Certificate #4312.01

FCC TEST REPORT

Product Name:	Smartphone
Trade Mark:	INVENTUS
Model No.:	Inventus PD1
Add. Model No.:	N/A
Report Number:	26052925036RFM-1
Test Standards:	FCC 47 CFR Part 22 Subpart H FCC 47 CFR Part 24 Subpart E FCC 47 CFR Part 27 Subpart L
FCC ID:	2BDXXPD1
Test Result:	PASS
Date of Issue:	September 18, 2026

Prepared for:

INVENTUS GROUP LTD
C/O FLB ACCOUNTANTS LLP 1010 ESKDALE ROAD
WINNERSH TRIANGLE WOKINGHAM UNITED KINGDOM RG41 5TS

Prepared by:

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Date: September 18, 2026

Version

Version No.	Date	Description
V1.0	September 18, 2026	Original

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1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	INVENTUS GROUP LTD
Address of Applicant:	C/O FLB ACCOUNTANTS LLP 1010 ESKDALE ROAD WINNERSH TRIANGLE WOKINGHAM UNITED KINGDOM RG41 5TS
Manufacturer:	INVENTUS GROUP LTD
Address of Manufacturer:	C/O FLB ACCOUNTANTS LLP 1010 ESKDALE ROAD WINNERSH TRIANGLE WOKINGHAM UNITED KINGDOM RG41 5TS

1.2 EUT INFORMATION

1.2.1 General Description of EUT

Product Name:	Smartphone		
Model No.:	Inventus PD1		
Trade Mark:	INVENTUS		
DUT Stage:	Identical Prototype		
EUT Supports Function: (Provided by the customer)	GSM Bands:	GSM 850/ PCS 1900	
	UTRA Bands:	Band II/ Band IV/ Band V	
	E-UTRA Bands:	FDD Band 2/ 4/ 5/ 7/ 12/ 13/ 17/ 25/ 26/ 30/ 66/ 71	
		TDD Band 38/ 41/ 42/ 43/ 48	
	NR Bands:	FDD n2/ 5/ 7/ 12/ 25/ 26/ 66/ 71	
		TDD n38/ 41/ 77/ 78	
	2.4 GHz ISM Band:	IEEE 802.11b/g/n/ax	
		Bluetooth V5.4	
	U-NII 5 GHz Bands:	5 150 - 5 250 MHz	IEEE 802.11a/n/ac/ax
		5 250 - 5 350 MHz	IEEE 802.11a/n/ac/ax
		5 470 - 5 725 MHz	IEEE 802.11a/n/ac/ax
		5 725 - 5 850 MHz	IEEE 802.11a/n/ac/ax
	U-NII 6 GHz Bands:	5 925 - 6 425 MHz	IEEE 802.11ax
		6 425 - 6 525 MHz	IEEE 802.11ax
		6 525 - 6 875 MHz	IEEE 802.11ax
		6 875 - 7 125 MHz	IEEE 802.11ax
	RNSS Bands:	1559 - 1610 MHz	GPS/ Galileo/ GLONASS/ BDS
	NFC:	13.553 MHz to 13.567 MHz	
	WPTs (Only Rx):	119 kHz to 140 kHz	
Software Version:	SW1_V4.10_GPD1INVS_ROW_A16_040826 (Provided by the customer)		
Hardware Version:	HW1 (Provided by the customer)		
Sample Received Date:	May 25, 2026		
Sample Tested Date:	June 2, 2026 to July 25, 2026		
Remark: The above EUT's information was provided by customer. Please refer to the specifications or user's manual for more detailed description.			

1.2.2 Description of Accessories

Refer to Report 26052925036EMC-1 for accessories.

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Support Networks:	GSM, GPRS, EDGE, WCDMA, HSDPA, HSUPA, HSPA+	
Type of Modulation:	GSM/GPRS:	GMSK
	EDGE:	GMSK, 8PSK
	WCDMA	UP Link Modulation: QPSK, 16-QAM Down Link Modulation: QPSK, 16-QAM, 64-QAM
Frequency Range:	GSM/GPRS/EDGE 850:	824.2-848.8 MHz
	GSM/GPRS/EDGE 1900:	1850.2-1909.8 MHz
	WCDMA Band II:	1852.4-1907.6 MHz
	WCDMA Band IV:	1712.4-1752.6 MHz
	WCDMA Band V:	826.4-846.6 MHz
Max. ERP/EIRP:	GSM/GPRS 850:	26.85 dBm
	EDGE 850:	21.35 dBm
	GSM/GPRS 1900:	31.3 dBm
	EDGE 1900:	27.3 dBm
	WCDMA Band II:	25.3 dBm
	WCDMA Band IV:	24.6 dBm
	WCDMA Band V:	17.35 dBm
Emission Designator:	GSM/GPRS 850:	248KGXW
	EDGE 850:	248KG7W
	GSM/GPRS 1900:	246KGXW
	EDGE 1900:	253KG7W
	WCDMA Band II:	4M15F9W
	WCDMA Band IV:	4M16F9W
	WCDMA Band V:	4M18F9W
Antenna Type: (Provided by the customer)	PIFA Antenna	
Antenna Gain: (Provided by the customer)	GSM 850:	-4.2 dBi
	PCS 1900:	0.3 dBi
	WCDMA Band II:	0.3 dBi
	WCDMA Band IV:	0.6 dBi
	WCDMA Band V:	-4.2 dBi
GPRS/EDGE Class:	Class 33	
Sample No.:	Radiated: S202606088878-ZJC02/4	
	Conducted: S202605258698-ZJB07/12	
Normal Test Voltage:	3.87 Vdc	
Extreme Test Voltage:	3.5 to 4.45 Vdc	
Extreme Test Temperature:	-30 ℃ to +50 ℃	

1.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested with associated equipment below.

1) Support Equipment

Description	Manufacturer	Model No.	Serial Number	Supplied by
Dummy battery	N/A	N/A	S202605218680-PJA03	Applicant

2) Support Cable

Cable No.	Description	Connector	Length	Supplied by
1	Antenna Cable	SMA	0.3 Meter	Applicant

1.5 TEST LOCATION

Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: 16/F., Block A, Building 6, Baoneng Science and Technology Park, Longhua Street, Longhua District, Shenzhen, Guangdong, China
Telephone: +86 (0) 755 2823 0888
Fax: +86 (0) 755 2823 0886

1.6 TEST FACILITY

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

CNAS-Lab Code: L9069
The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

A2LA-Lab Certificate No.: 4312.01
Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

ISED Wireless Device Testing Laboratories
CAB identifier: CN0032

FCC Accredited Lab.
Designation Number: CN1194
Test Firm Registration Number: 259480

1.7 DEVIATION FROM STANDARDS

None.

