

Appendix E: Conducted Spurious Emission

Test Result (worst case)

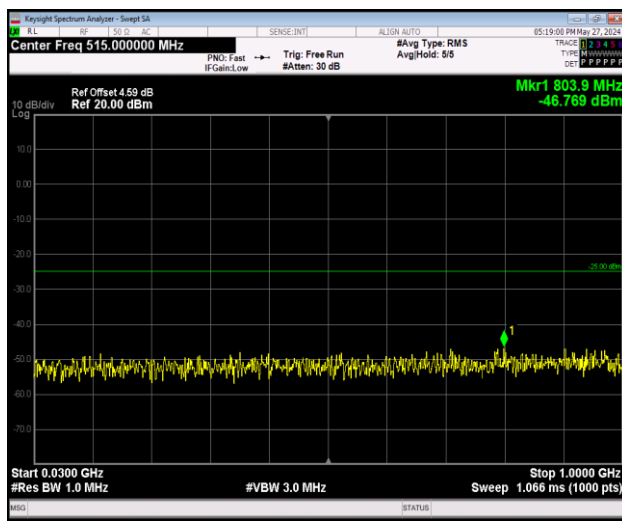
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	Range1:30~1000MHz	-46.77	PASS
Band41	5MHz	QPSK	39675	1RB#0	Range2:1000~26500MHz	-28.96	PASS
Band41	5MHz	QPSK	40620	1RB#0	Range1:30~1000MHz	-46.5	PASS
Band41	5MHz	QPSK	40620	1RB#0	Range2:1000~26500MHz	-29.54	PASS
Band41	5MHz	QPSK	41565	1RB#0	Range1:30~1000MHz	-46.79	PASS
Band41	5MHz	QPSK	41565	1RB#0	Range2:1000~26500MHz	-29.57	PASS
Band41	5MHz	16QAM	39675	1RB#0	Range1:30~1000MHz	-46.98	PASS
Band41	5MHz	16QAM	39675	1RB#0	Range2:1000~26500MHz	-30.15	PASS
Band41	5MHz	16QAM	40620	1RB#0	Range1:30~1000MHz	-47.02	PASS
Band41	5MHz	16QAM	40620	1RB#0	Range2:1000~26500MHz	-29.3	PASS
Band41	5MHz	16QAM	41565	1RB#0	Range1:30~1000MHz	-47.01	PASS
Band41	5MHz	16QAM	41565	1RB#0	Range2:1000~26500MHz	-28.58	PASS
Band41	5MHz	64QAM	39675	1RB#0	Range1:30~1000MHz	-46.92	PASS
Band41	5MHz	64QAM	39675	1RB#0	Range2:1000~26500MHz	-29.5	PASS
Band41	5MHz	64QAM	40620	1RB#0	Range1:30~1000MHz	-46.64	PASS
Band41	5MHz	64QAM	40620	1RB#0	Range2:1000~26500MHz	-28.93	PASS
Band41	5MHz	64QAM	41565	1RB#0	Range1:30~1000MHz	-46.61	PASS
Band41	5MHz	64QAM	41565	1RB#0	Range2:1000~26500MHz	-29.45	PASS
Band41	20MHz	QPSK	39750	1RB#0	Range1:30~1000MHz	-47.11	PASS
Band41	20MHz	QPSK	39750	1RB#0	Range2:1000~26500MHz	-29.86	PASS
Band41	20MHz	QPSK	40620	1RB#0	Range1:30~1000MHz	-46.22	PASS
Band41	20MHz	QPSK	40620	1RB#0	Range2:1000~26500MHz	-29.73	PASS
Band41	20MHz	QPSK	41490	1RB#0	Range1:30~1000MHz	-46.74	PASS
Band41	20MHz	QPSK	41490	1RB#0	Range2:1000~26500MHz	-29.19	PASS
Band41	20MHz	16QAM	39750	1RB#0	Range1:30~1000MHz	-46.83	PASS
Band41	20MHz	16QAM	39750	1RB#0	Range2:1000~26500MHz	-27.54	PASS
Band41	20MHz	16QAM	40620	1RB#0	Range1:30~1000MHz	-46.8	PASS
Band41	20MHz	16QAM	40620	1RB#0	Range2:1000~26500MHz	-29.13	PASS
Band41	20MHz	16QAM	41490	1RB#0	Range1:30~1000MHz	-46.26	PASS
Band41	20MHz	16QAM	41490	1RB#0	Range2:1000~26500MHz	-29.63	PASS
Band41	20MHz	64QAM	39750	1RB#0	Range1:30~1000MHz	-46.89	PASS
Band41	20MHz	64QAM	39750	1RB#0	Range2:1000~26500MHz	-29.29	PASS
Band41	20MHz	64QAM	40620	1RB#0	Range1:30~1000MHz	-46.3	PASS
Band41	20MHz	64QAM	40620	1RB#0	Range2:1000~26500MHz	-29.35	PASS
Band41	20MHz	64QAM	41490	1RB#0	Range1:30~1000MHz	-46.4	PASS

Band41	20MHz	64QAM	41490	1RB#0	Range2:1000~26500MHz	-29.85	PASS
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Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

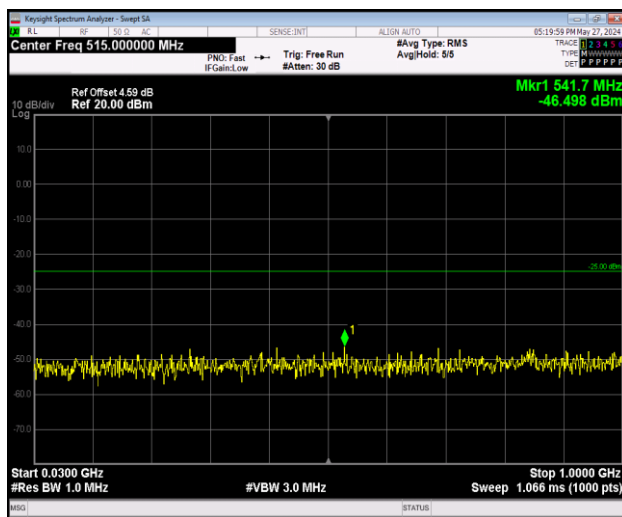
Band41-5MHz-QPSK-39675-1RB#0-Range1:30
~1000MHz



