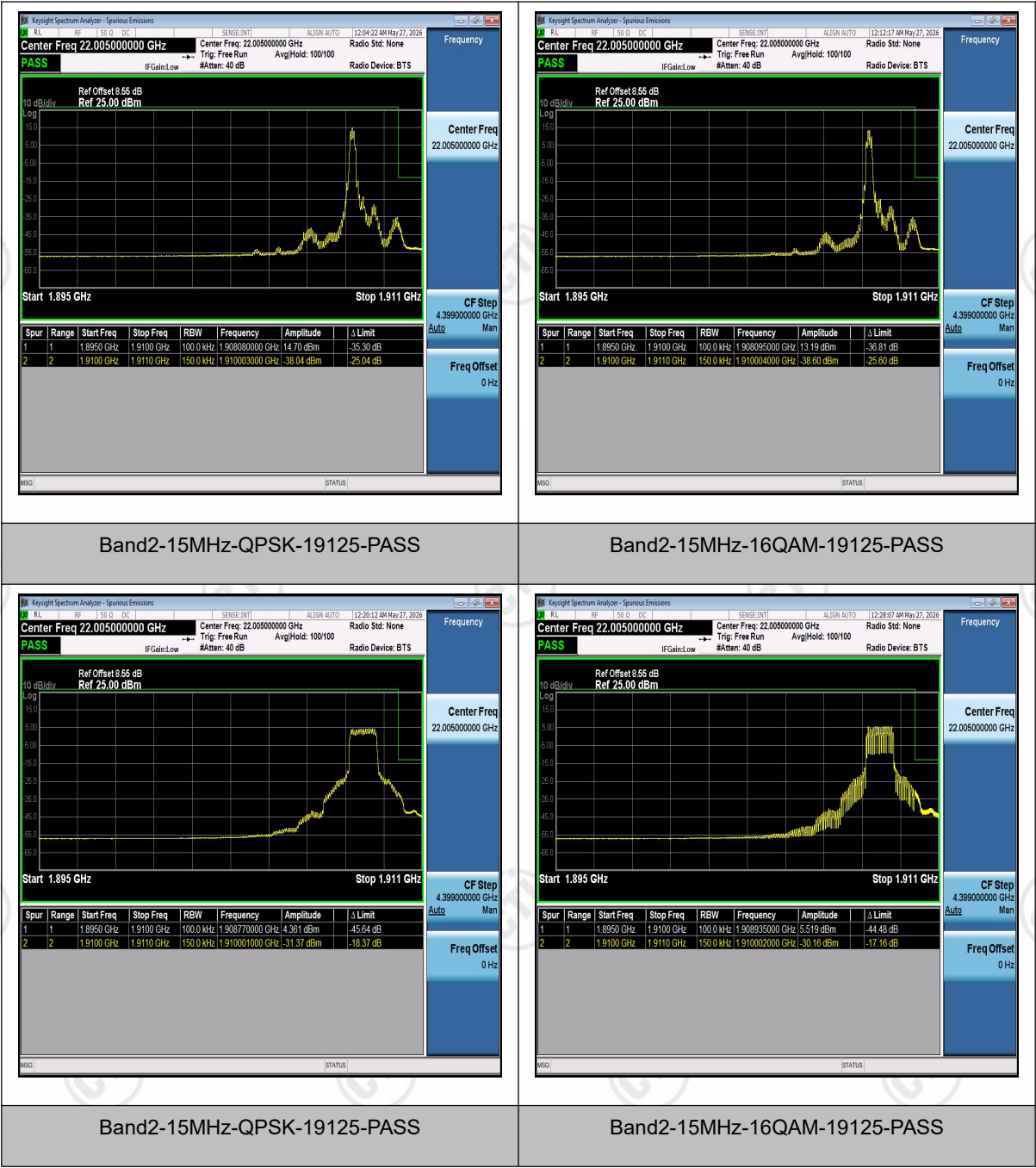




Keyight Spectrum Analyzer - Spurious Emissions

RL RF 150.0 DC

SENSE:INT1

ALIGN: AUTO

12:20:13 AM May 27, 2026

Center Freq 22.005000000 GHz

Center Freq: 22.005000000 GHz

Radio Std: None

PASS

IF Gain: Low

#Att: 40 dB

Avg/Hold: 100/100

Radio Device: BTS

10 dB/div

Ref Offset 8.55 dB

Ref 25.00 dBm

Log

15.0

10.0

5.0

0.0

-5.0

-10.0

-15.0

-20.0

-25.0

-30.0

-35.0

-40.0

-45.0

-50.0

Start 1.895 GHz

Stop 1.911 GHz

CF Step 4.399000000 GHz

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	1.8950 GHz	1.9100 GHz	100.0 kHz	1.908770000 GHz	4.361 dBm	-45.64 dB
2	2	1.9100 GHz	1.9110 GHz	150.0 kHz	1.910001000 GHz	-31.37 dBm	-18.37 dB

Freq Offset 0 Hz

MSG

STATUS

Band2-15MHz-QPSK-19125-PASS

Keyight Spectrum Analyzer - Spurious Emissions

RL RF 150.0 DC

SENSE:INT1

ALIGN: AUTO

12:28:07 AM May 27, 2026

Center Freq 22.005000000 GHz

Center Freq: 22.005000000 GHz

Radio Std: None

PASS

IF Gain: Low

#Att: 40 dB

Avg/Hold: 100/100

Radio Device: BTS

10 dB/div

Ref Offset 8.55 dB

Ref 25.00 dBm

Log

15.0

10.0

5.0

0.0

-5.0

-10.0

-15.0

-20.0

-25.0

-30.0

-35.0

-40.0

-45.0

-50.0

Start 1.895 GHz

Stop 1.911 GHz

CF Step 4.399000000 GHz

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	1.8950 GHz	1.9100 GHz	100.0 kHz	1.908935000 GHz	5.519 dBm	-44.48 dB