1.8 ABNORMALITIES FROM STANDARD CONDITIONS

None.

1.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

1.10 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted Output Power	±0.7 dB
2	99%&26dB Bandwidth	±1.86 %
3	Emission Mask	±2.7 dBm
4	Spurious emissions at antenna terminals	±2.7 dBm
5	Field strength of spurious radiation	30 MHz-1 GHz: ±4.9 dB 1 GHz-18 GHz: ±4.8 dB 18 GHz-40 GHz: ±5.1 dB
6	Frequency stability	±6.5 x 10^{-8}
7	Humidity	±3.9 %
8	Temperature	±0.62 ℃
9	DC Voltages	±0.68 %

2. TEST SUMMARY

FCC 47 CFR Part 22 Subpart H Test Cases			
Test Item	**Test Requirement**	**Test Method**	**Result**
Effective Radiated Power (ERP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 22.913(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 22.917(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 22.917(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 24 Subpart E Test Cases			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 24.232(c)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 24.232(d)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) & FCC 47 CFR Part 24.238(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 24.238(a)(b)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 24.235	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

FCC 47 CFR Part 27 Subpart L Test Cases			
Test Item	**Test Requirement**	**Test Method**	**Result**
Equivalent Isotropic Radiated Power (EIRP)	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Conducted Output Power	FCC 47 CFR Part 2.1046(a) & FCC 47 CFR Part 27.50(d)(4)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Peak-to-average ratio	FCC 47 CFR Part 27.50(d)(5)	KDB 971168 D01v03r01	PASS
99%&26dB Bandwidth	FCC 47 CFR Part 2.1049(h) FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	FCC 47 CFR Part 27.53(h)(1)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	FCC 47 CFR Part 2.1051 & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 27.53(h)	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS
Frequency stability	FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 27.54	ANSI C63.26-2015 & KDB 971168 D01v03r01	PASS

Disclaimer and Explanations:
The declared of product specification and data (e.g. antenna gain, RF specification, etc) for EUT presented in the report are provided by the customer, and the customer takes all the responsibilities for the accuracy of product specification.

3. EQUIPMENT LIST

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☑	3 m SAC	ETS-Lindgren	3 m	Euroshiedpn-CT001270-1317	11-Nov-2023	10-Nov-2026
☑	Loop Antenna	ETS-Lindgren	6502	00202525	26-Jan-2026	25-Jan-2027
☑	Broadband Antenna	ETS-Lindgren	3142E	00201566	26-Oct-2025	25-Oct-2026
☑	6dB Attenuator	Talent	RA6A5-N-18	18103001	26-Oct-2025	25-Oct-2026
☑	Double-Ridged Waveguide Horn Antenna(Pre-amplifier)	ETS-Lindgren	3117-PA	00201541	21-Mar-2026	20-Mar-2027
☑	Pre-amplifier	ETS-Lindgren	00118385	00201874	21-Mar-2026	20-Mar-2027
☑	Double-Ridged Waveguide Horn Antenna(Pre-amplifier)	ETS-Lindgren	3116C-PA	00202652	30-Oct-2025	29-Oct-2026
☑	Pre-amplifier	ETS-Lindgren	00118384	00202652	24-Oct-2025	23-Oct-2026
☑	Receiver	ROHDE & SCHWARZ	ESIB26	100114	24-Oct-2025	23-Oct-2026
☑	Pre-amplifier	HP	8447F	2805A02960	24-Oct-2025	23-Oct-2026
☑	Multi device Controller	ETS-Lindgren	7006-001	160105.00	N/A	N/A
☑	Test Software	Audix	e3	Software Version: 9.160323		

RF Conducted Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date**	**Cal. Due date**
☑	EXA Spectrum Analyzer	KEYSIGHT	N9020A	MY51286807	24-Oct-2025	23-Oct-2026
☑	DC Source	Agilent	66319B	MY43000795	24-Oct-2025	23-Oct-2026
☑	Temp & Humidity chamber	Votisch	VT4002	58566133290020	20-Mar-2026	19-Mar-2027
☑	Wideband Radio Communication Tester	R&S	CMW500	119583	20-Mar-2026	19-Mar-2027
☑	Wideband Radio Communication Tester	R&S	CMW500	120932	20-Mar-2026	19-Mar-2027
☑	Test Software	Tonscend	JS1120 RF Auto Test System	Software Version: 3.1.46(234G)		

4. TEST CONFIGURATION

4.1 ENVIRONMENTAL CONDITIONS FOR TESTING

Test Environment	Selected Values During Tests		
Test Condition	Ambient		
	Temperature (°C)	Voltage (V)	Relative Humidity (%)
TN/VN	+15 to +35	3.87	20 to 75
TL/VL	-30	3.5	20 to 75
TH/VL	+50	3.5	20 to 75
TL/VH	-30	4.45	20 to 75
TH/VH	+50	4.45	20 to 75

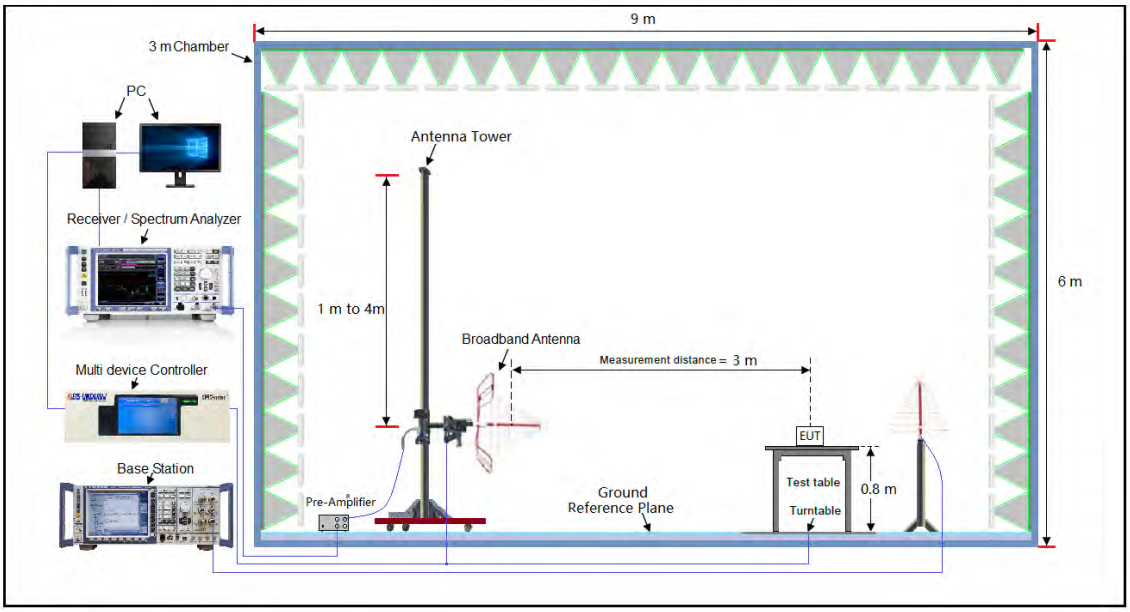
Remark:

