ACCREDITED
CERTIFICATE #5473.01

Test Report No.:
FCC2024-0031-RF2

TEST REPORT

FCC ID	:	2BG9T-TCLSMARTDM
Applicant	:	Shenzhen TCL Smart Home Technology Co., Ltd
Product Name	:	Smart Lock
Model No.	:	D1 Max,D11 Max,D12 Max,D13 Max,D14 Max,D15 Max,D16 Max,D17 Max,D18 Max,D19 Max
Classification Of Test:		**COMMISSION TEST**

CVC Testing Technology Co., Ltd.

Applicant	**Name:** Shenzhen TCL Smart Home Technology Co., Ltd **Address:** 7/F,TCL G1 Building. TCL International E City, No.1001 Zhongshan Yuan Road, Nanshan District,Shenzhen
Manufacturer	**Name:** Shenzhen TCL Smart Home Technology Co., Ltd **Address:** 7/F,TCL G1 Building. TCL International E City, No.1001 Zhongshan Yuan Road, Nanshan District,Shenzhen
Equipment Under Test	**Product Name :** Smart Lock **Model No. :** D1 Max **Trade mark :** TCL **Serial no.** : D1Max240800001 **Sampling :** 1-1

Date of Receipt.	2024.7.4	Date of Testing	2024.8.19

Test Specification	**Test Result**
FCC CFR47 Part 15C Radio Frequency Devices ANSI C63.10-2020/Cor1-2023	PASS
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. **Seal of CVC** **Issue Date:** 2024-8-19

Approved by:	Reviewed by:	Tested by:
Chen Huawen	**Xu Zhenfei**	**Lu Weiji**

Other Aspects: NONE.

Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested

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1. General Product Information

1.1 General information

Product Name	Smart Lock	
Model No.	D1 Max	
Additional model	D11 Max,D12 Max,D13 Max,D14 Max,D15 Max,D16 Max,D17 Max,D18 Max,D19 Max	
Power Supply	Rated voltage	DC 5.0V
	Battery voltage	DC 3.7V
Serial Number(SN)	D1Max240800001	
firmware	V0.6	
software	V1.0	
Antenna Type	Internal Antenna	
Antenna Gain	2.0 dBi (provided by client)	
Beamforming gain	Unsupported (provided by client)	
Frequency Range	5800~5840MHz	
Channel Number	41 Channels	
Type of Modulation	Unmodulation	
Max. Conducted Power	-13.84dBm	
Operate Temp. Range	-20~70℃	

Note：

1. The information of the EUT is declared by the manufacturer.
2. The laboratory is not responsible for the product technical specification provided by the client.
3. All the models are electrical identical including the same software parameter and hardware design (i.e., circuit design, PCB Layout, RF module/circuit, antenna type(s) and antenna location, components on PCB, etc.,), same mechanical structure and design (including product enclosure, materials, etc.,), the only difference is the model name, color, package.

No.	Model	Difference	Remarks
1	D1 Max	1. Only the appearance color difference is different. 2. Only the printing style on the surface of the package is different, the product inside the package is the same.	Inspection model
2	D11 Max		Coverage model
3	D12 Max		Coverage model
4	D13 Max		Coverage model
5	D14 Max		Coverage model
6	D15 Max		Coverage model
7	D16 Max		Coverage model
8	D17 Max		Coverage model
9	D18 Max		Coverage model
10	D19 Max		Coverage model

4. Channel List(Unit: MHz)：

1	2	3	4	5	6	7	8	9	10
5800	5801	5802	5803	5804	5805	5806	5807	5808	5809

11	12	13	14	15	16	17	18	19	20
5810	5811	5812	5813	5814	5815	5816	5817	5818	5819
21	22	23	24	25	26	27	28	29	30
5820	5821	5822	5823	5824	5825	5826	5827	5828	5829
31	32	33	34	35	36	37	38	39	40
5830	5831	5832	5833	5834	5835	5836	5837	5838	5839
41									
5840									

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by RF testing Lab. of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou,Guangdong,510663, People's Republic of China

Telephone : +86-20-32293888

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FCC(Test firm designation number：CN1282)

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix A**.

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Test Mode	Antenna Delivery	Test Channel [MHz]
Transmitting	1TX / 1RX	5800
	1TX / 1RX	5820
	1TX / 1RX	5840

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate and different channels. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case Antenna and channles are shown as following table.

Test Mode	Antenna 1	Antenna 2	MIMO
Transmitting	√	/	/

Test Items	Test Antennas	Test Modes	Test Frequency [MHz]
Conducted Emissions	Antenna 1	Transmitting	5800
Radiated Emissions	Antenna 1	Transmitting	5800,5820,5840
Occupied Channel Bandwidth	Antenna 1	Transmitting	5800,5820,5840
Antenna Requirement	Antenna 1	/	/

3.2 Duty cycle

TestMode	Antenna	Channel [MHz]	Transmission Duration [us]	Transmission Period [us]	Duty Cycle [%]	Limit	Verdict
Transmitting	Ant1	5800	7.826	3944.35	0.20	---	PASS
	Ant1	5820	7.826	3944.35	0.20	---	PASS
	Ant1	5840	7.826	3944.35	0.20	---	PASS

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Verdict	Note
Conducted Emissions	15.207	PASS	/
Radiated Emissions	15.249(a)(d)(e),15.205,15.209	PASS	/
20dB BANDWIDTH MEASUREMENT	15.215(c)	PASS	/
Antenna Requirement	15.203	PASS	See Note1

Note 1: According to 15.203, it is considered sufficient to comply with the provisions of this section.

