ACCREDITED
CERTIFICATE #5473.01

Test Report No.:
FCC2025-0024-RF

TEST REPORT

FCC ID	:	2BBMK-SHB-TPMS-0002
Applicant	:	Zhejiang Shenghuabo Electric Appliance Corporation
Product Name	:	Bluetooth tire pressure sensor
Mode No.	:	SHB-TPMS-0002

CVC Testing Technology Co., Ltd.

Product Name	Bluetooth tire pressure sensor	**Trade Mark**	SENHUABO
Type/Model	SHB-TPMS-0002	**Sample Status**	/
Applicant	Zhejiang Shenghuabo Electric Appliance Corporation		
Applicant Address	Ruian International Auto&Parts industry Park, Wenzhou, Zhejiang, China		
Manufacturer	Shanghai Shenghuabo Auto Electric Co.,Ltd		
Manufacturer Address	No.898, Baian Road, Anting Town, Jiading District Shanghai City, P.R. China		
Factory	Shanghai Shenghuabo Auto Electric Co.,Ltd		
Factory Address	No.898, Baian Road, Anting Town, Jiading District Shanghai City, P.R. China		
Sample Identification	1-1	**Test Item**	See page 9
Tested According To	FCC CFR47 Part 15C Radio Frequency Devices ANSI C63.10-2020		
Receiving Date	June.20,2025	**Completing Date**	June.24,2025~June.30,2025
Test conclusion	The equipment under test was found to comply with the requirements of the standards applied. Final Verdict：Pass. Seal of CVC Date of issue: **July.03,2025**		
Abbreviations: / Pass= passed Fail = failed N/A= not applicable			
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of **CVC**.			

Approved by: **Chen Huawen**

Reviewed by: **Xu Zhenfei**

Tested by: **Li Yueao**

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2025-0024-RF	Original release	July.03,2025

1. General Product Information

1.1 General information

Product Name	Bluetooth tire pressure sensor
Model No.	SHB-TPMS-0002
Additional model	N/A
Power Supply	DC 3V
Serial Number(SN)	3112F1D7
HVIN	SHB-TPMS-0002
Firmware	V1.2
Software	V1.0
Antenna Type	PCB Antenna
Antenna Connector	A permanently attached antenna
Antenna Gain	1.45 dBi (provided by client)
Beamforming gain	Unsupported (provided by client)
Frequency Range	2400~2483.5 MHz
Channel Number	3 Channel
Type of Modulation	GFSK
Max. Conducted Power	Custom technology 2.4G: -7.40dBm
Operate Temp. Range	-40℃~+125℃

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. Transmitter part is located in the controller, and Receiver is located in the Complete Equipment.
4. EUT photo refer to report (Report NO.: FCC2025-0024-EUT).
5. The EUT have SISO function, provides 1 completed transmitter and 1 receiver.

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

Fax : +86-20-32293889

FCC(Test firm designation number：CN1282)

IC(Test firm CAB identifier number：CN0103)

CNAS(Test firm designation number：L0095)

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]
Custom technology 2.4G	1TX / 1RX	2402
	1TX / 1RX	2426
	1TX / 1RX	2480

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
Custom technology 2.4G	√	/	/

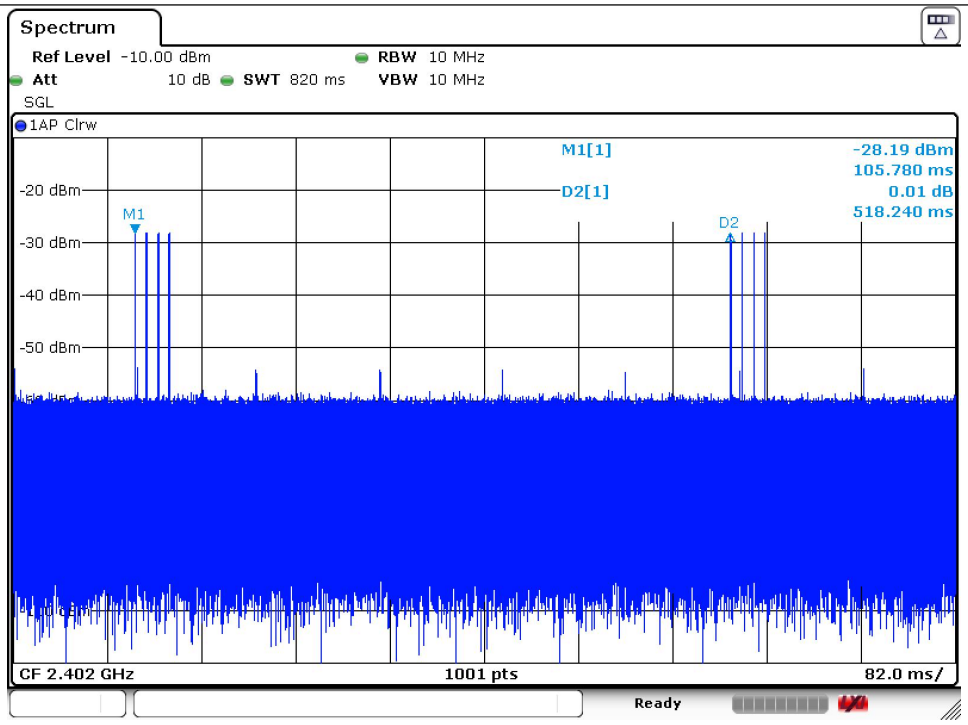
Test Items	Test Antennas	Test Modes	Test Frequency [MHz]
Conducted Emissions	Antenna 1	/	/
Radiated Emissions	Antenna 1	Custom technology 2.4G	2402, 2426, 2480
Occupied Channel Bandwidth	Antenna 1	Custom technology 2.4G	2402, 2426, 2480
Antenna Requirement	Antenna 1	/	/

3.2 Duty cycle

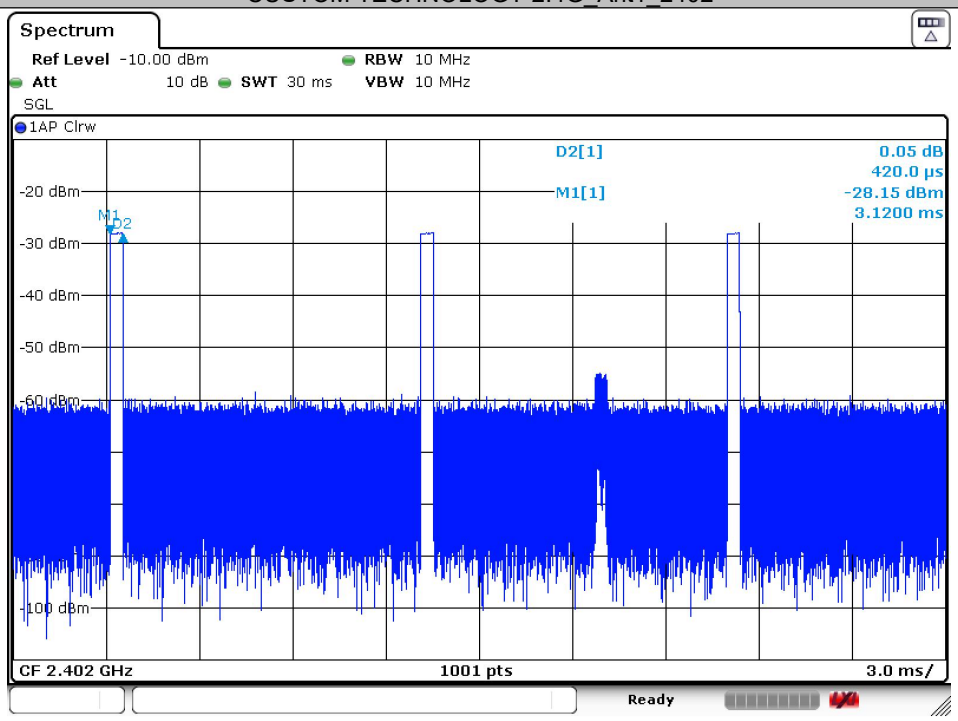
Test Results:

TestMode	Antenna	Channel [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
Custom technology 2.4G	Ant1	2402	518.24	1.68	0.32	---	PASS
	Ant1	2426	513.48	1.68	0.33	---	PASS
	Ant1	2480	519.88	1.56	0.30	---	PASS

Test Graphs:



CUSTOM TECHNOLOGY 2.4G_Ant1_2402



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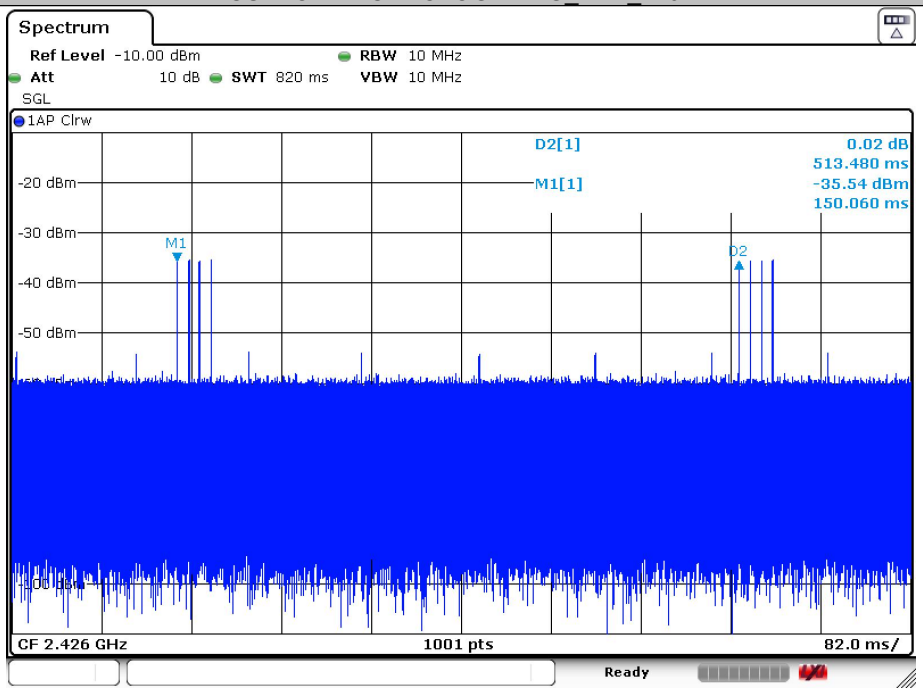

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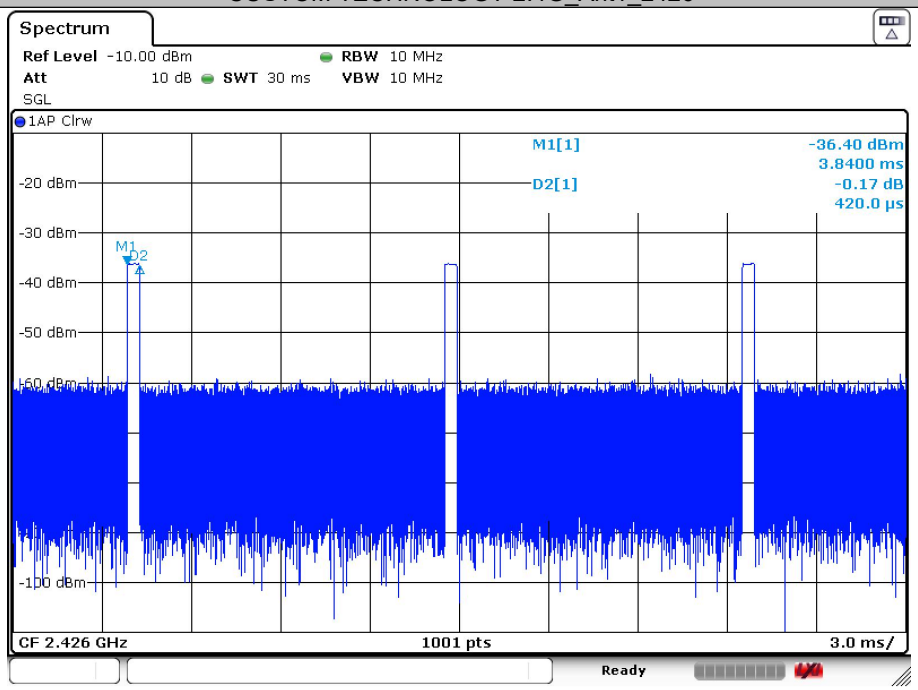

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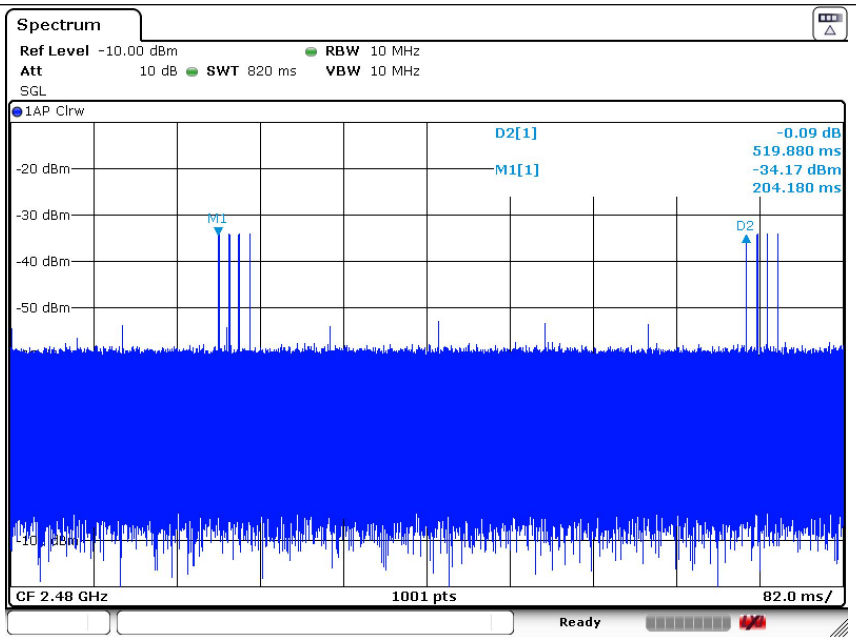

