



TEST REPORT

Applicant: MAXWEST COMMUNICATION LIMITED

Address: FLAT/RM 707 7/F, FORTRESS TOWER 250 KING'S ROAD,NORTH POINT, HONG KONG

FCC ID: 2ASP8NITRO55E

Product Name: Phone

Model Number: NITRO 55E

Standard(s): 47 CFR Part 2 47 CFR Part 22, Subpart H 47 CFR Part 24, Subpart E 47 CFR Part 27 ANSI C63.26-2015 KDB 971168 D01 Power Meas License Digital Systems v03r01

The above equipment has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: CR22080013-00D

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang 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. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Phone
EUT Model:	NITRO 55E
	GSM/GPRS: 850/1900
Operation Bands and modes:	WCDMA: Band 2/4/5
	LTE: Band 2/4/5/12/17/66
Modulation Type:	GMSK BPSK, QPSK, 16QAM
Rated Input Voltage:	DC 5V from adapter or DC 3.8V from battery
Serial Number:	CR22080013-RF-S1
EUT Received Date:	2022.08.12
EUT Received Status:	Good

Accessory Information:

Accessory Description	Manufacturer	Model	Parameters
Adapter 1#	Maxwest	TPA-46B050100UU	Input: 100-240V~50/60Hz 0.2A Output: 5.0V 1000mA
Adapter 2#	Maxwest	NITRO 55E	Input: 100-240V~50/60Hz 0.2A Output: 5.0V 1A
USB Cable	Unknown	Unknown	Unshielded, 1m

Antenna Information▲:

Antenna	Antenna	input impedance	Antenna Gain
Manufacturer	Type	(Ohm)	/Operation Band
MAXWEST COMMUNICATION LIMITED	FPC	50	0.57 dBi (GSM/GPRS1900/WCDMA B2/LTE B2) 0.54 dBi(WCDMA B4/LTE B4/LTE B66) 0.31 dBi (GSM/GPRS850/WCDMA B5/LTE B5) 0.31 dBi(LTE B12/LTE B17)

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation	The system was configured for testing in each operation			
-	mode.			
Equipment Modifica				
EUT Exercise Software: No The maximum power was configured per 3GPP Standard for each operation modes as below se				
GSM/GPRS	a per 5011 Standard for each operation modes as below setting.			
Function:Menu select > GPress Connection control to choosePress RESET > choose all the resetConnectionPress Signal Off toNetwork Support > GSM + GPRS ofMain Service > Packet DataService selection > Test Mode A - AMS SignalPress Slot Configslots and power setting> Slot configuration> U> 33 dBm for GPRS 850> 30 dBm for GPRS 190	all settings to turn off the signal and change settings or GSM + EGSM Auto Slot Config. off g Bottom on the right twice to select and change the number of time Uplink/Gamma 0 hannel number for TCH channel (test channel) and BCCH channel			
BCCH Level > -85 dBm (M	ay need to adjust if link is not stable) e test channel [Enter the same channel number for TCH channel (test			
TCH >choose destHopping >OffMain Timeslot >3	(if already set under MS signal) red test channel neme > CS4 (GPRS)			
	Bit Stream opriate offsets for Ext. Att. Output and Ext. Att. Input al 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		4	5		
	Loopback Mode	Test Mode 1						
	Rel99 RMC	12.2kbps RMC						
	HSDPA FRC			H-Set1				
	HSUPA Test		HS	SUPA Loopba	ck			
WCDMA	Power Control			Algorithm2				
General	Algorithm				- // -			
Settings	βc	11/15	6/15	15/15	2/15	15/15		
Settings	βd	15/15	15/15	9/15	15/15	0		
	βec	209/225	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		
	MPR(dB)	0	2	1	2	0		
	DACK			8				
	DNAK			8				
	DCQI	8						
	HSDPA Ack Nack repetition		2					
Specific Settings	factor	3						
Settings	CQI Feedback			4ms				
	CQI Repetition Factor			2				
	Ahs=βhs/ βc			30/15	_			
	DE-DPCCH	6	8	8	5	7		
	DHARQ	0	0	0	0	0		
	AG Index	20	12	15	17	21		
	ETFCI	75	67	92	71	81		
	Associated Max UL Data Rate k ps	242.1	174.9	482.8	205.8	308.9		
HSUPA Specific Settings	Reference E_FCls	E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC	I PO 4 CI 67 PO 18 CI 71 I PO23 CI 75 I PO26 CI 81	E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC E-TFC	CI 11 E CI PO 4 CI 67 I PO 18 CI 71 I PO23 CI 75 I PO26 CI 81 I 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	Cha	Channel bandwidth / Transmission bandwidth (RB)					MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	1
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".

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N _{RS})	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
			3	>5	≤ 1
			5	>6	≤1
NS_03	6.6.2.2.1	2, 4,10, 23, 25, 35, 36	10	>6	≤1
			15	>8	≤1
			20	>10	≤ 1
NS 04	66222	41	5	>6	s 1
NS_04	0.0.2.2.2	41 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
NO. 07	6.6.2.2.3	40	40	711.0040	
NS_07	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
	0.0.3.3.4			> 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'	1.4, 3, 5, 10	Table 6.2.4-5	Table 6.2.4-5
NS_32					
Note 1: A	pplies to the lower	block of Band 23, i.e	a carrier place	d in the 2000-201	10 MHz region.

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

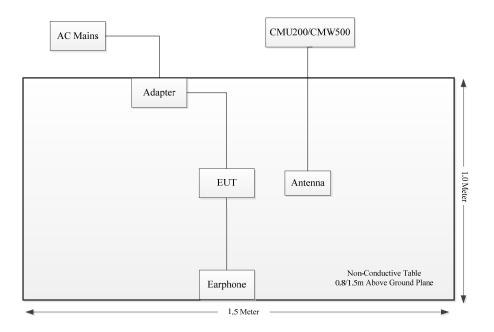
1.2.2 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
R&S	Wideband Radio Communication Tester	CMW500	149218
Unknown	Antenna	Unknown	Unknown
1MORE	earphone	1m301	5521427

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	То
Earphone Cable	No	No	1.2	EUT	Earphone

1.2.4 Block Diagram of Test Setup



1.3 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	$\pm 5\%$
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
Unwanted Emissions, radiated	30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB,
Oliwalited Ellissions, fadiated	6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Unwanted Emissions, conducted	±1.26 dB
Temperature	± 1 °C
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 0.4\%$
Duty Cycle	1%
RF Frequency	$\pm 0.082 \times 10^{-6}$

2. SUMMARY OF TEST RESULTS

Rules	Description of Test	Result
FCC§2.1046; § 22.913 (a); § 24.232 (c); §27.50	RF Output Power	Compliant
FCC§ 2.1047	Modulation Characteristics	Not Applicable
FCC§ 2.1049; § 22.905 § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliant
FCC§ 2.1051, § 22.917 (a); § 24.238 (a); § 27.53	Spurious Emissions at Antenna Terminal	Compliant
FCC§ 22.917 (a); § 24.238 (a); §27.53	Out of band emission, Band Edge	Compliant
FCC§ 2.1055 § 22.355; § 24.235; §27.54	Frequency stability vs. temperature Frequency stability vs. voltage	Compliant
FCC§ 2.1053 § 22.917 (a); § 24.238 (a); § 27.53	Field Strength of Spurious Radiation	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 Applicable Standard For Part 22 Subpart H:

3.1.1 RF Output Power

FCC §22.913(a)

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

3.1.2 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

3.1.3 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.

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

Table C-1 - Frequency Tolerance for Transmitters in the Public Mobile Services

3.2 Applicable Standard For Part 24 Subpart E:

3.2.1 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.

3.2.2 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.

3.2.3 Frequency stability

FCC §24.235

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

3.3 Applicable Standard For Part 27:

3.3.1 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.

3.3.2 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 log₁₀ (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.

3.3.3 Frequency stability

FCC §27.54

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

3.4 Test Method:

3.4.1 RF Output Power

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

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

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

where:

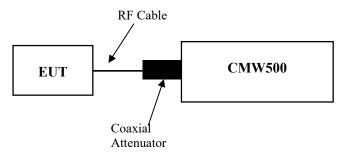
 $ERP \text{ or } EIRP = effective \text{ radiated power or equivalent isotropically radiated power, respectively} (expressed in the same units as P_{Meas}, typically dBW or dBm);$

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:



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

3.4.2 Occupied Bandwidth

According to CFR Part 2.1049, 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 $1.5 \times OBW$ 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 \ge 3 × RBW.

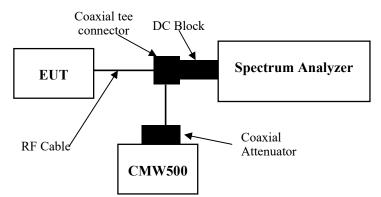
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3. NOTE—Step a), step b), and step c) may require iteration to adjust within the specified tolerances.

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:



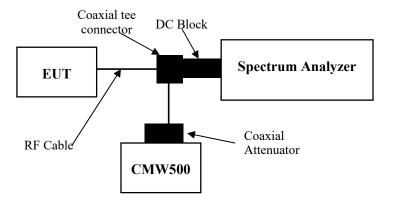
Note: 4.5dB is the Insertion loss of the RF cable, Coaxial tee connector and DC Block, which was offset into the Spectrum Analyzer.

3.4.3 Spurious emissions at antenna terminals

According to CFR Part 2.1051, 22.917(a), 24.238(a) and/or 27.53, 90, ANSI C63.26-2015 Section 5.7.4, KDB 971168 D01 Power Meas License Digital Systems v03r01:

the applicable rule part specifies the reference bandwidth for measuring unwanted emission levels (typically, 100 kHz if the authorized frequency band/block is at or below 1 GHz and 1 MHz if the authorized frequency band/block is above 1 GHz),8 effectively depicting the unwanted emission limit in terms of a power spectral density. In those cases where no reference bandwidth is explicitly specified, the values in the preceding sentence should be used.

Test Setup Block:



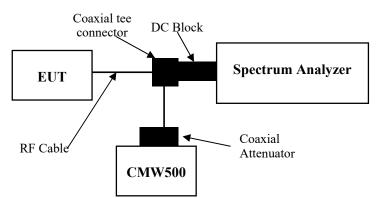
Note: 4.5dB is the Insertion loss of the RF cable, Coaxial tee connector and DC Block, which was offset into the Spectrum Analyzer.

3.4.4 Out of band emission

According to CFR Part 2.1051, 22.917(a), 24.238(a), 27.53,90, ANSI C63.26-2015 Section 5.7.3, KDB 971168 D01 Power Meas License Digital Systems v03r01:

Typically, a measurement (resolution) bandwidth smaller than the reference bandwidth is allowed for measurements within a specified frequency range at the edge of the authorized frequency block/band (e.g., within the first Y MHz outside of the authorized frequency band/block, where the value of Y is specified in the relevant rule part). Some FCC out-of-band emission rules permit the use of a narrower RBW (typically limited to a minimum RBW of 1 % of the 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 4.5dB is the Insertion loss of the RF cable, Coaxial tee connector and DC Block, which was offset into the Spectrum Analyzer.

3.4.5 Frequency stability

According to CFR Part 2.1055, ANSI C63.26-2015 Section 5.6, KDB 971168 D01 Power Meas License Digital Systems v03r01:

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

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

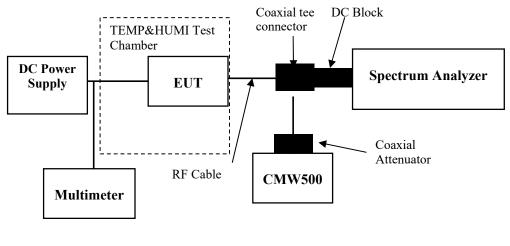
a) At 10 °C intervals of temperatures between -30 °C and +50 °C at the manufacturer's rated supply voltage, and

b) At +20 °C temperature and $\pm 15\%$ 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:



3.4.6 Field strength of spurious radiation

According to CFR Part 2.1053, 22.917(a), 24.238(a) and/or 27.53, ANSI C63.26-2015 Section 5.5.3:

Test setup:

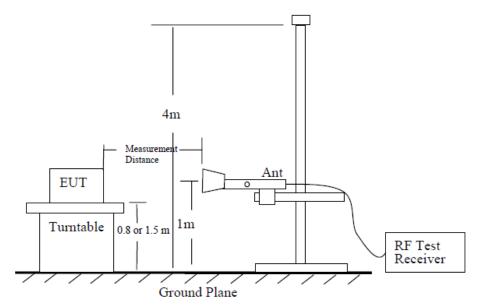


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

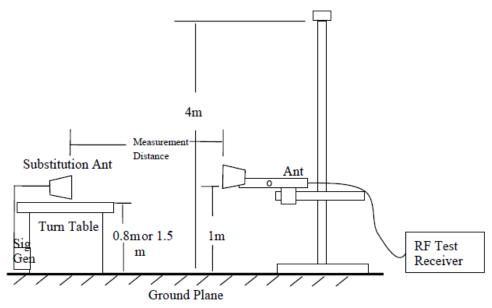


Figure 7 — Substitution method set-up for radiated emission

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:
 - 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.
 - Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
 - 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.
 - 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).
 - Record the output power level of the signal generator when equivalence is achieved in step 2).
- 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) - cable loss (dB) + 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.

