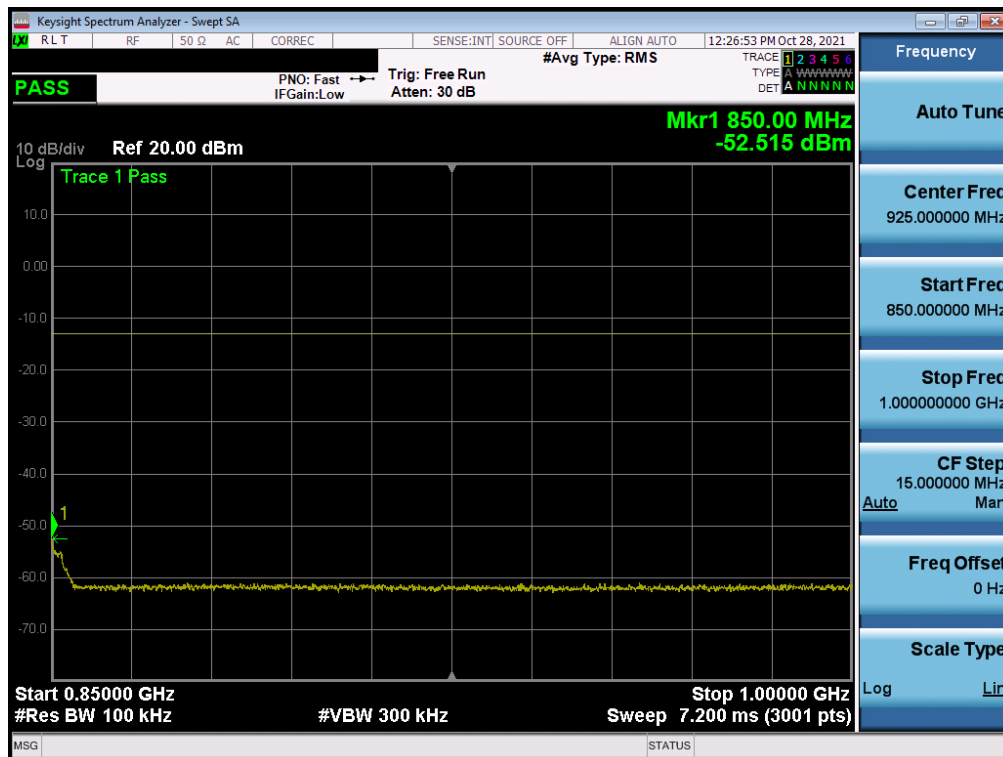
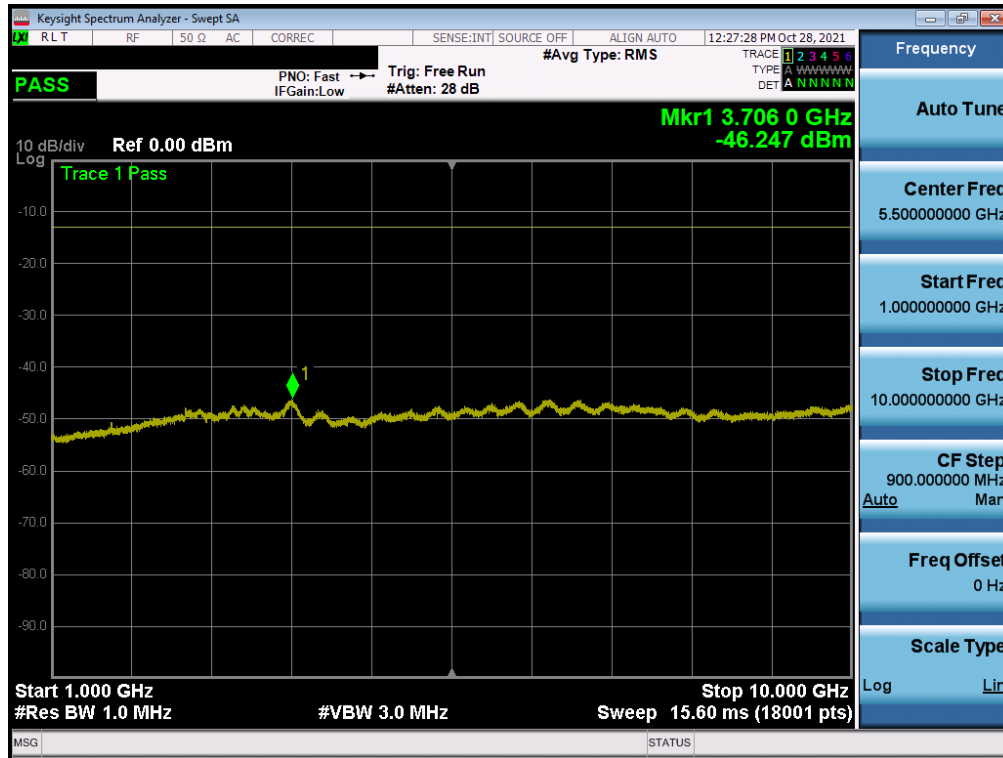


Plot 7-72. CSE (WCDMA Ch. 4233)



Plot 7-73. CSE (WCDMA Ch. 4233)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 53 of 98



Plot 7-74. CSE (WCDMA Ch. 4233)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 54 of 98

7.4 Band Edge Emissions at Antenna Terminal §2.1051, 22.917(a)

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section. All ports were tested and only the worst case data was reported.

The minimum permissible attenuation level of any spurious emission is $43 + 10 \log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. $RBW \geq 1\%$ of the emission bandwidth
4. $VBW \geq 3 \times RBW$
5. Detector = RMS
6. Number of sweep points $\geq 2 \times \text{Span}/RBW$
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

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

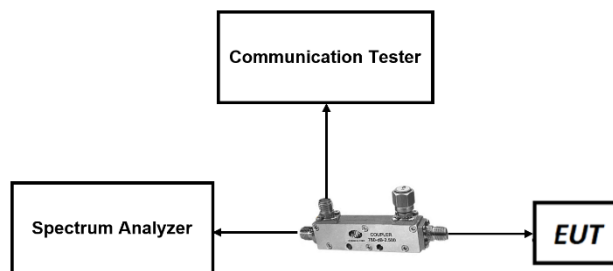



Figure 7-3. Test Instrument & Measurement Setup

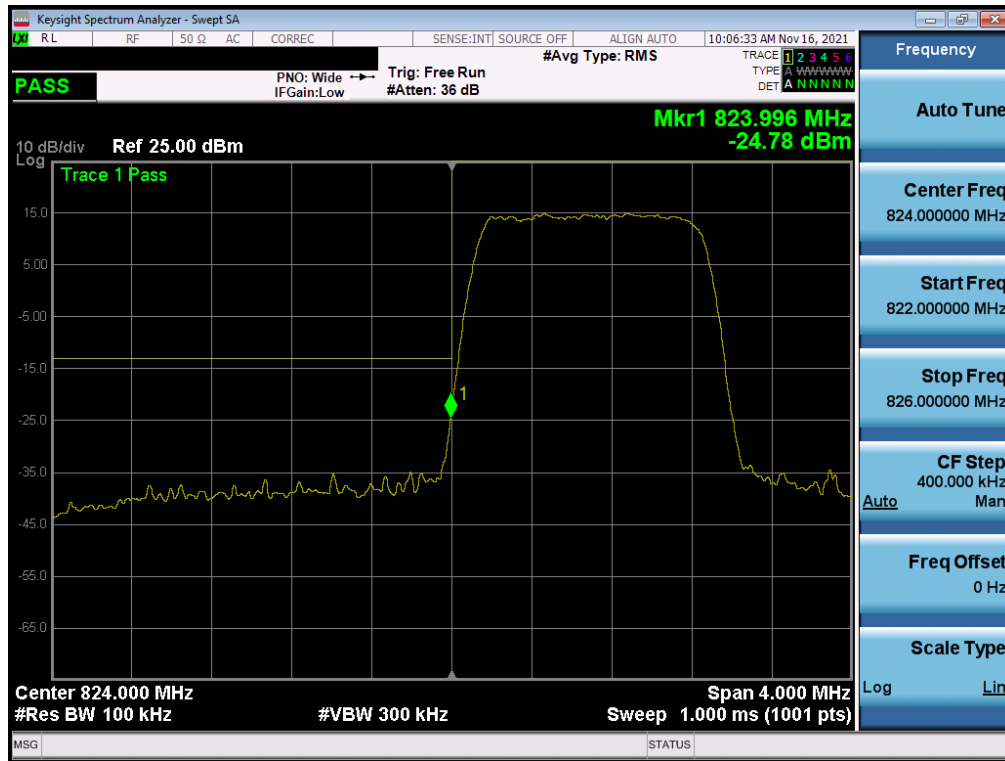
FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device		Page 55 of 98

Test Notes

1. Per 22.917(b), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
2. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

FCC ID: BCGA2589	 <small>Proud to be part of element</small>	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 56 of 98

LTE Band 26

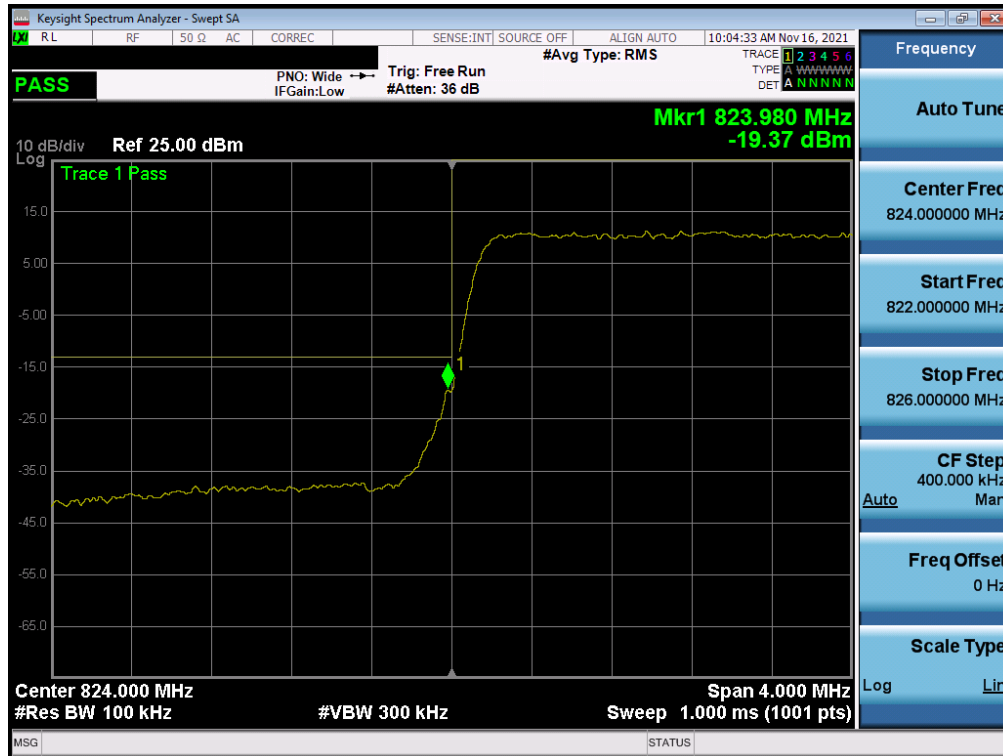


Plot 7-75. Lower BE Plot (LTE Band 26 – 1.4MHz QPSK – Full RB Configuration)

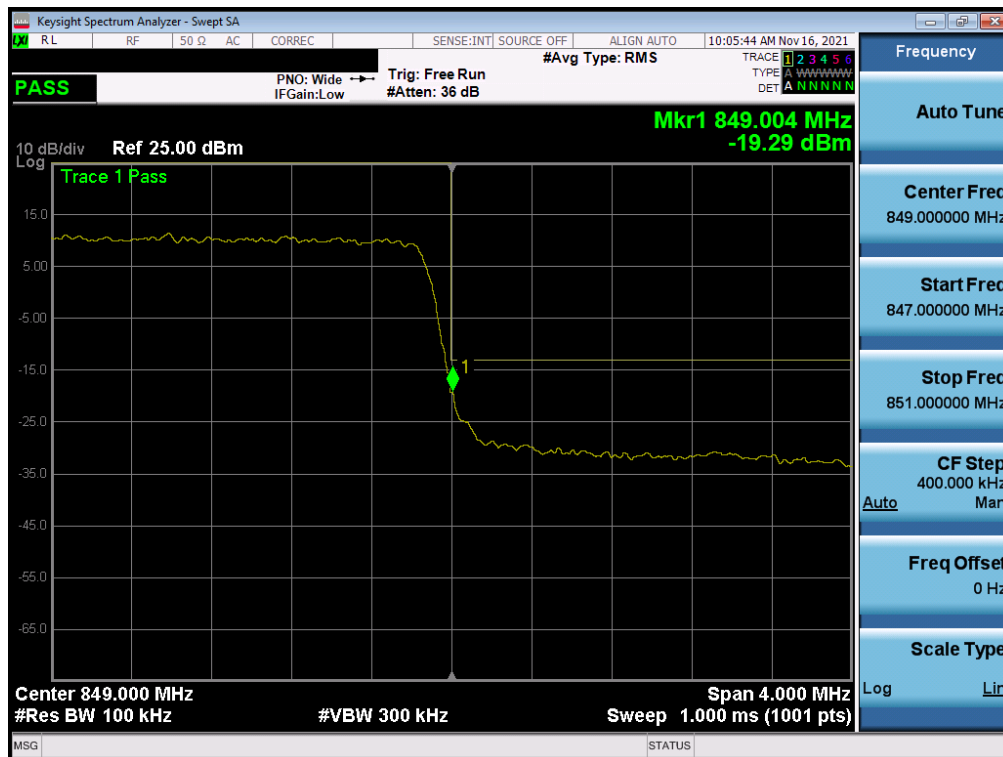


Plot 7-76. Upper BE Plot (LTE Band 26 – 1.4MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 57 of 98

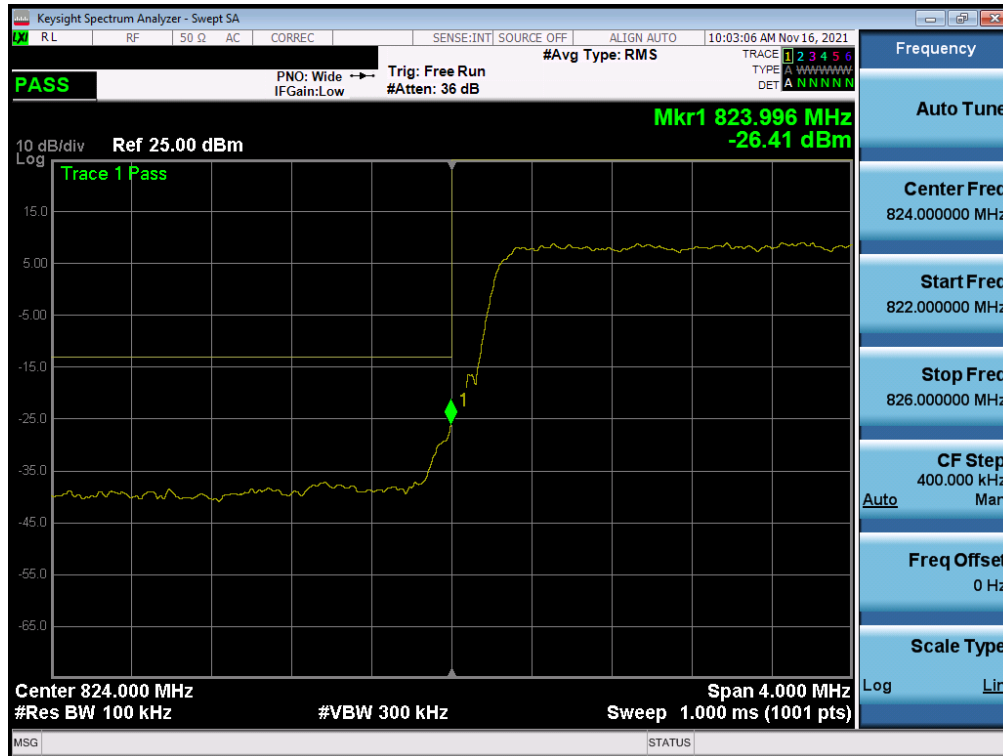


Plot 7-77. Lower BE Plot (LTE Band 26 - 3MHz QPSK – Full RB Configuration)

