TEST REPORT

Product Name	:	Smart phone
Brand Name	:	Blackview
Model	:	BL8000
Series Model	:	N/A
FCC ID	:	2A7DX-BL8000
Applicant	:	**DOKE COMMUNICATION (HK) LIMITED**
Address	:	19H MAXGRAND PLAZA NO 3 TAI YAU STREET SAN PO KONG KL
Manufacturer	:	**Shenzhen DOKE Electronic Co., Ltd**
Address	:	801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road, Guangming District, Shenzhen, China
Standard(s)	:	FCC CFR Title 47 Part 15 Subpart C Section 15.225
Date of Receipt	:	July 24, 2024
Date of Test	:	July 24, 2024~ Aug. 22, 2024
Issued Date	:	Aug. 23, 2024

Issued By: **Guangdong Asia Hongke Test Technology Limited**

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

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Report Revise Record

Report Version	Issued Date	Notes
M1	Aug. 23, 2024	Initial Release

Contents

1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:
FCC Rules Part 15.225: Operation within the band 13.110–14.010 MHz

ANSI C63.10: 2013: American National Standard for Testing Unlicensed Wireless Devices

1.2 Test Summary

FCC PART 15 .225		
FCC Part 15.207	AC Power Conducted Emission	PASS
FCC Part 2.1049	20dB Bandwidth	PASS
FCC Part 15.225(a) (b) (c)	In-band Emissions	PASS
FCC Part 15.225(d)/15.207	Out-of-band Emissions	PASS
FCC Part 15.225(e)	Frequency Stability Tolerance	PASS

1.3 Test Facility

Test Laboratory:
Guangdong Asia Hongke Test Technology Limited
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:
FCC-Registration No.: 251906 Designation Number: CN1376
Guangdong Asia Hongke Test Technology Limited 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.

IC —Registration No.: 31737 CAB identifier: CN0165
The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01
Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the Guangdong Asia Hongke Test Technology Limited’s quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Asia Hongke laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	150KHz~30MHz ±1.20 dB	(1)
Radiated Emission	9KHz~30Hz ±3.10dB	(1)
Radiated Emission	9KHz~1GHz ±3.75dB	(1)
Radiated Emission	1GHz~18GHz ±3.88 dB	(1)
Radiated Emission	18GHz-40GHz ±3.88dB	(1)
RF power, conducted	30MHz~6GHz ±0.16dB	(1)
RF power density, conducted	±0.24dB	(1)
Spurious emissions, conducted	±0.21dB	(1)
Temperature	±1℃	(1)
Humidity	±3%	(1)
DC and low frequency voltages	±1.5%	(1)
Time	±2%	(1)
Duty cycle	±2%	(1)

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

2 GENGENERAL INFORMATION

2.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

2.2 General Description of EUT

Product Name:	Smart phone
Model/Type reference:	BL8000
Serial Model:	N/A
Power Supply:	DC 3.87V from battery 8800mAh
Adapter Information:	Model: HJ-C6-33-US Input: 100-240V~50/60Hz 0.8A Output(PD)5.0V⎓3.0A 15.0W Or 9.0V⎓3.0A 27.0W Or 12.0V⎓2.5A 30.0W Or 15.0V⎓2.0A 30.0W Or 20.0V⎓1.5A 30.0W (PPS)3.3V-11.0V⎓3.0A(33.0W MAX)
Hardware Version:	HCT-V930MB-A1
Software Version:	BL8000_NEU_V1300_V1.0
Sample(s) Status:	AiTDG-240724011-1(Normal sample) AiTDG-240724011-2(Engineer sample)
NFC:	
Operation frequency:	13.56MHz
Modulation :	ASK
No. of Channel :	1
Antenna type:	Loop Antenna
Remark: The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual..	

