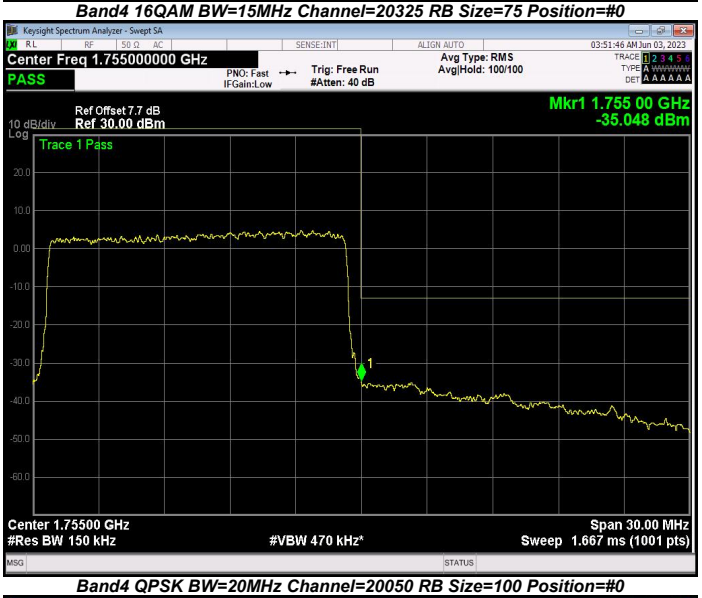
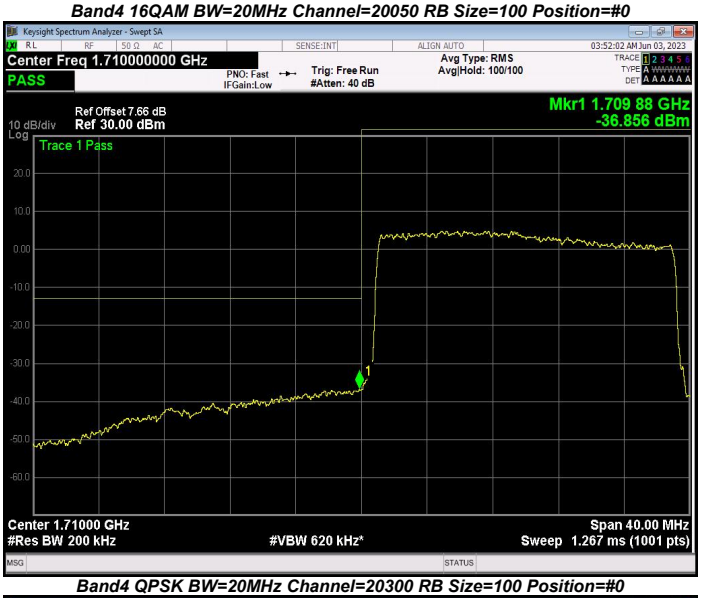
Band4 QPSK BW=15MHz Channel=20325 RB Size=75 Position=#0

Band4 16QAM BW=15MHz Channel=20325 RB Size=75 Position=#0

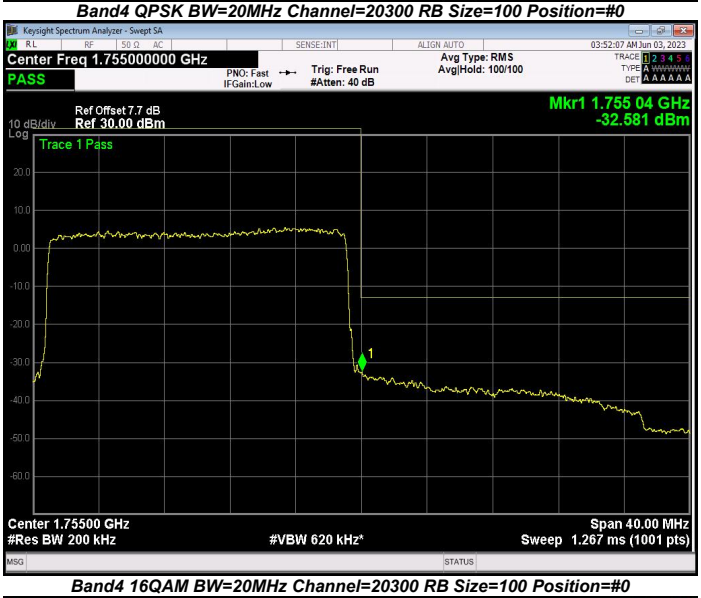


Band4 QPSK BW=20MHz Channel=20050 RB Size=100 Position=#0

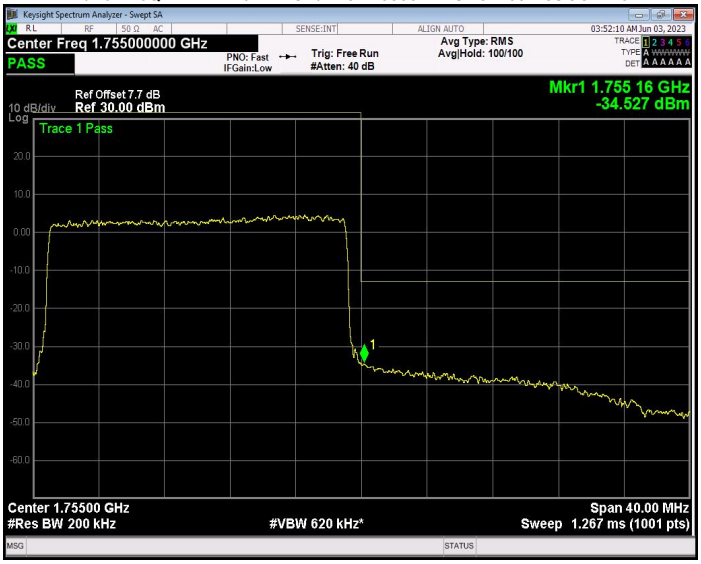
Band4 16QAM BW=20MHz Channel=20050 RB Size=100 Position=#0



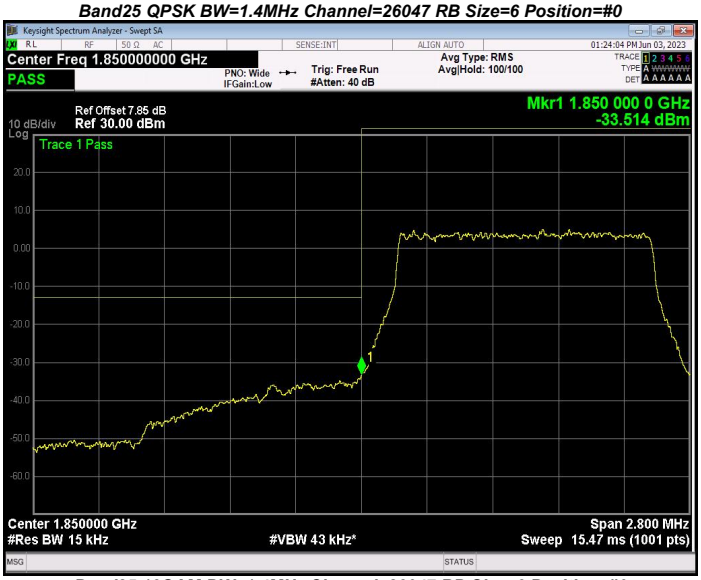
Band4 QPSK BW=20MHz Channel=20300 RB Size=100 Position=#0



