NVLAP TESTING
NVLAP LAB CODE 600341-0

BACL Bay Area Compliance Labs Corp.

TEST REPORT

Applicant:	**FCC: MAXWEST COMMUNICATION LIMITED IC: MAXWEST INTERNATIONAL LIMITED**
Address:	**FCC: FLAT/RM 707 7/F, FORTRESS TOWER 250 KING'S ROAD,NORTH POINT, HONG KONG IC: FLAT/RM 1802 18/F ON HONG COMMERCIAL BUILDING 145 HENNESSY ROAD WANCHAI HK 518000 China**
Product Name:	**Phone**
FCC ID:	**2ASP8NITROA65**
IC:	**24313-NITROA65**
HVIN:	**NITRO A65**
Standard(s):	**47 CFR Part 2, 47 CFR Part 22, Subpart H 47 CFR Part 24, Subpart E ,47 CFR Part 27 RSS-130 Issue 2, February 2019 RSS-132 Issue 4, January 31, 2023 RSS-133 Issue 7, July 24, 2024 RSS-139 Issue 4, September 29, 2022 RSS-199 Issue 4, July 2023 RSS-Gen, Issue 5, February 2021 Amendment 2 ANSI C63.26-2015**
Report Number:	**2402A62839E-RF-00D**
Report Date:	**2025/1/17**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

Pedro Yun

Gavin Xu

Reviewed By: Pedro Yun Title: **Project Engineer**

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402A62839E-RF-00D	Original Report	2025/1/17

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Phone
EUT Model:	NITRO A65
Operation Bands and modes:	GSM/GPRS/EDGE: 850/1900 WCDMA: Band 2/4/5 LTE: Band 2/4/5/7/12/17/41/66/71
Modulation Type:	GMSK, BPSK, QPSK, 16QAM
Rated Input Voltage:	DC 3.8V from battery or DC 5V from adapter
Serial Number:	2VUU-1(for RF Conducted Test) 2VUU-2(for Radiated Spurious Emissions Test)
EUT Received Date:	2024/12/11
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
Adapter1	MAXWEST	NITRO A65	**Input:**100-240V 50/60Hz 0.35A **Output:** DC5V 1A
Adapter2	MAXWEST	DCS10-0501000F	**Input:**100-240V 50/60Hz 0.3A **Output:** DC5V 1A
USB-C Cable	/	/	Unshielded without Ferrite Core, 1.0 meter in length

1.3 Operation Voltage (V_{DC})▲

Lowest:	3.55	Normal:	3.8	Highest:	4.35

1.4 Transmission Antenna Information▲

Antenna Manufacturer	ANT	Antenna Type	Operation Bands	Antenna Frequency Range (MHz)	Antenna Gain (G_T) (dBi)	L_C (dB)
Heyuan Xunwei	MAIN	FPC	GSM850	824-849	-3.95	0.1
			WCDMA B5	824-849	-3.95	0.1
			LTE B5	824-849	-3.95	0.1
			LTE B12	699-716	-0.91	0.1
			LTE B17	704-716	-0.91	0.1
			LTE B71	663-698	-0.15	0.1
Heyuan Xunwei	AUX	FPC	PCS1900	1850-1910	1.12	0
			WCDMA B2	1850-1910	1.12	0
			WCDMA B4	1710-1755	0.18	0
			LTE B2	1850-1910	1.12	0
			LTE B4	1710-1755	0.18	0
			LTE B7	2500-2570	0.38	0
			LTE B41	2535-2655	1.32	0
			LTE B66	1710-1780	0.18	0
Note: Lc= Signal Attenuation in the connecting cable between the transmitter and antenna, in dB.						

1.5 Equipment Modifications

No modifications are made to the EUT during all test items.

2. SUMMARY OF TEST RESULTS

Cellular Band: GSM 850/WCDMA Band 5/LTE Band 5:

FCC Standard Rule(s)	ISEDC Standard Rule(s)	Description of Test	Result	Section
/	RSS-132 Clause 5.1	Frequency Sub-bands	Compliant	4.4.1.2
/	RSS-132 Clause 5.2	Types of Modulation	Compliant	4.4.2.2
§ 2.1055, § 22.355	RSS-132 Clause 5.3	Frequency stability	Compliant	5.1
§2.1046; § 22.913	RSS-132 Clause 5.4	Transmitter output power and effective radiated power (e.r.p.)	Compliant	5.1
§ 2.1051, § 22.917 (a)	RSS-132 Clause 5.5	Transmitter unwanted emissions- at Antenna Terminal	Compliant	5.1
§ 22.917 (a)	RSS-132 Clause 5.5	Transmitter unwanted emissions- Out of band emission	Compliant	5.1
§ 2.1053, § 22.917 (a)	RSS-132 Clause 5.5	Transmitter unwanted emissions- Radiated Spurious emissions	Compliant	5.2
§ 2.1049; § 22.905	RSS-Gen Clause 6.7	Occupied Bandwidth	Compliant	5.1

PCS Band: GSM 1900/WCDMA Band 2/LTE Band 2:

FCC Standard Rule(s)	ISEDC Standard Rule(s)	Description of Test	Result	Section
/	RSS-133 Clause 5.2	Band plan	Compliant	4.5.1.2
/	RSS-133 Clause 5.3	Types of Modulation	Compliant	4.5.2.2
§ 2.1055, § 24.235	RSS-133 Clause 5.4	Frequency stability	Compliant	5.1
§2.1046, § 24.232	RSS-133 Clause 5.5	Transmitter output power	Compliant	5.1
§ 2.1051, § 24.238 (a)	RSS-133 Clause 5.6	Transmitter unwanted emissions- at Antenna Terminal	Compliant	5.1
§ 24.238 (a)	RSS-133 Clause 5.6	Transmitter unwanted emissions- Out of band emission	Compliant	5.1
§ 2.1053, § 24.238 (a)	RSS-133 Clause 5.6	Transmitter unwanted emissions- Radiated Spurious emissions	Compliant	5.2
§ 2.1049, § 24.238	RSS-Gen Clause 6.7	Occupied Bandwidth	Compliant	5.1

AWS Band: WCDMA Band 4/LTE Band 4/LTE B66:

FCC Standard Rule(s)	ISEDC Standard Rule(s)	Description of Test	Result	Section
/	RSS-139 Clause 5.2	Band Plan	Compliant	4.6.1.2
/	RSS-139 Clause 5.3	Types of Modulation	Compliant	4.6.2.2
§ 2.1055, §27.54	RSS-139 Clause 5.7	Additional Requirements for Subscriber Equipment	Compliant	4.6.6.2
FCC§2.1046, §27.50	RSS-139 Clause 5.4	Frequency stability	Compliant	5.1
FCC§ 2.1051, §27.53	RSS-139 Clause 5.5	Transmitter Output Power	Compliant	5.1
§27.53	RSS-139 Clause 5.6	Transmitter unwanted emissions-at Antenna Terminal	Compliant	5.1
§ 2.1053, §27.53	RSS-139 Clause 5.6	Transmitter unwanted emissions-Bandedge	Compliant	5.1
§ 2.1049, §27.53	RSS-139 Clause 5.6	Transmitter unwanted emissions-Radiated Spurious emissions	Compliant	5.2

BRS/EBS Band: LTE Band 7 /LTE B41:

FCC Standard Rule(s)	ISEDC Standard Rule(s)	Description of Test	Result	Section
/	RSS-199 Clause 5.2	Frequency Plan	Compliant	4.7.1.1
/	RSS-199 Clause 5.3	Types of Modulation	Compliant	4.7.1.2
§ 2.1055, §27.54	RSS-199 Clause 5.4	Frequency stability	Compliant	5.1
FCC§2.1046, §27.50	RSS-199 Clause 5.5	Transmitter Output Power and Equivalent Isotropically Radiated Power	Compliant	5.1
FCC§ 2.1051, §27.53	RSS-199 Clause 5.6	Transmitter unwanted emissions-at Antenna Terminal	Compliant	5.1
§27.53	RSS-199 Clause 5.6	Transmitter unwanted emissions-Out of band emission	Compliant	5.1
§ 2.1053, §27.53	RSS-199 Clause 5.6	Transmitter unwanted emissions-Radiated Spurious emissions	Compliant	5.2
§ 2.1049, §27.53	RSS-Gen Clause 6.7	Occupied Bandwidth	Compliant	5.1

LTE Band 12/17/71:

FCC Standard Rule(s)	ISEDC Standard Rule(s)	Description of Test	Result	Section
/	RSS-130 Clause 4.2	Types of modulation	Compliant	4.8.1.2
/	RSS-130 Clause 4.3	Frequency block	Compliant	4.8.2.2
/	RSS-130 Clause 4.4	Interoperability requirement	Compliant	4.8.3.2
§ 2.1055, §27.54	RSS-130 Clause 4.5	Transmitter frequency stability	Compliant	5.1
§2.1046, §27.50	RSS-130 Clause 4.6	Transmitter output power and effective radiated power (e.r.p.)	Compliant	5.1
§ 2.1051, §27.53	RSS-130 Clause 4.7	Transmitter unwanted emissions-at Antenna Terminal	Compliant	5.1
§27.53	RSS-130 Clause 4.7	Transmitter unwanted emissions-Out of band emission	Compliant	5.1
§ 2.1053, §27.53	RSS-130 Clause 4.7	Transmitter unwanted emissions-Radiated Spurious emissions	Compliant	5.2
§ 2.1049, §27.53	RSS-Gen Clause 6.7	Occupied Bandwidth	Compliant	5.1

3. ESCRIPTION OF TEST CONFIGURATION

3.1 EUT Operation Condition:

The EUT was configured for testing according to ANSI C63.26-2015.