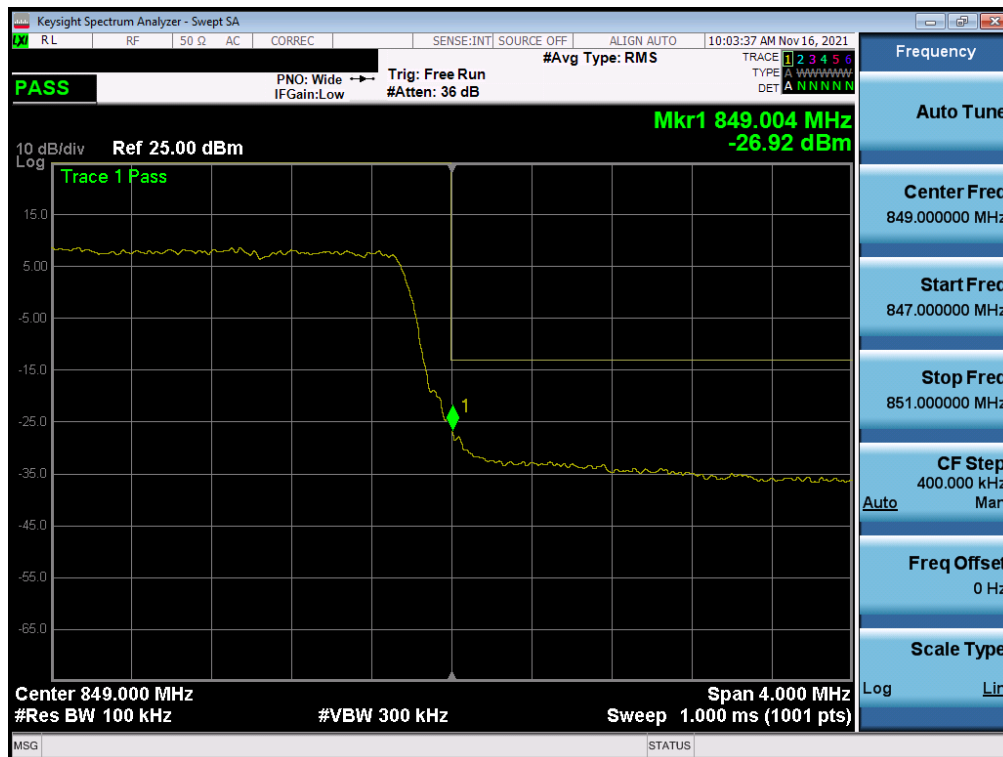


Plot 7-78. Upper BE Plot (LTE Band 26 - 3MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 58 of 98

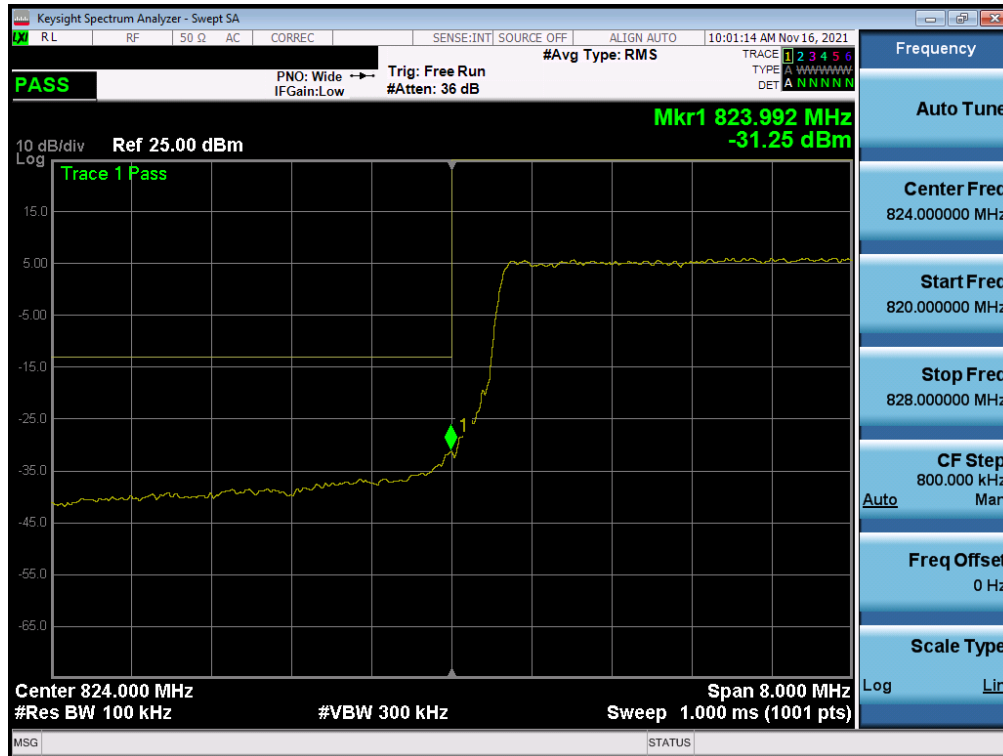


Plot 7-79. Lower BE Plot (LTE Band 26 - 5MHz QPSK – Full RB Configuration)



Plot 7-80. Upper BE Plot (LTE Band 26 - 5MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 59 of 98



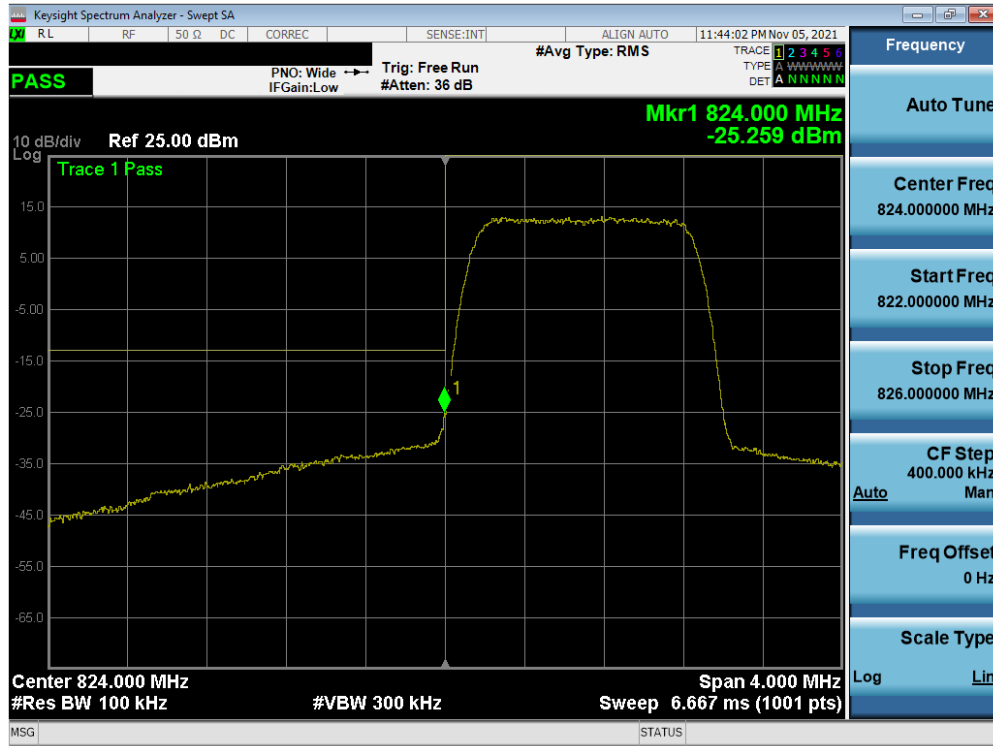
Plot 7-81. Lower BE Plot (LTE Band 26 - 10MHz QPSK – Full RB Configuration)



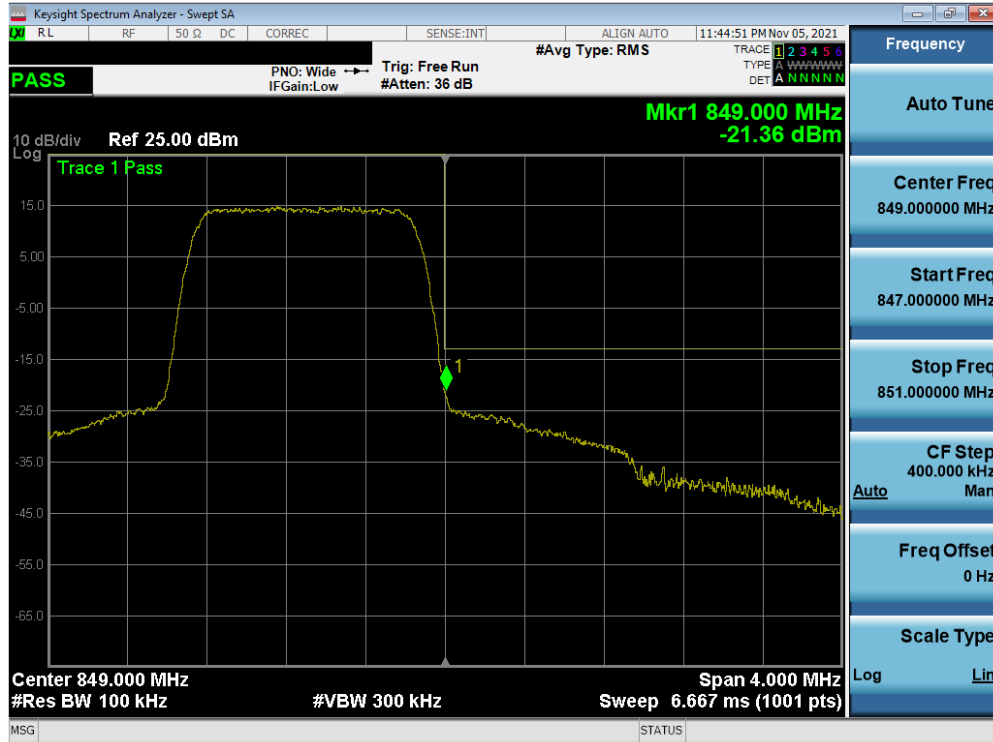
Plot 7-82. Upper BE Plot (LTE Band 26 - 10MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 60 of 98

LTE Band 5

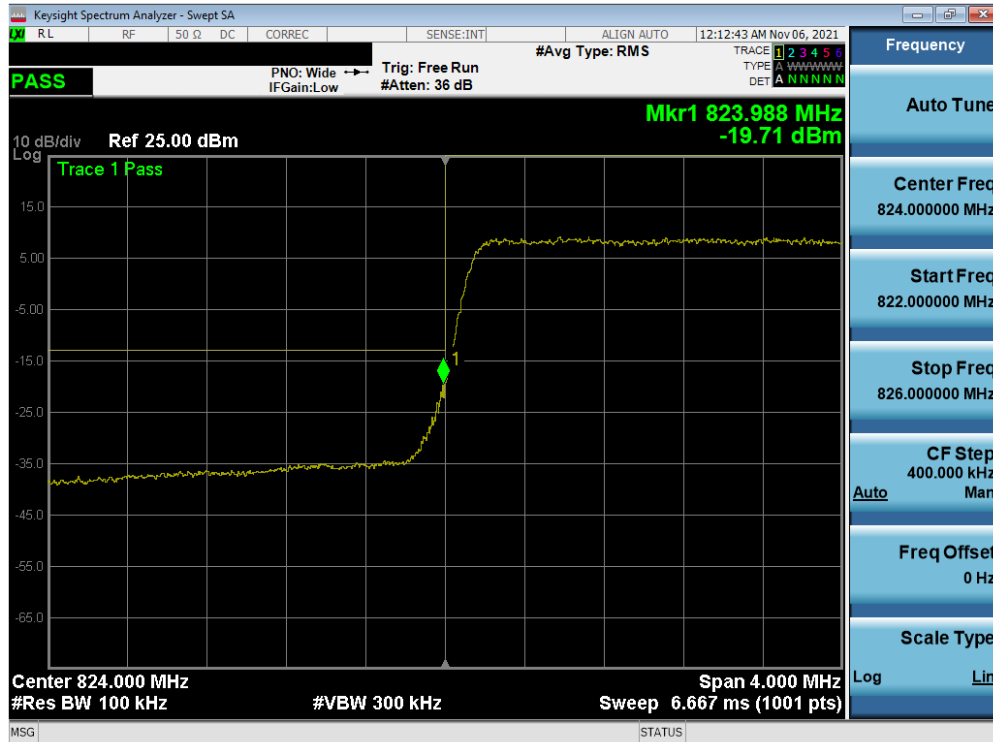


Plot 7-83. Lower BE Plot (LTE Band 5 – 1.4MHz QPSK – Full RB Configuration)

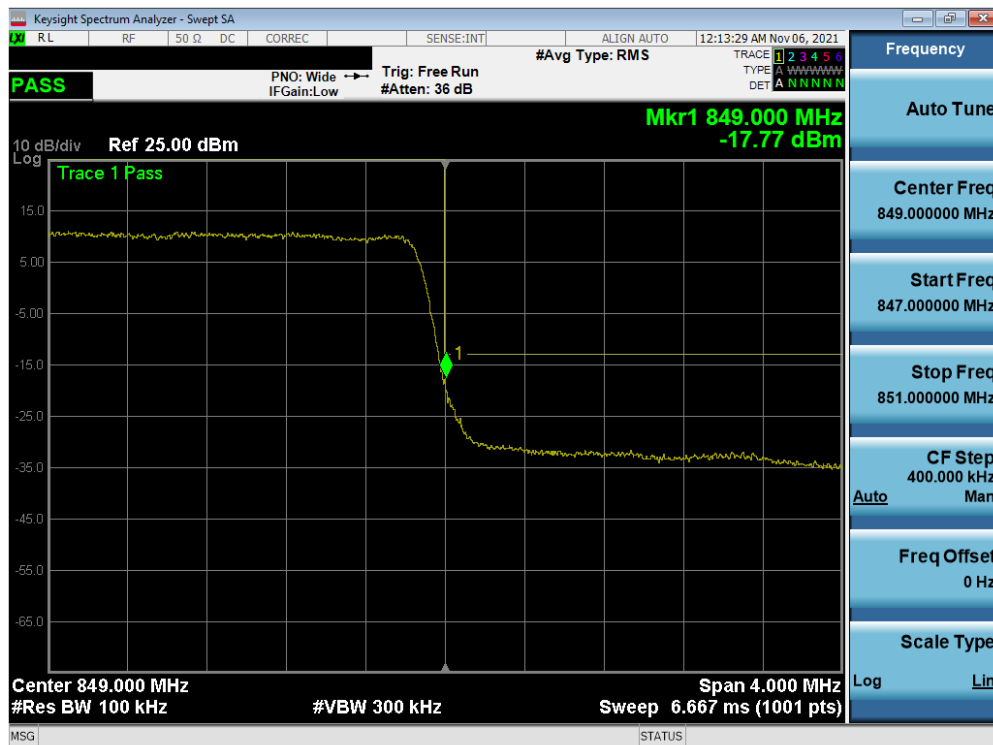


Plot 7-84. Upper BE Plot (LTE Band 5 – 1.4MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 61 of 98

