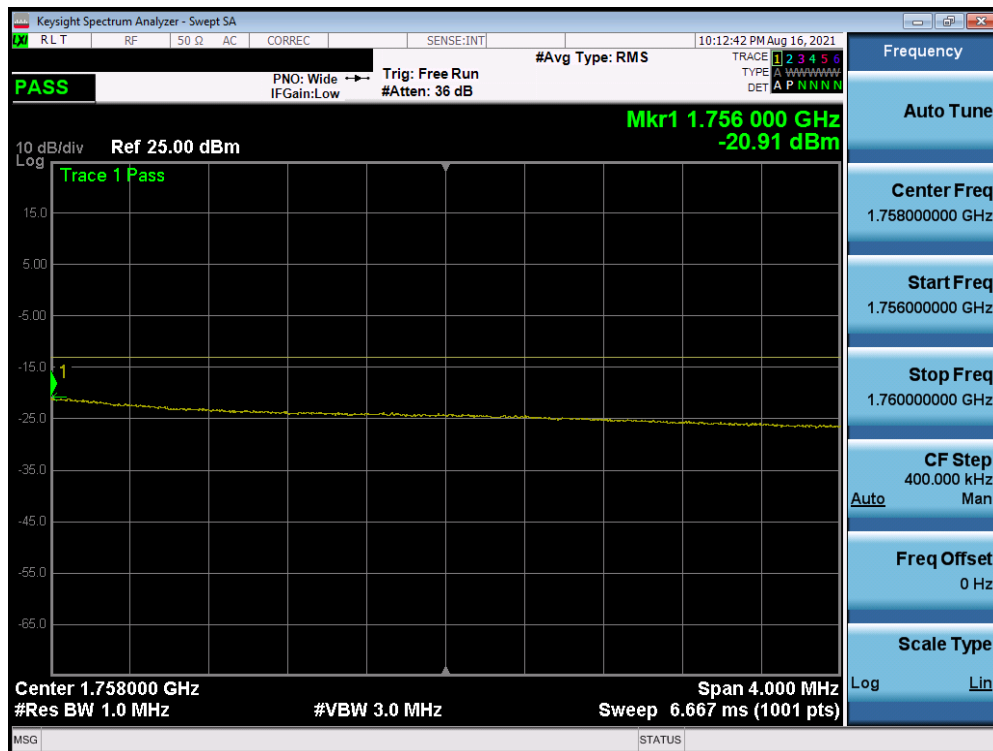


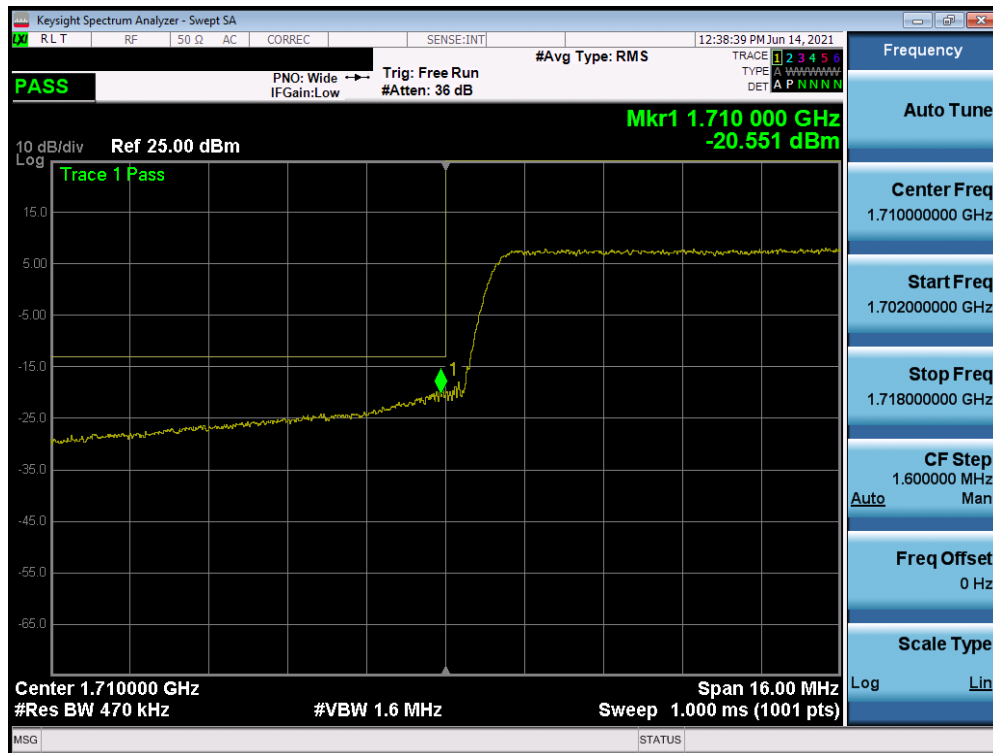


Plot 7-98. Upper Band Edge Plot (LTE Band 4 - 15MHz QPSK – Full RB)

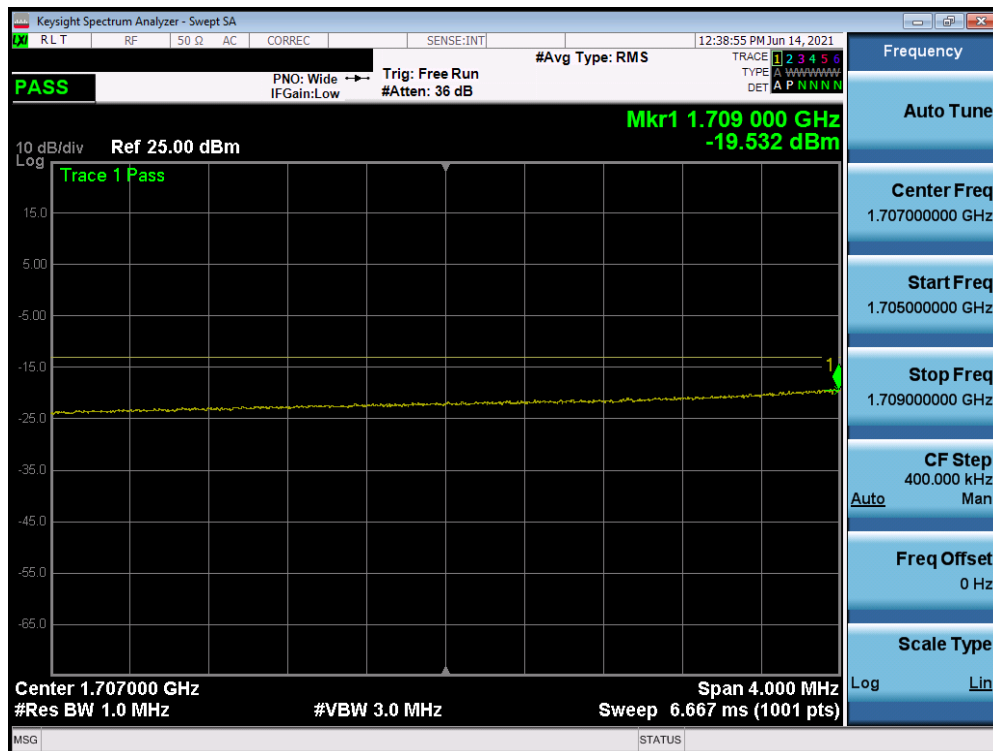


Plot 7-99. Upper Extended Band Edge Plot (LTE Band 4 - 15MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 70 of 120



Plot 7-100. Lower Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

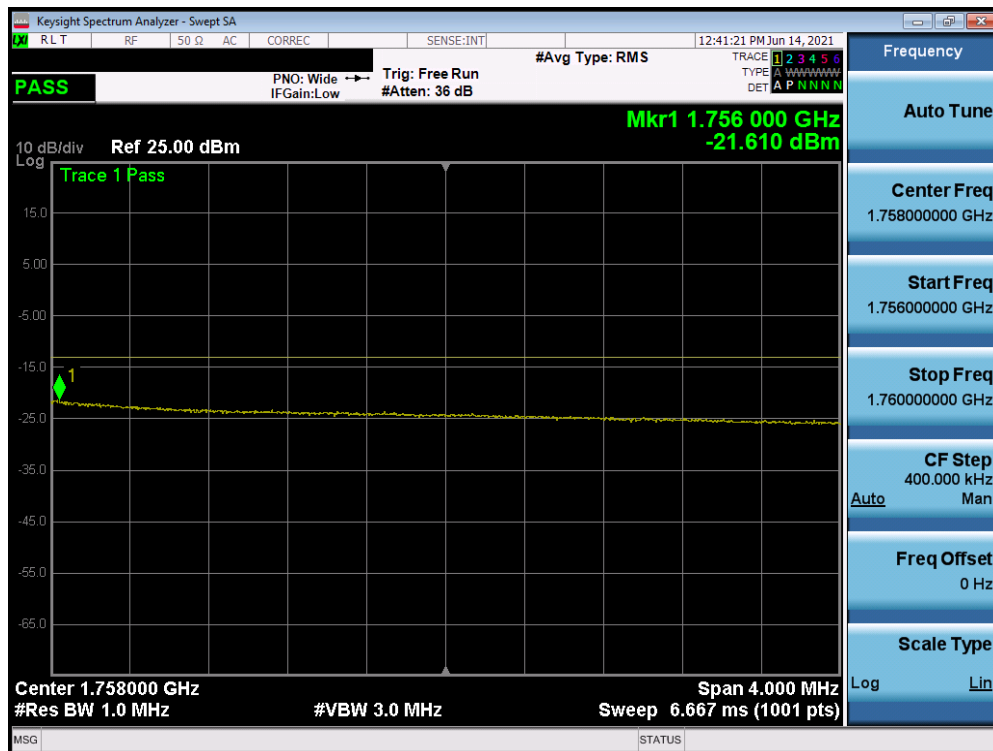


Plot 7-101. Lower Extended Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 71 of 120



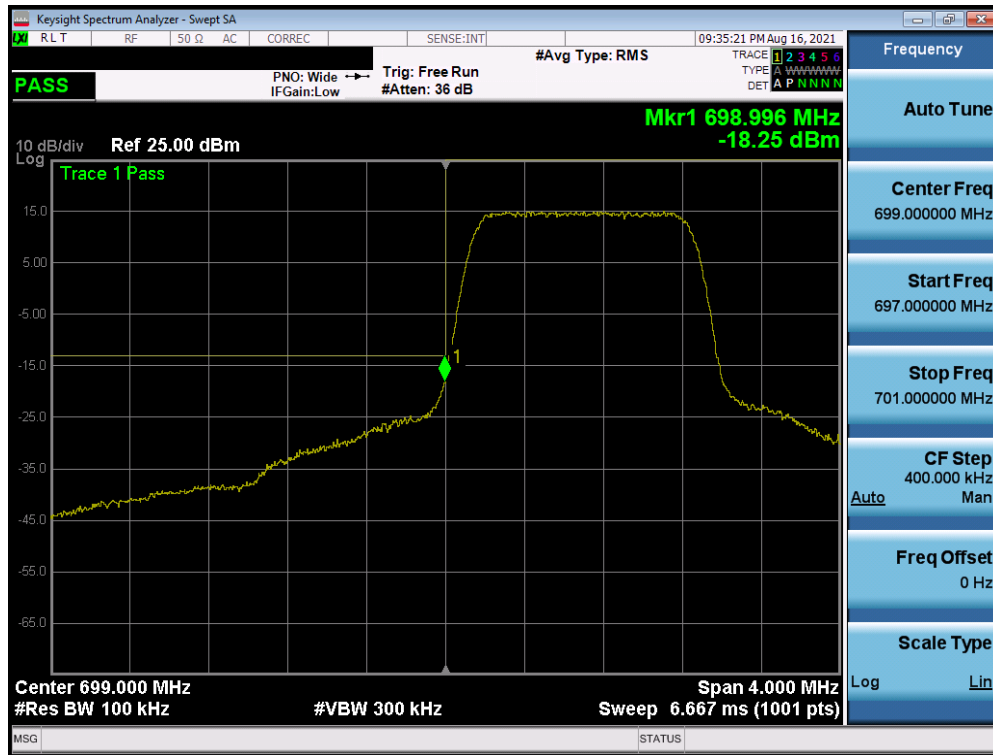
Plot 7-102. Upper Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)



Plot 7-103. Upper Extended Band Edge Plot (LTE Band 4 - 20MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 72 of 120

LTE Band 12

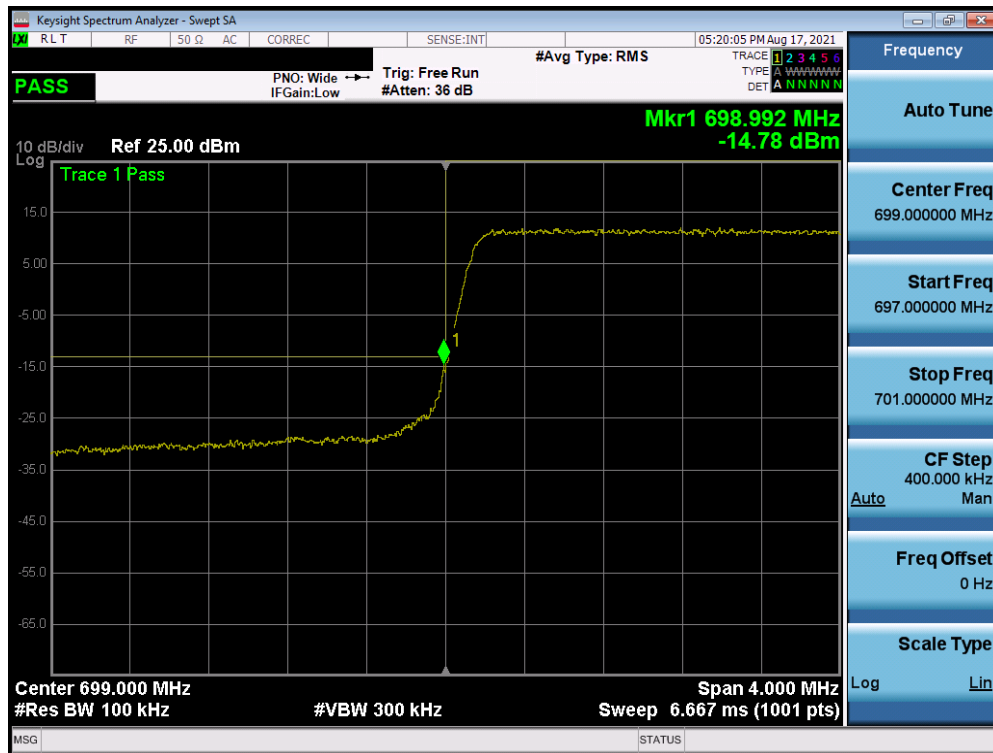


Plot 7-104. Lower Band Edge Plot (LTE Band 12 – 1.4MHz QPSK – Full RB)



Plot 7-105. Upper Band Edge Plot (LTE Band 12 – 1.4MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 73 of 120

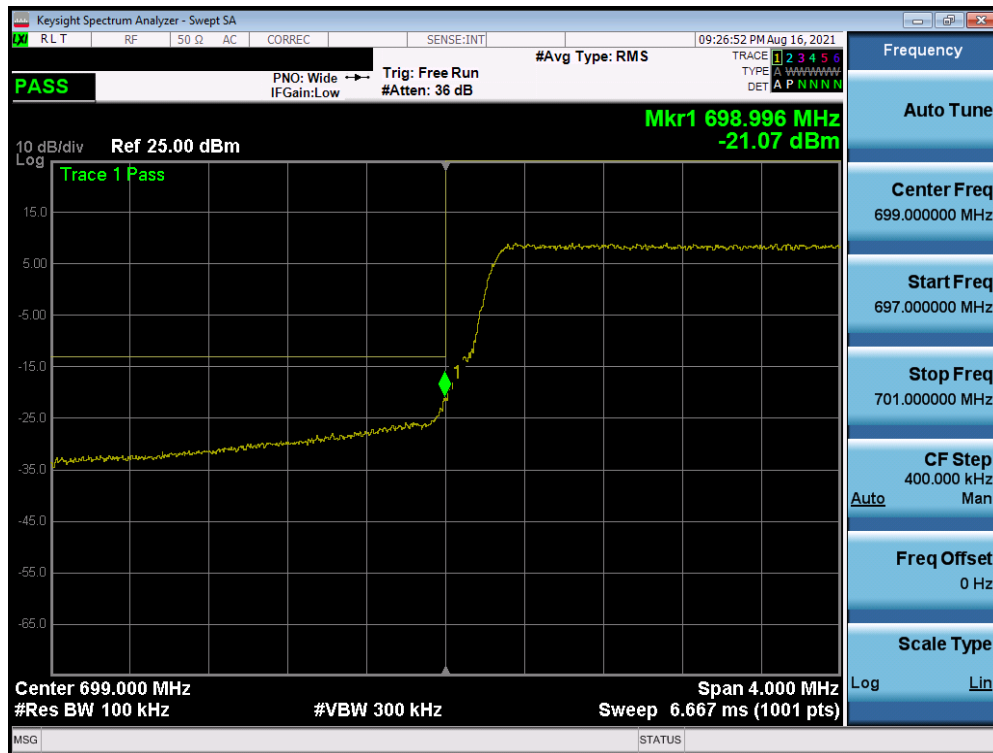


Plot 7-106. Lower Band Edge Plot (LTE Band 12 - 3MHz QPSK – Full RB)



Plot 7-107. Upper Band Edge Plot (LTE Band 12 - 3MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 74 of 120

