

# FCC Test Report

**Applicant** : **ShenZhen Easydetek Technology CO. LTD.**

**Address** : **6/F Fuyuan Industrial&commercial Building,  
Hangcheng Industrial Park, Baoan District,  
Shenzhen, 518000, China**

**Product Name** : **EDC18D**

**Report Date** : **Sept. 27, 2023**

**Shenzhen Anbotek Compliance Laboratory Limited**



**Shenzhen Anbotek Compliance Laboratory Limited**

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# TEST REPORT

Applicant : ShenZhen Easydetek Technology CO. LTD.  
Manufacturer : ShenZhen Easydetek Technology CO. LTD.  
Product Name : EDC18D  
Test Model No. : EDC18D  
Reference Model No. : N/A  
Trade Mark : N/A  
Rating(s) : Input: DC 5-12V

**Test Standard(s) : FCC Part15 Subpart C, Paragraph 15.249**

**Test Method(s) : ANSI C63.10: 2020**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt

Aug. 31, 2023

Date of Test

Aug. 31 ~ Sept. 23, 2023

Prepared by

*Nian Xiu Chen*

(Nianxiu Chen)

Approved & Authorized Signer

*Edward Pan*

(Edward Pan)



### Revision History

Report Version	Description	Issued Date
R00	Original Issue.	Sept. 27, 2023



## 1. General Information

### 1.1. Client Information

Applicant	:	ShenZhen Easydetek Technology CO. LTD.
Address	:	6/F Fuyuan Industrial&commercial Building, Hangcheng Industrial Park, Baoan District, Shenzhen, 518000, China
Manufacturer	:	ShenZhen Easydetek Technology CO. LTD.
Address	:	6/F Fuyuan Industrial&commercial Building, Hangcheng Industrial Park, Baoan District, Shenzhen, 518000, China
Factory	:	ShenZhen Easydetek Technology CO. LTD.
Address	:	6/F Fuyuan Industrial&commercial Building, Hangcheng Industrial Park, Baoan District, Shenzhen, 518000, China

### 1.2. Description of Device (EUT)

Product Name	:	EDC18D
Test Model No.	:	EDC18D
Reference Model No.	:	N/A
Trade Mark	:	N/A
Test Power Supply	:	DC 5V
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	N/A
<b>RF Specification</b>		
Operation Frequency	:	5750~5870MHz
Number of Channel	:	121 Channels
Modulation Type	:	FSK
Antenna Type	:	PCB Antenna
Antenna Gain(Peak)	:	4.86 dBi
<b>Remark:</b>		
(1) All of the RF specification are provided by customer.		
(2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		



**1.3. Auxiliary Equipment Used During Test**

Description	Rating(s)
--	--

**1.4. Description of Test Configuration**

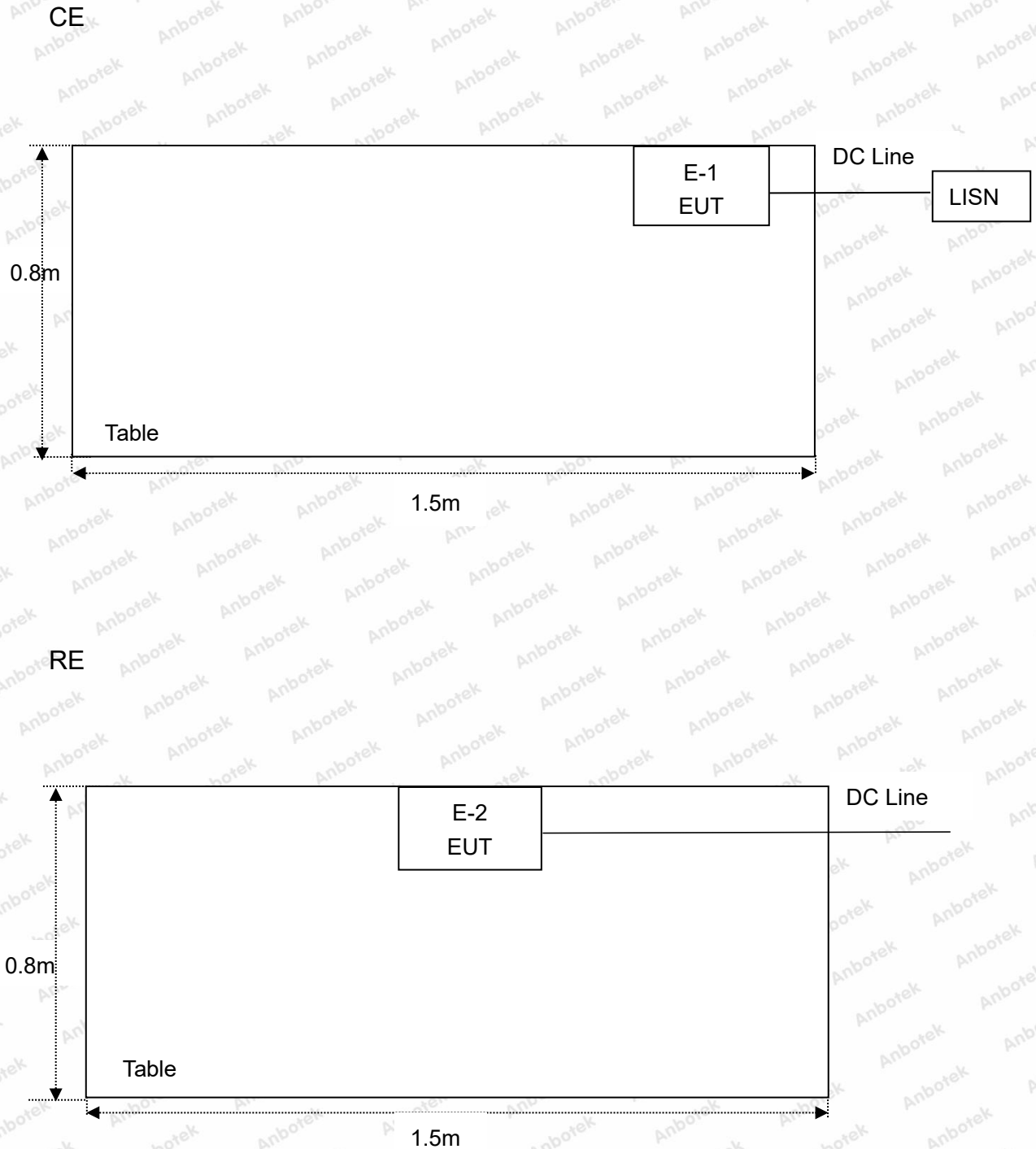
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
01	5750	26	5775	51	5800	76	5825	101	5850
02	5751	27	5776	52	5801	77	5826	102	5851
03	5752	28	5777	53	5802	78	5827	103	5852
04	5753	29	5778	54	5803	79	5828	104	5853
05	5754	30	5779	55	5804	80	5829	105	5854
06	5755	31	5780	56	5805	81	5830	106	5855
07	5756	32	5781	57	5806	82	5831	107	5856
08	5757	33	5782	58	5807	83	5832	108	5857
09	5758	34	5783	59	5808	84	5833	109	5858
10	5759	35	5784	60	5809	85	5834	110	5859
11	5760	36	5785	61	5810	86	5835	111	5860
12	5761	37	5786	62	5811	87	5836	112	5861
13	5762	38	5787	63	5812	88	5837	113	5862
14	5763	39	5788	64	5813	89	5838	114	5863
15	5764	40	5789	65	5814	90	5839	115	5864
16	5765	41	5790	66	5815	91	5840	116	5865
17	5766	42	5791	67	5816	92	5841	117	5866
18	5767	43	5792	68	5817	93	5842	118	5867
19	5768	44	5793	69	5818	94	5843	119	5868
20	5769	45	5794	70	5819	95	5844	120	5869
21	5770	46	5795	71	5820	96	5845	121	5870
22	5771	47	5796	72	5821	97	5846	/	/
23	5772	48	5797	73	5822	98	5847	/	/
24	5773	49	5798	74	5823	99	5848	/	/
25	5774	50	5799	75	5824	100	5849	/	/

