RF Test Report

For

Applicant Name:	**DOKE COMMUNICATION (HK) LIMITED**
Address:	RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI HK CHINA
EUT Name:	Mobile Phone
Brand Name:	Blackview
Model Number:	SHARK 8

Issued By

Company Name:	**BTF Testing Lab (Shenzhen) Co., Ltd.**
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Report Number:	BTF231031R00805
Test Standards:	FCC CFR Title 47 Part 2 FCC CFR Title 47 Part22 FCC CFR Title 47 Part24 FCC CFR Title 47 Part27 FCC CFR Title 47 Part90
FCC ID:	2A7DX-SHARK8
Test Conclusion:	Pass
Test Date:	2023-11-01 to 2023-12-05
Date of Issue:	2023-12-06

Prepared By: Aria Zhang

Aria Zhang / Project Engineer

Date: 2023-12-06

Approved By: Ryan.CJ

Ryan.CJ / EMC Manager

Date: 2023-12-06

Note: All the test results in this report only related to the testing samples. Which can be duplicated completely for the legal use with approval of applicant; it shall not be reproduced except in full without the written approval of BTF Testing Lab (Shenzhen) Co., Ltd., All the objections should be raised within thirty days from the date of issue. To validate the report, you can contact us.

Revision History		
Version	Issue Date	Revisions Content
R_V0	2023-12-06	Original
Note:	*Once the revision has been made, then previous versions reports are invalid.*	

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1. Introduction

1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

1.2 Identification of the Responsible Testing Location

Test Location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Description:	All measurement facilities used to collect the measurement data are located at F101,201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
FCC Registration Number:	518915
Designation Number:	CN1330

1.3 Laboratory Condition

Ambient Temperature:	20℃ to 35℃
Ambient Relative Humidity:	45% to 55%
Ambient Pressure:	100 kPa to 102 kPa

1.4 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.

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2. Product Information

2.1 Application Information

Company Name:	DOKE COMMUNICATION (HK) LIMITED
Address:	RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI HK CHINA

2.2 Manufacturer Information

Company Name:	Shenzhen DOKE Electronic Co., Ltd
Address:	801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road, Guangming District, Shenzhen, China.

2.3 Factory Information

Company Name:	Shenzhen DOKE Electronic Co., Ltd
Address:	801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road, Guangming District, Shenzhen, China.

2.4 General Description of Equipment under Test (EUT)

EUT Name	Mobile Phone
Under Test Model Name	SHARK 8
Hardware Version	N/A
Software and Firmware Version	N/A

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2.5 Technical Information

The requirement for the following technical information of the EUT was tested in this report:

Operating Bands	GSM/GPRS/EGPRS 850/1900 MHz WCDMA/HSDPA/HSUPA Band 2/4/5 FDD LTE Band 2/4/5/7/12/13/17/26/66	
Modulation Type	GPRS	GMSK
	EGPRS	8PSK
	WCDMA	QPSK
	HSDPA/HSUPA	QPSK
		16QAM
	LTE	QPSK
		16QAM
TX Frequency Range	GPRS/EGPRS 850: 824.2 MHz ~ 848.8 MHz GPRS/EGPRS 1900: 1850.2 MHz ~ 1909.8 MHz WCDMA/HSDPA/HSUPA Band 2: 1852.4 MHz ~ 1907.6 MHz WCDMA/HSDPA/HSUPA Band 4: 1712.4 MHz ~ 1752.6 MHz WCDMA/HSDPA/HSUPA Band 5: 826.4 MHz ~ 846.6 MHz FDD LTE Band 2: 1850.7 MHz ~ 1909.3 MHz FDD LTE Band 4: 1710.7 MHz ~ 1754.3 MHz FDD LTE Band 5: 824.7 MHz ~ 848.3 MHz FDD LTE Band 7: 2502.5 MHz ~ 2567.5 MHz FDD LTE Band 12: 699.7 MHz ~ 715.3 MHz FDD LTE Band 13: 779.5 MHz ~ 784.5 MHz FDD LTE Band 17:706.5 MHz ~ 713.5 MHz FDD LTE Band 26: 814.7 MHz ~ 823.3 MHz FDD LTE Band 26: 824.7 MHz ~ 848.3 MHz FDD LTE Band 66: 1710.7 MHz ~ 1779.3 MHz	
Rx Frequency Range	GPRS/EGPRS 850: 869.2 MHz ~ 893.8 MHz GPRS/EGPRS 1900: 1930.2 MHz ~ 1989.8 MHz WCDMA/HSDPA/HSUPA Band 2: 1932.4 MHz ~ 1987.6 MHz WCDMA/HSDPA/HSUPA Band 4: 2112.4 MHz ~ 2152.6 MHz WCDMA/HSDPA/HSUPA Band 5: 871.4 MHz ~ 891.6 MHz FDD LTE Band 2: 1930.7 MHz ~ 1989.3 MHz FDD LTE Band 4: 2110.7 MHz ~ 2154.3 MHz FDD LTE Band 5: 869.7 MHz ~ 893.3 MHz FDD LTE Band 7: 2622.5 MHz ~ 2687.5 MHz FDD LTE Band 12: 729.7 MHz ~ 745.3 MHz FDD LTE Band 13: 748.5 MHz ~ 753.5 MHz	

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	FDD LTE Band 17: 736.5 MHz ~ 743.5 MHz FDD LTE Band 26: 869.7 MHz ~ 893.3 MHz FDD LTE Band 26: 859.7 MHz ~ 868.3 MHz FDD LTE Band 66: 2110.7 MHz ~ 2179.3 MHz
Power Class	GPRS 850: 4 GPRS 1900: 1 EGPRS 850/1900: E2 WCDMA/HSDPA/HSUPA Band 2: 3 WCDMA/HSDPA/HSUPA Band 4: 3 WCDMA/HSDPA/HSUPA Band 5: 3 FDD LTE Band 2: 3 FDD LTE Band 4: 3 FDD LTE Band 5: 3 FDD LTE Band 7: 3 FDD LTE Band 12: 3 FDD LTE Band 13: 3 FDD LTE Band 17: 3 FDD LTE Band 26: 3 FDD LTE Band 66: 3
Multislot Class	GPRS/EGPRS: 12
Antenna Type	PIFA Antenna

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Antenna Gain	GSM850 -3.7dBi	GSM1900 -1.4dBi	WCDMA B2 -1.4dBi	WCDMA B4 -1.4dBi
	WCDMA B5 -3.7dBi	LTE B2 -1.4dBi	LTE B4 -1.4dBi	LTE B5 -3.7dBi
	LTE B7 0.8dBi	LTE B12 -4.3dBi	LTE B13 -4.3dBi	LTE B17 -4.3dBi
	LTE B26 -3.7dBi	LTE B66 -1.4dBi		
The Max RF Output Power (EIRP/ERP)	GSM850: 27.24dBm GSM1900: 28.36dBm WCDMA Band II:21.23dBm WCDMA Band IV: 17.56dBm WCDMA Band V: 21.15dBm LTE Band 2:20.96dBm LTE Band 4: 20.59dBm LTE Band 5: 18.05 dBm LTE Band 7: 23.50dBm FDD LTE Band 12: 17.67dBm FDD LTE Band 13: 17.51dBm FDD LTE Band 17: 17.63dBm FDD LTE Band 26(part22): 18.15 dBm FDD LTE Band 26 (part90): 18.24 dBm FDD LTE Band 66:21.41dBm			

Note: The EUT information are declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

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3. Summary of Test Results

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 Subpart H	Cellular Radiotelephone Service
3	47 CFR Part 24 Subpart E	Broadband PCS
4	47 CFR Part 27	Miscellaneous Wireless Communications Services
5	ANSI/TIA-603-E-2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
6	KDB 971168 D01 v03r01	Measurement Guidance for Certification of Licensed Digital Transmitters
7	ANSI C63.26:2015	IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

