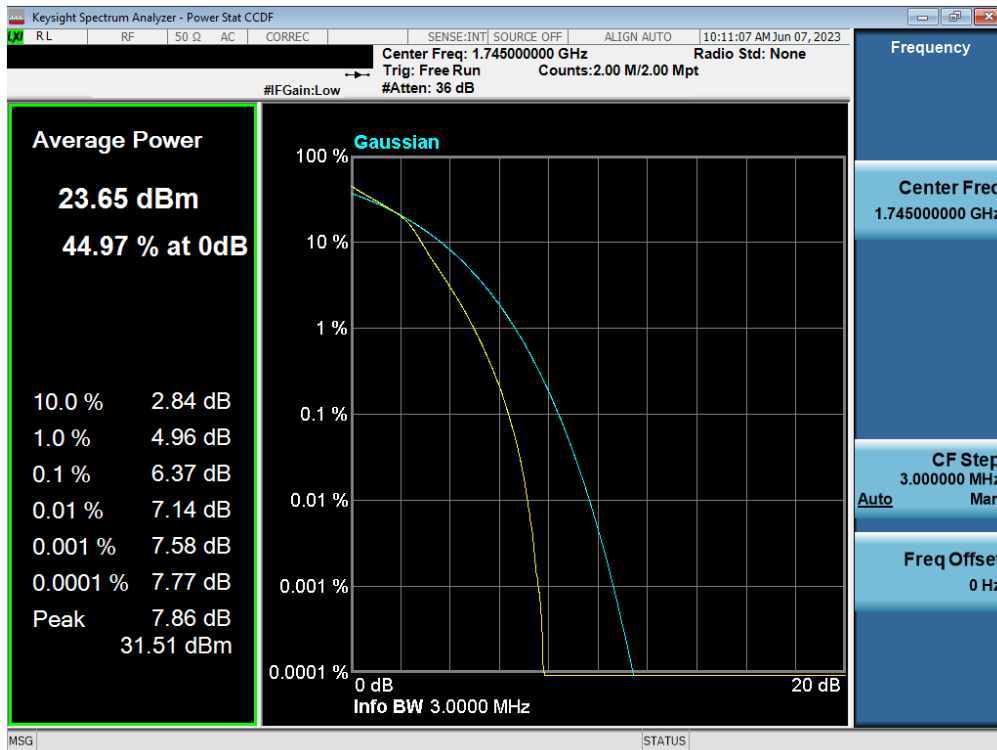
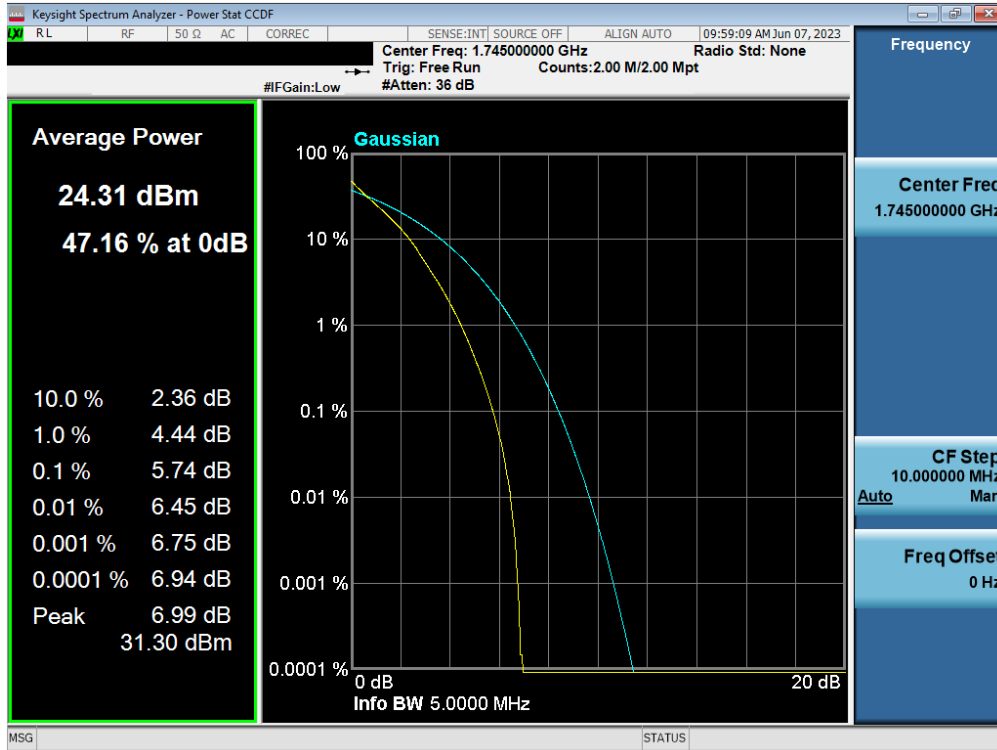


Plot 7-130. PAR Plot (LTE Band 66 - 3MHz QPSK - Full RB)

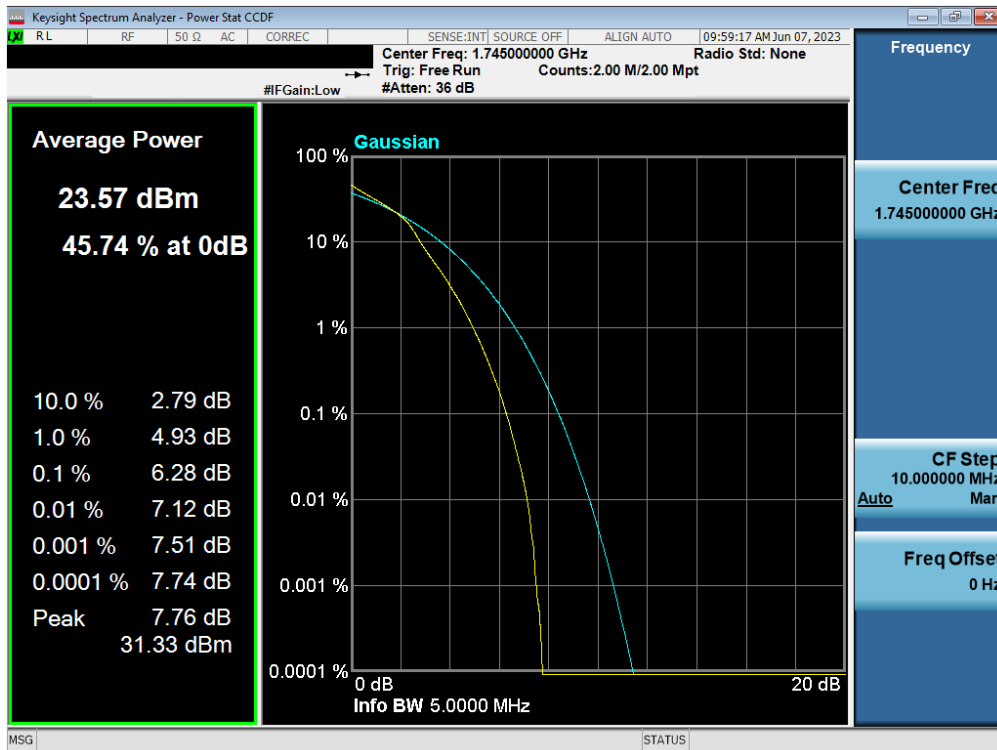


Plot 7-131. PAR Plot (LTE Band 66 - 3MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2305020014-05.BCG	Test Dates: 06/07/2023 - 07/31/2023	EUT Type: Watch
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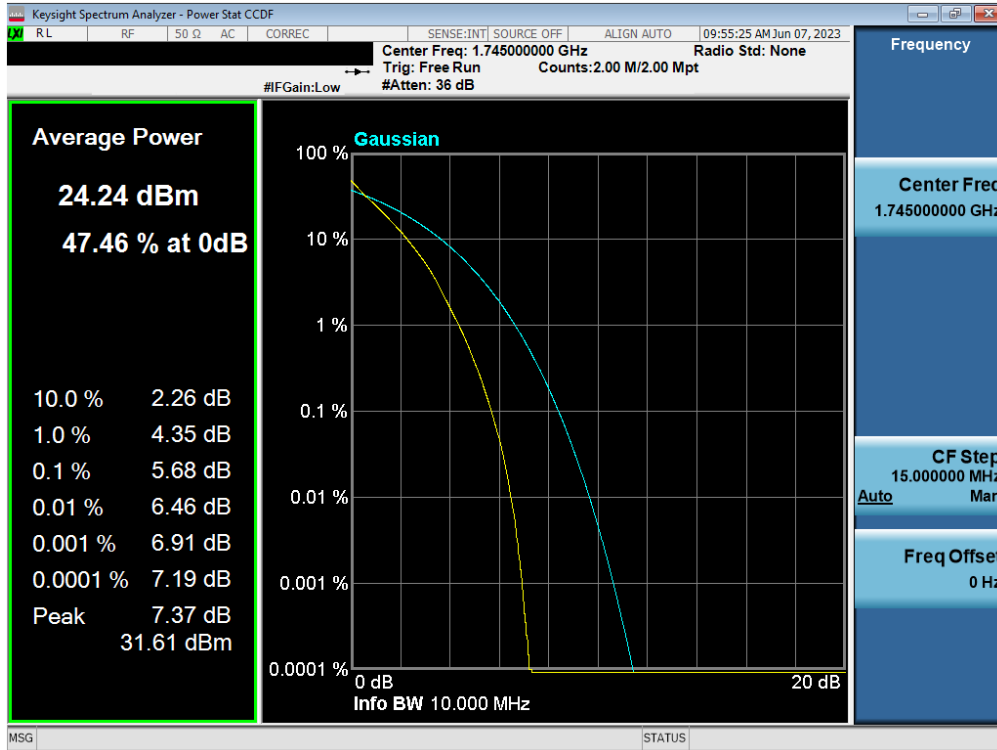


Plot 7-132. PAR Plot (LTE Band 66 - 5MHz QPSK - Full RB)

