

RF Test Report

For

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
EUT name: Smart Phone
Brand name: DOOGEE
Model number: Fire 3 Pro
Series model number: Fire 3 Ultra, Fire 3, Fire 3 Max, Fire 3 Power, Fire 3 Play, Fire 3 Pro Max, Fire 3 Plus
FCC ID: 2AX4YFIRE3PRO

Issued By

Company name: BTF Testing Lab (Shenzhen) Co., Ltd.
Address: 101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Report number: BTF250708R00406
Test standards: FCC CFR Title 47 Part 15 Subpart C (§15.225)
Test conclusion: Pass
Date of sample receipt: 2025-05-20
Test date: 2025-05-20 to 2025-07-10
Date of issue: 2025-07-28

Prepared by:

Chris Liu

Chris Liu / Project engineer

Approved
by:



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Revision History		
Version	Issue date	Revisions content
R_V0	2025-07-28	Original

Note:
Once the revision has been made, then previous versions reports are invalid.

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1 Introduction

1.1 Laboratory Location

Test location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Phone number:	+86-0755-23146130
Fax number:	+86-0755-23146130

1.2 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1409**

BTF Testing Lab (Shenzhen) Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 518915.

- **CNAS - Registration No.: CNAS L17568**

BTF Testing Lab (Shenzhen) Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L17568.

- **A2LA - Registration No.: 6660.01**

BTF Testing Lab (Shenzhen) Co., Ltd. is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.

1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2 Product Information

2.1 Application Information

Company 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 Information

Company 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 Information

Company 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 General Description of Equipment under Test (EUT)

EUT name	Smart Phone
Under test model name	Fire 3 Pro
Series model name	Fire 3 Ultra, Fire 3, Fire 3 Max, Fire 3 Power, Fire 3 Play, Fire 3 Pro Max, Fire 3 Plus
Description of model name differentiation	There is no difference except the name of the model
Hardware Version	SC6036LU_MB_V1.0.0-20250210
Software Version	DOOGEE-Fire 3Pro-EEA-Android15.0-20250419
Rating:	DC 3.87V from battery or DC 9V from Fast Charger

2.5 Technical Information

Operation frequency:	13.56MHz
Channel Numbers:	1
Modulation technology:	ASK
Antenna type:	Coil Antenna

3 Test Information

3.1 Test Standards

Identity	Document Title
FCC CFR Title 47 Part 15 Subpart C (§15.225)	Operation within the band 13.110-14.010 MHz.
ANSI C63.10-2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Summary of Test

Clauses	Test Items	Result
§ 15.203	Antenna Requirement	Pass
§ 15.207	AC Power Line Conducted Emission	Pass
§ 15.215(c)	20dB Bandwidth	Pass
§ 15.225(a)	Field Strength of Fundamental	Pass
§ 15.209 § 15.225(d)	Field Strength of Spurious Emissions	Pass
§ 15.225(e)	Frequency Tolerance	Pass

Remark:

1. Pass: met the requirements.
2. N/A: not applicable.

3.3 Uncertainty of Test

Measurement	Value
Conducted Emission for LISN (9kHz ~ 150kHz)	±2.97 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.45 dB
Radiated Emission (9kHz ~ 30MHz)	±2.20 dB
Radiated Emission (30MHz ~ 1000MHz)	±4.80 dB
Radiated Emission (1GHz ~ 18GHz)	±4.82 dB

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.4 Additions to, deviations, or exclusions from the method

None

3.5 Test Auxiliary Equipment

Description	Manufacturer	Model	Serial No.	Length	Description
Fast Charger	Shenzhen Huajin Electronics Co.,LTD	HJ-PD18W-US	N/A	N/A	N/A

3.6 Test Equipment List

Radiated Emission Test					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	Rohde & Schwarz	ESCI7	101032	2024/10/25	2025/10/24
Signal Analyzer	Rohde & Schwarz	FSQ40	100010	2024/10/25	2025/10/24
Log periodic antenna	Schwarzbeck	VULB 9168	01328	2024/10/28	2025/10/27
Preamplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9744	00246	2024/09/24	2025/09/23
Horn Antenna	Schwarzbeck	BBHA9120D	2597	2024/10/30	2025/10/29
Preamplifier (1GHz ~ 18GHz)	Schwarzbeck	BBV9718D	00008	2024/09/24	2025/09/23
Test Software	Frad	EZ_EMCA	Version: FA-03A2 RE+		

Conducted Emission Test					
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	Rohde & Schwarz	ESCI3	101422	2024/10/25	2025/10/24
V-LISN	Schwarzbeck	NSLK 8127	01073	2024/10/25	2025/10/24
Coaxial Switcher	Schwarzbeck	CX210	CX210	/	/
Pulse Limiter	Schwarzbeck	VTSD 9561-F	00953	/	/
Test Software	Frad	EZ_EMCA	Version: EMC-CON 3A1.1+		

