

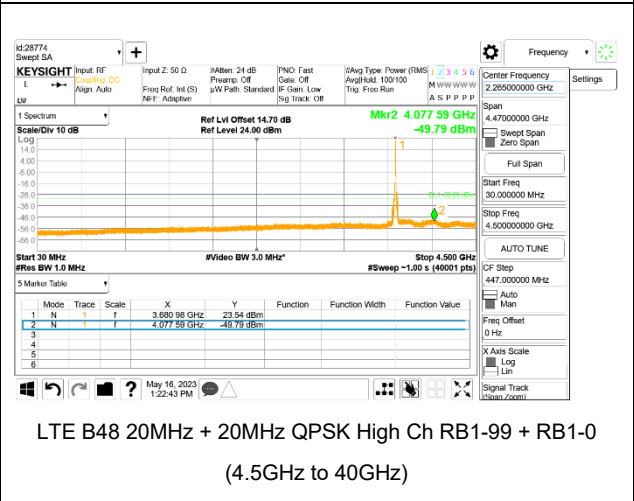
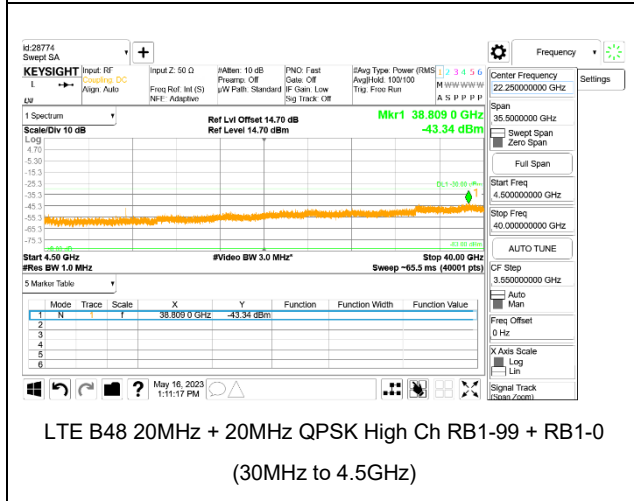
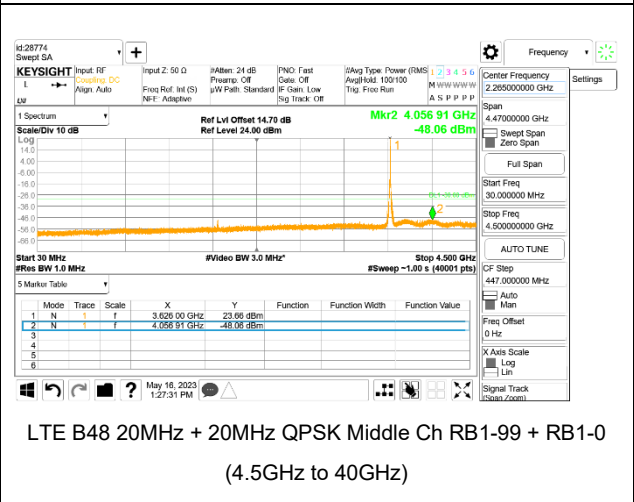
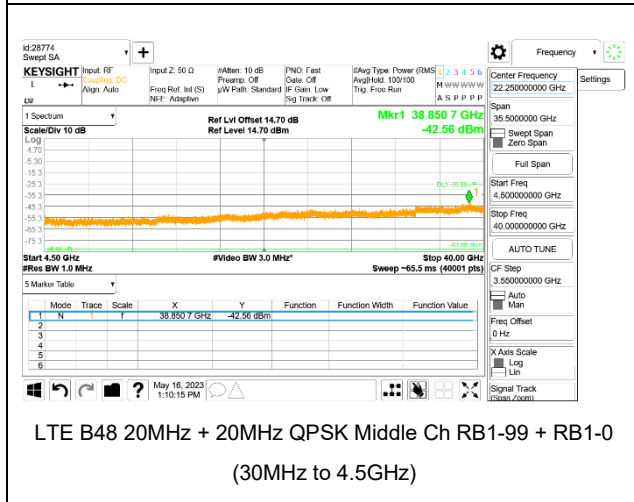
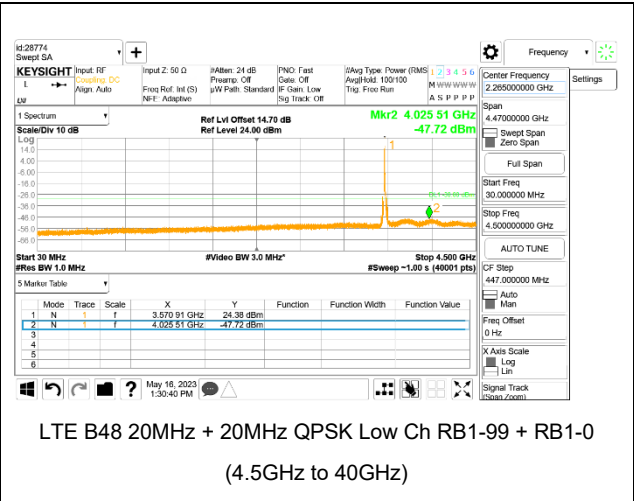
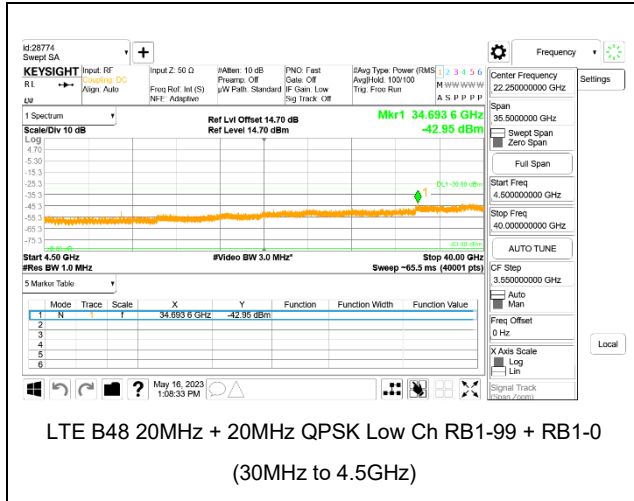
9.3.4 LTE BAND 48

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.



9.4. FREQUENCY STABILITY

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30°C to +50°C
- Voltage = (85% - 115%)

Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.
End Voltage, 3.2VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

9.4.1 LTE BAND 5

LIMITS

FCC §22.355

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

Test Engineer ID:	25602	Test Date:	3/31/2023
--------------------------	-------	-------------------	-----------

QPSK (10MHz + 10MHz BANDWIDTH)

Band		5		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		824	849	2.5	Within Authorized Frequency Block (Hz)			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)					
Normal (20°C)	Normal	824.7070	848.2575					
Extreme (50°C)		824.7070	848.2575	19.6	0.023	Yes		
Extreme (40°C)		824.7070	848.2575	27.6	0.033	Yes		
Extreme (30°C)		824.7070	848.2575	24.2	0.029	Yes		
Extreme (10°C)		824.7070	848.2575	11.7	0.014	Yes		
Extreme (0°C)		824.7070	848.2575	4.6	0.005	Yes		
Extreme (-10°C)		824.7070	848.2575	-25.1	-0.030	Yes		
Extreme (-20°C)		824.7070	848.2575	-23.2	-0.028	Yes		
Extreme (-30°C)		824.7070	848.2575	-23.9	-0.029	Yes		
20°C		15%	824.7070	848.2575	21.4	0.026	Yes	
	-15%	824.7070	848.2575	21.1	0.025	Yes		
	End Point Voltage	824.7070	848.2575	20.5	0.024	Yes		