2.3 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Serial No.	Provided by	Other
/	/	/	/	/	/
/	/	/	/	/	/

2.4 Equipment List for the Test

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	R&S	FSV40	101470	2023.09.08	2024.09.07
2	Spectrum Analyzer	Keysight	N9020A	MY51280643	2023.09.08	2024.09.07
3	EMI Measuring Receiver	R&S	ESR	101660	2023.09.08	2024.09.07
4	Low Noise Pre-Amplifier	HP	HP8447E	1937A01855	2023.09.08	2024.09.07
5	Low Noise Pre-Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2023.09.08	2024.09.07
6	Passive Loop	ETS	6512	00165355	2022.09.04	2024.09.03
7	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2021.08.29	2024.08.28
8	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	452	2021.08.29	2024.08.28
9	SHF-EHF Horn Antenna 15-40GHz	SCHWARZBECK	BBHA9170	BBHA9170367d	2021.08.29	2024.08.28
10	EMI Measuring Receiver	R&S	ESR	101160	2023.09.13	2024.09.12
11	LISN	SCHWARZBECK	NNLK 8129	8130179	2023.10.29	2024.10.28
12	Pulse Limiter	R&S	ESH3-Z2	102789	2023.09.13	2024.09.12
13	Pro.Temp&Humi.chamber	MENTEK	MHP-150-1C	MAA08112501	2023.09.08	2024.09.07
14	RF Automatic Test system	MW	MW100-RFCB	21033016	2023.09.08	2024.09.07
15	Signal Generator	Agilent	N5182A	MY50143009	2023.09.08	2024.09.07
16	Wideband Radio communication tester	R&S	CMW500	1201.0002K50	2023.09.08	2024.09.07
17	RF Automatic Test system	MW	MW100-RFCB	21033016	2023.09.08	2024.09.07
18	DC power supply	ZHAOXIN	RXN-305D-2	28070002559	N/A	N/A
19	RE Software	EZ	EZ-EMC_RE	Ver.AIT-03A	N/A	N/A
20	CE Software	EZ	EZ-EMC_CE	Ver.AIT-03A	N/A	N/A
21	RF Software	MW	MTS 8310	2.0.0.0	N/A	N/A
22	temporary antenna connector(Note)	NTS	R001	N/A	N/A	N/A
Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.						