Band4 16QAM BW=20MHz Channel=20300 RB Size=100 Position=#0



Band25 QPSK BW=1.4MHz Channel=26047 RB Size=6 Position=#0

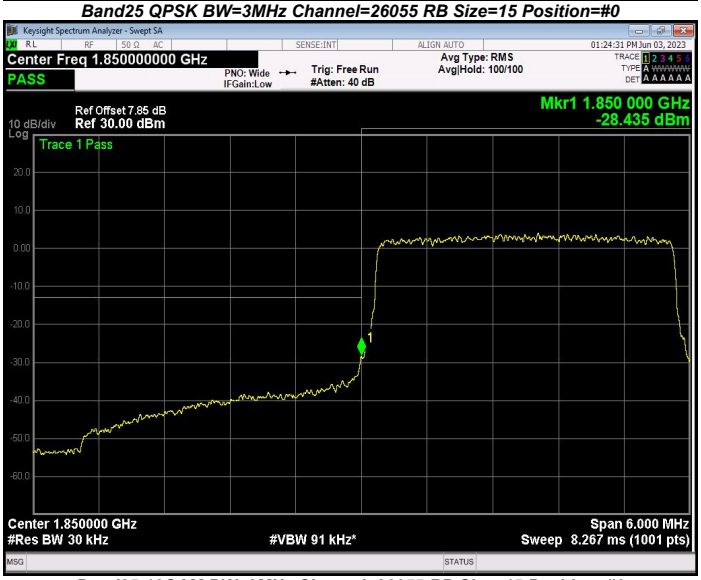


Band25 16QAM BW=1.4MHz Channel=26047 RB Size=6 Position=#0

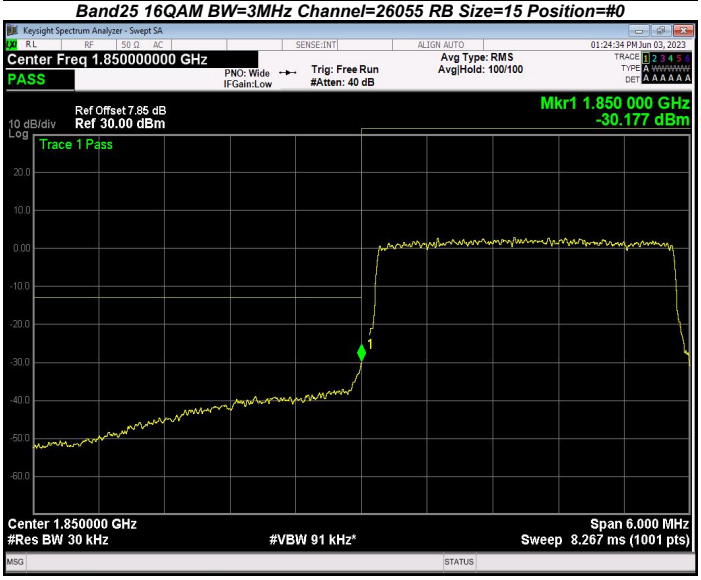
Band25 QPSK BW=1.4MHz Channel=26683 RB Size=6 Position=#0

Band25 16QAM BW=1.4MHz Channel=26683 RB Size=6 Position=#0

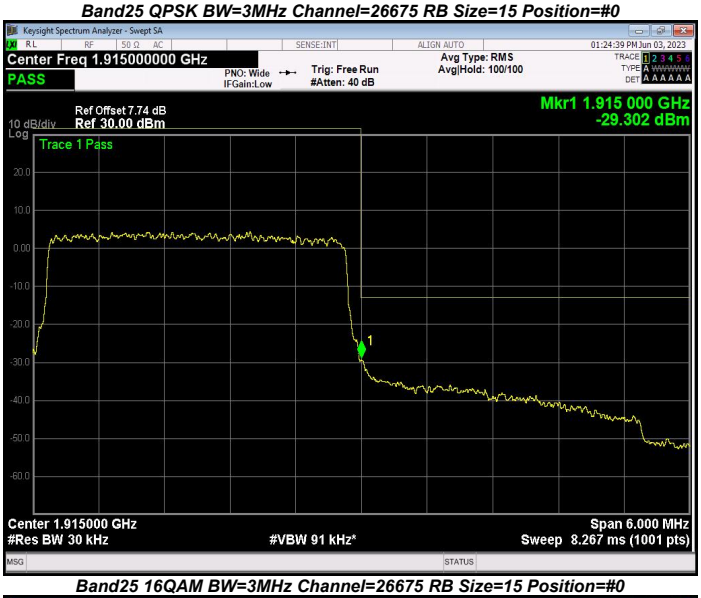
Band25 QPSK BW=3MHz Channel=26055 RB Size=15 Position=#0



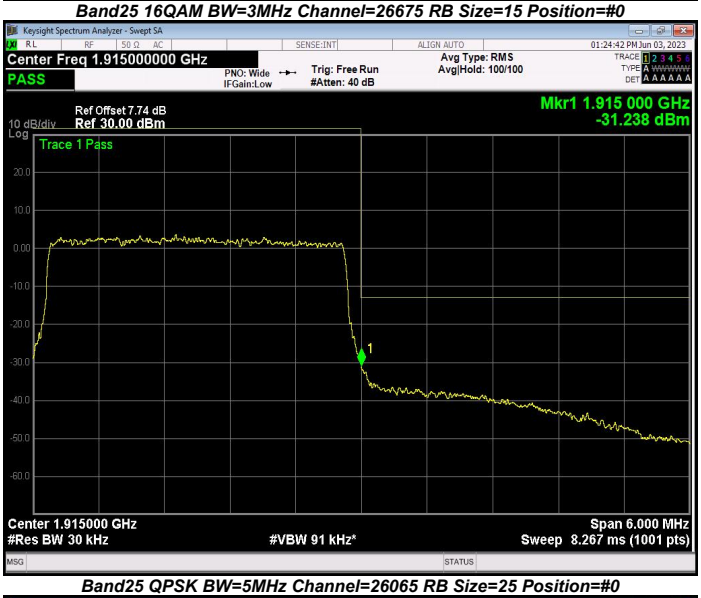
Band25 16QAM BW=3MHz Channel=26055 RB Size=15 Position=#0