Note:

1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.
2. EUT was tested with Channel 01, 51 and 121.



### 1.5. Description of Test Setup



## 1.6. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Oct. 23, 2022	1 Year
2.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul. 05, 2023	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 13, 2022	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 23, 2022	1 Year
5.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	Oct. 13, 2022	1 Year
6.	EMI Preamplifier	SKET Electronic	LNPA-0118G-45	SKET-PA-002	Oct. 13, 2022	1 Year
7.	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	02555	Oct. 16, 2022	3 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	Oct. 23, 2022	3 Year
9.	Loop Antenna	Schwarzbeck	FMZB1519B	00053	Oct. 23, 2022	1 Year
10.	Horn Antenna	A-INFO	LB-180400-KF	J211060628	Oct. 23, 2022	1 Year
11.	Pre-amplifier	SONOMA	310N	186860	Oct. 23, 2022	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	Oct. 13, 2022	1 Year
14.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Oct. 13, 2022	1 Year
15.	Signal Generator	Agilent	E4421B	MY41000743	Oct. 13, 2022	1 Year
16.	DC Power Supply	IVYTECH	IV3605	1804D360510	Oct. 22, 2022	1 Year
17.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	Oct. 19, 2022	1 Year
18.	Power Meter	Agilent	N1914A	MY50001102	Oct.26, 2022	1 Year





### 1.7. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	3.8dB
Occupied Bandwidth	925Hz
Conducted Output Power	0.76dB
Conducted Spurious Emission	1.24dB
Radiated spurious emissions (Below 30MHz)	3.53dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 3.92dB; Vertical: 4.52dB
Radiated spurious emissions (above 1GHz)	1G-6GHz: 4.78dB; 6G-18GHz: 4.88dB 18G-40GHz: 5.68dB
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

### 1.8. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111.

#### ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

#### Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518102



**1.9. Disclaimer**

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.



## 2. Summary of Test Results

Standard Section	Test Item	Result
15.203	Antenna Requirement	PASS
15.207	Conducted Emission	PASS
15.205/15.209/15.249	Radiated Emission	PASS
15.249(d)	Band Edge	PASS
15.215(c)	20dB Bandwidth	PASS
<b>Remark:</b> "N/A" is an abbreviation for Not Applicable.		



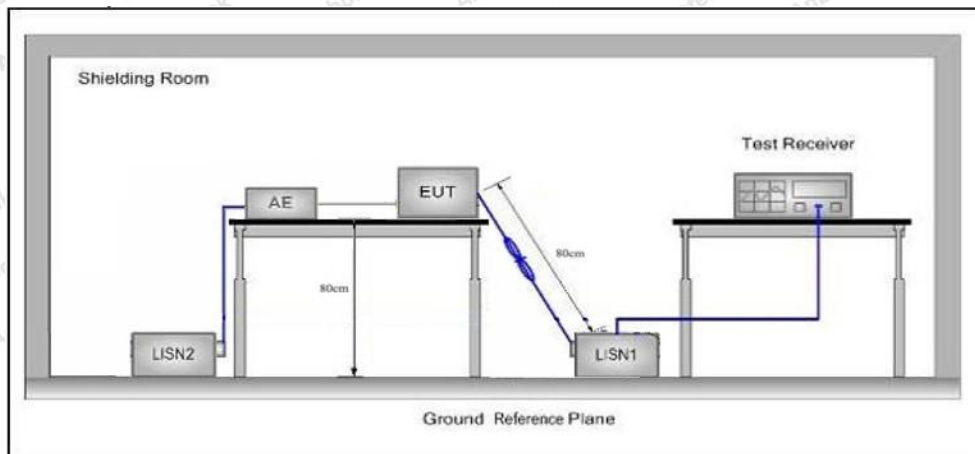
## 3. Conducted Emission Test

### 3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.207		
	Frequency	Maximum RF Line Voltage (dBuV)	
		Quasi-peak Level	Average Level
Test Limit	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
	500kHz~5MHz	56	46
	5MHz~30MHz	60	50

**Remark:** (1) \*Decreasing linearly with logarithm of the frequency.  
 (2) The lower limit shall apply at the transition frequency.

### 3.2. Test Setup



### 3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10: 2020 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

### 3.4. Test Data

During the test, pre-scan all modes, only the worst case is recorded in the report.