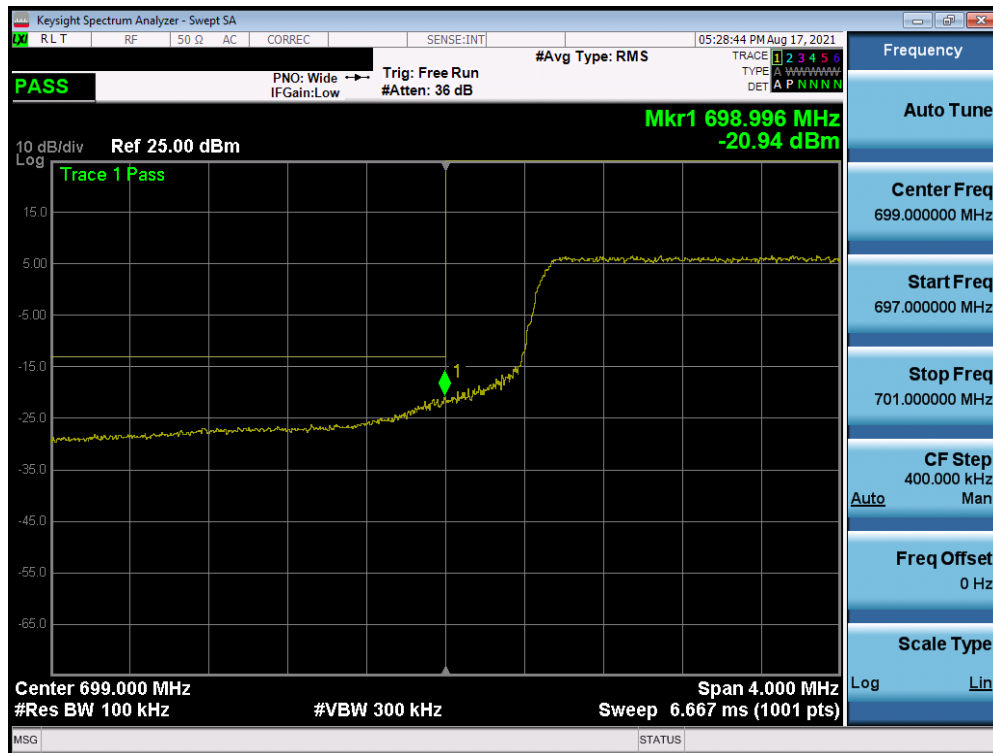


Plot 7-108. Lower Band Edge Plot (LTE Band 12 - 5MHz QPSK – Full RB)



Plot 7-109. Upper Band Edge Plot (LTE Band 12 - 5MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 75 of 120



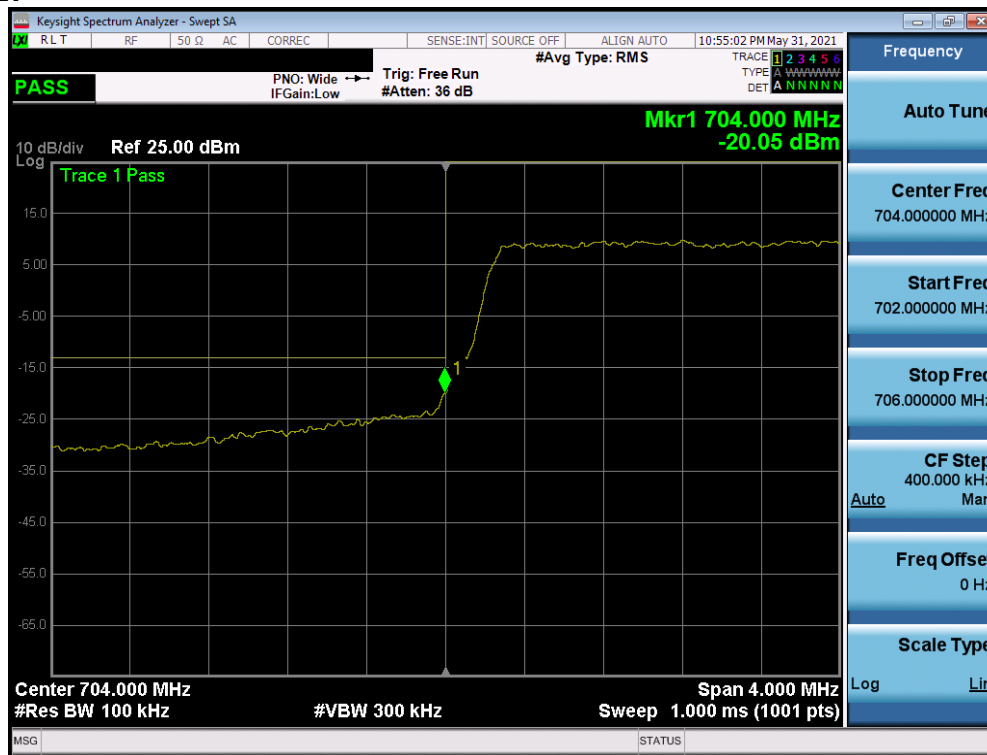
Plot 7-110. Lower Band Edge Plot (LTE Band 12 - 10MHz QPSK – Full RB)



Plot 7-111. Upper Band Edge Plot (LTE Band 12 - 10MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 76 of 120

LTE Band 17

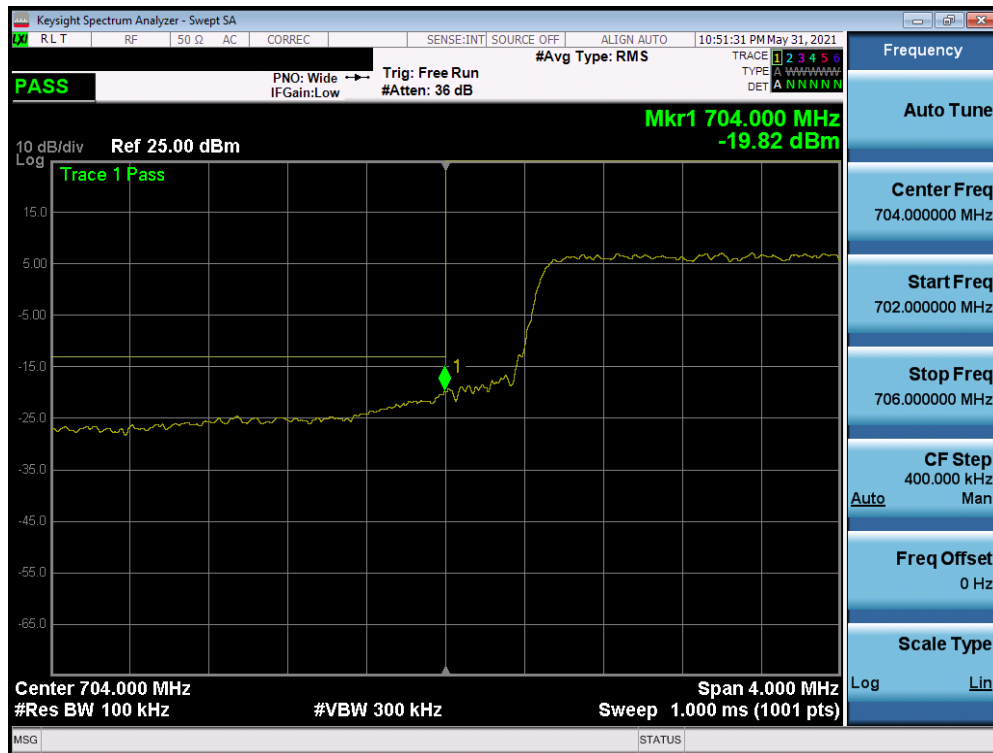


Plot 7-112. Lower Band Edge Plot (LTE Band 17 - 5MHz QPSK – Full RB)



Plot 7-113. Upper Band Edge Plot (LTE Band 17 - 5MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 77 of 120



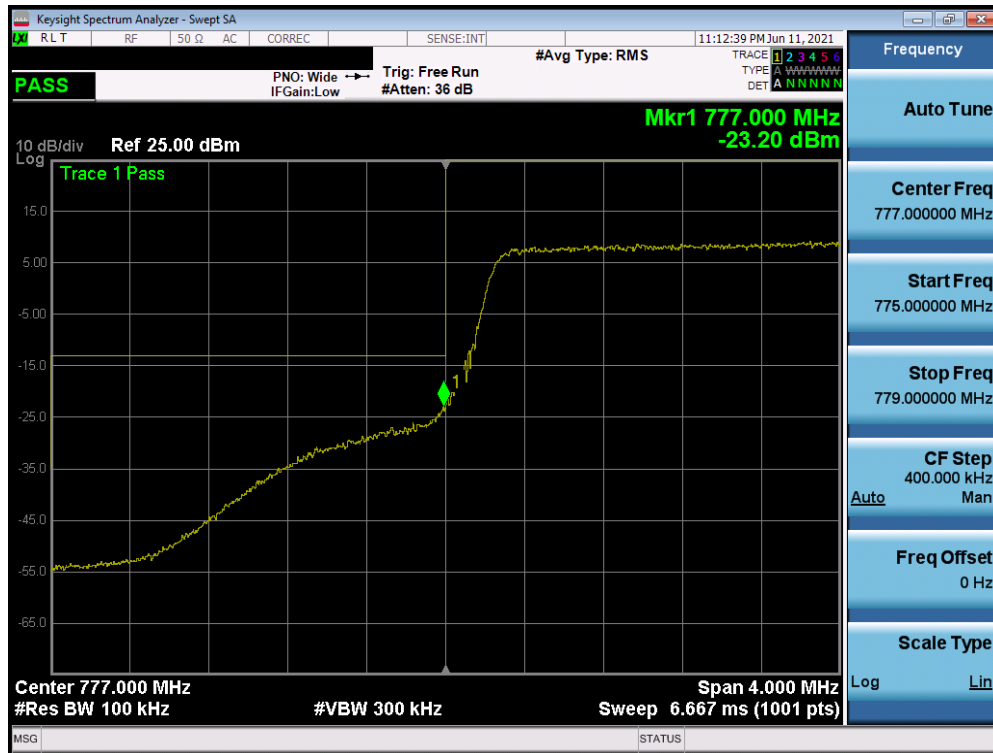
Plot 7-114. Lower Band Edge Plot (LTE Band 17 - 10MHz QPSK – Full RB)



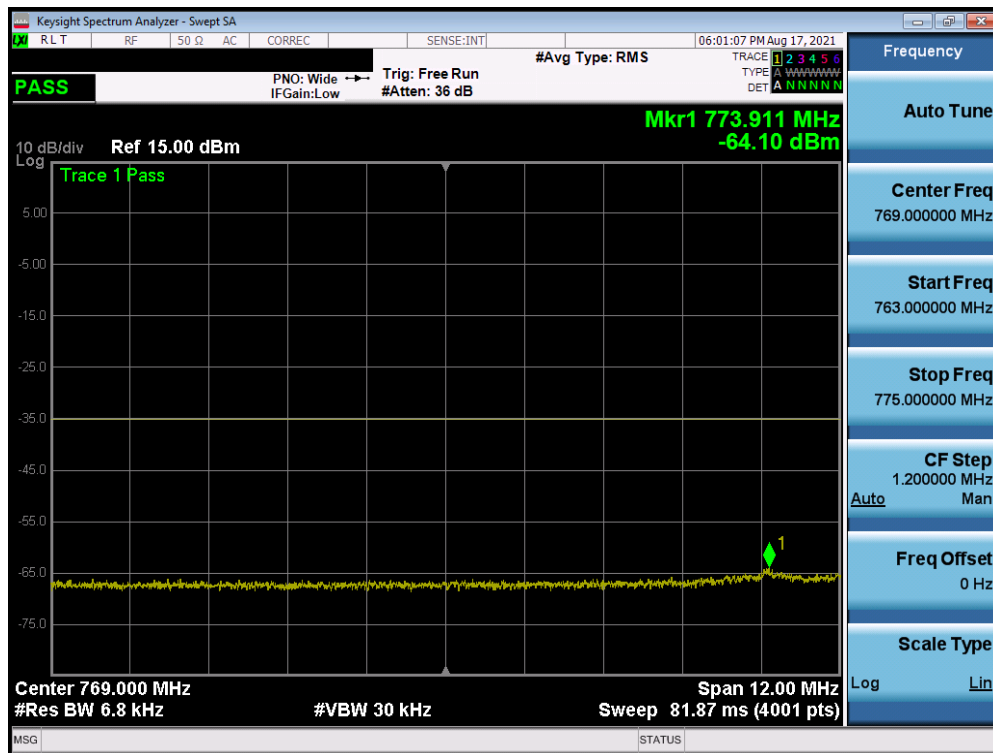
Plot 7-115. Upper Band Edge Plot (LTE Band 17 - 10MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 78 of 120

LTE Band 13



Plot 7-116. Lower Band Edge Plot (LTE Band 13 - 5MHz QPSK – Full RB)

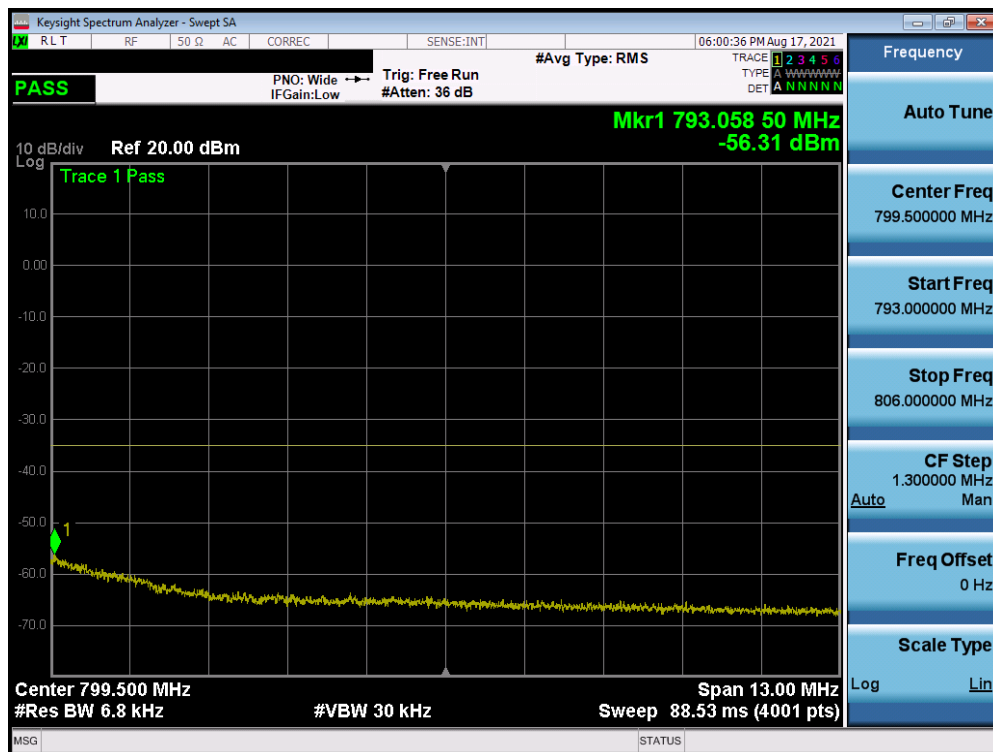


Plot 7-117. Lower Emission Mask Plot (LTE Band 13 - 5MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 79 of 120



Plot 7-118. Upper Band Edge Plot (LTE Band 13 - 5MHz QPSK – Full RB)

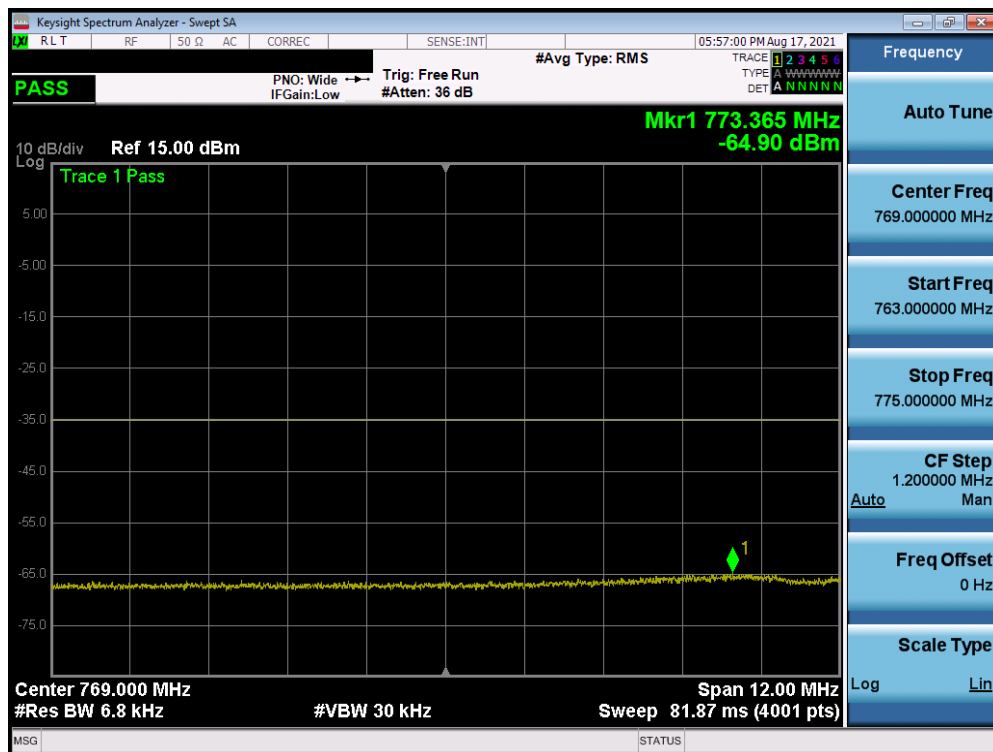


Plot 7-119. Upper Emission Mask Plot (LTE Band 13 - 5MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 80 of 120