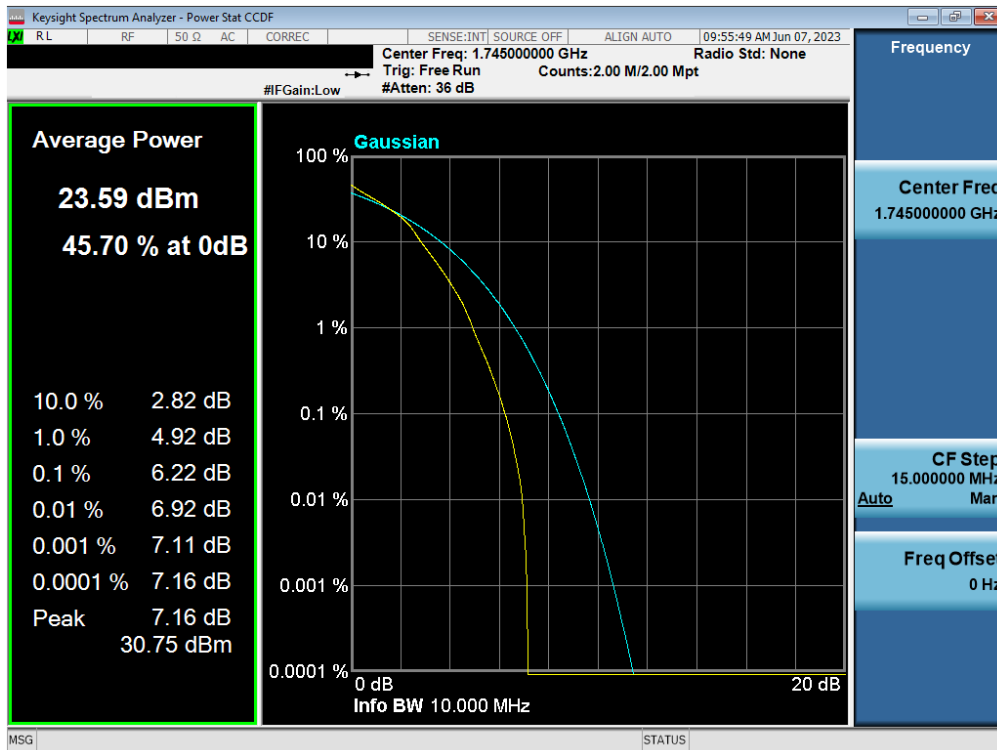


Plot 7-133. PAR Plot (LTE Band 66 - 5MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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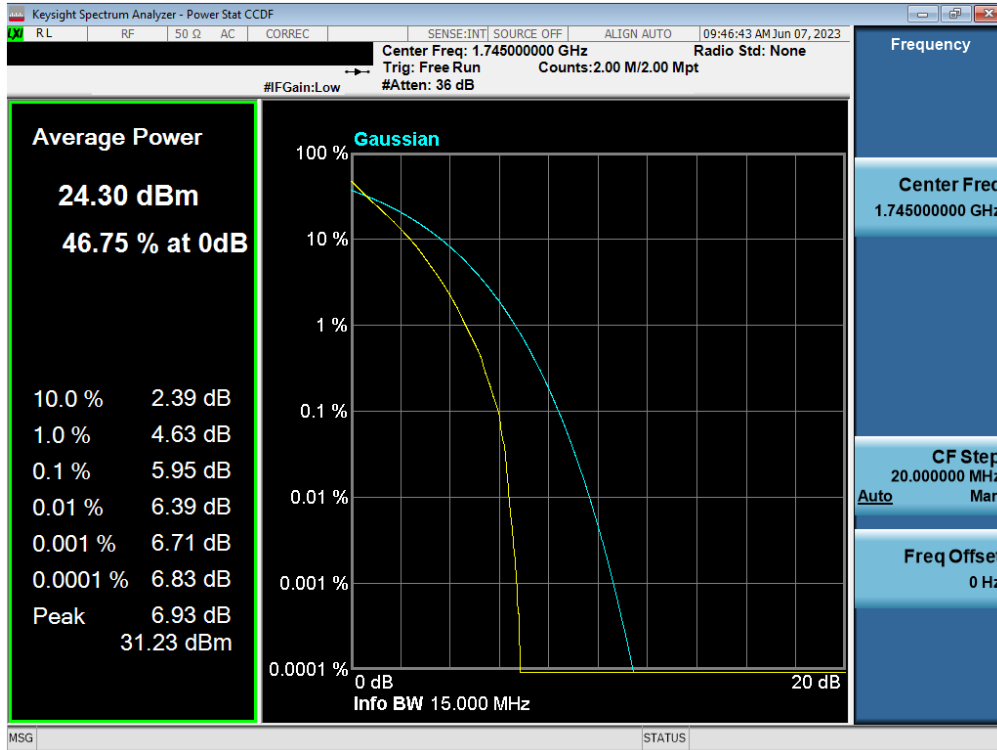


Plot 7-134. PAR Plot (LTE Band 66 - 10MHz QPSK - Full RB)

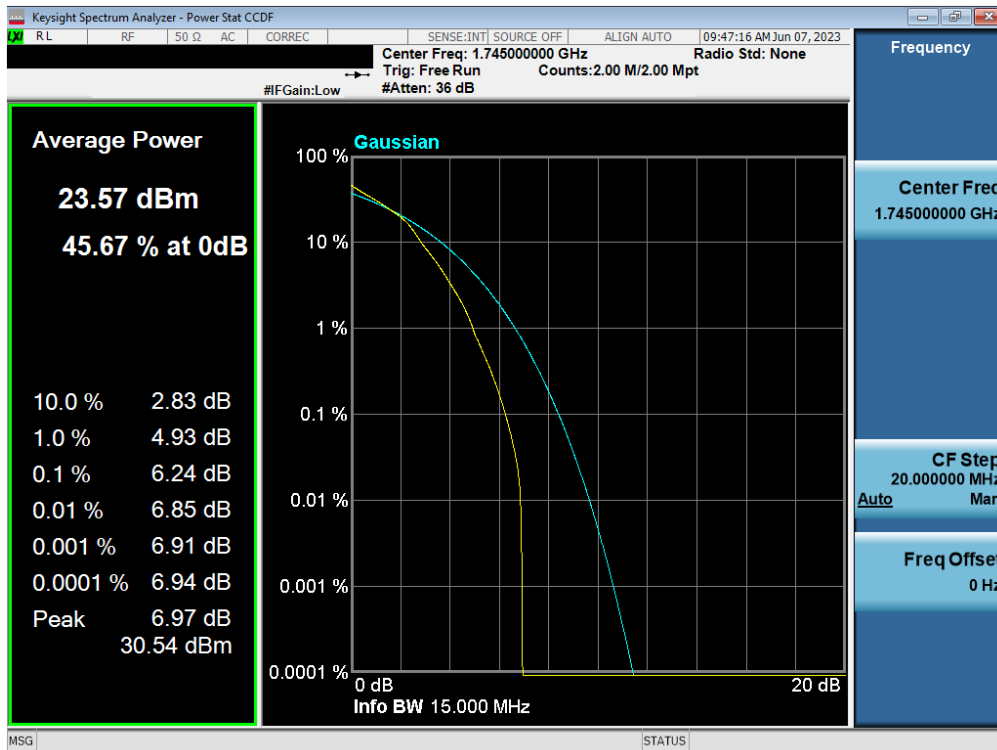


Plot 7-135. PAR Plot (LTE Band 66 - 10MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2305020014-05.BCG	Test Dates: 06/07/2023 - 07/31/2023	EUT Type: Watch
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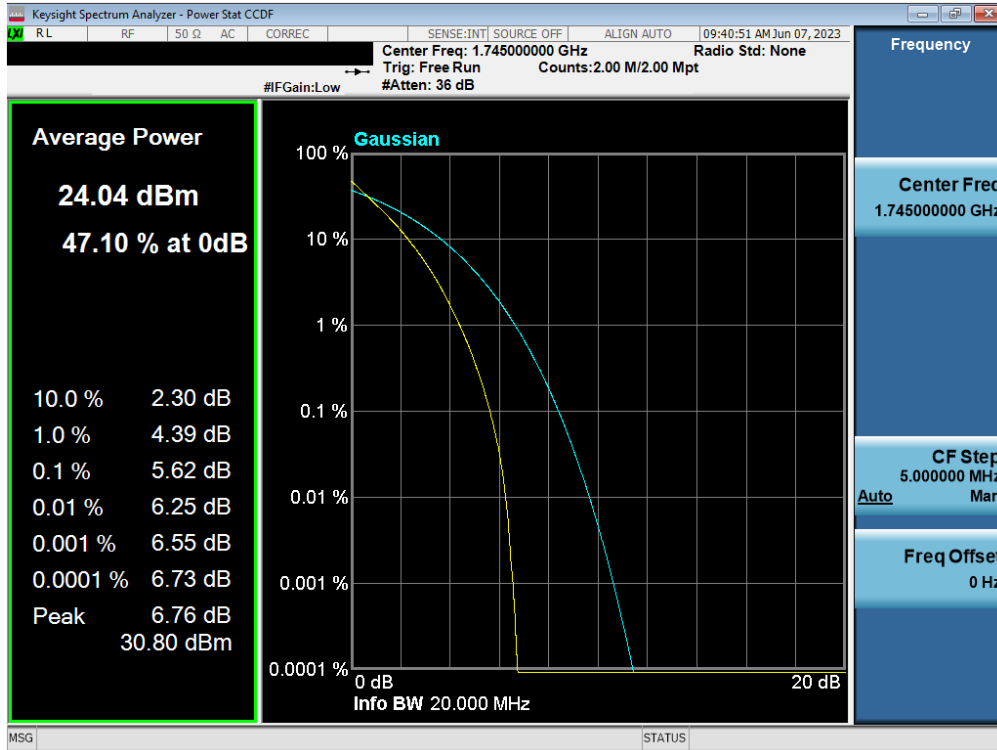


Plot 7-136. PAR Plot (LTE Band 66 - 15MHz QPSK - Full RB)

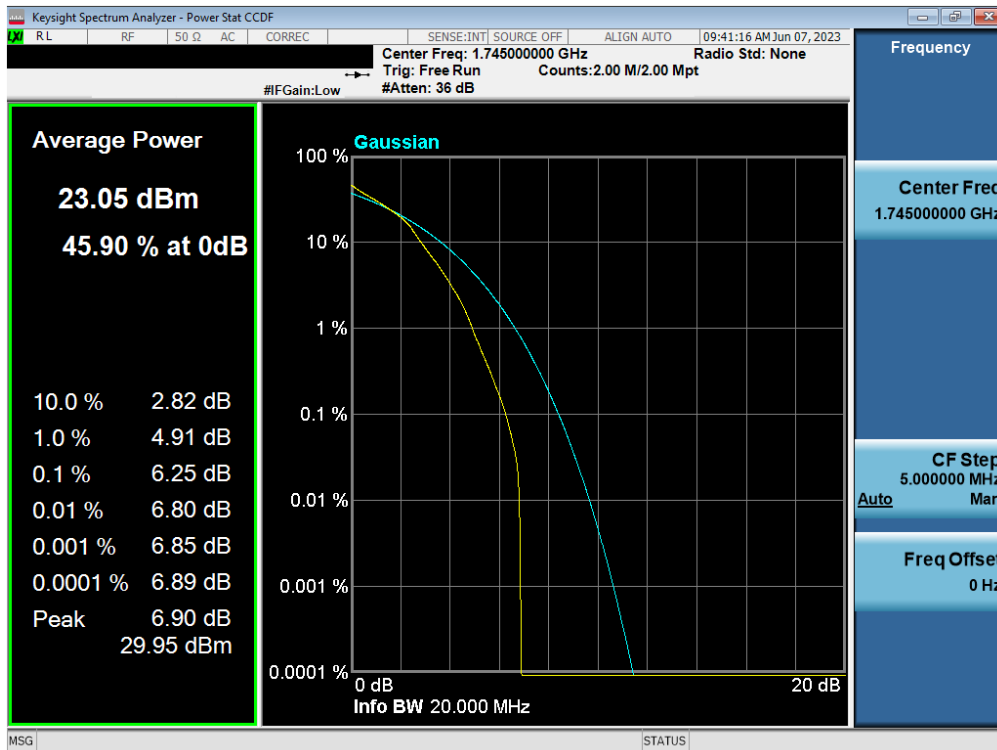


Plot 7-137. PAR Plot (LTE Band 66 - 15MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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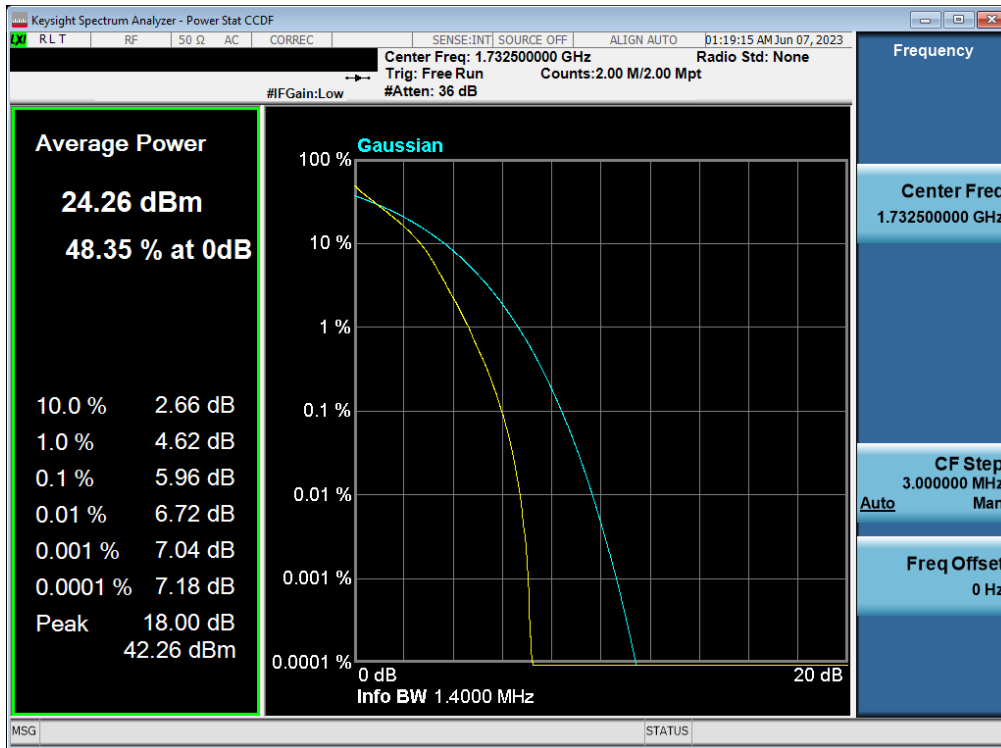
Plot 7-138. PAR Plot (LTE Band 66 - 20MHz QPSK - Full RB)



