45.37	74	-31.6	peak	H
34534.33 5	27.31	15.06	42.37	15.12	44.23	44.29	74	-31.63	peak	H
38281.30 0	24.58	19.22	43.8	15.48	49.46	45.72	74	-30.2	peak	H
39084.37 3	23.97	19.9	43.87	16.39	48.2	44.69	74	-30.13	peak	H

Test mode:	TX 5745 MHz	Polarization:	Vertical
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20032.817	42.26	-9.06	33.2	9.15	26.05	44.26	74	-40.8	peak	V
21889.48	37.73	-5.23	32.5	9.47	29.65	44.35	74	-41.5	peak	V
25394.397	36.22	-2.85	33.37	10.54	32.08	45.47	74	-40.63	peak	V
29296.306	33.82	3.98	37.8	12.65	36.61	45.28	74	-36.2	peak	V
33797.753	28.68	13.99	42.67	14.38	44.1	44.49	74	-31.33	peak	V
36959.665	25.92	17.58	43.5	15.72	47.24	45.38	74	-30.5	peak	V

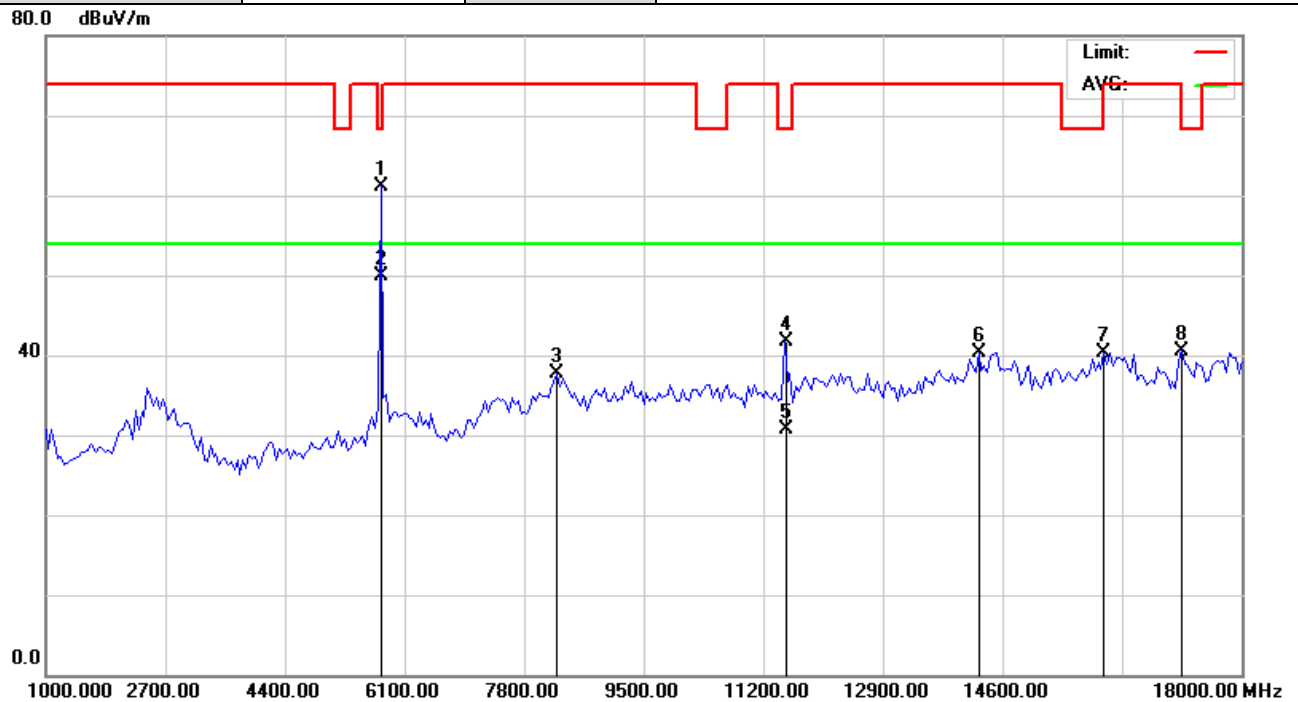
Test mode:	TX 5765 MHz	Polarization:	Horizontal
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5765	66.43	-3.03	63.4	7.15	24.24	34.42	68.3	-4.9	peak	H
5765	51.32	-3.03	48.29	7.15	24.24	34.42	54	-5.71	AVG	H
8055	36.87	0.83	37.7	7.59	28.09	34.85	74	-36.3	peak	H
11530	29.24	10.36	39.6	9.85	35.2	34.69	68.3	-28.7	peak	H
11530	21.67	10.36	32.03	9.85	35.2	34.69	54	-21.97	AVG	H
16470	21.14	19.46	40.6	10.79	44.04	35.37	74	-33.4	peak	H
17872.5	20.52	20.88	41.4	11.48	44.77	35.37	74	-32.6	peak	H

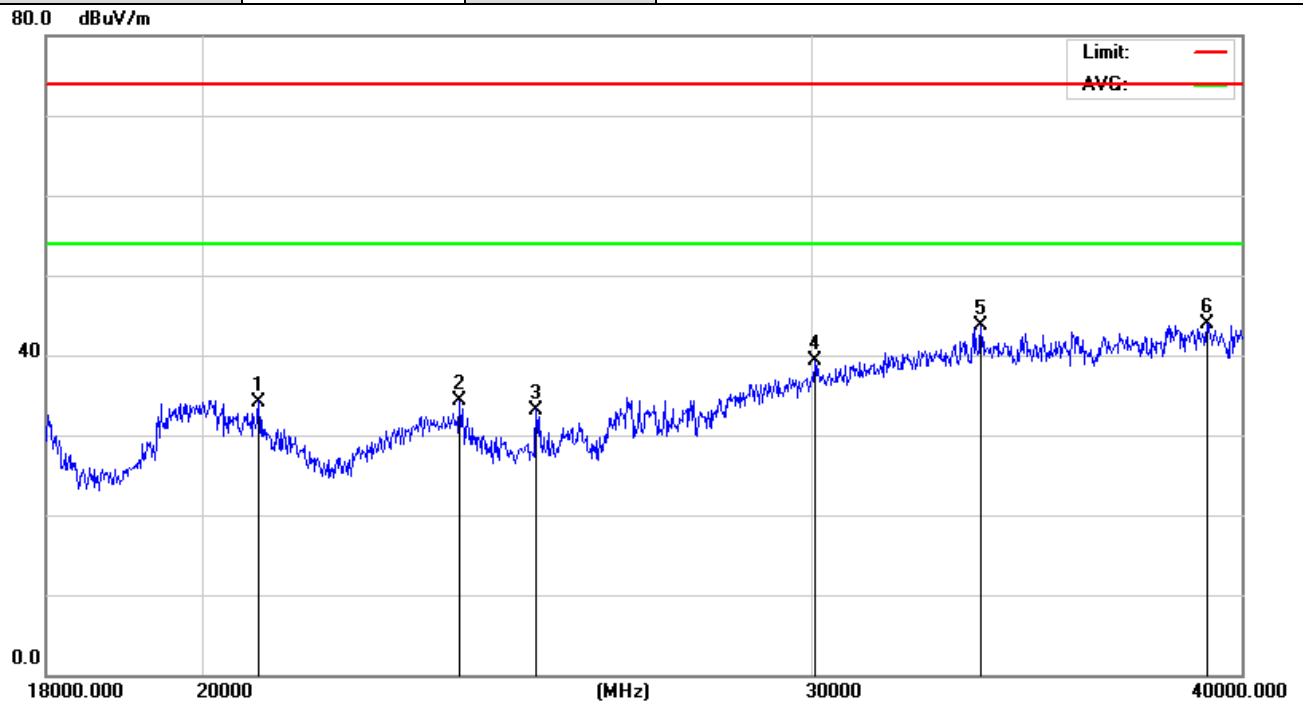


Test mode:	TX 5765 MHz	Polarization:	Vertical
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



