Appendix-B LTE NB-IoT Band 66

Effective (Isotropic) Radiated Power Output Data for NB1

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band66	Stand-Alone	3.75kHz	0.18	BPSK	131974	1@0	21.71	23.71	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	131974	1@0	21.76	23.76	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	131974	1@47	21.63	23.63	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	131974	1@47	21.67	23.67	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	132322	1@0	21.71	23.71	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	21.76	23.76	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	132322	1@47	21.68	23.68	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	21.62	23.62	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	132670	1@0	21.74	23.74	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132670	1@0	21.65	23.65	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	132670	1@47	21.72	23.72	30	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132670	1@47	21.70	23.7	30	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	131974	1@0	20.60	22.6	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	1@0	20.65	22.65	30	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	131974	1@11	20.56	22.56	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	1@11	20.57	22.57	30	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132322	1@0	21.79	23.79	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	21.81	23.81	30	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132322	1@11	21.73	23.73	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	21.74	23.74	30	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132670	1@0	21.96	23.96	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	1@0	21.99	23.99	30	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132670	1@11	21.90	23.9	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	1@11	21.91	23.91	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	3@3	21.86	23.86	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	3@3	21.79	23.79	30	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	3@3	21.98	23.98	30	PASS

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Peak-to-Average Ratio(CCDF) for NB1

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band66	Stand-Alone	3.75kHz	0.18	QPSK	131974	1@0	5.13	<=13	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	131974	1@47	4.98	<=13	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	4.67	<=13	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	5.03	<=13	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132670	1@0	4.69	<=13	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132670	1@47	5.08	<=13	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	1@0	6.57	<=13	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	1@11	7.09	<=13	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	6.58	<=13	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	7.09	<=13	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	1@0	6.59	<=13	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	1@11	7.1	<=13	PASS

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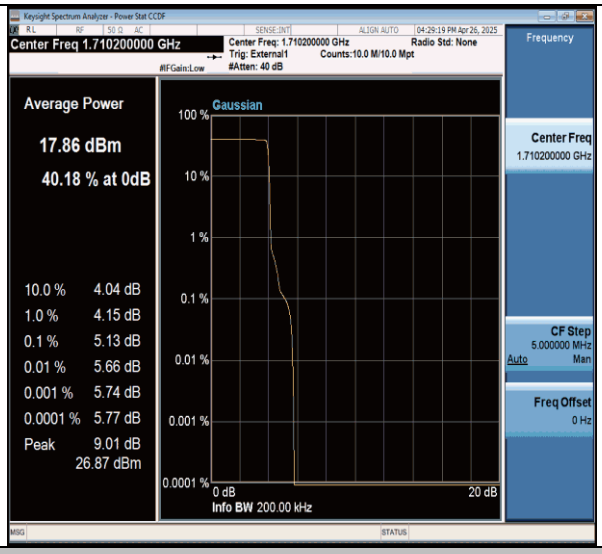
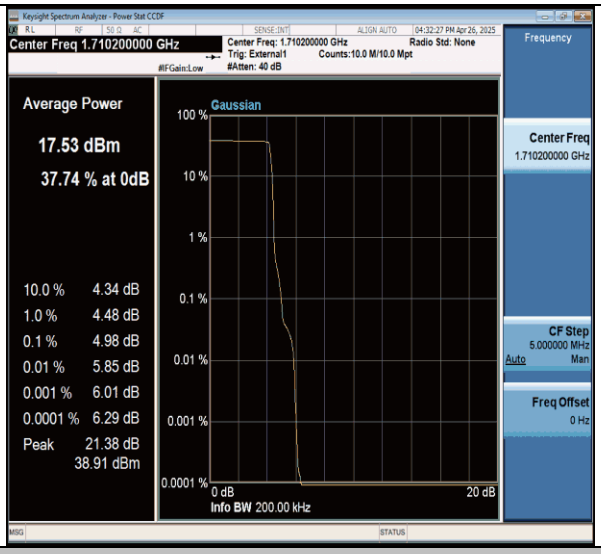
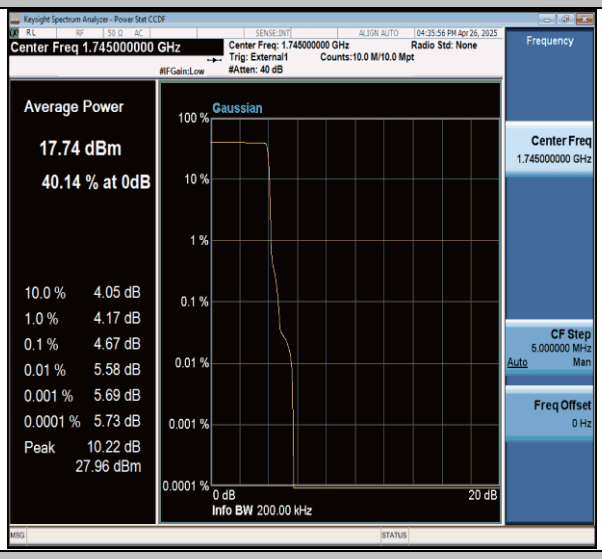
Test Graphs



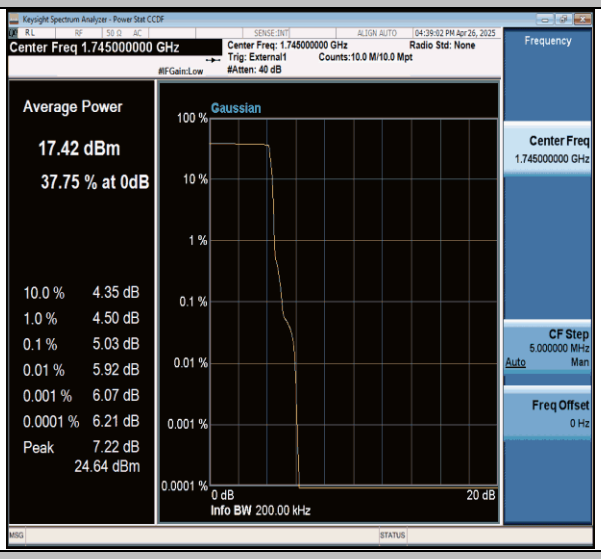
Band66-0.18-QPSK-131974-PASS



Band66-0.18-QPSK-131974-PASS

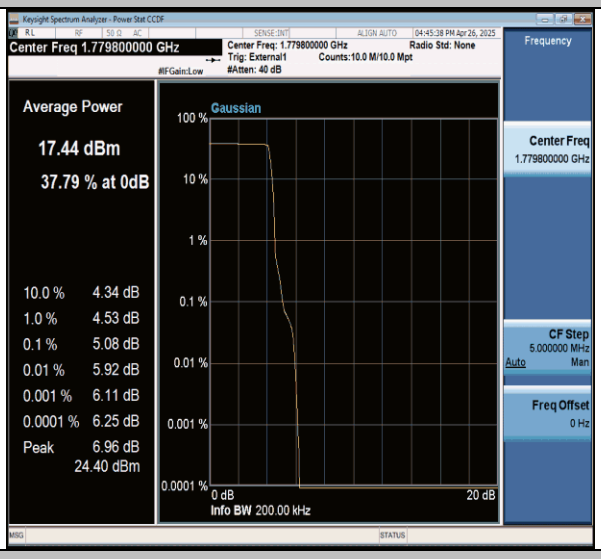


Band66-0.18-QPSK-132322-PASS



Band66-0.18-QPSK-132322-PASS

Band66-0.18-QPSK-132670-PASS



Band66-0.18-QPSK-132670-PASS

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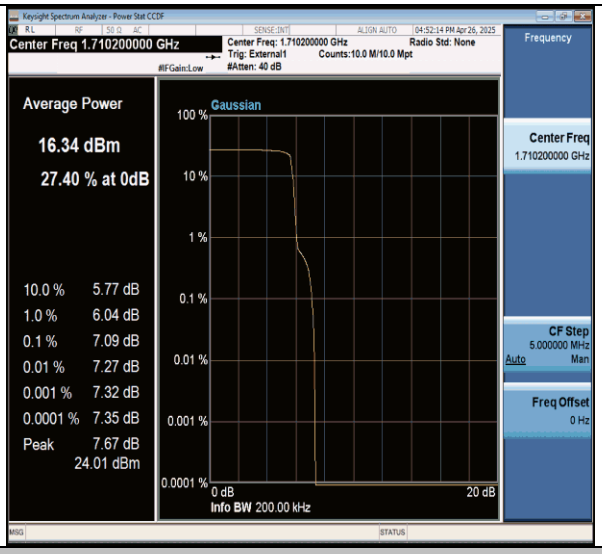
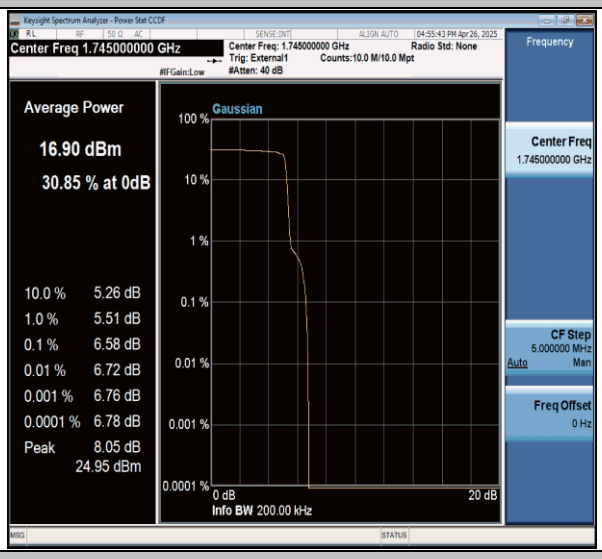
Band66-0.18-QPSK-131974-PASS



