1 of 37 Page:

Appendix B

E-UTRA Band 17



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Page: 2 of 37

CONTENT

1.	EFF	FECTIVE (ISOTROPIC) RADIATED POWER	3
	1.1.	TEST RESULT	3
2.	PE/	AK-TO-AVERAGE RATIO (CCDF)	6
	2.1.	Test Result	6
	2.2.	TEST PLOTS	6
3.	МС	ODULATION CHARACTERISTICS	10
	3.1.	TEST BAND = LTE BAND 17	10
	3.2.	TEST MODE = LTE /TM1 10MHz	10
	3.2.1.	TEST CHANNEL = MCH	10
	3.3.	TEST MODE = LTE /TM2 10MHz	11
	3.3.1.	TEST CHANNEL = MCH	11
4.	260	DB BANDWIDTH AND OCCUPIED BANDWIDTH	12
	4.1.	TEST RESULT	12
	4.2.	TEST PLOTS	12
5.	BA	ND EDGE COMPLIANCE	19
	5.1.	TEST PLOTS	19
6.	SPU	URIOUS EMISSION AT ANTENNA TERMINAL	27
	6.1.	TEST PLOTS	27
7.	FIE	ELD STRENGTH OF SPURIOUS RADIATION	33
	7.1.	TEST BAND = LTE BAND 17	33
	7.1.1.	TEST MODE =LTE/TM1 10MHz	33
	7.1.1.2	1. Test Channel = LCH	33
	7.1.1.2	2. Test Channel = MCH	33
	7.1.1.3	3. TEST CHANNEL = HCH	34
8.	FRE	EQUENCY STABILITY	35
	8.1.	Frequency Vs Voltage	35
	8.2.	Frequency Vs Temperature	35



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Page: 3 of 37

1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band17	5MHz	QPSK	23755	1RB#0	23.97	17.92	34.77	PASS
Band17	5MHz	QPSK	23755	1RB#12	24.13	18.08	34.77	PASS
Band17	5MHz	QPSK	23755	1RB#24	23.83	17.78	34.77	PASS
Band17	5MHz	QPSK	23755	12RB#0	23.05	17.00	34.77	PASS
Band17	5MHz	5MHz QPSK		12RB#6	23.08	17.03	34.77	PASS
Band17	5MHz	QPSK	23755	12RB#13	23.07	17.02	34.77	PASS
Band17	5MHz	QPSK	23755	25RB#0	23.11	17.06	34.77	PASS
Band17	5MHz	QPSK	23790	1RB#0	23.89	17.84	34.77	PASS
Band17	5MHz	QPSK	23790	1RB#12	24.17	18.12	34.77	PASS
Band17	5MHz	QPSK	23790	1RB#24	23.85	17.80	34.77	PASS
Band17	5MHz	QPSK	23790	12RB#0	22.95	16.90	34.77	PASS
Band17	5MHz	QPSK	23790	12RB#6	23.01	16.96	34.77	PASS
Band17	5MHz	QPSK	23790	12RB#13	22.94	16.89	34.77	PASS
Band17	5MHz	QPSK	23790	25RB#0	23.02	16.97	34.77	PASS
Band17	5MHz	QPSK	23825	1RB#0	23.89	17.84	34.77	PASS
Band17	5MHz	QPSK	23825	1RB#12	24.07	18.02	34.77	PASS
Band17	5MHz	QPSK	23825	1RB#24	23.78	17.73	34.77	PASS
Band17	5MHz	QPSK	23825	12RB#0	23.05	17.00	34.77	PASS
Band17	5MHz	QPSK	23825	12RB#6	23.01	16.96	34.77	PASS
Band17	5MHz	QPSK	23825	12RB#13	22.88	16.83	34.77	PASS
Band17	5MHz	QPSK	23825	25RB#0	23.05	17.00	34.77	PASS
Band17	5MHz	16QAM	23755	1RB#0	23.05	17.00	34.77	PASS
Band17	5MHz	16QAM	23755	1RB#12	23.33	17.28	34.77	PASS
Band17	5MHz	16QAM	23755	1RB#24	22.98	16.93	34.77	PASS
Band17	5MHz	16QAM	23755	12RB#0	22.04	15.99	34.77	PASS
Band17	5MHz	16QAM	23755	12RB#6	22.05	16.00	34.77	PASS
Band17	5MHz	16QAM	23755	12RB#13	22.04	15.99	34.77	PASS
Band17	5MHz	16QAM	23755	25RB#0	22.01	15.96	34.77	PASS
Band17	5MHz	16QAM	23790	1RB#0	22.99	16.94	34.77	PASS
Band17	5MHz	16QAM	23790	1RB#12	23.15	17.10	34.77	PASS
Band17	5MHz	16QAM	23790	1RB#24	22.94	16.89	34.77	PASS
Band17	5MHz	16QAM	23790	12RB#0	21.90	15.85	34.77	PASS



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Report No.: ZR/2019/6002601

Page: 4 of 37

				1000.00				
Band17	5MHz	16QAM	23790	12RB#6	21.95	15.90	34.77	PASS
Band17	5MHz	16QAM	23790	12RB#13	21.90	15.85	34.77	PASS
Band17	5MHz	16QAM	23790	25RB#0	21.94	15.89	34.77	PASS
Band17	5MHz	16QAM	23825	1RB#0	22.98	16.93	34.77	PASS
Band17	5MHz	16QAM	23825	1RB#12	23.16	17.11	34.77	PASS
Band17	5MHz	16QAM	23825	1RB#24	22.86	16.81	34.77	PASS
Band17	5MHz	16QAM	23825	12RB#0	22.02	15.97	34.77	PASS
Band17	5MHz	16QAM	23825	12RB#6	21.98	15.93	34.77	PASS
Band17	5MHz	16QAM	23825	12RB#13	21.83	15.78	34.77	PASS
Band17	5MHz	16QAM	23825	25RB#0	21.94	15.89	34.77	PASS
Band17	10MHz	QPSK	23780	1RB#0	24.04	17.99	34.77	PASS
Band17	10MHz	QPSK	23780	1RB#24	24.08	18.03	34.77	PASS
Band17	10MHz	QPSK	23780	1RB#49	23.86	17.81	34.77	PASS
Band17	10MHz	QPSK	23780	25RB#0	23.03	16.98	34.77	PASS
Band17	10MHz	QPSK	23780	25RB#12	23.08	17.03	34.77	PASS
Band17	10MHz	QPSK	23780	25RB#25	23.04	16.99	34.77	PASS
Band17	10MHz	QPSK	23780	50RB#0	23.02	16.97	34.77	PASS
Band17	10MHz	QPSK	23790	1RB#0	24.02	17.97	34.77	PASS
Band17	10MHz	QPSK	23790	1RB#24	24.08	18.03	34.77	PASS
Band17	10MHz	QPSK	23790	1RB#49	23.88	17.83	34.77	PASS
Band17	10MHz	QPSK	23790	25RB#0	23.00	16.95	34.77	PASS
Band17	10MHz	QPSK	23790	25RB#12	23.06	17.01	34.77	PASS
Band17	10MHz	QPSK	23790	25RB#25	22.94	16.89	34.77	PASS
Band17	10MHz	QPSK	23790	50RB#0	22.98	16.93	34.77	PASS
Band17	10MHz	QPSK	23800	1RB#0	24.00	17.95	34.77	PASS
Band17	10MHz	QPSK	23800	1RB#24	24.03	17.98	34.77	PASS
Band17	10MHz	QPSK	23800	1RB#49	23.85	17.80	34.77	PASS
Band17	10MHz	QPSK	23800	25RB#0	22.98	16.93	34.77	PASS
Band17	10MHz	QPSK	23800	25RB#12	23.06	17.01	34.77	PASS
Band17	10MHz	QPSK	23800	25RB#25	22.89	16.84	34.77	PASS
Band17	10MHz	QPSK	23800	50RB#0	22.96	16.91	34.77	PASS
Band17	10MHz	16QAM	23780	1RB#0	23.11	17.06	34.77	PASS
Band17	10MHz	16QAM	23780	1RB#24	23.17	17.12	34.77	PASS
Band17	10MHz	16QAM	23780	1RB#49	22.88	16.83	34.77	PASS
Band17	10MHz	16QAM	23780	25RB#0	21.97	15.92	34.77	PASS
Band17	10MHz	16QAM	23780	25RB#12	21.97	15.92	34.77	PASS
Band17	10MHz	16QAM	23780	25RB#25	21.91	15.86	34.77	PASS
Band17	10MHz	16QAM	23780	50RB#0	21.93	15.88	34.77	PASS



