TEST REPORT

Report Number: 15107858-E1V3

Applicant	:	Google LLC 1600 Amphitheatre Parkway Mountain View, CA 94043 U.S.A.
Model	:	GGX8B
FCC ID	:	A4RGGX8B
EUT Description	:	PHONE
Test Standard(s)	:	FCC 47 CFR PART 22H, 24E, AND 27L

Date Of Issue:
2024-05-16

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

CERT #0751.05

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2024-04-18	Initial Review	
V2	2024-04-29	Updated Section 5.4, 6.2, 6.4, 8.2 and 9.2	Kiya Kedida
V3	2024-05-16	Updated Section 6.2 and 8.1.2	Kiya Kedida

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	Google LLC 1600 Amphitheatre Parkway Mountain View, CA 94043 U.S.A.
Model	GGX8B
FCC ID	A4RGGX8B
EUT Description	Phone
Serial Number	Conducted: 41121FDAS000AZ and 41121FDAS0009E Radiated: 41031FDAS0006T and 41031FDAS000AE
Sample Receipt Date	2024-01-08
Date Tested	2024-01-08 to 2024-03-25
Applicable Standards	FCC 47 CFR PART 2, PART 22H, PART 24E, AND PART 27L
Test Results	COMPLIES

UL Verification Services Inc. 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.

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.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc will constitute fraud and shall nullify the document.

Approved & Released By:	Reviewed By:	Prepared By:
		
Dan Coronia Operations Leader UL Verification Services Inc.	Kiya Kedida Senior Project Engineer UL Verification Services Inc	Glenn Escano Senior Test Engineer UL Verification Services Inc

2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer, which can impact the validity of results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

Requirement Description	Requirement Clause Number (FCC)	Result	Remarks
RF Conducted Output Power	2.1046	Complies	
Effective Radiated Power	22.913 (a)(5)	Complies	
Equivalent Isotropic Radiated power	24.232 (c), 27.50 (d) (4)	Complies	
Occupied Bandwidth	2.1049	Complies	
Band Edge and Emission Mask	2.1051, 22.917 (a), 24.238 (a), 27.53 (h)	Complies	
Out of Band Emissions	2.1051, 22.917 (a), 24.238 (a), 27.53 (h)	Complies	
Frequency Stability	2.1055, 22.355, 24.235, 27.54	Complies	
Peak-to-Average Ratio	22.913 (d), 24.232 (d), 27.50 (d) (5)	Complies	
Field Strength of Spurious Radiation	2.1053, 22.917 (a), 24.238 (a), 27.53 (h)	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, 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 D01v01r01: Determining ERP and EIRP

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. 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
☐	Building 1: 47173 Benicia Street, Fremont, CA 94538 USA	US0104	2324A	550739
☐	Building 2: 47266 Benicia Street, Fremont, CA 94538 USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538 USA			
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538 USA			
☐	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_{Lab}
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 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT is a Phone.

6.2. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015
KDB 971168 D01 Section 5.6

ERP/EIRP = PMeas + GT − LC
where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);
PMeas = 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

Part 22 850MHz

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	32.60	-4.00	3.0	26.45	0.442	246.94	247KGXW
	EGPRS	26.60			20.45	0.111	248.85	249KG7W

Part 24 1900MHz

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	29.90	-0.60	2.0	29.30	0.851	244.66	245KGXW
	EGPRS	26.10			25.50	0.355	254.2	254KG7W

WCDMA MODE

Part 22 Band 5

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	24.90	-4.00	3.0	18.75	0.075	4157	4M16F9W
	HSDPA	24.90			18.75	0.075	4153	4M15F9W

Part 24 Band 2

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	24.80	-0.70	2.0	24.10	0.257	4182	4M18F9W
	HSDPA	24.80			24.10	0.257	4170	4M17F9W

Part 27 Band 4

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	24.80	-0.40	1.0	24.40	0.275	4167	4M17F9W
	HSDPA	24.80			24.40	0.275	4184	4M18F9W

6.3. MAXIMUM ANTENNA GAIN

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

Frequency Range (MHz)	ANT 0 Antenna Gain (dBi)	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)
GSM850 and WCDMA 5 824 - 849	-4	-4	
GSM1900 and WCDMA 2 1850 - 1910	-0.7		-0.6
WCDMA 4 1710 - 1755	-0.8		-0.4

6.4. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X/Y/Z on all ANT 0, ANT1 and ANT2 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	ANT0	ANT1	ANT2
824 – 849 MHz	X	X	N/A
1710 – 1755 MHz	X	N/A	X
1850 – 1910 MHz	X	N/A	X

Based on average conducted output power measurement investigations all conducted tests performed on ANT 0 for GSM 850, WCDMA B2/B5 and on ANT 2 for GSM 1900, WCDM 4.

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 18GHz. There were no emissions found with less than 20dB of margin from 9kHz to 30MHz, 30MHz-1GHz and above 18GHz.

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.

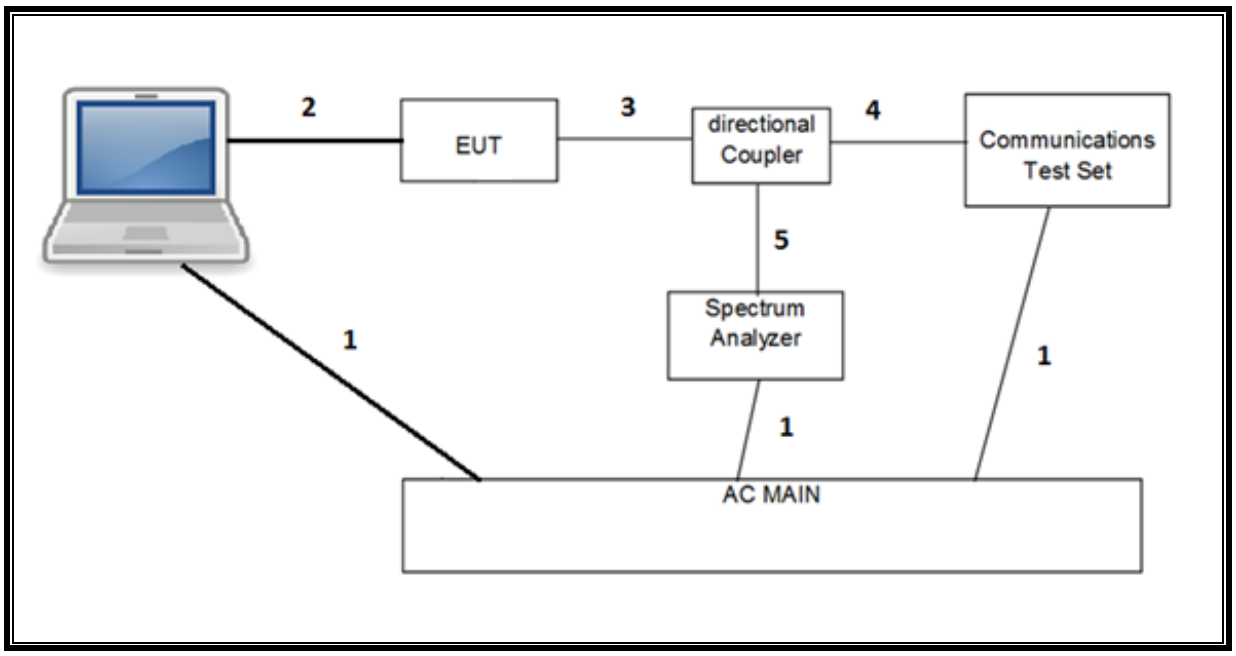
6.5. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID/ DoC**
Laptop	Dell	Latitude 7300	876819127	DoC
AC/DC adapter	Dell	DA130PE1-00	CN-0M55GJ-DES00-066-5THK-A02	DoC
Power Adapter	Google	GW8L7	1HV003B901000B9DE	DoC

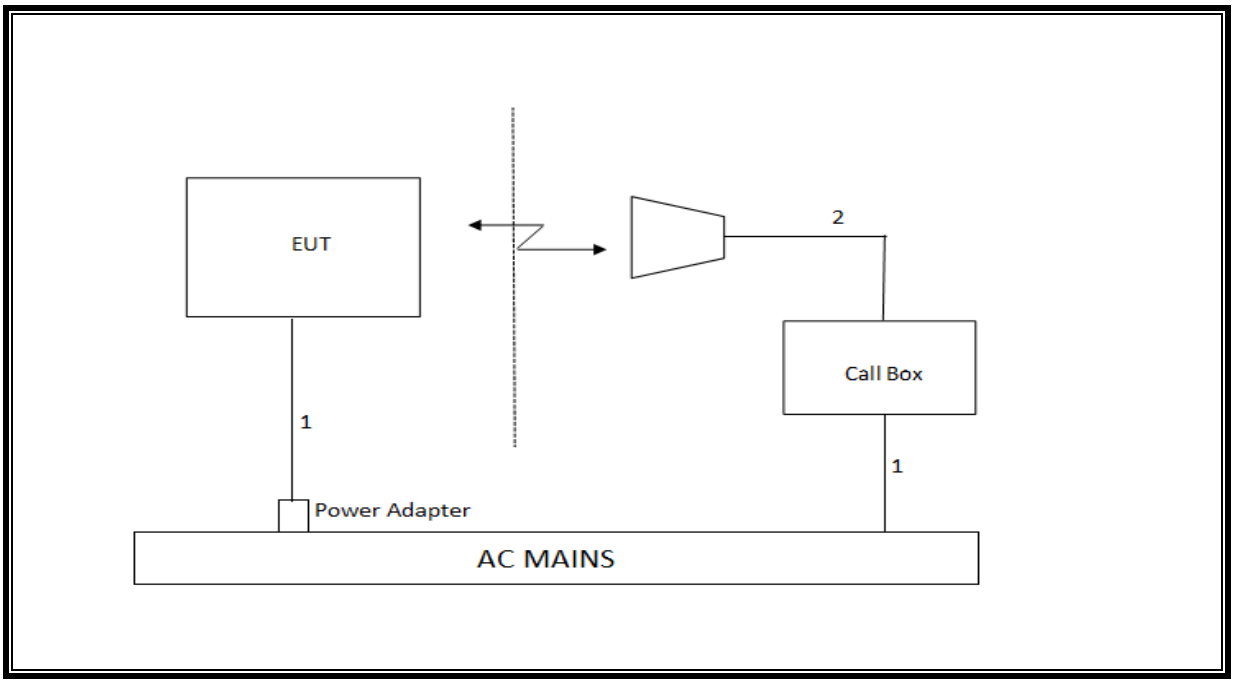
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	USB-C	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Un-shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Un-shielded	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	AC	1	US 115V	Un-shielded	2.0	N/A
1	USB	1	USB-C	Un-shielded	1	N/A
2	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	80430	2024-08-31
Antenna, Horn 1-18GHz	ETS Lindgren	3117	79834	2024-06-30
Antenna, Broadband Hybrid, 30MHz to 3000MHz	SUNAR	JB3	222009	2024-10-31
RF Filter Box, 1-18GHz	UL-FR1	NA	217255	2024-10-31
RF Filter Box, 1-18GHz	UL-FR1	RATS 2	226781	2024-09-30
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	430250	2024-09-30
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169936	2025-02-28
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	169935	2025-02-28
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	85943	2025-02-28
Directional Coupler	KRYTAR	152610	198816	2024-10-31
Directional Coupler	KRYTAR	152610	231664	2025-01-22
Power Meter, P-series single channel	Keysight	N1912A	90719	2025-01-31
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight	N1921A	81319	2025-01-31
Filter, HPF 1.2GHz	Wainwright Instruments GmbH	WHKX6-948-1.2/15G-40ST	99	2024-10-31
Spectrum Analyzer, PXA, 2Hz to 44GHz	Keysight	N9030B	231739	2025-01-31
Spectrum Analyzer, PXA, 2Hz to 44GHz	Keysight	N9030B	245120	2025-02-28
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A	85212	2025-02-28
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	222793	2025-02-28
Wideband Communication Test Set, Call Box	R&S GmbH & Co. KG	CMW500	222797	2025-02-28
Chamber, Environmental	Thermotron Corp.	SM-16C Mini-Max	179936	2024-06-30
Transmitting Antenna, Horn Antenna	TEKBOX Digital Solutions	TBMA4	226709	C.N.R.
Antenna, Horn 18 to 26.5GHz	A.R.A.	MWH-1826/B	199659	2024-12-31
Amplifier 18-26.5GHz, +5Vdc, -54dBm P1dB	AMPLICAL	AMP18G26.5-60	234683	2024-03-29
DC Power Supply	GWINSTEK	GPS18500	N/A	C.N.R.
UL AUTOMATION SOFTWARE				
CLT Software	UL	UL RF	V2023.11.21.0	
Power Measurement Software	UL	UL RF	V2023.08.14.0	
Radiated test software	UL	UL RF	Ver 9.5 2023-05-01	

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

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 **Signal Off** 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 **Signal On** to turn on the signal and change settings	

RESULT

8.1.1. GSM 850

Test Engineer ID:	52280ML	Test Date:	2024-02-08

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
					ANT 0	ANT 1
GPRS (GMSK)	CS1	1	128	824.2	32.6	32.2
			190	836.6	32.5	32.3
			251	848.8	**32.6**	32.4
		2	128	824.2	31.8	31.5
			190	836.6	31.7	31.4
			251	848.8	31.9	31.4
EGPRS (8PSK)	MCS5	1	128	824.2	26.4	26.4
			190	836.6	26.4	26.6
			251	848.8	**26.6**	26.5
		2	128	824.2	25.5	25.7
			190	836.6	25.4	25.6
			251	848.8	25.5	25.6

8.1.2. GSM 1900

Test Engineer ID:	52280ML and 50813CM	Test Date:	2024-02-08 to 2024-03-14

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
					ANT 2	ANT 0
GPRS (GMSK)	CS1	1	512	1850.2	29.7	**29.3**
			661	1880	**29.9**	29.3
			810	1909.8	29.8	29.3
		2	512	1850.2	28.6	28.2
			661	1880	28.7	28.2
			810	1909.8	28.8	28.0
EGPRS (8PSK)	MCS5	1	512	1850.2	25.4	25.4
			661	1880	25.7	**25.4**
			810	1909.8	**26.1**	25.4
		2	512	1850.2	24.7	24.3
			661	1880	25.0	24.2
			810	1909.8	25.1	24.2

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 ≥ RBW.≥ 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
	βc/βd	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: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} *(Note1, 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: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, 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 β_c/β_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 β_c = 11/15 and β_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: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{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	209/225	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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 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, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c. For sub-test 5, Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 5/15 with β_{hs} = 5/15 * β_c.

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c/β_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 β_c = 10/15 and β_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: β_{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

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.

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.

RESULT

8.2.1. WCDMA BAND 5

Test Engineer ID:	28686RL and 24937ZM	Test Date:	2024-01-16 to 2024-01-17

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)	
						ANT 0	ANT 1
W-CDMA Band 5 (850MHz)	Rel 99	RMC, 12.2 kbps	4132	826.4	N/A	24.8	24.6
			4183	836.6	N/A	**24.9**	24.6
			4233	846.6	N/A	24.8	24.4
	HSDPA	Subtest 1	4132	826.4	0	24.7	**24.6**
			4183	836.6	0	**24.9**	24.5
			4233	846.6	0	24.8	24.4
		Subtest 2	4132	826.4	0	24.9	24.5
			4183	836.6	0	24.9	**24.6**
			4233	846.6	0	24.9	24.4
		Subtest 3	4132	826.4	0.5	24.5	23.2
			4183	836.6	0.5	24.6	23.2
			4233	846.6	0.5	24.6	23.2
		Subtest 4	4132	826.4	0.5	24.5	23.7
			4183	836.6	0.5	24.6	23.7
			4233	846.6	0.5	24.6	23.7
	HSPA (HSDPA & HSUPA)	Subtest 1	4132	826.4	0	23.8	23.5
			4183	836.6	0	23.9	23.5
			4233	846.6	0	23.8	23.5
		Subtest 2	4132	826.4	2	21.5	22.2
			4183	836.6	2	21.6	22.1
			4233	846.6	2	21.5	22.1
		Subtest 3	4132	826.4	1	23.9	23.1
			4183	836.6	1	23.9	23.2
			4233	846.6	1	23.9	23.1
		Subtest 4	4132	826.4	2	21.6	22.1
			4183	836.6	2	21.6	22.1
			4233	846.6	2	21.7	22.0
		Subtest 5	4132	826.4	0	24.8	24.6
			4183	836.6	0	24.9	24.6
			4233	846.6	0	24.9	24.4
	DC-HSDPA	Subtest 1	4132	826.4	0	24.7	24.5
			4183	836.6	0	**24.9**	24.5
			4233	846.6	0	24.8	24.4
		Subtest 2	4132	826.4	0	24.9	24.5
			4183	836.6	0	24.9	24.5
			4233	846.6	0	24.9	24.5
		Subtest 3	4132	826.4	0.5	24.5	23.8
			4183	836.6	0.5	24.6	23.8
			4233	846.6	0.5	24.6	23.7
		Subtest 4	4132	826.4	0.5	24.5	23.6
			4183	836.6	0.5	24.6	23.6

