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Appendix for LTE Band 18

**Applicant: HONGKONG U-CLOUDLINK NETWORK TECHNOLOGY
LIMITED**

**Address: Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung
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Product Name: 4G LTE Wireless Router

Model: GLMR21A02

FCC ID: 2AC88-GLMR21A02

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1 Summary of Test Results Data and Graph

1.1. Appendix A: Conducted Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band18	5MHz	QPSK	23875	1RB#0	25.56	PASS
Band18	5MHz	QPSK	23875	1RB#12	25.57	PASS
Band18	5MHz	QPSK	23875	1RB#24	25.39	PASS
Band18	5MHz	QPSK	23875	12RB#0	24.58	PASS
Band18	5MHz	QPSK	23875	12RB#6	24.64	PASS
Band18	5MHz	QPSK	23875	12RB#13	24.63	PASS
Band18	5MHz	QPSK	23875	25RB#0	24.65	PASS
Band18	5MHz	QPSK	23975	1RB#0	25.60	PASS
Band18	5MHz	QPSK	23975	1RB#12	25.68	PASS
Band18	5MHz	QPSK	23975	1RB#24	25.53	PASS
Band18	5MHz	QPSK	23975	12RB#0	24.61	PASS
Band18	5MHz	QPSK	23975	12RB#6	24.58	PASS
Band18	5MHz	QPSK	23975	12RB#13	24.65	PASS
Band18	5MHz	QPSK	23975	25RB#0	24.63	PASS
Band18	5MHz	16QAM	23875	1RB#0	24.46	PASS
Band18	5MHz	16QAM	23875	1RB#12	24.59	PASS
Band18	5MHz	16QAM	23875	1RB#24	24.43	PASS
Band18	5MHz	16QAM	23875	12RB#0	24.66	PASS
Band18	5MHz	16QAM	23875	12RB#6	24.62	PASS
Band18	5MHz	16QAM	23875	12RB#13	24.63	PASS
Band18	5MHz	16QAM	23875	25RB#0	23.58	PASS
Band18	5MHz	16QAM	23975	1RB#0	24.39	PASS
Band18	5MHz	16QAM	23975	1RB#12	24.43	PASS
Band18	5MHz	16QAM	23975	1RB#24	24.41	PASS
Band18	5MHz	16QAM	23975	12RB#0	24.59	PASS
Band18	5MHz	16QAM	23975	12RB#6	24.66	PASS
Band18	5MHz	16QAM	23975	12RB#13	24.63	PASS
Band18	5MHz	16QAM	23975	25RB#0	23.55	PASS

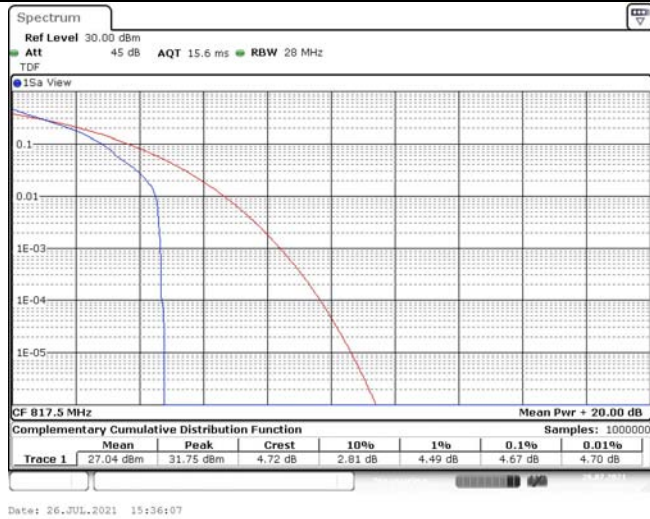
1.2. Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band18	5MHz	QPSK	23875	1RB#0	4.67	13	PASS
Band18	5MHz	QPSK	23875	25RB#0	5.13	13	PASS
Band18	5MHz	QPSK	23975	1RB#0	4.87	13	PASS
Band18	5MHz	QPSK	23975	25RB#0	5.54	13	PASS
Band18	5MHz	16QAM	23875	1RB#0	5.54	13	PASS
Band18	5MHz	16QAM	23875	25RB#0	6.00	13	PASS
Band18	5MHz	16QAM	23975	1RB#0	5.83	13	PASS
Band18	5MHz	16QAM	23975	25RB#0	6.41	13	PASS

