



RF TEST REPORT

Report No.: SHATBL2607032W08

Applicant : Shenzhen DOOGEE Hengtong Technology CO.,LTD

Product Name : Smart Phone

Brand Name : DOOGEE

Model Name : Note70 X

Series Model : Note 70,Note70 Pro,Note70 Ultra,Note70 Max,Note 80,
Note80 Pro,Note80 Ultra,Note80 Max,A11,A11 Plus,
A11 Pro,A11S,A11S Plus,A11S Pro

FCC ID : 2AX4Y-NOTE70X

Test Standard : FCC Part 15 Subpart C §15.225

Date of Sample Arrival : Jul.21, 2026

Date of Test : Jul.21, 2026~Sep.01, 2026

Date of Issue : Sep.01, 2026

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(Terry Yang)

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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	Sep.01, 2026	SHATBL2607032W08	ALL	Initial Release

Declaration Of Report

1. The device has been tested by ATBL, and the test results show that the equipment under test (EUT) is in compliance with the requirements of FCC Part 15 Subpart C §15.225. And it is applicable only to the tested sample identified in the report.
2. This report shall not be reproduced except in full, without the written approval of ATBL, this document only be altered or revised by ATBL, personal only, and shall be noted in the revision of the document.
3. The general information of EUT in this report is provided by the customer or manufacture, ATBL is only responsible for the test data but not for the information provided by the customer or manufacture.
4. The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.

1. Test Summary

1.1 Test Standards

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

1.2 Requirements for antennas

Standard Requirement
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antennathat uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a brokenantenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
EUT Antenna: The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 0dBi.

1.2 Test Items And The Results

No.	Basic Standard	Description Of Test	Test Mode	Result
1	§15.203	Antenna Equipment	TX	Pass
2	15.225(a)(b)(c)	Field Strength of Fundamental	TX	Pass
3	§15.209	Radiated Emission	TX	Pass
4	§15.215(c)	20dB Bandwidth	TX	Pass
5	§15.205(a)	Restricted Bands of Operation	TX	Pass
6	§15.225(e)	Frequency Stability	TX	Pass
7	§15.207	AC Power Line Conducted Emission	TX	Pass

Note: 1.N/A means not applicable.

1.3 Description of test mode

Summary table of Test Cases	
Test Item	Modulation
	ASK
Radiated&Conducted Test Cases	Mode 1: NFC Tx _13.56 MHz
AC Conducted Emission	Mode 2: NFC Link+Changer(by adapter)

Note:

- 1).Only the result of the worst case was recorded in the report, if no other cases.
- 2).The battery is full-charged during the test.
- 3).For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 4).For Conducted Test method, a temporary antenna connector is provided by the manufacture.

1.4 Statement of the measurement uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 3.1 \text{ dB}$
Uncertainty of Radiated Emission below 150kHz	$U_c = \pm 4.2 \text{ dB}$
Uncertainty of Radiated Emission below 30MHz	$U_c = \pm 3.8 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 4.0 \text{ dB}$
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of spurious emissions, conducted	$U_c = \pm 2 \%$
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2 \%$

1.5 Environmental conditions

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

Temperature	Normal Temperature:	25°C
	High Temperature:	50°C
	Low Temperature:	-20°C
Voltage	Normal Voltage	3.93V
	High Voltage	4.52V
	Low Voltage	3.34V
Other	Relative Humidity	56 %
	Air Pressure	100 kPa

2. General Information

2.1 Applicant

Name : Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address : B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua New District Shenzhen, China

2.2 Manufacturer

Name : Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address : B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua New District Shenzhen, China

2.3 Factory

Name : Shenzhen DOOGEE Hengtong Technology CO.,LTD
Address : B, 2/F, Building A4, Silicon Valley Power Digital Industrial Park, No. 22, Longhua New District Shenzhen, China

2.4 Test Facility

Company Name	:	Shanghai ATBL Technology Co., Ltd.
Address	:	5-6/F., Unit 1, No 8, Free Trade One Life Science No. 160, Basheng Road, Pudong New District, Shanghai, China
Telephone	:	+86(0)21-51298625
FCC-Registration Number	:	485917
Designation Number	:	CN1306
A2LA Number	:	6184.01
CNAS Number	:	CNAS L14531
ISED Designation Number	:	27371
CAB identifier	:	CN0116

2.5 EUT Information

Equipment Name:	Smart Phone
Model Name:	Note70 X
Series Model:	Note 70,Note70 Pro,Note70 Ultra,Note70 Max,Note 80, Note80 Pro,Note80 Ultra,Note80 Max,A11,A11 Plus, A11 Pro,A11S,A11S Plus,A11S Pro
Difference of Model:	They differ only in appearance color, memory size, and model naming; all other aspects are identical.
Power supply:	DC 3.93V by Battery
Adapter	Input:AC100-240V 50/60Hz 0.6A Max Output: 5.0V= 3.0A 15.0W;9.0V= 2.0A 18.0W;12.0V= 1.5.0A 18.0W Max
Battery	Rated Voltage:3.93V Charge Limit Voltage:4.53V Capacity:8000mAh
Hardware Version:	SC7302QU_MB_V1.0.0
Software Version:	DOOGEE-Note70 X-EEA-Android16.0-20260814
Permitted Range Of Operating Frequency:	13,553 MHz to 13,567 MHz
Operation frequency:	13.56MHz
Modulation:	ASK
NFC Out Power(ERP)	0.0138 mW
Number of Channels:	1 Channel
Antenna Gain	0dBi
Antenna Type:	PIFA Antenna
Receiver category	3
Equipment type:	Tagging systems

2.6 Measurement Instruments List

For Conducted test

Kind of Equipment	Manu facturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
Power sensor	DARE	RPR3006 W	16I00054SN016	SHATBL-W008	2026.06.27	2027.06.26	1 year
Adjustable Attenuator	Agilent	8494B	MY42144015	SHATBL-W009	2026.06.27	2027.06.26	1 year
Adjustable Attenuator	Agilent	8496B	MY42143776	SHATBL-W010	2026.06.27	2027.06.26	1 year
Environmental Test Chamber	KSON	THS-B6C- 150	9159K	SHATBL-W019	2026.03.31	2027.03.30	1 year
Signal analyzer	Keysight	N9020A	MY50510136	SHATBL-W003	2026.06.27	2027.06.26	1 year
Vector signal generator	Agilent	N5182A	MY48180764	SHATBL-W043	2026.06.27	2027.06.26	1 year
Analog signal generator	Keysight	N5182B	MY57300196	SHATBL-W005	2026.06.27	2027.06.26	1 year
Wideband radio communication tester	R&S	CMW500	101331	SHATBL-W007	2026.06.27	2027.06.26	1 year
Switch Box	Cesheng	smu 1003	WCS20221215	SHATBL-W046	2026.03.31	2027.03.30	1 year
Thermometer	DeLi	N/A	N/A	SHATBL-W011	2026.06.30	2027.06.29	1 year
Test Software	Cesheng	WCS-WC N	N/A	SHATBL-W021	N/A	N/A	N/A
Attenuator	Xupu	2W	10002464489 7	SHATBL-W0 26	N/A	N/A	N/A

