

ITEL MOBILE LIMITED

TEST REPORT

SCOPE OF WORK

FCC Testing – A675L

REPORT NUMBER

251205047SZN-005

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Dec. 22, 2025

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RF Test Report

Applicant: ITEL MOBILE LIMITED

Address of Applicant: FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE
19-25 SHAN MEI STREET FOTAN NT HONGKONG

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: A675L

Trademark: itel

FCC ID: 2AJMN-A675L

Applicable Standards: FCC CFR Title 47 Part 2, 22H, 24E, 27L & H & M & N

Date of Test: Dec. 05, 2025 to Dec. 14, 2025

Test Result: PASS

Prepared and Checked by:



Bruce Zheng
Project Engineer

Approved by:



Damon Wang
Team Leader
Date: Dec. 22, 2025

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Intertek Testing Service Shenzhen Ltd. Longhua Branch

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1. Version

Report No.	Version No.	Description	Issued Date
251205047SZN-005	01	Original	Dec. 22, 2025

2. Summary of Test Result

Test items	Standard clause	Test data	Result
Conducted Output Power	Part 2.1046 Part 22.913 (a)(5) Part 24.232 (c) Part 27.50 (c)(10) Part 27.50 (d)(4) Part 27.50 (h)(2)	Appendix – GSM Appendix – LTE	Pass
Peak-to-Average Ratio	Part 24.232 (d) Part 27.50 (d)(5)		Pass
Modulation Characteristics	Part 2.1047		Pass
Occupied Bandwidth	Part 2.1049		Pass
Conducted Band Edge	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53 (m)(4)		Pass
Conducted Spurious Emission	Part 2.1051 Part 22.917 (a) Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53 (m)(4)		Pass
Frequency Stability Temperature & Voltage	Part 2.1055 (a)(1)(b) Part 22.355 Part 24.235 Part 27.54		Pass
Radiated Spurious Emission	Part 2.1053 Part 22.917 (a) Part 24.238 (a) Part 27.53 (g) Part 27.53 (h) Part 27.53 (m)(4)	See Section 7.2	Pass
Remark: 1. Pass: The EUT complies with the essential requirements in the standard. 2. The cable insertion loss used by "Conducted Output Power" and other conduction measurement items is 0.5dB (Fundamental Frequency below 1GHz)/1.0dB (Fundamental Frequency above 1GHz) (provided by the customer).			
Test Method: ANSI/TIA-603-E-2016 ANSI C63.26-2015 KDB 971168 D01 Power Meas License Digital Systems v03r01 KDB 971168 D02 Misc Rev Approv License Devices v02r01 KDB 412172 D01 Determining ERP and EIRP v01r01			

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4. General Information

4.1 Client Information

Applicant:	ITEL MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	ITEL MOBILE LIMITED
Address:	FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

4.2 General Description of E.U.T.

Equipment Class:	PCS Licensed Transmitter held to ear (PCE)		
Product Name:	Mobile Phone		
Model No.:	A675L		
Operation Frequency Range:	GSM850:	Tx: 824 MHz - 850 MHz	Rx: 869 MHz - 894 MHz
	PCS1900:	Tx: 1850 MHz - 1910 MHz	Rx: 1930 MHz - 1990 MHz
	WCDMA850:	Tx: 824 MHz - 850 MHz	Rx: 869 MHz - 894 MHz
	WCDMA1900:	Tx: 1850 MHz - 1910 MHz	Rx: 1930 MHz - 1990 MHz
	WCDMA1700:	Tx: 1710 MHz - 1755 MHz	Rx: 2110 MHz - 2155 MHz
	LTE band 2:	Tx: 1850 MHz - 1910 MHz	Rx: 1930 MHz - 1990 MHz
	LTE band 4:	Tx: 1710 MHz - 1755 MHz	Rx: 2110 MHz - 2155 MHz
	LTE band 5:	Tx: 824 MHz - 849 MHz	Rx: 869 MHz - 894 MHz
	LTE band 7:	Tx: 2500 MHz - 2570 MHz	Rx: 2620 MHz - 2690 MHz
	LTE band 12:	Tx: 699 MHz - 716 MHz	Rx: 729 MHz - 746 MHz
	LTE band 17:	Tx: 704 MHz - 716 MHz	Rx: 734 MHz - 746 MHz
	LTE band 26:	Tx: 814 MHz - 849 MHz	Rx: 859 MHz - 894 MHz
	LTE band 38:	Tx: 2570 MHz - 2620 MHz	Rx: 2570 MHz - 2620 MHz
	LTE band 41:	Tx: 2535 MHz - 2655 MHz	Rx: 2535 MHz - 2655 MHz
	LTE band 66:	Tx: 1710 MHz - 1780 MHz	Rx: 2110 MHz - 2200 MHz
WModulation Type:	GSM:	☒ Voice(GMSK) ☒ GPRS(GMSK)	
	WCDMA:	☒ RMC(QPSK) ☒ HSUPA(QPSK) ☒ HSDPA(QPSK,16QAM)	
	LTE	☒ QPSK ☒ 16QAM ☒ 64QAM	
Antenna Type:	Internal Antenna		
Antenna Gain:	GSM 850:	-3.93 dBi (declare by Applicant)	
	PCS1900:	-1.05 dBi (declare by Applicant)	
	WCDMA850:	-3.93 dBi (declare by Applicant)	
	WCDMA1900:	-1.05 dBi (declare by Applicant)	
	WCDMA1700:	-2.36 dBi (declare by Applicant)	
	LTE band 2:	-1.05 dBi (declare by Applicant)	
	LTE band 4:	-2.36 dBi (declare by Applicant)	
	LTE band 5:	-3.93 dBi (declare by Applicant)	
	LTE band 7:	-1.09 dBi (declare by Applicant)	
	LTE band 12:	-4.78 dBi (declare by Applicant)	
	LTE band 17:	-4.78 dBi (declare by Applicant)	
	LTE band 26:	-3.93 dBi (declare by Applicant)	
	LTE band 38:	-0.95 dBi (declare by Applicant)	
	LTE band 41:	-0.95 dBi (declare by Applicant)	
	LTE band 66:	-2.08 dBi (declare by Applicant)	
Power Supply:	Rechargeable Li-ion Battery DC3.85V, 4900mAh		

AC Adapter:	Model: U100ISB Input: AC100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2.0A 10.0W
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

4.3 Disclaimer

For the information or data provided by the client in this report, the relevant results or conclusions of this report are only made for these data or information. The testing laboratory is not responsible for the authenticity and accuracy of these data or information.