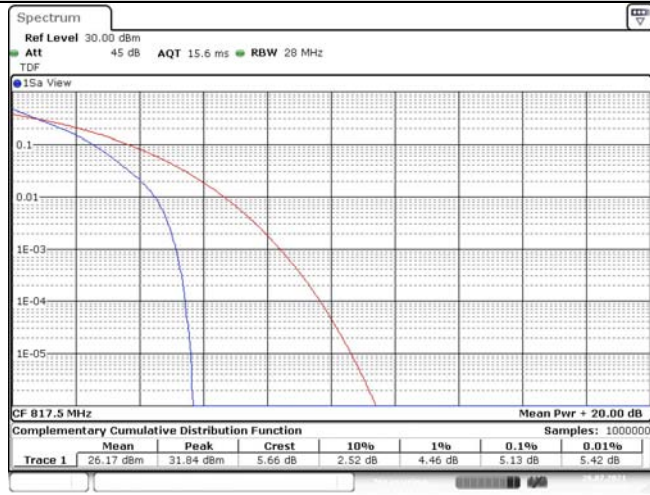
Test Graphs

Band18-5MHz-QPSK-23875-1RB#0



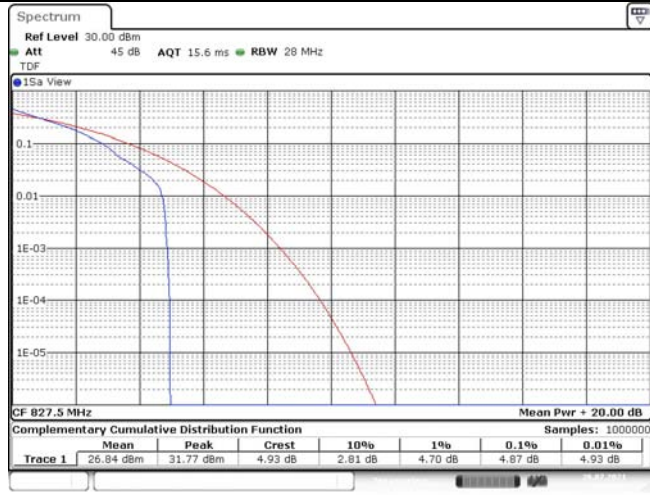
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Band18-5MHz-QPSK-23875-25RB#0



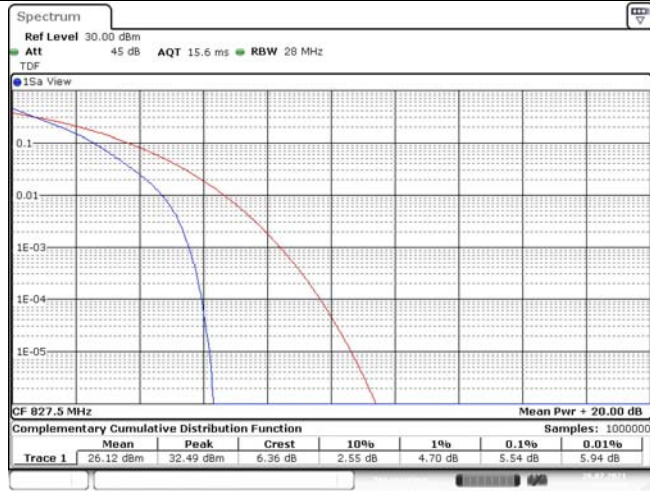
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Band18-5MHz-QPSK-23975-1RB#0



Date: 26.JUL.2021 15:37:33

Band18-5MHz-QPSK-23975-25RB#0



Date: 26.JUL.2021 15:37:54

Band18-5MHz-16QAM-23875-1RB#0



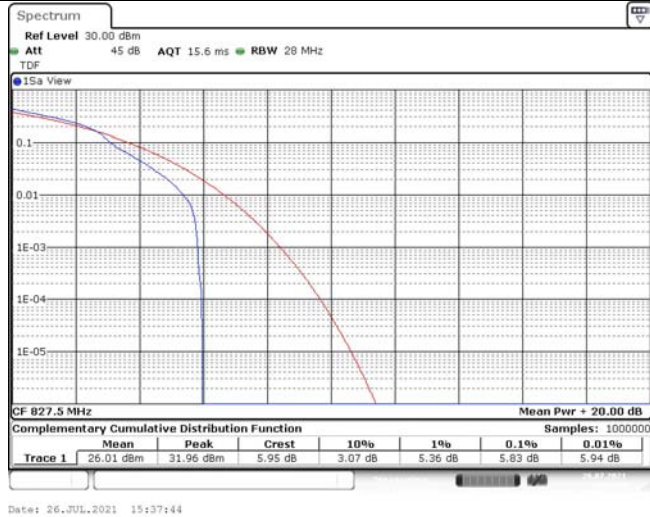
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Band18-5MHz-16QAM-23875-25RB#0