The test items were performed with the EUT operating at testing mode. The device operates on GSM Band 850/1900MHz, WCDMA Band 2/4/5, and LTE band 2/4/5/7/12/17/41/66/71, test was performed with channels as below table:

Frequency Bands	Bandwidth (MHz)	Test Frequency (MHz)		
		Low	Middle	High
GSM/GPRS/EDGE 850	0.25	824.2	836.6	848.8
GSM/GPRS/EDGE 1900	0.25	1850.2	1880	1909.8
WCDMA Band 2	4.2	1852.4	1880	1907.6
WCDMA Band 4	4.2	1712.4	1732.6	1752.6
WCDMA Band 5	4.2	826.4	836.6	846.6
LTE Band 2	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 Band 4	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 Band 5	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 Band 7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE Band 12	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 Band 17	5	706.5	710	713.5
	10	709	710	711
LTE Band 41	5	2537.5	2595	2652.5
	10	2540	2595	2650

	15	2542.5	2595	2647.5
	20	2545	2595	2645
LTE Band 66	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
LTE Band 71	5	665.5	680.5	695.5
	10	668	680.5	693
	15	670.5	680.5	690.5
	20	673	680.5	688

The maximum power was configured per 3GPP Standard for each operation modes as below setting:

GSM/GPRS/EDGE

Function: Menu select > GSM Mobile Station > GSM 850/1900
Press Connection control to choose the different menus
Press RESET > choose all the reset all settings
Connection Press Signal Off to turn off the signal and change settings
Network Support > GSM + GPRS or GSM + EGSM
Main Service > Packet Data
Service selection > Test Mode A – Auto Slot Config. off
MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting
> Slot configuration > Uplink/Gamma
> 33 dBm for GPRS 850
> 30 dBm for GPRS 1900
> 27 dBm for EGPRS 850
> 26 dBm for EGPRS 1900
BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel
Frequency Offset > + 0 Hz
Mode > BCCH and TCH

BCCH Level > -85 dBm (May need to adjust if link is not stable)
BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off
P0 > 4 dB
Slot Config > Unchanged (if already set under MS signal)
TCH > choose desired test channel
Hopping > Off
Main Timeslot > 3
Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)

Bit Stream > 2E9-1 PSR Bit Stream
AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection Press Signal on to turn on the signal and change settings

WCDMA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subset	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	1 / 5	0
	βec	20 /225	12/15	30 15	2/15	5/15
	βc/ βd	11/15	6/15	15/9	2/15	-
	βhs	22/15	12/15	30 15	4/15	5/15
	CM (dB)	1.0	3.0	2.0	3.0	1.0
	PR(dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	Ahs=βhs/ βc	30/15				
HSUPA Specific Settings	DE-DPCCH	6		8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI	5	67	92	71	81
	Associated Max UL Data Rate ps	242.1	174.9	482.8	205.8	308.9
	Reference E_F l	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	

LTE (FDD):

The following tests were conducted according to the test requirements in 3GPP TS36.101

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

The allowed A-MPR values specified below in Table 6.2.4.-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of "NS_01".

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	NA
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
			10, 15, 20	See Table 6.2.4-4	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	n/a
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	Table 6.2.4-2
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	Table 6.2.4-3
NS_11	6.6.2.2.1	23[1]	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
..					
NS_32	-	-	-	-	-

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

LTE(TDD):

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Calculated Duty Cycle

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

Calculated Duty Cycle = Extended cyclic prefix in uplink x (T_s) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
where
T_s = 1/(15000 x 2048) seconds

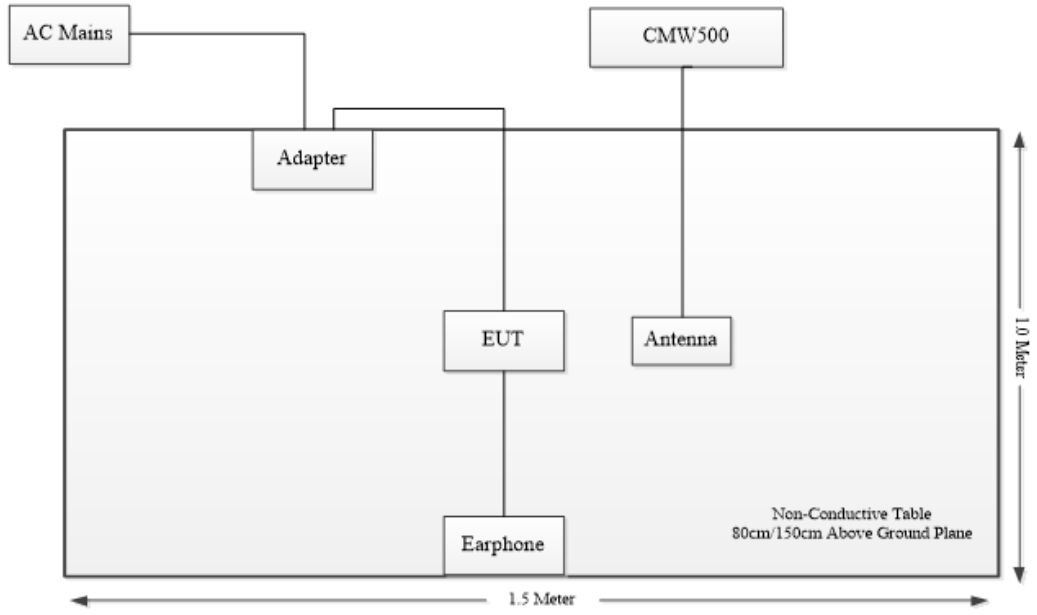
3.2 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Unknown	Antenna	Unknown	Unknown
R&S	Wideband Radio Communication Tester	CMW500	147473
IPRO	Earphone	Phonenix 5.0s	EMZBEP21103002B

3.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Earphone Cable	No	No	1.2	EUT	Earphone
USB-C Cable	No	No	1.0	Adapter	EUT
Coaxial-Cable	Yes	No	10.0	CMW500	Antenna

3.4 Block Diagram of Test Setup



3.5 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, 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.: 829273, the FCC Designation No.: CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

3.6 Measurement Uncertainty

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

Parameter	Measurement Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	30MHz~200MHz: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz:5.47 dB, 26.5GHz~40GHz:5.63 dB
Unwanted Emissions, conducted	±2.47 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
RF Frequency	$\pm 0.082\times10^{-6}$

4. REQUIREMENTS AND TEST PROCEDURES

4.1 Applicable Standard for Part 22 Subpart H

4.1.1 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.

4.1.2 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

4.1.3 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

4.2 Applicable Standard for Part 24 Subpart E

4.2.1 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.

4.2.2 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.

4.2.3 Frequency stability

FCC §24.235

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

4.3 Applicable Standard for Part 27

4.3.1 RF Output Power

FCC §27.50

(a)(3) *Mobile and portable stations.*
(i) For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, *except that* for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.
(ii) Mobile and portable stations are not permitted to transmit in the 2315-2320 MHz and 2345-2350 MHz bands.
(iii) *Automatic transmit power control.* Mobile and portable stations transmitting in the 2305-2315 MHz band or in the 2350-2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications.
(iv) *Prohibition on external vehicle-mounted antennas.* The use of external vehicle-mounted antennas for mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band is prohibited.

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

(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.

4.3.2 Spurious Emissions

FCC §27.53

(a) For operations in the 2305-2320 MHz band and the 2345-2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:
(4) For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

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

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

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

(c)For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;

(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

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

(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 block, a resolution bandwidth of at least 30 kHz may be employed.

(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.

4.3.3 Frequency stability

FCC §27.54

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

4.4 Applicable Standard For RSS-132 Issue 4, January 31, 2023

4.4.1 Frequency Sub-bands

4.4.1.1 Applicable Standard

RSS-132 clause 5.1

The frequency bands 824-849 MHz and 869-894 MHz are divided into sub-bands as described in SRSP-503. These sub-bands are:

824-835 MHz, 835-845 MHz, 845-846.5 MHz, and 846.5-849 MHz for mobile transmit; and

869-880 MHz, 880-890 MHz, 890-891.5 MHz, and 891.5-894 MHz for base transmit.

4.4.1.2 Judgment

Compliant, the device operates in this band is divided into sub-bands as described in SRSP-503.

4.4.2 Types of Modulation

4.4.2.1 Applicable Standard

RSS-132 clause 5.2

Equipment certified under this standard shall use digital modulation.

4.4.2.2 Judgment

Compliant, the device operates under this standard use digital modulation.

4.4.3 Frequency stability

4.4.3.1 Applicable Standard

RSS-132 clause 5.3

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.