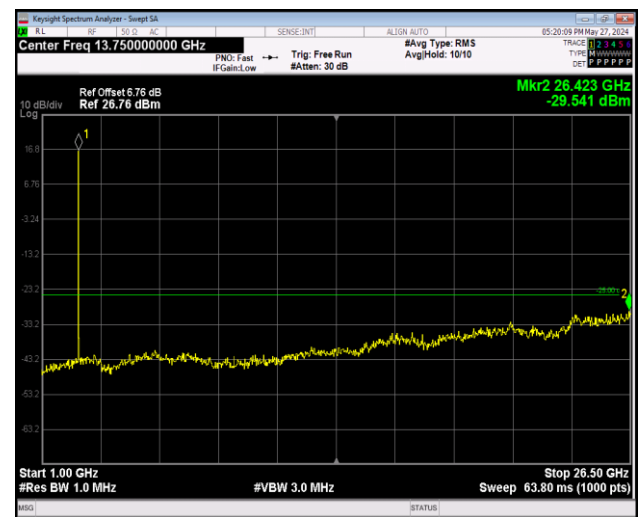
Band41-5MHz-QPSK-39675-1RB#0-Range2:1000~
26500MHz



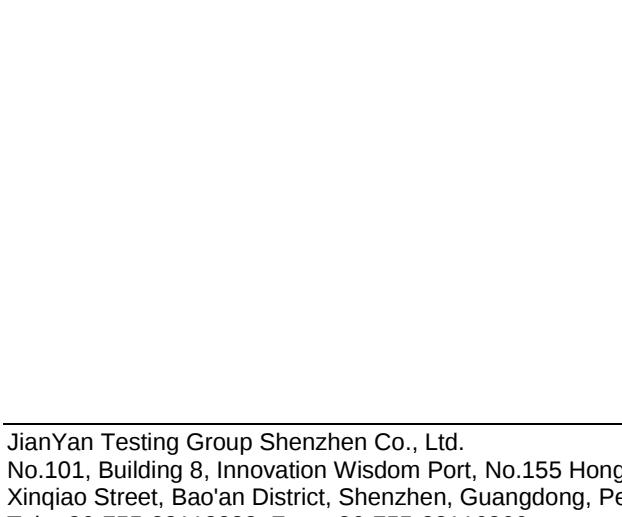
Band41-5MHz-QPSK-40620-1RB#0-Range1:30
~1000MHz



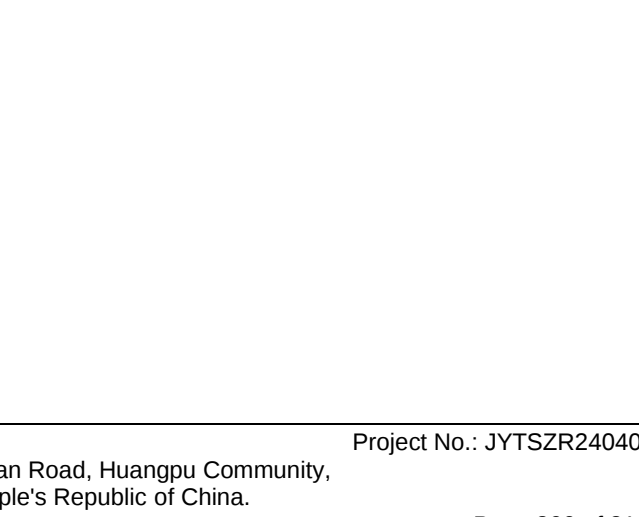
Band41-5MHz-QPSK-40620-1RB#0-Range2:1000~
26500MHz