For Radiated Test

Kind of Equipment	Manu facturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
Signal analyzer	Agilent	N9020A	MY50200811	SHATBL-E017	2026.03.31	2027.03.30	1 year
Amplifier	JPT	JPA0118-5 5-303A	1910001800055 000	SHATBL-E006	2026.03.31	2027.03.30	1 year
Amplifier	JPT	JPA-10M1 G32	2101010003500 1	SHATBL-E005	2026.03.31	2027.03.30	1 year
Antenna/Turn table Controller	Brilliant	N/A	N/A	SHATBL-E007	N/A	N/A	N/A
Loop Antenna(9kHz-30 MHz)	Daze	ZN30900C	20077	SHATBL-E042	2026.05.20	2027.05.19	1 year
Bilog Antenna	SCHWAR ZBECK	VULB 9168	01174	SHATBL-E008	2026.05.20	2027.05.19	1 year
Broad-band Horn Antenna	SCHWAR ZBECK	BBHA 9120D	02334	SHATBL-E009	2026.05.20	2027.05.19	1 year
Horn Antenna	COM-PO WER	AH-1840	10100008	SHATBL-E043	2026.06.26	2027.06.25	1 year
Thermometer	DeLi	N/A	N/A	SHATBL-E015	2026.06.30	2027.06.29	1 year
Test Software	FALA	EMC-RI(V er.4A2)	N/A	N/A	N/A	N/A	N/A
Wideband radio communication tester	R&S	CMW500	101331	SHATBL-W044	2026.06.27	2027.06.26	1 year
Spectrum analyzer	R&S	FSV40-N	101761	SHATBL-W036	2026.06.27	2027.06.26	1 year
Filter box	XH microwave	RSE01	ATBL011	SHATBL-W036 -W030	2026.06.27	2027.06.26	1 year
Coaxial cable (9KHz~26.5GHz)	XINQY	XINQYCT 26PE	CT26PE	SHATBL-W037	2026.06.27	2027.06.26	1 year
Coaxial cable (18~40GHz)	XINQY	CXN3506	CLB220E	SHATBL-W037	2026.06.27	2027.06.26	1 year

For AC Power-Line Conducted Emission

Kind of Equipment	Manu facturer	Type No.	Serial No.	equipment number	Calibrated until	Calibrated due until	Cal. Interval
EMI Test Receiver	R&S	ESPI	100679	SHATBL-E012	2026.03.31	2027.03.30	1 year
LISN	R&S	ENV216	101300	SHATBL-E013	2026.03.31	2027.03.30	1 year
LISN	R&S	ENV216	100333	SHATBL-E041	2026.03.31	2027.03.30	1 year
CE Cable	Chuangce xing	2M	EMI0014	SHATBL-E014	N/A	N/A	N/A
Temperature & Humidity	Deli	Deli	EMI0015	SHATBL-E015	2026.06.30	2027.06.29	1 year
Testing Software	FALA	EZ-EMC(V er.EMC-C ON 3A1.1)	EMI0044	SHATBL-E044	N/A	N/A	N/A

3. Test Items and Results

3.1 Field Strength of Fundamental

Provisions Applicable

Rules and specifications	FCC CFR 47 Part 15 section 15.225			
Description	Compliance with the spectrum mask is tested with RBW set to 9kHz.			
Freq. of Emission (MHz)	Field Strength ($\mu\text{V/m}$) at 30m	Field Strength ($\text{dB}\mu\text{V/m}$) at 30m	Field Strength ($\text{dB}\mu\text{V/m}$) at 10m	Field Strength ($\text{dB}\mu\text{V/m}$) at 3m
1.705~13.110	30	29.5	48.58	69.5
13.110~13.410	106	40.5	59.58	80.5
13.410~13.553	334	50.5	69.58	90.5
13.553~13.567	15848	84.0	103.08	124.0
13.567~13.710	334	50.5	69.58	90.5
13.710~14.010	106	40.5	59.58	80.5
14.010~30.000	30	29.5	48.58	69.5

Test Procedure

- 1).The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2).Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3).The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4).For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5).Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6).For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7).When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8).If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9).For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit

(that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

10).In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

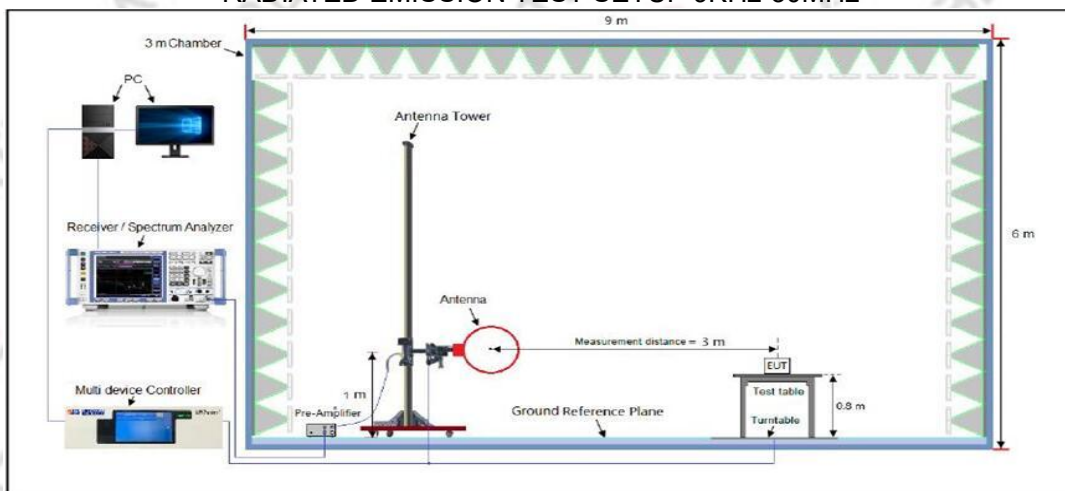
The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/3MHz for Peak, 1MHz/3MHz for Average

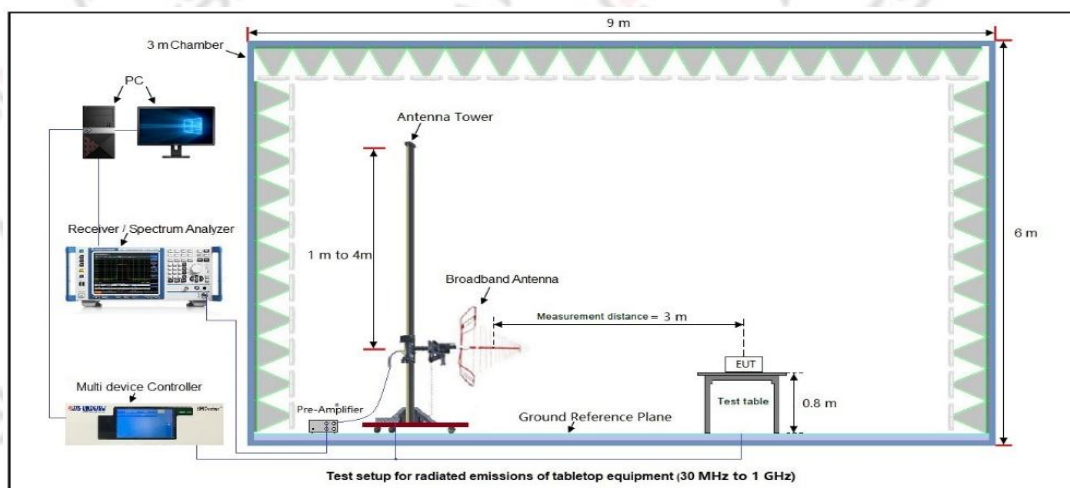
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

