

## Appendix test data for LTE band 12

Temperature:	25 ° C
Humidity:	44 %
Atmospheric pressure:	950-1050mbar
Test Engineer:	Aaron Tan

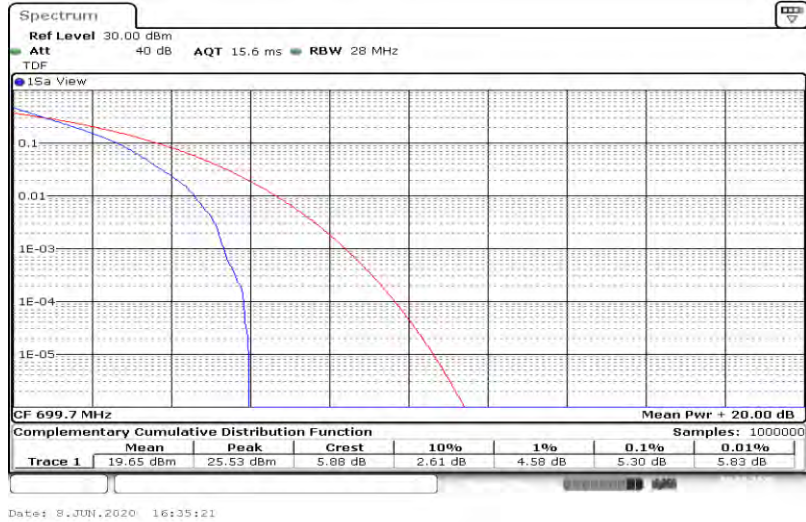
## Appendix B: Peak-to-Average Ratio(CCDF)

### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	5.30	13	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	6.41	13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	4.70	13	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	8.26	13	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	8.20	13	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	5.59	13	PASS
Band12	3MHz	QPSK	23025	15RB#0	5.36	13	PASS
Band12	3MHz	QPSK	23095	15RB#0	5.39	13	PASS
Band12	3MHz	QPSK	23165	15RB#0	4.61	13	PASS
Band12	3MHz	16QAM	23025	15RB#0	6.35	13	PASS
Band12	3MHz	16QAM	23095	15RB#0	8.20	13	PASS
Band12	3MHz	16QAM	23165	15RB#0	5.45	13	PASS
Band12	5MHz	QPSK	23035	25RB#0	5.30	13	PASS
Band12	5MHz	QPSK	23095	25RB#0	5.39	13	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.84	13	PASS
Band12	5MHz	16QAM	23035	25RB#0	6.20	13	PASS
Band12	5MHz	16QAM	23095	25RB#0	6.23	13	PASS
Band12	5MHz	16QAM	23155	25RB#0	5.71	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.06	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.30	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.48	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.03	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.17	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.17	13	PASS