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

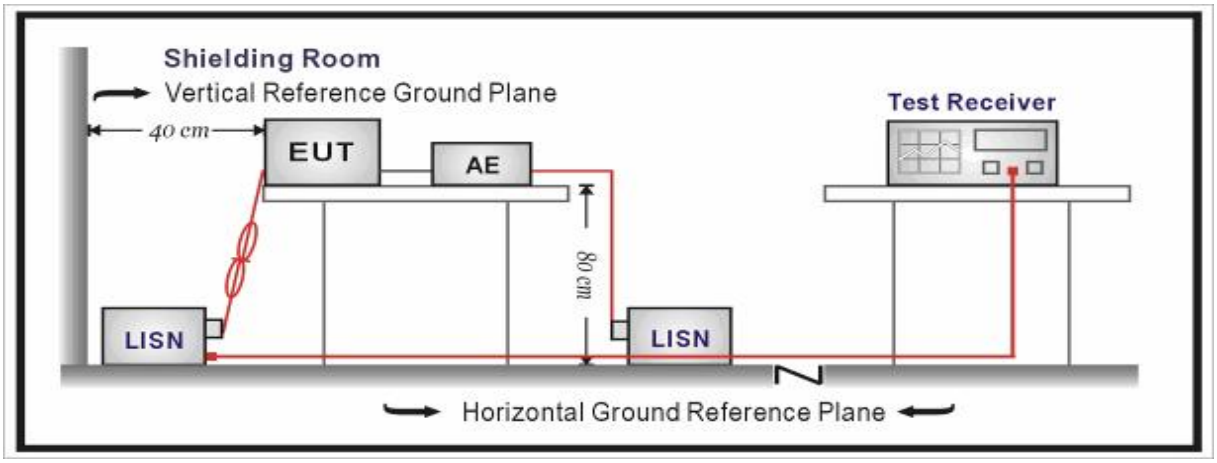
Method of Measurement:

The EUT was setup according to ANSI C63.10, 2020 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

Limits:

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

Test Setup:



Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Notes:

1. *The following Quasi-Peak and Average measurements were performed on the EUT:*
2. *Final Level =Reading + Factor.*

Measurement Uncertainty：

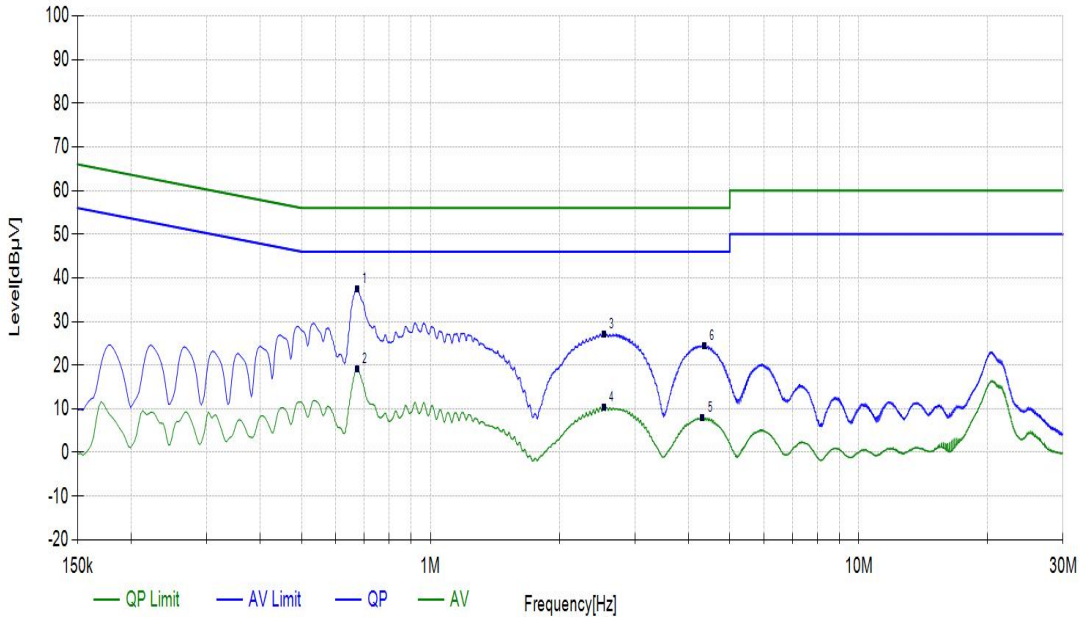
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96. U= 3.12 dB.

Test Results:

During the test, the Conducted Emission from 150kHz to 30MHz was performed in all modes with all channels, and all antennas. Transmitting, Channel 1, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

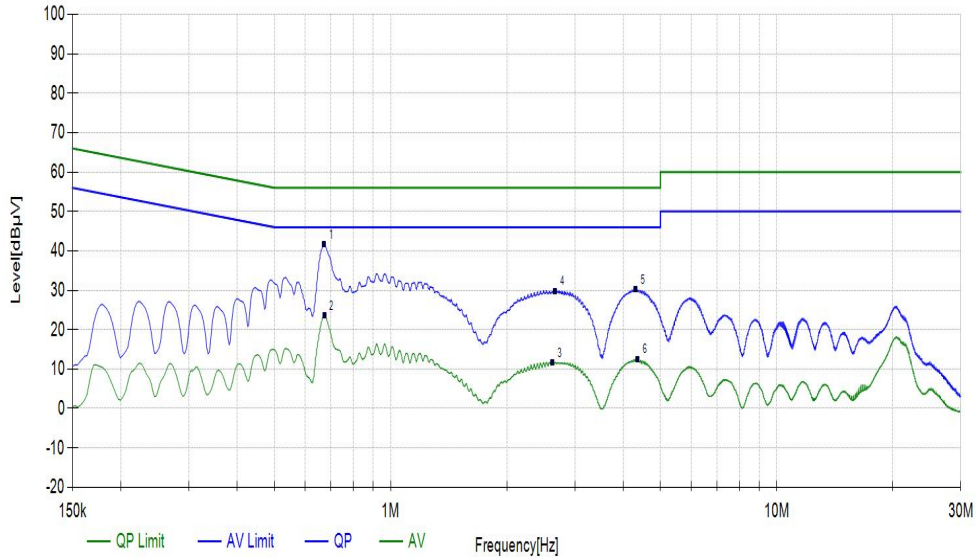
Power Line	L
Test channel	Worst-Case

NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/ Fail
6	4.3575	10.38	14.10	24.48	56.00	31.52	QP	PASS
1	0.6743	10.24	27.11	37.35	56.00	18.65	QP	PASS
3	2.5373	10.32	16.86	27.18	56.00	28.82	QP	PASS
4	2.5395	10.32	0.07	10.39	46.00	35.61	AV	PASS
5	4.3125	10.38	-2.42	7.96	46.00	38.04	AV	PASS
2	0.6743	10.24	8.86	19.10	46.00	26.90	AV	PASS



