

EMC TEST REPORT

Radio Frequency Devices - Unintentional Radiators

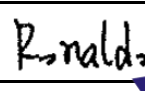
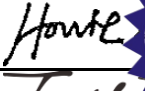
FCC ID.....:	2A6CL-CR1009ULTRA	
Test Report No.:	TCT250208E012	
Date of issue	Feb. 14, 2025	
Testing laboratory.....:	SHENZHEN TONGCE TESTING LAB	
Testing location/ address.....:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name	Shen Zhen Yelaw Technology Co., LTD	
Address.....:	4th Floor, Building D, Xinyong Fengxin Industrial Park, Fengzheng Road, Shiyan Street, Baoan District, Shenzhen, China	
Manufacturer's name	Dongguan Hexinying Technology Co., LTD	
Address.....:	No. 8 Xinyongda Road, Shipai Town, Dongguan City, Dongguan, China	
Standard(s).....:	FCC 47 CFR Part 15 Subpart B	
Test item description.....:	Emergency Alert Radio	
Trade Mark.....:	Mesqool, ROCAM, Raynic, Roxicosly, PPLEE, OnLyee, Eoxsmile, PESCON, MINORZ, Zebon	
Model/Type reference	CR1009Ultra, CR1009, CR1009Pro, CR1009ProDAB	
Rating(s)	Input/Output: DC 5 V, 1 A, 5 W Battery: DC 3.7 V, 6000 mAh, 22.2 Wh Dry Battery: DC 4.5 V (3*AAA)	
Date of receipt of test item.....:	Feb. 08, 2025	
Date (s) of performance of test:	Feb. 08, 2025 ~ Feb. 14, 2025	
Tested by (+signature).....:	Ronaldo LUO	
Check by (+signature)	Howie LYU	
Approved by (+signature)	Tomsin	
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1. General Product Information

1.1.EUT description

Test item description..... :	Emergency Alert Radio
Model/Type reference..... :	CR1009Ultra
Rating(s)..... :	Input/Output: DC 5 V, 1 A, 5 W Battery: DC 3.7 V, 12000 mAh, 44.4 Wh Dry Battery: DC 4.5 V (3*AAA)
Highest internal frequency F_x :	☐ $F_x \leq 108$ MHz ☒ $108 \text{ MHz} < F_x \leq 500 \text{ MHz}$ ☐ $500 \text{ MHz} < F_x \leq 1 \text{ GHz}$ ☐ $F_x > 1 \text{ GHz}$
AC Line..... :	☐ Shielded ☐ Unshielded ☐ Detachable ☐ Un-detachable ☒ No applicable ☐ Length:
DC Line..... :	☐ Shielded ☐ Unshielded ☐ Detachable ☐ Un-detachable ☒ No applicable ☐ Length:

1.2.Model(s) list

No.	Model No.	Tested with
1	CR1009Ultra	☒
Other models	CR1009, CR1009Pro, CR1009ProDAB	☐

Note: CR1009Ultra is tested model, other models are derivative models. The models are identical in circuit and PCB layout, different on the model names, trade mark and color. So the test data of CR1009Ultra can represent the remaining models.

2. Test Information

2.1.EUT operation mode(s)

Mode #	Operating mode description	Test voltage
1	Charging+ FM band	DC 5 V(Adapter Input AC 120 V/ 60 Hz)
2	Charging+ AM band	DC 5 V(Adapter Input AC 120 V/ 60 Hz)
3	Charging+ SW band	DC 5 V(Adapter Input AC 120 V/ 60 Hz)
4	Charging+ WX band	DC 5 V(Adapter Input AC 120 V/ 60 Hz)
5	USB Output(5V 1A)+ Lighting	DC 5 V

Test worst operating mode	
Disturbance voltage at mains terminals	Mode 2
Radiated emission	Mode 1
Remark: The worst measurement data and graphical presentation show in this report.	