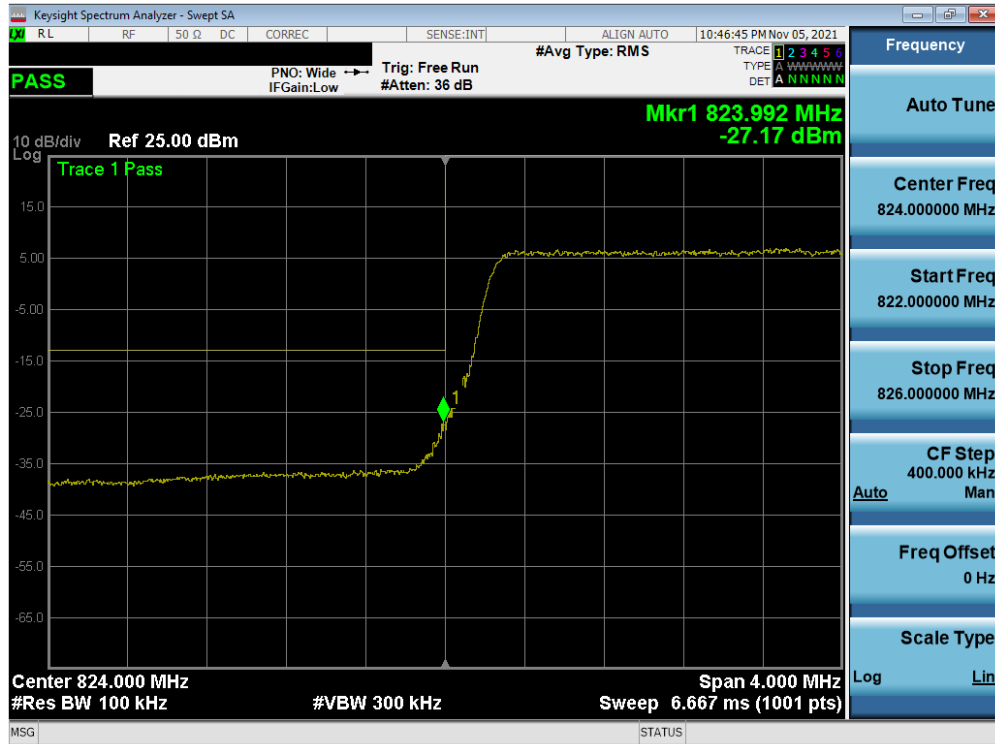


Plot 7-85. Lower BE Plot (LTE Band 5 - 3MHz QPSK – Full RB Configuration)

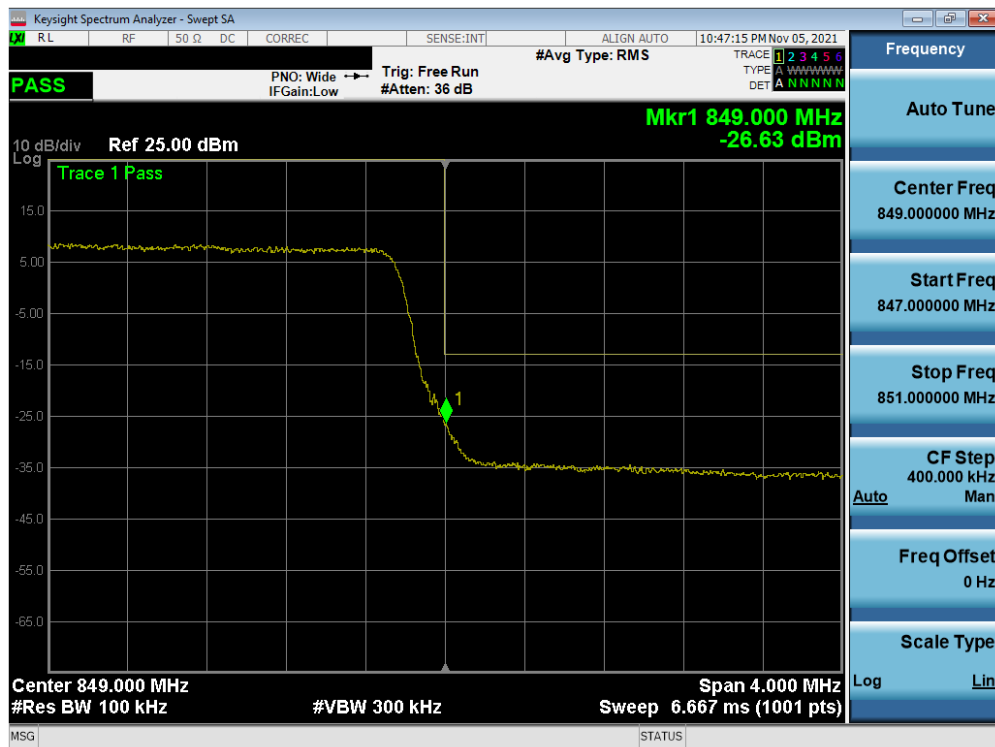


Plot 7-86. Upper BE Plot (LTE Band 5 - 3MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 62 of 98

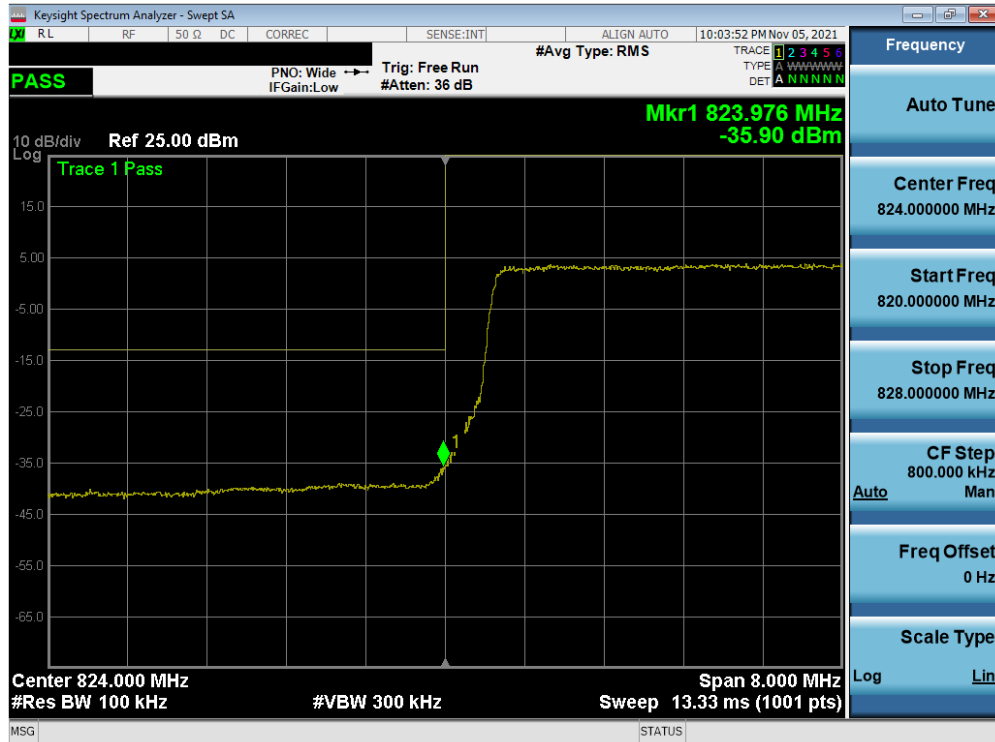


Plot 7-87. Lower BE Plot (LTE Band 5 - 5MHz QPSK – Full RB Configuration)

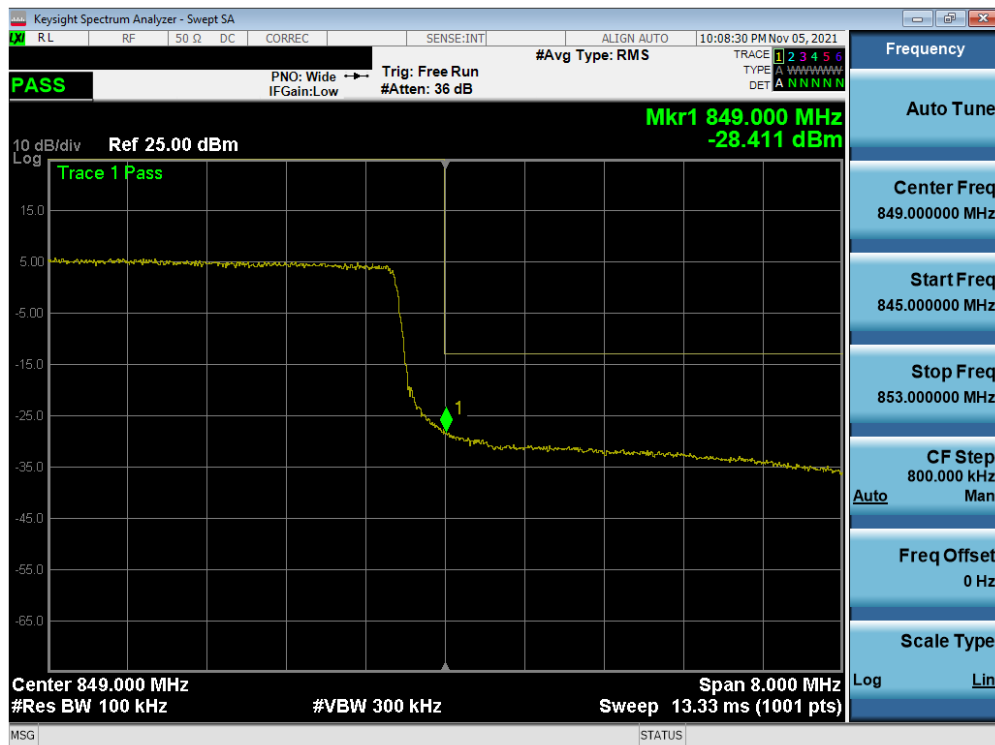


Plot 7-88. Upper BE Plot (LTE Band 5 - 5MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 63 of 98



Plot 7-89. Lower BE Plot (LTE Band 5 - 10MHz QPSK – Full RB Configuration)



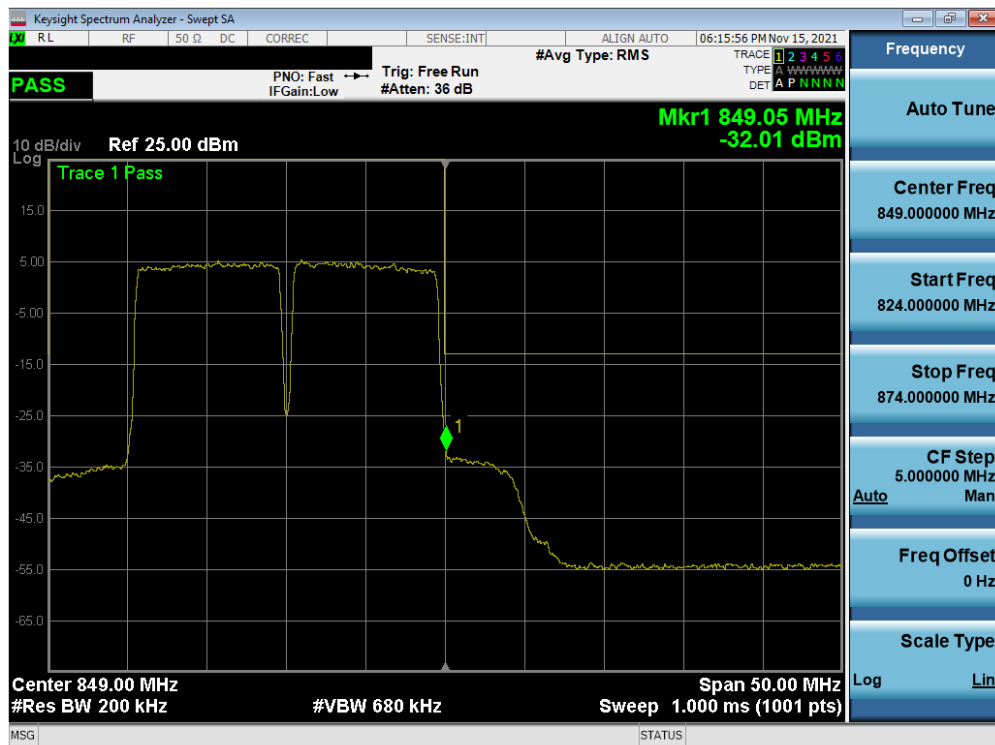
Plot 7-90. Upper BE Plot (LTE Band 5 - 10MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 64 of 98

ULCA - LTE Band 5



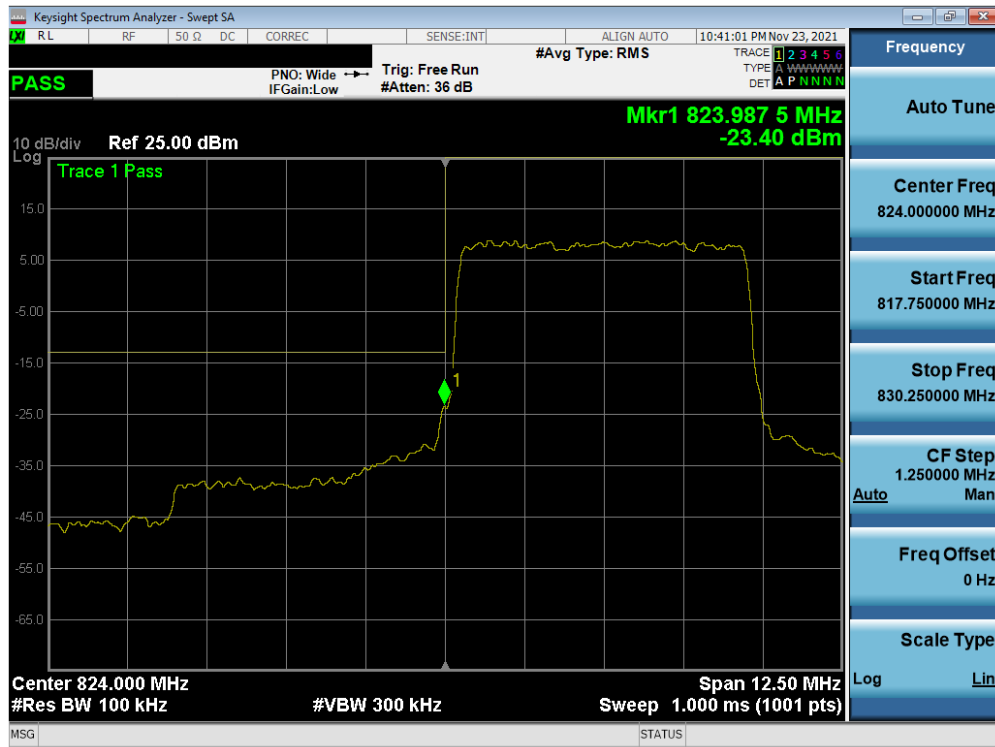
Plot 7-91. Lower BE Plot (ULCA – LTE Band 5 – (10 + 10)MHz QPSK – Full RB Configuration)