Power Line	N
Test channel	Worst-Case

NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV]	Limit [dBµV]	Margin [dB]	Detector	Pass/ Fail
1	0.6720	10.22	31.37	41.59	56.00	14.41	QP	PASS
4	2.6700	10.32	19.55	29.87	56.00	26.13	QP	PASS
5	4.3148	10.37	20.01	30.38	56.00	25.62	QP	PASS
2	0.6743	10.22	13.41	23.63	46.00	22.37	AV	PASS
6	4.3598	10.37	2.23	12.60	46.00	33.40	AV	PASS
3	2.6250	10.32	1.44	11.76	46.00	34.24	AV	PASS



5.2 Radiated Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

Method of Measurement:

The EUT was setup and tested according to ANSI C63.10, 2020.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Antenna to the EUT was 3 meters.

The Antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the Antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2020 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Antenna will be bended down a little (as horn

Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

Limits:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Frequency	Limit (μV/m)	Limit (dBμV/m @3m)	Remark
0.009MHz-0.490MHz	2400/F(kHz)@300m	20lg(24000000/F(kHz))	Quasi-peak Level
0.490MHz~1.705MHz	24000/F(kHz)@30m	20lg(2400000/F(kHz))	Quasi-peak Level
1.705MHz~30.0MHz	30@30m	69.54	Quasi-peak Level
30MHz-88MHz	100@3m	40.0	Quasi-peak Level
88MHz-216MHz	150@3m	43.5	Quasi-peak Level
216MHz-960MHz	200@3m	46.0	Quasi-peak Level
960MHz-1GHz	500@3m	54.0	Quasi-peak Level

Above 1GHz	500@3m	54.0	Average Level
	5000@3m	74.0	Peak Level

Spurious Radiated Emissions are permitted in any of the frequency bands listed below:

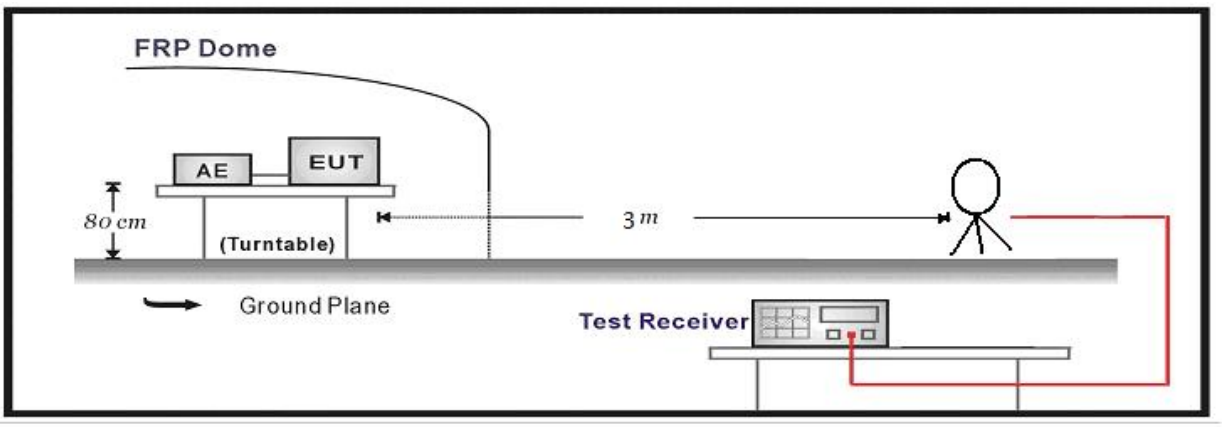
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.
12.57675-12.57725	322-335.4	3600-4400	/
13.36-13.41	/	/	/

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

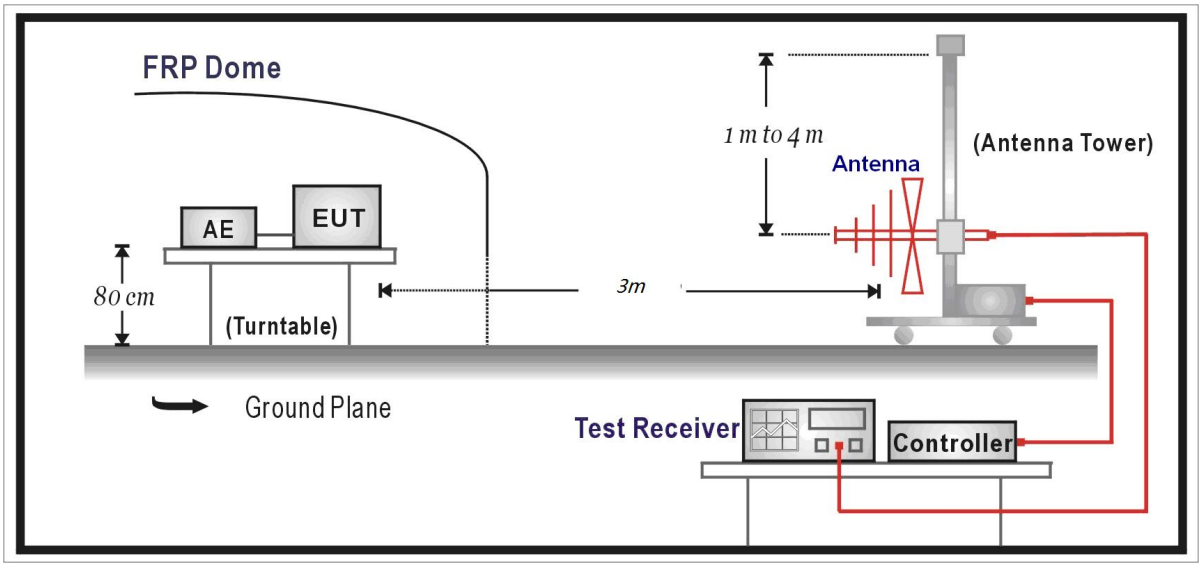
Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/ meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500
902-928 MHz	50	500

