

Report No: JYTSZB-R12-2102732

# FCC REPORT (Bluetooth)

Applicant:	Sky Phone LLC
Address of Applicant:	1348 Washington Av. Suite 350, Miami Beach, FL 33139
Equipment Under Test (E	EUT)
Product Name:	4G Smart Phone
Model No.:	Elite D55
Trade mark:	SKY DEVICES
FCC ID:	2ABOSSKYELITED55
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt:	03 Dec., 2021
Date of Test:	04 Dec., to 06 Jan., 2022
Date of report issued:	07 Jan., 2022
Test Result:	PASS *

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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# 2 Version

Version No.	Date	Description
00	07 Jan., 2022	Original

Tested by:

Janet Wei Test Engineer Winner Mang

Date:

07 Jan., 2022

Reviewed by:

Project Engineer

Date: 07 Jan., 2022

Project No.: JYTSZE2112003



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## **4** Test Summary

Test Items	Section in CFR 47	Test Data	Result	
Antenna Requirement	15.203 & 15.247 (b)	See Section 6.1	Pass	
AC Power Line Conducted Emission	15.207	See Section 6.2	Pass	
Conducted Peak Output Power	15.247 (b)(1)	Appendix A – BT	Pass	
20dB Occupied Bandwidth	15.247 (a)(1)	Appendix A – BT	Pass	
Carrier Frequencies Separation	15.247 (a)(1)	Appendix A – BT	Pass	
Hopping Channel Number	15.247 (a)(1)	Appendix A – BT	Pass	
Dwell Time	15.247 (a)(1)	Appendix A – BT	Pass	
Conducted Band Edge	45 005 8 45 000	Appendix A – BT	Pass	
Radiated Band Edge	15.205 & 15.209	See Section 6.9.2	Pass	
Conducted Spurious Emission		Appendix A – BT	Pass	
Radiated Spurious Emission	15.247(d)	See Section 6.10.2	Pass	
Remark:				

Pass: The EUT complies with the essential requirements in the standard. 1.

2. N/A: Not Applicable.

The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by З. the customer).

Test Method:	ANSI C63.10-2013
	KDB 558074 D01 15.247 Meas Guidance v05r02



# **5** General Information

# **5.1 Client Information**

Applicant:	Sky Phone LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL 33139
Manufacturer:	Sky Phone LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL 33139

# 5.2 General Description of E.U.T.

Product Name:	4G Smart Phone
Model No.:	Elite D55
Operation Frequency:	2402MHz~2480MHz
Transfer rate:	1/2/3 Mbits/s
Number of channel:	79
Modulation type:	GFSK, π/4-DQPSK, 8DPSK
Modulation technology:	FHSS
Antenna Type:	Internal Antenna
Antenna gain:	1.67dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V, 2000mAh
AC adapter:	Input: AC100-240V, 50/60Hz, 0.2A
	Output: DC 5.0V, 1.0A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
2	2404MHz	22	2424MHz	42	2444MHz	62	2464MHz
3	2405MHz	23	2425MHz	43	2445MHz	63	2465MHz
4	2406MHz	24	2426MHz	44	2446MHz	64	2466MHz
5	2407MHz	25	2427MHz	45	2447MHz	65	2467MHz
15	2417MHz	35	2437MHz	55	2457MHz	75	2477MHz
16	2418MHz	36	2438MHz	56	2458MHz	76	2478MHz
17	2419MHz	37	2439MHz	57	2459MHz	77	2479MHz
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19 2421MHz 39 2441MHz 59 2461MHz							



### 5.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test Modes:	
Non-hopping mode:	Keep the EUT in continuous transmitting mode with worst case data rate.
Hopping mode:	Keep the EUT in hopping mode.
Remark	GFSK (1 Mbps) is the worst case mode.
Radiated Emission: The same	le was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane

Radiated Emission: The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane of 3m chamber\*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

# 5.4 Description of Support Units

The EUT has been tested as an independent unit.

# 5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%)
Conducted Emission (9kHz ~ 150KHz) for V-AMN	3.11 dB
Conducted Emission (150kHz ~ 30MHz) for V-AMN	2.62 dB
Conducted Emission (150kHz ~ 30MHz) for AAN	3.54 dB
Radiated Emission (9kHz ~ 30MHz electric field) for 3m SAC	3.13 dB
Radiated Emission (9kHz ~ 30MHz magnetic field) for 3m SAC	3.13 dB
Radiated Emission (30MHz ~ 1GHz) for 3m SAC	4.45 dB
Radiated Emission (1GHz ~ 18GHz) for 3m SAC	5.34 dB
Radiated Emission (18GHz ~ 40GHz) for 3m SAC	5.34 dB
Radiated Emission (30MHz ~ 1GHz) for 10m SAC	4.32 dB

# 5.6 Additions to, deviations, or exclusions from the method

No

### 5.7 Laboratory Facility

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

### • FCC - Designation No.: CN1211

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

### • ISED – CAB identifier.: CN0021

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

#### • CNAS - Registration No.: CNAS L15527

JianYan Testing Group 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 L15527.

### • A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <a href="https://portal.a2la.org/scopepdf/4346-01.pdf">https://portal.a2la.org/scopepdf/4346-01.pdf</a>



