



# TEST REPORT

**Report Number:** 14523740-E17V2

**Applicant :** APPLE, INC  
1 APPLE PARK WAY  
CUPERTINO, CA 95014, U.S.A.

**Model :** A2848

**Brand :** APPLE

**FCC ID :** BCG-E8435A

**IC :** 579C-E8435A

**EUT Description :** SMARTPHONE

**Test Standard(s) :** FCC 47 CFR PART 22H, 24E, AND 27L  
ISED RSS-GEN ISSUE 5, RSS-132 ISSUE 4, RSS-133  
ISSUE 6, AND RSS-139 ISSUE 4

**Date Of Issue:**  
2023-07-24

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2023-07-11	Initial Review	Mengistu Mekuria
V2	2023-07-24	Addressed TCB Feedback Section 1, 6.1, 6.2	Andrew Le

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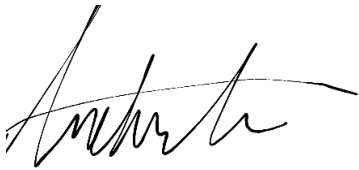
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# 1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARK WAY CUPERTINO, CA 95014, U.S.A.	
Model	AA2848	
Brand	APPLE	
FCC ID	BCG-E8435A	
IC	579C-E8435A	
EUT Description	SMARTPHONE	
Serial Number	PXMVQGG61Q, W65Q19WKHQ, CGYYK1Q2H7, PW29XTVX25 (CODUCTED) AND JK757KHXGW, L924YC39V4 (RADIATED)	
Sample Receipt Date	2022-11-04	
Date Tested	2022-11-07 to 2023-06-27	
Applicable Standards	FCC 47 CFR Part 2, Part 22, Part 24, and Part 27 ISED RSS-GEN ISSUE 5, RSS-132 Issue 4, RSS-133 Issue 6, RSS-139 Issue 4.	
Test Results	COMPLIES	
<p>UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.</p> <p>The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.</p> <p>This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.</p>		
Approved & Released By:	Reviewed By:	Prepared By:
		
Dan Corona Operations Leader UL LLC.	Eric Ting Laboratory Engineer UL LLC.	Andrew Le Senior Test Engineer UL LLC.

## 2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.

Requirement Description	Requirement Clause Number (FCC)	Requirement Clause Number (ISED)	Result	Remarks
RF Conducted Output Power	2.1046,	-	Complies	
Effective Radiated Power	22.913 (a)(5)	RSS132§5.4	Complies	
Equivalent Isotropic Radiated power	24.232 (c), 27.50 (d) (4)	RSS133§6.4 & SRSP-510, 5.1.2 RSS139§5.5	Complies	
Occupied Bandwidth	2.1049	RSS132 RSS133§2.3 RSS139 RSS-GEN§6.7	Complies	
Band Edge and Emission Mask	2.1051, 22.917 (a), 24.238 (a), 27.53 (h),	RSS132§5.5 RSS133§6.5 RSS139§5.6	Complies	
Out of Band Emissions	2.1051, 22.917 (a), 24.238 (a), 27.53 (h),	RSS132§5.5 RSS133§6.5 RSS139§5.6	Complies	
Frequency Stability	2.1055, 22.355, 24.235, 27.54	RSS132§5.3 RSS133§6.3 RSS139§5.4	Complies	
Peak-to-Average Ratio	22.913 (d), 24.232 (d), 27.50 (d) (5)	RSS132§5.4 RSS133§6.4 RSS139§5.5	Complies	
Field Strength of Spurious Radiation	2.1053, 22.917 (a), 24.238 (a), 27.53 (h),	RSS132§5.5 RSS133§6.5 RSS139§5.6	Complies	

### 3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following:

- ANSI C63.26:2015
- FCC 47 CFR Part 2, Part 22, Part 24, and Part 27.
- [FCC KDB 971168 D01 v03r01](#): Power Meas License Digital Systems
- [FCC KDB 971168 D02 v02r02](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01 v01r01](#). Determining ERP and EIRP
- ISED RSS-GEN Issue 5, ISED RSS-132 Issue 4, RSS-133 Issue 6, RSS-139 Issue 4.

### 4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input checked="" type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input checked="" type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
<input checked="" type="checkbox"/>	Building 3: 843 Auburn Court, Fremont, CA 94538 USA			
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
<input checked="" type="checkbox"/>	Building 5: 47670 Kato Rd, Fremont, CA 94538 USA			

## 5. DECISION RULES AND MEASUREMENT UNCERTAINTY

### 5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

### 5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

### 5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U <sub>Lab</sub>
Conducted Antenna Port Emission Measurement	1.940 db
Power Spectral Density	2.466 db
Time Domain Measurements Using SA	3.39 %
RF Power Measurement Direct Method Using Power Meter	0.450 db Peak 1.300 db Ave.
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 db
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 db
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 db
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 db
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 db
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 db
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 db

Uncertainty figures are valid to a confidence level of 95%.

### 5.4. SAMPLE CALCULATION

#### RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$



## 6. EQUIPMENT UNDER TEST

### 6.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G NR1, 5G NR2, IEEE 802.11a/b/g/n/ac/ax, Bluetooth (BT), Ultra-Wideband (UWB), GPS, NFC, NB UNII, 802.15.4, 802.15ab-NB and MSS technologies. The rechargeable battery is not user accessible.

Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

### 6.2. MAXIMUM OUTPUT POWER

#### EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015  
KDB 971168 D01 Section 5.6

$ERP/EIRP = P_{Meas} + GT - LC$

where: ERP/EIRP = effective or equivalent 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;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

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

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted and ERP/EIRP output powers as follows:

**GSM MODES**

<b>Part 22 / RSS 132 850MHz(Ant1)</b>								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	ERP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
824.2-848.8	GPRS	33.50	-5.80	3.0	25.55	0.359	244.13	244KGXW
	EGPRS	28.00			20.05	0.101	239.68	240KG7W
<b>Part 24 / RSS 133 1900MHz(Ant3)</b>								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
1850.2-1909.8	GPRS	31.50	-2.20	2.0	29.30	0.851	247.20	247KGXW
	EGPRS	26.24			24.04	0.254	245.09	245KG7W

**WCDMA MODE**

<b>Part 22 / RSS 132 Band 5(Ant1)</b>								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	ERP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
826.4-846.6	REL 99	25.70	-5.80	3.0	17.75	0.060	4141.5	4M14F9W
	HSDPA	24.68			16.73	0.047	4137.0	4M14F9W
<b>Part 24 / RSS 133 Band 2(Ant3)</b>								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
1852.4-1907.6	REL 99	25.50	-2.20	2.0	23.30	0.214	4146.8	4M15F9W
	HSDPA	25.53			23.33	0.215	4158.7	4M16F9W
<b>Part 27 / RSS 139 Band 4(Ant1)</b>								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
1712.4-1752.6	REL 99	25.70	-2.80	1.0	22.90	0.195	4143.3	4M14F9W
	HSDPA	24.92			22.12	0.163	4153.8	4M15F9W

### 6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version 0.13.02.

### 6.4. MAXIMUM ANTENNA GAIN

The antenna(s) gain(s) and type, as provided by the manufacturer' are as follows:

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	ANT 3 Antenna Gain (dBi)	ANT 4 Antenna Gain (dBi)
GSM850 and WCDMA 5 824 – 849MHz	-5.8	-5.8		
GSM1900 and WCDMA 2 1850 – 1910 MHz	-2.8	-3.0	-2.2	-1.0
WCDMA 4 1710 – 1755 MHz	-2.8	-3.8	-3.1	-1.6

## 6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X/Y/Z on all ANT 1, ANT2, ANT3 and ANT4 antennas to determine the worst-case orientation. The following table exhibits the worst-case orientation for different frequency bands. The full tests of the EUT have made upon the orientations that shown in the table below.

Frequency Bands	ANT1	ANT2	ANT3	ANT4
824 – 849 MHz	X	X	N/A	N/A
1710 – 1915 MHz	X	X	X	X

Based on average conducted output power measurement investigations. The worst-case is Ant1 with the highest power. Therefore, Ant 1 was used to perform all conducted tests.

The worst-case scenario for all measurements as followed:

- GSM GPRS
- GSM EGPRS
- WCDMA REL 99
- WCDMA HSDPA

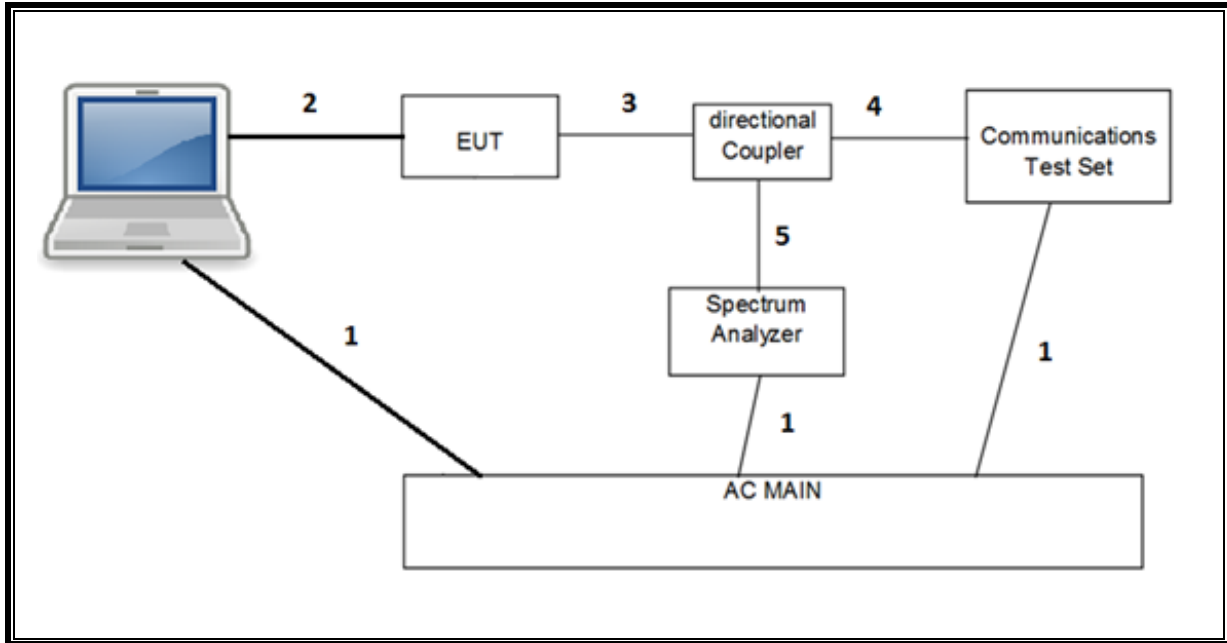
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz.

For simultaneous transmission of multiple channels in the 2.4GHz/5GH WLAN, UWB, and Cellular bands, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

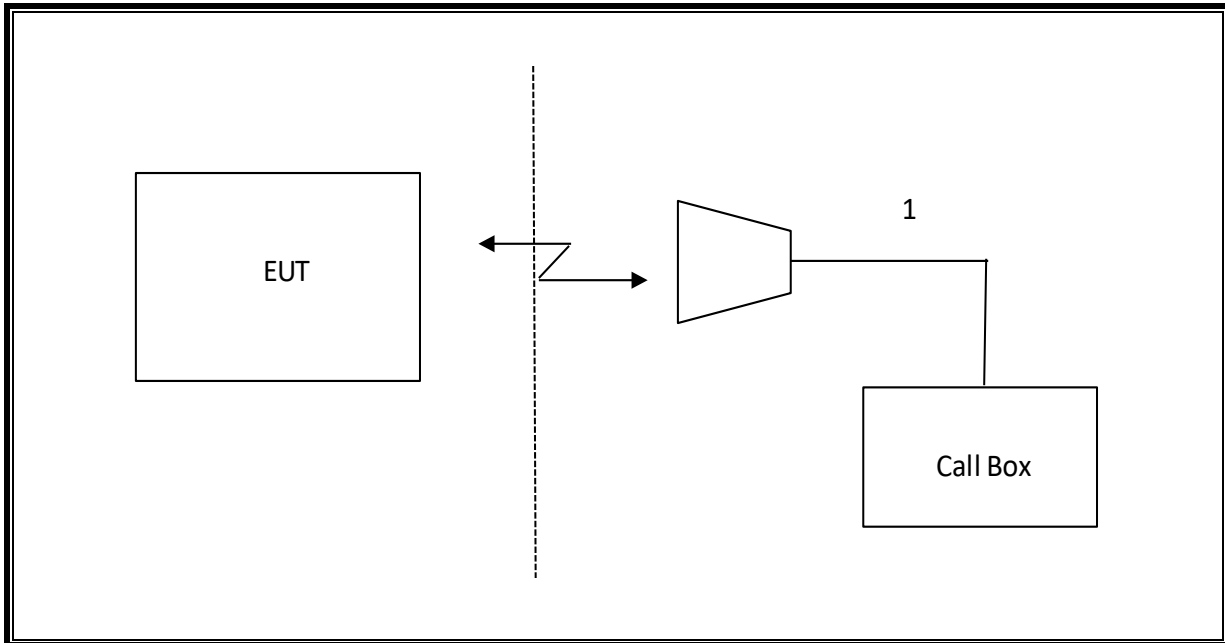
## 6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC		
Laptop	Apple	MacBook Pro	HRP082673	BCGA1708		
AC/DC adapter	Apple	A1718	C4H64450HH3GN8RA6	--		
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	DC	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Un-shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Un-shielded	1.2	N/A
5	RF In/Out	1	Barrel	N/A	N/A	N/A
I/O CABLES (RF RADIATED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF In/Out	1	Antenna	Un-shielded	5.0	N/A

**CONDUCTED SETUP**



**RADIATED SETUP**



## 7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
*Antenna, Horn 1-18GHz	ETS Lindgren	3117	79834	06/082203
*Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	85151	04/30/2024
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	85313	02/29/2024
Spectrum Analyzer, PXA	Keysight	N9030B	222074	07/16/2023
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	85201	02/29/2024
Spectrum Analyzer, PXA	Keysight	N9030B	85214	07/18/2023
Spectrum Analyzer, PXA	Keysight	N9030B	222073	07/22/2023
PXA Signal Analyzer	Keysight	N9030B	222073	07/22/2023
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	230548	02/29/2024
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201498	02/29/2024
Directional Coupler	KRYTAR	152610	198816	09/23/2023
Directional Coupler	KRYTAR	152610	198817	09/23/2023
Directional Coupler	KRYTAR	152610	135712	09/23/2023
Power Meter, P-series single channel	Keysight	N1912A	90630	01/24/2024
Power Meter, P-series single channel	Keysight	N1912A	90719	01/31/2024
Power Meter, P-series single channel	Agilent	N1911A	82174	01/31/2024
Power Sensor, P – series, 50MHz to 18GHz, Wideband	Keysight	N1921A	90389	01/31/2024
Filter, BRF 2495 – 2690 MHz	Micro-Tronics	155050	155055	12/28/2023
Filter, BRF 3.4 – 3.8GHz	Micro-Tronics	208398	208398	08/19/2023
Wideband Communication Test Set, Call Box	Rohde & Schwarz	CMW500	222792	02/29/2024
Wideband Communication Test Set, Call Box	Rohde & Schwarz	CMW500	230298	02/29/2024
Wideband Communication Test Set, Call Box	Rohde & Schwarz	CMW500	230295	02/29/2024
Wideband Communication Test Set, Call Box	Rohde & Schwarz	CMW500	22796	02/29/2024
Wideband Communication Test Set, Call Box	Rohde & Schwarz	CMW500	230297	02/29/2024
*5G NR Communication Test Set, Call Box	Keysight	UXM	207269	01/31/2024
*5G NR Communication Test Set, Call Box	Keysight	UXM	199836	01/31/2024
*Chamber, Environmental	Cincinnati Sub Zero	ZPHS-8-3.5-SCT/WC	82472	11/16/2023
*Amplifier, 218GHz to 26.5GHz	Ampical	AMP18G26.5-60	215705	02/26/2023
*Amplifier, 26.5GHz to 40GHz	Ampical	AMP26G40-65	172346	02/29/2024
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	172362	03/31/2024
Antenna, Horn 26.5GHz to 40GHz	ARA	MWH-2640/B	172365	03/31/2024
*Antenna, Active Loop 100KHz to 30MHz	ELECTRO-METRICS	EM-6872	219911	05/10/2023
*Antenna, Active Loop 30Hz to 1MHz	ELECTRO-METRICS	EM-6871	219909	05/10/2023
10dB Fixed Attenuator	Pasternack Enterprises	PE7087-10	236360	Verified/Characterized before use
10dB Fixed Attenuator	Pasternack Enterprises	PE7087-10	236285	Verified/Characterized before use
10dB Fixed Attenuator	Pasternack Enterprises	PE7087-10	236355	Verified/Characterized before use
UL AUTOMATION SOFTWARE				
CLT Software	UL	UL RF	Ver 3.4, May 20, 2022	
Power Measurement Software	UL	UL RF	Ver 3.1.4, April 29, 2022	
Radiated test software	UL	UL RF	Ver 9.5, Jan 21, 2022	

**NOTES:**

1. \* Testing is completed before equipment expiration date.
2. \*\* Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.



## 8. RF OUTPUT POWER VERIFICATION

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted output powers as follows:

### 8.1. GSM

#### Using CMW500 Communication Test Set

Function: Menu select > GSM Mobile Station > GSM 850/900/1800/1900

Press **Connection control** to choose the different menus

Press **RESET** > choose all to reset all settings

Connection	Press <b>Signal Off</b> to turn off the signal and change settings Network Support > GSM+GPRS or GSM+EGPRS 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 850/900 > 27 dBm for EGPRS 850/900 > 30 dBm for GPRS1800/1900 > 26 dBm for EGPRS1800/1900
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 (Default)
Network	Coding Scheme > CS 1 (GPRS) and MCS5 (EGPRS) Bit Stream > 2E9-1PSR Bit Pattern
AF/RF	Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection	Press <b>Signal On</b> to turn on the signal and change settings

**RESULT**

**8.1.1. GSM 850**

<b>Test Engineer ID:</b>	39004	<b>Test Date:</b>	11/23/2022
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Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
					ANT 1	ANT 2
GPRS (GMSK)	CS1	1	128	824.2	33.20	32.13
			190	836.6	32.99	31.95
			251	848.8	<b>33.50</b>	32.50
		2	128	824.2	32.30	31.32
			190	836.6	32.31	31.13
			251	848.8	32.13	30.96
EGPRS (8PSK)	MCS5	1	128	824.2	27.58	26.90
			190	836.6	27.65	25.89
			251	848.8	<b>28.00</b>	27.00
		2	128	824.2	26.86	24.97
			190	836.6	26.80	25.84
			251	848.8	26.64	24.72

**8.1.2. GSM 1900**

<b>Test Engineer ID:</b>	39004	<b>Test Date:</b>	11/30/2022
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Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)			
					ANT 1	ANT 2	ANT 3	ANT 4
GPRS (GMSK)	CS1	1	512	1850.2	<b>31.92</b>	29.21	<b>31.50</b>	28.69
			661	1880.0	31.63	28.96	31.25	28.43
			810	1909.8	31.88	<b>29.50</b>	31.32	<b>29.00</b>
		2	512	1850.2	30.77	28.25	<b>30.60</b>	27.81
			661	1880.0	<b>31.00</b>	<b>28.29</b>	30.33	<b>27.82</b>
			810	1909.8	30.87	28.07	30.30	27.75
EGPRS (8PSK)	MCS5	1	512	1850.2	26.59	24.44	<b>26.24</b>	23.81
			661	1880.0	26.36	23.39	25.45	22.68
			810	1909.8	<b>26.73</b>	<b>24.49</b>	26.06	<b>23.85</b>
		2	512	1850.2	<b>26.00</b>	22.67	25.43	21.74
			661	1880.0	25.82	<b>23.50</b>	25.13	<b>23.00</b>
			810	1909.8	25.90	22.48	<b>25.50</b>	21.76

## 8.2. WCDMA

### TEST PROCEDURE

The transmitter output was connected to the input terminal of Directional Coupler via calibrated coaxial cable. The output coupling terminal of the Directional Coupler was directly connected to a spectrum analyzer while the output through terminal connected to the communication test set via calibrated coaxial cable.

The output power was measured with the spectrum analyzer at the low, middle and high channel in each band.

- Set the spectrum analyzer span wide enough or greater than the modulated signal BW.
- Set a spectrum analyzer at peak detection mode with VBW  $\geq$  RBW  $\geq$  26dB BW, typically 5MHz.
- Set a marker to point the corresponding peak value.

### REL 99

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 2
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	$\beta_c/\beta_d$	8/15

### HSDPA REL 5

The following 4 Sub-tests were completed according to Release 5 procedures in table C.10.1.4 of 3GPP TS 34.121-1 A summary of these settings are illustrated below:

**Table C.10.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH**

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ .

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ , and  $\Delta_{CQI} = 24/15$  with  $\beta_{HS} = 24/15 * \beta_c$ .

Note 3: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{HS}/\beta_c = 24/15$ . For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the  $\beta_c/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

**HSPA REL 6 (HSDPA & HSUPA)**

The following 5 Sub-tests were completed according to Release 6 procedures in table C.11.1.3 of 3GPP TS 34.121-1. A summary of these settings are illustrated below:

**Table C.11.1.3:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH**

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note 1)	$\beta_{ec}$	$\beta_{ed}$ (Note 4) (Note 5)	$\beta_{ed}$ (SF)	$\beta_{ed}$ (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}$ : 47/15 $\beta_{ed2}$ : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4,  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$ . For sub-test 5,  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 5/15$  with  $\beta_{hs} = 5/15 * \beta_c$ .

Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the  $\beta_c/\beta_d$  ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 10/15$  and  $\beta_d = 15/15$ .

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

**DUAL CARRIER HSDPA (DC-HSDPA (REL 8, CAT 24))**

The following 4 Sub-tests for DC-HSDPA were completed according to Release 8 procedures in table C08.1.12 of 3GPP TS 34.121-1. A summary of subtest settings are illustrated below:

**Table C.8.1.12: Fixed Reference Channel H-Set 12**

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload ( $N_{INF}$ )	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK
<p>Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.</p> <p>Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.</p>		

**HSPA+ REL 7**

The following 1 Sub-test was completed according to Release 7 procedures in table C.11.1.4 of 3GPP TS34.121. A summary of these settings are illustrated below:

**Table C.11.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM**

Sub-test	$\beta_c$ (Note3)	$\beta_d$	$\beta_{HS}$ (Note1)	$\beta_{ec}$	$\beta_{ed}$ (2xSF2) (Note 4)	$\beta_{ed}$ (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	$\beta_{ed1}$ : 30/15 $\beta_{ed2}$ : 30/15	$\beta_{ed3}$ : 24/15 $\beta_{ed4}$ : 24/15	3.5	2.5	14	105	105

Note 1:  $\Delta_{ACK}, \Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{hs} = 30/15 * \beta_c$ .

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).

Note 3: DPDCH is not configured, therefore the  $\beta_c$  is set to 1 and  $\beta_d = 0$  by default.

