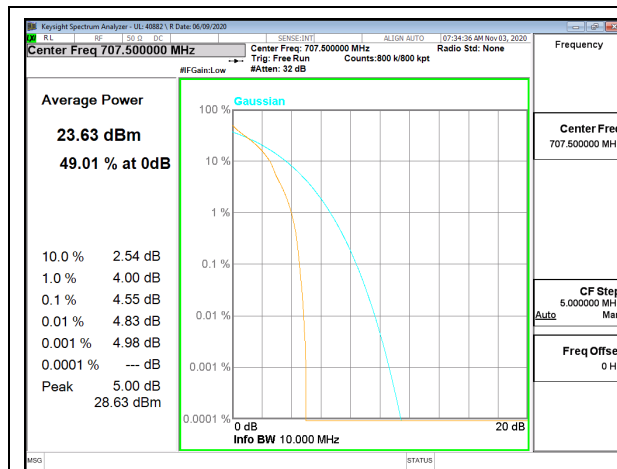
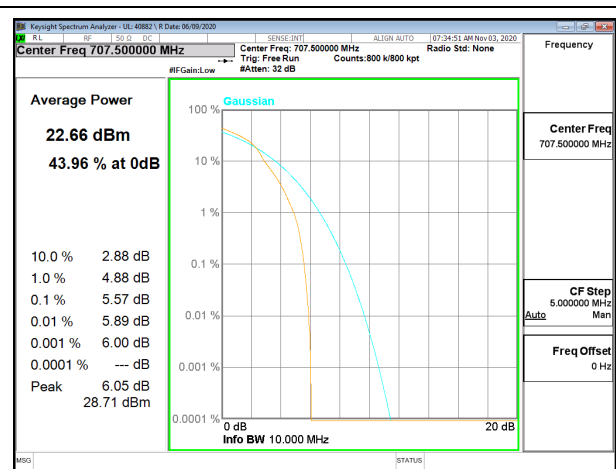