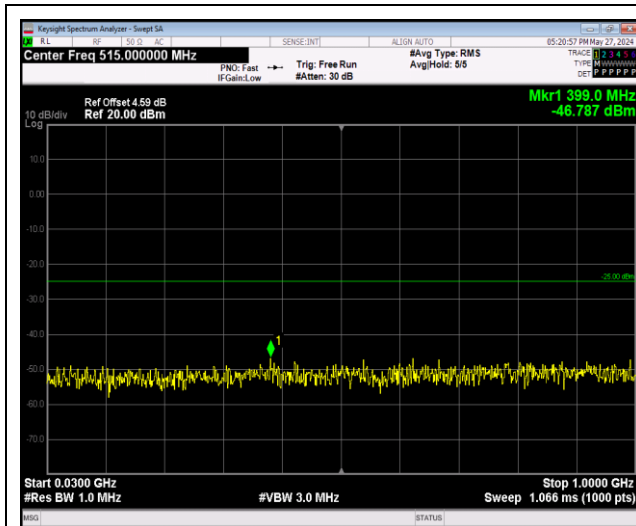


Band41-5MHz-QPSK-41565-1RB#0-Range1:30
~1000MHz

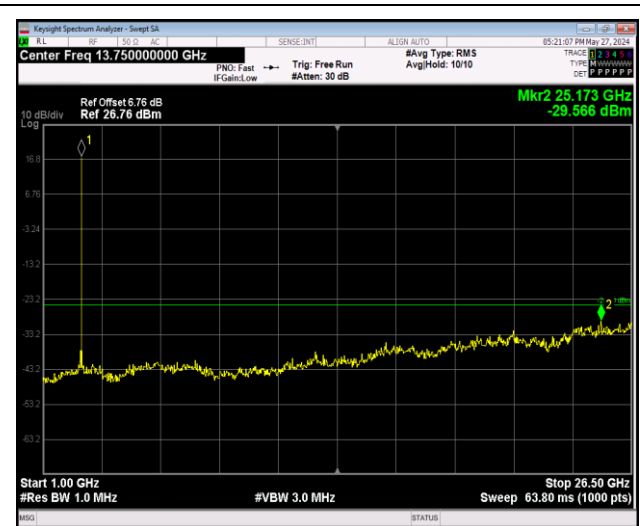


Band41-5MHz-QPSK-41565-1RB#0-Range2:1000~
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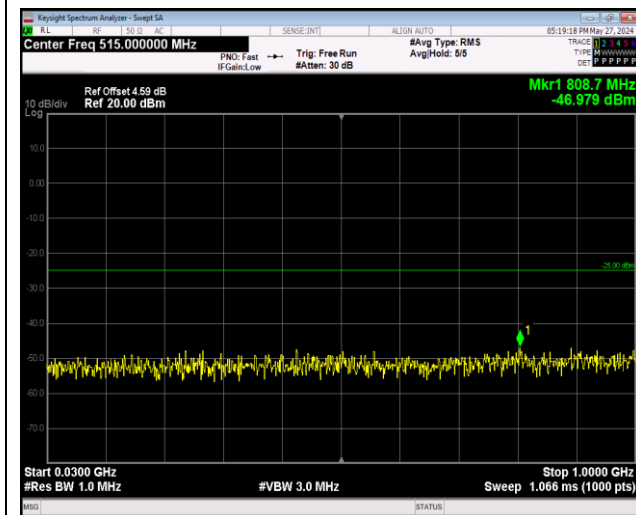




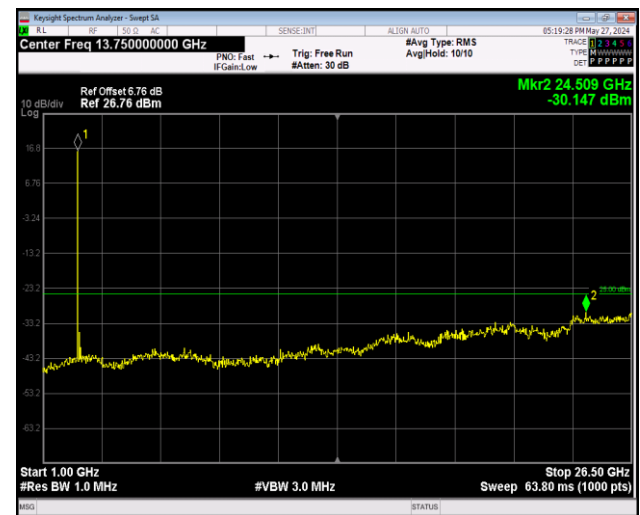
Band41-5MHz-16QAM-39675-1RB#0-Range1:3
0~1000MHz



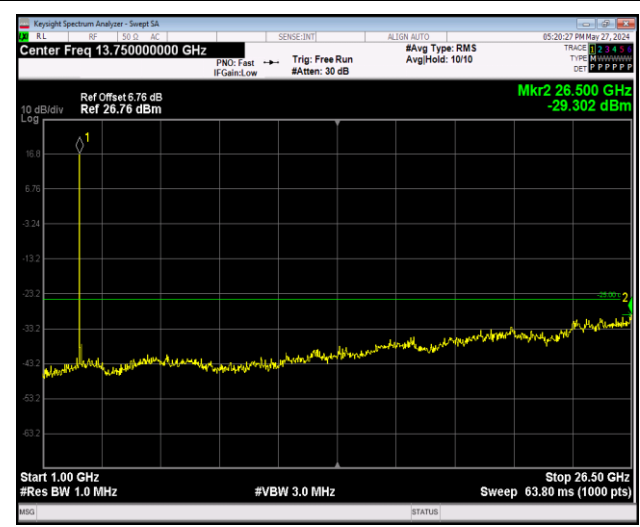
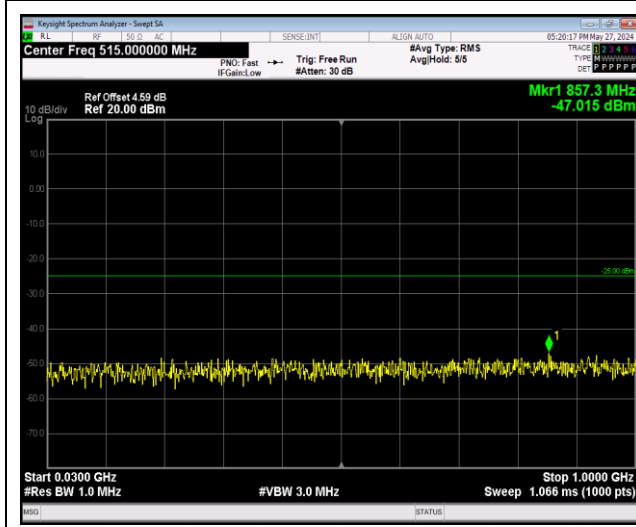
Band41-5MHz-16QAM-39675-1RB#0-Range2:1000
~26500MHz



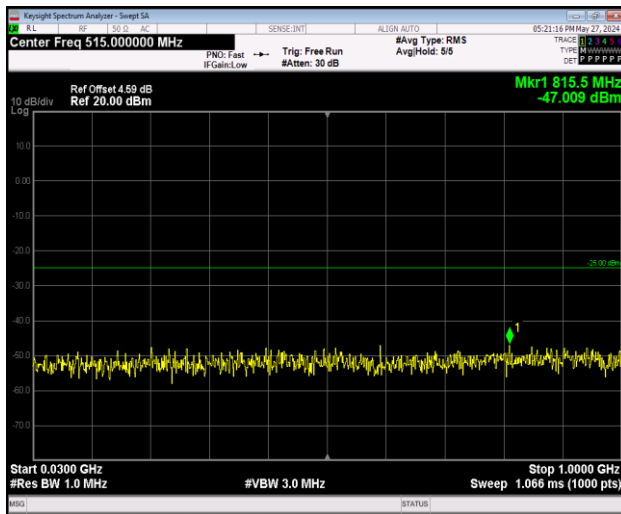
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0~1000MHz