2	2	1.9100 GHz	1.9110 GHz	150.0 kHz	1.910002000 GHz	-30.16 dBm	-17.16 dB

Freq Offset 0 Hz

MSG

STATUS

Band2-15MHz-16QAM-19125-PASS



Band2-20MHz-QPSK-19100-PASS



Band2-20MHz-16QAM-19100-PASS



Band2-20MHz-QPSK-19100-PASS



Band2-20MHz-16QAM-19100-PASS

Appendix E: Conducted Spurious Emission for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Start Freq	Stop Freq	Result (dBm)	Verdict
Band2	1.4MHz	18607	QPSK	1	0	Low	0.009	0.15	-61.61	PASS
Band2	1.4MHz	18607	QPSK	1	0	Low	0.15	30	-77.63	PASS
Band2	1.4MHz	18607	QPSK	1	0	Low	30	1000	-53.57	PASS
Band2	1.4MHz	18607	QPSK	1	0	Low	1000	3000	-50.11	PASS
Band2	1.4MHz	18607	QPSK	1	0	Low	3000	20000	-46.1	PASS
Band2	1.4MHz	18607	16QAM	1	0	Low	0.009	0.15	-62.66	PASS
Band2	1.4MHz	18607	16QAM	1	0	Low	0.15	30	-62.45	PASS
Band2	1.4MHz	18607	16QAM	1	0	Low	30	1000	-53.57	PASS
Band2	1.4MHz	18607	16QAM	1	0	Low	1000	3000	-50.11	PASS
Band2	3MHz	18615	QPSK	1	0	Low	0.009	0.15	-62.74	PASS
Band2	3MHz	18615	QPSK	1	0	Low	0.15	30	-61.79	PASS
Band2	3MHz	18615	QPSK	1	0	Low	30	1000	-53.6	PASS
Band2	3MHz	18615	QPSK	1	0	Low	1000	3000	-50.2	PASS
Band2	3MHz	18615	QPSK	1	0	Low	3000	20000	-46.49	PASS
Band2	3MHz	18615	16QAM	1	0	Low	0.009	0.15	-63.3	PASS
Band2	3MHz	18615	16QAM	1	0	Low	0.15	30	-63.45	PASS
Band2	3MHz	18615	16QAM	1	0	Low	30	1000	-53.64	PASS
Band2	1.4MHz	18607	16QAM	1	0	Low	3000	20000	-46.32	PASS
Band2	3MHz	18615	16QAM	1	0	Low	1000	3000	-50.11	PASS

