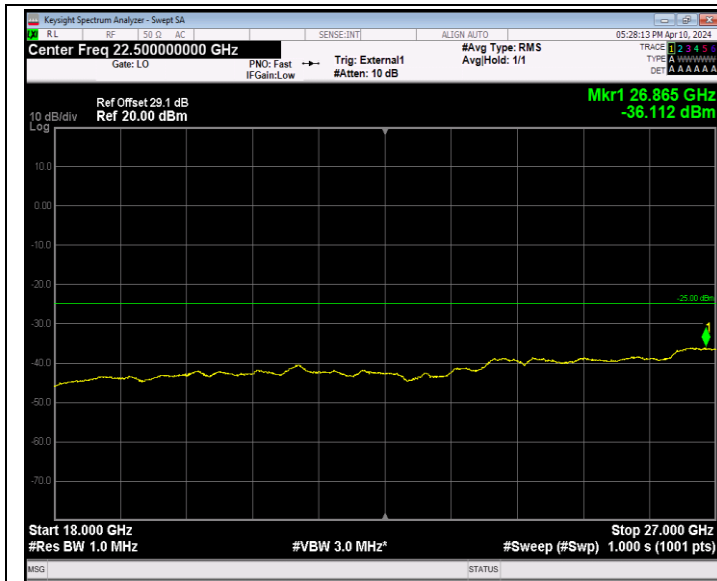
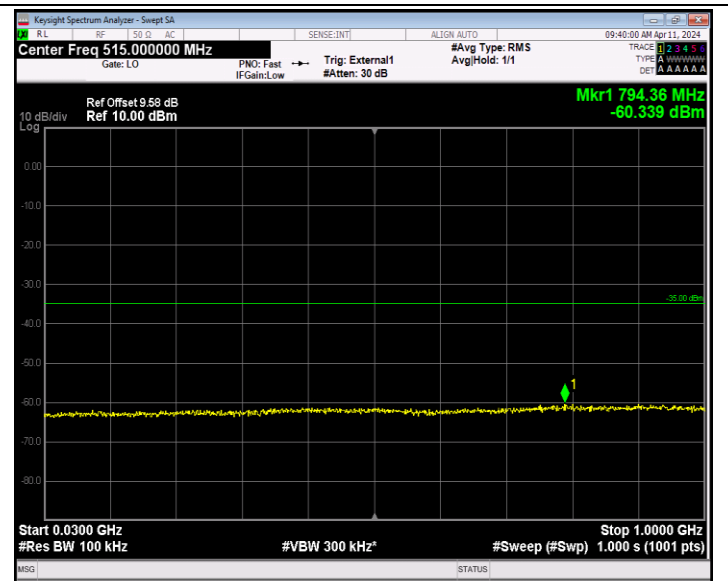
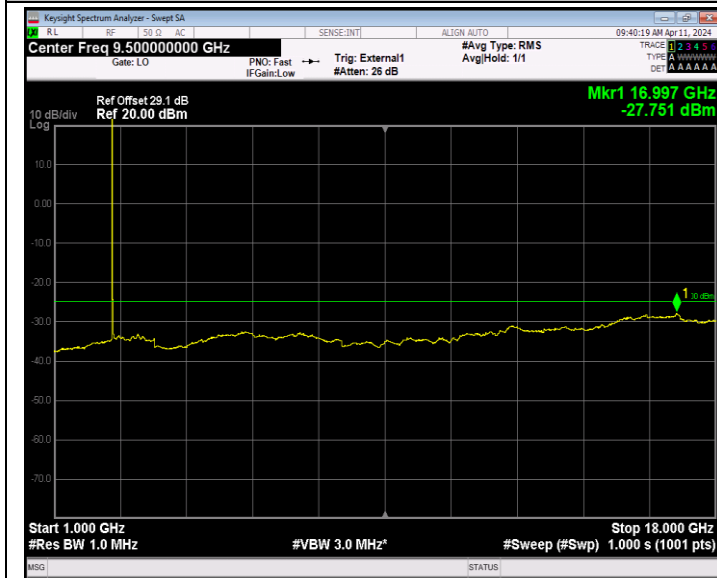




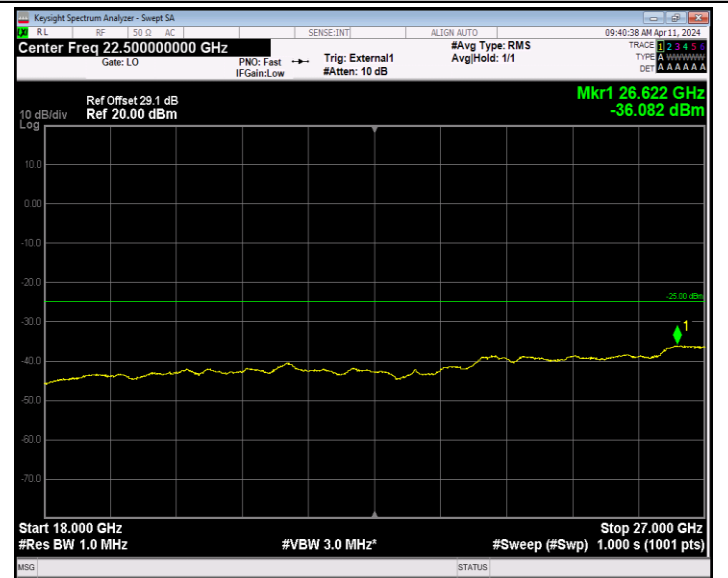
Band41_5MHz_64QAM_41565_1RB#0_18000~27000_18000~27000



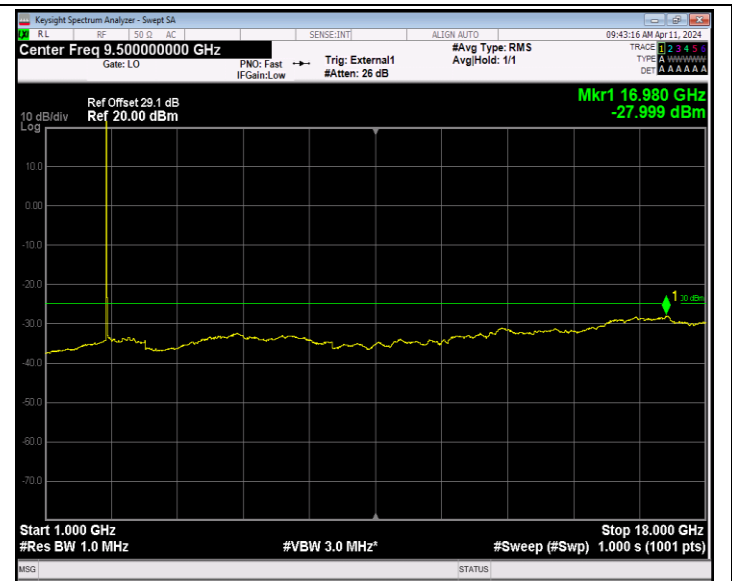
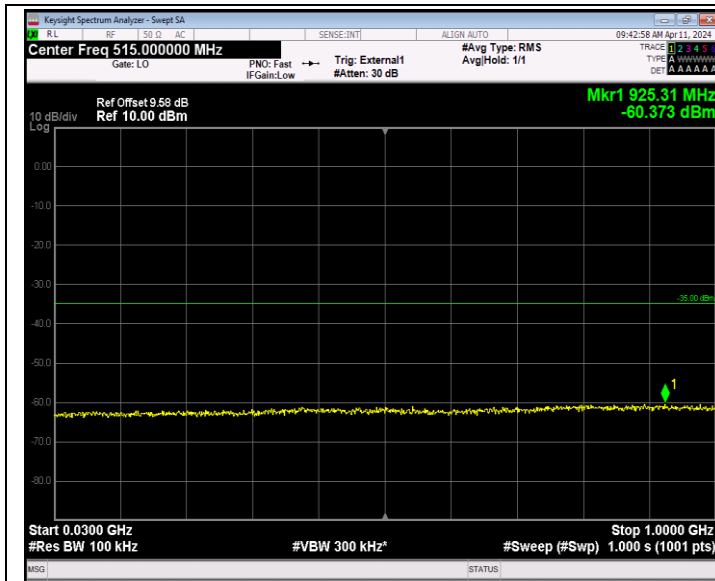
Band41_20MHz_QPSK_39750_1RB#0_30~1000_30~1000



Band41_20MHz_QPSK_39750_1RB#0_1000~18000_1000~18000

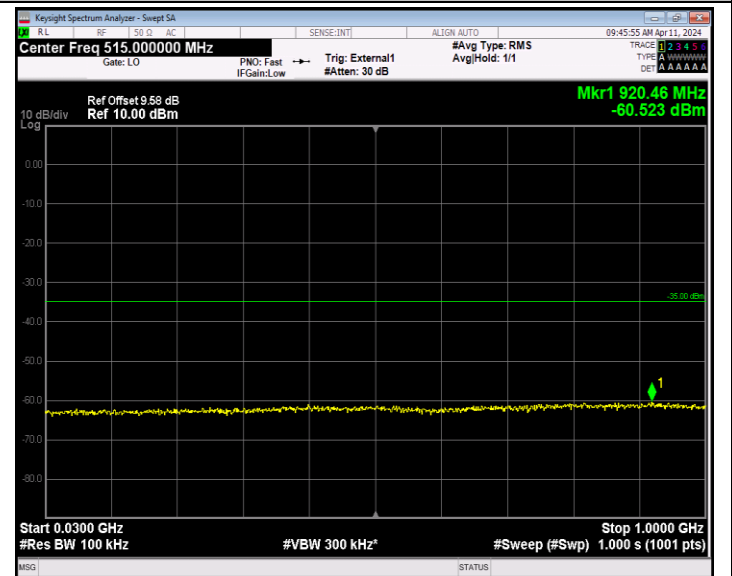
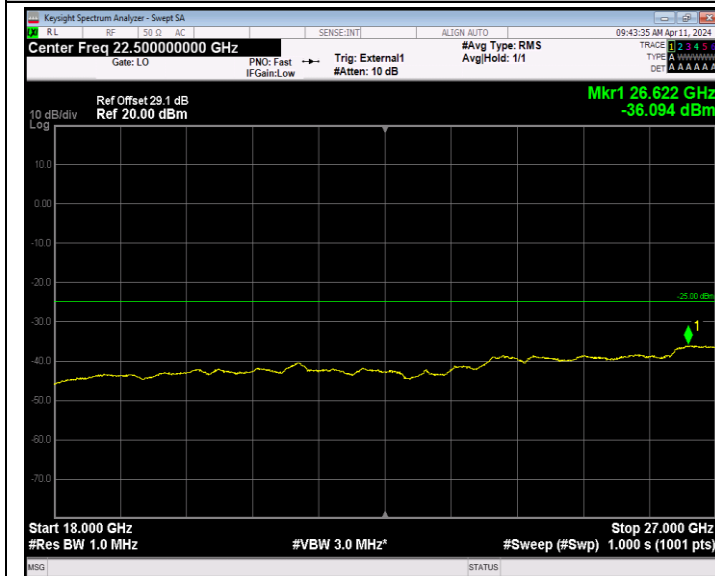


Band41_20MHz_QPSK_39750_1RB#0_18000~27000_18000~27000



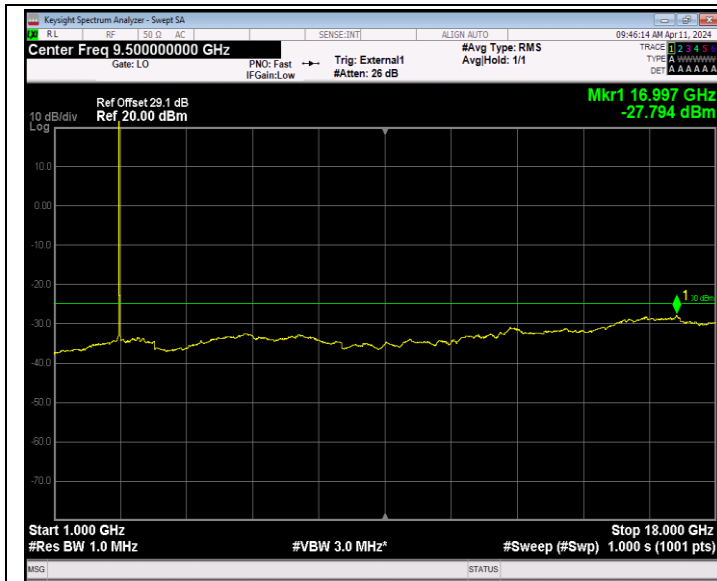
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Band41_20MHz_QPSK_40620_1RB#0_1000~18000_1000~18000



