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# Appendix B

**E-UTRA BAND 30** 



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#### 1 Effective (Isotropic) Radiated Power Output Data

#### 1.1. Conducted power Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)
BAND30	5MHz	QPSK	27685	1RB#0	22.86
BAND30	5MHz	QPSK	27685	1RB#12	22.69
BAND30	5MHz	QPSK	27685	1RB#24	22.73
BAND30	5MHz	QPSK	27685	12RB#0	21.77
BAND30	5MHz	QPSK	27685	12RB#6	21.56
BAND30	5MHz	QPSK	27685	12RB#13	21.59
BAND30	5MHz	QPSK	27685	25RB#0	21.60
BAND30	5MHz	QPSK	27710	1RB#0	22.79
BAND30	5MHz	QPSK	27710	1RB#12	22.85
BAND30	5MHz	QPSK	27710	1RB#24	22.65
BAND30	5MHz	QPSK	27710	12RB#0	21.67
BAND30	5MHz	QPSK	27710	12RB#6	21.66
BAND30	5MHz	QPSK	27710	12RB#13	21.81
BAND30	5MHz	QPSK	27710	25RB#0	21.75
BAND30	5MHz	QPSK	27735	1RB#0	22.89
BAND30	5MHz	QPSK	27735	1RB#12	22.73
BAND30	5MHz	QPSK	27735	1RB#24	22.82
BAND30	5MHz	QPSK	27735	12RB#0	21.87
BAND30	5MHz	QPSK	27735	12RB#6	21.63
BAND30	5MHz	QPSK	27735	12RB#13	21.73
BAND30	5MHz	QPSK	27735	25RB#0	21.63
BAND30	5MHz	16QAM	27685	1RB#0	22.22
BAND30	5MHz	16QAM	27685	1RB#12	21.97
BAND30	5MHz	16QAM	27685	1RB#24	21.95
BAND30	5MHz	16QAM	27685	12RB#0	20.74
BAND30	5MHz	16QAM	27685	12RB#6	20.53
BAND30	5MHz	16QAM	27685	12RB#13	20.59
BAND30	5MHz	16QAM	27685	25RB#0	20.57
BAND30	5MHz	16QAM	27710	1RB#0	21.87
BAND30	5MHz	16QAM	27710	1RB#12	22.17
BAND30	5MHz	16QAM	27710	1RB#24	21.83
BAND30	5MHz	16QAM	27710	12RB#0	20.68
BAND30	5MHz	16QAM	27710	12RB#6	20.65
BAND30	5MHz	16QAM	27710	12RB#13	20.81
BAND30	5MHz	16QAM	27710	25RB#0	20.71
BAND30	5MHz	16QAM	27735	1RB#0	22.04
BAND30	5MHz	16QAM	27735	1RB#12	22.03
BAND30	5MHz	16QAM	27735	1RB#24	22.16
BAND30	5MHz	16QAM	27735	12RB#0	20.85
BAND30	5MHz	16QAM	27735	12RB#6	20.60
BAND30	5MHz	16QAM	27735	12RB#13	20.71
BAND30	5MHz	16QAM	27735	25RB#0	20.57
BAND30	5MHz	64QAM	27685	1RB#0	21.12
BAND30	5MHz	64QAM	27685	1RB#12	20.98
BAND30	5MHz	64QAM	27685	1RB#24	21.04
BAND30	5MHz	64QAM	27685	12RB#0	19.77



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					1
BAND30	5MHz	64QAM	27685	12RB#6	19.57
BAND30	5MHz	64QAM	27685	12RB#13	19.60
BAND30	5MHz	64QAM	27685	25RB#0	19.59
BAND30	5MHz	64QAM	27710	1RB#0	21.02
BAND30	5MHz	64QAM	27710	1RB#12	21.06
BAND30	5MHz	64QAM	27710	1RB#24	20.89
BAND30	5MHz	64QAM	27710	12RB#0	19.67
BAND30	5MHz	64QAM	27710	12RB#6	19.64
BAND30	5MHz	64QAM	27710	12RB#13	19.83
BAND30	5MHz	64QAM	27710	25RB#0	19.69
BAND30	5MHz	64QAM	27735	1RB#0	21.05
BAND30	5MHz	64QAM	27735	1RB#12	20.89
BAND30	5MHz	64QAM	27735	1RB#24	21.01
BAND30	5MHz	64QAM	27735	12RB#0	19.86
BAND30	5MHz	64QAM	27735	12RB#6	19.58
BAND30	5MHz	64QAM	27735	12RB#13	19.70
BAND30	5MHz	64QAM	27735	25RB#0	19.58
BAND30	10MHz	QPSK	27710	1RB#0	22.97
BAND30	10MHz	QPSK	27710	1RB#24	22.85
BAND30	10MHz	QPSK	27710	1RB#49	22.85
BAND30	10MHz	QPSK	27710	25RB#0	21.79
BAND30	10MHz	QPSK	27710	25RB#12	21.83
BAND30	10MHz	QPSK	27710	25RB#25	21.67
BAND30	10MHz	QPSK	27710	50RB#0	21.93
BAND30	10MHz	16QAM	27710	1RB#0	22.18
BAND30	10MHz	16QAM	27710	1RB#24	22.18
BAND30	10MHz	16QAM	27710	1RB#49	22.11
BAND30	10MHz	16QAM	27710	25RB#0	20.86
BAND30	10MHz	16QAM	27710	25RB#12	20.91
BAND30	10MHz	16QAM	27710	25RB#25	20.73
BAND30	10MHz	16QAM	27710	50RB#0	20.98
BAND30	10MHz	64QAM	27710	1RB#0	21.11
BAND30	10MHz	64QAM	27710	1RB#24	21.07
BAND30	10MHz	64QAM	27710	1RB#49	21.00
BAND30	10MHz	64QAM	27710	25RB#0	19.85
BAND30	10MHz	64QAM	27710	25RB#12	19.87
BAND30	10MHz	64QAM	27710	25RB#25	19.71
BAND30	10MHz	64QAM	27710	50RB#0	19.98



