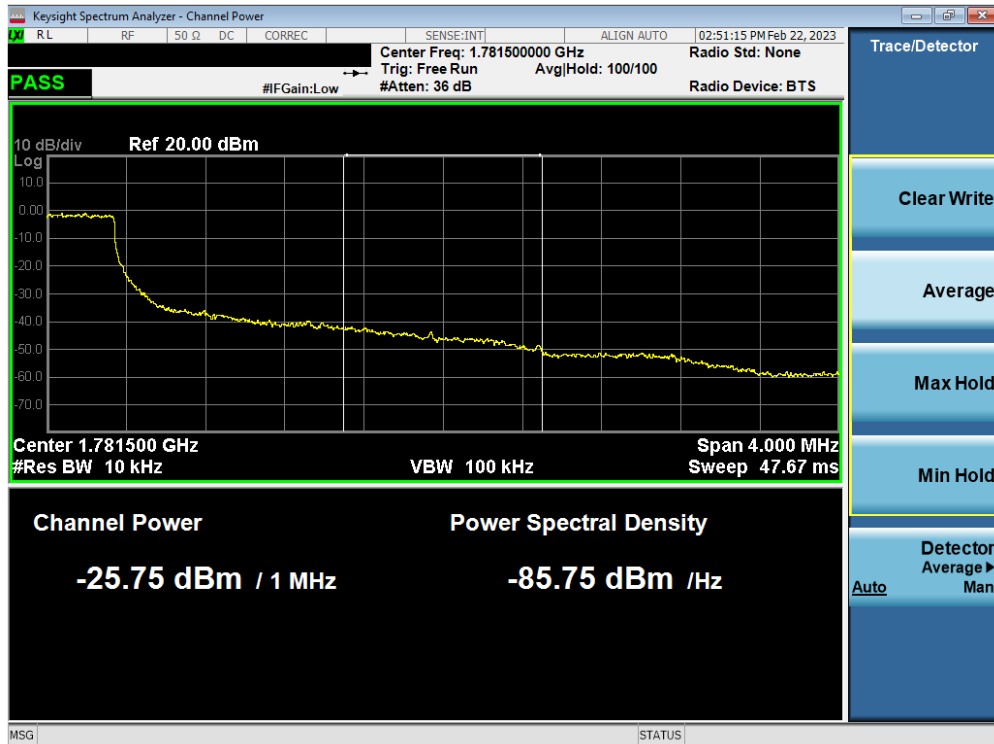


Plot 7-124. Upper Band Edge Plot (LTE Band 66 – 1.4MHz QPSK – Full RB)



Plot 7-125. Upper Extended Band Edge Plot (LTE Band 66 – 1.4MHz QPSK – Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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7.5 Peak-Average Ratio

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

ANSI C63.26-2015 – Section 5.2.3.4

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.

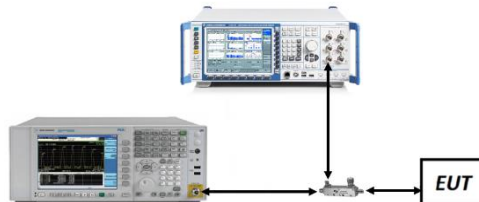


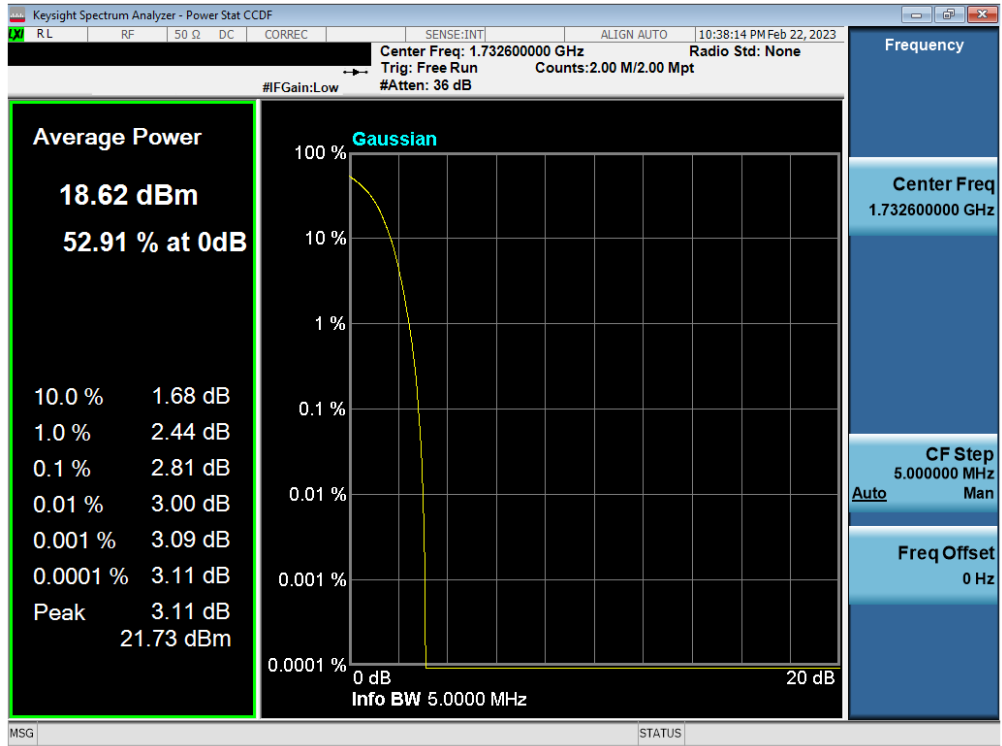
Figure 7-4. Test Instrument & Measurement Setup

Test Notes

None.

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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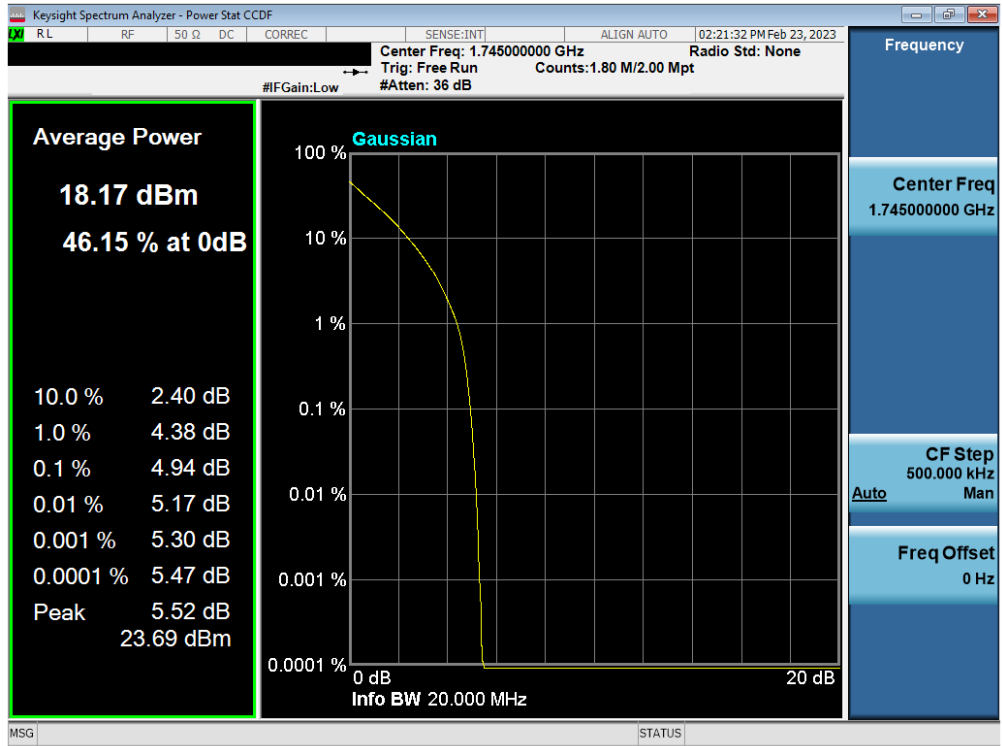
WCDMA AWS



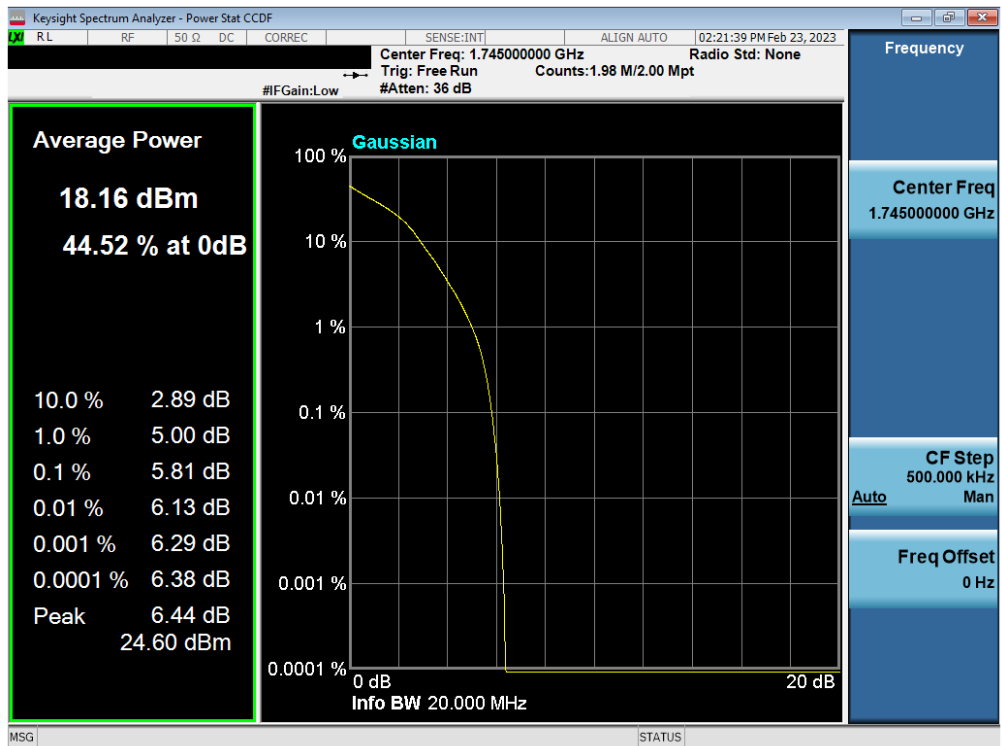
Plot 7-126. PAR Plot (WCDMA, Ch. 1413)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 – 03/22/2023	EUT Type: Portable Handset	Page 82 of 113

LTE Band 66/4

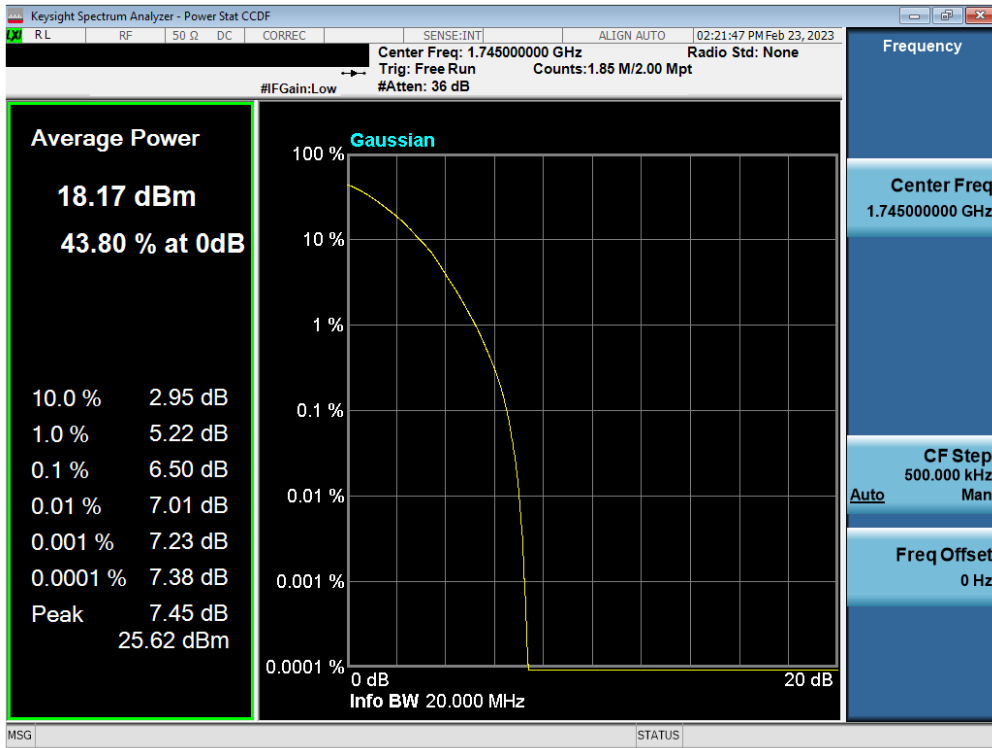


Plot 7-127. PAR Plot (LTE Band 66/4 - 20MHz QPSK - Full RB)