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3.2 Summary of Test Result

No.	Description	FCC Part No.	Test Verdict	Remark
1	Conducted RF Output Power	2.1046	Pass	--
2	Effective (Isotropic) Radiated Power	2.1046 22.913(a) 24.232(c) 27.50	Pass	--
3	Spurious Emission at Antenna Terminals	2.1051 22.917 24.238 27.53	Pass	--
4	Field Strength of Spurious Radiation	2.1053 22.917 24.238 27.53	Pass	--

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3.3 Uncertainty of Test

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2 and TR100 028-1/-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
RF output power, conducted	0.63 dB
Conducted spurious emissions	0.94 dB
Radiated emissions (＜1 GHz)	4.12 dB
Radiated emissions (＞1 GHz)	4.16 dB
Occupied Channel Bandwidth	69 KHz
Frequency Stability	0.4 KHz
Temperature	0.82 °C
Humidity	4.1 %

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4. Test Configuration

4.1 Environment Condition

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

Test Voltage of the EUT	NV (Normal Voltage)	3.87V
	LV (Low Voltage)	3.48 V
	HV (High Voltage)	4.26 V
Test Temperature of the EUT	NT (Normal Temperature)	+25 °C
	LT (Low Temperature)	-30 °C
	HT (High Temperature)	+50 °C

4.2 Test Equipment List

Conducted Method Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023.11.16	2024.11.15	☒
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023.11.16	2024.11.15	☒
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	/	/	☒
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023.11.16	2024.11.15	☒
RF Sensor Unit	Techy	TR1029-2	/	/	/	☒
RF Control Unit	Techy	TR1029-1	/	/	/	☒
RFTest software	/	V1.00	/	/	/	☒

Radiated Method Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
SIGNAL ANALYZER	ROHDE&SCHWARZ	FSQ40	100010	2023.11.16	2024.11.15	☒
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI7	101032	2023.11.16	2024.11.15	☒
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2023.11.13	2024.11.12	☒
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2023.11.13	2024.11.12	☒
POSITIONAL CONTROLLER	SKET	PCI-GPIB	/	/	/	☒
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	/	/	☒

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RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	/	/	☒
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	/	/	☒
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	/	/	☒
RE Cable	REBES Talent	UF1-SMASMAM-1m	21101568	/	/	☒
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	/	/	☒
RE Cable	REBES Talent	UF1-SMASMAM-10m	21101566	/	/	☒
Preamplifier	SCHWARZBECK	BBV9744	00246	/	/	☒
Horn Antenna	Schwarzbeck	BBHA9120D	2597	2022.05.22	2024.05.21	☒
Low Noise Pre-amplifier	Sket	LNPA_1840G-50	SK2022032902	2023.3.26	2024.3.25	☒
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	2023.3.26	2024.3.25	☒
Broadband Preamplilifier	Schwarzbeck	BBV9718D	00008	2023.3.26	2024.3.25	☒

4.3 Test Auxiliary Equipment

Description	Manufacturer	Model	Serial No.	Length	Description	Use
/	/	/	/	/	/	☒

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4.4 Test Configurations

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
Effective (Isotropic) Radiated Power	GPRS 850	v	v	v
	GPRS 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
	HSDPA Band 2	v	v	v
	HSDPA Band 4	v	v	v
	HSDPA Band 5	v	v	v
	HSUPA Band 2	v	v	v
	HSUPA Band 4	v	v	v
	HSUPA Band 5	v	v	v
Spurious Emission at Antenna Terminals	GPRS 850	v	v	v
	GPRS 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
	HSDPA Band 2	v	v	v
	HSDPA Band 4	v	v	v
	HSDPA Band 5	v	v	v
	HSUPA Band 2	v	v	v
	HSUPA Band 4	v	v	v
	HSUPA Band 5	v	v	v
Field Strength of Spurious Radiation	GPRS 850	v	v	v
	GPRS 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
	HSDPA Band 2	v	v	v
	HSDPA Band 4	v	v	v

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	HSDPA Band 5	v	v	v
	HSUPA Band 2	v	v	v
	HSUPA Band 4	v	v	v
	HSUPA Band 5	v	v	v
Note 1: The mark “v” means that this configuration is chosen for testing.				

Test Mode	UL Channel	UL Channel No.	UL Frequency (MHz)
GPRS/EGPRS 850	Low Channel	128	824.2
	Middle Channel	190	836.6
	High Channel	251	848.8
GPRS/EGPRS 1900	Low Channel	512	1850.2
	Middle Channel	661	1880.0
	High Channel	810	1909.8
WCDMA Band 2	Low Channel	9262	1852.4
	Middle Channel	9400	1880.0
	High Channel	9538	1907.6
WCDMA Band 4	Low Channel	1312	1712.4
	Middle Channel	1413	1732.6
	High Channel	1513	1752.6
WCDMA Band 5	Low Channel	4132	826.4
	Middle Channel	4182	836.4
	High Channel	4233	846.6

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LTE Band	Bandwidth (MHz)						Modulation Type		RB#			Test Channel		
	1.4	3	5	10	15	20	QPSK	16-QAM	1	Half	Full	LCH	MCH	HCH
Effective (Isotropic) Radiated Power														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
7	n	n	v	v	v	v	v	v	v	v	v	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	v	v	v	v	v	n	v	v	v	v	v	v	v	v
26(Part90)	v	v	v	v	v	n	v	v	v	v	v	v	v	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak to Average Ratio														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
7	n	n	v	v	v	v	v	v	--	--	v	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	v	v	v	v	v	n	v	v	--	--	v	v	v	v
26(Part90)	v	v	v	v	v	n	v	v	--	--	v	v	v	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Occupied Bandwidth														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
7	n	n	v	v	v	v	v	v	--	--	v	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	v	v	v	v	v	n	v	v	--	--	v	v	v	v
26(Part90)	v	v	v	v	v	n	v	v	--	--	v	v	v	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v

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Frequency Stability														
2	v	v	v	v	v	v	v	v	--	--	v	v	v	v
4	v	v	v	v	v	v	v	v	--	--	v	v	v	v
5	v	v	v	v	n	n	v	v	--	--	v	v	v	v
7	n	n	v	v	v	v	v	v	--	--	v	v	v	v
12	v	v	v	v	n	n	v	v	--	--	v	v	v	v
13	n	n	v	v	n	n	v	v	--	--	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	v	v	v	v	v	n	v	v	--	--	v	v	v	v
26(Part90)	v	v	v	v	v	n	v	v	--	--	v	v	v	v
66	v	v	v	v	v	v	v	v	--	--	v	v	v	v
Spurious Emission at Antenna Terminals														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
7	n	n	v	v	v	v	v	v	v	--	v	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	v	v	v	v	v	n	v	v	v	--	v	v	v	v
26(Part90)	v	v	v	v	v	n	v	v	v	--	v	v	v	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Band Edge														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
7	n	n	v	v	v	v	v	v	v	--	v	v	--	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	v	v	v	v	v	n	v	v	v	--	v	v	--	v
26(Part90)	v	v	v	v	v	n	v	v	v	--	v	v	--	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v

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Field Strength of Spurious Radiation														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
7	n	n	--	--	--	v	v	--	v	--	--	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
17	n	n	v	v	n	n	v	v	v	v	v	v	v	v
26(Part22)	--	--	--	--	v	n	v	--	v	--	--	v	v	v
26(Part90)	--	--	--	--	v	n	v	--	v	--	--	v	v	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Note 1: The mark “v” means that this configuration is chosen for testing. Note 2: The mark “n” means that this bandwidth is not supported.														