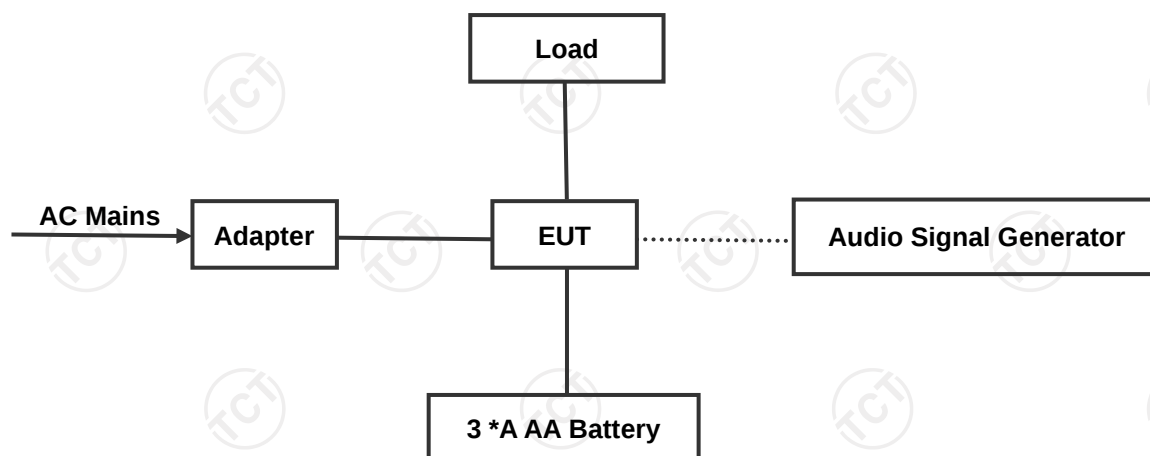
2.2.Special accessories and auxiliary equipment

Product Type	Manufacturer	Model No.	Serial No.
Adapter	SAMSUNG	EP-TA200	R37M4PR3QD1SE3
Audio Signal Generator	Tronson	TAG-101	TC-018

Auxiliary cable description

Port name	Specified length(m)	Shielded	Unshielded
/	/	/	/

2.3.Configuration of system under test



(EUT: Emergency Alert Radio)

2.4. General test conditions

Environmental reference conditions

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.

The climatic conditions during the tests were within the following limits:

Temperature	Humidity	Atmospheric pressure
15 °C – 35 °C	30 % - 60 %	86 kPa – 106 kPa

If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.

Measurement uncertainties

Test Item	Uncertainty
Uncertainty for Disturbance voltage at the mains terminals	3.32 dB
Uncertainty for Radiated emission (30 MHz to 1 GHz)	4.86 dB
Uncertainty for Radiated emission (above 1 GHz)	4.91 dB

The overall measurement uncertainty of a measurement is defined as the range of which can be supposed that it contains the true value with a specified probability.

This probability is 95 % for the generally specified measurement uncertainty (so-called expanded measurement uncertainty).

The limits for emission measurements and the Test levels for immunity tests in the applied standards were defined taking into consideration the accuracy limits for measurement and testing equipment required by the Basic standards.

All measurement and test results of the EMC laboratory of SHENZHEN TONGCE TESTING LAB fulfil the requirements for measurement uncertainties according to the standards applied.

Decision rule for statement(s) of conformity is based on simple acceptance specified in Clause 4.3.3 in IEC Guide 115:2023.

3. Test Result Summary

FCC 47 CFR Part 15 Subpart B	
Requirement – Test case	Verdict
Classification Class (☐ A ☒ B)	—
Disturbance voltage at the mains terminals	Pass
Radiated emission	Pass
Remark:---	

Test case verdicts	
- Test case does not apply to the test object	N/A
- Test object does meet the requirement.....	P (Pass)
- Test object does not meet the requirement	F (Fail)

