TEST REPORT

Report Number: 15107843-E1V2

Applicant	:	Google LLC 1600 Amphitheatre Parkway Mountain View, CA 94043 U.S.A.
Model	:	G2YBB
FCC ID	:	A4RG2YBB
EUT Description	:	PHONE
Test Standard(s)	:	FCC 47 CFR PART 22H, 24E, AND 27L

Date Of Issue:
2024-05-13

Prepared by:
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ACCREDITED
CERT #0751.05

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2024-05-01	Initial Review	--
V2	2024-05-13	Update Sections 6.2 Maximum Output Power and 6.3 Maximum Antenna Gains	

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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	Google LLC 1600 Amphitheatre Parkway Mountain View, CA 94043 U.S.A.
Model	G2YBB
FCC ID	A4RG2YBB
EUT Description	PHONE
Serial Number	Conducted: 41151FDAQ00063, 352207820041643 and 41151FDAQ0000J Radiated: 41061FDAQ0009D and 3B091FDAQ000LC
Sample Receipt Date	2024-01-08
Date Tested	2024-01-10 to 2024-03-26
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.

		
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 CFR 47 Part 2, Part 22, Part 24, and Part 27
- FCC KDB 971168 D01: Power Meas License Digital Systems
- FCC KDB 971168 D02: Misc Rev Approv License Devices
- FCC KDB 412172 D01: 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	33.00	-2.20	3.0	28.65	0.733	243.99	244KGXW
	EGPRS	27.20			22.85	0.193	244.94	245KG7W
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	1.50	2.0	31.40	1.380	244.49	244KGXW
	EGPRS	25.60			27.10	0.513	244.06	244KG7W

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	24.50	-2.20	3.0	20.15	0.104	4152	4M15F9W
	HSDPA	24.50			20.15	0.104	4158	4M16F9W
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	24.60	1.50	2.0	26.10	0.407	4163	4M16F9W
	HSDPA	24.60			26.10	0.407	4174	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	24.00	2.40	1.0	26.40	0.437	4172	4M17F9W
	HSDPA	23.80			26.20	0.417	4185	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	-2.7	-2.2	
GSM1900 and WCDMA 2 1850 - 1910	1.9		1.5
WCDMA 4 1710 - 1755	2.4		1.6

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	Z	Z	N/A
1710 – 1755 MHz	Z	N/A	X
1850 – 1910 MHz	Z	N/A	X

Based on average conducted output power measurement investigations all conducted tests performed on Ant 1 for GSM 850, on ANT 2 for GSM 1900 WCDMA B5 and on ANT 0 for WCDMA B2/B4.

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.

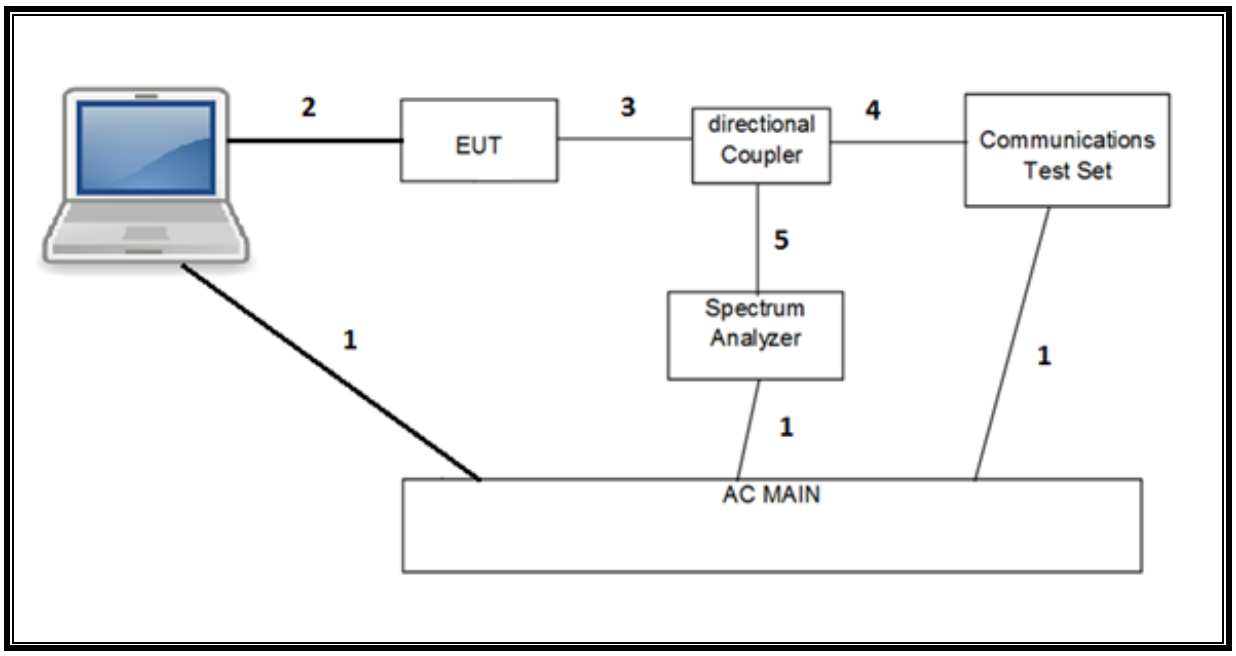
6.5. DESCRIPTION OF TEST SETUP

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

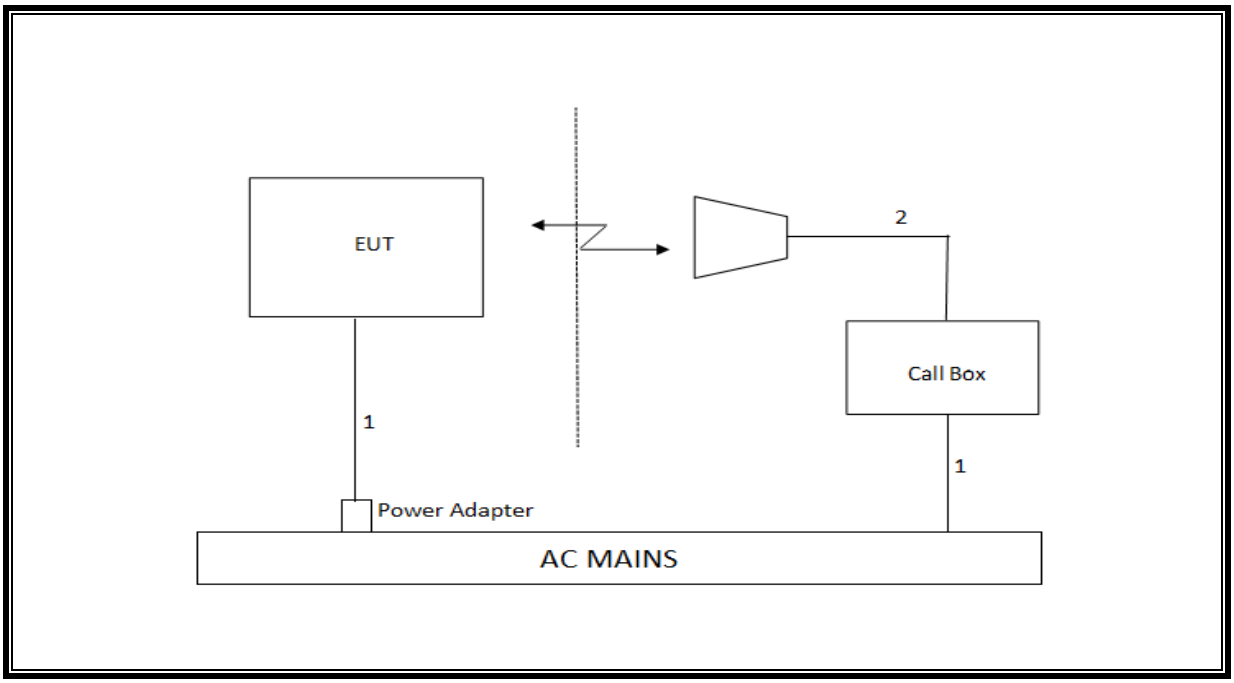
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	USB-C	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Un-shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Un-shielded	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:	24522NV and 27915TT	Test Date:	2024-02-08 to 2024-02-09

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	32.8
			190	836.6	32.8	32.7
			251	848.8	32.7	**33.0**
		2	128	824.2	31.6	31.8
			190	836.6	31.8	31.8
			251	848.8	31.8	31.5
EGPRS (8PSK)	MCS5	1	128	824.2	26.9	27.0
			190	836.6	26.9	27.2
			251	848.8	**27.3**	27.1
		2	128	824.2	25.7	25.6
			190	836.6	25.5	25.5
			251	848.8	25.6	25.9

8.1.2. GSM 1900

Test Engineer ID:	52280ML and 27915TT	Test Date:	2024-02-08 to 2024-02-09

Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
					ANT 2	ANT 0
GPRS (GMSK)	CS1	1	512	1850.2	29.2	28.4
			661	1880	29.6	28.6
			810	1909.8	**29.9**	**28.9**
		2	512	1850.2	28.7	28.2
			661	1880	29.2	28.3
			810	1909.8	29.4	28.5
EGPRS (8PSK)	MCS5	1	512	1850.2	25.0	24.9
			661	1880	25.3	25.3
			810	1909.8	**25.6**	**25.4**
		2	512	1850.2	24.6	24.8
			661	1880	24.9	24.9
			810	1909.8	25.4	25.3

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 $\beta_{hs} = 30/15 * \beta_c$.

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, Δ_{ACK} and Δ_{NACK} = 30/15 with $\beta_{hs} = 30/15 * \beta_c$, and Δ_{CQI} = 24/15 with $\beta_{hs} = 24/15 * \beta_c$.

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	Test Date:	2024-01-18

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	24.7	24.4
			4183	836.6	N/A	**24.8**	24.5
			4233	846.6	N/A	24.6	24.2
	HSDPA	Subtest 1	4132	826.4	0	24.7	24.4
			4183	836.6	0	**24.8**	24.4
			4233	846.6	0	24.5	24.2
		Subtest 2	4132	826.4	0	**24.8**	24.5
			4183	836.6	0	**24.8**	24.5
			4233	846.6	0	24.6	24.3
		Subtest 3	4132	826.4	0.5	23.8	23.2
			4183	836.6	0.5	23.7	23.2
			4233	846.6	0.5	23.5	22.9
		Subtest 4	4132	826.4	0.5	24.1	23.7
			4183	836.6	0.5	24.1	23.7
			4233	846.6	0.5	23.8	23.5
	HSPA (HSDPA & HSUPA)	Subtest 1	4132	826.4	0	23.8	23.4
			4183	836.6	0	23.8	23.4
			4233	846.6	0	23.6	23.4
		Subtest 2	4132	826.4	2	22.5	22.1
			4183	836.6	2	22.5	22.1
			4233	846.6	2	22.2	21.8
		Subtest 3	4132	826.4	1	23.6	23.1
			4183	836.6	1	23.6	23.1
			4233	846.6	1	23.3	22.8
		Subtest 4	4132	826.4	2	22.4	22.1
			4183	836.6	2	22.5	22.1
			4233	846.6	2	22.2	21.8
		Subtest 5	4132	826.4	0	**24.8**	24.4
			4183	836.6	0	**24.8**	24.4
			4233	846.6	0	24.6	24.2
	DC-HSDPA	Subtest 1	4132	826.4	0	**24.8**	24.5
			4183	836.6	0	**24.8**	24.5
			4233	846.6	0	24.7	24.4
		Subtest 2	4132	826.4	0	**24.8**	24.6
			4183	836.6	0	**24.8**	24.5
			4233	846.6	0	24.7	24.4
		Subtest 3	4132	826.4	0.5	24.7	24.6
			4183	836.6	0.5	**24.8**	24.6
			4233	846.6	0.5	24.7	24.4
		Subtest 4	4132	826.4	0.5	24.6	24.6
			4183	836.6	0.5	24.7	24.6
			4233	846.6	0.5	24.7	24.4

8.2.2. WCDMA BAND 2

Test Engineer ID:	19420PD, 24937ZM and 28529JB	Test Date:	2024-01-17 to 2024-01-24

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	24.5	23.8
			9400	1880.0	N/A	**24.6**	**23.9**
			9538	1907.6	N/A	24.5	**23.9**
	HSDPA	Subtest 1	9262	1852.4	0	23.4	23.8
			9400	1880.0	0	23.5	23.9
			9538	1907.6	0	23.5	23.9
		Subtest 2	9262	1852.4	0	23.1	23.9
			9400	1880.0	0	23.1	**24.0**
			9538	1907.6	0	23.1	23.9
		Subtest 3	9262	1852.4	0.5	21.8	23.1
			9400	1880.0	0.5	22.0	23.2
			9538	1907.6	0.5	22.0	23.1
		Subtest 4	9262	1852.4	0.5	21.8	23.4
			9400	1880.0	0.5	22.0	23.4
			9538	1907.6	0.5	22.0	23.5
	HSPA (HSDPA & HSUPA)	Subtest 1	9262	1852.4	0	22.3	22.8
			9400	1880.0	0	22.5	22.9
			9538	1907.6	0	22.5	22.9
		Subtest 2	9262	1852.4	2	19.9	20.6
			9400	1880.0	2	19.9	20.8
			9538	1907.6	2	19.9	20.8
		Subtest 3	9262	1852.4	1	20.4	22.9
			9400	1880.0	1	20.4	21.9
			9538	1907.6	1	20.3	21.8
		Subtest 4	9262	1852.4	2	20.4	20.6
			9400	1880.0	2	20.4	20.7
			9538	1907.6	2	20.4	20.7
		Subtest 5	9262	1852.4	0	24.5	23.8
			9400	1880.0	0	24.5	23.9
			9538	1907.6	0	**24.6**	23.9
	DC-HSDPA	Subtest 1	9262	1852.4	0	23.4	23.9
			9400	1880.0	0	23.4	23.8
			9538	1907.6	0	23.4	23.8
		Subtest 2	9262	1852.4	0	23.6	23.9
			9400	1880.0	0	24.5	23.9
			9538	1907.6	0	24.5	23.9
		Subtest 3	9262	1852.4	0.5	23.5	22.9
			9400	1880.0	0.5	23.5	22.8
			9538	1907.6	0.5	23.5	22.8
		Subtest 4	9262	1852.4	0.5	23.5	23.4
			9400	1880.0	0.5	23.5	23.3
			9538	1907.6	0.5	23.4	23.4

8.2.3. WCDMA BAND 4

Test Engineer ID:	19420PD, 24937ZM and 28529JB	Test Date:	2024-01-17 to 2024-01-24

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	23.2	**24.0**
			1413	1732.6	N/A	**23.7**	23.8
			1513	1752.6	N/A	23.5	23.7
	HSDPA	Subtest 1	1312	1712.4	0	23.3	23.5
			1413	1732.6	0	23.5	23.7
			1513	1752.6	0	23.4	23.6
		Subtest 2	1312	1712.4	0	23.3	23.6
			1413	1732.6	0	23.5	23.7
			1513	1752.6	0	23.3	23.6
		Subtest 3	1312	1712.4	0.5	22.1	23.3
			1413	1732.6	0.5	22.3	23.4
			1513	1752.6	0.5	22.2	23.3
		Subtest 4	1312	1712.4	0.5	22.3	23.6
			1413	1732.6	0.5	21.5	**23.8**
			1513	1752.6	0.5	22.2	23.7
	HSPA (HSDPA & HSUPA)	Subtest 1	1312	1712.4	0	22.0	22.5
			1413	1732.6	0	22.4	22.8
			1513	1752.6	0	21.7	22.7
		Subtest 2	1312	1712.4	2	19.5	20.5
			1413	1732.6	2	19.8	20.7
			1513	1752.6	2	19.6	20.3
		Subtest 3	1312	1712.4	1	20.0	22.0
			1413	1732.6	1	20.3	22.2
			1513	1752.6	1	20.1	22.1
		Subtest 4	1312	1712.4	2	20.1	20.5
			1413	1732.6	2	20.2	20.3
			1513	1752.6	2	19.4	20.8
		Subtest 5	1312	1712.4	0	23.4	23.5
			1413	1732.6	0	**23.6**	23.7
			1513	1752.6	0	23.4	23.7
	DC-HSDPA	Subtest 1	1312	1712.4	0	23.5	23.7
			1413	1732.6	0	23.5	23.7
			1513	1752.6	0	23.4	23.6
		Subtest 2	1312	1712.4	0	23.5	**23.8**
			1413	1732.6	0	23.4	23.7
			1513	1752.6	0	23.3	23.7
		Subtest 3	1312	1712.4	0.5	22.4	23.6
			1413	1732.6	0.5	22.5	23.5
			1513	1752.6	0.5	22.3	23.4
		Subtest 4	1312	1712.4	0.5	22.5	**23.8**
			1413	1732.6	0.5	22.5	**23.8**
			1513	1752.6	0.5	22.3	23.7

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.