8.2.2. WCDMA BAND 2

Test Engineer ID:	43576TS and 24937ZM	Test Date:	2024-01-12 to 2024-01-25

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)	
						ANT 2	ANT 0
W-CDMA Band 2 (1900MHz)	Rel 99	RMC, 12.2 kbps	9262	1852.4	N/A	**24.6**	**24.8**
			9400	1880.0	N/A	24.5	24.8
			9538	1907.6	N/A	24.2	24.8
	HSDPA	Subtest 1	9262	1852.4	0	24.5	24.8
			9400	1880.0	0	24.5	24.7
			9538	1907.6	0	24.2	24.8
		Subtest 2	9262	1852.4	0	**24.6**	24.8
			9400	1880.0	0	24.5	**24.8**
			9538	1907.6	0	24.2	24.8
		Subtest 3	9262	1852.4	0.5	**24.6**	24.8
			9400	1880.0	0.5	24.5	24.8
			9538	1907.6	0.5	24.2	24.7
		Subtest 4	9262	1852.4	0.5	**24.6**	24.3
			9400	1880.0	0.5	24.5	24.3
			9538	1907.6	0.5	24.2	24.3
	HSPA (HSDPA & HSUPA)	Subtest 1	9262	1852.4	0	23.7	23.7
			9400	1880.0	0	23.5	23.8
			9538	1907.6	0	23.5	23.7
		Subtest 2	9262	1852.4	2	21.5	23.9
			9400	1880.0	2	21.5	21.7
			9538	1907.6	2	21.5	21.7
		Subtest 3	9262	1852.4	1	23.4	23.8
			9400	1880.0	1	23.4	22.8
			9538	1907.6	1	23.2	22.7
		Subtest 4	9262	1852.4	2	21.5	23.8
			9400	1880.0	2	21.5	23.8
			9538	1907.6	2	21.5	23.8
		Subtest 5	9262	1852.4	0	**24.6**	**24.8**
			9400	1880.0	0	24.5	**24.8**
			9538	1907.6	0	24.2	24.6
	DC-HSDPA	Subtest 1	9262	1852.4	0	24.5	23.9
			9400	1880.0	0	**24.6**	23.8
			9538	1907.6	0	24.4	23.7
		Subtest 2	9262	1852.4	0	24.5	23.9
			9400	1880.0	0	**24.6**	23.8
			9538	1907.6	0	24.4	23.7
		Subtest 3	9262	1852.4	0.5	24.5	24.0
			9400	1880.0	0.5	**24.6**	23.7
			9538	1907.6	0.5	24.4	23.6
		Subtest 4	9262	1852.4	0.5	24.5	23.9
			9400	1880.0	0.5	**24.6**	23.8
			9538	1907.6	0.5	24.3	23.7

8.2.3. WCDMA BAND 4

Test Engineer ID:	20794DC and 24937ZM	Test Date:	2024-01-12 to 2024-01-25

Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)	
						ANT 2	ANT 0
W-CDMA Band 4 (1700MHz)	Rel 99	RMC, 12.2 kbps	1312	1712.4	N/A	24.6	**24.5**
			1413	1732.6	N/A	24.7	24.4
			1513	1752.6	N/A	**24.8**	**24.5**
	HSDPA	Subtest 1	1312	1712.4	0	24.5	24.7
			1413	1732.6	0	24.6	**24.8**
			1513	1752.6	0	24.7	24.6
		Subtest 2	1312	1712.4	0	24.7	24.4
			1413	1732.6	0	24.6	24.4
			1513	1752.6	0	**24.8**	24.4
		Subtest 3	1312	1712.4	0.5	24.7	24.1
			1413	1732.6	0.5	24.6	23.8
			1513	1752.6	0.5	24.7	23.3
		Subtest 4	1312	1712.4	0.5	24.6	24.3
			1413	1732.6	0.5	24.6	24.3
			1513	1752.6	0.5	**24.8**	24.6
	HSPA (HSDPA & HSUPA)	Subtest 1	1312	1712.4	0	23.6	24.1
			1413	1732.6	0	23.5	24.0
			1513	1752.6	0	23.7	24.0
		Subtest 2	1312	1712.4	2	21.5	21.7
			1413	1732.6	2	21.6	21.8
			1513	1752.6	2	21.7	23.4
		Subtest 3	1312	1712.4	1	23.5	23.2
			1413	1732.6	1	23.6	23.3
			1513	1752.6	1	23.7	23.5
		Subtest 4	1312	1712.4	2	21.6	21.5
			1413	1732.6	2	21.5	23.3
			1513	1752.6	2	21.6	23.6
		Subtest 5	1312	1712.4	0	24.7	24.5
			1413	1732.6	0	24.6	24.5
			1513	1752.6	0	24.7	24.6
	DC-HSDPA	Subtest 1	1312	1712.4	0	24.7	24.1
			1413	1732.6	0	24.6	24.0
			1513	1752.6	0	24.6	24.1
		Subtest 2	1312	1712.4	0	24.7	24.1
			1413	1732.6	0	24.6	24.1
			1513	1752.6	0	24.6	24.2
		Subtest 3	1312	1712.4	0.5	24.7	23.6
			1413	1732.6	0.5	24.7	23.6
			1513	1752.6	0.5	24.7	23.7
		Subtest 4	1312	1712.4	0.5	**24.8**	23.7
			1413	1732.6	0.5	24.7	23.6
			1513	1752.6	0.5	24.7	23.5

9. CONDUCTED TEST RESULTS

9.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

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.

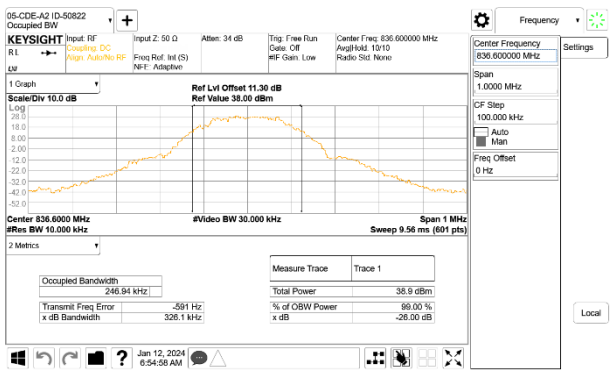
GSM

Band	Modulation	Channel	f(MHz)	99% BW (kHz)	-26dB BW (kHz)
850	GPRS	190	836.6	246.94	326.1
	EGPRS			248.85	317.2
1900	GPRS	661	1880.0	244.66	318.9
	EGPRS			254.20	324.0

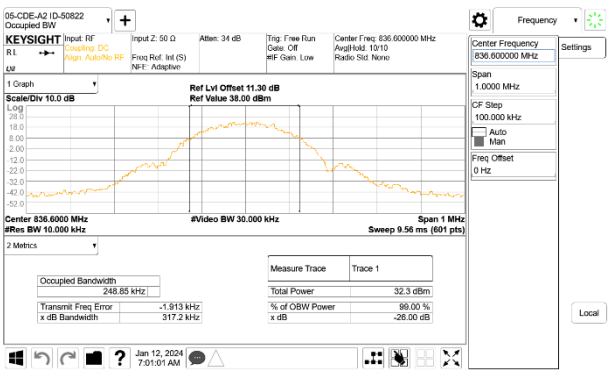
WCDMA

Band	Modulation	Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
BAND 5	REL 99	4408	836.6	4.1568	4.723
	HSDPA			4.1529	4.731
BAND 2	REL 99	9800	1880.0	4.1815	4.752
	HSDPA			4.1695	4.737
BAND 4	REL 99	1638	1732.6	4.1673	4.727
	HSDPA			4.1847	4.733

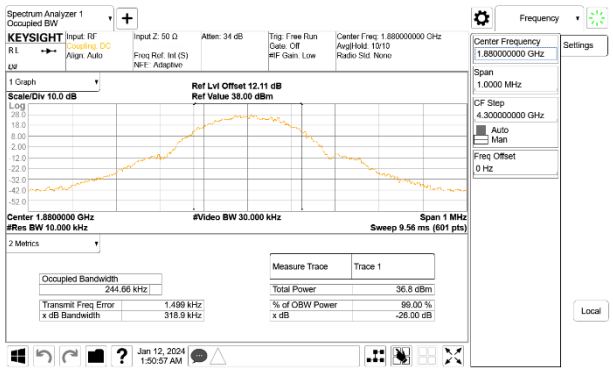
9.1.1. GSM



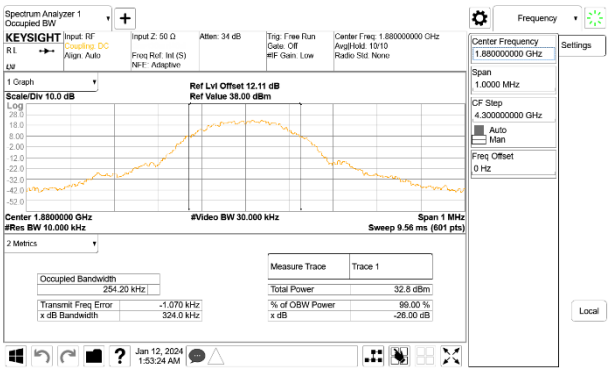
GSM 850 GPRS Middle Channel, ID:50822



GSM 850 EGPRS Middle Channel, ID:50822

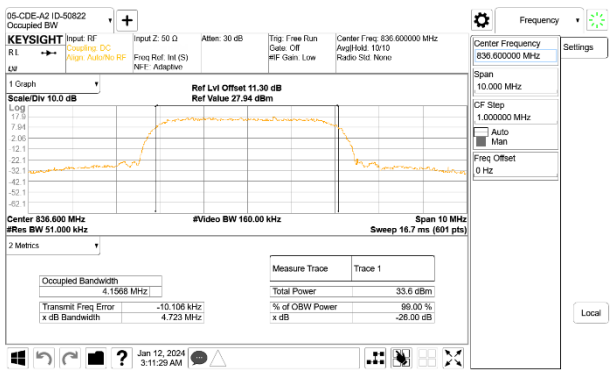


GSM 1900 GPRS Middle Channel, ID:28498

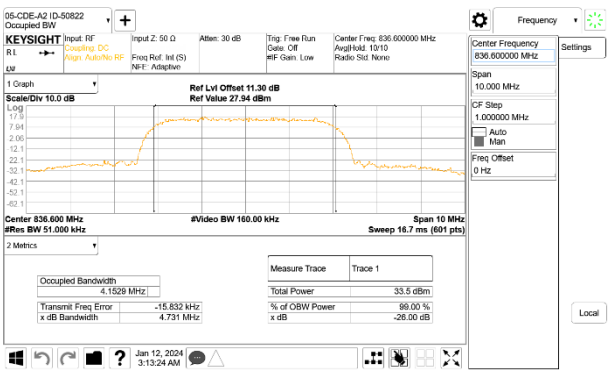


GSM 1900 EGPRS Middle Channel, ID:28498

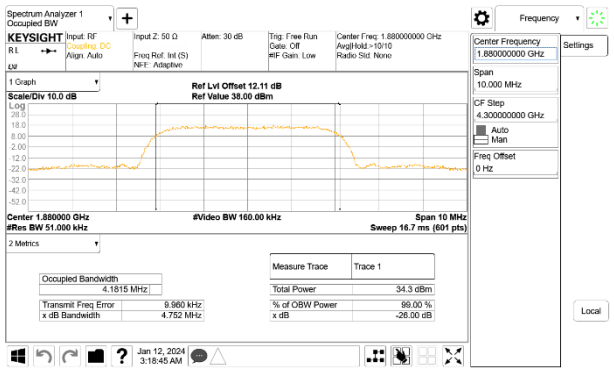
9.1.2. WCDMA



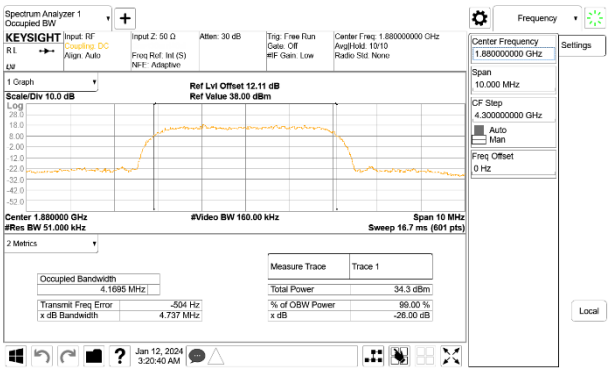
WCDMA Band 5 Rel 99 Middle Channel, ID:28498



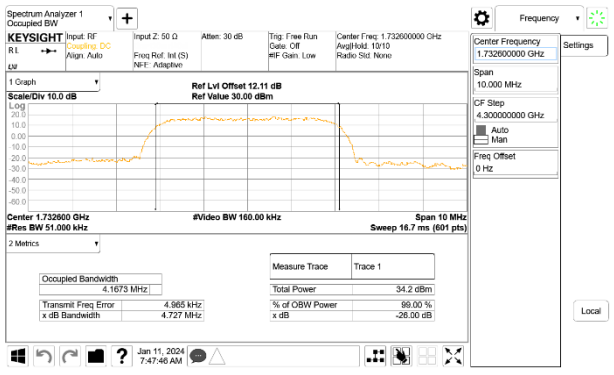
WCDMA Band 5 HSDPA Middle Channel, ID:28498



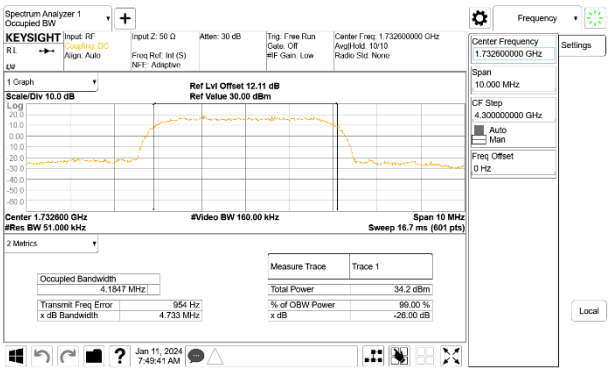
WCDMA Band 2 Rel 99 Middle Channel, ID:28498



WCDMA Band 2 HSDPA Middle Channel, ID:28498



WCDMA Band 4 Rel 99 Middle Channel, ID:39005



WCDMA Band 4 HSDPA Middle Channel, ID:39005

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 Log10(f/6.1) decibels or 50 + 10 Log10(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 + 10Log10(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.

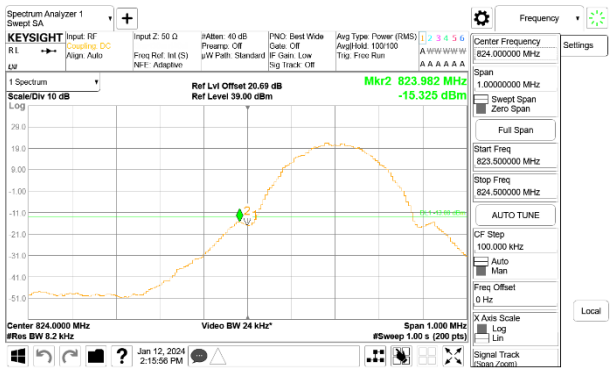
TEST PROCEDURE

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:

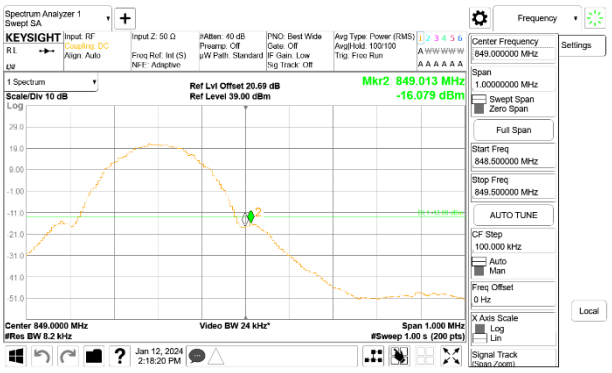
- Set the spectrum analyzer span to include the block edge frequency.
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