1) The EUT just work in such extreme temperature of -30 ℃ to +50 °C and the extreme voltage of 3.5 V to 4.45 V, so here the EUT is tested in the temperature of -30 ℃ to +50 °C and the voltage of 3.5 V to 4.45 V.
2) VN: Normal Voltage; TN: Normal Temperature;
TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;
VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

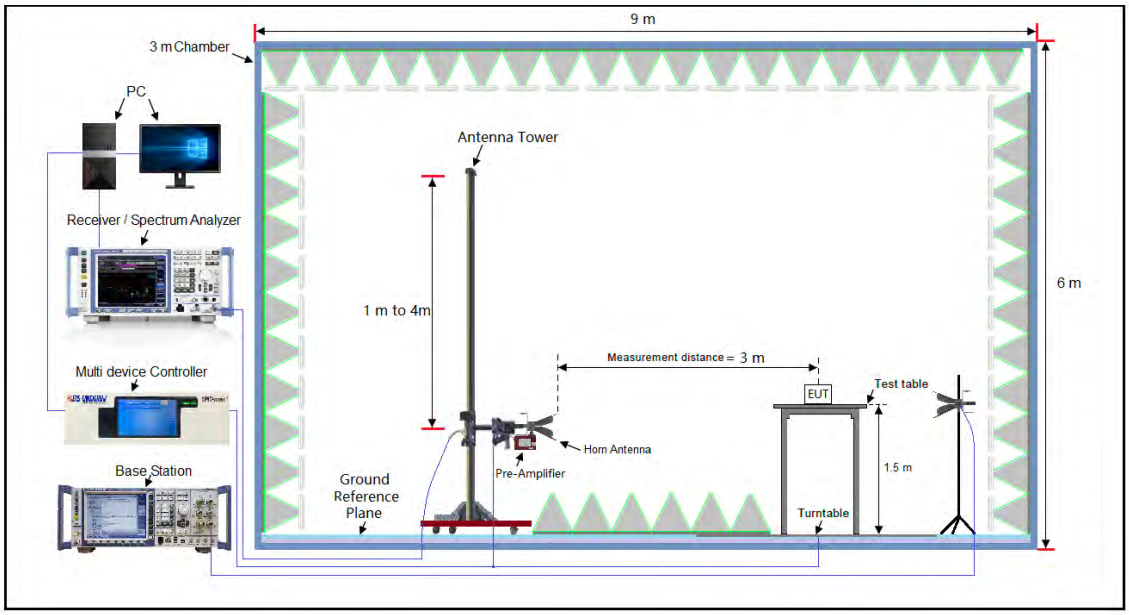
4.2 TEST SETUP

4.2.1 For Radiated Emissions test setup

Radiated Emissions 30MHz to 1GHz Test setup

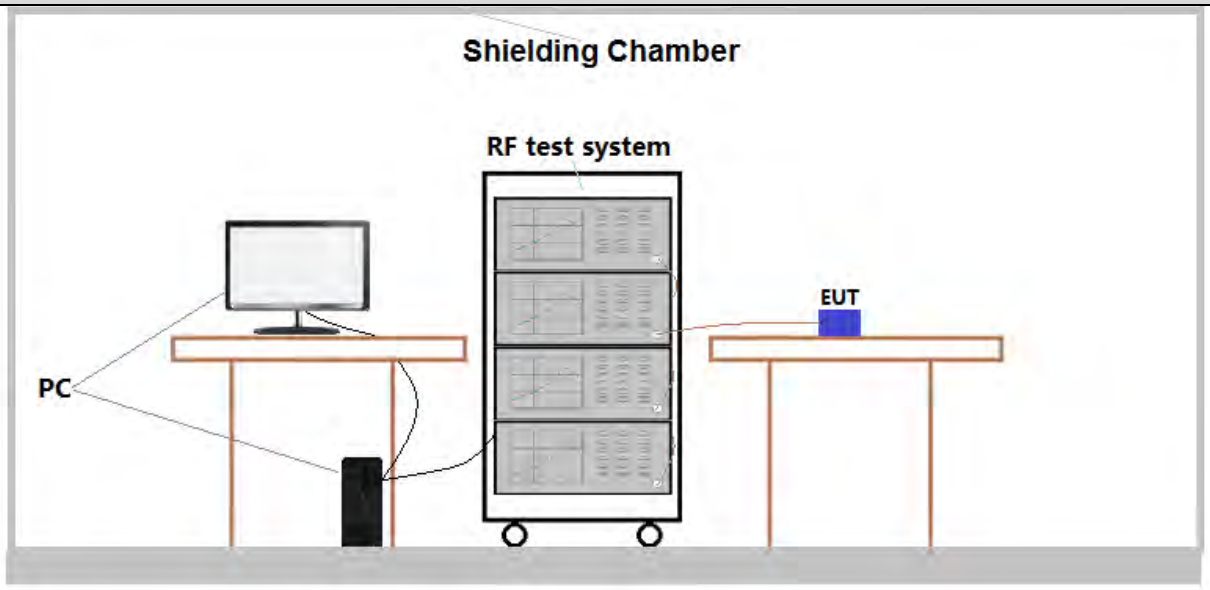


Radiated Emissions Above 1GHz Test setup

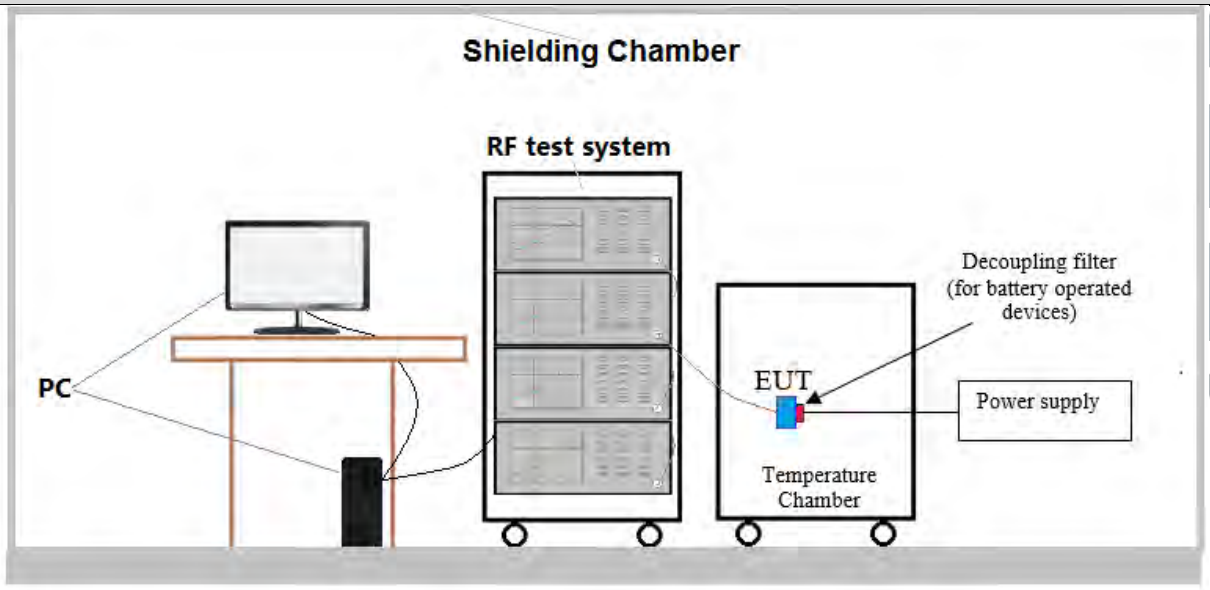


4.2.2 For Conducted RF test setup

Normal Environment



Extreme Environment



4.3 TEST CHANNELS

Bands	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS/ EDGE850	Tx (824 MHz ~ 849 MHz)	Channel 128	Channel 190	Channel 251
		824.2 MHz	836.6 MHz	848.8 MHz
WCDMA band V	Tx (824 MHz ~ 849 MHz)	Channel 4132	Channel 4182	Channel 4233
		826.4 MHz	836.4 MHz	846.6 MHz

Bands	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS/ EDGE1900	Tx (1850 MHz-1910 MHz)	Channel 512	Channel 661	Channel 810
		1850.2 MHz	1880.0 MHz	1909.8 MHz
WCDMA Band II	Tx (1850 MHz-1910 MHz)	Channel 9262	Channel 9400	Channel 9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz

Bands	Tx/Rx Frequency	RF Channel		
		Low(L)	Middle(M)	High(H)
WCDMA Band IV	Tx (1710 MHz-1755 MHz)	Channel 1312	Channel 1412	Channel 1513
		1712.4 MHz	1732.4 MHz	1752.6 MHz

4.4 SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. It was powered by a 3.87Vdc battery. Only the worst case data were recorded in this test report.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X/Y/Z axis, and antenna ports.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000MHz. The resolution is 1 MHz or greater for frequencies above 1000MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

4.5 PRE-SCAN

Pre-scan under all rate at lowest middle and highest channel, find the transmitter power as below:

SIM 1 Card Conducted transmitter power measurement result.