Test Setup:

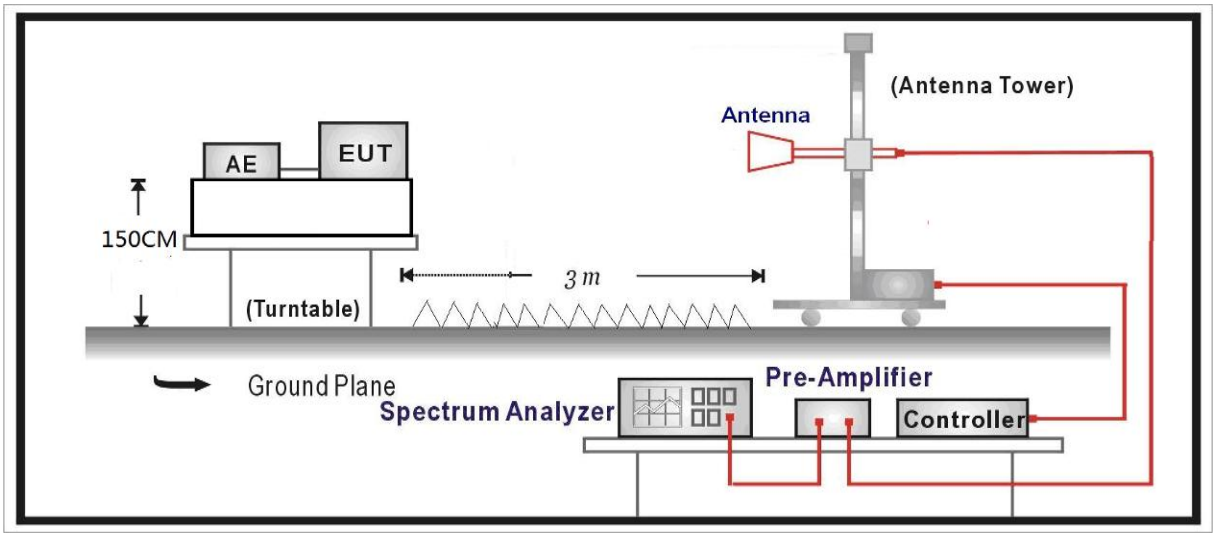
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



Measurement Data：

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Level =Reading - Factor

Factor = Preamplifier Factor – Antenna Factor–Cable Loss

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
Above 1GHz	3.68 dB

Test Results:

Fundamental Field Strength and SPURIOUS EMISSIONS：

During the test, the Radiates Emission from 9kHz to 1GHz was performed in 5.8G Radar all modes with all channels and all antenna. Transmitting, Channel 1, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	9k~1G
Test channel	Worst-Case

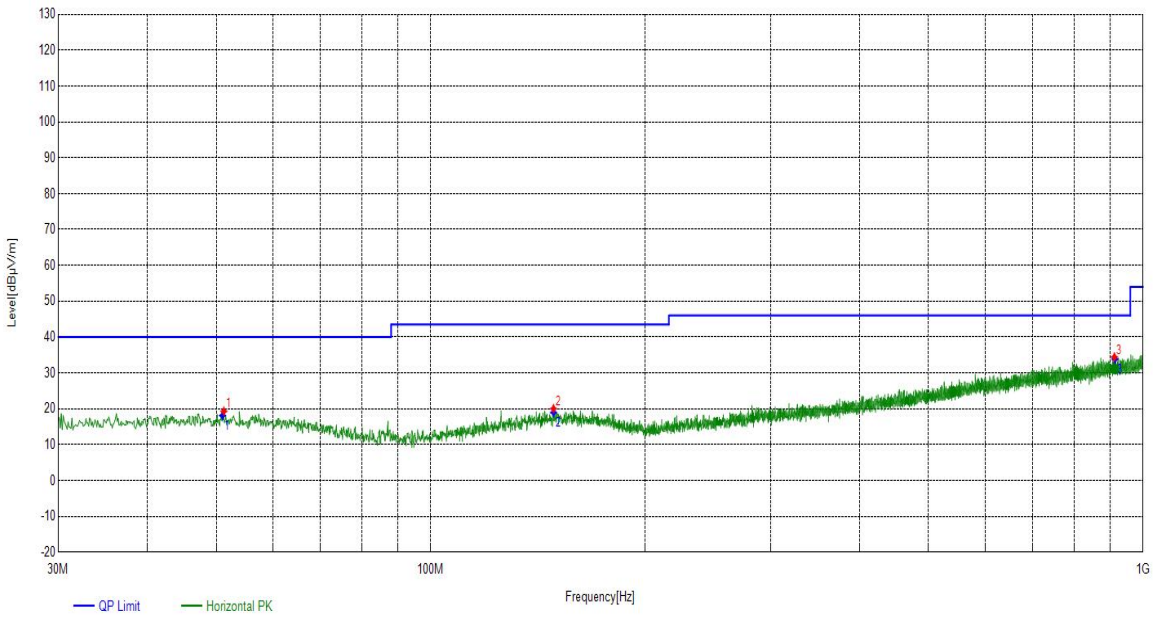
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
51.2451	Horizontal	20.46	-1.16	19.30	---	---	PK	100	0	---
148.7399	Horizontal	20.68	-0.64	20.04	---	---	PK	100	60	---
911.6242	Horizontal	33.62	0.81	34.43	---	---	PK	100	220	---