4. List of Test Equipment

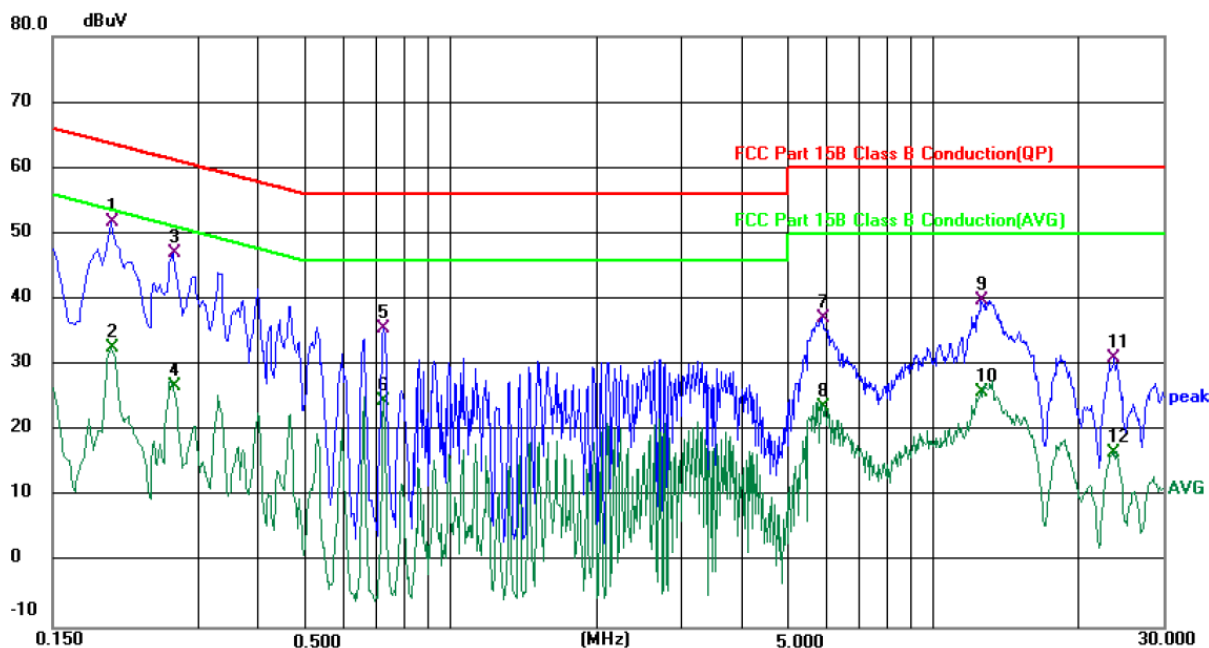
Equipment	Manufacturer	Model No.	Serial No.	Cal. Due
Disturbance voltage at mains terminals				
EMI Test Receiver	R&S	ESCI3	100898	2025/06/26
Line Impedance Stabilisation Network(LISN)	Schwarzbeck	NSLK 8126	8126453	2026/01/20
Attenuator	N/A	10dB	164080	2025/06/26
844 Shielded room	SKET	8m*4m*4m	CR4	2027/06/26
Test software	EZ EMC	EMEC-3A1	1.1.4.2	/
Radiated emission (30 MHz to 1 GHz)				
Broadband Antenna	Schwarzbeck	VULB 9168	01197	2026/01/22
EMI Test Receiver	R&S	ESCI7	100529	2026/01/20
Pre-amplifier	HP	8447D	2727A05017	2025/06/26
3m Anechoic Chamber	SKET	9m*6m*6m	SA01	2027/06/12
Test software	EZ EMC	FA-03A2 RE+	1.1.4.2	/
Radiated emission (above 1 GHz)				
Horn Antenna	Schwarzbeck	BBHA 9120 D	02372	2026/01/22
Horn Antenna	Schwarzbeck	BBHA 9170	00956	2026/01/22
Signal Analyzer	R&S	FSQ40	200061	2025/06/26
Pre-amplifier	SKET	LNPA_0118G-45	SK2021012102	2026/01/20
Pre-amplifier	SKET	LNPA_1840G-50	SK202109203500	2026/01/20
#3 3m Anechoic Chamber	SKET	9m*6m*6m	SA03	2027/05/29
Test software	EZ EMC	FA-03A2 RE+	1.1.4.2	/

5. Test Conditions and Results

5.1. Disturbance voltage at mains terminals

Test requirement	FCC 47 CFR Part 15 Subpart B		
Basic standard	ANSI C63.4: 2014+A1:2017		
Test frequency range..	150 kHz to 30 MHz		
Limits	Limits for Class A		
	Frequency (MHz)	dB μ V Quasi-peak	dB μ V Average
	0.15 to 0.5	79	66
	0.5 to 30	73	60
	Limits for Class B		
	Frequency (MHz)	dB μ V Quasi-peak	dB μ V Average
	0.15 to 0.5	66 to 56	56 to 46
	0.5 to 5	56	46
	5 to 30	60	50
Test method	The AMN placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment were at least 0.8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN).		
Ambient temperature..	22.8 °C		
Relative humidity	49 %		
Test location	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China		
Test model(s)	CR1009Ultra		
EUT operation mode..	Mode 2		
Test results	Pass		
Remark	/		