GSM 850 Maximum Average Power (dBm)				Max. Tune-up Power
Channel	128	190	251	
Frequency(MHz)	824.2 MHz	836.6 MHz	848.8 MHz	
GSM (GMSK, 1Tx-slot)	33.13	33.21	33.13	33.5
GPRS (GMSK, 1Tx-slot)	33.18	33.08	32.99	33.5
GPRS (GMSK, 2Tx-slot)	32.01	32.02	31.96	32.5
GPRS (GMSK, 3Tx-slot)	29.81	29.87	29.83	30.5
GPRS (GMSK, 4Tx-slot)	28.60	28.69	28.71	29.0
EDGE (8PSK, 1Tx-slot)	27.59	27.20	26.87	28.0
EDGE (8PSK, 2Tx-slot)	26.32	26.20	25.79	27.0
EDGE (8PSK, 3Tx-slot)	24.23	23.98	23.63	24.5
EDGE (8PSK, 4Tx-slot)	22.83	22.44	22.52	23.5

GSM 850 Maximum Average Power (dBm)				Max. Tune-up Power
Channel	512	661	810	
Frequency(MHz)	1850.2 MHz	1880.0 MHz	1909.8 MHz	
GSM (GMSK, 1Tx-slot)	30.32	30.38	30.35	31.0
GPRS (GMSK, 1Tx-slot)	30.33	30.34	30.29	31.0
GPRS (GMSK, 2Tx-slot)	29.23	29.26	29.21	30.0
GPRS (GMSK, 3Tx-slot)	27.28	27.31	27.30	28.0
GPRS (GMSK, 4Tx-slot)	26.15	26.19	26.18	26.5
EDGE (8PSK, 1Tx-slot)	26.68	26.32	26.15	27.0
EDGE (8PSK, 2Tx-slot)	25.63	25.40	25.21	26.0
EDGE (8PSK, 3Tx-slot)	23.64	23.35	23.10	24.0
EDGE (8PSK, 4Tx-slot)	22.55	22.05	22.29	23.0

WCDMA Band II Maximum Average Power (dBm)				Max. Tune-up Power
Channel	9262	9400	9538	
Frequency (MHz)	1852.4 MHz	1880.0 MHz	1907.6 MHz	
RMC 12.2K	23.44	**24.26**	23.79	25.0
HSDPA Subtest-1	22.49	23.29	22.86	24.0
HSDPA Subtest-2	21.98	22.82	22.42	23.5
HSDPA Subtest-3	22.04	22.83	22.43	23.5
HSDPA Subtest-4	22.00	22.80	22.43	23.5
HSUPA Subtest-1	20.46	21.29	20.89	22.0
HSUPA Subtest-2	20.48	21.23	20.92	21.5
HSUPA Subtest-3	21.48	22.32	21.90	23.0
HSUPA Subtest-4	20.03	20.80	20.44	21.5
HSUPA Subtest-5	21.42	22.34	21.93	23.0

WCDMA Band IV Maximum Average Power (dBm)				Max. Tune-up Power
Channel	1312	1412	1513	
Frequency (MHz)	1712.4 MHz	1732.4 MHz	1752.6 MHz	
RMC 12.2K	23.46	23.58	23.40	24.0
HSDPA Subtest-1	22.62	22.50	22.43	23.0
HSDPA Subtest-2	22.10	22.01	21.96	22.5
HSDPA Subtest-3	22.17	22.06	22.01	22.5
HSDPA Subtest-4	22.13	22.05	21.94	22.5
HSUPA Subtest-1	20.60	20.50	20.43	21.0
HSUPA Subtest-2	20.61	20.53	20.47	21.0
HSUPA Subtest-3	20.63	21.52	21.44	22.0
HSUPA Subtest-4	20.14	20.04	19.94	20.5
HSUPA Subtest-5	21.57	21.49	21.38	22.0