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Report No.: ZR/2019/6002601

Page: 5 of 37

Band17	10MHz	16QAM	23790	1RB#0	23.05	17.00	34.77	PASS
Band17	10MHz	16QAM	23790	1RB#24	23.07	17.02	34.77	PASS
Band17	10MHz	16QAM	23790	1RB#49	22.86	16.81	34.77	PASS
Band17	10MHz	16QAM	23790	25RB#0	21.90	15.85	34.77	PASS
Band17	10MHz	16QAM	23790	25RB#12	21.95	15.90	34.77	PASS
Band17	10MHz	16QAM	23790	25RB#25	21.83	15.78	34.77	PASS
Band17	10MHz	16QAM	23790	50RB#0	21.85	15.80	34.77	PASS
Band17	10MHz	16QAM	23800	1RB#0	23.13	17.08	34.77	PASS
Band17	10MHz	16QAM	23800	1RB#24	23.12	17.07	34.77	PASS
Band17	10MHz	16QAM	23800	1RB#49	22.87	16.82	34.77	PASS
Band17	10MHz	16QAM	23800	25RB#0	21.86	15.81	34.77	PASS
Band17	10MHz	16QAM	23800	25RB#12	21.94	15.89	34.77	PASS
Band17	10MHz	16QAM	23800	25RB#25	21.76	15.71	34.77	PASS
Band17	10MHz	16QAM	23800	50RB#0	21.85	15.80	34.77	PASS

Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power), the following formula should be taken to calculate it,

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



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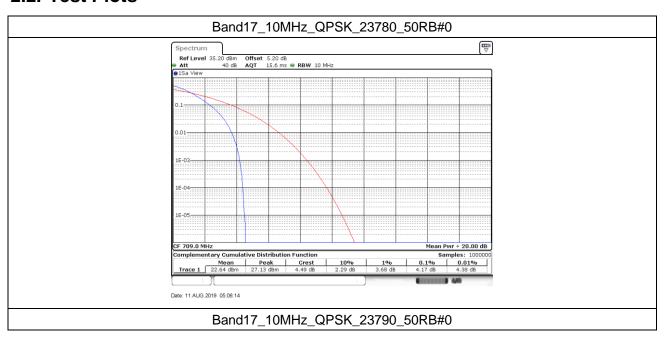
Page: 6 of 37

2. Peak-to-Average Ratio (CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band17	10MHz	QPSK	23780	50RB#0	4.17	13	PASS
Band17	10MHz	QPSK	23790	50RB#0	4.20	13	PASS
Band17	10MHz	QPSK	23800	50RB#0	4.17	13	PASS
Band17	10MHz	16QAM	23780	50RB#0	5.19	13	PASS
Band17	10MHz	16QAM	23790	50RB#0	5.22	13	PASS
Band17	10MHz	16QAM	23800	50RB#0	5.19	13	PASS

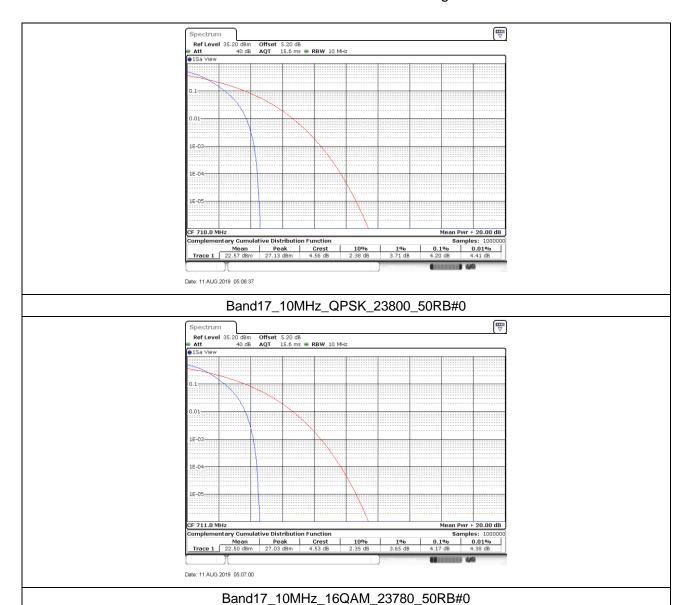
2.2. Test Plots





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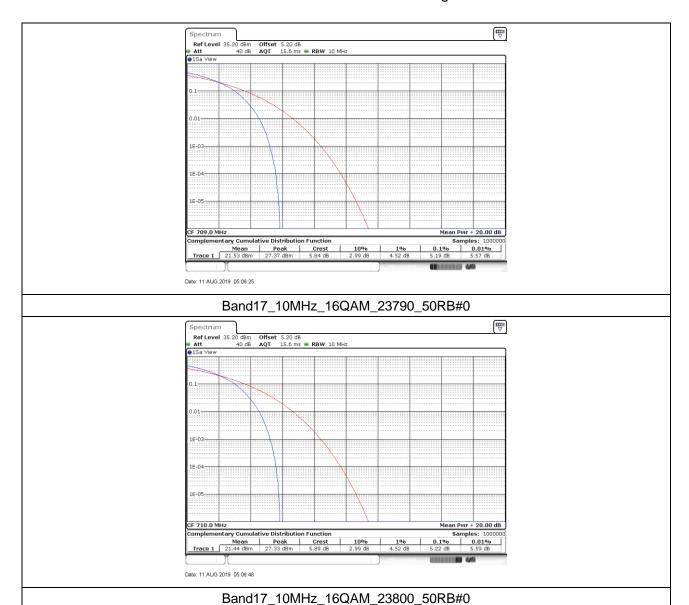
Page: 7 of 37