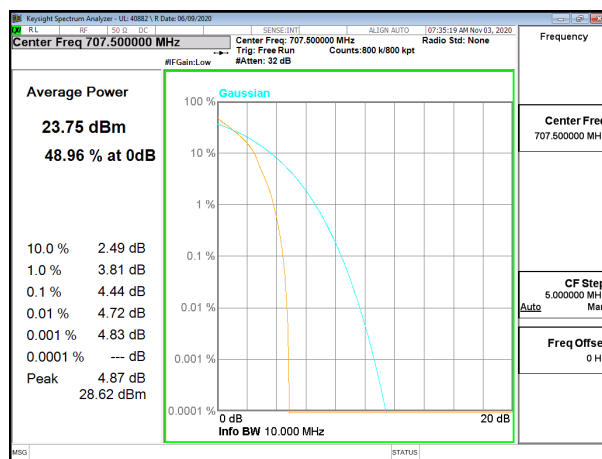
8.5.3. LTE BAND 12



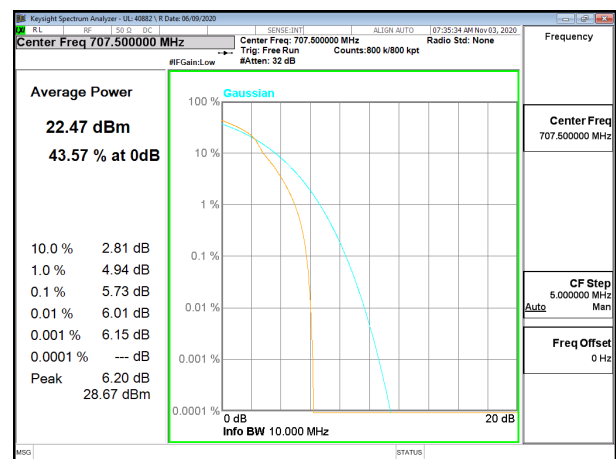
LTE B12 1.4MHz QPSK Middle Channel



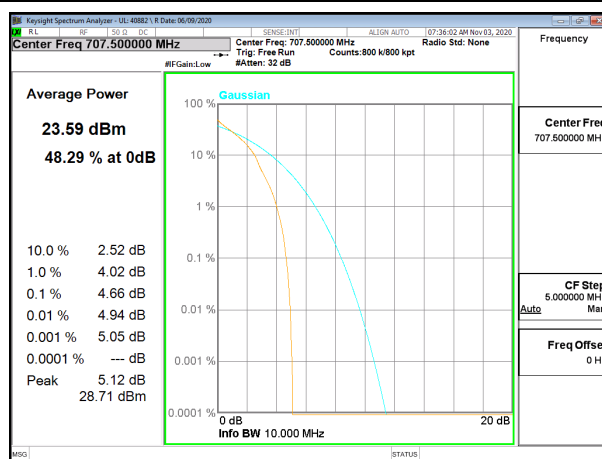
LTE B12 1.4MHz 16QAM Middle Channel



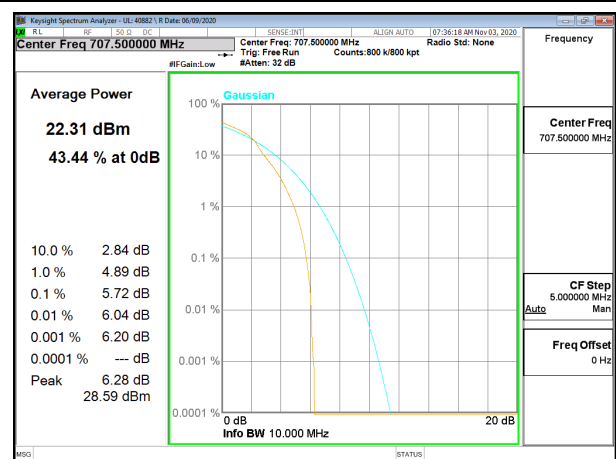
LTE B12 3MHz QPSK Middle Channel



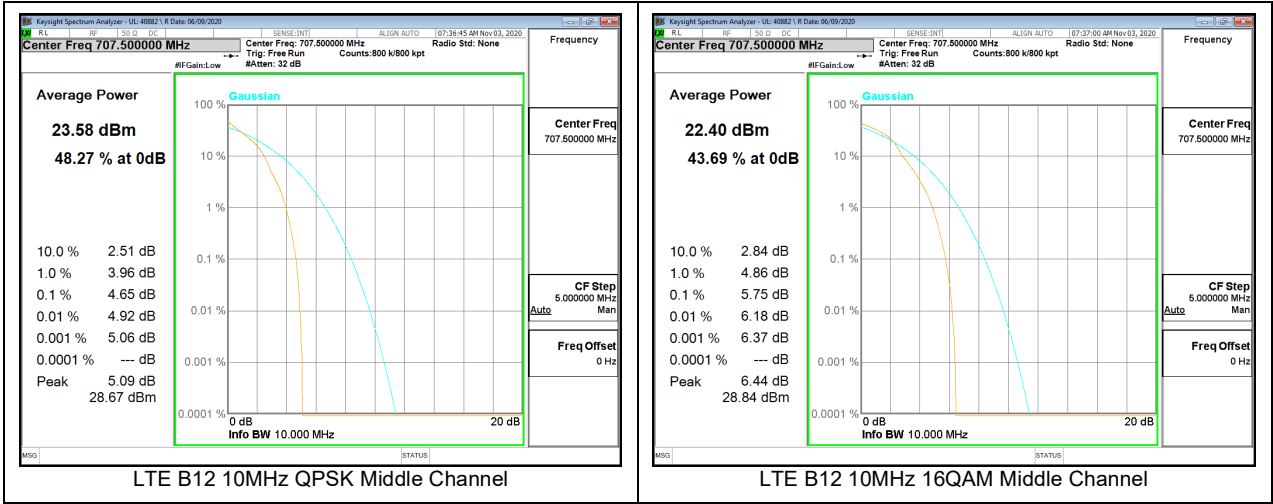
LTE B12 3MHz 16QAM Middle Channel



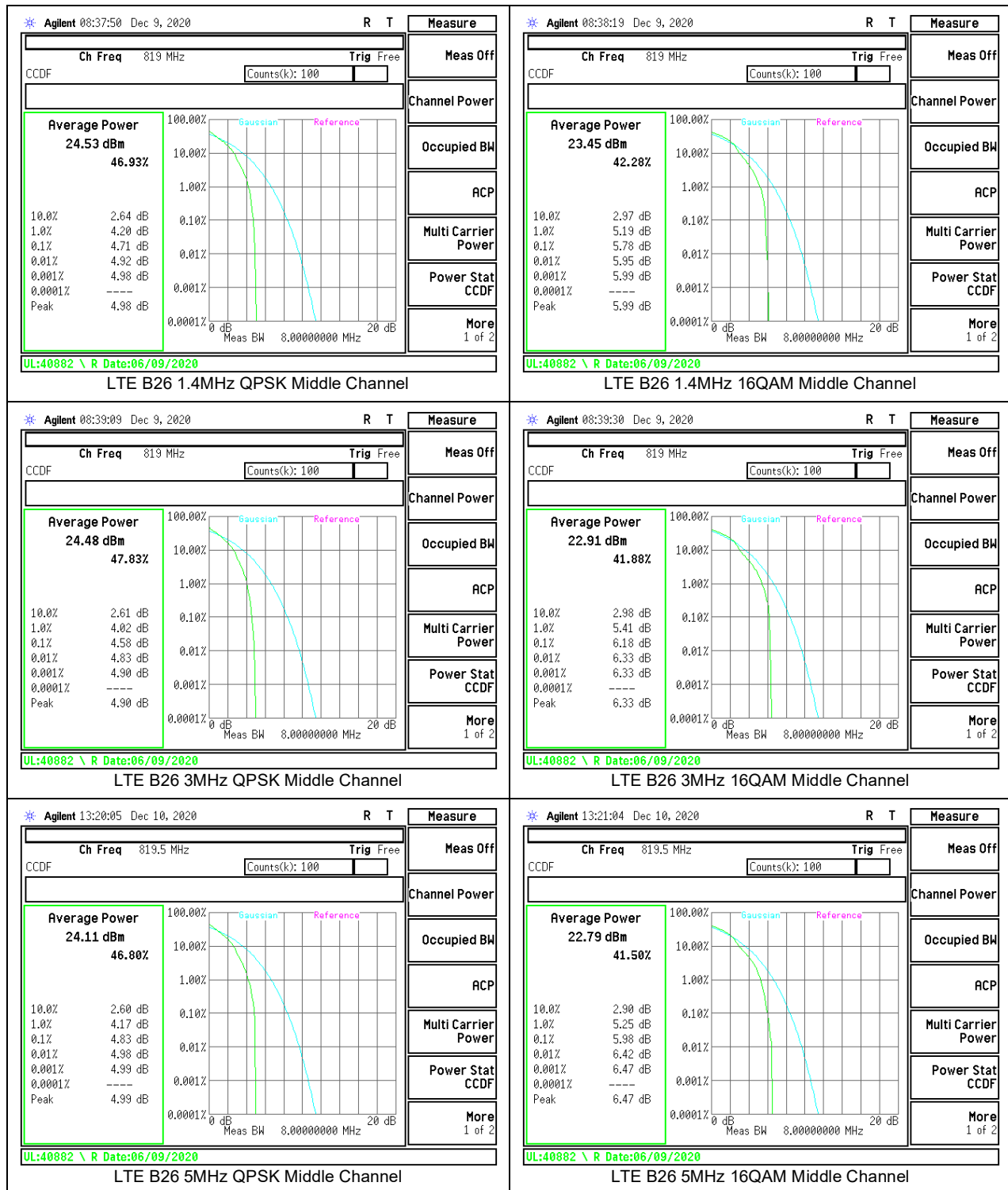
LTE B12 5MHz QPSK Middle Channel

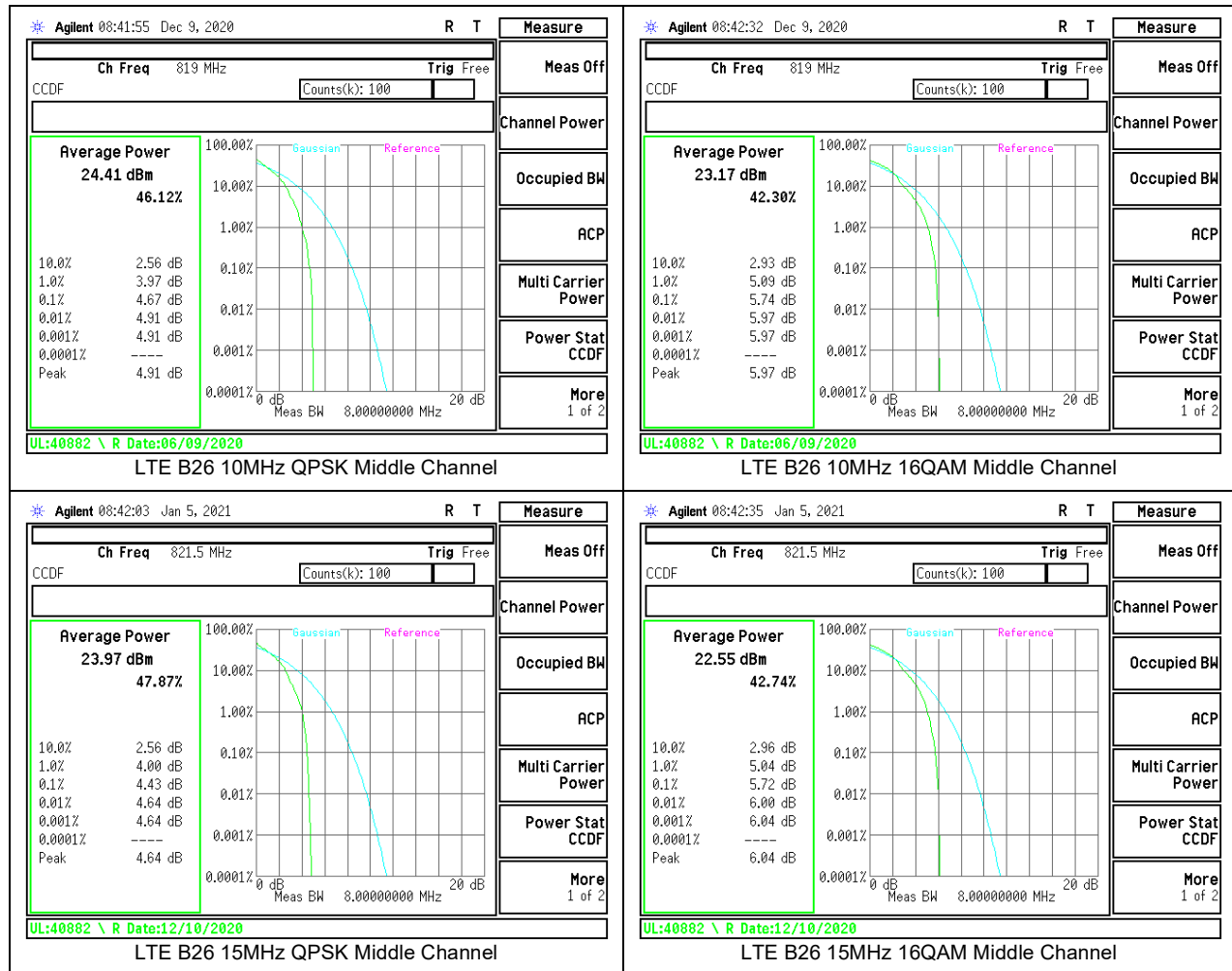


LTE B12 5MHz 16QAM Middle Channel

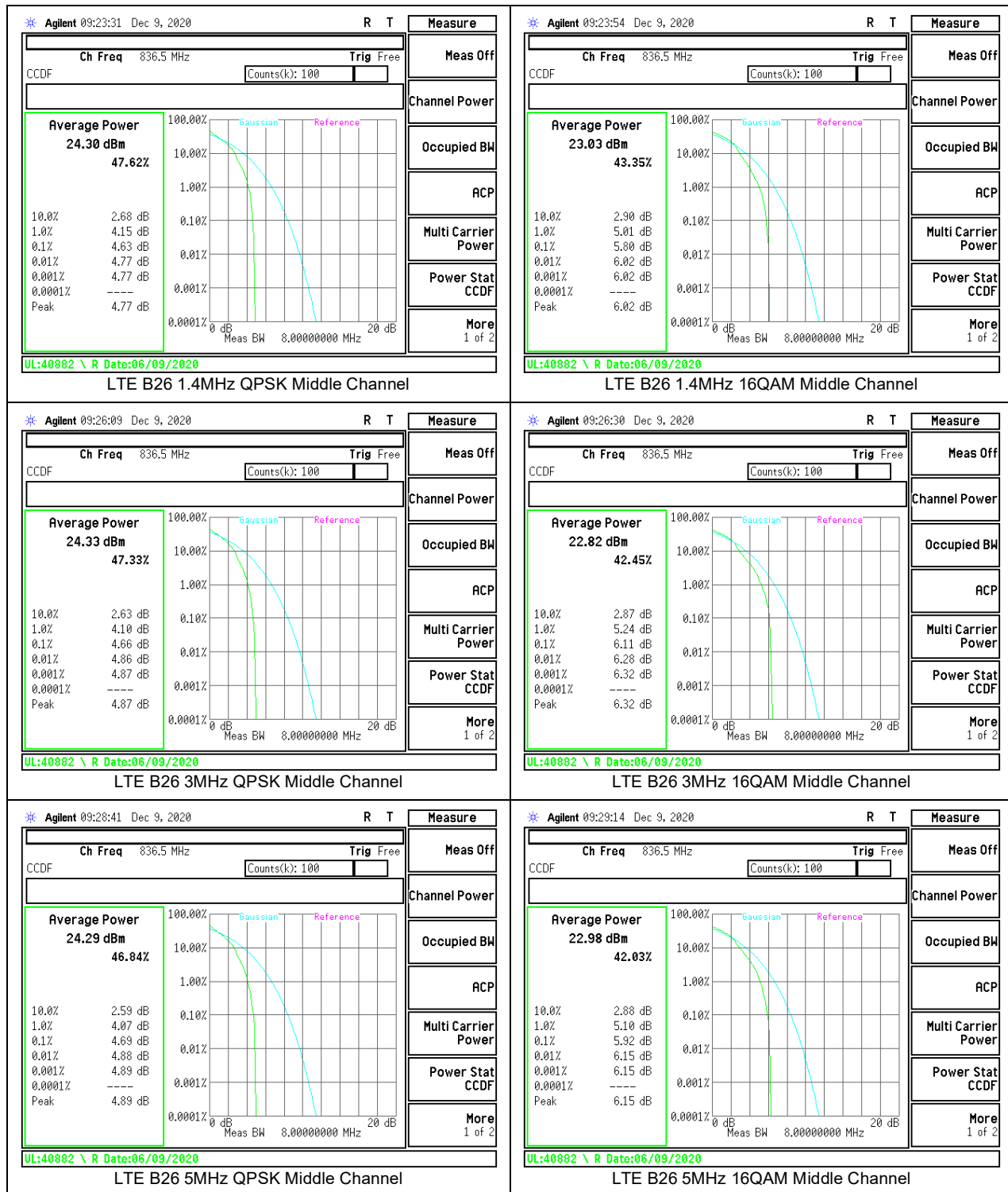


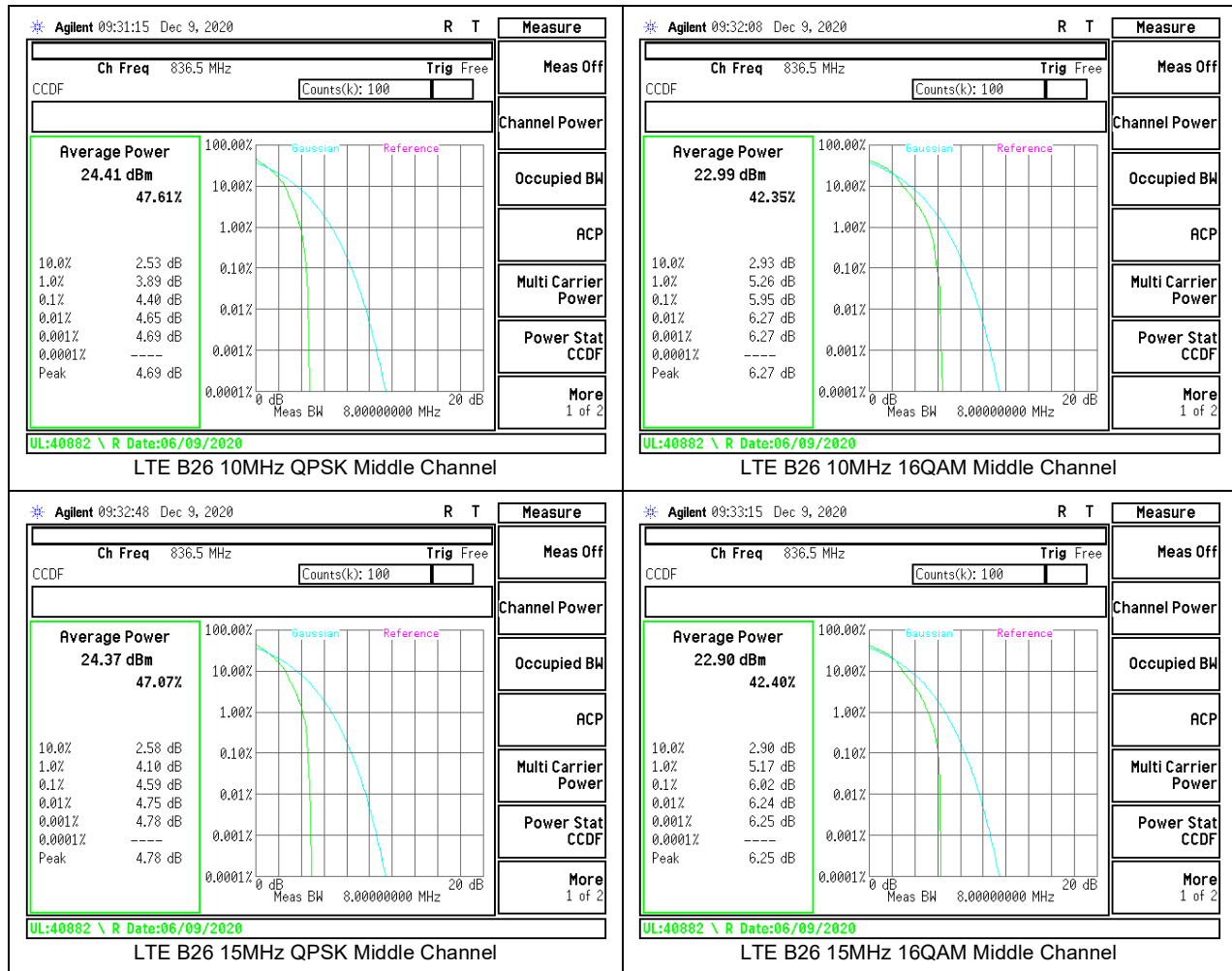
8.5.4. LTE BAND 26 (PART 90S)



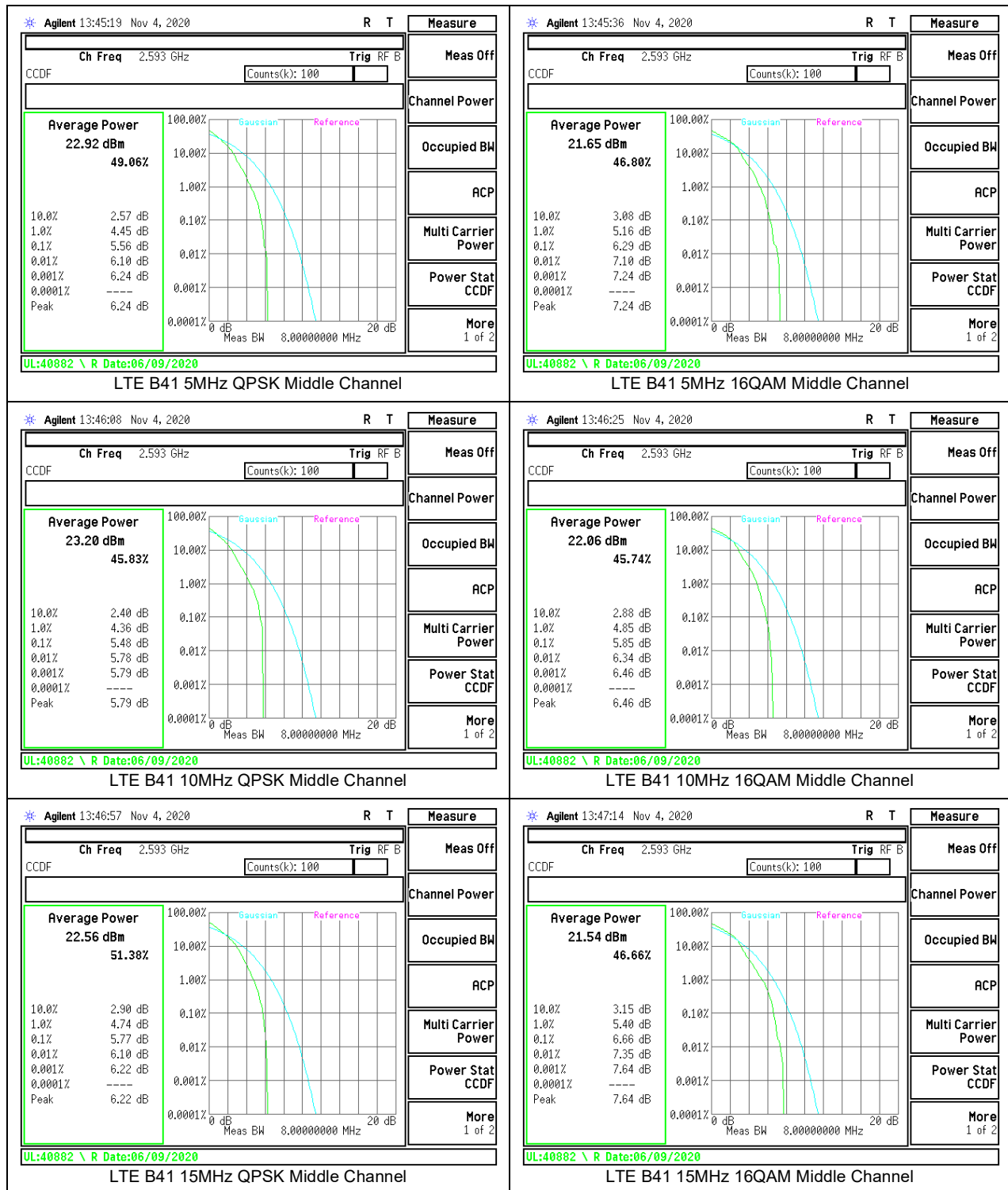


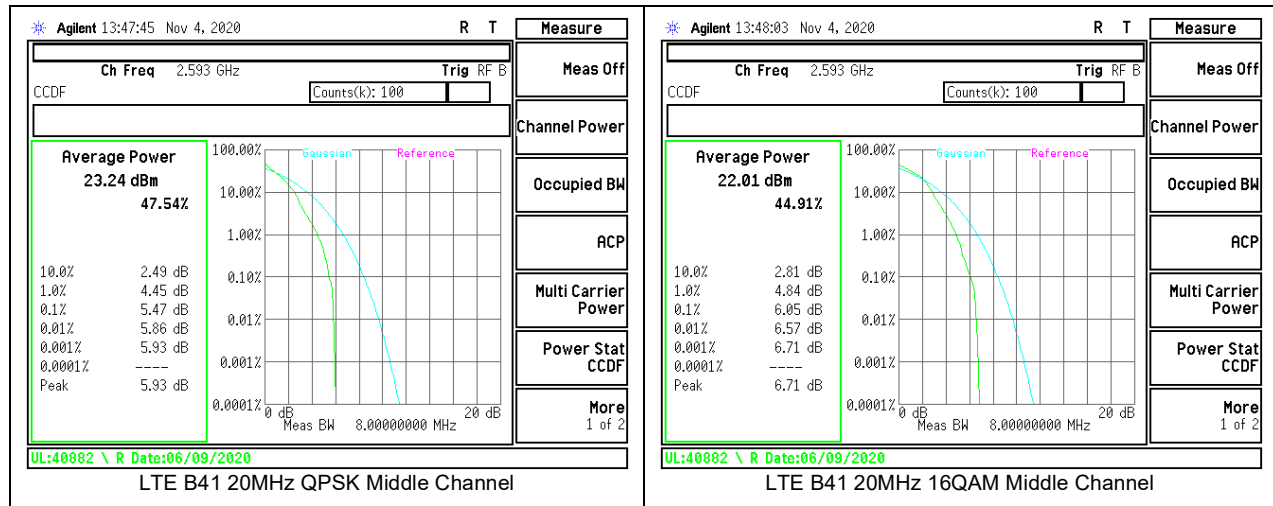
8.5.5. LTE BAND 26 (PART 22)



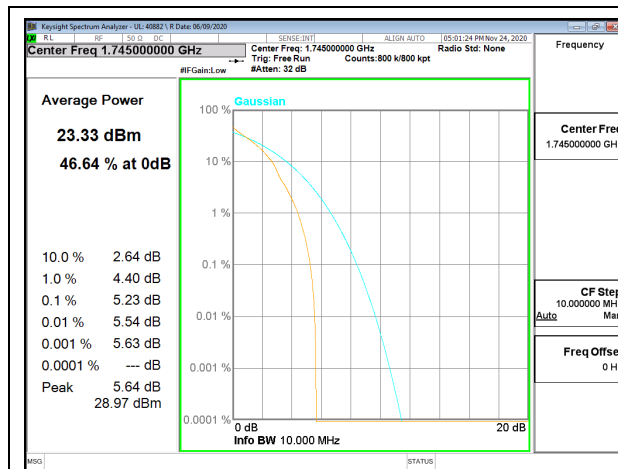


8.5.6. LTE BAND 41 (FCC)

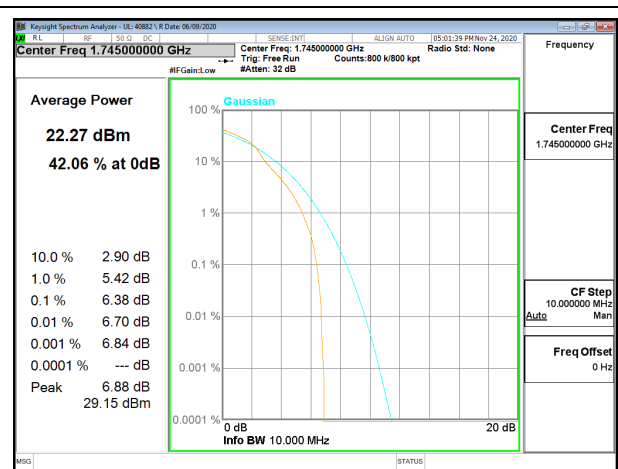




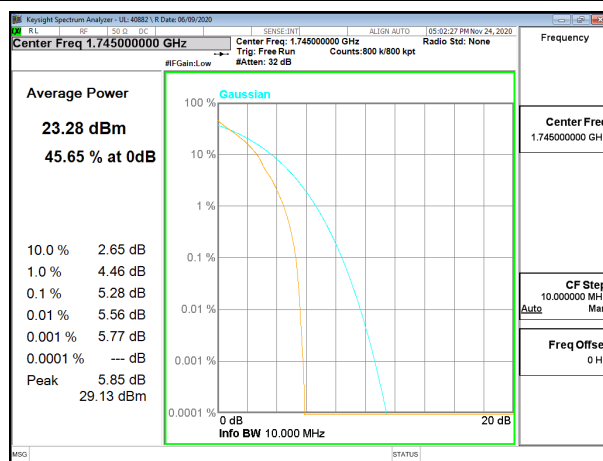
8.5.7. LTE BAND 66



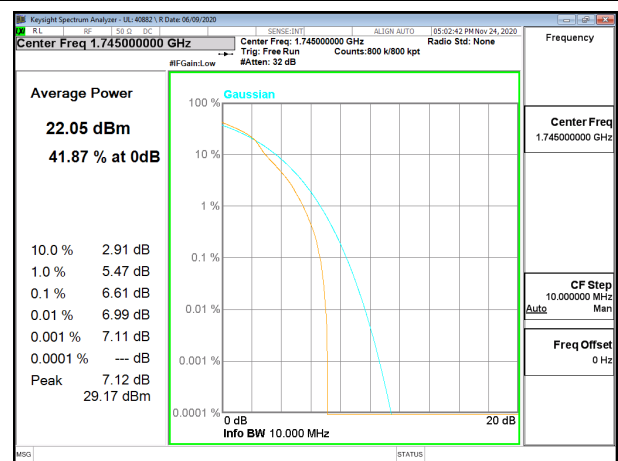
LTE B66 1.4MHz QPSK Middle Channel



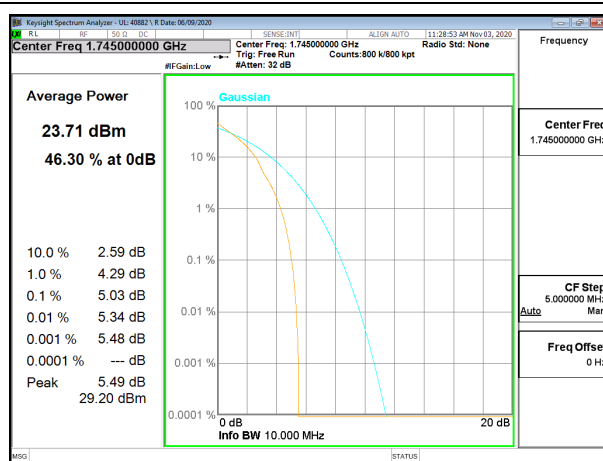
LTE B66 1.4MHz 16QAM Middle Channel



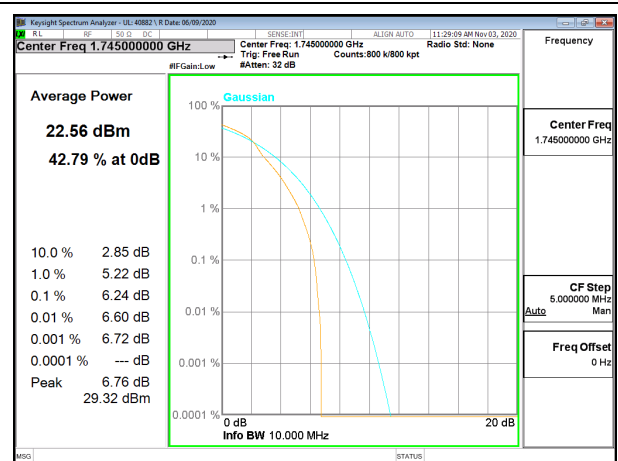
LTE B66 3MHz QPSK Middle Channel



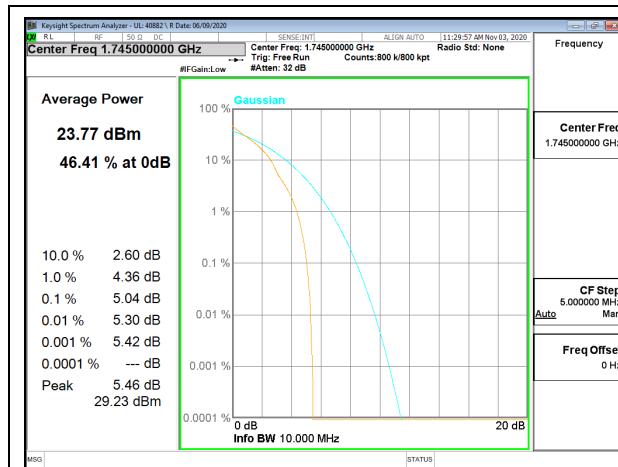
LTE B66 3MHz 16QAM Middle Channel



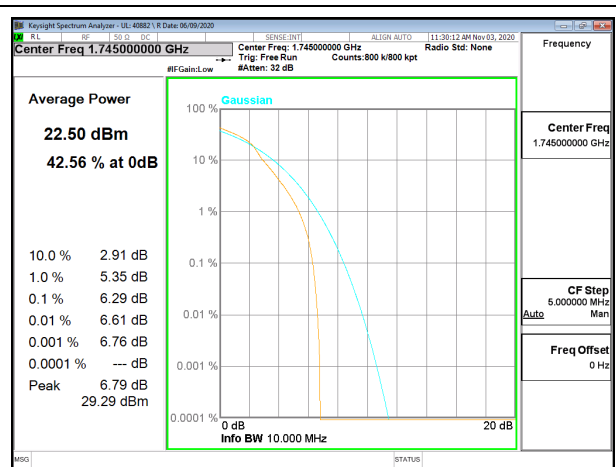
LTE B66 5MHz QPSK Middle Channel



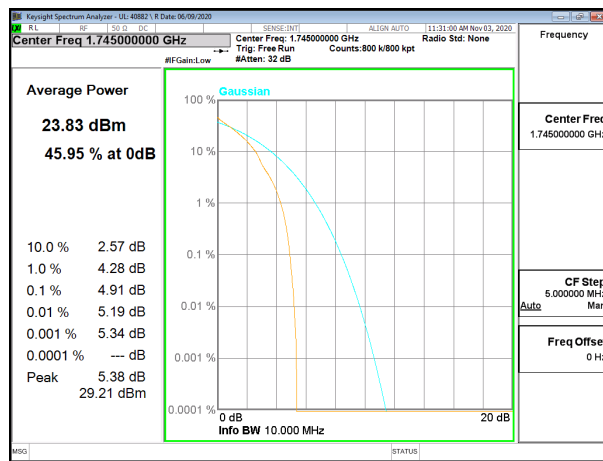
LTE B66 5MHz 16QAM Middle Channel



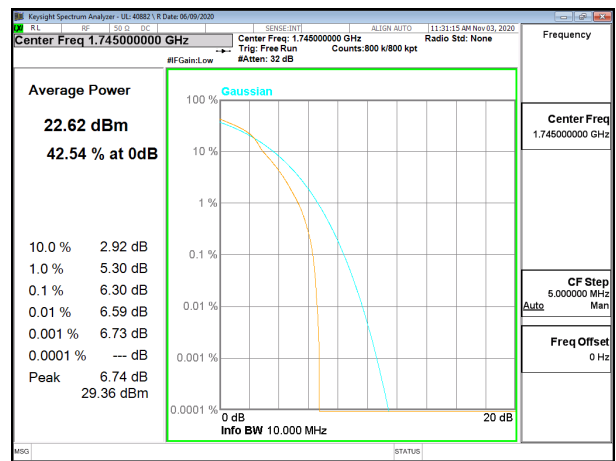
LTE B66 10MHz QPSK Middle Channel



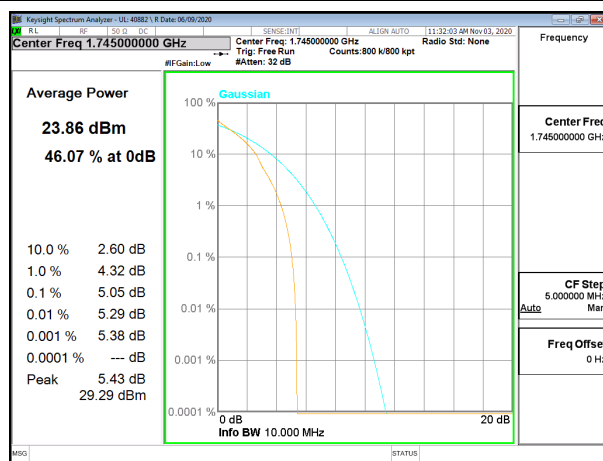
LTE B66 10MHz 16QAM Middle Channel



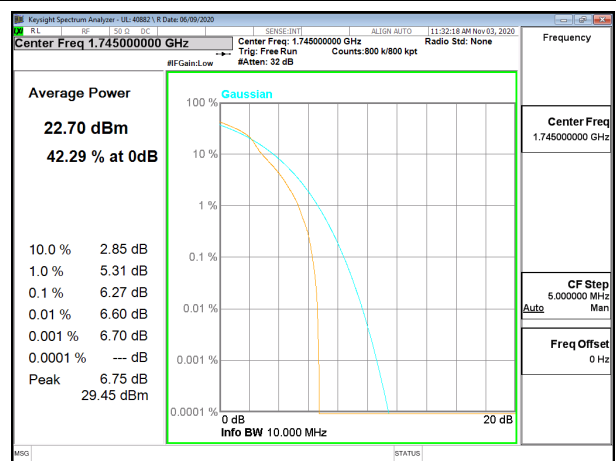
LTE B66 15MHz QPSK Middle Channel



LTE B66 15MHz 16QAM Middle Channel



LTE B66 20MHz QPSK Middle Channel



LTE B66 20MHz 16QAM Middle Channel

9. RADIATED TEST RESULTS

9.1. EFFECTIVE RADIATED POWER ERP/EIRP RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.50, and §90.691

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50(c) - (10) Portable stations (hand-held devices) are limited to 3 watts ERP; (LTE B12)

