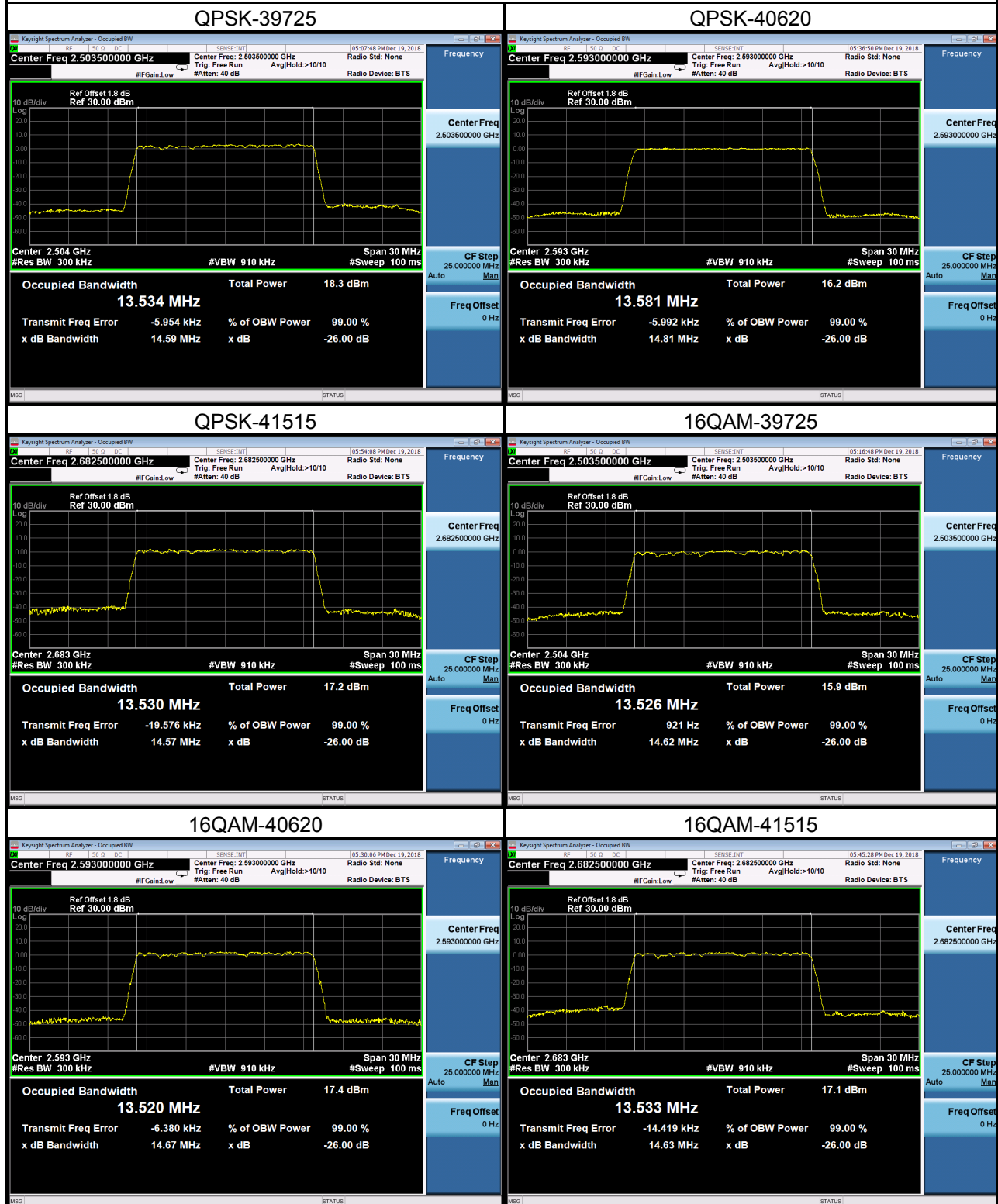
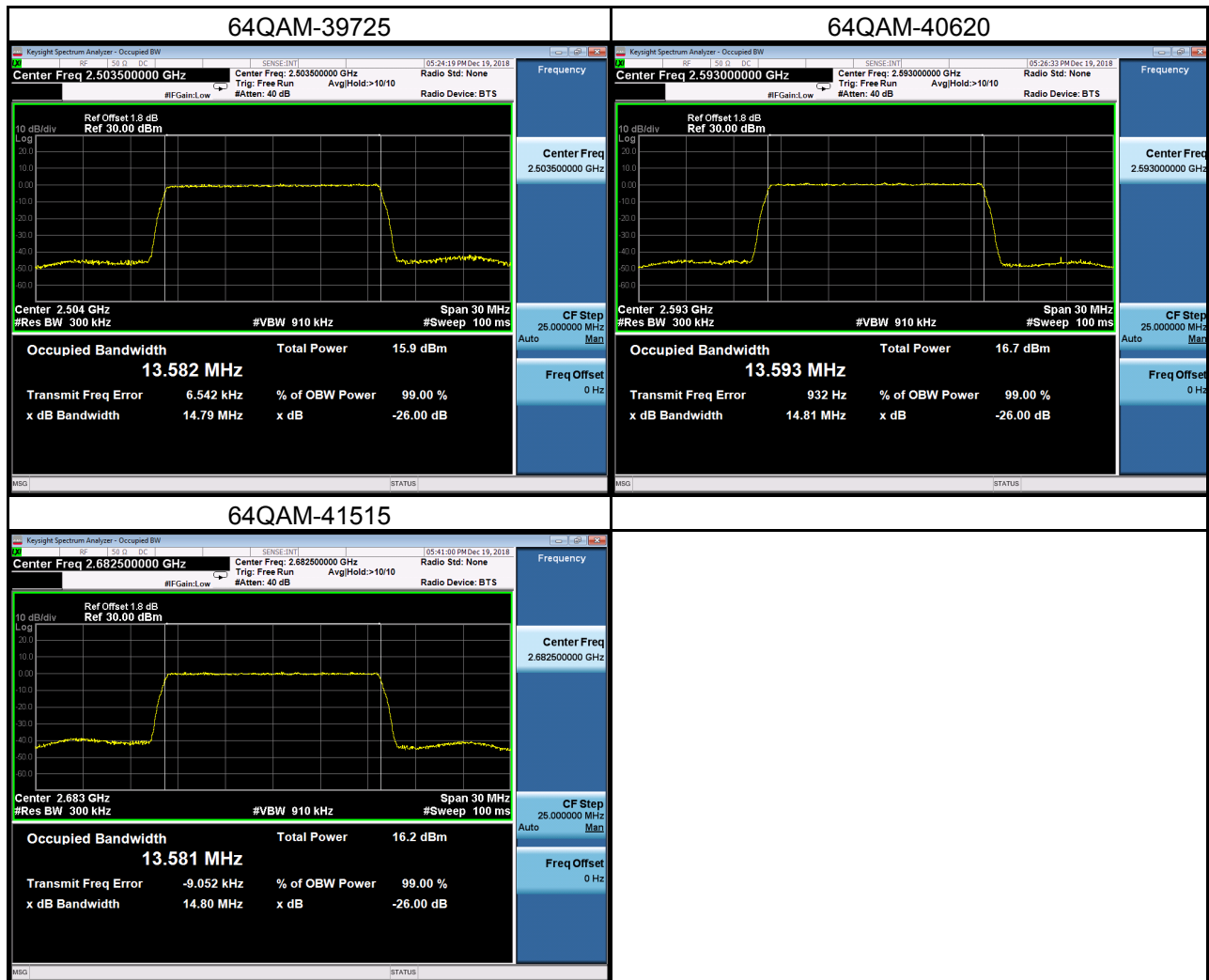


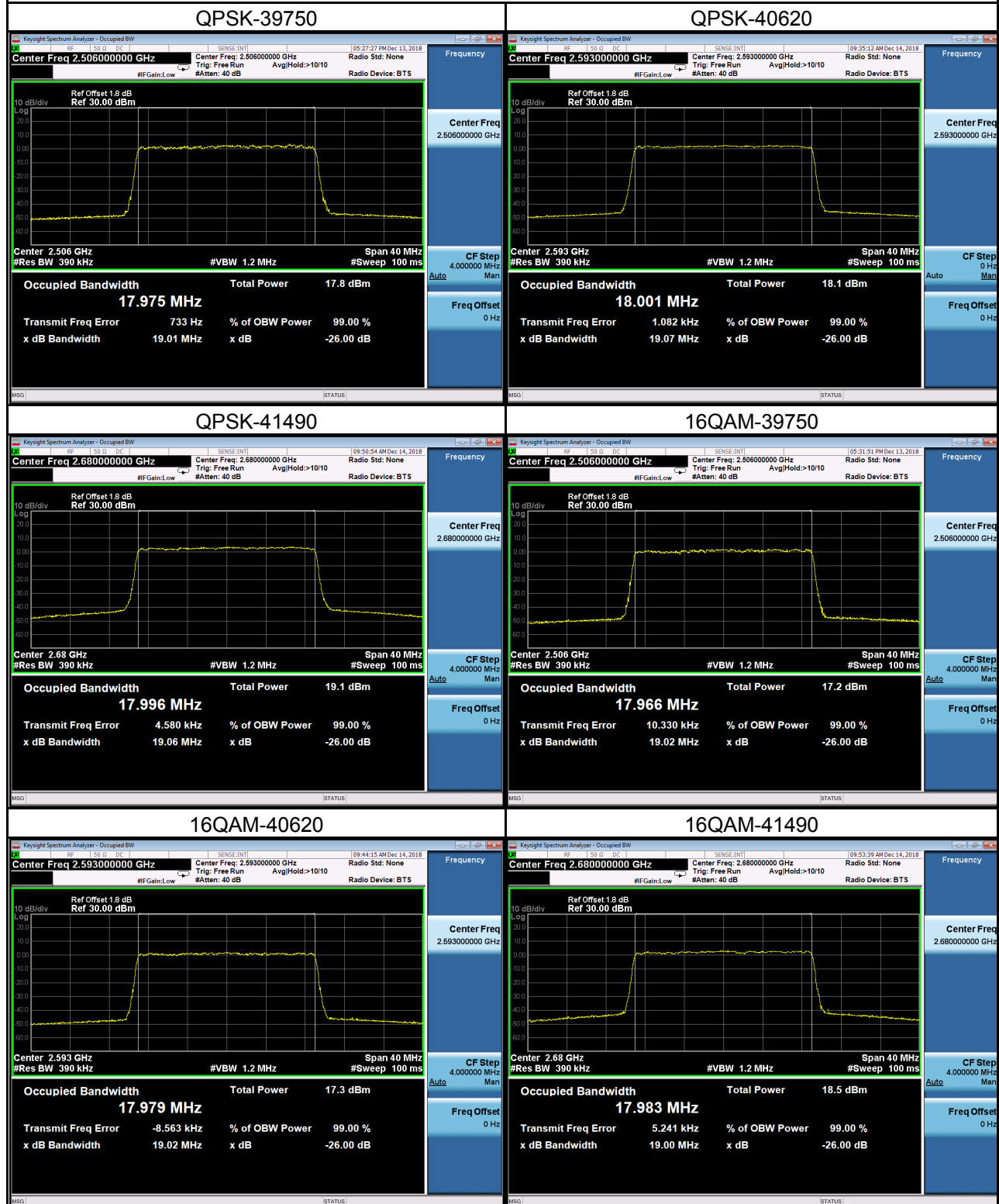
Spectrum Plot





LTE Band 41_20M								
QPSK			16QAM			64QAM		
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)
39750	2506.0	17.975	39750	2506.0	17.966	39750	2506.0	17.948
40620	2593.0	18.001	40620	2593.0	17.979	40620	2593.0	17.956
41490	2680.0	17.996	41490	2680.0	17.983	41490	2680.0	17.951
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
39750	2506.0	19.01	39750	2506.0	19.02	39750	2506.0	19.07
40620	2593.0	19.07	40620	2593.0	19.02	40620	2593.0	19.20
41490	2680.0	19.06	41490	2680.0	19.00	41490	2680.0	19.18

Spectrum Plot

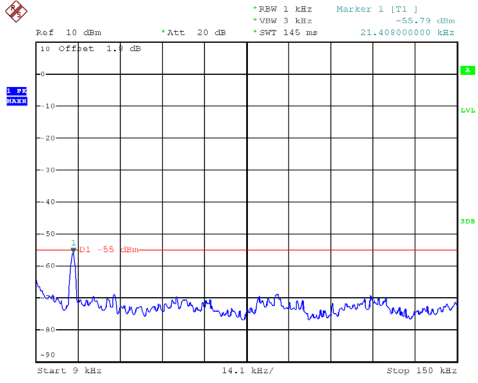
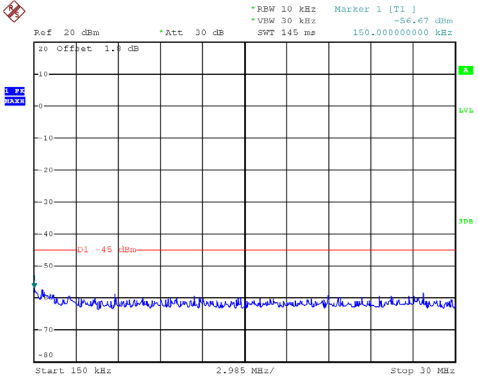
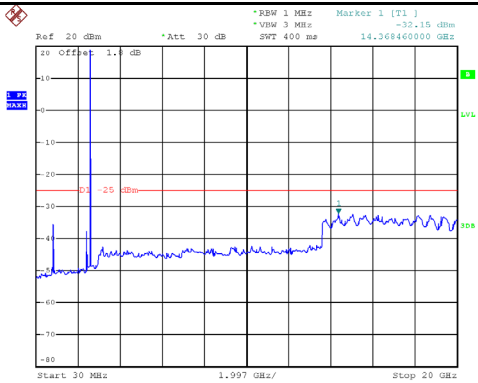