9.4.2 LTE BAND 7

LIMITS

FCC: §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Engineer ID:	32061	Test Date:	3/31/2023
--------------------------	-------	-------------------	-----------

QPSK (20MHz + 20MHz BANDWIDTH)

Band		7		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2500	2570	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)
Temperature	Voltage							
Normal (20°C)	Normal	2500.4700	2569.4300					
Extreme (50°C)		2500.4700	2569.4300	17.9	0.007	Yes		
Extreme (40°C)		2500.4700	2569.4300	43.8	0.017	Yes		
Extreme (30°C)		2500.4700	2569.4300	46.8	0.018	Yes		
Extreme (10°C)		2500.4700	2569.4300	15.0	0.006	Yes		
Extreme (0°C)		2500.4700	2569.4300	-18.7	-0.007	Yes		
Extreme (-10°C)		2500.4700	2569.4300	-45.8	-0.018	Yes		
Extreme (-20°C)		2500.4699	2569.4299	-53.0	-0.021	Yes		
Extreme (-30°C)		2500.4700	2569.4300	-40.2	-0.016	Yes		
20°C	15%	2500.4700	2569.4300	41.1	0.016	Yes		
	-15%	2500.4700	2569.4300	40.0	0.016	Yes		
	End Point Voltage	2500.4700	2569.4300	40.4	0.016	Yes		

9.4.3 LTE BAND 41

LIMITS

FCC: §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Engineer ID:	32061	Test Date:	3/16/2023
-------------------	-------	------------	-----------

QPSK (20MHz + 20MHz BANDWIDTH)

Band		41		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		2496	2690	0				
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)	Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)			
Normal (20°C)	Normal	2496.5200	2689.4600					
Extreme (50°C)		2496.5200	2689.4600	21.9	0.008	Yes		
Extreme (40°C)		2496.5200	2689.4600	38.8	0.015	Yes		
Extreme (30°C)		2496.5200	2689.4600	42.1	0.016	Yes		
Extreme (10°C)		2496.5200	2689.4600	-9.9	-0.004	Yes		
Extreme (0°C)		2496.5200	2689.4600	-18.0	-0.007	Yes		
Extreme (-10°C)		2496.5199	2689.4599	-50.9	-0.020	Yes		
Extreme (-20°C)		2496.5199	2689.4599	-54.3	-0.021	Yes		
Extreme (-30°C)		2496.5200	2689.4600	-43.9	-0.017	Yes		
20°C	15%	2496.5200	2689.4600	35.1	0.014	Yes		
	-15%	2496.5200	2689.4600	36.6	0.014	Yes		
	End Point Voltage	2496.5200	2689.4600	34.9	0.013	Yes		

9.4.4 LTE BAND 48

Test Engineer ID:	32061	Test Date:	3/15/2023
-------------------	-------	------------	-----------

QPSK (20MHz + 20MHz BANDWIDTH)

Band		48		Frequency Range		Frequency Error Reading (Hz)	Limit	
Condition		3550	3700	Frequency Stability (ppm)	Within Authorized Frequency Block (Hz)			
Temperature	Voltage	Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)					
Normal (20°C)	Normal	3550.5100	3699.5000					
Extreme (50°C)		3550.5100	3699.5000	35.1	0.010	Yes		
Extreme (40°C)		3550.5100	3699.5000	47.3	0.013	Yes		
Extreme (30°C)		3550.5100	3699.5000	39.2	0.011	Yes		
Extreme (10°C)		3550.5100	3699.5000	-18.3	-0.005	Yes		
Extreme (0°C)		3550.5100	3699.5000	-41.6	-0.011	Yes		
Extreme (-10°C)		3550.5099	3699.4999	-53.6	-0.015	Yes		
Extreme (-20°C)		3550.5099	3699.4999	-58.9	-0.016	Yes		
Extreme (-30°C)		3550.5099	3699.4999	-54.5	-0.015	Yes		
20°C	15%	3550.5100	3699.5000	48.5	0.013	Yes		
	-15%	3550.5100	3699.5000	48.6	0.013	Yes		
	End Point Voltage	3550.5101	3699.5001	51.0	0.014	Yes		

9.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

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

RESULT

Test was performed on Antenna 1; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average ratio criteria.

9.5.1 LTE BAND 5

Test Engineer ID:	12482	Test Date:	5/9/2023
--------------------------	-------	-------------------	----------

Band	Bandwidth (MHz)	PCC f (MHz)	SCC1 f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
					Peak	Average	
Band 5	3MHz / 5MHz	834.0	837.9	QPSK	32.37	25.46	6.91
				16QAM	32.36	25.48	6.88
	5 MHz / 3MHz	835.0	838.9	QPSK	32.21	25.46	6.75
				16QAM	32.32	25.47	6.85
	5MHz / 10MHz	831.6	838.8	QPSK	30.02	23.32	6.70
				16QAM	30.05	22.31	7.74
	10MHz / 5MHz	834.3	841.5	QPSK	30.01	23.34	6.67
				16QAM	30.01	23.34	6.67
	10MHz / 10MHz	831.5	841.4	QPSK	30.07	23.31	6.76
				16QAM	30.14	22.33	7.81
Duty Cycle Correction Factor (dB) =			0.00				
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor							

9.5.2 LTE BAND 7

Test Engineer ID:	25780	Test Date:	5/9/2023
--------------------------	-------	-------------------	----------

Band	Bandwidth (MHz)	PCC f (MHz)	SCC1 f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)	
					Peak	Average		
Band 7	10MHz / 20MHz	2525.6	2540.0	QPSK	30.01	23.63	6.38	
				16QAM	30.10	22.64	7.46	
	20MHz / 10MHz	2530.1	2544.5	QPSK	29.92	23.65	6.27	
				16QAM	30.20	22.67	7.53	
	15 MHz / 15MHz	2527.5	2542.5	QPSK	29.83	23.64	6.19	
				16QAM	30.08	22.67	7.41	
	15MHz / 20MHz	2525.3	2542.4	QPSK	29.68	23.64	6.04	
				16QAM	30.18	22.64	7.54	
	20MHz / 15MHz	2527.6	2544.7	QPSK	29.88	23.65	6.23	
				16QAM	30.17	22.65	7.52	
	20MHz / 20MHz	2525.1	2544.9	QPSK	29.70	23.63	6.07	
				16QAM	30.10	22.64	7.46	
	Duty Cycle Correction Factor (dB) =			0.00				
	Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor							

9.5.3 LTE BAND 41

Test Engineer ID:	25602	Test Date:	12/27/2022
--------------------------	-------	-------------------	------------

Band	Bandwidth (MHz)	PCC f (MHz)	SCC1 f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
					Peak	Average	
Band 41 (FCC)	5MHz / 20MHz	2583.8	2595.5	QPSK	33.52	20.55	5.98
				16QAM	33.58	19.54	7.05
	20MHz / 5MHz	2590.5	2602.2	QPSK	33.56	20.59	5.98
				16QAM	33.61	19.61	7.01
	10MHz / 20MHz	2583.6	2598.0	QPSK	33.45	20.52	5.94
				16QAM	33.48	19.54	6.95
	20MHz / 10MHz	2588.1	2602.5	QPSK	33.48	19.54	6.95
				16QAM	33.56	20.61	5.96
	15MHz / 15MHz	2585.5	2600.5	QPSK	33.50	20.54	5.97
				16QAM	33.55	19.56	7.00
	15MHz / 20MHz	2583.3	2600.4	QPSK	33.49	20.56	5.94
				16QAM	33.54	19.58	6.97
	20MHz / 15MHz	2585.6	2602.7	QPSK	33.53	20.59	5.95
				16QAM	33.60	19.57	7.04
	20MHz / 20MHz	2583.1	2602.9	QPSK	33.57	20.55	6.03
				16QAM	33.56	19.55	7.02
Duty Cycle Correction Factor (dB) =			6.99				
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor							