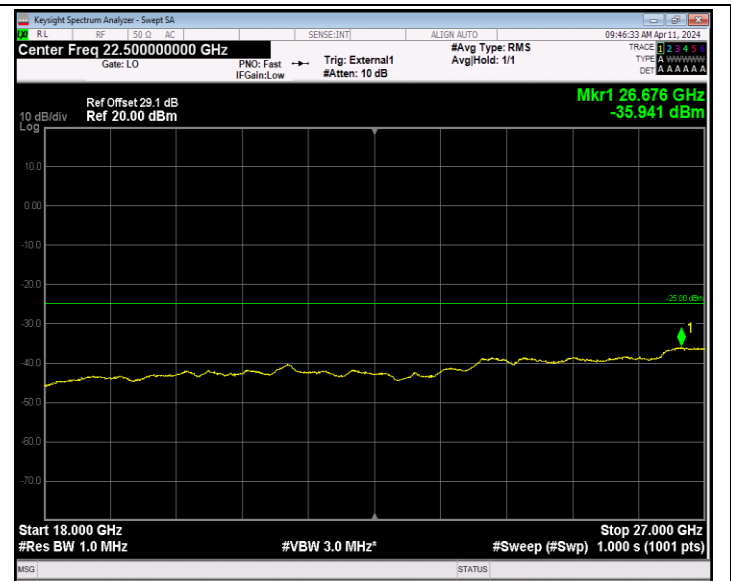
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Band41_20MHz_QPSK_41490_1RB#0_30~1000_30~1000



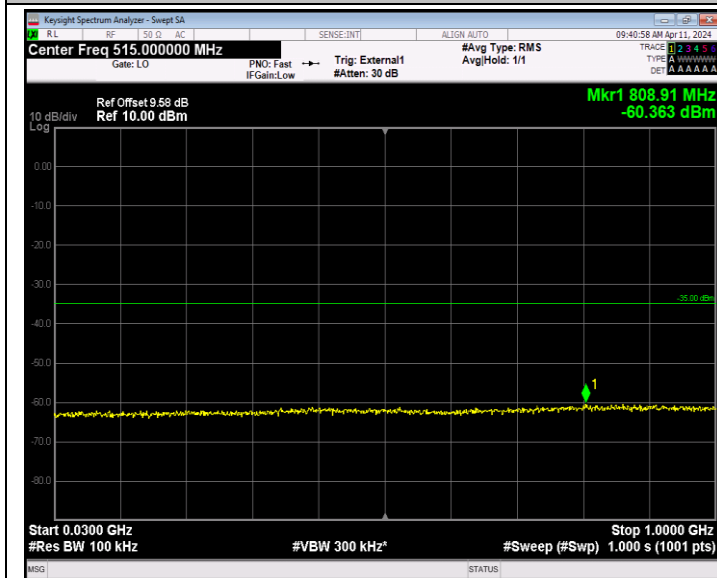
Band41_20MHz_QPSK_41490_1RB#0_1000~18000_1000~1800

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Band41_20MHz_QPSK_41490_1RB#0_18000~27000_18000~27

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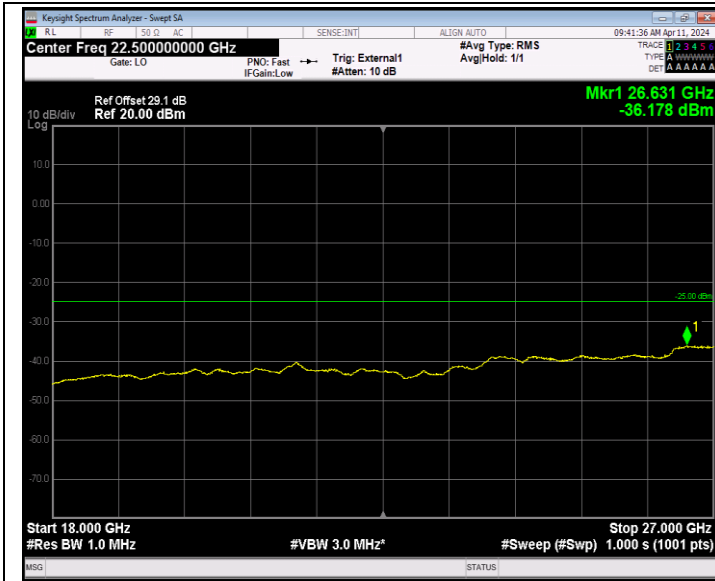


Band41_20MHz_16QAM_39750_1RB#0_30~1000_30~1000

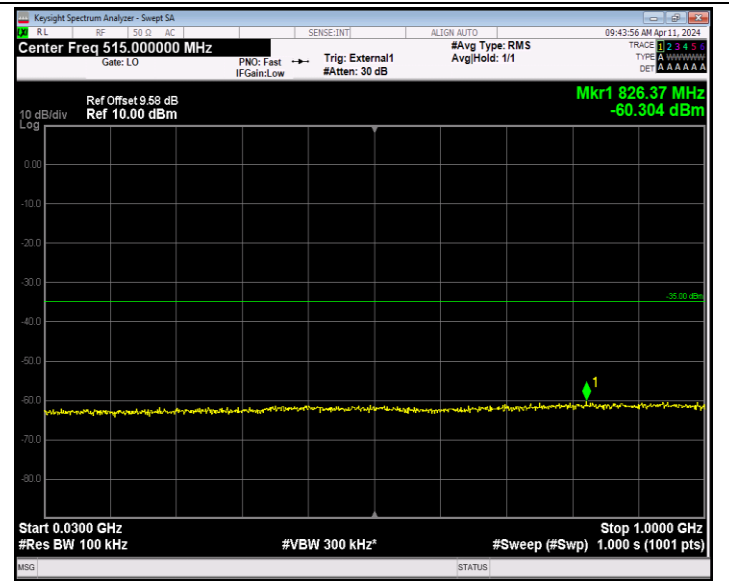


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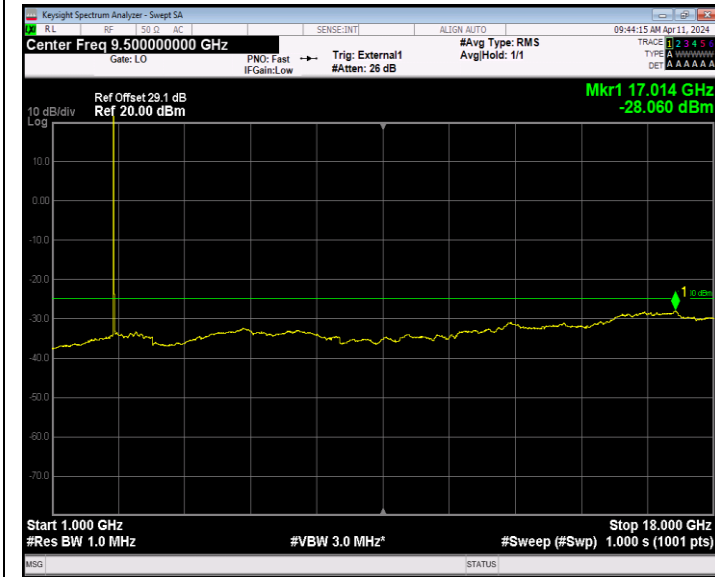
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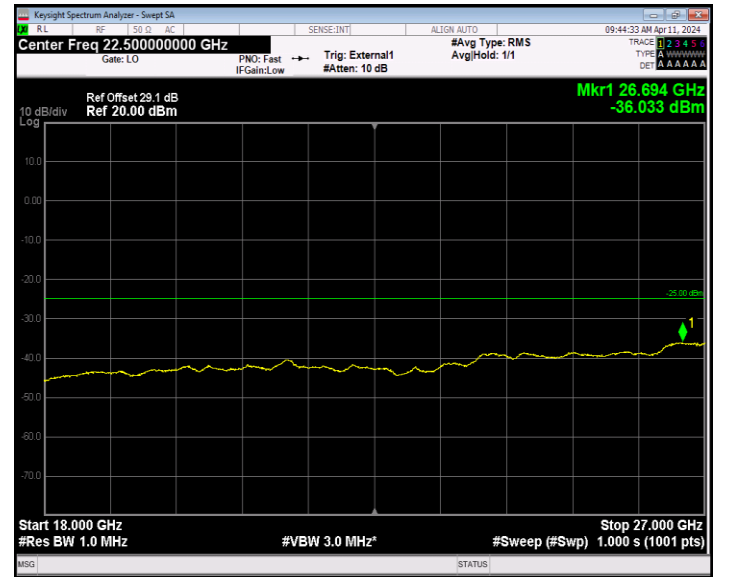
Band41_20MHz_16QAM_39750_1RB#0_18000~27000_18000~27000