Measurement data and Graphical presentation of the result



Site 844 Shielding Room

Phase: L1

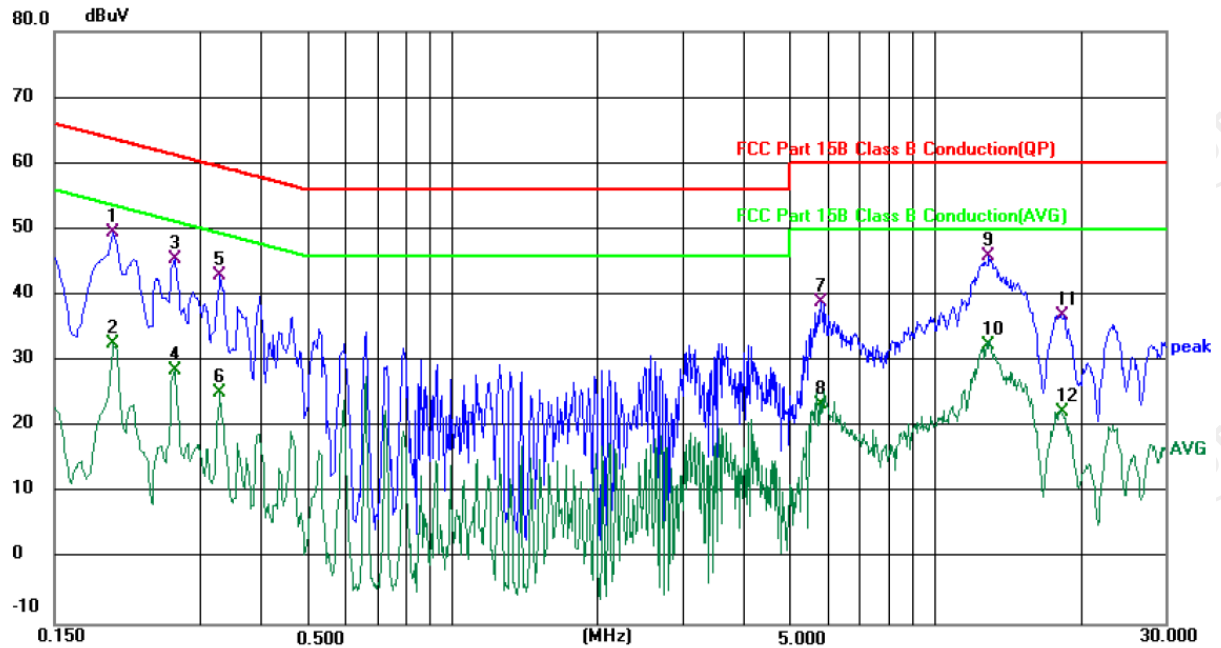
Temperature: 22.8 (°C)

Humidity: 49 %

Limit: FCC Part 15B Class B Conduction(QP)

Power: DC 5V(Adapter Input AC 120V/60Hz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1986	42.02	9.65	51.67	63.67	-12.00	QP	
2		0.1986	23.09	9.65	32.74	53.67	-20.93	AVG	
3		0.2673	37.34	9.66	47.00	61.20	-14.20	QP	
4		0.2673	17.09	9.66	26.75	51.20	-24.45	AVG	
5		0.7285	25.18	10.42	35.60	56.00	-20.40	QP	
6		0.7285	14.15	10.42	24.57	46.00	-21.43	AVG	
7		5.8884	26.96	10.22	37.18	60.00	-22.82	QP	
8		5.8884	13.53	10.22	23.75	50.00	-26.25	AVG	
9		12.5711	29.61	10.30	39.91	60.00	-20.09	QP	
10		12.5711	15.65	10.30	25.95	50.00	-24.05	AVG	
11		23.7560	20.55	10.52	31.07	60.00	-28.93	QP	
12		23.7560	6.05	10.52	16.57	50.00	-33.43	AVG	



Site 844 Shielding Room

Phase: **N**

Temperature: 22.8 (°C)

Humidity: 49 %

Limit: FCC Part 15B Class B Conduction(QP)