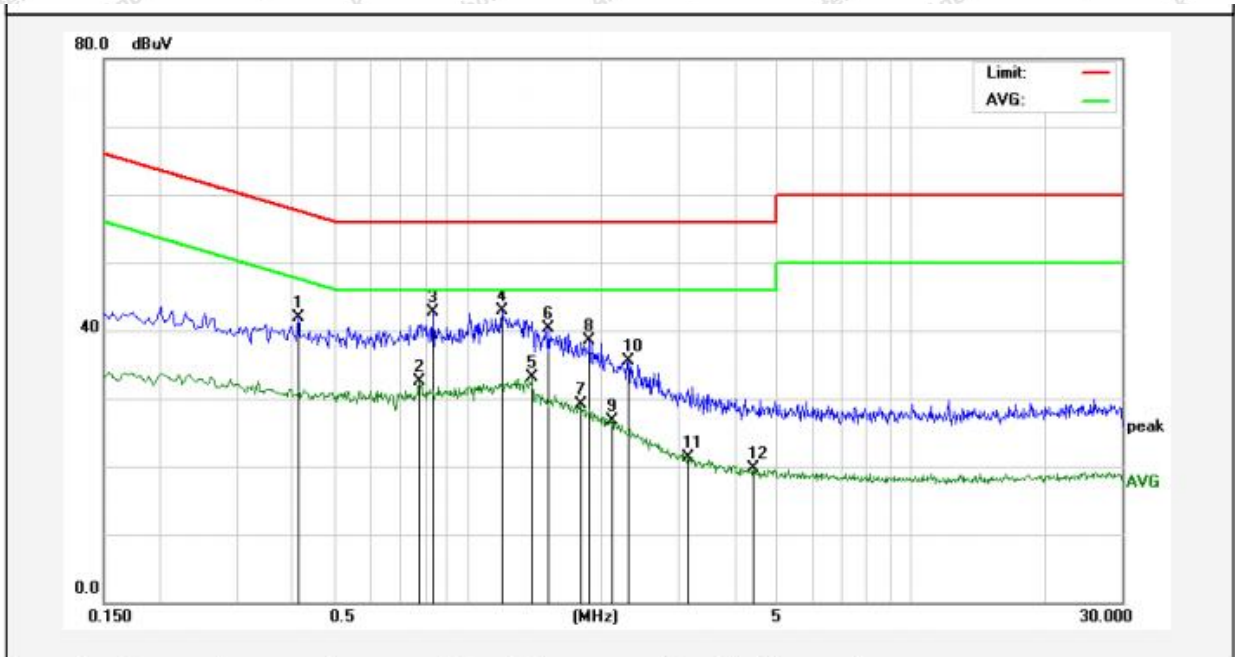
AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/60Hz modes, recorded worst case AC 120V/60Hz.

Please to see the following pages.



### Conducted Emission Test Data

Test Site: 1# Shielded Room  
 Operating Condition: 5800MHz  
 Test Specification: DC 5V  
 Comment: +  
 Temp.(°C)/Hum.(%RH): 24.2°C/66%RH

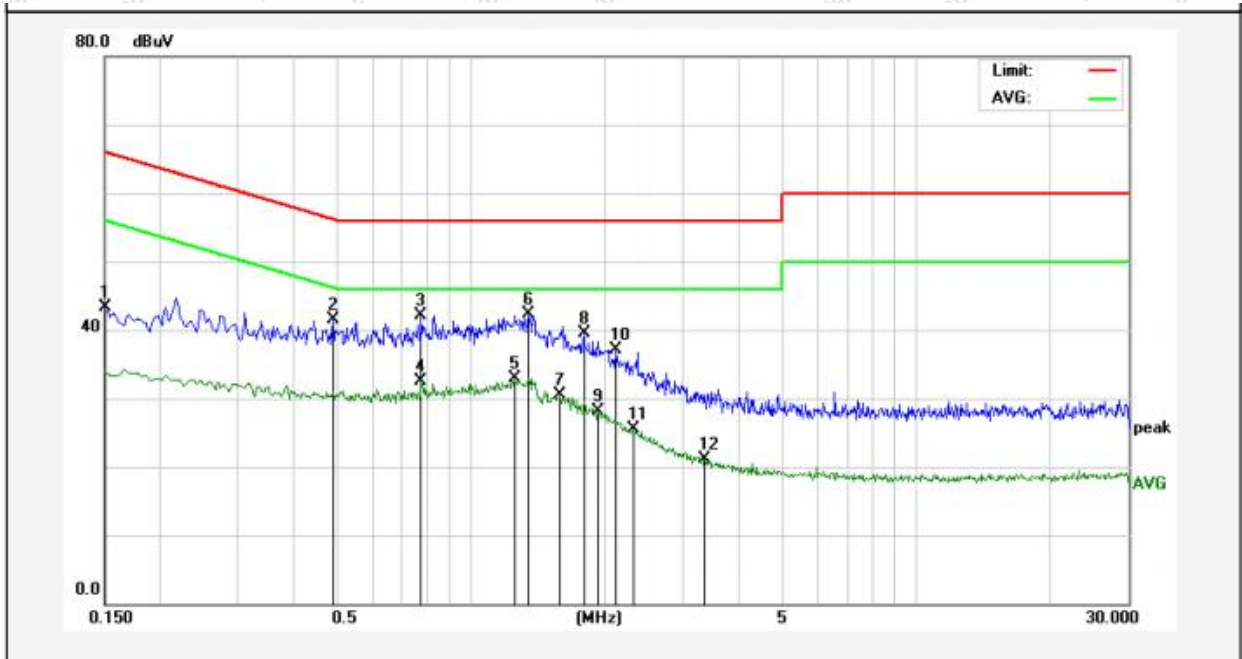


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.4140	22.13	19.82	41.95	57.57	-15.62	QP	
2	0.7780	12.70	19.87	32.57	46.00	-13.43	AVG	
3	0.8340	22.90	19.87	42.77	56.00	-13.23	QP	
4	1.1940	23.03	19.85	42.88	56.00	-13.12	QP	
5	1.3980	13.19	19.86	33.05	46.00	-12.95	AVG	
6	1.5260	20.55	19.85	40.40	56.00	-15.60	QP	
7	1.7980	9.20	19.86	29.06	46.00	-16.94	AVG	
8	1.8820	18.64	19.85	38.49	56.00	-17.51	QP	
9	2.1020	6.93	19.85	26.78	46.00	-19.22	AVG	
10	2.3020	15.67	19.85	35.52	56.00	-20.48	QP	
11	3.1540	1.53	19.85	21.38	46.00	-24.62	AVG	
12	4.4179	-0.15	19.85	19.70	46.00	-26.30	AVG	