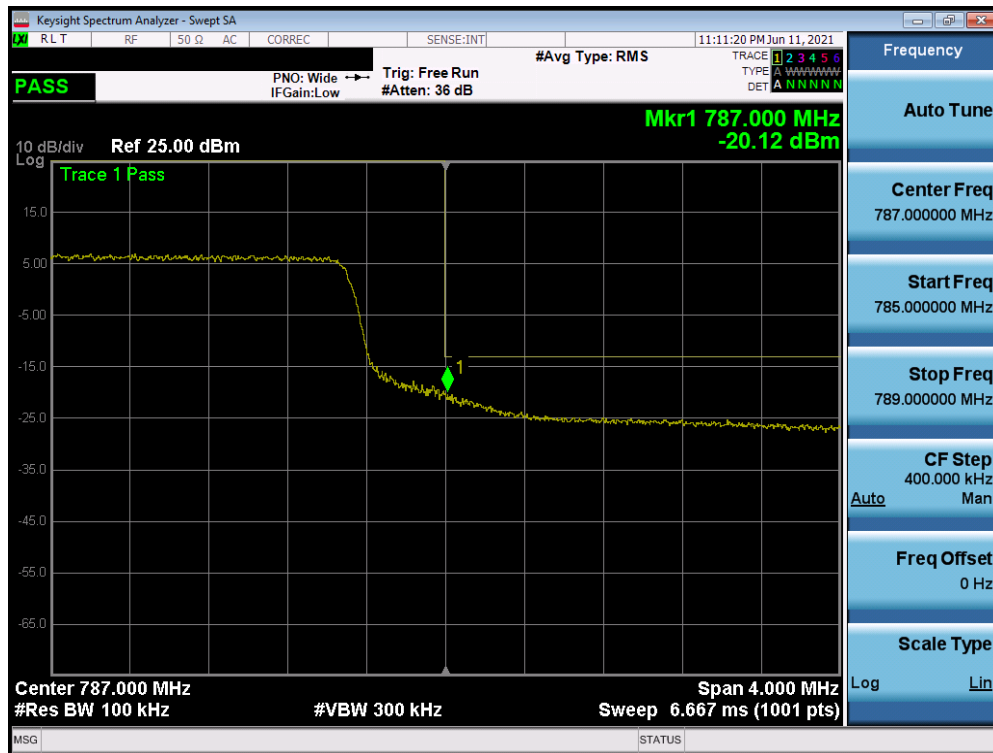


Plot 7-120. Lower Band Edge Plot (LTE Band 13 - 10MHz QPSK – Full RB)



Plot 7-121. Lower Emission Mask Plot (LTE Band 13 - 10MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 81 of 120



Plot 7-122. Upper Band Edge Plot (LTE Band 13 - 10MHz QPSK – Full RB)

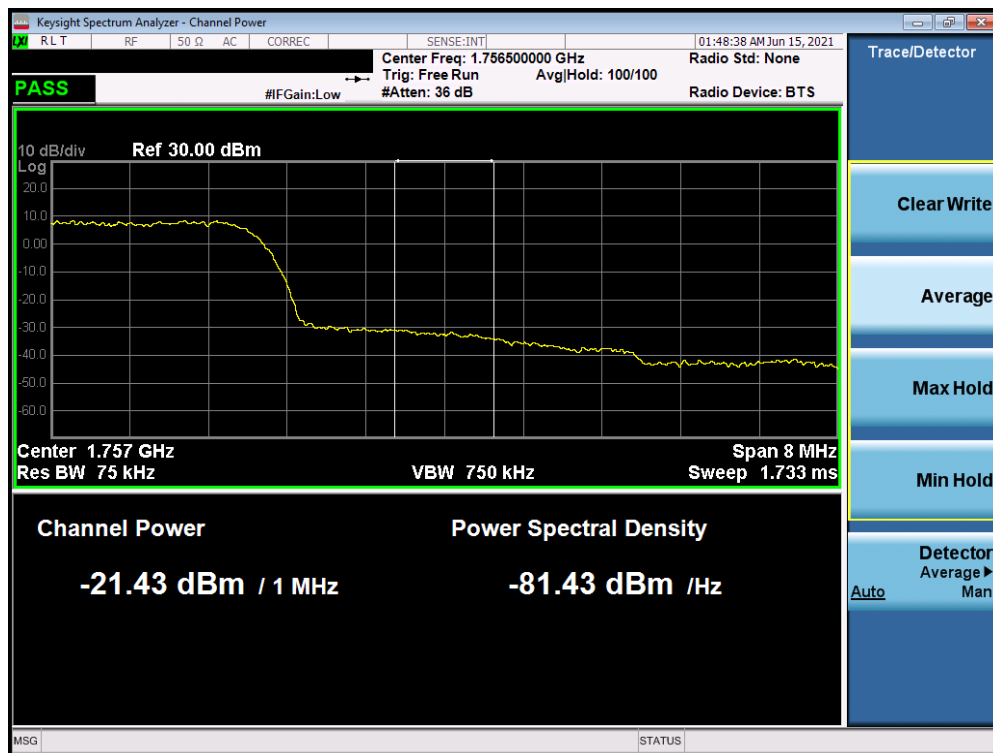


Plot 7-123. Upper Band Edge Plot (LTE Band 13 - 10MHz QPSK – Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 82 of 120



Plot 7-126. Upper Band Edge Plot (WCDMA AWS – Ch. 1513)



Plot 7-127. Upper Extended Band Edge Plot (WCDMA AWS – Ch. 1513)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 84 of 120

7.5 Peak-Average Ratio

§27.50(d)(5)

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7.1

Test Settings

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW $\geq$ OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Setup

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

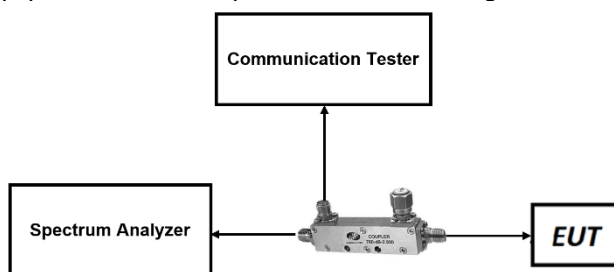


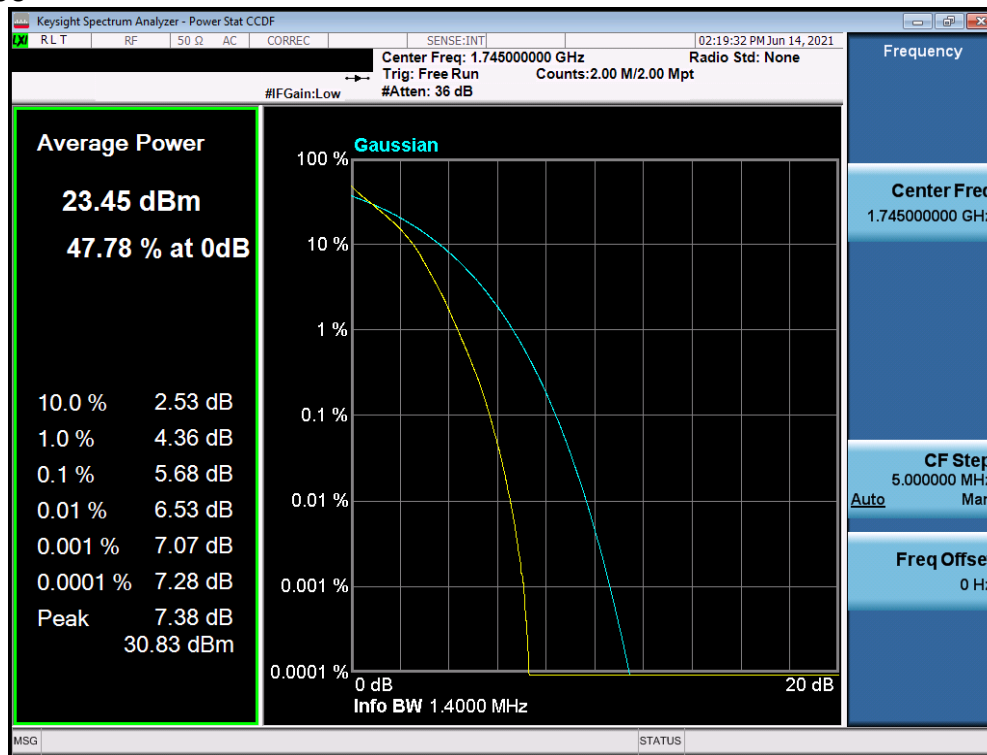
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

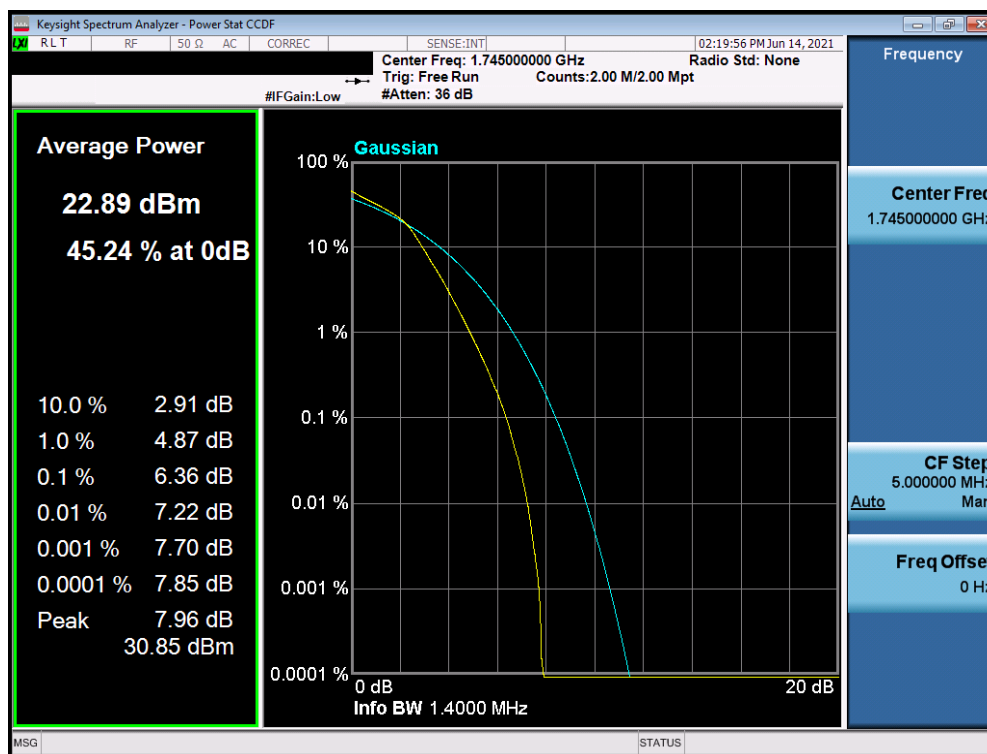
None.

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 85 of 120

LTE Band 66

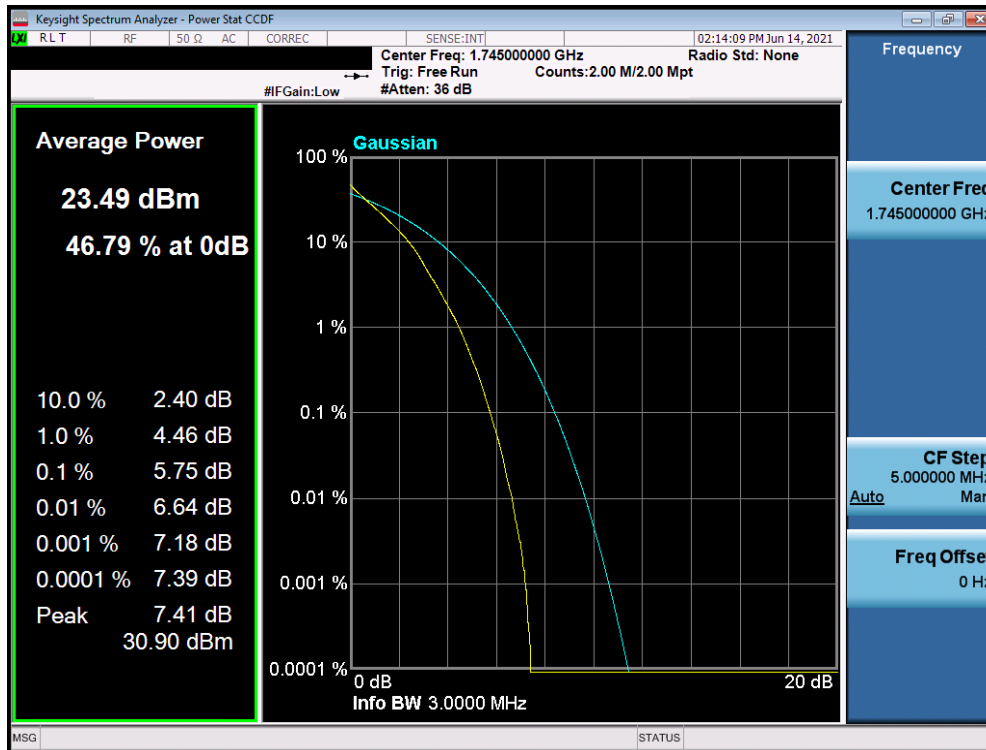


Plot 7-128. PAR Plot (LTE Band 66 - 1.4MHz QPSK - Full RB)

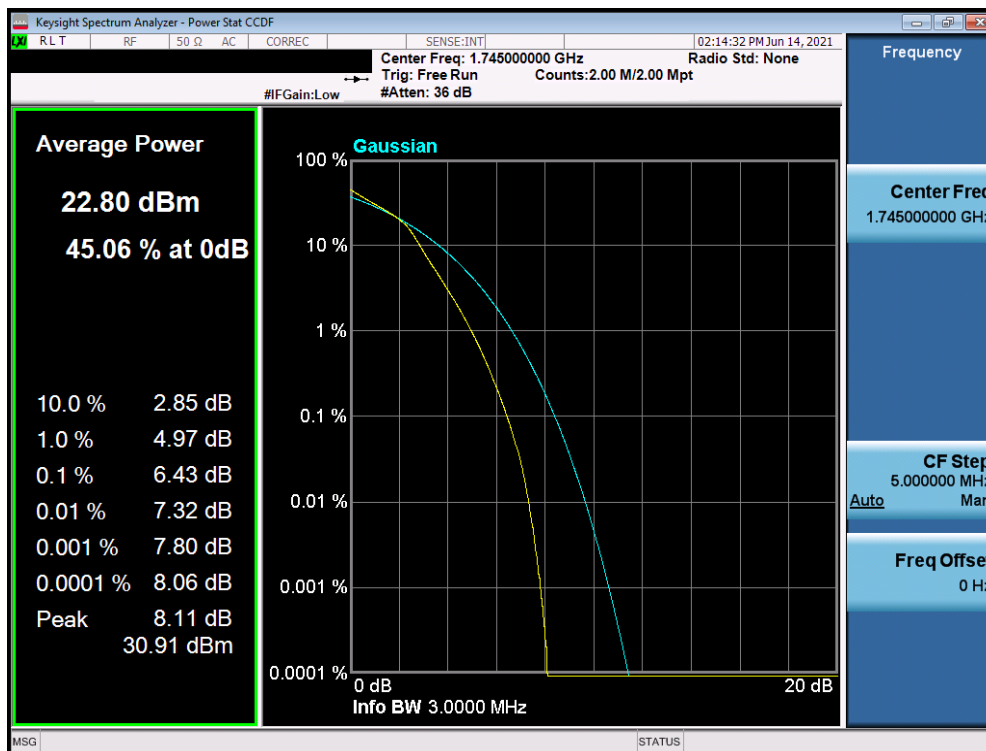


Plot 7-129. PAR Plot (LTE Band 66 - 1.4MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 86 of 120

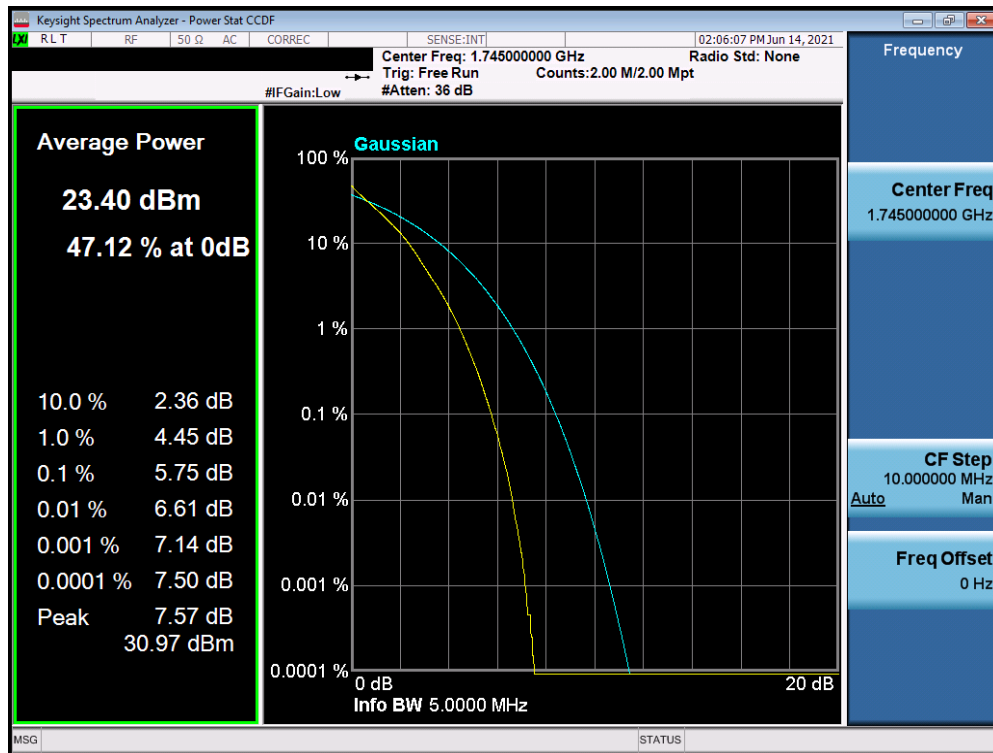


Plot 7-130. PAR Plot (LTE Band 66 - 3MHz QPSK - Full RB)