Note 4:  $\beta_{ed}$  can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

**RESULT**

### 8.2.1. WCDMA BAND 5

Test Engineer ID:	39004	Test Date:	12/8/2022
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Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)		
						ANT 1	ANT 2	
W-CDMA Band 5 (850MHz)	Rel 99	RMC, 12.2 kbps	4132	826.4	N/A	25.70	24.70	
			4183	836.6	N/A	25.68	24.61	
			4233	846.6	N/A	25.64	24.56	
	HSDPA	Subtest 1	4132	826.4	0	24.68	23.71	
			4183	836.6	0	24.67	23.65	
			4233	846.6	0	24.61	23.59	
		Subtest 2	4132	826.4	0	24.67	23.72	
			4183	836.6	0	24.67	23.63	
			4233	846.6	0	24.62	23.56	
		Subtest 3	4132	826.4	0.5	24.18	23.21	
			4183	836.6	0.5	24.19	23.15	
			4233	846.6	0.5	24.11	23.08	
		Subtest 4	4132	826.4	0.5	24.20	23.19	
			4183	836.6	0.5	24.16	23.10	
			4233	846.6	0.5	24.11	23.04	
		HSPA (HSDPA & HSUPA)	Subtest 1	4132	826.4	0	25.61	24.12
				4183	836.6	0	25.64	24.09
				4233	846.6	0	25.57	24.02
	Subtest 2		4132	826.4	2	23.59	22.15	
			4183	836.6	2	23.61	22.09	
			4233	846.6	2	23.56	22.03	
	Subtest 3		4132	826.4	1	24.57	23.17	
			4183	836.6	1	24.61	23.08	
			4233	846.6	1	24.56	23.04	
	Subtest 4		4132	826.4	2	23.58	22.18	
			4183	836.6	2	23.58	22.10	
			4233	846.6	2	23.56	22.03	
	Subtest 5		4132	826.4	0	25.12	23.69	
			4183	836.6	0	24.39	23.66	
			4233	846.6	0	24.88	23.58	
	DC-HSDPA	Subtest 1	4132	826.4	0	25.59	24.14	
			4183	836.6	0	25.62	24.11	
			4233	846.6	0	25.54	24.02	
		Subtest 2	4132	826.4	0	25.62	24.17	
			4183	836.6	0	25.60	24.06	
			4233	846.6	0	25.54	23.99	
		Subtest 3	4132	826.4	0.5	25.14	23.67	
			4183	836.6	0.5	25.15	23.59	
			4233	846.6	0.5	25.07	23.53	
		Subtest 4	4132	826.4	0.5	25.09	23.66	
			4183	836.6	0.5	25.10	23.55	
			4233	846.6	0.5	25.06	23.50	

### 8.2.2. WCDMA BAND 2

Test Engineer ID:	39004	Test Date:	11/28/2022
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Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)				
						ANT 1	ANT 2	ANT 3	ANT 4	
W-CDMA Band 2 (1900MHz)	Rel 99	RMC, 12.2 kbps	9262	1852.4	N/A	25.68	<b>23.40</b>	25.43	23.31	
			9400	1880.0	N/A	25.65	23.25	<b>25.50</b>	<b>23.40</b>	
			9538	1907.6	N/A	<b>25.70</b>	23.22	25.48	23.37	
	HSDPA	Subtest 1	9262	1852.4	0	24.69	22.40	24.51	22.76	
			9400	1880.0	0	24.65	22.25	24.61	22.86	
			9538	1907.6	0	24.65	22.21	24.54	22.80	
		Subtest 2	9262	1852.4	0	<b>24.70</b>	<b>22.41</b>	24.54	22.81	
			9400	1880.0	0	24.63	22.24	<b>24.63</b>	<b>22.90</b>	
			9538	1907.6	0	24.67	22.22	24.57	22.83	
		Subtest 3	9262	1852.4	0.5	24.18	21.91	24.08	22.34	
			9400	1880.0	0.5	24.14	21.74	24.17	22.42	
			9538	1907.6	0.5	24.16	21.73	24.07	22.33	
		Subtest 4	9262	1852.4	0.5	24.15	21.82	24.10	22.35	
			9400	1880.0	0.5	24.17	21.78	24.18	22.43	
			9538	1907.6	0.5	24.18	21.71	24.10	22.32	
		HSPA (HSDPA & HSUPA)	Subtest 1	9262	1852.4	0	<b>25.54</b>	<b>23.21</b>	25.52	23.37
				9400	1880.0	0	25.42	23.05	<b>25.53</b>	<b>23.40</b>
				9538	1907.6	0	25.33	23.05	25.42	23.26
	Subtest 2		9262	1852.4	2	23.54	21.17	23.38	21.29	
			9400	1880.0	2	23.37	21.05	23.45	21.35	
			9538	1907.6	2	23.34	21.07	23.31	21.22	
	Subtest 3		9262	1852.4	1	24.53	22.15	24.31	22.23	
			9400	1880.0	1	24.38	22.03	24.37	22.29	
			9538	1907.6	1	24.35	22.02	24.24	22.14	
	Subtest 4		9262	1852.4	2	23.55	21.22	23.32	21.24	
			9400	1880.0	2	23.37	21.09	23.35	21.24	
			9538	1907.6	2	23.29	21.06	23.24	21.12	
	Subtest 5		9262	1852.4	0	25.09	22.78	24.87	22.78	
			9400	1880.0	0	24.94	22.63	24.96	22.83	
			9538	1907.6	0	24.89	22.61	24.89	22.74	
	DC-HSDPA	Subtest 1	9262	1852.4	0	25.64	<b>23.16</b>	25.31	23.02	
			9400	1880.0	0	25.54	23.01	25.39	22.97	
			9538	1907.6	0	25.52	22.97	25.33	22.94	
		Subtest 2	9262	1852.4	0	<b>25.68</b>	23.14	25.36	<b>23.14</b>	
			9400	1880.0	0	25.57	22.99	<b>25.46</b>	23.06	
			9538	1907.6	0	25.53	22.96	25.40	23.04	
		Subtest 3	9262	1852.4	0.5	25.21	22.62	24.91	22.72	
			9400	1880.0	0.5	25.11	22.49	25.00	22.67	
			9538	1907.6	0.5	25.06	22.47	24.93	22.63	
		Subtest 4	9262	1852.4	0.5	25.23	22.65	24.93	22.80	
			9400	1880.0	0.5	25.12	22.50	25.04	22.77	
			9538	1907.6	0.5	25.09	22.48	24.97	22.73	

**8.2.3. WCDMA BAND 4**

<b>Test Engineer ID:</b>	39004	<b>Test Date:</b>	11/28/2022
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Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)				
						ANT 1	ANT 2	ANT 3	ANT 4	
W-CDMA Band 4 (1700MHz)	Rel 99	RMC, 12.2 kbps	1312	1712.4	N/A	25.67	23.40	25.22	23.12	
			1413	1732.6	N/A	<b>25.70</b>	<b>23.48</b>	25.26	23.13	
			1513	1752.6	N/A	25.68	23.36	<b>25.50</b>	<b>23.40</b>	
	HSDPA	Subtest 1	1312	1712.4	0	24.70	22.37	24.30	22.60	
			1413	1732.6	0	24.68	22.47	24.35	22.67	
			1513	1752.6	0	24.67	22.39	24.58	22.90	
		Subtest 2	1312	1712.4	0	24.65	22.39	24.37	22.73	
			1413	1732.6	0	<b>24.71</b>	<b>22.50</b>	24.41	22.78	
			1513	1752.6	0	24.68	22.41	<b>24.64</b>	<b>23.01</b>	
		Subtest 3	1312	1712.4	0.5	24.18	21.87	23.90	22.27	
			1413	1732.6	0.5	24.18	22.02	23.97	22.32	
			1513	1752.6	0.5	24.16	21.91	24.18	22.53	
		Subtest 4	1312	1712.4	0.5	24.17	21.89	23.92	22.29	
			1413	1732.6	0.5	24.21	21.88	23.97	22.28	
			1513	1752.6	0.5	24.15	21.91	24.20	22.44	
		HSPA (HSDPA & HSUPA)	Subtest 1	1312	1712.4	0	24.72	22.41	24.42	22.71
				1413	1732.6	0	24.75	<b>22.52</b>	24.41	22.69
				1513	1752.6	0	<b>24.86</b>	22.42	<b>24.54</b>	<b>22.85</b>
	Subtest 2		1312	1712.4	2	22.73	20.34	22.28	20.64	
			1413	1732.6	2	22.72	20.48	22.30	20.61	
			1513	1752.6	2	22.87	20.44	22.44	20.77	
	Subtest 3		1312	1712.4	1	23.75	21.37	23.21	21.55	
			1413	1732.6	1	23.72	21.48	23.20	21.58	
			1513	1752.6	1	23.84	21.41	23.37	21.73	
	Subtest 4		1312	1712.4	2	22.75	20.42	22.23	20.57	
			1413	1732.6	2	22.75	20.57	22.22	20.58	
			1513	1752.6	2	22.83	20.46	22.38	20.77	
	Subtest 5		1312	1712.4	0	24.32	21.98	23.80	22.20	
			1413	1732.6	0	24.28	22.07	23.81	22.19	
			1513	1752.6	0	24.47	22.00	23.99	22.40	
	DC-HSDPA	Subtest 1	1312	1712.4	0	24.75	22.40	24.25	22.60	
			1413	1732.6	0	24.76	<b>22.50</b>	24.22	22.67	
			1513	1752.6	0	24.90	22.39	24.45	22.91	
		Subtest 2	1312	1712.4	0	24.73	22.40	24.26	22.74	
			1413	1732.6	0	24.74	22.46	24.31	22.78	
			1513	1752.6	0	<b>24.92</b>	22.36	<b>24.52</b>	<b>23.02</b>	
		Subtest 3	1312	1712.4	0.5	24.26	21.88	23.84	22.29	
			1413	1732.6	0.5	24.24	21.99	23.87	22.35	
			1513	1752.6	0.5	24.46	21.86	24.13	22.56	
		Subtest 4	1312	1712.4	0.5	24.30	21.89	23.89	22.35	
			1413	1732.6	0.5	24.24	21.97	23.94	22.40	
			1513	1752.6	0.5	24.44	21.87	24.15	22.62	



## 9. CONDUCTED TEST RESULTS

### 9.1. OCCUPIED BANDWIDTH

#### RULE PART(S)

FCC: §2.1049  
ISED: RSS132; RSS133§2.3; RSS139

#### LIMITS

For reporting purposes only.

#### TEST PROCEDURE

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

#### RESULTS

There is no limit required and power is the same for low, middle, and high channel; therefore, only middle channel was tested.

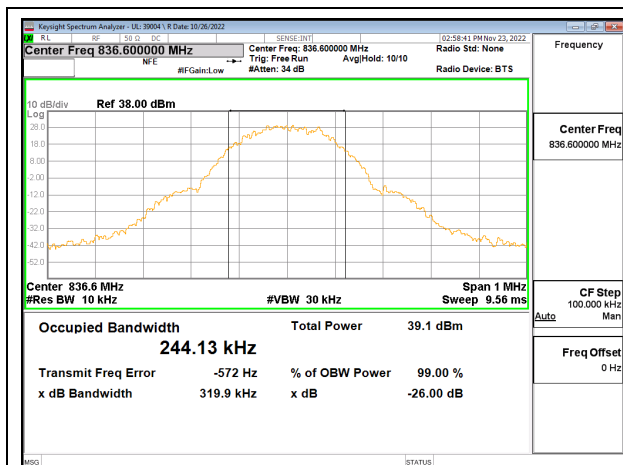
**GSM**

Band	Modulation	Channel	f(MHz)	99% BW (KHz)	-26dB BW (KHz)
850	GPRS	190	836.6	244.13	319.9
	EGPRS			239.68	318.6
1900	GPRS	661	1880.0	247.20	313.1
	EGPRS			245.09	310.3

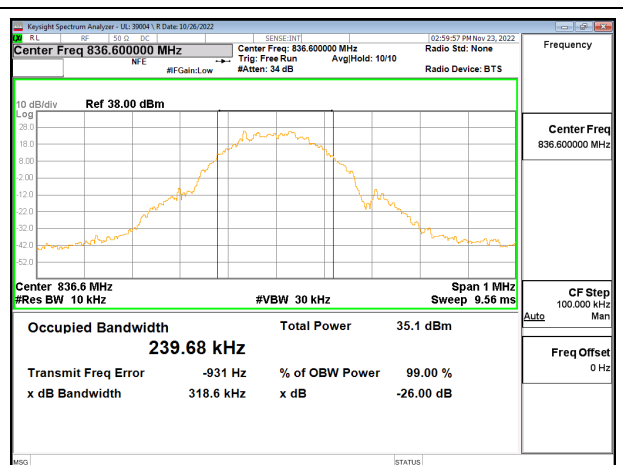
**WCDMA**

Band	Modulation	Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
BAND 5	REL 99	4408	836.6	4.1415	4.697
	HSDPA			4.1370	4.670
BAND 2	REL 99	9800	1880.0	4.1468	4.701
	HSDPA			4.1587	4.699
BAND 4	REL 99	1638	1732.6	4.1433	4.696
	HSDPA			4.1538	4.680

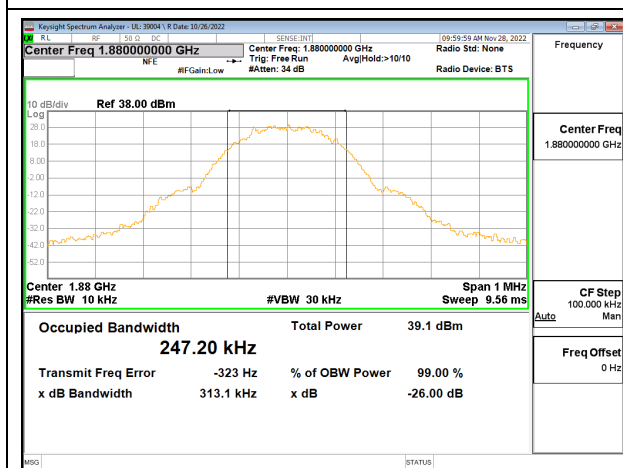
### 9.1.1. GSM



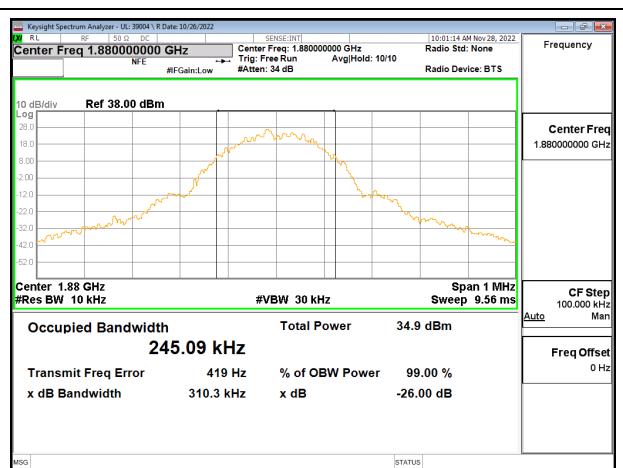
GSM 850 GPRS Middle Channel



GSM 850 EGPRS Middle Channel

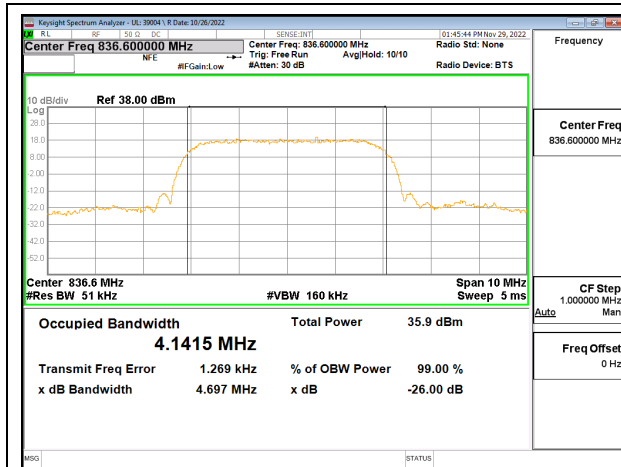


GSM 1900 GPRS Middle Channel

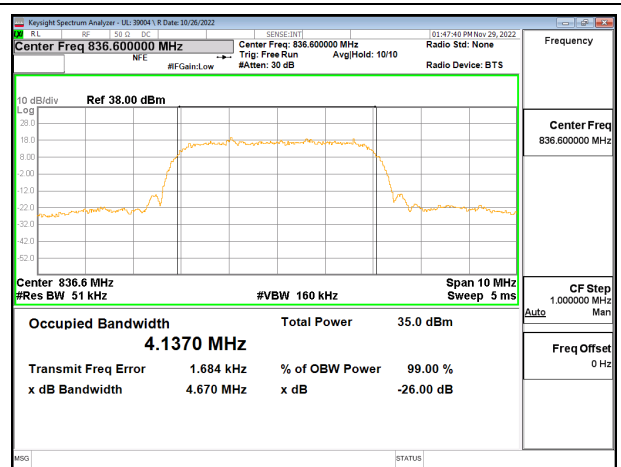


GSM 1900 EGPRS Middle Channel

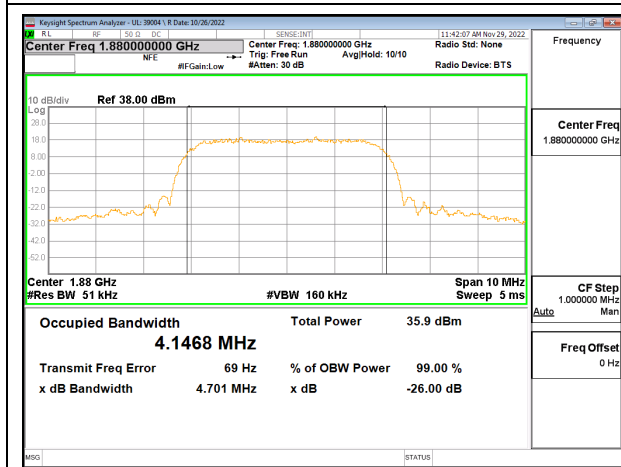
### 9.1.2. WCDMA



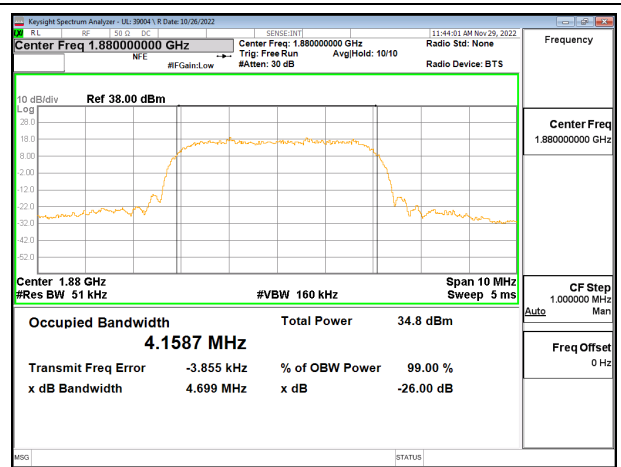
WCDMA Band 5 Rel 99 Middle Channel



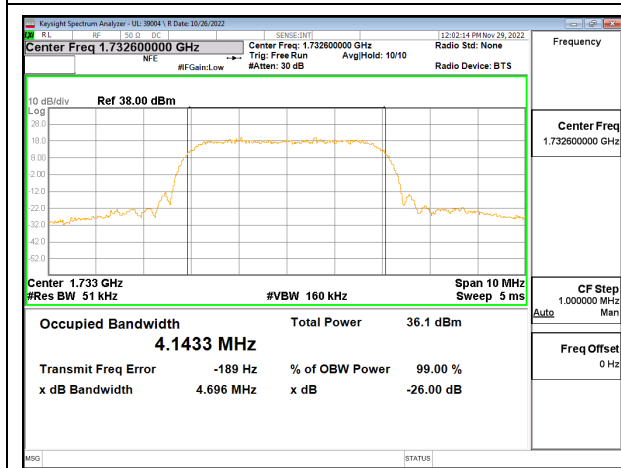
WCDMA Band 5 HSDPA Middle Channel



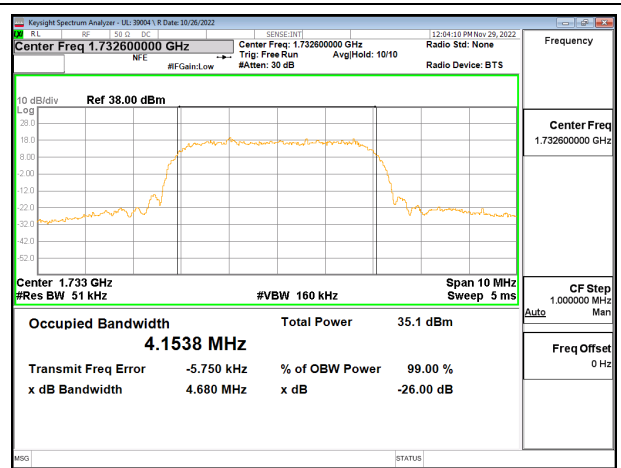
WCDMA Band 2 Rel 99 Middle Channel



WCDMA Band 2 HSDPA Middle Channel



WCDMA Band 4 Rel 99 Middle Channel



WCDMA Band 4 HSDPA Middle Channel

## 9.2. BAND EDGE AND EMISSION MASK

### LIMITS

FCC: §22.917(a), §24.238, §27.53 (h)

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.

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $116 \text{ Log}_{10}(f/6.1)$  decibels or  $50 + 10 \text{ Log}_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \text{ Log}_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

### RSS132§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  $43 + 10 \log_{10} p$  (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  $43 + 10 \log_{10} p$  (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

p is the output power specified in watts.

### RSS133§6.5.1

Equipment shall comply with the limits in (i) and (ii) below.

- (i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts).
- (ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

### RSS139§5.6

- (i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, Footnote 2 which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least  $43 + 10 \log_{10} p$  (watts) dB.
- (ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least  $43 + 10 \log_{10} p$  (watts) dB.

## **TEST PROCEDURE**

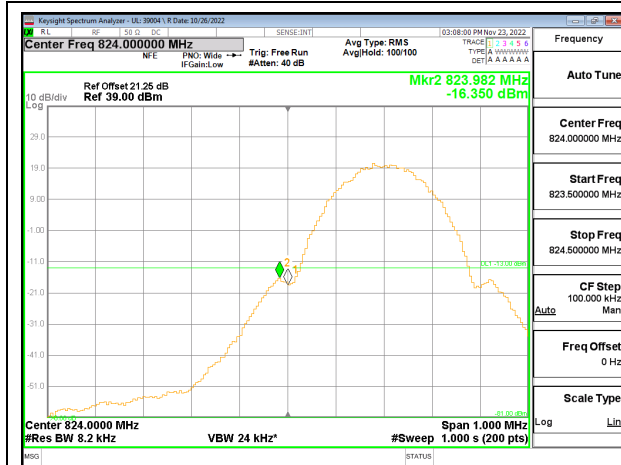
The transmitter output was connected to a R&S CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

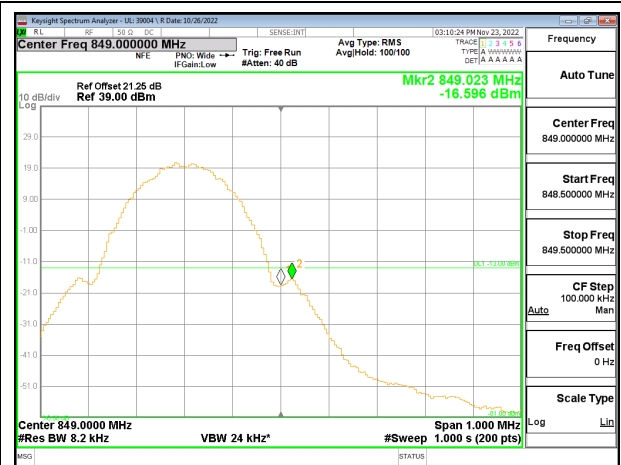
- Set the spectrum analyzer span to include the block edge frequency.
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

