



Table of Contents	Page
E1. Conducted Output Power	2
E2. Peak-To-Average Ratio	5
E3. Transmitter Radiated Power (EIRP/ERP)	8
E4. Occupied Bandwidth(99% Occupied Bandwidth/26dB Bandwidth)	10
E5. Frequency Stability	17
E6. SPURIOUS EMISSIONS AT ANTENNA TERMINALS	18
E7. BAND EDGE	24
E8. Field Strength of Spurious Radiation Measurement	40



**E1. CONDUCTED OUTPUT POWER**

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.47	23.69	23.71
1.4	1	2		23.24	23.42	23.47
1.4	1	5		23.04	23.16	23.25
1.4	3	0		22.81	22.92	23.04
1.4	3	1		22.57	22.71	22.83
1.4	3	2		22.33	22.47	22.53
1.4	6	0		22.06	22.22	22.32
1.4	1	0	16-QAM	23.25	23.41	23.42
1.4	1	2		22.98	23.14	23.22
1.4	1	5		22.69	22.86	23.01
1.4	3	0		22.40	22.62	22.79
1.4	3	1		22.15	22.39	22.56
1.4	3	2		21.87	22.10	22.29
1.4	6	0		21.64	21.84	22.05
3	1	0	QPSK	23.62	23.75	23.89
3	1	7		23.36	23.46	23.62
3	1	14		23.07	23.23	23.32
3	8	0		22.83	22.99	23.06
3	8	4		22.56	22.74	22.84
3	8	7		22.36	22.54	22.55
3	15	0		22.11	22.28	22.31
3	1	0	16-QAM	23.33	23.49	23.64
3	1	7		23.11	23.24	23.36
3	1	14		22.85	23.02	23.12
3	8	0		22.57	22.76	22.87
3	8	4		22.37	22.54	22.58
3	8	7		22.10	22.31	22.29
3	15	0		21.84	22.01	22.03



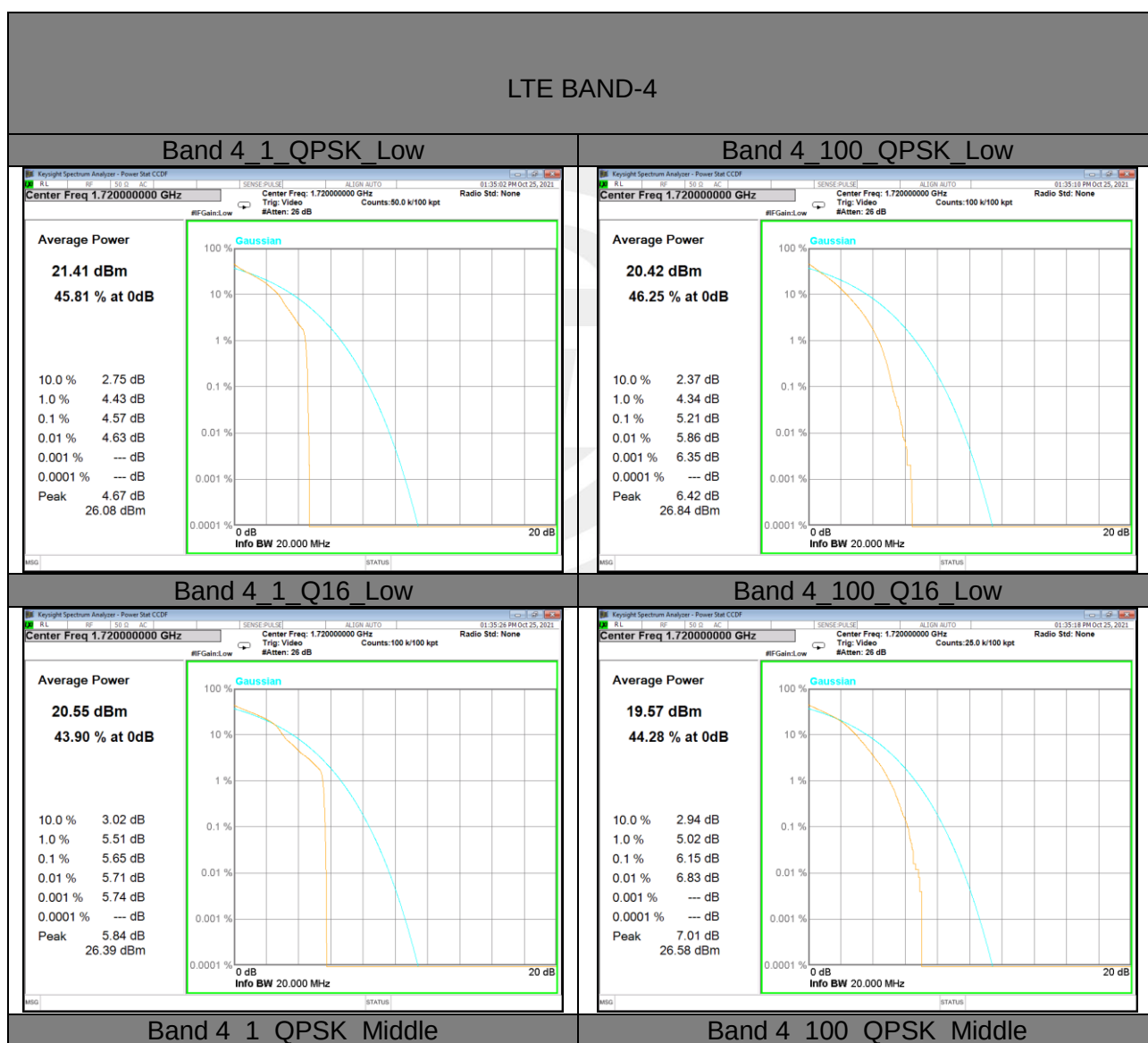
LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.75	23.89	23.96
5	1	12		23.48	23.66	23.70
5	1	24		23.28	23.38	23.40
5	12	0		23.08	23.16	23.14
5	12	6		22.87	22.86	22.88
5	12	11		22.58	22.62	22.66
5	25	0		22.35	22.33	22.38
5	1	0	16-QAM	23.49	23.61	23.73
5	1	12		23.27	23.33	23.47
5	1	24		22.98	23.09	23.19
5	12	0		22.74	22.84	22.90
5	12	6		22.47	22.59	22.64
5	12	11		22.27	22.39	22.40
5	25	0		22.03	22.10	22.12
10	1	0	QPSK	23.88	23.95	24.02
10	1	24		23.64	23.71	23.80
10	1	49		23.35	23.47	23.58
10	25	0		23.08	23.27	23.37
10	25	12		22.83	23.00	23.14
10	25	24		22.58	22.78	22.89
10	50	0		22.28	22.57	22.67
10	1	0	16-QAM	23.65	23.67	23.75
10	1	24		23.40	23.45	23.48
10	1	49		23.14	23.20	23.25
10	25	0		22.93	22.99	23.04
10	25	12		22.72	22.73	22.82
10	25	24		22.52	22.44	22.57
10	50	0		22.31	22.15	22.34