Band66-0.18-QPSK-131974-PASS



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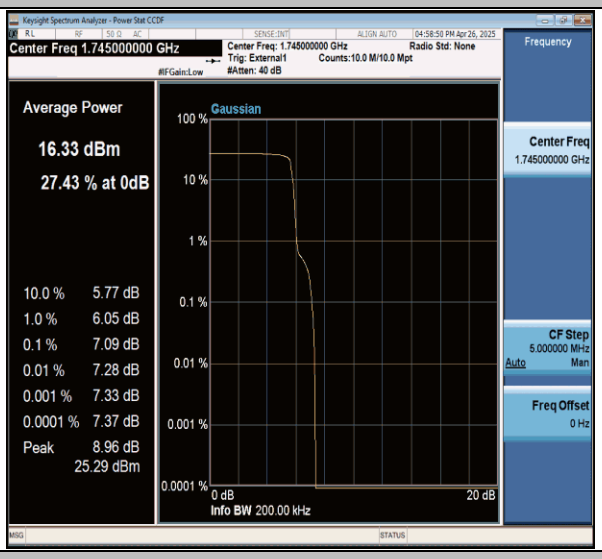

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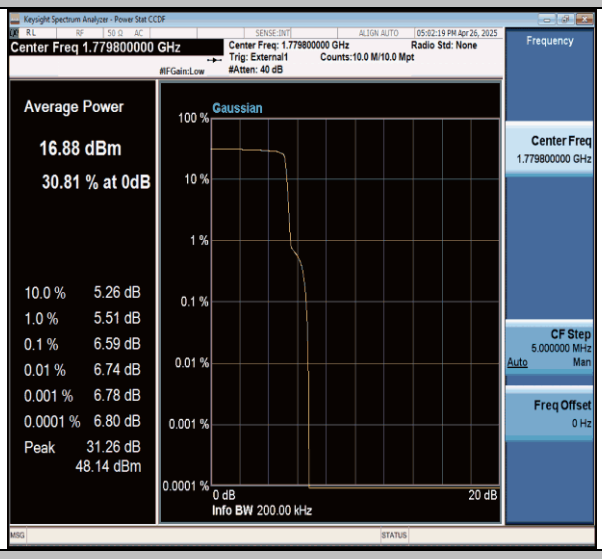
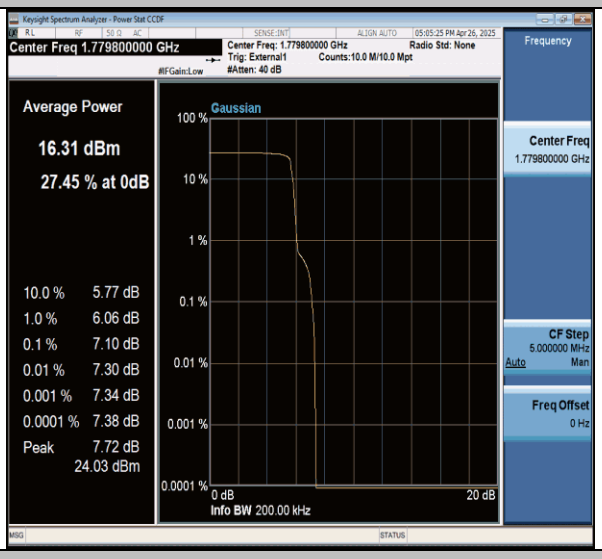


Band66-0.18-QPSK-132670-PASS



Band66-0.18-QPSK-132670-PASS

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Emission Bandwidth for NB1

Test Result

Band	OpMode	SCS	BW	Modulation	Channel	Tones	OBW(MHz)	EBW(MHz)	Verdict
Band66	Stand-Alone	3.75kHz	0.18	BPSK	131974	1@0	0.17140	0.1832	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	131974	1@0	0.16930	0.1775	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	132322	1@0	0.17194	0.1799	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	0.17146	0.1803	PASS
Band66	Stand-Alone	3.75kHz	0.18	BPSK	132670	1@0	0.17305	0.1834	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132670	1@0	0.17160	0.1814	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	131974	1@0	0.12192	0.1108	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	1@0	0.12360	0.1145	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	131974	12@0	0.19408	0.2199	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	131974	12@0	0.19215	0.2127	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132322	1@0	0.12223	0.1137	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	0.11588	0.1142	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132322	12@0	0.19461	0.2202	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	12@0	0.19437	0.2127	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132670	1@0	0.12121	0.1041	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	1@0	0.12462	0.1148	PASS
Band66	Stand-Alone	15kHz	0.18	BPSK	132670	12@0	0.19353	0.2280	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132670	12@0	0.19251	0.2115	PASS

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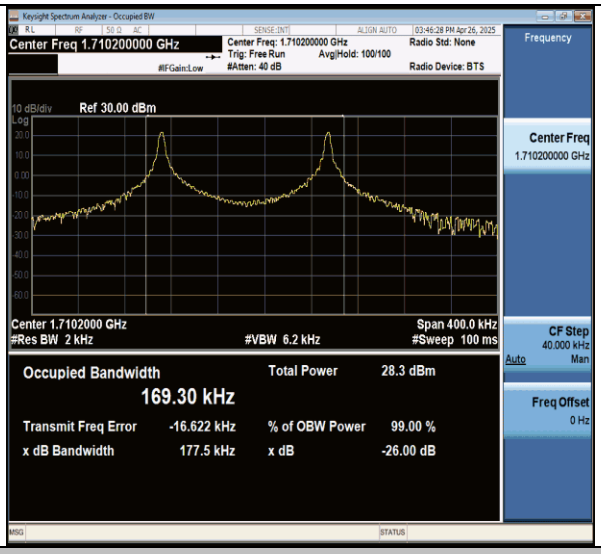
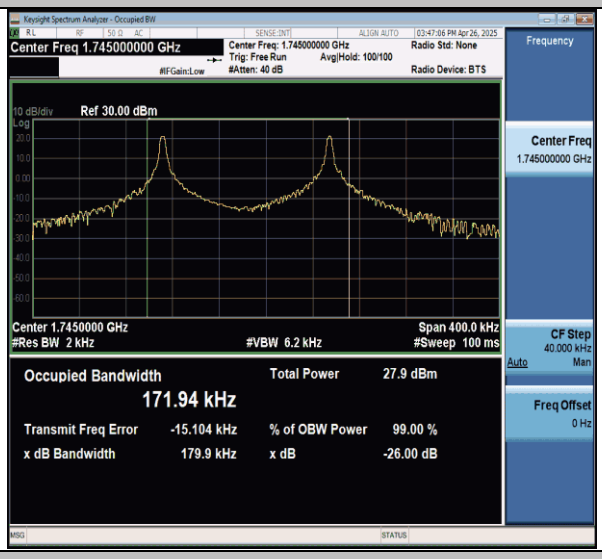
Test Graphs