Test Setup(Block Diagram of Configuration)

RADIATED EMISSION TEST SETUP 9KHz-30MHz



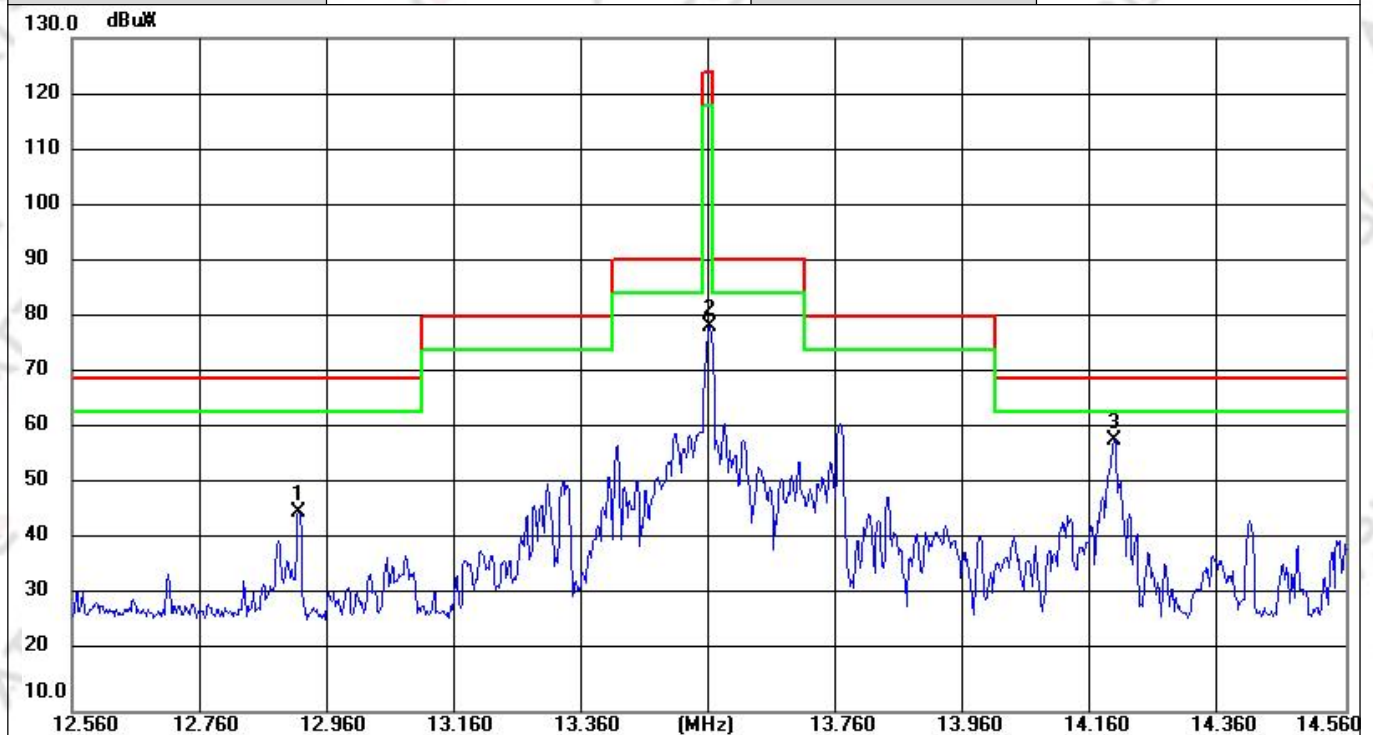
RADIATED EMISSION TEST SETUP 30MHz-1000MHz



Test Results

Note: The Coaxial orientation was confirmed as the worst case, and only test data under Coaxial orientation was recorded in the test report.

EUT	Smart Phone	Model Name	Note70 X
Temperature	25°C	Relative Humidity	55.4%
Pressure	101hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Coaxial



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Det.
1	12.9160	25.76	19.76	45.52	69.50	-23.98	peak
2	13.5600	59.05	19.70	78.75	124.00	-45.25	peak
3 *	14.1960	57.98	0.36	58.34	69.50	-11.16	peak

Results: Pass



3.2 Radiated Emission

Limit

According to 15.35, on any frequency or frequencies below or equal to 1000 MHz, the limits Shown are based on measuring equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test.

The field strength of any emissions which appear outside of 13.110 ~14.010MHz band shall not exceed the general radiated emissions limits.

15.209 Limit in the below table has to be followed:

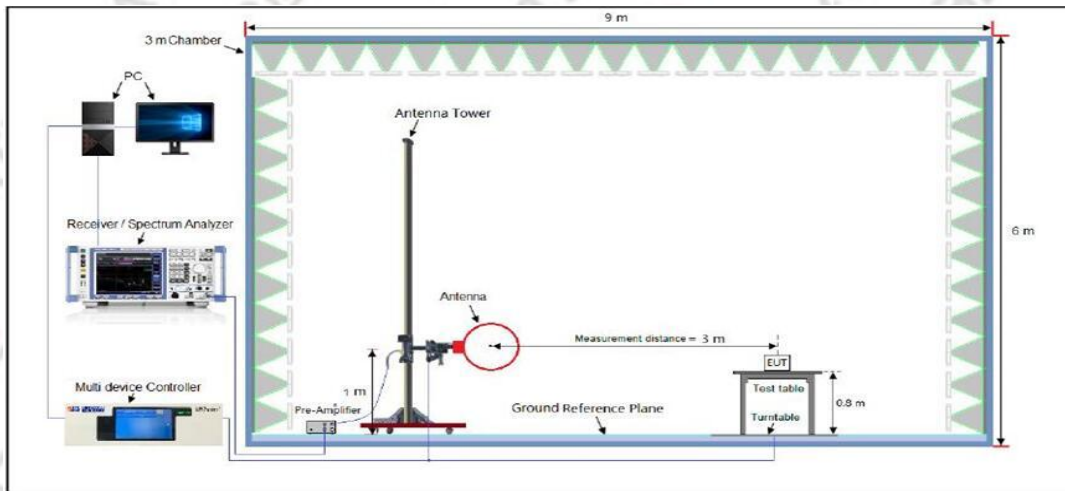
Frequency (MHz)	Distance Meters	Field Strengths Limit	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	$2400/\text{F}(\text{kHz})$	---
0.490 ~ 1.705	30	$24000/\text{F}(\text{kHz})$	---
1.705 ~ 30	30	30	---
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Remark:

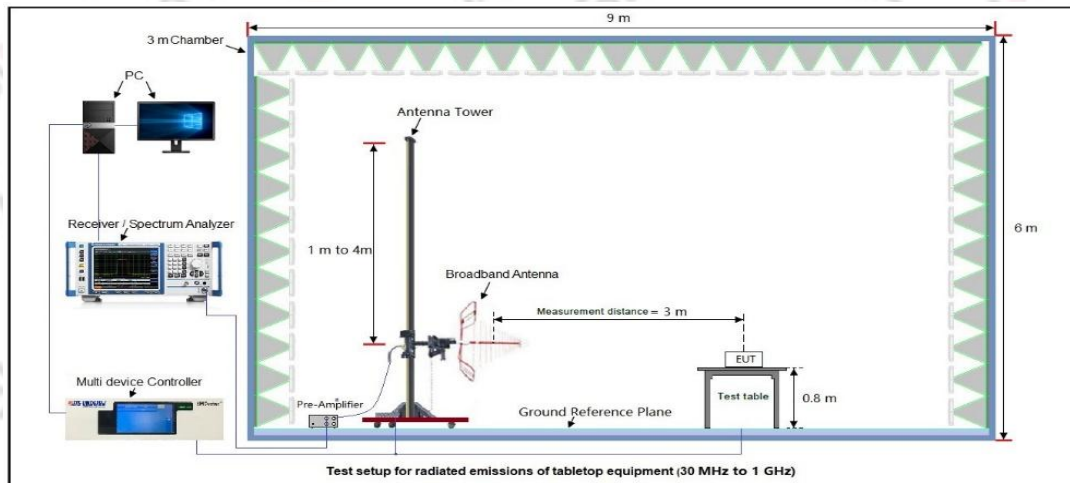
- (1) .Emission level $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
- (2). The smaller limit shall apply at the cross point between two frequency bands.
- (3). Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Test Setup:

RADIATED EMISSION TEST SETUP 9KHz-30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



Test Procedure

- 1).The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2).Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3).The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4).For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5).Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6).For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7).When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8).If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9).For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10).In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/3MHz for Peak, 1MHz/3MHz for Average

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

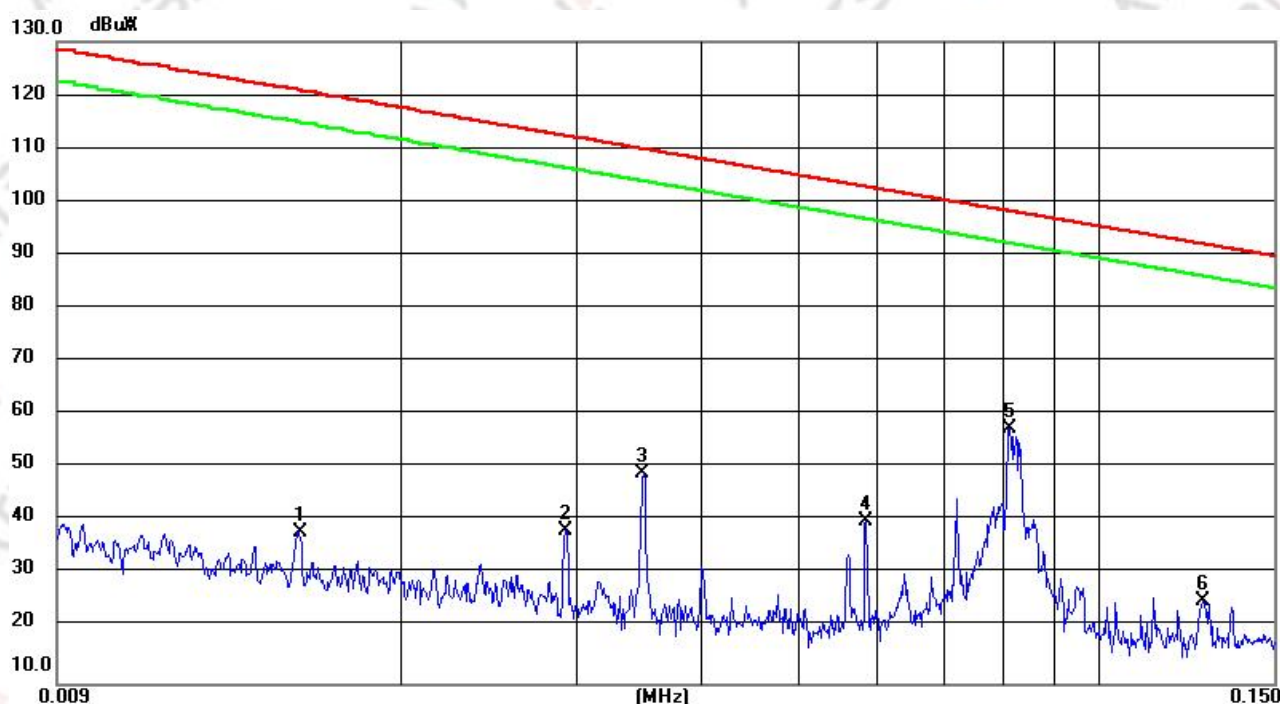
Test Results

Note: The Coaxial orientation was confirmed as the worst case, and only test data under Coaxial orientation was recorded in the test report..

BELOW 30MHz

RADIATED EMISSION FROM 9kHz ~150kHz

EUT	Smart Phone	Model Name	Note70 X
Temperature	25°C	Relative Humidity	55.4%
Pressure	101hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Coaxial