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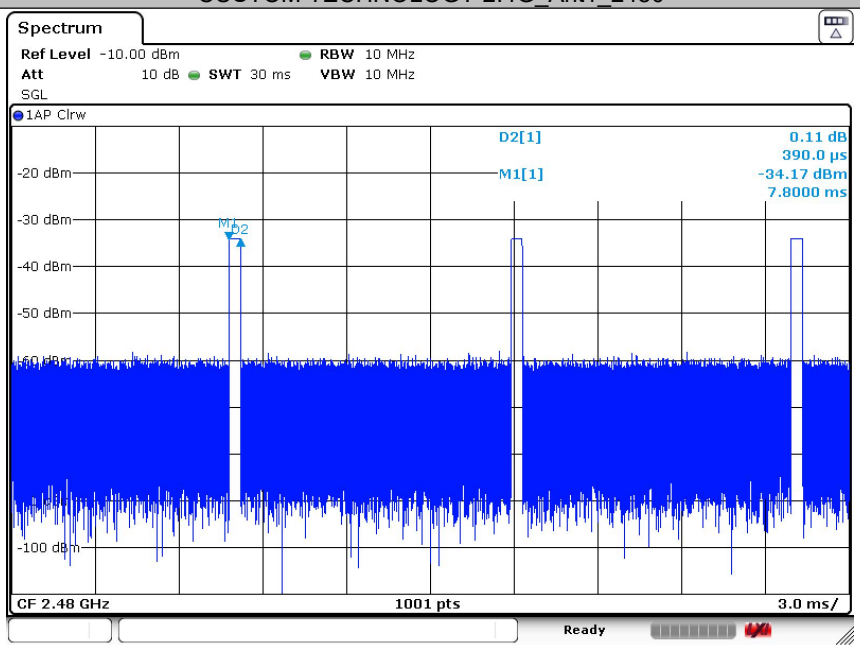


CUSTOM TECHNOLOGY 2.4G_Ant1_2480

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Verdict	Note
Conducted Emissions	15.207	Not Applicable	See Note1
Radiated Emissions	15.249(a)(d)(e),15.205,15.209	PASS	/
Occupied Channel Bandwidth	15.215(c)	PASS	/
Antenna Requirement	15.203	PASS	/

Note1: Battery powered, conducted emissions Not applicable.

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

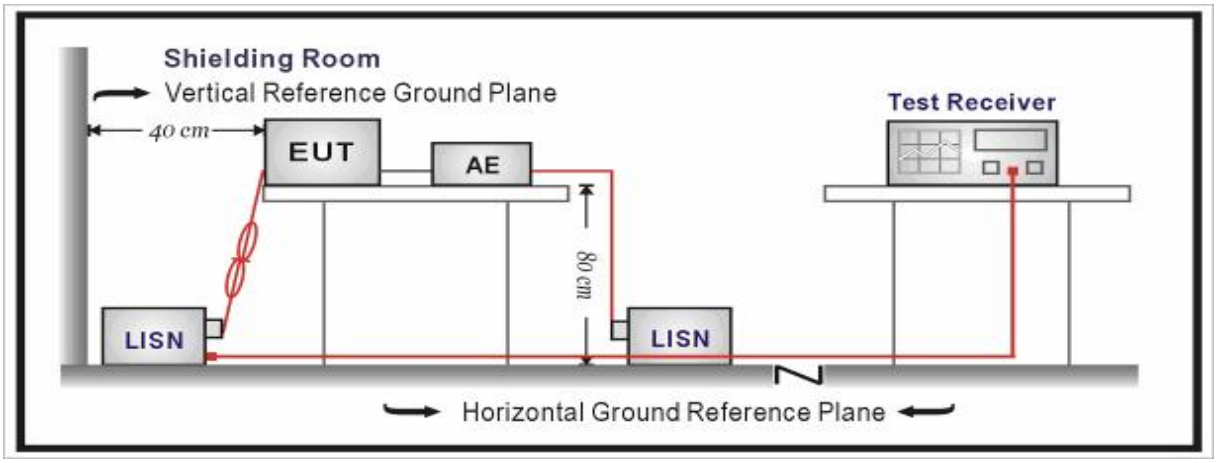
Method of Measurement:

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:

Battery powered, conducted emissions Not applicable.

5.2 Radiated Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

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

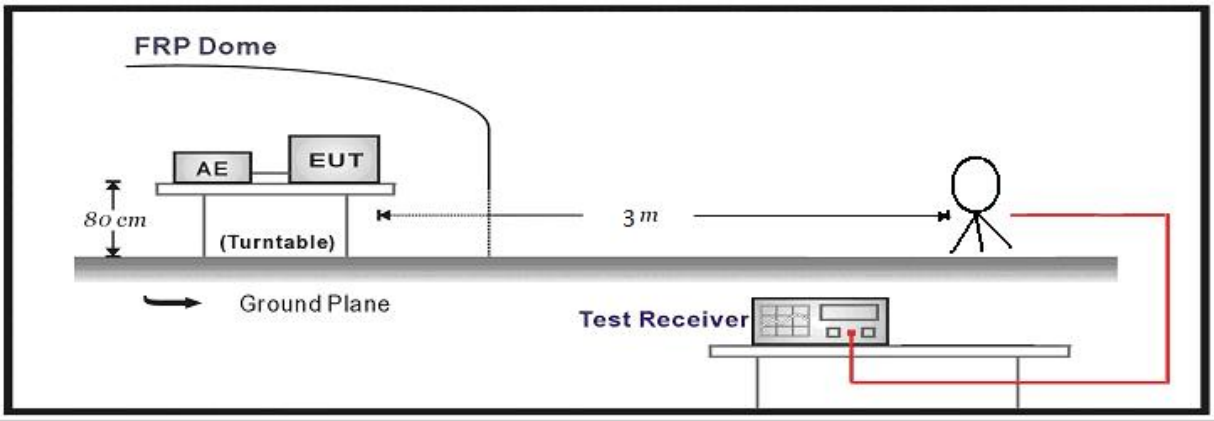
Above 1GHz	500@3m	54.0	Average Level
	5000@3m	74.0	Peak Level

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

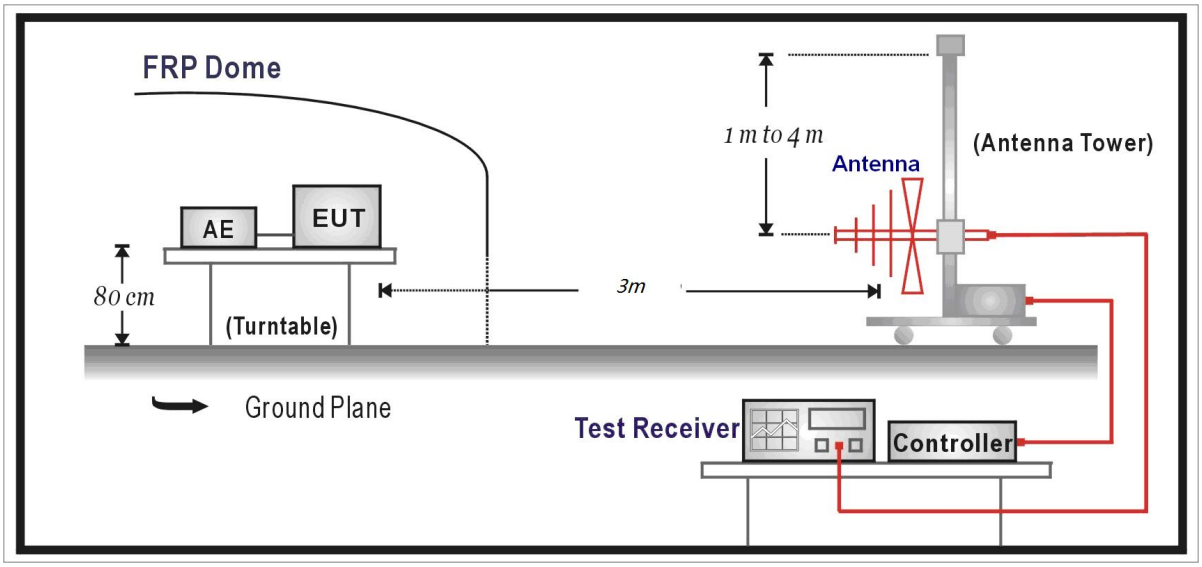
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	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	/	/	/