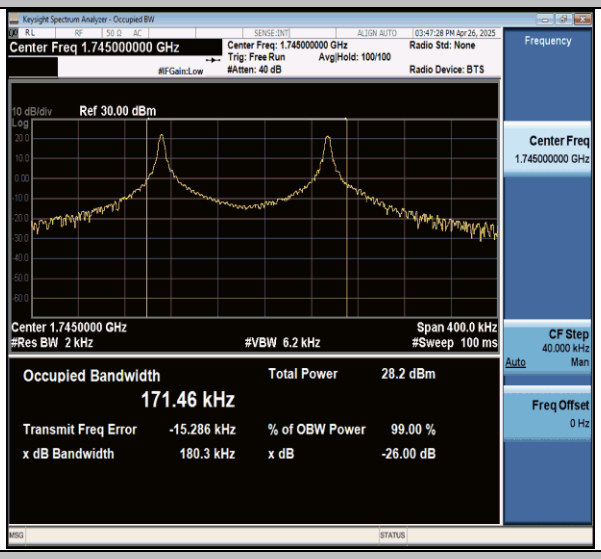
Band66-0.18-BPSK-131974-PASS



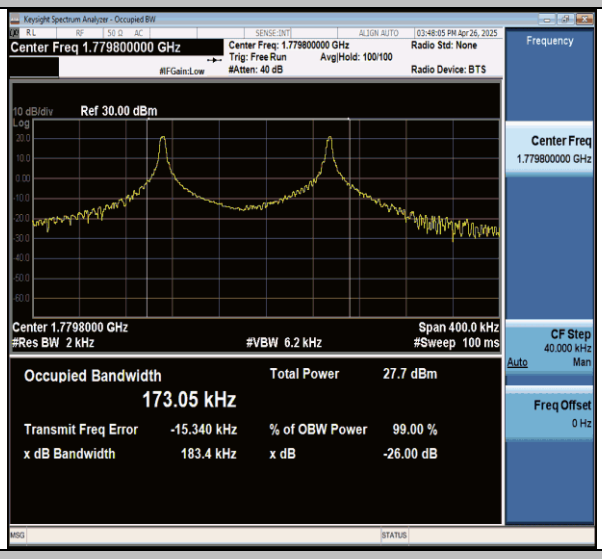
Band66-0.18-QPSK-131974-PASS



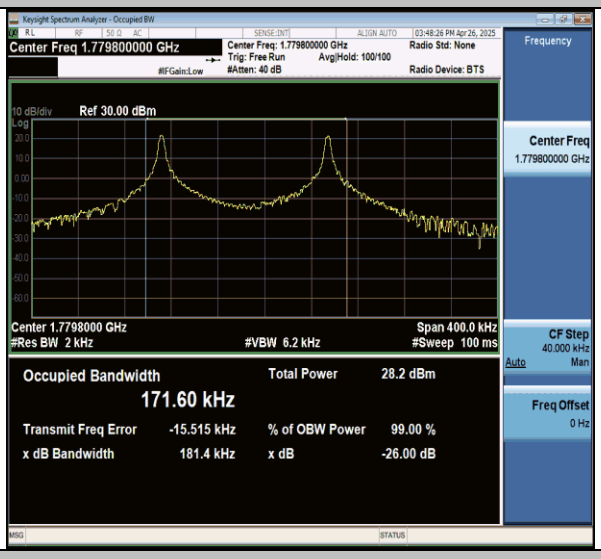
Band66-0.18-BPSK-132322-PASS



Band66-0.18-QPSK-132322-PASS



Band66-0.18-BPSK-132670-PASS



Band66-0.18-QPSK-132670-PASS

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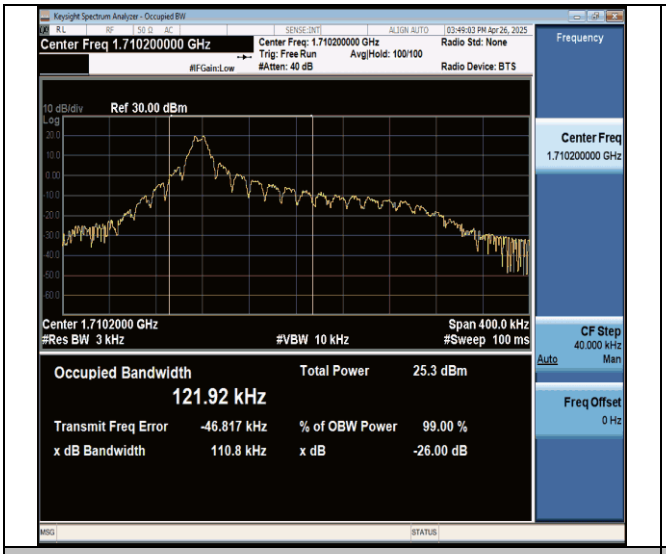
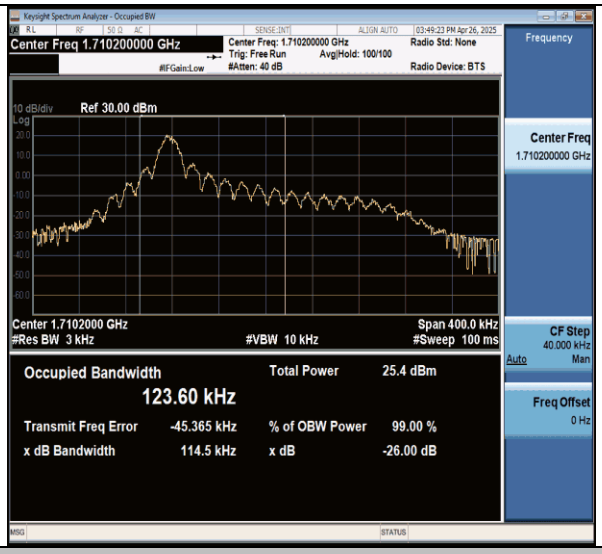
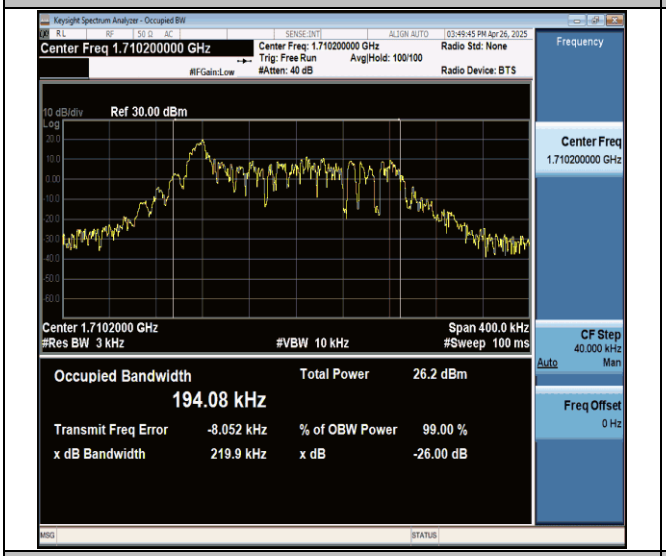


Band66-0.18-BPSK-131974-PASS



Band66-0.18-QPSK-131974-PASS



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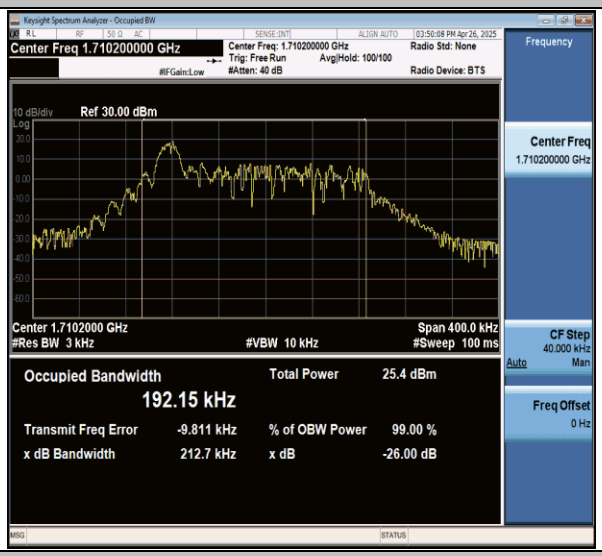
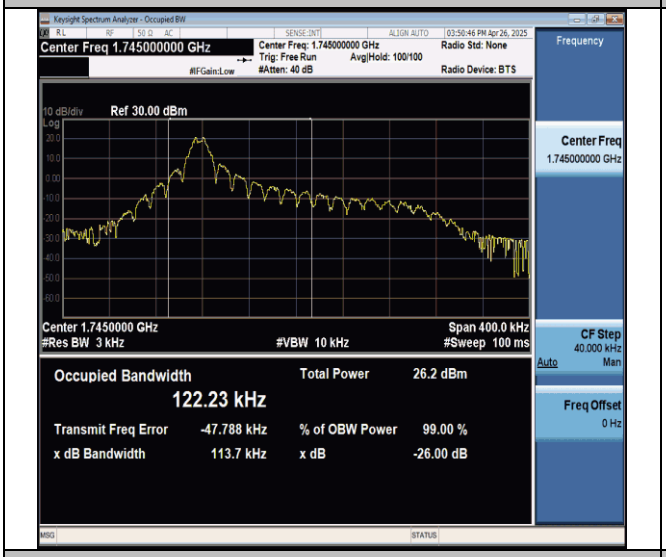
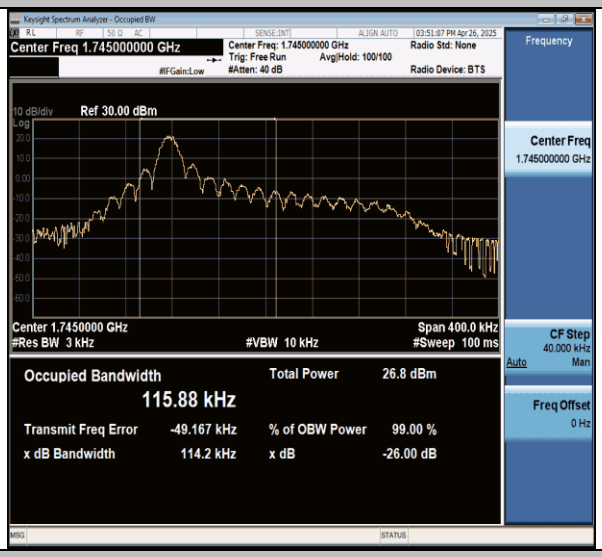