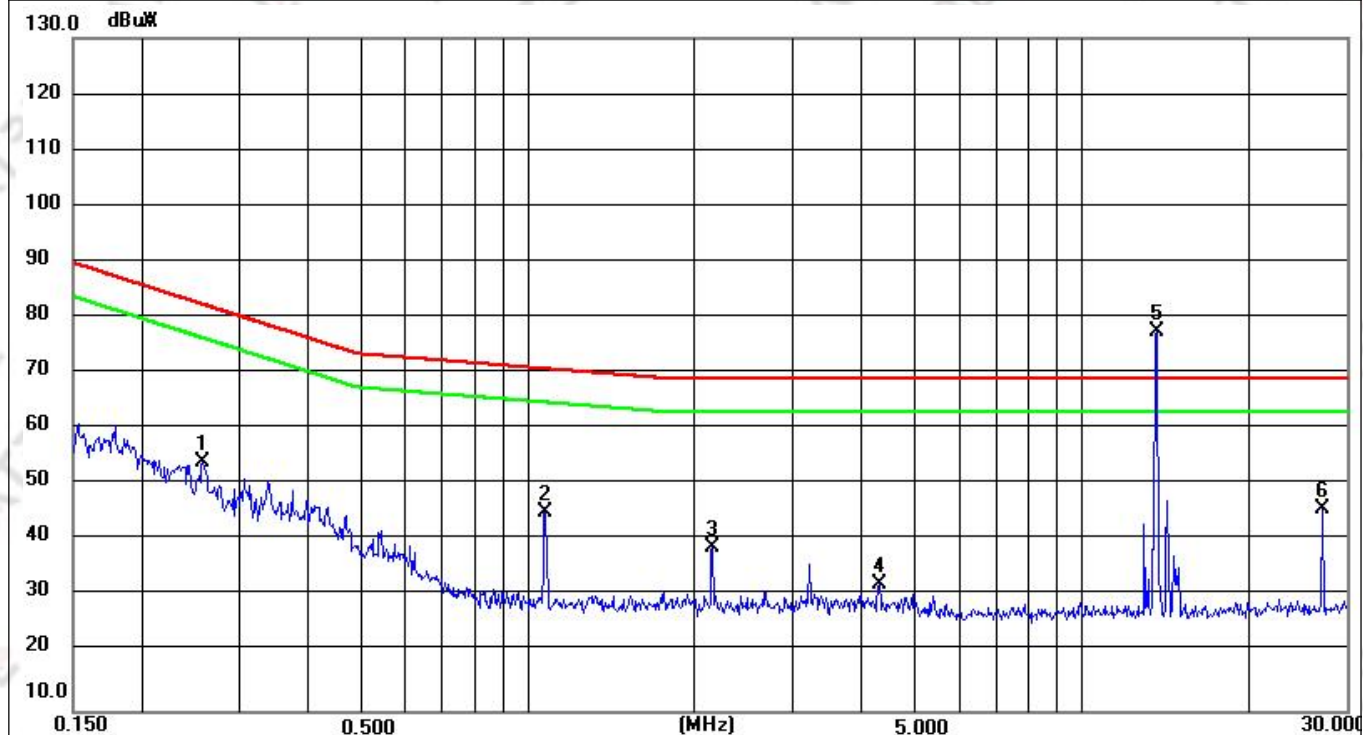


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Det.
1	0.0157	4.73	33.83	38.56	120.90	-82.34	peak
2	0.0291	10.09	28.79	38.88	112.45	-73.57	peak
3	0.0349	22.00	27.49	49.49	109.97	-60.48	peak
4	0.0584	14.63	26.01	40.64	102.92	-62.28	peak
5 *	0.0814	28.34	29.54	57.88	98.37	-40.49	peak
6	0.1274	2.98	22.70	25.68	92.24	-66.56	peak

Result: PASS

RADIATED EMISSION FROM 150kHz ~30MHz

EUT	Smart Phone	Model Name	Note70 X
Temperature	25°C	Relative Humidity	55.4%
Pressure	101hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Coaxial



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Det.
1	0.2580	32.57	21.98	54.55	82.58	-28.03	peak
2	1.0710	23.91	21.77	45.68	71.13	-25.45	peak
3	2.1440	17.72	21.60	39.32	69.54	-30.22	peak
4	4.2920	11.30	21.41	32.71	69.54	-36.83	peak
5 *	13.560	58.10	19.70	77.80	124.00	-46.20	peak
6	27.1270	45.60	0.43	46.03	69.54	-23.51	peak

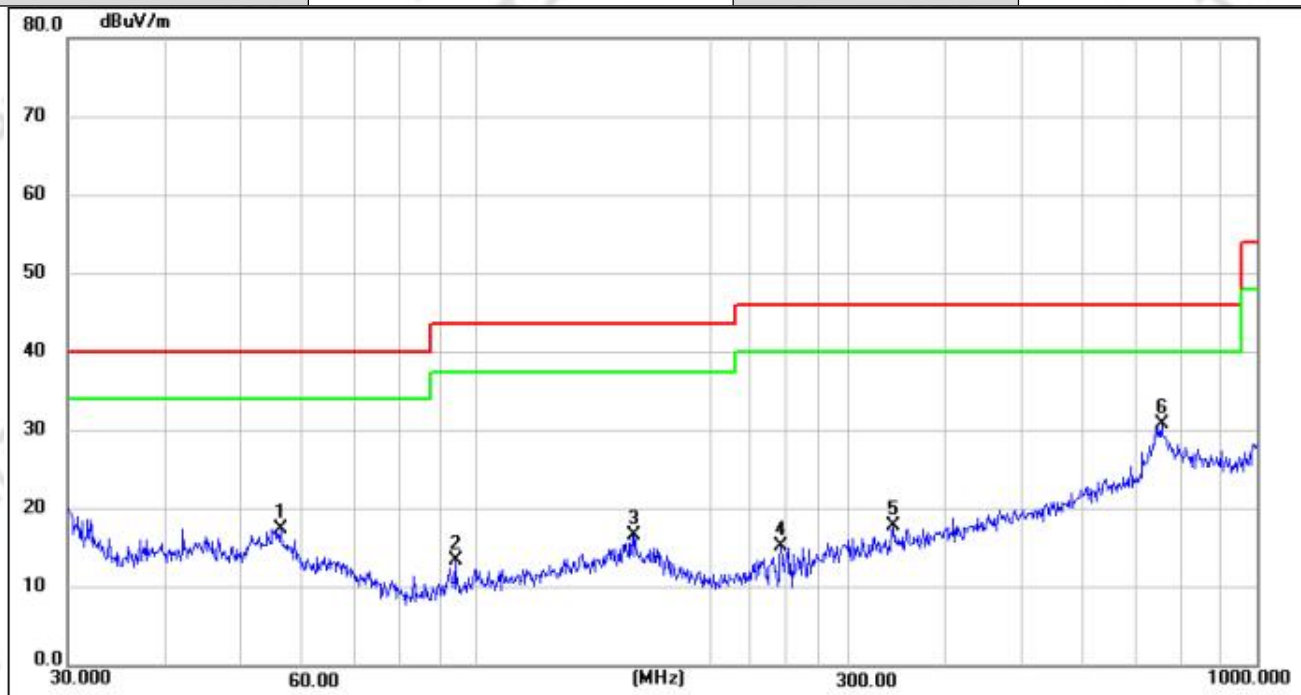
Remark:

1. Margin = Result (Result =Reading + Factor)-Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain
3. " * ": Fundamental frequency.

