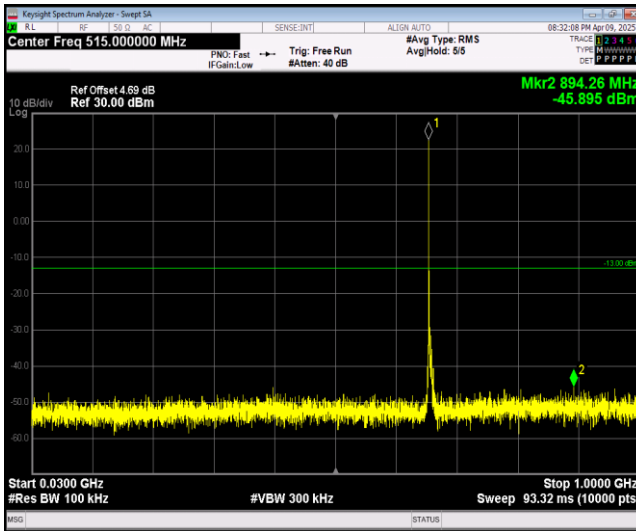
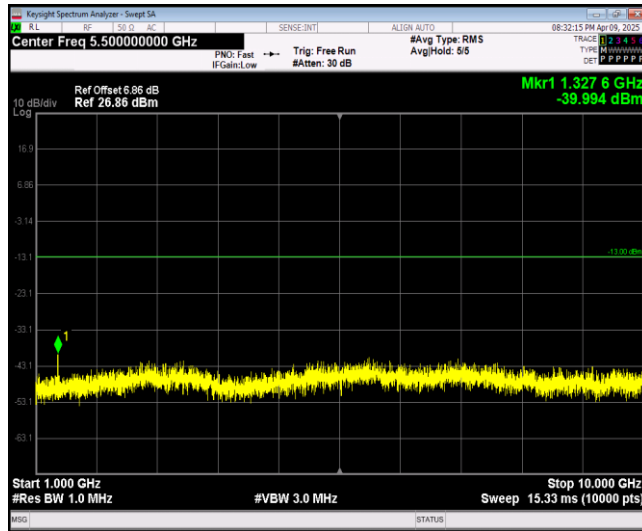


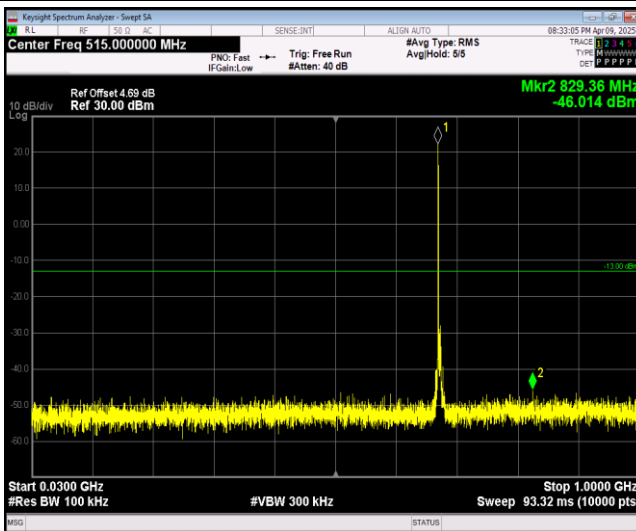
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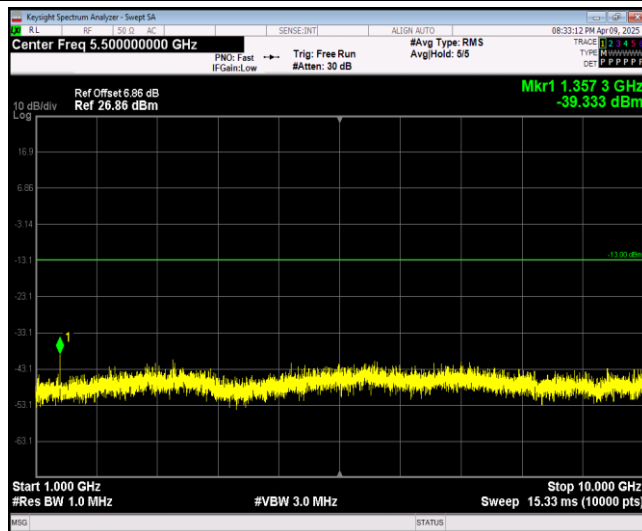
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Band71-5MHz-QPSK-133297-1RB#0-Range1:30~1000MHz