4.4.4 Transmitter output power and effective radiated power (e.r.p.)

4.4.4.1 Applicable Standard

RSS-132 clause 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.

4.4.5 Transmitter unwanted emissions

4.4.5.1 Applicable Standard

RSS-132 clause 5.5

Mobile and base station equipment shall comply with the limits in (i) and (ii) 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 log10 p (watts).

(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 + 10 log10 p (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

4.5 Applicable Standard For RSS-133 Issue 7, July 24, 2024

4.5.1 Band plan

4.5.1.1 Applicable Standard

RSS-133 clause 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, Technical Requirements for Personal Communications Services (PCS) in the Bands 1850-1915 MHz and 1930-1995 MHz, contains the detailed band plan.

Table 1: Paired frequency blocks in the 1850-1915 MHz and 1930-1995 MHz bands

Block	Lower sub-band (MHz)	Upper sub-band (MHz)	Total spectrum (MHz)
A	1850-1865	1930-1945	30
D	1865-1870	1945-1950	10
B1	1870-1875	1950-1955	10
B2	1875-1880	1955-1960	10
B3	1880-1885	1960-1965	10
E	1885-1890	1965-1970	10
F	1890-1895	1970-1975	10
C1	1895-1900	1975-1980	10
C2	1900-1905	1980-1985	10
C3	1905-1910	1985-1990	10
G	1910-1915	1990-1995	10

4.5.1.2 Judgment

Compliant, the device operates in this band is Compliant with SRSP-510.

4.5.2 Types of Modulation

4.5.2.1 Applicable Standard

RSS-133 clause 5.3

The modulation used shall be digital.

4.5.2.2 Judgment

Compliant, the device operates under this standard use digital modulation.

4.5.3 Frequency stability

4.5.3.1 Applicable Standard

RSS-133 clause 5.4

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block or frequency block group when tested to the temperature and supply voltage variations specified in RSS-Gen.

4.5.4 Transmitter Output Power

4.5.4.1 Applicable Standard

RSS-133 clause 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.

4.5.5 Transmitter unwanted emissions

4.5.5.1 Applicable Standard

RSS-133 clause 5.6

Unwanted emissions shall be measured in terms of average values while the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified in table 3, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

For the unwanted emission limits, in the 1 MHz bands immediately outside and adjacent to the frequency block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth (OBW). Beyond these 1 MHz bands, a resolution bandwidth of 1 MHz shall be used. A narrower resolution bandwidth may be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz, or 1% of the OBW, as applicable.

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

4.6 Applicable Standard For RSS-139 issue 4 September 29, 2022

4.6.1 Band plan

4.6.1.1 Applicable Standard

RSS-139 clause 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.

Table 1: Frequency blocks in the bands 1710-1780 MHz and 2110-2180 MHz

Block	Lower sub-band (MHz)	Upper sub-band (MHz)	Total block size (MHz)
Block A	1710-1720	2110-2120	20
Block B	1720-1730	2120-2130	20
Block C	1730-1735	2130-2135	10
Block D	1735-1740	2135-2140	10
Block E	1740-1745	2140-2145	10
Block F	1745-1755	2145-2155	20
Block G	1755-1760	2155-2160	10
Block H	1760-1765	2160-2165	10
Block I	1765-1770	2165-2170	10
Block J1	1770-1775	2170-2175	10
Block J2	1775-1780	2175-2180	10

The band 2180-2200 MHz is divided into two downlink-only blocks, as shown in table 2. SRSP-519, Technical Requirements for the Ancillary Terrestrial Component of Mobile-Satellite Service Systems Operating in the Bands 2000-2020 MHz and 2180-2200 MHz, contains the detailed band plan. In this RSS, AWS-4 is referred to as ATC band 2180-2200 MHz.

Table 2: Frequency blocks in the bands 2180-2200 MHz

Block	Frequency range (MHz)	Block size (MHz)
Block C	2180-2190	10
Block D	2190-2200	10

The blocks listed in tables 1 and 2 can be aggregated to form a larger channel.

4.6.1.2 Judgment

Compliant, the device operates in this band is Compliant with SRSP-513.

4.6.2 Types of Modulation

4.6.2.1 Applicable Standard

RSS-139 clause 5.3

Devices may use any type of modulation technique. The type of modulation shall be documented in the test report.

4.6.2.2 Judgment

Compliant, the device operates under this standard use digital modulation.44

4.6.3 Frequency stability

4.6.3.1 Applicable Standard

RSS-139 clause 5.4

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block or frequency block group when tested to the temperature and supply voltage variations specified in RSS-Gen.

4.6.4 Transmitter Output Power

4.6.4.1 Applicable Standard

RSS-139 clause 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.

The limits in this RSS are specified for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-513 and SRSP-519 for more details on the bands 2110-2180 MHz and 2180-2200 MHz respectively.

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

Table 4: Maximum power of equipment in the band 2110-2180 MHz	
Equipment type	**Maximum power**
Non-AAS fixed station and base station	65 dBm e.i.r.p./MHz
AAS fixed station and base station	46 dBm TRP/MHz
Subscriber equipment	30 dBm e.i.r.p./channel bandwidth

Table 5: Maximum power of equipment in the band 2180-2200 MHz	
Equipment type	**Maximum power**
Non-AAS base station	65 dBm e.i.r.p./MHz
AAS base station	46 dBm TRP/MHz

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.

4.6.5 Transmitter unwanted emissions

4.6.5.1 Applicable Standard

RSS-139 clause 5.6

Unwanted emissions shall be measured in terms of average values.
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 4.

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 B*)
>1 MHz	-13 dBm/MHz

*B is the frequency block or frequency block group.

In addition to complying with the above limits, equipment operating in the band 2180-2200 MHz may require additional filtering (see SRSP-519).

4.6.6 Additional requirements for subscriber equipment

4.6.6.1 Applicable Standard

RSS-139 clause 5.7

Subscriber equipment other than fixed subscriber equipment shall use transmitter power control to limit power. The applicant shall include, with the application for certification, a declaration of compliance that confirms the control requirement was met and that includes a description of how the requirement was met. The declaration of compliance may be included as a separate document or attached (e.g. as an annex) to the test report.

Subscriber equipment operating in the band 1755-1780 MHz shall operate only when under the control of a base station. The applicant shall include, with the application for certification, a declaration of compliance that confirms the control requirement was met and that includes a description of how the requirement was met. The declaration of compliance may be included as a separate document or attached (e.g. as an annex) to the test report.

4.6.6.2 Judgment

Compliant, the devices use transmitter power control to limit power and operate under the control of a base station.

4.7 Applicable Standard For RSS-199 Issue 4 July 2023

4.7.1 Band plan

4.7.1.1 Applicable Standard

RSS-199 Clause 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.

Table 1: Paired frequency blocks in the band 2500-2690 MHz

Block	Uplink frequencies (MHz)	Block	Downlink frequencies (MHz)	Total spectrum (MHz)
A	2500-2510	A′	2620-2630	10+10
B	2510-2520	B′	2630-2640	10+10
C	2520-2530	C′	2640-2650	10+10
D	2530-2540	D′	2650-2660	10+10
E	2540-2550	E′	2660-2670	10+10
F	2550-2560	F′	2670-2680	10+10
G	2560-2570	G′	2680-2690	10+10

Table 2: Unpaired frequency blocks in the band 2500-2690 MHz

Block	Frequencies (MHz)	Total spectrum (MHz)
H	2570-2595	25
I	2595-2620	25

4.7.1.2 Judgment

Compliant, the device operates in this band is Compliant with SRSP-517.

4.7.2 Types of Modulation

4.7.2.1 Applicable Standard

RSS-199 Clause 5.3

The modulation used shall be digital.

4.7.2.2 Judgment

Compliant, the device operates under this standard use digital modulation.

4.7.3 Frequency stability

4.7.3.1 Applicable Standard

RSS-199 Clause 5.4

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block or frequency block group when tested to the temperature and supply voltage variations specified in RSS-Gen.

4.7.4 Transmitter power

4.7.4.1 Applicable Standard

RSS-199 Clause 5.5

The maximum output power of the equipment shall comply with the limits specified in table 3. In this table, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Subscriber equipment other than fixed subscriber equipment shall not exceed an e.i.r.p of 2W per channel bandwidth.

Fixed subscriber equipment shall not exceed the following:

i. conducted power of 2W per channel bandwidth for all ports

ii. e.i.r.p of 40 W per channel bandwidth

The maximum power limits for fixed station and base station are provided in Table 3. The limits in this RSS are specified for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-517 for more deployment details in the band 2500-2690 MHz.

Table 3: Maximum power of fixed station and base station in the band 2500-2690 MHz

Equipment type	Maximum power
Non-AAS fixed station and base station	e.i.r.p of 1640 W /MHz
AAS fixed station and base station	TRP of 43 dBm /MHz

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.

4.7.5 Unwanted emissions limits

4.7.5.1 Applicable Standard

RSS-199 clause 5.6

Unwanted emissions shall be measured in terms of average values when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

For the unwanted emission limits, in the 1 MHz band immediately outside and adjacent to the frequency block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth for fixed stations, base stations, and fixed subscriber equipment, and 2% for subscriber equipment other than fixed subscriber equipment. Beyond this 1 MHz band, a resolution bandwidth of 1 MHz shall be used. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz, or 1% or 2% of the occupied bandwidth, as applicable.