27.50(d) - (4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.(Band 66)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

TEST PROCEDURE

ANSI / TIA / EIA 603-E (2016), Clause 2.2.17; PSA setting reference to 971168 D01 v03r01

For peak power measurement with a PSA:

a) Set the RBW $\geq$ OBW; b) Set VBW $\geq 3 \times$ RBW; c) Set span $\geq 2 \times$ RBW; d) Sweep time = auto couple; e) Detector = peak; f) Ensure that the number of measurement points $\geq$ span/RBW; g) Trace mode = max hold;

For average power measurement with a PSA:

a) Set span to at least 1.5 times the OBW; b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz; c) Set VBW $\geq 3 \times$ RBW; d) Set number of points in sweep $\geq 2 \times$ span / RBW; e) Sweep time = auto-couple; f) Detector = RMS (power averaging); g) Use free run trigger If burst duty cycle ≥ 98 ; h) Use trigger to capture bursts If burst duty cycle < 98 ; i) Trace average at least 100 traces in power averaging (i.e., RMS) mode. j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

TEST RESULTS

9.1.1. LTE Band 2

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	1860	23.80	0.2398
		1/0	1880	21.48	0.1407
		1/0	1900	22.22	0.1666
	16QAM	1/0	1860	21.10	0.1288
		1/0	1880	21.83	0.1523
		1/0	1900	19.61	0.0915
15	QPSK	1/0	1857.5	23.52	0.2247
		1/0	1880	22.21	0.1662
		1/0	1902.5	22.17	0.1649
	16QAM	1/0	1857.5	22.80	0.1903
		1/0	1880	21.67	0.1468
		1/0	1902.5	21.04	0.1270
10	QPSK	1/0	1855	21.70	0.1480
		1/0	1880	22.78	0.1895
		1/0	1905	20.45	0.1109
	16QAM	1/0	1855	22.66	0.1846
		1/0	1880	21.12	0.1295
		1/0	1905	22.81	0.1910
5	QPSK	1/0	1852.5	22.85	0.1926
		1/0	1880	22.74	0.1878
		1/0	1907.5	20.64	0.1158
	16QAM	1/0	1852.5	22.43	0.1751
		1/0	1880	21.40	0.1379
		1/0	1907.5	23.33	0.2151
3	QPSK	1/0	1851.5	22.80	0.1906
		1/0	1880	22.11	0.1624
		1/0	1908.5	21.37	0.1372
	16QAM	1/0	1851.5	22.82	0.1915
		1/0	1880	21.59	0.1443
		1/0	1908.5	23.79	0.2392
1.4	QPSK	1/0	1850.7	23.47	0.2225
		1/0	1880	22.46	0.1761
		1/0	1909.3	21.34	0.1363
	16QAM	1/0	1850.7	23.04	0.2013
		1/0	1880	21.23	0.1328
		1/0	1909.3	22.16	0.1644

20MHz QPSK/16QAM										15MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 2 QPSK 20MHz BW	1860	21.841	H	0.97	2.929	23.80	33	-9.20		LTE Band 2 QPSK 15MHz BW	1857.5	21.557	H	0.97	2.929	23.52	33	-9.48	
	1860	18.783	V	0.97	2.929	20.74	33	-12.26			1857.5	18.775	V	0.97	2.929	20.73	33	-12.27	
	1880	19.532	H	0.98	2.929	21.48	33	-11.52			1880	19.722	H	0.98	2.929	21.67	33	-11.33	
	1880	18.905	V	0.98	2.929	20.86	33	-12.14			1880	20.255	V	0.98	2.929	22.21	33	-10.79	
	1900	20.014	H	0.98	3.187	22.22	33	-10.78			1902.5	19.971	H	0.98	3.187	22.17	33	-10.83	
LTE Band 2 16QAM 20MHz BW	1900	15.801	V	0.98	3.187	18.00	33	-15.00		LTE Band 2 16QAM 15MHz BW	1902.5	17.976	V	0.98	3.187	20.18	33	-12.82	
	1860	19.141	H	0.97	2.929	21.10	33	-11.90			1857.5	20.837	H	0.97	2.929	22.80	33	-10.20	
	1860	18.783	V	0.97	2.929	20.74	33	-12.26			1857.5	20.015	V	0.97	2.929	21.97	33	-11.03	
	1880	17.612	H	0.98	2.929	19.56	33	-13.44			1880	17.372	H	0.98	2.929	19.32	33	-13.68	
	1880	19.875	V	0.98	2.929	21.83	33	-11.17			1880	19.715	V	0.98	2.929	21.67	33	-11.33	
	1900	15.354	H	0.98	3.187	17.56	33	-15.44			1902.5	17.021	H	0.98	3.187	19.22	33	-13.78	
	1900	17.411	V	0.98	3.187	19.61	33	-13.39			1902.5	18.836	V	0.98	3.187	21.04	33	-11.96	
10MHz QPSK/16QAM										5MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 2 QPSK 10MHz BW	1855	19.744	H	0.97	2.929	21.70	33	-11.30		LTE Band 2 QPSK 5MHz BW	1852.5	16.735	H	0.97	2.929	18.69	33	-14.31	
	1855	19.526	V	0.97	2.929	21.48	33	-11.52			1852.5	20.888	V	0.97	2.929	22.85	33	-10.15	
	1880	15.352	H	0.98	2.929	17.30	33	-15.70			1880	16.742	H	0.98	2.929	18.69	33	-14.31	
	1880	20.825	V	0.98	2.929	22.78	33	-10.22			1880	20.785	V	0.98	2.929	22.74	33	-10.26	
	1905	18.251	H	0.99	3.187	20.45	33	-12.55			1907.5	18.437	H	0.99	3.187	20.64	33	-12.36	
LTE Band 2 16QAM 10MHz BW	1905	17.865	V	0.99	3.187	20.06	33	-12.94		LTE Band 2 16QAM 5MHz BW	1907.5	17.42	V	0.99	3.187	19.62	33	-13.38	
	1855	20.704	H	0.97	2.929	22.66	33	-10.34			1852.5	20.475	H	0.97	2.929	22.43	33	-10.57	
	1855	19.676	V	0.97	2.929	21.63	33	-11.37			1852.5	19.678	V	0.97	2.929	21.64	33	-11.36	
	1880	19.172	H	0.98	2.929	21.12	33	-11.88			1880	19.092	H	0.98	2.929	21.04	33	-11.96	
	1880	18.975	V	0.98	2.929	20.93	33	-12.07			1880	19.445	V	0.98	2.929	21.40	33	-11.60	
	1905	20.611	H	0.99	3.187	22.81	33	-10.19			1907.5	21.127	H	0.99	3.187	23.33	33	-9.67	
	1905	18.105	V	0.99	3.187	20.30	33	-12.70			1907.5	18.57	V	0.99	3.187	20.77	33	-12.23	
3MHz QPSK/16QAM										1.4Hz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 2 QPSK 3MHz BW	1851.5	16.944	H	0.97	2.929	18.90	33	-14.10		LTE Band 2 QPSK 1.4MHz BW	1850.7	16.641	H	0.97	2.929	18.60	33	-14.40	
	1851.5	20.843	V	0.97	2.929	22.80	33	-10.20			1850.7	21.516	V	0.97	2.929	23.47	33	-9.53	
	1880	13.692	H	0.98	2.929	15.64	33	-17.36			1880	14.082	H	0.98	2.929	16.03	33	-16.97	
	1880	20.155	V	0.98	2.929	22.11	33	-10.89			1880	20.505	V	0.98	2.929	22.46	33	-10.54	
	1908.5	16.779	H	0.99	3.187	18.98	33	-14.02			1909.3	16.03	H	0.99	3.187	18.23	33	-14.77	
LTE Band 2 16QAM 3MHz BW	1908.5	19.174	V	0.99	3.187	21.37	33	-11.63		LTE Band 2 16QAM 1.4MHz BW	1909.3	19.146	V	0.99	3.187	21.34	33	-11.66	
	1851.5	20.864	H	0.97	2.929	22.82	33	-10.18			1850.7	21.081	H	0.97	2.929	23.04	33	-9.96	
	1851.5	20.143	V	0.97	2.929	22.10	33	-10.90			1850.7	20.076	V	0.97	2.929	22.03	33	-10.97	
	1880	19.642	H	0.98	2.929	21.59	33	-11.41			1880	19.282	H	0.98	2.929	21.23	33	-11.77	
	1880	16.425	V	0.98	2.929	18.38	33	-14.62			1880	17.125	V	0.98	2.929	19.08	33	-13.92	
	1908.5	21.589	H	0.99	3.187	23.79	33	-9.21			1909.3	19.96	H	0.99	3.187	22.16	33	-10.84	
	1908.5	19.164	V	0.99	3.187	21.36	33	-11.64			1909.3	18.666	V	0.99	3.187	20.86	33	-12.14	

9.1.2. LTE Band 4

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	1720.0	21.27	0.1341
		1/0	1732.5	22.27	0.1687
		1/0	1745.0	22.77	0.1894
	16QAM	1/0	1720.0	20.59	0.1146
		1/0	1732.5	21.82	0.1521
		1/0	1745.0	21.95	0.1568
15	QPSK	1/0	1717.5	21.28	0.1344
		1/0	1732.5	19.78	0.0951
		1/0	1747.5	21.83	0.1525
	16QAM	1/0	1717.5	20.59	0.1146
		1/0	1732.5	20.87	0.1222
		1/0	1747.5	18.91	0.0779
10	QPSK	1/0	1715.0	18.92	0.0780
		1/0	1732.5	21.16	0.1307
		1/0	1750.0	19.19	0.0830
	16QAM	1/0	1715.0	18.32	0.0680
		1/0	1732.5	21.15	0.1304
		1/0	1750.0	18.73	0.0746
5	QPSK	1/0	1712.5	18.70	0.0742
		1/0	1732.5	19.73	0.0940
		1/0	1752.5	19.52	0.0895
	16QAM	1/0	1712.5	18.67	0.0737
		1/0	1732.5	19.37	0.0865
		1/0	1752.5	19.11	0.0815
3	QPSK	1/0	1711.5	19.15	0.0822
		1/0	1732.5	19.67	0.0927
		1/0	1753.5	19.52	0.0895
	16QAM	1/0	1711.5	18.61	0.0726
		1/0	1732.5	18.77	0.0754
		1/0	1753.5	19.16	0.0824
1.4	QPSK	1/0	1710.7	18.84	0.0765
		1/0	1732.5	19.54	0.0900
		1/0	1754.3	19.70	0.0933
	16QAM	1/0	1710.7	18.19	0.0659
		1/0	1732.5	19.31	0.0853
		1/0	1754.3	18.93	0.0782

20MHz QPSK/16QAM										15MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 4 QPSK 20MHz BW	1720	16.17	H	0.93	3.773	19.01	30	-10.99		LTE Band 4 QPSK 15MHz BW	1717.5	15.81	H	0.93	3.773	18.65	30	-11.35	
	1720	18.43	V	0.93	3.773	21.27	30	-8.73			1717.5	18.44	V	0.93	3.773	21.28	30	-8.72	
	1732.5	16.64	H	0.93	3.773	19.48	30	-10.52			1732.5	16.94	H	0.93	3.773	19.78	30	-10.22	
	1732.5	19.43	V	0.93	3.773	22.27	30	-7.73			1732.5	15.97	V	0.93	3.773	18.81	30	-11.19	
	1745	17.47	H	0.94	3.773	20.30	30	-9.70			1747.5	16.51	H	0.94	3.773	19.34	30	-10.66	
LTE Band 4 16QAM 20MHz BW	1745	19.94	V	0.94	3.773	22.77	30	-7.23			1747.5	19	V	0.94	3.773	21.83	30	-8.17	
	1720	15.33	H	0.93	3.773	18.17	30	-11.83		LTE Band 4 16QAM 15MHz BW	1717.5	15.57	H	0.93	3.773	18.41	30	-11.59	
	1720	17.75	V	0.93	3.773	20.59	30	-9.41			1717.5	17.75	V	0.93	3.773	20.59	30	-9.41	
	1732.5	16.68	H	0.93	3.773	19.52	30	-10.48			1732.5	16.11	H	0.93	3.773	18.95	30	-11.05	
	1732.5	18.98	V	0.93	3.773	21.82	30	-8.18			1732.5	18.03	V	0.93	3.773	20.87	30	-9.13	
	1745	16.71	H	0.94	3.773	19.54	30	-10.46			1747.5	16.08	H	0.94	3.773	18.91	30	-11.09	
	1745	19.12	V	0.94	3.773	21.95	30	-8.05			1747.5	14.44	V	0.94	3.773	17.27	30	-12.73	
10MHz QPSK/16QAM										5MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 4 QPSK 10MHz BW	1715	16.08	H	0.93	3.773	18.92	30	-11.08		LTE Band 4 QPSK 5MHz BW	1712.5	15.86	H	0.93	3.773	18.70	30	-11.30	
	1715	14.54	V	0.93	3.773	17.38	30	-12.62			1712.5	14.42	V	0.93	3.773	17.26	30	-12.74	
	1732.5	16.65	H	0.93	3.773	19.49	30	-10.51			1732.5	16.89	H	0.93	3.773	19.73	30	-10.27	
	1732.5	18.32	V	0.93	3.773	21.16	30	-8.84			1732.5	15.53	V	0.93	3.773	18.37	30	-11.63	
	1750	16.71	H	0.94	3.419	19.19	30	-10.81			1752.5	17.04	H	0.94	3.419	19.52	30	-10.48	
LTE Band 4 16QAM 10MHz BW	1750	15.27	V	0.94	3.419	17.75	30	-12.25			1752.5	15.43	V	0.94	3.419	17.91	30	-12.09	
	1715	15.48	H	0.93	3.773	18.32	30	-11.68		LTE Band 4 16QAM 5MHz BW	1712.5	15.83	H	0.93	3.773	18.67	30	-11.33	
	1715	14	V	0.93	3.773	16.84	30	-13.16			1712.5	13.96	V	0.93	3.773	16.80	30	-13.20	
	1732.5	16.01	H	0.93	3.773	18.85	30	-11.15			1732.5	16.53	H	0.93	3.773	19.37	30	-10.63	
	1732.5	18.31	V	0.93	3.773	21.15	30	-8.85			1732.5	14.94	V	0.93	3.773	17.78	30	-12.22	
	1750	16.25	H	0.94	3.419	18.73	30	-11.27			1752.5	16.63	H	0.94	3.419	19.11	30	-10.89	
	1750	15.63	V	0.94	3.419	18.11	30	-11.89			1752.5	15.27	V	0.94	3.419	17.75	30	-12.25	
3MHz QPSK/16QAM										1.4Hz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10, 2020-12-14 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 4 QPSK 3MHz BW	1711.5	16.31	H	0.94	3.773	19.15	30	-10.85		LTE Band 4 QPSK 1.4MHz BW	1710.7	16	H	0.94	3.773	18.84	30	-11.16	
	1711.5	14.55	V	0.94	3.773	17.39	30	-12.61			1710.7	14.65	V	0.94	3.773	17.49	30	-12.51	
	1732.5	16.83	H	0.93	3.773	19.67	30	-10.33			1732.5	16.7	H	0.93	3.773	19.54	30	-10.46	
	1732.5	15.79	V	0.93	3.773	18.63	30	-11.37			1732.5	15.55	V	0.93	3.773	18.39	30	-11.61	
	1753.5	17.04	H	0.94	3.419	19.52	30	-10.48			1754.3	16.11	H	0.94	3.419	18.59	30	-11.41	
LTE Band 4 16QAM 3MHz BW	1753.5	15.77	V	0.94	3.419	18.25	30	-11.75			1754.3	17.22	V	0.94	3.419	19.70	30	-10.30	
	1711.5	15.77	H	0.94	3.773	18.61	30	-11.39		LTE Band 4 16QAM 1.4MHz BW	1710.7	15.35	H	0.94	3.773	18.19	30	-11.81	
	1711.5	14.44	V	0.94	3.773	17.28	30	-12.72			1710.7	14.18	V	0.94	3.773	17.02	30	-12.98	
	1732.5	15.93	H	0.93	3.773	18.77	30	-11.23			1732.5	16.47	H	0.93	3.773	19.31	30	-10.69	
	1732.5	14.89	V	0.93	3.773	17.73	30	-12.27			1732.5	15.21	V	0.93	3.773	18.05	30	-11.95	
	1753.5	16.68	H	0.94	3.419	19.16	30	-10.84			1754.3	16.45	H	0.94	3.419	18.93	30	-11.07	
	1753.5	15.48	V	0.94	3.419	17.96	30	-12.04			1754.3	14.97	V	0.94	3.419	17.45	30	-12.55	

9.1.3. LTE Band 12

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	W
10	QPSK	1/0	704	12.54	0.0180
		1/0	707.5	12.41	0.0174
		1/0	711	13.31	0.0214
	16QAM	1/0	704	12.08	0.0162
		1/0	707.5	12.42	0.0175
		1/0	711	12.43	0.0175
5	QPSK	1/0	701.5	12.46	0.0176
		1/0	707.5	12.45	0.0176
		1/0	713.5	13.60	0.0229
	16QAM	1/0	701.5	12.03	0.0160
		1/0	707.5	12.49	0.0177
		1/0	713.5	13.12	0.0205
3	QPSK	1/0	700.5	12.71	0.0187
		1/0	707.5	12.72	0.0187
		1/0	714.5	13.90	0.0245
	16QAM	1/0	700.5	12.11	0.0163
		1/0	707.5	11.86	0.0154
		1/0	714.5	13.17	0.0207
1.4	QPSK	1/0	699.7	12.44	0.0176
		1/0	707.5	12.68	0.0185
		1/0	715.3	13.85	0.0243
	16QAM	1/0	699.7	12.24	0.0168
		1/0	707.5	12.47	0.0177
		1/0	715.3	13.60	0.0229