Band2	3MHz	18615	16QAM	1	0	Low	3000	20000	-46.32	PASS
Band2	5MHz	18625	QPSK	1	0	Low	0.009	0.15	-61.62	PASS
Band2	5MHz	18625	QPSK	1	0	Low	0.15	30	-60.56	PASS
Band2	5MHz	18625	QPSK	1	0	Low	30	1000	-53.62	PASS
Band2	5MHz	18625	QPSK	1	0	Low	1000	3000	-50.08	PASS
Band2	5MHz	18625	QPSK	1	0	Low	3000	20000	-46.25	PASS
Band2	5MHz	18625	16QAM	1	0	Low	0.009	0.15	-62.5	PASS
Band2	5MHz	18625	16QAM	1	0	Low	0.15	30	-69.07	PASS
Band2	5MHz	18625	16QAM	1	0	Low	30	1000	-53.51	PASS
Band2	5MHz	18625	16QAM	1	0	Low	1000	3000	-49.89	PASS
Band2	5MHz	18625	16QAM	1	0	Low	3000	20000	-46.22	PASS
Band2	10MHz	18650	QPSK	1	0	Low	0.009	0.15	-61.78	PASS
Band2	10MHz	18650	QPSK	1	0	Low	0.15	30	-64.75	PASS
Band2	10MHz	18650	QPSK	1	0	Low	30	1000	-53.53	PASS
Band2	10MHz	18650	QPSK	1	0	Low	1000	3000	-50.21	PASS
Band2	10MHz	18650	QPSK	1	0	Low	3000	20000	-46.27	PASS
Band2	10MHz	18650	16QAM	1	0	Low	0.009	0.15	-62.59	PASS
Band2	10MHz	18650	16QAM	1	0	Low	0.15	30	-61.64	PASS
Band2	10MHz	18650	16QAM	1	0	Low	30	1000	-53.51	PASS
Band2	10MHz	18650	16QAM	1	0	Low	1000	3000	-50.34	PASS
Band2	10MHz	18650	16QAM	1	0	Low	3000	20000	-46.3	PASS
Band2	15MHz	18675	QPSK	1	0	Low	0.009	0.15	-62.73	PASS
Band2	15MHz	18675	QPSK	1	0	Low	0.15	30	-72.79	PASS
Band2	15MHz	18675	QPSK	1	0	Low	30	1000	-53.67	PASS
Band2	15MHz	18675	QPSK	1	0	Low	1000	3000	-50.23	PASS