4.4 Test Mode and Environment

Test Mode:	
GSM mode:	Keep the EUT communication with simulated station in GSM mode
GPRS mode:	Keep the EUT communication with simulated station in GPRS mode
RMC mode:	Keep the EUT communication with simulated station in RMC mode
HSDPA mode:	Keep the EUT communication with simulated station in HSDPA mode
HSUPA mode:	Keep the EUT communication with simulated station in HSUPA mode
QPSK mode:	Keep the EUT communication with simulated station in QPSK mode
16QAM mode:	Keep the EUT communication with simulated station in 16QAM mode
64QAM mode:	Keep the EUT communication with simulated station in 64QAM mode
Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report.	
Operating Environment:	
Temperature:	Normal: 15°C ~ 35°C, Extreme: -30°C ~ +50°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.85Vdc, Extreme: Low 3.60Vdc, High 4.40Vdc
Test Engineer:	Bruce Zheng

4.5 Description of Test Auxiliary Equipment

Test Equipment	Manufacturer	Model No.	Serial No.
Simulated Station	R&S	CMW500	144665

4.6 Measurement Uncertainty

Test Item		Extended Uncertainty
Transmit Output Power Data	Power [dBm]	U = 0.42 dB
Bandwidth	Magnitude [%]	U = 0.2%
Band Edge Compliance	Disturbance Power [dBm]	U = 1.24 dB
Spurious Emissions, Conducted	Disturbance Power [dBm]	U = 1.62 dB
Field Strength of Spurious Radiation	ERP [dBm]	For 3 m Chamber: U = 4.8 dB (30 MHz to 6 GHz) U = 5.1 dB (6 GHz to 18 GHz) U = 5.3 dB (above 18GHz)
Frequency Stability	Frequency Accuracy [ppm]	U = 0.017 ppm
Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.		

4.7 Additions to, Deviations, or Exclusions from the Method

No

4.8 Laboratory Facility

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

- FCC - Designation No.: CN1188

Intertek Testing Services Shenzhen Ltd. Longhua Branch has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 435976.

4.9 Laboratory Location

Intertek Testing Services Shenzhen Ltd. Longhua Branch

Address: 101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, ShenZhen.

4.10 Test Instruments List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ006-27	DC Power Supply	Keysight	E3648A	MY56096119	2025-12-00	2026-12-02
SZ047-35	Digital Temperature-Humidity Recorder	YiJie	RS210	0045340A15	2025-08-09	2026-08-09
SZ065-08	Wideband Radio Communication Tester	R&S	CMW500	144665	2025-09-15	2026-09-15
SZ056-06	Signal Analyzer	R&S	FSV 40	101101	2025-12-01	2026-12-01
SZ061-13	BiConiLog Antenna	ETS	3142E	00217919	2025-05-29	2028-05-29
SZ061-08	Horn Antenna	ETS	3115	00092346	2024-09-13	2027-09-13
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	2024-05-05	2027-05-05
SZ185-03	EMI Receiver	R&S	ESR7	101975	2025-04-13	2026-04-13
SZ181-08	Microwave System Amplifier	keysight	83017A	MY57280108	2025-07-30	2026-07-30
SZ188-05	Anechoic Chamber	ETS	FACT 3-2.0	CT001880-Q13914102	2025-06-18	2028-06-18
SZ062-23	RF Cable	HUBER+SUHNER	SF104PE-1M	MY4262/4PE	2025-09-15	2026-09-15
SZ062-40	RF Cable	Talent Microwave	A50-3.5M3.5M-4.5M	22012932	2025-09-15	2026-09-15
SZ062-38	RF Cable	Talent Microwave	A50-3.5M3.5M-8M	21051695	2025-09-15	2026-09-15
SZ016-12	Programmable Temperature & Humidity Chamber	Taili	MHK-120NK	AB0105	2024-12-04	2025-12-04

5. Measurement Setup and Procedure

5.1 Test Channel

According to ANSI C63.26-2015 chapter 5.1.2.1 Table 2 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

GSM850					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
128	824.2	190	836.6	251	848.8
PCS1900					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
512	1850.2	661	1880.0	810	1909.8
WCDMA band II					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
9262	1852.4	9400	1880.0	9538	1907.6
WCDMA band IV					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1312	1712.4	1413	1732.6	1513	1752.6
WCDMA band V					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
4132	826.4	4183	836.6	4233	846.6
LTE band 2					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	18607	1850.7	Lowest channel	18915	1851.5
Middle channel	18900	1880.0	Middle channel	18900	1880.0
Highest channel	19193	1909.3	Highest channel	19185	1908.5
5 MHz			10 MHz		
Lowest channel	18625	1852.5	Lowest channel	18650	1855.0
Middle channel	18900	1880.0	Middle channel	18900	1880.0
Highest channel	19175	1907.5	Highest channel	19150	1905.0
15 MHz			20 MHz		
Lowest channel	18675	1857.5	Lowest channel	18700	1860.0
Middle channel	18900	1880.0	Middle channel	18900	1880.0
Highest channel	19125	1902.5	Highest channel	19100	1900.0
LTE band 4					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	19957	1710.7	Lowest channel	19965	1711.5
Middle channel	20175	1732.5	Middle channel	20175	1732.5
Highest channel	20393	1754.3	Highest channel	20385	1753.5