RESULTS

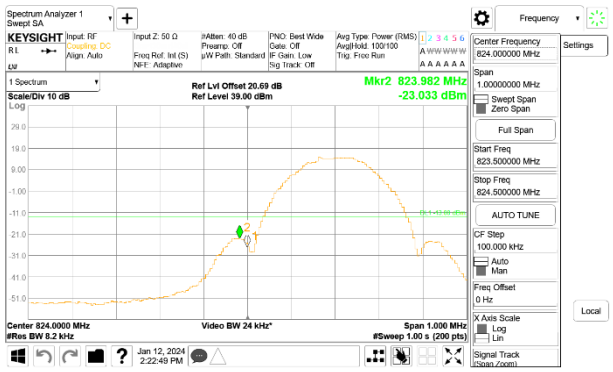
9.2.1. GSM 850



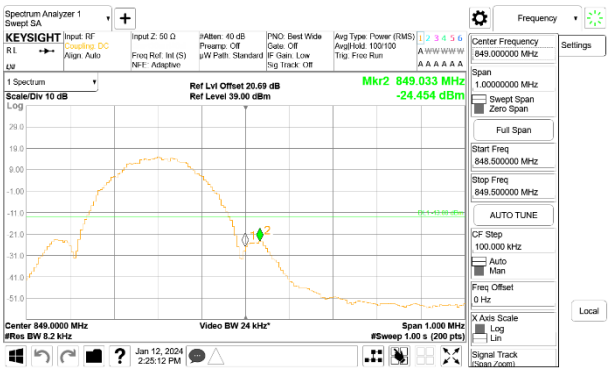
GSM 850 GPRS Low Channel, ID:39005



GSM 850 GPRS High Channel, ID:39005



GSM 850 EGPRS Low Channel, ID:39005



GSM 850 EGPRS High Channel, ID:39005

9.2.2. GSM 1900

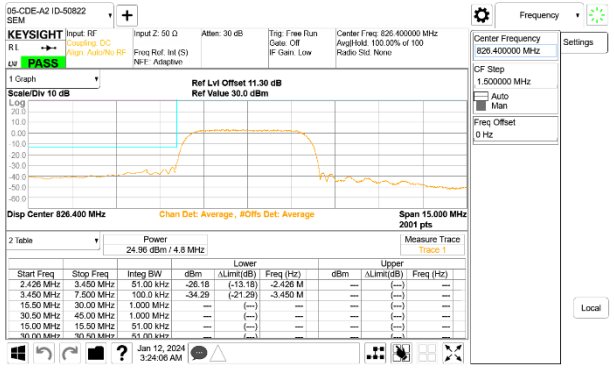
GSM 1900 GPRS Low Channel, ID:28498

GSM 1900 GPRS High Channel, ID:28498

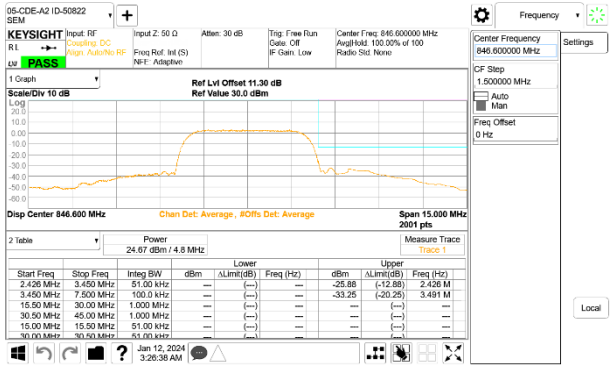
GSM 1900 EGPRS Low Channel, ID:28498

GSM 1900 EGPRS High Channel, ID:28498

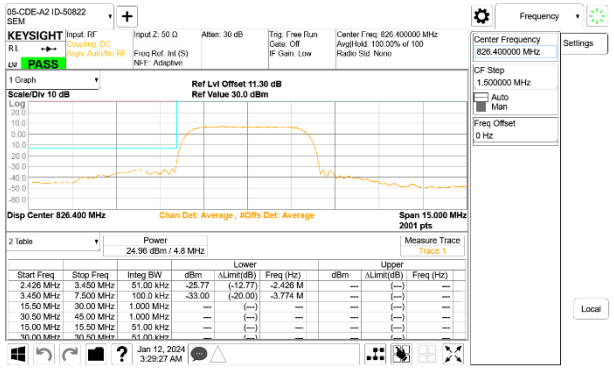
9.2.3. WCDMA BAND 5



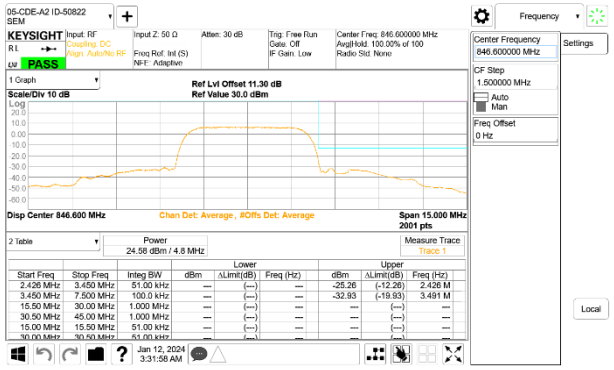
WCDMA Band 5 Rel 99 Low Channel



WCDMA Band 5 Rel 99 High Channel

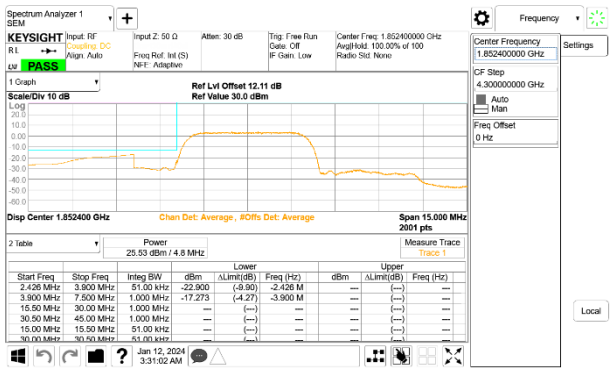


WCDMA Band 5 HSDPA Low Channel

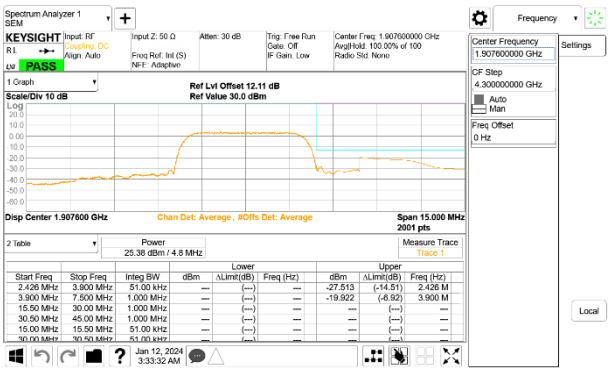


WCDMA Band 5 HSDPA High Channel

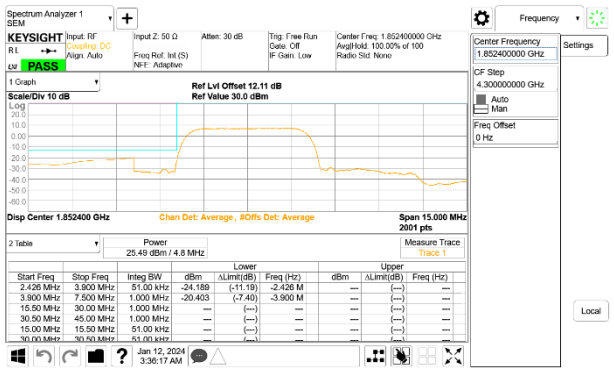
9.2.4. WCDMA BAND 2



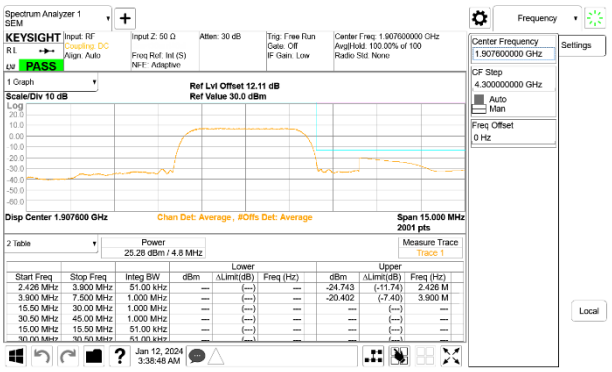
WCDMA Band 2 Rel 99 Low Channel, ID:28498



WCDMA Band 2 Rel 99 High Channel, ID:28498

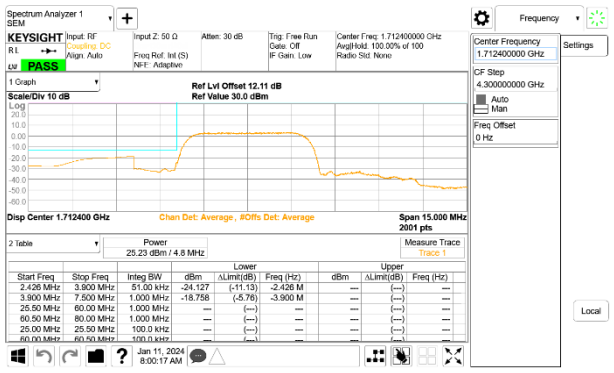


WCDMA Band 2 HSDPA Low Channel, ID:28498

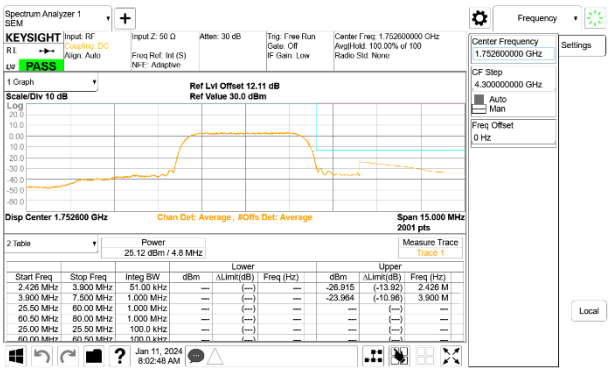


WCDMA Band 2 HSDPA High Channel, ID:28498

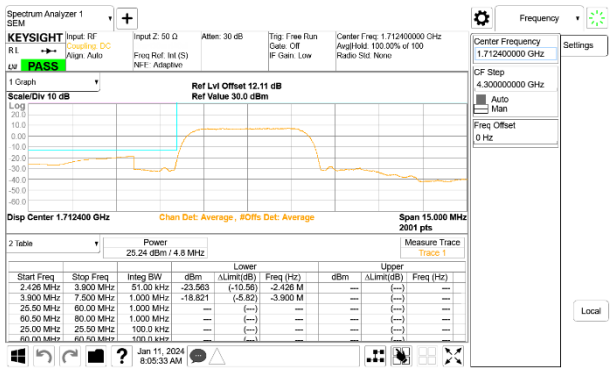
9.2.5. WCDMA BAND 4



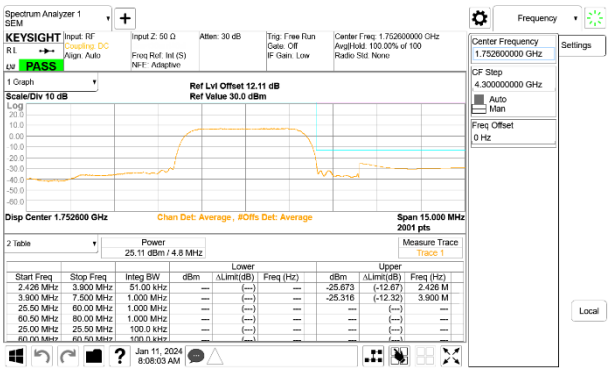
WCDMA Band 4 Rel 99 Low Channel, ID:39005



WCDMA Band 4 Rel 99 High Channel, ID:39005



WCDMA Band 4 HSDPA Low Channel, ID:39005



WCDMA Band 4 HSDPA High Channel, ID:39005

9.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.917, §24.238, and §27.53

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.

TEST PROCEDURE

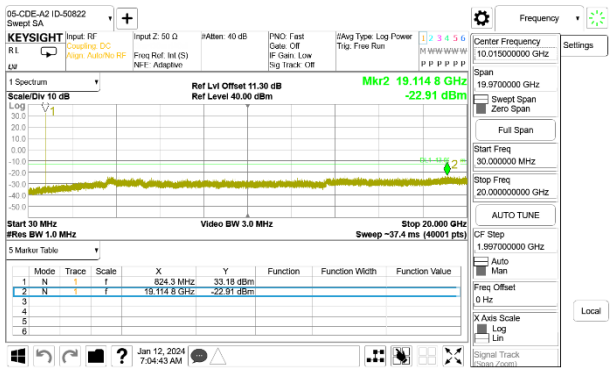
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case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

For each out of band emissions measurement:

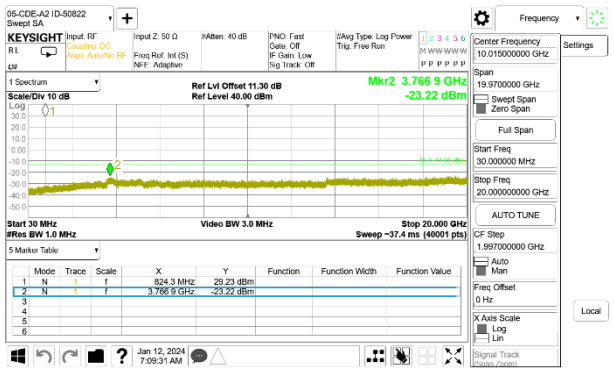
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz. (NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

