



Appendix for LTE Band12

FCC ID: 2AC88-GLMU19A02

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Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	24.20	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	24.12	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	24.15	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.90	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	24.08	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.98	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.94	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.86	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.96	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.99	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.95	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.97	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	23.07	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.96	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	24.04	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	24.02	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	24.24	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	24.28	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	24.10	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	23.17	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	23.24	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	23.48	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	23.39	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	23.98	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	24.07	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	23.97	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	22.42	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	23.11	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	23.28	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	23.09	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	23.97	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	23.93	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	23.96	PASS

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Band12	1.4MHz	16QAM	23095	6RB#0	21.71	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	23.55	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	23.83	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	23.76	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	24.21	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	24.27	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	24.09	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	22.22	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.96	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.90	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.98	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.99	PASS
Band12	3MHz	QPSK	23025	8RB#4	23.10	PASS
Band12	3MHz	QPSK	23025	8RB#7	23.01	PASS
Band12	3MHz	QPSK	23025	15RB#0	23.10	PASS
Band12	3MHz	QPSK	23095	1RB#0	24.07	PASS
Band12	3MHz	QPSK	23095	1RB#8	24.01	PASS
Band12	3MHz	QPSK	23095	1RB#14	24.08	PASS
Band12	3MHz	QPSK	23095	8RB#0	23.07	PASS
Band12	3MHz	QPSK	23095	8RB#4	23.11	PASS
Band12	3MHz	QPSK	23095	8RB#7	23.09	PASS
Band12	3MHz	QPSK	23095	15RB#0	23.22	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.88	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.95	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.97	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.86	PASS
Band12	3MHz	QPSK	23165	8RB#4	23.00	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.91	PASS
Band12	3MHz	QPSK	23165	15RB#0	23.11	PASS
Band12	3MHz	16QAM	23025	1RB#0	23.10	PASS
Band12	3MHz	16QAM	23025	1RB#8	23.12	PASS
Band12	3MHz	16QAM	23025	1RB#14	22.99	PASS
Band12	3MHz	16QAM	23025	8RB#0	23.23	PASS
Band12	3MHz	16QAM	23025	8RB#4	23.05	PASS
Band12	3MHz	16QAM	23025	8RB#7	23.02	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.91	PASS
Band12	3MHz	16QAM	23095	1RB#0	23.12	PASS
Band12	3MHz	16QAM	23095	1RB#8	23.05	PASS
Band12	3MHz	16QAM	23095	1RB#14	23.01	PASS
Band12	3MHz	16QAM	23095	8RB#0	23.12	PASS

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Band12	3MHz	16QAM	23095	8RB#4	23.10	PASS
Band12	3MHz	16QAM	23095	8RB#7	23.09	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.95	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.95	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.90	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.91	PASS
Band12	3MHz	16QAM	23165	8RB#0	22.87	PASS
Band12	3MHz	16QAM	23165	8RB#4	22.99	PASS
Band12	3MHz	16QAM	23165	8RB#7	22.70	PASS
Band12	3MHz	16QAM	23165	15RB#0	22.08	PASS
Band12	5MHz	QPSK	23035	1RB#0	24.32	PASS
Band12	5MHz	QPSK	23035	1RB#12	24.15	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.79	PASS
Band12	5MHz	QPSK	23035	12RB#0	23.13	PASS
Band12	5MHz	QPSK	23035	12RB#6	23.05	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.97	PASS
Band12	5MHz	QPSK	23035	25RB#0	23.05	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.87	PASS
Band12	5MHz	QPSK	23095	1RB#12	24.26	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.92	PASS
Band12	5MHz	QPSK	23095	12RB#0	23.06	PASS
Band12	5MHz	QPSK	23095	12RB#6	23.10	PASS
Band12	5MHz	QPSK	23095	12RB#13	23.10	PASS
Band12	5MHz	QPSK	23095	25RB#0	23.13	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.85	PASS
Band12	5MHz	QPSK	23155	1RB#12	24.13	PASS
Band12	5MHz	QPSK	23155	1RB#24	24.11	PASS
Band12	5MHz	QPSK	23155	12RB#0	23.15	PASS
Band12	5MHz	QPSK	23155	12RB#6	23.07	PASS
Band12	5MHz	QPSK	23155	12RB#13	23.03	PASS
Band12	5MHz	QPSK	23155	25RB#0	23.16	PASS
Band12	5MHz	16QAM	23035	1RB#0	23.09	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.84	PASS
Band12	5MHz	16QAM	23035	1RB#24	23.03	PASS
Band12	5MHz	16QAM	23035	12RB#0	23.06	PASS
Band12	5MHz	16QAM	23035	12RB#6	23.08	PASS
Band12	5MHz	16QAM	23035	12RB#13	22.94	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.93	PASS
Band12	5MHz	16QAM	23095	1RB#0	23.28	PASS
Band12	5MHz	16QAM	23095	1RB#12	23.20	PASS

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Band12	5MHz	16QAM	23095	1RB#24	23.17	PASS
Band12	5MHz	16QAM	23095	12RB#0	23.12	PASS
Band12	5MHz	16QAM	23095	12RB#6	23.20	PASS
Band12	5MHz	16QAM	23095	12RB#13	23.12	PASS
Band12	5MHz	16QAM	23095	25RB#0	22.06	PASS
Band12	5MHz	16QAM	23155	1RB#0	22.69	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.61	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.68	PASS
Band12	5MHz	16QAM	23155	12RB#0	23.17	PASS
Band12	5MHz	16QAM	23155	12RB#6	23.08	PASS
Band12	5MHz	16QAM	23155	12RB#13	23.09	PASS
Band12	5MHz	16QAM	23155	25RB#0	22.11	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.95	PASS
Band12	10MHz	QPSK	23060	1RB#24	24.11	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.91	PASS
Band12	10MHz	QPSK	23060	25RB#0	23.09	PASS
Band12	10MHz	QPSK	23060	25RB#12	23.03	PASS
Band12	10MHz	QPSK	23060	25RB#25	23.11	PASS
Band12	10MHz	QPSK	23060	50RB#0	23.08	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	24.41	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.88	PASS
Band12	10MHz	QPSK	23095	25RB#0	23.09	PASS
Band12	10MHz	QPSK	23095	25RB#12	23.16	PASS
Band12	10MHz	QPSK	23095	25RB#25	23.04	PASS
Band12	10MHz	QPSK	23095	50RB#0	23.15	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.90	PASS
Band12	10MHz	QPSK	23130	1RB#24	24.08	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.85	PASS
Band12	10MHz	QPSK	23130	25RB#0	23.24	PASS
Band12	10MHz	QPSK	23130	25RB#12	23.12	PASS
Band12	10MHz	QPSK	23130	25RB#25	23.11	PASS
Band12	10MHz	QPSK	23130	50RB#0	23.16	PASS
Band12	10MHz	16QAM	23060	1RB#0	23.02	PASS
Band12	10MHz	16QAM	23060	1RB#24	23.36	PASS
Band12	10MHz	16QAM	23060	1RB#49	22.88	PASS
Band12	10MHz	16QAM	23060	25RB#0	23.01	PASS
Band12	10MHz	16QAM	23060	25RB#12	23.03	PASS
Band12	10MHz	16QAM	23060	25RB#25	23.11	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.97	PASS

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Band12	10MHz	16QAM	23095	1RB#0	23.40	PASS
Band12	10MHz	16QAM	23095	1RB#24	23.24	PASS
Band12	10MHz	16QAM	23095	1RB#49	23.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	23.17	PASS
Band12	10MHz	16QAM	23095	25RB#12	23.15	PASS
Band12	10MHz	16QAM	23095	25RB#25	23.06	PASS
Band12	10MHz	16QAM	23095	50RB#0	22.07	PASS
Band12	10MHz	16QAM	23130	1RB#0	23.02	PASS
Band12	10MHz	16QAM	23130	1RB#24	23.13	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.88	PASS
Band12	10MHz	16QAM	23130	25RB#0	23.27	PASS
Band12	10MHz	16QAM	23130	25RB#12	23.13	PASS
Band12	10MHz	16QAM	23130	25RB#25	23.16	PASS
Band12	10MHz	16QAM	23130	50RB#0	22.02	PASS

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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	1RB#0	3.74	13	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	5.28	13	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	3.91	13	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	5.54	13	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	3.88	13	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	5.45	13	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	4.72	13	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	6.09	13	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	4.84	13	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	6.49	13	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	4.84	13	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	6.46	13	PASS
Band12	3MHz	QPSK	23025	1RB#0	3.74	13	PASS
Band12	3MHz	QPSK	23025	15RB#0	5.36	13	PASS
Band12	3MHz	QPSK	23095	1RB#0	3.97	13	PASS
Band12	3MHz	QPSK	23095	15RB#0	5.57	13	PASS
Band12	3MHz	QPSK	23165	1RB#0	3.91	13	PASS
Band12	3MHz	QPSK	23165	15RB#0	5.59	13	PASS
Band12	3MHz	16QAM	23025	1RB#0	4.64	13	PASS
Band12	3MHz	16QAM	23025	15RB#0	6.38	13	PASS
Band12	3MHz	16QAM	23095	1RB#0	4.84	13	PASS
Band12	3MHz	16QAM	23095	15RB#0	6.52	13	PASS
Band12	3MHz	16QAM	23165	1RB#0	4.81	13	PASS
Band12	3MHz	16QAM	23165	15RB#0	6.49	13	PASS
Band12	5MHz	QPSK	23035	1RB#0	3.80	13	PASS
Band12	5MHz	QPSK	23035	25RB#0	5.45	13	PASS
Band12	5MHz	QPSK	23095	1RB#0	3.91	13	PASS
Band12	5MHz	QPSK	23095	25RB#0	5.59	13	PASS
Band12	5MHz	QPSK	23155	1RB#0	3.86	13	PASS
Band12	5MHz	QPSK	23155	25RB#0	5.48	13	PASS
Band12	5MHz	16QAM	23035	1RB#0	4.61	13	PASS
Band12	5MHz	16QAM	23035	25RB#0	6.38	13	PASS
Band12	5MHz	16QAM	23095	1RB#0	4.75	13	PASS
Band12	5MHz	16QAM	23095	25RB#0	6.46	13	PASS
Band12	5MHz	16QAM	23155	1RB#0	4.78	13	PASS

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Band12	5MHz	16QAM	23155	25RB#0	6.38	13	PASS
Band12	10MHz	QPSK	23060	1RB#0	3.80	13	PASS
Band12	10MHz	QPSK	23060	50RB#0	5.45	13	PASS
Band12	10MHz	QPSK	23095	1RB#0	3.88	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.51	13	PASS
Band12	10MHz	QPSK	23130	1RB#0	3.86	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.28	13	PASS
Band12	10MHz	16QAM	23060	1RB#0	4.70	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.38	13	PASS
Band12	10MHz	16QAM	23095	1RB#0	4.70	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.41	13	PASS
Band12	10MHz	16QAM	23130	1RB#0	4.78	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.29	13	PASS

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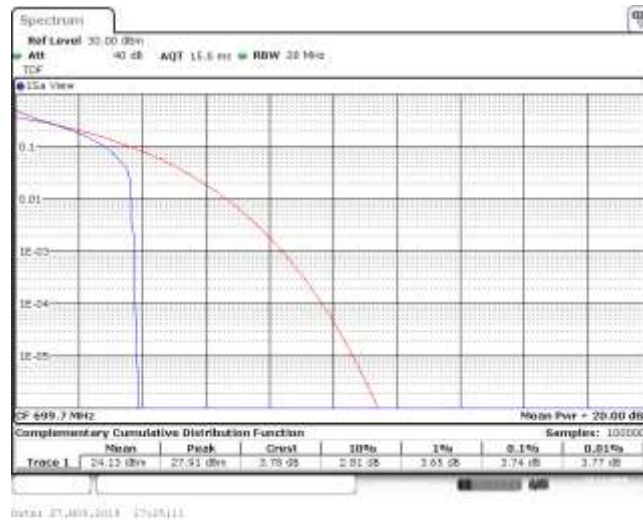
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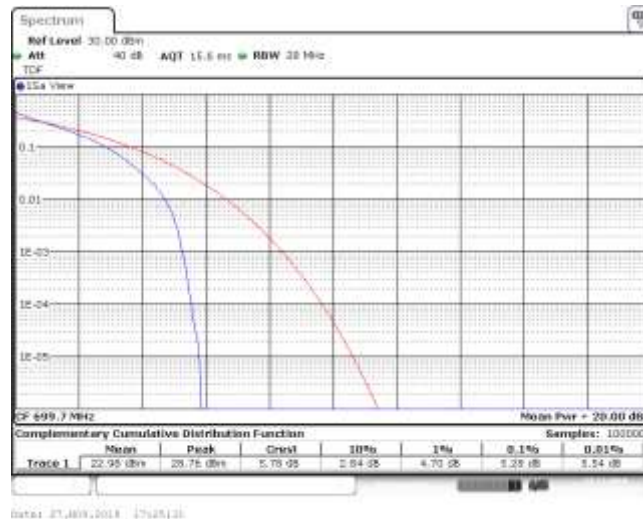
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Test Graphs

Band12_1.4MHz_QPSK_23017_1RB#0



Band12_1.4MHz_QPSK_23017_6RB#0



Band12_1.4MHz_QPSK_23095_1RB#0

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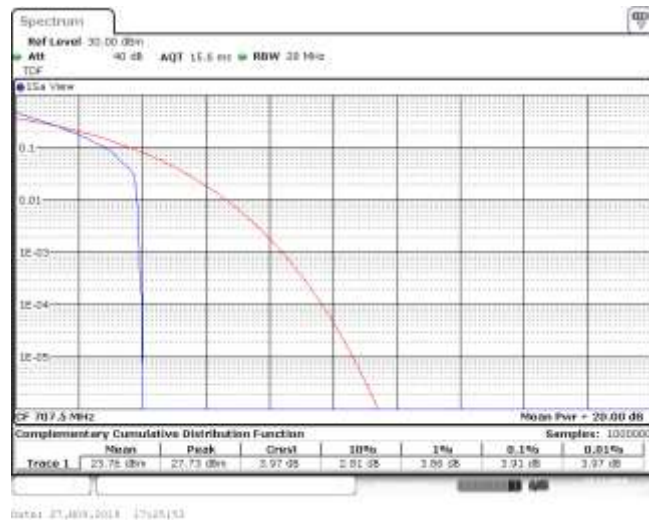
Tel.: (86)755-27521059

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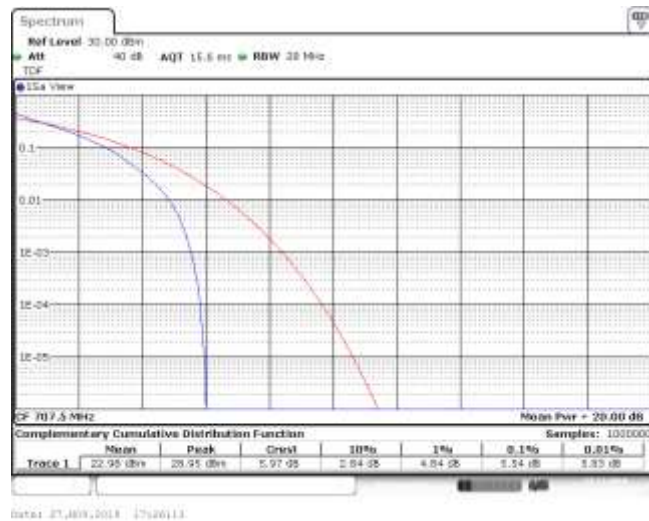
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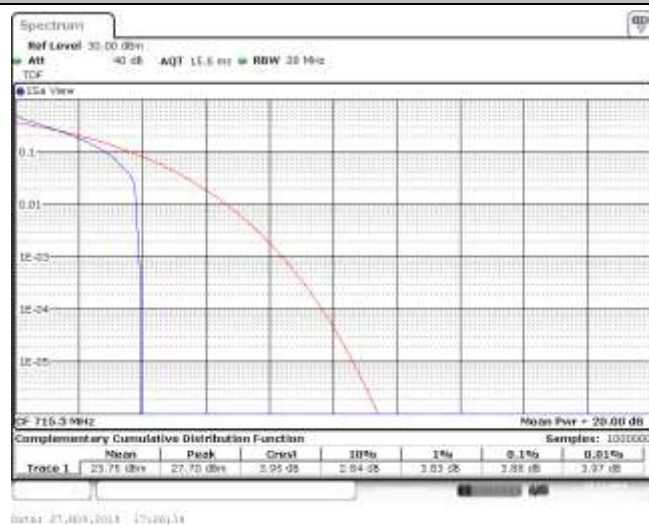
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Band12_1.4MHz_QPSK_23095_6RB#0



Band12_1.4MHz_QPSK_23173_1RB#0



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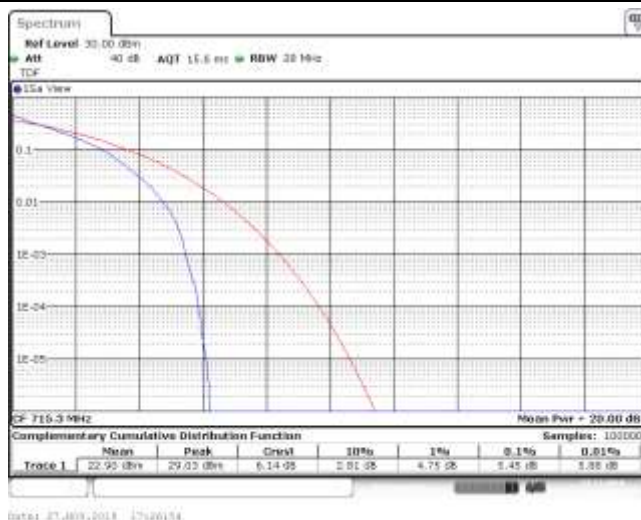
Tel.: (86)755-27521059

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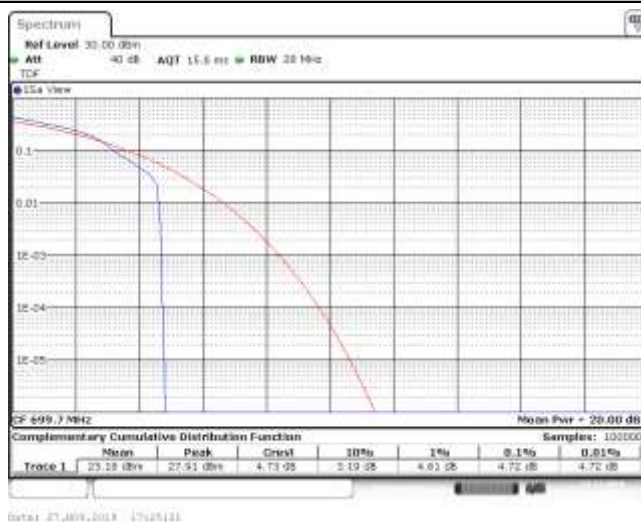
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Band12_1.4MHz_QPSK_23173_6RB#0



Band12_1.4MHz_16QAM_23017_1RB#0



Band12_1.4MHz_16QAM_23017_6RB#0

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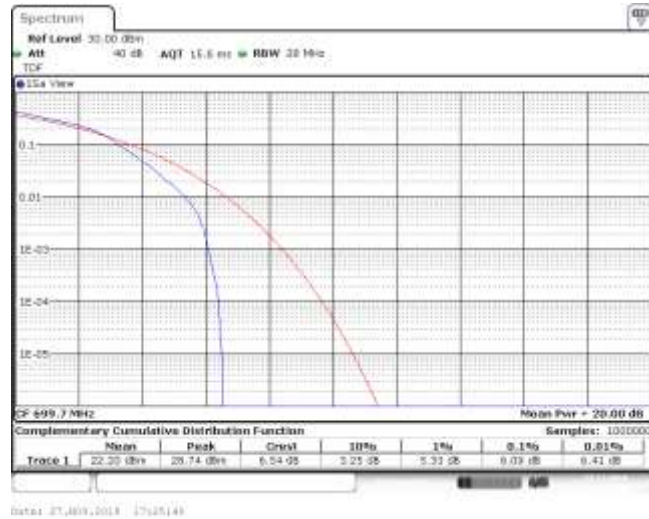
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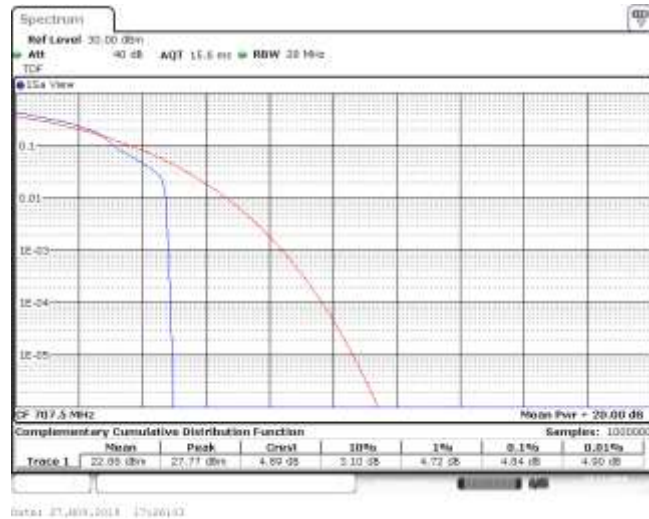


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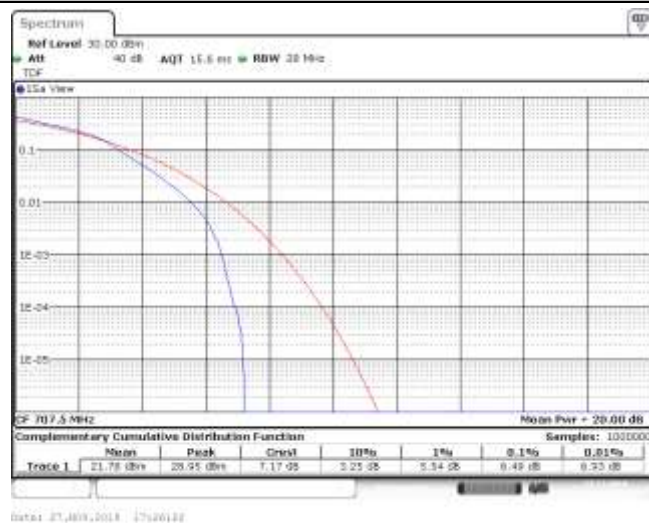
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Band12_1.4MHz_16QAM_23095_1RB#0



Band12_1.4MHz_16QAM_23095_6RB#0



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Tel.: (86)755-27521059

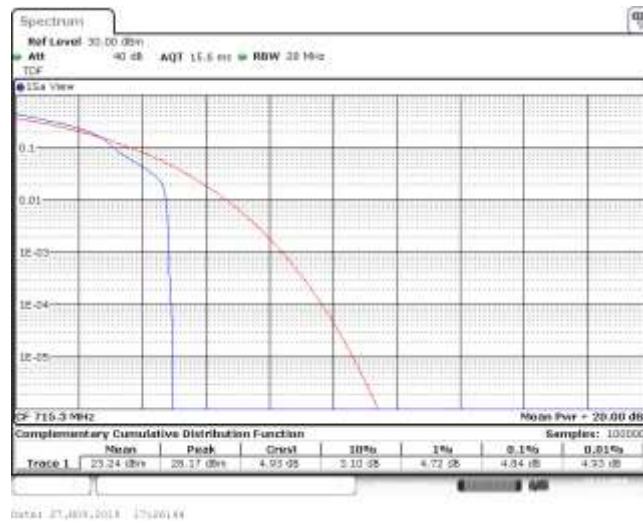
Fax: (86)755-27521011

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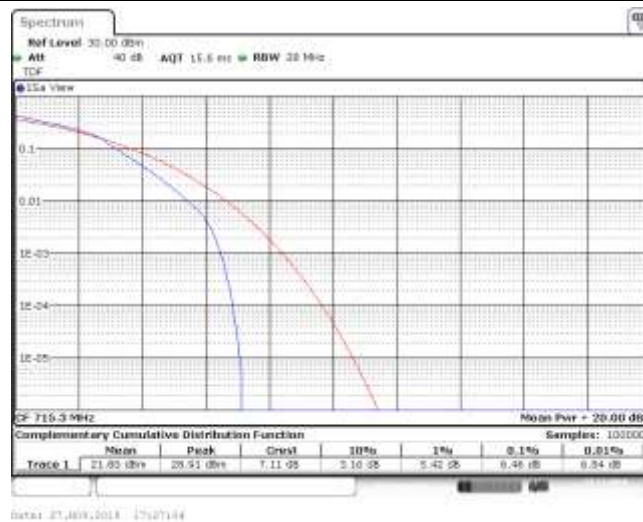

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Band12_1.4MHz_16QAM_23173_1RB#0



Band12_1.4MHz_16QAM_23173_6RB#0



Band12_3MHz_QPSK_23025_1RB#0

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2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

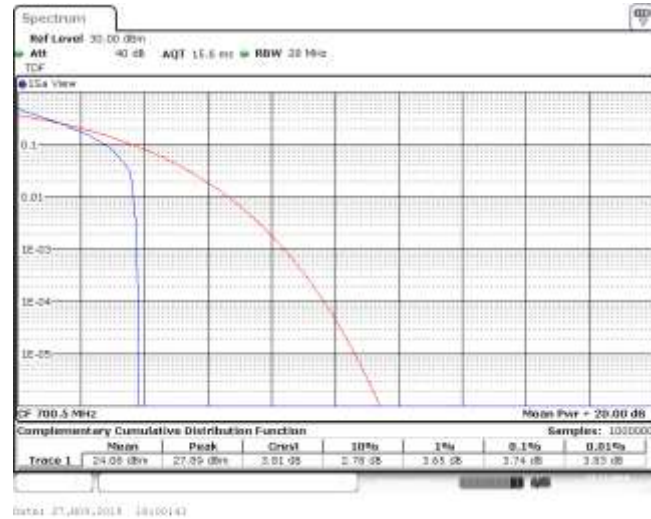
Tel.: (86)755-27521059

Fax: (86)755-27521011

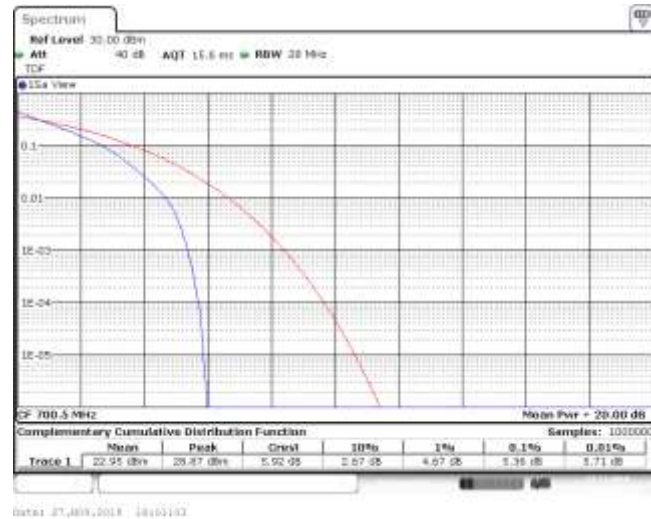
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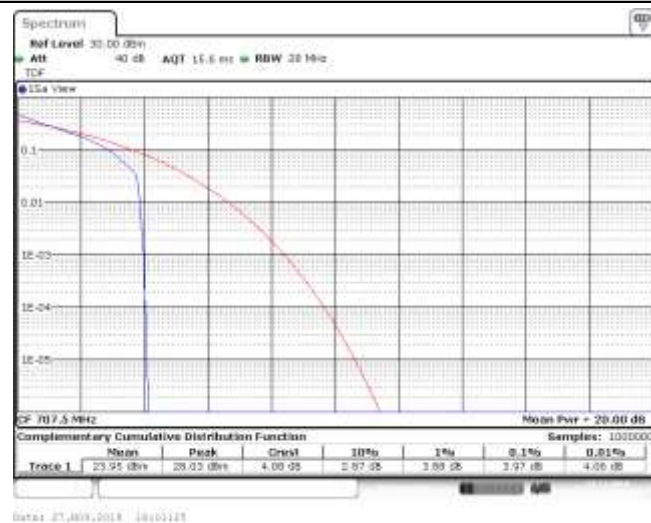
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Band12_3MHz_QPSK_23025_15RB#0



Band12_3MHz_QPSK_23095_1RB#0



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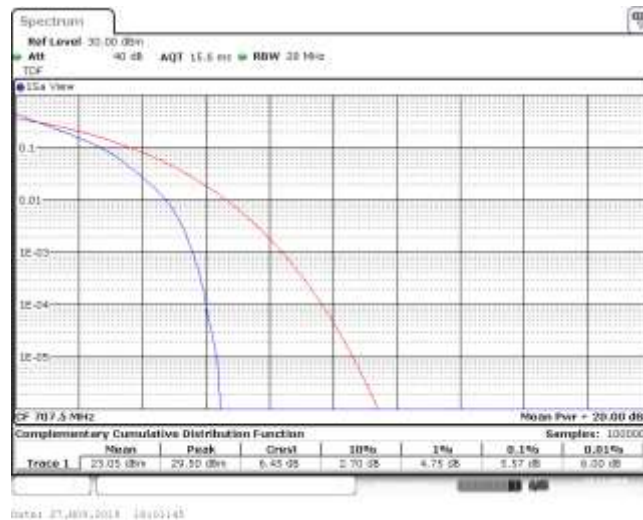
Tel.: (86)755-27521059

Fax: (86)755-27521011

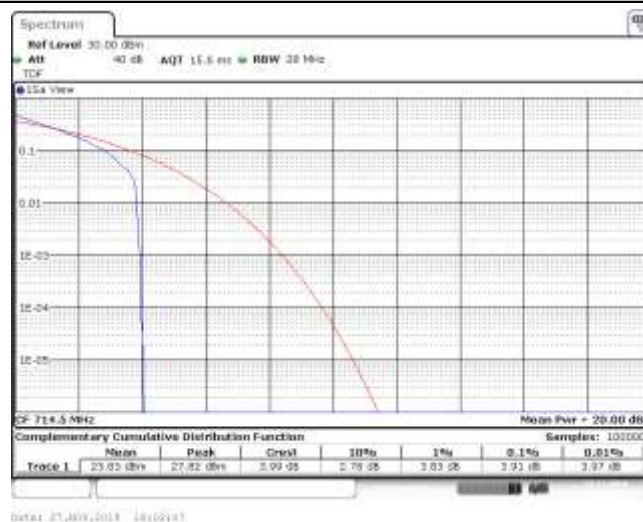
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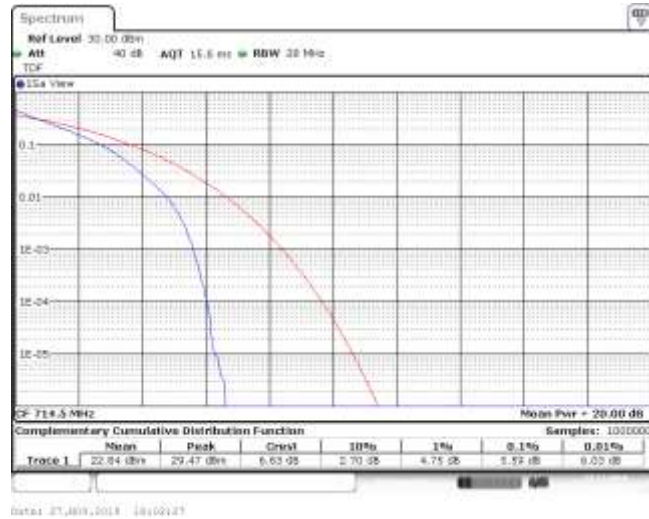
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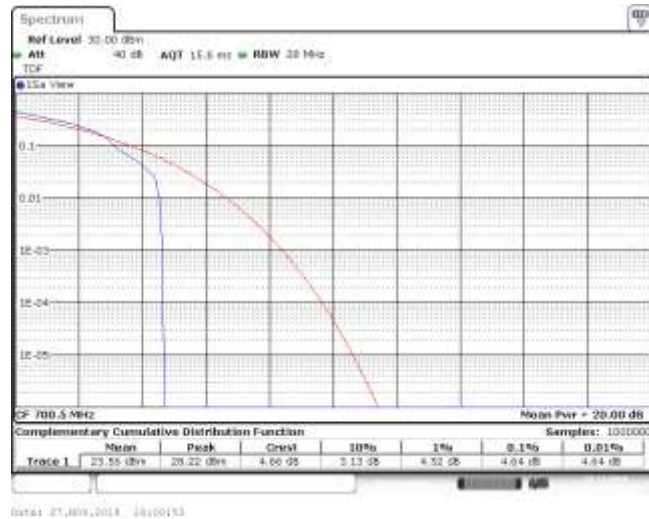
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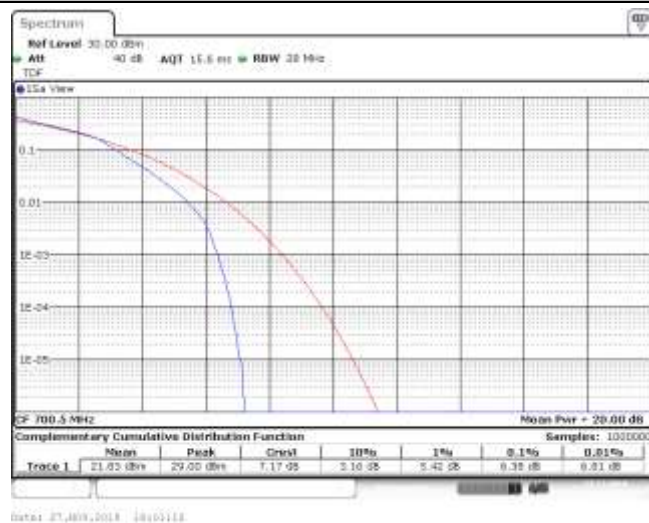
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Band12_3MHz_16QAM_23025_1RB#0



Band12_3MHz_16QAM_23025_15RB#0



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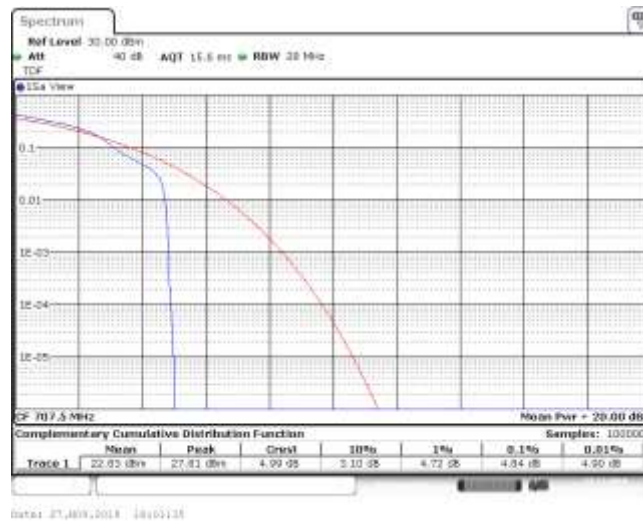
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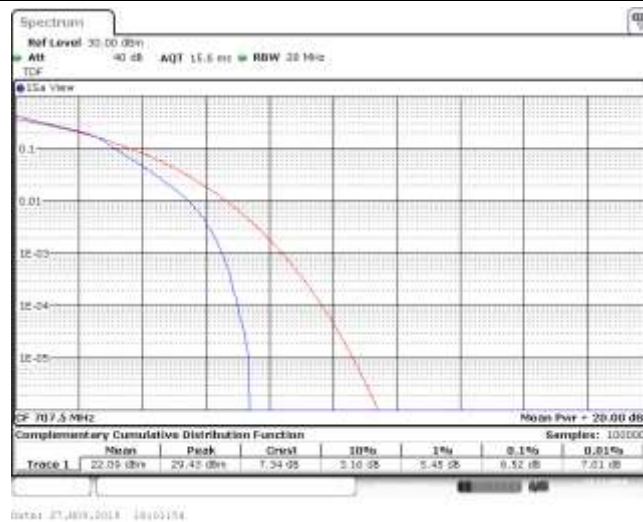
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Band12_3MHz_16QAM_23095_1RB#0



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Band12_3MHz_16QAM_23165_1RB#0

CTC Laboratories, Inc.