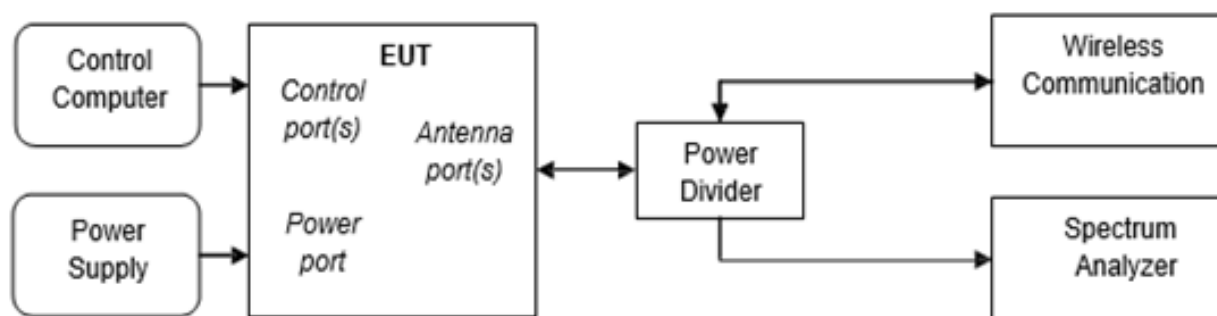
5 MHz			10 MHz		
Lowest channel	19975	1712.5	Lowest channel	20000	1715.0
Middle channel	20175	1732.5	Middle channel	20175	1732.5
Highest channel	20375	1752.5	Highest channel	20350	1750.0
15 MHz			20 MHz		
Lowest channel	20025	1717.5	Lowest channel	20050	1720.0
Middle channel	20175	1732.5	Middle channel	20175	1732.5
Highest channel	20325	1747.5	Highest channel	20300	1745.0
LTE band 5					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	20407	824.7	Lowest channel	20415	825.5
Middle channel	20525	836.5	Middle channel	20525	836.5
Highest channel	20643	848.3	Highest channel	20635	847.5
5 MHz			10 MHz		
Lowest channel	20425	826.5	Lowest channel	20450	829.0
Middle channel	20525	836.5	Middle channel	20525	836.5
Highest channel	20625	846.5	Highest channel	20600	844.0
LTE band 7					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
5 MHz			10 MHz		
Lowest channel	20775	2502.5	Lowest channel	20800	2505.0
Middle channel	21100	2535.0	Middle channel	21100	2535.0
Highest channel	21425	2567.5	Highest channel	21400	2565.0
15 MHz			20 MHz		
Lowest channel	20825	2507.5	Lowest channel	20850	2510.0
Middle channel	21100	2535.0	Middle channel	21100	2535.0
Highest channel	21375	2562.5	Highest channel	21350	2560.0
LTE band 12					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	23017	699.70	Lowest channel	23025	700.50
Middle channel	23095	707.50	Middle channel	23095	707.50
Highest channel	23173	715.30	Highest channel	23165	714.50
5 MHz			10 MHz		
Lowest channel	23035	701.50	Lowest channel	23060	704.00
Middle channel	23095	707.50	Middle channel	23095	707.50
Highest channel	23155	713.50	Highest channel	23130	711.00
LTE band 17					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
5 MHz			10 MHz		
Lowest channel	23755	706.50	Lowest channel	23780	709.00
Middle channel	23790	710.00	Middle channel	23790	710.00
Highest channel	23825	713.50	Highest channel	23800	711.00

LTE band 26 For Part 22					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	26797	824.7	Lowest channel	26805	825.5
Middle channel	26915	836.5	Middle channel	26915	836.5
Highest channel	27033	848.3	Highest channel	27025	847.5
5 MHz			10 MHz		
Lowest channel	26815	826.5	Lowest channel	26840	829.0
Middle channel	26915	836.5	Middle channel	26915	836.5
Highest channel	27015	846.5	Highest channel	26990	844.0
15 MHz					
Lowest channel	26865	831.5			
Middle channel	26915	836.5			
Highest channel	26965	841.5			
LTE band 26 For Part 90					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	26697	814.7	Lowest channel	26705	815.5
Middle channel	26740	819.0	Middle channel	26740	819.0
Highest channel	26783	823.3	Highest channel	26775	822.5
5 MHz			10 MHz		
Lowest channel	26715	816.5	Lowest channel	/	/
Middle channel	26740	819.0	Middle channel	26740	819.0
Highest channel	26765	821.5	Highest channel	/	/
LTE band 38					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
5 MHz			10 MHz		
Lowest channel	37775	2572.5	Lowest channel	37800	2575.0
Middle channel	38000	2595.0	Middle channel	38000	2595.0
Highest channel	38225	2617.5	Highest channel	38200	2615.0
15 MHz			20 MHz		
Lowest channel	37825	2577.5	Lowest channel	37850	2580.0
Middle channel	38000	2595.0	Middle channel	38000	2595.0
Highest channel	38175	2612.5	Highest channel	38150	2610.0

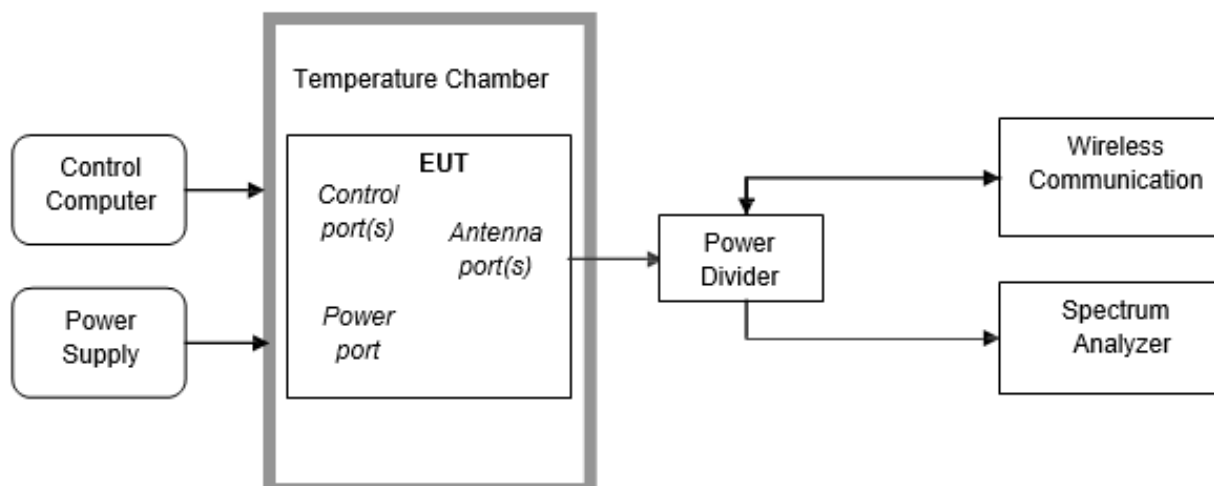
LTE band 41(2535MHz ~ 2655MHz)					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
5 MHz			10 MHz		
Lowest channel	40065	2537.50	Lowest channel	40090	2540.00
Middle channel	40640	2595.00	Middle channel	40640	2595.00
Highest channel	41215	2652.50	Highest channel	41190	2650.00
15 MHz			20 MHz		
Lowest channel	40115	2542.50	Lowest channel	40140	2545.00
Middle channel	40640	2595.00	Middle channel	40640	2595.00
Highest channel	41165	2647.50	Highest channel	41140	2645.00
LTE band 66					
Channels		Frequency (MHz)	Channels		Frequency (MHz)
1.4 MHz			3 MHz		
Lowest channel	131979	1710.7	Lowest channel	131987	1711.5
Middle channel	132322	1745.0	Middle channel	132322	1745.0
Highest channel	132665	1779.3	Highest channel	132657	1778.5
5 MHz			10 MHz		
Lowest channel	131997	1712.5	Lowest channel	132022	1715.0
Middle channel	132322	1745.5	Middle channel	132322	1745.0
Highest channel	132647	1777.5	Highest channel	132622	1775.0
15 MHz			20 MHz		
Lowest channel	132047	1717.5	Lowest channel	132072	1720.0
Middle channel	132322	1745.0	Middle channel	132322	1745.0
Highest channel	132597	1772.5	Highest channel	132572	1770.0