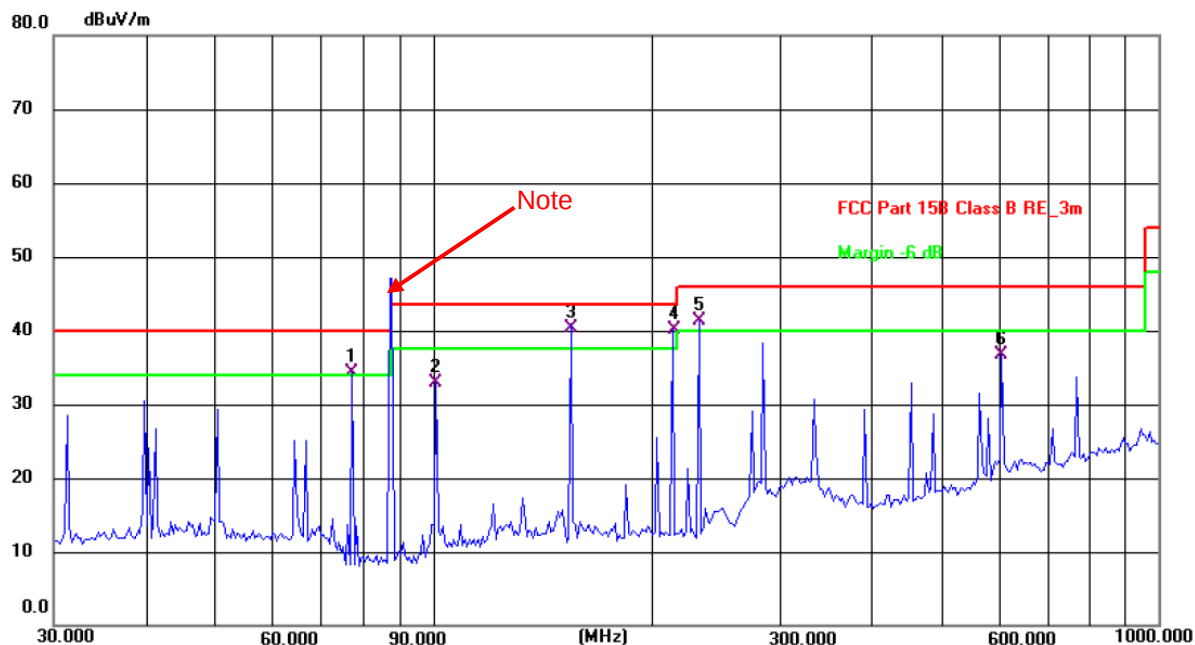
Power: DC 5V(Adapter Input AC 120V/60Hz)

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1980	39.92	9.63	49.55	63.69	-14.14	QP	
2		0.1980	22.95	9.63	32.58	53.69	-21.11	AVG	
3		0.2660	35.86	9.64	45.50	61.24	-15.74	QP	
4		0.2660	18.89	9.64	28.53	51.24	-22.71	AVG	
5		0.3300	33.00	9.97	42.97	59.45	-16.48	QP	
6		0.3300	15.23	9.97	25.20	49.45	-24.25	AVG	
7		5.8140	28.80	10.15	38.95	60.00	-21.05	QP	
8		5.8140	13.28	10.15	23.43	50.00	-26.57	AVG	
9	*	12.9420	35.60	10.27	45.87	60.00	-14.13	QP	
10		12.9420	22.18	10.27	32.45	50.00	-17.55	AVG	
11		18.2578	26.74	10.24	36.98	60.00	-23.02	QP	
12		18.2578	12.08	10.24	22.32	50.00	-27.68	AVG	

5.2. Radiated emission

Test requirement	FCC 47 CFR Part 15 Subpart B					
Basic standard	ANSI C63.4: 2014+A1:2017					
Test frequency range.:	30 MHz to 40 GHz					
Limits	Frequency (MHz)	3 m measurement distance				
		Quasi-peak (dBμV/m)				
		Class A		Class B		
	30 to 88	49		40		
	88 to 216	53.5		43.5		
	216 to 960	56.4		46		
	960 to 1000	59.5		54		
	Frequency (MHz)	3 m measurement distance				
		Class A		Class B		
		Peak (dBμV/m)	Average (dBμV/m)	Peak (dBμV/m)	Average (dBμV/m)	
	Above 1000	79.5	59.5	74	54	
Test method.....:	Measurements were made in a 3-meter semi-anechoic chamber that complies to CISPR 16. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meters with the receive antenna located at 1 to 4-meter height in both horizontal and vertical polarities. Final measurements (quasi-peak) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.					
Ambient temperature.:	23.7 °C (30MHz-1GHz) 21.6 °C (Above 1GHz)					
Relative humidity	48 % (30MHz-1GHz) 46 % (Above 1GHz)					
Test location	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China					
Test model(s)	CR1009Ultra					
EUT operation mode..:	Mode 1					
Test results	Pass					
Remark.....:	/					