4. Test DATA AND RESULTS

4.1 Antenna Port Test Data and Results for GSM 850 band:

Serial Number:	CR22080013-RF-S1	Test Date:	2022/08/15~2022/09/26
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rinka Li	Test Result:	Pass

Environmental Conditions:						
Temperature: (℃)	26.5~26.8	Relative Humidity: (%)	47.6~64	ATM Pressure: (kPa)	99.9~101.1	

Test Equipment List and Details:							
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date		
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14		
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A		
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A		
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A		
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A		
Unknown	RF Cable	Unknown	RF Cable 003	Each time	N/A		
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14		
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29		
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A		
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05		

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@ GSM 850 Band A:							
Antenna Gain (dBi):	0.31	Antenna Gain (dBd):	-1.84	Path Loss L _C (dB):	0.3		
Operation Voltage(VDC):							
Lowest:	3.5	Normal:	3.8	Highest:	4.35		

Test Frequency For Each Mode:						
Operation Modes	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)			
GSM	824.2	836.6	848.8			
GPRS	824.2	836.6	848.8			

FCC§2.1046;§ 22.913 (a):RF Output Power								
Test Mode	Conducted Lowest Channel	Peak Output Pe Middle Channel	ower(dBm) Highest Channel	- Maximum ERP (dBm)	ERP Limit (dBm)			
GSM	32.4	32.53	31.85	30.39	38.45			
GPRS 1 Slot	33.18	33.25	33.45	31.31	38.45			
GPRS 2 Slots	33.09	32.95	33.32	31.18	38.45			
GPRS 3 Slots	32.6	32.87	33.28	31.14	38.45			
GPRS 4 Slots	32.59	32.82	32.98	30.84	38.45			
Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd)								
				Result:	Pass			

FCC §2.1049, §22.917, §22.905:Occupied Bandwidth								
Operation	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)				
Mode	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel		
GSM	0.247	0.245	0.245	0.318	0.317	0.317		
Note: The test plots please refer to the Plots of Occupied Bandwidth								

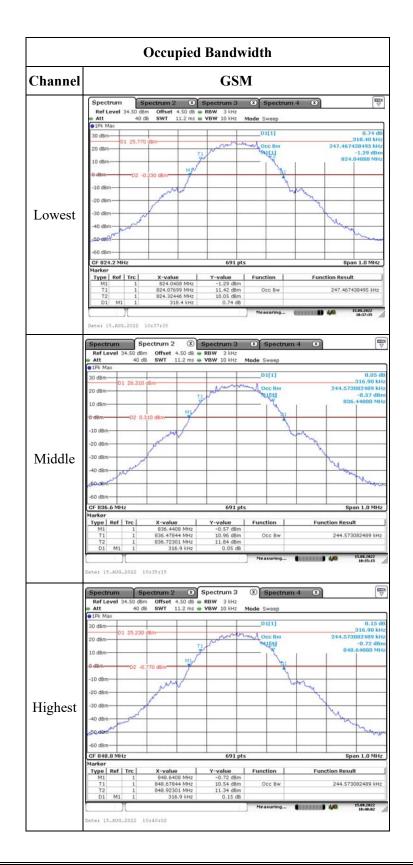
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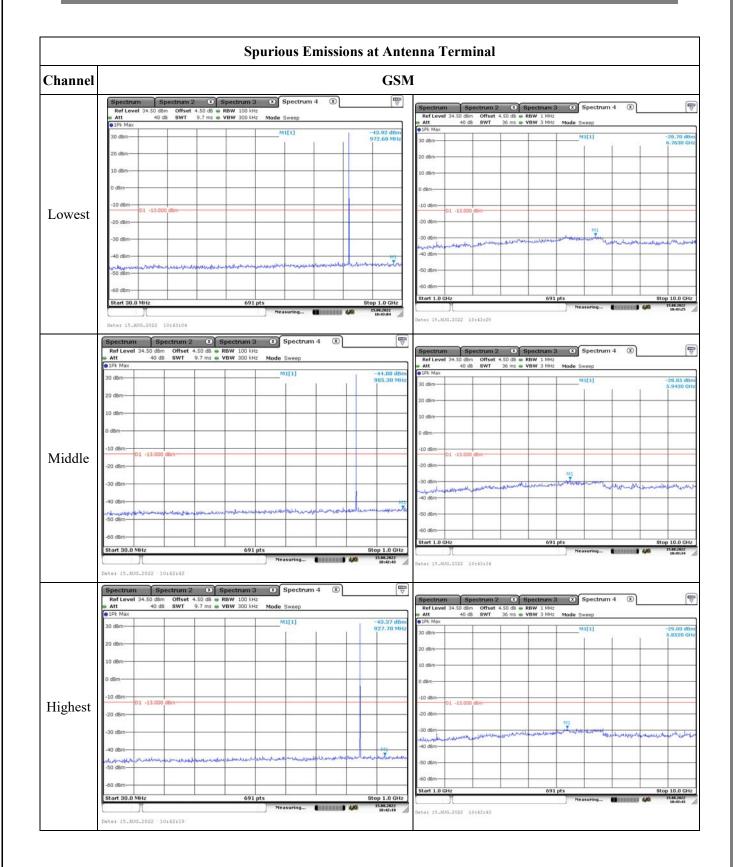
FCC §2.1051, §22.917(a):Spurious Emissions at Antenna TerminalResult:Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

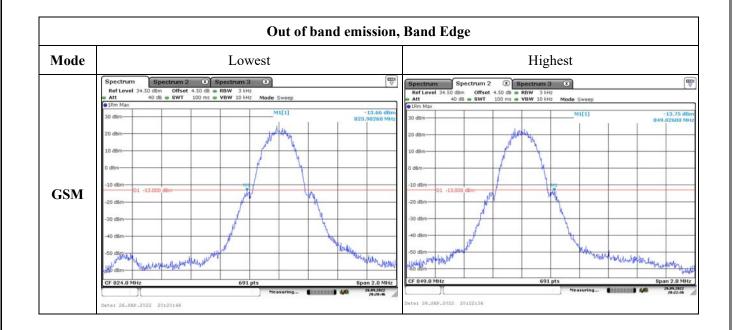
FCC §2.1051, §22.917(a):Out of band emission, Band EdgeResult:Pass, Please refer to the test plots of Out of band emission, Band Edge.

FCC §2.1055	FCC §2.1055, §22.355: Frequency Stability							
Test Modulation:	GMSK		Test Channel:	836.6	MHz			
Test Item	Temperature Voltage		Frequ	ency Error	Limit			
Test Item	(°C)	(Vdc)	(Hz)	(ppm)	(ppm)			
	-30	3.8	-5	-0.006	2.5			
	-20	3.8	11	0.013	2.5			
	-10	3.8	32	0.038	2.5			
Frequency	0	3.8	-16	-0.019	2.5			
Stability vs.	10	3.8	32	0.038	2.5			
Temperature	20	3.8	48	0.057	2.5			
	30	3.8	65	0.078	2.5			
	40	3.8	-6	-0.007	2.5			
	50	3.8	-35	-0.042	2.5			
Frequency	20	3.5	21	0.025	2.5			
Stability vs. Voltage	20	4.35	31	0.037	2.5			
				Result:	Pass			

Test Plots:







4.2 Antonna 1	1.2 Antenna i ort rest Data and Results for GSM 1700 band.							
Serial Number:	CR22080013-RF-S1	Test Date:	2022/8/15~2022/9/26					
Test Site:	RF	Test Mode:	Transmitting					
Tester:	Rinka Li	Test Result:	Pass					

4.2 Antenna Port Test Data and Results for GSM 1900 band:

En	vironment	al Conditions:				
Te	emperature: (°C)	26.3~26.8	Relative Humidity: (%)	47.6~64	ATM Pressure: (kPa)	99.9~101.1

Test Equipment List and Details:						
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	
R&S	Spectrum Analyzer FSV40		101474	2022-07-15	2023-07-14	
zhuoxiang	Coaxial Cable SMA-178 211002		Each time	N/A		
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A	
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A	
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A	
Unknown	RF Cable	Unknown	RF Cable 003	Each time	N/A	
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14	
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29	
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A	
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05	

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@PCS1900 Band▲:						
Antenna Gain (dBi):	0.57			Path Loss L _C (dB):	0.5	
Operation Volta	Operation Voltage(VDC):					
Lowest:	3.5	Normal:	3.8	Highest:	4.35	

Test Frequency For Each Mode:						
Operation Modes	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)			
GSM	1850.2	1880	1909.8			
GPRS	1850.2	1880	1909.8			

Test Data:

FCC§2.1046;§ 24.232 (c):RF Output Power						
	Conducted P	Maximum EIRP	EIRP Limit			
Test Mode	Lowest Channel	Middle Channel	Highest Channel	(dBm)	(dBm)	
GSM	27.65	27.85	27.45	27.92	33	
GPRS 1 Slot	26.45	26.85	26.78	26.92	33	
GPRS 2 Slots	26.06	26.57	26.37	26.64	33	
GPRS 3 Slots	25.66	26.14	26.19	26.26	33	
GPRS 4 Slots	25.19	25.92	25.69	25.99	33	
Note: EIRP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBi)						
				Result:	Pass	

FCC §2.1049, §24.238:Occupied Bandwidth							
Operation	99% O	ccupied Bandw (MHz)	vidth	26 dB Occupied Bandwidth (MHz)			
Mode	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel	
GSM 0.248 0.246 0.246 0.323 0.313 0.313							
Note: The test p	Note: The test plots please refer to the Plots of Occupied Bandwidth						

FCC §2.1051, § 24.238 (a):Spurious Emissions at Antenna TerminalResult:Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

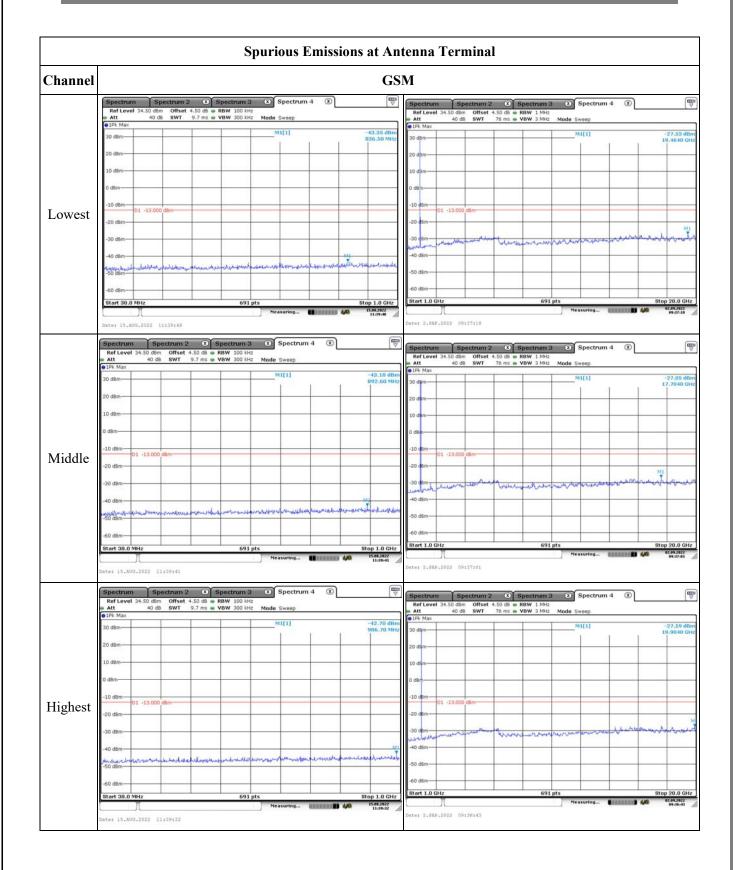
FCC §2.1051, § 24.238 (a):Out of band emission, Band Edge

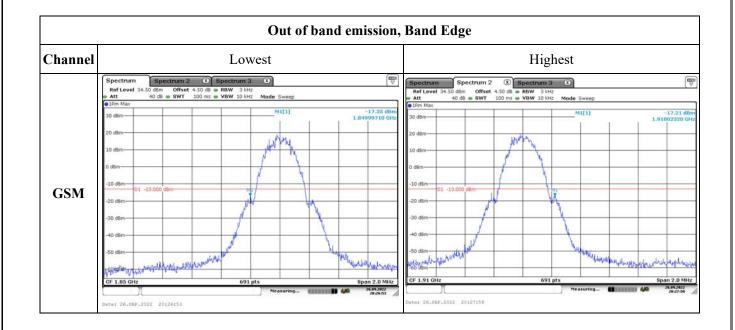
Result: Pass, Please refer to the test plots of Out of band emission, Band Edge.