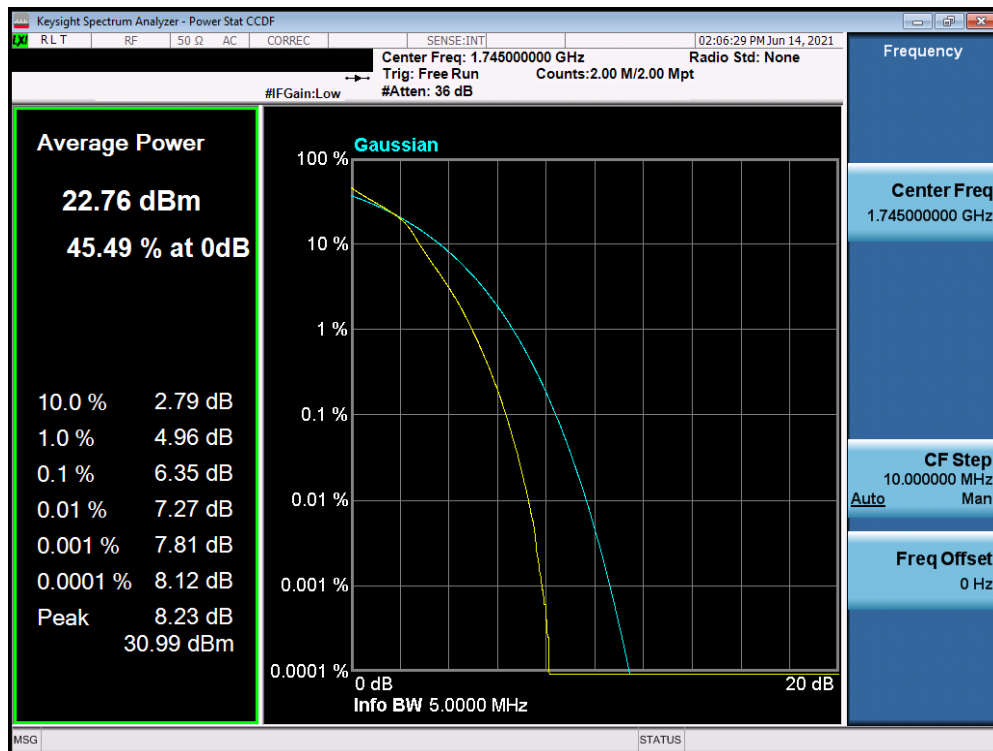


Plot 7-131. PAR Plot (LTE Band 66 - 3MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 87 of 120

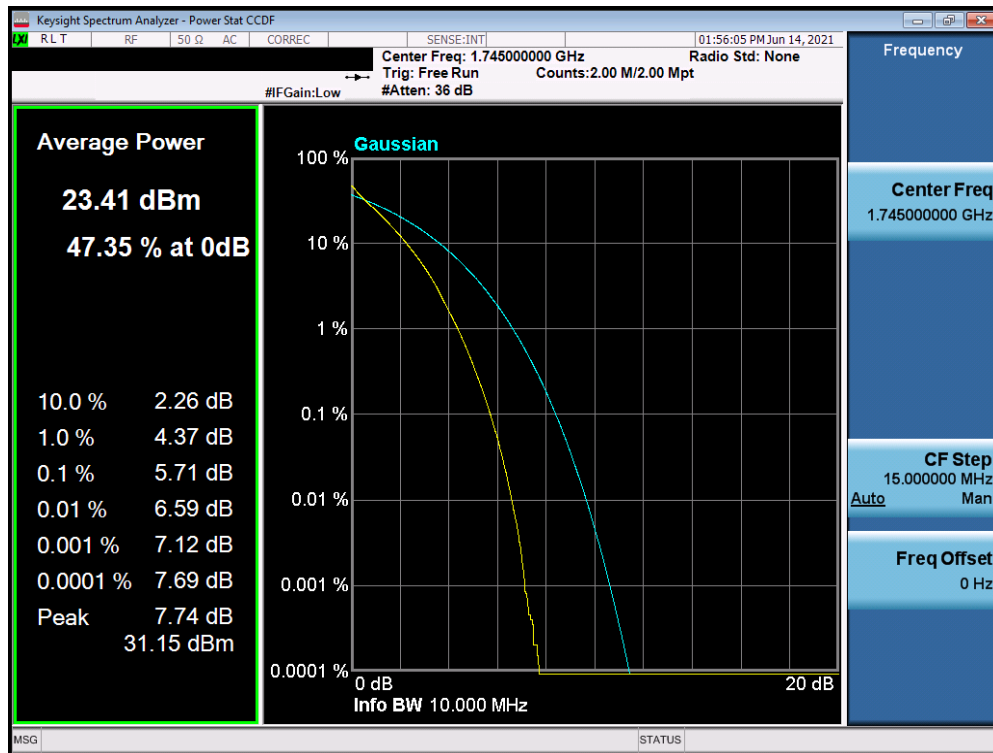


Plot 7-132. PAR Plot (LTE Band 66 - 5MHz QPSK - Full RB)

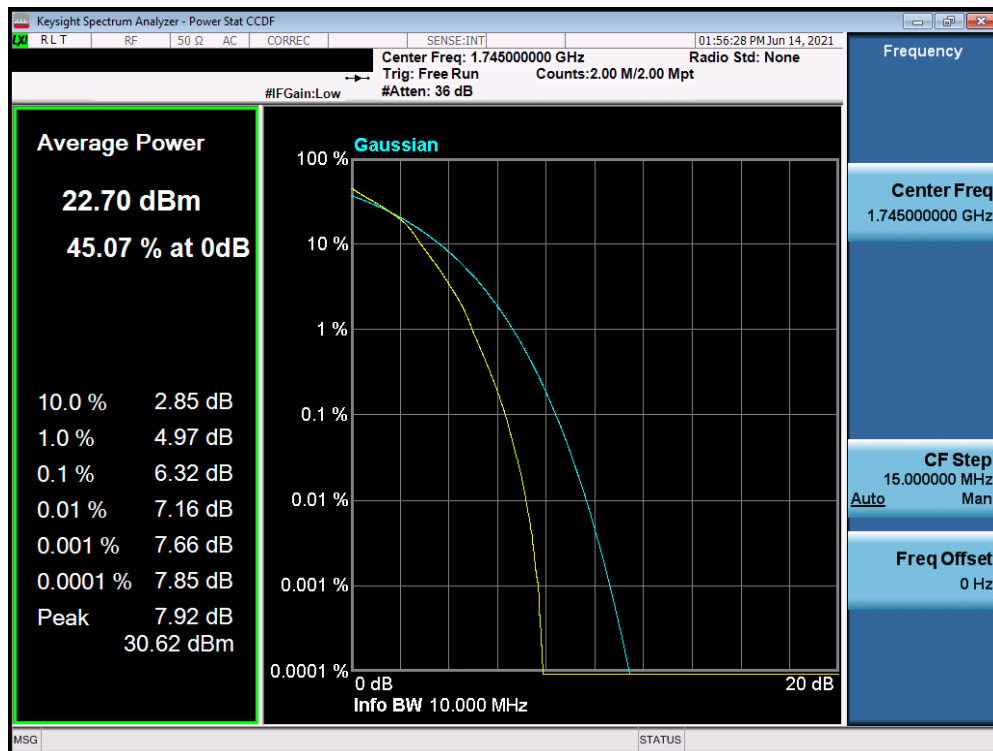


Plot 7-133. PAR Plot (LTE Band 66 - 5MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 88 of 120

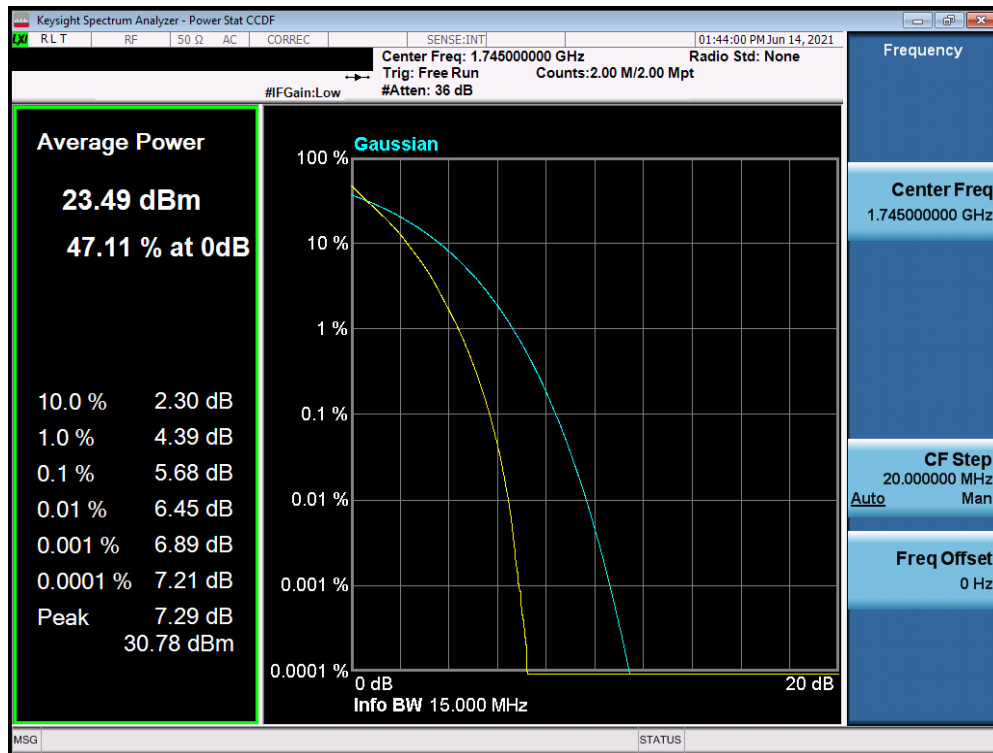


Plot 7-134. PAR Plot (LTE Band 66 - 10MHz QPSK - Full RB)

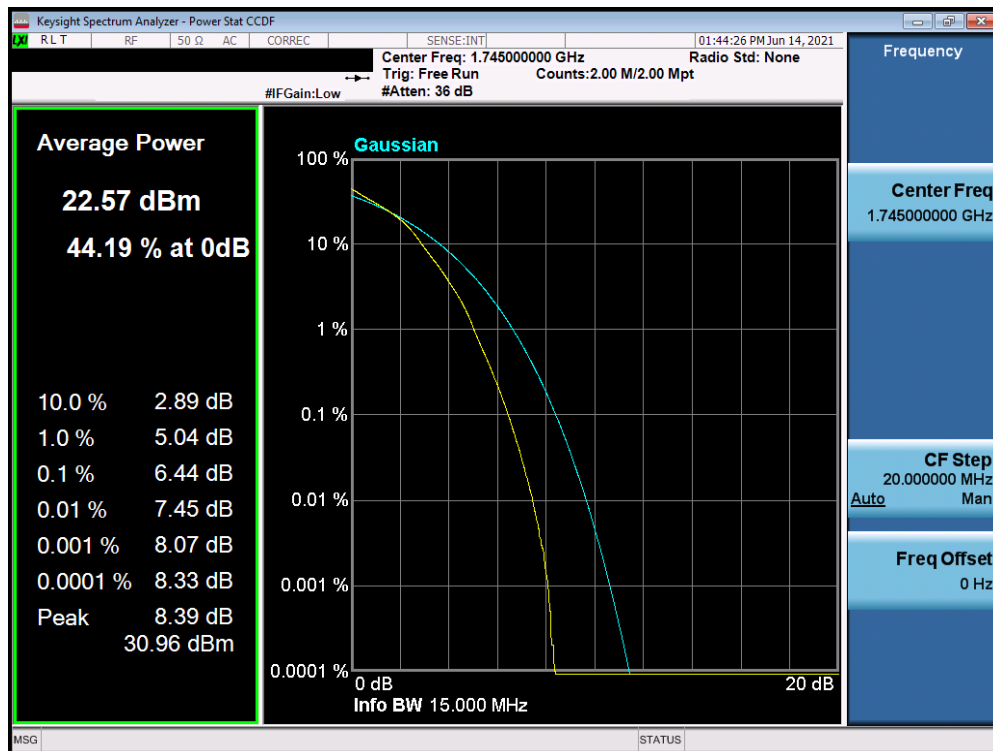


Plot 7-135. PAR Plot (LTE Band 66 - 10MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 89 of 120

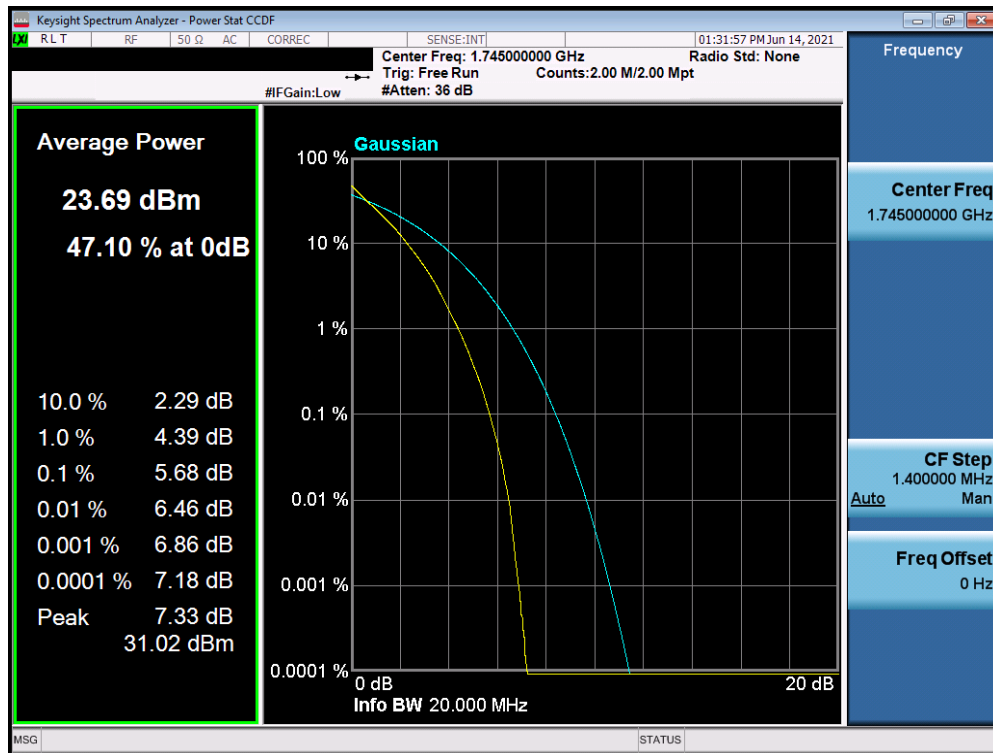


Plot 7-136. PAR Plot (LTE Band 66 - 15MHz QPSK - Full RB)

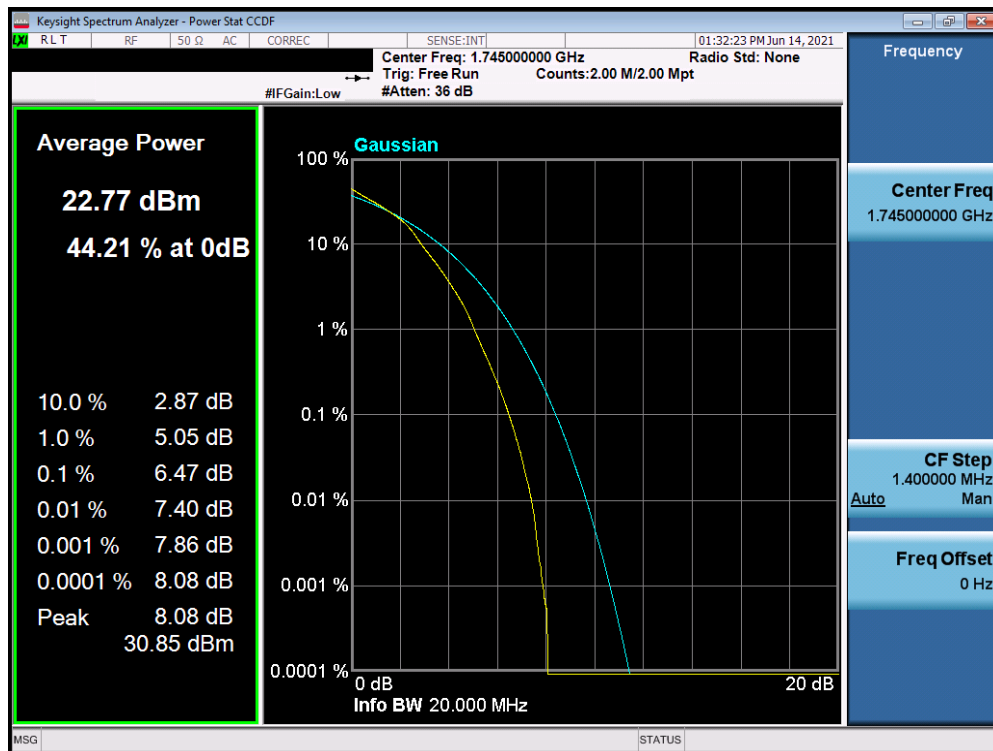


Plot 7-137. PAR Plot (LTE Band 66 - 15MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 90 of 120



