

Appendix K: Test Data for E-UTRA Band 17

Product Name: mobile phone

Trade Mark: Purism

Test Model: Librem 5

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	53.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Ken He
Supervised by:	LI HUAN

K.1 Conducted Output Power

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band17	5MHz	QPSK	23755	1RB#0	24.03	PASS
Band17	5MHz	QPSK	23755	1RB#12	24.14	PASS
Band17	5MHz	QPSK	23755	1RB#24	24.04	PASS
Band17	5MHz	QPSK	23755	12RB#0	22.92	PASS
Band17	5MHz	QPSK	23755	12RB#6	22.97	PASS
Band17	5MHz	QPSK	23755	12RB#13	23.01	PASS
Band17	5MHz	QPSK	23755	25RB#0	22.98	PASS
Band17	5MHz	QPSK	23790	1RB#24	23.92	PASS
Band17	5MHz	QPSK	23790	1RB#12	24.26	PASS
Band17	5MHz	QPSK	23790	1RB#0	23.95	PASS
Band17	5MHz	QPSK	23790	12RB#0	22.85	PASS
Band17	5MHz	QPSK	23790	12RB#13	22.78	PASS
Band17	5MHz	QPSK	23790	12RB#6	22.86	PASS
Band17	5MHz	QPSK	23790	25RB#0	22.79	PASS
Band17	5MHz	QPSK	23825	1RB#24	23.82	PASS
Band17	5MHz	QPSK	23825	1RB#12	23.92	PASS
Band17	5MHz	QPSK	23825	1RB#0	24.12	PASS
Band17	5MHz	QPSK	23825	12RB#13	22.69	PASS
Band17	5MHz	QPSK	23825	12RB#6	22.83	PASS
Band17	5MHz	QPSK	23825	12RB#0	22.82	PASS
Band17	5MHz	QPSK	23825	25RB#0	22.73	PASS
Band17	5MHz	16QAM	23755	1RB#24	22.75	PASS
Band17	5MHz	16QAM	23755	1RB#0	22.75	PASS
Band17	5MHz	16QAM	23755	1RB#12	22.59	PASS
Band17	5MHz	16QAM	23755	12RB#0	21.97	PASS
Band17	5MHz	16QAM	23755	12RB#6	21.94	PASS
Band17	5MHz	16QAM	23755	12RB#13	22.10	PASS
Band17	5MHz	16QAM	23755	25RB#0	22.18	PASS
Band17	5MHz	16QAM	23790	1RB#0	23.40	PASS
Band17	5MHz	16QAM	23790	1RB#24	23.09	PASS
Band17	5MHz	16QAM	23790	1RB#12	22.76	PASS
Band17	5MHz	16QAM	23790	12RB#0	21.97	PASS
Band17	5MHz	16QAM	23790	12RB#13	21.97	PASS

Band17	5MHz	16QAM	23790	12RB#6	22.02	PASS
Band17	5MHz	16QAM	23790	25RB#0	21.74	PASS
Band17	5MHz	16QAM	23825	1RB#12	22.83	PASS
Band17	5MHz	16QAM	23825	1RB#24	22.85	PASS
Band17	5MHz	16QAM	23825	1RB#0	22.97	PASS
Band17	5MHz	16QAM	23825	12RB#0	21.85	PASS
Band17	5MHz	16QAM	23825	12RB#6	21.85	PASS
Band17	5MHz	16QAM	23825	12RB#13	21.70	PASS
Band17	5MHz	16QAM	23825	25RB#0	21.80	PASS
Band17	10MHz	QPSK	23780	1RB#24	23.92	PASS
Band17	10MHz	QPSK	23780	1RB#0	23.77	PASS
Band17	10MHz	QPSK	23780	1RB#49	23.70	PASS
Band17	10MHz	QPSK	23780	25RB#0	22.97	PASS
Band17	10MHz	QPSK	23780	25RB#12	22.89	PASS
Band17	10MHz	QPSK	23780	25RB#25	22.80	PASS
Band17	10MHz	QPSK	23780	50RB#0	22.80	PASS
Band17	10MHz	QPSK	23790	1RB#49	23.62	PASS
Band17	10MHz	QPSK	23790	1RB#24	24.15	PASS
Band17	10MHz	QPSK	23790	1RB#0	23.54	PASS
Band17	10MHz	QPSK	23790	25RB#0	22.85	PASS
Band17	10MHz	QPSK	23790	25RB#25	22.75	PASS
Band17	10MHz	QPSK	23790	25RB#12	22.85	PASS
Band17	10MHz	QPSK	23790	50RB#0	22.74	PASS
Band17	10MHz	QPSK	23800	1RB#49	23.48	PASS
Band17	10MHz	QPSK	23800	1RB#24	24.07	PASS
Band17	10MHz	QPSK	23800	1RB#0	23.66	PASS
Band17	10MHz	QPSK	23800	25RB#25	22.75	PASS
Band17	10MHz	QPSK	23800	25RB#12	22.77	PASS
Band17	10MHz	QPSK	23800	25RB#0	22.76	PASS
Band17	10MHz	QPSK	23800	50RB#0	22.72	PASS
Band17	10MHz	16QAM	23780	1RB#49	22.67	PASS
Band17	10MHz	16QAM	23780	1RB#24	23.44	PASS
Band17	10MHz	16QAM	23780	1RB#0	22.85	PASS
Band17	10MHz	16QAM	23780	25RB#0	21.85	PASS
Band17	10MHz	16QAM	23780	25RB#12	21.84	PASS
Band17	10MHz	16QAM	23780	25RB#25	21.89	PASS
Band17	10MHz	16QAM	23780	50RB#0	21.86	PASS
Band17	10MHz	16QAM	23790	1RB#0	22.55	PASS

Band17	10MHz	16QAM	23790	1RB#49	22.41	PASS
Band17	10MHz	16QAM	23790	1RB#24	22.96	PASS
Band17	10MHz	16QAM	23790	25RB#0	21.93	PASS
Band17	10MHz	16QAM	23790	25RB#25	21.89	PASS
Band17	10MHz	16QAM	23790	25RB#12	21.93	PASS
Band17	10MHz	16QAM	23790	50RB#0	21.74	PASS
Band17	10MHz	16QAM	23800	1RB#24	23.08	PASS
Band17	10MHz	16QAM	23800	1RB#49	22.97	PASS
Band17	10MHz	16QAM	23800	1RB#0	22.97	PASS
Band17	10MHz	16QAM	23800	25RB#0	21.87	PASS
Band17	10MHz	16QAM	23800	25RB#12	21.77	PASS
Band17	10MHz	16QAM	23800	25RB#25	21.79	PASS
Band17	10MHz	16QAM	23800	50RB#0	21.70	PASS

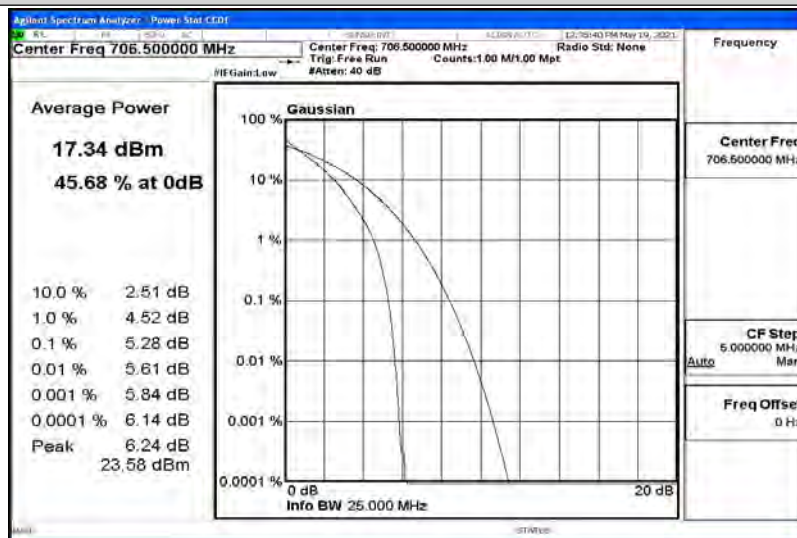
K.2 Peak-to-Average Ratio(CCDF)

Test Result

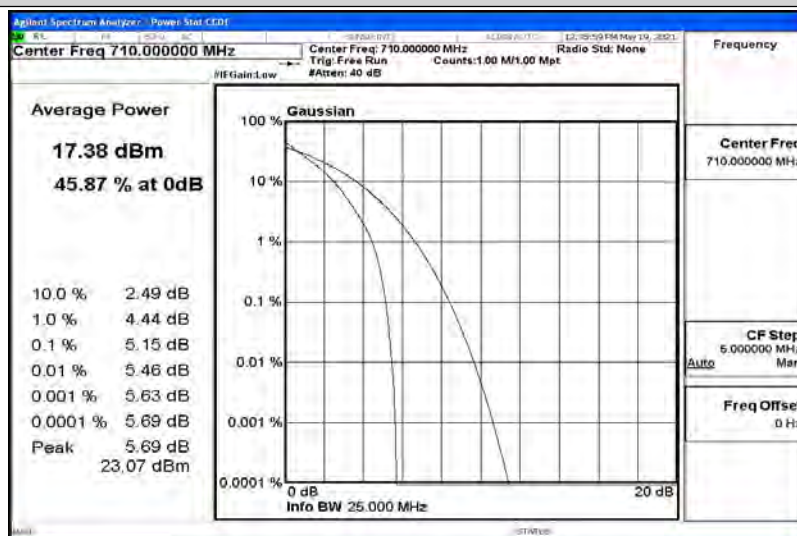
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	5.28	13	PASS
Band17	5MHz	QPSK	23790	25RB#0	5.15	13	PASS
Band17	5MHz	QPSK	23825	25RB#0	5.07	13	PASS
Band17	5MHz	16QAM	23755	25RB#0	6.12	13	PASS
Band17	5MHz	16QAM	23790	25RB#0	6.04	13	PASS
Band17	5MHz	16QAM	23825	25RB#0	5.93	13	PASS
Band17	10MHz	QPSK	23780	50RB#0	5.15	13	PASS
Band17	10MHz	QPSK	23800	50RB#0	5.14	13	PASS
Band17	10MHz	16QAM	23780	50RB#0	6.03	13	PASS
Band17	10MHz	16QAM	23800	50RB#0	6.01	13	PASS

