TEST REPORT

Applicant Name:	Shenzhen Ulefone Technology Co., Ltd.
Address:	FCC: 4G01, Building A, Block 1, Anhongji Tianyao Plaza, Longhua District,Shenzhen City, Guangdong Province China IC: 4G01, Building A, Block 1, Anhongji Tianyao Plaza, Longhua District Shenzhen City Guangdong 518110 China
Report Number:	2601S50985E-RFD
FCC ID:	2AT9T-3293
IC:	28620-3293

Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E;
RSS-130 ISSUE 2, FEBRUARY 2019; RSS-132 ISSUE 4, JANUARY 2023;
RSS-133 ISSUE 7, JULY 24, 2024; RSS-139 ISSUE 4, OCTOBER 2022, AMENDMENT;
RSS-199 ISSUE 4, JULY 2023; RSS-GEN ISSUE 5, FEBRUARY 2021 AMENDMENT 2

Sample Description

Product Type:	Feature Phone
Model No.:	Armor Mini 5
Multiple Model(s) No.:	For FCC only: GQ3293, Armor Mini 5T, Armor Mini 5 Pro, Armor Mini 5 Plus, Armor Mini 5T Pro, Armor Mini 5 Ultra, Armor Mini 5T Ultra
Trade Mark:	ulefone
Date Received:	2026-04-03
Issue Date:	2026-06-26
Test Result:	Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Cheeb Huang

RF Engineer

Approved By:

Nancy Wang

RF Supervisor

Note: The information marked# is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "▼".

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2601S50985E-RFD	Original Report	2026-06-26

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

HVIN	GQ3293			
FVIN	N/A			
Product	Feature Phone			
Tested Model	Armor Mini 5			
Multiple Model(s)	For FCC only: GQ3293, Armor Mini 5T, Armor Mini 5 Pro, Armor Mini 5 Plus, Armor Mini 5T Pro, Armor Mini 5 Ultra, Armor Mini 5T Ultra			
Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 41: 2535-2655MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2180MHz(RX)			
Modulation Technique	2G: GMSK,8PSK 3G: BPSK, QPSK, 16QAM, 64QAM 4G: QPSK, 16QAM			
Antenna Specification#	Antenna	Operation Bands	Antenna Gain (G_T) (dBi)	L_C (dB)
	Main ANT	GSM 850/WCDMA B5/LTE B5	0.38	0
		PCS1900/WCDMA B2/LTE B2	-1.98	0
		WCDMA B4/LTE B4	-1.63	0
		LTE B7	0.98	0
		LTE B12	-5.12	0
		LTE B17	-5.12	0
		LTE B38	0.71	0
		LTE B41	0.91	0
		LTE B66	-1.28	0
	Note: Lc= Signal Attenuation in the connecting cable between the transmitter and antenna, in dB.			
Voltage Range	DC 5V from adapter or DC 3.7V from battery			
Sample serial number	RE: 3JDP-1; RF: 3JDP-2 (Assigned by BACL, Shenzhen)			
Sample/EUT Status	Good condition			
Normal/Extreme Condition#	LV: Low Voltage 3.5V_{DC}; NV: Normal Voltage 3.7V_{DC}; HV: High Voltage 4.2V_{DC} (provided by the applicant)			
Adapter Information	Model:PS06CA050K1000UU Input:100-240V~50/60Hz 0.25A Max. Output:5.0V⎓1.0A 5.0W			
Note: The Multiple models are electrically identical with the test model except for model name and sales channel. Please refer to the declaration letter# for more detail, which was provided by manufacturer.				

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part24-Subpart E, Part 27 of the Federal Communication Commission's rules and RSS-130, RSS-132, RSS-133, RSS-139, RSS-199 and RSS-GEN of the Innovation, science and Economic Development Canada.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services

RSS-130 - Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz

RSS-132 - Cellular Systems Operating in the Bands 824-849 MHz and 869-894 MHz

RSS-133 - Personal Communications Service Equipment Operating in the Bands 1850-1915 MHz and 1930-1995 MHz

RSS-139 - Advanced Wireless Services Equipment Operating in the Bands 1710-1780 MHz and 2110-2200 MHz

RSS-199 - Broadband Radio Service (BRS) Equipment Operating in the Band 2500–2690 MHz

RSS-Gen - General Requirements for Compliance of Radio Apparatus

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

KDB 971168 D01: Power Meas License Digital Systems v03r01

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		52.29kHz(k=1.96, 95% level of confidence)
RF output power, conducted		1.57dB(k=1.96, 95% level of confidence)
Conducted Spurious Emission		2.48dB(k=1.96, 95% level of confidence)
RF Frequency		81.235Hz(k=1.96, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz~150 kHz	3.46dB(k=2, 95% level of confidence)
	150 kHz ~30MHz	3.72dB(k=2, 95% level of confidence)
Radiated Emissions	30MHz~1000MHz (Horizontal)	5.10dB(k=2, 95% level of confidence)
	30MHz~1000MHz (Vertical)	6.28dB(k=2, 95% level of confidence)
	1GHz - 6GHz	6.18dB(k=2, 95% level of confidence)
	6GHz - 18GHz	6.62dB(k=2, 95% level of confidence)
	18GHz - 40GHz	6.66dB(k=2, 95% level of confidence)
Temperature		±0.4℃
Humidity		±2%
Supply voltages		DC±0.4%;AC±1%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0023.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Frequency band	Bandwidth (MHz)	Test Frequency (MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
PCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B4	4.2	1712.4	1732.6	1752.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704	707.5	711
LTE B17	5	706.5	710	713.5
	10	709	710	711

Frequency band	Bandwidth (MHz)	Test Frequency (MHz)		
		Low	Middle	High
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

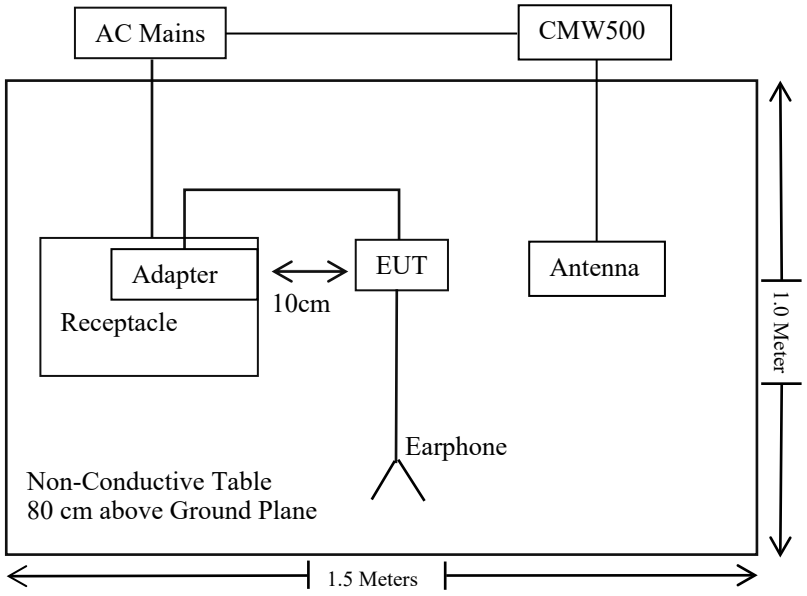
Manufacturer	Description	Model	Serial Number
OUPU	Receptacle	PDU-OP1606K	6971041358020
Rohde & Schwarz	Universal Radio Communication Tester	CMW500	146520