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 tables below.

Table 4: Unwanted emission limits for fixed station, base station and fixed subscriber equipment

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

*OB is the occupied bandwidth

Table 5: Unwanted emission limits for subscriber equipment other than fixed subscriber equipment

Offset from the edge of the frequency block or frequency block group (MHz)	Unwanted emission limits
0-1	-10 dBm/(2% of OB*)
1-5	-10 dBm/MHz
5-X**	-13 dBm/MHz
≥ X	-25 dBm/MHz

*OB is the occupied bandwidth

** X is 6 MHz or the equipment occupied bandwidth, whichever is greater

In addition to complying with the limits in table 5, subscriber equipment other than fixed subscriber equipment shall not exceed -13 dBm/MHz on all frequencies between 2490.5 MHz and 2496 MHz, and -25 dBm/MHz at or below 2490.5 MHz.

4.8 Applicable Standard For RSS-130 Issue 2, February 2019

4.8.1 Types of modulation

4.8.1.1 Applicable Standard

RSS-130 clause 4.2

Equipment certified under this standard shall employ digital modulation

4.8.1.2 Judgment

Compliant, the device employs digital modulation.

4.8.2 Frequency block

4.8.2.1 Applicable Standard

RSS-130 clause 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.

4.8.2.2 Judgment

Compliant, the device operates in the frequency bands 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.

4.8.3 Interoperability requirement

4.5.3.1 Applicable Standard

RSS-130 clause 4.4

Mobile and portable stations in the bands 617-652 MHz and 663-698 MHz must be capable of operating on all frequencies in these bands.

4.8.3.2 Judgment

Compliant, the device employs all the range of 663-698MHz for this band.

4.8.4 Transmitter frequency stability

4.8.4.1 Applicable Standard

RSS-130 clause 4.5

For equipment that is capable of transmitting numerous channels simultaneously for different applications (e.g. LTE and narrowband – internet of things (IoT)), the occupied bandwidth shall be the bandwidth representing the sum of the occupied bandwidths of these channels.

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

4.8.5 Transmitter output power and effective radiated power (e.r.p.)

4.8.5.1 Applicable Standard

RSS-130 clause 4.6.1 General

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.

RSS-130 clause 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.

RSS-130 clause 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.

4.8.6 Transmitter unwanted emissions

4.8.6.1 Applicable Standard

RSS-130 clause 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 log10 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.

RSS-130 clause 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 log10 p (watts), dB, for base and fixed equipment, and
(ii) 65 + 10 log10 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.

4.9 Test Method

4.9.1 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:

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.

Test Setup Block:

CMW500

Note: The Insertion loss of the RF cable and coaxial Attenuator was offset into the Reading of CMW500.

4.9.2 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.

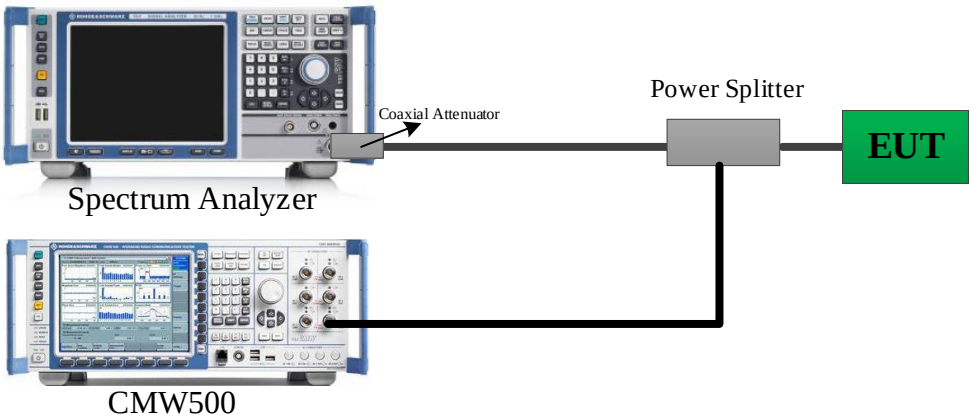
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.

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:



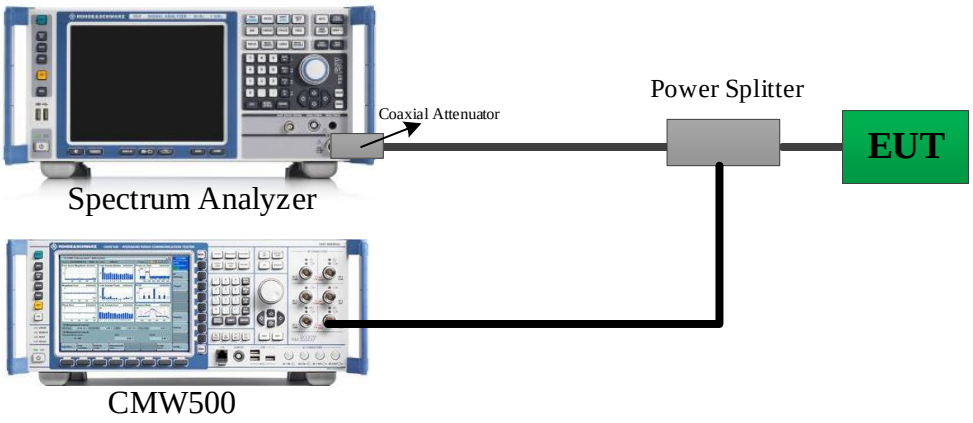
Note: The Insertion loss of the RF cable, Coaxial Attenuator and Power Splitter was offset into the Reading of Spectrum Analyzer.

4.9.3 Transmitter unwanted emissions-at antenna terminals

According to ANSI C63.26-2015 Section 5.7.4:

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:



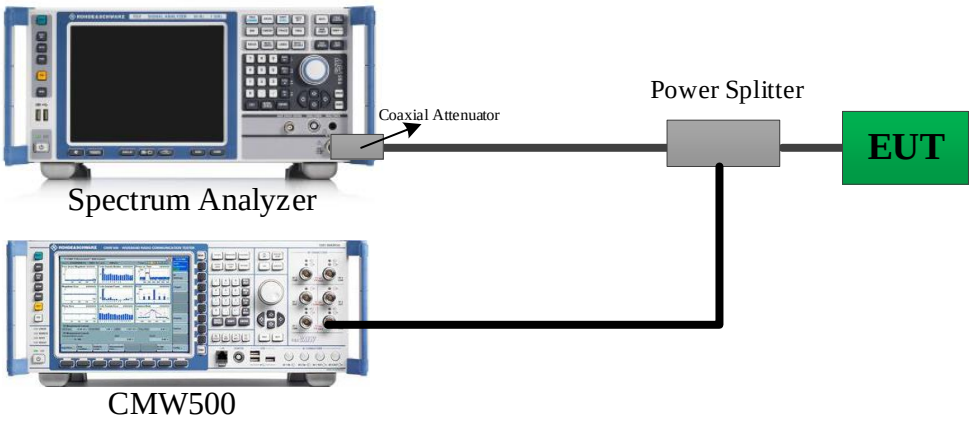
Note: The Insertion loss of the RF cable, Coaxial Attenuator and Power Splitter was offset into the Reading of Spectrum Analyzer.

4.9.4 Transmitter unwanted emissions-Out of band emission

According to ANSI C63.26-2015 Section 5.7.3:

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 OBW) 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 OBW) to increase accuracy, but the measurement result must subsequently be integrated over the full reference bandwidth.

Test Setup Block:



Note: The Insertion loss of the RF cable, Coaxial Attenuator and Power Splitter was offset into the Reading of Spectrum Analyzer.