Band66-0.18-QPSK-131974-PASS



Band66-0.18-BPSK-132322-PASS



Band66-0.18-QPSK-132322-PASS

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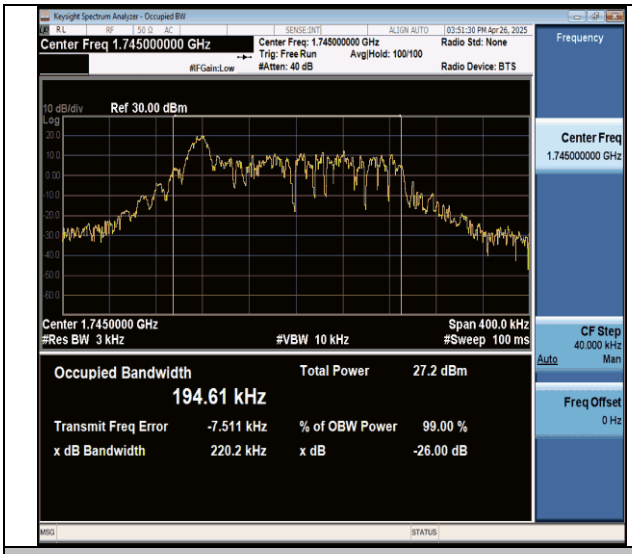
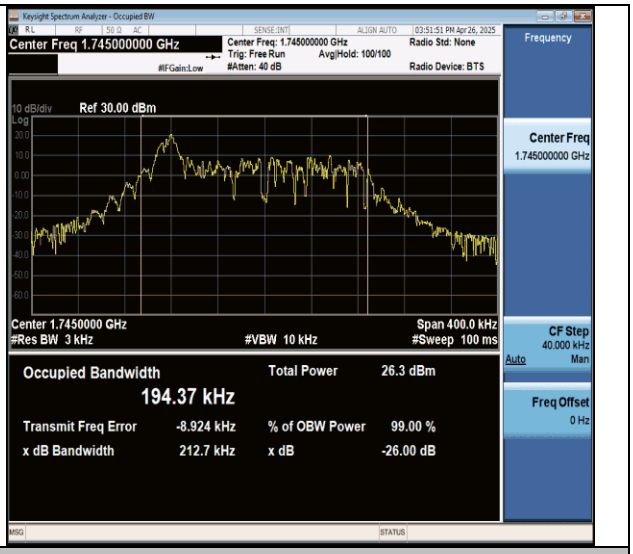


Band66-0.18-BPSK-132322-PASS



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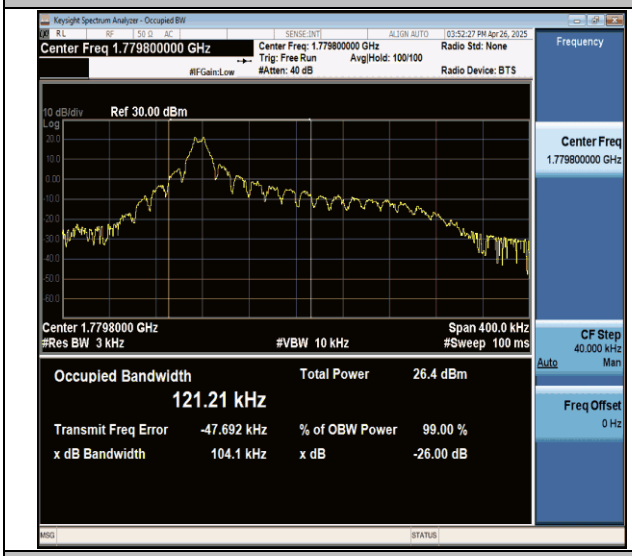
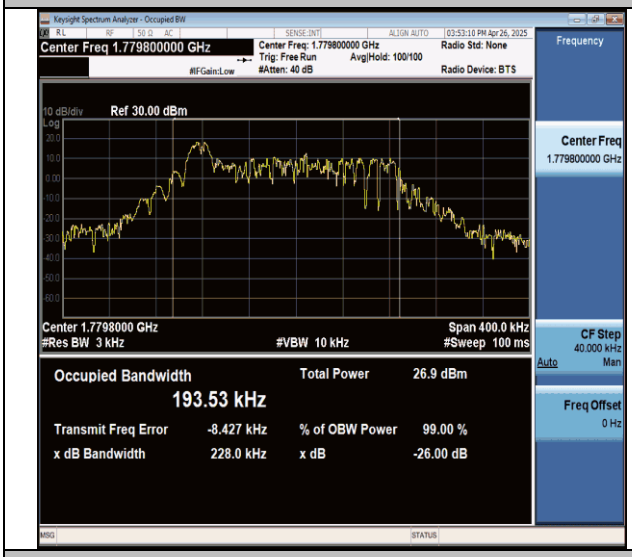


Band66-0.18-BPSK-132670-PASS

Band66-0.18-QPSK-132670-PASS



Band66-0.18-BPSK-132670-PASS

Band66-0.18-QPSK-132670-PASS

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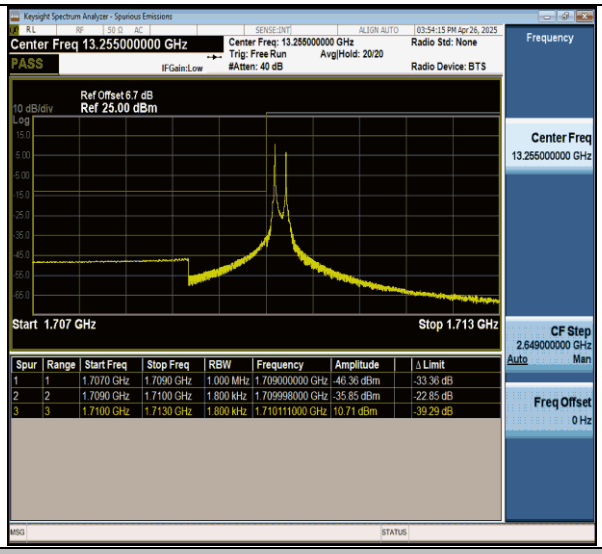
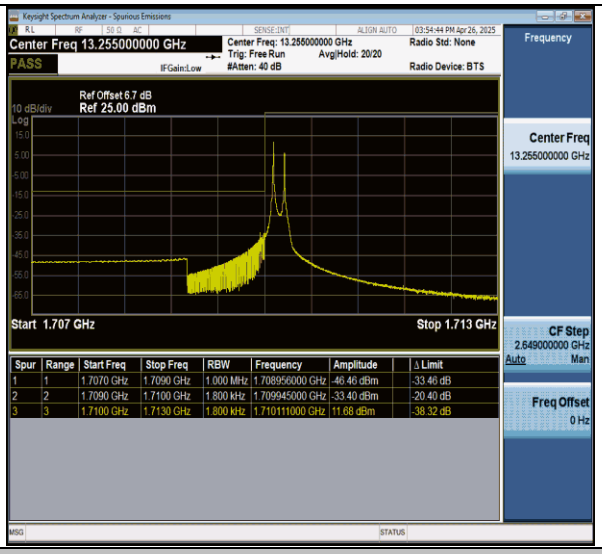
Band Edge for NB1

