Report No: CCISE181116402

# **FCC REPORT**

(Bluetooth)

Applicant: Interglobe Connection Corp

Address of Applicant: 8228 NW 30th Terrace. Doral, Miami, FL 33122

**Equipment Under Test (EUT)** 

Product Name: Mobile Phone

Model No.: EKO Star 5.5 G55

Trade mark: EKO

FCC ID: 2AC7IEKONG55

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 30 Nov., 2018

**Date of Test:** 30 Nov., to 21 Dec., 2018

Date of report issued: 24 Dec., 2018

Test Result: PASS \*

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

#### Authorized Signature:



Bruce Zhang Laboratory Manager

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 CCIS 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	24 Dec., 2018	Original

Tested by: Date: 24 Dec., 2018

Test Engineer

Reviewed by: Date: 24 Dec., 2018

Project Engineer



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## 4 Test Summary

Test Items	Section in CFR 47	Result
Antenna Requirement	15.203 & 15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(1)	Pass
20dB Occupied Bandwidth	15.247 (a)(1)	Pass
Carrier Frequencies Separation	15.247 (a)(1)	Pass
Hopping Channel Number	15.247 (a)(1)	Pass
Dwell Time	15.247 (a)(1)	Pass
Spurious Emission	15.205 & 15.209	Pass
Band Edge	15.247(d)	Pass

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

N/A: Not Applicable.





## 5 General Information

## **5.1 Client Information**

Applicant:	Interglobe Connection Corp	
Address:	8228 NW 30th Terrace. Doral, Miami, FL 33122	
Manufacturer/ Factory:	INTERGLOBE CONNECTION LTD	
Address:	RM 1101 11F SAN TOI BLDG 139 CONNAUGHT RD CENTRAL HK	

5.2 General Description of E.U.T.

O.E Ochicial Descriptio	6. 2.6
Product Name:	Mobile Phone
Model No.:	EKO Star 5.5 G55
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:	-3.4 dBi
Power supply:	Rechargeable Li-ion Battery DC3.85V-2920mAh
AC adapter:	Model: Ara 5.7 B5719 Input: AC100-240V, 50/60Hz, 0.15A Output: DC 5.0V, 1000mA
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Operation Frequency each of channel for GFSK, π/4-DQPSK, 8DPSK							
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		
Remark: Ch	Remark: Channel 0, 39 &78 selected for GFSK, π/4-DQPSK and 8DPSK.						

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### 5.3 Test environment and test 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.

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 with a fresh battery, 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

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±2.22 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

## 5.6 Laboratory Facility

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

#### FCC - Registration No.: 727551

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

#### IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing 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 L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

#### A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 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>

# 5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

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

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366



# 5.8 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	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020	
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-16-2018	03-15-2019	
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-16-2018	03-15-2019	
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-16-2018	03-15-2019	
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020	
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019	
EMI Test Software	AUDIX	E3	Version: 6.110919b		b	
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019	
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019	
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019	
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019	
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019	
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019	
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019	
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019	
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A	
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0			

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	101189	03-07-2018	03-06-2019	
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-07-2018	03-06-2019	
LISN	CHASE	MN2050D	1447	03-19-2018	03-18-2019	
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019	
Cable	HP	10503A	N/A	03-07-2018	03-06-2019	
EMI Test Software	AUDIX	E3	\	/ersion: 6.110919	b	



## 6 Test results and measurement data

## 6.1 Antenna Requirement

#### Standard requirement:

FCC Part 15 C Section 15.203 & 247(b)

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.

15.247(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### E.U.T Antenna:

The Bluetooth antenna is an Internal antenna which permanently attached, and the best case gain of the antenna is -3.4 dBi.





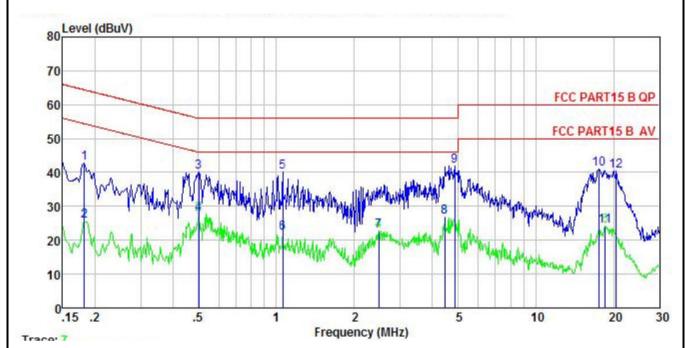
# **6.2 Conducted Emissions**

Test Requirement:	FCC Part 15 C Section 1	5.207		
Test Method:	ANSI C63.10:2013			
Test Frequency Range:	150 kHz to 30 MHz			
Class / Severity:	Class B			
Receiver setup:	RBW=9 kHz, VBW=30 k	Hz, Sweep time=auto		
Limit:	Frequency range	Limit (	dBuV)	
	(MHz)	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 log	arithm of the frequency.		
Test setup:	Reference			
	AUX Equipment  Test table/Insulation plane  Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m			
Test procedure:	<ol> <li>The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.</li> </ol>			
Test Instruments:	Refer to section 5.8 for c	letails		
Test mode:	Hopping mode			
Test results:	Pass			
	•			



#### **Measurement Data:**

Product name:	Mobile Phone	Product model:	EKO Star 5.5 G55
Test by:	Carey	Test mode:	BT Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



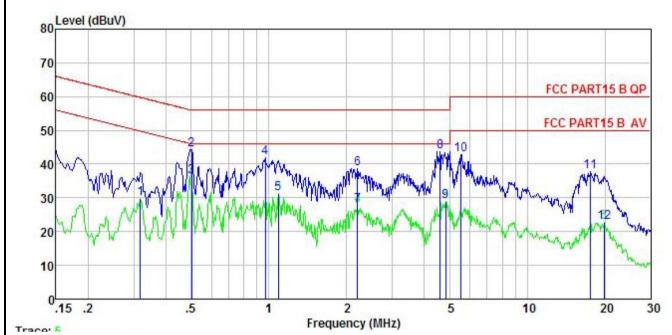
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
2	MHz	dBu∜	₫B	₫B	dBu₹	dBu∀	<u>dB</u>	120 CO
1	0.182	31.20	0.73	10.77	42.70	64.42	-21.72	QP
2	0.182	14.07	0.73	10.77	25.57	54.42	-28.85	Average
3	0.502	28.59	0.76	10.76	40.11	56.00	-15.89	QP
1 2 3 4 5 6 7 8 9	0.502	16.22	0.76	10.76	27.74	46.00	-18.26	Average
5	1.060	28.48	0.78	10.88	40.14	56.00	-15.86	QP
6	1.060	10.60	0.78	10.88	22.26	46.00	-23.74	Average
7	2.487	11.00	0.78	10.94	22.72	46.00	-23.28	Average
8	4.454	15.37	0.76	10.87	27.00	46.00	-19.00	Average
9	4.874	30.22	0.76	10.85	41.83	56.00	-14.17	QP
10	17.475	29.52	0.70	10.92	41.14	60.00	-18.86	QP
11	18.524	12.45	0.70	10.92	24.07	50.00	-25.93	Average
12	20.486	28.92	0.70	10.92	40.54	60.00	-19.46	QP

#### Notes

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



Product name:	Mobile Phone	Product model:	EKO Star 5.5 G55
Test by:	Carey	Test mode:	BT Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	
	MHz	dBu₹	<u>dB</u>	₫B	dBu₹	dBu₹	<u>dB</u>		-
1 2	0.318 0.502	18.40 32.89	0.64 0.61	10.74 10.76	29.78 44.26		-19.97 -11.74	Average OP	
3	0.502	24.97	0.61	10.76	36.34	46.00	-9.66	Average	
5	0.968 1.088	30.32 19.70	0.67	10.86 10.88	41.85	46.00		Average	
6 7	2.201 2.201	27.06 16.13	0.67 0.67	10.95 10.95	38.68 27.75		-17.32 -18.25	QP Average	
1 2 3 4 5 6 7 8 9	4.598 4.822	32.13 17.40	0.70 0.70	10.86	43.69 28.96		-12.31 -17.04	QP Average	
10 11	5.535 17.568	31.34 26.15	0.70	10.83	42.87 37.76	60.00	-17.13 -22.24	QP	
12	19.845	11.24	0.69	10.92	22.86			Average	

#### Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



# **6.3 Conducted Output Power**

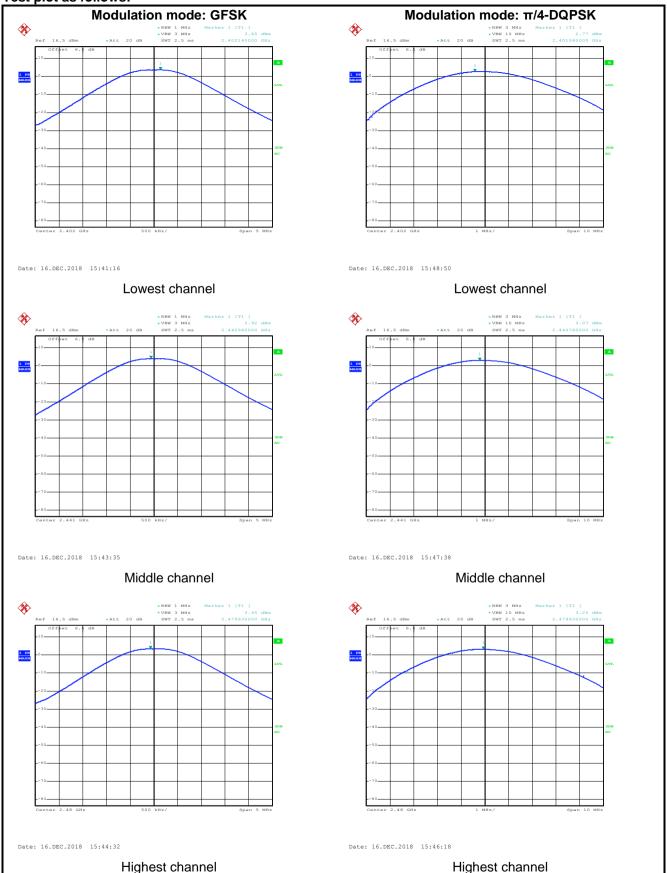
Test Requirement:	FCC Part 15 C Section 15.247 (b)(1)			
Test Method:	ANSI C63.10:2013 and KDB 558074			
Receiver setup:	RBW=1MHz, VBW=3MHz, Detector=Peak (If 20dB BW ≤1 MHz) RBW=3MHz, VBW=10MHz, Detector=Peak (If 20dB BW > 1 MHz and < 3MHz)			
Limit:	For frequency hopping systems operating in the 2400-2483.5 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:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Non-hopping mode			
Test results:	Pass			

### **Measurement Data:**

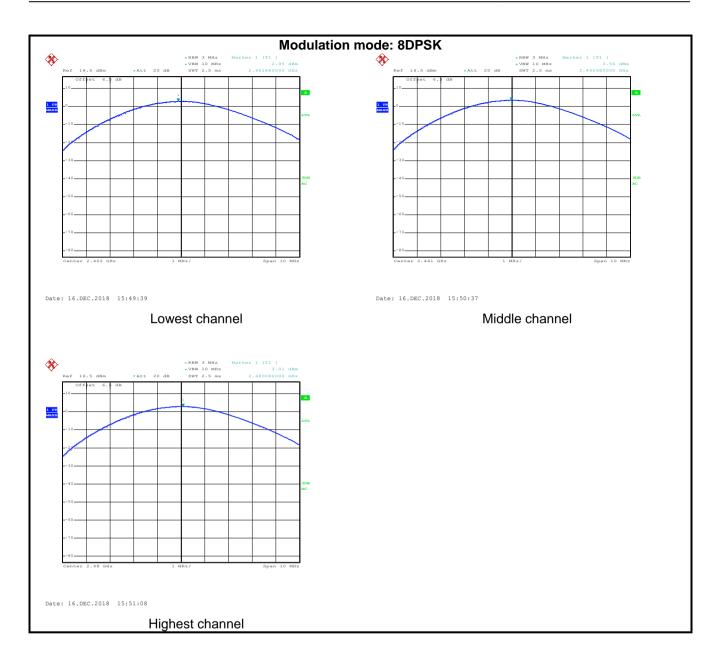
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result			
	GFSK mo	de				
Lowest channel	3.65	30.00	Pass			
Middle channel	3.92	30.00	Pass			
Highest channel	3.45	30.00	Pass			
	π/4-DQPSK mode					
Lowest channel	2.77	21.00	Pass			
Middle channel	3.07	21.00	Pass			
Highest channel	3.25	21.00	Pass			
	8DPSK mode					
Lowest channel	2.95	21.00	Pass			
Middle channel	3.56	21.00	Pass			
Highest channel	3.01	21.00	Pass			



### Test plot as follows:









6.4 20dB Occupy Bandwidth

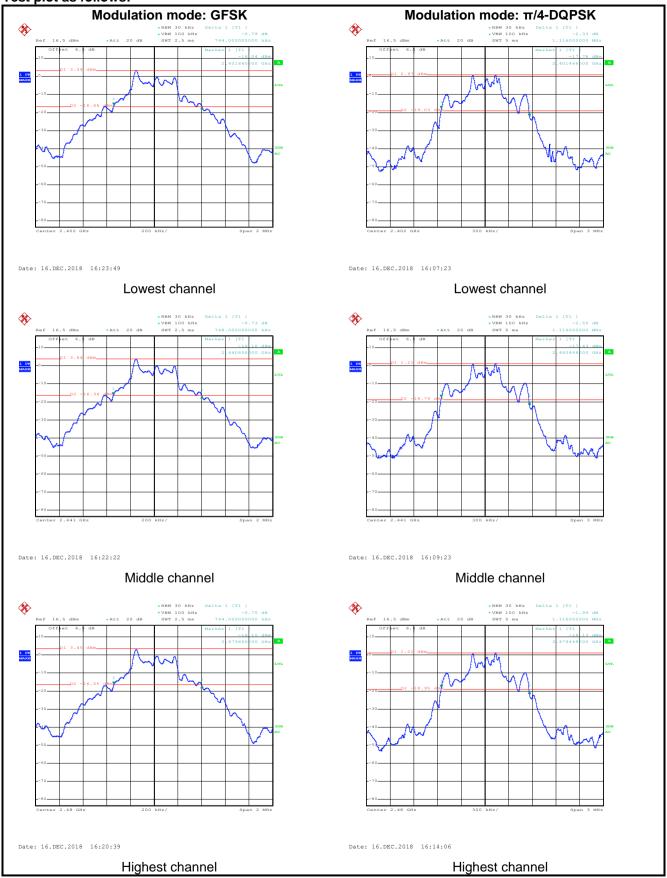
Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)		
Test Method:	ANSI C63.10:2013 and KDB 558074		
Receiver setup:	RBW=30 kHz, VBW=100 kHz, detector=Peak		
Limit:	NA		
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane		
Test Instruments:	Refer to section 5.8 for details		
Test mode:	Non-hopping mode		
Test results:	Pass		