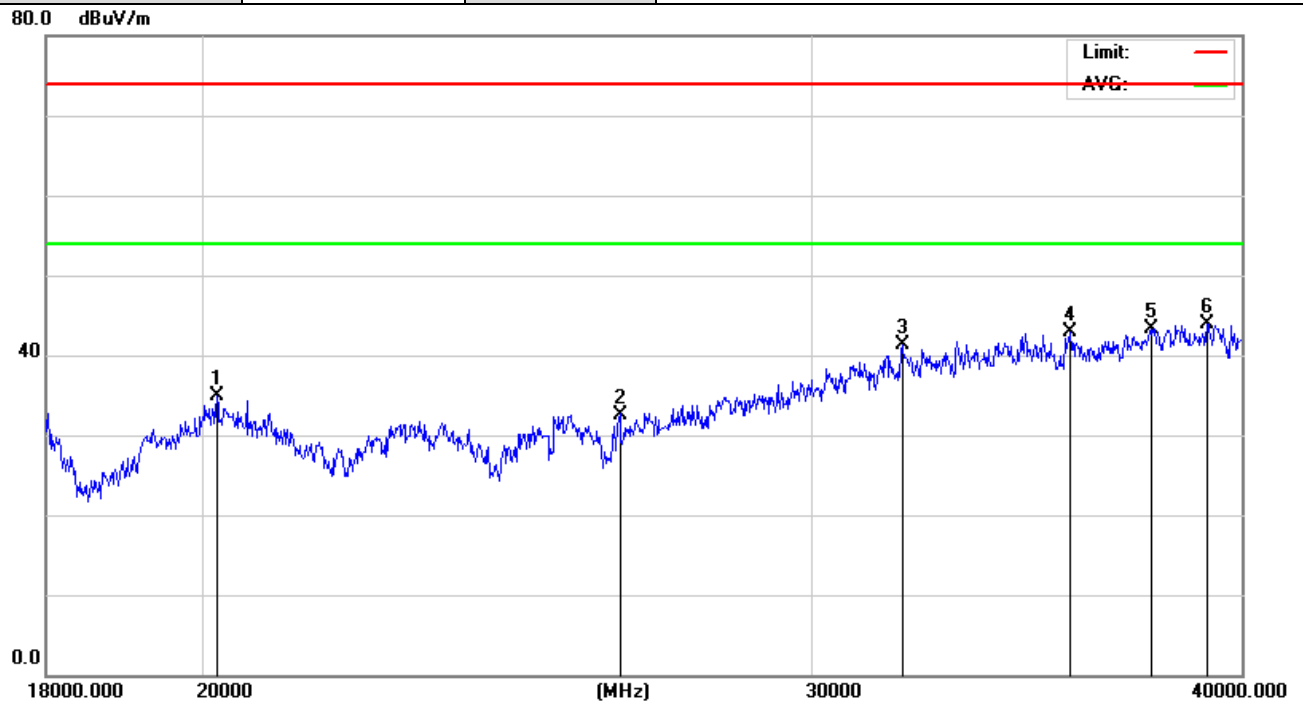
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5765	64.23	-3.03	61.2	7.15	24.24	34.42	68.3	-7.1	peak	V
5765	52.85	-3.03	49.82	7.15	24.24	34.42	54	-4.18	AVG	V
8267.5	36.61	1.09	37.7	7.89	27.74	34.54	74	-36.3	peak	V
11530	31.34	10.36	41.7	9.85	35.2	34.69	68.3	-26.6	peak	V
11530	20.37	10.36	30.73	9.85	35.2	34.69	54	-23.27	AVG	V
14260	25.27	15.13	40.4	10.86	39.49	35.22	74	-33.6	peak	V
16045	22.55	17.85	40.4	11.53	42.07	35.75	68.3	-27.9	peak	V
17150	20.24	20.36	40.6	11.39	44.39	35.42	74	-33.4	peak	V
17787.5	20.42	20.78	41.2	11.68	44.65	35.55	74	-32.8	peak	V

Test mode:	TX 5765 MHz	Polarization:	Horizontal
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



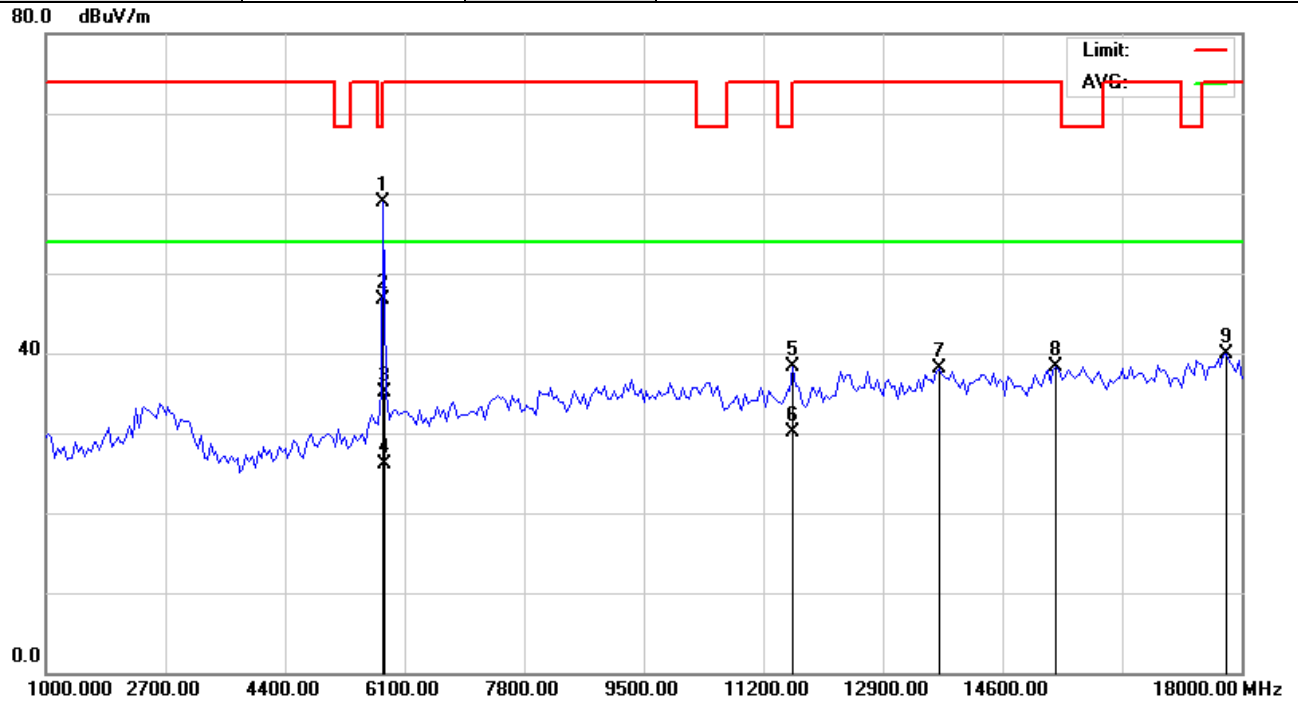
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20749.168	41.59	-7.39	34.2	9.35	28.04	44.78	74	-39.8	peak	H
23727.991	38.37	-4.07	34.3	10.57	30.08	44.72	74	-39.7	peak	H
24972.18	36.46	-3.26	33.2	12.47	28.62	44.35	74	-40.8	peak	H
30078.547	34.59	4.81	39.4	14.52	35.66	45.37	74	-34.6	peak	H
33609.366	30.04	13.76	43.8	15.26	43.67	45.17	74	-30.2	peak	H
39084.373	23.97	19.9	43.87	16.38	49.2	45.68	74	-30.13	peak	H

Test mode:	TX 5765 MHz	Polarization:	Vertical
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