Report No.: ZR/2019/6002601

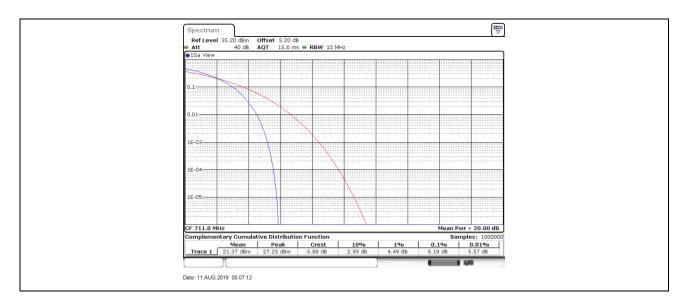
Page: 8 of 37





Report No.: ZR/2019/6002601

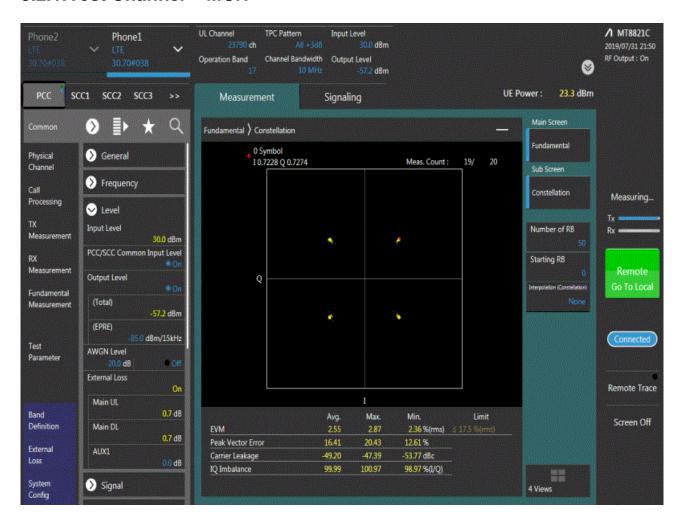
Page: 9 of 37



Page: 10 of 37

3. Modulation Characteristics

- 3.1. Test BAND = LTE Band 17
- 3.2. Test Mode = LTE /TM1 10MHz
- 3.2.1.Test Channel = MCH

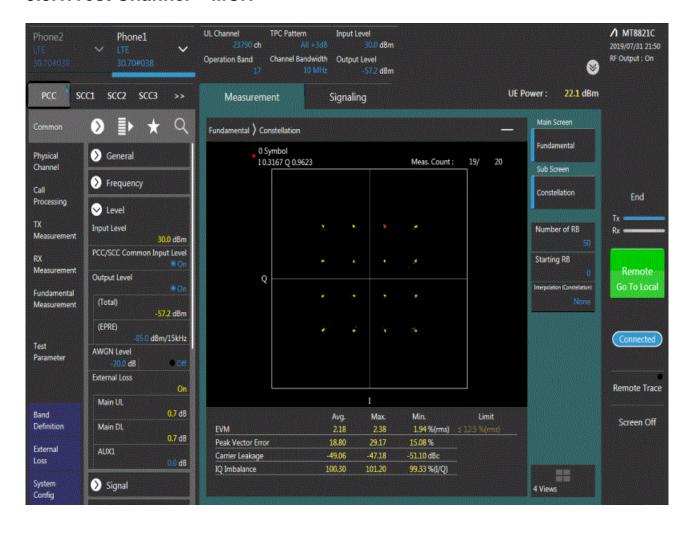




Page: 11 of 37

3.3. Test Mode = LTE /TM2 10MHz

3.3.1.Test Channel = MCH





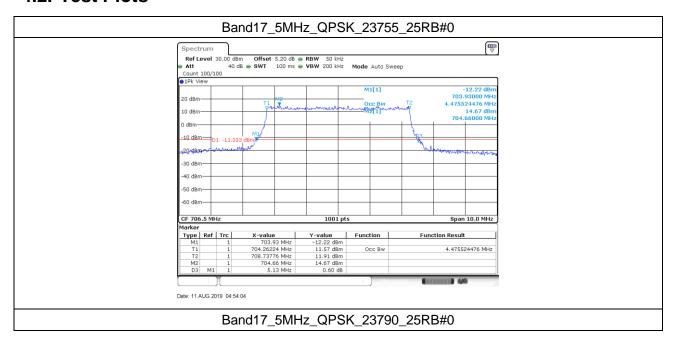
Page: 12 of 37

4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	4.476	5.130	PASS
Band17	5MHz	QPSK	23790	25RB#0	4.476	5.060	PASS
Band17	5MHz	QPSK	23825	25RB#0	4.476	5.070	PASS
Band17	5MHz	16QAM	23755	25RB#0	4.496	5.110	PASS
Band17	5MHz	16QAM	23790	25RB#0	4.496	5.080	PASS
Band17	5MHz	16QAM	23825	25RB#0	4.496	5.050	PASS
Band17	10MHz	QPSK	23780	50RB#0	8.951	10.040	PASS
Band17	10MHz	QPSK	23790	50RB#0	8.931	9.920	PASS
Band17	10MHz	QPSK	23800	50RB#0	8.931	9.820	PASS
Band17	10MHz	16QAM	23780	50RB#0	8.971	9.940	PASS
Band17	10MHz	16QAM	23790	50RB#0	8.951	9.900	PASS
Band17	10MHz	16QAM	23800	50RB#0	8.931	9.800	PASS