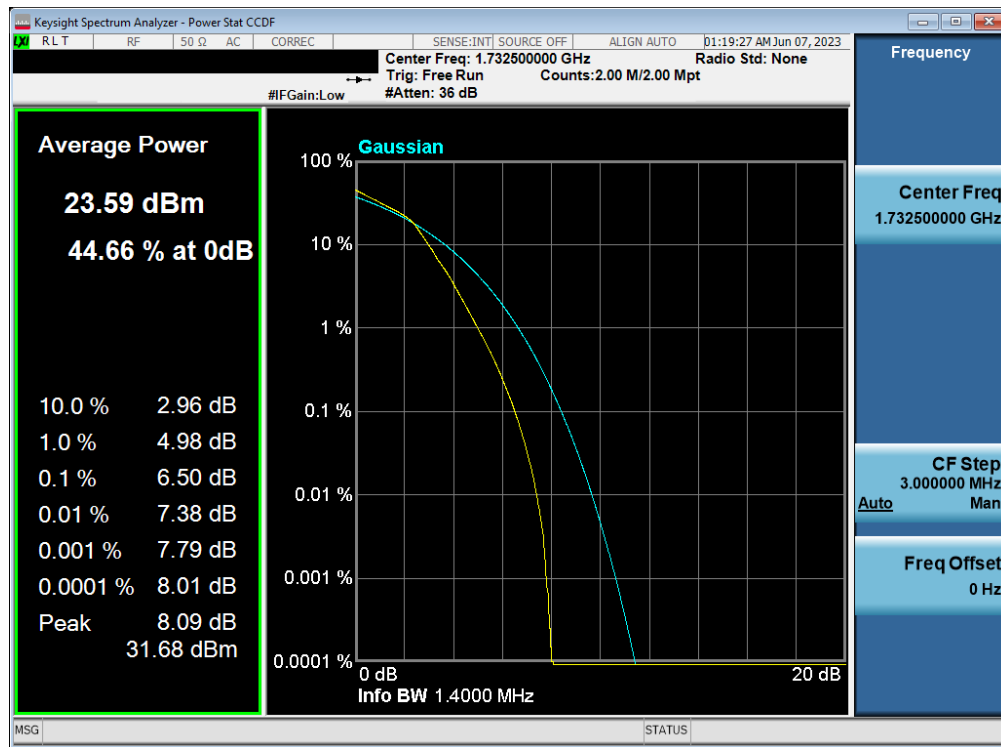
Plot 7-139. PAR Plot (LTE Band 66 - 20MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2305020014-05.BCG	Test Dates: 06/07/2023 - 07/31/2023	EUT Type: Watch
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LTE Band 4

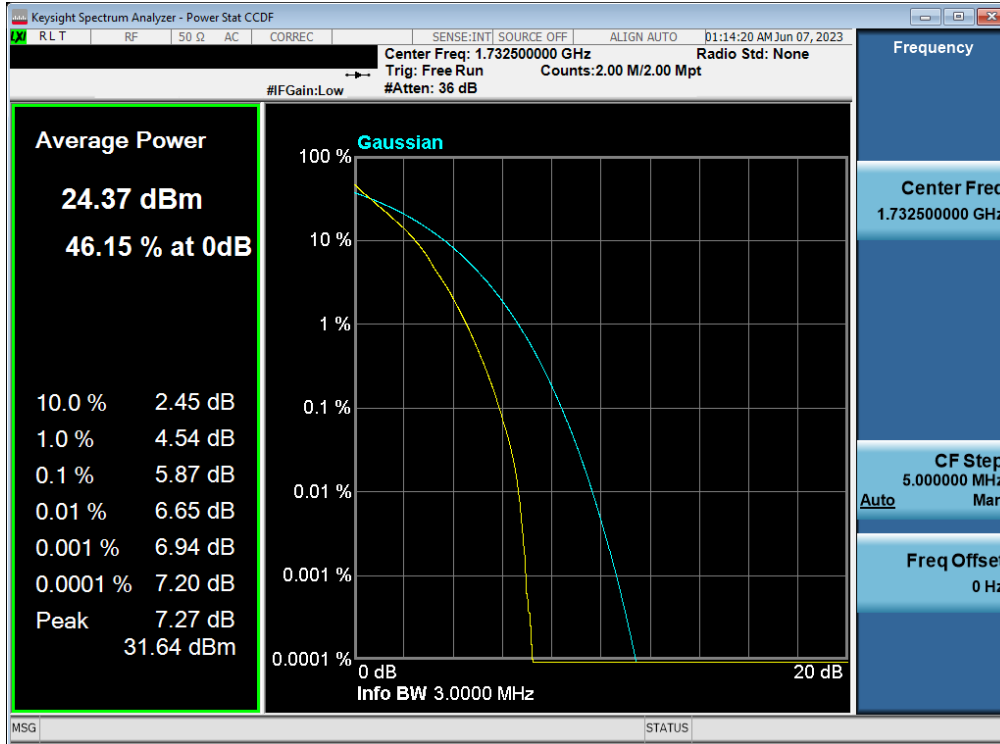


Plot 7-140. PAR Plot (LTE Band 4 - 1.4MHz QPSK - Full RB)

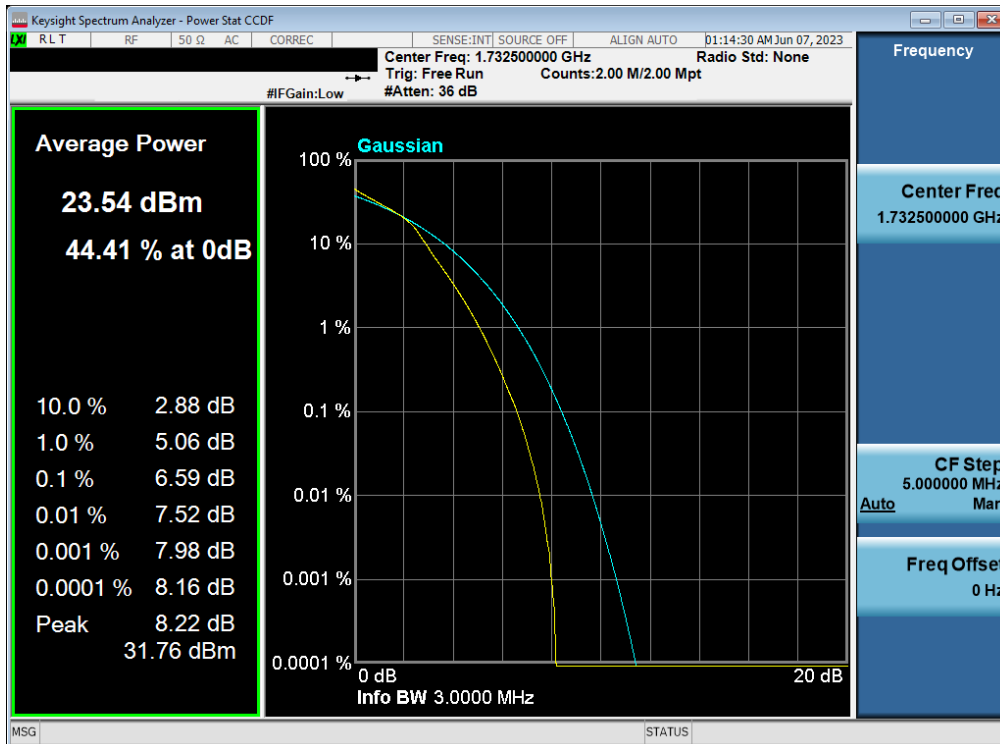


Plot 7-141. PAR Plot (LTE Band 4 - 1.4MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2305020014-05.BCG	Test Dates: 06/07/2023 - 07/31/2023	EUT Type: Watch
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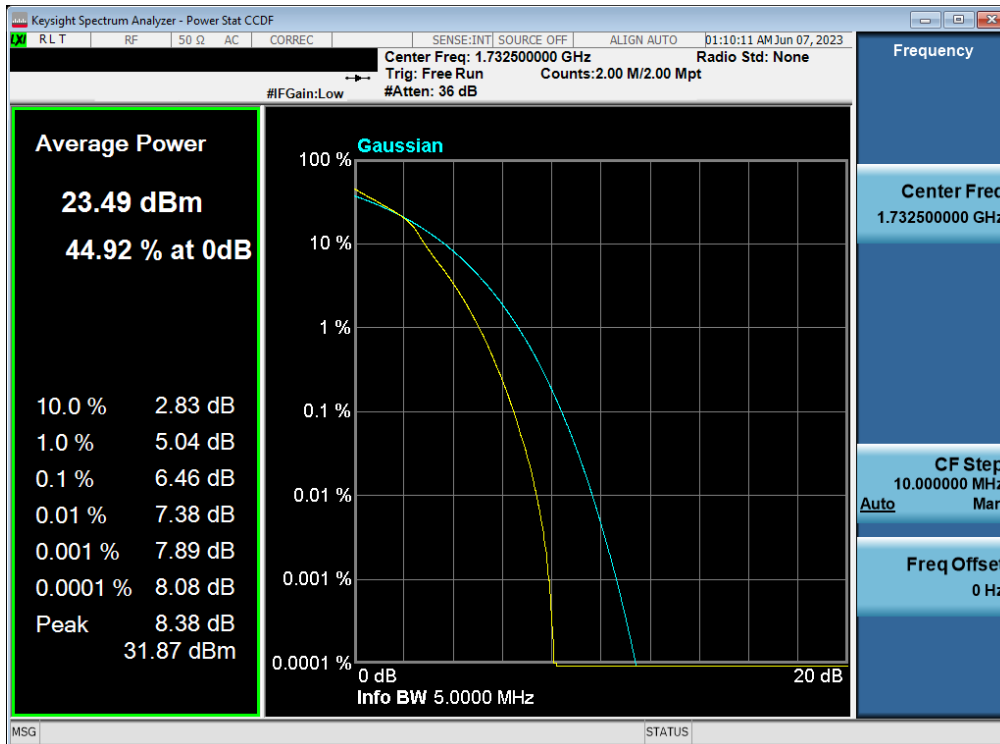
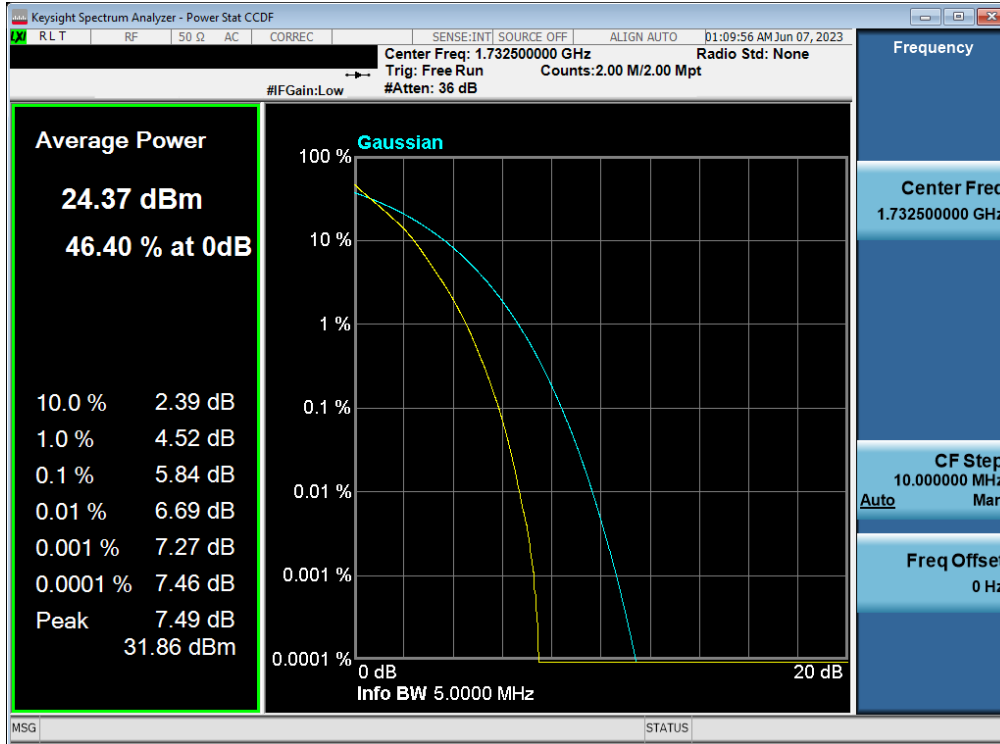