Result: PASS

RADIATED EMISSION FROM 30MHz ~1000MHz

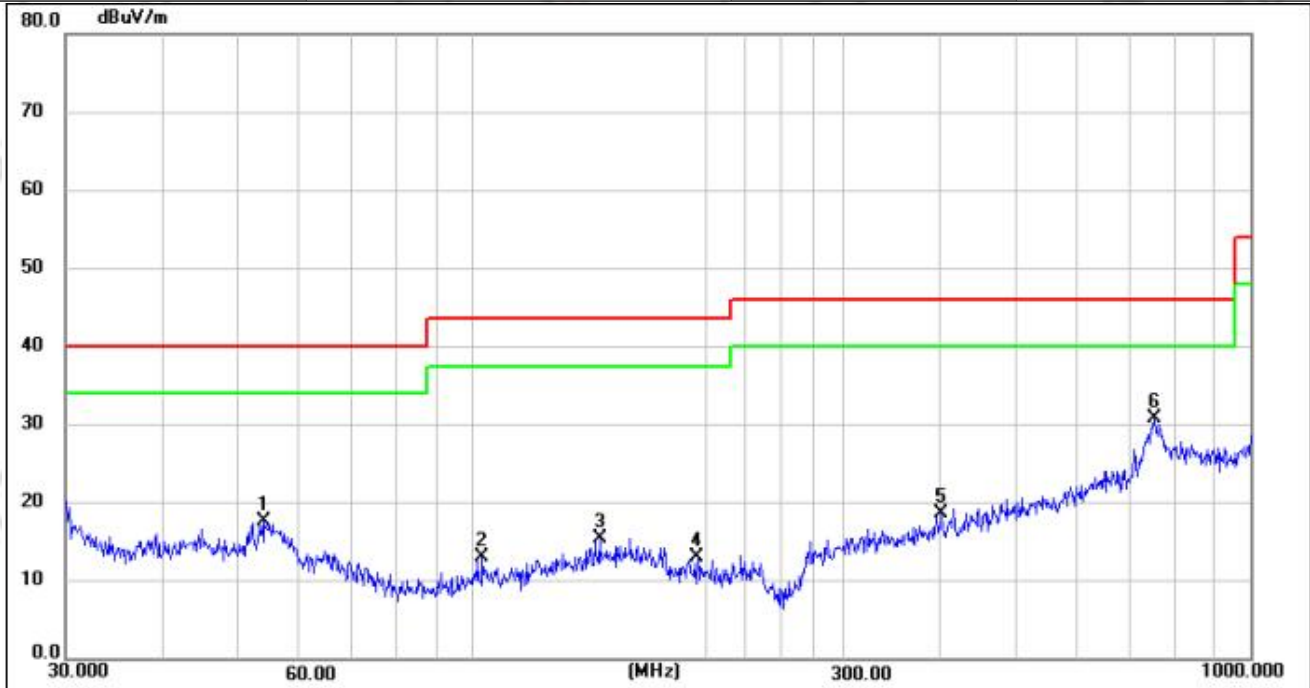
EUT	Smart Phone	Model Name	Note70 X
Temperature	25°C	Relative Humidity	55.4%
Pressure	101hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	56.1974	41.95	-24.56	17.39	40.00	-22.61	peak
2	94.0978	41.99	-28.43	13.56	43.50	-29.94	peak
3	159.7844	40.46	-23.72	16.74	43.50	-26.76	peak
4	245.9510	40.59	-25.35	15.24	46.00	-30.76	peak
5	343.1800	41.96	-24.03	17.93	46.00	-28.07	peak
6 *	755.3873	43.70	-12.96	30.74	46.00	-15.26	peak

Result: PASS

EUT	Smart Phone	Model Name	Note70 X
Temperature	25°C	Relative Humidity	55.4%
Pressure	101hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	54.0710	39.09	-21.40	17.69	40.00	-22.31	peak
2	103.0800	40.46	-27.49	12.97	43.50	-30.53	peak
3	145.8611	40.14	-24.66	15.48	43.50	-28.02	peak
4	195.1363	39.46	-26.48	12.98	43.50	-30.52	peak
5	400.4318	38.80	-20.24	18.56	46.00	-27.44	peak
6 *	752.7431	36.92	-6.19	30.73	46.00	-15.27	peak

Result: PASS

Note:

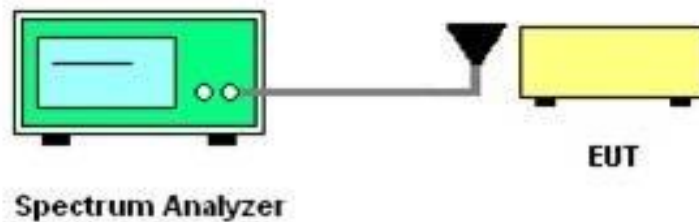
- 1). Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.
- 2). All test modes had been pre-tested. The mode 1 is the worst case and recorded in the report.

3.3 20 dB Bandwidth

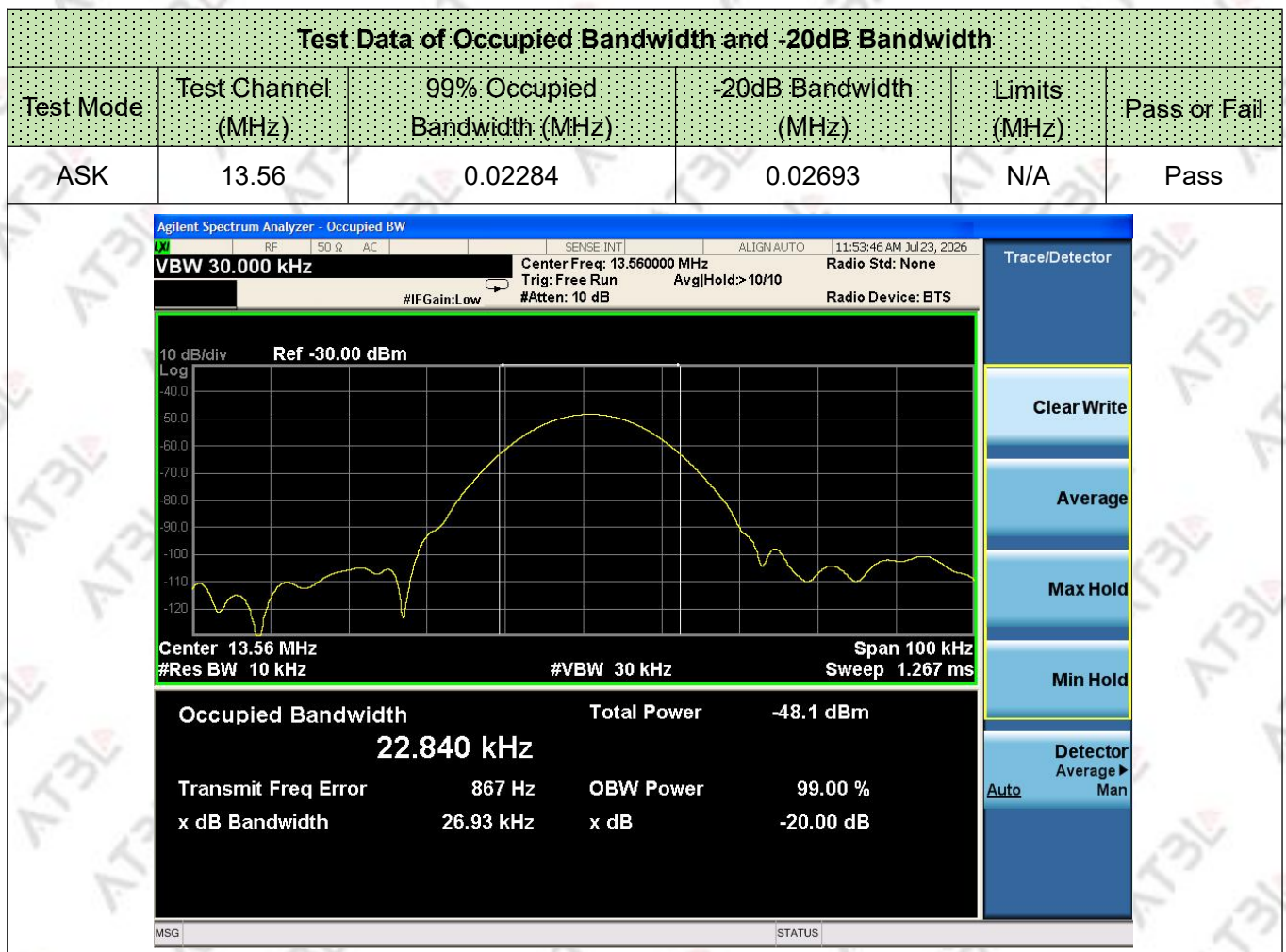
Limit

Intentional radiators must be designed to ensure that the 20dB and 99% emission bandwidth in the specific band 13.553~13.567MHz.