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Band 2

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	18607	1850.7	607	1930.7
	3	18615	1851.5	615	1931.5
	5	18625	1852.5	625	1932.5
	10	18650	1855	650	1935
	15 [1]	18675	1857.5	675	1937.5
	20 [1]	18700	1860	700	1940
Mid Range	1.4/3/5/10 15 [1]/20 [1]	18900	1880	900	1960
High Range	1.4	19193	1909.3	1193	1989.3
	3	19185	1908.5	1185	1988.5
	5	19175	1907.5	1175	1987.5
	10	19150	1905	1150	1985
	15 [1]	19125	1902.5	1125	1982.5
	20 [1]	19100	1900	1100	1980

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

Band 4

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
	5	19975	1712.5	1975	2112.5
	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Mid Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
High Range	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
	5	20375	1752.5	2375	2152.5
	10	20350	1750	2350	2150
	15	20325	1747.5	2325	2147.5
	20	20300	1745	2300	2145

Band 5

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10 [1]	20450	829	2450	874
Mid Range	1.4/3/5 10 [1]	20525	836.5	2525	881.5
High Range	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10 [1]	20600	844	2600	889

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

Band 7

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	5	20775	2502.5	2775	2622.5
	10	20800	2505	2800	2625
	15	20825	2507.5	2825	2627.5
	20 [1]	20850	2510	2850	2630
Mid Range	5/10/15 20 [1]	21100	2535	3100	2655
High Range	5	21425	2567.5	3425	2687.5
	10	21400	2565	3400	2685
	15	21375	2562.5	3375	2682.5
	20 [1]	21350	2560	3350	2680

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

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Band 12

Table 4.3.1.1.12-1: Test frequencies for E-UTRA channel bandwidth for operating band 12

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	23017	699.7	5017	729.7
	3	23025	700.5	5025	730.5
	5 [1]	23035	701.5	5035	731.5
	10 [1]	23060	704	5060	734
Mid Range	1.4/3 5 [1]/10 [1]	23095	707.5	5095	737.5
High Range	1.4	23173	715.3	5173	745.3
	3	23165	714.5	5165	744.5
	5 [1]	23155	713.5	5155	743.5
	10 [1]	23130	711	5130	741

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

Band 13

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	5 [1]	23205	779.5	5205	748.5
	10 [1]	23230	782	5230	751
Mid Range	5 [1]/10 [1]	23230	782	5230	751
High Range	5 [1]	23255	784.5	5255	753.5
	10 [1]	23230	782	5230	751

NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.

Band 17

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	5 [1]	23755	706.5	5755	736.5
	10 [1]	23780	709	5780	739
Mid Range	5 [1]/10 [1]	23790	710	5790	740
High Range	5 [1]	23825	713.5	5825	743.5
	10 [1]	23800	711	5800	741

Band 26(Part 22)

Test Frequency ID	Banwidth[MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	26797	824.7	8797	869.7
	3	26805	825.5	8805	870.5
	5	26815	826.5	8815	871.5
	10	26840	829	8840	874
	15	26865	831.5	8865	876.5
Mid Range	1.4/3/5/10/15	26915	836.5	8915	881.5
High Range	1.4	27033	848.3	9033	893.3
	3	27025	847.5	9025	892.5
	5	27015	846.5	9015	891.5
	10	26990	844	8990	889
	15	26965	841.5	8965	886.5

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Band26(Part 90)

Test Frequency ID	Banwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	26997	814.7	8697	859.7
	3	26705	815.5	8705	860.5
	5	26715	816.5	8715	861.5
	10	-	-	-	-
	15	26765	821.5		
Mid Range	1.4/3/5/10	26740	819	8740	864
High Range	1.4	26783	823.3	8783	868.3
	3	26775	822.5	8775	867.5
	5	26765	821.5	8765	866.5
	10	-	-	-	-

Band 66

Table 4.3.1.1.66-1: Test frequencies for E-UTRA channel bandwidth for operating band 66

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	131979	1710.7	66443	2110.7
	3	131987	1711.5	66451	2111.5
	5	131997	1712.5	66461	2112.5
	10	132022	1715	66486	2115
	15	132047	1717.5	66511	2117.5
	20	132072	1720	66536	2120
Mid Range Tx[1]	1.4/3/5/10/15/20	132322	1745	66786	2145
Mid Range	1.4/3/5/10/15/20	132422	1755	66886	2155
Paired High Range[2]	1.4	132665	1779.3	67129	2179.3
	3	132657	1778.5	67121	2178.5
	5	132647	1777.5	67111	2177.5
	10	132622	1775	67086	2175
	15	132597	1772.5	67061	2172.5
	20	132572	1770	67036	2170
High Range[3]	1.4	NA	NA	67329	2199.3
	3	NA	NA	67321	2198.5
	5	NA	NA	67311	2197.5
	10	NA	NA	67286	2195
	15	NA	NA	67261	2192.5
	20	NA	NA	67236	2190

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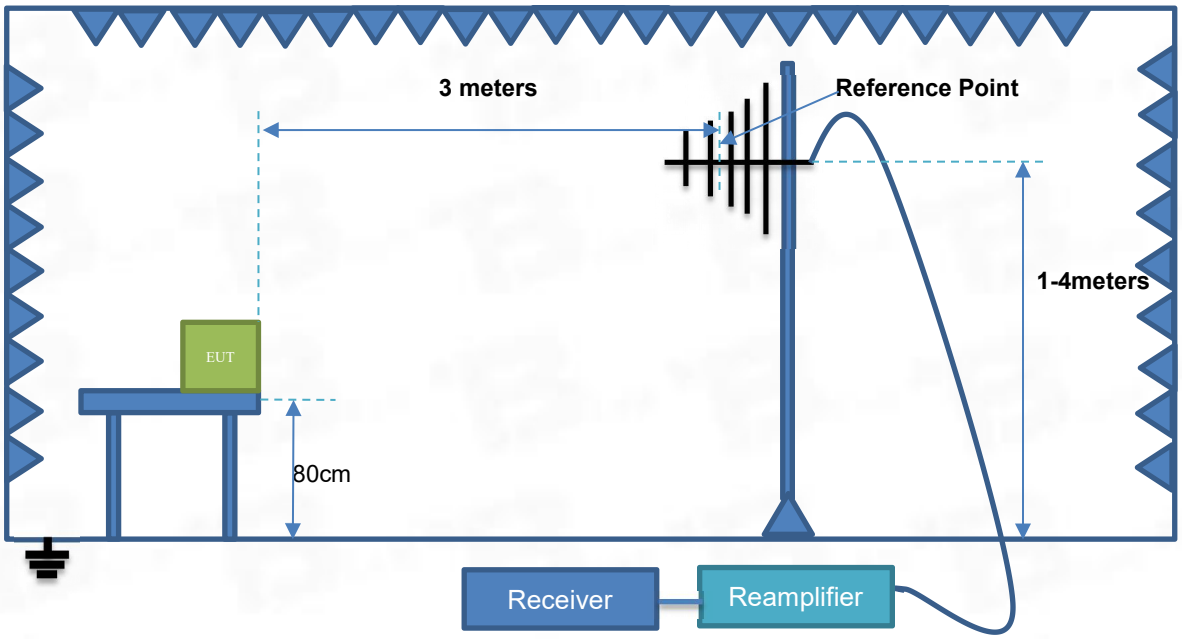
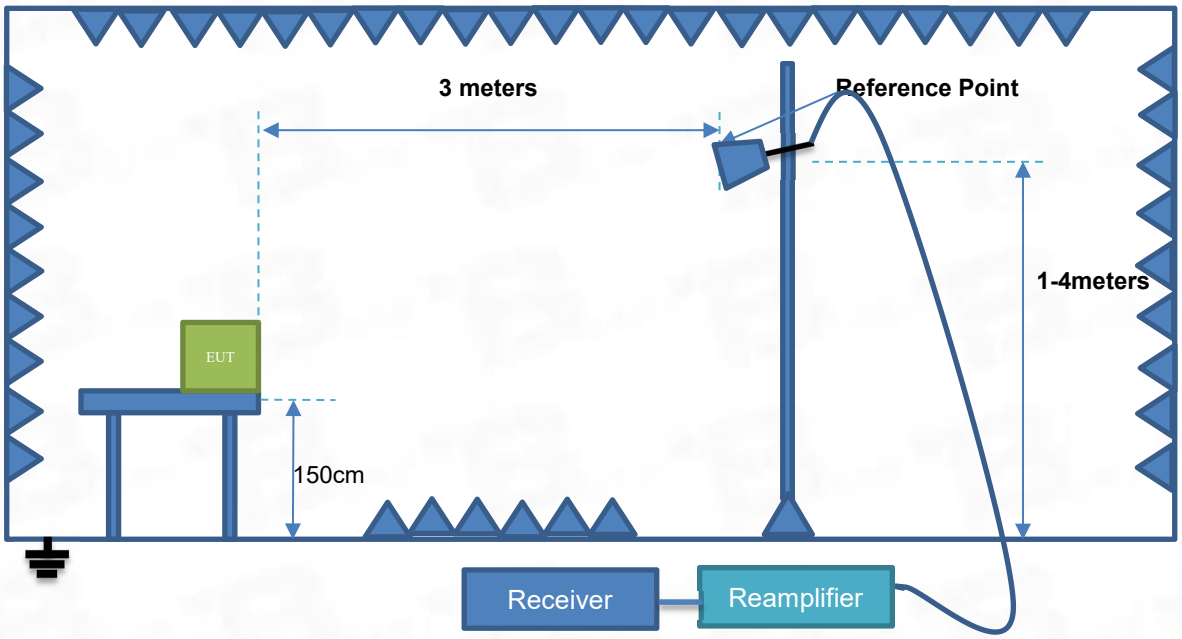
4.5 Test Setup