Conducted test method					
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Keysight	N9020A	MY50410020	2024/10/25	2025/10/24
ESG Vector Signal Generator	Agilent	E4438C	MY45094854	2024/10/25	2025/10/24
Temperature Humidity Chamber	ZZCKONG	ZZ-K02A	20210928007	2024/10/25	2025/10/24
Test Software	TST Pass	/	Version: 2.0		

4 Test Configuration

4.1 Environment Condition

Selected Values During Tests		
Temperature	Relative Humidity	Ambient Pressure
Normal: +15°C to +35°C		
Extreme: -30°C to +50°C	20% to 75%	86 kPa to 106 kPa

4.2 Test mode

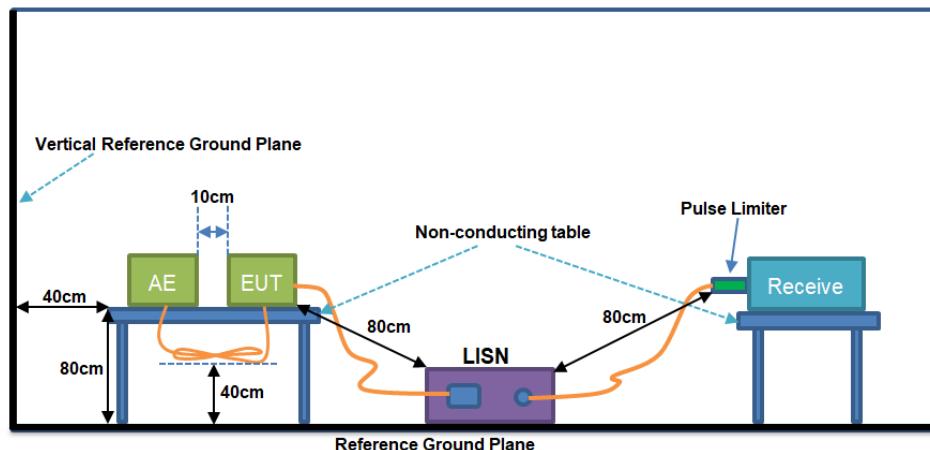
Transmitting mode:	Keep the EUT in continuously transmitting mode with modulation
Remark: Per-scan all kind of data rate, and report only reflects the test data of worst data rate mode.	

4.3 Test procedure

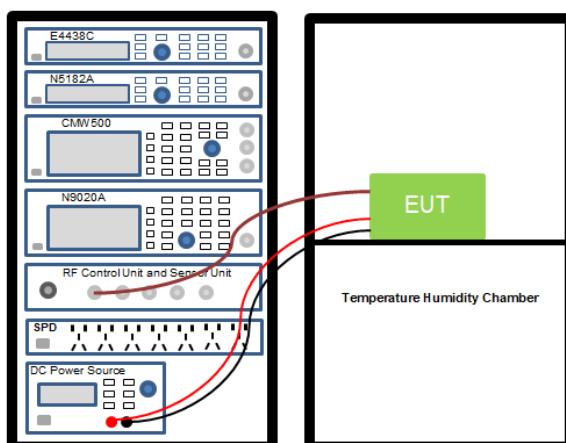
AC Power Line Conducted Emission
The EUT is connected to the power mains through a LISN which provides 50 Ω/50 μH of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.
Radiated test method
1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method
1. The antenna port of EUT was connected to the test port of the test system through an RF cable. 2. The EUT is keeping in continuous transmission mode and tested in all modulation modes. 3. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