External I/O Cable

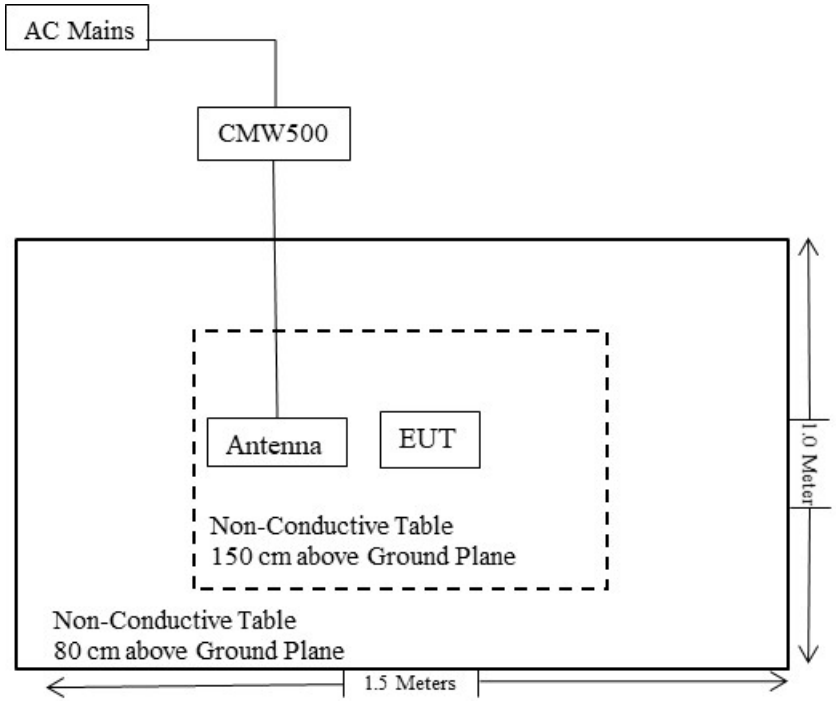
Cable Description	Length (m)	From Port	To
Unshielded Un-detachable AC cable	1.2	Receptacle	AC Mains
Unshielded Detachable DC cable	0.6	Adapter	EUT
Unshielded Detachable AC cable	1.2	CMW500	AC Mains

Block Diagram of Test Setup

For Radiated Emissions below 1GHz:



For Radiated Emissions above 1GHz:



SUMMARY OF TEST RESULTS

FCC Standard Rule(s)	ISEDC Standard Rule(s)	Description of Test	Result
§ 1.1310, §2.1093	RSS-102	RF Exposure	Compliant
/	RSS-130 §4.3 RSS-132 §5.1 RSS-133 §5.2 RSS-139 §5.2 RSS-199 §5.2	Channeling Arrangements Frequency Plan	Compliant
/	RSS-130 §4.2 RSS-132 §5.2 RSS-133 §5.3 RSS-139 §5.3 RSS-199 §5.3	Types of Modulation	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54	RSS-130 §4.5 RSS-132 §5.3 RSS-133 §5.4 RSS-139 §5.4 RSS-199 §5.4 RSS-Gen §6.11	Frequency stability	Compliant
§2.1046; § 22.913 (a)(d); § 24.232 (c)(d) ; §27.50 (c)(d)(h)	RSS-130 §4.6 RSS-132 §5.4 RSS-133 §5.5 RSS-139 §5.5 RSS-199 §5.5 RSS-Gen §6.12	RF Output Power	Compliant
§ 2.1049; § 22.905; § 22.917; §24.238; §27.53	RSS-Gen §6.7	Occupied Bandwidth & 26dB Bandwidth	Compliant
§ 2.1051; § 22.917 (a); § 24.238 (a); §27.53	RSS-130 §4.7 RSS-132 §5.5 RSS-133 §5.6 RSS-139 §5.6 RSS-199 §5.6 RSS-Gen §6.13	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	RSS-130 §4.7 RSS-132 §5.5 RSS-133 §5.6 RSS-139 §5.6 RSS-199 §5.6 RSS-Gen §6.13	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 (g)(h)(m)	RSS-130 §4.7 RSS-132 §5.5 RSS-133 §5.6 RSS-139 §5.6 RSS-199 §5.6 RSS-Gen §6.13	Band Edge	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2025/09/01	2026/08/31
Sonoma instrument	Pre-amplifier	310 N	186238	2025/09/08	2026/09/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Chamber A Cable	Cable A1	Cable A1	2025/09/08	2026/09/07
Unknown	Chamber A Cable	Cable A2	Cable A2	2025/09/08	2026/09/07
TDK	Chamber	Chamber A	2#	2023/07/12	2026/07/11
COM-POWER	Dipole Antenna	3121C	9209-860	NCR	NCR
TDK	Chamber	Chamber A	2#	2023/07/12	2026/07/11
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2025/09/01	2026/08/31
A.H.System	Preamplifier	PAM-0118P	489	2025/09/08	2026/09/07
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2023/07/26	2026/07/25
The Electro-Mechanics Co.	Horn Antenna	3115	9107-3694	2024/06/06	2027/06/05
Unknown	Chamber B Cable	Cable B1	Cable B1	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B2	Cable B2	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B3	Cable B3	2025/09/08	2026/09/07
JD	Filter Switch Unit	DT7220FSU	DS79906	2025/08/12	2026/08/11
JD	Multiplex Switch Test Control Set	DT7220SCU	DS79903	2025/08/12	2026/08/11
A.H.System	Pre-amplifier	PAM-1840VH	190	2025/09/08	2026/09/07
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	2023/09/18	2026/09/17
Electro-Mechanics Co	Horn Antenna	3116	2026	2025/09/18	2028/09/17
Unknown	Chamber B Cable	Cable B4	Cable B4	2025/09/17	2026/09/16
Unknown	Chamber B Cable	Cable B5	Cable B5	2025/09/17	2026/09/16
TDK	Chamber	Chamber B	1#	2023/07/14	2026/07/13
Agilent	Signal Generator	N5183A	MY50140588	2025/09/18	2026/09/17

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSV40-N	102259	2025/09/01	2026/08/31
BACL	Temp&Humi Test Chamber	BTH-150-40	30145	2025/09/11	2026/09/10
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	146520	2025/09/18	2026/09/17
instek	DC Power Supply	GPS-3030DD	EM832096	NCR	NCR
Fluke	Digital Multimeter	287	19000011	2026/03/16	2027/03/15
Unknown	10dB Attenuator	Unknown	F-03-EM190	2025/06/26	2026/06/25
Unknown	10dB Attenuator	Unknown	F-03-EM190	2026/06/24	2027/06/23
HP	Power Splitter	11667A	1610A	2025/06/26	2026/06/25
HP	Power Splitter	11667A	1610A	2026/06/24	2027/06/23
Unknown	RF Cable	Cable RF1	Cable RF1	2025/09/17	2026/09/16
Unknown	RF Cable	Cable RF11	Cable RF11	2025/06/26	2026/06/25
Unknown	RF Cable	Cable RF11	Cable RF11	2026/06/24	2027/06/23
JD	JD Auto Test software	NA	1.0.0.3769	NCR	NCR

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*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

REQUIREMENTS AND TEST PROCEDURES

Applicable Standard for Part 22 Subpart H

RF Output Power

FCC §22.913
(a)(5) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7watts.