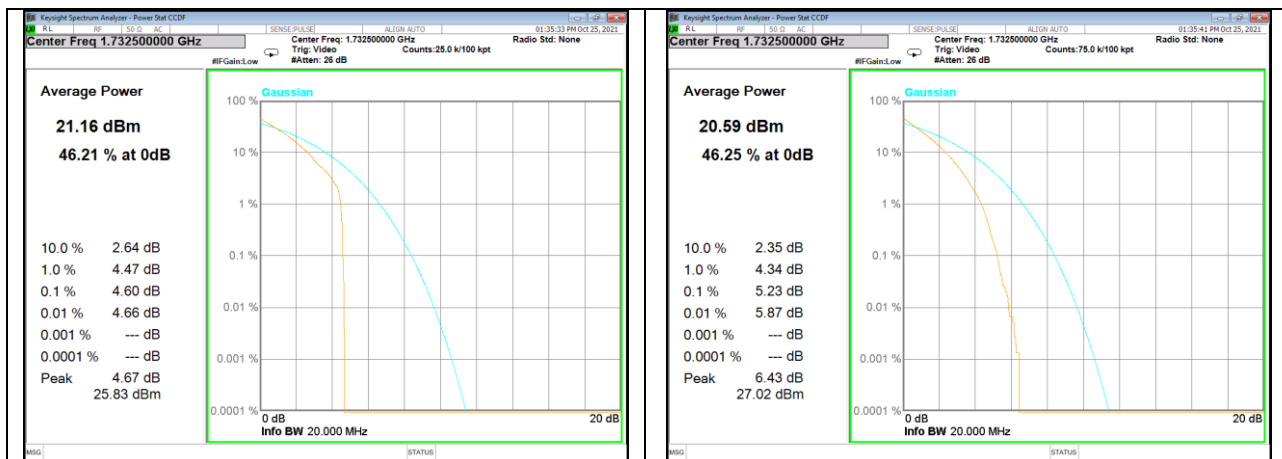


LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.06	24.09	23.13
15	1	37		23.77	23.83	22.90
15	1	74		23.56	23.62	22.62
15	36	0		23.31	23.40	22.32
15	36	18		23.05	23.16	22.09
15	36	39		22.78	22.90	21.82
15	75	0		22.57	22.62	21.54
15	1	0	16-QAM	23.83	23.81	22.91
15	1	38		23.54	23.55	22.63
15	1	75		23.26	23.31	22.34
15	36	0		22.97	23.04	22.12
15	36	18		22.73	22.78	21.90
15	36	39		22.53	22.50	21.60
15	75	0		22.30	22.22	21.38
20	1	0	QPSK	24.58	24.61	24.79
20	1	49		24.34	24.38	24.51
20	1	99		24.05	24.12	24.30
20	50	0		23.85	23.91	24.03
20	50	24		23.64	23.61	23.75
20	50	49		23.44	23.39	23.49
20	100	0		23.16	23.17	23.22
20	1	0	16-QAM	24.28	24.33	24.53
20	1	49		24.06	24.08	24.31
20	1	99		23.83	23.82	24.10
20	50	0		23.58	23.58	23.84
20	50	24		23.33	23.32	23.58
20	50	49		23.09	23.12	23.35
20	100	0		22.82	22.86	23.07

**E2. PEAK-TO-AVERAGE RADIO**

LTE Band 4 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
			P-A	P-A	P-A
20	1	QPSK	4.57	4.6	4.27
20	100		5.21	5.23	5.24
20	1	16-QAM	5.65	5.25	5.21
20	100		6.15	6.06	6.09
Limit			≤13dB		