4.4 Test Setup Block

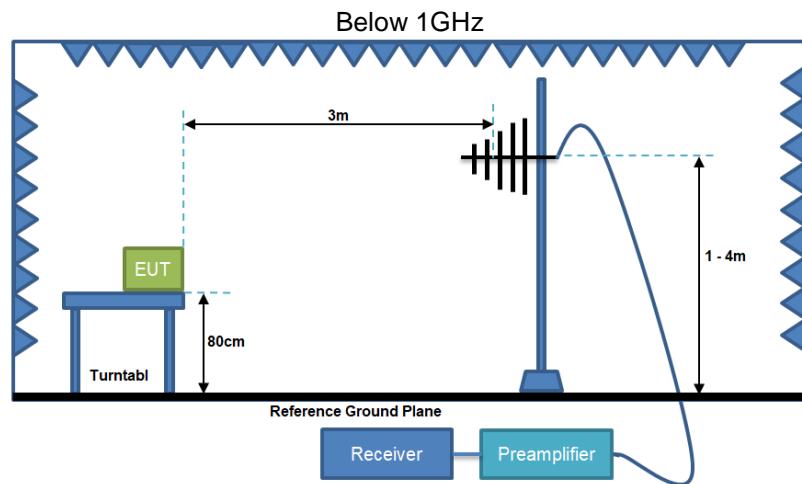
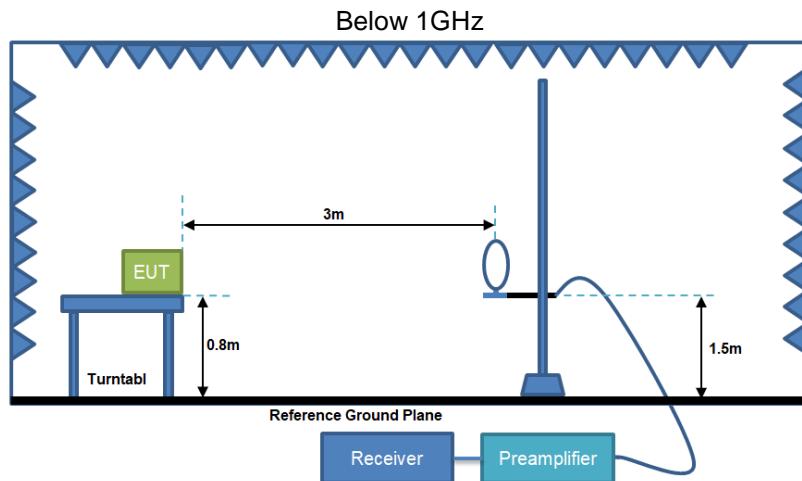
1) Conducted emission measurement:



2) Conducted test method:



3) Radiated test method:



5 Technical requirements specification

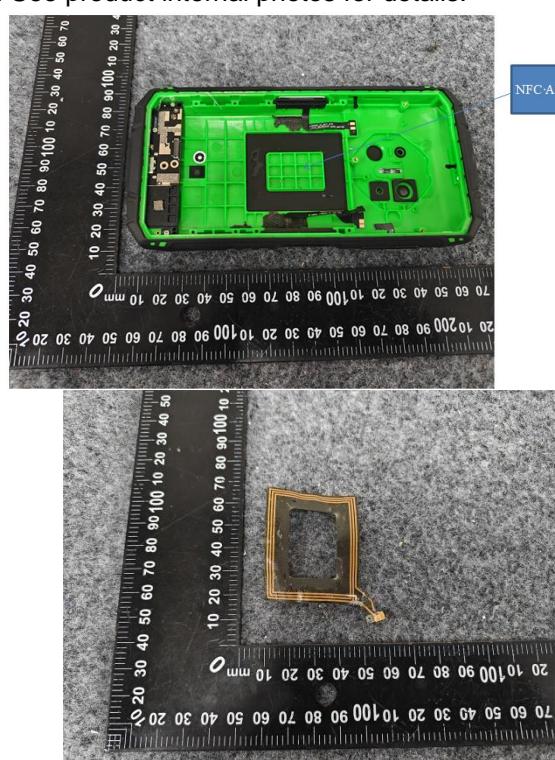
5.1 Summary of Test Result

Test Items	Limit	Test data	Verdict
Antenna Requirement	Please refer to §15.203	See Section 5.2	Pass
AC Power Line Conducted Emission	Please refer to §15.207	See Section 5.3	Pass
20dB Bandwidth	Please refer to § 15.215(c)	See Section 5.4	Pass
Field Strength of Fundamental	Please refer to §15.225(a)	See Section 5.5	Pass
Field Strength of Spurious Emissions	Please refer to §15.209 and §15.225(d)	See Section 5.6	Pass
Frequency Tolerance	Please refer to §15.225(e)	See Section 5.7	Pass

5.2 Antenna Requirement

§15.203 requirement:

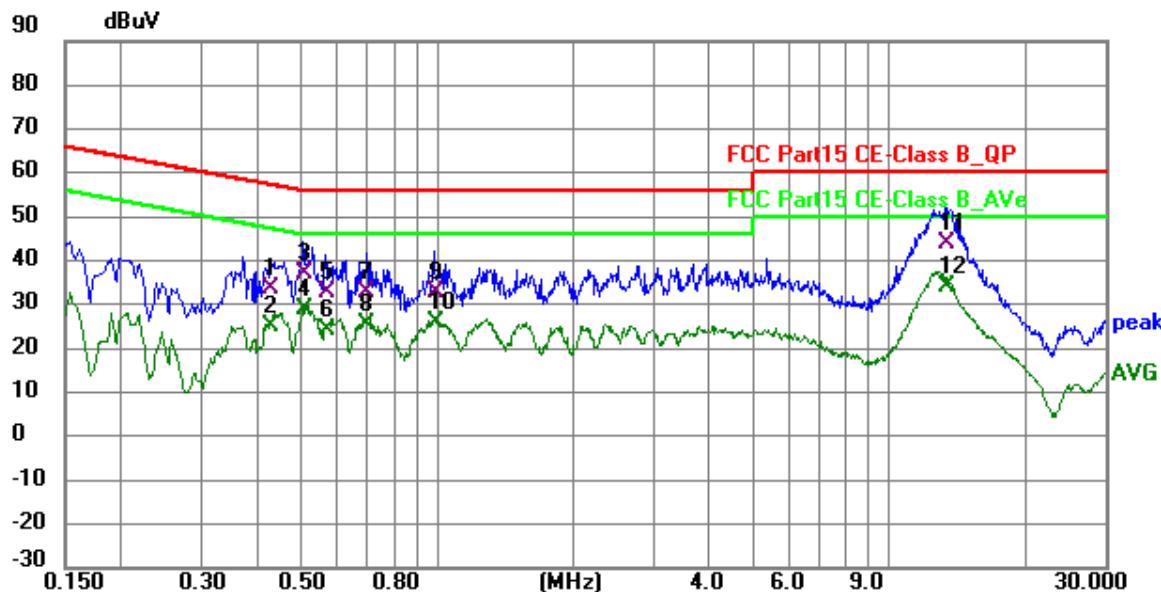
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