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#### 1.2. EIRP Density Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power Density (dBm/MHz)	EIRP Density (dBm/MHz)	Limit (dBm/MHz)	Result
BAND30	5MHz	QPSK	27685	1RB#0	21.36	22.36	24	Pass
BAND30	5MHz	QPSK	27710	1RB#0	21.42	22.42	24	Pass
BAND30	5MHz	QPSK	27735	1RB#0	21.36	22.36	24	Pass
BAND30	5MHz	16QAM	27685	1RB#0	20.35	21.35	24	Pass
BAND30	5MHz	16QAM	27710	1RB#0	20.44	21.44	24	Pass
BAND30	5MHz	16QAM	27735	1RB#0	20.35	21.35	24	Pass
BAND30	5MHz	64QAM	27685	1RB#0	19.36	20.36	24	Pass
BAND30	5MHz	64QAM	27710	1RB#0	19.42	20.42	24	Pass
BAND30	5MHz	64QAM	27735	1RB#0	19.38	20.38	24	Pass
BAND30	10MHz	QPSK	27710	1RB#0	22.87	23.87	24	Pass
BAND30	10MHz	16QAM	27710	1RB#0	21.98	22.98	24	Pass
BAND30	10MHz	64QAM	27710	1RB#0	21.28	22.28	24	Pass

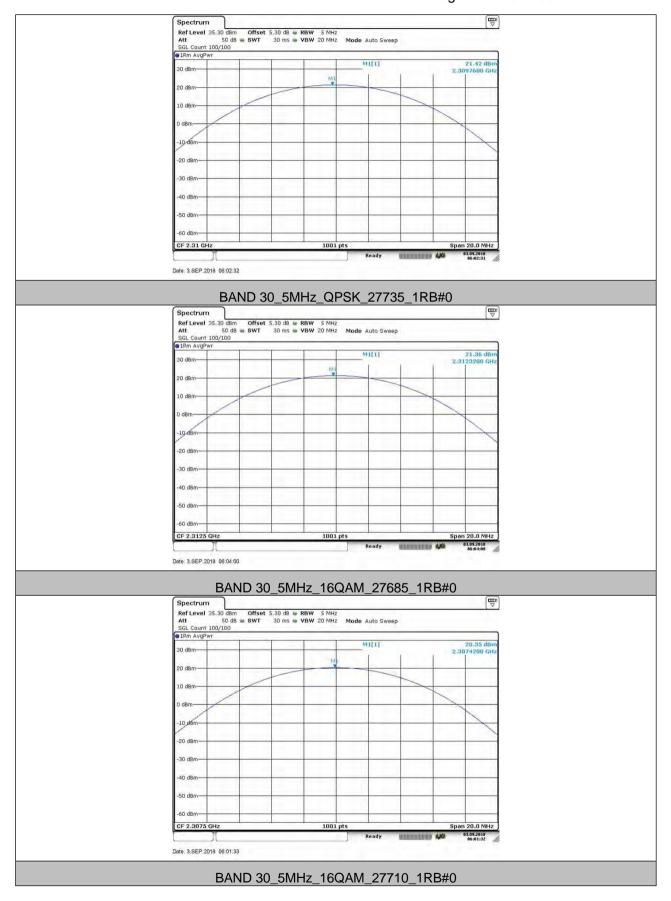
#### 1.2.1. Test Plots





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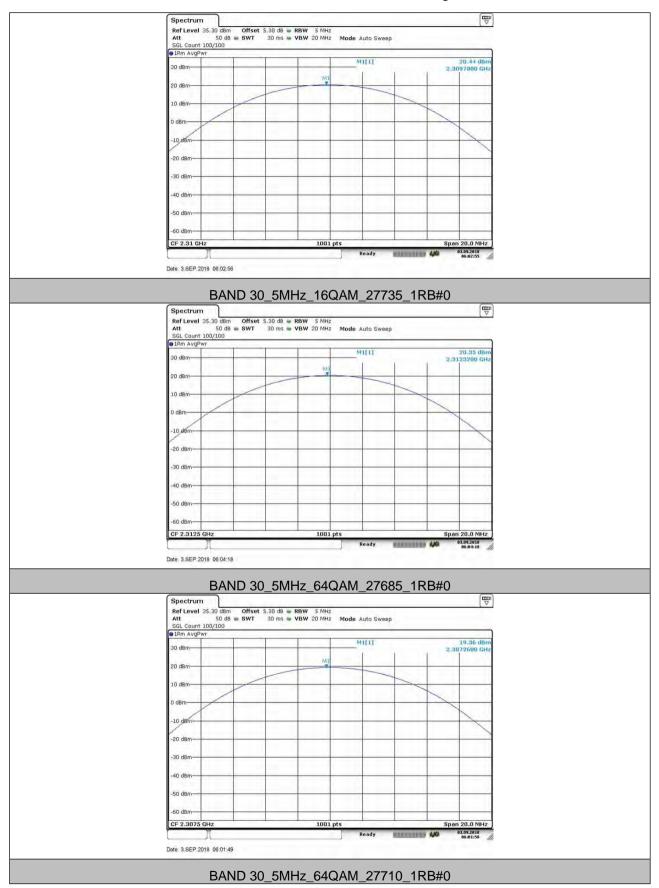
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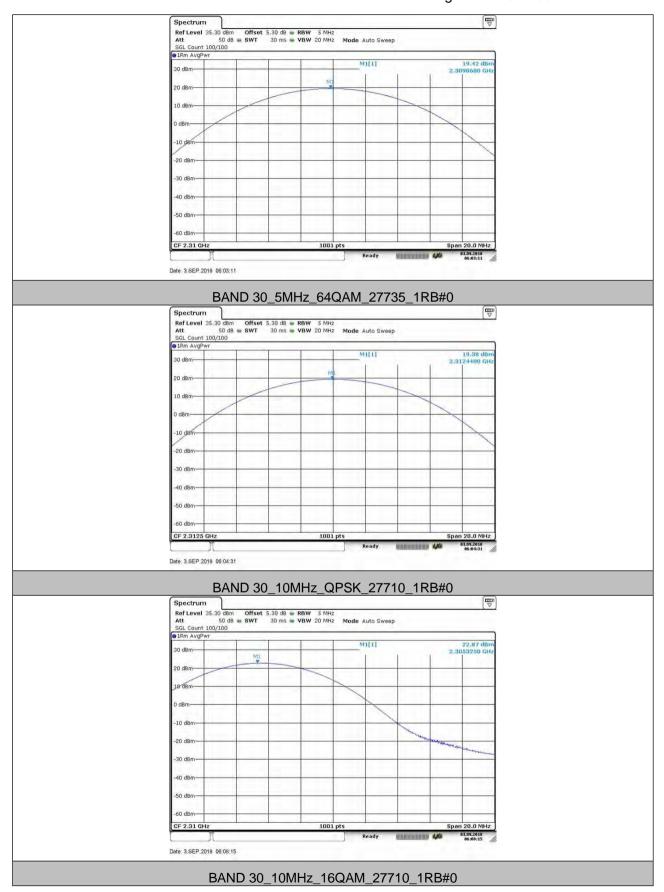