### **5.8 Laboratory Location**

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: http://www.ccis-cb.com

# **5.9 Test Instruments list**

Radiated Emission:						
Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
3m SAC	ETS	RFD-100	Q1984	04-14-2021	04-13-2024	
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-044	03-07-2021	03-06-2022	
BiConiLog Antenna	SCHWARZBECK	VULB9163	9163-1246	03-07-2021	03-06-2022	
Biconical Antenna	SCHWARZBECK	VUBA 9117	9117#359	06-17-2021	06-17-2022	
Horn Antenna	SCHWARZBECK	BBHA9120D	912D-916	03-07-2021	03-06-2022	
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1067	04-02-2021	04-01-2022	
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9170	1068	04-02-2021	04-01-2022	
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022	
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022	
Spectrum analyzer	Keysight	N9010B	MY60240202	10-27-2021	10-26-2022	
Simulated Station	Anritsu	MT8820C	6201026545	03-03-2021	03-02-2022	
Low Pre-amplifier	SCHWARZBECK	BBV9743B	00305	03-07-2021	03-06-2022	
High Pre-amplifier	SKET	LNPA_0118G-50	MF280208233	03-07-2021	03-06-2022	
Cable	Qualwave	JYT3M-1G-NN-8M	JYT3M-1	03-07-2021	03-06-2022	
Cable	Qualwave	JYT3M-18G-NN-8M	JYT3M-2	03-07-2021	03-06-2022	
Cable	Qualwave	JYT3M-1G-BB-5M	JYT3M-3	03-07-2021	03-06-2022	
Cable	Bost	JYT3M-40G-SS-8M	JYT3M-4	04-02-2021	04-01-2022	
EMI Test Software	Tonscend	TS+		Version:3.0.0.1		
10m SAC	ETS	RFSD-100-F/A	Q2005	04-28-2021	04-27-2024	
BiConiLog Antenna	SCHWARZBECK	VULB 9168	1249	04-02-2021	04-01-2022	
BiConiLog Antenna	SCHWARZBECK	VULB 9168	1250	04-02-2021	04-01-2022	
EMI Test Receiver	R&S	ESR 3	102800	04-08-2021	04-07-2022	
EMI Test Receiver	R&S	ESR 3	102802	04-08-2021	04-07-2022	
Low Pre-amplifier	Bost	LNA 0920N	2016	04-06-2021	04-05-2022	
Low Pre-amplifier	Bost	LNA 0920N	2019	04-06-2021	04-05-2022	
Cable	Bost	JYT10M-1G-NN-10M	JYT10M-1	04-02-2021	04-01-2022	
Cable	Bost	JYT10M-1G-NN-10M	JYT10M-2	04-02-2021	04-01-2022	
Test Software	R&S	EMC32	١	/ersion: 10.50.4	0	

Conducted Emission:							
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)		
EMI Test Receiver	Rohde & Schwarz	ESCI 3	101189	03-03-2021	03-02-2022		
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	03-18-2021	03-17-2022		
LISN	Rohde & Schwarz	ESH3-Z5	843862/010	06-18-2020	06-17-2022		
RF Switch	TOP PRECISION	RSU0301	N/A	03-03-2021	03-02-2022		
Cable	Bost	JYTCE-1G-NN-2M	JYTCE-1	03-03-2021	03-02-2022		
Cable	Bost	JYTCE-1G-BN-3M	JYTCE-2	03-03-2021	03-02-2022		
EMI Test Software	AUDIX	E3	Version: 6.110919b				



Conducted method:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9010B	MY60240202	10-27-2021	10-26-2022
Vector Signal Generator	Keysight	N5182B	MY59101009	10-27-2021	10-26-2022
Analog Signal Generator	Keysight	N5173B	MY59100765	10-27-2021	10-26-2022
Power Detector Box	MWRF-test	MW100-PSB	MW201020JYT	11-19-2021	11-18-2022
Simulated Station	Rohde & Schwarz	CMW270	102335	10-27-2021	10-26-2022
RF Control Box	MWRF-test	MW100-RFCB	MW200927JYT	N/A	N/A
PDU	MWRF-test	XY-G10	N/A	N/A	N/A
DC Power Supply	Keysight	E3642A	MY60296194	11-27-2020	11-26-2023
Temperature Humidity Chamber	Deli	8840	N/A	03-08-2021	03-07-2022
Test Software	MWRF-tes	MTS 8310		Version: 2.0.0.0	



# 6 Test results and measurement data

# 6.1 Antenna Requirement

Standard requirement:	FCC Part 15 C Section 15.203 & 247(b)
responsible party shall be u antenna that uses a unique so that a broken antenna ca electrical connector is prohi 15.247(b) (4) requirement: (4) The conducted output p antennas with directional ga section, if transmitting anten power from the intentional r	be designed to ensure that no antenna other than that furnished by the sed with the device. The use of a permanently attached antenna or of an coupling to the intentional radiator, the manufacturer may design the unit an be replaced by the user, but the use of a standard antenna jack or bited. ower limit specified in paragraph (b) of this section is based on the use of ains that do not exceed 6 dBi. Except as shown in paragraph (c) of this nnas of directional gain greater than 6 dBi are used, the conducted output adiator shall be reduced below the stated values in paragraphs (b)(1), tion, as appropriate, by the amount in dB that the directional gain of the
E.U.T Antenna:	
The Bluetooth antenna is an the antenna is 1.67dBi.	Internal antenna which permanently attached, and the best case gain of



## **6.2 Conducted Emissions**

Test Requirement:	FCC Part 15 C Section 15.	207	
Test Frequency Range:	150 kHz to 30 MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9 kHz, VBW=30 kHz	z, Sweep time=auto	
Limit:	Frequency range (MHz)	Limit (d	dBuV)
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
Test setup:	* Decreases with the logari Reference Pl		
Toot areas dura:	AUX         Equipment         Test table/Insulation plane         Remark:         E.U.T. Equipment Under Test         LISN: Line Impedence Stabilization Networ         Test table height=0.8m		
Test procedure:	<ol> <li>50ohm/50uH coupling in</li> <li>The peripheral devices a LISN that provides a 500 termination. (Please reference)</li> <li>Both sides of A.C. line interference. In order to positions of equipmen</li> </ol>	tion network (L.I.S.N.). Th npedance for the measuri	is provides a ng equipment. main power through a lance with 500hm the test setup and n conducted sion, the relative ables must be changed
Test Instruments:	Refer to section 5.9 for det	ails	
Test mode:	Hopping mode		
Test results:	Pass		