3 TEST CONDITIONS AND RESULTS

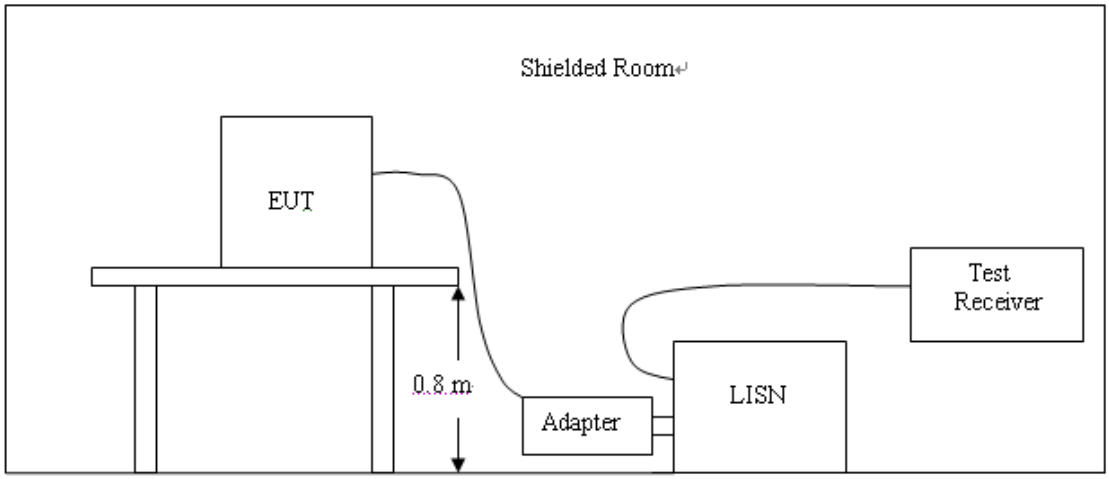
3.1 Conducted Emissions Test

LIMIT

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION



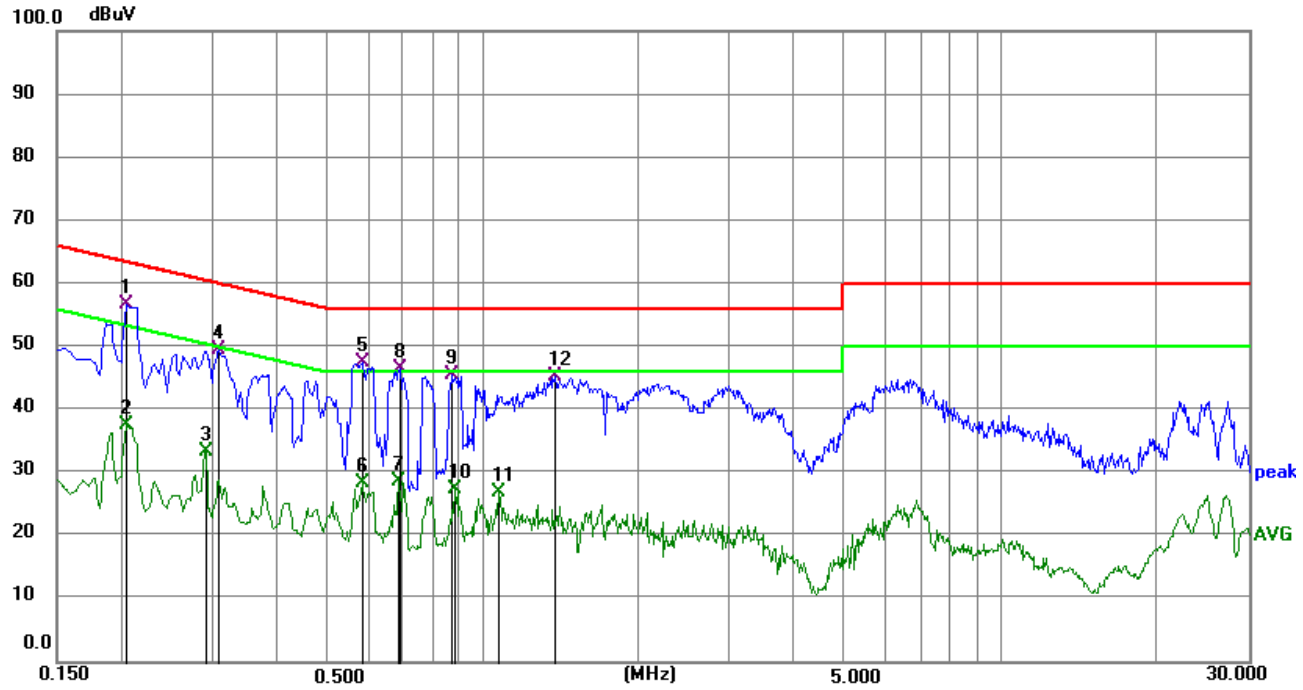
TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10:2013.
2. Support equipment, if needed, was placed as per ANSI C63.10:2013.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2013.
4. The adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST RESULTS

Remark: Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:

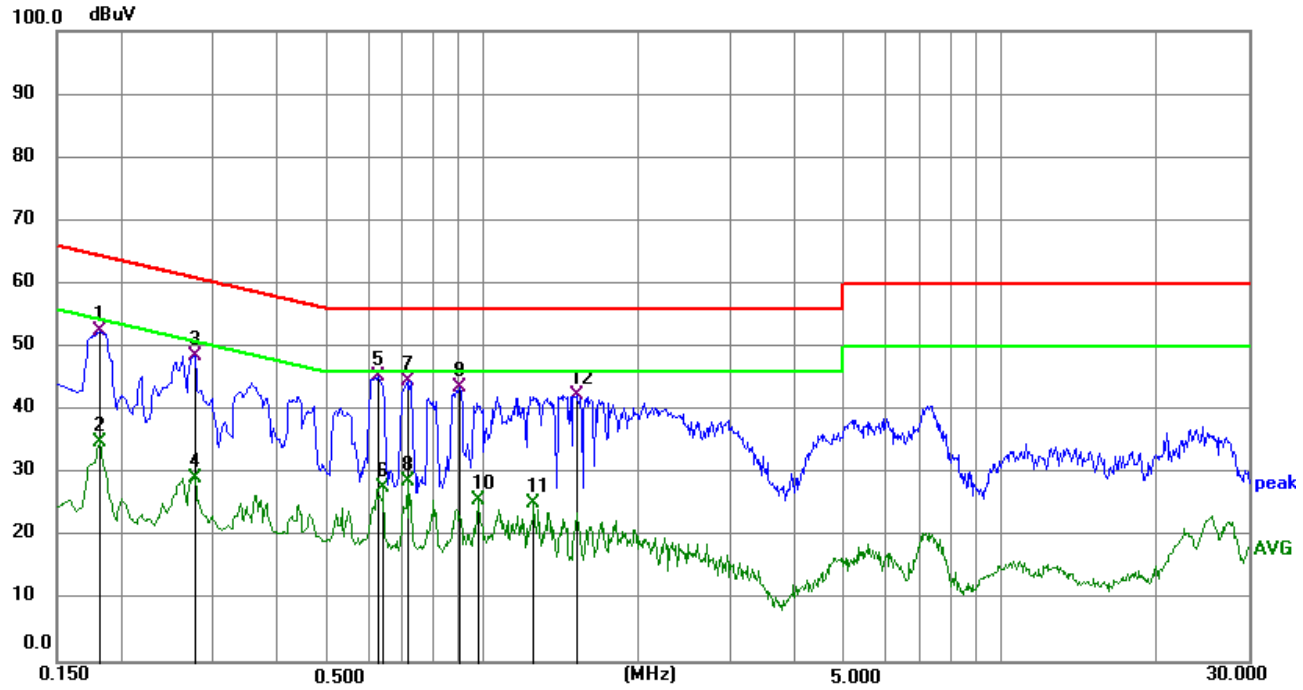
Test Mode	NFC	Line:	L



Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;
Measurement Result = Reading Level +Correct Factor;
Margin = Measurement Result- Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2040	45.97	10.70	56.67	63.45	-6.78	QP
2	0.2040	26.88	10.70	37.58	53.45	-15.87	AVG
3	0.2895	22.77	10.70	33.47	50.54	-17.07	AVG
4	0.3075	38.70	10.70	49.40	60.04	-10.64	QP
5	0.5820	36.91	10.69	47.60	56.00	-8.40	QP
6	0.5820	17.68	10.69	28.37	46.00	-17.63	AVG
7	0.6855	18.08	10.68	28.76	46.00	-17.24	AVG
8	0.6900	35.73	10.68	46.41	56.00	-9.59	QP
9	0.8745	34.85	10.65	45.50	56.00	-10.50	QP
10	0.8835	16.83	10.65	27.48	46.00	-18.52	AVG
11	1.0725	16.16	10.66	26.82	46.00	-19.18	AVG
12	1.3785	34.59	10.70	45.29	56.00	-10.71	QP

Test Mode	NFC	Line:	N



Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;
Measurement Result = Reading Level +Correct Factor;
Margin = Measurement Result- Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1815	41.71	10.68	52.39	64.42	-12.03	QP
2	0.1815	24.18	10.68	34.86	54.42	-19.56	AVG
3	0.2760	37.72	10.69	48.41	60.94	-12.53	QP
4	0.2760	18.46	10.69	29.15	50.94	-21.79	AVG
5	0.6270	34.55	10.67	45.22	56.00	-10.78	QP
6	0.6405	17.05	10.67	27.72	46.00	-18.28	AVG
7	0.7125	33.99	10.66	44.65	56.00	-11.35	QP
8	0.7125	17.88	10.66	28.54	46.00	-17.46	AVG
9	0.9015	32.84	10.65	43.49	56.00	-12.51	QP
10	0.9825	15.12	10.64	25.76	46.00	-20.24	AVG
11	1.2525	14.62	10.67	25.29	46.00	-20.71	AVG
12	1.5135	31.55	10.71	42.26	56.00	-13.74	QP