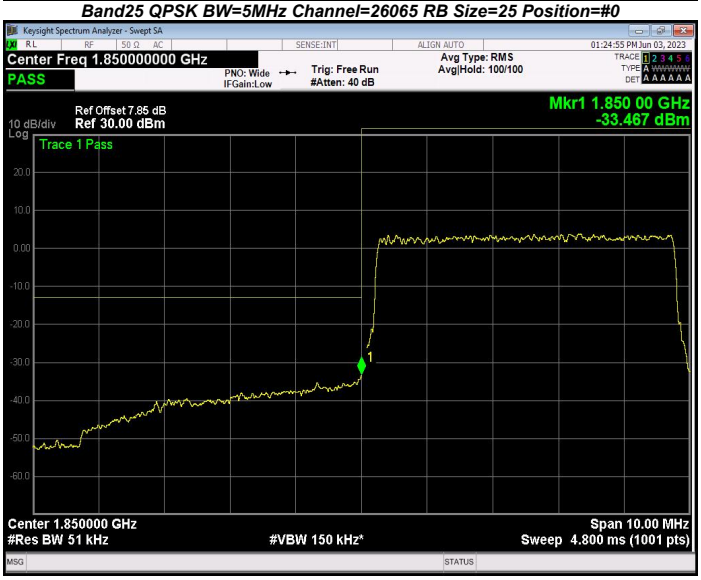
Band25 QPSK BW=3MHz Channel=26675 RB Size=15 Position=#0



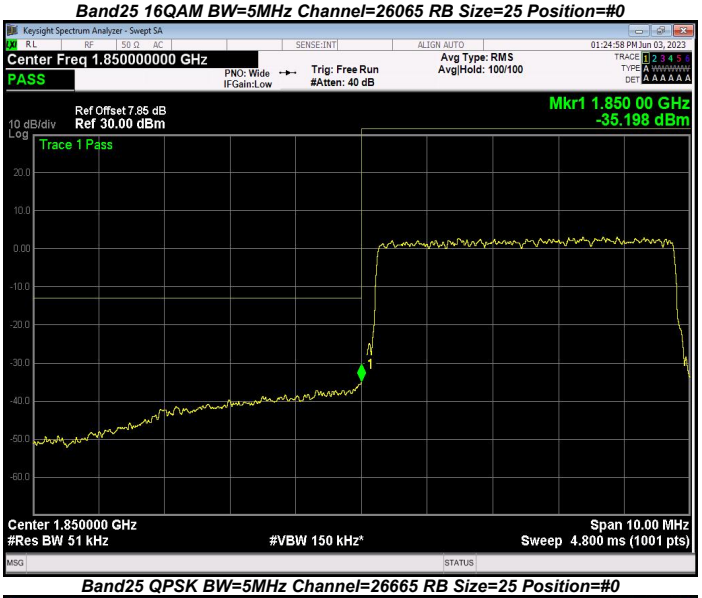
Band25 16QAM BW=3MHz Channel=26675 RB Size=15 Position=#0



Band25 QPSK BW=5MHz Channel=26065 RB Size=25 Position=#0



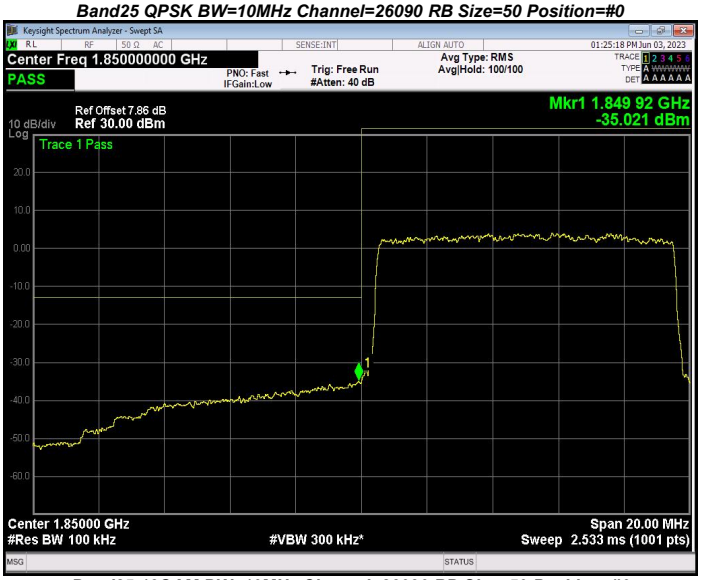
Band25 16QAM BW=5MHz Channel=26065 RB Size=25 Position=#0



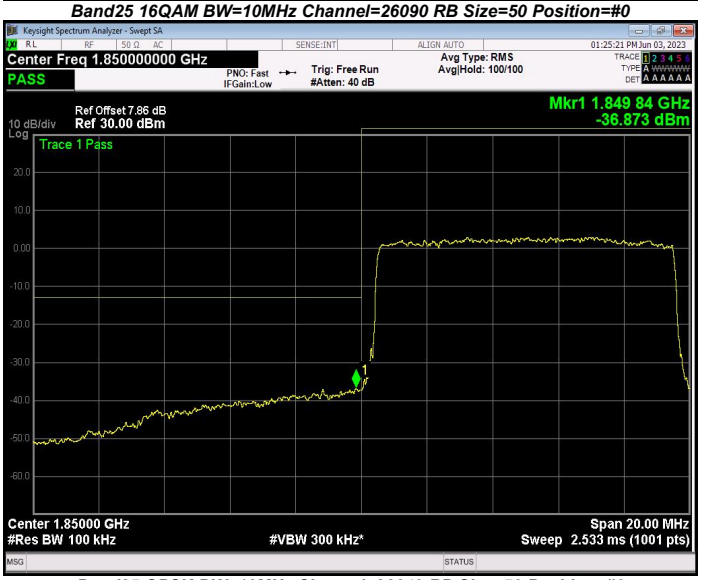
Band25 QPSK BW=5MHz Channel=26665 RB Size=25 Position=#0