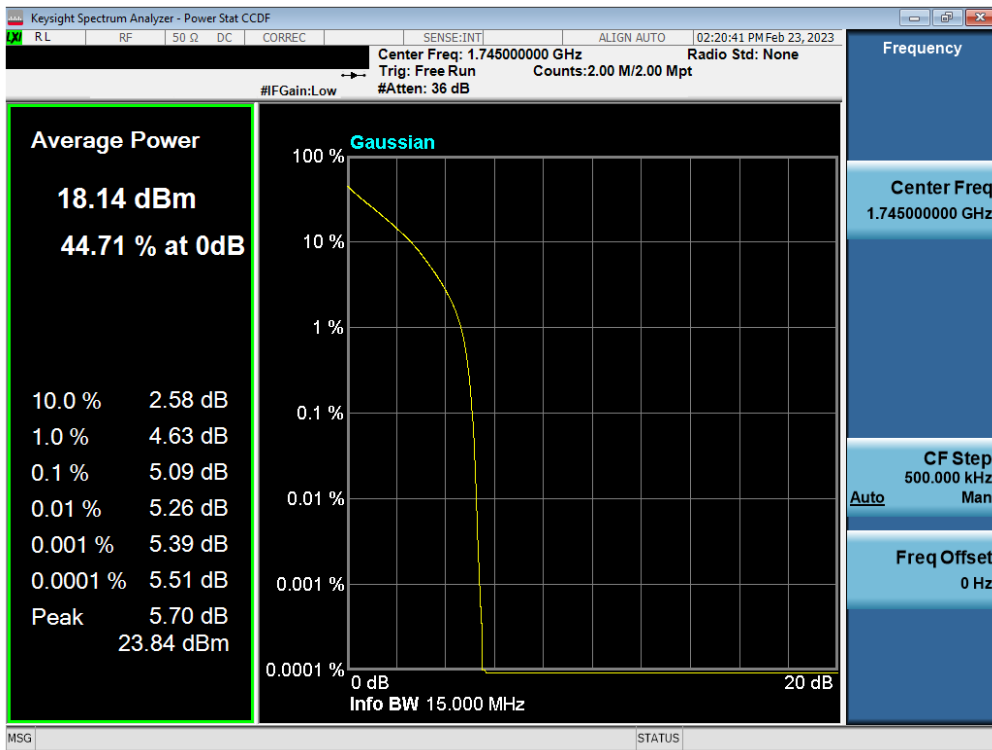


Plot 7-128. PAR Plot (LTE Band 66/4 - 20MHz 16-QAM - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 – 03/22/2023	EUT Type: Portable Handset	Page 83 of 113

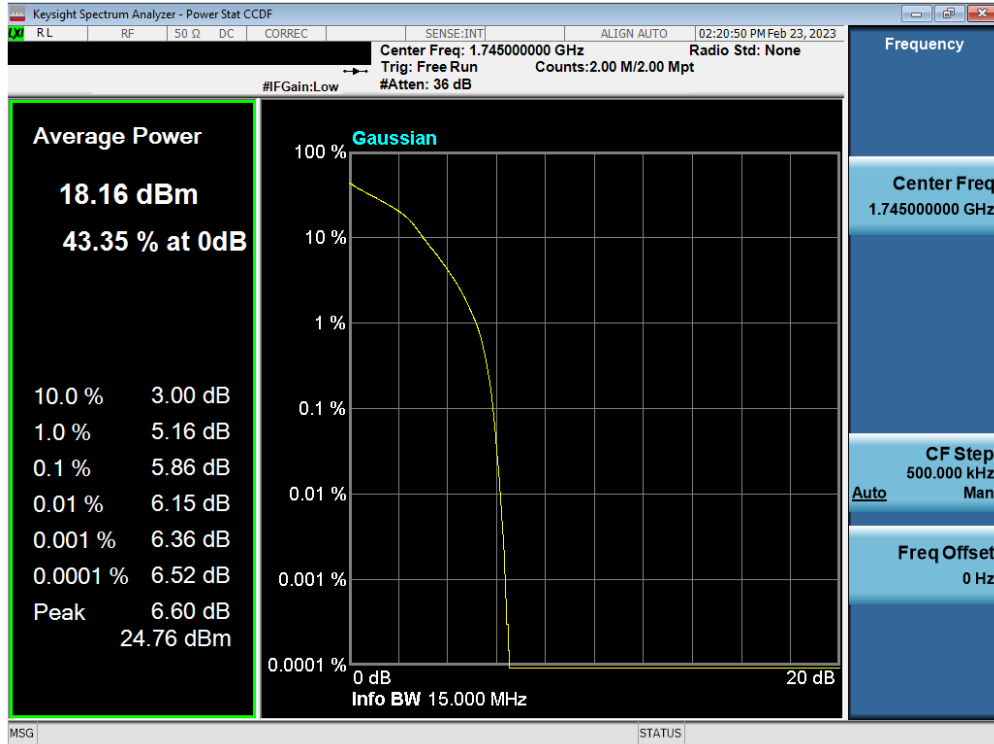


Plot 7-129. PAR Plot (LTE Band 66/4 - 20MHz 64-QAM - Full RB)

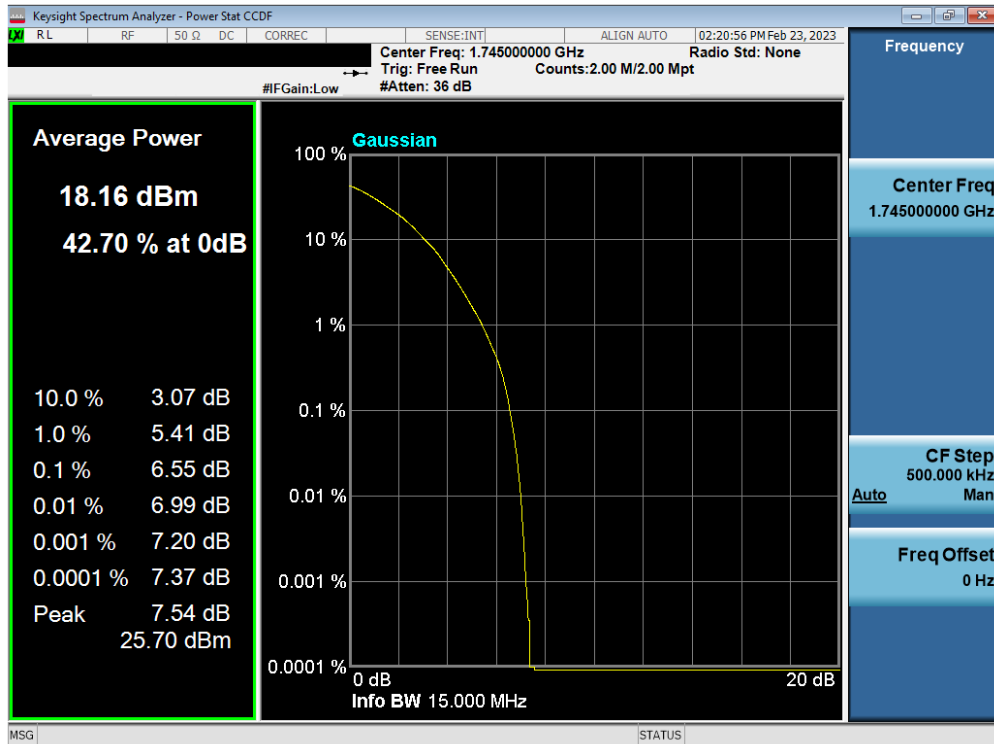


Plot 7-130. PAR Plot (LTE Band 66/4 - 15MHz QPSK - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 - 03/22/2023	EUT Type: Portable Handset	Page 84 of 113

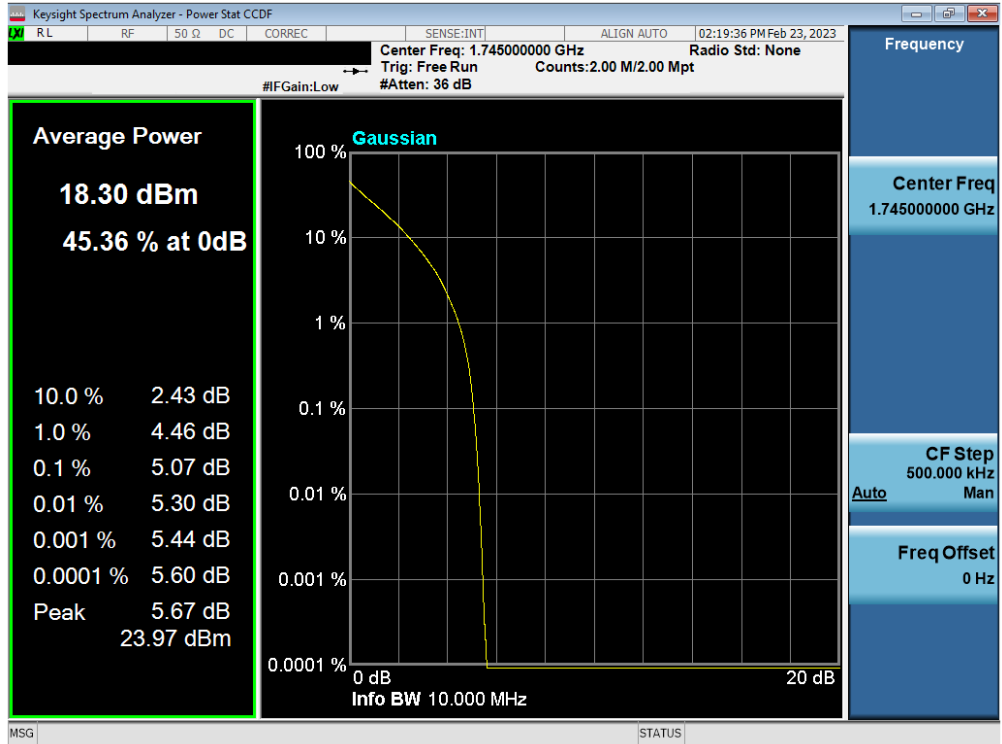


Plot 7-131. PAR Plot (LTE Band 66/4 - 15MHz 16-QAM - Full RB)