LTE BAND-4

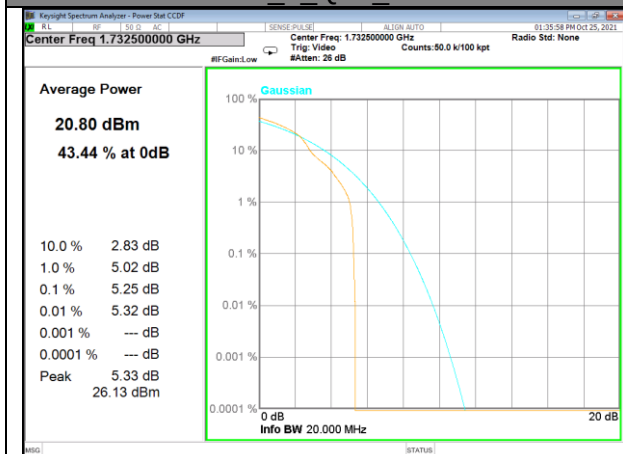




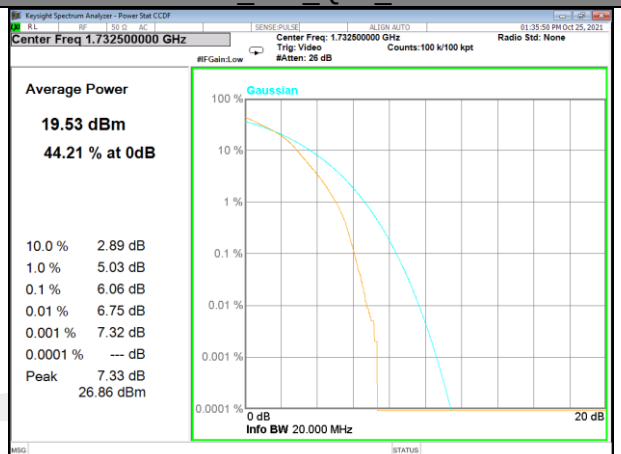
LTE BAND-4

LTE BAND-4

Band 4_1_Q16_Middle



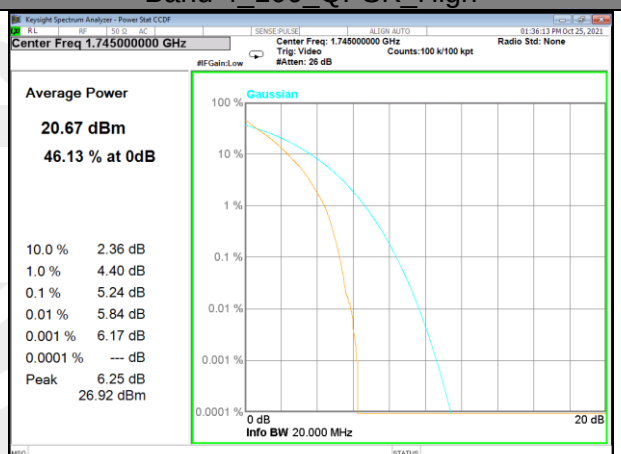
Band 4_100_Q16_Middle



Band 4_1_QPSK_High



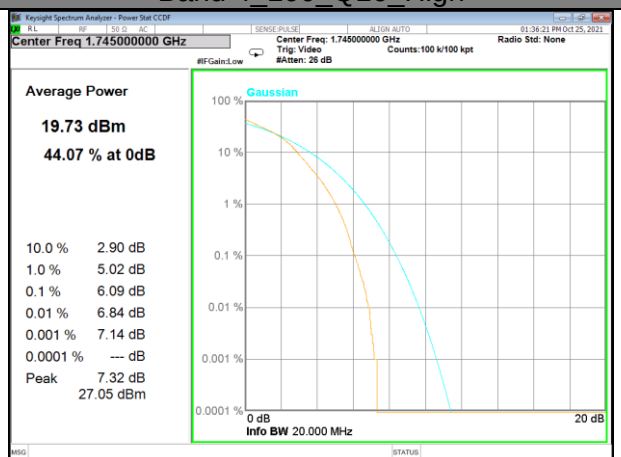
Band 4_100_QPSK_High



Band 4_1_Q16_High



Band 4_100_Q16_High



**E3. TRANSMITTER RADIATED POWER (EIRP/ERP)**

Radiated Power (EIRP) for LTE Band 4 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.03	2.35	10.13	20.81	Horizontal	Pass
	1	0	Middle	13.22	2.36	10.16	21.02	Horizontal	Pass
	1	0	Highest	13.08	2.37	10.22	20.93	Horizontal	Pass
	1	0	Lowest	14.48	2.35	10.13	22.26	Vertical	Pass
	1	0	Middle	14.56	2.36	10.16	22.36	Vertical	Pass
	1	0	Highest	14.5	2.37	10.22	22.35	Vertical	Pass
16QAM	1	0	Lowest	12.74	2.35	10.13	20.52	Horizontal	Pass
	1	0	Middle	13.02	2.36	10.16	20.82	Horizontal	Pass
	1	0	Highest	13	2.37	10.22	20.85	Horizontal	Pass
	1	0	Lowest	14.1	2.35	10.13	21.88	Vertical	Pass
	1	0	Middle	14.36	2.36	10.16	22.16	Vertical	Pass
	1	0	Highest	14.3	2.37	10.22	22.15	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.1	2.35	10.13	20.88	Horizontal	Pass
	1	0	Middle	13.15	2.36	10.16	20.95	Horizontal	Pass
	1	0	Highest	13.29	2.37	10.22	21.14	Horizontal	Pass
	1	0	Lowest	14.59	2.35	10.13	22.37	Vertical	Pass
	1	0	Middle	14.61	2.36	10.16	22.41	Vertical	Pass
	1	0	Highest	14.69	2.37	10.22	22.54	Vertical	Pass
16QAM	1	0	Lowest	12.92	2.35	10.13	20.70	Horizontal	Pass
	1	0	Middle	13	2.36	10.16	20.80	Horizontal	Pass
	1	0	Highest	13.16	2.37	10.22	21.01	Horizontal	Pass
	1	0	Lowest	14.29	2.35	10.13	22.07	Vertical	Pass
	1	0	Middle	14.41	2.36	10.16	22.21	Vertical	Pass
	1	0	Highest	14.5	2.37	10.22	22.35	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.16	2.35	10.13	20.94	Horizontal	Pass
	1	0	Middle	13.44	2.36	10.16	21.24	Horizontal	Pass
	1	0	Highest	13.51	2.37	10.22	21.36	Horizontal	Pass
	1	0	Lowest	14.58	2.35	10.13	22.36	Vertical	Pass
	1	0	Middle	14.79	2.36	10.16	22.59	Vertical	Pass
	1	0	Highest	14.87	2.37	10.22	22.72	Vertical	Pass
16QAM	1	0	Lowest	12.99	2.35	10.13	20.77	Horizontal	Pass
	1	0	Middle	13.15	2.36	10.16	20.95	Horizontal	Pass
	1	0	Highest	13.23	2.37	10.22	21.08	Horizontal	Pass
	1	0	Lowest	14.46	2.35	10.13	22.24	Vertical	Pass
	1	0	Middle	14.49	2.36	10.16	22.29	Vertical	Pass
	1	0	Highest	14.66	2.37	10.22	22.51	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for LTE Band 4 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.27	2.35	10.13	21.05	Horizontal	Pass
	1	0	Middle	13.36	2.36	10.16	21.16	Horizontal	Pass
	1	0	Highest	13.44	2.37	10.22	21.29	Horizontal	Pass
	1	0	Lowest	14.74	2.35	10.13	22.52	Vertical	Pass
	1	0	Middle	14.83	2.36	10.16	22.63	Vertical	Pass
	1	0	Highest	14.81	2.37	10.22	22.66	Vertical	Pass
16QAM	1	0	Lowest	13.02	2.35	10.13	20.80	Horizontal	Pass
	1	0	Middle	13.14	2.36	10.16	20.94	Horizontal	Pass
	1	0	Highest	13.2	2.37	10.22	21.05	Horizontal	Pass
	1	0	Lowest	14.51	2.35	10.13	22.29	Vertical	Pass
	1	0	Middle	14.48	2.36	10.16	22.28	Vertical	Pass
	1	0	Highest	14.66	2.37	10.22	22.51	Vertical	Pass
Limit	EIRP<1W=30dBm								