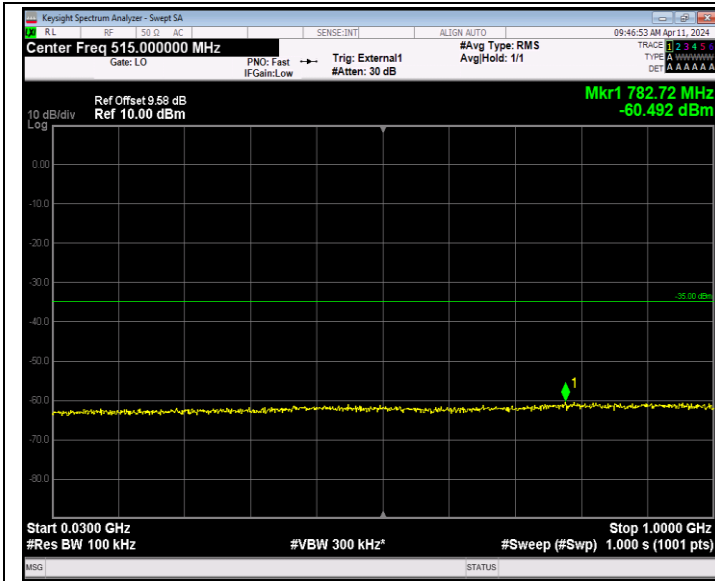
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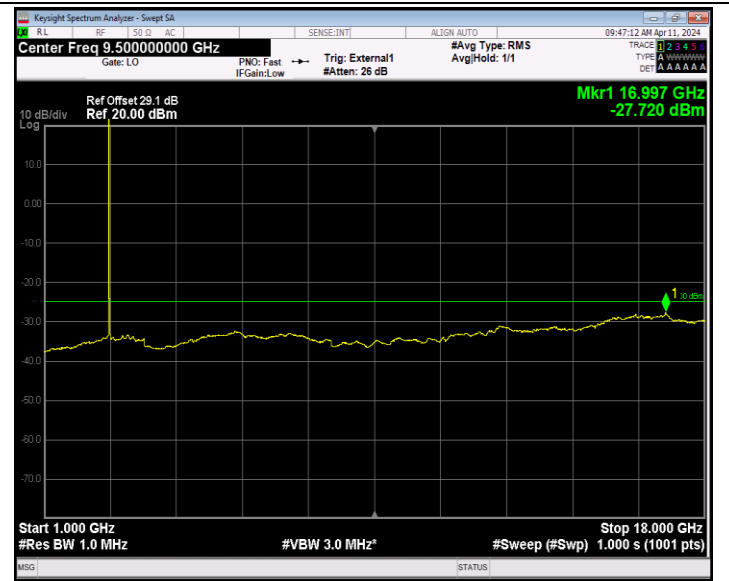
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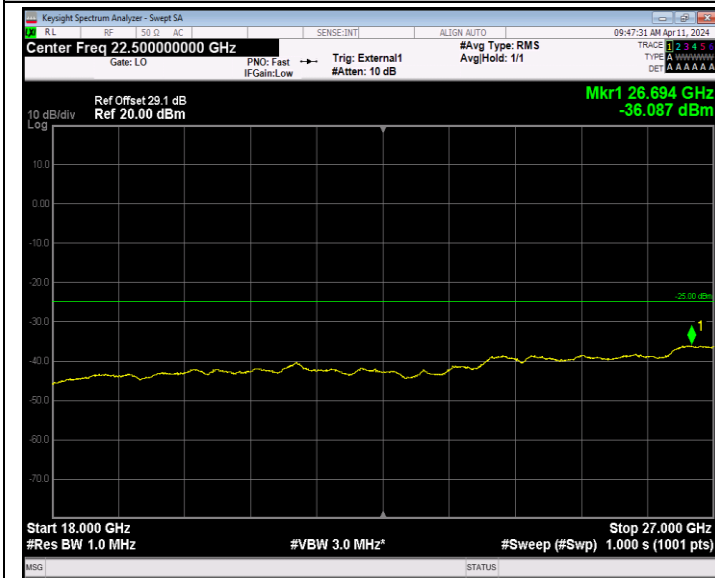
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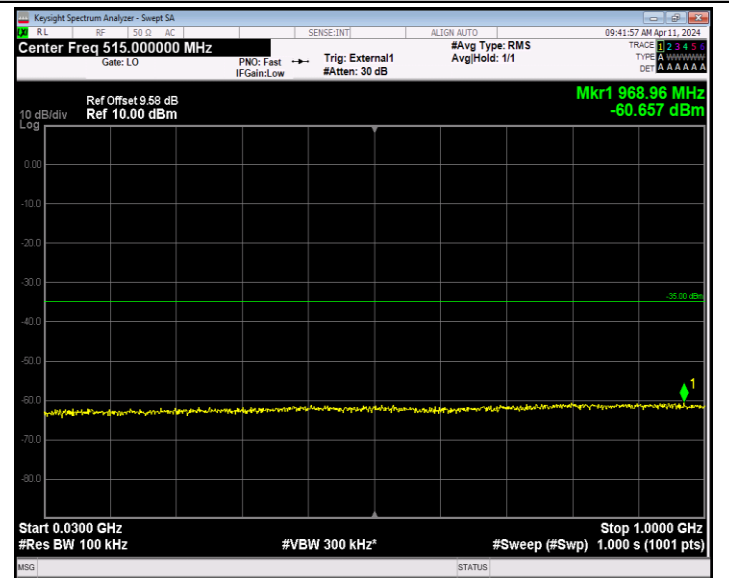
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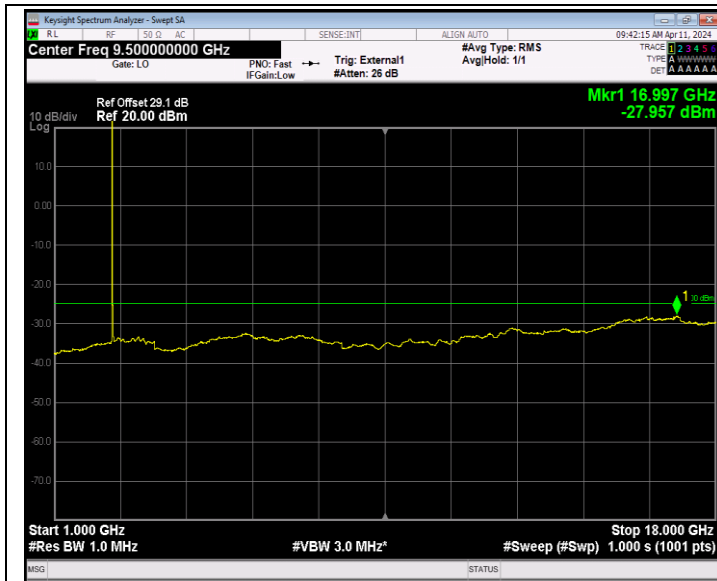
Band41_20MHz_16QAM_41490_1RB#0_1000~18000_1000~18000



Band41_20MHz_16QAM_41490_1RB#0_18000~27000_18000~27000

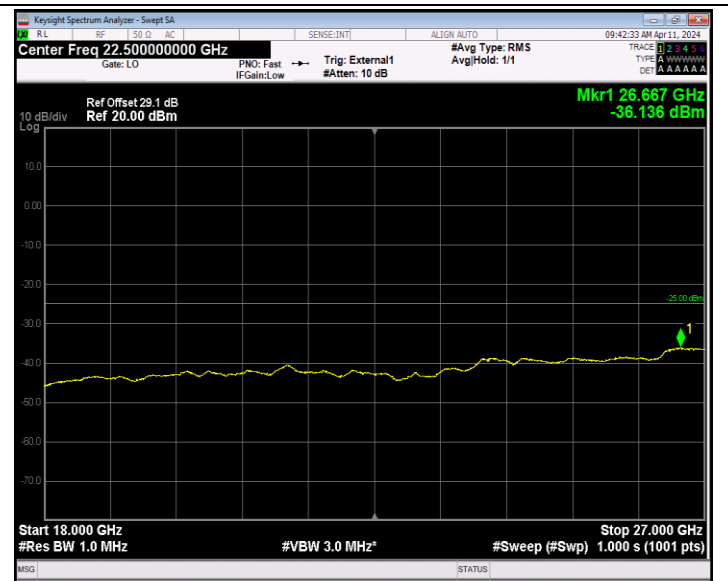


Band41_20MHz_64QAM_39750_1RB#0_30~1000_30~1000



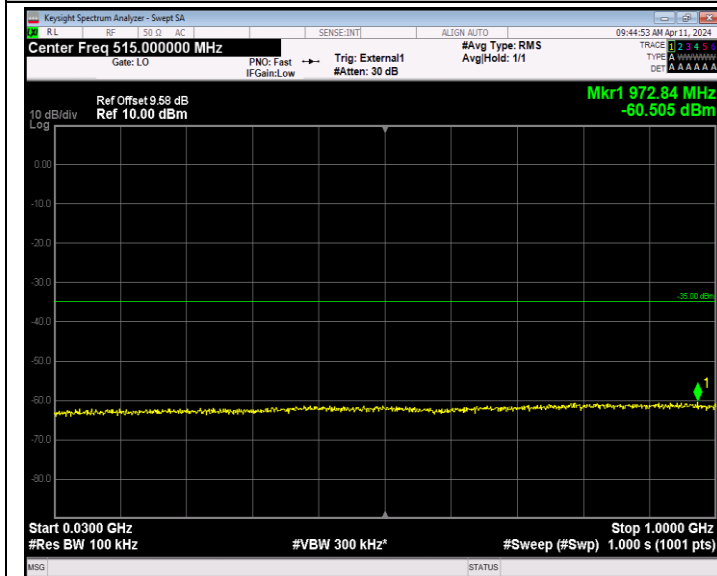
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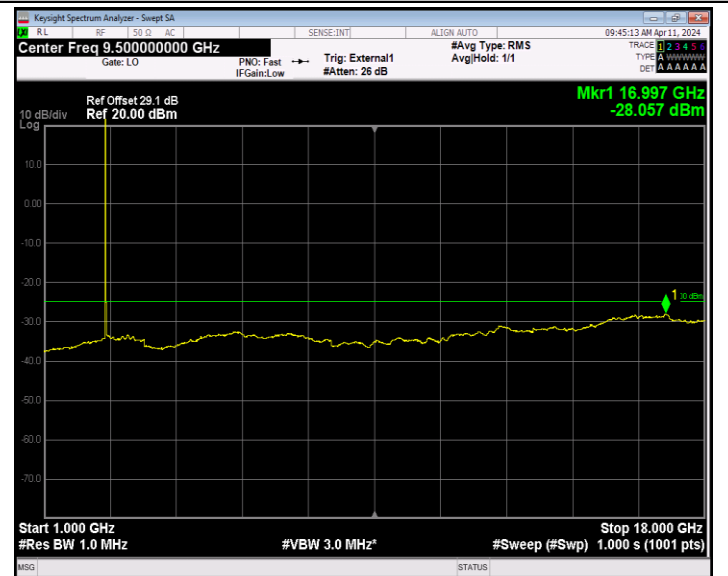