3.2 Radiated Emissions

Limit

a The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

b Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

c Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

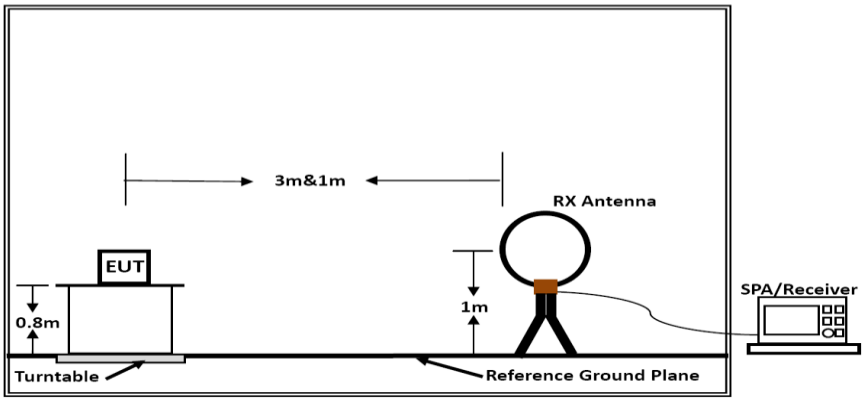
d The field strength of any emissions appearing outside of the 13.110– 14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

Radiated emission limits

Frequency (MHz)	Distance (Meters)	Radiated (dBuV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-13.110	3	69.54	30
13.110-13.410	3	80.50	106
13.410-13.553	3	90.47	334
13.553-13.567	3	124.00	15848
13.567-13.710	3	90.47	334
13.710-14.010	3	80.50	106
14.010-30.0	3	69.54	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

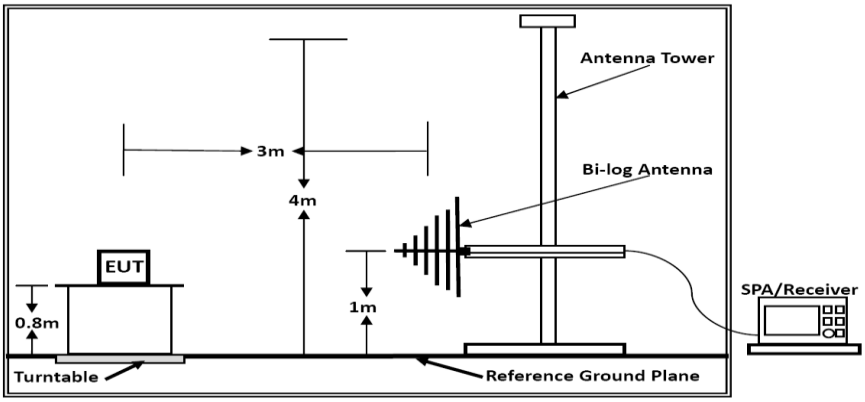
TEST CONFIGURATION

(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



Below 30MHz

(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



Below 1GHz

Test Procedure

1. Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.
5. Radiated emission test frequency band from 9KHz to 1GHz.
6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3

7. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP

TEST RESULTS

Below 30MHz

Frequency(MHz):		13.56MHz		Polarity:	Antenna Position 0	
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB/m)	(dBμV/m)	(dBμV/m)	(dB)	
8.948	14.77	22.03	36.80	69.54	-32.74	PEAK
13.376	21.17	22.58	43.75	80.50	-36.75	PEAK
13.49	33.93	22.60	56.53	90.47	-33.94	PEAK
13.562	40.91	22.62	63.53	124.00	-60.47	PEAK
13.58	33.59	22.62	56.21	90.47	-34.26	PEAK
13.997	22.06	22.7	44.76	80.50	-35.74	PEAK
20.549	13.59	22.75	36.34	69.54	-33.20	PEAK