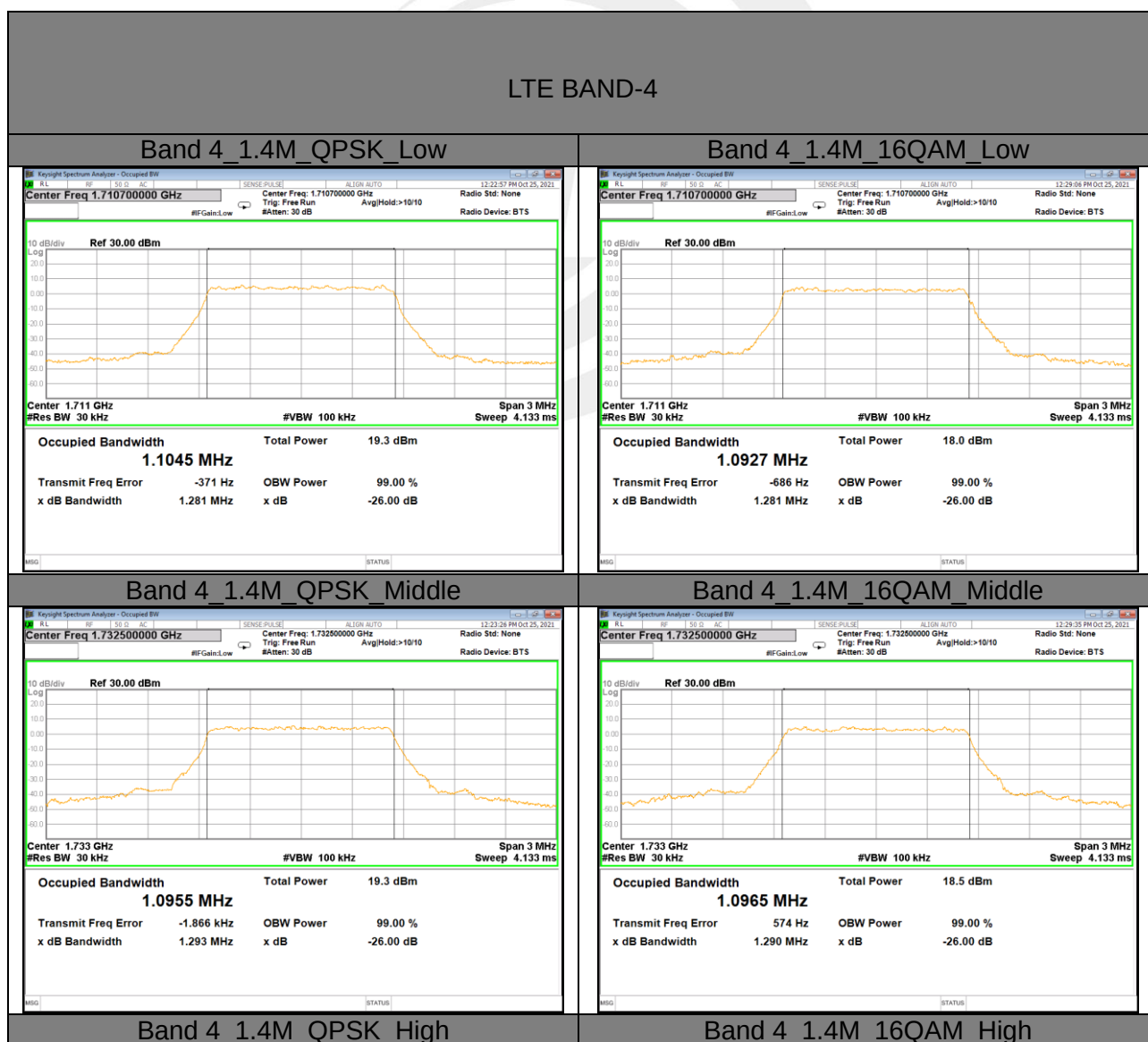
Radiated Power (EIRP) for LTE Band 4 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.63	2.35	10.13	21.41	Horizontal	Pass
	1	0	Middle	13.63	2.36	10.16	21.43	Horizontal	Pass
	1	0	Highest	12.59	2.37	10.22	20.44	Horizontal	Pass
	1	0	Lowest	15.03	2.35	10.13	22.81	Vertical	Pass
	1	0	Middle	15.03	2.36	10.16	22.83	Vertical	Pass
	1	0	Highest	13.95	2.37	10.22	21.80	Vertical	Pass
16QAM	1	0	Lowest	13.25	2.35	10.13	21.03	Horizontal	Pass
	1	0	Middle	13.44	2.36	10.16	21.24	Horizontal	Pass
	1	0	Highest	12.37	2.37	10.22	20.22	Horizontal	Pass
	1	0	Lowest	14.69	2.35	10.13	22.47	Vertical	Pass
	1	0	Middle	14.79	2.36	10.16	22.59	Vertical	Pass
	1	0	Highest	13.75	2.37	10.22	21.60	Vertical	Pass
Limit	EIRP<1W=30dBm								