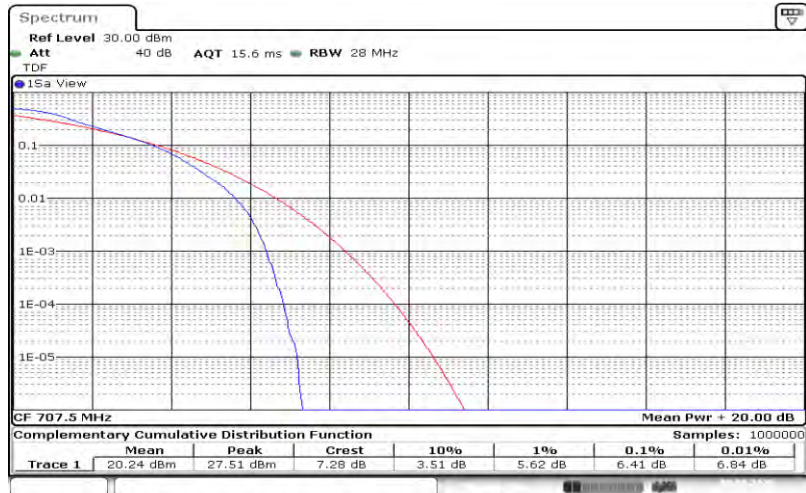
# Test Graphs

## Band12-1.4MHz-QPSK-23017-6RB#0



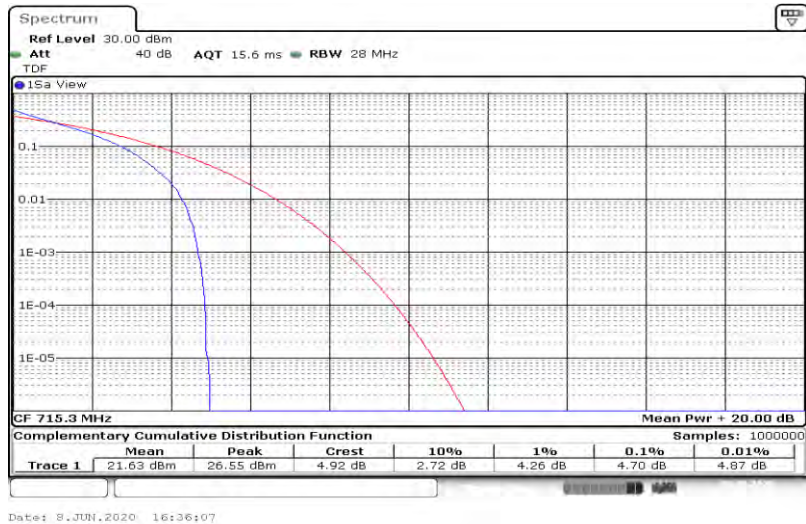
Date: 8 JUN 2020 16:35:21

## Band12-1.4MHz-QPSK-23095-6RB#0

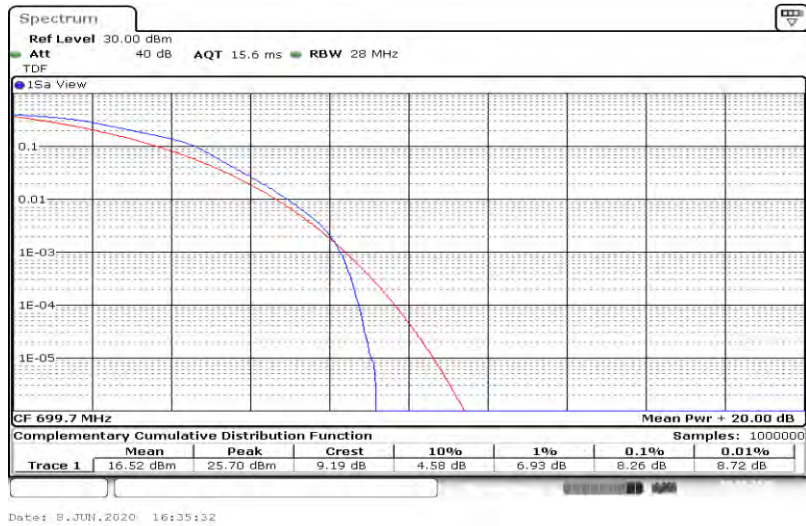


Date: 8 JUN 2020 16:35:44

## Band12-1.4MHz-QPSK-23173-6RB#0



Band12-1.4MHz-16QAM-23017-6RB#0

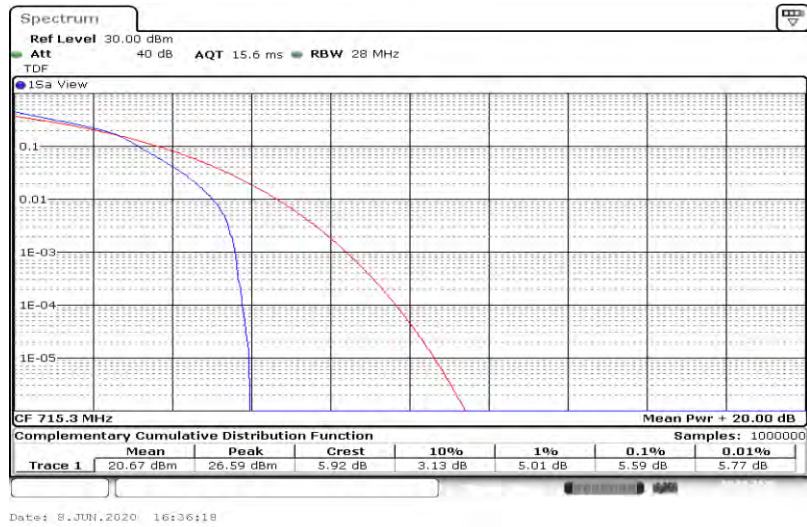


Band12-1.4MHz-16QAM-23095-6RB#0

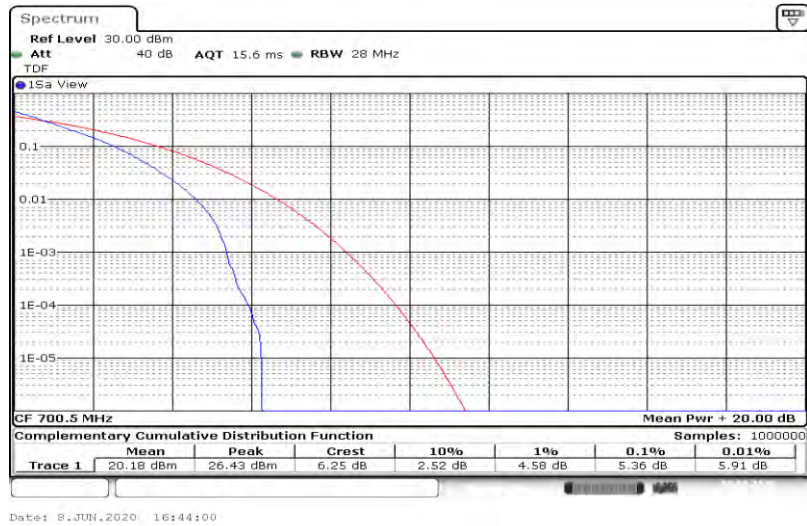


Band12-1.4MHz-16QAM-23173-6RB#0

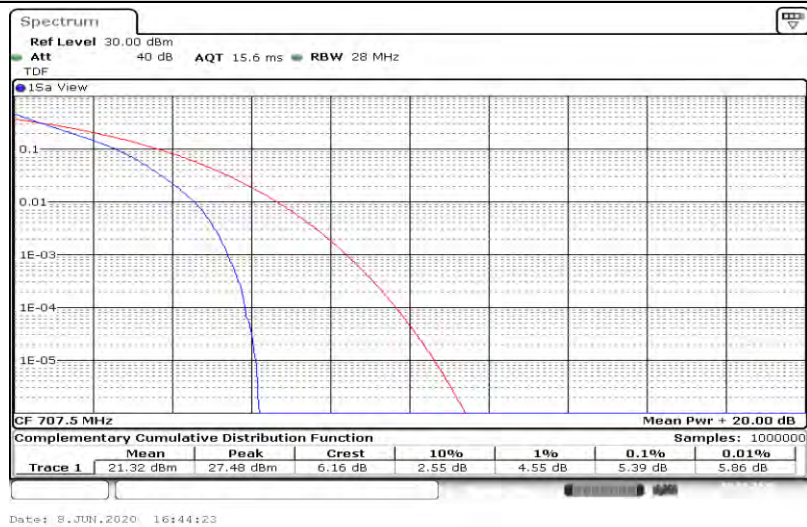




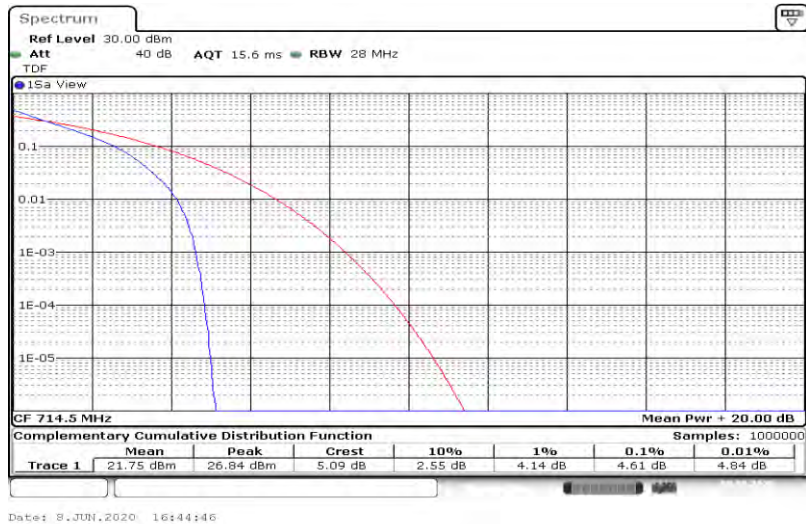
Band12-3MHz-QPSK-23025-15RB#0



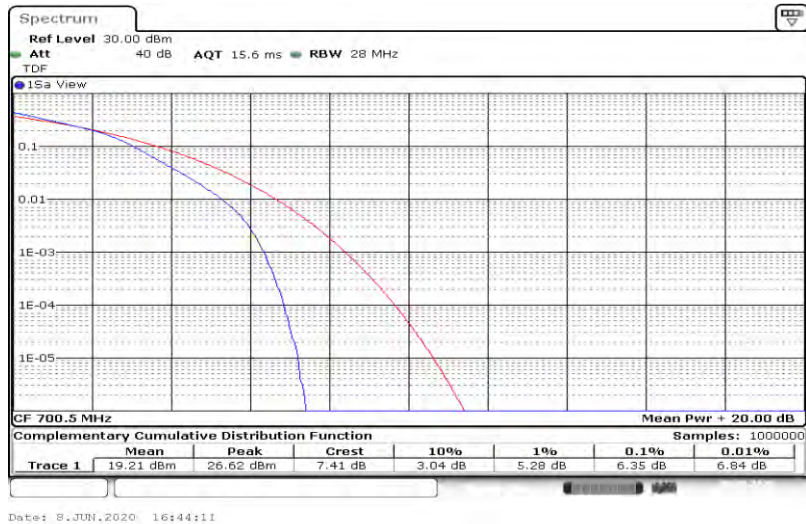
Band12-3MHz-QPSK-23095-15RB#0



Band12-3MHz-QPSK-23165-15RB#0



Band12-3MHz-16QAM-23025-15RB#0

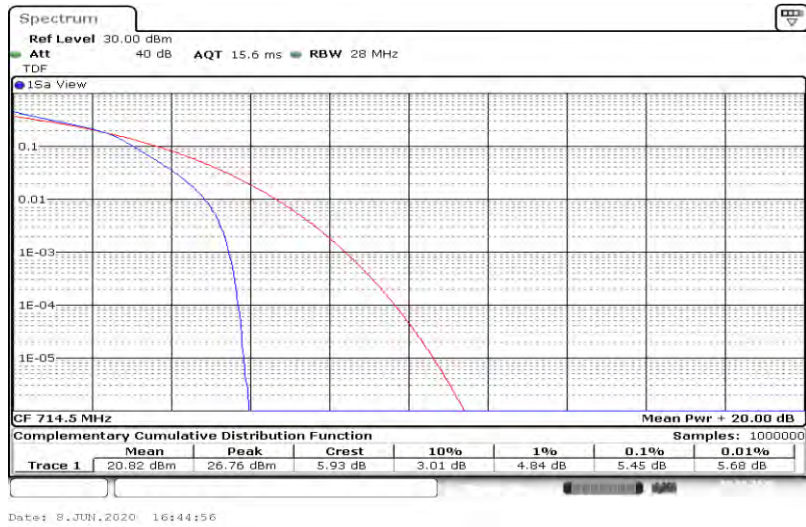


Band12-3MHz-16QAM-23095-15RB#0



Band12-3MHz-16QAM-23165-15RB#0

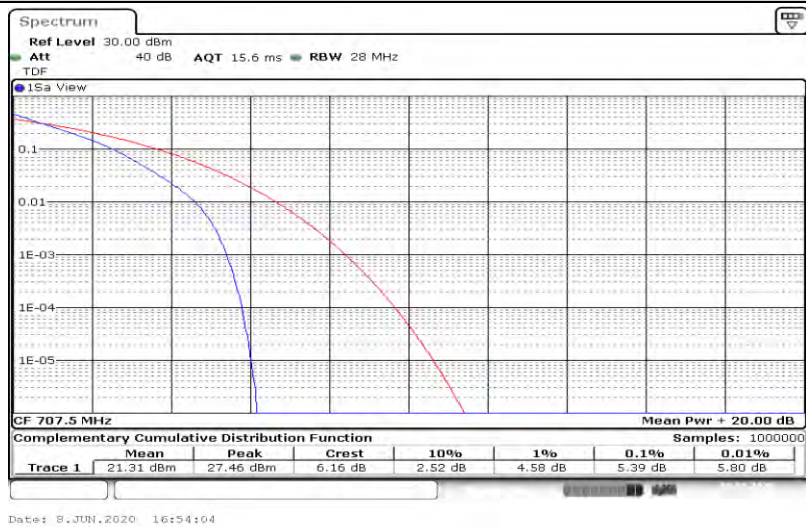




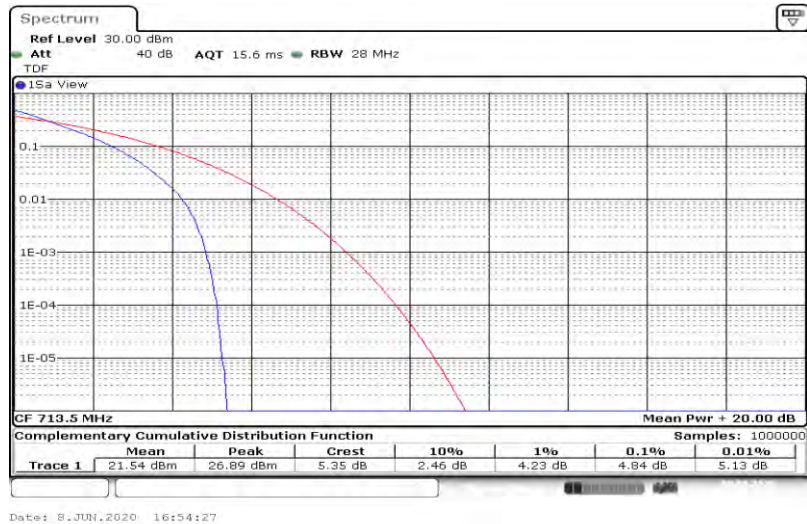
Band12-5MHz-QPSK-23035-25RB#0



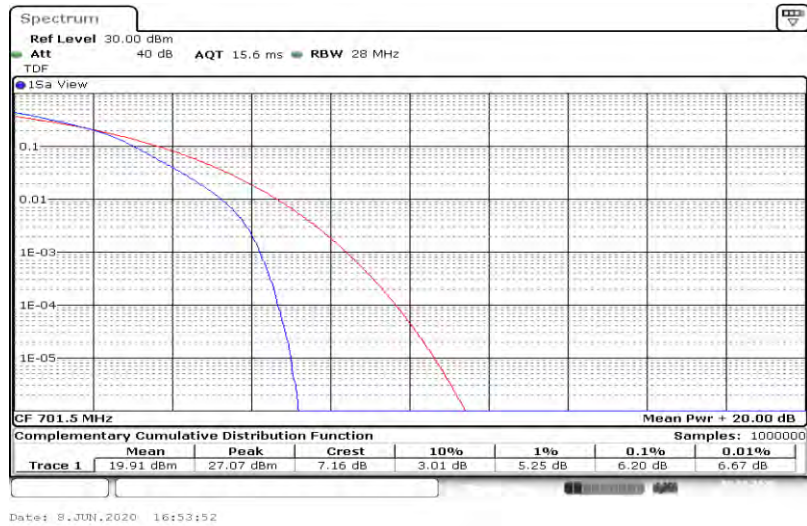
Band12-5MHz-QPSK-23095-25RB#0



Band12-5MHz-QPSK-23155-25RB#0



Band12-5MHz-16QAM-23035-25RB#0

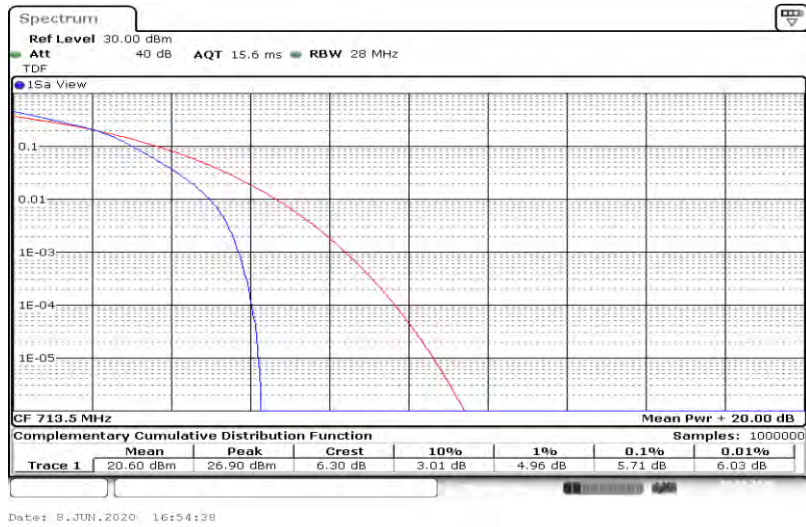


Band12-5MHz-16QAM-23095-25RB#0

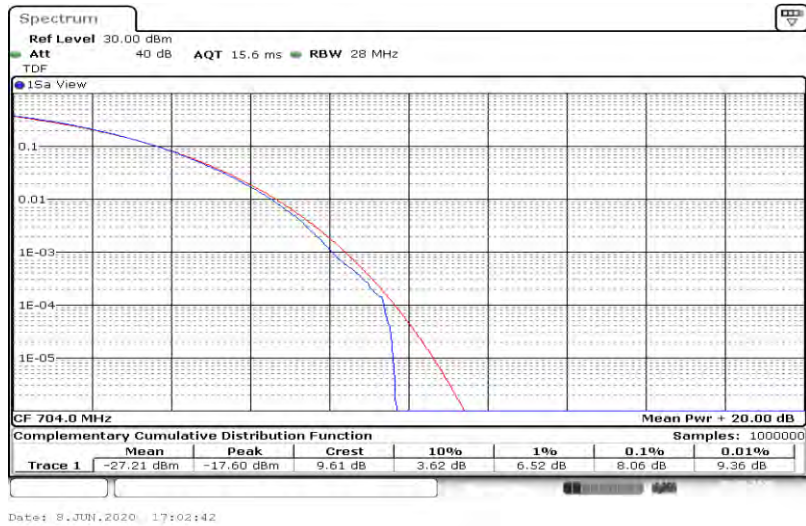


Band12-5MHz-16QAM-23155-25RB#0





Band12-10MHz-QPSK-23060-50RB#0



Band12-10MHz-QPSK-23095-50RB#0



Band12-10MHz-QPSK-23130-50RB#0



Band12-10MHz-16QAM-23060-50RB#0



Band12-10MHz-16QAM-23095-50RB#0



Band12-10MHz-16QAM-23130-50RB#0





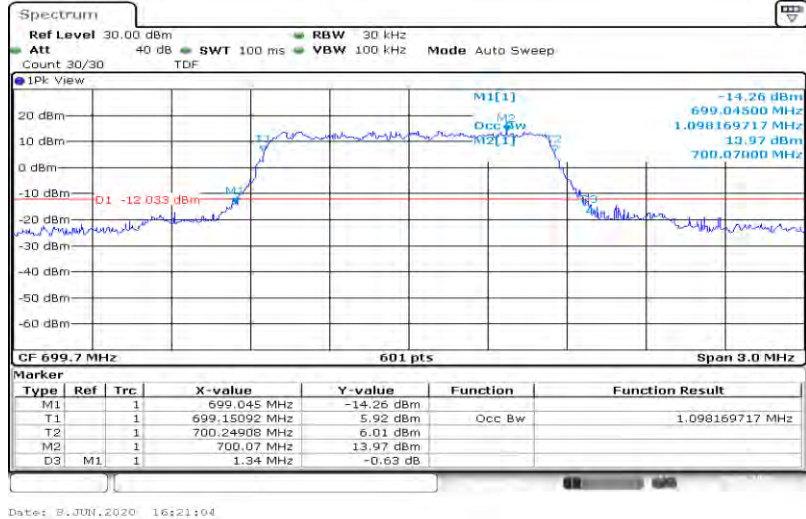
## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

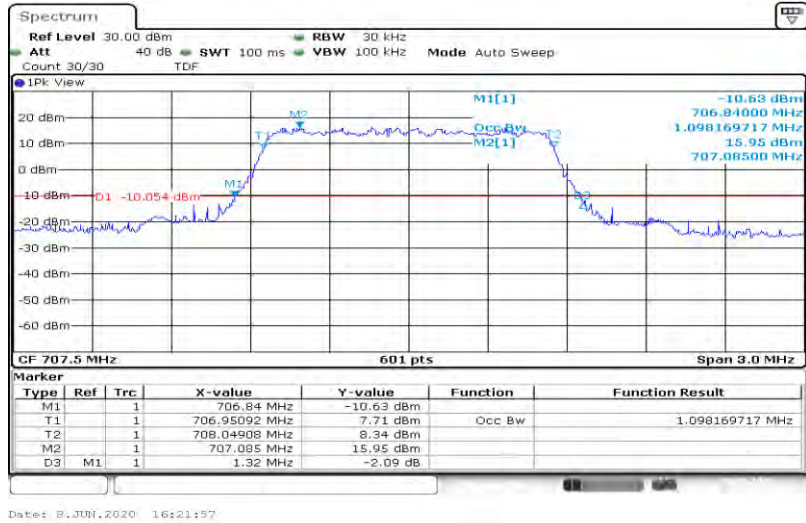
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.098	1.340	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.098	1.320	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.093	1.325	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.103	1.335	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.103	1.315	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.098	1.315	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.705	3.190	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.705	3.040	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.696	3.020	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.696	3.050	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.705	3.040	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.696	3.040	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.525	5.200	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.515	5.300	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.505	5.000	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.515	5.140	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.525	5.260	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.515	5.340	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.952	9.900	PASS
Band12	10MHz	QPSK	23095	50RB#0	9.018	10.000	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.985	9.933	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.918	9.867	PASS
Band12	10MHz	16QAM	23095	50RB#0	9.018	9.967	PASS
Band12	10MHz	16QAM	23130	50RB#0	9.018	10.000	PASS