RESULTS

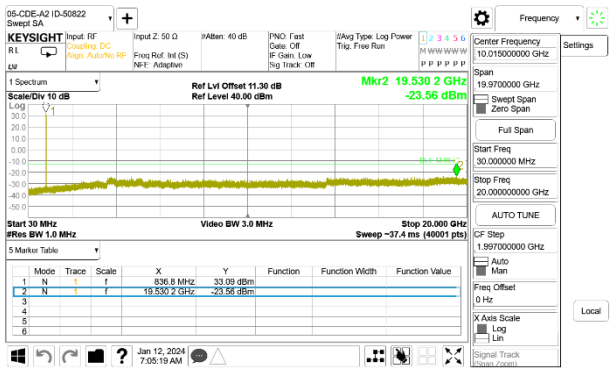
9.3.1. GSM 850



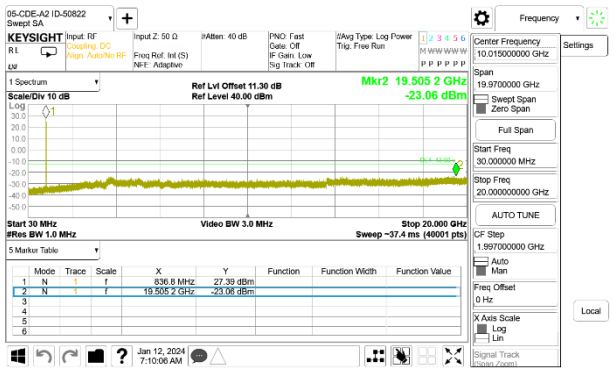
GSM 850 GPRS Low Channel



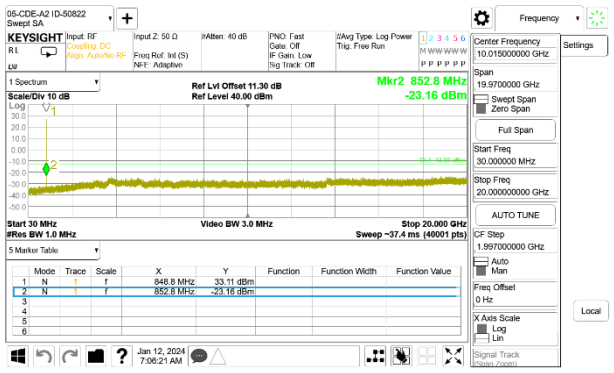
GSM 850 EGPRS Low Channel



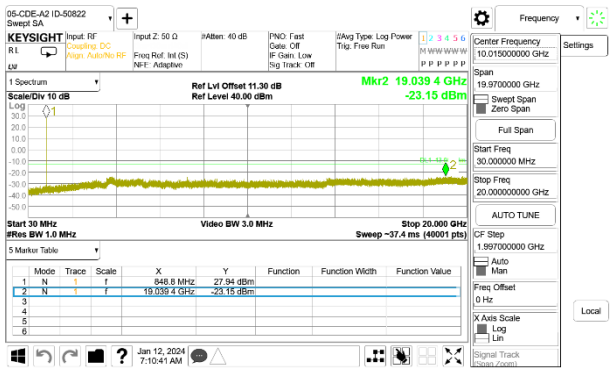
GSM 850 GPRS Middle Channel



GSM 850 EGPRS Middle Channel

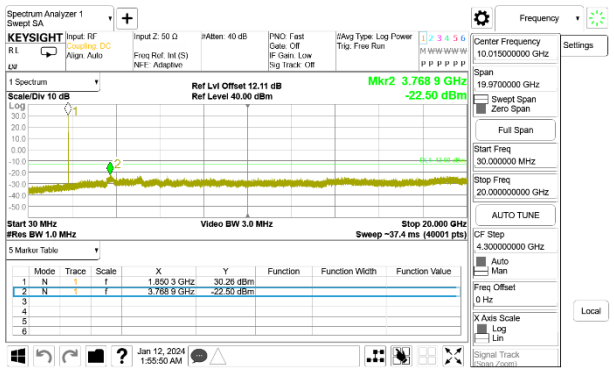


GSM 850 GPRS High Channel

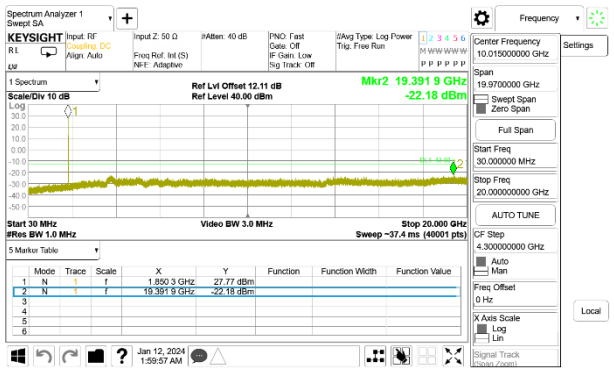


GSM 850 EGPRS High Channel

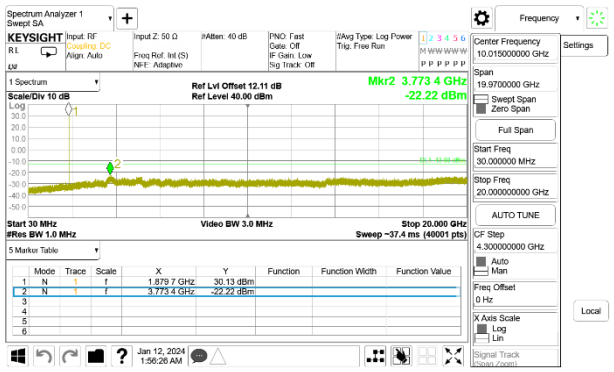
9.3.2. GSM 1900



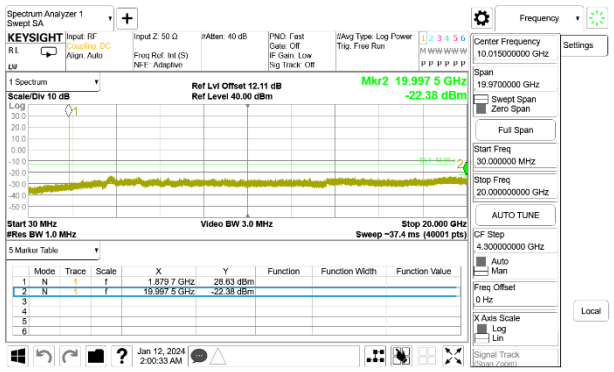
GSM 1900 GPRS Low Channel, ID:28498



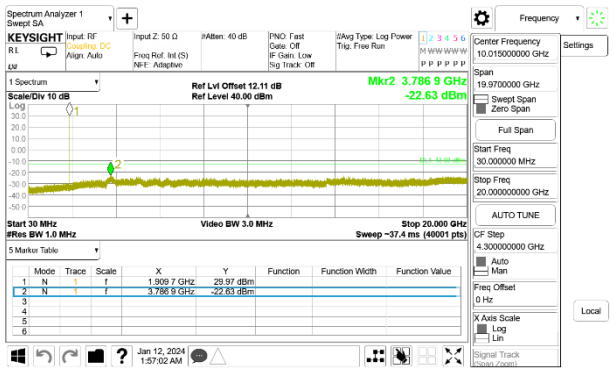
GSM 1900 EGPRS Low Channel, ID:28498



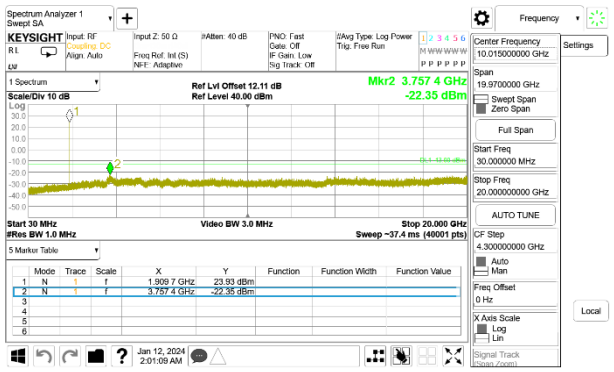
GSM 1900 GPRS Middle Channel, ID:28498



GSM 1900 EGPRS Middle Channel, ID:28498

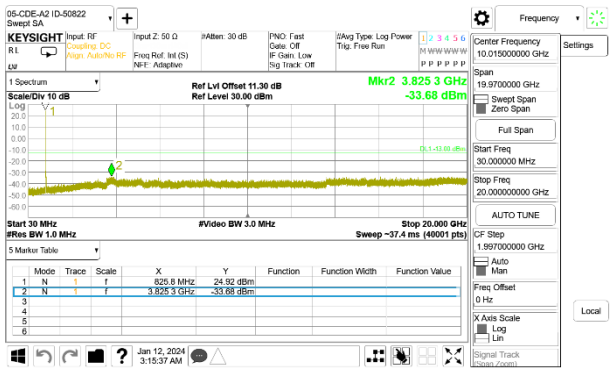


GSM 1900 GPRS High Channel, ID:28498

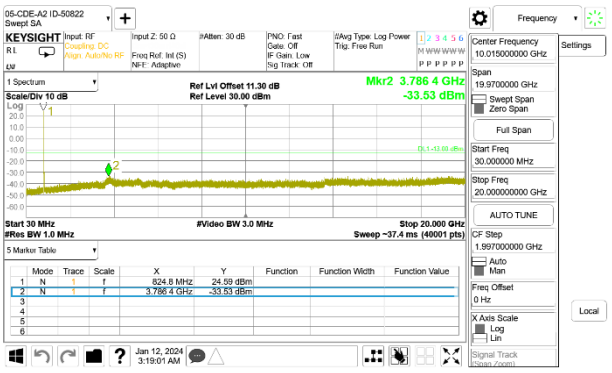


GSM 1900 EGPRS High Channel, ID:28498

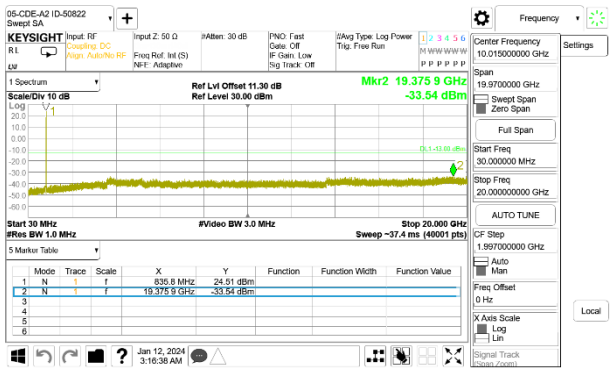
9.3.3. WCDMA BAND 5



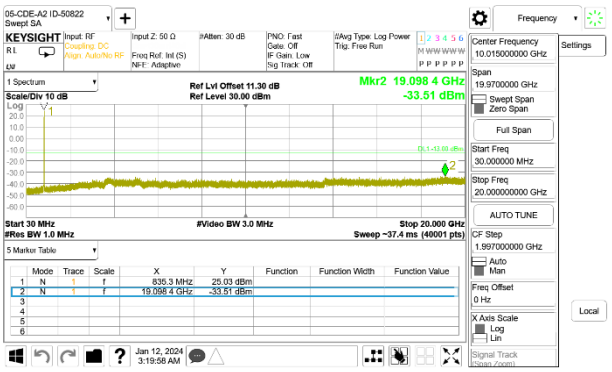
WCDMA Band 5 Rel 99 Low Channel



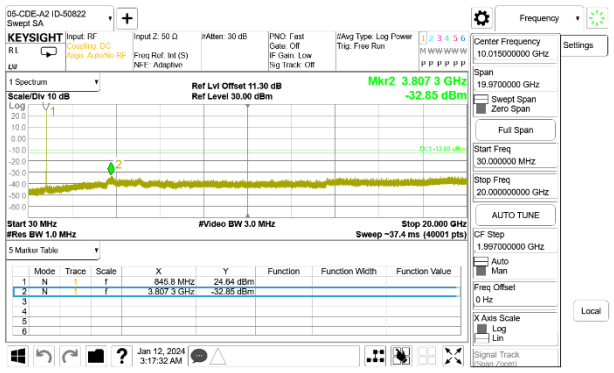
WCDMA Band 5 HSDPA Low Channel



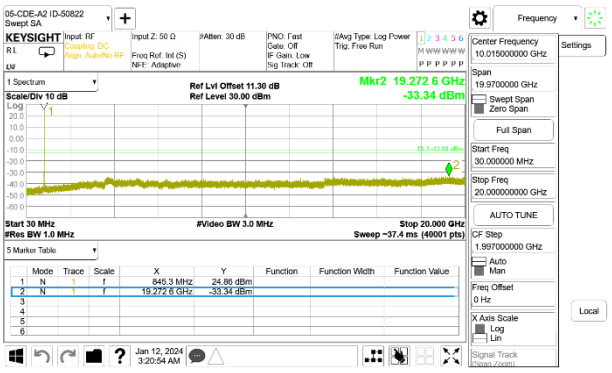
WCDMA Band 5 Rel 99 Middle Channel



WCDMA Band 5 HSDPA Middle Channel

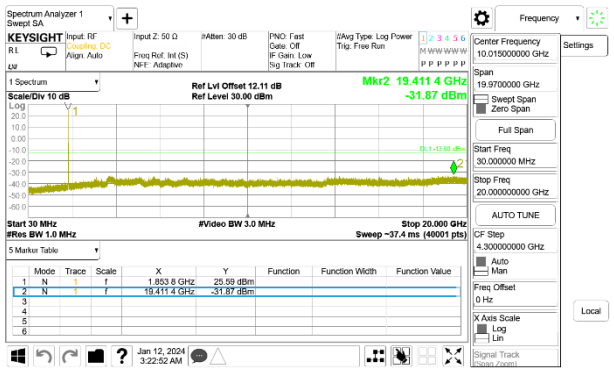


WCDMA Band 5 Rel 99 High Channel

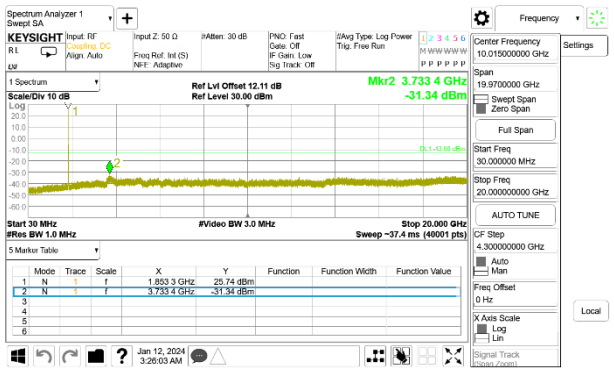


WCDMA Band 5 HSDPA High Channel

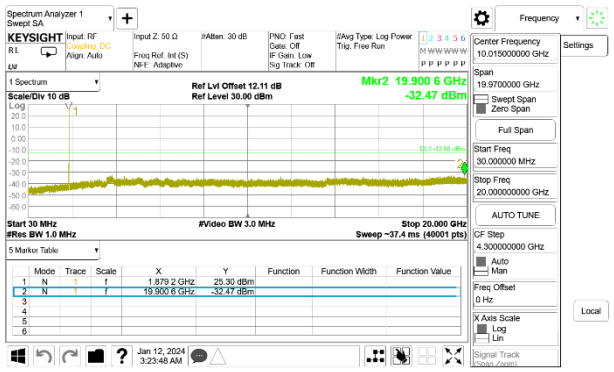
9.3.4. WCDMA BAND 2



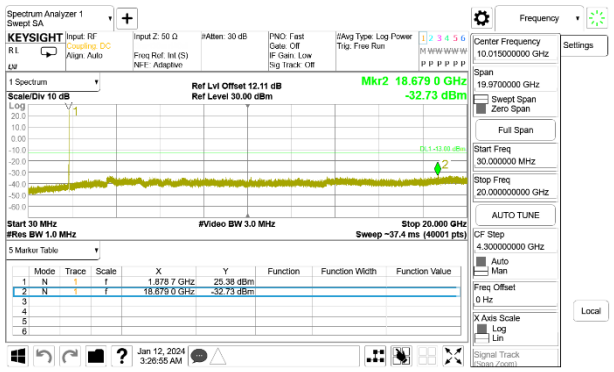
WCDMA Band 2 Rel 99 Low Channel, ID:39005



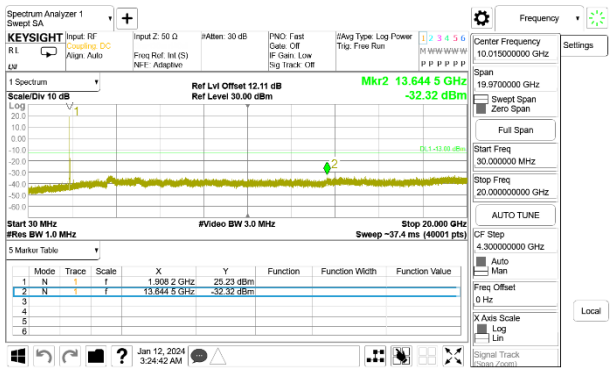
WCDMA Band 2 HSDPA Low Channel, ID:39005



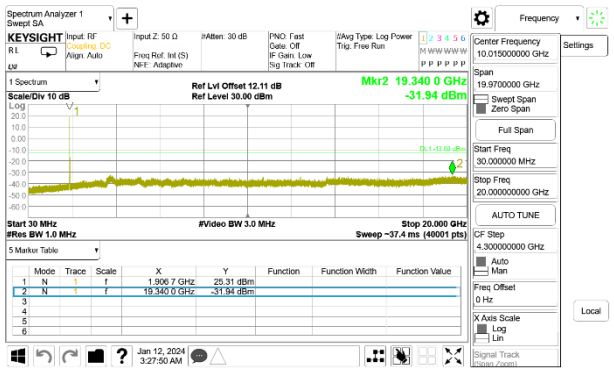
WCDMA Band 2 Rel 99 Middle Channel, ID:39005



WCDMA Band 2 HSDPA Middle Channel, ID:39005

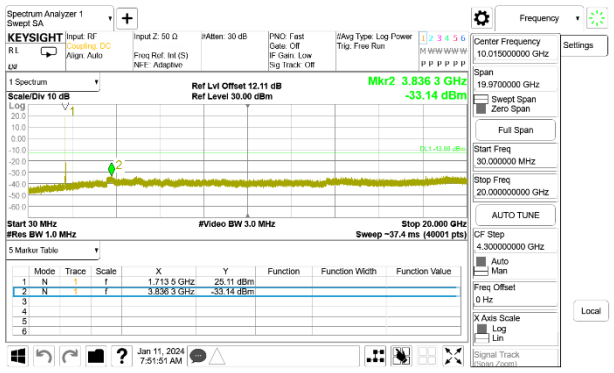


WCDMA Band 2 Rel 99 High Channel, ID:39005

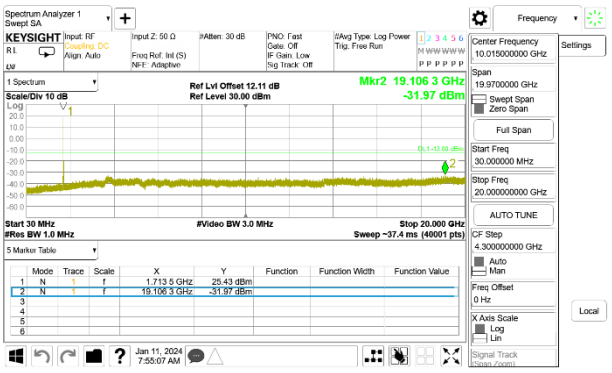


WCDMA Band 2 HSDPA High Channel, ID:39005

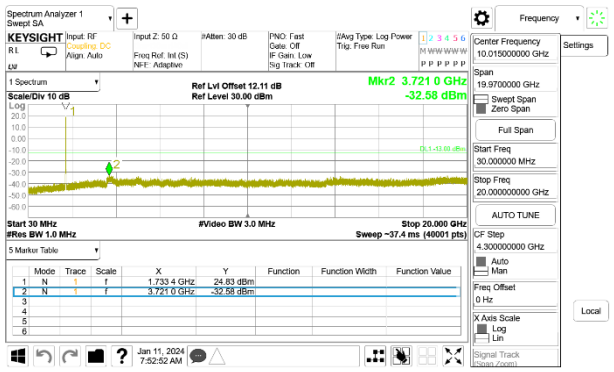
9.3.5. WCDMA BAND 4



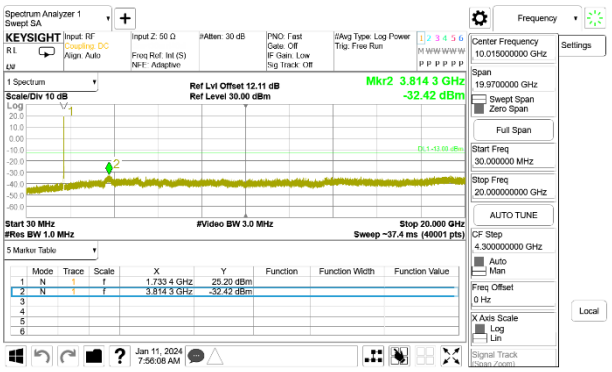
WCDMA Band 4 Rel 99 Low Channel, ID:39005



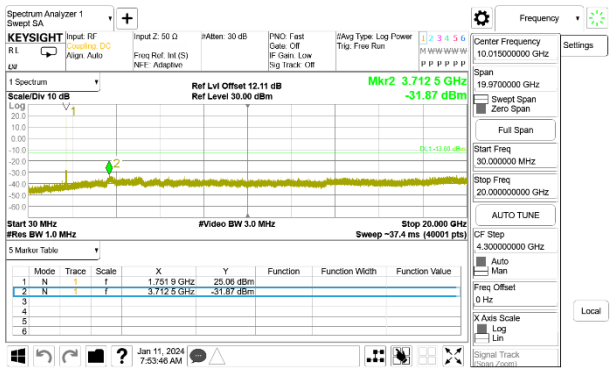
WCDMA Band 4 HSDPA Low Channel, ID:39005



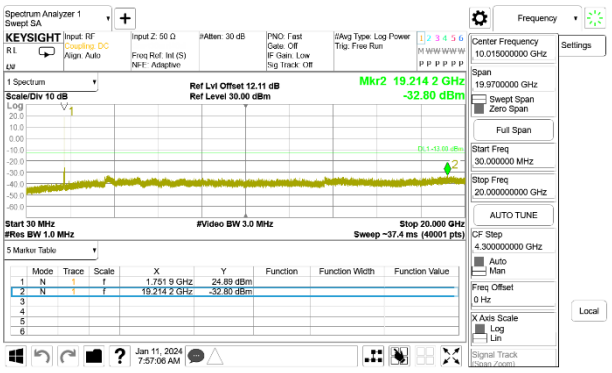
WCDMA Band 4 Rel 99 Middle Channel, ID:39005



WCDMA Band 4 HSDPA Middle Channel, ID:39005



WCDMA Band 4 Rel 99 High Channel, ID:39005



WCDMA Band 4 HSDPA High Channel, ID:39005

9.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54

LIMITS

FCC §24.235 & §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = −30°C to +50°C
- Voltage = (85% - 115%)

  Low voltage, 3.6VDC, Normal, 3.89VDC and High voltage, 4.48VDC.
  End Voltage, 3.35VDC.