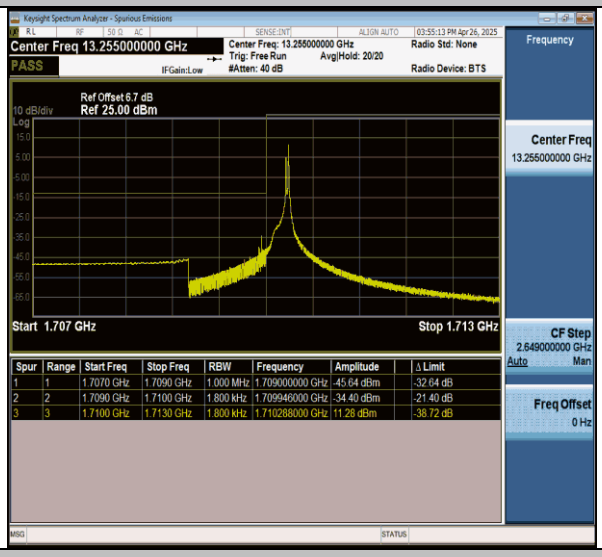
Test Graphs



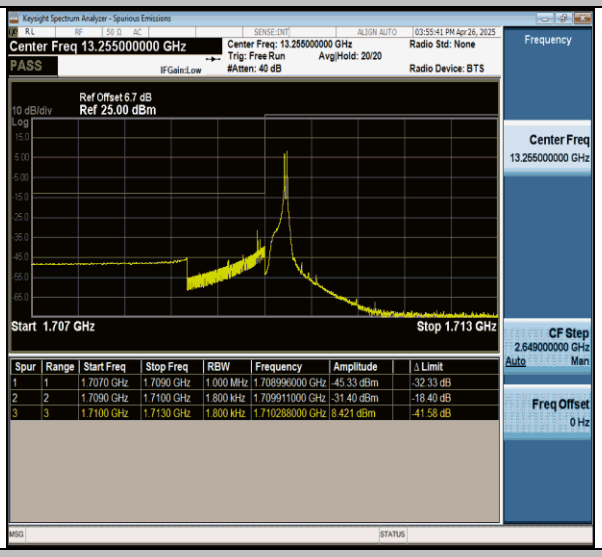
Band66_Stand-Alone_0.18_BPSK_131974_1@0_3.75kHz



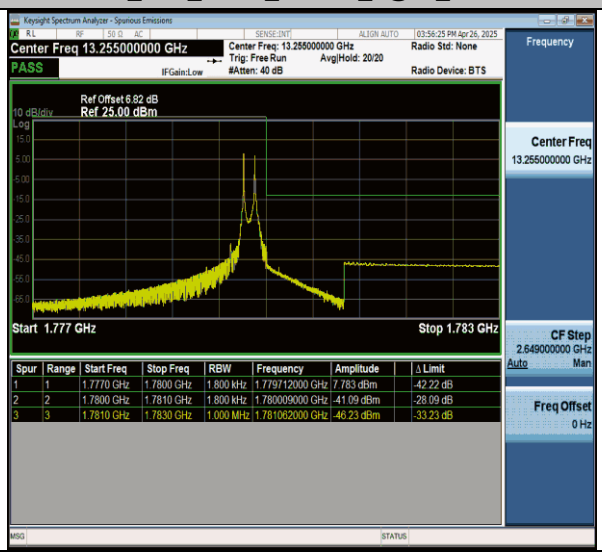
Band66_Stand-Alone_0.18_QPSK_131974_1@0_3.75kHz

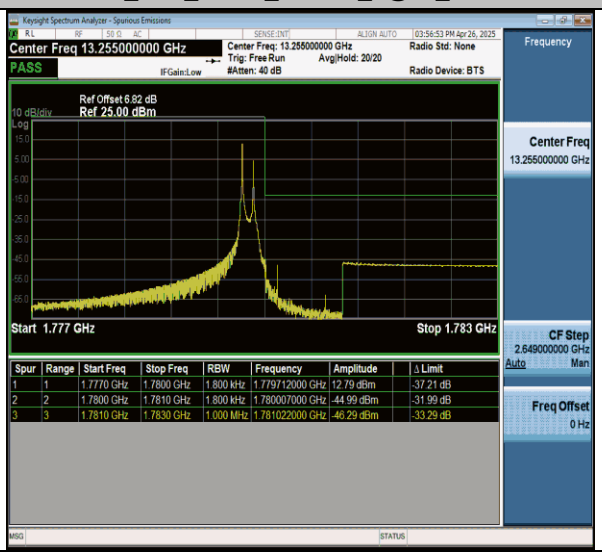


Band66_Stand-Alone_0.18_BPSK_131974_1@47_3.75kHz



Band66_Stand-Alone_0.18_QPSK_131974_1@47_3.75kHz





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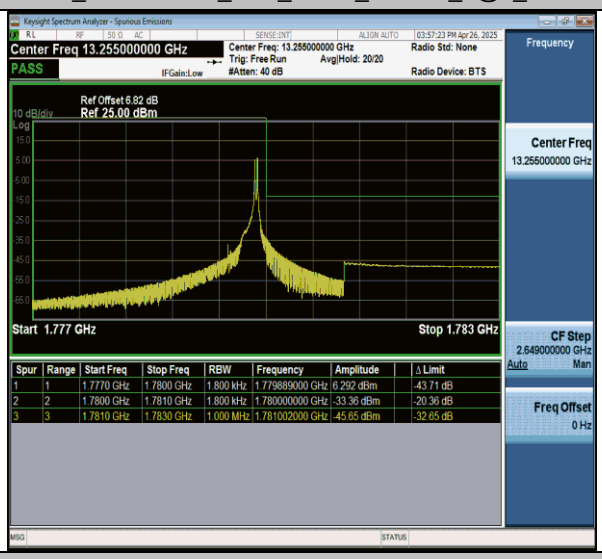
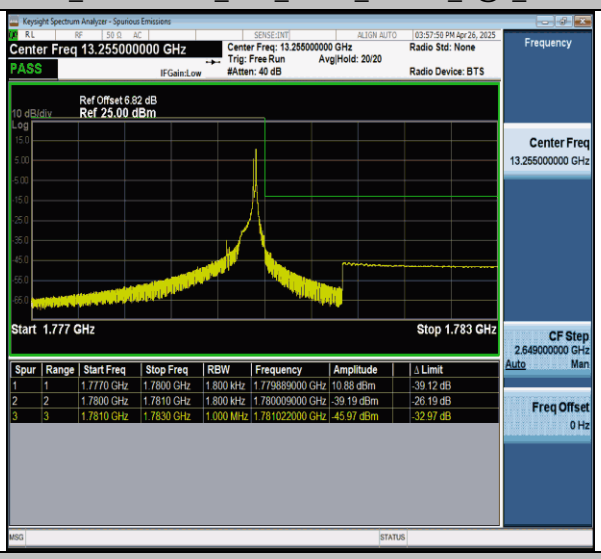
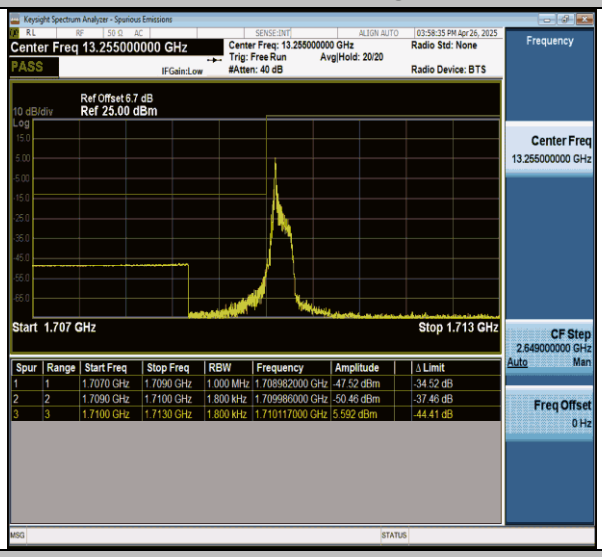
Band66_Stand-Alone_0.18_BPSK_132670_1@0_3.75kHz