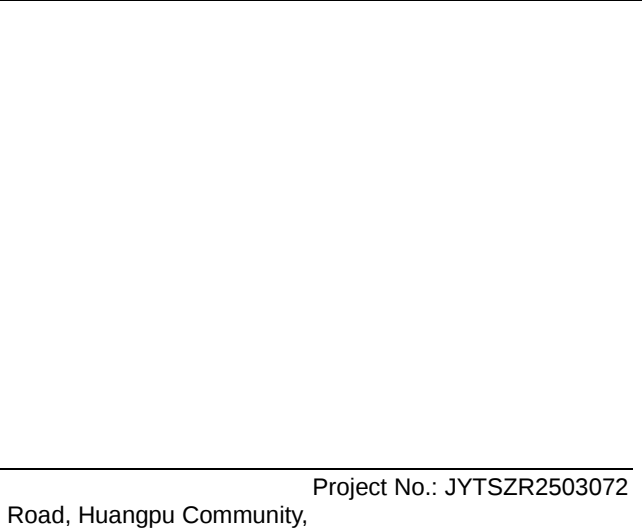
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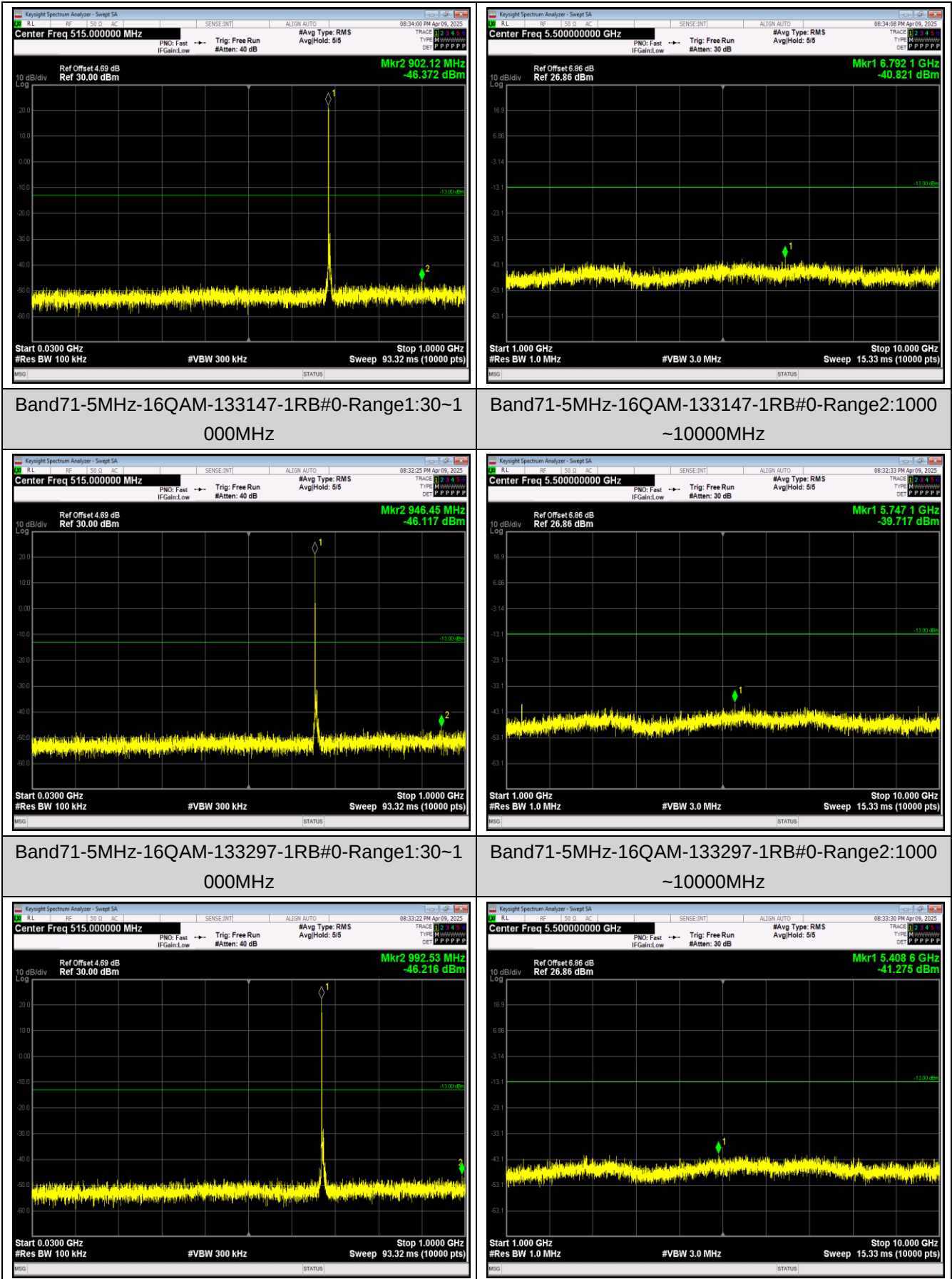


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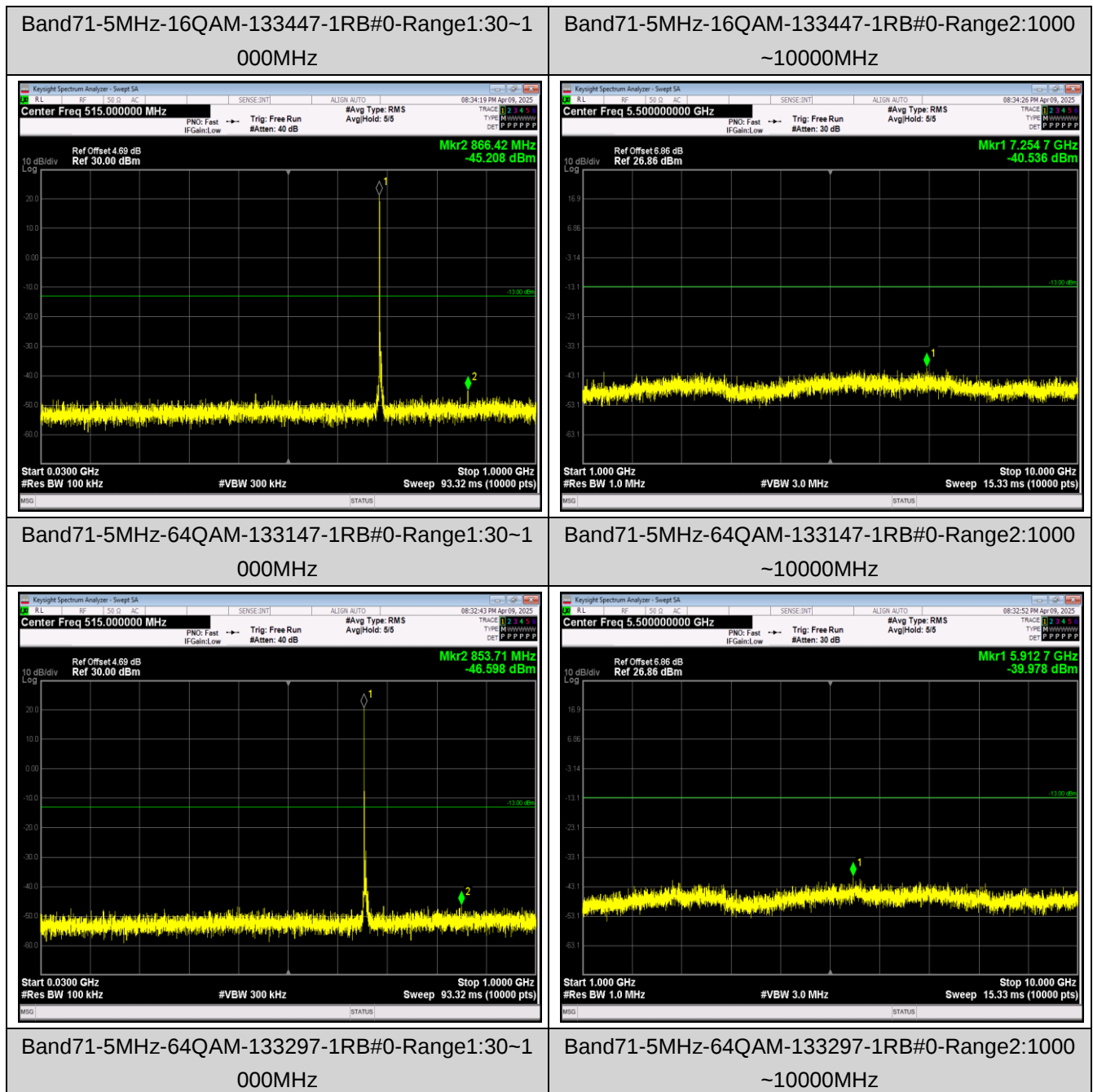