10MHz QPSK/16QAM									5MHz QPSK/16QAM								
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC								
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta	Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB		MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 12 QPSK 10MHz BW	704	9.045	H	0.57	4.07	12.54	34.8	-22.26	LTE Band 12 QPSK 5MHz BW	701.5	8.961	H	0.57	4.07	12.46	34.8	-22.34
	704	7.522	V	0.57	4.08	11.03	34.8	-23.77		701.5	6.795	V	0.57	4.09	10.32	34.8	-24.48
	707.5	8.894	H	0.57	4.09	12.41	34.8	-22.39		707.5	8.934	H	0.57	4.09	12.45	34.8	-22.35
	707.5	7.376	V	0.57	4.06	10.86	34.8	-23.94		707.5	6.936	V	0.57	4.06	10.42	34.8	-24.38
	711	9.742	H	0.57	4.14	13.31	34.8	-21.49		713.5	10.007	H	0.57	4.17	13.60	34.8	-21.20
LTE Band 12 16QAM 10MHz BW	711	7.236	V	0.57	4.07	10.73	34.8	-24.07		713.5	7.03	V	0.57	4.06	10.52	34.8	-24.28
	704	8.585	H	0.57	4.07	12.08	34.8	-22.72	LTE Band 12 16QAM 5MHz BW	701.5	8.531	H	0.57	4.07	12.03	34.8	-22.77
	704	6.422	V	0.57	4.08	9.93	34.8	-24.87		701.5	6.325	V	0.57	4.09	9.85	34.8	-24.95
	707.5	8.904	H	0.57	4.09	12.42	34.8	-22.38		707.5	8.974	H	0.57	4.09	12.49	34.8	-22.31
	707.5	6.536	V	0.57	4.06	10.02	34.8	-24.78		707.5	6.356	V	0.57	4.06	9.84	34.8	-24.96
	711	8.862	H	0.57	4.14	12.43	34.8	-22.37		713.5	9.527	H	0.57	4.17	13.12	34.8	-21.68
	711	6.966	V	0.57	4.07	10.46	34.8	-24.34		713.5	7.04	V	0.57	4.06	10.53	34.8	-24.27
3MHz QPSK/16QAM									1.4Hz QPSK/16QAM								
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC								
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta	Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB		MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 12 QPSK 3MHz BW	700.5	9.199	H	0.57	4.08	12.71	34.8	-22.09	LTE Band 12 QPSK 1.4MHz BW	699.7	8.934	H	0.57	4.08	12.44	34.8	-22.36
	700.5	6.893	V	0.57	4.11	10.43	34.8	-24.37		699.7	6.934	V	0.57	4.12	10.48	34.8	-24.32
	707.5	9.204	H	0.57	4.09	12.72	34.8	-22.08		707.5	9.164	H	0.57	4.09	12.68	34.8	-22.12
	707.5	7.156	V	0.57	4.06	10.64	34.8	-24.16		707.5	6.866	V	0.57	4.06	10.35	34.8	-24.45
	714.5	10.293	H	0.57	4.18	13.90	34.8	-20.90		714.5	10.243	H	0.57	4.18	13.85	34.8	-20.95
LTE Band 12 16QAM 3MHz BW	714.5	7.601	V	0.57	4.07	11.10	34.8	-23.70		714.5	7.311	V	0.57	4.07	10.81	34.8	-23.99
	700.5	8.599	H	0.57	4.08	12.11	34.8	-22.69	LTE Band 12 16QAM 1.4MHz BW	699.7	8.734	H	0.57	4.08	12.24	34.8	-22.56
	700.5	6.663	V	0.57	4.11	10.20	34.8	-24.60		699.7	6.394	V	0.57	4.12	9.94	34.8	-24.86
	707.5	8.344	H	0.57	4.09	11.86	34.8	-22.94		707.5	8.954	H	0.57	4.09	12.47	34.8	-22.33
	707.5	6.606	V	0.57	4.06	10.09	34.8	-24.71		707.5	6.526	V	0.57	4.06	10.01	34.8	-24.79
	714.5	9.563	H	0.57	4.18	13.17	34.8	-21.63		714.5	9.993	H	0.57	4.18	13.60	34.8	-21.20
	714.5	6.761	V	0.57	4.07	10.26	34.8	-24.54		714.5	7.061	V	0.57	4.07	10.56	34.8	-24.24

9.1.4. LTE Band 26 (PART 22)

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	W
15	QPSK	1/0	831.5	17.39	0.0548
		1/0	836.5	18.42	0.0695
		1/0	841.5	16.18	0.0415
	16QAM	1/0	831.5	17.27	0.0533
		1/0	836.5	16.95	0.0495
		1/0	841.5	16.14	0.0411
10	QPSK	1/0	829	18.26	0.0669
		1/0	836.5	18.37	0.0687
		1/0	844	15.95	0.0393
	16QAM	1/0	829	17.01	0.0502
		1/0	836.5	17.09	0.0512
		1/0	844	16.05	0.0403
5	QPSK	1/0	826.5	17.74	0.0594
		1/0	836.5	18.65	0.0733
		1/0	846.5	15.89	0.0388
	16QAM	1/0	826.5	16.87	0.0486
		1/0	836.5	16.96	0.0497
		1/0	846.5	15.88	0.0387
3	QPSK	1/0	825.5	17.75	0.0596
		1/0	836.5	17.34	0.0542
		1/0	847.5	15.84	0.0383
	16QAM	1/0	825.5	17.26	0.0532
		1/0	836.5	17.45	0.0556
		1/0	847.5	14.92	0.0310
1.4	QPSK	1/0	824.7	17.26	0.0532
		1/0	836.5	17.36	0.0545
		1/0	848.3	15.86	0.0385
	16QAM	1/0	824.7	17.40	0.0550
		1/0	836.5	18.16	0.0655
		1/0	848.3	15.45	0.0350

15MHz QPSK/16QAM										10MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	ERP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 26 QPSK 15MHz BW	831.5	14.068	H	0.62	3.94	17.39	38.5	-21.11		LTE Band 26 QPSK 10MHz BW	829	14.917	H	0.62	3.96	18.26	38.5	-20.24	
	831.5	6.743	V	0.62	3.49	9.61	38.5	-28.89			829	9.542	V	0.62	3.48	12.40	38.5	-26.10	
	836.5	15.159	H	0.62	3.89	18.42	38.5	-20.08			836.5	15.109	H	0.62	3.89	18.37	38.5	-20.13	
	836.5	9.34	V	0.62	3.54	12.26	38.5	-26.24			836.5	8.87	V	0.62	3.54	11.79	38.5	-26.71	
	841.5	12.88	H	0.63	3.93	16.18	38.5	-22.32			844	12.62	H	0.63	3.96	15.95	38.5	-22.55	
LTE Band 26 16QAM 15MHz BW	841.5	5.683	V	0.63	3.61	8.67	38.5	-29.83		LTE Band 26 16QAM 10MHz BW	844	4.577	V	0.63	3.65	7.60	38.5	-30.90	
	831.5	13.948	H	0.62	3.94	17.27	38.5	-21.23			829	13.667	H	0.62	3.96	17.01	38.5	-21.49	
	831.5	6.563	V	0.62	3.49	9.43	38.5	-29.07			829	9.052	V	0.62	3.48	11.91	38.5	-26.59	
	836.5	13.689	H	0.62	3.89	16.95	38.5	-21.55			836.5	13.829	H	0.62	3.89	17.09	38.5	-21.41	
	836.5	10.13	V	0.62	3.54	13.05	38.5	-25.45			836.5	8.52	V	0.62	3.54	11.44	38.5	-27.06	
841.5	12.84	H	0.63	3.93	16.14	38.5	-22.36		844	12.72	H	0.63	3.96	16.05	38.5	-22.45			
841.5	5.623	V	0.63	3.61	8.61	38.5	-29.89		844	5.387	V	0.63	3.65	8.41	38.5	-30.09			

5MHz QPSK/16QAM										3MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 26 QPSK 5MHz BW	826.5	14.353	H	0.62	4.01	17.74	38.5	-20.76		LTE Band 26 QPSK 3MHz BW	825.5	14.351	H	0.62	4.02	17.75	38.5	-20.75	
	826.5	9.58	V	0.62	3.49	12.45	38.5	-26.05			825.5	9.723	V	0.62	3.48	12.58	38.5	-25.92	
	836.5	15.389	H	0.62	3.89	18.65	38.5	-19.85			836.5	14.079	H	0.62	3.89	17.34	38.5	-21.16	
	836.5	8.95	V	0.62	3.54	11.87	38.5	-26.63			836.5	11.34	V	0.62	3.54	14.26	38.5	-24.24	
	846.5	12.534	H	0.63	3.98	15.89	38.5	-22.61			847.5	12.476	H	0.63	3.99	15.84	38.5	-22.66	
LTE Band 26 16QAM 5MHz BW	846.5	6.121	V	0.63	3.70	9.19	38.5	-29.31		LTE Band 26 16QAM 3MHz BW	847.5	10.167	V	0.63	3.71	13.25	38.5	-25.25	
	826.5	13.483	H	0.62	4.01	16.87	38.5	-21.63			825.5	13.861	H	0.62	4.02	17.26	38.5	-21.24	
	826.5	9.08	V	0.62	3.49	11.95	38.5	-26.55			825.5	8.903	V	0.62	3.48	11.76	38.5	-26.74	
	836.5	13.699	H	0.62	3.89	16.96	38.5	-21.54			836.5	14.189	H	0.62	3.89	17.45	38.5	-21.05	
	836.5	8.17	V	0.62	3.54	11.09	38.5	-27.41			836.5	7.75	V	0.62	3.54	10.67	38.5	-27.83	
846.5	12.524	H	0.63	3.98	15.88	38.5	-22.62		847.5	11.556	H	0.63	3.99	14.92	38.5	-23.58			
846.5	5.591	V	0.63	3.70	8.66	38.5	-29.84		847.5	3.587	V	0.63	3.71	6.67	38.5	-31.83			

1.4MHz QPSK/16QAM										INTENTIONALLY LEFT BLANK																			
Company: Samsung Project #: 13548896 Date: 2020-11-19, 2020-11-20, 2020-12-10 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC																													
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta																					
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB																					
LTE Band 26 QPSK 1.4MHz BW	824.7	13.847	H	0.62	4.03	17.26	38.5	-21.24																					
	824.7	9.624	V	0.62	3.50	12.51	38.5	-25.99																					
	836.5	14.099	H	0.62	3.89	17.36	38.5	-21.14																					
	836.5	11.04	V	0.62	3.54	13.96	38.5	-24.54																					
	848.3	12.494	H	0.63	3.99	15.86	38.5	-22.64																					
LTE Band 26 16QAM 1.4MHz BW	848.3	7.685	V	0.63	3.73	10.79	38.5	-27.71																					
	824.7	13.987	H	0.62	4.03	17.40	38.5	-21.10																					
	824.7	8.954	V	0.62	3.50	11.84	38.5	-26.66																					
	836.5	14.899	H	0.62	3.89	18.16	38.5	-20.34																					
	836.5	7.75	V	0.62	3.54	10.67	38.5	-27.83																					
848.3	12.084	H	0.63	3.99	15.45	38.5	-23.05																						
848.3	3.495	V	0.63	3.73	6.60	38.5	-31.90																						

9.1.5. LTE Band 41 (FCC)

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	2506	18.19	0.06587
		1/0	2593	18.66	0.07343
		1/0	2680	18.58	0.07214
	16QAM	1/0	2506	18.81	0.07597
		1/0	2593	19.93	0.09838
		1/0	2680	19.32	0.08554
15	QPSK	1/0	2503.5	22.74	0.18809
		1/0	2593	19.26	0.08431
		1/0	2682.5	18.17	0.06556
	16QAM	1/0	2503.5	19.49	0.08900
		1/0	2593	19.84	0.09636
		1/0	2682.5	18.58	0.07206
10	QPSK	1/0	2501	18.57	0.07199
		1/0	2593	19.23	0.08373
		1/0	2685	18.77	0.07531
	16QAM	1/0	2501	18.86	0.07696
		1/0	2593	19.21	0.08335
		1/0	2685	18.88	0.07724
5	QPSK	1/0	2498.5	19.25	0.08419
		1/0	2593	18.10	0.06455
		1/0	2687.5	16.34	0.0423
	16QAM	1/0	2498.5	19.52	0.08959
		1/0	2593	19.92	0.09815
		1/0	2687.5	18.98	0.07899

20MHz QPSK/16QAM									15MHz QPSK/16QAM								
Company: Samsung Project #: 13548896 Date: 11/25/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									Company: Samsung Project #: 13548896 Date: 11/25/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC								
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB		MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 41 (FCC) QPSK	2506	11.083	H	1.14	3.489	13.43	33	-19.57	LTE Band 41 (FCC) QPSK	2503.5	10.568	H	1.14	3.489	12.92	33	-20.08
	2506	15.839	V	1.14	3.489	18.19	33	-14.81		2503.5	20.396	V	1.14	3.489	22.74	33	-10.26
	2593	9.126	H	1.17	3.819	11.78	33	-21.22		2593	10.506	H	1.17	3.819	13.16	33	-19.84
	2593	16.006	V	1.17	3.819	18.66	33	-14.34		2593	16.606	V	1.17	3.819	19.26	33	-13.74
20MHz BW	2680	8.851	H	1.19	4.257	11.92	33	-21.08	15MHz BW	2682.5	8.773	H	1.19	4.257	11.84	33	-21.16
	2680	15.517	V	1.19	4.257	18.58	33	-14.42		2682.5	15.102	V	1.19	4.257	18.17	33	-14.83
LTE Band 41 (FCC) 16QAM	2506	11.703	H	1.14	3.489	14.05	33	-18.95	LTE Band 41 (FCC) 16QAM	2503.5	11.368	H	1.14	3.489	13.72	33	-19.28
	2506	16.459	V	1.14	3.489	18.81	33	-14.19		2503.5	17.146	V	1.14	3.489	19.49	33	-13.51
	2593	10.816	H	1.17	3.819	13.47	33	-19.53		2593	10.636	H	1.17	3.819	13.29	33	-19.71
	2593	17.276	V	1.17	3.819	19.93	33	-13.07		2593	17.186	V	1.17	3.819	19.84	33	-13.16
20MHz BW	2680	10.421	H	1.19	4.257	13.49	33	-19.51	15MHz BW	2682.5	9.903	H	1.19	4.257	12.97	33	-20.03
	2680	16.257	V	1.19	4.257	19.32	33	-13.68		2682.5	15.512	V	1.19	4.257	18.58	33	-14.42

10MHz QPSK/16QAM									5MHz QPSK/16QAM								
Company: Samsung Project #: 13548896 Date: 11/25/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									Company: Samsung Project #: 13548896 Date: 11/25/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC								
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB		MHz	dBm	H/V	dB	dBi	dBm	dBm	dB
LTE Band 41 (FCC) QPSK	2501	11.586	H	1.14	3.489	13.93	33	-19.07	LTE Band 41 (FCC) QPSK	2498.5	11.143	H	1.14	3.746	13.75	33	-19.25
	2501	16.225	V	1.14	3.489	18.57	33	-14.43		2498.5	16.648	V	1.14	3.746	19.25	33	-13.75
	2593	10.476	H	1.17	3.819	13.13	33	-19.87		2593	9.286	H	1.17	3.819	11.94	33	-21.06
	2593	16.576	V	1.17	3.819	19.23	33	-13.77		2593	15.446	V	1.17	3.819	18.10	33	-14.90
10MHz BW	2685	10.499	H	1.19	4.257	13.56	33	-19.44	5MHz BW	2687.5	9.712	H	1.19	4.257	12.78	33	-20.22
	2685	15.704	V	1.19	4.257	18.77	33	-14.23		2687.5	13.271	V	1.19	4.257	16.34	33	-16.66
LTE Band 41 (FCC) 16QAM	2501	12.326	H	1.14	3.489	14.67	33	-18.33	LTE Band 41 (FCC) 16QAM	2498.5	11.533	H	1.14	3.746	14.14	33	-18.86
	2501	16.515	V	1.14	3.489	18.86	33	-14.14		2498.5	16.918	V	1.14	3.746	19.52	33	-13.48
	2593	10.446	H	1.17	3.819	13.10	33	-19.90		2593	10.116	H	1.17	3.819	12.77	33	-20.23
	2593	16.556	V	1.17	3.819	19.21	33	-13.79		2593	17.266	V	1.17	3.819	19.92	33	-13.08
10MHz BW	2685	11.139	H	1.19	4.257	14.20	33	-18.80	5MHz BW	2687.5	11.522	H	1.19	4.257	14.59	33	-18.41
	2685	15.814	V	1.19	4.257	18.88	33	-14.12		2687.5	15.911	V	1.19	4.257	18.98	33	-14.02

9.1.6. LTE Band 66

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	W
20	QPSK	1/0	1720	19.80	0.0956
		1/0	1745	21.16	0.1306
		1/0	1770	20.80	0.1201
	16QAM	1/0	1720	22.15	0.1642
		1/0	1745	22.83	0.1919
		1/0	1770	23.51	0.2242
15	QPSK	1/0	1717.5	20.93	0.1238
		1/0	1745	22.85	0.1927
		1/0	1772.5	23.94	0.2477
	16QAM	1/0	1717.5	22.07	0.1609
		1/0	1745	22.93	0.1964
		1/0	1772.5	23.61	0.2297
10	QPSK	1/0	1715	20.29	0.1069
		1/0	1745	22.97	0.1980
		1/0	1775	23.51	0.2244
	16QAM	1/0	1715	20.88	0.1223
		1/0	1745	23.33	0.2153
		1/0	1775	23.69	0.2339
5	QPSK	1/0	1712.5	20.45	0.1110
		1/0	1745	23.24	0.2108
		1/0	1777.5	22.49	0.1774
	16QAM	1/0	1712.5	19.88	0.0973
		1/0	1745	20.77	0.1193
		1/0	1777.5	19.67	0.0927
3	QPSK	1/0	1711.5	20.61	0.1151
		1/0	1745	23.08	0.2031
		1/0	1778.5	22.24	0.1676
	16QAM	1/0	1711.5	19.44	0.0879
		1/0	1745	20.47	0.1114
		1/0	1778.5	19.51	0.0894
1.4	QPSK	1/0	1710.7	19.79	0.0953
		1/0	1745	20.84	0.1213
		1/0	1779.3	22.08	0.1615
	16QAM	1/0	1710.7	19.21	0.0834
		1/0	1745	20.59	0.1145
		1/0	1779.3	19.27	0.0845