Test Setup:

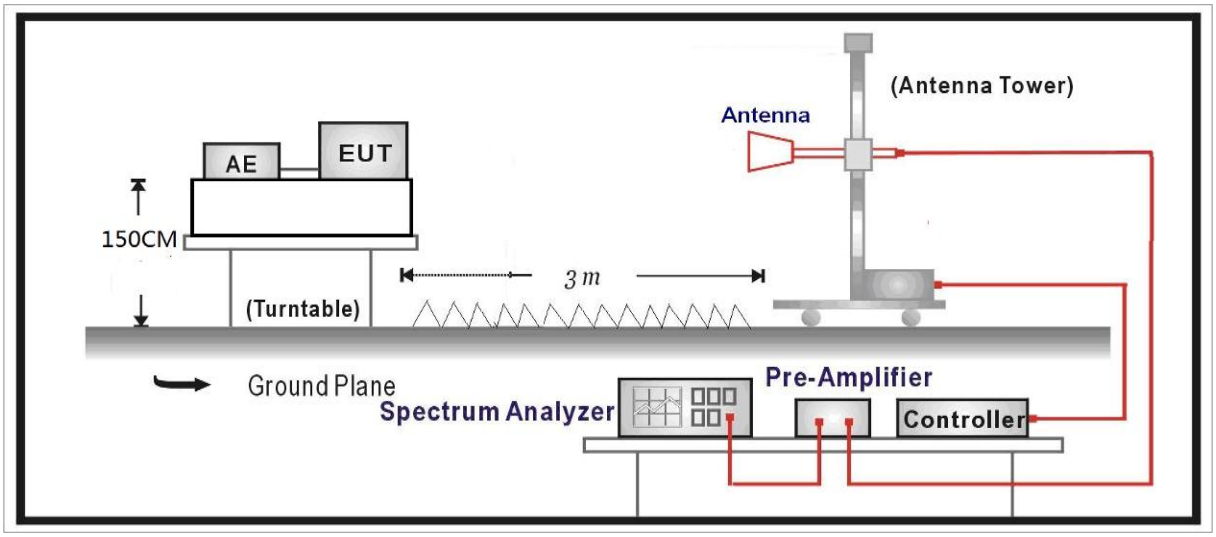
Below 30MHz Test Setup:



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：

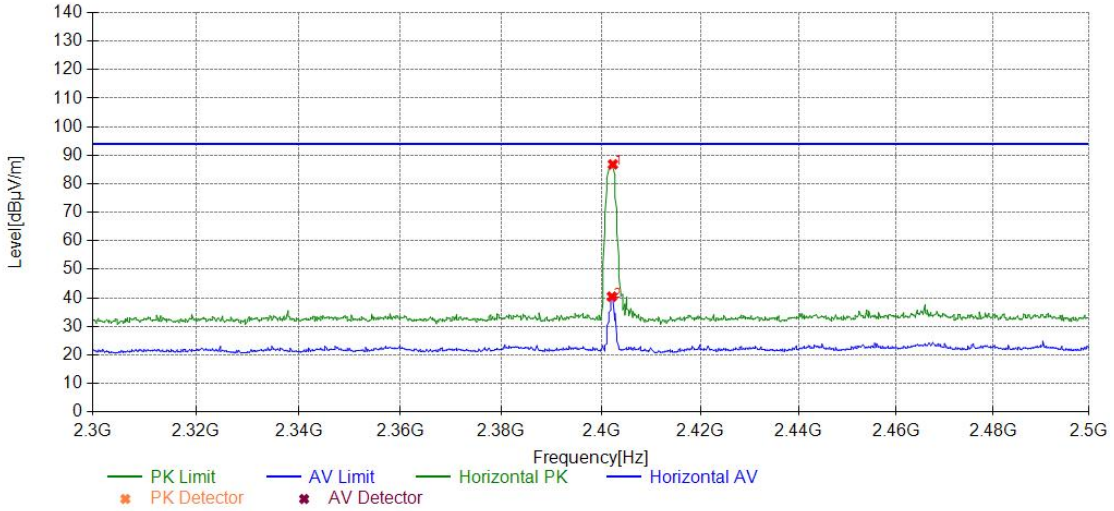
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

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

Test Results:

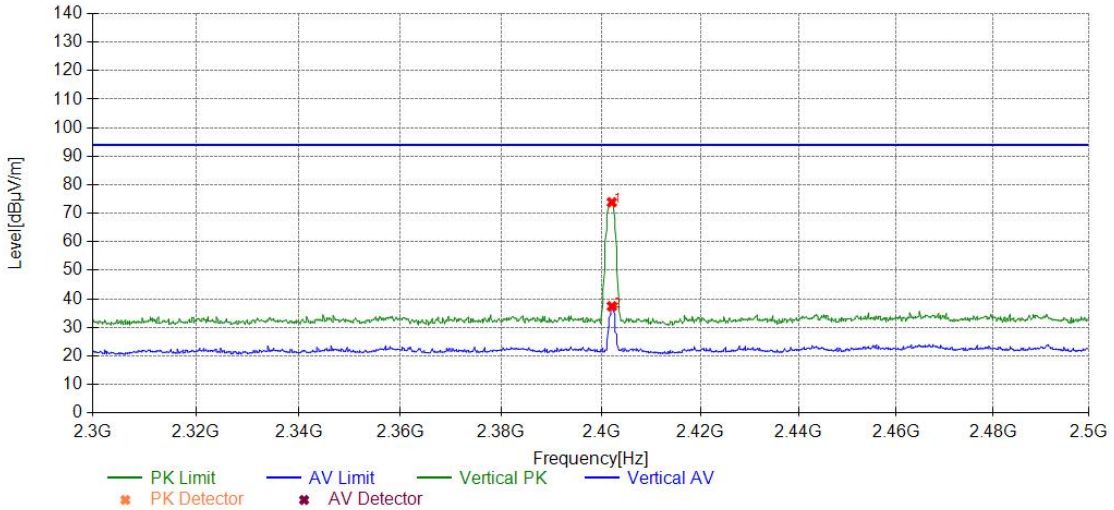
Fundamental Field Strength：

Test Carrier frequency (MHz)	2402



Suspected List

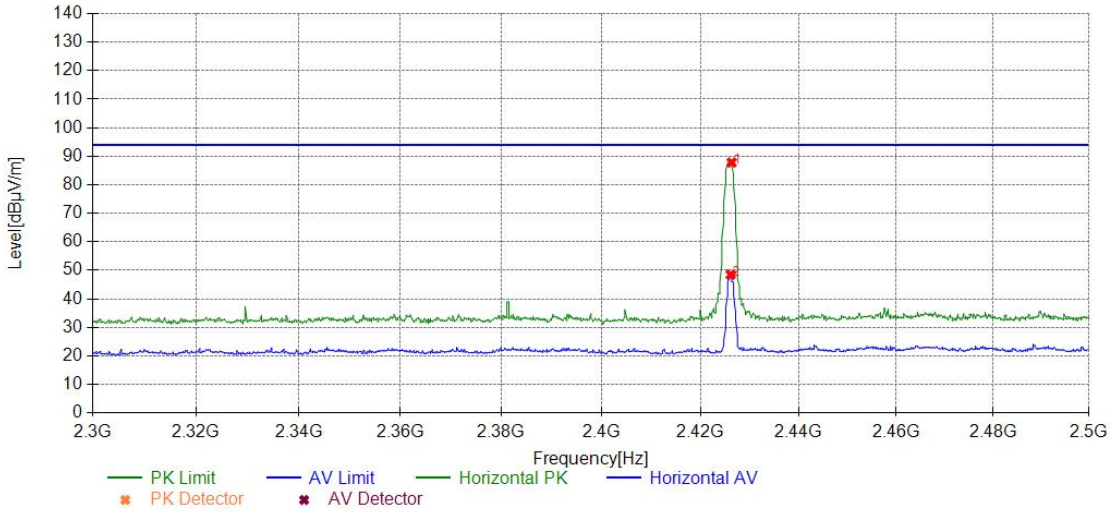
Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
2402.340234	Horizontal	-4.53	91.34	86.81	94.00	7.19	PK	150	328	PASS
2402.140214	Horizontal	-4.53	44.93	40.40	94.00	53.60	AV	150	350	PASS



Suspected List

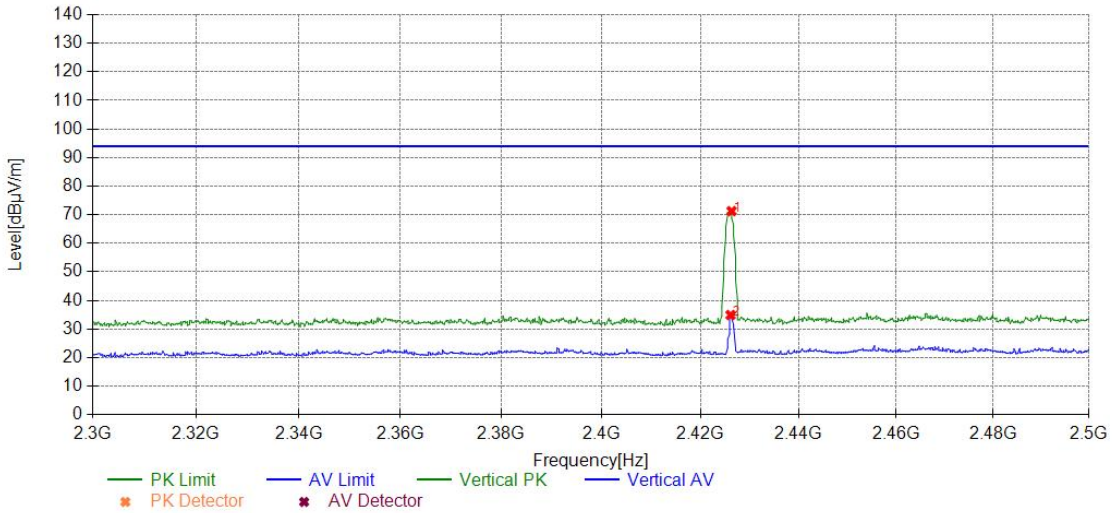
Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
2402.140214	Vertical	-4.53	78.40	73.87	94.00	20.13	PK	150	296	PASS
2402.140214	Vertical	-4.53	41.91	37.38	94.00	56.62	AV	150	318	PASS

Test Carrier frequency (MHz)	2426



Suspected List

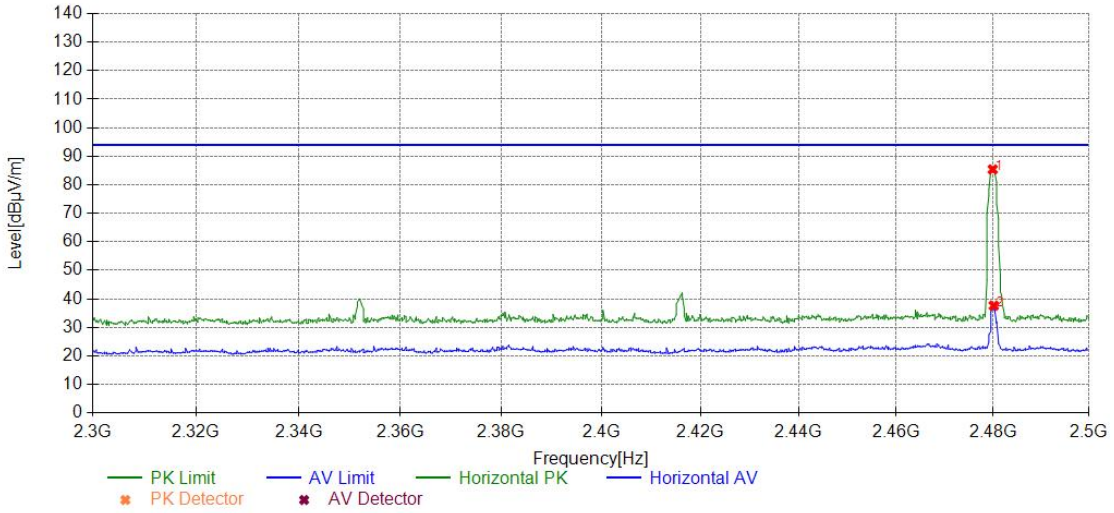
Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
2426.34263	Horizontal	-4.45	92.25	87.80	94.00	6.20	PK	150	160	PASS
2426.14261	Horizontal	-4.45	52.93	48.48	94.00	45.52	AV	150	237	PASS