E.U.T Antenna:	<p>The NFC antenna is an coil antenna which permanently attached, and the best case gain of the antenna is 0dBi. See product internal photos for details.</p> 
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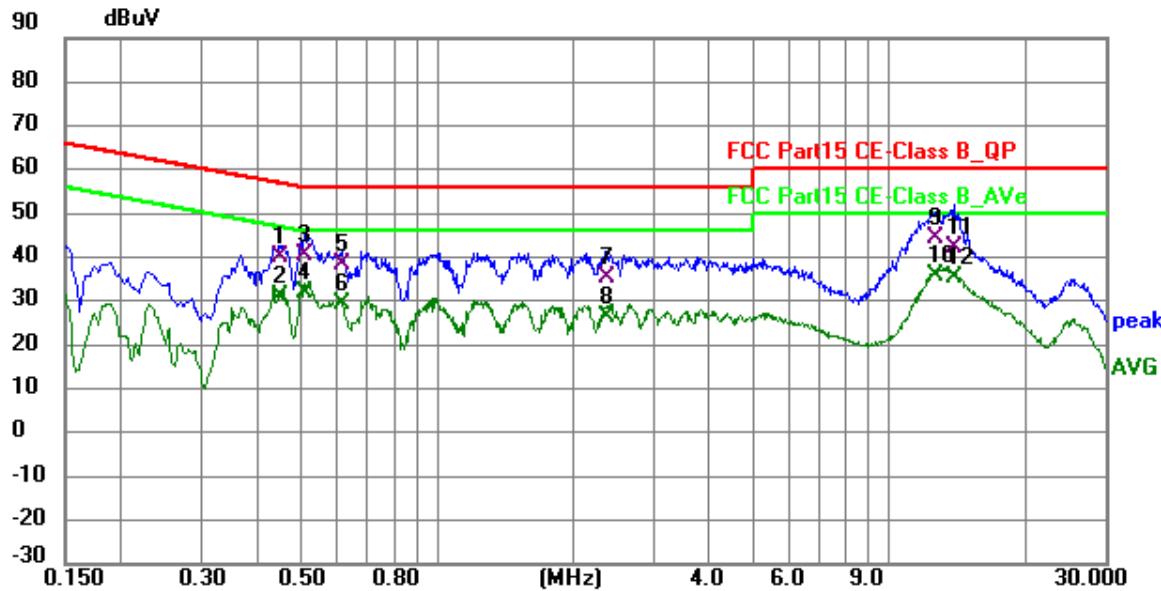
5.3 AC Power Line Conducted Emission

Temperature	22.5 °C	Humidity	56%
Test voltage	AC 120V	Test Engineer	Sean He

Test phase: L phase



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4287	23.88	9.63	33.51	57.28	-23.77	QP	P	
2	0.4287	15.48	9.63	25.11	47.28	-22.17	AVG	P	
3	0.5081	27.58	9.62	37.20	56.00	-18.80	QP	P	
4	0.5081	19.13	9.62	28.75	46.00	-17.25	AVG	P	
5	0.5648	23.30	9.62	32.92	56.00	-23.08	QP	P	
6	0.5648	14.47	9.62	24.09	46.00	-21.91	AVG	P	
7	0.6956	23.27	9.63	32.90	56.00	-23.10	QP	P	
8	0.6956	16.01	9.63	25.64	46.00	-20.36	AVG	P	
9	0.9853	23.36	9.64	33.00	56.00	-23.00	QP	P	
10	0.9853	16.40	9.64	26.04	46.00	-19.96	AVG	P	
11	13.3854	34.21	9.74	43.95	60.00	-16.05	QP	P	
12 *	13.3854	24.52	9.74	34.26	50.00	-15.74	AVG	P	

