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Appendix B

E-UTRA Band 17



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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	22.70	18.05	34.77	PASS
Band17	5MHz	QPSK	23755	1RB#12	22.87	18.22	34.77	PASS
Band17	5MHz	QPSK	23755	1RB#24	22.81	18.16	34.77	PASS
Band17	5MHz	QPSK	23755	12RB#0	21.84	17.19	34.77	PASS
Band17	5MHz	QPSK	23755	12RB#6	21.91	17.26	34.77	PASS
Band17	5MHz	QPSK	23755	12RB#13	21.88	17.23	34.77	PASS
Band17	5MHz	QPSK	23755	25RB#0	21.86	17.21	34.77	PASS
Band17	5MHz	QPSK	23790	1RB#24	22.71	18.06	34.77	PASS
Band17	5MHz	QPSK	23790	1RB#12	22.89	18.24	34.77	PASS
Band17	5MHz	QPSK	23790	1RB#0	22.76	18.11	34.77	PASS
Band17	5MHz	QPSK	23790	12RB#0	21.89	17.24	34.77	PASS
Band17	5MHz	QPSK	23790	12RB#13	21.94	17.29	34.77	PASS
Band17	5MHz	QPSK	23790	12RB#6	21.85	17.20	34.77	PASS
Band17	5MHz	QPSK	23790	25RB#0	21.91	17.26	34.77	PASS
Band17	5MHz	QPSK	23825	1RB#24	22.73	18.08	34.77	PASS
Band17	5MHz	QPSK	23825	1RB#12	22.86	18.21	34.77	PASS
Band17	5MHz	QPSK	23825	1RB#0	22.74	18.09	34.77	PASS
Band17	5MHz	QPSK	23825	12RB#13	21.88	17.23	34.77	PASS
Band17	5MHz	QPSK	23825	12RB#6	21.95	17.30	34.77	PASS
Band17	5MHz	QPSK	23825	12RB#0	21.89	17.24	34.77	PASS
Band17	5MHz	QPSK	23825	25RB#0	21.89	17.24	34.77	PASS
Band17	5MHz	16QAM	23755	1RB#24	21.92	17.27	34.77	PASS
Band17	5MHz	16QAM	23755	1RB#0	22.06	17.41	34.77	PASS
Band17	5MHz	16QAM	23755	1RB#12	21.95	17.30	34.77	PASS
Band17	5MHz	16QAM	23755	12RB#0	20.78	16.13	34.77	PASS
Band17	5MHz	16QAM	23755	12RB#6	20.87	16.22	34.77	PASS
Band17	5MHz	16QAM	23755	12RB#13	20.84	16.19	34.77	PASS
Band17	5MHz	16QAM	23755	25RB#0	20.84	16.19	34.77	PASS
Band17	5MHz	16QAM	23790	1RB#0	21.93	17.28	34.77	PASS
Band17	5MHz	16QAM	23790	1RB#24	22.27	17.62	34.77	PASS
Band17	5MHz	16QAM	23790	1RB#12	21.98	17.33	34.77	PASS
Band17	5MHz	16QAM	23790	12RB#0	20.83	16.18	34.77	PASS



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D 147		400 414	00700	4000 #40	20.00	46.07	04.77	D4.00
Band17	5MHz	16QAM	23790	12RB#13	20.92	16.27	34.77	PASS
Band17	5MHz	16QAM	23790	12RB#6	20.79	16.14	34.77	PASS
Band17	5MHz	16QAM	23790	25RB#0	20.87	16.22	34.77	PASS
Band17	5MHz	16QAM	23825	1RB#12	21.90	17.25	34.77	PASS
Band17	5MHz	16QAM	23825	1RB#24	22.25	17.60	34.77	PASS
Band17	5MHz	16QAM	23825	1RB#0	22.02	17.37	34.77	PASS
Band17	5MHz	16QAM	23825	12RB#0	20.80	16.15	34.77	PASS
Band17	5MHz	16QAM	23825	12RB#6	20.87	16.22	34.77	PASS
Band17	5MHz	16QAM	23825	12RB#13	20.76	16.11	34.77	PASS
Band17	5MHz	16QAM	23825	25RB#0	20.88	16.23	34.77	PASS
Band17	10MHz	QPSK	23780	1RB#24	22.78	18.13	34.77	PASS
Band17	10MHz	QPSK	23780	1RB#0	22.99	18.34	34.77	PASS
Band17	10MHz	QPSK	23780	1RB#49	22.93	18.28	34.77	PASS
Band17	10MHz	QPSK	23780	25RB#0	21.91	17.26	34.77	PASS
Band17	10MHz	QPSK	23780	25RB#12	21.99	17.34	34.77	PASS
Band17	10MHz	QPSK	23780	25RB#25	21.94	17.29	34.77	PASS
Band17	10MHz	QPSK	23780	50RB#0	21.94	17.29	34.77	PASS
Band17	10MHz	QPSK	23790	1RB#49	22.81	18.16	34.77	PASS
Band17	10MHz	QPSK	23790	1RB#24	22.95	18.30	34.77	PASS
Band17	10MHz	QPSK	23790	1RB#0	22.93	18.28	34.77	PASS
Band17	10MHz	QPSK	23790	25RB#0	21.95	17.30	34.77	PASS
Band17	10MHz	QPSK	23790	25RB#25	21.98	17.33	34.77	PASS
Band17	10MHz	QPSK	23790	25RB#12	21.92	17.27	34.77	PASS
Band17	10MHz	QPSK	23790	50RB#0	21.98	17.33	34.77	PASS
Band17	10MHz	QPSK	23800	1RB#49	22.84	18.19	34.77	PASS
Band17	10MHz	QPSK	23800	1RB#24	22.98	18.33	34.77	PASS
Band17	10MHz	QPSK	23800	1RB#0	22.92	18.27	34.77	PASS
Band17	10MHz	QPSK	23800	25RB#25	21.96	17.31	34.77	PASS
Band17	10MHz	QPSK	23800	25RB#12	21.98	17.33	34.77	PASS
Band17	10MHz	QPSK	23800	25RB#0	21.95	17.30	34.77	PASS
Band17	10MHz	QPSK	23800	50RB#0	21.97	17.32	34.77	PASS
Band17	10MHz	16QAM	23780	1RB#49	21.95	17.30	34.77	PASS
Band17	10MHz	16QAM	23780	1RB#24	22.14	17.49	34.77	PASS
Band17	10MHz	16QAM	23780	1RB#0	22.08	17.43	34.77	PASS
Band17	10MHz	16QAM	23780	25RB#0	20.86	16.21	34.77	PASS
Band17	10MHz	16QAM	23780	25RB#12	20.94	16.29	34.77	PASS
Band17	10MHz	16QAM	23780	25RB#25	20.92	16.27	34.77	PASS
Band17	10MHz	16QAM	23780	50RB#0	20.90	16.25	34.77	PASS