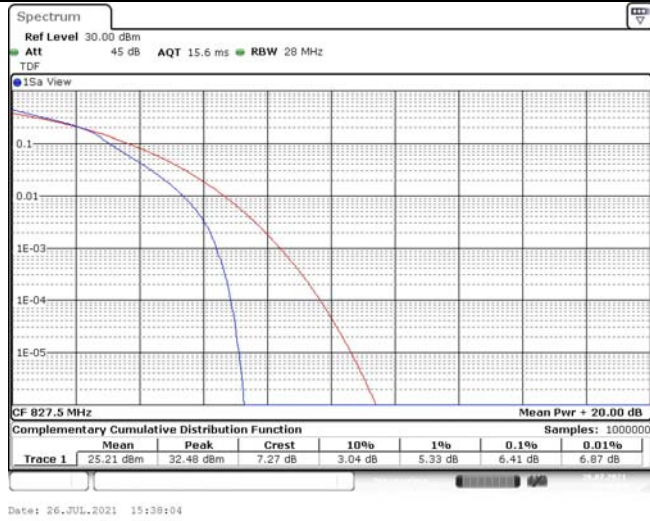


Date: 26.JUL.2021 15:36:38

Band18-5MHz-16QAM-23975-1RB#0



Band18-5MHz-16QAM-23975-25RB#0



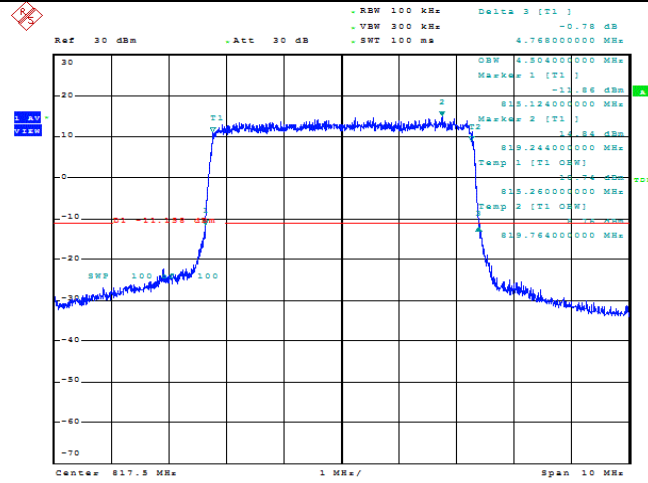
1.3. Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band18	5MHz	QPSK	23875	25RB#0	4.504	4.768	PASS
Band18	5MHz	QPSK	23975	25RB#0	4.504	4.776	PASS
Band18	5MHz	16QAM	23875	25RB#0	4.504	4.768	PASS
Band18	5MHz	16QAM	23975	25RB#0	4.512	4.776	PASS

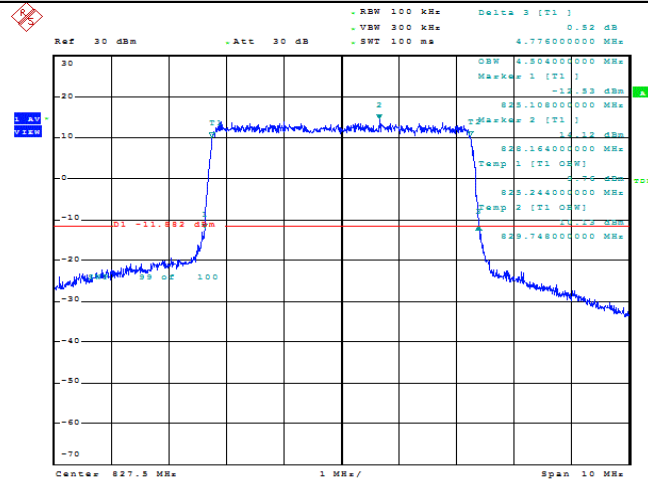
Test Graphs

Band18-5MHz-QPSK-23875-25RB#0-4.504



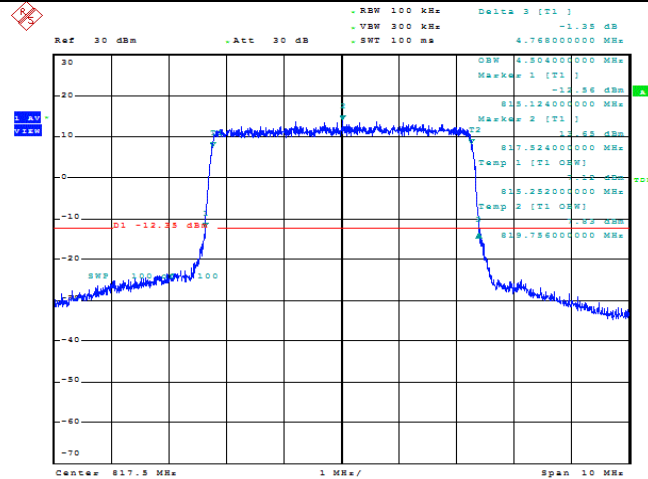
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Band18-5MHz-QPSK-23975-25RB#0-4.504



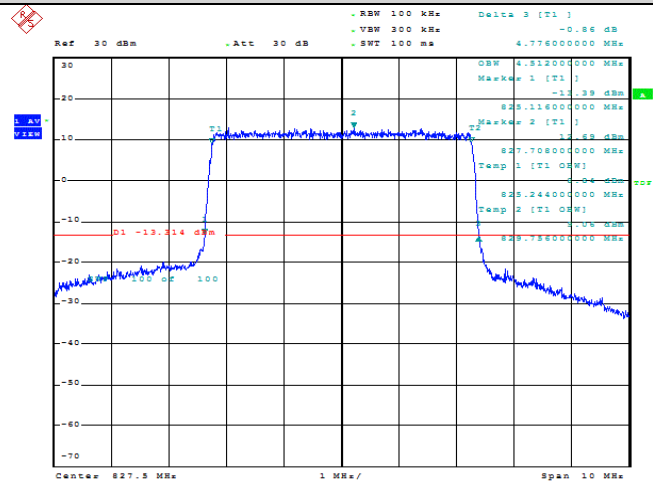
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Band18-5MHz-16QAM-23875-25RB#0-4.504