Measurement data and Graphical presentation of the result



Site: 3m Anechoic Chamber1

Polarization: **Horizontal**

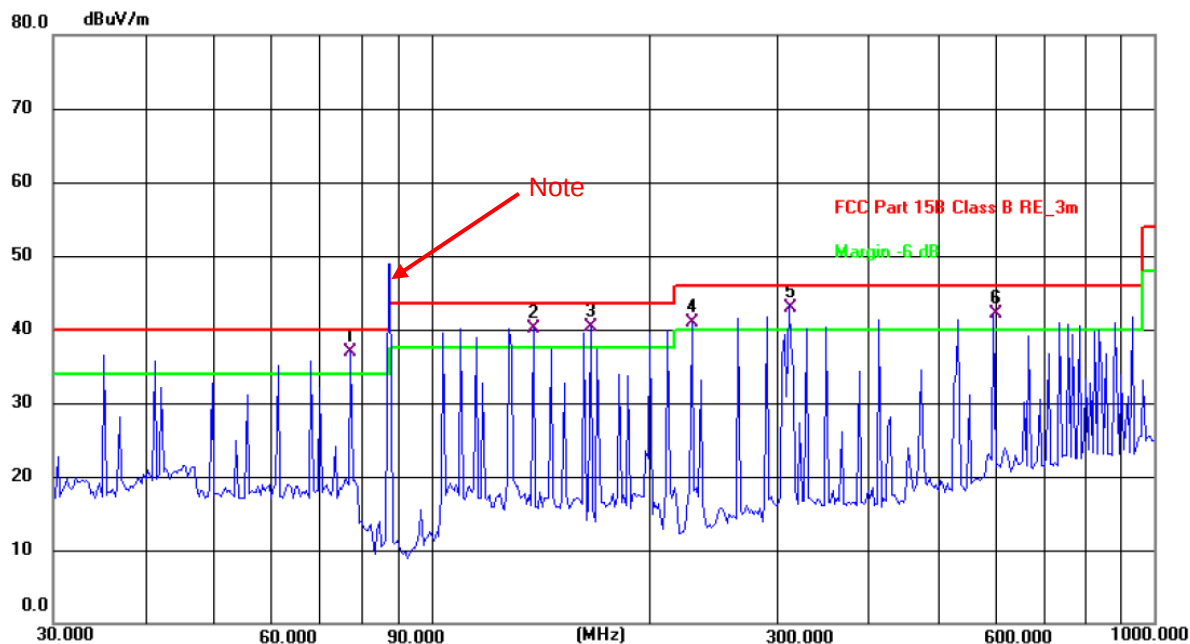
Temperature: 23.7(C) Humidity: 48 %

Limit: FCC Part 15B Class B RE_3m

Power: DC 5 V(Adapter Input AC 120 V/60 Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 !	77.3210	49.67	-15.45	34.22	40.00	-5.78	QP	P	
2	100.9338	48.08	-15.22	32.86	43.50	-10.64	QP	P	
3 *	154.8204	51.48	-11.08	40.40	43.50	-3.10	QP	P	
4 !	213.7633	55.34	-15.16	40.18	43.50	-3.32	QP	P	
5 !	232.5318	55.72	-14.41	41.31	46.00	-4.69	QP	P	
6	607.7866	41.63	-4.95	36.68	46.00	-9.32	QP	P	

Note: This signal is generated by the auxiliary testing equipment audio signal generator, not the EUT.