4.9.5 Frequency stability

According to ANSI C63.26-2015 Section 5.6:

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:

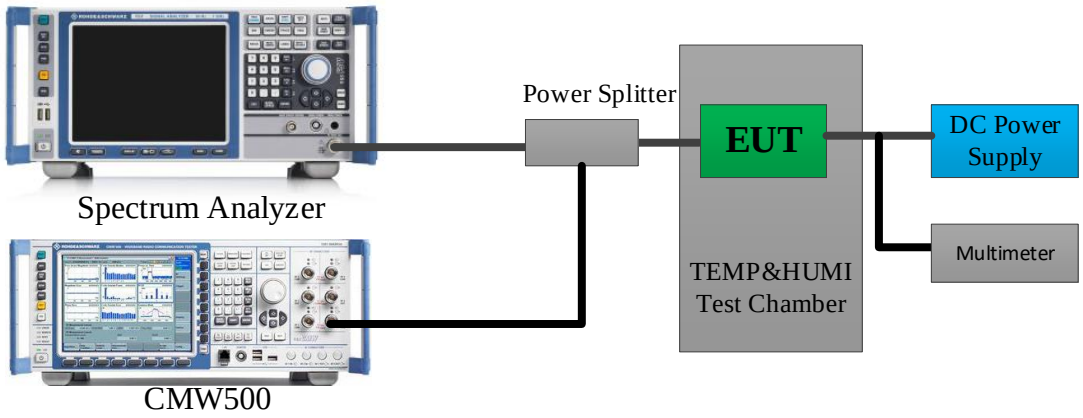
a) At 10 °C intervals of temperatures between −30 °C and +50 °C at the manufacturer's rated supply voltage, and

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:



4.9.6 Transmitter unwanted emissions- Radiated Spurious emissions

According to ANSI C63.26-2015 Section 5.5.3:

Test setup:

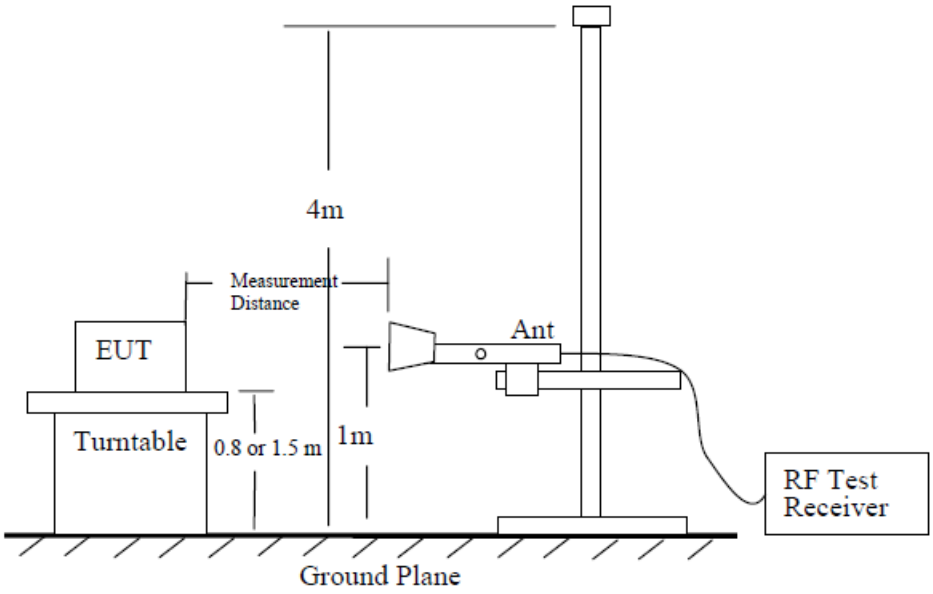


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

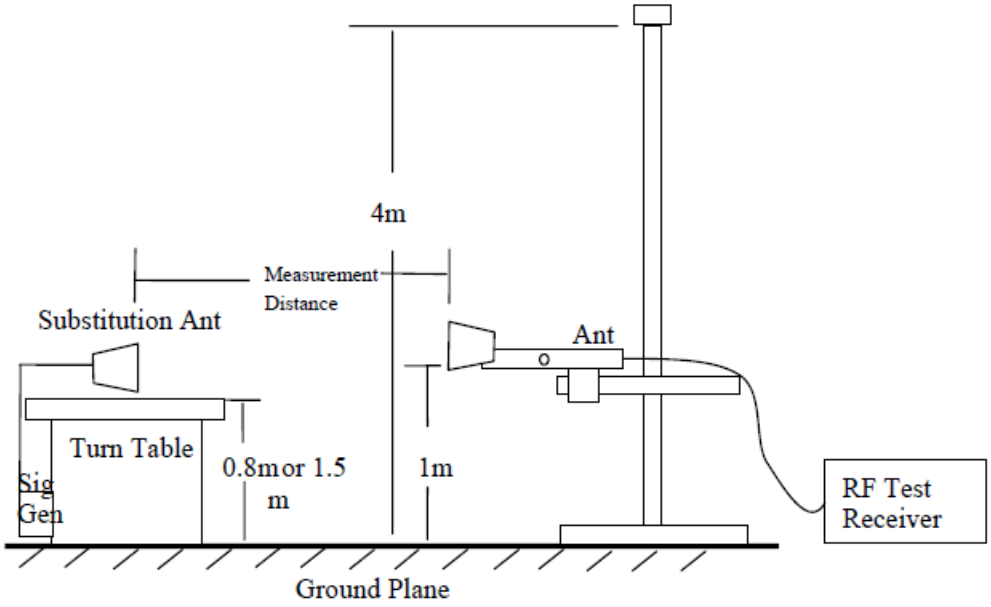


Figure 7—Substitution method set-up for radiated emission

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.

5. Test DATA AND RESULTS

5.1 Antenna Port Test Data and Results

Please refer to the attachment Appendix A, B and C.

5.2 Radiated Spurious Emissions

Serial Number:	2VUU-2	Test Date:	Below 1GHz: 2024/12/27 Above 1GHz: 2025/1/11
Test Site:	Chamber A, Chamber B	Test Mode:	Transmitting
Tester:	Jayce Wang, Nat Zhou	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	20.1~24.2	Relative Humidity: (%)	27~45	ATM Pressure: (kPa)	102.4

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
30MHz~1000MHz					
Sunol Sciences	Hybrid Antenna	JB3	A060611-2	2024/4/16	2027/4/15
Narda	Coaxial Attenuator	757C-6dB	34010	2024/4/16	2027/4/15
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2024/7/1	2025/6/30
Sonoma	Amplifier	310N	372193	2024/8/16	2025/8/15
R&S	EMI Test Receiver	ESR3	102453	2024/8/26	2025/8/25
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Micro-Coax	Coaxial Cable	UFA210B	99G1448	2024/9/5	2025/9/4
Agilent	Signal Generator	E8247C	MY43321350	2024/9/5	2025/9/4
Sinoscite	Band Rejection Filter	BSF824-862MS	1438001	2024/6/7	2025/6/6
E-Microwave	Band Rejection Filter	OBF-ZP-703-748-SMAF	OE01902425	2024/6/7	2025/6/6
Above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
AH	Horn Antenna	SAS-571	1177	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-03 1304	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-01 1302	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-2823-02	1007726-02 1302	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2024/11/17	2025/11/16
Micro-Coax	Coaxial Cable	UFA210B	99G1448	2024/9/5	2025/9/4
Agilent	Signal Generator	E8247C	MY43321350	2024/9/5	2025/9/4
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/J-6M-A	20231208001 #0001	2024/12/9	2025/12/8
AH	Preamplifier	PAM-0118P	469	2024/4/15	2025/4/15
AH	Preamplifier	PAM-1840VH	191	2024/9/5	2025/9/4
R&S	Spectrum Analyzer	FSV40	101944	2024/9/6	2025/9/5
Sinoscite	Band Rejection Filter	BSF824-862MS	1438001	2024/6/7	2025/6/6
E-Microwave	Band Rejection Filter	OBF-ZP-703-748-SMAF	OE01902425	2024/6/7	2025/6/6
Sinoscite	Band Rejection Filter	BSF2500-2750MS	1439001	2024/6/7	2025/6/6
Sinoscite	Band Rejection Filter	BSF1850-1910MS	0935V2001	2024/6/11	2025/6/10
Sinoscite	Band Rejection Filter	BSF1710-1785MN	0383003	2024/6/7	2025/6/6

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

Test Data:

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

Cellular Band (30MHz-10GHz)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850 Frequency:824.2MHz								
85.72	H	54.98	-63.73	0.00	0.10	-63.83	-13.00	50.83
49.87	V	58.09	-48.88	-15.03	0.07	-63.98	-13.00	50.98
1648.40	H	71.53	-53.60	10.44	0.71	-43.87	-13.00	30.87
1648.40	V	69.22	-56.51	10.44	0.71	-46.78	-13.00	33.78
2472.60	H	55.39	-67.39	12.88	1.25	-55.76	-13.00	42.76
2472.60	V	51.69	-71.14	12.88	1.25	-59.51	-13.00	46.51
3296.80	H	58.23	-61.16	13.60	1.59	-49.15	-13.00	36.15
3296.80	V	56.73	-62.66	13.60	1.59	-50.65	-13.00	37.65
GSM 850 Frequency:836.6MHz								
85.45	H	54.69	-64.16	0.00	0.10	-64.26	-13.00	51.26
50.34	V	58.21	-49.18	-14.74	0.07	-63.99	-13.00	50.99
1673.20	H	71.63	-53.12	10.61	0.73	-43.24	-13.00	30.24
1673.20	V	65.38	-59.97	10.61	0.73	-50.09	-13.00	37.09
2509.80	H	56.03	-66.85	13.11	1.25	-54.99	-13.00	41.99
2509.80	V	57.20	-65.70	13.11	1.25	-53.84	-13.00	40.84
3346.40	H	57.74	-61.47	13.83	1.61	-49.25	-13.00	36.25
3346.40	V	56.12	-63.14	13.83	1.61	-50.92	-13.00	37.92
GSM 850 Frequency:848.8MHz								
83.78	H	56.03	-63.66	0.00	0.10	-63.76	-13.00	50.76
48.69	V	56.88	-48.14	-16.18	0.07	-64.39	-13.00	51.39
1697.60	H	68.23	-56.14	10.78	0.75	-46.11	-13.00	33.11
1697.60	V	62.33	-62.64	10.78	0.75	-52.61	-13.00	39.61
2546.40	H	54.84	-68.03	13.15	1.27	-56.15	-13.00	43.15
2546.40	V	56.37	-66.64	13.15	1.27	-54.76	-13.00	41.76
3395.20	H	55.75	-63.24	14.08	1.64	-50.80	-13.00	37.80
3395.20	V	56.83	-62.26	14.08	1.64	-49.82	-13.00	36.82