Date: 26 JUL 2021 11:28:36

Band18-5MHz-16QAM-23975-25RB#0-4.512



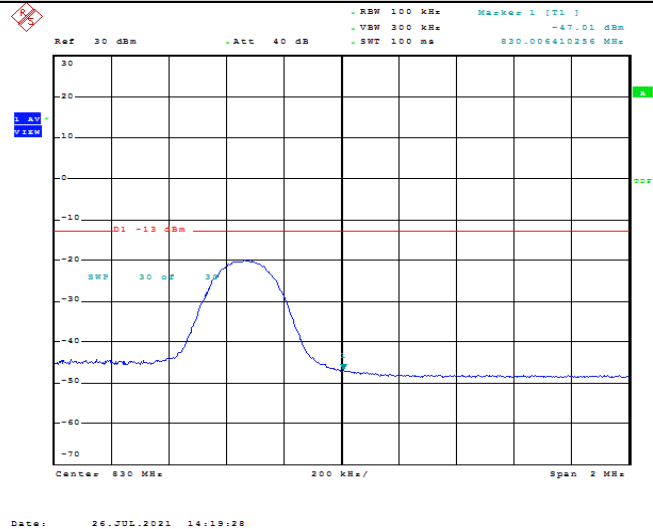
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1.4. Appendix D: Band Edge

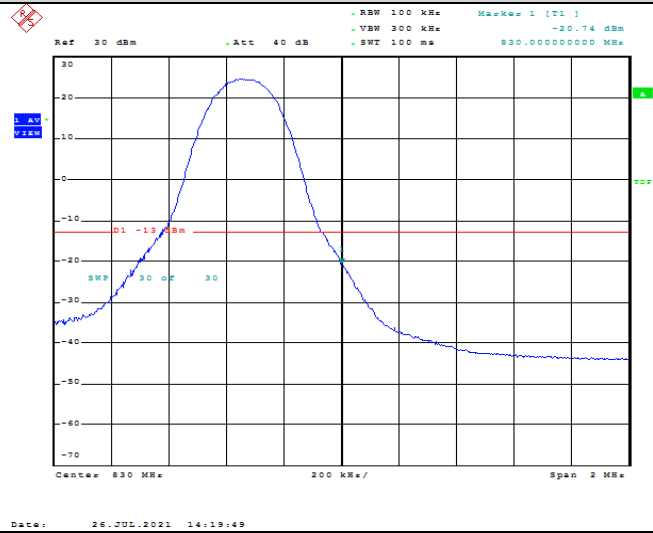
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band18	5MHz	QPSK	23875	1RB#0	-19.03	PASS
Band18	5MHz	QPSK	23875	1RB#24	-47.55	PASS
Band18	5MHz	QPSK	23875	25RB#0	-24.16	PASS
Band18	5MHz	QPSK	23975	1RB#0	-47.01	PASS
Band18	5MHz	QPSK	23975	1RB#24	-20.74	PASS
Band18	5MHz	QPSK	23975	25RB#0	-23.75	PASS
Band18	5MHz	16QAM	23875	1RB#0	-21.93	PASS
Band18	5MHz	16QAM	23875	1RB#24	-47.59	PASS
Band18	5MHz	16QAM	23875	25RB#0	-24.65	PASS
Band18	5MHz	16QAM	23975	1RB#0	-47.26	PASS
Band18	5MHz	16QAM	23975	1RB#24	-21.48	PASS
Band18	5MHz	16QAM	23975	25RB#0	-24.36	PASS