Test Setup 1



Radiation Test (30MHz – 1GHz)



Radiation Test (Above 1GHz)

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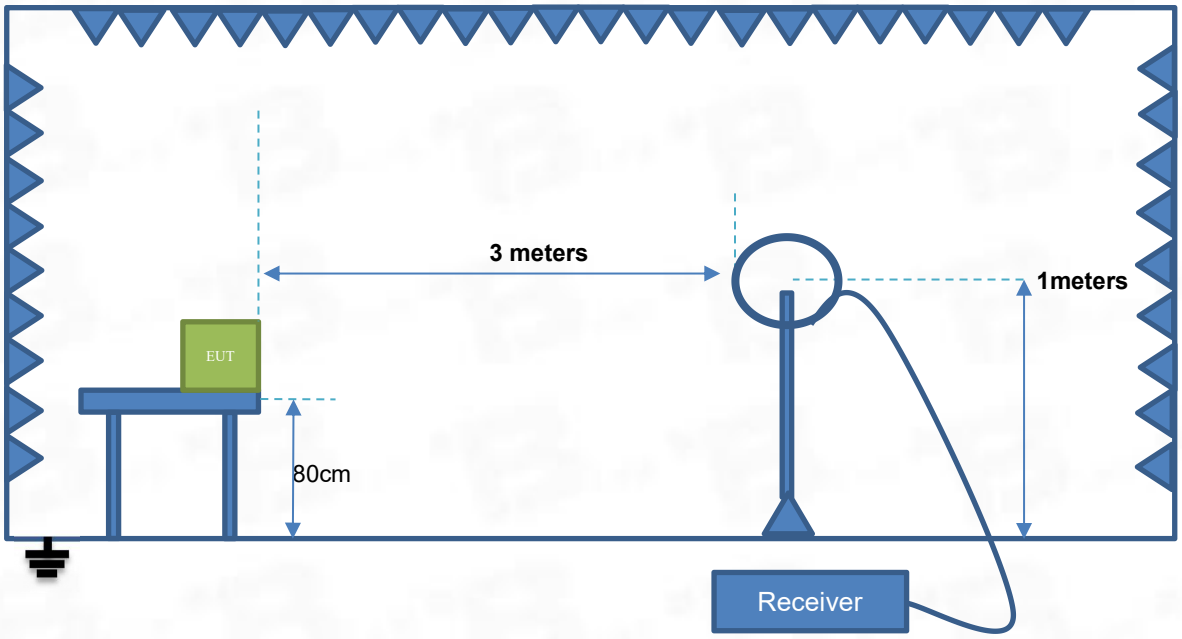
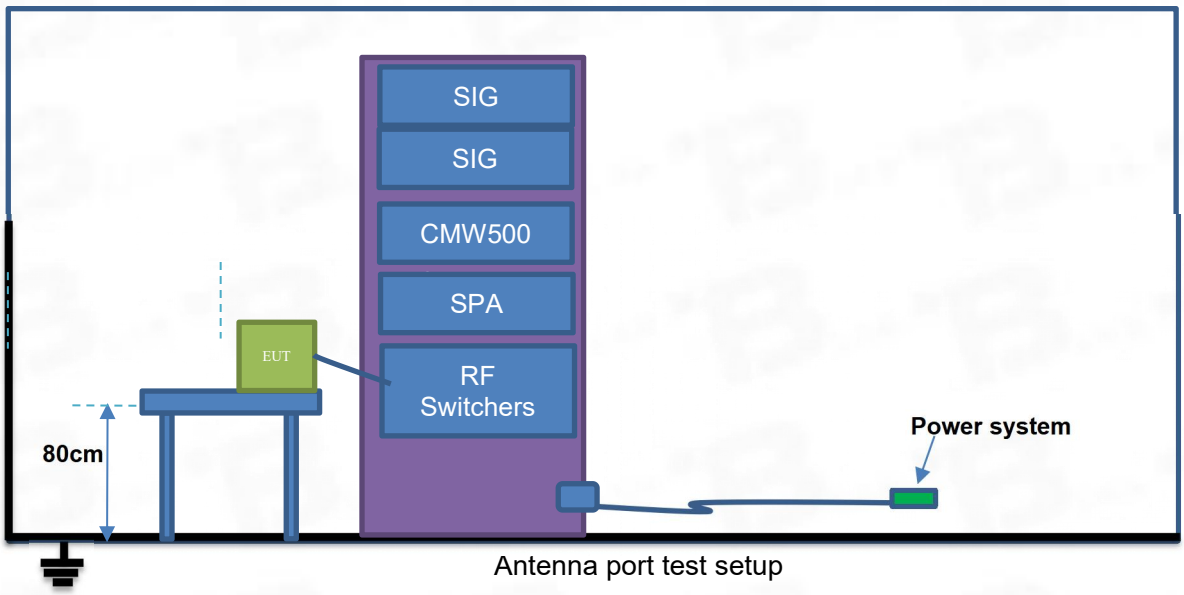
Test Setup 2



Radiation Test (9k - 30MHz)

Test Setup 3



Antenna port test setup

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5. Test Items

5.1 Transmitter Radiated Power (EIRP/ERP)

5.1.1 Limit

FCC § 2.1046 & 22.913(a) & 24.232(c) & 27.50(a) & 27.50(b) & 27.50(c) & 27.50(d) & 27.50(h) & 90.635(b) & 90.542(a); RSS-103 4.6; RSS-132 5.4, RSS-133 6.4, RSS-139 6.5, RSS199 4.4

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50(a) (3), for mobile and portable stations transmitting in the 2305-2315MHz band or the 2350-2360MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards.

FCC section 27.50(b) (10), portable stations (hand-held devices) transmitting in the 746-757MHz, 776-788MHz, and 805-806MHz bands are limited to 3 watts ERP.

FCC section 27.50(c) (10), portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 watts ERP.

FCC section 27.50(d) (4), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(7) Fixed, mobile, and portable (hand-held) stations operating in the 2000-2020 MHz band are limited to 2 watts EIRP.

And FCC section 27.50(h) (2), for mobile and other user stations, mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

According to FCC section 90.635(b), the maximum output power of the transmitter for mobile stations is 100 watts (20dBW).