#### **Measurement Data:**

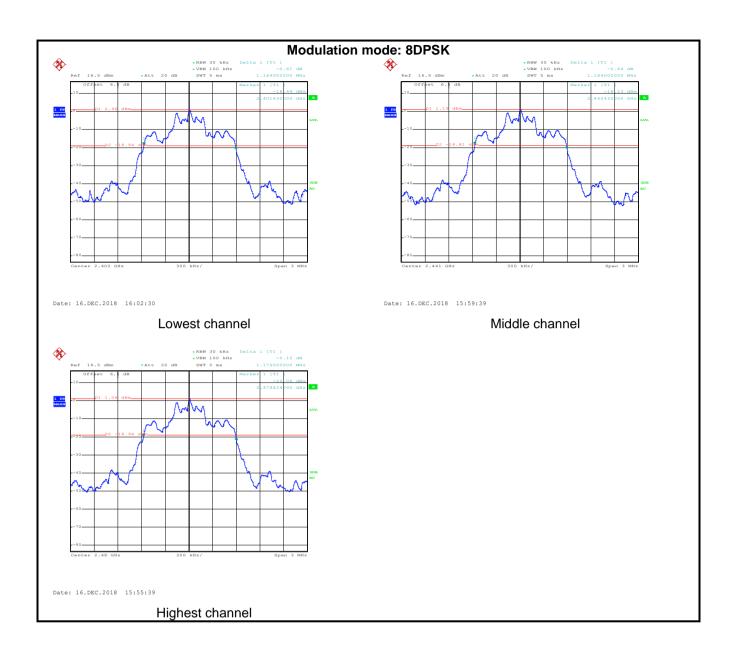
Test channel		20dB Occupy Bandwidth (kHz)		
	GFSK	π/4-DQPSK	8DPSK	
Lowest	744	1116	1164	
Middle	748	1116	1164	
Highest	744	1116	1176	



### Test plot as follows:









6.5 Carrier Frequencies Separation

old Gallion Frequencies				
Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)			
Test Method:	ANSI C63.10:2013 and KDB 558074			
Receiver setup:	RBW=100 kHz, VBW=300 kHz, detector=Peak			
Limit:	<ul> <li>a) 0.025MHz or the 20dB bandwidth (whichever is greater)</li> <li>b) 0.025MHz or 2/3 of the 20dB bandwidth (whichever is greater)</li> </ul>			
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Hopping mode			
Test results:	Pass			



### **Measurement Data:**

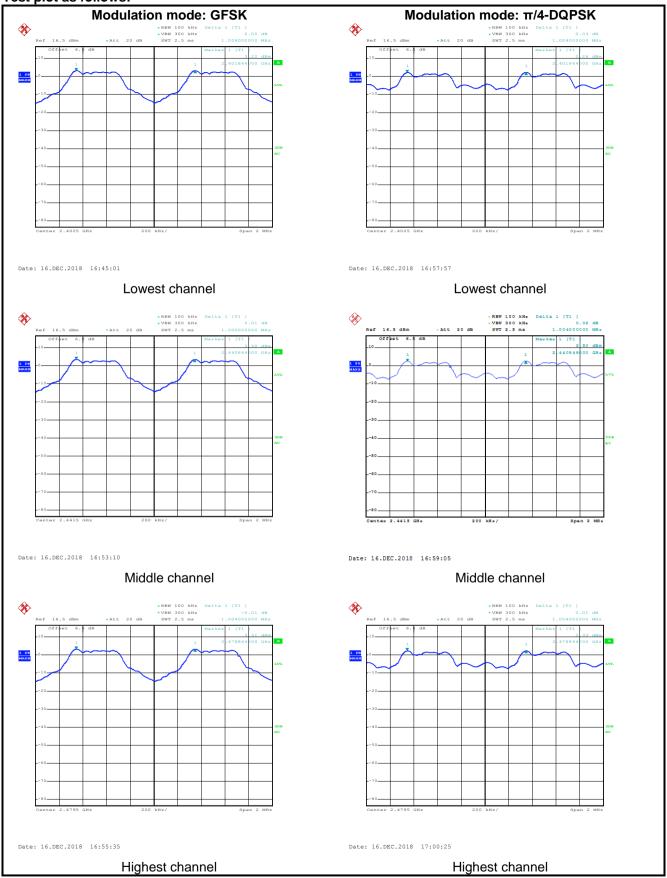
Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result					
	GFSK							
Lowest	1004	744.00	Pass					
Middle	1000	744.00	Pass					
Highest	1004	744.00	Pass					
	π/4-DQPSK mode							
Lowest	1004	744.00	Pass					
Middle	1004	744.00	Pass					
Highest	1004	744.00	Pass					
	8DPSK mode							
Lowest	1004	776.00	Pass					
Middle	1000	776.00	Pass					
Highest	1000	776.00	Pass					

Note: According to section 6.4

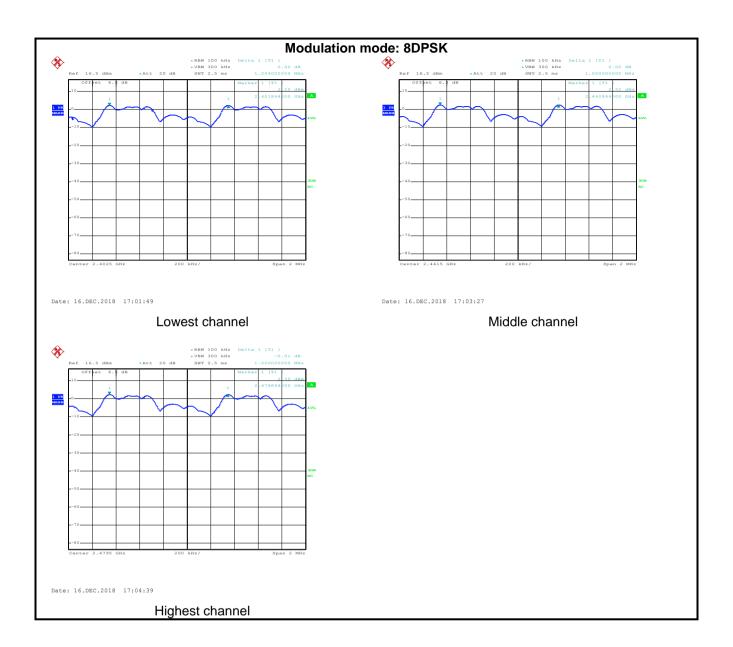
Mode	20dB bandwidth (kHz) (worse case)	Limit (kHz) (Carrier Frequencies Separation)
GFSK	744	744.00
π/4-DQPSK	1116	744.00
8DPSK	1164	776.00



### Test plot as follows:









6.6 Hopping Channel Number

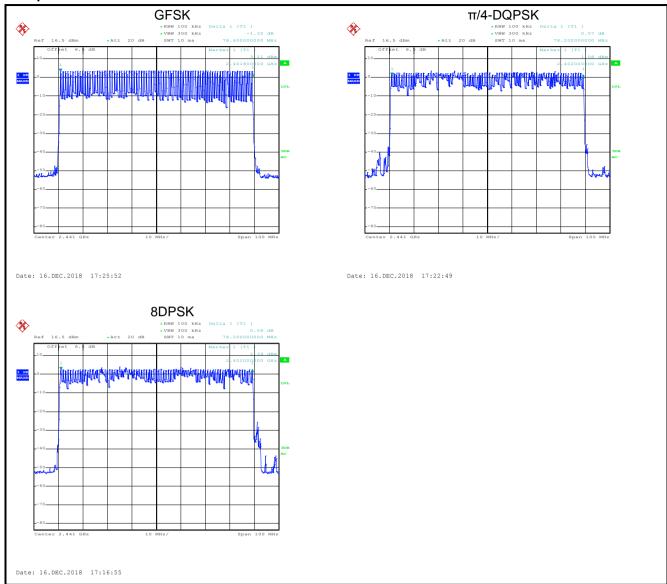
Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)			
Test Method:	ANSI C63.10:2013 and KDB 558074			
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak			
Limit:	15 channels			
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Hopping mode			
Test results:	Pass			