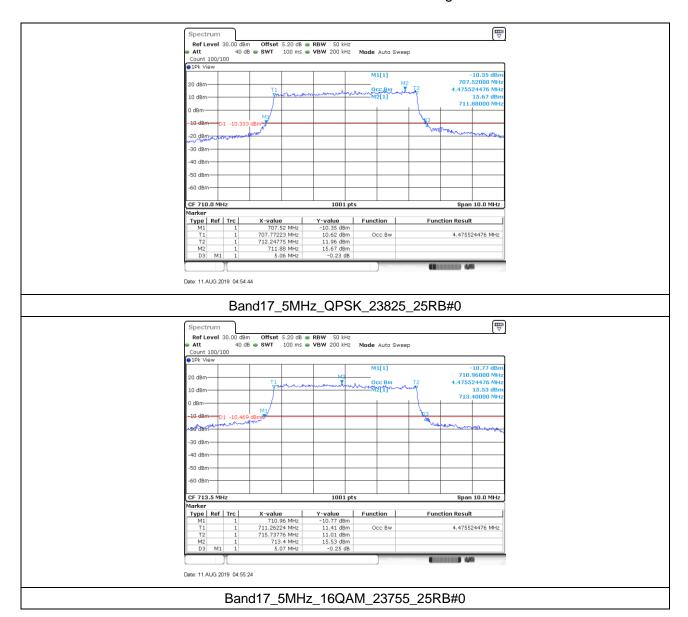
4.2. Test Plots





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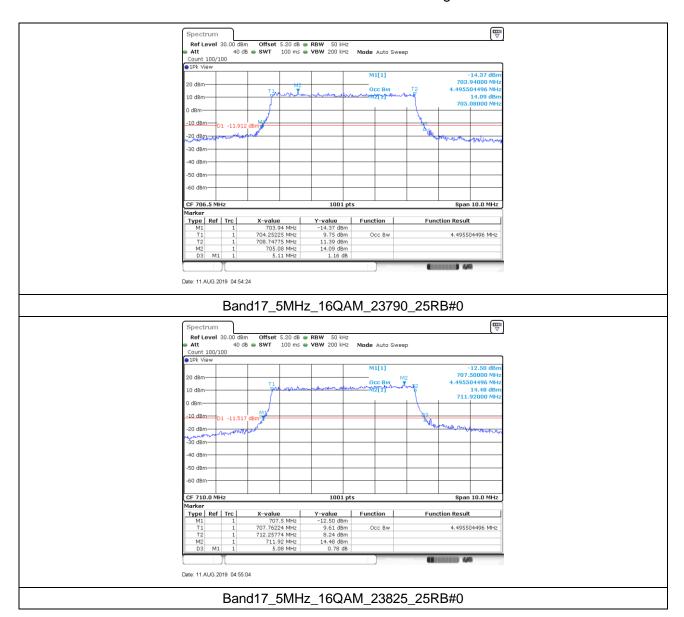
Page: 13 of 37