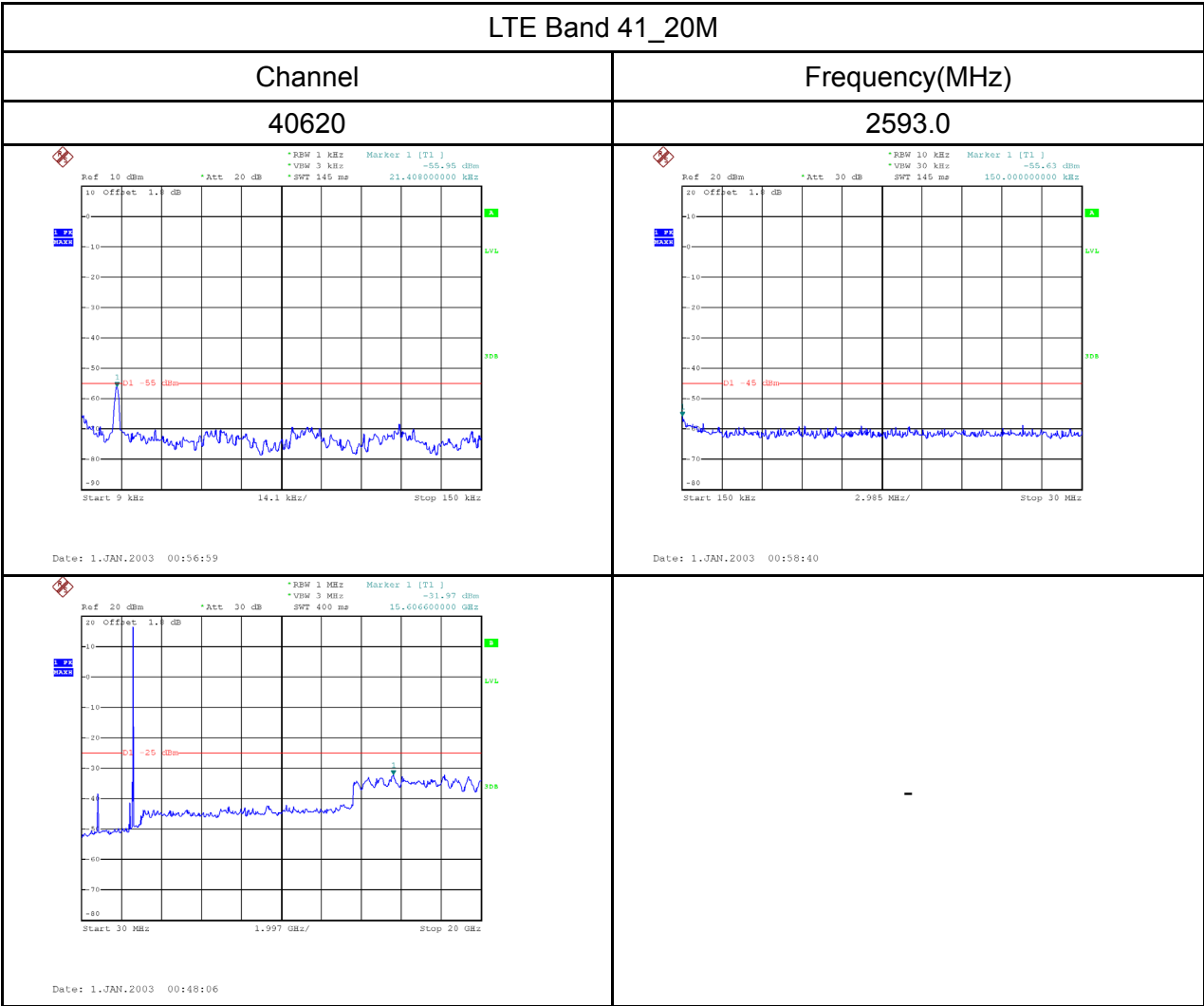


APPENDIX C - CONDUCTED EMISSIONS

For ANT 1

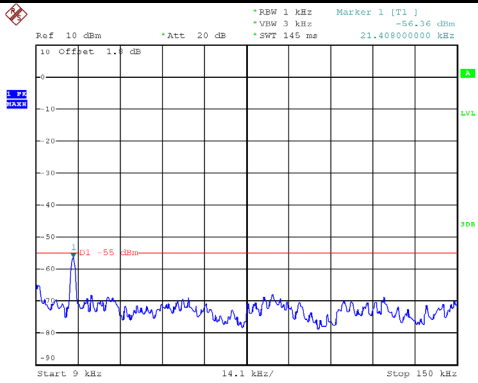
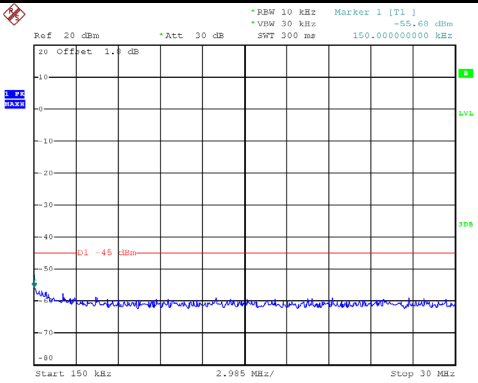
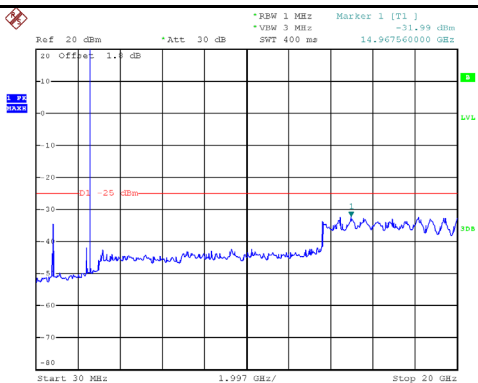
LTE Band 41_5M

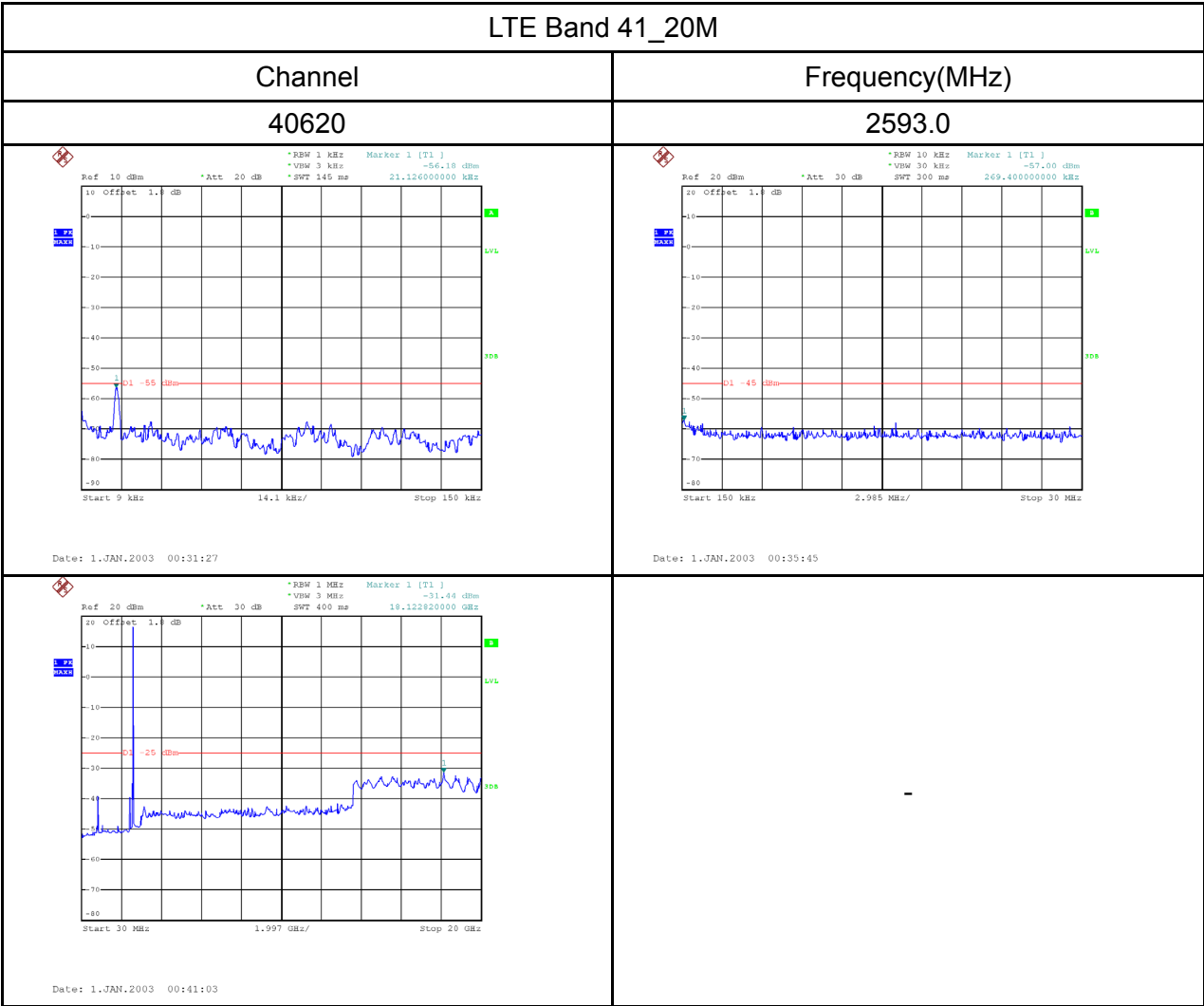
Channel	Frequency(MHz)
40620	2593.0
 Ref 10 dBm *Att 20 dB *BW 1 kHz Marker 1 [T1] -55.79 dBm *VMW 3 kHz *SWT 145 ms 21.408000000 kHz Date: 1.JAN.2003 00:56:41	 Ref 20 dBm *Att 30 dB *BW 10 kHz Marker 1 [T1] -56.67 dBm *VMW 30 kHz *SWT 145 ms 150.000000000 kHz Date: 1.JAN.2003 00:59:22
 Ref 20 dBm *Att 30 dB *BW 1 MHz Marker 1 [T1] -32.15 dBm *VMW 3 MHz *SWT 400 ms 14.368460000 GHz Date: 1.JAN.2003 00:54:48	



For ANT 2

LTE Band 41_5M

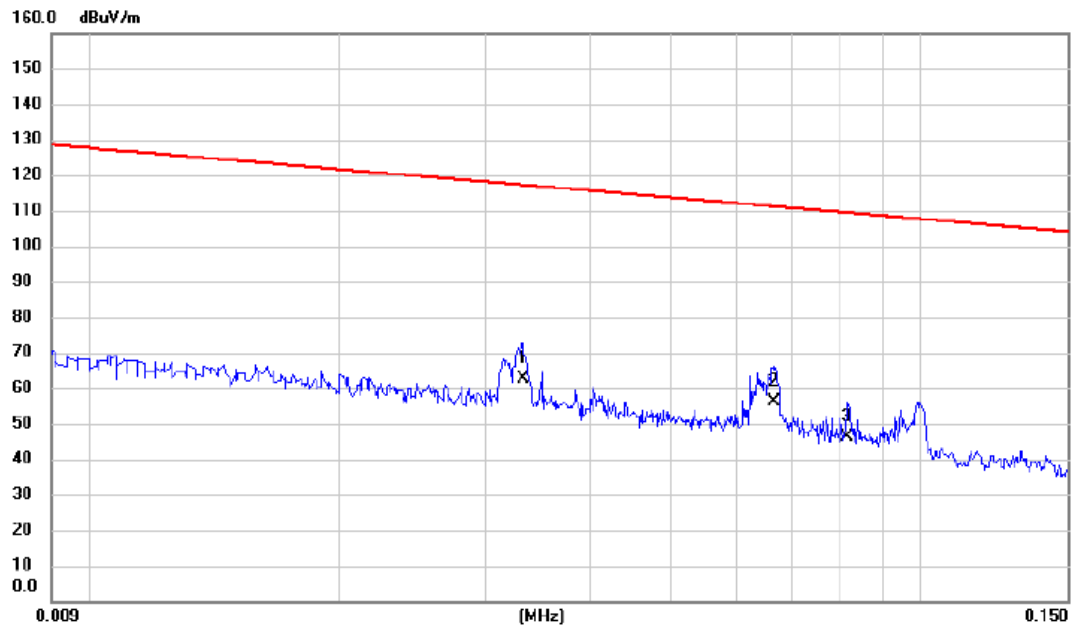
Channel	Frequency(MHz)
40620	2593.0
 Date: 1.JAN.2003 00:30:17	 Date: 1.JAN.2003 00:35:25
 Date: 1.JAN.2003 00:38:08	