# Test Graphs

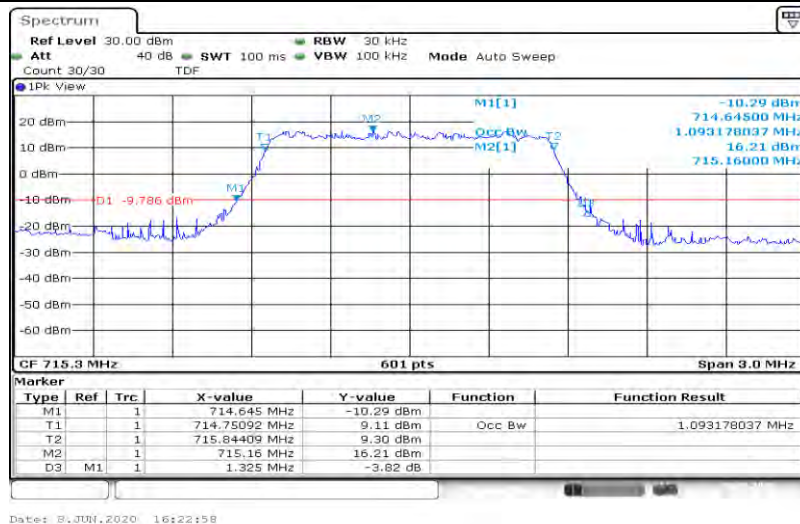
Band12-1.4MHz-QPSK-23017-6RB#0-1.098



Band12-1.4MHz-QPSK-23095-6RB#0-1.098



Band12-1.4MHz-QPSK-23173-6RB#0-1.093



Band12-1.4MHz-16QAM-23017-6RB#0-1.103

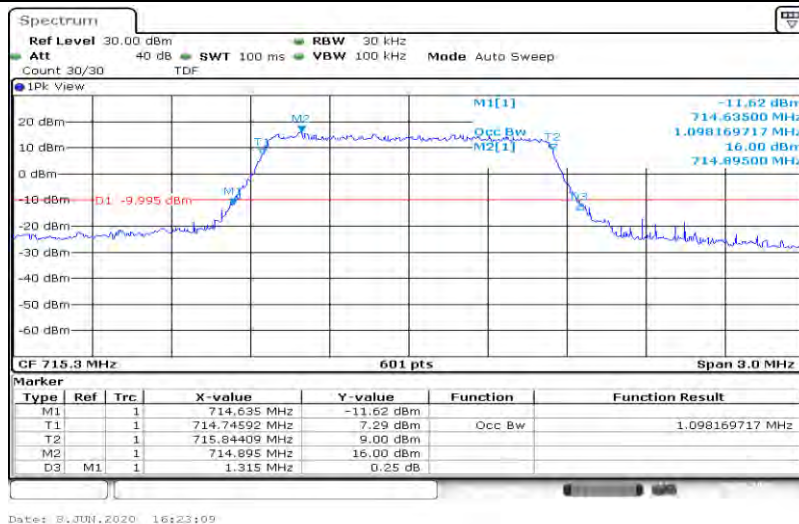


Band12-1.4MHz-16QAM-23095-6RB#0-1.103



Band12-1.4MHz-16QAM-23173-6RB#0-1.098





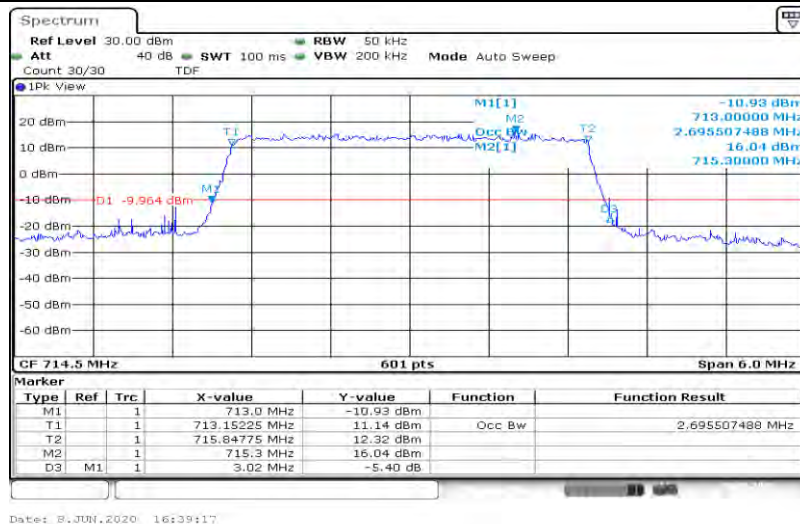
### Band12-3MHz-QPSK-23025-15RB#0-2.705



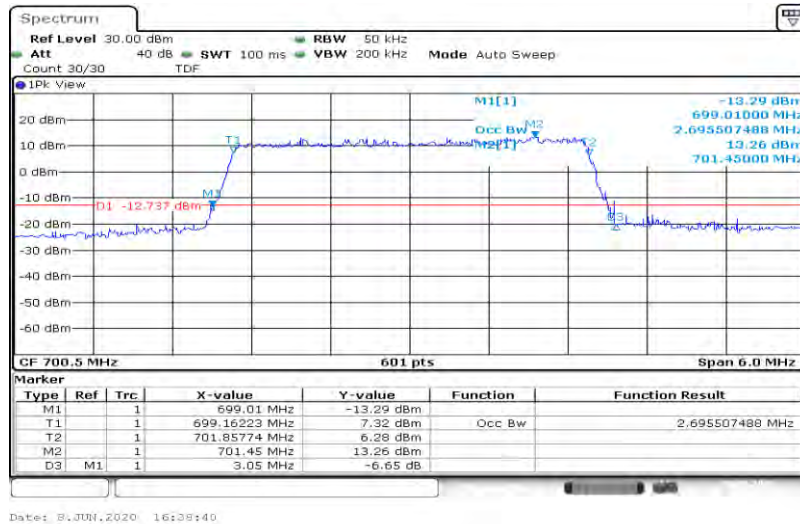
### Band12-3MHz-QPSK-23095-15RB#0-2.705



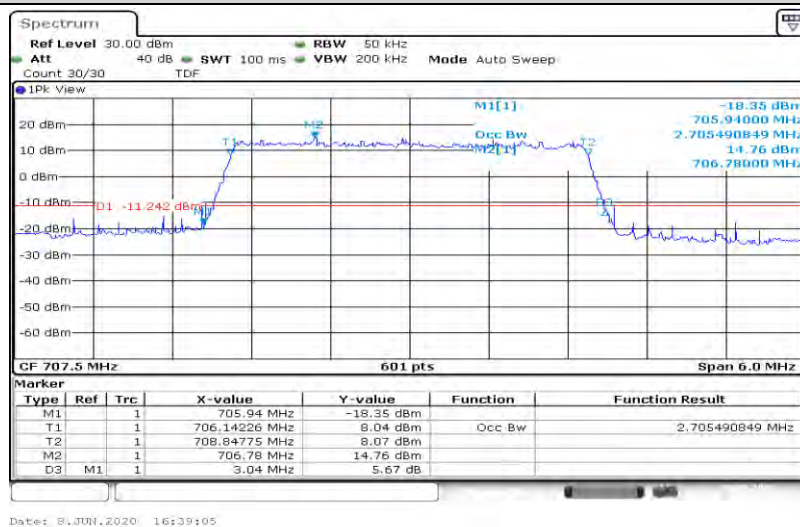
### Band12-3MHz-QPSK-23165-15RB#0-2.696



Band12-3MHz-16QAM-23025-15RB#0-2.696



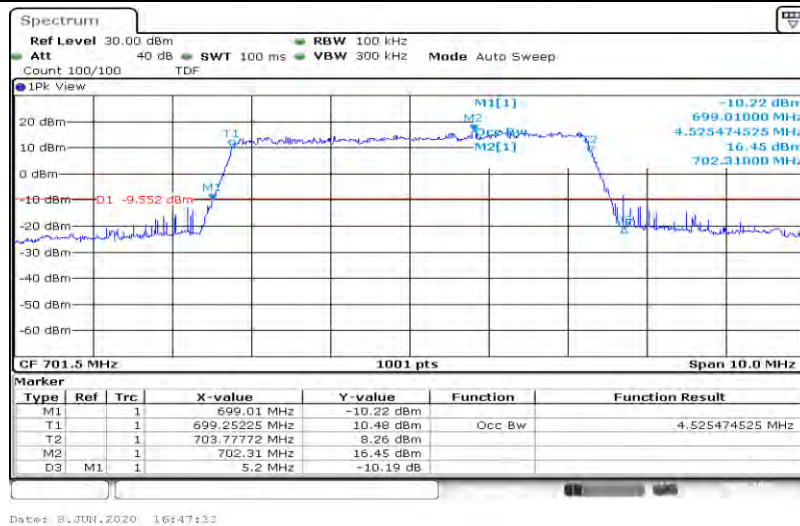
Band12-3MHz-16QAM-23095-15RB#0-2.705



Band12-3MHz-16QAM-23165-15RB#0-2.696



Band12-5MHz-QPSK-23035-25RB#0-4.525

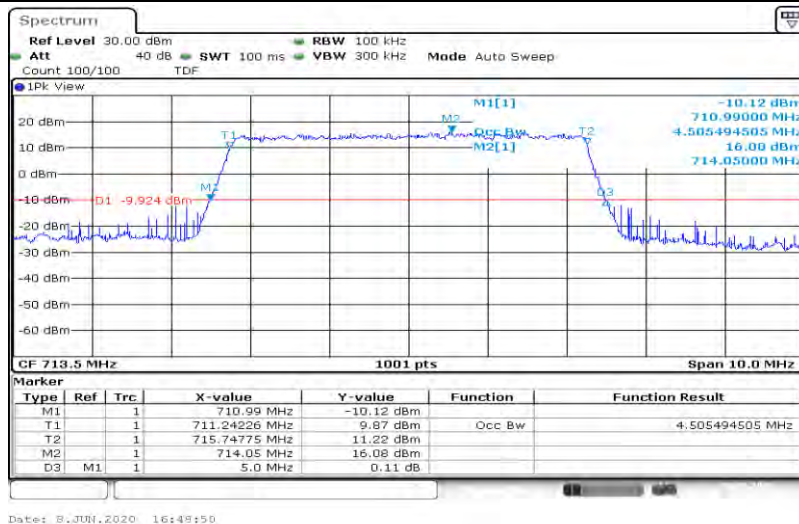


Band12-5MHz-QPSK-23095-25RB#0-4.515

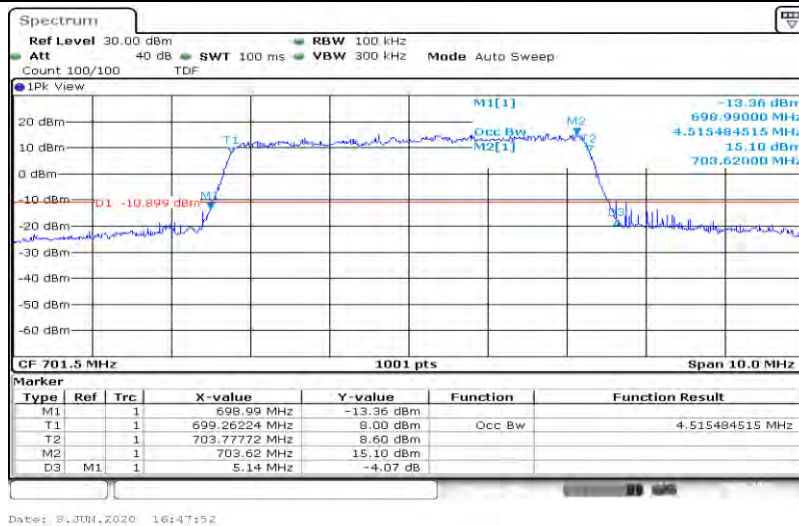


Band12-5MHz-QPSK-23155-25RB#0-4.505





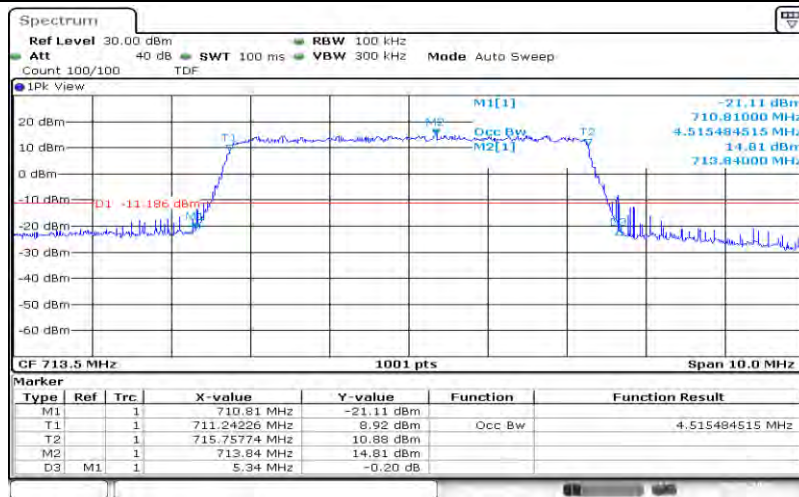
Band12-5MHz-16QAM-23035-25RB#0-4.515



Band12-5MHz-16QAM-23095-25RB#0-4.525



Band12-5MHz-16QAM-23155-25RB#0-4.515



Date: 8 JUN 2020 16:49:09

Band12-10MHz-QPSK-23060-50RB#0-8.952



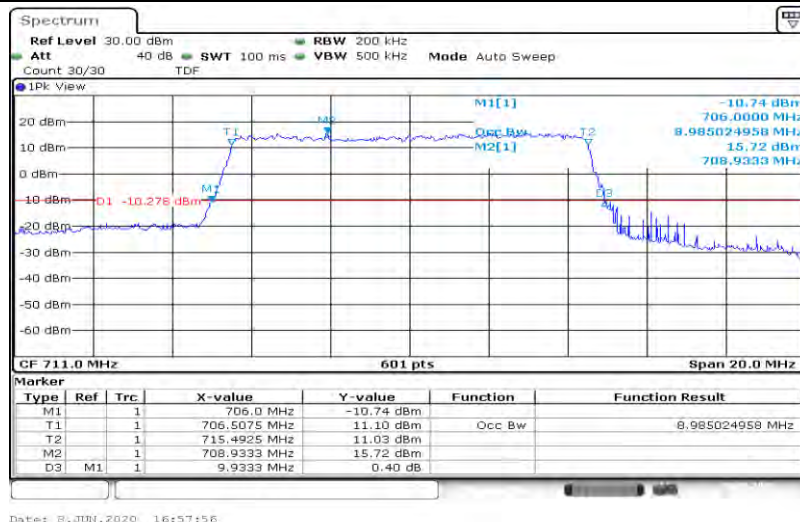
Date: 8 JUN 2020 16:57:07

Band12-10MHz-QPSK-23095-50RB#0-9.018



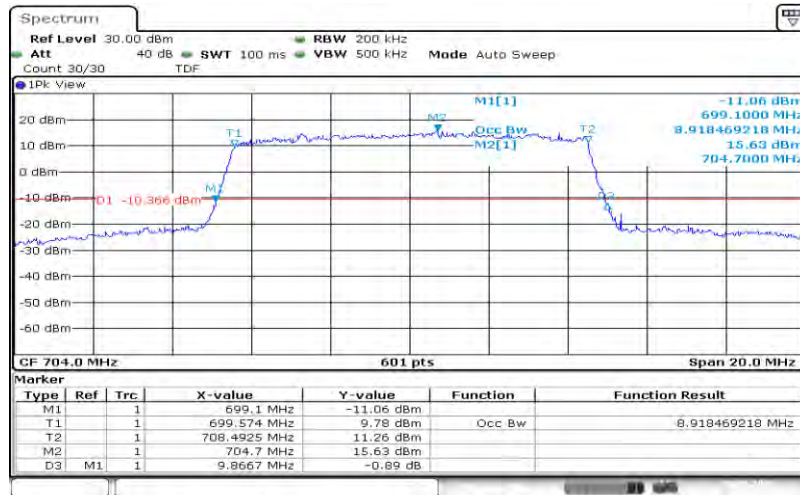
Date: 8 JUN 2020 16:57:32

Band12-10MHz-QPSK-23130-50RB#0-8.985



Date: 8 JUN 2020 16:57:56

### Band12-10MHz-16QAM-23060-50RB#0-8.918



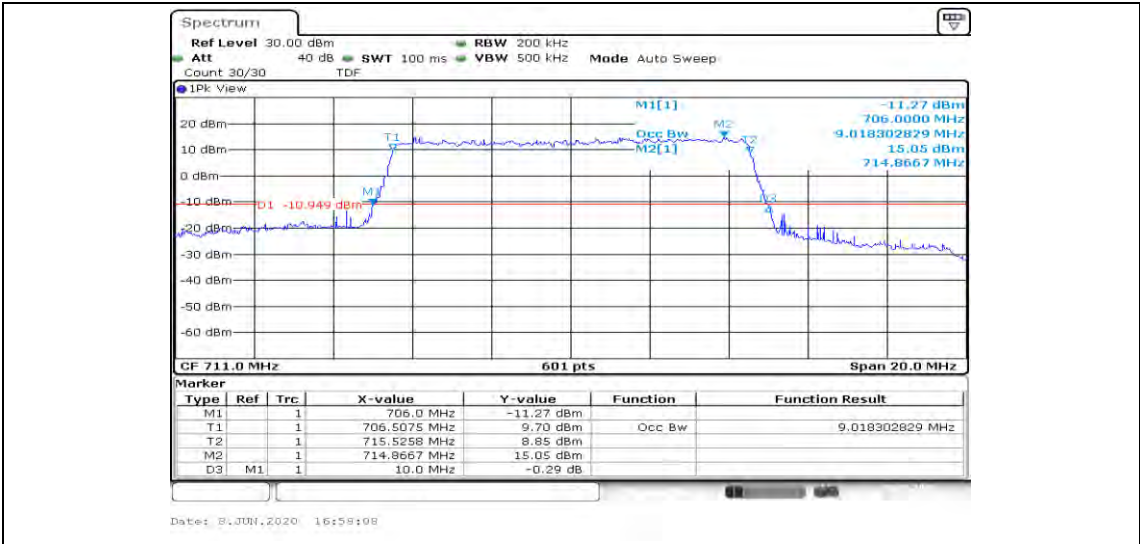
Date: 8 JUN 2020 16:57:19

### Band12-10MHz-16QAM-23095-50RB#0-9.018



Date: 8 JUN 2020 16:57:43

### Band12-10MHz-16QAM-23130-50RB#0-9.018



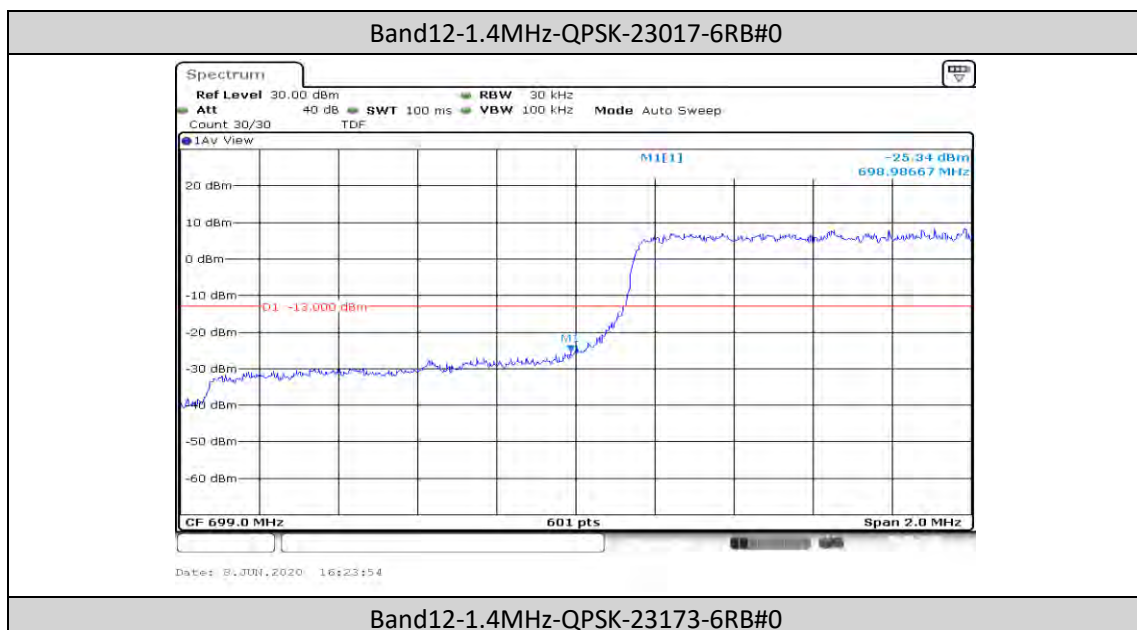


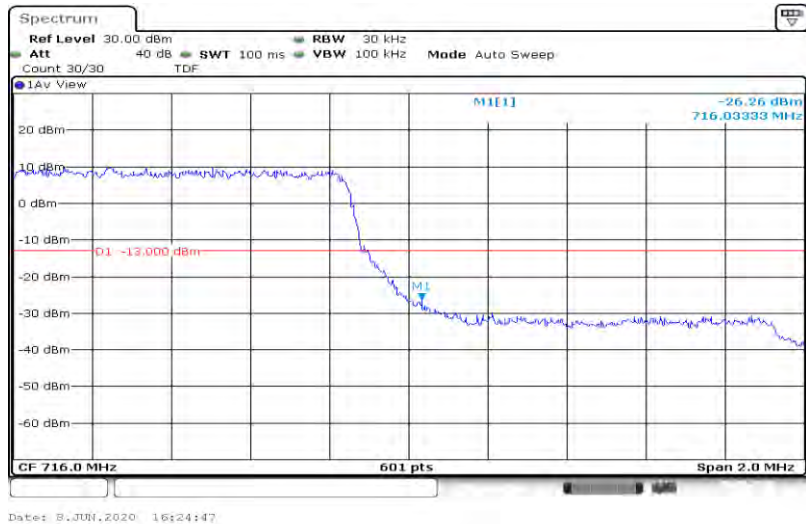
## Appendix D: Band Edge

### Test Result

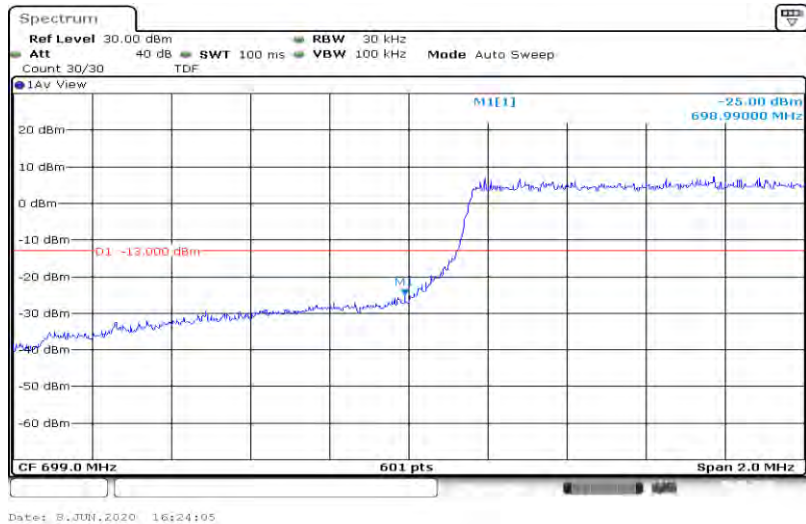
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	-25.34	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	-26.26	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	-25.00	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	-25.07	PASS
Band12	3MHz	QPSK	23025	15RB#0	-25.99	PASS
Band12	3MHz	QPSK	23165	15RB#0	-24.94	PASS
Band12	3MHz	16QAM	23025	15RB#0	-26.00	PASS
Band12	3MHz	16QAM	23165	15RB#0	-25.44	PASS
Band12	5MHz	QPSK	23035	25RB#0	-27.25	PASS
Band12	5MHz	QPSK	23155	25RB#0	-26.86	PASS
Band12	5MHz	16QAM	23035	25RB#0	-26.90	PASS
Band12	5MHz	16QAM	23155	25RB#0	-26.73	PASS
Band12	10MHz	QPSK	23060	50RB#0	-28.82	PASS
Band12	10MHz	QPSK	23130	50RB#0	-29.25	PASS
Band12	10MHz	16QAM	23060	50RB#0	-29.30	PASS
Band12	10MHz	16QAM	23130	50RB#0	-28.86	PASS

### Test Graphs





Band12-1.4MHz-16QAM-23017-6RB#0



Band12-1.4MHz-16QAM-23173-6RB#0



Band12-3MHz-QPSK-23025-15RB#0



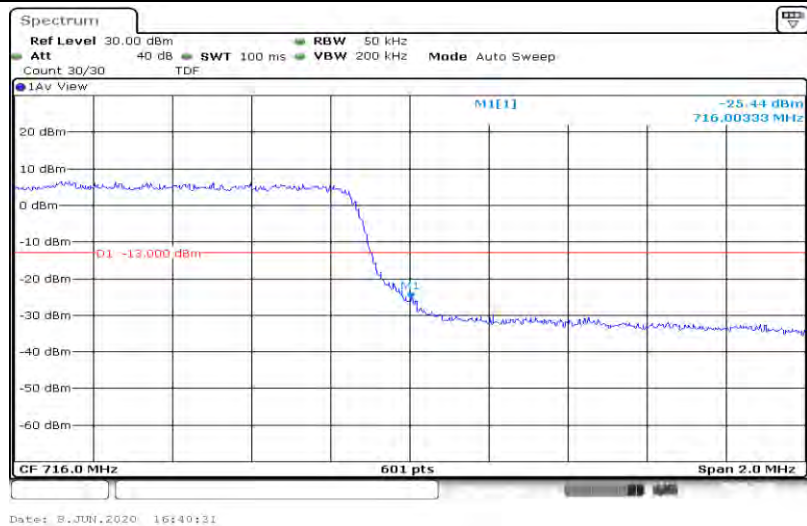
Band12-3MHz-QPSK-23165-15RB#0



Band12-3MHz-16QAM-23025-15RB#0



Band12-3MHz-16QAM-23165-15RB#0



Band12-5MHz-QPSK-23035-25RB#0



Band12-5MHz-QPSK-23155-25RB#0



Band12-5MHz-16QAM-23035-25RB#0





Band12-5MHz-16QAM-23155-25RB#0



Band12-10MHz-QPSK-23060-50RB#0



Band12-10MHz-QPSK-23130-50RB#0



**Band12-10MHz-16QAM-23060-50RB#0**



**Band12-10MHz-16QAM-23130-50RB#0**



## Appendix E: Conducted Spurious Emission

### Test Result

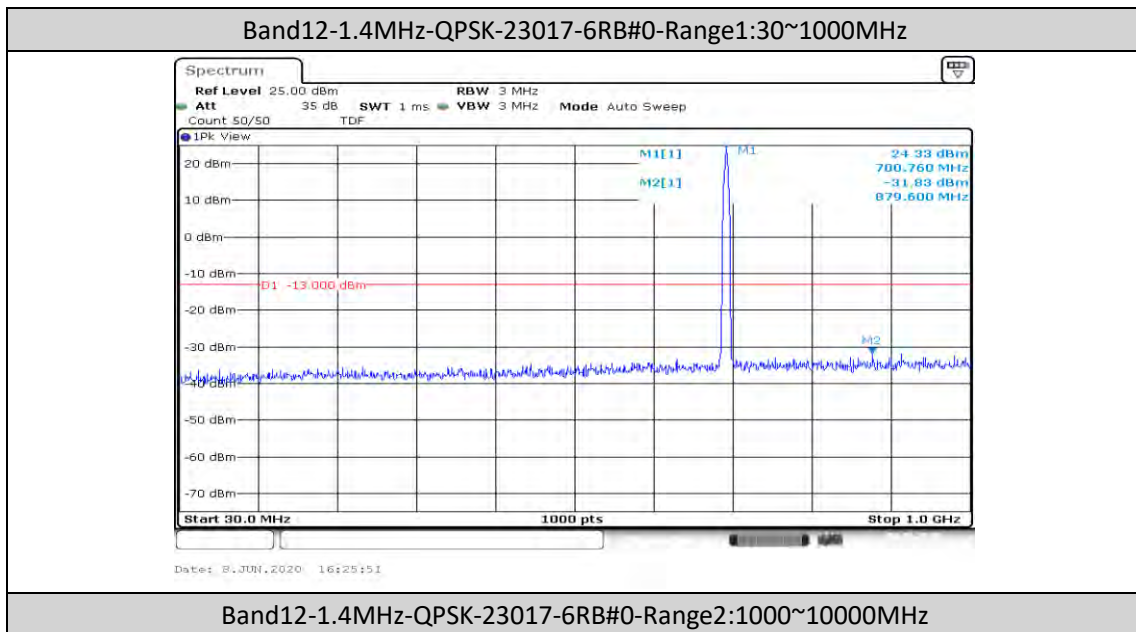