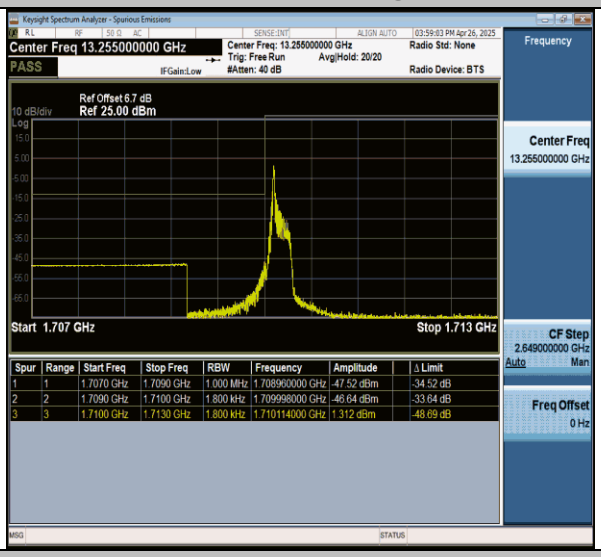
Band66_Stand-Alone_0.18_QPSK_132670_1@0_3.75kHz



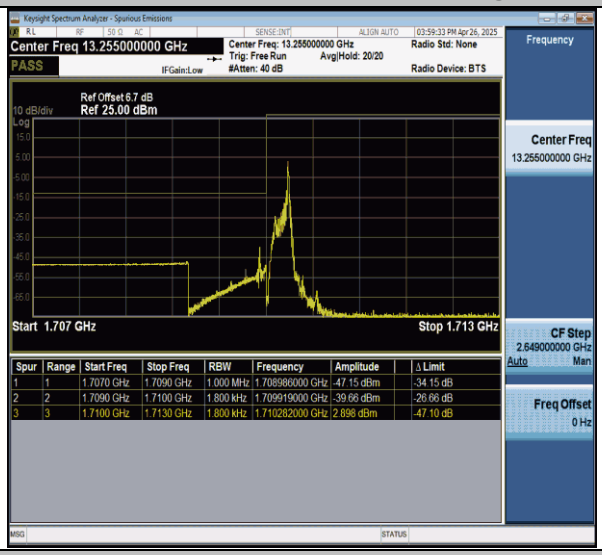
Band66_Stand-Alone_0.18_BPSK_132670_1@47_3.75kHz



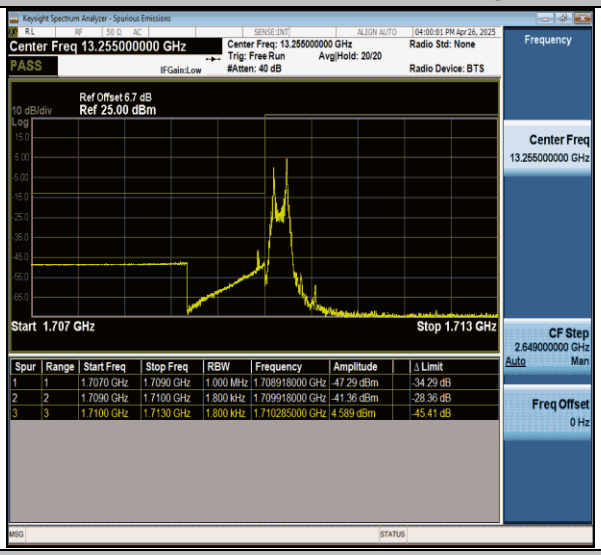
Band66_Stand-Alone_0.18_QPSK_132670_1@47_3.75kHz



Band66_Stand-Alone_0.18_BPSK_131974_1@0_15kHz



Band66_Stand-Alone_0.18_QPSK_131974_1@0_15kHz



Band66_Stand-Alone_0.18_BPSK_131974_1@11_15kHz

Band66_Stand-Alone_0.18_QPSK_131974_1@11_15kHz

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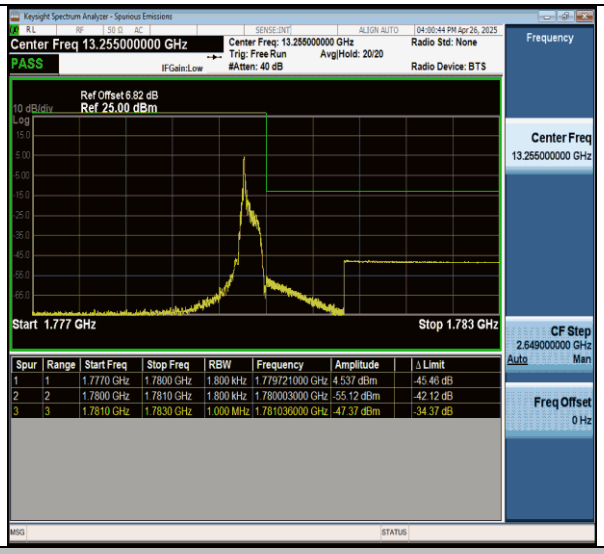
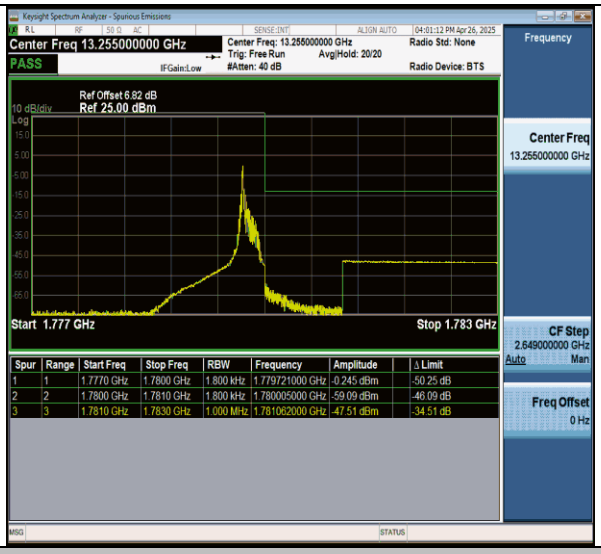
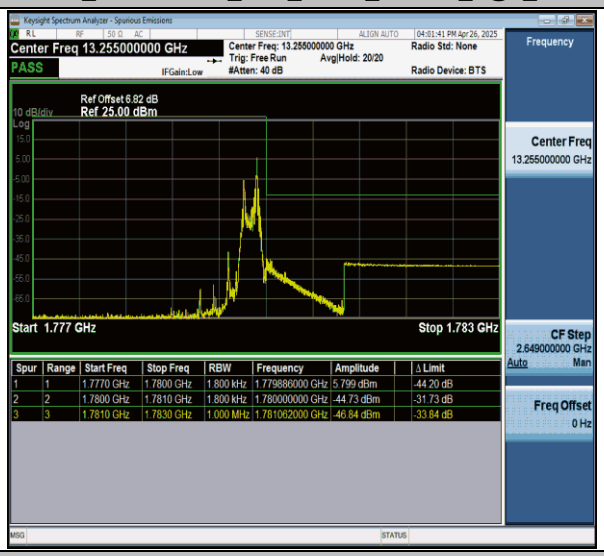


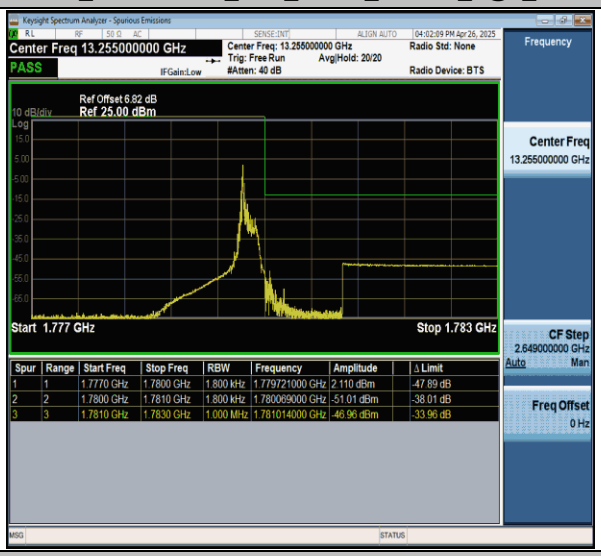
Band66_Stand-Alone_0.18_BPSK_132670_1@0_15kHz