Test Graphs

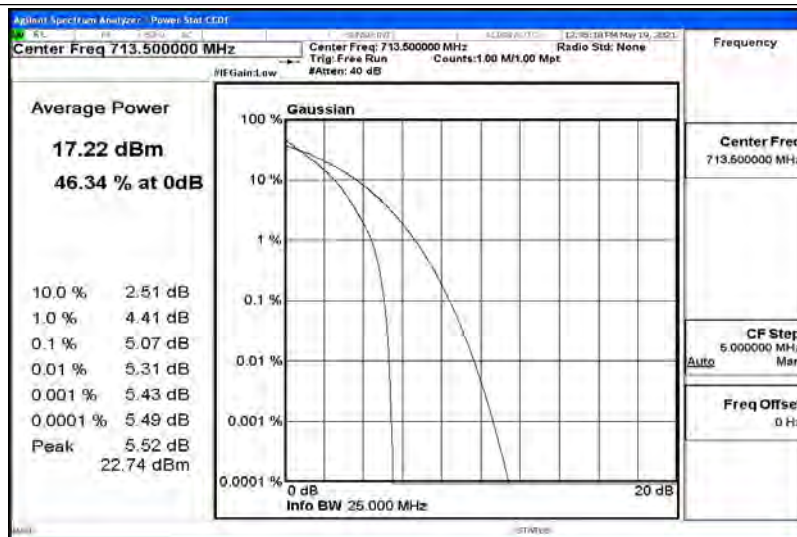
Band17-5MHz-QPSK-23755-25RB#0



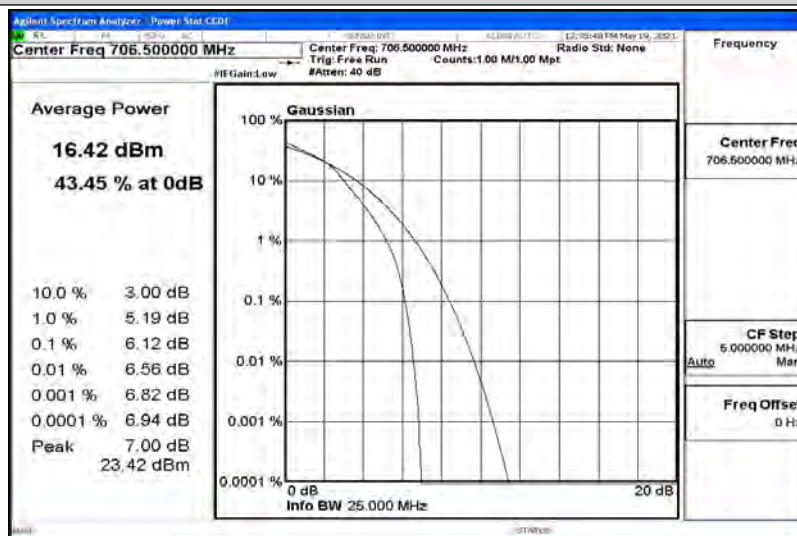
Band17-5MHz-QPSK-23790-25RB#0



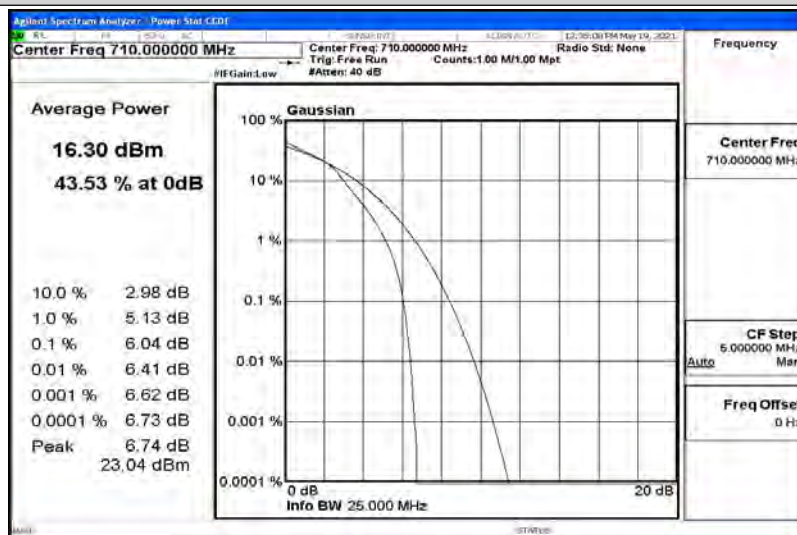
Band17-5MHz-QPSK-23825-25RB#0



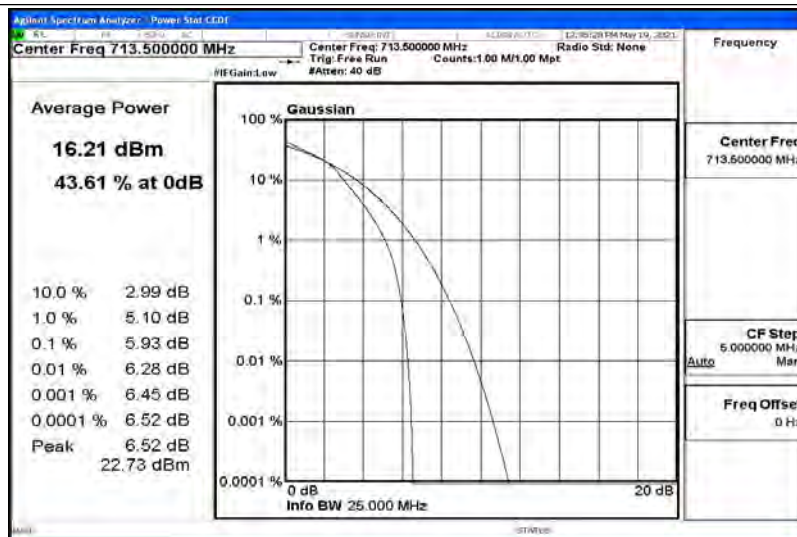
Band17-5MHz-16QAM-23755-25RB#0



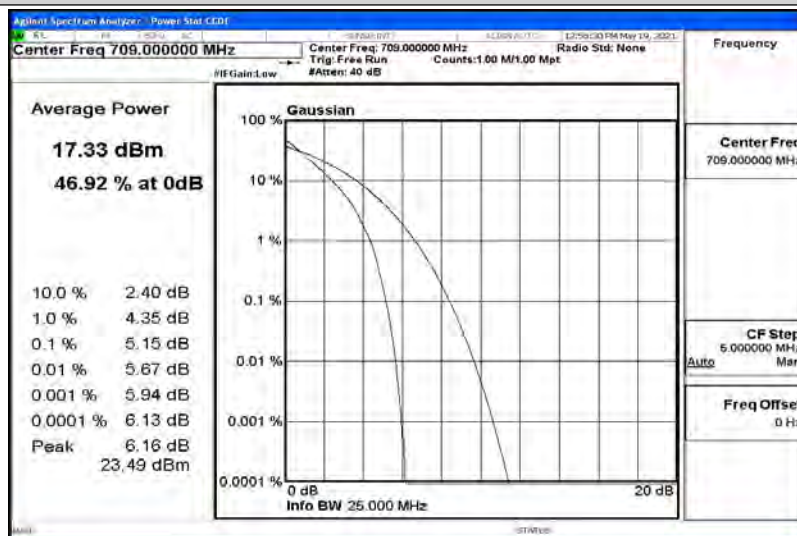
Band17-5MHz-16QAM-23790-25RB#0



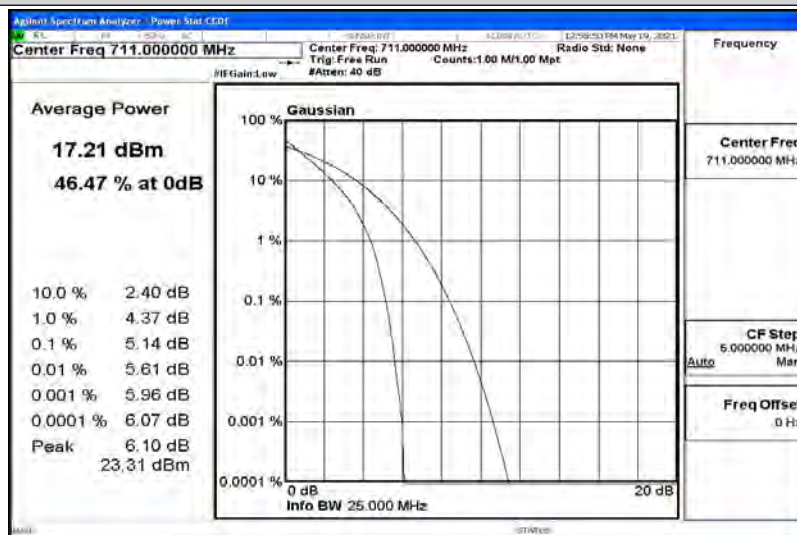
Band17-5MHz-16QAM-23825-25RB#0



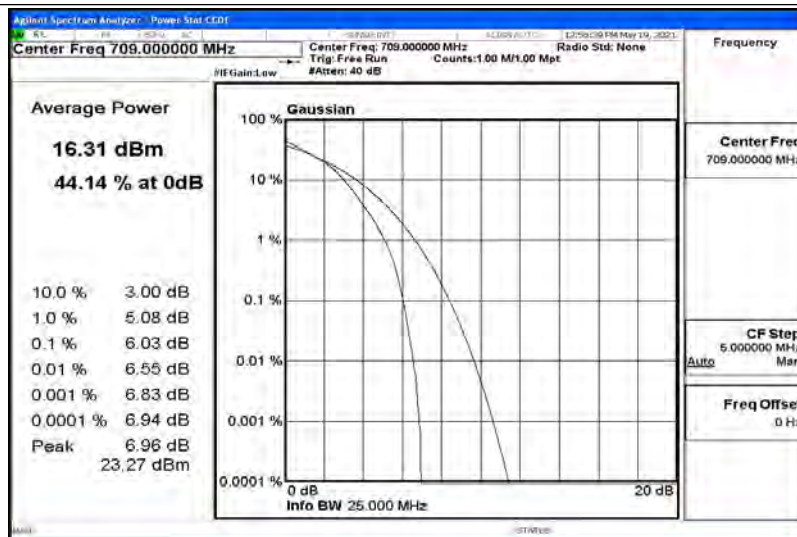
Band17-10MHz-QPSK-23780-50RB#0



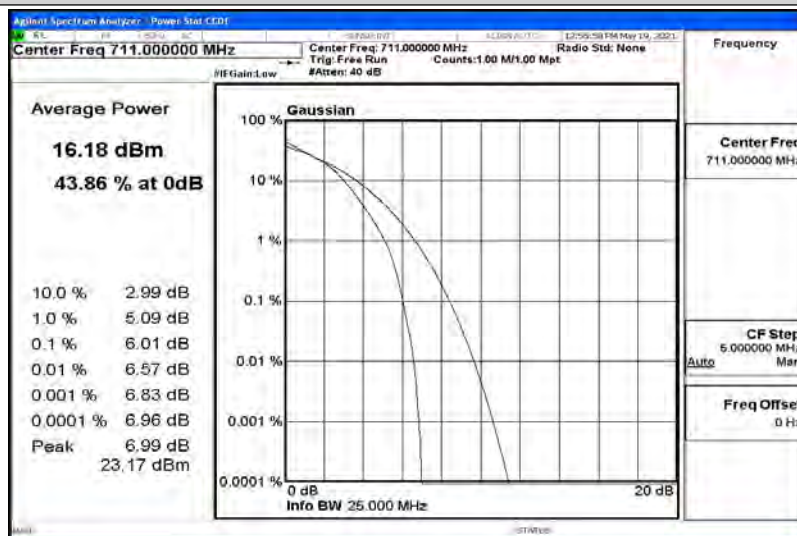
Band17-10MHz-QPSK-23800-50RB#0



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



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