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band1 2	1.4MHz	QPSK	23017	6RB#0	Range1:30~1000MHz	-31.8 3	PASS
Band1 2	1.4MHz	QPSK	23017	6RB#0	Range2:1000~10000M Hz	-33.2 7	PASS
Band1 2	1.4MHz	QPSK	23095	6RB#0	Range1:30~1000MHz	-36.0 9	PASS
Band1 2	1.4MHz	QPSK	23095	6RB#0	Range2:1000~10000M Hz	-31.2 5	PASS
Band1 2	1.4MHz	QPSK	23173	6RB#0	Range1:30~1000MHz	-36.6 8	PASS
Band1 2	1.4MHz	QPSK	23173	6RB#0	Range2:1000~10000M Hz	-45.7 4	PASS
Band1 2	1.4MHz	16QAM	23017	6RB#0	Range1:30~1000MHz	-36.0 4	PASS
Band1 2	1.4MHz	16QAM	23017	6RB#0	Range2:1000~10000M Hz	-36.0 2	PASS
Band1 2	1.4MHz	16QAM	23095	6RB#0	Range1:30~1000MHz	-36.4 9	PASS
Band1 2	1.4MHz	16QAM	23095	6RB#0	Range2:1000~10000M Hz	-32.7 2	PASS
Band1 2	1.4MHz	16QAM	23173	6RB#0	Range1:30~1000MHz	-36.8 6	PASS
Band1 2	1.4MHz	16QAM	23173	6RB#0	Range2:1000~10000M Hz	-32.9 2	PASS
Band1 2	3MHz	QPSK	23025	15RB#0	Range1:30~1000MHz	-32.4 2	PASS
Band1 2	3MHz	QPSK	23025	15RB#0	Range2:1000~10000M Hz	-32.9 1	PASS
Band1 2	3MHz	QPSK	23095	15RB#0	Range1:30~1000MHz	-36.3	PASS
Band1 2	3MHz	QPSK	23095	15RB#0	Range2:1000~10000M Hz	-36.3 2	PASS
Band1 2	3MHz	QPSK	23165	15RB#0	Range1:30~1000MHz	-36.5 5	PASS
Band1	3MHz	QPSK	23165	15RB#0	Range2:1000~10000M	-36.6	PASS

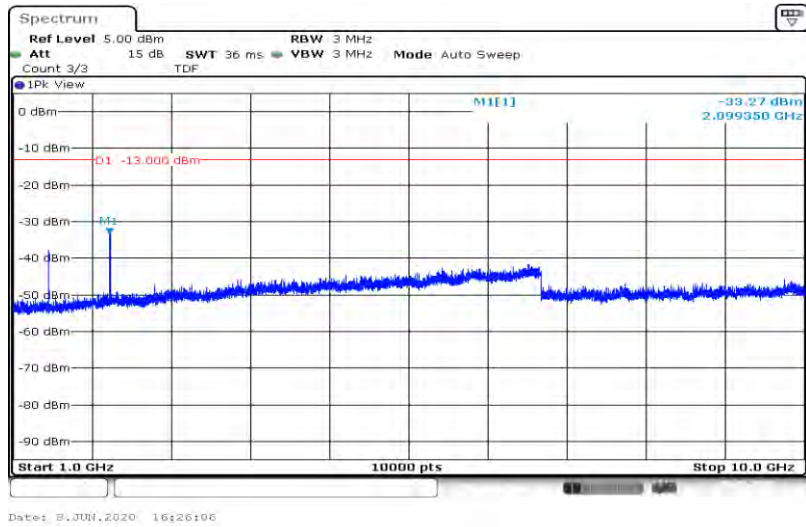
2					Hz	9	
Band1 2	3MHz	16QAM	23025	15RB#0	Range1:30~1000MHz	-35.3 4	PASS
Band1 2	3MHz	16QAM	23025	15RB#0	Range2:1000~10000M Hz	-37.9 5	PASS
Band1 2	3MHz	16QAM	23095	15RB#0	Range1:30~1000MHz	-36.7 1	PASS
Band1 2	3MHz	16QAM	23095	15RB#0	Range2:1000~10000M Hz	-36.2 8	PASS
Band1 2	3MHz	16QAM	23165	15RB#0	Range1:30~1000MHz	-35.6 4	PASS
Band1 2	3MHz	16QAM	23165	15RB#0	Range2:1000~10000M Hz	-36.7 9	PASS
Band1 2	5MHz	QPSK	23035	25RB#0	Range1:30~1000MHz	-32.1 6	PASS
Band1 2	5MHz	QPSK	23035	25RB#0	Range2:1000~10000M Hz	-34.4 6	PASS
Band1 2	5MHz	QPSK	23095	25RB#0	Range1:30~1000MHz	-36.3	PASS
Band1 2	5MHz	QPSK	23095	25RB#0	Range2:1000~10000M Hz	-38.6	PASS
Band1 2	5MHz	QPSK	23155	25RB#0	Range1:30~1000MHz	-35.9	PASS
Band1 2	5MHz	QPSK	23155	25RB#0	Range2:1000~10000M Hz	-40.4 5	PASS
Band1 2	5MHz	16QAM	23035	25RB#0	Range1:30~1000MHz	-36.6	PASS
Band1 2	5MHz	16QAM	23035	25RB#0	Range2:1000~10000M Hz	-40.0 4	PASS
Band1 2	5MHz	16QAM	23095	25RB#0	Range1:30~1000MHz	-36.0 1	PASS
Band1 2	5MHz	16QAM	23095	25RB#0	Range2:1000~10000M Hz	-37.7	PASS
Band1 2	5MHz	16QAM	23155	25RB#0	Range1:30~1000MHz	-36.7 9	PASS
Band1 2	5MHz	16QAM	23155	25RB#0	Range2:1000~10000M Hz	-39.6 9	PASS
Band1 2	10MHz	QPSK	23060	50RB#0	Range1:30~1000MHz	-32.5 5	PASS
Band1 2	10MHz	QPSK	23060	50RB#0	Range2:1000~10000M Hz	-36.8 4	PASS
Band1 2	10MHz	QPSK	23095	50RB#0	Range1:30~1000MHz	-36.8	PASS



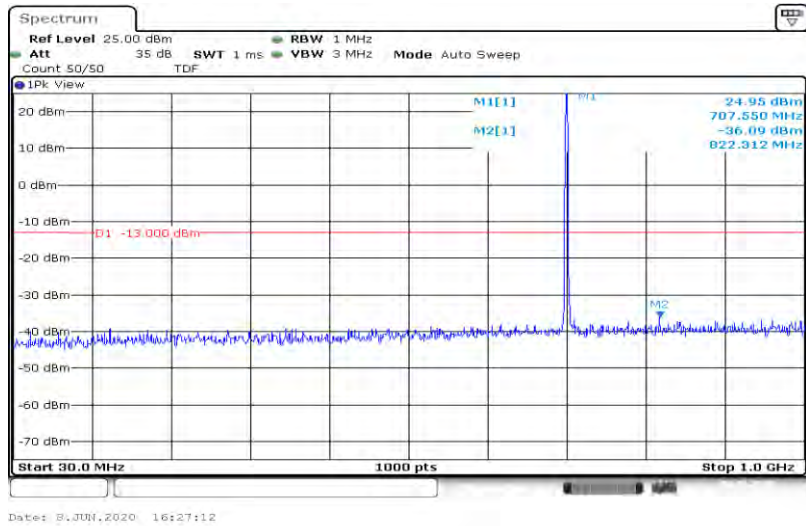
Band1 2	10MHz	QPSK	23095	50RB#0	Range2:1000~10000M Hz	-42.7 2	PASS
Band1 2	10MHz	QPSK	23130	50RB#0	Range1:30~1000MHz	-35.5 3	PASS
Band1 2	10MHz	QPSK	23130	50RB#0	Range2:1000~10000M Hz	-42.7 1	PASS
Band1 2	10MHz	16QAM	23060	50RB#0	Range1:30~1000MHz	-36.1 3	PASS
Band1 2	10MHz	16QAM	23060	50RB#0	Range2:1000~10000M Hz	-41.6 3	PASS
Band1 2	10MHz	16QAM	23095	50RB#0	Range1:30~1000MHz	-36.7 8	PASS
Band1 2	10MHz	16QAM	23095	50RB#0	Range2:1000~10000M Hz	-41.9 3	PASS
Band1 2	10MHz	16QAM	23130	50RB#0	Range1:30~1000MHz	-36.3 9	PASS
Band1 2	10MHz	16QAM	23130	50RB#0	Range2:1000~10000M Hz	-44.0 8	PASS