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
51.0159	Horizontal	20.46	18.12	40.00	21.88	320	330	PASS
148.7765	Horizontal	20.68	18.96	43.50	24.54	170	65	PASS
913.5771	Horizontal	33.62	33.82	46.00	12.18	190	225	PASS



Radiates Emission	9k~1G
Test channel	Worst-Case

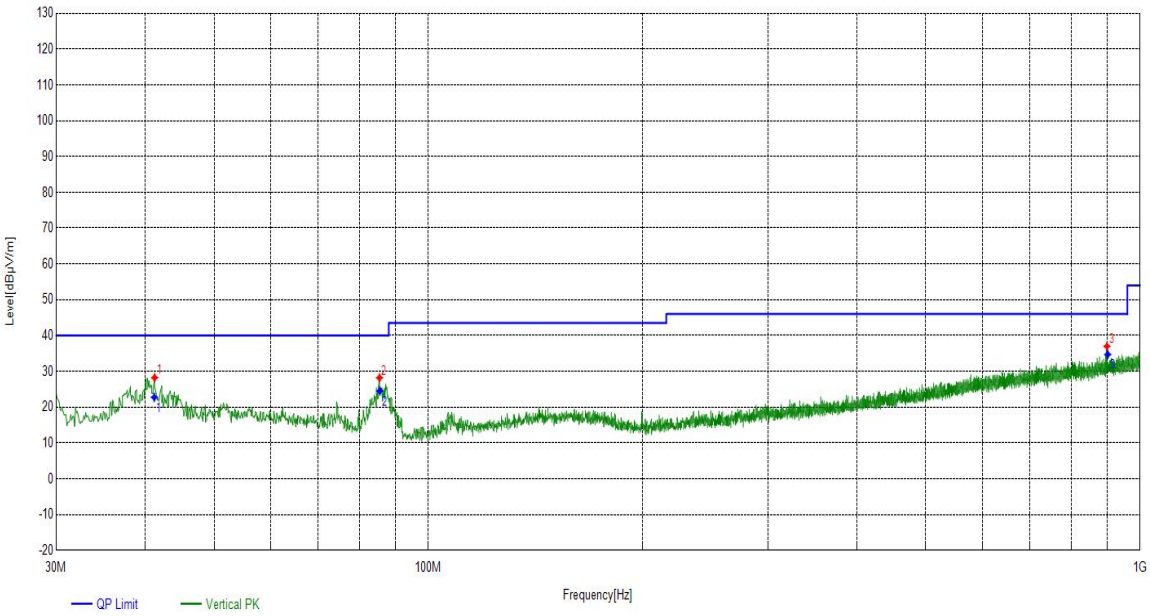
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
41.2531	Vertical	20.09	8.14	28.23	40.00	11.77	PK	100	150	PASS
85.3925	Vertical	15.16	13.02	28.18	40.00	11.82	PK	100	230	PASS
898.4308	Vertical	33.47	3.51	36.98	46.00	9.02	PK	100	90	PASS

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
41.2053	Vertical	20.09	22.74	40.00	17.26	300	155	PASS
85.4851	Vertical	15.16	24.54	40.00	15.46	110	235	PASS
900.8496	Vertical	33.47	34.71	46.00	11.29	350	95	PASS



During the test, the Radiates Emission from Above 1G was performed in 5.8G Radar all modes with all channels and all antennas. Transmitting, Highest, medium, lowest channels, Ant1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
1119.511951	-8.70	50.49	41.79	74.00	32.21	PK	150	31	PASS
2316.131613	-5.27	41.88	36.61	74.00	37.39	PK	150	19	PASS
4943.394339	1.44	39.68	41.12	74.00	32.88	PK	150	137	PASS
5800*	4.34	71.66	79.00	114.00	38.00	PK	150	51	PASS
1119.511951	-8.70	31.71	23.01	54.00	30.99	AV	150	175	PASS
2316.131613	-5.27	28.81	23.54	54.00	30.46	AV	150	1	PASS
4943.394339	1.44	28.50	29.94	54.00	24.06	AV	150	6	PASS
5800*	4.34	32.21	36.55	94.00	61.79	AV	150	12	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.
Note2": * ": Fundamental frequency.

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
1331.033103	-8.24	42.11	33.87	74.00	40.13	PK	150	94	PASS
2742.174217	-3.87	41.52	37.65	74.00	36.35	PK	150	140	PASS
4939.393939	1.42	41.01	42.43	74.00	31.57	PK	150	237	PASS
5800*	4.34	67.76	72.10	114.00	41.90	PK	150	127	PASS
1331.033103	-8.24	30.38	22.14	54.00	31.86	AV	150	80	PASS
2742.174217	-3.87	28.42	24.55	54.00	29.45	AV	150	250	PASS
4939.393939	1.42	28.14	29.56	54.00	24.44	AV	150	359	PASS
5800*	4.34	30.90	35.24	94.00	58.76	AV	150	127	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.
Note2": * ": Fundamental frequency.

Radiates Emission	Above 1G
Test channel	Medium
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
1696.069607	-7.10	43.28	36.18	74.00	37.82	PK	150	21	PASS
3076.207621	-2.58	38.96	36.38	74.00	37.62	PK	150	132	PASS
5331.433143	2.64	39.36	42.00	74.00	32.00	PK	150	204	PASS
5820*	4.43	73.86	78.29	114.00	35.71	PK	150	112	PASS
1696.069607	-7.10	29.28	22.18	54.00	31.82	AV	150	158	PASS
3076.207621	-2.58	28.26	25.68	54.00	28.32	AV	150	329	PASS
5331.433143	2.64	26.53	29.17	54.00	24.83	AV	150	14	PASS
5820*	4.43	33.46	37.89	94.00	56.11	AV	150	112	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.
Note2": * ": Fundamental frequency.