Plot 7-92. Upper BE Plot (ULCA – LTE Band 5 - (10 + 10)MHz QPSK – Full RB Configuration)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 65 of 98

NR Band n5

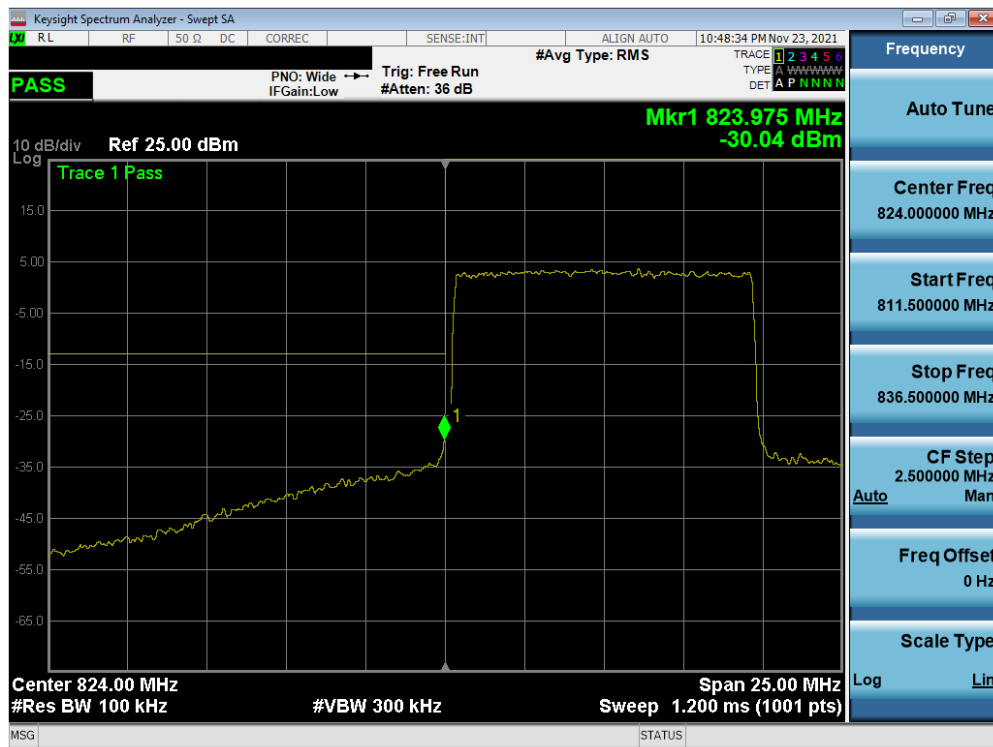


Plot 7-93. Lower BE Plot (NR Band n5 DFT-s-OFDM QPSK – 5.0MHz - Full RB)

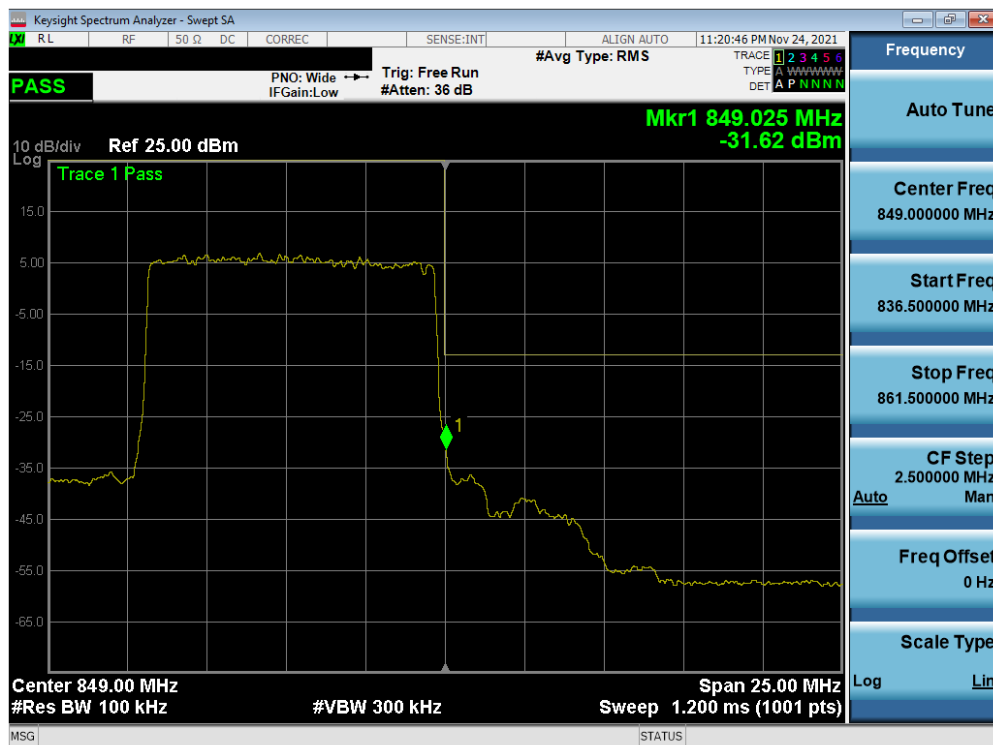


Plot 7-94. Upper BE Plot (NR Band n5 DFT-s-OFDM $\pi/2$ BPSK – 5.0MHz - Full RB)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 66 of 98

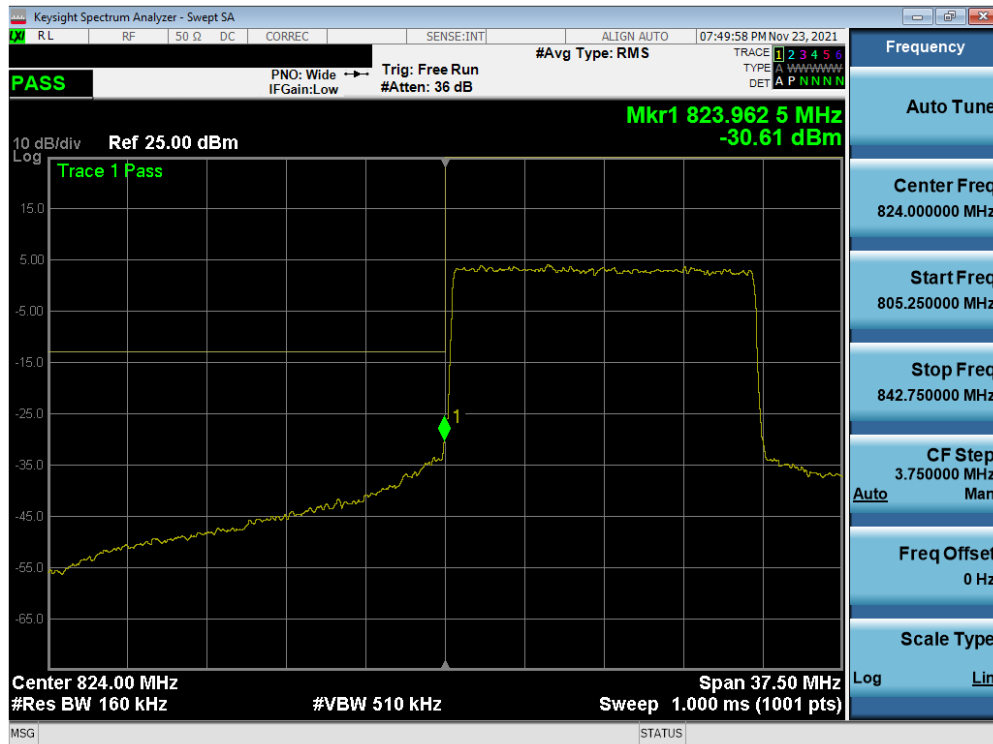


Plot 7-95. Lower BE Plot (NR Band n5 CP-OFDM QPSK – 10.0MHz - Full RB)



Plot 7-96. Upper BE Plot (NR Band n5 DFT-s-OFDM $\pi/2$ BPSK – 10.0MHz - Full RB)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 67 of 98

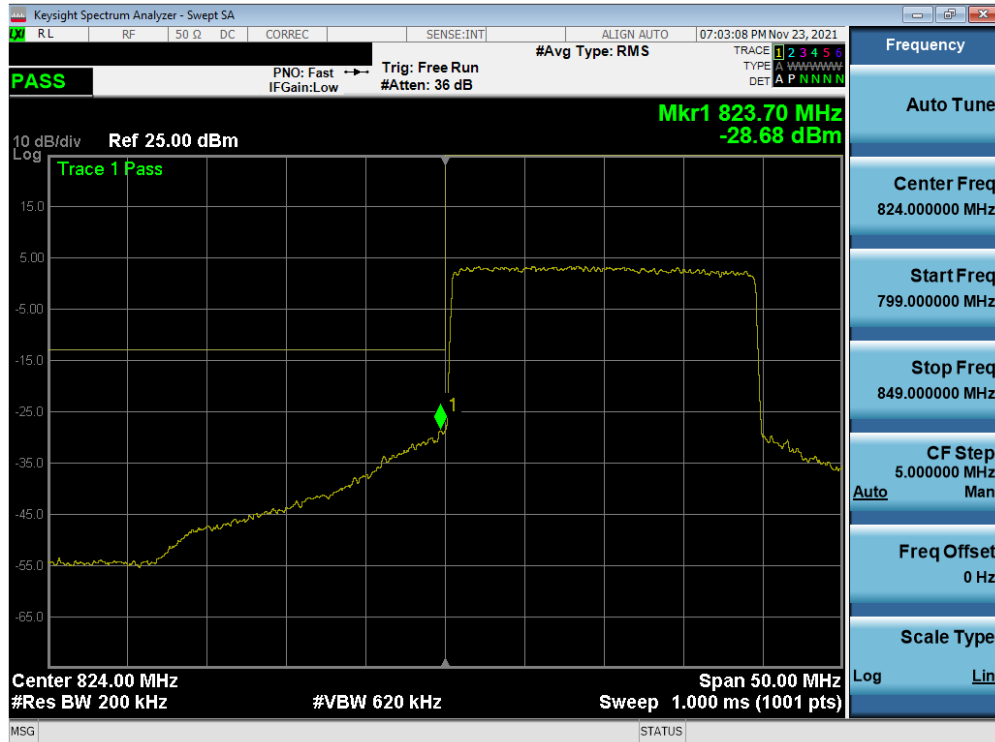


Plot 7-97. Lower BE Plot (NR Band n5 CP-OFDM QPSK – 15.0MHz - Full RB)



Plot 7-98. Upper BE Plot (NR Band n5 DFT-s-OFDM $\pi/2$ BPSK – 15.0MHz - Full RB)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 68 of 98



Plot 7-99. Lower BE Plot (NR Band n5 CP-OFDM QPSK – 20.0MHz - Full RB)



Plot 7-100. Upper BE Plot (NR Band n5 CP-OFDM QPSK – 20.0MHz - Full RB)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 69 of 98

WCDMA Cell



Plot 7-101. Lower BE Plot (WCDMA Cell – Ch. 4132)



Plot 7-102. Upper BE Plot (WCDMA Cell – Ch. 4233)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 70 of 98

7.5 Radiated Power (ERP/EIRP)

§22.913(a)(5)

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.

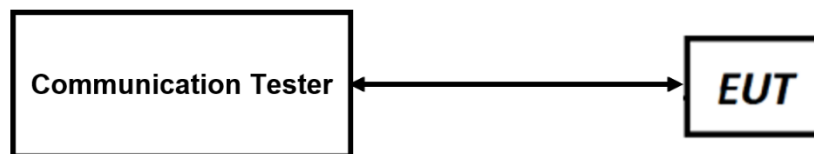




Figure 7-4. ERP/EIRP Measurement Setup

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 71 of 98

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. Uplink carrier aggregation for LTE B5 is only supported in this EUT while operating in Power Class 3.
5. Conducted power measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
6. The Ant. Gains (GT) are listed in dBi.

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 72 of 98

7.5.1 Antenna 4 – ERP/EIRP

LTE Band 26



Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	824.7	-1.40	1 / 12	25.27	21.72	0.149	38.45	-16.73	23.87	0.244	40.61	-16.74
		836.5	-1.40	1 / 12	25.14	21.59	0.144	38.45	-16.86	23.74	0.237	40.61	-16.87
		848.3	-1.40	1 / 12	25.44	21.89	0.155	38.45	-16.56	24.04	0.254	40.61	-16.57
	16-QAM	836.5	-1.40	1 / 12	24.62	21.07	0.128	38.45	-17.38	23.22	0.210	40.61	-17.39
	64-QAM	836.5	-1.40	1 / 12	23.90	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.11
3 MHz	QPSK	824.7	-1.40	1 / 24	20.46	16.91	0.049	38.45	-21.54	19.06	0.081	40.61	-21.55
		825.5	-1.40	1 / 24	25.34	21.79	0.151	38.45	-16.66	23.94	0.248	40.61	-16.67
		836.5	-1.40	1 / 0	25.16	21.61	0.145	38.45	-16.84	23.76	0.238	40.61	-16.85
	16-QAM	825.5	-1.40	1 / 12	24.60	21.05	0.127	38.45	-17.40	23.20	0.209	40.61	-17.41
	64-QAM	836.5	-1.40	1 / 12	23.94	20.39	0.109	38.45	-18.06	22.54	0.179	40.61	-18.07
5 MHz	QPSK	825.5	-1.40	1 / 12	20.53	16.98	0.050	38.45	-21.47	19.13	0.082	40.61	-21.48
		826.5	-1.40	1 / 12	25.25	21.70	0.148	38.45	-16.75	23.85	0.243	40.61	-16.76
		836.5	-1.40	1 / 12	25.26	21.71	0.148	38.45	-16.74	23.86	0.243	40.61	-16.75
	16-QAM	826.5	-1.40	1 / 12	24.83	21.28	0.134	38.45	-17.17	23.43	0.220	40.61	-17.18
	64-QAM	836.5	-1.40	1 / 12	23.91	20.36	0.109	38.45	-18.09	22.51	0.178	40.61	-18.10
10 MHz	QPSK	846.5	-1.40	1 / 12	20.80	17.25	0.053	38.45	-21.20	19.40	0.087	40.61	-21.21
		829.0	-1.40	1 / 0	25.35	21.80	0.151	38.45	-16.65	23.95	0.248	40.61	-16.66
		836.5	-1.40	1 / 0	25.18	21.63	0.146	38.45	-16.82	23.78	0.239	40.61	-16.83
	16-QAM	829.0	-1.40	1 / 0	24.62	21.07	0.128	38.45	-17.38	23.22	0.210	40.61	-17.39
	64-QAM	836.5	-1.40	1 / 0	23.96	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05
	256-QAM	829.0	-1.40	1 / 24	20.63	17.08	0.051	38.45	-21.37	19.23	0.084	40.61	-21.38

Table 7-2. Antenna 4 ERP/EIRP Data (LTE Band 26)