## Test Graphs

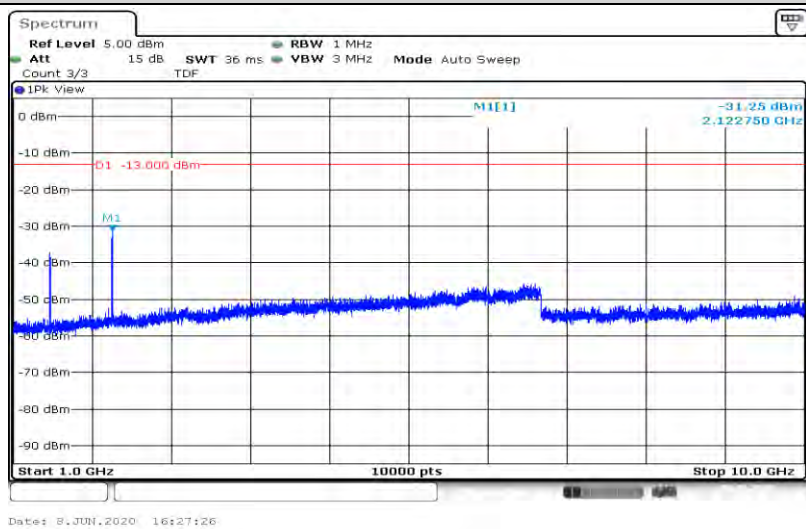




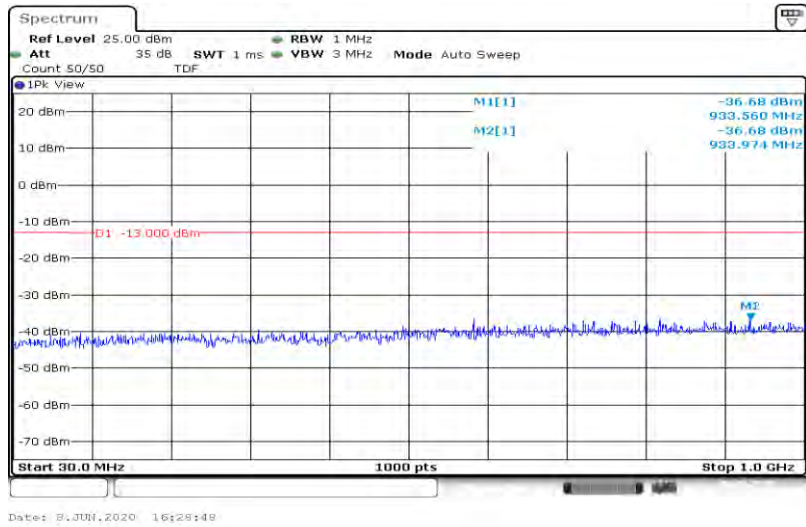
Band12-1.4MHz-QPSK-23095-6RB#0-Range1:30~1000MHz



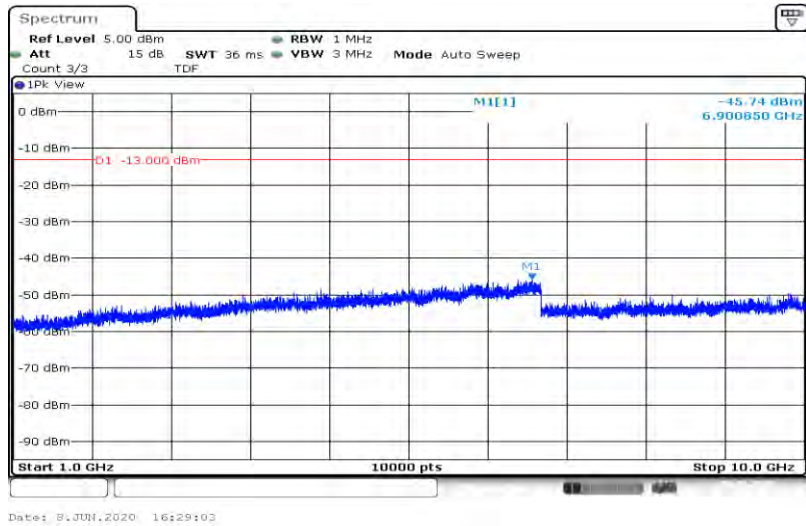
Band12-1.4MHz-QPSK-23095-6RB#0-Range2:1000~10000MHz



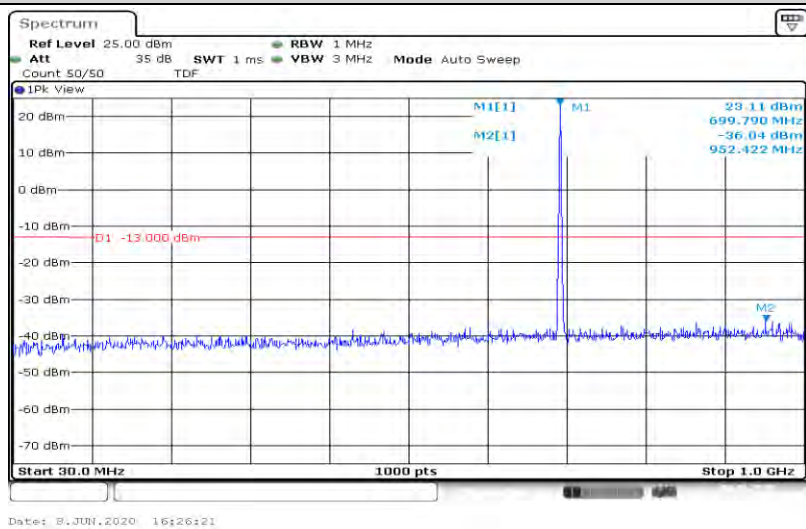
Band12-1.4MHz-QPSK-23173-6RB#0-Range1:30~1000MHz



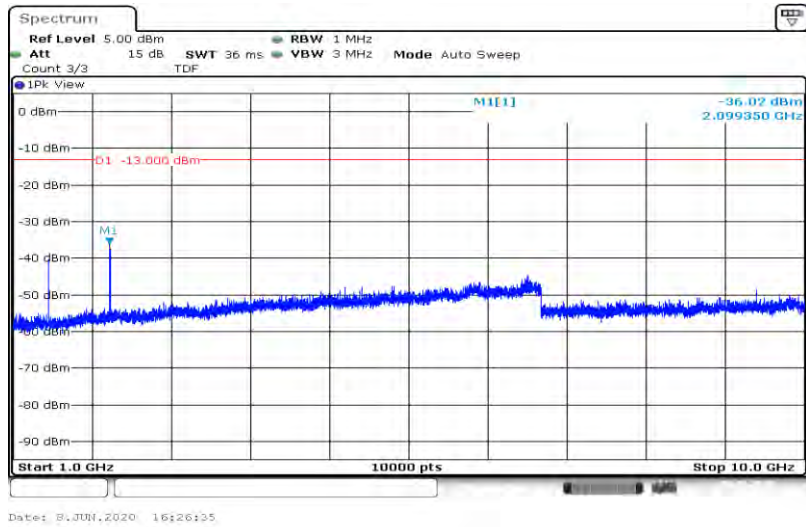
Band12-1.4MHz-QPSK-23173-6RB#0-Range2:1000~10000MHz



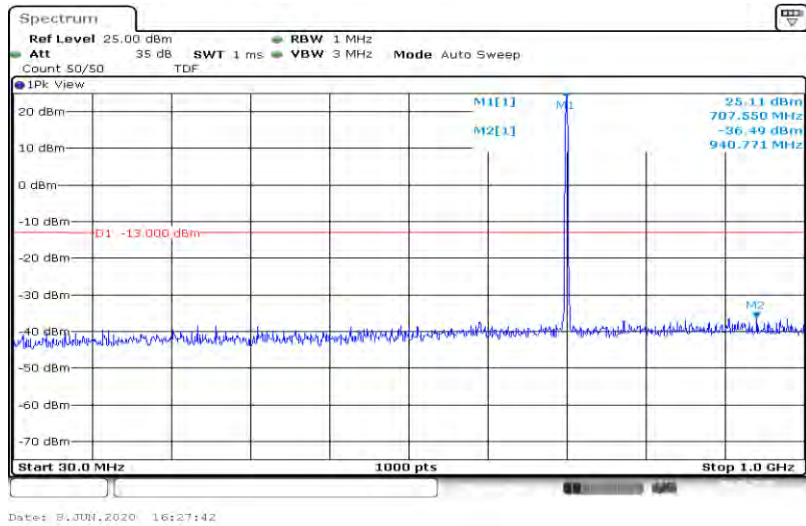
Band12-1.4MHz-16QAM-23017-6RB#0-Range1:30~1000MHz



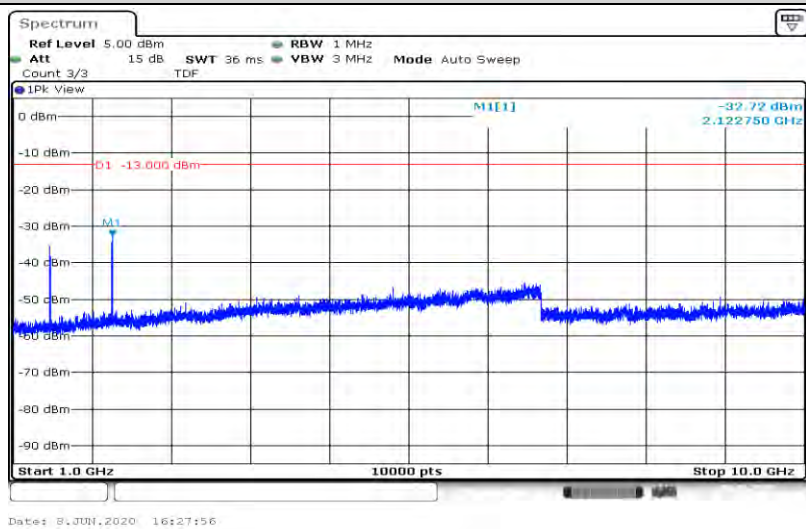
Band12-1.4MHz-16QAM-23017-6RB#0-Range2:1000~10000MHz



Band12-1.4MHz-16QAM-23095-6RB#0-Range1:30~1000MHz

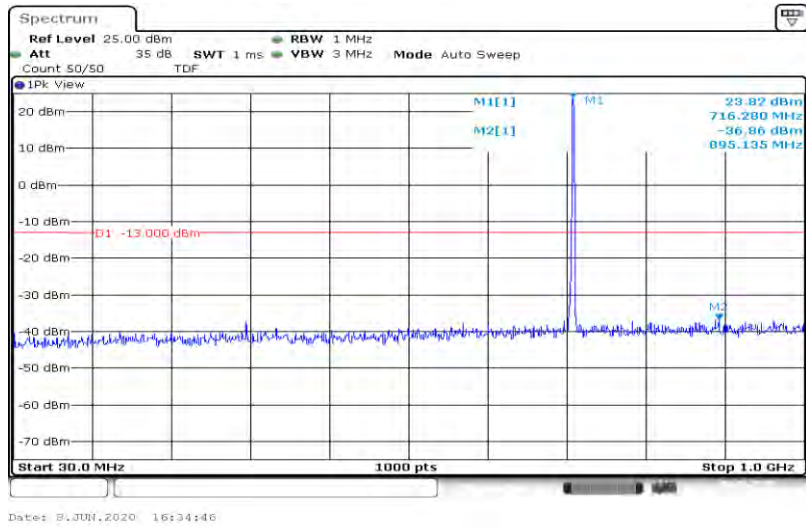


Band12-1.4MHz-16QAM-23095-6RB#0-Range2:1000~10000MHz

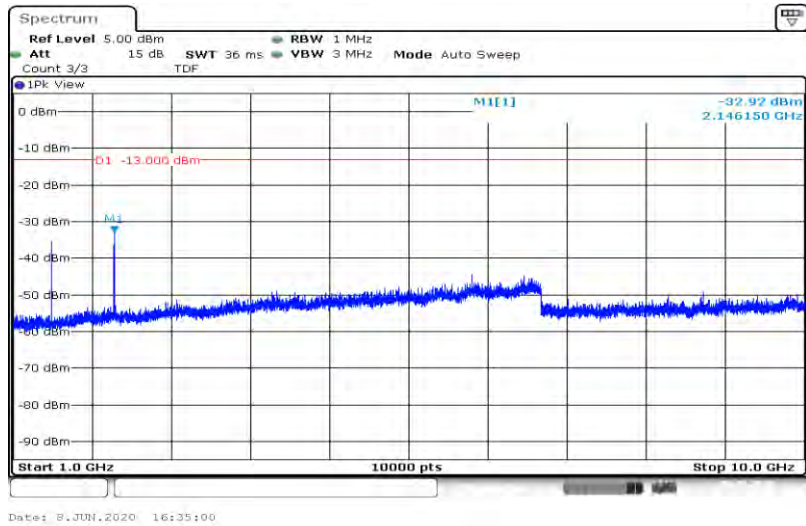


Band12-1.4MHz-16QAM-23173-6RB#0-Range1:30~1000MHz

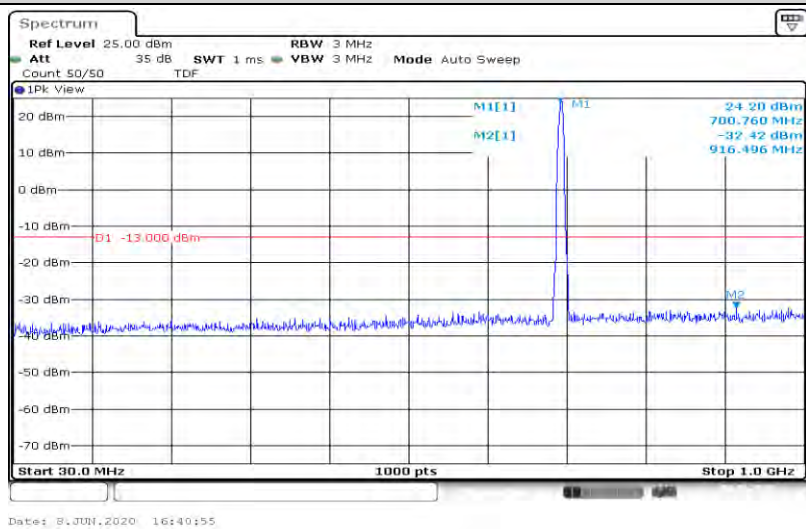




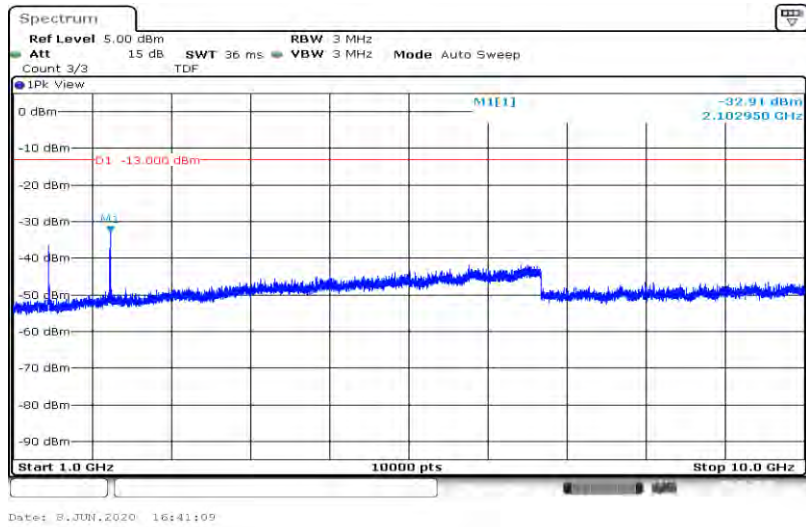
Band12-1.4MHz-16QAM-23173-6RB#0-Range2:1000~10000MHz