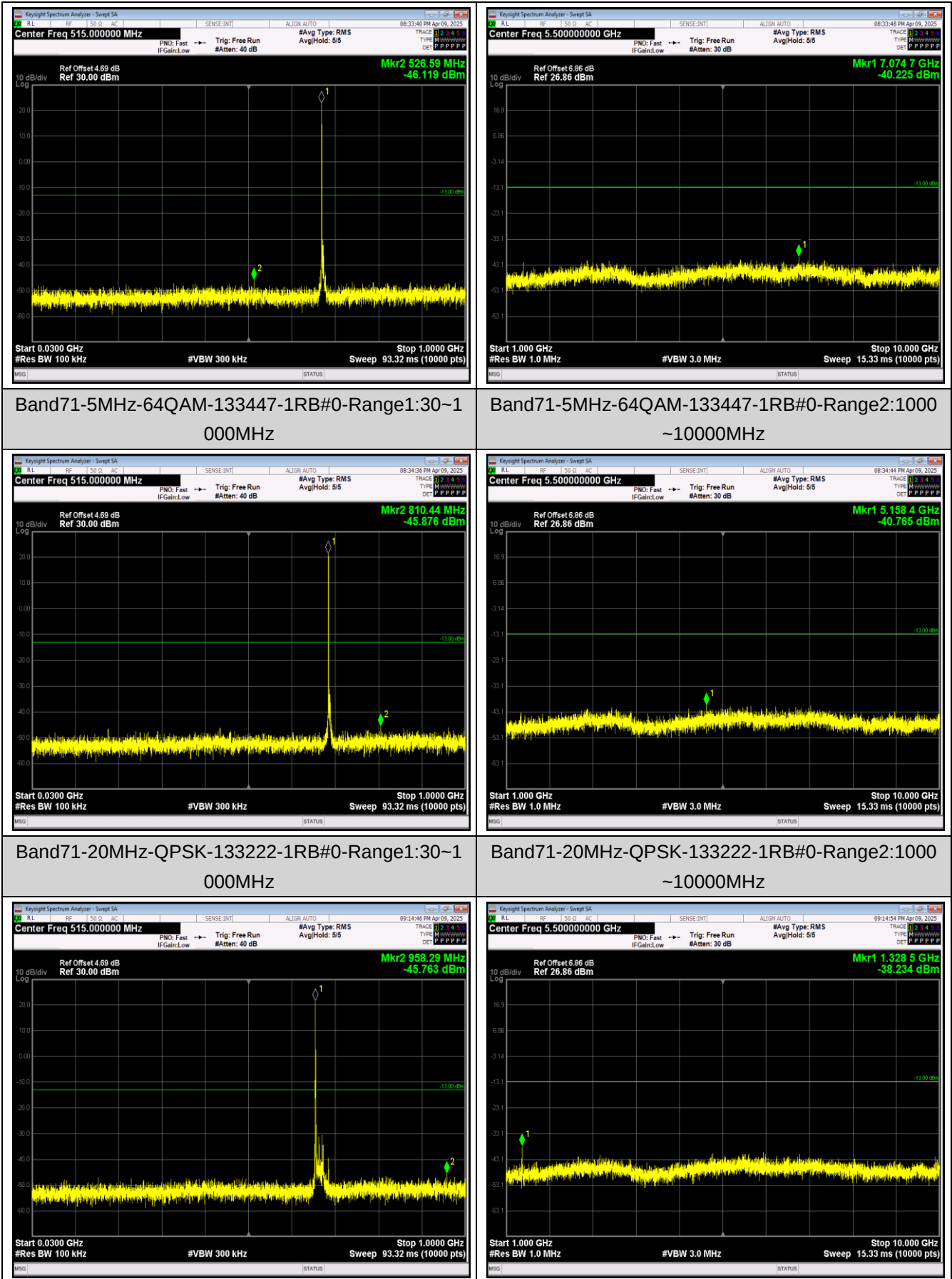
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Band71-5MHz-16QAM-133147-1RB#0-Range2:1000
~10000MHz