(d) *Power measurement.* Measurement of the ERP of Cellular base transmitters and repeaters must be made using an average power measurement technique. The peak-toaverage ratio (PAR) of the transmission must not exceed 13 dB. Power measurements for base transmitters and repeaters must be made in accordance with either of the following:
(1) A Commission-approved average power technique (*see* FCC Laboratory's Knowledge Database); or
(2) For purposes of this section, peak transmit power must be measured over an interval of continuous transmission using instrumentation calibrated in terms of an rmsequivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, *etc.,* so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

Spurious Emissions

FCC §22.917

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a reference bandwidth as follows:
(1) In the spectrum below 1 GHz, instrumentation should employ a reference bandwidth of 100 kHz or greater. In 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy, provided that the measured power is integrated over the full required reference bandwidth (i.e., 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
(2) In the spectrum above 1 GHz, instrumentation should employ a reference bandwidth of 1 MHz

Frequency stability

FCC §22.355

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	20	50
50 to 450	5	5	50
450 to 512	2.5	5	5
821 to 896	1.5	**2.5**	**2.5**
928 to 929	5	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10	n/a	n/a

Applicable Standard for Part 24 Subpart E

RF Output Power

FCC §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.

(d)Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. 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.

Spurious Emissions

FCC §24.238

The rules in this section govern the spectral characteristics of emissions in the Broadband Personal Communications Service.

(a) Out of band emissions. 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.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.

(d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

Frequency stability

FCC §24.235

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

Applicable Standard for Part 27

RF Output Power

FCC §27.50

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

(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.

(h) The following power limits shall apply in the BRS and EBS:
(2)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.

Spurious Emissions

FCC §27.53

(g) For operations in the 600 MHz band and the 698-746 MHz 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 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency.

(h) AWS emission limits
(1) ***General protection levels.*** 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 $43 + 10 \log_{10}$ (P) dB.

(m)(4) 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 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.

Frequency stability

FCC §27.54

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

Applicable Standard for RSS-130, RSS-132, RSS-133, RSS-139, RSS-199, RSS-GEN

Channeling arrangements & frequency plan

According to RSS-130 §4.3, the frequency bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz are divided into small frequency blocks as per SRSP-518. Equipment shall operate according to the frequency plan given in the SRSP.

According to RSS-132 §5.1, the frequency bands 824-849 MHz and 869-894 MHz are divided into sub-bands as described in SRSP-503.

According to RSS-133 §5.2, The bands 1850-1915 MHz and 1930-1995 MHz are divided into 11 paired frequency blocks as shown in table 1. Frequency blocks may be aggregated to form a frequency block group. SRSP 510 contains the detailed band plan.

According to RSS-139 §5.2, The bands 1710-1780 MHz and 2110-2180 MHz are divided into 11 paired blocks as shown in table 1. Standard Radio System Plan SRSP-513, Technical Requirements for Advanced Wireless Services in the Bands 1710-1780 MHz and 2110-2180 MHz, contains the detailed band plan.

According to RSS-199 §5.2, The band 2500-2690 MHz is divided into 7 paired blocks and 2 unpaired blocks as shown in table 1 and 2. SRSP-517 contains the detailed band plan. Frequency blocks can be aggregated to form a frequency block group.

Types of Modulation

According to RSS-130 §4.2, Equipment certified under this standard shall employ digital modulation.

According to RSS-132 §5.2, equipment certified under this standard shall use digital modulation.

According to RSS-133 §5.3, the devices shall employ digital modulation techniques.

According to RSS-139 §5.3, Devices may use any type of modulation technique. The type of modulation shall be documented in the test report.

According to RSS-199 §5.3, Equipment certified under this standard shall employ digital modulation.

Frequency stability

According to RSS-130 §4.5, RSS-132 §5.3, RSS-133 §5.4, RSS-139 §5.4 and RSS-199§5.4:

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within each of the sub-bands when tested at the temperature and supply voltage variations specified in RSS-Gen.

Transmitter output power

According to RSS-130 §4.6

The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

4.6.2 Frequency bands 617-652 MHz and 663-698 MHz

The e.r.p. shall not exceed 3 watts for mobile equipment, fixed subscriber equipment and portable equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the equivalent isotropically radiated power (e.i.r.p.) limits.

4.6.3 Frequency bands 698-756 MHz and 777-787 MHz

The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

According to RSS-132 §5.4

The transmitter output power shall be measured in terms of average power. The equivalent radiated power (e.r.p.) shall not exceed 7 watts for mobile equipment and 3 watts for portable equipment.

The effective isotropic radiated power (e.i.r.p.) shall not exceed the limits specified in SRSP-503 for base station equipment.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to RSS-133 §5.5

The maximum power spectral density of the equipment, measured in terms of average values, shall comply with the limits specified in table 2. These limits are either specified in terms of equivalent isotropically radiated power (e.i.r.p.) or TRP for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-510 for more deployment details in the bands 1850-1915 MHz and 1930-1995 MHz.

AAS equipment with eight antenna elements or less can demonstrate compliance with the e.i.r.p limit specified for non-AAS equipment in table 2, instead of the TRP limit.

Table 2: Maximum power spectral density of equipment

Equipment type	Maximum power spectral density
Non-AAS fixed station and base station	3280 W/MHz e.i.r.p
AAS fixed station and base station	46 dBm/MHz TRP
Subscriber equipment	2 W /channel bandwidth e.i.r.p

In addition, the peak-to-average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to RSS-139 §5.5

The maximum output power of the equipment shall comply with the limits specified below. In the tables, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Table 3: Maximum power of equipment in the band 1710-1780 MHz

Equipment type	Maximum power
Fixed station and base station	30 dBm e.i.r.p./channel bandwidth
Subscriber equipment	30 dBm e.i.r.p./channel bandwidth

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

According to RSS-199 §5.5

The transmitter output power shall be measured in terms of average value.

For base station equipment, refer to SRSP-517 for the maximum permissible e.i.r.p.

For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 W.

For fixed subscriber equipment, the transmitter output power shall not exceed 2 W and the e.i.r.p. shall be limited to 40 W.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

Transmitter unwanted emissions

According to RSS-130§4.7

4.7.1 General unwanted emissions limits

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least 43 + 10 $\log_{10}$ P (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

4.7.2 Additional unwanted emissions limits

In addition to the limit outlined in section 4.7.1 above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

a. The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:

(i) 76 + 10 $\log_{10}$ P (watts), dB, for base and fixed equipment and
(ii) 65 + 10$\log_{10}$ P (watts), dB, for mobile and portable equipment

b. The e.i.r.p. in the band 1559-1610 MHz shall not exceed −70 dBW/MHz for wideband signal and −80 dBW for discrete emission with bandwidth less than 700 Hz.

According to RSS-132 §5.5

Equipment shall meet the unwanted emission limits specified below:

(i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log (p) dB.

(ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + log (p) dB. If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

According to RSS-133 §5.6

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the table 3.

Table 3: Unwanted emission limits for all equipment

Offset frequency from the edge of the frequency block group (MHz)	Unwanted emission limit
⩽ 1	-13 dBm/(1% of OBW)
> 1	-13 dBm/MHz

According to RSS-139 §5.6

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors) of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in table 6.