## **RESULTS**

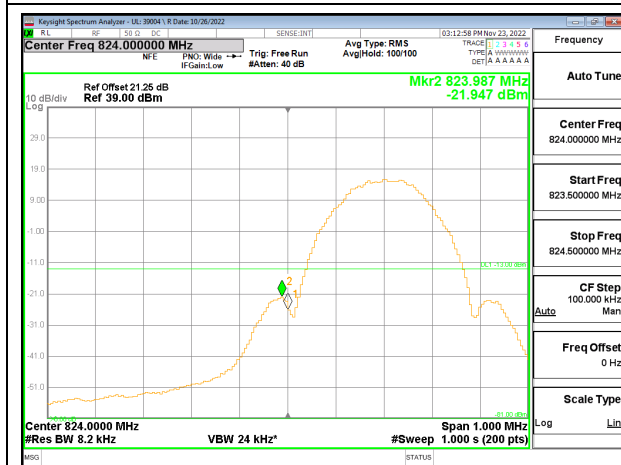
### 9.2.1. GSM 850



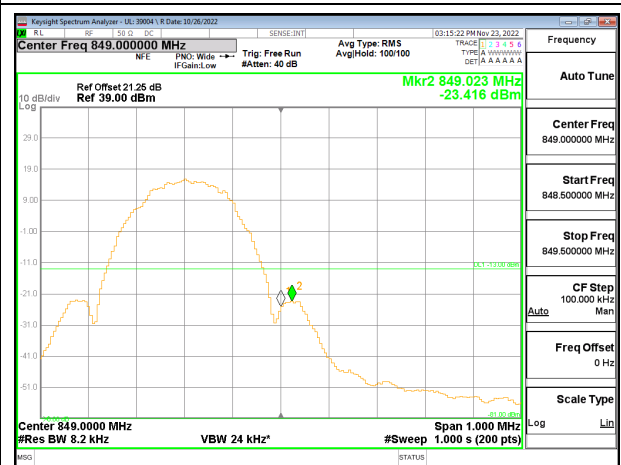
GSM 850 GPRS Low Channel



GSM 850 GPRS High Channel

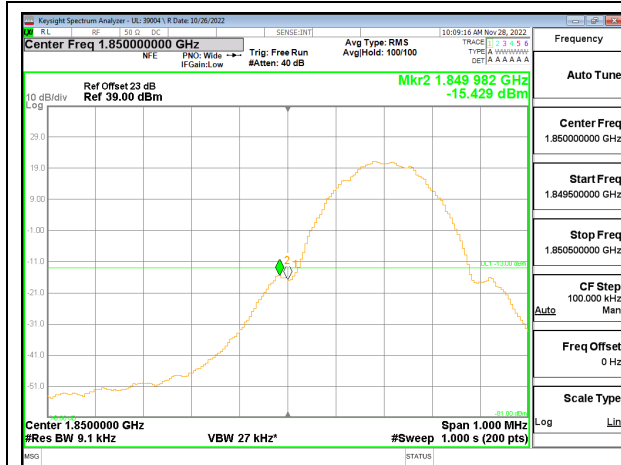


GSM 850 EGPRS Low Channel

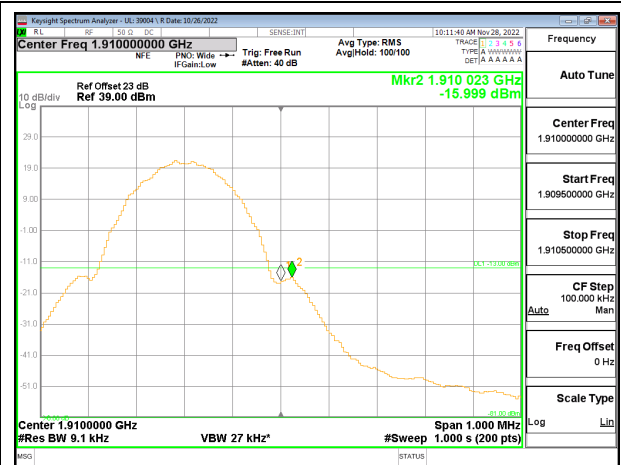


GSM 850 EGPRS High Channel

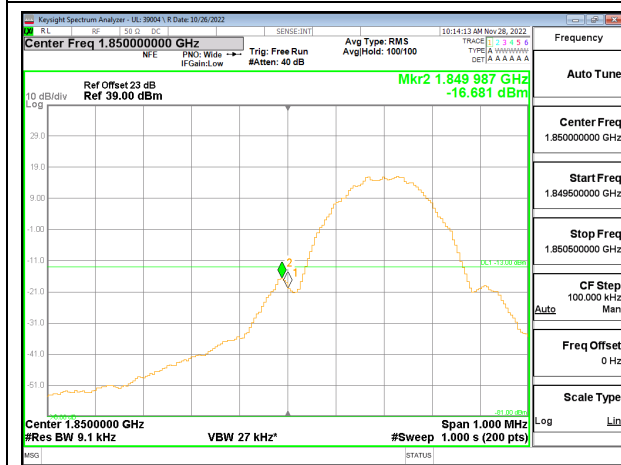
### 9.2.2. GSM 1900



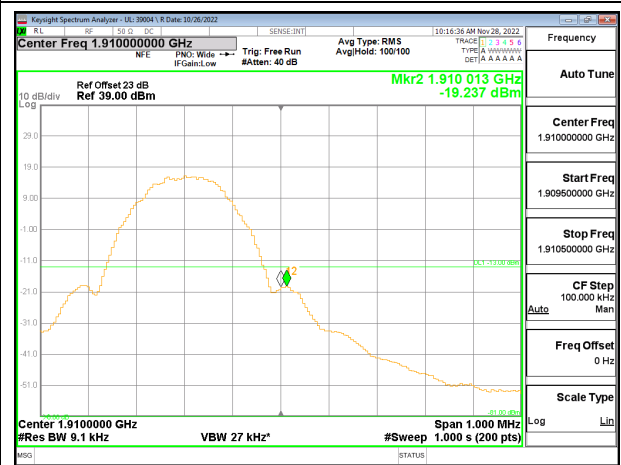
GSM 1900 GPRS Low Channel



GSM 1900 GPRS High Channel



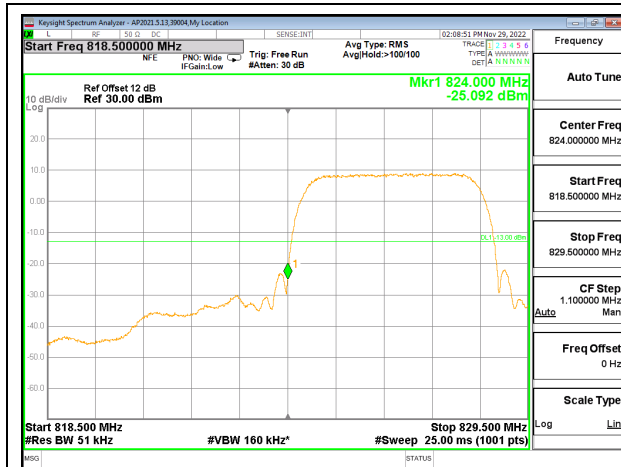
GSM 1900 EGPRS Low Channel



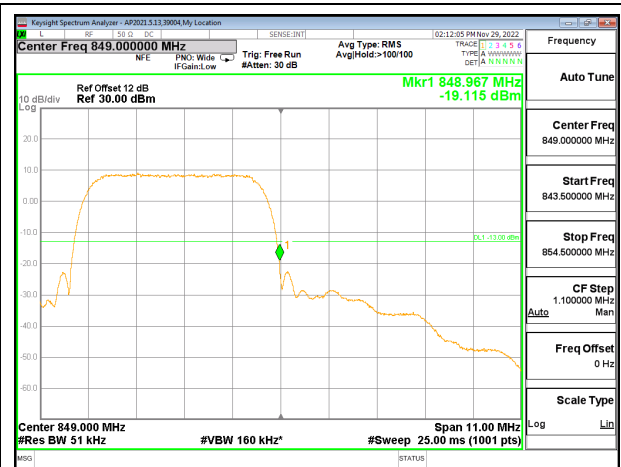
GSM 1900 EGPRS High Channel



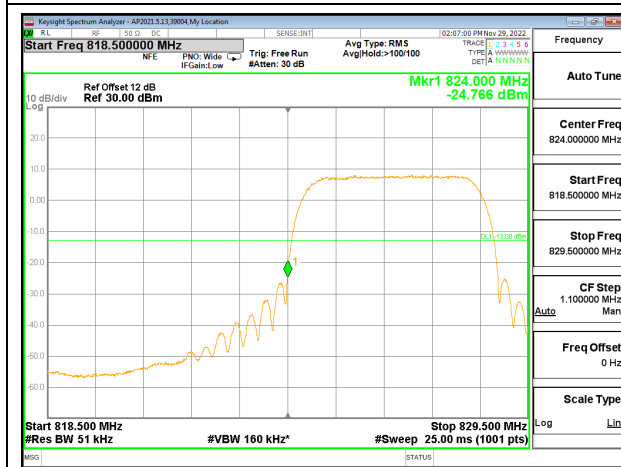
### 9.2.3. WCDMA BAND 5



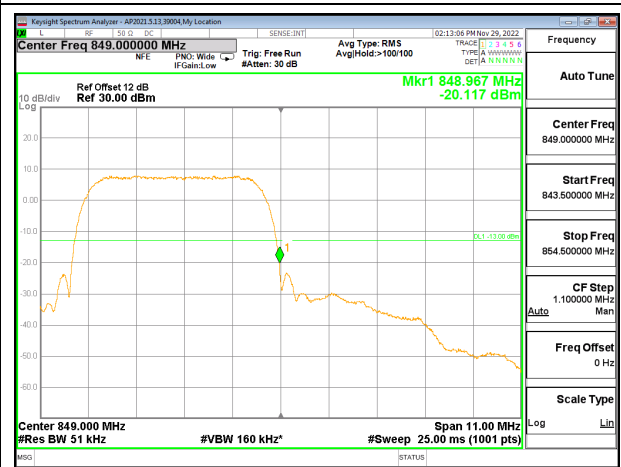
WCDMA Band 5 Rel 99 Low Channel



WCDMA Band 5 Rel 99 High Channel

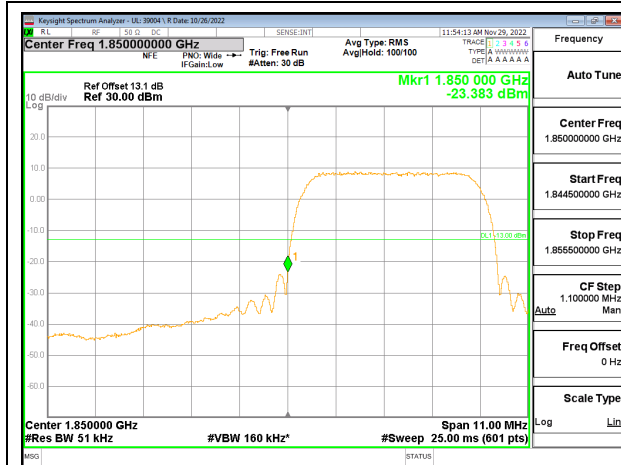


WCDMA Band 5 HSDPA Low Channel

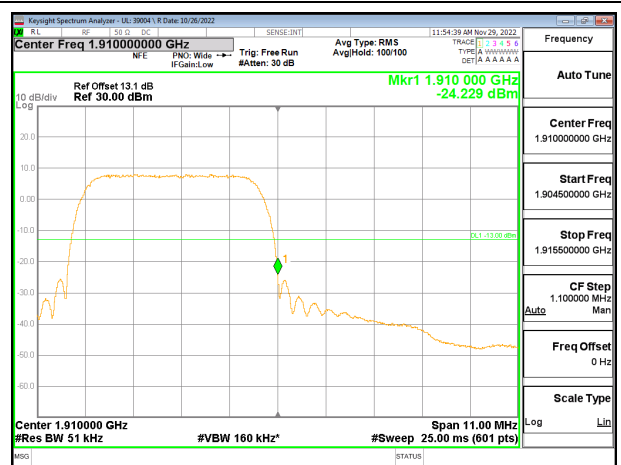


WCDMA Band 5 HSDPA High Channel

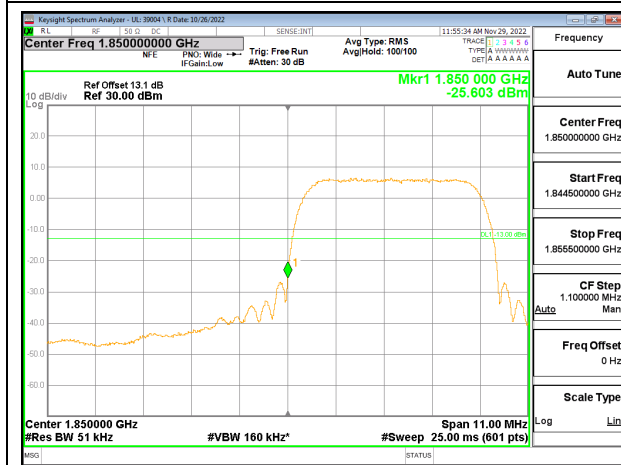
### 9.2.4. WCDMA BAND 2



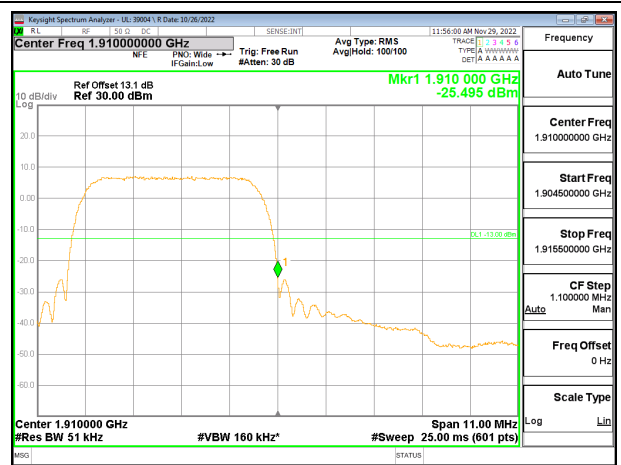
WCDMA Band 2 Rel 99 Low Channel



WCDMA Band 2 Rel 99 High Channel

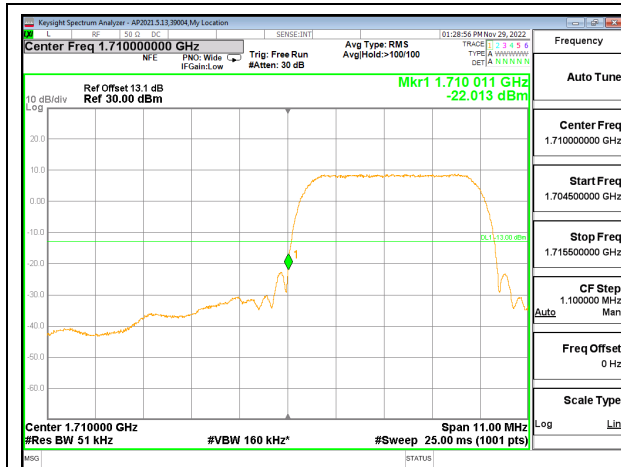


WCDMA Band 2 HSDPA Low Channel

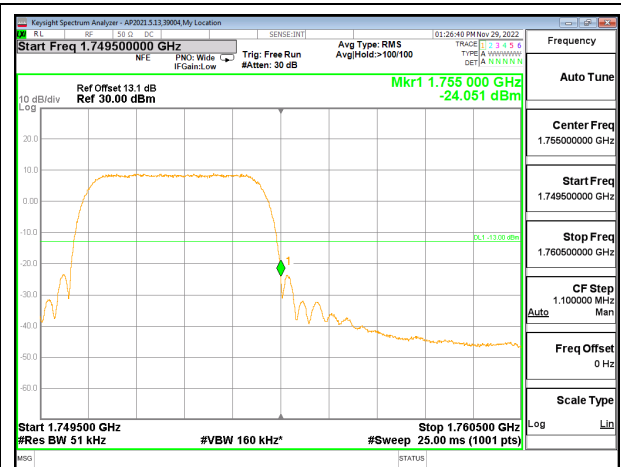


WCDMA Band 2 HSDPA High Channel

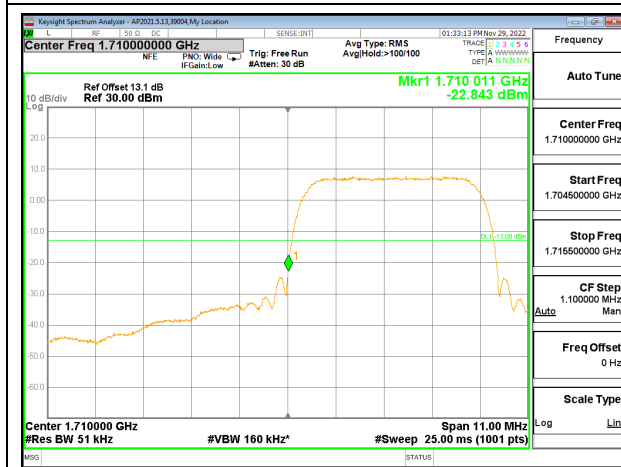
### 9.2.5. WCDMA BAND 4



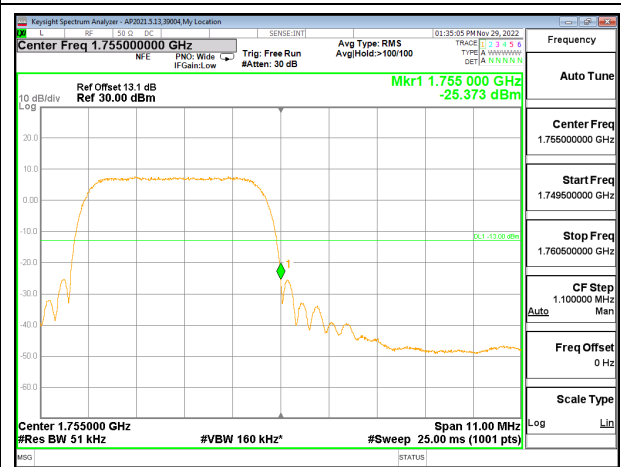
WCDMA Band 4 Rel 99 Low Channel



WCDMA Band 4 Rel 99 High Channel



WCDMA Band 4 HSDPA Low Channel



WCDMA Band 4 HSDPA High Channel

### 9.3. OUT OF BAND EMISSIONS

#### RULE PART(S)

FCC: §2.1051, §22.917, §24.238, and §27.53  
ISED: RSS132§5.5; RSS133§6.5 and RSS139§5.6

#### LIMITS

FCC: §22.917(a), §24.238, §27.53 (h)

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

RSS132§5.5, RSS133§6.5.1, RSS139§5.6

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

#### TEST PROCEDURE

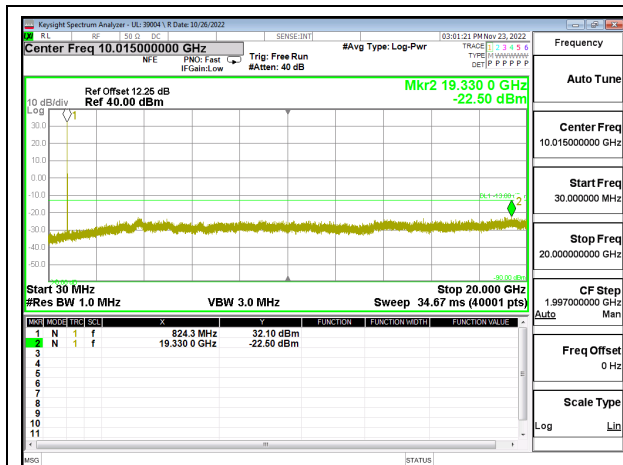
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

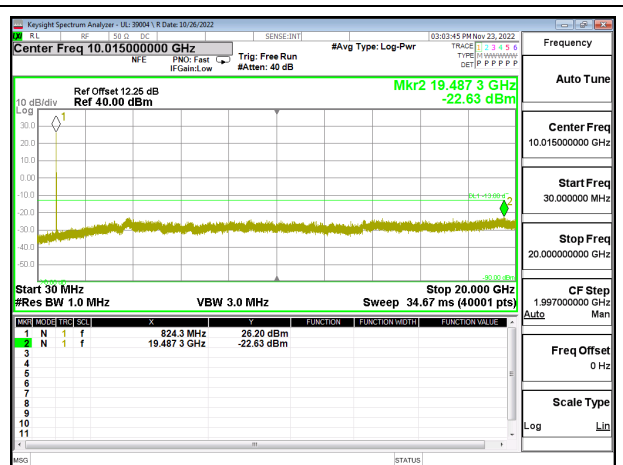
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.  
(NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