Site: 3m Anechoic Chamber1

Polarization: **Vertical**

Temperature: 23.7(C)

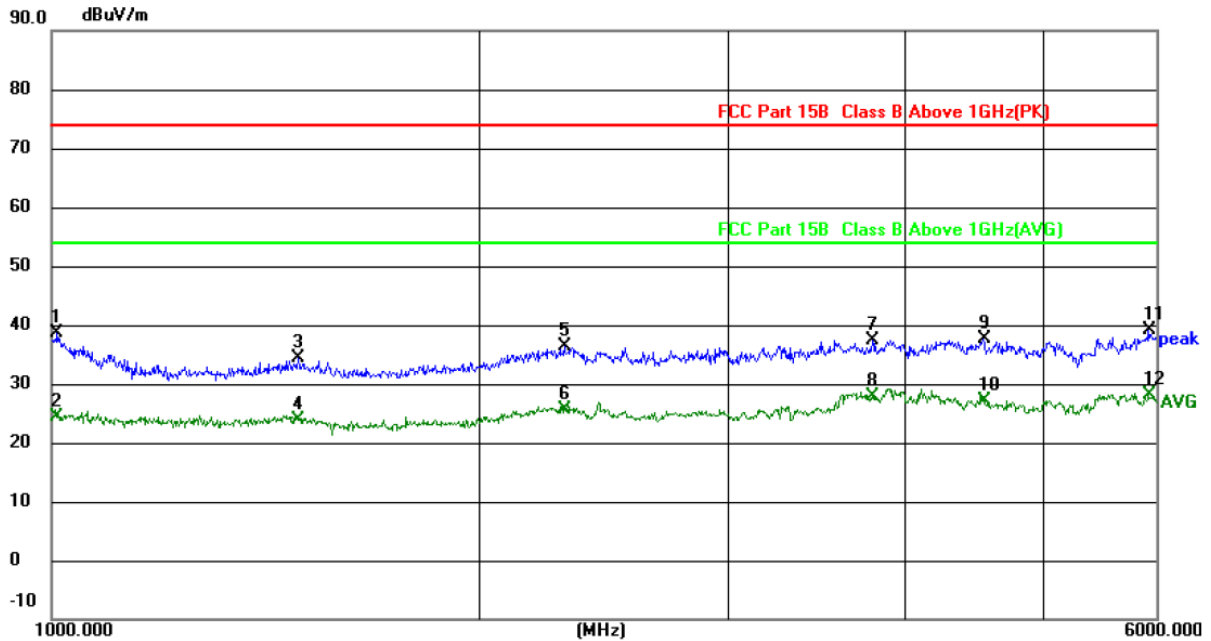
Humidity: 48 %

Limit: FCC Part 15B Class B RE_3m

Power: DC 5 V(Adapter Input AC 120 V/60 Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 !	77.3210	52.26	-15.45	36.81	40.00	-3.19	QP	P	
2 !	138.3873	52.34	-12.16	40.18	43.50	-3.32	QP	P	
3 !	166.0680	51.87	-11.54	40.33	43.50	-3.17	QP	P	
4 !	229.2930	55.54	-14.71	40.83	46.00	-5.17	QP	P	
5 *	312.1794	53.78	-10.78	43.00	46.00	-3.00	QP	P	
6 !	599.3212	47.26	-5.14	42.12	46.00	-3.88	QP	P	

Note: This signal is generated by the auxiliary testing equipment audio signal generator, not the EUT.