5.2 Test Setup

Test Setup 1

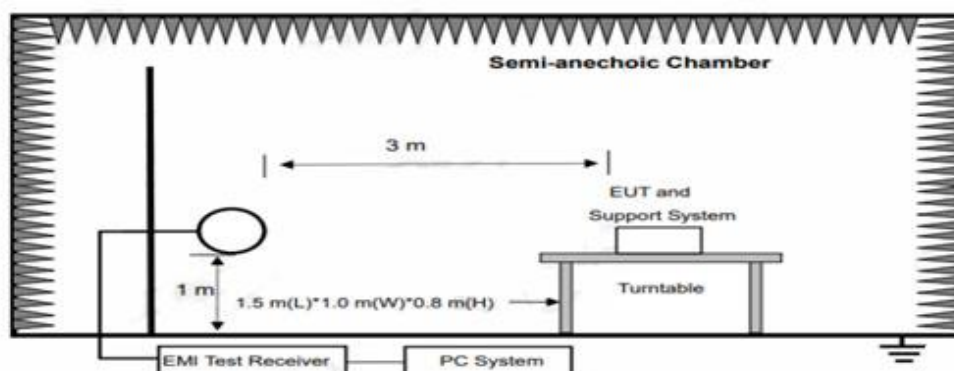


Test Setup 2

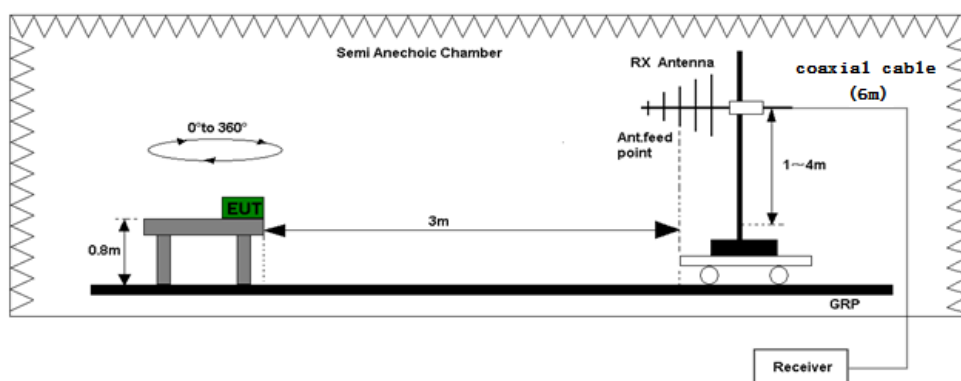


Test Setup 3

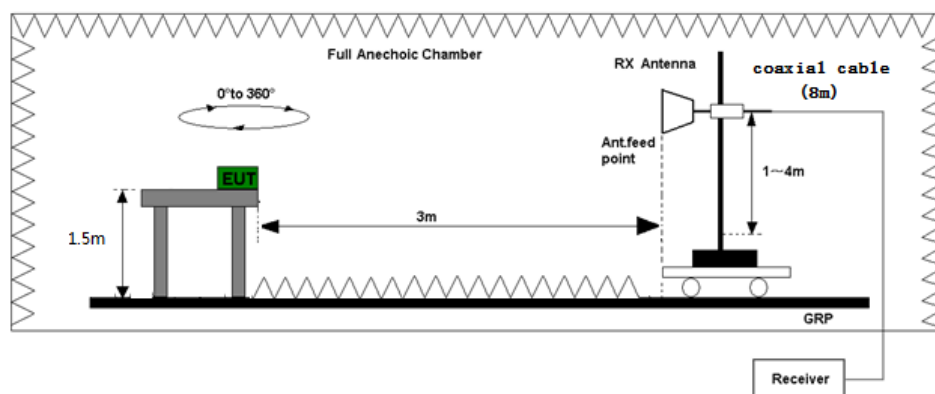
For radiated test below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test from Above 1GHz



5.3 Test Procedure

Test method	Test step
Radiated emission	For below 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. For above 1GHz: 1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	1. The LTE antenna port of EUT was connected to the test port of the test system through an RF cable. 2. The EUT is keeping in continuous transmission mode and tested in all modulation modes. 3. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

5.4 Test Limit

Test items	Limit
RF Output Power	GSM850, WCDMA band V, LTE band 5/26(Part 22): 7W ERP PCS1900, WCDMA band II, LTE band 2/7/38/41: 2W EIRP WCDMA band IV, LTE band 4/66: 1W EIRP LTE band 12: 3W ERP LTE band 26(Part 90): 100W EIPR
Peak-to-Average Power Ratio	GSM850, PCS1900, WCDMA band II, WCDMA band IV, WCDMA band V, LTE band 2/4/5/7/12/17/26/38/41/66: The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB Other bands: N/A report only
Modulation Characteristics	N/A
26dB Emission Bandwidth 99% Occupied Bandwidth	N/A
Out of Band Emission at Antenna Terminals Field Strength of Spurious Radiation	GSM850, PCS1900, WCDMA band II, WCDMA band IV, WCDMA band V, LTE band 2/4/5/12/17/26(Part 22)/66: 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. LTE band 7/38/41: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. LTE band 26(Part 90): (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 $\text{Log}_{10}(f/6.1)$ decibels or $50 + 10 \text{Log}_{10}(P)$ 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 $43 + 10 \text{Log}_{10}(P)$ 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 37.5 kHz.

PCS1900, WCDMA band II, LTE band 2:

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

WCDMA band IV, LTE band 4/7/12/17/38/41/66:

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

GSM850, WCDMA band V , LTE band 5, 26(Part 22):

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

TABLE C-1—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES

Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

Frequency Stability vs. Temperature

Frequency Stability vs. Voltage

LTE band 26(Part 90):

Part 90.213(a): Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table.