WCDMA Band V Maximum Average Power (dBm)				Max. Tune-up Power
Channel	4132	4182	4233	
Frequency (MHz)	826.4 MHz	836.4 MHz	846.6 MHz	
RMC 12.2K	23.62	23.64	23.56	24.0
HSDPA Subtest-1	22.67	22.70	22.61	23.0
HSDPA Subtest-2	22.20	22.18	22.11	22.5
HSDPA Subtest-3	22.23	22.21	22.12	22.5
HSDPA Subtest-4	22.23	22.19	22.09	22.5
HSUPA Subtest-1	20.67	20.66	20.56	21.0
HSUPA Subtest-2	20.69	20.69	20.60	21.0
HSUPA Subtest-3	20.68	21.71	20.60	22.0
HSUPA Subtest-4	20.23	20.22	20.12	20.5
HSUPA Subtest-5	21.65	21.67	21.59	22.0

Pre-scan all bandwidth and RB, find worse case mode are chosen to the report, the worse mode applicability and tested channel detail as below:

Band	Radiated	Conducted
GSM/GPRS/ EDGE 850/1900	1) GSM (GMSK, 1Tx-slot) Link 2) GPRS (GMSK, 1Tx-slot) Link 3) EDGE (8PSK, 1Tx-slot) Link	1) GSM (GMSK,1Tx-slot) Link 2) GPRS (GMSK, 1Tx-slot) Link 3) EDGE (8PSK, 1Tx-slot) Link
WCDMA Band II/IVV	RMC 12.2kbps Link	RMC 12.2kbps Link

5. RADIO TECHNICAL REQUIREMENTS SPECIFICATION

5.1 REFERENCE DOCUMENTS FOR TESTING

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 22	Public Mobile Services
3	FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services
4	FCC 47 CFR Part 24	Personal Communications Services
5	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
6	KDB 971168 D01	KDB 971168 D01 Power Meas License Digital Systems v03r01
7	KDB 412172 D01 Determining ERP and EIRP v01r01	Guidelines for determining the effective radiated power (ERP) and isotropically radiated power (EIRP) of an RF transmitting system

5.2 MAXIMUM ERP/EIRP

Test Requirement: FCC 47 CFR Part 2.1046(a),
FCC 47 CFR Part 22.913(a),
FCC 47 CFR Part 24.232(c),
FCC 47 CFR Part 27.50(d)(4)

Test Method: KDB 971168 D01v03r01 Section 5.6 & ANSI C63.26-2015

Limit:

FCC 47 CFR Part 22.913(a)

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 47 CFR Part 24.232(c)

Mobile and portable stations are limited to 2 watts EIRP.

FCC 47 CFR Part 27.50(d)(4)

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

Test Procedure:

According to KDB 412172 D01 Power Approach,

- **ERP or EIRP = $P_T + G_T - L_C$**
- **ERP = EIRP -2.15**

where

- **P_T** = transmitter output power, expressed in dBW, dBm, or PSD;
- **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.

Test Setup: Refer to section 4.2.1 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: See table below

Band		Ant. Gain (dBi)	Max. Tune-up Power	Maximum ERP/EIRP (dBm)	Limit (dBm)	Maximum ERP/EIRP (W)	Limit (W)	Result
PCS 1900	GSM	0.3	31.0	31.3	33.01	1.3490	2	Pass
	GPRS		31.0	31.3	33.01	1.3490	2	Pass
	EGPRS		27.0	27.3	33.01	0.5370	2	Pass
GSM 850	GSM	-4.5	33.5	26.85	38.45	0.4842	7	Pass
	GPRS		33.5	26.85	38.45	0.4842	7	Pass
	EGPRS		28.0	21.35	38.45	0.1365	7	Pass

Band		Ant. Gain (dBi)	Max. Tune-up Power	Maximum ERP/EIRP (dBm)	Limit (dBm)	Maximum ERP/EIRP (W)	Limit (W)	Result
WCDMA Band II	RMC 12.2K	0.3	25.0	25.3	33.01	0.3388	2	Pass
	HSDPA		24.0	24.3	33.01	0.2692	2	Pass
	HSUPA		23.0	23.3	33.01	0.2138	2	Pass
WCDMA Band IV	RMC 12.2K	0.6	24.0	24.6	30	0.2884	1	Pass
	HSDPA		23.0	23.6	30	0.2291	1	Pass
	HSUPA		22.0	22.6	30	0.1820	1	Pass
WCDMA Band V	RMC 12.2K	-4.2	24.0	17.35	38.45	0.0543	7	Pass
	HSDPA		23.0	16.35	38.45	0.0432	7	Pass
	HSUPA		22.0	15.35	38.45	0.0343	7	Pass

Note: The maximum ERP/EIRP is calculated from max output power and antenna gain, the antenna gain provided by the customer, and the customer takes all the responsibilities for the accuracy of antenna gain.

5.3 CONDUCTED OUTPUT POWER

Test Requirement: FCC 47 CFR Part 2.1046(a),
FCC 47 CFR Part 22.913(a),
FCC 47 CFR Part 24.232(c),
FCC 47 CFR Part 27.50(d)(4)

Test Method: KDB 971168 D01v03r01 & ANSI C63.26-2015

Limit:

FCC 47 CFR Part 22.913(a)

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC 47 CFR Part 24.232(c)

Mobile and portable stations are limited to 2 watts EIRP.

FCC 47 CFR Part 27.50(d)(4)

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

Test Procedure:

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA, CDMA2000, and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data: The full result refer to section 4.5 for details.

5.4 PEAK-TO-AVERAGE RATIO

Test Requirement:	FCC 47 CFR Part 22.913(a), FCC 47 CFR Part 24.232(c), FCC 47 CFR Part 27.50(d)(5)
Test Method:	KDB 971168 D01v03r01 Section 5.7
Limit:	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 Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer.

a) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth
b) Set the number of counts to a value that stabilizes the measured CCDF curve
c) Record the maximum PAPR level associated with a probability of 0.1 %

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup:	Refer to section 4.2.2 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Link mode
Test Results:	Pass
Test Data:	**Please refer to Appendix A & B**

5.599%&26DB BANDWIDTH

Test Requirement:	FCC 47 CFR Part 2.1049(h), FCC 47 CFR Part 22.917(b), FCC 47 CFR Part 24.238(b), FCC 47 CFR Part 27.53(h)
Test Method:	ANSI C63.26-2015 & KDB 971168 D01v03r01 Section 4
Limit:	No Limit, for reporting purposes only.