APPENDIX C - RADIATED EMISSION (9KHZ TO 30MHZ)

Test Mode: TX Mode

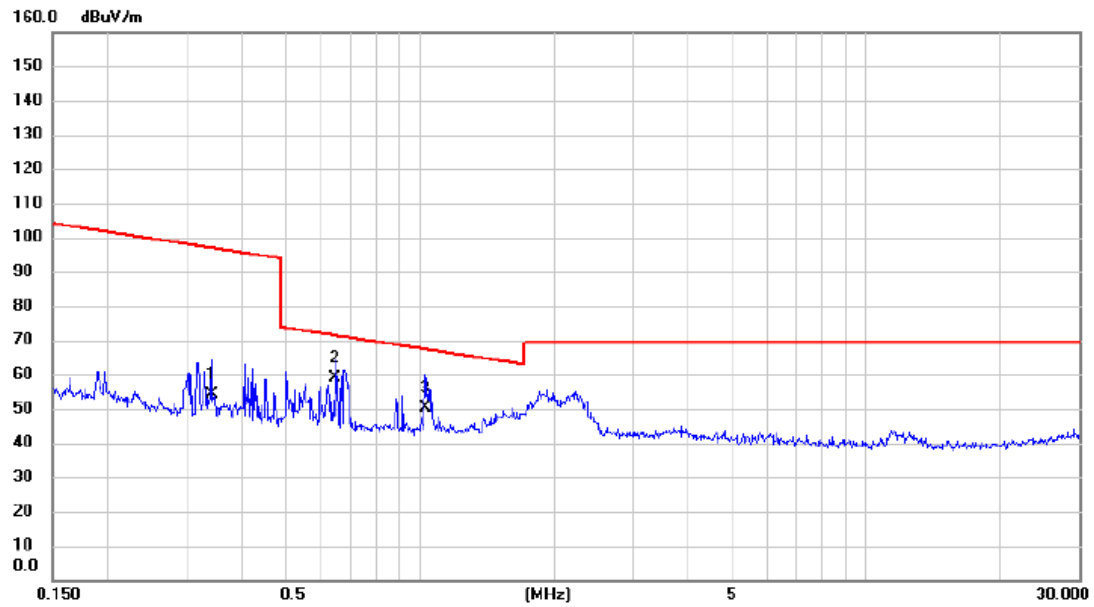
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.0333	42.90	19.81	62.71	117.16	-54.45	AVG	
2		0.0667	36.90	19.20	56.10	111.12	-55.02	AVG	
3		0.0816	27.40	18.88	46.28	109.37	-63.09	AVG	

Test Mode: TX Mode

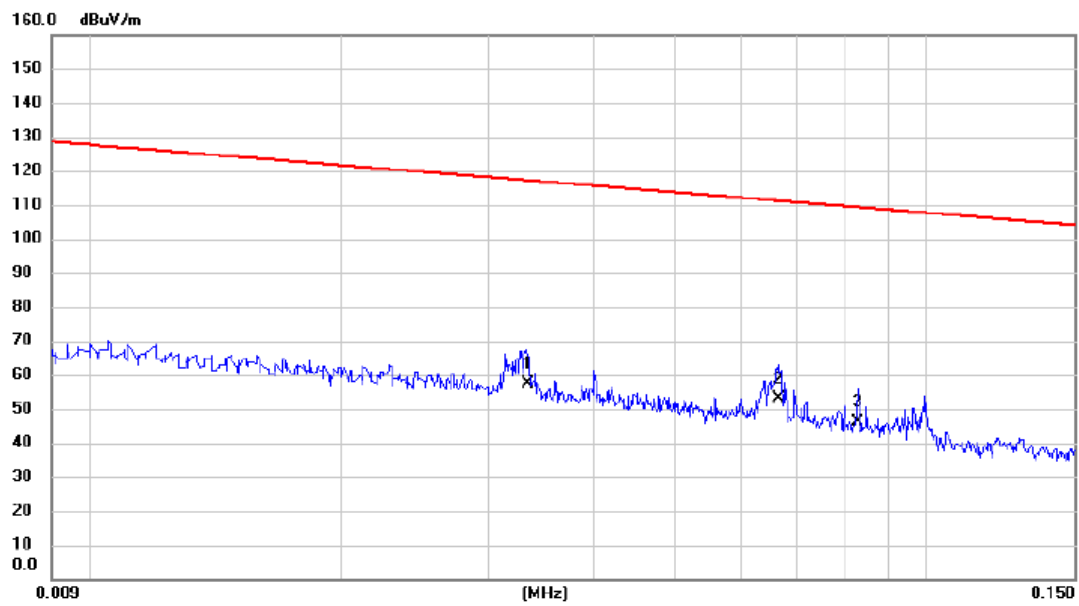
Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.3410	37.30	17.02	54.32	96.95	-42.63	AVG	
2	*	0.6440	42.20	16.91	59.11	71.43	-12.32	QP	
3		1.0265	33.40	16.61	50.01	67.38	-17.37	QP	

Test Mode: TX Mode

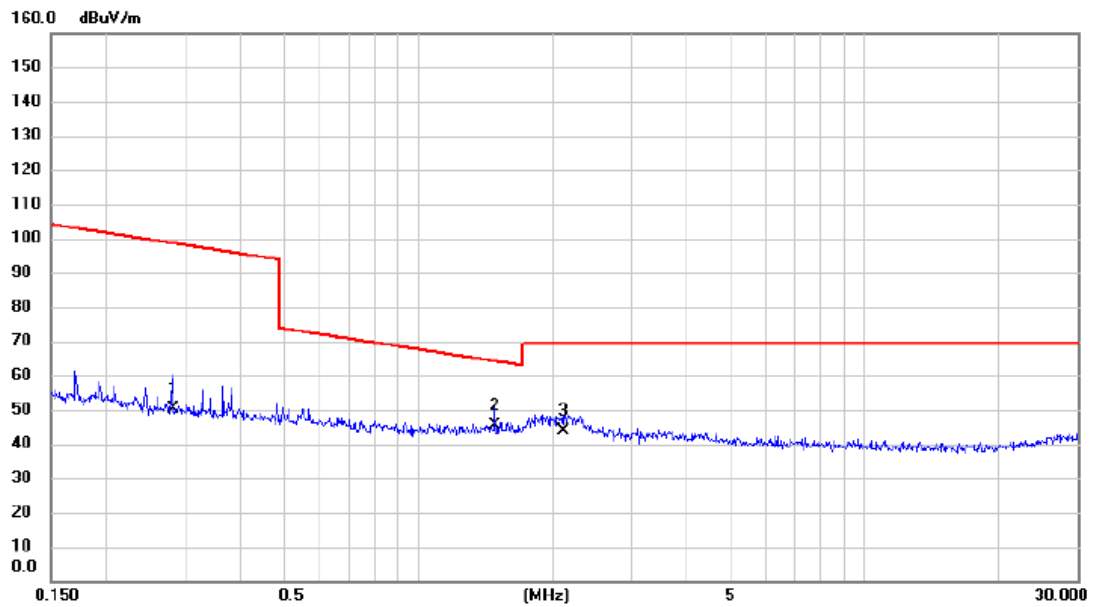
Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0334	37.50	19.81	57.31	117.13	-59.82	AVG	
2	*	0.0665	33.80	19.20	53.00	111.15	-58.15	AVG	
3		0.0827	27.19	18.86	46.05	109.25	-63.20	AVG	

Test Mode: TX Mode

Ant 90°

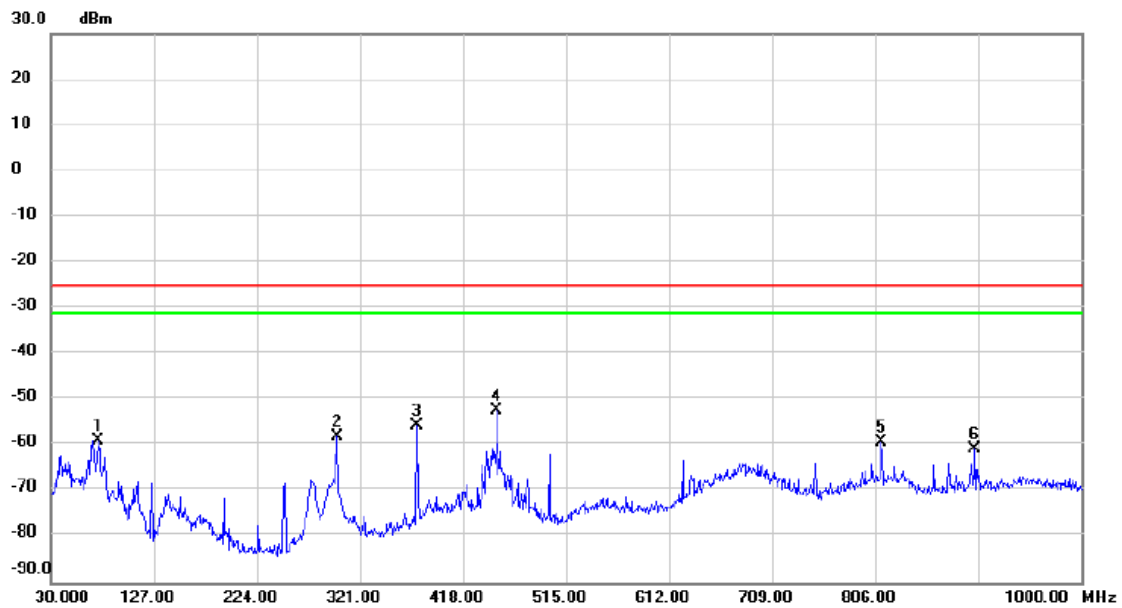


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2818	33.30	17.05	50.35	98.61	-48.26	AVG	
2	*	1.4796	28.60	16.85	45.45	64.20	-18.75	QP	
3		2.1213	26.70	17.05	43.75	69.54	-25.79	QP	

APPENDIX D - RADIATED EMISSION (30MHZ TO 1GHZ)

Test Mode: LTE Band 41_5M

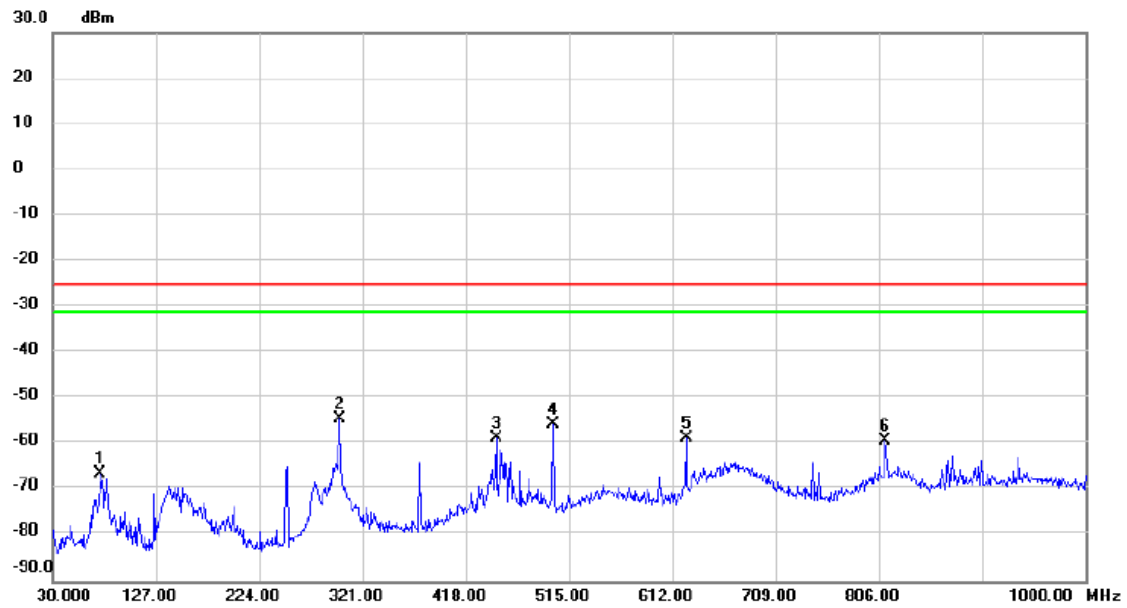
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		74.620	-40.61	-18.34	-58.95	-25.00	-33.95	peak	
2		300.145	-47.76	-10.37	-58.13	-25.00	-33.13	peak	
3		374.835	-45.39	-10.24	-55.63	-25.00	-30.63	peak	
4	*	450.010	-45.04	-7.40	-52.44	-25.00	-27.44	peak	
5		812.305	-58.14	-1.23	-59.37	-25.00	-34.37	peak	
6		900.090	-60.05	-0.60	-60.65	-25.00	-35.65	peak	