#### **Measurement Data:**

Mode	Hopping channel numbers	Limit	Result
GFSK, π/4-DQPSK, 8DPSK	79	15	Pass



### Test plot as follows:





## 6.7 Dwell Time

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013 and KDB 558074
Receiver setup:	RBW=1 MHz, VBW=1 MHz, Span=0 Hz, Detector=Peak
Limit:	0.4 Second
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Hopping mode
Test results:	Pass

### Measurement Data (Worse case):

Mode	Packet	Dwell time (second)	Limit (second)	Result
	DH1	0.12544		
GFSK	DH3	0.26688	0.4	Pass
	DH5	0.31061		
	2-DH1	0.14272		
π/4-DQPSK	2-DH3	0.26784	0.4	Pass
	2-DH5	0.31147		
	3-DH1	0.12736		
8DPSK	3-DH3	0.26688	0.4	Pass
	3-DH5	0.31573		

Note:

The test period = 0.4 Second/Channel x 79 Channel = 31.6 s

Calculation Formula: Dwell time = Ton time per hop \* Hopping numbers \* Period

For example:

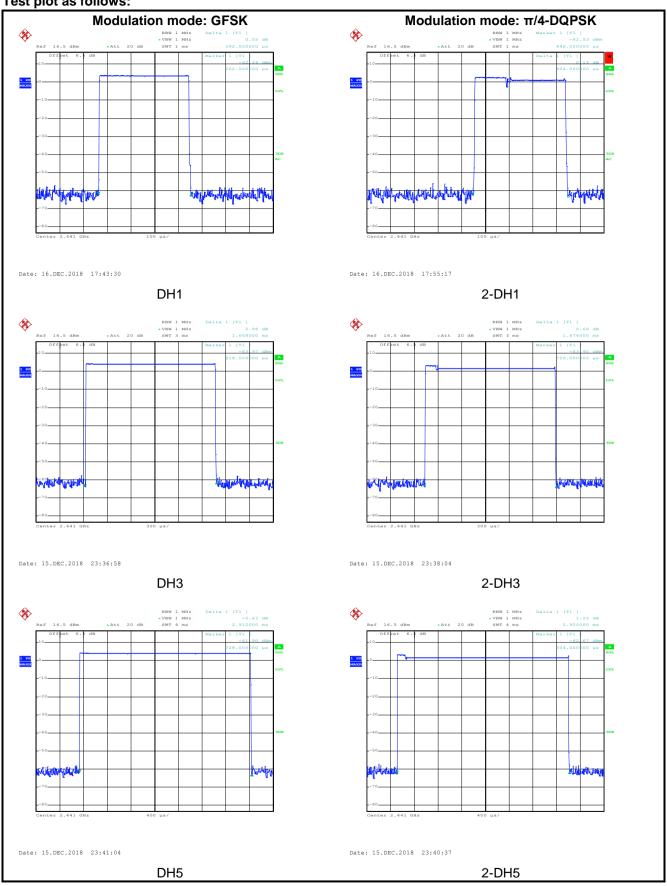
DH1 time slot=0.392\*(1600/ (2\*79)) \* 31.6=125.44ms

DH3 time slot=1.668\*(1600/ (4\*79)) \* 31.6=266.88ms

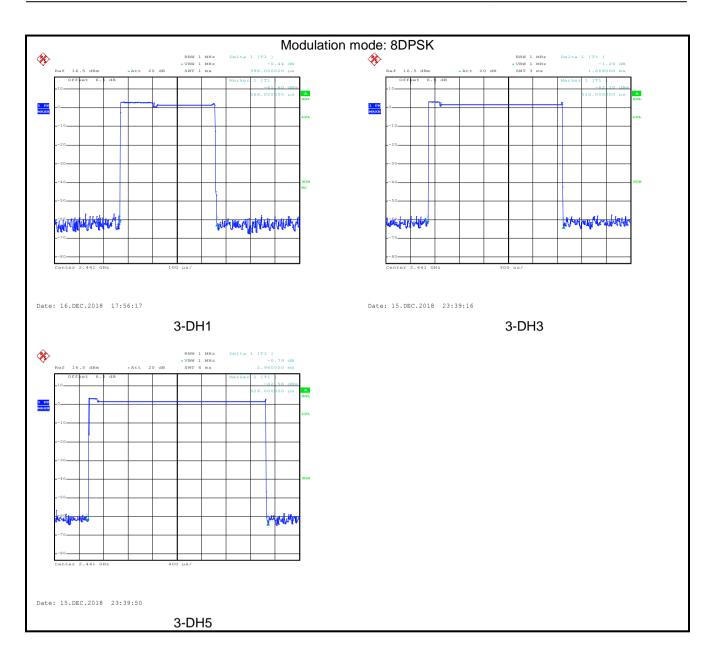
DH5 time slot=2.912\*(1600/ (6\*79)) \* 31.6=310.61ms



### Test plot as follows:









6.8 Pseudorandom Frequency Hopping Sequence

### Test Requirement: FCC Part 15 C Section 15.247 (a)(1) requirement:

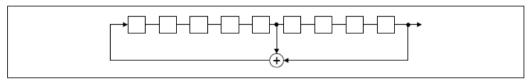
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Alternatively. Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

### **EUT Pseudorandom Frequency Hopping Sequence**

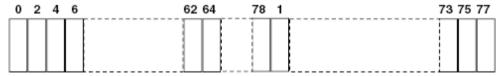
The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONEs; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 29-1 = 511 bits
- · Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.



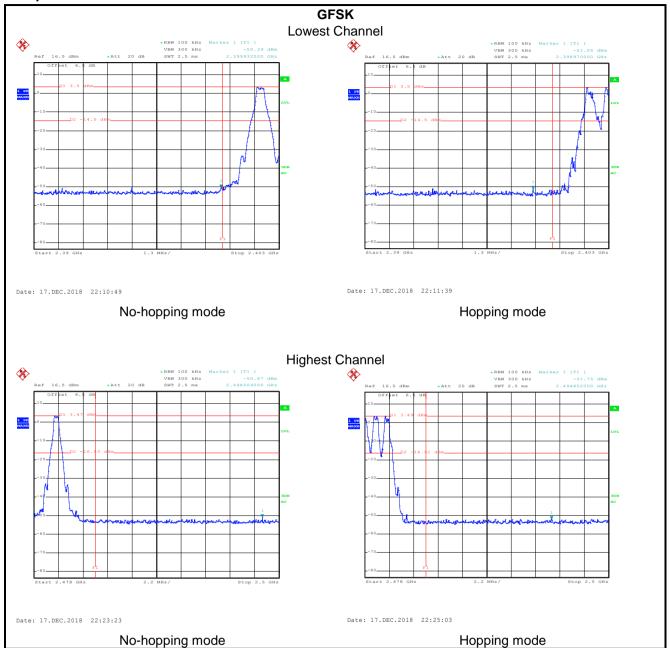
# 6.9 Band Edge

## 6.9.1 Conducted Emission Method

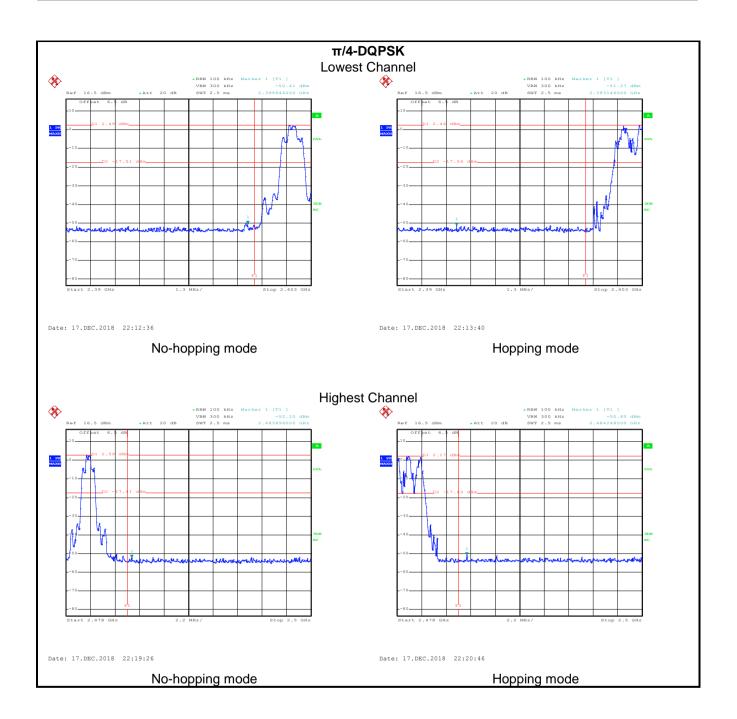
Test Requirement:	FCC Part 15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB 558074
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Detector=Peak
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power 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:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Non-hopping mode and hopping mode
Test results:	Pass