According to FCC section 90.542(a) (7), portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

5.1.2 Test Setup

The section 4.4 test setup 4 description is used for conducted test, and the test setup description is used for radiated test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

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Description of the Conducted Output Power Measurement

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The relevant equation for determining the conducted measured value is:

Conducted Output Power Value (dBm) = Measured Value (dBm) + Path Loss (dB)

where:
Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm; Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;
Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).

For example:

In the conducted output power test, when measured value for GSM850 is 24.7 dBm, and path loss is 8.5 dB, then final conducted output power value is:
Conducted Output Power Value (dBm) = 24.7 dBm + 8.5 dB = 33.2 dBm

Description of the Transmitter Radiated Power Measurement

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

Final measurement calculation as below:

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:
ERP/EIRP = PMeas + GT − LC

where:
ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

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PMeas = measured transmitter output power or PSD, in dBm or dBW; GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP); dBd (ERP)=dBi (EIRP) -2.15 dB
LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

For example:
In the EIRP test, when PMeas value for GSM1900 is 30.2 dBm, LC is 0.6 dB, and GT is -3.4 dB, then final EIRP value is:
EIRP for GSM1900 = 30.2 dBm - 3.4 dBi - 0.6 dB = 26.2 dBm

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

ERP/EIRP (dBm) = SA Read Value (dBm) + Correction Factor (dB)

where:
ERP/EIRP = effective or equivalent radiated power, in dBm;
SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm; Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:
ERP (dBm) = 21dBm + 8dB = 29dBm

5.1.4 Test Result

Refer to appendix report.

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5.2 Field Strength of Spurious Radiation

5.2.1 Limit

FCC § 2.1053 & 22.917(a) & 24.238(a) & 27.53(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(m) & 90.691& 90.543 ; RSS-130 4.7, RSS-132 5.5, RSS-133 6.5, RSS-139 6.6, RSS199 4.5

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P) dB. This is calculated to be -13 dBm.

FCC § 27.53(a) (4), RSS-139 6.6

For mobile and portable stations operating in the 2305-2315MHz and 2350-2360MHz bands:

(1) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324MHz and on all frequencies between 2341 and 2345MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328MHz and on all frequencies between 2337 and 2341MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337MHz.

(2) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292MHz, and 70 + 10 log (P) dB below 2288MHz.

(3) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365MHz, and not less than 70 + 10 log (P) dB above 2365MHz.

FCC § 27.53(c), RSS-139 6.6

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;
(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;
(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.
However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of

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measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(f), RSS-139 6.6

For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to - 70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

FCC § 27.53(g), RSS-139 6.6

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43+10*log(P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC § 27.53(h) (1), RSS-139 6.6

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB. FCC § 27.53(m) (4)
For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- 40+10logP dB (−10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- 43+10logP dB (−13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,

- 55+10logP dB (−25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

FCC § 90.691

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80

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decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.
(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

FCC § 90.543

(e) For operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations.
(2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations.
(3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB.
(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

RSS199 4.5

(a) for base station and fixed subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least 43 + 10 log10 p.
(b) for mobile subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least:
(i) 40 + 10 log10 p from the channel edges to 5 MHz away
(ii) 43 + 10 log10 p between 5 MHz and X MHz from the channel edges, and
(iii) 55 + 10 log10 p at X MHz and beyond from the channel edges

In addition, the attenuation shall not be less than 43 + 10 log10 p on all frequencies between 2490.5 MHz and 2496 MHz, and 55 + 10 log10 p at or below 2490.5 MHz.

In (a) and (b), p is the transmitter power measured in watts and X is 6 MHz or the equipment occupied bandwidth, whichever is greater.

5.2.2 Test Setup

The section 4.5 test setup 4 description is used for conducted test, and the test setup description is used for radiated test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

1. On a test site, the EUT shall be placed at 80cm height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.

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4. During the measurement of the EUT, the resolution bandwidth was to 1 MHz and the average bandwidth was set to 1 MHz.
5. The transmitter shall be switched on; the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.

10. The EUT was replaced by half-wave dipole (824 ~ 849 MHz) or horn antenna (1 850 ~ 1 910 MHz) connected to a signal generator.
11. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
12. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
13. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring received, which is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
14. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

Final measurement calculation as below:

The relevant equation for determining the ERP/EIRP from the radiated RF output power is: ERP/EIRP (dBm) = SA Read Value (dBm) + Correction Factor (dB)

where:
ERP/EIRP = effective or equivalent radiated power, in dBm;
SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm; Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:
ERP (dBm) = 21dBm + 8dB = 29dBm

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5.2.4 Test Result

2G Part

Note:1.It was found that the emission value below 1GHz and above 18GHz was below the limit of 20dB, so it was recorded in the report.

2.All mode are tested, and the report only shows the worst mode ofGSM(Voice) .

GSM850

Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1648.40	-42.56	-19.44	-62.00	-13.00	49.00	Vertical
2472.60	-36.49	-17.95	-54.44	-13.00	41.44	Vertical
3296.80	-32.49	-16.80	-49.29	-13.00	36.29	Vertical
1648.40	-42.65	-19.44	-62.09	-13.00	49.09	Horizontal
2472.60	-35.12	-17.95	-53.07	-13.00	40.07	Horizontal
3296.80	-34.89	-16.80	-51.69	-13.00	38.69	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1673.20	-43.20	-19.53	-62.73	-13.00	49.73	Vertical
2509.80	-36.15	-17.91	-54.06	-13.00	41.06	Vertical
3346.40	-32.40	-16.85	-49.25	-13.00	36.25	Vertical
1673.20	-43.31	-19.53	-62.84	-13.00	49.84	Horizontal
2509.80	-34.31	-17.91	-52.22	-13.00	39.22	Horizontal
3346.40	-35.26	-16.85	-52.11	-13.00	39.11	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1697.60	-42.11	-19.61	-61.72	-13.00	48.72	Vertical
2546.40	-36.44	-17.80	-54.24	-13.00	41.24	Vertical
3395.20	-31.88	-16.91	-48.79	-13.00	35.79	Vertical
1697.60	-42.56	-19.61	-62.17	-13.00	49.17	Horizontal
2546.40	-33.47	-17.80	-51.27	-13.00	38.27	Horizontal
3395.20	-34.99	-16.91	-51.90	-13.00	38.90	Horizontal

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PCS1900

Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3700.40	-35.14	-16.76	-51.90	-13.00	38.90	Vertical
5550.60	-33.47	-11.85	-45.32	-13.00	32.32	Vertical
7400.80	-30.18	-14.23	-44.41	-13.00	31.41	Vertical
3700.40	-34.88	-16.76	-51.64	-13.00	38.64	Horizontal
5550.60	-35.77	-11.85	-47.62	-13.00	34.62	Horizontal
7400.80	-31.22	-14.23	-45.45	-13.00	32.45	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3760.00	-36.03	-16.69	-52.72	-13.00	39.72	Vertical
5640.00	-33.06	-12.09	-45.15	-13.00	32.15	Vertical
7520.00	-31.19	-14.30	-45.49	-13.00	32.49	Vertical
3760.00	-35.30	-16.69	-51.99	-13.00	38.99	Horizontal
5640.00	-34.44	-12.09	-46.53	-13.00	33.53	Horizontal
7520.00	-30.20	-14.30	-44.50	-13.00	31.50	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3819.60	-36.44	-16.61	-53.05	-13.00	40.05	Vertical
5729.40	-34.66	-12.39	-47.05	-13.00	34.05	Vertical
7639.20	-32.44	-14.34	-46.78	-13.00	33.78	Vertical
3819.60	-35.77	-16.61	-52.38	-13.00	39.38	Horizontal
5729.40	-35.46	-12.39	-47.85	-13.00	34.85	Horizontal
7639.20	-29.99	-14.34	-44.33	-13.00	31.33	Horizontal

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3G Part

Note:1.It was found that the emission value below 1GHz and above 18GHz was below the limit of 20dB, so it was recorded in the report.