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

Frequency Stability vs Voltage:
The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

9.4.1. GSM

Test Engineer ID:	32061WY	Test Date:	2024-03-22 to 2024-03-25

GPRS 850

Band	850	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	824.0326	848.9642			
Extreme (50°C)		824.0326	848.9642	15.2	0.018	Yes
Extreme (40°C)		824.0326	848.9642	8.5	0.010	Yes
Extreme (30°C)		824.0326	848.9642	5.8	0.007	Yes
Extreme (10°C)		824.0326	848.9642	-8.7	-0.010	Yes
Extreme (0°C)		824.0326	848.9642	7.1	0.008	Yes
Extreme (-10°C)		824.0326	848.9642	20.2	0.024	Yes
Extreme (-20°C)		824.0326	848.9642	4.1	0.005	Yes
Extreme (-30°C)		824.0326	848.9642	20.8	0.025	Yes
20°C	15%	824.0326	848.9642	5.1	0.006	Yes
	-15%	824.0326	848.9642	18.7	0.022	Yes
	End Point Voltage	824.0326	848.9642	11.1	0.013	Yes

GPRS 1900

Band	1900	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1910			
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	1850.0232	1909.9799			
Extreme (50°C)		1850.0232	1909.9799	14.6	0.008	Yes
Extreme (40°C)		1850.0231	1909.9799	-9.7	-0.005	Yes
Extreme (30°C)		1850.0231	1909.9799	-16.0	-0.009	Yes
Extreme (10°C)		1850.0232	1909.9799	28.3	0.015	Yes
Extreme (0°C)		1850.0232	1909.9799	16.2	0.009	Yes
Extreme (-10°C)		1850.0232	1909.9799	31.1	0.017	Yes
Extreme (-20°C)		1850.0232	1909.9799	54.3	0.029	Yes
Extreme (-30°C)		1850.0232	1909.9799	11.3	0.006	Yes
20°C	15%	1850.0231	1909.9799	-13.2	-0.007	Yes
	-15%	1850.0232	1909.9799	27.1	0.014	Yes
	End Point Voltage	1850.0232	1909.9799	15.3	0.008	Yes

9.4.2. WCDMA

Test Engineer ID:	32546JB	Test Date:	2024-03-20

WCDMA REL 99 BAND 5

Band	5	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		2.5	
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	824.1896	848.8347			
Extreme (50°C)		824.1896	848.8347	-7.6	-0.009	Yes
Extreme (40°C)		824.1896	848.8347	-9.3	-0.011	Yes
Extreme (30°C)		824.1896	848.8347	-8.1	-0.010	Yes
Extreme (10°C)		824.1896	848.8347	3.7	0.004	Yes
Extreme (0°C)		824.1896	848.8347	6.9	0.008	Yes
Extreme (-10°C)		824.1896	848.8347	8.5	0.010	Yes
Extreme (-20°C)		824.1896	848.8347	11.5	0.014	Yes
Extreme (-30°C)		824.1896	848.8347	8.2	0.010	Yes
20°C	15%	824.1896	848.8347	-4.3	-0.005	Yes
	-15%	824.1896	848.8347	-18.7	-0.022	Yes
	End Point Voltage	824.1896	848.8347	-18.1	-0.022	Yes

WCDMA REL 99 BAND 2

Band	2	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1910		2.5	
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage					
Normal (20°C)	Normal	1850.1875	1909.8879			
Extreme (50°C)		1850.1875	1909.8879	-8.0	-0.004	Yes
Extreme (40°C)		1850.1875	1909.8879	-7.5	-0.004	Yes
Extreme (30°C)		1850.1875	1909.8879	-6.9	-0.004	Yes
Extreme (10°C)		1850.1875	1909.8879	-5.2	-0.003	Yes
Extreme (0°C)		1850.1875	1909.8879	6.1	0.003	Yes
Extreme (-10°C)		1850.1875	1909.8879	6.4	0.003	Yes
Extreme (-20°C)		1850.1875	1909.8879	8.8	0.005	Yes
Extreme (-30°C)		1850.1875	1909.8879	8.6	0.005	Yes
20°C	15%	1850.1875	1909.8879	4.2	0.002	Yes
	-15%	1850.1875	1909.8879	-5.3	-0.003	Yes
	End Point Voltage	1850.1875	1909.8879	-8.1	-0.004	Yes

WCDMA REL 99 BAND 4

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	1710.1369	1754.8717			
Extreme (50°C)		1710.1369	1754.8717	-16.2	-0.009	Yes
Extreme (40°C)		1710.1369	1754.8717	-15.2	-0.009	Yes
Extreme (30°C)		1710.1369	1754.8717	-10.9	-0.006	Yes
Extreme (10°C)		1710.1369	1754.8717	7.3	0.004	Yes
Extreme (0°C)		1710.1369	1754.8717	13.1	0.008	Yes
Extreme (-10°C)		1710.1369	1754.8717	19.7	0.011	Yes
Extreme (-20°C)		1710.1369	1754.8717	19.0	0.011	Yes
Extreme (-30°C)		1710.1369	1754.8717	12.6	0.007	Yes
20°C	15%	1710.1369	1754.8717	17.1	0.010	Yes
	-15%	1710.1369	1754.8717	20.6	0.012	Yes
	End Point Voltage	1710.1369	1754.8717	-36.9	-0.021	Yes

9.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

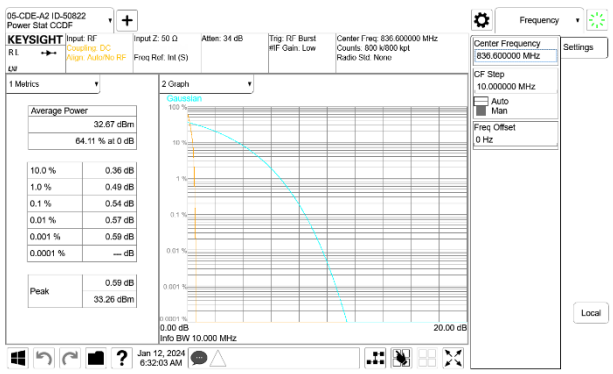
In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

RESULT

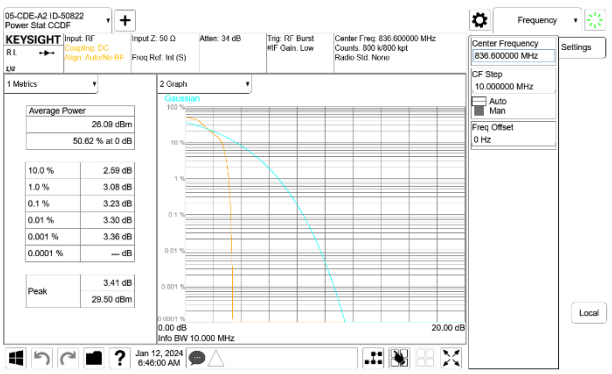
Worst case antenna was used to make measurement. The results from all CCDF plots are passed with 13dB peak-to-average power ratio criteria.

Test Engineer ID:	39005	**Test Date:**	2024-01-12

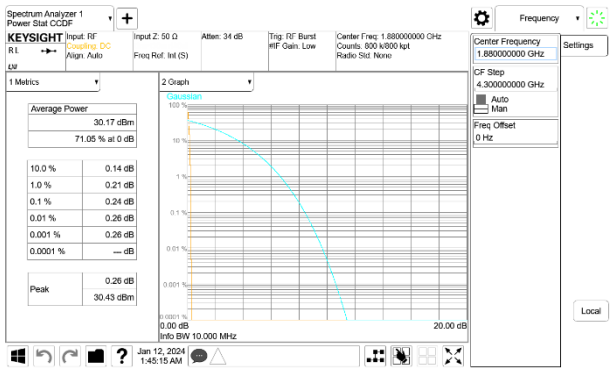
9.5.1. GSM



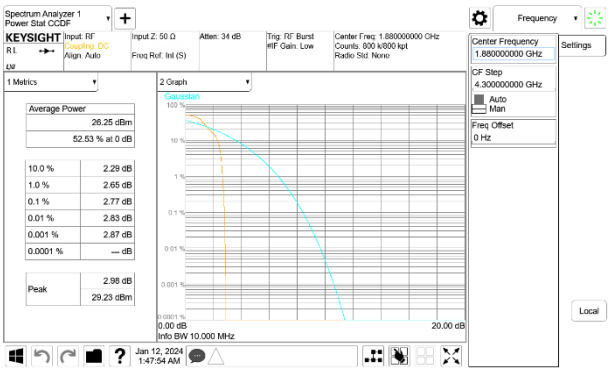
GSM 850 GPRS Middle Channel



GSM 850 EGPRS Middle Channel

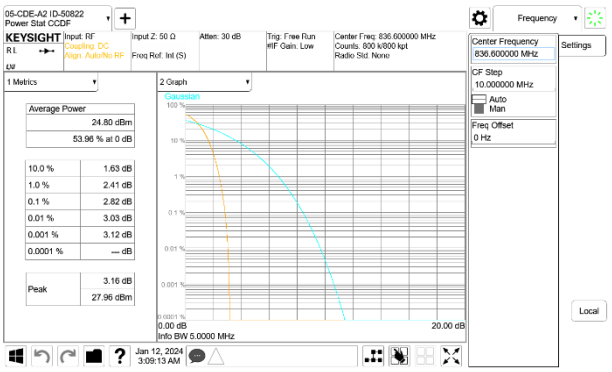


GSM 1900 GPRS Middle Channel, ID:28498

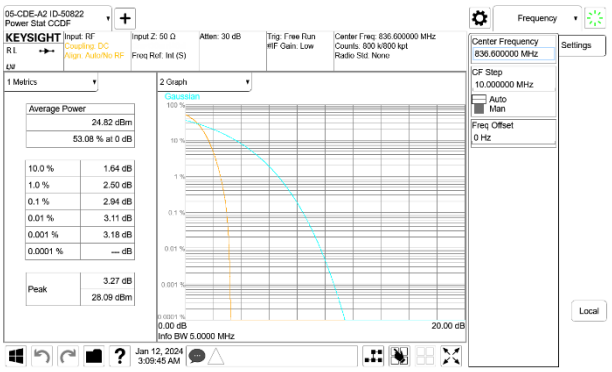


GSM 1900 EGPRS Middle Channel, ID:28498

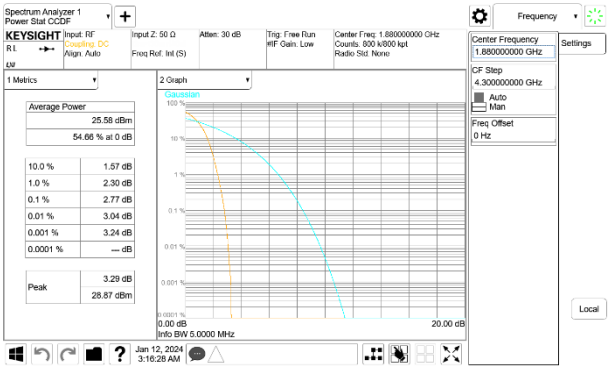
9.5.2. WCDMA



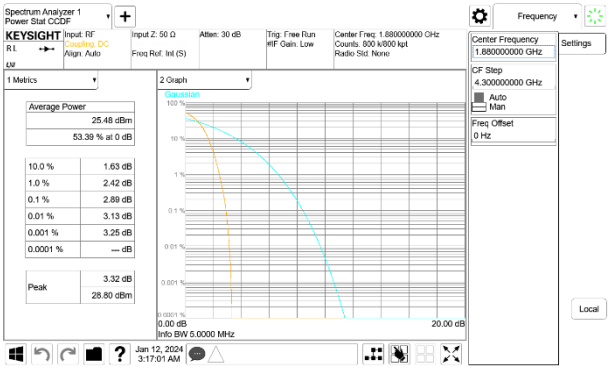
WCDMA Band 5 Rel 99 Middle Channel, ID:50822



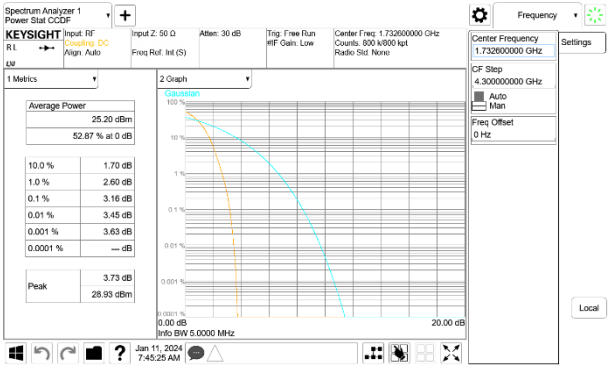
WCDMA Band 5 HSDPA Middle Channel, ID:50822



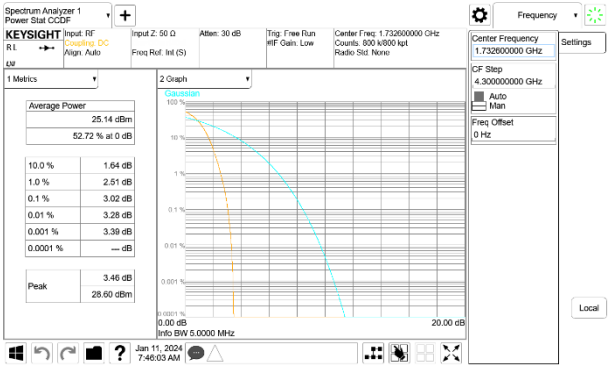
WCDMA Band 2 Rel 99 Middle Channel, ID:39005



WCDMA Band 2 HSDPA Middle Channel, ID:39005



WCDMA Band 4 Rel 99 Middle Channel, ID:39005



WCDMA Band 4 HSDPA Middle Channel, ID:39005

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.

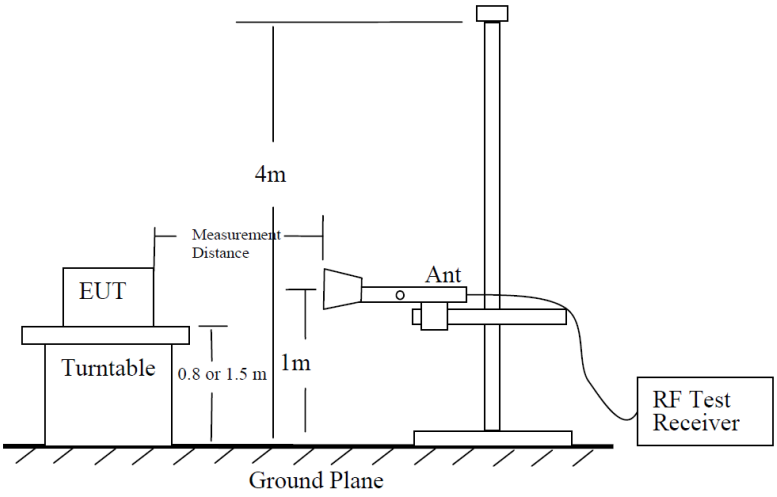


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

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

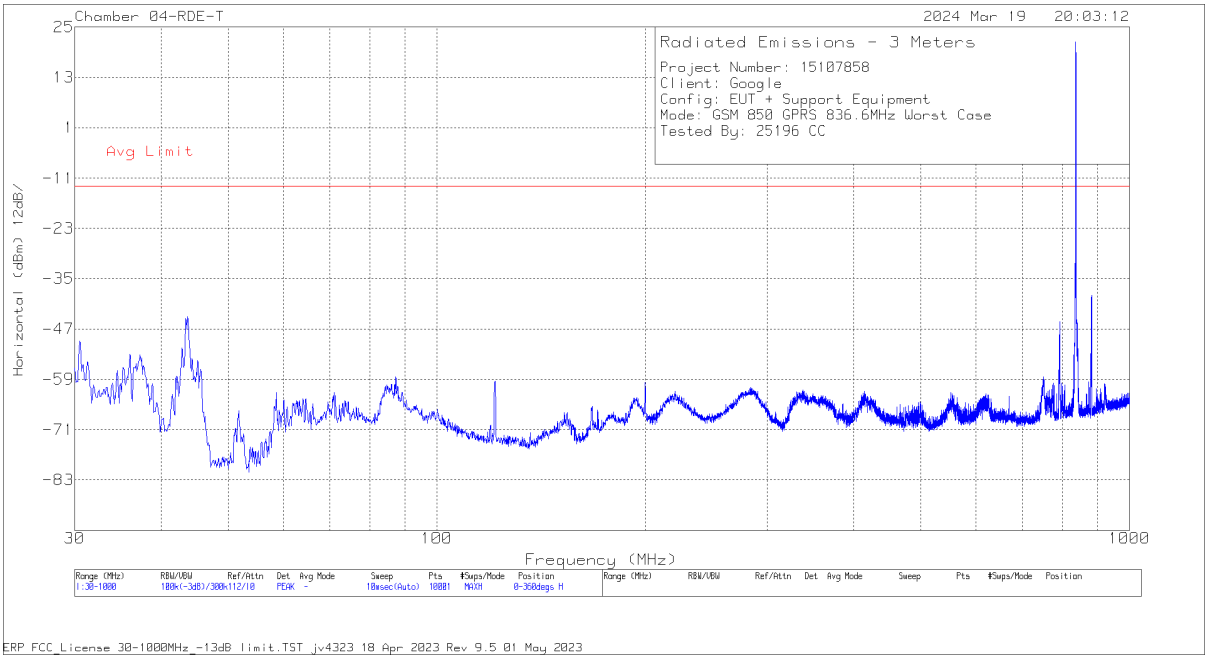
a) E (dBμV/m) = Measured amplitude level (dBμV) + Cable Loss (dB) + Antenna Factor (dB/m).
b) E (dBμV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m).
c) E (dBμV/m) = EIRP (dBm) − 20log(D) + 104.8; where D is the measurement distance (in the far field region) in m.
d) EIRP (dBm) = E (dBμV/m) + 20log(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*Log(3)=9.5424

