FCC Radio Test Report

FCC ID: 2AYLE-KS-G3B-13M-D

Report No.	:	TB-FCC179746
Applicant	:	Shenzhen Oneking Technologies co., Ltd.
Equipment Under Test (EUT)		
EUT Name	:	5.8G Wireless Dongle
Model No.	:	KS-G3B-13M
Serial Model No.	:	KS-G3B-11M, KS-G3B-12M, KS-G3B-21M, KS-G3B-22M, KS-G3B-23M, KS-G3B-11N, KS-G3B-12N, KS-G3B-13N
Brand Name	:	----
Sample ID	:	20210412-31-01 & 20210412-31-02
Receipt Date	:	2021-04-14
Test Date	:	2021-04-16 to 2021-05-06
Issue Date	:	2021-05-11
Standards	:	FCC Part 15, Subpart C (15.249: 2018)
Test Method	:	ANSI C63.10: 2013
Conclusions	:	**PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC requirements

Test/Witness Engineer	:	Wade. LV	Wade. Lv
Engineer Supervisor	:	IVAN SU	IVAN SU
Approved & Authorized	:	Ray Lai	Ray Lai

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

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Revision History

Report No.	Version	Description	Issued Date
TB-FCC179746	Rev.01	Initial issue of report	2021-05-11

1. General Information about EUT

1.1 Client Information

Applicant	:	Shenzhen Oneking Technologies co., Ltd.
Address	:	F5, Bldg7, YuSheng Industrial Park, Gushu Xixiang 107 National Road Baoan, Shenzhen, China
Manufacturer	:	Shenzhen Oneking Technologies co., Ltd.
Address	:	F5, Bldg7, YuSheng Industrial Park, Gushu Xixiang 107 National Road Baoan, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	5.8G Wireless Dongle	
Model No.	:	KS-G3B-13M, KS-G3B-11M, KS-G3B-12M, KS-G3B-21M, KS-G3B-22M, KS-G3B-23M, KS-G3B-11N, KS-G3B-12N, KS-G3B-13N	
Model Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is color.	
Product Description	:	Operation Frequency:	5732~5848 MHz
		Number of Channel:	Please see the note (2)
		Output power:	101.31 dBuV/m@3m Peak 83.86 dBuV/m@3m Avg
		Antenna Gain:	3.49dBi Internal Antenna
		Modulation Type:	FSK
Power Rating	:	DC 5V from USB	
Software Version	:	KO-CT-speaker-chunyinping_1.0	
Hardware Version	:	KO-CT-speaker-Main-V1.5A	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

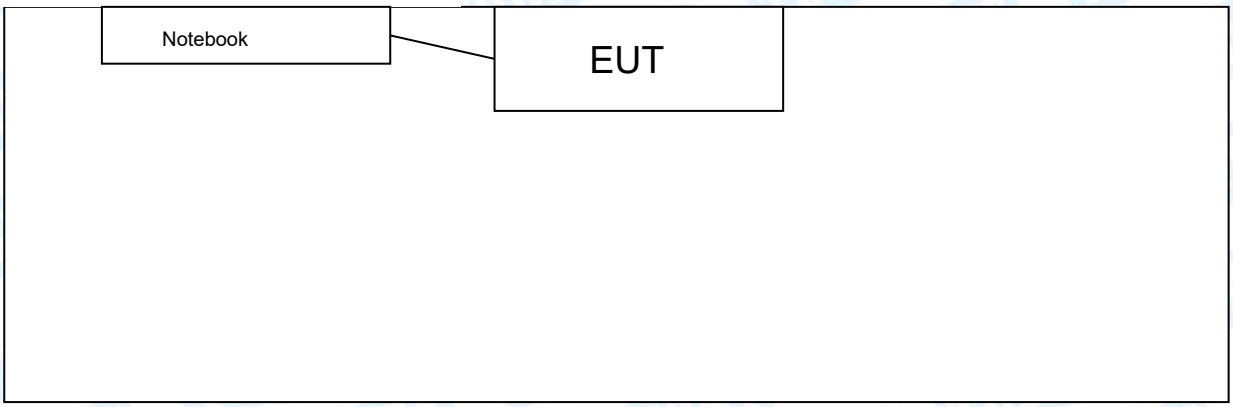
(1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

(2) Channel List:

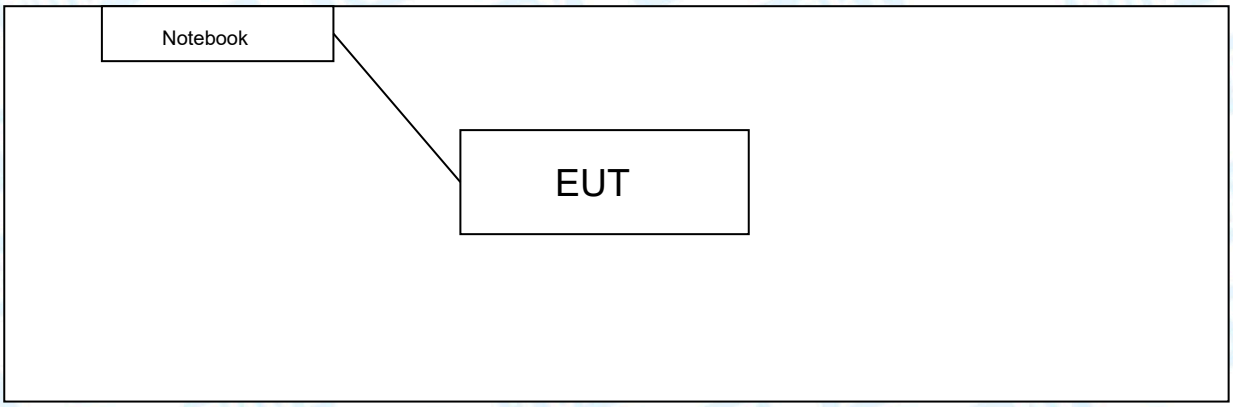
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	5732	21	5772	41	5812
02	5734	22	5774	42	5814
03	5736	23	5776	43	5816
04	5738	24	5778	44	5818
05	5740	25	5780	45	5820
06	5742	26	5782	46	5822
07	5744	27	5784	47	5824
08	5746	28	5786	48	5826
09	5748	29	5788	49	5828
10	5750	30	5790	50	5830
11	5752	31	5792	51	5832
12	5754	32	5794	52	5834
13	5756	33	5796	53	5836
14	5758	34	5798	54	5838
15	5760	35	5800	55	5840
16	5762	36	5802	56	5842
17	5764	37	5804	57	5844
18	5766	38	5806	58	5846
19	5768	39	5808	59	5848
20	5770	40	5810		

1.3 Block Diagram Showing the Configuration of System Tested

Mode 1: Charging+TX Mode



Mode 2: TX Mode



1.4 Description of Support Units

Equipment Information				
Name	**Model**	**FCC ID/SDOC**	**Manufacturer**	**Used "√"**
Notebook	Inspiron 5493	----	DELL	√

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test	
Final Test Mode	**Description**
Mode 1	Charging+TX Mode
For Radiated Test	
Final Test Mode	**Description**
Mode 1	TX Mode(5732MHz/5780MHz/5848MHz)

Note:

For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

(1) According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels.

(2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.

(3) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis, X-plane, Y-plane and Z-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel & Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of RF mode.

Product SW/HW Version :	N/A		
Radio SW/HW Version:	N/A		
Test Software Version	**EMI Tool (for FW adopt OLD RF structure) V9_2019_1218_CustomerUse**		
Frequency	5732 MHz	5780MHz	5848MHz
FM	2	2	2

1.7 Measurement Uncertainty

The reported uncertainty of measurement y ± U，where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2，providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	±3.50 dB ±3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	±4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	±4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F.,Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)
The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01
The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025：2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01. FCC Accredited Test Site Number: 854351.

IC Registration No.: (11950A)
The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A.

2. Test Summary

FCC Part 15 Subpart C(15.249)			
Standard Section	**Test Item**	**Judgment**	**Remark**
15.203	Antenna Requirement	PASS	N/A
15.205	Restricted Bands	PASS	N/A
15.207	AC Power Conducted Emission	PASS	N/A
15.249 &15.209	Radiated Spurious Emission	PASS	N/A
15.215(C)	20dB Bandwidth	PASS	N/A
Note: N/A is an abbreviation for Not Applicable.			