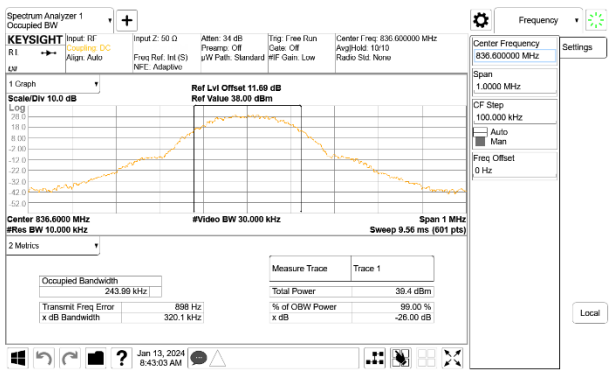
GSM

Band	Modulation	Channel	f(MHz)	99% BW (kHz)	-26dB BW (kHz)
850	GPRS	190	836.6	243.99	320.1
	EGPRS			244.94	299.8
1900	GPRS	661	1880.0	244.49	315.5
	EGPRS			244.06	314.7

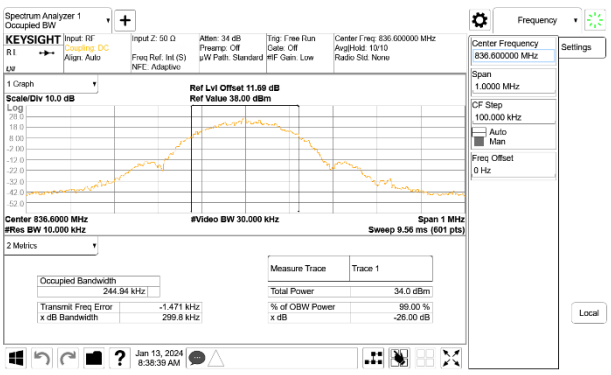
WCDMA

Band	Modulation	Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
BAND 5	REL 99	4408	836.6	4.1515	4.723
	HSDPA			4.1580	4.697
BAND 2	REL 99	9800	1880.0	4.1625	4.750
	HSDPA			4.1743	4.735
BAND 4	REL 99	1638	1732.6	4.1720	4.727
	HSDPA			4.1848	4.734

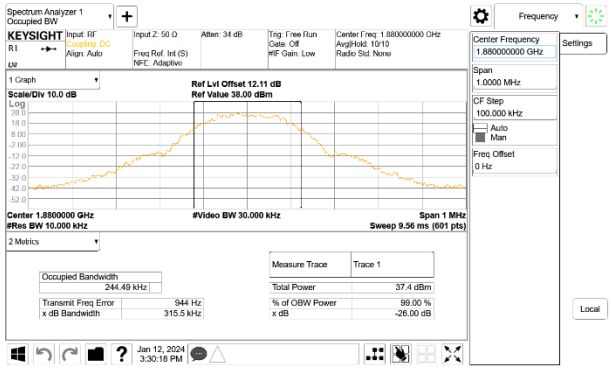
9.1.1. GSM



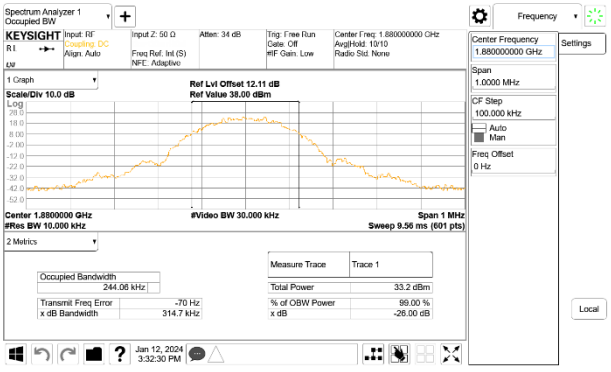
GSM 850 GPRS Middle Channel, ID:27979



GSM 850 EGPRS Middle Channel, ID:27979

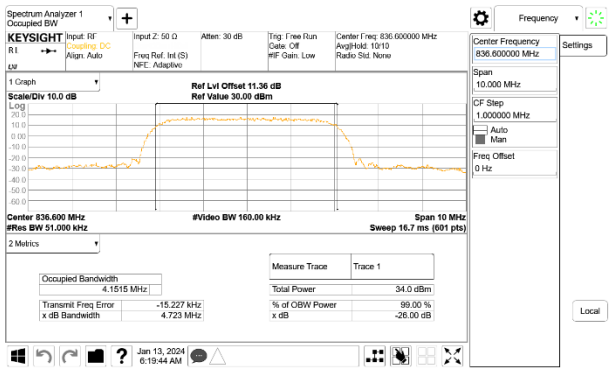


GSM 1900 GPRS Middle Channel, ID:27966

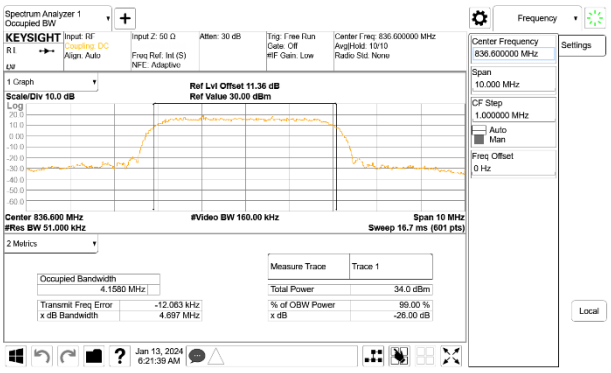


GSM 1900 EGPRS Middle Channel, ID:27966

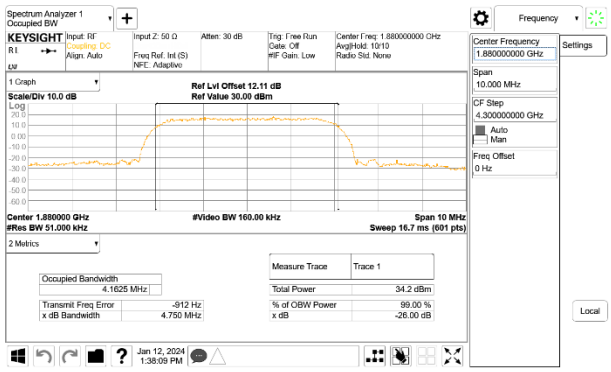
9.1.2. WCDMA



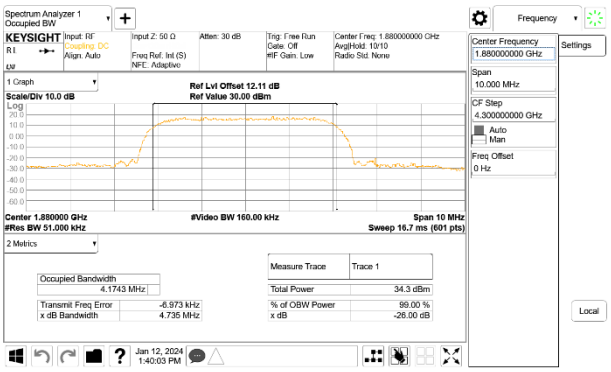
WCDMA Band 5 Rel 99 Middle Channel, ID:27979



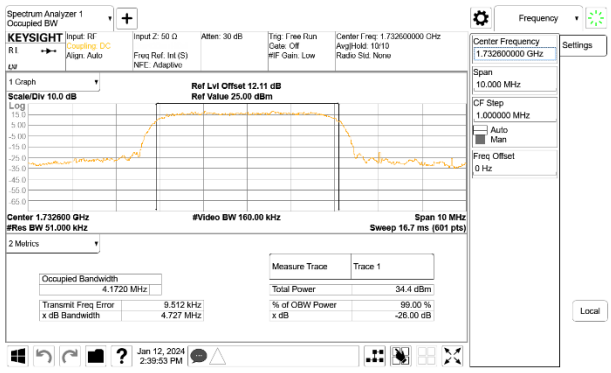
WCDMA Band 5 HSDPA Middle Channel, ID:27979



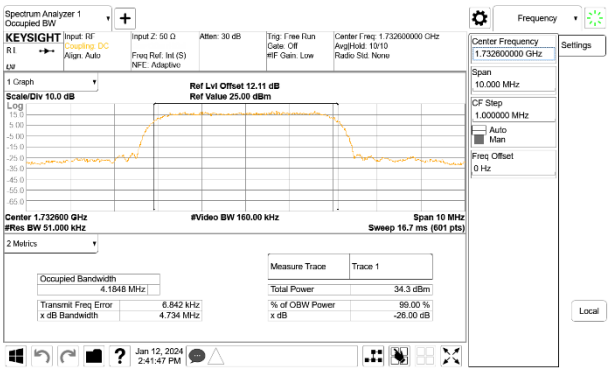
WCDMA Band 2 Rel 99 Middle Channel, ID:27966



WCDMA Band 2 HSDPA Middle Channel, ID:27966



WCDMA Band 4 Rel 99 Middle Channel, ID:27966



WCDMA Band 4 HSDPA Middle Channel, ID:27966

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.

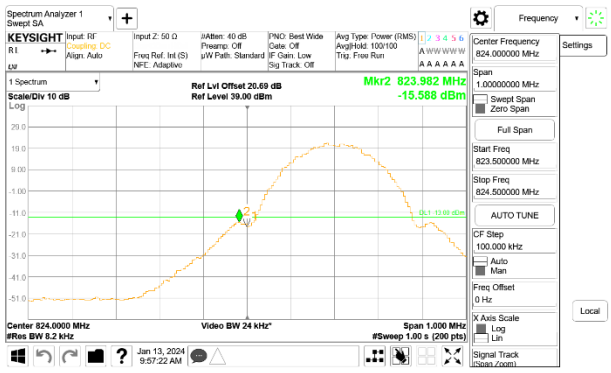
TEST PROCEDURE

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:

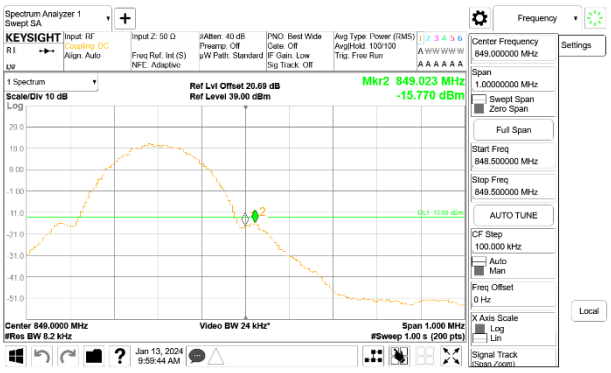
- Set the spectrum analyzer span to include the block edge frequency.
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

RESULTS

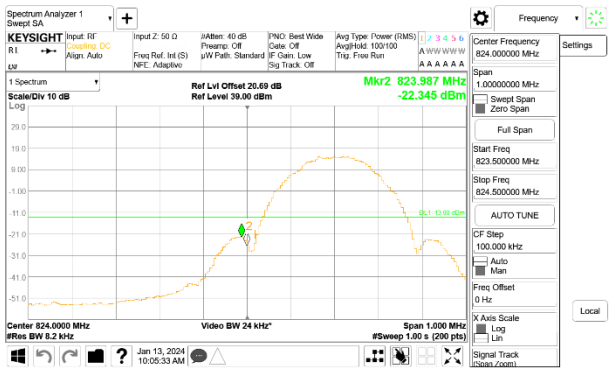
9.2.1. GSM 850



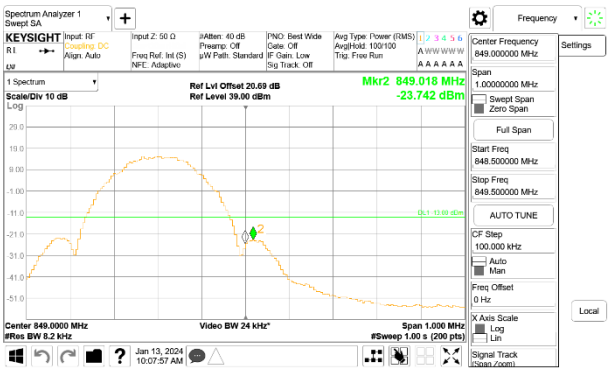
GSM 850 GPRS Low Channel, ID:27979



GSM 850 GPRS High Channel, ID:27979

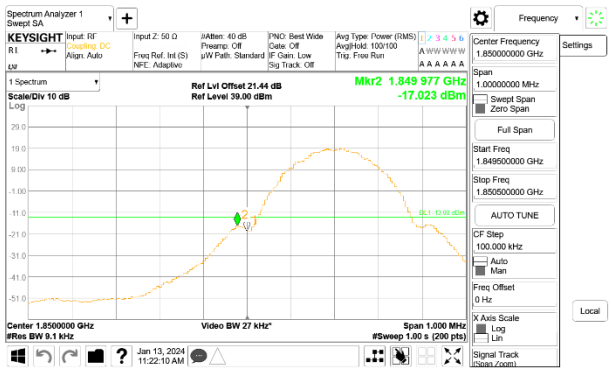


GSM 850 EGPRS Low Channel, ID:27979

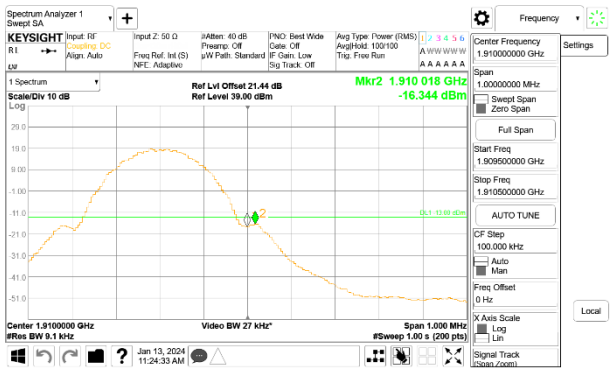


GSM 850 EGPRS High Channel, ID:27979

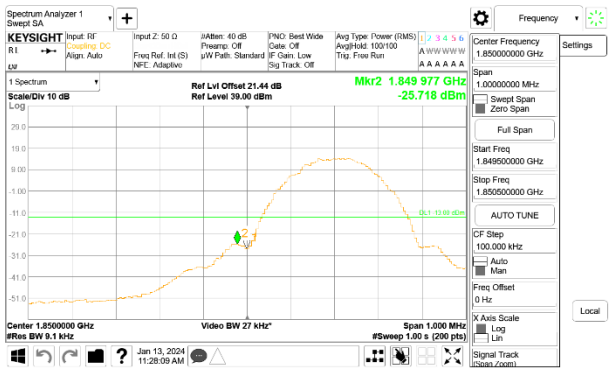
9.2.2. GSM 1900



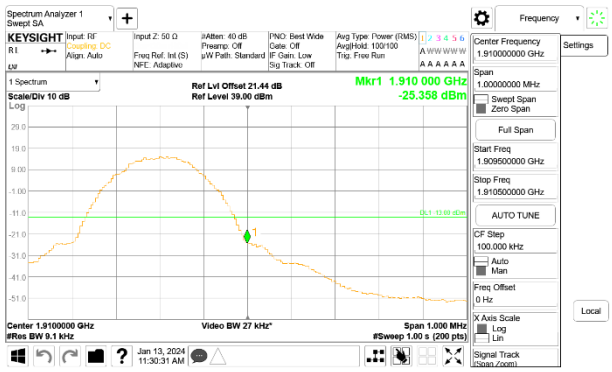
GSM 1900 GPRS Low Channel, ID:27966



GSM 1900 GPRS High Channel, ID:27966

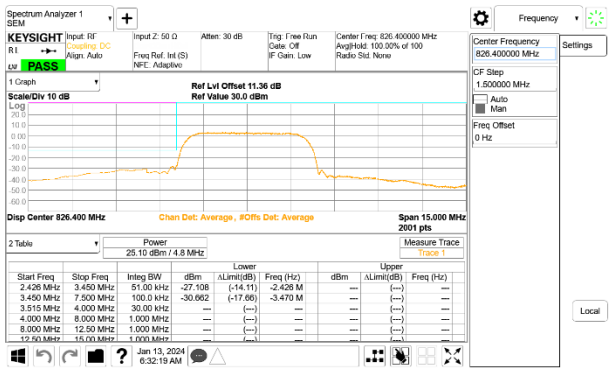


GSM 1900 EGPRS Low Channel, ID:27966

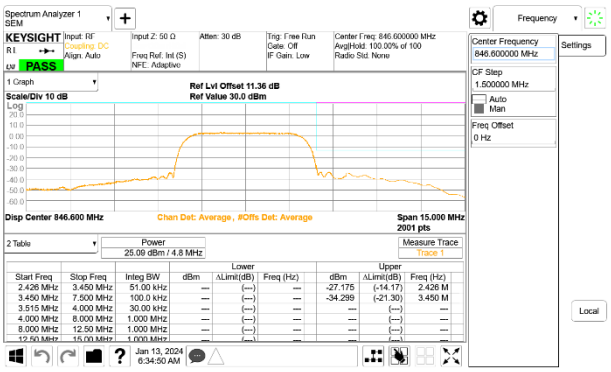


GSM 1900 EGPRS High Channel, ID:27966

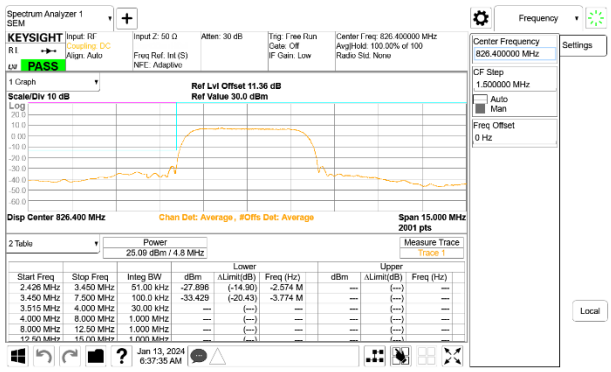
9.2.3. WCDMA BAND 5



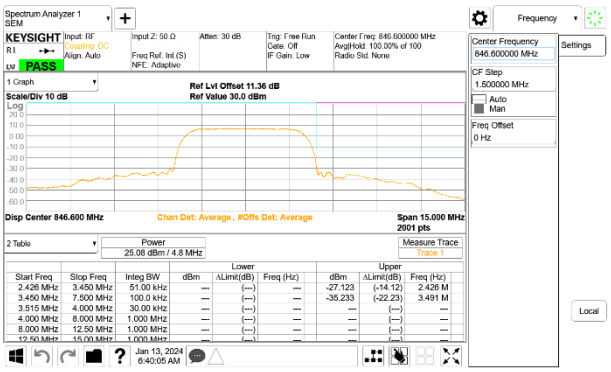
WCDMA Band 5 Rel 99 Low Channel, ID:27979