9.5.4 LTE BAND 48

Test Engineer ID:	25780	Test Date:	4/27/2022
--------------------------	-------	-------------------	-----------

Band	Bandwidth (MHz)	PCC f (MHz)	SCC1 f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)	
					Peak	Average		
Band 41 (FCC)	5MHz / 20MHz	3615.8	3627.5	QPSK	31.23	15.20	9.04	
				16QAM	32.43	15.23	10.21	
	20MHz / 5MHz	3622.5	3634.2	QPSK	31.32	15.22	9.11	
				16QAM	32.34	15.24	10.11	
	10MHz / 20MHz	3615.6	3630.0	QPSK	30.92	14.74	9.19	
				16QAM	31.88	14.71	10.18	
	20MHz / 10MHz	3620.1	3634.5	QPSK	30.62	14.74	8.89	
				16QAM	31.80	14.74	10.07	
	15MHz / 20MHz	3615.3	3632.4	QPSK	30.87	14.72	9.16	
				16QAM	32.17	14.73	10.45	
	20MHz / 15MHz	3617.6	3634.7	QPSK	30.90	14.74	9.17	
				16QAM	31.59	14.74	9.86	
	20MHz / 20MHz	3615.1	3634.9	QPSK	31.07	14.71	9.37	
				16QAM	31.81	14.71	10.11	
	Duty Cycle Correction Factor (dB) =			6.99				
	Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor							

10. RADIATED TEST RESULTS

Using the test configuration shown in Figure 6 below, we measure the radiated emissions directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement method.

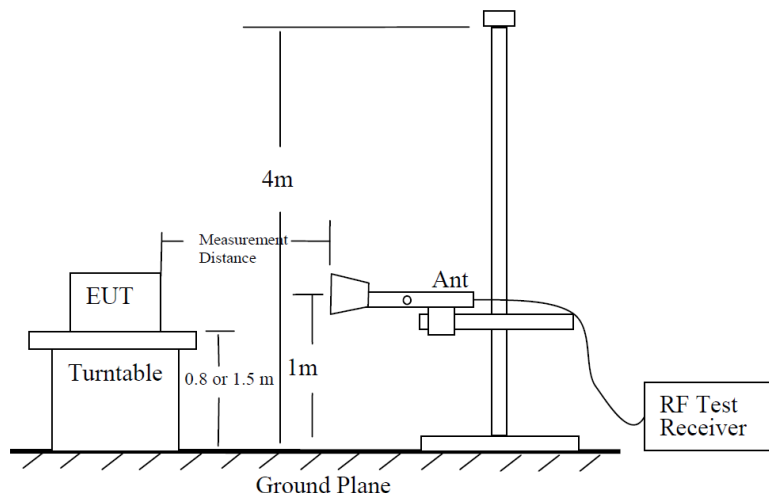


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

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

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.

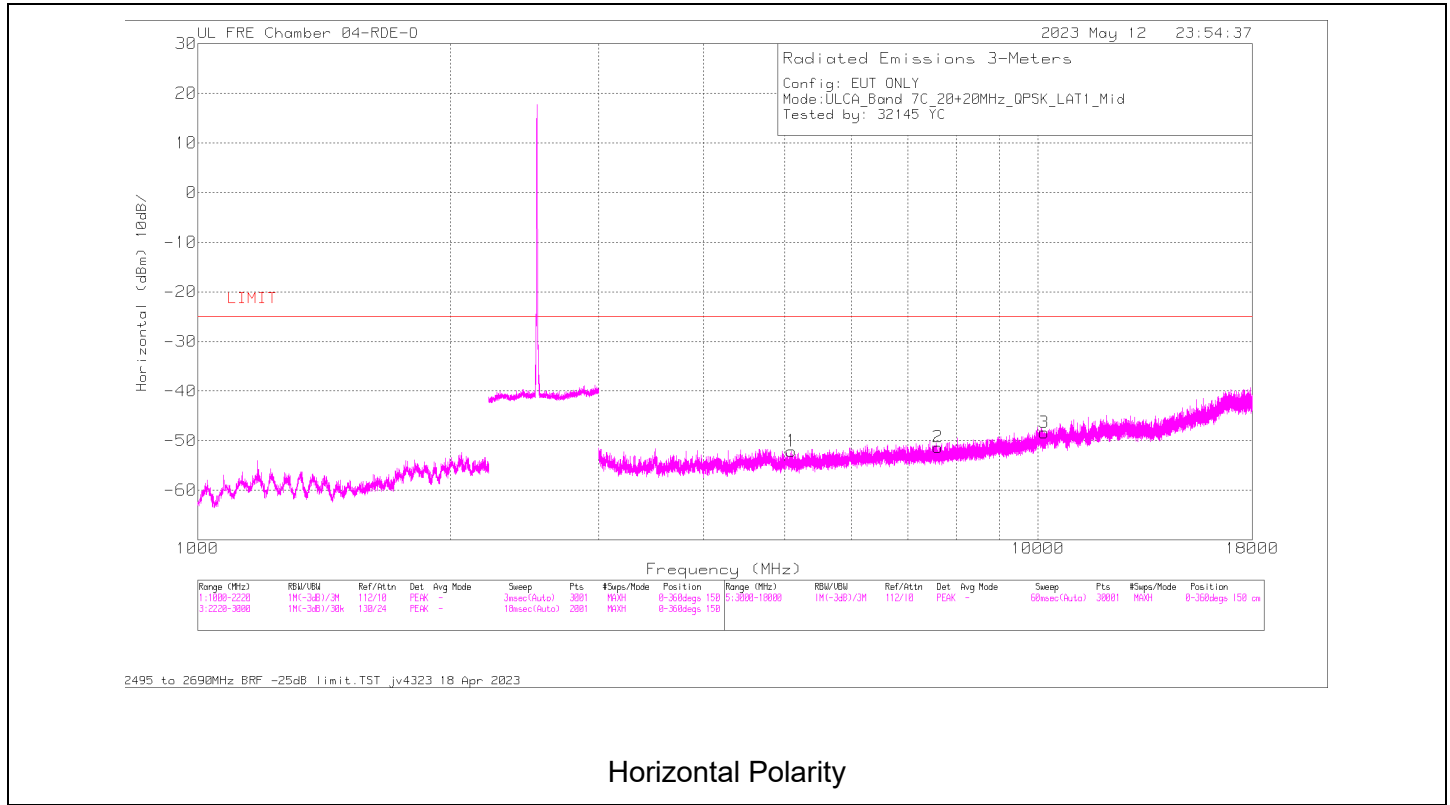
So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