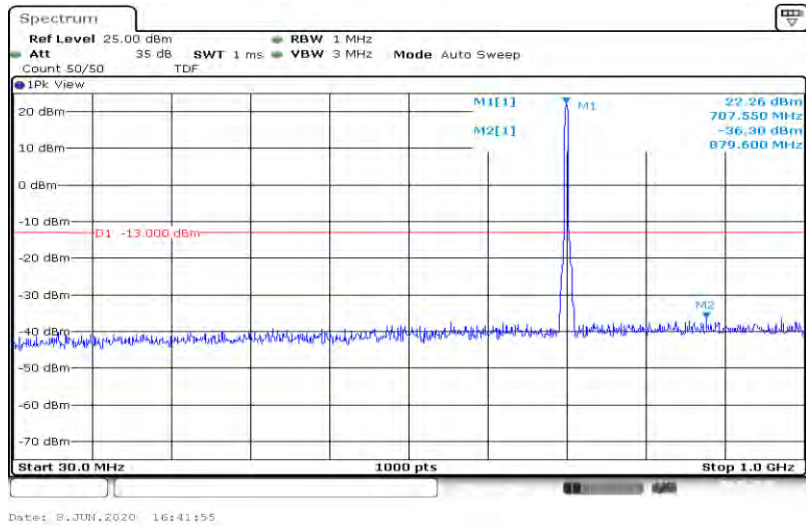
Band12-3MHz-QPSK-23025-15RB#0-Range1:30~1000MHz



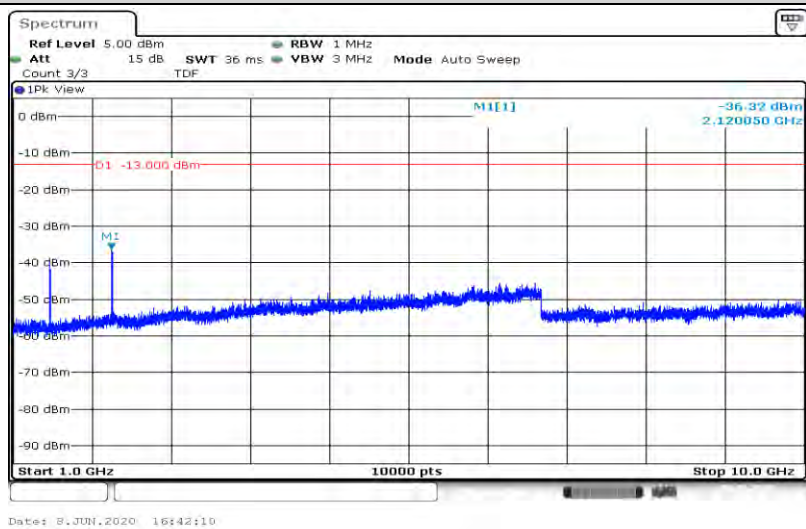
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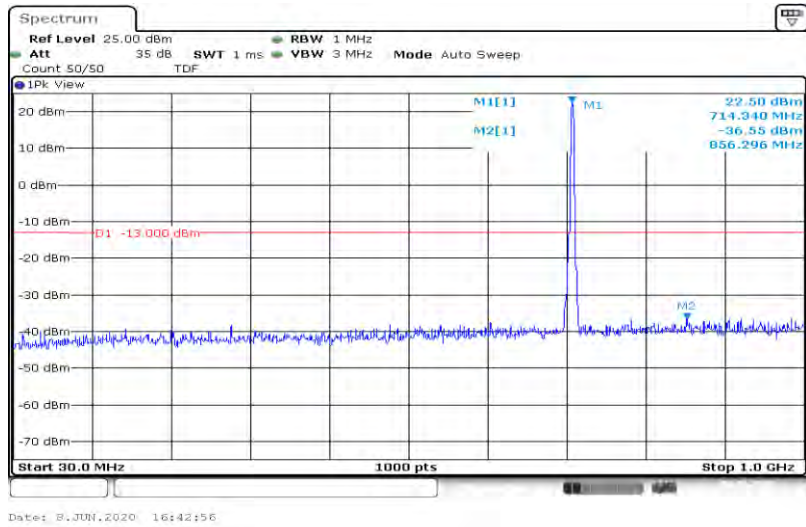
Band12-3MHz-QPSK-23095-15RB#0-Range1:30~1000MHz



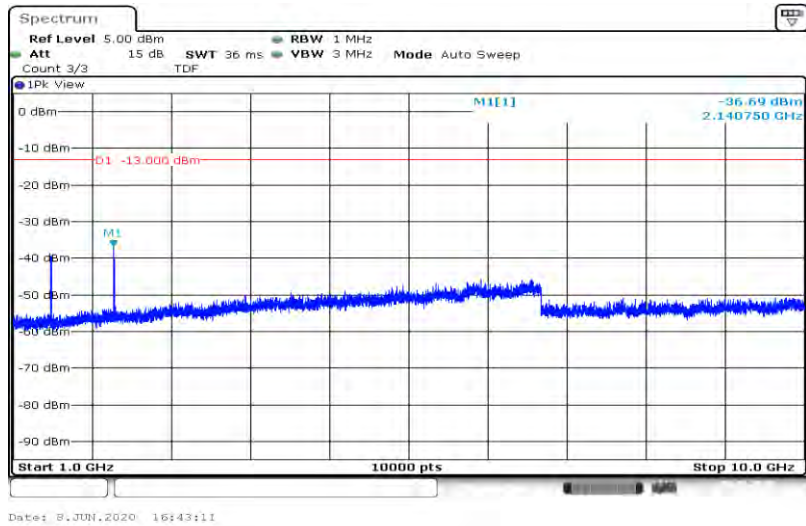
Band12-3MHz-QPSK-23095-15RB#0-Range2:1000~10000MHz



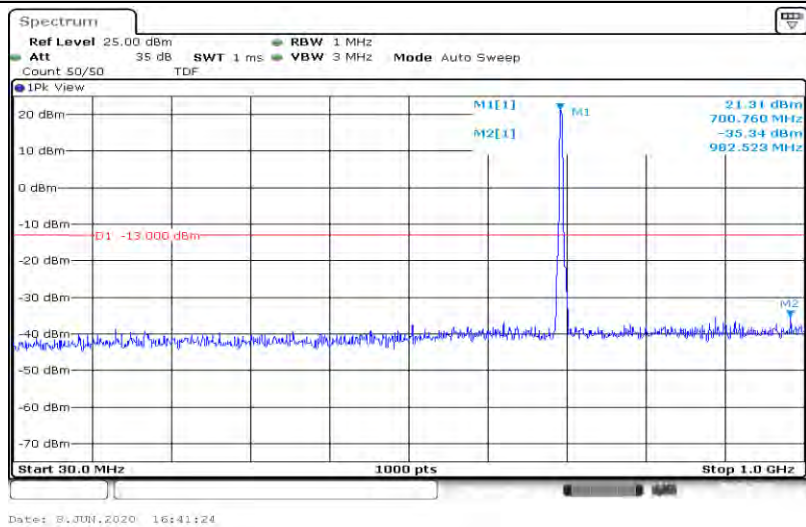
Band12-3MHz-QPSK-23165-15RB#0-Range1:30~1000MHz



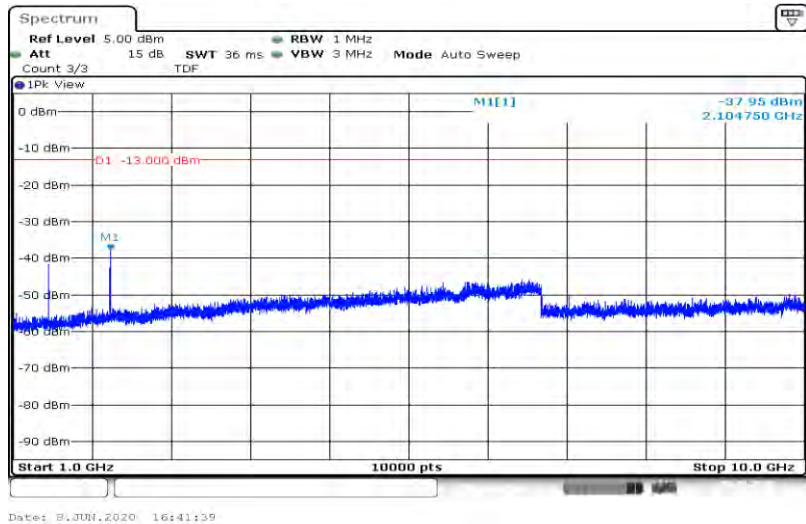
Band12-3MHz-QPSK-23165-15RB#0-Range2:1000~10000MHz



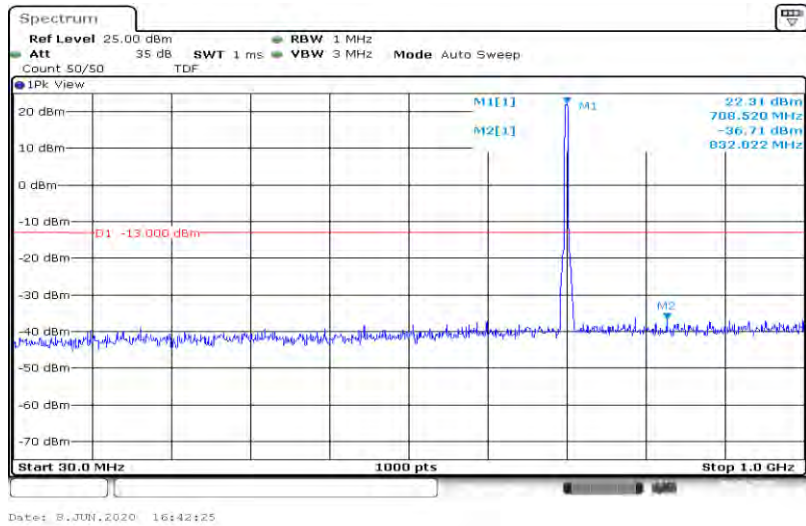
Band12-3MHz-16QAM-23025-15RB#0-Range1:30~1000MHz



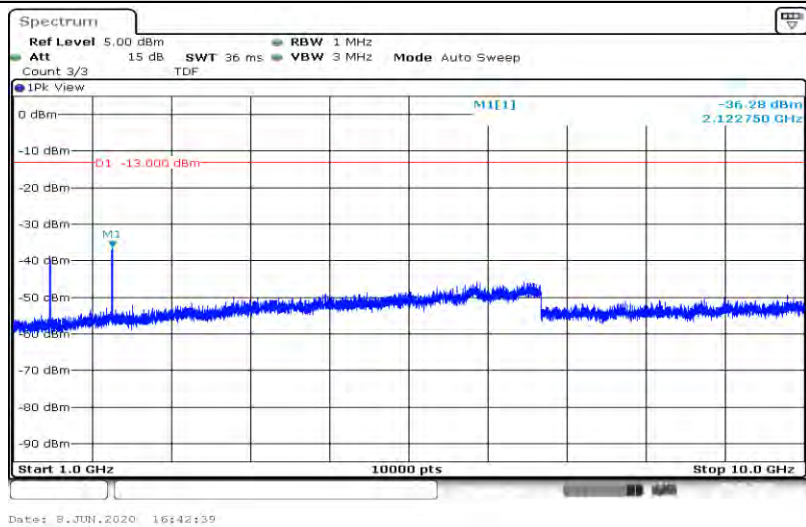
Band12-3MHz-16QAM-23025-15RB#0-Range2:1000~10000MHz



Band12-3MHz-16QAM-23095-15RB#0-Range1:30~1000MHz

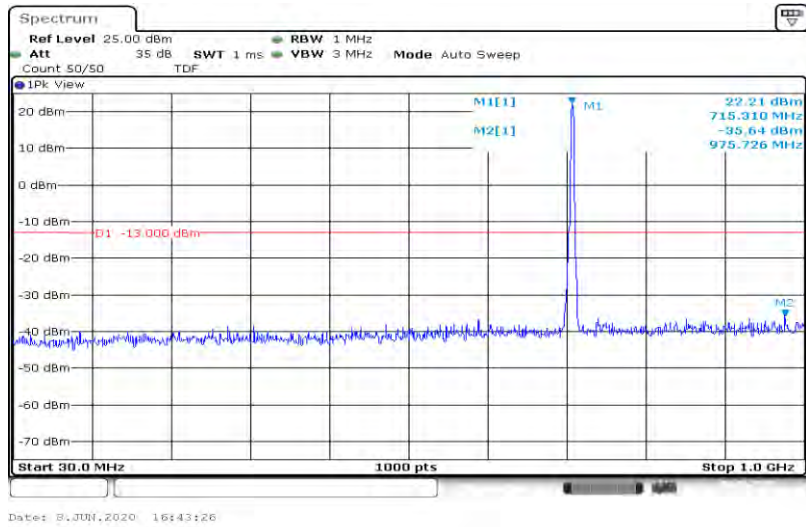


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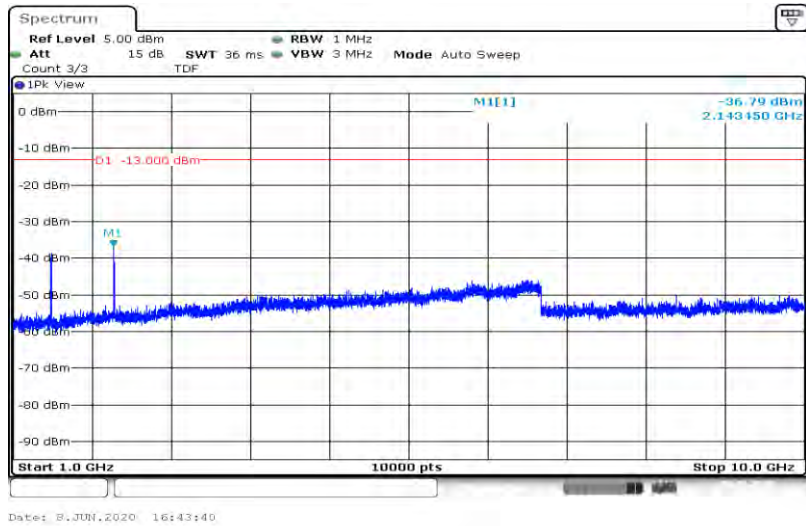


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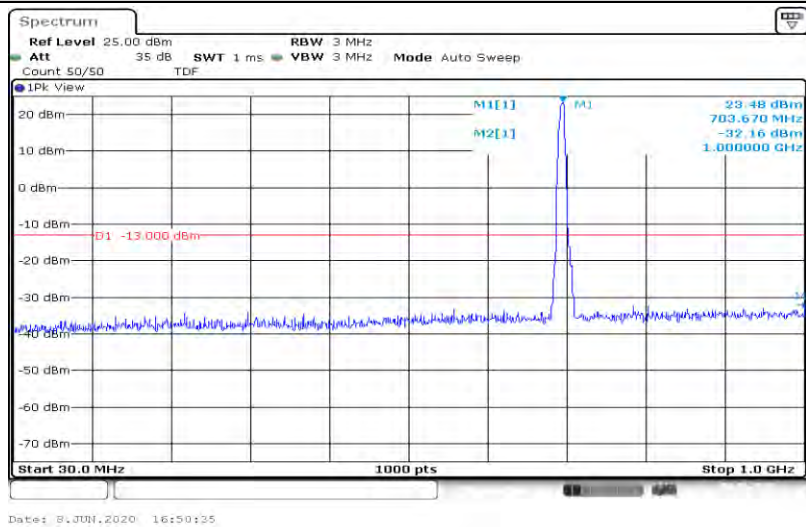