#### RESULTS

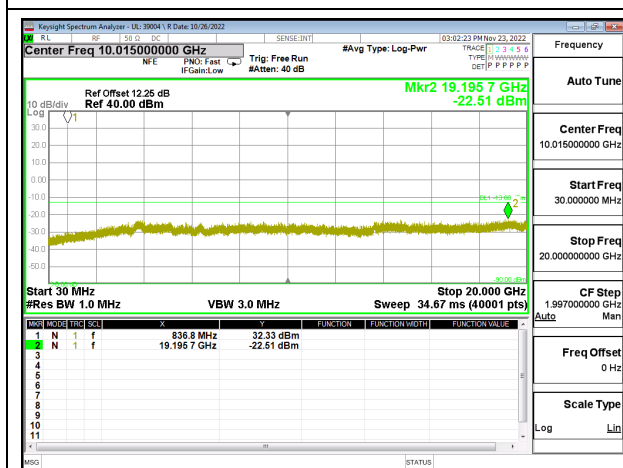
### 9.3.1. GSM 850



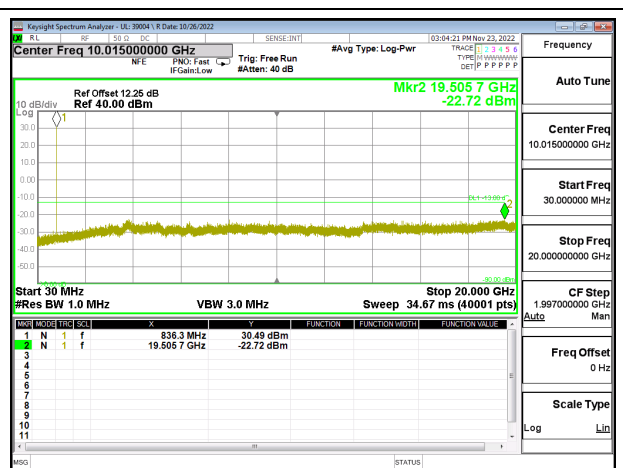
GSM 850 GPRS Low Channel



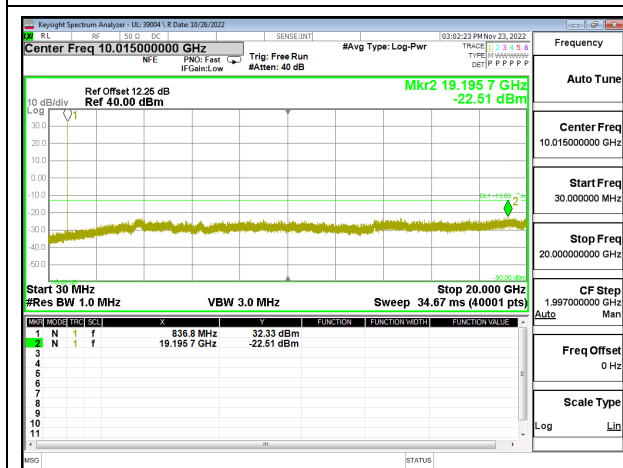
GSM 850 EGPRS Low Channel



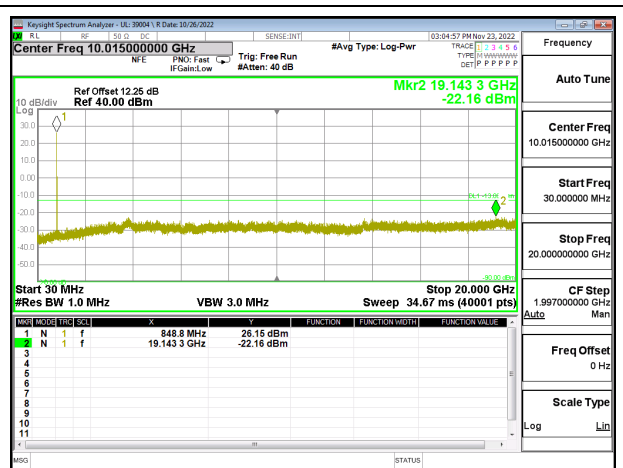
GSM 850 GPRS Middle Channel



GSM 850 EGPRS Middle Channel

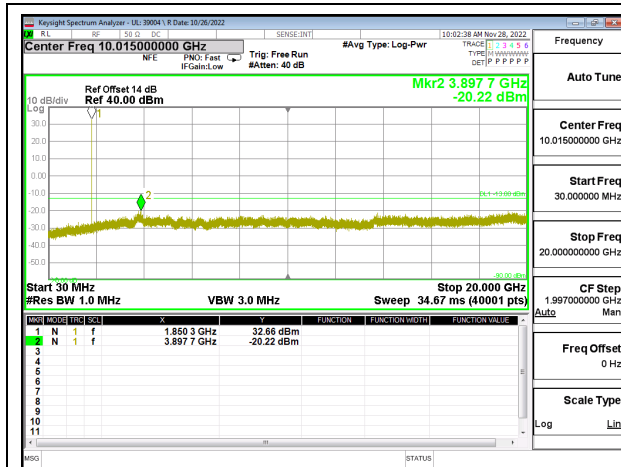


GSM 850 GPRS High Channel

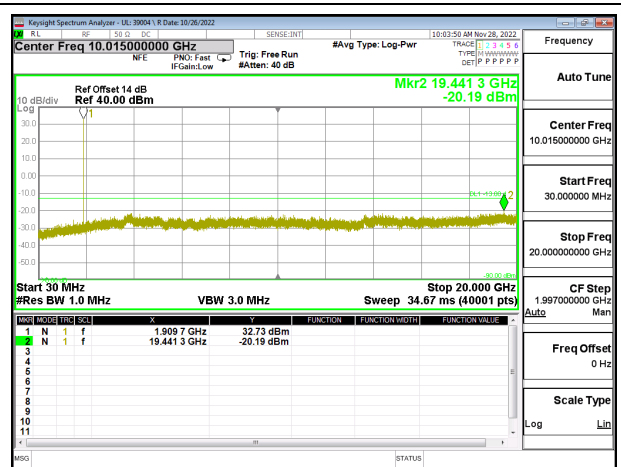


GSM 850 EGPRS High Channel

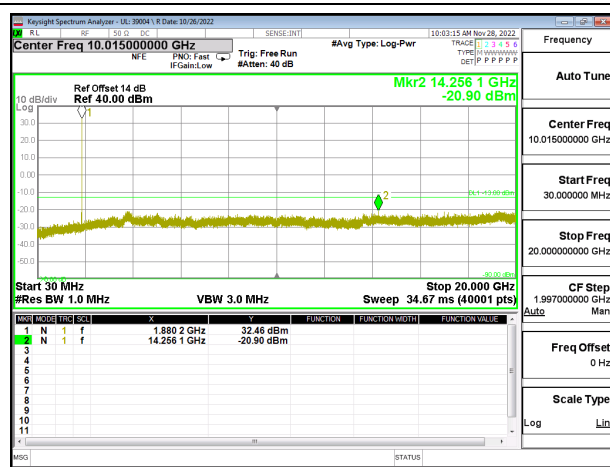
### 9.3.2. GSM 1900



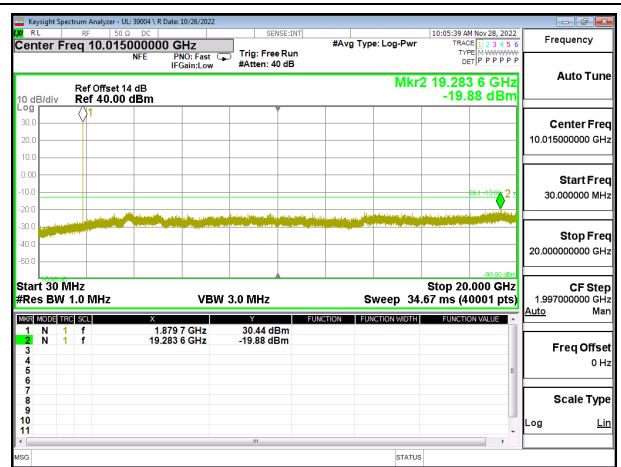
GSM 1900 GPRS Low Channel



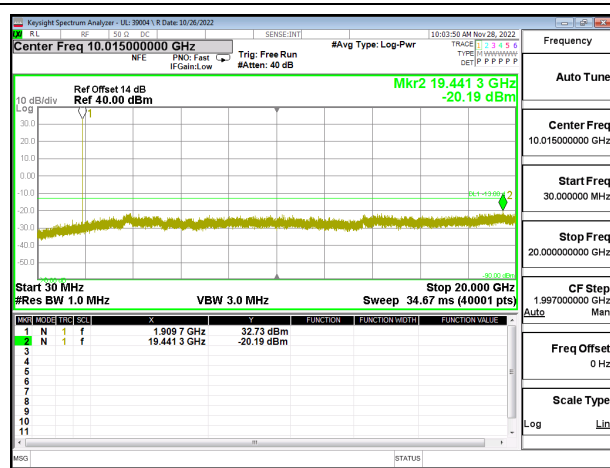
GSM 1900 EGPRS Low Channel



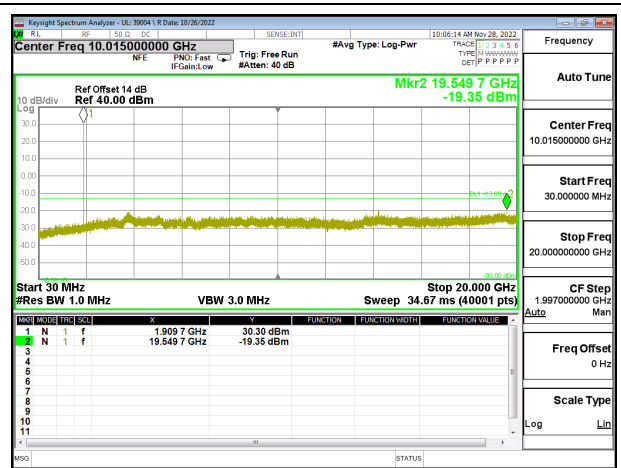
GSM 1900 GPRS Middle Channel



GSM 1900 EGPRS Middle Channel

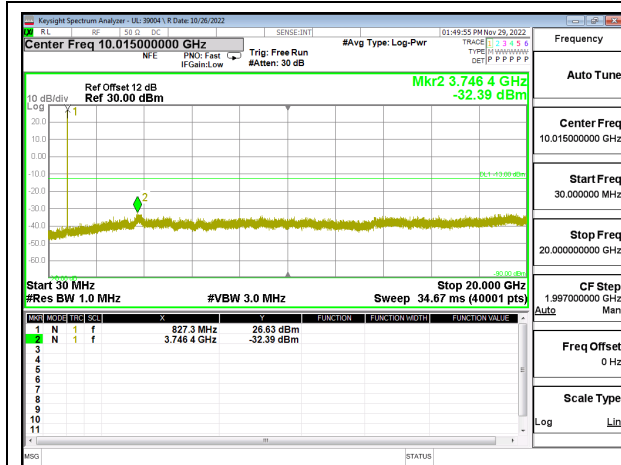


GSM 1900 GPRS High Channel

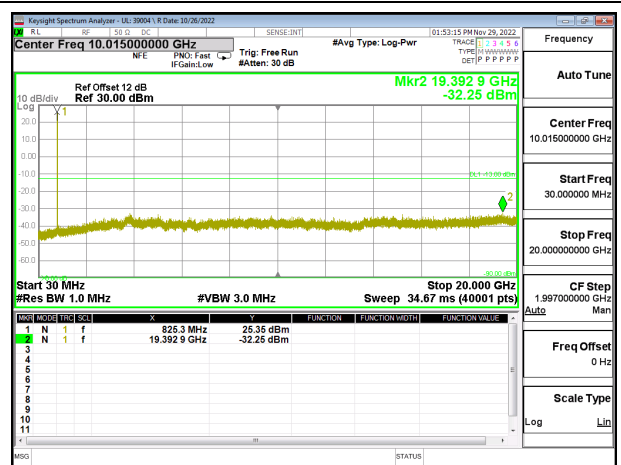


GSM 1900 EGPRS High Channel

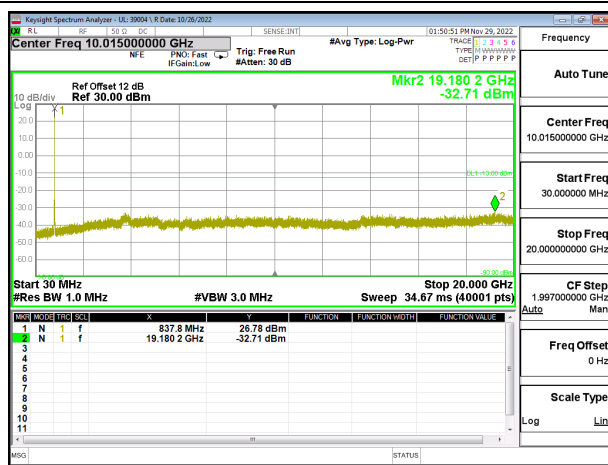
### 9.3.3. WCDMA BAND 5



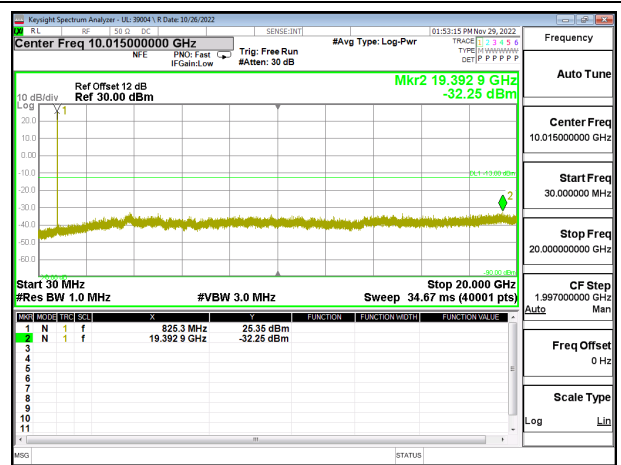
WCDMA Band 5 Rel 99 Low Channel



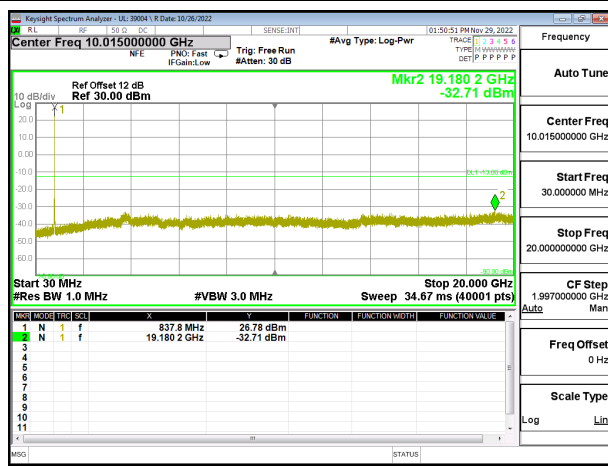
WCDMA Band 5 HSDPA Low Channel



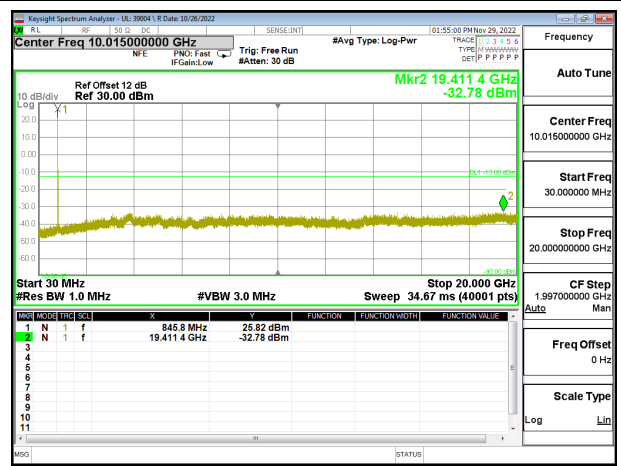
WCDMA Band 5 Rel 99 Middle Channel



WCDMA Band 5 HSDPA Middle Channel

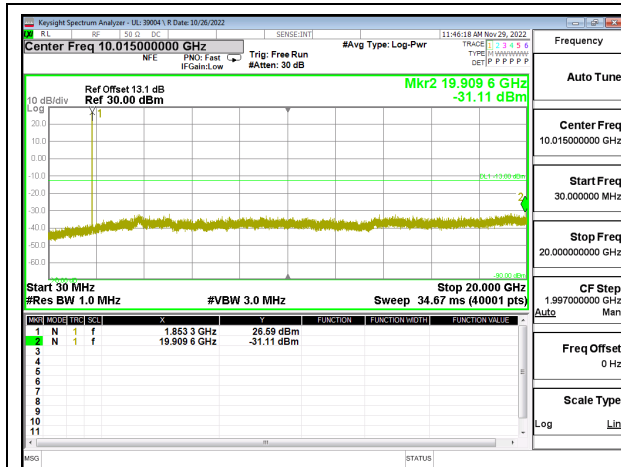


WCDMA Band 5 Rel 99 High Channel

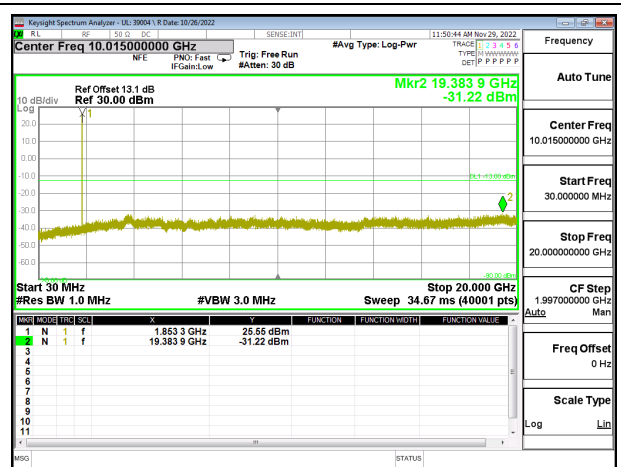


WCDMA Band 5 HSDPA High Channel

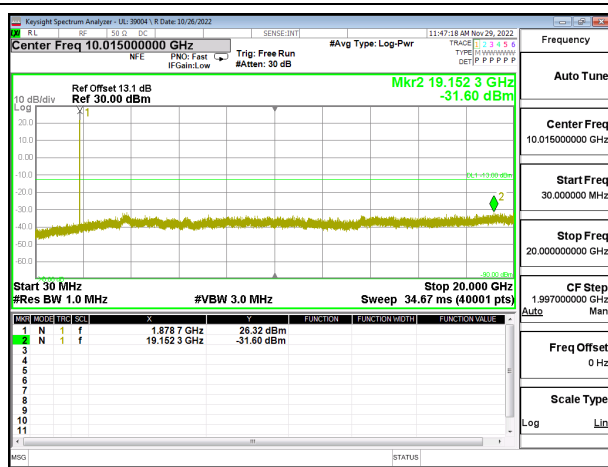
### 9.3.4. WCDMA BAND 2



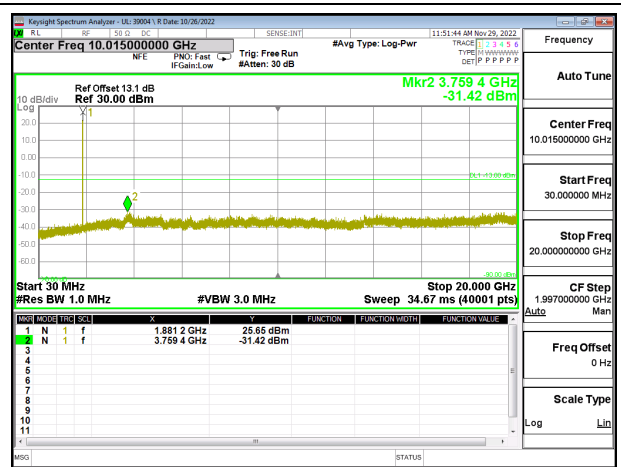
WCDMA Band 2 Rel 99 Low Channel



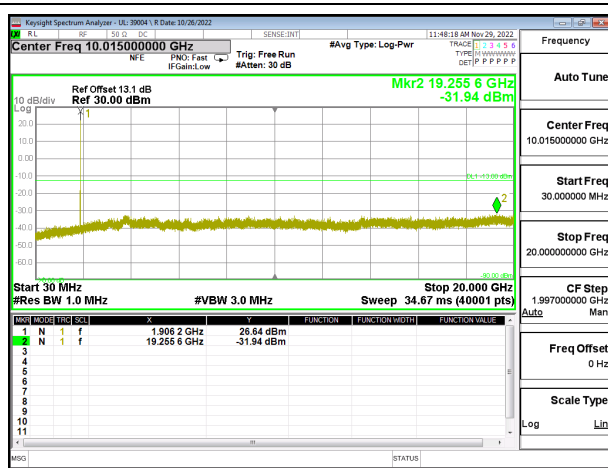
WCDMA Band 2 HSDPA Low Channel



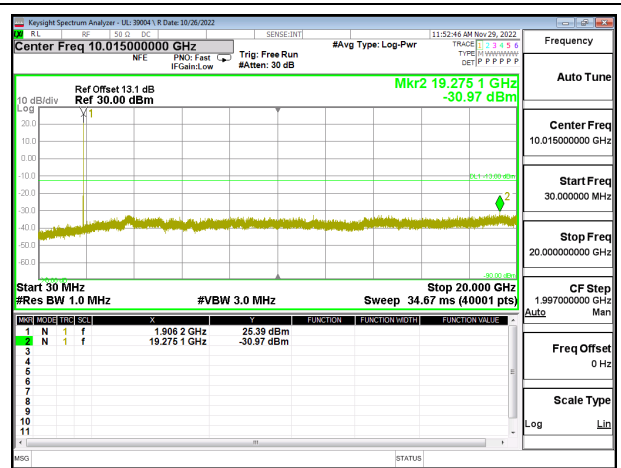
WCDMA Band 2 Rel 99 Middle Channel



WCDMA Band 2 HSDPA Middle Channel



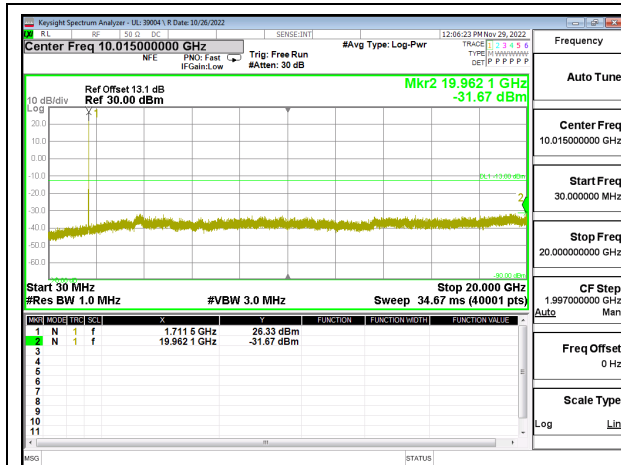
WCDMA Band 2 Rel 99 High Channel



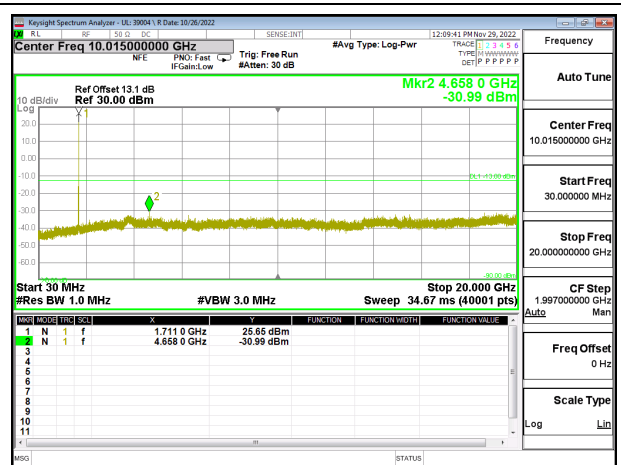
WCDMA Band 2 HSDPA High Channel



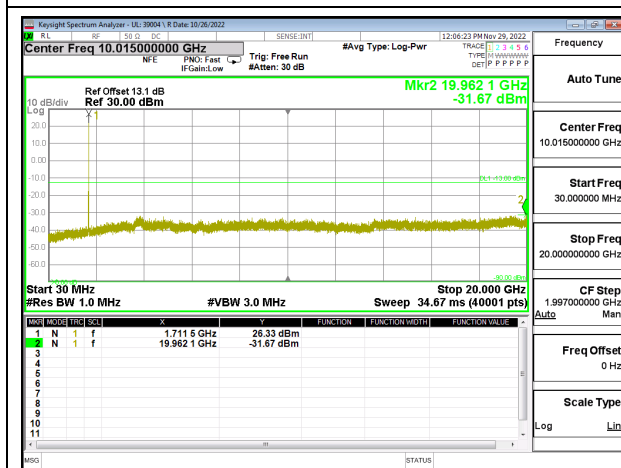
### 9.3.5. WCDMA BAND 4



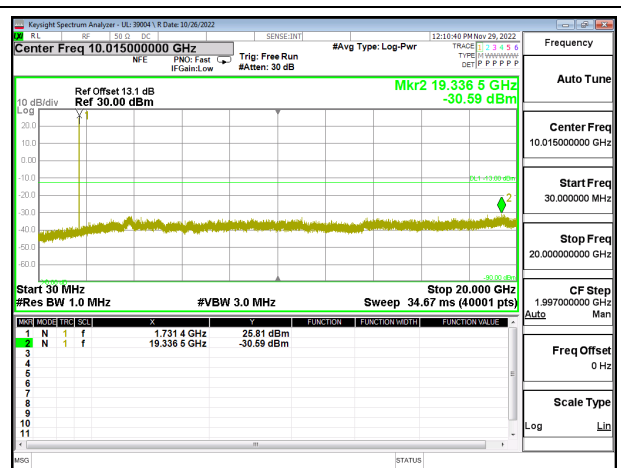
WCDMA Band 4 Rel 99 Low Channel



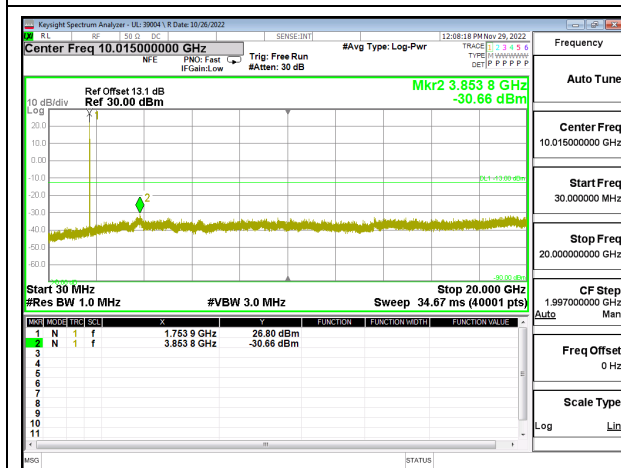
WCDMA Band 4 HSDPA Low Channel



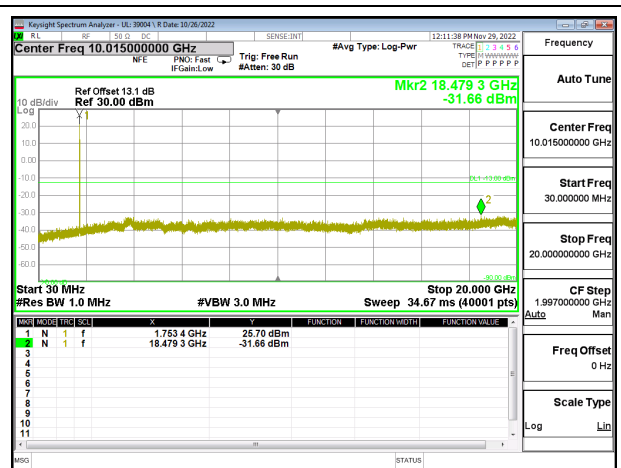
WCDMA Band 4 Rel 99 Middle Channel



WCDMA Band 4 HSDPA Middle Channel



WCDMA Band 4 Rel 99 High Channel



WCDMA Band 4 HSDPA High Channel

## 9.4. FREQUENCY STABILITY

### RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54  
ISED: RSS132§5.3; RSS133§6.3 and RSS139§6.4

### LIMITS

FCC §22.355

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

FCC §24.235 & §27.54

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

RSS132§5.3

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  SRSP for mobile stations and  $\pm 1.5$  ppm for base stations.

In lieu of meeting the above stability values, the test report may show that the frequency stability is sufficient to ensure that the occupied bandwidth stays within each of the sub-bands (see Section 5.1) when tested to the temperature and supply voltage variations specified in RSS-Gen.

RSS133§6.3

The carrier frequency shall not depart from the reference frequency, in excess of  $\pm 2.5$  ppm for mobile stations and  $\pm 1.0$  ppm for base stations.

In lieu of meeting the above stability values, the test report may show that the frequency stability is sufficient to ensure that the emission bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

RSS139§6.4

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

### TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. =  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- Voltage = (85% - 115%)  
Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.  
End Voltage, 2.95VDC.

#### **Frequency Stability vs Temperature:**

The EUT is placed inside a temperature chamber. The temperature is set to  $20^{\circ}\text{C}$  and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until  $+50^{\circ}\text{C}$  is reached.

#### **Frequency Stability vs Voltage:**

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

### RESULTS

See the following pages.