Radiates Emission	Above 1G
Test channel	Medium
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
1330.033003	-8.24	42.96	34.72	74.00	39.28	PK	150	97	PASS
2566.156616	-4.50	41.11	36.61	74.00	37.39	PK	150	325	PASS
4940.394039	1.42	38.69	40.11	74.00	33.89	PK	150	1	PASS
5820*	4.43	61.03	65.46	114.00	48.54	PK	150	136	PASS
1330.033003	-8.24	30.36	22.12	54.00	31.88	AV	150	254	PASS
2566.156616	-4.50	28.76	24.26	54.00	29.74	AV	150	1	PASS
4940.394039	1.42	27.95	29.37	54.00	24.63	AV	150	325	PASS
5820*	4.43	29.86	34.29	94.00	59.71	AV	150	136	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.
Note2": * ": Fundamental frequency.

Radiates Emission	Above 1G
Test channel	Highest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
1821.082108	-6.53	39.98	33.45	74.00	40.55	PK	150	103	PASS
3146.214622	-2.30	41.15	38.85	74.00	35.15	PK	150	332	PASS
4141.314131	-0.14	40.76	40.62	74.00	33.38	PK	150	241	PASS
5840*	4.52	76.84	81.36	114.00	32.64	PK	150	228	PASS
1821.082108	-6.53	29.22	22.69	54.00	31.31	AV	150	339	PASS
3146.214622	-2.30	27.99	25.69	54.00	28.31	AV	150	358	PASS
4141.314131	-0.14	29.69	29.55	54.00	24.45	AV	150	6	PASS
5840*	4.52	37.53	42.05	94.00	51.95	AV	150	234	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.
Note2": * ": Fundamental frequency.

Radiates Emission	Above 1G
Test channel	Highest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
1333.033303	-8.24	45.26	37.02	74.00	36.98	PK	150	94	PASS
3188.218822	-2.13	42.31	40.18	74.00	33.82	PK	150	67	PASS
5236.423642	2.39	40.18	42.57	74.00	31.43	PK	150	269	PASS
5840*	4.52	62.49	67.01	114.00	46.99	PK	150	165	PASS
1333.033303	-8.24	30.21	21.97	54.00	32.03	AV	150	87	PASS
3188.218822	-2.13	27.77	25.64	54.00	28.36	AV	150	328	PASS
5236.423642	2.39	26.66	29.05	54.00	24.95	AV	150	295	PASS
5840*	4.52	28.75	33.27	94.00	60.73	AV	150	165	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.
Note2": * ": Fundamental frequency.

During the test, the Band Edge was performed in 5.8G Radar all modes with all channels and all antennas. Transmitting, Highest and lowest channels, Ant1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
5617.461746	3.56	36.95	40.51	74.00	33.49	PK	150	182	PASS
5679.467947	3.82	38.19	42.01	74.00	31.99	PK	150	182	PASS
5725.472547	4.02	35.87	39.89	74.00	34.11	PK	150	246	PASS
5617.461746	3.56	25.81	29.37	54.00	24.63	AV	150	338	PASS
5679.467947	3.82	24.82	28.64	54.00	25.36	AV	150	240	PASS
5725.472547	4.02	25.02	29.04	54.00	24.96	AV	150	44	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Lowest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
5456.445645	2.96	38.69	41.65	74.00	32.35	PK	150	179	PASS
5626.462646	3.60	37.46	41.06	74.00	32.94	PK	150	80	PASS
5725.472547	4.02	35.18	39.20	74.00	34.80	PK	150	341	PASS
5456.445645	2.96	26.39	29.35	54.00	24.65	AV	150	296	PASS
5626.462646	3.60	25.15	28.75	54.00	25.25	AV	150	29	PASS
5725.472547	4.02	25.18	29.20	54.00	24.80	AV	150	315	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Highest
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
5875.487549	4.68	35.54	40.22	74.00	33.78	PK	150	32	PASS
5950.9951	5.01	38.21	43.22	74.00	30.78	PK	150	168	PASS
5987.9988	5.18	37.77	42.95	74.00	31.05	PK	150	149	PASS
5875.487549	4.68	24.76	29.44	54.00	24.56	AV	150	162	PASS
5950.9951	5.01	25.47	30.48	54.00	23.52	AV	150	19	PASS
5987.9988	5.18	25.72	30.90	54.00	23.10	AV	150	6	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	Highest
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
5875.487549	4.68	35.30	39.98	74.00	34.02	PK	150	250	PASS
5923.492349	4.88	35.55	40.43	74.00	33.57	PK	150	22	PASS
5950.9951	5.01	36.42	41.43	74.00	32.57	PK	150	205	PASS
5875.487549	4.68	24.76	29.44	54.00	24.56	AV	150	172	PASS
5923.492349	4.88	25.37	30.25	54.00	23.75	AV	150	321	PASS
5950.9951	5.01	25.46	30.47	54.00	23.53	AV	150	341	PASS

Note1: The emission levels of other frequencies were greater than 20dB margin.