3. Test Equipment

Conducted Emission Test					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 06, 2020	Jul. 05, 2021
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 06, 2020	Jul. 05, 2021
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 06, 2020	Jul. 05, 2021
LISN	Rohde & Schwarz	ENV216	101131	Jul. 06, 2020	Jul. 05, 2021
Radiation Emission Test					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 06, 2020	Jul. 05, 2021
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 06, 2020	Jul. 05, 2021
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jul. 06, 2020	Jul. 05, 2021
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar.01, 2020	Feb. 28, 2022
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar.01, 2020	Feb. 28, 2022
Horn Antenna	ETS-LINDGREN	BBHA 9170	BBHA9170582	Mar.01, 2020	Feb. 28, 2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jul. 07, 2020	Jul. 06, 2021
Pre-amplifier	Sonoma	310N	185903	Feb. 25, 2021	Feb. 24, 2022
Pre-amplifier	HP	8449B	3008A00849	Feb. 25, 2021	Feb. 24, 2022
Cable	HUBER+SUHNER	100	SUCOFLEX	Feb. 25, 2021	Feb. 24, 2022
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 06, 2020	Jul. 05, 2021
Antenna Conducted Emission					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 06, 2020	Jul. 05, 2021
Spectrum Analyzer	Rohde & Schwarz	ESPI	100010/007	Jul. 06, 2020	Jul. 05, 2021
MXA Signal Analyzer	Agilent	N9020A	MY49100060	Sep. 11, 2020	Sep. 10, 2021
Vector Signal Generator	Agilent	N5182A	MY50141294	Sep. 11, 2020	Sep. 10, 2021
Analog Signal Generator	Agilent	N5181A	MY50141953	Sep. 11, 2020	Sep. 10, 2021
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO26	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO29	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO31	Sep. 11, 2020	Sep. 10, 2021
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO33	Sep. 11, 2020	Sep. 10, 2021

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1Test Standard

FCC Part 15.207

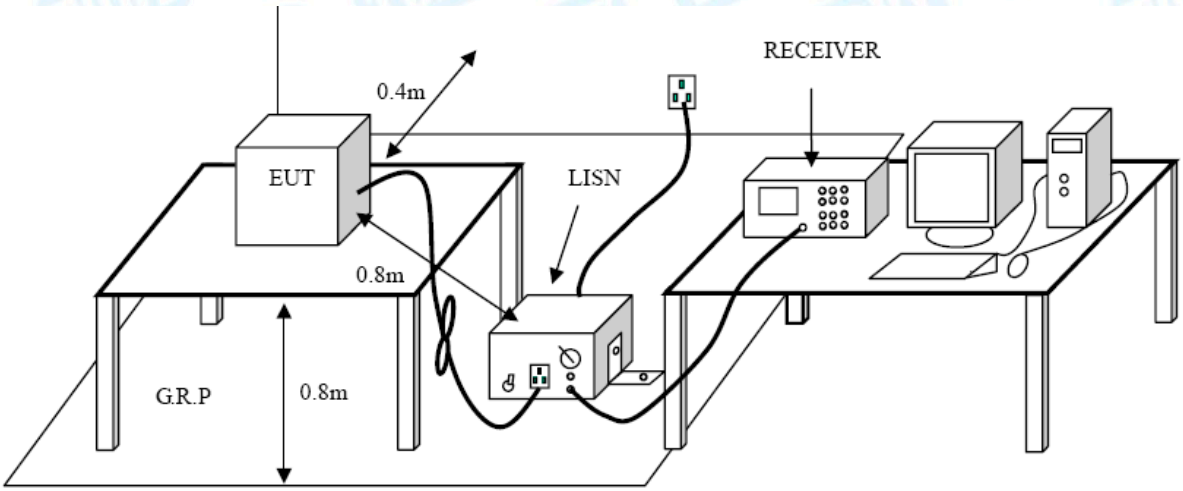
4.1.2 Test Limit

Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:
(1) *Decreasing linearly with logarithm of the frequency.
(2) The lower limit shall apply at the transition frequencies.
(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN is at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Data

Please refer to the Attachment A.

5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard
FCC Part 15.209
5.1.2 Test Limit

Radiated Emission Limit (9kHz~1000MHz)

Frequency (MHz	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	(dBuV/m)(at 3 M)	
	Peak	Average
Above 1000	74	54

Note:
(1) The tighter limit applies at the band edges.
(2) Emission Level(dBuV/m)=20log Emission Level(Uv/m)

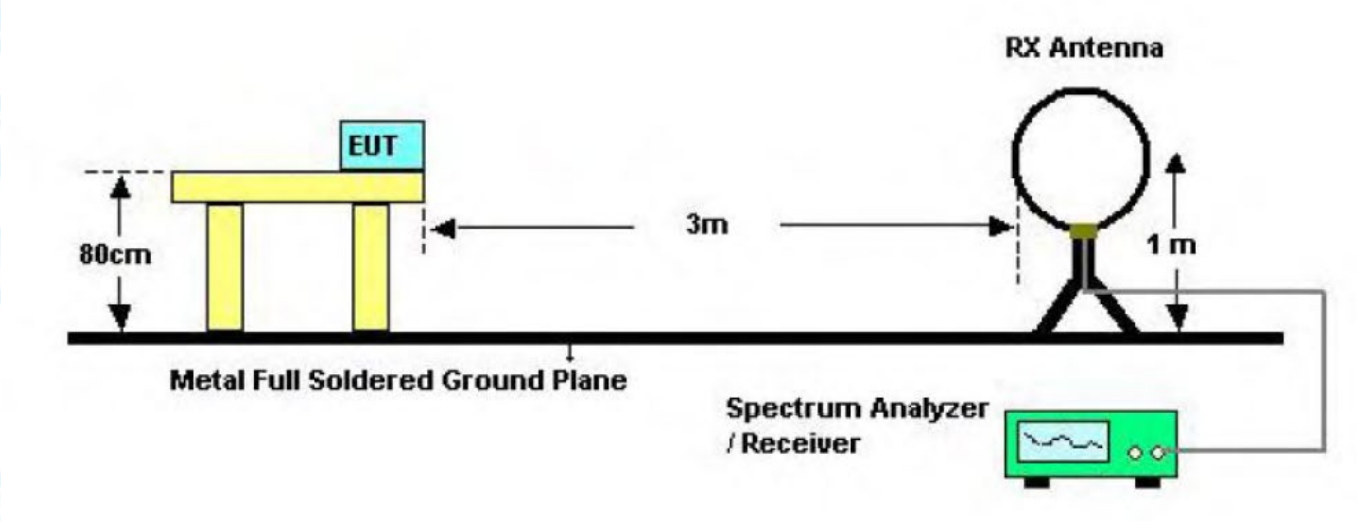
Limits of radiated emission measurement (15.249)

FCC Part 15 (15.249), Subpart C	
Limit	**Frequency Range (MHz)**
Field strength of fundamental 50000 μV/m (94 dBμV/m) @ 3 m	5725~5875
Field strength of harmonics 500 μV/m (54 dBμV/m) @ 3 m	Below 5725 and Above 5875

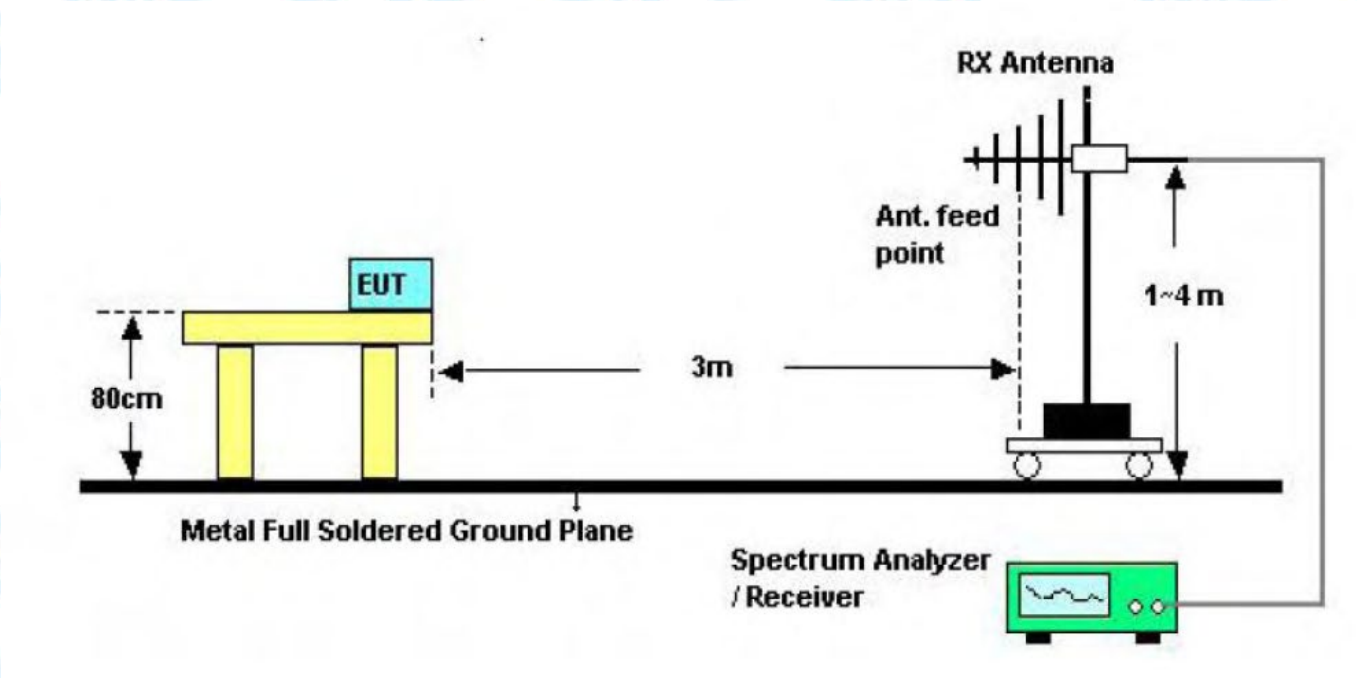
Restricted bands requirement for equipment operating in 5725MHz to 5875 MHz (15.249)