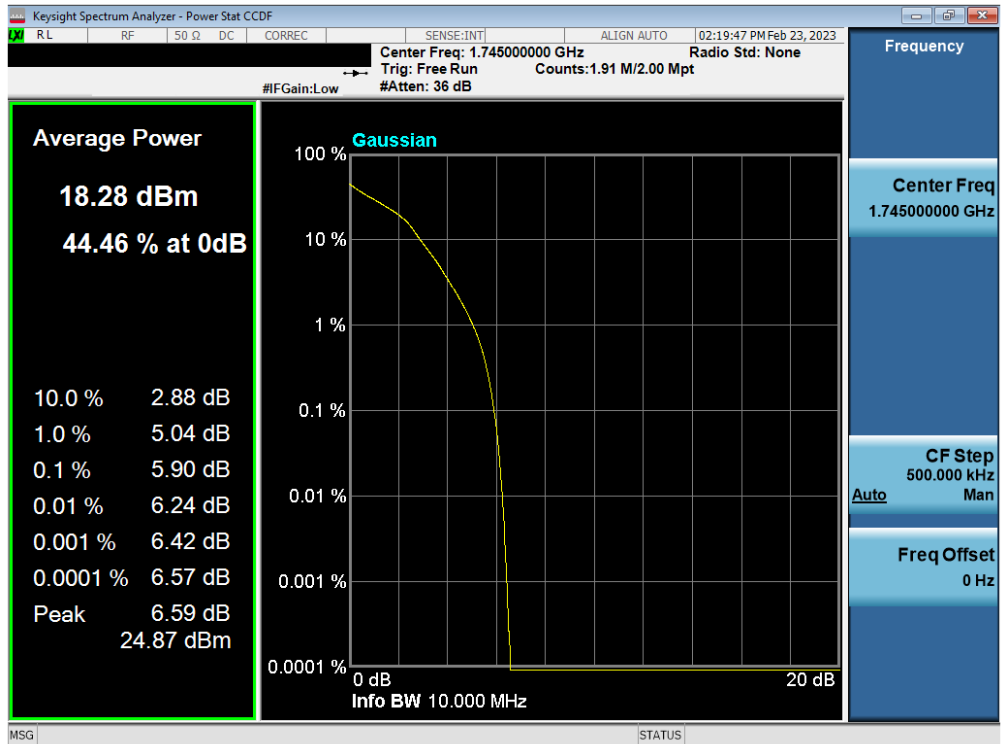


Plot 7-132. PAR Plot (LTE Band 66/4 - 15MHz 64-QAM - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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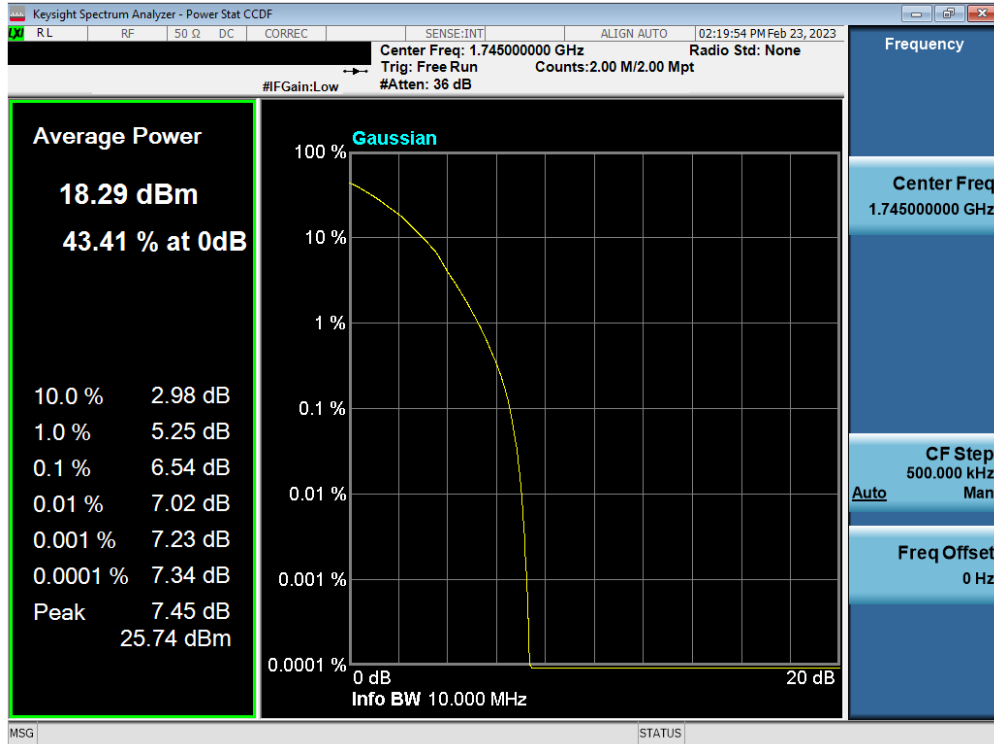


Plot 7-133. PAR Plot (LTE Band 66/4 - 10MHz QPSK - Full RB)

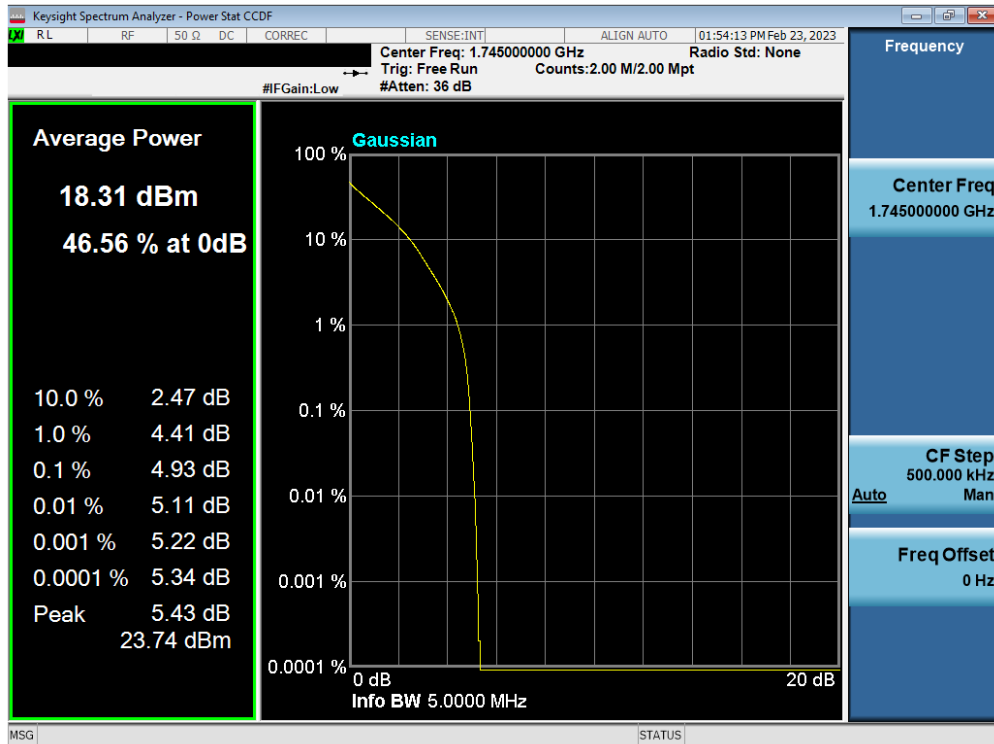


Plot 7-134. PAR Plot (LTE Band 66/4 - 10MHz 16-QAM - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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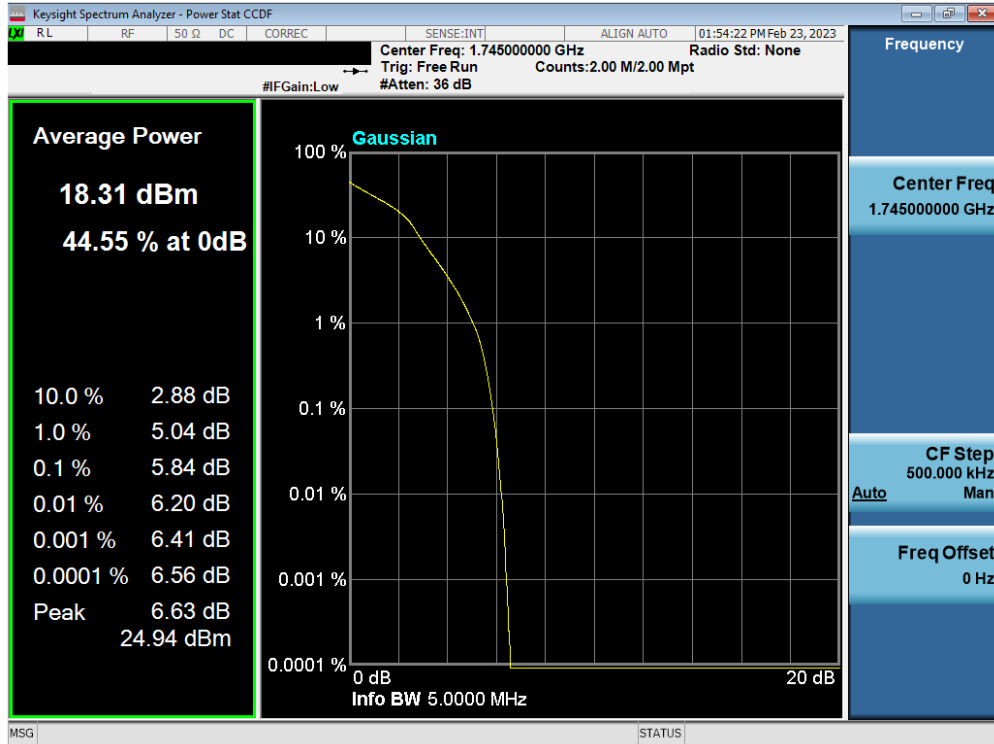


Plot 7-135. PAR Plot (LTE Band 66/4 - 10MHz 64-QAM - Full RB)

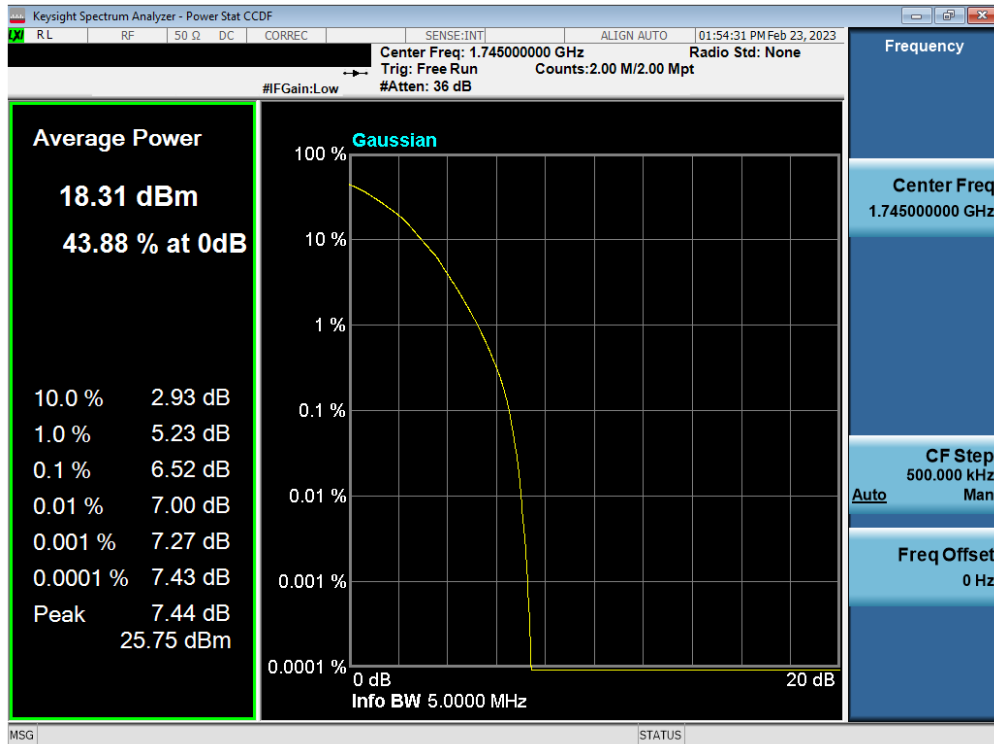


Plot 7-136. PAR Plot (LTE Band 66/4 - 5MHz QPSK - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 - 03/22/2023	EUT Type: Portable Handset	Page 87 of 113

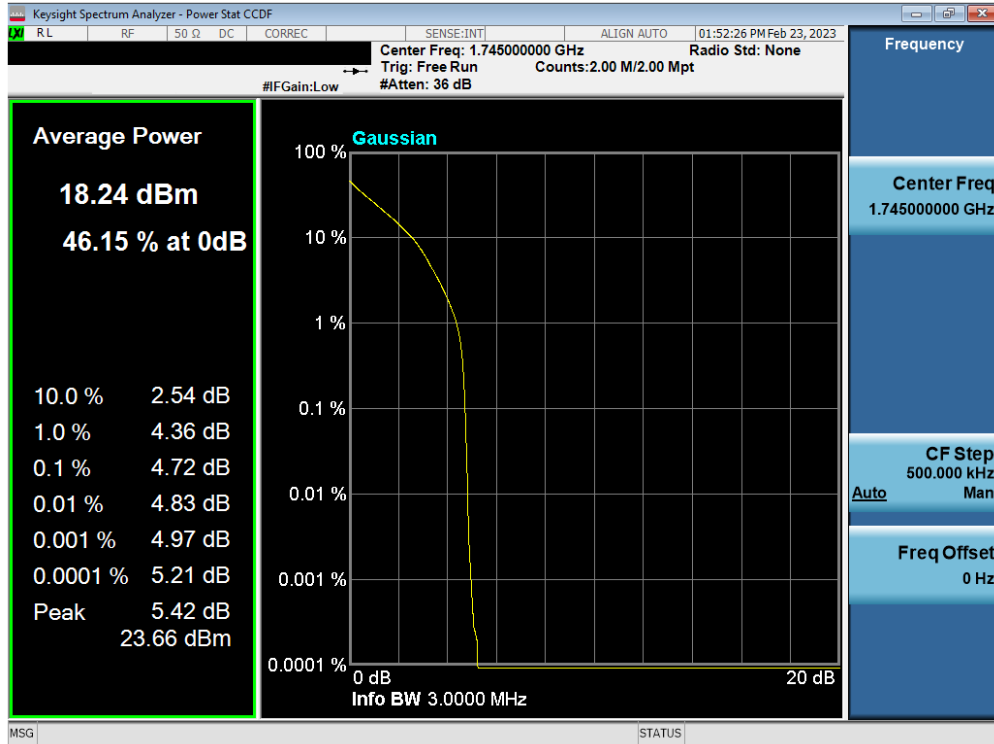


Plot 7-137. PAR Plot (LTE Band 66/4 - 5MHz 16-QAM - Full RB)