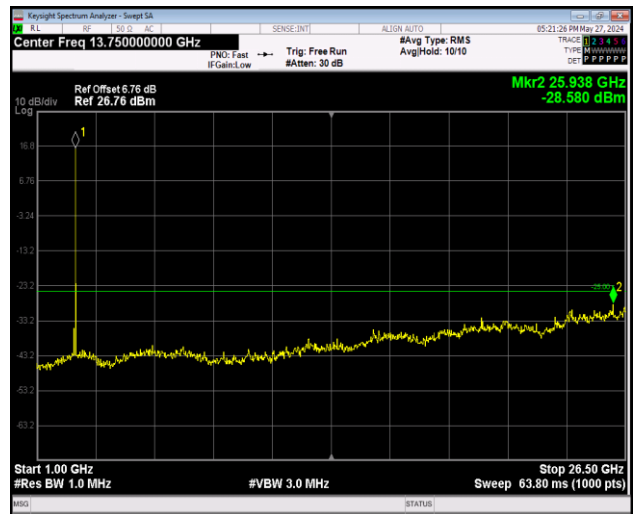
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~26500MHz



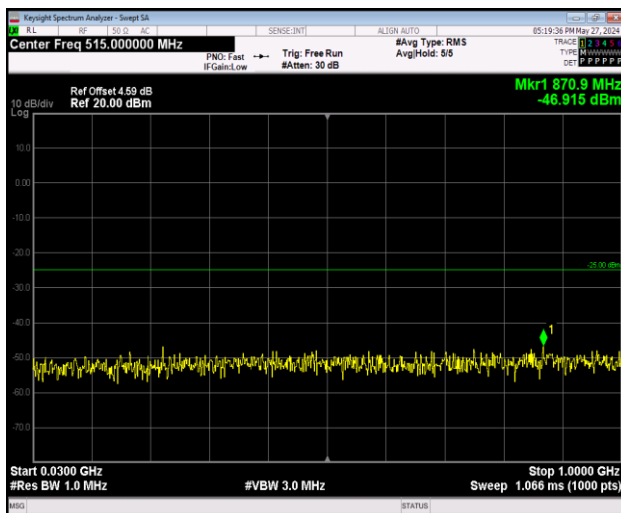
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0~1000MHz



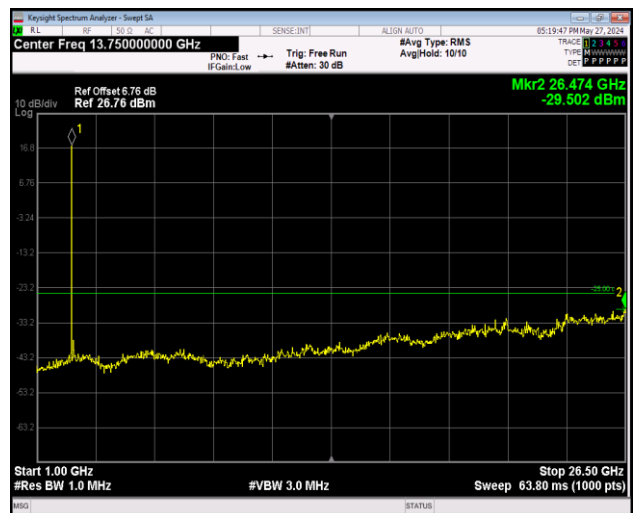
Band41-5MHz-16QAM-41565-1RB#0-Range2:1000
~26500MHz



Band41-5MHz-64QAM-39675-1RB#0-Range1:3
0~1000MHz



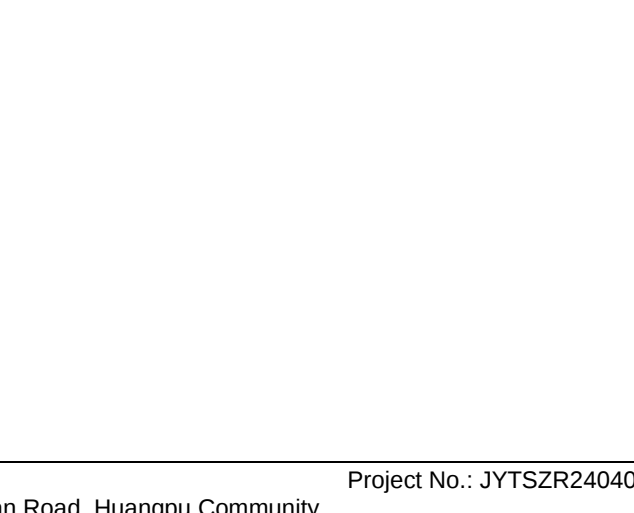
Band41-5MHz-64QAM-39675-1RB#0-Range2:1000
~26500MHz