FCC §2.1055, §24.235: Frequency Stability						
Test Modulation:	GMSK		Test Channel:	1880	MHz	
T 4 I4	Temperature Voltage		Frequ	ency Error	D14	
Test Item	(°C)	(VDC)	(Hz)	(ppm)	Result	
	-30	3.8	5	0.003	Pass	
	-20	3.8	-5	-0.003	Pass	
	-10	3.8	11	0.006	Pass	
Frequency	0	3.8	25	0.013	Pass	
Stability vs.	10	3.8	29	0.015	Pass	
Temperature	20	3.8	38	0.020	Pass	
	30	3.8	31	0.016	Pass	
	40	3.8	-65	-0.035	Pass	
	50	3.8	-34	-0.018	Pass	
Frequency	20	3.5	11	0.006	Pass	
Stability vs. Voltage	20	4.35	6	0.003	Pass	
				Result:	Pass	

Test Plots:







	in Thitema I off I off Duta and Results for the Objetit Dana 20						
Serial Number:	CR22080013-RF-S1	Test Date:	2022/08/15-2022/09/02				
Test Site:	RF	Test Mode:	Transmitting				
Tester:	Rinka Li	Test Result:	Pass				

4.3 Antenna Port Test Data and Results for WCDMA Band 2:

Environmental Conditions:						
Temperature: (°C)	26.3~26.5	Relative Humidity: (%)	47.6~61	ATM Pressure: (kPa)	99.9~100.3	

Test Equipment List and Details:						
Description	Model	Serial Number	Calibration Date	Calibration Due Date		
Spectrum Analyzer FSV4		101474	2022-07-15	2023-07-14		
Coaxial Cable	SMA-178	211002	Each time	N/A		
DC Block	BLK-18-S+	1554404	Each time	N/A		
Coaxial Attenuators	53-20-34	LN751	Each time	N/A		
Coaxial tee connector	Unknown	2204004	Each time	N/A		
RF Cable	Unknown	RF Cable 003	Each time	N/A		
Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14		
Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29		
DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A		
TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05		
	DescriptionSpectrum AnalyzerCoaxial CableDC BlockCoaxial AttenuatorsCoaxial tee connectorRF CableWideband RadioCommunication TesterMultimeterDC Power Supply	DescriptionModelSpectrum AnalyzerFSV40Coaxial CableSMA-178DC BlockBLK-18-S+Coaxial Attenuators53-20-34Coaxial tee connectorUnknownRF CableUnknownWideband Radio Communication TesterCMW500MultimeterUT39A+DC Power SupplyRXN-6010D	DescriptionModelSerial NumberSpectrum AnalyzerFSV40101474Coaxial CableSMA-178211002DC BlockBLK-18-S+1554404Coaxial Attenuators53-20-34LN751Coaxial tee connectorUnknown2204004RF CableUnknownRF Cable 003Wideband Radio Communication TesterCMW500149218MultimeterUT39A+C210582554DC Power SupplyRXN-6010D21R6010D0912386	DescriptionModelSerial NumberCalibration DateSpectrum AnalyzerFSV401014742022-07-15Coaxial CableSMA-178211002Each timeDC BlockBLK-18-S+1554404Each timeCoaxial Attenuators53-20-34LN751Each timeCoaxial tee connectorUnknown2204004Each timeRF CableUnknownRF Cable 003Each timeWideband Radio Communication TesterCMW5001492182022-07-15MultimeterUT39A+C2105825542021-09-30DC Power SupplyRXN-6010D21R6010D0912386N/A		

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@ WCDMA Band II A:						
Antenna Gain (dBi):	0.57			Path Loss L _C (dB):	0.5	
Operation Volta	Operation Voltage(VDC):					
Lowest:	3.5	Normal:	3.8	Highest:	4.35	

Test Frequency For Each Mode:					
Operation Modes	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)		
WCDMA	1852.4	1880	1907.6		

Test Data:

FCC§2.1046;§ 24.232 (c) RF Output Power:							
	Conducted A	verage Output		LIDD			
Test Mode	Lowest Channel	Middle Channel	Highest Channel	Maximum EIRP(dBm)	EIRP Limit(dBm)		
WCDMA R99	22.45	22.35	22.14	22.52	33		
HSDPA Subtest 1	21.85	21.65	21.77	21.92	33		
HSDPA Subtest 2	21.56	21.24	21.65	21.72	33		
HSDPA Subtest 3	21.27	21.19	21.38	21.45	33		
HSDPA Subtest 4	21.25	20.79	21.02	21.32	33		
HSUPA Subtest 1	21.56	21.48	21.66	21.73	33		
HSUPA Subtest 2	21.26	21.26	21.21	21.33	33		
HSUPA Subtest 3	21.1	20.88	21.11	21.18	33		
HSUPA Subtest 4	20.91	20.44	21.08	21.15	33		
HSUPA Subtest 5	20.58	20.11	20.92	20.99	33		
Note: EIRP=Cor	Note: EIRP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBi)						
		Result:	Pass				

Peak-to-average Ratio(PAR)

ı a	ge Rano(I AR)			
		Pe	T · · ·		
	Test Mode	Lowest Channel	Middle Channel	Highest Channel	Limit (dB)
	WCDMA R99	3.07	3.04	3.16	13
	HSDPA	5.54	5.71	5.74	13
	HSUPA	4.78	5.22	5.62	13
				Result:	Pass

FCC §2.1049, §24.238:Occupied Bandwidth								
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)				
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel		
WCDMA R99	4.17	4.17	4.15	4.71	4.69	4.69		
HSDPA	4.15	4.17	4.17	4.71	4.69	4.69		
HSUPA	4.17	4.15	4.71	4.69	4.69			
Note: The test p	lots please refer t	o the Plots of Oc	cupied Bandwid	th				

FCC §2.1051, § 24.238 (a):Spurious Emissions at Antenna Terminal

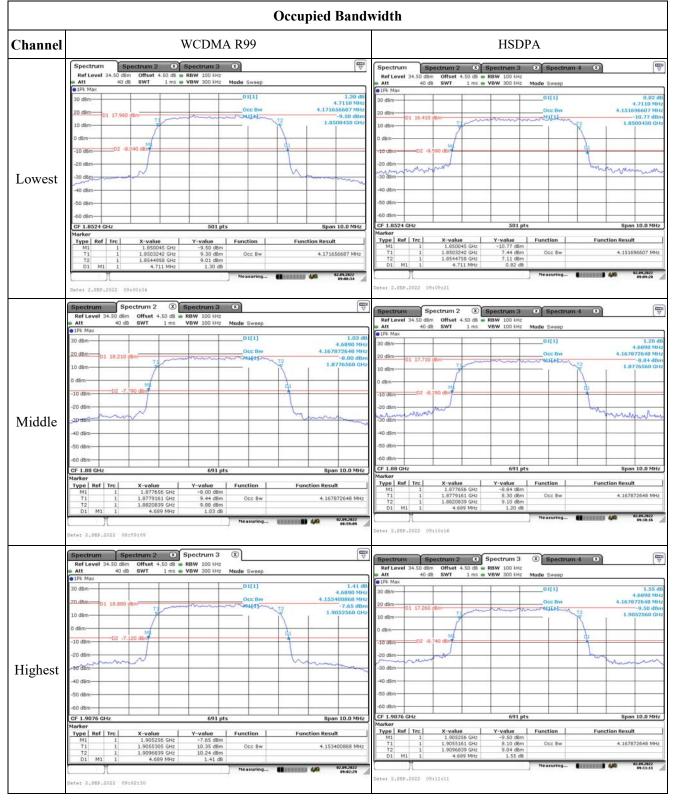
Result: Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

FCC §2.1051, § 24.238 (a):Out of band emission, Band EdgeResult:Pass, Please refer to the test plots of Out of band emission, Band Edge.

FCC §2.1055, §24.235: Frequency Stability						
Test Modulation:	WCDMA R99		Test Channel:	1880	MHz	
Test Item	Temperature	Voltage	Frequ	ency Error	Result	
Test nem	(°C)	(Vdc)	(Hz)	(ppm)	Kesuit	
	-30	3.8	42	0.022	Pass	
	-20	3.8	-26	-0.014	Pass	
	-10	3.8	-4	-0.002	Pass	
Frequency	0	3.8	-28	-0.015	Pass	
Stability vs.	10	3.8	29	0.015	Pass	
Temperature	20	3.8	-31	-0.016	Pass	
	30	3.8	10	0.005	Pass	
	40	3.8	1	0.001	Pass	
	50	3.8	-25	-0.013	Pass	
Frequency	20	3.5	29	0.015	Pass	
Stability vs. Voltage	20	4.35	37	0.020	Pass	
	· · · ·	Result:	Pass			

Report No.: CR22080013-00D

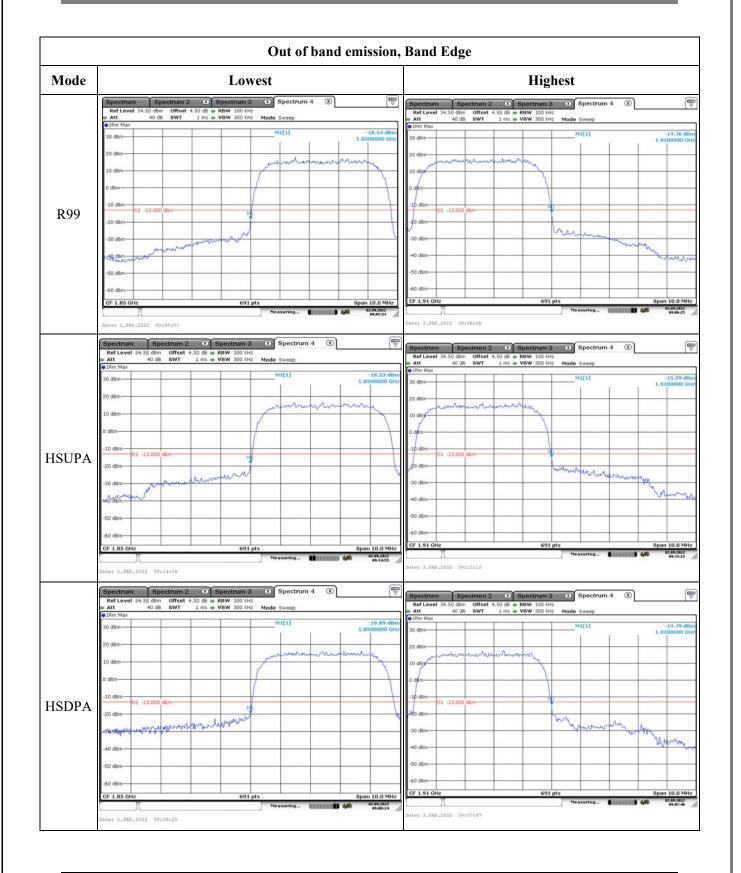
Test Plots:



1	Occupied Bandwidth
Channel	HSUPA
Lowest	Spectrum Spectrum 3 Spectrum 4 Tmp Ref Level 34.50 dBm Offset 4.50 dB RBW 100 H/z Mode Sweep • Att 40 dB SWT 1 ms VBW 200 H/z Mode Sweep • D1 (hz -0.94 dB -0.94
	OF L8524 GHz 501 pts Span 10.0 MHz Marker Yupe Ref Trc X-value Y-value Function Function Result M1 1 1.850045 GHz -10.70 dHm Function Function Result T1 1 1.850042 GHz -7.85 dHm Occ Bw 4.171656697 MHz T2 1 1.850049 GHz 7.56 dHm Occ Bw 4.171656697 MHz D1 M1 1 4.4711 MHz 0.94 dB EXPLANT Messuring EXPLANT Dates 2.5EP.2022 09:14124 Messuring EXPLANT Mittel
Middle	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 Image: Spectrum 4 <thimage: 4<="" spectrum="" th=""></thimage:>
Highest	Spectrum 2 Spectrum 3 Spectrum 4 Image: Control of the state

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	Spurious Emissions at An	itenna Terminal
Channel	WCDM	1A R99
Lowest	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 Image: Control of the second s	
	-60 dBm Start 30.0 MHz 691 pts Stop 1.0 GHz (10.0 Hz 10.0 Hz	60 dBm Btort 1.0 GHz 691 pts Stop 20.0 GHz Stort 1.0 GHz 691 pts Stop 20.0 GHz Stop 20.0 GHz Date: 2.8EP.2022 09:04:59 Measuring Btort 2.8EP.2022 09:04:59 Stop 20.0 GHz
Middle	Spectrum Spectrum 3 Spectrum 4 The system 4	Appectant Comparing Comparing <thcomparing< th=""> Comparing <thcomparing< th=""> Comparing <thc< td=""></thc<></thcomparing<></thcomparing<>
Highest	Spectrum Spectrum 3 Spectrum 4 Image: Control of the second s	RefLevel 34.50 dlm Offset 4.50 dlm 0 ffset 4.50 dlm (V) # Att 40 db SWT 76 million VBW 3 MHz Mode Sweep # DPL Max