### Conducted Emission Test Data

Test Site: 1# Shielded Room  
 Operating Condition: 5800MHz  
 Test Specification: DC 5V  
 Comment: -  
 Temp.(°C)/Hum.(%RH): 24.2°C/66%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1500	23.53	19.82	43.35	65.99	-22.64	QP	
2	0.4900	21.72	19.86	41.58	56.17	-14.59	QP	
3	0.7740	22.31	19.87	42.18	56.00	-13.82	QP	
4	0.7740	12.68	19.87	32.55	46.00	-13.45	AVG	
5	1.2500	13.15	19.85	33.00	46.00	-13.00	AVG	
6	1.3500	22.49	19.86	42.35	56.00	-13.65	QP	
7	1.5900	10.74	19.85	30.59	46.00	-15.41	AVG	
8	1.7980	19.62	19.86	39.48	56.00	-16.52	QP	
9	1.9300	8.24	19.85	28.09	46.00	-17.91	AVG	
10	2.1140	17.23	19.85	37.08	56.00	-18.92	QP	
11	2.3100	5.71	19.85	25.56	46.00	-20.44	AVG	
12	3.3500	1.30	19.85	21.15	46.00	-24.85	AVG	



## 4. Radiated Emission and Band Edge

### 4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.209 and 15.205				
Test Limit	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz~0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz~88MHz	100	40.0	Quasi-peak	3
	88MHz~216MHz	150	43.5	Quasi-peak	3
	216MHz~960MHz	200	46.0	Quasi-peak	3
	960MHz~1000MHz	500	54.0	Quasi-peak	3
	Above 1000MHz	500	54.0	Average	3
-		74.0	Peak	3	

**Remark:**

(1)The lower limit shall apply at the transition frequency.

(2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Standard	FCC Part15 C Section 15.249					
Test Limit	Frequency (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	5725~5875	50	-	114.0	Peak	3
	5725~5875	50	-	94.0	Average	3
	5725~5875	-	500	74.0	Peak	3
	5725~5875	-	500	54.0	Average	3

**Remark:**

(1) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.