Band71-5MHz-16QAM-133297-1RB#0-Range1:30~1
000MHz

Band71-5MHz-16QAM-133297-1RB#0-Range2:1000
~10000MHz





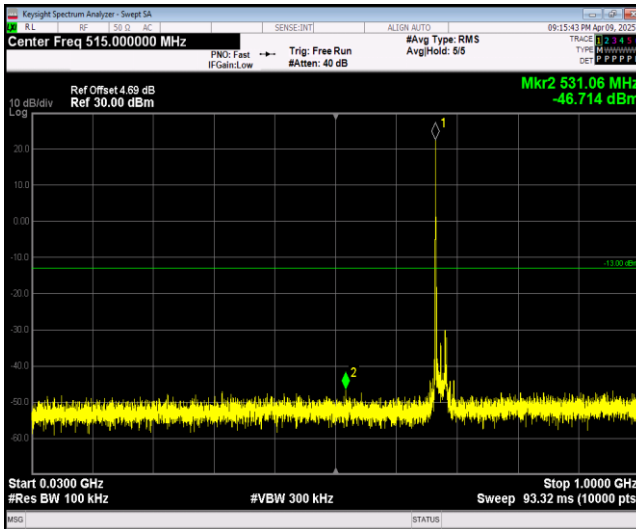
JianYan Testing Group Shenzhen Co., Ltd.

No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

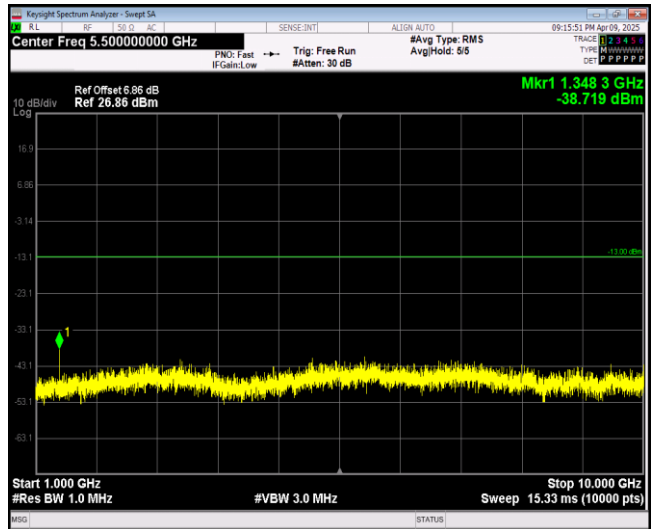
Tel: +86-755-23118282, Fax: +86-755-23116366