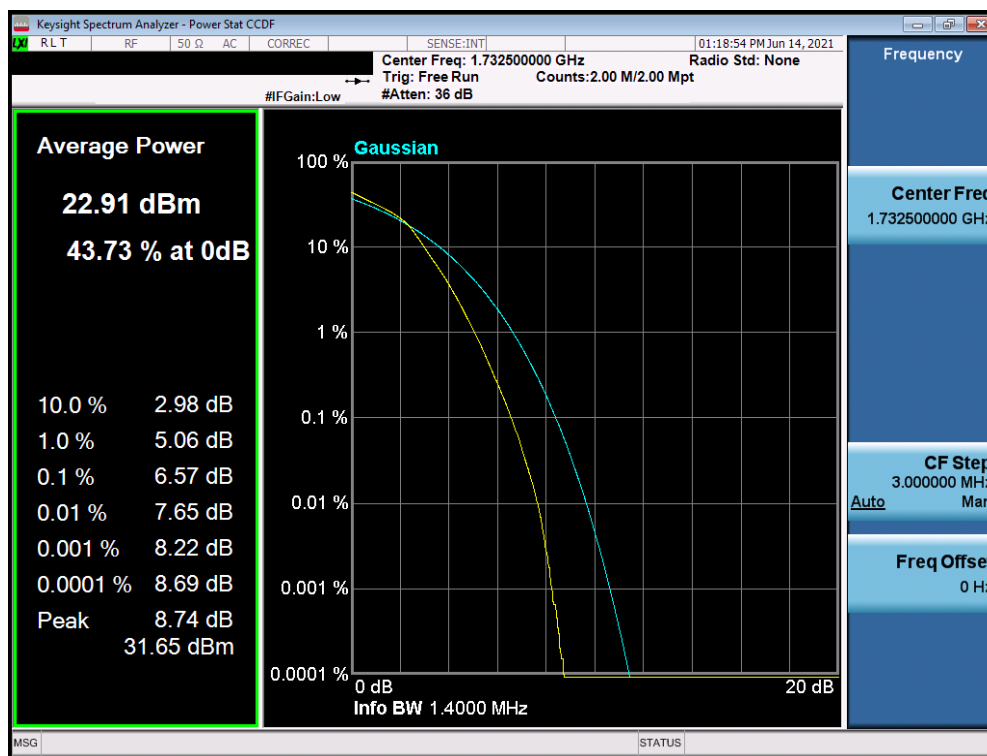
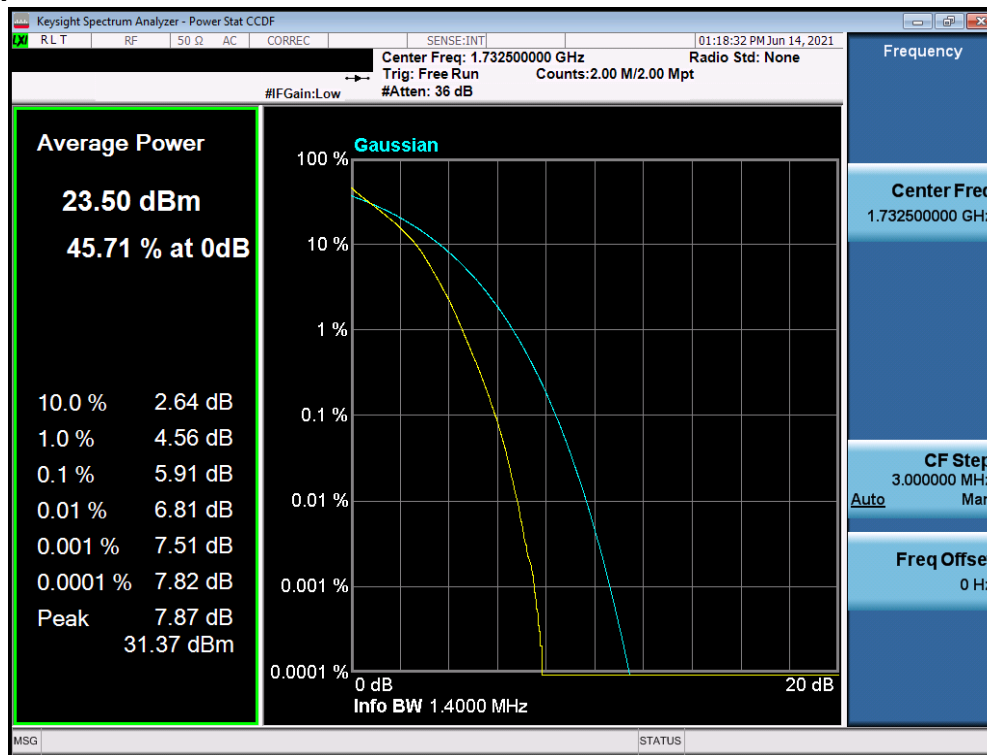
Plot 7-138. PAR Plot (LTE Band 66 - 20MHz QPSK - Full RB)



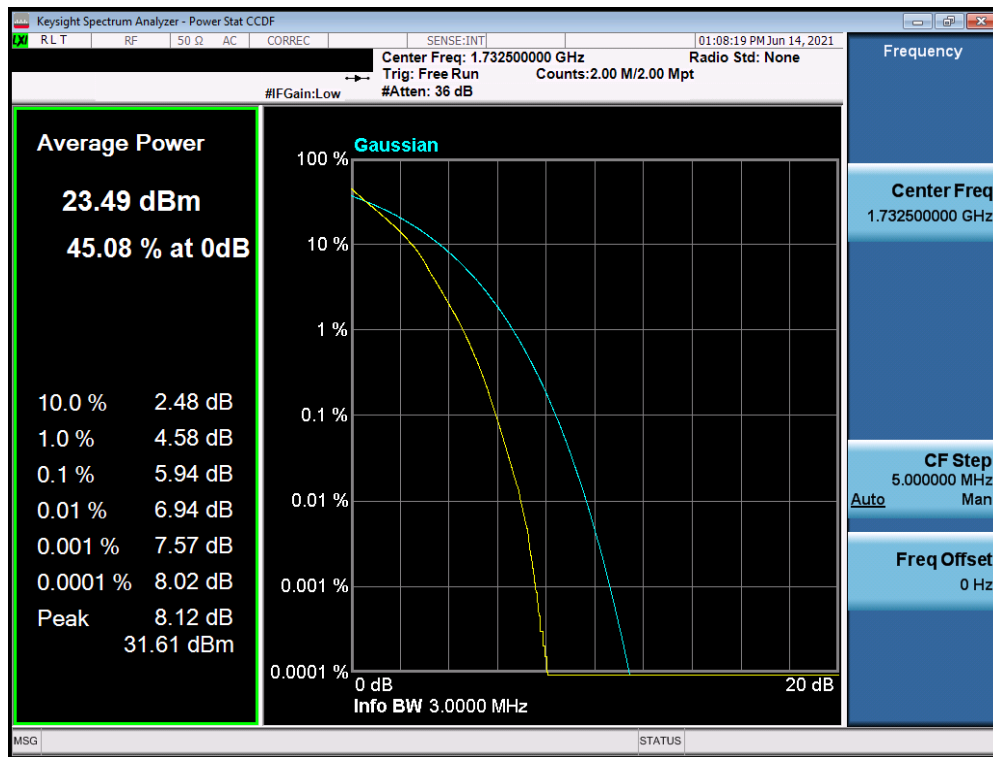
Plot 7-139. PAR Plot (LTE Band 66 - 20MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 91 of 120

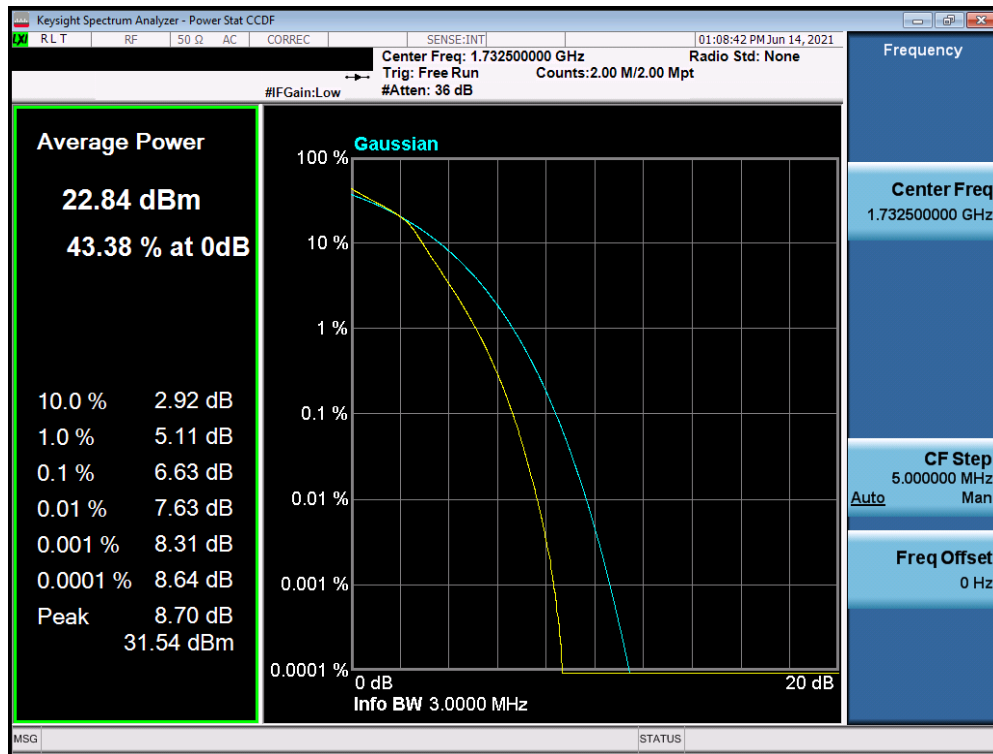
LTE Band 4



FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 92 of 120

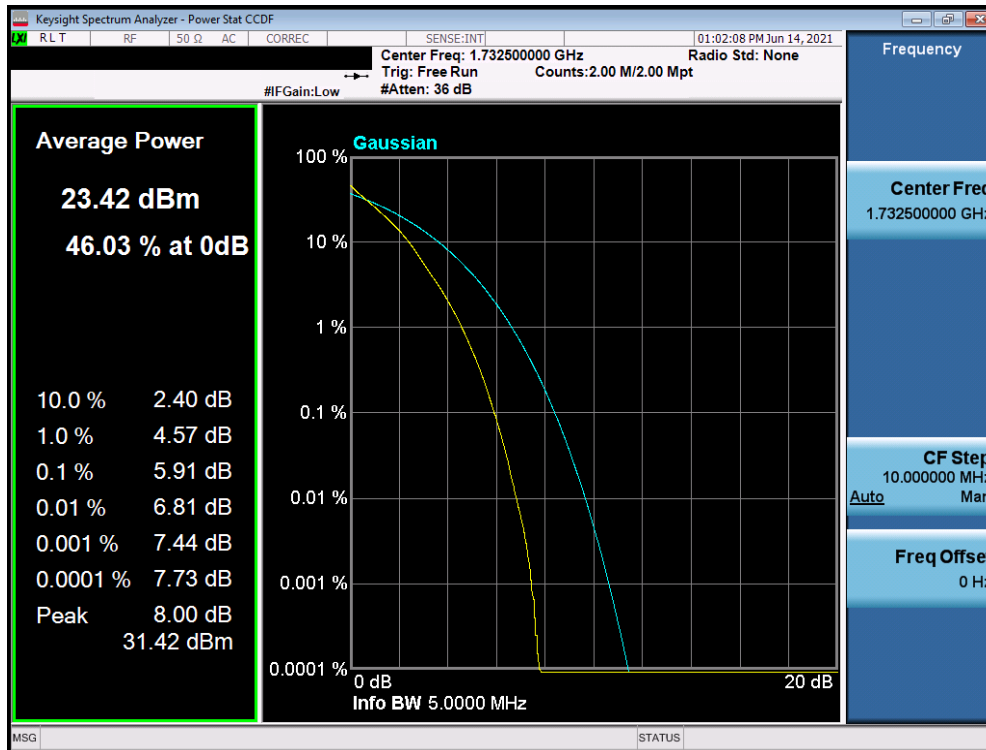


Plot 7-142. PAR Plot (LTE Band 4 - 3MHz QPSK - Full RB)

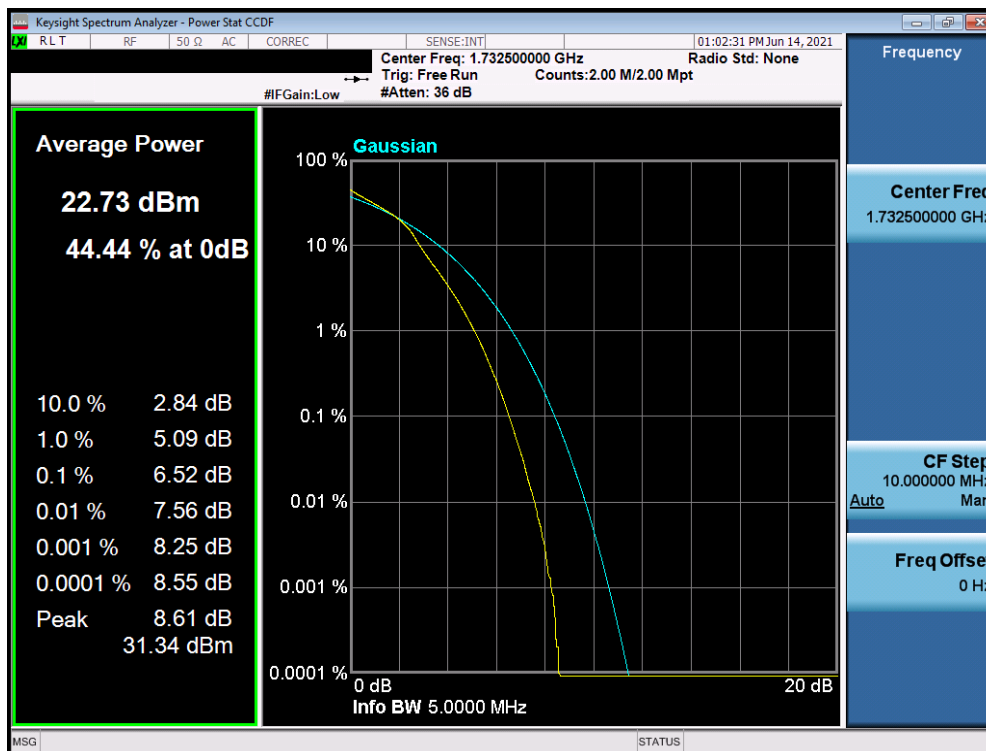


Plot 7-143. PAR Plot (LTE Band 4 - 3MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 93 of 120

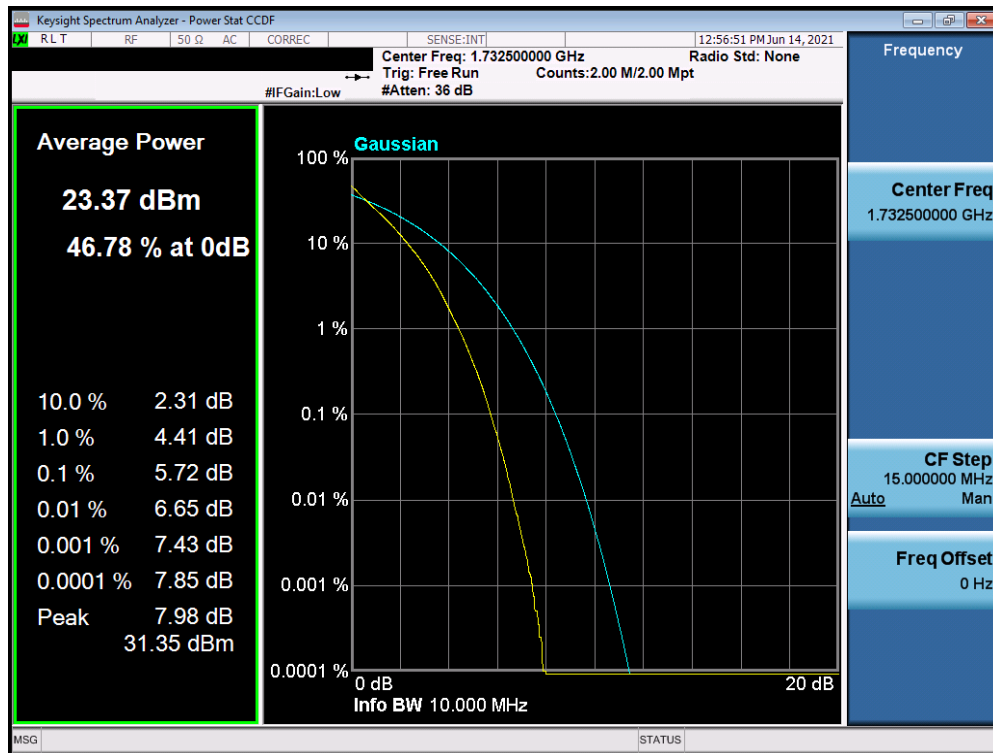


Plot 7-144. PAR Plot (LTE Band 4 - 5MHz QPSK - Full RB)