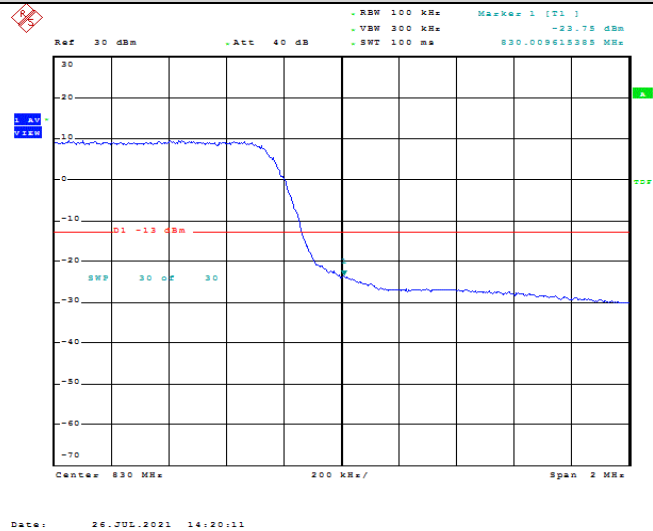
Band18-5MHz-QPSK-23975-1RB#0



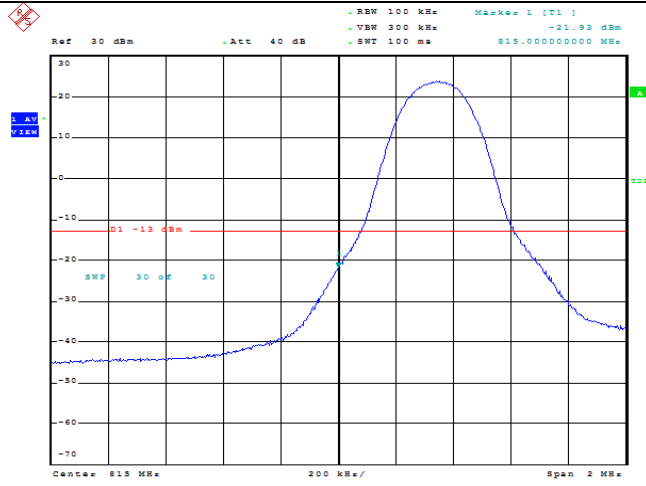
Band18-5MHz-QPSK-23975-1RB#24



Band18-5MHz-QPSK-23975-25RB#0

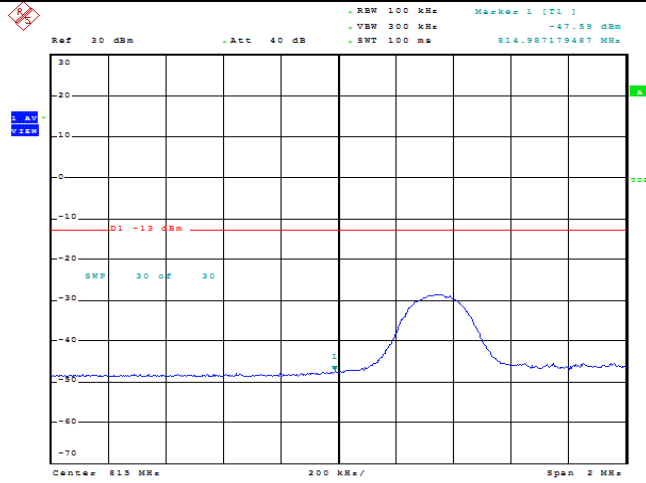


Band18-5MHz-16QAM-23875-1RB#0



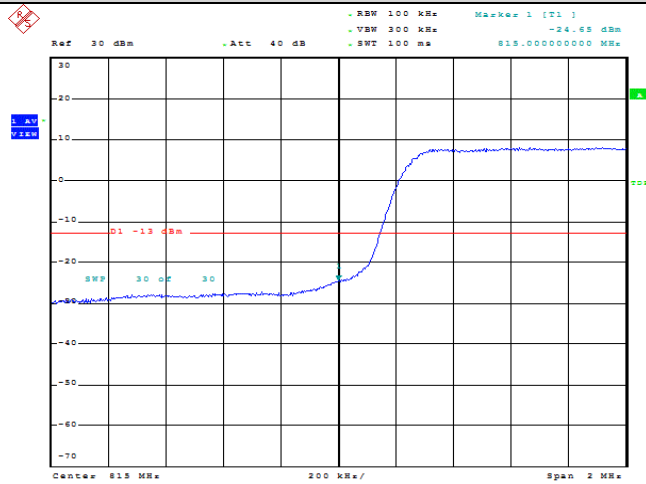
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Band18-5MHz-16QAM-23875-1RB#24



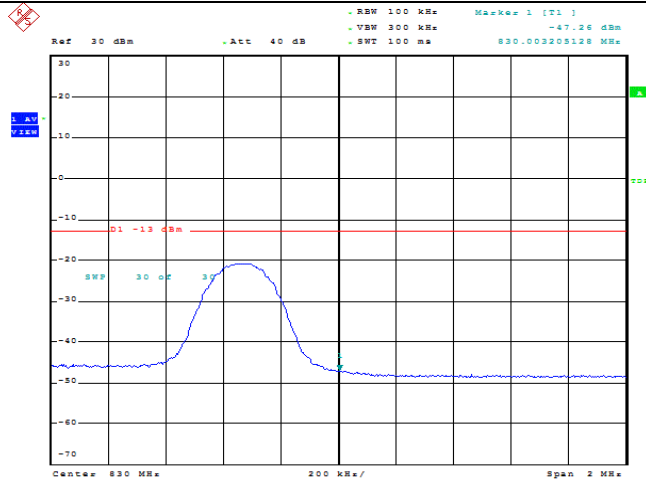
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Band18-5MHz-16QAM-23875-25RB#0