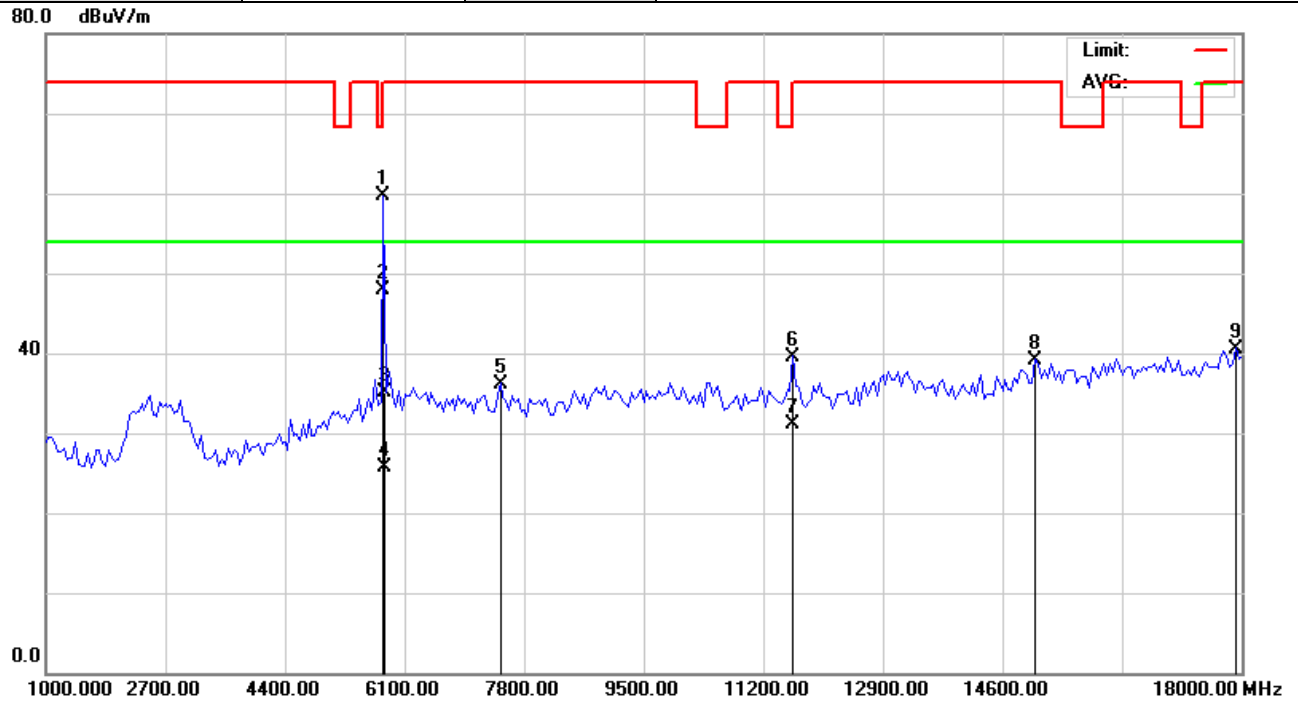
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20177.303	43.73	-8.73	35	9.31	26.32	44.36	74	-39	peak	V
26407.695	33.57	-0.97	32.6	10.58	33.02	44.57	74	-41.4	peak	V
31883.966	32.44	8.93	41.37	13.94	40.21	45.22	74	-32.63	peak	V
35683.659	26.56	16.41	42.97	15.41	45.72	44.72	74	-31.03	peak	V
37674.798	24.72	18.55	43.27	16.05	47.85	45.35	74	-30.73	peak	V
39084.373	23.97	19.9	43.87	16.39	48.88	45.37	74	-30.13	peak	V

Test mode:	TX 5805 MHz	Polarization:	Horizontal
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



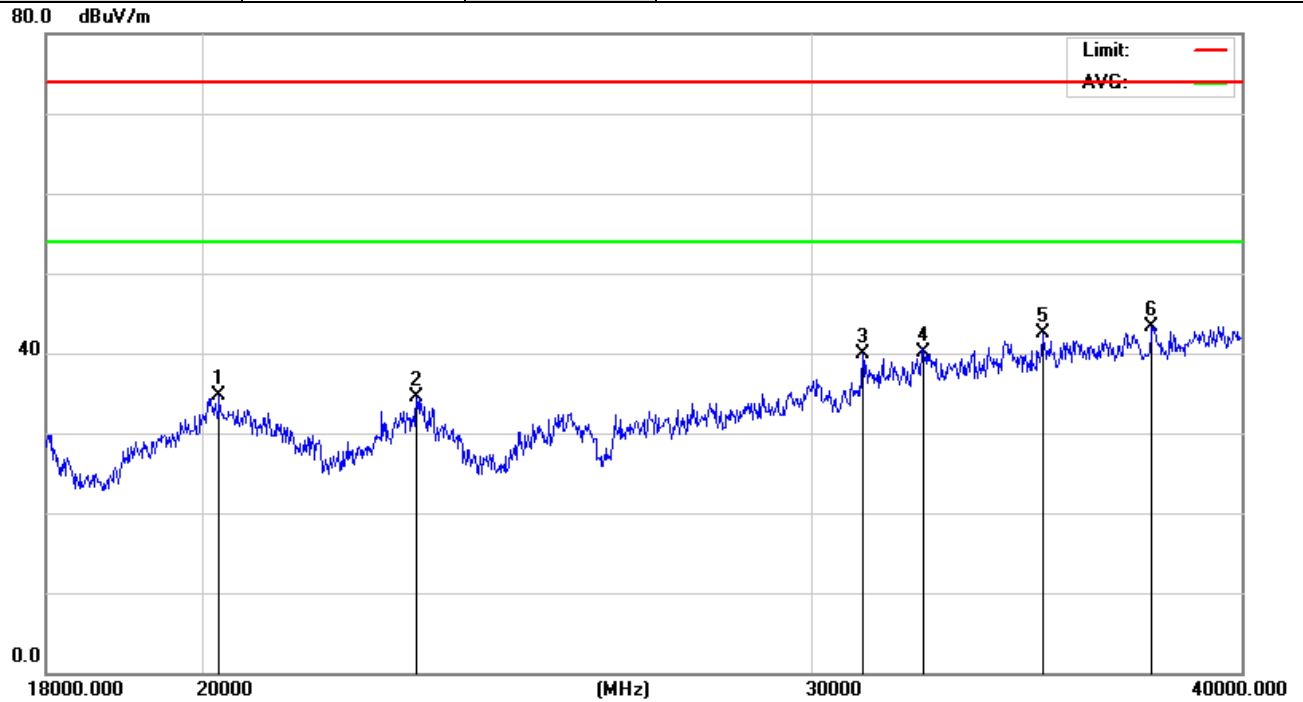
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5805	61.95	-2.95	59	7.35	24.22	34.52	68.3	-9.3	peak	H
5805	49.68	-2.95	46.73	7.35	24.22	34.52	54	-7.27	AVG	H
5825	37.94	-2.92	35.02	7.79	24.63	35.34	68.3	-33.28	peak	H
5825	29.12	-2.92	26.2	7.79	24.63	35.34	54	-27.8	AVG	H
11610.000	27.86	10.54	38.4	9.88	36.07	35.41	68.3	-29.9	peak	H
11610	19.63	10.54	30.17	9.88	36.07	35.41	54	-23.83	AVG	H
13707.500	23.54	14.56	38.1	10.95	38.58	34.97	74	-35.9	peak	H
15365.000	21.85	16.45	38.3	10.78	41.12	35.45	74	-35.7	peak	H
17787.500	19.12	20.78	39.9	11.05	45.35	35.62	74	-34.1	peak	H

Test mode:	TX 5805 MHz	Polarization:	Vertical
Frequency range:	1-26.5GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



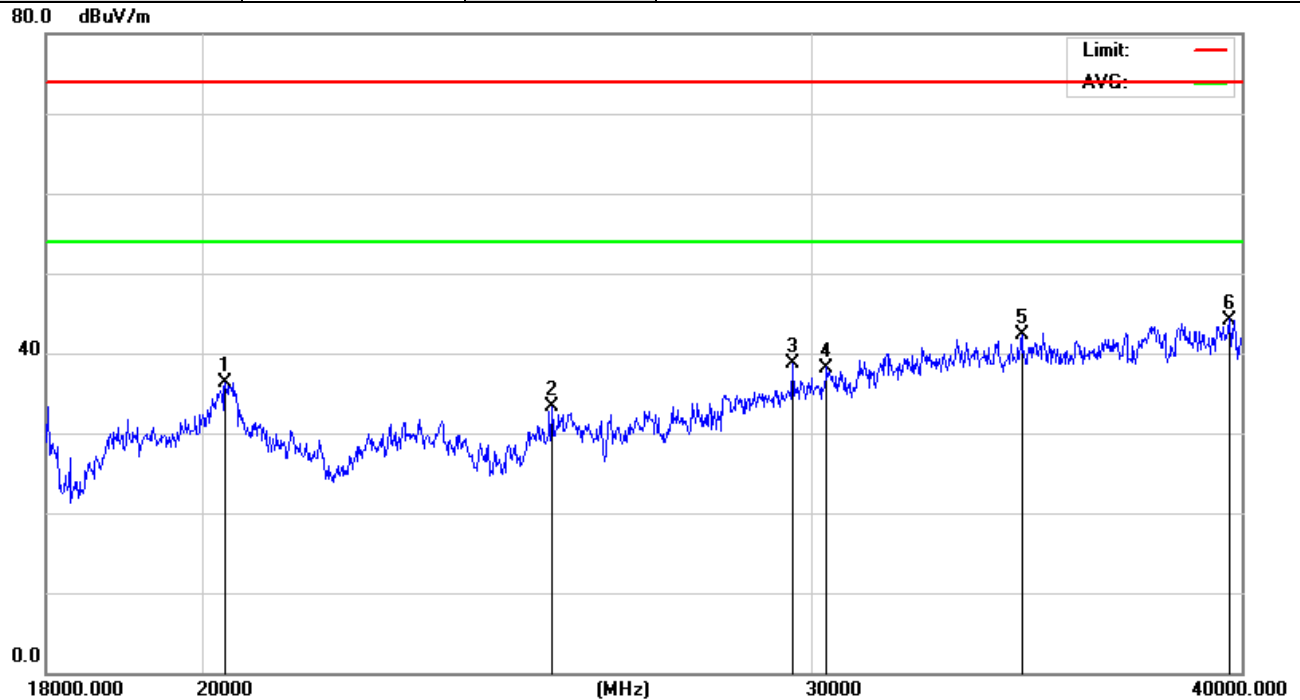
Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
5805	62.65	-2.95	59.7	7.35	24.22	34.52	68.3	-8.6	peak	V
5805	50.94	-2.95	47.99	7.35	24.22	34.52	54	-6.01	AVG	V
5825	37.94	-2.92	35.02	7.79	24.63	35.34	68.3	-33.28	peak	V
5825	28.67	-2.92	25.75	7.79	24.63	35.34	54	-28.25	AVG	V
7460	36.18	0.02	36.2	8.21	27.05	35.24	74	-37.8	peak	V
11610	29.06	10.54	39.6	9.88	36.07	35.41	68.3	-28.7	peak	V
11610	20.54	10.54	31.08	9.88	36.07	35.41	54	-22.92	AVG	V
15067.5	22.9	16.3	39.2	10.89	40.58	35.17	74	-34.8	peak	V
17915	19.66	20.94	40.6	11.25	45.4	35.71	74	-33.4	peak	V

Test mode:	TX 5805 MHz	Polarization:	Horizontal
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.



Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20209.552	43.45	-8.65	34.8	9.47	26.15	44.27	74	-39.2	peak	H
23055.6	38.92	-4.42	34.5	10.22	29.94	44.58	74	-39.5	peak	H
31054.773	32.93	6.97	39.9	13.75	38.58	45.36	74	-34.1	peak	H
32345.549	28.45	11.65	40.1	14.21	42.16	44.72	74	-33.9	peak	H
35034.286	26.65	15.82	42.47	15.47	45.8	45.45	74	-31.53	peak	H
37674.798	24.72	18.55	43.27	15.86	48.65	45.96	74	-30.73	peak	H

Test mode:	TX 5805 MHz	Polarization:	Vertical
Frequency range:	18-40GHz	RBW/VBW	Spurious : 1MHz/3MHz for Peak,1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.

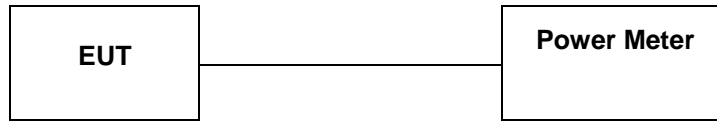


Freq. (MHz)	Reading (dBμV)	Factor (dB)	Corrected Amplitude (dBμV/m)	Calbe Lost (dB)	Ant. Factor (dB/m)	Pr-Amp. Gain (dB)	Limit (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)	Polar (H/V)
20290.401	44.77	-8.47	36.3	9.44	26.37	44.28	74	-37.7	peak	V
25232.694	36.41	-3.01	33.4	10.27	31.3	44.58	74	-40.6	peak	V
29649.316	34.49	4.31	38.8	12.67	36.39	44.75	74	-35.2	peak	V
30319.688	32.85	5.35	38.2	13.28	37.34	45.27	74	-35.8	peak	V
34534.335	27.31	15.06	42.37	15.19	45.24	45.37	74	-31.63	peak	V
39681.869	23.58	20.62	44.2	16.75	49.64	45.77	74	-29.8	peak	V

- REMARKS:**
1. Corrected Amplitude level (dBuV/m)=Reading(dBuV)+Factor(dB/m)
  2. Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
  3. The other emission levels were very low against the limit.
  4. Margin value = Limit value- Emission level.
  5. For Wireless 802.11a mode at 54Mbps.

### 4.3. Peak Transmit Power Measurement

#### TEST CONFIGURATION



#### TEST PROCEDURE

The EUT was directly connected to the Power Meter and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

#### LIMIT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 250mW (24dBm)
5.725 – 5.825GHz	The lesser of 1W (30dBm)

#### TEST RESULTS

Remark: We measured output power at difference data rate for each mode and recorded woest case for each mode.

#### 4.3.1 802.11a Test Mode

##### A. Test Verdict

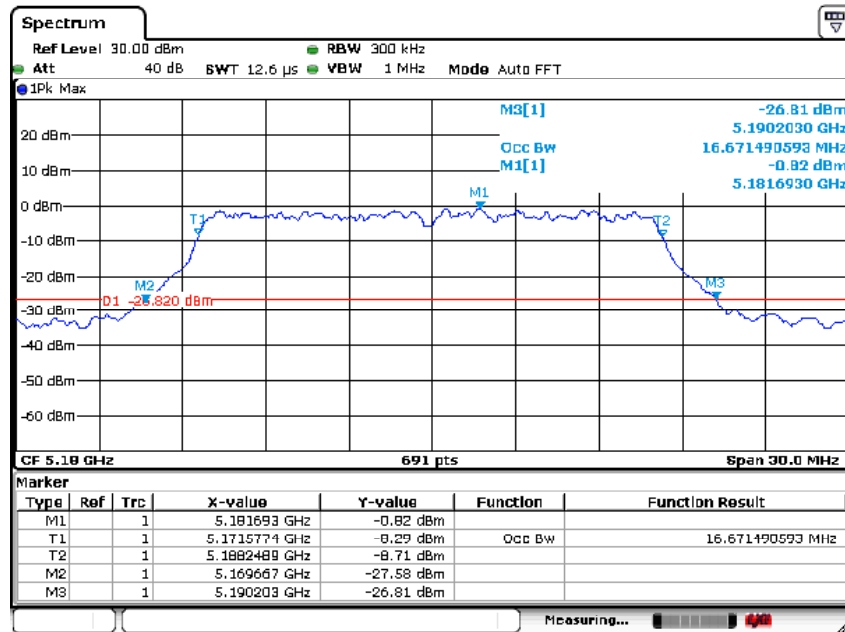
TEST CONDITIONS	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	26dBc Occupied Bandwidth (MHz)	PEAK POWER LIMIT	PASS/FAIL
Tnom=25°C; Vnom =3.8Vdc	5180	5.54	7.44	16.67	250mW (24dBm)	PASS
	5220	5.14	7.11	17.15		PASS
	5240	5.33	7.27	17.11		PASS

TEST CONDITIONS	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	6dBc Occupied Bandwidth (MHz)	PEAK POWER LIMIT	6dBc Occupied Bandwidth LIMIT (kHz)	PASS/FAIL
Tnom=25°C; Vnom =3.8Vdc	5745	4.57	6.60	16.41	1W (30dBm)	500	PASS
	5765	4.63	6.66	16.41			PASS
	5805	4.55	6.58	16.41			PASS

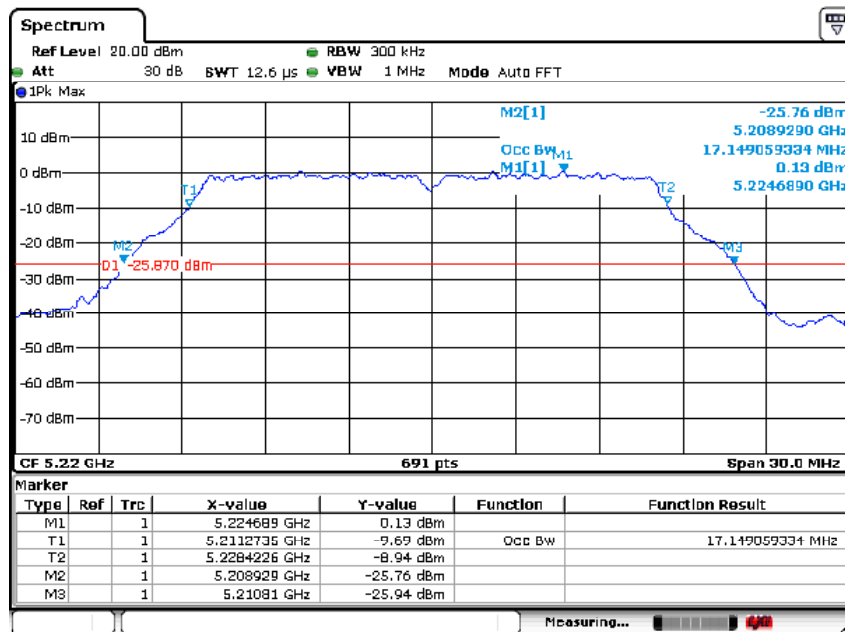
NOTE: The Occupied Bandwidth plot, please refer to the following pages.