20MHz QPSK/16QAM										15MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 66 QPSK 20MHz BW	1720	16.96	H	0.93	3.773	19.80	30	-10.20		LTE Band 66 QPSK 15MHz BW	1717.5	16.677	H	0.93	3.773	19.52	30	-10.48	
	1720	16.383	V	0.93	3.773	19.23	30	-10.77			1717.5	18.083	V	0.93	3.773	20.93	30	-9.07	
	1745	18.327	H	0.94	3.773	21.16	30	-8.84			1745	17.797	H	0.94	3.773	20.63	30	-9.37	
	1745	16.794	V	0.94	3.773	19.63	30	-10.37			1745	20.014	V	0.94	3.773	22.85	30	-7.15	
	1770	18.326	H	0.95	3.419	20.80	30	-9.20			1772.5	18.992	H	0.95	3.419	21.46	30	-8.54	
LTE Band 66 16QAM 20MHz BW	1770	17.386	V	0.95	3.419	19.86	30	-10.14			1772.5	21.47	V	0.95	3.419	23.94	30	-6.06	
	1720	19.31	H	0.93	3.773	22.15	30	-7.85		LTE Band 66 16QAM 15MHz BW	1717.5	19.097	H	0.93	3.773	21.94	30	-8.06	
	1720	18.983	V	0.93	3.773	21.83	30	-8.17			1717.5	19.223	V	0.93	3.773	22.07	30	-7.93	
	1745	19.997	H	0.94	3.773	22.83	30	-7.17			1745	20.097	H	0.94	3.773	22.93	30	-7.07	
	1745	19.414	V	0.94	3.773	22.25	30	-7.75			1745	19.164	V	0.94	3.773	22.00	30	-8.00	
	1770	21.036	H	0.95	3.419	23.51	30	-6.49			1772.5	21.142	H	0.95	3.419	23.61	30	-6.39	
	1770	20.556	V	0.95	3.419	23.03	30	-6.97			1772.5	20.81	V	0.95	3.419	23.28	30	-6.72	
10MHz QPSK/16QAM										5MHz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 66 QPSK 10MHz BW	1715	16.453	H	0.93	3.773	19.30	30	-10.70		LTE Band 66 QPSK 5MHz BW	1712.5	16.013	H	0.93	3.773	18.86	30	-11.14	
	1715	17.447	V	0.93	3.773	20.29	30	-9.71			1712.5	17.61	V	0.93	3.773	20.45	30	-9.55	
	1745	17.927	H	0.94	3.773	20.76	30	-9.24			1745	18.067	H	0.94	3.773	20.90	30	-9.10	
	1745	20.134	V	0.94	3.773	22.97	30	-7.03			1745	20.404	V	0.94	3.773	23.24	30	-6.76	
	1775	18.883	H	0.95	3.419	21.35	30	-8.65			1777.5	17.861	H	0.95	3.419	20.33	30	-9.67	
LTE Band 66 16QAM 10MHz BW	1775	21.04	V	0.95	3.419	23.51	30	-6.49			1777.5	20.019	V	0.95	3.419	22.49	30	-7.51	
	1715	18.033	H	0.93	3.773	20.88	30	-9.12		LTE Band 66 16QAM 5MHz BW	1712.5	15.743	H	0.93	3.773	18.59	30	-11.41	
	1715	17.827	V	0.93	3.773	20.67	30	-9.33			1712.5	17.04	V	0.93	3.773	19.88	30	-10.12	
	1745	20.497	H	0.94	3.773	23.33	30	-6.67			1745	17.697	H	0.94	3.773	20.53	30	-9.47	
	1745	19.914	V	0.94	3.773	22.75	30	-7.25			1745	17.934	V	0.94	3.773	20.77	30	-9.23	
	1775	20.733	H	0.95	3.419	23.20	30	-6.80			1777.5	16.611	H	0.95	3.419	19.08	30	-10.92	
	1775	21.22	V	0.95	3.419	23.69	30	-6.31			1777.5	17.199	V	0.95	3.419	19.67	30	-10.33	
3MHz QPSK/16QAM										1.4Hz QPSK/16QAM									
Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC										Company: Samsung Project #: 13548896 Date: 11/19/2020, 11/20/2020 Test Engineer: 11322, 11993 Configuration: EUT w/ PS and Earbuds Location: S-SAC									
Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta		Mode	f	SG Reading	Polarity	Cable Loss	Antenna Gain	EIRP	Limit	Delta	
	MHz	dBm	H/V	dB	dBi	dBm	dBm	dB			MHz	dBm	H/V	dB	dBi	dBm	dBm	dB	
LTE Band 66 QPSK 3MHz BW	1711.5	15.972	H	0.94	3.773	18.81	30	-11.19		LTE Band 66 QPSK 1.4MHz BW	1710.7	15.962	H	0.94	3.773	18.80	30	-11.20	
	1711.5	17.774	V	0.94	3.773	20.61	30	-9.39			1710.7	16.954	V	0.94	3.773	19.79	30	-10.21	
	1745	17.947	H	0.94	3.773	20.78	30	-9.22			1745	17.967	H	0.94	3.773	20.80	30	-9.20	
	1745	20.244	V	0.94	3.773	23.08	30	-6.92			1745	18.004	V	0.94	3.773	20.84	30	-9.16	
	1778.5	17.872	H	0.95	3.419	20.34	30	-9.66			1779.3	17.549	H	0.95	3.419	20.02	30	-9.98	
LTE Band 66 16QAM 3MHz BW	1778.5	19.773	V	0.95	3.419	22.24	30	-7.76			1779.3	19.611	V	0.95	3.419	22.08	30	-7.92	
	1711.5	15.252	H	0.94	3.773	18.09	30	-11.91		LTE Band 66 16QAM 1.4MHz BW	1710.7	15.502	H	0.94	3.773	18.34	30	-11.66	
	1711.5	16.604	V	0.94	3.773	19.44	30	-10.56			1710.7	16.374	V	0.94	3.773	19.21	30	-10.79	
	1745	17.287	H	0.94	3.773	20.12	30	-9.88			1745	17.297	H	0.94	3.773	20.13	30	-9.87	
	1745	17.634	V	0.94	3.773	20.47	30	-9.53			1745	17.754	V	0.94	3.773	20.59	30	-9.41	
	1778.5	16.522	H	0.95	3.419	18.99	30	-11.01			1779.3	16.429	H	0.95	3.419	18.90	30	-11.10	
	1778.5	17.043	V	0.95	3.419	19.51	30	-10.49			1779.3	16.801	V	0.95	3.419	19.27	30	-10.73	

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53

LIMITS

FCC: §22.917(a), §24.238(a), §27.53 (g), (h)

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.

FCC: §27.53 (m) (Band 41)

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.

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

RESULTS

No spurious emissions were detected above system noise floor from 18-26GHz.

9.2.1. LTE BAND 2

QPSK LTE BAND 2 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE2/20MHz/QPSK
Tested by	19289 / 11993
Date	2020-11-09

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1860MHz													
4	34.3	-71.34	Pk	23.9	-31.3	.1	9.7	-68.94	-13	-55.94	0-360	101	V
5	114.55	-70.53	Pk	19.4	-30.1	.2	9.7	-71.33	-13	-58.33	0-360	101	V
1	114.6	-74.34	Pk	19.4	-30.1	.2	9.7	-75.14	-13	-62.14	0-360	400	H
6	188.4	-69.47	Pk	17.5	-29.4	.3	9.7	-71.37	-13	-58.37	0-360	101	V
2	194.05	-75.71	Pk	18.1	-29.2	.3	9.7	-76.81	-13	-63.81	0-360	101	H
7	230.9	-71.58	Pk	17.2	-28.9	.3	9.7	-73.28	-13	-60.28	0-360	99	V
3	239.9	-74.79	Pk	17.7	-28.8	.3	9.7	-75.89	-13	-62.89	0-360	101	H
1880MHz													
4	34.15	-72.67	Pk	24	-31.3	.1	9.7	-70.17	-13	-57.17	0-360	100	V
5	71.15	-66.32	Pk	14.2	-30.8	.1	9.7	-73.12	-13	-60.12	0-360	100	V
6	76.1	-66.49	Pk	14	-30.7	.2	9.7	-73.29	-13	-60.29	0-360	100	V
1	114.2	-73.71	Pk	19.3	-30.1	.2	9.7	-74.61	-13	-61.61	0-360	299	H
7	114.6	-70.21	Pk	19.4	-30.1	.2	9.7	-71.01	-13	-58.01	0-360	100	V
8	189.5	-68.83	Pk	17.6	-29.4	.3	9.7	-70.63	-13	-57.63	0-360	100	V
2	197.65	-76.62	Pk	18.8	-29.3	.3	9.7	-77.12	-13	-64.12	0-360	99	H
9	232.2	-71.11	Pk	17.2	-28.9	.3	9.7	-72.81	-13	-59.81	0-360	99	V
3	240.05	-75.25	Pk	17.7	-28.8	.3	9.7	-76.35	-13	-63.35	0-360	200	H
1900MHz													
4	34.3	-69.25	Pk	23.9	-31.3	.1	9.7	-66.85	-13	-53.85	0-360	100	V
5	41.9	-72.42	Pk	18.3	-31.2	.1	9.7	-75.52	-13	-62.52	0-360	100	V
6	60.5	-70.7	Pk	13.6	-30.9	.1	9.7	-78.2	-13	-65.2	0-360	100	V
7	76.3	-65.97	Pk	14	-30.7	.2	9.7	-72.77	-13	-59.77	0-360	100	V
8	106.95	-71.27	Pk	18.1	-30.2	.2	9.7	-73.47	-13	-60.47	0-360	100	V
1	107.9	-76.2	Pk	18.3	-30.2	.2	9.7	-78.2	-13	-65.2	0-360	400	H
2	195.65	-78.16	Pk	18.4	-29.3	.3	9.7	-79.06	-13	-66.06	0-360	299	H
9	200.65	-74.52	Pk	18.8	-29.1	.3	9.7	-74.82	-13	-61.82	0-360	99	V
3	327.05	-75.05	Pk	20.1	-28.2	.3	9.7	-73.15	-13	-60.15	0-360	100	H

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE2/20MHz/QPSK
Tested by:	11993
Date:	2020-10-28

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1860MHz												
1	3.70248	-61.44	Pk	33.1	-32.4	11.8	-48.94	-13	-35.94	0-360	101	H
2	5.55291	-58.96	Pk	34.4	-30.8	11.8	-43.56	-13	-30.56	0-360	101	H
3	9.25529	-68.93	Pk	36.3	-26.5	11.8	-47.33	-13	-34.33	0-360	101	H
4	3.70198	-59.77	Pk	33.1	-32.4	11.8	-47.27	-13	-34.27	0-360	101	V
5	5.55291	-61.99	Pk	34.4	-30.8	11.8	-46.59	-13	-33.59	0-360	200	V
6	9.25529	-69.37	Pk	36.3	-26.5	11.8	-47.77	-13	-34.77	0-360	101	V
1880MHz												
1	3.74197	-60.57	Pk	33.2	-32.8	11.8	-48.37	-13	-35.37	0-360	300	H
2	5.61291	-61.73	Pk	34.4	-29.8	11.8	-45.33	-13	-32.33	0-360	101	H
3	17.09702	-71.33	Pk	41.8	-23.2	11.8	-40.93	-13	-27.93	0-360	101	H
4	3.74247	-61.28	Pk	33.2	-32.8	11.8	-49.08	-13	-36.08	0-360	101	V
5	5.61341	-64.08	Pk	34.4	-29.8	11.8	-47.68	-13	-34.68	0-360	300	V
6	9.35528	-68.59	Pk	36.4	-26.5	11.8	-46.89	-13	-33.89	0-360	200	V
1900MHz												
1	5.67341	-60.68	Pk	34.5	-29.2	11.8	-43.58	-13	-30.58	0-360	101	H
2	9.45528	-67.03	Pk	36.4	-26.5	11.8	-45.33	-13	-32.33	0-360	101	H
3	16.98202	-70.07	Pk	42	-24.1	11.8	-40.37	-13	-27.37	0-360	199	H
4	3.78197	-63.42	Pk	33.3	-32.7	11.8	-51.02	-13	-38.02	0-360	101	V
5	5.67341	-65.04	Pk	34.5	-29.2	11.8	-47.94	-13	-34.94	0-360	300	V
6	9.45528	-64.21	Pk	36.4	-26.5	11.8	-42.51	-13	-29.51	0-360	200	V

Pk - Peak detector

16QAM LTE BAND 2 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE2/1860.0/20MHz/16-QAM
Tested by	19289 / 11993
Date	2020-11-11

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1860MHz													
1	60.85	-70.44	Pk	13.6	-30.9	.1	9.7	-77.94	-13	-64.94	0-360	399	H
5	60.9	-68.04	Pk	13.6	-30.9	.1	9.7	-75.54	-13	-62.54	0-360	100	V
2	83.15	-73.2	Pk	13.4	-30.6	.2	9.7	-80.5	-13	-67.5	0-360	399	H
6	84.95	-67.31	Pk	13.3	-30.5	.2	9.7	-74.61	-13	-61.61	0-360	100	V
7	110.35	-67.91	Pk	18.7	-30.2	.2	9.7	-69.51	-13	-56.51	0-360	100	V
3	110.55	-74.3	Pk	18.8	-30.2	.2	9.7	-75.8	-13	-62.8	0-360	299	H
4	470.8	-76.85	Pk	23.5	-27.1	.4	9.7	-70.35	-13	-57.35	0-360	199	H
8	623.55	-77.29	Pk	25.5	-26.6	.5	9.7	-68.19	-13	-55.19	0-360	99	V
1880MHz													
5	30.3	-71.03	Pk	26.7	-31.4	.1	9.7	-65.93	-13	-52.93	0-360	100	V
1	60.3	-70.92	Pk	13.5	-30.9	.1	9.7	-78.52	-13	-65.52	0-360	399	H
6	60.55	-67.61	Pk	13.6	-30.9	.1	9.7	-75.11	-13	-62.11	0-360	100	V
2	84.3	-73.11	Pk	13.3	-30.5	.2	9.7	-80.41	-13	-67.41	0-360	399	H
7	85.25	-66.68	Pk	13.3	-30.5	.2	9.7	-73.98	-13	-60.98	0-360	100	V
8	110.25	-68.58	Pk	18.7	-30.2	.2	9.7	-70.18	-13	-57.18	0-360	100	V
3	111.55	-73.68	Pk	18.9	-30.2	.2	9.7	-75.08	-13	-62.08	0-360	399	H
4	421.5	-75.53	Pk	22.5	-27.4	.4	9.7	-70.33	-13	-57.33	0-360	199	H
9	518.55	-75.83	Pk	23.8	-26.9	.5	9.7	-68.73	-13	-55.73	0-360	99	V
1900MHz													
1	60.25	-70.74	Pk	13.5	-30.9	.1	9.7	-78.34	-13	-65.34	0-360	399	H
5	60.95	-68.12	Pk	13.6	-30.9	.1	9.7	-75.62	-13	-62.62	0-360	100	V
2	84.575	-73.23	Pk	13.3	-30.5	.2	9.7	-80.53	-13	-67.53	0-360	299	H
6	84.85	-66.78	Pk	13.3	-30.5	.2	9.7	-74.08	-13	-61.08	0-360	100	V
7	109.65	-68.44	Pk	18.6	-30.2	.2	9.7	-70.14	-13	-57.14	0-360	100	V
3	110.9	-74.03	Pk	18.8	-30.2	.2	9.7	-75.53	-13	-62.53	0-360	299	H
4	499.55	-76.83	Pk	23.8	-27	.5	9.7	-69.83	-13	-56.83	0-360	200	H
8	636.2	-77.53	Pk	25.9	-26.5	.5	9.7	-67.93	-13	-54.93	0-360	100	V

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE2/20MHz/16-QAM
Tested by:	11993
Date:	2020-11-03

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1860 MHz												
1	3.70298	-59.93	Pk	33.1	-32.5	11.8	-47.53	-13	-34.53	0-360	200	H
2	5.55391	-57.54	Pk	34.4	-30.8	11.8	-42.14	-13	-29.14	0-360	101	H
3	9.25579	-68.63	Pk	36.3	-26.5	11.8	-47.03	-13	-34.03	0-360	299	H
4	3.70248	-61.16	Pk	33.1	-32.4	11.8	-48.66	-13	-35.66	0-360	299	V
5	5.55341	-65.28	Pk	34.4	-30.8	11.8	-49.88	-13	-36.88	0-360	299	V
6	9.25529	-67.33	Pk	36.3	-26.5	11.8	-45.73	-13	-32.73	0-360	101	V
1880MHz												
1	3.74197	-62.04	Pk	33.2	-32.8	11.8	-49.84	-13	-36.84	0-360	200	H
2	5.61291	-60.12	Pk	34.4	-29.8	11.8	-43.72	-13	-30.72	0-360	101	H
3	17.43751	-70.81	Pk	41.1	-23.2	11.8	-41.11	-13	-28.11	0-360	101	H
4	3.74197	-60.94	Pk	33.2	-32.8	11.8	-48.74	-13	-35.74	0-360	101	V
5	5.61291	-65.56	Pk	34.4	-29.8	11.8	-49.16	-13	-36.16	0-360	101	V
6	9.35528	-68.49	Pk	36.4	-26.5	11.8	-46.79	-13	-33.79	0-360	101	V
1900 MHz												
1	3.78197	-63.91	Pk	33.3	-32.7	11.8	-51.51	-13	-38.51	0-360	101	H
2	5.67341	-64.82	Pk	34.5	-29.2	11.8	-47.72	-13	-34.72	0-360	101	H
3	9.45478	-71.53	Pk	36.4	-26.5	11.8	-49.83	-13	-36.83	0-360	300	H
4	3.78197	-61.93	Pk	33.3	-32.7	11.8	-49.53	-13	-36.53	0-360	101	V
5	5.67341	-65.92	Pk	34.5	-29.2	11.8	-48.82	-13	-35.82	0-360	300	V
6	9.45528	-63.72	Pk	36.4	-26.5	11.8	-42.02	-13	-29.02	0-360	101	V

Pk - Peak detector

9.2.2. LTE BAND 4

QPSK LTE BAND 4 (20.0MHZ BANDWIDTH)

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE4/20MHz/QPSK
Tested by:	11993
Date:	2020-12-14 and 2020-12-15

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0075 AF (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz													
1	31.3	-66.32	Pk	26.3	-31.5	.1	9.7	-61.72	-13	-48.72	0-360	299	H
4	32.9	-54.69	Pk	25.1	-31.5	.1	9.7	-51.29	-13	-38.29	0-360	101	V
5	41.45	-52.23	Pk	18.7	-31.4	.1	9.7	-55.13	-13	-42.13	0-360	101	V
2	78	-62.48	Pk	14	-30.8	.2	9.7	-69.38	-13	-56.38	0-360	200	H
6	78	-59.49	Pk	14	-30.8	.2	9.7	-66.39	-13	-53.39	0-360	101	V
3	555.1	-73.9	Pk	24.4	-27.7	.5	9.7	-67	-13	-54	0-360	199	H
1732.5MHz													
4	78	-68.14	Pk	14	-30.8	.2	9.7	-75.04	-13	-62.04	0-360	101	V
1	97	-71.42	Pk	15.9	-30.6	.2	9.7	-76.22	-13	-63.22	0-360	300	H
2	130	-76.03	Pk	20	-30.2	.2	9.7	-76.33	-13	-63.33	0-360	199	H
5	182.05	-73.35	Pk	17.4	-29.7	.3	9.7	-75.65	-13	-62.65	0-360	101	V
6	247.9	-72.46	Pk	17.6	-29.2	.3	9.7	-74.06	-13	-61.06	0-360	199	V
3	266.3	-76.19	Pk	18.8	-29.1	.3	9.7	-76.49	-13	-63.49	0-360	101	H
1745MHz													
4	40.9	-66.98	Pk	19.1	-31.4	.1	9.7	-69.48	-13	-56.48	0-360	101	V
1	78	-68.56	Pk	14	-30.8	.2	9.7	-75.46	-13	-62.46	0-360	200	H
5	78	-68.09	Pk	14	-30.8	.2	9.7	-74.99	-13	-61.99	0-360	101	V
2	97.35	-70.88	Pk	15.9	-30.6	.2	9.7	-75.68	-13	-62.68	0-360	300	H
6	957.2	-77.2	Pk	29	-24.9	.7	9.7	-62.7	-13	-49.7	0-360	299	V
3	994.8	-79.15	Pk	29.4	-24.3	.7	9.7	-63.65	-13	-50.65	0-360	400	H

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE4/20MHz/QPSK
Tested by:	11993
Date:	2020-10-29 and 2020-10-30

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz												
1	5.13293	-61.96	Pk	34.1	-31.1	11.8	-47.16	-13	-34.16	0-360	101	H
2	6.84437	-65.62	Pk	35.7	-28.8	11.8	-46.92	-13	-33.92	0-360	101	H
3	16.91553	-72.62	Pk	42	-23.5	11.8	-42.32	-13	-29.32	0-360	300	H
4	5.13293	-62.85	Pk	34.1	-31.1	11.8	-48.05	-13	-35.05	0-360	101	V
5	6.84437	-68.42	Pk	35.7	-28.8	11.8	-49.72	-13	-36.72	0-360	200	V
6	16.97452	-71.27	Pk	42	-24.1	11.8	-41.57	-13	-28.57	0-360	200	V
1732.5MHz												
1	5.17093	-60.71	Pk	34.2	-31.3	11.8	-46.01	-13	-33.01	0-360	101	H
2	6.89387	-63.22	Pk	35.7	-28.5	11.8	-44.22	-13	-31.22	0-360	101	H
3	12.32918	-71.65	Pk	38.9	-24.1	11.8	-45.05	-13	-32.05	0-360	101	H
4	5.17043	-59.34	Pk	34.2	-31.3	11.8	-44.64	-13	-31.64	0-360	101	V
5	6.89437	-68.21	Pk	35.7	-28.5	11.8	-49.21	-13	-36.21	0-360	101	V
6	15.41908	-73.79	Pk	40.3	-21.9	11.8	-43.59	-13	-30.59	0-360	101	V
1745MHz												
1	5.20792	-60.37	Pk	34.3	-30.8	11.8	-45.07	-13	-32.07	0-360	101	H
2	6.94387	-63.93	Pk	35.7	-27.8	11.8	-44.23	-13	-31.23	0-360	101	H
3	10.41575	-70.75	Pk	37.6	-25	11.8	-46.35	-13	-33.35	0-360	101	H
4	5.20792	-61.2	Pk	34.3	-30.8	11.8	-45.9	-13	-32.9	0-360	101	V
5	6.94487	-68.73	Pk	35.7	-27.8	11.8	-49.03	-13	-36.03	0-360	101	V
6	10.41625	-68.94	Pk	37.6	-25	11.8	-44.54	-13	-31.54	0-360	101	V