Test Mode: LTE Band 41_5M

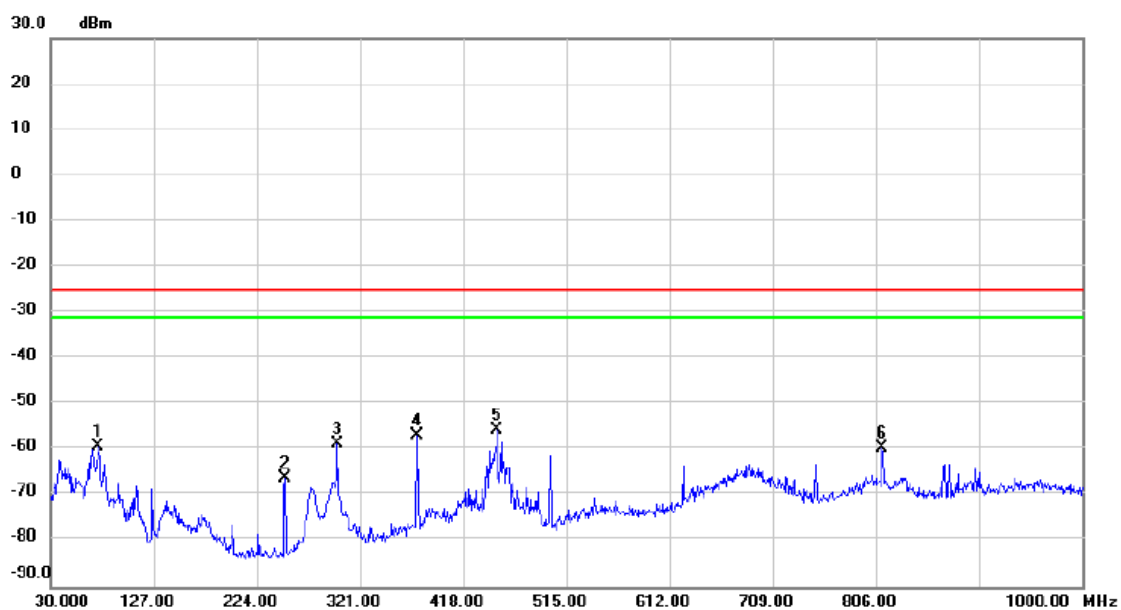
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		74.620	-48.10	-18.34	-66.44	-25.00	-41.44	peak	
2	*	300.145	-44.18	-10.37	-54.55	-25.00	-29.55	peak	
3		446.615	-51.19	-7.54	-58.73	-25.00	-33.73	peak	
4		499.965	-47.15	-8.53	-55.68	-25.00	-30.68	peak	
5		625.095	-52.86	-5.73	-58.59	-25.00	-33.59	peak	
6		812.305	-58.09	-1.23	-59.32	-25.00	-34.32	peak	

Test Mode: LTE Band 41_20M

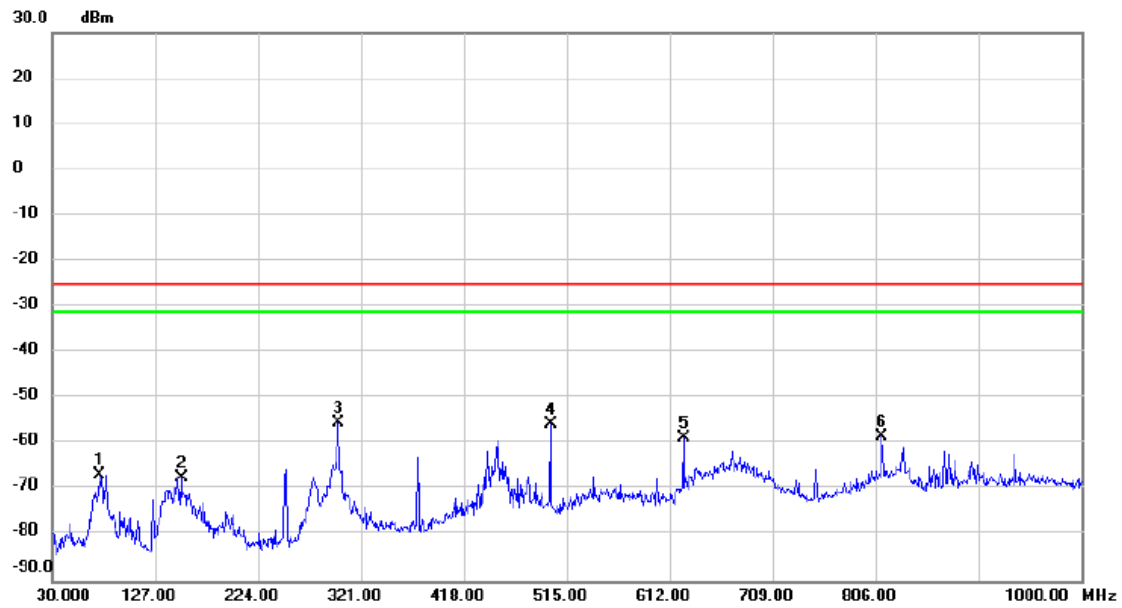
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		74.620	-40.94	-18.34	-59.28	-25.00	-34.28	peak	
2		250.190	-51.93	-14.28	-66.21	-25.00	-41.21	peak	
3		300.145	-48.33	-10.37	-58.70	-25.00	-33.70	peak	
4		374.835	-46.46	-10.24	-56.70	-25.00	-31.70	peak	
5	*	450.010	-48.40	-7.40	-55.80	-25.00	-30.80	peak	
6		812.305	-58.22	-1.23	-59.45	-25.00	-34.45	peak	

Test Mode: LTE Band 41_20M

Horizontal

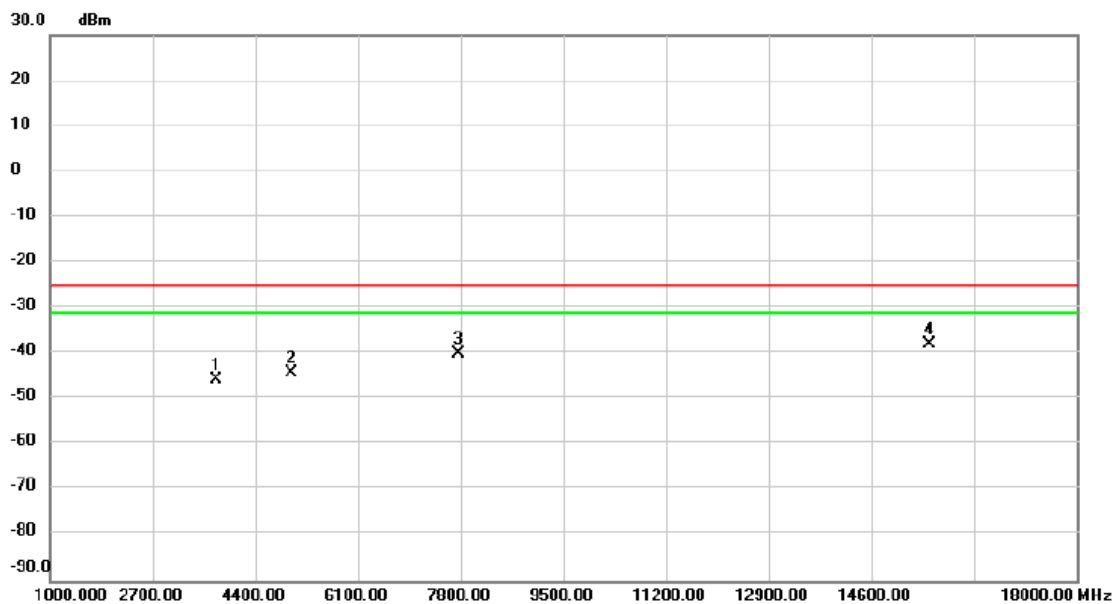


No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		74.620	-48.41	-18.34	-66.75	-25.00	-41.75	peak	
2		151.735	-56.09	-11.33	-67.42	-25.00	-42.42	peak	
3	*	300.145	-44.87	-10.37	-55.24	-25.00	-30.24	peak	
4		499.965	-47.12	-8.53	-55.65	-25.00	-30.65	peak	
5		625.095	-52.94	-5.73	-58.67	-25.00	-33.67	peak	
6		812.305	-57.21	-1.23	-58.44	-25.00	-33.44	peak	

APPENDIX E - RADIATED EMISSION (ABOVE 1GHZ)

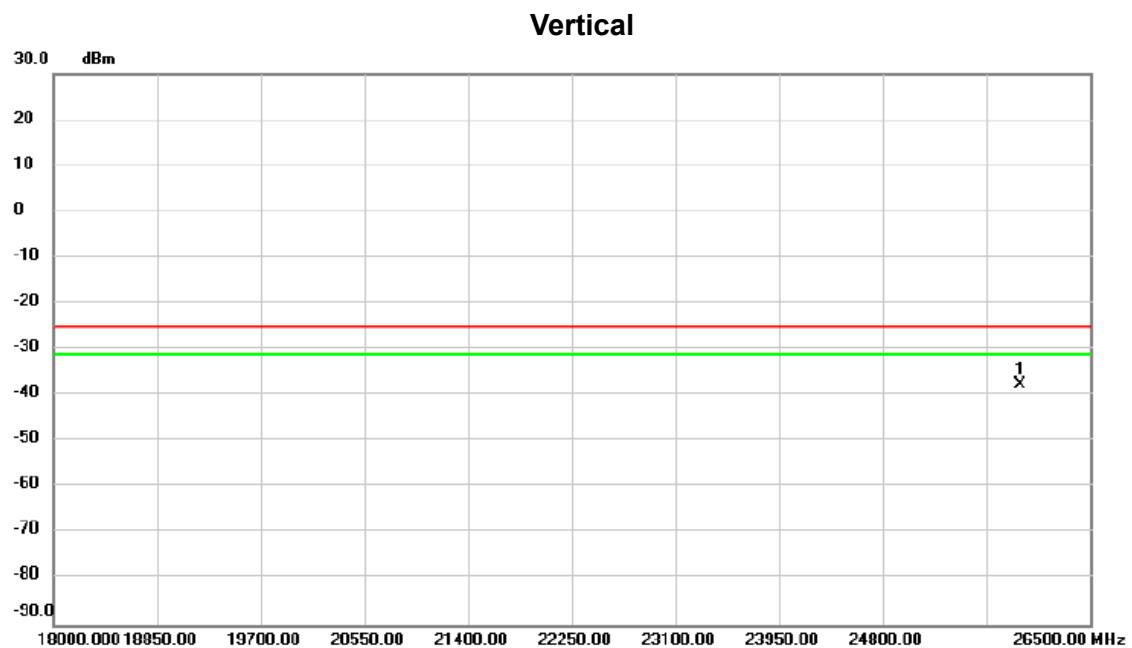
Test Mode: LTE Band 41_ 5M

Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3754.000	-46.87	1.06	-45.81	-25.00	-20.81	peak	
2		5003.500	-48.10	3.97	-44.13	-25.00	-19.13	peak	
3		7774.500	-50.12	9.93	-40.19	-25.00	-15.19	peak	
4	*	15560.500	-52.23	14.23	-38.00	-25.00	-13.00	peak	

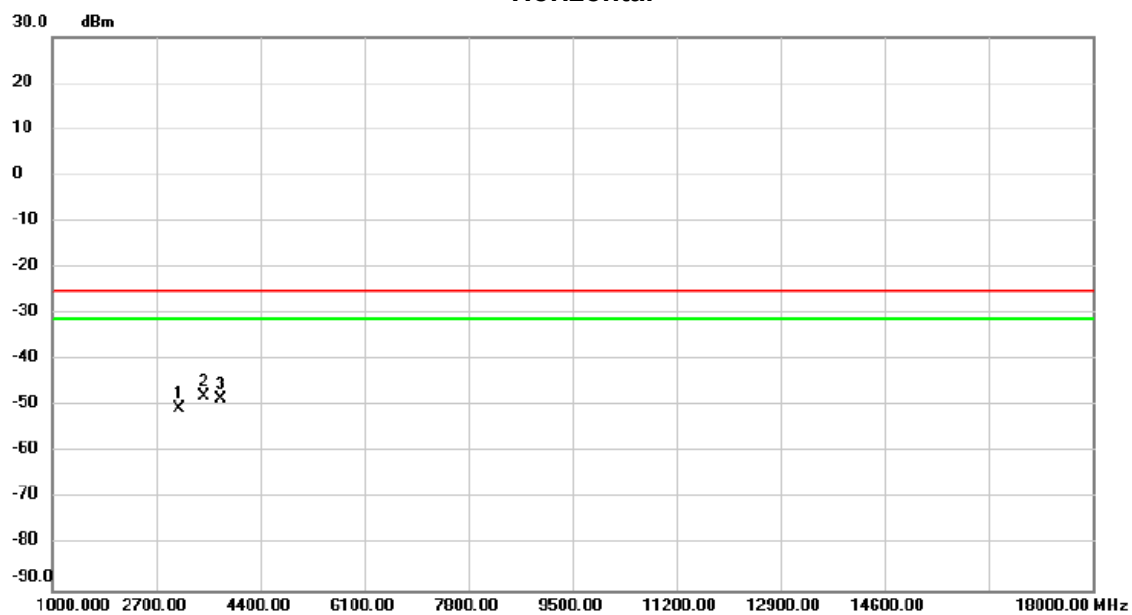
Test Mode:	LTE Band 41_ 5M
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No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	25930.50	-59.29	21.63	-37.66	-25.00	-12.66	peak	