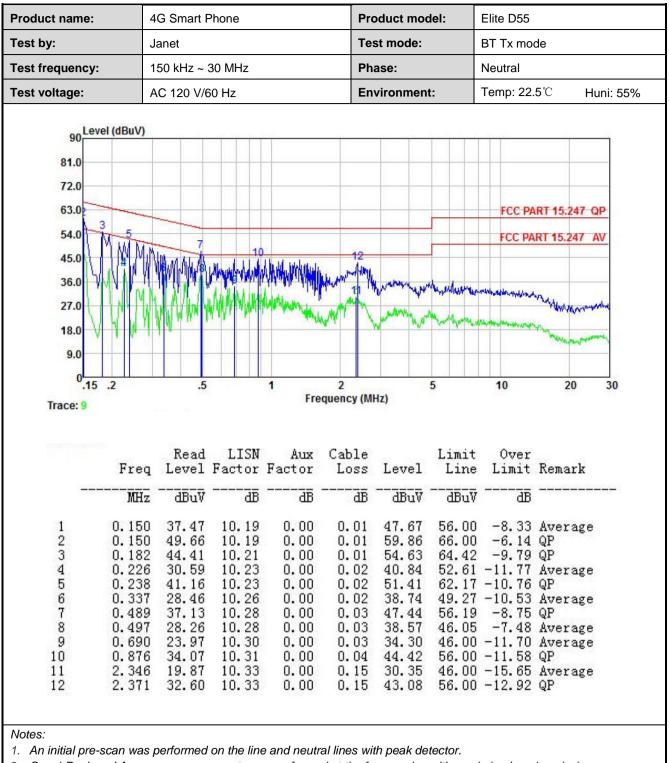


#### **Measurement Data:**

Product name:	4	G Smart	Phone		Pro	oduct mod	el:	Elite D55		
est by:	J	anet			Те	st mode:		BT Tx mod	de	
est frequency:	1	50 kHz ~	30 MHz		Pha	ase:		Line		
est voltage:	A	AC 120 V/	60 Hz		En	vironment	:	Temp: 22.	5℃ Huni	: 55%
90 Leve 81.0 72.0 63.0 54.0 45.0 36.0 27.0 18.0 9.0 0.15	I (dBuV)	.5	Alexandre	10 10 10 10 10 10 10 10 10 10	12 11 11 2 equency (MH		лициницинициницинициницинициницинициници	FCC PAI	RT 15.247 QP RT 15.247 AV	0
	Freq	Read Level	LISN Factor		Cable Loss	Level	Limit Line		Remark	
	MHz	 dBu∛	<u>d</u> B	<u>dB</u>		 dBu∛	 dBu∛	<u>a</u> b		
2 3 4 5	0.150 0.150 0.186 0.190 0.226 0.226 0.479	32.44 47.25 40.70 28.07 25.89 39.17 23.80 34.65	10.22 10.22 10.23 10.23 10.24 10.24 10.29 10.29	$\begin{array}{c} 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\\ 0.\ 00\end{array}$	0.01 0.02 0.03 0.02 0.02 0.02 0.03 0.03	42.67 57.48 50.95 38.33 36.15 49.43 34.12 44.97	66.00 64.20 54.02 52.61 62.61 46.36 56.36	-8.52 -13.25 -15.69 -16.46 -13.18 -12.24 -11.39	QP Average Average QP Average	

3. Final Level = Receiver Read level + LISN Factor + Aux Factor + Cable Loss.





2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

3. Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.



Test Requirement:	FCC Part 15 C Section 15.247 (b)(1)
Receiver setup:	RBW=1MHz, VBW=3MHz, Detector=Peak (If 20dB BW ≤1 MHz) RBW=2MHz, VBW=6MHz, Detector=Peak (If 20dB BW > 1 MHz and < 3MHz)
Limit:	For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT

### 6.3 Conducted Output Power

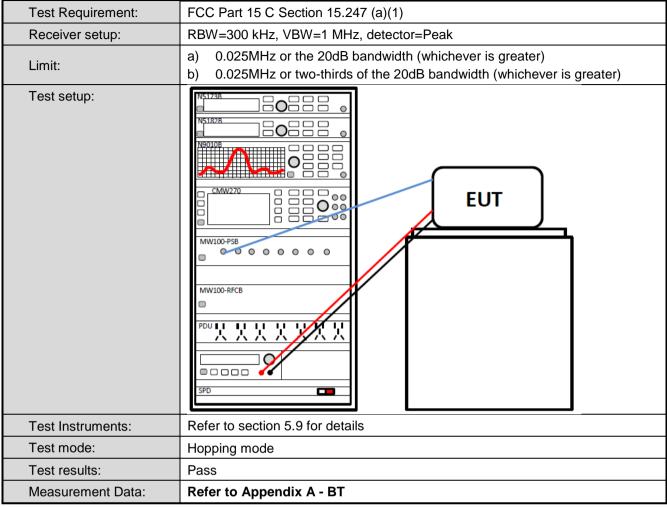


### 6.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)
Receiver setup:	DH1: RBW=15 kHz, VBW=47 kHz, detector=Peak 2DH1&3DH: RBW=20 kHz, VBW=62 kHz, detector=Peak
Limit:	Within authorization band
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



### 6.5 Carrier Frequencies Separation



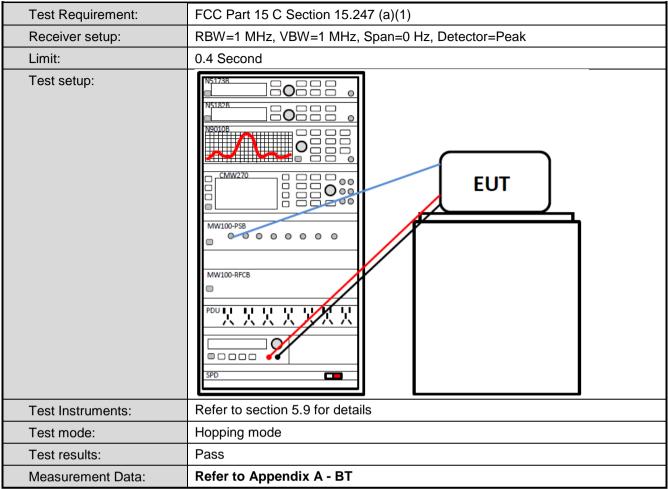


## 6.6 Hopping Channel Number

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Center Frequency=2441MHz, Frequency Range: 2400MHz~2483.5MHz, Detector=Peak
Limit:	15 channels
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT

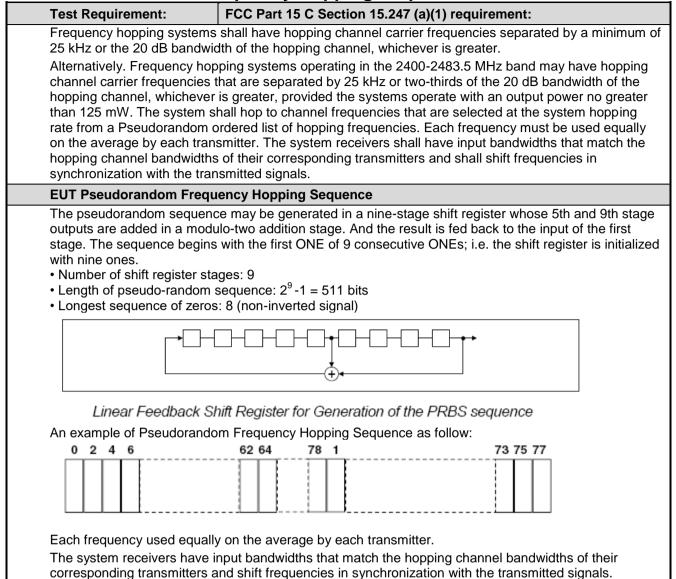


### 6.7 Dwell Time





### 6.8 Pseudorandom Frequency Hopping Sequence





### 6.9 Band Edge 6.9.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Detector=Peak
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode and hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