Pk - Peak detector

16QAM LTE BAND 4 (20.0MHZ BANDWIDTH)

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE4/20MHz/16-QAM
Tested by:	85198/11993
Date:	2020-12-14

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0075 AF (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz													
4	63.05	-69.41	Pk	13.9	-31.1	.1	9.7	-76.81	-13	-63.81	0-360	101	V
1	78	-68.3	Pk	14	-30.8	.2	9.7	-75.2	-13	-62.2	0-360	299	H
5	78	-68.23	Pk	14	-30.8	.2	9.7	-75.13	-13	-62.13	0-360	101	V
2	97.85	-72.21	Pk	15.9	-30.6	.2	9.7	-77.01	-13	-64.01	0-360	200	H
3	181.95	-74.85	Pk	17.4	-29.7	.3	9.7	-77.15	-13	-64.15	0-360	99	H
6	201.55	-77.06	Pk	18.9	-29.5	.3	9.7	-77.66	-13	-64.66	0-360	101	V
1732.5MHz													
4	62.35	-67.43	Pk	13.9	-31	.1	9.7	-74.73	-13	-61.73	0-360	101	V
1	76.5	-72.84	Pk	14.2	-30.9	.2	9.7	-79.64	-13	-66.64	0-360	300	H
5	78	-68.08	Pk	14	-30.8	.2	9.7	-74.98	-13	-61.98	0-360	101	V
2	97.2	-69.93	Pk	15.9	-30.6	.2	9.7	-74.73	-13	-61.73	0-360	200	H
6	143.55	-74.7	Pk	18.9	-30.1	.3	9.7	-75.9	-13	-62.9	0-360	101	V
3	576	-76.49	Pk	24.7	-27.6	.5	9.7	-69.19	-13	-56.19	0-360	200	H
1745MHz													
4	33.35	-69.06	Pk	24.8	-31.5	.1	9.7	-65.96	-13	-52.96	0-360	101	V
5	63.275	-66.6	Pk	13.9	-31.1	.1	9.7	-74	-13	-61	0-360	101	V
1	96.85	-70.32	Pk	15.9	-30.6	.2	9.7	-75.12	-13	-62.12	0-360	400	H
2	256.45	-73.74	Pk	17.5	-29.1	.3	9.7	-75.34	-13	-62.34	0-360	101	H
6	923.7	-77.86	Pk	28.8	-25.1	.6	9.7	-63.86	-13	-50.86	0-360	200	V
3	928.9	-79.03	Pk	28.9	-25.2	.6	9.7	-65.03	-13	-52.03	0-360	200	H

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE4/20MHz/16-QAM
Tested by:	11993
Date:	2020-11-03

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz												
1	5.13343	-64.19	Pk	34.1	-31.1	11.8	-49.39	-13	-36.39	0-360	101	H
2	6.84437	-67.76	Pk	35.7	-28.8	11.8	-49.06	-13	-36.06	0-360	101	H
3	17.01752	-71.78	Pk	41.9	-23.9	11.8	-41.98	-13	-28.98	0-360	101	H
4	5.13343	-62.89	Pk	34.1	-31.1	11.8	-48.09	-13	-35.09	0-360	101	V
5	10.45925	-71.05	Pk	37.7	-25.1	11.8	-46.65	-13	-33.65	0-360	101	V
6	17.14902	-71.9	Pk	41.6	-23	11.8	-41.5	-13	-28.5	0-360	299	V
1732.5MHz												
1	5.17043	-61.01	Pk	34.2	-31.3	11.8	-46.31	-13	-33.31	0-360	101	H
2	6.89437	-64.44	Pk	35.7	-28.5	11.8	-45.44	-13	-32.44	0-360	101	H
3	16.59154	-72.05	Pk	41.6	-23.1	11.8	-41.75	-13	-28.75	0-360	101	H
4	5.17043	-59.47	Pk	34.2	-31.3	11.8	-44.77	-13	-31.77	0-360	101	V
5	6.89487	-68.75	Pk	35.7	-28.5	11.8	-49.75	-13	-36.75	0-360	200	V
6	15.47708	-71.89	Pk	40.3	-23	11.8	-42.79	-13	-29.79	0-360	200	V
1745MHz												
1	5.20842	-64.15	Pk	34.3	-30.8	11.8	-48.85	-13	-35.85	0-360	101	H
2	6.94437	-65.27	Pk	35.7	-27.8	11.8	-45.57	-13	-32.57	0-360	101	H
3	17.561	-70.66	Pk	41	-22.9	11.8	-40.76	-13	-27.76	0-360	101	H
4	5.20842	-61.88	Pk	34.3	-30.8	11.8	-46.58	-13	-33.58	0-360	101	V
5	6.94387	-68.85	Pk	35.7	-27.8	11.8	-49.15	-13	-36.15	0-360	200	V
6	10.41625	-68.89	Pk	37.6	-25	11.8	-44.49	-13	-31.49	0-360	101	V

Pk - Peak detector

9.2.3. LTE BAND 12

QPSK LTE BAND 12 (10.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE12 / 10MHz / QPSK
Tested by	19289 / 11993
Date	2020-11-20

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
704MHz													
1	45.45	-71.85	Pk	16	-31.2	.1	9.7	-77.25	-13	-64.25	0-360	400	H
4	45.85	-61.9	Pk	15.8	-31.2	.1	9.7	-67.5	-13	-54.5	0-360	100	V
5	102.45	-69.91	Pk	17	-30.4	.3	9.7	-73.31	-13	-60.31	0-360	100	V
2	103.1	-71.19	Pk	17.2	-30.4	.3	9.7	-74.39	-13	-61.39	0-360	299	H
3	479.3	-78.64	Pk	23.8	-27.4	.6	9.7	-71.94	-13	-58.94	0-360	199	H
6	532.3	-78.55	Pk	24.1	-27.2	.7	9.7	-71.25	-13	-58.25	0-360	100	V
707.5MHz													
1	45.75	-69.79	Pk	15.9	-31.2	.1	9.7	-75.29	-13	-62.29	0-360	299	H
4	46.05	-62.09	Pk	15.7	-31.2	.1	9.7	-67.79	-13	-54.79	0-360	101	V
5	101.15	-71.12	Pk	16.6	-30.4	.3	9.7	-74.92	-13	-61.92	0-360	101	V
2	102.7	-72.09	Pk	17.1	-30.4	.3	9.7	-75.39	-13	-62.39	0-360	299	H
6	221.15	-72.94	Pk	16.8	-29.1	.5	9.7	-75.04	-13	-62.04	0-360	101	V
3	350	-75.64	Pk	20.4	-28.1	.4	9.7	-73.24	-13	-60.24	0-360	101	H
711MHz													
1	44.65	-71.97	Pk	16.5	-31.2	.1	9.7	-76.87	-13	-63.87	0-360	299	H
4	45.4	-62.13	Pk	16.1	-31.2	.1	9.7	-67.43	-13	-54.43	0-360	101	V
5	101.15	-67.69	Pk	16.6	-30.4	.3	9.7	-71.49	-13	-58.49	0-360	101	V
2	103.5	-69.93	Pk	17.4	-30.4	.3	9.7	-72.93	-13	-59.93	0-360	299	H
6	191.05	-73.2	Pk	17.7	-29.4	.5	9.7	-74.7	-13	-61.7	0-360	101	V
3	355	-76.32	Pk	20.7	-28.2	.4	9.7	-73.72	-13	-60.72	0-360	101	H

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE12/10MHz/QPSK
Tested by:	11993
Date:	2020-10-29

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
704MHz													
1	1.39898	-45.97	Pk	28.5	-35.1	.9	11.8	-39.87	-13	-26.87	0-360	300	H
2	2.09894	-61.18	Pk	31.9	-34.5	.4	11.8	-51.58	-13	-38.58	0-360	101	H
3	8.62957	-69.17	Pk	36	-27.6	.5	11.8	-48.47	-13	-35.47	0-360	300	H
4	1.39898	-48.57	Pk	28.5	-35.1	.9	11.8	-42.47	-13	-29.47	0-360	300	V
5	4.67429	-66.17	Pk	34.1	-31.7	.3	11.8	-51.67	-13	-38.67	0-360	300	V
6	8.59107	-69.93	Pk	35.9	-27.6	.5	11.8	-49.33	-13	-36.33	0-360	300	V
707.5MHz													
1	1.40598	-49.38	Pk	28.5	-35.1	.9	11.8	-43.28	-13	-30.28	0-360	199	H
2	2.10944	-57.71	Pk	31.9	-34.6	.4	11.8	-48.21	-13	-35.21	0-360	199	H
3	7.18015	-69.08	Pk	35.6	-28.4	.7	11.8	-49.38	-13	-36.38	0-360	199	H
4	1.40598	-54.08	Pk	28.5	-35.1	.9	11.8	-47.98	-13	-34.98	0-360	200	V
5	2.10894	-62.08	Pk	31.9	-34.6	.4	11.8	-52.58	-13	-39.58	0-360	101	V
6	7.61663	-68.41	Pk	35.7	-28	.5	11.8	-48.41	-13	-35.41	0-360	300	V
711MHz													
1	1.41298	-40.83	Pk	28.4	-35.1	.9	11.8	-34.83	-13	-21.83	0-360	101	H
2	2.11944	-57.34	Pk	31.9	-34.6	.4	11.8	-47.84	-13	-34.84	0-360	200	H
3	7.19315	-69.23	Pk	35.6	-28.2	.8	11.8	-49.23	-13	-36.23	0-360	299	H
4	1.41298	-44.11	Pk	28.4	-35.1	.9	11.8	-38.11	-13	-25.11	0-360	299	V
5	2.11944	-59.75	Pk	31.9	-34.6	.4	11.8	-50.25	-13	-37.25	0-360	299	V
6	6.82667	-69.16	Pk	35.7	-28.6	.7	11.8	-49.56	-13	-36.56	0-360	101	V

Pk - Peak detector

16QAM LTE BAND 12 (10.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE12 / 10MHz/ 16-QAM
Tested by	19289 / 11993
Date	2020-11-20

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
704MHz													
5	45.9	-61.69	Pk	15.8	-31.2	.1	9.7	-67.29	-13	-54.29	0-360	101	V
1	45.95	-71.11	Pk	15.7	-31.2	.1	9.7	-76.81	-13	-63.81	0-360	300	H
2	61.05	-73.49	Pk	13.6	-30.9	.2	9.7	-80.89	-13	-67.89	0-360	300	H
6	61.85	-68.6	Pk	13.7	-31	.2	9.7	-76	-13	-63	0-360	101	V
7	101.1	-68.61	Pk	16.6	-30.4	.3	9.7	-72.41	-13	-59.41	0-360	101	V
3	103	-69.29	Pk	17.2	-30.4	.3	9.7	-72.49	-13	-59.49	0-360	300	H
4	495.75	-77.26	Pk	23.8	-27.3	.7	9.7	-70.36	-13	-57.36	0-360	200	H
8	560.25	-78.06	Pk	24.5	-27.1	.8	9.7	-70.16	-13	-57.16	0-360	99	V
707.5MHz													
1	44.95	-72.2	Pk	16.3	-31.2	.1	9.7	-77.3	-13	-64.3	0-360	300	H
4	45.5	-61.93	Pk	16	-31.2	.1	9.7	-67.33	-13	-54.33	0-360	100	V
5	102.55	-68.2	Pk	17.1	-30.4	.3	9.7	-71.5	-13	-58.5	0-360	100	V
2	102.9	-69.4	Pk	17.2	-30.4	.3	9.7	-72.6	-13	-59.6	0-360	300	H
6	197.8	-76.42	Pk	18.9	-29.4	.5	9.7	-76.72	-13	-63.72	0-360	100	V
3	513.4	-77.61	Pk	23.8	-27.2	.7	9.7	-70.61	-13	-57.61	0-360	200	H
711MHz													
1	45.05	-72.17	Pk	16.3	-31.2	.1	9.7	-77.27	-13	-64.27	0-360	300	H
4	45.6	-61.6	Pk	15.9	-31.2	.1	9.7	-67.1	-13	-54.1	0-360	100	V
2	102.2	-69.75	Pk	17	-30.4	.3	9.7	-73.15	-13	-60.15	0-360	300	H
5	102.25	-68.39	Pk	17	-30.4	.3	9.7	-71.79	-13	-58.79	0-360	100	V
6	196.75	-77.05	Pk	18.7	-29.4	.5	9.7	-77.55	-13	-64.55	0-360	100	V
3	487.1	-77.7	Pk	23.8	-27.3	.6	9.7	-70.9	-13	-57.9	0-360	99	H

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE12/10MHz/16-QAM
Tested by:	11993
Date:	2020-11-02

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
704MHz													
1	1.39898	-50.95	Pk	28.5	-35.1	.9	11.8	-44.85	-13	-31.85	0-360	101	H
2	4.29232	-64.93	Pk	33.4	-32.4	.3	11.8	-51.83	-13	-38.83	0-360	101	H
3	7.77562	-69.28	Pk	35.7	-27.8	.5	11.8	-49.08	-13	-36.08	0-360	300	H
4	1.39848	-58.86	Pk	28.5	-35.1	.9	11.8	-52.76	-13	-39.76	0-360	101	V
5	5.32626	-66.48	Pk	34.4	-30.6	.4	11.8	-50.48	-13	-37.48	0-360	200	V
6	6.51819	-68.29	Pk	35.6	-29.3	.6	11.8	-49.59	-13	-36.59	0-360	101	V
707.5MHz													
1	1.40598	-52.41	Pk	28.5	-35.1	.9	11.8	-46.31	-13	-33.31	0-360	101	H
2	2.10944	-60.7	Pk	31.9	-34.6	.4	11.8	-51.2	-13	-38.2	0-360	199	H
3	9.30453	-69.96	Pk	36.3	-26.8	.6	11.8	-48.06	-13	-35.06	0-360	101	H
4	1.40598	-56.23	Pk	28.5	-35.1	.9	11.8	-50.13	-13	-37.13	0-360	300	V
5	3.24262	-63.91	Pk	33.1	-33.5	.5	11.8	-52.01	-13	-39.01	0-360	200	V
6	8.51408	-69.84	Pk	35.9	-27.4	.5	11.8	-49.04	-13	-36.04	0-360	200	V
711MHz													
1	1.41298	-44.56	Pk	28.4	-35.1	.9	11.8	-38.56	-13	-25.56	0-360	300	H
2	1.42998	-57.29	Pk	28.3	-35.1	.8	11.8	-51.49	-13	-38.49	0-360	200	H
3	2.11944	-59.33	Pk	31.9	-34.6	.4	11.8	-49.83	-13	-36.83	0-360	200	H
4	9.15904	-69.09	Pk	36.3	-27.1	.6	11.8	-47.49	-13	-34.49	0-360	300	H
5	1.41298	-52.37	Pk	28.4	-35.1	.9	11.8	-46.37	-13	-33.37	0-360	300	V
6	2.11994	-61.84	Pk	31.9	-34.6	.4	11.8	-52.34	-13	-39.34	0-360	101	V
7	8.75657	-69.66	Pk	36.1	-27.4	.5	11.8	-48.66	-13	-35.66	0-360	200	V

Pk - Peak detector

9.2.4. LTE BAND 26 (FCC PART 90S)

QPSK LTE BAND 26 (1.4MHz BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	S-SAC
Mode	LTE26, 1.4MHz, QPSK
Tested by	19289 / 11993, 22797/11993
Date	2020-12-10 and 2020-12-29

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
814.7MHz													
4	45.95	-56.38	Pk	15.8	-31.3	.1	9.7	-62.08	-13	-49.08	0-360	101	V
1	46.5	-68.44	Pk	15.6	-31.3	.1	9.7	-74.34	-13	-61.34	0-360	399	H
5	61.15	-65.61	Pk	13.8	-31	.2	9.7	-72.91	-13	-59.91	0-360	101	V
6	83.4	-67.66	Pk	13.6	-30.8	.2	9.7	-74.96	-13	-61.96	0-360	101	V
2	86.7	-73.23	Pk	13.7	-30.7	.2	9.7	-80.33	-13	-67.33	0-360	300	H
3	342.95	-73.15	Pk	20.3	-28.6	.4	9.7	-71.35	-13	-58.35	0-360	101	H
819.0MHz													
4	42.8	-48.93	Pk	17.7	-31.3	.1	9.7	-52.73	-13	-39.73	0-360	101	V
1	43.25	-65.12	Pk	17.5	-31.3	.1	9.7	-69.12	-13	-56.12	0-360	400	H
5	83.35	-59.92	Pk	13.6	-30.8	.2	9.7	-67.22	-13	-54.22	0-360	101	V
2	83.6	-68.68	Pk	13.6	-30.8	.2	9.7	-75.98	-13	-62.98	0-360	199	H
6	143.6	-72.66	Pk	18.9	-30.1	.4	9.7	-73.76	-13	-60.76	0-360	101	V
3	344.4	-72.9	Pk	20.3	-28.6	.4	9.7	-71.1	-13	-58.1	0-360	101	H
823.3MHz													
4	32.35	-74.54	Pk	25.5	-31.5	.1	9.7	-70.74	-13	-57.74	0-360	101	V
5	63.2	-67.97	Pk	13.9	-31.1	.2	9.7	-75.27	-13	-62.27	0-360	101	V
1	71.35	-75.45	Pk	14.4	-30.9	.2	9.7	-82.05	-13	-69.05	0-360	199	H
6	71.5	-69.84	Pk	14.4	-30.9	.2	9.7	-76.44	-13	-63.44	0-360	101	V
2	199.9	-78.35	Pk	18.9	-29.6	.5	9.7	-78.85	-13	-65.85	0-360	100	H
3	346.9	-75.8	Pk	20.4	-28.5	.4	9.7	-73.8	-13	-60.8	0-360	101	H

Pk - Peak detector

Project Number	13548896
Client	Lions
Test Location	S-SAC
Mode	LTE26, 1.4MHz, QPSK
Tested by	19289 / 11993, 85198/11993
Date	2020-12-10 and 2020-12-28