Test Setup:



Test Results

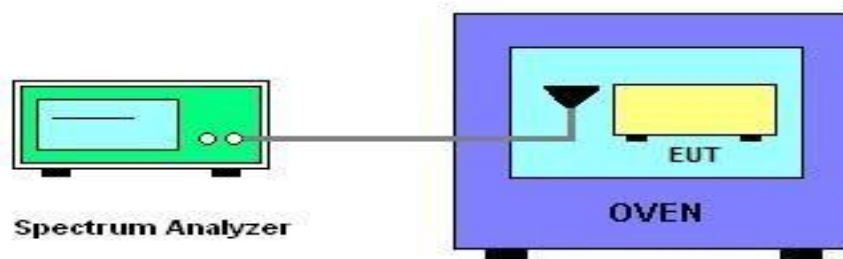


3.4 Frequency Stability

Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -30 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. For battery operated equipment, the equipment tests shall be performed using a new battery.

Test Setup



Test Procedure

- 1).The spectrum analyzer connected via a receive antenna placed near the EUT.
- 2).EUT have transmitted signal and fixed channelize.
- 3).Set the spectrum analyzer span to view the entire emissions bandwidth.
- 4).Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.
- 5).The f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm and the limit is less than ± 100 ppm.
- 6).Extreme temperature rule is -10°C~40°C.

Test Result and Limit

Operating frequency: 13.56MHz

Voltage vs. Frequency Stability (Test Temperature: 20°C)

Voltage(V)	Measurement Frequency (MHz)	Max. Deviation (ppm)	Limit(ppm)	Conclusion
3.34	13.56049	+42	±100	PASS
3.93	13.56051			
4.52	13.56056			

Temperature vs. Frequency Stability (Test Voltage: 3.93V)

Temperature	Measurement Frequency (MHz)	Max. Deviation (ppm)	Limit(ppm)	Conclusion
-30°C	13.56062	+55	±100	PASS
-20°C	13.56059			
-10°C	13.56065			
0°C	13.56058			
10°C	13.56055			
20°C	13.56059			
30°C	13.56068			
40°C	13.56061			
50°C	13.56066			

3.5 AC Power LINE Conducted Emission Test

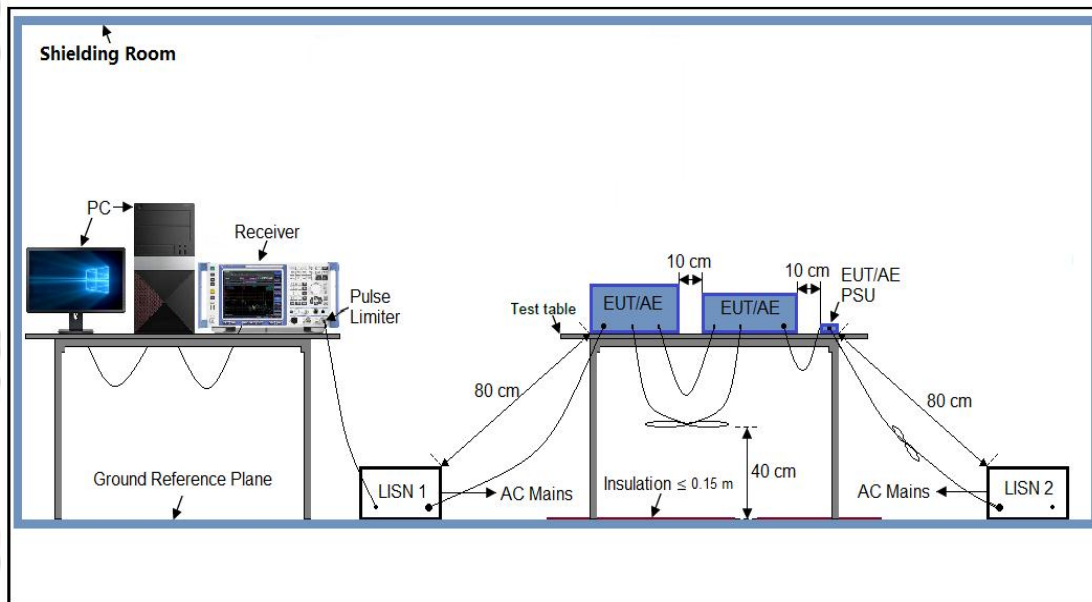
Limit

Frequency	Maximum RF Line Voltage	
	Q.P. (dB μ V)	Average (dB μ V)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

Test Setup:

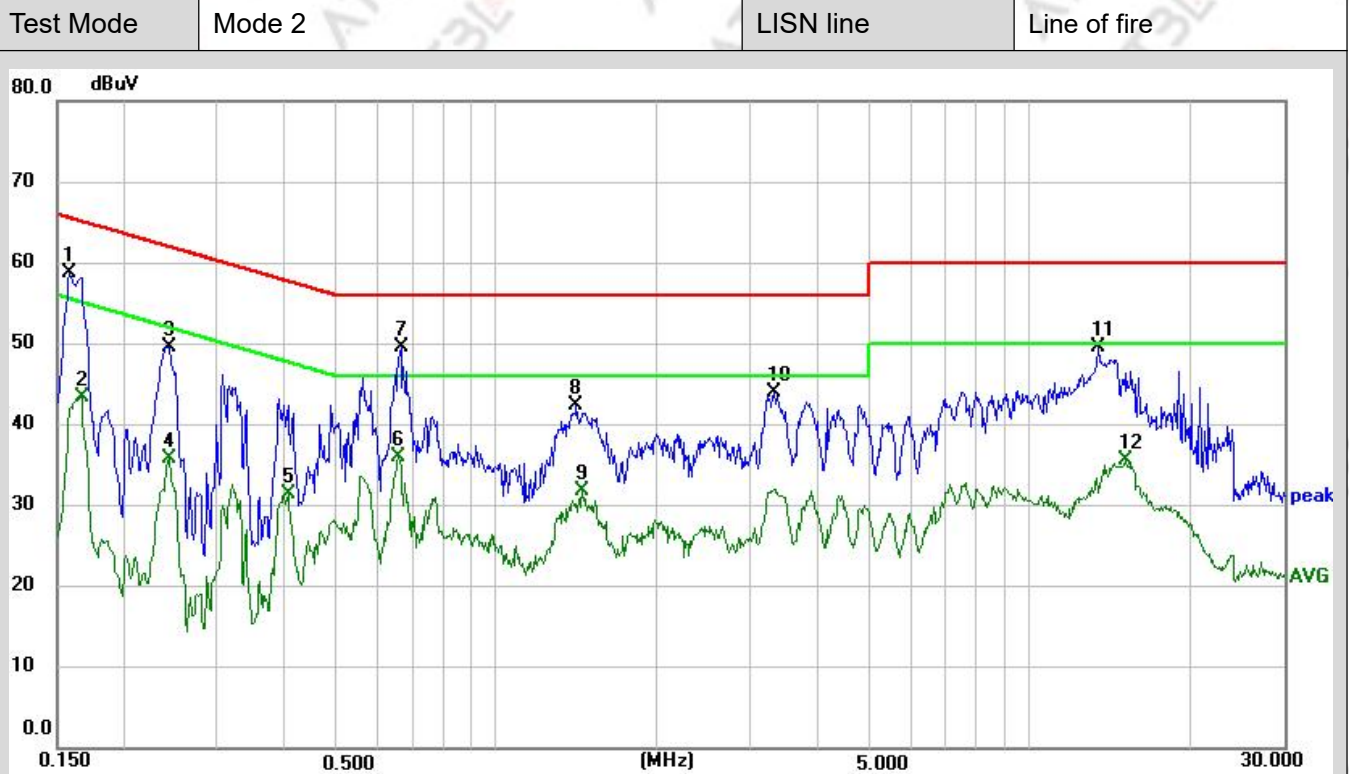


Test Procedure

- 1). The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When 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 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2). Support equipment, if needed, was placed as per ANSI C63.10.
- 3). All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4). All support equipment received AC120V/60Hz power from a LISN, if any.
- 5). The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
- 6). The 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 50ohm 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.
- 9). The test mode(s) were scanned during the preliminary test.