**9.4.1. GSM**

Test Engineer ID:	39004	Test Date:	1/24/2023
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**GPRS 850**

Band	850	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Normal (20°C)	Normal	824.0230	848.9720			
Extreme (50°C)		824.0230	848.9720	12.7	0.015	Yes
Extreme (40°C)		824.0230	848.9720	11.9	0.014	Yes
Extreme (30°C)		824.0230	848.9720	10.3	0.012	Yes
Extreme (10°C)		824.0230	848.9720	10.7	0.013	Yes
Extreme (0°C)		824.0230	848.9720	9.2	0.011	Yes
Extreme (-10°C)		824.0230	848.9720	9.0	0.011	Yes
Extreme (-20°C)		824.0230	848.9720	8.4	0.010	Yes
Extreme (-30°C)		824.0230	848.9720	8.0	0.010	Yes
20°C		15%	824.0230	848.9720	8.3	0.010
	-15%	824.0230	848.9720	9.7	0.012	Yes
	End Point Voltage	824.0230	848.9720	11.5	0.014	Yes

**GPRS 1900**

Band	1900	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1910		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)			
Normal (20°C)	Normal	1850.0320	1909.9640			
Extreme (50°C)		1850.0320	1909.9640	15.1	0.008	Yes
Extreme (40°C)		1850.0320	1909.9640	14.2	0.008	Yes
Extreme (30°C)		1850.0320	1909.9640	13.7	0.007	Yes
Extreme (10°C)		1850.0320	1909.9640	13.3	0.007	Yes
Extreme (0°C)		1850.0320	1909.9640	12.0	0.006	Yes
Extreme (-10°C)		1850.0320	1909.9640	11.4	0.006	Yes
Extreme (-20°C)		1850.0320	1909.9640	11.0	0.006	Yes
Extreme (-30°C)		1850.0320	1909.9640	10.7	0.006	Yes
20°C	15%	1850.0320	1909.9640	9.1	0.005	Yes
	-15%	1850.0320	1909.9640	8.3	0.004	Yes
	End Point Voltage	1850.0320	1909.9640	10.0	0.005	Yes

### 9.4.2. WCDMA

#### WCDMA REL 99 BAND 5

Test Engineer ID:	39004	Test Date:	1/24/2023
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Band	5	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	Within Authorized Frequency Block (Hz)
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	
Normal (20°C)	Normal	824.0880	848.9010			
Extreme (50°C)		824.0880	848.9010	7.8	0.009	Yes
Extreme (40°C)		824.0880	848.9010	7.0	0.008	Yes
Extreme (30°C)		824.0880	848.9010	6.8	0.008	Yes
Extreme (10°C)		824.0880	848.9010	6.0	0.007	Yes
Extreme (0°C)		824.0880	848.9010	4.5	0.005	Yes
Extreme (-10°C)		824.0880	848.9010	4.0	0.005	Yes
Extreme (-20°C)		824.0880	848.9010	5.3	0.006	Yes
Extreme (-30°C)		824.0880	848.9010	3.8	0.005	Yes
20°C		15%	824.0880	848.9010	2.0	0.002
	-15%	824.0880	848.9010	6.0	0.007	Yes
	End Point Voltage	824.0880	848.9010	4.7	0.006	Yes

**WCDMA REL 99 BAND 2**

Test Engineer ID:	39004	Test Date:	1/24/2023
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Band		2		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1910	2.5			Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)					
Normal (20°C)	Normal	1850.0990	1909.9010					
Extreme (50°C)		1850.0990	1909.9010	9.3	0.005	Yes		
Extreme (40°C)		1850.0990	1909.9010	8.8	0.005	Yes		
Extreme (30°C)		1850.0990	1909.9010	9.1	0.005	Yes		
Extreme (10°C)		1850.0990	1909.9010	6.3	0.003	Yes		
Extreme (0°C)		1850.0990	1909.9010	8.4	0.004	Yes		
Extreme (-10°C)		1850.0990	1909.9010	8.2	0.004	Yes		
Extreme (-20°C)		1850.0990	1909.9010	8.6	0.005	Yes		
Extreme (-30°C)		1850.0990	1909.9010	7.7	0.004	Yes		
20°C	15%	1850.0990	1909.9010	6.1	0.003	Yes		
	-15%	1850.0990	1909.9010	5.3	0.003	Yes		
	End Point Voltage	1850.0990	1909.9010	4.8	0.003	Yes		

**WCDMA REL 99 BAND 4**

Test Engineer ID:	39004	Test Date:	1/24/2023
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Band		4		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1710	1755	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage							
Normal (20°C)	Normal	1710.0990	1754.9010					
Extreme (50°C)		1710.0990	1754.9010	14.0	0.008	Yes		
Extreme (40°C)		1710.0990	1754.9010	12.2	0.007	Yes		
Extreme (30°C)		1710.0990	1754.9010	10.8	0.006	Yes		
Extreme (10°C)		1710.0990	1754.9010	10.1	0.006	Yes		
Extreme (0°C)		1710.0990	1754.9010	8.2	0.005	Yes		
Extreme (-10°C)		1710.0990	1754.9010	7.1	0.004	Yes		
Extreme (-20°C)		1710.0990	1754.9010	6.8	0.004	Yes		
Extreme (-30°C)		1710.0990	1754.9010	5.9	0.003	Yes		
20°C	15%	1710.0990	1754.9010	9.4	0.005	Yes		
	-15%	1710.0990	1754.9010	8.6	0.005	Yes		
	End Point Voltage	1710.0990	1754.9010	6.7	0.004	Yes		

## 9.5. PEAK-TO-AVERAGE POWER RATIO

### LIMIT

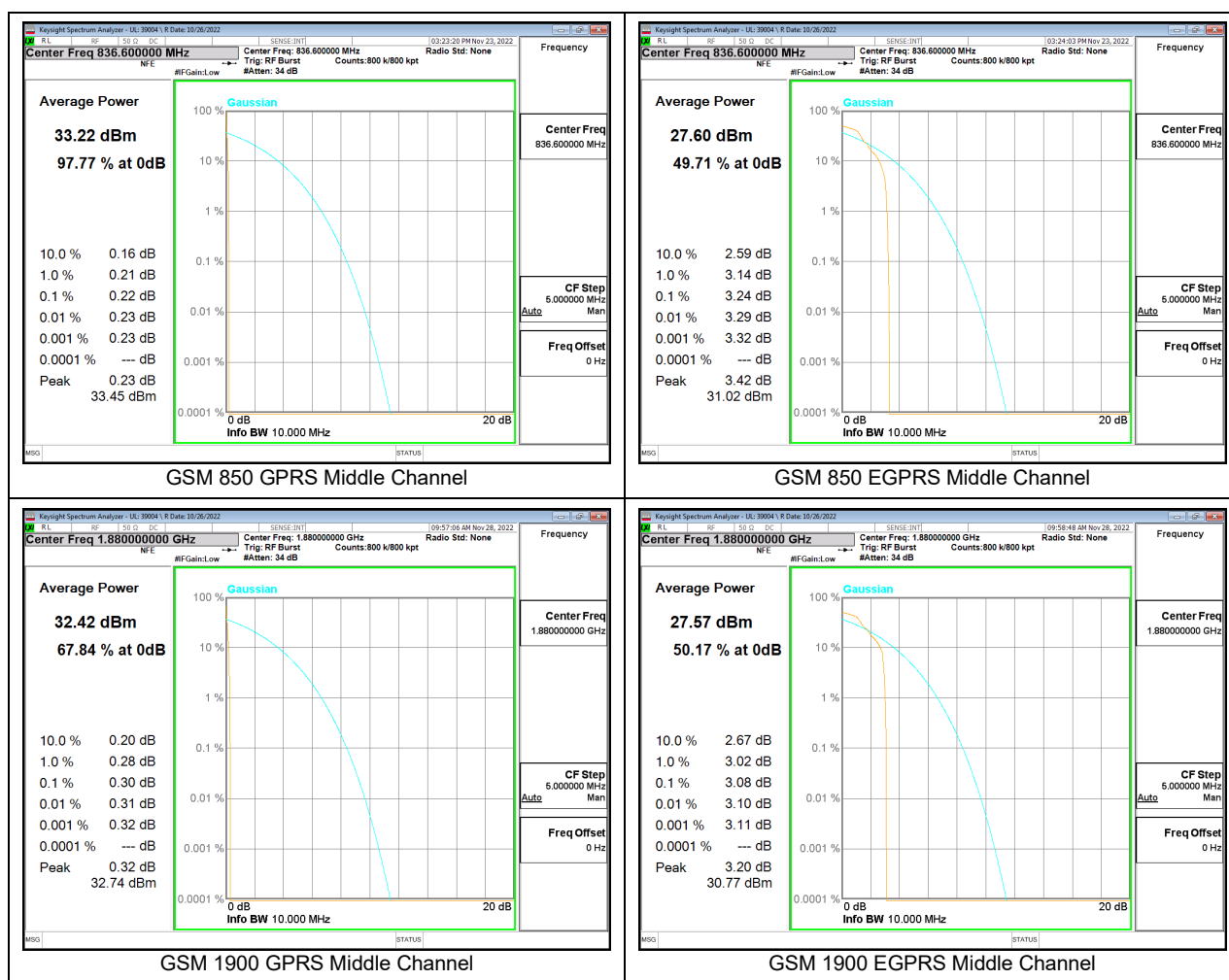
In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

### RESULT

Ant 1 was used to measure as the worst case. The results from all CCDF plots are passed with 13dB peak-to-average power ratio criteria.

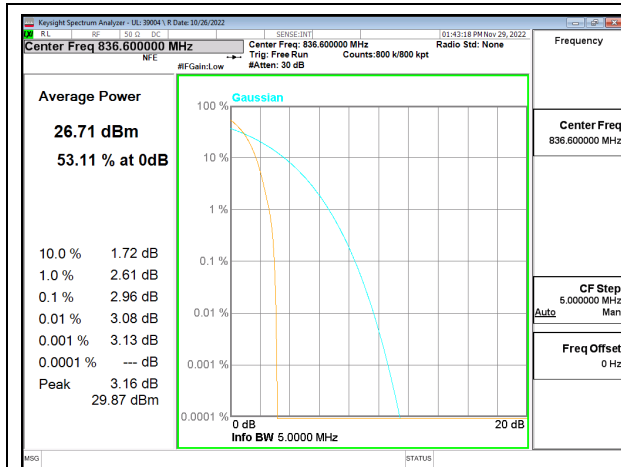
Test Engineer ID:	39004	Test Date:	11/23/2022
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### 9.5.1. GSM

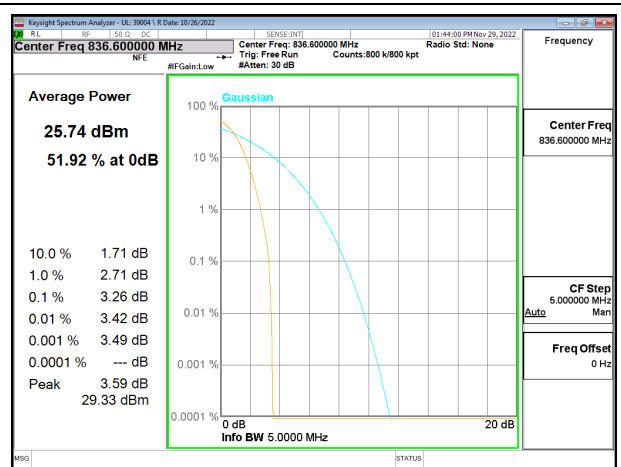




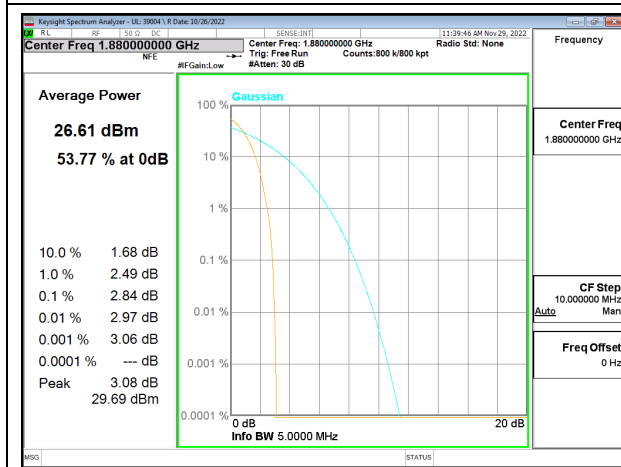
### 9.5.2. WCDMA



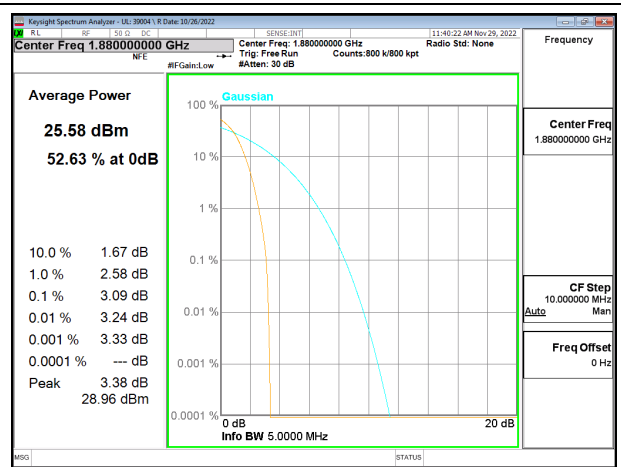
WCDMA Band 5 Rel 99 Middle Channel



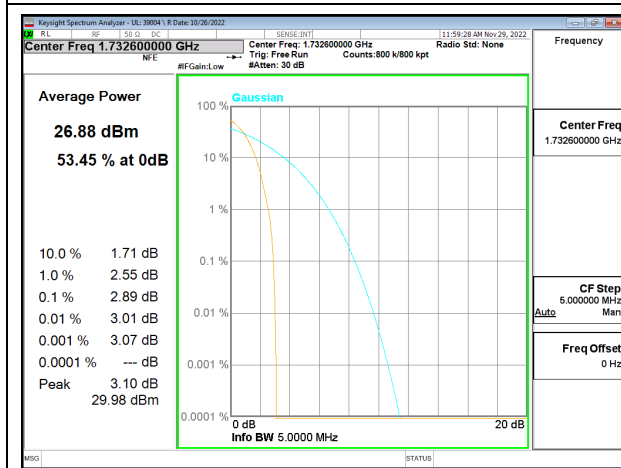
WCDMA Band 5 HSDPA Middle Channel



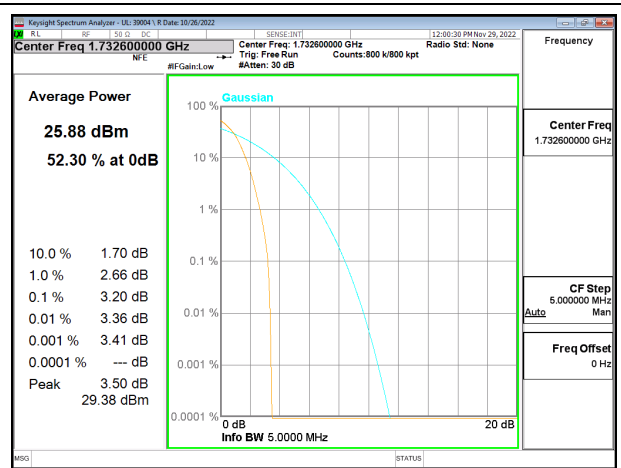
WCDMA Band 2 Rel 99 Middle Channel



WCDMA Band 2 HSDPA Middle Channel



WCDMA Band 4 Rel 99 Middle Channel



WCDMA Band 4 HSDPA Middle Channel

## 10. RADIATED TEST RESULTS

### Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, we measure the radiated emissions directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement method.

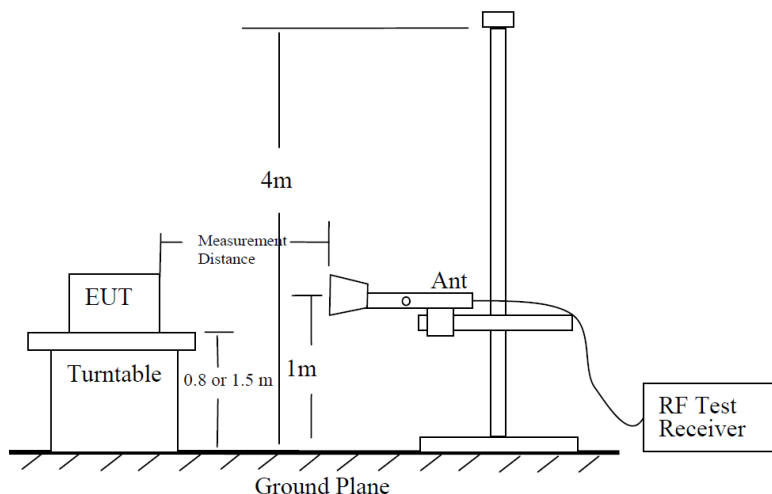


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

### Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a)  $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$ .
- b)  $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$ .
- c)  $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$ ; where D is the measurement distance (in the far field region) in m.
- d)  $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m.

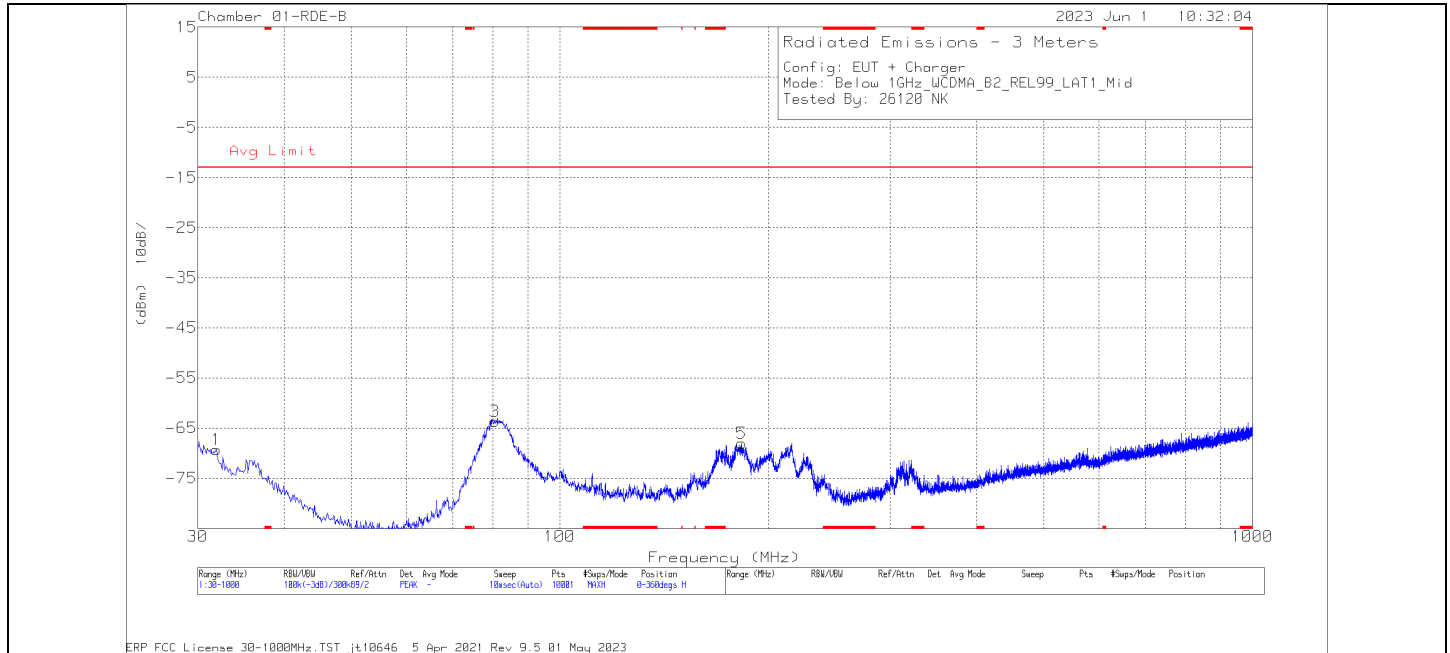
So, from d)

The measuring distance is usually at 3m, then  $20 \cdot \log(3) = 9.5424$

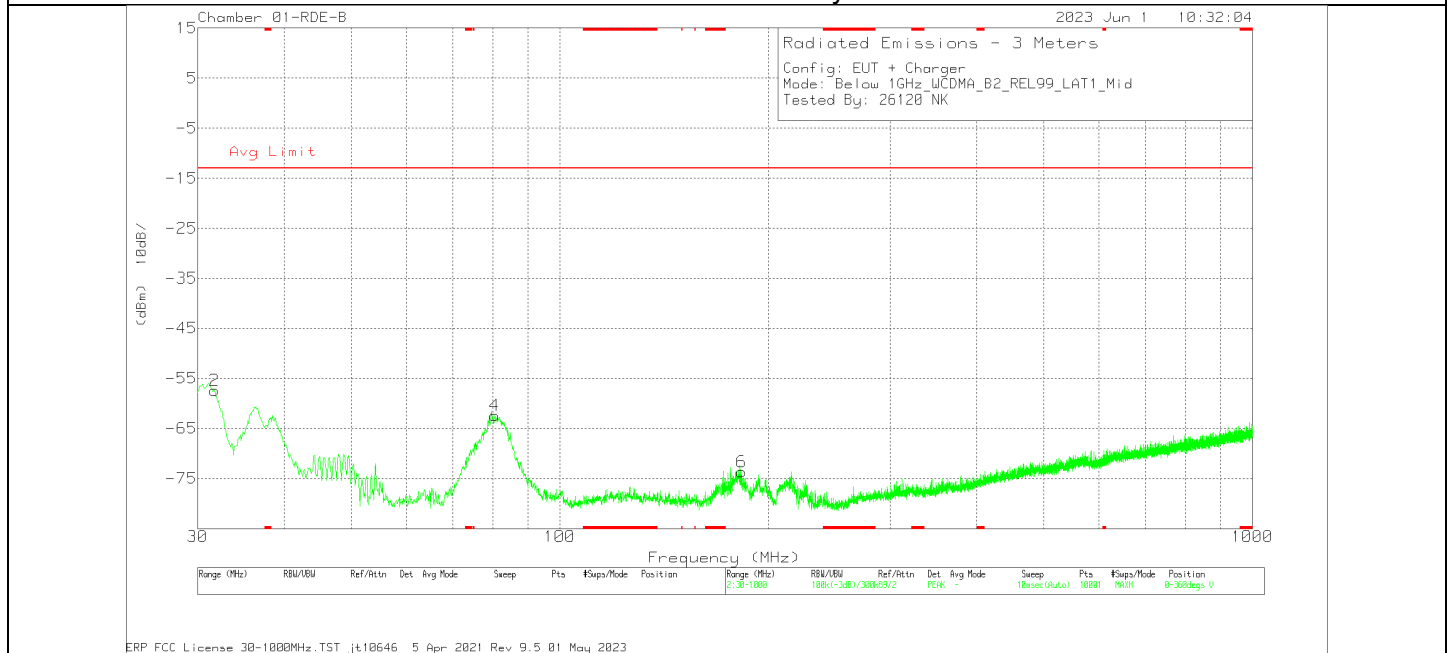
Then,  $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

Note: Confidence check of each chamber is performed daily to see if any degradation from expected/normal reading reference data. Ambient check of each chamber is performed monthly.