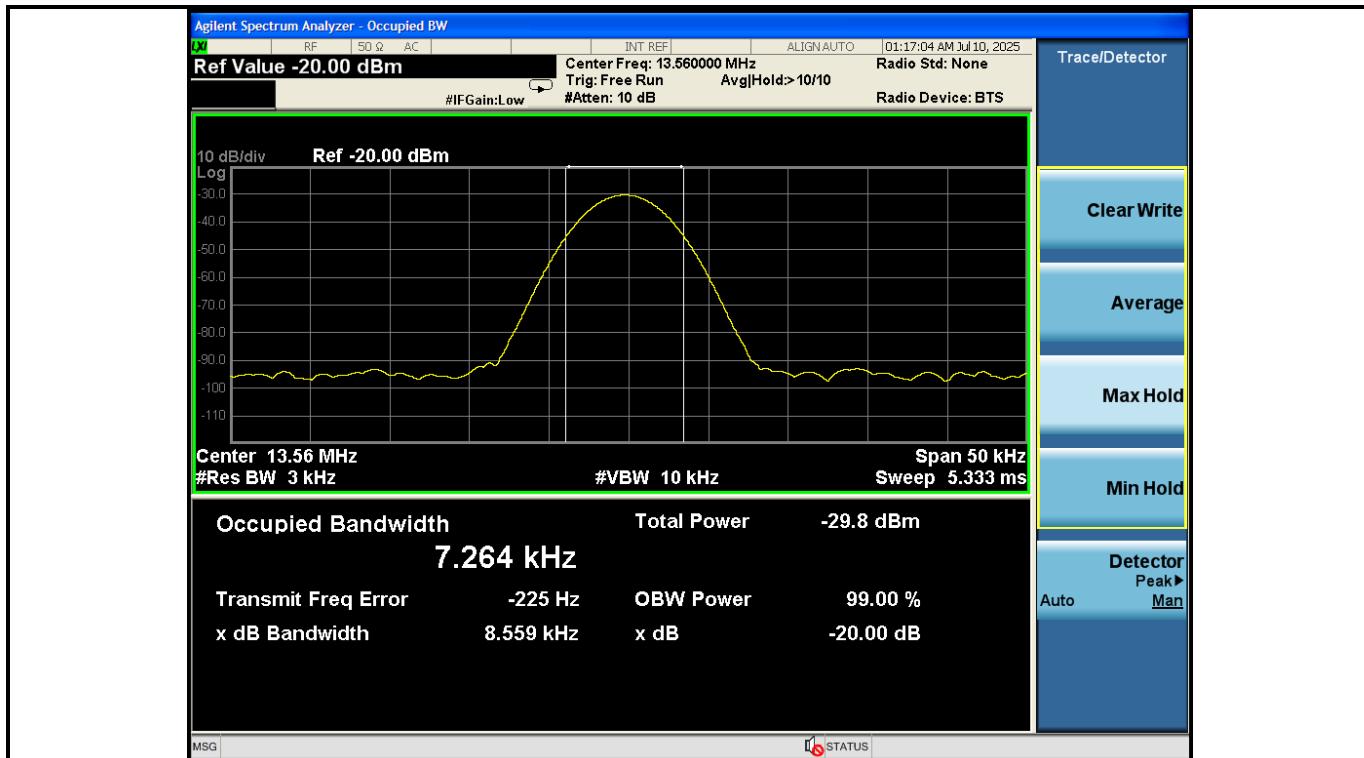
Test phase: N phase

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4473	30.33	9.62	39.95	56.93	-16.98	QP	P	
2	0.4473	21.63	9.62	31.25	46.93	-15.68	AVG	P	
3	0.5122	31.00	9.62	40.62	56.00	-15.38	QP	P	
4 *	0.5122	22.45	9.62	32.07	46.00	-13.93	AVG	P	
5	0.6161	28.56	9.62	38.18	56.00	-17.82	QP	P	
6	0.6161	19.87	9.62	29.49	46.00	-16.51	AVG	P	
7	2.3528	25.81	9.65	35.46	56.00	-20.54	QP	P	
8	2.3528	16.61	9.65	26.26	46.00	-19.74	AVG	P	
9	12.6340	34.58	9.75	44.33	60.00	-15.67	QP	P	
10	12.6340	25.91	9.75	35.66	50.00	-14.34	AVG	P	
11	13.8987	32.60	9.76	42.36	60.00	-17.64	QP	P	
12	13.8987	25.49	9.76	35.25	50.00	-14.75	AVG	P	

5.4 20dB Bandwidth

Mode	Freq (MHz)	20dB Bandwidth (KHz)	99% Bandwidth	Limit (kHz)	Conclusion
Tx Mode	13.56	8.559	7.264	/	PASS

Test Plot as Follows:



5.5 Field Strength of Fundamental

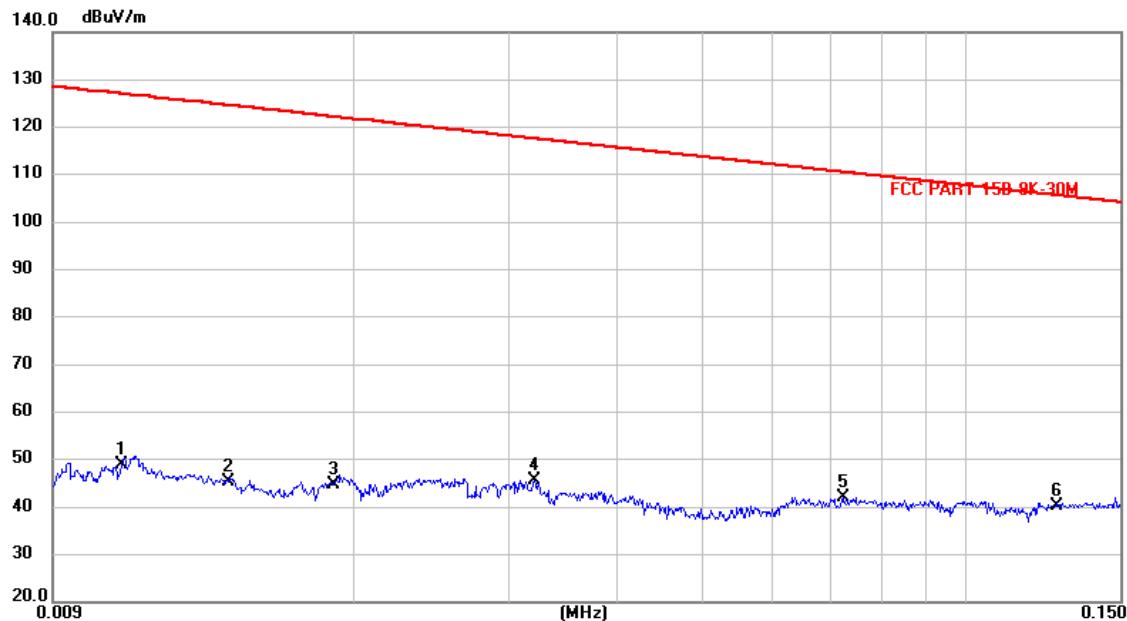
Temperature	22.5 °C	Humidity	56%
Test voltage	DC 3.87V	Test Engineer	Sean He

Freq. (MHz)	Position H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dBuV/m)
13.56	H	Peak	70.87	-13.94	56.93	124	-67.07
13.56	H	AV	67.34	-13.94	53.40	104	-50.60
13.11	H	Peak	66.83	-13.94	52.89	80.5	-27.61
13.41	H	Peak	65.94	-13.94	52.00	90.5	-38.50
13.553	H	Peak	65.05	-13.94	51.11	90.5	-39.39
13.567	H	Peak	64.15	-13.93	50.22	90.5	-40.28
13.71	H	Peak	63.26	-13.93	49.33	80.5	-31.17
14.01	H	Peak	62.37	-13.93	48.44	80.5	-32.06
Freq. (MHz)	Position H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dBuV/m)
13.56	V	Peak	70.86	-13.94	56.92	124	-67.08
13.56	V	AV	70.8	-13.94	56.86	104	-47.14
13.11	V	Peak	70.26	-13.94	56.32	80.5	-24.18
13.41	V	Peak	70.17	-13.94	56.23	90.5	-34.27
13.553	V	Peak	69.93	-13.94	55.99	90.5	-34.51
13.567	V	Peak	69.23	-13.93	55.30	90.5	-35.20
13.71	V	Peak	68.26	-13.93	54.33	80.5	-26.17
14.01	V	Peak	68.09	-13.93	54.16	80.5	-26.34