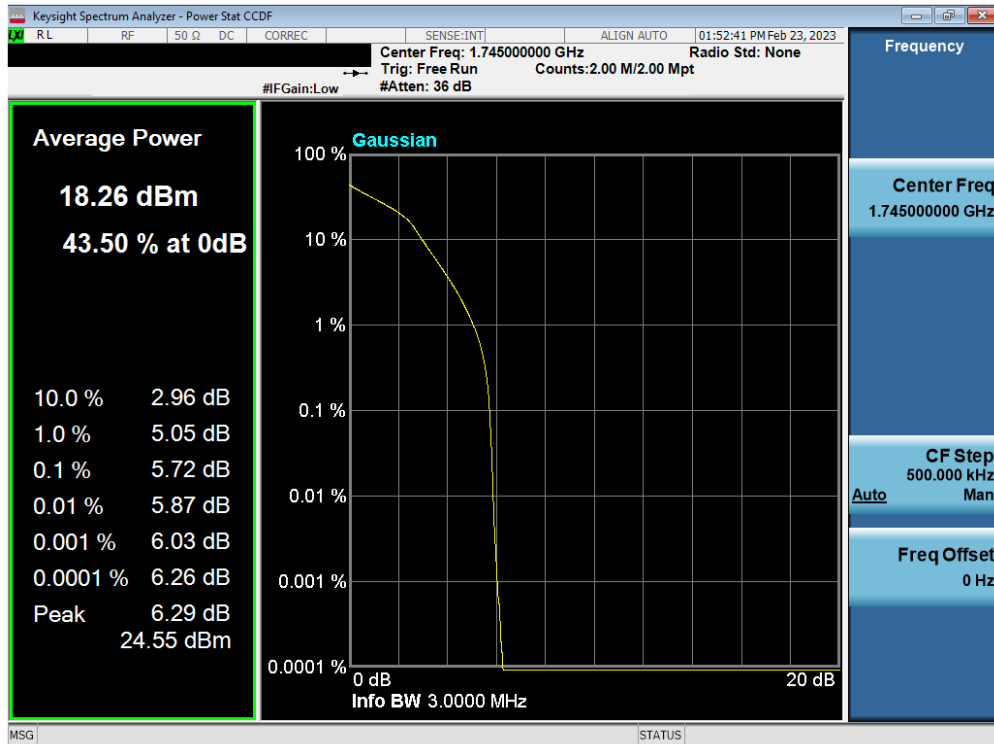


Plot 7-138. PAR Plot (LTE Band 66/4 - 5MHz 64-QAM - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 - 03/22/2023	EUT Type: Portable Handset	Page 88 of 113

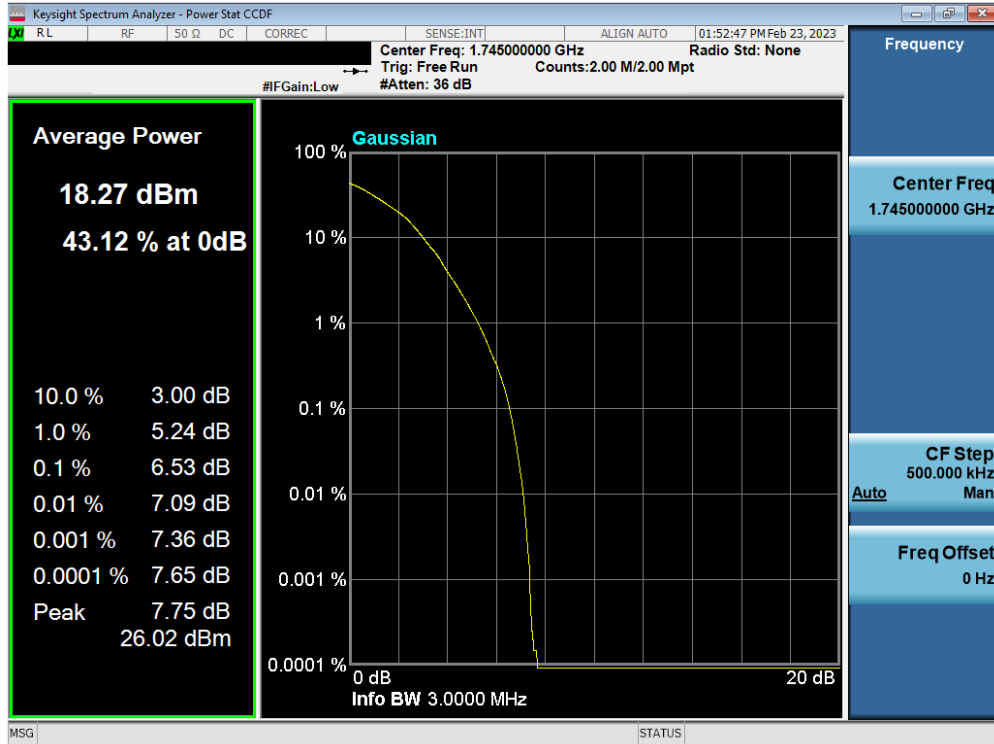


Plot 7-139. PAR Plot (LTE Band 66/4 - 3MHz QPSK - Full RB)

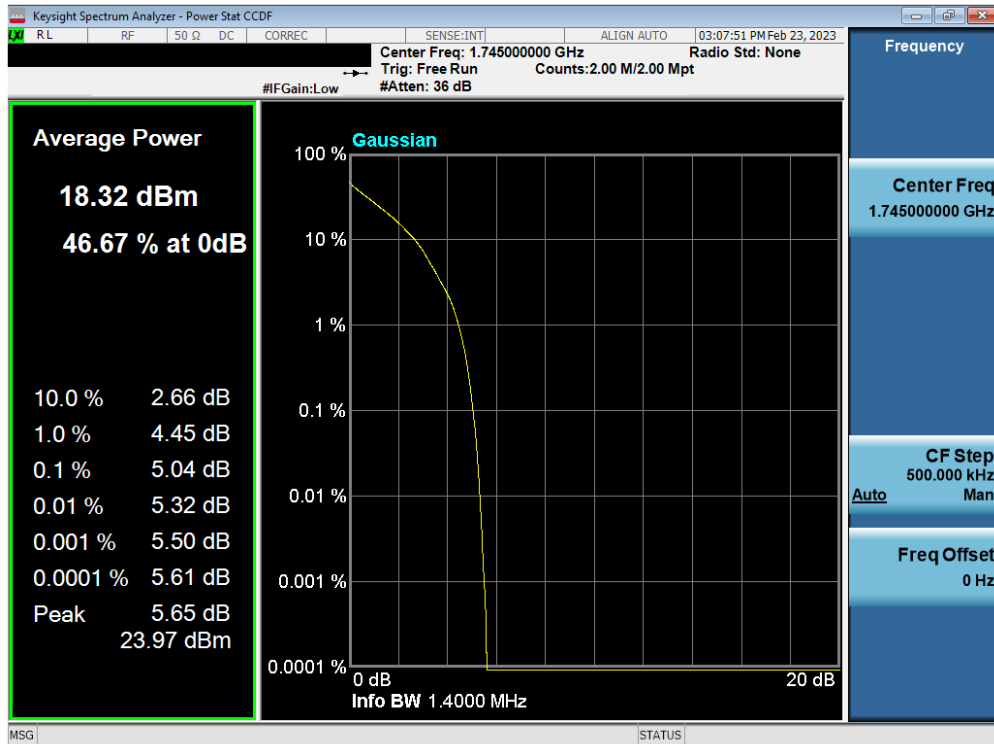


Plot 7-140. PAR Plot (LTE Band 66/4 - 3MHz 16-QAM - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 - 03/22/2023	EUT Type: Portable Handset	Page 89 of 113

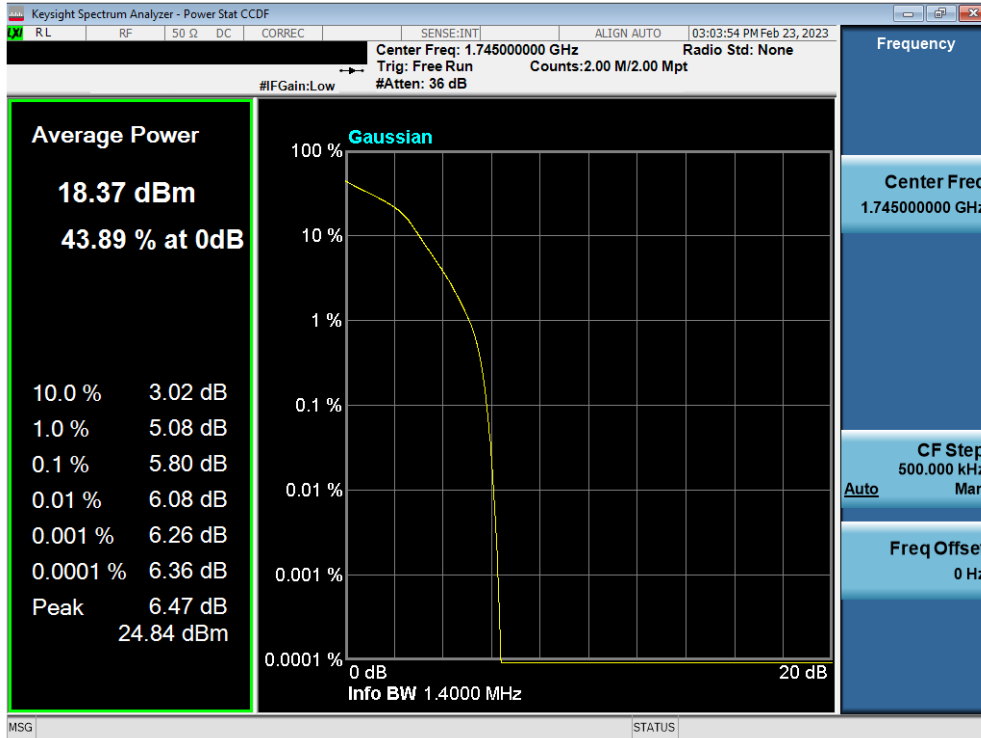


Plot 7-141. PAR Plot (LTE Band 66/4 - 3MHz 64-QAM - Full RB)

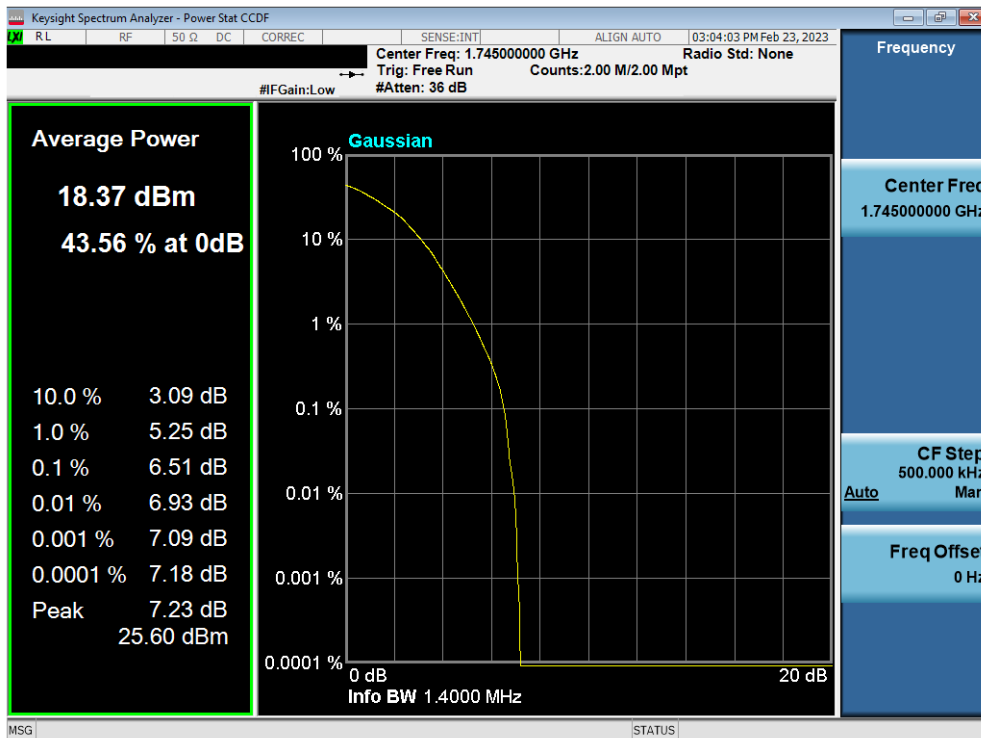


Plot 7-142. PAR Plot (LTE Band 66/4 - 1.4MHz QPSK - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Plot 7-143. PAR Plot (LTE Band 66/4 - 1.4MHz 16-QAM - Full RB)