Table 6: Unwanted emission limits

Offset from the edge of the frequency block or frequency block group	Unwanted emission limits
1 MHz	-13 dBm/(1% of OB*)
>1 MHz	-13 dBm/MHz

*OB is the occupied bandwidth.

According to RSS-199 §5.6

Equipment shall comply with the following unwanted emission limits:

(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.

Occupied Bandwidth & 26dB bandwidth

According to RSS-Gen §6.7

The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

In some cases, the "26 dB bandwidth" is required, which is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated 26 dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

Test Method

Transmitter output power, e.r.p. and e.i.r.p

According to CFR Part 2.1046, ANSI C63.26-2015 Section 5.2.5.5 and KDB 971168 D01 Power Meas License Digital Systems v03r01:

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

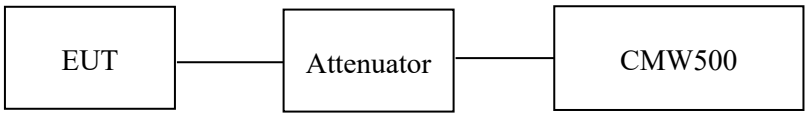
$$ERP \text{ or } EIRP = P_{Meas} + G_T - L_C$$

where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);
P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;
G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

Note: The ERP is for below 1GHz, EIRP is for above 1GHz.

Test Setup Block:



The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.
Note: Offset (10.5dB) = Attenuator (10dB) + Cable loss (0.5dB)

Occupied Bandwidth

According to ANSI C63.26-2015 Section 5.4.4

The OBW is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

The following procedure shall be used for measuring (99%) power bandwidth:

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of 1.5 × OBW is sufficient).

b) The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.

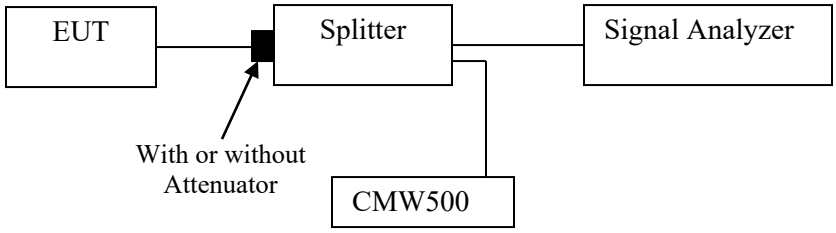
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3. NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.

d) Set the detection mode to peak, and the trace mode to max-hold.

e) If the instrument does not have a 99% OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5% of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5% of the total is reached and record that frequency as the upper OBW frequency. The 99% power OBW can be determined by computing the difference these two frequencies.

f) The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

Test Setup Block:



Note:

For GSM, Offset (17dB) = Attenuator (10dB) + Splitter insert loss (6dB) + Cable loss 1 (0.5dB) + Cable loss 2 (0.5dB)

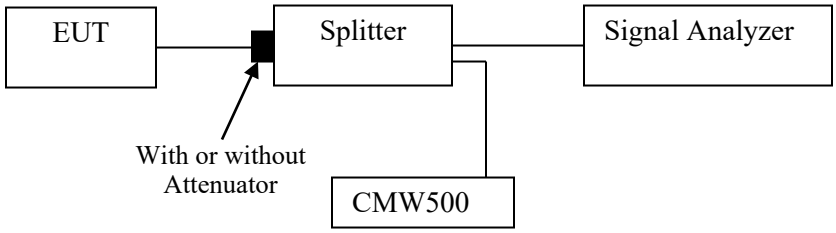
For WCDMA/LTE, Offset (7dB) = Splitter insert loss (6dB) + Cable loss 1 (0.5dB) + Cable loss 2 (0.5dB)

Transmitter unwanted emissions-at antenna terminals

According to ANSI C63.26-2015 Section 5.7.4, KDB 971168 D01 Power Meas License Digital Systems v03r01:

the applicable rule part specifies the reference bandwidth for measuring unwanted emission levels (typically, 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),8 effectively depicting the unwanted emission limit in terms of a power spectral density. In those cases where no reference bandwidth is explicitly specified, the values in the preceding sentence should be used.

Test Setup Block:



Note 1: The worst path loss (cable loss and splitter inset loss) among the test frequency range was added into plots.

Note 2:

For GSM, Offset (19dB) = Attenuator (10dB) + Splitter insert loss (6dB) + Cable loss 1 (1.5dB) + Cable loss 2 (1.5dB)

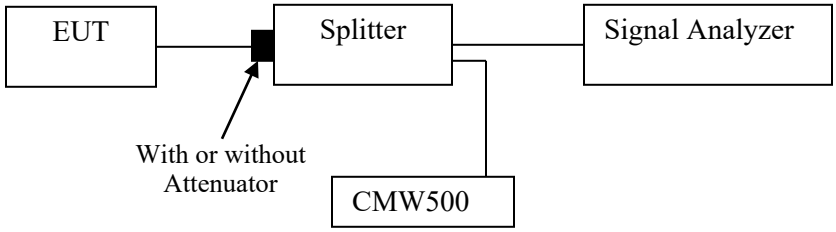
For WCDMA/LTE, Offset (9dB) = Splitter insert loss (6dB) + Cable loss 1 (1.5dB) + Cable loss 2 (1.5dB)

Transmitter unwanted emissions-Out of band emission

According to ANSI C63.26-2015 Section 5.7.3, KDB 971168 D01 Power Meas License Digital Systems v03r01:

Typically, a measurement (resolution) bandwidth smaller than the reference bandwidth is allowed for measurements within a specified frequency range at the edge of the authorized frequency block/band (e.g., within the first Y MHz outside of the authorized frequency band/block, where the value of Y is specified in the relevant rule part). Some FCC out-of-band emission rules permit the use of a narrower RBW (typically limited to a minimum RBW of 1 % of the 26dB EBW for FCC and 1 % of the OBW for ISEDC) for measuring the out-of-band emissions without a requirement to integrate the result over the full reference bandwidth. Beyond the specified frequency range in which this relaxation of the uniform reference bandwidth is permitted, it typically is also acceptable to use a narrower RBW (again limited to a minimum of 1 % of the 26dB EBW for FCC and 1 % of the OBW for ISEDC) to increase accuracy, but the measurement result must subsequently be integrated over the full reference bandwidth.

Test Setup Block:



Note:

For GSM, Offset (17dB) = Attenuator (10dB) + Splitter insert loss (6dB) + Cable loss 1 (0.5dB) + Cable loss 2 (0.5dB)

For WCDMA/ LTE_ FDD Band, Offset (7dB) = Splitter insert loss (6dB) + Cable loss 1 (0.5dB) + Cable loss 2 (0.5dB)

For LTE_ TDD Band,

Offset = Splitter insert loss (6dB) + Cable loss 1 (0.5dB) + Cable loss 2 (0.5dB) + Duty Cycle Factor

Frequency stability

According to ANSI C63.26-2015 Section 5.6, KDB 971168 D01 Power Meas License Digital Systems v03r01:

Frequency stability is a measure of the frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at +20 °C and rated supply voltage.