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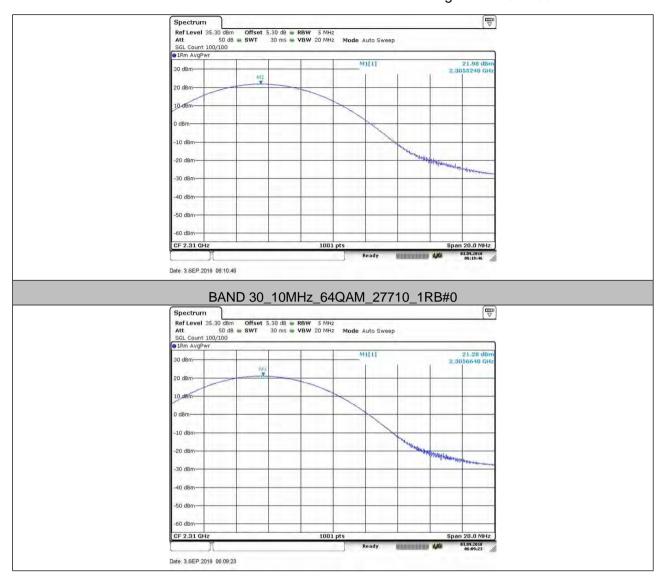


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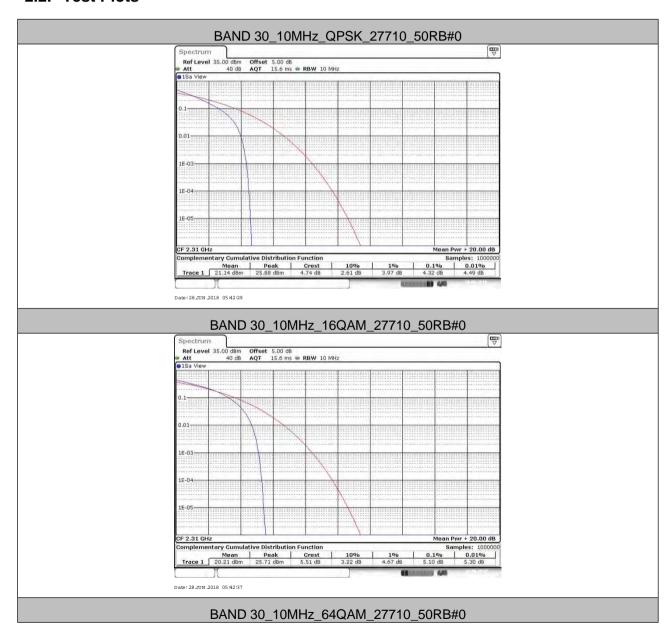
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#### 2 Peak-to-Average Ratio

#### 2.1. Test Result

BAND	Bandwidth	dth Modulation Cha		Channel RB Configuration		Limit(dB)	Verdict
		QPSK	27710	50RB#0	4.32	13	PASS
BAND 30	10MHz	16QAM	27710	50RB#0	5.10	13	PASS
		64QAM	27710	50RB#0	5.68	13	PASS

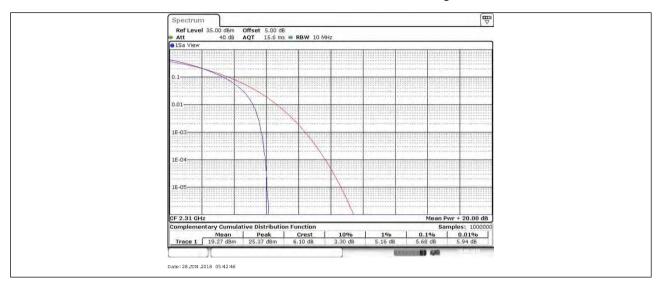
#### 2.2. Test Plots





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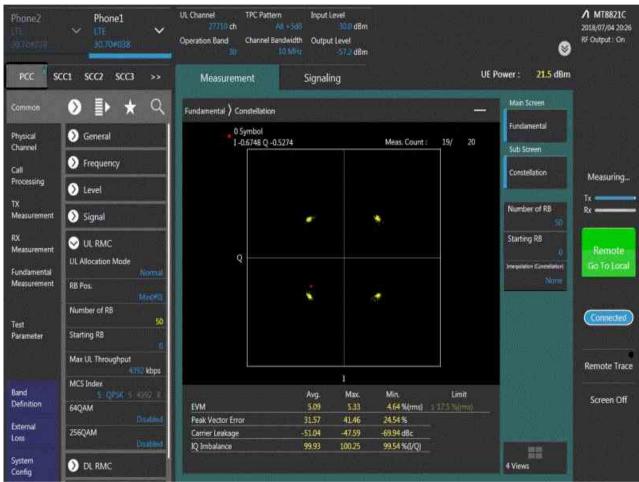
#### 3 Modulation Characteristics

#### 3.1 For LTE

#### 3.1.1 Test BAND = LTE BAND30

#### 3.1.1.1 Test Mode = LTE /TM1 10MHz

3.1.1.1.1 Test Channel = MCH



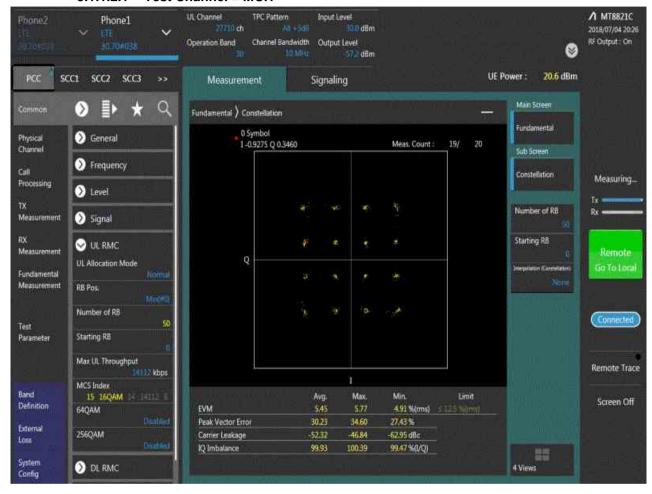


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#### 3.1.1.2 Test Mode = LTE /TM2 10MHz