Band2	15MHz	18675	QPSK	1	0	Low	3000	20000	-46.37	PASS
Band2	15MHz	18675	16QAM	1	0	Low	0.009	0.15	-60.23	PASS
Band2	15MHz	18675	16QAM	1	0	Low	0.15	30	-60.55	PASS
Band2	15MHz	18675	16QAM	1	0	Low	30	1000	-53.48	PASS
Band2	15MHz	18675	16QAM	1	0	Low	1000	3000	-50.08	PASS
Band2	15MHz	18675	16QAM	1	0	Low	3000	20000	-46.29	PASS
Band2	20MHz	18700	QPSK	1	0	Low	0.009	0.15	-62.57	PASS
Band2	20MHz	18700	QPSK	1	0	Low	0.15	30	-66.34	PASS
Band2	20MHz	18700	QPSK	1	0	Low	30	1000	-53.61	PASS
Band2	20MHz	18700	QPSK	1	0	Low	1000	3000	-50.13	PASS
Band2	20MHz	18700	QPSK	1	0	Low	3000	20000	-46.39	PASS
Band2	20MHz	18700	16QAM	1	0	Low	0.009	0.15	-60.98	PASS
Band2	20MHz	18700	16QAM	1	0	Low	0.15	30	-68.58	PASS
Band2	20MHz	18700	16QAM	1	0	Low	30	1000	-53.61	PASS
Band2	20MHz	18700	16QAM	1	0	Low	1000	3000	-50.1	PASS
Band2	20MHz	18700	16QAM	1	0	Low	3000	20000	-46.46	PASS
Band2	1.4MHz	18900	QPSK	1	0	Low	0.009	0.15	-63.27	PASS
Band2	1.4MHz	18900	QPSK	1	0	Low	0.15	30	-62.21	PASS
Band2	1.4MHz	18900	QPSK	1	0	Low	30	1000	-53.55	PASS
Band2	1.4MHz	18900	QPSK	1	0	Low	1000	3000	-50.12	PASS
Band2	1.4MHz	18900	QPSK	1	0	Low	3000	20000	-46.42	PASS
Band2	1.4MHz	18900	16QAM	1	0	Low	0.009	0.15	-62.53	PASS
Band2	1.4MHz	18900	16QAM	1	0	Low	0.15	30	-56.99	PASS
Band2	1.4MHz	18900	16QAM	1	0	Low	30	1000	-53.61	PASS
Band2	1.4MHz	18900	16QAM	1	0	Low	1000	3000	-50.17	PASS

Band2	1.4MHz	18900	16QAM	1	0	Low	3000	20000	-46.48	PASS
Band2	1.4MHz	19193	QPSK	1	0	High	0.009	0.15	-63.98	PASS
Band2	1.4MHz	19193	QPSK	1	0	High	0.15	30	-62.09	PASS
Band2	1.4MHz	19193	QPSK	1	0	High	30	1000	-53.42	PASS
Band2	1.4MHz	19193	QPSK	1	0	High	1000	3000	-50.05	PASS
Band2	1.4MHz	19193	QPSK	1	0	High	3000	20000	-46.36	PASS
Band2	1.4MHz	19193	16QAM	1	0	High	0.009	0.15	-62.67	PASS
Band2	1.4MHz	19193	16QAM	1	0	High	0.15	30	-60.81	PASS
Band2	1.4MHz	19193	16QAM	1	0	High	30	1000	-53.45	PASS
Band2	1.4MHz	19193	16QAM	1	0	High	1000	3000	-49.94	PASS
Band2	1.4MHz	19193	16QAM	1	0	High	3000	20000	-46.25	PASS
Band2	3MHz	18900	QPSK	1	0	Low	0.009	0.15	-62.73	PASS
Band2	3MHz	18900	QPSK	1	0	Low	0.15	30	-66.2	PASS
Band2	3MHz	18900	QPSK	1	0	Low	30	1000	-53.7	PASS
Band2	3MHz	18900	QPSK	1	0	Low	1000	3000	-50.31	PASS
Band2	3MHz	18900	QPSK	1	0	Low	3000	20000	-46.27	PASS
Band2	3MHz	18900	16QAM	1	0	Low	0.009	0.15	-62.7	PASS
Band2	3MHz	18900	16QAM	1	0	Low	0.15	30	-66.1	PASS
Band2	3MHz	18900	16QAM	1	0	Low	30	1000	-53.63	PASS
Band2	3MHz	18900	16QAM	1	0	Low	1000	3000	-50.22	PASS
Band2	3MHz	18900	16QAM	1	0	Low	3000	20000	-46.28	PASS
Band2	3MHz	19185	QPSK	1	0	High	0.009	0.15	-63.9	PASS
Band2	3MHz	19185	QPSK	1	0	High	0.15	30	-63.61	PASS
Band2	3MHz	19185	QPSK	1	0	High	30	1000	-53.43	PASS
Band2	3MHz	19185	QPSK	1	0	High	1000	3000	-50.1	PASS