## 4.2. Test Setup

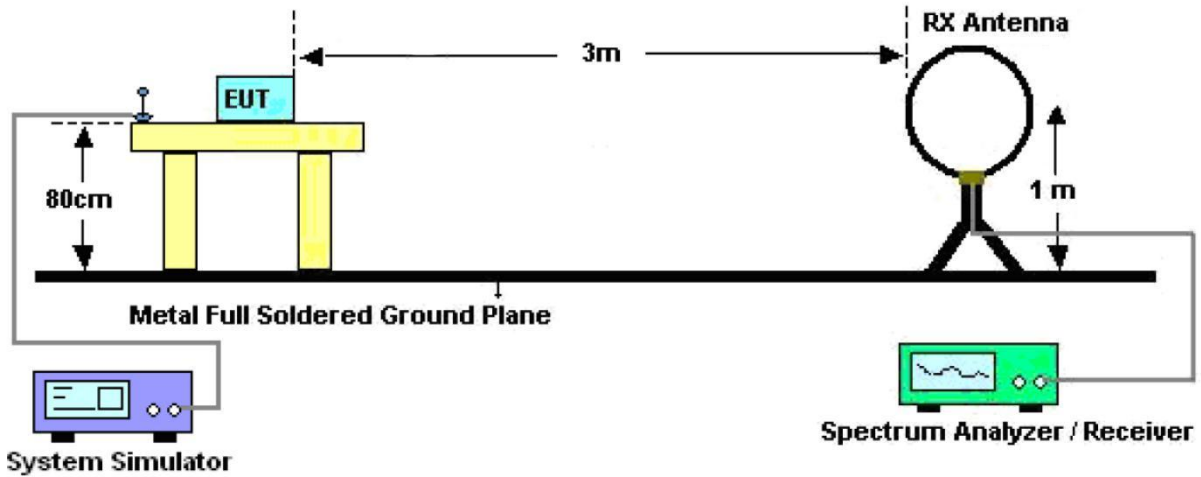


Figure 1. Below 30MHz

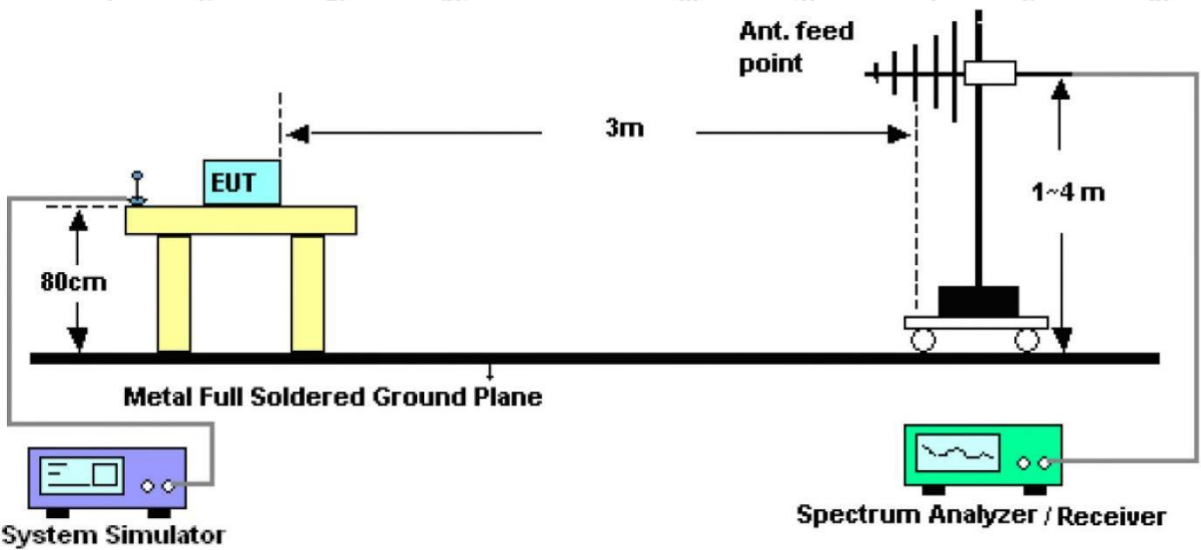


Figure 2. 30MHz to 1GHz





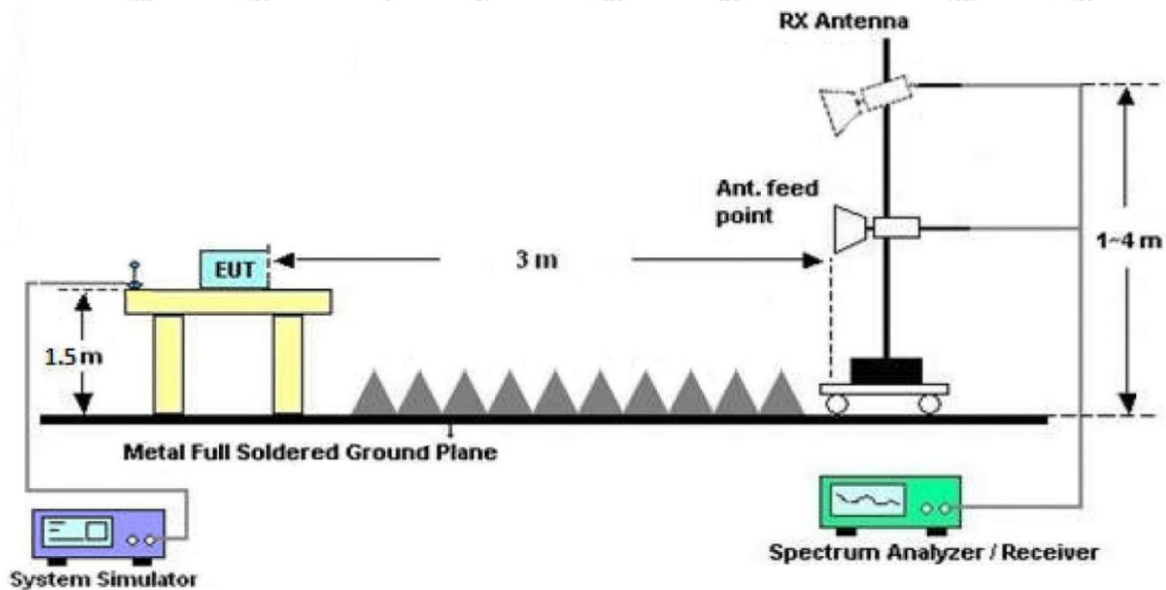


Figure 3. Above 1 GHz

### 4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9\*6\*6 Chamber. The device is evaluated in xyz orientation.

For the radiated emission test above 1GHz:

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.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.



For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW = 300kHz, Detector = Quasi-Peak, Trace mode = Max hold, Sweep = auto couple.

For above 1GHz, Set the spectrum analyzer as:

RBW = 1MHz, VBW = 1MHz, Detector = Peak, Trace mode = Max hold, Sweep = auto couple.

RBW = 1MHz, VBW = 10Hz, Detector = Average, Trace mode = Max hold, Sweep = auto couple.

#### 4.4. Test Data

##### PASS

During the test, Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis is the worst case.

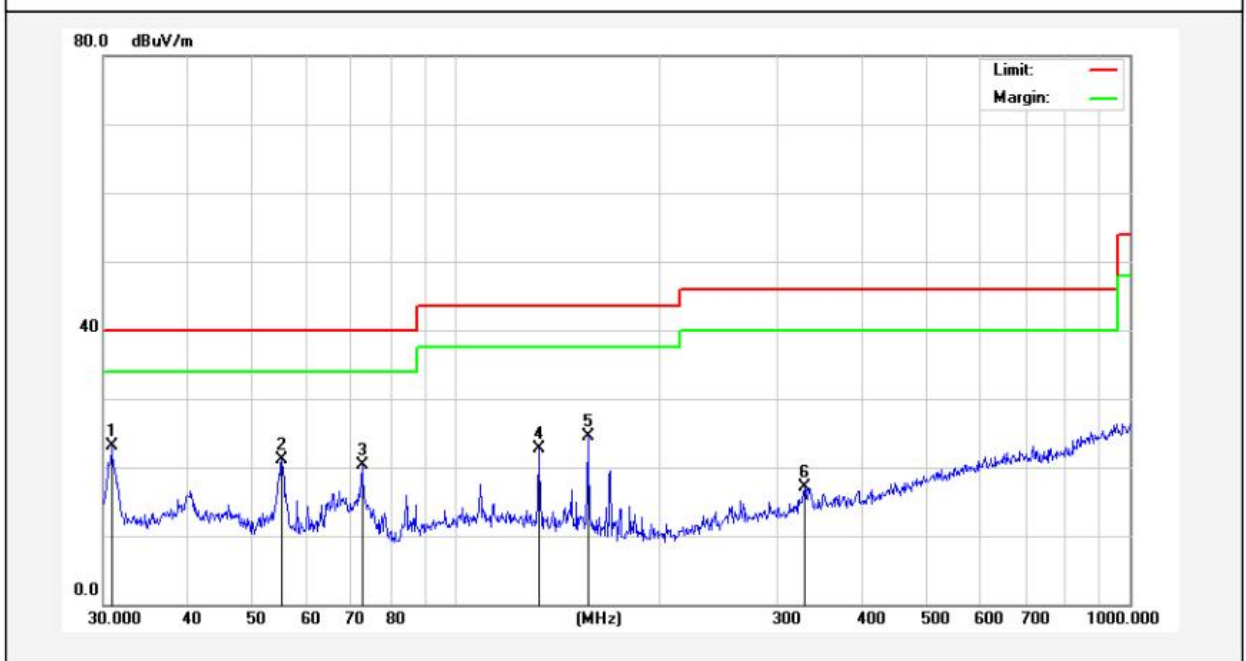
The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, pre-scan all the modes, only the worst case is recorded in the report.