### 6.9.2 Radiated Emission Method

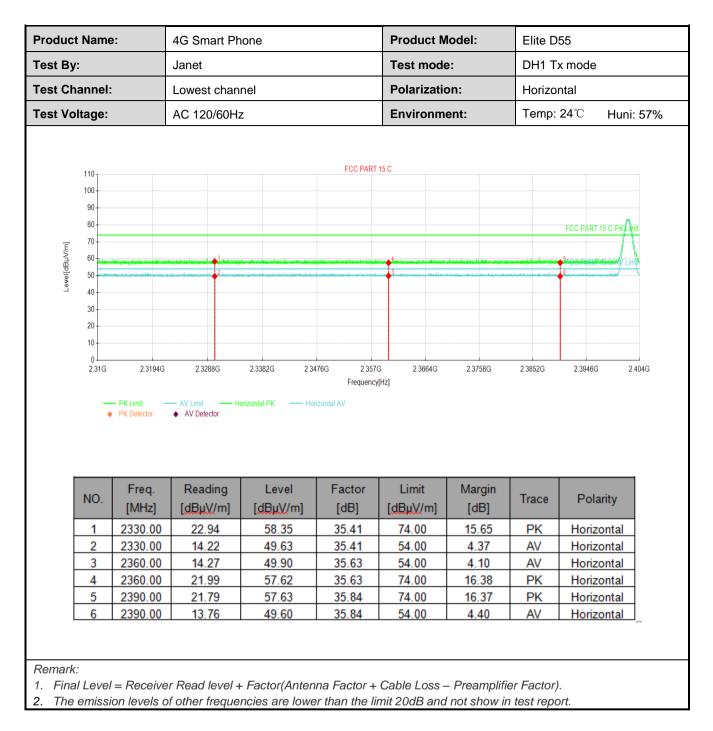
Test Requirement:	FCC Part 15 C	Section 15.2	209 a	and 15.205			
Test Frequency Range:	2310 MHz to 23	90 MHz and	d 248	83.5 MHz to 2	500 M	lHz	
Test Distance:	3m						
Receiver setup:	Frequency	Detector	r	RBW	V	BW	Remark
	Above 1GHz	Peak		1MHz	31	MHz	Peak Value
	Above IGHZ	RMS		1MHz	31	MHz	Average Value
Limit:	Frequence	су	Lim	it (dBuV/m @3	3m)		Remark
	Above 1G	H7		54.00		Av	verage Value
	7.000010			74.00		F	Peak Value
Test setup:	AE unitst	EUT table) Grour Test Receiver	3m A Reference A		enna Towe		
Test Procedure:	<ul> <li>determine the</li> <li>2. The EUT was antenna, whi tower.</li> <li>3. The antenna ground to de horizontal an measuremen</li> <li>4. For each sus and then the the rota table maximum rea</li> <li>5. The test-rece Bandwidth w</li> <li>6. If the emission limit specified EUT would b margin would</li> </ul>	B meter camb e position of s set 3 mete ch was mou height is va termine the r d vertical po t. spected emis antenna wa was turned ading. eiver system ith Maximum on level of th d, then testin e reported. (d	ber. the ers a intec intec max blariz ssior is tur fror was n Ho ne El or or the co Othe ed or	The table was highest radiati way from the in d on the top of from one mete imum value of zations of the a h, the EUT was ned to heights n 0 degrees to s set to Peak E old Mode. JT in peak mo build be stoppe	rotat ion. nterfe a vari er to fe the fi antenr s arrai from 0 360 0 Detect de wa d and ssions g pea	ed 360 or rence-re able-he our meta eld strein ha are s nged to 1 meter degrees Function as 10dB I the pea s that dia k, quasi	degrees to eceiving ight antenna ers above the ngth. Both et to make the its worst case to 4 meters and to find the on and Specified lower than the ak values of the d not have 10dB -peak or
Test Instruments:	Refer to section						
Test mode:	Non-hopping m	ode					
Test results:	Passed						