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	^{1 2 3} 100	100	200
25-50	20	20	50
72-76	5		50
150-174	^{5 11} 5	⁶ 5	^{4 6} 50
216-220	1.0		1.0
220-222 ¹²	0.1	1.5	1.5
421-512	^{7 11 14} 2.5	⁸ 5	⁸ 5
806-809	¹⁴ 1.0	1.5	1.5
809-824	¹⁴ 1.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	¹⁴ 0.1	1.5	1.5
902-928	2.5	2.5	2.5
902-928 ¹³	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	¹¹ 5
1427-1435	⁹ 300	300	300
Above 2450 ¹⁰			

6. Conducted Test Items

6.1 Conducted Output Power and ERP/EIRP

A system simulator was used to establish communication with the EUT. Its parameters were 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 ERP of mobile transmitters must not exceed 7 Watts for GSM850, WCDMA band V, LTE Band 5, Band 26(Part 22)

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 12

The EIRP of mobile transmitters must not exceed 2 Watts for PCS1900, LTE Band 2, Band 7, Band 38, Band 41

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4, Band 66

The EIRP of mobile transmitters must not exceed 100 Watts for LTE Band 26(Part 90)

According to KDB 412172 D01 Power Approach,

$EIRP = PT + GT - LC$, $ERP = EIRP - 2.15$, where

PT = transmitter output power in dBm

GT = gain of the transmitting antenna in dBi

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

Test set-up

Reference test setup 1

Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

6.2 Peak-to-Average Ratio

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Test set-up

Reference test setup 1

Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

6.3 Occupied Bandwidth

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

Test set-up

Reference test setup 1

Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
6. (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

6.4 Conducted Band Edge

the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission power must be attenuated below the transmitting power (P) by a factor of at least $43+10\log_{10}P$ dB.

Test set-up

Reference test setup 1

Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
5. Set spectrum analyzer with RMS detector.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. Checked that all the results comply with the emission limit line.

6.5 Conducted Spurious Emission

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 7, Band 38, Band 41:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

Test set-up

Reference test setup 1

Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The conducted spurious emission for the whole frequency range was taken.
4. Make the measurement with the spectrum analyzer's RBW = 100 kHz if the authorized frequency band/block is at or below 1 GHz and 1 MHz if the authorized frequency band/block is above 1 GHz, VBW = 3 * RBW.
5. Set spectrum analyzer with RMS detector.
6. Taking the record of maximum spurious emission.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
For LTE Band 7, The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)

6.6 Frequency Stability

24.235, 27.54,

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

22.355

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

Test set-up

Reference test setup 2

Test Procedures

Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in -30°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

7. Radiated Test Items

7.1 Radiated Spurious Emission Measurement

The radiated spurious emission was measured by substitution method according to ANSI C63.26-2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 7, Band 38, Band 41:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

Test set-up

Reference test setup 3

Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI C63.26-2015 section 5.5.4 Radiated measurement using the field strength method.

The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.

1. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
2. The table was rotated 360 degrees to determine the position of the highest spurious emission.
3. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
5. To convert spectrum reading E(dBuV/m) to EIRP(dBm)
6. $EIRP(dBm) = Level (dBuV/m) + 20\log(d) - 104.77$, where d is the distance at which field strength limit is specified in the rules
7. $Field\ Strength\ Level (dBm) = Spectrum\ Reading (dBm) + Antenna\ Factor + Cable\ Loss + Read\ Level - Preamp\ Factor$.
8. $ERP (dBm) = EIRP (dBm) - 2.15$
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

7.2 Radiated Spurious Emission Test Results

GSM850						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1648.40	-56.00	-11.55	-67.55	-13.00	54.55	Vertical
2472.60	-46.75	-8.68	-55.43	-13.00	42.43	Vertical
3296.80	-60.41	-3.87	-64.28	-13.00	51.28	Vertical
1648.40	-49.80	-10.88	-60.68	-13.00	47.68	Horizontal
2472.60	-45.71	-9.15	-54.86	-13.00	41.86	Horizontal
3296.80	-54.93	-3.93	-58.86	-13.00	45.86	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.20	-55.50	-10.70	-66.20	-13.00	53.20	Vertical
2509.80	-47.16	-8.66	-55.82	-13.00	42.82	Vertical
3346.40	-60.62	-3.33	-63.95	-13.00	50.95	Vertical
1673.20	-50.15	-10.28	-60.43	-13.00	47.43	Horizontal
2509.80	-45.88	-8.73	-54.61	-13.00	41.61	Horizontal
3346.40	-54.91	-3.42	-58.33	-13.00	45.33	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1697.60	-55.55	-9.90	-65.45	-13.00	52.45	Vertical
2546.40	-47.28	-8.40	-55.68	-13.00	42.68	Vertical
3395.20	-60.81	-2.55	-63.36	-13.00	50.36	Vertical
1697.60	-49.78	-9.70	-59.48	-13.00	46.48	Horizontal
2546.40	-45.74	-8.17	-53.91	-13.00	40.91	Horizontal
3395.20	-55.03	-2.62	-57.65	-13.00	44.65	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

PCS1900						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3700.40	-55.72	-0.34	-56.06	-13.00	43.06	Vertical
5550.60	-52.72	4.15	-48.57	-13.00	35.57	Vertical
3700.40	-57.83	-0.16	-57.99	-13.00	44.99	Horizontal
5550.60	-49.26	4.05	-45.21	-13.00	32.21	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-55.23	-1.01	-56.24	-13.00	43.24	Vertical
5640.00	-52.72	3.96	-48.76	-13.00	35.76	Vertical
3760.00	-57.61	-0.56	-58.17	-13.00	45.17	Horizontal
5640.00	-49.02	4.14	-44.88	-13.00	31.88	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3819.60	-55.45	-0.53	-55.98	-13.00	42.98	Vertical
5729.40	-52.30	3.44	-48.86	-13.00	35.86	Vertical
3819.60	-57.30	-0.06	-57.36	-13.00	44.36	Horizontal
5729.40	-48.98	3.82	-45.16	-13.00	32.16	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 20GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

WCDMA band II						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3704.80	-62.56	-0.43	-62.99	-13.00	49.99	Vertical
5557.20	-64.10	4.18	-59.92	-13.00	46.92	Vertical
3704.80	-63.63	-0.23	-63.86	-13.00	50.86	Horizontal
5557.20	-63.76	4.10	-59.66	-13.00	46.66	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-63.29	-1.01	-64.30	-13.00	51.30	Vertical
5640.00	-63.59	3.96	-59.63	-13.00	46.63	Vertical
3760.00	-63.35	-0.56	-63.91	-13.00	50.91	Horizontal
5640.00	-63.65	4.14	-59.51	-13.00	46.51	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3815.20	-62.88	-0.65	-63.53	-13.00	50.53	Vertical
5722.80	-63.75	3.42	-60.33	-13.00	47.33	Vertical
3815.20	-63.69	-0.14	-63.83	-13.00	50.83	Horizontal
5722.80	-63.92	3.81	-60.11	-13.00	47.11	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 20GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