Restricted Frequency Band (MHz)	(dBuV/m)(at 3 M)
5725~5875	Attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation

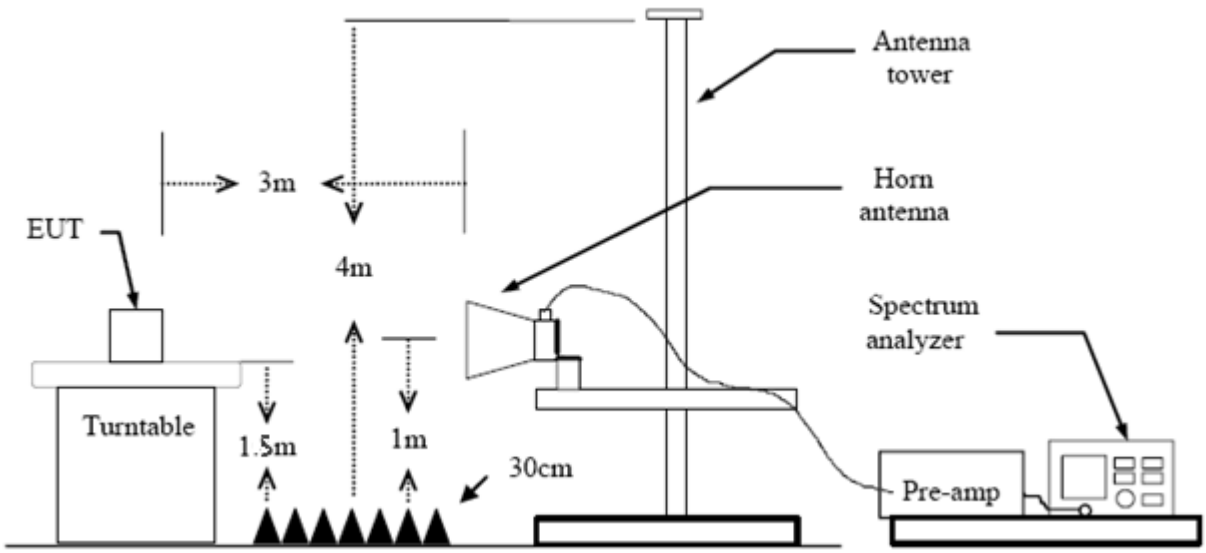
5.2 Test Setup



Bellow 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

(1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.

(2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

(3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.

(4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

(5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.

(6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.

(7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

(8) For the actual test configuration, please see the test setup photo.

5.4 EUT Operating Condition

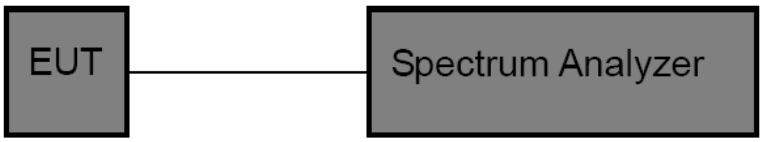
The EUT was set to Continual Transmitting in maximum power, and new batteries are used during testing.

5.5 Test Data

Please refer to the Attachment B.

6. Bandwidth Test

6.1 Test Setup



6.2 Test Procedure

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

(2) Spectrum Setting:

Bandwidth: RBW=100 kHz, VBW=300kHz.

(3) The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.

6.3 EUT Operating Condition

The EUT was set to continuously transmitting for the Bandwidth Test.

6.4 Test Data

Please refer to the Attachment C.

7. Antenna Requirement

7.1 Standard Requirement

7.1.1 Standard

FCC Part 15.203

7.1.2 Requirement

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

7.2 Antenna Connected Construction

The gains of the antenna used for transmitting is 2 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

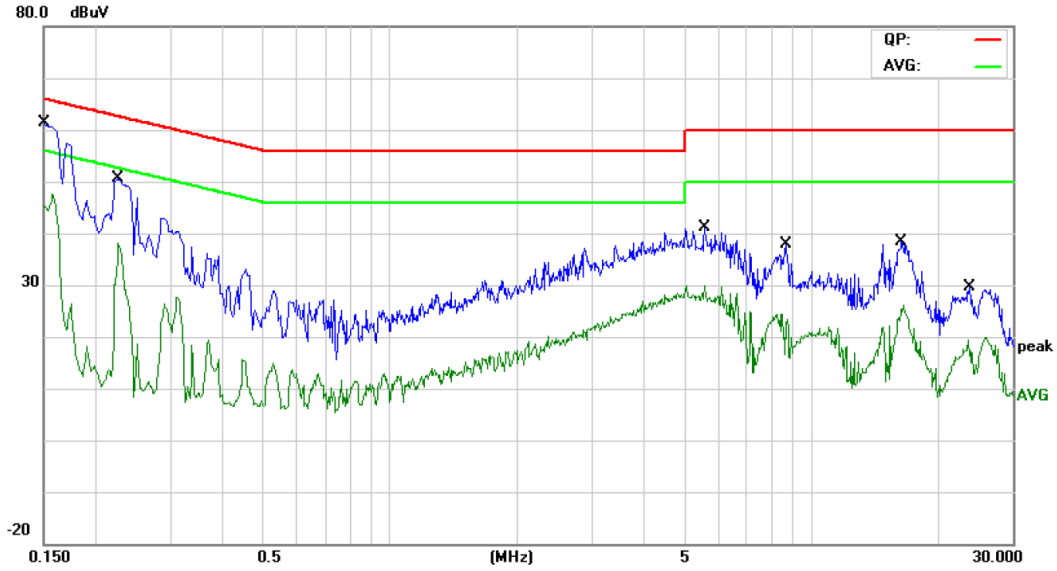
7.3 Result

The EUT antenna is a Dipole Antenna. It complies with the standard requirement.

Antenna Type
☒Permanent attached antenna
☐Unique connector antenna
☐Professional installation antenna

Attachment A--Conducted Emission Test Data

Temperature:	24.3℃	**Relative Humidity:**	44%
Test Voltage:	DC 5V from PC		
Terminal:	Line		
Test Mode:	Charging+TX Mode		
Remark:	Only worse case is reported		

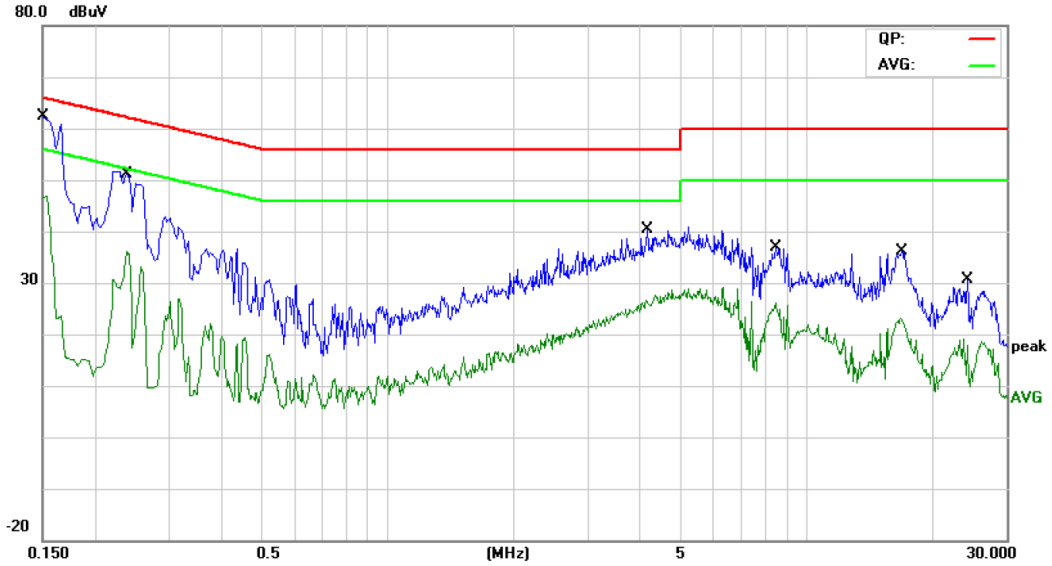


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1500	49.49	9.70	59.19	65.99	-6.80	QP
2		0.1500	34.28	9.70	43.98	55.99	-12.01	AVG
3		0.2260	38.89	9.70	48.59	62.59	-14.00	QP
4		0.2260	22.65	9.70	32.35	52.59	-20.24	AVG
5		5.5820	23.79	9.87	33.66	60.00	-26.34	QP
6		5.5820	16.99	9.87	26.86	50.00	-23.14	AVG
7		8.6899	15.93	9.80	25.73	60.00	-34.27	QP
8		8.6899	6.83	9.80	16.63	50.00	-33.37	AVG
9		16.3900	21.76	10.00	31.76	60.00	-28.24	QP
10		16.3900	13.73	10.00	23.73	50.00	-26.27	AVG
11		23.6420	11.52	10.09	21.61	60.00	-38.39	QP
12		23.6420	5.80	10.09	15.89	50.00	-34.11	AVG