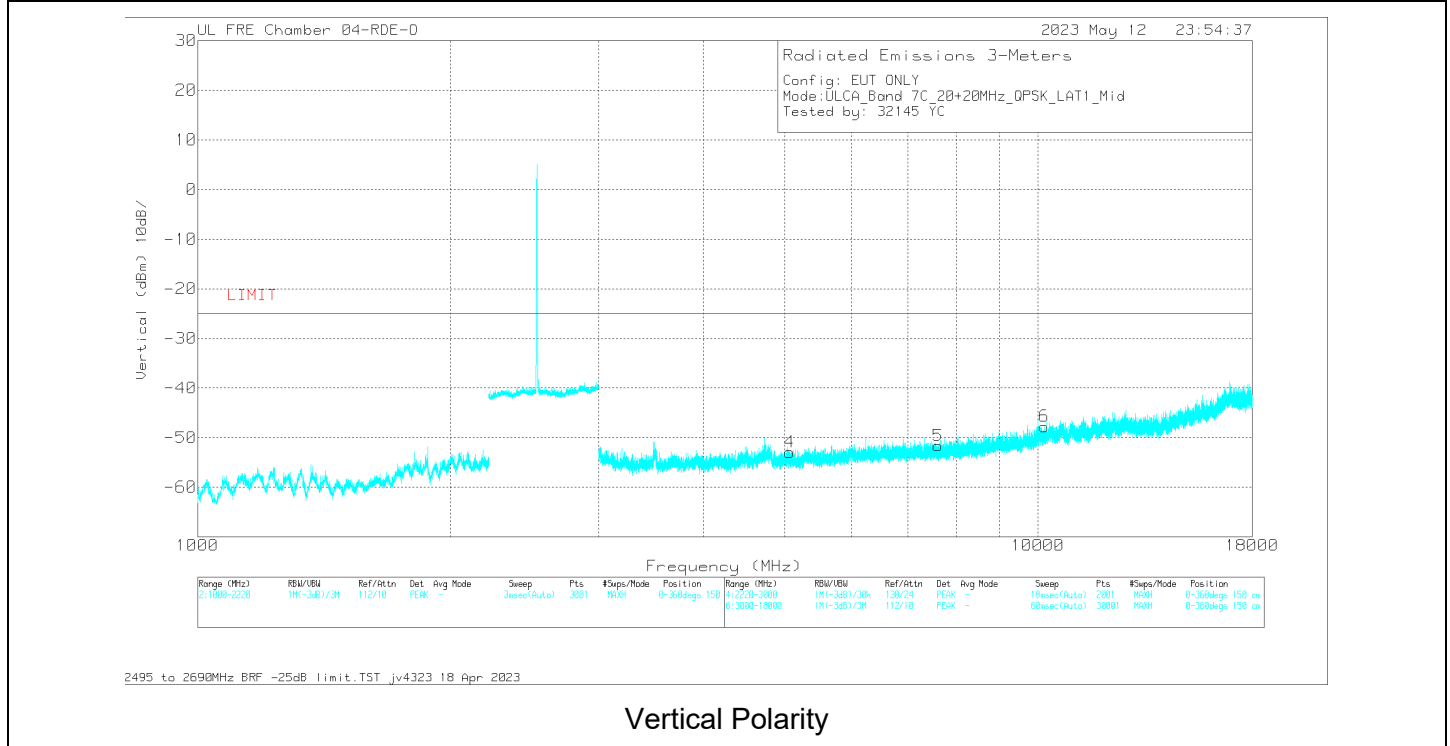
Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

Note: Confidence check of each chamber is performed daily to see if any degradation from expected/normal reading reference data. Ambient check of each chamber is performed monthly.

Example Plot



Horizontal Polarity



Vertical Polarity

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	80404_ACF(dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
4	5.069000	53.22	Pk	34.2	-95.2	-45.14	-52.92	-25	-27.92	V
1	5.090000	53.93	Pk	34.2	-95.2	-45.04	-52.11	-25	-27.11	H
2	7.604000	50.68	Pk	35.9	-95.2	-42.68	-51.3	-25	-26.3	H
5	7.606000	50.33	Pk	35.9	-95.2	-42.66	-51.63	-25	-26.63	V
3	10.173000	50.82	Pk	37.6	-95.2	-41.58	-48.36	-25	-23.36	H
6	10.177000	51.44	Pk	37.6	-95.2	-41.6	-47.76	-25	-22.76	V

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 1

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.1.1 LTE BAND 5

LIMIT

FCC: §22.917(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 5 (10.0MHZ + 10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/16/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 5 QPSK 10MHz + 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz + 838.9MHz									
1.670950	55.56	Pk	28.9	-95.2	-46.43	-57.17	-13	-44.17	V
1.682200	55.70	Pk	28.8	-95.2	-46.56	-57.26	-13	-44.26	H
2.518300	55.15	Pk	32.2	-95.2	-46.29	-54.14	-13	-41.14	H
2.531800	55.06	Pk	32.3	-95.2	-46.66	-54.50	-13	-41.50	V
3.360700	53.05	Pk	33.0	-95.2	-45.04	-54.19	-13	-41.19	V
3.364300	53.25	Pk	33.0	-95.2	-45.16	-54.11	-13	-41.11	H
Mid Channel, 831.6MHz + 841.5MHz									
1.661500	56.03	Pk	28.9	-95.2	-46.48	-56.75	-13	-43.75	V
1.677250	56.93	Pk	28.9	-95.2	-46.52	-55.89	-13	-42.89	H
2.507500	54.42	Pk	32.3	-95.2	-46.09	-54.57	-13	-41.57	V
2.511550	56.06	Pk	32.3	-95.2	-46.09	-52.93	-13	-39.93	H
3.363850	53.23	Pk	33.0	-95.2	-45.15	-54.12	-13	-41.12	V
3.367000	53.35	Pk	33.0	-95.2	-45.00	-53.85	-13	-40.85	H
High Channel, 834.1MHz + 844MHz									
1.666900	55.25	Pk	28.9	-95.2	-46.54	-57.59	-13	-44.59	V
1.677700	56.68	Pk	28.9	-95.2	-46.5	-56.12	-13	-43.12	H
2.545300	54.86	Pk	32.3	-95.2	-46.63	-54.67	-13	-41.67	H
2.562400	56.05	Pk	32.0	-95.2	-46.9	-54.05	-13	-41.05	V
3.372850	53.65	Pk	33.0	-95.2	-45.23	-53.78	-13	-40.78	H
3.383650	52.77	Pk	32.9	-95.2	-45.04	-54.57	-13	-41.57	V

10.1.2. LTE BAND 7

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/12/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 7 QPSK 20MHz + 20MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz + 2529.8MHz									
5.060000	53.48	Pk	34.3	-95.2	-45.23	-52.65	-25	-27.65	H
5.061000	53.70	Pk	34.3	-95.2	-45.19	-52.39	-25	-27.39	V
7.535000	50.66	Pk	35.9	-95.2	-42.73	-51.37	-25	-26.37	V
7.584000	50.47	Pk	35.7	-95.2	-42.59	-51.62	-25	-26.62	H
10.098500	50.31	Pk	37.5	-95.2	-40.82	-48.21	-25	-23.21	V
10.126500	51.01	Pk	37.4	-95.2	-41.15	-47.94	-25	-22.94	H
Mid Channel, 2525.1MHz + 2544.9MHz									
5.06900	53.22	Pk	34.2	-95.2	-45.14	-52.92	-25	-27.92	V
5.090000	53.93	Pk	34.2	-95.2	-45.04	-52.11	-25	-27.11	H
7.604000	50.68	Pk	35.9	-95.2	-42.68	-51.30	-25	-26.30	H
7.606000	50.33	Pk	35.9	-95.2	-42.66	-51.63	-25	-26.63	V
10.173000	50.82	Pk	37.6	-95.2	-41.58	-48.36	-25	-23.36	H
10.177000	51.44	Pk	37.6	-95.2	-41.6	-47.76	-25	-22.76	V
High Channel, 2540.2MHz + 2560MHz									
5.094500	53.07	Pk	34.2	-95.2	-45.02	-52.95	-25	-27.95	V
5.103500	52.77	Pk	34.3	-95.2	-44.97	-53.10	-25	-28.10	H
7.660000	50.28	Pk	35.9	-95.2	-42.43	-51.45	-25	-26.45	V
7.671500	50.93	Pk	36.0	-95.2	-42.3	-50.57	-25	-25.57	H
10.205500	51.33	Pk	37.6	-95.2	-41.93	-48.20	-25	-23.20	V
10.236500	51.13	Pk	37.6	-95.2	-41.62	-48.09	-25	-23.09	H