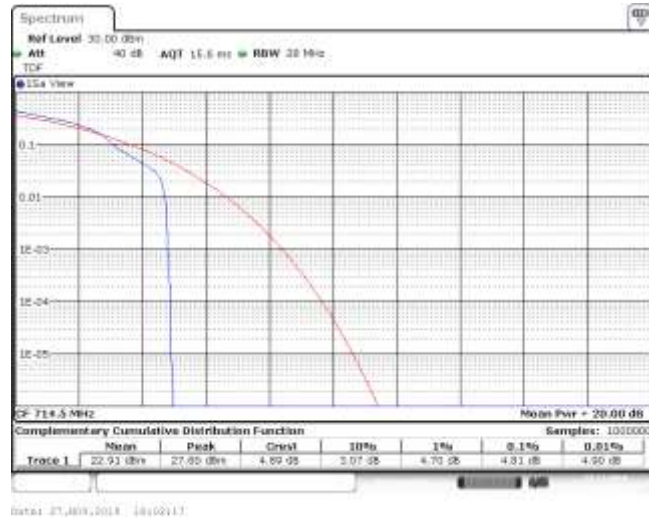
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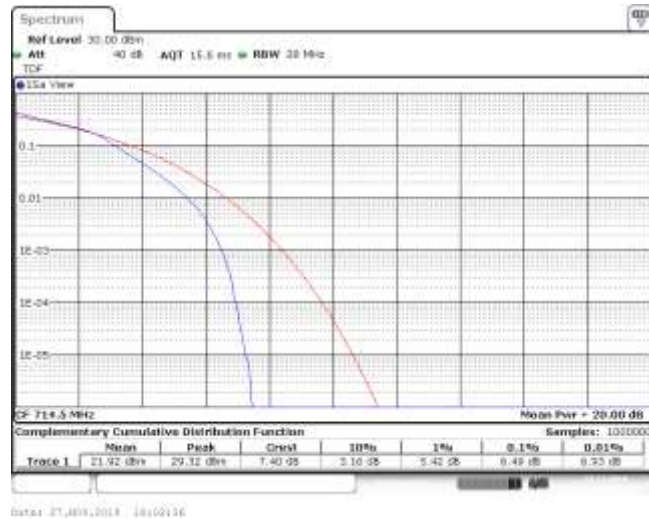
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

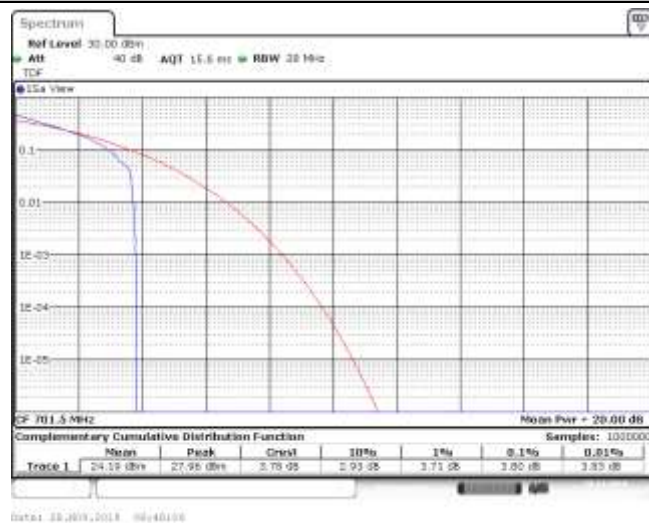
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : yz.cnca.cn



Band12_3MHz_16QAM_23165_15RB#0



Band12_5MHz_QPSK_23035_1RB#0



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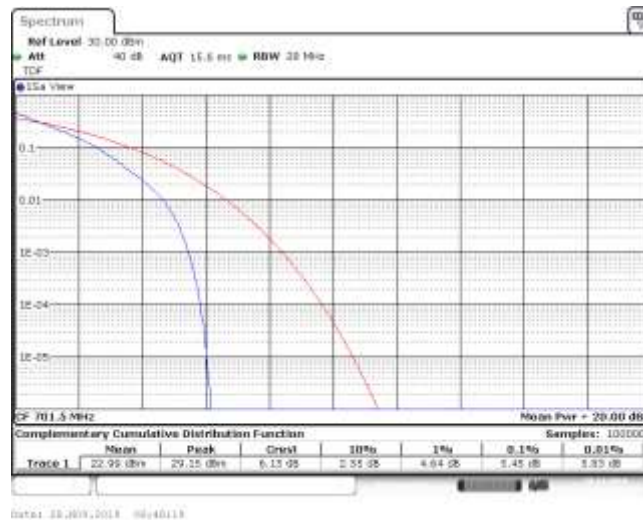
Tel.: (86)755-27521059

Fax: (86)755-27521011

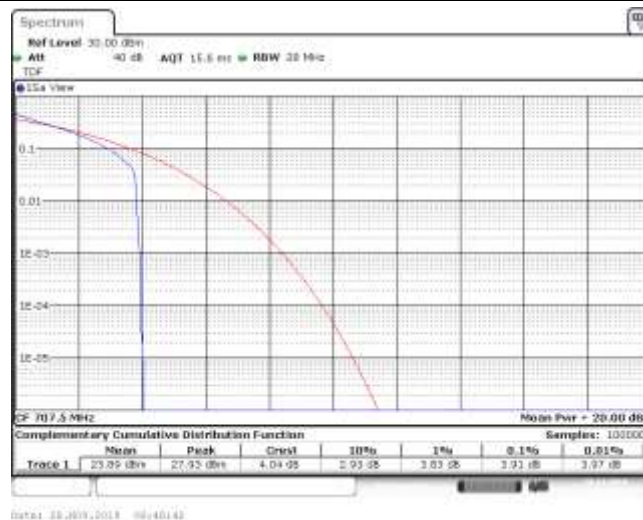
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Band12_5MHz_QPSK_23035_25RB#0



Band12_5MHz_QPSK_23095_1RB#0



Band12_5MHz_QPSK_23095_25RB#0

CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

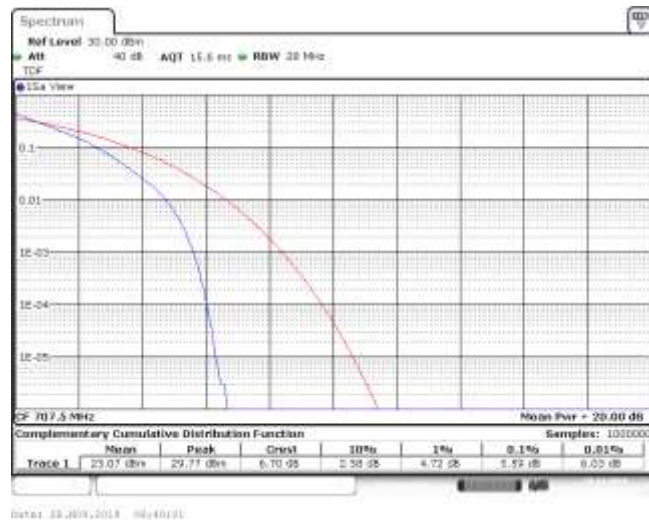
Tel.: (86)755-27521059

Fax: (86)755-27521011

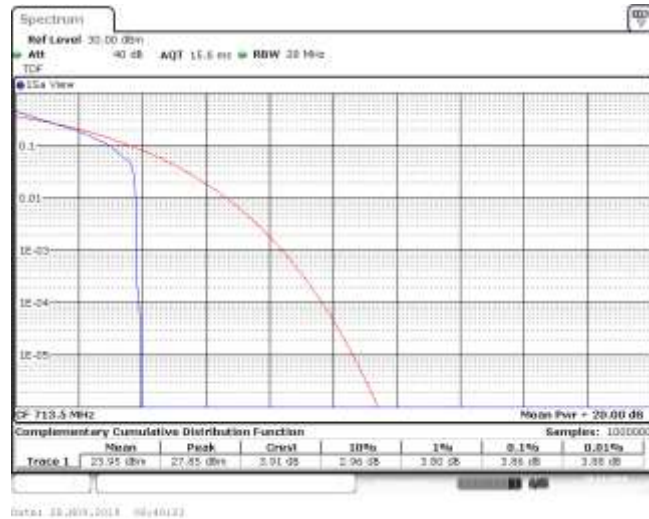
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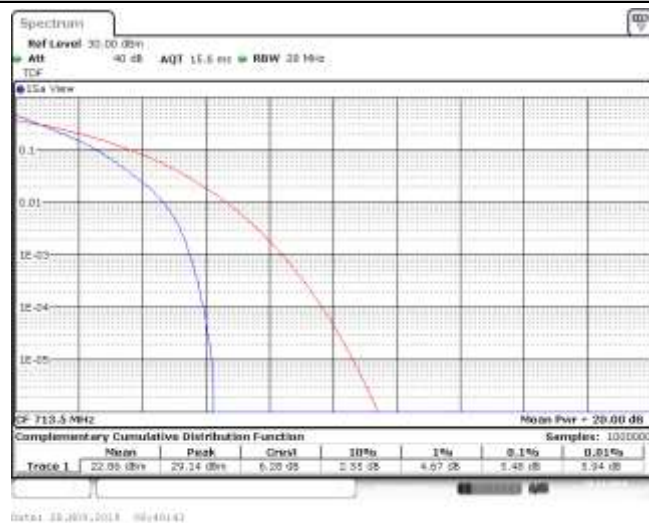
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Band12_5MHz_QPSK_23155_1RB#0



Band12_5MHz_QPSK_23155_25RB#0



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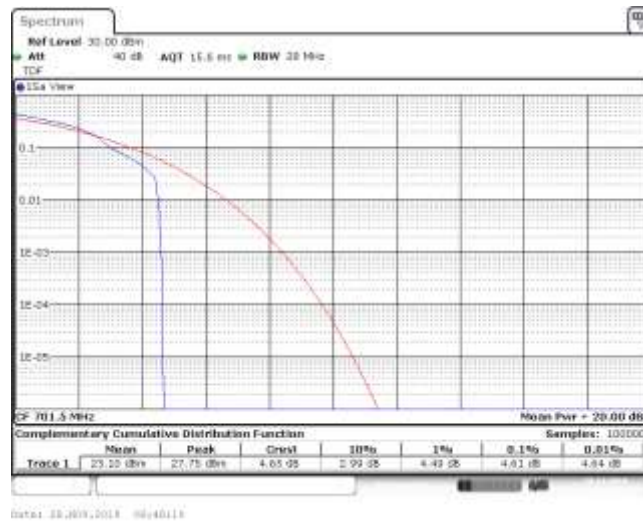
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Fax: (86)755-27521011

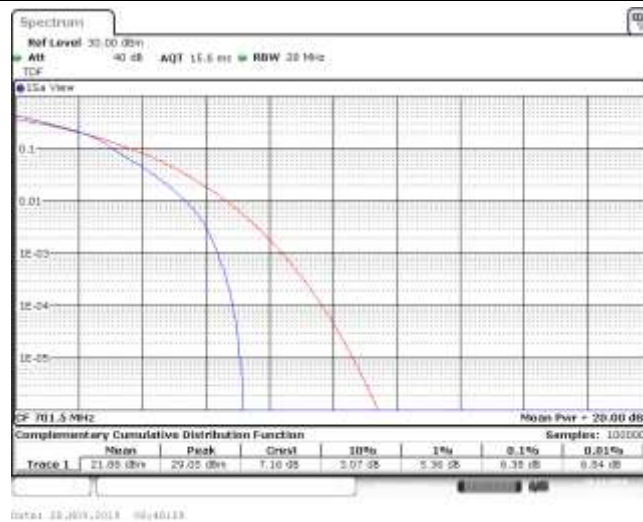
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Band12_5MHz_16QAM_23035_1RB#0



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Band12_5MHz_16QAM_23095_1RB#0

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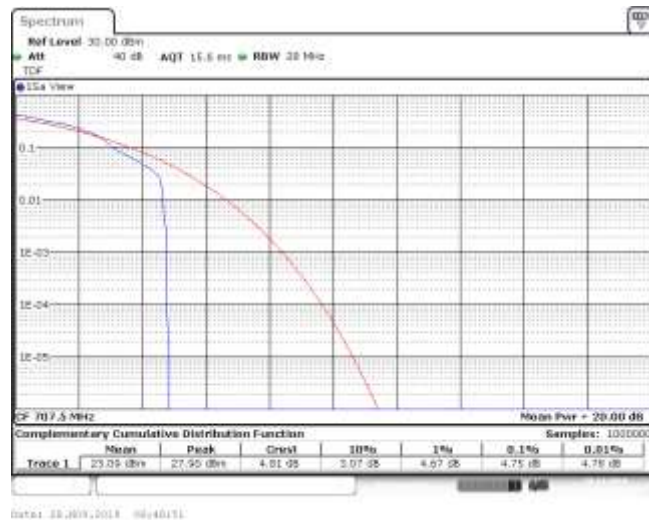
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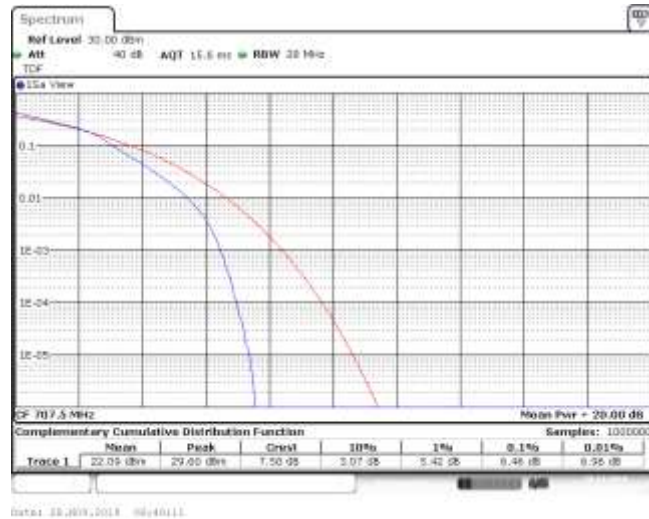
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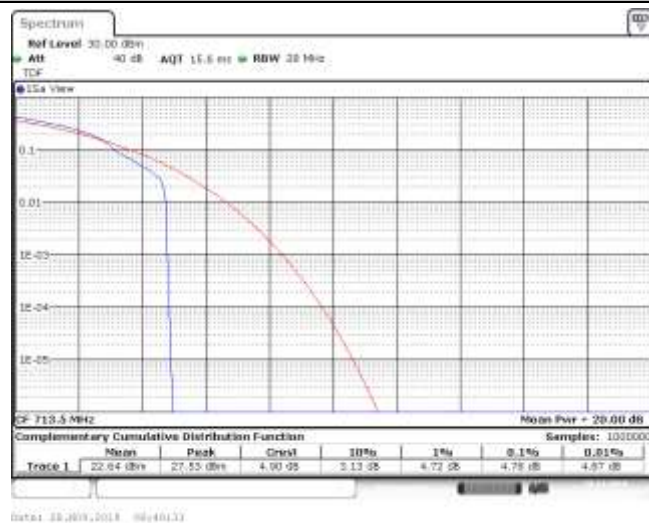
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Band12_5MHz_16QAM_23095_25RB#0



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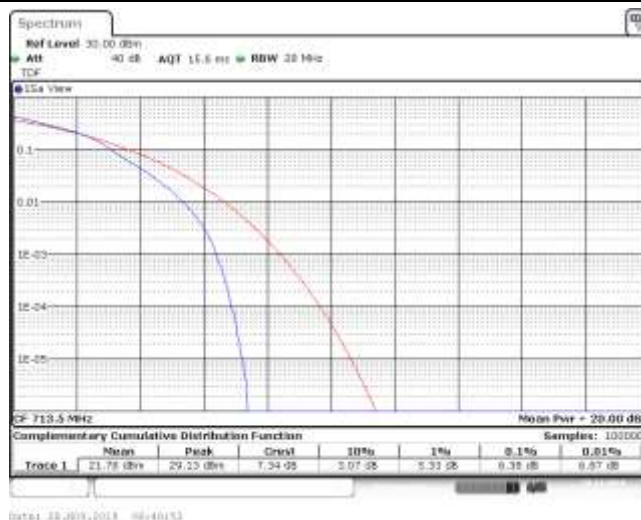
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Tel.: (86)755-27521059

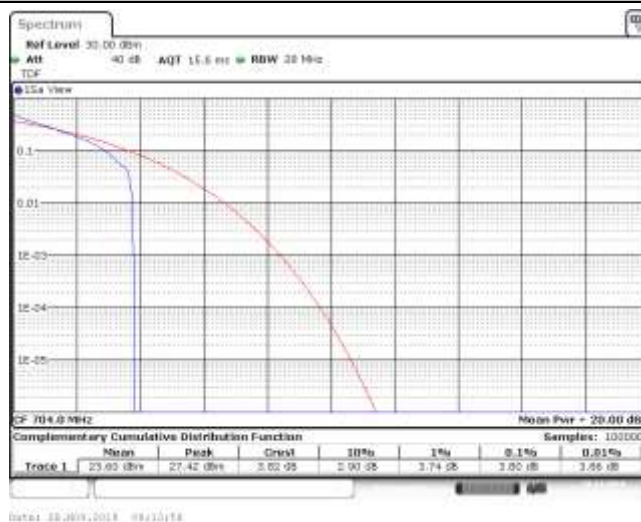
Fax: (86)755-27521011

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Band12_5MHz_16QAM_23155_25RB#0



Band12_10MHz_QPSK_23060_1RB#0



Band12_10MHz_QPSK_23060_50RB#0

CTC Laboratories, Inc.

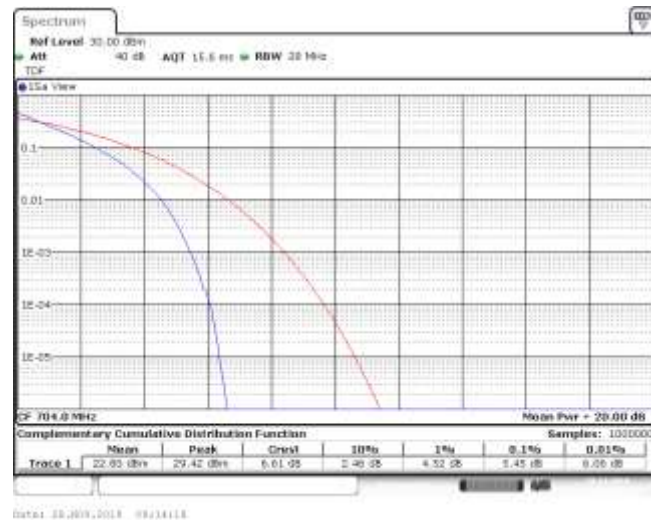
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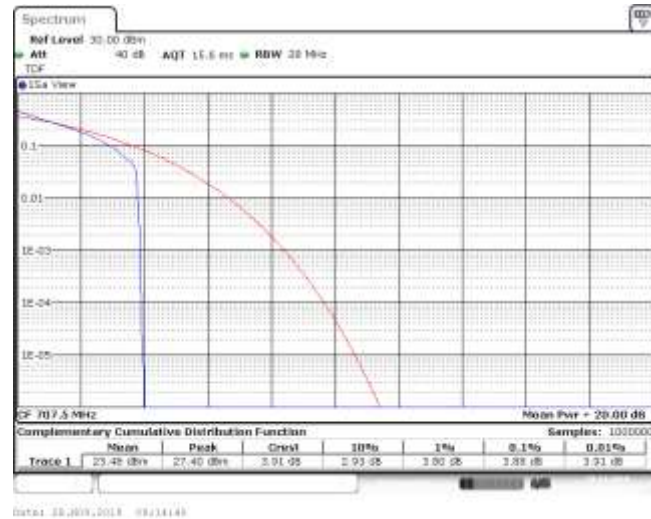
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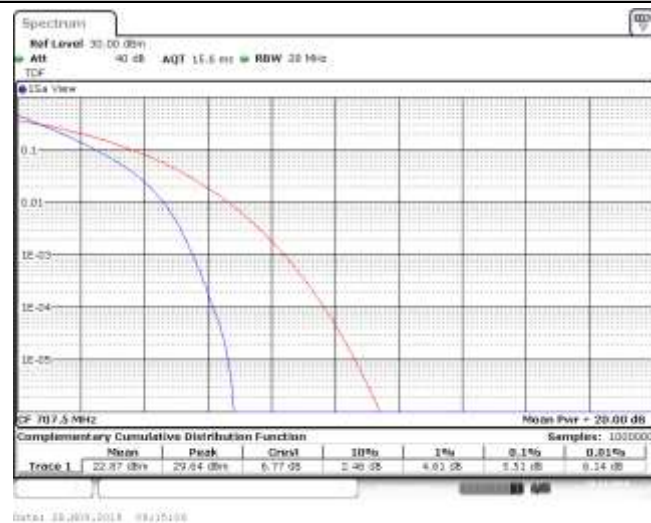
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Band12_10MHz_QPSK_23095_1RB#0



Band12_10MHz_QPSK_23095_50RB#0



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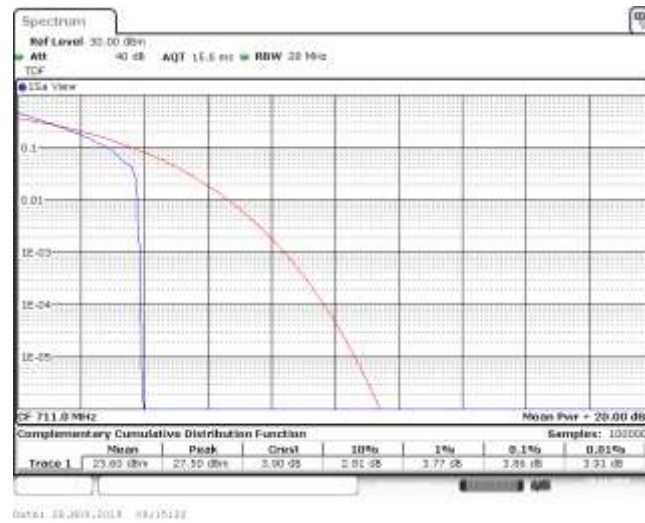
Tel.: (86)755-27521059

Fax: (86)755-27521011

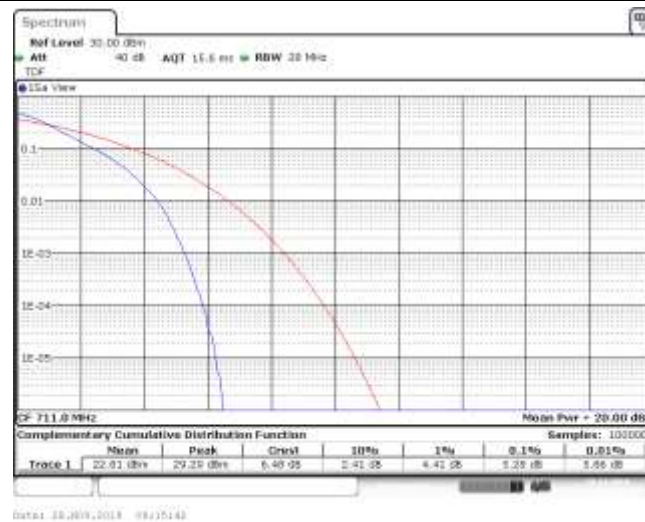
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Band12_10MHz_QPSK_23130_1RB#0



Band12_10MHz_QPSK_23130_50RB#0



Band12_10MHz_16QAM_23060_1RB#0

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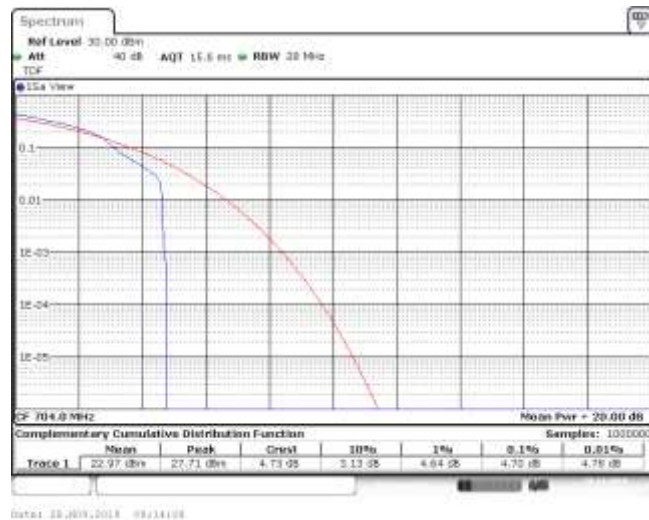
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Fax: (86)755-27521011

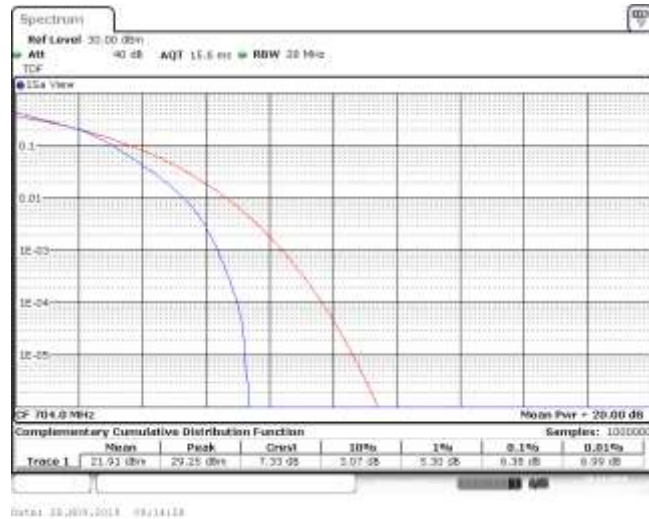
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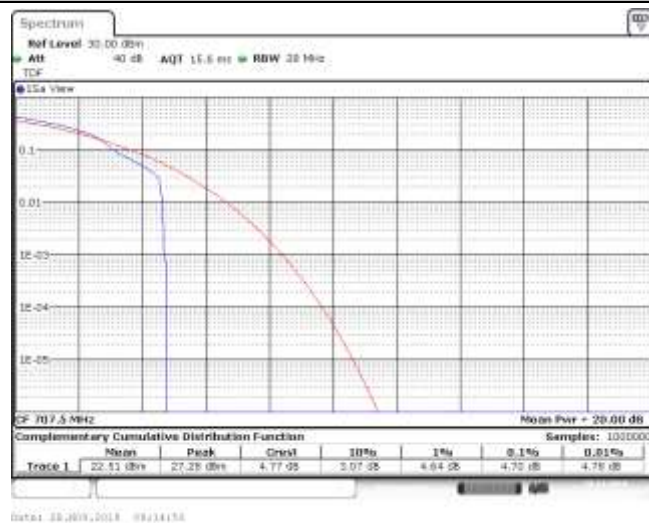
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Band12_10MHz_16QAM_23060_50RB#0



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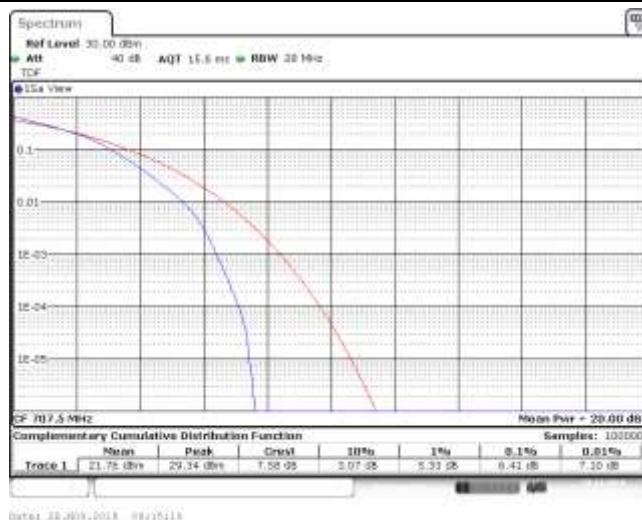
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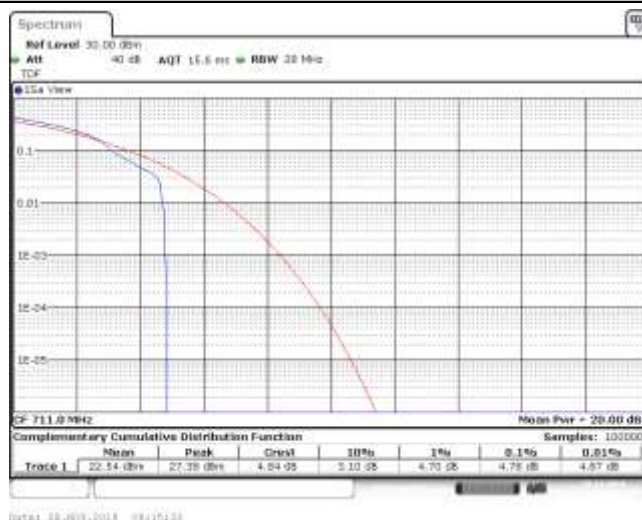
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Band12_10MHz_16QAM_23095_50RB#0



Band12_10MHz_16QAM_23130_1RB#0



Band12_10MHz_16QAM_23130_50RB#0

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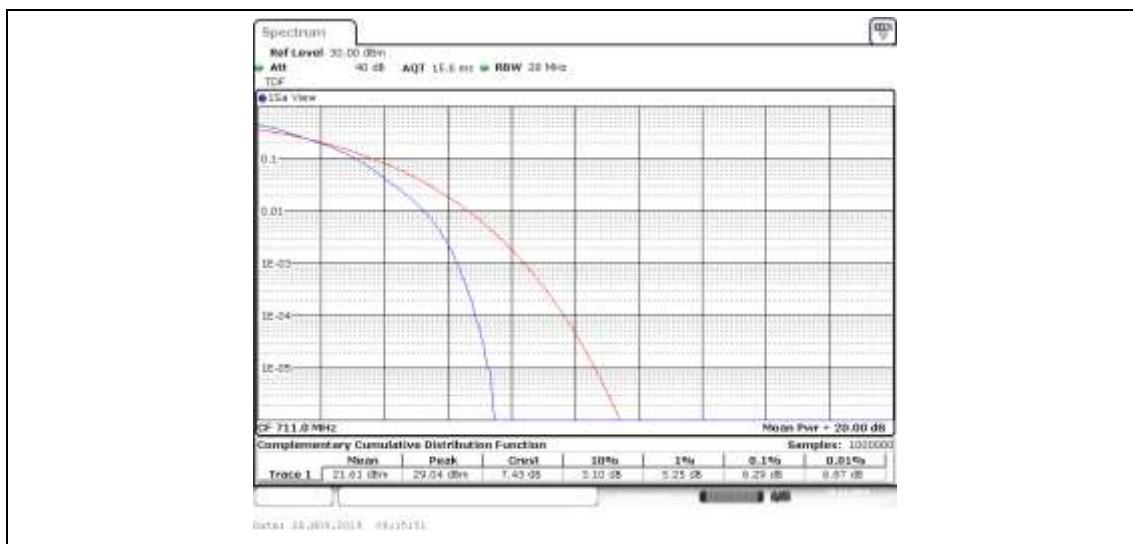
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Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.093	1.235	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.088	1.235	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.088	1.210	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.088	1.255	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.088	1.225	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.088	1.245	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.696	2.880	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.705	2.880	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.696	2.860	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.696	2.880	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.696	2.880	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.696	2.890	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.496	4.780	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.496	4.780	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.496	4.780	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.496	4.790	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.505	4.790	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.505	4.780	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.985	9.533	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.985	9.533	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.918	9.533	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.952	9.533	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.985	9.533	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.918	9.533	PASS

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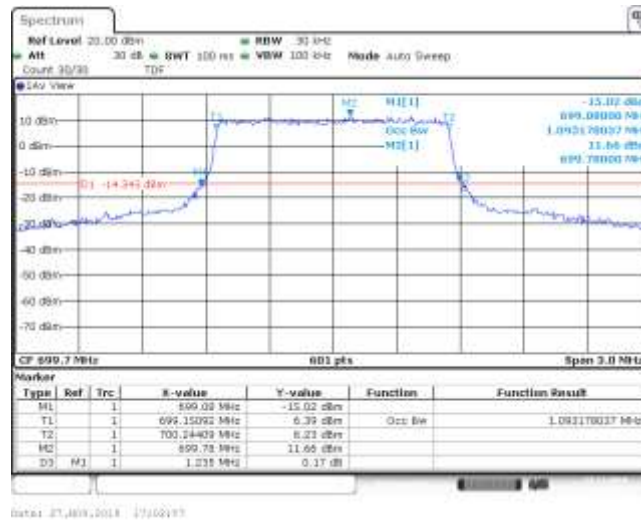
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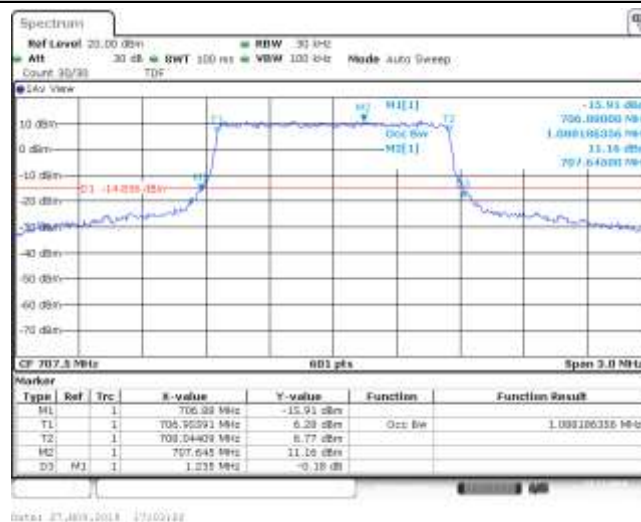

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Test Graphs

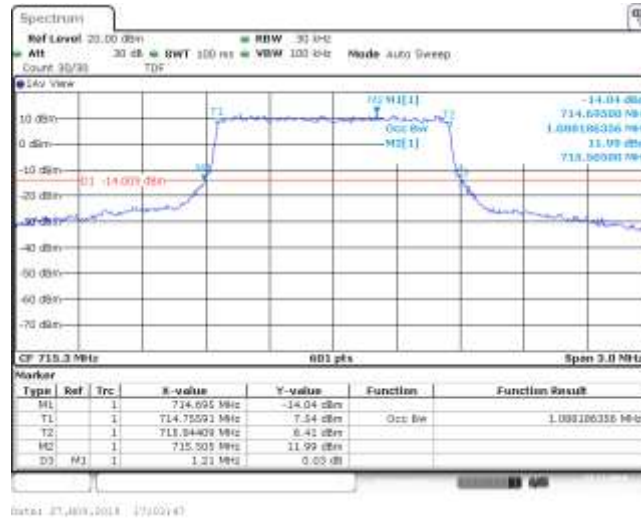
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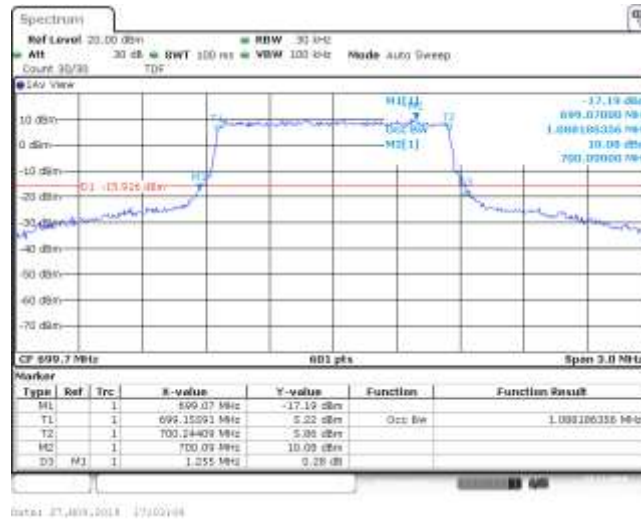
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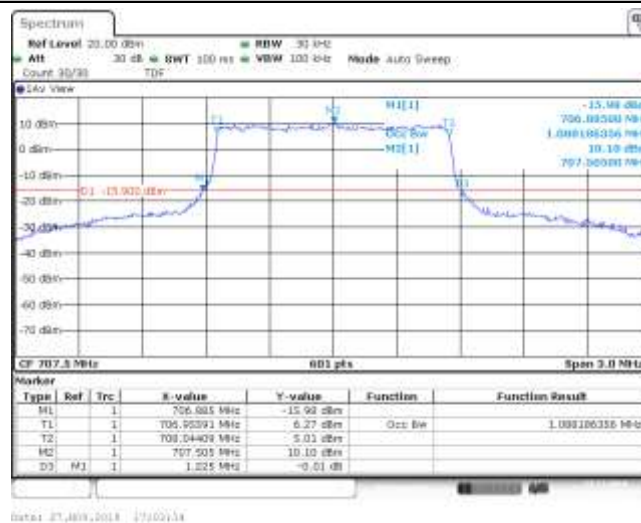
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Band12_1.4MHz_16QAM_23017_6RB#0



Band12_1.4MHz_16QAM_23095_6RB#0



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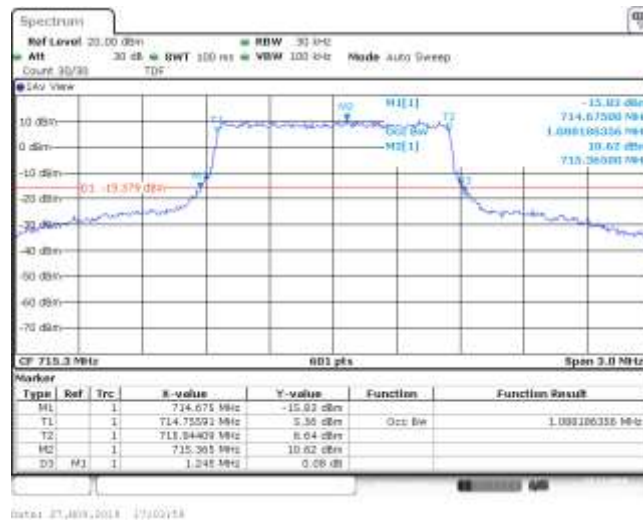
Tel.: (86)755-27521059

Fax: (86)755-27521011

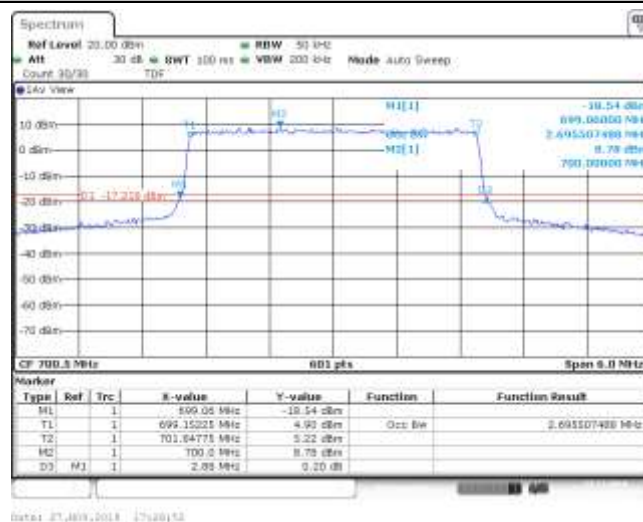
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Band12_1.4MHz_16QAM_23173_6RB#0



Band12_3MHz_QPSK_23025_15RB#0



Band12_3MHz_QPSK_23095_15RB#0

CTC Laboratories, Inc.