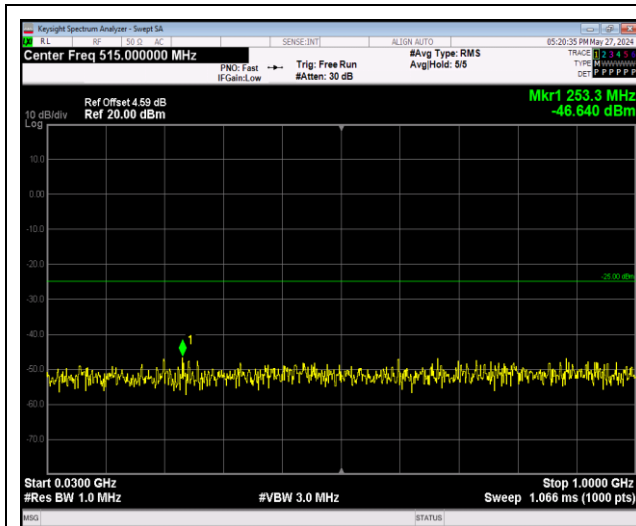


Band41-5MHz-64QAM-40620-1RB#0-Range1:3
0~1000MHz

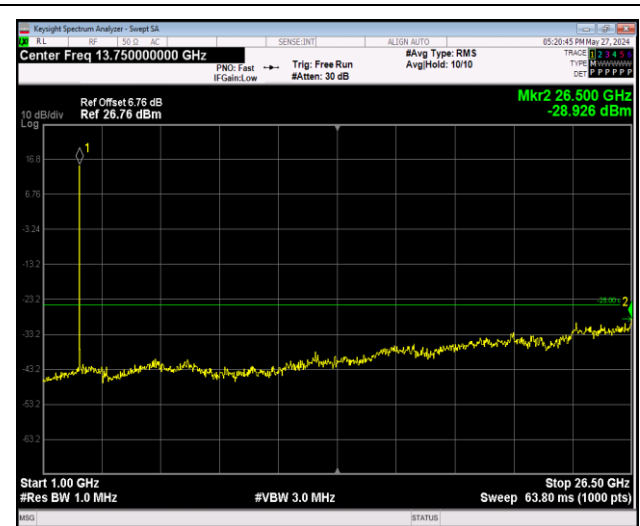


Band41-5MHz-64QAM-40620-1RB#0-Range2:1000
~26500MHz

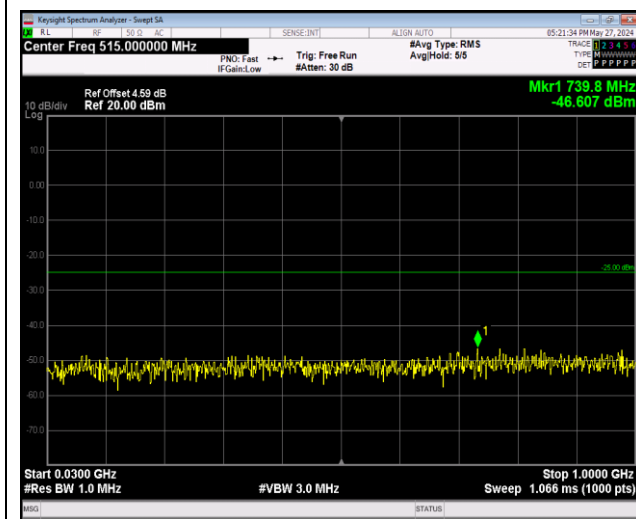




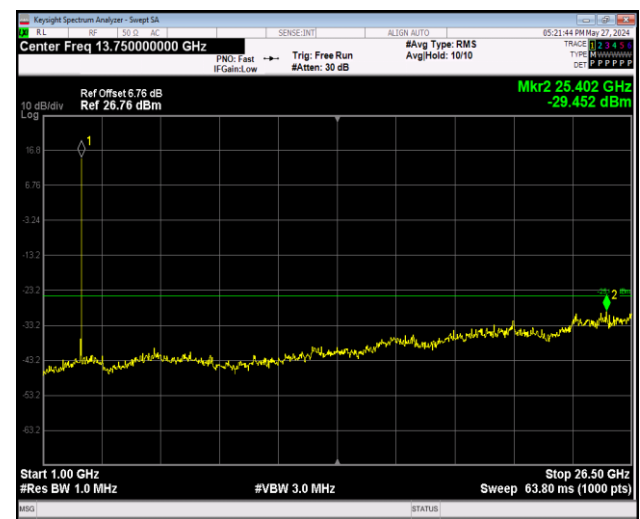
Band41-5MHz-64QAM-41565-1RB#0-Range1:3
0~1000MHz



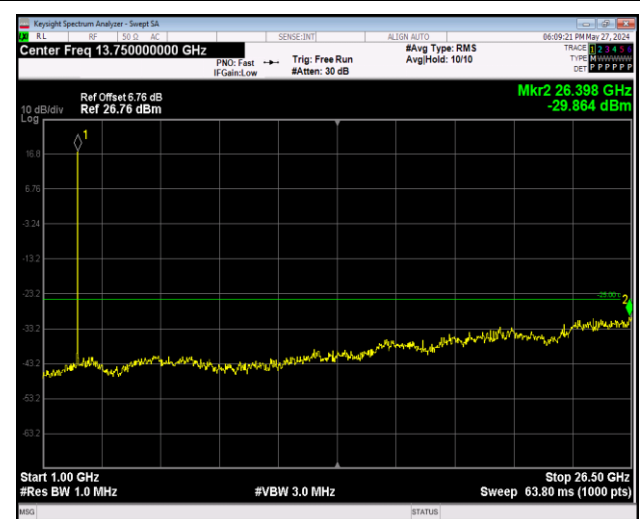
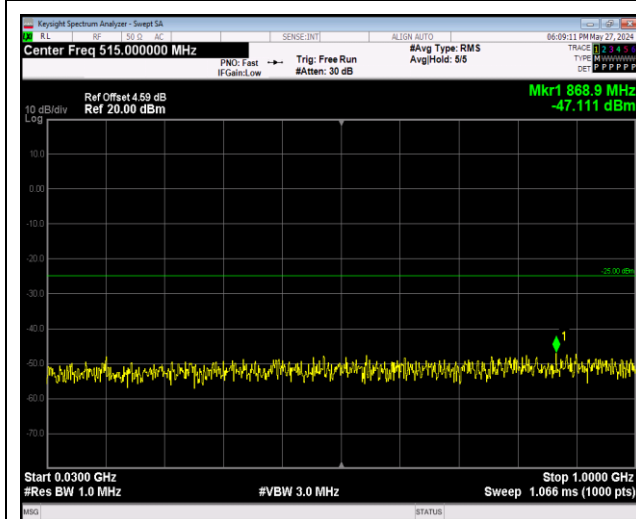
Band41-5MHz-64QAM-41565-1RB#0-Range2:1000
~26500MHz



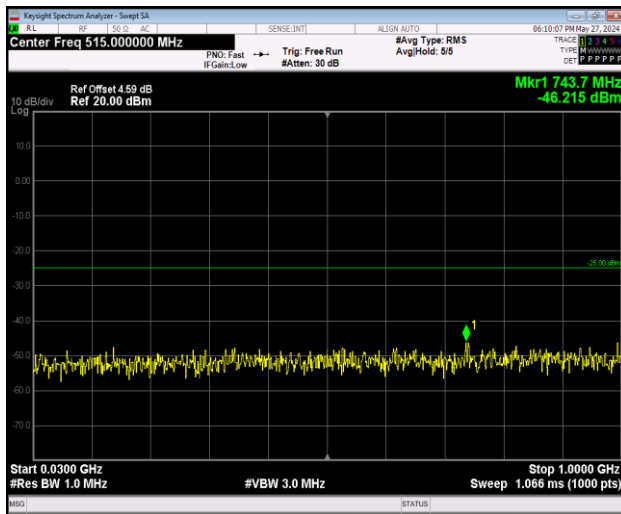
Band41-20MHz-QPSK-39750-1RB#0-Range1:3
0~1000MHz