#### 3.1.1.2.1 Test Channel = MCH



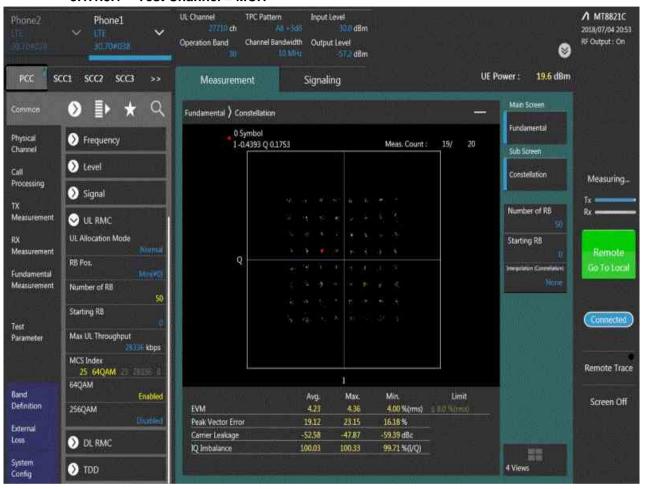


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#### 3.1.1.3 Test Mode = LTE /TM3 10MHz

#### 3.1.1.3.1 Test Channel = MCH





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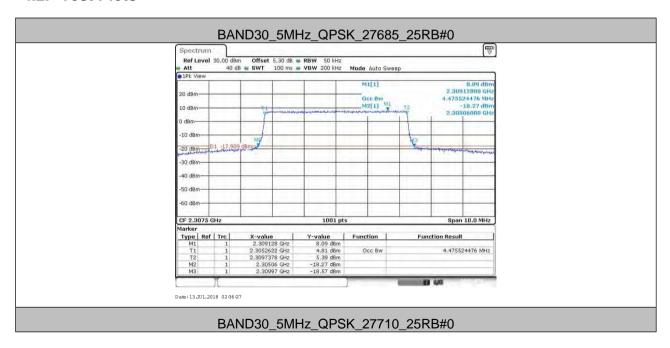
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#### 4 26dB Bandwidth and Occupied Bandwidth

#### 4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict					
			27685	25RB#0	4.476	4.910	PASS					
		QPSK	27710	25RB#0	4.456	4.900	PASS					
	5MHz		27735	25RB#0	4.466	4.860	PASS					
		5MHz 64QAM	27685	25RB#0	4.476	5.090	PASS					
			27710	25RB#0	4.466	4.890	PASS					
BAND30			27735	25RB#0	4.456	4.880	PASS					
DANDSU			27685	25RB#0	4.476	5.070	PASS					
								16QAM	27710	25RB#0	4.476	4.930
			27735	25RB#0	4.466	4.920	PASS					
		QPSK	27710	50RB#0	8.931	10.380	PASS					
	10MHz	10MHz 64QAM	27710	50RB#0	8.951	10.300	PASS					
		16QAM	27710	50RB#0	8.951	10.600	PASS					