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Band17	10MHz	16QAM	23790	1RB#0	21.99	17.34	34.77	PASS
Band17	10MHz	16QAM	23790	1RB#49	22.14	17.49	34.77	PASS
Band17	10MHz	16QAM	23790	1RB#24	22.10	17.45	34.77	PASS
Band17	10MHz	16QAM	23790	25RB#0	20.89	16.24	34.77	PASS
Band17	10MHz	16QAM	23790	25RB#25	20.95	16.30	34.77	PASS
Band17	10MHz	16QAM	23790	25RB#12	20.85	16.20	34.77	PASS
Band17	10MHz	16QAM	23790	50RB#0	20.91	16.26	34.77	PASS
Band17	10MHz	16QAM	23800	1RB#24	21.97	17.32	34.77	PASS
Band17	10MHz	16QAM	23800	1RB#49	22.13	17.48	34.77	PASS
Band17	10MHz	16QAM	23800	1RB#0	22.01	17.36	34.77	PASS
Band17	10MHz	16QAM	23800	25RB#0	20.95	16.30	34.77	PASS
Band17	10MHz	16QAM	23800	25RB#12	20.95	16.30	34.77	PASS
Band17	10MHz	16QAM	23800	25RB#25	20.89	16.24	34.77	PASS
Band17	10MHz	16QAM	23800	50RB#0	20.93	16.28	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]



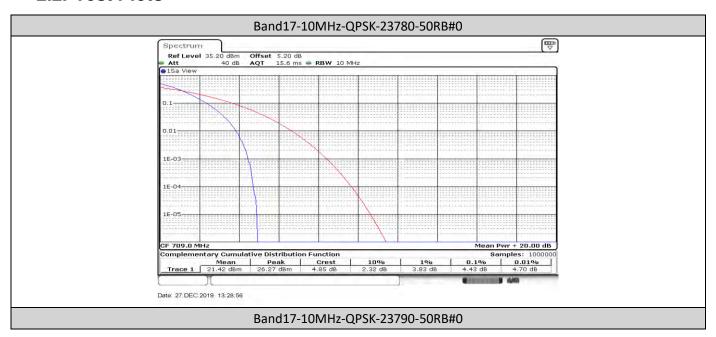
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2. Peak-to-Average Ratio (CCDF)

2.1. Test Result

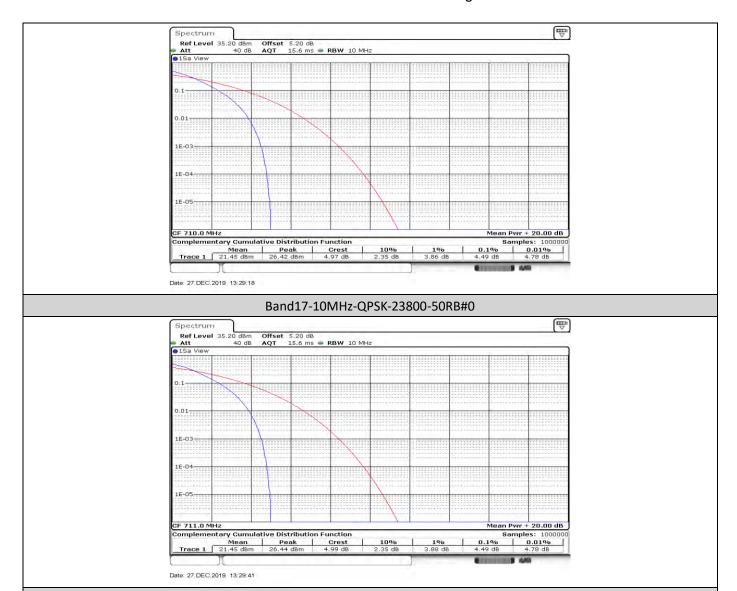
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band17	10MHz	QPSK	23780	50RB#0	4.43	13	PASS
Band17	10MHz	QPSK	23790	50RB#0	4.49	13	PASS
Band17	10MHz	QPSK	23800	50RB#0	4.49	13	PASS
Band17	10MHz	16QAM	23780	50RB#0	5.39	13	PASS
Band17	10MHz	16QAM	23790	50RB#0	5.42	13	PASS
Band17	10MHz	16QAM	23800	50RB#0	5.42	13	PASS

2.2. Test Plots





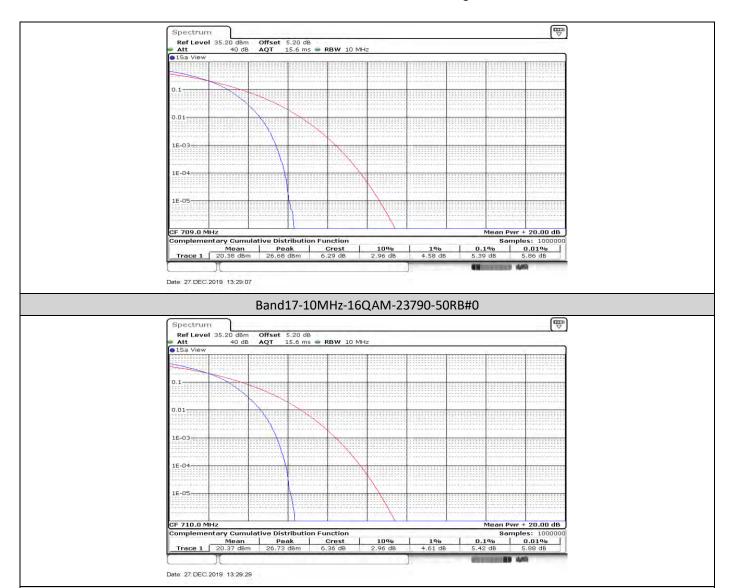
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Band17-10MHz-16QAM-23780-50RB#0



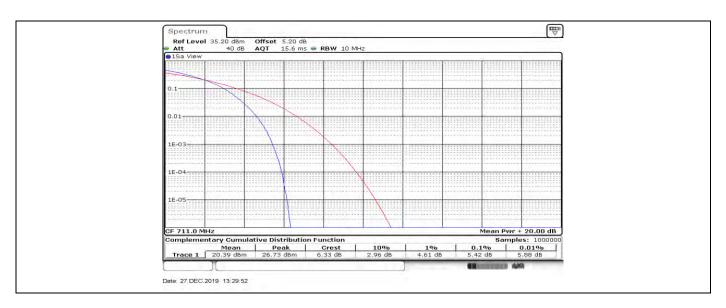
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Band17-10MHz-16QAM-23800-50RB#0