Band25 16QAM BW=5MHz Channel=26665 RB Size=25 Position=#0

Band25 QPSK BW=10MHz Channel=26090 RB Size=50 Position=#0

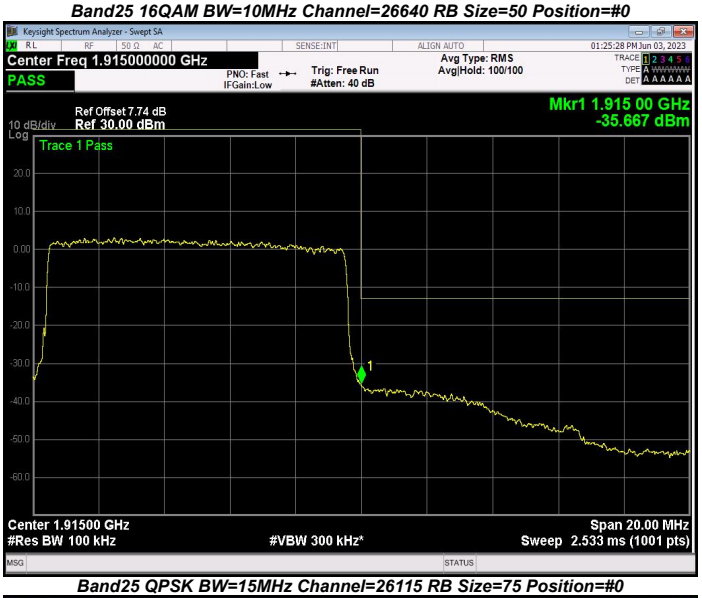


Band25 16QAM BW=10MHz Channel=26090 RB Size=50 Position=#0

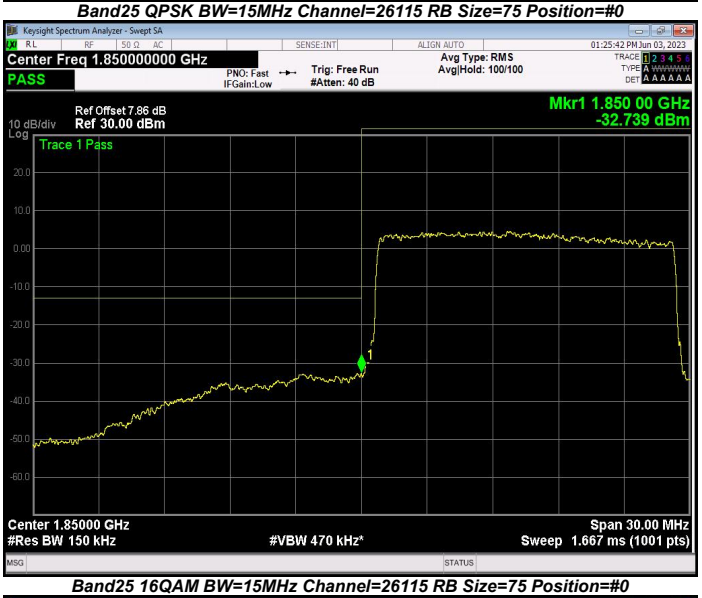


Band25 QPSK BW=10MHz Channel=26640 RB Size=50 Position=#0

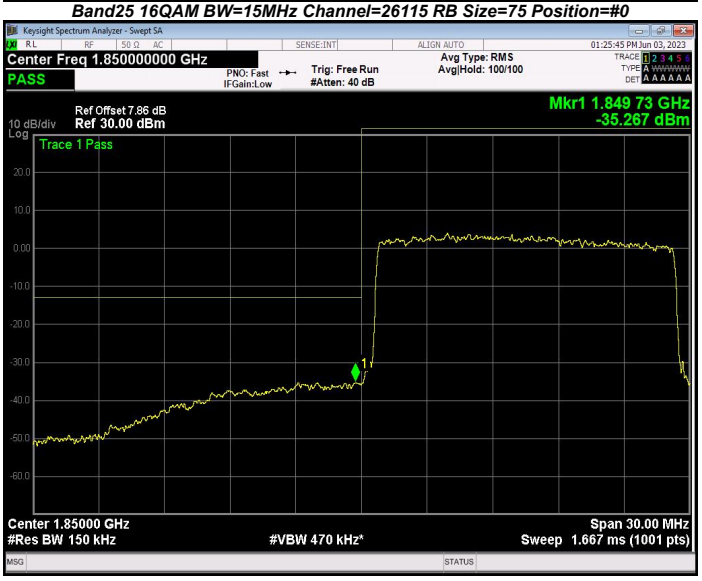
Band25 16QAM BW=10MHz Channel=26640 RB Size=50 Position=#0



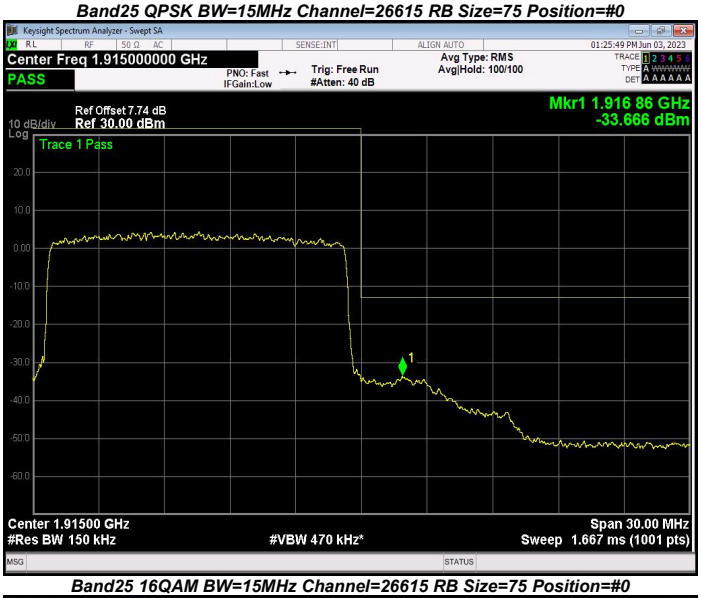
Band25 QPSK BW=15MHz Channel=26115 RB Size=75 Position=#0



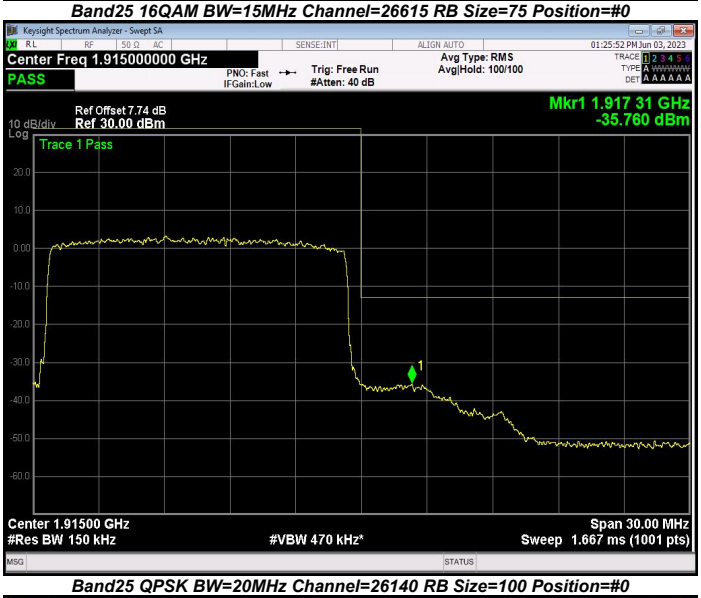
Band25 16QAM BW=15MHz Channel=26115 RB Size=75 Position=#0