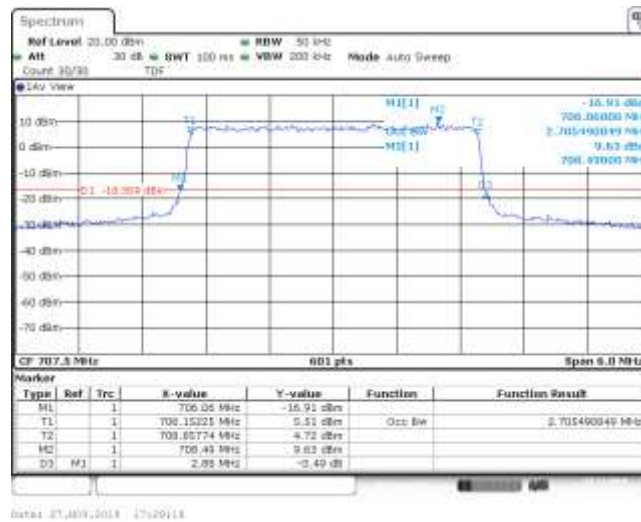
2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

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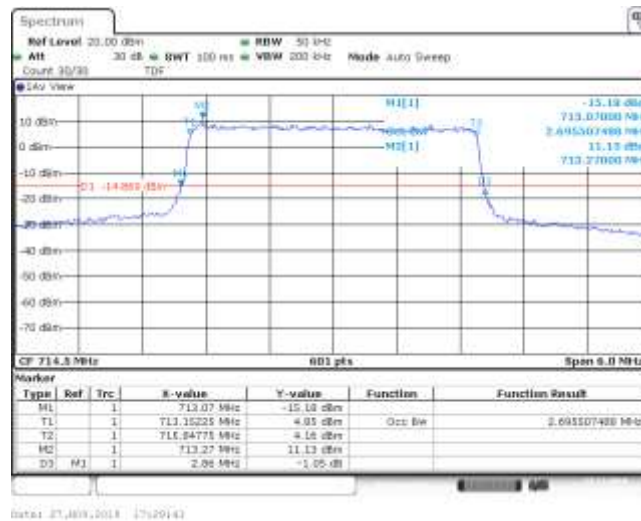
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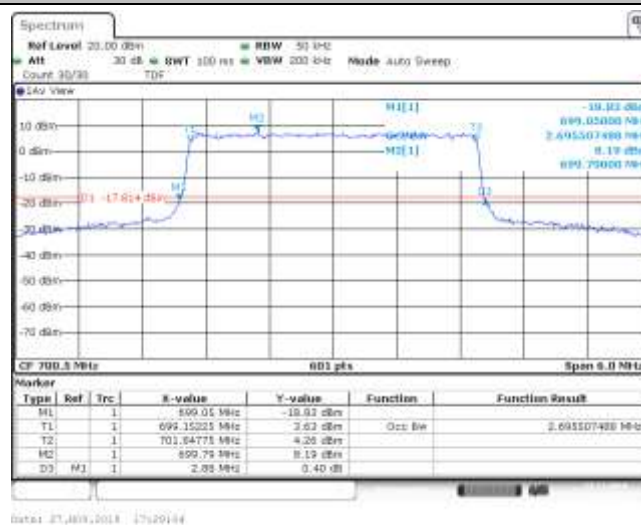

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Band12_3MHz_QPSK_23165_15RB#0



Band12_3MHz_16QAM_23025_15RB#0



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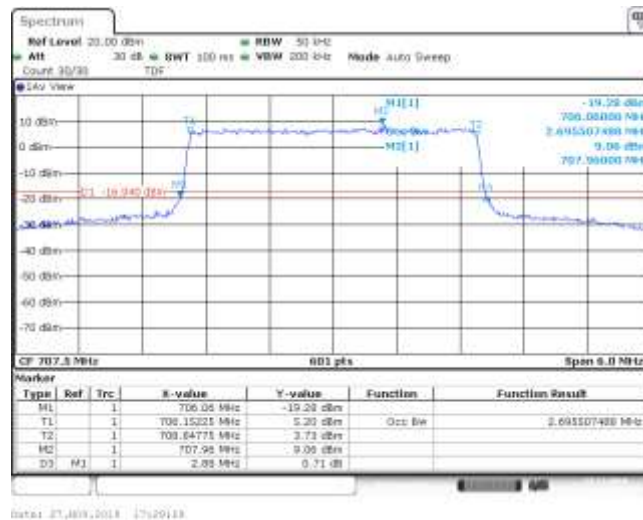
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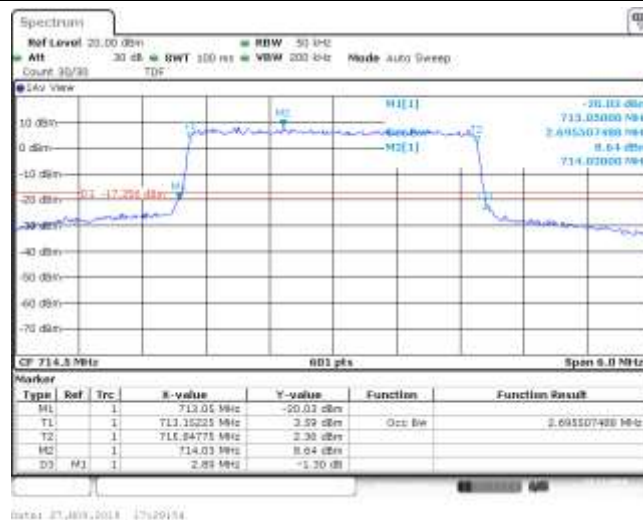
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Band12_3MHz_16QAM_23095_15RB#0



Band12_3MHz_16QAM_23165_15RB#0



Band12_5MHz_QPSK_23035_25RB#0

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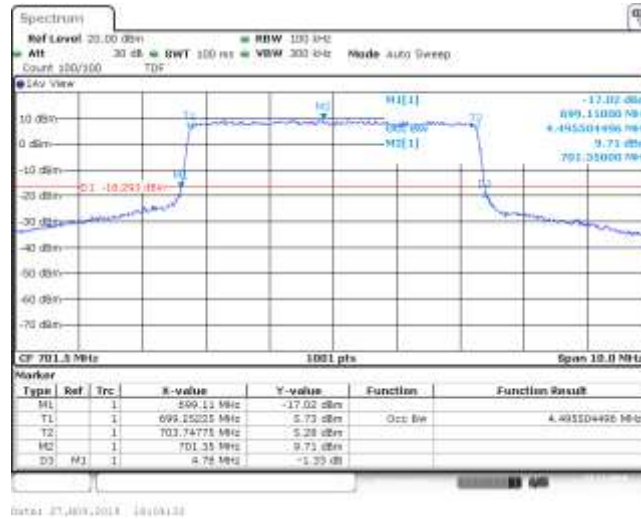
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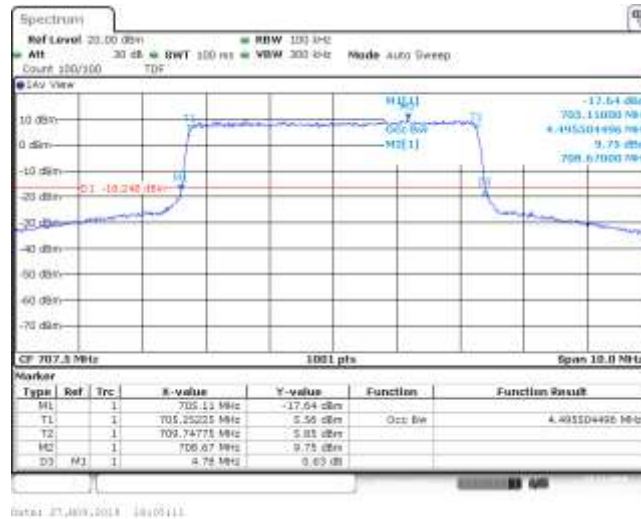
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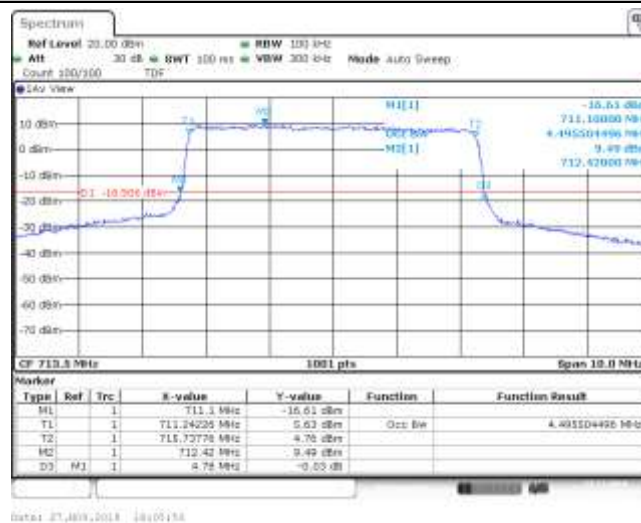

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Band12_5MHz_QPSK_23095_25RB#0



Band12_5MHz_QPSK_23155_25RB#0



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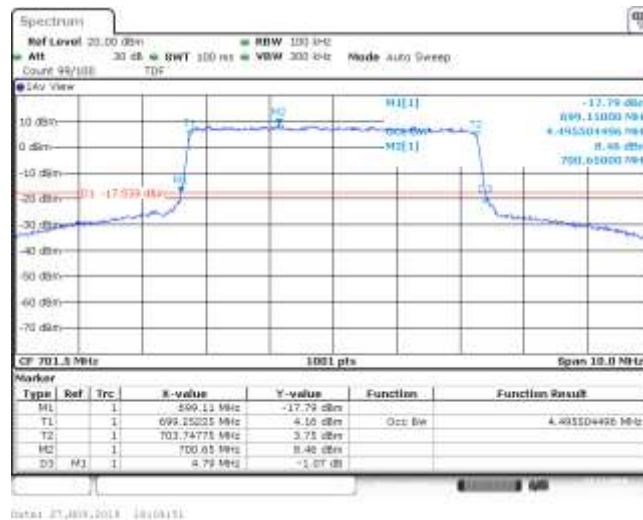
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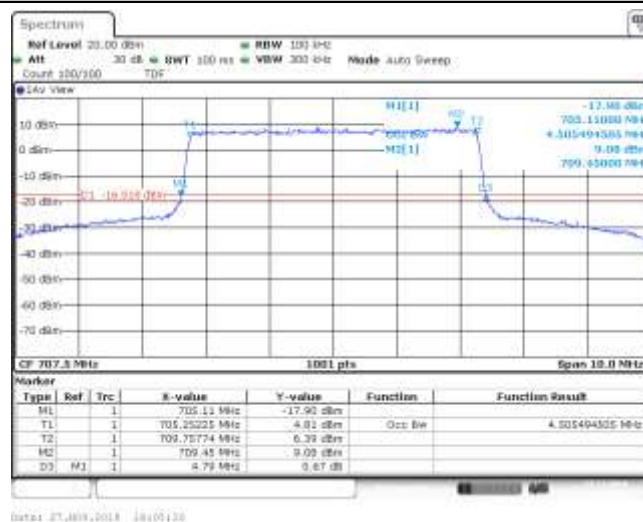
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Band12_5MHz_16QAM_23035_25RB#0



Band12_5MHz_16QAM_23095_25RB#0



Band12_5MHz_16QAM_23155_25RB#0

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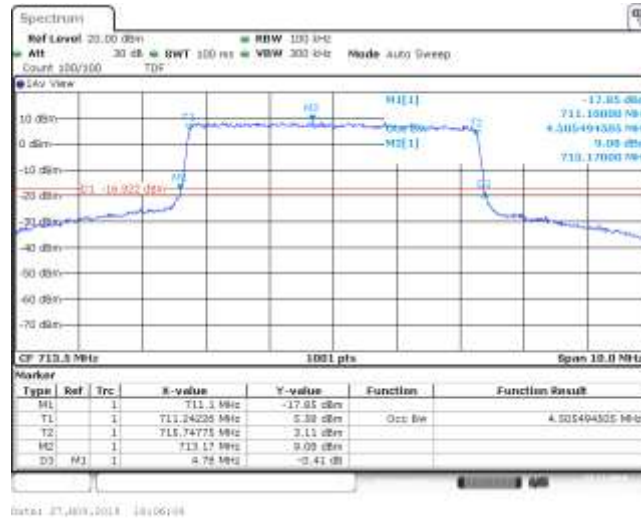
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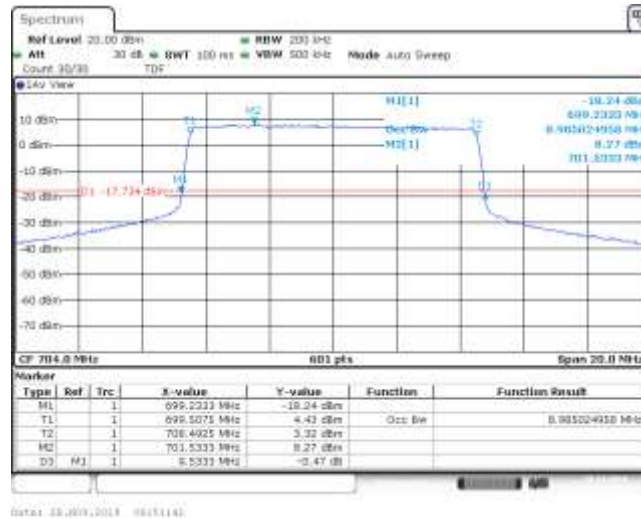
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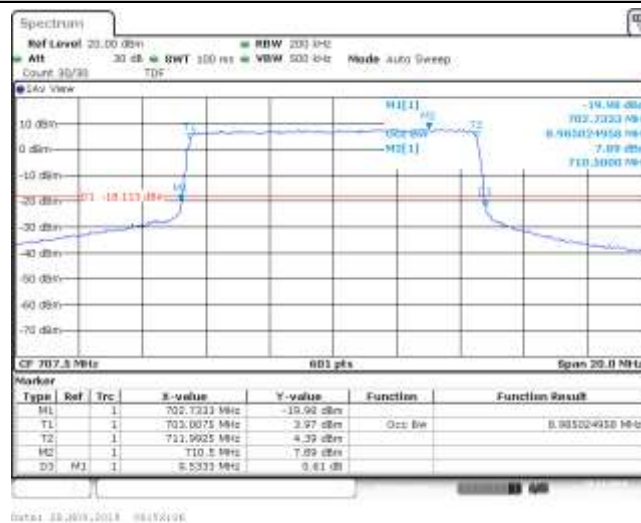
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Band12_10MHz_QPSK_23060_50RB#0



Band12_10MHz_QPSK_23095_50RB#0



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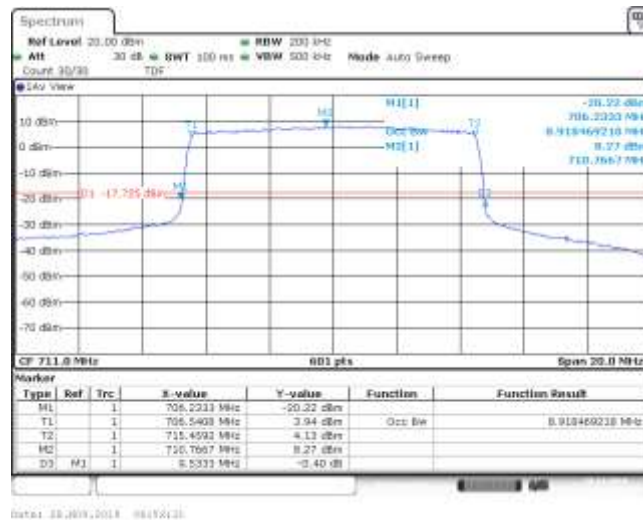
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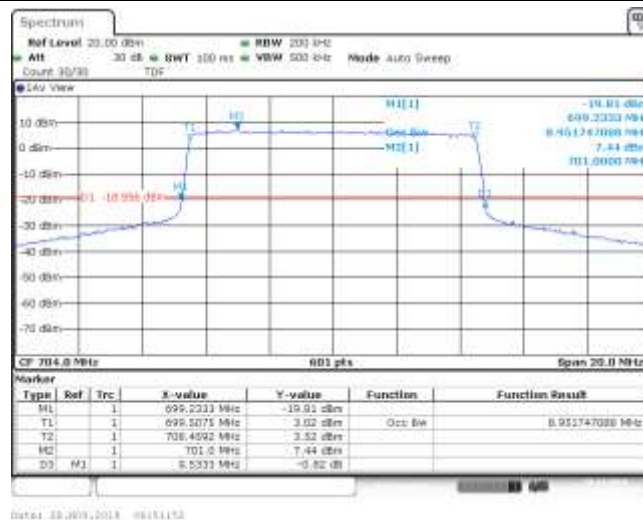
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Band12_10MHz_QPSK_23130_50RB#0



Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23095_50RB#0

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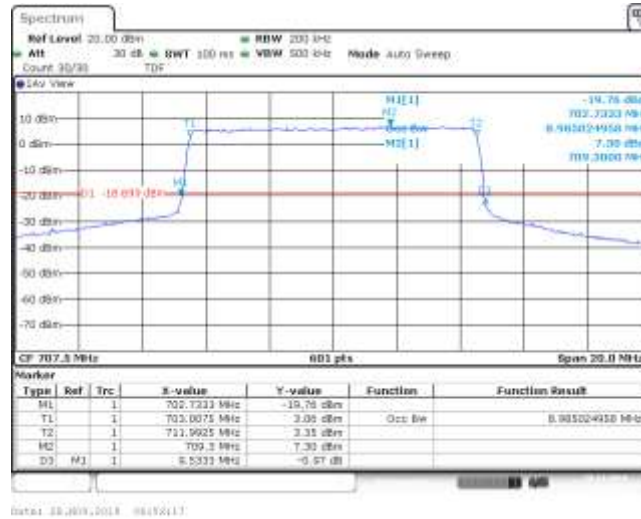
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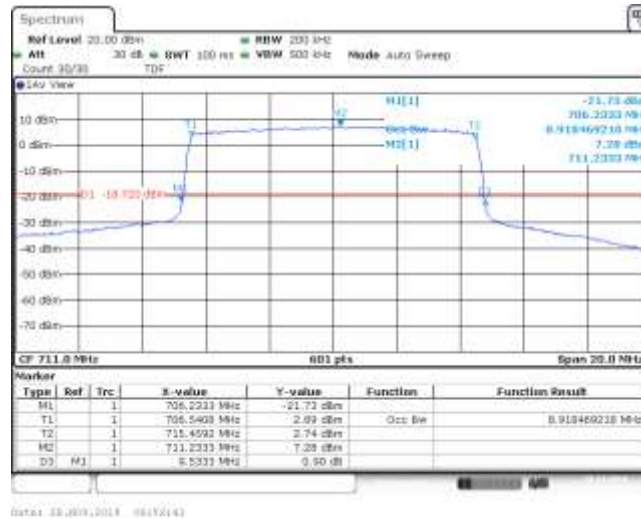


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Band12_10MHz_16QAM_23130_50RB#0



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Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	-16.04	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	-37.06	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	-47.13	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	-22.13	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	-39.73	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	-34.44	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	-15.94	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	-23.79	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	-19.12	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	-38.18	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	-48.09	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	-22.66	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	-40.22	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	-34.84	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	-18.28	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	-23.20	PASS
Band12	3MHz	QPSK	23025	1RB#0	-14.92	PASS
Band12	3MHz	QPSK	23025	1RB#8	-44.98	PASS
Band12	3MHz	QPSK	23025	1RB#14	-41.39	PASS
Band12	3MHz	QPSK	23025	15RB#0	-22.85	PASS
Band12	3MHz	QPSK	23165	1RB#0	-43.60	PASS
Band12	3MHz	QPSK	23165	1RB#8	-43.71	PASS
Band12	3MHz	QPSK	23165	1RB#14	-14.94	PASS
Band12	3MHz	QPSK	23165	15RB#0	-23.80	PASS
Band12	3MHz	16QAM	23025	1RB#0	-15.18	PASS
Band12	3MHz	16QAM	23025	1RB#8	-44.68	PASS
Band12	3MHz	16QAM	23025	1RB#14	-42.58	PASS
Band12	3MHz	16QAM	23025	15RB#0	-22.49	PASS
Band12	3MHz	16QAM	23165	1RB#0	-42.75	PASS
Band12	3MHz	16QAM	23165	1RB#8	-44.23	PASS
Band12	3MHz	16QAM	23165	1RB#14	-16.41	PASS
Band12	3MHz	16QAM	23165	15RB#0	-24.76	PASS
Band12	5MHz	QPSK	23035	1RB#0	-15.56	PASS
Band12	5MHz	QPSK	23035	1RB#12	-44.12	PASS

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Band12	5MHz	QPSK	23035	1RB#24	-50.56	PASS
Band12	5MHz	QPSK	23035	25RB#0	-22.92	PASS
Band12	5MHz	QPSK	23155	1RB#0	-50.92	PASS
Band12	5MHz	QPSK	23155	1RB#12	-44.42	PASS
Band12	5MHz	QPSK	23155	1RB#24	-16.11	PASS
Band12	5MHz	QPSK	23155	25RB#0	-24.99	PASS
Band12	5MHz	16QAM	23035	1RB#0	-17.67	PASS
Band12	5MHz	16QAM	23035	1RB#12	-44.23	PASS
Band12	5MHz	16QAM	23035	1RB#24	-50.63	PASS
Band12	5MHz	16QAM	23035	25RB#0	-23.51	PASS
Band12	5MHz	16QAM	23155	1RB#0	-51.33	PASS
Band12	5MHz	16QAM	23155	1RB#12	-45.04	PASS
Band12	5MHz	16QAM	23155	1RB#24	-18.37	PASS
Band12	5MHz	16QAM	23155	25RB#0	-25.44	PASS
Band12	10MHz	QPSK	23060	1RB#0	-26.62	PASS
Band12	10MHz	QPSK	23060	1RB#24	-48.87	PASS
Band12	10MHz	QPSK	23060	1RB#49	-44.37	PASS
Band12	10MHz	QPSK	23060	50RB#0	-25.07	PASS
Band12	10MHz	QPSK	23130	1RB#0	-45.49	PASS
Band12	10MHz	QPSK	23130	1RB#24	-49.21	PASS
Band12	10MHz	QPSK	23130	1RB#49	-28.47	PASS
Band12	10MHz	QPSK	23130	50RB#0	-27.73	PASS
Band12	10MHz	16QAM	23060	1RB#0	-26.44	PASS
Band12	10MHz	16QAM	23060	1RB#24	-49.28	PASS
Band12	10MHz	16QAM	23060	1RB#49	-43.91	PASS
Band12	10MHz	16QAM	23060	50RB#0	-26.50	PASS
Band12	10MHz	16QAM	23130	1RB#0	-45.28	PASS
Band12	10MHz	16QAM	23130	1RB#24	-49.75	PASS
Band12	10MHz	16QAM	23130	1RB#49	-28.52	PASS
Band12	10MHz	16QAM	23130	50RB#0	-28.25	PASS

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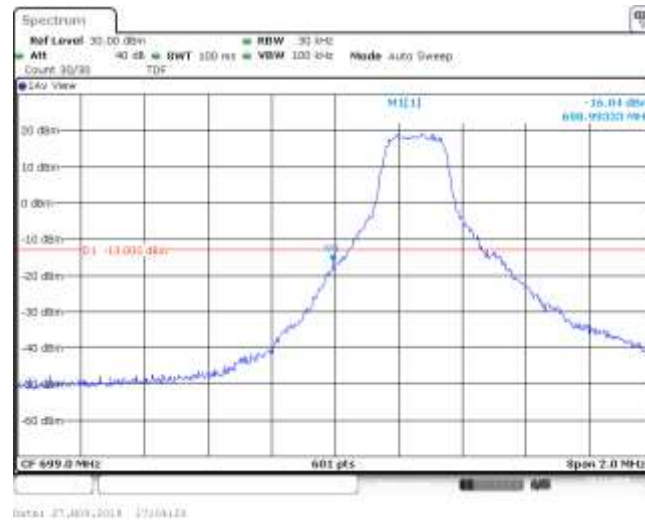
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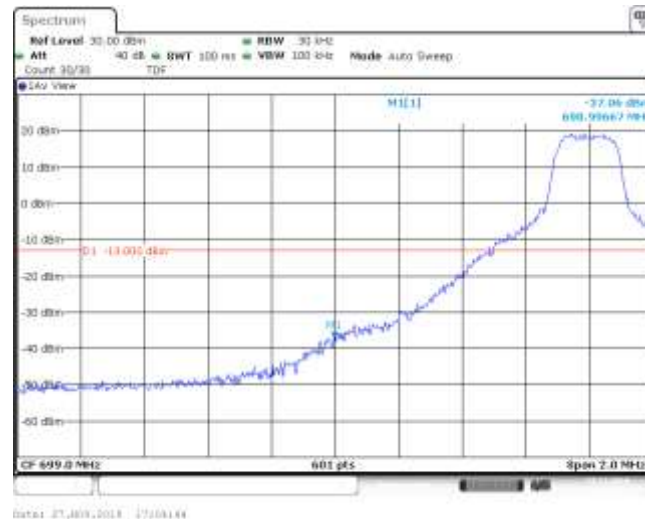
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Test Graphs

Band12_1.4MHz_QPSK_23017_1RB#0



Band12_1.4MHz_QPSK_23017_1RB#2



Band12_1.4MHz_QPSK_23017_1RB#5

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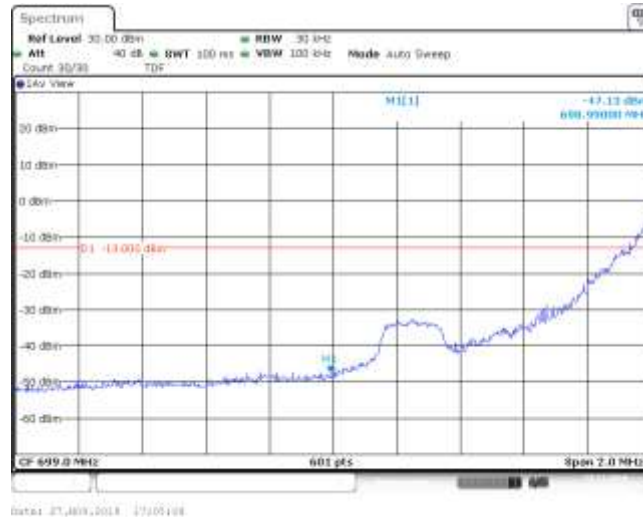
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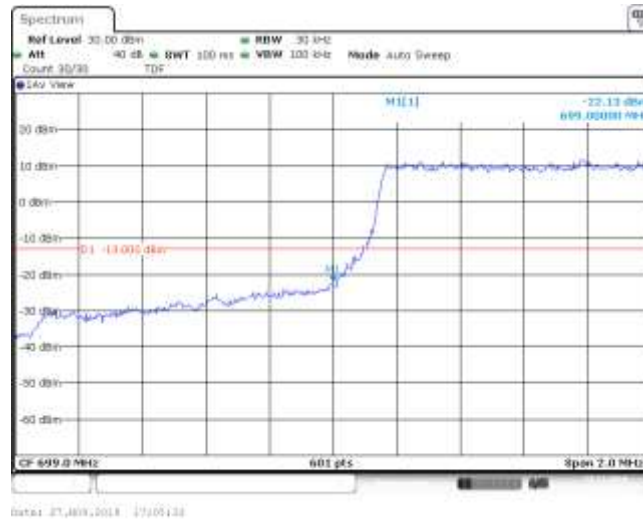
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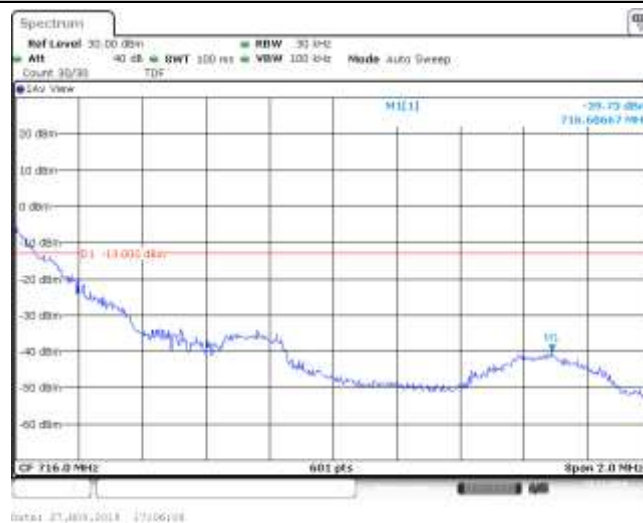
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Band12_1.4MHz_QPSK_23017_6RB#0



Band12_1.4MHz_QPSK_23173_1RB#0



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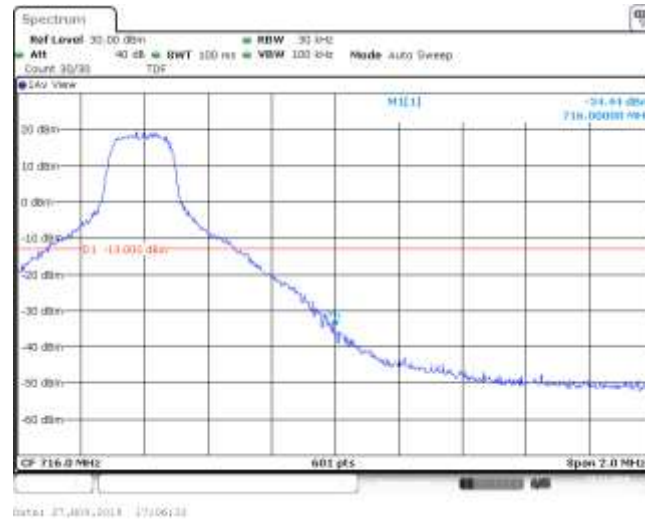
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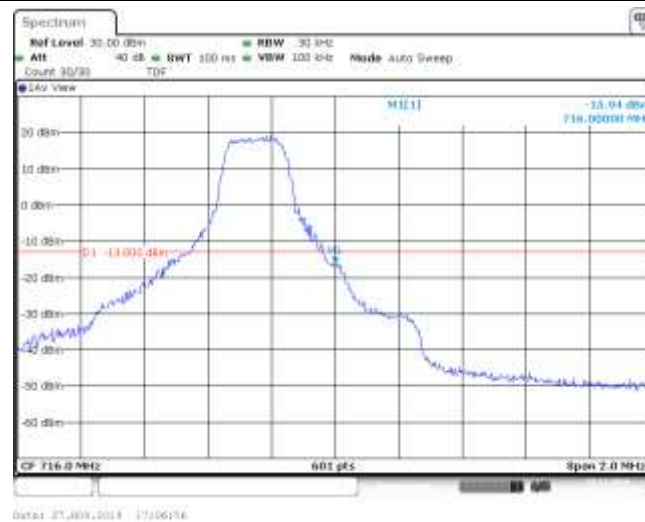
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Band12_1.4MHz_QPSK_23173_1RB#5