Project No.: JYTSZR2503072

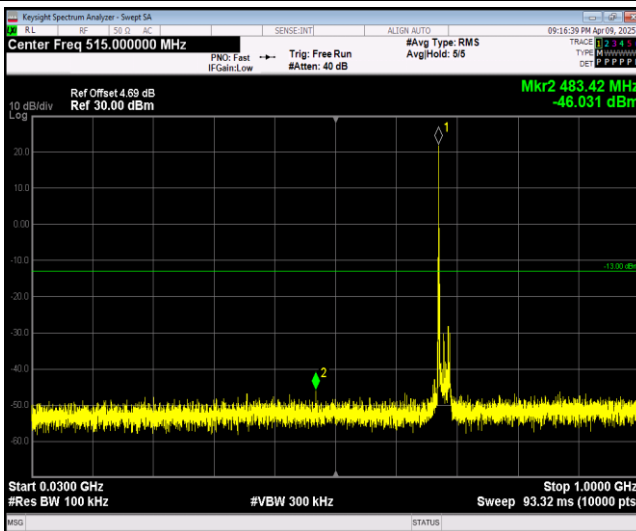
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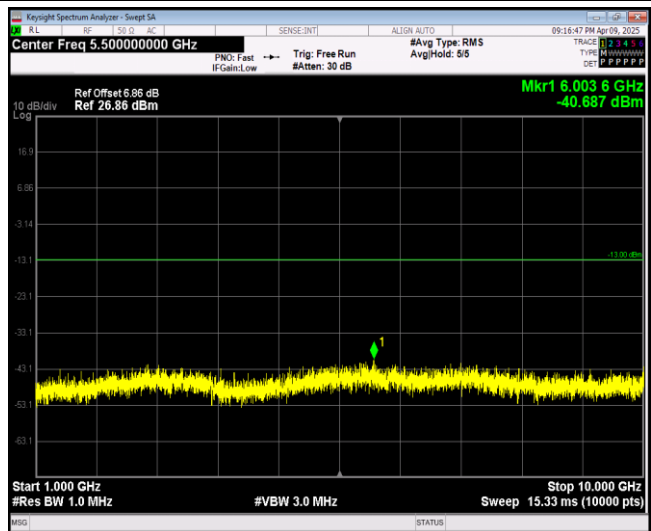
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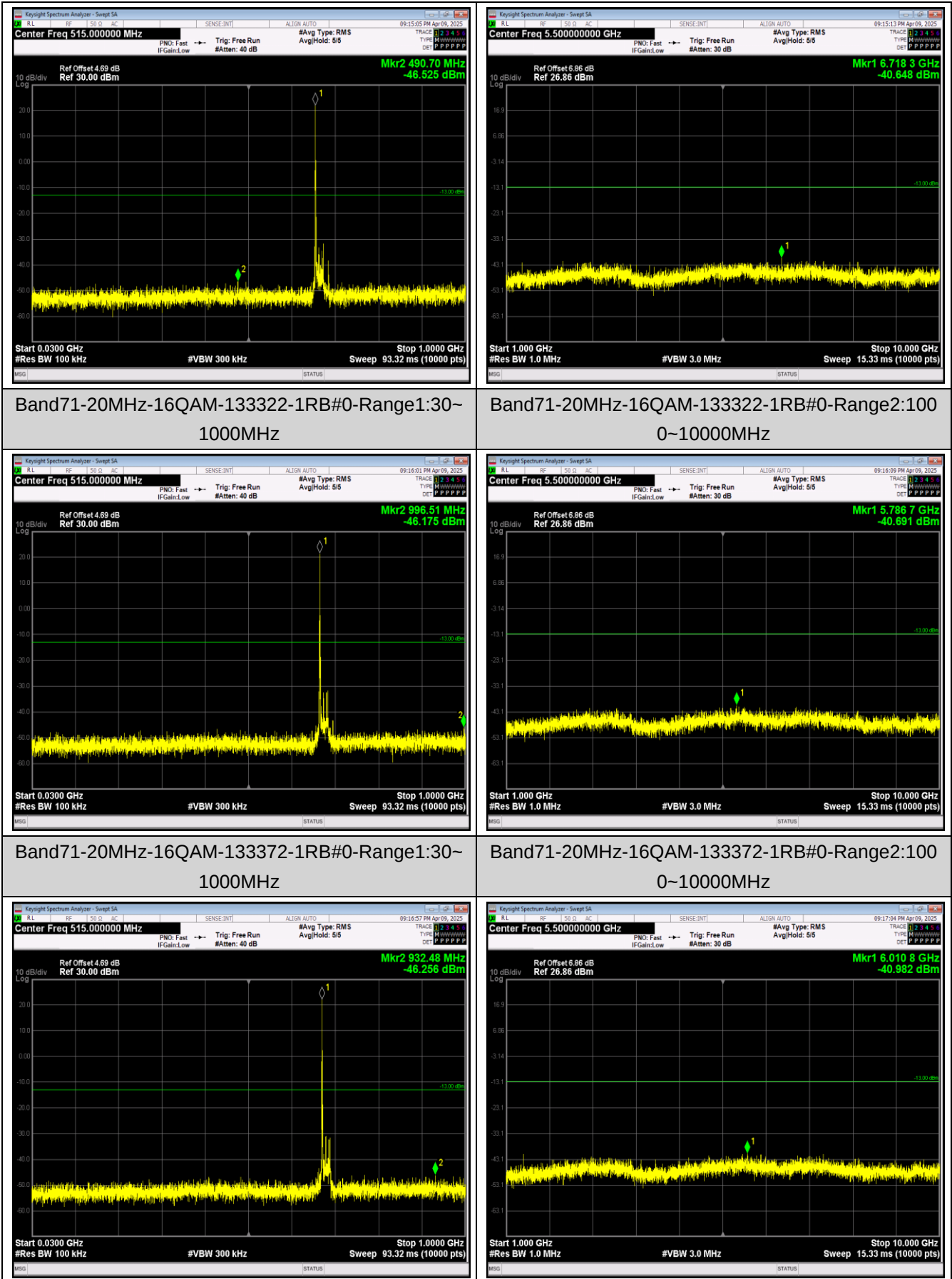


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~10000MHz

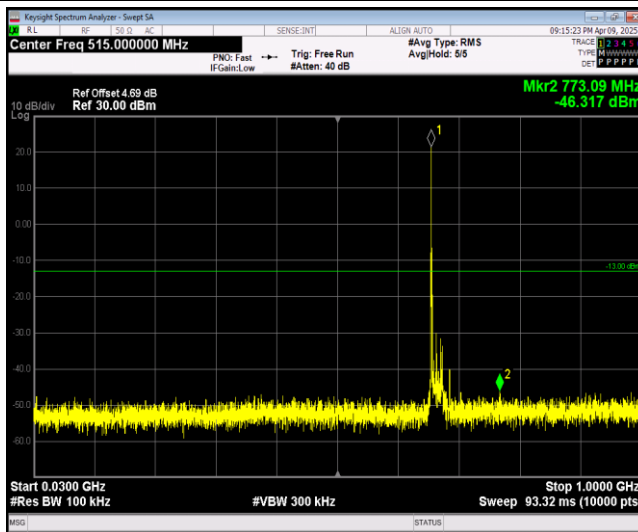


Band71-20MHz-16QAM-133222-1RB#0-Range1:30~
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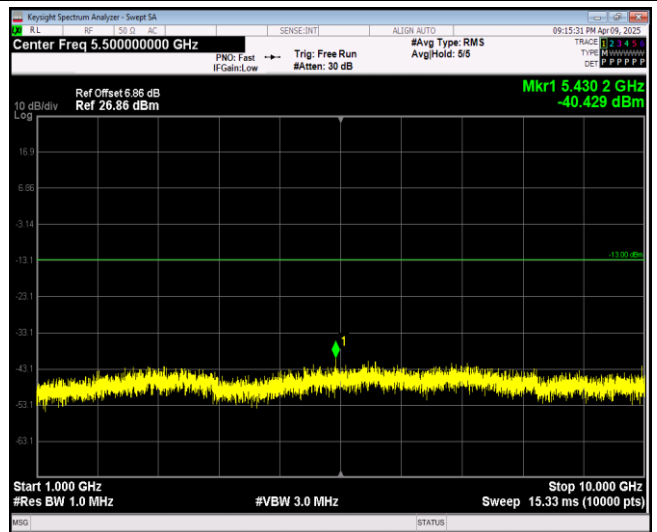
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0~10000MHz