Band41_20MHz_64QAM_39750_1RB#0_18000~27000_18000~27000

7000

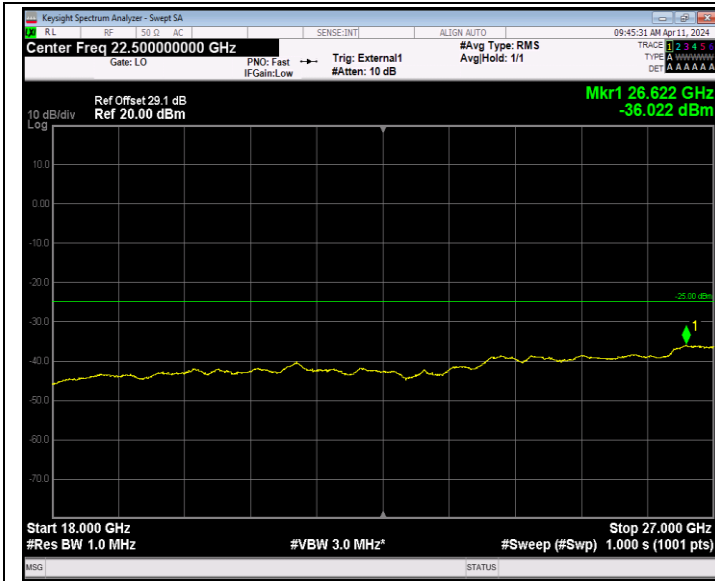


Band41_20MHz_64QAM_40620_1RB#0_30~1000_30~1000

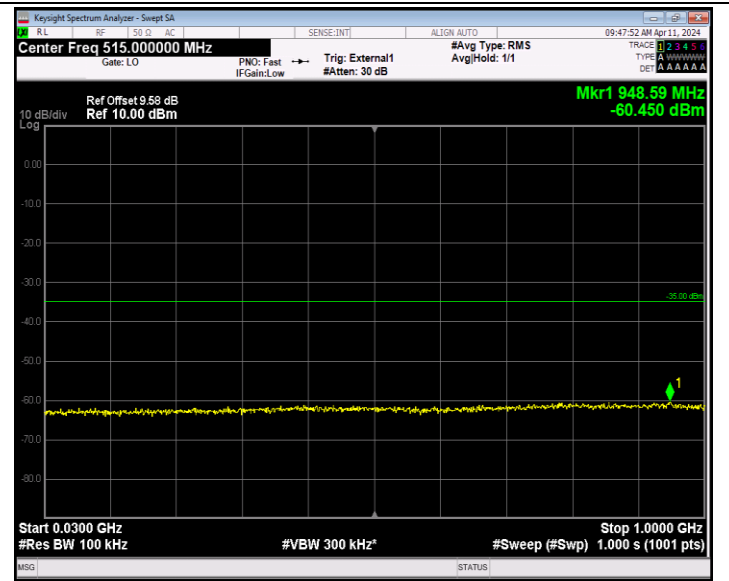


Band41_20MHz_64QAM_40620_1RB#0_1000~18000_1000~18000

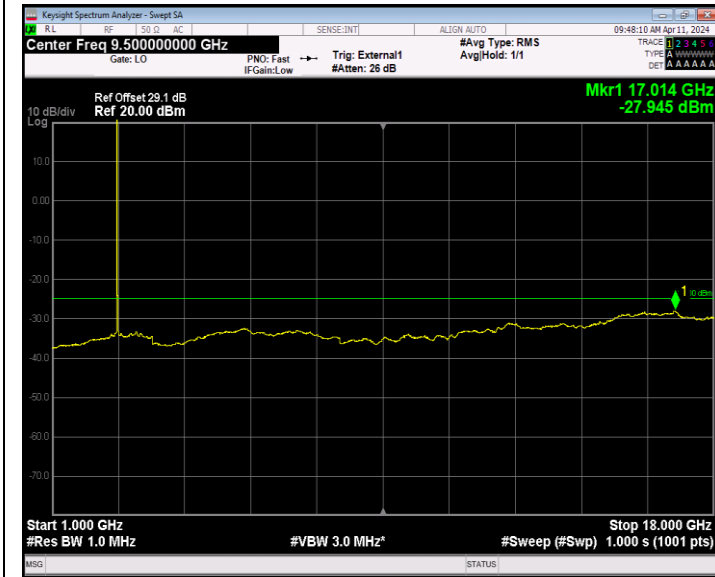
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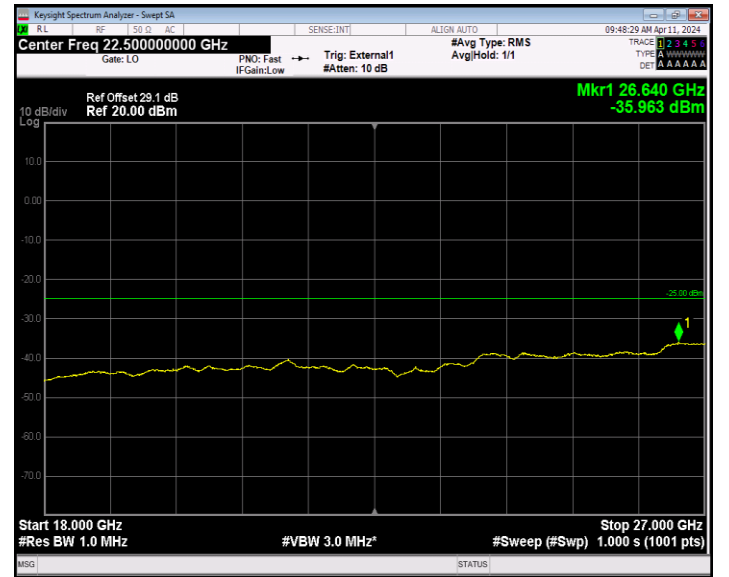
Band41_20MHz_64QAM_40620_1RB#0_18000~27000_18000~27000



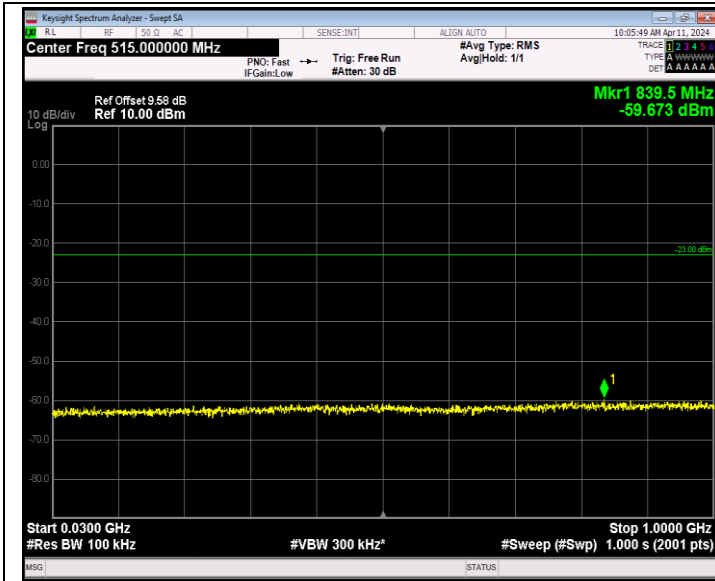
Band41_20MHz_64QAM_41490_1RB#0_30~1000_30~1000



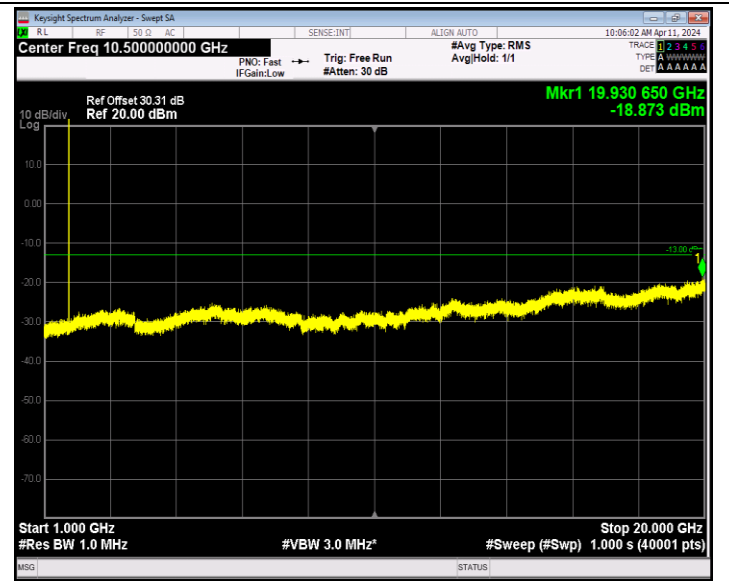
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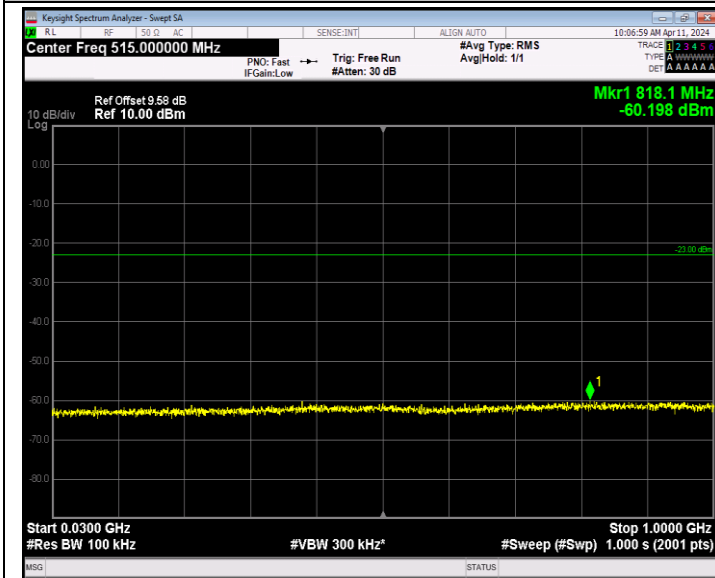
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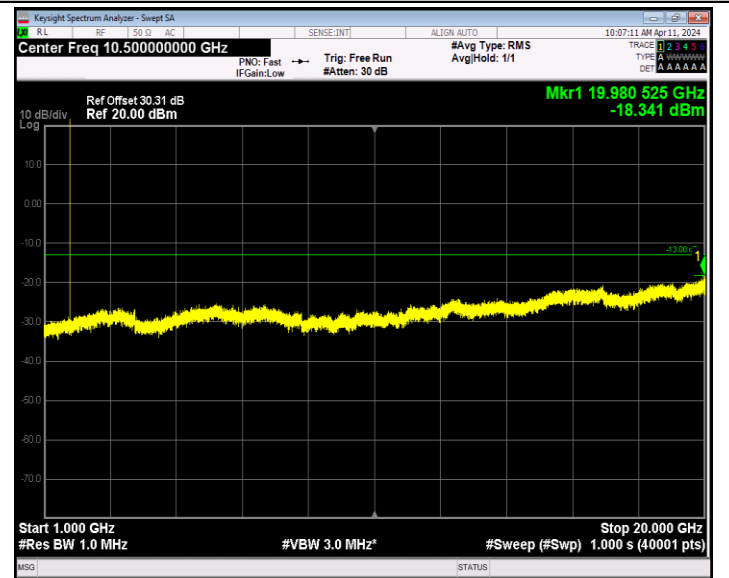
Band66_1.4MHz_QPSK_131979_1RB#0_30~1000_30~1000



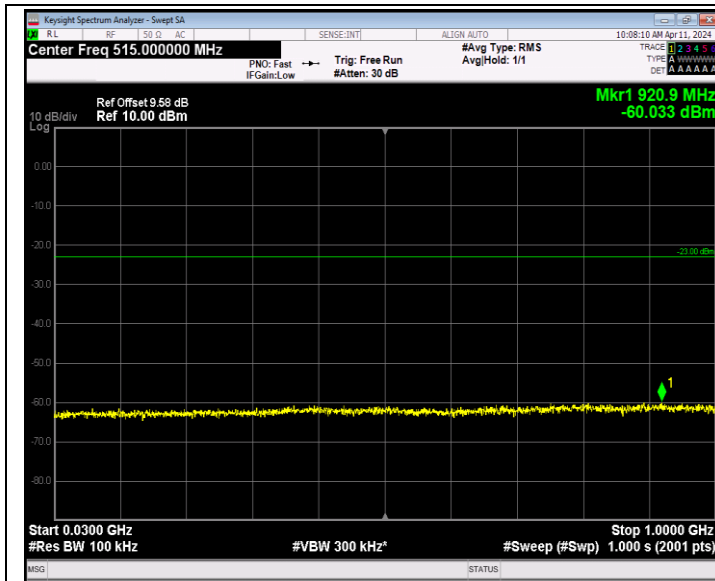
Band66_1.4MHz_QPSK_131979_1RB#0_1000~20000_1000~20000



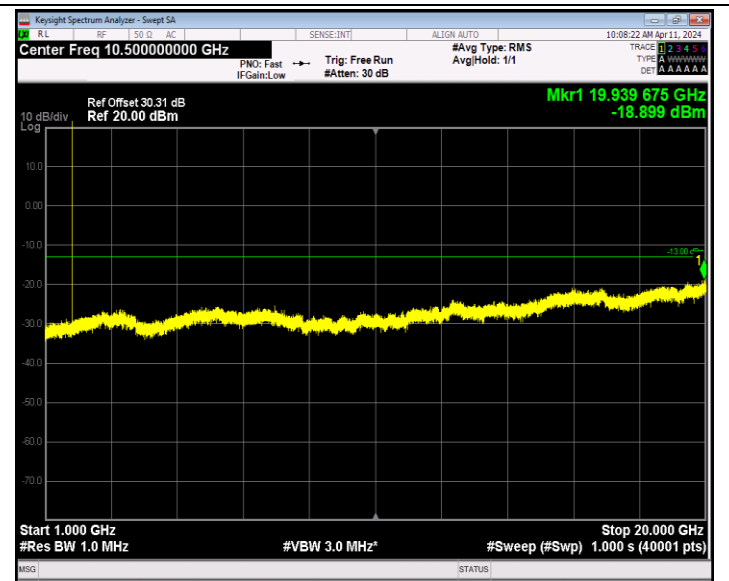
Band66_1.4MHz_QPSK_132322_1RB#0_30~1000_30~1000