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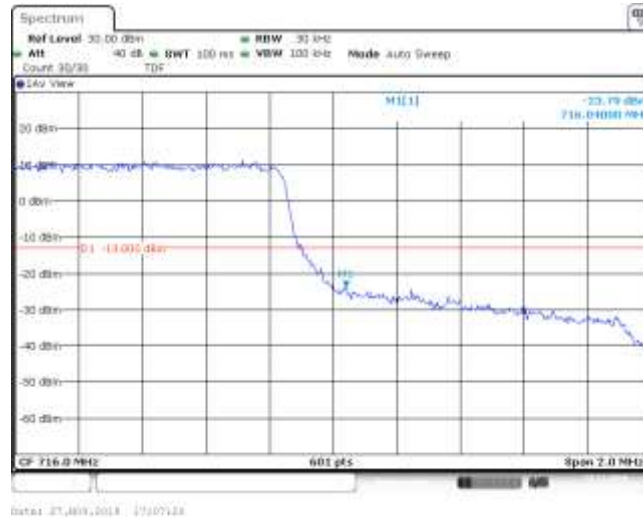
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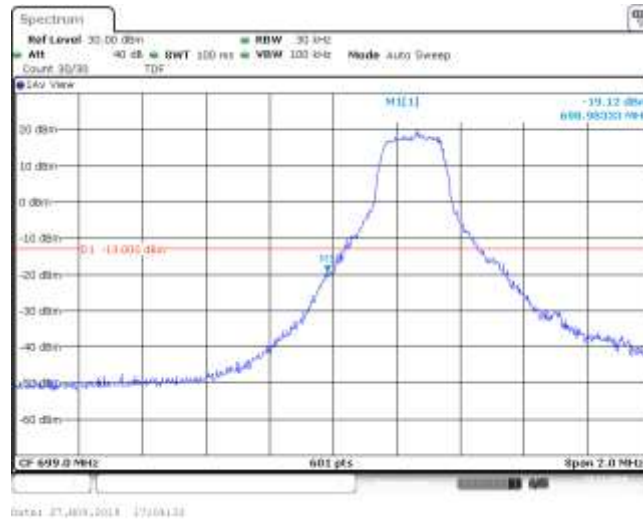
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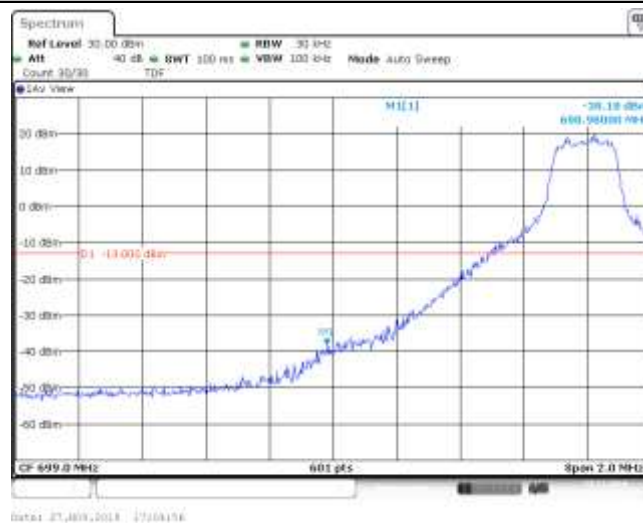
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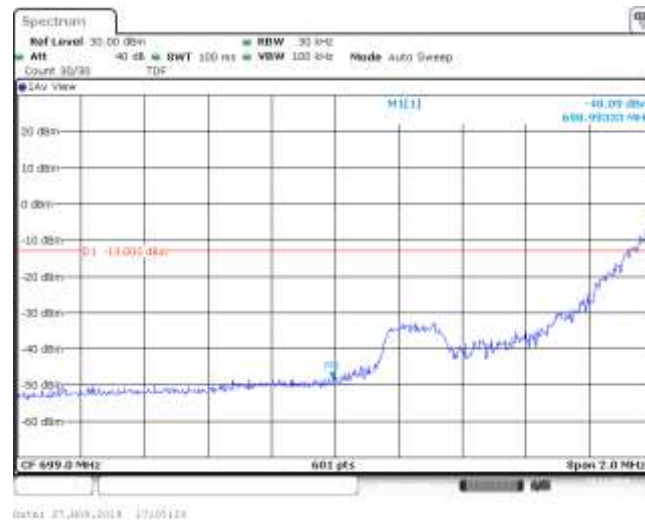
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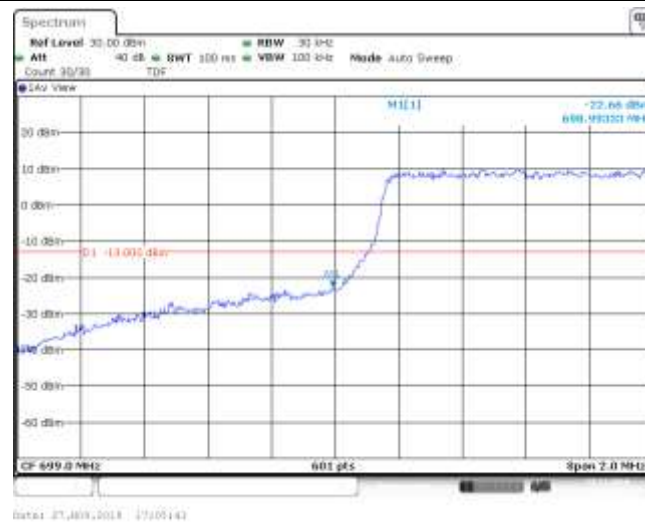
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Band12_1.4MHz_16QAM_23017_1RB#5



Band12_1.4MHz_16QAM_23017_6RB#0



Band12_1.4MHz_16QAM_23173_1RB#0

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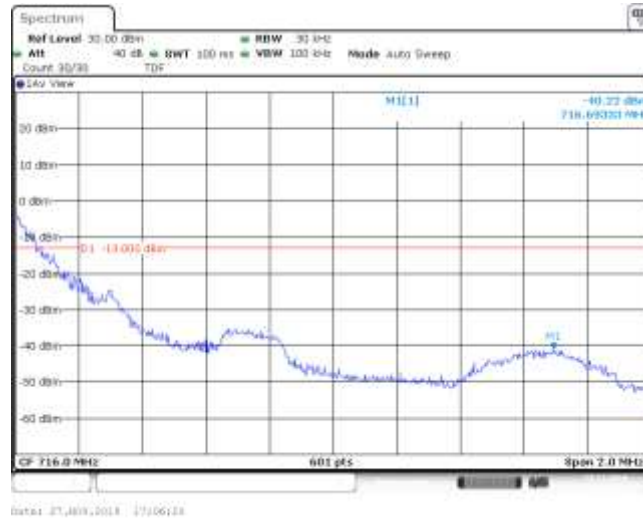
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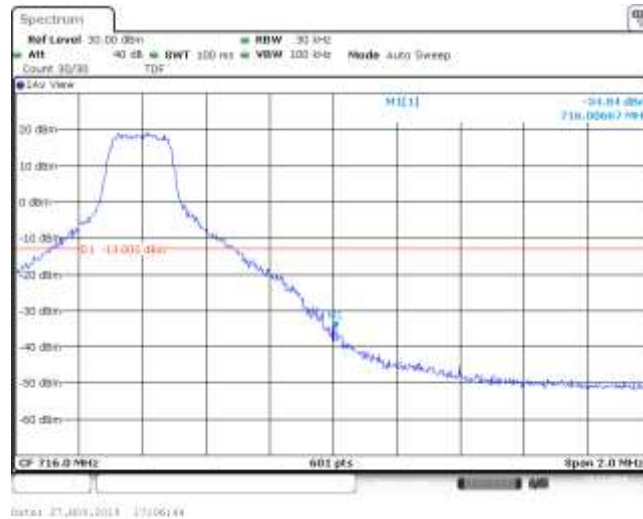
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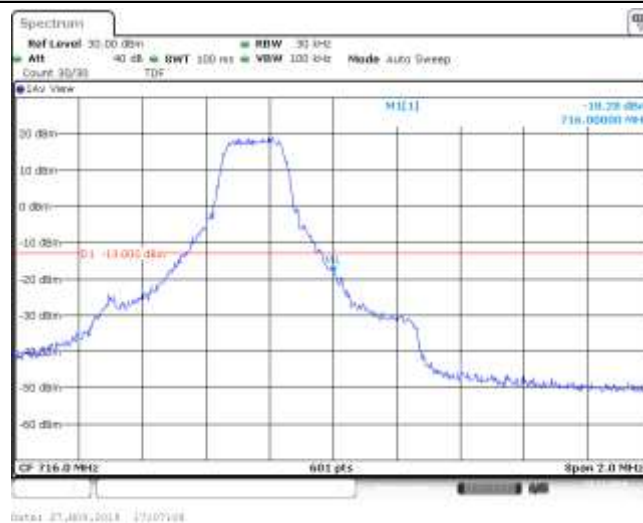
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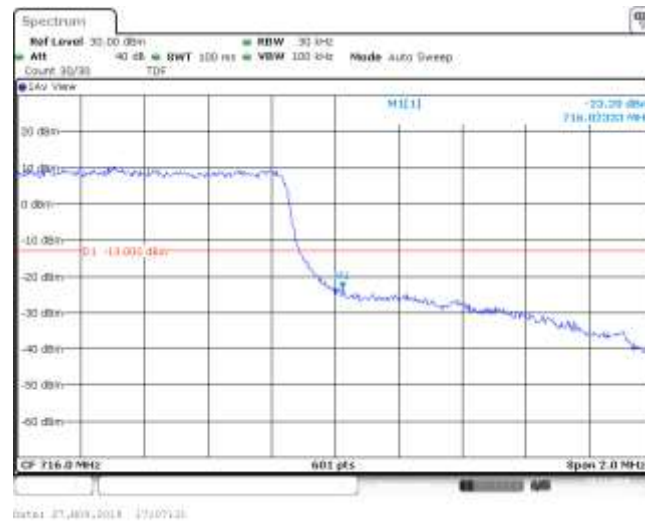
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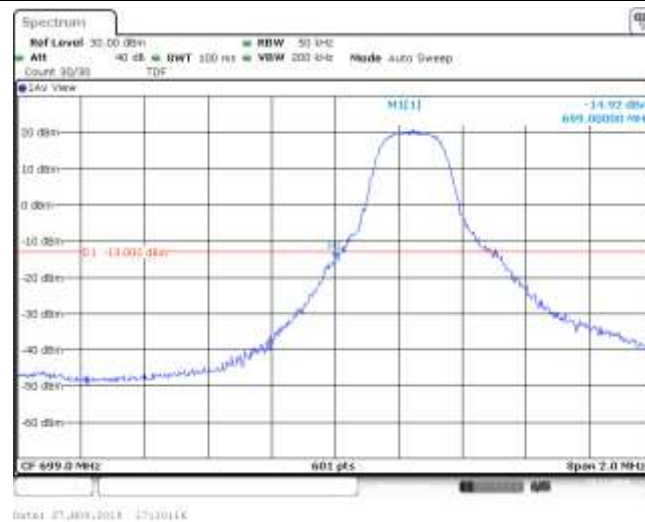


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Band12_3MHz_QPSK_23025_1RB#0



Band12_3MHz_QPSK_23025_1RB#8

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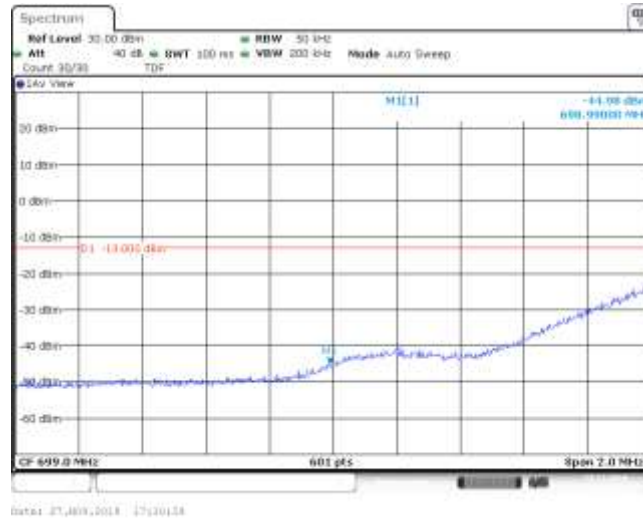
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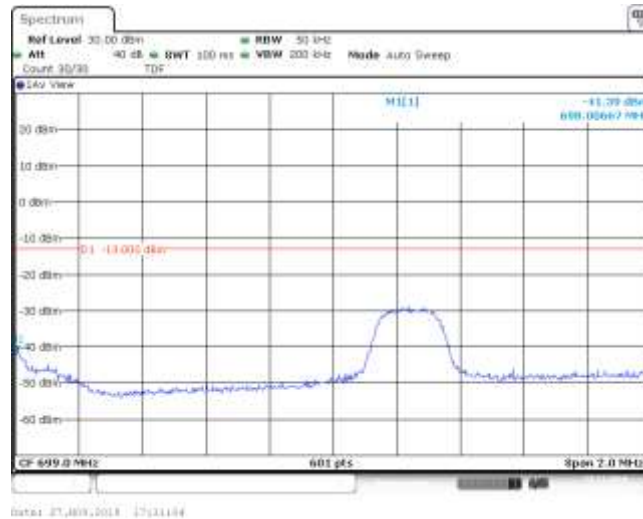
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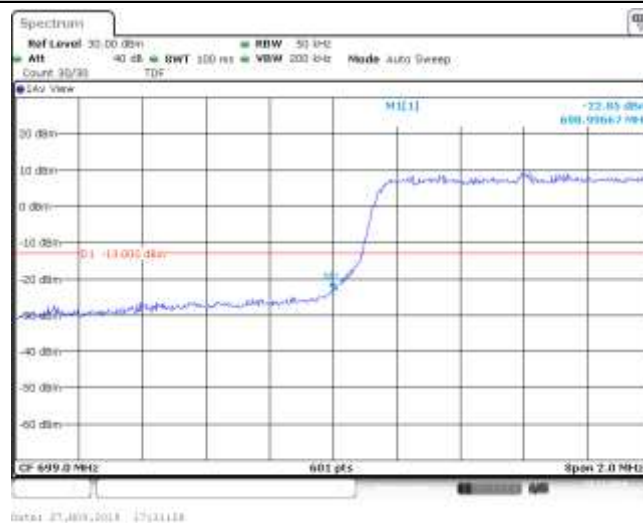
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Band12_3MHz_QPSK_23025_1RB#14



Band12_3MHz_QPSK_23025_15RB#0



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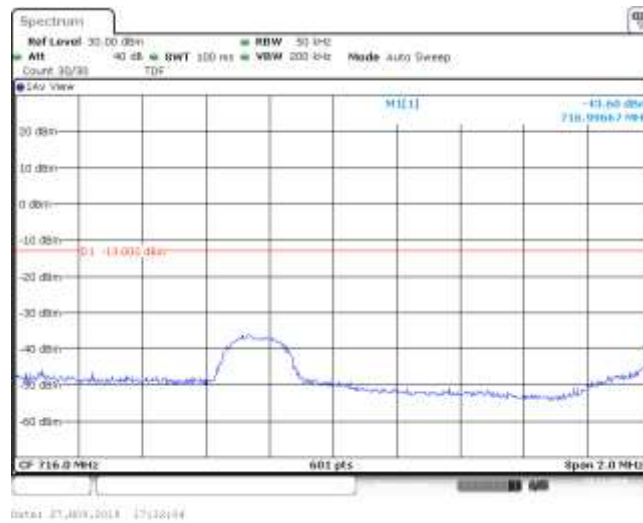
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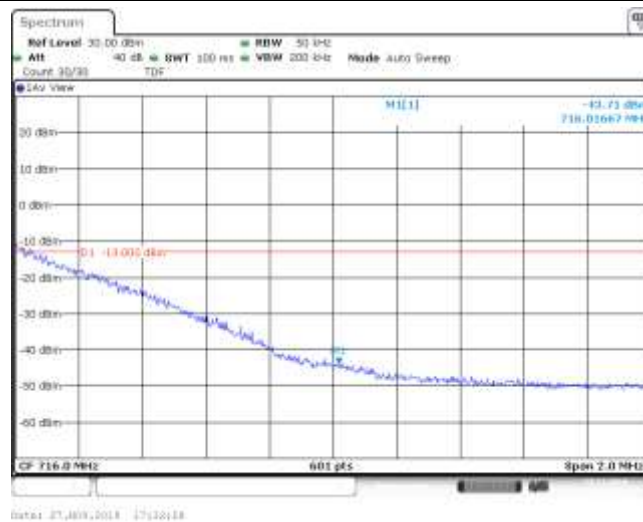
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Band12_3MHz_QPSK_23165_1RB#0



Band12_3MHz_QPSK_23165_1RB#8



Band12_3MHz_QPSK_23165_1RB#14

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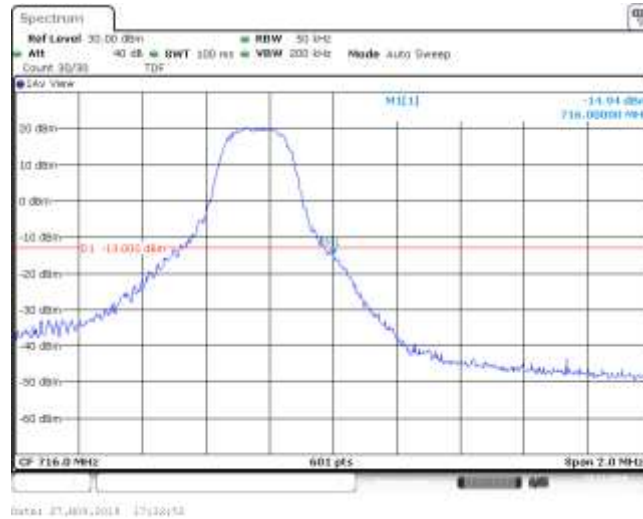
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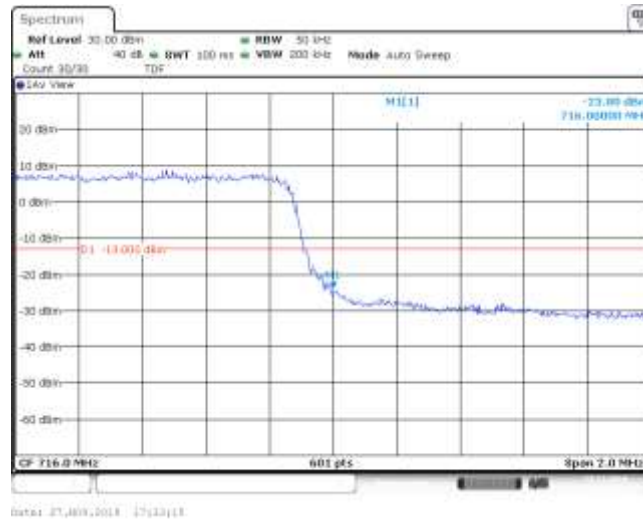
Http://www.sz-ctc.org.cn



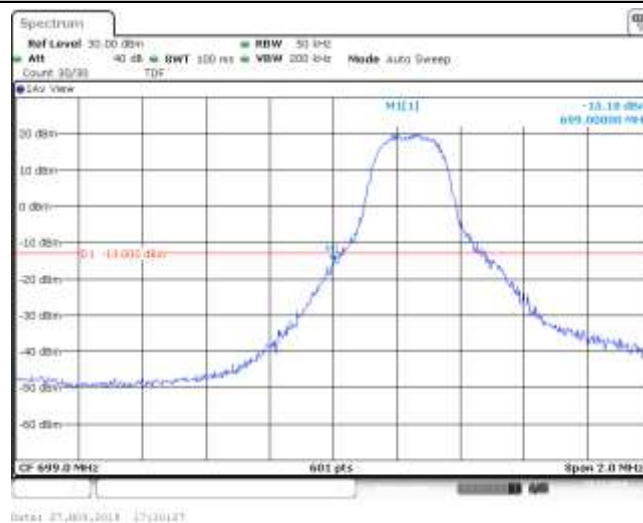
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Band12_3MHz_QPSK_23165_15RB#0



Band12_3MHz_16QAM_23025_1RB#0



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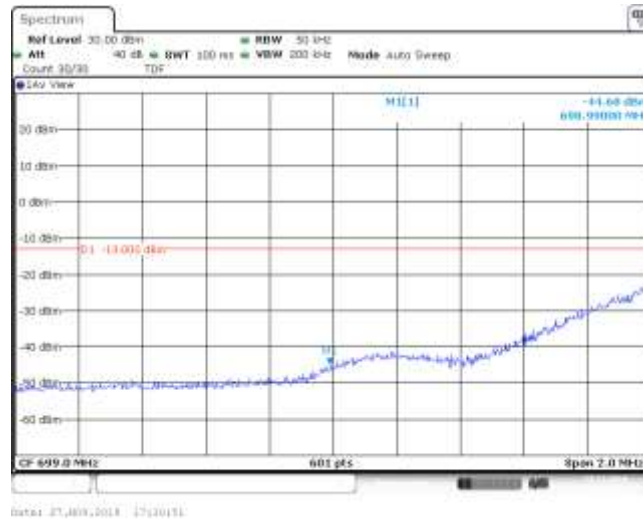
Tel.: (86)755-27521059

Fax: (86)755-27521011

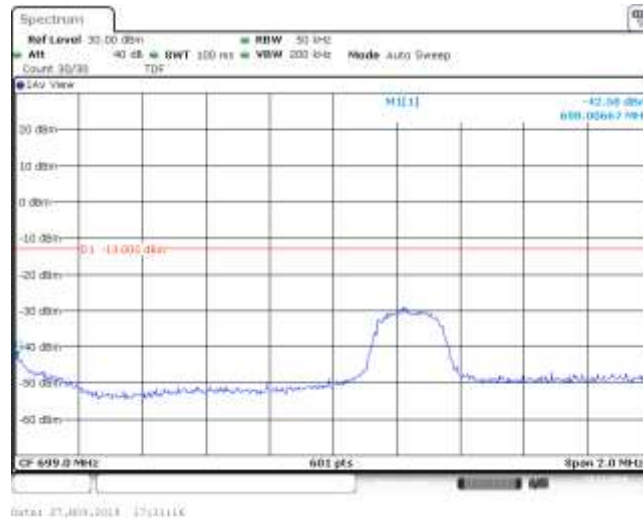
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Band12_3MHz_16QAM_23025_1RB#8



Band12_3MHz_16QAM_23025_1RB#14



Band12_3MHz_16QAM_23025_15RB#0

CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

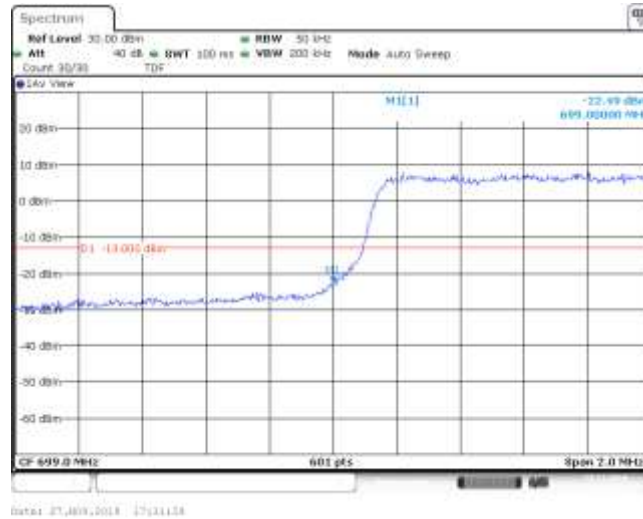
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Fax: (86)755-27521011

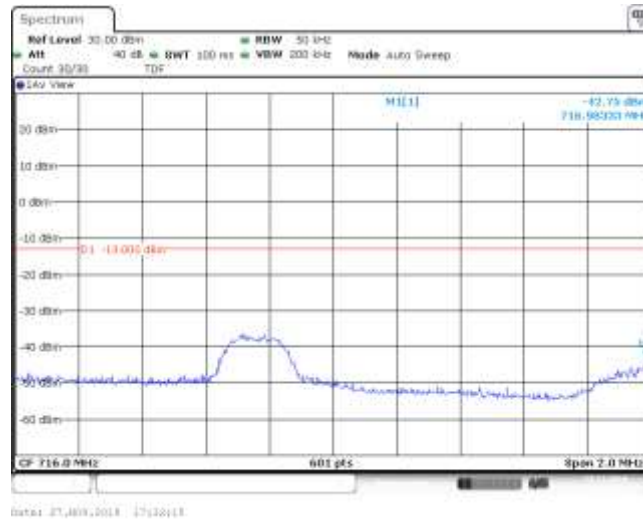
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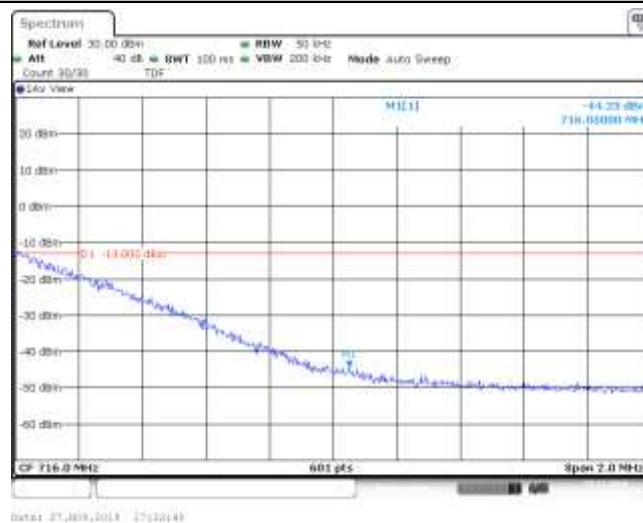
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Band12_3MHz_16QAM_23165_1RB#0



Band12_3MHz_16QAM_23165_1RB#8



CTC Laboratories, Inc.

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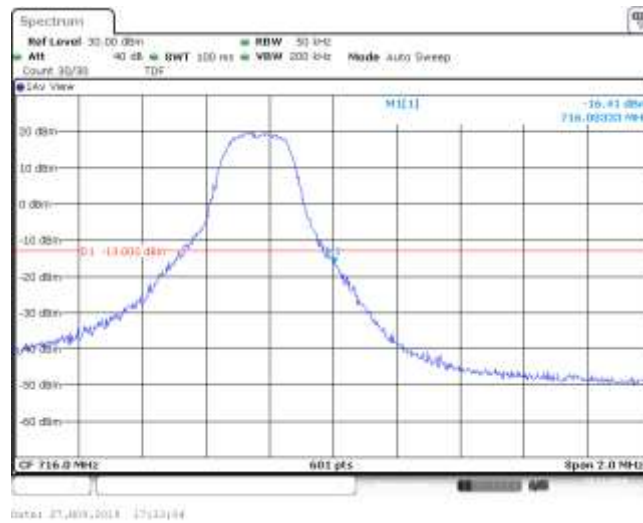
Tel.: (86)755-27521059

Fax: (86)755-27521011

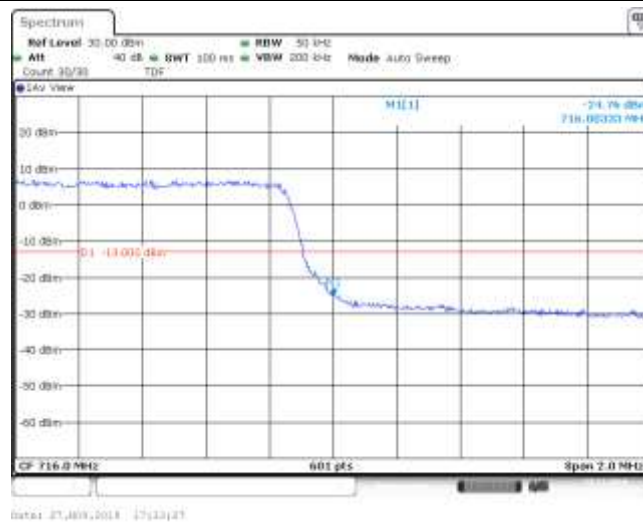
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Band12_3MHz_16QAM_23165_1RB#14



Band12_3MHz_16QAM_23165_15RB#0



Band12_5MHz_QPSK_23035_1RB#0

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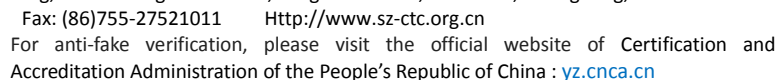
Tel.: (86)755-27521059

Fax: (86)755-27521011

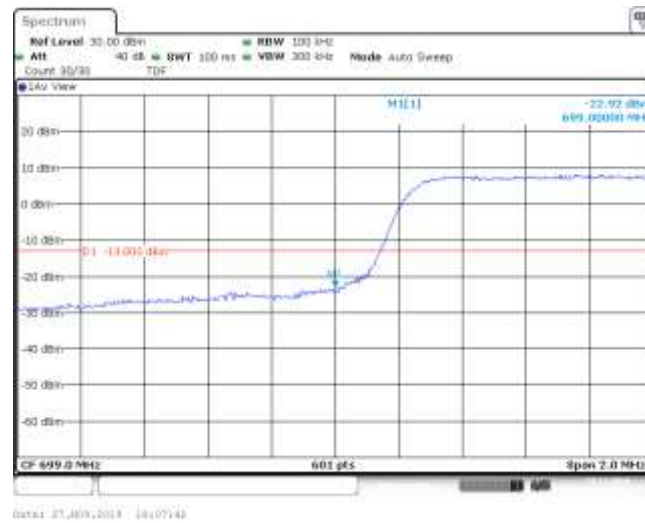
Http://www.sz-ctc.org.cn



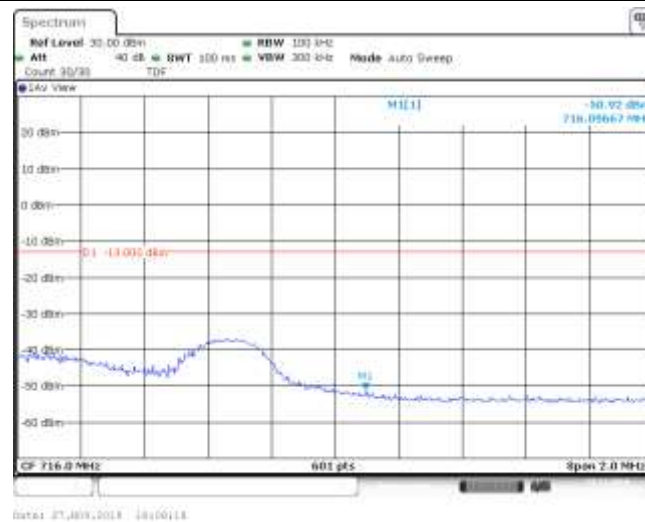
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : www.cnca.cn



Band12_5MHz_QPSK_23035_25RB#0



Band12_5MHz_QPSK_23155_1RB#0



Band12_5MHz_QPSK_23155_1RB#12

CTC Laboratories, Inc.

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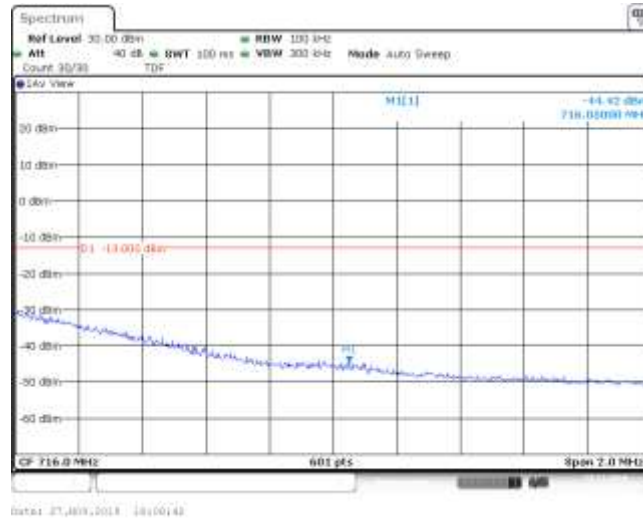
Tel.: (86)755-27521059

Fax: (86)755-27521011

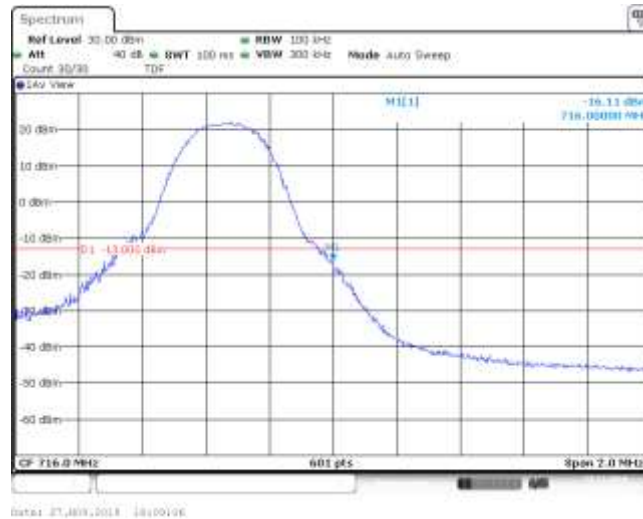
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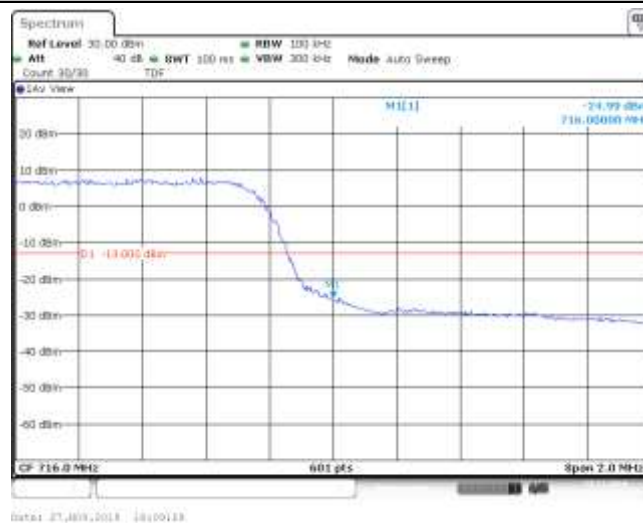
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : yz.cnca.cn



Band12_5MHz_QPSK_23155_1RB#24



Band12_5MHz_QPSK_23155_25RB#0



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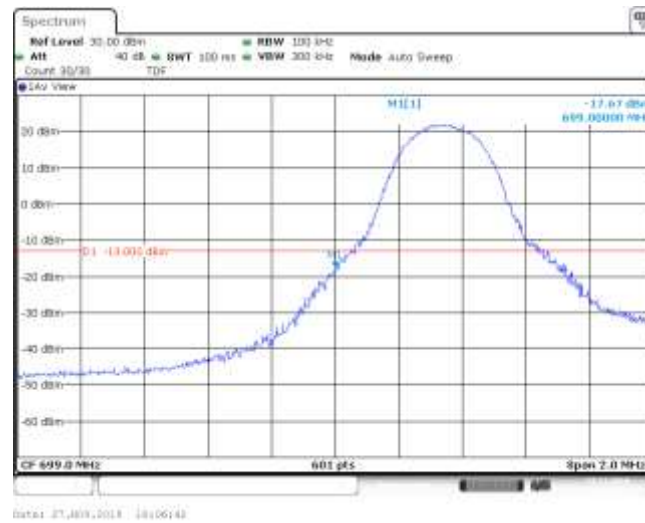
2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

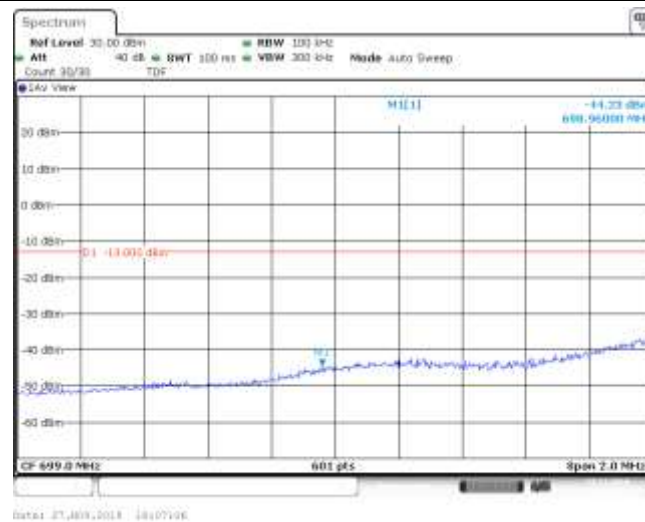
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

Band12_5MHz_16QAM_23035_1RB#0



Band12_5MHz_16QAM_23035_1RB#12



Band12_5MHz_16QAM_23035_1RB#24

CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

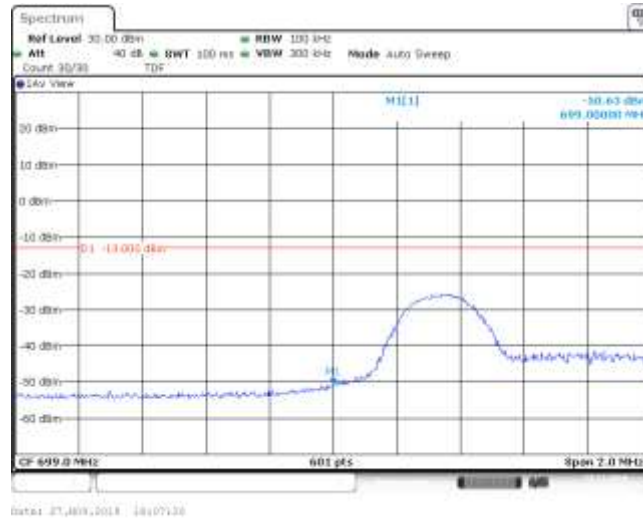
Tel.: (86)755-27521059

Fax: (86)755-27521011

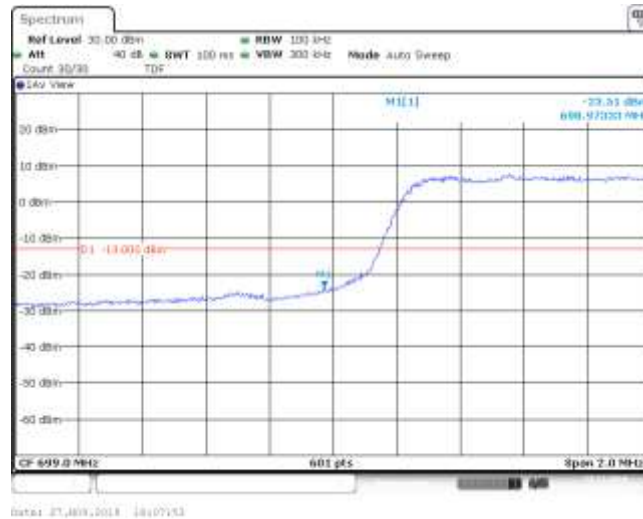
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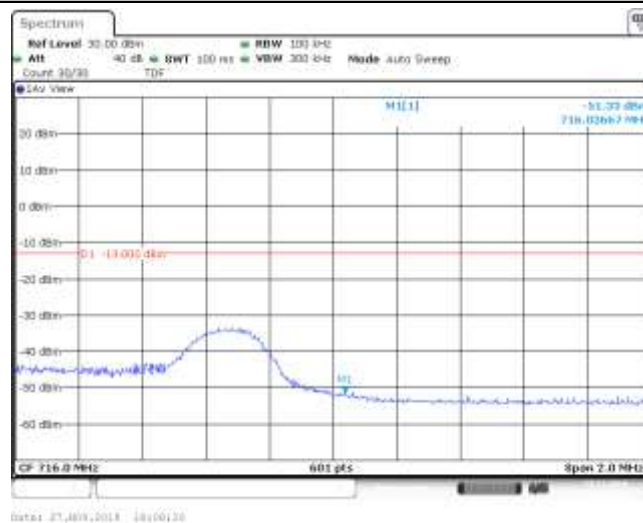
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Band12_5MHz_16QAM_23035_25RB#0



Band12_5MHz_16QAM_23155_1RB#0



CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

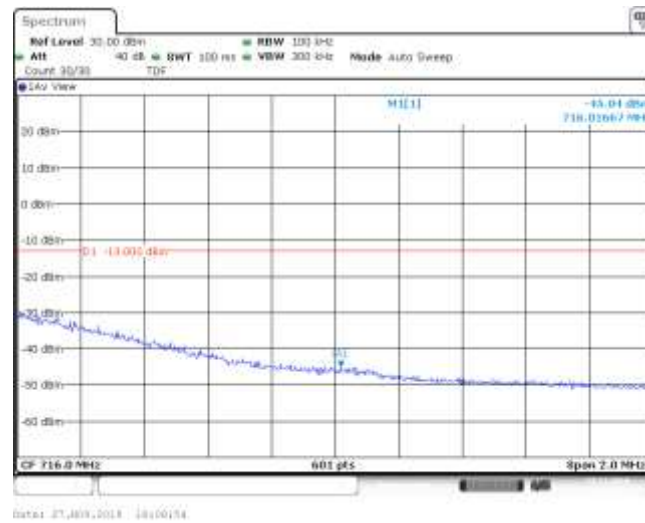
Tel.: (86)755-27521059

Fax: (86)755-27521011

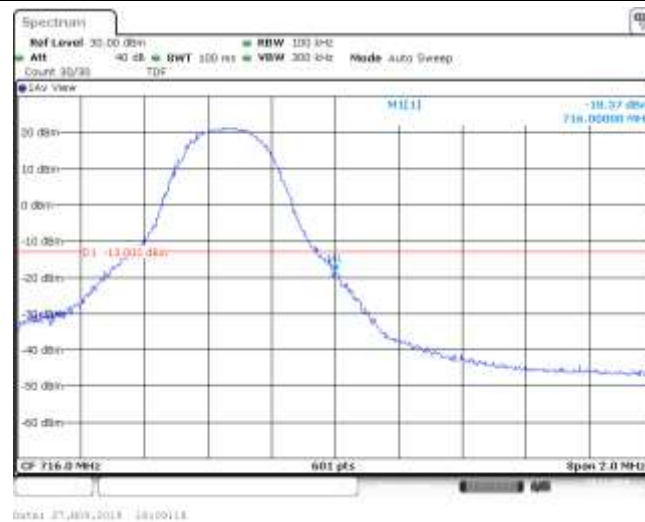
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Band12_5MHz_16QAM_23155_1RB#12



Band12_5MHz_16QAM_23155_1RB#24



Band12_5MHz_16QAM_23155_25RB#0

CTC Laboratories, Inc.