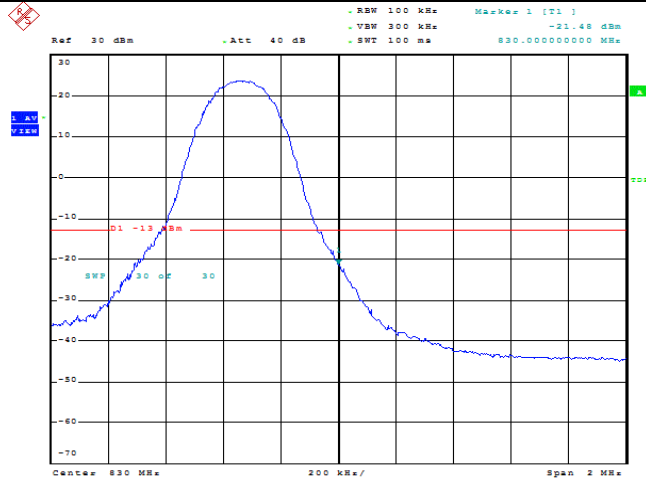
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Band18-5MHz-16QAM-23975-1RB#0



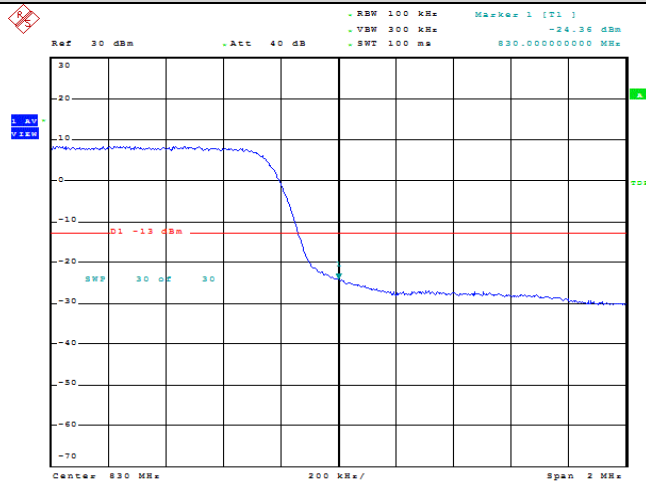
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Band18-5MHz-16QAM-23975-1RB#24



Date: 26.JUL.2021 14:20:00

Band18-5MHz-16QAM-23975-25RB#0



Date: 26.JUL.2021 14:20:21

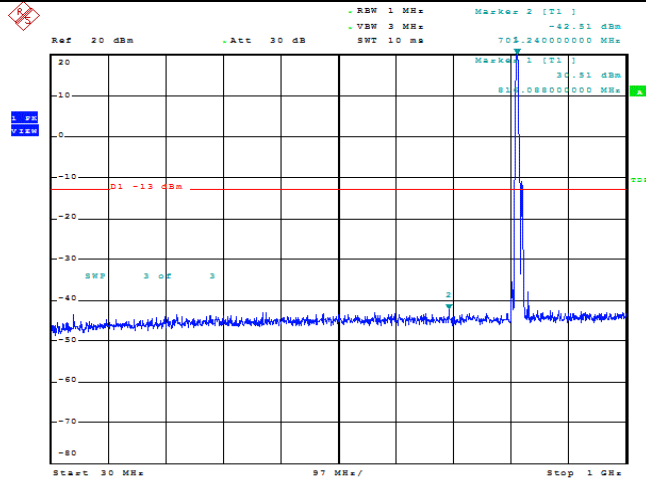
1.5. Appendix E: Conducted Spurious Emission

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band18	5MHz	QPSK	23875	1RB#0	Range1:30~1000MHz	-42.51	PASS
Band18	5MHz	QPSK	23875	1RB#0	Range2:1000~10000MHz	-28.35	PASS
Band18	5MHz	QPSK	23975	1RB#0	Range1:30~1000MHz	-41.96	PASS
Band18	5MHz	QPSK	23975	1RB#0	Range2:1000~10000MHz	-26.59	PASS
Band18	5MHz	16QAM	23875	1RB#0	Range1:30~1000MHz	-42.19	PASS
Band18	5MHz	16QAM	23875	1RB#0	Range2:1000~10000MHz	-29.82	PASS
Band18	5MHz	16QAM	23975	1RB#0	Range1:30~1000MHz	-42.57	PASS
Band18	5MHz	16QAM	23975	1RB#0	Range2:1000~10000MHz	-29.72	PASS