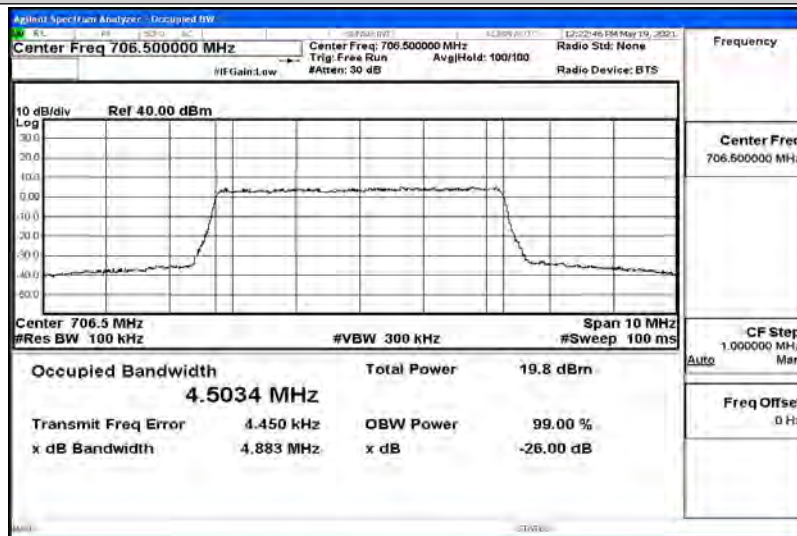
K.3 26dB Bandwidth and Occupied Bandwidth

Test Result

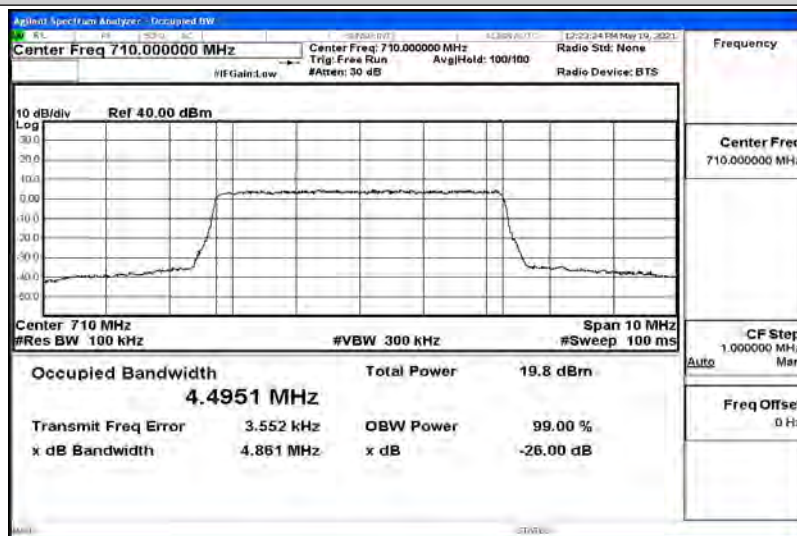
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	4.5034	4.883	PASS
Band17	5MHz	QPSK	23790	25RB#0	4.4951	4.861	PASS
Band17	5MHz	QPSK	23825	25RB#0	4.5105	4.870	PASS
Band17	5MHz	16QAM	23755	25RB#0	4.5040	4.876	PASS
Band17	5MHz	16QAM	23790	25RB#0	4.4984	4.902	PASS
Band17	5MHz	16QAM	23825	25RB#0	4.5096	4.870	PASS
Band17	10MHz	QPSK	23780	50RB#0	8.9404	9.537	PASS
Band17	10MHz	QPSK	23790	50RB#0	8.9536	9.513	PASS
Band17	10MHz	QPSK	23800	50RB#0	8.9557	9.536	PASS
Band17	10MHz	16QAM	23780	50RB#0	8.9461	9.524	PASS
Band17	10MHz	16QAM	23790	50RB#0	8.9499	9.534	PASS
Band17	10MHz	16QAM	23800	50RB#0	8.9610	9.512	PASS