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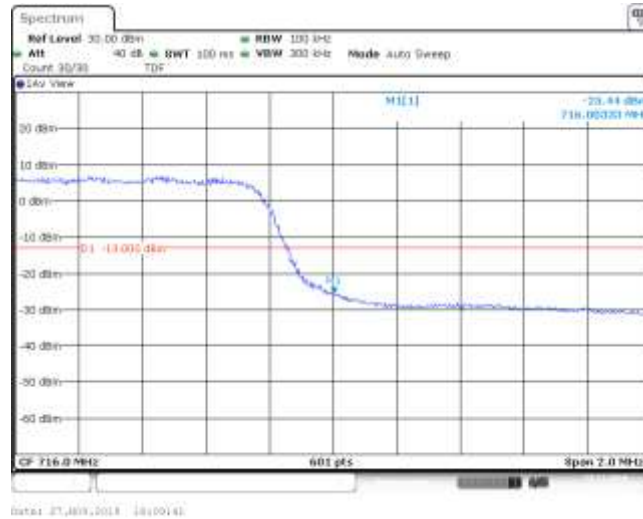
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Fax: (86)755-27521011

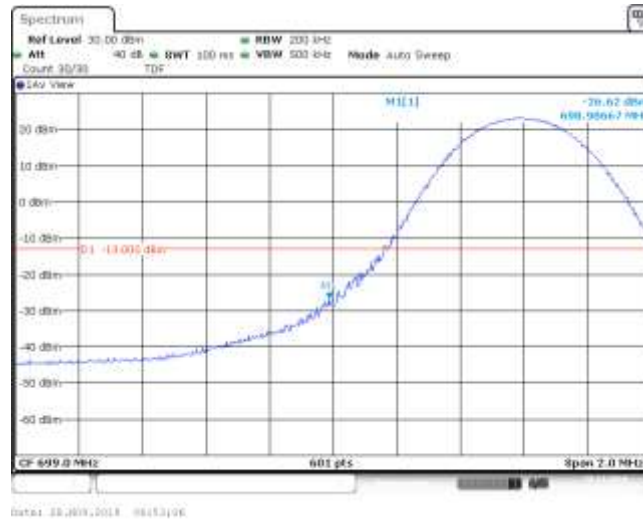
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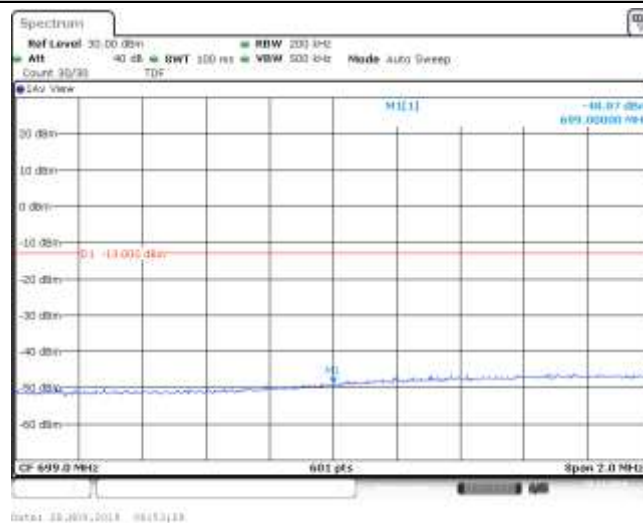
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Band12_10MHz_QPSK_23060_1RB#0



Band12_10MHz_QPSK_23060_1RB#24



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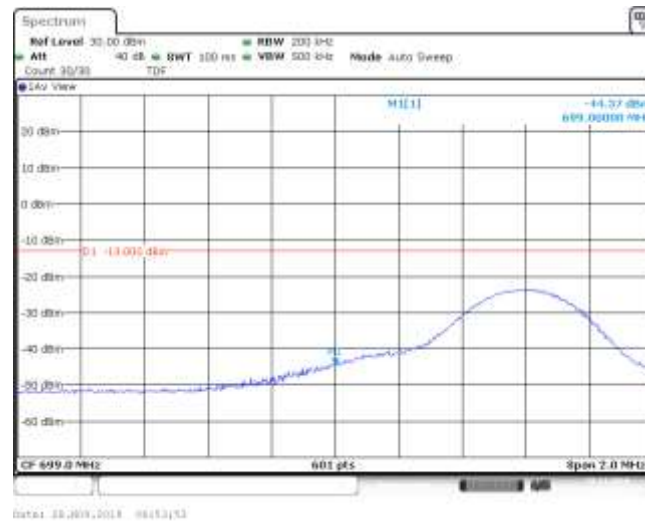
Tel.: (86)755-27521059

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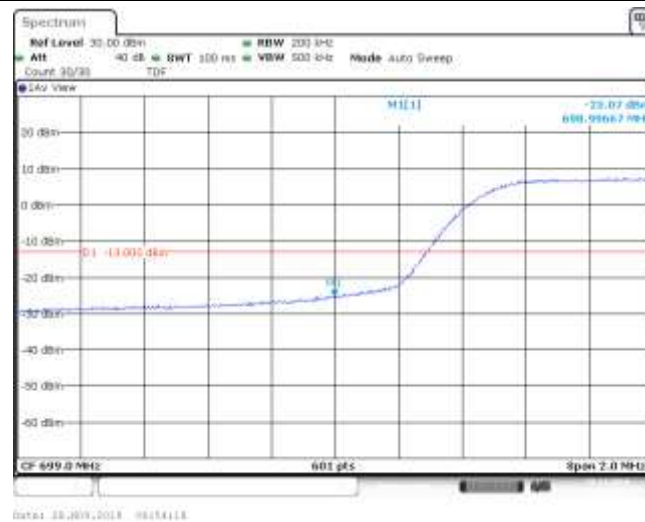
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Band12_10MHz_QPSK_23060_1RB#49



Band12_10MHz_QPSK_23060_50RB#0



Band12_10MHz_QPSK_23130_1RB#0

CTC Laboratories, Inc.

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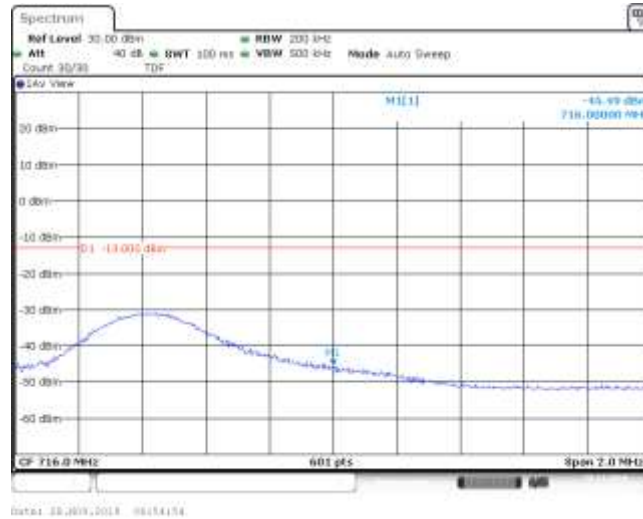
Tel.: (86)755-27521059

Fax: (86)755-27521011

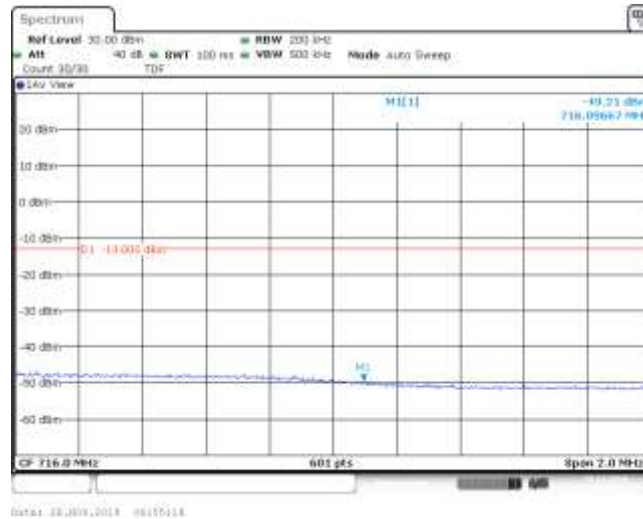
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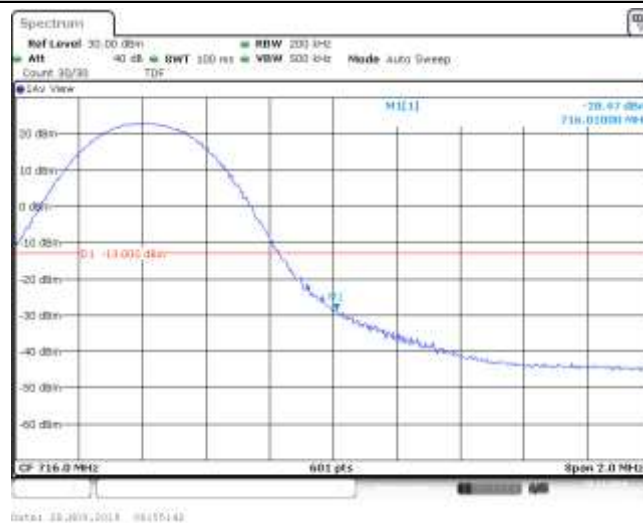
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Band12_10MHz_QPSK_23130_1RB#24



Band12_10MHz_QPSK_23130_1RB#49



CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

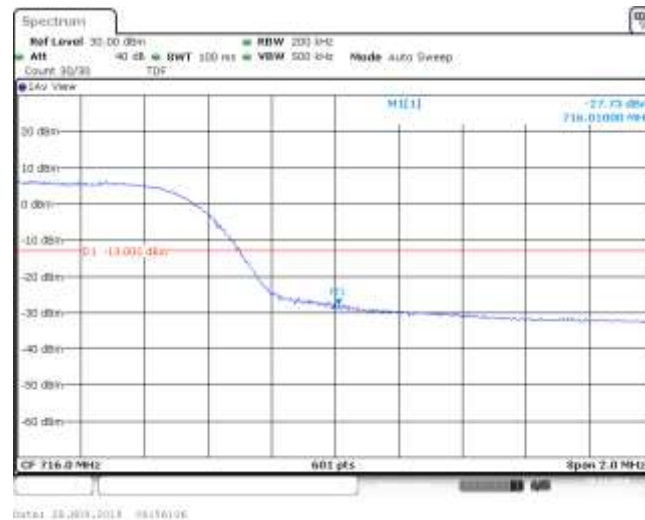
Tel.: (86)755-27521059

Fax: (86)755-27521011

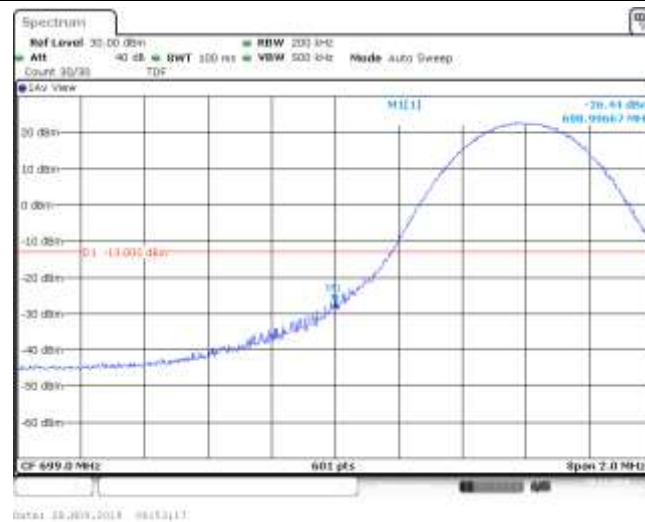
Http://www.sz-ctc.org.cn


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Band12_10MHz_QPSK_23130_50RB#0



Band12_10MHz_16QAM_23060_1RB#0



Band12_10MHz_16QAM_23060_1RB#24

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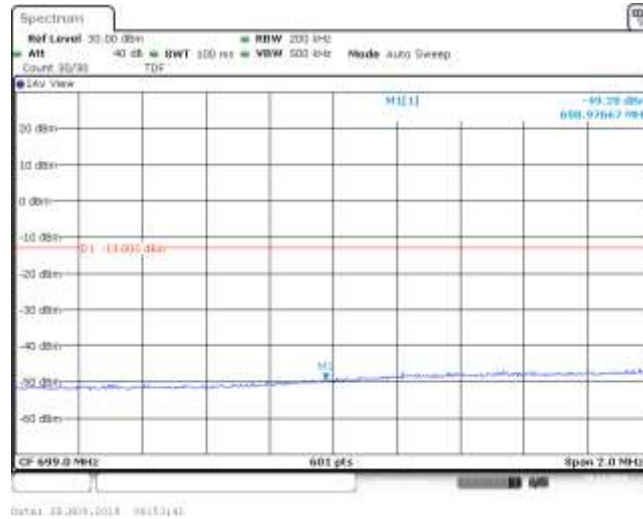
Tel.: (86)755-27521059

Fax: (86)755-27521011

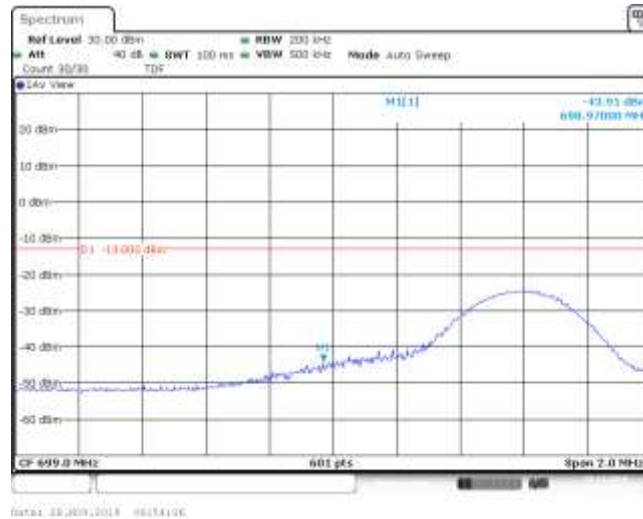
Http://www.sz-ctc.org.cn



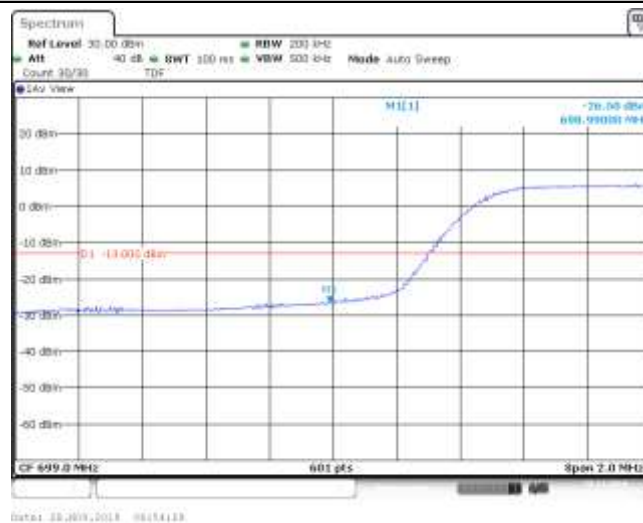
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Band12_10MHz_16QAM_23060_1RB#49



Band12_10MHz_16QAM_23060_50RB#0



CTC Laboratories, Inc.

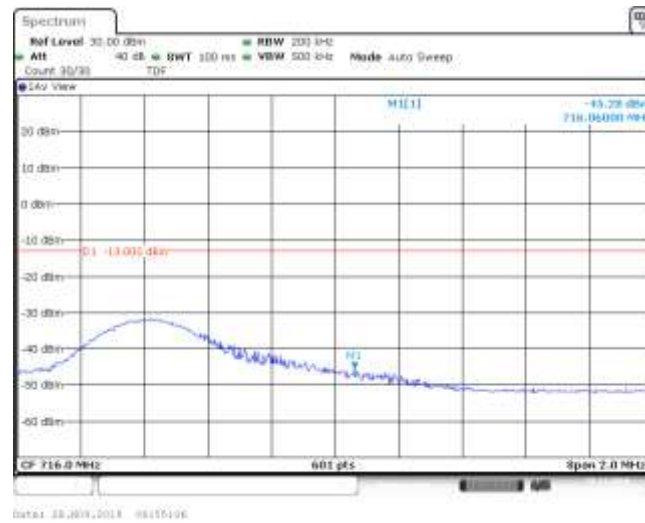
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Tel.: (86)755-27521059

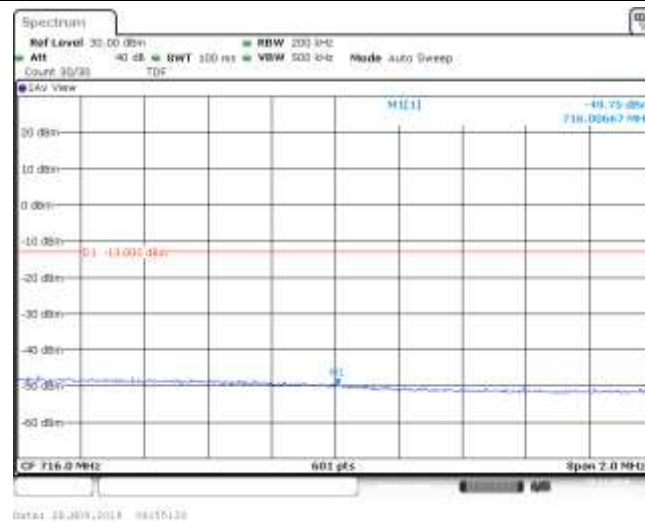
Fax: (86)755-27521011

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Band12_10MHz_16QAM_23130_1RB#0



Band12_10MHz_16QAM_23130_1RB#24



Band12_10MHz_16QAM_23130_1RB#49

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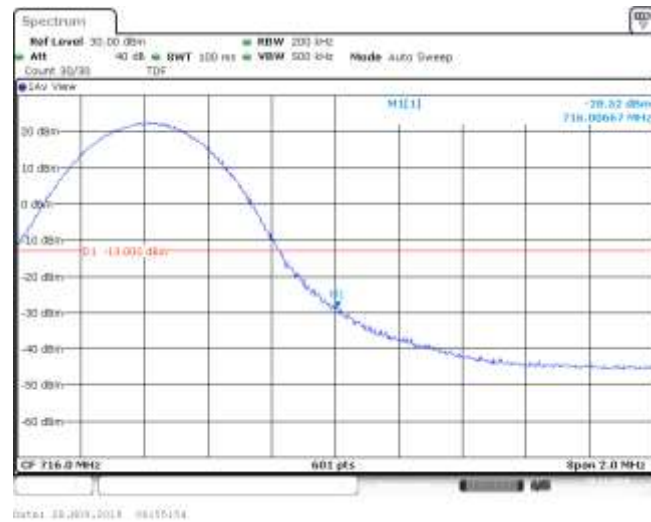
Tel.: (86)755-27521059

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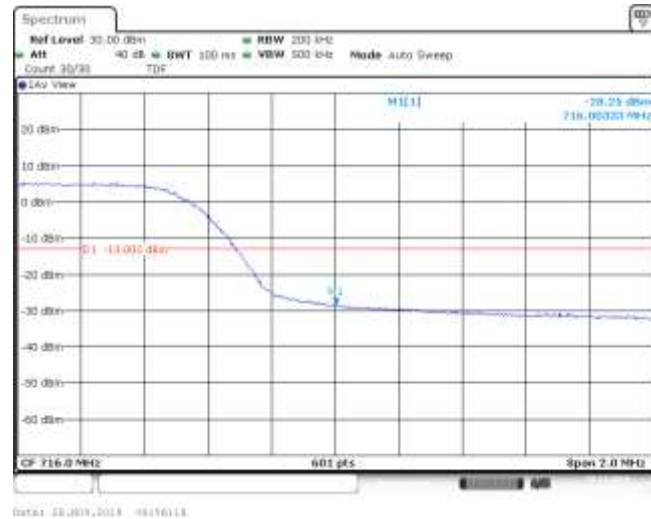
Http://www.sz-ctc.org.cn



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Band12_10MHz_16QAM_23130_50RB#0



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Appendix E: Conducted Spurious Emission

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	Range1:0.009~0.15MHz	-64.54	PASS
Band12	1.4MHz	QPSK	23017	1RB#0	Range2:0.15~30MHz	-48.05	PASS
Band12	1.4MHz	QPSK	23017	1RB#0	Range3:30~1000MHz	-60.71	PASS
Band12	1.4MHz	QPSK	23017	1RB#0	Range4:1000~5000MHz	-43.67	PASS
Band12	1.4MHz	QPSK	23017	1RB#0	Range5:5000~12000MHz	-57.95	PASS
Band12	1.4MHz	QPSK	23017	1RB#0	Range6:12000~26500MHz	-58.49	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range1:0.009~0.15MHz	-63.05	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range2:0.15~30MHz	-50.39	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range3:30~1000MHz	-60.92	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range4:1000~5000MHz	-42.86	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range5:5000~12000MHz	-57.94	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	Range6:12000~26500MHz	-58.64	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range1:0.009~0.15MHz	-64.9	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range2:0.15~30MHz	-50.34	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range3:30~1000MHz	-60.62	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range4:1000~5000MHz	-43.61	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range5:5000~12000MHz	-58.01	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	Range6:12000~26500MHz	-58.56	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	Range1:0.009~0.15MHz	-64.13	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	Range2:0.15~30MHz	-51.8	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	Range3:30~1000MHz	-60.92	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	Range4:1000~5000MHz	-43.85	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	Range5:5000~12000MHz	-58.05	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	Range6:12000~26500MHz	-58.43	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	Range1:0.009~0.15MHz	-62.32	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	Range2:0.15~30MHz	-50.05	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	Range3:30~1000MHz	-61.46	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	Range4:1000~5000MHz	-43.78	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	Range5:5000~12000MHz	-57.97	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	Range6:12000~26500MHz	-58.6	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	Range1:0.009~0.15MHz	-64.7	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	Range2:0.15~30MHz	-50.2	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	Range3:30~1000MHz	-61.5	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	Range4:1000~5000MHz	-43.9	PASS

CTC Laboratories, Inc.

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Band12	1.4MHz	16QAM	23173	1RB#0	Range5:5000~12000MHz	-57.97	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	Range6:12000~26500MHz	-58.45	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range1:0.009~0.15MHz	-64.2	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range2:0.15~30MHz	-50.39	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range3:30~1000MHz	-60.28	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range4:1000~5000MHz	-43.96	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range5:5000~12000MHz	-57.95	PASS
Band12	3MHz	QPSK	23025	1RB#0	Range6:12000~26500MHz	-58.67	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range1:0.009~0.15MHz	-63.24	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range2:0.15~30MHz	-48.74	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range3:30~1000MHz	-61.31	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range4:1000~5000MHz	-42.44	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range5:5000~12000MHz	-57.73	PASS
Band12	3MHz	QPSK	23095	1RB#0	Range6:12000~26500MHz	-58.45	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range1:0.009~0.15MHz	-64.1	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range2:0.15~30MHz	-50.75	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range3:30~1000MHz	-61.02	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range4:1000~5000MHz	-43.92	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range5:5000~12000MHz	-57.88	PASS
Band12	3MHz	QPSK	23165	1RB#0	Range6:12000~26500MHz	-58.66	PASS
Band12	3MHz	16QAM	23025	1RB#0	Range1:0.009~0.15MHz	-64.16	PASS
Band12	3MHz	16QAM	23025	1RB#0	Range2:0.15~30MHz	-50.71	PASS
Band12	3MHz	16QAM	23025	1RB#0	Range3:30~1000MHz	-60.16	PASS
Band12	3MHz	16QAM	23025	1RB#0	Range4:1000~5000MHz	-43.97	PASS
Band12	3MHz	16QAM	23025	1RB#0	Range5:5000~12000MHz	-57.86	PASS
Band12	3MHz	16QAM	23025	1RB#0	Range6:12000~26500MHz	-58.61	PASS
Band12	3MHz	16QAM	23095	1RB#0	Range1:0.009~0.15MHz	-61.04	PASS
Band12	3MHz	16QAM	23095	1RB#0	Range2:0.15~30MHz	-49.79	PASS
Band12	3MHz	16QAM	23095	1RB#0	Range3:30~1000MHz	-61.42	PASS
Band12	3MHz	16QAM	23095	1RB#0	Range4:1000~5000MHz	-43.29	PASS
Band12	3MHz	16QAM	23095	1RB#0	Range5:5000~12000MHz	-58.02	PASS
Band12	3MHz	16QAM	23095	1RB#0	Range6:12000~26500MHz	-58.67	PASS
Band12	3MHz	16QAM	23165	1RB#0	Range1:0.009~0.15MHz	-63.59	PASS
Band12	3MHz	16QAM	23165	1RB#0	Range2:0.15~30MHz	-52.64	PASS
Band12	3MHz	16QAM	23165	1RB#0	Range3:30~1000MHz	-60.75	PASS
Band12	3MHz	16QAM	23165	1RB#0	Range4:1000~5000MHz	-43.93	PASS
Band12	3MHz	16QAM	23165	1RB#0	Range5:5000~12000MHz	-57.94	PASS
Band12	3MHz	16QAM	23165	1RB#0	Range6:12000~26500MHz	-58.69	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range1:0.009~0.15MHz	-63.5	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range2:0.15~30MHz	-51.54	PASS

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Band12	5MHz	QPSK	23035	1RB#0	Range3:30~1000MHz	-60.28	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range4:1000~5000MHz	-43.7	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range5:5000~12000MHz	-57.33	PASS
Band12	5MHz	QPSK	23035	1RB#0	Range6:12000~26500MHz	-58.4	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range1:0.009~0.15MHz	-63.03	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range2:0.15~30MHz	-50.71	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range3:30~1000MHz	-61.02	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range4:1000~5000MHz	-41.97	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range5:5000~12000MHz	-57.76	PASS
Band12	5MHz	QPSK	23095	1RB#0	Range6:12000~26500MHz	-58.48	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range1:0.009~0.15MHz	-64.24	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range2:0.15~30MHz	-51.23	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range3:30~1000MHz	-60.16	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range4:1000~5000MHz	-43.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range5:5000~12000MHz	-57.88	PASS
Band12	5MHz	QPSK	23155	1RB#0	Range6:12000~26500MHz	-58.46	PASS
Band12	5MHz	16QAM	23035	1RB#0	Range1:0.009~0.15MHz	-64.58	PASS
Band12	5MHz	16QAM	23035	1RB#0	Range2:0.15~30MHz	-49.99	PASS
Band12	5MHz	16QAM	23035	1RB#0	Range3:30~1000MHz	-60.89	PASS
Band12	5MHz	16QAM	23035	1RB#0	Range4:1000~5000MHz	-43.67	PASS
Band12	5MHz	16QAM	23035	1RB#0	Range5:5000~12000MHz	-57.58	PASS
Band12	5MHz	16QAM	23035	1RB#0	Range6:12000~26500MHz	-58.38	PASS
Band12	5MHz	16QAM	23095	1RB#0	Range1:0.009~0.15MHz	-63.92	PASS
Band12	5MHz	16QAM	23095	1RB#0	Range2:0.15~30MHz	-53.15	PASS
Band12	5MHz	16QAM	23095	1RB#0	Range3:30~1000MHz	-60.57	PASS
Band12	5MHz	16QAM	23095	1RB#0	Range4:1000~5000MHz	-42.66	PASS
Band12	5MHz	16QAM	23095	1RB#0	Range5:5000~12000MHz	-57.8	PASS
Band12	5MHz	16QAM	23095	1RB#0	Range6:12000~26500MHz	-58.47	PASS
Band12	5MHz	16QAM	23155	1RB#0	Range1:0.009~0.15MHz	-65.03	PASS
Band12	5MHz	16QAM	23155	1RB#0	Range2:0.15~30MHz	-54.41	PASS
Band12	5MHz	16QAM	23155	1RB#0	Range3:30~1000MHz	-61.12	PASS
Band12	5MHz	16QAM	23155	1RB#0	Range4:1000~5000MHz	-43.84	PASS
Band12	5MHz	16QAM	23155	1RB#0	Range5:5000~12000MHz	-57.78	PASS
Band12	5MHz	16QAM	23155	1RB#0	Range6:12000~26500MHz	-58.32	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range1:0.009~0.15MHz	-64.47	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range2:0.15~30MHz	-49.95	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range3:30~1000MHz	-60.26	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range4:1000~5000MHz	-43.87	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range5:5000~12000MHz	-57.93	PASS
Band12	10MHz	QPSK	23060	1RB#0	Range6:12000~26500MHz	-58.51	PASS

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Band12	10MHz	QPSK	23095	1RB#0	Range1:0.009~0.15MHz	-64.4	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range2:0.15~30MHz	-50.73	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range3:30~1000MHz	-61.3	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range4:1000~5000MHz	-43.91	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range5:5000~12000MHz	-58.06	PASS
Band12	10MHz	QPSK	23095	1RB#0	Range6:12000~26500MHz	-58.6	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range1:0.009~0.15MHz	-63.66	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range2:0.15~30MHz	-50.23	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range3:30~1000MHz	-61.07	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range4:1000~5000MHz	-42.36	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range5:5000~12000MHz	-57.96	PASS
Band12	10MHz	QPSK	23130	1RB#0	Range6:12000~26500MHz	-58.68	PASS
Band12	10MHz	16QAM	23060	1RB#0	Range1:0.009~0.15MHz	-64.56	PASS
Band12	10MHz	16QAM	23060	1RB#0	Range2:0.15~30MHz	-50.57	PASS
Band12	10MHz	16QAM	23060	1RB#0	Range3:30~1000MHz	-60.32	PASS
Band12	10MHz	16QAM	23060	1RB#0	Range4:1000~5000MHz	-43.82	PASS
Band12	10MHz	16QAM	23060	1RB#0	Range5:5000~12000MHz	-58.08	PASS
Band12	10MHz	16QAM	23060	1RB#0	Range6:12000~26500MHz	-58.6	PASS
Band12	10MHz	16QAM	23095	1RB#0	Range1:0.009~0.15MHz	-61.21	PASS
Band12	10MHz	16QAM	23095	1RB#0	Range2:0.15~30MHz	-52.6	PASS
Band12	10MHz	16QAM	23095	1RB#0	Range3:30~1000MHz	-61.31	PASS
Band12	10MHz	16QAM	23095	1RB#0	Range4:1000~5000MHz	-43.93	PASS
Band12	10MHz	16QAM	23095	1RB#0	Range5:5000~12000MHz	-58.1	PASS
Band12	10MHz	16QAM	23095	1RB#0	Range6:12000~26500MHz	-58.55	PASS
Band12	10MHz	16QAM	23130	1RB#0	Range1:0.009~0.15MHz	-63.21	PASS
Band12	10MHz	16QAM	23130	1RB#0	Range2:0.15~30MHz	-51.84	PASS
Band12	10MHz	16QAM	23130	1RB#0	Range3:30~1000MHz	-60.47	PASS
Band12	10MHz	16QAM	23130	1RB#0	Range4:1000~5000MHz	-43.14	PASS
Band12	10MHz	16QAM	23130	1RB#0	Range5:5000~12000MHz	-58.07	PASS
Band12	10MHz	16QAM	23130	1RB#0	Range6:12000~26500MHz	-58.71	PASS

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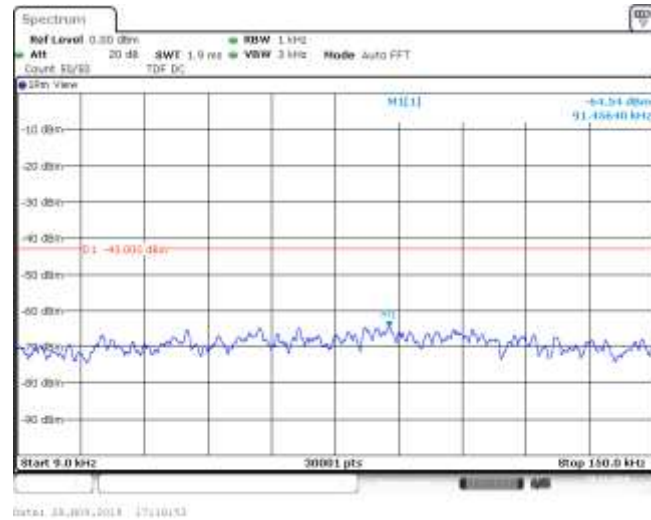
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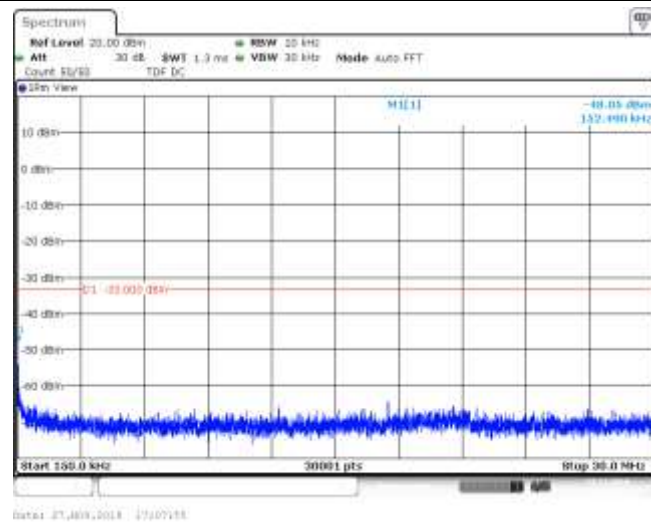
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Test Graphs