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

Temperature:	24.3℃	**Relative Humidity:**	44%
Test Voltage:	DC 5V from PC		
Terminal:	Neutral		
Test Mode:	Charging+TX Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1499	29.33	9.80	39.13	66.00	-26.87	QP
2		0.1499	20.53	9.80	30.33	56.00	-25.67	AVG
3	*	0.2380	35.48	9.80	45.28	62.16	-16.88	QP
4		0.2380	10.06	9.80	19.86	52.16	-32.30	AVG
5		4.1739	23.13	9.80	32.93	56.00	-23.07	QP
6		4.1739	15.88	9.80	25.68	46.00	-20.32	AVG
7		8.4619	20.73	9.90	30.63	60.00	-29.37	QP
8		8.4619	13.66	9.90	23.56	50.00	-26.44	AVG
9		16.8619	19.34	10.00	29.34	60.00	-30.66	QP
10		16.8619	11.59	10.00	21.59	50.00	-28.41	AVG
11		24.1980	8.05	10.10	18.15	60.00	-41.85	QP
12		24.1980	-0.26	10.10	9.84	50.00	-40.16	AVG

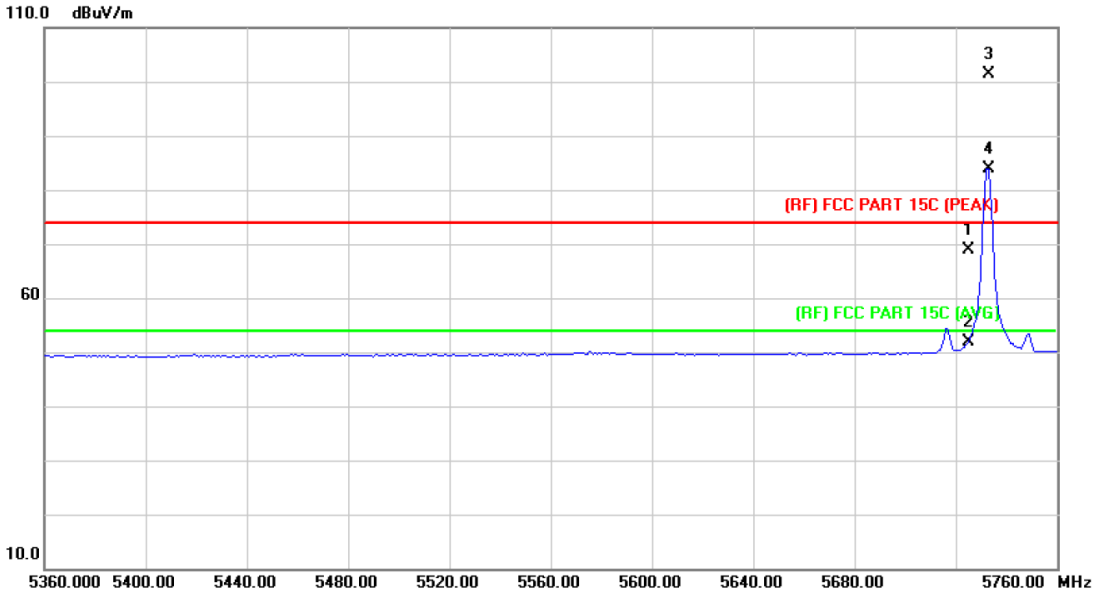
*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

Attachment B-- Radiated Emission Test Data

Field Strength of the Fundamental

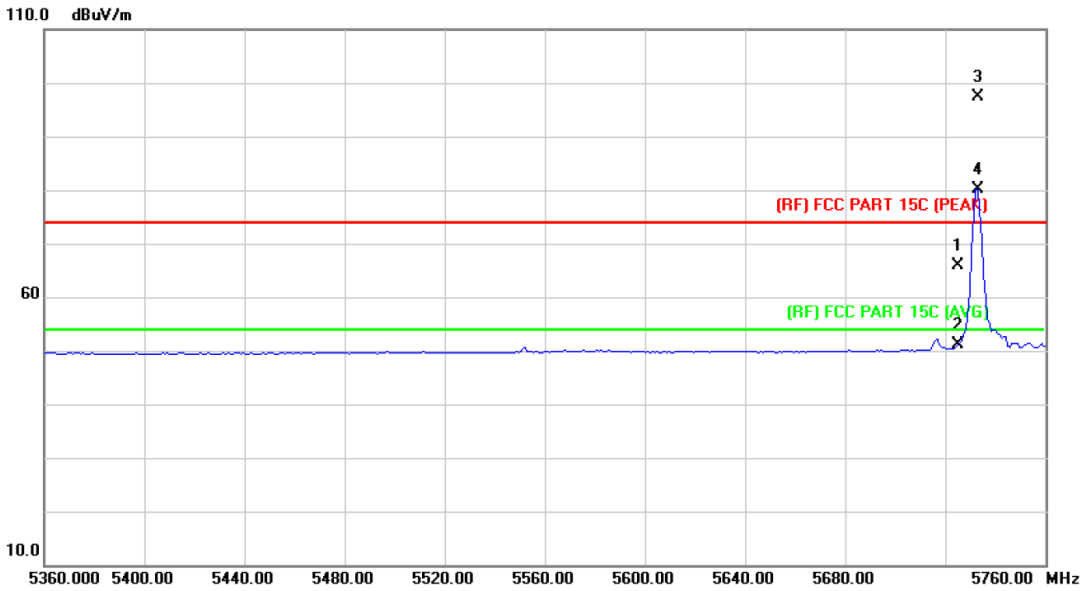
Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX 5732MHz		
Remark:			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	53.12	15.88	69.00	74.00	-5.00	peak
2		5725.000	36.07	15.88	51.95	54.00	-2.05	AVG
3	X	5732.800	85.41	15.90	101.31	**114.00**	**-12.69**	peak
4	*	5732.800	67.96	15.90	83.86	**94.00**	**-10.14**	AVG

Emission Level= Read Level+ Correct Factor

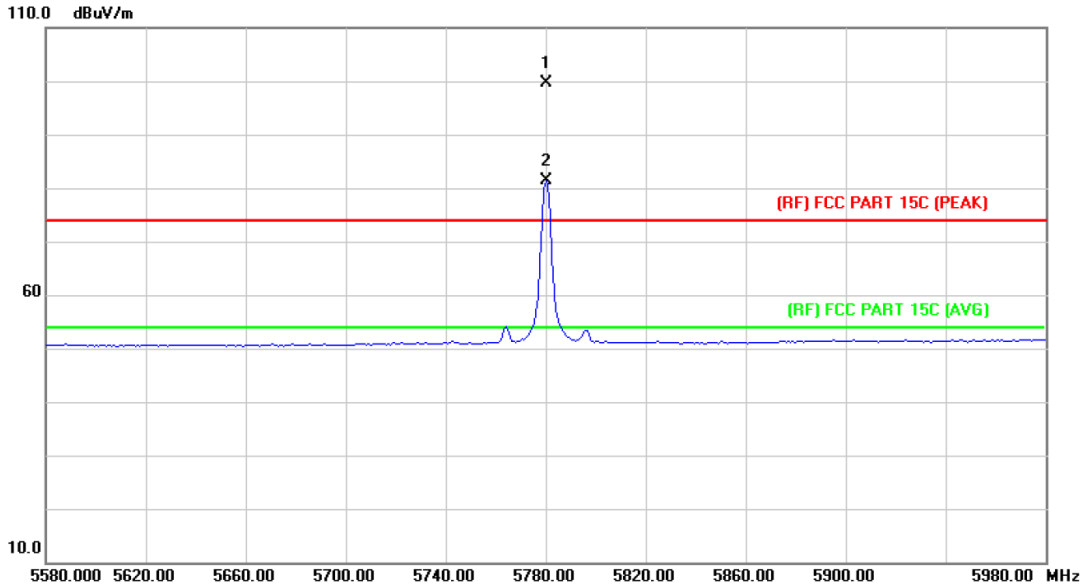
Temperature:	22.6℃	Relative Humidity:	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX 5732MHz		
Remark:			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		5725.000	49.96	15.88	65.84	74.00	-8.16	peak
2		5725.000	35.15	15.88	51.03	54.00	-2.97	AVG
3	X	5732.800	81.57	15.90	97.47	**114.00**	**-16.53**	peak
4	*	5732.800	64.23	15.90	80.13	**94.00**	**-13.87**	AVG