WCDMA Band 5 Rel 99 High Channel, ID:27979

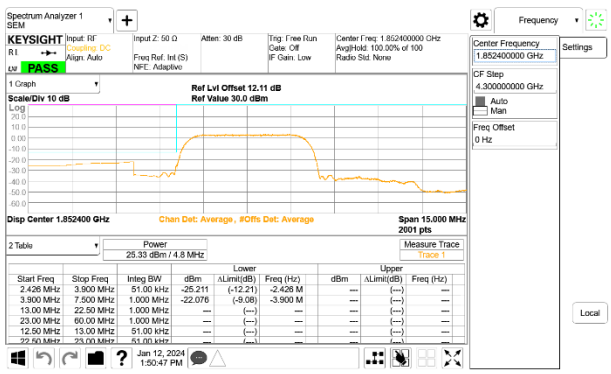


WCDMA Band 5 HSDPA Low Channel, ID:27979

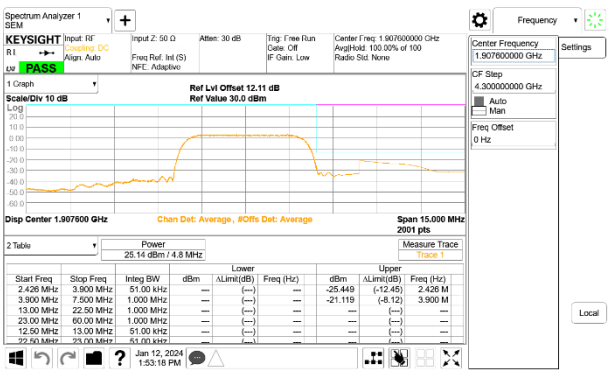


WCDMA Band 5 HSDPA High Channel, ID:27979

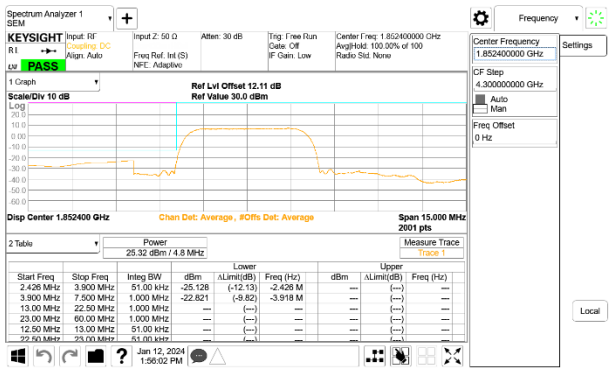
9.2.4. WCDMA BAND 2



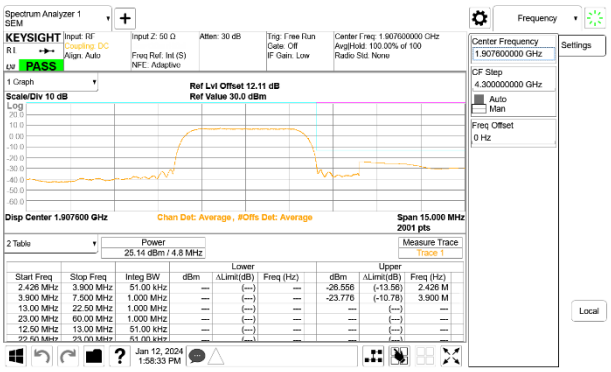
WCDMA Band 2 Rel 99 Low Channel, ID:27966



WCDMA Band 2 Rel 99 High Channel, ID:27966

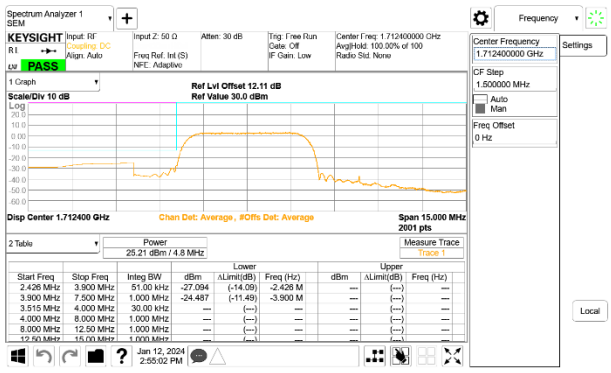


WCDMA Band 2 HSDPA Low Channel, ID:27966

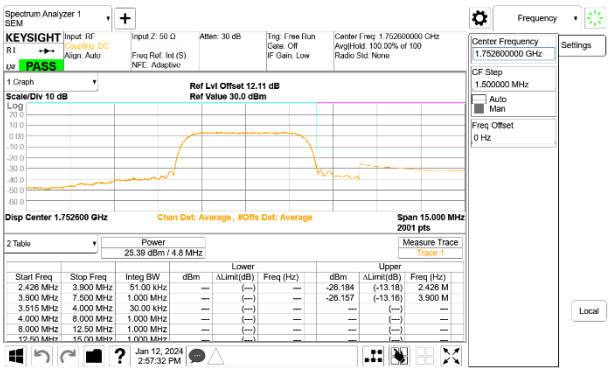


WCDMA Band 2 HSDPA High Channel, ID:27966

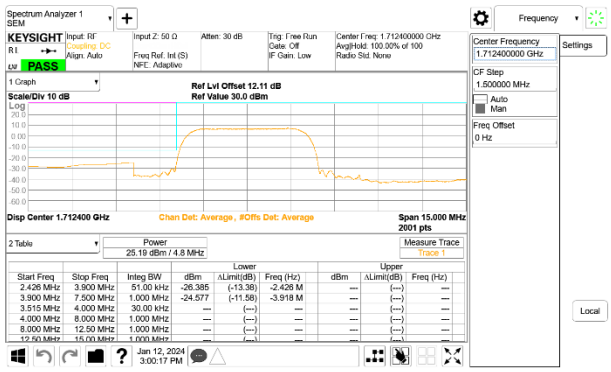
9.2.5. WCDMA BAND 4



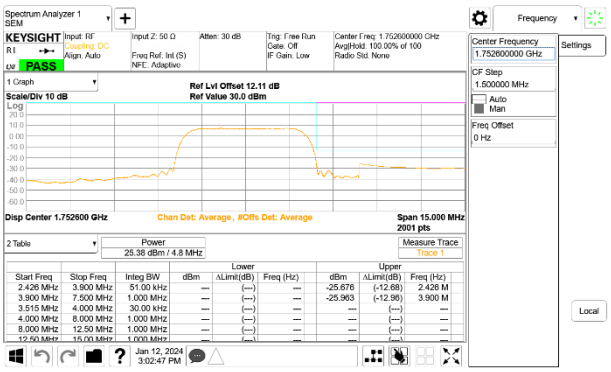
WCDMA Band 4 Rel 99 Low Channel, ID:27966



WCDMA Band 4 Rel 99 High Channel, ID:27966



WCDMA Band 4 HSDPA Low Channel, ID:27966



WCDMA Band 4 HSDPA High Channel, ID:27966

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

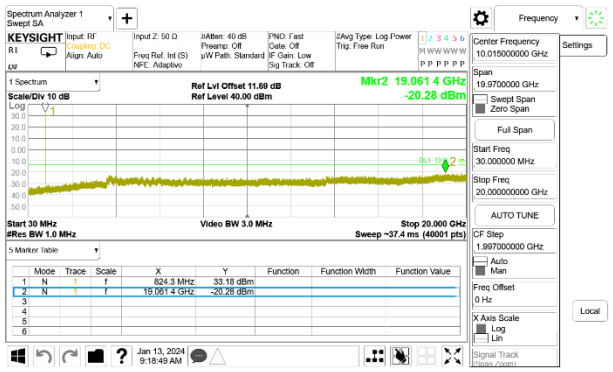
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case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

For each out of band emissions measurement:

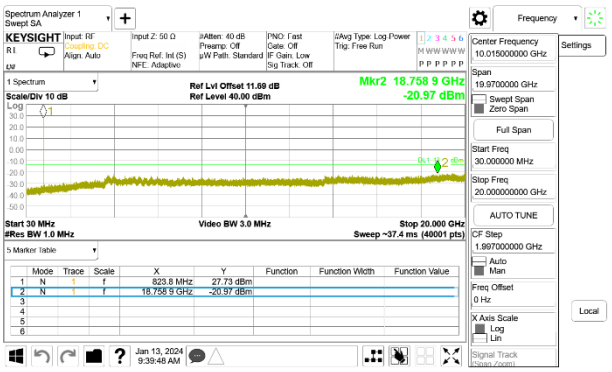
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz. (NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