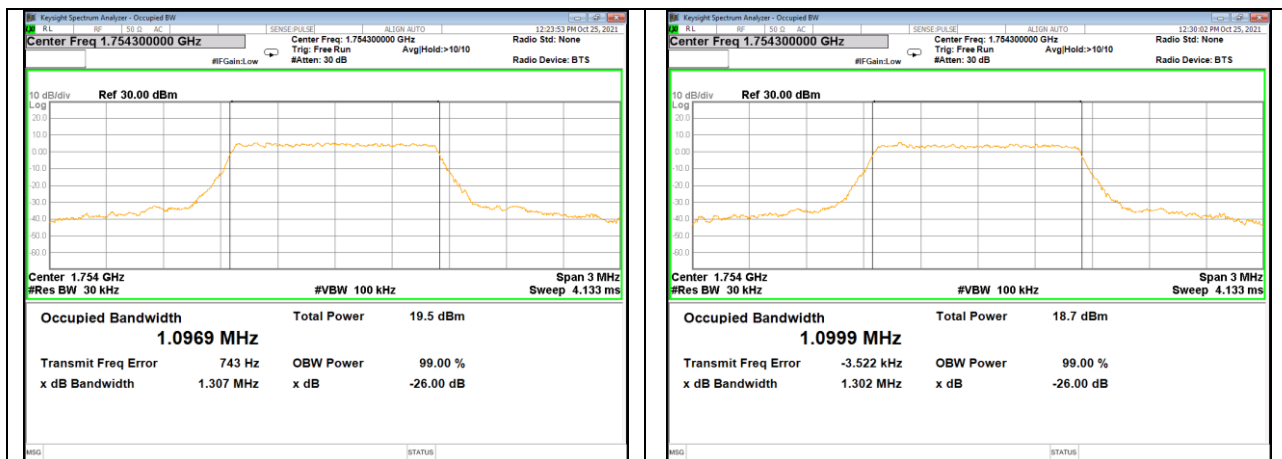
Radiated Power (EIRP) for LTE Band 4 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	14.13	2.35	10.13	21.91	Horizontal	Pass
	1	0	Middle	14.03	2.36	10.16	21.83	Horizontal	Pass
	1	0	Highest	14.13	2.37	10.22	21.98	Horizontal	Pass
	1	0	Lowest	15.6	2.35	10.13	23.38	Vertical	Pass
	1	0	Middle	15.44	2.36	10.16	23.24	Vertical	Pass
	1	0	Highest	15.59	2.37	10.22	23.44	Vertical	Pass
16QAM	1	0	Lowest	13.87	2.35	10.13	21.65	Horizontal	Pass
	1	0	Middle	13.8	2.36	10.16	21.60	Horizontal	Pass
	1	0	Highest	13.93	2.37	10.22	21.78	Horizontal	Pass
	1	0	Lowest	15.2	2.35	10.13	22.98	Vertical	Pass
	1	0	Middle	15.29	2.36	10.16	23.09	Vertical	Pass
	1	0	Highest	15.43	2.37	10.22	23.28	Vertical	Pass
Limit	EIRP<1W=30dBm								

**E4. OCCUPIED BANDWIDTH(99% OCCUPIED BANDWIDTH/26DB BANDWIDTH)**

LTE Band 4 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.1045	1.281	1.096	1.293	1.0969	1.307
1.4	16-QAM	1.0927	1.281	1.0965	1.29	1.1	1.302
3	QPSK	2.6877	2.917	2.684	2.928	2.683	2.91
3	16-QAM	2.6795	2.937	2.681	2.935	2.68	2.927
5	QPSK	4.501	5.004	4.523	5.029	4.509	4.993
5	16-QAM	4.525	5.031	4.5263	5.026	4.507	4.967
10	QPSK	8.912	9.671	8.923	9.689	8.935	9.77
10	16-QAM	8.918	9.591	8.922	9.621	8.93	9.714
15	QPSK	13.392	14.56	13.446	14.75	13.451	14.71
15	16-QAM	13.424	14.66	13.449	14.67	13.451	14.7
20	QPSK	17.839	19.1	17.877	19.44	17.862	19.2
20	16-QAM	17.891	19.22	17.876	19.41	17.857	19.28