Emission Level= Read Level+ Correct Factor

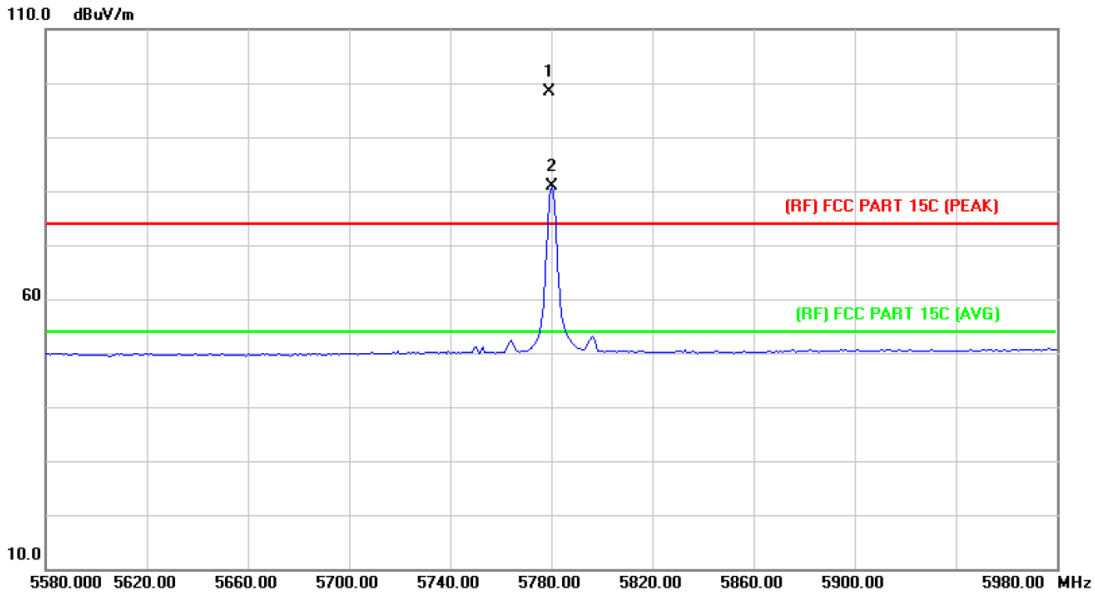
Temperature:	22.6℃	Relative Humidity:	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX 5780MHz		
Remark:			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5780.000	83.47	16.04	99.51	**114.00**	**-14.49**	peak
2	*	5780.000	65.33	16.04	81.37	**94.00**	**-12.63**	AVG

Emission Level= Read Level+ Correct Factor

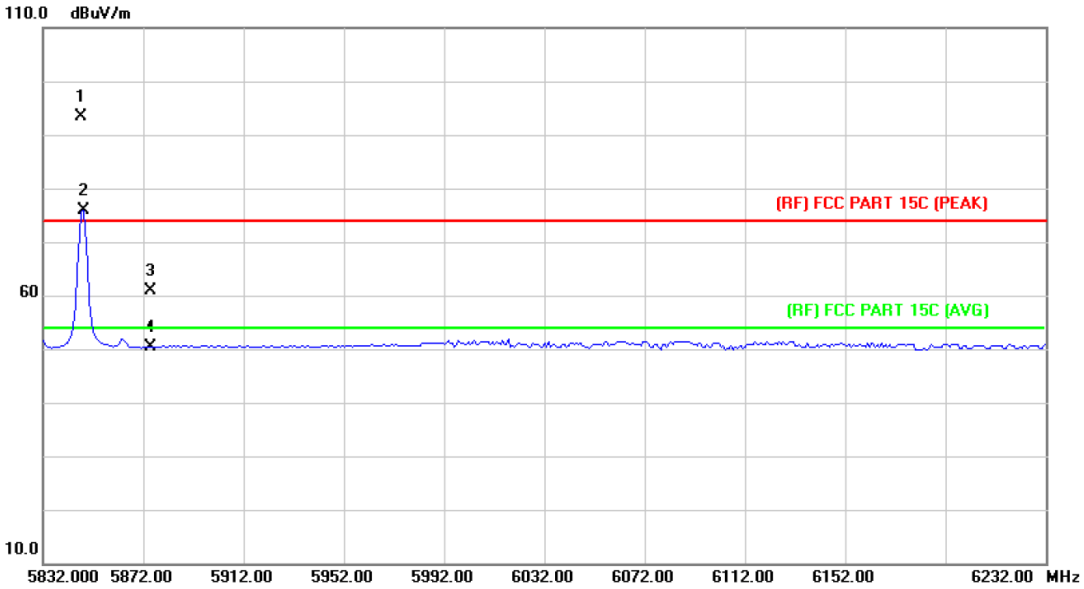
Temperature:	22.6℃	Relative Humidity:	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX 5780MHz		
Remark:			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5779.200	82.43	16.04	98.47	**114.00**	**-15.53**	peak
2	*	5780.000	64.84	16.04	80.88	**94.00**	**-13.12**	AVG

Emission Level= Read Level+ Correct Factor

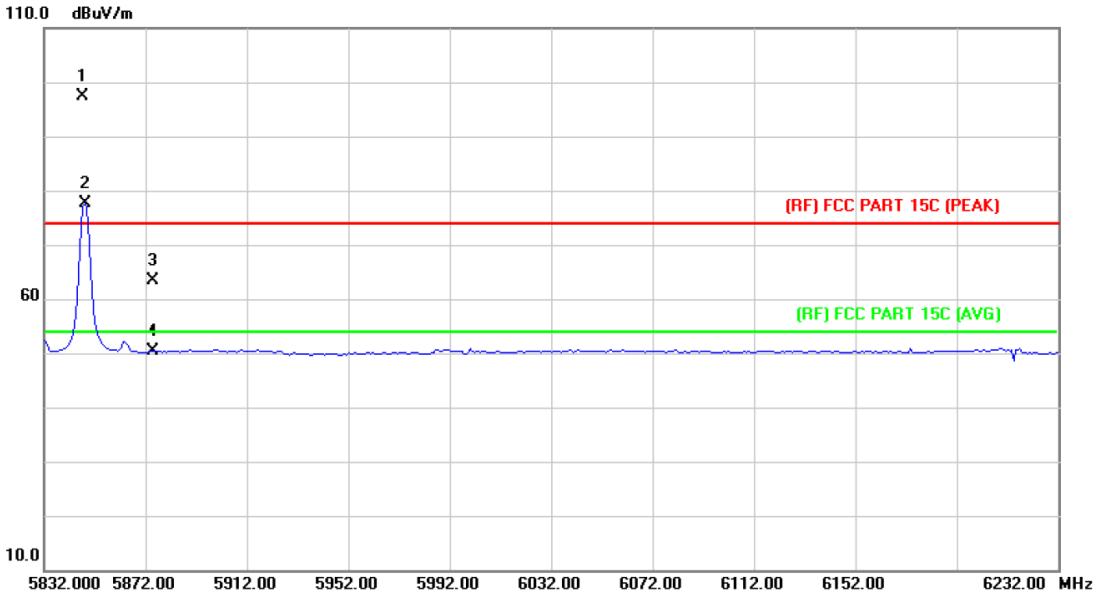
Temperature:	22.6℃	Relative Humidity:	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX 5848MHz		
Remark:			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5847.200	77.20	16.26	93.46	**114.00**	**-20.54**	peak
2	*	5848.000	59.52	16.26	75.78	**94.00**	**-18.22**	AVG
3		5875.000	44.64	16.34	60.98	74.00	-13.02	peak
4		5875.000	33.93	16.34	50.27	54.00	-3.73	AVG

Emission Level= Read Level+ Correct Factor

Temperature:	22.6℃	Relative Humidity:	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX 5848MHz		
Remark:			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	5847.400	81.00	16.26	97.26	**114.00**	**-16.74**	peak
2	*	5848.000	61.48	16.26	77.74	**94.00**	**-16.26**	AVG
3		5875.000	47.08	16.34	63.42	74.00	-10.58	peak
4		5875.000	34.14	16.34	50.48	54.00	-3.52	AVG

Emission Level= Read Level+ Correct Factor

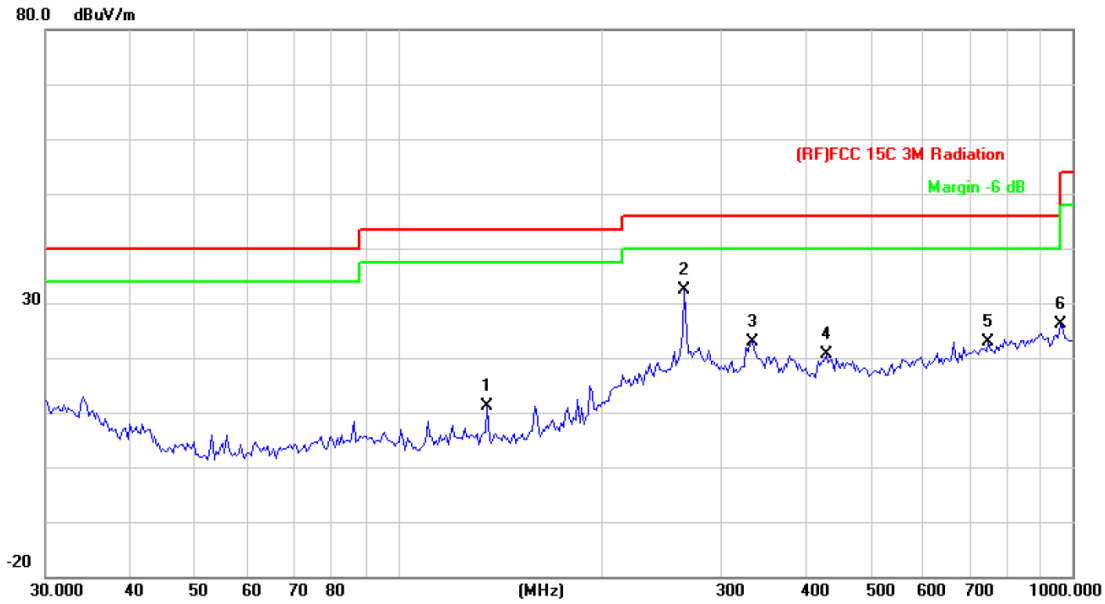
9 KHz to 30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