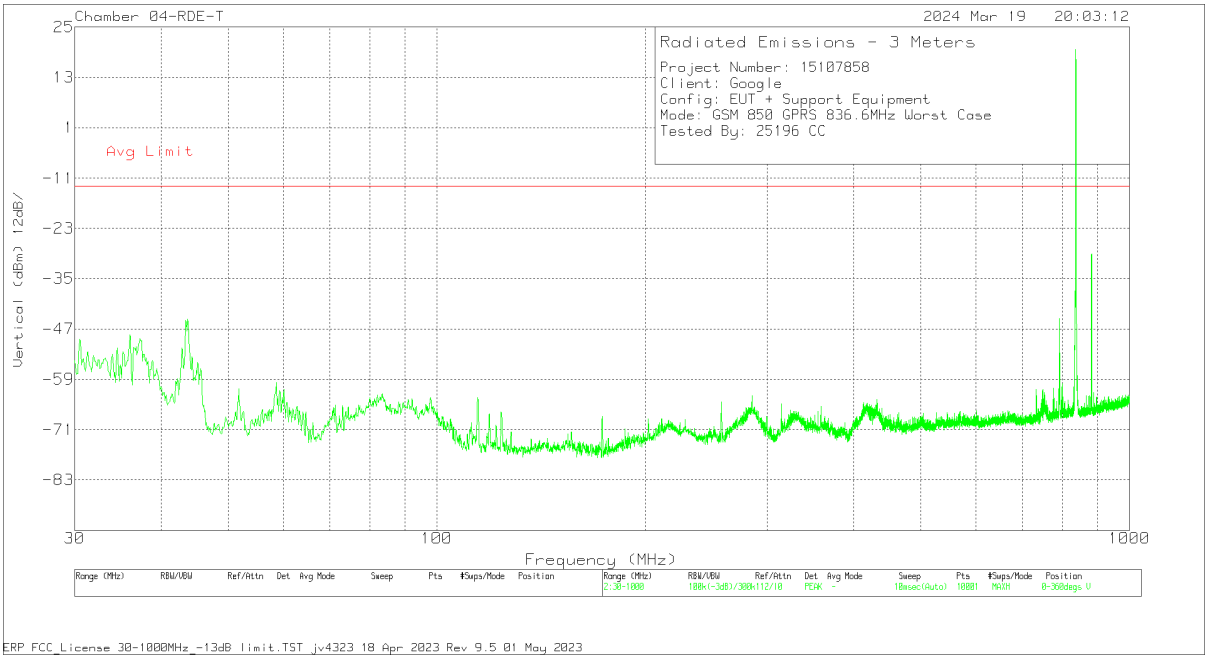
Then, EIRP (dBm) = E (dBμV/m) + 9.5424 − 104.8 = E (dBμV/m) – 95.2576

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



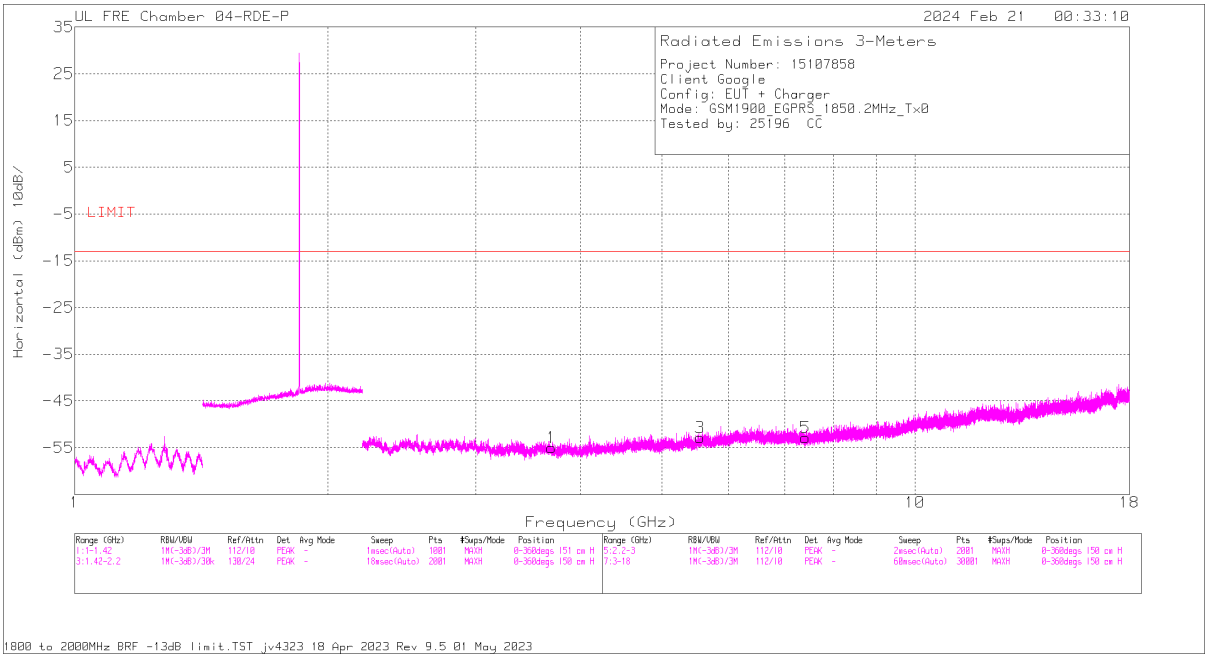
Vertical Polarity

Trace Markers

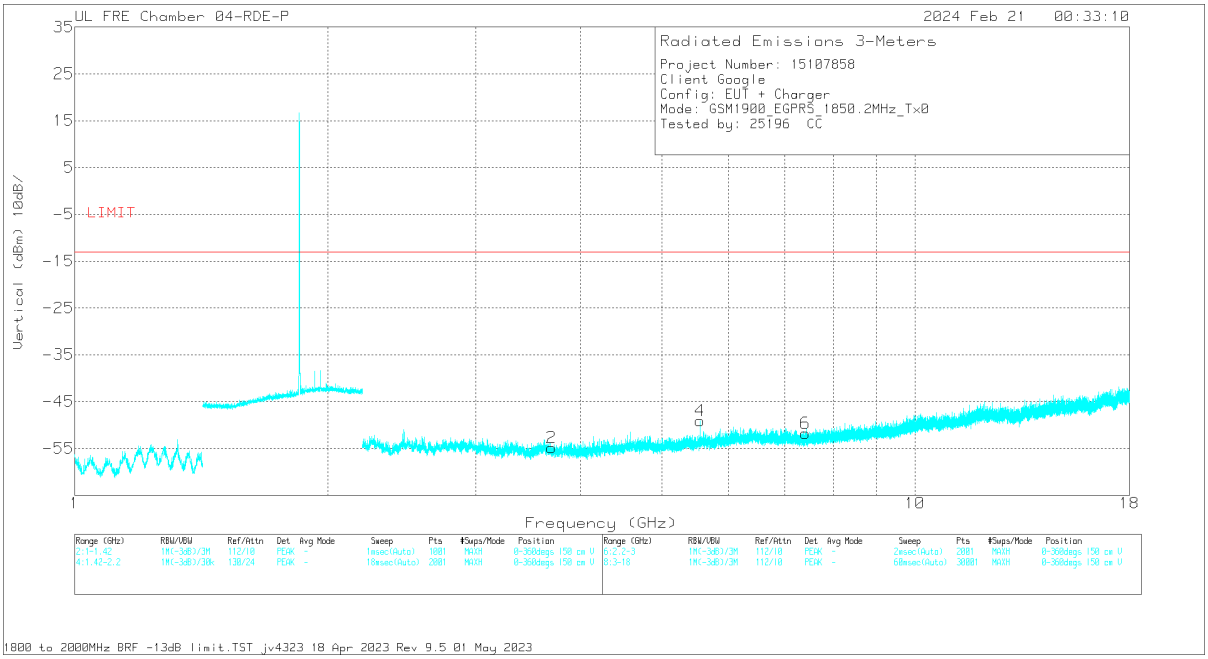
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	222009 ACF (dB)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Avg Limit	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 121.277	46.93	Pk	19.8	-31	-95.2	-59.47	-13	-46.47	0-360	199	H
4	* 121.762	36.37	Pk	19.9	-31	-95.2	-69.93	-13	-56.93	0-360	100	V
1	43.677	65.85	Pk	16.9	-31.6	-95.2	-44.05	-13	-31.05	0-360	199	H
2	43.677	65.29	Pk	16.9	-31.6	-95.2	-44.61	-13	-31.61	0-360	100	V
5	199.847	47.69	Pk	18.5	-30.7	-95.2	-59.71	-13	-46.71	0-360	199	H
6	200.332	35.29	Pk	18.4	-30.7	-95.2	-72.21	-13	-59.21	0-360	199	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector

Example Plot Above 1GHz



Horizontal Polarity



Vertical Polarity

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	3.692	54	Pk	33.1	-95.2	-46.78	-54.88	-13	-41.88	0-360	150	V
1	3.6935	53.89	Pk	33.1	-95.2	-46.81	-55.02	-13	-42.02	0-360	150	H
3	5.548	56.01	Pk	34.7	-95.2	-48.31	-52.8	-13	-39.8	0-360	150	H
4	5.551	59.76	Pk	34.7	-95.2	-48.33	-49.07	-13	-36.07	0-360	150	V
5	7.409	54.69	Pk	35.5	-95.2	-47.85	-52.86	-13	-39.86	0-360	150	H
6	7.409	55.8	Pk	35.5	-95.2	-47.85	-51.75	-13	-38.75	0-360	150	V

Pk - Peak detector

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 0

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §27.53.

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.

TEST PROCEDURE

KDB 971168 D01

RESULTS

10.1.1. GSM 850

GPRS MODE

Project #:	15107858
Date:	2024-01-08
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 850
Chamber #:	04-RDE-T

Frequency (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2MHz									
1645.75	57.19	Pk	28.4	-95.2	-47.73	-57.34	-13	-44.34	H
2482.75	57.58	Pk	32.2	-95.2	-48.38	-53.8	-13	-40.8	H
3324.658	56.31	Pk	32.7	-95.2	-45.21	-51.4	-13	-38.4	H
1647.1	56.92	Pk	28.4	-95.2	-47.68	-57.56	-13	-44.56	V
2471.05	58.22	Pk	32.2	-95.2	-48.44	-53.22	-13	-40.22	V
3298.6	54.21	Pk	32.7	-95.2	-45.26	-53.55	-13	-40.55	V
Mid Channel, 836.6MHz									
1651.411	58.76	Pk	28.4	-95.2	-47.68	-55.72	-13	-42.72	H
2495.8	58.72	Pk	32.3	-95.2	-48.22	-52.4	-13	-39.4	H
3362.5	54.58	Pk	32.7	-95.2	-45.38	-53.3	-13	-40.3	H
1663.75	56.24	Pk	28.6	-95.2	-47.44	-57.8	-13	-44.8	V
2488.6	58.42	Pk	32.3	-95.2	-48.29	-52.77	-13	-39.77	V
3352.6	54.47	Pk	32.7	-95.2	-45.5	-53.53	-13	-40.53	V
High Channel, 848.8MHz									
1700.65	56.89	Pk	29	-95.2	-47.63	-56.94	-13	-43.94	H
2558.35	57.16	Pk	32.2	-95.2	-47.36	-53.2	-13	-40.2	H
3383.43	55.36	Pk	32.7	-95.2	-45.4	-52.54	-13	-39.54	H
1694.8	56.58	Pk	28.9	-95.2	-47.39	-57.11	-13	-44.11	V
2512.073	58.93	Pk	32.3	-95.2	-48.04	-52.01	-13	-39.01	V
3389.95	53.73	Pk	32.7	-95.2	-45.44	-54.21	-13	-41.21	V

EGPRS MODE

Project #:	15107858
Date:	2024-02-20
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 850
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2MHz									
1.64826	74.52	Pk	29.8	-95.2	-49.56	-40.44	-13	-27.44	H
2.472815	69.29	Pk	32.2	-95.2	-50.26	-43.97	-13	-30.97	H
3.29572	56.18	Pk	32.9	-95.2	-47.57	-53.69	-13	-40.69	H
1.648214	70.32	Pk	29.8	-95.2	-49.56	-44.64	-13	-31.64	V
2.47271	67.82	Pk	32.2	-95.2	-50.26	-45.44	-13	-32.44	V
3.30364	56.05	Pk	32.9	-95.2	-47.57	-53.82	-13	-40.82	V
Mid Channel, 836.6MHz									
1.673119	71.19	Pk	30.1	-95.2	-49.62	-43.53	-13	-30.53	H
2.46192	60.27	Pk	32.1	-95.2	-50.34	-53.17	-13	-40.17	H
3.3516	55.67	Pk	32.8	-95.2	-47.32	-54.05	-13	-41.05	H
1.67324	69.02	Pk	30.1	-95.2	-49.62	-45.7	-13	-32.7	V
2.450759	65.35	Pk	32.1	-95.2	-50.42	-48.17	-13	-35.17	V
3.34148	55.76	Pk	32.8	-95.2	-47.29	-53.93	-13	-40.93	V
High Channel, 848.8MHz									
1.697729	66.13	Pk	30.3	-95.2	-49.5	-48.27	-13	-35.27	H
2.41176	57.9	Pk	32.1	-95.2	-50.42	-55.62	-13	-42.62	H
3.39956	55.47	Pk	32.7	-95.2	-47	-54.03	-13	-41.03	H
1.6972	58.48	Pk	30.3	-95.2	-49.51	-55.93	-13	-42.93	V
2.416143	61.43	Pk	32.1	-95.2	-50.4	-52.07	-13	-39.07	V
3.3978	55.54	Pk	32.7	-95.2	-47.01	-53.97	-13	-40.97	V

10.1.2. GSM 1900

GPRS MODE

Project #:	15107858
Date:	2024-01-08
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 1900
Chamber #:	04-RDE-T

Frequency (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz									
3694.5	53.7	Pk	33.2	-95.2	-44.91	-53.21	-13	-40.21	H
5553	53.52	Pk	34.5	-95.2	-45.12	-52.3	-13	-39.3	H
7425.5	53.95	Pk	35.7	-95.2	-44.37	-49.92	-13	-36.92	H
3682.5	54.11	Pk	33.1	-95.2	-45.22	-53.21	-13	-40.21	V
5550.5	54.45	Pk	34.5	-95.2	-45.16	-51.41	-13	-38.41	V
7475	53.67	Pk	35.7	-95.2	-44.29	-50.12	-13	-37.12	V
Mid Channel, 1880MHz									
3769	55.23	Pk	33.3	-95.2	-45.43	-52.1	-13	-39.1	H
5639.5	54.16	Pk	34.5	-95.2	-45.31	-51.85	-13	-38.85	H
7497	53.6	Pk	35.7	-95.2	-44.53	-50.43	-13	-37.43	H
3783	54.3	Pk	33.3	-95.2	-45.43	-53.03	-13	-40.03	V
5626	54.02	Pk	34.5	-95.2	-45.41	-52.09	-13	-39.09	V
7547.5	53.07	Pk	35.8	-95.2	-44.17	-50.5	-13	-37.5	V
High Channel, 1909.8MHz									
3809.5	53.07	Pk	33.4	-95.2	-45.36	-54.09	-13	-41.09	H
5728.5	53.97	Pk	34.6	-95.2	-45.2	-51.83	-13	-38.83	H
7629.5	53.52	Pk	35.8	-95.2	-43.85	-49.73	-13	-36.73	H
3804	54.26	Pk	33.4	-95.2	-45.2	-52.74	-13	-39.74	V
5698.5	53.8	Pk	34.5	-95.2	-45.34	-52.24	-13	-39.24	V
7652	53.31	Pk	35.8	-95.2	-43.82	-49.91	-13	-36.91	V