2.All mode are tested, and the report only shows the worst mode of RCM

WCDMA B2

Lowest						
Peak Value						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3704.80	-34.59	-16.75	-51.34	-13.00	38.34	Vertical
5557.20	-32.19	-11.85	-44.04	-13.00	31.04	Vertical
7409.60	-30.59	-14.21	-44.80	-13.00	31.80	Vertical
3704.80	-36.19	-16.75	-52.94	-13.00	39.94	Horizontal
5557.20	-31.46	-11.85	-43.31	-13.00	30.31	Horizontal
7409.60	-31.49	-14.21	-45.70	-13.00	32.70	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3760.00	-35.64	-16.69	-52.33	-13.00	39.33	Vertical
5646.08	-31.06	-12.11	-43.17	-13.00	30.17	Vertical
7520.00	-30.43	-14.30	-44.73	-13.00	31.73	Vertical
3760.00	-35.85	-16.69	-52.54	-13.00	39.54	Horizontal
5640.00	-32.43	-12.07	-44.50	-13.00	31.50	Horizontal
7520.00	-30.95	-14.30	-45.25	-13.00	32.25	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3815.20	-35.66	-16.61	-52.27	-13.00	39.27	Vertical
5722.80	-31.45	-12.39	-43.84	-13.00	30.84	Vertical
7630.40	-30.88	-14.33	-45.21	-13.00	32.21	Vertical
3815.20	-36.14	-16.61	-52.75	-13.00	39.75	Horizontal
5722.80	-32.47	-12.39	-44.86	-13.00	31.86	Horizontal
7630.40	-30.75	-14.33	-45.08	-13.00	32.08	Horizontal

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WCDMA B4

Lowest						
Peak Value						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3424.40	-34.18	-16.95	-51.13	-13.00	38.13	Vertical
5136.60	-30.36	-13.80	-44.16	-13.00	31.16	Vertical
6848.80	-30.19	-13.47	-43.66	-13.00	30.66	Vertical
3424.40	-36.14	-16.95	-53.09	-13.00	40.09	Horizontal
5136.60	-34.07	-13.80	-47.87	-13.00	34.87	Horizontal
6848.80	-30.49	-13.47	-43.96	-13.00	30.96	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3464.80	-35.10	-16.99	-52.09	-13.00	39.09	Vertical
5197.20	-31.81	-13.45	-45.26	-13.00	32.26	Vertical
6929.60	-29.93	-13.66	-43.59	-13.00	30.59	Vertical
3464.80	-35.43	-16.99	-52.42	-13.00	39.42	Horizontal
5197.20	-33.87	-13.45	-47.32	-13.00	34.32	Horizontal
6929.60	-31.82	-13.66	-45.48	-13.00	32.48	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3505.20	-36.47	-17.01	-53.48	-13.00	40.48	Vertical
5257.80	-30.49	-13.07	-43.56	-13.00	30.56	Vertical
7010.40	-28.88	-13.84	-42.72	-13.00	29.72	Vertical
3505.20	-36.19	-17.01	-53.20	-13.00	40.20	Horizontal
5257.80	-34.79	-13.07	-47.86	-13.00	34.86	Horizontal
7010.40	-30.48	-13.84	-44.32	-13.00	31.32	Horizontal

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WCDMA B5

Lowest						
Peak Value						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1652.80	-42.15	-19.46	-61.61	-13.00	48.61	Vertical
2479.20	-41.55	-17.95	-59.50	-13.00	46.50	Vertical
3305.60	-35.46	-16.81	-52.27	-13.00	39.27	Vertical
1652.80	-41.88	-19.46	-61.34	-13.00	48.34	Horizontal
2479.20	-33.58	-17.95	-51.53	-13.00	38.53	Horizontal
3305.60	-29.31	-16.81	-46.12	-13.00	33.12	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1673.20	-43.35	-19.53	-62.88	-13.00	49.88	Vertical
2509.80	-40.66	-17.91	-58.57	-13.00	45.57	Vertical
3346.40	-35.76	-16.85	-52.61	-13.00	39.61	Vertical
1673.20	-42.83	-19.53	-62.36	-13.00	49.36	Horizontal
2509.80	-33.25	-17.91	-51.16	-13.00	38.16	Horizontal
3346.40	-28.71	-16.85	-45.56	-13.00	32.56	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1697.60	-42.16	-19.61	-61.77	-13.00	48.77	Vertical
2546.40	-40.55	-17.83	-58.38	-13.00	45.38	Vertical
3395.20	-36.15	-16.91	-53.06	-13.00	40.06	Vertical
1697.60	-43.00	-19.61	-62.61	-13.00	49.61	Horizontal
2546.40	-33.58	-17.83	-51.41	-13.00	38.41	Horizontal
3395.20	-29.47	-16.91	-46.38	-13.00	33.38	Horizontal

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4G Part
Note: 1.It was found that the emission value below 1GHz and above 18GHz was below the limit of 20dB, so it was recorded in the report. 2.All mode are tested, and the report only shows the worst mode.of GPSK & minimum bandwidth

LTE Band 2 (1.4MHz)

Lowest						
Peak Value						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3701.40	-36.57	-16.76	-53.33	-13.00	40.33	Vertical
5552.10	-23.74	-11.79	-35.53	-13.00	22.53	Vertical
7402.00	-30.14	-14.20	-44.34	-13.00	31.34	Vertical
3701.40	-34.25	-16.76	-51.01	-13.00	38.01	Horizontal
5552.10	-24.87	-11.79	-36.66	-13.00	23.66	Horizontal
7402.00	-30.85	-14.20	-45.05	-13.00	32.05	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-36.47	-16.69	-53.16	-13.00	40.16	Vertical
5646.08	-22.08	-12.09	-34.17	-13.00	21.17	Vertical
7520.00	-29.92	-14.30	-44.22	-13.00	31.22	Vertical
3760.00	-35.90	-16.69	-52.59	-13.00	39.59	Horizontal
5646.08	-25.64	-12.09	-37.73	-13.00	24.73	Horizontal
7520.00	-31.01	-14.30	-45.31	-13.00	32.31	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3816.60	-36.21	-16.61	-52.82	-13.00	39.82	Vertical
5724.90	-23.47	-12.38	-35.85	-13.00	22.85	Vertical
7633.20	-30.17	-14.34	-44.51	-13.00	31.51	Vertical
3816.60	-36.74	-16.61	-53.35	-13.00	40.35	Horizontal
5724.90	-25.87	-12.38	-38.25	-13.00	25.25	Horizontal
7633.20	-30.74	-14.34	-45.08	-13.00	32.08	Horizontal

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LTE Band 4(1.4MHz)

Lowest						
Peak Value						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3421.40	-35.24	-16.94	-52.18	-13.00	39.18	Vertical
5132.10	-28.32	-13.82	-42.14	-13.00	29.14	Vertical
6842.80	-32.14	-13.45	-45.59	-13.00	32.59	Vertical
3421.40	-35.24	-16.94	-52.18	-13.00	39.18	Horizontal
5132.10	-26.13	-13.82	-39.95	-13.00	26.95	Horizontal
6842.80	-30.24	-13.45	-43.69	-13.00	30.69	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.00	-35.37	-16.99	-52.36	-13.00	39.36	Vertical
5204.40	-28.62	-12.75	-41.37	-13.00	28.37	Vertical
6930.00	-32.09	-13.85	-45.94	-13.00	32.94	Vertical
3465.00	-35.78	-16.99	-52.77	-13.00	39.77	Horizontal
5204.40	-26.80	-12.75	-39.55	-13.00	26.55	Horizontal
6930.00	-31.44	-13.85	-45.29	-13.00	32.29	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3508.60	-34.26	-17.02	-51.28	-13.00	38.28	Vertical
5262.90	-27.64	-13.04	-40.68	-13.00	27.68	Vertical
7017.20	-31.29	-13.84	-45.13	-13.00	32.13	Vertical
3508.60	-34.79	-17.02	-51.81	-13.00	38.81	Horizontal
5262.90	-25.98	-13.04	-39.02	-13.00	26.02	Horizontal
7017.20	-32.01	-13.84	-45.85	-13.00	32.85	Horizontal