Band25 QPSK BW=15MHz Channel=26615 RB Size=75 Position=#0

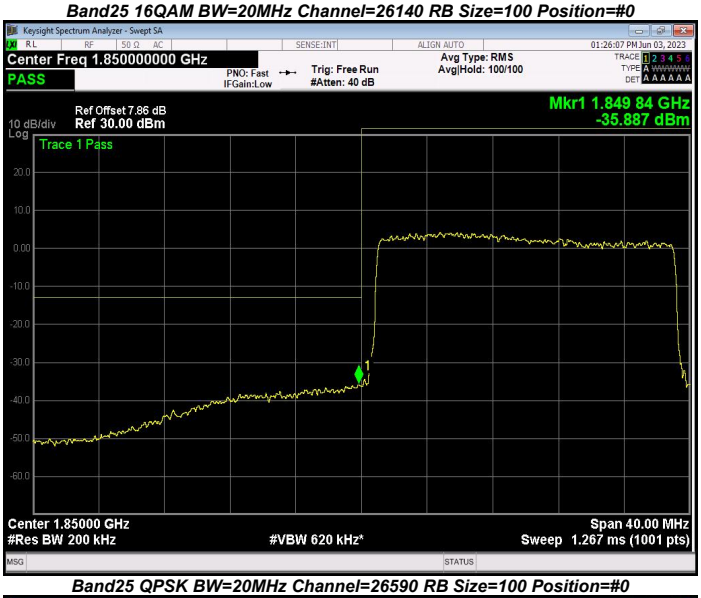


Band25 16QAM BW=15MHz Channel=26615 RB Size=75 Position=#0



Band25 QPSK BW=20MHz Channel=26140 RB Size=100 Position=#0

Band25 16QAM BW=20MHz Channel=26140 RB Size=100 Position=#0



Band25 QPSK BW=20MHz Channel=26590 RB Size=100 Position=#0

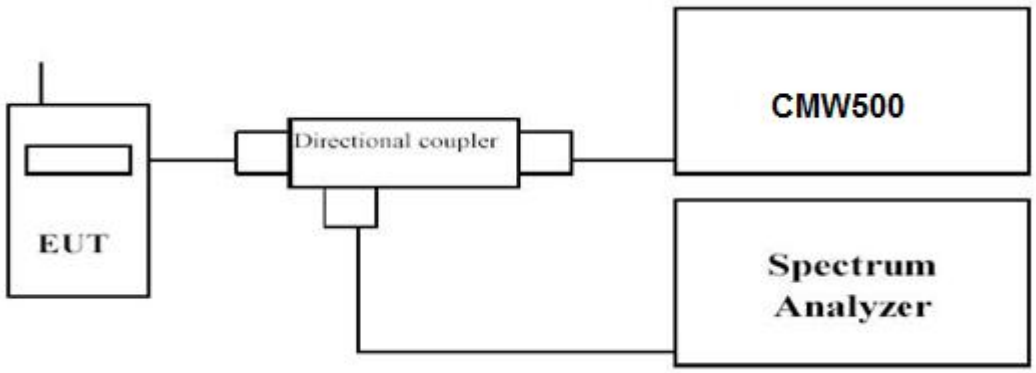
Band25 16QAM BW=20MHz Channel=26590 RB Size=100 Position=#0

4.5 Spurious Emssion on Antenna Port

LIMIT

Per FCC §24.238, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

a. Place the EUT on a bench and set it in transmitting mode.
b. Connect a low loss RF cable from the antenna port to a spectrum analyzer andCMW500 by a Directional Couple.
c. EUT Communicate with CMW500, then select a channel for testing.
d. Add a correction factor to the display of spectrum, and then test.
e. The resolution bandwidth of the spectrum analyzer was setsufficient scans were taken to show the out of band Emission if any up to10th harmonic.
f. Please refer to following tables for test antenna conducted emissions.