Serial Number:	CR22080013-RF-S1	Test Date:	2022/08/15
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rinka Li	Test Result:	Pass

4.4 Antenna Port Test Data and Results for WCDMA Band 4:

Environmental Conditions:							
Temperature: (℃)	26.5	Relative Humidity: (%)	47.6	ATM Pressure: (kPa)	99.9		

Test Equipment List and Details:								
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date			
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14			
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A			
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A			
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A			
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A			
Unknown	RF Cable	Unknown	RF Cable 003	Each time	N/A			
R&S Wideband Radio Communication Tester		CMW500	149218	2022-07-15	2023-07-14			
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29			
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A			
BACL TEMP&HUMI Test Chamber		BTH-150-40	30174	2022-04-06	2023-04-05			

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@ WCDMA Band IV :							
Antenna Gain (dBi):	0.54			Path Loss L _C (dB):	0.4		
Operation Volta	Operation Voltage(V _{DC}):						
Lowest:	3.5	Normal:	3.8	Highest:	4.35		

Test Frequency For Each Mode:							
Operation Modes	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)				
WCDMA	1712.4	1732.6	1752.6				

Test Data:

FCC§2.1046;§27.50(d)(4) RF Output Power:						
	Conducted A	verage Output		EIRP		
Test Mode	Lowest Channel	Middle Channel	Highest Channel	Maximum EIRP(dBm)	Limit(dBm)	
WCDMA R99 Subtest 1	21.58	21.29	20.97	21.72	30	
HSDPA Subtest 1	20.27	19.83	19.57	20.41	30	
HSDPA Subtest 2	20.18	19.81	19.49	20.32	30	
HSDPA Subtest 3	20.06	19.53	19.43	20.2	30	
HSDPA Subtest 4	20.00	19.3	19.33	20.14	30	
HSUPA Subtest 1	20.27	19.87	19.53	20.41	30	
HSUPA Subtest 2	20.25	19.83	19.47	20.39	30	
HSUPA Subtest 3	20.21	19.58	19.32	20.35	30	
HSUPA Subtest 4	20.19	19.46	19.24	20.33	30	
HSUPA Subtest 5	20.04	19.44	19.18	20.18	30	
Note: EIRP=Cor	nducted Power(d	Bm) - Cable loss	(dB) + Antenna	Gain(dBi)		
Result: Pass						

Peak-to-average Ratio(PAR)								
		Pe	Peak-to-average Ratio(dB)					
	Test Mode	Lowest Channel	Middle Channel	Highest Channel	Limit (dB)			
	WCDMA R99	2.7	3.07	2.87	13			
	HSDPA	5.1	5.39	5.33	13			
	HSUPA	6	6.17	6.38	13			
				Result:	Pass			

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FCC §2.1049, §27.53:Occupied Bandwidth									
Opration Mode	99%	Occupied Band (MHz)	width	26 dB Occupied Bandwidth (MHz)					
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel			
WCDMA R99	4.17	4.15	4.15	4.70	4.69	4.69			
HSDPA	4.15	4.17	4.15	4.69	4.70	4.69			
HSUPA 4.15 4.14 4.15 4.70						4.69			
Note: The test pl	lots please refer t	o the Plots of Oc	cupied Bandwid	th					

FCC §2.1051, § 27.53:Spurious Emissions at Antenna Terminal

Result: Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

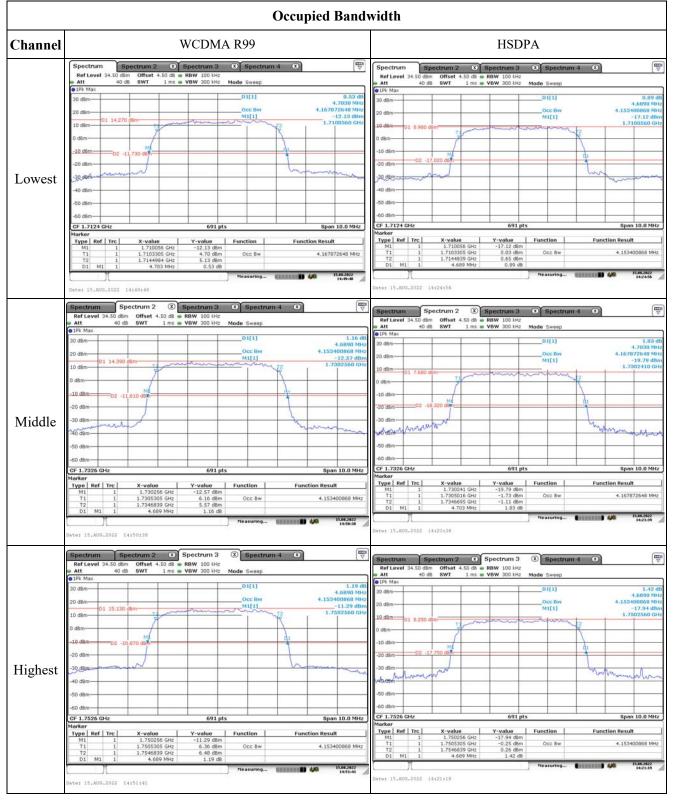
FCC §2.1051, § 27.53:Out of band emission, Band EdgeResult:Pass, Please refer to the test plots of Out of band emission, Band Edge.

FCC §2.1055, §27.54: Frequency Stability

Test Mode:	WCDMA R99	Test Channel: Lowest for Lower Edge, Highest for Upper Edge					
Test Item	Temperature	Voltage		ver Edge MHz)		Upper Edge (MHz)	
	(°C)	(Vdc)	Result	Limit	Result	Limit	
	-30	3.8	1710.417	1710.00	1754.741	1755	
	-20	3.8	1710.414	1710.00	1754.735	1755	
	-10	3.8	1710.388	1710.00	1754.724	1755	
Frequency	0	3.8	1710.378	1710.00	1754.690	1755	
Stability vs.	10	3.8	1710.347	1710.00	1754.687	1755	
Temperature	20	3.8	1710.331	1710.00	1754.684	1755	
	30	3.8	1710.327	1710.00	1754.680	1755	
	40	3.8	1710.312	1710.00	1754.676	1755	
	50	3.8	1710.298	1710.00	1754.664	1755	
Frequency	20	3.5	1710.292	1710.00	1754.659	1755	
Stability vs. Voltage	20	4.35	1710.287	1710.00	1754.655	1755	
					Result:	Pass	

Report No.: CR22080013-00D

Test Plots:

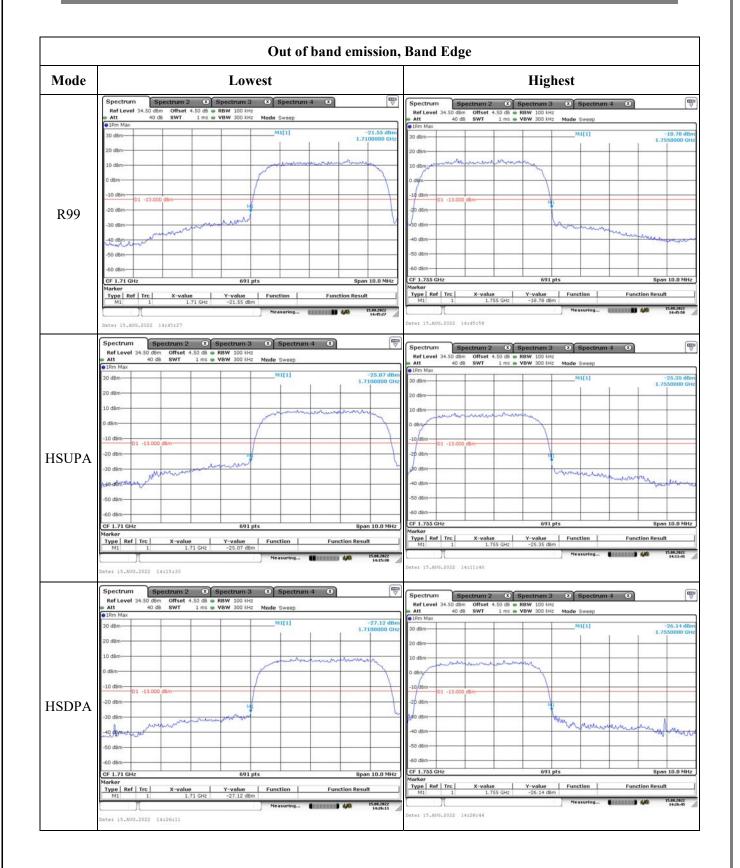


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Channal		ottapica	Bandwidth		
Channel			HSUPA		
	Spectrum Ref Level 34.50	d8m Offset 4.50 d8 .	RBW 100 kHz	rum 4 🛛 🛞	
	Att 4	0 d8 SWT 1 ms 🖷	VBW 300 kHz Mode Sweep	8 6	
	30 dām		D1[1]		0,17 dB 4,7030 MHz
	20 d8m		Occ Bw M1[1]		53400868 MHz -17.41 dBm
	10.d8m-01 9.0	i0 dBm		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1.7100560 GHz
	0 dBm	1			
	-20 dBm D2	-16,940 db/r		qu	
Lowest	-30 dero	mm		mon	man
Lowest	-40 d8m-				
	-50 dBm				_
	-60 dBm-				
	CF 1.7124 GHz Marker		691 pts		pan 10.0 MHz
	Type Ref Trc M1 1	X-value 1.710056 GHz	Y-value Function -17.41 dBm	Function Re	
	T1 1 T2 1 D1 M1 1	1.7103305 GHz 1.7144839 GHz 4.703 MHz	0.30 dBm Occ Bw 1.13 dBm 0.17 dB	4.1	53400868 MHz
		Arres mine	Measuring		15.08.2022
	Date: 15.AUG.2022	14:17:32			
			Spectrum 3 🔹 Spect	trum 4 🛛 🛞	
	Att 40	Bm Offset 4.50 dB 👄 1 dB SWT 1 ms 👄 2	RBW 100 kHz VBW 300 kHz Mode Sweep	3	
	1Pk Max 30 dBm-		D1[1]		-0.30 dB
	20 dBm-		Occ Bw	4.	4,7030 MHz 138929088 MHz
	10 dBm-		M1[1]		-19.66 dBm 1.7302560 GHz
	0 dBm-01 6.58	dam Ta		m 12	
	-10 dBm	-			_
	20 dBm	-19.420 dBh		d1	_
Middle	-30 dBm	N			
	40 dBm who have			man	munun
	-50 dBm				
	-60 dBm CF 1.7326 GHz		691 pts		Span 10.0 MHz
	Marker Type Ref Trc	X-value	Y-value Function	Function R	
	M1 1 T1 1	1.730256 GHz 1.7305305 GHz	-19.66 dBm -1.17 dBm Occ Bw		138929088 MHz
	T2 1 D1 M1 1	1.7346695 GHz 4.703 MHz	-1.73 dBm -0.30 dB		
			Measuring	2 CIIIIIII 🖬 4/4	15.88.2022 14:18:36
	Date: 15.AUG.2022	14:18:36			
			Spectrum 3 🛞 Spec	trum 4 🛛 🛞	
	Ref Level 34.50 d Att 40	Bm Offset 4.50 dB 🖷 1 dB SWT 1 ms 🖷 '	RBW 100 kHz VBW 300 kHz Mode Sweep	0	
	IPk Max 30 dBm		D1[1]		1.62 dB
	20 d8m-		Occ Bw M1[1]	4.	4.6890 MHz 153400868 MHz -18.38 d6m
	.10.d8m-01 8.510) dam	Malaj		1,7502560 GHz
	0 dBm	James and a start and a start		R	
	-10 dBm	-17.490 dBm		di	
	-20 GBM	-17.490 dB/r		1	
Highest	-30 dBm	month		huma	mm
	- 40-88m				
	-50 dBm				
	-60 dBm CF 1.7526 GHz		691 pts		Span 10.0 MHz
	Marker	X-value I	CICCUM NO.		
	Type Ref Trc M1 1 T1 1	X-value 1.750256 GHz 1.750545 GHz	Y-value Function ~18.38 dBm	0.0000000000	153400868 MHz
	T2 1 D1 M1 1	1.7546984 GHz 4.689 MHz	-0.21 dBm 1.62 dB	-	200 100000 mm2
			Measuring	9 	15.08.2022
			rieasurin		14:19:44