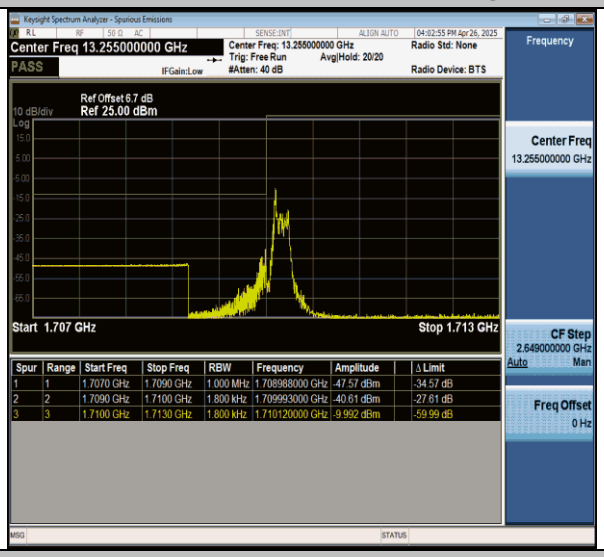
Band66_Stand-Alone_0.18_QPSK_132670_1@0_15kHz



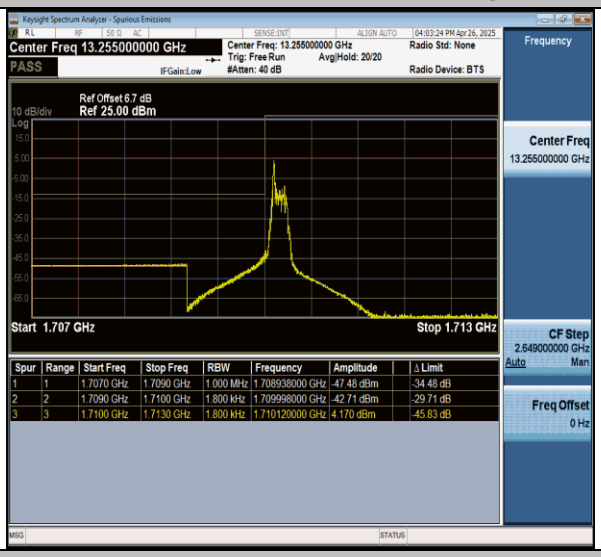
Band66_Stand-Alone_0.18_BPSK_132670_1@11_15kHz



Band66_Stand-Alone_0.18_QPSK_132670_1@11_15kHz



Band66_Stand-Alone_0.18_BPSK_131974_12@0_15kHz



Band66_Stand-Alone_0.18_QPSK_131974_12@0_15kHz

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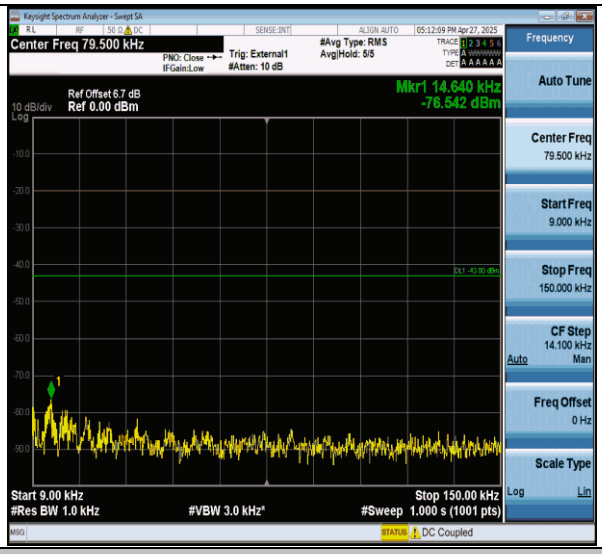
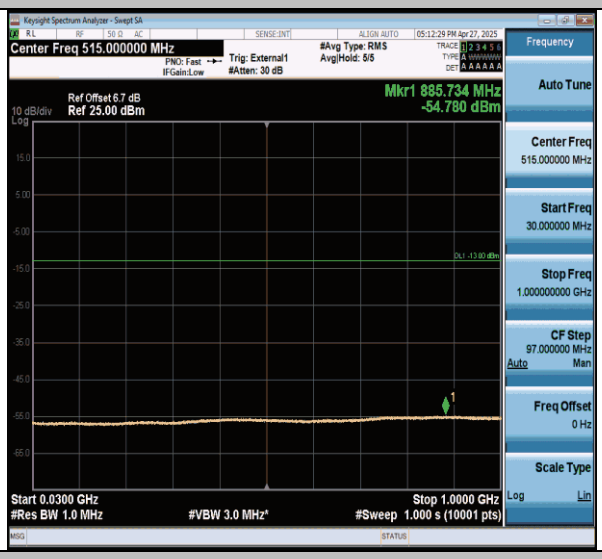
Conducted Spurious Emission for NB1

Test Graphs



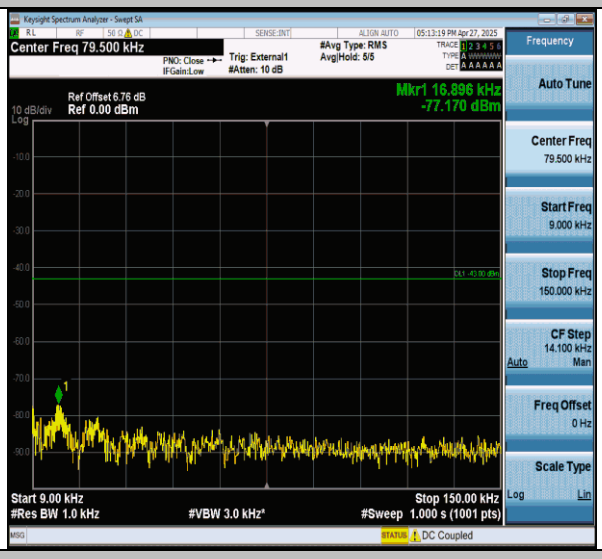
Band66-0.18-BPSK-131974-PASS

Band66-0.18-BPSK-131974-PASS

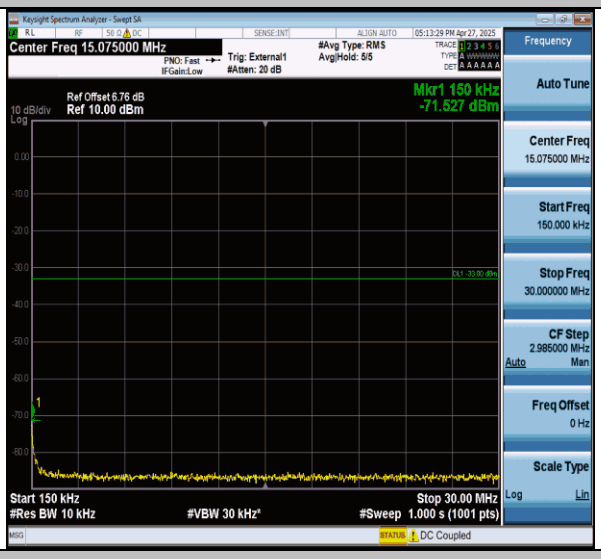


Band66-0.18-BPSK-131974-PASS

Band66-0.18-BPSK-131974-PASS



Band66-0.18-BPSK-132322-PASS



Band66-0.18-BPSK-132322-PASS

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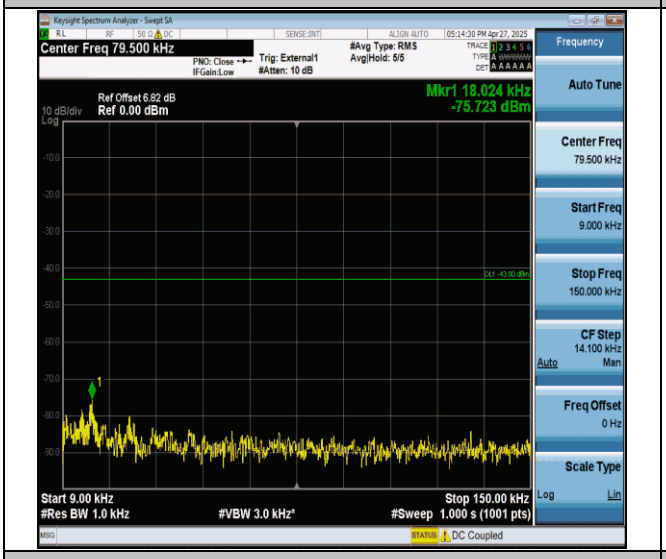
Band66-0.18-BPSK-132322-PASS