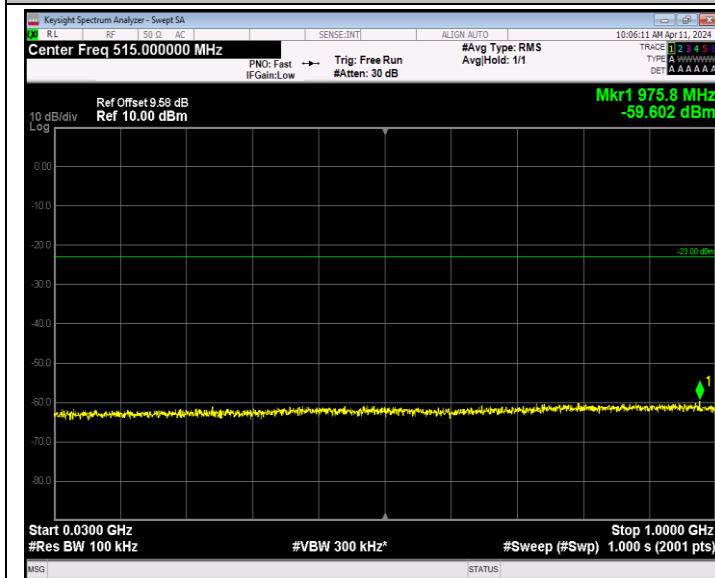
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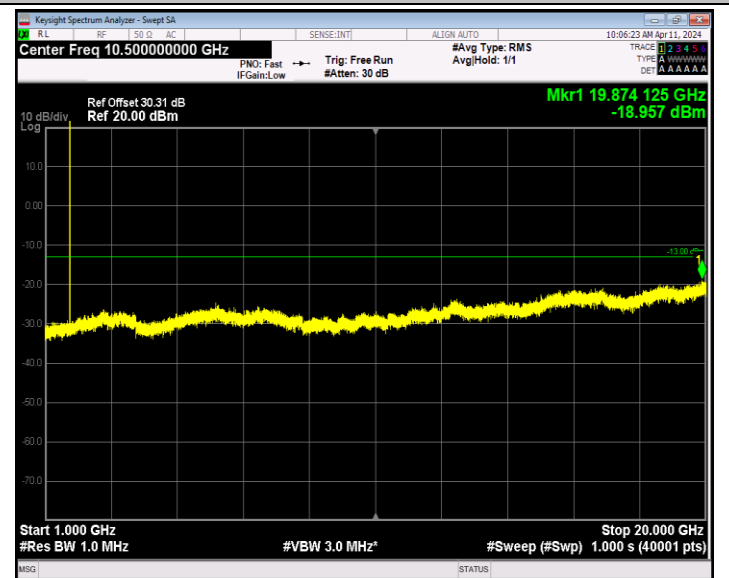
Band66_1.4MHz_QPSK_132665_1RB#0_30~1000_30~1000



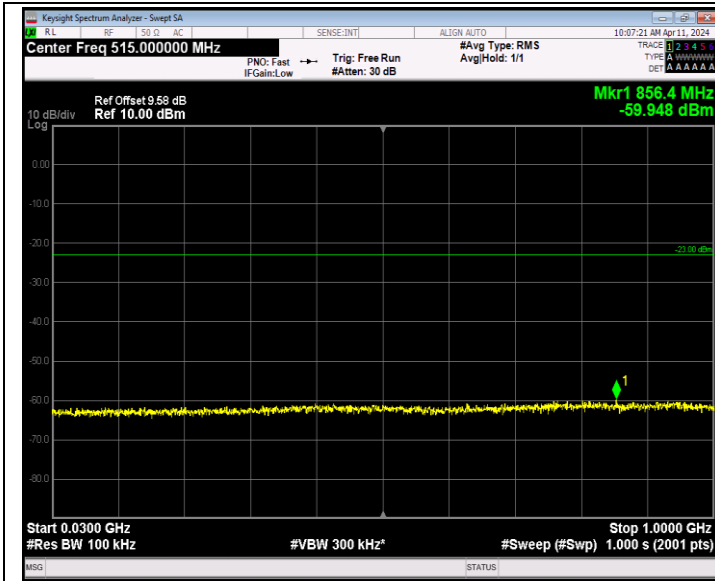
Band66_1.4MHz_QPSK_132665_1RB#0_1000~20000_1000~20000



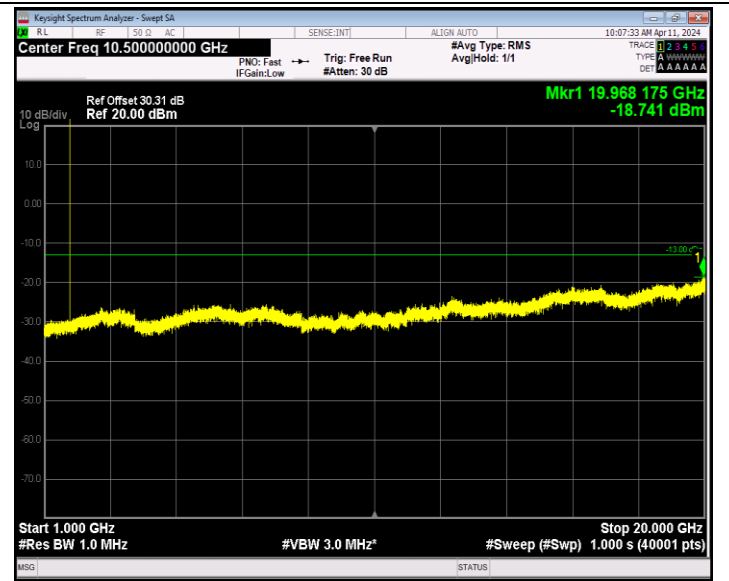
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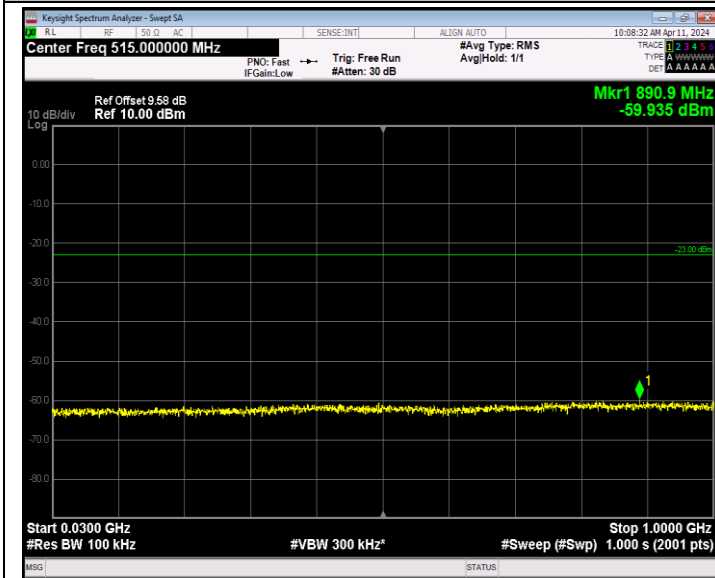
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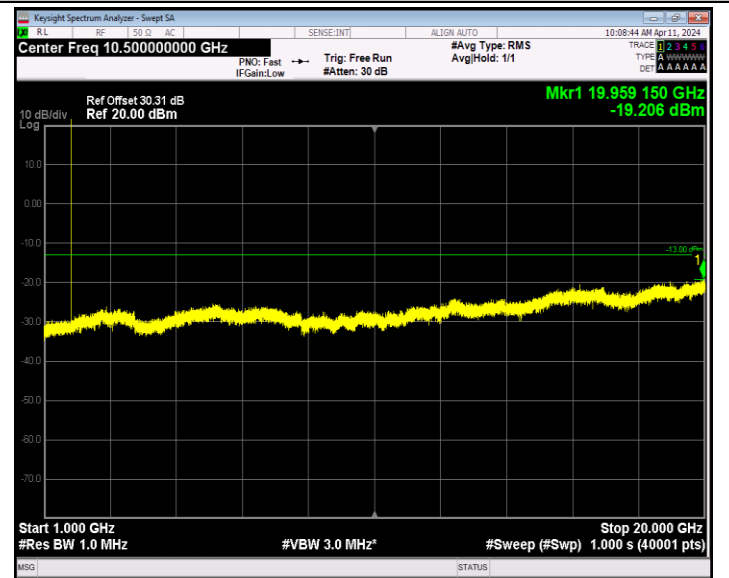
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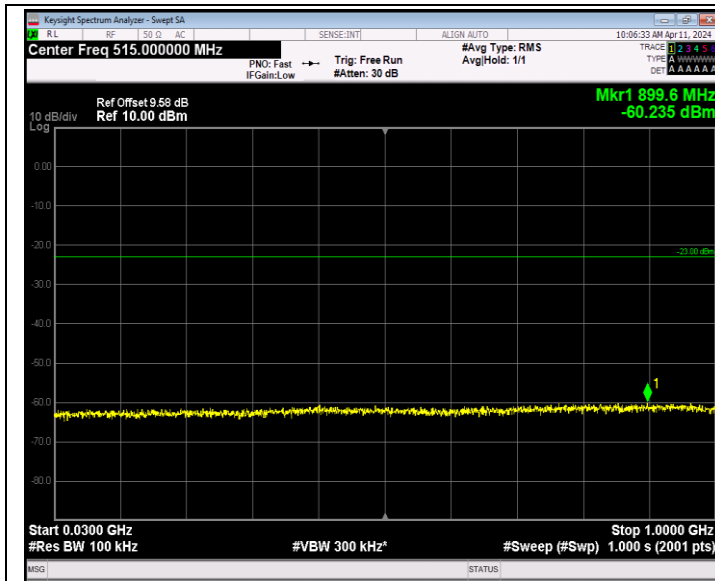
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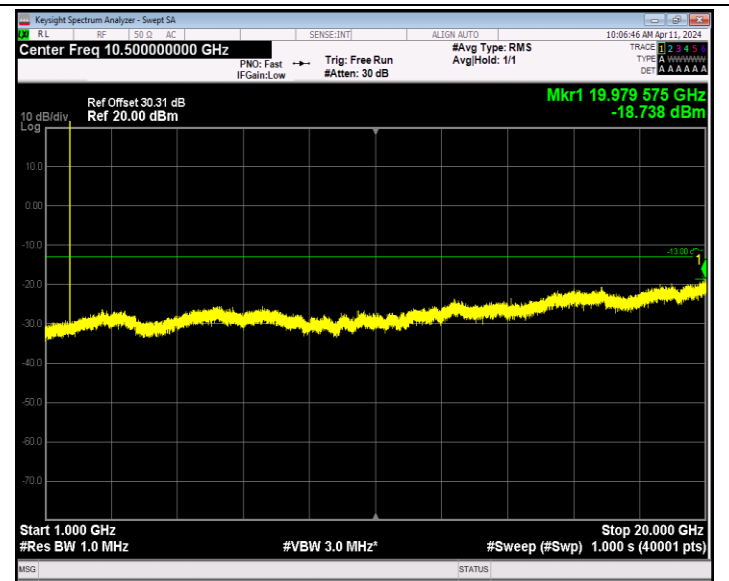
Band66_1.4MHz_16QAM_132665_1RB#0_30~1000_30~1000



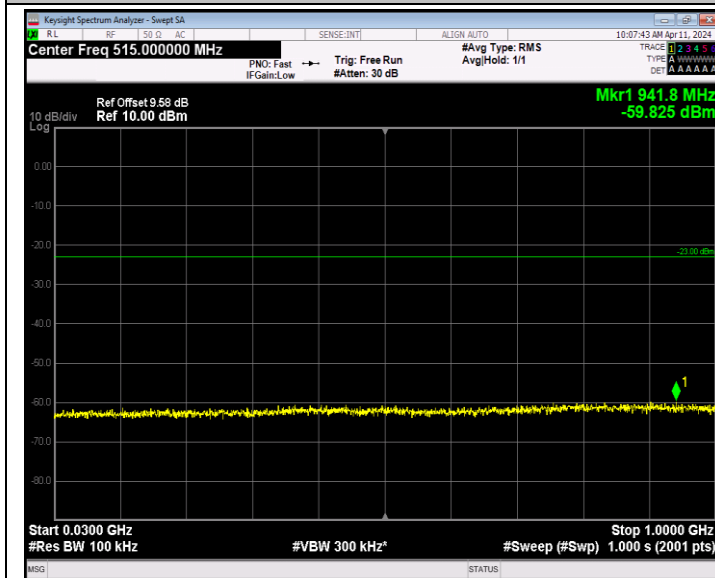
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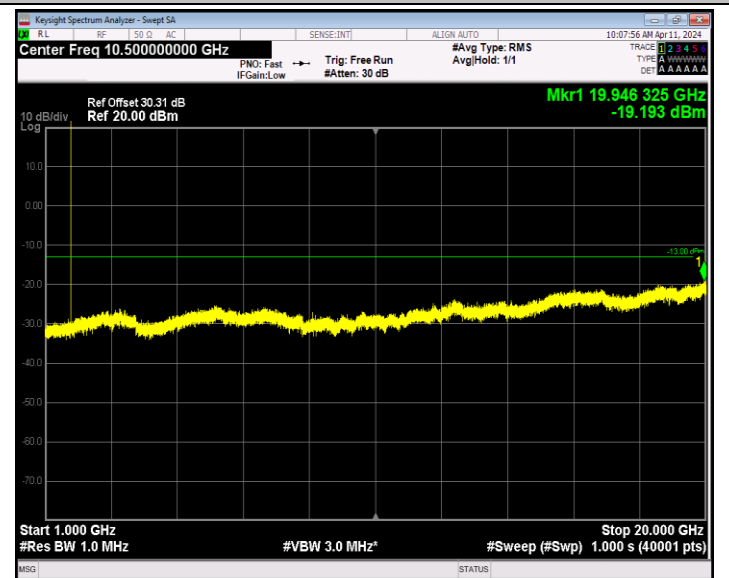
Band66_1.4MHz_64QAM_131979_1RB#0_30~1000_30~1000