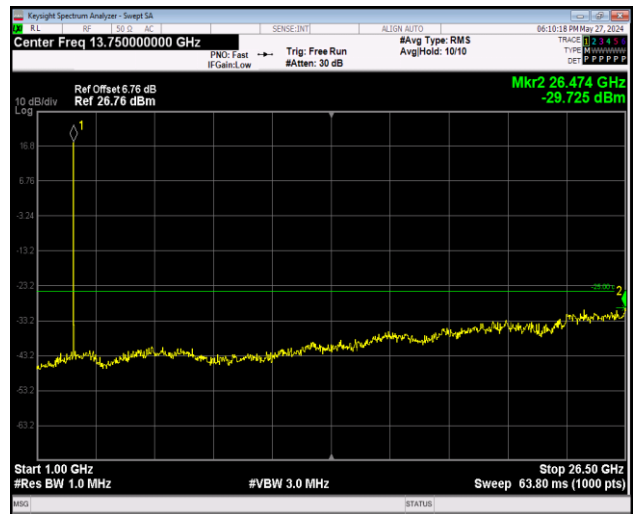
Band41-20MHz-QPSK-39750-1RB#0-Range2:1000
~26500MHz



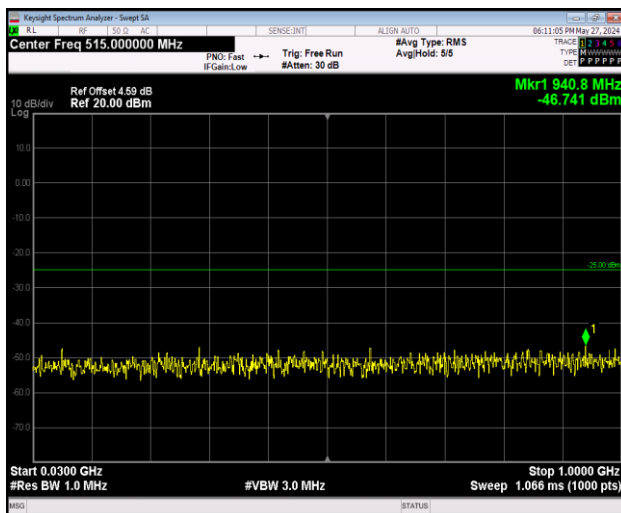
Band41-20MHz-QPSK-40620-1RB#0-Range1:3
0~1000MHz



Band41-20MHz-QPSK-40620-1RB#0-Range2:1000
~26500MHz



Band41-20MHz-QPSK-41490-1RB#0-Range1:3
0~1000MHz

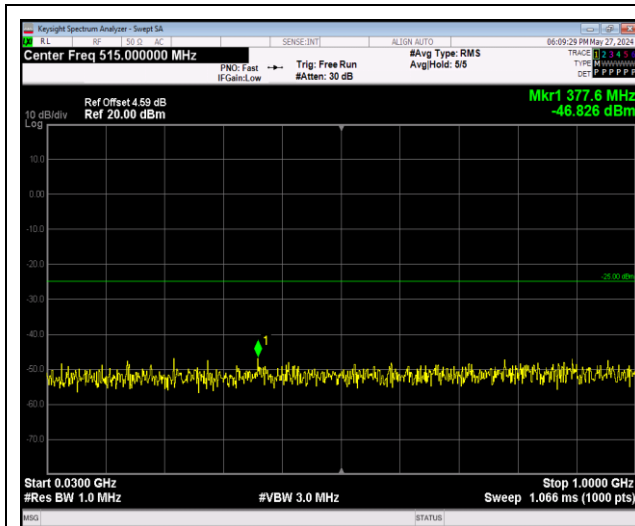


Band41-20MHz-QPSK-41490-1RB#0-Range2:1000
~26500MHz

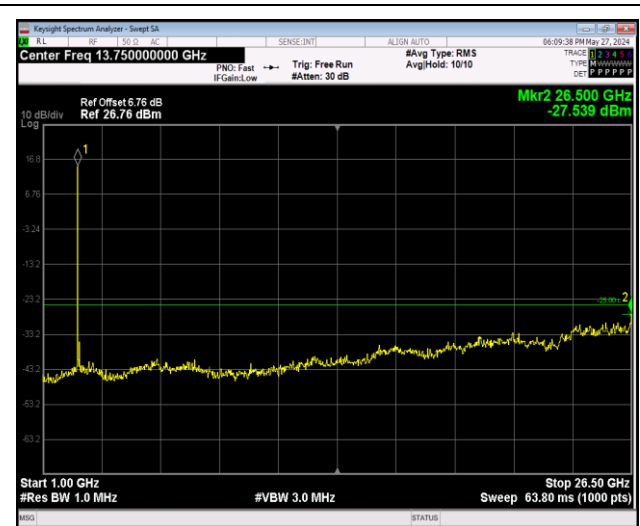


Band41-20MHz-16QAM-39750-1RB#0-Range1:
30~1000MHz

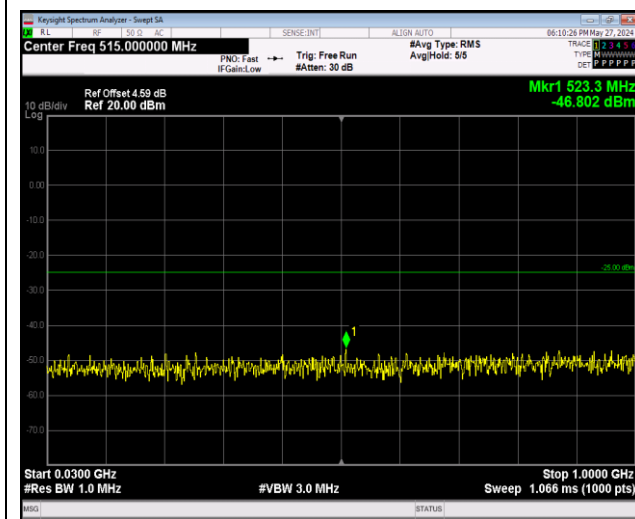
Band41-20MHz-16QAM-39750-1RB#0-Range2:100
0~26500MHz