Band12_1.4MHz_QPSK_23017_1RB#0



Band12_1.4MHz_QPSK_23017_1RB#0



Band12_1.4MHz_QPSK_23017_1RB#0

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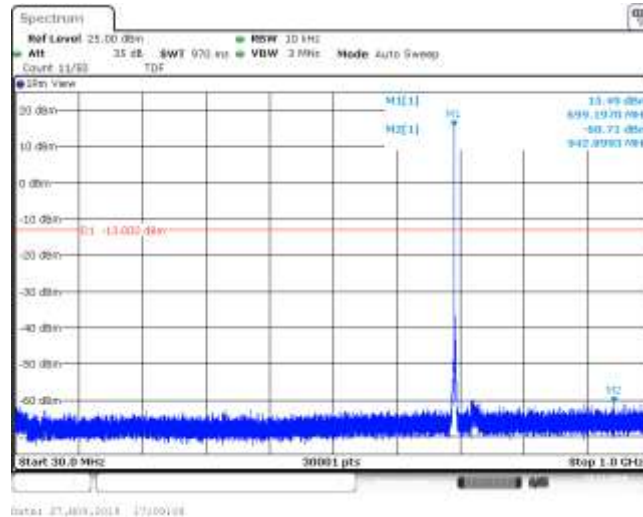
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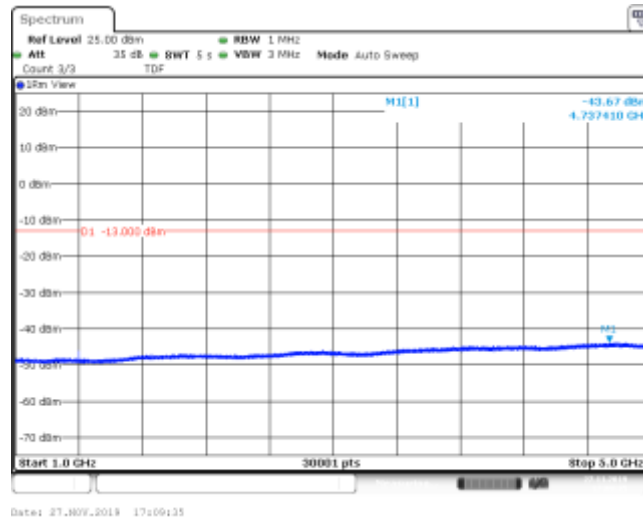
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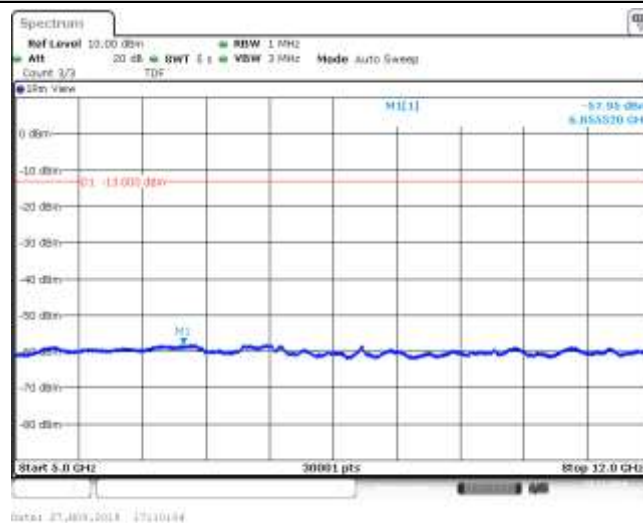
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Band12_1.4MHz_QPSK_23017_1RB#0



Band12_1.4MHz_QPSK_23017_1RB#0



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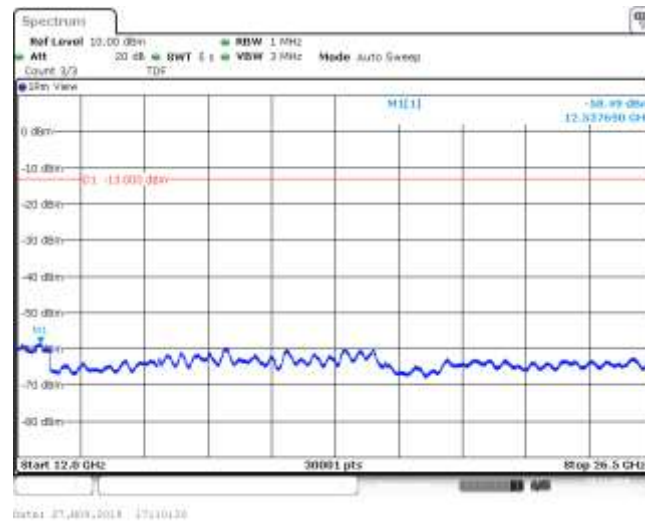
Tel.: (86)755-27521059

Fax: (86)755-27521011

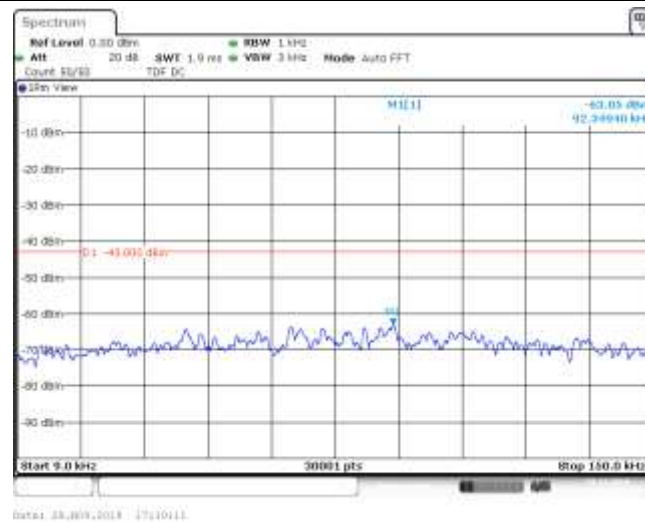
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Band12_1.4MHz_QPSK_23017_1RB#0



Band12_1.4MHz_QPSK_23095_1RB#0



Band12_1.4MHz_QPSK_23095_1RB#0

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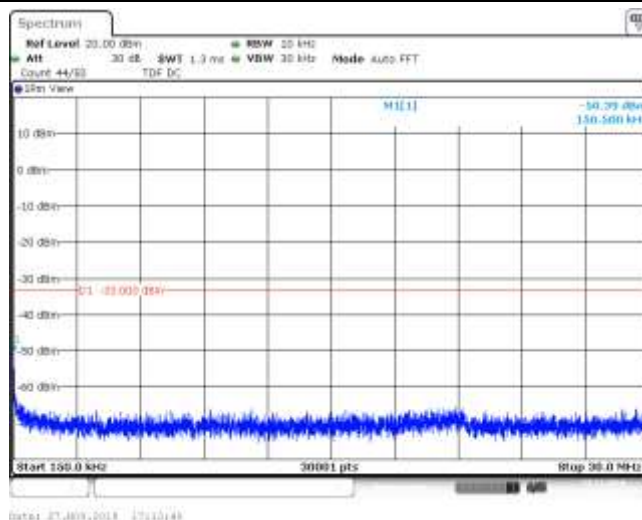
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Tel.: (86)755-27521059

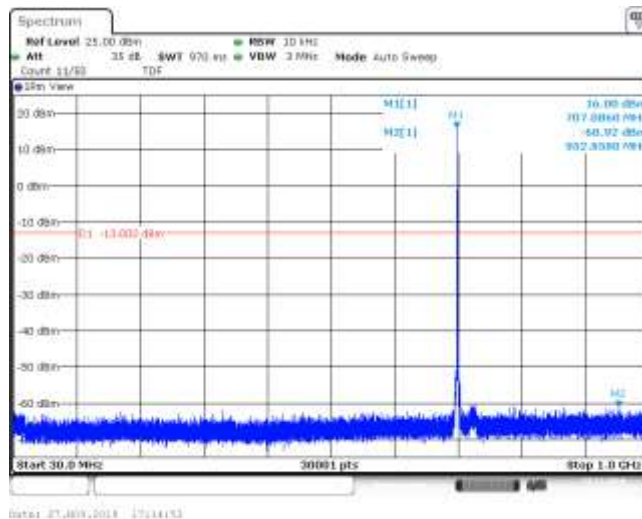
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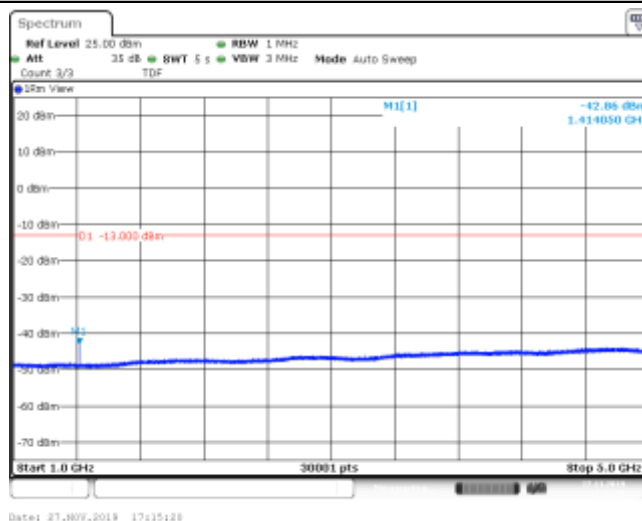
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Band12_1.4MHz_QPSK_23095_1RB#0



Band12_1.4MHz_QPSK_23095_1RB#0



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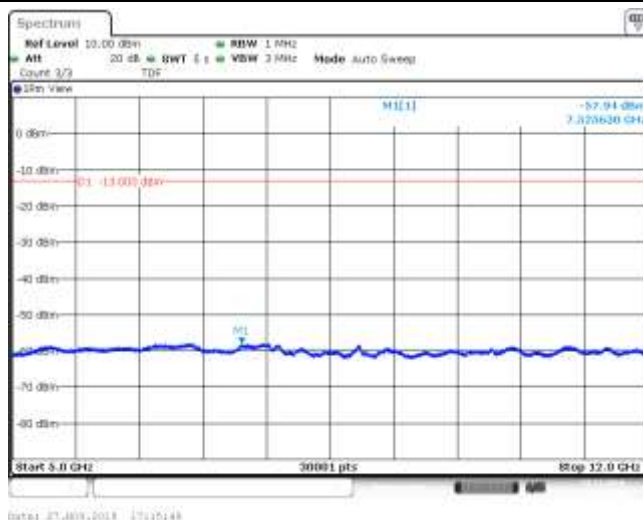
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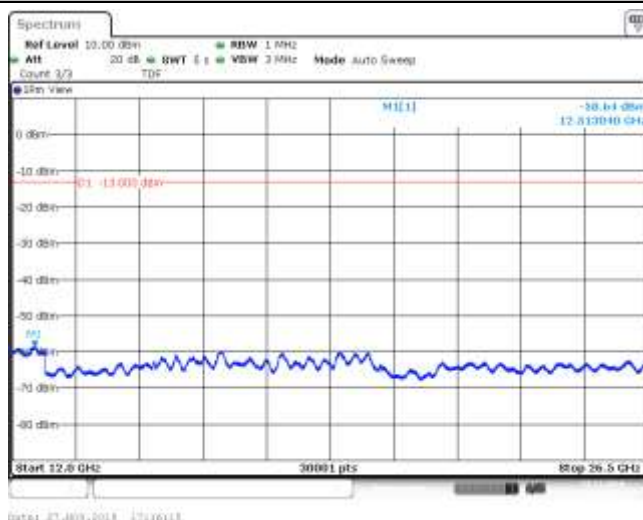
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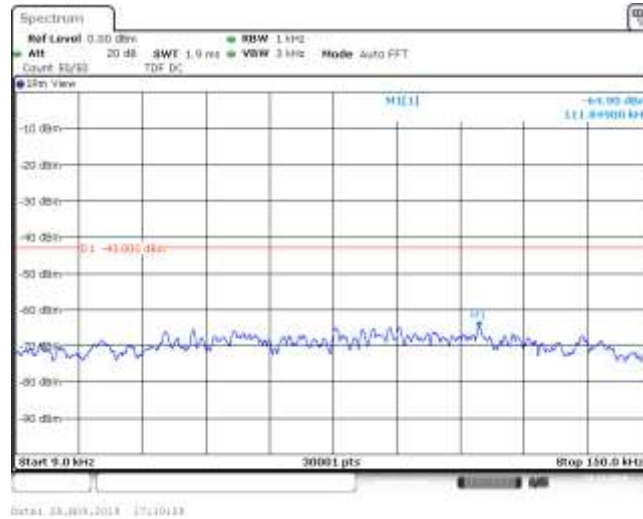
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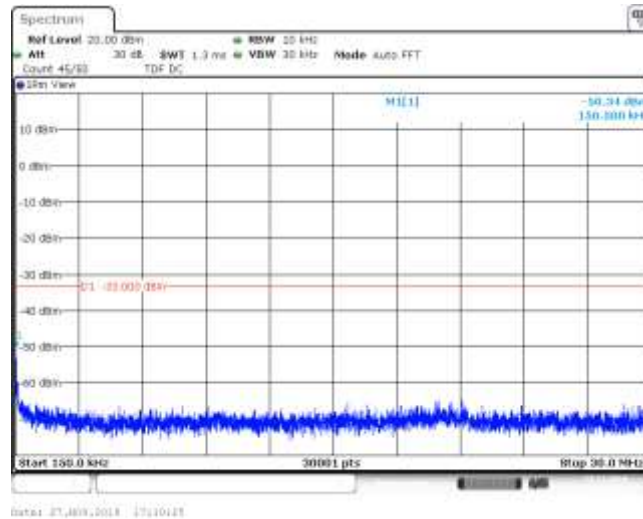
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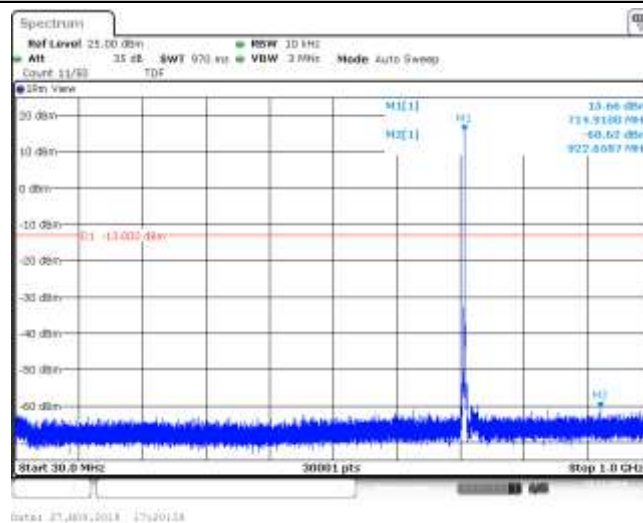
Band12_1.4MHz_QPSK_23173_1RB#0



Band12_1.4MHz_QPSK_23173_1RB#0



Band12_1.4MHz_QPSK_23173_1RB#0



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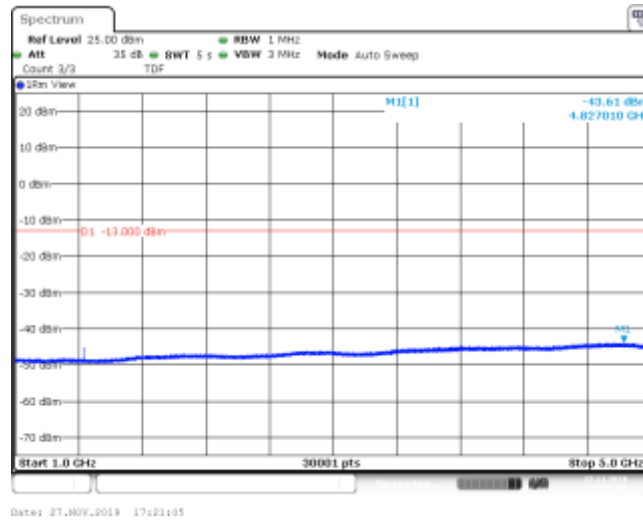
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Fax: (86)755-27521011

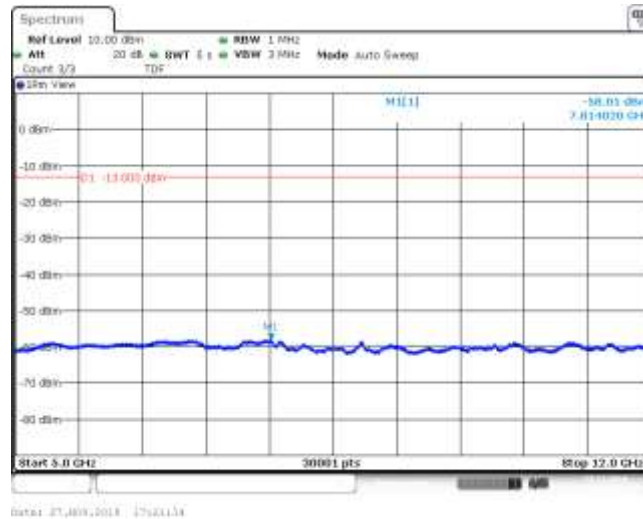
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Band12_1.4MHz_QPSK_23173_1RB#0



Band12_1.4MHz_QPSK_23173_1RB#0



Band12_1.4MHz_QPSK_23173_1RB#0

CTC Laboratories, Inc.

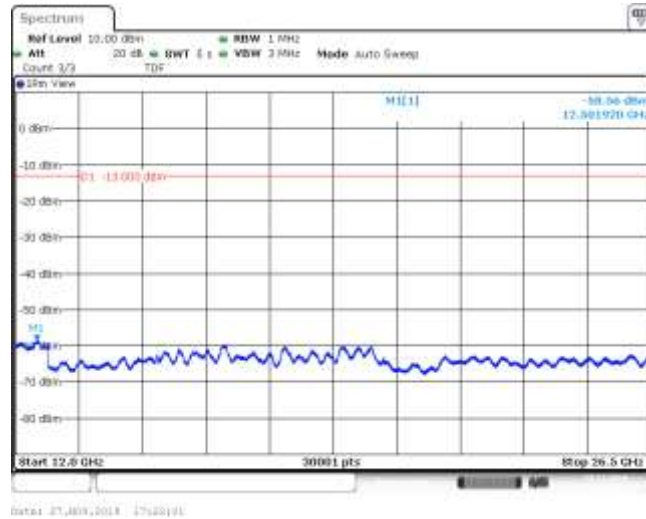
2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

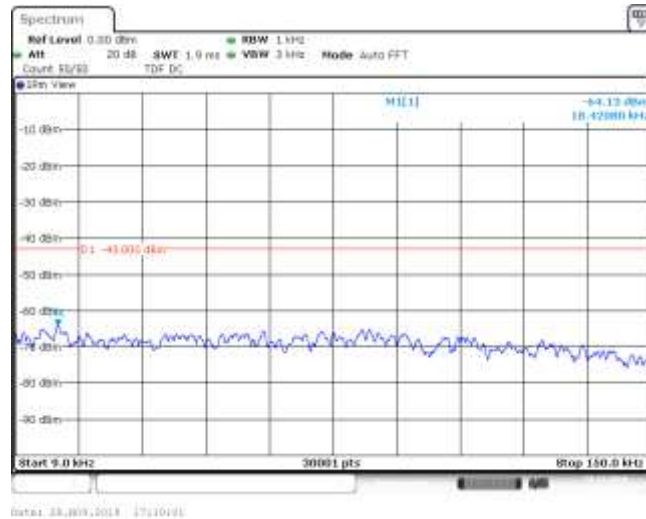
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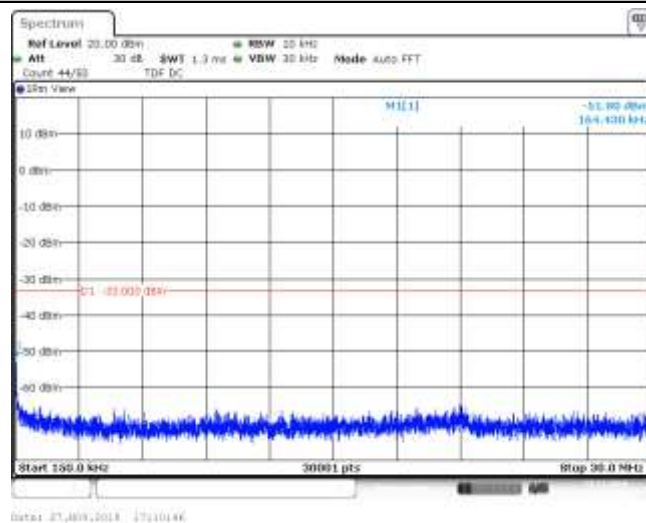

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Band12_1.4MHz_16QAM_23017_1RB#0



Band12_1.4MHz_16QAM_23017_1RB#0



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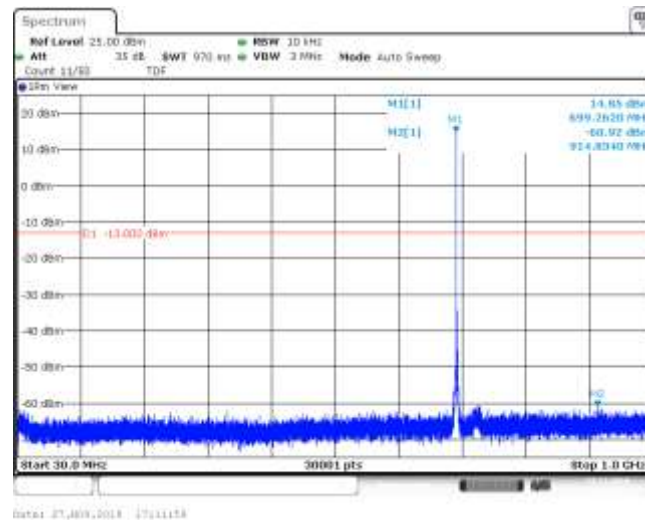
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Tel.: (86)755-27521059

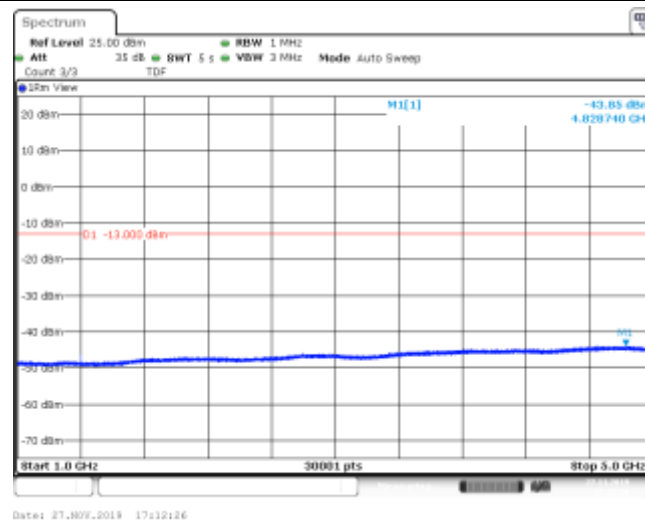
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Band12_1.4MHz_16QAM_23017_1RB#0



Band12_1.4MHz_16QAM_23017_1RB#0



Band12_1.4MHz_16QAM_23017_1RB#0

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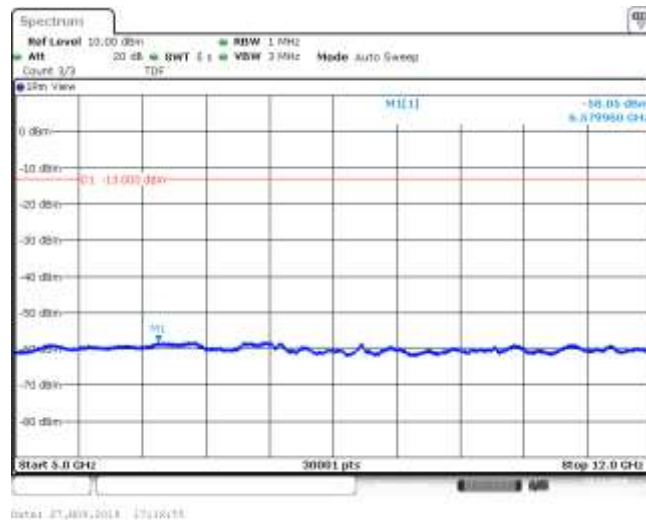
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Tel.: (86)755-27521059

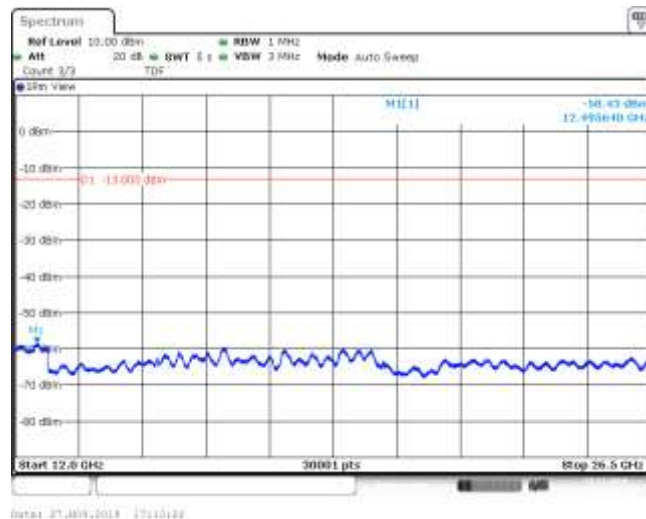
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

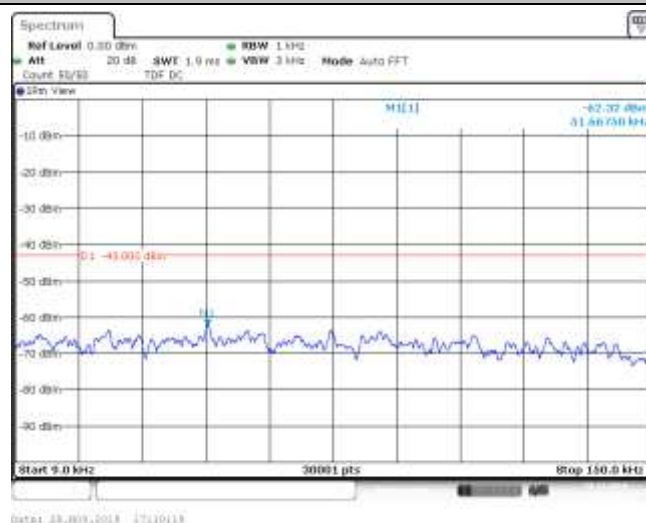

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Band12_1.4MHz_16QAM_23017_1RB#0



Band12_1.4MHz_16QAM_23095_1RB#0



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Spectrum

Ref Level 20.00 dBm BW 1.0 MHz Att 30 dB VBW 30 kHz Mode auto FFT Count 44/50 TDF On

20 dBm

10 dBm

0 dBm

-10 dBm

-20 dBm

-30 dBm

-40 dBm

-50 dBm

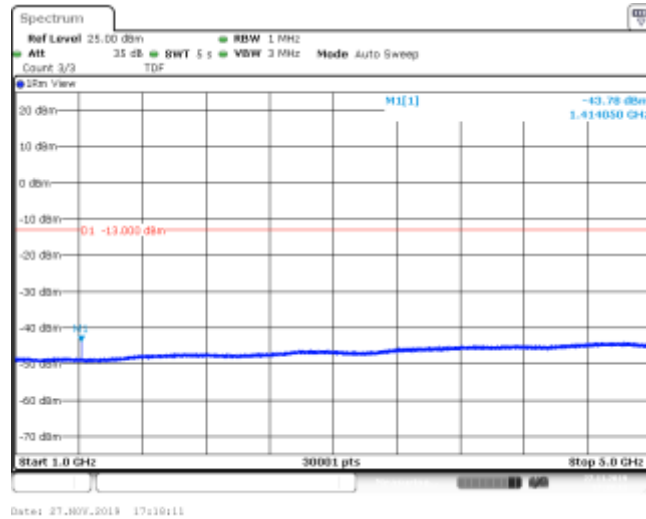
-60 dBm

Start 100.0 kHz 30001 pts Stop 30.0 MHz

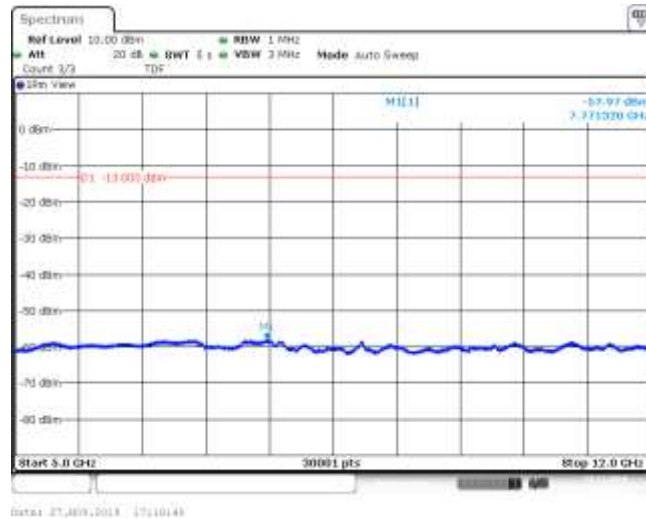
151.490 kHz -50.05 dBm

-30.00 dBm

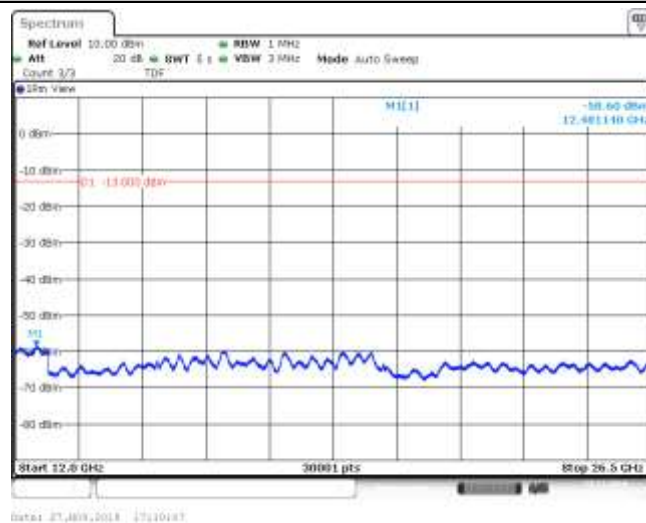
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Band12_1.4MHz_16QAM_23095_1RB#0



Band12_1.4MHz_16QAM_23095_1RB#0



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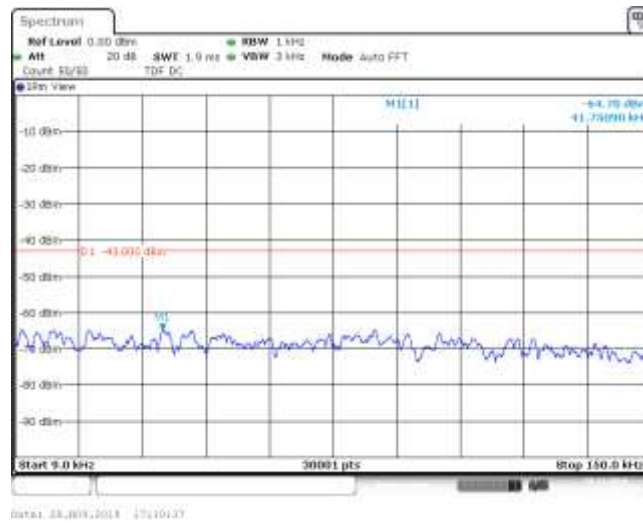
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Fax: (86)755-27521011

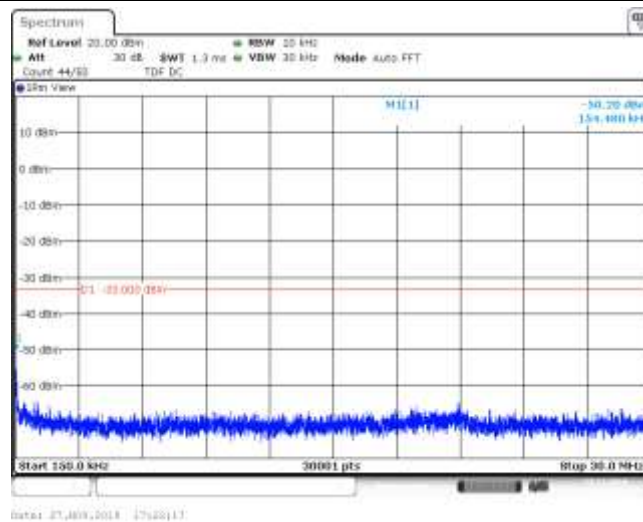
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Band12_1.4MHz_16QAM_23173_1RB#0



Band12_1.4MHz_16QAM_23173_1RB#0



Band12_1.4MHz_16QAM_23173_1RB#0

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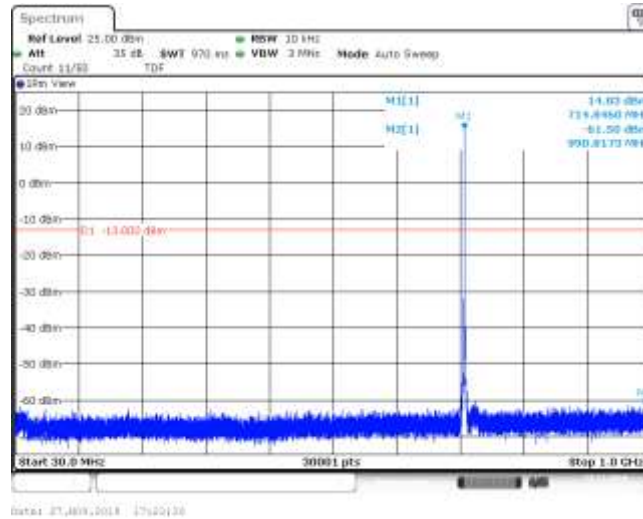
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Tel.: (86)755-27521059

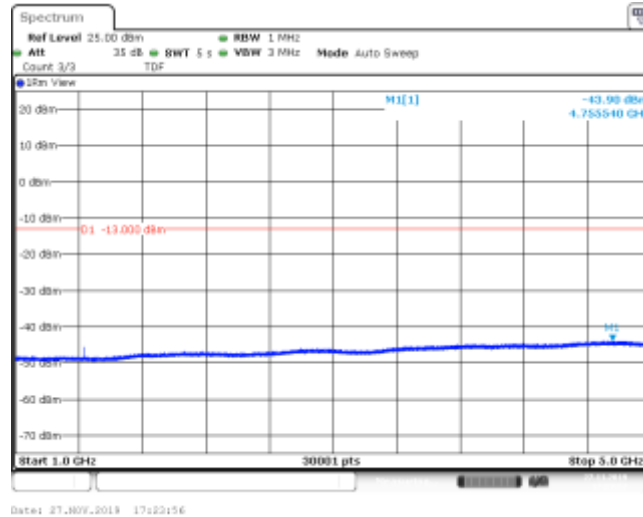
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

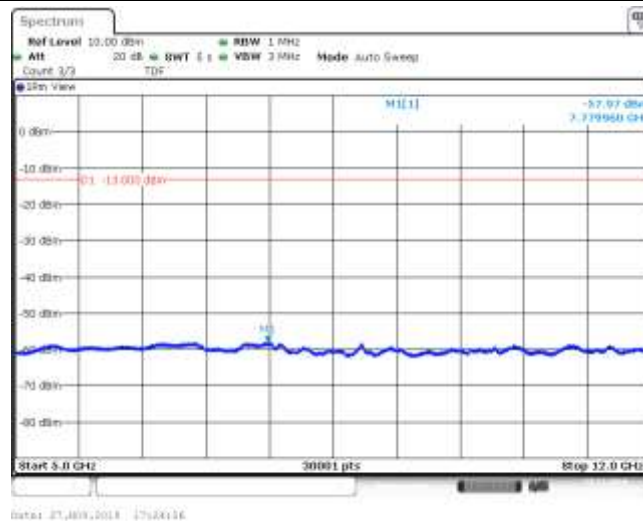
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : [yz.cnca.cn](http://www.cnca.cn)



Band12_1.4MHz_16QAM_23173_1RB#0



Band12_1.4MHz_16QAM_23173_1RB#0



CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

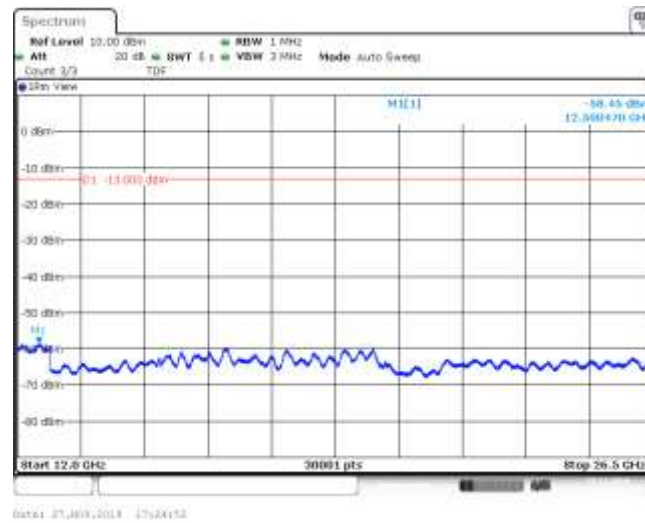
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Fax: (86)755-27521011

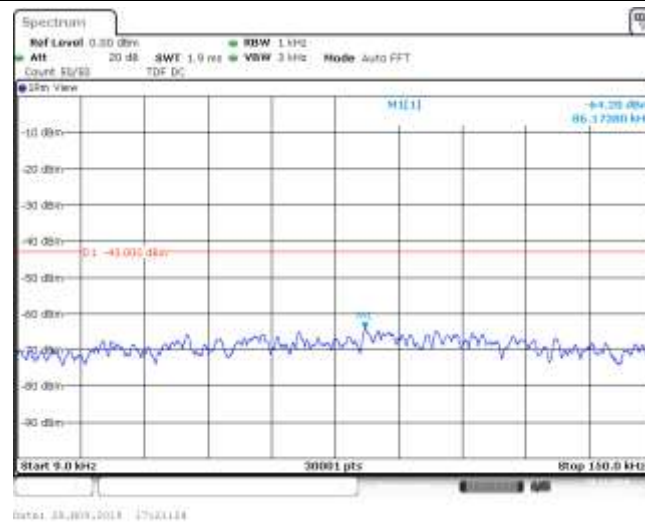
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Band12_1.4MHz_16QAM_23173_1RB#0



Band12_3MHz_QPSK_23025_1RB#0



Band12_3MHz_QPSK_23025_1RB#0

CTC Laboratories, Inc.