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

30MHz-1GHz

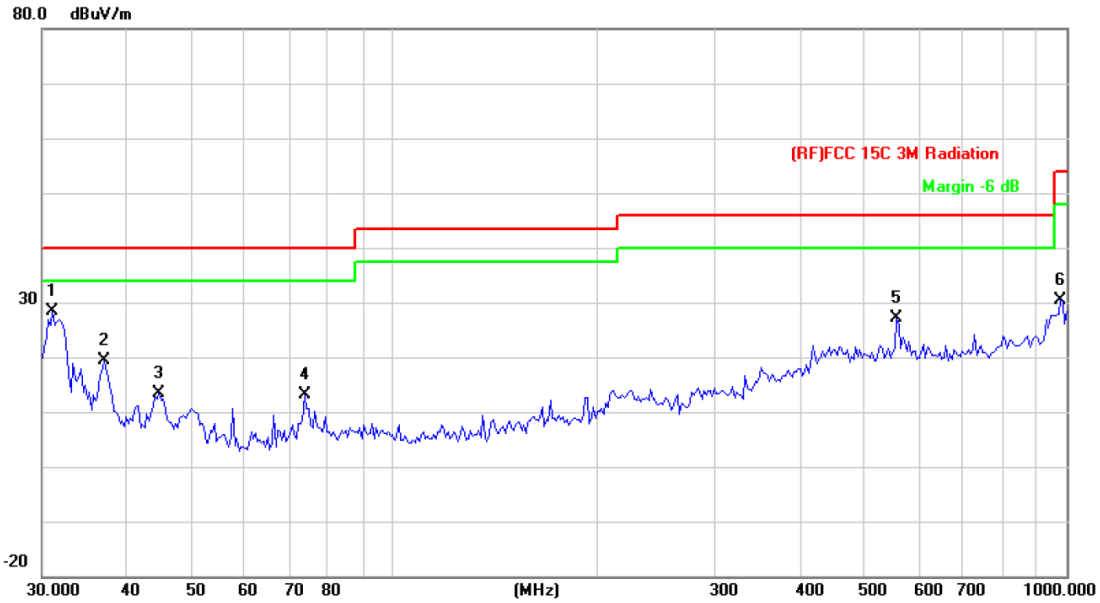
Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX Mode		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		135.5062	33.47	-22.37	11.10	43.50	-32.40	peak
2	*	265.6757	49.33	-16.93	32.40	46.00	-13.60	peak
3		334.8589	37.98	-15.14	22.84	46.00	-23.16	peak
4		431.0316	32.67	-12.07	20.60	46.00	-25.40	peak
5		750.1083	29.54	-6.60	22.94	46.00	-23.06	peak
6		958.7943	30.37	-4.21	26.16	46.00	-19.84	peak

Emission Level= Read Level+ Correct Factor

Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX Mode		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		

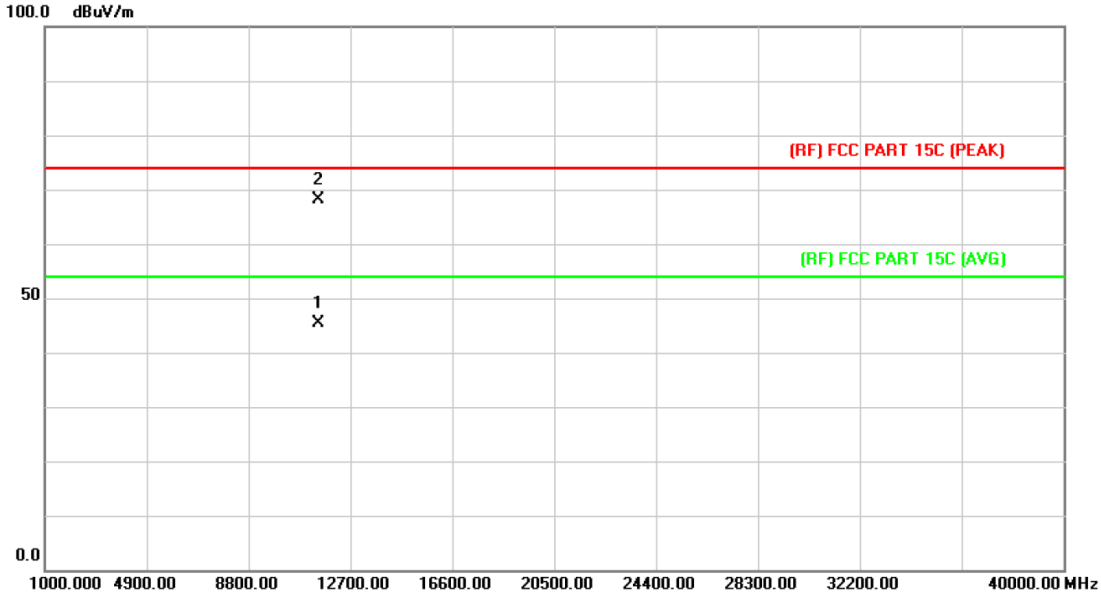


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	31.0706	42.08	-13.74	28.34	40.00	-11.66	peak
2		37.0248	36.98	-17.61	19.37	40.00	-20.63	peak
3		44.7433	34.64	-21.30	13.34	40.00	-26.66	peak
4		73.6170	36.19	-23.05	13.14	40.00	-26.86	peak
5		558.7302	36.03	-8.82	27.21	46.00	-18.79	peak
6		979.1804	34.44	-4.05	30.39	54.00	-23.61	peak

Emission Level= Read Level+ Correct Factor

Radiated Spurious Emission (Above 1 GHz)

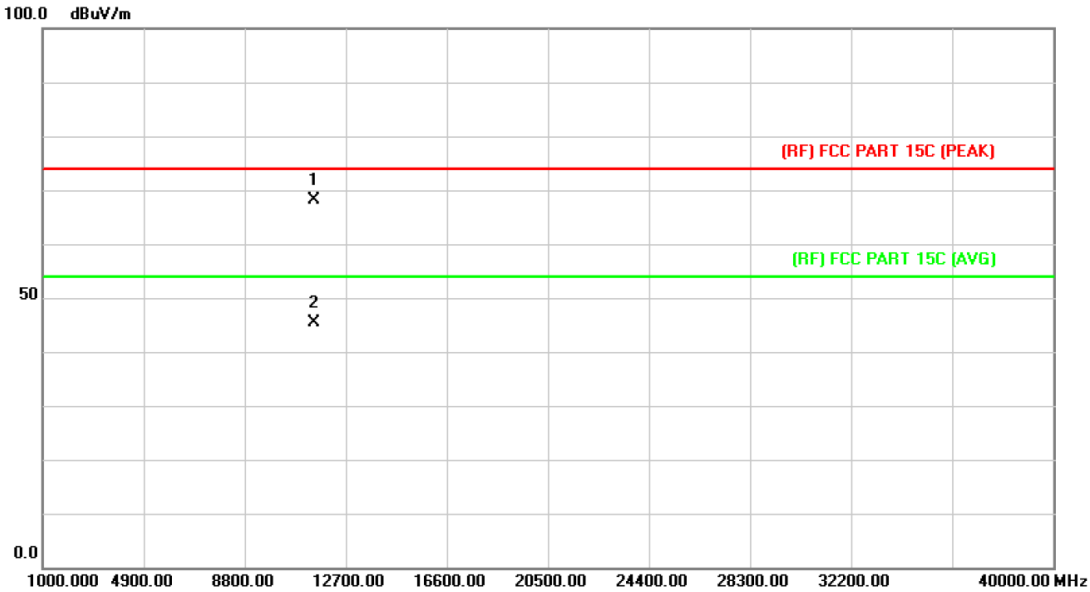
Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX 5732MHz		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		11464.142	13.41	32.02	45.43	54.00	-8.57	AVG
2	*	11464.751	36.00	32.01	68.01	74.00	-5.99	peak