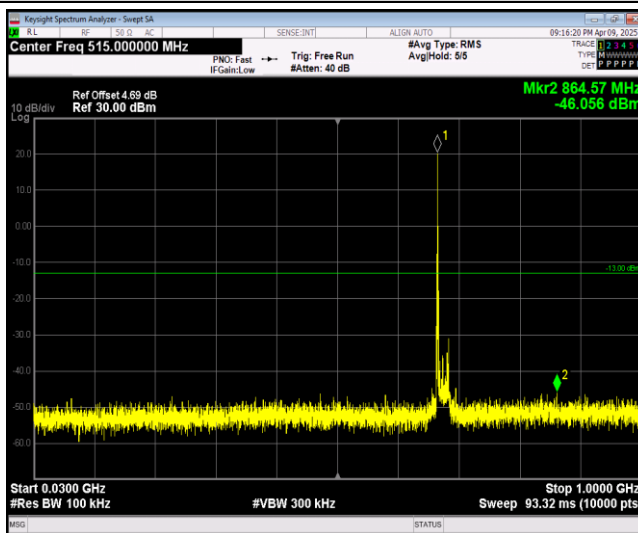
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1000MHz



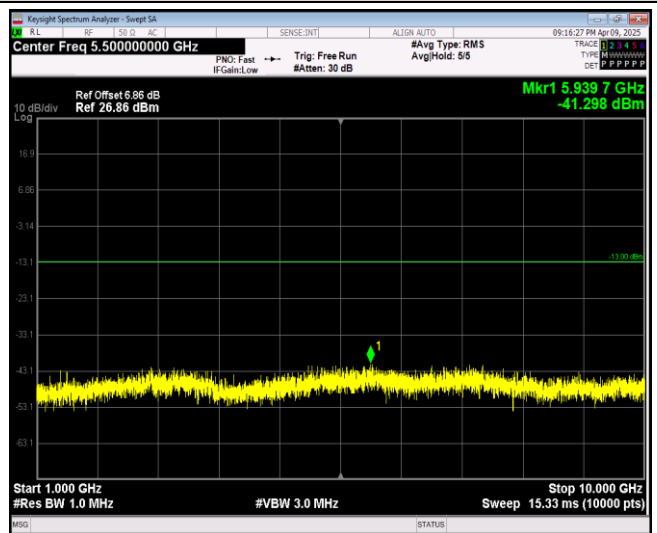
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0~10000MHz



Band71-20MHz-64QAM-133322-1RB#0-Range1:30~
1000MHz



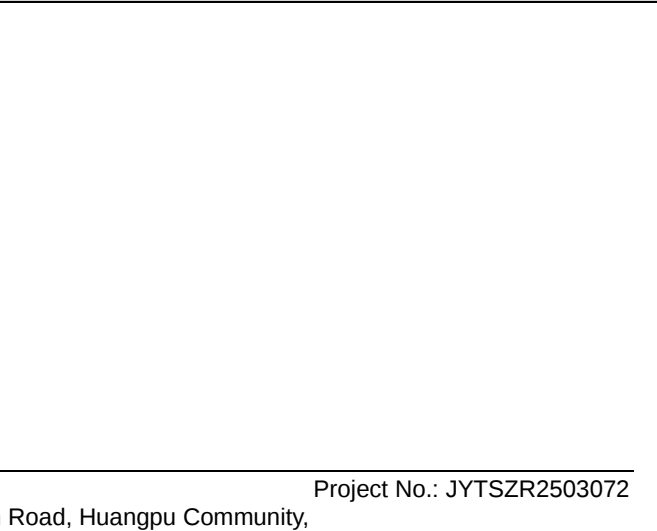
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0~10000MHz