Plot 7-144. PAR Plot (LTE Band 66/4 - 1.4MHz 64-QAM - Full RB)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 – 03/22/2023	EUT Type: Portable Handset	Page 91 of 113

7.6 Radiated Power (ERP/EIRP)

Test Overview

Effective Radiated Power (ERP) and Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.2.4.4

Test Settings

1. Radiated power measurements are performed using the signal analyzer’s “channel power” measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW $\geq 3 \times$ RBW
4. Span = 1.5 times the OBW
5. No. of sweep points $\geq 2 \times$ span / RBW
6. Detector = RMS
7. Trigger is set to “free run” for signals with continuous operation with the sweep times set to “auto”.
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

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Test Setup

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

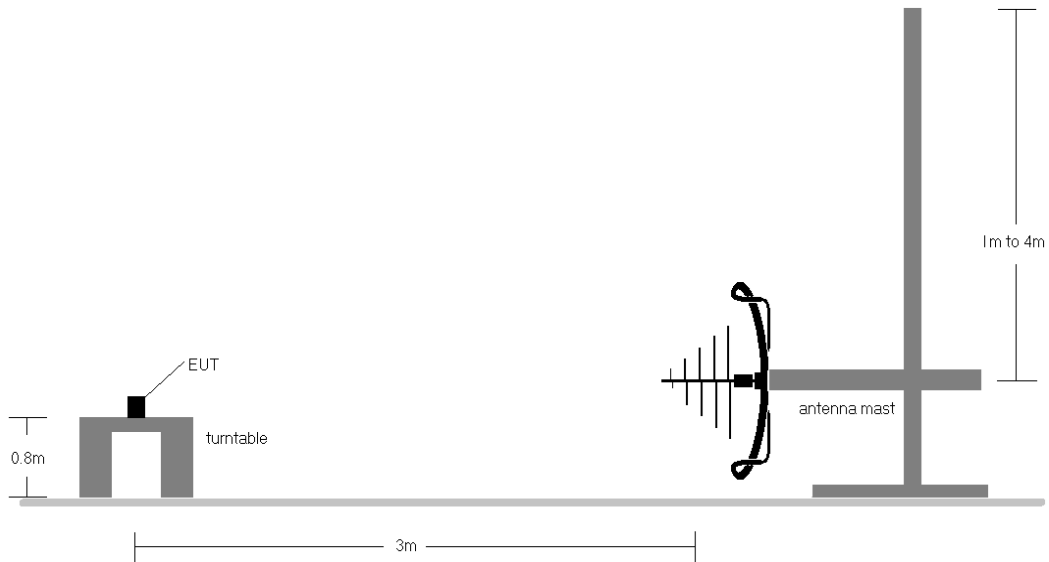


Figure 7-5. Radiated Test Setup <1GHz

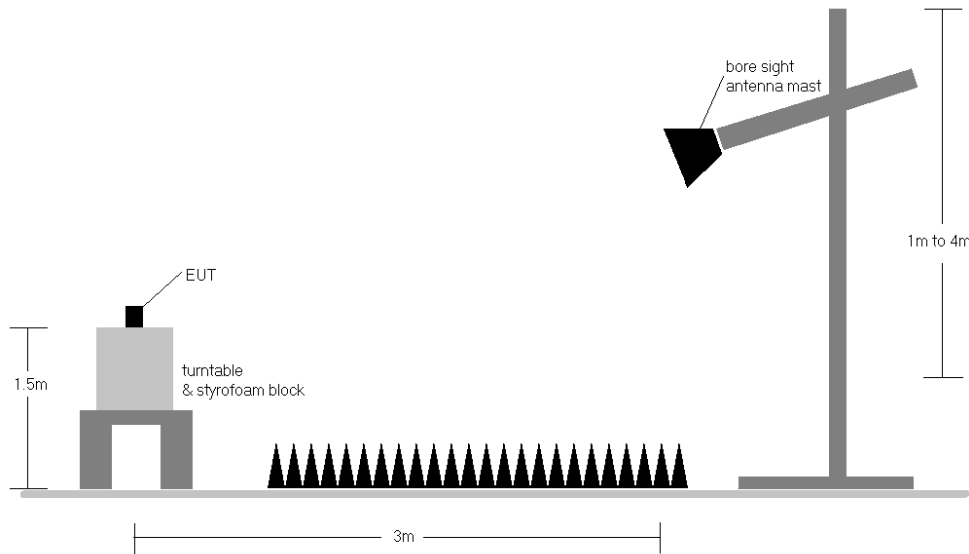


Figure 7-6. Radiated Test Setup >1GHz

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Test Notes

- 1) 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.
- 2) This unit was tested with its standard battery.
- 3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 4) 20dB attenuator was applied to the antenna gain for below 1GHz.

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	QPSK	704.00	H	128	246	-18.90	1 / 0	33.80	14.90	0.031	36.99	-22.09	12.75	0.019	34.77	-22.02
	QPSK	707.50	H	116	247	-18.90	1 / 49	34.06	15.16	0.033	36.99	-21.83	13.01	0.020	34.77	-21.76
	QPSK	711.00	H	120	244	-18.90	1 / 0	33.87	14.97	0.031	36.99	-22.02	12.82	0.019	34.77	-21.95
	16-QAM	711.00	H	120	244	-18.90	1 / 0	34.25	15.35	0.034	36.99	-21.64	13.20	0.021	34.77	-21.57
5 MHz	64-QAM	711.00	H	120	244	-18.90	1 / 0	34.28	15.38	0.035	36.99	-21.61	13.23	0.021	34.77	-21.54
	QPSK	701.50	H	128	246	0.00	1 / 24	14.99	14.99	0.032	36.99	-22.00	12.84	0.019	34.77	-21.93
	QPSK	707.50	H	116	247	0.00	1 / 12	15.28	15.28	0.034	36.99	-21.71	13.13	0.021	34.77	-21.65
	QPSK	713.50	H	120	244	0.00	1 / 12	15.06	15.06	0.032	36.99	-21.93	12.91	0.020	34.77	-21.86
3 MHz	16-QAM	713.50	H	120	244	0.00	1 / 12	15.52	15.52	0.036	36.99	-21.47	13.37	0.022	34.77	-21.40
	QPSK	700.50	H	128	246	0.00	1 / 7	14.90	14.90	0.031	36.99	-22.09	12.75	0.019	34.77	-22.02
	QPSK	707.50	H	116	247	0.00	1 / 7	15.17	15.17	0.033	36.99	-21.82	13.02	0.020	34.77	-21.75
	QPSK	714.50	H	120	244	0.00	1 / 7	14.89	14.89	0.031	36.99	-22.10	12.74	0.019	34.77	-22.04
1.4 MHz	16-QAM	714.50	H	120	244	0.00	1 / 7	15.18	15.18	0.033	36.99	-21.81	13.03	0.020	34.77	-21.74
	QPSK	699.70	H	128	246	0.00	1 / 3	14.85	14.85	0.031	36.99	-22.14	12.70	0.019	34.77	-22.07
	QPSK	707.50	H	116	247	0.00	1 / 3	15.18	15.18	0.033	36.99	-21.81	13.03	0.020	34.77	-21.74
	QPSK	715.30	H	120	244	0.00	1 / 0	14.91	14.91	0.031	36.99	-22.08	12.76	0.019	34.77	-22.01
10 MHz	16-QAM	715.30	H	120	244	0.00	1 / 3	15.14	15.14	0.033	36.99	-21.85	12.99	0.020	34.77	-21.78
	WCP	711.00	H	119	45	-18.90	1 / 25	33.12	14.22	0.026	36.99	-22.77	12.07	0.016	34.77	-22.70

Table 7-2. ERP Data (LTE Band 12/17)

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	QPSK	782.00	H	107	252	-19.74	1 / 49	35.33	15.59	0.036	36.99	-21.40	13.44	0.022	34.77	-21.33
	16-QAM	782.00	H	107	252	-19.74	1 / 49	35.85	16.11	0.041	36.99	-20.88	13.96	0.025	34.77	-20.81
	64-QAM	782.00	H	107	252	-19.74	1 / 49	35.87	16.13	0.041	36.99	-20.86	13.98	0.025	34.77	-20.79
5 MHz	QPSK	779.50	H	107	252	0.00	1 / 12	15.58	15.58	0.036	36.99	-21.41	13.43	0.022	34.77	-21.35
	QPSK	782.00	H	107	252	0.00	25 / 0	15.47	15.47	0.035	36.99	-21.52	13.32	0.021	34.77	-21.45
	QPSK	784.50	H	107	252	0.00	1 / 12	15.63	15.63	0.037	36.99	-21.36	13.48	0.022	34.77	-21.29
	16-QAM	782.00	H	107	252	0.00	1 / 12	16.34	16.34	0.043	36.99	-20.65	14.19	0.026	34.77	-20.58
10 MHz	64-QAM	779.50	H	107	252	0.00	1 / 12	16.58	16.58	0.046	36.99	-20.41	14.43	0.028	34.77	-20.34
	WCP	782.00	H	107	226	-19.74	1 / 49	36.83	17.09	0.051	36.99	-19.90	14.94	0.031	34.77	-19.83

Table 7-3. ERP Data (LTE Band 13)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1712.40	WCDMA1700	V	176	94	9.63	3.61	13.24	0.021	30.00	-16.76
1732.60	WCDMA1700	V	164	94	10.42	3.52	13.94	0.025	30.00	-16.06
1752.60	WCDMA1700	V	209	92	9.61	3.38	12.99	0.020	30.00	-17.01
1732.60	WCDMA1700 (WCP)	V	323	326	4.58	3.52	8.10	0.006	30.00	-21.90

Table 7-4. EIRP Data (WCDMA AWS)

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Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
20 MHz	QPSK	1720.00	V	113	354	3.55	1 / 0	9.61	13.16	0.021	30.00	-16.84
	QPSK	1745.00	V	123	141	3.44	100 / 0	10.17	13.61	0.023	30.00	-16.39
	QPSK	1770.00	V	101	336	3.27	1 / 0	9.85	13.12	0.020	30.00	-16.88
	16-QAM	1745.00	V	123	141	3.44	100 / 0	10.54	13.98	0.025	30.00	-16.02
	64-QAM	1720.00	V	113	354	3.55	1 / 0	10.40	13.95	0.025	30.00	-16.05
15 MHz	QPSK	1717.50	V	113	354	3.57	75 / 0	9.49	13.06	0.020	30.00	-16.94
	QPSK	1745.00	V	123	141	3.44	1 / 74	10.16	13.60	0.023	30.00	-16.40
	QPSK	1772.50	V	101	336	3.26	75 / 0	9.71	12.97	0.020	30.00	-17.03
	16-QAM	1717.50	V	113	354	3.57	1 / 74	10.24	13.81	0.024	30.00	-16.19
10 MHz	QPSK	1715.00	V	113	354	3.59	1 / 49	9.61	13.20	0.021	30.00	-16.80
	QPSK	1745.00	V	123	141	3.44	1 / 25	10.27	13.71	0.024	30.00	-16.29
	QPSK	1775.00	V	101	336	3.25	1 / 0	9.92	13.18	0.021	30.00	-16.82
	16-QAM	1715.00	V	113	354	3.59	1 / 0	10.41	14.00	0.025	30.00	-16.00
5 MHz	QPSK	1712.50	V	113	354	3.61	1 / 12	9.78	13.39	0.022	30.00	-16.61
	QPSK	1745.00	V	123	141	3.44	1 / 24	10.38	13.81	0.024	30.00	-16.19
	QPSK	1777.50	V	101	336	3.25	1 / 12	9.94	13.19	0.021	30.00	-16.81
	16-QAM	1712.50	V	113	354	3.61	1 / 12	10.44	14.05	0.025	30.00	-15.95
3 MHz	QPSK	1711.50	V	113	354	3.62	15 / 0	9.49	13.11	0.020	30.00	-16.89
	QPSK	1745.00	V	123	141	3.44	1 / 14	10.21	13.65	0.023	30.00	-16.35
	QPSK	1778.50	V	101	336	3.24	1 / 0	9.94	13.18	0.021	30.00	-16.82
	16-QAM	1778.50	V	101	336	3.24	1 / 0	10.76	14.00	0.025	30.00	-16.00
1.4 MHz	QPSK	1710.70	V	113	354	3.63	1 / 3	9.63	13.25	0.021	30.00	-16.75
	QPSK	1745.00	V	123	141	3.44	1 / 0	10.21	13.65	0.023	30.00	-16.35
	QPSK	1779.30	V	101	336	3.24	1 / 3	9.87	13.12	0.020	30.00	-16.88
	16-QAM	1710.70	V	113	354	3.63	1 / 5	10.28	13.91	0.025	30.00	-16.09
20 MHz	WCP	1745.00	V	231	348	3.44	1 / 50	5.84	9.28	0.008	30.00	-20.72