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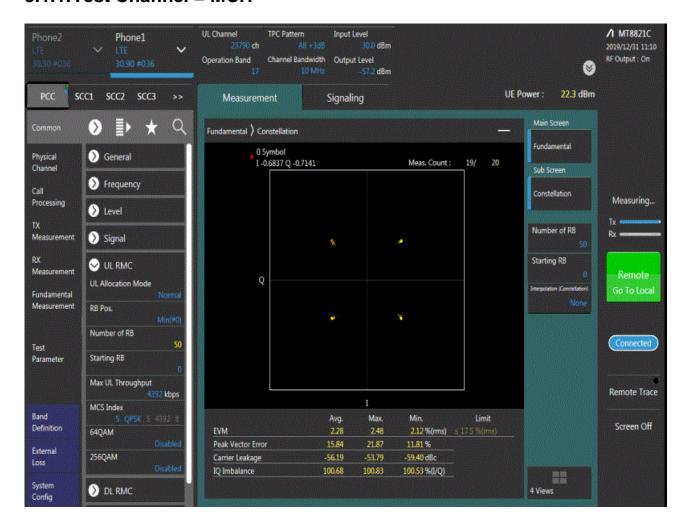
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3. Modulation Characteristics

3.1. Test Mode = LTE /TM1 10MHz

3.1.1.Test Channel = MCH





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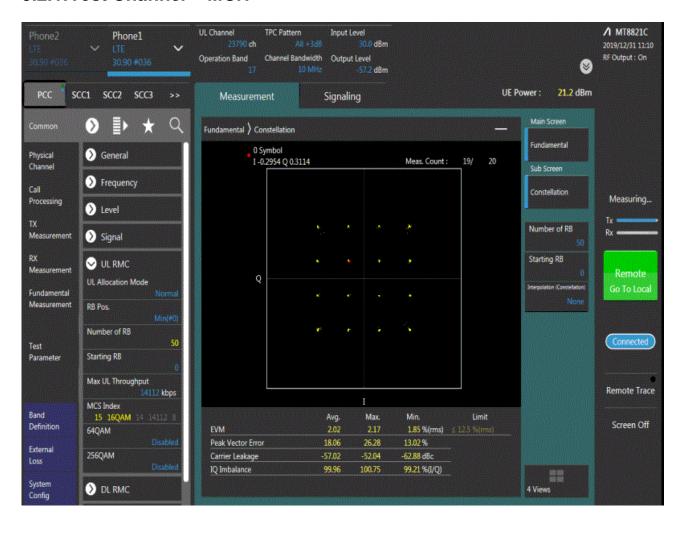
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3.2. Test Mode = LTE /TM2 10MHz

3.2.1.Test Channel = MCH





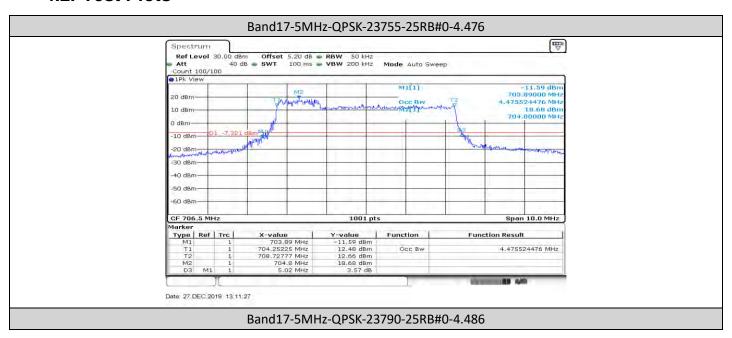
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4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	4.476	5.020	PASS
Band17	5MHz	QPSK	23790	25RB#0	4.486	4.830	PASS
Band17	5MHz	QPSK	23825	25RB#0	4.486	4.940	PASS
Band17	5MHz	16QAM	23755	25RB#0	4.505	4.900	PASS
Band17	5MHz	16QAM	23790	25RB#0	4.486	4.900	PASS
Band17	5MHz	16QAM	23825	25RB#0	4.505	4.960	PASS
Band17	10MHz	QPSK	23780	50RB#0	8.951	9.640	PASS
Band17	10MHz	QPSK	23790	50RB#0	8.931	9.480	PASS
Band17	10MHz	QPSK	23800	50RB#0	8.951	9.560	PASS
Band17	10MHz	16QAM	23780	50RB#0	8.931	9.660	PASS
Band17	10MHz	16QAM	23790	50RB#0	8.911	9.580	PASS
Band17	10MHz	16QAM	23800	50RB#0	8.971	9.840	PASS