RESULTS

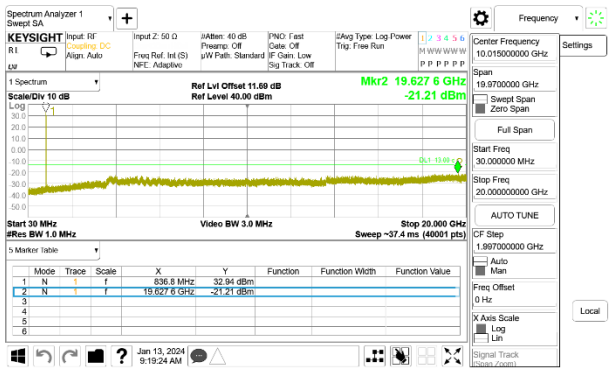
9.3.1. GSM 850



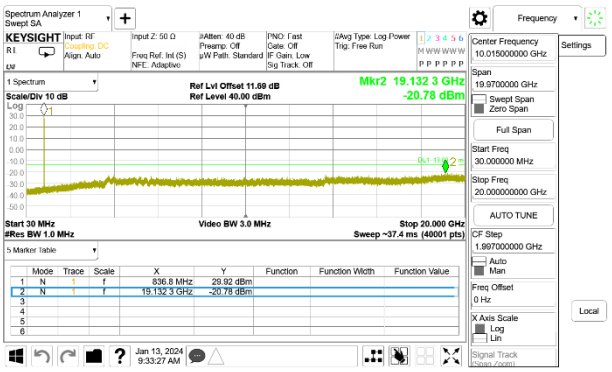
GSM 850 GPRS Low Channel, ID:27979



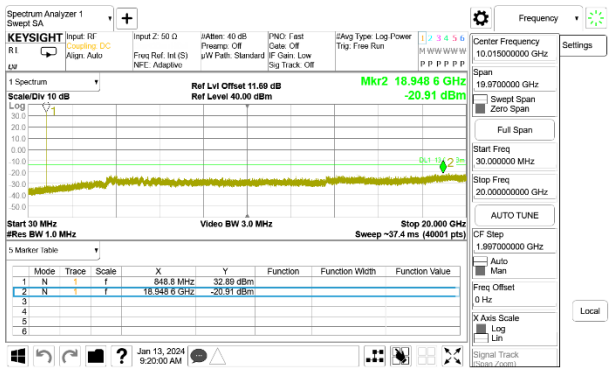
GSM 850 EGPRS Low Channel, ID:27979



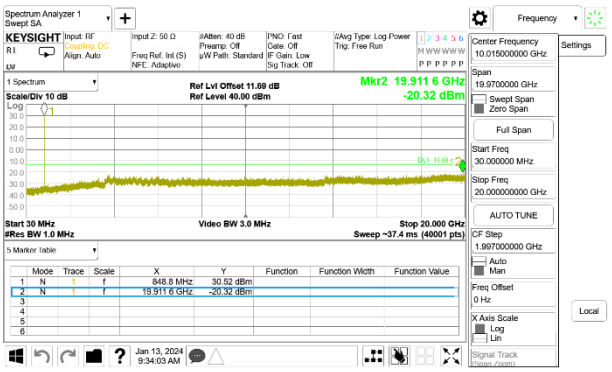
GSM 850 GPRS Middle Channel, ID:27979



GSM 850 EGPRS Middle Channel, ID:27979

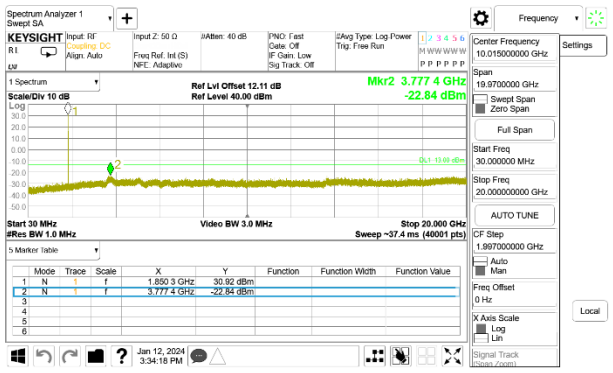


GSM 850 GPRS High Channel, ID:27979

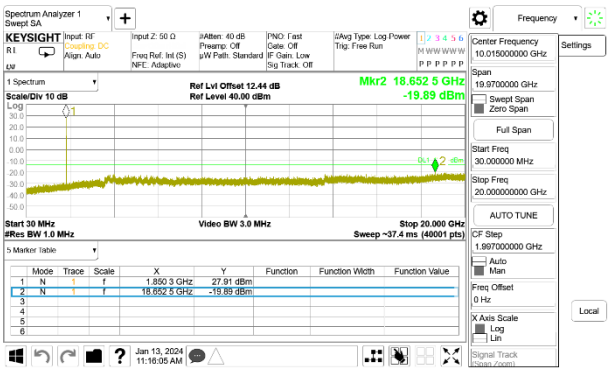


GSM 850 EGPRS High Channel, ID:27979

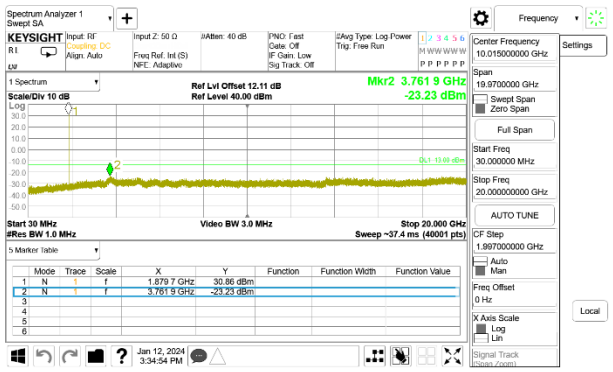
9.3.2. GSM 1900



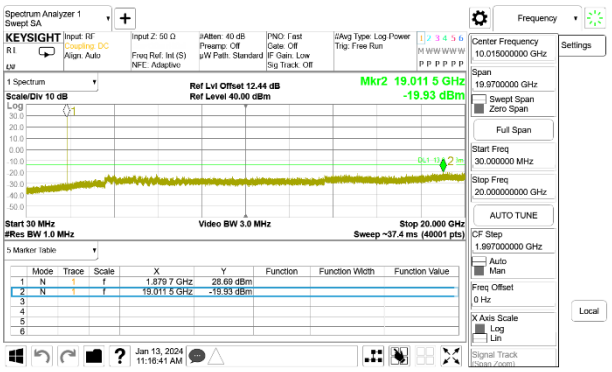
GSM 1900 GPRS Low Channel, ID:27966



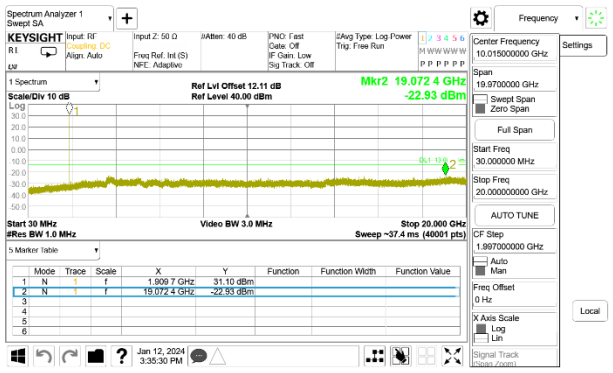
GSM 1900 EGPRS Low Channel, ID:27966



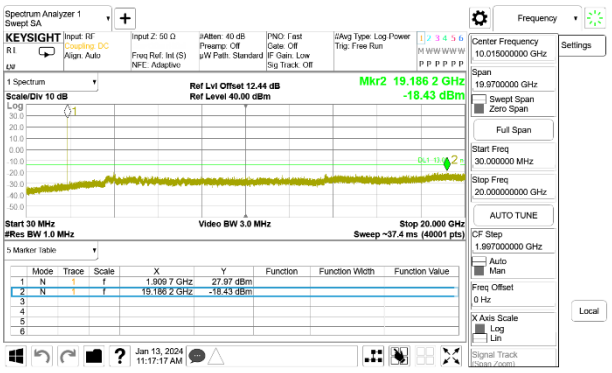
GSM 1900 GPRS Middle Channel, ID:27966



GSM 1900 EGPRS Middle Channel, ID:27966

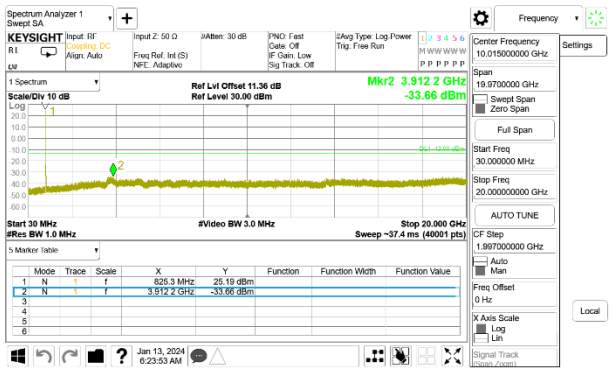


GSM 1900 GPRS High Channel, ID:27966

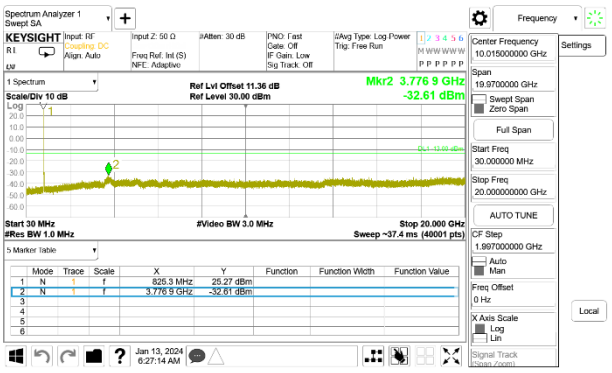


GSM 1900 EGPRS High Channel, ID:27966

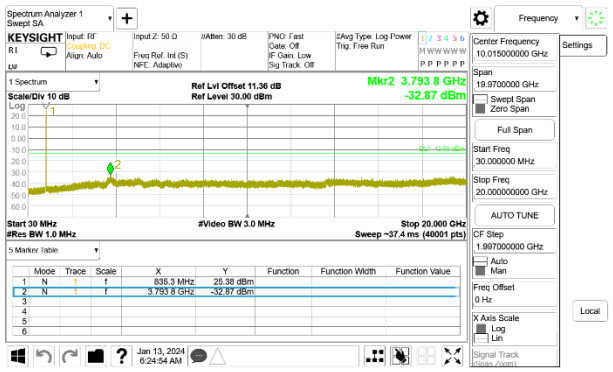
9.3.3. WCDMA BAND 5



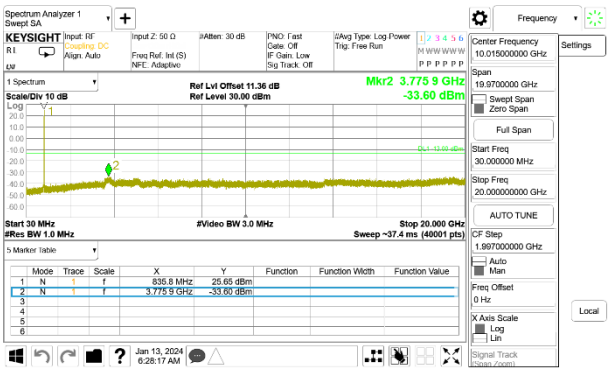
WCDMA Band 5 Rel 99 Low Channel, ID:27979



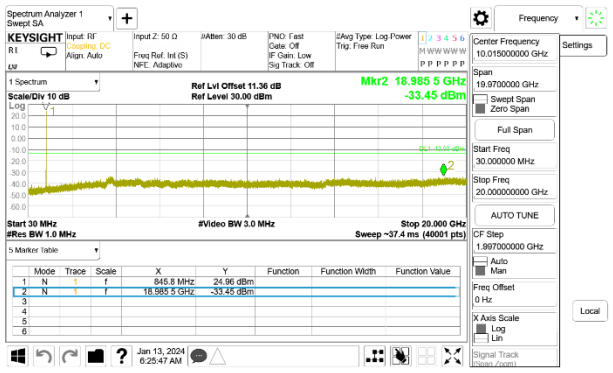
WCDMA Band 5 HSDPA Low Channel, ID:27979



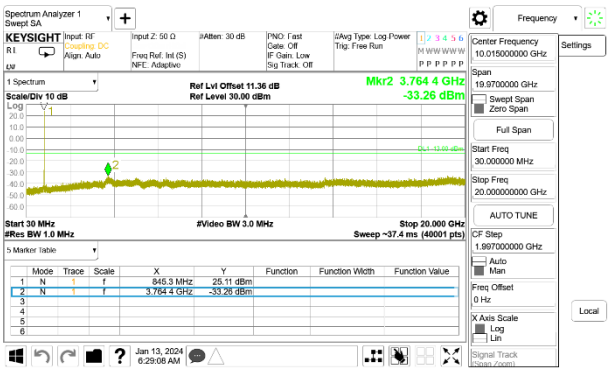
WCDMA Band 5 Rel 99 Middle Channel, ID:27979



WCDMA Band 5 HSDPA Middle Channel, ID:27979

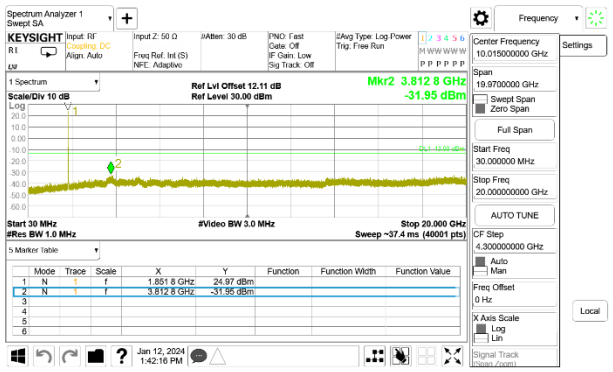


WCDMA Band 5 Rel 99 High Channel, ID:27979

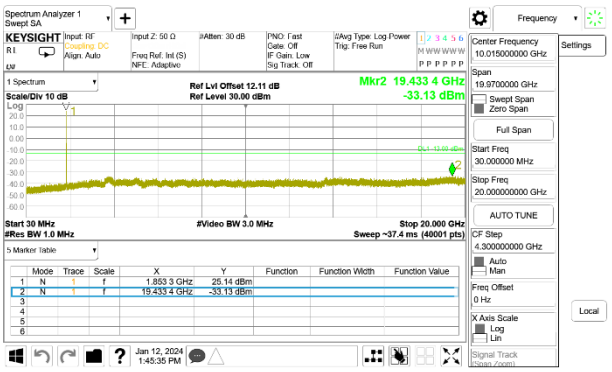


WCDMA Band 5 HSDPA High Channel, ID:27979

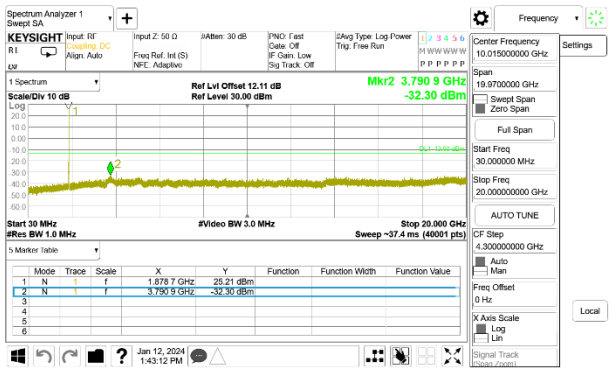
9.3.4. WCDMA BAND 2



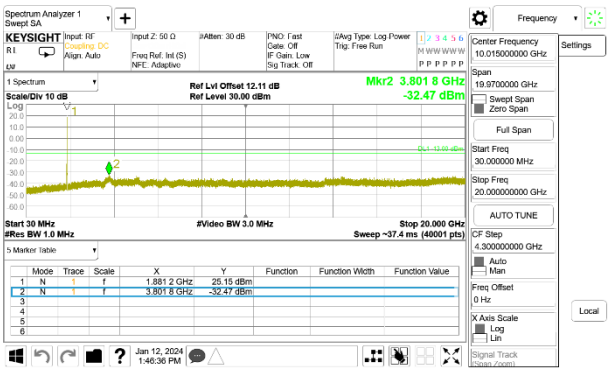
WCDMA Band 2 Rel 99 Low Channel, ID:27966



WCDMA Band 2 HSDPA Low Channel, ID:27966

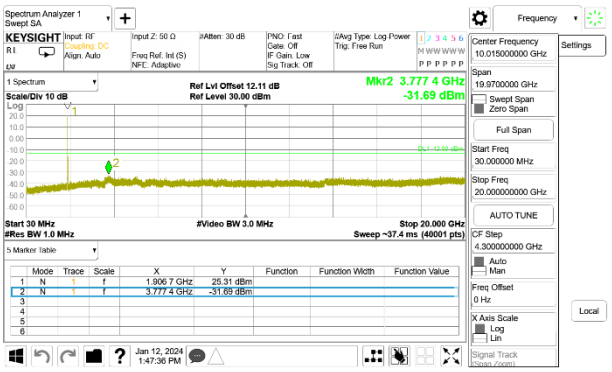


WCDMA Band 2 Rel 99 Middle Channel, ID:27966



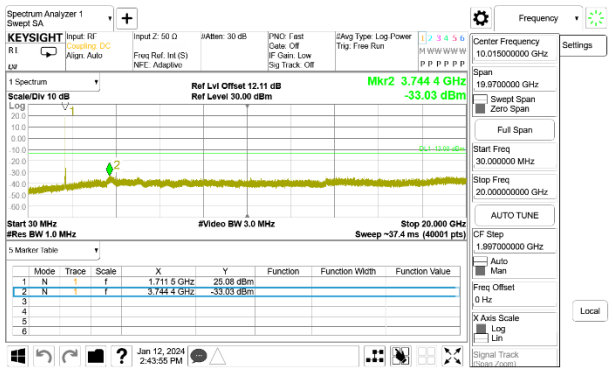
WCDMA Band 2 HSDPA Middle Channel, ID:27966

WCDMA Band 2 Rel 99 High Channel, ID:27966

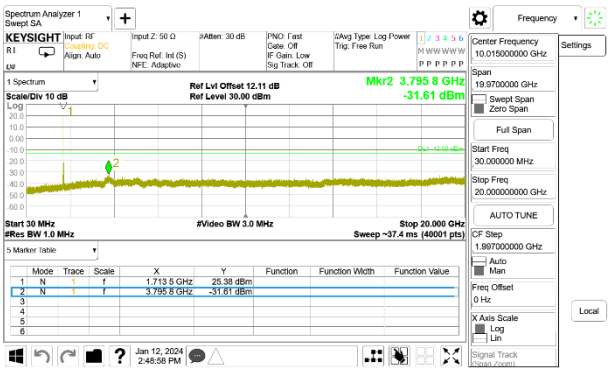


WCDMA Band 2 HSDPA High Channel, ID:27966

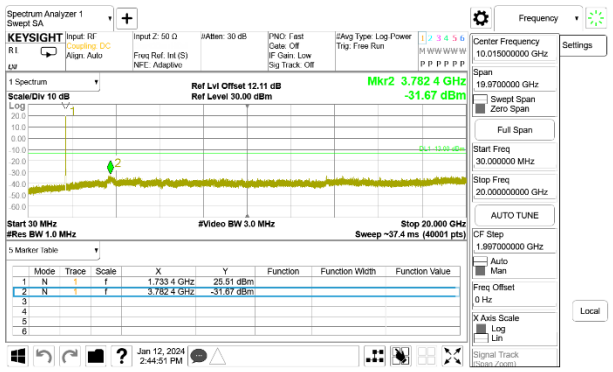
9.3.5. WCDMA BAND 4



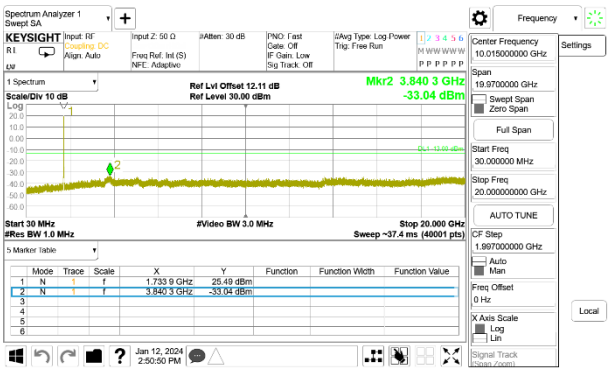
WCDMA Band 4 Rel 99 Low Channel, ID:27966



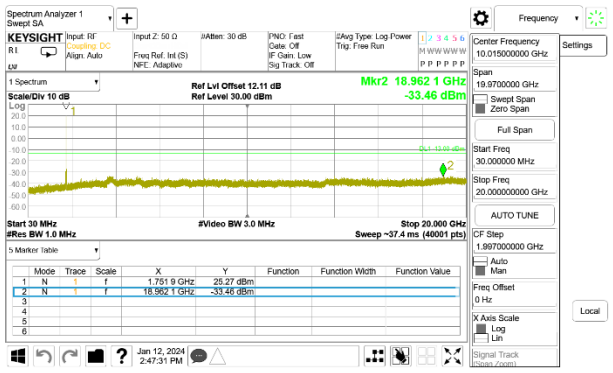
WCDMA Band 4 HSDPA Low Channel, ID:27966



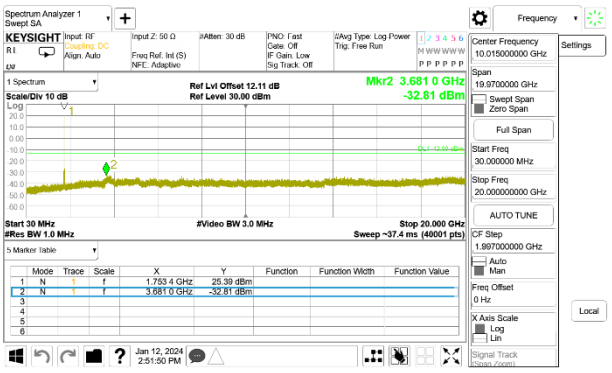
WCDMA Band 4 Rel 99 Middle Channel, ID:27966



WCDMA Band 4 HSDPA Middle Channel, ID:27966



WCDMA Band 4 Rel 99 High Channel, ID:27966



WCDMA Band 4 HSDPA High Channel, ID:27966

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, 3.9VDC and High voltage, 4.5VDC.
  End Voltage, 3.17VDC.