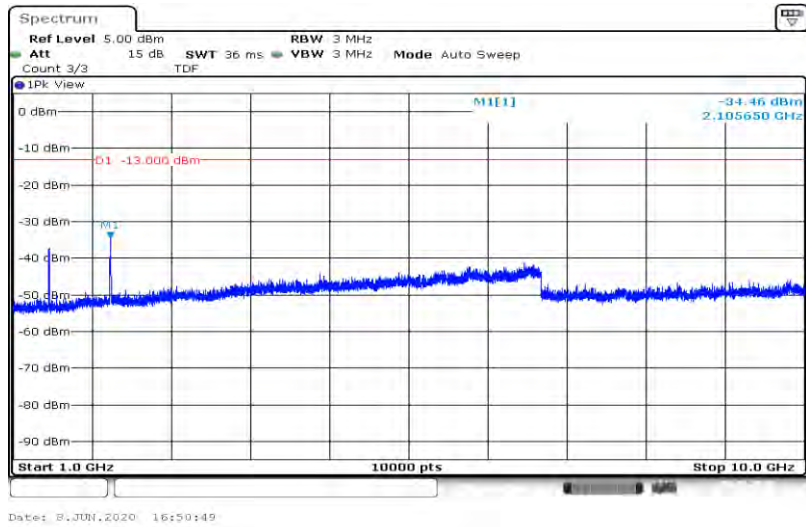
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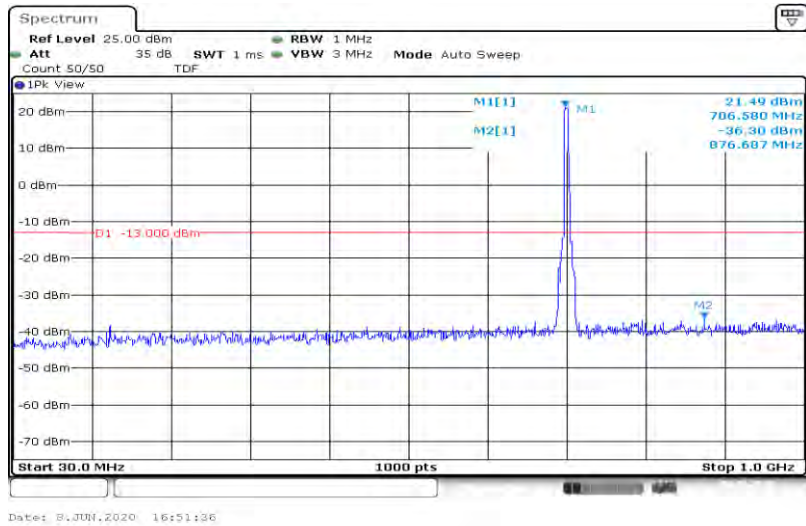
Band12-5MHz-QPSK-23035-25RB#0-Range1:30~1000MHz



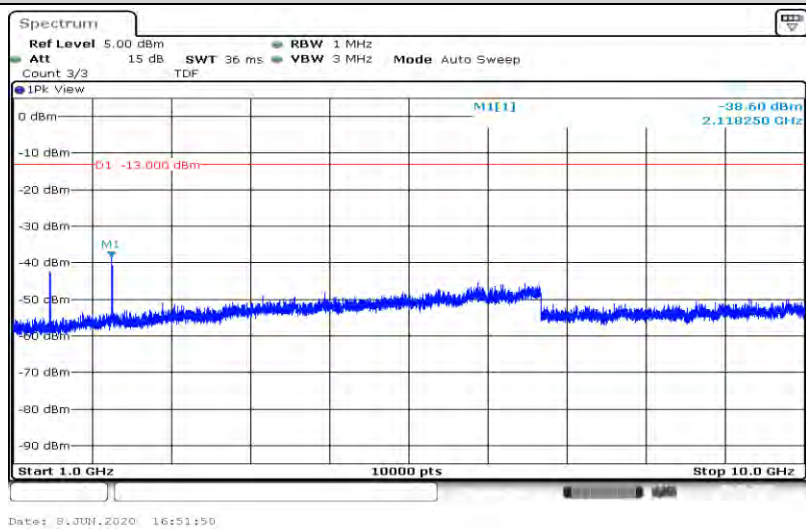
Band12-5MHz-QPSK-23035-25RB#0-Range2:1000~10000MHz



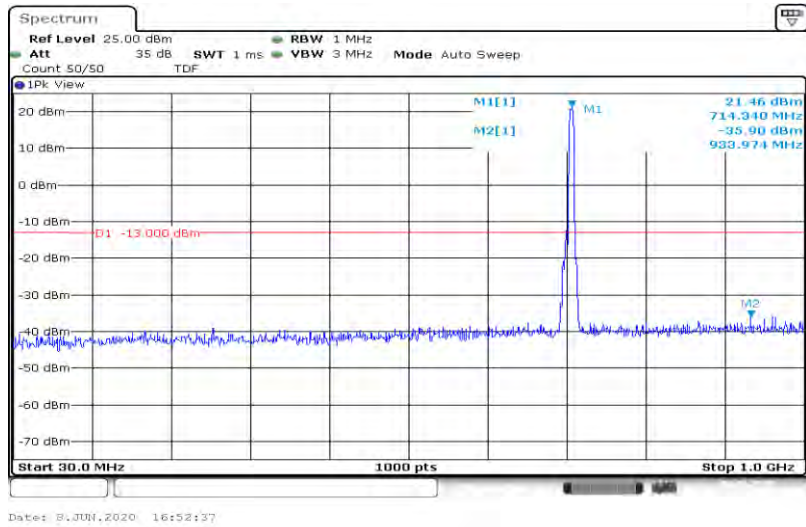
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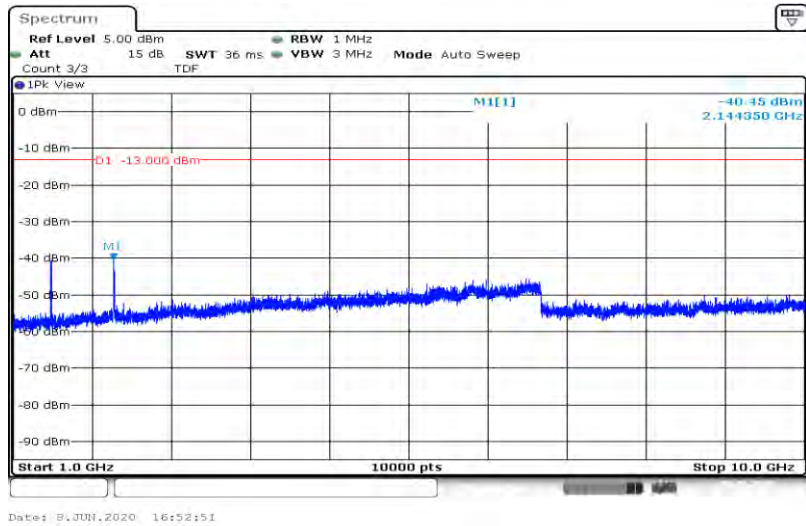
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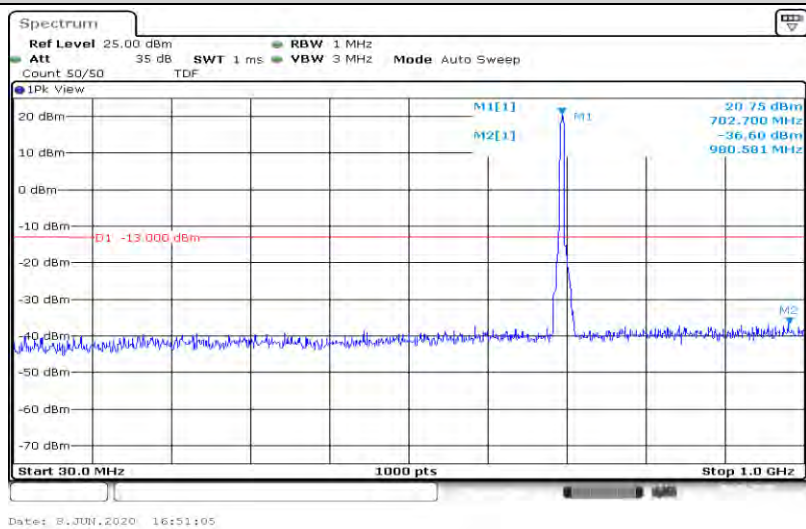
Band12-5MHz-QPSK-23155-25RB#0-Range1:30~1000MHz



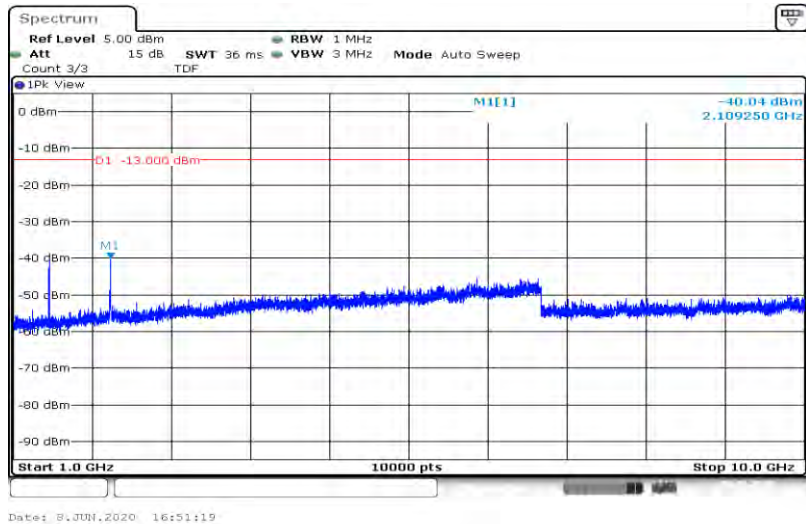
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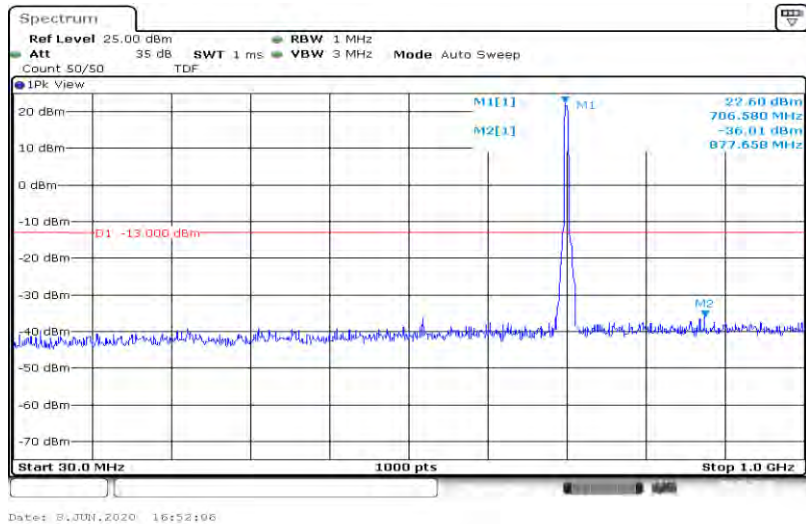
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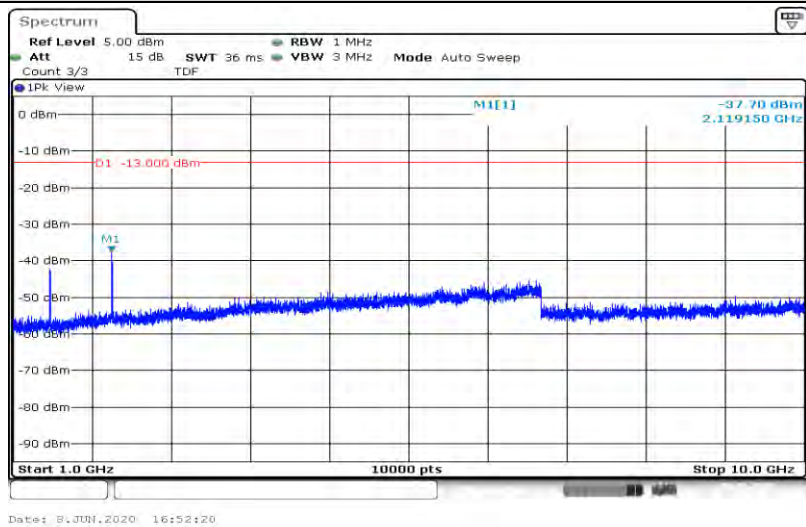
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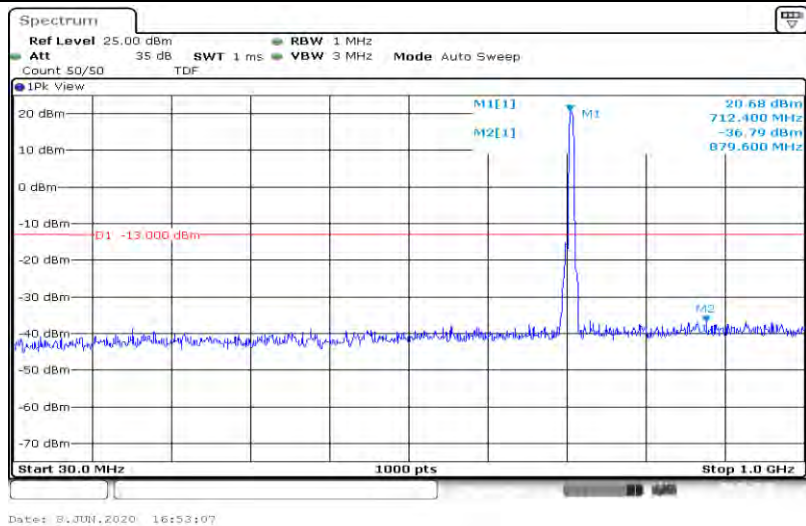


Band12-5MHz-16QAM-23095-25RB#0-Range2:1000~10000MHz

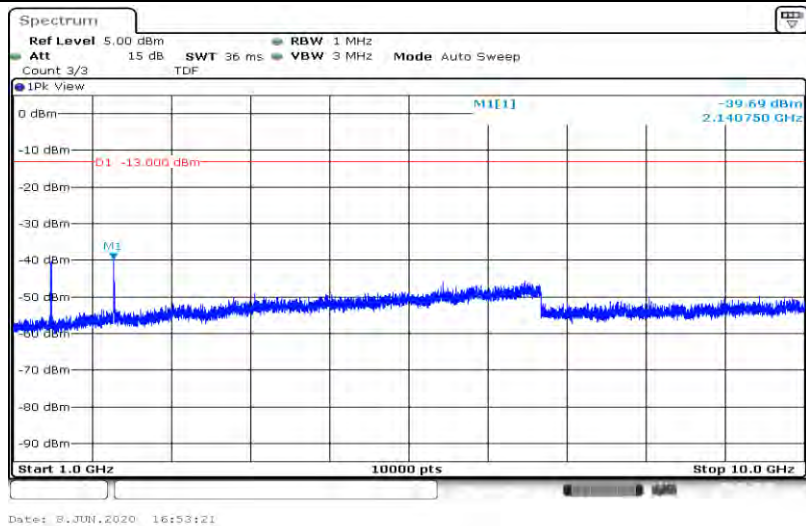


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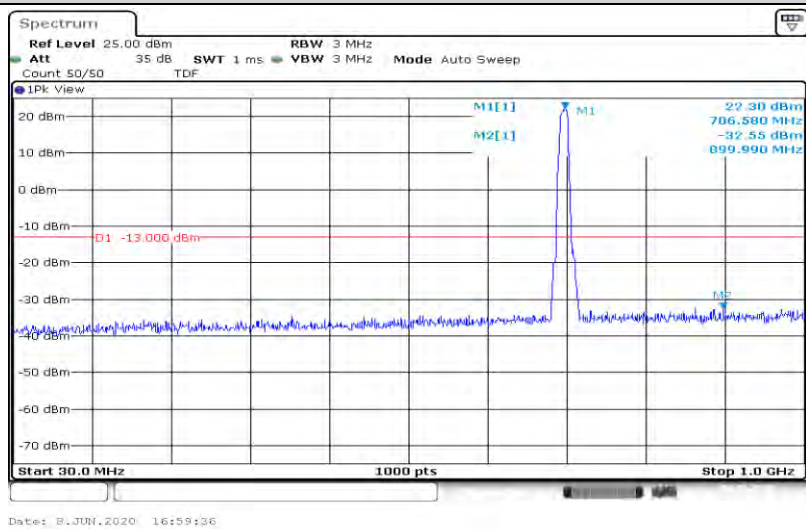