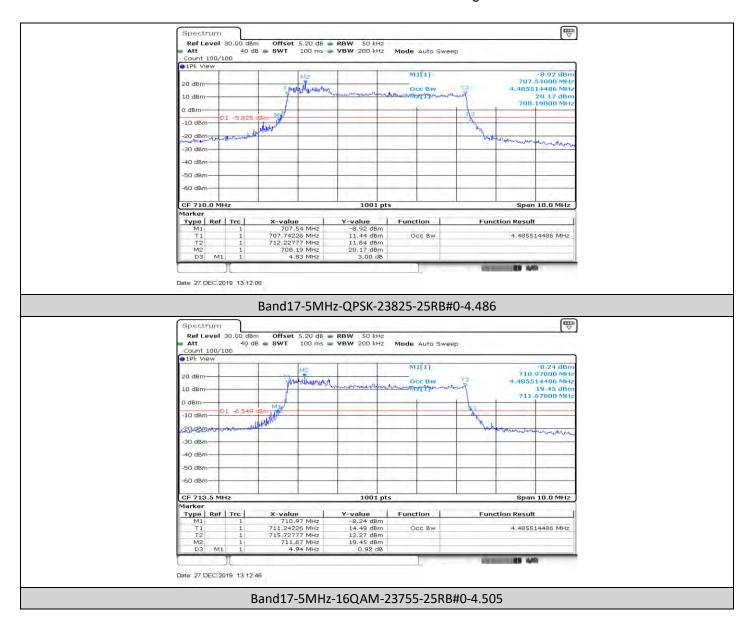
4.2. Test Plots





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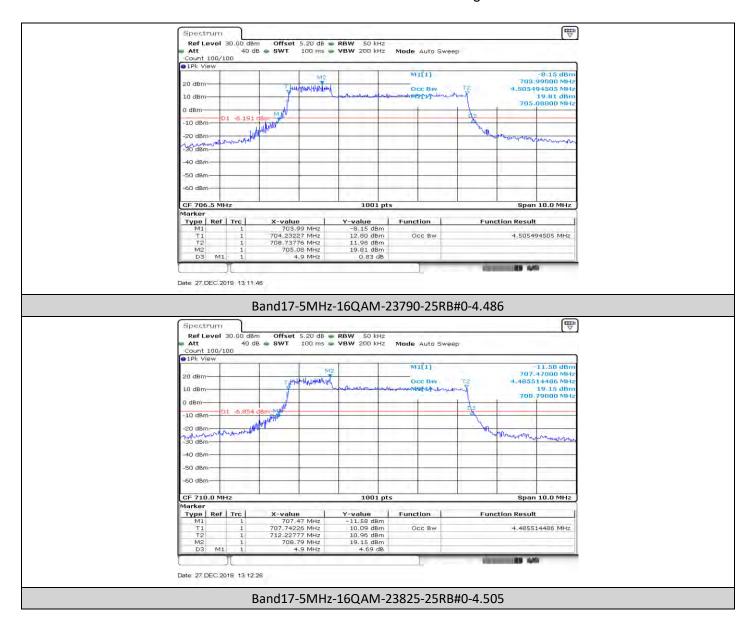
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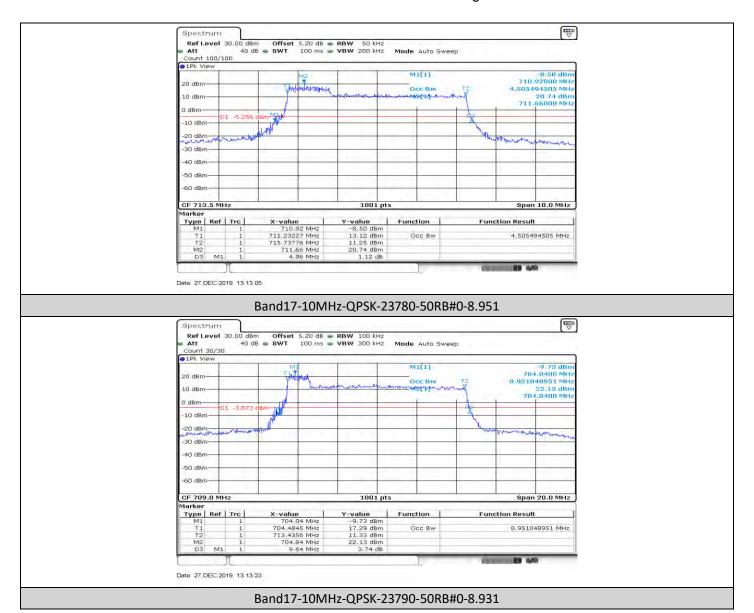
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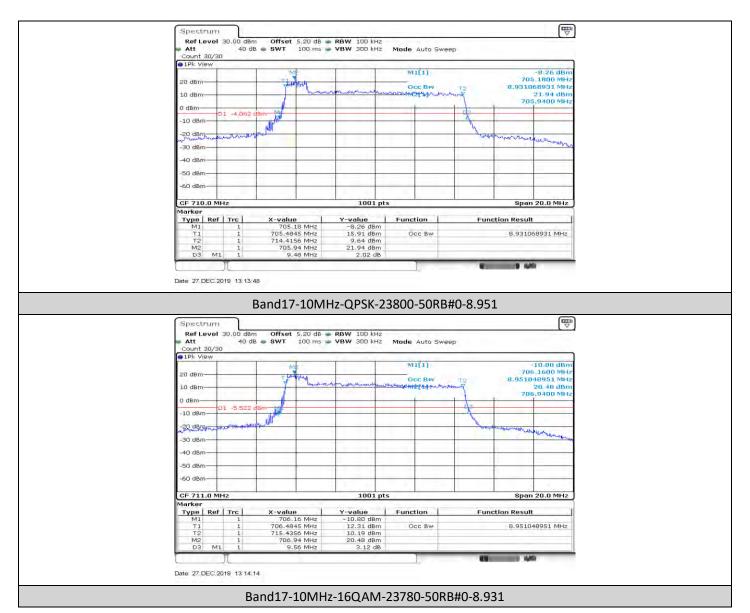
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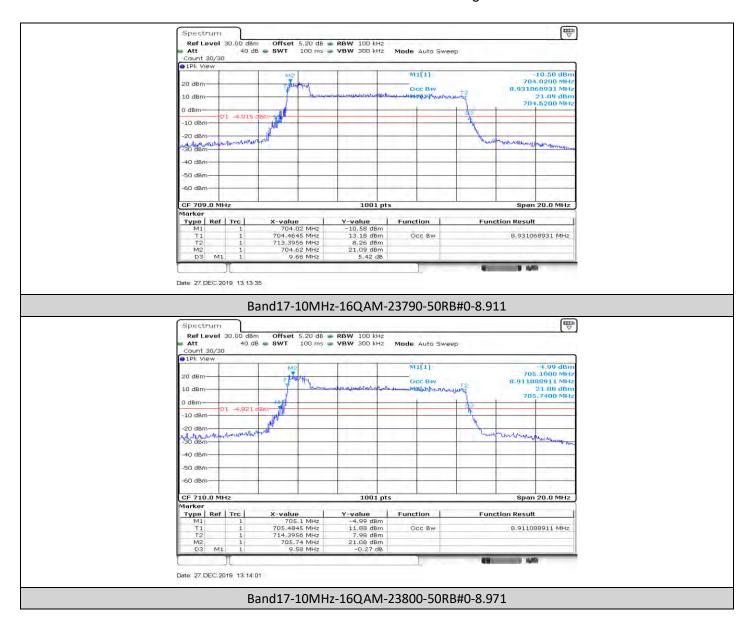
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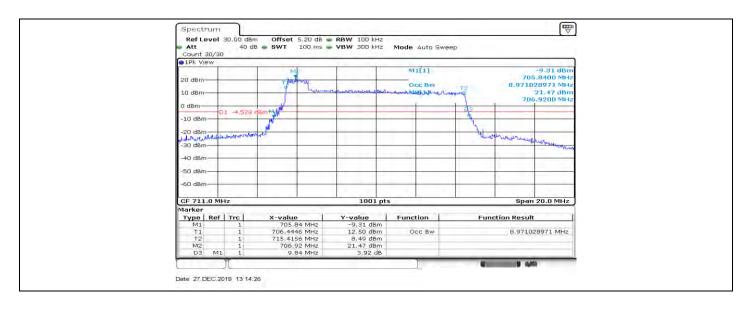