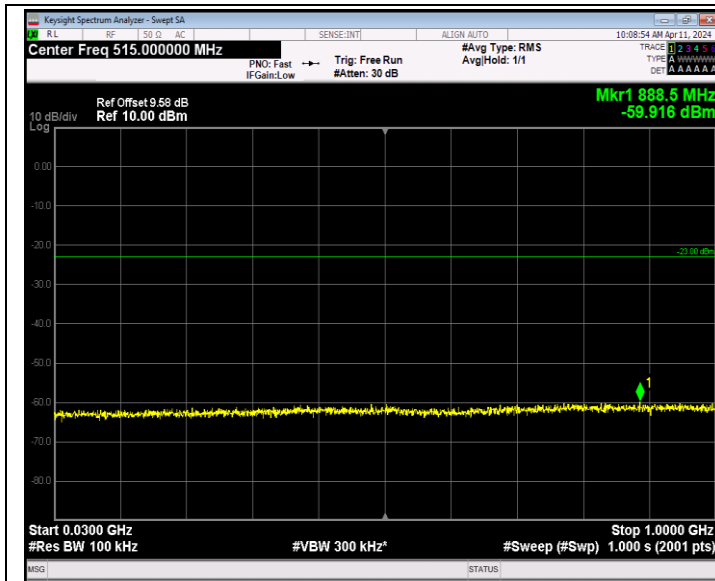
Band66_1.4MHz_64QAM_131979_1RB#0_1000~20000_1000~20000



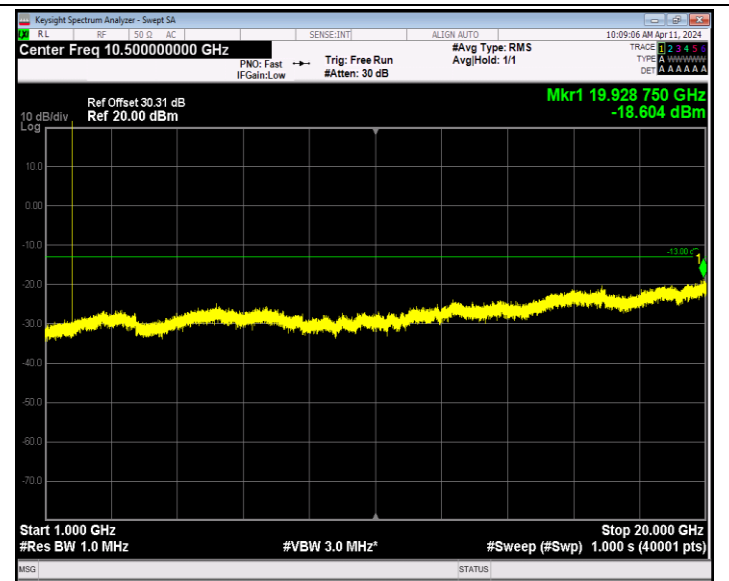
Band66_1.4MHz_64QAM_132322_1RB#0_30~1000_30~1000



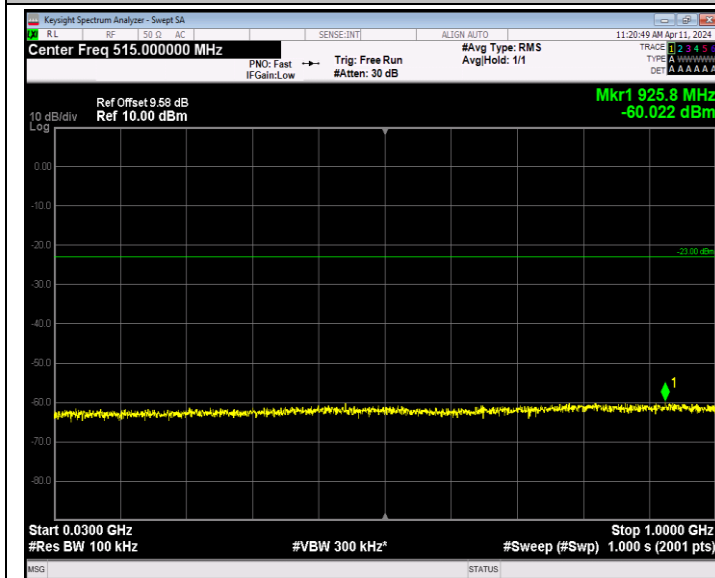
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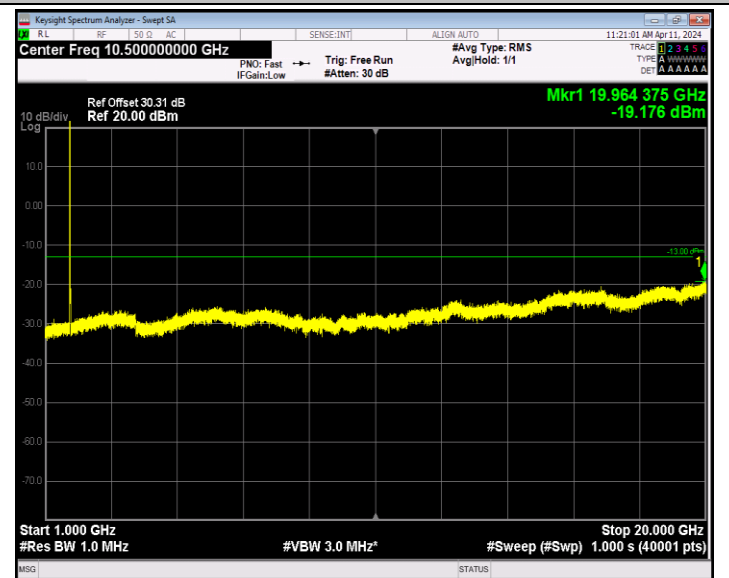
Band66_1.4MHz_64QAM_132665_1RB#0_30~1000_30~1000



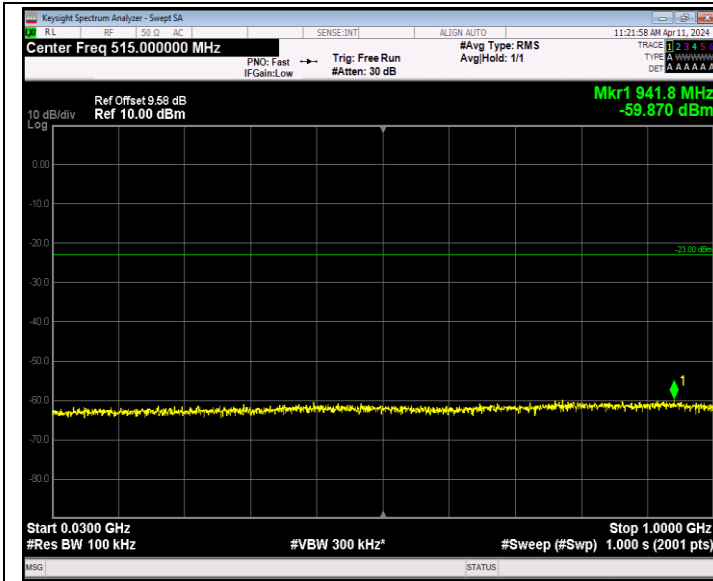
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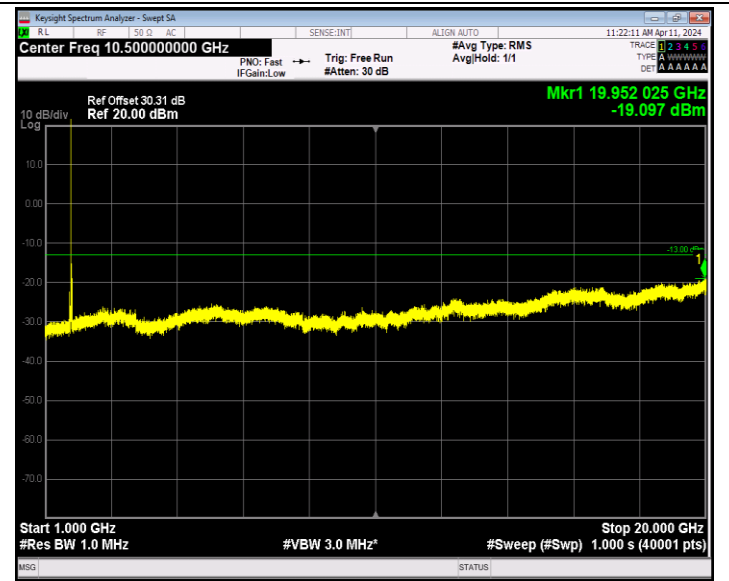
Band66_20MHz_QPSK_132072_1RB#0_30~1000_30~1000



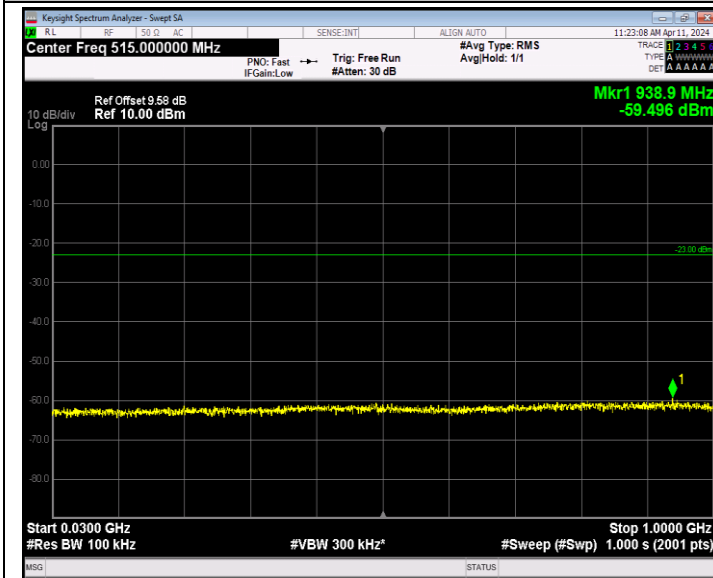
Band66_20MHz_QPSK_132072_1RB#0_1000~20000_1000~20000