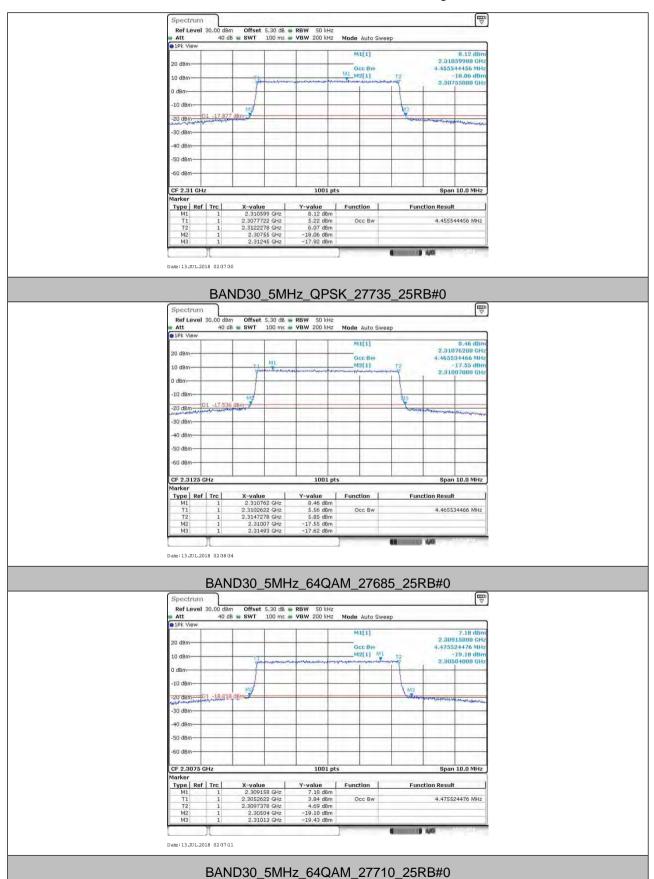
#### 4.2. Test Plots





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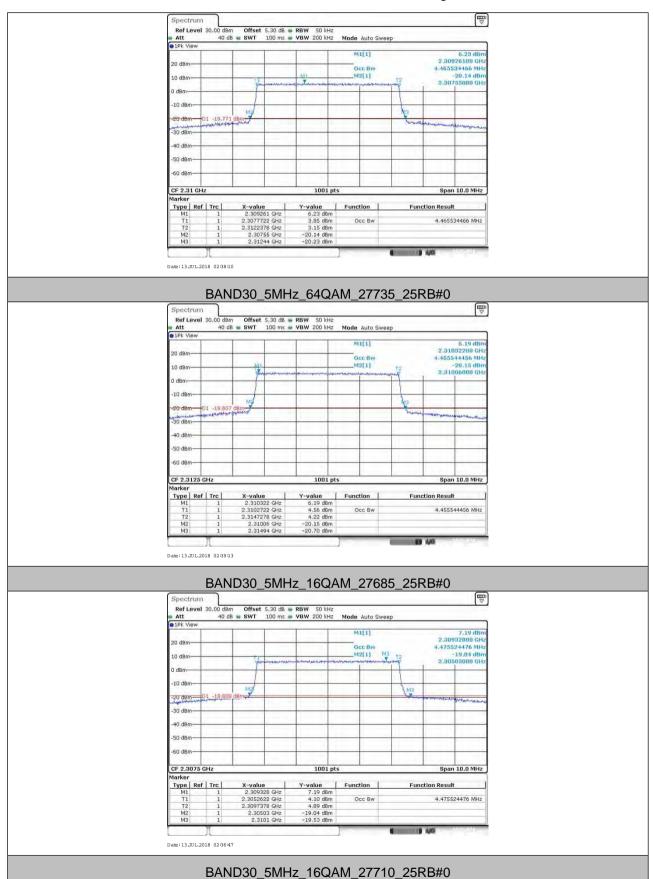
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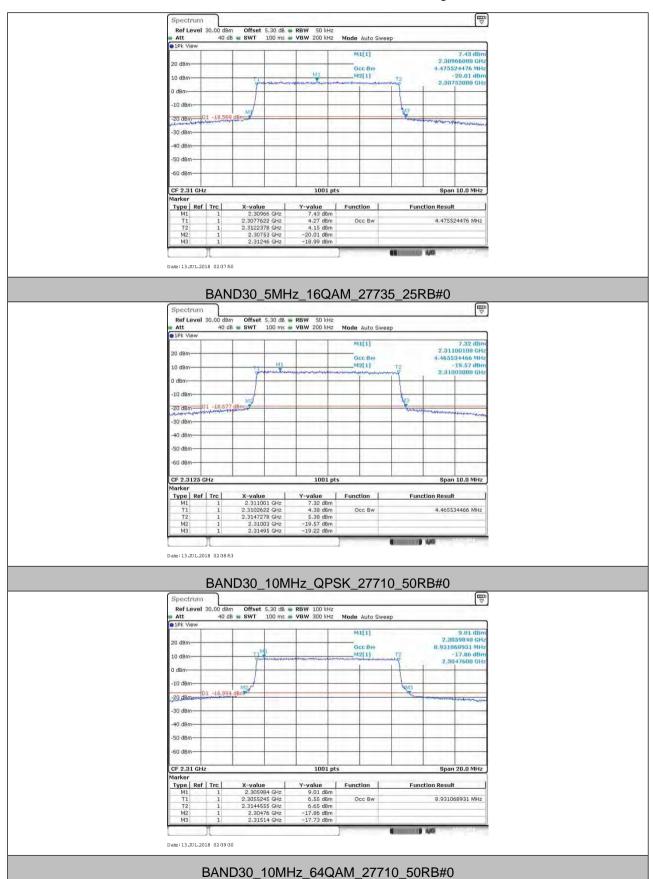
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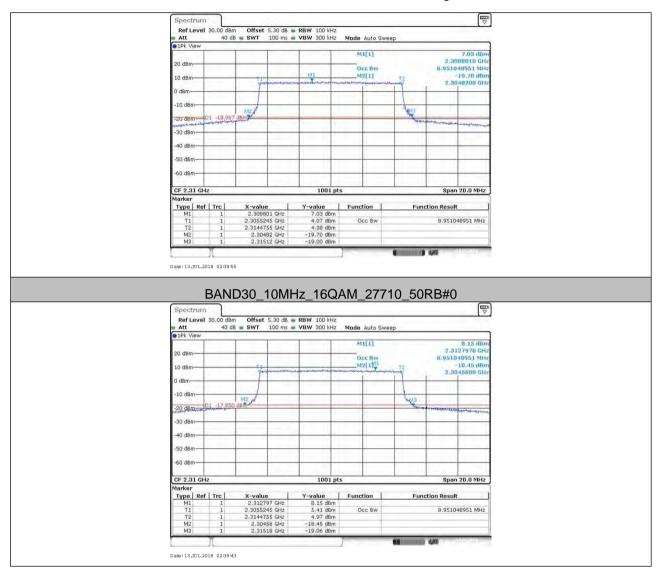
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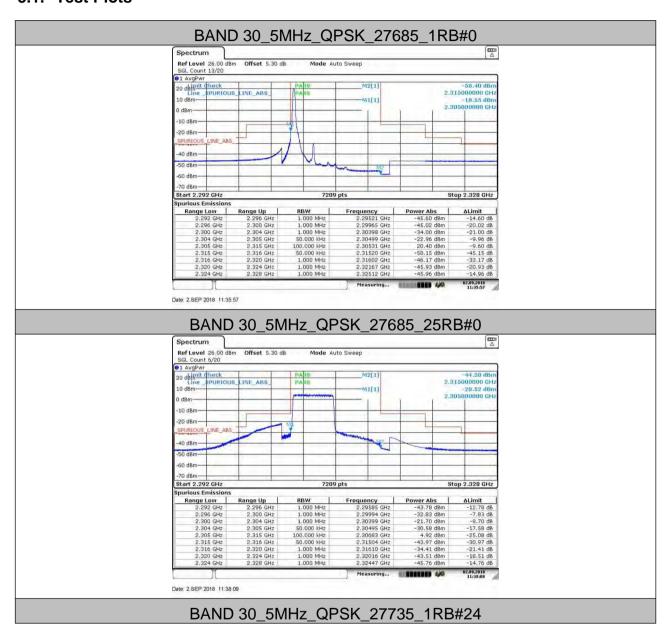


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#### 5 Band Edges Compliance