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	Spurious Emissions at An	tenna Terminal
Channel	WCDM	(A R99
	Spectrum Spectrum 3 Spectrum 4 Image: Comparison of the top in the t	Spectrum Spectrum 2 Spectrum 3 X Spectrum 4 Image: Compare 1 Ref Level 34.50 dBm Offset 4.50 dB = RBW 1 Mitz X Spectrum 4 X Image: Compare 2
	10 dBm	10 aBm
Lowest	-10 dBm 01 -13.000 dBm	-10 HBm 01 -13 000 dBm
	-30 dBm	- 30 BER
	1 Lewy on an anni an freithe ste feither in an far an	-50 dem
	Start 30.0 MHz 691 pts Stop 1.0 GHz Date: 15.400.2022 14146139	Start 1.0 GHz 691 pts Stop 20.0 GHz Measuring 13.48.392 Date: 15.4002.2022 14148105
	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 Image: Construct a spectrum 4 Image: Construm4 Image: Construm4 Image: Consp	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 Image: Control of the system in the
	19 Fk Max 10 dBm 20 dBm 20 dBm	OFF Max M1[1] -28.06 dBm 20 dBm 17.7040 GHz 17.7040 GHz
	10 dBm	20 dem 10 d8m
Middle	-10 dBm 01 -13.000 dBm	-10 #8m 01 -13 000 d8m
	-30 dBm	-30 dan- - and the advance of the second of
		-50 dBm
	Stort 30.0 MHz 691 pts Stop 1.0 GHz Neasuring 1000 MHz 1000 MHz 1000 MHz Date: 15.400.2022 14:46:46 1400 MHz 1400 MHz	Stort 1.0 GHz 691 pts Stop 20.0 GHz Neasuring Neasuring Neasuring Date: 15.AUG.2022 14:47:34 Neasuring Neasuring
	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 Tmm Ref Level 34.50 dBm Offset 4.50 dBm RBW 100 HHz Spectrum 4 Tmm Tmm Att 40 dB SVM 9.7 ms SVM Mode Sweep Spectrum 4 Spectru	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 T T Ref Level 34.50 dim Offset 4.50 dill = RBW 1164; Spectrum 4 Spectrum4
	19k Max 30 dBm 608.50 MHz	● ATL 40 dB SWT 76 ms ● VBW 3 MHz Mode Sweep ● IPk Max 30 dBm
	20 d8m	20 dBm
Highest	-10 dBm 01 -13.000 dBm	0 dtm -10 JBm -11 JBm -20 JBm
	-30 dBm	-30 Jen
	-50 dbm-	-50 d8m
	Stort 30.0 NHz 691 pts Stop 1.0 GHz Measuring Massing 1440 52	Stort 1.0 GHz 691 pts Stop 20.0 GHz Measuring Measuring Measuring



ne mintenna i	to intenna i ore i ese bata and results for the Obinit band of								
Serial Number:	CR22080013-RF-S1	Test Date:	2022/08/15						
Test Site:	RF	Test Mode:	Transmitting						
Tester:	Rinka Li	Test Result:	Pass						

4.5 Antenna Port Test Data and Results for WCDMA Band 5:

Environmental Conditions:								
Temperature: (°C)	26.5	Relative Humidity: (%)	47.6	ATM Pressure: (kPa)	99.9			

Test Equipment List and Details:								
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date			
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14			
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A			
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A			
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A			
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A			
Unknown	RF Cable	Unknown	RF Cable 003	Each time	N/A			
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14			
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29			
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A			
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05			

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@ WCDMA Band VA:									
Antenna Gain (dBi):	0.31	Antenna Gain (dBd):	-1.84	Path Loss L _C (dB):	0.3				
Operation Volta	Operation Voltage(V _{DC}):								
Lowest:	3.5	Normal:	3.8	Highest:	4.35				

Test Frequency For Each Mode:							
Operation Modes Lowest Frequency (MHz)		Middle Frequency (MHz)	Highest Frequency (MHz)				
WCDMA	826.4	836.6	846.6				

Test Data:					
FCC§2.1046;§	§ 22.913 (a)				
RF Output Po	ower:				
	Conducted A	verage Output	Power(dBm)	Maximum ERP	ERP Limit
Test Mode	Lowest Channel	Middle Channel	Highest Channel	(dBm)	(dBm)
WCDMA R99 Subtest 1	21.65	20.48	20.78	19.51	38.45
HSDPA Subtest 1	21.15	21.35	20.78	19.21	38.45
HSDPA Subtest 2	21.94	22.16	22.34	20.2	38.45
HSDPA Subtest 3	21.91	22.15	22.33	20.19	38.45
HSDPA Subtest 4	21.90	22.10	22.33	20.19	38.45
HSUPA Subtest 1	22.16	22.26	22.44	20.30	38.45
HSUPA Subtest 2	22.12	22.23	22.43	20.29	38.45
HSUPA Subtest 3	22.07	22.20	22.42	20.28	38.45
HSUPA Subtest 4	22.05	22.17	22.37	20.23	38.45
HSUPA Subtest 5	22.03	22.15	22.36	20.22	38.45
Note: ERP=Con	ducted Power(dE	Bm) - Cable loss(dB) + Antenna (Gain(dBd)	
				Result:	Pass

Peak-to-avera	Peak-to-average Ratio(PAR)								
		Pe	eak-to-average Ra	atio(dB)	T · ·/				
	Test Mode		Middle Channel	Highest Channel	Limit (dB)				
	WCDMA R99	2.78	3.01	3.04	13				
	HSDPA	5.30	5.22	5.19	13				
	HSUPA	4.55	5.01	4.96	13				
				Result:	Pass				

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FCC §2.1049, §22.917, §22.905:Occupied Bandwidth								
Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)				
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel		
WCDMA R99	4.15	4.17	4.17	4.72	4.7	4.69		
HSDPA	4.17	4.15	4.17	4.7	4.67	4.7		
HSUPA	4.17	4.14	4.17	4.7	4.67	4.7		
Note: The test p	Note: The test plots please refer to the Plots of Occupied Bandwidth							

FCC §2.1051, §22.917(a):Spurious Emissions at Antenna Terminal

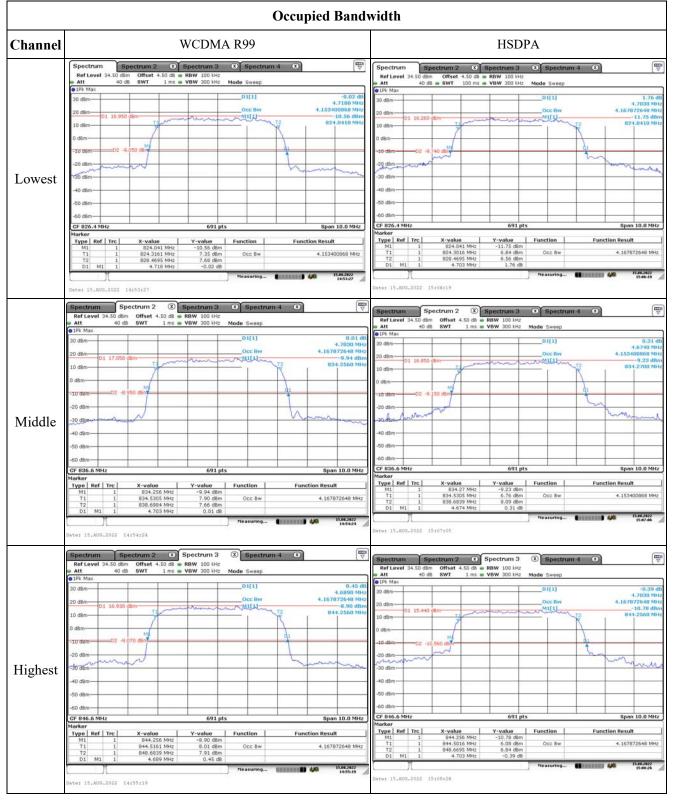
Result: Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.

FCC §2.1051, §22.917(a):Out of band emission, Band EdgeResult:Pass, Please refer to the test plots of Out of band emission, Band Edge.

FCC §2.1055, §22.355: Frequency Stability							
Test Modulation:	WCDMA R99		Test Channel:	836.6	MHz		
Test Item	Temperature	Voltage	Frequ	ency Error	Limit		
Test Item	(°C)	(VDC)	(Hz)	(ppm)	(ppm)		
	-30	3.8	42	0.050	2.5		
	-20	3.8	11	0.013	2.5		
	-10	3.8	6	0.007	2.5		
Frequency	0	3.8	5	0.006	2.5		
Stability vs.	10	3.8	43	0.051	2.5		
Temperature	20	3.8	44	0.053	2.5		
	30	3.8	6	0.007	2.5		
	40	3.8	1	0.001	2.5		
	50	3.8	-23	-0.027	2.5		
Frequency	20	3.5	44	0.053	2.5		
Stability vs. Voltage	20	4.35	30	0.036	2.5		
			•	Result:	Pass		

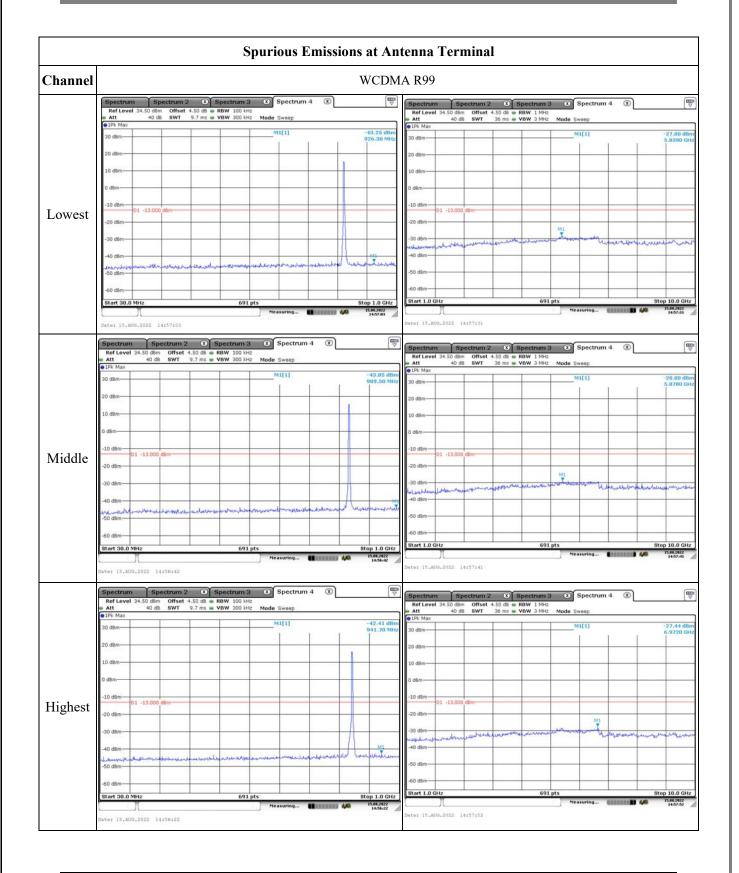
Report No.: CR22080013-00D

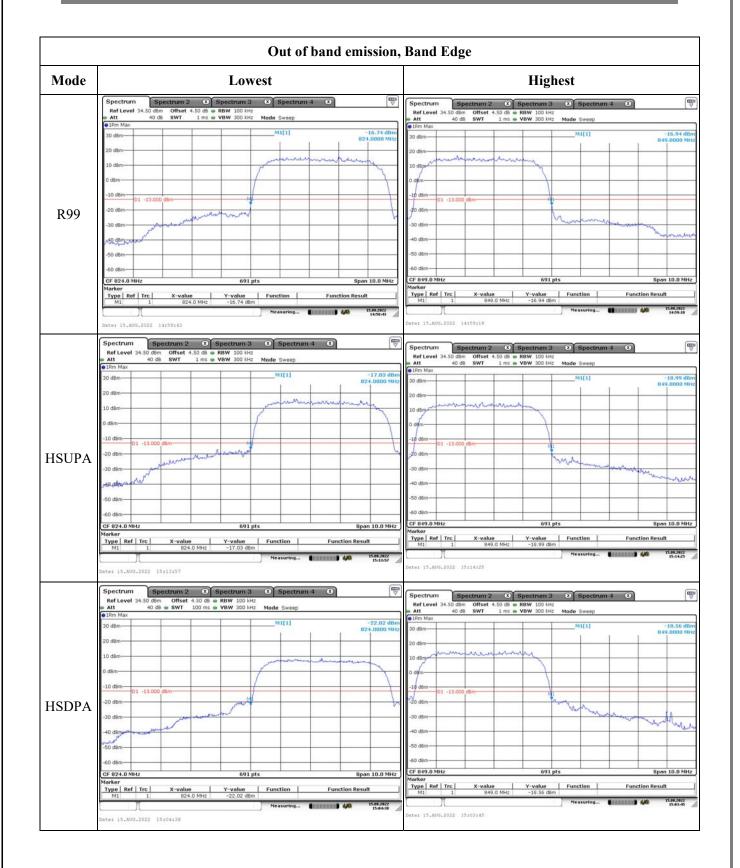
Test Plots:



	Occupied Bandwidth
Channel	HSUPA
Lowest	ISOLIA Spectrum 2 Spectrum 3 Spectrum 4 C Colspan="2">C Ref Level 34.50 dim Offset 4.50 die RBW 100 HHz Alt 40 die SWT 100 ms # VBW 200 HHz Alt 40 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die SWT 100 ms # VBW 200 HHz Offset 4.50 die MHz Offset 4.50 die MHz Offset 4.50 die MHz Offset 4.10 die MHZ
	CF 826.4 MHz 601 pts Span 10.0 MHz Marker Y-value Y-value Function Function Result M1 1 824.041 MHz -11.16 dBm Occ Bw 4.167872648 MHz T2 1 822.4668 MHz 6.46 dBm Occ Bw 4.167872648 MHz D1 1 4.703 MHz 1.15 dB Messuring The security of the se
/liddle	Ref Level 34.50 dbm Offset 4.50 dbm RBW 100 kHz A 40 db SWT I ms V BW 300 kHz Mode Sweep B 19k Max O 10 11 0.00 dbm 0.00 dbm 0.01 11 0.00 dbm 0.00 dbm 30 dbm 0 1 16.490 dbm 0 ccc flw 4.0000 MHz 9.15 dbm 9.15 dbm 10 dbm 0 1 16.490 dbm 0 ccc flw 9.15 dbm 9.13 dbm 9.15 dbm 0 dbm 0 dbm 0 dbm 0.01 10.490 dbm 9.15 dbm 9.13 dbm 9.13 dbm 0 dbm 0 dbm 0 dbm 0.01 10.490 dbm 9.13 dbm 9.13 dbm 9.13 dbm -00 dbm -02 -9.520 dbm -04 dbm -04 dbm -04 dbm 9.13 dbm 9.10 dbHz 1.139290dB MHz 1.1392
Highest	Spectrum Spectrum 2 Spectrum 3 Spectrum 4 The sector of the secto

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4.6Antenna Port Test Data and Results for LTE Band 2

Serial Number:	CR22080013-RF-S1	Test Date:	2022-08-13~2022-08-25
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

Environmental Conditions:						
Temperature: (°C)	25.1~25.9	Relative Humidity: (%)	52~63	ATM Pressure: (kPa)	99.9~100.8	

Test Equipment List and Details:							
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date		
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14		
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A		
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A		
Weinschel	Coaxial Attenuators	53-20-34	LN751	Each time	N/A		
Unknown	Coaxial tee connector	Unknown	2204004	Each time	N/A		
Unknown	RF Cable	Unknown	RF Cable 003	Each time	N/A		
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14		
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29		
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A		
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05		

* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

EUT Information@ LTE Band 2▲:						
Antenna Gain (dBi):	0.57			Path Loss L _C (dB):	0.5	
Operation Voltage(VDC):						
Lowest:	3.5	Normal:	3.8	Highest:	4.35	

Test Frequency For Each Mode:							
Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)				
1.4MHz	1850.7	1880	1909.3				
3MHz	1851.5	1880	1908.5				
5MHz	1852.5	1880	1907.5				
10MHz	1855	1880	1905				
15MHz	1857.5	1880	1902.5				

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China Certificati	on ICT (Co., Ltd ((Dongguan)
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Report No.: CR22080013-00D

20MHz

1860

1880

1900

FCC§2.1046;	§ 24.232					
RF Output P	ower:					
Test	Resource	Conducted	l Average Out	put Power(dBm)	Maximum	EIRP
Bandwidth & Modulation	Block & RB offset	Lowest Channel	Middle Channel	Highest Channel	EIRP (dBm)	Limit (dBm)
	RB1#0	21.9	21.86	22.03		
	RB1#3	21.9	21.83	22.05		
	RB1#5	22.01	21.84	22.16	22.22	22
1.4MHz QPSK	RB3#0	22.03	21.94	22.22	22.33	33
	RB3#3	22.09	22.05	22.26		
	RB6#0	21	20.98	21.1		
	RB1#0	21.74	21.61	20.98		
	RB1#3	21.74	21.6	20.94		
	RB1#5	21.78	21.52	21.01	21.95	33
1.4MHz 16QAM	RB3#0	21.15	20.96	21.32	- 21.85	
	RB3#3	21.14	21.03	21.32		
	RB6#0	20.33	20.22	20.56		
	RB1#0	21.92	21.92	22.05		
	RB1#8	21.97	21.95	22.09		
	RB1#14	21.85	21.96	22.05	22.10	22
3MHz QPSK	RB6#0	20.99	21.01	21.07	22.16	33
	RB6#9	20.97	20.93	21.11		
	RB15#0	21	20.98	21.11		
	RB1#0	21.76	20.87	21.58		33
	RB1#8	21.77	20.85	21.56		
	RB1#14	21.66	20.89	21.53	21.04	
3MHz 16QAM	RB6#0	20.25	20.15	20.25	21.84	
	RB6#9	20.13	20.34	20.21		
	RB15#0	20.14	20.12	20.38		
	RB1#0	22.07	21.98	22.03		
	RB1#13	21.96	21.97	22.11		
	RB1#24	21.97	21.98	22.07	22.10	
5MHz QPSK	RB15#0	20.92	21.06	21.22	22.18	33
	RB15#10	20.84	20.88	21.13		
	RB25#0	20.85	20.89	21.13		
	RB1#0	21.27	20.67	20.42		
	RB1#13	21.16	20.63	20.36		
SMI- 1/0 M	RB1#24	21.15	20.72	20.39	21.24	22
5MHz 16QAM	RB15#0	20.06	20.18	20.34	21.34	33
	RB15#10	19.91	20.14	20.37		
	RB25#0	19.96	19.99	20.39		
10MHz QPSK	RB1#0	22.01	21.95	22.04	22.12	33

					Result:	Pass
ote: EIRP=Cor			(dB) + Antenna G			
	RB50#50 RB100#0	20.17 20.07	20.15 20.24	20.35	-	
-	RB50#0	19.99	20.08	20.3	4	
0MHz 16QAM	RB1#99	21.09	21.91	21.43	21.98	33
	RB1#50	20.97	21.79	21.36		
	RB1#0	21.12	21.62	21.34		
	RB100#0	21.01	21.05	21.28		
	RB50#50	20.98	21.14	21.2		
2000 QI SIX	RB50#0	20.95	21.02	21.07	22.32	55
20MHz QPSK	RB1#99	22.15	22.11	22.25	22.32	33
	RB1#50	22.1	22.04	22.23		
	RB1#0	22.07	21.98	22.08		
	RB75#0	20.08	20.11	20.33		33
ĺ	RB36#39	20.12	20.18	20.35		
JIMITZ TOQAM	RB36#0	20.13	20.03	20.35	21.0	
5MHz 16QAM	RB1#74	21.17	21.53	21.43	21.6	
	RB1#38	21.12	21.45	21.47		
	RB1#0	21.21	21.35	21.31		
	RB75#0	20.89	21.08	21.15		55
	RB36#39	20.92	21.04	21.08		
1 JUILL OF DE	RB36#0	20.98	20.89	21.09	22.22	
15MHz QPSK	RB1#74	21.93	22.08	22.15	22.22	33
[RB1#38	21.92	21.99	22.05		
	RB1#0	22.08	22.01	22.01		
	RB50#0	20.13	20.06	20.29		
ĺ	RB25#25	20.15	20.28	20.38		
I OTVITIZ TOQAIVI	RB25#0	20.12	20.21	20.24	21.34	33
10MHz 16QAM	RB1#49	21.11	20.52	21.46	21.54	33
	RB1#25	21.12	20.51	21.47		
	RB1#0	21.19	20.44	21.42		
	RB50#0	20.83	20.97	21.16		
	RB25#25	20.9	21.06	21.13		
	RB25#0	20.85	20.97	21.08		
	RB1#49	21.96	22.03	22.05		
	RB1#25	21.98	21.95	22.03		

Peak-to-average Ratio(PAR)							
Test	Resource	Pea	ak-to-average R	latio(dB)			
Bandwidth & Modulation	Block & RB offset	Lowest Channel	Middle Channel	Highest Channel	Limit (dB)		
20MHz QPSK	RB1#0	5.01	3.57	2.81	13		
20MHZ QFSK	RB100#0	5.04	5.04	4.64	13		
20MHz	RB1#0	6.00	4.55	4.06	13		
16QAM	RB100#0	5.91	5.97	5.57	13		
				Result:	Pass		

FCC §2.1049,	§24.238:Occu	pied Bandwidt	h				
Operation	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)			
Mode	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel	
1.4MHz QPSK	1.102	1.102	1.108	1.260	1.260	1.272	
1.4MHz 16QAM	1.096	1.108	1.096	1.254	1.260	1.254	
3MHz QPSK	2.695	2.695	2.695	3.000	3.012	3.012	
3MHz 16QAM	2.683	2.683	2.695	3.000	3.024	3.024	
5MHz QPSK	4.511	4.511	4.531	5.020	5.000	5.000	
5MHz 16QAM	4.531	4.551	4.511	5.020	5.040	5.020	
10MHz QPSK	8.942	8.942	8.982	9.760	9.800	9.840	
10MHz 16QAM	8.982	8.942	8.982	9.800	9.800	9.800	
15MHz QPSK	13.473	13.533	13.593	15.000	15.180	15.000	
15MHz 16QAM	13.473	13.593	13.593	15.120	15.180	15.060	
20MHz QPSK	17.964	18.124	17.964	19.520	19.920	19.520	
20MHz 16QAM	17.964	18.124	18.044	19.840	19.840	19.680	

Note: The test plots please refer to the Plots of Occupied Bandwidth

FCC §2.1051, § 24.238 (a):Spurious Emissions at Antenna Terminal

Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal. **Result:**

FCC §2.1051, § 24.238 (a):Out of band emission, Band Edge **Result:** Pass, Please refer to the test plots of Out of band emission, Band Edge.

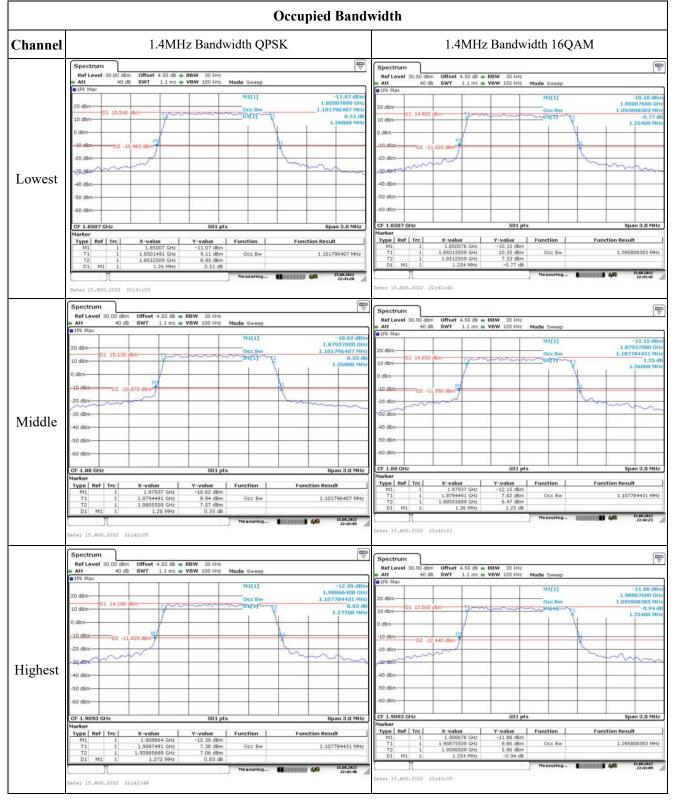
FCC §2.1055, §24.235: Frequency Stability							
Test Mode:	20 MHz QPSK		Test Channel:	1880	MHz		
Test Item	Temperature Voltage		Frequency Error		Result		
Test Item	(°C)	(V _{DC})	(Hz)	(ppm)	Kesun		
Frequency	-30	3.8	-13.07	-0.007	Pass		
Stability vs.	-20	3.8	-9.97	-0.005	Pass		