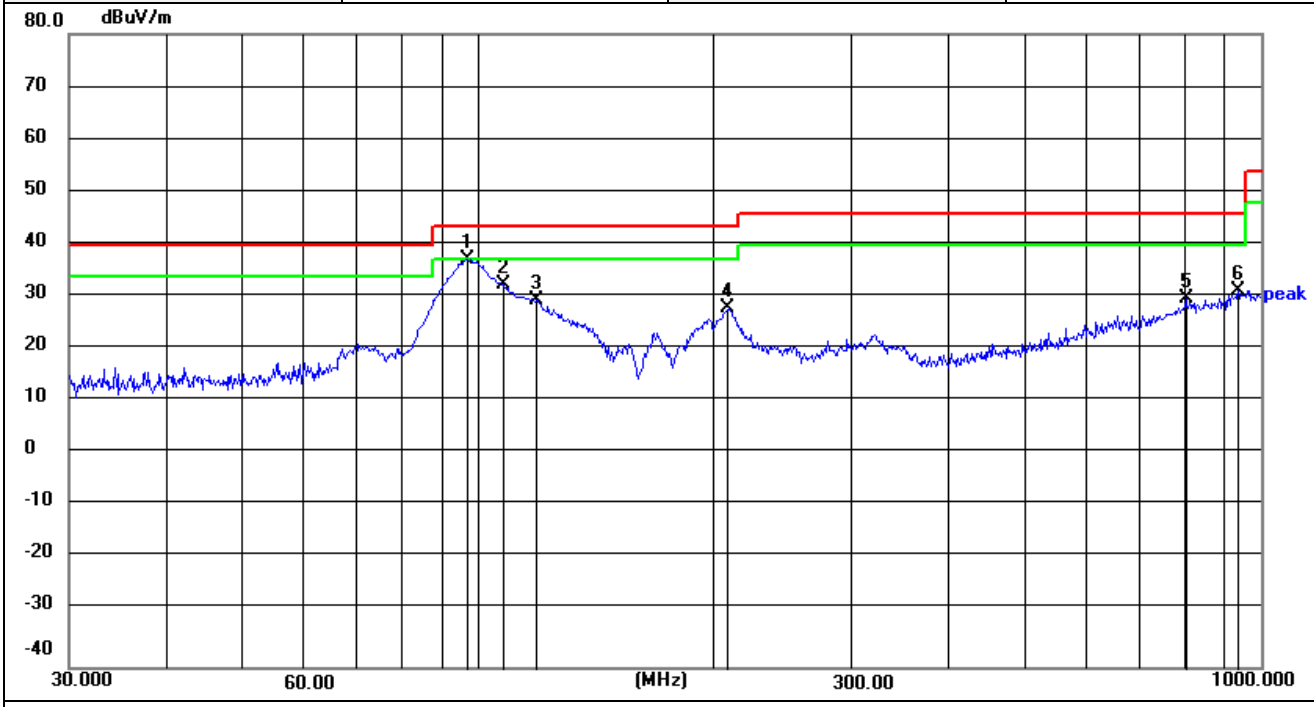
Frequency(MHz):		13.56MHz		Polarity:	Antenna Position 90	
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB/m)	(dBμV/m)	(dBμV/m)	(dB)	
4.922	13.59	22.47	36.06	69.54	-33.48	PEAK
13.111	21.34	22.53	43.87	80.50	-36.63	PEAK
13.457	33.22	22.60	55.82	90.47	-34.65	PEAK
13.562	40.38	22.62	63.00	124.00	-61.00	PEAK
13.632	32.00	22.63	54.63	90.47	-35.84	PEAK
13.723	20.75	22.65	43.40	80.50	-37.10	PEAK

REMARKS:

1. Emission level (dBuV/m) = Reading (dBuV)+ Factor (dB/m)
2. Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)
3. Margin value = Emission level- Limit value.
4. Other emission levels are attenuated 20dB below the limit and not recorded in report.