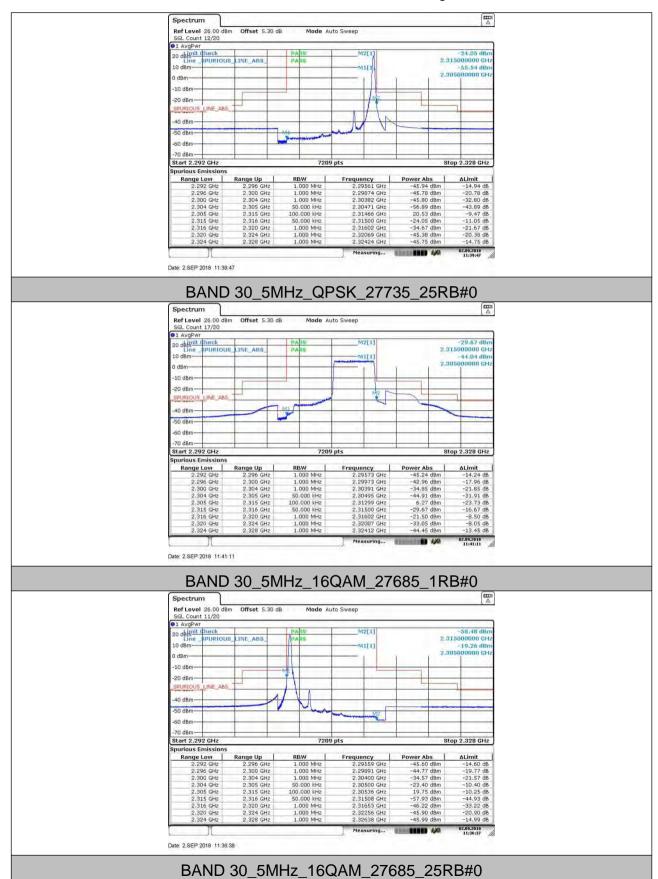
#### 5.1. Test Plots





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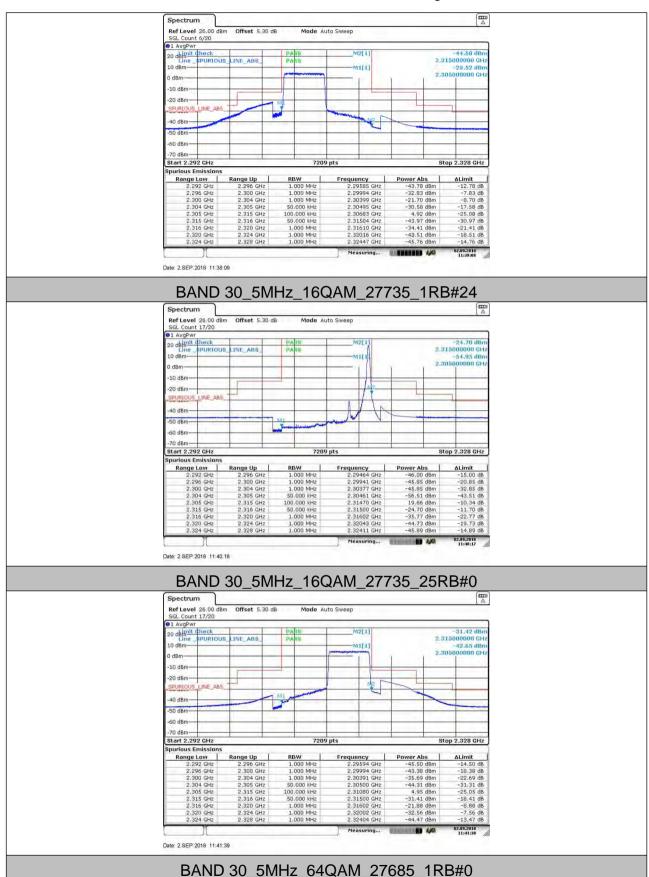
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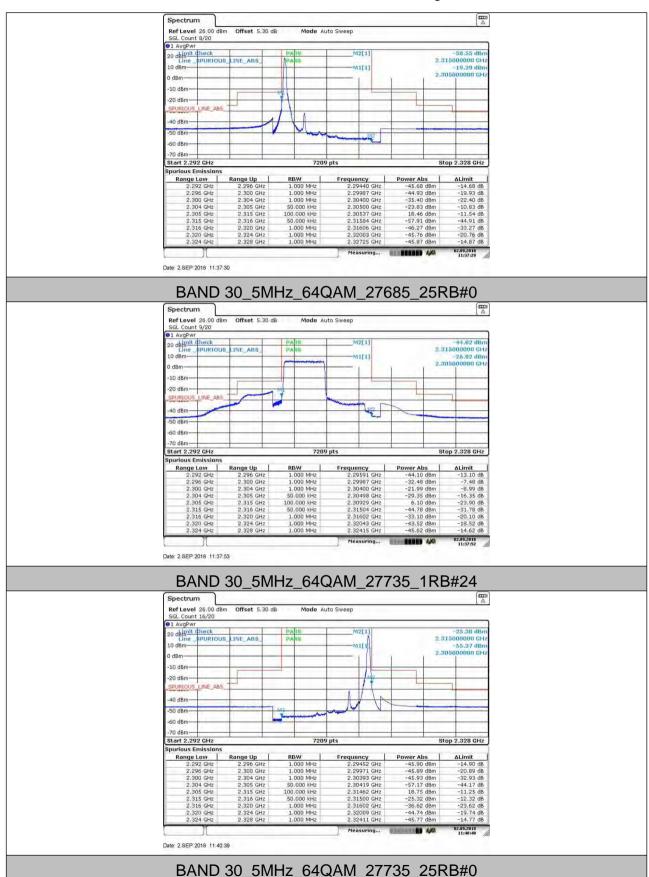
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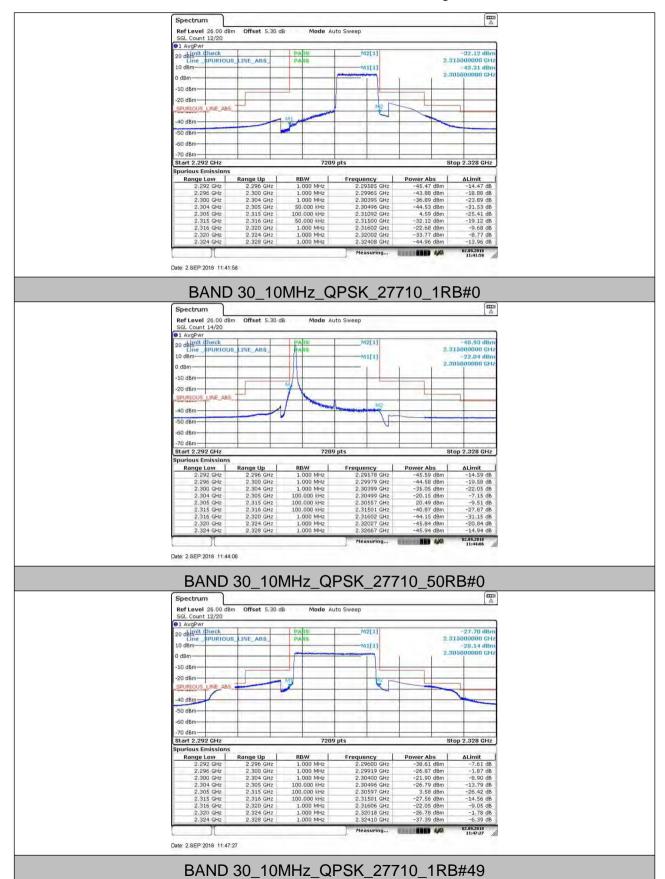
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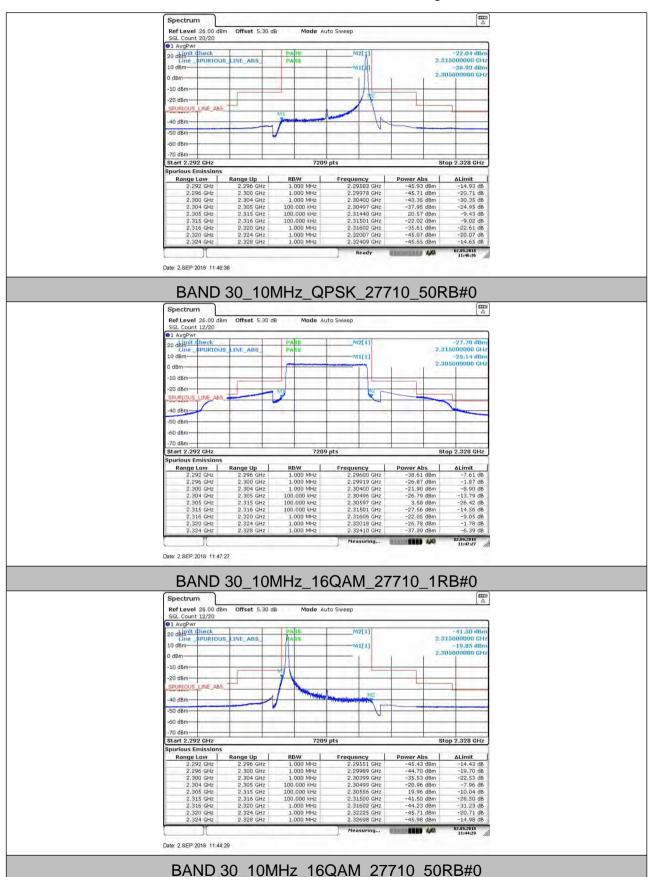
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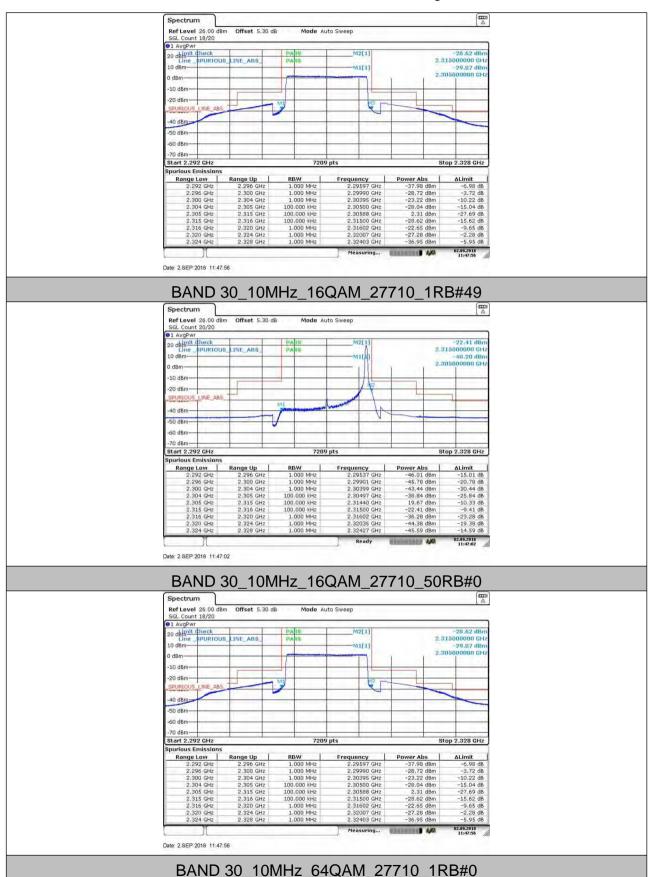