The operating carrier frequency shall be set up in accordance with the manufacturer's published operation and instruction manual prior to the commencement of these tests. No adjustment of any frequency determining circuit element shall be made subsequent to this initial set-up. Frequency stability is tested:

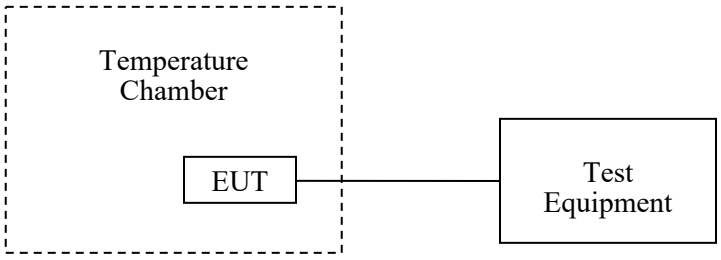
a) At 10 °C intervals of temperatures between −30 °C and +50 °C at the manufacturer's rated supply voltage, and

b) At +20 °C temperature and ±15% supply voltage variations. If a product is specified to operate over a range of input voltage then the −15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.

During the test all necessary settings, adjustments and control of the EUT have to be performed without disturbing the test environment, i.e., without opening the environmental chamber. The frequency stabilities can be maintained to a lesser temperature range provided that the transmitter is automatically inhibited from operating outside the lesser temperature range. For handheld equipment that is only capable of operating from internal batteries and the supply voltage cannot be varied, the frequency stability tests shall be performed at the nominal battery voltage and the battery end point voltage specified by the manufacturer. An external supply voltage can be used and set at the internal battery nominal voltage, and again at the battery operating end point voltage which shall be specified by the equipment manufacturer.

If an unmodulated carrier is not available, the mean frequency of a modulated carrier can be obtained by using a frequency counter with gating time set to an appropriately large multiple of bit periods (gating time depending on the required accuracy). Full details on the choice of values shall be included in the test report.

Test Setup Block:



Transmitter unwanted emissions- Radiated Spurious emissions

According to ANSI C63.26-2015 Section 5.5.3:

Test setup:

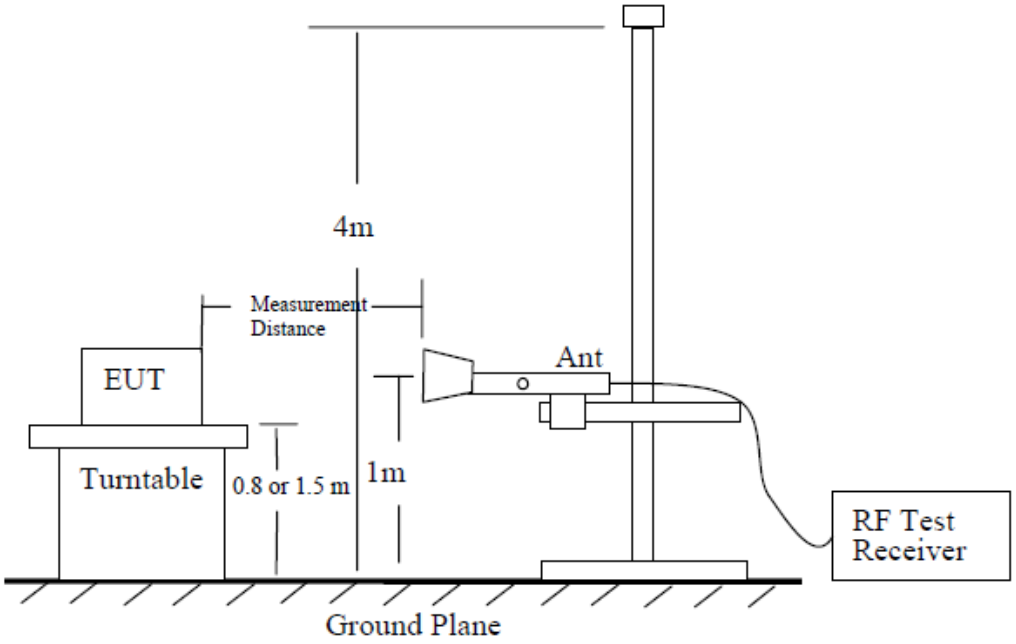


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

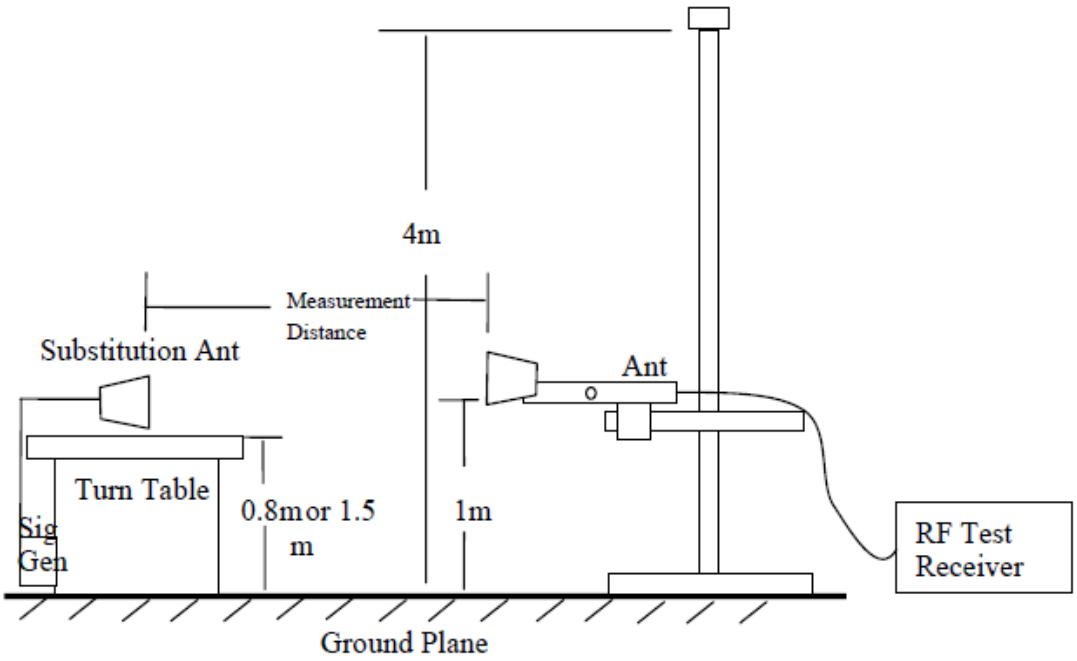


Figure 7—Substitution method set-up for radiated emission

Test Procedure:

a) Place the EUT in the center of the turntable. The EUT shall be configured to transmit into the standard non-radiating load (for measuring radiated spurious emissions), connected with cables of minimal length unless specified otherwise. If the EUT uses an adjustable antenna, the antenna shall be positioned to the length that produces the worst case emission at the fundamental operating frequency.

b) Each emission under consideration shall be evaluated:

1) Raise and lower the measurement antenna in accordance 5.5.2, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.

2) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.

3) Return the turntable to the azimuth where the highest emission amplitude level was observed.

4) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.

5) Record the measured emission amplitude level and frequency using the appropriate RBW.

c) Repeat step b) for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.

d) Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.

e) Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.

f) Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.

g) For each emission that was detected and measured in the initial test [i.e., in step b) and step c)]:

1) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.

2) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step b) and step c).