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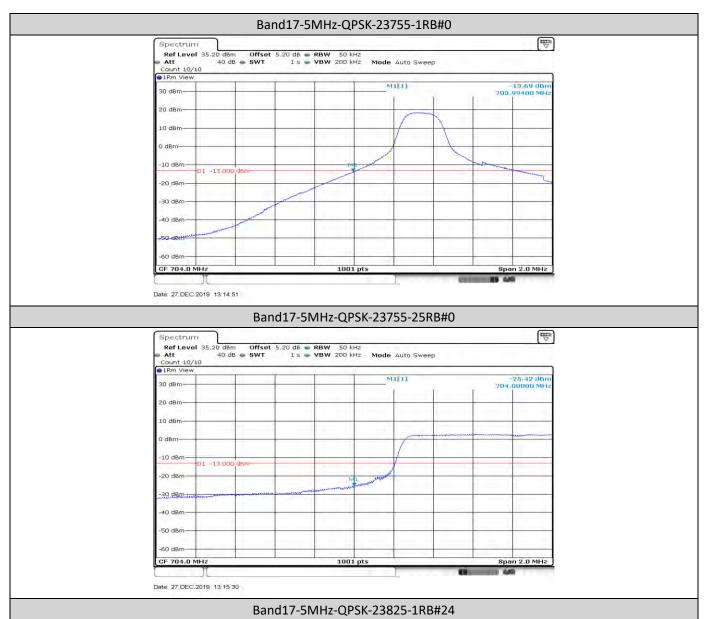