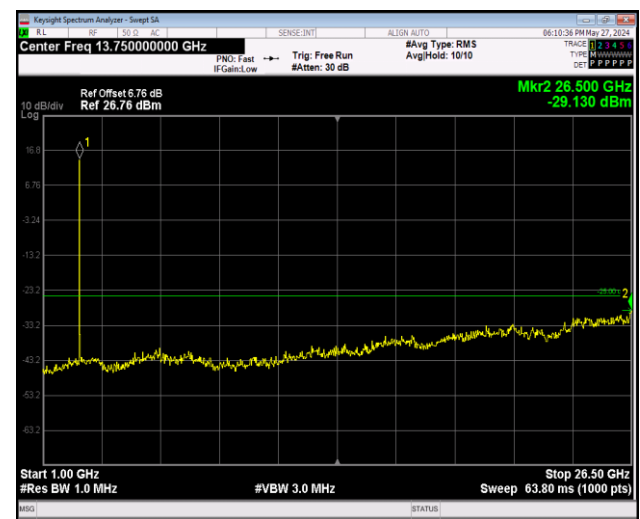
Band41-20MHz-16QAM-40620-1RB#0-Range1:
30~1000MHz



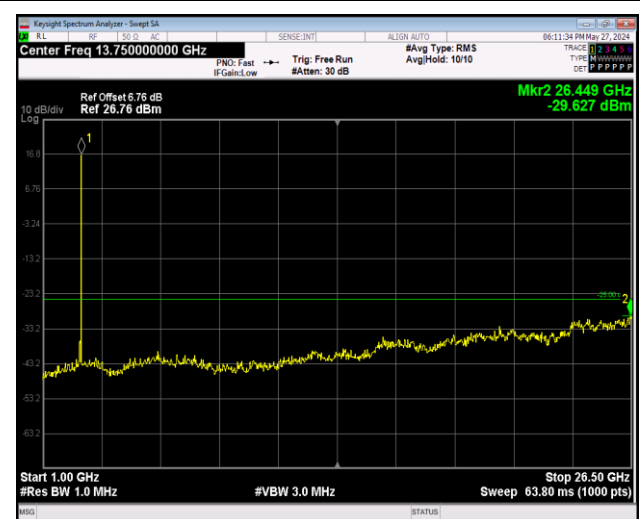
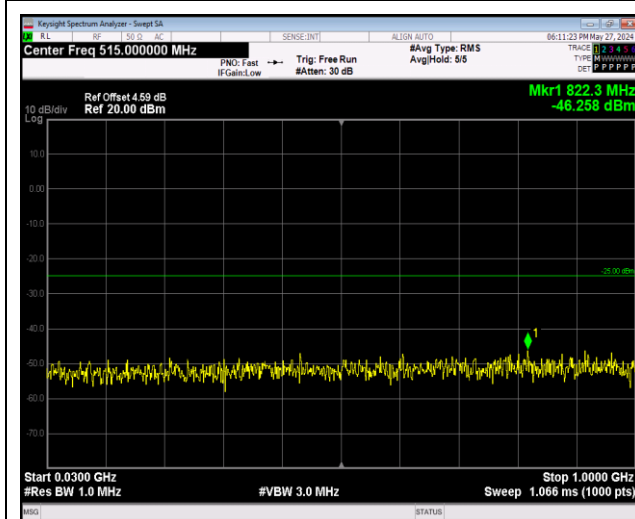
Band41-20MHz-16QAM-40620-1RB#0-Range2:100
0~26500MHz



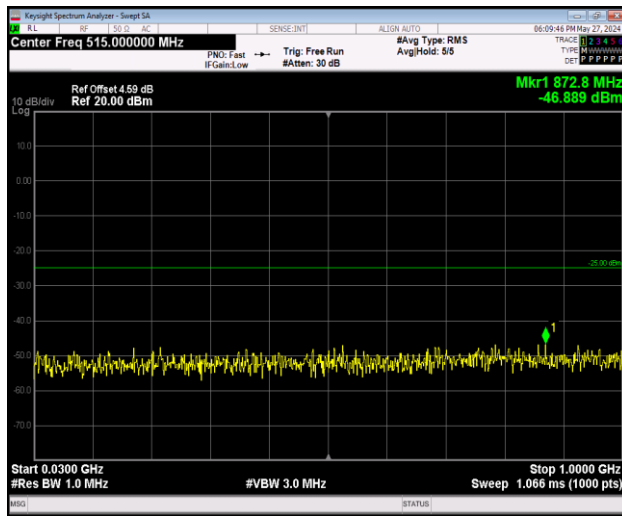
Band41-20MHz-16QAM-41490-1RB#0-Range1:
30~1000MHz



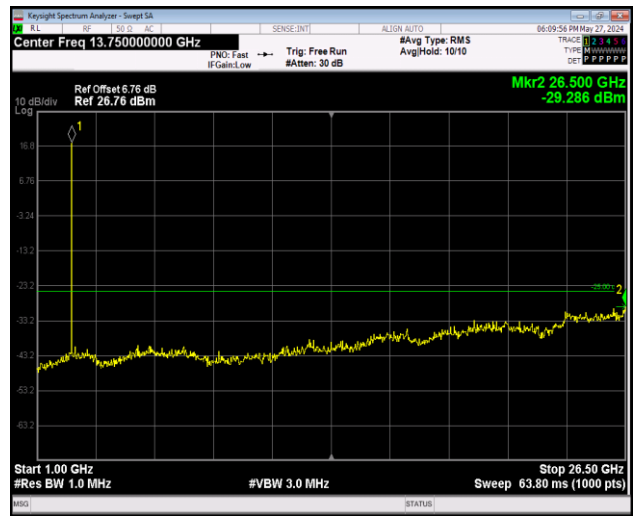
Band41-20MHz-16QAM-41490-1RB#0-Range2:100
0~26500MHz