Table 7-5. EIRP Data (LTE Band 66/4)

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7.7 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

ANSI C63.26-2015 – Section 5.5.4

Test Settings

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

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Test Setup

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

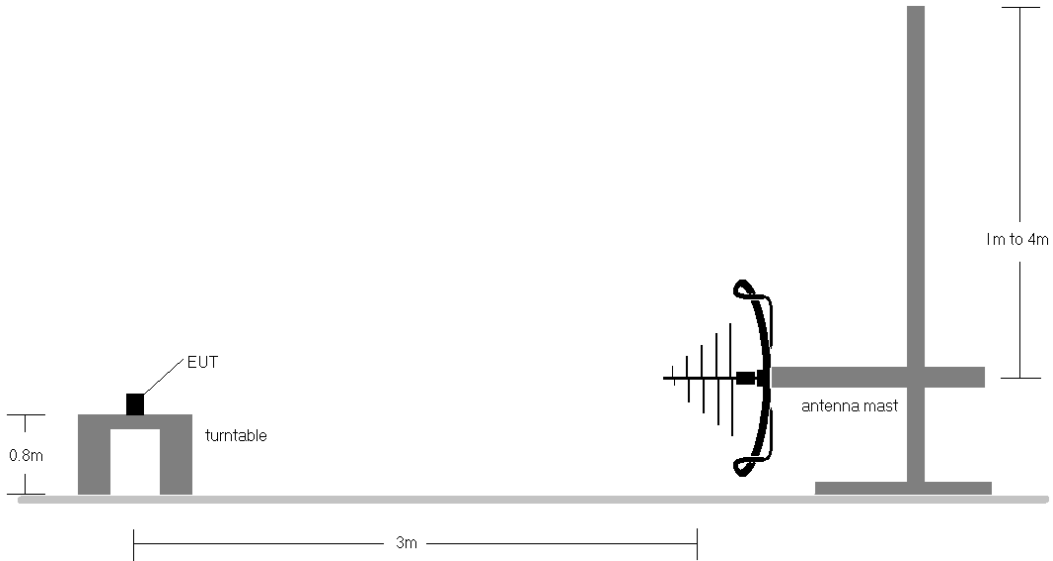


Figure 7-7. Test Instrument & Measurement Setup < 1GHz

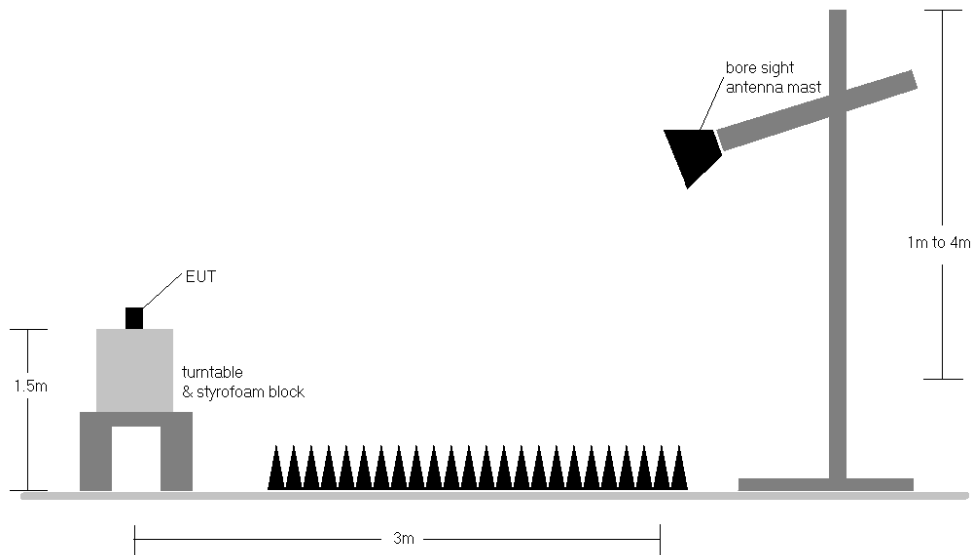


Figure 7-8. Test Instrument & Measurement Setup > 1GHz

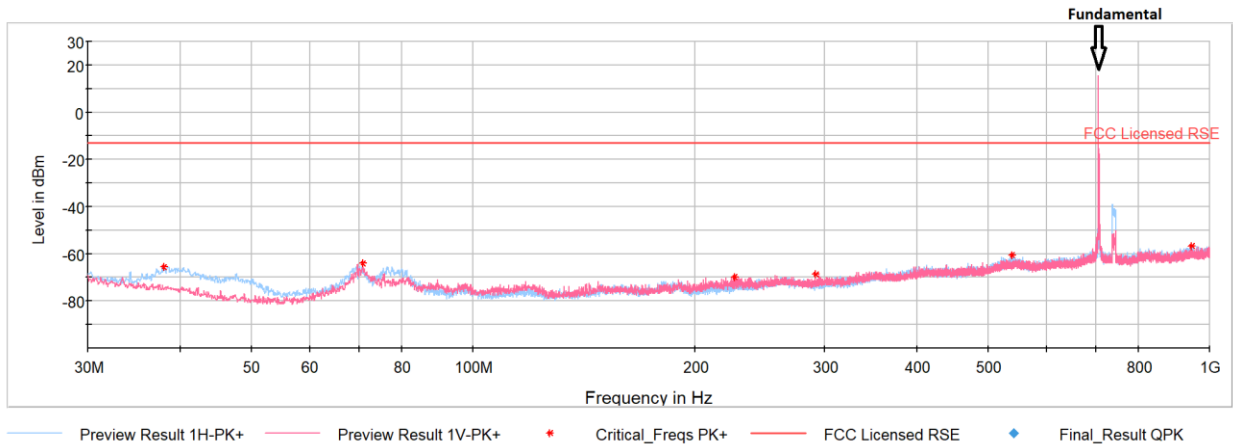
FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 – 03/22/2023	EUT Type: Portable Handset	Page 98 of 113

Test Notes

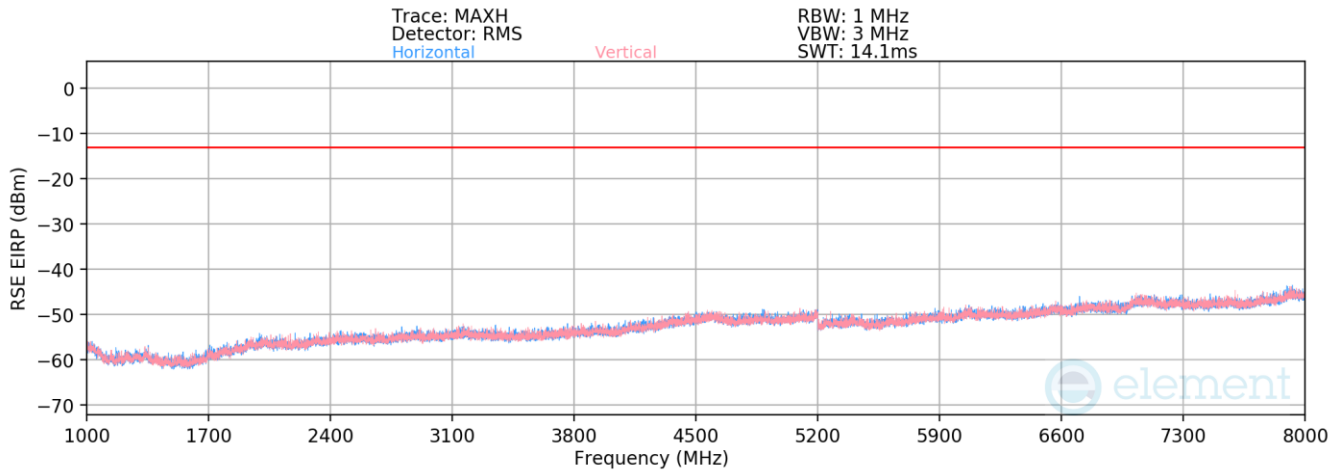
- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest powers are reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to "1".
- 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) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 7) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

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LTE Band 12/17



Plot 7-145. Radiated Spurious Plot Below 1GHz (LTE Band 12/17)



Plot 7-146. Radiated Spurious Plot (LTE Band 12/17)

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]
945.15	H	300	1	-72.10	3.77	38.67	-56.59	-13.00	-43.59

Table 7-6. Radiated Spurious Data Below 1GHz (LTE Band 12/17 – Mid Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	10
Frequency (MHz):	704
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]
1408.00	V	-	-	-78.27	-2.21	26.52	-68.74	-13.00	-55.74
2112.00	V	336	90	-70.64	2.26	38.62	-56.64	-13.00	-43.64
2816.00	V	-	-	-80.05	3.90	30.85	-64.41	-13.00	-51.41
3520.00	V	-	-	-81.10	5.14	31.04	-64.22	-13.00	-51.22
4224.00	V	-	-	-81.63	6.65	32.02	-63.23	-13.00	-50.23

Table 7-7. 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]
1415.00	V	-	-	-78.23	-2.17	26.60	-68.66	-13.00	-55.66
2122.50	V	-	-	-79.42	2.32	29.90	-65.35	-13.00	-52.35
2830.00	V	-	-	-80.59	4.02	30.43	-64.83	-13.00	-51.83

Table 7-8. Radiated Spurious Data (LTE Band 12/17 – Mid Channel)

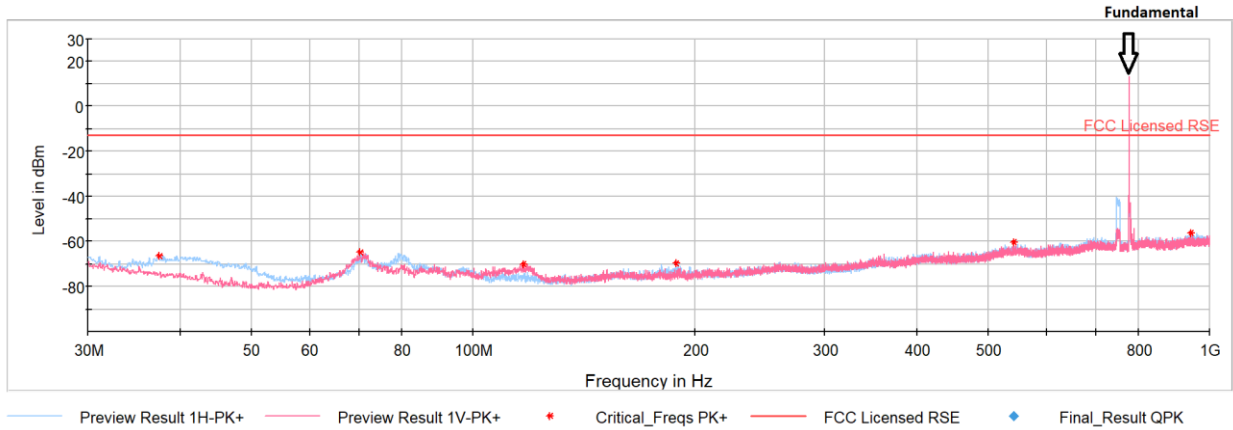
Bandwidth (MHz):	10
Frequency (MHz):	711
RB / Offset:	1 / 25

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]
1422.00	V	-	-	-78.36	-2.13	26.51	-68.75	-13.00	-55.75
2133.00	V	-	-	-79.46	2.23	29.77	-65.49	-13.00	-52.49
2844.00	V	-	-	-80.55	4.12	30.57	-64.69	-13.00	-51.69

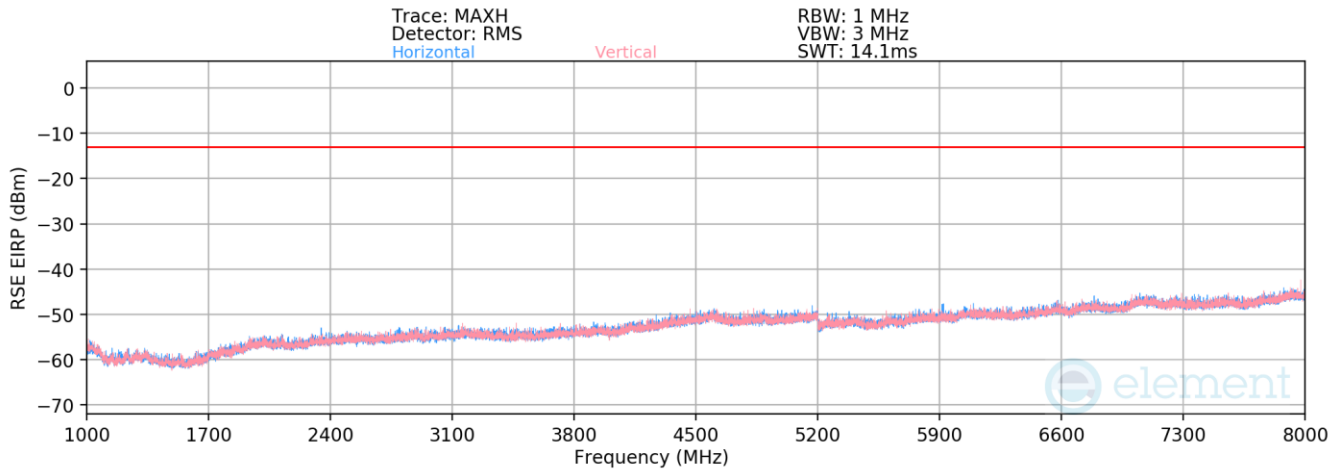
Table 7-9. Radiated Spurious Data (LTE Band 12/17 – High Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 13