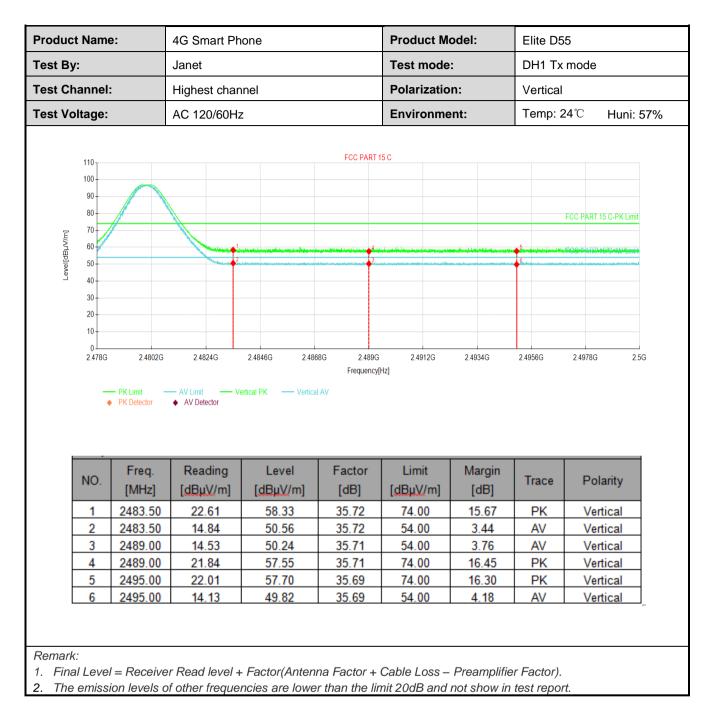
#### **GFSK Mode:**

Product Name: Test By:		4G Smart Phone			Product M	odel:	Elite D55			
est By:	:	Janet Test mode: DH1 Tx mode				Test mode	:	DH1 Tx	mode	
est Ch	Channel:		Lowest channel		hannel Polarization: Vertical					
est Vo	Itage:		AC 120/60Hz	7		Environme	ent:	Temp: 24°C Huni:		57%
Level[dBµV/m]	110 100 90 80 70 60 50				FCC PART	15 C			FCC PART 15 C-PK Linu And Data Structure V Linu 5	
Level	40 30 20 10 0 2.31G	2.3194G PK Limit - PK Detector	2 3288G AV Limit Ve AV Detector	2.3382G 2.34 ertical PK — Vertica	Frequency		2.3758G	2.3852G	2.3946G 2.404	4G
- Fevel	30 20 10	— PK Limit —	— AV Limit — Ve		Frequency		2.3758G Margin [dB]	2.3852G	2.3946G 2.404	4G
Level	30 20 10 0 2.31G	PK Limit - PK Detector	AV Limit Va AV Detector Va Reading [dBµV/m] 14.63	ertical PK — Vertica	Frequency IAV Factor	Limit	Margin	Trace		4G
Level	30 20 10 0 231G	PK Limit PK Detector [MHz] 2330.00 2330.00	AV Limit Va AV Detector Va Reading [dBµV/m] 14.63 21.77	ertical PK — Vertica Level [dBµV/m] 50.04 57.18	Frequency IAV Factor [dB]	Limit [dBµV/m]	Margin [dB] 3.96 16.82	Trace AV PK	Polarity Vertical Vertical	4G
Tevel	30 20 10 0 2.31G	PK Limit           PK Detector           Freq.           [MHz]           2330.00           2330.00           2360.00	AV Limit Ve AV Detector Ve Reading [dBµV/m] 14.63 21.77 21.59	Level [dBµV/m] 50.04	Frequency IAV Factor [dB] 35.41 35.41 35.63	Limit [dBµV/m] 54.00 74.00 74.00	Margin [dB] 3.96 16.82 16.78	Trace AV PK PK	Polarity Vertical Vertical Vertical	4G
Level	30 20 10 231G NO. 1 2	PK Limit PK Detector [MHz] 2330.00 2330.00 2360.00 2360.00	AV Limit Va AV Detector Va Reading [dBµV/m] 14.63 21.77	erfical PK — Vertica Level [dBµV/m] 50.04 57.18	Frequency AV Factor [dB] 35.41 35.41	Limit [dBµV/m] 54.00 74.00	Margin [dB] 3.96 16.82	Trace AV PK	Polarity Vertical Vertical	4G
	30 20 10 0 2.31G NO. 1 2 3	PK Limit           PK Detector           Freq.           [MHz]           2330.00           2330.00           2360.00	AV Limit Ve AV Detector Ve Reading [dBµV/m] 14.63 21.77 21.59	Level [dBµV/m] 50.04 57.18 57.22	Frequency IAV Factor [dB] 35.41 35.41 35.63	Limit [dBµV/m] 54.00 74.00 74.00	Margin [dB] 3.96 16.82 16.78	Trace AV PK PK	Polarity Vertical Vertical Vertical	4G











Product Na		4G Smart Ph	one		Product Me	odel:	Elite D5	55		
Test By:		Janet			Test mode	:	DH1 Tx	mode		
Test Chann	el:	Highest chan	nel		Polarizatio	n:	Horizontal			
Test Voltag	e:	AC 120/60Hz			Environme	ent:	Temp: 2	24℃ Huni:	57%	
J	-		-							
110-				FCC PART 1	15 C					
100-										
90 -										
80 -		<b></b>						FCC PART 15 C-PK Limit		
E 70-										
[W/VI 60- [M/VI 60- [9] 50-	1		فوا ومواد وورارة الأخراب ورهوار واردوار والمراجع المالية والمراجع والمراجع	ningin pitan minaka kata ningina	and an and a star of the second star		us <mark>e <sup>5</sup>emberijenteus</mark> tien			
p] 50 -	<i>*</i>	2	des despendentes des alles de la companya des des antes de la companya des des antes de la companya de la comp		unun gentinen nebera ohaan in derardera dir kalen	a ang ni glan lagagan tir na ang darang na ba		แสรมประกอง เมือง (การสารสารสารสารสารสารสารสารสารสารสารสารสา		
<u> </u>	-									
30 -										
20 -										
20- 10-										
20 -	78G 2.4802G	2.4824G	2.4846G 2.486	8G 2.489G	2.4912G	2.4934G	2.4956G	2.4978G 2.5	iG	
20 - 10 - 0 -	78G 2.4802G	2.4824G	2.4846G 2.486	8G 2.489G Frequency[		2.4934G	2.4956G	2.4978G 2.5	iG	
20 - 10 - 0 -	PK Limit	— AV Limit — Ho	2.4846G 2.486 prizontal PK — Hori:	Frequency[		2.4934G	2.4956G	2.4978G 2.5	iG	
20 - 10 - 0 -				Frequency[		2.4934G	2.4956G	2.4978G 2.5	iG	
20 - 10 - 0 -	← PK Limit - ◆ PK Detector	AV Limit Ho	prizontal PK — Horiz	Frequency[ zontal AV	Hz]		2.4956G	2.4978G 2.5	iG	
20 - 10 - 2.4	PK Limit PK Detector	AV Limit Ho AV Detector Ho Reading	orizontal PK — Hori: Level	Frequency zontal AV Factor	Limit	Margin			G	
20 - 10 - 0 -	PK Limit PK Detector	AV Limit Ho	prizontal PK — Horiz	Frequency[ zontal AV	Hz]		24956G Trace	2.4978G 2.5 Polarity	G	
20 - 10 - 2.4	PK Limit PK Detector Freq. [MHz]	AV Limit Ho AV Detector Ho Reading	orizontal PK — Hori: Level	Frequency zontal AV Factor	Limit	Margin			G	
20- 10- 2.4; NC	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2483.50</li> </ul>	AV Limit Ho AV Detector Ho Reading [dBµV/m]	Drizontal PK — Horr Level [dBµV/m]	Frequency zontal AV Factor [dB]	Limit	Margin [dB]	Trace	Polarity	GG	
20- 10- 2.4; NC	<ul> <li>→ PK Limit</li> <li>→ PK Detector</li> <li>→ Freq.</li> <li>[MHz]</li> <li>2483.50</li> <li>2483.50</li> </ul>	AV Limit Ho AV Detector Ho Reading [dBµV/m] 21.63	Level [dBµV/m] 57.35	Frequency zontal AV Factor [dB] 35.72	Limit [dBµV/m] 74.00	Margin [dB] 16.65	Trace	Polarity Horizontal	G	
20- 10- 2.43 NC 1 2	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2483.50</li> <li>2483.50</li> <li>2489.00</li> </ul>	AV Limit AV Detector Reading [dBµV/m] 21.63 14.34	Level [dBµV/m] 57.35 50.06	Frequency zontal AV Factor [dB] 35.72 35.72	Limit [dBµV/m] 74.00 54.00	Margin [dB] 16.65 3.94	Trace PK AV	Polarity Horizontal Horizontal	iG	
20- 10- 2.4 NC 1 2 3	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2483.50</li> <li>2483.50</li> <li>2489.00</li> <li>2489.00</li> </ul>	AV Limit He AV Detector He AV Detector He Reading [dBµV/m] 21.63 14.34 14.55	Level [dBµV/m] 57.35 50.06 50.26	Frequency zontal AV Factor [dB] 35.72 35.72 35.71	Limit [dBµV/m] 74.00 54.00 54.00	Margin [dB] 16.65 3.94 3.74	Trace PK AV AV	Polarity Horizontal Horizontal Horizontal	GG	