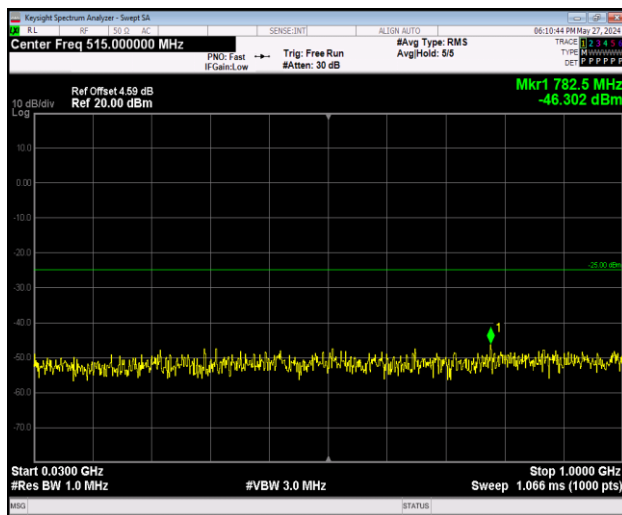
Band41-20MHz-64QAM-39750-1RB#0-Range1:
30~1000MHz



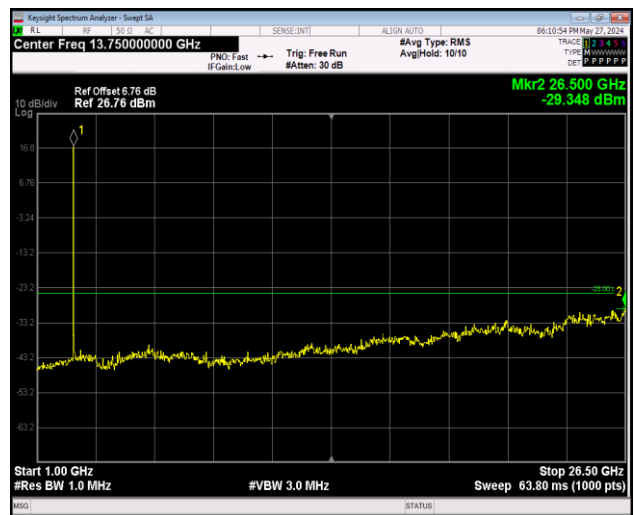
Band41-20MHz-64QAM-39750-1RB#0-Range2:100
0~26500MHz



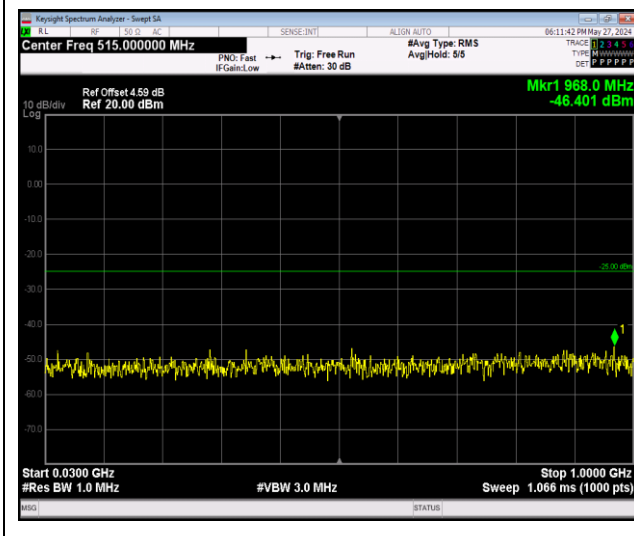
Band41-20MHz-64QAM-40620-1RB#0-Range1:
30~1000MHz



Band41-20MHz-64QAM-40620-1RB#0-Range2:100
0~26500MHz



Band41-20MHz-64QAM-41490-1RB#0-Range1:
30~1000MHz



Band41-20MHz-64QAM-41490-1RB#0-Range2:100
0~26500MHz



Appendix F: Frequency Stability

Test Result

LTE Band 41 part:

Reference Frequency: LTE Band 41 (10MHz) Middle channel=40640 Frequency=2595.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-8.53	-0.003290	Within authorized band for Band 41	Pass
	-20	-2.09	-0.000806		
	-10	-9.48	-0.003656		
	0	-7.98	-0.003078		
	10	-3.71	-0.001431		
	20	-4.99	-0.001924		
	30	-7.10	-0.002738		
	40	-5.24	-0.002021		
	50	-10.43	-0.004022		
16QAM					
3.85	-30	-13.82	-0.005330	Within authorized band for Band 41	Pass
	-20	-4.75	-0.001832		
	-10	5.21	0.002009		
	0	-11.40	-0.004396		
	10	-7.12	-0.002746		
	20	-3.18	-0.001226		
	30	-9.63	-0.003714		
	40	-5.66	-0.002183		
	50	-8.51	-0.003282		
64QAM					
3.85	-30	-3.92	-0.001512	Within authorized band for Band 41	Pass
	-20	-5.74	-0.002214		
	-10	-11.94	-0.004605		
	0	-11.84	-0.004566		
	10	-7.60	-0.002931		
	20	-9.51	-0.003668		
	30	-7.00	-0.002700		
	40	-7.50	-0.002892		
	50	-13.33	-0.005141		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-8.45	-0.003259	Within authorized band for Band 41	Pass
	3.85	-7.97	-0.003074		
	4.40	-14.41	-0.005557		
16QAM					
25	3.00	-9.73	-0.003752	Within authorized band for Band41	Pass
	3.85	-6.54	-0.002522		
	4.40	-9.21	-0.003552		
64QAM					
25	3.00	-8.25	-0.003182	Within authorized band for Band41	Pass
	3.85	-14.31	-0.005519		
	4.40	-7.80	-0.003008		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

Appendix G: Modulation Characteristics

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band41	20MHz	QPSK	40620	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40620	100RB#0	PASS	PASS
Band41	20MHz	64QAM	40620	100RB#0	PASS	PASS

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