Band66_20MHz_QPSK_132322_1RB#0_30~1000_30~1000



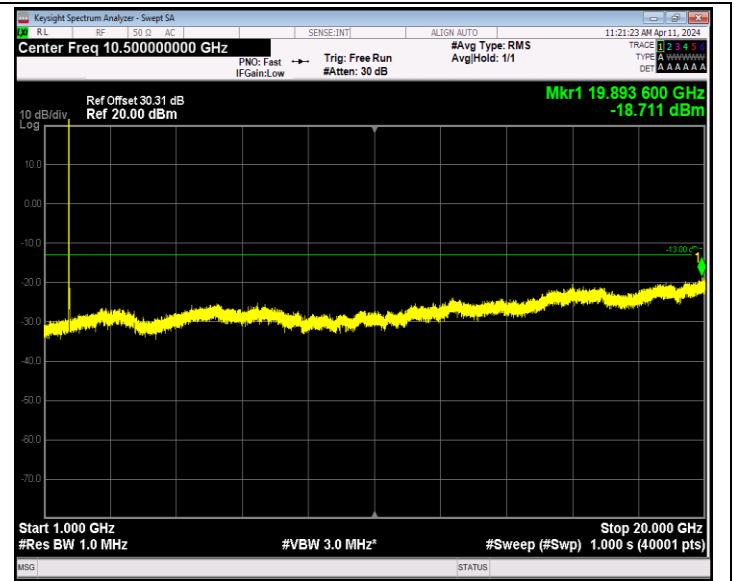
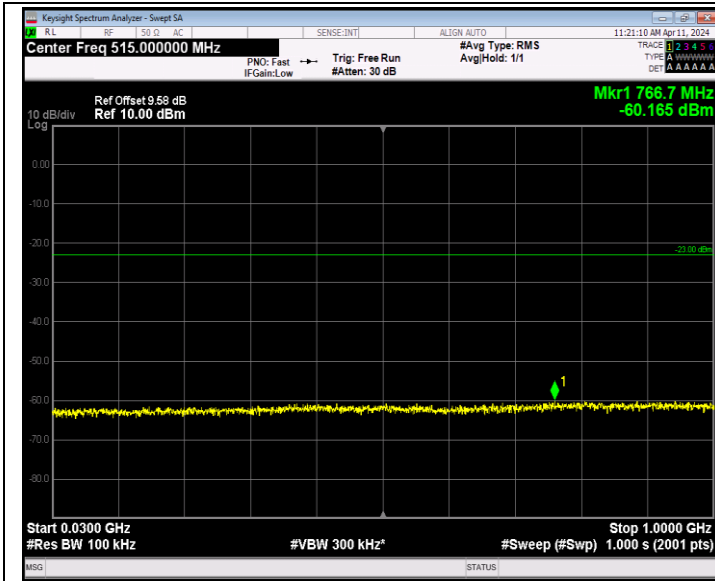
Band66_20MHz_QPSK_132322_1RB#0_1000~20000_1000~2000



Band66_20MHz_QPSK_132572_1RB#0_30~1000_30~1000

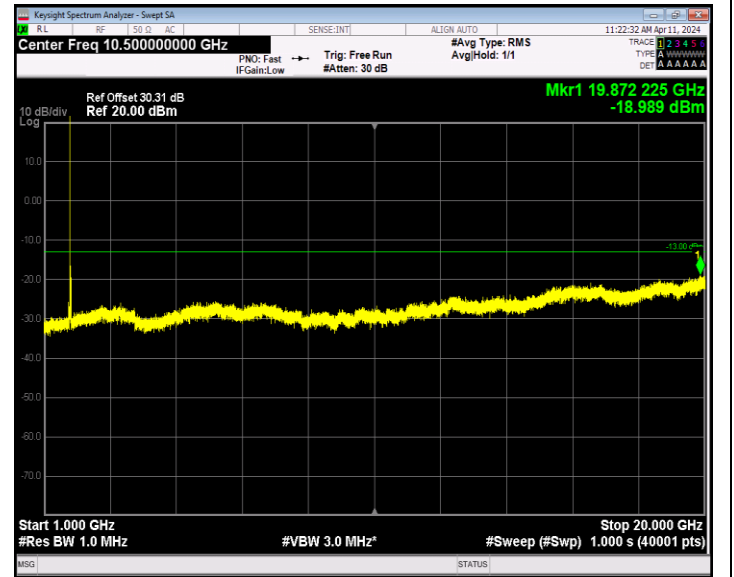
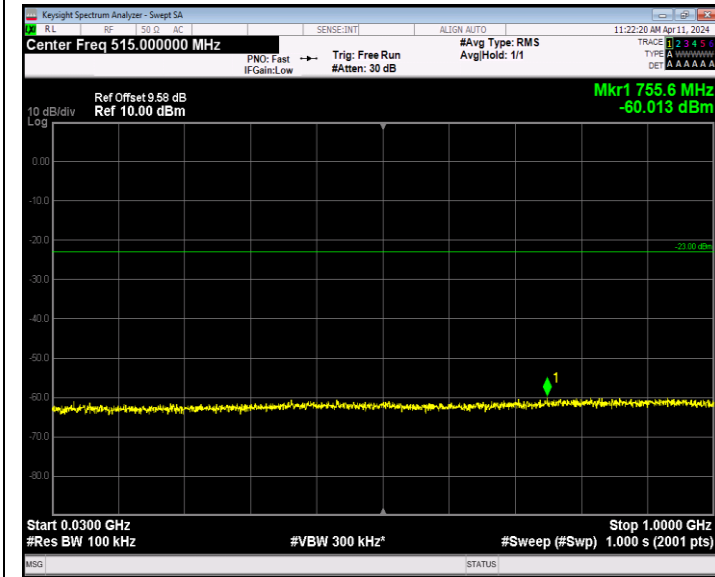


Band66_20MHz_QPSK_132572_1RB#0_1000~20000_1000~2000



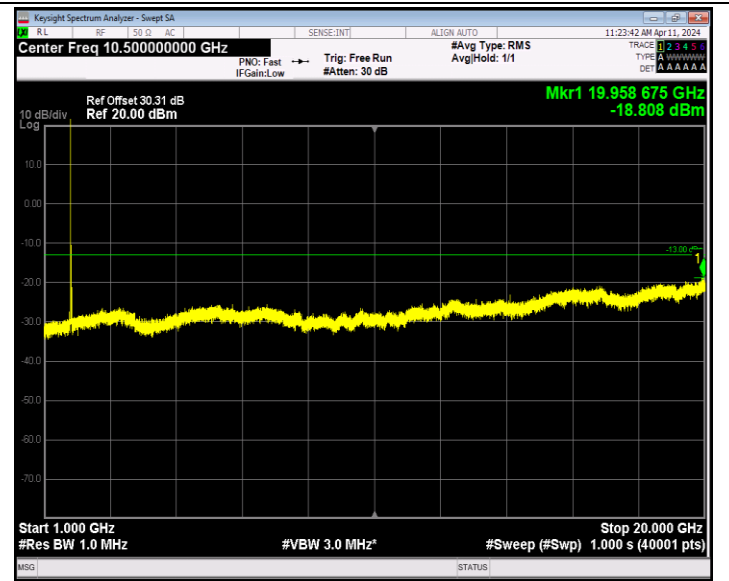
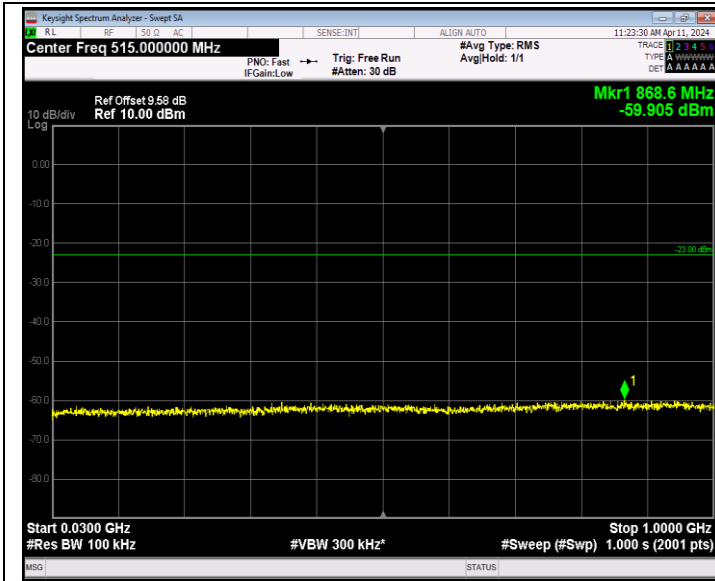
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Band66_20MHz_16QAM_132072_1RB#0_1000~20000_1000~20000



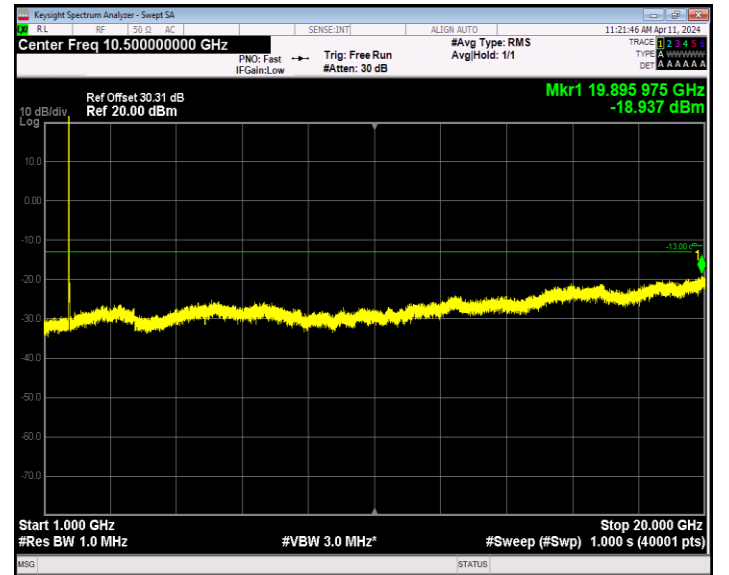
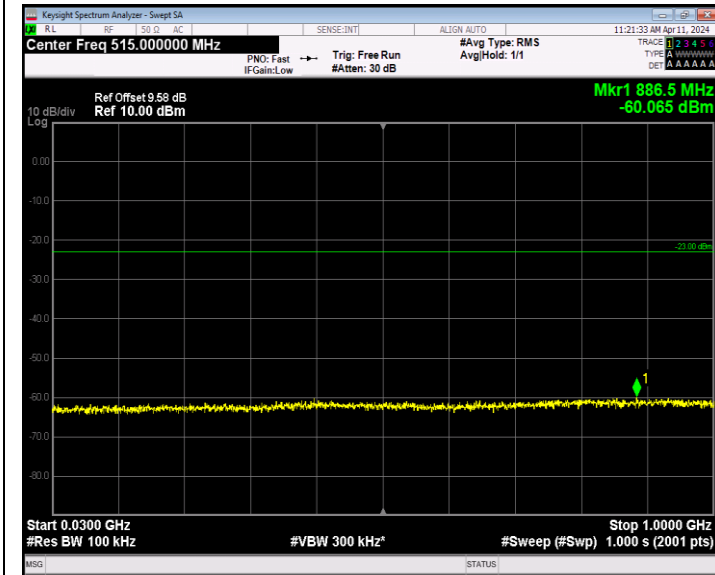
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Band66_20MHz_16QAM_132322_1RB#0_1000~20000_1000~20000