Suspected List

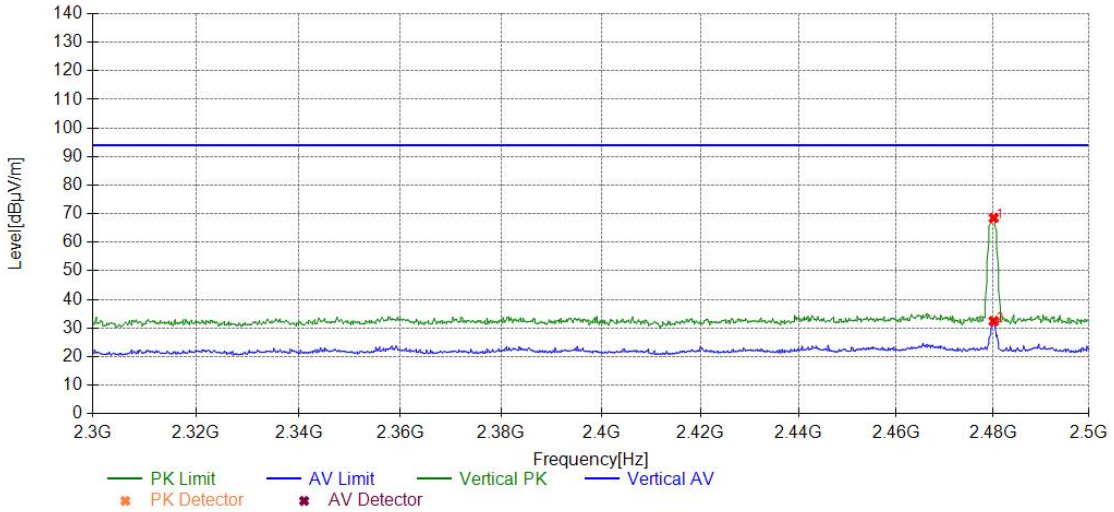
Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
2426.34263	Vertical	-4.45	75.71	71.26	94.00	22.74	PK	150	50	PASS
2426.14261	Vertical	-4.45	39.34	34.89	94.00	59.11	AV	150	65	PASS

Test Carrier frequency (MHz)	2480



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
2479.947995	Horizontal	-4.27	89.67	85.40	94.00	8.60	PK	150	263	PASS
2480.148015	Horizontal	-4.27	41.88	37.61	94.00	56.39	AV	150	353	PASS



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
2480.148015	Vertical	-4.27	72.79	68.52	94.00	25.48	PK	150	218	PASS
2480.148015	Vertical	-4.27	36.67	32.40	94.00	61.60	AV	150	196	PASS

SPURIOUS EMISSIONS：

During the test, the Radiates Emission from 9kHz to 1GHz was performed in all modes with all channels and all antenna. Custom technology 2.4G, Channel 1, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

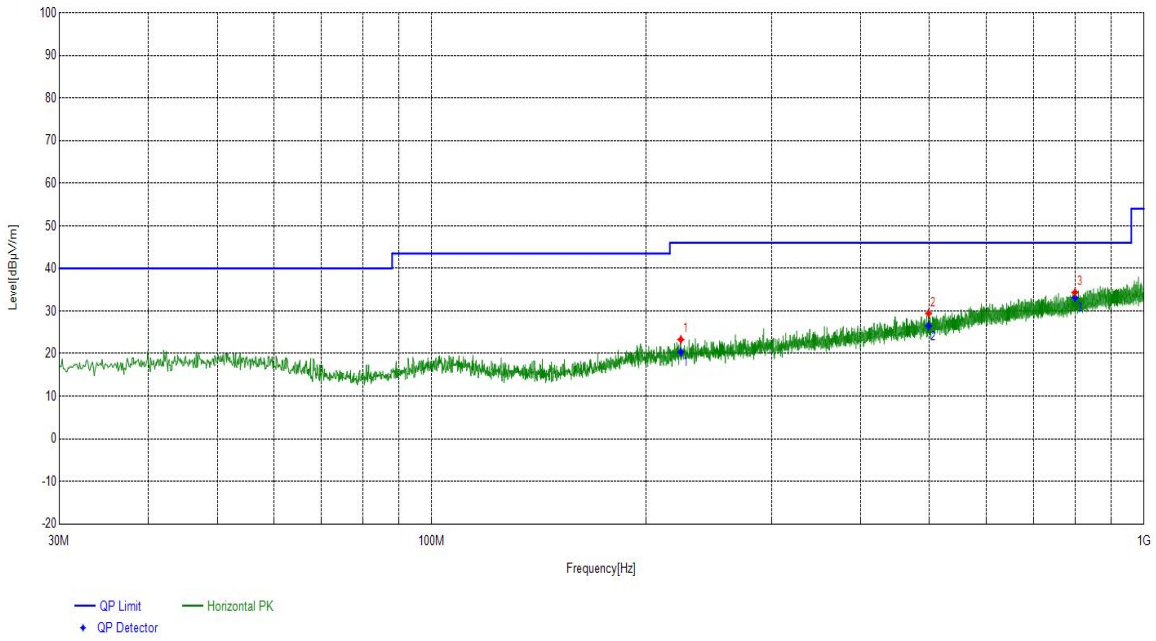
Radiates Emission	9k~1G
Test channel	Worst-Case

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
223.73	Horizontal	13.51	9.78	23.29	46.00	22.71	PK	100	40	PASS
498.46	Horizontal	19.68	9.75	29.43	46.00	16.57	PK	100	200	PASS
800.06	Horizontal	24.58	9.78	34.36	46.00	11.64	PK	100	320	PASS

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
223.728373	Horizontal	13.51	20.37	46.00	25.63	130	40	PASS
498.459846	Horizontal	19.68	26.51	46.00	19.49	125	200	PASS
800.063006	Horizontal	24.58	33.12	46.00	12.88	110	320	PASS



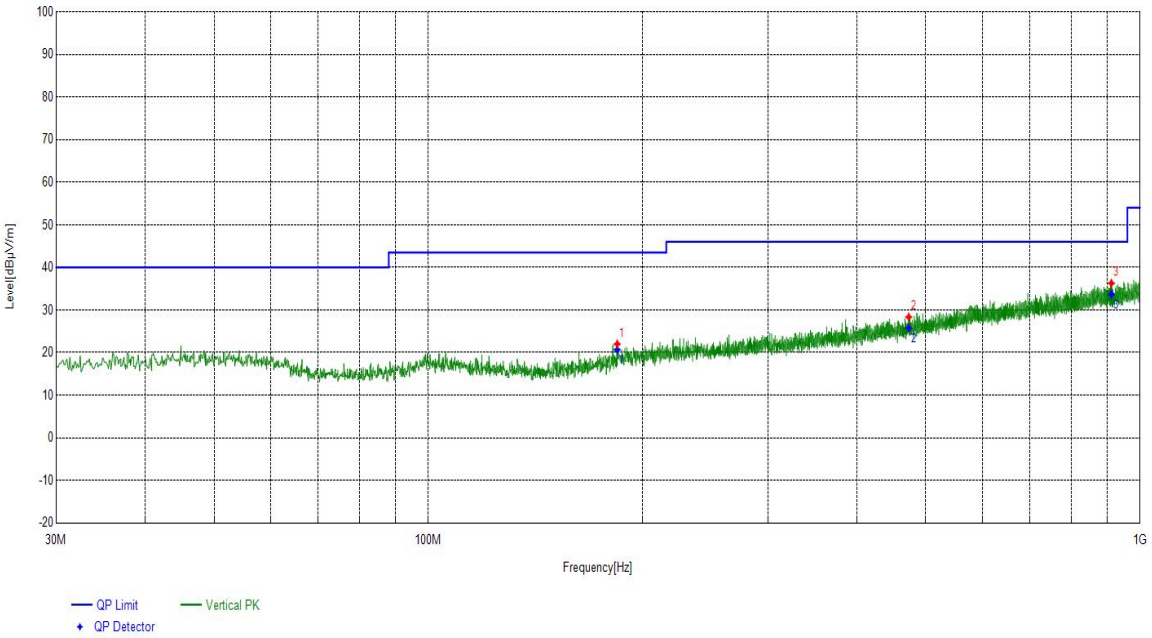
Radiates Emission	9k~1G
Test channel	Worst-Case