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:	25780MW	Test Date:	2024-03-22

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	824.0244	848.9792			
Extreme (50°C)		824.0244	848.9792	-11.3	-0.014	Yes
Extreme (40°C)		824.0244	848.9792	-9.1	-0.011	Yes
Extreme (30°C)		824.0244	848.9792	-8.8	-0.011	Yes
Extreme (10°C)		824.0245	848.9793	98.5	0.118	Yes
Extreme (0°C)		824.0245	848.9793	89.3	0.107	Yes
Extreme (-10°C)		824.0244	848.9793	16.9	0.020	Yes
Extreme (-20°C)		824.0244	848.9793	12.3	0.015	Yes
Extreme (-30°C)		824.0244	848.9792	-6.0	-0.007	Yes
20°C	15%	824.0244	848.9792	-13.2	-0.016	Yes
	-15%	824.0244	848.9792	-10.4	-0.012	Yes
	End Point Voltage	824.0244	848.9792	-14.9	-0.018	Yes

GPRS 1900

Condition		1850	1910	Frequency Error Reading (Hz)		
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1850.0274	1909.9581			
Extreme (50°C)		1850.0275	1909.9582	48.9	0.026	Yes
Extreme (40°C)		1850.0275	1909.9582	39.9	0.021	Yes
Extreme (30°C)		1850.0275	1909.9582	36.7	0.020	Yes
Extreme (10°C)		1850.0275	1909.9582	55.3	0.029	Yes
Extreme (0°C)		1850.0275	1909.9582	67.8	0.036	Yes
Extreme (-10°C)		1850.0275	1909.9582	46.2	0.025	Yes
Extreme (-20°C)		1850.0275	1909.9582	10.7	0.006	Yes
Extreme (-30°C)		1850.0275	1909.9582	44.4	0.024	Yes
20°C	15%	1850.0275	1909.9582	14.4	0.008	Yes
	-15%	1850.0274	1909.9581	-14.0	-0.007	Yes
	End Point Voltage	1850.0275	1909.9582	50.5	0.027	Yes

9.4.2. WCDMA

Test Engineer ID:	32601WY	Test Date:	2024-03-25 to 2024-03-26

WCDMA REL 99 BAND 5

Band	5	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849		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	824.1468	848.9045			
Extreme (50°C)		824.1468	848.9045	-10.3	-0.012	Yes
Extreme (40°C)		824.1468	848.9045	-10.9	-0.013	Yes
Extreme (30°C)		824.1468	848.9045	-11.3	-0.014	Yes
Extreme (10°C)		824.1468	848.9045	9.2	0.011	Yes
Extreme (0°C)		824.1468	848.9045	8.7	0.010	Yes
Extreme (-10°C)		824.1468	848.9045	13.1	0.016	Yes
Extreme (-20°C)		824.1469	848.9045	24.2	0.029	Yes
Extreme (-30°C)		824.1468	848.9045	11.8	0.014	Yes
20°C	15%	824.1468	848.9045	11.4	0.014	Yes
	-15%	824.1468	848.9045	8.8	0.011	Yes
	End Point Voltage	824.1469	848.9045	24.1	0.029	Yes

WCDMA REL 99 BAND 2

Band	2	Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		1850	1910		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	1850.1618	1909.8517			
Extreme (50°C)		1850.1618	1909.8517	-6.0	-0.003	Yes
Extreme (40°C)		1850.1618	1909.8517	-7.5	-0.004	Yes
Extreme (30°C)		1850.1618	1909.8517	7.4	0.004	Yes
Extreme (10°C)		1850.1618	1909.8517	6.6	0.003	Yes
Extreme (0°C)		1850.1618	1909.8517	9.3	0.005	Yes
Extreme (-10°C)		1850.1618	1909.8517	12.3	0.007	Yes
Extreme (-20°C)		1850.1618	1909.8517	13.0	0.007	Yes
Extreme (-30°C)		1850.1618	1909.8517	-12.6	-0.007	Yes
20°C	15%	1850.1618	1909.8517	8.5	0.005	Yes
	-15%	1850.1618	1909.8517	8.7	0.005	Yes
	End Point Voltage	1850.1618	1909.8517	9.8	0.005	Yes

WCDMA REL 99 BAND 4

Condition		1710	1755	Frequency Error Reading (Hz)		
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Normal (20°C)	Normal	1710.1397	1754.8435			
Extreme (50°C)		1710.1397	1754.8435	-18.6	-0.011	Yes
Extreme (40°C)		1710.1397	1754.8435	-16.1	-0.009	Yes
Extreme (30°C)		1710.1397	1754.8435	13.4	0.008	Yes
Extreme (10°C)		1710.1397	1754.8435	10.3	0.006	Yes
Extreme (0°C)		1710.1397	1754.8435	19.3	0.011	Yes
Extreme (-10°C)		1710.1397	1754.8435	22.8	0.013	Yes
Extreme (-20°C)		1710.1397	1754.8435	20.3	0.012	Yes
Extreme (-30°C)		1710.1397	1754.8435	8.7	0.005	Yes
20°C	15%	1710.1397	1754.8435	16.0	0.009	Yes
	-15%	1710.1397	1754.8435	16.7	0.010	Yes
	End Point Voltage	1710.1397	1754.8435	14.2	0.008	Yes

9.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

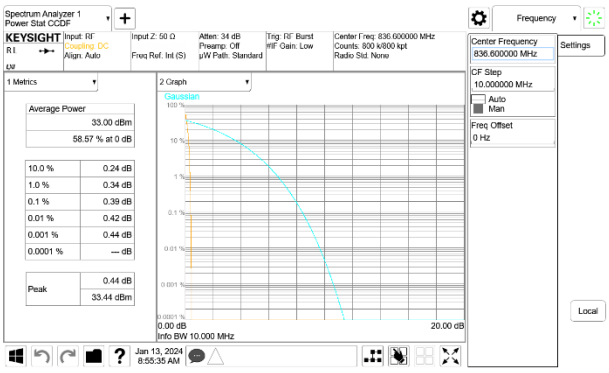
In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

RESULT

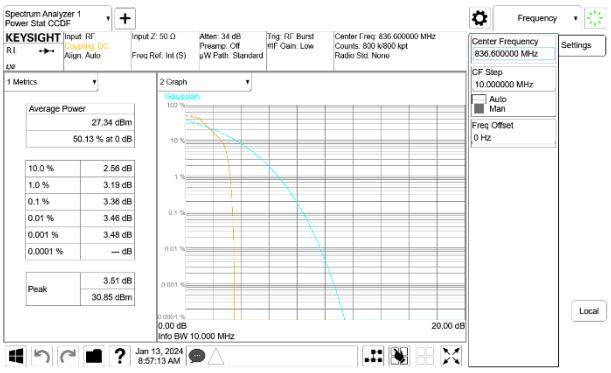
Worst case antenna was used for measurement. The results from all CCDF plots are passed with 13dB peak-to-average power ratio criteria.

Test Engineer ID:	27979HN	**Test Date:**	2024-01-12 to 2024-01-13

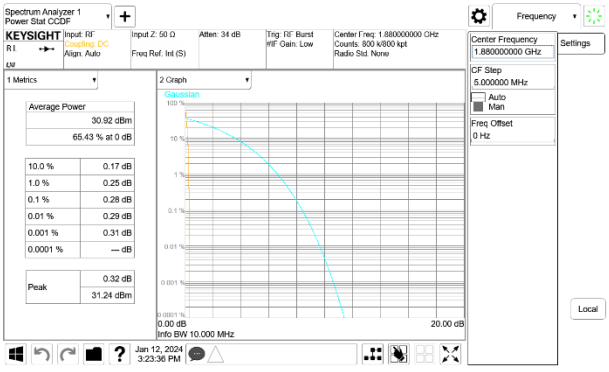
9.5.1. GSM



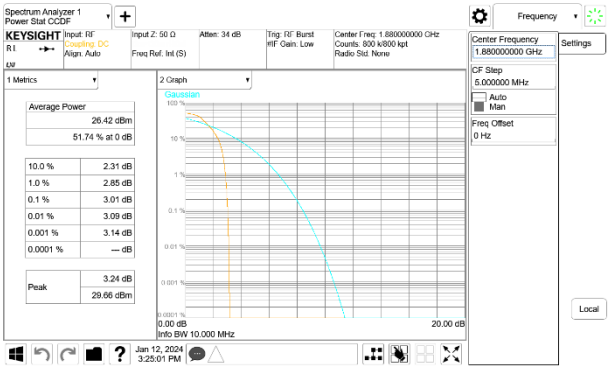
GSM 850 GPRS Middle Channel, ID:27979



GSM 850 EGPRS Middle Channel, ID:27979

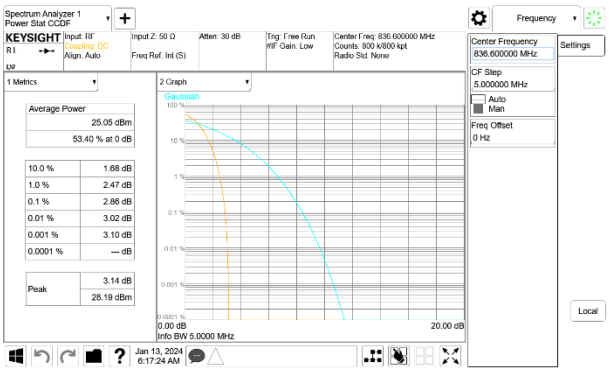


GSM 1900 GPRS Middle Channel, ID:27966

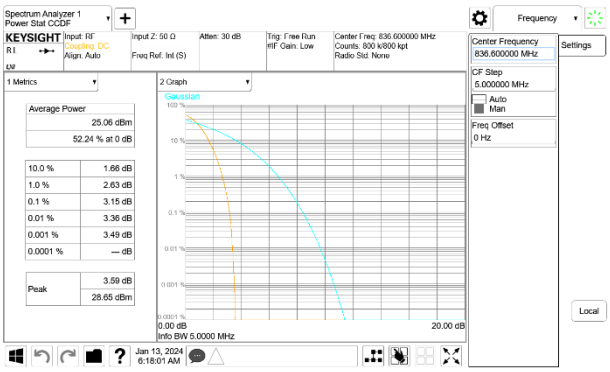


GSM 1900 EGPRS Middle Channel, ID:27966

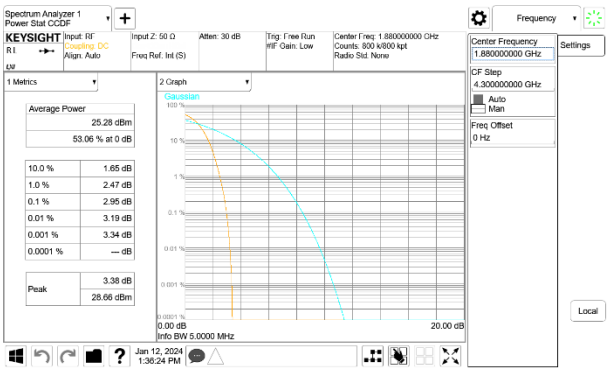
9.5.2. WCDMA



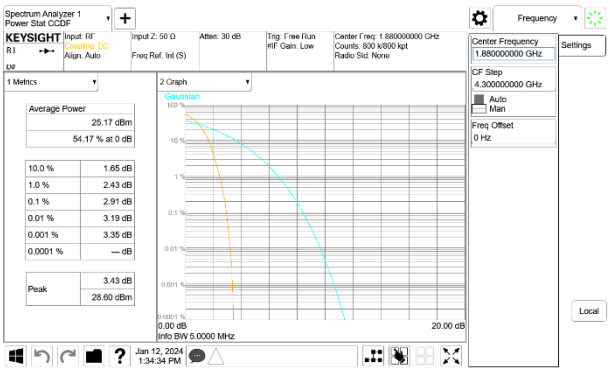
WCDMA Band 5 Rel 99 Middle Channel, ID:27979



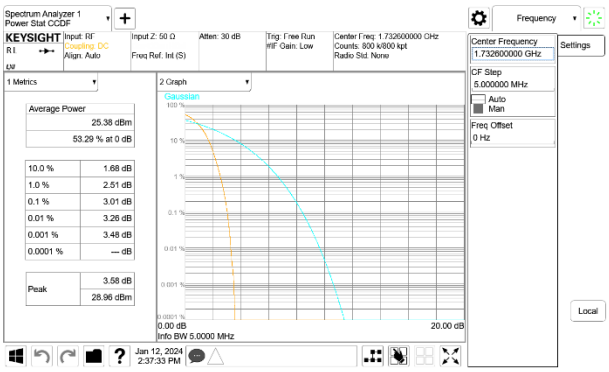
WCDMA Band 5 HSDPA Middle Channel, ID:27979



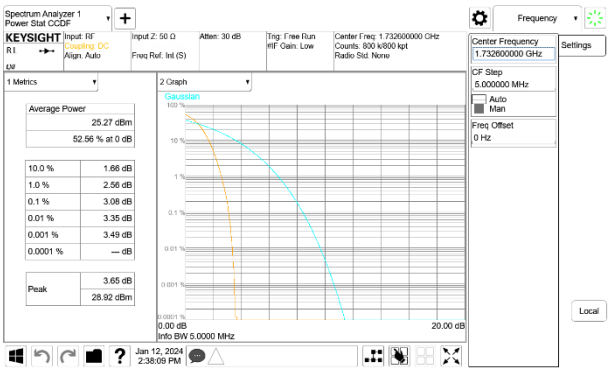
WCDMA Band 2 Rel 99 Middle Channel, ID:27966



WCDMA Band 2 HSDPA Middle Channel, ID:27966



WCDMA Band 4 Rel 99 Middle Channel, ID:27966



WCDMA Band 4 HSDPA Middle Channel, ID:27966

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.

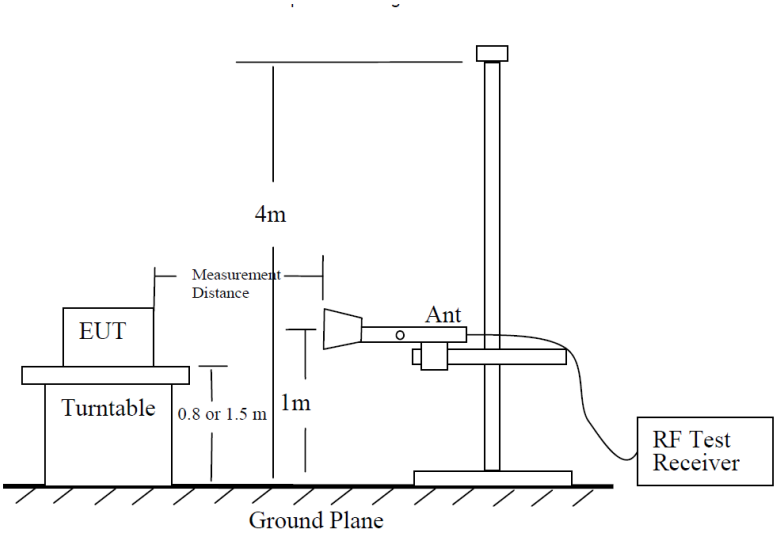


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

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

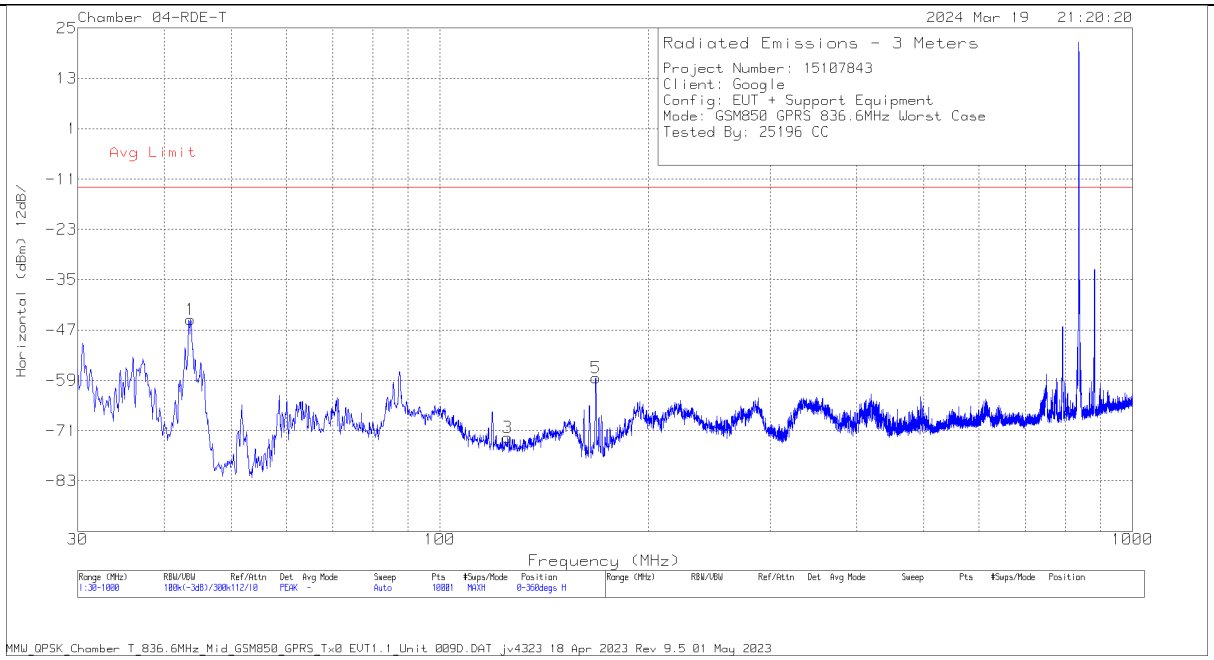
a) E (dBµV/m) = Measured amplitude level (dBµV) + Cable Loss (dB) + Antenna Factor (dB/m).
b) E (dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m).
c) E (dBµV/m) = EIRP (dBm) − 20log(D) + 104.8; where D is the measurement distance (in the far field region) in m.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