**Test Results (30~1000MHz)**

Test Mode: 5800MHz  
 Power Source: DC 5V  
 Polarization: Horizontal  
 Temp.(°C)/Hum.(%RH): 23.5°C/49%RH

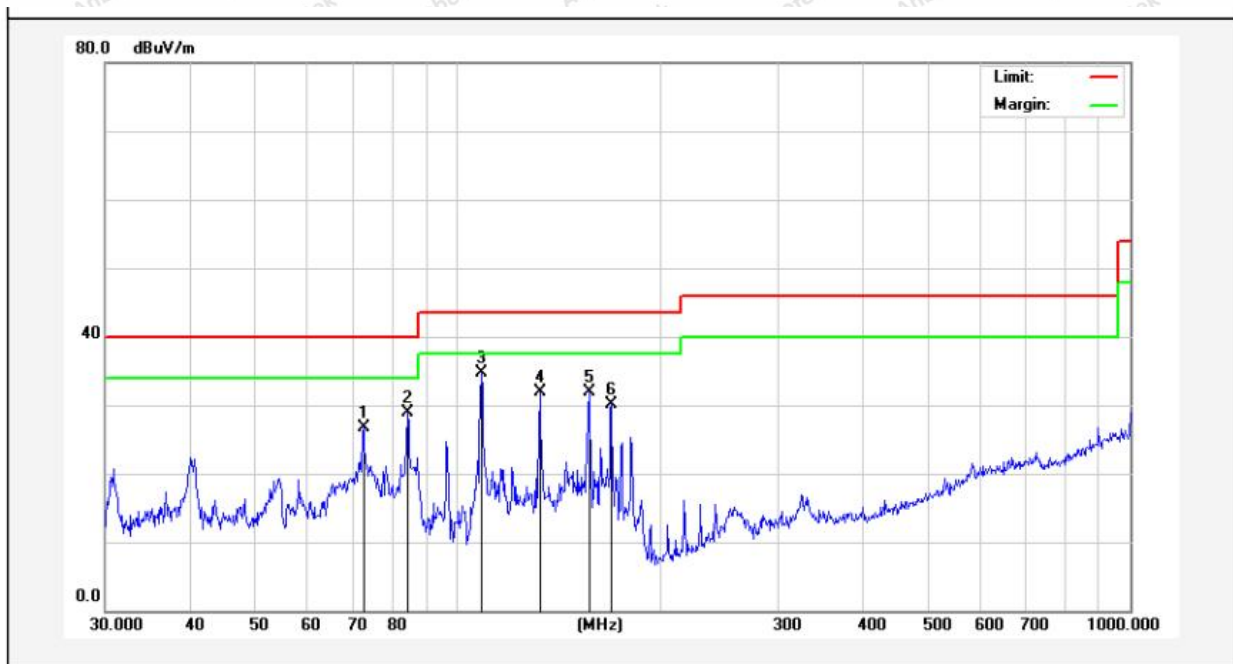


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	30.8535	43.15	-19.95	23.20	40.00	-16.80	QP			
2	55.2207	38.69	-17.62	21.07	40.00	-18.93	QP			
3	72.5916	42.36	-22.11	20.25	40.00	-19.75	QP			
4	132.6850	45.35	-22.66	22.69	43.50	-20.81	QP			
5	157.0074	48.20	-23.67	24.53	43.50	-18.97	QP			
6	329.0390	33.53	-16.49	17.04	46.00	-28.96	QP			



### Test Results (30~1000MHz)

Test Mode: 5800MHz  
 Power Source: DC 5V  
 Polarization: Vertical  
 Temp.(°C)/Hum.(%RH): 23.5°C/49%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	72.5916	46.60	-19.92	26.68	40.00	-13.32	QP			
2	84.4054	47.63	-18.64	28.99	40.00	-11.01	QP			
3	108.6470	52.65	-17.97	34.68	43.50	-8.82	QP			
4	132.6850	53.58	-21.67	31.91	43.50	-11.59	QP			
5	157.0074	53.66	-21.78	31.88	43.50	-11.62	QP			
6	169.5990	51.20	-21.16	30.04	43.50	-13.46	QP			



## Test Results (1GHz-25GHz)

Test channel: Lowest						
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
5750.00	85.80	9.75	95.55	114.00	-18.45	Vertical
11500.00	29.94	15.27	45.21	74.00	-28.79	Vertical
17250.00	28.00	18.09	46.09	74.00	-27.91	Vertical
23000.00	29.29	23.76	53.05	74.00	-20.95	Vertical
28750.00	*			74.00		Vertical
34500.00	*			74.00		Vertical
5750.00	84.36	9.75	94.11	114.00	-19.89	Horizontal
11500.00	26.11	15.27	41.38	74.00	-32.62	Horizontal
17250.00	27.60	18.09	45.69	74.00	-28.31	Horizontal
23000.00	32.24	23.76	56.00	74.00	-18.00	Horizontal
28750.00	*			74.00		Horizontal
34500.00	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
5750.00	77.35	9.75	87.10	94.00	-6.90	Vertical
11500.00	16.13	15.27	31.40	54.00	-22.60	Vertical
17250.00	17.54	18.09	35.63	54.00	-18.37	Vertical
23000.00	23.38	23.76	47.14	54.00	-6.86	Vertical
28750.00	*			54.00		Vertical
34500.00	*			54.00		Vertical
5750.00	71.74	9.75	81.49	94.00	-12.51	Horizontal
11500.00	18.81	15.27	34.08	54.00	-19.92	Horizontal
17250.00	19.92	18.09	38.01	54.00	-15.99	Horizontal
23000.00	17.92	23.76	41.68	54.00	-12.32	Horizontal
28750.00	*			54.00		Horizontal
34500.00	*			54.00		Horizontal

## Remark:

- 1.Result =Reading + Factor
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