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Band 5(1.4MHz)

1.4MHz(RB size 1 & RB offset 0) for QPSK						
Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1649.40	-42.45	-19.44	-61.89	-13.00	48.89	Vertical
2474.10	-40.58	-17.95	-58.53	-13.00	45.53	Vertical
3298.80	-35.19	-16.80	-51.99	-13.00	38.99	Vertical
1649.40	-43.68	-19.44	-63.12	-13.00	50.12	Horizontal
2474.10	-40.59	-17.95	-58.54	-13.00	45.54	Horizontal
3298.80	-36.24	-16.80	-53.04	-13.00	40.04	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1673.00	-43.87	-19.53	-63.40	-13.00	50.40	Vertical
2509.50	-41.69	-17.91	-59.60	-13.00	46.60	Vertical
3346.00	-36.17	-16.85	-53.02	-13.00	40.02	Vertical
1673.00	-43.86	-19.53	-63.39	-13.00	50.39	Horizontal
2509.50	-41.90	-17.91	-59.81	-13.00	46.81	Horizontal
3346.00	-35.17	-16.85	-52.02	-13.00	39.02	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1696.60	-43.45	-19.60	-63.05	-13.00	50.05	Vertical
2544.90	-40.55	-17.82	-58.37	-13.00	45.37	Vertical
3393.20	-36.57	-16.90	-53.47	-13.00	40.47	Vertical
1696.60	-43.74	-19.60	-63.34	-13.00	50.34	Horizontal
2544.90	-40.89	-17.82	-58.71	-13.00	45.71	Horizontal
3393.20	-35.58	-16.90	-52.48	-13.00	39.48	Horizontal

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Band 7(5MHz)

5MHz(RB size 1 & RB offset 0) for QPSK						
Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5005.00	-23.24	-14.58	-37.82	-25.00	12.82	Vertical
7507.50	-29.34	-14.29	-43.63	-25.00	18.63	Vertical
10010.00	-28.12	-13.00	-41.12	-25.00	16.12	Vertical
5005.00	-21.46	-14.58	-36.04	-25.00	11.04	Horizontal
7507.50	-27.68	-14.29	-41.97	-25.00	16.97	Horizontal
10010.00	-25.98	-13.00	-38.98	-25.00	13.98	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5073.59	-24.36	-14.20	-38.56	-25.00	13.56	Vertical
7605.00	-30.42	-14.33	-44.75	-25.00	19.75	Vertical
10140.00	-27.71	-13.15	-40.86	-25.00	15.86	Vertical
5073.59	-20.47	-14.20	-34.67	-25.00	9.67	Horizontal
7605.00	-28.98	-14.33	-43.31	-25.00	18.31	Horizontal
10140.00	-26.61	-13.15	-39.76	-25.00	14.76	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5135.00	-23.46	-13.80	-37.26	-25.00	12.26	Vertical
7702.50	-31.25	-14.36	-45.61	-25.00	20.61	Vertical
10270.00	-26.89	-13.30	-40.19	-25.00	15.19	Vertical
5135.00	-21.55	-13.80	-35.35	-25.00	10.35	Horizontal
7702.50	-27.69	-14.36	-42.05	-25.00	17.05	Horizontal
10270.00	-25.96	-13.30	-39.26	-25.00	14.26	Horizontal

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Band 12(1.4MHz)

1.4MHz(RB size 1 & RB offset 0) for QPSK

Lowest

Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1399.40	-43.25	-19.38	-62.63	-13.00	49.63	Vertical
2099.10	-41.69	-18.09	-59.78	-13.00	46.78	Vertical
2798.80	-38.25	-17.06	-55.31	-13.00	42.31	Vertical
1399.40	-43.56	-19.38	-62.94	-13.00	49.94	Horizontal
2099.10	-44.35	-18.09	-62.44	-13.00	49.44	Horizontal
2798.80	-36.98	-17.06	-54.04	-13.00	41.04	Horizontal

Middle

Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1415.00	-45.21	-19.43	-64.64	-13.00	51.64	Vertical
2122.50	-42.80	-18.08	-60.88	-13.00	47.88	Vertical
2830.00	-37.43	-16.97	-54.40	-13.00	41.40	Vertical
1415.00	-44.31	-19.43	-63.74	-13.00	50.74	Horizontal
2122.50	-43.37	-18.08	-61.45	-13.00	48.45	Horizontal
2830.00	-37.65	-16.97	-54.62	-13.00	41.62	Horizontal

Highest

Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1430.60	-46.21	-19.48	-65.69	-13.00	52.69	Vertical
2145.90	-43.15	-18.08	-61.23	-13.00	48.23	Vertical
2861.20	-36.57	-16.88	-53.45	-13.00	40.45	Vertical
1430.60	-43.58	-19.48	-63.06	-13.00	50.06	Horizontal
2145.90	-43.99	-18.08	-62.07	-13.00	49.07	Horizontal

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Band 13(5MHz)

5MHz(RB size 1 & RB offset 0) for QPSK						
Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1559.00	-45.12	-19.44	-64.56	-40.00	24.56	Vertical
2338.50	-36.98	-18.00	-54.98	-13.00	41.98	Vertical
3118.00	-36.24	-16.61	-52.85	-13.00	39.85	Vertical
1559.00	-45.68	-19.44	-65.12	-13.00	52.12	Horizontal
2338.50	-32.84	-18.00	-50.84	-13.00	37.84	Horizontal
3118.00	-33.54	-16.61	-50.15	-13.00	37.15	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1564.00	-46.69	-19.42	-66.11	-40.00	26.11	Vertical
2340.13	-36.10	-18.00	-54.10	-13.00	41.10	Vertical
3003.17	-35.40	-16.48	-51.88	-13.00	38.88	Vertical
1564.00	-46.55	-19.42	-65.97	-13.00	52.97	Horizontal
2346.00	-31.81	-18.00	-49.81	-13.00	36.81	Horizontal
3128.00	-34.50	-16.48	-50.98	-13.00	37.98	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1569.00	-47.68	-19.41	-67.09	-40.00	27.09	Vertical
2353.50	-35.74	-18.00	-53.74	-13.00	40.74	Vertical
3138.00	-36.15	-16.62	-52.77	-13.00	39.77	Vertical
1569.00	-44.98	-19.41	-64.39	-13.00	51.39	Horizontal
2353.50	-32.45	-18.00	-50.45	-13.00	37.45	Horizontal
3138.00	-33.19	-16.62	-49.81	-13.00	36.81	Horizontal

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Band 17(5MHz)

5MHz(RB size 1 & RB offset 0) for QPSK						
Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1413.00	-44.89	-19.42	-64.31	-13.00	51.31	Vertical
2119.50	-42.67	-18.08	-60.75	-13.00	47.75	Vertical
2826.00	-38.56	-16.98	-55.54	-13.00	42.54	Vertical
1413.00	-46.12	-19.42	-65.54	-13.00	52.54	Horizontal
2119.50	-43.67	-18.08	-61.75	-13.00	48.75	Horizontal
2826.00	-38.14	-16.98	-55.12	-13.00	42.12	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1420.00	-45.35	-19.44	-64.79	-13.00	51.79	Vertical
2130.00	-42.41	-18.09	-60.50	-13.00	47.50	Vertical
2840.00	-38.08	-16.95	-55.03	-13.00	42.03	Vertical
1420.00	-45.20	-19.44	-64.64	-13.00	51.64	Horizontal
2130.00	-42.56	-18.09	-60.65	-13.00	47.65	Horizontal
2840.00	-38.02	-16.95	-54.97	-13.00	41.97	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1427.00	-44.37	-19.45	-63.82	-13.00	50.82	Vertical
2140.50	-41.68	-18.07	-59.75	-13.00	46.75	Vertical
2854.00	-39.47	-16.91	-56.38	-13.00	43.38	Vertical
1427.00	-44.25	-19.45	-63.70	-13.00	50.70	Horizontal
2140.50	-41.39	-18.07	-59.46	-13.00	46.46	Horizontal
2854.00	-38.49	-16.91	-55.40	-13.00	42.40	Horizontal