3) Record the output power level of the signal generator when equivalence is achieved in step 2).

h) Repeat step e) through step g) with the measurement antenna oriented in the opposite polarization.

i) Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:

$$Pe = Ps(dBm) - \text{cable loss (dB)} + \text{antenna gain (dBd)}$$

where

Pe = equivalent emission power in dBm
Ps = source (signal generator) power in dBm

NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.

j) Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from: gain (dBd) = gain (dBi) − 2.15 dB. If necessary, the antenna gain can be calculated from calibrated antenna factor information

k) Provide the complete measurement results as a part of the test report.

RF EXPOSURE EVALUATION

Applicable Standard

FCC§1.1310 and §2.1093.

According to RSS-102 Issue 6, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Test Result

Compliance, please refer to the SAR report: 2601S50985E-SAA for FCC & 2601S50985E-SAB for IC.

TEST DATA AND RESULTS

Channeling Arrangements & Frequency Plan

Judgment:

Compliant. Channeling arrangement meets all relevant conditions specified in SRSP-503, SRSP-510, SRSP-513, SRSP-517, SRSP-518.

Types of Modulation

Judgment:

Compliant. The EUT uses GMSK & 8PSK & QPSK & BPSK & 16QAM & 64QAM modulation.

Spurious Radiated Emissions

Environmental Conditions

Temperature (℃)	22.6-24.9	**Relative Humidity (%)**	44-56
ATM Pressure (kPa):	100.2-101.4	**Test engineer:**	Alex Yan&Zenos Qiao
Test date:	2026/05/03-2026/5/15		
EUT operation mode:	Transmitting		
Note:	1. After pre-scan in the X, Y and Z axes of orientation, the worst case z-axis of orientation were recorded. 2. For LTE bands, only the worst case was recorded, please refer to the data tables. 3. For GSM850/PCS 1900, only the worst case GSM mode was recorded, please refer to the data tables.		

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
GSM 850 (30MHz-10GHz)								
Low Channel								
844.9	33.03	H	-63.4	1.32	0	-64.72	-13	51.72
649.1	32.25	V	-65.1	1.17	0	-66.27	-13	53.27
1648.4	68.02	H	-46.3	1.5	8.6	-39.20	-13	26.20
1648.4	70.15	V	-44.7	1.5	8.6	-37.60	-13	24.60
Middle Channel								
844.9	33.12	H	-63.3	1.32	0	-64.62	-13	51.62
646.8	32.32	V	-65	1.17	0	-66.17	-13	53.17
1673.2	69.18	H	-45	1.5	8.8	-37.70	-13	24.70
1673.2	71.09	V	-43.7	1.5	8.8	-36.40	-13	23.40
High Channel								
844.9	33.41	H	-63.1	1.32	0	-64.42	-13	51.42
647.7	32.13	V	-65.2	1.17	0	-66.37	-13	53.37
1697.6	70.94	H	-43.2	1.5	8.8	-35.90	-13	22.90
1697.6	72.87	V	-41.9	1.5	8.8	-34.60	-13	21.60
PCS 1900 (30MHz-20GHz)								
Low Channel								
844.9	33.49	H	-63	1.32	0	-64.32	-13	51.32
645.5	32.31	V	-65	1.17	0	-66.17	-13	53.17
3700.4	58.89	H	-53.9	2.1	9.7	-46.30	-13	33.30
3700.4	59.54	V	-53.1	2.1	9.7	-45.50	-13	32.50
Middle Channel								
844.9	33.53	H	-62.9	1.32	0	-64.22	-13	51.22
646.2	32.02	V	-65.3	1.17	0	-66.47	-13	53.47
3760	59.93	H	-53.5	2	9.6	-45.90	-13	32.90
3760	60.39	V	-52.9	2	9.6	-45.30	-13	32.30
High Channel								
844.9	33.87	H	-62.6	1.32	0	-63.92	-13	50.92
644.7	32.09	V	-65.2	1.17	0	-66.37	-13	53.37
3819.6	61.05	H	-52.3	2	9.6	-44.70	-13	31.70
3819.6	61.68	V	-51.6	2	9.6	-44.00	-13	31.00

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
WCDMA Band 2 (30MHz-20GHz)								
Low Channel								
844.9	33.29	H	-63.2	1.32	0	-64.52	-13	51.52
647.1	32.98	V	-64.4	1.17	0	-65.57	-13	52.57
3704.8	52.05	H	-60.7	2.1	9.7	-53.10	-13	40.10
3704.8	51.78	V	-60.8	2.1	9.7	-53.20	-13	40.20
5557.2	52.37	H	-59	2.7	10.6	-51.10	-13	38.10
5557.2	51.93	V	-59.5	2.7	10.6	-51.60	-13	38.60
Middle Channel								
844.3	33.24	H	-63.2	1.32	0	-64.52	-13	51.52
644.9	32.70	V	-64.6	1.17	0	-65.77	-13	52.77
3760	52.39	H	-61	2	9.6	-53.40	-13	40.40
3760	52.02	V	-61.3	2	9.6	-53.70	-13	40.70
5640	52.76	H	-58.6	2.7	10.6	-50.70	-13	37.70
5640	52.28	V	-59.2	2.7	10.6	-51.30	-13	38.30
High Channel								
844.3	33.13	H	-63.3	1.32	0	-64.62	-13	51.62
649.7	32.79	V	-64.6	1.17	0	-65.77	-13	52.77
3815.2	52.94	H	-60.5	2	9.6	-52.90	-13	39.90
3815.2	52.57	V	-60.8	2	9.6	-53.20	-13	40.20
5722.8	53.45	H	-57.5	2.1	10.6	-49.00	-13	36.00
5722.8	53.01	V	-58.1	2.1	10.6	-49.60	-13	36.60

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
WCDMA Band 4 (30MHz-20GHz)								
Low Channel								
844.3	33.59	H	-62.9	1.32	0	-64.22	-13	51.22
647.3	32.53	V	-64.8	1.17	0	-65.97	-13	52.97
3424.8	51.03	H	-62.7	1.7	9.6	-54.80	-13	41.80
3424.8	51.28	V	-62.2	1.7	9.6	-54.30	-13	41.30
5137.2	52.75	H	-59.8	2.6	10.6	-51.80	-13	38.80
5137.2	52.44	V	-59.6	2.6	10.6	-51.60	-13	38.60
Middle Channel								
844.3	33.63	H	-62.8	1.32	0	-64.12	-13	51.12
644.1	32.29	V	-65	1.17	0	-66.17	-13	53.17
3465.2	51.21	H	-62.3	1.8	9.7	-54.40	-13	41.40
3465.2	51.45	V	-61.8	1.8	9.7	-53.90	-13	40.90
5197.8	53.02	H	-59.4	2.4	10.6	-51.20	-13	38.20
5197.8	52.86	V	-59.2	2.4	10.6	-51.00	-13	38.00
High Channel								
844.3	33.36	H	-63.1	1.32	0	-64.42	-13	51.42
646.7	32.59	V	-64.8	1.17	0	-65.97	-13	52.97
3505.2	51.72	H	-61.8	1.8	9.7	-53.90	-13	40.90
3505.2	52.17	V	-61	1.8	9.7	-53.10	-13	40.10
5257.8	53.69	H	-58.2	2.2	10.6	-49.80	-13	36.80
5257.8	53.22	V	-58.5	2.2	10.6	-50.10	-13	37.10