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5. Band Edge Compliance

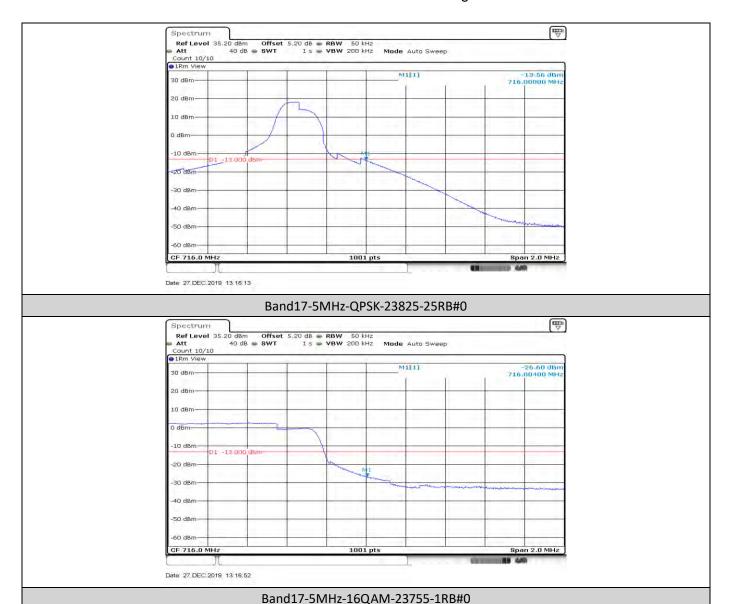
5.1. Test Plots





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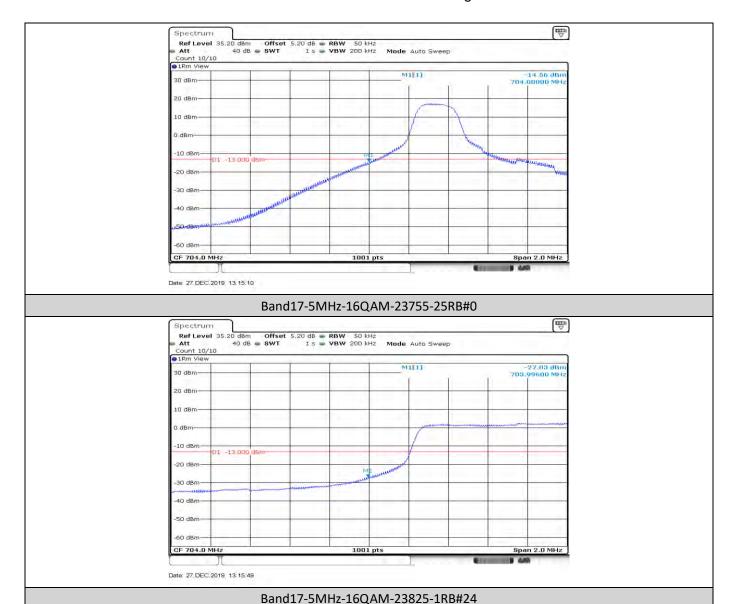
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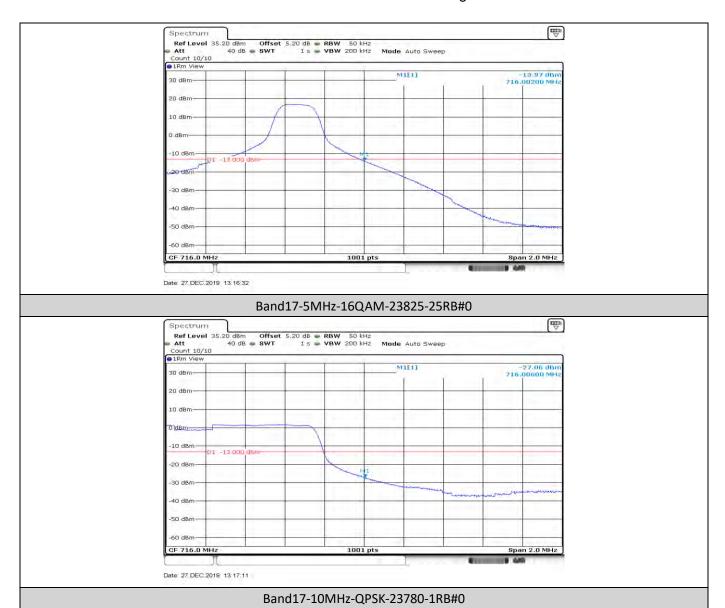
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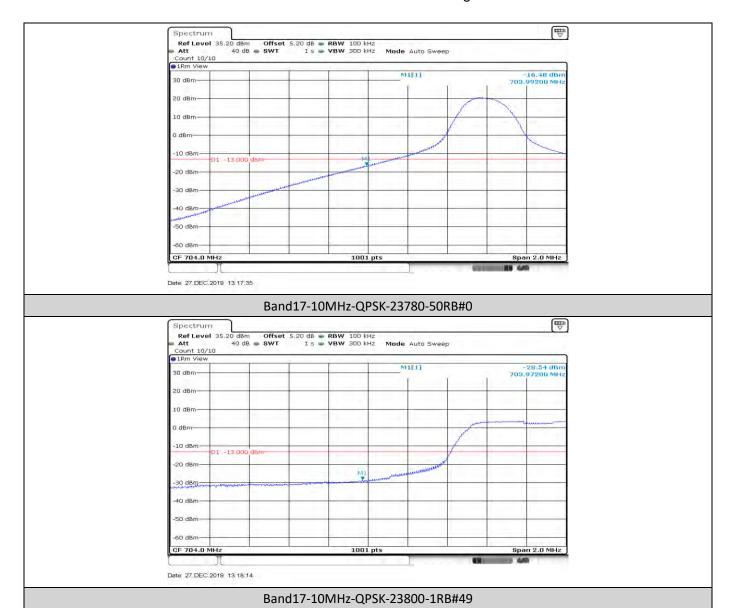
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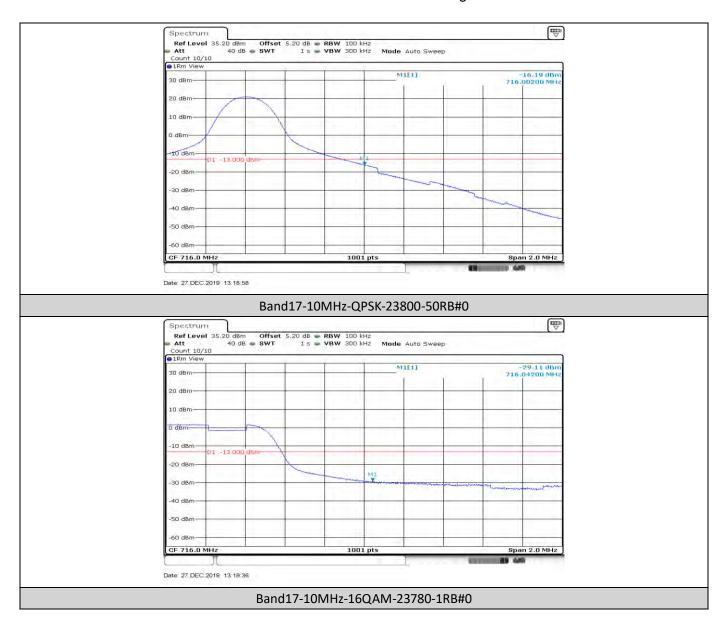
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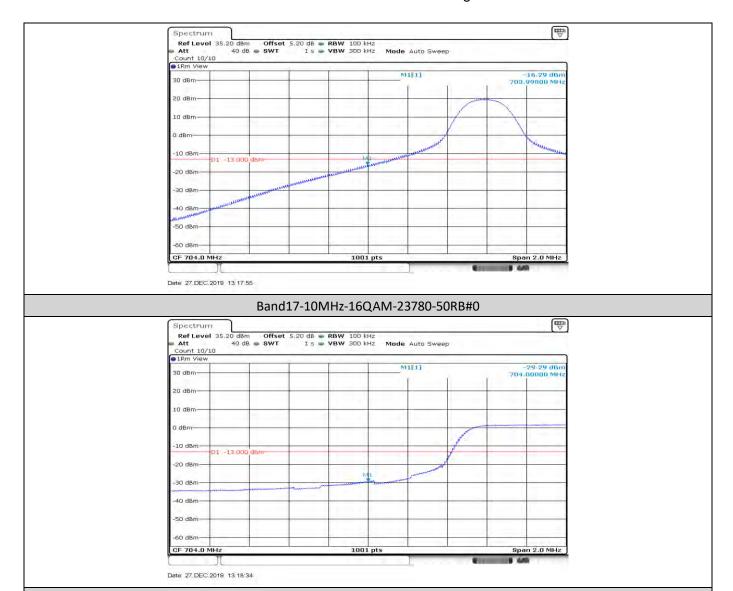
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Band17-10MHz-16QAM-23800-1RB#49



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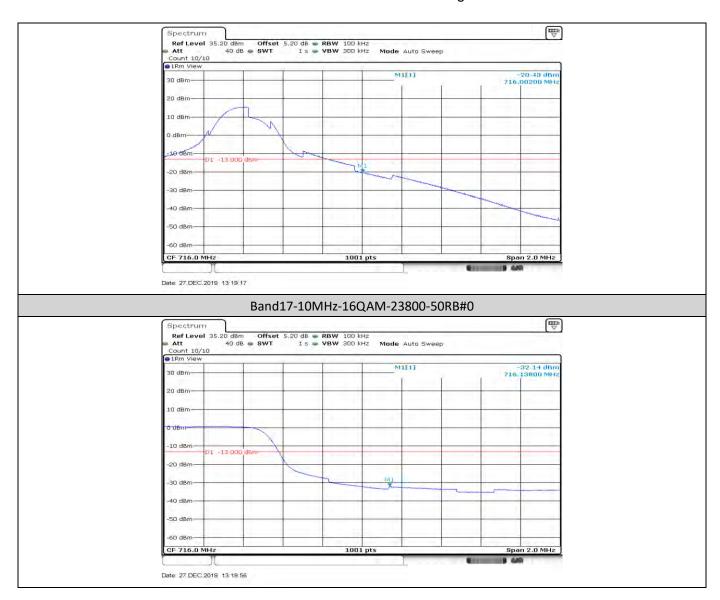
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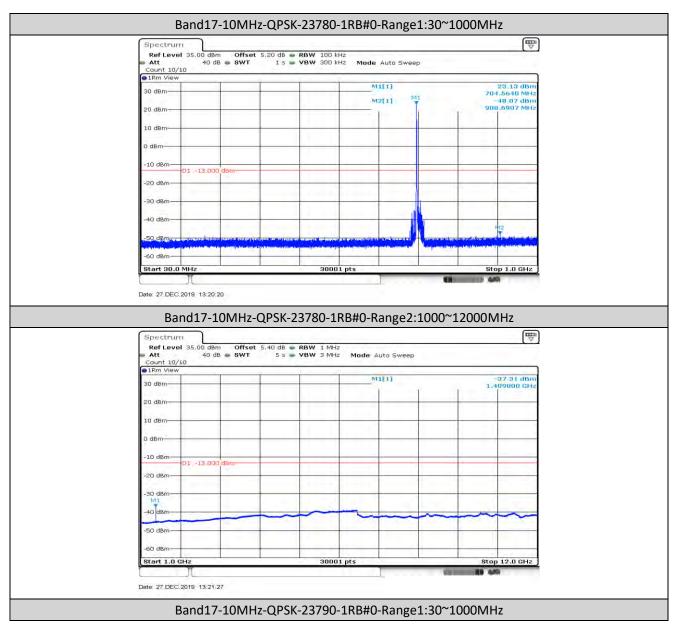
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6. Spurious Emission at Antenna Terminal