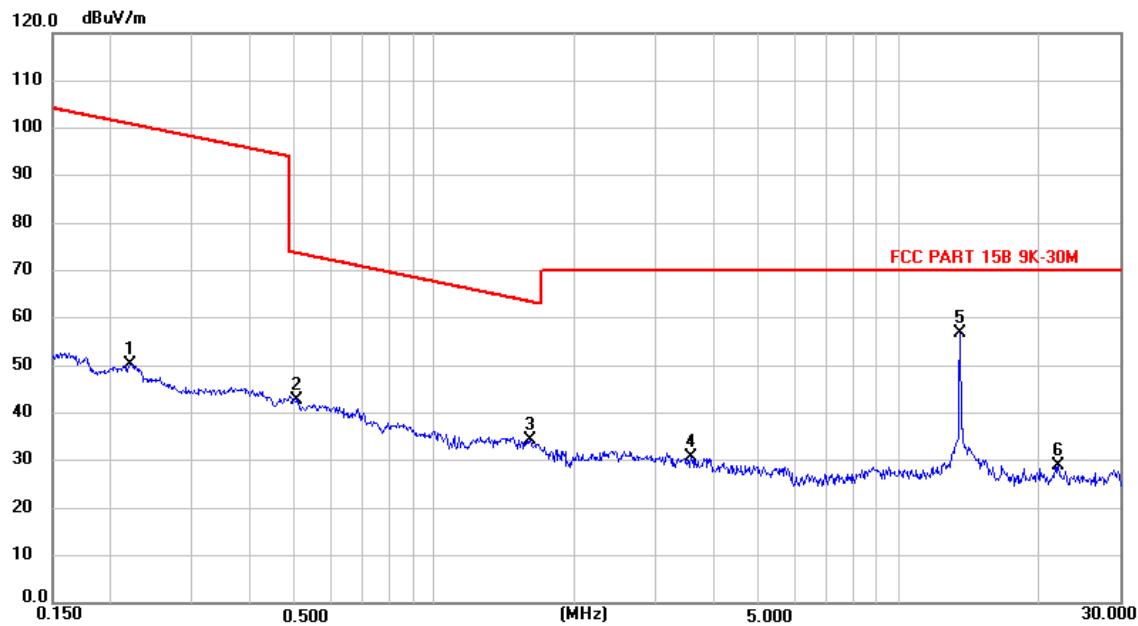
5.6 Field Strength of Spurious Emissions

Temperature	22.5 °C	Humidity	56%
Test voltage	DC 3.87V	Test Engineer	Sean He

Test Frequency: 9KHz to 30MHz

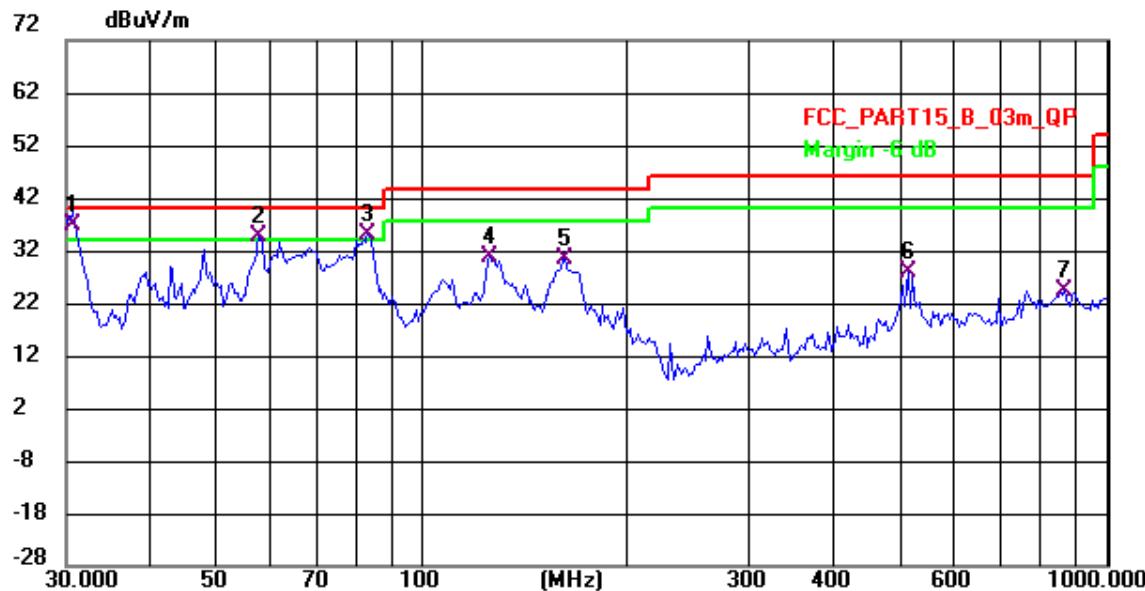


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.0108	27.42	21.48	48.90	127.03	-78.13	peak			P	
2	0.0143	23.85	21.39	45.24	124.60	-79.36	peak			P	
3	0.0190	23.56	21.27	44.83	122.14	-77.31	peak			P	
4	0.0320	24.65	20.88	45.53	117.62	-72.09	peak			P	
5	0.0724	21.92	20.16	42.08	110.55	-68.47	peak			P	
6 *	0.1270	20.30	19.87	40.17	105.69	-65.52	peak			P	