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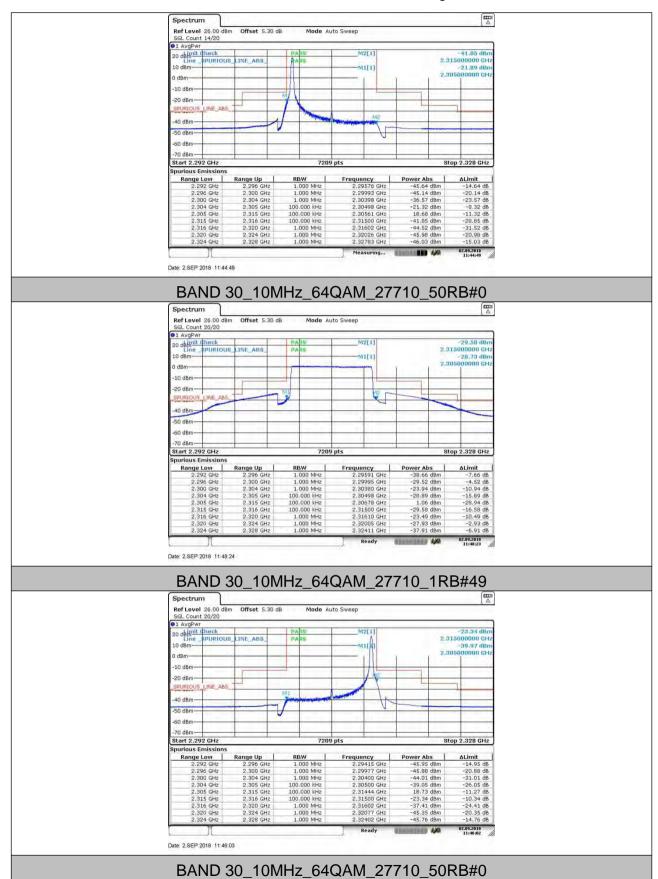
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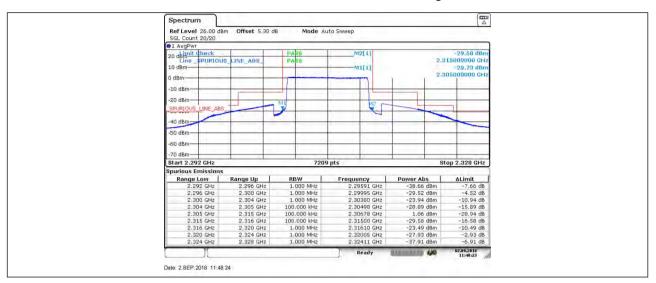
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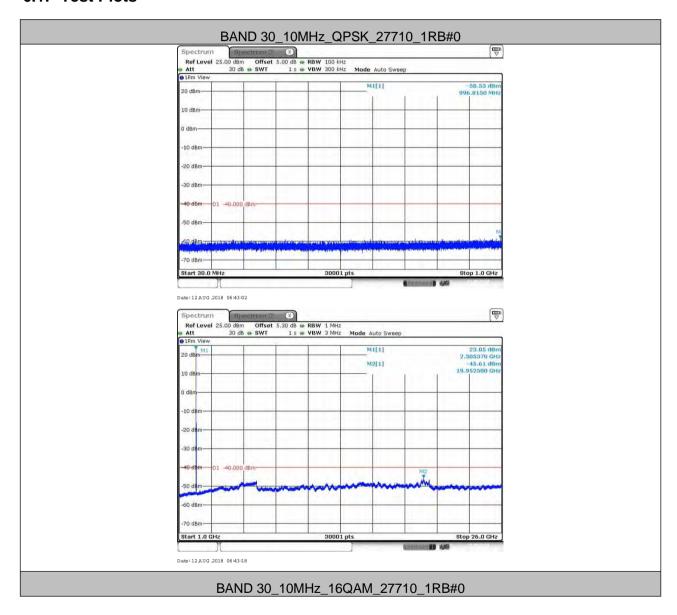
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#### 6 Spurious Emission at Antenna Terminal

NOTE1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k \* (Span / RBW)" with k = 4 \* (Span / RBW) with k = 4 \* (Span / RBW).