Band66-0.18-BPSK-132322-PASS



Band66-0.18-BPSK-132670-PASS

Band66-0.18-BPSK-132670-PASS

Band66-0.18-BPSK-132670-PASS

Band66-0.18-BPSK-132670-PASS

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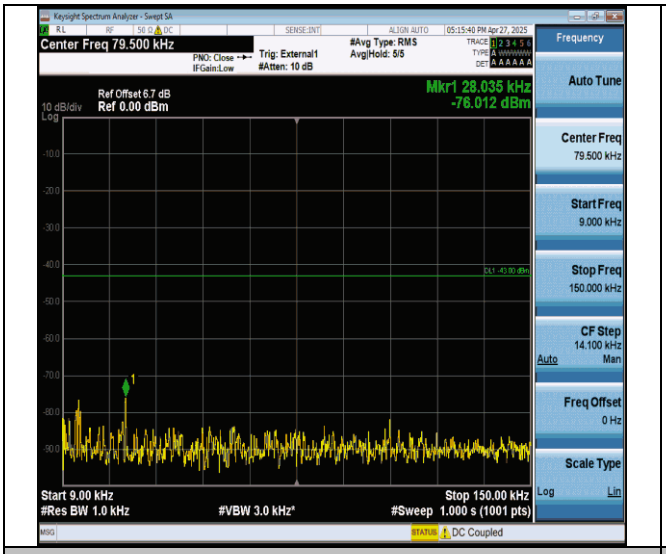
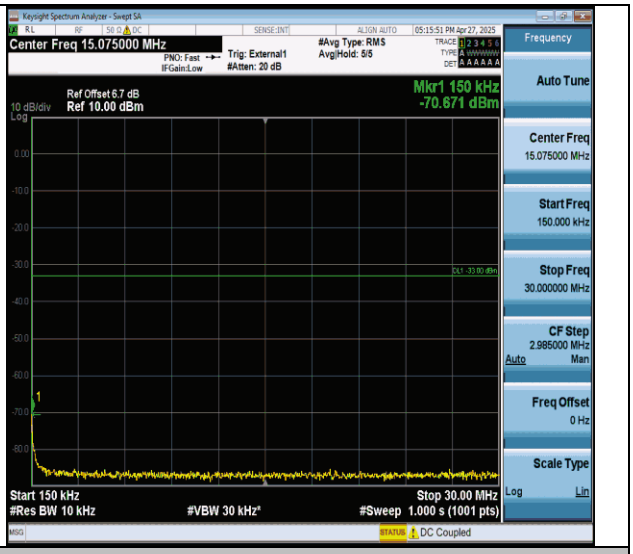
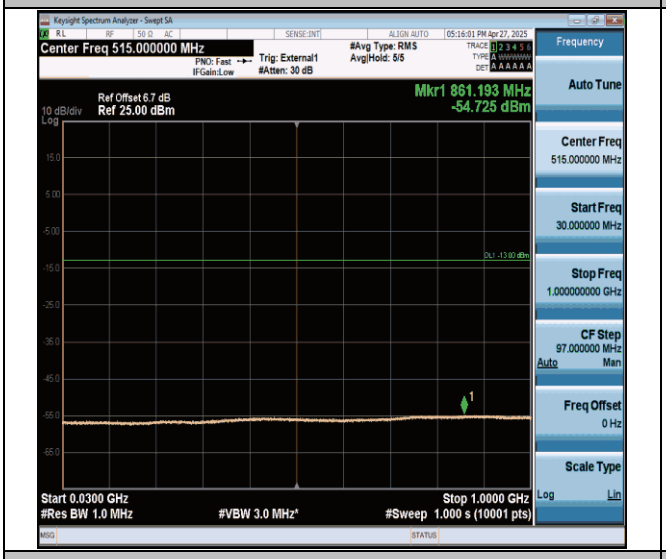


Band66-0.18-BPSK-131974-PASS

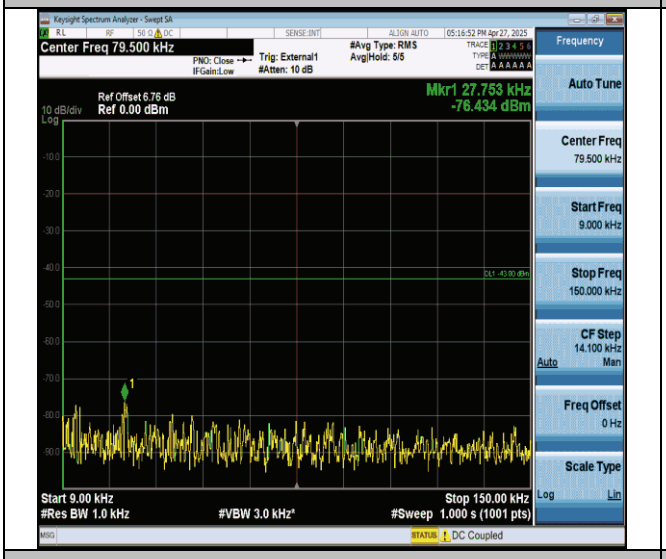


Band66-0.18-BPSK-131974-PASS



Band66-0.18-BPSK-131974-PASS

Band66-0.18-BPSK-131974-PASS



Band66-0.18-BPSK-132322-PASS

Band66-0.18-BPSK-132322-PASS

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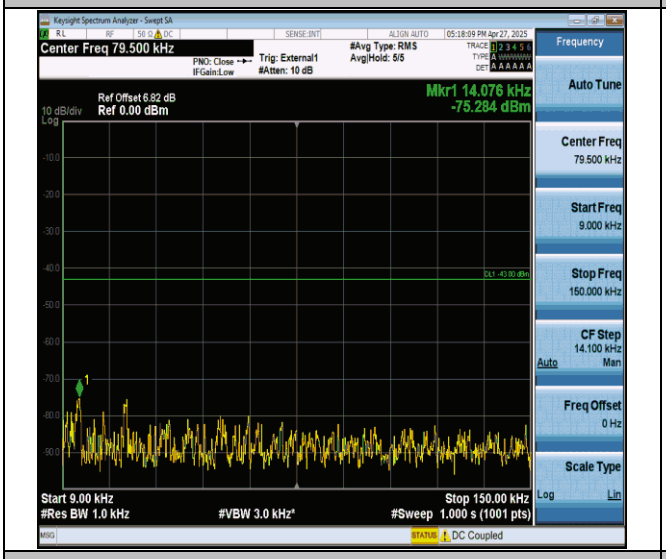
Band66-0.18-BPSK-132322-PASS

Band66-0.18-BPSK-132322-PASS



Band66-0.18-BPSK-132670-PASS

Band66-0.18-BPSK-132670-PASS

Band66-0.18-BPSK-132670-PASS

Band66-0.18-BPSK-132670-PASS

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Frequency Stability for NB1

Test Result

Voltage											
Band	OpMode	SCS	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	VN	NT	3.50	0.002006	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	VL	NT	1.10	0.000630	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	VH	NT	0.20	0.000115	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	VN	NT	3.30	0.001891	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	VL	NT	1.60	0.000917	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	VH	NT	4.10	0.002350	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	VN	NT	2.00	0.001146	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	VL	NT	6.60	0.003782	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	VH	NT	3.90	0.002235	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	VN	NT	-0.70	-0.000401	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	VL	NT	5.40	0.003095	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	VH	NT	3.50	0.002006	PASS

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Temperature											
Band	OpMode	Bandwidth	Modulation	Channel	Tones	SCS	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	-30	1.30	0.000745	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	-20	2.60	0.001490	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	-10	1.60	0.000917	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	0	3.90	0.002235	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	10	4.20	0.002407	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	20	4.30	0.002464	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	30	4.70	0.002693	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	40	1.20	0.000688	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@0	NV	50	1.60	0.000917	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	-30	4.80	0.002751	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	-20	3.30	0.001891	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	-10	3.60	0.002063	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	0	-0.40	-0.000229	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	10	1.70	0.000974	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	20	4.40	0.002521	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	30	5.30	0.003037	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	40	7.50	0.004298	PASS
Band66	Stand-Alone	3.75kHz	0.18	QPSK	132322	1@47	NV	50	2.40	0.001375	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	-30	2.70	0.001547	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	-20	4.00	0.002292	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	-10	1.50	0.000860	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	0	3.10	0.001777	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	10	3.20	0.001834	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	20	4.60	0.002636	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	30	3.40	0.001948	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	40	-0.30	-0.000172	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@0	NV	50	1.90	0.001089	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	-30	-1.70	-0.000974	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	-20	1.30	0.000745	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	-10	2.20	0.001261	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	0	4.20	0.002407	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	10	4.60	0.002636	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	20	1.40	0.000802	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	30	3.90	0.002235	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	40	4.20	0.002407	PASS
Band66	Stand-Alone	15kHz	0.18	QPSK	132322	1@11	NV	50	-1.10	-0.000630	PASS

~The End~

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