Test Graphs

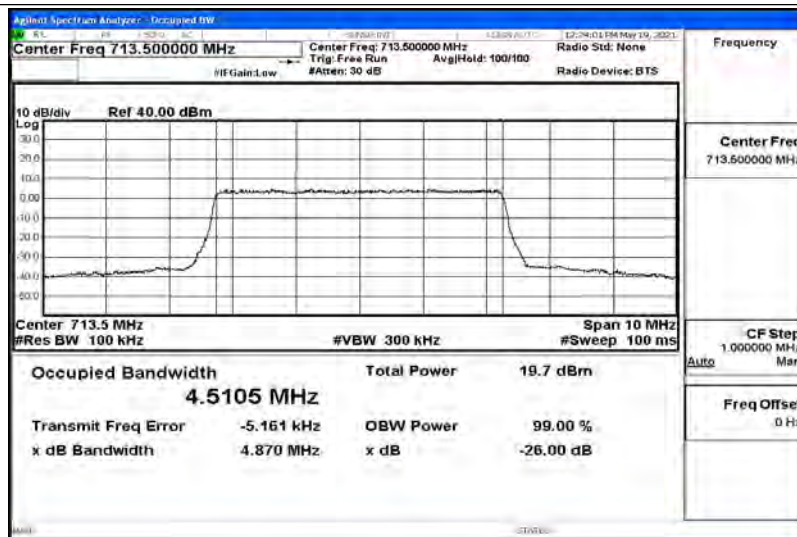
Band17-5MHz-QPSK-23755-25RB#0-4.5034



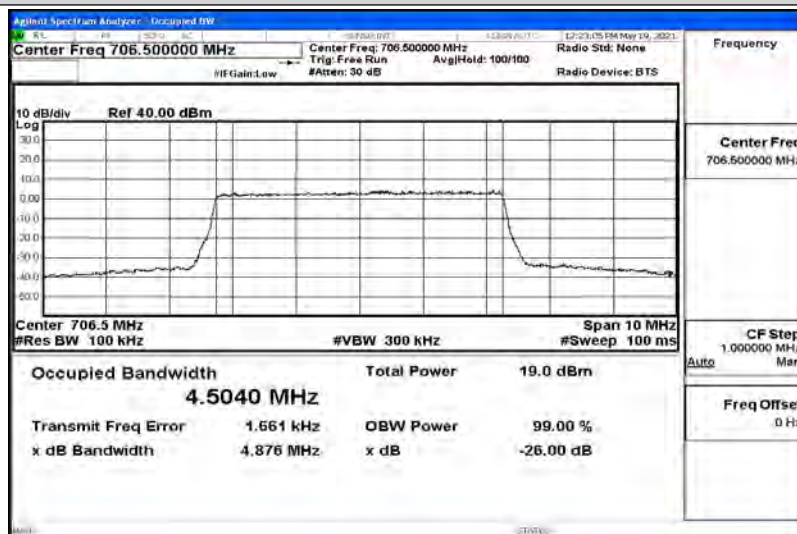
Band17-5MHz-QPSK-23790-25RB#0-4.4951



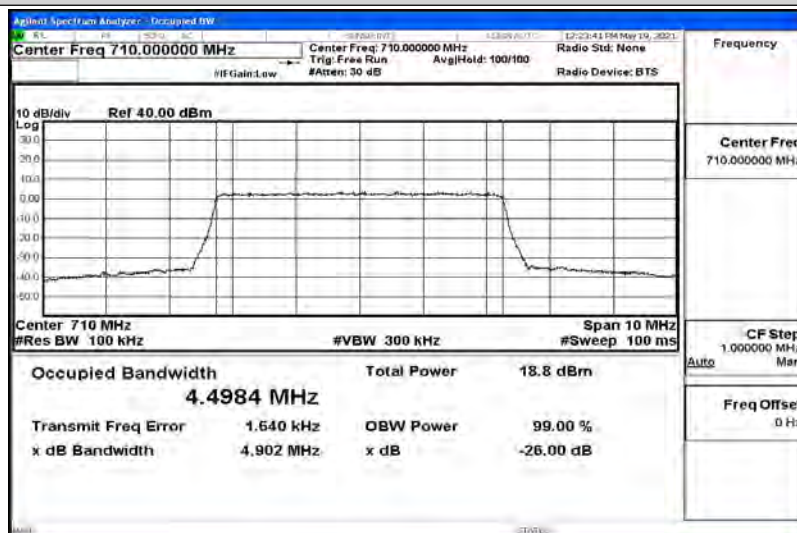
Band17-5MHz-QPSK-23825-25RB#0-4.5105



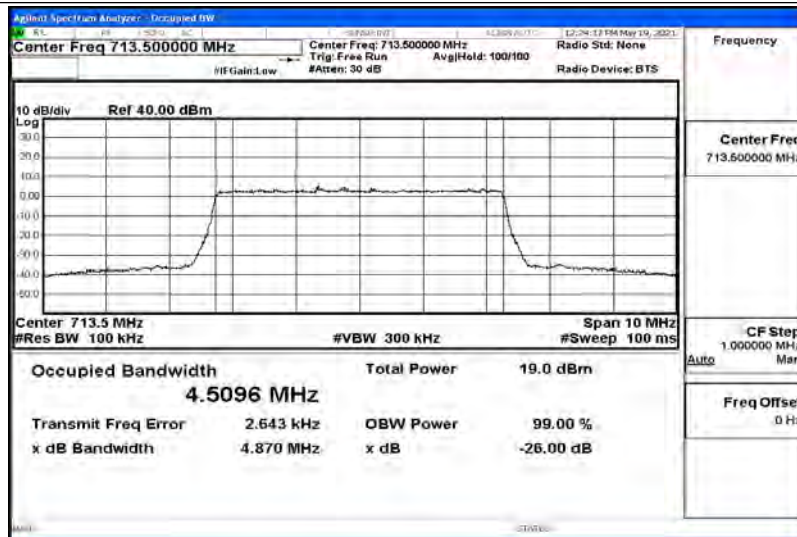
Band17-5MHz-16QAM-23755-25RB#0-4.5040



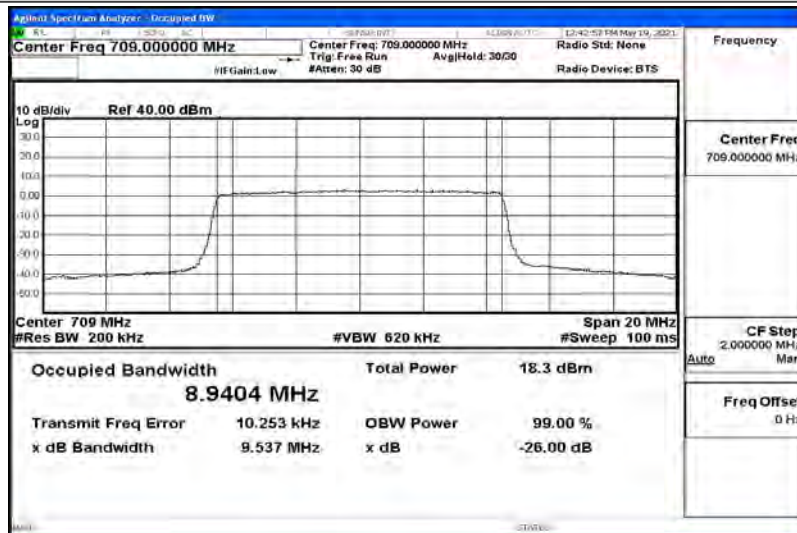
Band17-5MHz-16QAM-23790-25RB#0-4.4984



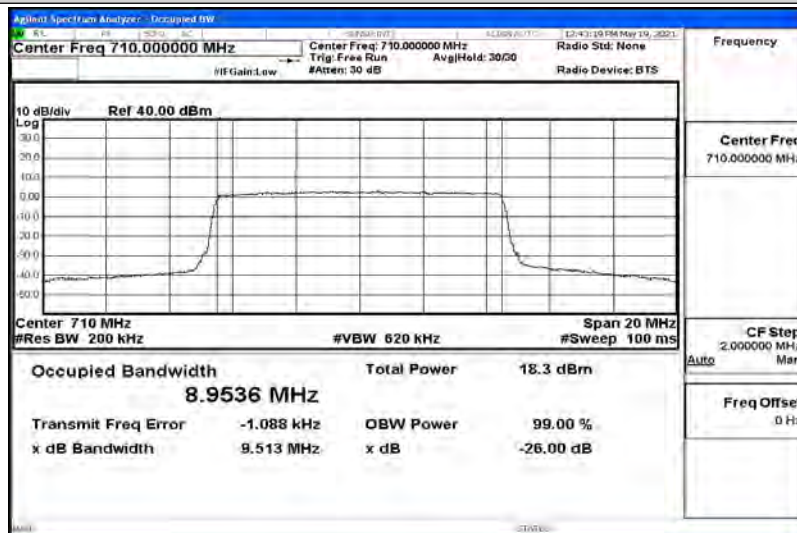
Band17-5MHz-16QAM-23825-25RB#0-4.5096



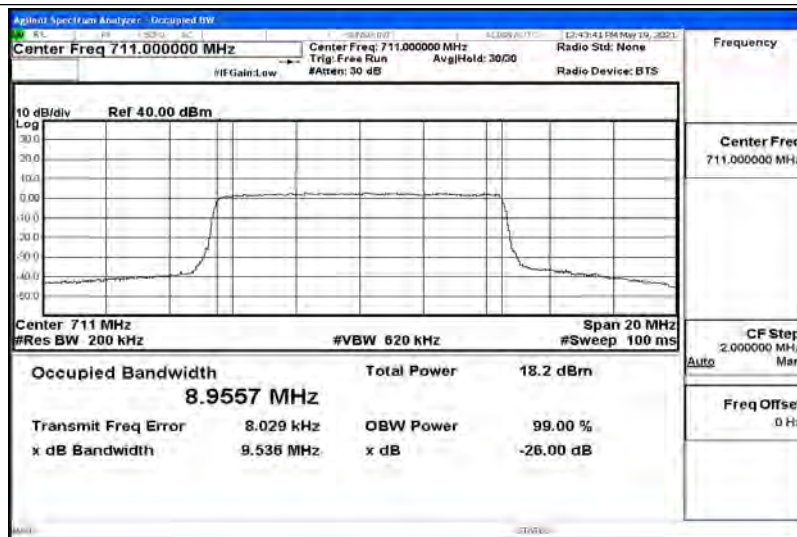
Band17-10MHz-QPSK-23780-50RB#0-8.9404



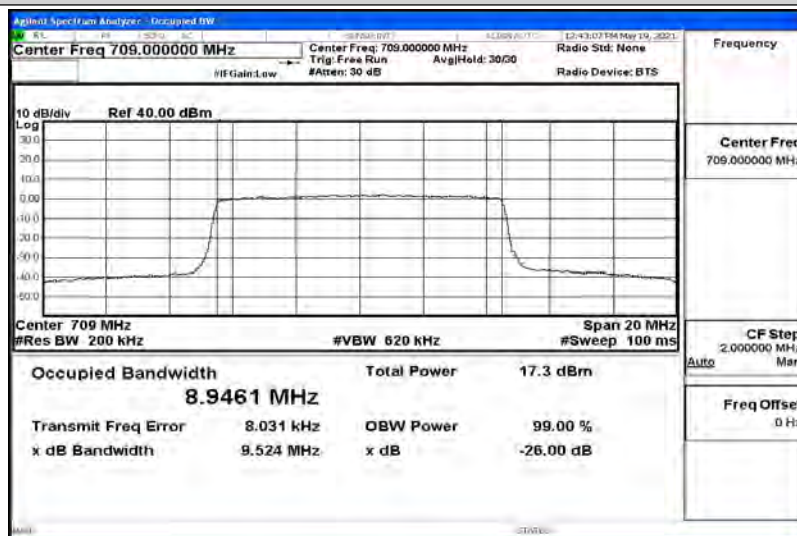
Band17-10MHz-QPSK-23790-50RB#0-8.9536