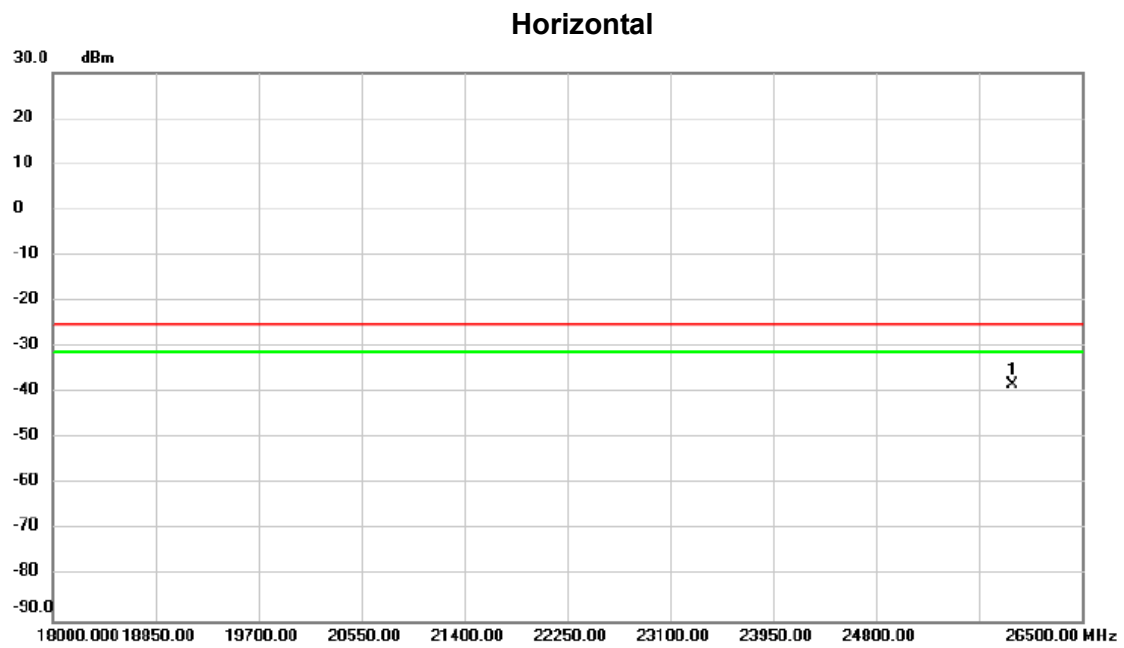
Test Mode: LTE Band 41_ 5M

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3065.500	-50.53	-0.01	-50.54	-25.00	-25.54	peak	
2	*	3473.500	-48.14	0.18	-47.96	-25.00	-22.96	peak	
3		3754.000	-49.43	1.06	-48.37	-25.00	-23.37	peak	

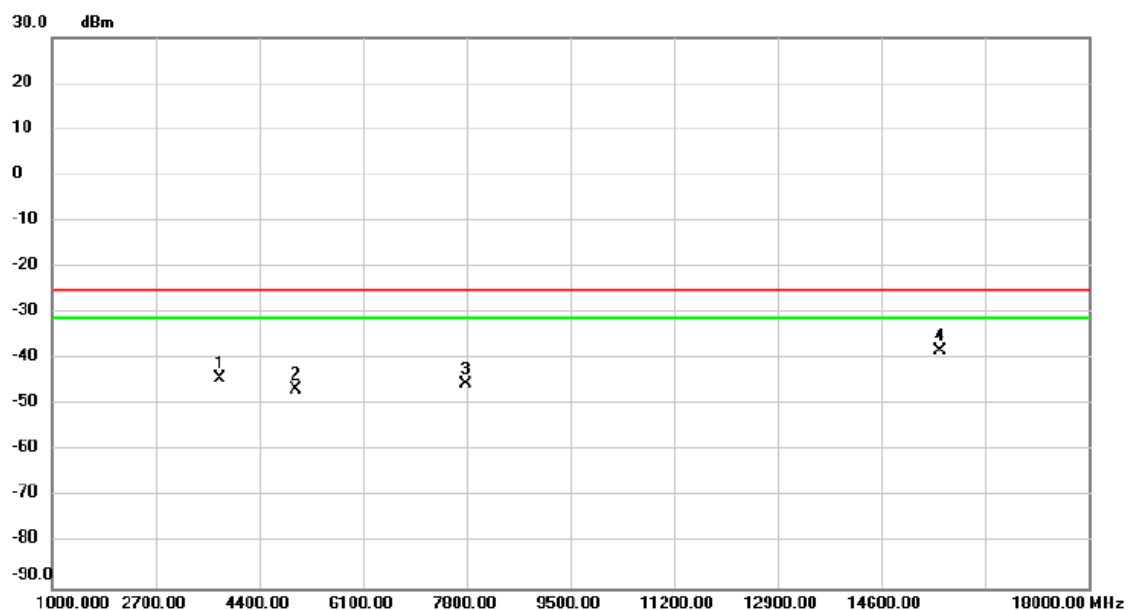
Test Mode:	LTE Band 41_ 5M
------------	-----------------



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBm	dB	dBm	dBm	dB	Detector	Comment
1	*	25930.50	-59.86	21.63	-38.23	-25.00	-13.23	peak	

Test Mode: LTE Band 41_ 20M

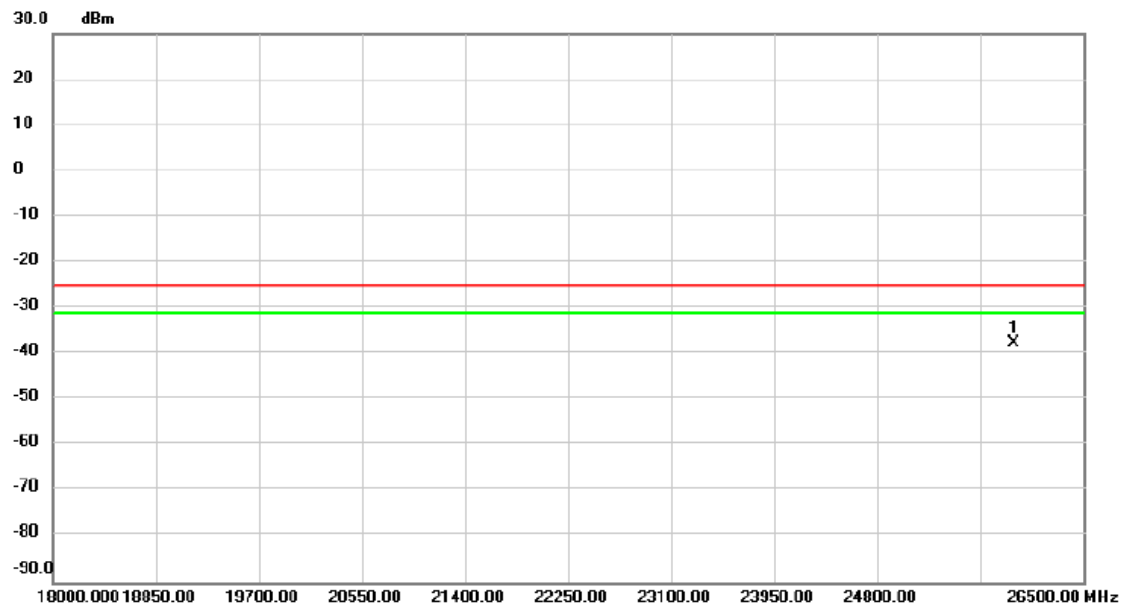
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3754.000	-45.42	1.06	-44.36	-25.00	-19.36	peak	
2		5003.500	-50.56	3.97	-46.59	-25.00	-21.59	peak	
3		7783.000	-55.49	9.92	-45.57	-25.00	-20.57	peak	
4	*	15560.50	-52.60	14.23	-38.37	-25.00	-13.37	peak	

Test Mode: LTE Band 41_ 20M

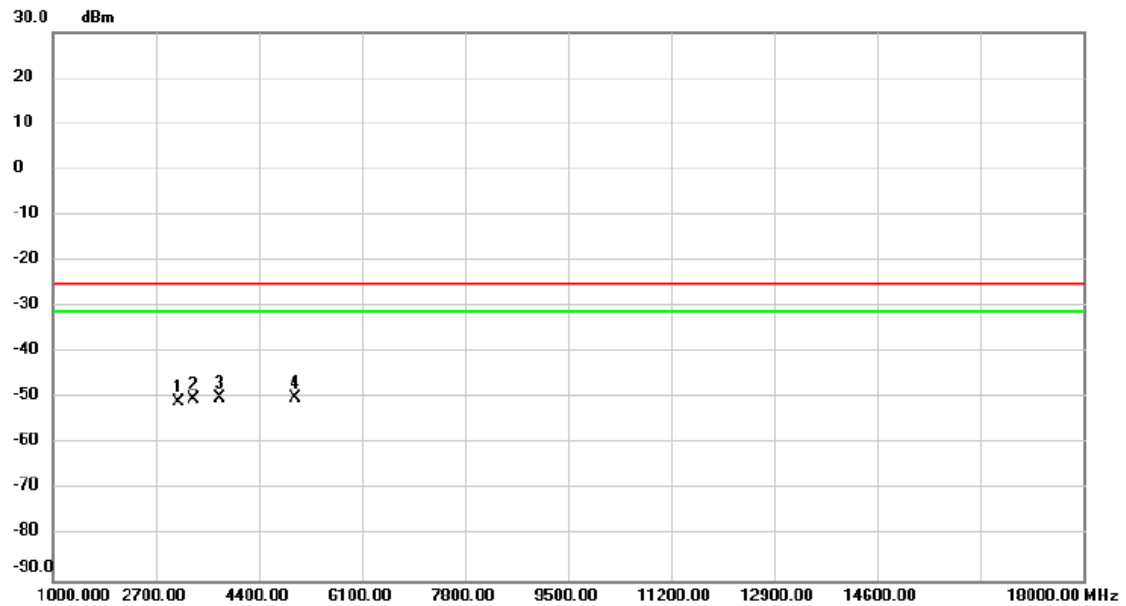
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1	*	25930.50	-59.27	21.63	-37.64	-25.00	-12.64	peak	

Test Mode: LTE Band 41_ 20M

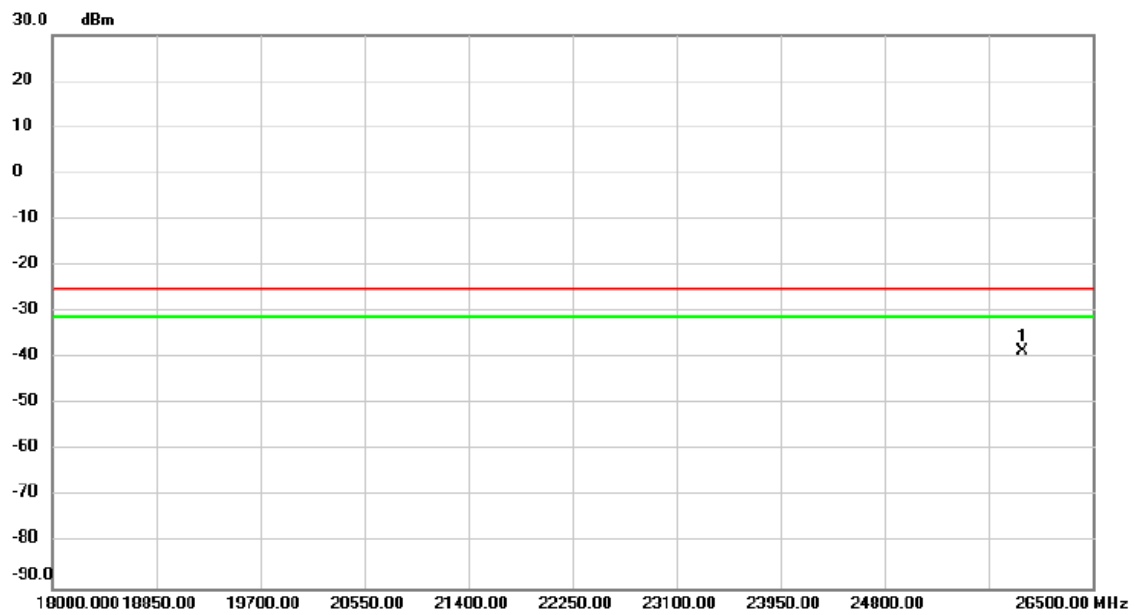
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1		3065.500	-50.94	-0.01	-50.95	-25.00	-25.95	peak	
2		3312.000	-50.26	0.10	-50.16	-25.00	-25.16	peak	
3		3754.000	-51.01	1.06	-49.95	-25.00	-24.95	peak	
4	*	5003.500	-53.89	3.97	-49.92	-25.00	-24.92	peak	