Plot 7-147. Radiated Spurious Plot Below 1GHz (LTE Band 13)



Plot 7-148. Radiated Spurious Plot (LTE Band 13)

Bandwidth (MHz):	10
Frequency (MHz):	782
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]
940.88	H	100	305	-71.38	3.32	38.94	-56.32	-13.00	-43.32

Table 7-10. Radiated Spurious Data Below 1GHz (LTE Band 13 – Mid Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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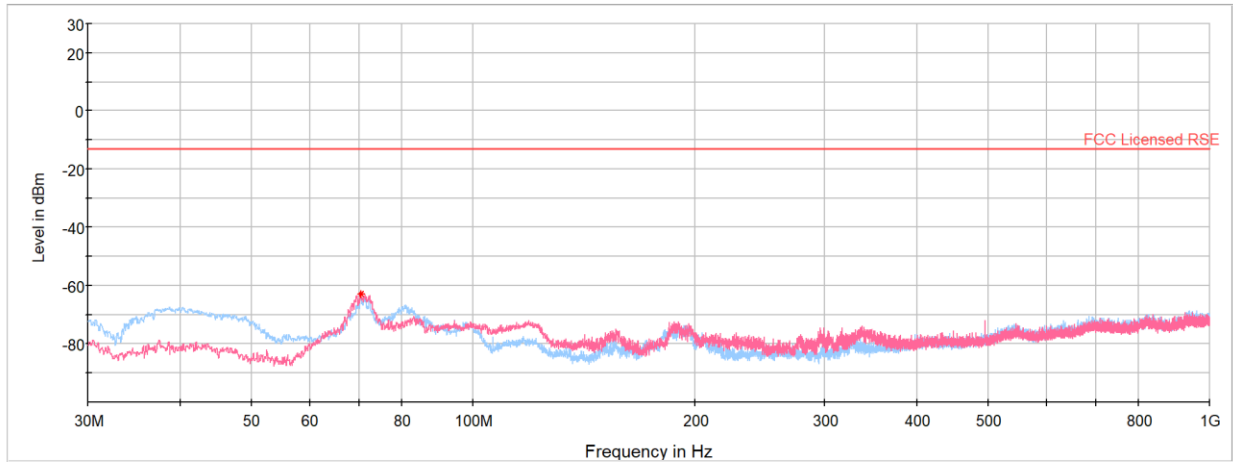
Bandwidth (MHz):	10
Frequency (MHz):	782
RB / Offset:	1 / 25

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]
1564.00	H	-	-	-78.57	-2.48	25.95	-69.31	-40.00	-29.31
2346.00	H	213	25	-73.22	2.76	36.54	-58.71	-13.00	-45.71
3128.00	H	-	-	-80.72	4.51	30.79	-64.46	-13.00	-51.46
3910.00	H	-	-	-81.10	5.90	31.80	-63.46	-13.00	-50.46
4692.00	H	-	-	-81.82	7.69	32.87	-62.38	-13.00	-49.38

Table 7-11. Radiated Spurious Data (LTE Band 13 – Mid Channel)

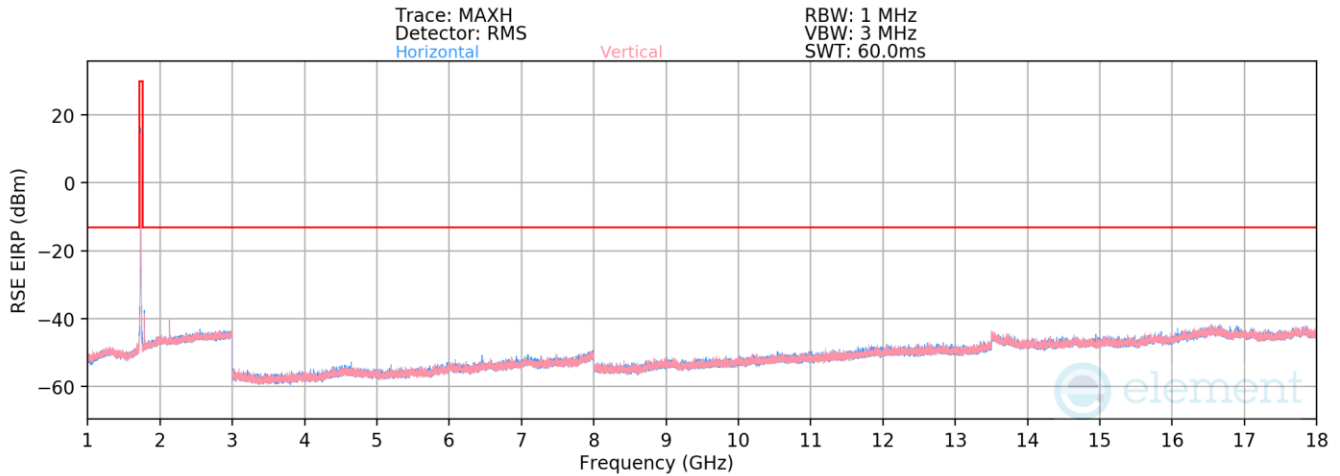
FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 – 03/22/2023	EUT Type: Portable Handset	Page 103 of 113

WCDMA AWS



— Preview Result 1H-PK+ — Preview Result 1V-PK+ * Critical_Freqs PK+ — FCC Licensed RSE ◆ Final_Result QPK

Plot 7-149. Radiated Spurious Plot Below 1GHz (WCDMA AWS)



Plot 7-150. Radiated Spurious Plot (WCDMA AWS)

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 [dBuV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
70.35	V	300	32	-57.36	-17.40	32.24	-63.01	-13.00	-50.01

Table 7-12. Radiated Spurious Data Below 1GHz (WCDMA AWS – Mid Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Mode:	WCDMA RMC
Channel:	1312
Frequency (MHz):	1712.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3424.80	H	-	-	-81.00	5.26	31.26	-64.00	-13.00	-51.00
5137.20	H	105	238	-81.55	8.76	34.21	-61.05	-13.00	-48.05
6849.60	H	-	-	-83.96	11.56	34.60	-60.66	-13.00	-47.66
8562.00	H	-	-	-85.36	12.87	34.51	-60.74	-13.00	-47.74
10274.40	H	-	-	-85.18	15.04	36.86	-58.40	-13.00	-45.40

7-13. 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]
3465.20	H	-	-	-80.96	5.72	31.76	-63.50	-13.00	-50.50
5197.80	H	352	23	-81.07	9.00	34.93	-60.32	-13.00	-47.32
6930.40	H	-	-	-83.88	11.73	34.85	-60.40	-13.00	-47.40
8663.00	H	-	-	-85.42	13.01	34.59	-60.66	-13.00	-47.66
10395.60	H	-	-	-85.65	15.77	37.12	-58.13	-13.00	-45.13

Table 7-14. Radiated Spurious Data (WCDMA AWS – Mid Channel)

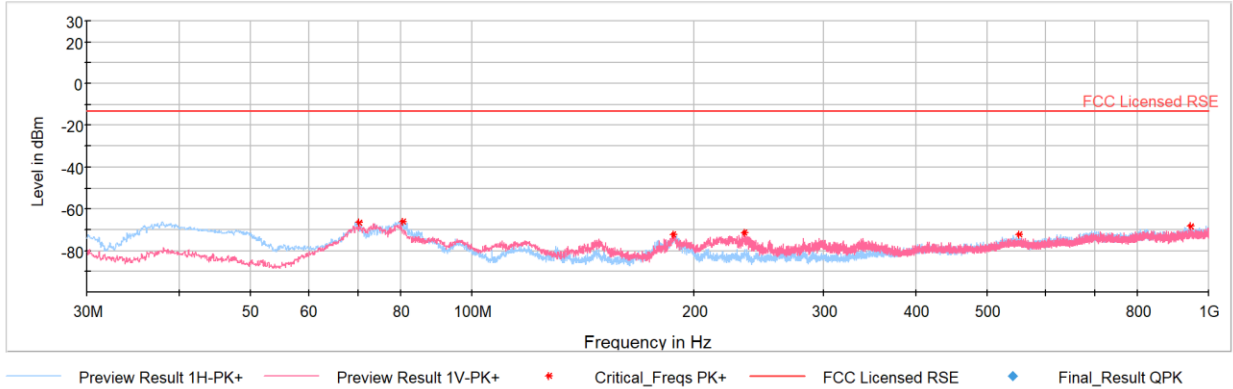
Mode:	WCDMA RMC
Channel:	1513
Frequency (MHz):	1752.6

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]
3505.20	H	-	-	-81.25	5.72	31.47	-63.79	-13.00	-50.79
5257.80	H	123	134	-79.40	8.75	36.35	-58.91	-13.00	-45.91
7010.40	H	-	-	-83.85	11.77	34.92	-60.34	-13.00	-47.34
8763.00	H	-	-	-84.66	12.84	35.18	-60.08	-13.00	-47.08
10515.60	H	-	-	-86.21	16.25	37.04	-58.22	-13.00	-45.22

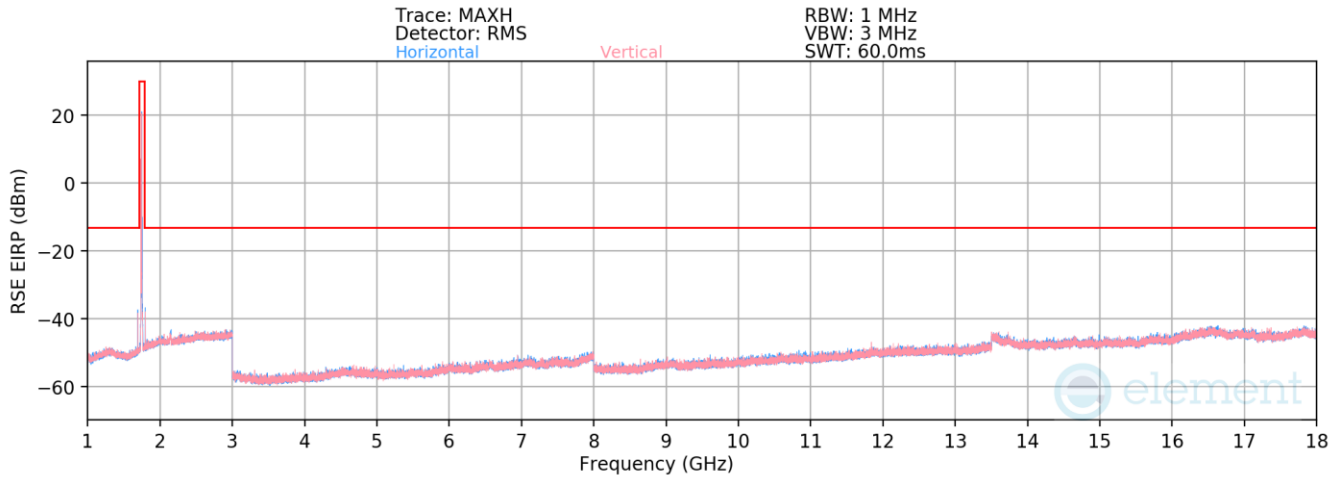
Table 7-15. Radiated Spurious Data (WCDMA AWS – High Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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LTE Band 66/4



Plot 7-151. Radiated Spurious Plot Below 1GHz (LTE Band 66/4)



Plot 7-152. Radiated Spurious Plot (LTE Band 66/4)

Bandwidth (MHz):	20
Frequency (MHz):	1745
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]
80.44	H	100	203	-60.33	-17.54	29.13	-66.13	-13.00	-53.13