Test Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup:	Refer to section 4.2.2 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Link mode
Test Results:	Pass
Test Data:	**Please refer to Appendix A & B**

5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement:	FCC 47 CFR Part 2.1051, FCC 47 CFR Part 22.917(a), FCC 47 CFR Part 24.238(a), FCC 47 CFR Part 27.53(h)(1)
Test Method:	ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

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. The emission limit equal to -13 dBm.

Test Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer.

For each band edge measurement:

1) Set the spectrum analyzer span to include the block edge frequency.
2) Set a marker to point the corresponding band edge frequency in each test case.
3) Set display line at -13 dBm
4) Set resolution bandwidth to at least 1% of emission bandwidth.
5) Set spectrum analyzer with RMS detector.
6) Record the max trace plot into the test report

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup:	Refer to section 4.2.2 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Link mode
Test Results:	**Please refer to Appendix A & B**

5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Test Requirement:	FCC 47 CFR Part 2.1051, FCC 47 CFR Part 22.917(a)(b), FCC 47 CFR Part 24.238(a)(b), FCC 47 CFR Part 27.53(h)(1)
Test Method:	ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

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. The emission limit equal to -13 dBm.

Test Procedure:

The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range. b. Measuring frequency range is from 30 MHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup:	Refer to section 4.2.2 for details.
Instruments Used:	Refer to section 3 for details
Test Mode:	Link mode
Test Results:	**Please refer to Appendix A & B**

5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: FCC 47 CFR Part 2.1053, FCC 47 CFR Part 22.917(a)(b), FCC 47 CFR Part 24.238(a)(b), FCC 47 CFR Part 27.53(h)(1)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01 Section 7

Limits:

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. The emission limit equal to -13 dBm.

Test Setup: Refer to section 4.2.1 for details.

Test Procedures: KDB 971168 D01v03r01 Section 7

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The worst measurement data as follows:

GSM 850							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	50.461	-69.33	24.46	-44.87	-13.00	-31.87	Horizontal
2	220.724	-71.20	28.34	-42.86	-13.00	-29.86	Horizontal
3	280.294	-69.36	30.58	-38.78	-13.00	-25.78	Horizontal
4	1648.400	-57.09	2.01	-55.08	-13.00	-42.08	Horizontal
5	2472.600	-58.10	6.26	-51.84	-13.00	-38.84	Horizontal
6	17308.200	-63.88	20.41	-43.47	-13.00	-30.47	Horizontal
7	37.565	-71.92	31.09	-40.83	-13.00	-27.83	Vertical
8	121.462	-63.09	22.89	-40.20	-13.00	-27.20	Vertical
9	554.171	-77.09	39.56	-37.53	-13.00	-24.53	Vertical
10	1648.400	-57.24	2.01	-55.23	-13.00	-42.23	Vertical
11	2472.600	-58.54	6.26	-52.28	-13.00	-39.28	Vertical
12	17308.200	-64.16	20.41	-43.75	-13.00	-30.75	Vertical
Middle Channel							
1	52.634	-69.12	23.60	-45.52	-13.00	-32.52	Horizontal
2	219.179	-70.13	28.31	-41.82	-13.00	-28.82	Horizontal
3	286.265	-69.97	30.97	-39.00	-13.00	-26.00	Horizontal
4	1673.200	-58.01	2.23	-55.78	-13.00	-42.78	Horizontal
5	2509.800	-58.88	6.38	-52.50	-13.00	-39.50	Horizontal
6	17568.600	-65.79	20.99	-44.80	-13.00	-31.80	Horizontal
7	42.931	-66.96	27.84	-39.12	-13.00	-26.12	Vertical
8	122.319	-62.91	22.94	-39.97	-13.00	-26.97	Vertical
9	280.294	-73.02	30.58	-42.44	-13.00	-29.44	Vertical
10	1673.200	-57.77	2.23	-55.54	-13.00	-42.54	Vertical
11	2509.800	-59.37	6.38	-52.99	-13.00	-39.99	Vertical
12	17568.600	-65.70	20.99	-44.71	-13.00	-31.71	Vertical
Highest Channel							
1	50.461	-70.27	24.46	-45.81	-13.00	-32.81	Horizontal
2	220.724	-70.24	28.34	-41.90	-13.00	-28.90	Horizontal
3	288.284	-71.02	31.13	-39.89	-13.00	-26.89	Horizontal
4	1697.600	-57.18	2.44	-54.74	-13.00	-41.74	Horizontal
5	2546.400	-59.25	6.53	-52.72	-13.00	-39.72	Horizontal
6	17824.800	-66.11	21.81	-44.30	-13.00	-31.30	Horizontal
7	39.182	-70.60	29.87	-40.73	-13.00	-27.73	Vertical
8	120.612	-62.85	22.95	-39.90	-13.00	-26.90	Vertical
9	282.270	-73.92	30.70	-43.22	-13.00	-30.22	Vertical
10	1697.600	-56.66	2.44	-54.22	-13.00	-41.22	Vertical
11	2546.400	-58.58	6.53	-52.05	-13.00	-39.05	Vertical
12	17824.800	-66.01	21.81	-44.20	-13.00	-31.20	Vertical