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
WCDMA Band 5 (30MHz-10GHz)								
Low Channel								
844.3	33.55	H	-62.9	1.32	0	-64.22	-13	51.22
647.5	32.94	V	-64.4	1.17	0	-65.57	-13	52.57
1652.8	59.87	V	-54.9	1.5	8.8	-47.60	-13	34.60
2479.2	62.32	H	-51.9	1.5	9.5	-43.90	-13	30.90
2479.2	63.98	V	-50	1.5	9.5	-42.00	-13	29.00
3305.6	51.35	H	-62.1	1.7	9.6	-54.20	-13	41.20
3305.6	51.08	V	-62.1	1.7	9.6	-54.20	-13	41.20
3305.6	51.08	V	-62.1	1.7	9.6	-54.20	-13	41.20
Middle Channel								
844.3	33.26	H	-63.2	1.32	0	-64.52	-13	51.52
649.4	32.91	V	-64.4	1.17	0	-65.57	-13	52.57
1673.2	61.78	H	-52.4	1.5	8.8	-45.10	-13	32.10
1673.2	60.32	V	-54.4	1.5	8.8	-47.10	-13	34.10
2509.8	63.54	H	-50.7	1.5	9.5	-42.70	-13	29.70
2509.8	65.05	V	-48.9	1.5	9.5	-40.90	-13	27.90
3346.4	51.69	H	-61.8	1.7	9.6	-53.90	-13	40.90
3346.4	51.37	V	-61.8	1.7	9.6	-53.90	-13	40.90
High Channel								
844.3	33.86	H	-62.6	1.32	0	-63.92	-13	50.92
646.4	32.37	V	-65	1.17	0	-66.17	-13	53.17
1693.2	62.87	H	-51.3	1.5	8.8	-44.00	-13	31.00
1693.2	61.39	V	-53.4	1.5	8.8	-46.10	-13	33.10
2539.8	64.48	H	-49.7	1.5	9.5	-41.70	-13	28.70
2539.8	66.21	V	-47.8	1.5	9.5	-39.80	-13	26.80
3386.4	52.30	H	-61.5	1.7	9.6	-53.60	-13	40.60
3386.4	51.93	V	-61.5	1.7	9.6	-53.60	-13	40.60

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 2 (30MHz-20GHz)								
QPSK 1.4MHz Bandwidth_RB1#0, Low Channel								
844.9	33.57	H	-62.9	1.32	0	-64.22	-13	51.22
648.2	32.31	V	-65	1.17	0	-66.17	-13	53.17
3701.4	55.39	H	-57.4	2.1	9.7	-49.80	-13	36.80
3701.4	56.04	V	-56.6	2.1	9.7	-49.00	-13	36.00
5552.1	56.41	H	-54.9	2.7	10.6	-47.00	-13	34.00
5552.1	55.76	V	-55.7	2.7	10.6	-47.80	-13	34.80
QPSK 1.4MHz Bandwidth_RB1#0, Middle Channel								
844.9	33.68	H	-62.8	1.32	0	-64.12	-13	51.12
643.4	32.80	V	-64.5	1.17	0	-65.67	-13	52.67
3760	55.87	H	-57.5	2	9.6	-49.90	-13	36.90
3760	56.56	V	-56.8	2	9.6	-49.20	-13	36.20
5640	57.02	H	-54.3	2.7	10.6	-46.40	-13	33.40
5640	56.54	V	-54.9	2.7	10.6	-47.00	-13	34.00
QPSK 1.4MHz Bandwidth_RB1#0, High Channel								
844.9	33.68	H	-62.8	1.32	0	-64.12	-13	51.12
646.4	32.95	V	-64.4	1.17	0	-65.57	-13	52.57
3818.6	56.91	H	-56.5	2	9.6	-48.90	-13	35.90
3818.6	57.68	V	-55.6	2	9.6	-48.00	-13	35.00
5727.9	58.25	H	-52.7	2.1	10.6	-44.20	-13	31.20
5727.9	57.42	V	-53.7	2.1	10.6	-45.20	-13	32.20

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 4 (30MHz-18GHz)								
QPSK 1.4MHz Bandwidth_RB1#0, Low channel								
844.9	33.94	H	-62.5	1.32	0	-63.82	-13	50.82
643.1	32.58	V	-64.8	1.17	0	-65.97	-13	52.97
3421.4	53.04	H	-60.7	1.7	9.6	-52.80	-13	39.80
3421.4	52.36	V	-61.1	1.7	9.6	-53.20	-13	40.20
QPSK 1.4MHz Bandwidth_RB1#0, Middle Channel								
844.9	33.95	H	-62.5	1.32	0	-63.82	-13	50.82
645	32.99	V	-64.4	1.17	0	-65.57	-13	52.57
3465	53.37	H	-60.2	1.8	9.7	-52.30	-13	39.30
3465	52.58	V	-60.6	1.8	9.7	-52.70	-13	39.70
QPSK 1.4MHz Bandwidth_RB1#0, High Channel								
844.9	33.24	H	-63.2	1.32	0	-64.52	-13	51.52
645.9	32.24	V	-65.1	1.17	0	-66.27	-13	53.27
3508.6	54.29	H	-59.2	1.8	9.7	-51.30	-13	38.30
3508.6	53.55	V	-59.7	1.8	9.7	-51.80	-13	38.80
LTE Band 5 (30MHz-10GHz)								
QPSK 1.4MHz Bandwidth_RB1#0, Low channel								
844.9	33.37	H	-63.1	1.32	0	-64.42	-13	51.42
646.3	32.46	V	-64.9	1.17	0	-66.07	-13	53.07
1649.4	63.08	H	-51.3	1.5	8.6	-44.20	-13	31.20
1649.4	64.54	V	-50.3	1.5	8.6	-43.20	-13	30.20
QPSK 1.4MHz Bandwidth_RB1#0, Middle Channel								
844.9	33.45	H	-63	1.32	0	-64.32	-13	51.32
645.6	32.39	V	-64.9	1.17	0	-66.07	-13	53.07
1673	63.86	H	-50.3	1.5	8.8	-43.00	-13	30.00
1673	65.73	V	-49	1.5	8.8	-41.70	-13	28.70
QPSK 1.4MHz Bandwidth_RB1#0, High Channel								
844.9	33.78	H	-62.7	1.32	0	-64.02	-13	51.02
645.4	32.60	V	-64.7	1.17	0	-65.87	-13	52.87
1696.6	65.09	H	-49.1	1.5	8.8	-41.80	-13	28.80
1696.6	66.96	V	-47.8	1.5	8.8	-40.50	-13	27.50