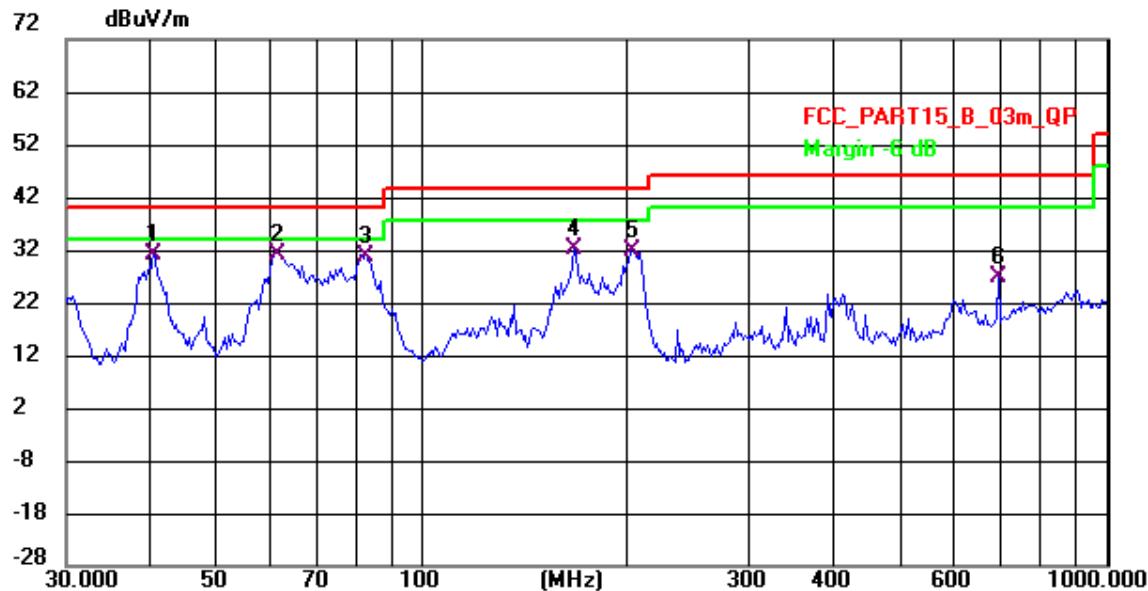
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.2205	30.22	20.10	50.32	100.91	-50.59	peak			P	
2	0.5070	23.20	19.70	42.90	73.70	-30.80	peak			P	
3	1.6067	14.29	20.15	34.44	63.52	-29.08	peak			P	
4	3.5678	9.81	20.81	30.62	70.00	-39.38	peak			P	
5 *	13.5625	36.29	20.64	56.93	70.00	-13.07	peak			P	
6	22.0667	9.28	19.70	28.98	70.00	-41.02	peak			P	

Test Frequency: 30 MHz to 1 GHz, Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	30.6392	60.22	-23.35	36.87	40.00	-3.13	QP	200	12	P	
2 !	57.2654	57.00	-22.46	34.54	40.00	-5.46	QP	200	196	P	
3 !	83.1076	60.87	-25.84	35.03	40.00	-4.97	QP	100	36	P	
4	124.9249	53.15	-22.43	30.72	43.50	-12.78	QP	100	342	P	
5	160.8852	51.04	-20.77	30.27	43.50	-13.23	QP	200	273	P	
6	512.9477	44.34	-16.53	27.81	46.00	-18.19	QP	100	61	P	
7	868.8860	33.23	-8.94	24.29	46.00	-21.71	QP	100	208	P	

Test Frequency: 30 MHz to 1 GHz, Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	40.2995	53.20	-22.08	31.12	40.00	-8.88	QP	100	298	P	
2	61.0041	53.71	-22.68	31.03	40.00	-8.97	QP	100	114	P	
3	82.5257	56.73	-25.85	30.88	40.00	-9.12	QP	200	15	P	
4	166.6385	53.05	-20.91	32.14	43.50	-11.36	QP	100	261	P	
5	202.8745	56.50	-24.79	31.71	43.50	-11.79	QP	200	126	P	
6	693.9101	39.21	-12.25	26.96	46.00	-19.04	QP	100	261	P	

5.7 Frequency Tolerance

Frequency Stability V.S. Temperature Measurement:

Assigned Frequency(MHz): 13.56MHz				
Voltage	Temperature	Measured Frequency(MHz)	Frequency stability	Limit
Low DC 3.28V	20°C	13.560403	0.000403	
Normal DC 3.87V	-20°C	13.560321	0.000321	$\pm 100 \text{ ppm}$ $\pm 0.001356 \text{ MHz}$
	-10°C	13.560325	0.000325	
	-5°C	13.560721	0.000721	
	0°C	13.560511	0.000511	
	+10°C	13.560010	0.000010	
	+20°C	13.560322	0.000322	
	+30°C	13.560430	0.000430	
	+40°C	13.560421	0.000421	
	+50°C	13.560453	0.000453	
High DC 4.45V	+20°C	13.560421	0.000421	

6 Test Setup Photos

Please refer to the Appendix I Test Setup Photos

7 EUT Constructional Details (EUT Photos)

Please refer to the Appendix II External Photos & Appendix III External Photos



BTF Testing Lab (Shenzhen) Co., Ltd.

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Bao'an District, Shenzhen, China

www.btf-lab.com

--END OF REPORT--