PCS Band (30MHz-20GHz)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
82.81	H	53.07	-67.12	0.00	0.10	-67.22	-13.00	54.22
49.87	V	57.49	-49.48	-15.03	0.07	-64.58	-13.00	51.58
3700.40	H	57.99	-60.58	14.00	1.83	-48.41	-13.00	35.41
3700.40	V	59.53	-59.02	14.00	1.83	-46.85	-13.00	33.85
5550.60	H	68.96	-45.15	13.95	1.27	-32.47	-13.00	19.47
5550.60	V	68.39	-45.57	13.95	1.27	-32.89	-13.00	19.89
GSM 1900 Frequency:1880MHz								
81.68	H	53.45	-67.31	0.00	0.10	-67.41	-13.00	54.41
50.46	V	56.87	-50.59	-14.69	0.07	-65.35	-13.00	52.35
3760.00	H	54.06	-63.78	13.76	1.63	-51.65	-13.00	38.65
3760.00	V	55.30	-62.41	13.76	1.63	-50.28	-13.00	37.28
5640.00	H	67.14	-46.58	14.02	1.31	-33.87	-13.00	20.87
5640.00	V	68.93	-44.68	14.02	1.31	-31.97	-13.00	18.97
GSM 1900 Frequency:1909.8MHz								
82.34	H	54.21	-66.21	0.00	0.10	-66.31	-13.00	53.31
49.65	V	57.82	-48.79	-15.24	0.07	-64.10	-13.00	51.10
3819.60	H	52.20	-65.07	13.56	1.50	-53.01	-13.00	40.01
3819.60	V	54.65	-62.43	13.56	1.50	-50.37	-13.00	37.37
5729.40	H	69.59	-44.43	13.96	1.31	-31.78	-13.00	18.78
5729.40	V	70.36	-43.63	13.96	1.31	-30.98	-13.00	17.98

WCDMA Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 2, Frequency:1852.4 MHz								
83.42	H	54.78	-65.10	0.00	0.10	-65.20	-13.00	52.20
46.87	V	53.24	-48.75	-17.97	0.07	-66.79	-13.00	53.79
3704.80	H	49.76	-68.76	13.98	1.81	-56.59	-13.00	43.59
3704.80	V	50.19	-68.30	13.98	1.81	-56.13	-13.00	43.13
5557.20	H	51.43	-62.62	13.97	1.27	-49.92	-13.00	36.92
5557.20	V	55.76	-58.14	13.97	1.27	-45.44	-13.00	32.44
WCDMA Band 2, Frequency:1880 MHz								
209.32	H	57.24	-58.04	0.00	0.18	-58.22	-13.00	45.22
54.40	V	53.71	-56.09	-12.88	0.07	-69.04	-13.00	56.04
3760.00	H	49.51	-68.33	13.76	1.63	-56.20	-13.00	43.20
3760.00	V	50.62	-67.09	13.76	1.63	-54.96	-13.00	41.96
5640.00	H	50.89	-62.83	14.02	1.31	-50.12	-13.00	37.12
5640.00	V	51.46	-62.15	14.02	1.31	-49.44	-13.00	36.44
WCDMA Band 2, Frequency:1907.6MHz								
82.46	H	54.32	-66.04	0.00	0.10	-66.14	-13.00	53.14
48.68	V	53.68	-51.32	-16.19	0.07	-67.58	-13.00	54.58
3815.20	H	50.16	-67.13	13.57	1.50	-55.06	-13.00	42.06
3815.20	V	49.48	-67.62	13.57	1.50	-55.55	-13.00	42.55
5722.80	H	50.37	-63.62	13.95	1.32	-50.99	-13.00	37.99
5722.80	V	50.89	-63.05	13.95	1.32	-50.42	-13.00	37.42

WCDMA Band 4(30MHz-18GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 4, Frequency:1712.4 MHz								
80.75	H	54.24	-66.99	0.00	0.10	-67.09	-13.00	54.09
69.42	V	58.21	-60.95	-5.31	0.11	-66.37	-13.00	53.37
3424.80	H	50.43	-68.47	14.03	1.63	-56.07	-13.00	43.07
3424.80	V	50.39	-68.58	14.03	1.63	-56.18	-13.00	43.18
5137.20	H	50.27	-66.23	13.94	1.39	-53.68	-13.00	40.68
5137.20	V	50.36	-66.06	13.94	1.39	-53.51	-13.00	40.51
WCDMA Band 4, Frequency:1732.6 MHz								
47.52	H	58.48	-49.25	-17.33	0.07	-66.65	-13.00	53.65
65.54	V	56.87	-59.81	-7.36	0.10	-67.27	-13.00	54.27
3465.20	H	49.62	-69.16	13.90	1.62	-56.88	-13.00	43.88
3465.20	V	51.13	-67.68	13.90	1.62	-55.40	-13.00	42.40
5197.80	H	50.79	-65.58	14.00	1.52	-53.10	-13.00	40.10
5197.80	V	52.04	-64.40	14.00	1.52	-51.92	-13.00	38.92
WCDMA Band 4, Frequency:1752.6MHz								
81.56	H	53.79	-67.03	0.00	0.10	-67.13	-13.00	54.13
72.43	V	55.42	-65.15	-3.79	0.11	-69.05	-13.00	56.05
3505.20	H	50.16	-68.54	13.82	1.60	-56.32	-13.00	43.32
3505.20	V	50.72	-67.98	13.82	1.60	-55.76	-13.00	42.76
5257.80	H	51.23	-65.50	14.17	1.31	-52.64	-13.00	39.64
5257.80	V	51.94	-64.87	14.17	1.31	-52.01	-13.00	39.01

WCDMA Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 5 Frequency:826.4 MHz								
82.34	H	53.65	-66.77	0.00	0.10	-66.87	-13.00	53.87
72.27	V	55.21	-65.30	-3.87	0.11	-69.28	-13.00	56.28
1652.80	H	48.75	-76.31	10.47	0.72	-66.56	-13.00	53.56
1652.80	V	48.62	-77.04	10.47	0.72	-67.29	-13.00	54.29
2479.20	H	48.46	-74.34	12.93	1.25	-62.66	-13.00	49.66
2479.20	V	49.16	-73.68	12.93	1.25	-62.00	-13.00	49.00
3305.60	H	49.50	-69.89	13.63	1.59	-57.85	-13.00	44.85
3305.60	V	50.03	-69.37	13.63	1.59	-57.33	-13.00	44.33
WCDMA Band 5 Frequency:836.6MHz								
85.44	H	53.74	-65.11	0.00	0.10	-65.21	-13.00	52.21
71.45	V	56.02	-64.13	-4.28	0.11	-68.52	-13.00	55.52
1673.20	H	48.72	-76.03	10.61	0.73	-66.15	-13.00	53.15
1673.20	V	49.11	-76.24	10.61	0.73	-66.36	-13.00	53.36
2509.80	H	49.06	-73.82	13.11	1.25	-61.96	-13.00	48.96
2509.80	V	48.76	-74.14	13.11	1.25	-62.28	-13.00	49.28
3346.40	H	49.63	-69.58	13.83	1.61	-57.36	-13.00	44.36
3346.40	V	48.89	-70.37	13.83	1.61	-58.15	-13.00	45.15
WCDMA Band 5 Frequency:846.6MHz								
85.34	H	54.26	-64.64	0.00	0.10	-64.74	-13.00	51.74
68.77	V	56.74	-62.00	-5.65	0.11	-67.76	-13.00	54.76
1693.20	H	49.76	-74.68	10.75	0.75	-64.68	-13.00	51.68
1693.20	V	48.57	-76.47	10.75	0.75	-66.47	-13.00	53.47
2539.80	H	48.19	-74.68	13.14	1.27	-62.81	-13.00	49.81
2539.80	V	49.23	-73.76	13.14	1.27	-61.89	-13.00	48.89
3386.40	H	48.72	-70.31	14.03	1.63	-57.91	-13.00	44.91
3386.40	V	48.61	-70.51	14.03	1.63	-58.11	-13.00	45.11

LTE Bands:

(The Worst modulation and bandwidth were below)