Plot 7-142. PAR Plot (LTE Band 4 - 3MHz QPSK - Full RB)

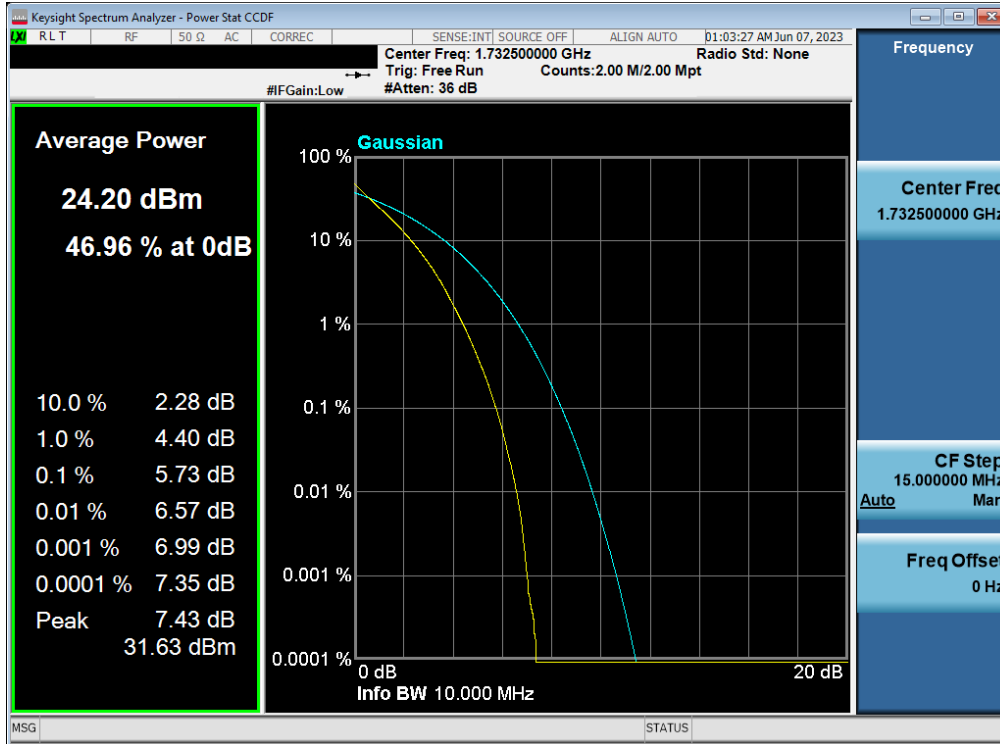


Plot 7-143. PAR Plot (LTE Band 4 - 3MHz 16-QAM - Full RB)

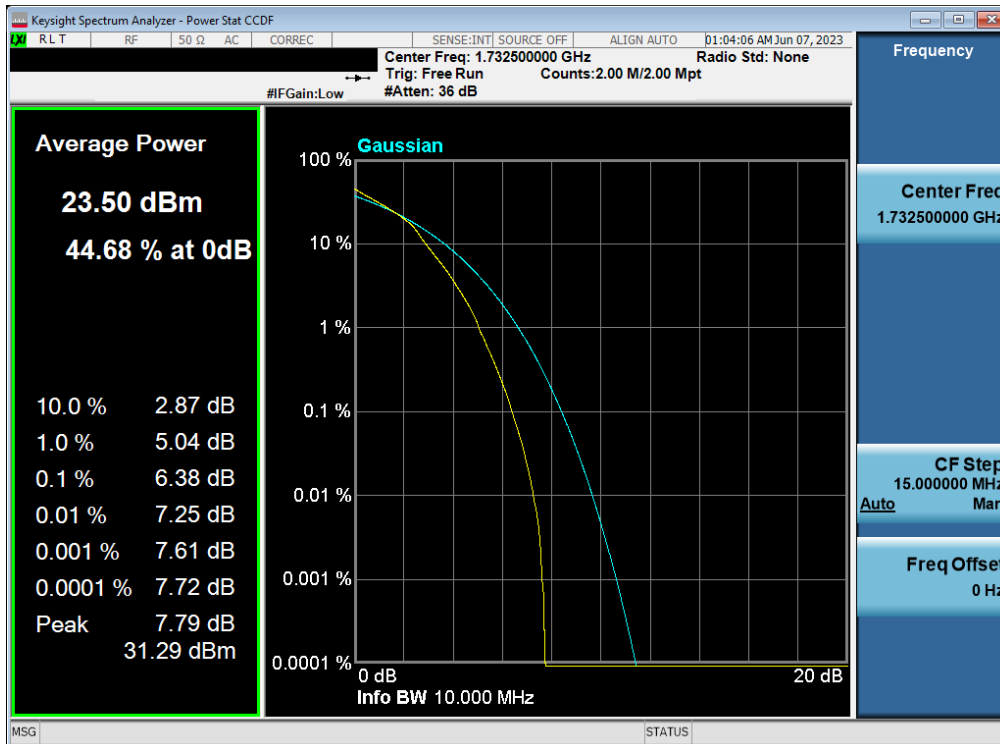
FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2305020014-05.BCG	Test Dates: 06/07/2023 - 07/31/2023	EUT Type: Watch
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FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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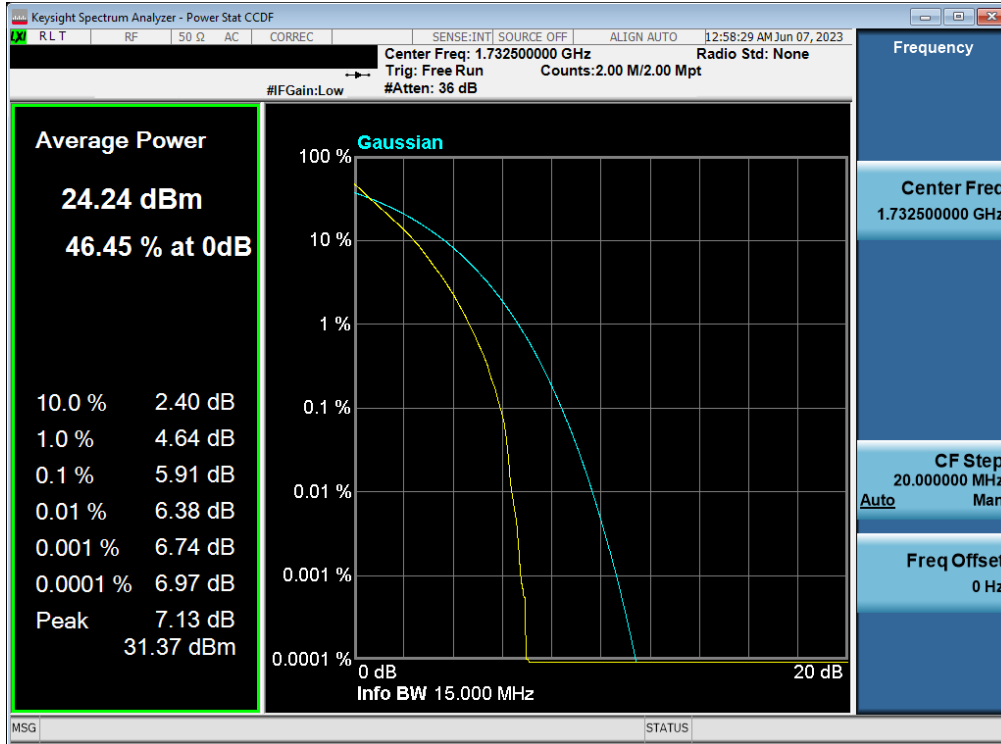


Plot 7-146. PAR Plot (LTE Band 4 - 10MHz QPSK - Full RB)

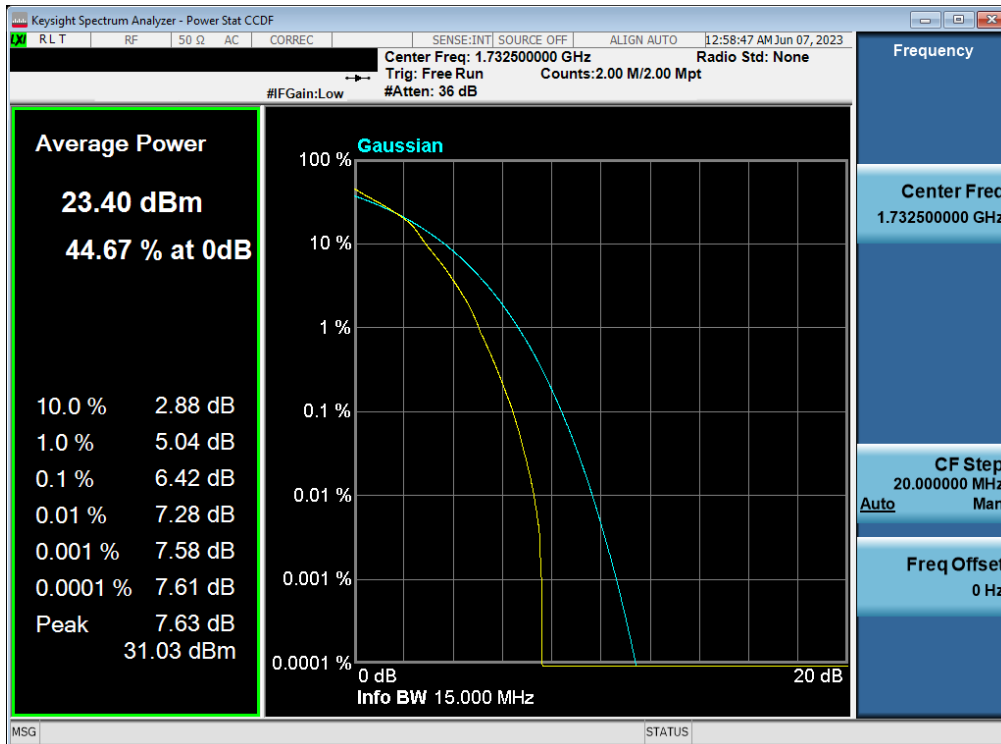


Plot 7-147. PAR Plot (LTE Band 4 - 10MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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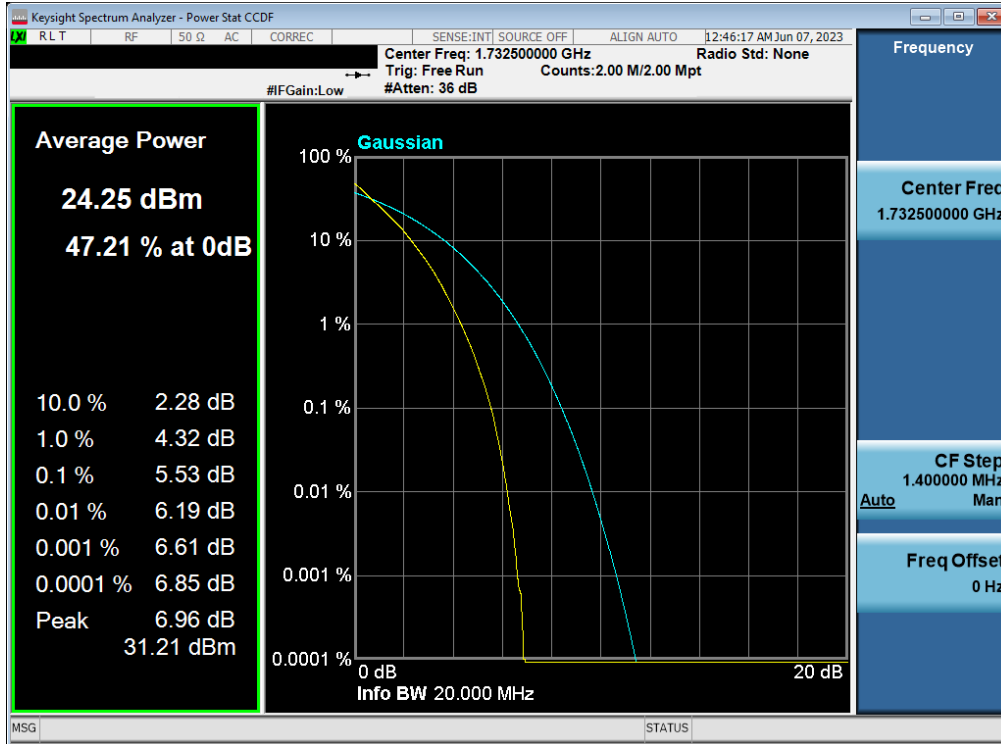