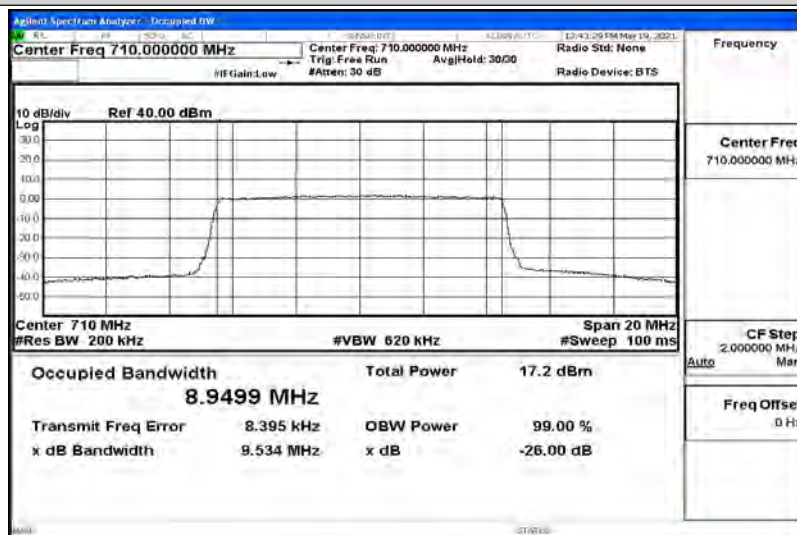
Band17-10MHz-QPSK-23800-50RB#0-8.9557



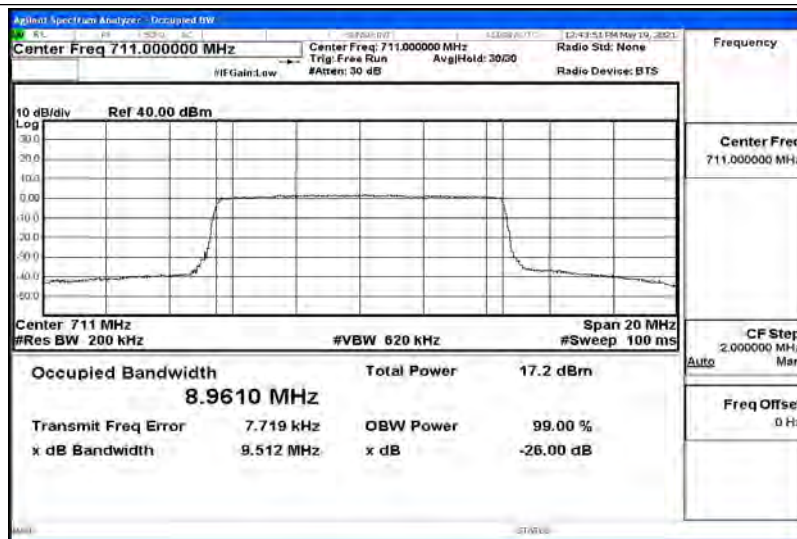
Band17-10MHz-16QAM-23780-50RB#0-8.9461



Band17-10MHz-16QAM-23790-50RB#0-8.9499



Band17-10MHz-16QAM-23800-50RB#0-8.9610



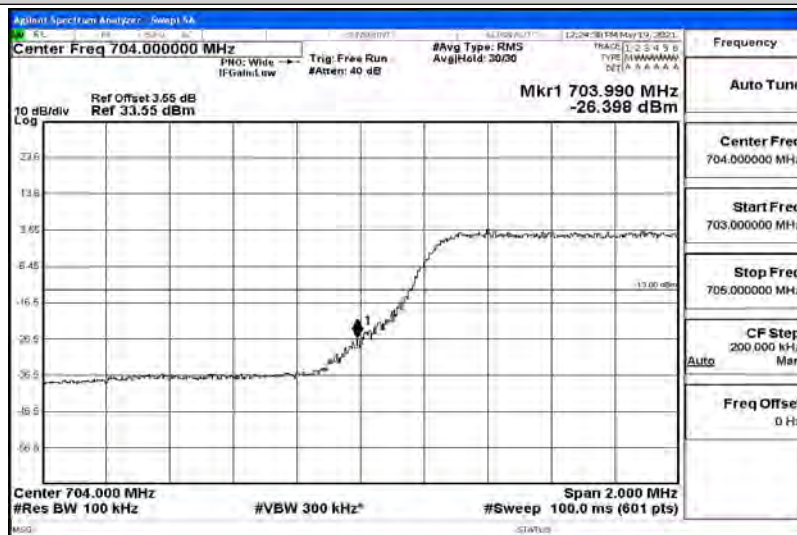
K.4 Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band17	5MHz	QPSK	23755	25RB#0	-26.40	PASS
Band17	5MHz	QPSK	23825	25RB#0	-26.79	PASS
Band17	5MHz	16QAM	23755	25RB#0	-26.97	PASS
Band17	5MHz	16QAM	23825	25RB#0	-26.51	PASS
Band17	10MHz	QPSK	23780	50RB#0	-31.51	PASS
Band17	10MHz	QPSK	23800	50RB#0	-30.23	PASS
Band17	10MHz	16QAM	23780	50RB#0	-33.23	PASS
Band17	10MHz	16QAM	23800	50RB#0	-31.28	PASS