**Example Plot Below 1GHz**



**Horizontal Polarity**

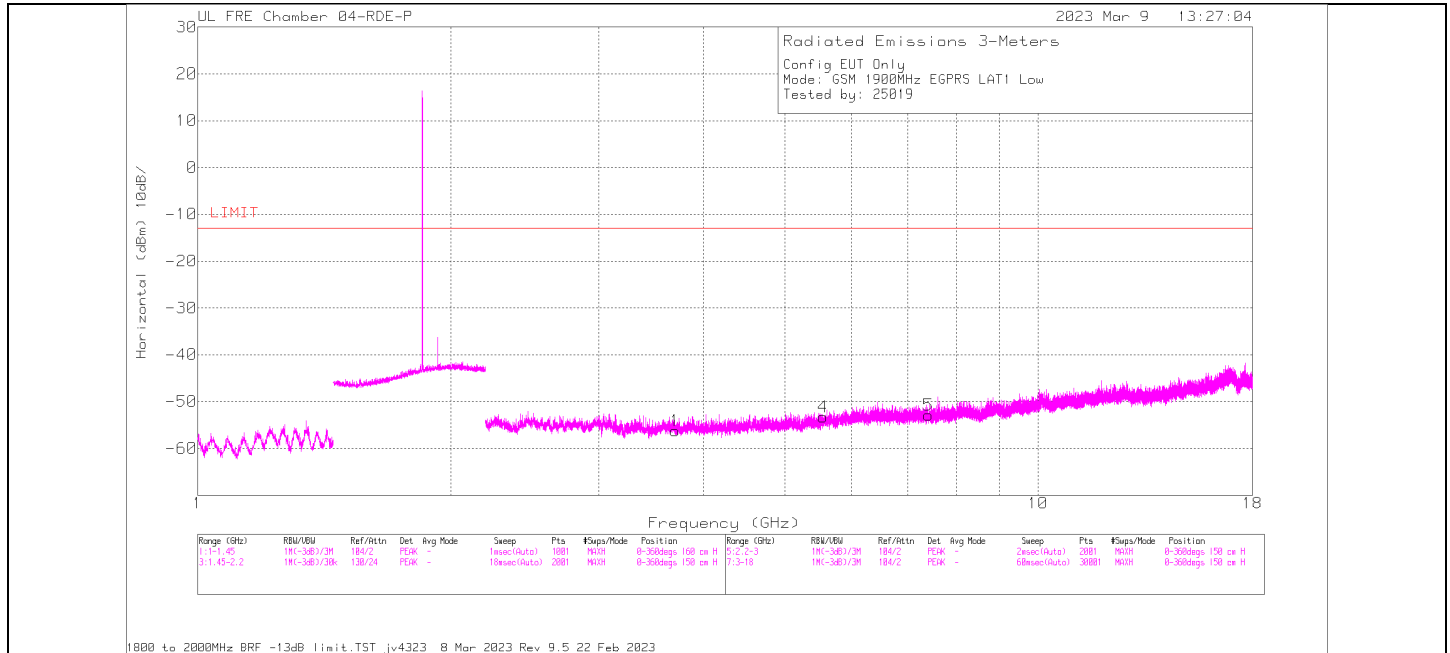


**Vertical Polarity**

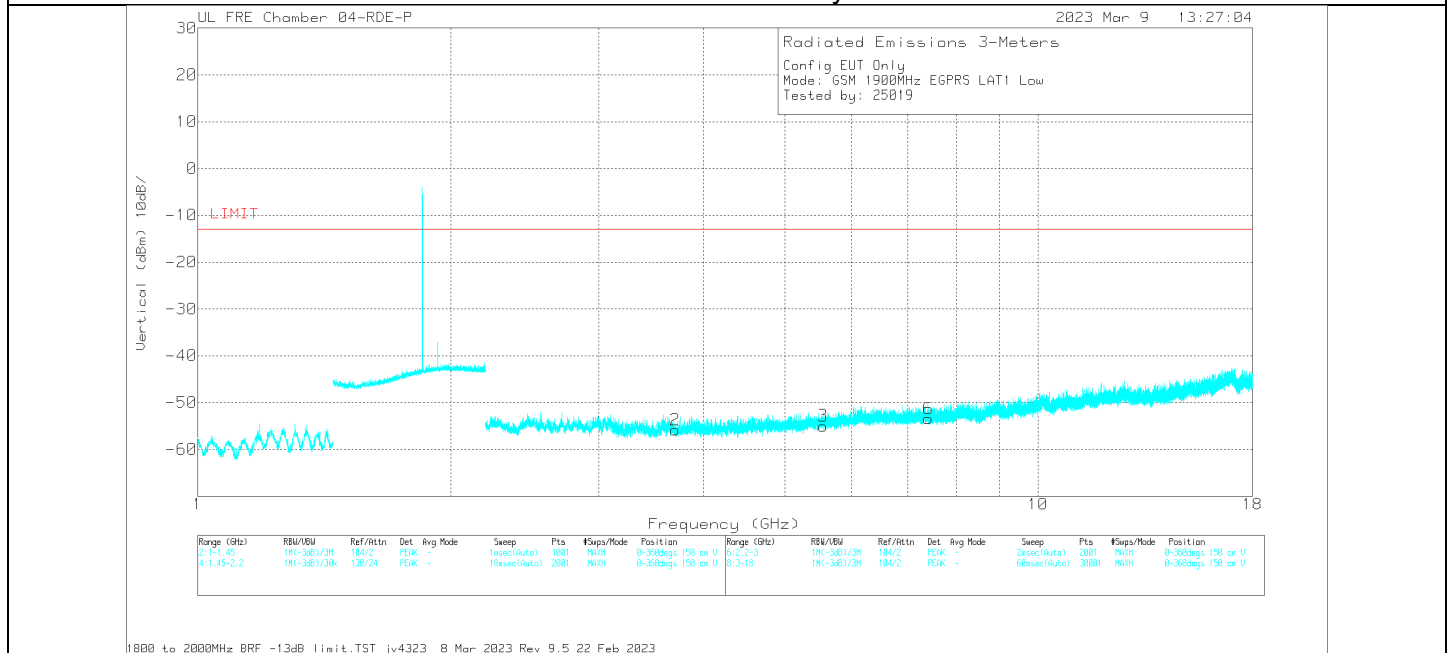
### Trace Markers

Frequency (MHz)	Meter Reading (dBuV)	Det	173997 ACF (dB/m)	Cbl/Amp (dB)	EIRP CF	Corrected Reading (dBm)	Avg Limit	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
31.94	31.31	Pk	25.7	-31.1	-95.2	-69.29	-13	-56.29	0-360	102	H
31.746	43.1	Pk	25.8	-31.1	-95.2	-57.4	-13	-44.4	0-360	102	V
80.537	48.61	Pk	13.6	-30.7	-95.2	-63.69	-13	-50.69	0-360	299	H
80.537	49.91	Pk	13.6	-30.7	-95.2	-62.39	-13	-49.39	0-360	102	V
182.872	40.08	Pk	17.1	-30	-95.2	-68.02	-13	-55.02	0-360	199	H
183.066	34.43	Pk	17.1	-30	-95.2	-73.67	-13	-60.67	0-360	299	V

**Example Plot Above 1GHz**



**Horizontal Polarity**



**Vertical Polarity**

**Trace Markers**

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.700302	55.34	Pk	33.1	-95.2	-45.67	-52.43	-13	-39.43	H
3.700057	56.25	Pk	33.1	-95.2	-45.65	-51.5	-13	-38.5	V
5.550013	56.39	Pk	34.4	-95.2	-46.9	-51.31	-13	-38.31	H
5.549459	56.34	Pk	34.4	-95.2	-46.86	-51.32	-13	-38.32	V
7.401878	55.93	Pk	35.7	-95.2	-46.12	-49.69	-13	-36.69	H
7.40043	55.33	Pk	35.7	-95.2	-46.08	-50.25	-13	-37.25	V

## 10.1. FIELD STRENGTH OF SPURIOUS RADIATION, Antenna 1

### RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §27.53  
ISED: RSS132§5.5; RSS133§6.5 and RSS139§5.6

### LIMIT

FCC: §22.917(a), §24.238(a), §27.53 (h)

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.

#### RSS132§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  $43 + 10 \log_{10} p$  (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  $43 + 10 \log_{10} p$  (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

#### RSS133§6.5.1

Equipment shall comply with the limits in (i) and (ii) below.

- (i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts).
- (ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least  $43 + 10 \log_{10} p$  (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

#### RSS139§6.6

- (i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, Footnote 2 which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least  $43 + 10 \log_{10} p$  (watts) dB.
- (ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least  $43 + 10 \log_{10} p$  (watts) dB.

### TEST PROCEDURE

KDB 971168 D01

### RESULTS

**10.1.1. GSM 850**

**GPRS MODE**

Project #:	14523740
Date:	03/09/2022
Test Engineer:	25019
Configuration:	EUT Only
Mode:	GPRS 850
Chamber #:	Chamber P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 824.2 MHz</b>									
1.64836	56.76	Pk	28.6	-95.2	-48.95	-58.79	-13	-45.79	H
1.64836	56.86	Pk	28.6	-95.2	-48.95	-58.69	-13	-45.69	V
2.47204	58.02	Pk	32	-95.2	-49.61	-54.79	-13	-41.79	H
2.47204	56.13	Pk	32	-95.2	-49.61	-56.68	-13	-43.68	V
3.2966	53.4	Pk	32.9	-95.2	-46.75	-55.65	-13	-42.65	H
3.2966	53.35	Pk	32.9	-95.2	-46.75	-55.7	-13	-42.7	V
<b>Mid Channel, 836.6 MHz</b>									
1.67256	54.5	Pk	28.9	-95.2	-48.94	-60.74	-13	-47.74	H
1.67256	55.65	Pk	28.9	-95.2	-48.94	-59.59	-13	-46.59	V
2.50988	56.33	Pk	32.1	-95.2	-49.50	-56.27	-13	-43.27	H
2.50988	57.51	Pk	32.1	-95.2	-49.50	-55.09	-13	-42.09	V
3.34588	52.33	Pk	32.8	-95.2	-46.82	-56.89	-13	-43.89	H
3.34588	52.38	Pk	32.8	-95.2	-46.82	-56.84	-13	-43.84	V
<b>High Channel, 848.8 MHz</b>									
1.69764	56.79	Pk	29.2	-95.2	-48.87	-58.08	-13	-45.08	H
1.69764	56.52	Pk	29.2	-95.2	-48.87	-58.35	-13	-45.35	V
2.5464	55.93	Pk	32.2	-95.2	-49.46	-56.53	-13	-43.53	H
2.5464	55.74	Pk	32.2	-95.2	-49.46	-56.72	-13	-43.72	V
3.3956	52.03	Pk	32.8	-95.2	-46.50	-56.87	-13	-43.87	H
3.3956	52.12	Pk	32.8	-95.2	-46.50	-56.78	-13	-43.78	V



**EGPRS MODE**

Project #:	14523740
Date:	03/09/2022
Test Engineer:	32145
Configuration:	EUT Only
Mode:	EGPRS 850
Chamber #:	Chamber P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 824.2 MHz</b>									
1.64924	53.86	Pk	29	-95.2	-46.58	-58.92	-13	-45.92	H
1.64616	55.92	Pk	29	-95.2	-46.63	-56.91	-13	-43.91	V
2.47248	54.54	Pk	32.4	-95.2	-47.20	-55.46	-13	-42.46	H
2.47732	55.8	Pk	32.3	-95.2	-47.06	-54.16	-13	-41.16	V
3.30232	54.41	Pk	32.9	-95.2	-44.96	-52.85	-13	-39.85	H
3.29968	53.47	Pk	32.9	-95.2	-45.10	-53.93	-13	-40.93	V
<b>Mid Channel, 836.6 MHz</b>									
1.67185	57.6	Pk	28.9	-95.2	-48.67	-57.37	-13	-44.37	H
1.67185	57.21	Pk	28.9	-95.2	-48.67	-57.76	-13	-44.76	V
2.50885	58.59	Pk	32.1	-95.2	-49.12	-53.63	-13	-40.63	V
2.50975	61.18	Pk	32.1	-95.2	-49.08	-51	-13	-38.00	H
3.3202	55.11	Pk	32.9	-95.2	-46.51	-53.7	-13	-40.7	V
3.32965	53.99	Pk	32.8	-95.2	-46.25	-54.66	-13	-41.66	H
<b>High Channel, 848.8 MHz</b>									
1.697772	71.31	Pk	29.2	-95.2	-48.92	-43.61	-13	-30.61	H
1.688950	56.73	Pk	29.1	-95.2	-48.83	-58.20	-13	-45.20	V
2.546534	65.19	Pk	32.2	-95.2	-48.79	-46.60	-13	-33.60	H
2.546200	58.45	Pk	32.2	-95.2	-48.80	-53.35	-13	-40.35	V
3.403000	53.88	Pk	32.8	-95.2	-46.45	-54.97	-13	-41.97	H
3.381850	54.04	Pk	32.8	-95.2	-46.10	-54.46	-13	-41.46	V

**10.1.2. GSM 1900**

**GPRS MODE**

Project #:	14523740
Date:	03/09/2022
Test Engineer:	32145
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	Chamber P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.700500	51.29	Pk	33.1	-95.2	-45.68	-56.49	-13	-43.49	H
3.700500	53.17	Pk	33.1	-95.2	-45.68	-54.61	-13	-41.61	V
5.550500	53.48	Pk	34.4	-95.2	-46.90	-54.22	-13	-41.22	H
5.550500	52.98	Pk	34.4	-95.2	-46.90	-54.72	-13	-41.72	V
7.398500	51.84	Pk	35.7	-95.2	-46.05	-53.71	-13	-40.71	V
7.399500	53.36	Pk	35.7	-95.2	-46.05	-52.19	-13	-39.19	H
<b>Mid Channel, 1880MHz</b>									
3.760000	52.73	Pk	33.2	-95.2	-45.54	-54.81	-13	-41.81	H
3.760000	51.76	Pk	33.2	-95.2	-45.54	-55.78	-13	-42.78	V
5.640500	55.14	Pk	34.5	-95.2	-46.56	-52.12	-13	-39.12	H
5.640500	53.75	Pk	34.5	-95.2	-46.56	-53.51	-13	-40.51	V
7.521000	53.36	Pk	35.6	-95.2	-46.16	-52.40	-13	-39.40	H
7.521000	53.75	Pk	35.6	-95.2	-46.16	-52.01	-13	-39.01	V
<b>High Channel, 1909.8MHz</b>									
3.789000	53.68	Pk	33.2	-95.2	-45.57	-53.89	-13	-40.89	V
3.797000	54.19	Pk	33.3	-95.2	-45.87	-53.58	-13	-40.58	H
5.737500	54	Pk	34.6	-95.2	-46.40	-53.00	-13	-40.00	V
5.747500	54.5	Pk	34.6	-95.2	-46.25	-52.35	-13	-39.35	H
7.634000	54.61	Pk	35.7	-95.2	-45.95	-50.84	-13	-37.84	H
7.637500	54.58	Pk	35.7	-95.2	-46.10	-51.02	-13	-38.02	V

**EGPRS MODE**

Project #:	14523740
Date:	3/9/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	Chamber P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 824.2 MHz</b>									
3.700000	51.54	Pk	33.1	-95.2	-45.65	-56.21	-13	-43.21	H
3.700000	51.86	Pk	33.1	-95.2	-45.65	-55.89	-13	-42.89	V
5.550000	54.38	Pk	34.4	-95.2	-46.90	-53.32	-13	-40.32	H
5.550500	52.73	Pk	34.4	-95.2	-46.90	-54.97	-13	-41.97	V
7.400500	52.69	Pk	35.7	-95.2	-46.08	-52.89	-13	-39.89	H
7.400500	52.18	Pk	35.7	-95.2	-46.08	-53.40	-13	-40.40	V
<b>Mid Channel, 836.6 MHz</b>									
3.760000	51.49	Pk	33.2	-95.2	-45.54	-56.05	-13	-43.05	H
3.760000	52.72	Pk	33.2	-95.2	-45.54	-54.82	-13	-41.82	V
5.600000	52.63	Pk	34.4	-95.2	-46.67	-54.84	-13	-41.84	H
5.600000	53.89	Pk	34.4	-95.2	-46.67	-53.58	-13	-40.58	V
7.521000	54.23	Pk	35.6	-95.2	-46.16	-51.53	-13	-38.53	H
7.521000	52.4	Pk	35.6	-95.2	-46.16	-53.36	-13	-40.36	V
<b>High Channel, 848.8 MHz</b>									
3.735000	56.02	Pk	33.1	-95.2	-45.34	-51.42	-13	-38.42	H
3.735000	51.41	Pk	33.1	-95.2	-45.34	-56.03	-13	-43.03	V
5.729500	52.63	Pk	34.5	-95.2	-46.49	-54.56	-13	-41.56	H
5.729500	52.57	Pk	34.5	-95.2	-46.49	-54.62	-13	-41.62	V
7.639500	51.76	Pk	35.7	-95.2	-46.14	-53.88	-13	-40.88	H
7.639500	54.05	Pk	35.7	-95.2	-46.14	-51.59	-13	-38.59	V

**10.1.3. WCDMA BAND 5**

**REL 99 MODE**

Project #:	14523740
Date:	3/29/2023
Test Engineer:	24943
Configuration:	EUT Only
Mode:	REL 99 Band 5
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	172654 HPF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 826.4MHz</b>										
1.650756	44.21	Pk	28.3	0.7	-95.2	-35.16	-57.15	-13	-44.15	H
1.651245	45.46	Pk	28.3	0.7	-95.2	-35.19	-55.93	-13	-42.93	V
2.445689	44.27	Pk	32.2	0.6	-95.2	-34.98	-53.11	-13	-40.11	H
2.463778	43.21	Pk	32.2	0.5	-95.2	-34.88	-54.17	-13	-41.17	V
3.368223	42.36	Pk	32.6	0.5	-95.2	-33.80	-53.54	-13	-40.54	H
3.371156	41.68	Pk	32.6	0.5	-95.2	-33.64	-54.06	-13	-41.06	V
<b>Mid Channel, 836.6 MHz</b>										
1.674711	43.83	Pk	28.6	0.7	-95.2	-35.08	-57.15	-13	-44.15	H
1.674711	45.42	Pk	28.6	0.7	-95.2	-35.08	-55.56	-13	-42.56	V
2.534667	42.73	Pk	32.3	0.5	-95.2	-34.83	-54.50	-13	-41.50	H
2.558623	42.62	Pk	32.2	0.7	-95.2	-34.89	-54.57	-13	-41.57	V
3.301245	41.86	Pk	32.7	0.5	-95.2	-34.02	-54.16	-13	-41.16	V
3.325689	42.02	Pk	32.7	0.5	-95.2	-33.90	-53.88	-13	-40.88	H
<b>High Channel, 848.6 MHz</b>										
1.694267	45.88	Pk	28.9	0.6	-95.2	-35.06	-54.88	-13	-41.88	H
1.694267	45.15	Pk	28.9	0.6	-95.2	-35.06	-55.61	-13	-42.61	V
2.527334	41.76	Pk	32.3	0.5	-95.2	-34.85	-55.49	-13	-42.49	H
2.546889	42.43	Pk	32.2	0.7	-95.2	-34.87	-54.74	-13	-41.74	V
3.413201	40.79	Pk	32.6	0.5	-95.2	-33.62	-54.93	-13	-41.93	H
3.480178	42.32	Pk	32.6	0.5	-95.2	-33.52	-53.30	-13	-40.30	V

**HSDPA MODE**

Project #:	14523740
Date:	3/14/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode:	HSDPA Band 5
Chamber #:	Chamber P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 826.4MHz</b>									
1.652320	56.33	Pk	28.6	-95.2	-48.92	-59.19	-13	-46.19	H
1.652320	55.76	Pk	28.6	-95.2	-48.92	-59.76	-13	-46.76	V
2.479080	59.01	Pk	32	-95.2	-49.53	-53.72	-13	-40.72	H
2.479080	55.64	Pk	32	-95.2	-49.53	-57.09	-13	-44.09	V
3.305400	52.86	Pk	32.9	-95.2	-46.83	-56.27	-13	-43.27	H
3.305400	53.45	Pk	32.9	-95.2	-46.83	-55.68	-13	-42.68	V
<b>Mid Channel, 836.6 MHz</b>									
1.673440	54.56	Pk	28.9	-95.2	-48.92	-60.66	-13	-47.66	H
1.673440	54.92	Pk	28.9	-95.2	-48.92	-60.30	-13	-47.30	V
2.509440	59.26	Pk	32.1	-95.2	-49.51	-53.35	-13	-40.35	H
2.509440	56.89	Pk	32.1	-95.2	-49.51	-55.72	-13	-42.72	V
3.346320	54.41	Pk	32.8	-95.2	-46.85	-54.84	-13	-41.84	H
3.346320	52.88	Pk	32.8	-95.2	-46.85	-56.37	-13	-43.37	V
<b>High Channel, 848.6 MHz</b>									
1.693240	57.24	Pk	29.1	-95.2	-48.87	-57.73	-13	-44.73	H
1.693240	57.17	Pk	29.1	-95.2	-48.87	-57.80	-13	-44.80	V
2.539360	57.48	Pk	32.2	-95.2	-49.48	-55.00	-13	-42.00	H
2.539360	56.27	Pk	32.2	-95.2	-49.48	-56.21	-13	-43.21	V
3.386360	52.21	Pk	32.8	-95.2	-46.56	-56.75	-13	-43.75	H
3.386360	53.2	Pk	32.8	-95.2	-46.56	-55.76	-13	-42.76	V

**10.1.4. WCDMA BAND 2**

**REL 99 MODE**

Project #:	14523740
Date:	3/29/2023
Test Engineer:	24943
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.456094	41.27	Pk	32.6	-95.2	-32.98	-54.31	-13	-41.31	H
3.436875	41.08	Pk	32.6	-95.2	-32.95	-54.47	-13	-41.47	V
5.180625	39.1	Pk	34.7	-95.2	-29.30	-50.70	-13	-37.70	H
5.215313	39.09	Pk	34.7	-95.2	-29.03	-50.44	-13	-37.44	V
6.821719	37.45	Pk	35.7	-95.2	-27.04	-49.09	-13	-36.09	H
6.715781	36.98	Pk	35.7	-95.2	-26.71	-49.23	-13	-36.23	V
<b>Mid Channel, 1880MHz</b>									
3.728438	41.14	Pk	33.1	-95.2	-32.18	-53.14	-13	-40.14	H
3.774375	41.54	Pk	33.2	-95.2	-31.97	-52.43	-13	-39.43	V
5.565000	39.96	Pk	34.4	-95.2	-29.79	-50.63	-13	-37.63	H
5.571094	39.69	Pk	34.4	-95.2	-29.85	-50.96	-13	-37.96	V
7.552500	35.63	Pk	35.9	-95.2	-26.08	-49.75	-13	-36.75	H
7.597500	37.72	Pk	35.9	-95.2	-26.51	-48.09	-13	-35.09	V
<b>High Channel, 1907.6MHz</b>									
3.789375	41.02	Pk	33.3	-95.2	-31.86	-52.74	-13	-39.74	H
3.788906	40.8	Pk	33.3	-95.2	-31.82	-52.92	-13	-39.92	V
5.715469	38.69	Pk	34.6	-95.2	-29.05	-50.96	-13	-37.96	H
5.748750	38.63	Pk	34.7	-95.2	-29.02	-50.89	-13	-37.89	V
7.634531	36.6	Pk	35.9	-95.2	-26.66	-49.36	-13	-36.36	H
7.748906	36.69	Pk	35.9	-95.2	-25.96	-48.57	-13	-35.57	V

**HSDPA MODE**

Project #:	14523740
Date:	3/14/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	Chamber P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.704	52.4	Pk	33.1	-95.2	-45.64	-55.34	-13	-42.34	V
3.70425	51.44	Pk	33.1	-95.2	-45.62	-56.28	-13	-43.28	H
5.5575	54.65	Pk	34.4	-95.2	-46.85	-53.00	-13	-40.00	H
5.5575	54.92	Pk	34.4	-95.2	-46.85	-52.73	-13	-39.73	V
7.41	52.65	Pk	35.7	-95.2	-46.21	-53.06	-13	-40.06	H
7.41	52.29	Pk	35.7	-95.2	-46.21	-53.42	-13	-40.42	V
<b>Mid Channel, 1880MHz</b>									
3.7605	51.25	Pk	33.2	-95.2	-45.62	-56.37	-13	-43.37	H
3.7605	51.81	Pk	33.2	-95.2	-45.62	-55.81	-13	-42.81	V
5.641	53.47	Pk	34.5	-95.2	-46.59	-53.82	-13	-40.82	H
5.641	54.77	Pk	34.5	-95.2	-46.59	-52.52	-13	-39.52	V
7.5205	53.54	Pk	35.6	-95.2	-46.14	-52.20	-13	-39.20	H
7.5205	52.92	Pk	35.6	-95.2	-46.14	-52.82	-13	-39.82	V
<b>High Channel, 1907.6MHz</b>									
3.8155	51.64	Pk	33.3	-95.2	-46.06	-56.32	-13	-43.32	H
3.8155	51.75	Pk	33.3	-95.2	-46.06	-56.21	-13	-43.21	V
5.7225	53.6	Pk	34.5	-95.2	-46.46	-53.56	-13	-40.56	H
5.7225	53.32	Pk	34.5	-95.2	-46.46	-53.84	-13	-40.84	V
7.63	52.93	Pk	35.7	-95.2	-46.02	-52.59	-13	-39.59	H
7.63	52.06	Pk	35.7	-95.2	-46.02	-53.46	-13	-40.46	V

### 10.1.5. WCDMA BAND 4

#### REL 99 MODE

Project #:	14523740
Date:	3/29/2023
Test Engineer:	24943
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1712.4MHz</b>									
3.450938	41.39	Pk	32.6	-95.2	-32.93	-54.14	-13	-41.14	H
3.532500	41.89	Pk	32.7	-95.2	-32.92	-53.53	-13	-40.53	V
5.180156	38.97	Pk	34.7	-95.2	-29.32	-50.85	-13	-37.85	H
5.145938	40.01	Pk	34.8	-95.2	-30	-50.39	-13	-37.39	V
6.897656	36.38	Pk	35.7	-95.2	-26.59	-49.71	-13	-36.71	H
6.80625	35.91	Pk	35.7	-95.2	-27	-50.59	-13	-37.59	V
<b>Mid Channel, 1732.6MHz</b>									
3.465469	38.75	Pk	32.6	-95.2	-33.06	-56.91	-13	-43.91	H
3.465469	37.98	Pk	32.6	-95.2	-33.06	-57.68	-13	-44.68	V
5.197969	36.27	Pk	34.7	-95.2	-29.35	-53.58	-13	-40.58	H
5.197969	37.17	Pk	34.7	-95.2	-29.35	-52.68	-13	-39.68	V
6.933750	34.98	Pk	35.7	-95.2	-26.43	-50.95	-13	-37.95	H
6.933750	33.65	Pk	35.7	-95.2	-26.43	-52.28	-13	-39.28	V
<b>High Channel, 1752.6MHz</b>									
3.513750	40.92	Pk	32.7	-95.2	-32.97	-54.55	-13	-41.55	H
3.441094	41.64	Pk	32.6	-95.2	-32.98	-53.94	-13	-40.94	V
5.238281	37.96	Pk	34.7	-95.2	-28.69	-51.23	-13	-38.23	H
5.200313	39.24	Pk	34.7	-95.2	-29.40	-50.66	-13	-37.66	V
6.997031	36.18	Pk	35.7	-95.2	-26.61	-49.93	-13	-36.93	H
7.121719	36.76	Pk	35.7	-95.2	-26.49	-49.23	-13	-36.23	V