PCS 1900							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
Lowest Channel							
1	219.179	-70.59	28.31	-42.28	-13.00	-29.28	Horizontal
2	282.270	-69.70	30.70	-39.00	-13.00	-26.00	Horizontal
3	868.886	-79.41	44.75	-34.66	-13.00	-21.66	Horizontal
4	3700.400	-58.36	10.95	-47.41	-13.00	-34.41	Horizontal
5	5550.600	-63.31	12.32	-50.99	-13.00	-37.99	Horizontal
6	16651.800	-64.83	19.71	-45.12	-13.00	-32.12	Horizontal
7	37.565	-68.57	31.09	-37.48	-13.00	-24.48	Vertical
8	124.050	-62.52	23.11	-39.41	-13.00	-26.41	Vertical
9	284.261	-74.26	30.82	-43.44	-13.00	-30.44	Vertical
10	3700.400	-62.13	10.95	-51.18	-13.00	-38.18	Vertical
11	5550.600	-62.43	12.32	-50.11	-13.00	-37.11	Vertical
12	16651.800	-63.43	19.71	-43.72	-13.00	-30.72	Vertical
Middle Channel							
1	216.120	-70.40	28.12	-42.28	-13.00	-29.28	Horizontal
2	282.270	-69.93	30.70	-39.23	-13.00	-26.23	Horizontal
3	844.803	-78.85	44.32	-34.53	-13.00	-21.53	Horizontal
4	3760.000	-61.22	11.30	-49.92	-13.00	-36.92	Horizontal
5	3760.000	-61.22	11.30	-49.92	-13.00	-36.92	Horizontal
6	16920.000	-63.84	19.77	-44.07	-13.00	-31.07	Horizontal
7	39.182	-70.02	29.87	-40.15	-13.00	-27.15	Vertical
8	123.181	-62.77	22.86	-39.91	-13.00	-26.91	Vertical
9	821.387	-80.14	43.99	-36.15	-13.00	-23.15	Vertical
10	3760.000	-60.55	11.30	-49.25	-13.00	-36.25	Vertical
11	5640.000	-61.62	12.52	-49.10	-13.00	-36.10	Vertical
12	16920.000	-63.83	19.77	-44.06	-13.00	-31.06	Vertical
Highest Channel							
1	52.634	-69.25	23.60	-45.65	-13.00	-32.65	Horizontal
2	219.179	-70.89	28.31	-42.58	-13.00	-29.58	Horizontal
3	284.261	-70.19	30.82	-39.37	-13.00	-26.37	Horizontal
4	3819.600	-60.84	11.65	-49.19	-13.00	-36.19	Horizontal
5	5729.400	-63.55	12.71	-50.84	-13.00	-37.84	Horizontal
6	17168.400	-62.84	20.12	-42.72	-13.00	-29.72	Horizontal
7	42.931	-67.75	27.84	-39.91	-13.00	-26.91	Vertical
8	123.181	-63.72	22.86	-40.86	-13.00	-27.86	Vertical
9	282.270	-73.68	30.70	-42.98	-13.00	-29.98	Vertical
10	3819.600	-60.20	11.65	-48.55	-13.00	-35.55	Vertical
11	5729.400	-63.15	12.71	-50.44	-13.00	-37.44	Vertical
12	17168.400	-63.90	20.12	-43.78	-13.00	-30.78	Vertical

WCDMA Band II							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
RMC 12.2kbps _ Lowest Channel							
1	220.724	-70.12	28.34	-41.78	-13.00	-28.78	Horizontal
2	280.294	-69.10	30.58	-38.52	-13.00	-25.52	Horizontal
3	844.803	-79.39	44.32	-35.07	-13.00	-22.07	Horizontal
4	3704.800	-62.63	10.98	-51.65	-13.00	-38.65	Horizontal
5	5557.200	-63.43	12.34	-51.09	-13.00	-38.09	Horizontal
6	16671.600	-64.65	19.71	-44.94	-13.00	-31.94	Horizontal
7	36.524	-72.06	31.36	-40.70	-13.00	-27.70	Vertical
8	123.181	-62.59	22.86	-39.73	-13.00	-26.73	Vertical
9	276.382	-73.38	30.13	-43.25	-13.00	-30.25	Vertical
10	3704.800	-62.99	10.98	-52.01	-13.00	-39.01	Vertical
11	5557.200	-63.60	12.34	-51.26	-13.00	-38.26	Vertical
12	16671.600	-64.72	19.71	-45.01	-13.00	-32.01	Vertical
RMC 12.2kbps _ Middle Channel							
1	216.120	-69.78	28.12	-41.66	-13.00	-28.66	Horizontal
2	280.294	-69.05	30.58	-38.47	-13.00	-25.47	Horizontal
3	827.179	-79.41	43.91	-35.50	-13.00	-22.50	Horizontal
4	3760.000	-60.75	11.30	-49.45	-13.00	-36.45	Horizontal
5	5640.000	-61.32	12.52	-48.80	-13.00	-35.80	Horizontal
6	16920.000	-64.20	19.77	-44.43	-13.00	-31.43	Horizontal
7	42.931	-65.75	27.84	-37.91	-13.00	-24.91	Vertical
8	119.767	-63.68	23.19	-40.49	-13.00	-27.49	Vertical
9	286.265	-73.81	30.97	-42.84	-13.00	-29.84	Vertical
10	3760.000	-60.95	11.30	-49.65	-13.00	-36.65	Vertical
11	5640.000	-61.89	12.52	-49.37	-13.00	-36.37	Vertical
12	16920.000	-64.44	19.77	-44.67	-13.00	-31.67	Vertical
RMC 12.2kbps _ Highest Channel							
1	219.179	-71.02	28.31	-42.71	-13.00	-29.71	Horizontal
2	280.294	-69.98	30.58	-39.40	-13.00	-26.40	Horizontal
3	952.000	-79.33	45.21	-34.12	-13.00	-21.12	Horizontal
4	3815.200	-61.91	11.62	-50.29	-13.00	-37.29	Horizontal
5	5722.800	-63.16	12.69	-50.47	-13.00	-37.47	Horizontal
6	17168.400	-63.43	20.12	-43.31	-13.00	-30.31	Horizontal
7	39.182	-69.15	29.87	-39.28	-13.00	-26.28	Vertical
8	122.319	-63.16	22.94	-40.22	-13.00	-27.22	Vertical
9	280.294	-73.74	30.58	-43.16	-13.00	-30.16	Vertical
10	3815.200	-61.68	11.62	-50.06	-13.00	-37.06	Vertical
11	5722.800	-63.49	12.69	-50.80	-13.00	-37.80	Vertical
12	17168.400	-63.66	20.12	-43.54	-13.00	-30.54	Vertical