Plot 7-148. PAR Plot (LTE Band 4 - 15MHz QPSK - Full RB)

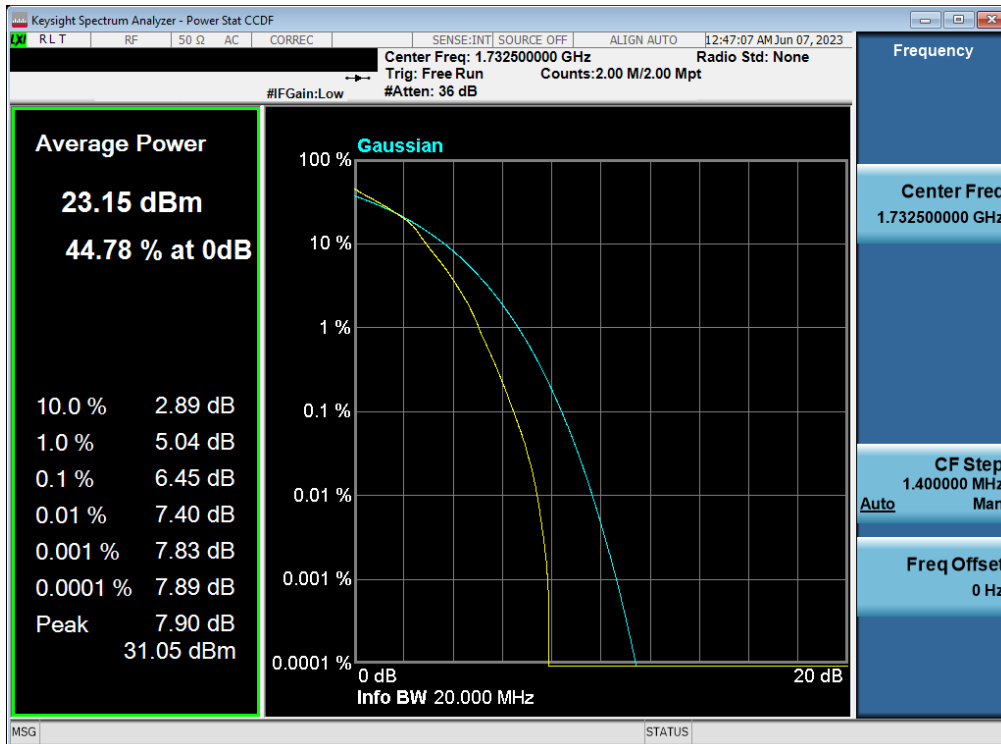


Plot 7-149. PAR Plot (LTE Band 4 - 15MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2305020014-05.BCG	Test Dates: 06/07/2023 - 07/31/2023	EUT Type: Watch
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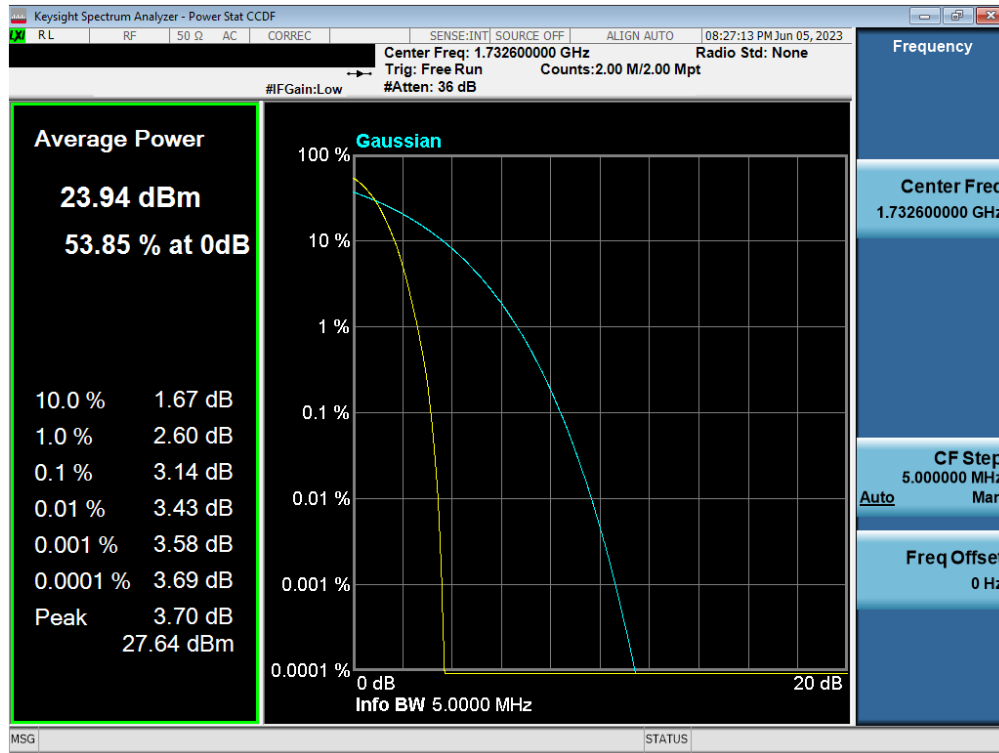


Plot 7-150. PAR Plot (LTE Band 4 - 20MHz QPSK - Full RB)



Plot 7-151. PAR Plot (LTE Band 4 - 20MHz 16-QAM - Full RB)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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Plot 7-152. PAR Plot (WCDMA, Ch. 1413)

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7.6 Radiated Power (ERP/EIRP)

§27.50(b)(10), §27.50(c)(10), §27.50(d)(4)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are calculated by adding highest antenna gain to maximum measured conducted output power. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1
ANSI C63.26-2015 – Section 5.2.5.5

Test Settings

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

$$\text{ERP/EIRP} = \text{PMeas} - \text{LC} + \text{GT}$$

Where:

ERP/EIRP = Effective or Equivalent Isotropic Radiated Power, respectively (expressed in the same units as PMeas, typically dBW or dBm)

PMeas = measured transmitter output power or PSD, in dBW or dBm

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

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

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

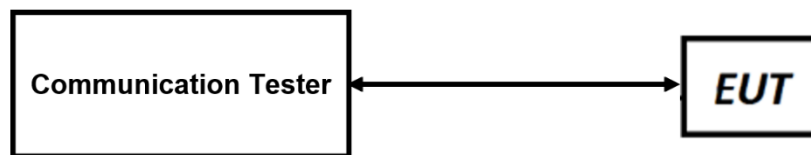




Figure 7-5. ERP/EIRP Measurement Setup

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Test Notes

1. The EUT was tested in all possible test configurations. The worst case emissions are reported with the EUT modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
2. This unit was tested with its standard battery.
3. The Level (dBm) readings in the table were taken with a correction table loaded into the base station simulator. The correction table was used to account for the signal attenuation in the connecting cable between the transmitter and antenna.
4. This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1."
5. The Ant. Gains (GT) are listed in dBi.


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7.6.1 Antenna FCM – EIRP

Antenna FCM LTE Band 66

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1710.7	-11.60	1 / 3	24.50	12.90	19.498	30.00	-17.10
		1745.0	-11.60	1 / 3	24.12	12.52	17.865	30.00	-17.48
		1779.3	-11.60	1 / 3	24.33	12.73	18.750	30.00	-17.27
	16-QAM	1710.7	-11.60	1 / 3	23.84	12.24	16.749	30.00	-17.76
3 MHz	QPSK	1711.5	-11.60	1 / 7	24.50	12.90	19.498	30.00	-17.10
		1745.0	-11.60	1 / 0	24.10	12.50	17.783	30.00	-17.50
		1778.5	-11.60	1 / 14	24.47	12.87	19.364	30.00	-17.13
	16-QAM	1711.5	-11.60	1 / 7	23.93	12.33	17.100	30.00	-17.67
5 MHz	QPSK	1712.5	-11.60	1 / 12	24.50	12.90	19.498	30.00	-17.10
		1745.0	-11.60	1 / 12	24.08	12.48	17.701	30.00	-17.52
		1777.5	-11.60	1 / 24	24.47	12.87	19.364	30.00	-17.13
	16-QAM	1745.0	-11.60	1 / 0	23.87	12.27	16.866	30.00	-17.73
10 MHz	QPSK	1715.0	-11.60	1 / 25	24.50	12.90	19.498	30.00	-17.10
		1745.0	-11.60	1 / 49	24.49	12.89	19.454	30.00	-17.11
		1775.0	-11.60	1 / 0	24.47	12.87	19.364	30.00	-17.13
	16-QAM	1715.0	-11.60	1 / 25	23.93	12.33	17.100	30.00	-17.67
15 MHz	QPSK	1717.5	-11.60	1 / 37	24.50	12.90	19.498	30.00	-17.10
		1745.0	-11.60	1 / 74	24.41	12.81	19.099	30.00	-17.19
		1772.5	-11.60	1 / 74	24.42	12.82	19.143	30.00	-17.18
	16-QAM	1745.0	-11.60	1 / 37	23.94	12.34	17.140	30.00	-17.66
20 MHz	QPSK	1720.0	-11.60	1 / 50	24.50	12.90	19.498	30.00	-17.10
		1745.0	-11.60	1 / 99	24.46	12.86	19.320	30.00	-17.14
		1770.0	-11.60	1 / 0	24.22	12.62	18.281	30.00	-17.38
	16-QAM	1720.0	-11.60	1 / 0	23.97	12.37	17.258	30.00	-17.63

Table 7-2. Antenna FCM EIRP Data (LTE Band 66)