10.1.3 LTE BAND 41

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	12/12/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE BAND 41 20.0MHz + 20.0MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	200786 ACF (dB/m)	BRF 2495-2690MHz T1790 1-18GHz	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz + 2525.8MHz										
5.041406	37.94	Pk	34.6	.6	-95.2	-31.06	-53.12	-25	-28.12	V
5.050313	37.24	Pk	34.6	.6	-95.2	-31.04	-53.8	-25	-28.8	H
7.560938	33.94	Pk	36	.4	-95.2	-27.24	-52.1	-25	-27.1	H
7.587188	34.42	Pk	36	.5	-95.2	-27.2	-51.48	-25	-26.48	V
10.089844	33.33	Pk	37.5	.6	-95.2	-25.15	-48.92	-25	-23.92	V
10.107188	33.93	Pk	37.5	.7	-95.2	-25.16	-48.23	-25	-23.23	H
Mid Channel, 2583.1MHz + 2602.9MHz										
5.111250	37.11	Pk	34.7	.8	-95.2	-30.77	-53.36	-25	-28.36	V
5.164219	36.95	Pk	34.7	.7	-95.2	-30.45	-53.30	-25	-28.30	H
7.718438	33.45	Pk	35.9	.3	-95.2	-26.85	-52.40	-25	-27.40	V
7.745156	33.14	Pk	35.9	.3	-95.2	-27.00	-52.86	-25	-27.86	H
10.299844	33.86	Pk	37.6	.6	-95.2	-25.20	-48.34	-25	-23.34	V
10.317656	32.94	Pk	37.6	.6	-95.2	-25.07	-49.13	-25	-24.13	H
High Channel, 2660.2MHz + 2680MHz										
5.326406	36.88	Pk	34.6	.8	-95.2	-30.37	-53.29	-25	-28.29	H
5.353594	36.19	Pk	34.6	.5	-95.2	-30.09	-54.00	-25	-29.00	H
8.028984	33.84	Pk	36.0	.3	-95.2	-26.56	-51.62	-25	-26.62	H
8.056875	34.13	Pk	36.0	.4	-95.2	-26.48	-51.15	-25	-26.15	H
10.696406	32.40	Pk	37.7	.5	-95.2	-24.28	-48.88	-25	-23.88	H
10.714688	32.68	Pk	37.7	.5	-95.2	-24.07	-48.39	-25	-23.39	H

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT2

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.2.1 LTE BAND 5

LIMIT

FCC: §22.917(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 5 (10.0MHZ + 10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/16/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 5 QPSK 10MHz + 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz + 838.9MHz									
1.671400	55.79	Pk	28.9	-95.2	-46.43	-56.94	-13	-43.94	V
1.679950	55.69	Pk	28.8	-95.2	-46.48	-57.19	-13	-44.19	H
2.503000	55.67	Pk	32.2	-95.2	-46.07	-53.40	-13	-40.40	H
2.506150	55.45	Pk	32.3	-95.2	-46.03	-53.48	-13	-40.48	V
3.367450	53.11	Pk	33.0	-95.2	-44.97	-54.06	-13	-41.06	H
3.369250	52.64	Pk	33.0	-95.2	-44.95	-54.51	-13	-41.51	V
Mid Channel, 831.6MHz + 841.5MHz									
1.697500	55.17	Pk	28.9	-95.2	-46.62	-57.75	-13	-44.75	H
1.701550	55.18	Pk	29.1	-95.2	-46.58	-57.50	-13	-44.50	V
2.515150	54.60	Pk	32.3	-95.2	-46.22	-54.52	-13	-41.52	H
2.528650	54.63	Pk	32.2	-95.2	-46.47	-54.84	-13	-41.84	V
3.365650	52.99	Pk	33.0	-95.2	-45.12	-54.33	-13	-41.33	H
3.367000	53.10	Pk	33.0	-95.2	-45.00	-54.10	-13	-41.10	V
High Channel, 834.1MHz + 844MHz									
1.685350	55.63	Pk	28.8	-95.2	-46.44	-57.21	-13	-44.21	V
1.687150	55.20	Pk	28.7	-95.2	-46.43	-57.73	-13	-44.73	H
2.542150	54.69	Pk	32.4	-95.2	-46.61	-54.72	-13	-41.72	H
2.547100	54.76	Pk	32.3	-95.2	-46.74	-54.88	-13	-41.88	V
3.378700	53.28	Pk	32.9	-95.2	-45.17	-54.19	-13	-41.19	V
3.387700	53.75	Pk	32.9	-95.2	-45.23	-53.78	-13	-40.78	H

10.2.2 LTE BAND 7

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/18/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 7 QPSK 20MHz + 20MHz
Chamber #:	04-RDE-N

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz + 2529.8MHz									
5.067000	58.57	Pk	34.4	-95.2	-49.67	-51.90	-25	-26.90	H
5.075500	58.85	Pk	34.4	-95.2	-49.57	-51.52	-25	-26.52	V
7.569000	53.46	Pk	35.7	-95.2	-44.67	-50.71	-25	-25.71	H
7.581000	53.60	Pk	35.5	-95.2	-44.55	-50.65	-25	-25.65	V
10.116500	49.50	Pk	37.3	-95.2	-39.08	-47.48	-25	-22.48	V
10.117000	49.90	Pk	37.2	-95.2	-39.03	-47.13	-25	-22.13	H
Mid Channel, 2525.1MHz + 2544.9MHz									
5.076000	58.38	Pk	34.4	-95.2	-49.56	-51.98	-25	-26.98	H
5.091500	58.55	Pk	34.5	-95.2	-49.78	-51.93	-25	-26.93	V
7.663000	53.71	Pk	35.8	-95.2	-44.78	-50.47	-25	-25.47	H
7.663000	54.05	Pk	35.8	-95.2	-44.78	-50.13	-25	-25.13	V
10.161000	49.35	Pk	37.2	-95.2	-38.54	-47.19	-25	-22.19	H
10.167000	48.69	Pk	37.3	-95.2	-38.77	-47.98	-25	-22.98	V
High Channel, 2540.2MHz + 2560MHz									
5.1075	58.98	Pk	34.6	-95.2	-49.76	-51.38	-25	-26.38	H
5.1115	58.39	Pk	34.6	-95.2	-49.84	-52.05	-25	-27.05	V
7.654	54.08	Pk	35.6	-95.2	-44.63	-50.15	-25	-25.15	V
7.6895	54.79	Pk	35.6	-95.2	-44.72	-49.53	-25	-24.53	H
10.191	48.98	Pk	37.3	-95.2	-38.73	-47.65	-25	-22.65	V
10.245	49.61	Pk	37.4	-95.2	-38.81	-47.00	-25	-22.00	H