WCDMA band IV						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3424.40	-53.93	-2.17	-56.10	-13.00	43.10	Vertical
5136.60	-64.18	3.77	-60.41	-13.00	47.41	Vertical
6848.80	-64.26	5.80	-58.46	-13.00	45.46	Vertical
3424.40	-54.73	-2.23	-56.96	-13.00	43.96	Horizontal
5136.60	-62.84	3.81	-59.03	-13.00	46.03	Horizontal
6848.80	-64.26	6.01	-58.25	-13.00	45.25	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3464.80	-53.48	-2.53	-56.01	-13.00	43.01	Vertical
5197.20	-63.91	3.26	-60.65	-13.00	47.65	Vertical
6929.60	-64.03	5.19	-58.84	-13.00	45.84	Vertical
3464.80	-54.38	-2.53	-56.91	-13.00	43.91	Horizontal
5197.20	-62.56	3.18	-59.38	-13.00	46.38	Horizontal
6929.60	-63.83	5.17	-58.66	-13.00	45.66	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3505.20	-53.20	-3.15	-56.35	-13.00	43.35	Vertical
5257.80	-63.43	3.11	-60.32	-13.00	47.32	Vertical
7010.40	-63.86	5.73	-58.13	-13.00	45.13	Vertical
3505.20	-54.61	-3.00	-57.61	-13.00	44.61	Horizontal
5257.80	-63.04	3.43	-59.61	-13.00	46.61	Horizontal
7010.40	-64.31	5.77	-58.54	-13.00	45.54	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 20GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

WCDMA band V						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1652.80	-61.38	-11.40	-72.78	-13.00	59.78	Vertical
2479.20	-61.37	-8.68	-70.05	-13.00	57.05	Vertical
3305.60	-62.75	-3.76	-66.51	-13.00	53.51	Vertical
1652.80	-61.24	-10.77	-72.01	-13.00	59.01	Horizontal
2479.20	-60.48	-9.07	-69.55	-13.00	56.55	Horizontal
3305.60	-61.68	-3.86	-65.54	-13.00	52.54	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.20	-61.29	-10.70	-71.99	-13.00	58.99	Vertical
2509.80	-61.00	-8.66	-69.66	-13.00	56.66	Vertical
3346.40	-62.36	-3.33	-65.69	-13.00	52.69	Vertical
1673.20	-61.06	-10.28	-71.34	-13.00	58.34	Horizontal
2509.80	-60.12	-8.73	-68.85	-13.00	55.85	Horizontal
3346.40	-61.96	-3.42	-65.38	-13.00	52.38	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1697.60	-61.05	-9.90	-70.95	-13.00	57.95	Vertical
2546.40	-60.57	-8.40	-68.97	-13.00	55.97	Vertical
3395.20	-61.99	-2.55	-64.54	-13.00	51.54	Vertical
1697.60	-60.96	-9.70	-70.66	-13.00	57.66	Horizontal
2546.40	-60.43	-8.17	-68.60	-13.00	55.60	Horizontal
3395.20	-62.27	-2.62	-64.89	-13.00	51.89	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

Note: All bandwidths, modulation types and RB configurations were pretested, and it was found that minimum bandwidths, QPSK modulation and 1RB0 were the worst modes, and only the worst modes were reflected in the report.