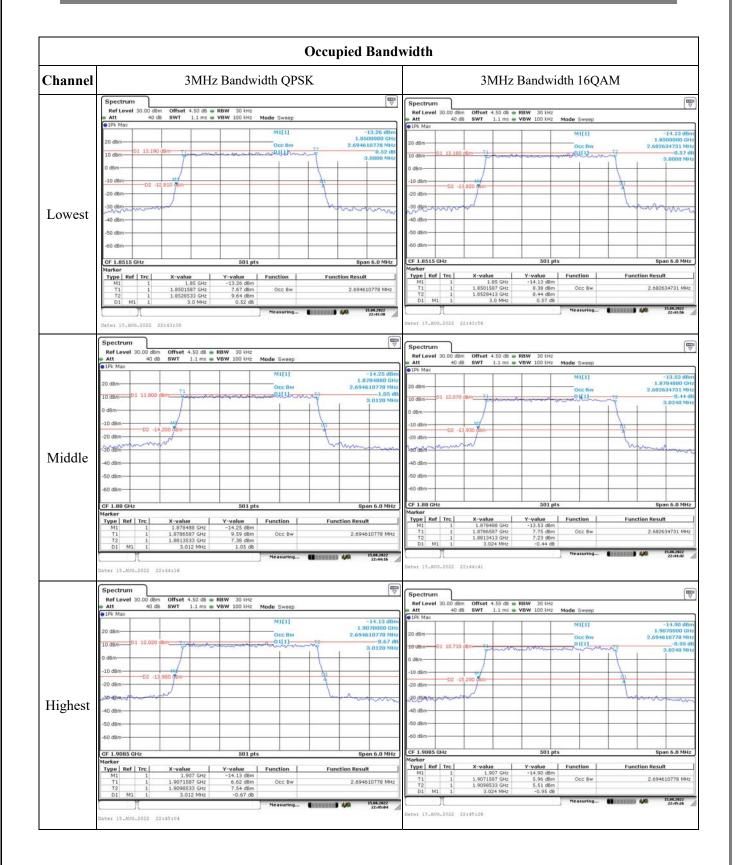
				Result:	Pass
Stability vs. Voltage	20	4.35	-7.05	-0.004	Pass
Frequency	20	3.5	-8.17	-0.004	Pass
	50	3.8	-9.7	-0.005	Pass
	40	3.8	7.18	0.004	Pass
	30	3.8	-6.52	-0.003	Pass
	20	3.8	6.46	0.003	Pass
	10	3.8	7.92	0.004	Pass
	0	3.8	6.17	0.003	Pass
Temperature	-10	3.8	-6.13	-0.003	Pass

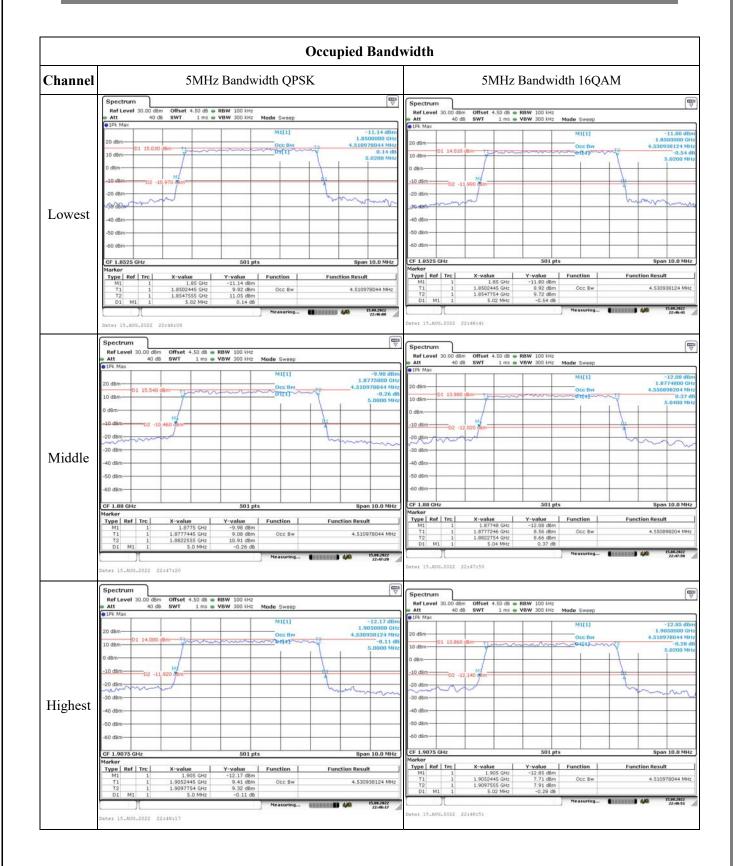
Test Mode:	20 MHz	16QAM	Test Channel:	1880	MHz
Test Item	Temperature	Voltage	Frequency Error		Result
Test field	(°C)	(Vdc)	(Hz)	(ppm)	Kesult
	-30	3.8	-4.12	-0.002	Pass
	-20	3.8	-6.68	-0.004	Pass
	-10	3.8	9.77	0.005	Pass
Frequency	0	3.8	-7.62	-0.004	Pass
Stability vs.	10	3.8	-9.91	-0.005	Pass
Temperature	20	3.8	-9.82	-0.005	Pass
	30	3.8	-6.68	-0.004	Pass
	40	3.8	-8.86	-0.005	Pass
	50	3.8	5.67	0.003	Pass
Frequency	20	3.5	6.05	0.003	Pass
Stability vs. Voltage	20	4.35	7.52	0.004	Pass
	•			Result:	Pass

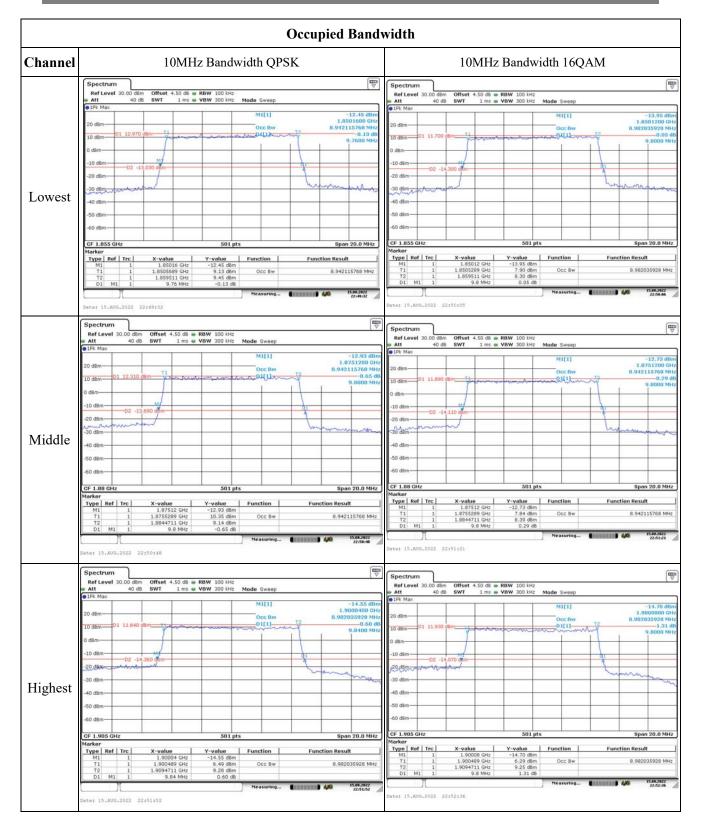
Report No.: CR22080013-00D

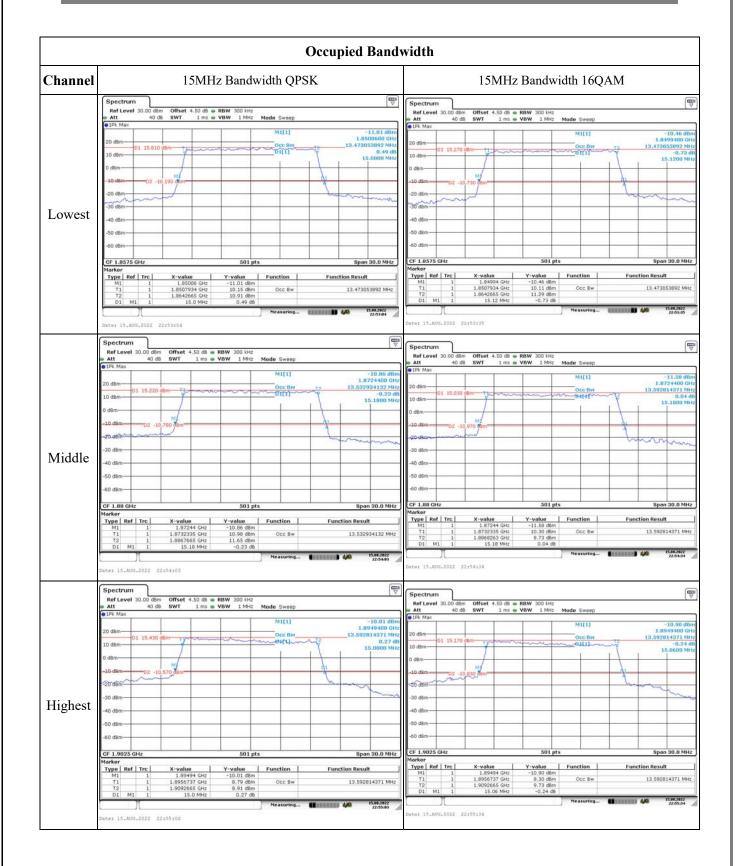
Test Plots:

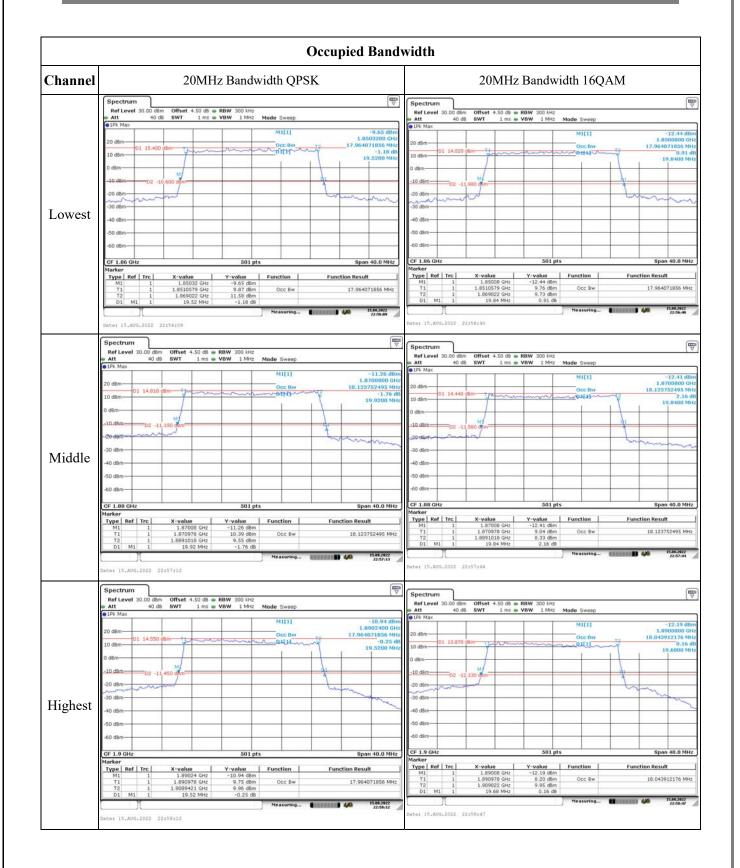












Spectrum Ref Level 10.00 dBm Offset 4.50 dB ⊕ RBW 100 iHz Att 30 dB SWT 9.7 ms € VBW 300 iHz Mode Sweep © JPk Max	width QPS	K					
RefLevel 10.00 dBm Offset 4.50 dB ⊕ RBW 100 bHz ■ Att 30 dB SWT 9.7 ms ● VBW 300 bHz Mode Sweep ● DFk Max	Spectrum						
● 1Pk Max	Ref Level 30.00 dBm Att 40 dB			Mode Sweep			
M1[1] -52.92 dBm	• 1Pk Max	awi roms	TON 3 Minz	MDUE Sweep M1[1]			27.06 dBm
0 dBm	20 d8m			(mi[1]		17	.7440 GHz
-10 dBm 01 -12 000 dBm	10 d8m						
-20 dBm	0 dBm						
-30 dBm	-10 dBm	100					
-40 dBm	-20 dBm	dem					
-50 dBm	+30 dBm	mon		Andrew	min	M1	Amalo
	-40 dBm		The second s				
	-50 dBm						
Start 30.0 MHz 501 pts Stop 1.0 GHz Marker	Marker		501 pt		N 52	1211212	20.0 GHz
Type Ref Trc X-value Y-value Function Function Result M1 1 871.2 MHz -52.92 dBm	Type Ref Trc M1 1	X-value 17.744 GHz	Y-value -27.06 dBm	Function	Functi		
Neasuring 16.86.2822		100000		Measuring	COURSES 4	100	6.86.2022 80.55.58
Date: 16.AUG.2022 00:55:25	Date: 16.AUG.2022 00	155158					
Spectrum T	Spectrum						E
Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep	Ref Level 30.00 dBm			under Concern			
e IPk Max	Att +0 dB Pk Max	SWI 70 ms .	VBW 3 MH2			_	
0 dBm	20 dam			M1[1]		15	27.49 dBm .9990 GHz
-10 dBm	1000						
01 -13.000 dBm							
	01 -13.000 (dBm					
		-		and the second	MI	anna Na	
where an an an and a second and a	- alimentant -	man men	unun	- Are and a second a	-		
-70 dBm							
-80 dBm	-60 dBm-						
Start 30.0 MHz 501 pts Stop 1.0 GHz	Start 1.0 GHz Marker		501 pt	5	1 is	Stop	20.0 GHz
Type Ref Trc X-value Y-value Function Function Result	Type Ref Trc M1 1	X-value 15.999 GHz	Y-value -27.49 dBm	Function	Functi	on Result	
M1 1 935.1 MHz -55.21 Ubm Measuring • • • • • • • • • • • • • • • • • •				Measuring	Courses 4	ya ı	6.86.2922 80:57:87
Date: 16.409.2022 00:56:38	Date: 16.AUG.2022 00	157107					
Casetway							-
Ref Level 10.00 dBm Offset 4.50 dB . RBW 100 kHz	opeculari	Offset 4.50 d8	RBW 1 MHz				
● 1Pk Max	Att 40 dB	SWT 76 ms 👄	VBW 3 MHz	Mode Sweep			
836.40 MHz				M1[1]			26.60 dBm .3780 GHz
	20 d8m-						
01 -13.000 dBm	10 d5m					-	
	0 dBm						
-30 dBm-	-10 d3m 01 -13.000 d	dBm	+ +		+ +		
-40 d8m-	-20 dBm				1	1	
-50 dBm	-30 cBm	and there	mun	www.www.www.	- annon	mark	antra
-60 dBm-	-40 dBm						
-70 d8m	-50 dBm		+ +		+ +		
-80 d8m	-60 dBm		+ +		+ +	1	
Start 30.0 MHz 501 pts Stop 1.0 GHz	Start 1.0 GHz		501 pt	s	<u> </u>	Stop	20.0 GHz
Marker Type Ref Trc X-value Y-value Function Function Result	Marker Type Ref Trc	X-value	Y-value	Function	Functi	on Result	
M1 1 836.4 MHz -S2.47 dBm	M1 1	10.378 GHz	-20.60 dBm	Neasuring	COURSES 4	100	6.86.2022
	Date: 16.AUG.2022 00	158:13		54 - CAN - CA		color.	All and an
	O 1.3.000 dim Image: Solution of the	01 13.000 00	0 0				