NOTE2: only the worst case data displayed in this report.

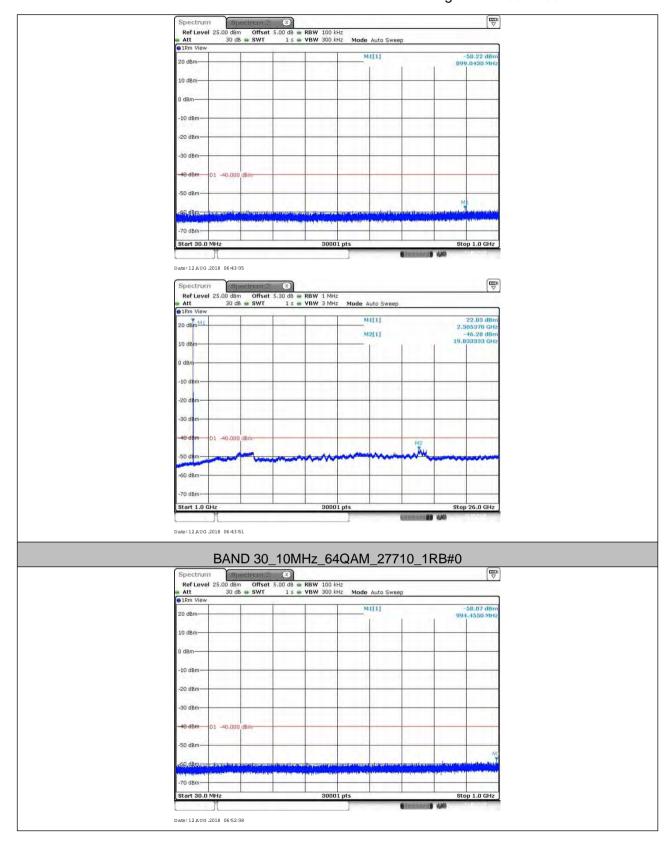
#### 6.1. Test Plots





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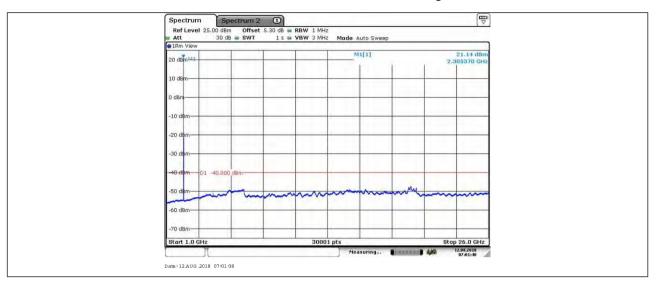
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#### 7 Field Strength of Spurious Radiation

#### 7.1 For LTE

#### 7.1.1 Test BAND = LTE BAND 30

#### 7.1.1.1 Test Mode =LTE/TM1 10MHz RB1#0

7.1.1.1.1 Test Channel = MCH

7.11.11.11	10010110111101			
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.350000	-81.52	-40.00	41.52	Vertical
104.250000	-61.74	-40.00	21.74	Vertical
2826.500000	-53.31	-40.00	13.31	Vertical
4205.750000	-67.22	-40.00	27.22	Vertical
6039.400000	-65.22	-40.00	25.22	Vertical
8639.725000	-63.71	-40.00	23.71	Vertical
63.200000	-77.64	-40.00	37.64	Horizontal
104.300000	-72.54	-40.00	32.54	Horizontal
2826.500000	-48.05	-40.00	8.05	Horizontal
4269.775000	-67.23	-40.00	27.23	Horizontal
6489.850000	-65.16	-40.00	25.16	Horizontal
9245.850000	-63.68	-40.00	23.68	Horizontal

#### NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



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#### 8 Frequency Stability

#### 8.1 Frequency Vs Voltage

					Voltage					
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
				50RB#0	VH	NT	6.40	0.002771	±2.5	PASS
	10MHz	QPSK	27710	50RB#0	VL	NT	3.00	0.001299	±2.5	PASS
				50RB#0	VN	NT	6.30	0.002727	±2.5	PASS
		Hz 16QAM	AM 27710	50RB#0	VH	NT	5.70	0.002468	±2.5	PASS
BAND30				50RB#0	VL	NT	3.80	0.001645	±2.5	PASS
				50RB#0	VN	NT	7.70	0.003333	±2.5	PASS
			QAM 27710	50RB#0	VH	NT	3.40	0.001472	±2.5	PASS
		64QAM		50RB#0	VL	NT	4.60	0.001991	±2.5	PASS
				50RB#0	VN	NT	4.40	0.001905	±2.5	PASS

#### 8.2 Frequency Vs Temperature

	Temperature											
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict		
				50RB#0	NV	0	5.30	0.002294	±2.5	PASS		
				50RB#0	NV	10	5.50	0.002381	±2.5	PASS		
		QPSK	27710	50RB#0	NV	20	3.50	0.001515	±2.5	PASS		
				50RB#0	NV	-20	5.30	0.002294	±2.5	PASS		
	10MHz			50RB#0	NV	-30	3.70	0.001602	±2.5	PASS		
		16QAM	27710	50RB#0	NV	0	7.90	0.003420	±2.5	PASS		
				50RB#0	NV	10	4.40	0.001905	±2.5	PASS		
BAND30				50RB#0	NV	20	3.00	0.001299	±2.5	PASS		
				50RB#0	NV	-20	5.30	0.002294	±2.5	PASS		
				50RB#0	NV	-30	5.00	0.002165	±2.5	PASS		
				50RB#0	NV	0	4.70	0.002035	±2.5	PASS		
			27710	50RB#0	NV	10	4.20	0.001818	±2.5	PASS		
		64QAM		50RB#0	NV	20	2.80	0.001212	±2.5	PASS		
				50RB#0	NV	-20	4.50	0.001948	±2.5	PASS		
				50RB#0	NV	-30	5.60	0.002424	±2.5	PASS		

The End