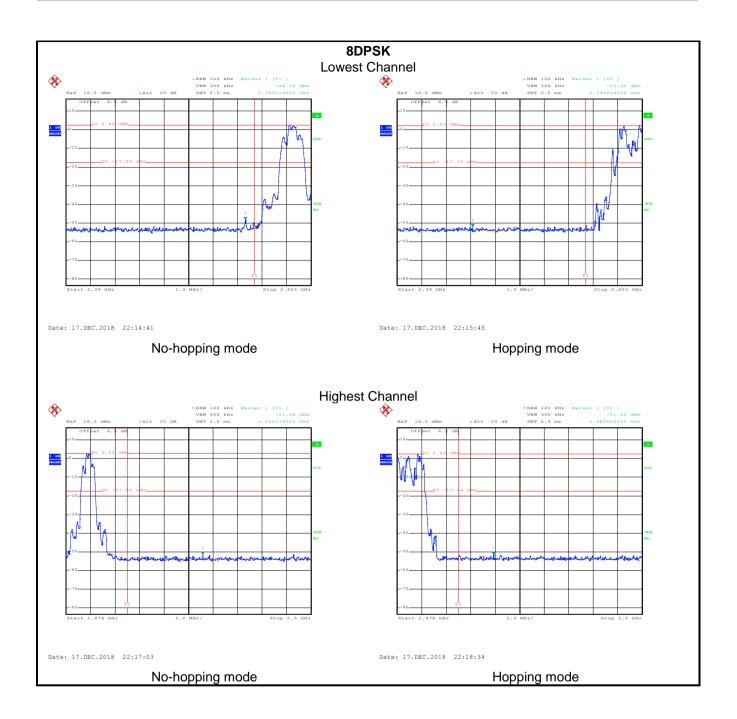
### Test plot as follows:













## 6.9.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C	Section 1	5 200	and 15 205			
Test Method:	ANSI C63.10:		3.208	and 15.205			
Test Frequency Range:	2.3GHz to 2.50	3HZ					
Test Distance:	3m	Datast		DDW	\ //	D\\\	Dama and
Receiver setup:	Frequency	Detector		RBW	VBW		Remark
	Above 1GHz	Peak		1MHz		/lHz	Peak Value
	RMS 1MHz 3MHz					Average Value	
Limit:						Remark	
	Above 10	SHz -		54.00			verage Value
Test setup:	2			74.00			Peak Value
	AE (To	rntable) Test Rec		Horn Antenna Amplier Contro	untenna Tow	ver W	
Test Procedure:	ground at a determine the second at a determine the second antenna, whetower.  3. The antennation ground to do horizontal a measureme second then the and the rotal maximum results. The test-recursive Specified Bases of the emission limit specified EUT would 10dB marginists.	3 meter cane position as set 3 me inch was eatenant. It is pected er antenna variable was eading. Seeiver system and width we inch level of ed, then test be reported in would be	variene massid the Esting d. Other testers was the Esting d. Other testers was the testers was the Esting d. Other testers was the tester was the teste	r. The table wat highest radia away from the away from the ed on the top of the aximum value of the ed from 0 degrees set to Peak laximum Hold I EUT in peak mould be stoppherwise the emerger of the ed from 1 degrees as set to Peak laximum Hold I EUT in peak mould be stoppherwise the emerger of the ed from 1 degrees as the edge of the edge o	ter to fanten	erence- riable-herence stanged to a meter 360 de at Function as 10dE at the period that ong peak	receiving eight antenna sters above the ength. Both set to make the coits worst case or to 4 meters grees to find the sion and solower than the eak values of the did not have a, quasi-peak or
Test Instruments:	Refer to sectio	-		·			
Test mode:	Non-hopping n	node					
Test results:	Passed						



### **GFSK Mode:**

Product Nar	Name: Mobile Phone				Product Model:		E	EKO Star 5.5 G55			
est By:		Carey				Test n	node:	D	DH1 Tx mode		
est Channe	st Channel:		Lowest channel P			Polarization:			Vertical		
Test Voltage	<b>:</b>	AC 120	)/60Hz			Enviro	nment:	T	Temp: 24°C Huni: 57°		
				= 87 - 5							
110 Level	(dBuV/m)										
100											
										Λ	
80									FCC PAR	RT 15 (PK)	
60									FCC PAI	RT 15 (AV)	
60	mm	~~~	~~~~	Variation of the same of the s	·~~	val	~~~~	~~~	FCC PAI	RT 15 (AV)	
40	and	····	~~~	Variation .	···	v	~~~~	~~~	FCÇ PAI	RT 15 (AV)	
w	~~~~			Variation.	····	v		~~~	FCC PAI	RT 15 (AV)	
w	~~~			And Market	····	· · · · · ·		~~~	FCC PAI	RT 15 (AV)	
40	~~~	~~~		~~~~	· · · · ·	um		~~~	FCC PAI	RT 15 (AV)	
40	2320				350	um			FCC PAI	RT 15 (AV)	
40	2320	••••			Frequency				FCC PAI		
40		ReadA	untenna Factor	Cable	Frequency Preamp		Limit Line	Over Limit			
40		ReadA Level	intenna Factor	Cable	Frequency Preamp Factor		Line	Limit			

#### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

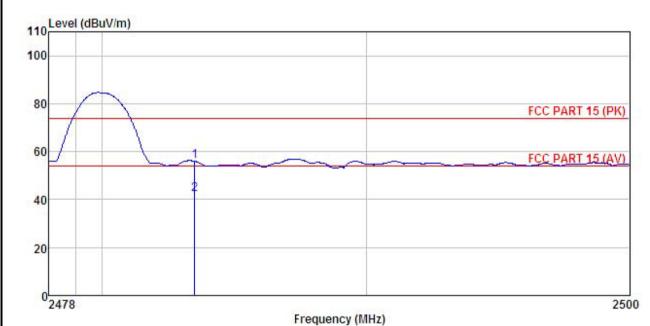


oduct Name:	Mobil	Mobile Phone					del:	EKO Star 5.5 G55					
st By:	Carey	Carey Test mode: DH1 Tx mode				Test mode:		le					
st Channel:	Lowe	st channel			Pol	larization	1:	Horizontal Temp: 24°C Huni: 57%			Horizontal		
st Voltage:	AC 12	20/60Hz			En	vironmer	nt:						
Laval (dDa4//													
110 Level (dBuV/	n)	7											
100													
										_			
80									ADT 45	1			
00								FCC F	CLINA	(HK)			
00								FCC F	PART 15	THE			
60													
	~~~~	^~~		~~	ww	V	~~~~		PART 15				
	~~~~	^~~		~~	~~~	V	m						
60	~~~	^~~	new	~~~	·~~	V	m						
60	<b>~~~</b>	<b>^</b>	~~~/	<b>~</b>	·~~	V	m						
40	\-\ <u>\</u>	<b>^</b>	~~~	~~~		V~~~	m						
40	^~~	^~~		~~		V	m			(AV)			
40	0			2350 Freque	ency (MHz	()	m						
40		Antenna	Cable	Freque	ency (MHz	t)	~~~~~			(AV)			
60 40 20 0 2310 232		Antenna Factor	Cable Loss	Freque Preamp		Limit	Over Limit	FCCF		(AV)			
60 40 20 0 2310 232	Read/ Level	Factor	Cable Loss	Freque Preamp Factor		Limit Line	Limit	FCCF		(AV)			
60 40 20 0 2310 232 Free	Read/ Level dBuV	Factor dB/m 27.37	Loss dB	Freque Preamp Factor dB	Level dBuV/m 50.17	Limit Line dBuV/m 74.00	Limit dB -23.83	Remark		(AV)			