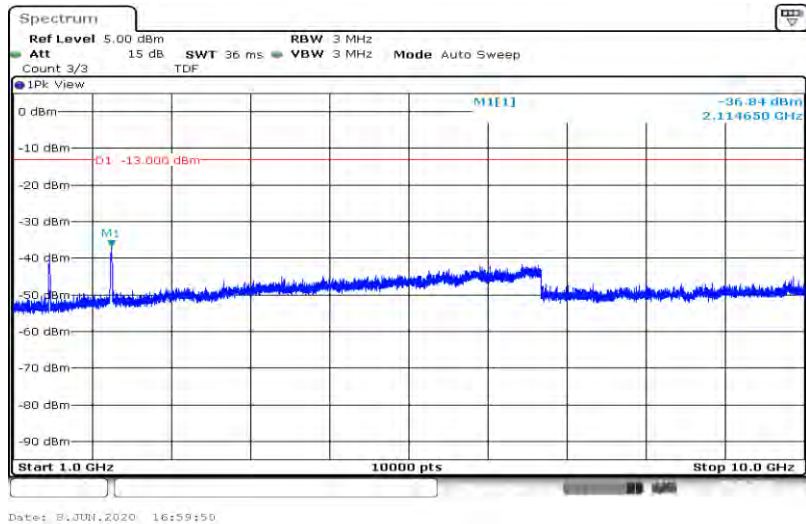
Band12-5MHz-16QAM-23155-25RB#0-Range2:1000~10000MHz



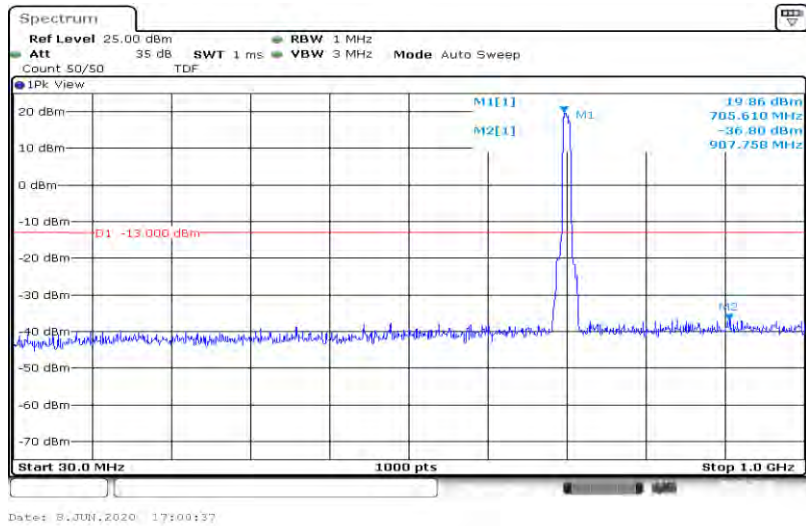
Band12-10MHz-QPSK-23060-50RB#0-Range1:30~1000MHz



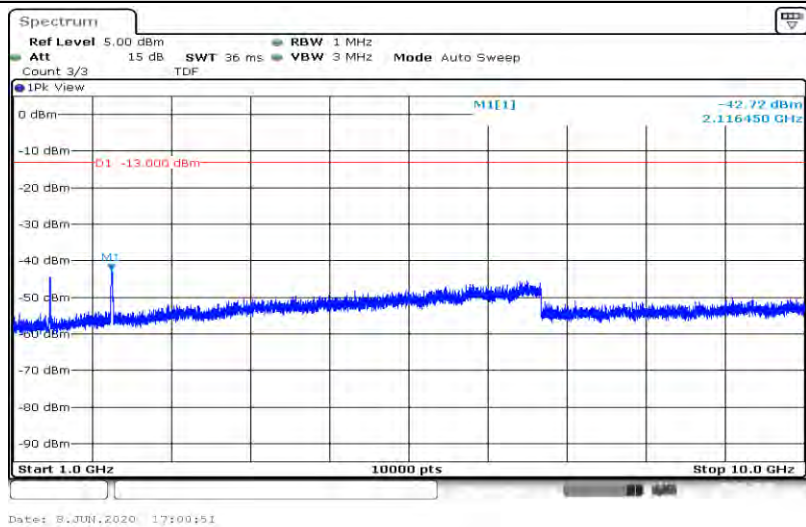
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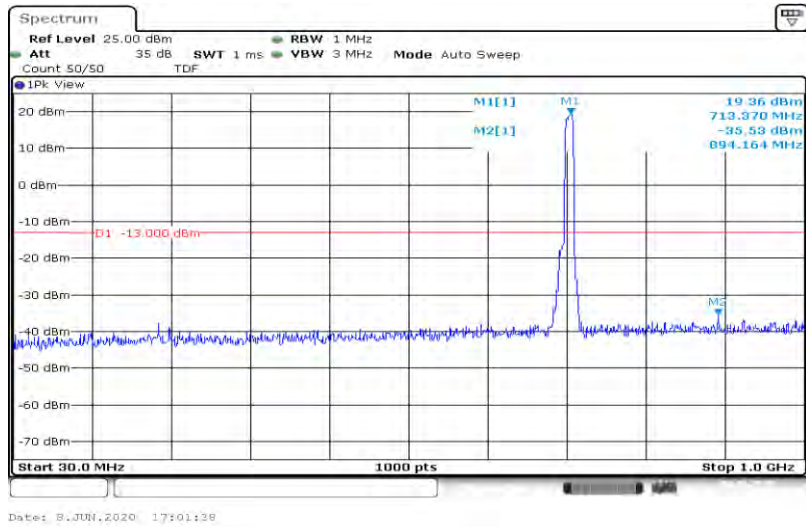
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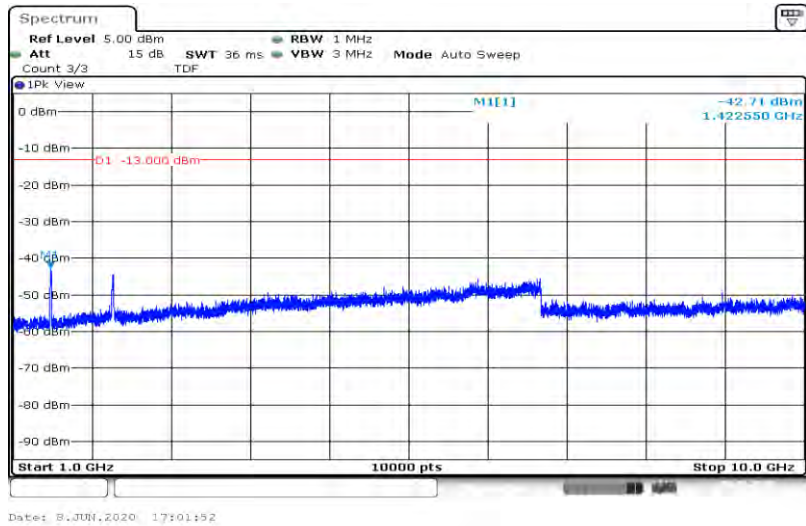
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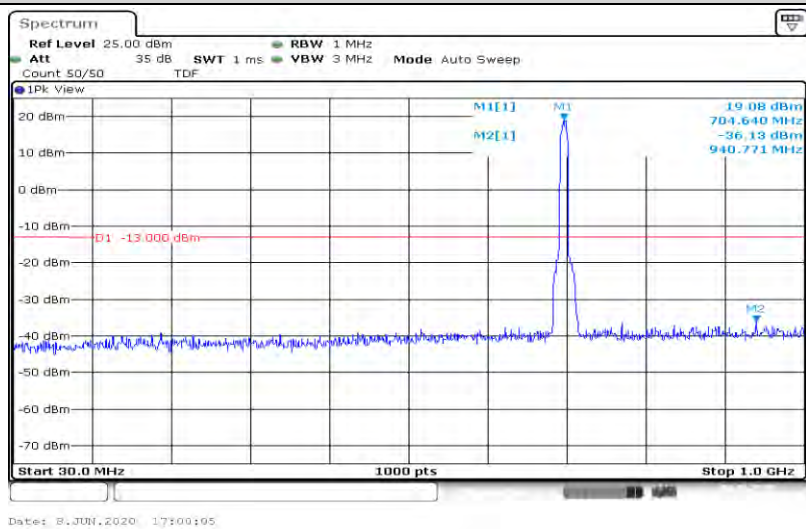
Band12-10MHz-QPSK-23130-50RB#0-Range1:30~1000MHz



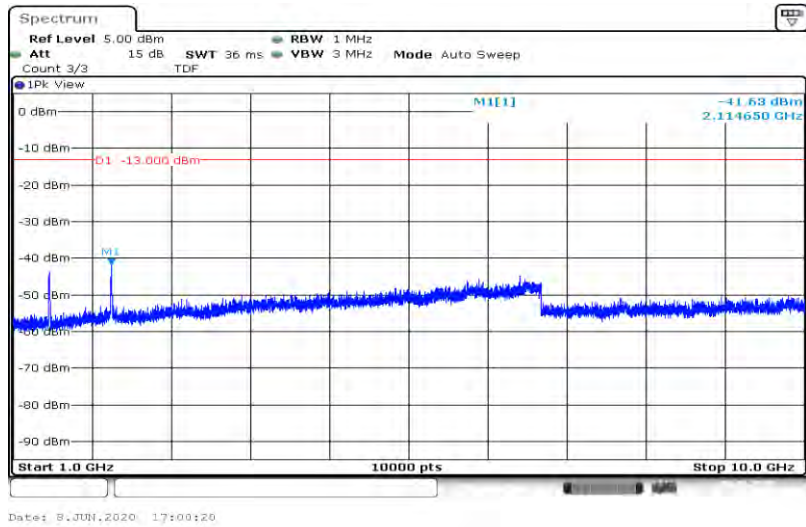
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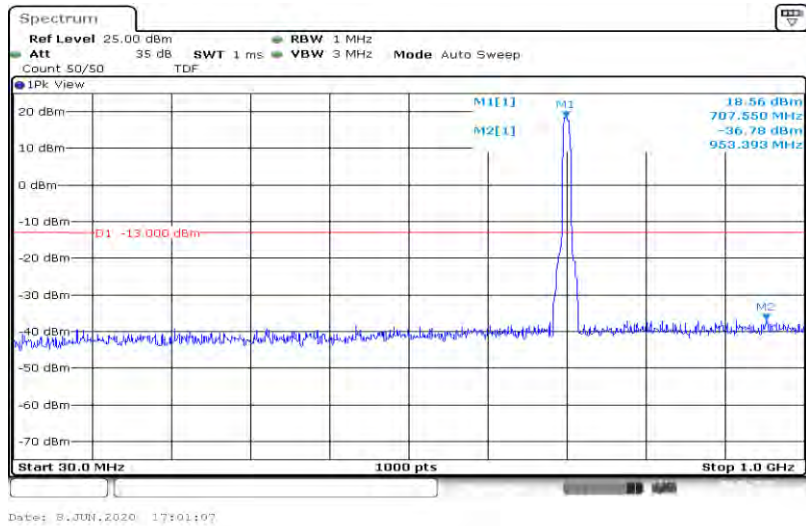
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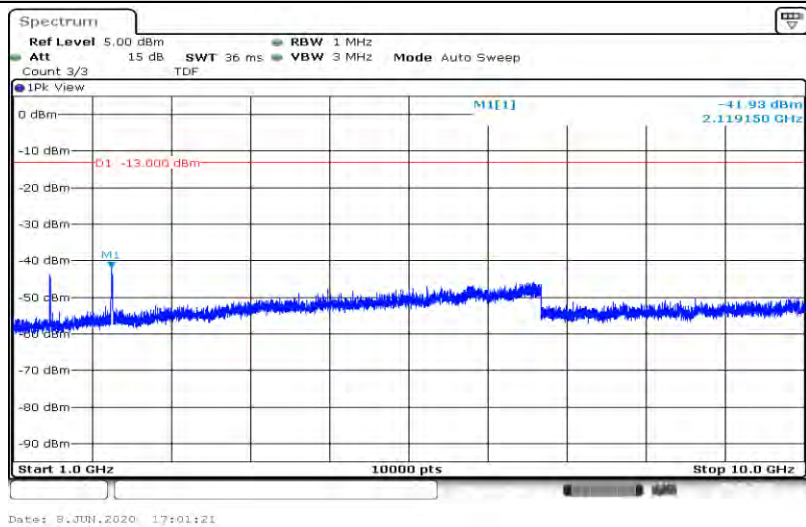
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Band12-10MHz-16QAM-23095-50RB#0-Range1:30~1000MHz

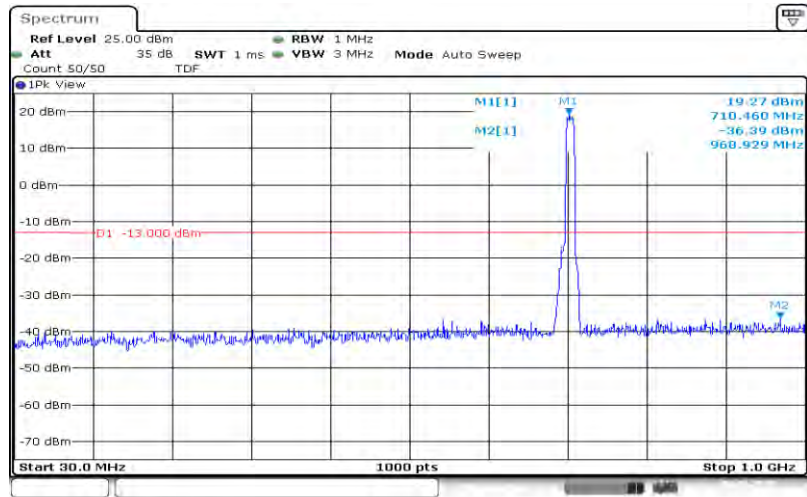


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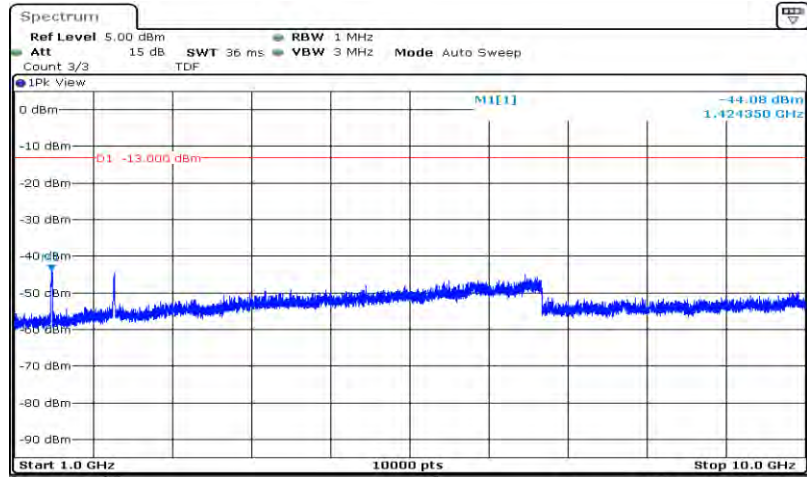
Band12-10MHz-16QAM-23130-50RB#0-Range1:30~1000MHz





Date: 8 JUN 2020 17:02:07

**Band12-10MHz-16QAM-23130-50RB#0-Range2:1000~10000MHz**



Date: 8 JUN 2020 17:02:22

## Appendix F: Frequency Stability

### Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
@FCC_Frequency_stability@										
BandName	Bandwidth	Modulation	Channel	RBcfg	VolValue	TempValue	ValueHz	ValuePpm	Limit	Verdict

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
@FCC_Frequency_stability_Temperature@										
BandName	Bandwidth	Modulation	Channel	RBcfg	VolValue	TempValue	ValueHz	ValuePpm	Limit	Verdict