LTE band 2 – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3701.40	-61.72	-0.36	-62.08	-13.00	49.08	Vertical
5552.10	-60.13	4.16	-55.97	-13.00	42.97	Vertical
7402.00	-64.93	6.10	-58.83	-13.00	45.83	Vertical
3701.40	-57.50	-0.17	-57.67	-13.00	44.67	Horizontal
5552.10	-63.96	4.07	-59.89	-13.00	46.89	Horizontal
7402.00	-65.09	5.78	-59.31	-13.00	46.31	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3760.00	-61.43	-1.01	-62.44	-13.00	49.44	Vertical
5640.00	-60.02	3.96	-56.06	-13.00	43.06	Vertical
7520.00	-64.60	5.55	-59.05	-13.00	46.05	Vertical
3760.00	-57.58	-0.56	-58.14	-13.00	45.14	Horizontal
5640.00	-63.59	4.14	-59.45	-13.00	46.45	Horizontal
7520.00	-64.81	5.56	-59.25	-13.00	46.25	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3816.60	-61.86	-0.59	-62.45	-13.00	49.45	Vertical
5724.90	-60.05	3.42	-56.63	-13.00	43.63	Vertical
7633.20	-65.19	6.40	-58.79	-13.00	45.79	Vertical
3816.60	-57.77	-0.10	-57.87	-13.00	44.87	Horizontal
5724.90	-64.21	3.80	-60.41	-13.00	47.41	Horizontal
7633.20	-65.58	6.24	-59.34	-13.00	46.34	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 20GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 4 – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3421.40	-50.59	-2.15	-52.74	-13.00	39.74	Vertical
5132.10	-63.30	3.80	-59.50	-13.00	46.50	Vertical
6842.80	-63.73	5.86	-57.87	-13.00	44.87	Vertical
3421.40	-49.93	-2.22	-52.15	-13.00	39.15	Horizontal
5132.10	-60.22	3.86	-56.36	-13.00	43.36	Horizontal
6842.80	-64.47	6.07	-58.40	-13.00	45.40	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3465.00	-50.76	-2.54	-53.30	-13.00	40.30	Vertical
5197.50	-63.38	3.25	-60.13	-13.00	47.13	Vertical
6930.00	-63.88	5.20	-58.68	-13.00	45.68	Vertical
3465.00	-50.20	-2.54	-52.74	-13.00	39.74	Horizontal
5197.50	-60.30	3.17	-57.13	-13.00	44.13	Horizontal
6930.00	-64.23	5.17	-59.06	-13.00	46.06	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3508.60	-50.65	-3.13	-53.78	-13.00	40.78	Vertical
5262.90	-63.09	3.11	-59.98	-13.00	46.98	Vertical
7017.20	-63.81	5.74	-58.07	-13.00	45.07	Vertical
3508.60	-49.74	-2.96	-52.70	-13.00	39.70	Horizontal
5262.90	-60.00	3.46	-56.54	-13.00	43.54	Horizontal
7017.20	-64.11	5.80	-58.31	-13.00	45.31	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 20GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 5 – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1649.40	-61.68	-11.51	-73.19	-13.00	60.19	Vertical
2474.10	-59.93	-8.67	-68.60	-13.00	55.60	Vertical
3298.80	-62.06	-3.89	-65.95	-13.00	52.95	Vertical
1649.40	-60.51	-10.85	-71.36	-13.00	58.36	Horizontal
2474.10	-56.59	-9.13	-65.72	-13.00	52.72	Horizontal
3298.80	-62.57	-3.96	-66.53	-13.00	53.53	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.30	-61.21	-10.70	-71.91	-13.00	58.91	Vertical
2509.50	-60.21	-8.66	-68.87	-13.00	55.87	Vertical
3346.00	-62.12	-3.33	-65.45	-13.00	52.45	Vertical
1673.30	-60.96	-10.28	-71.24	-13.00	58.24	Horizontal
2509.50	-56.58	-8.73	-65.31	-13.00	52.31	Horizontal
3346.00	-62.41	-3.42	-65.83	-13.00	52.83	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1696.60	-61.69	-9.90	-71.59	-13.00	58.59	Vertical
2544.90	-60.64	-8.45	-69.09	-13.00	56.09	Vertical
3393.20	-61.77	-2.59	-64.36	-13.00	51.36	Vertical
1696.60	-61.22	-9.70	-70.92	-13.00	57.92	Horizontal
2544.90	-57.00	-8.21	-65.21	-13.00	52.21	Horizontal
3393.20	-62.16	-2.65	-64.81	-13.00	51.81	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 7 – 5 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5005.00	-63.04	3.69	-59.35	-25.00	34.35	Vertical
7507.50	-61.93	5.56	-56.37	-25.00	31.37	Vertical
10010.00	-64.89	10.09	-54.80	-25.00	29.80	Vertical
5005.00	-63.31	4.02	-59.29	-25.00	34.29	Horizontal
7507.50	-65.04	5.56	-59.48	-25.00	34.48	Horizontal
10010.00	-62.37	9.47	-52.90	-25.00	27.90	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5070.00	-63.43	4.23	-59.20	-25.00	34.20	Vertical
7605.00	-62.23	6.06	-56.17	-25.00	31.17	Vertical
10140.00	-64.97	10.48	-54.49	-25.00	29.49	Vertical
5070.00	-63.80	3.51	-60.29	-25.00	35.29	Horizontal
7605.00	-65.08	5.95	-59.13	-25.00	34.13	Horizontal
10140.00	-62.49	10.21	-52.28	-25.00	27.28	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5135.00	-63.43	3.78	-59.65	-25.00	34.65	Vertical
7702.50	-62.12	6.22	-55.90	-25.00	30.90	Vertical
10270.00	-65.39	11.48	-53.91	-25.00	28.91	Vertical
5135.00	-62.82	3.83	-58.99	-25.00	33.99	Horizontal
7702.50	-64.80	5.97	-58.83	-25.00	33.83	Horizontal
10270.00	-62.39	11.00	-51.39	-25.00	26.39	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 27GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 12 – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1399.40	-58.87	-11.68	-70.55	-13.00	57.55	Vertical
2099.10	-46.10	-9.89	-55.99	-13.00	42.99	Vertical
2798.80	-61.01	-7.09	-68.10	-13.00	55.10	Vertical
1399.40	-58.64	-11.43	-70.07	-13.00	57.07	Horizontal
2099.10	-51.39	-9.44	-60.83	-13.00	47.83	Horizontal
2798.80	-60.96	-6.71	-67.67	-13.00	54.67	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1415.00	-58.84	-11.77	-70.61	-13.00	57.61	Vertical
2122.50	-45.99	-9.58	-55.57	-13.00	42.57	Vertical
2830.00	-60.67	-6.50	-67.17	-13.00	54.17	Vertical
1415.00	-58.43	-11.45	-69.88	-13.00	56.88	Horizontal
2122.50	-51.02	-8.86	-59.88	-13.00	46.88	Horizontal
2830.00	-61.40	-5.97	-67.37	-13.00	54.37	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1430.60	-58.63	-11.92	-70.55	-13.00	57.55	Vertical
2145.90	-45.90	-9.51	-55.41	-13.00	42.41	Vertical
2861.20	-61.15	-5.55	-66.70	-13.00	53.70	Vertical
1430.60	-58.79	-11.66	-70.45	-13.00	57.45	Horizontal
2145.90	-51.79	-9.15	-60.94	-13.00	47.94	Horizontal
2861.20	-61.33	-5.44	-66.77	-13.00	53.77	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 17 – 5 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1413.00	-58.17	-12.29	-70.46	-13.00	57.46	Vertical
2119.50	-47.47	-9.97	-57.44	-13.00	44.44	Vertical
2826.00	-61.64	-7.59	-69.23	-13.00	56.23	Vertical
1413.00	-58.04	-11.98	-70.02	-13.00	57.02	Horizontal
2119.50	-53.07	-9.21	-62.28	-13.00	49.28	Horizontal
2826.00	-61.21	-7.02	-68.23	-13.00	55.23	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1420.00	-58.65	-12.41	-71.06	-13.00	58.06	Vertical
2130.00	-47.48	-9.81	-57.29	-13.00	44.29	Vertical
2840.00	-61.58	-6.98	-68.56	-13.00	55.56	Vertical
1420.00	-58.49	-12.07	-70.56	-13.00	57.56	Horizontal
2130.00	-52.77	-9.20	-61.97	-13.00	48.97	Horizontal
2840.00	-61.66	-6.59	-68.25	-13.00	55.25	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1427.00	-59.14	-12.46	-71.60	-13.00	58.60	Vertical
2140.50	-47.45	-9.69	-57.14	-13.00	44.14	Vertical
2854.00	-61.86	-7.47	-69.33	-13.00	56.33	Vertical
1427.00	-58.51	-12.16	-70.67	-13.00	57.67	Horizontal
2140.50	-52.78	-9.24	-62.02	-13.00	49.02	Horizontal
2854.00	-62.03	-7.27	-69.30	-13.00	56.30	Horizontal
Remark: - The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. - Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 26(Part 22H) – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1649.40	-61.45	-11.51	-72.96	-13.00	59.96	Vertical
2474.10	-55.36	-8.67	-64.03	-13.00	51.03	Vertical
3298.80	-62.48	-3.89	-66.37	-13.00	53.37	Vertical
1649.40	-61.41	-10.85	-72.26	-13.00	59.26	Horizontal
2474.10	-55.62	-9.13	-64.75	-13.00	51.75	Horizontal
3298.80	-62.29	-3.96	-66.25	-13.00	53.25	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-61.55	-10.70	-72.25	-13.00	59.25	Vertical
2509.50	-55.11	-8.66	-63.77	-13.00	50.77	Vertical
3346.00	-62.27	-3.33	-65.60	-13.00	52.60	Vertical
1673.00	-61.35	-10.28	-71.63	-13.00	58.63	Horizontal
2509.50	-55.37	-8.73	-64.10	-13.00	51.10	Horizontal
3346.00	-61.86	-3.42	-65.28	-13.00	52.28	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1696.60	-61.25	-9.90	-71.15	-13.00	58.15	Vertical
2544.90	-55.57	-8.45	-64.02	-13.00	51.02	Vertical
3393.20	-62.39	-2.59	-64.98	-13.00	51.98	Vertical
1696.60	-61.33	-9.70	-71.03	-13.00	58.03	Horizontal
2544.90	-55.32	-8.21	-63.53	-13.00	50.53	Horizontal
3393.20	-62.26	-2.65	-64.91	-13.00	51.91	Horizontal
Remark: 3. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. 4. Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 26(90S) – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1629.40	-62.80	-12.21	-75.01	-13.00	62.01	Vertical
2444.10	-55.82	-8.84	-64.66	-13.00	51.66	Vertical
3258.80	-61.30	-3.57	-64.87	-13.00	51.87	Vertical
1629.40	-62.94	-11.35	-74.29	-13.00	61.29	Horizontal
2444.10	-51.64	-9.23	-60.87	-13.00	47.87	Horizontal
3258.80	-61.76	-3.42	-65.18	-13.00	52.18	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1638.00	-62.49	-11.90	-74.39	-13.00	61.39	Vertical
2457.00	-55.44	-8.75	-64.19	-13.00	51.19	Vertical
3276.00	-61.70	-3.71	-65.41	-13.00	52.41	Vertical
1638.00	-62.73	-11.13	-73.86	-13.00	60.86	Horizontal
2457.00	-51.25	-9.20	-60.45	-13.00	47.45	Horizontal
3276.00	-61.60	-3.65	-65.25	-13.00	52.25	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1646.60	-63.05	-11.60	-74.65	-13.00	61.65	Vertical
2469.90	-55.88	-8.67	-64.55	-13.00	51.55	Vertical
3293.20	-61.69	-3.85	-65.54	-13.00	52.54	Vertical
1646.60	-63.32	-10.92	-74.24	-13.00	61.24	Horizontal
2469.90	-51.27	-9.18	-60.45	-13.00	47.45	Horizontal
3293.20	-61.65	-3.88	-65.53	-13.00	52.53	Horizontal
Remark: 5. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. 6. Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 38 – 5 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5145.00	-62.79	3.70	-59.09	-25.00	34.09	Vertical
7717.50	-65.73	6.36	-59.37	-25.00	34.37	Vertical
10290.00	-64.40	11.95	-52.45	-25.00	27.45	Vertical
5145.00	-58.73	3.73	-55.00	-25.00	30.00	Horizontal
7717.50	-65.18	6.10	-59.08	-25.00	34.08	Horizontal
10290.00	-63.05	11.52	-51.53	-25.00	26.53	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.00	-62.48	3.33	-59.15	-25.00	34.15	Vertical
7785.00	-65.34	8.39	-56.95	-25.00	31.95	Vertical
10380.00	-64.81	10.75	-54.06	-25.00	29.06	Vertical
5190.00	-58.53	3.26	-55.27	-25.00	30.27	Horizontal
7785.00	-64.79	8.24	-56.55	-25.00	31.55	Horizontal
10380.00	-63.48	10.21	-53.27	-25.00	28.27	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.00	-62.88	3.17	-59.71	-25.00	34.71	Vertical
7852.50	-65.80	8.52	-57.28	-25.00	32.28	Vertical
10470.00	-64.49	11.86	-52.63	-25.00	27.63	Vertical
5235.00	-58.09	3.32	-54.77	-25.00	29.77	Horizontal
7852.50	-65.27	8.28	-56.99	-25.00	31.99	Horizontal
10470.00	-63.12	11.27	-51.85	-25.00	26.85	Horizontal
Remark: 7. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. 8. Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 41 – 5 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5075.00	-62.44	4.18	-58.26	-25.00	33.26	Vertical
7612.50	-64.92	6.15	-58.77	-25.00	33.77	Vertical
10150.00	-65.65	10.32	-55.33	-25.00	30.33	Vertical
5075.00	-58.13	3.52	-54.61	-25.00	29.61	Horizontal
7612.50	-51.22	6.03	-45.19	-25.00	20.19	Horizontal
10150.00	-63.43	10.16	-53.27	-25.00	28.27	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.00	-62.66	3.33	-59.33	-25.00	34.33	Vertical
7785.00	-64.79	8.39	-56.40	-25.00	31.40	Vertical
10380.00	-65.56	10.75	-54.81	-25.00	29.81	Vertical
5190.00	-58.46	3.26	-55.20	-25.00	30.20	Horizontal
7785.00	-65.46	8.24	-57.22	-25.00	32.22	Horizontal
10380.00	-63.92	10.21	-53.71	-25.00	28.71	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5305.00	-62.75	3.67	-59.08	-25.00	34.08	Vertical
7957.50	-64.62	8.36	-56.26	-25.00	31.26	Vertical
10610.00	-65.17	12.12	-53.05	-25.00	28.05	Vertical
5305.00	-58.40	3.85	-54.55	-25.00	29.55	Horizontal
7957.50	-65.41	8.12	-57.29	-25.00	32.29	Horizontal
10610.00	-64.12	11.70	-52.42	-25.00	27.42	Horizontal
Remark: 9. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. 10. Test Frequency up to 27GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