Test Mode: LTE Band 41_ 20M

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Margin dB	Detector	Comment
1	*	25930.50	-60.25	21.63	-38.62	-25.00	-13.62	peak	

APPENDIX F - BAND EDGE

For ANT 1

LTE Band 41 5M

Full RB

Channel

Keysight Spectrum Analyzer - Spurious Emissions

Center Freq **22.005000000 GHz** SENSE [NT] 01:46:40 PM Dec 14, 2018

PASS IF Gain: Low #Att: 40 dB Radio Device: BTS

Ref Offset 1.8 dB
Ref 30.00 dBm

Start 2.475 GHz Stop 2.501 GHz CF Step 4.399000000 GHz

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4900 GHz	1.000 MHz	2.489000000 GHz	-17.65 dBm	8.778 dB
2	2	2.4800 GHz	2.4950 GHz	1.000 MHz	2.494000000 GHz	-19.78 dBm	8.778 dB
3	3	2.4950 GHz	2.4960 GHz	100.0 kHz	2.495963333 GHz	-37.31 dBm	-27.31 dB
4	4	2.4900 GHz	2.5010 GHz	100.0 kHz	2.500141667 GHz	-4.336 dBm	-25.66 dB

Frequency Center Freq 22.005000000 GHz CF Step 4.399000000 GHz Auto Man Freq Offset 0 Hz

Channel

Keysight Spectrum Analyzer - Spurious Emissions

Center Freq **22.005000000 GHz** SENSE [NT] 11:27:50 AM Dec 14, 2018

PASS IF Gain: Low #Att: 40 dB Radio Device: BTS

Ref Offset 1.8 dB
Ref 30.00 dBm

Start 2.685 GHz Stop 2.772 GHz CF Step 4.399000000 GHz

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6850 GHz	2.6900 GHz	100.0 MHz	2.690033333 GHz	-6.14 dBm	-23.69 dB
2	2	2.6900 GHz	2.6910 GHz	100.0 MHz	2.690013333 GHz	-31.43 dBm	-21.43 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691080000 GHz	-21.51 dBm	-11.51 dB
4	4	2.6950 GHz	2.6960 GHz	1.000 MHz	2.695335000 GHz	-40.04 dBm	-27.04 dB
5	5	2.6960 GHz	2.7200 GHz	1.000 MHz	2.704440000 GHz	-41.62 dBm	-16.62 dB

Frequency Center Freq 22.005000000 GHz CF Step 4.399000000 GHz Auto Man Freq Offset 0 Hz

LTE Band 41 10M

Full RB

Channel 39700

Keysight Spectrum Analyzer - Spurious Emissions

Center Freq: 22.005000000 GHz Radio Std: None [11:47:43 AM Dec 14, 2018]

Trig: Free Run Avg/Hold: 2/2 IF Gain: Low #Atten: 40 dB Radio Device: BTS

Frequency

Center Freq: 22.005000000 GHz

Ref Offset 1.8 dB
Ref 30.00 dBm

Start 2.475 GHz Stop 2.506 GHz

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4900 GHz	1.000 MHz	2.481600000 GHz	-41.69 dBm	-16.69 dB
2	2	2.4900 GHz	2.4950 GHz	1.000 MHz	2.494433333 GHz	-37.79 dBm	-24.79 dB
3	3	2.4950 GHz	2.4960 GHz	200.0 kHz	2.495926667 GHz	-42.48 dBm	-32.48 dB
4	4	2.4960 GHz	2.5060 GHz	100.0 kHz	2.500300000 GHz	-2.940 dBm	-27.06 dB
5	5	2.4960 GHz	2.5060 GHz	100.0 kHz	2.504166667 GHz	-2.906 dBm	-27.09 dB

Channel 41540

Keysight Spectrum Analyzer - Spurious Emissions

Center Freq: 22.005000000 GHz Radio Std: None [13:50:53 PM Dec 14, 2018]

Trig: Free Run Avg/Hold: 2/2 IF Gain: Low #Atten: 40 dB Radio Device: BTS

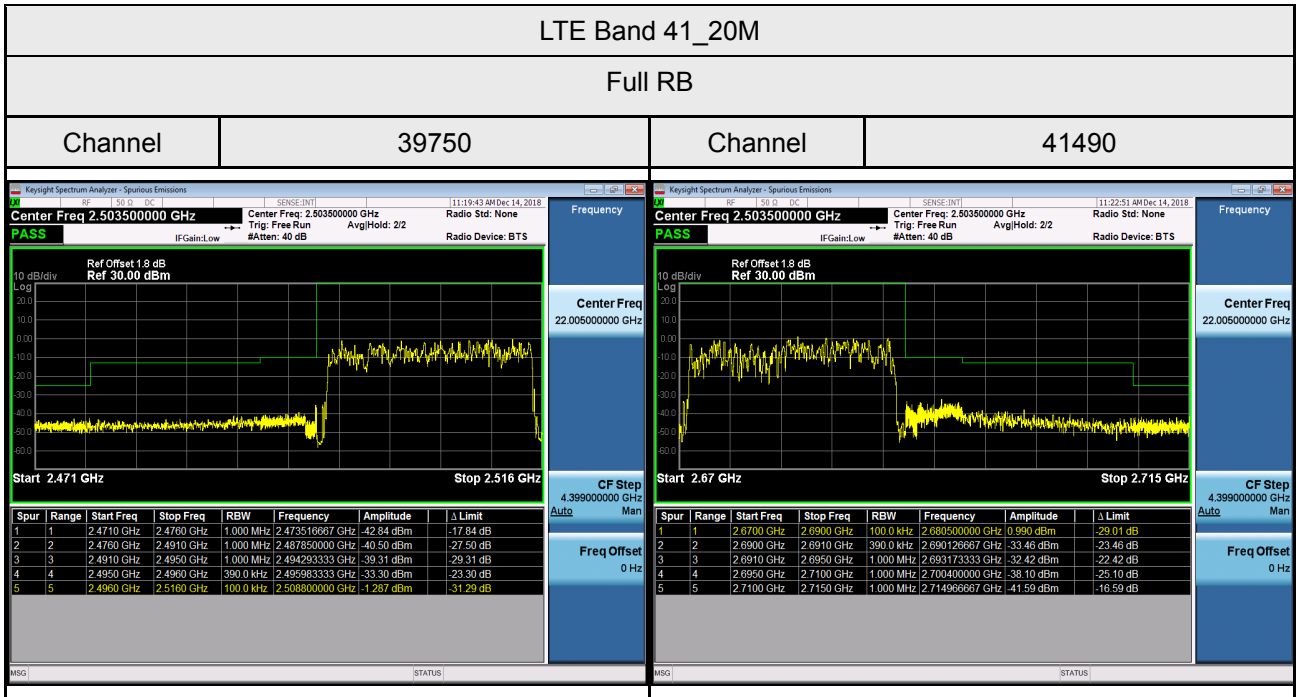
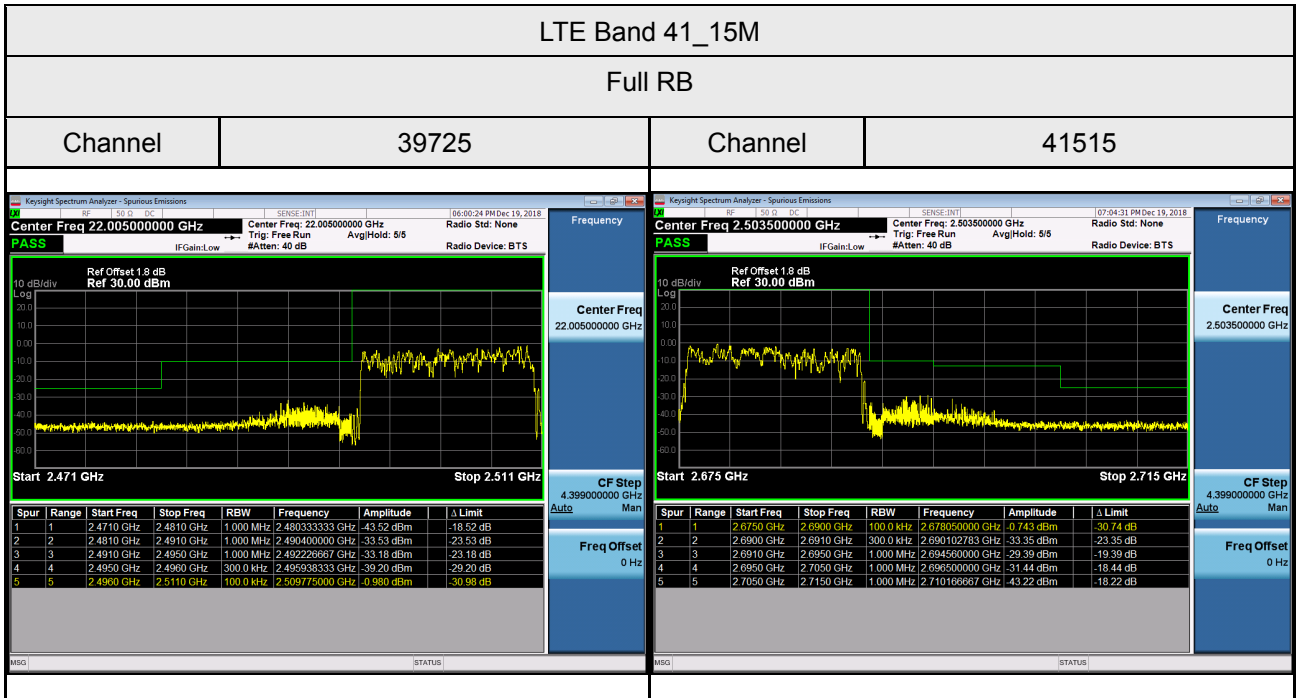
Frequency

Center Freq: 22.005000000 GHz

Ref Offset 1.8 dB
Ref 30.00 dBm

Start 2.675 GHz Stop 2.715 GHz

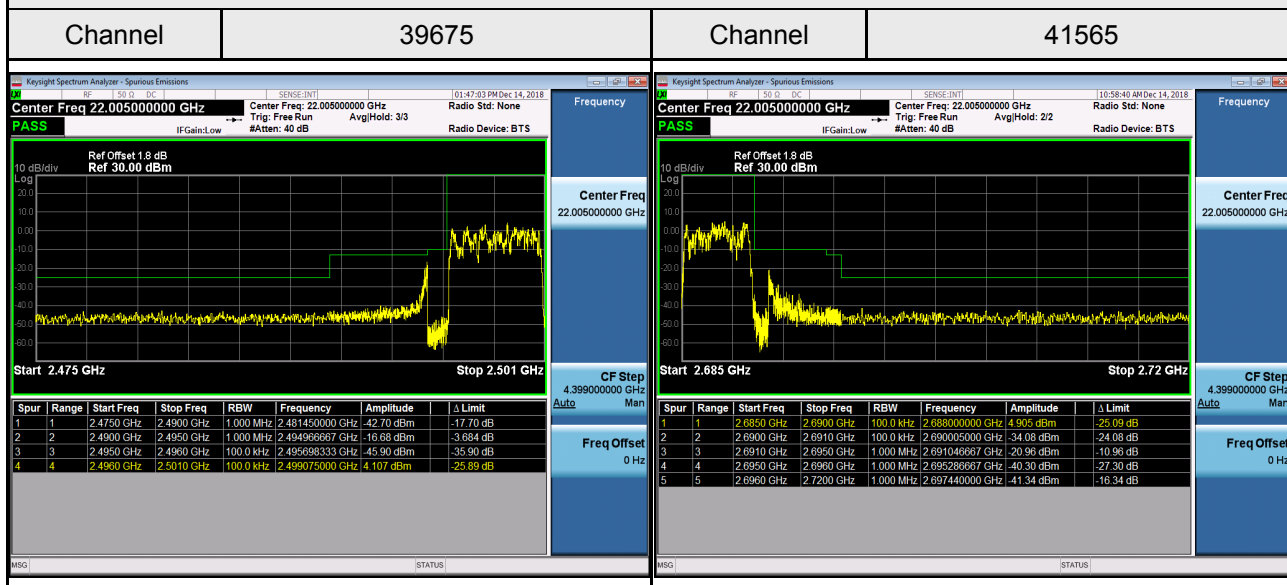
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.6800 GHz	2.6900 GHz	100.0 kHz	2.684000000 GHz	-3.620 dBm	-26.38 dB
2	2	2.6900 GHz	2.6910 GHz	200.0 kHz	2.690458333 GHz	-34.95 dBm	-24.95 dB
3	3	2.6910 GHz	2.6950 GHz	1.000 MHz	2.691166667 GHz	-27.44 dBm	-17.44 dB
4	4	2.6950 GHz	2.7000 GHz	1.000 MHz	2.697000000 GHz	-35.53 dBm	-22.53 dB
5	5	2.7000 GHz	2.7150 GHz	1.000 MHz	2.700775000 GHz	-40.92 dBm	-15.92 dB