10.2.3 LTE BAND 41

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/17/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE BAND 41 20.0MHz + 20.0MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz + 2525.8MHz									
5.020000	54.51	Pk	34.2	-95.2	-45.56	-52.05	-25	-27.05	V
5.042000	53.61	Pk	34.4	-95.2	-45.50	-52.69	-25	-27.69	H
7.564750	52.51	Pk	36.0	-95.2	-42.46	-49.15	-25	-24.15	H
7.567500	50.50	Pk	36.0	-95.2	-42.47	-51.17	-25	-26.17	V
10.113500	51.23	Pk	37.4	-95.2	-40.87	-47.44	-25	-22.44	V
10.123000	52.37	Pk	37.4	-95.2	-41.05	-46.48	-25	-21.48	H
Mid Channel, 2583.1MHz + 2602.9MHz									
5.185000	53.10	Pk	34.4	-95.2	-45.07	-52.77	-25	-27.77	V
5.193500	52.93	Pk	34.4	-95.2	-45.18	-53.05	-25	-28.05	H
7.812500	50.66	Pk	36.1	-95.2	-42.16	-50.6	-25	-25.60	H
7.818000	51.14	Pk	36.0	-95.2	-42.13	-50.19	-25	-25.19	V
10.388500	50.80	Pk	37.7	-95.2	-40.32	-47.02	-25	-22.02	H
10.395000	50.25	Pk	37.6	-95.2	-40.44	-47.79	-25	-22.79	V
High Channel, 2660.2MHz + 2680MHz									
5.345000	53.11	Pk	34.5	-95.2	-44.49	-52.08	-25	-27.08	V
5.349000	53.03	Pk	34.6	-95.2	-44.57	-52.14	-25	-27.14	H
7.991000	50.49	Pk	35.8	-95.2	-41.71	-50.62	-25	-25.62	V
8.025000	50.31	Pk	35.8	-95.2	-41.84	-50.93	-25	-25.93	H
10.721000	50.45	Pk	37.7	-95.2	-40.06	-47.11	-25	-22.11	H
10.734000	50.51	Pk	37.9	-95.2	-40.44	-47.23	-25	-22.23	V

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT3

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.3.1 LTE BAND 5

LIMIT

FCC: §22.917(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

QPSK LTE BAND 5 (10.0MHZ + 10.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/16/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 5 QPSK 10MHz + 10MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 829MHz + 838.9MHz									
1.659700	54.76	Pk	29	-95.2	-46.55	-57.99	-13	-44.99	H
1.665100	55.91	Pk	28.9	-95.2	-46.44	-56.83	-13	-43.83	V
2.510200	54.86	Pk	32.3	-95.2	-46.13	-54.17	-13	-41.17	H
2.522800	54.89	Pk	32.2	-95.2	-46.35	-54.46	-13	-41.46	V
3.371050	52.59	Pk	33	-95.2	-45.11	-54.72	-13	-41.72	H
3.376450	53.16	Pk	32.9	-95.2	-45.05	-54.19	-13	-41.19	V
Mid Channel, 831.6MHz + 841.5MHz									
1.675900	54.70	Pk	28.9	-95.2	-46.61	-58.21	-13	-45.21	V
1.690300	54.97	Pk	28.7	-95.2	-46.58	-58.11	-13	-45.11	H
2.509300	54.41	Pk	32.3	-95.2	-46.14	-54.63	-13	-41.63	H
2.510650	55.02	Pk	32.3	-95.2	-46.12	-54.00	-13	-41.00	V
3.367450	53.70	Pk	33.0	-95.2	-44.97	-53.47	-13	-40.47	H
3.375550	53.14	Pk	32.9	-95.2	-45.08	-54.24	-13	-41.24	V
High Channel, 834.1MHz + 844MHz									
1.688050	55.98	Pk	28.8	-95.2	-46.44	-56.86	-13	-43.86	H
1.688950	54.34	Pk	28.7	-95.2	-46.50	-58.66	-13	-45.66	V
2.548450	54.48	Pk	32.2	-95.2	-46.74	-55.26	-13	-42.26	V
2.548900	55.25	Pk	32.2	-95.2	-46.72	-54.47	-13	-41.47	H
3.370150	54.03	Pk	33.0	-95.2	-45.01	-53.18	-13	-40.18	H
3.391750	53.58	Pk	32.9	-95.2	-45.12	-53.84	-13	-40.84	V

10.3.2 LTE BAND 7

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/18/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 7 QPSK 20MHz + 20MHz
Chamber #:	04-RDE-N

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz + 2529.8MHz									
5.042000	59.21	Pk	34.4	-95.2	-49.80	-51.39	-25	-26.39	H
5.051000	58.46	Pk	34.4	-95.2	-49.61	-51.95	-25	-26.95	V
7.575500	53.83	Pk	35.6	-95.2	-44.91	-50.68	-25	-25.68	V
7.590000	53.08	Pk	35.7	-95.2	-44.45	-50.87	-25	-25.87	H
10.124500	49.37	Pk	37.3	-95.2	-39.19	-47.72	-25	-22.72	V
10.133500	49.45	Pk	37.4	-95.2	-39.05	-47.40	-25	-22.40	H
Mid Channel, 2525.1MHz + 2544.9MHz									
5.106500	58.59	Pk	34.6	-95.2	-49.75	-51.76	-25	-26.76	H
5.121500	58.39	Pk	34.6	-95.2	-49.63	-51.84	-25	-26.84	V
7.613500	53.64	Pk	35.6	-95.2	-45.15	-51.11	-25	-26.11	V
7.625500	54.50	Pk	35.6	-95.2	-44.85	-49.95	-25	-24.95	H
10.168000	48.54	Pk	37.4	-95.2	-38.77	-48.03	-25	-23.03	V
10.169000	48.89	Pk	37.4	-95.2	-38.75	-47.66	-25	-22.66	H
High Channel, 2540.2MHz + 2560MHz									
5.117500	58.88	Pk	34.6	-95.2	-49.48	-51.2	-25	-26.20	H
5.137000	58.20	Pk	34.7	-95.2	-49.08	-51.38	-25	-26.38	V
7.675500	53.31	Pk	35.7	-95.2	-44.50	-50.69	-25	-25.69	H
7.679000	53.73	Pk	35.7	-95.2	-44.34	-50.11	-25	-25.11	V
10.256000	48.83	Pk	37.3	-95.2	-38.79	-47.86	-25	-22.86	V
10.260000	49.60	Pk	37.4	-95.2	-38.59	-46.79	-25	-21.79	H

10.3.3 LTE BAND 41

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/11/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE BAND 41 20.0MHz + 20.0MHz
Chamber #:	04-RDE-O

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz + 2525.8MHz									
5.031500	53.87	Pk	34.3	-95.2	-45.49	-52.52	-25	-27.52	V
5.035500	54.45	Pk	34.3	-95.2	-45.53	-51.98	-25	-26.98	H
7.531000	50.45	Pk	36.0	-95.2	-42.72	-51.47	-25	-26.47	V
7.563500	50.27	Pk	36.0	-95.2	-42.47	-51.40	-25	-26.40	H
10.077000	51.79	Pk	37.4	-95.2	-41.43	-47.44	-25	-22.44	H
10.088500	50.80	Pk	37.3	-95.2	-41.16	-48.26	-25	-23.26	V
Mid Channel, 2583.1MHz + 2602.9MHz									
5.232500	53.18	Pk	34.6	-95.2	-45.28	-52.70	-25	-27.70	H
5.249000	53.19	Pk	34.7	-95.2	-45.25	-52.56	-25	-27.56	V
7.800000	50.76	Pk	36.0	-95.2	-42.20	-50.64	-25	-25.64	V
7.820000	52.08	Pk	35.9	-95.2	-42.16	-49.38	-25	-24.38	H
10.367500	50.77	Pk	37.5	-95.2	-40.26	-47.19	-25	-22.19	V
10.392500	51.61	Pk	37.7	-95.2	-40.37	-46.26	-25	-21.26	H
High Channel, 2660.2MHz + 2680MHz									
5.352000	52.63	Pk	34.6	-95.2	-44.48	-52.45	-25	-27.45	V
5.384000	54.04	Pk	34.7	-95.2	-44.46	-50.92	-25	-25.92	H
8.039000	49.75	Pk	35.9	-95.2	-41.89	-51.44	-25	-26.44	V
8.061000	50.21	Pk	35.8	-95.2	-41.71	-50.90	-25	-25.90	H
10.702500	51.23	Pk	37.9	-95.2	-39.90	-45.97	-25	-20.97	H
10.722500	50.86	Pk	37.7	-95.2	-40.13	-46.77	-25	-21.77	V