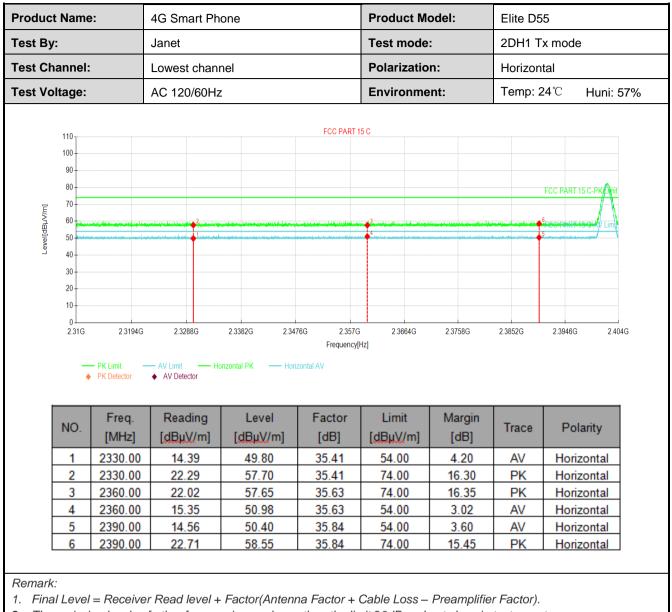
2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



#### $\pi$ /4-DQPSK mode

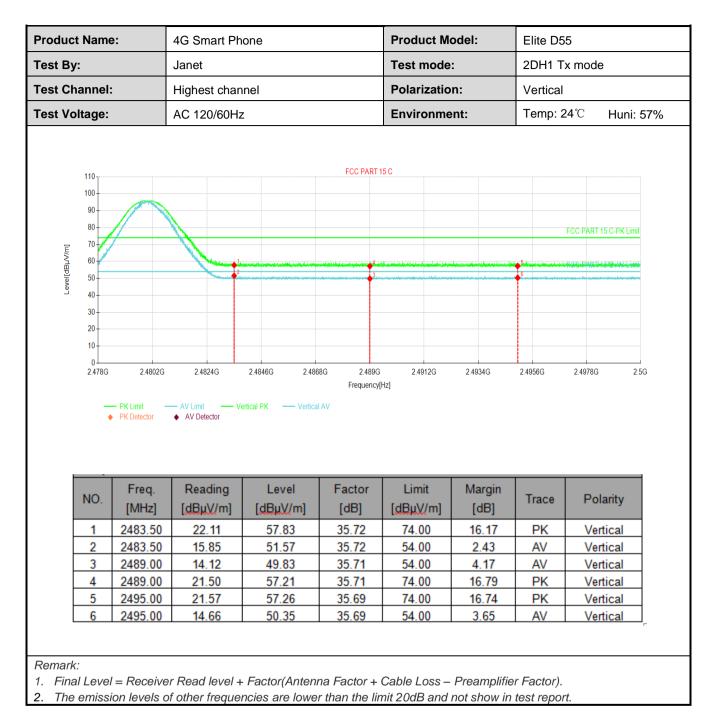
	ne:	4G Smart Ph	ione		Product M	odel:	Elite D5	55	
Test By:		Janet			Test mode	:	2DH1 T	x mode	
Fest Channe	el:	Lowest channel Polarization: Vertical		Polarization:		ion: Vertical			
Fest Voltage	):	AC 120/60Hz	<u>z</u>		Environment:				
110				FCC PART 1	15 C				
100-									
90 -									^
80 -								FCC PART 15 C	-PK Linit
E 70									
	an herde daar ook too in daardad		ومدار والارسان والإربوع ومسوعا بالازم والمارات			alle andre de same de la cher a de		<sup>6</sup> ~00H7N2AT-16-0	V Limit
50	Handalah na Haidin 39 Mala anishan	nann die fankeling statistik 2nie partie ide	89.00% es es tantadogió es 8. alta es este l'édate y a cela	- 1999, 1999 (1997), - 2014, - 2014, - 2014, - 2014, - 2014, - 2014, - 2014, - 2014, - 2014, - 2014, - 2014, -	a an	K-AMARINAL MARINE STATE AND	a. A a b d have a second a se	an a	
40 -									
30									
20									
20									
20	G 2.3194G	2.3288G	2.3382G 2.34			2.3758G	2.3852G	2.3946G	2.404G
10	PK Limit PK Detector Freq.	AV Limit Vi AV Detector Reading	ertical PK — Vertica	Frequency IAV Factor	Limit	Margin	23852G	2.3946G Polari	
10-0-2310 NO.	PK Limit PK Detector Freq. [MHz]	AV Limit AV Detector Reading [dBµV/m]	ertical PK — Vertica Level [dBµV/m]	Frequency AV Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Polari	ty
10-0-2.310 NO.	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> </ul>	AV Limit AV Detector Reading [dBµV/m] 21.86	ertical PK	Frequency AV Factor [dB] 35.41	Limit [dBµV/m] 74.00	Margin [dB] 16.73	Trace	Polari Vertic	ty al
10 0 2.310 NO. 1 2	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> <li>2330.00</li> </ul>	AV Limit AV Detector Reading [dBµV/m] 21.86 14.16	ertical PK — Vertica Level [dBµV/m] 57.27 49.57	Frequency AV Factor [dB] 35.41 35.41	Limit [dBµV/m] 74.00 54.00	Margin [dB] 16.73 4.43	Trace PK AV	Polari Vertic Vertic	ty al al
10- 0- 2310 NO. 1 2 3	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> <li>2330.00</li> <li>2360.00</li> </ul>	AV Limit AV Detector Reading [dBµV/m] 21.86 14.16 14.03	Level [dBµV/m] 57.27 49.57 49.66	Frequency Factor [dB] 35.41 35.63	Limit [dBµV/m] 74.00 54.00 54.00	Margin [dB] 16.73 4.43 4.34	Trace PK AV AV	Polari Vertic Vertic Vertic	ty al al
10 0 2.310 NO. 1 2	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> <li>2330.00</li> </ul>	AV Limit AV Detector Reading [dBµV/m] 21.86 14.16	ertical PK — Vertica Level [dBµV/m] 57.27 49.57	Frequency AV Factor [dB] 35.41 35.41	Limit [dBµV/m] 74.00 54.00	Margin [dB] 16.73 4.43	Trace PK AV	Polari Vertic Vertic	ty al al al al