5.3 20dB BANDWIDTH MEASUREMENT

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.3kPa

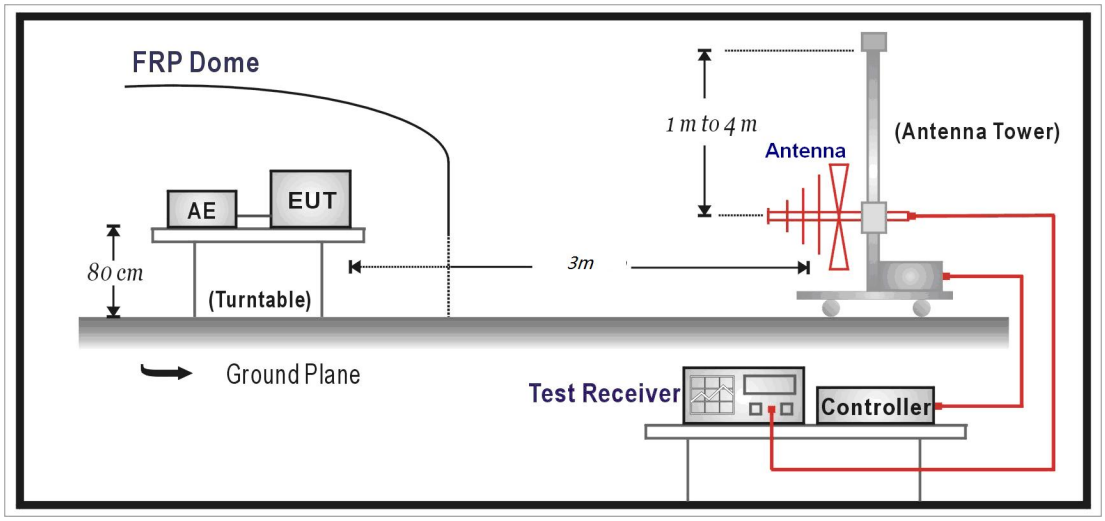
Method of Measurement:

The spectrum analyzer was receiving the maximum emission level. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Limit:

20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Setup:



Measurement Uncertainty：

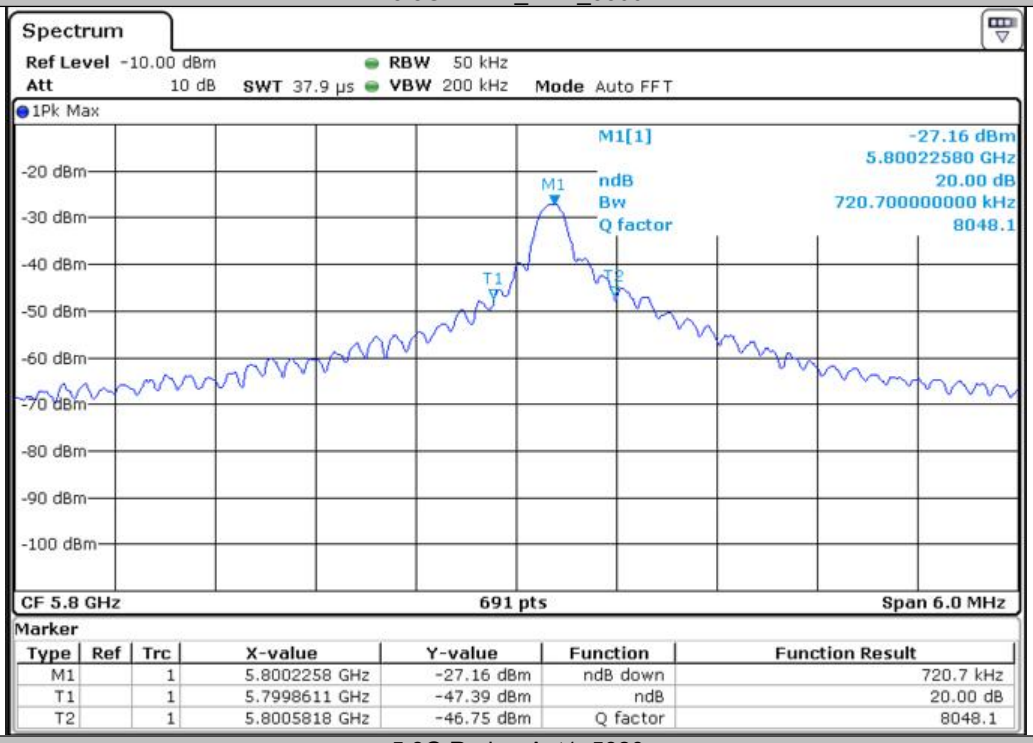
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

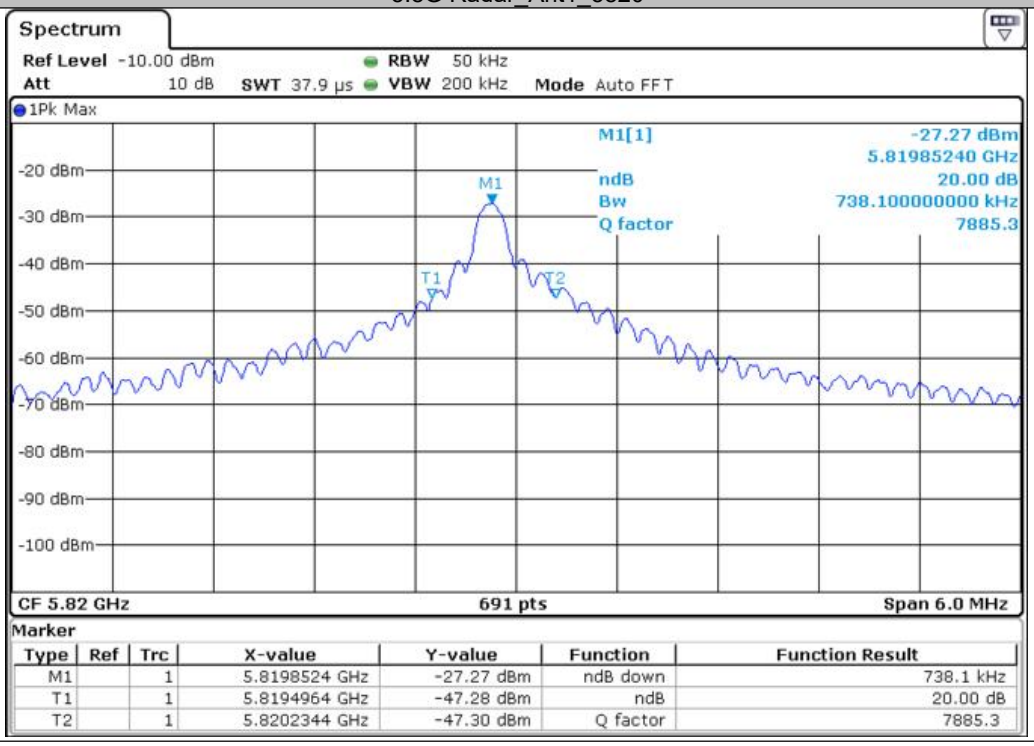
TestMode	Antenna	Channel	20dB Bandwidth [kHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
Transmitting	Ant1	5800	720.7	5799.8611	5800.5818	5725~5875	PASS
	Ant1	5820	738.1	5819.4964	5820.2344	5725~5875	PASS
	Ant1	5840	729.4	5839.1404	5839.8698	5725~5875	PASS