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	DH1 Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



ReadAntenna Cable Preamp Limit Over Freq Level Factor Loss Factor Level Line Limit Remark MHz dBuV dB/m dB dB dBuV/m dBuV/m dB

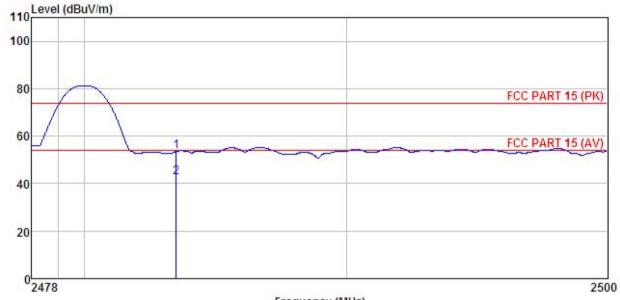
1 2483.500 21.88 27.57 4.81 0.00 55.96 74.00 -18.04 Peak 2 2483.500 8.28 27.57 4.81 0.00 42.36 54.00 -11.64 Average

#### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	DH1 Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%
110 Level (dBuV/m)			



## Frequency (MHz)

	Freq		Antenna Factor						
	MHz	dBu∜		<u>d</u> B	<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2483.500 2483.500								

#### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



# π/4-DQPSK mode

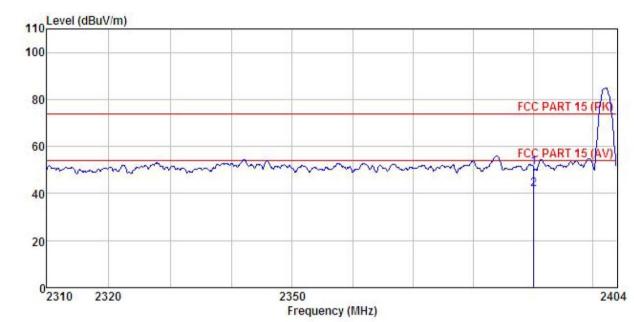
oduct	nct Name: Mobile Phone			Proc	duct Mode	el:	EKO Star 5.5 G55				
est By:		Carey				Test	mode:		2DH1 Tx mo	ode	
est Cha	annel:	Lowes	Lowest channel Polarization: Vertical			Polarization:			Vertical		
est Vol	tage:	AC 12	0/60Hz			Environment: Temp: 24°C			Temp: 24℃	Huni: 57%	
	an over the second	State of the state									
110[	Level (dBuV/m	1)	1								
100					-						
										Λ	
80									ECC D	ART 15 (PK)	
									TCCF	AKT 15 (FK)	
60									EC# D	ART 15 (AV)	
-	~~~	man	www.	again	~~~	- marin	- Andrews			Www.	
40					-				2		
20					-						
0	2310 2320			L.,	2350					2404	
•	2310 2320			•		ncy (MHz)				2404	
	Freq			Cable H Loss H			Limit Line	Over Limit	Remark		
	MHz	dBu₹	dB/π		<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>d</u> B			
1 2	2390.000 2390.000	20.54 7.83	27.37 27.37	4.69 4.69		54.28 41.57		-19.72	Peak Average		

### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	2DH1 Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%

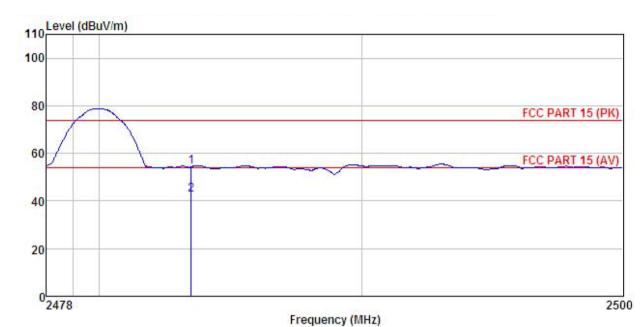


			Cable Preamp Loss Factor Level					Remark	
	MHz	dBu₹	$\overline{dB/m}$		<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2390.000 2390.000					50.97 41.86			

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55		
Test By:	Carey	Test mode:	2DH1 Tx mode		
Test Channel:	Highest channel	Polarization:	Vertical		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%		

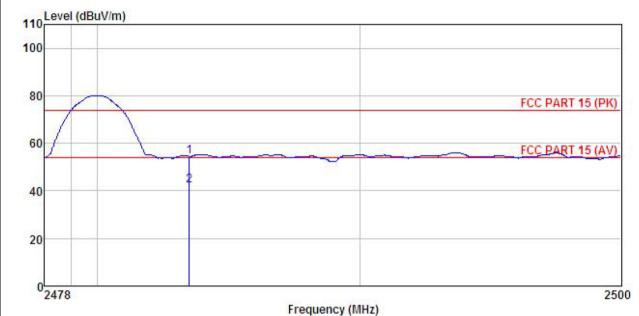


	Freq		Antenna Factor						Remark
	MHz	dBu₹	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	$\overline{dBuV/m}$	dBu√/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	2DH1 Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%
Level (dBuV/m)			



	Freq		Antenna Factor						
	MHz	dBu∀	$\overline{dB/m}$	<u>d</u> B	<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2483,500 2483,500								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



# 8DPSK mode

Produc	Product Name: Mobile Phone			Product Model:	EKO Star 5.5 G55		
Test By	y:	Carey		Test mode:	3DH1 Tx mode		
Test Channel: Lowest channel Polarization:				Vertical			
Test Vo	oltage:	AC 120/60Hz		Environment:	Temp: 24°C Huni: 57%		
110	Level (dBuV/m)						
100							
80					FCC PART 15 (PK)		
60					FCC PART 15 (AV)		
40	www	vv.	monum	m			
20							

	Freq			Cable Preamp Loss Factor Level					Remark
,	MHz	dBu∜	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2390.000 2390.000								

Frequency (MHz)

2350

### Remark:

0<sup>2310</sup>

2320

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Project No.: CCISE1811164

2404



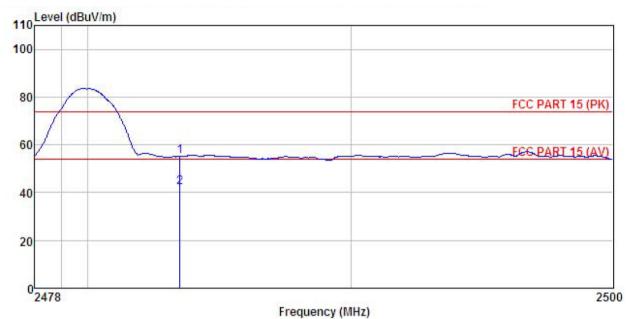
Product Name:	Mobile Phon	е	Product Model:	EKO Star 5.5 G55
Test By:	Carey		Test mode:	3DH1 Tx mode
Test Channel:	Lowest chan	nel	Polarization:	Horizontal
Test Voltage:	AC 120/60H	Z	Environment:	Temp: 24℃ Huni: 57%
110 Level (dBuV/	n)			
100				
80				FCC PART 15 (FK)
60	www	,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FCC PART 15 (AV)
40				2
20				
0 2310 232	0	2350 Frequenc	v (MHz)	2404

	Freq		Antenna Factor						
	MHz	dBu₹	dB/m	dB	dB	$\overline{dBuV/m}$	dBu√/m	<u>d</u> B	
1 2	2390.000 2390.000								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	3DH1 Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%

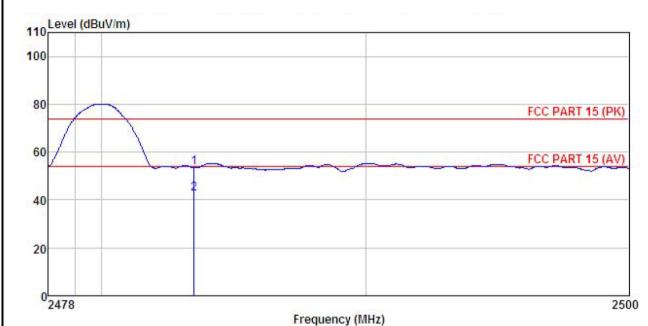


	Freq		Antenna Factor						
	MHz	dBu∇		<u>ab</u>	<u>ab</u>	$\overline{dBuV/m}$	dBu√/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	3DH1 Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



	Freq		Antenna Factor						Remark
	MHz	dBu₹	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500							-20.50 -11.27	

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



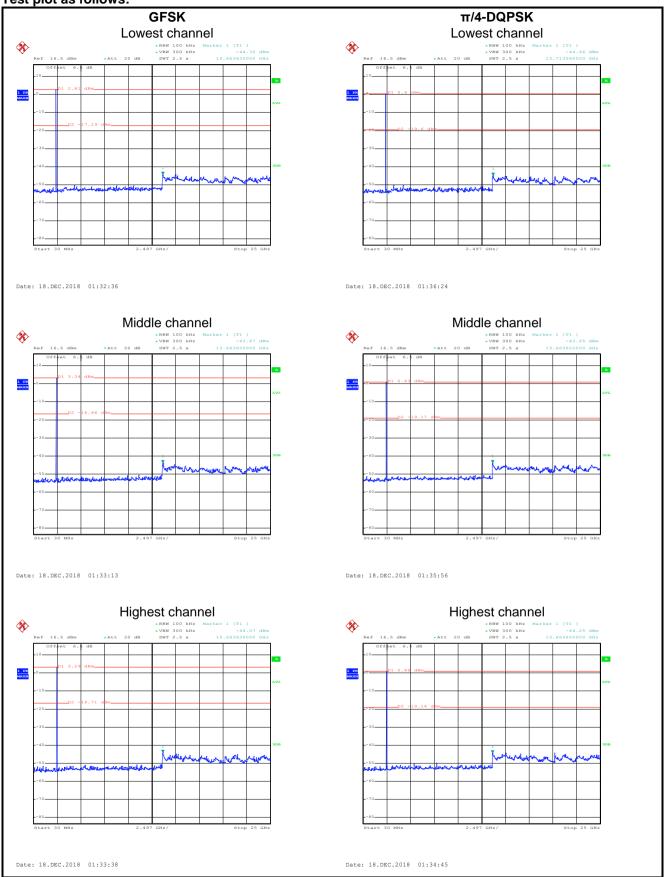
# 6.10 Spurious Emission

# 6.10.1 Conducted Emission Method

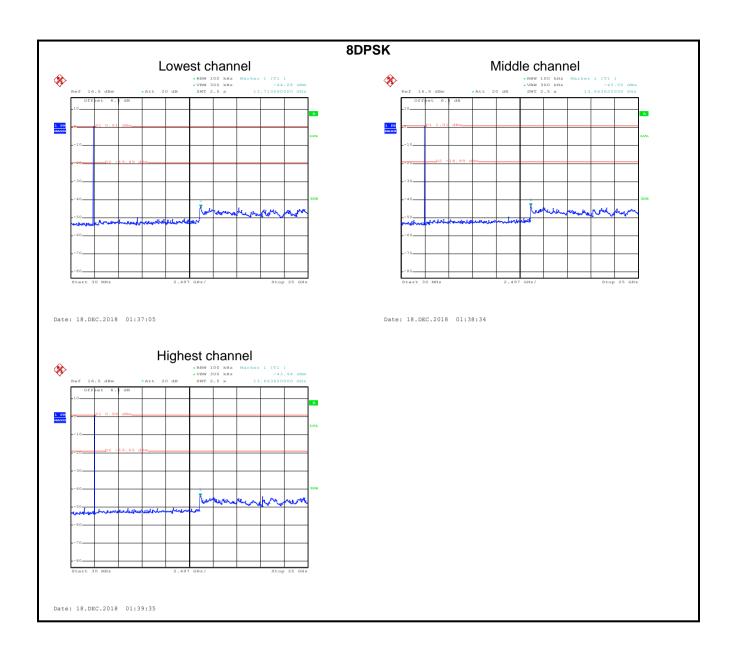