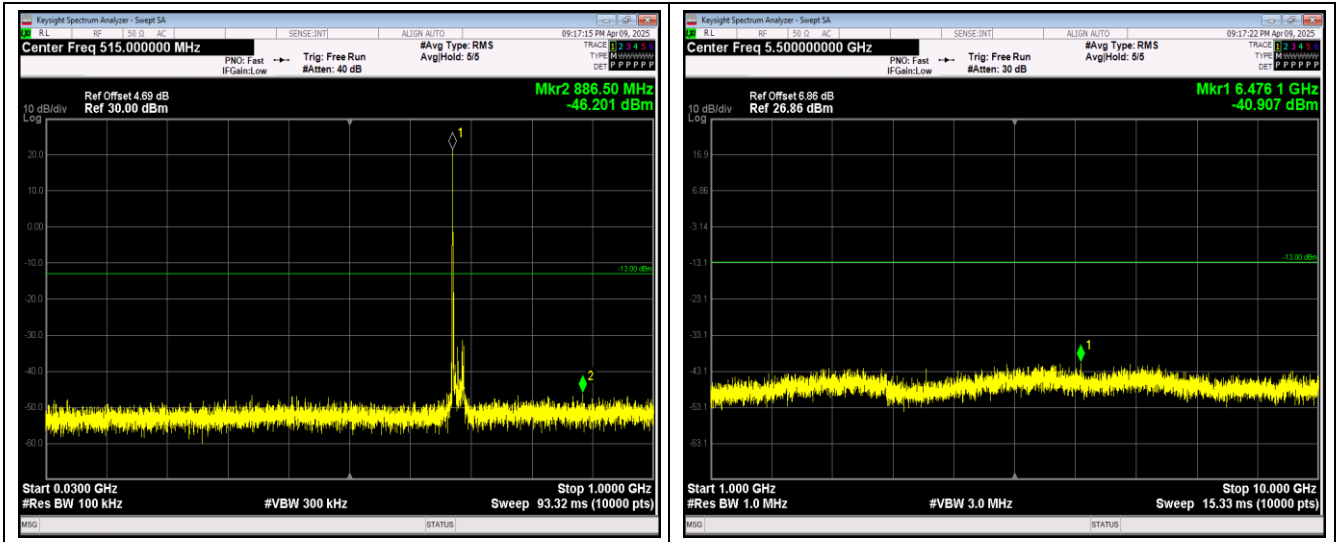


Band71-20MHz-64QAM-133372-1RB#0-Range1:30~
1000MHz



Band71-20MHz-64QAM-133372-1RB#0-Range2:100
0~10000MHz





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					
3.87	-30	8.05	0.004282	Within authorized band for Band 2	Pass
	-20	-7.22	-0.003840		
	-10	8.55	0.004548		
	0	7.54	0.004011		
	10	7.00	0.003723		
	20	-6.51	-0.003463		
	30	7.10	0.003777		
	40	-4.95	-0.002633		
	50	-5.99	-0.003186		
16QAM					
3.87	-30	-4.18	-0.002223	Within authorized band for Band 2	Pass
	-20	-6.58	-0.003500		
	-10	6.71	0.003569		
	0	-6.37	-0.003388		
	10	7.93	0.004218		
	20	-6.68	-0.003553		
	30	-8.83	-0.004697		
	40	4.06	0.002160		
	50	-5.42	-0.002883		
64QAM					
3.87	-30	7.32	0.003894	Within authorized band for Band 2	Pass
	-20	-5.92	-0.003149		
	-10	7.24	0.003851		
	0	-6.25	-0.003324		
	10	6.59	0.003505		
	20	-6.34	-0.003372		
	30	-10.53	-0.005601		
	40	-7.98	-0.004245		
	50	6.09	0.003239		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-6.90	-0.003670	Within authorized band for Band 2	Pass
	3.87	-6.90	-0.003670		
	4.45	6.48	0.003447		
16QAM					
25	3.00	7.62	0.004053	Within authorized band for Band 2	Pass
	3.87	-4.91	-0.002612		
	4.45	7.25	0.003856		
64QAM					
25	3.00	-9.21	-0.004899	Within authorized band for Band 2	Pass
	3.87	7.80	0.004149		
	4.45	6.81	0.003622		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 5 part:

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	-3.03	-0.003622	±2.5	Pass
	-20	-3.55	-0.004244		
	-10	-4.59	-0.005487		
	0	-2.95	-0.003527		
	10	-4.58	-0.005475		
	20	-6.14	-0.007340		
	30	-4.85	-0.005798		
	40	-2.27	-0.002714		
	50	-5.34	-0.006384		
16QAM					
3.87	-30	-2.90	-0.003467	±2.5	Pass
	-20	-4.76	-0.005690		
	-10	-2.78	-0.003323		
	0	-5.02	-0.006001		
	10	-4.63	-0.005535		
	20	-4.28	-0.005117		
	30	-5.64	-0.006742		
	40	-4.92	-0.005882		
	50	-2.37	-0.002833		
64QAM					
3.87	-30	-4.45	-0.005320	±2.5	Pass
	-20	-2.59	-0.003096		
	-10	-3.13	-0.003742		
	0	-4.81	-0.005750		
	10	-4.81	-0.005750		
	20	-2.45	-0.002929		
	30	-1.77	-0.002116		
	40	2.32	0.002773		
	50	-6.05	-0.007233		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-5.65	-0.006754	±2.5	Pass
	3.87	-3.49	-0.004172		
	4.45	-4.43	-0.005296		
16QAM					
25	3.00	-4.19	-0.005009	±2.5	Pass
	3.87	-7.44	-0.008894		
	4.45	-7.05	-0.008428		
64QAM					
25	3.00	-3.68	-0.004399	±2.5	Pass
	3.87	-4.21	-0.005033		
	4.45	-4.32	-0.005164		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	-4.88	-0.006898	Within authorized band for Band 12	Pass
	-20	-6.09	-0.008608		
	-10	-6.65	-0.009399		
	0	-3.95	-0.005583		
	10	-7.41	-0.010473		
	20	-1.77	-0.002502		
	30	-4.43	-0.006261		
	40	-4.21	-0.005951		
	50	-3.76	-0.005314		
16QAM					
3.87	-30	-7.91	-0.011180	Within authorized band for Band 12	Pass
	-20	-5.41	-0.007647		
	-10	2.56	0.003618		
	0	-2.43	-0.003435		
	10	-6.82	-0.009640		
	20	-5.32	-0.007519		
	30	-2.19	-0.003095		
	40	-7.44	-0.010516		
	50	-1.87	-0.002643		
64QAM					
3.87	-30	-6.74	-0.009527	Within authorized band for Band 12	Pass
	-20	-4.82	-0.006813		
	-10	-3.73	-0.005272		
	0	2.57	0.003633		
	10	-2.12	-0.002996		
	20	-5.79	-0.008184		
	30	-5.05	-0.007138		
	40	-4.18	-0.005908		
	50	-3.40	-0.004806		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-4.38	-0.006191	Within authorized band for Band 12	Pass
	3.87	-6.32	-0.008933		
	4.45	-6.98	-0.009866		
16QAM					
25	3.00	-4.38	-0.006191	Within authorized band for Band 12	Pass
	3.87	-6.32	-0.008933		
	4.45	-6.98	-0.009866		
64QAM					
25	3.00	-5.87	-0.008297	Within authorized band for Band 12	Pass
	3.87	-6.95	-0.009823		
	4.45	-4.02	-0.005682		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