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

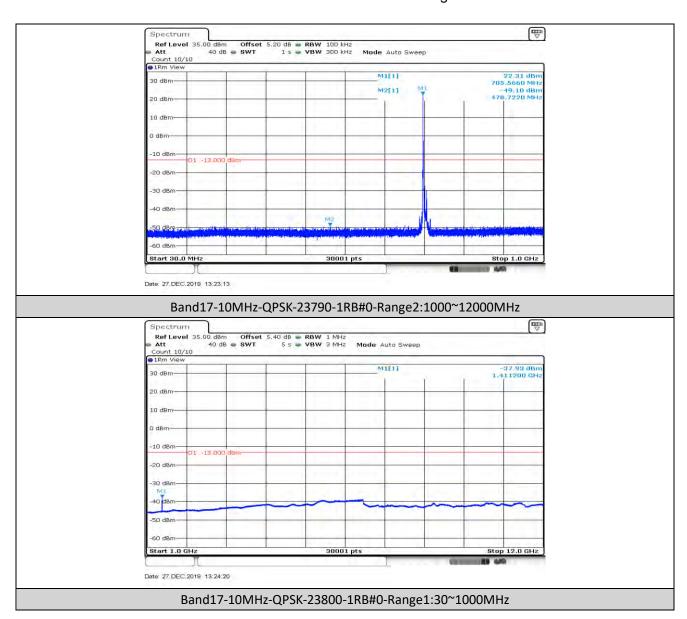






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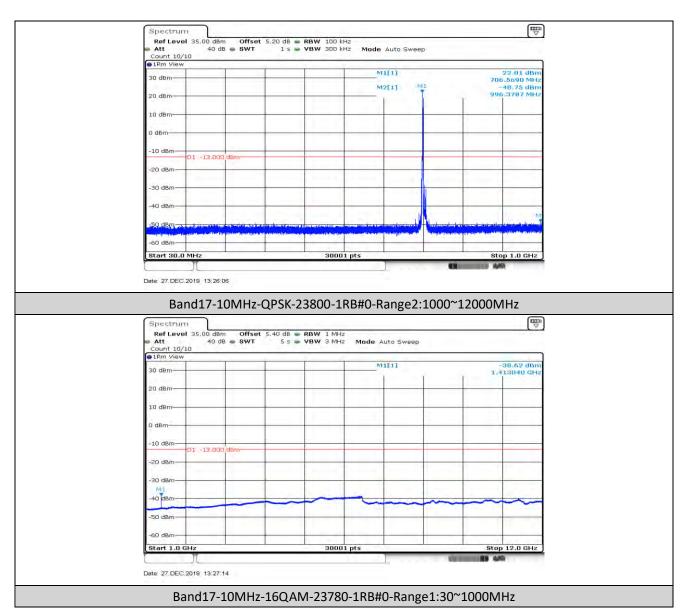
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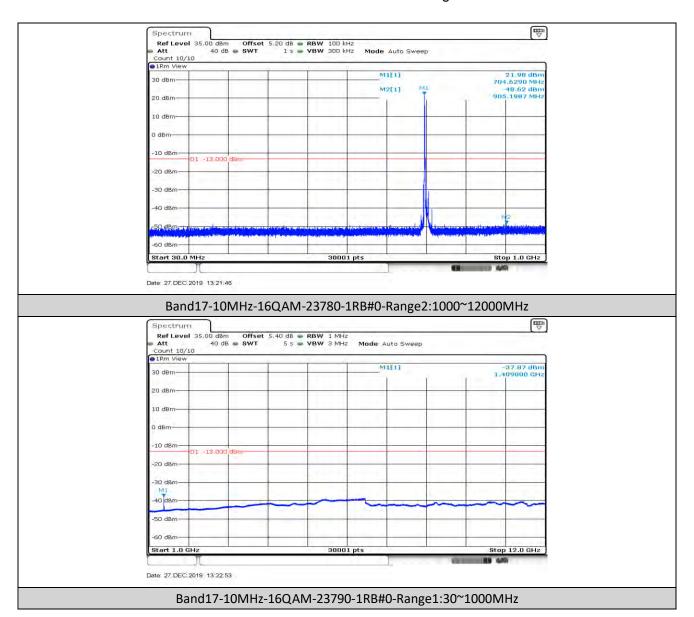






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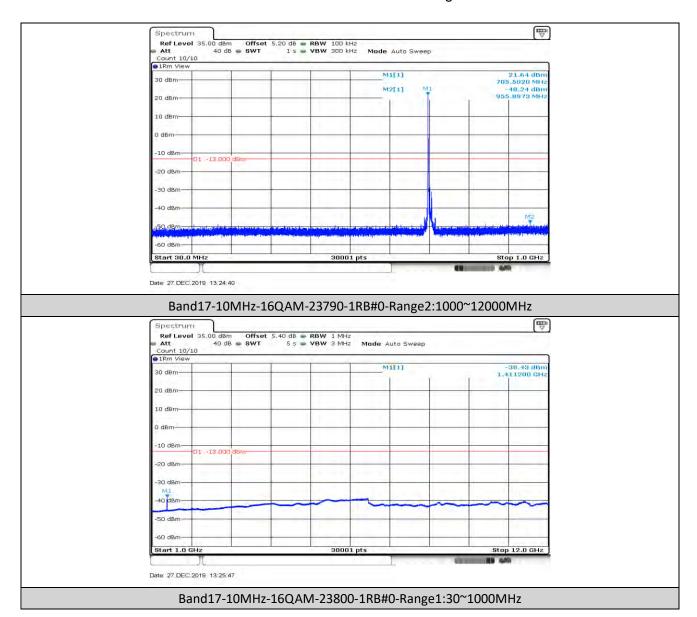
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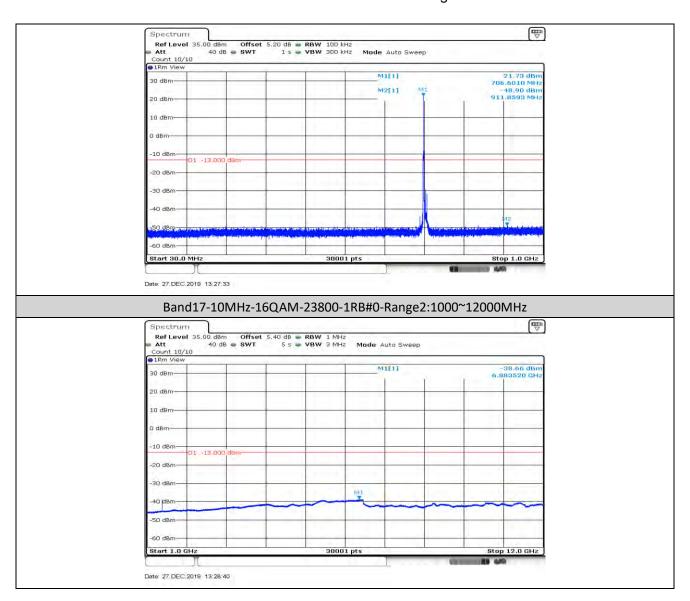