**Test Results (1GHz-25GHz)**

Test channel: Middle						
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
5800.00	83.52	9.75	93.27	114.00	-20.73	Vertical
11600.00	31.15	15.27	46.42	74.00	-27.58	Vertical
17400.00	33.64	18.09	51.73	74.00	-22.27	Vertical
23200.00	32.14	23.76	55.90	74.00	-18.10	Vertical
29000.00	*			74.00		Vertical
34800.00	*			74.00		Vertical
5800.00	79.82	9.75	89.57	114.00	-24.43	Horizontal
11600.00	24.94	15.27	40.21	74.00	-33.79	Horizontal
17400.00	30.76	18.09	48.85	74.00	-25.15	Horizontal
23200.00	31.04	23.76	54.80	74.00	-19.20	Horizontal
29000.00	*			74.00		Horizontal
34800.00	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
5800.00	71.71	9.75	81.46	94.00	-12.54	Vertical
11600.00	18.79	15.27	34.06	54.00	-19.94	Vertical
17400.00	15.69	18.09	33.78	54.00	-20.22	Vertical
23200.00	16.64	23.76	40.40	54.00	-13.60	Vertical
29000.00	*			54.00		Vertical
34800.00	*			54.00		Vertical
5800.00	74.06	9.75	83.81	94.00	-10.19	Horizontal
11600.00	17.44	15.27	32.71	54.00	-21.29	Horizontal
17400.00	15.78	18.09	33.87	54.00	-20.13	Horizontal
23200.00	17.40	23.76	41.16	54.00	-12.84	Horizontal
29000.00	*			54.00		Horizontal
34800.00	*			54.00		Horizontal

Remark:

- 1.Result =Reading + Factor
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



**Test Results (1GHz-25GHz)**

Test channel: Highest						
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
5870.00	81.60	9.75	91.35	114.00	-22.65	Vertical
11740.00	28.91	15.27	44.18	74.00	-29.82	Vertical
17610.00	27.26	18.09	45.35	74.00	-28.65	Vertical
23480.00	33.61	23.76	57.37	74.00	-16.63	Vertical
29350.00	*			74.00		Vertical
35220.00	*			74.00		Vertical
5870.00	81.41	9.75	91.16	114.00	-22.84	Horizontal
11740.00	29.49	15.27	44.76	74.00	-29.24	Horizontal
17610.00	31.33	18.09	49.42	74.00	-24.58	Horizontal
23480.00	26.53	23.76	50.29	74.00	-23.71	Horizontal
29350.00	*			74.00		Horizontal
35220.00	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
5870.00	75.71	9.75	85.46	94.00	-8.54	Vertical
11740.00	14.82	15.27	30.09	54.00	-23.91	Vertical
17610.00	18.12	18.09	36.21	54.00	-17.79	Vertical
23480.00	15.17	23.76	38.93	54.00	-15.07	Vertical
29350.00	*			54.00		Vertical
35220.00	*			54.00		Vertical
5870.00	76.02	9.75	85.77	94.00	-8.23	Horizontal
11740.00	17.99	15.27	33.26	54.00	-20.74	Horizontal
17610.00	25.42	18.09	43.51	54.00	-10.49	Horizontal
23480.00	18.53	23.76	42.29	54.00	-11.71	Horizontal
29350.00	*			54.00		Horizontal
35220.00	*			54.00		Horizontal

Remark:

- 1.Result =Reading + Factor
2. "\*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.



**Radiated Band Edge:**

Test channel: Lowest							
Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Antenna Pol.	Detector
5725.00	43.02	17.05	60.07	74.00	-13.93	H	Peak
5725.00	43.12	17.05	60.17	74.00	-13.83	V	Peak
5725.00	29.96	17.05	47.01	54.00	-6.99	H	AVG
5725.00	31.14	17.05	48.19	54.00	-5.81	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Over Limit (dB)	Antenna Pol.	Detector
5875.00	43.36	17.21	60.57	74.00	-13.43	H	Peak
5875.00	41.60	17.21	58.81	74.00	-15.19	V	Peak
5875.00	30.39	17.21	47.60	54.00	-6.40	H	AVG
5875.00	30.61	17.21	47.82	54.00	-6.18	V	AVG

**Remark:**

1. Level = Reading + Factor



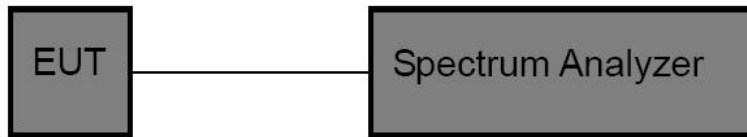


## 5. 20dB Bandwidth Test

### 5.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.215(c)
Test Limit	N/A

### 5.2. Test Setup



### 5.3. Test Procedure

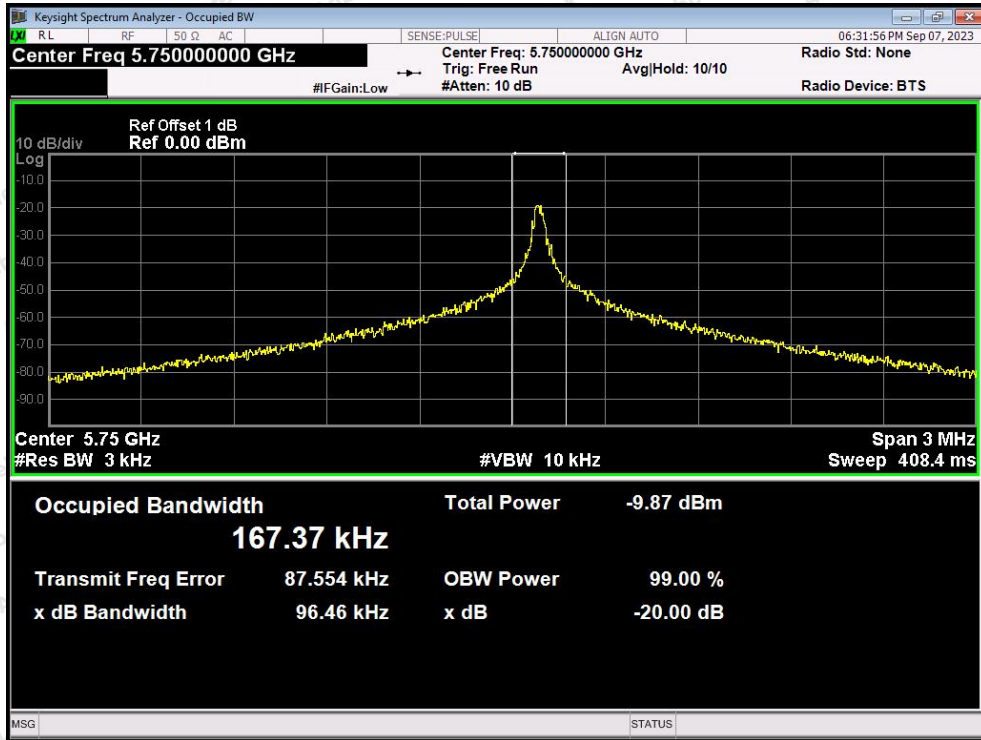
1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as:  
 RBW = 30kHz, VBW≥3\*RBW =100kHz,  
 Detector= Average  
 Trace mode= Max hold.  
 Sweep- auto couple.
4. Mark the peak frequency and -20dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