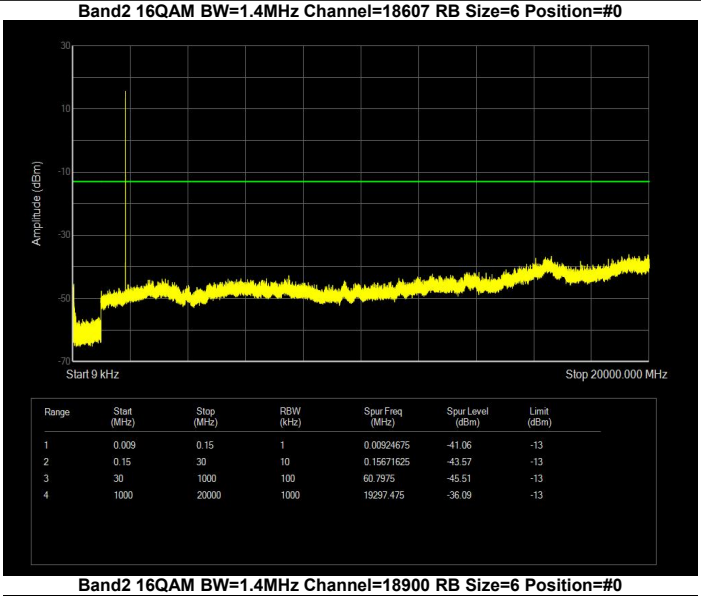
TEST RESULTS

Out-of-band emissions

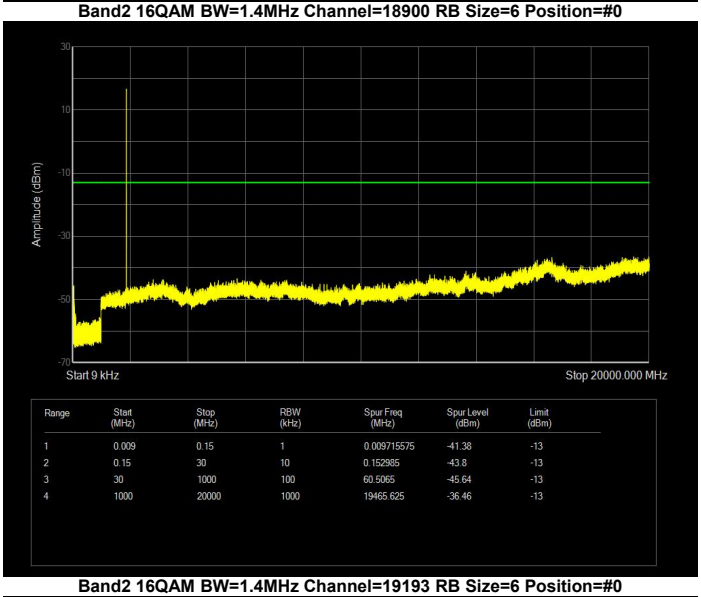
Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
Band2	1.4	18607	6	#0	QPSK	16435.13	-35.54	-13	PASS
Band2	1.4	18607	6	#0	16QAM	19297.48	-36.09	-13	PASS
Band2	1.4	18900	6	#0	QPSK	19501.73	-35.26	-13	PASS
Band2	1.4	18900	6	#0	16QAM	19465.63	-36.46	-13	PASS
Band2	1.4	19193	6	#0	QPSK	19509.80	-36.06	-13	PASS
Band2	1.4	19193	6	#0	16QAM	19267.55	-36.33	-13	PASS
Band2	3	18615	15	#0	QPSK	19074.23	-36.31	-13	PASS
Band2	3	18615	15	#0	16QAM	19985.28	-35.50	-13	PASS
Band2	3	18900	15	#0	QPSK	19448.05	-35.39	-13	PASS
Band2	3	18900	15	#0	16QAM	19100.35	-35.47	-13	PASS
Band2	3	19185	15	#0	QPSK	19915.93	-35.77	-13	PASS
Band2	3	19185	15	#0	16QAM	19339.28	-35.80	-13	PASS
Band2	5	18625	25	#0	QPSK	19958.20	-35.12	-13	PASS
Band2	5	18625	25	#0	16QAM	19973.40	-35.40	-13	PASS
Band2	5	18900	25	#0	QPSK	19991.93	-35.70	-13	PASS
Band2	5	18900	25	#0	16QAM	16458.88	-35.42	-13	PASS
Band2	5	19175	25	#0	QPSK	19651.35	-35.87	-13	PASS
Band2	5	19175	25	#0	16QAM	19319.80	-36.30	-13	PASS
Band2	10	18650	50	#0	QPSK	19332.63	-35.77	-13	PASS
Band2	10	18650	50	#0	16QAM	19474.18	-35.94	-13	PASS
Band2	10	18900	50	#0	QPSK	19373.00	-36.06	-13	PASS
Band2	10	18900	50	#0	16QAM	19913.55	-35.30	-13	PASS
Band2	10	19150	50	#0	QPSK	19067.10	-36.34	-13	PASS
Band2	10	19150	50	#0	16QAM	19421.93	-35.89	-13	PASS
Band2	15	18675	75	#0	QPSK	20000.00	-35.41	-13	PASS
Band2	15	18675	75	#0	16QAM	19244.75	-34.99	-13	PASS
Band2	15	18900	75	#0	QPSK	19953.45	-35.92	-13	PASS
Band2	15	18900	75	#0	16QAM	19292.25	-34.50	-13	PASS
Band2	15	19125	75	#0	QPSK	19954.88	-35.95	-13	PASS
Band2	15	19125	75	#0	16QAM	19634.73	-35.67	-13	PASS
Band2	20	18700	100	#0	QPSK	19406.25	-36.15	-13	PASS
Band2	20	18700	100	#0	16QAM	19360.18	-35.81	-13	PASS
Band2	20	18900	100	#0	QPSK	19154.98	-35.71	-13	PASS
Band2	20	18900	100	#0	16QAM	19990.03	-35.42	-13	PASS
Band2	20	19100	100	#0	QPSK	19106.53	-35.94	-13	PASS
Band2	20	19100	100	#0	16QAM	19936.83	-35.97	-13	PASS
Band4	1.4	19957	6	#0	QPSK	16645.10	-35.96	-13	PASS
Band4	1.4	19957	6	#0	16QAM	16480.20	-36.58	-13	PASS
Band4	1.4	20175	6	#0	QPSK	16507.83	-36.11	-13	PASS
Band4	1.4	20175	6	#0	16QAM	16464.48	-36.65	-13	PASS
Band4	1.4	20393	6	#0	QPSK	16395.63	-36.43	-13	PASS
Band4	1.4	20393	6	#0	16QAM	16502.30	-36.83	-13	PASS
Band4	3	19965	15	#0	QPSK	16648.08	-36.63	-13	PASS
Band4	3	19965	15	#0	16QAM	16366.73	-36.30	-13	PASS
Band4	3	20175	15	#0	QPSK	16566.05	-36.67	-13	PASS
Band4	3	20175	15	#0	16QAM	16550.75	-36.71	-13	PASS
Band4	3	20385	15	#0	QPSK	16404.13	-36.41	-13	PASS
Band4	3	20385	15	#0	16QAM	16403.70	-36.06	-13	PASS
Band4	5	19975	25	#0	QPSK	16367.58	-36.32	-13	PASS
Band4	5	19975	25	#0	16QAM	16440.25	-36.63	-13	PASS
Band4	5	20175	25	#0	QPSK	16577.53	-35.76	-13	PASS
Band4	5	20175	25	#0	16QAM	16662.53	-36.61	-13	PASS
Band4	5	20375	25	#0	QPSK	1809.63	-35.74	-13	PASS
Band4	5	20375	25	#0	16QAM	16367.15	-36.82	-13	PASS
Band4	10	20000	50	#0	QPSK	16381.60	-36.52	-13	PASS
Band4	10	20000	50	#0	16QAM	16572.85	-35.88	-13	PASS
Band4	10	20175	50	#0	QPSK	16508.25	-36.02	-13	PASS
Band4	10	20175	50	#0	16QAM	16455.98	-36.54	-13	PASS
Band4	10	20350	50	#0	QPSK	16425.80	-36.82	-13	PASS
Band4	10	20350	50	#0	16QAM	16534.60	-34.66	-13	PASS
Band4	15	20025	75	#0	QPSK	16517.60	-36.91	-13	PASS
Band4	15	20025	75	#0	16QAM	16428.78	-36.52	-13	PASS
Band4	15	20175	75	#0	QPSK	16455.98	-36.62	-13	PASS
Band4	15	20175	75	#0	16QAM	16405.40	-35.94	-13	PASS
Band4	15	20325	75	#0	QPSK	16494.23	-37.11	-13	PASS
Band4	15	20325	75	#0	16QAM	16404.98	-36.31	-13	PASS
Band4	20	20050	100	#0	QPSK	16461.08	-35.84	-13	PASS
Band4	20	20050	100	#0	16QAM	16489.55	-36.50	-13	PASS
Band4	20	20175	100	#0	QPSK	16515.05	-36.87	-13	PASS
Band4	20	20175	100	#0	16QAM	16419.85	-35.51	-13	PASS
Band4	20	20300	100	#0	QPSK	16506.55	-36.77	-13	PASS
Band4	20	20300	100	#0	16QAM	16411.35	-35.74	-13	PASS
Band25	1.4	26047	6	#0	QPSK	16439.88	-36.37	-13	PASS
Band25	1.4	26047	6	#0	16QAM	16413.75	-36.87	-13	PASS
Band25	1.4	26365	6	#0	QPSK	16439.40	-35.94	-13	PASS
Band25	1.4	26365	6	#0	16QAM	19677.00	-36.22	-13	PASS
Band25	1.4	26683	6	#0	QPSK	19169.70	-37.04	-13	PASS
Band25	1.4	26683	6	#0	16QAM	19047.15	-35.91	-13	PASS
Band25	3	26055	15	#0	QPSK	19468.95	-35.66	-13	PASS
Band25	3	26055	15	#0	16QAM	16449.85	-35.84	-13	PASS
Band25	3	26365	15	#0	QPSK	16503.53	-36.36	-13	PASS
Band25	3	26365	15	#0	16QAM	19285.13	-35.70	-13	PASS
Band25	3	26675	15	#0	QPSK	19992.88	-35.23	-13	PASS
Band25	3	26675	15	#0	16QAM	19223.85	-36.88	-13	PASS
Band25	5	26065	25	#0	QPSK	16448.90	-36.65	-13	PASS
Band25	5	26065	25	#0	16QAM	19945.85	-36.72	-13	PASS
Band25	5	26365	25	#0	QPSK	16495.93	-35.72	-13	PASS
Band25	5	26365	25	#0	16QAM	19256.15	-36.46	-13	PASS
Band25	5	26665	25	#0	QPSK	19323.60	-36.55	-13	PASS
Band25	5	26665	25	#0	16QAM	19138.35	-36.57	-13	PASS
Band25	10	26090	50	#0	QPSK	16479.78	-35.51	-13	PASS
Band25	10	26090	50	#0	16QAM	19962.00	-35.33	-13	PASS
Band25	10	26365	50	#0	QPSK	19646.13	-36.56	-13	PASS
Band25	10	26365	50	#0	16QAM	19983.85	-36.58	-13	PASS
Band25	10	26640	50	#0	QPSK	19925.90	-36.44	-13	PASS
Band25	10	26640	50	#0	16QAM	16529.65	-36.45	-13	PASS