LTE BAND-4







LTE BAND-4

LTE BAND-4





LTE BAND-4

LTE BAND-4





LTE BAND-4

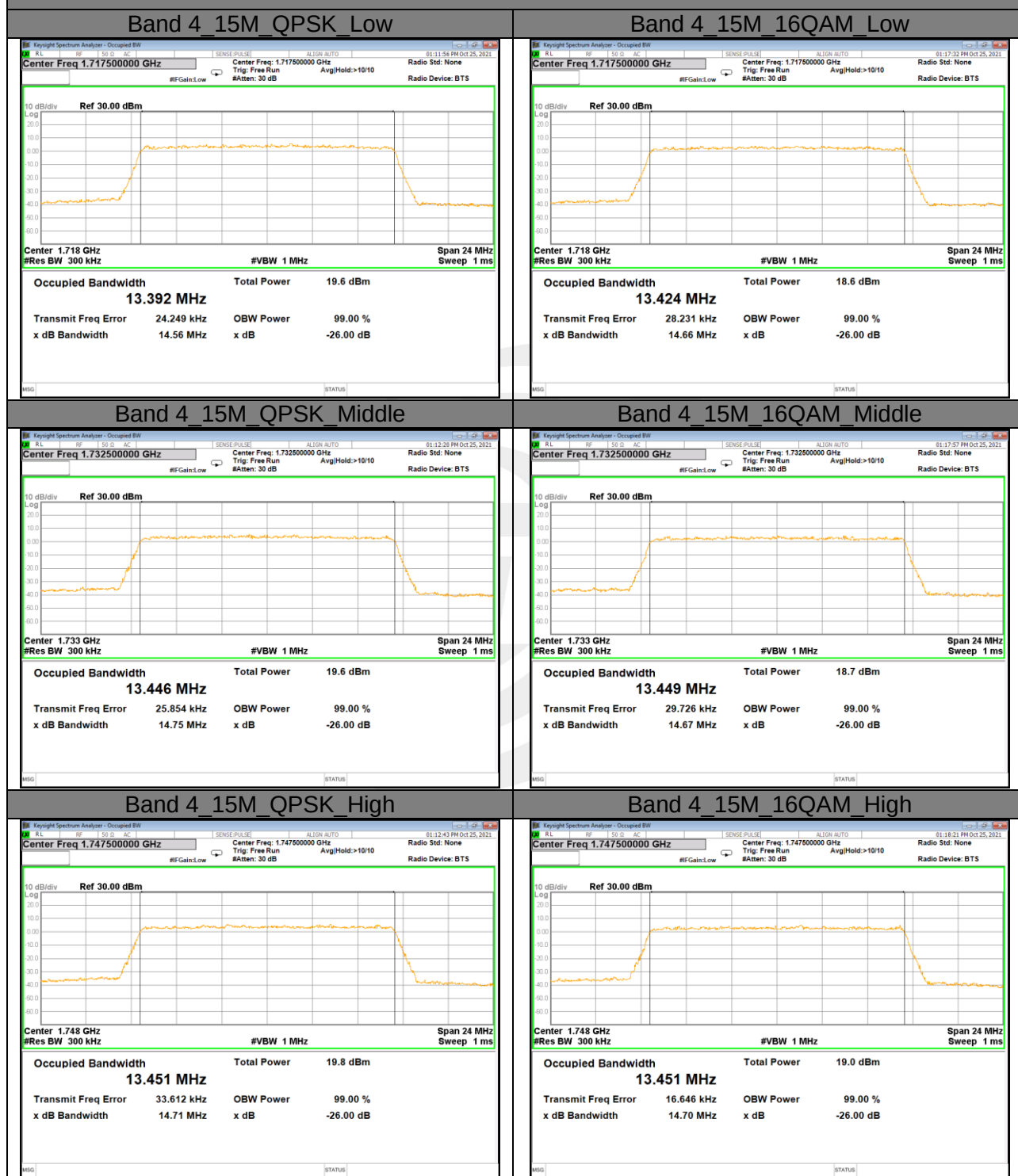
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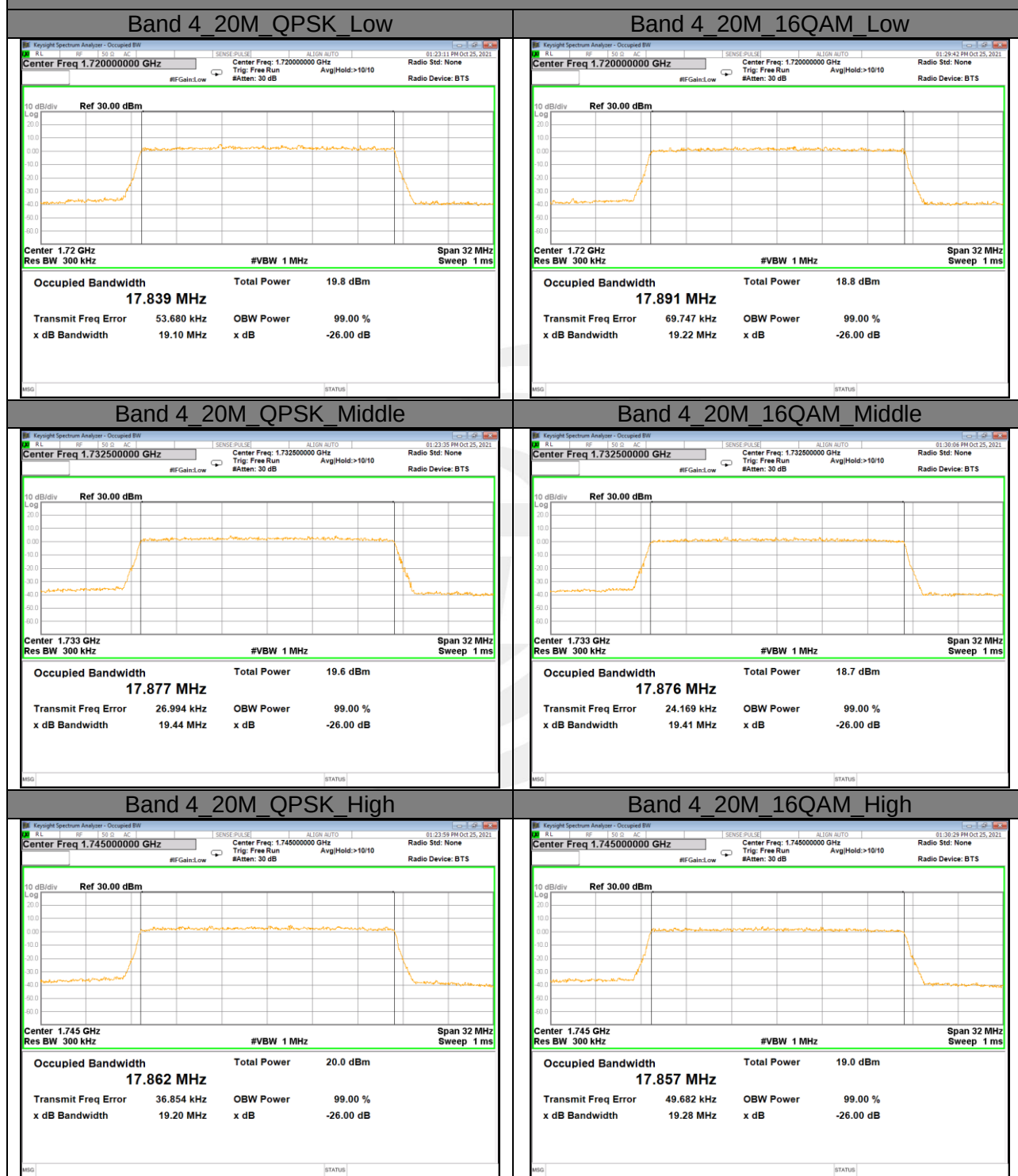
LTE BAND-4





LTE BAND-4

LTE BAND-4



**E5. FREQUENCY STABILITY**

LTE Band 4 (QPSK) / 1733MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	35.08	0.020	2.5ppm	PASS
40		12.62	0.007		
30		16.97	0.010		
20		12.74	0.007		
10		29.06	0.017		
0		32.80	0.019		
-10		26.28	0.015		
-20		34.19	0.020		
-30		32.86	0.019		
20	Maximum Voltage	31.02	0.018		
20	BEP	13.36	0.008		