EGPRS MODE

Project #:	15107843
Date:	2024-02-20
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz									
3.705	53.67	Pk	33.1	-95.2	-46.76	-55.19	-13	-42.19	H
5.542	56	Pk	34.7	-95.2	-48.38	-52.88	-13	-39.88	H
7.4085	55.65	Pk	35.5	-95.2	-47.86	-51.91	-13	-38.91	H
3.7075	53.98	Pk	33.1	-95.2	-46.78	-54.9	-13	-41.9	V
5.5415	56.29	Pk	34.7	-95.2	-48.39	-52.6	-13	-39.6	V
7.4065	54.51	Pk	35.5	-95.2	-47.9	-53.09	-13	-40.09	V
Mid Channel, 1880MHz									
3.7595	54.64	Pk	33	-95.2	-46.84	-54.4	-13	-41.4	H
5.645	56.45	Pk	34.8	-95.2	-48.05	-52	-13	-39	H
7.537	55.61	Pk	35.6	-95.2	-47.93	-51.92	-13	-38.92	H
3.76	54.08	Pk	33	-95.2	-46.84	-54.96	-13	-41.96	V
5.6455	55.94	Pk	34.8	-95.2	-48.06	-52.52	-13	-39.52	V
7.5355	55.73	Pk	35.6	-95.2	-47.96	-51.83	-13	-38.83	V
High Channel, 1909.8MHz									
3.8155	55.29	Pk	33	-95.2	-47.07	-53.98	-13	-40.98	H
5.724	55.01	Pk	34.9	-95.2	-47.96	-53.25	-13	-40.25	H
7.637	55.16	Pk	35.7	-95.2	-47.81	-52.15	-13	-39.15	H
3.817	55.3	Pk	33	-95.2	-47.02	-53.92	-13	-40.92	V
5.7265	54.63	Pk	34.9	-95.2	-47.96	-53.63	-13	-40.63	V
7.64	55.81	Pk	35.7	-95.2	-47.77	-51.46	-13	-38.46	V

10.1.3. WCDMA BAND 5

REL 99 MODE

Project #:	15107858
Date:	2024-02-13
Test Engineer:	23522 SI
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 5
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz									
1.65276	57.08	Pk	29.9	-95.2	-47.72	-55.94	-13	-42.94	H
2.47908	58.13	Pk	32.2	-95.2	-47.86	-52.73	-13	-39.73	H
3.3054	55.24	Pk	32.9	-95.2	-46.46	-53.52	-13	-40.52	H
1.65276	56.59	Pk	29.9	-95.2	-47.72	-56.43	-13	-43.43	V
2.47908	54.75	Pk	32.2	-95.2	-47.86	-56.11	-13	-43.11	V
3.3054	54.41	Pk	32.9	-95.2	-46.46	-54.35	-13	-41.35	V
Mid Channel, 836.6MHz									
1.67344	56.05	Pk	30.1	-95.2	-47.73	-56.78	-13	-43.78	H
2.50988	56.02	Pk	32.3	-95.2	-47.82	-54.7	-13	-41.7	H
3.34632	54.07	Pk	32.8	-95.2	-46.39	-54.72	-13	-41.72	H
1.67344	56.31	Pk	30.1	-95.2	-47.73	-56.52	-13	-43.52	V
2.50988	56.98	Pk	32.3	-95.2	-47.82	-53.74	-13	-40.74	V
3.34632	54.31	Pk	32.8	-95.2	-46.39	-54.48	-13	-41.48	V
High Channel, 846.6MHz									
1.69324	55.54	Pk	30.2	-95.2	-47.87	-57.33	-13	-44.33	H
2.5398	58.06	Pk	32.4	-95.2	-47.69	-52.43	-13	-39.43	H
3.38636	53.68	Pk	32.7	-95.2	-46.33	-55.15	-13	-42.15	H
1.69324	56.73	Pk	30.2	-95.2	-47.87	-56.14	-13	-43.14	V
2.5398	54.34	Pk	32.4	-95.2	-47.69	-56.15	-13	-43.15	V
3.38636	53.3	Pk	32.7	-95.2	-46.33	-55.53	-13	-42.53	V

HSDPA MODE

Project #:	15107858
Date:	2024-01-10
Test Engineer:	25019 VK
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 5
Chamber #:	04-RDE-N

Frequency (MHz)	Meter Reading (dBuV)	Det	206805 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz									
1632.7	60.62	Pk	28.2	-95.2	-52.89	-59.27	-13	-46.27	H
2449.45	61.05	Pk	32.3	-95.2	-51.77	-53.62	-13	-40.62	H
3265.75	57.43	Pk	32.8	-95.2	-50.44	-55.41	-13	-42.41	H
1632.7	61.21	Pk	28.2	-95.2	-52.89	-58.68	-13	-45.68	V
2449.45	61.58	Pk	32.3	-95.2	-51.77	-53.09	-13	-40.09	V
3265.75	58.74	Pk	32.8	-95.2	-50.44	-54.1	-13	-41.1	V
Mid Channel, 836.6MHz									
1653.4	60.43	Pk	28.3	-95.2	-52.95	-59.42	-13	-46.42	H
2480.05	59.29	Pk	32.4	-95.2	-51.34	-54.85	-13	-41.85	H
3306.25	58.42	Pk	32.7	-95.2	-50.58	-54.66	-13	-41.66	H
1653.4	60.48	Pk	28.3	-95.2	-52.95	-59.37	-13	-46.37	V
2480.05	59.32	Pk	32.4	-95.2	-51.34	-54.82	-13	-41.82	V
3306.25	57.7	Pk	32.7	-95.2	-50.58	-55.38	-13	-42.38	V
High Channel, 846.6MHz									
1673.2	59.6	Pk	28.5	-95.2	-52.75	-59.85	-13	-46.85	H
2509.75	57.98	Pk	32.4	-95.2	-51.17	-55.99	-13	-42.99	H
3346.3	58.12	Pk	32.6	-95.2	-50.17	-54.65	-13	-41.65	H
1673.2	60.61	Pk	28.5	-95.2	-52.75	-58.84	-13	-45.84	V
2509.75	58.39	Pk	32.4	-95.2	-51.17	-55.58	-13	-42.58	V
3346.3	57.27	Pk	32.6	-95.2	-50.17	-55.5	-13	-42.5	V

10.1.4. WCDMA BAND 2

REL 99 MODE

Project #:	15107858
Date:	2024-02-15
Test Engineer:	23522 SI
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 2
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz									
3.705	53.95	Pk	33.1	-95.2	-45.69	-53.84	-13	-40.84	H
5.555	51.81	Pk	34.7	-95.2	-45.84	-54.53	-13	-41.53	H
7.4095	51.77	Pk	35.5	-95.2	-44.45	-52.38	-13	-39.38	H
3.705	53.37	Pk	33.1	-95.2	-45.69	-54.42	-13	-41.42	V
5.555	52.47	Pk	34.7	-95.2	-45.84	-53.87	-13	-40.87	V
7.4095	50.87	Pk	35.5	-95.2	-44.45	-53.28	-13	-40.28	V
Mid Channel, 1880MHz									
3.76	53.93	Pk	33	-95.2	-46.09	-54.36	-13	-41.36	H
5.64	52.5	Pk	34.8	-95.2	-45.88	-53.78	-13	-40.78	H
7.5205	51.05	Pk	35.6	-95.2	-43.97	-52.52	-13	-39.52	H
3.76	52.23	Pk	33	-95.2	-46.09	-56.06	-13	-43.06	V
5.64	52.4	Pk	34.8	-95.2	-45.88	-53.88	-13	-40.88	V
7.5205	49.98	Pk	35.6	-95.2	-43.97	-53.59	-13	-40.59	V
High Channel, 1907.6MHz									
3.8155	54.42	Pk	33	-95.2	-47.07	-54.85	-13	-41.85	H
5.723	53.81	Pk	34.9	-95.2	-47.96	-54.45	-13	-41.45	H
7.6305	52.49	Pk	35.7	-95.2	-47.74	-54.75	-13	-41.75	H
3.8155	54.45	Pk	33	-95.2	-47.07	-54.82	-13	-41.82	V
5.723	55	Pk	34.9	-95.2	-47.96	-53.26	-13	-40.26	V
7.6305	52.25	Pk	35.7	-95.2	-47.74	-54.99	-13	-41.99	V

HSDPA MODE

Project #:	15107858
Date:	2024-01-09
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 2
Chamber #:	04-RDE-T

Frequency (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz									
3708	53.42	Pk	33.2	-95.2	-45.25	-53.83	-13	-40.83	H
5554.051	61.64	Pk	34.5	-95.2	-45.16	-44.22	-13	-31.22	H
7403	53.57	Pk	35.7	-95.2	-44.2	-50.13	-13	-37.13	H
3681.5	53.4	Pk	33.1	-95.2	-45.16	-53.86	-13	-40.86	V
5558.535	55.93	Pk	34.4	-95.2	-45.3	-50.17	-13	-37.17	V
7401	53.88	Pk	35.7	-95.2	-44.19	-49.81	-13	-36.81	V
Mid Channel, 1880MHz									
3760.5	53.83	Pk	33.3	-95.2	-45.34	-53.41	-13	-40.41	H
5643.457	54.99	Pk	34.5	-95.2	-45.38	-51.09	-13	-38.09	H
7533.5	53.29	Pk	35.7	-95.2	-44.13	-50.34	-13	-37.34	H
3721.5	53.83	Pk	33.2	-95.2	-45.15	-53.32	-13	-40.32	V
5637.635	58.16	Pk	34.5	-95.2	-45.39	-47.93	-13	-34.93	V
7492	54.08	Pk	35.7	-95.2	-44.49	-49.91	-13	-36.91	V
High Channel, 1907.6MHz									
3828	54.72	Pk	33.4	-95.2	-45.27	-52.35	-13	-39.35	H
5725.5	55.25	Pk	34.6	-95.2	-45.16	-50.51	-13	-37.51	H
7651	52.44	Pk	35.8	-95.2	-43.78	-50.74	-13	-37.74	H
3830.5	54.14	Pk	33.4	-95.2	-45.36	-53.02	-13	-40.02	V
5725	55.04	Pk	34.6	-95.2	-45.15	-50.71	-13	-37.71	V
7701	52.95	Pk	35.8	-95.2	-43.95	-50.4	-13	-37.4	V

10.1.5. WCDMA BAND 4

REL 99 MODE

Project #:	15107858
Date:	2024-02-14
Test Engineer:	23522 SI
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 4
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4MHz									
3.424	56.26	Pk	32.8	-95.2	-46.23	-52.37	-13	-39.37	H
5.1375	52.95	Pk	34.4	-95.2	-46.33	-54.18	-13	-41.18	H
6.8495	50.02	Pk	35.6	-95.2	-43.93	-53.51	-13	-40.51	H
3.424	52.43	Pk	32.8	-95.2	-46.23	-56.2	-13	-43.2	V
5.1375	51.1	Pk	34.4	-95.2	-46.33	-56.03	-13	-43.03	V
6.8495	50.65	Pk	35.6	-95.2	-43.93	-52.88	-13	-39.88	V
Mid Channel, 1732.6MHz									
3.465	53.54	Pk	32.8	-95.2	-45.92	-54.78	-13	-41.78	H
5.1975	55.01	Pk	34.5	-95.2	-46.12	-51.81	-13	-38.81	H
6.93	51.14	Pk	35.6	-95.2	-44.77	-53.23	-13	-40.23	H
3.465	52.64	Pk	32.8	-95.2	-45.92	-55.68	-13	-42.68	V
5.1975	51.96	Pk	34.5	-95.2	-46.12	-54.86	-13	-41.86	V
6.93	50.8	Pk	35.6	-95.2	-44.77	-53.57	-13	-40.57	V
High Channel, 1752.6MHz									
3.505	54.56	Pk	32.9	-95.2	-46.16	-53.9	-13	-40.9	H
5.2575	56.78	Pk	34.6	-95.2	-46.16	-49.98	-13	-36.98	H
7.01	50.96	Pk	35.7	-95.2	-44.79	-53.33	-13	-40.33	H
3.505	52.63	Pk	32.9	-95.2	-46.16	-55.83	-13	-42.83	V
5.2575	52.49	Pk	34.6	-95.2	-46.16	-54.27	-13	-41.27	V
7.01	51.45	Pk	35.7	-95.2	-44.79	-52.84	-13	-39.84	V

HSDPA MODE

Project #:	15107858
Date:	2024-01-09
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 4
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4MHz									
3431.5	53.56	Pk	32.7	-95.2	-45.2	-54.14	-13	-41.14	H
5139.5	56.98	Pk	34.2	-95.2	-46.25	-50.27	-13	-37.27	H
6846	54.25	Pk	35.6	-95.2	-44.55	-49.9	-13	-36.9	H
3433.5	53.58	Pk	32.7	-95.2	-45.3	-54.22	-13	-41.22	V
5131	54.25	Pk	34.2	-95.2	-46.09	-52.84	-13	-39.84	V
6811	53.29	Pk	35.6	-95.2	-44.41	-50.72	-13	-37.72	V
Mid Channel, 1732.6MHz									
3481	54.39	Pk	32.8	-95.2	-45.3	-53.31	-13	-40.31	H
5200.5	56.01	Pk	34.3	-95.2	-46.1	-50.99	-13	-37.99	H
6943	53.78	Pk	35.6	-95.2	-43.99	-49.81	-13	-36.81	H
3488	54.51	Pk	32.8	-95.2	-45.17	-53.06	-13	-40.06	V
5198	54.91	Pk	34.3	-95.2	-46.12	-52.11	-13	-39.11	V
6983	53.19	Pk	35.6	-95.2	-43.37	-49.78	-13	-36.78	V
High Channel, 1752.6MHz									
3506	55.15	Pk	32.8	-95.2	-45.24	-52.49	-13	-39.49	H
5260.502	59.46	Pk	34.4	-95.2	-45.88	-47.22	-13	-34.22	H
7037	53.62	Pk	35.6	-95.2	-43.6	-49.58	-13	-36.58	H
3496.5	54.35	Pk	32.8	-95.2	-45.17	-53.22	-13	-40.22	V
5261.025	58.15	Pk	34.4	-95.2	-45.86	-48.51	-13	-35.51	V
7014	52.8	Pk	35.6	-95.2	-43.68	-50.48	-13	-37.48	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 1

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §27.53.

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.

TEST PROCEDURE

KDB 971168 D01

RESULTS

10.2.1. GSM 850

GPRS MODE

Project #:	15107858
Date:	2024-01-08
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 850
Chamber #:	04-RDE-T

Frequency (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2MHz									
1653.4	56.49	Pk	28.5	-95.2	-47.54	-57.75	-13	-44.75	H
2479.6	57.8	Pk	32.2	-95.2	-48.42	-53.62	-13	-40.62	H
3293.2	53.54	Pk	32.7	-95.2	-44.99	-53.95	-13	-40.95	H
1660.6	56.98	Pk	28.6	-95.2	-47.19	-56.81	-13	-43.81	V
2480.05	56.72	Pk	32.2	-95.2	-48.37	-54.65	-13	-41.65	V
3287.35	53.09	Pk	32.7	-95.2	-45.3	-54.71	-13	-41.71	V
Mid Channel, 836.6MHz									
1661.95	55.96	Pk	28.6	-95.2	-47.26	-57.9	-13	-44.9	H
2494.9	58.01	Pk	32.3	-95.2	-48.36	-53.25	-13	-40.25	H
3330.55	53.22	Pk	32.7	-95.2	-45.37	-54.65	-13	-41.65	H
1658.35	56.17	Pk	28.5	-95.2	-47.34	-57.87	-13	-44.87	V
2505.7	58.05	Pk	32.3	-95.2	-48.08	-52.93	-13	-39.93	V
3326.05	53.87	Pk	32.7	-95.2	-45.15	-53.78	-13	-40.78	V
High Channel, 848.8MHz									
1710.1	56.54	Pk	29.2	-95.2	-47.78	-57.24	-13	-44.24	H
2536.3	56.77	Pk	32.3	-95.2	-47.41	-53.54	-13	-40.54	H
3380.5	54.35	Pk	32.7	-95.2	-45.31	-53.46	-13	-40.46	H
1704.7	56.77	Pk	29.1	-95.2	-47.8	-57.13	-13	-44.13	V
2528.2	56.79	Pk	32.3	-95.2	-47.68	-53.79	-13	-40.79	V
3370.6	54.25	Pk	32.7	-95.2	-45.45	-53.7	-13	-40.7	V

EGPRS MODE

Project #:	15107858
Date:	2024-02-20
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 850
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2MHz									
1.64836	60.62	Pk	28.7	-95.2	-49.56	-55.44	-13	-42.44	H
2.472736	68.57	Pk	32.1	-95.2	-50.26	-44.79	-13	-31.79	H
3.2966	55.54	Pk	32.9	-95.2	-47.54	-54.3	-13	-41.3	H
1.648311	63.89	Pk	28.7	-95.2	-49.56	-52.17	-13	-39.17	V
2.472395	70.11	Pk	32.1	-95.2	-50.26	-43.25	-13	-30.25	V
3.2966	54.62	Pk	32.9	-95.2	-47.54	-55.22	-13	-42.22	V
Mid Channel, 836.6MHz									
1.673948	60.88	Pk	29.1	-95.2	-47.76	-52.98	-13	-39.98	H
2.510838	76.2	Pk	32.2	-95.2	-47.8	-34.6	-13	-21.6	H
4.18496	57.01	Pk	33.5	-95.2	-46.59	-51.28	-13	-38.28	H
1.674027	65.05	Pk	29.1	-95.2	-47.76	-48.81	-13	-35.81	V
2.510801	77.25	Pk	32.2	-95.2	-47.8	-33.55	-13	-20.55	V
4.18496	59.22	Pk	33.5	-95.2	-46.59	-49.07	-13	-36.07	V
High Channel, 848.8MHz									
1.6976	71.41	Pk	30.3	-95.2	-49.5	-42.99	-13	-29.99	H
2.546328	68.22	Pk	32.4	-95.2	-49.83	-44.41	-13	-31.41	H
3.39516	56.55	Pk	32.7	-95.2	-47.06	-53.01	-13	-40.01	H
1.697614	74.9	Pk	30.3	-95.2	-49.5	-39.5	-13	-26.5	V
2.546077	71	Pk	32.4	-95.2	-49.83	-41.63	-13	-28.63	V
3.39956	55.74	Pk	32.7	-95.2	-47	-53.76	-13	-40.76	V