Test Result

AC LINE CONDUCTED EMISSION TEST

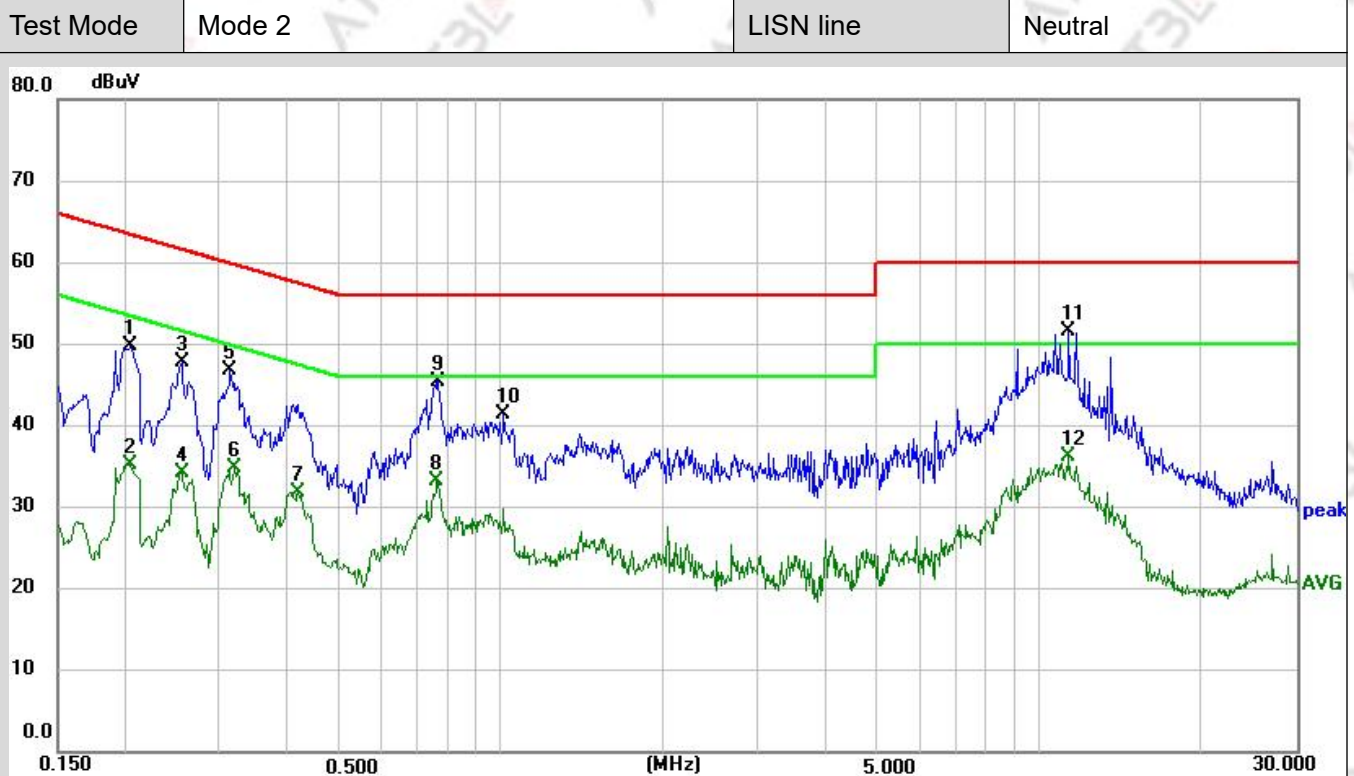


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	38.92	19.74	58.66	65.57	-6.91	peak
2	0.1660	23.58	19.74	43.32	55.16	-11.84	AVG
3	0.2420	29.76	19.73	49.49	62.03	-12.54	peak
4	0.2420	16.13	19.73	35.86	52.03	-16.17	AVG
5	0.4060	11.62	19.82	31.44	47.73	-16.29	AVG
6	0.6540	16.14	19.93	36.07	46.00	-9.93	AVG
7	0.6620	29.70	19.93	49.63	56.00	-6.37	peak
8	1.4180	22.49	19.93	42.42	56.00	-13.58	peak
9	1.4540	11.83	19.94	31.77	46.00	-14.23	AVG
10	3.3180	23.74	20.25	43.99	56.00	-12.01	peak
11	13.4380	27.91	21.59	49.50	60.00	-10.50	peak
12	15.1100	13.60	22.07	35.67	50.00	-14.33	AVG

Remark:

- 1.When the PEAK value conforms to the limit, the QP value also conforms to the limit
- 2.The emission level of the six frequencies is marked as the highest level
- 3.Margin value = Emission level – Limit value
- 4.Emission Level = Correction Factor + Reading Value
- 5.Correct Factor=Cable Loss +AMN Factor

AC LINE CONDUCTED EMISSION TEST



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2050	29.83	20.01	49.84	63.41	-13.57	peak
2	0.2050	15.12	20.01	35.13	53.41	-18.28	AVG
3	0.2540	27.76	19.93	47.69	61.63	-13.94	peak
4	0.2540	14.36	19.93	34.29	51.63	-17.34	AVG
5	0.3130	26.82	19.87	46.69	59.89	-13.20	peak
6	0.3200	14.87	19.86	34.73	49.71	-14.98	AVG
7	0.4180	12.13	19.69	31.82	47.49	-15.67	AVG
8	0.7620	13.42	19.75	33.17	46.00	-12.83	AVG
9	0.7660	25.69	19.75	45.44	56.00	-10.56	peak
10	1.0140	21.61	19.76	41.37	56.00	-14.63	peak
11	11.3180	30.58	21.00	51.58	60.00	-8.42	peak
12	11.3180	15.27	21.00	36.27	50.00	-13.73	AVG

Remark:

- 1.When the PEAK value conforms to the limit, the QP value also conforms to the limit
- 2.The emission level of the six frequencies is marked as the highest level
- 3.Margin value = Emission level – Limit value
- 4.Emission Level = Correction Factor + Reading Value
- 5.Correct Factor=Cable Loss +AMN Factor

4. Test Setup Photos of the EUT

Refer to Appendix C Setup photos of the EUT

5. External and Internal Photos of the EUT

Refer to Appendix D photos of the EUT

※※※※※END OF THE REPORT※※※※※