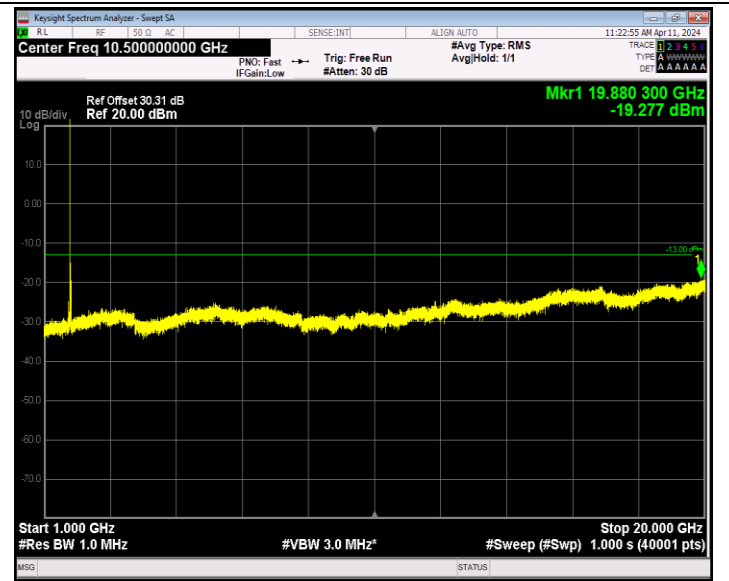
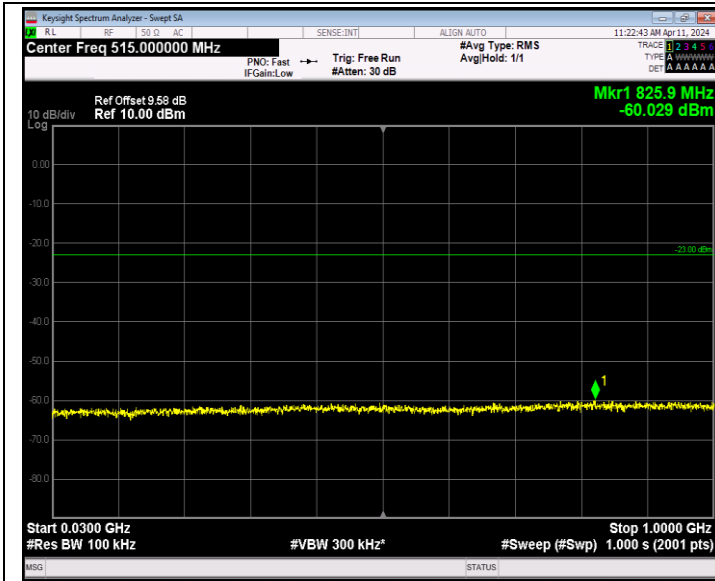
Band66_20MHz_16QAM_132572_1RB#0_30~1000_30~1000

Band66_20MHz_16QAM_132572_1RB#0_1000~20000_1000~2000



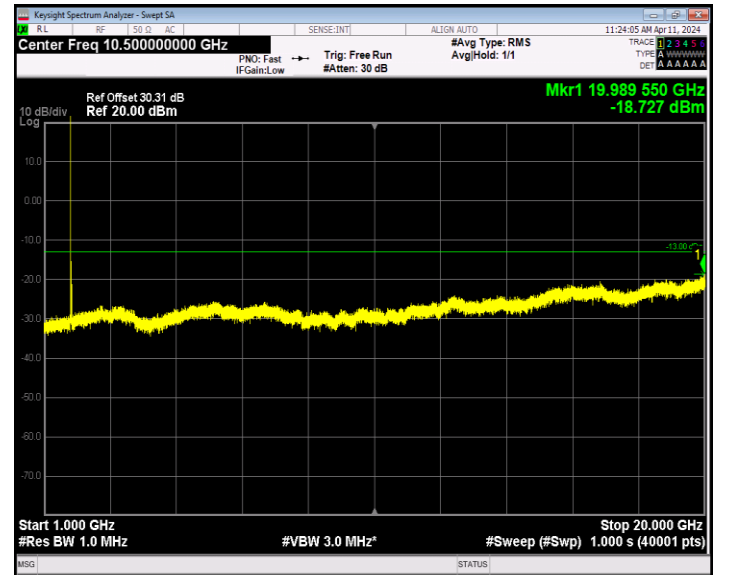
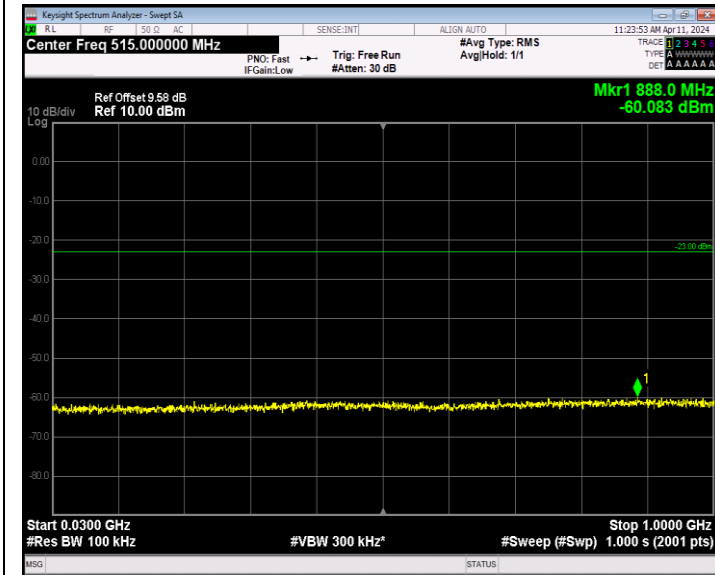
Band66_20MHz_64QAM_132072_1RB#0_30~1000_30~1000

Band66_20MHz_64QAM_132072_1RB#0_1000~20000_1000~2000



Band66_20MHz_64QAM_132322_1RB#0_30~1000_30~1000

Band66_20MHz_64QAM_132322_1RB#0_1000~20000_1000~20000



Band66_20MHz_64QAM_132572_1RB#0_30~1000_30~1000

Band66_20MHz_64QAM_132572_1RB#0_1000~20000_1000~20000

Appendix F: Frequency Stability

Test Result

LTE Band 2 part:

Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 Frequency=1880.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.91	-30	14.59	0.007761	Within authorized band for Band 2	Pass
	-20	10.97	0.005835		
	-10	17.58	0.009351		
	0	15.76	0.008383		
	10	3.71	0.001973		
	20	-6.44	-0.003426		
	30	-11.19	-0.005952		
	40	5.95	0.003165		
	50	2.32	0.001234		
16QAM					
3.91	-30	14.48	0.007702	Within authorized band for Band 2	Pass
	-20	8.54	0.004543		
	-10	-15.52	-0.008255		
	0	-25.79	-0.013718		
	10	16.25	0.008644		
	20	11.07	0.005888		
	30	14.33	0.007622		
	40	24.82	0.013202		
	50	-4.49	-0.002388		
64QAM					
3.91	-30	16.95	0.009016	Within authorized band for Band 2	Pass
	-20	5.44	0.002894		
	-10	11.14	0.005926		
	0	8.15	0.004335		
	10	16.29	0.008665		
	20	11.49	0.006112		
	30	12.60	0.006702		
	40	12.62	0.006713		
	50	22.62	0.012032		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-14.35	-0.007633	Within authorized band for Band 2	Pass
	3.91	-14.86	-0.007904		
	4.50	2.88	0.001532		
16QAM					
25	3.45	3.69	0.001963	Within authorized band for Band 2	Pass
	3.91	-20.17	-0.010729		
	4.50	18.94	0.010074		
64QAM					
25	3.45	9.63	0.005122	Within authorized band for Band 2	Pass
	3.91	7.78	0.004138		
	4.50	17.11	0.009101		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this					

LTE Band 7 part:

Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.91	-30	25.91	0.010221	Within authorized band for Band 7	Pass
	-20	-19.77	-0.007799		
	-10	5.69	0.002245		
	0	25.38	0.010012		
	10	26.06	0.010280		
	20	32.87	0.012966		
	30	8.53	0.003365		
	40	11.10	0.004379		
	50	20.33	0.008020		
16QAM					
3.91	-30	21.63	0.008533	Within authorized band for Band 7	Pass
	-20	26.89	0.010607		
	-10	11.10	0.004379		
	0	-7.14	-0.002817		
	10	24.92	0.009830		
	20	9.46	0.003732		
	30	21.87	0.008627		
	40	31.13	0.012280		
	50	16.37	0.006458		
64QAM					
3.91	-30	5.95	0.002347	Within authorized band for Band 7	Pass
	-20	23.09	0.009108		
	-10	20.54	0.008103		
	0	19.57	0.007720		
	10	15.12	0.005964		
	20	17.17	0.006773		
	30	16.12	0.006359		
	40	18.22	0.007187		
	50	14.31	0.005645		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	26.89	0.010607	Within authorized band for Band 7	Pass
	3.91	4.82	0.001901		
	4.50	33.45	0.013195		
16QAM					
25	3.45	4.38	0.001728	Within authorized band for Band 7	Pass
	3.91	19.13	0.007546		
	4.50	22.72	0.008963		
64QAM					
25	3.45	21.53	0.008493	Within authorized band for Band 7	Pass
	3.91	20.06	0.007913		
	4.50	17.77	0.007010		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this					

LTE Band 41 part:

Reference Frequency: LTE Band 41 (10MHz) Middle channel=40620 Frequency=2593.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.91	-30	11.26	0.004342	Within authorized band for Band 41	Pass
	-20	10.59	0.004084		
	-10	13.88	0.005353		
	0	-7.67	-0.002958		
	10	9.08	0.003502		
	20	10.77	0.004153		
	30	-5.68	-0.002191		
	40	6.95	0.002680		
	50	11.26	0.004342		
16QAM					
3.91	-30	-6.58	-0.002538	Within authorized band for Band 41	Pass
	-20	-9.84	-0.003795		
	-10	15.81	0.006097		
	0	-6.51	-0.002511		
	10	9.73	0.003752		
	20	81.10	0.031277		
	30	4.55	0.001755		
	40	-9.76	-0.003764		
	50	14.53	0.005604		
64QAM					
3.91	-30	-7.25	-0.002796	Within authorized band for Band 41	Pass
	-20	-15.86	-0.006116		
	-10	-5.46	-0.002106		
	0	14.08	0.005430		
	10	-5.72	-0.002206		
	20	11.99	0.004624		
	30	-12.35	-0.004763		
	40	8.38	0.003232		
	50	-14.71	-0.005673		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-11.39	-0.004393	Within authorized band for Band 41	Pass
	3.91	12.70	0.004898		
	4.50	-8.41	-0.003243		
16QAM					
25	3.45	-5.76	-0.002221	Within authorized band for Band41	Pass
	3.91	10.83	0.004177		
	4.50	-9.44	-0.003641		
64QAM					
25	3.45	-9.13	-0.003521	Within authorized band for Band41	Pass
	3.91	11.62	0.004481		
	4.50	-9.97	-0.003845		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this					

LTE Band 66 part:

Reference Frequency: LTE Band 66 (10MHz) Middle channel=132322 Frequency=1745.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.91	-30	13.83	0.007926	Within authorized band for Band 66	Pass
	-20	20.08	0.011507		
	-10	6.27	0.003593		
	0	23.69	0.013576		
	10	26.31	0.015077		
	20	22.06	0.012642		
	30	16.75	0.009599		
	40	16.04	0.009192		
	50	11.84	0.006785		
16QAM					
3.91	-30	11.13	0.006378	Within authorized band for Band 66	Pass
	-20	21.63	0.012395		
	-10	26.52	0.015198		
	0	28.32	0.016229		
	10	24.99	0.014321		
	20	18.38	0.010533		
	30	11.70	0.006705		
	40	15.35	0.008797		
	50	14.63	0.008384		
64QAM					
3.91	-30	15.25	0.008739	Within authorized band for Band 66	Pass
	-20	19.63	0.011249		
	-10	19.35	0.011089		
	0	7.40	0.004241		
	10	26.85	0.015387		
	20	6.08	0.003484		
	30	24.00	0.013754		
	40	17.45	0.010000		
	50	19.76	0.011324		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	19.98	0.011450	Within authorized band for Band 66	Pass
	3.91	27.24	0.015610		
	4.50	-8.57	-0.004911		
16QAM					
25	3.45	5.28	0.003026	Within authorized band for Band 66	Pass
	3.91	20.00	0.011461		
	4.50	21.96	0.012585		
64QAM					
25	3.45	29.17	0.016716	Within authorized band for Band 66	Pass
	3.91	16.81	0.009633		
	4.50	8.77	0.005026		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this					

Appendix G: Modulation Characteristics

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Verdict
Band2	20MHz	QPSK	18900	100RB#0	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS
Band2	20MHz	64QAM	18900	100RB#0	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS
Band7	20MHz	64QAM	21100	100RB#0	PASS
Band41	20MHz	QPSK	40620	100RB#0	PASS
Band41	20MHz	16QAM	40620	100RB#0	PASS
Band41	20MHz	64QAM	40620	100RB#0	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS
Band66	20MHz	64QAM	132322	100RB#0	PASS

Test Graphs