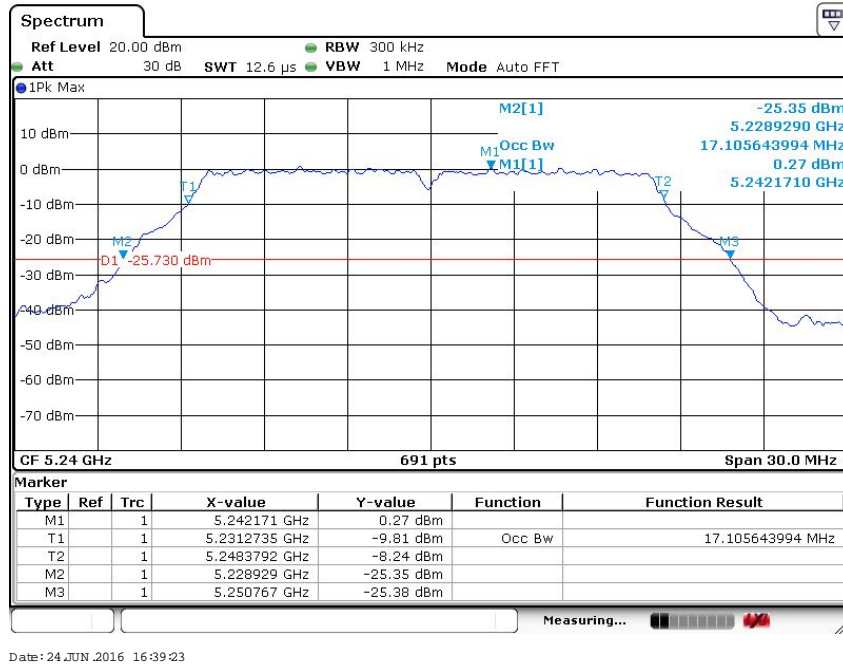
## 26dB Occupied Bandwidth:



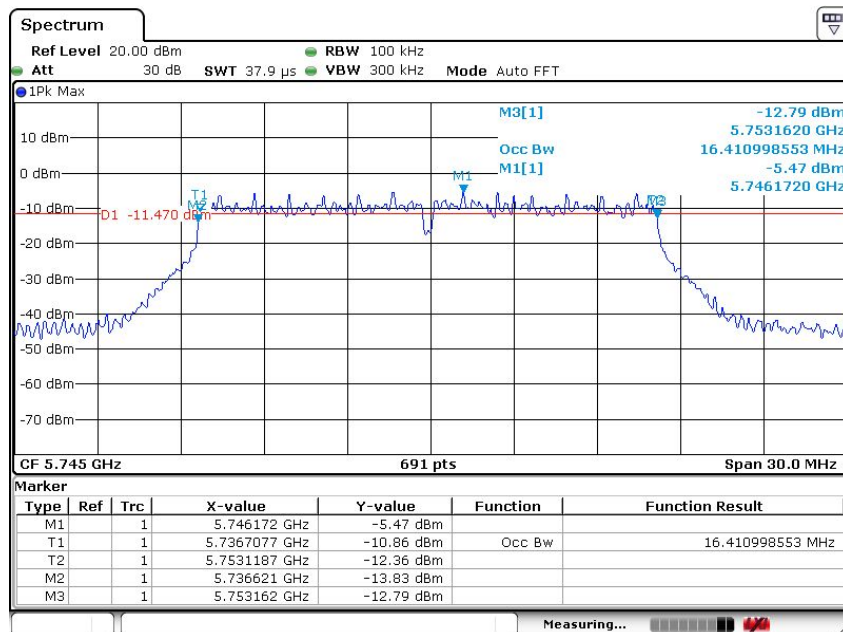
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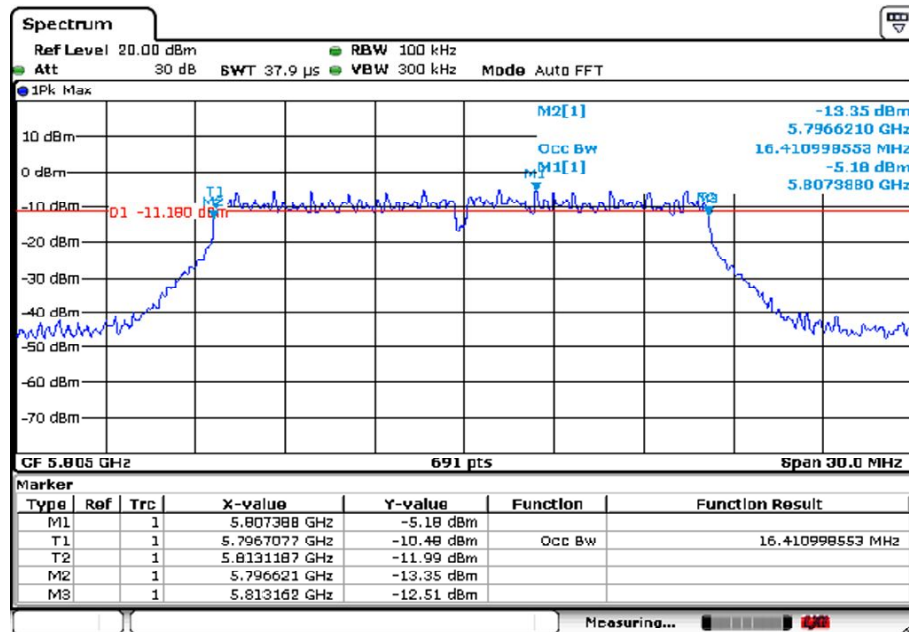
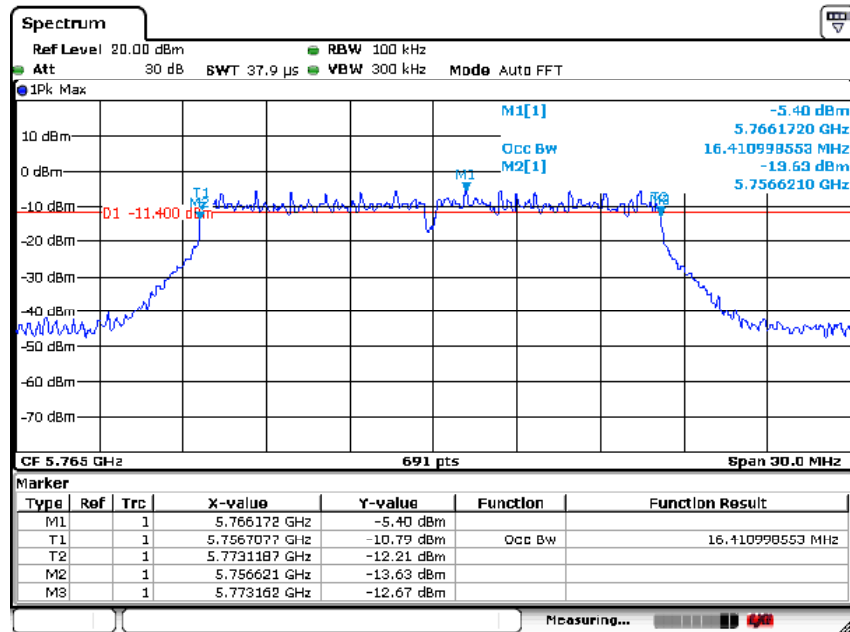


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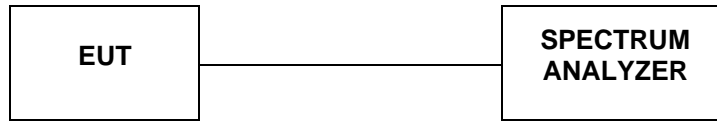
### 6dB Occupied Bandwidth:





#### 4.4. Peak Power Spectral Density Measurement

##### TEST CONFIGURATION



##### TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

##### LIMIT

Frequency Band	Limit
5.15 ~ 5.25GHz	11dBm
5.725 ~ 5.825GHz	30dBm

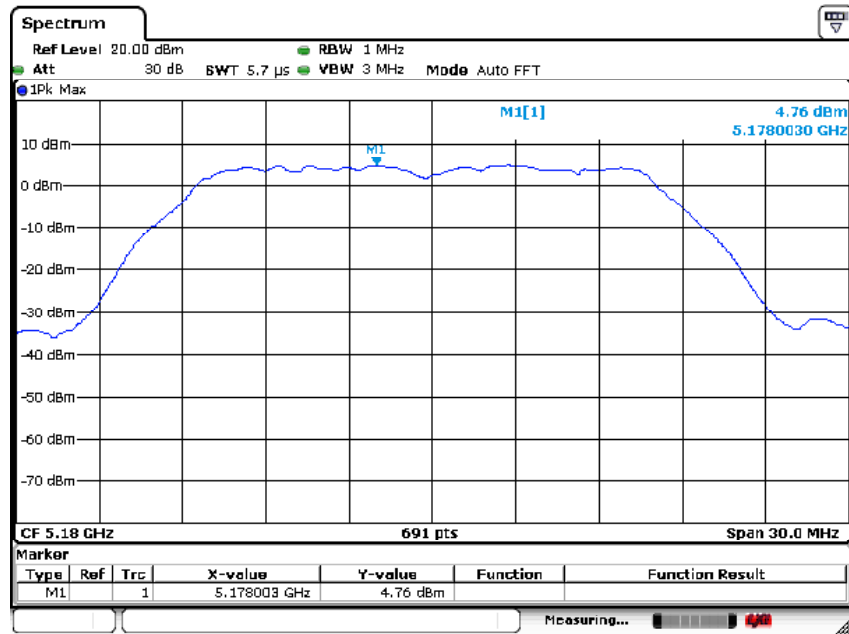
##### TEST RESULTS

##### 4.4.1 802.11a Test Mode

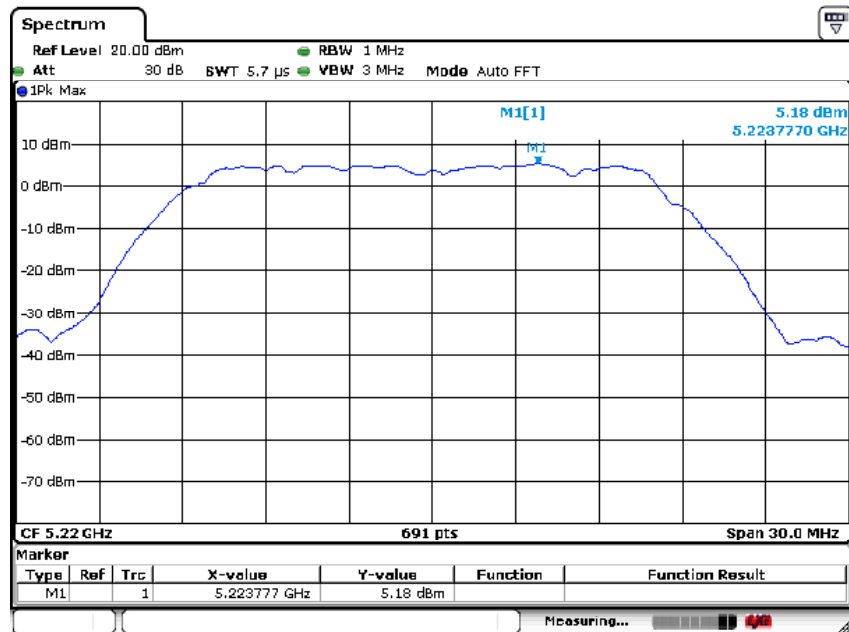
##### A. Test Verdict

TEST CONDITIONS	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
Tnom=25°C; Vnom =3.8Vdc	5180	4.76	11	PASS
	5220	5.18		PASS
	5240	5.31		PASS
	5745	4.46	30	PASS
	5765	4.80		PASS
	5805	5.17		PASS

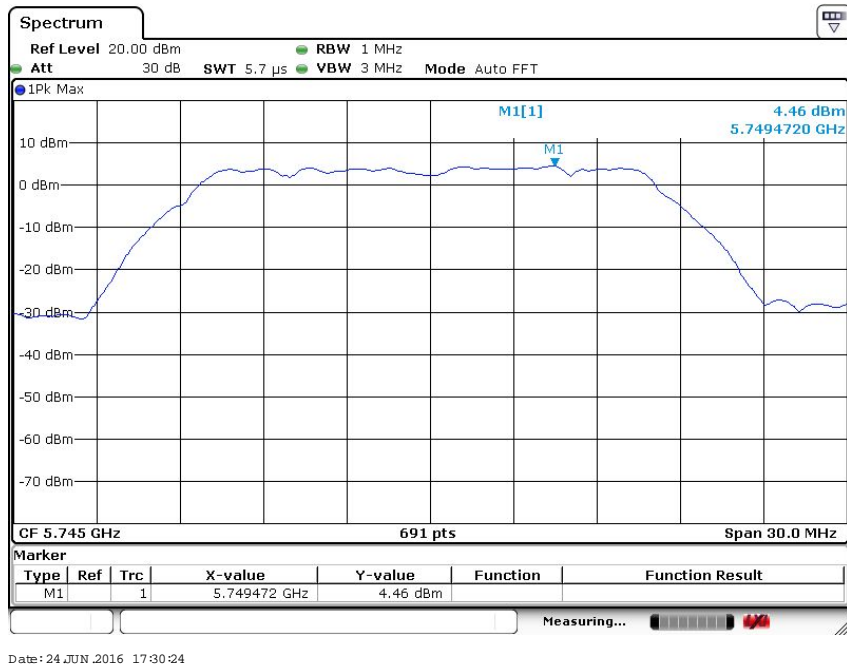
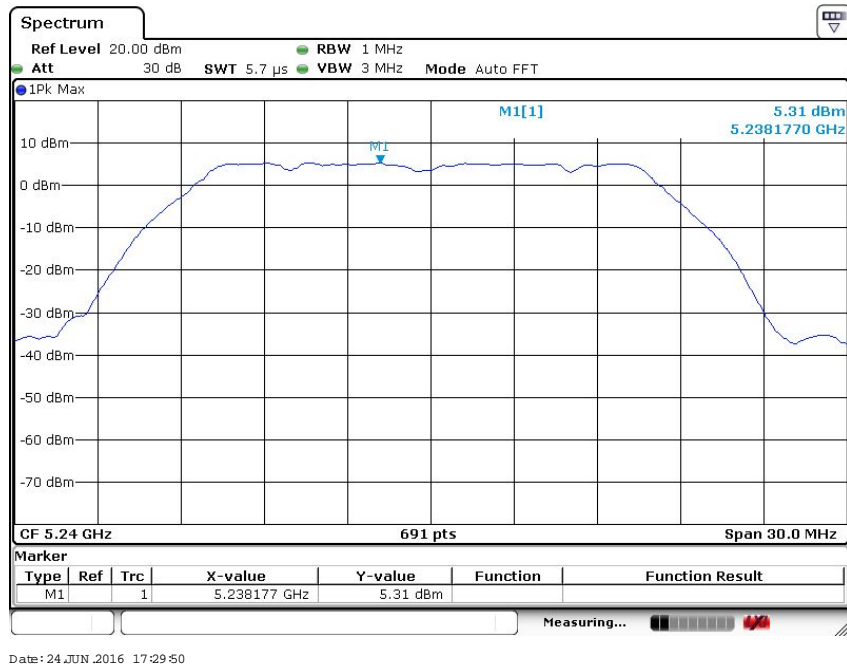
##### B. Test Plots

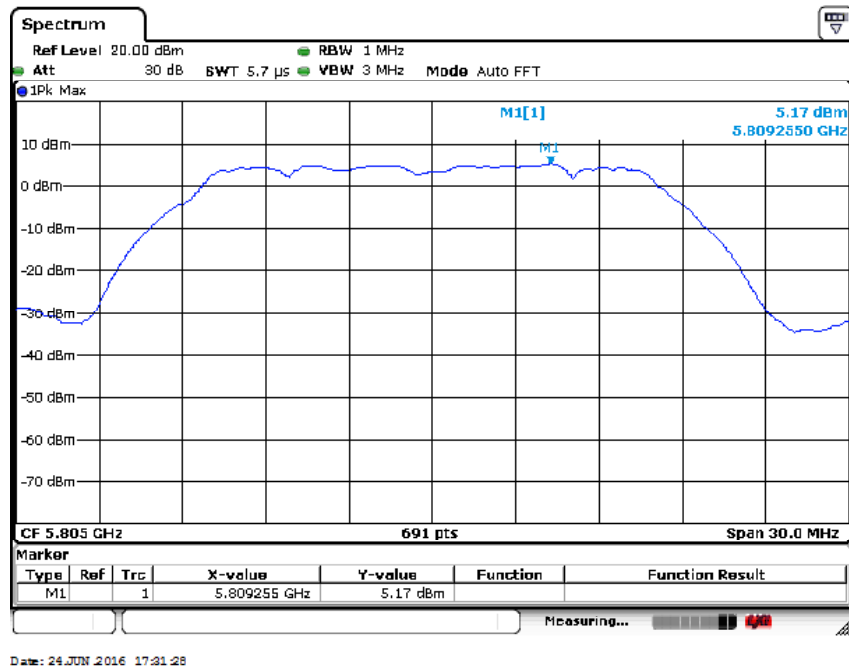
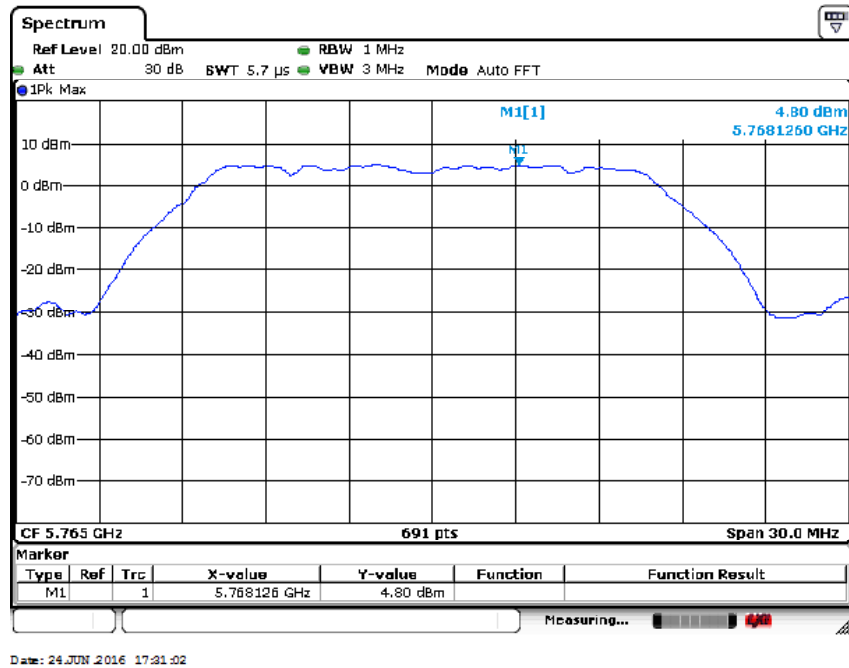