LTE band 66 – 1.4 MHz bandwidth						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3421.40	-44.77	-2.15	-46.92	-13.00	33.92	Vertical
5132.10	-52.97	3.80	-49.17	-13.00	36.17	Vertical
6842.80	-57.01	5.86	-51.15	-13.00	38.15	Vertical
3421.40	-35.79	-2.22	-38.01	-13.00	25.01	Horizontal
5132.10	-52.78	3.86	-48.92	-13.00	35.92	Horizontal
6842.80	-59.85	6.07	-53.78	-13.00	40.78	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3490.00	-44.69	-3.02	-47.71	-13.00	34.71	Vertical
5235.00	-52.81	3.17	-49.64	-13.00	36.64	Vertical
6980.00	-56.76	5.49	-51.27	-13.00	38.27	Vertical
3490.00	-35.94	-2.92	-38.86	-13.00	25.86	Horizontal
5235.00	-52.62	3.32	-49.30	-13.00	36.30	Horizontal
6980.00	-59.92	5.46	-54.46	-13.00	41.46	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
3558.60	-44.69	-2.25	-46.94	-13.00	33.94	Vertical
5337.90	-52.34	4.23	-48.11	-13.00	35.11	Vertical
7117.20	-56.60	5.53	-51.07	-13.00	38.07	Vertical
3558.60	-35.90	-2.22	-38.12	-13.00	25.12	Horizontal
5337.90	-52.57	4.19	-48.38	-13.00	35.38	Horizontal
7117.20	-59.87	5.32	-54.55	-13.00	41.55	Horizontal
Remark: 11. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report. 12. Test Frequency up to 10GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

*****End of Report*****