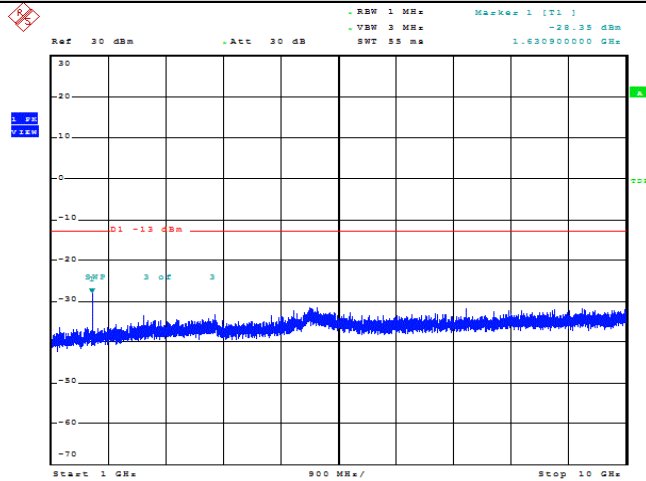
Test Graphs

Band18-5MHz-QPSK-23875-1RB#0-Range1:30~1000MHz



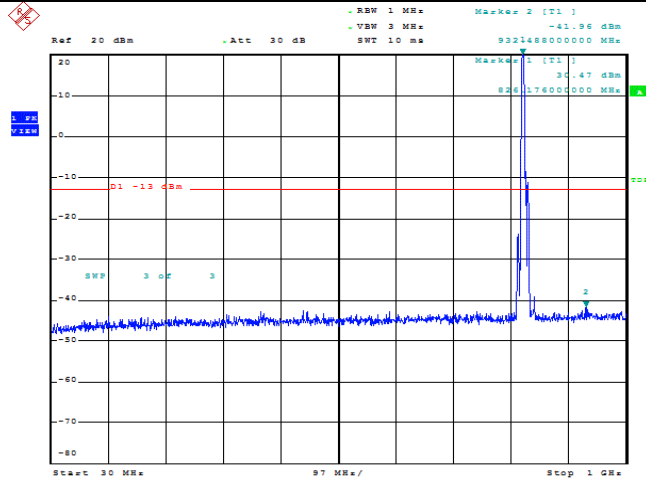
Date: 26.JUL.2021 14:20:36

Band18-5MHz-QPSK-23875-1RB#0-Range2:1000~10000MHz



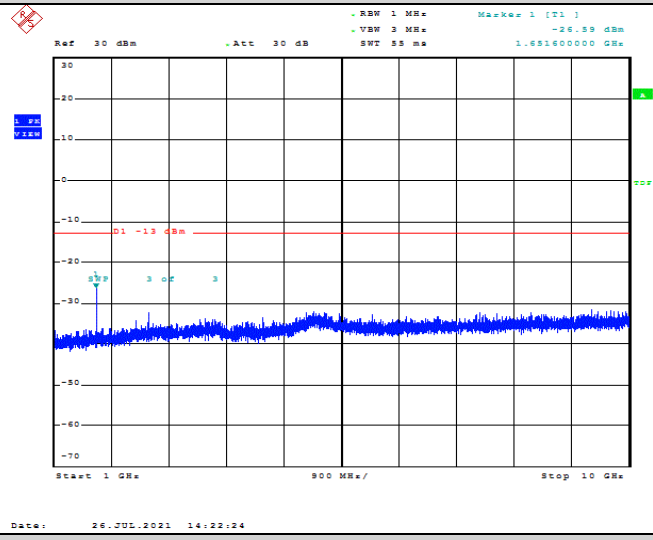
Date: 26.JUL.2021 14:20:46

Band18-5MHz-QPSK-23975-1RB#0-Range1:30~1000MHz

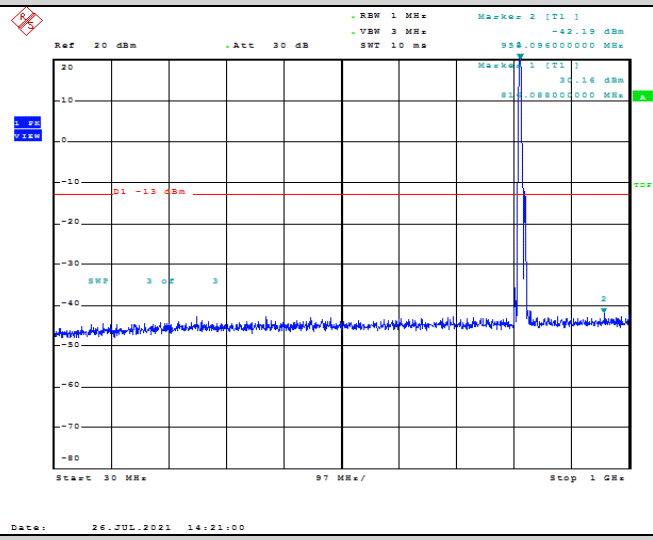


Date: 26.JUL.2021 14:22:14

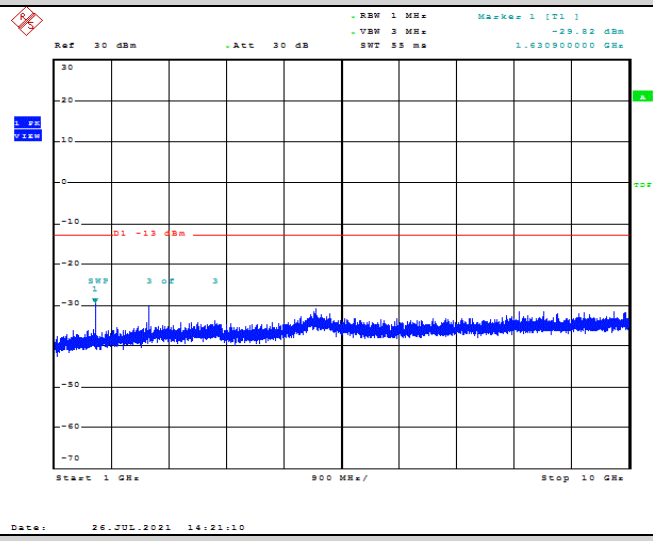
Band18-5MHz-QPSK-23975-1RB#0-Range2:1000~10000MHz