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## 4.5. Frequency Stability

### LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

UNII lower band  $5150 \text{ MHz} \leq f \leq 5250 \text{ MHz}$

UNII middle band  $5250 \text{ MHz} \leq f \leq 5350 \text{ MHz}$

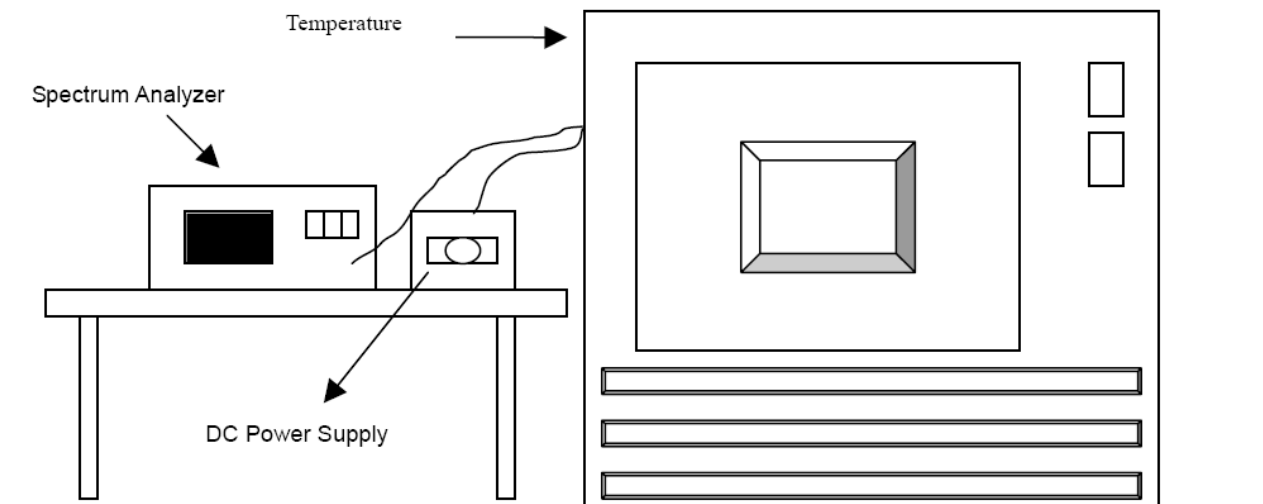
$5470 \text{ MHz} \leq f \leq 5725 \text{ MHz}$

UNII Upper band  $5725 \text{ MHz} \leq f \leq 5825 \text{ MHz}$

### TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and
7. the frequency record.

### TEST SETUP





Technical characteristics		5180 MHz	5220 MHz	5240 MHz
25 °C	Vmin	5179.956	5219.956	5239.956
	Vmax	5179.957	5219.956	5239.958
0 °C	Vnom	5179.963	5219.964	5239.965
10 °C	Vnom	5179.952	5219.954	5239.961
20 °C	Vnom	5179.954	5219.955	5239.953
30 °C	Vnom	5179.975	5219.975	5239.976
40 °C	Vnom	5179.987	5219.986	5239.987
45 °C	Vnom	5180.002	5220.002	5424.000

Technical characteristics		5745 MHz	5765 MHz	5805 MHz
25 °C	Vmin	5744.953	5764.958	5804.951
	Vmax	5744.954	5764.957	5804.953
0 °C	Vnom	5744.956	5764.985	5804.959
10 °C	Vnom	5744.957	5764.955	5804.953
20 °C	Vnom	5744.948	5764.957	5804.948
30 °C	Vnom	5744.973	5764.976	5804.973
40 °C	Vnom	5744.985	5764.987	5804.987
45 °C	Vnom	5744.999	5765.002	5804.999