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Antenna FCM LTE Band 4


Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1710.7	-11.60	1 / 3	24.50	12.90	19.498	30.00	-17.10
		1732.5	-11.60	1 / 3	24.50	12.90	19.498	30.00	-17.10
		1754.3	-11.60	1 / 3	24.41	12.81	19.099	30.00	-17.19
	16-QAM	1710.7	-11.60	1 / 0	23.92	12.32	17.061	30.00	-17.68
3 MHz	QPSK	1711.5	-11.60	1 / 7	24.50	12.90	19.498	30.00	-17.10
		1732.5	-11.60	1 / 0	24.49	12.89	19.454	30.00	-17.11
		1753.5	-11.60	1 / 0	24.25	12.65	18.408	30.00	-17.35
	16-QAM	1732.5	-11.60	1 / 14	23.91	12.31	17.022	30.00	-17.69
5 MHz	QPSK	1712.5	-11.60	1 / 0	24.50	12.90	19.498	30.00	-17.10
		1732.5	-11.60	1 / 0	24.50	12.90	19.498	30.00	-17.10
		1752.5	-11.60	1 / 24	24.14	12.54	17.947	30.00	-17.46
	16-QAM	1712.5	-11.60	1 / 0	23.96	12.36	17.219	30.00	-17.64
10 MHz	QPSK	1715.0	-11.60	1 / 25	24.47	12.87	19.364	30.00	-17.13
		1732.5	-11.60	1 / 0	24.50	12.90	19.498	30.00	-17.10
		1750.0	-11.60	1 / 49	24.20	12.60	18.197	30.00	-17.40
	16-QAM	1732.5	-11.60	1 / 49	23.92	12.32	17.061	30.00	-17.68
15 MHz	QPSK	1717.5	-11.60	1 / 0	24.43	12.83	19.187	30.00	-17.17
		1732.5	-11.60	1 / 0	24.49	12.89	19.454	30.00	-17.11
		1747.5	-11.60	1 / 37	24.30	12.70	18.621	30.00	-17.30
	16-QAM	1717.5	-11.60	1 / 37	23.87	12.27	16.866	30.00	-17.73
20 MHz	QPSK	1720.0	-11.60	1 / 99	24.50	12.90	19.498	30.00	-17.10
		1732.5	-11.60	1 / 0	24.42	12.82	19.143	30.00	-17.18
		1745.0	-11.60	1 / 50	24.50	12.90	19.498	30.00	-17.10
	16-QAM	1732.5	-11.60	1 / 99	23.93	12.33	17.100	30.00	-17.67

Table 7-3. Antenna FCM EIRP Data (LTE Band 4)

Antenna FCM WCDMA AWS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1712.40	WCDMA1700	23.91	-11.60	12.31	17.022	30.00	-17.69
1732.60	WCDMA1700	23.95	-11.60	12.35	17.179	30.00	-17.65
1752.60	WCDMA1700	23.90	-11.60	12.30	16.982	30.00	-17.70

Table 7-4. Antenna FCM EIRP Data (WCDMA AWS)

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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7.6.2 Antenna BCM – ERP/EIRP

Antenna BCM LTE Band 12

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	699.7	-29.50	1 / 3	25.48	-6.17	0.242	34.77	-40.94	-4.02	0.396	36.99	-41.01
		707.5	-29.50	1 / 5	25.48	-6.17	0.242	34.77	-40.94	-4.02	0.396	36.99	-41.01
		715.3	-29.50	1 / 3	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
3 MHz	16-QAM	699.7	-29.50	1 / 0	24.97	-6.68	0.215	34.77	-41.45	-4.53	0.352	36.99	-41.52
		700.5	-29.50	1 / 0	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
		707.5	-29.50	1 / 14	25.47	-6.18	0.241	34.77	-40.95	-4.03	0.395	36.99	-41.02
5 MHz	QPSK	714.5	-29.50	1 / 0	25.44	-6.21	0.239	34.77	-40.98	-4.06	0.393	36.99	-41.05
		714.5	-29.50	1 / 0	24.95	-6.70	0.214	34.77	-41.47	-4.55	0.351	36.99	-41.54
		701.5	-29.50	1 / 12	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
10 MHz	16-QAM	707.5	-29.50	1 / 24	25.36	-6.29	0.235	34.77	-41.06	-4.14	0.385	36.99	-41.13
		713.5	-29.50	1 / 0	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
		701.5	-29.50	1 / 12	25.17	-6.48	0.225	34.77	-41.25	-4.33	0.369	36.99	-41.32
10 MHz	QPSK	704.0	-29.50	1 / 25	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
		707.5	-29.50	1 / 0	25.46	-6.19	0.240	34.77	-40.96	-4.04	0.394	36.99	-41.03
		711.0	-29.50	1 / 49	25.40	-6.25	0.237	34.77	-41.02	-4.10	0.389	36.99	-41.09
10 MHz	16-QAM	711.0	-29.50	1 / 49	24.95	-6.70	0.214	34.77	-41.47	-4.55	0.351	36.99	-41.54

Table 7-5. Antenna BCM ERP/EIRP Data (LTE Band 12)

Antenna BCM LTE Band 17

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
5 MHz	QPSK	706.5	-29.50	1 / 0	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
		710.0	-29.50	1 / 24	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
		713.5	-29.50	1 / 0	25.42	-6.23	0.238	34.77	-41.00	-4.08	0.391	36.99	-41.07
10 MHz	16-QAM	706.5	-29.50	1 / 12	24.99	-6.66	0.216	34.77	-41.43	-4.51	0.354	36.99	-41.50
		709.0	-29.50	1 / 49	25.45	-6.20	0.240	34.77	-40.97	-4.05	0.394	36.99	-41.04
		710.0	-29.50	1 / 0	25.50	-6.15	0.243	34.77	-40.92	-4.00	0.398	36.99	-40.99
10 MHz	QPSK	711.0	-29.50	1 / 0	25.38	-6.27	0.236	34.77	-41.04	-4.12	0.387	36.99	-41.11
		711.0	-29.50	1 / 25	24.90	-6.75	0.211	34.77	-41.52	-4.60	0.347	36.99	-41.59

Table 7-6. Antenna BCM ERP/EIRP Data (LTE Band 17)

Antenna BCM LTE Band 13

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [mW]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
5 MHz	QPSK	779.5	-27.00	1 / 12	25.50	-3.65	0.432	34.77	-38.42	-1.50	0.708	36.99	-38.49
		782.0	-27.00	1 / 24	25.36	-3.79	0.418	34.77	-38.56	-1.64	0.685	36.99	-38.63
		784.5	-27.00	1 / 0	25.44	-3.71	0.426	34.77	-38.48	-1.56	0.698	36.99	-38.55
10 MHz	16-QAM	782.0	-27.00	1 / 12	24.99	-4.16	0.384	34.77	-38.93	-2.01	0.630	36.99	-39.00
		782.0	-27.00	1 / 49	25.50	-3.65	0.432	34.77	-38.42	-1.50	0.708	36.99	-38.49
		782.0	-27.00	1 / 49	24.85	-4.30	0.372	34.77	-39.07	-2.15	0.610	36.99	-39.14

Table 7-7. Antenna BCM ERP/EIRP Data (LTE Band 13)

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7.7 Radiated Spurious Emissions §2.1053, §27.53(f)

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized broadband hybrid antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed while the EUT is operating at maximum power and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

ANSI C63.26-2015, TIA-603-E-2016 – Section 2.2.12

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW \geq 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points \geq 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

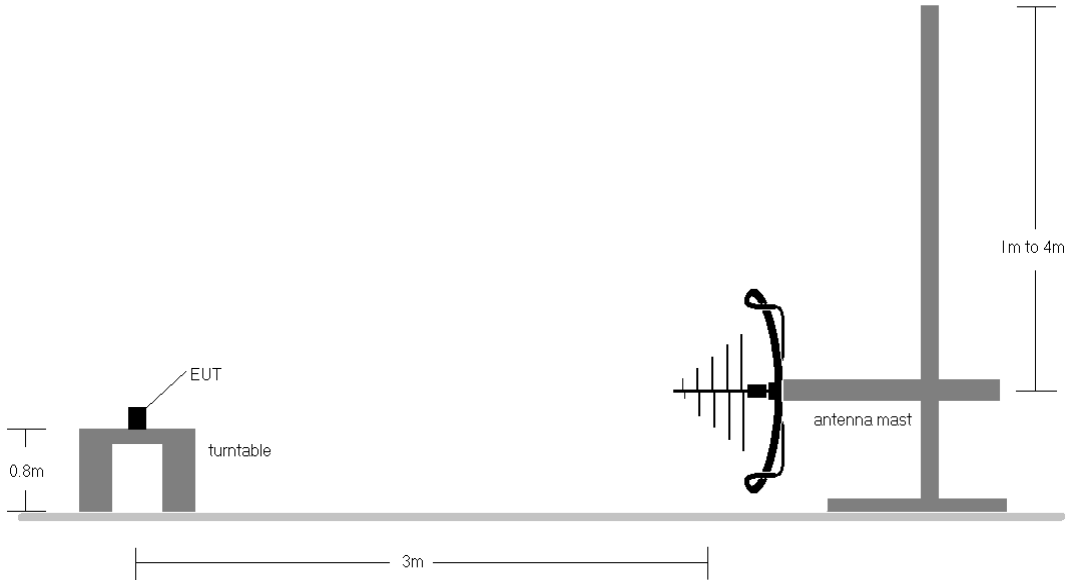


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

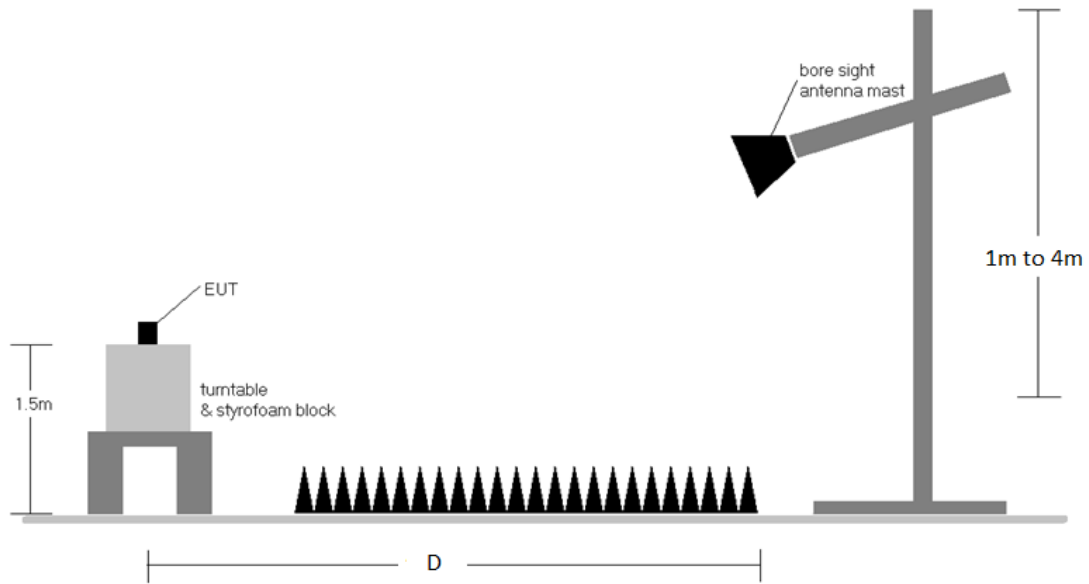



Figure 7-7. Test Instrument & Measurement Setup > 1GHz

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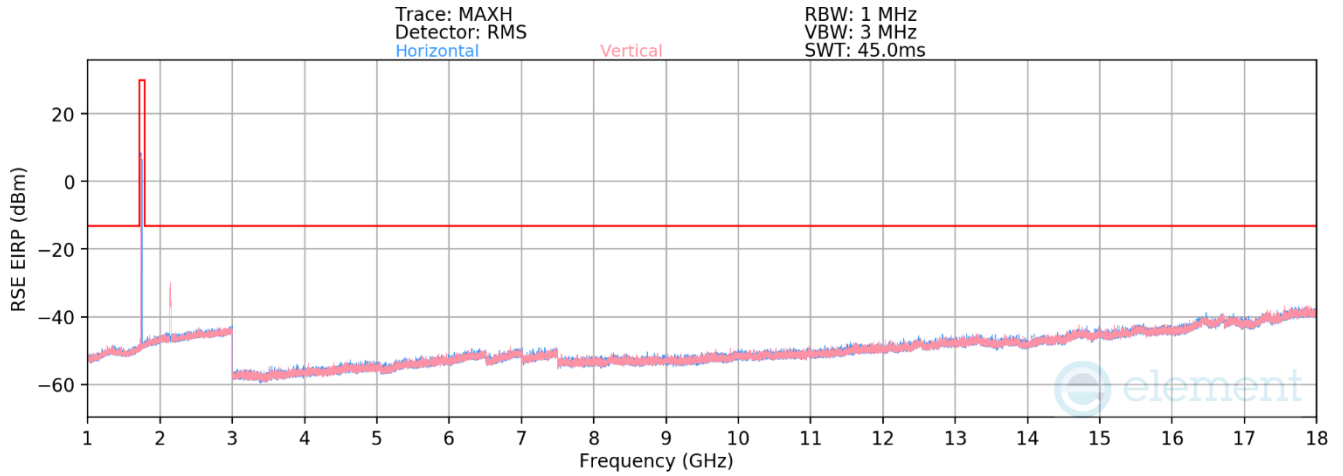
Test Notes

1. Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
 - a. $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b. $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
2. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
3. This unit was tested with its standard battery.
4. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
5. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
6. The "-" shown in the following RSE tables are used to denote a noise floor measurement
7. This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".