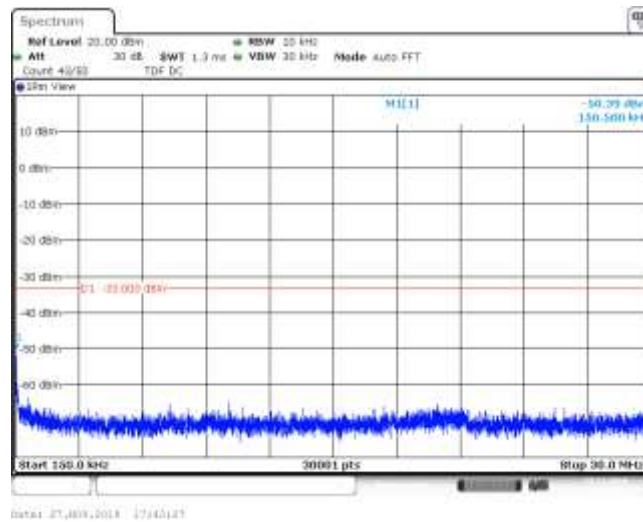
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Tel.: (86)755-27521059

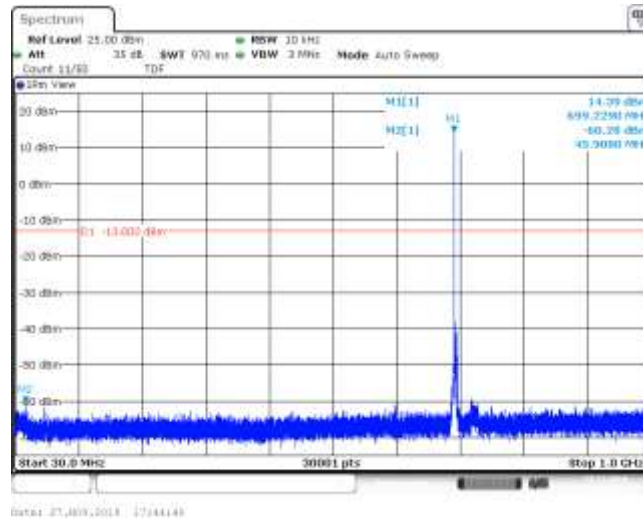
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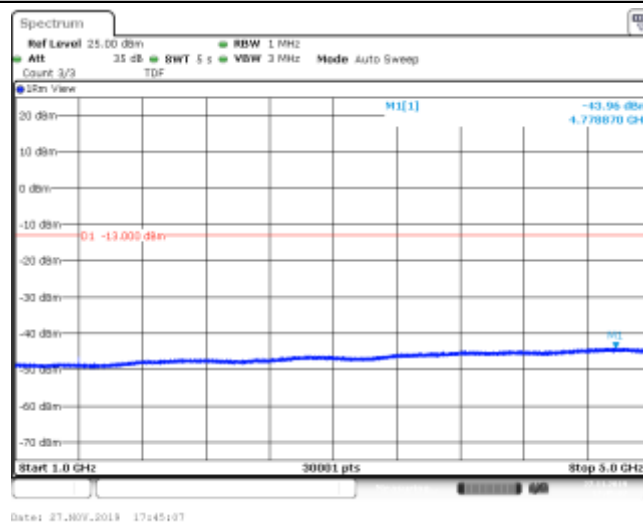

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Band12_3MHz_QPSK_23025_1RB#0



Band12_3MHz_QPSK_23025_1RB#0



CTC Laboratories, Inc.

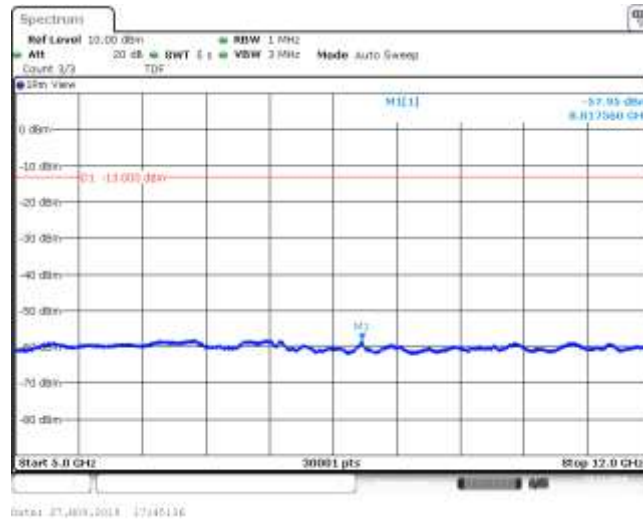
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Tel.: (86)755-27521059

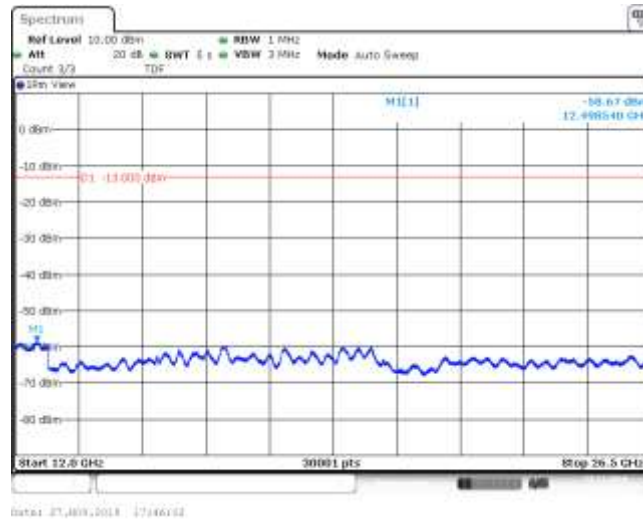
Fax: (86)755-27521011

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Band12_3MHz_QPSK_23025_1RB#0



Band12_3MHz_QPSK_23025_1RB#0



Band12_3MHz_QPSK_23095_1RB#0

CTC Laboratories, Inc.

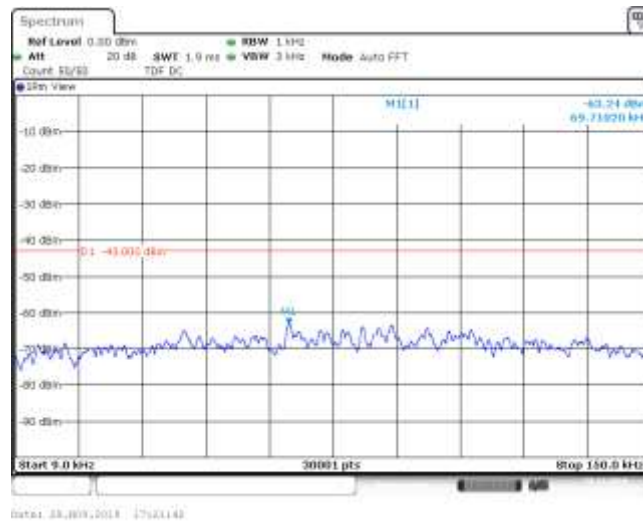
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Tel.: (86)755-27521059

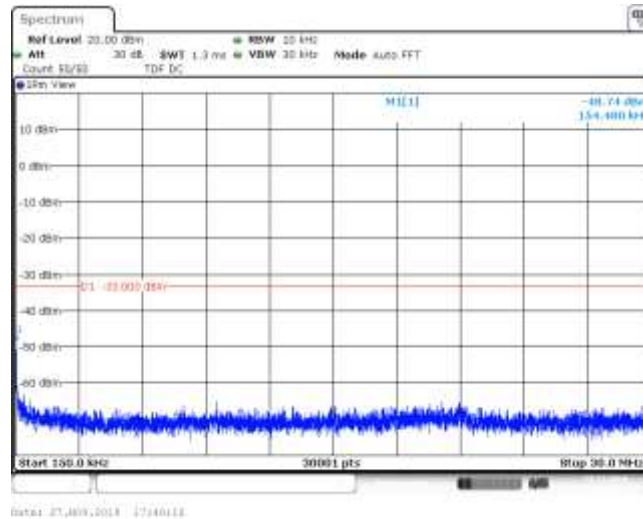
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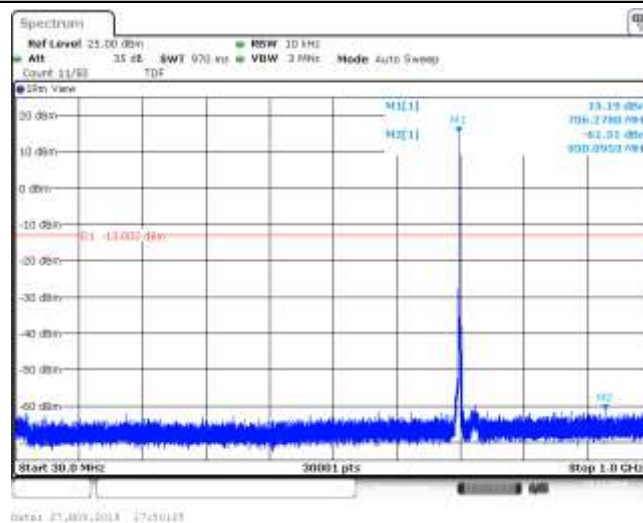

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Band12_3MHz_QPSK_23095_1RB#0



Band12_3MHz_QPSK_23095_1RB#0



CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

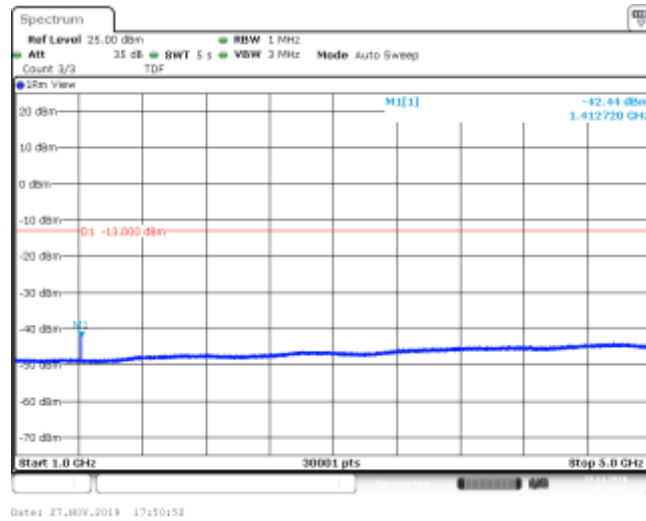
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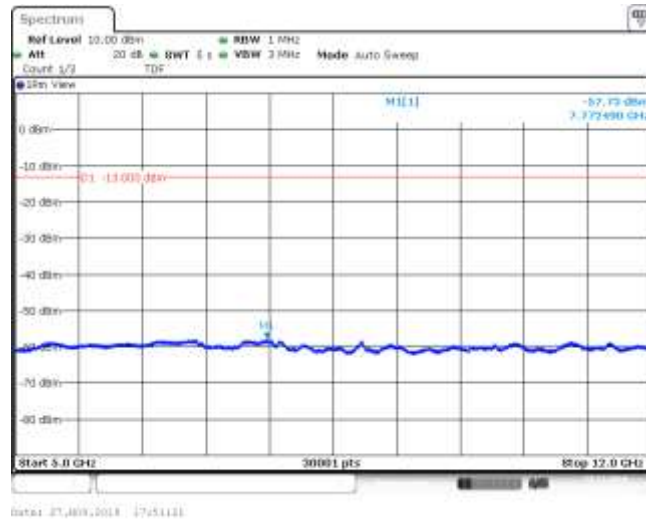
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Band12_3MHz_QPSK_23095_1RB#0



Band12_3MHz_QPSK_23095_1RB#0



Band12_3MHz_QPSK_23095_1RB#0

CTC Laboratories, Inc.

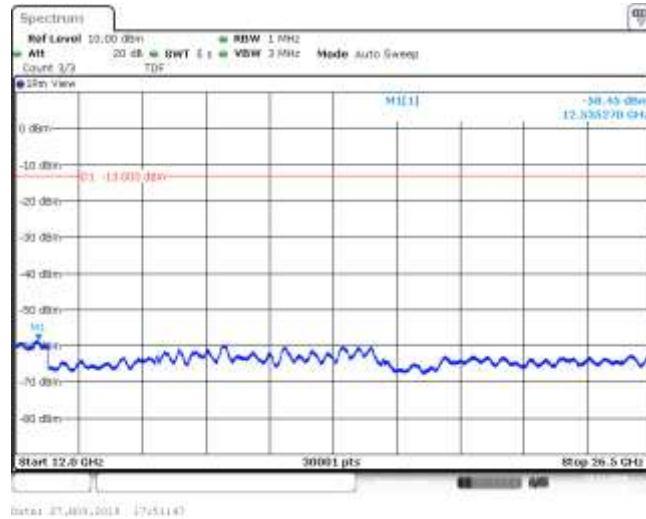
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Tel.: (86)755-27521059

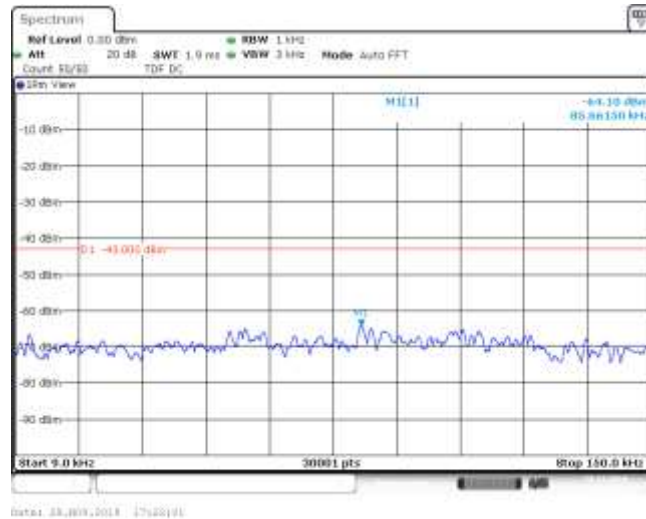
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Http://www.sz-ctc.org.cn

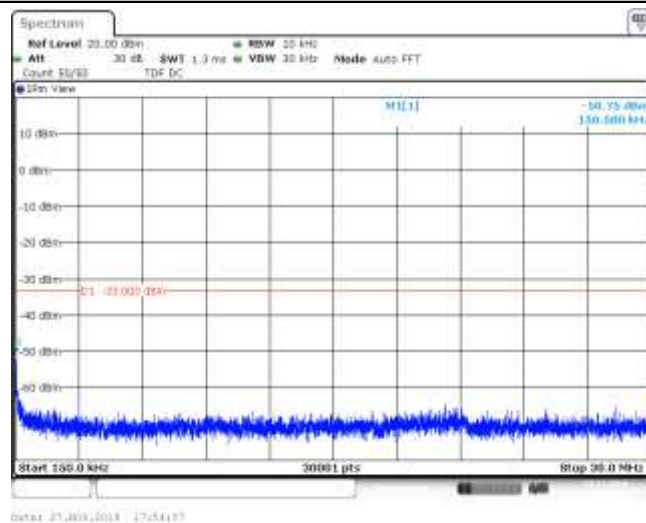
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Band12_3MHz_QPSK_23165_1RB#0



Band12_3MHz_QPSK_23165_1RB#0



CTC Laboratories, Inc.

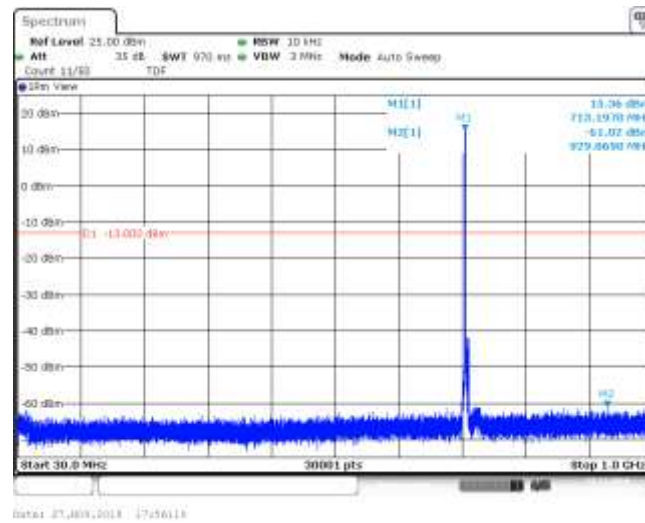
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Tel.: (86)755-27521059

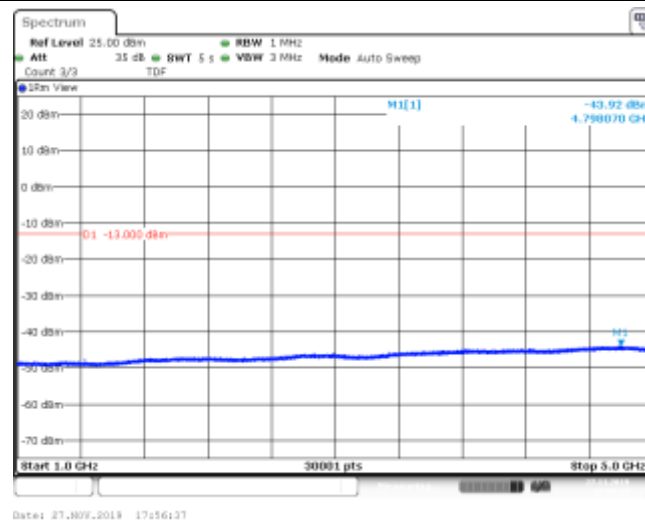
Fax: (86)755-27521011

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Band12_3MHz_QPSK_23165_1RB#0



Band12_3MHz_QPSK_23165_1RB#0



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CTC Laboratories, Inc.

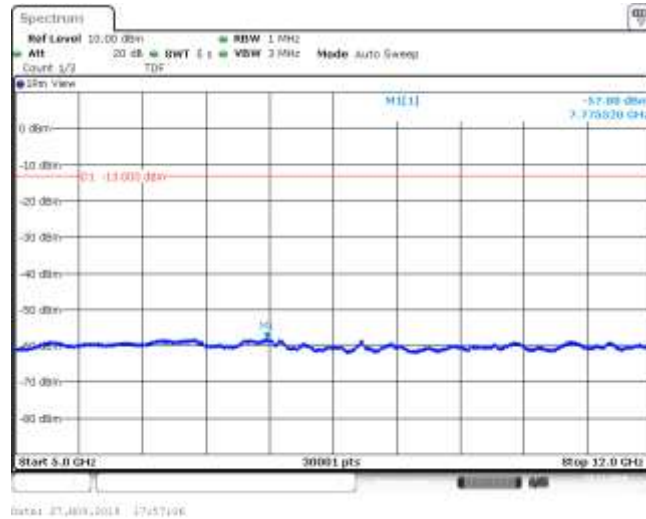
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Tel.: (86)755-27521059

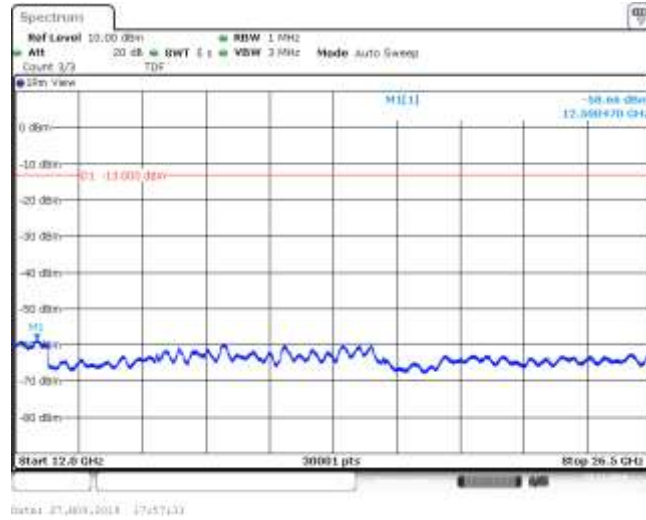
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

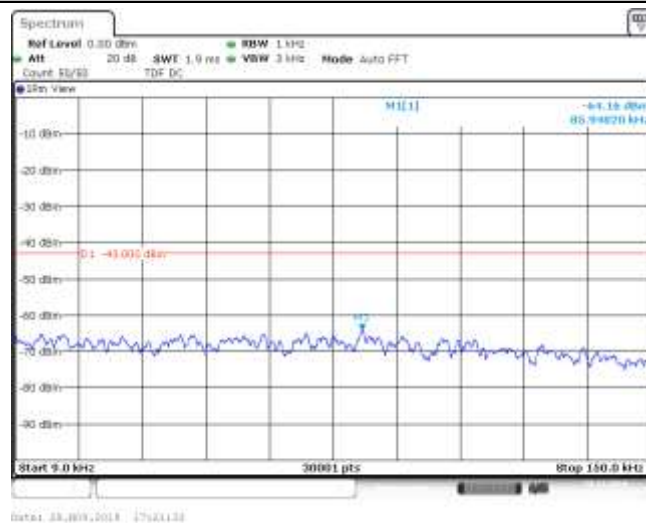

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Band12_3MHz_QPSK_23165_1RB#0



Band12_3MHz_16QAM_23025_1RB#0





Spectrum

Ref Level: 20.00 dBm BW: 20 kHz Att: 30 dB SMT: 1.3 ms VBW: 30 kHz Mode: Auto FFT

Count: 44/50 TDF: 0%

20m View

10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm

M1[1] -50.73 dBm
160.430 kHz

-50.73 dBm

Start: 100.0 kHz 30001 pts Stop: 20.0 MHz

Date: 27.09.2018 17:46:18

Spectrum

Ref Level: 25.00 dBm

Att: 35 dB

SWT: 970 Hz

VBW: 2 MHz

Mode: Auto Sweep

Count: 11/50

TOT

30m Vane

M1[1]

M2[1]

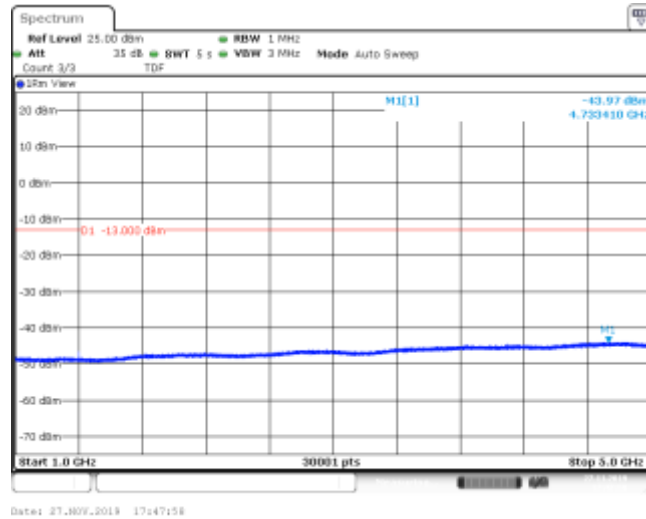
-10.000 dBm

Start 30.0 MHz

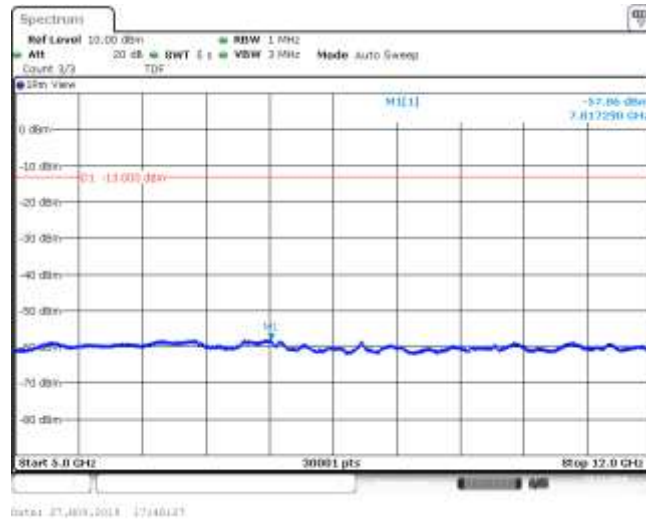
30001 pts

Stop 1.0 GHz

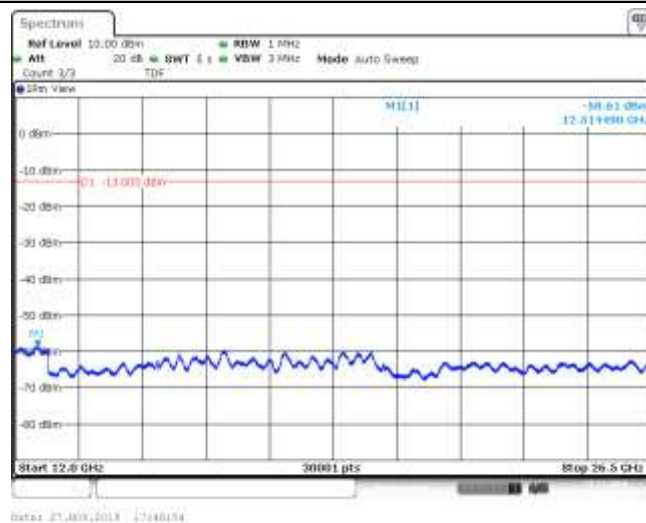
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Band12_3MHz_16QAM_23025_1RB#0



Band12_3MHz_16QAM_23025_1RB#0



CTC Laboratories, Inc.

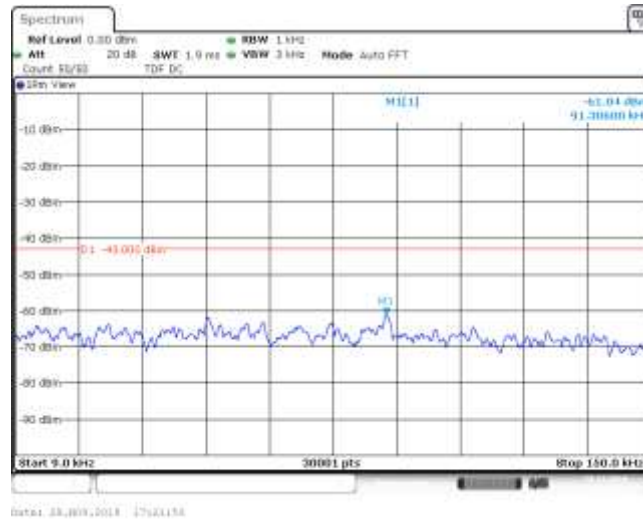
2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

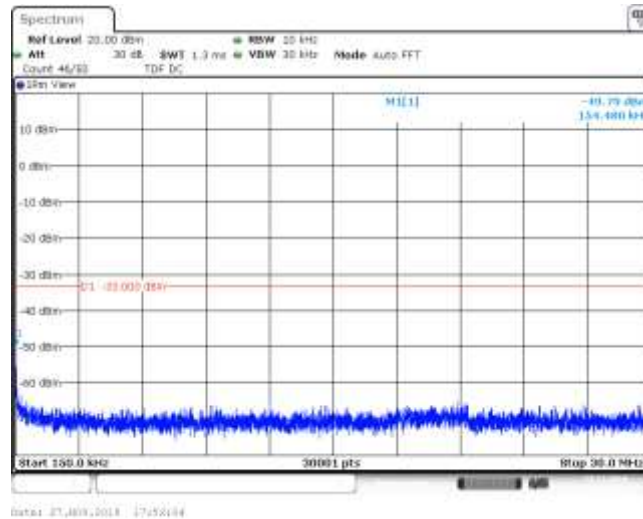
Fax: (86)755-27521011

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Band12_3MHz_16QAM_23095_1RB#0



Band12_3MHz_16QAM_23095_1RB#0



Band12_3MHz_16QAM_23095_1RB#0

CTC Laboratories, Inc.

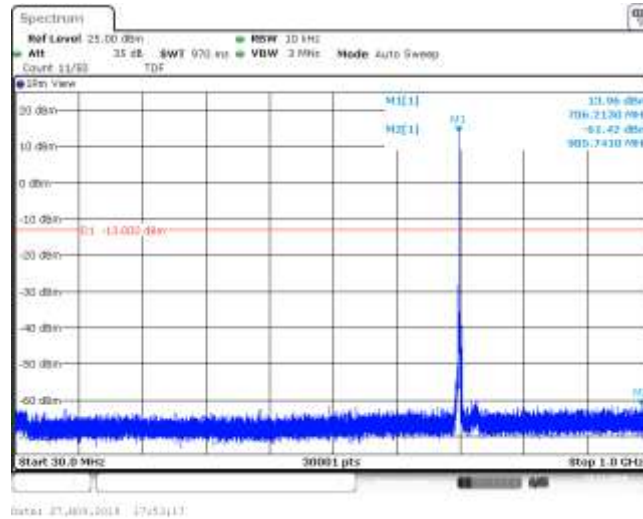
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Tel.: (86)755-27521059

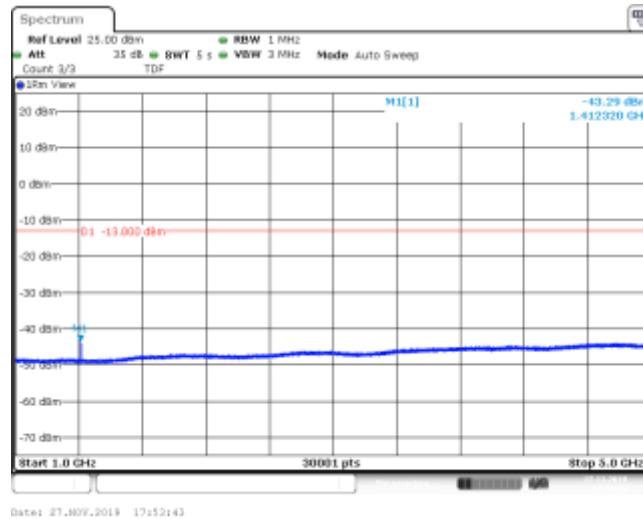
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

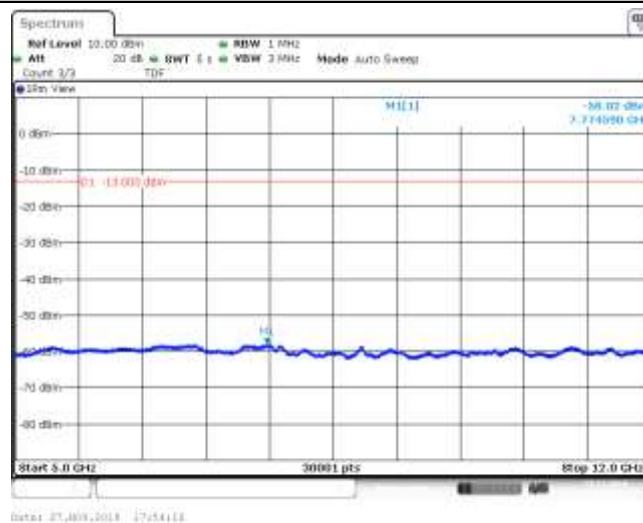

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Band12_3MHz_16QAM_23095_1RB#0



Band12_3MHz_16QAM_23095_1RB#0



CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

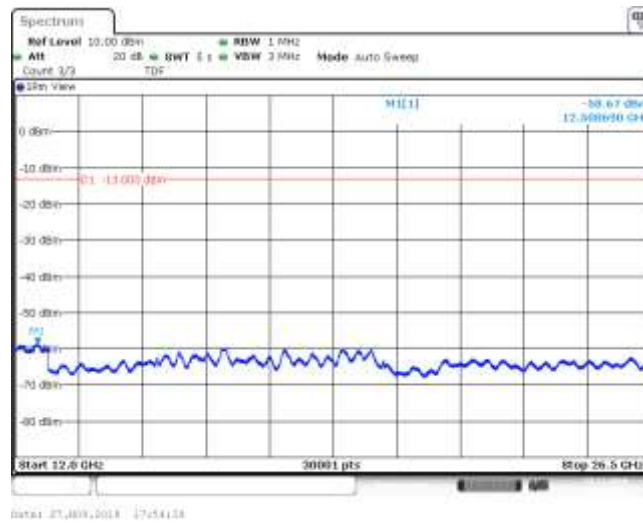
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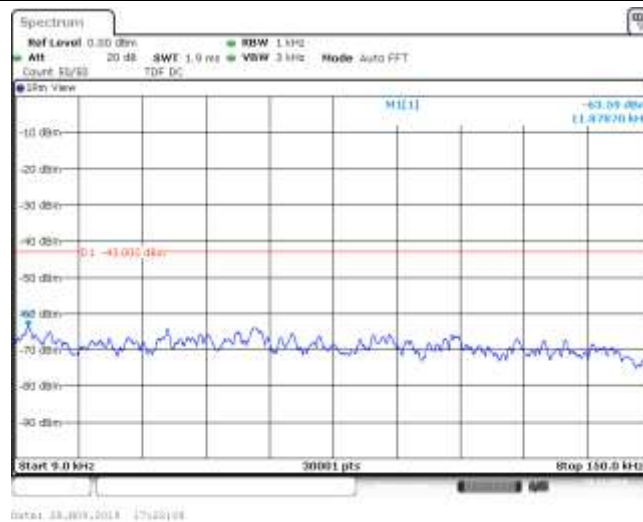
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Band12_3MHz_16QAM_23095_1RB#0



Band12_3MHz_16QAM_23165_1RB#0



Band12_3MHz_16QAM_23165_1RB#0

CTC Laboratories, Inc.