LTE Band 5

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	829.0	-1.40	1 / 5	25.30	21.75	0.150	38.45	-16.70	23.90	0.245	40.61	-16.71
		836.5	-1.40	1 / 5	25.22	21.67	0.147	38.45	-16.78	23.82	0.241	40.61	-16.78
		844.0	-1.40	1 / 0	25.25	21.70	0.148	38.45	-16.76	23.85	0.242	40.61	-16.76
	16-QAM	829.0	-1.40	1 / 5	24.59	21.04	0.127	38.45	-17.41	23.19	0.209	40.61	-17.42
	64-QAM	844.0	-1.40	1 / 0	23.70	20.15	0.103	38.45	-18.31	22.30	0.170	40.61	-18.31
3 MHz	QPSK	829.0	-1.40	1 / 5	20.44	16.89	0.049	38.45	-21.56	19.04	0.080	40.61	-21.57
		829.0	-1.40	1 / 0	25.30	21.75	0.150	38.45	-16.70	23.90	0.246	40.61	-16.70
		836.5	-1.40	1 / 7	25.47	21.92	0.156	38.45	-16.53	24.07	0.255	40.61	-16.54
	16-QAM	844.0	-1.40	1 / 0	25.27	21.72	0.149	38.45	-16.73	23.87	0.244	40.61	-16.73
	64-QAM	829.0	-1.40	1 / 7	24.71	21.16	0.131	38.45	-17.29	23.31	0.214	40.61	-17.30
5 MHz	QPSK	829.0	-1.40	1 / 0	23.72	20.17	0.104	38.45	-18.28	22.32	0.171	40.61	-18.28
		836.5	-1.40	1 / 7	20.63	17.08	0.051	38.45	-21.37	19.23	0.084	40.61	-21.37
		829.0	-1.40	1 / 24	25.26	21.71	0.148	38.45	-16.74	23.86	0.243	40.61	-16.75
	16-QAM	836.5	-1.40	1 / 0	25.44	21.89	0.155	38.45	-16.56	24.04	0.254	40.61	-16.56
	64-QAM	844.0	-1.40	1 / 0	25.29	21.74	0.149	38.45	-16.71	23.89	0.245	40.61	-16.72
10 MHz	QPSK	844.0	-1.40	1 / 0	24.69	21.14	0.130	38.45	-17.31	23.29	0.213	40.61	-17.32
		836.5	-1.40	1 / 12	23.61	20.06	0.101	38.45	-18.39	22.21	0.166	40.61	-18.40
		829.0	-1.40	1 / 24	20.48	16.93	0.049	38.45	-21.52	19.08	0.081	40.61	-21.52
	16-QAM	829.0	-1.40	1 / 25	25.50	21.95	0.157	38.45	-16.50	24.10	0.257	40.61	-16.51
	64-QAM	836.5	-1.40	1 / 0	25.28	21.73	0.149	38.45	-16.72	23.88	0.244	40.61	-16.72
10 MHz	QPSK	844.0	-1.40	1 / 25	25.21	21.66	0.147	38.45	-16.79	23.81	0.241	40.61	-16.79
		829.0	-1.40	1 / 25	24.75	21.20	0.132	38.45	-17.25	23.35	0.216	40.61	-17.26
		829.0	-1.40	1 / 0	23.63	20.08	0.102	38.45	-18.37	22.23	0.167	40.61	-18.38
	256-QAM	836.5	-1.40	1 / 49	20.66	17.11	0.051	38.45	-21.34	19.26	0.084	40.61	-21.35



Table 7-3. Antenna 4 ERP/EIRP Data (LTE Band 5)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C211150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 73 of 98

NR Band n5

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	829.0	-1.40	1 / 23	25.09	21.54	0.142	38.45	-16.92	23.69	0.234	40.61	-16.92
		836.5	-1.40	1 / 1	24.98	21.43	0.139	38.45	-17.02	23.58	0.228	40.61	-17.02
		844.0	-1.40	1 / 1	24.93	21.38	0.137	38.45	-17.08	23.53	0.225	40.61	-17.08
	QPSK	829.0	-1.40	1 / 1	25.43	21.88	0.154	38.45	-16.58	24.03	0.253	40.61	-16.58
		836.5	-1.40	1 / 1	24.93	21.38	0.137	38.45	-17.08	23.53	0.225	40.61	-17.08
		844.0	-1.40	1 / 1	24.73	21.18	0.131	38.45	-17.27	23.33	0.215	40.61	-17.28
	16-QAM	829.0	-1.40	1 / 12	24.23	20.68	0.117	38.45	-17.77	22.83	0.192	40.61	-17.78
	64-QAM	829.0	-1.40	1 / 1	22.70	19.15	0.082	38.45	-19.30	21.30	0.135	40.61	-19.31
	256-QAM	829.0	-1.40	1 / 1	20.96	17.41	0.055	38.45	-21.04	19.56	0.090	40.61	-21.05
10 MHz	π/2 BPSK	829.0	-1.40	1 / 25	25.15	21.60	0.145	38.45	-16.85	23.75	0.237	40.61	-16.85
		836.5	-1.40	1 / 1	25.05	21.50	0.141	38.45	-16.95	23.65	0.232	40.61	-16.96
		844.0	-1.40	1 / 48	24.76	21.21	0.132	38.45	-17.24	23.36	0.217	40.61	-17.24
	QPSK	829.0	-1.40	1 / 1	25.35	21.80	0.151	38.45	-16.65	23.95	0.248	40.61	-16.66
		836.5	-1.40	1 / 25	25.00	21.45	0.140	38.45	-17.00	23.60	0.229	40.61	-17.01
		844.0	-1.40	1 / 1	24.96	21.41	0.138	38.45	-17.04	23.56	0.227	40.61	-17.04
	16-QAM	829.0	-1.40	1 / 48	24.30	20.75	0.119	38.45	-17.70	22.90	0.195	40.61	-17.71
	64-QAM	844.0	-1.40	1 / 25	22.83	19.28	0.085	38.45	-19.17	21.43	0.139	40.61	-19.17
	256-QAM	829.0	-1.40	1 / 25	20.68	17.13	0.052	38.45	-21.32	19.28	0.085	40.61	-21.33
15 MHz	π/2 BPSK	831.5	-1.40	1 / 1	25.18	21.63	0.145	38.45	-16.82	23.78	0.239	40.61	-16.83
		836.5	-1.40	1 / 73	25.03	21.48	0.141	38.45	-16.97	23.63	0.231	40.61	-16.98
		841.5	-1.40	1 / 1	25.07	21.52	0.142	38.45	-16.93	23.67	0.233	40.61	-16.94
	QPSK	831.5	-1.40	1 / 1	25.00	21.45	0.140	38.45	-17.00	23.60	0.229	40.61	-17.01
		836.5	-1.40	1 / 75	25.22	21.67	0.147	38.45	-16.78	23.82	0.241	40.61	-16.79
		841.5	-1.40	1 / 1	24.98	21.43	0.139	38.45	-17.03	23.58	0.228	40.61	-17.03
	16-QAM	841.5	-1.40	1 / 1	24.17	20.62	0.115	38.45	-17.83	22.77	0.189	40.61	-17.84
	64-QAM	836.5	-1.40	1 / 73	22.82	19.27	0.084	38.45	-19.18	21.42	0.139	40.61	-19.19
	256-QAM	836.5	-1.40	1 / 73	20.76	17.21	0.053	38.45	-21.24	19.36	0.086	40.61	-21.24
20 MHz	π/2 BPSK	834.0	-1.40	1 / 50	24.81	21.26	0.134	38.45	-17.19	23.41	0.219	40.61	-17.19
		836.5	-1.40	1 / 50	25.21	21.66	0.147	38.45	-16.79	23.81	0.241	40.61	-16.79
		839.0	-1.40	1 / 1	25.37	21.82	0.152	38.45	-16.63	23.97	0.250	40.61	-16.63
	QPSK	834.0	-1.40	1 / 50	24.91	21.36	0.137	38.45	-17.09	23.51	0.224	40.61	-17.10
		836.5	-1.40	1 / 98	24.97	21.42	0.139	38.45	-17.03	23.57	0.228	40.61	-17.03
		839.0	-1.40	1 / 98	24.98	21.43	0.139	38.45	-17.02	23.58	0.228	40.61	-17.03
	16-QAM	839.0	-1.40	1 / 50	24.33	20.78	0.120	38.45	-17.67	22.93	0.196	40.61	-17.68
	64-QAM	836.5	-1.40	1 / 1	22.88	19.33	0.086	38.45	-19.12	21.48	0.140	40.61	-19.13
	256-QAM	839.0	-1.40	1 / 50	20.71	17.16	0.052	38.45	-21.29	19.31	0.085	40.61	-21.29

Table 7-4. Antenna 4 ERP/EIRP Data (NR Band n5)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 74 of 98

ULCA - LTE Band 5


Power State	Band	Bandwidth (PCC + SCC)	PCC					SCC					ULCA Tx. Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
			Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset	Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset										
Max	LTE B5	10MHz + 10MHz	QPSK	20450	829.0	1	49	QPSK	20549	838.9	1	0	25.29	-1.40	21.73	0.149	38.45	-16.72	23.88	0.244	40.61	-16.73
				20475	831.5	1	49		20574	841.4	1	0	25.37	-1.40	21.82	0.152	38.45	-16.63	23.97	0.249	40.61	-16.64
				20500	844.0	1	0		20501	834.1	1	49	25.16	-1.40	21.61	0.145	38.45	-16.84	23.76	0.238	40.61	-16.85
				20475	831.5	50	0		20574	841.4	50	0	23.35	-1.40	19.80	0.095	38.45	-18.65	21.95	0.157	40.61	-18.66
				16-QAM	20475	831.5	50		0	16-QAM	20574	841.4	50	0	22.37	-1.40	18.82	0.076	38.45	-19.63	20.97	0.125
			64-QAM	20475	831.5	50	0	64-QAM	20574	841.4	50	0	22.41	-1.40	18.86	0.077	38.45	-19.59	21.01	0.126	40.61	-19.60
			256-QAM	20475	831.5	50	0	256-QAM	20574	841.4	50	0	20.42	-1.40	16.87	0.049	38.45	-21.58	19.02	0.080	40.61	-21.59

Table 7-5. Antenna 4 ERP/EIRP Data (ULCA LTE Band 5)

WCDMA Cell

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
826.40	WCDMA850	25.39	-1.40	21.84	0.153	38.45	-16.61	23.99	0.251	40.61	-16.62
836.60	WCDMA850	25.40	-1.40	21.85	0.153	38.45	-16.60	24.00	0.251	40.61	-16.61
846.60	WCDMA850	25.38	-1.40	21.83	0.152	38.45	-16.62	23.98	0.250	40.61	-16.63

Table 7-6. Antenna 4 ERP/EIRP Data (WCDMA Cell)

FCC ID: BCGA2589	 <p>PART 22 MEASUREMENT REPORT</p>		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 75 of 98

Antenna 3b – ERP/EIRP LTE Band 26



Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	824.7	-2.20	1 / 12	24.89	20.54	0.113	38.45	-17.91	22.69	0.186	40.61	-17.92
		836.5	-2.20	1 / 0	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05
		848.3	-2.20	1 / 0	24.86	20.51	0.112	38.45	-17.94	22.66	0.185	40.61	-17.95
	16-QAM	836.5	-2.20	1 / 12	23.89	19.54	0.090	38.45	-18.91	21.69	0.148	40.61	-18.92
	64-QAM	836.5	-2.20	1 / 12	23.09	18.74	0.075	38.45	-19.71	20.89	0.123	40.61	-19.72
3 MHz	QPSK	824.7	-2.20	1 / 12	20.06	15.71	0.037	38.45	-22.74	17.86	0.061	40.61	-22.75
		825.5	-2.20	1 / 0	24.72	20.37	0.109	38.45	-18.08	22.52	0.179	40.61	-18.09
		836.5	-2.20	1 / 12	24.83	20.48	0.112	38.45	-17.97	22.63	0.183	40.61	-17.98
	16-QAM	847.5	-2.20	1 / 0	24.83	20.48	0.112	38.45	-17.97	22.63	0.183	40.61	-17.98
		825.5	-2.20	1 / 24	23.86	19.51	0.089	38.45	-18.94	21.66	0.147	40.61	-18.95
5 MHz	QPSK	836.5	-2.20	1 / 12	23.17	18.82	0.076	38.45	-19.63	20.97	0.125	40.61	-19.64
		825.5	-2.20	1 / 12	20.12	15.77	0.038	38.45	-22.68	17.92	0.062	40.61	-22.69
		826.5	-2.20	1 / 12	24.86	20.51	0.112	38.45	-17.94	22.66	0.185	40.61	-17.95
	16-QAM	836.5	-2.20	1 / 0	24.86	20.51	0.112	38.45	-17.94	22.66	0.185	40.61	-17.95
		846.5	-2.20	1 / 0	24.93	20.58	0.114	38.45	-17.87	22.73	0.187	40.61	-17.88
10 MHz	QPSK	826.5	-2.20	1 / 12	24.14	19.79	0.095	38.45	-18.66	21.94	0.156	40.61	-18.67
		836.5	-2.20	1 / 12	23.21	18.86	0.077	38.45	-19.59	21.01	0.126	40.61	-19.60
		846.5	-2.20	1 / 12	20.30	15.95	0.039	38.45	-22.50	18.10	0.065	40.61	-22.51
	16-QAM	829.0	-2.20	1 / 12	24.82	20.47	0.111	38.45	-17.98	22.62	0.183	40.61	-17.99
		836.5	-2.20	1 / 12	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05

Table 7-7. Antenna 3b ERP/EIRP Data (LTE Band 26)

LTE Band 5

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1.4 MHz	QPSK	829.0	-2.20	1 / 0	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05
		836.5	-2.20	1 / 5	24.79	20.44	0.111	38.45	-18.01	22.59	0.182	40.61	-18.02
		844.0	-2.20	1 / 0	24.71	20.36	0.109	38.45	-18.09	22.51	0.178	40.61	-18.10
	16-QAM	844.0	-2.20	1 / 3	23.68	19.33	0.086	38.45	-19.12	21.48	0.141	40.61	-19.13
	64-QAM	836.5	-2.20	1 / 3	22.80	18.45	0.070	38.45	-20.00	20.60	0.115	40.61	-20.00
3 MHz	QPSK	829.0	-2.20	1 / 3	19.51	15.16	0.033	38.45	-23.29	17.31	0.054	40.61	-23.29
		829.0	-2.20	1 / 14	24.73	20.38	0.109	38.45	-18.07	22.53	0.179	40.61	-18.08
		836.5	-2.20	1 / 14	24.71	20.36	0.109	38.45	-18.09	22.51	0.178	40.61	-18.10
	16-QAM	844.0	-2.20	1 / 7	24.74	20.39	0.109	38.45	-18.06	22.54	0.179	40.61	-18.07
		836.5	-2.20	1 / 0	23.76	19.41	0.087	38.45	-19.04	21.56	0.143	40.61	-19.04
5 MHz	QPSK	829.0	-2.20	1 / 0	22.83	18.48	0.070	38.45	-19.97	20.63	0.116	40.61	-19.98
		844.0	-2.20	1 / 7	19.94	15.59	0.036	38.45	-22.86	17.74	0.059	40.61	-22.87
		829.0	-2.20	1 / 24	24.74	20.39	0.109	38.45	-18.06	22.54	0.179	40.61	-18.07
	16-QAM	836.5	-2.20	1 / 12	24.80	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
		844.0	-2.20	1 / 24	24.80	20.45	0.111	38.45	-18.00	22.60	0.182	40.61	-18.01
10 MHz	QPSK	836.5	-2.20	1 / 12	23.84	19.49	0.089	38.45	-18.96	21.64	0.146	40.61	-18.97
		836.5	-2.20	1 / 0	22.70	18.35	0.068	38.45	-20.10	20.50	0.112	40.61	-20.10
		836.5	-2.20	1 / 24	19.63	15.28	0.034	38.45	-23.17	17.43	0.055	40.61	-23.17
	16-QAM	829.0	-2.20	1 / 0	24.90	20.55	0.114	38.45	-17.90	22.70	0.186	40.61	-17.91
		836.5	-2.20	1 / 0	24.94	20.59	0.115	38.45	-17.86	22.74	0.188	40.61	-17.87