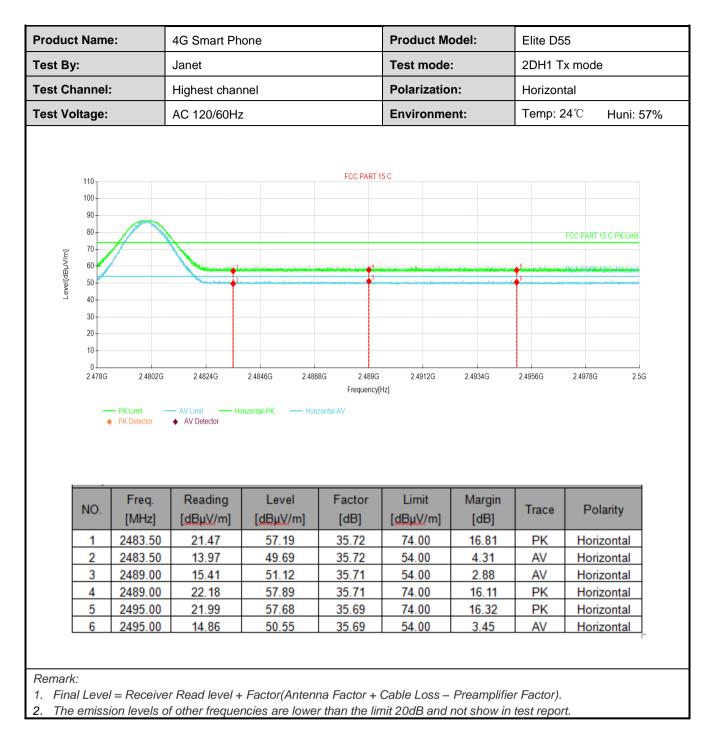


2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.











#### 8DPSK mode

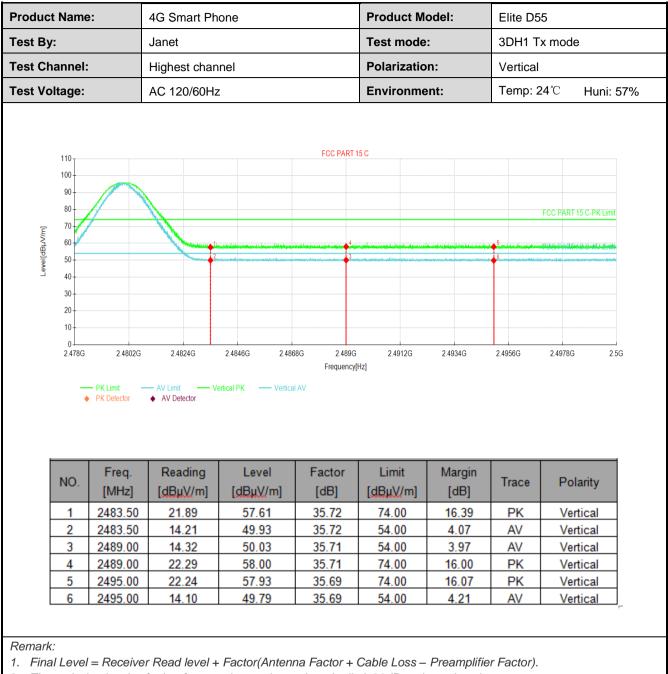
est By:	Product Name:		4G Smart Phone			Product Model:			Elite D55		
est By: est Channel: est Voltage:		Janet Lowest channel AC 120/60Hz			Test mode: Polarization: Environment:		3DH1 Tx mode				
							Vertical				
							Temp: 24°C Huni: 57%				
110 100 90 80 70 2 80 60				FCC PART	15 C			FCC PART 1	5 C-PK Lint		
		2		indaniyi in	anta <sup>3</sup> an ann aite imreachailte an			5			
30- 20- 10- 2.31	PK Limit		2.3382G 2.34 lertical PK — Vertica	Frequency[		2.3758G	2.3852G	2.3946G	2.404G		
20 - 10 - 0 -	PK Limit - PK Detector -			Frequency[		2.3758G Margin [dB]	2.3852G	2.3946G			
20 - 10 - 0 - 2.31	PK Limit PK Detector	AV Limit V AV Detector V Reading	<sup>r</sup> ertical PK — Vertica Level	Frequency IAV Factor	Hz]	Margin			arity		
20- 10- 0- 2.31	PK Limit PK Detector	AV Limit V AV Detector V Reading [dBµV/m]	Level	Frequency IAV Factor [dB]	Limit [dBµV/m]	Margin [dB]	Trace	Pola	arity		
20- 10- 0- 2.31 NO.	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> </ul>	AV Limit	Level [dBµV/m] 58.55	Frequency IAV Factor [dB] 35.41	Limit [dBµV/m] 74.00	Margin [dB] 15.45	Trace	Pola	arity ical		
20- 10- 0- 2.31 NO. 1 2	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> <li>2330.00</li> </ul>	AV Limit V	Level [dBµV/m] 58.55 49.84	Frequency IAV Factor [dB] 35.41 35.41	Limit [dBµV/m] 74.00 54.00	Margin [dB] 15.45 4.16	Trace PK AV	Pola Vert Vert	arity ical ical		
20- 10- 0_ 2.31 NO. 1 2 3	<ul> <li>PK Limit</li> <li>PK Detector</li> <li>Freq.</li> <li>[MHz]</li> <li>2330.00</li> <li>2330.00</li> <li>2360.00</li> </ul>	AV Limit V • AV Detector V	Level [dBµV/m] 58.55 49.84 50.61	Frequency IAV Factor [dB] 35.41 35.41 35.63	Limit [dBµV/m] 74.00 54.00 54.00	Margin [dB] 15.45 4.16 3.39	Trace PK AV AV	Pola Vert Vert Vert	arity ical ical ical		





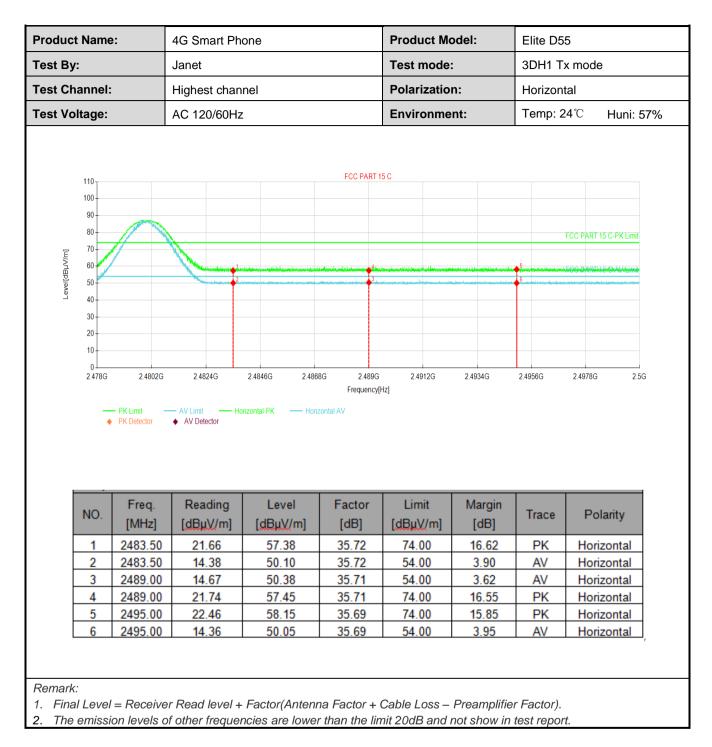
2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.