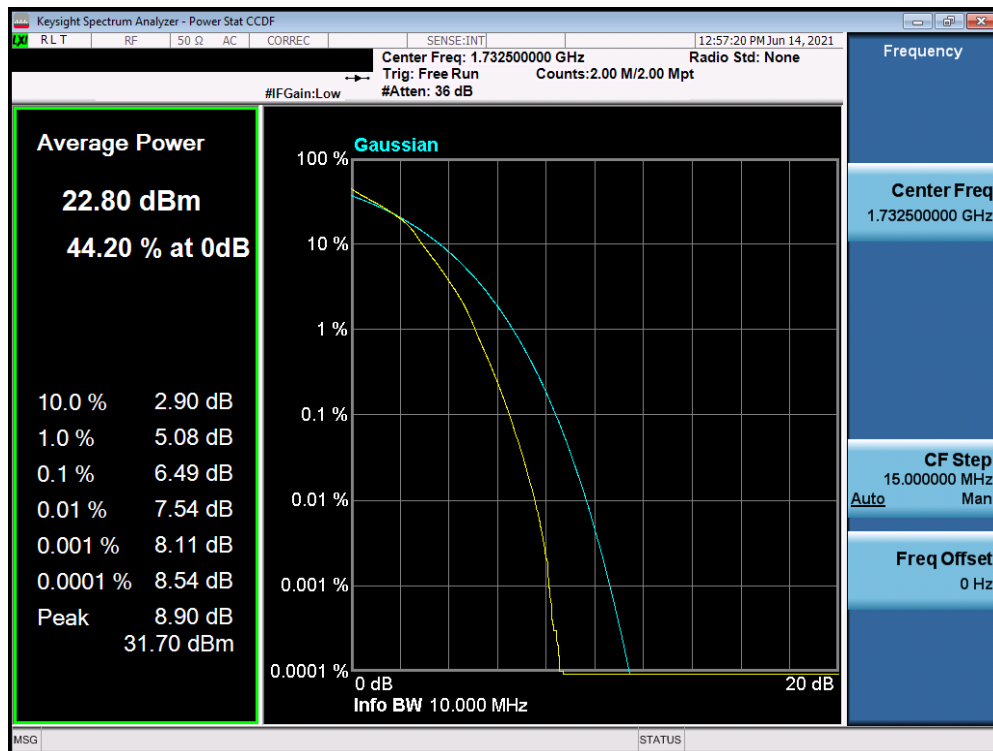


Plot 7-145. PAR Plot (LTE Band 4 - 5MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 94 of 120

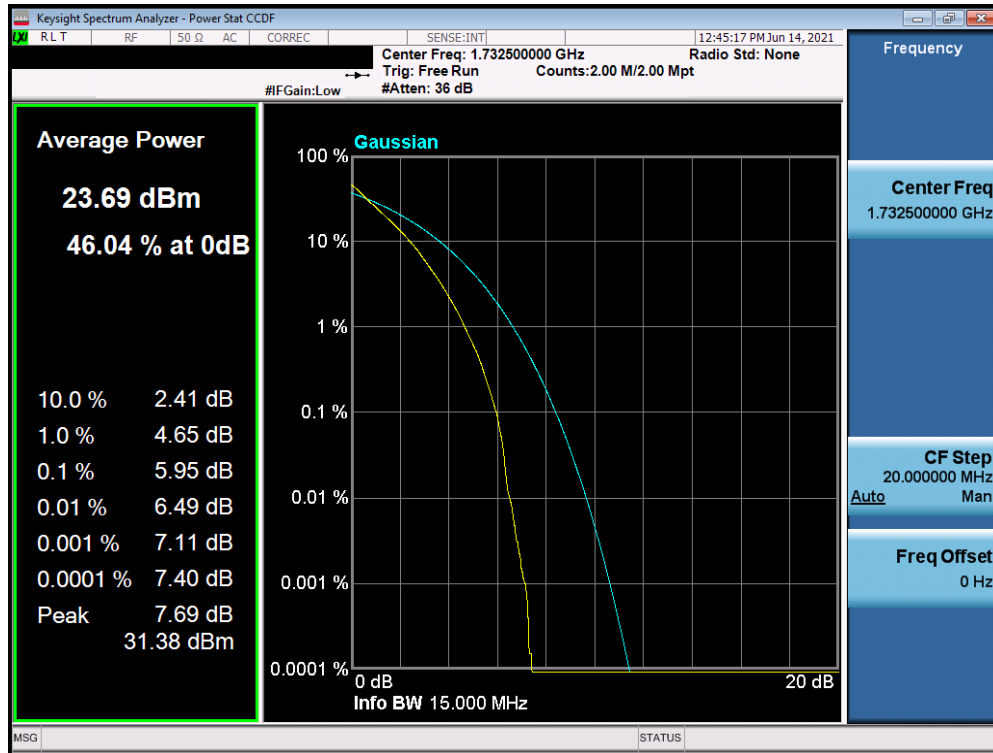


Plot 7-146. PAR Plot (LTE Band 4 - 10MHz QPSK - Full RB)

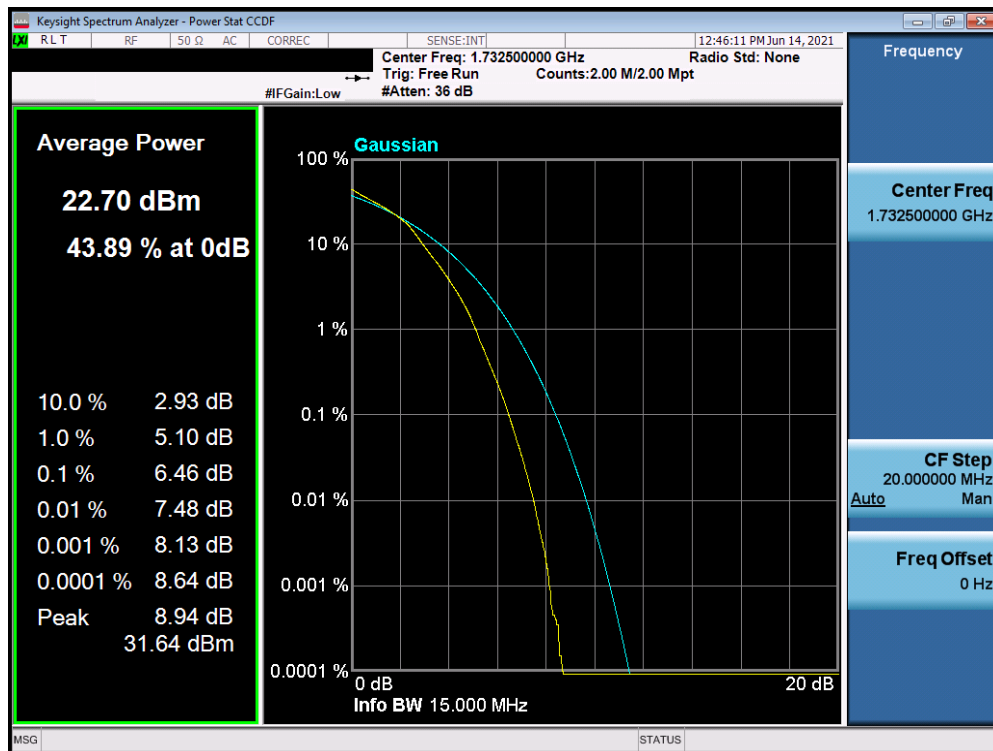


Plot 7-147. PAR Plot (LTE Band 4 - 10MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 95 of 120

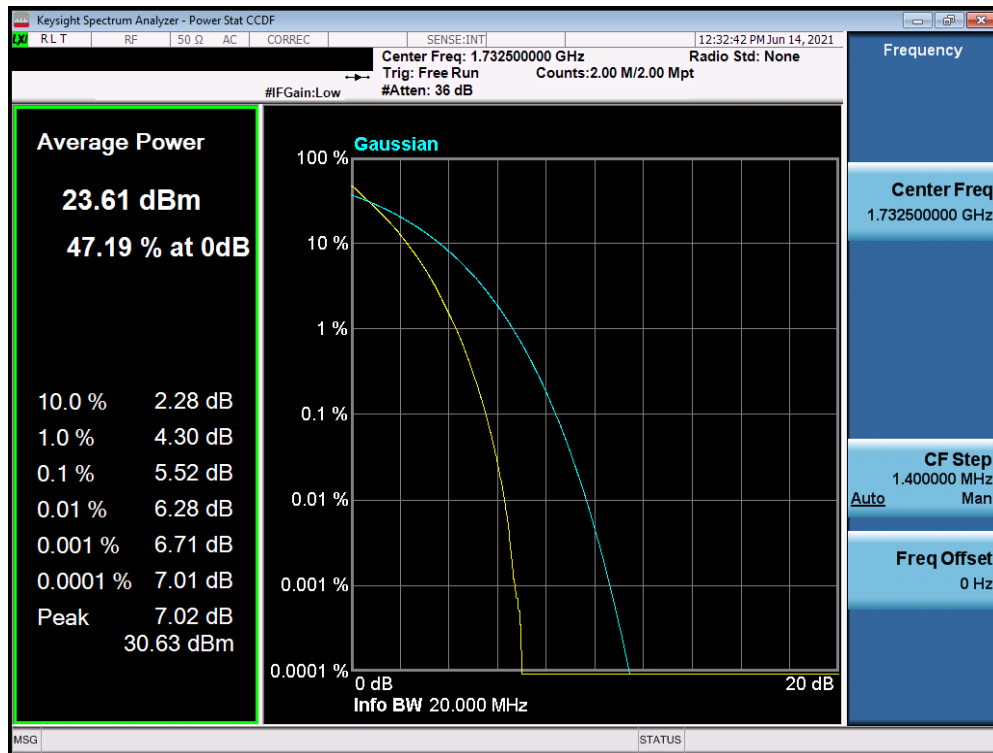


Plot 7-148. PAR Plot (LTE Band 4 - 15MHz QPSK - Full RB)

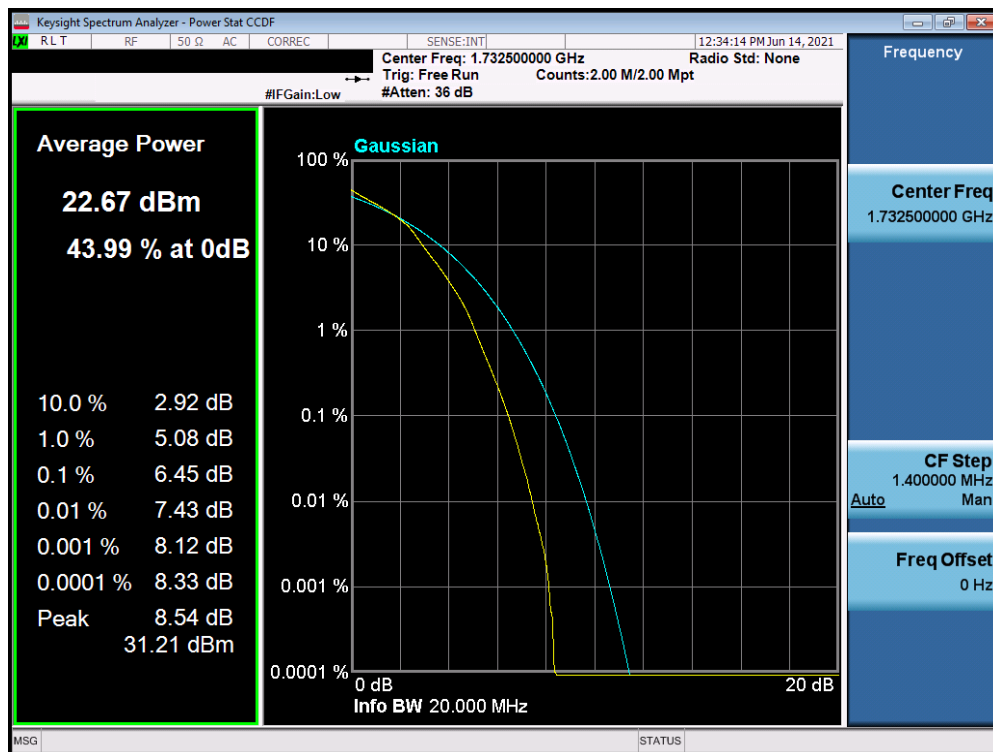


Plot 7-149. PAR Plot (LTE Band 4 - 15MHz 16-QAM - Full RB)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 96 of 120



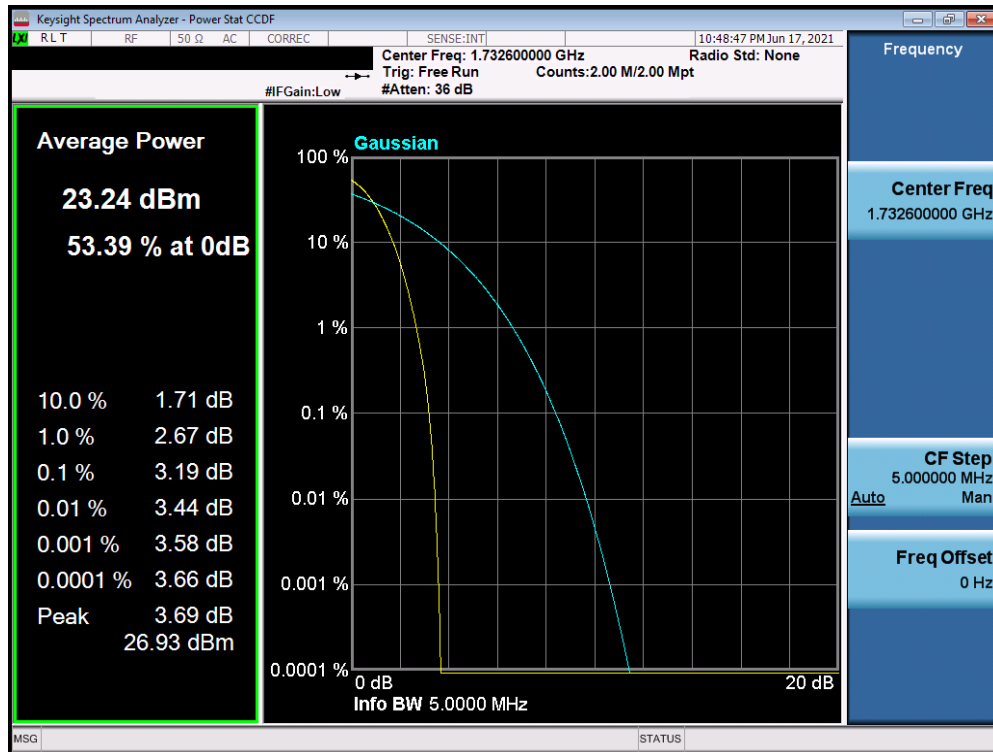
Plot 7-150. PAR Plot (LTE Band 4 - 20MHz QPSK - Full RB)



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

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 97 of 120

WCDMA AWS



Plot 7-152. PAR Plot (WCDMA, Ch. 1413)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 98 of 120

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.

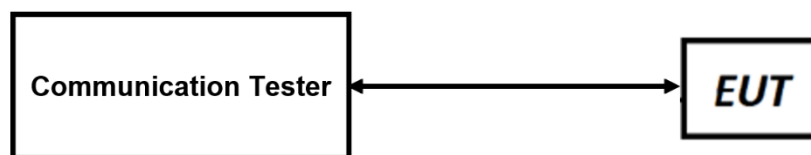


Figure 7-5. ERP/EIRP Measurement Setup

FCC ID: BCG-A2477	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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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.

FCC ID: BCG-A2477	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Antenna FCM – ERP/EIRP

LTE Band 66

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	EIRP [dBm]	EIRP [mWatts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	1710.7	-12.60	1 / 3	24.38	11.78	15.066	30.00	-18.22
		1745.0	-12.60	1 / 0	24.20	11.60	14.454	30.00	-18.40
		1779.3	-12.60	1 / 3	24.50	11.90	15.488	30.00	-18.10
	16-QAM	1745.0	-12.60	1 / 3	23.91	11.31	13.521	30.00	-18.69
3 MHz	QPSK	1711.5	-12.60	1 / 14	24.49	11.89	15.453	30.00	-18.11
		1745.0	-12.60	1 / 0	24.50	11.90	15.488	30.00	-18.10
		1778.5	-12.60	1 / 14	24.49	11.89	15.453	30.00	-18.11
	16-QAM	1778.5	-12.60	1 / 0	23.93	11.33	13.583	30.00	-18.67
5 MHz	QPSK	1712.5	-12.60	1 / 24	24.40	11.80	15.136	30.00	-18.20
		1745.0	-12.60	1 / 0	24.50	11.90	15.488	30.00	-18.10
		1777.5	-12.60	1 / 12	24.46	11.86	15.346	30.00	-18.14
	16-QAM	1745.0	-12.60	1 / 0	23.88	11.28	13.428	30.00	-18.72
10 MHz	QPSK	1715.0	-12.60	1 / 49	24.50	11.90	15.488	30.00	-18.10
		1745.0	-12.60	1 / 0	24.50	11.90	15.488	30.00	-18.10
		1775.0	-12.60	1 / 0	24.50	11.90	15.488	30.00	-18.10
	16-QAM	1775.0	-12.60	1 / 0	23.86	11.26	13.366	30.00	-18.74
15 MHz	QPSK	1717.5	-12.60	1 / 74	24.50	11.90	15.488	30.00	-18.10
		1745.0	-12.60	1 / 0	24.36	11.76	14.997	30.00	-18.24
		1772.5	-12.60	1 / 0	24.43	11.83	15.241	30.00	-18.17
	16-QAM	1772.5	-12.60	1 / 0	23.79	11.19	13.152	30.00	-18.81
20 MHz	QPSK	1720.0	-12.60	1 / 99	24.50	11.90	15.488	30.00	-18.10
		1745.0	-12.60	1 / 50	24.49	11.89	15.453	30.00	-18.11
		1770.0	-12.60	1 / 50	24.48	11.88	15.417	30.00	-18.12
	16-QAM	1745.0	-12.60	1 / 0	23.80	11.20	13.183	30.00	-18.80

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

FCC ID: BCG-A2477		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 101 of 120