Table 7-8. Antenna 3b ERP/EIRP Data (LTE Band 5)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 76 of 98

NR Band n5

Bandwidth	Mod.	Frequency [MHz]	Ant. Gain [dBi]	RB Size/Offset	Conducted Power [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
5 MHz	π/2 BPSK	829.0	-2.20	1 / 1	24.77	20.42	0.110	38.45	-18.04	22.57	0.181	40.61	-18.04
		836.5	-2.20	1 / 23	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.04
		844.0	-2.20	1 / 1	24.47	20.12	0.103	38.45	-18.33	22.27	0.169	40.61	-18.34
	QPSK	829.0	-2.20	1 / 1	25.03	20.68	0.117	38.45	-17.77	22.83	0.192	40.61	-17.78
		836.5	-2.20	1 / 1	24.58	20.23	0.105	38.45	-18.22	22.38	0.173	40.61	-18.23
		844.0	-2.20	1 / 1	24.69	20.34	0.108	38.45	-18.11	22.49	0.177	40.61	-18.12
	16-QAM	836.5	-2.20	1 / 1	23.51	19.16	0.082	38.45	-19.29	21.31	0.135	40.61	-19.30
	64-QAM	829.0	-2.20	1 / 1	22.20	17.85	0.061	38.45	-20.60	20.00	0.100	40.61	-20.61
10 MHz	π/2 BPSK	829.0	-2.20	1 / 1	24.70	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.11
		836.5	-2.20	1 / 25	24.70	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.10
		844.0	-2.20	1 / 1	24.94	20.59	0.115	38.45	-17.86	22.74	0.188	40.61	-17.86
	QPSK	829.0	-2.20	1 / 48	24.51	20.16	0.104	38.45	-18.29	22.31	0.170	40.61	-18.30
		836.5	-2.20	1 / 25	24.54	20.19	0.104	38.45	-18.26	22.34	0.171	40.61	-18.27
		844.0	-2.20	1 / 1	24.65	20.30	0.107	38.45	-18.15	22.45	0.176	40.61	-18.15
	16-QAM	836.5	-2.20	1 / 25	23.46	19.11	0.081	38.45	-19.34	21.26	0.134	40.61	-19.35
	64-QAM	844.0	-2.20	1 / 25	22.51	18.16	0.065	38.45	-20.29	20.31	0.107	40.61	-20.30
15 MHz	π/2 BPSK	831.5	-2.20	1 / 75	24.92	20.57	0.114	38.45	-17.88	22.72	0.187	40.61	-17.89
		836.5	-2.20	1 / 75	24.70	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.10
		841.5	-2.20	1 / 1	24.77	20.42	0.110	38.45	-18.03	22.57	0.181	40.61	-18.03
	QPSK	831.5	-2.20	1 / 73	24.78	20.43	0.110	38.45	-18.02	22.68	0.181	40.61	-18.03
		836.5	-2.20	1 / 75	24.64	20.29	0.107	38.45	-18.16	22.44	0.175	40.61	-18.17
		841.5	-2.20	1 / 1	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05
	16-QAM	841.5	-2.20	1 / 75	23.64	19.29	0.085	38.45	-19.16	21.44	0.139	40.61	-19.16
	64-QAM	841.5	-2.20	1 / 75	22.17	17.82	0.061	38.45	-20.63	19.97	0.099	40.61	-20.64
20 MHz	π/2 BPSK	831.5	-2.20	1 / 73	20.25	15.90	0.039	38.45	-22.55	18.05	0.064	40.61	-22.56
		834.0	-2.20	1 / 1	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.05
		836.5	-2.20	1 / 50	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.04
	QPSK	839.0	-2.20	1 / 1	24.76	20.41	0.110	38.45	-18.04	22.56	0.180	40.61	-18.04
		834.0	-2.20	1 / 1	24.85	20.50	0.112	38.45	-17.95	22.65	0.184	40.61	-17.96
		836.5	-2.20	1 / 98	24.79	20.44	0.111	38.45	-18.01	22.59	0.181	40.61	-18.02
	16-QAM	839.0	-2.20	1 / 1	24.57	20.22	0.105	38.45	-18.23	22.37	0.173	40.61	-18.23
		839.0	-2.20	1 / 1	23.63	19.28	0.085	38.45	-19.17	21.43	0.139	40.61	-19.18
		834.0	-2.20	1 / 1	22.45	18.10	0.065	38.45	-20.35	20.25	0.106	40.61	-20.36
20 MHz	256-QAM	839.0	-2.20	1 / 50	20.39	16.04	0.040	38.45	-22.42	18.19	0.066	40.61	-22.42

Table 7-9. Antenna 3b ERP/EIRP Data (NR Band n5)

FCC ID: BCGA2589	 PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device		Page 77 of 98

ULCA - LTE Band 5


Power State	Band	Bandwidth (PCC + SCC)	PCC					SCC					ULCA Tx. Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
			Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset	Modulation	UL Channel	UL Frequency	UL # RB	UL RB Offset										
Max	LTE B5	10MHz + 10MHz	QPSK	20450	829.0	1	49	QPSK	20549	838.9	1	0	24.78	-2.20	20.43	0.110	38.45	-18.02	22.58	0.181	40.61	-18.03
				20475	831.5	1	49		20574	841.4	1	0	24.70	-2.20	20.35	0.108	38.45	-18.10	22.50	0.178	40.61	-18.11
				20500	844.0	1	0		20501	834.1	1	49	24.74	-2.20	20.39	0.109	38.45	-18.06	22.54	0.179	40.61	-18.07
				20450	829	50	0		20549	838.9	50	0	22.80	-2.20	18.45	0.070	38.45	-20.00	20.80	0.115	40.61	-20.01
			16-QAM	20450	829	50	0	16-QAM	20549	838.9	50	0	21.91	-2.20	17.56	0.057	38.45	-20.88	19.71	0.094	40.61	-20.90
				20450	829	50	0		20549	838.9	50	0	21.81	-2.20	17.46	0.056	38.45	-20.99	19.61	0.091	40.61	-21.00
			256-QAM	20450	829	50	0	256-QAM	20549	838.9	50	0	19.92	-2.20	15.57	0.036	38.45	-22.88	17.72	0.059	40.61	-22.89
				20450	829	50	0		20549	838.9	50	0	19.82	-2.20	15.47	0.035	38.45	-22.98	17.62	0.058	40.61	-22.99
			64-QAM	20450	829	50	0	64-QAM	20549	838.9	50	0	21.01	-2.20	17.07	0.049	38.45	-21.77	19.04	0.076	40.61	-21.78
				20450	829	50	0		20549	838.9	50	0	20.91	-2.20	16.97	0.048	38.45	-21.87	18.94	0.075	40.61	-21.88

Table 7-10. Antenna 3b ERP/EIRP Data (ULCA LTE Band 5)

WCDMA Cell

Frequency [MHz]	Mode	Conducted Power [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
826.40	WCDMA850	24.91	-2.20	20.56	0.114	38.45	-17.89	22.71	0.187	40.61	-17.90
836.60	WCDMA850	24.87	-2.20	20.52	0.113	38.45	-17.93	22.67	0.185	40.61	-17.94
846.60	WCDMA850	24.90	-2.20	20.55	0.114	38.45	-17.90	22.70	0.186	40.61	-17.91

Table 7-11. Antenna 3b ERP/EIRP Data (WCDMA Cell)

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 78 of 98

7.6 Radiated Spurious Emissions

§2.1053, 22.917(a)

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 tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

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: BCGA2589	 PCTEST Proud to be part of  element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 79 of 98

Test Setup

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

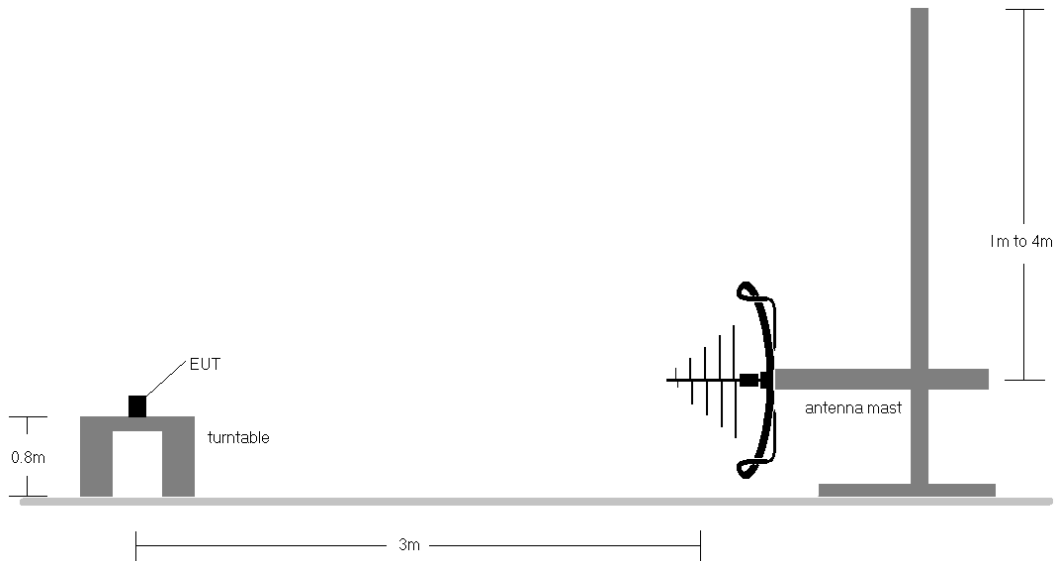


Figure 7-5. Test Instrument & Measurement Setup < 1GHz

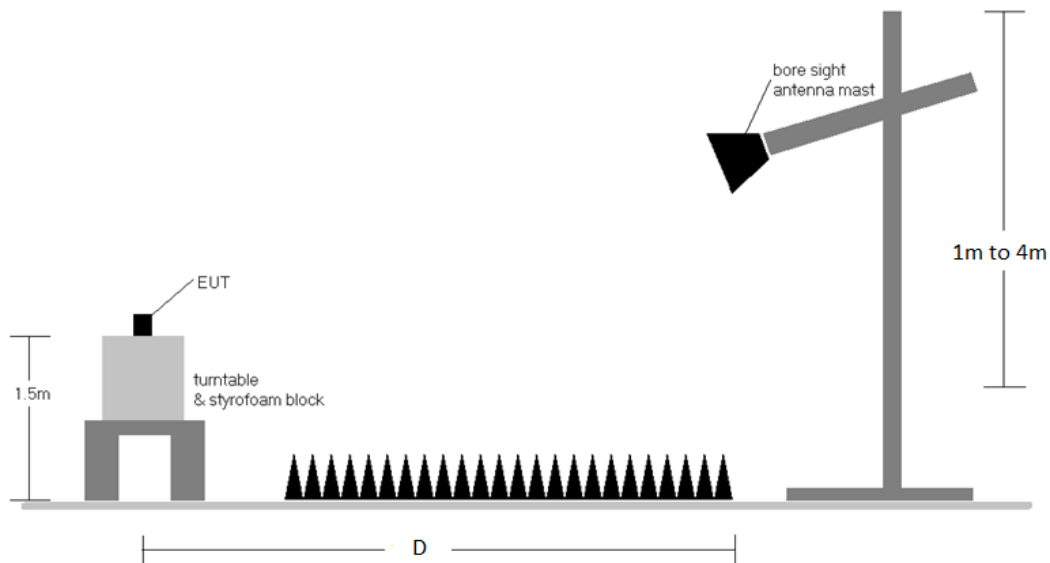



Figure 7-6. Test Instrument & Measurement Setup >1 GHz

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 80 of 98

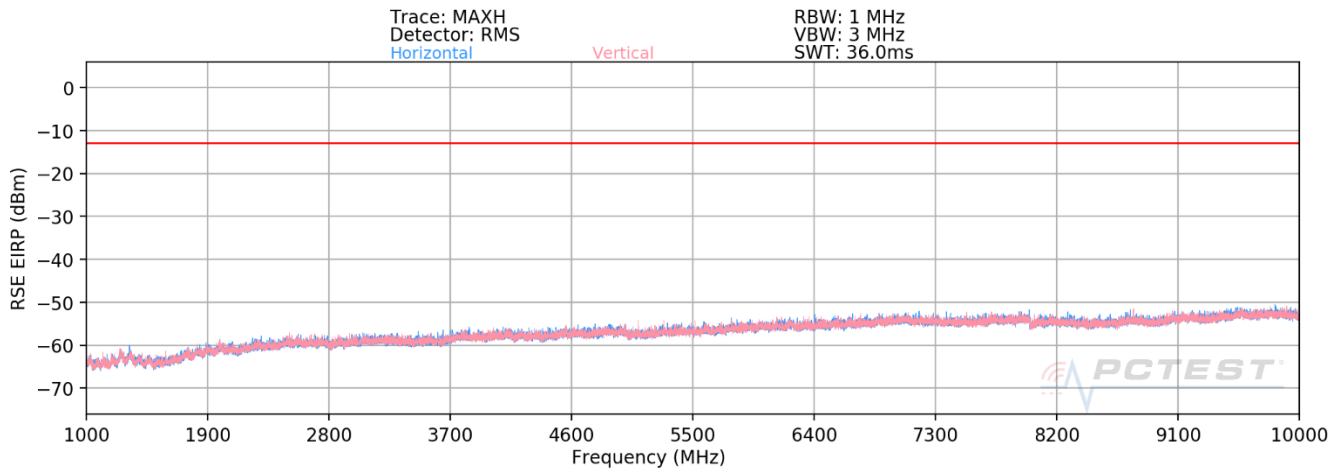
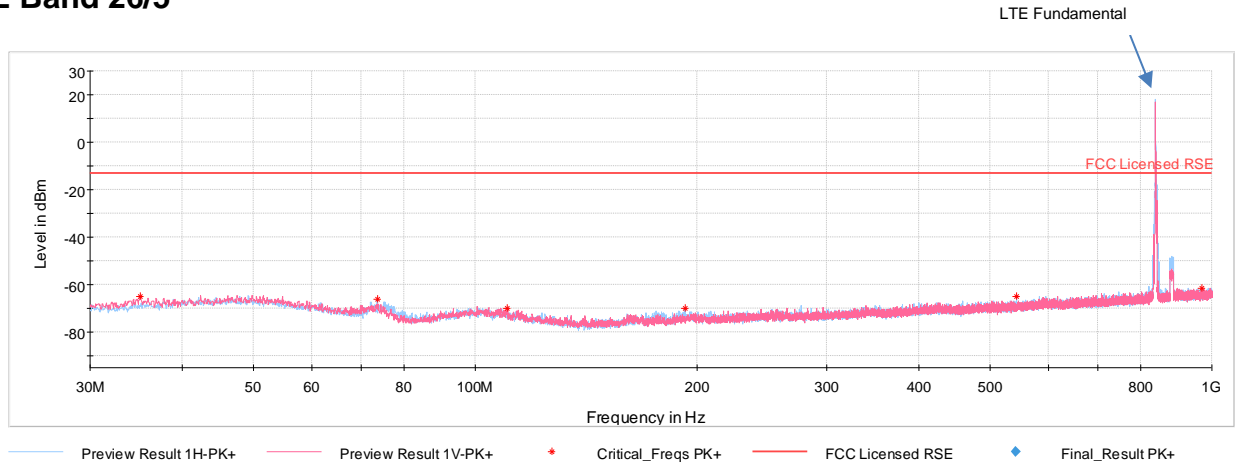
Test Notes

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. 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".
3. 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.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
6. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance.
7. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
8. ULCA spurious emissions measurements were evaluated for the two contiguous channels using various combinations of RB size, RB offset, modulation, and channel bandwidth. Channel bandwidth data is shown in the tables below based only on the channel bandwidths that were supported in this device.
9. For NR operation, all subcarrier spacings (SCS) and transmission schemes (e.g. CP-OFDM and DFT-s-OFDM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.
10. Spurious emission in EN-DC Operating mode with Sub 6GHz NR carrier as well as an LTE carrier (anchor) has been checked and was found to not to be the worst case.
11. Uplink carrier aggregation inter-band emission was investigated and found to not be the worst case.