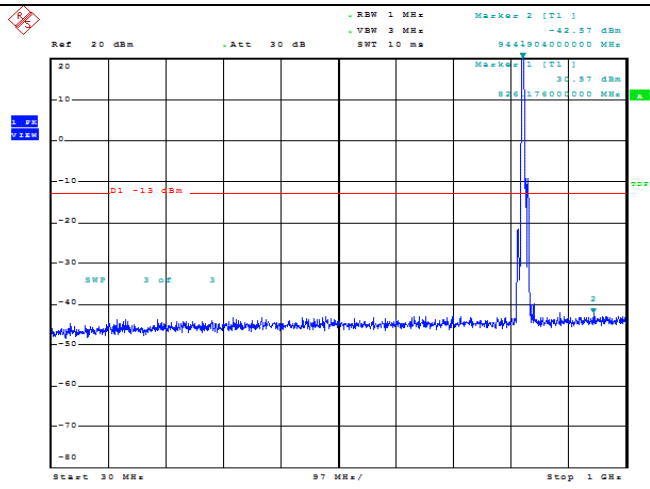
Band18-5MHz-16QAM-23875-1RB#0-Range1:30~1000MHz



Band18-5MHz-16QAM-23875-1RB#0-Range2:1000~10000MHz

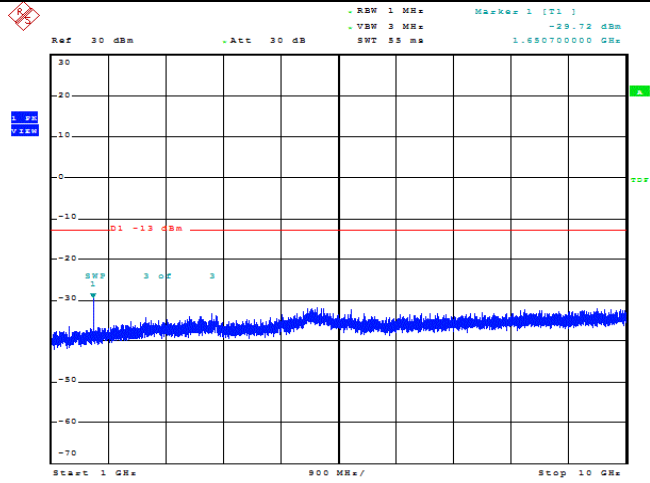


Band18-5MHz-16QAM-23975-1RB#0-Range1:30~1000MHz



Date: 26.JUL.2021 14:22:37

Band18-5MHz-16QAM-23975-1RB#0-Range2:1000~10000MHz



Date: 26.JUL.2021 14:22:47

1.6. Appendix F: Frequency Stability

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band18	5MHz	QPSK	23875	25RB#0	VL	NT	-2.92	-0.003572	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	VN	NT	-3.09	-0.003780	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	VH	NT	-3.45	-0.004220	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	VL	NT	-1.52	-0.001837	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	VN	NT	1.67	0.002018	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	VH	NT	-1.42	-0.001716	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	VL	NT	-2.30	-0.002813	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	VN	NT	-3.99	-0.004881	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	VH	NT	-4.09	-0.005003	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	VL	NT	-3.05	-0.003686	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	VN	NT	-2.32	-0.002804	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	VH	NT	-2.43	-0.002937	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band18	5MHz	QPSK	23875	25RB#0	NV	0	-3.66	-0.004477	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	NV	10	-2.55	-0.003119	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	NV	20	-3.92	-0.004795	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	NV	30	-2.65	-0.003242	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	NV	40	-2.80	-0.003425	±2.5	PASS
Band18	5MHz	QPSK	23875	25RB#0	NV	45	-1.87	-0.002287	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	NV	0	2.79	0.003372	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	NV	10	-2.10	-0.002538	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	NV	20	-2.03	-0.002453	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	NV	30	-2.60	-0.003142	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	NV	40	-3.05	-0.003686	±2.5	PASS
Band18	5MHz	QPSK	23975	25RB#0	NV	45	-2.65	-0.003202	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	NV	0	-2.30	-0.002813	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	NV	10	-2.17	-0.002654	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	NV	20	-2.59	-0.003168	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	NV	30	-3.58	-0.004379	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	NV	40	-3.91	-0.004783	±2.5	PASS
Band18	5MHz	16QAM	23875	25RB#0	NV	45	-2.12	-0.002593	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	NV	0	-1.17	-0.001414	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	NV	10	-2.05	-0.002477	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	NV	20	1.29	0.001559	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	NV	30	-2.32	-0.002804	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	NV	40	-3.40	-0.004109	±2.5	PASS
Band18	5MHz	16QAM	23975	25RB#0	NV	45	-2.92	-0.003529	±2.5	PASS

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