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	-12.60	1 / 0	24.44	11.84	15.276	30.00	-18.16
		1732.5	-12.60	1 / 0	24.49	11.89	15.453	30.00	-18.11
		1754.3	-12.60	1 / 3	24.50	11.90	15.488	30.00	-18.10
	16-QAM	1732.5	-12.60	1 / 0	23.89	11.29	13.459	30.00	-18.71
3 MHz	QPSK	1711.5	-12.60	1 / 0	24.45	11.85	15.311	30.00	-18.15
		1732.5	-12.60	1 / 0	24.50	11.90	15.488	30.00	-18.10
		1753.5	-12.60	1 / 0	24.41	11.81	15.171	30.00	-18.19
	16-QAM	1732.5	-12.60	1 / 0	23.86	11.26	13.366	30.00	-18.74
5 MHz	QPSK	1712.5	-12.60	1 / 12	24.45	11.85	15.311	30.00	-18.15
		1732.5	-12.60	1 / 24	24.50	11.90	15.488	30.00	-18.10
		1752.5	-12.60	1 / 24	24.39	11.79	15.101	30.00	-18.21
	16-QAM	1732.5	-12.60	1 / 0	23.79	11.19	13.152	30.00	-18.81
10 MHz	QPSK	1715.0	-12.60	1 / 25	24.39	11.79	15.101	30.00	-18.21
		1732.5	-12.60	1 / 49	24.46	11.86	15.346	30.00	-18.14
		1750.0	-12.60	1 / 25	24.50	11.90	15.488	30.00	-18.10
	16-QAM	1732.5	-12.60	1 / 0	23.81	11.21	13.213	30.00	-18.79
15 MHz	QPSK	1717.5	-12.60	1 / 0	24.50	11.90	15.488	30.00	-18.10
		1732.5	-12.60	1 / 0	24.45	11.85	15.311	30.00	-18.15
		1747.5	-12.60	1 / 0	24.37	11.77	15.031	30.00	-18.23
	16-QAM	1732.5	-12.60	1 / 0	23.76	11.16	13.062	30.00	-18.84
20 MHz	QPSK	1720.0	-12.60	1 / 0	24.49	11.89	15.453	30.00	-18.11
		1732.5	-12.60	1 / 0	24.42	11.82	15.205	30.00	-18.18
		1745.0	-12.60	1 / 50	24.50	11.90	15.488	30.00	-18.10
	16-QAM	1732.5	-12.60	1 / 0	23.90	11.30	13.490	30.00	-18.70

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

WCDMA AWS

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [mW]	EIRP Limit [dBm]	Margin [dB]
1712.40	WCDMA1700	23.86	-12.60	11.26	13.366	30.00	-18.74
1732.60	WCDMA1700	24.00	-12.60	11.40	13.804	30.00	-18.60
1752.60	WCDMA1700	23.92	-12.60	11.32	13.552	30.00	-18.68

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

FCC ID: BCG-A2477		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch		Page 102 of 120

Antenna BCM – ERP/EIRP

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	-31.10	1 / 5	25.49	-7.76	0.167	34.77	-42.53	-5.61	0.275	36.99	-42.60
		707.5	-31.10	1 / 3	25.33	-7.92	0.161	34.77	-42.69	-5.77	0.265	36.99	-42.76
		715.3	-31.10	1 / 3	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
	16-QAM	699.7	-31.10	1 / 5	24.91	-8.34	0.147	34.77	-43.11	-6.19	0.240	36.99	-43.18
3 MHz	QPSK	700.5	-31.10	1 / 0	25.47	-7.78	0.167	34.77	-42.55	-5.63	0.274	36.99	-42.62
		707.5	-31.10	1 / 0	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
		714.5	-31.10	1 / 0	25.48	-7.77	0.167	34.77	-42.54	-5.62	0.274	36.99	-42.61
	16-QAM	707.5	-31.10	1 / 7	24.99	-8.26	0.149	34.77	-43.03	-6.11	0.245	36.99	-43.10
5 MHz	QPSK	701.5	-31.10	1 / 24	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
		707.5	-31.10	1 / 12	25.48	-7.77	0.167	34.77	-42.54	-5.62	0.274	36.99	-42.61
		713.5	-31.10	1 / 24	25.47	-7.78	0.167	34.77	-42.55	-5.63	0.274	36.99	-42.62
	16-QAM	713.5	-31.10	1 / 24	24.96	-8.29	0.148	34.77	-43.06	-6.14	0.243	36.99	-43.13
10 MHz	QPSK	704.0	-31.10	1 / 0	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
		707.5	-31.10	1 / 25	25.48	-7.77	0.167	34.77	-42.54	-5.62	0.274	36.99	-42.61
		711.0	-31.10	1 / 25	25.46	-7.79	0.166	34.77	-42.56	-5.64	0.273	36.99	-42.63
	16-QAM	711.0	-31.10	1 / 25	24.78	-8.47	0.142	34.77	-43.24	-6.32	0.233	36.99	-43.31

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

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	-31.10	1 / 12	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
		710.0	-31.10	1 / 24	25.38	-7.87	0.163	34.77	-42.64	-5.72	0.268	36.99	-42.71
		713.5	-31.10	1 / 0	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
	16-QAM	713.5	-31.10	1 / 0	24.76	-8.49	0.142	34.77	-43.26	-6.34	0.232	36.99	-43.33
10 MHz	QPSK	709.0	-31.10	1 / 25	25.50	-7.75	0.168	34.77	-42.52	-5.60	0.275	36.99	-42.59
		710.0	-31.10	1 / 0	25.33	-7.92	0.161	34.77	-42.69	-5.77	0.265	36.99	-42.76
		711.0	-31.10	1 / 25	25.44	-7.81	0.166	34.77	-42.58	-5.66	0.272	36.99	-42.65
	16-QAM	709.0	-31.10	1 / 25	24.91	-8.34	0.147	34.77	-43.11	-6.19	0.240	36.99	-43.18

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

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	-29.00	1 / 12	25.50	-5.65	0.272	34.77	-40.42	-3.50	0.447	36.99	-40.49
		782.0	-29.00	1 / 24	25.33	-5.82	0.262	34.77	-40.59	-3.67	0.430	36.99	-40.66
		784.5	-29.00	1 / 0	25.50	-5.65	0.272	34.77	-40.42	-3.50	0.447	36.99	-40.49
	16-QAM	784.5	-29.00	1 / 0	24.83	-6.32	0.233	34.77	-41.09	-4.17	0.383	36.99	-41.16
10 MHz	QPSK	782.0	-29.00	1 / 25	25.50	-5.65	0.272	34.77	-40.42	-3.50	0.447	36.99	-40.49
	16-QAM	782.0	-29.00	1 / 25	25.17	-5.98	0.252	34.77	-40.75	-3.83	0.414	36.99	-40.82

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 $\geq 3 \times$ RBW
3. Span = 1.5 times the OBW
4. No. of sweep points $\geq 2 \times$ span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

FCC ID: BCG-A2477	 PCTEST [®] Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Test Setup

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

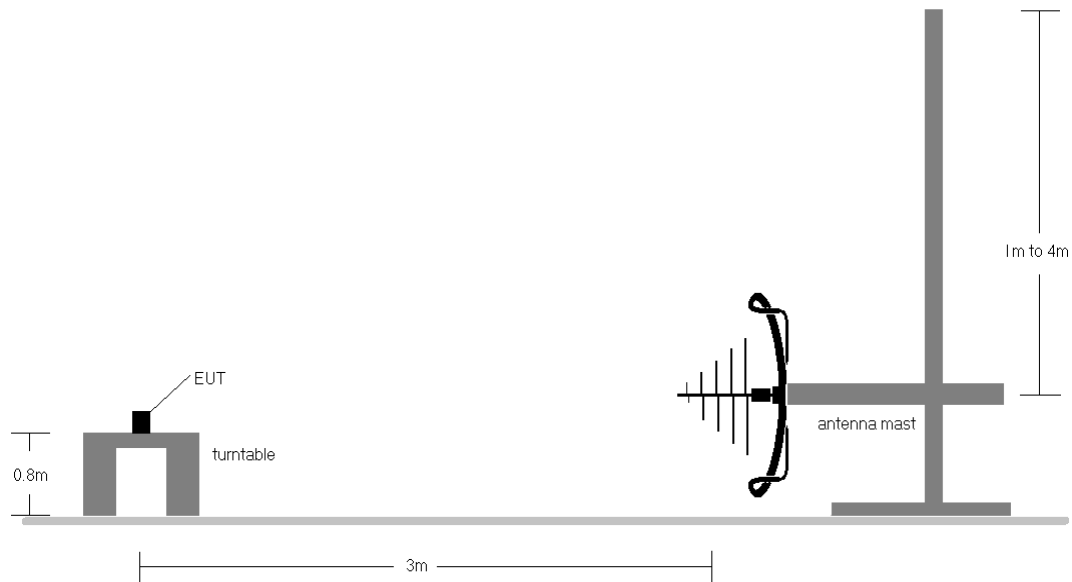


Figure 7-6. Test Instrument & Measurement Setup < 1GHz

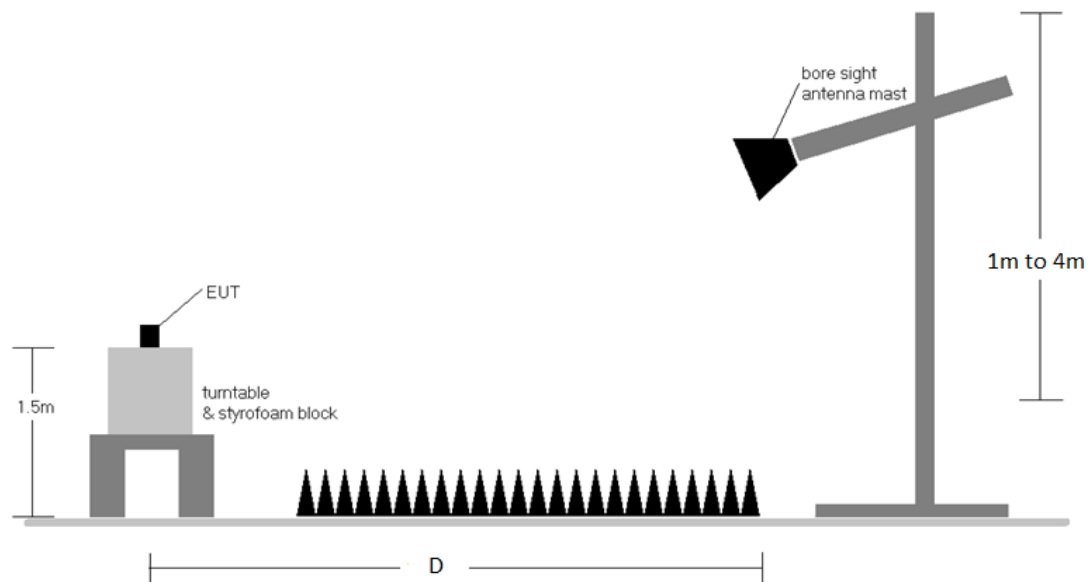


Figure 7-7. Test Instrument & Measurement Setup > 1GHz

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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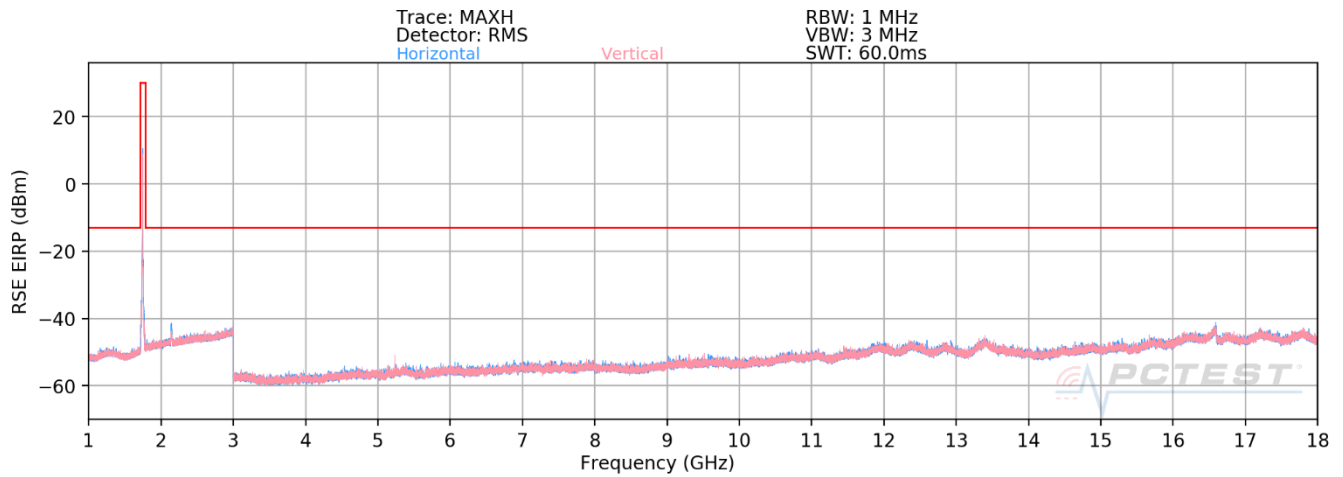
Test Notes

1. Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
 - a. $E(\text{dB}\mu\text{V/m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b. $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V/m}) + 20\log D - 104.8$; 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.

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7.7.1 Antenna FCM – Radiated Spurious Emission Measurement

LTE Band 66/4



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

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 107 of 120

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	V	-	-	-80.57	5.64	32.07	-63.19	-13.00	-50.19
5160.0	V	343	168	-77.06	9.29	39.23	-56.03	-13.00	-43.03
6880.0	V	-	-	-83.41	11.64	35.23	-60.03	-13.00	-47.03
8600.0	V	-	-	-84.16	13.21	36.05	-59.21	-13.00	-46.21
10320.0	V	-	-	-83.75	15.32	38.57	-56.69	-13.00	-43.69

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	V	-	-	-81.25	6.03	31.78	-63.48	-13.00	-50.48
5235.0	V	294	180	-75.79	8.86	40.07	-55.19	-13.00	-42.19
6980.0	V	-	-	-84.22	11.98	34.76	-60.50	-13.00	-47.50
8725.0	V	-	-	-85.12	13.21	35.09	-60.17	-13.00	-47.17
10470.0	V	-	-	-84.65	16.46	38.81	-56.44	-13.00	-43.44

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

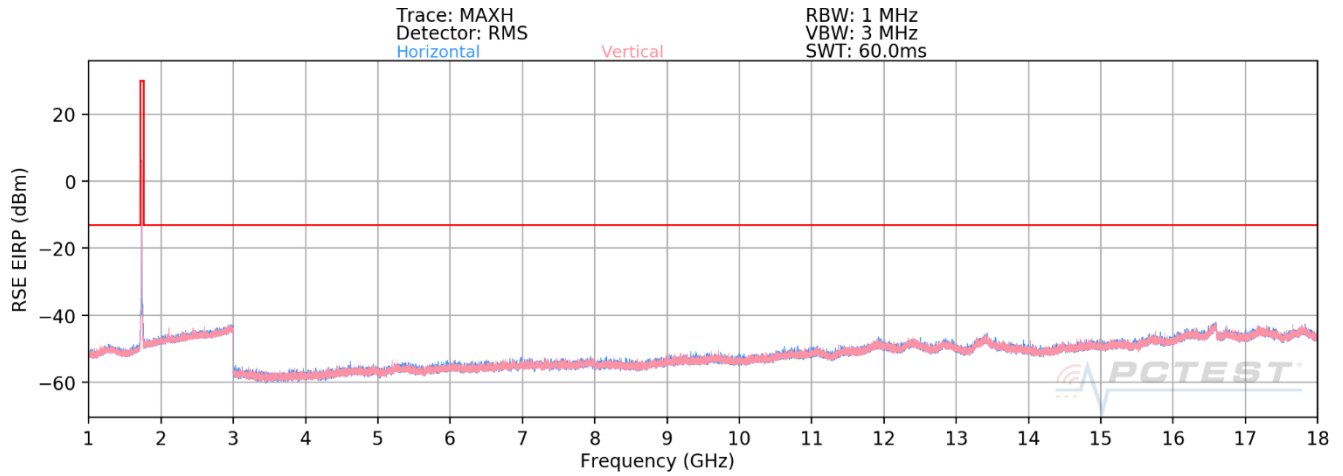
Bandwidth (MHz):	20
Frequency (MHz):	1770.0
RB / Offset:	1 / 50

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]
3540.00	V	-	-	-81.41	6.19	31.78	-63.48	-13.00	-50.48
5310.00	V	249	156	-76.38	8.78	39.40	-55.86	-13.00	-42.86
7080.00	V	-	-	-84.16	12.18	35.02	-60.23	-13.00	-47.23
8850.00	V	-	-	-84.45	13.26	35.81	-59.45	-13.00	-46.45
10620.00	V	-	-	-84.69	16.78	39.09	-56.16	-13.00	-43.16

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

FCC ID: BCG-A2477		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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WCDMA AWS



Plot 7-154. Antenna FCM Radiated Spurious Emission above 1GHz (WCDMA AWS)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 109 of 120

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	V	-	-	-81.72	5.65	30.93	-64.33	-13.00	-51.33
5137.2	V	326	13	-80.21	9.17	35.96	-59.30	-13.00	-46.30
6849.6	V	-	-	-83.94	11.52	34.58	-60.68	-13.00	-47.68
8562.0	V	-	-	-84.54	12.98	35.44	-59.82	-13.00	-46.82
10274.4	V	-	-	-84.45	15.17	37.72	-57.54	-13.00	-44.54

7-11. 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	V	-	-	-81.73	5.90	31.17	-64.08	-13.00	-51.08
5197.8	V	109	171	-80.31	9.33	36.02	-59.24	-13.00	-46.24
6930.4	V	-	-	-84.28	11.85	34.57	-60.68	-13.00	-47.68
8663.0	V	-	-	-84.79	13.29	35.50	-59.76	-13.00	-46.76
10395.6	V	-	-	-84.90	15.98	38.08	-57.18	-13.00	-44.18

Table 7-12. Antenna FCM Radiated Spurious Data (WCDMA AWS – Mid Channel)