## 4.6. Band Edge Compliance of RF Emission

### EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

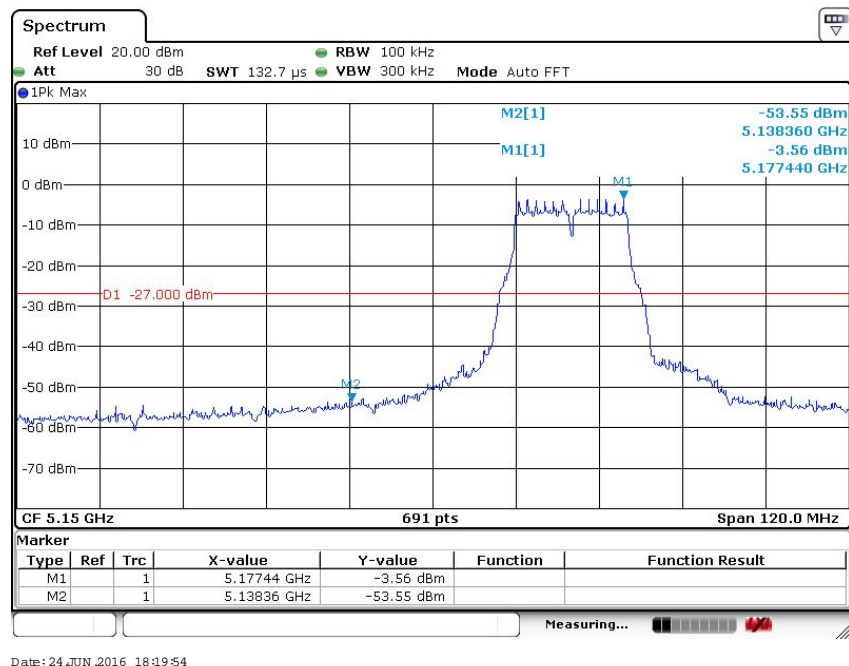
### TEST PROCEDURE

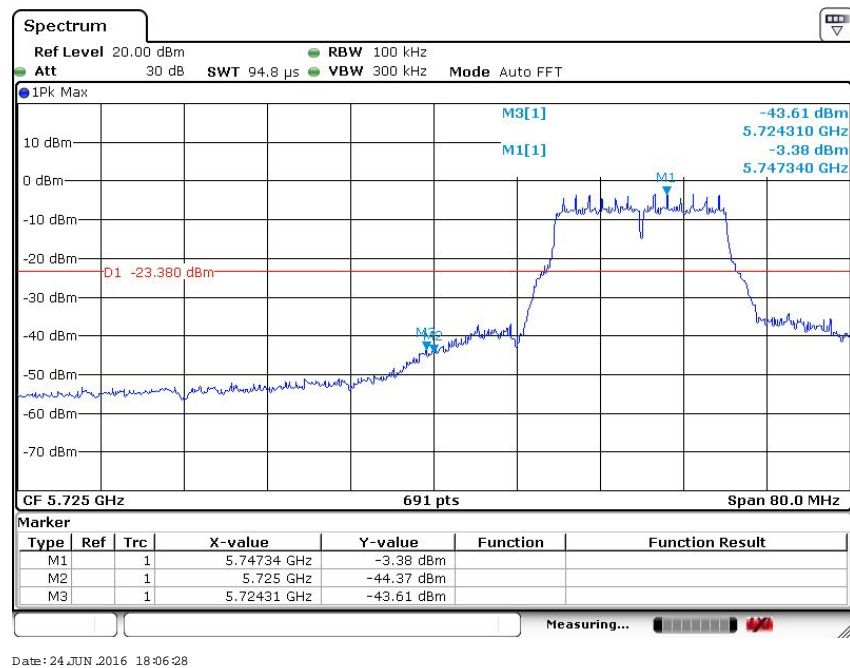
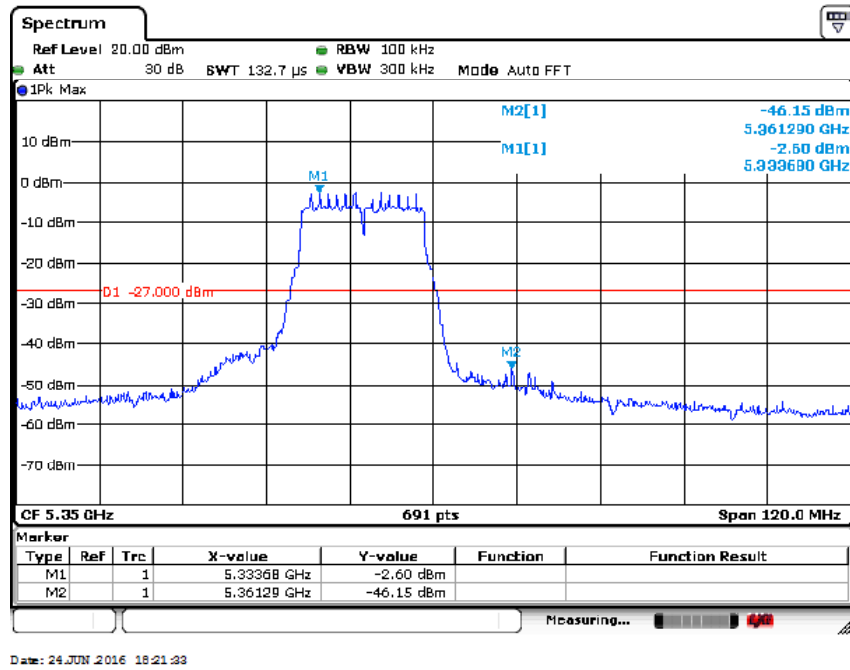
The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

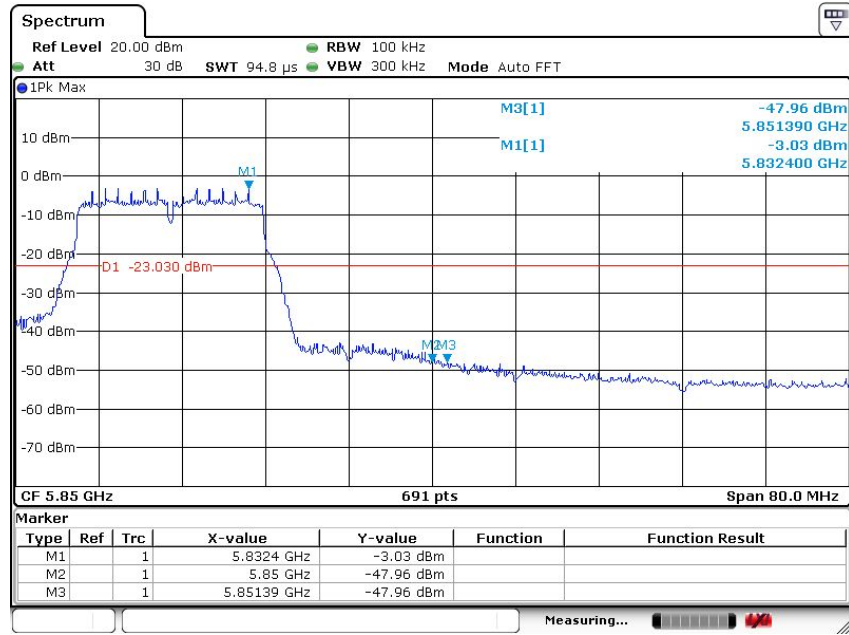
### TEST RESULTS

For signals in the restricted bands above and below the 5.15 to 5.35GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak filed strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=10Hz) are attached on the following pages.







Date: 24 JUN 2016 18:01:27



## **4.7. Antenna Requirement**

### **Standard Applicable**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### **Refer to statement below for compliance**

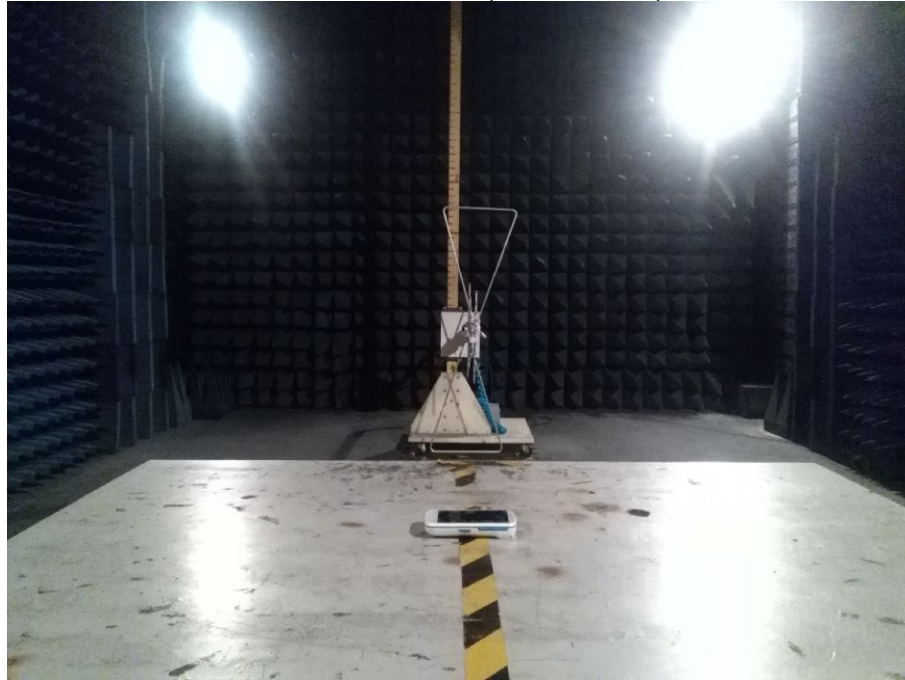
The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

### **Antenna Connected Construction**

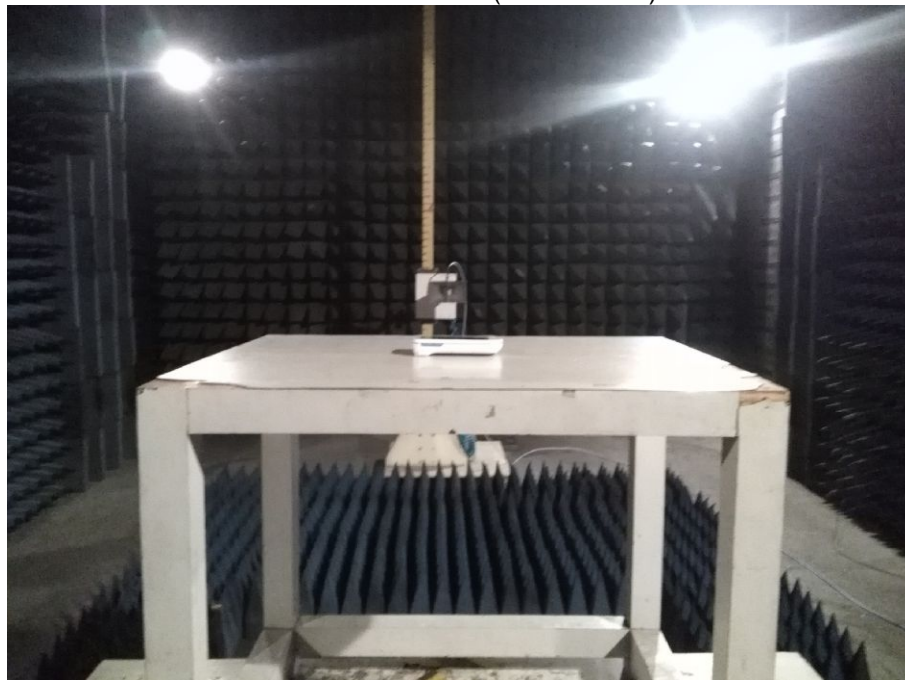
The WLAN antenna and the maximum antenna gain of WLAN used was 3.5 dBi.

## 5. Test Setup Photos of the EUT

Radiated Emission (30MHz-1GHz)



Radiated Emission (above 1GHz)



Conducted Emission (AC Mains)



## **6. External and Internal Photos of the EUT**

.....End of Report.....