Band2	3MHz	19185	QPSK	1	0	High	3000	20000	-45.97	PASS
Band2	3MHz	19185	16QAM	1	0	High	0.009	0.15	-63.53	PASS
Band2	3MHz	19185	16QAM	1	0	High	0.15	30	-62.38	PASS
Band2	3MHz	19185	16QAM	1	0	High	30	1000	-53.49	PASS
Band2	3MHz	19185	16QAM	1	0	High	1000	3000	-50.01	PASS
Band2	3MHz	19185	16QAM	1	0	High	3000	20000	-46.04	PASS
Band2	5MHz	18900	QPSK	1	0	Low	0.009	0.15	-61.4	PASS
Band2	5MHz	18900	QPSK	1	0	Low	0.15	30	-56.41	PASS
Band2	5MHz	18900	QPSK	1	0	Low	30	1000	-53.63	PASS
Band2	5MHz	18900	QPSK	1	0	Low	1000	3000	-50.19	PASS
Band2	5MHz	18900	QPSK	1	0	Low	3000	20000	-46.47	PASS
Band2	5MHz	18900	16QAM	1	0	Low	0.009	0.15	-62.14	PASS
Band2	5MHz	18900	16QAM	1	0	Low	0.15	30	-76.16	PASS
Band2	5MHz	18900	16QAM	1	0	Low	30	1000	-53.64	PASS
Band2	5MHz	18900	16QAM	1	0	Low	1000	3000	-50.17	PASS
Band2	5MHz	18900	16QAM	1	0	Low	3000	20000	-46.57	PASS
Band2	5MHz	19175	QPSK	1	0	High	0.009	0.15	-62.67	PASS
Band2	5MHz	19175	QPSK	1	0	High	0.15	30	-59.54	PASS
Band2	5MHz	19175	QPSK	1	0	High	30	1000	-53.52	PASS
Band2	5MHz	19175	QPSK	1	0	High	1000	3000	-50.04	PASS
Band2	5MHz	19175	QPSK	1	0	High	3000	20000	-46.43	PASS
Band2	5MHz	19175	16QAM	1	0	High	0.009	0.15	-61.97	PASS
Band2	5MHz	19175	16QAM	1	0	High	0.15	30	-65.11	PASS
Band2	5MHz	19175	16QAM	1	0	High	30	1000	-53.48	PASS
Band2	5MHz	19175	16QAM	1	0	High	1000	3000	-50.12	PASS

Band2	5MHz	19175	16QAM	1	0	High	3000	20000	-46.25	PASS
Band2	10MHz	18900	QPSK	1	0	Low	0.009	0.15	-61.02	PASS
Band2	10MHz	18900	QPSK	1	0	Low	0.15	30	-62.76	PASS
Band2	10MHz	18900	QPSK	1	0	Low	30	1000	-53.55	PASS
Band2	10MHz	18900	QPSK	1	0	Low	1000	3000	-50.02	PASS
Band2	10MHz	18900	QPSK	1	0	Low	3000	20000	-46.61	PASS
Band2	10MHz	18900	16QAM	1	0	Low	0.009	0.15	-63.89	PASS
Band2	10MHz	18900	16QAM	1	0	Low	0.15	30	-74.45	PASS
Band2	10MHz	18900	16QAM	1	0	Low	30	1000	-53.6	PASS
Band2	10MHz	18900	16QAM	1	0	Low	1000	3000	-50.11	PASS
Band2	10MHz	18900	16QAM	1	0	Low	3000	20000	-46.53	PASS
Band2	10MHz	19150	QPSK	1	0	High	0.009	0.15	-62.35	PASS
Band2	10MHz	19150	QPSK	1	0	High	0.15	30	-60.79	PASS
Band2	10MHz	19150	QPSK	1	0	High	30	1000	-53.4	PASS
Band2	10MHz	19150	QPSK	1	0	High	1000	3000	-49.98	PASS
Band2	10MHz	19150	QPSK	1	0	High	3000	20000	-46.42	PASS
Band2	10MHz	19150	16QAM	1	0	High	0.009	0.15	-61.29	PASS
Band2	10MHz	19150	16QAM	1	0	High	0.15	30	-68.9	PASS
Band2	10MHz	19150	16QAM	1	0	High	30	1000	-53.48	PASS
Band2	10MHz	19150	16QAM	1	0	High	1000	3000	-50.19	PASS
Band2	10MHz	19150	16QAM	1	0	High	3000	20000	-46.03	PASS
Band2	15MHz	18900	QPSK	1	0	Low	0.009	0.15	-59.8	PASS
Band2	15MHz	18900	QPSK	1	0	Low	0.15	30	-62.97	PASS
Band2	15MHz	18900	QPSK	1	0	Low	30	1000	-53.59	PASS
Band2	15MHz	18900	QPSK	1	0	Low	1000	3000	-50.03	PASS