Emission Level= Read Level+ Correct Factor

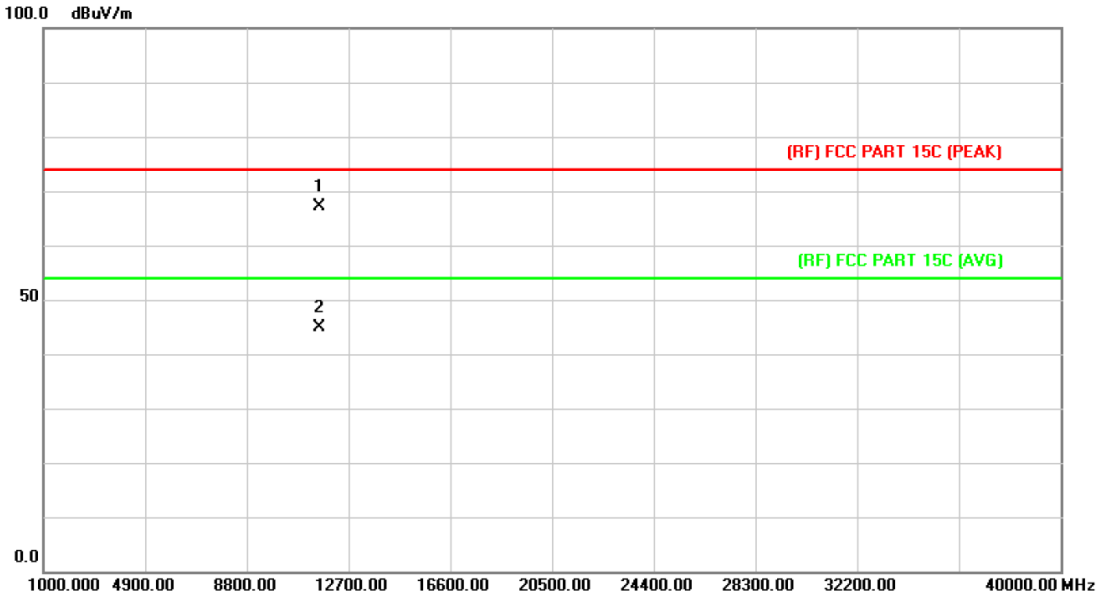
Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX 5732MHz		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	11463.597	32.84	35.28	68.12	74.00	-5.88	peak
2		11464.014	10.13	35.28	45.41	54.00	-8.59	AVG

Emission Level= Read Level+ Correct Factor

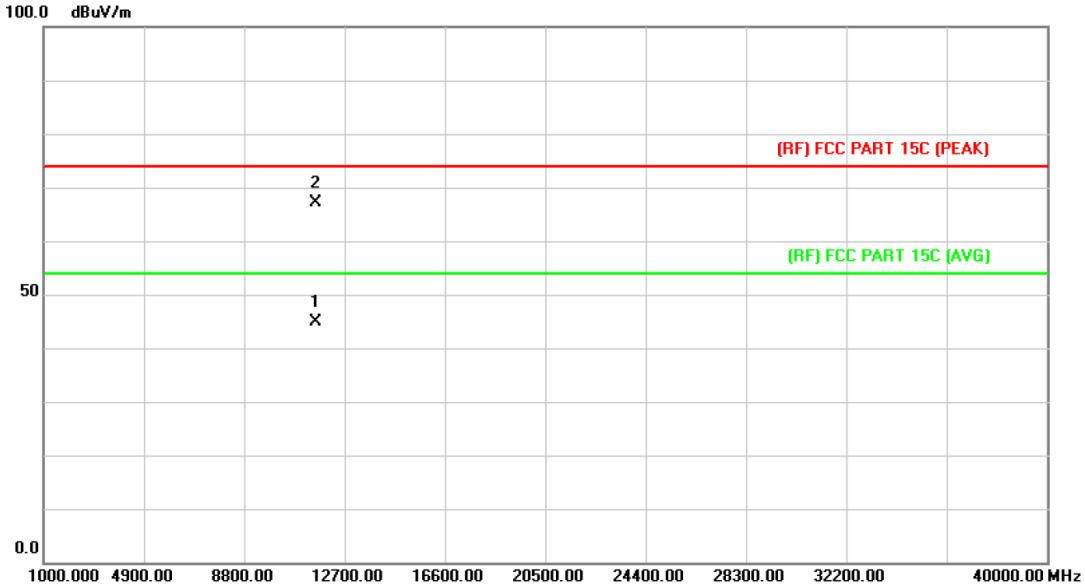
Temperature:	22.6℃	Relative Humidity:	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX 5780MHz		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	11560.153	35.05	32.04	67.09	74.00	-6.91	peak
2		11560.753	12.91	32.04	44.95	54.00	-9.05	AVG

Emission Level= Read Level+ Correct Factor

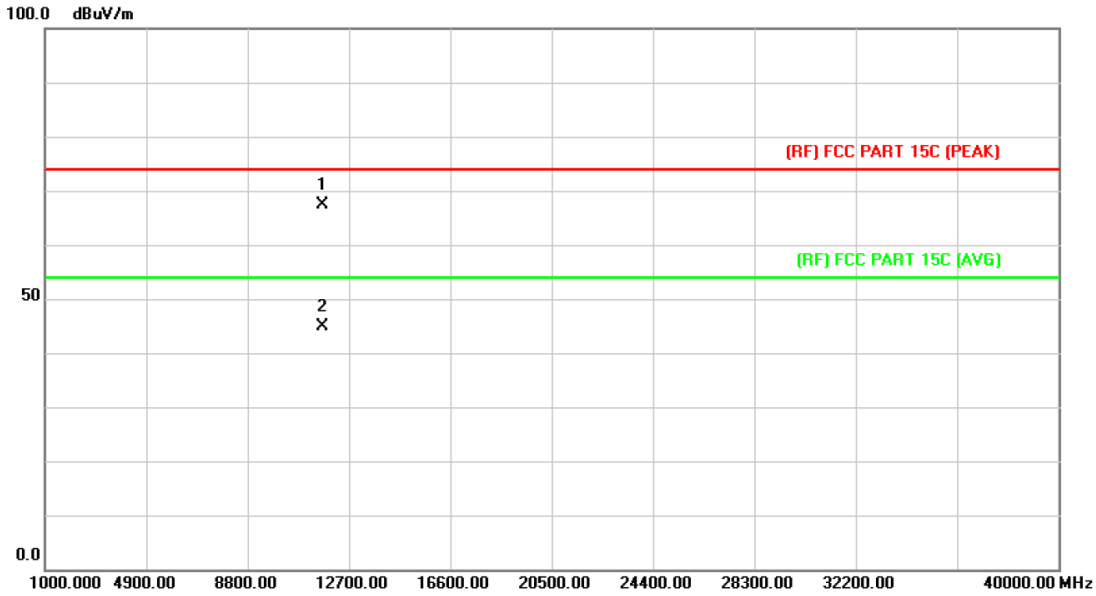
Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX 5780MHz		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		11560.060	10.10	34.82	44.92	54.00	-9.08	AVG
2	*	11560.184	32.35	34.82	67.17	74.00	-6.83	peak

Emission Level= Read Level+ Correct Factor

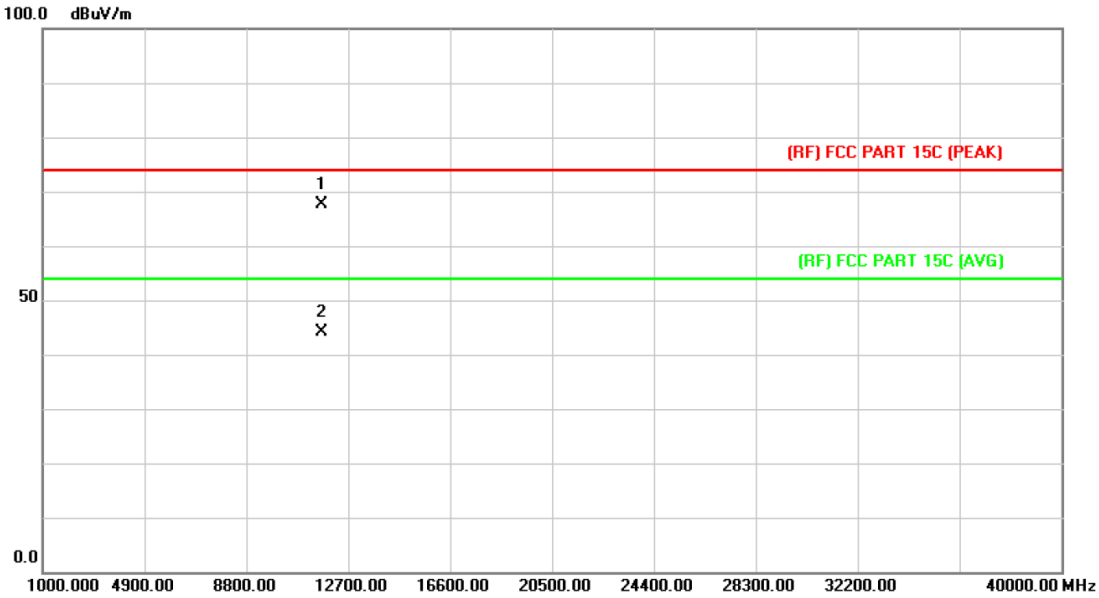
Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Horizontal		
Test Mode:	TX 5848MHz		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	11695.043	35.11	32.31	67.42	74.00	-6.58	peak
2		11696.128	12.47	32.32	44.79	54.00	-9.21	AVG

Emission Level= Read Level+ Correct Factor

Temperature:	22.6℃	**Relative Humidity:**	42%
Test Voltage:	DC 5V from PC		
Ant. Pol.	Vertical		
Test Mode:	TX 5848MHz		
Remark:	No report for the emission which more than 20 dB below the prescribed limit.		