Test Graphs:

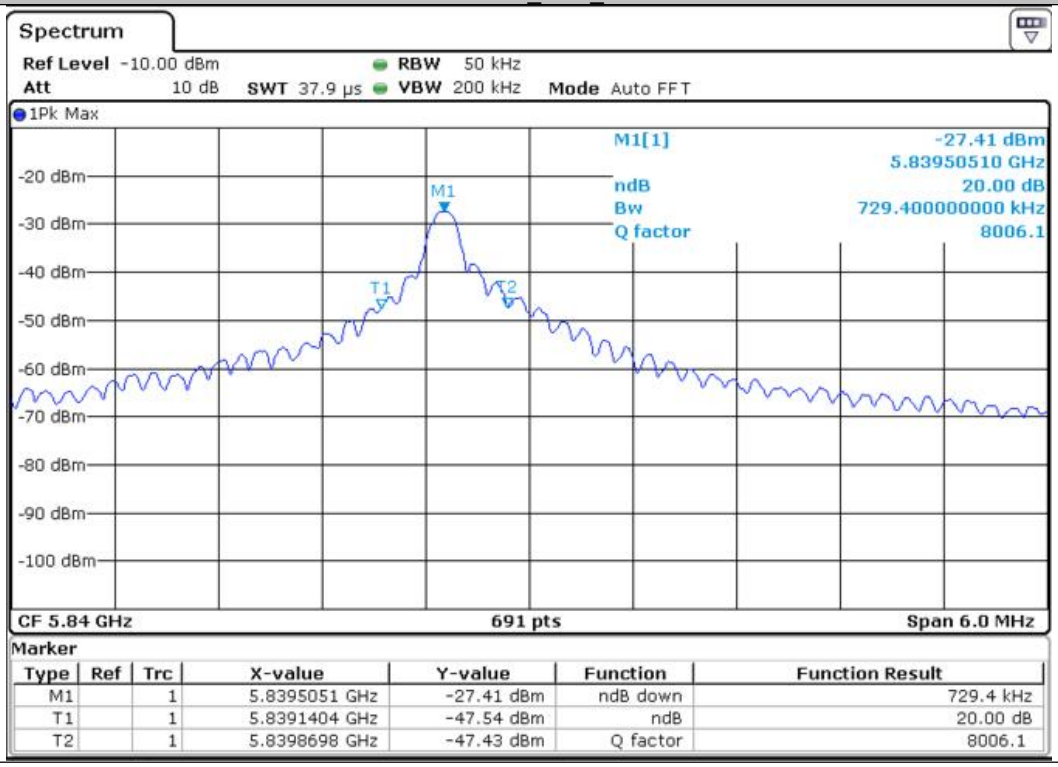
5.8G Radar_Ant1_5800



5.8G Radar_Ant1_5820



5.8G Radar_Ant1_5840



Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.8395051 GHz	-27.41 dBm	ndB down	729.4 kHz
T1		1	5.8391404 GHz	-47.54 dBm	ndB	20.00 dB
T2		1	5.8398698 GHz	-47.43 dBm	Q factor	8006.1

6. Appendix A

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
Communication Shielded Room 2	4m*3m*3m	CRTDSWKSR44301	/	CRT	2027/04/22
Spectrum Analyzer	FSV40	101580	DZ-000238-3	R&S	2025/04/22
RF Radio Frequency Switch	JS0806-2	19H9080187	DZ-000241	Tonscend	2025/04/27
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2024/11/02
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2025/01/02
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2025/01/13
EMI Test Receiver	ESR7	102235	EM-000574	R&S	2025/01/13
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2025/06/04
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2025/06/09
Waveguide Horn Antenna	HF906	360306/008	EM-000093	R&S	2025/01/13
Waveguide Horn Antenna	BBHA9170	00949	DZ-000209-2	SCHWARZBECK	2024/08/05
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2025/06/03
5G Bandstop Filters	WRCJV12-4900-5100-5900-6100-50EE	1	DZ-000186	WI	2024/12/03
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2025/06/03
Temperature and humidity meter	MHO-C201	/	DZ-000249-2	Seconds test	2024/08/30
Temperature and humidity meter	MHO-C201	/	DZ-000249-5	Seconds test	2024/08/30
SuperCharge	HW-100400C01	/	/	HUAWEI	/

Dynacomm	Software Release	Software Developer
TS1120-3 Test System(Conduction test)	3.3.38	Tonscend
TS+（5m,Radiation test）	JS32-RE 5.0.0	Tonscend

The End

Important

1. The test report is invalid without the official stamp of CVC;
2. Any part photocopies of the test report are forbidden without the written permission from CVC;
3. The test report is invalid without the signatures of Author and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, "—" or " N/A" means "not applicable", " / "means "not testing", "P" means "pass" and "F" means "fail".

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