For ANT 2

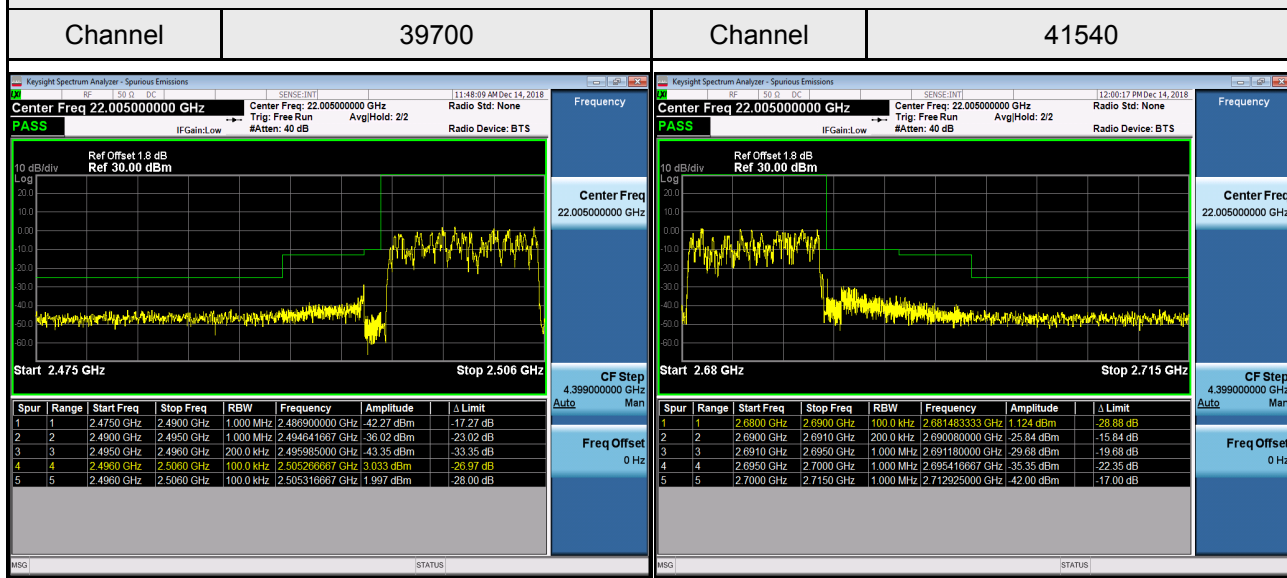
LTE Band 41_5M

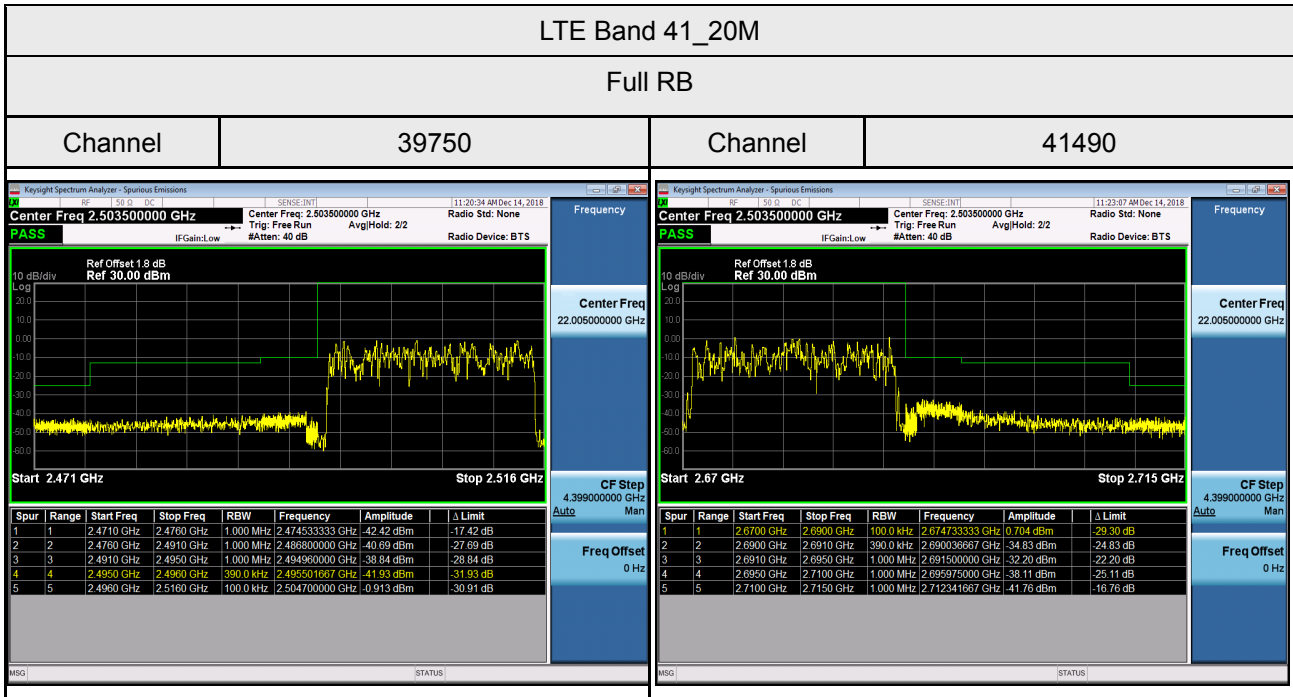
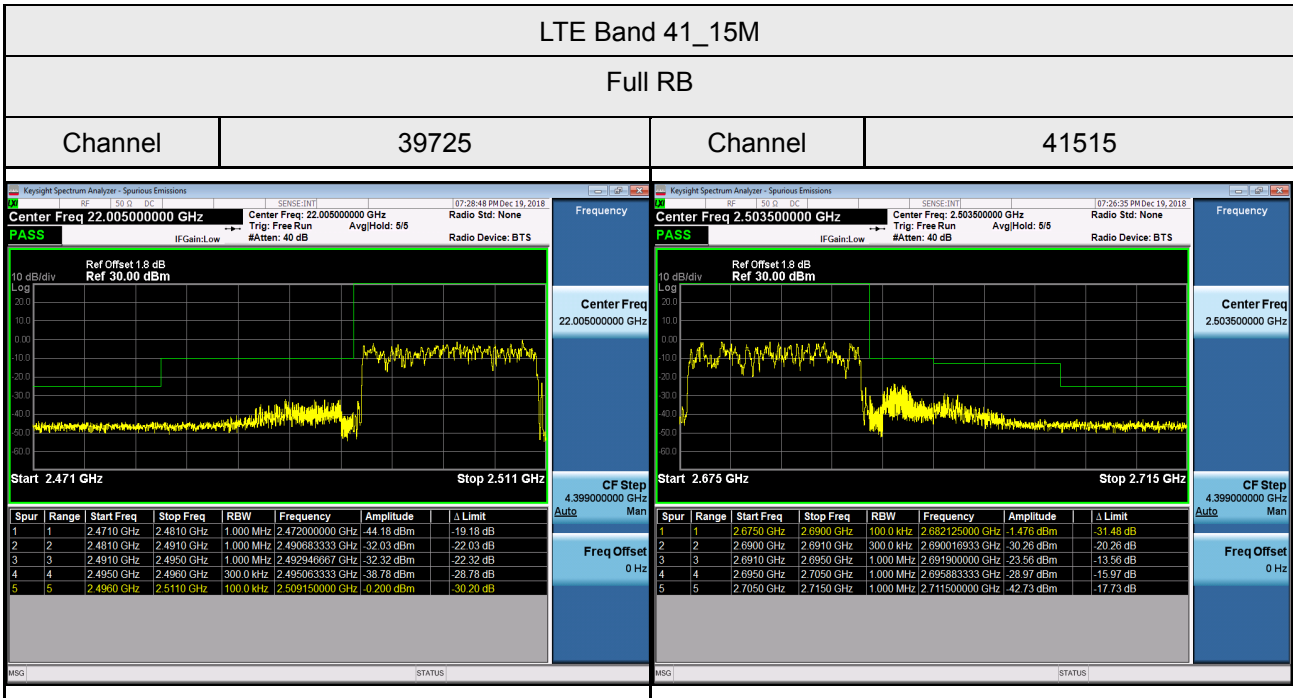
Full RB