WCDMA Band IV							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
RMC 12.2kbps_ Lowest Channel							
1	216.120	-71.71	28.12	-43.59	-13.00	-30.59	Horizontal
2	282.270	-69.44	30.70	-38.74	-13.00	-25.74	Horizontal
3	821.387	-78.81	43.99	-34.82	-13.00	-21.82	Horizontal
4	3424.800	-60.09	9.57	-50.52	-13.00	-37.52	Horizontal
5	5137.200	-60.42	11.58	-48.84	-13.00	-35.84	Horizontal
6	17124.000	-63.68	20.03	-43.65	-13.00	-30.65	Horizontal
7	39.182	-69.36	29.87	-39.49	-13.00	-26.49	Vertical
8	124.050	-62.17	23.11	-39.06	-13.00	-26.06	Vertical
9	906.304	-79.51	45.37	-34.14	-13.00	-21.14	Vertical
10	3424.800	-59.90	9.57	-50.33	-13.00	-37.33	Vertical
11	5137.200	-61.43	11.58	-49.85	-13.00	-36.85	Vertical
12	17124.000	-63.81	20.03	-43.78	-13.00	-30.78	Vertical
RMC 12.2kbps _ Middle Channel							
1	222.281	-70.37	28.32	-42.05	-13.00	-29.05	Horizontal
2	282.270	-69.20	30.70	-38.50	-13.00	-25.50	Horizontal
3	868.886	-80.12	44.75	-35.37	-13.00	-22.37	Horizontal
4	3464.800	-60.71	9.68	-51.03	-13.00	-38.03	Horizontal
5	5197.200	-64.07	11.69	-52.38	-13.00	-39.38	Horizontal
6	17324.000	-63.68	20.43	-43.25	-13.00	-30.25	Horizontal
7	39.182	-70.29	29.87	-40.42	-13.00	-27.42	Vertical
8	123.181	-61.76	22.86	-38.90	-13.00	-25.90	Vertical
9	887.398	-79.26	44.96	-34.30	-13.00	-21.30	Vertical
10	3464.800	-60.71	9.68	-51.03	-13.00	-38.03	Vertical
11	5197.200	-64.45	11.69	-52.76	-13.00	-39.76	Vertical
12	17324.000	-63.34	20.43	-42.91	-13.00	-29.91	Vertical
RMC 12.2kbps _ Highest Channel							
1	286.265	-69.15	30.97	-38.18	-13.00	-25.18	Horizontal
2	693.910	-79.52	41.64	-37.88	-13.00	-24.88	Horizontal
3	925.613	-80.19	45.33	-34.86	-13.00	-21.86	Horizontal
4	3505.200	-61.11	9.80	-51.31	-13.00	-38.31	Horizontal
5	5257.800	-63.97	11.80	-52.17	-13.00	-39.17	Horizontal
6	17450.000	-63.35	20.68	-42.67	-13.00	-29.67	Horizontal
7	42.931	-67.44	27.84	-39.60	-13.00	-26.60	Vertical
8	123.181	-62.70	22.86	-39.84	-13.00	-26.84	Vertical
9	906.304	-79.43	45.37	-34.06	-13.00	-21.06	Vertical
10	3505.200	-61.25	9.80	-51.45	-13.00	-38.45	Vertical
11	5257.800	-64.77	11.80	-52.97	-13.00	-39.97	Vertical
12	17450.000	-63.62	20.68	-42.94	-13.00	-29.94	Vertical

WCDMA Band V							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
RMC 12.2kbps _ Lowest Channel							
1	45.095	-72.35	25.95	-46.40	-13.00	-33.40	Horizontal
2	220.724	-70.25	28.34	-41.91	-13.00	-28.91	Horizontal
3	280.294	-69.37	30.58	-38.79	-13.00	-25.79	Horizontal
4	1652.800	-57.29	2.05	-55.24	-13.00	-42.24	Horizontal
5	2479.200	-57.97	6.28	-51.69	-13.00	-38.69	Horizontal
6	17354.400	-63.91	20.49	-43.42	-13.00	-30.42	Horizontal
7	38.365	-69.88	30.58	-39.30	-13.00	-26.30	Vertical
8	124.050	-62.94	23.11	-39.83	-13.00	-26.83	Vertical
9	282.270	-73.72	30.70	-43.02	-13.00	-30.02	Vertical
10	1652.800	-57.19	2.05	-55.14	-13.00	-42.14	Vertical
11	2479.200	-58.22	6.28	-51.94	-13.00	-38.94	Vertical
12	17354.400	-63.45	20.49	-42.96	-13.00	-29.96	Vertical
RMC 12.2kbps _ Middle Channel							
1	220.724	-70.09	28.34	-41.75	-13.00	-28.75	Horizontal
2	286.265	-68.84	30.97	-37.87	-13.00	-24.87	Horizontal
3	535.038	-77.89	39.42	-38.47	-13.00	-25.47	Horizontal
4	1672.800	-57.63	2.22	-55.41	-13.00	-42.41	Horizontal
5	2509.200	-59.43	6.38	-53.05	-13.00	-40.05	Horizontal
6	17564.400	-65.14	20.98	-44.16	-13.00	-31.16	Horizontal
7	39.459	-66.75	29.57	-37.18	-13.00	-24.18	Vertical
8	282.270	-73.77	30.70	-43.07	-13.00	-30.07	Vertical
9	538.811	-78.73	39.28	-39.45	-13.00	-26.45	Vertical
10	1672.800	-56.99	2.22	-54.77	-13.00	-41.77	Vertical
11	2509.200	-58.71	6.38	-52.33	-13.00	-39.33	Vertical
12	17564.400	-65.60	20.98	-44.62	-13.00	-31.62	Vertical
RMC 12.2kbps _ Highest Channel							
1	216.120	-70.57	28.12	-42.45	-13.00	-29.45	Horizontal
2	286.265	-69.50	30.97	-38.53	-13.00	-25.53	Horizontal
3	573.988	-78.45	39.59	-38.86	-13.00	-25.86	Horizontal
4	1693.200	-58.00	2.40	-55.60	-13.00	-42.60	Horizontal
5	2539.800	-58.49	6.50	-51.99	-13.00	-38.99	Horizontal
6	17778.600	-66.11	21.66	-44.45	-13.00	-31.45	Horizontal
7	123.181	-61.82	22.86	-38.96	-13.00	-25.96	Vertical
8	280.294	-73.54	30.58	-42.96	-13.00	-29.96	Vertical
9	669.952	-78.70	41.28	-37.42	-13.00	-24.42	Vertical
10	1693.200	-57.70	2.40	-55.30	-13.00	-42.30	Vertical
11	2539.800	-57.47	6.50	-50.97	-13.00	-37.97	Vertical
12	17778.600	-65.52	21.66	-43.86	-13.00	-30.86	Vertical

Remark:

1. Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
2. Result = Reading + Correct Factor.
3. Margin = Result – Limit

5.9 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 2.1055 &
FCC 47 CFR Part 22.355 &
FCC 47 CFR Part 24.235 &
FCC 47 CFR Part 27.54

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limits:

FCC 47 CFR Part 22.355,

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

FCC 47 CFR Part 24.235, FCC 47 CFR Part 27.54

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

Test Setup: Refer to section 4.2.2 for details.

Test Procedures:

1) Use CMW 500 with Frequency Error measurement capability.
   a) Temp. = −30° to + 50°C
   b) Voltage =low voltage, 3.5 Vdc, Normal, 3.87 Vdc and High voltage, 4.45 Vdc.
2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

3) Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

Equipment Used: Refer to section 3 for details.

Test Result: **Please refer to Appendix A & Appendix B**

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of UnionTrust, this report can't be reproduced except in full.