Report No.: ZR/2019/6002601

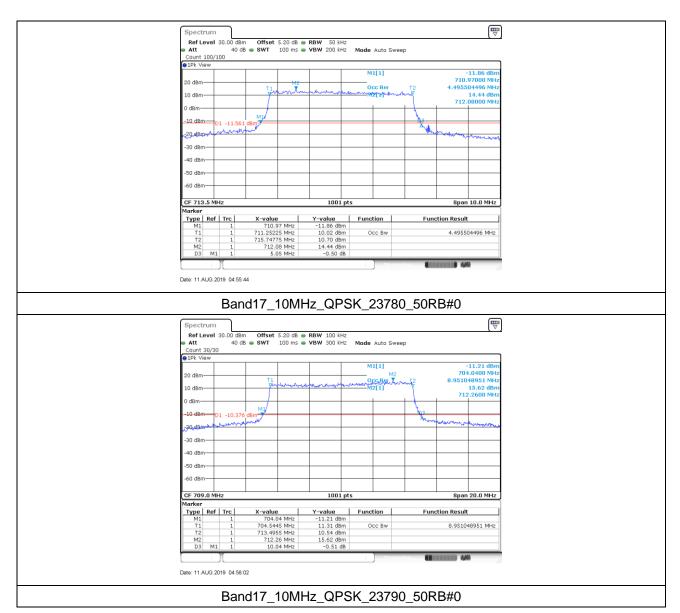
Page: 14 of 37





Report No.: ZR/2019/6002601

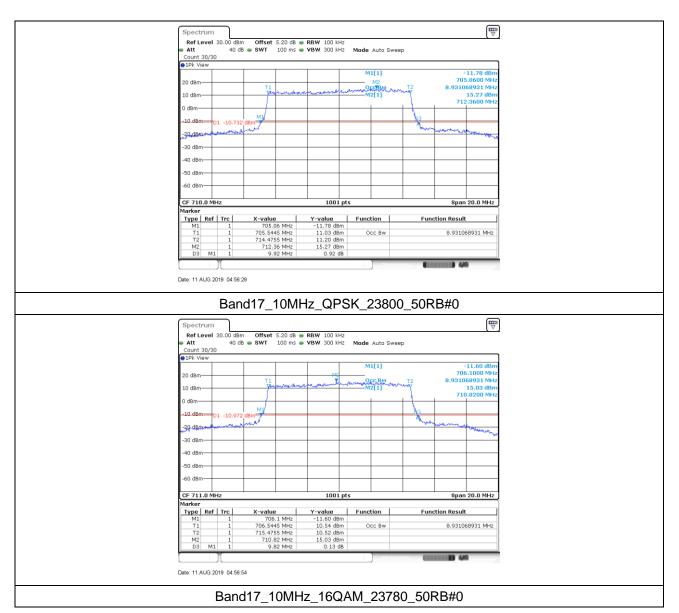
Page: 15 of 37





Report No.: ZR/2019/6002601

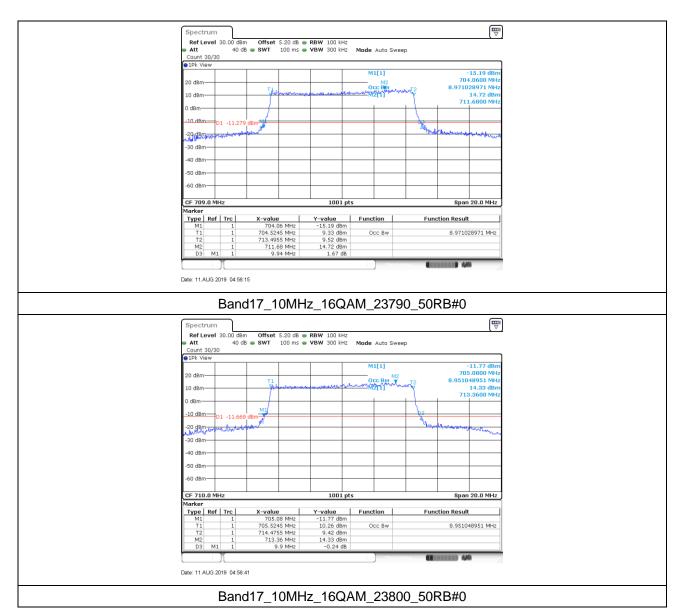
Page: 16 of 37





Report No.: ZR/2019/6002601

Page: 17 of 37

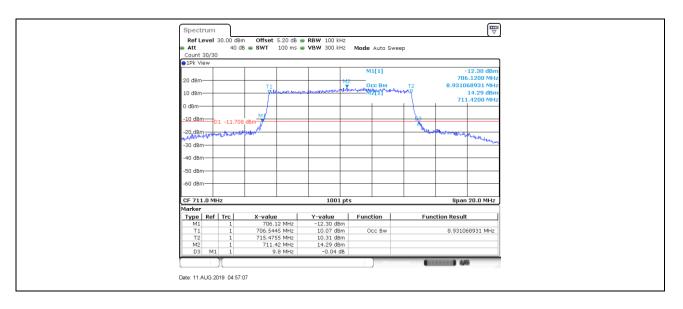






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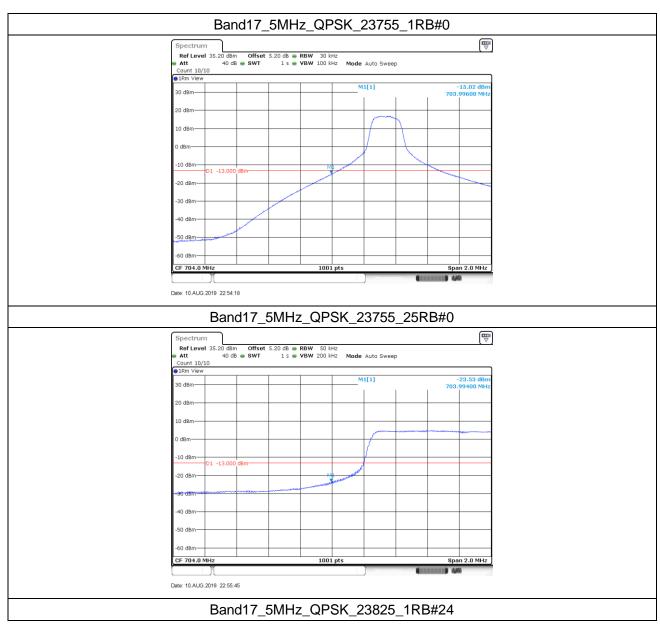
Page: 18 of 37



Page: 19 of 37

5. Band Edge Compliance

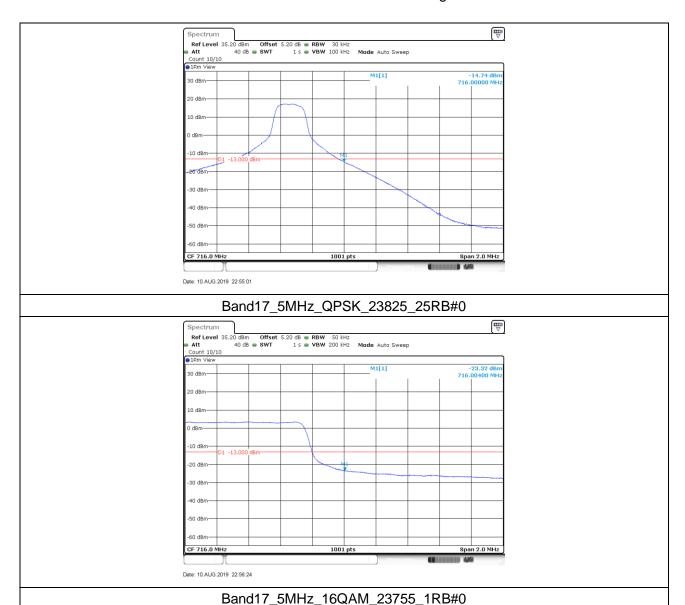
5.1. Test Plots





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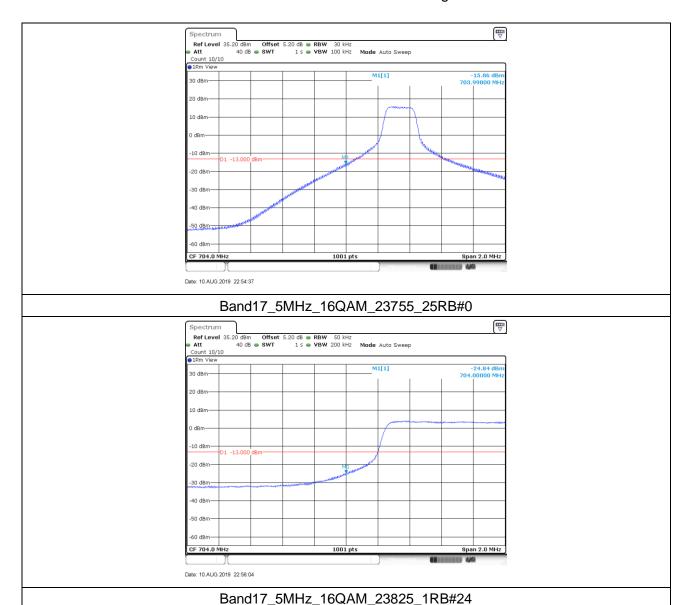
Page: 20 of 37