LTE Band 2(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency:1850.7 MHz								
84.54	H	55.09	-64.22	0.00	0.10	-64.32	-13.00	51.32
48.52	V	55.63	-49.10	-16.35	0.07	-65.52	-13.00	52.52
3701.40	H	53.39	-65.17	13.99	1.83	-53.01	-13.00	40.01
3701.40	V	53.34	-65.20	13.99	1.83	-53.04	-13.00	40.04
5552.10	H	77.05	-37.05	13.96	1.27	-24.36	-13.00	11.36
5552.10	V	70.98	-42.97	13.96	1.27	-30.28	-13.00	17.28
1RB, 1.4MHz, QPSK, Frequency:1880 MHz								
84.42	H	55.35	-64.02	0.00	0.10	-64.12	-13.00	51.12
46.75	V	54.87	-46.93	-18.09	0.07	-65.09	-13.00	52.09
3760.00	H	56.20	-61.64	13.76	1.63	-49.51	-13.00	36.51
3760.00	V	55.83	-61.88	13.76	1.63	-49.75	-13.00	36.75
5640.00	H	75.41	-38.31	14.02	1.31	-25.60	-13.00	12.60
5640.00	V	69.32	-44.29	14.02	1.31	-31.58	-13.00	18.58
1RB, 1.4MHz, QPSK, Frequency:1909.3 MHz								
84.36	H	49.76	-69.64	0.00	0.10	-69.74	-13.00	56.74
47.35	V	55.26	-47.53	-17.50	0.07	-65.10	-13.00	52.10
3818.60	H	59.65	-57.62	13.56	1.50	-45.56	-13.00	32.56
3818.60	V	61.95	-55.14	13.56	1.50	-43.08	-13.00	30.08
5727.90	H	67.59	-46.42	13.96	1.31	-33.77	-13.00	20.77
5727.90	V	69.06	-44.92	13.96	1.31	-32.27	-13.00	19.27

LTE Band 4(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency:1710.7 MHz								
83.95	H	56.24	-63.37	0.00	0.10	-63.47	-13.00	50.47
46.52	V	55.13	-46.28	-18.31	0.07	-64.66	-13.00	51.66
3421.40	H	54.19	-64.72	14.04	1.63	-52.31	-13.00	39.31
3421.40	V	52.32	-66.66	14.04	1.63	-54.25	-13.00	41.25
5132.10	H	58.58	-57.93	13.93	1.37	-45.37	-13.00	32.37
5132.10	V	60.80	-55.62	13.93	1.37	-43.06	-13.00	30.06
1RB, 1.4MHz, QPSK, Frequency:1732.5 MHz								
84.21	H	55.38	-64.10	0.00	0.10	-64.20	-13.00	51.20
47.65	V	54.69	-48.60	-17.20	0.07	-65.87	-13.00	52.87
3465.00	H	52.77	-66.01	13.91	1.62	-53.72	-13.00	40.72
3465.00	V	54.22	-64.59	13.91	1.62	-52.30	-13.00	39.30
5197.50	H	66.31	-50.06	14.00	1.52	-37.58	-13.00	24.58
5197.50	V	65.28	-51.16	14.00	1.52	-38.68	-13.00	25.68
1RB, 1.4MHz, QPSK, Frequency:1754.3MHz								
82.76	H	55.29	-64.92	0.00	0.10	-65.02	-13.00	52.02
48.73	V	55.13	-49.95	-16.14	0.07	-66.16	-13.00	53.16
3508.60	H	57.04	-61.67	13.83	1.60	-49.44	-13.00	36.44
3508.60	V	56.27	-62.44	13.83	1.60	-50.21	-13.00	37.21
5262.90	H	65.02	-51.75	14.19	1.29	-38.85	-13.00	25.85
5262.90	V	64.02	-52.83	14.19	1.29	-39.93	-13.00	26.93

LTE Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 824.7 MHz								
84.75	H	54.39	-64.81	0.00	0.10	-64.91	-13.00	51.91
81.24	V	54.37	-68.85	0.00	0.10	-68.95	-13.00	55.95
1649.40	H	59.73	-65.38	10.45	0.71	-55.64	-13.00	42.64
1649.40	V	53.51	-72.20	10.45	0.71	-62.46	-13.00	49.46
2474.10	H	52.26	-70.52	12.89	1.25	-58.88	-13.00	45.88
2474.10	V	52.30	-70.53	12.89	1.25	-58.89	-13.00	45.89
3298.80	H	50.27	-69.14	13.60	1.59	-57.13	-13.00	44.13
3298.80	V	50.70	-68.71	13.60	1.59	-56.70	-13.00	43.70
1RB, 1.4MHz, QPSK, Frequency: 836.5 MHz								
84.35	H	54.27	-65.13	0.00	0.10	-65.23	-13.00	52.23
79.68	V	53.42	-70.27	-0.16	0.10	-70.53	-13.00	57.53
1673.00	H	57.17	-67.58	10.61	0.73	-57.70	-13.00	44.70
1673.00	V	51.96	-73.39	10.61	0.73	-63.51	-13.00	50.51
2509.50	H	50.15	-72.73	13.11	1.25	-60.87	-13.00	47.87
2509.50	V	51.39	-71.51	13.11	1.25	-59.65	-13.00	46.65
3346.00	H	51.00	-68.21	13.83	1.61	-55.99	-13.00	42.99
3346.00	V	51.14	-68.12	13.83	1.61	-55.90	-13.00	42.90
1RB, 1.4MHz, QPSK, Frequency: 848.3 MHz								
83.96	H	55.23	-64.37	0.00	0.10	-64.47	-13.00	51.47
80.87	V	52.96	-70.44	0.00	0.10	-70.54	-13.00	57.54
1696.60	H	59.36	-65.02	10.78	0.75	-54.99	-13.00	41.99
1696.60	V	54.86	-70.12	10.78	0.75	-60.09	-13.00	47.09
2544.90	H	51.72	-71.15	13.14	1.27	-59.28	-13.00	46.28
2544.90	V	53.66	-69.35	13.14	1.27	-57.48	-13.00	44.48
3393.20	H	51.53	-67.47	14.07	1.64	-55.04	-13.00	42.04
3393.20	V	51.20	-67.89	14.07	1.64	-55.46	-13.00	42.46

LTE Band 7 (30MHz-26GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 2502.5 MHz								
84.75	H	55.26	-63.94	0.00	0.10	-64.04	-25.00	39.04
83.68	V	52.34	-69.68	0.00	0.10	-69.78	-25.00	44.78
5005.00	H	53.08	-64.57	14.00	1.43	-52.00	-25.00	27.00
5005.00	V	53.51	-63.90	14.00	1.43	-51.33	-25.00	26.33
7507.50	H	59.59	-49.54	13.20	1.33	-37.67	-25.00	12.67
7507.50	V	56.93	-52.68	13.20	1.33	-40.81	-25.00	15.81
1RB, 5MHz, QPSK, Frequency:2535 MHz								
83.36	H	53.86	-66.05	0.00	0.10	-66.15	-25.00	41.15
42.11	V	52.60	-42.75	-23.61	0.07	-66.43	-25.00	41.43
5070.00	H	51.63	-65.28	13.93	1.34	-52.69	-25.00	27.69
5070.00	V	52.19	-64.53	13.93	1.34	-51.94	-25.00	26.94
7605.00	H	50.86	-58.55	13.21	1.40	-46.74	-25.00	21.74
7605.00	V	54.61	-55.20	13.21	1.40	-43.39	-25.00	18.39
1RB, 5MHz, QPSK, Frequency: 2567.5 MHz								
84.13	H	54.92	-64.60	0.00	0.10	-64.70	-25.00	39.70
83.24	V	53.42	-68.82	0.00	0.10	-68.92	-25.00	43.92
5135.00	H	61.15	-55.35	13.94	1.38	-42.79	-25.00	17.79
5135.00	V	55.93	-60.49	13.94	1.38	-47.93	-25.00	22.93
7702.50	H	61.23	-48.46	13.40	1.47	-36.53	-25.00	11.53
7702.50	V	59.99	-50.02	13.40	1.47	-38.09	-25.00	13.09

LTE Band 12 (30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 699.7MHz								
83.46	H	53.24	-66.62	0.00	0.10	-66.72	-13.00	53.72
52.43	V	54.35	-54.28	-13.78	0.07	-68.13	-13.00	55.13
1399.40	H	53.30	-70.90	9.00	1.20	-63.10	-13.00	50.10
1399.40	V	52.31	-72.49	9.00	1.20	-64.69	-13.00	51.69
2099.10	H	49.89	-73.59	11.41	1.10	-63.28	-13.00	50.28
2099.10	V	50.64	-72.84	11.41	1.10	-62.53	-13.00	49.53
2798.80	H	50.84	-71.26	13.10	1.36	-59.52	-13.00	46.52
2798.80	V	51.45	-70.85	13.10	1.36	-59.11	-13.00	46.11
1RB, 1.4MHz, QPSK, Frequency:707.5 MHz								
82.76	H	52.75	-67.46	0.00	0.10	-67.56	-13.00	54.56
43.84	V	53.68	-43.79	-21.33	0.07	-65.19	-13.00	52.19
1415.00	H	54.87	-69.62	9.08	1.22	-61.76	-13.00	48.76
1415.00	V	52.45	-72.56	9.08	1.22	-64.70	-13.00	51.70
2122.50	H	54.76	-68.68	11.27	1.11	-58.52	-13.00	45.52
2122.50	V	52.70	-70.72	11.27	1.11	-60.56	-13.00	47.56
2830.00	H	51.51	-70.16	13.34	1.36	-58.18	-13.00	45.18
2830.00	V	50.92	-70.98	13.34	1.36	-59.00	-13.00	46.00
1RB, 1.4MHz, QPSK, Frequency: 715.3 MHz								
84.26	H	55.32	-64.13	0.00	0.10	-64.23	-13.00	51.23
81.49	V	53.76	-69.34	0.00	0.10	-69.44	-13.00	56.44
1430.60	H	55.76	-69.03	9.15	1.25	-61.13	-13.00	48.13
1430.60	V	50.46	-74.77	9.15	1.25	-66.87	-13.00	53.87
2145.90	H	49.52	-73.89	11.12	1.12	-63.89	-13.00	50.89
2145.90	V	49.12	-74.25	11.12	1.12	-64.25	-13.00	51.25
2861.20	H	50.76	-70.47	13.59	1.35	-58.23	-13.00	45.23
2861.20	V	49.89	-71.60	13.59	1.35	-59.36	-13.00	46.36