Test Requirement:	FCC Part 15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at 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:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Non-hopping mode
Test results:	Pass



# Test plot as follows:









# 6.10.2 Radiated Emission Method

Test Requirement:		Section 15	.209						
Test Method:	FCC Part 15 C Section 15.209  ANSI C63.10: 2013								
Test Frequency Range:	9 kHz to 25 GHz								
Test Distance:	3m								
Receiver setup:	Frequency Detector RBW VBW Remark								
	30MHz-1GHz Quasi-peak 120kHz 300kHz Quasi-peak \								
	Peak 1MHz 3MHz Peak Value								
	Above 1GHz	RMS		1MHz	ЗМН		ge Value		
Limit:	Frequenc	y	Lim	it (dBuV/m @	93m)	Rem			
	30MHz-88MHz 40.0 Quasi-peak Va								
	88MHz-216	MHz		43.5		Quasi-pea	ak Value		
	216MHz-960	MHz		46.0		Quasi-pea	ak Value		
	960MHz-10	SHz		54.0		Quasi-pea	ak Value		
	Ab 2112 4 CI	1-		54.0		Average	· Value		
	Above 1GI	HZ		74.0		Peak \	/alue		
Test setup:	Below 1GHz  Antenna Tower  Search Antenna								
	Ta	urm 0.8m	1	,		RF Test Receiver			
	Above 1GHz								
	WWWWW 1890m	Horn Antenna Tower  Ground Reference Plane  Test Receiver  Amplifer  Controller							
Test Procedure:	1. The EUT was /1.5m(above was rotated 3 radiation.	1GHz) abo	ove t	he ground at	a 3 me	ter chamber.	The table		

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366





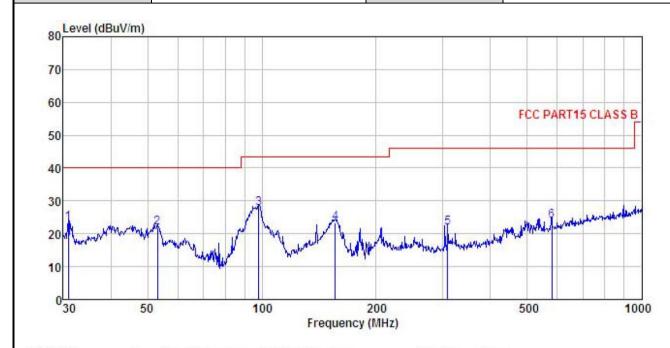
	<ol> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>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.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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.</li> </ol>
Test Instruments:	Refer to section 5.8 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, so only shows the data of above 30MHz in this report.</li> </ol>



# Measurement Data (worst case):

### **Below 1GHz:**

Product Name:	Mobile Phone	Product Model:	EKO Star 5.5 G55
Test By:	Carey	Test mode:	BT Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



Freq								
MHz	dBu∀			<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
30.962	41.76	10.83	0.78	29.97	23.40	40.00	-16.60	QP
53.131	36.71	13.53	1.32	29.81	21.75	40.00	-18.25	QP
98.142	43.90	11.40	1.97	29.54	27.73	43.50	-15.77	QP
155.910	41.09	8.90	2.56	29.17	23.38	43.50	-20.12	QP
308.913	33.60	13.79	2.97	28.47	21.89	46.00	-24.11	QP
580.703	30.34	18.75	3.92	29.00	24.01	46.00	-21.99	QP
	MHz 30. 962 53. 131 98. 142 155. 910 308. 913	Freq Level  MHz dBuV  30.962 41.76 53.131 36.71 98.142 43.90 155.910 41.09 308.913 33.60	Freq Level Factor  MHz dBuV dB/m  30.962 41.76 10.83 53.131 36.71 13.53 98.142 43.90 11.40 155.910 41.09 8.90 308.913 33.60 13.79	Freq Level Factor Loss  MHz dBuV dB/m dB  30.962 41.76 10.83 0.78 53.131 36.71 13.53 1.32 98.142 43.90 11.40 1.97 155.910 41.09 8.90 2.56 308.913 33.60 13.79 2.97	MHz         dBuV         dB/m         dB         dB           30.962         41.76         10.83         0.78         29.97           53.131         36.71         13.53         1.32         29.81           98.142         43.90         11.40         1.97         29.54           155.910         41.09         8.90         2.56         29.17           308.913         33.60         13.79         2.97         28.47	MHz dBuV dB/m dB dB dBuV/m  30.962 41.76 10.83 0.78 29.97 23.40 53.131 36.71 13.53 1.32 29.81 21.75 98.142 43.90 11.40 1.97 29.54 27.73 155.910 41.09 8.90 2.56 29.17 23.38 308.913 33.60 13.79 2.97 28.47 21.89	MHz         dBuV         dB/m         dB         dB dBuV/m         dBuV/m         dBuV/m           30.962         41.76         10.83         0.78         29.97         23.40         40.00           53.131         36.71         13.53         1.32         29.81         21.75         40.00           98.142         43.90         11.40         1.97         29.54         27.73         43.50           155.910         41.09         8.90         2.56         29.17         23.38         43.50           308.913         33.60         13.79         2.97         28.47         21.89         46.00	MHz         dBuV         dB/m         dB         dB dBuV/m         dBuV/m         dBuV/m         dB           30.962         41.76         10.83         0.78         29.97         23.40         40.00         -16.60           53.131         36.71         13.53         1.32         29.81         21.75         40.00         -18.25           98.142         43.90         11.40         1.97         29.54         27.73         43.50         -15.77           155.910         41.09         8.90         2.56         29.17         23.38         43.50         -20.12           308.913         33.60         13.79         2.97         28.47         21.89         46.00         -24.11

### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



oauct r	Name:	Mobi	le Phone			Product Model:			EKO Star 5.5 G55							
st By:		Carey Test mode:			Carey Test mode: BT Tx mode			Carey			Test mode:			BT Tx mode		
st Freq	quency:	30 M	30 MHz ~ 1 GHz				Polarization:			Horizontal						
st Volta	age:	AC 1	20/60Hz			ı	Environn	nent:		Temp: 24℃ Huni: 5						
Le	vel (dBuV/m	1														
80	- Tor (abarra															
70																
00																
60										FCC PA	RT15	CLASSB				
50							Tre .									
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30 1				2,		3		4		5 9						
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20	Nondone de la Maria	profession and the	allyly		Manager of the State of the Sta		Conference for the second	make the same	de la contraction de	The way	godborske,	Ingrange while all the				
M	Market Market	araban hay na	alle Land	<b>M</b>	Mary Mary Company	- Alpha	the second second	and the same	de de la constitución de la cons	The way	godforer, elpelin	Internation Institute				
20	Mars	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	afel a super	100	Managara spransk di	3	Washington of	and the same of th	dage of land		godforbu, chall					
20	Mars	50	Mayan	100	Frec	20 Juency (N	<sup>(λ</sup> έν <sub>έλιν,</sub> δι <sub>γ</sub> έν <sup>ε</sup> 00 ΛΗz)	and the same of th	d <sub>redition</sub> ed the	500	grajining cilipay	1000				
20	Mars		afoly a some				ЛН2)	and the same of th	derest of the		ng milway sipelif					
20	Mar.		intenna Factor	Cable		juency (N	MHz) Limit	Over Limit	Rema	500	and the second					
20	Mar.	ReadA	Factor	Cable	Preamp Factor	juenc <mark>y (</mark> M Le <del>v</del> el	MHz) Limit	Limit	Rema	500	and the second					
20 0 0 30	Freq MHz 31.620	ReadA Level	Factor	Cable Loss dB	Preamp Factor dB	Level dBuV/m 26.71	MHz)  Limit Line  dBuV/m  40.00	Limit 	QP	500	ng on plants, she ha					
20 10 0 30	Freq MHz 31.620 97.115	ReadA Level dBuV 44.85 41.43	Factor  dB/m  10.98 11.23	Cable Loss dB 0.85 1.98	Preamp Factor ————————————————————————————————————	Level  dBuV/m  26.71 25.10	Limit Line dBuV/m 40.00 43.50	Limit 	QP QP	500	and the second					
20 10 0 30	Freq MHz 31.620	ReadA Level dBuV 44.85 41.43 41.85	Factor  dB/m  10.98 11.23 8.93	Cable Loss dB 0.85 1.98 2.56	Preamp Factor ————————————————————————————————————	Level  dBuV/m  26.71 25.10 24.18	Limit Line dBuV/m 40.00 43.50 43.50	Limit	QP QP QP QP	500	and the second					
20 10 0 30	Freq MHz 31.620 97.115 156.458	ReadA Level dBuV 44.85 41.43	Factor  dB/m  10.98 11.23	Cable Loss dB 0.85 1.98	Preamp Factor ————————————————————————————————————	Level  dBuV/m  26.71 25.10 24.18 24.82 25.88	Limit Line dBuV/m 40.00 43.50 43.50 46.00 46.00	Limit 	QP QP QP QP QP QP	500	ng on plane, she ha					

<sup>1.</sup> Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.

<sup>2.</sup> The emission levels of other frequencies are very lower than the limit and not show in test report.



### Above 1GHz:

Above 1GHz	<u> </u>										
			Test ch	annel: Lowe	est channel						
			De	tector: Peak	Value						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4804.00	48.69	30.85	6.80	41.81	44.53	74.00	-29.47	Vertical			
4804.00	48.28	30.85	6.80	41.81	44.12	74.00	-29.88	Horizontal			
Detector: Average Value											
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4804.00	38.31	30.85	6.80	41.81	34.15	54.00	-19.85	Vertical			
4804.00	38.16	30.85	6.80	41.81	34.00	54.00	-20.00	Horizontal			
				annel: Mido							
				tector: Peak	Value		T .				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4882.00	48.10	31.20	6.86	41.84	44.32	74.00	-29.68	Vertical			
4882.00	48.11	31.20	6.86	41.84	44.33	74.00	-29.67	Horizontal			
			Dete	ctor: Averag	ge Value						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4882.00	37.31	31.20	6.86	41.84	33.53	54.00	-20.47	Vertical			
4882.00	37.67	31.20	6.86	41.84	33.89	54.00	-20.11	Horizontal			
				annel: Highe							
		1	De	tector: Peak	Value		T				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4960.00	47.41	31.63	6.91	41.87	44.08	74.00	-29.92	Vertical			
4960.00	47.74	31.63	6.91	41.87	44.41	74.00	-29.59	Horizontal			
			Dete	ctor: Averaç	e Value						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4960.00	37.83	31.63	6.91	41.87	34.50	54.00	-19.50	Vertical			
4960.00	37.41	31.63	6.91	41.87	34.08	54.00	-19.92	Horizontal			
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### Remark:

<sup>1.</sup> Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.

<sup>2.</sup> The emission levels of other frequencies are very lower than the limit and not show in test report.