**HSDPA MODE**

Project #:	14523740
Date:	3/29/2023
Test Engineer:	24943
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1712.4MHz</b>									
3.452813	40.88	Pk	32.6	-95.2	-33.04	-54.76	-13	-41.76	H
3.520781	40.84	Pk	32.7	-95.2	-32.93	-54.59	-13	-41.59	V
5.165625	39.64	Pk	34.7	-95.2	-29.45	-50.31	-13	-37.31	H
5.206875	39.74	Pk	34.7	-95.2	-29.31	-50.07	-13	-37.07	V
6.845625	36.27	Pk	35.7	-95.2	-26.88	-50.11	-13	-37.11	H
6.953906	35.52	Pk	35.7	-95.2	-26.42	-50.40	-13	-37.4	V
<b>Mid Channel, 1732.6MHz</b>									
3.619219	40.35	Pk	32.9	-95.2	-32.58	-54.53	-13	-41.53	H
3.620625	41.56	Pk	32.9	-95.2	-32.58	-53.32	-13	-40.32	V
5.145938	39.80	Pk	34.8	-95.2	-30.00	-50.60	-13	-37.60	H
5.163750	39.33	Pk	34.7	-95.2	-29.46	-50.63	-13	-37.63	V
6.954375	36.59	Pk	35.7	-95.2	-26.43	-49.34	-13	-36.34	H
6.660000	37.18	Pk	35.7	-95.2	-26.20	-48.52	-13	-35.52	V
<b>High Channel, 1752.6MHz</b>									
3.502031	41.16	Pk	32.7	-95.2	-32.94	-54.28	-13	-41.28	H
3.610313	41.11	Pk	32.9	-95.2	-32.55	-53.74	-13	-40.74	V
5.280938	38.59	Pk	34.7	-95.2	-29.61	-51.52	-13	-38.52	H
5.150625	39.86	Pk	34.8	-95.2	-29.84	-50.38	-13	-37.38	V
7.076250	36.53	Pk	35.7	-95.2	-26.86	-49.83	-13	-36.83	H
7.195781	36.05	Pk	35.8	-95.2	-25.97	-49.32	-13	-36.32	V

## 10.2. FIELD STRENGTH OF SPURIOUS RADIATION, Antenna 2

### 10.2.1. GSM 850

#### GPRS MODE

Project #:	14523740
Date:	04/13/2023
Test Engineer:	45258
Configuration:	EUT Only
Mode:	GPRS 850
Chamber #:	01-RDE- A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 826.4MHz</b>										
1.648311	36.18	Pk	28.5	0.7	-95.2	-29.01	-58.83	-13	-45.83	H
1.648311	34.91	Pk	28.5	0.7	-95.2	-29.01	-60.10	-13	-47.10	V
2.472089	34.81	Pk	32.4	0.5	-95.2	-27.61	-55.10	-13	-42.10	H
2.472578	35.66	Pk	32.4	0.5	-95.2	-27.59	-54.23	-13	-41.23	V
3.295867	34.73	Pk	32.8	0.8	-95.2	-26.09	-52.96	-13	-39.96	H
3.296356	34.46	Pk	32.8	0.8	-95.2	-26.06	-53.20	-13	-40.20	V
<b>Mid Channel, 836.6 MHz</b>										
1.673245	36.05	Pk	28.6	0.7	-95.2	-28.72	-58.57	-13	-45.57	H
1.673245	36.6	Pk	28.6	0.7	-95.2	-28.72	-58.02	-13	-45.02	V
2.509734	35.09	Pk	32.2	0.7	-95.2	-27.54	-54.75	-13	-41.75	H
2.510223	35.85	Pk	32.2	0.7	-95.2	-27.52	-53.97	-13	-40.97	V
3.346223	34.79	Pk	32.5	0.5	-95.2	-26.25	-53.66	-13	-40.66	H
3.346223	33.07	Pk	32.5	0.5	-95.2	-26.25	-55.38	-13	-42.38	V
<b>High Channel, 848.8 MHz</b>										
1.698667	36.5	Pk	28.9	0.6	-95.2	-28.83	-58.03	-13	-45.03	H
1.697689	36.04	Pk	28.9	0.6	-95.2	-28.74	-58.40	-13	-45.40	V
2.544934	34.66	Pk	32.3	0.6	-95.2	-27.34	-54.98	-13	-41.98	H
2.544934	33.81	Pk	32.3	0.6	-95.2	-27.34	-55.83	-13	-42.83	V
3.396089	34.89	Pk	32.5	0.6	-95.2	-25.95	-53.16	-13	-40.16	H
3.395601	33.63	Pk	32.5	0.6	-95.2	-25.93	-54.40	-13	-41.4	V

**EGPRS MODE**

Project #:	14523740
Date:	3/10/2023
Test Engineer:	12501
Configuration:	EUT Only
Mode:	EGPRS 850
Chamber #:	05- RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 824.2 MHz</b>									
1.652950	57.65	Pk	29.3	-95.2	-47.80	-56.05	-13	-43.05	H
1.651150	57.14	Pk	29.3	-95.2	-47.75	-56.51	-13	-43.51	V
2.470600	57.34	Pk	32.6	-95.2	-47.64	-52.90	-13	-39.90	H
2.459350	57.4	Pk	32.6	-95.2	-47.82	-53.02	-13	-40.02	V
3.299500	54.14	Pk	33.1	-95.2	-45.77	-53.73	-13	-40.73	H
3.301750	54.17	Pk	33.1	-95.2	-45.74	-53.67	-13	-40.67	V
<b>Mid Channel, 836.6 MHz</b>									
1.675000	56.39	Pk	29.4	-95.2	-47.74	-57.15	-13	-44.15	H
1.678600	56.03	Pk	29.4	-95.2	-47.67	-57.44	-13	-44.44	V
2.507050	55.4	Pk	32.6	-95.2	-47.15	-54.35	-13	-41.35	H
2.493100	56.14	Pk	32.5	-95.2	-47.33	-53.89	-13	-40.89	V
3.342700	55.16	Pk	33	-95.2	-45.4	-52.44	-13	-39.44	H
3.347650	54.49	Pk	32.9	-95.2	-45.42	-53.23	-13	-40.23	V
<b>High Channel, 848.8 MHz</b>									
1.701100	56.57	Pk	29.6	-95.2	-47.68	-56.71	-13	-43.71	H
1.699300	56.19	Pk	29.6	-95.2	-47.71	-57.12	-13	-44.12	V
2.546200	58.12	Pk	32.7	-95.2	-47.72	-52.10	-13	-39.10	H
2.540800	54.79	Pk	32.6	-95.2	-47.66	-55.47	-13	-42.47	V
3.404350	54.28	Pk	32.9	-95.2	-45.34	-53.36	-13	-40.36	H
3.412900	53.33	Pk	33	-95.2	-45.45	-54.32	-13	-41.32	V

### 10.2.2. GSM 1900

#### GPRS MODE

Project #:	14523740
Date:	3/9/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.705500	53.67	Pk	33.1	-95.2	-45.58	-54.01	-13	-41.01	H
3.694500	54	Pk	33.1	-95.2	-45.73	-53.83	-13	-40.83	V
5.546500	55.81	Pk	34.4	-95.2	-46.94	-51.93	-13	-38.93	H
5.556500	55.1	Pk	34.4	-95.2	-46.87	-52.57	-13	-39.57	V
7.417000	54.6	Pk	35.7	-95.2	-46.24	-51.14	-13	-38.14	H
7.411500	54.54	Pk	35.7	-95.2	-46.19	-51.15	-13	-38.15	V
<b>Mid Channel, 1880MHz</b>									
3.766500	53.82	Pk	33.2	-95.2	-45.82	-54.00	-13	-41.00	H
3.780500	53.3	Pk	33.2	-95.2	-45.80	-54.50	-13	-41.50	V
5.638000	54.93	Pk	34.5	-95.2	-46.69	-52.46	-13	-39.46	H
5.623500	55.57	Pk	34.4	-95.2	-46.65	-51.88	-13	-38.88	V
7.543000	55.82	Pk	35.6	-95.2	-46.22	-50.00	-13	-37.00	H
7.536500	54.25	Pk	35.6	-95.2	-46.19	-51.54	-13	-38.54	V
<b>High Channel, 1909.8MHz</b>									
3.808000	54.14	Pk	33.3	-95.2	-46.00	-53.76	-13	-40.76	H
3.785500	53.84	Pk	33.2	-95.2	-46.04	-54.20	-13	-41.20	V
5.710000	55.29	Pk	34.5	-95.2	-46.55	-51.96	-13	-38.96	H
5.717500	54.79	Pk	34.5	-95.2	-46.55	-52.46	-13	-39.46	V
7.648500	55.58	Pk	35.7	-95.2	-46.11	-50.03	-13	-37.03	H
7.656000	54.61	Pk	35.7	-95.2	-46.20	-51.09	-13	-38.09	V

**EGPRS MODE**

Project #:	14523740
Date:	3/10/2023
Test Engineer:	32145
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.675000	53.26	Pk	33	-95.2	-45.58	-54.52	-13	-41.52	H
3.665500	54.22	Pk	33	-95.2	-45.87	-53.85	-13	-40.85	V
5.535000	55.95	Pk	34.4	-95.2	-46.95	-51.80	-13	-38.80	H
5.519500	55.46	Pk	34.4	-95.2	-46.98	-52.32	-13	-39.32	V
7.376000	53.93	Pk	35.7	-95.2	-45.98	-51.55	-13	-38.55	H
7.379000	54.09	Pk	35.7	-95.2	-46.06	-51.47	-13	-38.47	V
<b>Mid Channel, 1880MHz</b>									
3.768500	53.92	Pk	33.2	-95.2	-45.95	-54.03	-13	-41.03	H
3.760000	53.19	Pk	33.2	-95.2	-45.54	-54.35	-13	-41.35	V
5.649000	56.2	Pk	34.5	-95.2	-46.47	-50.97	-13	-37.97	H
5.663000	55.93	Pk	34.5	-95.2	-46.48	-51.25	-13	-38.25	V
7.506500	55.19	Pk	35.6	-95.2	-46.26	-50.67	-13	-37.67	H
7.491500	54.37	Pk	35.7	-95.2	-46.19	-51.32	-13	-38.32	V
<b>High Channel, 1909.8MHz</b>									
3.819375	35.83	Pk	32.9	-95.2	-25.05	-51.52	-13	-38.52	H
3.818906	35.52	Pk	32.9	-95.2	-25.03	-51.81	-13	-38.81	V
5.729531	31.79	Pk	34.8	-95.2	-21.69	-50.30	-13	-37.30	H
5.730000	33.8	Pk	34.8	-95.2	-21.67	-48.27	-13	-35.27	V
7.639219	32.31	Pk	35.6	-95.2	-17.73	-45.02	-13	-32.02	H
7.639688	30.31	Pk	35.6	-95.2	-17.73	-47.02	-13	-34.02	V

### 10.2.3. WCDMA BAND 5

#### REL 99 MODE

Project #:	14523740
Date:	3/30/2023
Test Engineer:	45258
Configuration:	EUT Only
Mode:	REL 99 Band 5
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 826.4MHz</b>										
1.652222	37.12	Pk	28.4	0.8	-95.2	-28.90	-57.78	-13	-44.78	H
1.652222	36.77	Pk	28.4	0.8	-95.2	-28.90	-58.13	-13	-45.13	V
2.478934	37.2	Pk	32.3	0.5	-95.2	-27.56	-52.76	-13	-39.76	H
2.478934	36.33	Pk	32.3	0.5	-95.2	-27.56	-53.63	-13	-40.63	V
3.305156	35.39	Pk	32.7	0.7	-95.2	-26.06	-52.47	-13	-39.47	H
3.305156	35.23	Pk	32.7	0.7	-95.2	-26.06	-52.63	-13	-39.63	V
<b>Mid Channel, 836.6 MHz</b>										
1.673245	37.37	Pk	28.6	0.7	-95.2	-28.72	-57.25	-13	-44.25	H
1.673245	35.57	Pk	28.6	0.7	-95.2	-28.72	-59.05	-13	-46.05	V
2.509245	36.23	Pk	32.2	0.7	-95.2	-27.55	-53.62	-13	-40.62	H
2.509734	34.25	Pk	32.2	0.7	-95.2	-27.54	-55.59	-13	-42.59	V
3.346712	33.33	Pk	32.5	0.5	-95.2	-26.23	-55.10	-13	-42.10	H
3.346223	34.03	Pk	32.5	0.5	-95.2	-26.25	-54.42	-13	-41.42	V
<b>High Channel, 848.8 MHz</b>										
1.693778	35.53	Pk	28.8	0.7	-95.2	-28.84	-59.01	-13	-46.01	H
1.693778	37.22	Pk	28.8	0.7	-95.2	-28.84	-57.32	-13	-44.32	V
2.539067	36.41	Pk	32.2	0.7	-95.2	-27.4	-53.29	-13	-40.29	H
2.537600	36.67	Pk	32.2	0.7	-95.2	-27.41	-53.04	-13	-40.04	V
3.386312	34.62	Pk	32.4	0.6	-95.2	-26.00	-53.58	-13	-40.58	H
3.386312	33.52	Pk	32.4	0.6	-95.2	-26.00	-54.68	-13	-41.68	V

**HSDPA MODE**

Project #:	14523740
Date:	03/30/2023
Test Engineer:	45258
Configuration:	EUT Only
Mode:	HSDPA Band 5
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 826.4MHz</b>										
1.651733	36.63	Pk	28.4	0.8	-95.2	-28.92	-58.29	-13	-45.29	H
1.652222	36.91	Pk	28.4	0.8	-95.2	-28.90	-57.99	-13	-44.99	V
2.480889	39.5	Pk	32.3	0.5	-95.2	-27.57	-50.47	-13	-37.47	H
2.479911	35.99	Pk	32.3	0.5	-95.2	-27.58	-53.99	-13	-40.99	V
3.305645	34.34	Pk	32.7	0.7	-95.2	-26.09	-53.55	-13	-40.55	H
3.305645	33.97	Pk	32.7	0.7	-95.2	-26.09	-53.92	-13	-40.92	V
<b>Mid Channel, 836.6 MHz</b>										
1.673733	37.21	Pk	28.6	0.7	-95.2	-28.67	-57.36	-13	-44.36	H
1.673733	35.35	Pk	28.6	0.7	-95.2	-28.67	-59.22	-13	-46.22	V
2.508756	36.72	Pk	32.2	0.7	-95.2	-27.55	-53.13	-13	-40.13	H
2.508756	35.6	Pk	32.2	0.7	-95.2	-27.55	-54.25	-13	-41.25	V
3.346223	33.82	Pk	32.5	0.5	-95.2	-26.25	-54.63	-13	-41.63	H
3.346223	34.54	Pk	32.5	0.5	-95.2	-26.25	-53.91	-13	-40.91	V
<b>High Channel, 848.8 MHz</b>										
1.693289	35.54	Pk	28.8	0.7	-95.2	-28.87	-59.03	-13	-46.03	H
1.693289	35.04	Pk	28.8	0.7	-95.2	-28.87	-59.53	-13	-46.53	V
2.543467	38.7	Pk	32.3	0.6	-95.2	-27.28	-50.88	-13	-37.88	H
2.539556	35.23	Pk	32.2	0.7	-95.2	-27.37	-54.44	-13	-41.44	V
3.386312	33.01	Pk	32.4	0.6	-95.2	-26.00	-55.19	-13	-42.19	H
3.386312	32.54	Pk	32.4	0.6	-95.2	-26.00	-55.66	-13	-42.66	V

### 10.2.4. WCDMA BAND 2

#### REL 99 MODE

Project #:	14523740
Date:	03/31/2023
Test Engineer:	45258
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.705469	36.11	Pk	33	-95.2	-25.11	-51.20	-13	-38.20	H
3.705938	35.88	Pk	33	-95.2	-25.12	-51.44	-13	-38.44	V
5.557500	32.63	Pk	34.7	-95.2	-21.37	-49.24	-13	-36.24	H
5.557031	33.02	Pk	34.7	-95.2	-21.37	-48.85	-13	-35.85	V
7.409531	31.17	Pk	35.5	-95.2	-18.60	-47.13	-13	-34.13	H
7.409531	30.87	Pk	35.5	-95.2	-18.60	-47.43	-13	-34.43	V
<b>Mid Channel, 1880MHz</b>									
3.760313	35.28	Pk	32.9	-95.2	-24.87	-51.89	-13	-38.89	H
3.759844	36.06	Pk	32.9	-95.2	-24.86	-51.10	-13	-38.10	V
5.640000	32.62	Pk	34.6	-95.2	-20.72	-48.70	-13	-35.70	H
5.640938	33.81	Pk	34.6	-95.2	-20.71	-47.50	-13	-34.50	V
7.520156	31.98	Pk	35.4	-95.2	-18.64	-46.46	-13	-33.46	H
7.519688	31.64	Pk	35.4	-95.2	-18.66	-46.82	-13	-33.82	V
<b>High Channel, 1907.6MHz</b>									
3.814688	36.38	Pk	32.9	-95.2	-25.1	-51.02	-13	-38.02	H
3.815156	36.48	Pk	32.9	-95.2	-25.11	-50.93	-13	-37.93	V
5.721563	34.74	Pk	34.7	-95.2	-21.64	-47.40	-13	-34.40	H
5.722031	33.36	Pk	34.7	-95.2	-21.64	-48.78	-13	-35.78	V
7.629844	32.35	Pk	35.6	-95.2	-17.86	-45.11	-13	-32.11	H
7.630313	29.96	Pk	35.6	-95.2	-17.85	-47.49	-13	-34.49	V



**HSDPA MODE**

Project #:	14523740
Date:	03/30/2023
Test Engineer:	45258
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.705000	35.8	Pk	33	-95.2	-25.1	-51.50	-13	-38.50	H
3.705469	33.78	Pk	33	-95.2	-25.11	-53.53	-13	-40.53	V
5.557969	32.71	Pk	34.6	-95.2	-21.37	-49.26	-13	-36.26	H
5.557031	32.84	Pk	34.7	-95.2	-21.37	-49.03	-13	-36.03	V
7.409063	33.25	Pk	35.5	-95.2	-18.58	-45.03	-13	-32.03	H
7.409531	30.84	Pk	35.5	-95.2	-18.6	-47.46	-13	-34.46	V
<b>Mid Channel, 1880MHz</b>									
3.759844	35.53	Pk	32.9	-95.2	-24.86	-51.63	-13	-38.63	H
3.759375	36.91	Pk	32.9	-95.2	-24.88	-50.27	-13	-37.27	V
5.640938	33.18	Pk	34.6	-95.2	-20.71	-48.13	-13	-35.13	H
5.640938	32.91	Pk	34.6	-95.2	-20.71	-48.40	-13	-35.40	V
7.521094	30.96	Pk	35.4	-95.2	-18.63	-47.47	-13	-34.47	H
7.520625	31.09	Pk	35.4	-95.2	-18.63	-47.34	-13	-34.34	V
<b>High Channel, 1907.6MHz</b>									
3.815156	34.63	Pk	32.9	-95.2	-25.11	-52.78	-13	-39.78	H
3.815156	35.21	Pk	32.9	-95.2	-25.11	-52.20	-13	-39.20	V
5.722969	34.03	Pk	34.7	-95.2	-21.65	-48.12	-13	-35.12	H
5.721563	32.91	Pk	34.7	-95.2	-21.64	-49.23	-13	-36.23	V
7.631250	32.22	Pk	35.6	-95.2	-17.84	-45.22	-13	-32.22	H
7.632188	33.08	Pk	35.6	-95.2	-17.83	-44.35	-13	-31.35	V

### 10.2.5. WCDMA BAND 4

#### REL 99 MODE

Project #:	14523740
Date:	03/30/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Mid Channel, 1732.6MHz</b>									
3.455156	35.06	Pk	32.5	-95.2	-25.39	-53.03	-13	-40.03	H
3.457500	34.86	Pk	32.5	-95.2	-25.43	-53.27	-13	-40.27	V
5.141719	36.17	Pk	34.4	-95.2	-22.55	-47.18	-13	-34.18	H
5.119688	34.36	Pk	34.3	-95.2	-22.23	-48.77	-13	-35.77	V
6.835781	33.38	Pk	35.5	-95.2	-19.77	-46.09	-13	-33.09	H
6.819844	32.65	Pk	35.5	-95.2	-19.63	-46.68	-13	-33.68	V
<b>Low Channel, 1712.4MHz</b>									
3.485625	34.7	Pk	32.5	-95.2	-24.71	-52.71	-13	-39.71	H
3.47625	34.52	Pk	32.5	-95.2	-25.04	-53.22	-13	-40.22	V
5.176875	34.39	Pk	34.5	-95.2	-23.06	-49.37	-13	-36.37	H
5.182031	35.01	Pk	34.5	-95.2	-23.08	-48.77	-13	-35.77	V
6.937500	33.46	Pk	35.5	-95.2	-19.53	-45.77	-13	-32.77	H
6.964688	33.3	Pk	35.4	-95.2	-19.27	-45.77	-13	-32.77	V
<b>High Channel, 1752.61MHz</b>									
3.532031	35.04	Pk	32.6	-95.2	-24.22	-51.78	-13	-38.78	H
3.534844	34.59	Pk	32.6	-95.2	-24.08	-52.09	-13	-39.09	V
5.238750	34.7	Pk	34.5	-95.2	-22.52	-48.52	-13	-35.52	H
5.250000	33.81	Pk	34.6	-95.2	-22.45	-49.24	-13	-36.24	V
7.066406	33.46	Pk	35.5	-95.2	-18.64	-44.88	-13	-31.88	H
7.071094	33.71	Pk	35.5	-95.2	-18.67	-44.66	-13	-31.66	V

**HSDPA MODE**

Project #:	14523740
Date:	03/30/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Mid Channel, 1732.6MHz</b>									
3.488438	38.37	Pk	32.5	-95.2	-24.67	-49.00	-13	-36.00	H
3.494063	37.03	Pk	32.6	-95.2	-24.51	-50.08	-13	-37.08	V
5.123438	36.32	Pk	34.3	-95.2	-22.27	-46.85	-13	-33.85	H
5.126719	35.71	Pk	34.4	-95.2	-22.33	-47.42	-13	-34.42	V
6.856875	34.17	Pk	35.5	-95.2	-19.93	-45.46	-13	-32.46	H
6.871406	34.11	Pk	35.4	-95.2	-20.03	-45.72	-13	-32.72	V
<b>Low Channel, 1712.4MHz</b>									
3.462656	39.36	Pk	32.5	-95.2	-25.34	-48.68	-13	-35.68	H
3.460313	38.24	Pk	32.5	-95.2	-25.45	-49.91	-13	-36.91	V
5.202188	36.86	Pk	34.5	-95.2	-22.96	-46.80	-13	-33.80	H
5.214844	36.11	Pk	34.5	-95.2	-22.92	-47.51	-13	-34.51	V
6.934219	34.49	Pk	35.5	-95.2	-19.53	-44.74	-13	-31.74	H
6.962344	35.27	Pk	35.4	-95.2	-19.25	-43.78	-13	-30.78	V
<b>High Channel, 1752.61MHz</b>									
3.540938	36.64	Pk	32.7	-95.2	-23.98	-49.84	-13	-36.84	H
3.536719	37.25	Pk	32.7	-95.2	-24.03	-49.28	-13	-36.28	V
5.219063	37.19	Pk	34.6	-95.2	-22.91	-46.32	-13	-33.32	H
5.216719	36.99	Pk	34.5	-95.2	-22.91	-46.62	-13	-33.62	V
7.044375	34.31	Pk	35.5	-95.2	-18.76	-44.15	-13	-31.15	H
7.079531	33.97	Pk	35.5	-95.2	-18.95	-44.68	-13	-31.68	V