LTE Band 4 (QPSK) / 1733MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	29.44	0.017	2.5ppm	PASS
40		28.41	0.016		
30		32.12	0.019		
20		36.24	0.021		
10		12.25	0.007		
0		36.38	0.021		
-10		24.85	0.014		
-20		15.63	0.009		
-30		32.03	0.018		
20	Maximum Voltage	13.44	0.008		
20	BEP	23.38	0.013		



E6. SPURIOUS EMISSIONS AT ANTENNA TERMINALS

LTE BAND-4

LTE BAND-4





LTE BAND-4

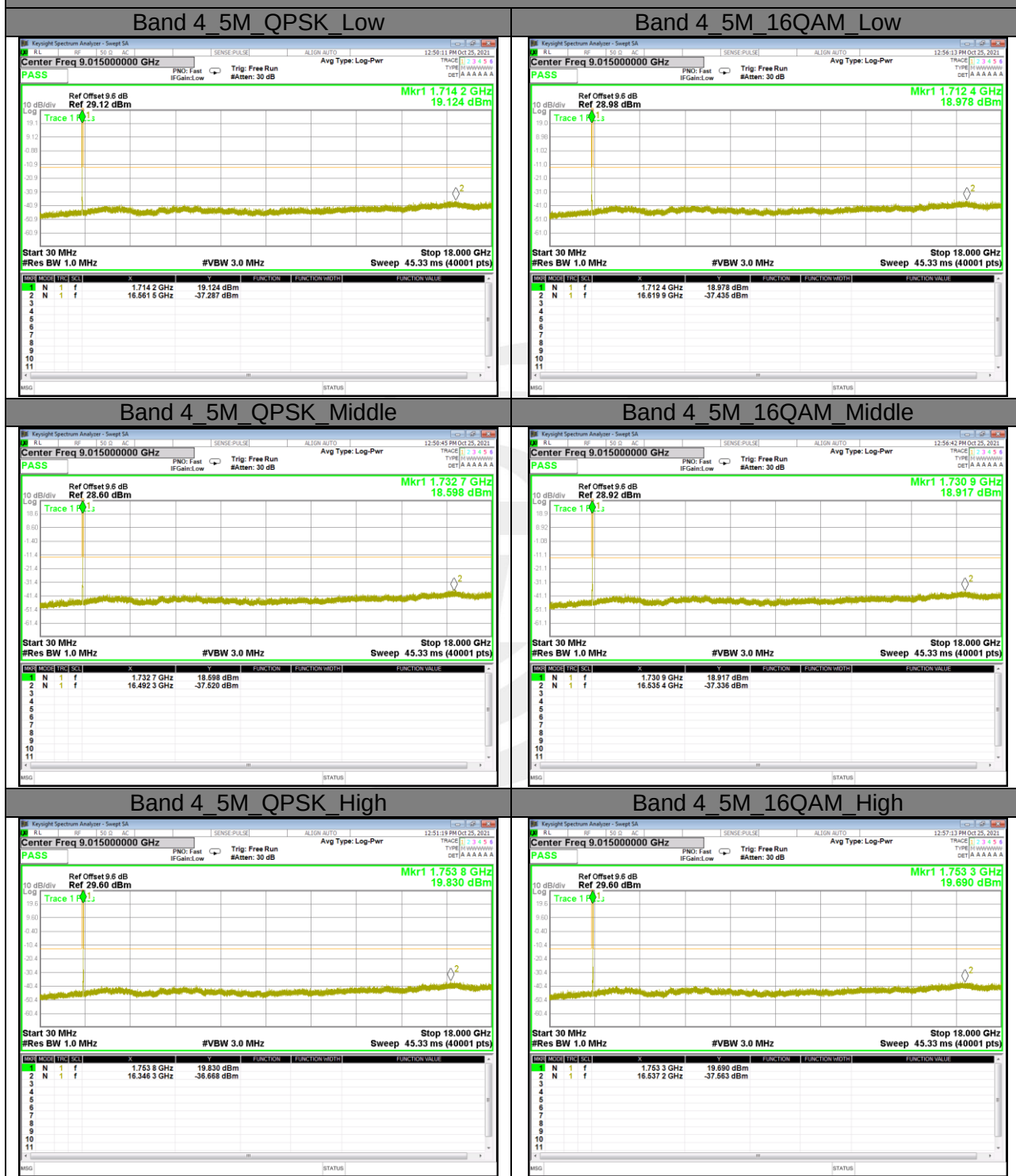
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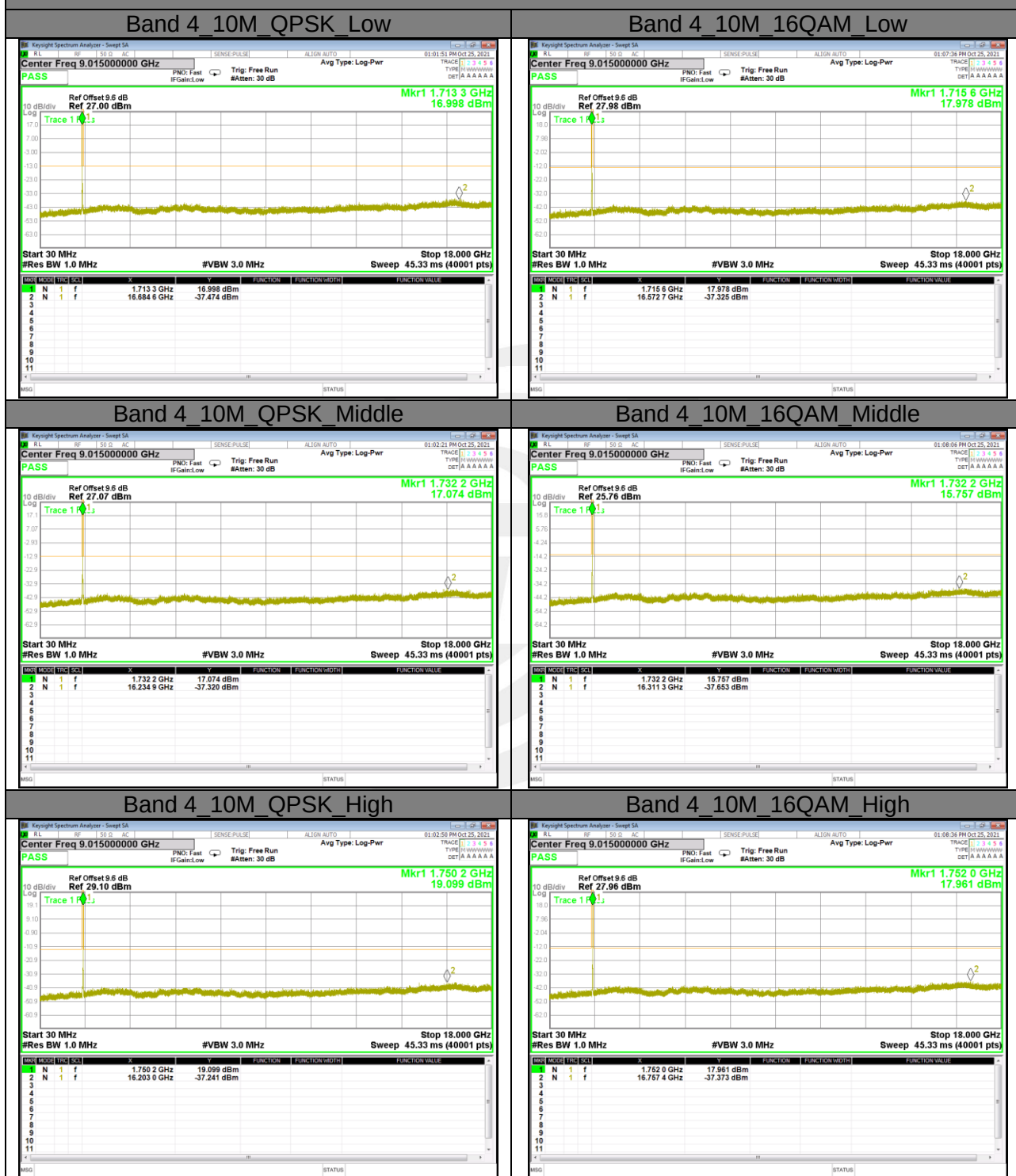
LTE BAND-4