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					
3.87	-30	-7.35	-0.002835	Within authorized band for Band 41	Pass
	-20	-8.70	-0.003355		
	-10	5.91	0.002279		
	0	-8.90	-0.003432		
	10	6.38	0.002460		
	20	-7.70	-0.002970		
	30	-5.61	-0.002164		
	40	-10.40	-0.004011		
	50	-6.87	-0.002649		
16QAM					
3.87	-30	4.56	0.001759	Within authorized band for Band 41	Pass
	-20	-8.65	-0.003336		
	-10	-9.41	-0.003629		
	0	-7.71	-0.002973		
	10	-7.22	-0.002784		
	20	-12.06	-0.004651		
	30	5.48	0.002113		
	40	-5.02	-0.001936		
	50	2.88	0.001111		
64QAM					
3.87	-30	-6.98	-0.002692	Within authorized band for Band 41	Pass
	-20	-5.15	-0.001986		
	-10	-11.24	-0.004335		
	0	-5.55	-0.002140		
	10	-8.63	-0.003328		
	20	-6.35	-0.002449		
	30	2.85	0.001099		
	40	-4.92	-0.001897		
	50	7.65	0.002950		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-7.01	-0.002703	Within authorized band for Band 41	Pass
	3.87	-3.79	-0.001462		
	4.45	6.05	0.002333		
16QAM					
25	3.00	-8.18	-0.003155	Within authorized band for Band41	Pass
	3.87	-5.84	-0.002252		
	4.45	-8.55	-0.003297		
64QAM					
25	3.00	-7.54	-0.002908	Within authorized band for Band41	Pass
	3.87	-8.67	-0.003344		
	4.45	-11.14	-0.004296		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

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					
3.87	-30	5.26	0.003014	Within authorized band for Band 66	Pass
	-20	7.47	0.004281		
	-10	8.85	0.005072		
	0	7.95	0.004556		
	10	3.35	0.001920		
	20	5.55	0.003181		
	30	7.32	0.004195		
	40	4.46	0.002556		
	50	-6.14	-0.003519		
16QAM					
3.87	-30	7.64	0.004378	Within authorized band for Band 66	Pass
	-20	3.89	0.002229		
	-10	5.29	0.003032		
	0	6.19	0.003547		
	10	-3.32	-0.001903		
	20	4.73	0.002711		
	30	6.24	0.003576		
	40	4.23	0.002424		
	50	5.84	0.003347		
64QAM					
3.87	-30	3.43	0.001966	Within authorized band for Band 66	Pass
	-20	4.56	0.002613		
	-10	5.74	0.003289		
	0	5.99	0.003433		
	10	-3.36	-0.001926		
	20	5.58	0.003198		
	30	4.42	0.002533		
	40	7.90	0.004527		
	50	5.98	0.003427		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-5.05	-0.002894	Within authorized band for Band 66	Pass
	3.87	3.78	0.002166		
	4.45	6.52	0.003736		
16QAM					
25	3.00	4.85	0.002779	Within authorized band for Band 66	Pass
	3.87	5.72	0.003278		
	4.45	4.33	0.002481		
64QAM					
25	3.00	-4.75	-0.002722	Within authorized band for Band 66	Pass
	3.87	-5.72	-0.003278		
	4.45	-3.66	-0.002097		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 71 part:

Reference Frequency: LTE Band 71 (10MHz) Middle channel=133297 Frequency=680.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	-3.25	-0.004776	Within authorized band for Band 71	Pass
	-20	-7.31	-0.010742		
	-10	-4.51	-0.006627		
	0	-4.25	-0.006245		
	10	-5.81	-0.008538		
	20	-6.84	-0.010051		
	30	-5.25	-0.007715		
	40	-6.22	-0.009140		
	50	-6.48	-0.009522		
16QAM					
3.87	-30	-4.96	-0.007289	Within authorized band for Band 71	Pass
	-20	-7.75	-0.011389		
	-10	-4.28	-0.006289		
	0	-7.12	-0.010463		
	10	-3.06	-0.004497		
	20	-3.71	-0.005452		
	30	-4.13	-0.006069		
	40	-8.27	-0.012153		
	50	-1.86	-0.002733		
64QAM					
3.87	-30	-6.58	-0.009669	Within authorized band for Band 71	Pass
	-20	-4.12	-0.006054		
	-10	-6.57	-0.009655		
	0	-6.79	-0.009978		
	10	-2.50	-0.003674		
	20	-6.09	-0.008949		
	30	-6.49	-0.009537		
	40	-3.46	-0.005084		
	50	-8.55	-0.012564		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	-2.85	-0.004188	Within authorized band for Band 71	Pass
	3.87	-4.15	-0.006098		
	4.45	-7.82	-0.011492		
16QAM					
25	3.00	-4.91	-0.007215	Within authorized band for Band 71	Pass
	3.87	-4.66	-0.006848		
	4.45	-3.98	-0.005849		
64QAM					
25	3.00	-4.78	-0.007024	Within authorized band for Band 71	Pass
	3.87	-5.11	-0.007509		
	4.45	-1.42	-0.002087		
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
Band2	20MHz	QPSK	18900	100RB#0	PASS	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS	PASS
Band2	20MHz	64QAM	18900	100RB#0	PASS	PASS
Band5	10MHz	QPSK	20525	50RB#0	PASS	PASS
Band5	10MHz	16QAM	20525	50RB#0	PASS	PASS
Band5	10MHz	64QAM	20525	50RB#0	PASS	PASS
Band12	10MHz	QPSK	23095	50RB#0	PASS	PASS
Band12	10MHz	16QAM	23095	50RB#0	PASS	PASS
Band12	10MHz	64QAM	23095	50RB#0	PASS	PASS
Band41	20MHz	QPSK	40620	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40620	100RB#0	PASS	PASS
Band41	20MHz	64QAM	40620	100RB#0	PASS	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS	PASS
Band66	20MHz	64QAM	132322	100RB#0	PASS	PASS
Band71	20MHz	QPSK	133322	100RB#0	PASS	PASS
Band71	20MHz	16QAM	133322	100RB#0	PASS	PASS
Band71	20MHz	64QAM	133322	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