Band2	15MHz	18900	QPSK	1	0	Low	3000	20000	-46.2	PASS
Band2	15MHz	18900	16QAM	1	0	Low	0.009	0.15	-62.92	PASS
Band2	15MHz	18900	16QAM	1	0	Low	0.15	30	-68.24	PASS
Band2	15MHz	18900	16QAM	1	0	Low	30	1000	-53.58	PASS
Band2	15MHz	18900	16QAM	1	0	Low	1000	3000	-50.09	PASS
Band2	15MHz	18900	16QAM	1	0	Low	3000	20000	-46.42	PASS
Band2	15MHz	19125	QPSK	1	0	High	0.009	0.15	-64.16	PASS
Band2	15MHz	19125	QPSK	1	0	High	0.15	30	-74.9	PASS
Band2	15MHz	19125	QPSK	1	0	High	30	1000	-53.45	PASS
Band2	15MHz	19125	QPSK	1	0	High	1000	3000	-49.91	PASS
Band2	15MHz	19125	QPSK	1	0	High	3000	20000	-46.33	PASS
Band2	15MHz	19125	16QAM	1	0	High	0.009	0.15	-62.79	PASS
Band2	15MHz	19125	16QAM	1	0	High	0.15	30	-66.18	PASS
Band2	15MHz	19125	16QAM	1	0	High	30	1000	-53.5	PASS
Band2	15MHz	19125	16QAM	1	0	High	1000	3000	-50.18	PASS
Band2	15MHz	19125	16QAM	1	0	High	3000	20000	-46.5	PASS
Band2	20MHz	18900	QPSK	1	0	Low	0.009	0.15	-60.84	PASS
Band2	20MHz	18900	QPSK	1	0	Low	0.15	30	-58.7	PASS
Band2	20MHz	18900	QPSK	1	0	Low	30	1000	-53.65	PASS
Band2	20MHz	18900	QPSK	1	0	Low	1000	3000	-50.06	PASS
Band2	20MHz	18900	QPSK	1	0	Low	3000	20000	-46.18	PASS
Band2	20MHz	18900	16QAM	1	0	Low	0.009	0.15	-61.93	PASS
Band2	20MHz	18900	16QAM	1	0	Low	0.15	30	-72.04	PASS
Band2	20MHz	18900	16QAM	1	0	Low	30	1000	-53.63	PASS
Band2	20MHz	18900	16QAM	1	0	Low	1000	3000	-50.37	PASS

Band2	20MHz	18900	16QAM	1	0	Low	3000	20000	-45.77	PASS
Band2	20MHz	19100	QPSK	1	0	High	0.009	0.15	-63.18	PASS
Band2	20MHz	19100	QPSK	1	0	High	0.15	30	-59.95	PASS
Band2	20MHz	19100	QPSK	1	0	High	30	1000	-53.48	PASS
Band2	20MHz	19100	QPSK	1	0	High	1000	3000	-50.08	PASS
Band2	20MHz	19100	QPSK	1	0	High	3000	20000	-46.18	PASS
Band2	20MHz	19100	16QAM	1	0	High	0.009	0.15	-61.27	PASS
Band2	20MHz	19100	16QAM	1	0	High	0.15	30	-74.22	PASS
Band2	20MHz	19100	16QAM	1	0	High	30	1000	-53.56	PASS
Band2	20MHz	19100	16QAM	1	0	High	1000	3000	-50.05	PASS
Band2	20MHz	19100	16QAM	1	0	High	3000	20000	-46.62	PASS

Test Graphs