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device
		Page 81 of 98

7.6.1 Antenna 4 – Radiated Spurious Emission Measurements

LTE Band 26/5



FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 82 of 98

Bandwidth (MHz):	10
Frequency (MHz):	829.0
RB / Offset:	1 / 37

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]
1658.0	H	-	-	-77.85	-2.63	26.52	-68.74	-13.00	-55.74
2487.0	H	-	-	-78.98	1.99	30.01	-65.25	-13.00	-52.25
3316.0	H	-	-	-79.88	3.39	30.51	-64.75	-13.00	-51.75

Table 7-12. Antenna 4 Radiated Spurious Data (LTE Band 26/5 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 37



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]
1673.0	H	102	294	-76.98	-2.50	27.52	-67.74	-13.00	-54.74
2509.5	H	-	-	-78.70	2.35	30.65	-64.61	-13.00	-51.61
3346.0	H	-	-	-79.89	3.12	30.23	-65.02	-13.00	-52.02
4182.5	H	-	-	-81.04	5.41	31.37	-63.89	-13.00	-50.89

Table 7-13. Antenna 4 Radiated Spurious Data (LTE Band 26/5 – Mid Channel)

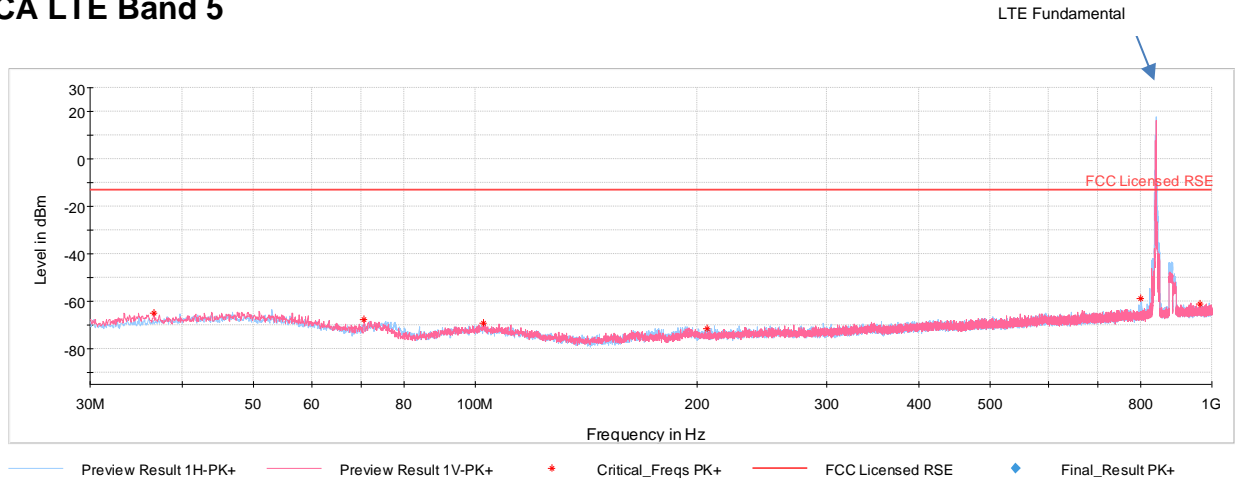
Bandwidth (MHz):	10
Frequency (MHz):	844.0
RB / Offset:	1 / 37

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]
1688.0	H	131	314	-77.61	-2.44	26.95	-68.30	-13.00	-55.30
2532.0	H	-	-	-79.07	2.34	30.27	-64.99	-13.00	-51.99
3376.0	H	-	-	-79.82	3.26	30.44	-64.82	-13.00	-51.82
4220.0	H	-	-	-80.23	5.17	31.94	-63.32	-13.00	-50.32

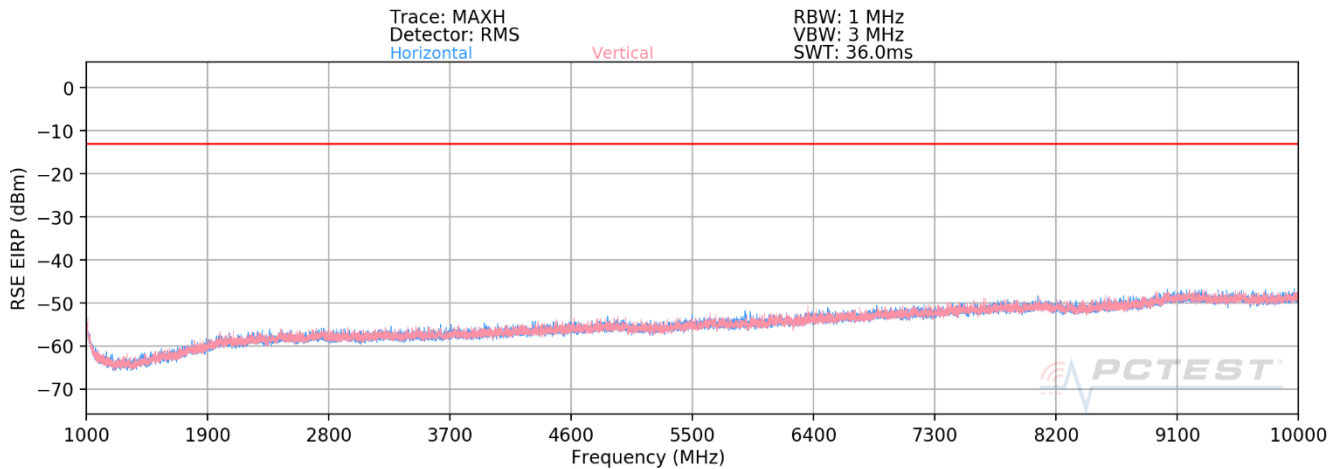
Table 7-14. Antenna 4 Radiated Spurious Data (LTE Band 26/5 – High Channel)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 83 of 98

ULCA LTE Band 5



Plot 7-105. Antenna 4 Radiated Spurious Plot below 1GHz (ULCA LTE Band 5)



Plot 7-106. Antenna 4 Radiated Spurious Plot above 1GHz (ULCA LTE Band 5)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 84 of 98

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	829.0
PCC RB / Offset:	1 / 49
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	838.9
SCC RB / Offset:	1 / 0



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]
1658.0	H	239	133	-76.42	-1.87	28.71	-66.55	-13.00	-53.55
2487.0	H	-	-	-77.98	3.01	32.03	-63.23	-13.00	-50.23
3316.0	H	-	-	-77.90	3.62	32.72	-62.53	-13.00	-49.53
4145.0	H	-	-	-78.99	5.01	33.02	-62.24	-13.00	-49.24

Table 7-15. Antenna 4 Radiated Spurious Data (ULCA LTE Band 5 – Low Channel)

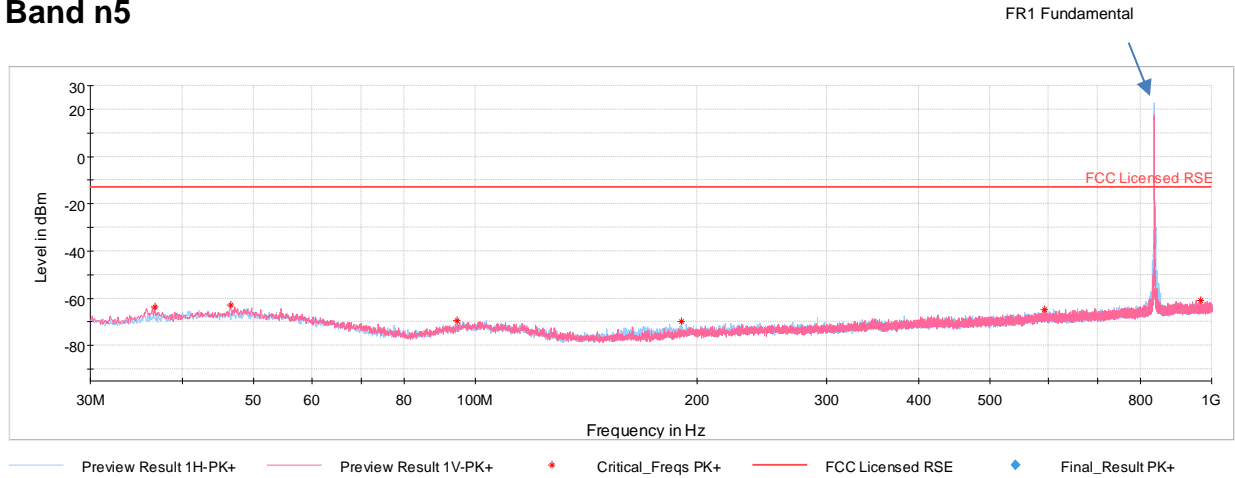
PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	844.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	834.1
SCC RB / Offset:	1 / 49

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]
1688.0	H	194	203	-76.75	-1.50	28.75	-66.51	-13.00	-53.51
2532.0	H	-	-	-78.00	2.67	31.67	-63.59	-13.00	-50.59
3376.0	H	-	-	-78.59	3.99	32.40	-62.86	-13.00	-49.86
4220.0	H	-	-	-79.49	5.73	33.24	-62.02	-13.00	-49.02

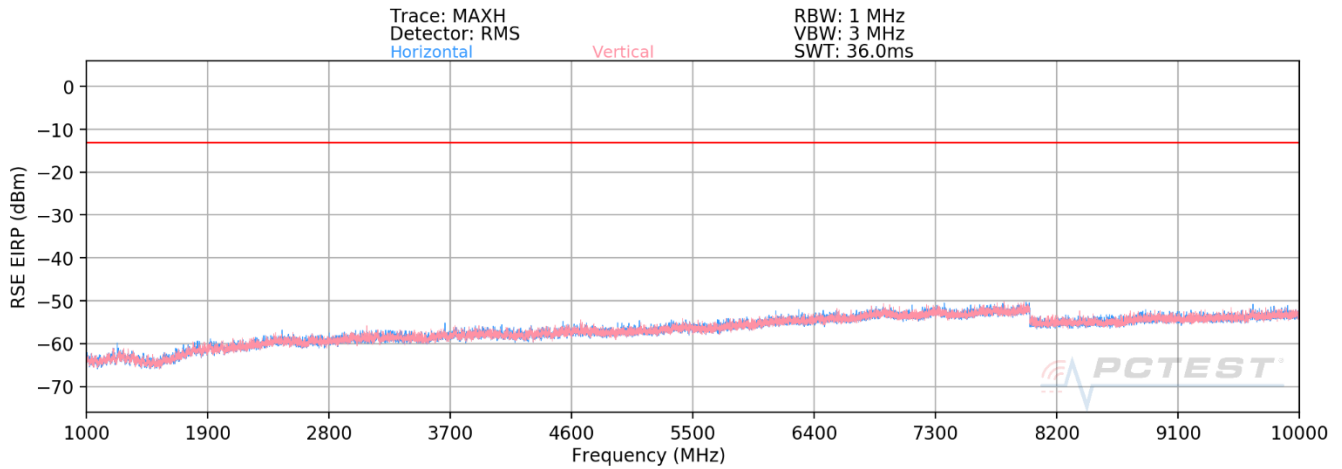
Table 7-16. Antenna 4 Radiated Spurious Data (ULCA LTE Band 5 – High Channel)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 85 of 98

NR Band n5



Plot 7-107. Antenna 4 Radiated Spurious Plot below 1GHz (NR Band n5)



Plot 7-108. Antenna 4 Radiated Spurious Plot above 1GHz (NR Band n5)

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 86 of 98

Bandwidth (MHz):	20
Frequency (MHz):	834.0
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]
1668.0	H	-	-	-78.10	-1.87	27.03	-68.23	-13.00	-55.23
2502.0	H	-	-	-78.88	2.51	30.63	-64.63	-13.00	-51.63
3336.0	H	-	-	-79.56	4.47	31.91	-63.34	-13.00	-50.34
4170.0	H	-	-	-80.02	4.78	31.76	-63.50	-13.00	-50.50

Table 7-17. Antenna 4 Radiated Spurious Data (NR Band n5 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	836.5
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]
1673.0	H	116	342	-77.59	-1.80	27.61	-67.65	-13.00	-54.65
2509.5	H	-	-	-78.97	2.42	30.45	-64.80	-13.00	-51.80
3346.0	H	-	-	-80.00	4.54	31.54	-63.72	-13.00	-50.72
4182.5	H	-	-	-79.83	4.72	31.89	-63.37	-13.00	-50.37

Table 7-18. Antenna 4 Radiated Spurious Data (NR Band n5 – Mid Channel)

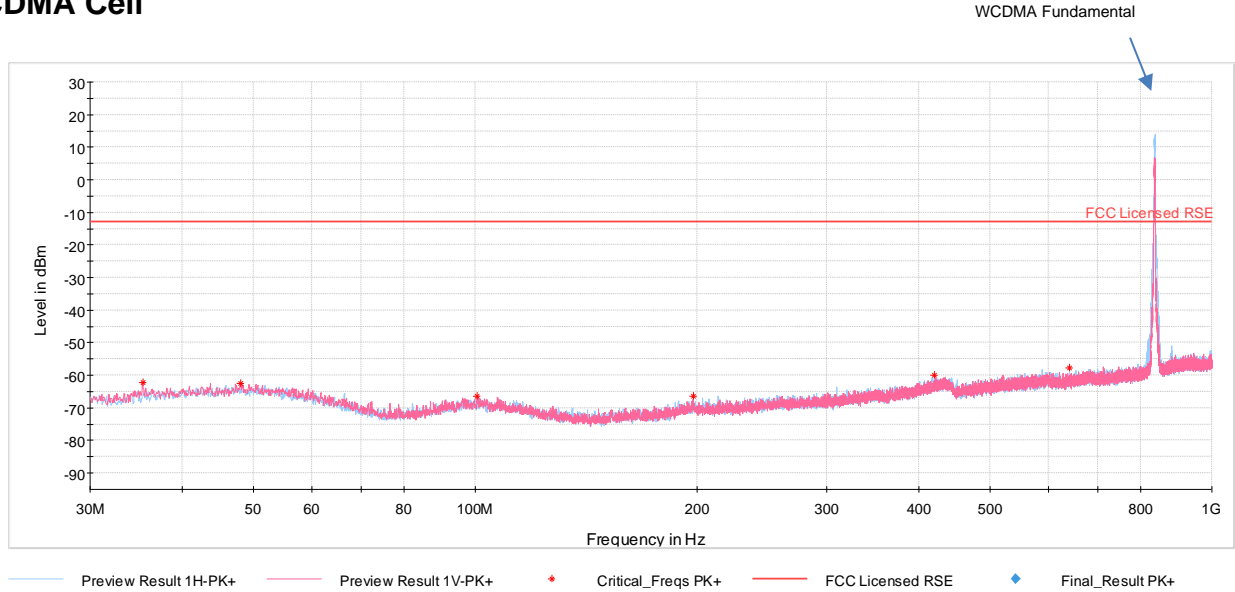
Bandwidth (MHz):	20
Frequency (MHz):	839.0
RB / Offset:	1 / 50