Test Graphs

Band17-5MHz-QPSK-23755-25RB#0



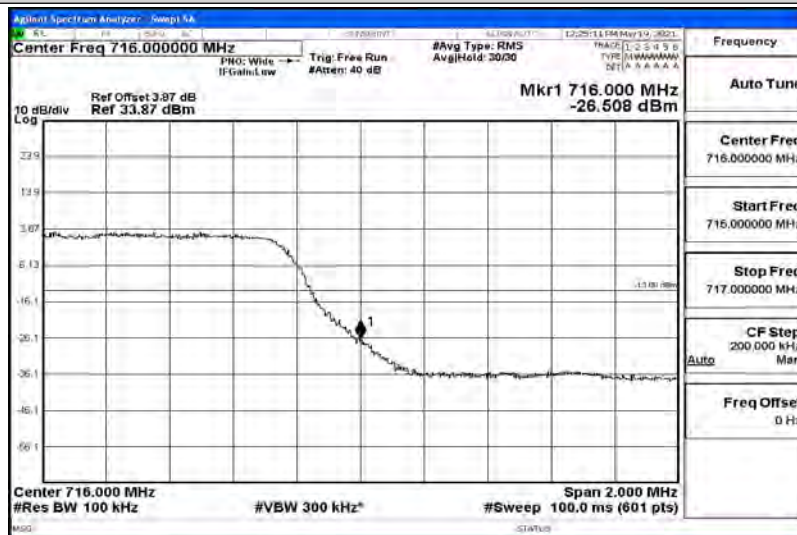
Band17-5MHz-QPSK-23825-25RB#0



Band17-5MHz-16QAM-23755-25RB#0



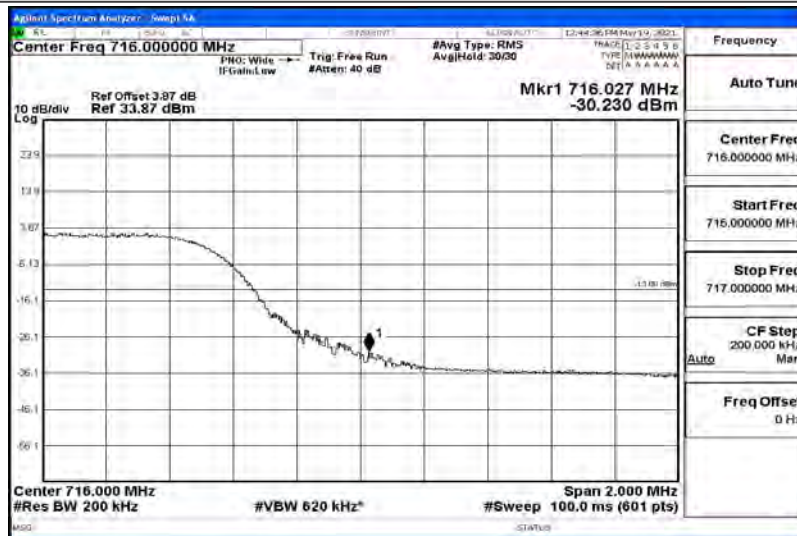
Band17-5MHz-16QAM-23825-25RB#0



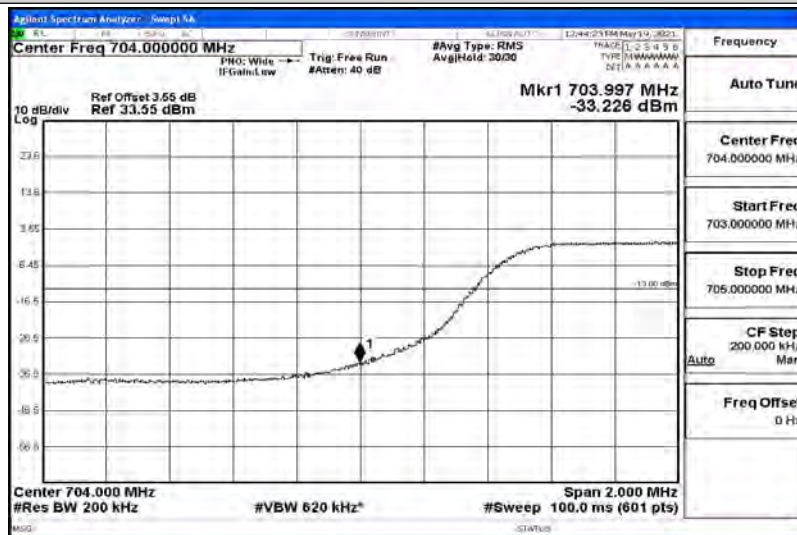
Band17-10MHz-QPSK-23780-50RB#0



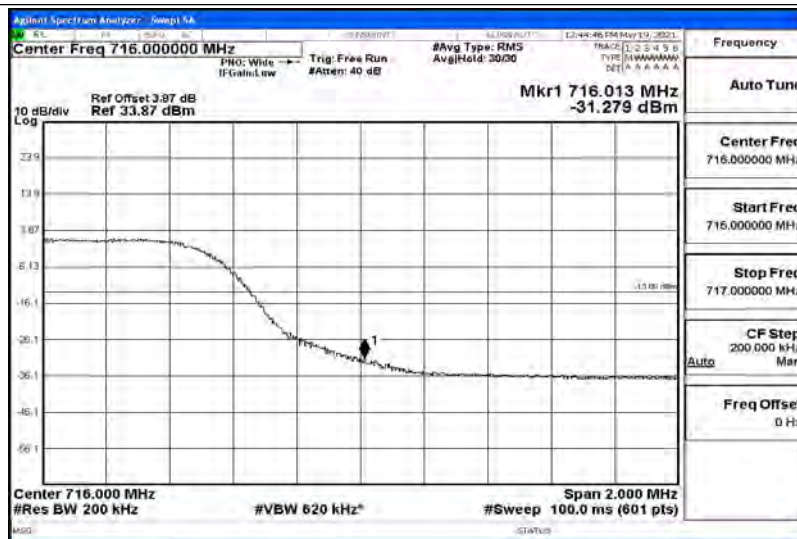
Band17-10MHz-QPSK-23800-50RB#0



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



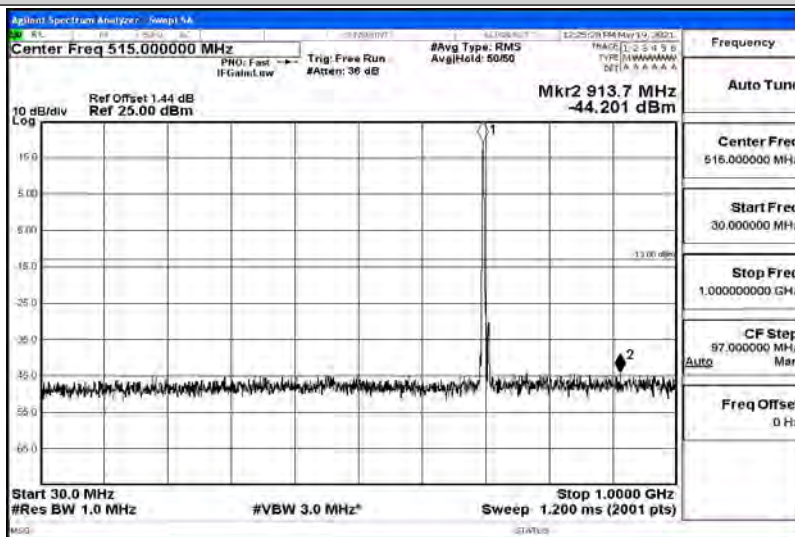
Band17-10MHz-16QAM-23800-50RB#0



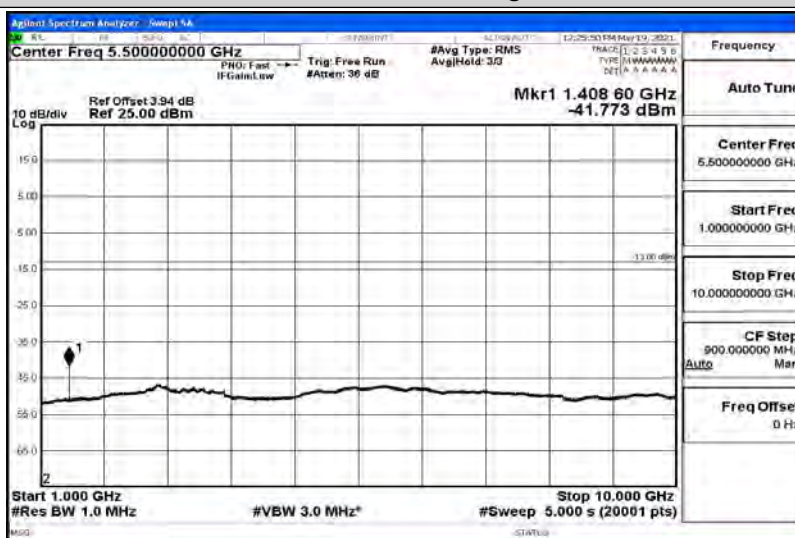
K.5 Conducted Spurious Emission

Test Graphs

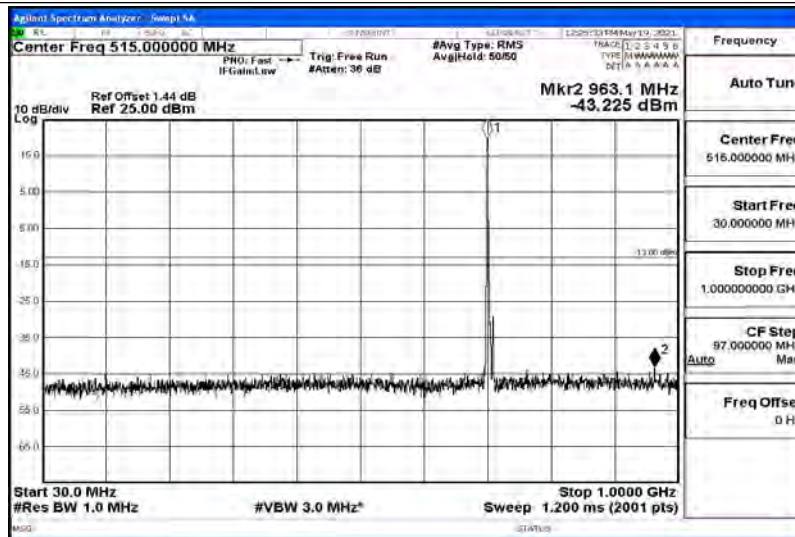
Band17-5MHz-QPSK-23755-1RB#0-Range1:30~1000MHz



Band17-5MHz-QPSK-23755-1RB#0-Range2:1000~10000MHz



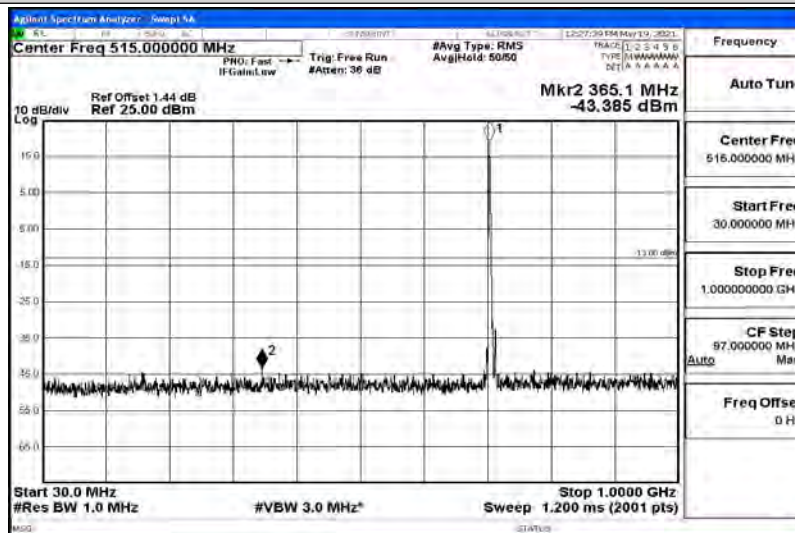
Band17-5MHz-QPSK-23790-1RB#0-Range1:30~1000MHz



Band17-5MHz-QPSK-23790-1RB#0-Range2:1000~10000MHz



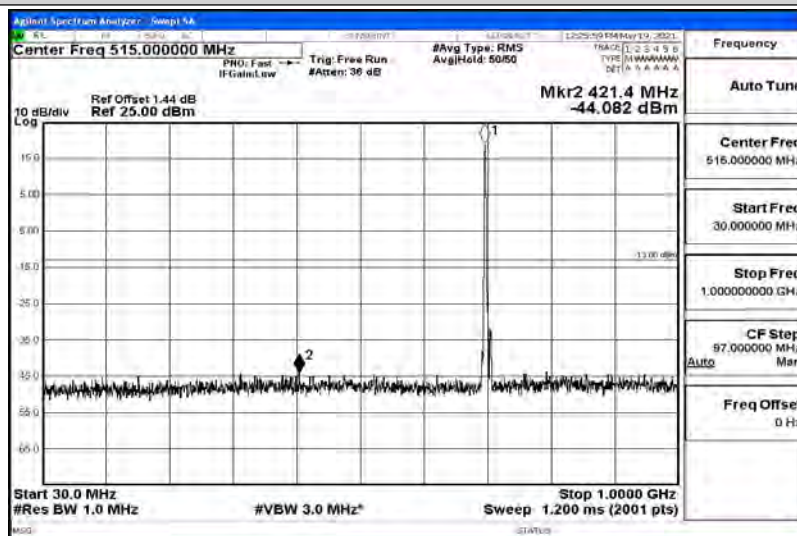
Band17-5MHz-QPSK-23825-1RB#0-Range1:30~1000MHz