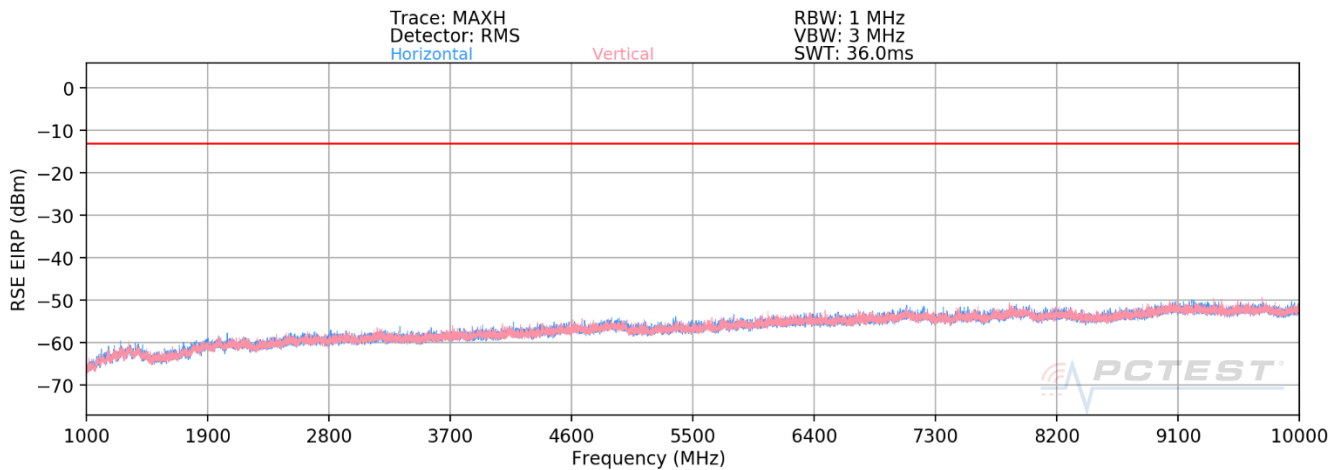
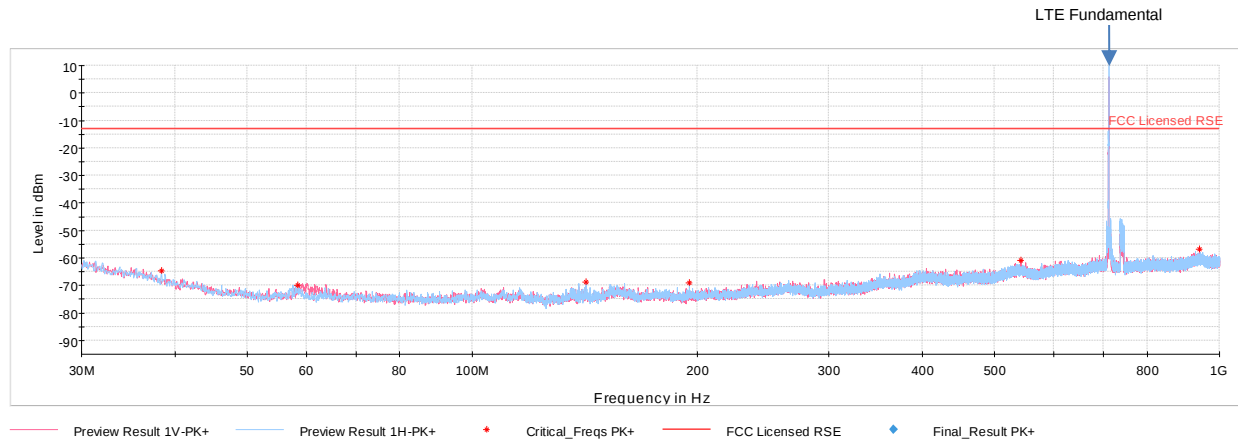
Mode:	WCDMA RMC								
Channel:	1513								
Frequency (MHz):	1752.6								
Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3505.2	V	-	-	-81.61	6.06	31.45	-63.80	-13.00	-50.80
5257.8	V	395	178	-80.94	8.99	35.05	-60.21	-13.00	-47.21
7010.4	V	-	-	-84.22	11.91	34.69	-60.56	-13.00	-47.56
8763.0	V	-	-	-84.33	13.08	35.75	-59.51	-13.00	-46.51
10515.6	V	-	-	-85.09	16.73	38.64	-56.62	-13.00	-43.62

Table 7-13. Antenna FCM Radiated Spurious Data (WCDMA AWS – High Channel)

FCC ID: BCG-A2477		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 110 of 120

7.7.2 Antenna FCM – Radiated Spurious Emission Measurement

LTE Band 12/17



FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 111 of 120

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	V	-	-	-78.30	-1.51	27.19	-68.07	-13.00	-55.07
2112.0	V	-	-	-79.99	2.11	29.12	-66.14	-13.00	-53.14
2816.0	V	-	-	-80.76	4.05	30.29	-64.97	-13.00	-51.97

Table 7-14. 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	V	231	319	-76.74	-1.49	28.77	-66.49	-13.00	-53.49
2122.5	V	-	-	-78.34	2.25	30.91	-64.34	-13.00	-51.34
2830.0	V	-	-	-80.69	4.20	30.51	-64.75	-13.00	-51.75
3537.5	V	-	-	-81.49	5.45	30.96	-64.30	-13.00	-51.30

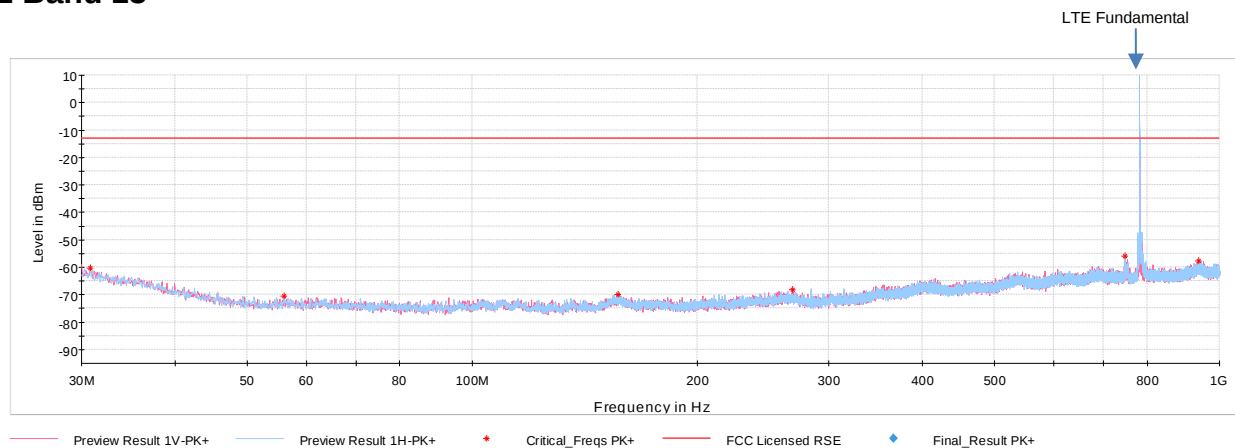
Table 7-15. Antenna BCM Radiated Spurious Data (LTE Band 12/17 – Mid Channel)

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	V	384	156	-78.48	-1.45	27.07	-68.19	-13.00	-55.19
2133.0	V	151	177	-78.28	2.35	31.07	-64.18	-13.00	-51.18
2844.0	V	-	-	-80.82	4.35	30.53	-64.73	-13.00	-51.73
3555.0	V	-	-	-81.51	5.46	30.95	-64.31	-13.00	-51.31
4266.0	V	-	-	-81.96	6.72	31.76	-63.50	-13.00	-50.50

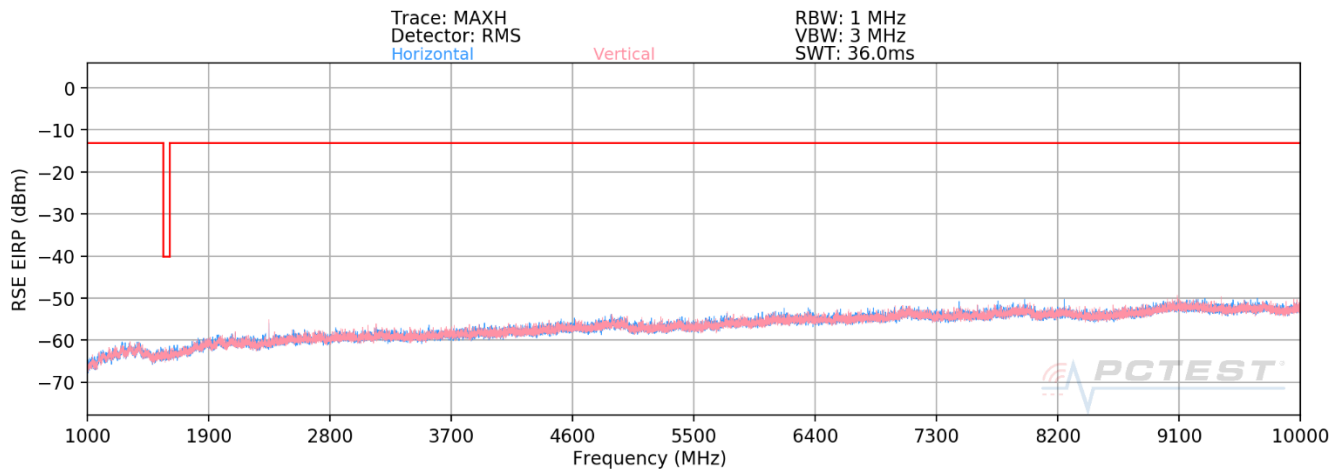
Table 7-16. Antenna BCM Radiated Spurious Data (LTE Band 12/17 – High Channel)

FCC ID: BCG-A2477	 Proud to be part of element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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LTE Band 13



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



Plot 7-158. Antenna BCM Radiated Spurious Emission above 1GHz (LTE Band 13)

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 113 of 120

Bandwidth (MHz):	5								
Frequency (MHz):	779.5								
RB / Offset:	1 / 12								
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	V	184	4	-78.59	-1.47	26.94	-68.32	-40.00	-28.32
2338.5	V	101	220	-77.13	2.46	32.33	-62.93	-13.00	-49.93
3118.0	V	-	-	-81.27	4.63	30.36	-64.89	-13.00	-51.89
3897.5	V	-	-	-81.80	6.24	31.44	-63.82	-13.00	-50.82
4677.0	V	-	-	-82.42	7.60	32.18	-63.08	-13.00	-50.08

Table 7-17. Antenna BCM Radiated Spurious Data (LTE Band 13 – Low Channel)

Bandwidth (MHz):	10								
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	V	101	150	-78.64	-1.48	26.88	-68.38	-40.00	-28.38
2346.0	V	159	18	-76.46	2.48	33.02	-62.24	-13.00	-49.24
3128.0	V	-	-	-81.08	4.81	30.73	-64.53	-13.00	-51.53
3910.0	V	-	-	-81.77	6.38	31.61	-63.65	-13.00	-50.65
4692.0	V	-	-	-82.23	7.62	32.39	-62.87	-13.00	-49.87

Table 7-18. 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	V	175	184	-78.86	-1.48	26.66	-68.60	-40.00	-28.60
2353.5	V	192	196	-78.14	2.48	31.34	-63.92	-13.00	-50.92
3138.0	V	-	-	-81.43	4.81	30.38	-64.88	-13.00	-51.88
3922.5	V	-	-	-81.90	6.38	31.48	-63.78	-13.00	-50.78
4707.0	V	-	-	-82.59	7.62	32.03	-63.23	-13.00	-50.23

Table 7-19. Antenna BCM Radiated Spurious Data (LTE Band 13 – High Channel)

FCC ID: BCG-A2477	 Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch		Page 114 of 120

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

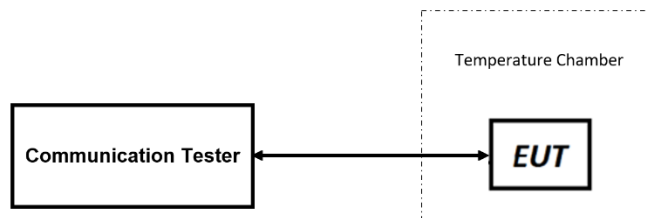


Figure 7-8. Test Instrument & Measurement Setup

Test Notes

None.

FCC ID: BCG-A2477	PCTEST Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Frequency Stability / Temperature Variation

LTE Band 66/4							
			Low Channel Frequency (Hz):		1,720,000,000		
			High Channel Frequency (Hz):		1,770,000,000		
			Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Low Freq. (Hz)	High Freq. (Hz)	Low Freq. Dev. (Hz)	High Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	1,720,000,002	1,770,000,002	1.83	0.63	0.0000001
		- 20	1,720,000,002	1,770,000,002	1.27	1.16	0.0000001
		- 10	1,720,000,001	1,770,000,001	0.43	0.54	0.0000000
		0	1,720,000,001	1,770,000,002	0.03	0.80	0.0000000
		+ 10	1,720,000,001	1,770,000,001	0.53	-0.23	0.0000000
		+ 20 (Ref)	1,720,000,001	1,770,000,001	0.00	0.00	0.0000000
		+ 30	1,720,000,000	1,770,000,002	-0.51	0.62	0.0000000
		+ 40	1,720,000,000	1,770,000,001	-0.21	0.41	0.0000000
		+ 50	1,720,000,000	1,770,000,003	-0.17	1.66	0.0000001
Battery Endpoint	3.40	+ 20	1,720,000,007	1,770,000,007	6.08	6.07	0.0000004

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

FCC ID: BCG-A2477			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch		Page 116 of 120

Frequency Stability / Temperature Variation

LTE Band 12/17							
			Low Channel Frequency (Hz):		704,000,000		
			High Channel Frequency (Hz):		711,000,000		
			Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Low Freq. (Hz)	High Freq. (Hz)	Low Freq. Dev. (Hz)	High Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	704,000,002	711,000,002	1.07	1.00	0.0000002
		- 20	704,000,001	711,000,001	0.51	0.30	0.0000001
		- 10	704,000,002	711,000,002	0.94	0.92	0.0000001
		0	704,000,002	711,000,001	1.17	0.74	0.0000002
		+ 10	704,000,002	711,000,001	1.10	0.23	0.0000002
		+ 20 (Ref)	704,000,001	711,000,001	0.00	0.00	0.0000000
		+ 30	704,000,002	711,000,002	1.09	1.26	0.0000002
		+ 40	704,000,001	711,000,002	0.60	0.93	0.0000001
		+ 50	704,000,002	711,000,002	1.30	1.63	0.0000001
Battery Endpoint	3.40	+ 20	704,000,001	711,000,002	0.49	0.93	0.0000001

Table 7-19. LTE Band 12/17 Frequency Stability Data

FCC ID: BCG-A2477			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Frequency Stability / Temperature Variation

LTE Band 13							
			Low Channel Frequency (Hz):		779,500,000		
			High Channel Frequency (Hz):		784,500,000		
			Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Low Freq. (Hz)	High Freq. (Hz)	Low Freq. Dev. (Hz)	High Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	779,500,003	784,500,003	1.77	2.19	0.0000003
		- 20	779,500,003	784,500,004	0.97	2.62	0.0000003
		- 10	779,500,003	784,500,003	1.26	1.76	0.0000002
		0	779,500,004	784,500,003	1.93	2.16	0.0000003
		+ 10	779,500,003	784,500,003	1.22	2.07	0.0000003
		+ 20 (Ref)	779,500,002	784,500,001	0.00	0.00	0.0000000
		+ 30	779,500,003	784,500,003	1.72	1.50	0.0000002
		+ 40	779,500,005	784,500,004	2.96	2.80	0.0000004
		+ 50	779,500,003	784,500,002	1.27	0.92	0.0000001
Battery Endpoint	3.40	+ 20	779,500,004	784,500,004	1.90	2.32	0.0000001

Table 7-20. LTE Band 13 Frequency Stability Data

FCC ID: BCG-A2477			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
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Frequency Stability / Temperature Variation

WCDMA AWS							
			Low Channel Frequency (Hz):		1,712,400,000		
			High Channel Frequency (Hz):		1,752,600,000		
			Ref. Voltage (VDC):		3.80		
Voltage (%)	Power (VDC)	Temp (°C)	Low Freq. (Hz)	High Freq. (Hz)	Low Freq. Dev. (Hz)	High Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	1,712,399,999	1,752,600,002	0.16	0.34	0.0000000
		- 20	1,712,400,003	1,752,600,003	4.76	1.63	0.0000003
		- 10	1,712,399,995	1,752,600,001	-3.36	-0.20	-0.0000002
		0	1,712,400,000	1,752,600,007	2.15	5.74	0.0000003
		+ 10	1,712,400,000	1,752,600,001	1.40	-0.40	0.0000001
		+ 20 (Ref)	1,712,399,998	1,752,600,002	0.00	0.00	0.0000000
		+ 30	1,712,399,993	1,752,599,994	-4.86	-8.11	-0.0000005
		+ 40	1,712,399,999	1,752,600,006	0.57	4.22	0.0000002
		+ 50	1,712,399,990	1,752,599,997	-8.73	-4.54	-0.0000005
Battery Endpoint	3.40	+ 20	1,712,400,000	1,752,600,003	1.56	0.96	0.0000001

Table 7-21. WCDMA AWS Frequency Stability Data

FCC ID: BCG-A2477			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch		Page 119 of 120

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Watch** **FCC ID: BCG-A2477** complies with all the requirements of Part 27 of the FCC rules.

FCC ID: BCG-A2477	 PCTEST® Proud to be part of element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Quality Manager
Test Report S/N: 1C2106070045-03-R1.BCG	Test Dates: 06-08-2021 – 08-18-2021	EUT Type: Watch	Page 120 of 120