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7. Field Strength of Spurious Radiation

7.1. Test Mode =LTE/TM1

7.1.1.Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.5996	-65.08	-13.00	52.08	Vertical
1408.8818	-53.16	-13.00	40.16	Vertical
2113.8228	-49.65	-13.00	36.65	Vertical
4227.6491	-50.30	-13.00	37.30	Vertical
4932.0773	-49.43	-13.00	36.43	Vertical
17996.9999	-42.48	-13.00	29.48	Vertical
45.7148	-64.18	-13.00	51.18	Horizontal
1409.2819	-52.14	-13.00	39.14	Horizontal
3523.2209	-56.05	-13.00	43.05	Horizontal
4227.6491	-52.32	-13.00	39.32	Horizontal
4932.0773	-50.67	-13.00	37.67	Horizontal
16394.3358	-46.49	-13.00	33.49	Horizontal

7.1.2.Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.3571	-65.31	-13.00	52.31	Vertical
1411.2823	-54.14	-13.00	41.14	Vertical
2116.6233	-50.06	-13.00	37.06	Vertical
4233.6493	-51.13	-13.00	38.13	Vertical
4938.6775	-51.71	-13.00	38.71	Vertical
17995.7998	-42.25	-13.00	29.25	Vertical
40.6705	-63.59	-13.00	50.59	Horizontal
1410.8822	-53.03	-13.00	40.03	Horizontal
3528.0211	-56.37	-13.00	43.37	Horizontal
4233.6493	-53.18	-13.00	40.18	Horizontal
4938.6775	-51.67	-13.00	38.67	Horizontal
16377.5351	-45.93	-13.00	32.93	Horizontal



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7.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
111.4356	-65.58	-13.00	52.58	Vertical
1412.8826	-55.32	-13.00	42.32	Vertical
2119.8240	-51.53	-13.00	38.53	Vertical
4239.6496	-52.97	-13.00	39.97	Vertical
4946.4779	-53.11	-13.00	40.11	Vertical
17996.9999	-41.95	-13.00	28.95	Vertical
42.3196	-65.05	-13.00	52.05	Horizontal
1412.8826	-54.04	-13.00	41.04	Horizontal
2826.3653	-56.15	-13.00	43.15	Horizontal
4239.6496	-55.58	-13.00	42.58	Horizontal
4946.4779	-53.43	-13.00	40.43	Horizontal
16389.5356	-45.54	-13.00	32.54	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.
- 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 displayed in this report.
- 3 all modulation and all Bandwidth had been tested, but only the worst case data displayed in this report.



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8. Frequency Stability

8.1. Frequency Vs Voltage

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temper ature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band17	10MHz	QPSK	23780	50RB#0	VL	NT	-3.90	-0.005501	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	VN	NT	-8.20	-0.011566	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	VH	NT	-3.10	-0.004372	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	VL	NT	-7.20	-0.010141	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	VN	NT	-8.30	-0.011690	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	VH	NT	-7.60	-0.010704	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	VL	NT	-4.50	-0.006329	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	VN	NT	-9.90	-0.013924	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	VH	NT	-2.00	-0.002813	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	VL	NT	-6.70	-0.009450	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	VN	NT	-6.80	-0.009591	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	VH	NT	-4.40	-0.006206	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	VL	NT	-8.20	-0.011549	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	VN	NT	-3.20	-0.004507	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	VH	NT	-2.40	-0.003380	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	VL	NT	-1.00	-0.001406	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	VN	NT	-3.00	-0.004219	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	VH	NT	-7.10	-0.009986	±2.5	PASS

8.2. Frequency Vs Temperature

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temper ature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band17	10MHz	QPSK	23780	50RB#0	NV	-30	-4.20	-0.005924	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	-20	-7.70	-0.010860	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	0	-3.70	-0.005219	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	10	-5.90	-0.008322	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	20	-4.80	-0.006770	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	30	-5.70	-0.008039	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	40	-8.30	-0.011707	±2.5	PASS
Band17	10MHz	QPSK	23780	50RB#0	NV	50	-5.40	-0.007616	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-30	-5.70	-0.008028	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	-20	-9.70	-0.013662	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	0	-5.80	-0.008169	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	10	-5.10	-0.007183	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	20	-6.40	-0.009014	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	30	-7.30	-0.010282	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	40	-4.20	-0.005915	±2.5	PASS
Band17	10MHz	QPSK	23790	50RB#0	NV	50	-7.00	-0.009859	±2.5	PASS



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D = 14.7	401411-	ODOK	00000	50DD#0	NIV/	20	7.00	0.044444	.0.5	DAGG
Band17	10MHz	QPSK	23800	50RB#0	NV	-30	-7.90	-0.011111	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	-20	-4.00	-0.005626	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	0	-7.20	-0.010141	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	10	-3.30	-0.004641	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	20	-6.50	-0.009142	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	30	-5.90	-0.008298	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	40	-10.90	-0.015331	±2.5	PASS
Band17	10MHz	QPSK	23800	50RB#0	NV	50	-6.70	-0.009423	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-30	-10.90	-0.015374	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	-20	-5.10	-0.007193	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	0	-6.70	-0.009450	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	10	-9.50	-0.013399	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	20	-3.10	-0.004372	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	30	-3.50	-0.004937	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	40	-3.90	-0.005501	±2.5	PASS
Band17	10MHz	16QAM	23780	50RB#0	NV	50	-7.20	-0.010141	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-30	-6.50	-0.009155	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	-20	-0.60	-0.000845	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	0	-3.60	-0.005070	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	10	-7.20	-0.010141	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	20	-6.90	-0.009718	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	30	-5.90	-0.008310	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	40	-1.80	-0.002535	±2.5	PASS
Band17	10MHz	16QAM	23790	50RB#0	NV	50	-10.40	-0.014648	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-30	-10.50	-0.014768	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	-20	-5.40	-0.007595	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	0	-2.20	-0.003094	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	10	-5.40	-0.007595	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	20	-4.60	-0.006470	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	30	-5.50	-0.007736	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	40	-10.30	-0.014487	±2.5	PASS
Band17	10MHz	16QAM	23800	50RB#0	NV	50	-4.50	-0.006329	±2.5	PASS



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