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT4

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.4.1 LTE BAND 7

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 7 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/18/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE Band 7 QPSK 20MHz + 20MHz
Chamber #:	04-RDE-N

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2510MHz + 2529.8MHz									
5.048000	58.95	Pk	34.4	-95.2	-49.95	-51.80	-25	-26.80	H
5.062000	58.61	Pk	34.4	-95.2	-49.71	-51.90	-25	-26.90	V
7.570500	54.37	Pk	35.7	-95.2	-44.66	-49.79	-25	-24.79	H
7.604000	53.99	Pk	35.7	-95.2	-45.12	-50.63	-25	-25.63	V
10.077000	49.57	Pk	37.4	-95.2	-39.65	-47.88	-25	-22.88	V
10.108500	49.69	Pk	37.4	-95.2	-39.25	-47.36	-25	-22.36	H
Mid Channel, 2525.1MHz + 2544.9MHz									
5.104000	59.74	Pk	34.6	-95.2	-49.84	-50.70	-25	-25.70	H
5.115500	58.09	Pk	34.7	-95.2	-49.58	-51.99	-25	-26.99	V
7.641500	54.03	Pk	35.7	-95.2	-44.43	-49.90	-25	-24.90	V
7.656000	53.86	Pk	35.7	-95.2	-44.74	-50.38	-25	-25.38	H
10.155000	48.28	Pk	37.3	-95.2	-38.79	-48.41	-25	-23.41	V
10.169000	48.96	Pk	37.4	-95.2	-38.75	-47.59	-25	-22.59	H
High Channel, 2540.2MHz + 2560MHz									
5.094500	58.29	Pk	34.5	-95.2	-49.70	-52.11	-25	-27.11	V
5.102500	58.80	Pk	34.6	-95.2	-49.92	-51.72	-25	-26.72	H
7.647310	60.61	Pk	35.7	-95.2	-44.66	-43.55	-25	-18.55	H
7.647541	61.72	Pk	35.7	-95.2	-44.70	-42.48	-25	-17.48	V
10.135000	49.85	Pk	37.4	-95.2	-39.04	-46.99	-25	-21.99	V
10.176000	48.84	Pk	37.4	-95.2	-38.76	-47.72	-25	-22.72	H

10.4.2 LTE BAND 41

LIMIT

FCC: §27.53 (m)

At least 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

QPSK LTE BAND 41 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	5/18/2023
Test Engineer:	32145
Configuration:	EUT only
Mode	LTE BAND 41 20.0MHz + 20.0MHz
Chamber #:	04-RDE-N

Frequency (GHz)	Meter Reading (dBuV)	Det	80404_ACF (dB) - 3mH	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 2506MHz + 2525.8MHz									
5.045500	58.84	Pk	34.4	-95.2	-49.79	-51.75	-25	-26.75	H
5.058000	59.33	Pk	34.4	-95.2	-49.78	-51.25	-25	-26.25	V
7.568000	53.19	Pk	35.8	-95.2	-44.74	-50.95	-25	-25.95	V
7.580000	53.81	Pk	35.6	-95.2	-44.45	-50.24	-25	-25.24	H
10.118500	49.99	Pk	37.2	-95.2	-39.20	-47.21	-25	-22.21	H
10.142000	48.91	Pk	37.4	-95.2	-39.10	-47.99	-25	-22.99	V
Mid Channel, 2583.1MHz + 2602.9MHz									
5.045500	58.84	Pk	34.4	-95.2	-49.79	-51.75	-25	-26.75	H
5.058000	59.33	Pk	34.4	-95.2	-49.78	-51.25	-25	-26.25	V
7.568000	53.19	Pk	35.8	-95.2	-44.74	-50.95	-25	-25.95	V
7.580000	53.81	Pk	35.6	-95.2	-44.45	-50.24	-25	-25.24	H
10.118500	49.99	Pk	37.2	-95.2	-39.2	-47.21	-25	-22.21	H
10.142000	48.91	Pk	37.4	-95.2	-39.1	-47.99	-25	-22.99	V
High Channel, 2660.2MHz + 2680MHz									
5.347500	56.40	Pk	35.1	-95.2	-48.54	-52.24	-25	-27.24	H
5.356000	56.59	Pk	35.0	-95.2	-48.26	-51.87	-25	-26.87	V
8.053000	54.53	Pk	35.8	-95.2	-45.84	-50.71	-25	-25.71	H
8.056500	54.69	Pk	35.8	-95.2	-45.93	-50.64	-25	-25.64	V
10.664000	50.09	Pk	37.7	-95.2	-39.87	-47.28	-25	-22.28	V
10.664000	50.09	Pk	37.7	-95.2	-39.87	-47.28	-25	-22.28	V

10.4.3 LTE BAND 48

LIMIT

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/11/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE Band 48 QPSK 20MHz + 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	200786 ACF (dB/m)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz + 3579.8MHz										
7.101581	24.48	RMS	35.7	.5	-95.2	-27.24	-61.76	-40	-21.76	V
7.131103	24.64	RMS	35.7	.5	-95.2	-27.13	-61.49	-40	-21.49	H
10.653900	22.46	RMS	37.8	.6	-95.2	-24.42	-58.76	-40	-18.76	V
10.700606	22.13	RMS	37.7	.5	-95.2	-24.27	-59.14	-40	-19.14	H
14.219438	20.27	RMS	39.3	.8	-95.2	-20.09	-54.92	-40	-14.92	V
14.245434	20.08	RMS	39.3	.8	-95.2	-20.31	-55.33	-40	-15.33	H
Mid Channel, 3615.1MHz + 3634.9MHz										
7.247428	24.70	RMS	35.8	.6	-95.2	-26.82	-60.92	-40	-20.92	V
7.256241	24.77	RMS	35.8	.6	-95.2	-26.87	-60.90	-40	-20.90	H
10.837641	21.92	RMS	37.7	.6	-95.2	-24.14	-59.12	-40	-19.12	V
10.875094	22.01	RMS	37.7	.5	-95.2	-24.08	-59.07	-40	-19.07	H
14.511131	19.36	RMS	39.7	.8	-95.2	-19.96	-55.30	-40	-15.30	H
14.528316	19.23	RMS	39.7	.8	-95.2	-19.58	-55.05	-40	-15.05	V
High Channel, 3670.2MHz + 3690MHz										
7.391072	24.75	RMS	35.8	.7	-95.2	-26.97	-60.92	-40	-20.92	H
7.416628	24.45	RMS	35.9	.5	-95.2	-26.92	-61.27	-40	-21.27	V
11.065884	21.94	RMS	37.8	.6	-95.2	-23.39	-58.25	-40	-18.25	H
11.079544	22.01	RMS	37.8	.7	-95.2	-23.49	-58.18	-40	-18.18	V
14.729241	19.64	RMS	40.0	.9	-95.2	-19.70	-54.36	-40	-14.36	V
14.775947	19.60	RMS	40.2	.8	-95.2	-20.06	-54.66	-40	-14.66	H