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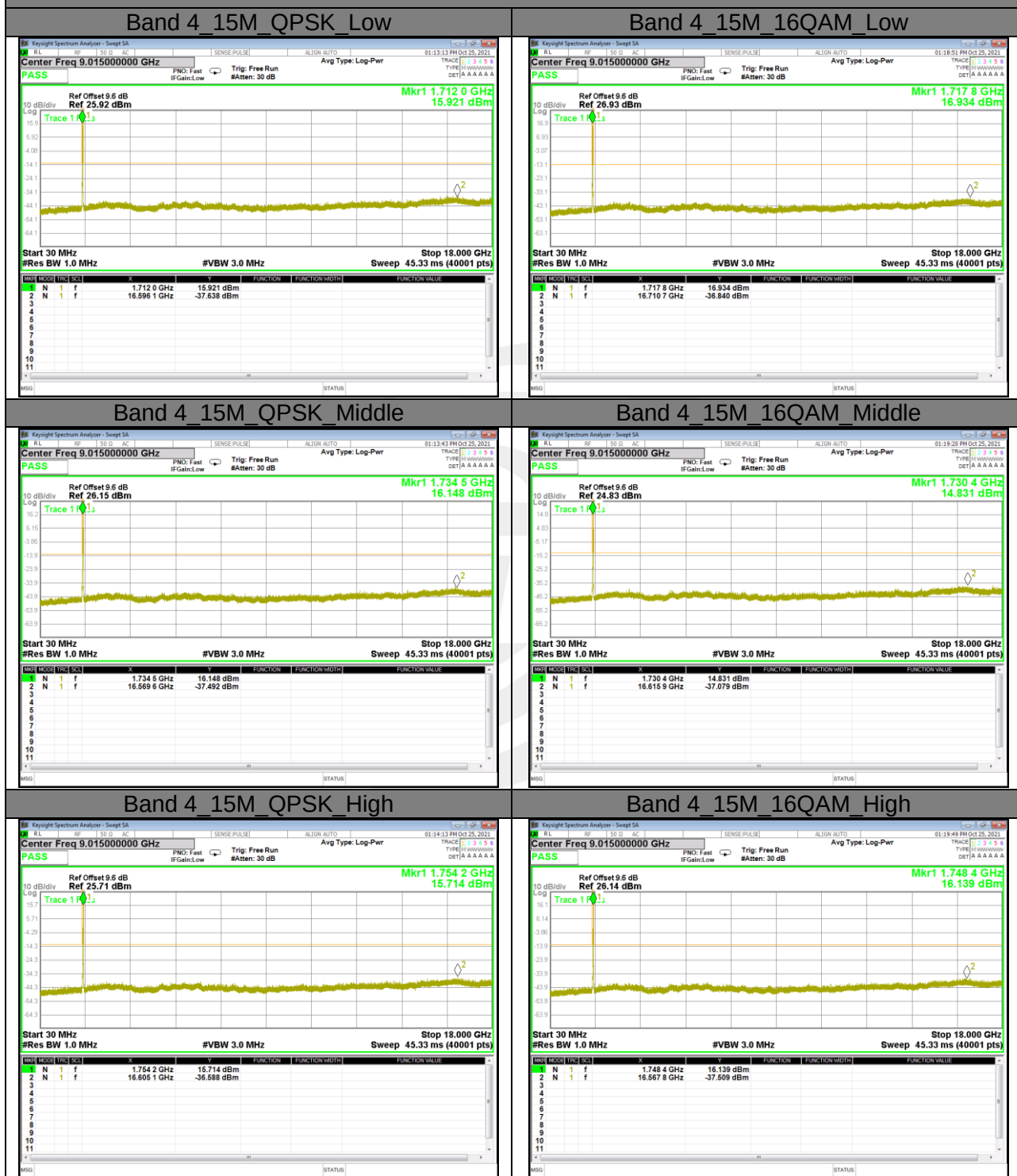
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