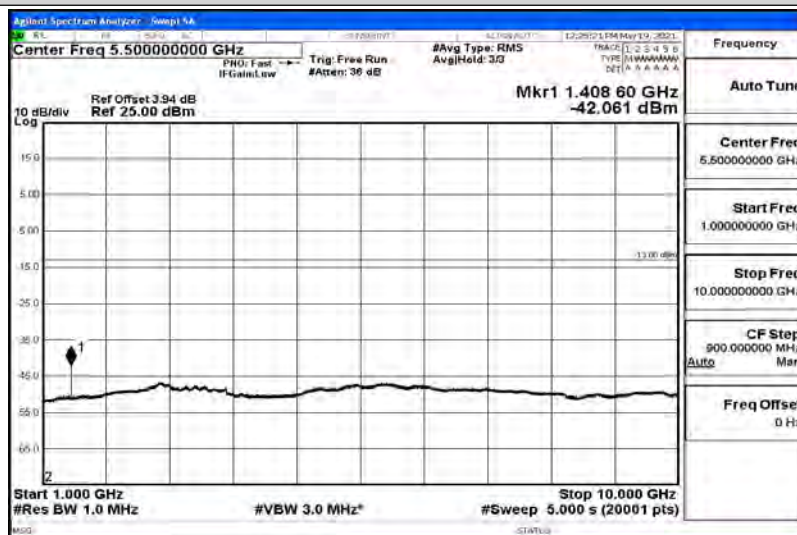
Band17-5MHz-QPSK-23825-1RB#0-Range2:1000~10000MHz



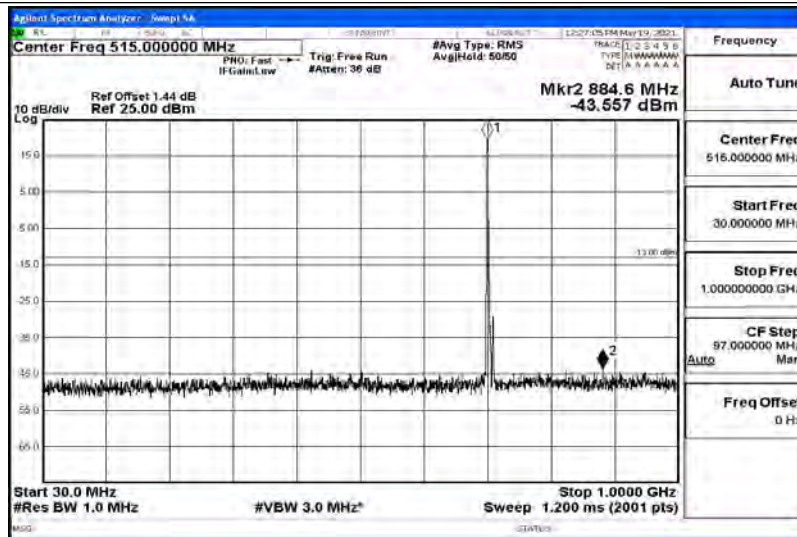
Band17-5MHz-16QAM-23755-1RB#0-Range1:30~1000MHz



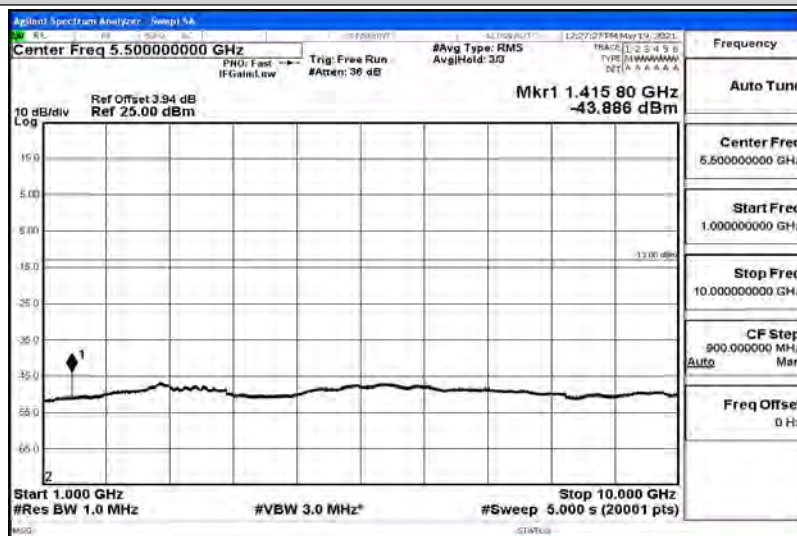
Band17-5MHz-16QAM-23755-1RB#0-Range2:1000~10000MHz



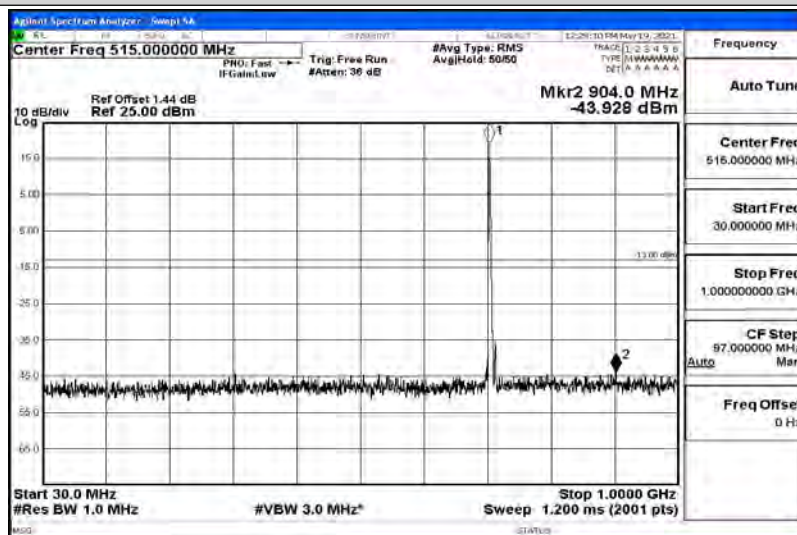
Band17-5MHz-16QAM-23790-1RB#0-Range1:30~1000MHz



Band17-5MHz-16QAM-23790-1RB#0-Range2:1000~10000MHz



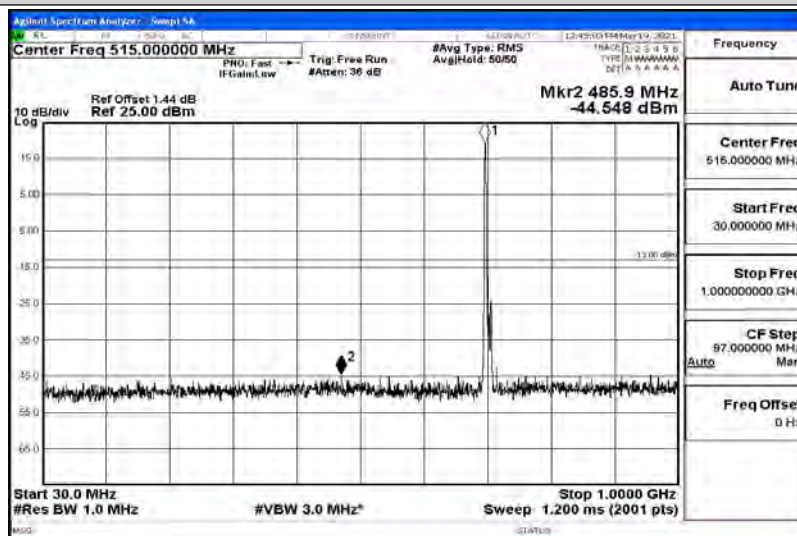
Band17-5MHz-16QAM-23825-1RB#0-Range1:30~1000MHz



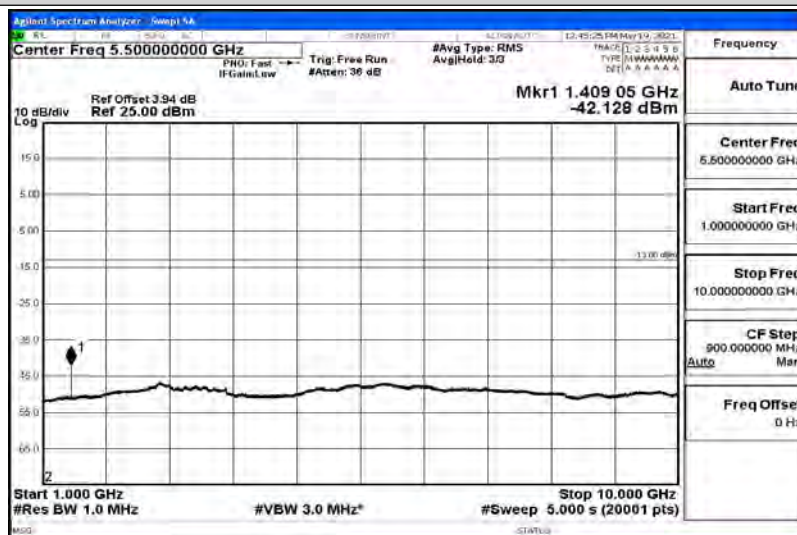
Band17-5MHz-16QAM-23825-1RB#0-Range2:1000~10000MHz



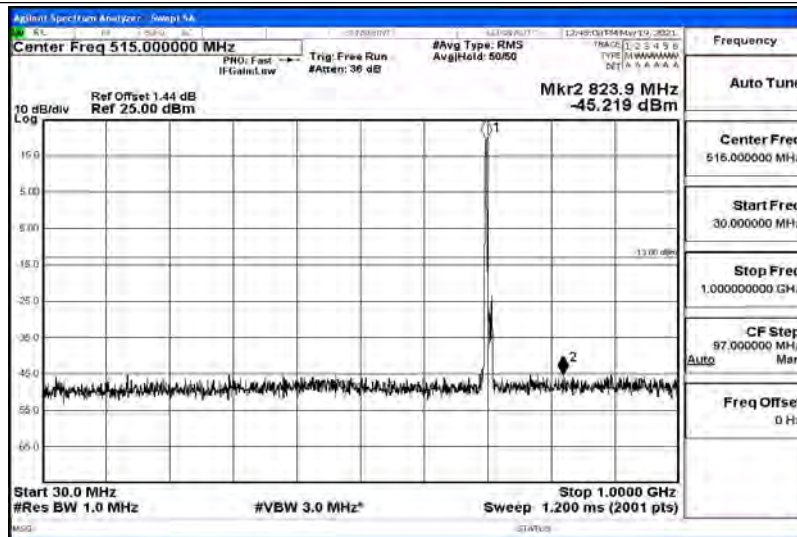
Band17-10MHz-QPSK-23780-1RB#0-Range1:30~1000MHz