2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.







## 6.10 Spurious Emission

### 6.10.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



### 6.10.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C S	Section 15.2	209					
Test Frequency Range:	9 kHz to 25 GHz							
Test Distance:	3m or 10m							
Receiver setup:	Frequency Detector RBW VB			VBW	3W Remark			
	30MHz-1GHz	Quasi-pea	ak	120kHz	300k⊢	lz	Quasi-peak Value	
		Peak		1MHz	3MHz	z	Peak Value	
	Above 1GHz	RMS		1MHz	3MHz	z	Average Value	
Limit:	Frequency		Limit (dBuV/m @10m)			Remark		
	30MHz-88MHz		30.0		C	Quasi-peak Value		
	88MHz-216MHz		33.5		Quasi-peak Value			
	216MHz-960	MHz	36.0		Quasi-peak Value			
	960MHz-10	GHz	44.0		Quasi-peak Value			
	Frequenc	у	Limit (dBuV/m @3m)		Remark			
	Above 1G	Hz –	54.0			Average Value		
		-	74.0			Peak Value		
	EUT Tur Tal Ground Above 1GHz		1m ••••			— An	arch ntenna fest eiver	
Test Procedure:	1. The EUT		Test Rece	3m Ground Reference Plane	Pre- Amplier Contr		Tower Tower Table 0.8m(below	
Test Flocedule.	1GHz)/1.5m (below 1GH 360 degree	n(above 1G Iz)or 3 mete s to determ	GHz) a er cha iine th	above the g amber(abov ne position o	ground a re 1GHz of the hig	at a ). Th ghes	10 meter chamber table was rotated	

JianYan Testing Group Shenzhen Co., Ltd. No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Project No.: JYTSZE2112003



	away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
	3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
	4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
	<ol> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> </ol>
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Remark:	<ol> <li>Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li> <li>9 kHz to 30 MHz is noise floor and lower than the limit 20dB, so only shows the data of above 30MHz in this report.</li> </ol>



#### Measurement Data (worst case):

#### Below 1GHz:

	4G Smart Phone			Product Model:		Elite D55	Elite D55		
Гest By:	Janet			Test mod	le:	BT Tx mod	BT Tx mode		
Test Frequency:	30 MHz ~ 1 (	30 MHz ~ 1 GHz			Polarization:		Vertical & Horizontal		
Test Voltage:	AC 120/60H	7		Environment:		Temp: 24°	°C Huni: 579		
45 40 30 20 45 40 40 40 40 40 40 40 40 40 40 40 40 40			Full Spect	:rum		FCC PART 1			
	50 60	80 100	<u>л</u>	200	300 400		800 1G		
30M			Frequer	ncy in Hz					
Frequency	MaxPeak	Limit	Margin	ncy in Hz Height	Pol	Azimuth	Corr.		
Frequency (MHz)	MaxPeak (dB u V/m)	(dB ¤ V/m)	Margin (dB)	ncy in Hz Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)		
Frequency (MHz) 37.566000	MaxPeak (dB ¤ V/m) ) 21.69	(dB µ V/m) 30.00	Margin (dB) 8.31	Height (cm) 100.0		Azimuth (deg) 0.0	Corr. (dB/m) -16.1		
Frequency (MHz) 37.566000 76.851000 180.544000	MaxPeak (dB u V/m) ) 21.69 ) 18.35 ) 30.29	(dB µ V/m) 30.00 30.00 33.50	Margin (dB)	ncy in Hz Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m) -16.1 -19.6 -17.4		
Frequency (MHz) 37.566000 76.851000	MaxPeak (dB u V/m) ) 21.69 ) 18.35 ) 30.29	(dB µ V/m) 30.00 30.00	Margin (dB) 8.31 11.65	Height (cm) 100.0	Pol V V	Azimuth (deg) 0.0 345.0	Corr. (dB/m) -16.1 -19.6		
Frequency (MHz) 37.566000 76.851000 180.544000	MaxPeak (dB ¤ V/m) ) 21.69 ) 18.35 ) 30.29 ) 23.61 ) 25.86	(dB µ V/m) 30.00 30.00 33.50	Margin (dB) 8.31 11.65 3.21	Height (cm) 100.0 100.0 100.0	Pol V V V	Azimuth (deg) 0.0 345.0 42.0	Corr. (dB/m) -16.1 -19.6 -17.4		



#### Above 1GHz:

		Test ch	annel: Lowest ch	annel		
		De	tector: Peak Valu	e		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarization
4804.00	56.67	-9.60	47.07	74.00	26.93	Vertical
4804.00	55.02	-9.60	45.42	74.00	28.58	Horizontal
		Dete	ctor: Average Va	lue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4804.00	49.75	-9.60	40.15	54.00	13.85	Vertical
4804.00	47.71	-9.60	38.11	54.00	15.89	Horizonta
		Test ch	annel: Middle ch	annel		
		Det	ector: Peak Valu	ie		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4882.00	56.90	-9.05	47.85	74.00	26.15	Vertical
4882.00	55.38	-9.05	46.33	74.00	27.67	Horizonta
		Dete	ctor: Average Va	lue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4882.00	49.90	-9.05	40.85	54.00	13.15	Vertical
4882.00	47.25	-9.05	38.20	54.00	15.80	Horizonta
			annel: Highest ch ector: Peak Valu	Ie		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4960.00	57.34	-8.45	48.89	74.00	25.11	Vertical
4960.00	55.11	-8.45	46.66	74.00	27.34	Horizonta
		Dete	ctor: Average Va	lue		
Frequency	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
(MHz)	( )			= 4 00	40.50	Vartical
	49.89	-8.45	41.44	54.00	12.56	Vertical

2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.