Site: 3m Anechoic Chamber

Polarization: **Horizontal**

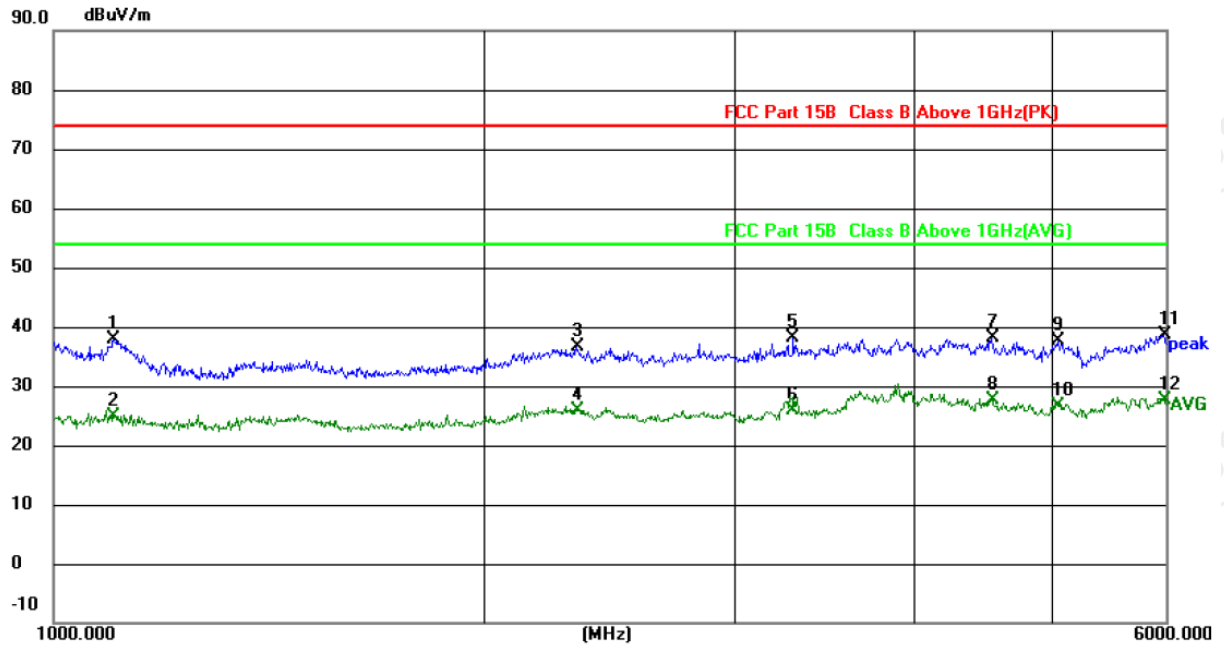
Temperature: 21.6(°C)

Humidity: 46 %

Limit: FCC Part 15B Class B Above 1GHz(PK)

Power:DC 5V(Adapter Input AC 120V/60Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	1010.627	57.88	-19.37	38.51	74.00	-35.49	peak	P	
2	1010.627	43.83	-19.37	24.46	54.00	-29.54	AVG	P	
3	1493.846	52.55	-18.29	34.26	74.00	-39.74	peak	P	
4	1493.846	42.21	-18.29	23.92	54.00	-30.08	AVG	P	
5	2302.245	52.19	-15.81	36.38	74.00	-37.62	peak	P	
6	2302.245	41.33	-15.81	25.52	54.00	-28.48	AVG	P	
7	3798.786	49.65	-12.26	37.39	74.00	-36.61	peak	P	
8	3798.786	40.24	-12.26	27.98	54.00	-26.02	AVG	P	
9	4531.624	47.85	-10.33	37.52	74.00	-36.48	peak	P	
10	4531.624	37.38	-10.33	27.05	54.00	-26.95	AVG	P	
11	5939.566	45.25	-6.11	39.14	74.00	-34.86	peak	P	
12 *	5939.566	34.22	-6.11	28.11	54.00	-25.89	AVG	P	



Site: 3m Anechoic Chamber

Polarization: **Vertical**

Temperature: 21.6(°C)

Humidity: 46 %

Limit: FCC Part 15B Class B Above 1GHz(PK)

Power:DC 5V(Adapter Input AC 120V/60Hz)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	1104.555	57.22	-19.37	37.85	74.00	-36.15	peak	P	
2	1104.555	44.36	-19.37	24.99	54.00	-29.01	AVG	P	
3	2326.504	52.54	-15.90	36.64	74.00	-37.36	peak	P	
4	2326.504	41.85	-15.90	25.95	54.00	-28.05	AVG	P	
5	3295.327	52.35	-14.31	38.04	74.00	-35.96	peak	P	
6	3295.327	40.08	-14.31	25.77	54.00	-28.23	AVG	P	
7	4532.842	48.53	-10.33	38.20	74.00	-35.80	peak	P	
8	4532.842	38.04	-10.33	27.71	54.00	-26.29	AVG	P	
9	5051.377	46.30	-8.77	37.53	74.00	-36.47	peak	P	
10	5051.377	35.50	-8.77	26.73	54.00	-27.27	AVG	P	
11	5982.824	44.45	-5.93	38.52	74.00	-35.48	peak	P	
12 *	5982.824	33.65	-5.93	27.72	54.00	-26.28	AVG	P	

6. Test set-up photo

Please refer to document Appendix No.: TCT250208E012-A

7. Photo of the EUT

Please refer to document Appendix No.: TCT250208E012-B & TCT250208E012-C

*******End of report*******