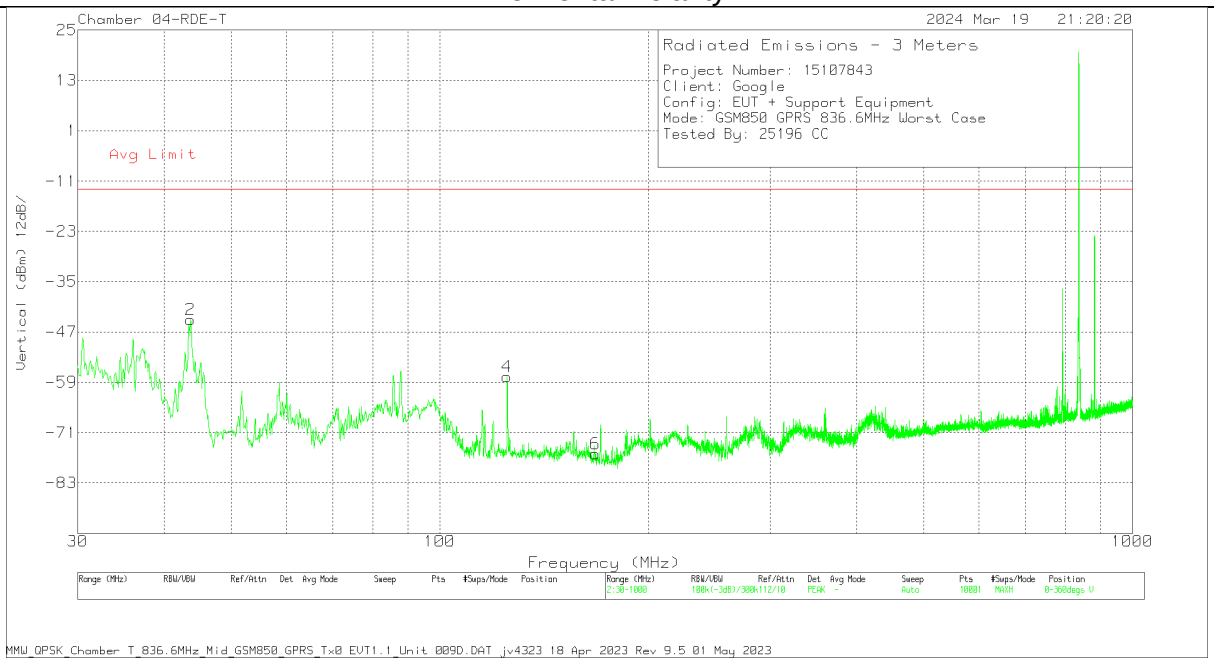
Then, EIRP (dBm) = E (dBµV/m) + 9.5424 − 104.8 = E (dBµV/m) – 95.2576

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.

Worst Case Plot Below 1 GHz



Horizontal Polarity



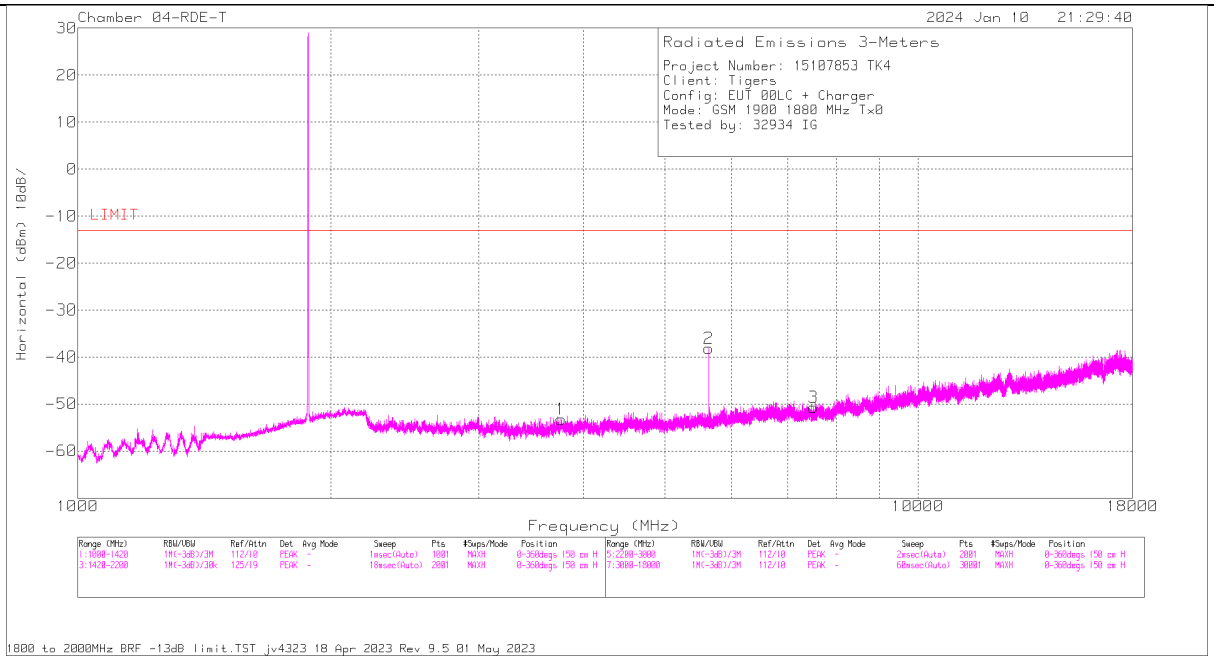
Vertical Polarity

Trace Markers

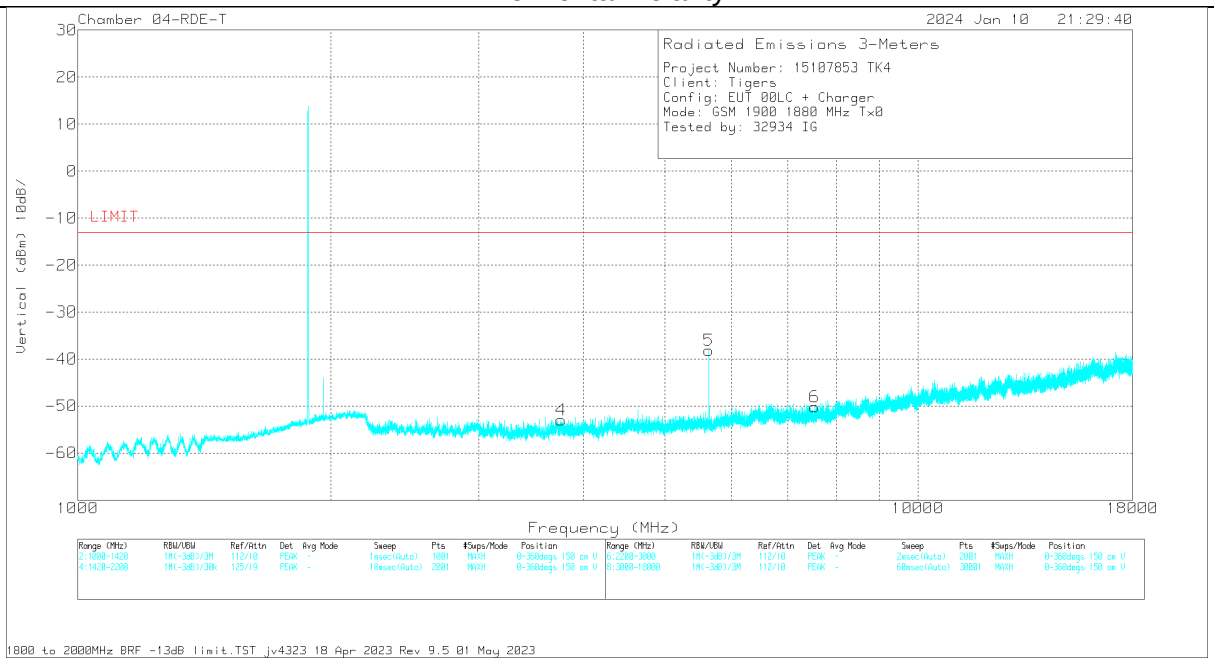
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	222009 ACF (dB)	Amp/Cbl (dB)	EIRP CF	Corrected Reading (dBm)	Avg Limit	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 125.351	33.61	Pk	20	-31	-95.2	-72.59	-13	-59.59	0-360	299	H
5	* 167.934	49.75	Pk	17.8	-30.8	-95.2	-58.45	-13	-45.45	0-360	199	H
4	* 124.963	48.53	Pk	20	-31	-95.2	-57.67	-13	-44.67	0-360	97	V
6	* 167.837	32.15	Pk	17.8	-30.8	-95.2	-76.05	-13	-63.05	0-360	97	V
1	43.677	65.45	Pk	16.9	-31.6	-95.2	-44.45	-13	-31.45	0-360	199	H
2	43.677	65.8	Pk	16.9	-31.6	-95.2	-44.1	-13	-31.1	0-360	97	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 (MHz)	Meter Reading (dBuV)	Det	226673 ACF (dB) 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3761.5	54	Pk	33.3	-95.2	-45.35	-53.25	-13	-40.25	0-360	150	H
3	* 7512	53.18	Pk	35.7	-95.2	-44.42	-50.74	-13	-37.74	0-360	150	H
4	* 3761.5	54.29	Pk	33.3	-95.2	-45.35	-52.96	-13	-39.96	0-360	150	V
6	* 7529	53.49	Pk	35.7	-95.2	-44.18	-50.19	-13	-37.19	0-360	150	V
2	5640.0	70.56	Pk	34.5	-95.2	-45.31	-35.45	-13	-22.45	132	283	H
5	5640.1	69.29	Pk	34.5	-95.2	-45.31	-36.72	-13	-23.72	355	146	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
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: §2.1053, §22.917, §24.238, and §27.53.
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 #:	15107843
Date:	2024-01-10
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 850
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, 824.2MHz									
1.648413	69.00	Pk	28.4	-95.2	-47.76	-45.56	-13	-32.56	H
2.479600	57.14	Pk	32.2	-95.2	-48.42	-54.28	-13	-41.28	H
3.291850	52.89	Pk	32.7	-95.2	-45.17	-54.78	-13	-41.78	H
1.648167	71.52	Pk	28.4	-95.2	-47.73	-43.01	-13	-30.01	V
2.479600	56.88	Pk	32.2	-95.2	-48.42	-54.54	-13	-41.54	V
3.294550	52.55	Pk	32.7	-95.2	-44.92	-54.87	-13	-41.87	V
Mid Channel, 836.6MHz									
1.673098	68.38	Pk	28.7	-95.2	-47.59	-45.71	-13	-32.71	H
2.509444	63.05	Pk	32.3	-95.2	-48.2	-48.05	-13	-35.05	H
3.345400	54.29	Pk	32.7	-95.2	-45.59	-53.80	-13	-40.80	H
1.673139	70.47	Pk	28.7	-95.2	-47.59	-43.62	-13	-30.62	V
2.522800	57.10	Pk	32.3	-95.2	-47.9	-53.70	-13	-40.70	V
3.346300	54.28	Pk	32.7	-95.2	-45.48	-53.70	-13	-40.70	V
High Channel, 848.8MHz									
1.697474	87.44	Pk	29.0	-95.2	-47.60	-26.36	-13	-13.36	H
2.546305	69.82	Pk	32.3	-95.2	-47.60	-40.68	-13	-27.68	H
3.394450	54.02	Pk	32.7	-95.2	-45.08	-53.56	-13	-40.56	H
1.697532	74.59	Pk	29.0	-95.2	-47.60	-39.21	-13	-26.21	V
2.546284	64.70	Pk	32.3	-95.2	-47.60	-45.80	-13	-32.80	V
3.372400	54.17	Pk	32.7	-95.2	-45.37	-53.70	-13	-40.70	V

EGPRS MODE

Project #:	15107843
Date:	2024-02-14
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 850
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2MHz									
1.648178	62.45	Pk	28.7	-95.2	-47.62	-51.67	-13	-38.67	H
2.508560	56.56	Pk	32.2	-95.2	-47.78	-54.22	-13	-41.22	H
3.346320	54.35	Pk	32.8	-95.2	-46.39	-54.44	-13	-41.44	H
1.646160	56.93	Pk	28.6	-95.2	-47.68	-57.35	-13	-44.35	V
2.507680	55.94	Pk	32.2	-95.2	-47.77	-54.83	-13	-41.83	V
3.348960	54.98	Pk	32.8	-95.2	-46.18	-53.6	-13	-40.60	V
Mid Channel, 836.6MHz									
1.674320	57.04	Pk	29.2	-95.2	-47.76	-56.72	-13	-43.72	H
2.505920	56.04	Pk	32.2	-95.2	-47.74	-54.70	-13	-41.70	H
3.348960	55.65	Pk	32.8	-95.2	-46.18	-52.93	-13	-39.93	H
1.670360	55.99	Pk	29.1	-95.2	-47.66	-57.77	-13	-44.77	V
2.504160	56.58	Pk	32.2	-95.2	-47.81	-54.23	-13	-41.23	V
3.344560	54.65	Pk	32.8	-95.2	-46.41	-54.16	-13	-41.16	V
High Channel, 848.8MHz									
1.702480	56.80	Pk	29.7	-95.2	-47.90	-56.60	-13	-43.60	H
2.546546	59.56	Pk	32.3	-95.2	-47.63	-50.97	-13	-37.97	H
3.410120	54.14	Pk	32.8	-95.2	-46.51	-54.77	-13	-41.77	H
1.702920	56.88	Pk	29.7	-95.2	-47.88	-56.50	-13	-43.50	V
2.558280	56.16	Pk	32.4	-95.2	-47.77	-54.41	-13	-41.41	V
3.408800	54.76	Pk	32.8	-95.2	-46.64	-54.28	-13	-41.28	V

10.1.2. GSM 1900

GPRS MODE

Project #:	15107843
Date:	2024-01-11
Test Engineer:	32188 AC
Configuration;	EUT + Support Equipment
Mode:	GPRS 1900
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, 1850.2MHz									
3.700500	52.36	Pk	33.2	-95.2	-45.32	-54.96	-13	-41.96	H
5.550500	51.21	Pk	34.5	-95.2	-45.16	-54.65	-13	-41.65	H
7.400500	51.36	Pk	35.7	-95.2	-44.21	-52.35	-13	-39.35	H
3.700500	51.71	Pk	33.2	-95.2	-45.32	-55.61	-13	-42.61	V
5.550500	53.06	Pk	34.5	-95.2	-45.16	-52.80	-13	-39.80	V
7.400500	52.66	Pk	35.7	-95.2	-44.21	-51.05	-13	-38.05	V
Mid Channel, 1880MHz									
3.600000	51.77	Pk	33.0	-95.2	-44.97	-55.40	-13	-42.40	H
5.400000	53.26	Pk	34.5	-95.2	-45.78	-53.22	-13	-40.22	H
7.200000	50.68	Pk	35.6	-95.2	-44.51	-53.43	-13	-40.43	H
3.600000	51.35	Pk	33.0	-95.2	-44.97	-55.82	-13	-42.82	V
5.400000	52.87	Pk	34.5	-95.2	-45.78	-53.61	-13	-40.61	V
7.200000	50.54	Pk	35.6	-95.2	-44.51	-53.57	-13	-40.57	V
High Channel, 1909.8MHz									
3.820000	52.13	Pk	33.4	-95.2	-45.06	-54.73	-13	-41.73	H
5.729500	50.99	Pk	34.6	-95.2	-45.18	-54.79	-13	-41.79	H
7.639500	50.68	Pk	35.8	-95.2	-43.91	-52.63	-13	-39.63	H
3.820000	51.52	Pk	33.4	-95.2	-45.06	-55.34	-13	-42.34	V
5.729500	52.16	Pk	34.6	-95.2	-45.18	-53.62	-13	-40.62	V
7.639500	50.91	Pk	35.8	-95.2	-43.91	-52.40	-13	-39.40	V

EGPRS MODE

Project #:	15107843
Date:	2024-02-13
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 1900
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz									
3.703000	53.92	Pk	32.8	-95.2	-45.79	-54.27	-13	-41.27	H
5.559000	54.97	Pk	34.6	-95.2	-45.79	-51.42	-13	-38.42	H
6.567000	53.22	Pk	35.5	-95.2	-44.10	-50.58	-13	-37.58	H
3.702500	54.41	Pk	32.8	-95.2	-45.83	-53.82	-13	-40.82	V
5.560500	53.47	Pk	34.6	-95.2	-45.79	-52.92	-13	-39.92	V
6.558340	55.40	Pk	35.5	-95.2	-44.19	-48.49	-13	-35.49	V
Mid Channel, 1880MHz									
3.764500	54.50	Pk	32.7	-95.2	-46.23	-54.23	-13	-41.23	H
5.656500	53.65	Pk	34.7	-95.2	-45.85	-52.70	-13	-39.7	H
7.520000	52.26	Pk	35.5	-95.2	-44.00	-51.44	-13	-38.44	H
3.767500	55.01	Pk	32.7	-95.2	-46.15	-53.64	-13	-40.64	V
5.657000	54.86	Pk	34.7	-95.2	-45.83	-51.47	-13	-38.47	V
7.524000	52.43	Pk	35.5	-95.2	-43.9	-51.17	-13	-38.17	V
High Channel, 1909.8MHz									
3.828500	54.90	Pk	32.8	-95.2	-46.31	-53.81	-13	-40.81	H
5.725000	54.20	Pk	34.9	-95.2	-45.66	-51.76	-13	-38.76	H
7.651000	53.88	Pk	35.6	-95.2	-44.13	-49.85	-13	-36.85	H
3.828000	55.35	Pk	32.8	-95.2	-46.35	-53.40	-13	-40.40	V
5.712500	53.81	Pk	34.8	-95.2	-45.73	-52.32	-13	-39.32	V
7.645000	53.78	Pk	35.6	-95.2	-44.13	-49.95	-13	-36.95	V