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 7 (30MHz-26GHz)								
QPSK 5MHz Bandwidth_RB1#0, Low channel								
844.9	33.23	H	-63.2	1.32	0	-64.52	-25	39.52
644.2	32.07	V	-65.3	1.17	0	-66.47	-25	41.47
5005	54.15	H	-58.5	2	10.6	-49.90	-25	24.90
5005	53.02	V	-58.9	2	10.6	-50.30	-25	25.30
QPSK 5MHz Bandwidth_RB1#0, Middle channel								
844.9	33.31	H	-63.2	1.32	0	-64.52	-25	39.52
647.7	32.62	V	-64.7	1.17	0	-65.87	-25	40.87
5070	54.87	H	-57.7	2.6	10.6	-49.70	-25	24.70
5070	53.69	V	-58.3	2.6	10.6	-50.30	-25	25.30
QPSK 5MHz Bandwidth_RB1#0, High channel								
844.9	33.09	H	-63.4	1.32	0	-64.72	-25	39.72
644.8	32.97	V	-64.4	1.17	0	-65.57	-25	40.57
5135	55.96	H	-56.6	2.6	10.6	-48.60	-25	23.60
5135	54.82	V	-57.2	2.6	10.6	-49.20	-25	24.20
LTE Band 12 (30MHz-10GHz)								
QPSK 1.4MHz Bandwidth_RB1#0, Low channel								
844.9	33.17	H	-63.3	1.32	0	-64.62	-13	51.62
646.8	32.13	V	-65.2	1.17	0	-66.37	-13	53.37
1399.4	56.73	H	-57.6	0.9	7.8	-50.70	-13	37.70
1399.4	57.85	V	-57.2	0.9	7.8	-50.30	-13	37.30
QPSK 1.4MHz Bandwidth_RB1#0, Middle channel								
844.9	33.89	H	-62.6	1.32	0	-63.92	-13	50.92
644.4	32.75	V	-64.6	1.17	0	-65.77	-13	52.77
1415	57.52	H	-56.8	0.9	7.8	-49.90	-13	36.90
1415	58.68	V	-56.3	0.9	7.8	-49.40	-13	36.40
QPSK 1.4MHz Bandwidth_RB1#0, High channel								
844.9	33.16	H	-63.3	1.32	0	-64.62	-13	51.62
646.5	32.99	V	-64.4	1.17	0	-65.57	-13	52.57
1430.6	58.61	H	-55.7	0.9	7.8	-48.80	-13	35.80
1430.6	59.76	V	-55.3	0.9	7.8	-48.40	-13	35.40

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 17 (30MHz-10GHz)								
QPSK 5MHz Bandwidth_RB1#0, Low channel								
844.9	33.01	H	-63.5	1.32	0	-64.82	-13	51.82
647.2	32.11	V	-65.2	1.17	0	-66.37	-13	53.37
1413	58.53	H	-55.8	0.9	7.8	-48.90	-13	35.90
1413	59.68	V	-55.3	0.9	7.8	-48.40	-13	35.40
QPSK 5MHz Bandwidth_RB1#0, Middle channel								
844.9	33.70	H	-62.8	1.32	0	-64.12	-13	51.12
643.4	32.80	V	-64.5	1.17	0	-65.67	-13	52.67
1420	59.79	H	-54.5	0.9	7.8	-47.60	-13	34.60
1420	60.55	V	-54.5	0.9	7.8	-47.60	-13	34.60
QPSK 5MHz Bandwidth_RB1#0, High channel								
844.9	33.13	H	-63.3	1.32	0	-64.62	-13	51.62
645.5	32.41	V	-64.9	1.17	0	-66.07	-13	53.07
1427	60.59	H	-53.7	0.9	7.8	-46.80	-13	33.80
1427	61.78	V	-53.2	0.9	7.8	-46.30	-13	33.30
LTE Band 38 (30MHz-27GHz)								
QPSK 5MHz Bandwidth_RB1#0, Low channel								
844.9	33.62	H	-62.9	1.32	0	-64.22	-25	39.22
647.8	32.91	V	-64.4	1.17	0	-65.57	-25	40.57
5145	56.95	H	-55.6	2.6	10.6	-47.60	-25	22.60
5145	56.32	V	-55.7	2.6	10.6	-47.70	-25	22.70
QPSK 5MHz Bandwidth_RB1#0, Middle channel								
844.9	33.10	H	-63.4	1.32	0	-64.72	-25	39.72
645.6	32.71	V	-64.6	1.17	0	-65.77	-25	40.77
5190	57.69	H	-54.8	2.4	10.6	-46.60	-25	21.60
5190	56.98	V	-55.1	2.4	10.6	-46.90	-25	21.90
QPSK 5MHz Bandwidth_RB1#0, High channel								
844.9	33.22	H	-63.2	1.32	0	-64.52	-25	39.52
645.5	32.54	V	-64.8	1.17	0	-65.97	-25	40.97
5235	58.57	H	-53.9	2.4	10.6	-45.70	-25	20.70
5235	57.83	V	-54.2	2.4	10.6	-46.00	-25	21.00

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 41 (30MHz-27GHz)								
QPSK 5MHz Bandwidth_RB1#0, Low channel								
844.9	33.23	H	-63.2	1.32	0	-64.52	-25	39.52
648.7	32.05	V	-65.3	1.17	0	-66.47	-25	41.47
5075	56.71	H	-55.9	2.6	10.6	-47.90	-25	22.90
5075	55.92	V	-56.1	2.6	10.6	-48.10	-25	23.10
QPSK 5MHz Bandwidth_RB1#0, Middle channel								
844.9	33.50	H	-63	1.32	0	-64.32	-25	39.32
644	32.20	V	-65.1	1.17	0	-66.27	-25	41.27
5190	57.24	H	-55.2	2.4	10.6	-47.00	-25	22.00
5190	56.63	V	-55.4	2.4	10.6	-47.20	-25	22.20
QPSK 5MHz Bandwidth_RB1#0, High channel								
844.9	33.00	H	-63.5	1.32	0	-64.82	-25	39.82
649	32.80	V	-64.5	1.17	0	-65.67	-25	40.67
5305	58.45	H	-53.5	2.2	10.6	-45.10	-25	20.10
5305	57.74	V	-53.9	2.2	10.6	-45.50	-25	20.50
LTE Band 66 (30MHz-18GHz)								
QPSK 1.4MHz Bandwidth_RB1#0, Low channel								
844.9	33.40	H	-63.1	1.32	0	-64.42	-13	51.42
649	32.77	V	-64.6	1.17	0	-65.77	-13	52.77
3421.4	52.98	H	-60.8	1.7	9.6	-52.90	-13	39.90
3421.4	52.35	V	-61.1	1.7	9.6	-53.20	-13	40.20
QPSK 1.4MHz Bandwidth_RB1#0, Middle channel								
844.9	33.18	H	-63.3	1.32	0	-64.62	-13	51.62
649	32.71	V	-64.6	1.17	0	-65.77	-13	52.77
3490	53.31	H	-60.2	1.8	9.7	-52.30	-13	39.30
3490	52.73	V	-60.5	1.8	9.7	-52.60	-13	39.60
QPSK 1.4MHz Bandwidth_RB1#0, High channel								
844.9	33.44	H	-63	1.32	0	-64.32	-13	51.32
649	32.77	V	-64.6	1.17	0	-65.77	-13	52.77
3558.6	54.22	H	-58.5	1.9	9.6	-50.80	-13	37.80
3558.6	53.67	V	-58.8	1.9	9.6	-51.10	-13	38.10

Note 1: The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.
Note 2:
Absolute Level = Substituted Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level

RF Conducted data

Please refer to Annex "Appendix A1~A9" for detail test data.

EUT PHOTOGRAPHS

Please refer to the attachment 2601S50985E-RF-EXP External photo and 2601S50985E-RF-INP Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2601S50985E-RF-TSPB Test Setup photo.

******* END OF REPORT *******