Report No.: ZR/2019/6002601

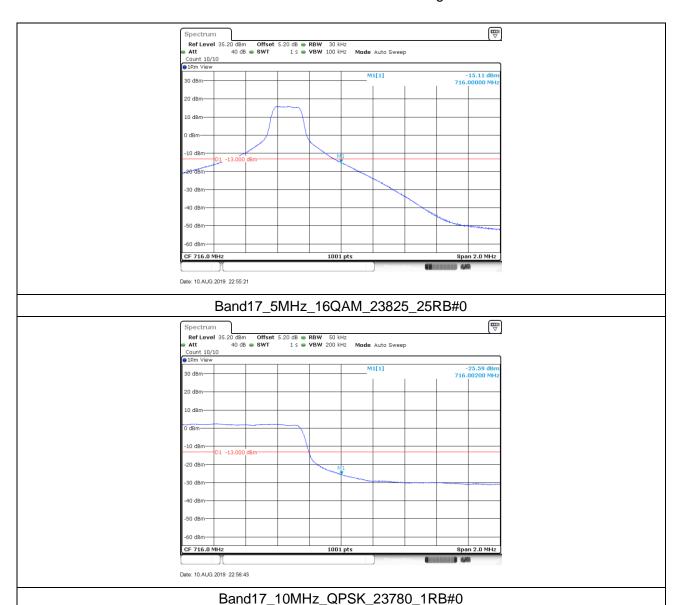
Page: 21 of 37





Report No.: ZR/2019/6002601

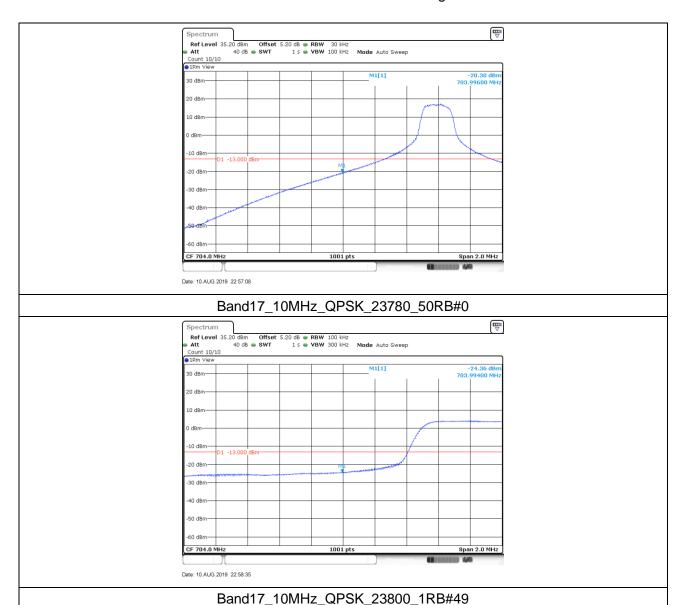
Page: 22 of 37





Report No.: ZR/2019/6002601

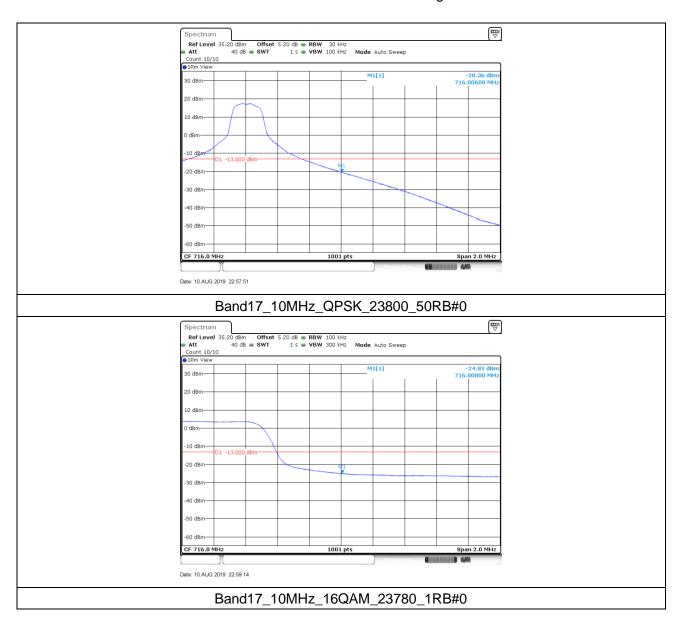
Page: 23 of 37





Report No.: ZR/2019/6002601

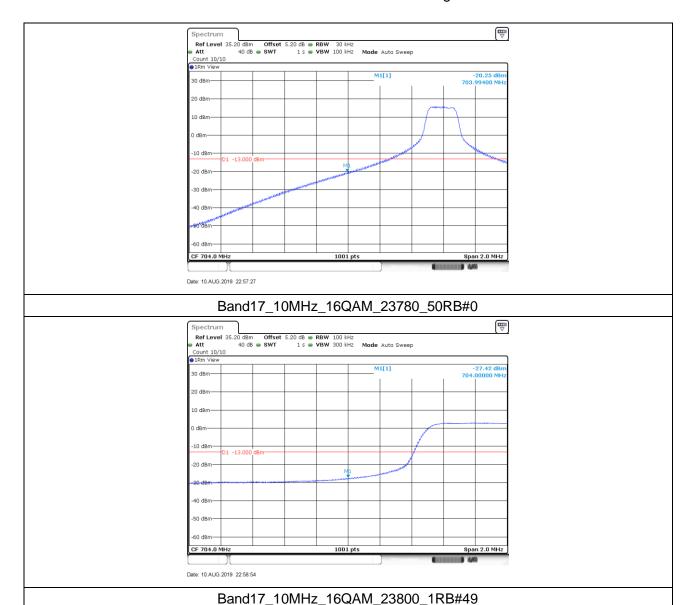
Page: 24 of 37





Report No.: ZR/2019/6002601

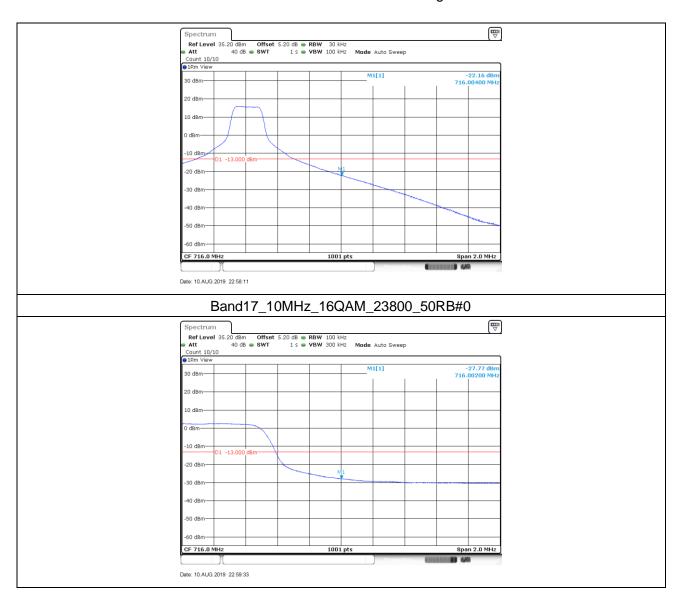
Page: 25 of 37





Report No.: ZR/2019/6002601

Page: 26 of 37





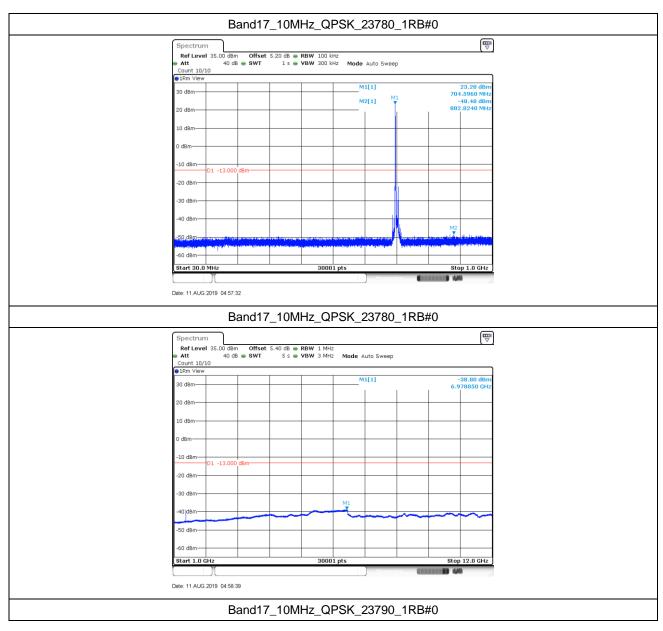
Page: 27 of 37

6. Spurious Emission at Antenna Terminal

Remark1: 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 between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