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Band 26 Part22 (1.4MHz)

1.4MHz(RB size 1 & RB offset 0) for QPSK						
Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1649.40	-43.68	-19.44	-63.12	-13.00	-1.59	Vertical
2474.10	-40.64	-17.95	-58.59	-13.00	-6.55	Vertical
3298.80	-31.52	-16.80	-48.32	-13.00	-8.12	Vertical
1649.40	-43.29	-19.44	-62.73	-13.00	-1.69	Horizontal
2474.10	-40.79	-17.95	-58.74	-13.00	-6.21	Horizontal
3298.80	-24.69	-16.80	-41.49	-13.00	-7.83	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1673.00	-44.35	-19.53	-63.88	-13.00	-1.52	Vertical
2509.50	-41.57	-17.91	-59.48	-13.00	-6.60	Vertical
3346.00	-30.36	-16.85	-47.21	-13.00	-8.04	Vertical
1673.00	-44.14	-19.53	-63.67	-13.00	-1.61	Horizontal
2509.50	-41.28	-17.91	-59.19	-13.00	-6.30	Horizontal
3346.00	-23.45	-16.85	-40.30	-13.00	-7.83	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1696.60	-45.16	-19.60	-64.76	-13.00	-1.46	Vertical
2544.90	-40.37	-17.82	-58.19	-13.00	-6.75	Vertical
3393.20	-31.49	-16.90	-48.39	-13.00	-7.95	Vertical
1696.60	-44.68	-19.60	-64.28	-13.00	-1.52	Horizontal
2544.90	-40.67	-17.82	-58.49	-13.00	-6.44	Horizontal
3393.20	-24.97	-16.90	-41.87	-13.00	-7.84	Horizontal

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Band 26 Part90 (1.4MHz)

1.4MHz(RB size 1 & RB offset 0) for QPSK						
Lowest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1629.40	-44.73	-19.37	-64.10	-13.00	51.10	Vertical
2444.10	-41.59	-17.96	-59.55	-13.00	46.55	Vertical
3258.80	-32.46	-16.76	-49.22	-13.00	36.22	Vertical
1629.40	-44.12	-19.37	-63.49	-13.00	50.49	Horizontal
2444.10	-41.39	-17.96	-59.35	-13.00	46.35	Horizontal
3258.80	-25.02	-16.76	-41.78	-13.00	28.78	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1638.00	-44.29	-19.41	-63.70	-13.00	50.70	Vertical
2457.00	-41.34	-17.96	-59.30	-13.00	46.30	Vertical
3276.00	-31.29	-16.77	-48.06	-13.00	35.06	Vertical
1638.00	-43.46	-19.41	-62.87	-13.00	49.87	Horizontal
2457.00	-41.59	-17.96	-59.55	-13.00	46.55	Horizontal
3276.00	-25.16	-16.77	-41.93	-13.00	28.93	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
1646.60	-44.59	-19.44	-64.03	-13.00	51.03	Vertical
2469.90	-41.76	-17.95	-59.71	-13.00	46.71	Vertical
3293.20	-30.49	-16.79	-47.28	-13.00	34.28	Vertical
1646.60	-45.19	-19.44	-64.63	-13.00	51.63	Horizontal
2469.90	-41.76	-17.95	-59.71	-13.00	46.71	Horizontal
3293.20	-25.19	-16.79	-41.98	-13.00	28.98	Horizontal

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Band 66(1.4MHz)

Lowest						
Peak Value						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3421.40	-25.64	-16.94	-42.58	-13.00	29.58	Vertical
5132.10	-30.29	-13.82	-44.11	-13.00	31.11	Vertical
6842.80	-30.59	-13.45	-44.04	-13.00	31.04	Vertical
3421.40	-35.49	-16.94	-52.43	-13.00	39.43	Horizontal
5132.10	-27.56	-13.82	-41.38	-13.00	28.38	Horizontal
6842.80	-29.94	-13.45	-43.39	-13.00	30.39	Horizontal
Middle						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3490.00	-36.60	-17.01	-53.61	-13.00	40.61	Vertical
5204.40	-31.35	-13.20	-44.55	-13.00	31.55	Vertical
6980.00	-31.97	-13.78	-45.75	-13.00	32.75	Vertical
3490.00	-36.27	-17.01	-53.28	-13.00	40.28	Horizontal
5204.40	-27.06	-13.20	-40.26	-13.00	27.26	Horizontal
6980.00	-30.51	-13.78	-44.29	-13.00	31.29	Horizontal
Highest						
Frequency (MHz)	Spurous Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
3558.60	-35.69	-16.95	-52.64	-13.00	39.64	Vertical
5337.90	-30.57	-12.58	-43.15	-13.00	30.15	Vertical
7117.20	-30.54	-13.93	-44.47	-13.00	31.47	Vertical
3558.60	-35.62	-16.95	-52.57	-13.00	39.57	Horizontal
5337.90	-27.83	-12.58	-40.41	-13.00	27.41	Horizontal
7117.20	-30.99	-13.93	-44.92	-13.00	31.92	Horizontal

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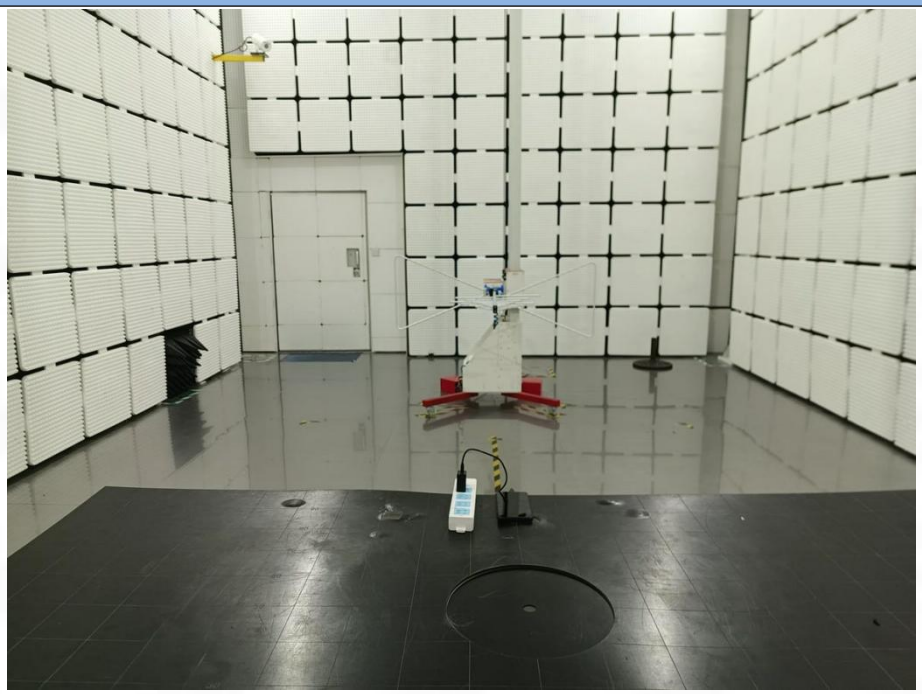
ANNEX B TEST SETUP PHOTOS

Band edge emissions (Radiated)
Emissions in frequency bands (above 1GHz)

Emissions in frequency bands (below 1GHz)



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ANNEX C EUT PHOTOS

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