10.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT7

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.5.1. LTE BAND 48

LIMIT

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/11/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE Band 48 QPSK 20MHz + 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz + 3579.8MHz										
7.221872	24.98	RMS	35.8	.5	-95.2	-27.01	-60.93	-40	-20.93	V
7.250072	25.48	RMS	35.8	.6	-95.2	-26.86	-60.18	-40	-20.18	H
10.813406	22.24	RMS	37.7	.6	-95.2	-24.12	-58.78	-40	-18.78	V
10.854825	22.19	RMS	37.7	.5	-95.2	-23.99	-58.80	-40	-18.80	H
14.412431	19.93	RMS	39.6	.8	-95.2	-19.66	-54.53	-40	-14.53	V
14.486016	19.61	RMS	39.7	.7	-95.2	-19.52	-54.71	-40	-14.71	H
Mid Channel, 3615.1MHz + 3634.9MHz										
7.096294	25.21	RMS	35.7	.5	-95.2	-27.26	-61.05	-40	-21.05	V
7.114800	25.55	RMS	35.7	.5	-95.2	-27.17	-60.62	-40	-20.62	H
10.682981	22.50	RMS	37.8	.6	-95.2	-24.38	-58.68	-40	-18.68	H
10.719113	22.35	RMS	37.7	.5	-95.2	-24.01	-58.66	-40	-18.66	V
14.250722	20.13	RMS	39.3	.8	-95.2	-20.13	-55.10	-40	-15.10	H
14.263500	20.22	RMS	39.3	.8	-95.2	-20.23	-55.11	-40	-15.11	V
High Channel, 3670.2MHz + 3690MHz										
7.244344	25.22	RMS	35.8	.5	-95.2	-27.00	-60.68	-40	-20.68	H
7.282238	24.92	RMS	35.8	.5	-95.2	-26.97	-60.95	-40	-20.95	V
10.809441	22.26	RMS	37.7	.6	-95.2	-24.01	-58.65	-40	-18.65	V
10.809441	22.26	RMS	37.7	.6	-95.2	-24.01	-58.65	-40	-18.65	V
10.809441	22.23	RMS	37.7	.6	-95.2	-24.01	-58.68	-40	-18.68	V
10.854825	22.18	RMS	37.7	.5	-95.2	-23.99	-58.81	-40	-18.81	H

10.6. FIELD STRENGTH OF SPURIOUS RADIATION, ANT8

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.6.1 LTE BAND 48

LIMIT

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

PSK LTE BAND 48 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/11/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE Band 48 QPSK 20MHz + 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBuV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz + 3579.8MHz										
7.104666	24.63	RMS	35.7	.5	-95.2	-27.14	-61.51	-40	-21.51	V
7.122291	24.73	RMS	35.7	.5	-95.2	-27.16	-61.43	-40	-21.43	H
10.667559	22.45	RMS	37.8	.6	-95.2	-24.53	-58.88	-40	-18.88	V
10.679016	22.30	RMS	37.8	.6	-95.2	-24.54	-59.04	-40	-19.04	H
14.167003	19.74	RMS	39.2	.7	-95.2	-20.13	-55.69	-40	-15.69	V
14.248078	20.07	RMS	39.3	.8	-95.2	-20.30	-55.33	-40	-15.33	H
Mid Channel, 3615.1MHz + 3634.9MHz										
7.210856	24.45	RMS	35.8	.6	-95.2	-27.08	-61.43	-40	-21.43	V
7.248309	25.06	RMS	35.8	.6	-95.2	-26.83	-60.57	-40	-20.57	H
10.84425	21.94	RMS	37.7	.5	-95.2	-24.12	-59.18	-40	-19.18	V
10.860113	21.99	RMS	37.7	.4	-95.2	-23.97	-59.08	-40	-19.08	H
14.480728	19.53	RMS	39.7	.7	-95.2	-19.66	-54.93	-40	-14.93	V
14.503641	19.39	RMS	39.7	.8	-95.2	-19.93	-55.24	-40	-15.24	H
High Channel, 3670.2MHz + 3690MHz										
7.37565	24.57	RMS	35.8	.7	-95.2	-27.02	-61.15	-40	-21.15	V
7.395038	24.85	RMS	35.8	.6	-95.2	-27.02	-60.97	-40	-20.97	H
11.007722	21.43	RMS	37.8	.7	-95.2	-23.56	-58.83	-40	-18.83	V
11.059275	21.74	RMS	37.8	.6	-95.2	-23.43	-58.49	-40	-18.49	H
14.741578	19.55	RMS	40.1	.8	-95.2	-19.49	-54.24	-40	-14.24	V
14.774184	19.61	RMS	40.2	.8	-95.2	-20.06	-54.65	-40	-14.65	H

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, ANT9

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02r02

All tests above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

10.7.1. LTE BAND 48

LIMIT

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

QPSK LTE BAND 48 (20.0MHZ + 20.0MHZ BANDWIDTH)

Project #:	4790592293
Date:	6/11/2023
Test Engineer:	25196
Configuration:	EUT only
Mode	LTE Band 48 QPSK 20MHz + 20MHz
Chamber #:	01-RDE-B

Frequency (GHz)	Meter Reading (dBUV)	Det	Horn Antenna ACF(dB)	T1792 3400-3800MHz BRF	EIRP CF	Gain/Loss (dB)	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 3560MHz + 3579.8MHz										
7.098497	24.52	RMS	35.7	.5	-95.2	-27.26	-61.74	-40	-21.74	V
7.127138	24.68	RMS	35.7	.5	-95.2	-27.15	-61.47	-40	-21.47	H
10.688269	22.26	RMS	37.8	.6	-95.2	-24.37	-58.91	-40	-18.91	H
10.719113	22.14	RMS	37.7	.5	-95.2	-24.01	-58.87	-40	-18.87	V
14.199609	20.14	RMS	39.2	.7	-95.2	-20.08	-55.24	-40	-15.24	V
14.216353	20.26	RMS	39.2	.8	-95.2	-20.14	-55.08	-40	-15.08	H
Mid Channel, 3615.1MHz + 3634.9MHz										
7.219669	24.36	RMS	35.8	.5	-95.2	-26.99	-61.53	-40	-21.53	V
7.248309	24.76	RMS	35.8	.6	-95.2	-26.83	-60.87	-40	-20.87	H
10.880381	21.96	RMS	37.7	.5	-95.2	-24.07	-59.11	-40	-19.11	H
10.906378	21.71	RMS	37.7	.6	-95.2	-23.86	-59.05	-40	-19.05	V
14.412872	19.91	RMS	39.6	.8	-95.2	-19.67	-54.56	-40	-14.56	V
14.466188	19.43	RMS	39.7	.7	-95.2	-19.29	-54.66	-40	-14.66	H
High Channel, 3670.2MHz + 3690MHz										
7.367719	24.54	RMS	35.8	.7	-95.2	-26.96	-61.12	-40	-21.12	V
7.373006	24.62	RMS	35.8	.7	-95.2	-26.93	-61.01	-40	-21.01	H
10.983708	21.35	RMS	37.7	.6	-95.2	-23.31	-58.86	-40	-18.86	H
10.984369	21.39	RMS	37.7	.6	-95.2	-23.34	-58.85	-40	-18.85	V
14.780353	19.63	RMS	40.2	.8	-95.2	-19.95	-54.52	-40	-14.52	H
14.813400	19.72	RMS	40.2	.9	-95.2	-20.01	-54.39	-40	-14.39	V

11. SETUP PHOTOS

Please refer to 14040863-EP1V1 for setup photos.

END OF REPORT