For 30MHz-1GHz

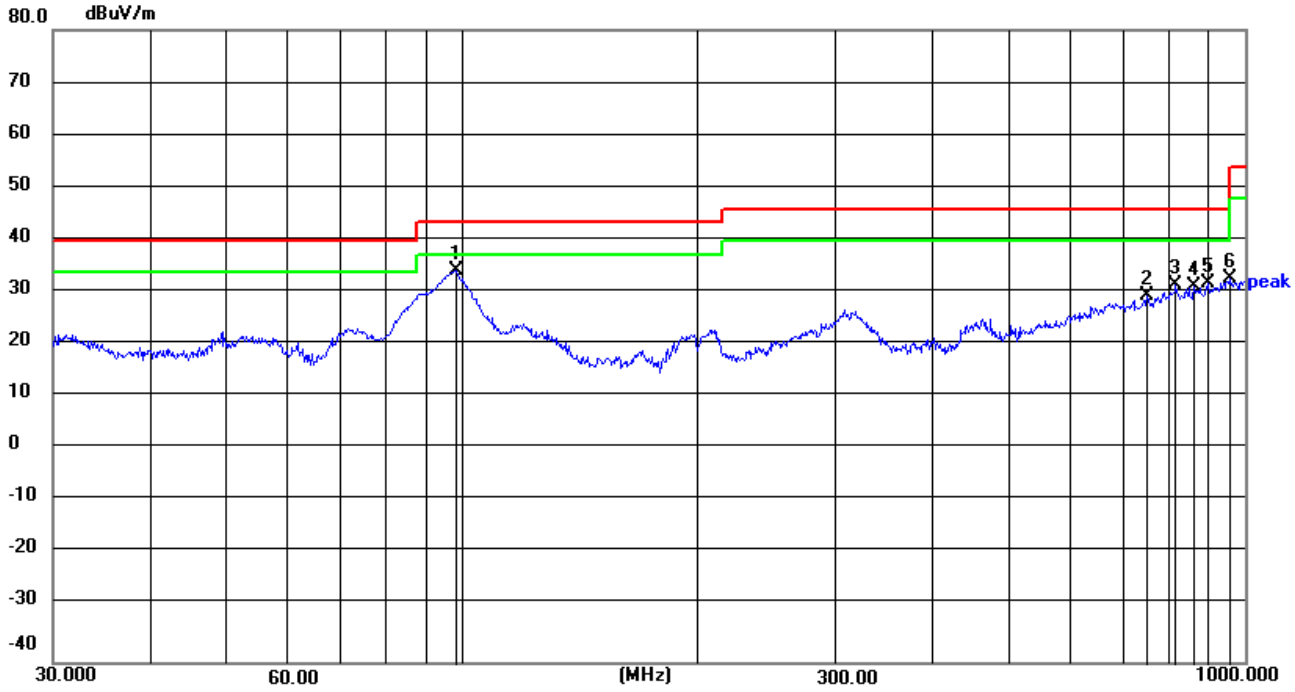
Test mode:	NFC	Polarization:	Horizontal



Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	97.1148	57.96	-20.51	37.45	43.50	-6.05	QP
2	107.8877	52.18	-19.65	32.53	43.50	-10.97	QP
3	118.6014	48.19	-18.54	29.65	43.50	-13.85	QP
4	209.3129	48.47	-20.30	28.17	43.50	-15.33	QP
5	801.7863	35.85	-5.96	29.89	46.00	-16.11	QP
6	935.5463	35.31	-3.90	31.41	46.00	-14.59	QP

Test mode:	NFC	Polarization:	Vertical



Remark:
Emission Level = Reading + Factor;
Factor = Antenna Factor + Cable Loss – Pre-amplifier;
Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	98.1419	54.72	-20.44	34.28	43.50	-9.22	QP
2	750.1083	36.50	-6.88	29.62	46.00	-16.38	QP
3	815.9678	37.62	-5.80	31.82	46.00	-14.18	QP
4	860.0352	36.70	-5.30	31.40	46.00	-14.60	QP
5	896.9965	36.99	-4.85	32.14	46.00	-13.86	QP
6	955.4381	36.39	-3.49	32.90	46.00	-13.10	QP

3.3 20dB Bandwidth

Limit

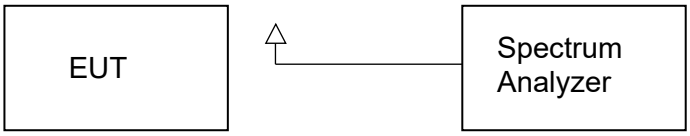
No limit for 20dB bandwidth.

Test Procedure

The 20dB bandwidth is measured with a spectrum analyzer connected via a receive antenna placed near the EUT while the EUT is operating in transmission mode.