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
184.25	Vertical	12.19	9.81	22.00	43.50	21.50	PK	100	130	PASS
473.14	Vertical	19.22	9.12	28.34	46.00	17.66	PK	100	60	PASS
911.43	Vertical	25.95	10.32	36.27	46.00	9.73	PK	100	290	PASS

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
184.245425	Vertical	12.19	20.67	43.50	22.83	135	130	PASS
473.140314	Vertical	19.22	25.73	46.00	20.27	120	60	PASS
911.430143	Vertical	25.95	33.66	46.00	12.34	130	290	PASS



During the test, the Radiates Emission from 1GHz to 40GHz was performed in all modes with all channels and all antenna. Custom technology 2.4G, Highest, medium, lowest channels 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
4323.132313	0.19	37.54	37.73	74.00	36.27	PK	150	290	PASS
6061.806181	5.77	34.32	40.09	74.00	33.91	PK	150	200	PASS
9593.159316	12.39	32.07	44.46	74.00	29.54	PK	150	30	PASS
4191.119112	0.44	27.88	28.32	54.00	25.68	AV	150	50	PASS
6288.328833	5.97	24.18	30.15	54.00	23.85	AV	150	180	PASS
9563.156316	12.36	22.03	34.39	54.00	19.61	AV	150	90	PASS
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
4093.609361	0.50	38.53	39.03	74.00	34.97	PK	150	180	PASS
5715.271527	4.37	34.15	38.52	74.00	35.48	PK	150	50	PASS
7833.483348	9.23	33.81	43.04	74.00	30.96	PK	150	300	PASS
4003.60036	0.54	28.39	28.93	54.00	25.07	AV	150	260	PASS
5752.775278	4.51	24.60	29.11	54.00	24.89	AV	150	170	PASS
8438.043804	9.91	24.02	33.93	54.00	20.07	AV	150	130	PASS

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

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
4602.160216	0.37	37.91	38.28	74.00	35.72	PK	150	290	PASS
7276.927693	9.00	34.58	43.58	74.00	30.42	PK	150	310	PASS
9734.173417	12.39	32.56	44.95	74.00	29.05	PK	150	130	PASS
4086.108611	0.50	29.41	29.91	54.00	24.09	AV	150	220	PASS
7011.40114	8.95	23.97	32.92	54.00	21.08	AV	150	110	PASS
8556.555656	10.05	23.72	33.77	54.00	20.23	AV	150	310	PASS

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
4773.177318	1.11	36.76	37.87	74.00	36.13	PK	150	50	PASS
6180.318032	5.93	34.77	40.70	74.00	33.30	PK	150	130	PASS
8612.061206	10.11	34.23	44.34	74.00	29.66	PK	150	160	PASS
4396.639664	0.04	28.46	28.50	54.00	25.50	AV	150	60	PASS
6033.30333	5.73	24.50	30.23	54.00	23.77	AV	150	110	PASS
8597.059706	10.11	24.20	34.31	54.00	19.69	AV	150	210	PASS

Note: 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
4630.663066	0.49	39.00	39.49	74.00	34.51	PK	150	120	PASS
7039.90399	8.95	34.16	43.11	74.00	30.89	PK	150	10	PASS
8537.053705	10.03	33.23	43.26	74.00	30.74	PK	150	160	PASS
4609.660966	0.40	27.38	27.78	54.00	26.22	AV	150	110	PASS
6853.885389	8.21	22.66	30.87	54.00	23.13	AV	150	320	PASS
8408.040804	9.85	24.01	33.86	54.00	20.14	AV	150	140	PASS

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
4938.193819	1.83	36.64	38.47	74.00	35.53	PK	150	120	PASS
7632.463246	9.11	34.37	43.48	74.00	30.52	PK	150	150	PASS
9668.166817	12.40	32.63	45.03	74.00	28.97	PK	150	350	PASS
4735.673567	0.96	26.69	27.65	54.00	26.35	AV	150	120	PASS
7027.90279	8.95	23.64	32.59	54.00	21.41	AV	150	30	PASS
9249.624963	11.27	22.08	33.35	54.00	20.65	AV	150	140	PASS

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

Fundamental Field Strength and Band Edge:

During the test, the Band Edge was performed in Custom technology 2.4G all modes with all channels and all antenna. Custom technology 2.4G, Antenna 1, highest and lowest channels are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Test mode	Custom technology 2.4G								
Test channel	Lowest channel								
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
2390.1390	-4.57	36.90	32.33	74.00	41.67	PK	150	350	PASS
2400.1400	-4.54	37.46	32.92	74.00	41.08	PK	150	350	PASS
2402.3402	-4.53	91.34	86.81	94.00	7.19	PK	150	350	PASS
2390.1390	-4.57	26.17	21.60	54.00	32.40	AV	150	40	PASS
2400.1400	-4.54	26.32	21.78	54.00	32.22	AV	150	50	PASS
2402.1402	-4.53	44.93	40.40	94.00	53.60	AV	150	350	PASS
Test mode	Custom technology 2.4G								
Test channel	Lowest channel								
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
2390.1390	-4.57	37.08	32.51	74.00	41.49	PK	150	340	PASS
2400.1400	-4.54	37.58	33.04	74.00	40.96	PK	150	340	PASS
2402.1402	-4.53	78.40	73.87	94.00	20.13	PK	150	340	PASS
2390.1390	-4.57	26.28	21.71	54.00	32.29	AV	150	30	PASS
2400.1400	-4.54	26.72	22.18	54.00	31.82	AV	150	30	PASS
2402.1402	-4.53	41.91	37.38	94.00	56.62	AV	150	340	PASS

Test mode	Custom technology 2.4G
Test channel	Highest channel
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
2479.9479	-4.27	89.67	85.40	94.00	8.60	PK	150	340	PASS
2483.5483	-4.26	37.82	33.56	74.00	40.44	PK	150	340	PASS
2490.1490	-4.23	38.34	34.11	74.00	39.89	PK	150	250	PASS
2480.1480	-4.27	41.88	37.61	94.00	56.39	AV	150	340	PASS
2483.5483	-4.26	26.58	22.32	54.00	31.68	AV	150	20	PASS
2490.1490	-4.23	26.92	22.69	54.00	31.31	AV	150	10	PASS

Test mode	Custom technology 2.4G
Test channel	Highest channel
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
2480.1480	-4.27	72.79	68.52	94.00	25.48	PK	150	340	PASS
2483.5483	-4.26	36.16	31.90	74.00	42.10	PK	150	90	PASS
2504.9504	-4.18	36.57	32.39	74.00	41.61	PK	150	350	PASS
2480.1480	-4.27	36.67	32.40	94.00	61.60	AV	150	340	PASS
2483.5483	-4.26	26.48	22.22	54.00	31.78	AV	150	10	PASS
2504.9504	-4.18	26.58	22.40	54.00	31.60	AV	150	320	PASS

5.3 Occupied Channel Bandwidth

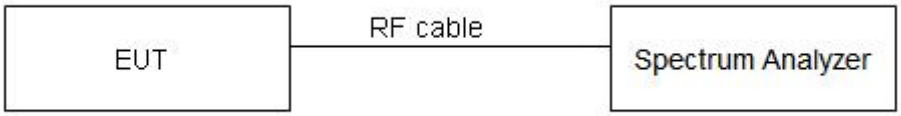
Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. RBW is set to 50 kHz; VBW is set to 200 kHz on spectrum analyzer.
Detector=Peak, Trace mode=Max hold.