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7.7.1 Radiated Spurious Emission Measurements

Antenna FCM LTE Band 66/4



Plot 7-153. Antenna FCM Radiated Spurious Emission above 1GHz (LTE Band 66/4)

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Bandwidth (MHz):	20
Frequency (MHz):	1720.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3440.0	H	-	-	-79.56	2.94	30.38	-64.88	-13.00	-51.88
5160.0	H	-	-	-81.19	6.69	32.50	-62.76	-13.00	-49.76
6880.0	H	-	-	-81.89	10.36	35.47	-59.79	-13.00	-46.79

Table 7-8. Antenna FCM Radiated Spurious Data (LTE Band 66/4 - Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1745.0
RB / Offset:	1 / 50


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3490.0	H	-	-	-78.79	3.19	31.40	-63.86	-13.00	-50.86
5235.0	H	-	-	-81.03	6.70	32.67	-62.59	-13.00	-49.59
6980.0	H	-	-	-81.96	9.85	34.89	-60.37	-13.00	-47.37

Table 7-9. Antenna FCM Radiated Spurious Data (LTE Band 66/4 - Mid Channel)

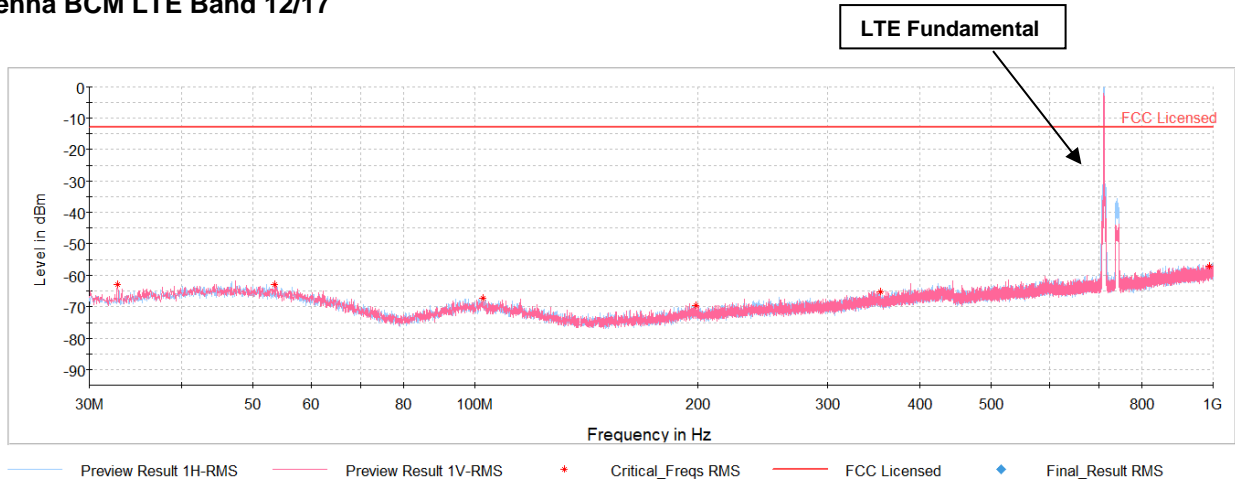
Bandwidth (MHz):	20
Frequency (MHz):	1770.0
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3540.0	H	-	-	-79.84	3.69	30.85	-64.40	-13.00	-51.40
5310.0	H	-	-	-81.20	7.25	33.05	-62.20	-13.00	-49.20
7080.0	H	-	-	-82.53	9.87	34.34	-60.92	-13.00	-47.92

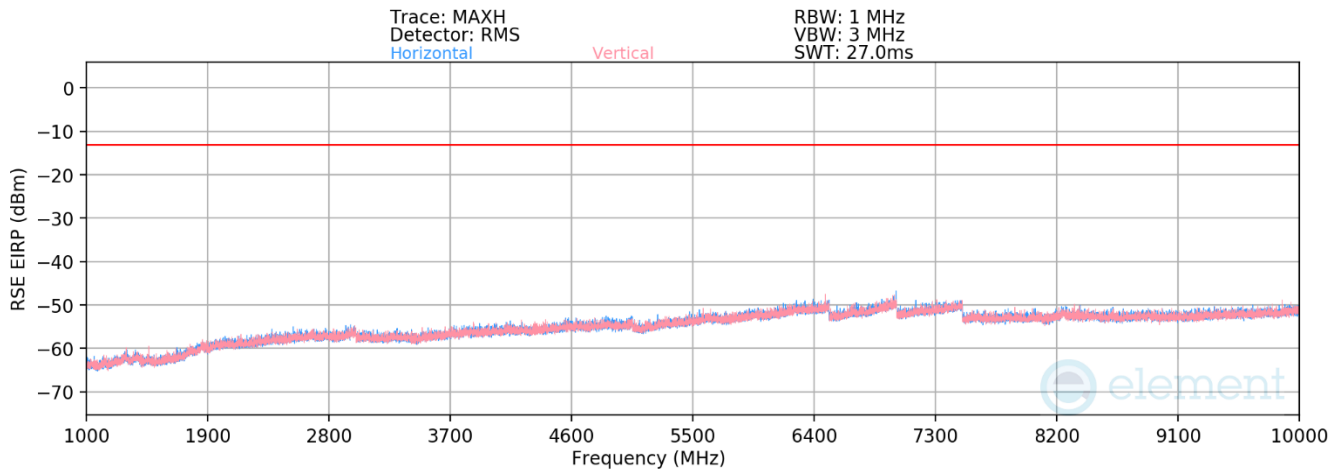
Table 7-10. Antenna FCM Radiated Spurious Data (LTE Band 66/4 - High Channel)

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Antenna BCM LTE Band 12/17



Plot 7-154. Antenna BCM Radiated Spurious Emission below 1GHz (LTE Band 12/17)



Plot 7-155. Antenna BCM Radiated Spurious Emission above 1GHz (LTE Band 12/17)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	10
Frequency (MHz):	704.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1408.0	H	167	305	-78.12	-3.23	25.65	-69.61	-13.00	-56.61
2112.0	H	-	-	-78.61	0.22	28.61	-66.65	-13.00	-53.65
2816.0	H	-	-	-78.95	1.88	29.93	-65.33	-13.00	-52.33
3520.0	H	-	-	-79.03	3.53	31.50	-63.76	-13.00	-50.76

Table 7-11. Antenna BCM Radiated Spurious Data (LTE Band 12/17 - Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	707.5
RB / Offset:	1 / 25


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1415.0	H	257	346	-78.04	-3.24	25.72	-69.53	-13.00	-56.53
2122.5	H	-	-	-78.62	0.19	28.57	-66.69	-13.00	-53.69
2830.0	H	-	-	-79.13	1.82	29.69	-65.57	-13.00	-52.57
3537.5	H	-	-	-79.28	3.68	31.40	-63.85	-13.00	-50.85

Table 7-12. Antenna BCM Radiated Spurious Data (LTE Band 12/17 - Mid Channel)

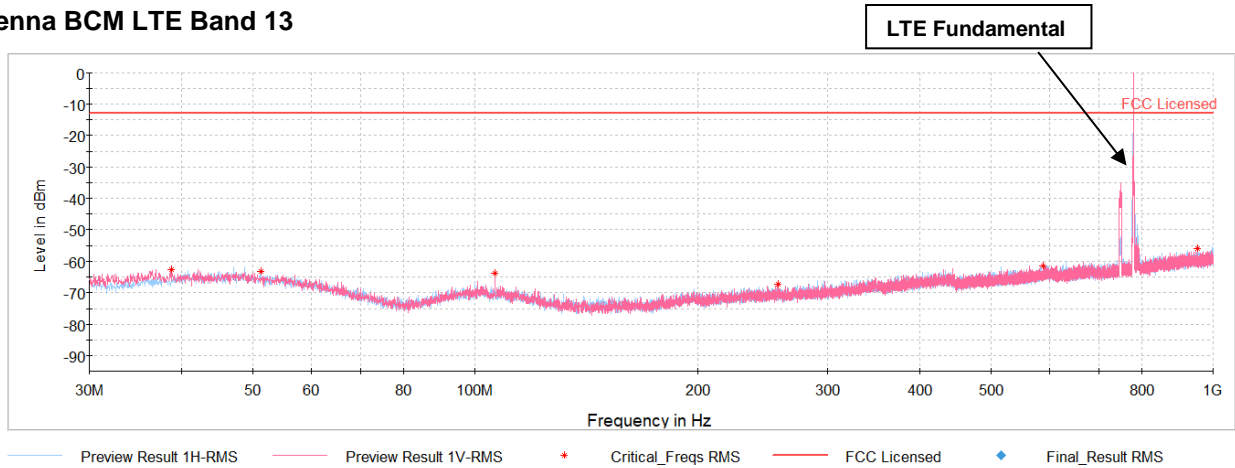
Bandwidth (MHz):	10
Frequency (MHz):	711.0
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1422.0	H	208	285	-78.01	-3.24	25.75	-69.51	-13.00	-56.51
2133.0	H	-	-	-78.65	0.25	28.60	-66.66	-13.00	-53.66
2844.0	H	-	-	-79.09	1.83	29.74	-65.52	-13.00	-52.52
3555.0	H	-	-	-79.48	3.77	31.29	-63.97	-13.00	-50.97

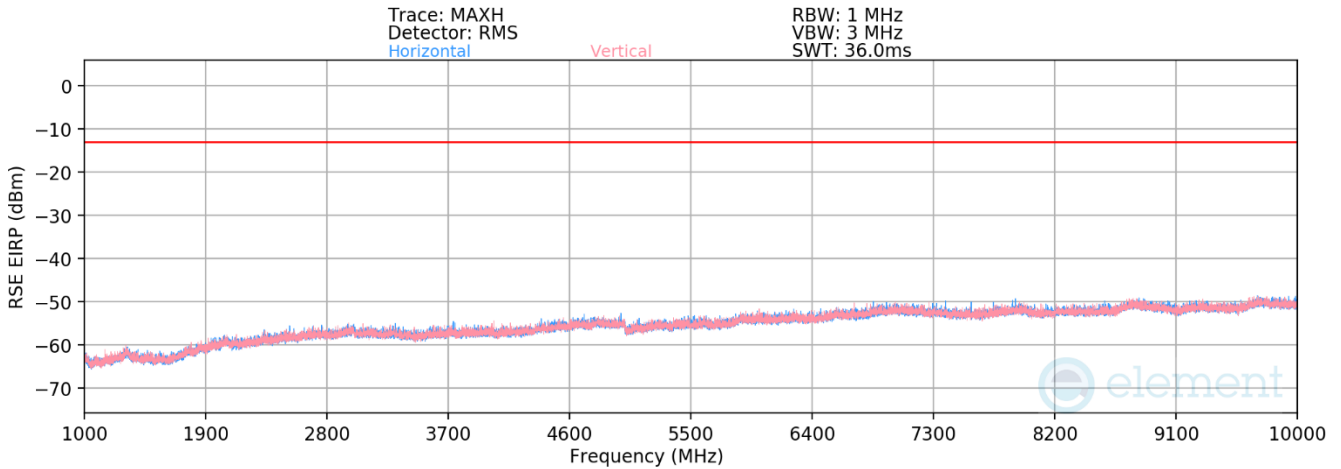
Table 7-13. Antenna BCM Radiated Spurious Data (LTE Band 12/17 - High Channel)

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Antenna BCM LTE Band 13



Plot 7-156. Antenna BCM Radiated Spurious Emission below 1GHz (LTE Band 13)