Band17-10MHz-QPSK-23780-1RB#0-Range2:1000~10000MHz



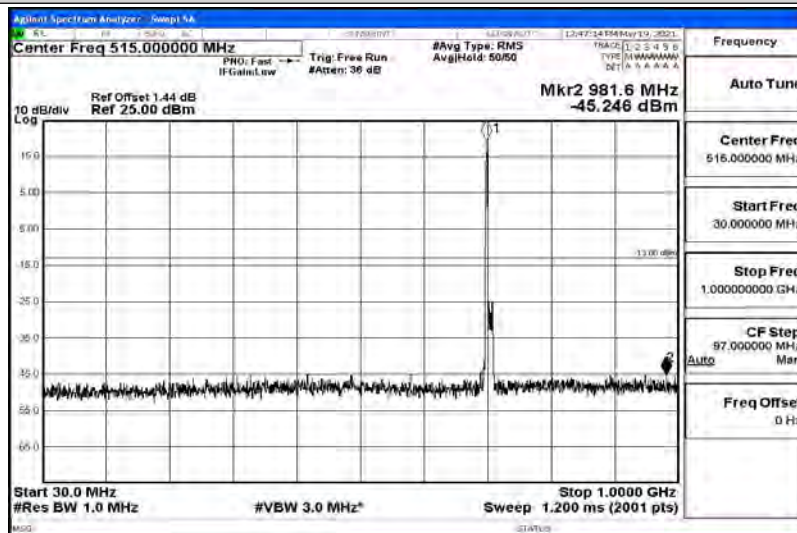
Band17-10MHz-QPSK-23790-1RB#0-Range1:30~1000MHz



Band17-10MHz-QPSK-23790-1RB#0-Range2:1000~10000MHz



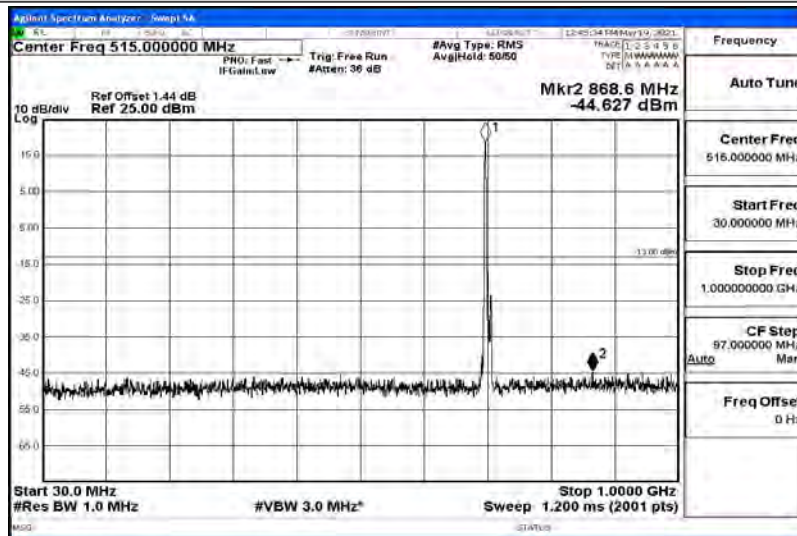
Band17-10MHz-QPSK-23800-1RB#0-Range1:30~1000MHz



Band17-10MHz-QPSK-23800-1RB#0-Range2:1000~10000MHz



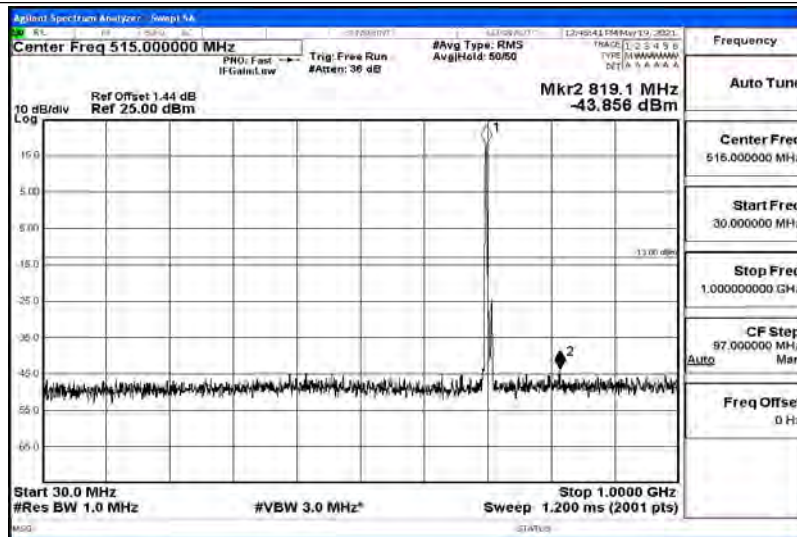
Band17-10MHz-16QAM-23780-1RB#0-Range1:30~1000MHz



Band17-10MHz-16QAM-23780-1RB#0-Range2:1000~10000MHz



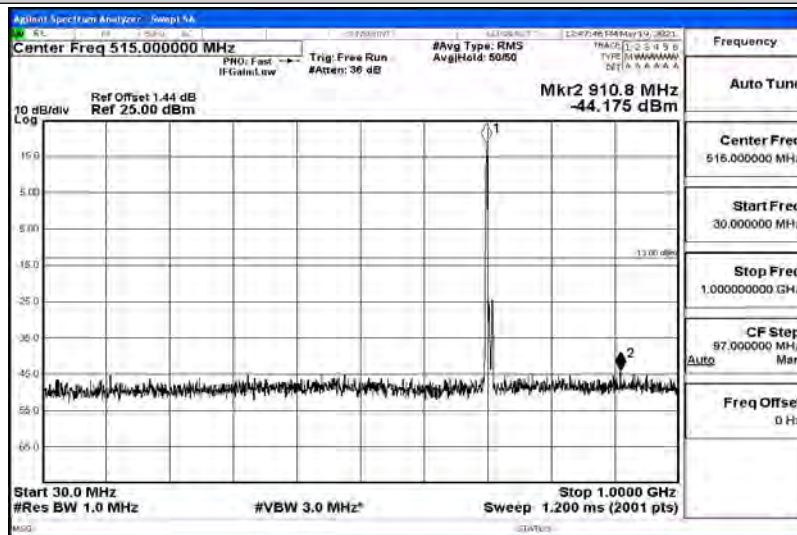
Band17-10MHz-16QAM-23790-1RB#0-Range1:30~1000MHz



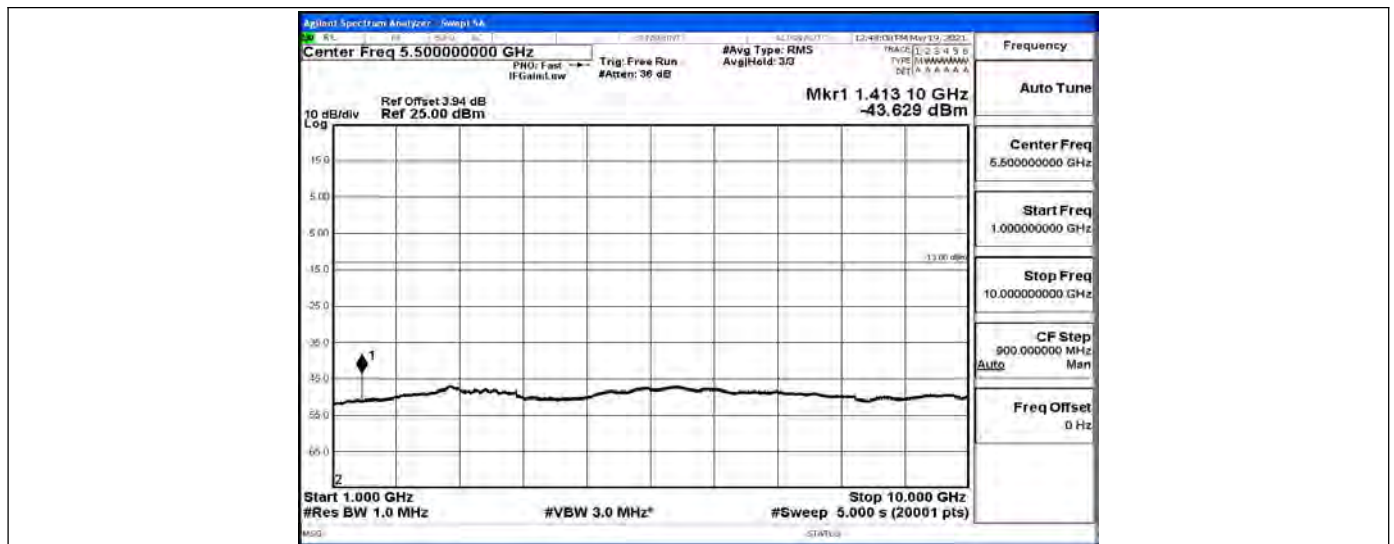
Band17-10MHz-16QAM-23790-1RB#0-Range2:1000~10000MHz



Band17-10MHz-16QAM-23800-1RB#0-Range1:30~1000MHz



Band17-10MHz-16QAM-23800-1RB#0-Range2:1000~10000MHz



Note: Not recorded test plots from 9 KHz to 30 MHz as emission levels 20dB lower than emission limit.