10.1.3. WCDMA BAND 5

REL 99 MODE

Project #:	15107843
Date:	2024-02-14
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 5
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz									
1.651440	55.71	Pk	28.7	-95.2	-47.72	-58.51	-13	-45.51	H
2.479080	56.34	Pk	32.1	-95.2	-47.86	-54.62	-13	-41.62	H
3.308480	55.00	Pk	32.9	-95.2	-46.39	-53.69	-13	-40.69	H
1.651000	57.36	Pk	28.7	-95.2	-47.71	-56.85	-13	-43.85	V
2.478640	56.41	Pk	32.1	-95.2	-47.86	-54.55	-13	-41.55	V
3.308040	56.23	Pk	32.9	-95.2	-46.43	-52.5	-13	-39.50	V
Mid Channel, 836.6MHz									
1.674320	55.99	Pk	29.2	-95.2	-47.76	-57.77	-13	-44.77	H
2.509000	55.68	Pk	32.2	-95.2	-47.78	-55.10	-13	-42.10	H
3.342800	54.10	Pk	32.8	-95.2	-46.27	-54.57	-13	-41.57	H
1.674760	57.71	Pk	29.2	-95.2	-47.77	-56.06	-13	-43.06	V
2.506360	56.02	Pk	32.2	-95.2	-47.75	-54.73	-13	-41.73	V
3.340160	54.22	Pk	32.8	-95.2	-46.26	-54.44	-13	-41.44	V
High Channel, 846.6MHz									
1.695440	57.00	Pk	29.5	-95.2	-47.85	-56.55	-13	-43.55	H
2.536720	57.45	Pk	32.3	-95.2	-47.66	-53.11	-13	-40.11	H
3.383280	54.11	Pk	32.8	-95.2	-46.39	-54.68	-13	-41.68	H
1.695000	56.24	Pk	29.5	-95.2	-47.86	-57.32	-13	-44.32	V
2.537600	55.67	Pk	32.3	-95.2	-47.64	-54.87	-13	-41.87	V
3.384160	53.72	Pk	32.8	-95.2	-46.42	-55.10	-13	-42.10	V

HSDPA MODE

Project #:	15107843
Date:	2024-01-10
Test Engineer:	32188 AC
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 5
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, 826.4MHz									
1.632250	55.14	Pk	28.2	-95.2	-47.58	-59.44	-13	-46.44	H
2.449450	55.68	Pk	32.2	-95.2	-48.41	-55.73	-13	-42.73	H
3.265300	51.59	Pk	32.7	-95.2	-45.16	-56.07	-13	-43.07	H
1.632250	55.42	Pk	28.2	-95.2	-47.58	-59.16	-13	-46.16	V
2.449450	56.57	Pk	32.2	-95.2	-48.41	-54.84	-13	-41.84	V
3.265300	52.07	Pk	32.7	-95.2	-45.16	-55.59	-13	-42.59	V
Mid Channel, 836.6MHz									
1.652950	54.21	Pk	28.5	-95.2	-47.52	-60.01	-13	-47.01	H
2.479600	57.68	Pk	32.2	-95.2	-48.42	-53.74	-13	-40.74	H
3.306250	51.69	Pk	32.7	-95.2	-45.59	-56.40	-13	-43.40	H
1.652950	54.94	Pk	28.5	-95.2	-47.52	-59.28	-13	-46.28	V
2.479600	55.8	Pk	32.2	-95.2	-48.42	-55.62	-13	-42.62	V
3.306250	51.91	Pk	32.7	-95.2	-45.59	-56.18	-13	-43.18	V
High Channel, 846.6MHz									
1.673200	54.08	Pk	28.7	-95.2	-47.58	-60.00	-13	-47.00	H
2.509750	55.97	Pk	32.3	-95.2	-48.21	-55.14	-13	-42.14	H
3.345850	54.50	Pk	32.7	-95.2	-45.5	-53.50	-13	-40.50	H
1.673200	54.11	Pk	28.7	-95.2	-47.58	-59.97	-13	-46.97	V
2.509750	56.10	Pk	32.3	-95.2	-48.21	-55.01	-13	-42.01	V
3.345850	52.88	Pk	32.7	-95.2	-45.5	-55.12	-13	-42.12	V

10.1.4. WCDMA BAND 2

REL 99 MODE

Project #:	15107843
Date:	2024-02-12
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 2
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	80430 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz									
3.716000	55.12	Pk	33.3	-95.2	-45.08	-51.86	-13	-38.86	H
5.558000	53.78	Pk	34.8	-95.2	-45.28	-51.90	-13	-38.90	H
7.408000	52.67	Pk	35.4	-95.2	-44.20	-51.33	-13	-38.33	H
3.715000	54.04	Pk	33.3	-95.2	-45.16	-53.02	-13	-40.02	V
5.560500	53.42	Pk	34.8	-95.2	-45.35	-52.33	-13	-39.33	V
7.407000	52.51	Pk	35.4	-95.2	-44.05	-51.34	-13	-38.34	V
Mid Channel, 1880MHz									
3.759000	53.52	Pk	33.3	-95.2	-45.43	-53.81	-13	-40.81	H
5.635000	54.13	Pk	34.8	-95.2	-45.39	-51.66	-13	-38.66	H
7.521500	52.70	Pk	35.5	-95.2	-44.27	-51.27	-13	-38.27	H
3.757000	54.16	Pk	33.3	-95.2	-45.42	-53.16	-13	-40.16	V
5.639500	53.44	Pk	34.8	-95.2	-45.31	-52.27	-13	-39.27	V
7.523000	52.65	Pk	35.6	-95.2	-44.31	-51.26	-13	-38.26	V
High Channel, 1907.6MHz									
3.815000	52.71	Pk	33.4	-95.2	-45.22	-54.31	-13	-41.31	H
5.723500	52.89	Pk	34.9	-95.2	-45.2	-52.61	-13	-39.61	H
7.638500	52.63	Pk	35.6	-95.2	-43.86	-50.83	-13	-37.83	H
3.818000	52.25	Pk	33.4	-95.2	-45.02	-54.57	-13	-41.57	V
5.725500	54.13	Pk	34.9	-95.2	-45.16	-51.33	-13	-38.33	V
7.641000	52.06	Pk	35.6	-95.2	-43.89	-51.43	-13	-38.43	V

HSDPA MODE

Project #:	15107843
Date:	2024-01-10
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 2
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, 1852.4MHz									
3.697500	54.14	Pk	33.2	-95.2	-45.2	-53.06	-13	-40.06	H
5.556102	56.10	Pk	34.5	-95.2	-45.19	-49.79	-13	-36.79	H
7.402000	53.06	Pk	35.7	-95.2	-44.23	-50.67	-13	-37.67	H
3.682500	53.87	Pk	33.1	-95.2	-45.22	-53.45	-13	-40.45	V
5.561207	55.82	Pk	34.4	-95.2	-45.34	-50.32	-13	-37.32	V
7.345000	53.27	Pk	35.6	-95.2	-44.29	-50.62	-13	-37.62	V
Mid Channel, 1880MHz									
3.753500	53.83	Pk	33.3	-95.2	-45.36	-53.43	-13	-40.43	H
5.637098	65.28	Pk	34.5	-95.2	-45.42	-40.84	-13	-27.84	H
7.521500	53.11	Pk	35.7	-95.2	-44.27	-50.66	-13	-37.66	H
3.721500	54.47	Pk	33.2	-95.2	-45.15	-52.68	-13	-39.68	V
5.642631	63.81	Pk	34.5	-95.2	-45.35	-42.24	-13	-29.24	V
7.500000	53.77	Pk	35.7	-95.2	-44.51	-50.24	-13	-37.24	V
High Channel, 1907.6MHz									
3.807000	54.08	Pk	33.4	-95.2	-45.32	-53.04	-13	-40.04	H
5.719140	63.70	Pk	34.6	-95.2	-45.22	-42.12	-13	-29.12	H
7.620000	52.98	Pk	35.8	-95.2	-43.72	-50.14	-13	-37.14	H
3.873838	55.22	Pk	33.4	-95.2	-44.80	-51.38	-13	-38.38	V
5.719861	62.90	Pk	34.6	-95.2	-45.24	-42.94	-13	-29.94	V
7.6425000	54.22	Pk	35.8	-95.2	-43.91	-49.09	-13	-36.09	V

10.1.5. WCDMA BAND 4

REL 99 MODE

Project #:	15107843
Date:	2024-02-12
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 4
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	80430 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4MHz									
3.425500	52.75	Pk	32.9	-95.2	-45.08	-54.63	-13	-41.63	H
5.139000	55.83	Pk	34.4	-95.2	-46.25	-51.22	-13	-38.22	H
6.846500	52.21	Pk	36.3	-95.2	-44.57	-51.26	-13	-38.26	H
3.426500	52.85	Pk	32.9	-95.2	-45.19	-54.64	-13	-41.64	V
5.135000	54.91	Pk	34.4	-95.2	-46.33	-52.22	-13	-39.22	V
6.8445000	53.69	Pk	36.3	-95.2	-44.48	-49.69	-13	-36.69	V
Mid Channel, 1732.6MHz									
3.463000	53.34	Pk	33.0	-95.2	-45.14	-54	-13	-41.00	H
5.200000	55.38	Pk	34.5	-95.2	-46.07	-51.39	-13	-38.39	H
6.926000	52.27	Pk	35.8	-95.2	-44.03	-51.16	-13	-38.16	H
3.463000	52.94	Pk	33.0	-95.2	-45.14	-54.40	-13	-41.40	V
5.199000	54.62	Pk	34.5	-95.2	-46.04	-52.12	-13	-39.12	V
6.928500	53.55	Pk	35.8	-95.2	-44.01	-49.86	-13	-36.86	V
High Channel, 1752.6MHz									
3.502500	54.06	Pk	33.1	-95.2	-45.12	-53.16	-13	-40.16	H
5.254500	54.49	Pk	34.5	-95.2	-45.81	-52.02	-13	-39.02	H
7.008000	52.99	Pk	35.5	-95.2	-43.73	-50.44	-13	-37.44	H
3.504500	53.61	Pk	33.1	-95.2	-45.28	-53.77	-13	-40.77	V
5.251000	53.88	Pk	34.5	-95.2	-45.91	-52.73	-13	-39.73	V
7.009500	53.59	Pk	35.5	-95.2	-43.68	-49.79	-13	-36.79	V

HSDPA MODE

Project #:	15107843
Date:	2024-01-10
Test Engineer:	32188 AC
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 4
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, 1712.4MHz									
3425	52.26	Pk	32.7	-95.2	-45.04	-55.28	-13	-42.28	H
5137	53.6	Pk	34.2	-95.2	-46.29	-53.69	-13	-40.69	H
6849	51.27	Pk	35.6	-95.2	-44.56	-52.89	-13	-39.89	H
3425	50.9	Pk	32.7	-95.2	-45.04	-56.64	-13	-43.64	V
5137	52.71	Pk	34.2	-95.2	-46.29	-54.58	-13	-41.58	V
6849	50.99	Pk	35.6	-95.2	-44.56	-53.17	-13	-40.17	V
Mid Channel, 1732.6MHz									
3465	52.49	Pk	32.8	-95.2	-45.23	-55.14	-13	-42.14	H
5198	52.79	Pk	34.3	-95.2	-46.12	-54.23	-13	-41.23	H
6930.5	51.43	Pk	35.6	-95.2	-44.06	-52.23	-13	-39.23	H
3465	52.7	Pk	32.8	-95.2	-45.23	-54.93	-13	-41.93	V
5198	53.31	Pk	34.3	-95.2	-46.12	-53.71	-13	-40.71	V
6930.5	51.21	Pk	35.6	-95.2	-44.06	-52.45	-13	-39.45	V
High Channel, 1752.6MHz									
3505.5	51.24	Pk	32.8	-95.2	-45.26	-56.42	-13	-43.42	H
5258	52.39	Pk	34.4	-95.2	-45.99	-54.4	-13	-41.4	H
7010.5	52.31	Pk	35.6	-95.2	-43.66	-50.95	-13	-37.95	H
3505.5	52.88	Pk	32.8	-95.2	-45.26	-54.78	-13	-41.78	V
5258	53.33	Pk	34.4	-95.2	-45.99	-53.46	-13	-40.46	V
7010.5	52.3	Pk	35.6	-95.2	-43.66	-50.96	-13	-37.96	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 #:	15107843
Date:	2024-01-10
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 850
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, 824.2MHz									
1.648484	72.23	Pk	28.4	-95.2	-47.76	-42.33	-13	-29.33	H
2.472349	62.09	Pk	32.2	-95.2	-48.45	-49.36	-13	-36.36	H
3.295000	52.80	Pk	32.7	-95.2	-44.92	-54.62	-13	-41.62	H
1.648234	77.02	Pk	28.4	-95.2	-47.74	-37.52	-13	-24.52	V
2.472723	59.48	Pk	32.2	-95.2	-48.48	-52.00	-13	-39.00	V
3.294100	53.61	Pk	32.7	-95.2	-44.93	-53.82	-13	-40.82	V
Mid Channel, 836.6MHz									
1.673308	71.82	Pk	28.7	-95.2	-47.58	-42.26	-13	-29.26	H
2.501200	58.13	Pk	32.3	-95.2	-48.27	-53.04	-13	-40.04	H
3.353500	54.44	Pk	32.7	-95.2	-45.50	-53.56	-13	-40.56	H
1.673082	76.55	Pk	28.7	-95.2	-47.59	-37.54	-13	-24.54	V
2.490400	57.87	Pk	32.3	-95.2	-48.26	-53.29	-13	-40.29	V
3.379600	53.95	Pk	32.7	-95.2	-45.35	-53.9	-13	-40.9	V
High Channel, 848.8MHz									
1.697620	87.25	Pk	29	-95.2	-47.6	-26.55	-13	-13.55	H
2.546235	70.44	Pk	32.3	-95.2	-47.6	-40.06	-13	-27.06	H
3.398500	53.97	Pk	32.7	-95.2	-45.28	-53.81	-13	-40.81	H
1.697465	77.79	Pk	29	-95.2	-47.6	-36.01	-13	-23.01	V
2.545300	57.29	Pk	32.3	-95.2	-47.58	-53.19	-13	-40.19	V
3.381850	53.9	Pk	32.7	-95.2	-45.47	-54.07	-13	-41.07	V

EGPRS MODE

Project #:	15107843
Date:	2024-02-14
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 850
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2MHz									
1.648377	64.16	Pk	28.7	-95.2	-47.62	-49.96	-13	-36.96	H
2.470280	56.97	Pk	32.1	-95.2	-47.93	-54.06	-13	-41.06	H
3.295720	55.48	Pk	32.9	-95.2	-46.44	-53.26	-13	-40.26	H
1.649680	55.93	Pk	28.7	-95.2	-47.65	-58.22	-13	-45.22	V
2.471600	56.18	Pk	32.1	-95.2	-47.92	-54.84	-13	-41.84	V
3.294840	55.08	Pk	32.9	-95.2	-46.4	-53.62	-13	-40.62	V
Mid Channel, 836.6MHz									
1.673154	62.03	Pk	29.1	-95.2	-47.72	-51.79	-13	-38.79	H
2.509000	56.27	Pk	32.2	-95.2	-47.78	-54.51	-13	-41.51	H
3.347200	55.13	Pk	32.8	-95.2	-46.31	-53.58	-13	-40.58	H
1.670360	55.72	Pk	29.1	-95.2	-47.66	-58.04	-13	-45.04	V
2.508120	55.99	Pk	32.2	-95.2	-47.78	-54.79	-13	-41.79	V
3.345440	54.81	Pk	32.8	-95.2	-46.43	-54.02	-13	-41.02	V
High Channel, 848.8MHz									
1.697514	65.62	Pk	29.6	-95.2	-47.92	-47.90	-13	-34.90	H
2.539800	56.22	Pk	32.3	-95.2	-47.69	-54.37	-13	-41.37	H
3.408800	54.89	Pk	32.8	-95.2	-46.64	-54.15	-13	-41.15	H
1.709080	56.48	Pk	29.8	-95.2	-47.96	-56.88	-13	-43.88	V
2.538480	56.05	Pk	32.3	-95.2	-47.66	-54.51	-13	-41.51	V
3.400880	54.75	Pk	32.8	-95.2	-46.56	-54.21	-13	-41.21	V