Band25	15	26115	75	#0	QPSK	19980.53	-36.77	-13	PASS
Band25	15	26115	75	#0	16QAM	19114.13	-35.75	-13	PASS
Band25	15	26365	75	#0	QPSK	16400.45	-36.03	-13	PASS
Band25	15	26365	75	#0	16QAM	19270.40	-36.27	-13	PASS
Band25	15	26615	75	#0	QPSK	19113.65	-36.26	-13	PASS
Band25	15	26615	75	#0	16QAM	19026.25	-35.93	-13	PASS
Band25	20	26140	100	#0	QPSK	19969.13	-36.40	-13	PASS
Band25	20	26140	100	#0	16QAM	19470.85	-36.35	-13	PASS
Band25	20	26365	100	#0	QPSK	19395.80	-35.78	-13	PASS
Band25	20	26365	100	#0	16QAM	19953.45	-36.28	-13	PASS
Band25	20	26590	100	#0	QPSK	19271.35	-36.27	-13	PASS
Band25	20	26590	100	#0	16QAM	19981.48	-35.91	-13	PASS

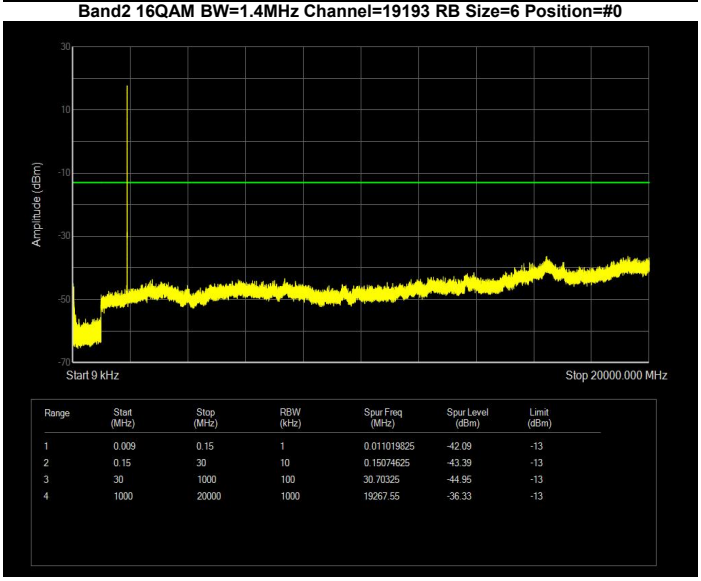
Band2 16QAM BW=1.4MHz Channel=18607 RB Size=6 Position=#0



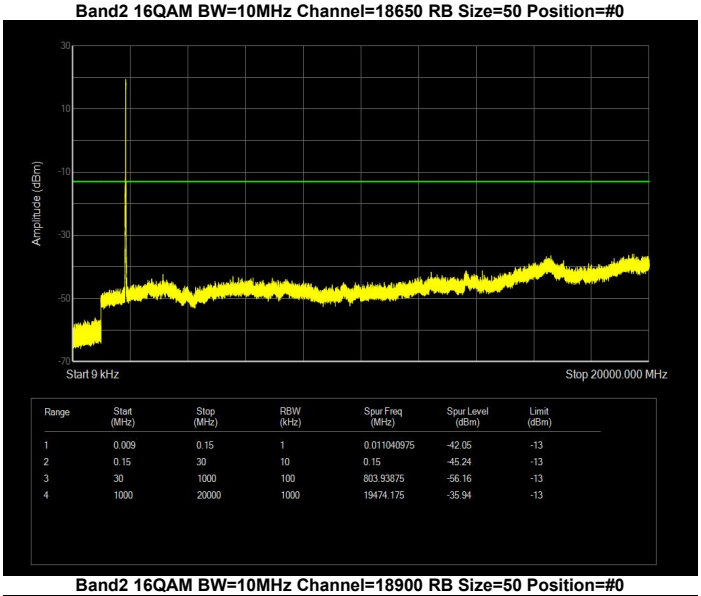
Band2 16QAM BW=1.4MHz Channel=18900 RB Size=6 Position=#0