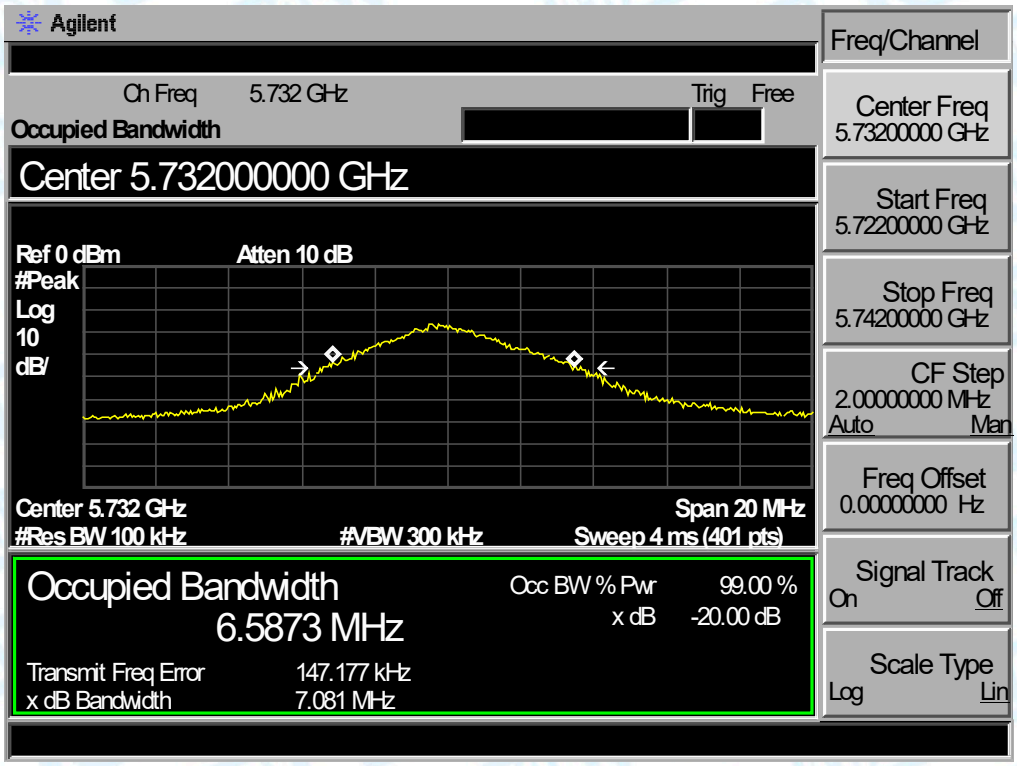
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	11696.137	34.00	33.75	67.75	74.00	-6.25	peak
2		11696.851	10.42	33.74	44.16	54.00	-9.84	AVG

Emission Level= Read Level+ Correct Factor

Attachment C--Bandwidth Data

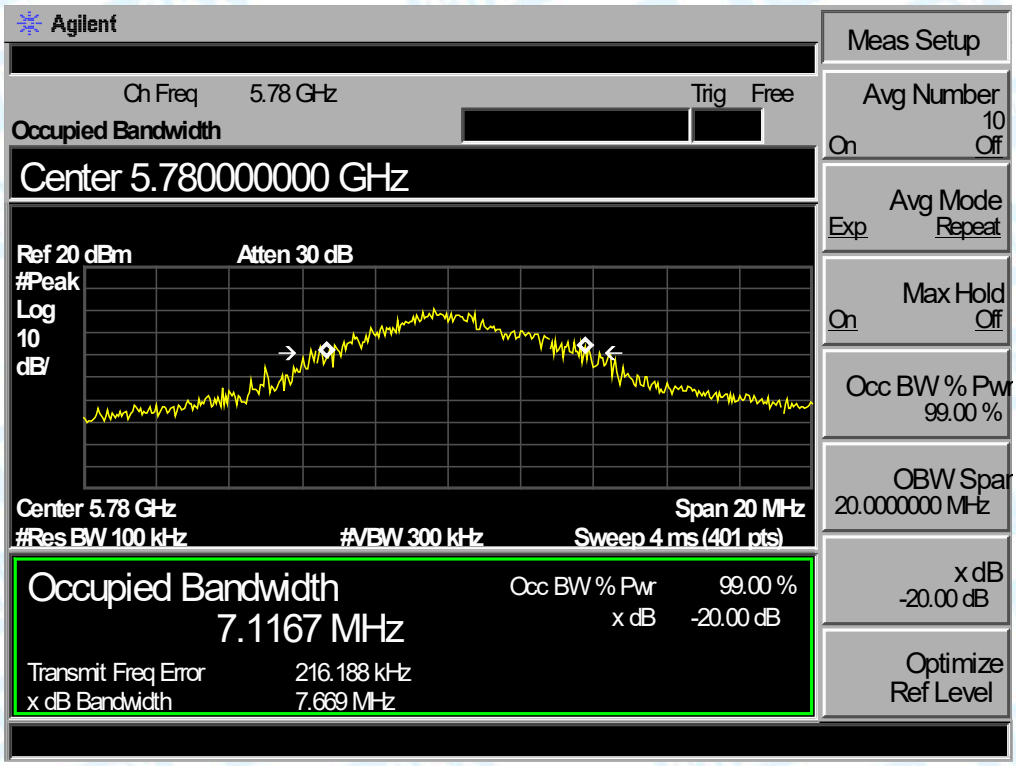
Low Channel Frequency (MHz)	20dB Bandwidth (MHz)
5732	7.081

5732 MHz



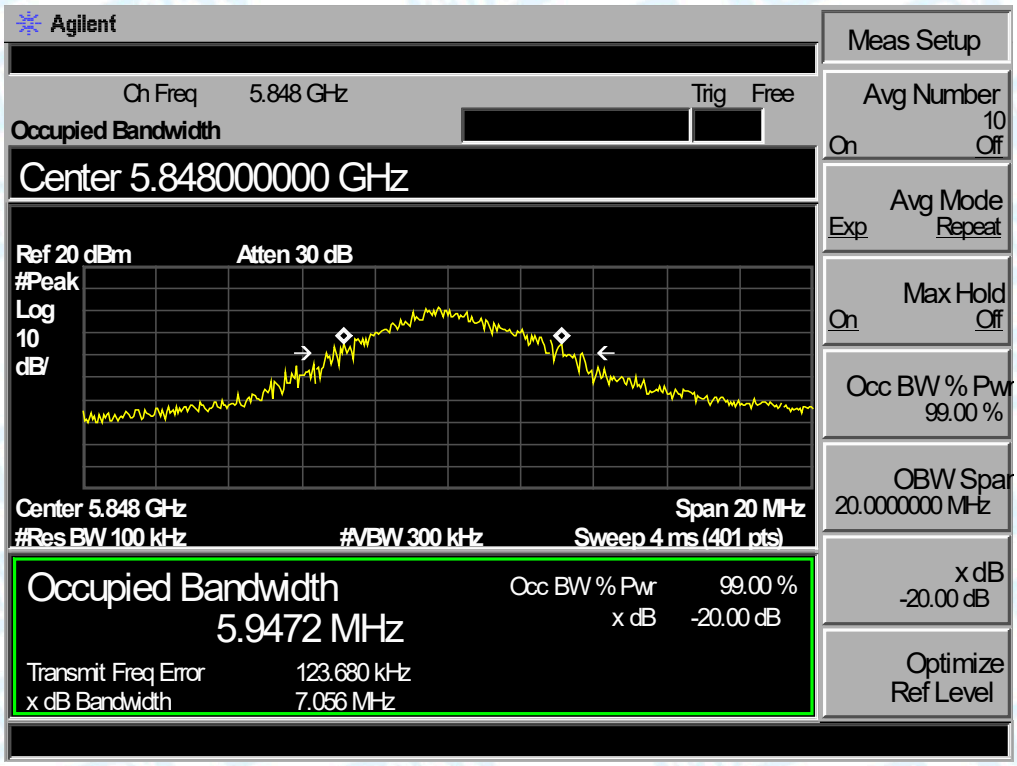
MID Channel Frequency (MHz)	20dB Bandwidth (MHz)
5780	7.669

5780 MHz



HIGH Channel Frequency (MHz)	20dB Bandwidth (MHz)
5848	7.056

5848 MHz



-----End of Report----