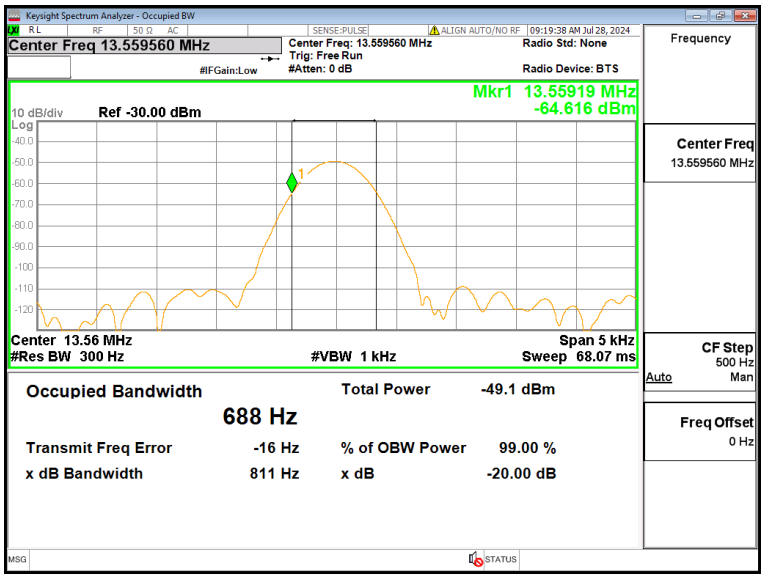
The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Test Configuration



Test Results

Modulation	Frequency(MHz)	20dB bandwidth (KHz)	99%dB bandwidth (KHz)	Result
ASK	13.56	0.811	0.688	Pass

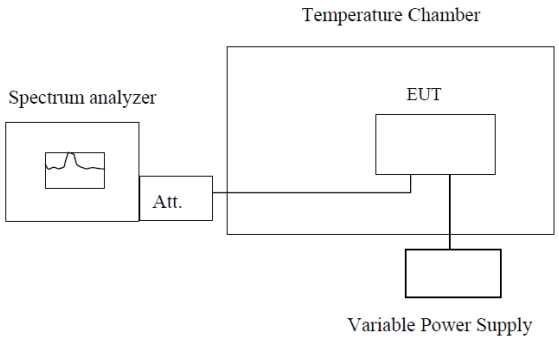


3.4 Frequency Stability

LIMIT

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

TEST CONFIGURATION



Note : Measurement setup for testing on Antenna connector

TEST PROCEDURE

1. The equipment under test was connected to an external DC power supply and input rated voltage.
2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.
3. The EUT was placed inside the temperature chamber.
4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20℃ operating frequency as reference frequency.
5. Turn EUT off and set the chamber temperature to –20℃. After the temperature stabilized for approximately 30 minutes recorded the frequency.
6. Repeat step measure with 10℃ increased per stage until the highest temperature of +50℃ reached.
7. Reduce the input voltage to specified extreme voltage variation (+/- 15%) or endpoint, record the maximum frequency change.

TEST RESULTS

Reference Frequency: 13.56MHz				
Voltage (V)	Temperature (℃)	Frequency (Hz)	Frequency Deviation(Hz)	Deviation (%)
3.87	+20(Ref)	13.560084	84	0.000619%
	-20	13.560164	164	0.001209%
	-10	13.560123	123	0.000907%
	0	13.560194	194	0.001431%
	+10	13.560127	127	0.000937%
	+20	13.560113	113	0.000833%
	+25	13.560117	117	0.000863%
	+30	13.560155	155	0.001143%
	+40	13.560164	164	0.001209%
	+50	13.560162	162	0.001195%
4.45	+20	13.560182	182	0.001342%
3.29	+20	13.560129	129	0.000951%

4 Test Setup Photographs of EUT

Please refer to separated files for Test Setup Photos of the EUT.

5 External Photographs of EUT

Please refer to separated files for External Photos of the EUT.

6 Internal Photographs of EUT

Please refer to separated files for Internal Photos of the EUT.

********** End of Report **********