6.1. Test Plots





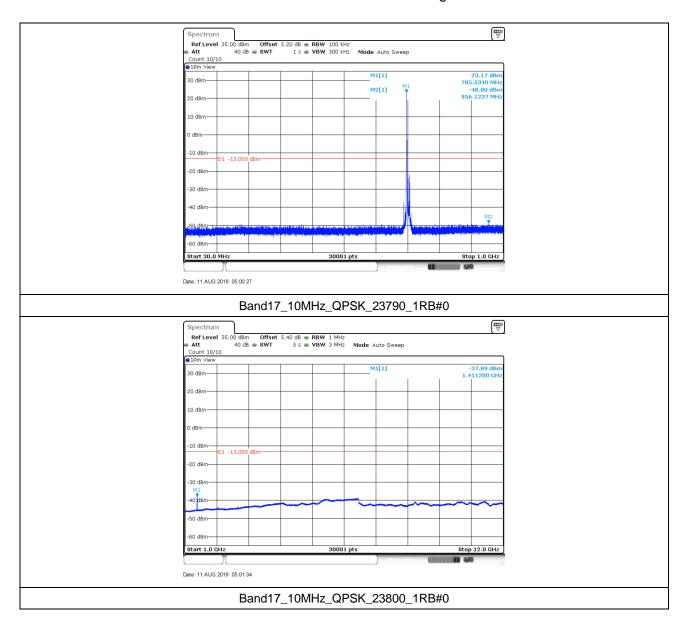
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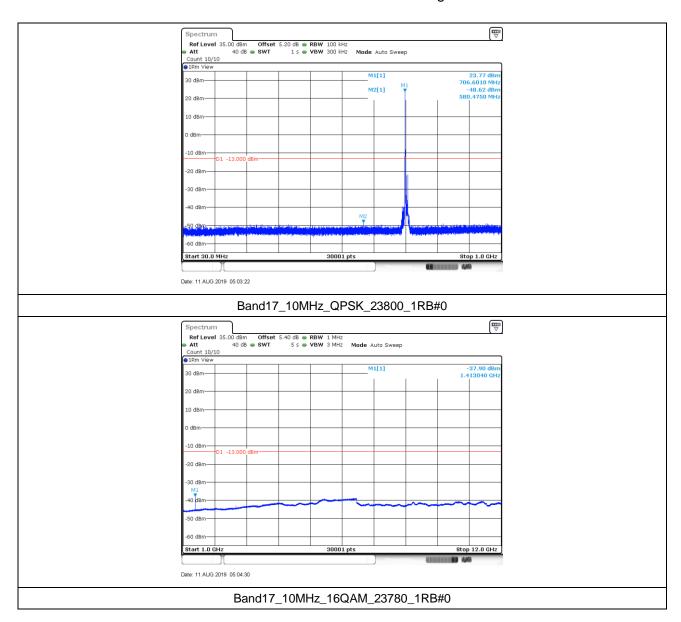
Page: 28 of 37