Plot 7-157. Antenna BCM Radiated Spurious Emission above 1GHz (LTE Band 13)

FCC ID: BCG-A2986	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	5
Frequency (MHz):	779.5
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1559.0	H	243	294	-76.93	-4.13	25.94	-69.32	-40.00	-29.32
2338.5	H	229	121	-77.41	0.76	30.35	-64.90	-13.00	-51.90
3118.0	H	-	-	-79.32	2.39	30.07	-65.19	-13.00	-52.19
3897.5	H	-	-	-80.01	3.18	30.17	-65.08	-13.00	-52.08

Table 7-14. Antenna BCM Radiated Spurious Data (LTE Band 13 - Low Channel)

Bandwidth (MHz):	5
Frequency (MHz):	782.0
RB / Offset:	1 / 25


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1564.0	H	167	291	-75.63	-4.12	27.25	-68.01	-40.00	-28.01
2346.0	H	-	-	-78.82	0.82	29.00	-66.26	-13.00	-53.26
3128.0	H	-	-	-79.24	2.29	30.05	-65.21	-13.00	-52.21

Table 7-15. Antenna BCM Radiated Spurious Data (LTE Band 13 - Mid Channel)

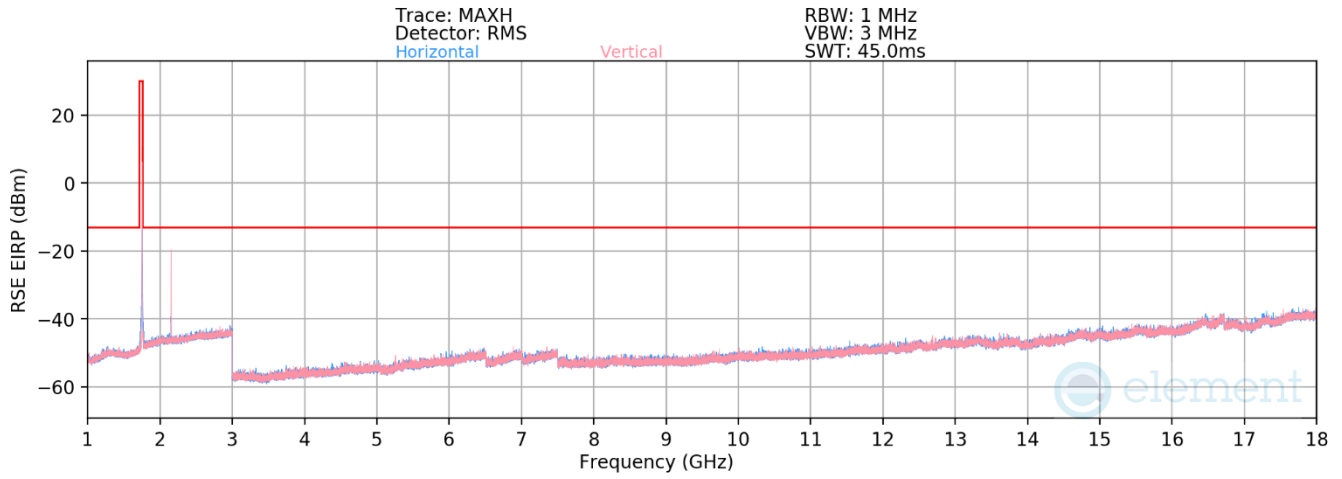
Bandwidth (MHz):	5
Frequency (MHz):	784.5
RB / Offset:	1 / 25

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1569.0	H	-	-	-78.13	-4.12	24.75	-70.51	-40.00	-30.51
2353.5	H	-	-	-79.52	0.87	28.35	-66.91	-13.00	-53.91
3138.0	H	-	-	-79.88	2.21	29.33	-65.93	-13.00	-52.93


Table 7-16. Antenna BCM Radiated Spurious Data (LTE Band 13 - High Channel)

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Antenna FCM WCDMA AWS



Plot 7-158. Antenna FCM Radiated Spurious Emission above 1GHz (WCDMA AWS)

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Mode:	WCDMA RMC
Channel:	1312
Frequency (MHz):	1712.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3424.8	H	-	-	-79.53	6.02	33.49	-61.77	-13.00	-48.77
5137.2	H	-	-	-81.38	9.40	35.02	-60.24	-13.00	-47.24

Table 7-17. Antenna FCM Radiated Spurious Data (WCDMA AWS - Low Channel)

Mode:	WCDMA RMC
Channel:	1413
Frequency (MHz):	1732.6


Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3465.2	H	-	-	-79.60	5.97	33.37	-61.88	-13.00	-48.88
5197.8	H	-	-	-81.35	10.00	35.65	-59.60	-13.00	-46.60

Table 7-18. Antenna FCM Radiated Spurious Data (WCDMA AWS - Mid Channel)

Mode:	WCDMA RMC
Channel:	1513
Frequency (MHz):	1752.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3505.2	H	-	-	-78.89	3.26	31.37	-63.88	-13.00	-50.88
5257.8	H	319	131	-79.22	6.95	34.73	-60.53	-13.00	-47.53
7010.4	H	-	-	-80.58	10.10	36.52	-58.74	-13.00	-45.74
8763.0	H	-	-	-83.33	11.12	34.79	-60.47	-13.00	-47.47

Table 7-19. Antenna FCM Radiated Spurious Data (WCDMA AWS - High Channel)

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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7.8 Frequency Stability / Temperature Variation

§2.1053, §27.53

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015 and TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Procedure Used

ANSI C63.26-2015

TIA-603-E-2016

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

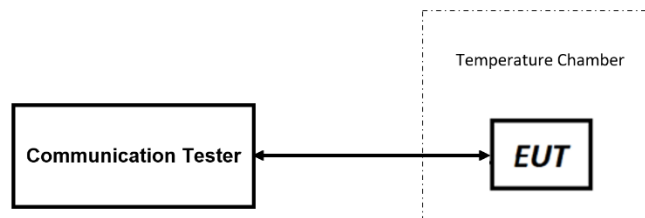



Figure 7-8. Test Instrument & Measurement Setup

Test Notes

None

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Frequency Stability / Temperature Variation

LTE Band 66/4				
Operating Band Lower Boundary (GHz)			1.710	
Ref. Voltage (VDC)			3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.711124765	-0.0011248
		- 20	1.711118799	-0.0011188
		- 10	1.711128817	-0.0011288
		0	1.711134009	-0.0011340
		+ 10	1.711101492	-0.0011015
		+ 20 (Ref)	1.711116725	-0.0011167
		+ 30	1.711107160	-0.0011072
		+ 40	1.711113504	-0.0011135
Battery Endpoint	3.40	+ 20	1.711108625	-0.0011086

Table 7-20. LTE Band 66/4 Lower Boundary Frequency Stability Data

LTE Band 66/4				
Operating Band Upper Boundary (GHz)			1.780	
Ref. Voltage (VDC)			3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.779064429	-0.0009356
		- 20	1.779068732	-0.0009313
		- 10	1.779058900	-0.0009411
		0	1.779073820	-0.0009262
		+ 10	1.779065470	-0.0009345
		+ 20 (Ref)	1.779056380	-0.0009436
		+ 30	1.779069530	-0.0009305
		+ 40	1.779069312	-0.0009307
Battery Endpoint	3.40	+ 20	1.779082674	-0.0009173

Table 7-21. LTE Band 66/4 Upper Boundary Frequency Stability Data

FCC ID: BCG-A2986	 PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Frequency Stability / Temperature Variation

LTE Band 12/17				
		Operating Band Lower Boundary (GHz)	0.6990	
		Ref. Voltage (VDC):	3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.6994853	-0.0004853
		- 20	0.6995025	-0.0005025
		- 10	0.6994753	-0.0004753
		0	0.6994679	-0.0004679
		+ 10	0.6995249	-0.0005249
		+ 20 (Ref)	0.6995135	-0.0005135
		+ 30	0.6994802	-0.0004802
		+ 40	0.6994920	-0.0004920
		+ 50	0.6994730	-0.0004730
Battery Endpoint	3.40	+ 20	0.6994826	-0.0004826

Table 7-22. LTE Band 12/17 Lower Boundary Frequency Stability Data

LTE Band 12/17				
		Operating Band Upper Boundary (GHz)	0.7160	
		Ref. Voltage (VDC):	3.80	
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.7155530	-0.0004470
		- 20	0.7155569	-0.0004431
		- 10	0.7155591	-0.0004409
		0	0.7155228	-0.0004772
		+ 10	0.7155382	-0.0004618
		+ 20 (Ref)	0.7155242	-0.0004758
		+ 30	0.7155450	-0.0004550
		+ 40	0.7155554	-0.0004446
		+ 50	0.7155262	-0.0004738
Battery Endpoint	3.40	+ 20	0.7155399	-0.0004601

Table 7-23. LTE Band 12/17 Upper Boundary Frequency Stability Data

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Frequency Stability / Temperature Variation

LTE Band 13				
		Operating Band Lower Boundary (GHz)		0.7770
		Ref. Voltage (VDC):		3.80
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.7772609	-0.0002609
		- 20	0.7772583	-0.0002583
		- 10	0.7772504	-0.0002504
		0	0.7772517	-0.0002517
		+ 10	0.7772619	-0.0002619
		+ 20 (Ref)	0.7772599	-0.0002599
		+ 30	0.7772547	-0.0002547
		+ 40	0.7772520	-0.0002520
		+ 50	0.7772519	-0.0002519
Battery Endpoint	3.40	+ 20	0.7772626	-0.0002626

Table 7-24. LTE Band 13 Lower Boundary Frequency Stability Data

LTE Band 13				
		Operating Band Upper Boundary (GHz)		0.7870
		Ref. Voltage (VDC):		3.80
Voltage (%)	Power (VDC)	Temp (°C)	Measured Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	0.7867646	-0.0002354
		- 20	0.7867658	-0.0002342
		- 10	0.7867735	-0.0002265
		0	0.7867640	-0.0002360
		+ 10	0.7867571	-0.0002429
		+ 20 (Ref)	0.7867565	-0.0002435
		+ 30	0.7867661	-0.0002339
		+ 40	0.7867693	-0.0002307
		+ 50	0.7867596	-0.0002404
Battery Endpoint	3.40	+ 20	0.7867672	-0.0002328

Table 7-25. LTE Band 13 Upper Boundary Frequency Stability Data

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Frequency Stability / Temperature Variation

WCDMA AWS				
		Operating Band Lower Boundary (GHz)		1.710
		Ref. Voltage (VDC)		3.80
Voltage (%)	Power (VDC)	Temp (°C)	Low Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.710387941	-0.0003879
		- 20	1.710391459	-0.0003915
		- 10	1.710381174	-0.0003812
		0	1.710375218	-0.0003752
		+ 10	1.710374561	-0.0003746
		+ 20 (Ref)	1.710382564	-0.0003826
		+ 30	1.710379486	-0.0003795
		+ 40	1.710376668	-0.0003767
Battery Endpoint	3.40	+ 20	1.710394698	-0.0003947

Table 7-26. WCDMA AWS Lower Boundary Frequency Stability Data

WCDMA AWS				
		Operating Band Upper Boundary (GHz)		1.755
		Ref. Voltage (VDC)		3.80
Voltage (%)	Power (VDC)	Temp (°C)	High Freq. (GHz)	Freq. Delta from Operating Range (GHz)
100 %	3.80	- 30	1.754640039	-0.0003600
		- 20	1.754642187	-0.0003578
		- 10	1.754637798	-0.0003622
		0	1.754638459	-0.0003615
		+ 10	1.754638118	-0.0003619
		+ 20 (Ref)	1.754639258	-0.0003607
		+ 30	1.754634528	-0.0003655
		+ 40	1.754642813	-0.0003572
Battery Endpoint	3.40	+ 20	1.754639927	-0.0003601


Table 7-27. WCDMA AWS Upper Boundary Frequency Stability Data

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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Watch FCC ID: BCG-A2986** complies with all the requirements of Part 27 of the FCC rules.

FCC ID: BCG-A2986		PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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