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]
1678.0	H	144	349	-76.73	-1.69	28.58	-66.68	-13.00	-53.68
2517.0	H	-	-	-79.04	2.34	30.30	-64.95	-13.00	-51.95
3356.0	H	-	-	-80.01	4.48	31.47	-63.78	-13.00	-50.78
4195.0	H	-	-	-79.99	4.97	31.98	-63.28	-13.00	-50.28

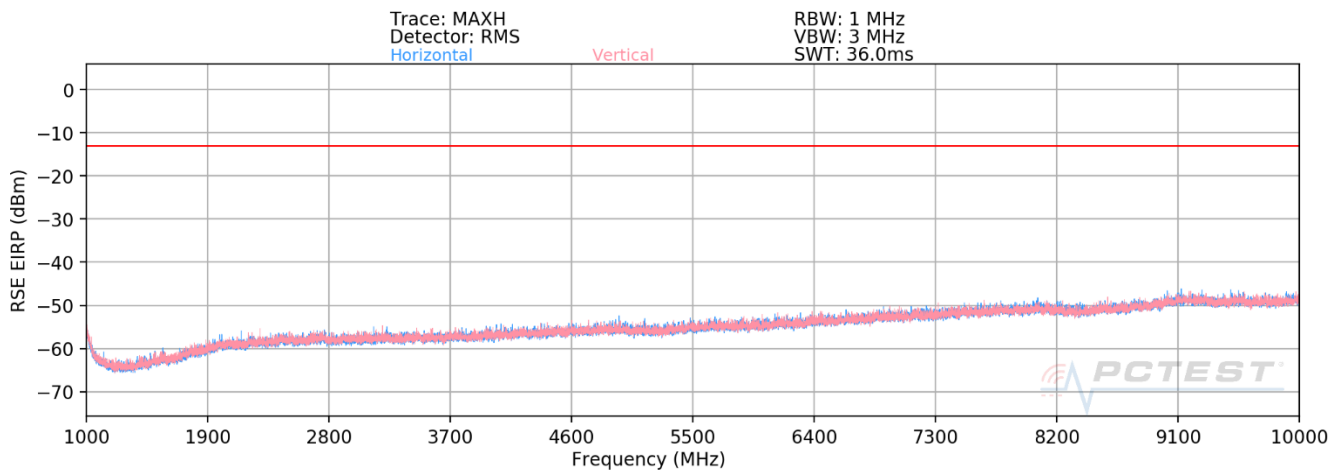
Table 7-19. Antenna 4 Radiated Spurious Data (NR Band n5 – High Channel)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 87 of 98


WCDMA Cell



Plot 7-109. Antenna 4 Radiated Spurious Plot below 1GHz (WCDMA Cell)



Plot 7-110. Antenna 4 Radiated Spurious Plot above 1GHz (WCDMA Cell)

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device
		Page 88 of 98

Mode:	WCDMA RMC								
Channel:	4132								
Frequency (MHz):	826.4								
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]
1652.8	H	-	-	-76.95	-2.02	28.03	-67.23	-13.00	-54.23
2479.2	H	-	-	-78.12	3.05	31.93	-63.32	-13.00	-50.32
3305.6	H	-	-	-78.26	3.54	32.28	-62.98	-13.00	-49.98


Table 7-20. Antenna 4 Radiated Spurious Data (WCDMA Cell – Low Channel)

Mode:	WCDMA RMC								
Channel:	4183								
Frequency (MHz):	836.6								
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]
1673.2	H	-	-	-77.29	-1.65	28.06	-67.19	-13.00	-54.19
2509.8	H	-	-	-77.78	2.96	32.18	-63.08	-13.00	-50.08
3346.4	H	-	-	-78.57	3.83	32.26	-62.99	-13.00	-49.99

Table 7-21. Antenna 4 Radiated Spurious Data (WCDMA Cell – Mid Channel)

Mode:	WCDMA RMC								
Channel:	4233								
Frequency (MHz):	846.6								
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]
1693.2	H	-	-	-77.34	-1.47	28.19	-67.07	-13.00	-54.07
2539.8	H	-	-	-77.99	2.37	31.38	-63.88	-13.00	-50.88
3386.4	H	-	-	-78.71	4.16	32.45	-62.81	-13.00	-49.81

Table 7-22. Antenna 4 Radiated Spurious Data (WCDMA Cell – High Channel)

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device
		Page 89 of 98

7.6.2 Antenna 3b – Radiated Spurious Emission Measurements

LTE Band 26/5

Bandwidth (MHz):	10
Frequency (MHz):	829.0
RB / Offset:	1 / 37

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]
1658.0	H	-	-	-77.81	-2.63	26.56	-68.70	-13.00	-55.70
2487.0	H	-	-	-78.75	1.99	30.24	-65.02	-13.00	-52.02
3316.0	H	-	-	-79.89	3.39	30.50	-64.76	-13.00	-51.76

Table 7-23. Antenna 3b Radiated Spurious Data (LTE Band 26/5 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 37



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]
1673.0	H	-	-	-77.73	-2.50	26.77	-68.49	-13.00	-55.49
2509.5	H	-	-	-78.86	2.35	30.49	-64.77	-13.00	-51.77
3346.0	H	-	-	-79.96	3.12	30.16	-65.09	-13.00	-52.09

Table 7-24. Antenna 3b Radiated Spurious Data (LTE Band 26/5 – Mid Channel)

Bandwidth (MHz):	10
Frequency (MHz):	844.0
RB / Offset:	1 / 37

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]
1688.0	H	-	-	-78.13	-2.44	26.43	-68.82	-13.00	-55.82
2532.0	H	-	-	-79.25	2.34	30.09	-65.17	-13.00	-52.17
3376.0	H	-	-	-79.81	3.26	30.45	-64.81	-13.00	-51.81

Table 7-25. Antenna 3b Radiated Spurious Data (LTE Band 26/5 – High Channel)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 90 of 98

ULCA LTE Band 5

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	829.0
PCC RB / Offset:	1 / 49
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	838.9
SCC RB / Offset:	1 / 0



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]
1658.0	H	-	-	-76.99	-1.87	28.14	-67.12	-13.00	-54.12
2487.0	H	-	-	-78.14	3.01	31.87	-63.39	-13.00	-50.39
3316.0	H	-	-	-78.49	3.62	32.13	-63.12	-13.00	-50.12

Table 7-26. Antenna 3b Radiated Spurious Data (ULCA LTE Band 5 – Low Channel)

PCC Bandwidth (MHz):	10
PCC Frequency (MHz):	844.0
PCC RB / Offset:	1 / 0
SCC Bandwidth (MHz):	10
SCC Frequency (MHz):	834.1
SCC RB / Offset:	1 / 49

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]
1688.0	H	-	-	-77.20	-1.50	28.30	-66.96	-13.00	-53.96
2532.0	H	-	-	-77.85	2.67	31.82	-63.44	-13.00	-50.44
3376.0	H	-	-	-78.71	3.99	32.28	-62.98	-13.00	-49.98

Table 7-27. Antenna 3b Radiated Spurious Data (ULCA LTE Band 5 – High Channel)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 91 of 98

NR Band n5

Bandwidth (MHz):	20								
Frequency (MHz):	834.0								
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]
1668.0	H	-	-	-78.21	-1.87	26.92	-68.34	-13.00	-55.34
2502.0	H	-	-	-79.01	2.51	30.50	-64.76	-13.00	-51.76
3336.0	H	-	-	-79.97	4.47	31.50	-63.75	-13.00	-50.75
4170.0	H	-	-	-80.09	4.78	31.69	-63.57	-13.00	-50.57



Table 7-28. Antenna 3b Radiated Spurious Data (NR Band n5 – Low Channel)

Bandwidth (MHz):	20								
Frequency (MHz):	836.5								
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]
1673.0	H	-	-	-78.14	-1.80	27.06	-68.20	-13.00	-55.20
2509.5	H	-	-	-79.22	2.42	30.20	-65.05	-13.00	-52.05
3346.0	H	-	-	-79.80	4.54	31.74	-63.52	-13.00	-50.52
4182.5	H	-	-	-79.83	4.72	31.89	-63.37	-13.00	-50.37

Table 7-29. Antenna 3b Radiated Spurious Data (NR Band n5 – Mid Channel)

Bandwidth (MHz):	20								
Frequency (MHz):	839.0								
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]
1678.0	H	-	-	-78.15	-1.69	27.16	-68.10	-13.00	-55.10
2517.0	H	-	-	-79.11	2.34	30.23	-65.02	-13.00	-52.02
3356.0	H	-	-	-80.15	4.48	31.33	-63.92	-13.00	-50.92
4195.0	H	-	-	-79.88	4.97	32.09	-63.17	-13.00	-50.17

Table 7-30. Antenna 3b Radiated Spurious Data (NR Band n5 – High Channel)

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 92 of 98

WCDMA Cell

Mode:	WCDMA RMC								
Channel:	4132								
Frequency (MHz):	826.4								
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]
1652.8	H	-	-	-77.12	-2.02	27.86	-67.40	-13.00	-54.40
2479.2	H	-	-	-78.17	3.05	31.88	-63.37	-13.00	-50.37
3305.6	H	-	-	-78.33	3.54	32.21	-63.05	-13.00	-50.05


Table 7-31. Antenna 3b Radiated Spurious Data (WCDMA Cell – Low Channel)

Mode:	WCDMA RMC								
Channel:	4183								
Frequency (MHz):	836.6								
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]
1673.2	H	-	-	-77.20	-1.65	28.15	-67.10	-13.00	-54.10
2509.8	H	-	-	-78.01	2.96	31.95	-63.31	-13.00	-50.31
3346.4	H	-	-	-78.28	3.83	32.55	-62.70	-13.00	-49.70

Table 7-32. Antenna 3b Radiated Spurious Data (WCDMA Cell – Mid Channel)

Mode:	WCDMA RMC								
Channel:	4233								
Frequency (MHz):	846.6								
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]
1693.2	H	-	-	-77.44	-1.47	28.09	-67.17	-13.00	-54.17
2539.8	H	-	-	-78.01	2.37	31.36	-63.90	-13.00	-50.90
3386.4	H	-	-	-78.57	4.16	32.59	-62.67	-13.00	-49.67

Table 7-33. Antenna 3b Radiated Spurious Data (WCDMA Cell – High Channel)

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device
		Page 93 of 98

7.7 Frequency Stability / Temperature Variation

§2.1055, 22.355

Test Overview and Limit

Frequency Tolerance testing is performed in accordance with the guidelines of ANSI C63.26-2015 and TIA-603-E-2016. All port were tested and only the worst case data were reported. The Frequency Tolerance 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 22, the Frequency Tolerance of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

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

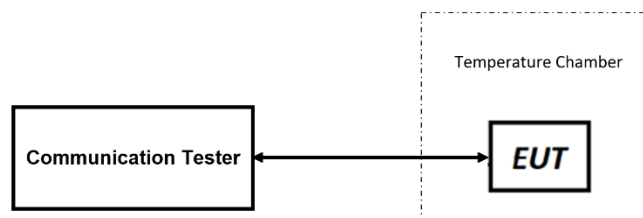


Figure 7-7. Test Instrument & Measurement Setup

Test Notes


1. All port were tested and only the worst case data were reported.
2. Only the worst-case NR bands with a wider bandwidth compared to LTE have been tested and reported. NR bands that have similar bandwidths as LTE is covered by the LTE bands.

FCC ID: BCGA2589	PCTEST Proud to be part of element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 94 of 98

Frequency Tolerance / Temperature Variation

LTE Band 26/5					
		Operating Frequency (Hz):		836,500,000	
		Ref. Voltage (VDC):		3.80	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,500,001	1	0.0000001
		- 20	836,500,001	1	0.0000001
		- 10	836,500,002	2	0.0000002
		0	836,499,999	-1	-0.0000001
		+ 10	836,499,999	-1	-0.0000001
		+ 20 (Ref)	836,500,000	0	0.0000000
		+ 30	836,500,000	0	0.0000000
		+ 40	836,500,001	1	0.0000001
		+ 50	836,500,000	0	0.0000000
Battery Endpoint	3.23	+ 20	836,499,998	-2	-0.0000002


Table 7-34. LTE Band 26/5 Frequency Tolerance Data

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 95 of 98

Frequency Tolerance / Temperature Variation

NR Band n5					
		Operating Frequency (Hz):		836,500,000	
		Ref. Voltage (VDC):		3.80	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,499,515	-485	-0.0000580
		- 20	836,499,480	-520	-0.0000622
		- 10	836,499,560	-440	-0.0000526
		0	836,499,600	-400	-0.0000478
		+ 10	836,499,490	-510	-0.0000610
		+ 20 (Ref)	836,499,525	-475	-0.0000568
		+ 30	836,499,625	-375	-0.0000448
		+ 40	836,499,550	-450	-0.0000538
		+ 50	836,499,540	-460	-0.0000550
Battery Endpoint	3.23	+ 20	836,499,525	-475	-0.0000568



Table 7-35. NR Band n5 Frequency Tolerance Data

FCC ID: BCGA2589	 PART 22 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 96 of 98

Frequency Tolerance / Temperature Variation



WCDMA Cellular					
		Operating Frequency (Hz):	836,600,000		
		Ref. Voltage (VDC):	3.80		
		Deviation Limit:	± 0.00025% or 2.5 ppm		
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	- 30	836,600,001	1	0.0000001
		- 20	836,600,001	1	0.0000002
		- 10	836,600,001	1	0.0000002
		0	836,600,001	1	0.0000002
		+ 10	836,600,002	2	0.0000002
		+ 20 (Ref)	836,600,000	0	0.0000000
		+ 30	836,600,000	0	-0.0000001
		+ 40	836,599,999	-1	-0.0000001
		+ 50	836,599,999	-1	-0.0000001
Battery Endpoint	3.23	+ 20	836,599,999	-1	-0.0000001

Table 7-36. WCDMA Cell Frequency Tolerance Data

FCC ID: BCGA2589	 PCTEST Proud to be part of 	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 97 of 98

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the Apple **Tablet Device** **FCC ID: BCGA2589** complies with all the requirements of Part 22 of the FCC rules.

FCC ID: BCGA2589	 PCTEST Proud to be part of  element	PART 22 MEASUREMENT REPORT	Approved by: Technical Manager
Test Report S/N: 1C2111150079-01.BCG	Test Dates: 11/29/2021 - 1/17/2022	EUT Type: Tablet Device	Page 98 of 98