### 5.4. Test Data

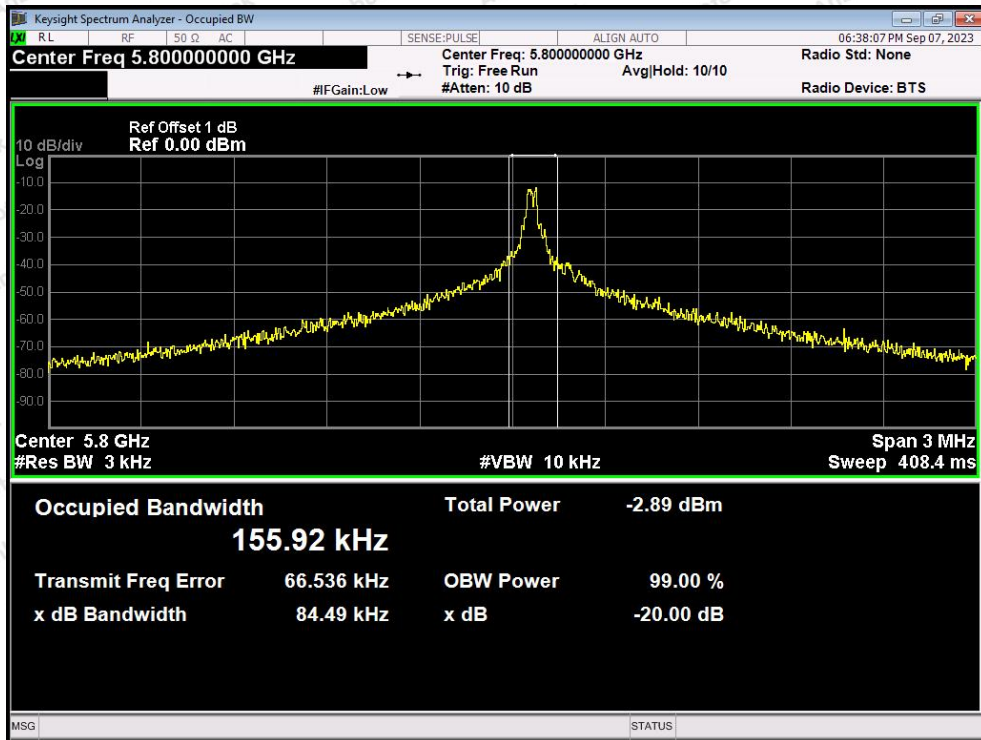
Test Item	: 20dB Bandwidth	Test Mode	: CH Low ~ CH High
Test Voltage	: DC 5V	Temperature	: 22.4℃
Test Result	: PASS	Humidity	: 55%RH

Channel	Bandwidth (MHz)	Result
Low	0.0965	PASS
Middle	0.0845	PASS
High	0.0884	PASS



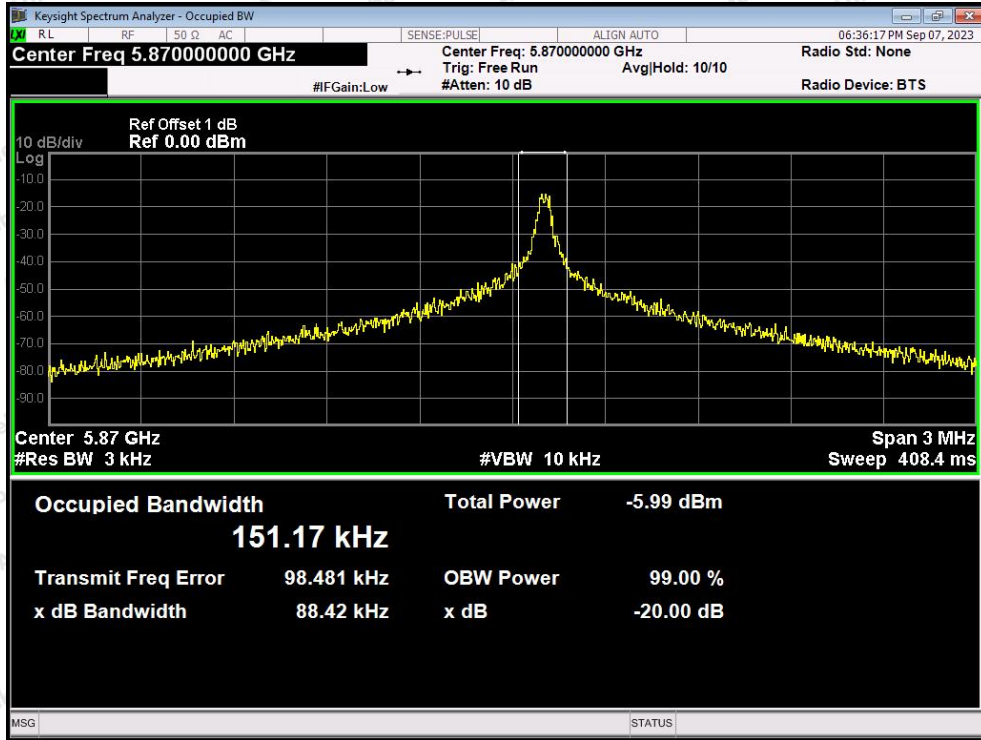


Low Channel



Mid Channel





High Channel



## 6. Antenna Requirement

### 6.1. Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203
Requirement	1) 15.203 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, 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.

### 6.2. Antenna Connecteds Construction

The antenna is a PCB Antenna which permanently attached, and the best case gain of the antenna is 4.86 dBi. It complies with the standard requirement.



## **APPENDIX I -- TEST SETUP PHOTOGRAPH**

Please refer to separated files Appendix I -- Test Setup Photograph

## **APPENDIX II -- EXTERNAL PHOTOGRAPH**

Please refer to separated files Appendix II -- External Photograph

## **APPENDIX III -- INTERNAL PHOTOGRAPH**

Please refer to separated files Appendix III -- Internal Photograph

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