LTE Band 41_10M

Full RB



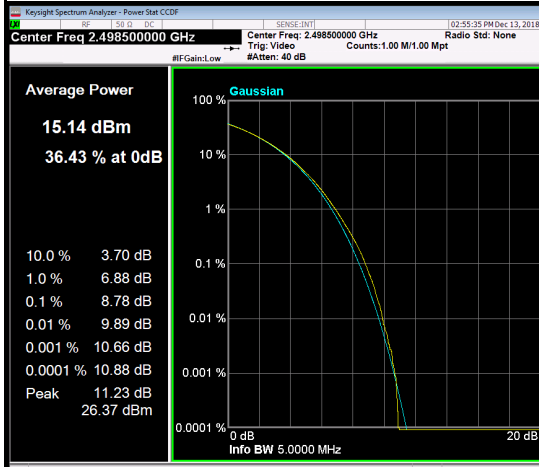


APPENDIX G - PEAK TO AVERAGE RATIO

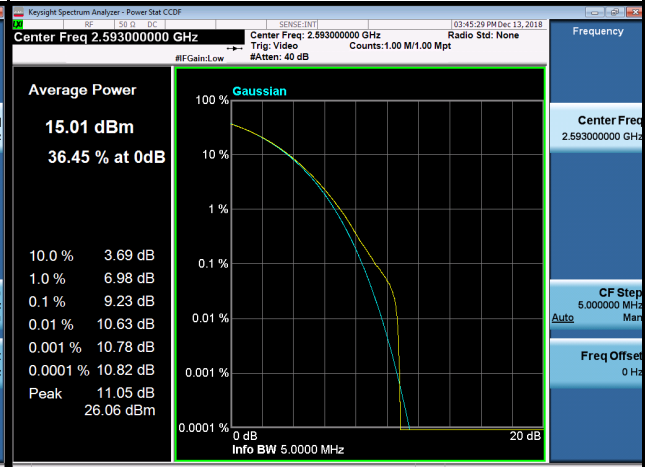
For ANT 1

LTE Band 41 Spectrum Plot_5M

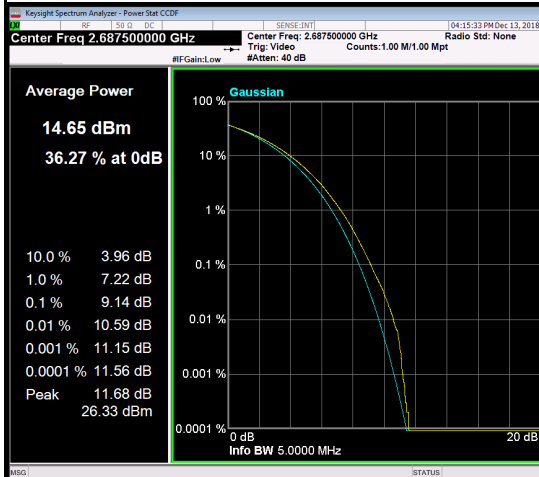
QPSK-39675



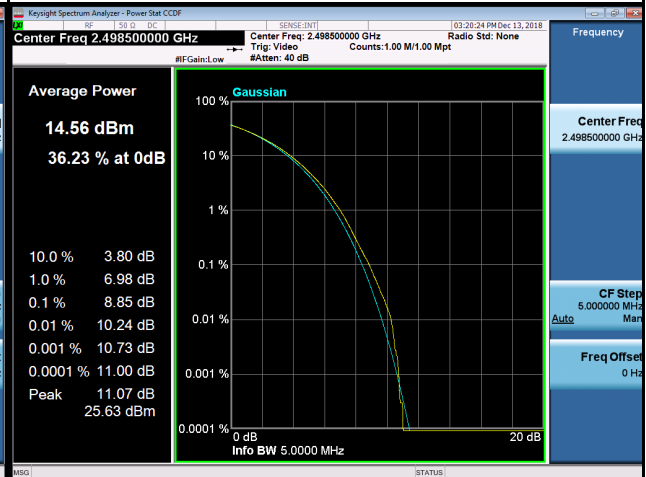
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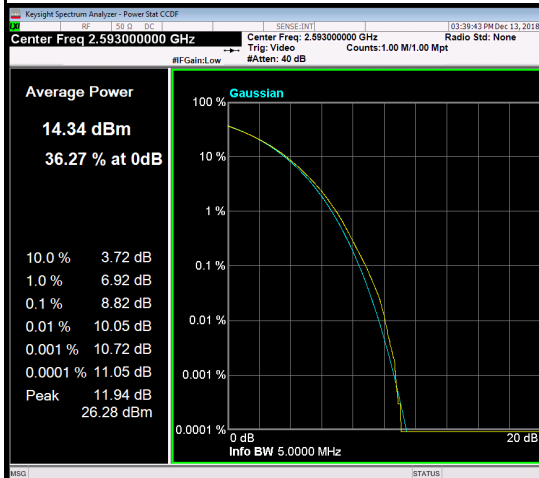
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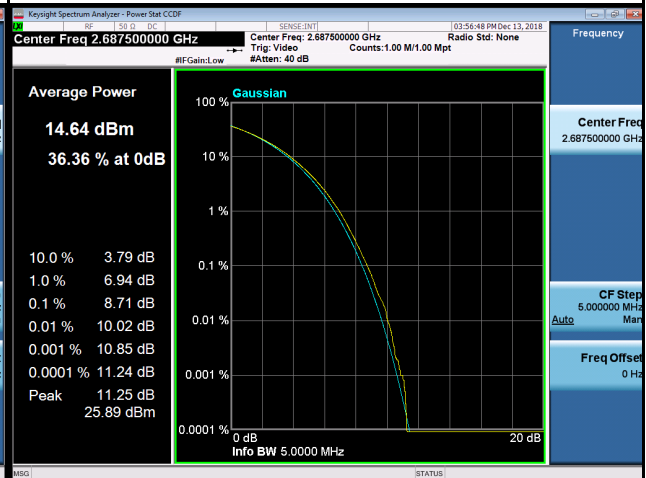
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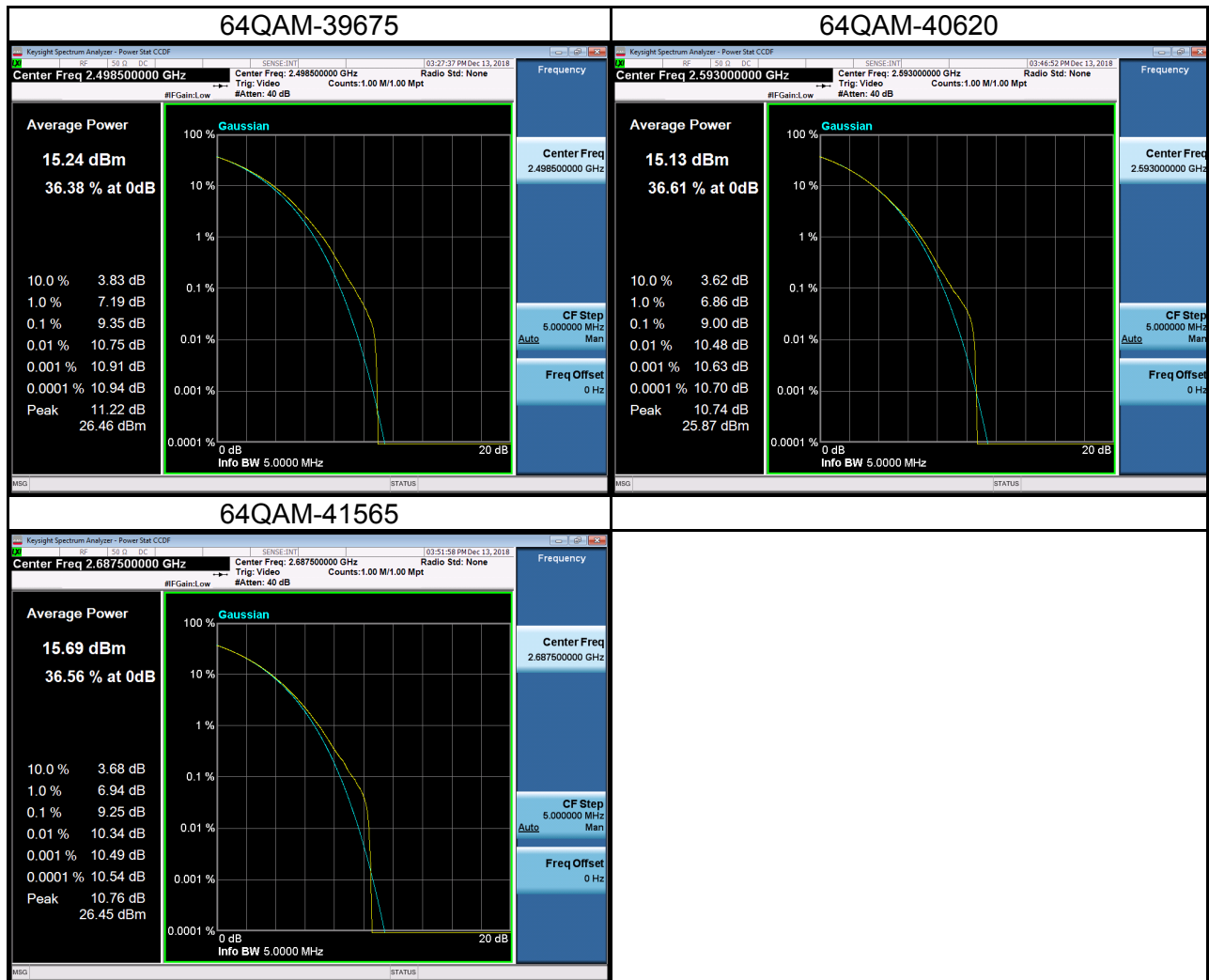


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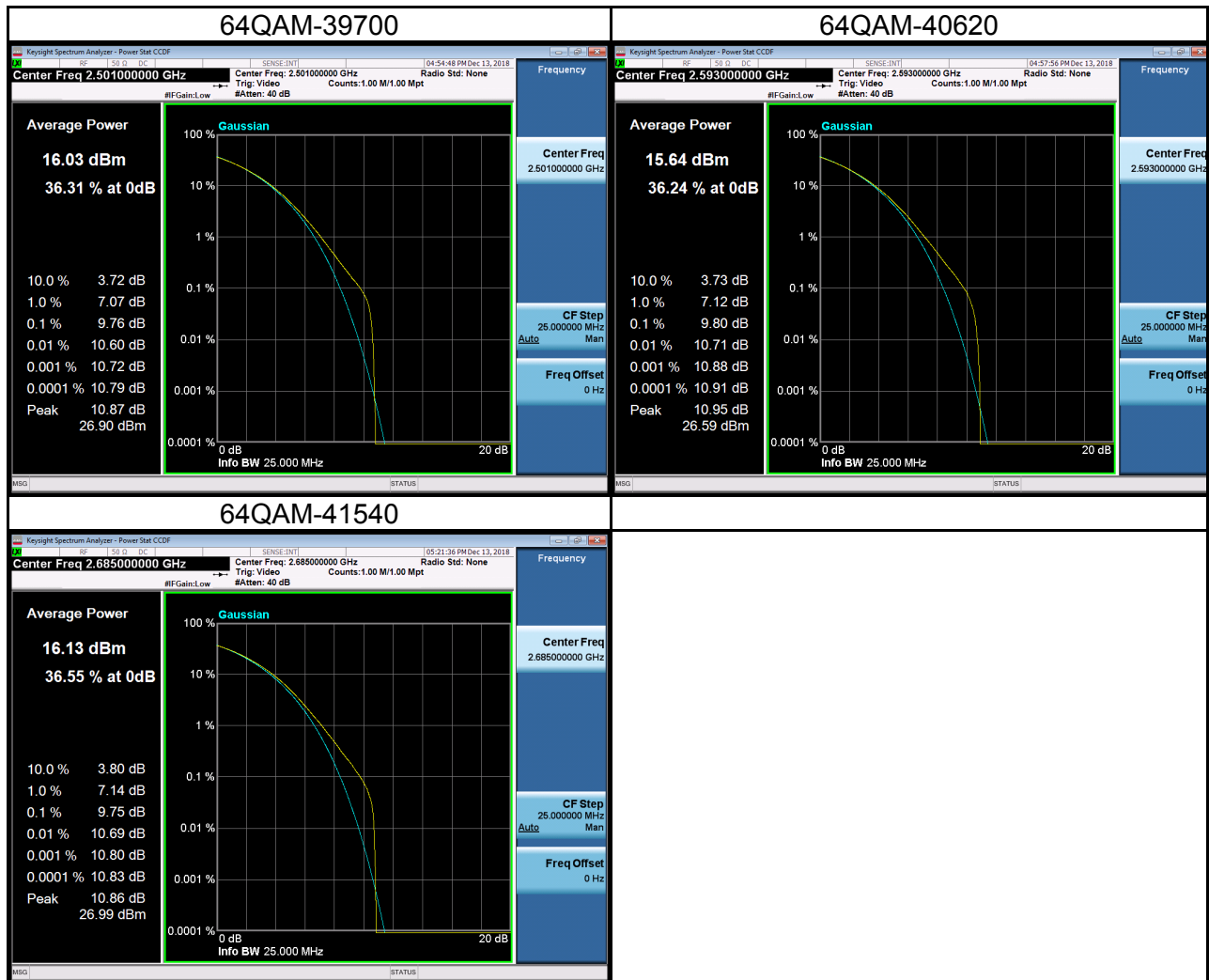
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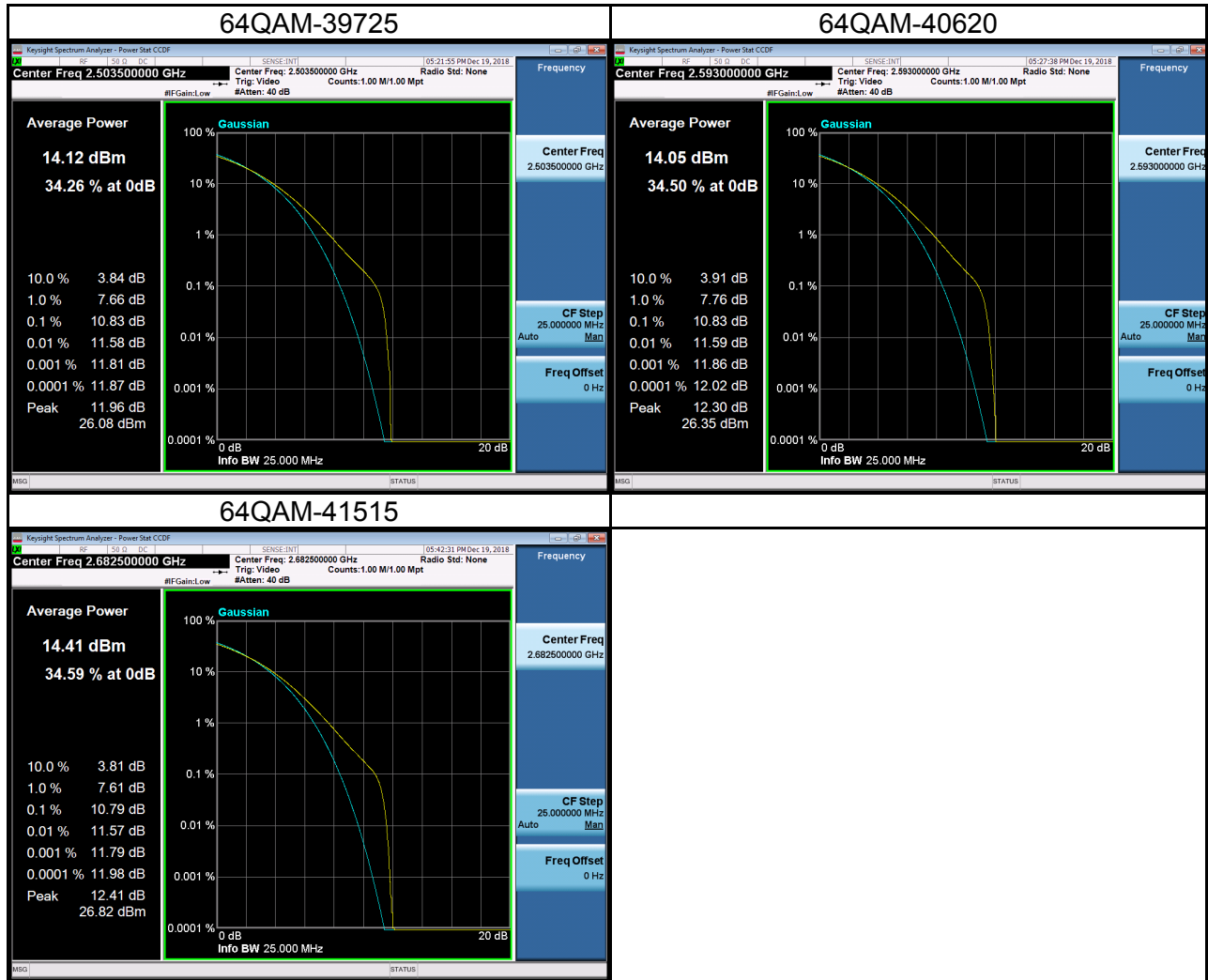
LTE Band 41 Spectrum Plot_10M





LTE Band 41 Spectrum Plot_15M





LTE Band 41 Spectrum Plot_20M