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
814.7MHz													
1	1.62846	-58.1	Pk	28.6	-34.9	.5	11.8	-52.1	-13	-39.1	0-360	101	H
3	1.62846	-59.83	Pk	28.6	-34.9	.5	11.8	-53.83	-13	-40.83	0-360	200	V
4	1.71896	-61.69	Pk	29.6	-34.7	.4	11.8	-54.59	-13	-41.59	0-360	101	V
5	1.85645	-58.35	Pk	30.8	-34.6	.4	11.8	-49.95	-13	-36.95	0-360	200	V
2	2.44242	-56.38	Pk	32.5	-34.2	.4	11.8	-45.88	-13	-32.88	0-360	299	H
6	2.44292	-59.3	Pk	32.5	-34.3	.4	11.8	-48.9	-13	-35.9	0-360	299	V
819.0MHz													
1	1.34948	-64.28	Pk	29	-35.1	.8	11.8	-57.78	-13	-44.78	0-360	200	H
4	1.63746	-62.81	Pk	28.6	-34.9	.5	11.8	-56.81	-13	-43.81	0-360	101	V
5	1.85895	-58.95	Pk	30.8	-34.6	.4	11.8	-50.55	-13	-37.55	0-360	200	V
2	1.87995	-64.08	Pk	31.1	-34.6	.4	11.8	-55.38	-13	-42.38	0-360	200	H
3	2.30793	-64.11	Pk	32	-34.3	.4	11.8	-54.21	-13	-41.21	0-360	101	H
6	3.24387	-64.78	Pk	33.1	-33.5	.5	11.8	-52.88	-13	-39.88	0-360	300	V
823.3MHz													
1	1.64596	-52.93	Pk	28.7	-34.9	.5	11.8	-46.83	-13	-33.83	0-360	200	H
4	1.64596	-56.04	Pk	28.7	-34.9	.5	11.8	-49.94	-13	-36.94	0-360	299	V
5	2.40142	-59.3	Pk	32.1	-34.3	.4	11.8	-49.3	-13	-36.3	0-360	200	V
2	2.46842	-48.17	Pk	32.5	-34.2	.4	11.8	-37.67	-13	-24.67	0-360	101	H
6	2.46842	-50.19	Pk	32.5	-34.2	.4	11.8	-39.69	-13	-26.69	0-360	200	V
3	2.47942	-59.45	Pk	32.4	-34.2	.4	11.8	-49.05	-13	-36.05	0-360	299	H

Pk - Peak detector

16QAM LTE BAND 26 (1.4MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	S-SAC
Mode	LTE26, 1.4MHz, 16-QAM
Tested by	19289 / 11993, 22797/11993
Date	2020-12-10 and 2020-12-29

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
814.7MHz													
1	45.9	-69.29	Pk	15.9	-31.3	.1	9.7	-74.89	-13	-61.89	0-360	399	H
4	46.25	-56.69	Pk	15.7	-31.3	.1	9.7	-62.49	-13	-49.49	0-360	101	V
5	61.25	-65.84	Pk	13.8	-31	.2	9.7	-73.14	-13	-60.14	0-360	101	V
6	82.85	-67.15	Pk	13.6	-30.8	.2	9.7	-74.45	-13	-61.45	0-360	101	V
2	83.45	-75.2	Pk	13.6	-30.8	.2	9.7	-82.5	-13	-69.5	0-360	399	H
3	514.9	-76.37	Pk	23.8	-27.5	.7	9.7	-69.67	-13	-56.67	0-360	199	H
819.0MHz													
4	44.2	-55.85	Pk	16.9	-31.3	.1	9.7	-60.45	-13	-47.45	0-360	101	V
1	46.25	-67.66	Pk	15.7	-31.3	.1	9.7	-73.46	-13	-60.46	0-360	399	H
5	83.3	-62.88	Pk	13.6	-30.8	.2	9.7	-70.18	-13	-57.18	0-360	101	V
2	83.8	-71.67	Pk	13.6	-30.8	.2	9.7	-78.97	-13	-65.97	0-360	199	H
6	144	-75.72	Pk	18.9	-30.1	.4	9.7	-76.82	-13	-63.82	0-360	101	V
3	338.2	-72.32	Pk	20.1	-28.6	.4	9.7	-70.72	-13	-57.72	0-360	101	H
823.3MHz													
4	32.95	-73.22	Pk	25	-31.5	.1	9.7	-69.92	-13	-56.92	0-360	101	V
5	63.35	-68.72	Pk	13.9	-31.1	.2	9.7	-76.02	-13	-63.02	0-360	101	V
1	71.65	-76.9	Pk	14.4	-30.9	.2	9.7	-83.5	-13	-70.5	0-360	99	H
6	97.75	-74.9	Pk	15.9	-30.6	.3	9.7	-79.6	-13	-66.6	0-360	101	V
2	118.05	-76.76	Pk	19.9	-30.4	.3	9.7	-77.26	-13	-64.26	0-360	400	H
3	221.05	-74.52	Pk	16.9	-29.4	.5	9.7	-76.82	-13	-63.82	0-360	200	H

Pk - Peak detector

Project Number	13548896
Client	Lions
Test Location	S-SAC
Mode	LTE26, 1.4MHz, 16-QAM
Tested by	19289 / 11993, 85198/11993
Date	2020-12-10 and 2020-12-28

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
814.7MHz													
1	1.62846	-58.36	Pk	28.6	-34.9	.5	11.8	-52.36	-13	-39.36	0-360	101	H
3	1.62846	-60.12	Pk	28.6	-34.9	.5	11.8	-54.12	-13	-41.12	0-360	200	V
4	1.71946	-61.01	Pk	29.6	-34.7	.4	11.8	-53.91	-13	-40.91	0-360	200	V
5	1.85845	-61.37	Pk	30.8	-34.6	.4	11.8	-52.97	-13	-39.97	0-360	101	V
2	2.44242	-56.92	Pk	32.5	-34.2	.4	11.8	-46.42	-13	-33.42	0-360	300	H
6	2.44292	-59.15	Pk	32.5	-34.3	.4	11.8	-48.75	-13	-35.75	0-360	300	V
819.0MHz													
1	1.65546	-63.44	Pk	28.8	-34.9	.5	11.8	-57.24	-13	-44.24	0-360	101	H
4	1.74596	-63.33	Pk	29.7	-34.8	.4	11.8	-56.23	-13	-43.23	0-360	101	V
5	1.85645	-60.17	Pk	30.8	-34.6	.4	11.8	-51.77	-13	-38.77	0-360	299	V
2	1.85845	-62.13	Pk	30.8	-34.6	.4	11.8	-53.73	-13	-40.73	0-360	200	H
6	2.06544	-62.8	Pk	31.8	-34.6	.4	11.8	-53.4	-13	-40.4	0-360	200	V
3	2.36942	-63.64	Pk	32.2	-34.3	.4	11.8	-53.54	-13	-40.54	0-360	101	H
823.3MHz													
1	1.64546	-54.55	Pk	28.7	-34.9	.5	11.8	-48.45	-13	-35.45	0-360	300	H
3	1.64546	-58.54	Pk	28.7	-34.9	.5	11.8	-52.44	-13	-39.44	0-360	101	V
4	2.42592	-58.17	Pk	32.3	-34.4	.4	11.8	-48.07	-13	-35.07	0-360	300	V
2	2.46842	-50.6	Pk	32.5	-34.2	.4	11.8	-40.1	-13	-27.1	0-360	300	H
5	2.46842	-52.65	Pk	32.5	-34.2	.4	11.8	-42.15	-13	-29.15	0-360	101	V
6	5.32226	-65	Pk	34.4	-30.7	.4	11.8	-49.1	-13	-36.1	0-360	200	V

Pk - Peak detector

9.2.5. LTE BAND 26 (FCC PART 22)

QPSK LTE BAND 26 (15.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE26/15MHz/QPSK
Tested by	23567 / 11993
Date	2020-11-19 and 2020-12-09

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
831.5MHz													
1	35.7	-70.45	Pk	22.8	-31.3	.1	9.7	-69.15	-13	-56.15	0-360	99	H
4	49.3	-57.64	Pk	14.2	-31.1	.1	9.7	-64.74	-13	-51.74	0-360	101	V
2	62.1	-66.97	Pk	13.7	-31	.2	9.7	-74.37	-13	-61.37	0-360	299	H
5	109.4	-70.95	Pk	18.6	-30.3	.3	9.7	-72.65	-13	-59.65	0-360	101	V
3	198.15	-73.06	Pk	18.9	-29.3	.5	9.7	-73.26	-13	-60.26	0-360	99	H
6	254.65	-72.38	Pk	17.7	-28.9	.4	9.7	-73.48	-13	-60.48	0-360	100	V
836.5MHz													
1	61.45	-67.48	Pk	13.6	-31	.2	9.7	-74.98	-13	-61.98	0-360	399	H
4	61.85	-61.3	Pk	13.7	-31	.2	9.7	-68.7	-13	-55.7	0-360	101	V
5	114.7	-68.41	Pk	19.4	-30.2	.3	9.7	-69.21	-13	-56.21	0-360	101	V
2	115.15	-73.63	Pk	19.4	-30.2	.3	9.7	-74.43	-13	-61.43	0-360	299	H
3	490.85	-77.49	Pk	23.8	-27.2	.6	9.7	-70.59	-13	-57.59	0-360	399	H
6	573.85	-77.23	Pk	24.7	-27.2	.9	9.7	-69.13	-13	-56.13	0-360	101	V
841.5MHz													
4	36.25	-64.64	Pk	22.4	-31.3	.1	9.7	-63.74	-13	-50.74	0-360	100	V
1	49.4	-61.95	Pk	14.2	-31.1	.1	9.7	-69.05	-13	-56.05	0-360	199	H
5	109.1	-69.93	Pk	18.5	-30.3	.3	9.7	-71.73	-13	-58.73	0-360	100	V
2	202.1	-74.41	Pk	18.2	-29.4	.5	9.7	-75.41	-13	-62.41	0-360	99	H
3	353.45	-75.94	Pk	20.6	-28.1	.4	9.7	-73.34	-13	-60.34	0-360	200	H
6	420.7	-76.66	Pk	22.4	-27.8	.5	9.7	-71.86	-13	-58.86	0-360	199	V

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE26/821.5/15MHz/QPSK
Tested by:	11993
Date:	2020-10-30 and 2020-12-09

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
831.5MHz													
1	1.64946	-53	Pk	28.7	-34.8	.5	11.8	-46.8	-13	-33.8	0-360	101	H
2	2.47442	-59.01	Pk	32.5	-34.2	.4	11.8	-48.51	-13	-35.51	0-360	200	H
3	6.52419	-68.08	Pk	35.6	-29.3	.6	11.8	-49.38	-13	-36.38	0-360	101	H
4	1.64946	-54.99	Pk	28.7	-34.8	.5	11.8	-48.79	-13	-35.79	0-360	101	V
5	2.47392	-59.53	Pk	32.5	-34.2	.4	11.8	-49.03	-13	-36.03	0-360	101	V
6	9.29754	-70.07	Pk	36.3	-26.8	.6	11.8	-48.17	-13	-35.17	0-360	200	V
836.5MHz													
1	1.66046	-54.79	Pk	28.9	-34.9	.5	11.8	-48.49	-13	-35.49	0-360	299	H
4	1.66046	-54.23	Pk	28.9	-34.9	.5	11.8	-47.93	-13	-34.93	0-360	299	V
5	2.48992	-61.53	Pk	32.4	-34.2	.4	11.8	-51.13	-13	-38.13	0-360	101	V
2	2.49042	-58.97	Pk	32.4	-34.2	.4	11.8	-48.57	-13	-35.57	0-360	200	H
3	5.11327	-65.77	Pk	34.1	-31.2	.3	11.8	-50.77	-13	-37.77	0-360	299	H
6	5.85023	-68.7	Pk	34.8	-30.1	.5	11.8	-51.7	-13	-38.7	0-360	299	V
841.5MHz													
1	1.66946	-51.74	Pk	29	-34.9	.5	11.8	-45.34	-13	-32.34	0-360	101	H
2	2.50442	-53.76	Pk	32.4	-34.3	.4	11.8	-43.46	-13	-30.46	0-360	300	H
3	3.65135	-64.34	Pk	33.1	-33	.5	11.8	-51.94	-13	-38.94	0-360	101	H
4	1.66946	-50.79	Pk	29	-34.9	.5	11.8	-44.39	-13	-31.39	0-360	101	V
5	2.50492	-57.63	Pk	32.4	-34.3	.4	11.8	-47.33	-13	-34.33	0-360	300	V
6	9.45928	-70.05	Pk	36.5	-26.9	.6	11.8	-48.05	-13	-35.05	0-360	101	V

Pk - Peak detector

16QAM LTE BAND 26 (15.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE26/15MHz/16-QAM
Tested by	23567 / 11993
Date	2020-11-19 and 2020-12-09

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
831.5MHz													
1	35.9	-70.23	Pk	22.7	-31.3	.1	9.7	-69.03	-13	-56.03	0-360	99	H
4	36.1	-64.88	Pk	22.5	-31.3	.1	9.7	-63.88	-13	-50.88	0-360	101	V
5	47.45	-57.82	Pk	15	-31.1	.1	9.7	-64.12	-13	-51.12	0-360	101	V
3	49.25	-61.77	Pk	14.2	-31.1	.1	9.7	-68.87	-13	-55.87	0-360	199	H
6	108.5	-71.91	Pk	18.4	-30.3	.3	9.7	-73.81	-13	-60.81	0-360	101	V
2	199.65	-73.5	Pk	19	-29.3	.5	9.7	-73.6	-13	-60.6	0-360	99	H
836.5MHz													
1	61.5	-67.55	Pk	13.7	-31	.2	9.7	-74.95	-13	-61.95	0-360	400	H
4	61.75	-61.51	Pk	13.7	-31	.2	9.7	-68.91	-13	-55.91	0-360	101	V
5	115.9	-68.8	Pk	19.6	-30.2	.3	9.7	-69.4	-13	-56.4	0-360	101	V
2	116.55	-76.55	Pk	19.7	-30.3	.3	9.7	-77.15	-13	-64.15	0-360	299	H
3	451.9	-77.57	Pk	22.9	-27.6	.5	9.7	-72.07	-13	-59.07	0-360	300	H
6	600.95	-77.01	Pk	24.5	-26.8	1.2	9.7	-68.41	-13	-55.41	0-360	101	V
841.5MHz													
1	35.8	-70.03	Pk	22.8	-31.3	.1	9.7	-68.73	-13	-55.73	0-360	99	H
4	36.05	-65.81	Pk	22.6	-31.3	.1	9.7	-64.71	-13	-51.71	0-360	100	V
5	47.6	-57.5	Pk	14.9	-31.1	.1	9.7	-63.9	-13	-50.9	0-360	100	V
3	48.2	-62.57	Pk	14.6	-31.1	.1	9.7	-69.27	-13	-56.27	0-360	200	H
6	108.75	-71.2	Pk	18.5	-30.3	.3	9.7	-73	-13	-60	0-360	100	V
2	198.05	-74.42	Pk	18.9	-29.3	.5	9.7	-74.62	-13	-61.62	0-360	99	H

Pk - Peak detector

Project Number	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE26/15MHz/16-QAM
Tested by:	11993
Date:	2020-11-02 and 2020-12-09

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
831.5MHz													
1	1.64996	-52.75	Pk	28.7	-34.8	.5	11.8	-46.55	-13	-33.55	0-360	199	H
2	2.47442	-57.95	Pk	32.5	-34.2	.4	11.8	-47.45	-13	-34.45	0-360	199	H
3	6.94567	-69.66	Pk	35.7	-28.7	.8	11.8	-50.06	-13	-37.06	0-360	101	H
4	1.64946	-56.81	Pk	28.7	-34.8	.5	11.8	-50.61	-13	-37.61	0-360	200	V
5	2.47442	-59.8	Pk	32.5	-34.2	.4	11.8	-49.3	-13	-36.3	0-360	200	V
6	9.29454	-70.13	Pk	36.3	-26.8	.6	11.8	-48.23	-13	-35.23	0-360	200	V
836.5MHz													
1	1.65946	-54.93	Pk	28.8	-34.9	.5	11.8	-48.73	-13	-35.73	0-360	299	H
4	1.65996	-54.89	Pk	28.9	-34.9	.5	11.8	-48.59	-13	-35.59	0-360	299	V
5	2.41442	-61.33	Pk	32.2	-34.3	.4	11.8	-51.23	-13	-38.23	0-360	200	V
2	2.41592	-59.98	Pk	32.3	-34.3	.4	11.8	-49.78	-13	-36.78	0-360	299	H
6	3.84934	-63.1	Pk	33.3	-32.9	.4	11.8	-50.5	-13	-37.5	0-360	101	V
3	3.85334	-64.57	Pk	33.3	-33	.4	11.8	-52.07	-13	-39.07	0-360	299	H
841.5MHz													
1	1.66946	-54.58	Pk	29	-34.9	.5	11.8	-48.18	-13	-35.18	0-360	300	H
2	2.50442	-55.19	Pk	32.4	-34.3	.4	11.8	-44.89	-13	-31.89	0-360	101	H
3	9.31553	-69.11	Pk	36.3	-26.7	.6	11.8	-47.11	-13	-34.11	0-360	199	H
4	1.66946	-56.26	Pk	29	-34.9	.5	11.8	-49.86	-13	-36.86	0-360	101	V
5	2.50442	-55.77	Pk	32.4	-34.3	.4	11.8	-45.47	-13	-32.47	0-360	300	V
6	7.33415	-68.72	Pk	35.6	-28.2	.7	11.8	-48.82	-13	-35.82	0-360	200	V

Pk - Peak detector

9.2.6. LTE BAND 41 (FCC)

QPSK LTE BAND 41 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE41/20MHz/QPSK
Tested by	19289 / 11993
Date	2020-11-11

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-25dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2506MHz													
1	34.1	-76.24	Pk	24	-31.3	.1	9.7	-73.74	-25	-48.74	0-360	99	H
5	47.7	-69.23	Pk	14.9	-31.1	.1	9.7	-75.63	-25	-50.63	0-360	100	V
6	59.85	-68.92	Pk	13.5	-30.9	.1	9.7	-76.52	-25	-51.52	0-360	100	V
2	60.25	-73.13	Pk	13.5	-30.9	.1	9.7	-80.73	-25	-55.73	0-360	199	H
7	109.55	-67.31	Pk	18.6	-30.2	.2	9.7	-69.01	-25	-44.01	0-360	100	V
3	110.05	-71.72	Pk	18.7	-30.2	.2	9.7	-73.32	-25	-48.32	0-360	299	H
4	469.4	-77.53	Pk	23.5	-27.1	.4	9.7	-71.03	-25	-46.03	0-360	299	H
8	615.3	-76.49	Pk	25.1	-26.4	.5	9.7	-67.59	-25	-42.59	0-360	99	V
2593MHz													
1	34.75	-77.7	Pk	23.6	-31.3	.1	9.7	-75.6	-25	-50.6	0-360	399	H
2	47.55	-74.48	Pk	14.9	-31.1	.1	9.7	-80.88	-25	-55.88	0-360	199	H
5	48.65	-69.6	Pk	14.4	-31.1	.1	9.7	-76.5	-25	-51.5	0-360	100	V
6	60.65	-68.75	Pk	13.6	-30.9	.1	9.7	-76.25	-25	-51.25	0-360	100	V
3	108.8	-71.24	Pk	18.5	-30.2	.2	9.7	-73.04	-25	-48.04	0-360	300	H
7	109.1	-66.91	Pk	18.5	-30.2	.2	9.7	-68.71	-25	-43.71	0-360	100	V
4	529.3	-78.02	Pk	24.1	-26.8	.5	9.7	-70.52	-25	-45.52	0-360	299	H
8	746.6	-77.6	Pk	26.8	-25.8	.6	9.7	-66.3	-25	-41.3	0-360	299	V
2680MHz													
1	47.55	-74.86	Pk	14.9	-31.1	.1	9.7	-81.26	-25	-56.26	0-360	399	H
5	48.95	-69.22	Pk	14.3	-31.1	.1	9.7	-76.22	-25	-51.22	0-360	100	V
2	60.65	-74.55	Pk	13.6	-30.9	.1	9.7	-82.05	-25	-57.05	0-360	399	H
6	61.2	-68.57	Pk	13.6	-30.9	.1	9.7	-76.07	-25	-51.07	0-360	100	V
3	109.1	-71.47	Pk	18.5	-30.2	.2	9.7	-73.27	-25	-48.27	0-360	299	H
7	109.15	-66.87	Pk	18.5	-30.2	.2	9.7	-68.67	-25	-43.67	0-360	100	V
8	321.1	-77.16	Pk	20	-28.1	.3	9.7	-75.26	-25	-50.26	0-360	99	V
4	507.9	-76.68	Pk	23.7	-27	.5	9.7	-69.78	-25	-44.78	0-360	199	H