Test Setup:



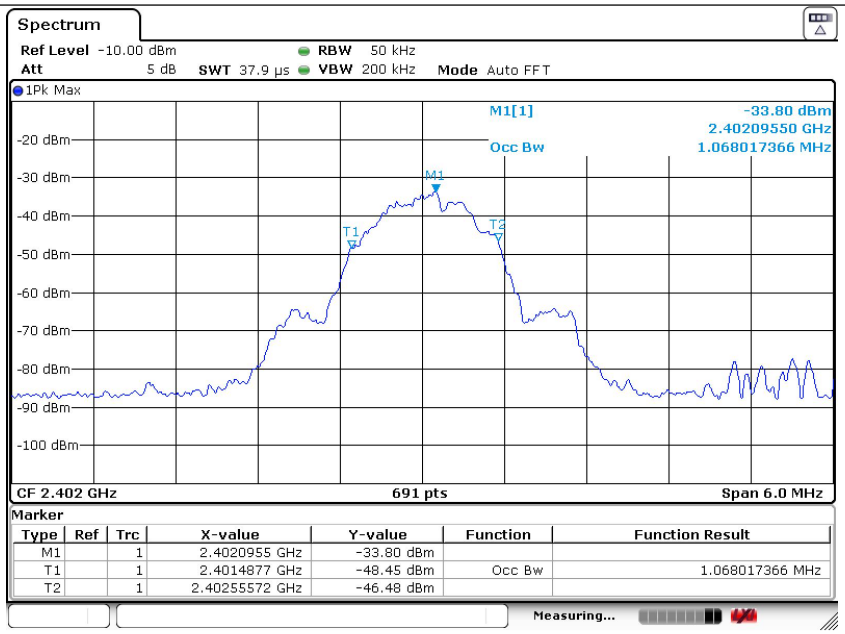
Measurement Uncertainty：

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

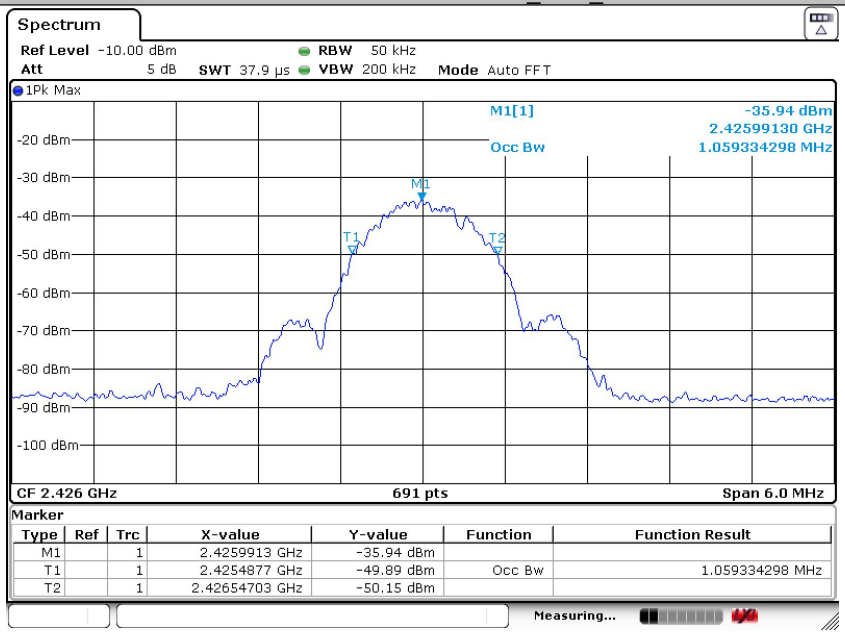
Test Results:

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
CUSTOM TECHNOLOGY 2.4G	Ant1	2402	1.07	2401.49	2402.56	---	PASS
	Ant1	2426	1.06	2425.49	2426.55	---	PASS
	Ant1	2480	1.05	2479.48	2480.53	---	PASS

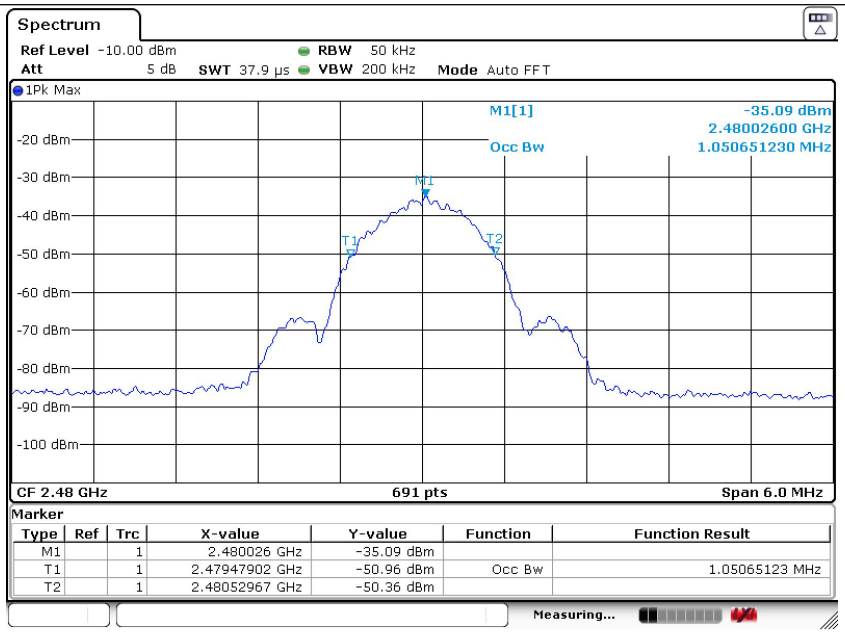
Test Graphs:



CUSTOM TECHNOLOGY 2.4G_Ant1_2402



CUSTOM TECHNOLOGY 2.4G_Ant1_2426



CUSTOM TECHNOLOGY 2.4G_Ant1_2480

5.4 Antenna Measurement

Limits:

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

Antenna Description:

PCB antenna, without antenna connector. According to 15.203, it is considered sufficient to comply with the provisions of this section.

6. Appendix A

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2027/04/22
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2026/01/01
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2025/12/26
EMI Test Receiver	ESR7	102235	VGDY-0956	R&S	2026/01/05
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2026/06/03
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2026/06/08
Waveguide Horn Antenna	HF906	360306/008	EM-000093	R&S	2025/12/26
Waveguide Horn Antenna	BBHA9170	00949	DZ-000209-2	SCHWARZBECK	2025/08/03
Bandstop Filters	SW-BSF-2400-100-7-A1	/	EM-000495	/	2025/08/29
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2026/06/02
Temperature and humidity meter	MHO-C201	C231446122	DZ-000249-2	Seconds test	2025/07/28

Dynacomm	Software Release	Software Developer
TS+（5m,Radiation test）	JS32-RE 5.0.0	Tonscend

No Body Text Below

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".

Address: No.3,Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China (Test location)
Post Code：510663 Tel：020-32293888
FAX：020 32293889 E-mail：office@cvc.org.cn