### 10.3. FIELD STRENGTH OF SPURIOUS RADIATION, Antenna 3

#### 10.3.1. GSM 1900

##### GPRS MODE

Project #:	14523740
Date:	03/10/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.701000	52.4	Pk	33.1	-95.2	-45.71	-55.41	-13	-42.41	H
3.701000	51.27	Pk	33.1	-95.2	-45.71	-56.54	-13	-43.54	V
5.550500	53.98	Pk	34.4	-95.2	-46.90	-53.72	-13	-40.72	H
5.550500	53.06	Pk	34.4	-95.2	-46.90	-54.64	-13	-41.64	V
7.400500	52.34	Pk	35.7	-95.2	-46.08	-53.24	-13	-40.24	H
7.400000	52.49	Pk	35.7	-95.2	-46.06	-53.07	-13	-40.07	V
<b>Mid Channel, 1880MHz</b>									
3.760500	52.35	Pk	33.2	-95.2	-45.62	-55.27	-13	-42.27	H
3.760500	50.62	Pk	33.2	-95.2	-45.62	-57.00	-13	-44.00	V
5.640500	52.63	Pk	34.5	-95.2	-46.56	-54.63	-13	-41.63	H
5.640500	52.68	Pk	34.5	-95.2	-46.56	-54.58	-13	-41.58	V
7.520000	51.73	Pk	35.6	-95.2	-46.12	-53.99	-13	-40.99	H
7.520000	53.2	Pk	35.6	-95.2	-46.12	-52.52	-13	-39.52	V
<b>High Channel, 1752.61MHz</b>									
3.819500	51.57	Pk	33.3	-95.2	-45.79	-56.12	-13	-43.12	H
3.819500	51.33	Pk	33.3	-95.2	-45.79	-56.36	-13	-43.36	V
5.729500	53.06	Pk	34.5	-95.2	-46.49	-54.13	-13	-41.13	H
5.729500	53.26	Pk	34.5	-95.2	-46.49	-53.93	-13	-40.93	V
7.639500	53.84	Pk	35.7	-95.2	-46.14	-51.80	-13	-38.80	H
7.639500	51.82	Pk	35.7	-95.2	-46.14	-53.82	-13	-40.82	V

**EGPRS MODE**

Project #:	14523740
Date:	03/10/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Mid Channel, 1732.6MHz</b>									
3.700000	49.9	Pk	33.1	-95.2	-45.65	-57.85	-13	-44.85	H
3.700000	51.28	Pk	33.1	-95.2	-45.65	-56.47	-13	-43.47	V
5.550000	54.24	Pk	34.4	-95.2	-46.90	-53.46	-13	-40.46	H
5.550000	53.12	Pk	34.4	-95.2	-46.90	-54.58	-13	-41.58	V
7.401000	52.96	Pk	35.7	-95.2	-46.10	-52.64	-13	-39.64	H
7.401000	52.5	Pk	35.7	-95.2	-46.10	-53.10	-13	-40.10	V
<b>Low Channel, 1712.4MHz</b>									
3.760500	53.08	Pk	33.2	-95.2	-45.62	-54.54	-13	-41.54	H
3.760500	54.04	Pk	33.2	-95.2	-45.62	-53.58	-13	-40.58	V
5.640000	53.8	Pk	34.5	-95.2	-46.52	-53.42	-13	-40.42	H
5.640000	52.69	Pk	34.5	-95.2	-46.52	-54.53	-13	-41.53	V
7.520000	52.73	Pk	35.6	-95.2	-46.12	-52.99	-13	-39.99	H
7.520000	53.19	Pk	35.6	-95.2	-46.12	-52.53	-13	-39.53	V
<b>High Channel, 1752.61MHz</b>									
3.819500	53.1	Pk	33.3	-95.2	-45.79	-54.59	-13	-41.59	H
3.819500	51.68	Pk	33.3	-95.2	-45.79	-56.01	-13	-43.01	V
5.729500	53.94	Pk	34.5	-95.2	-46.49	-53.25	-13	-40.25	H
5.729500	53.98	Pk	34.5	-95.2	-46.49	-53.21	-13	-40.21	V
7.639500	53.23	Pk	35.7	-95.2	-46.14	-52.41	-13	-39.41	H
7.639500	52.08	Pk	35.7	-95.2	-46.14	-53.56	-13	-40.56	V

### 10.3.2. WCDMA BAND 2

#### REL 99 MODE

Project #:	14523740
Date:	03/31/23
Test Engineer:	45258
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.705000	39.1	Pk	33	-95.2	-25.1	-48.20	-13	-35.20	H
3.705000	36.24	Pk	33	-95.2	-25.1	-51.06	-13	-38.06	V
5.557969	32.85	Pk	34.6	-95.2	-21.37	-49.12	-13	-36.12	H
5.557031	32.37	Pk	34.7	-95.2	-21.37	-49.5	-13	-36.5	V
7.409063	32.09	Pk	35.5	-95.2	-18.58	-46.19	-13	-33.19	H
7.408125	32.61	Pk	35.5	-95.2	-18.55	-45.64	-13	-32.64	V
<b>Mid Channel, 1880MHz</b>									
3.764531	36.91	Pk	32.9	-95.2	-24.96	-50.35	-13	-37.35	H
3.764531	36.05	Pk	32.9	-95.2	-24.96	-51.21	-13	-38.21	V
5.646094	33.93	Pk	34.6	-95.2	-20.77	-47.44	-13	-34.44	H
5.647031	32.88	Pk	34.6	-95.2	-20.78	-48.50	-13	-35.50	V
7.529063	31.91	Pk	35.5	-95.2	-18.48	-46.27	-13	-33.27	H
7.528594	31.29	Pk	35.5	-95.2	-18.49	-46.90	-13	-33.90	V
<b>High Channel, 1907.6MHz</b>									
3.814688	38.85	Pk	32.9	-95.2	-25.1	-48.55	-13	-35.55	H
3.815156	36.26	Pk	32.9	-95.2	-25.11	-51.15	-13	-38.15	V
5.722500	33.18	Pk	34.7	-95.2	-21.65	-48.97	-13	-35.97	H
5.722500	33.92	Pk	34.7	-95.2	-21.65	-48.23	-13	-35.23	V
7.630781	33.6	Pk	35.6	-95.2	-17.84	-43.84	-13	-30.84	H
7.630781	31.58	Pk	35.6	-95.2	-17.84	-45.86	-13	-32.86	V

**HSDPA MODE**

Project #:	14523740
Date:	3/31/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.724688	36.86	Pk	33.1	-95.2	-24.89	-50.13	-13	-37.13	H
3.723750	36.18	Pk	33	-95.2	-24.88	-50.90	-13	-37.90	V
5.562188	34.07	Pk	34.7	-95.2	-21.34	-47.77	-13	-34.77	H
5.574375	35.01	Pk	34.7	-95.2	-21.15	-46.64	-13	-33.64	V
7.418906	33.52	Pk	35.4	-95.2	-18.67	-44.95	-13	-31.95	H
7.432266	32.54	Pk	35.4	-95.2	-18.8	-46.06	-13	-33.06	V
<b>Mid Channel, 1880MHz</b>									
3.760313	34.45	Pk	32.9	-95.2	-24.87	-52.72	-13	-39.72	H
3.760781	37.51	Pk	32.9	-95.2	-24.88	-49.67	-13	-36.67	V
5.640469	33.57	Pk	34.6	-95.2	-20.72	-47.75	-13	-34.75	H
5.640938	33.02	Pk	34.6	-95.2	-20.71	-48.29	-13	-35.29	V
7.520625	31.85	Pk	35.4	-95.2	-18.63	-46.58	-13	-33.58	H
7.520156	31.64	Pk	35.4	-95.2	-18.64	-46.80	-13	-33.80	V
<b>High Channel, 1907.6MHz</b>									
3.742500	37.92	Pk	32.9	-95.2	-24.78	-49.16	-13	-36.16	H
3.7237500	37.01	Pk	33	-95.2	-24.88	-50.07	-13	-37.07	V
5.560313	35.65	Pk	34.6	-95.2	-21.37	-46.32	-13	-33.32	H
5.581406	34.92	Pk	34.7	-95.2	-20.99	-46.57	-13	-33.57	V
7.437656	33.44	Pk	35.4	-95.2	-18.87	-45.23	-13	-32.23	H
7.440000	33.76	Pk	35.4	-95.2	-18.89	-44.93	-13	-31.93	V

### 10.3.3. WCDMA BAND 4

#### REL 99 MODE

Project #:	14523740
Date:	3/30/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
<b>Low Channel, 1712.4MHz</b>									
3.419531	35.74	Pk	32.6	-95.2	-25.74	-52.6	-13	-39.6	H
3.423281	36.9	Pk	32.6	-95.2	-25.82	-51.52	-13	-38.52	V
5.168906	35.73	Pk	34.4	-95.2	-22.99	-48.06	-13	-35.06	H
5.160469	36.04	Pk	34.4	-95.2	-22.91	-47.67	-13	-34.67	V
6.853594	33.58	Pk	35.5	-95.2	-19.93	-46.05	-13	-33.05	H
6.854063	33.49	Pk	35.5	-95.2	-19.93	-46.14	-13	-33.14	V
<b>Mid Channel, 1732.6MHz</b>									
3.470625	36.41	Pk	32.5	-95.2	-25.19	-51.48	-13	-38.48	H
3.461719	36.99	Pk	32.5	-95.2	-25.38	-51.09	-13	-38.09	V
5.167031	36.66	Pk	34.4	-95.2	-22.96	-47.1	-13	-34.1	H
5.184375	38.25	Pk	34.5	-95.2	-23.1	-45.55	-13	-32.55	V
6.937969	34.17	Pk	35.5	-95.2	-19.52	-45.05	-13	-32.05	H
6.923906	33.84	Pk	35.5	-95.2	-19.66	-45.52	-13	-32.52	V
<b>High Channel, 1752.61MHz</b>									
3.531094	34.53	Pk	32.6	-95.2	-24.2	-52.27	-13	-39.27	H
3.516563	37.19	Pk	32.5	-95.2	-24.38	-49.89	-13	-36.89	V
5.242031	35.21	Pk	34.5	-95.2	-22.49	-47.98	-13	-34.98	H
5.250469	35.22	Pk	34.6	-95.2	-22.43	-47.81	-13	-34.81	V
6.991875	34.89	Pk	35.5	-95.2	-18.87	-43.68	-13	-30.68	H
6.975469	33.82	Pk	35.4	-95.2	-19.2	-45.18	-13	-32.18	V



**HSDPA MODE**

Project #:	14523740
Date:	3/30/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
<b>Low Channel, 1712.4MHz</b>									
3.452344	35.5	Pk	32.5	-95.2	-25.52	-52.72	-13	-39.72	H
3.451406	36.73	Pk	32.5	-95.2	-25.54	-51.51	-13	-38.51	V
5.019844	38.12	Pk	34.2	-95.2	-22.11	-44.99	-13	-31.99	H
5.039531	35.28	Pk	34.3	-95.2	-21.95	-47.57	-13	-34.57	V
6.838594	33.63	Pk	35.5	-95.2	-19.8	-45.87	-13	-32.87	H
6.824063	33.66	Pk	35.4	-95.2	-19.68	-45.82	-13	-32.82	V
<b>Mid Channel, 1732.6MHz</b>									
3.470625	35.32	Pk	32.5	-95.2	-25.19	-52.57	-13	-39.57	H
3.463125	36.49	Pk	32.5	-95.2	-25.32	-51.53	-13	-38.53	V
5.19375	35.47	Pk	34.5	-95.2	-23.03	-48.26	-13	-35.26	H
5.200313	36.00	Pk	34.5	-95.2	-22.97	-47.67	-13	-34.67	V
6.913594	33.85	Pk	35.5	-95.2	-19.78	-45.63	-13	-32.63	H
6.883125	33.6	Pk	35.4	-95.2	-19.95	-46.15	-13	-33.15	V
<b>High Channel, 1752.61MHz</b>									
3.495938	35.18	Pk	32.6	-95.2	-24.55	-51.97	-13	-38.97	H
3.489844	37.40	Pk	32.5	-95.2	-24.61	-49.91	-13	-36.91	V
5.235000	35.83	Pk	34.5	-95.2	-22.57	-47.44	-13	-34.44	H
5.257031	34.40	Pk	34.6	-95.2	-22.37	-48.57	-13	-35.57	V
7.030313	34.14	Pk	35.5	-95.2	-18.62	-44.18	-13	-31.18	H
7.072969	34.58	Pk	35.5	-95.2	-18.74	-43.86	-13	-30.86	V

## 10.4. FIELD STRENGTH OF SPURIOUS RADIATION, Antenna 4

### 10.4.1. GSM 1900

#### GPRS MODE

Project #:	14523740
Date:	3/9/2023
Test Engineer:	31300
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.700500	52.18	Pk	33.1	-95.2	-45.68	-55.60	-13	-42.60	H
3.700500	51.15	Pk	33.1	-95.2	-45.68	-56.63	-13	-43.63	V
5.500500	55.00	Pk	34.4	-95.2	-47.16	-52.96	-13	-39.96	H
5.500500	53.87	Pk	34.4	-95.2	-47.16	-54.09	-13	-41.09	V
7.401500	53.27	Pk	35.7	-95.2	-46.11	-52.34	-13	-39.34	H
7.401500	53.55	Pk	35.7	-95.2	-46.11	-52.06	-13	-39.06	V
<b>Mid Channel, 1880MHz</b>									
3.762500	52.14	Pk	33.2	-95.2	-45.78	-55.64	-13	-42.64	H
3.761750	51.71	Pk	33.2	-95.2	-45.75	-56.04	-13	-43.04	V
5.640500	53.99	Pk	34.5	-95.2	-46.56	-53.27	-13	-40.27	H
5.640500	52.66	Pk	34.5	-95.2	-46.56	-54.60	-13	-41.60	V
7.521000	53.28	Pk	35.6	-95.2	-46.16	-52.48	-13	-39.48	H
7.521000	52.33	Pk	35.6	-95.2	-46.16	-53.43	-13	-40.43	V
<b>High Channel, 1909.8MHz</b>									
3.820500	52.41	Pk	33.3	-95.2	-45.82	-55.31	-13	-42.31	H
3.820500	51.70	Pk	33.3	-95.2	-45.82	-56.02	-13	-43.02	V
5.731000	53.53	Pk	34.5	-95.2	-46.38	-53.55	-13	-40.55	H
5.731000	54.02	Pk	34.5	-95.2	-46.38	-53.06	-13	-40.06	V
7.640000	52.61	Pk	35.7	-95.2	-46.16	-53.05	-13	-40.05	H
7.640000	54.90	Pk	35.7	-95.2	-46.16	-50.76	-13	-37.76	V

**EGPRS MODE**

Project #:	14523740
Date:	3/13/2023
Test Engineer:	25019
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	222740 ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
<b>Low Channel, 1850.2MHz</b>									
3.700500	51.31	Pk	33.1	-95.2	-45.68	-56.47	-13	-43.47	H
3.700500	51.29	Pk	33.1	-95.2	-45.68	-56.49	-13	-43.49	V
4.854500	55.64	Pk	33.8	-95.2	-48.01	-53.77	-13	-40.77	H
4.854500	59.33	Pk	33.8	-95.2	-48.01	-50.08	-13	-37.08	V
7.400500	52.37	Pk	35.7	-95.2	-46.08	-53.21	-13	-40.21	H
7.400500	52.66	Pk	35.7	-95.2	-46.08	-52.92	-13	-39.92	V
<b>Mid Channel, 1880MHz</b>									
3.7605	51.32	Pk	33.2	-95.2	-45.62	-56.3	-13	-43.3	H
3.7605	51.72	Pk	33.2	-95.2	-45.62	-55.9	-13	-42.90	V
5.64	54	Pk	34.5	-95.2	-46.52	-53.22	-13	-40.22	H
5.64	53.6	Pk	34.5	-95.2	-46.52	-53.62	-13	-40.62	V
7.5205	52.97	Pk	35.6	-95.2	-46.14	-52.77	-13	-39.77	H
7.5205	51.5	Pk	35.6	-95.2	-46.14	-54.24	-13	-41.24	V
<b>High Channel, 1909.8MHz</b>									
3.819250	50.92	Pk	33.3	-95.2	-45.79	-56.77	-13	-43.77	H
3.819000	52.01	Pk	33.3	-95.2	-45.79	-55.68	-13	-42.68	V
5.729500	52.91	Pk	34.5	-95.2	-46.49	-54.28	-13	-41.28	H
5.729500	53.98	Pk	34.5	-95.2	-46.49	-53.21	-13	-40.21	V
7.640000	51.95	Pk	35.7	-95.2	-46.16	-53.71	-13	-40.71	H
7.640000	53.25	Pk	35.7	-95.2	-46.16	-52.41	-13	-39.41	V

**10.4.2. WCDMA BAND 2**

**REL 99 MODE**

Project #:	14523740
Date:	3/28/2023
Test Engineer:	26120
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.704531	37.89	Pk	33.1	-95.2	-32.38	-56.59	-13	-43.59	H
3.704531	38.77	Pk	33.1	-95.2	-32.38	-55.71	-13	-42.71	V
5.557031	35.49	Pk	34.5	-95.2	-29.44	-54.65	-13	-41.65	H
5.557031	35.51	Pk	34.5	-95.2	-29.44	-54.63	-13	-41.63	V
7.409063	34.77	Pk	35.8	-95.2	-26.45	-51.08	-13	-38.08	H
7.409063	33.87	Pk	35.8	-95.2	-26.45	-51.98	-13	-38.98	V
<b>Mid Channel, 1880MHz</b>									
3.760313	38.97	Pk	33.2	-95.2	-32.17	-55.20	-13	-42.20	H
3.760313	39.72	Pk	33.2	-95.2	-32.17	-54.45	-13	-41.45	V
5.639531	36.82	Pk	34.5	-95.2	-30.10	-53.98	-13	-40.98	H
5.639531	36.29	Pk	34.5	-95.2	-30.10	-54.51	-13	-41.51	V
7.520156	34.23	Pk	35.9	-95.2	-26.39	-51.46	-13	-38.46	H
7.520156	34.74	Pk	35.9	-95.2	-26.39	-50.95	-13	-37.95	V
<b>High Channel, 1907.6MHz</b>									
3.815625	38.57	Pk	33.3	-95.2	-31.95	-55.28	-13	-42.28	H
3.815625	39.32	Pk	33.3	-95.2	-31.95	-54.53	-13	-41.53	V
5.722969	35.19	Pk	34.6	-95.2	-29.05	-54.46	-13	-41.46	H
5.722969	36.29	Pk	34.6	-95.2	-29.05	-53.36	-13	-40.36	V
7.630313	35.23	Pk	35.9	-95.2	-26.59	-50.66	-13	-37.66	H
7.630313	33.46	Pk	35.9	-95.2	-26.59	-52.43	-13	-39.43	V

**HSDPA MODE**

Project #:	14523740
Date:	3/31/2023
Test Engineer:	27661
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	01-RDE-A

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	Harmonics limit	Margin (dB)	Polarity
<b>Low Channel, 1852.4MHz</b>									
3.638906	36.31	Pk	32.8	-95.2	-24.36	-50.45	-13	-37.45	H
3.62625	37.48	Pk	32.8	-95.2	-24.11	-49.03	-13	-36.03	V
5.485313	35.48	Pk	34.7	-95.2	-22.46	-47.48	-13	-34.48	H
5.457656	34.77	Pk	34.7	-95.2	-22.50	-48.23	-13	-35.23	V
7.277813	33.78	Pk	35.5	-95.2	-18.22	-44.14	-13	-31.14	H
7.278281	33.22	Pk	35.5	-95.2	-18.21	-44.69	-13	-31.69	V
<b>Mid Channel, 1880MHz</b>									
3.755156	36.51	Pk	32.9	-95.2	-24.87	-50.66	-13	-37.66	H
3.724688	36.48	Pk	33.1	-95.2	-24.89	-50.51	-13	-37.51	V
5.667656	35.32	Pk	34.7	-95.2	-20.78	-45.96	-13	-32.96	H
5.595469	34.48	Pk	34.6	-95.2	-20.77	-46.89	-13	-33.89	V
7.545938	33.39	Pk	35.5	-95.2	-18.48	-44.79	-13	-31.79	H
7.552031	33.2	Pk	35.6	-95.2	-18.40	-44.80	-13	-31.80	V
<b>High Channel, 1907.6MHz</b>									
3.831094	37.06	Pk	32.9	-95.2	-25.02	-50.26	-13	-37.26	H
3.852656	37.28	Pk	32.9	-95.2	-24.73	-49.75	-13	-36.75	V
5.748750	34.5	Pk	34.8	-95.2	-21.85	-47.75	-13	-34.75	H
5.741719	34.11	Pk	34.8	-95.2	-21.79	-48.08	-13	-35.08	V
7.637344	33.41	Pk	35.6	-95.2	-17.75	-43.94	-13	-30.94	H
7.629375	32.77	Pk	35.6	-95.2	-17.87	-44.70	-13	-31.70	V

### 10.4.3. WCDMA BAND 4

#### REL 99 MODE

Project #:	14523740
Date:	03/28/2023
Test Engineer:	25196
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1712.4MHz</b>									
3.425625	40.97	Pk	32.6	-95.2	-33.06	-54.69	-13	-41.69	H
3.428906	40.32	Pk	32.6	-95.2	-33.04	-55.32	-13	-42.32	V
5.135156	39.55	Pk	34.8	-95.2	-30.29	-51.14	-13	-38.14	H
5.131875	39.69	Pk	34.8	-95.2	-30.42	-51.13	-13	-38.13	V
6.852188	36.37	Pk	35.7	-95.2	-26.84	-49.97	-13	-36.97	H
6.808594	36.46	Pk	35.7	-95.2	-27	-50.04	-13	-37.04	V
<b>Mid Channel, 1732.6MHz</b>									
3.470156	40.85	Pk	32.6	-95.2	-32.99	-54.74	-13	-41.74	H
3.463125	42.31	Pk	32.6	-95.2	-33.00	-53.29	-13	-40.29	V
5.197969	38.64	Pk	34.7	-95.2	-29.35	-51.21	-13	-38.21	H
5.165625	39.64	Pk	34.7	-95.2	-29.45	-50.31	-13	-37.31	V
6.948750	36.57	Pk	35.7	-95.2	-26.42	-49.35	-13	-36.35	H
6.911250	35.53	Pk	35.7	-95.2	-26.55	-50.52	-13	-37.52	V
<b>High Channel, 1752.61MHz</b>									
3.512813	40.51	Pk	32.7	-95.2	-33.02	-55.01	-13	-42.01	H
3.493594	39.77	Pk	32.6	-95.2	-32.98	-55.81	-13	-42.81	V
5.253750	38.20	Pk	34.7	-95.2	-28.80	-51.10	-13	-38.10	H
5.250000	39.18	Pk	34.7	-95.2	-28.74	-50.06	-13	-37.06	V
7.010625	36.10	Pk	35.7	-95.2	-26.71	-50.11	-13	-37.11	H
6.977813	36.12	Pk	35.7	-95.2	-26.73	-50.11	-13	-37.11	V

**HSDPA MODE**

Project #:	14523740
Date:	03/28/2023
Test Engineer:	25196
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
<b>Low Channel, 1712.4MHz</b>									
3.431250	40.00	Pk	32.6	-95.2	-32.92	-55.52	-13	-42.52	H
3.423281	41.49	Pk	32.6	-95.2	-33.06	-54.17	-13	-41.17	V
5.141250	39.61	Pk	34.8	-95.2	-30.10	-50.89	-13	-37.89	H
5.152031	39.93	Pk	34.8	-95.2	-29.72	-50.19	-13	-37.19	V
6.850313	36.01	Pk	35.7	-95.2	-26.89	-50.38	-13	-37.38	H
6.878906	37.26	Pk	35.7	-95.2	-26.48	-48.72	-13	-35.72	V
<b>Mid Channel, 1732.6MHz</b>									
3.474375	41.2	Pk	32.6	-95.2	-33.03	-54.43	-13	-41.43	H
3.508125	41.61	Pk	32.7	-95.2	-32.9	-53.79	-13	-40.79	V
5.194688	39.62	Pk	34.7	-95.2	-29.39	-50.27	-13	-37.27	H
5.367188	40.91	Pk	34.7	-95.2	-30.55	-50.14	-13	-37.14	V
6.953438	37.14	Pk	35.7	-95.2	-26.51	-48.87	-13	-35.87	H
6.962344	36.86	Pk	35.7	-95.2	-26.58	-49.22	-13	-36.22	V
<b>High Channel, 1752.61MHz</b>									
3.5025	40.38	Pk	32.7	-95.2	-33	-55.12	-13	-42.12	H
3.479531	41.24	Pk	32.6	-95.2	-32.98	-54.34	-13	-41.34	V
5.248594	37.69	Pk	34.7	-95.2	-28.8	-51.61	-13	-38.61	H
5.192344	38.81	Pk	34.7	-95.2	-29.46	-51.15	-13	-38.15	V
7.014844	36.46	Pk	35.7	-95.2	-26.69	-49.73	-13	-36.73	H
6.966094	37.16	Pk	35.7	-95.2	-26.58	-48.92	-13	-35.92	V

## 11. SETUP PHOTOS

Please refer to 14523740-EP1V1 for Setup Photo Report for setup photos.

**END OF REPORT**