Table 7-16. Radiated Spurious Data Below 1GHz (LTE Band 66/4 – Mid Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Bandwidth (MHz):	20
Frequency (MHz):	1720
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3440.00	H	291	21	-80.21	5.43	32.22	-63.04	-13.00	-50.04
5160.00	H	193	14	-72.65	8.83	43.18	-52.07	-13.00	-39.07
6880.00	H	221	357	-83.46	11.67	35.21	-60.05	-13.00	-47.05
8600.00	H	-	-	-85.36	12.84	34.48	-60.77	-13.00	-47.77
10320.00	H	-	-	-85.21	15.10	36.89	-58.37	-13.00	-45.37
12040.00	H	-	-	-85.82	17.85	39.03	-56.23	-13.00	-43.23

Table 7-17. Radiated Spurious Data (LTE Band 66/4 – Low Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1745
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3490.00	H	348	20	-80.40	5.73	32.33	-62.93	-13.00	-49.93
5235.00	H	205	339	-81.43	8.72	34.29	-60.97	-13.00	-47.97
6980.00	H	217	363	-84.03	11.70	34.67	-60.58	-13.00	-47.58
8725.00	H	-	-	-84.75	13.11	35.36	-59.89	-13.00	-46.89
10470.00	H	-	-	-86.07	15.98	36.91	-58.34	-13.00	-45.34
12215.00	H	-	-	-85.80	18.00	39.20	-56.06	-13.00	-43.06

Table 7-18. Radiated Spurious Data (LTE Band 66/4 – Mid Channel)

Bandwidth (MHz):	20
Frequency (MHz):	1770
RB / Offset:	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3540.00	H	184	359	-78.89	5.80	33.91	-61.34	-13.00	-48.34
5310.00	H	109	351	-78.87	8.54	36.67	-58.58	-13.00	-45.58
7080.00	H	-	-	-84.08	12.25	35.17	-60.09	-13.00	-47.09
8850.00	H	-	-	-84.77	13.19	35.42	-59.83	-13.00	-46.83
10620.00	H	-	-	-85.75	16.34	37.59	-57.67	-13.00	-44.67

Table 7-19. Radiated Spurious Data (LTE Band 66/4 – High Channel)

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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7.8 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015. 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 – Section 5.6

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

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

Test Notes

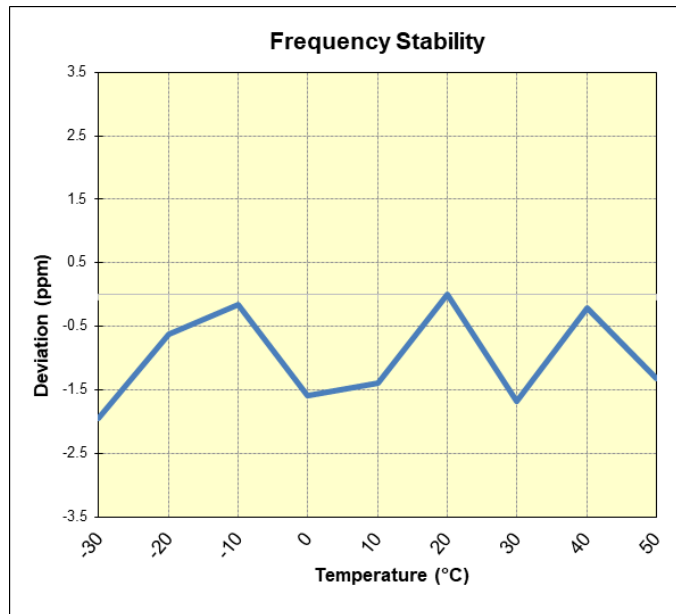
None

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Frequency Stability / Temperature Variation

LTE Band 12/17					
Operating Frequency (Hz):		707,500,000			
Ref. Voltage (VDC):		4.28			
Deviation Limit:		± 0.00025% or 2.5 ppm			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.28	- 30	707,500,061	-1,376	-0.0001945
		- 20	707,500,997	-439	-0.0000621
		- 10	707,501,331	-106	-0.0000149
		0	707,500,311	-1,126	-0.0001591
		+ 10	707,500,449	-987	-0.0001395
		+ 20 (Ref)	707,501,437	0	0.0000000
		+ 30	707,500,255	-1,182	-0.0001671
		+ 40	707,501,285	-152	-0.0000215
Battery Endpoint	3.69	+ 20	707,500,257	-1,180	-0.0001667

Table 7-20. LTE Band 12/17 Frequency Stability Data



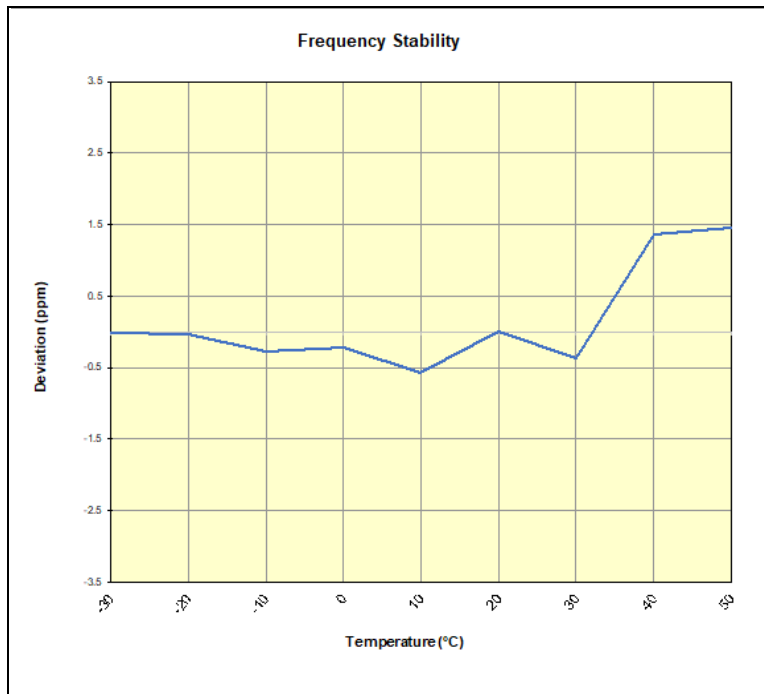
Plot 7-153. LTE Band 12/17 Frequency Stability Chart

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Frequency Stability / Temperature Variation

LTE Band 13					
Operating Frequency (Hz):		782,000,000			
Ref. Voltage (VDC):		4.28			
Deviation Limit:		± 0.00025% or 2.5 ppm			
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.28	- 30	782,000,892	-13	-0.0000017
		- 20	782,000,880	-25	-0.0000032
		- 10	782,000,689	-216	-0.0000276
		0	782,000,735	-170	-0.0000217
		+ 10	782,000,461	-444	-0.0000568
		+ 20 (Ref)	782,000,905	0	0.0000000
		+ 30	782,000,613	-292	-0.0000374
		+ 40	782,001,965	1,060	0.0001355
Battery Endpoint	3.69	+ 20	781,999,895	-1,010	-0.0001291

Table 7-21. LTE Band 13 Frequency Stability Data



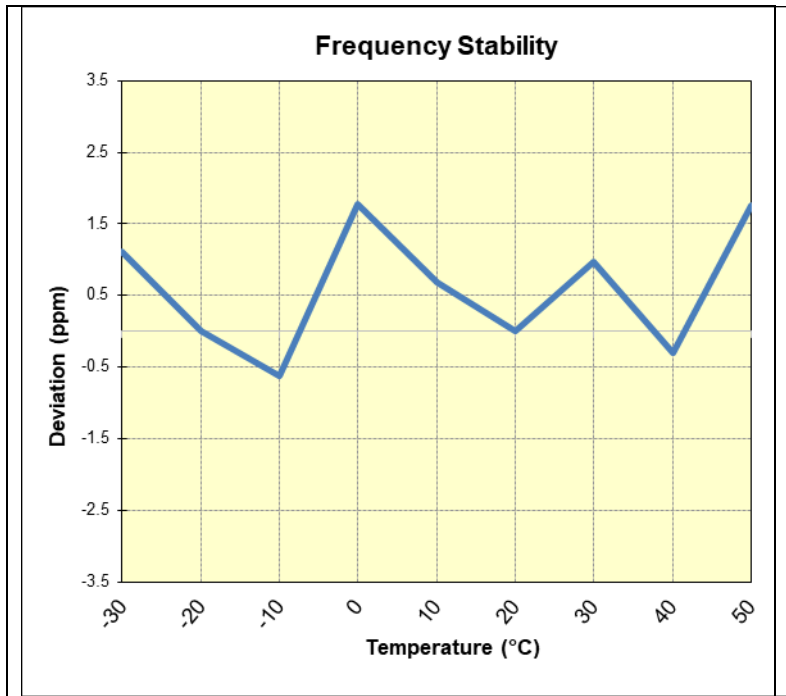
Plot 7-154. LTE Band 13 Frequency Stability Chart

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Frequency Stability / Temperature Variation

WCDMA AWS					
		Operating Frequency (Hz):		1,732,600,000	
		Ref. Voltage (VDC):		4.28	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.28	- 30	1,732,600,960	1,919	0.0001108
		- 20	1,732,599,039	-2	-0.0000001
		- 10	1,732,597,964	-1,077	-0.0000622
		0	1,732,602,117	3,076	0.0001775
		+ 10	1,732,600,237	1,196	0.0000690
		+ 20 (Ref)	1,732,599,041	0	0.0000000
		+ 30	1,732,600,710	1,669	0.0000963
		+ 40	1,732,598,533	-508	-0.0000293
		+ 50	1,732,602,082	3,041	0.0001755
Battery Endpoint	3.69	+ 20	1,732,597,991	-1,050	-0.0000606

Table 7-22. WCDMA AWS Frequency Stability Data



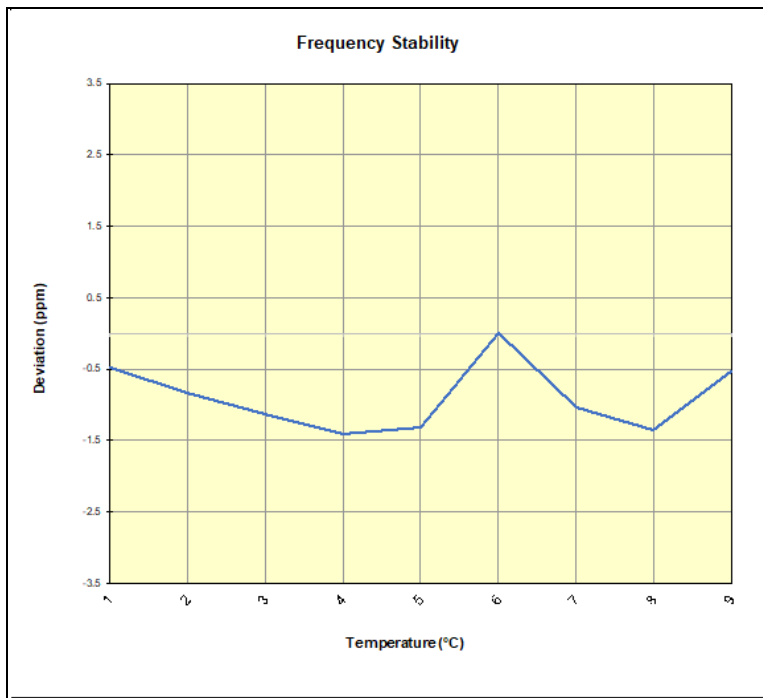
Plot 7-155. WCDMA AWS Frequency Stability Chart

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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Frequency Stability / Temperature Variation

LTE Band 66/4					
		Operating Frequency (Hz):		1,745,000,000	
		Ref. Voltage (VDC):		4.28	
		Deviation Limit:		± 0.00025% or 2.5 ppm	
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	4.28	- 30	1,745,001,934	-847	-0.0000485
		- 20	1,745,001,316	-1,464	-0.0000839
		- 10	1,745,000,815	-1,965	-0.0001126
		0	1,745,000,333	-2,447	-0.0001402
		+ 10	1,745,000,479	-2,302	-0.0001319
		+ 20 (Ref)	1,745,002,780	0	0.0000000
		+ 30	1,745,000,958	-1,822	-0.0001044
		+ 40	1,745,000,425	-2,355	-0.0001350
		+ 50	1,745,001,853	-927	-0.0000531
Battery Endpoint	3.69	+ 20	1,745,000,831	-1,949	-0.0001117

Table 7-23. LTE Band 66/4 Frequency Stability Data



Plot 7-156. LTE Band 66/4 Frequency Stability Chart

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Sony Corporation Portable Handset FCC ID: PY7-25682R** complies with all the requirements of Part 27 of the FCC rules.

FCC ID: PY7-25682R	PART 27 MEASUREMENT REPORT		Approved by: Technical Manager
Test Report S/N: 1M2302230018-03-R1.PY7	Test Dates: 02/22/2023 – 03/22/2023	EUT Type: Portable Handset	Page 113 of 113