LTE Band 17 (30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 706.5MHz								
85.42	H	53.75	-65.11	0.00	0.10	-65.21	-13.00	52.21
45.76	V	52.46	-47.69	-19.06	0.07	-66.82	-13.00	53.82
1413.00	H	50.60	-73.85	9.07	1.22	-66.00	-13.00	53.00
1413.00	V	49.53	-75.45	9.07	1.22	-67.60	-13.00	54.60
2119.50	H	50.52	-72.92	11.28	1.11	-62.75	-13.00	49.75
2119.50	V	49.02	-74.40	11.28	1.11	-64.23	-13.00	51.23
2826.00	H	51.43	-70.30	13.31	1.36	-58.35	-13.00	45.35
2826.00	V	51.20	-70.76	13.31	1.36	-58.81	-13.00	45.81
1RB, 5MHz, QPSK, Frequency:710 MHz								
83.46	H	54.22	-65.64	0.00	0.10	-65.74	-13.00	52.74
79.65	V	53.64	-70.04	-0.17	0.10	-70.31	-13.00	57.31
1420.00	H	50.97	-73.61	9.10	1.23	-65.74	-13.00	52.74
1420.00	V	50.36	-74.72	9.10	1.23	-66.85	-13.00	53.85
2130.00	H	49.32	-74.11	11.22	1.11	-64.00	-13.00	51.00
2130.00	V	49.31	-74.09	11.22	1.11	-63.98	-13.00	50.98
2840.00	H	51.26	-70.27	13.42	1.36	-58.21	-13.00	45.21
2840.00	V	51.01	-70.76	13.42	1.36	-58.70	-13.00	45.70
1RB, 5MHz, QPSK, Frequency: 713.5 MHz								
82.65	H	54.26	-66.01	0.00	0.10	-66.11	-13.00	53.11
80.76	V	53.74	-69.72	0.00	0.10	-69.82	-13.00	56.82
1427.00	H	51.22	-73.50	9.14	1.24	-65.60	-13.00	52.60
1427.00	V	49.84	-75.34	9.14	1.24	-67.44	-13.00	54.44
2140.50	H	48.67	-74.75	11.16	1.12	-64.71	-13.00	51.71
2140.50	V	49.16	-74.22	11.16	1.12	-64.18	-13.00	51.18
2854.00	H	50.02	-71.31	13.53	1.35	-59.13	-13.00	46.13
2854.00	V	50.65	-70.94	13.53	1.35	-58.76	-13.00	45.76

LTE Band 41 (30MHz-27GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 2537.5MHz								
85.34	H	54.36	-64.54	0.00	0.10	-64.64	-25.00	39.64
46.75	V	56.85	-44.95	-18.09	0.07	-63.11	-25.00	38.11
5075.00	H	51.52	-65.34	13.93	1.34	-52.75	-25.00	27.75
5075.00	V	50.99	-65.68	13.93	1.34	-53.09	-25.00	28.09
7612.50	H	52.10	-57.33	13.23	1.40	-45.50	-25.00	20.50
7612.50	V	51.84	-57.99	13.23	1.40	-46.16	-25.00	21.16
1RB, 5MHz, QPSK, Frequency: 2595 MHz								
83.52	H	51.65	-68.18	0.00	0.10	-68.28	-25.00	43.28
46.88	V	52.74	-49.27	-17.96	0.07	-67.30	-25.00	42.30
5190.00	H	51.78	-64.60	13.99	1.51	-52.12	-25.00	27.12
5190.00	V	50.81	-65.63	13.99	1.51	-53.15	-25.00	28.15
7785.00	H	52.89	-57.04	13.32	1.53	-45.25	-25.00	20.25
7785.00	V	51.54	-58.64	13.32	1.53	-46.85	-25.00	21.85
1RB, 5MHz, QPSK, Frequency: 2652.5 MHz								
83.64	H	53.45	-66.31	0.00	0.10	-66.41	-25.00	41.41
82.54	V	55.26	-67.32	0.00	0.10	-67.42	-25.00	42.42
5305.00	H	52.20	-64.64	14.29	1.17	-51.52	-25.00	26.52
5305.00	V	51.39	-65.53	14.29	1.17	-52.41	-25.00	27.41
7957.50	H	51.39	-59.04	13.32	1.66	-47.38	-25.00	22.38
7957.50	V	40.57	-69.96	13.32	1.66	-58.30	-25.00	33.30

LTE Band 66 (30MHz-18GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 1.4MHz, QPSK, Frequency: 1710.7 MHz								
83.45	H	52.54	-67.32	0.00	0.10	-67.42	-13.00	54.42
81.62	V	53.75	-69.28	0.00	0.10	-69.38	-13.00	56.38
3421.40	H	54.51	-64.40	14.04	1.63	-51.99	-13.00	38.99
3421.40	V	54.57	-64.41	14.04	1.63	-52.00	-13.00	39.00
5132.10	H	68.53	-47.98	13.93	1.37	-35.42	-13.00	22.42
5132.10	V	67.51	-48.91	13.93	1.37	-36.35	-13.00	23.35
1RB, 1.4MHz, QPSK, Frequency:1745 MHz								
84.52	H	53.64	-65.68	0.00	0.10	-65.78	-13.00	52.78
79.65	V	52.43	-71.25	-0.17	0.10	-71.52	-13.00	58.52
3490.00	H	60.16	-58.54	13.83	1.61	-46.32	-13.00	38.99
3490.00	V	60.58	-58.13	13.83	1.61	-45.91	-13.00	39.00
5235.00	H	66.50	-50.09	14.11	1.40	-37.38	-13.00	22.42
5235.00	V	66.82	-49.85	14.11	1.40	-37.14	-13.00	23.35
1RB, 1.4MHz, QPSK, Frequency: 1779.3 MHz								
82.16	H	55.37	-65.14	0.00	0.10	-65.24	-13.00	52.24
50.58	V	52.12	-55.41	-14.63	0.07	-70.11	-13.00	57.11
3558.60	H	68.54	-50.37	13.98	1.55	-37.94	-13.00	24.94
3558.60	V	66.14	-52.77	13.98	1.55	-40.34	-13.00	27.34
5337.90	H	65.73	-50.08	14.22	1.26	-37.12	-13.00	24.12
5337.90	V	65.94	-49.90	14.22	1.26	-36.94	-13.00	23.94

LTE Band 71 (30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
1RB, 5MHz, QPSK, Frequency: 665.5 MHz								
81.74	H	53.55	-67.18	0.00	0.10	-67.28	-13.00	54.28
83.64	V	53.64	-68.40	0.00	0.10	-68.50	-13.00	55.50
1331.00	H	52.68	-71.82	8.52	1.19	-64.49	-13.00	51.49
1331.00	V	50.28	-75.03	8.52	1.19	-67.70	-13.00	54.70
1996.50	H	49.31	-76.14	11.99	1.13	-65.28	-13.00	52.28
1996.50	V	49.39	-76.45	11.99	1.13	-65.59	-13.00	52.59
1RB, 5MHz, QPSK, Frequency:680.5 MHz								
83.74	H	53.16	-66.55	0.00	0.10	-66.65	-13.00	53.65
43.58	V	51.58	-45.57	-21.67	0.07	-67.31	-13.00	54.31
1361.00	H	42.69	-81.68	8.73	1.20	-74.15	-13.00	61.15
1361.00	V	50.37	-74.72	8.73	1.20	-67.19	-13.00	54.19
2041.50	H	50.84	-73.83	11.75	1.12	-63.20	-13.00	50.20
2041.50	V	48.53	-76.37	11.75	1.12	-65.74	-13.00	52.74
1RB, 5MHz, QPSK, Frequency: 695.5 MHz								
84.65	H	52.64	-66.61	0.00	0.10	-66.71	-13.00	53.71
48.34	V	53.84	-50.59	-16.53	0.07	-67.19	-13.00	54.19
1391.00	H	52.46	-71.78	8.94	1.20	-64.04	-13.00	51.04
1391.00	V	50.51	-74.35	8.94	1.20	-66.61	-13.00	53.61
2086.50	H	49.67	-74.07	11.48	1.10	-63.69	-13.00	50.69
2086.50	V	49.58	-74.21	11.48	1.10	-63.83	-13.00	50.83

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

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2402A62839E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2402A62839E-RF-INP EUT INTERNAL PHOTOGRAPHS

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2402A62839E-RF-00D-TSP TEST SETUP PHOTOGRAPHS.

==== END OF REPORT =====