10.2.2. WCDMA BAND 5

REL 99 MODE

Project #:	15107858
Date:	2024-02-13
Test Engineer:	23522 SI
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 5
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz									
1.65276	57.88	Pk	29.9	-95.2	-47.72	-55.14	-13	-42.14	H
2.47952	58.28	Pk	32.2	-95.2	-47.87	-52.59	-13	-39.59	H
3.30496	53.94	Pk	32.9	-95.2	-46.45	-54.81	-13	-41.81	H
1.65276	55.95	Pk	29.9	-95.2	-47.72	-57.07	-13	-44.07	V
2.47952	58.71	Pk	32.2	-95.2	-47.87	-52.16	-13	-39.16	V
3.30496	55.58	Pk	32.9	-95.2	-46.45	-53.17	-13	-40.17	V
Mid Channel, 836.6MHz									
1.67344	57.54	Pk	30.1	-95.2	-47.73	-55.29	-13	-42.29	H
2.50944	56.41	Pk	32.3	-95.2	-47.8	-54.29	-13	-41.29	H
3.34632	54.11	Pk	32.8	-95.2	-46.39	-54.68	-13	-41.68	H
1.67344	57.54	Pk	30.1	-95.2	-47.73	-55.29	-13	-42.29	V
2.50944	58.86	Pk	32.3	-95.2	-47.8	-51.84	-13	-38.84	V
3.34632	54.87	Pk	32.8	-95.2	-46.39	-53.92	-13	-40.92	V
High Channel, 846.6MHz									
1.69324	57.26	Pk	30.2	-95.2	-47.87	-55.61	-13	-42.61	H
2.53892	59.18	Pk	32.4	-95.2	-47.68	-51.3	-13	-38.3	H
3.38592	54.31	Pk	32.7	-95.2	-46.35	-54.54	-13	-41.54	H
1.69324	57.14	Pk	30.2	-95.2	-47.87	-55.73	-13	-42.73	V
2.53892	57.43	Pk	32.4	-95.2	-47.68	-53.05	-13	-40.05	V
3.38592	53.86	Pk	32.7	-95.2	-46.35	-54.99	-13	-41.99	V

HSDPA MODE

Project #:	15107858
Date:	2024-01-10
Test Engineer:	25019 VK
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 5
Chamber #:	04-RDE-N

Frequency (MHz)	Meter Reading (dBuV)	Det	206805 ACF (dB/m)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz									
1632.25	59.52	Pk	28.2	-95.2	-52.87	-60.35	-13	-47.35	H
2449.45	60.21	Pk	32.3	-95.2	-51.77	-54.46	-13	-41.46	H
3265.75	57.31	Pk	32.8	-95.2	-50.44	-55.53	-13	-42.53	H
1632.25	59.76	Pk	28.2	-95.2	-52.87	-60.11	-13	-47.11	V
2449.45	60.15	Pk	32.3	-95.2	-51.77	-54.52	-13	-41.52	V
3265.75	56.84	Pk	32.8	-95.2	-50.44	-56	-13	-43	V
Mid Channel, 836.6MHz									
1653.4	60.43	Pk	28.3	-95.2	-52.95	-59.42	-13	-46.42	H
2479.6	59.11	Pk	32.4	-95.2	-51.33	-55.02	-13	-42.02	H
3306.25	58.34	Pk	32.7	-95.2	-50.58	-54.74	-13	-41.74	H
1653.4	60.9	Pk	28.3	-95.2	-52.95	-58.95	-13	-45.95	V
2479.6	59	Pk	32.4	-95.2	-51.33	-55.13	-13	-42.13	V
3306.25	57.62	Pk	32.7	-95.2	-50.58	-55.46	-13	-42.46	V
High Channel, 846.6MHz									
1673.2	59.27	Pk	28.5	-95.2	-52.75	-60.18	-13	-47.18	H
2509.75	57.79	Pk	32.4	-95.2	-51.17	-56.18	-13	-43.18	H
3346.3	56.1	Pk	32.6	-95.2	-50.17	-56.67	-13	-43.67	H
1673.2	59.59	Pk	28.5	-95.2	-52.75	-59.86	-13	-46.86	V
2509.75	57.2	Pk	32.4	-95.2	-51.17	-56.77	-13	-43.77	V
3346.3	57.48	Pk	32.6	-95.2	-50.17	-55.29	-13	-42.29	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 2

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §27.53.

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.

TEST PROCEDURE

KDB 971168 D01

RESULTS

10.3.1. GSM 1900

GPRS MODE

Project #:	15107858
Date:	2024-01-08
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 1900
Chamber #:	04-RDE-T

Frequency (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz									
3710	54.17	Pk	33.2	-95.2	-45.24	-53.07	-13	-40.07	H
5545.5	54.36	Pk	34.5	-95.2	-45.27	-51.61	-13	-38.61	H
7395.5	53.79	Pk	35.7	-95.2	-44.08	-49.79	-13	-36.79	H
3679.5	53.22	Pk	33.1	-95.2	-45.07	-53.95	-13	-40.95	V
5502	54.47	Pk	34.5	-95.2	-45.38	-51.61	-13	-38.61	V
7414	52.86	Pk	35.7	-95.2	-44.33	-50.97	-13	-37.97	V
Mid Channel, 1880MHz									
3750	53.98	Pk	33.3	-95.2	-45.01	-52.93	-13	-39.93	H
5645	54.33	Pk	34.5	-95.2	-45.44	-51.81	-13	-38.81	H
7506.5	53.77	Pk	35.7	-95.2	-44.36	-50.09	-13	-37.09	H
3707.5	55.97	Pk	33.2	-95.2	-45.22	-51.25	-13	-38.25	V
5611.5	54.01	Pk	34.4	-95.2	-45.37	-52.16	-13	-39.16	V
7496	53.37	Pk	35.7	-95.2	-44.55	-50.68	-13	-37.68	V
High Channel, 1909.8MHz									
3818.5	53.26	Pk	33.4	-95.2	-44.99	-53.53	-13	-40.53	H
5723.5	53.36	Pk	34.6	-95.2	-45.2	-52.44	-13	-39.44	H
7629	53.24	Pk	35.8	-95.2	-43.88	-50.04	-13	-37.04	H
3804.5	53.51	Pk	33.4	-95.2	-45.24	-53.53	-13	-40.53	V
5730.5	53.75	Pk	34.6	-95.2	-45.16	-52.01	-13	-39.01	V
7624.5	53.48	Pk	35.8	-95.2	-43.82	-49.74	-13	-36.74	V

EGPRS MODE

Project #:	15107858
Date:	2024-02-20
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 1900
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz									
3.6935	53.89	Pk	33.1	-95.2	-46.81	-55.02	-13	-42.02	H
5.548	56.01	Pk	34.7	-95.2	-48.31	-52.8	-13	-39.8	H
7.409	54.69	Pk	35.5	-95.2	-47.85	-52.86	-13	-39.86	H
3.692	54	Pk	33.1	-95.2	-46.78	-54.88	-13	-41.88	V
5.550559	62.12	Pk	34.7	-95.2	-48.33	-46.71	-13	-33.71	V
7.409	55.8	Pk	35.5	-95.2	-47.85	-51.75	-13	-38.75	V
Mid Channel, 1880MHz									
3.760002	60.28	Pk	33	-95.2	-46.84	-48.76	-13	-35.76	H
5.639771	60.85	Pk	34.8	-95.2	-48.07	-47.62	-13	-34.62	H
7.527	55.95	Pk	35.6	-95.2	-47.81	-51.46	-13	-38.46	H
3.76	55.07	Pk	33	-95.2	-46.84	-53.97	-13	-40.97	V
5.6395	59.03	Pk	34.8	-95.2	-48.07	-49.44	-13	-36.44	V
7.514	56.34	Pk	35.6	-95.2	-47.75	-51.01	-13	-38.01	V
High Channel, 1909.8MHz									
3.8195	56.8	Pk	33	-95.2	-47.02	-52.42	-13	-39.42	H
5.729866	60.75	Pk	34.9	-95.2	-47.91	-47.46	-13	-34.46	H
7.6505	56.21	Pk	35.7	-95.2	-47.95	-51.24	-13	-38.24	H
3.819	55.71	Pk	33	-95.2	-47	-53.49	-13	-40.49	V
5.729253	62.22	Pk	34.9	-95.2	-47.92	-46	-13	-33	V
7.642	56.02	Pk	35.7	-95.2	-47.77	-51.25	-13	-38.25	V

10.3.2. WCDMA BAND 2

REL 99 MODE

Project #:	15107858
Date:	2024-02-13
Test Engineer:	23522 SI
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 2
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz									
3.705	52.66	Pk	33.1	-95.2	-45.69	-55.13	-13	-42.13	H
5.557	54.11	Pk	34.7	-95.2	-45.79	-52.18	-13	-39.18	H
7.4095	52.08	Pk	35.5	-95.2	-44.45	-52.07	-13	-39.07	H
3.705	53.79	Pk	33.1	-95.2	-45.69	-54	-13	-41	V
5.557	51.81	Pk	34.7	-95.2	-45.79	-54.48	-13	-41.48	V
7.4095	51.91	Pk	35.5	-95.2	-44.45	-52.24	-13	-39.24	V
Mid Channel, 1880MHz									
3.76	53.69	Pk	33	-95.2	-46.09	-54.6	-13	-41.6	H
5.64	53.13	Pk	34.8	-95.2	-45.88	-53.15	-13	-40.15	H
7.52	52	Pk	35.6	-95.2	-44	-51.6	-13	-38.6	H
3.76	51.81	Pk	33	-95.2	-46.09	-56.48	-13	-43.48	V
5.64	52.73	Pk	34.8	-95.2	-45.88	-53.55	-13	-40.55	V
7.52	50.3	Pk	35.6	-95.2	-44	-53.3	-13	-40.3	V
High Channel, 1907.6MHz									
3.815	54	Pk	33	-95.2	-46.32	-54.52	-13	-41.52	H
5.723	51.35	Pk	34.9	-95.2	-45.63	-54.58	-13	-41.58	H
7.6305	50.86	Pk	35.7	-95.2	-44.23	-52.87	-13	-39.87	H
3.815	53.43	Pk	33	-95.2	-46.32	-55.09	-13	-42.09	V
5.723	51.96	Pk	34.9	-95.2	-45.63	-53.97	-13	-40.97	V
7.6305	51.7	Pk	35.7	-95.2	-44.23	-52.03	-13	-39.03	V

HSDPA MODE

Project #:	15107858
Date:	2024-01-09
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 2
Chamber #:	04-RDE-T

Frequency (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz									
3692	53.74	Pk	33.2	-95.2	-45.05	-53.31	-13	-40.31	H
5557	55.49	Pk	34.5	-95.2	-45.27	-50.48	-13	-37.48	H
7406.5	52.92	Pk	35.7	-95.2	-44.09	-50.67	-13	-37.67	H
3668.75	52.99	Pk	33.1	-95.2	-45.22	-54.33	-13	-41.33	V
5524	53.72	Pk	34.5	-95.2	-45.29	-52.27	-13	-39.27	V
7407.5	53.73	Pk	35.7	-95.2	-44.13	-49.9	-13	-36.9	V
Mid Channel, 1880MHz									
3768.5	53.68	Pk	33.3	-95.2	-45.43	-53.65	-13	-40.65	H
5641	55.27	Pk	34.5	-95.2	-45.32	-50.75	-13	-37.75	H
7513.5	52.89	Pk	35.7	-95.2	-44.37	-50.98	-13	-37.98	H
3774.5	54.48	Pk	33.3	-95.2	-45.13	-52.55	-13	-39.55	V
5609	53.84	Pk	34.4	-95.2	-45.32	-52.28	-13	-39.28	V
7540	53.14	Pk	35.8	-95.2	-44.24	-50.5	-13	-37.5	V
High Channel, 1907.6MHz									
3814	54.32	Pk	33.4	-95.2	-45.27	-52.75	-13	-39.75	H
5727	52.65	Pk	34.6	-95.2	-45.14	-53.09	-13	-40.09	H
7616.5	52.91	Pk	35.8	-95.2	-43.7	-50.19	-13	-37.19	H
3794.5	54.89	Pk	33.3	-95.2	-45.19	-52.2	-13	-39.2	V
5696.5	53.34	Pk	34.5	-95.2	-45.33	-52.69	-13	-39.69	V
7601	53.7	Pk	35.8	-95.2	-43.61	-49.31	-13	-36.31	V

10.3.3. WCDMA BAND 4

REL 99 MODE

Project #:	15107858
Date:	2024-02-14
Test Engineer:	23522 SI
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 4
Chamber #:	04-RDE-P

Frequency (GHz)	Meter Reading (dBuV)	Det	79834 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4MHz									
3.425	53.04	Pk	32.8	-95.2	-46.16	-55.52	-13	-42.52	H
5.137	53.45	Pk	34.4	-95.2	-46.31	-53.66	-13	-40.66	H
6.8495	49.73	Pk	35.6	-95.2	-43.93	-53.8	-13	-40.8	H
3.425	52.06	Pk	32.8	-95.2	-46.16	-56.5	-13	-43.5	V
5.137	56.79	Pk	34.4	-95.2	-46.31	-50.32	-13	-37.32	V
6.8495	49.59	Pk	35.6	-95.2	-43.93	-53.94	-13	-40.94	V
Mid Channel, 1732.6MHz									
3.465	53.8	Pk	32.8	-95.2	-45.92	-54.52	-13	-41.52	H
5.198	51.86	Pk	34.5	-95.2	-46.09	-54.93	-13	-41.93	H
6.9305	51.49	Pk	35.6	-95.2	-44.77	-52.88	-13	-39.88	H
3.465	53.47	Pk	32.8	-95.2	-45.92	-54.85	-13	-41.85	V
5.198	53.88	Pk	34.5	-95.2	-46.09	-52.91	-13	-39.91	V
6.9305	51.42	Pk	35.6	-95.2	-44.77	-52.95	-13	-39.95	V
High Channel, 1752.6MHz									
3.505	54.88	Pk	32.9	-95.2	-46.16	-53.58	-13	-40.58	H
5.5275	56.77	Pk	34.7	-95.2	-45.91	-49.64	-13	-36.64	H
7.0105	50.57	Pk	35.7	-95.2	-44.79	-53.72	-13	-40.72	H
3.505	54.23	Pk	32.9	-95.2	-46.16	-54.23	-13	-41.23	V
5.527	51.44	Pk	34.7	-95.2	-45.88	-54.94	-13	-41.94	V
7.0105	51.39	Pk	35.7	-95.2	-44.79	-52.9	-13	-39.9	V

HSDPA MODE

Project #:	15107858
Date:	2024-01-09
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 4
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4MHz									
3422.5	53.52	Pk	32.7	-95.2	-45.2	-54.18	-13	-41.18	H
5142.522	74.86	Pk	34.2	-95.2	-46.26	-32.4	-13	-19.4	H
6848	52.57	Pk	35.6	-95.2	-44.54	-51.57	-13	-38.57	H
3419	54.46	Pk	32.7	-95.2	-45.18	-53.22	-13	-40.22	V
5141.442	77.55	Pk	34.2	-95.2	-46.31	-29.76	-13	-16.76	V
6868	53.21	Pk	35.6	-95.2	-44.57	-50.96	-13	-37.96	V
Mid Channel, 1732.6MHz									
3468	54.16	Pk	32.8	-95.2	-45.37	-53.61	-13	-40.61	H
5195	55.49	Pk	34.3	-95.2	-46.15	-51.56	-13	-38.56	H
6920.5	53.61	Pk	35.6	-95.2	-44.07	-50.06	-13	-37.06	H
3468.5	54.42	Pk	32.8	-95.2	-45.26	-53.24	-13	-40.24	V
5196	54.95	Pk	34.3	-95.2	-46.22	-52.17	-13	-39.17	V
6940.5	54.22	Pk	35.6	-95.2	-44.07	-49.45	-13	-36.45	V
High Channel, 1752.6MHz									
3504	54	Pk	32.8	-95.2	-45.28	-53.68	-13	-40.68	H
5258.5	55.54	Pk	34.4	-95.2	-45.97	-51.23	-13	-38.23	H
7020	53.79	Pk	35.6	-95.2	-43.77	-49.58	-13	-36.58	H
3469.5	54.64	Pk	32.8	-95.2	-45.1	-52.86	-13	-39.86	V
5254.5	56.63	Pk	34.4	-95.2	-45.81	-49.98	-13	-36.98	V
7112	55.5	Pk	35.6	-95.2	-44.28	-48.38	-13	-35.38	V

11. SETUP PHOTOS

Please refer to 15107858-EP1 for Setup Photo Report.

END OF REPORT