Band2 16QAM BW=1.4MHz Channel=19193 RB Size=6 Position=#0

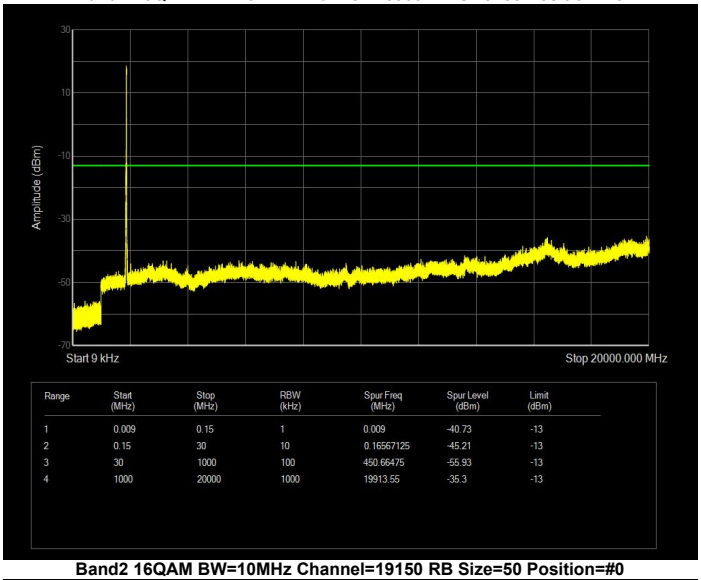


Band2 16QAM BW=10MHz Channel=18650 RB Size=50 Position=#0



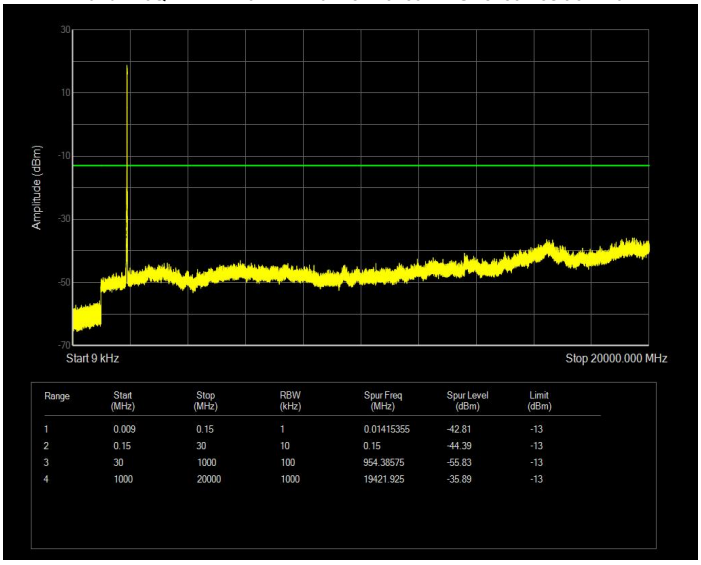
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.011040975	-42.05	-13
2	0.15	30	10	0.15	-45.24	-13
3	30	1000	100	803.93875	-56.16	-13
4	1000	20000	1000	19474.175	-35.94	-13

Band2 16QAM BW=10MHz Channel=18900 RB Size=50 Position=#0



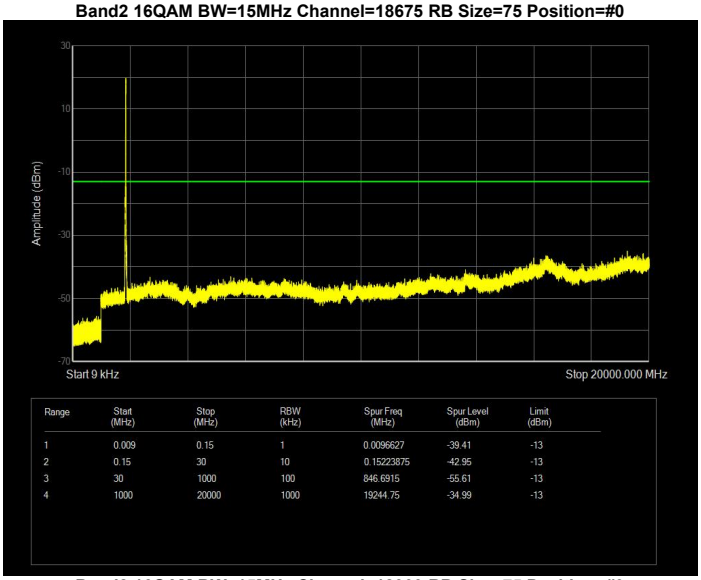
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009	-40.73	-13
2	0.15	30	10	0.16567125	-45.21	-13
3	30	1000	100	450.66475	-55.93	-13
4	1000	20000	1000	19913.55	-35.3	-13

Band2 16QAM BW=10MHz Channel=19150 RB Size=50 Position=#0



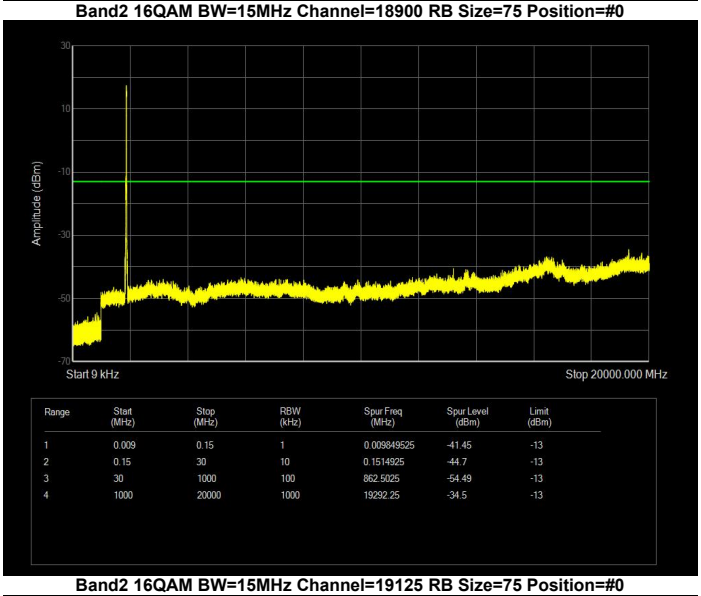
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.01415355	-42.81	-13
2	0.15	30	10	0.15	-44.39	-13
3	30	1000	100	954.38575	-55.83	-13
4	1000	20000	1000	19421.925	-35.89	-13

Band2 16QAM BW=15MHz Channel=18675 RB Size=75 Position=#0



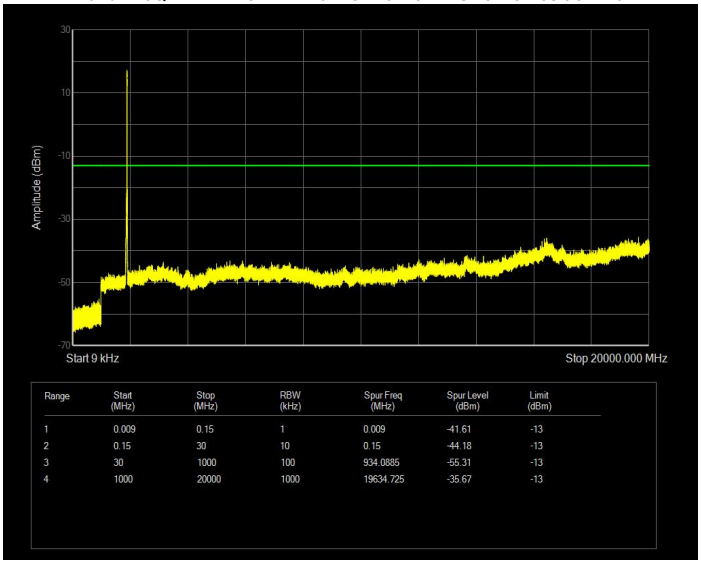
Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.0096627	-39.41	-13
2	0.15	30	10	0.15223875	-42.95	-13
3	30	1000	100	846.6915	-55.61	-13
4	1000	20000	1000	19244.75	-34.99	-13

Band2 16QAM BW=15MHz Channel=18900 RB Size=75 Position=#0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009849525	-41.45	-13
2	0.15	30	10	0.1514925	-44.7	-13
3	30	1000	100	862.5025	-54.49	-13
4	1000	20000	1000	19292.25	-34.5	-13

Band2 16QAM BW=15MHz Channel=19125 RB Size=75 Position=#0



Range	Start (MHz)	Stop (MHz)	RBW (kHz)	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)
1	0.009	0.15	1	0.009	-41.61	-13
2	0.15	30	10	0.15	-44.18	-13
3	30	1000	100	934.0885	-55.31	-13
4	1000	20000	1000	19634.725	-35.67	-13