10.2.2. WCDMA BAND 5

REL 99 MODE

Project #:	15107843
Date:	2024-02-14
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 5
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz									
1.674320	56.32	Pk	29.2	-95.2	-47.76	-57.44	-13	-44.44	H
2.482160	56.61	Pk	32.1	-95.2	-47.78	-54.27	-13	-41.27	H
3.307600	54.97	Pk	32.9	-95.2	-46.46	-53.79	-13	-40.79	H
1.676080	56.12	Pk	29.2	-95.2	-47.83	-57.71	-13	-44.71	V
2.479520	55.77	Pk	32.1	-95.2	-47.87	-55.20	-13	-42.20	V
3.304520	55.70	Pk	32.9	-95.2	-46.42	-53.02	-13	-40.02	V
Mid Channel, 836.6MHz									
1.669920	57.62	Pk	29.1	-95.2	-47.67	-56.15	-13	-43.15	H
2.509440	56.35	Pk	32.2	-95.2	-47.8	-54.45	-13	-41.45	H
3.347200	55.29	Pk	32.8	-95.2	-46.31	-53.42	-13	-40.42	H
1.669480	56.62	Pk	29.1	-95.2	-47.7	-57.18	-13	-44.18	V
2.511640	55.91	Pk	32.2	-95.2	-47.81	-54.90	-13	-41.90	V
3.348080	54.36	Pk	32.8	-95.2	-46.24	-54.28	-13	-41.28	V
High Channel, 846.6MHz									
1.697640	56.20	Pk	29.6	-95.2	-47.93	-57.33	-13	-44.33	H
2.538920	55.70	Pk	32.3	-95.2	-47.68	-54.88	-13	-41.88	H
3.386360	54.75	Pk	32.8	-95.2	-46.33	-53.98	-13	-40.98	H
1.696320	56.20	Pk	29.5	-95.2	-47.85	-57.35	-13	-44.35	V
2.538480	55.66	Pk	32.3	-95.2	-47.66	-54.90	-13	-41.90	V
3.387240	53.94	Pk	32.8	-95.2	-46.30	-54.76	-13	-41.76	V

HSDPA MODE

Project #:	15107843
Date:	2024-01-10
Test Engineer:	32188 AC
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 5
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, 826.4MHz									
1.632700	54.48	Pk	28.2	-95.2	-47.63	-60.15	-13	-47.15	H
2.449450	56.09	Pk	32.2	-95.2	-48.41	-55.32	-13	-42.32	H
3.265750	51.55	Pk	32.7	-95.2	-45.22	-56.17	-13	-43.17	H
1.632700	56.31	Pk	28.2	-95.2	-47.63	-58.32	-13	-45.32	V
2.449450	56.49	Pk	32.2	-95.2	-48.41	-54.92	-13	-41.92	V
3.265750	52.39	Pk	32.7	-95.2	-45.22	-55.33	-13	-42.33	V
Mid Channel, 836.6MHz									
1.653400	56.91	Pk	28.5	-95.2	-47.54	-57.33	-13	-44.33	H
2.480050	55.15	Pk	32.2	-95.2	-48.37	-56.22	-13	-43.22	H
3.306250	53.48	Pk	32.7	-95.2	-45.59	-54.61	-13	-41.61	H
1.653400	55.97	Pk	28.5	-95.2	-47.54	-58.27	-13	-45.27	V
2.480050	56.04	Pk	32.2	-95.2	-48.37	-55.33	-13	-42.33	V
3.306250	53.03	Pk	32.7	-95.2	-45.59	-55.06	-13	-42.06	V
High Channel, 846.6MHz									
1.673200	53.83	Pk	28.7	-95.2	-47.58	-60.25	-13	-47.25	H
2.509750	55.55	Pk	32.3	-95.2	-48.21	-55.56	-13	-42.56	H
3.346300	53.07	Pk	32.7	-95.2	-45.48	-54.91	-13	-41.91	H
1.673200	54.59	Pk	28.7	-95.2	-47.58	-59.49	-13	-46.49	V
2.509750	55.46	Pk	32.3	-95.2	-48.21	-55.65	-13	-42.65	V
3.346300	52.49	Pk	32.7	-95.2	-45.48	-55.49	-13	-42.49	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 #:	15107843
Date:	2024-01-10
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	GPRS 1900
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, 1850.2MHz									
3.712500	53.98	Pk	33.2	-95.2	-45.29	-53.31	-13	-40.31	H
5.550662	67.90	Pk	34.5	-95.2	-45.15	-37.95	-13	-24.95	H
7.397000	53.63	Pk	35.7	-95.2	-44.12	-49.99	-13	-36.99	H
3.712000	54.13	Pk	33.2	-95.2	-45.27	-53.14	-13	-40.14	V
5.550542	68.02	Pk	34.5	-95.2	-45.16	-37.84	-13	-24.84	V
7.374500	52.41	Pk	35.7	-95.2	-44.03	-51.12	-13	-38.12	V
Mid Channel, 1880MHz									
3.761500	54.00	Pk	33.3	-95.2	-45.35	-53.25	-13	-40.25	H
5.640006	70.56	Pk	34.5	-95.2	-45.31	-35.45	-13	-22.45	H
7.512000	53.18	Pk	35.7	-95.2	-44.42	-50.74	-13	-37.74	H
3.761500	54.29	Pk	33.3	-95.2	-45.35	-52.96	-13	-39.96	V
5.640060	69.29	Pk	34.5	-95.2	-45.31	-36.72	-13	-23.72	V
7.529000	53.49	Pk	35.7	-95.2	-44.18	-50.19	-13	-37.19	V
High Channel, 1909.8MHz									
3.808500	53.86	Pk	33.4	-95.2	-45.39	-53.33	-13	-40.33	H
5.729238	64.34	Pk	34.6	-95.2	-45.18	-41.44	-13	-28.44	H
7.645500	52.99	Pk	35.8	-95.2	-43.85	-50.26	-13	-37.26	H
3.794500	53.29	Pk	33.3	-95.2	-45.19	-53.80	-13	-40.80	V
5.729518	64.37	Pk	34.6	-95.2	-45.17	-41.40	-13	-28.40	V
7.621000	53.36	Pk	35.8	-95.2	-43.71	-49.75	-13	-36.75	V

EGPRS MODE

Project #:	15107843
Date:	2024-02-13
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	EGPRS 1900
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz									
3.706000	53.89	Pk	32.8	-95.2	-45.65	-54.16	-13	-41.16	H
5.550610	62.55	Pk	34.6	-95.2	-45.71	-43.76	-13	-30.76	H
7.404000	53.57	Pk	35.4	-95.2	-44.46	-50.69	-13	-37.69	H
3.708000	53.85	Pk	32.8	-95.2	-45.78	-54.33	-13	-41.33	V
5.550500	54.59	Pk	34.6	-95.2	-45.71	-51.72	-13	-38.72	V
7.406000	52.70	Pk	35.4	-95.2	-44.44	-51.54	-13	-38.54	V
Mid Channel, 1880MHz									
3.767500	54.56	Pk	32.7	-95.2	-46.15	-54.09	-13	-41.09	H
5.644500	54.40	Pk	34.7	-95.2	-45.87	-51.97	-13	-38.97	H
7.523000	52.52	Pk	35.5	-95.2	-43.89	-51.07	-13	-38.07	H
3.765000	54.92	Pk	32.7	-95.2	-46.23	-53.81	-13	-40.81	V
5.645000	53.56	Pk	34.7	-95.2	-45.87	-52.81	-13	-39.81	V
7.520500	53.89	Pk	35.5	-95.2	-43.97	-49.78	-13	-36.78	V
High Channel, 1909.8MHz									
3.825500	55.08	Pk	32.8	-95.2	-46.34	-53.66	-13	-40.66	H
5.725426	56.47	Pk	34.9	-95.2	-45.67	-49.50	-13	-36.50	H
7.631000	53.81	Pk	35.6	-95.2	-44.22	-50.01	-13	-37.01	H
3.822000	54.66	Pk	32.8	-95.2	-46.19	-53.93	-13	-40.93	V
5.729384	58.63	Pk	34.9	-95.2	-45.68	-47.35	-13	-34.35	V
7.636000	53.69	Pk	35.6	-95.2	-44.18	-50.09	-13	-37.09	V

10.3.2. WCDMA BAND 2

REL 99 MODE

Project #:	15107843
Date:	2024-02-12
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 2
Chamber #:	04-RDE-Q

Frequency (GHz)	Meter Reading (dBuV)	Det	84796 ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz									
3.700000	54.32	Pk	32.8	-95.2	-45.84	-53.92	-13	-40.92	H
5.561000	55.47	Pk	34.6	-95.2	-45.79	-50.92	-13	-37.92	H
7.405000	53.05	Pk	35.4	-95.2	-44.45	-51.20	-13	-38.20	H
3.701500	53.41	Pk	32.8	-95.2	-45.88	-54.87	-13	-41.87	V
5.562500	53.47	Pk	34.6	-95.2	-45.80	-52.93	-13	-39.93	V
7.407500	52.89	Pk	35.4	-95.2	-44.46	-51.37	-13	-38.37	V
Mid Channel, 1880MHz									
3.757500	54.41	Pk	32.7	-95.2	-46.21	-54.30	-13	-41.30	H
5.644000	54.71	Pk	34.7	-95.2	-45.87	-51.66	-13	-38.66	H
7.522500	51.94	Pk	35.5	-95.2	-43.90	-51.66	-13	-38.66	H
3.761000	53.82	Pk	32.7	-95.2	-46.11	-54.79	-13	-41.79	V
5.645500	54.81	Pk	34.7	-95.2	-45.88	-51.57	-13	-38.57	V
7.523000	53.71	Pk	35.5	-95.2	-43.89	-49.88	-13	-36.88	V
High Channel, 1907.6MHz									
3.814500	53.00	Pk	33.4	-95.2	-45.25	-54.05	-13	-41.05	H
5.726000	52.94	Pk	34.9	-95.2	-45.17	-52.53	-13	-39.53	H
7.642000	52.60	Pk	35.6	-95.2	-43.91	-50.91	-13	-37.91	H
3.814500	52.51	Pk	33.4	-95.2	-45.25	-54.54	-13	-41.54	V
5.725500	55.20	Pk	34.9	-95.2	-45.16	-50.26	-13	-37.26	V
7.641500	52.58	Pk	35.6	-95.2	-43.90	-50.92	-13	-37.92	V

HSDPA MODE

Project #:	15107843
Date:	2024-01-10
Test Engineer:	32934 IG
Configuration;	EUT + Support Equipment
Mode:	HSDPA Band 2
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, 1852.4MHz									
3.721000	54.73	Pk	33.2	-95.2	-45.12	-52.39	-13	-39.39	H
5.553500	55.53	Pk	34.5	-95.2	-45.14	-50.31	-13	-37.31	H
7.423500	53.65	Pk	35.7	-95.2	-44.38	-50.23	-13	-37.23	H
3.723500	54.08	Pk	33.2	-95.2	-45.26	-53.18	-13	-40.18	V
5.555094	58.53	Pk	34.5	-95.2	-45.14	-47.31	-13	-34.31	V
7.414000	53.65	Pk	35.7	-95.2	-44.33	-50.18	-13	-37.18	V
Mid Channel, 1880MHz									
3.758500	54.38	Pk	33.3	-95.2	-45.40	-52.92	-13	-39.92	H
5.641500	55.20	Pk	34.5	-95.2	-45.32	-50.82	-13	-37.82	H
7.541500	53.46	Pk	35.8	-95.2	-44.19	-50.13	-13	-37.13	H
3.720500	54.76	Pk	33.2	-95.2	-45.07	-52.31	-13	-39.31	V
5.642000	56.22	Pk	34.5	-95.2	-45.31	-49.79	-13	-36.79	V
7.582000	53.48	Pk	35.8	-95.2	-43.92	-49.84	-13	-36.84	V
High Channel, 1907.6MHz									
3.802500	54.56	Pk	33.4	-95.2	-45.27	-52.51	-13	-39.51	H
5.726500	53.77	Pk	34.6	-95.2	-45.16	-51.99	-13	-38.99	H
7.638000	53.64	Pk	35.8	-95.2	-43.82	-49.58	-13	-36.58	H
3.829000	54.31	Pk	33.4	-95.2	-45.32	-52.81	-13	-39.81	V
5.720000	55.15	Pk	34.6	-95.2	-45.25	-50.7	-13	-37.70	V
7.676000	52.91	Pk	35.8	-95.2	-43.64	-50.13	-13	-37.13	V

10.3.3. WCDMA BAND 4

REL 99 MODE

Project #:	15107843
Date:	2024-02-12
Test Engineer:	25196 CC
Configuration;	EUT + Support Equipment
Mode:	REL 99 Band 4
Chamber #:	04-RDE-T

Frequency (GHz)	Meter Reading (dBuV)	Det	80430 ACF (dB)	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4MHz									
3.427000	53.46	Pk	32.9	-95.2	-45.26	-54.10	-13	-41.10	H
5.129000	53.85	Pk	34.4	-95.2	-46.19	-53.14	-13	-40.14	H
6.851500	52.29	Pk	36.2	-95.2	-44.5	-51.21	-13	-38.21	H
3.427500	52.57	Pk	32.9	-95.2	-45.27	-55.00	-13	-42.00	V
5.129000	53.73	Pk	34.4	-95.2	-46.19	-53.26	-13	-40.26	V
6.848500	53.23	Pk	36.3	-95.2	-44.55	-50.22	-13	-37.22	V
Mid Channel, 1732.6MHz									
3.465500	53.15	Pk	33.0	-95.2	-45.27	-54.32	-13	-41.32	H
5.191500	53.66	Pk	34.5	-95.2	-46.07	-53.11	-13	-40.11	H
6.936500	52.70	Pk	35.7	-95.2	-44.07	-50.87	-13	-37.87	H
3.469500	52.86	Pk	33.0	-95.2	-45.10	-54.44	-13	-41.44	V
5.192500	53.92	Pk	34.5	-95.2	-46.09	-52.87	-13	-39.87	V
6.939000	52.78	Pk	35.7	-95.2	-44.03	-50.75	-13	-37.75	V
High Channel, 1752.6MHz									
3.499000	53.99	Pk	33.1	-95.2	-45.31	-53.42	-13	-40.42	H
5.254000	54.38	Pk	34.5	-95.2	-45.77	-52.09	-13	-39.09	H
7.018000	53.22	Pk	35.5	-95.2	-43.89	-50.37	-13	-37.37	H
3.502500	53.45	Pk	33.1	-95.2	-45.12	-53.77	-13	-40.77	V
5.253000	54.30	Pk	34.5	-95.2	-45.88	-52.28	-13	-39.28	V
7.015500	52.37	Pk	35.5	-95.2	-43.80	-51.13	-13	-38.13	V

HSDPA MODE

Project #:	15107843
Date:	2024-01-10
Test Engineer:	32188 AC
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									
3.425000	52.71	Pk	32.7	-95.2	-45.04	-54.83	-13	-41.83	H
5.137000	52.57	Pk	34.2	-95.2	-46.29	-54.72	-13	-41.72	H
6.849500	52.79	Pk	35.6	-95.2	-44.54	-51.35	-13	-38.35	H
3.425000	52.78	Pk	32.7	-95.2	-45.04	-54.76	-13	-41.76	V
5.137000	53.09	Pk	34.2	-95.2	-46.29	-54.20	-13	-41.20	V
6.849500	50.94	Pk	35.6	-95.2	-44.54	-53.20	-13	-40.20	V
Mid Channel, 1732.6MHz									
3.465500	51.93	Pk	32.8	-95.2	-45.27	-55.74	-13	-42.74	H
5.198000	53.31	Pk	34.3	-95.2	-46.12	-53.71	-13	-40.71	H
6.930500	51.50	Pk	35.6	-95.2	-44.06	-52.16	-13	-39.16	H
3.465500	52.20	Pk	32.8	-95.2	-45.27	-55.47	-13	-42.47	V
5.19800	52.94	Pk	34.3	-95.2	-46.12	-54.08	-13	-41.08	V
6.930500	50.84	Pk	35.6	-95.2	-44.06	-52.82	-13	-39.82	V
High Channel, 1752.6MHz									
3.050500	52.90	Pk	32.8	-95.2	-45.28	-54.78	-13	-41.78	H
5.025800	53.09	Pk	34.4	-95.2	-45.99	-53.70	-13	-40.70	H
7.001050	50.80	Pk	35.6	-95.2	-43.66	-52.46	-13	-39.46	H
3.505000	52.52	Pk	32.8	-95.2	-45.28	-55.16	-13	-42.16	V
5.258000	53.97	Pk	34.4	-95.2	-45.99	-52.82	-13	-39.82	V
7.010500	51.83	Pk	35.6	-95.2	-43.66	-51.43	-13	-38.43	V

11. SETUP PHOTOS

Please refer to 15107843-EP1V1 for Setup Photo Report.

END OF REPORT