Report No.: ZR/2019/6002601

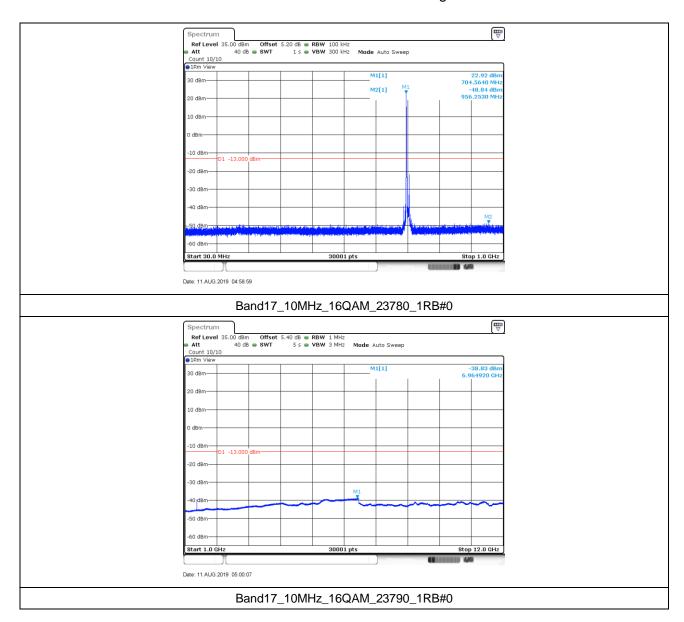
Page: 29 of 37





Report No.: ZR/2019/6002601

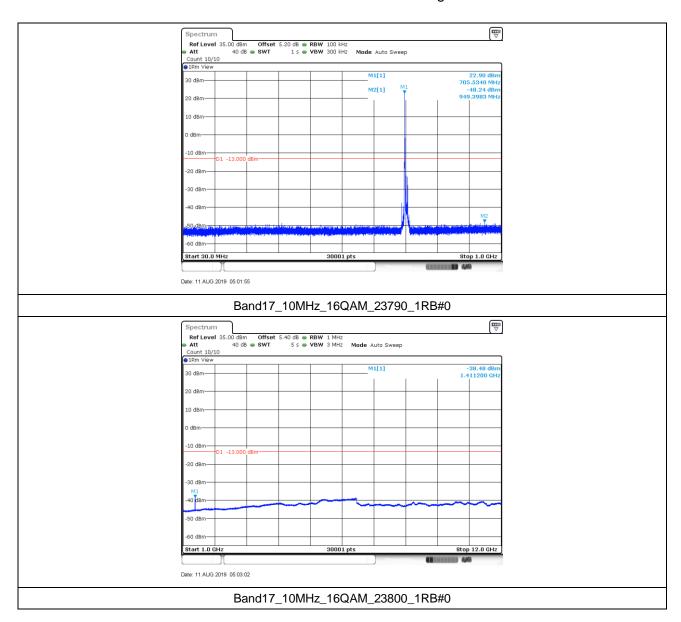
Page: 30 of 37





Report No.: ZR/2019/6002601

Page: 31 of 37

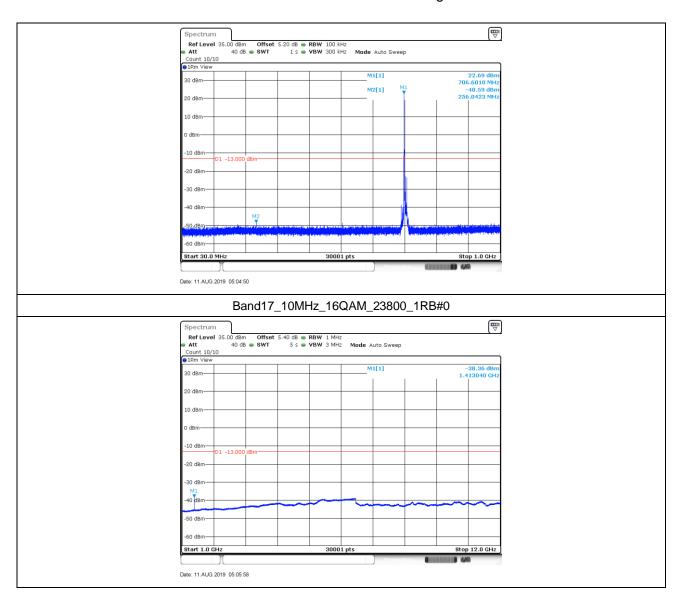






Report No.: ZR/2019/6002601

Page: 32 of 37





Page: 33 of 37

7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE Band 17

7.1.1.Test Mode =LTE/TM1 10MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.6481	-65.18	-13.00	52.18	Vertical
1409.2819	-53.69	-13.00	40.69	Vertical
2113.8228	-51.46	-13.00	38.46	Vertical
2818.3637	-53.72	-13.00	40.72	Vertical
14695.6678	-41.99	-13.00	28.99	Vertical
17996.9999	-32.25	-13.00	19.25	Vertical
42.6591	-65.06	-13.00	52.06	Horizontal
1408.8818	-46.67	-13.00	33.67	Horizontal
2113.8228	-39.44	-13.00	26.44	Horizontal
2818.7638	-48.68	-13.00	35.68	Horizontal
4227.6491	-54.64	-13.00	41.64	Horizontal
17995.7998	-37.18	-13.00	24.18	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
109.0590	-65.68	-13.00	52.68	Vertical
1410.8822	-54.27	-13.00	41.27	Vertical
2116.6233	-54.40	-13.00	41.40	Vertical
2822.7646	-53.28	-13.00	40.28	Vertical
14413.6565	-44.06	-13.00	31.06	Vertical
17982.5993	-32.64	-13.00	19.64	Vertical
42.3681	-64.46	-13.00	51.46	Horizontal
1410.8822	-46.77	-13.00	33.77	Horizontal
2116.6233	-41.49	-13.00	28.49	Horizontal
2822.7646	-48.50	-13.00	35.50	Horizontal
4233.6493	-55.61	-13.00	42.61	Horizontal
17977.7991	-37.29	-13.00	24.29	Horizontal



Page: 34 of 37

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
110.3685	-65.12	-13.00	52.12	Vertical
1412.8826	-54.89	-13.00	41.89	Vertical
2119.8240	-57.91	-13.00	44.91	Vertical
2826.3653	-53.63	-13.00	40.63	Vertical
14740.6696	-42.23	-13.00	29.23	Vertical
17993.9998	-32.65	-13.00	19.65	Vertical
43.0472	-64.60	-13.00	51.60	Horizontal
1412.8826	-48.04	-13.00	35.04	Horizontal
2119.8240	-45.82	-13.00	32.82	Horizontal
2826.3653	-48.95	-13.00	35.95	Horizontal
3532.8213	-55.36	-13.00	42.36	Horizontal
17995.1998	-37.25	-13.00	24.25	Horizontal

Remark:

- According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2 The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.
- 3 all modulation and all Bandwidth had been tested, but only the worst case data displayed in this report.



Page: 35 of 37

8. Frequency Stability

8.1. Frequency Vs Voltage

				Vo	oltage					
BAND	Bandwidth	Modulation	Channel	RB	Voltage	Temperature	Deviation	Deviation	Limit	Verdic
DAIND	Danawiatri	iviodulation	Channel	Configure	[Vdc]	(°C)	(Hz)	(ppm)	(ppm)	t
Band17	10MHz	QPSK	23780	50RB#0	VL	NT	-4.70	-0.006629	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	VN	NT	-1.60	-0.002257	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	VH	NT	-1.40	-0.001975	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	VL	NT	-7.00	-0.009859	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	VN	NT	-6.40	-0.009014	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	VH	NT	-8.50	-0.011972	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	VL	NT	-6.10	-0.008579	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	VN	NT	-7.20	-0.010127	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	VH	NT	-6.10	-0.008579	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	VL	NT	-9.40	-0.013258	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	VN	NT	-5.40	-0.007616	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	VH	NT	-10.20	-0.014386	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	VL	NT	-9.00	-0.012676	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	VN	NT	-7.40	-0.010423	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	VH	NT	-1.00	-0.001408	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	VL	NT	-1.70	-0.002391	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	VN	NT	-0.40	-0.000563	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	VH	NT	-5.60	-0.007876	±2.5	PASS

8.2. Frequency Vs Temperature

Temperatur	е									
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band17	10MHz	QPSK	23780	50RB#0	NV	-30	-12.30	-0.017348	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	-20	-9.00	-0.012694	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	0	-6.80	-0.009591	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	10	-9.60	-0.013540	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	20	-9.10	-0.012835	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	30	-6.20	-0.008745	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	40	-5.90	-0.008322	±2.5	PASS



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Report No.: ZR/2019/6002601

Page: 36 of 37

	1	1	ı		ı			1	1	
Band17	10MHz	QPSK	23780	50RB#0	NV	50	-6.30	-0.008886	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-30	-6.50	-0.009155	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-20	-6.30	-0.008873	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	0	-8.50	-0.011972	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	10	-7.40	-0.010423	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	20	-9.90	-0.013944	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	30	-6.80	-0.009577	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	40	-9.50	-0.013380	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	50	-9.40	-0.013239	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	-30	-6.50	-0.009142	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	-20	-6.60	-0.009283	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	0	-3.60	-0.005063	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	10	-5.50	-0.007736	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	20	-0.80	-0.001125	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	30	-2.00	-0.002813	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	40	-5.20	-0.007314	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	50	-5.30	-0.007454	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-30	-5.50	-0.007757	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-20	-3.20	-0.004513	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	0	-5.50	-0.007757	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	10	-3.70	-0.005219	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	20	-3.50	-0.004937	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	30	-7.90	-0.011142	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	40	-4.80	-0.006770	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	50	-1.50	-0.002116	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-30	-5.00	-0.007042	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-20	-6.00	-0.008451	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	0	-7.10	-0.010000	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	10	-6.10	-0.008592	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	20	-7.90	-0.011127	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	30	-3.70	-0.005211	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	40	-7.10	-0.010000	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	50	-10.20	-0.014366	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-30	-7.80	-0.010970	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-20	-5.30	-0.007454	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	0	-8.60	-0.012096	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	10	-12.60	-0.017722	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	20	-2.20	-0.003094	±2.5	PASS
	•				•				•	



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Report No.: ZR/2019/6002601

Page: 37 of 37

Band17	10MHz	16QAM	23800	50RB#0	NV	30	-1.90	-0.002672	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	40	-0.80	-0.001125	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	50	-5.10	-0.007173	±2.5	PASS

The End