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE41/20MHz/QPSK
Tested by:	11993
Date:	2020-11-03

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-25dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2506MHz													
1	4.99396	-58.9	Pk	33.9	-31.5	.7	11.8	-44	-25	-19	0-360	101	H
2	5.02646	-62.21	Pk	33.9	-31.8	.7	11.8	-47.61	-25	-22.61	0-360	299	H
3	7.49087	-65.71	Pk	35.6	-28.1	.6	11.8	-45.81	-25	-20.81	0-360	101	H
4	9.98828	-70.08	Pk	37.1	-26.2	.7	11.8	-46.68	-25	-21.68	0-360	101	H
5	17.47901	-67.72	Pk	41.1	-24.2	1.3	11.8	-37.72	-25	-12.72	0-360	199	H
6	4.99396	-57.87	Pk	33.9	-31.5	.7	11.8	-42.97	-25	-17.97	0-360	101	V
7	5.01896	-61.93	Pk	33.9	-31.8	.7	11.8	-47.33	-25	-22.33	0-360	101	V
8	9.98778	-68.53	Pk	37.1	-26.2	.7	11.8	-45.13	-25	-20.13	0-360	101	V
2593MHz													
1	5.16846	-61.9	Pk	34.2	-31.2	.7	11.8	-46.4	-25	-21.4	0-360	200	H
2	10.33627	-70.08	Pk	37.5	-25.6	.6	11.8	-45.78	-25	-20.78	0-360	200	H
3	17.63901	-72.89	Pk	41	-22.5	1.3	11.8	-41.29	-25	-16.29	0-360	101	H
4	5.16846	-57.98	Pk	34.2	-31.2	.7	11.8	-42.48	-25	-17.48	0-360	200	V
5	10.67276	-70.93	Pk	37.9	-25.1	.6	11.8	-45.73	-25	-20.73	0-360	101	V
6	17.39402	-71.72	Pk	41.2	-23.8	1.2	11.8	-41.32	-25	-16.32	0-360	300	V
2680MHz													
1	5.34245	-61.94	Pk	34.5	-30.6	.7	11.8	-45.54	-25	-20.54	0-360	101	H
2	8.01286	-65.38	Pk	35.8	-27.6	.6	11.8	-44.78	-25	-19.78	0-360	101	H
3	10.68426	-67.93	Pk	37.9	-25	.6	11.8	-42.63	-25	-17.63	0-360	101	H
4	5.34195	-61.35	Pk	34.5	-30.6	.7	11.8	-44.95	-25	-19.95	0-360	200	V
5	8.01336	-67.74	Pk	35.8	-27.6	.6	11.8	-47.14	-25	-22.14	0-360	101	V
6	10.68426	-65.6	Pk	37.9	-25	.6	11.8	-40.3	-25	-15.3	0-360	101	V

Pk - Peak detector

16QAM LTE BAND 41 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE41/20MHz/16-QAM
Tested by	19289 / 11993
Date	2020-11-11

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-25dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2506MHz													
1	47.75	-74.36	Pk	14.8	-31.1	.1	9.7	-80.86	-25	-55.86	0-360	400	H
5	48.95	-69.75	Pk	14.3	-31.1	.1	9.7	-76.75	-25	-51.75	0-360	100	V
2	59.4	-73.6	Pk	13.5	-30.9	.1	9.7	-81.2	-25	-56.2	0-360	299	H
6	59.8	-68.94	Pk	13.5	-30.9	.1	9.7	-76.54	-25	-51.54	0-360	100	V
7	109.2	-67.26	Pk	18.5	-30.2	.2	9.7	-69.06	-25	-44.06	0-360	100	V
3	109.7	-71.39	Pk	18.6	-30.2	.2	9.7	-73.09	-25	-48.09	0-360	299	H
4	482.8	-77.32	Pk	23.8	-27.2	.4	9.7	-70.62	-25	-45.62	0-360	200	H
8	606.15	-78.95	Pk	24.6	-26.1	.5	9.7	-70.25	-25	-45.25	0-360	299	V
2593MHz													
1	47.55	-74.78	Pk	14.9	-31.1	.1	9.7	-81.18	-25	-56.18	0-360	199	H
5	48.4	-68.95	Pk	14.5	-31.1	.1	9.7	-75.75	-25	-50.75	0-360	100	V
6	60.05	-68.77	Pk	13.5	-30.9	.1	9.7	-76.37	-25	-48.37	0-360	100	V
2	60.1	-74.65	Pk	13.5	-30.9	.1	9.7	-82.25	-25	-57.25	0-360	399	H
7	109.95	-67.08	Pk	18.7	-30.2	.2	9.7	-68.68	-25	-43.68	0-360	100	V
3	110.4	-71.83	Pk	18.7	-30.2	.2	9.7	-73.43	-25	-48.43	0-360	299	H
4	529.25	-77.48	Pk	24.1	-26.8	.5	9.7	-69.98	-25	-43.98	0-360	199	H
8	653.5	-78.45	Pk	25.9	-26.2	.5	9.7	-68.55	-25	-43.55	0-360	299	V
2680MHz													
1	47.5	-75.96	Pk	15	-31.1	.1	9.7	-82.26	-25	-57.26	0-360	300	H
5	48.4	-69.92	Pk	14.5	-31.1	.1	9.7	-76.72	-25	-51.72	0-360	100	V
6	60.45	-68.64	Pk	13.5	-30.9	.1	9.7	-76.24	-25	-51.24	0-360	100	V
2	62.95	-74.25	Pk	13.8	-30.9	.1	9.7	-81.55	-25	-56.55	0-360	200	H
7	109.05	-67.59	Pk	18.5	-30.2	.2	9.7	-69.39	-25	-44.39	0-360	100	V
3	110	-72.34	Pk	18.7	-30.2	.2	9.7	-73.94	-25	-48.94	0-360	300	H
4	490.15	-77.83	Pk	23.8	-27	.4	9.7	-70.93	-25	-45.93	0-360	199	H
8	655.35	-78.71	Pk	25.9	-26.1	.5	9.7	-68.71	-25	-43.71	0-360	99	V

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE41/20MHz/16-QAM
Tested by:	11993
Date:	2020-11-03

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-25dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2506MHz													
1	4.99396	-58.7	Pk	33.9	-31.5	.7	11.8	-43.8	-25	-18.8	0-360	200	H
2	7.49137	-64.08	Pk	35.6	-28.1	.6	11.8	-44.18	-25	-19.18	0-360	300	H
3	9.98828	-68.24	Pk	37.1	-26.2	.7	11.8	-44.84	-25	-19.84	0-360	300	H
4	17.48001	-69.2	Pk	41.1	-24.2	1.3	11.8	-39.2	-25	-14.2	0-360	200	H
5	4.99396	-57.99	Pk	33.9	-31.5	.7	11.8	-43.09	-25	-18.09	0-360	300	V
6	9.98878	-68.59	Pk	37.1	-26.2	.7	11.8	-45.19	-25	-20.19	0-360	101	V
7	17.47951	-67.35	Pk	41.1	-24.2	1.3	11.8	-37.35	-25	-12.35	0-360	101	V
2593MHz													
1	5.16796	-61.65	Pk	34.2	-31.2	.7	11.8	-46.15	-25	-21.15	0-360	300	H
2	10.33627	-69.13	Pk	37.5	-25.6	.6	11.8	-44.83	-25	-19.83	0-360	200	H
3	16.93553	-71.24	Pk	42	-24.8	1	11.8	-41.24	-25	-16.24	0-360	200	H
4	5.16796	-61.14	Pk	34.2	-31.2	.7	11.8	-45.64	-25	-20.64	0-360	200	V
5	10.33627	-70.9	Pk	37.5	-25.6	.6	11.8	-46.6	-25	-21.6	0-360	101	V
6	16.62705	-71.74	Pk	41.7	-24.4	.9	11.8	-41.74	-25	-16.74	0-360	101	V
2680MHz													
1	5.34195	-62	Pk	34.5	-30.6	.7	11.8	-45.6	-25	-20.6	0-360	200	H
2	8.01286	-61.57	Pk	35.8	-27.6	.6	11.8	-40.97	-25	-15.97	0-360	101	H
3	10.68426	-62.99	Pk	37.9	-25	.6	11.8	-37.69	-25	-12.69	0-360	101	H
4	5.34245	-60.38	Pk	34.5	-30.6	.7	11.8	-43.98	-25	-18.98	0-360	101	V
5	8.01336	-68.74	Pk	35.8	-27.6	.6	11.8	-48.14	-25	-23.14	0-360	101	V
6	10.68426	-64.68	Pk	37.9	-25	.6	11.8	-39.38	-25	-14.38	0-360	101	V

Pk - Peak detector

9.2.7. LTE BAND 66

QPSK LTE BAND 66 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE66/20MHz/QPSK
Tested by	19289 / 11993
Date	2020-11-12

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz													
5	30.3	-71.44	Pk	26.7	-31.4	.1	9.7	-66.34	-13	-53.34	0-360	100	V
1	60.95	-70.38	Pk	13.6	-30.9	.1	9.7	-77.88	-13	-64.88	0-360	400	H
6	60.95	-64.89	Pk	13.6	-30.9	.1	9.7	-72.39	-13	-59.39	0-360	100	V
7	112.1	-67.7	Pk	19	-30.2	.2	9.7	-69	-13	-56	0-360	100	V
2	113	-73.41	Pk	19.1	-30.1	.2	9.7	-74.51	-13	-61.51	0-360	299	H
3	331.35	-74.98	Pk	20.1	-28.1	.3	9.7	-72.98	-13	-59.98	0-360	99	H
8	336.15	-74.94	Pk	20.1	-28.2	.3	9.7	-73.04	-13	-60.04	0-360	100	V
9	583	-77.03	Pk	24.5	-26.8	.5	9.7	-69.13	-13	-56.13	0-360	100	V
4	809.1	-77.49	Pk	27.7	-25.2	.6	9.7	-64.69	-13	-51.69	0-360	99	H
1745MHz													
5	31	-73.04	Pk	26.3	-31.4	.1	9.7	-68.34	-13	-55.34	0-360	100	V
6	60.25	-64.79	Pk	13.5	-30.9	.1	9.7	-72.39	-13	-59.39	0-360	100	V
1	60.5	-69.69	Pk	13.6	-30.9	.1	9.7	-77.19	-13	-64.19	0-360	400	H
7	111.75	-68.1	Pk	19	-30.2	.2	9.7	-69.4	-13	-56.4	0-360	100	V
2	113.2	-74.3	Pk	19.1	-30.1	.2	9.7	-75.4	-13	-62.4	0-360	200	H
8	327.2	-75.18	Pk	20.1	-28.2	.3	9.7	-73.28	-13	-60.28	0-360	99	V
3	332	-75.36	Pk	20.1	-28.1	.3	9.7	-73.36	-13	-60.36	0-360	99	H
4	483	-77.84	Pk	23.8	-27.2	.4	9.7	-71.14	-13	-58.14	0-360	99	H
9	641	-78.07	Pk	25.9	-26.3	.5	9.7	-68.27	-13	-55.27	0-360	99	V
1770MHz													
1	45.35	-58.25	Pk	16.1	-31.1	.1	9.7	-63.45	-13	-50.45	0-360	100	V
4	46.85	-71.42	Pk	15.3	-31.1	.1	9.7	-77.42	-13	-64.42	0-360	400	H
5	103.85	-71.8	Pk	17.5	-30.2	.2	9.7	-74.6	-13	-61.6	0-360	299	H
2	104.35	-70.55	Pk	17.6	-30.2	.2	9.7	-73.25	-13	-60.25	0-360	100	V
3	520.05	-75.82	Pk	23.9	-26.9	.5	9.7	-68.62	-13	-55.62	0-360	101	V
6	953.45	-78.66	Pk	29.1	-23.6	.7	9.7	-62.76	-13	-49.76	0-360	199	H

Pk - Peak detector

Client:	Lions
Test Location:	S-SAC
Mode:	LTE66/20MHz/QPSK
Tested by:	11993
Date:	2020-10-30

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz												
1	6.40638	-68.31	Pk	35.6	-28.5	11.8	-49.41	-13	-36.41	0-360	101	H
2	11.34372	-73.45	Pk	38.1	-23.1	11.8	-46.65	-13	-33.65	0-360	200	H
3	15.44708	-72.82	Pk	40.3	-22.2	11.8	-42.92	-13	-29.92	0-360	200	H
4	5.13343	-63.65	Pk	34.1	-31.1	11.8	-48.85	-13	-35.85	0-360	101	V
5	12.52468	-71.16	Pk	39.1	-24.5	11.8	-44.76	-13	-31.76	0-360	300	V
6	14.8356	-71.85	Pk	40.1	-23.3	11.8	-43.25	-13	-30.25	0-360	199	V
1745MHz												
1	5.20792	-59.37	Pk	34.3	-30.8	11.8	-44.07	-13	-31.07	0-360	101	H
2	6.94437	-64.48	Pk	35.7	-27.8	11.8	-44.78	-13	-31.78	0-360	101	H
3	10.41625	-70.25	Pk	37.6	-25	11.8	-45.85	-13	-32.85	0-360	101	H
4	5.20842	-60.7	Pk	34.3	-30.8	11.8	-45.4	-13	-32.4	0-360	101	V
5	6.94387	-68.5	Pk	35.7	-27.8	11.8	-48.8	-13	-35.8	0-360	200	V
6	10.41625	-67.97	Pk	37.6	-25	11.8	-43.57	-13	-30.57	0-360	200	V
1770MHz												
1	5.28292	-62.8	Pk	34.4	-29.8	11.8	-46.4	-13	-33.4	0-360	101	H
2	7.04411	-67.17	Pk	35.7	-27.7	11.8	-47.37	-13	-34.37	0-360	101	H
3	10.56724	-70.04	Pk	37.8	-24.6	11.8	-45.04	-13	-32.04	0-360	101	H
4	5.28292	-66.07	Pk	34.4	-29.8	11.8	-49.67	-13	-36.67	0-360	101	V
5	7.04411	-65.63	Pk	35.7	-27.7	11.8	-45.83	-13	-32.83	0-360	101	V
6	10.56724	-67.96	Pk	37.8	-24.6	11.8	-42.96	-13	-29.96	0-360	101	V

Pk - Peak detector

16QAM LTE BAND 66 (20.0MHZ BANDWIDTH)

Project Number	13548896
Client	Lions
Test Location	N-SAC
Mode	LTE66/20MHz/16-QAM
Tested by	19289 / 11993
Date	2020-11-12

Marker	Frequency (MHz)	Meter Reading (dBm)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Filter (dB)	Conversion Factor (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz													
4	32.1	-74.86	Pk	25.4	-31.4	.1	9.7	-71.06	-13	-58.06	0-360	101	V
5	61	-66.93	Pk	13.6	-30.9	.1	9.7	-74.43	-13	-61.43	0-360	101	V
1	61.05	-71.35	Pk	13.6	-30.9	.1	9.7	-78.85	-13	-65.85	0-360	300	H
2	111.75	-74.1	Pk	19	-30.2	.2	9.7	-75.4	-13	-62.4	0-360	300	H
6	112.2	-67.28	Pk	19	-30.2	.2	9.7	-68.58	-13	-55.58	0-360	101	V
3	492.5	-79.06	Pk	23.8	-27	.5	9.7	-72.06	-13	-59.06	0-360	200	H
7	704	-78.47	Pk	26.5	-26	.6	9.7	-67.67	-13	-54.67	0-360	299	V
1745MHz													
4	32.1	-73.95	Pk	25.4	-31.4	.1	9.7	-70.15	-13	-57.15	0-360	100	V
1	60.4	-70.37	Pk	13.5	-30.9	.1	9.7	-77.97	-13	-64.97	0-360	399	H
5	60.4	-64.41	Pk	13.5	-30.9	.1	9.7	-72.01	-13	-59.01	0-360	100	V
6	112.15	-66.73	Pk	19	-30.2	.2	9.7	-68.03	-13	-55.03	0-360	100	V
2	112.4	-74.21	Pk	19	-30.2	.2	9.7	-75.51	-13	-62.51	0-360	300	H
3	328.8	-74.52	Pk	20.1	-28.2	.3	9.7	-72.62	-13	-59.62	0-360	99	H
7	746.15	-78.28	Pk	26.8	-25.8	.6	9.7	-66.98	-13	-53.98	0-360	199	V
1770MHz													
4	45.7	-62.31	Pk	15.9	-31	.1	9.7	-67.61	-13	-54.61	0-360	100	V
1	45.8	-72.32	Pk	15.8	-31	.1	9.7	-77.72	-13	-64.72	0-360	399	H
2	104.1	-72.43	Pk	17.5	-30.2	.2	9.7	-75.23	-13	-62.23	0-360	300	H
5	149.7	-74.94	Pk	18.7	-29.7	.3	9.7	-75.94	-13	-62.94	0-360	100	V
3	476	-75.01	Pk	23.7	-27.2	.4	9.7	-68.41	-13	-55.41	0-360	199	H
6	997	-77.72	Pk	29.5	-23.1	.7	9.7	-60.92	-13	-47.92	0-360	300	V

Pk - Peak detector

Project Number:	13548896
Client:	Lions
Test Location:	S-SAC
Mode:	LTE66/20MHz/16-QAM
Tested by:	11993
Date:	2020-11-03

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1720MHz												
1	5.13343	-64.4	Pk	34.1	-31.1	11.8	-49.6	-13	-36.6	0-360	200	H
2	6.84437	-67.36	Pk	35.7	-28.8	11.8	-48.66	-13	-35.66	0-360	101	H
3	16.63904	-71.54	Pk	41.7	-23.6	11.8	-41.64	-13	-28.64	0-360	101	H
4	5.13343	-60.37	Pk	34.1	-31.1	11.8	-45.57	-13	-32.57	0-360	101	V
5	5.63291	-66.37	Pk	34.5	-29.3	11.8	-49.37	-13	-36.37	0-360	300	V
6	17.8095	-71.73	Pk	41.1	-21.7	11.8	-40.53	-13	-27.53	0-360	101	V
1745MHz												
1	5.20817	-62.4	Pk	34.3	-30.8	11.8	-47.1	-13	-34.1	0-360	101	H
2	6.94387	-64.78	Pk	35.7	-27.8	11.8	-45.08	-13	-32.08	0-360	101	H
3	10.41625	-69.56	Pk	37.6	-25	11.8	-45.16	-13	-32.16	0-360	101	H
4	5.20792	-60.79	Pk	34.3	-30.8	11.8	-45.49	-13	-32.49	0-360	101	V
5	6.94437	-67.89	Pk	35.7	-27.8	11.8	-48.19	-13	-35.19	0-360	200	V
6	10.41575	-69.86	Pk	37.6	-25	11.8	-45.46	-13	-32.46	0-360	200	V
1770MHz												
1	5.28342	-63.9	Pk	34.4	-29.8	11.8	-47.5	-13	-34.5	0-360	101	H
2	7.04461	-64.25	Pk	35.7	-27.7	11.8	-44.45	-13	-31.45	0-360	101	H
3	10.56774	-70.37	Pk	37.8	-24.6	11.8	-45.37	-13	-32.37	0-360	199	H
4	5.28342	-62.54	Pk	34.4	-29.8	11.8	-46.14	-13	-33.14	0-360	101	V
5	7.04386	-67.23	Pk	35.7	-27.7	11.8	-47.43	-13	-34.43	0-360	200	V
6	10.56724	-66.22	Pk	37.8	-24.6	11.8	-41.22	-13	-28.22	0-360	101	V

Pk - Peak detector

10. SETUP PHOTOS

Refer to R13548896-EP3 for setup diagrams and photos.

END OF REPORT