	Spurious Emissions at An	ntenna Terminal
Channel	3MHz Band	width QPSK
	Spectrum ttm://www.spectrum ttm:///www.spectrum ttm://www.spectrum ttm:///www.spectrum ttm:///www.spectrum ttm:///www.spectrum ttm://www.spectrum ttm:///www.spectrum ttm:////www.spectrum ttm:///www.spectrum ttm:///www.spectrum ttm:///www.spectrum tm:///www.spectrum </th <th>Ref Level 30.00 dBm Offset 4.50 dB . RBW 1 MHz</th>	Ref Level 30.00 dBm Offset 4.50 dB . RBW 1 MHz
	0 1Pk Max M1[1] -53.14 dBm	1Pk Max M1[1] -27.35 dBm
	0 dBm	20 dbm 15.6580 GHz
	-10 dBm-01 -13.000 dBm	10 d8m
	-20 dBm-	0 dBn
	-30 dBm	-10 dBm- 01 -13.000 dBm-
Lowest	-40 dBm-	-20 dBm- ML
Lowest	-50 dBm	30 dem
	-ou cem	-50 dBm
	-90 d8m	-60 dBm-
	Start 30.0 MHz 501 pts Stop 1.0 GHz	Start 1.0 GHz S01 pts Stop 20.0 GHz
	Start 30.0 MHz 501 pts Stop 1.0 GHz Marker	Marker Type Ref Trc X-value Y-value Function Function Result
	Mil 1 B005-4 MHz - 53.14 dBm - 6 micrositi - 6 micrositi Mil 1 805-4 MHz - 53.14 dBm - 6 micrositi - 6 micrositi	M1 1 15.658 GHz -27.35 dBm Neasuring (1997) 409 16.98232
	Date: 16.AU9.2022 00:58:49	Date: 16,AUG.2022 00:59:19
	Spectrum	Spectrum 🕎
	Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep	Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz
	1Pk Max M1[1] -53.15 dBn	e 1Pk Max
	0 dBm	2 20 dkm 15.6960 GHz
	-10 dBm-01 -13.000 dBm-	10 d8m
	-20 dBm-	0 dBn
	-30 dBm-	-10 dBm
NC 1 11	-40 dBm-	20 dBm
Middle	-50 dBm- MI	- 30 gen
	-60 dBm	-40 d8m
	-70 dBm	50 dBm
	-60 dBm-	-60 dBm
	Start 30.0 MHz 501 pts Stop 1.0 GHz Marker	Marker
	Type Ref Trc X-value Y-value Function Function Result M1 1 950.6 MHz -53.15 dBm Function Function Function	Juppe Ref Trc X-value Y-value Function Function Result M1 1 15.696.GHz -27.02 dBm Function Function Result Nessuring 1 15.696.GHz -27.02 dBm Function Result Function Result
	Measuring Measuring	Date: 16,803,2022 01:00:29
	No Alexandra Carlor Carlo	
	Spectrum Image: Control of the second	a spectrum (V
	Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep IPk Max	RefLevel 30.00 dtm Offset 4.50 dt e RBW 1 MH₂ ■ Att 40 dt SWT 76 ms ■ VBW 3 MH₂ Mode Sweep ■ 1% Max
	0 dBm	MILES
	-10 dBm	20 dkm
	-20 dBm	10 dkm
Highest	-30 dBm	-10.0km
	-40 dBm	01 -13.000 dBm
	-50 dBm	- 30 cm
	60 dBm	40 dBm
	-70 dBm	-50 dBm
	-80 d8m	-60 dBm-
	Start 30.0 MHz 501 pts Stop 1.0 GHz	Stort 1.0 GHz Stop 20.0 GHz
	Marker Type Ref Trc X-value Y-value Function Function Result	Narker Yupp Ref Trc X-value Y-value Function Function Result M1 1 15.696 GHz -27.39 dBm -
	M1 1 937.1 MHz -53.32 dBm Measuring Measuring	Neasuring
	Date: 16.800.2022 01:00:58	Date: 16.AUG.2022 01:01:28

Spurious Emissions at An	itenna Terminal
5MHz Band	width QPSK
Ref Level 10.00 dBm Offset 4.50 dB 🖷 RBW 100 kHz	Ref Level 30.00 dBm Offset 4.50 dB . RBW 1 MHz
0 1Pk Max	w Att 40 dB SWT 76 ms ⊕ VBW 3 MHz Mode Sweep ●1% Max
0 dBm 940.90 MHz	20 dBm 16.4160 GHz
-10 dBm 01 -13.000 dBm	10 dbm
-20 d8m	0 dBm
-30 d8m	-10 dBm-01 -13.000 dBm-
-40 d8m	-20 dBm
-50 dBm	-30 dam-
-60 d8m	-40 dBm-
-70 d8m	-50 dBm
-80 dBm-	-60 dBm-
Start 30.0 MHz 501 pts Stop 1.0 GHz	Start 1.0 GHz 501 pts Stop 20.0 GHz Marker
Type Ref Trc X-value Y-value Function Function Result	Type Ref Trc X-value Y-value Function Function Result M1 1 16.416 GHz -27.11 dBm
Measuring 11.01.2022 01.02.04	Neasuring
Date: 16.AUG.2022 01:02:04	Date: 16.AUG.2022 01:02:34
	 [Spectrum]
Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep	Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz ● Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep
M1[1] -52,62 dBn	(94[1] -27.12 dbm
0 dBm	2 20 dBm
-10 dBm 01 -13.000 dBm	10 dBm-
-20 dBm	0 dBm
-30 dBm	-10 dBm- 01 -13.000 dBm-
-40 dBm-	20 dam
-50 dBm - 121	30 dem
-60 dBm-	-40 dBm
-70 dBm	-50 dBm
-80 dBm	60 dBm
	Stort 1.0 GHz S01 pts Stop 20.0 GHz Marker
Type Ref Trc X-value Y-value Function Function Result M1 1 906.1 MHz -52.62 dBm Function Function Result	Type Ref Trc X-value Y-value Function Function Result M1 1 15.656 GHz -27.12 dBm
Neasuring 16.86.7822 01.89.18	Measuring Measuring Measuring Measuring Date: 16,A00,2022 01:03:51 01001:51 01001:51 01001:51
Date: 16.AUG.2022 01:03:18	Datel 16.A00-2022 01103131
	Spectrum
Att 30 dB SWT 9.7 ms WBW 300 kHz Mode Sweep	Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode Sweep
M1[1] -52,60 d8n	(14L1) -20.27 UDI
0 dBm	20 d8m
-10 dBm 01 -13.000 dBm	10 d5m
-20 dBm	0 dBn
	-10 dBm
	-20 chm
mand aller and many and and and and a second and and and and and and and and and a	- when and the second of the s
	- 40 dBm
-70 dBm	-50 dBm
	-K0 dBm
-60 dBm	-60 dBm-
e0 dBm Stort 30.0 MHz 501 pts Stop 1.0 GHz Marker	Stort 1.0 GHz S01 pts Stop 20.0 GHz Marker S01 pts Stop 20.0 GHz
-80 dBm	Stort 1.0 GHz 501 pts Stop 20.0 GHz
	SMHz Bandt Spectrum By The World 0.00 des Wird + 50 de # BBW 100 http: By The World 0.00 des Wird + 50 d

	Spurious Emissions at An	tenna Terminal
Channel	10MHz Band	width QPSK
	Spectrum (1000) Ref Level 10.00 d8m Offset 4.50 d8 ● RBW 100 1Hz Att 30 d8 SWT 9.7 ms ● VBW 300 Hz Mode Sweep	Spectrum [m] Ref Level 30.00 dBm Offset 4.50 dB = RBW 1 MHz
	● 1Pk Max	Att 40 dB SWT 76 ms • VBW 3 MHz Mode Sweep FK Max
	0 dBm M1[1] -50.11 dBm 755.10 MHz	M1[1] -26.86 dBm 20 dBm
	-10 d8m	10 dBm
	-20 dBm-	0 dBm
	-30 d8m	-10 dBm
	-40 d8m	01 -13.000 dBm
Lowest	-50 d8m	-30 dBm
		-su dem
	-70 dām	-50 dbm
	-80 dam	-60 dBm
	Start 30.0 MHz 501 pts Stop 1.0 GHz Marker	Start 1.0 GHz S01 pts Stop 20.0 GHz Marker
	Type Ref Trc X-value Y-value Function Function Result M1 1 755.1 MHz ~53.11 dBm	Type Ref Trc X-value Y-value Function Function Result M1 1 17.744 GHz -26.86 dBm
	Measuring 15.01.2822 81.05.04	Measuring 11 1828283 4/4 15.88,2422
	Date: 16.AUG.2022 01:05:34	Date: 16.AUG.2022 01:06:00
	Spectrum 🕎	Spectrum
	Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz Att 30 dB SWT 9.7 ms VBW 300 kHz Mode Sweep	Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms VBW 3 MHz Mode 5weep
	P1Pk Max M1[1] -53.26 d8m	●1Pk Max M1[1] -26.80 dBm
	0 dBm 766.70 MHz	20 dgm-17.7440 GHz
	-10 dBm 01 -13.000 dBm	10 dem
	-20 dBm	0 dBm
	-30 dBm	-10 dsm
	-40 dBm	-20 dbm
Middle	-50 dBm M3	30 cm manufacture manufactor and man the man
	muther my all and a share and a share	-40 dBm
	-70 dBm	-50 d8m
	-80 d8m	-60 dBm
		Start 1.0 GHz S01 pts Stop 20.0 GHz
	Start 30.0 MHz 501 pts Stop 1.0 GHz Marker	Advice Storp (2) S
	Type Ref Trc X-value Y-value Function Function Result M1 1 766.7 MHz -53.26 dBm	M1 1 17.744 GHz -26.80 dBm
	Measuring 111111 4/0 16.07.792	Measuring Measuring Measuring
	Date: 16.AUG.2022 01:06:26	
	Spectrum 🕎	Spectrum
	Ref Level 10.00 dBm Offset 4.50 dB RBW 100 kHz w Att 30 dB SWT 9.7 ms • VBW 300 kHz	Ref Level 30.00 dBm Offset 4.50 dB RBW 1 MHz Att 40 dB SWT 76 ms YBW 3 MHz
	PFk Max MI[1] -52,41 dBm MI[1]	
	0 dBm	20 dpm-15.9990 GHz
	-10 dBm	10 dem
	-20 dBm	0 dBn
	-30 dBm	-10 dBm 01 -13.000 dBm
	-40 dBm-	-20 c3m
Highest	-50 dBm M1	-30 cpm
	-60 dBm	-40 dBm-
	-70 dBm	-50 dBm
	-80 dBm-	-60 d8m-
	Start 30.0 MHz 501 pts Stop 1.0 GHz	Start 1.0 GHz S01 pts Stop 20.0 GHz
	Start 30.0 MHZ SUT pts Stop 1.0 GHZ Marker	Marker
		Type Ref Trc X-value Y-value Function Function Result
	Type Ref Trc X-value Y-value Function Function Function Result M1 1 735.7 MHz -52.41 dBm Masuring ####################################	Type / Ref Trc X-value Y-value Function Function Result M1 1 15.999 GHz -26.60 dBm Function Function Result