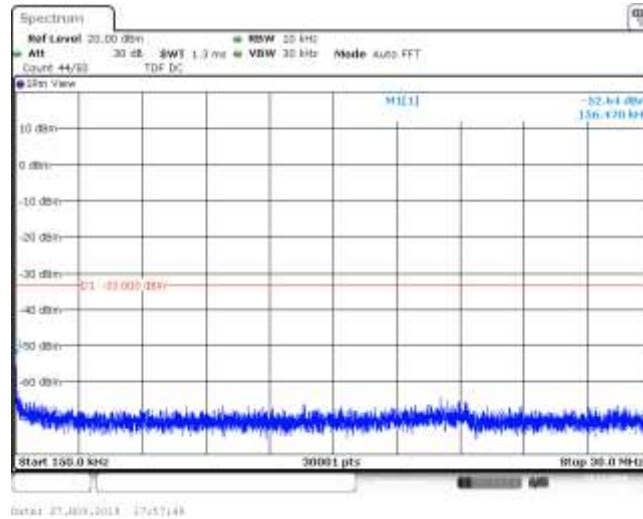
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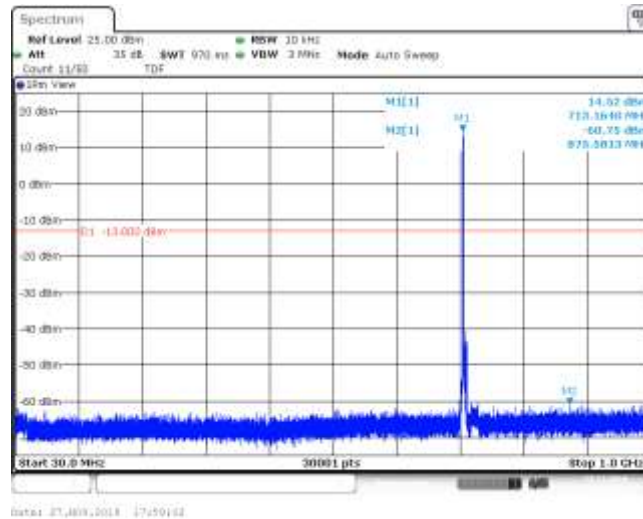
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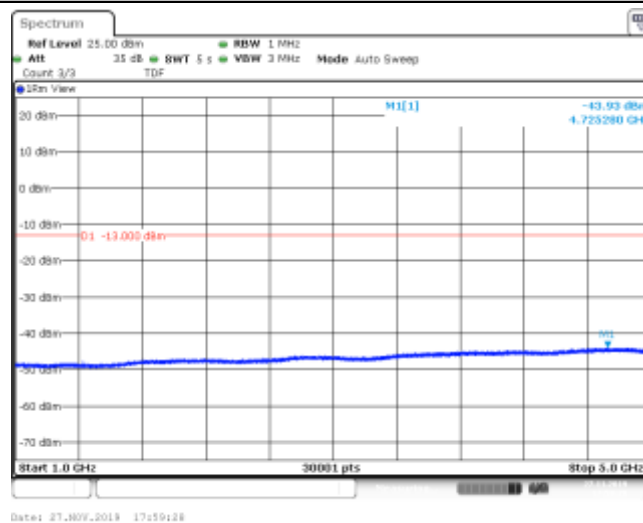
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Band12_3MHz_16QAM_23165_1RB#0



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CTC Laboratories, Inc.

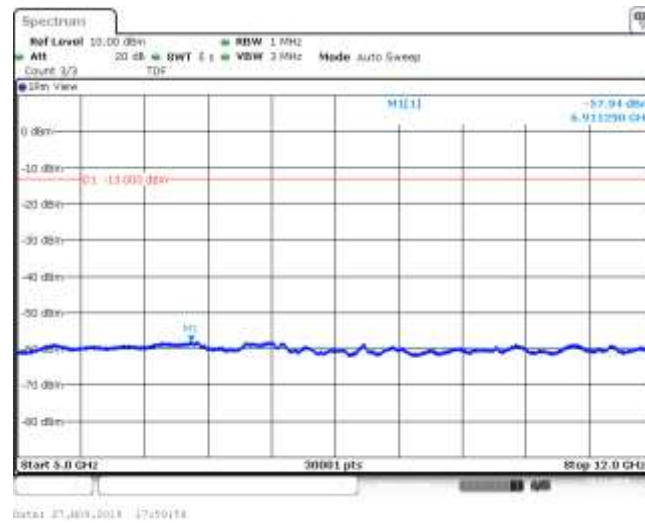
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Tel.: (86)755-27521059

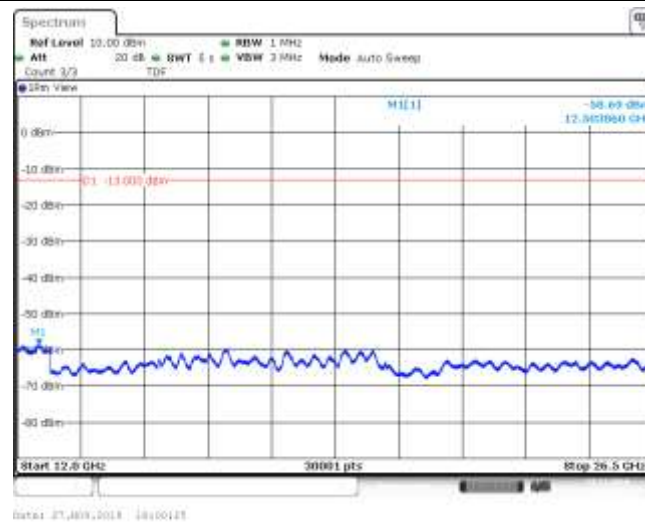
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Http://www.sz-ctc.org.cn

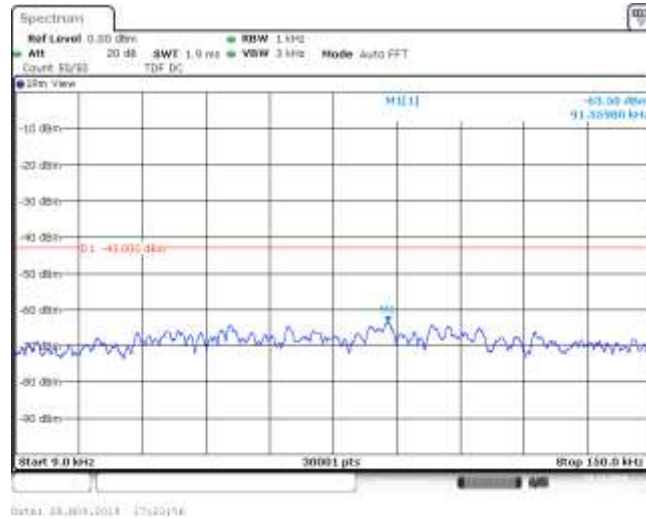
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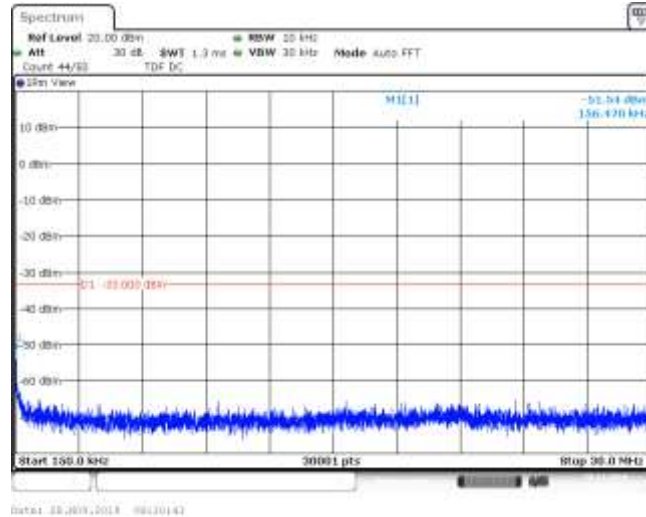
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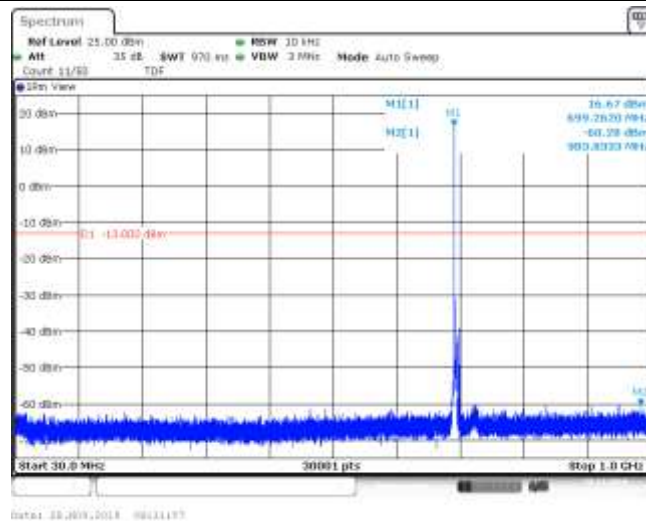
Band12_5MHz_QPSK_23035_1RB#0



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CTC Laboratories, Inc.

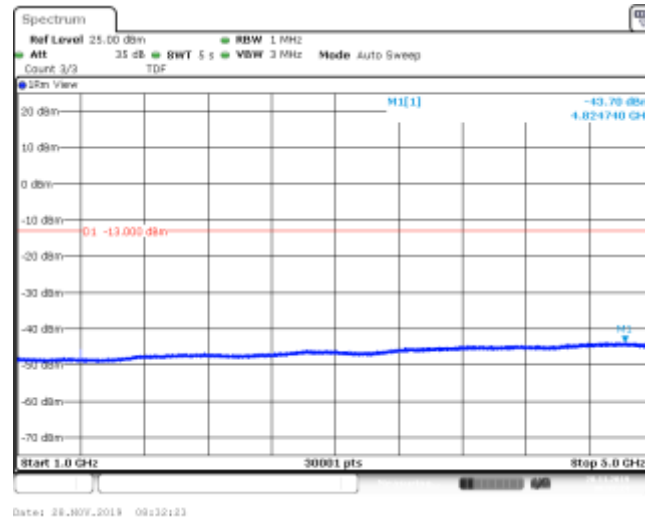
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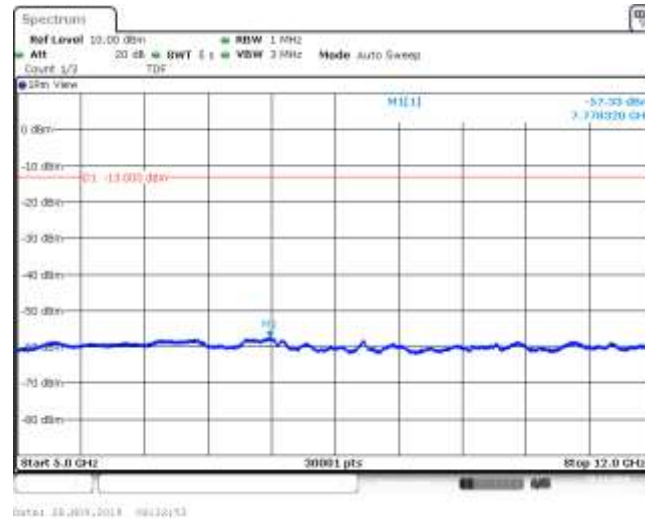
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

Band12_5MHz_QPSK_23035_1RB#0



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CTC Laboratories, Inc.

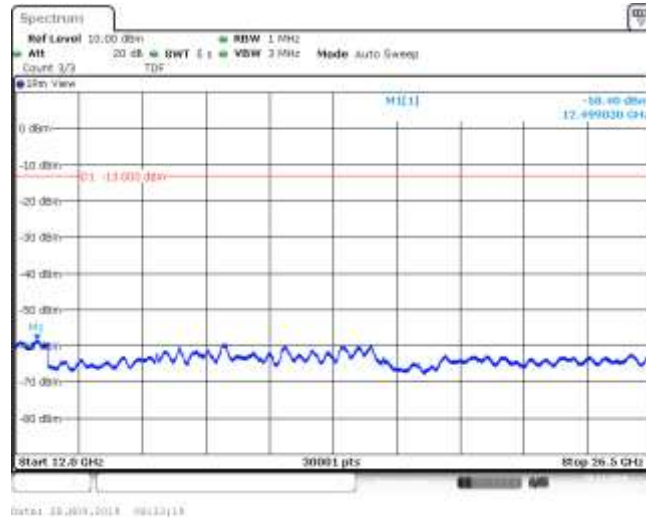
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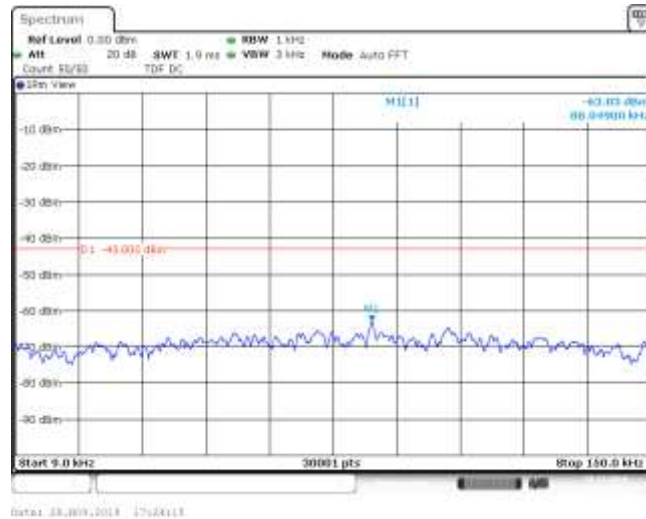
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Http://www.sz-ctc.org.cn

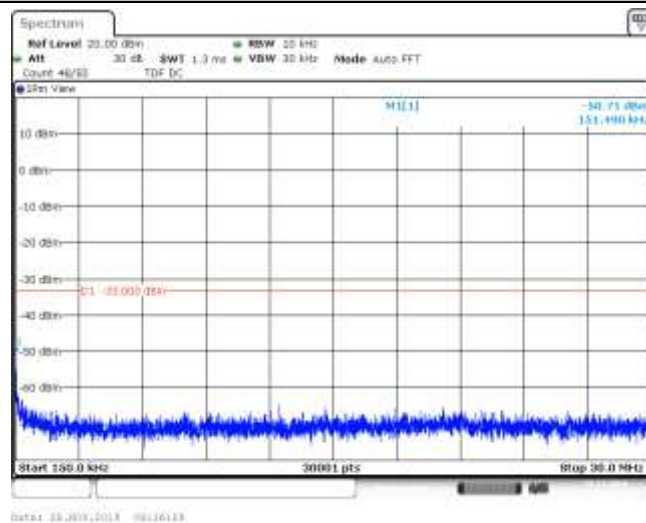

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CTC Laboratories, Inc.

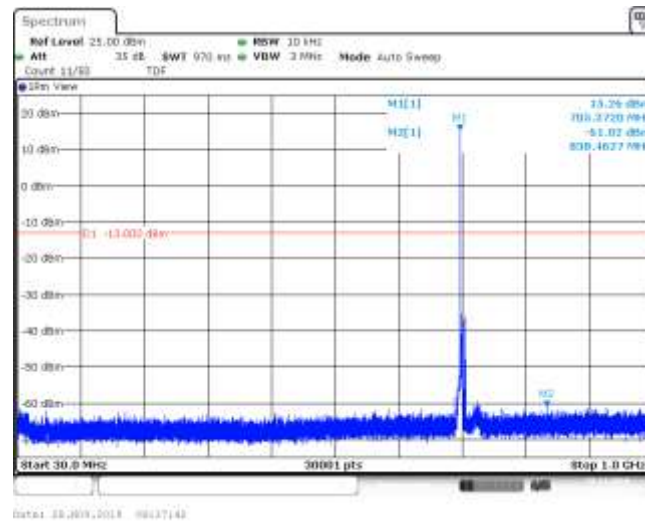
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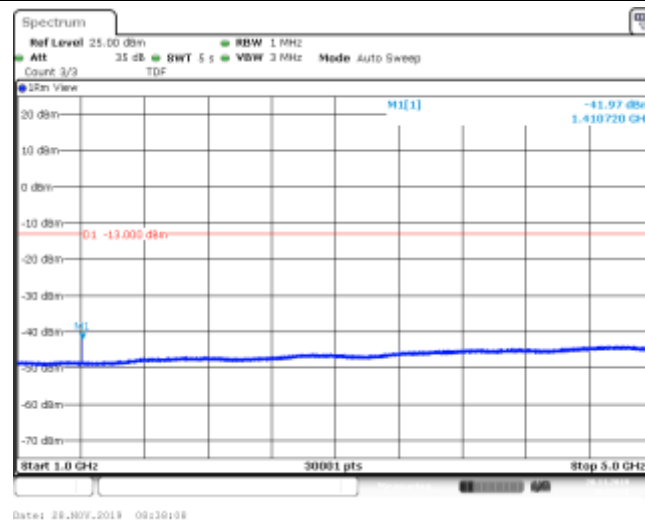
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Band12_5MHz_QPSK_23095_1RB#0



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CTC Laboratories, Inc.

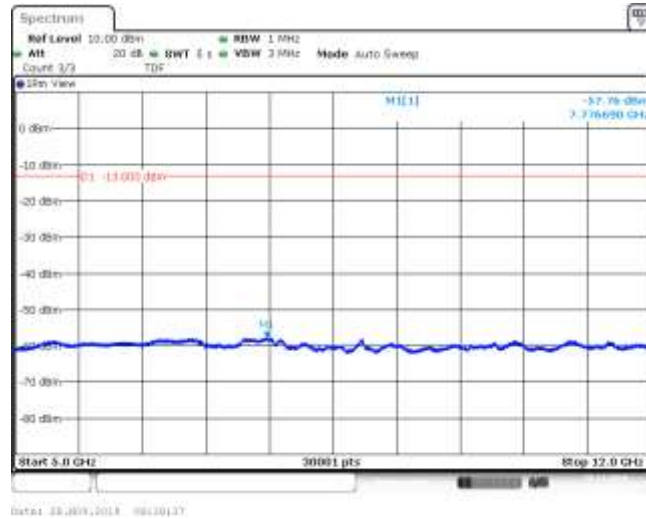
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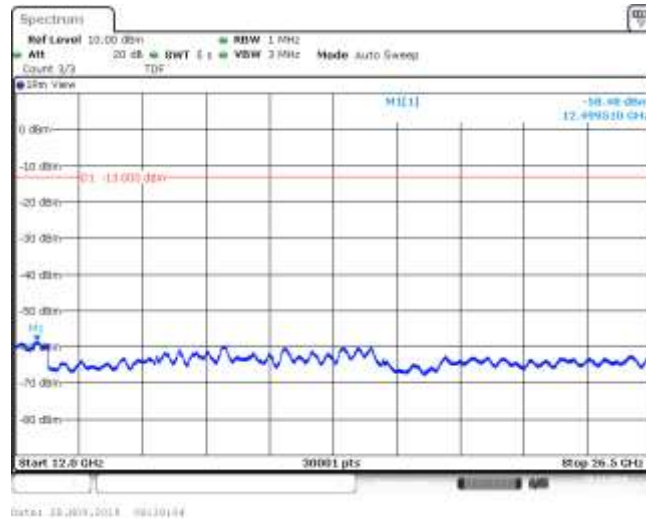
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

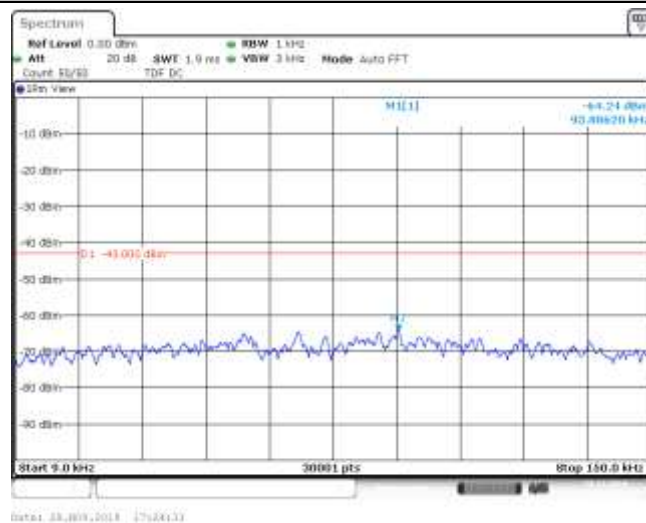

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Band12_5MHz_QPSK_23095_1RB#0



Band12_5MHz_QPSK_23155_1RB#0



CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

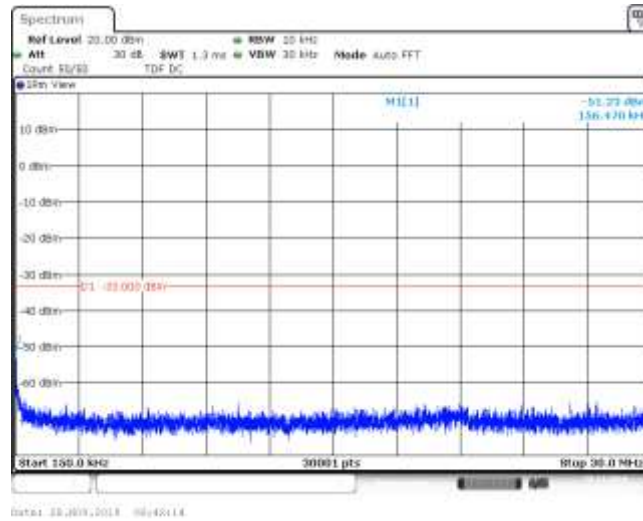
Tel.: (86)755-27521059

Fax: (86)755-27521011

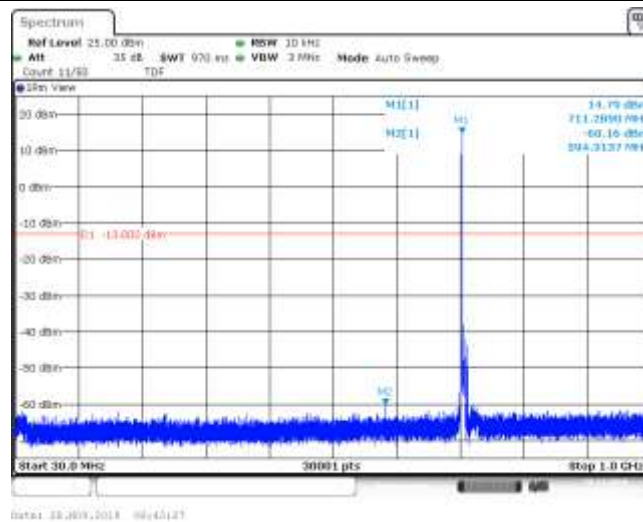
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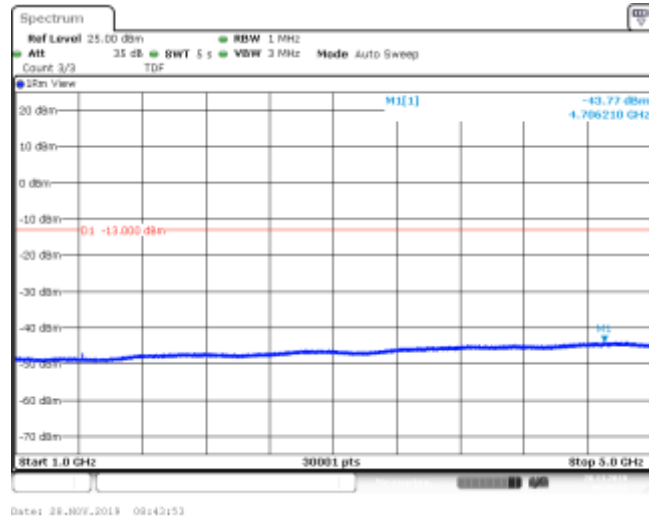
CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

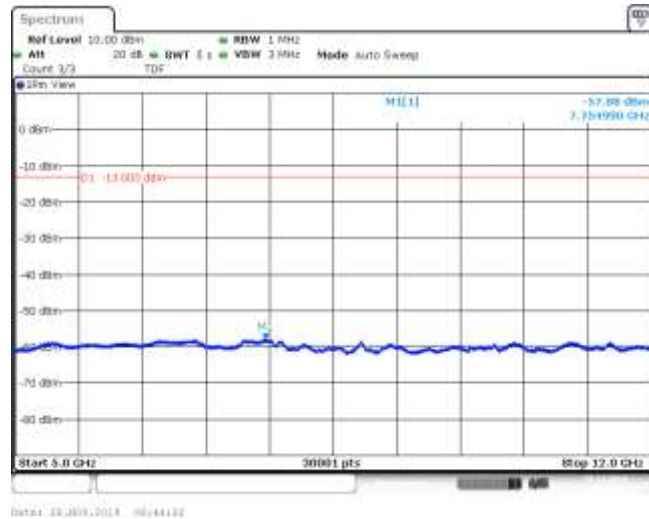
Tel.: (86)755-27521059

Fax: (86)755-27521011 [Http://www.sz-ctc.org.cn](http://www.sz-ctc.org.cn)

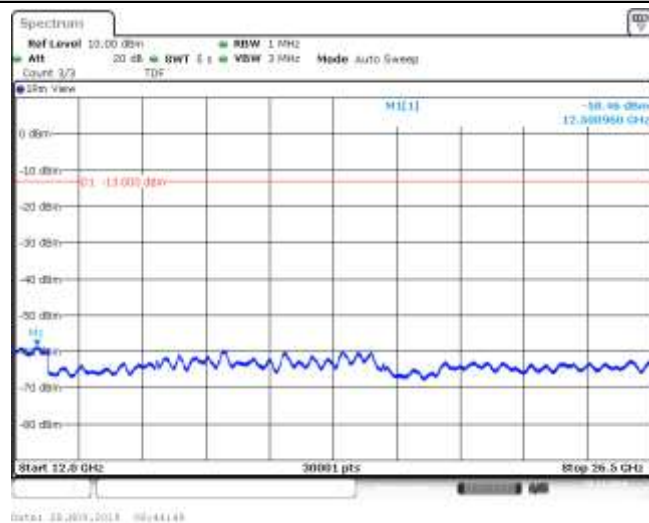
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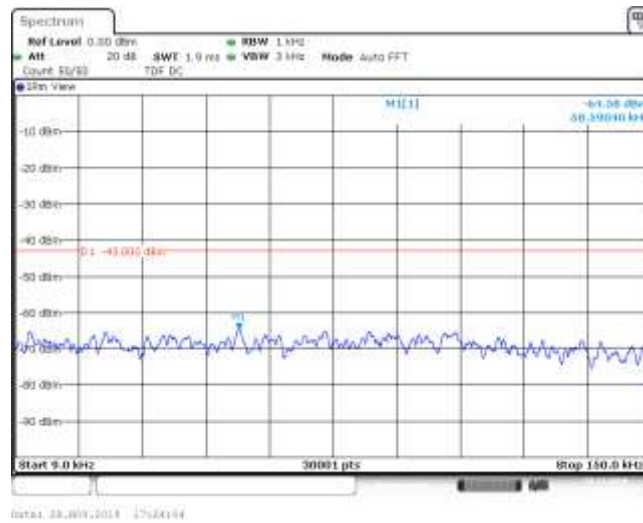
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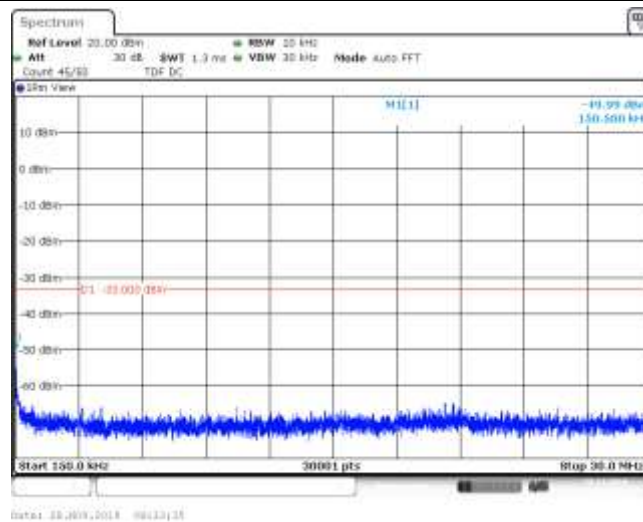
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Band12_5MHz_16QAM_23035_1RB#0



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CTC Laboratories, Inc.

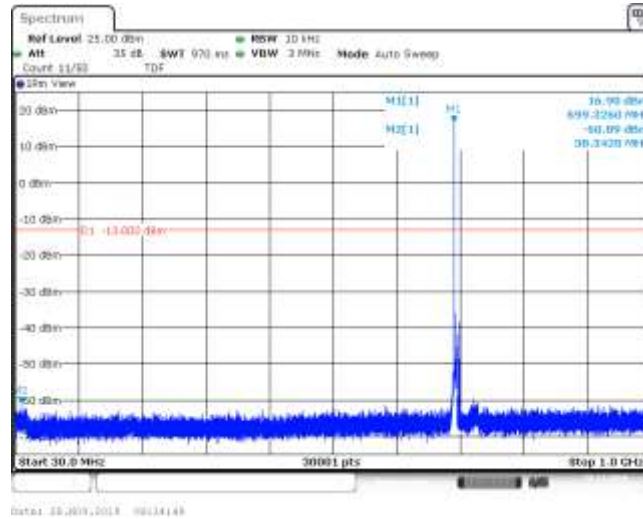
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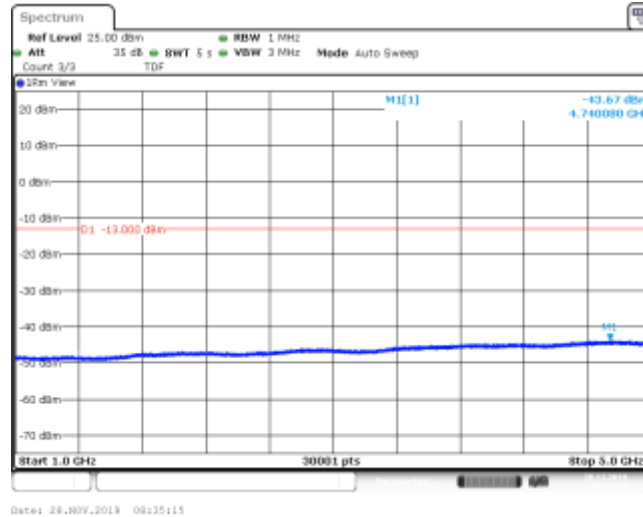
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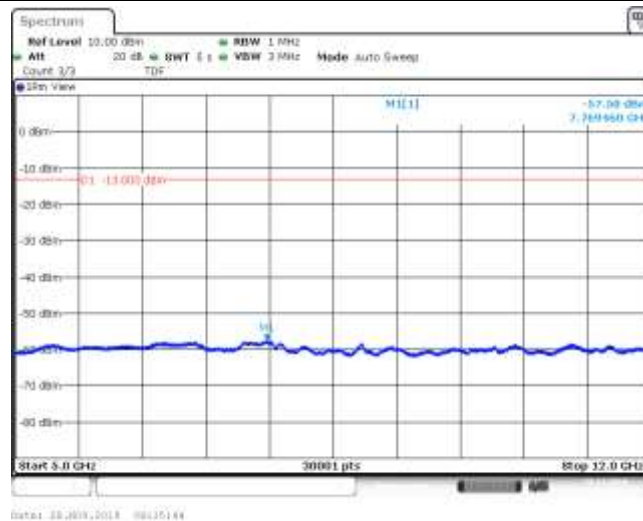

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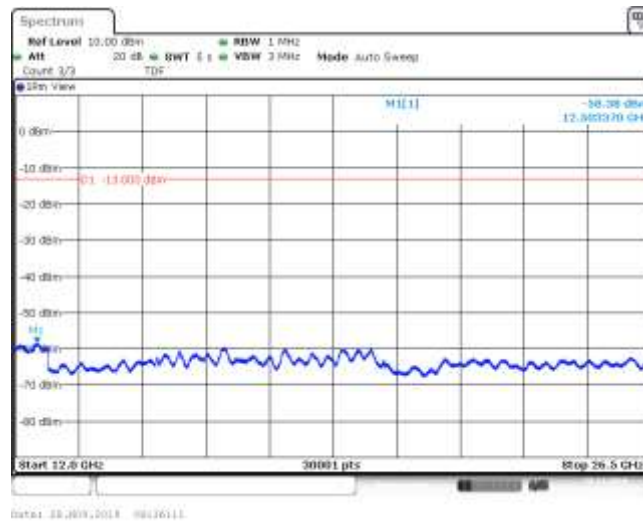
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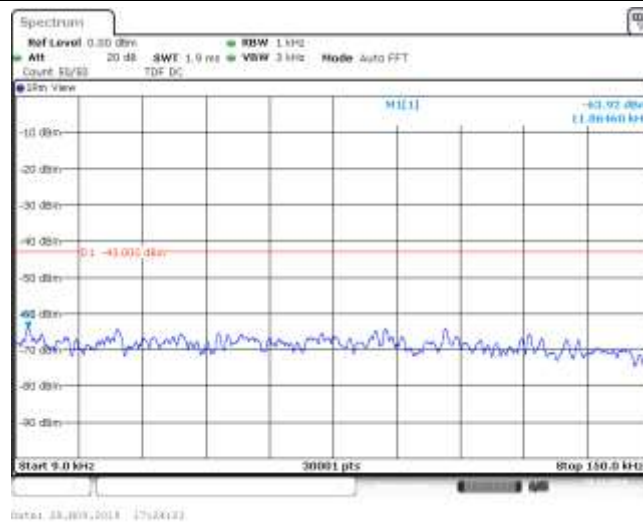
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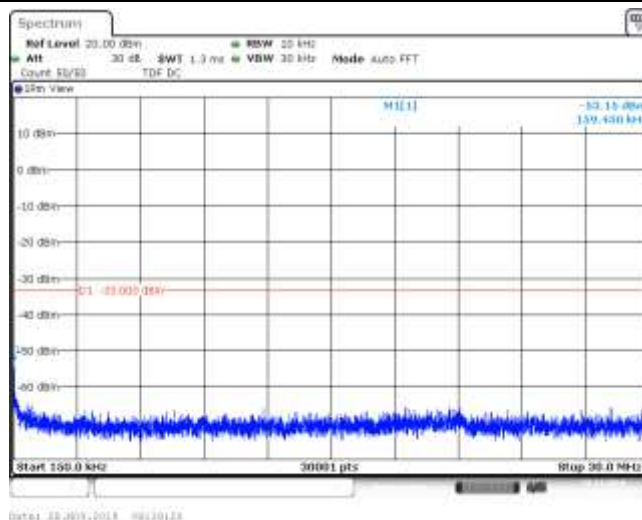
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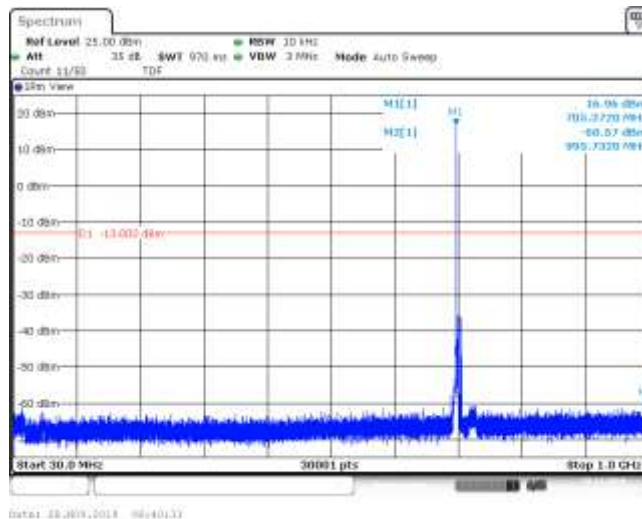
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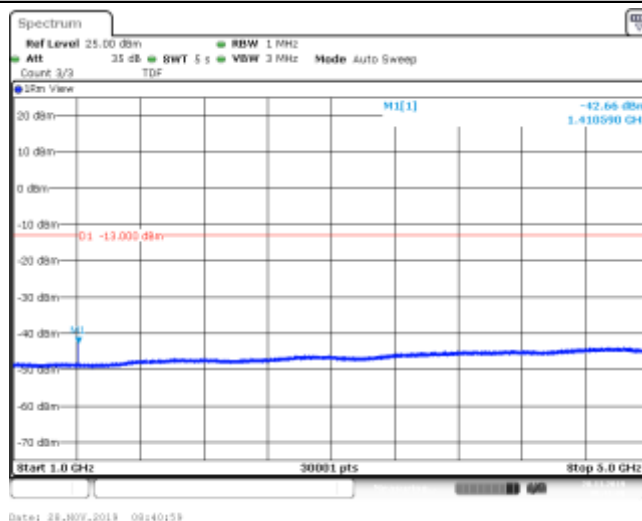
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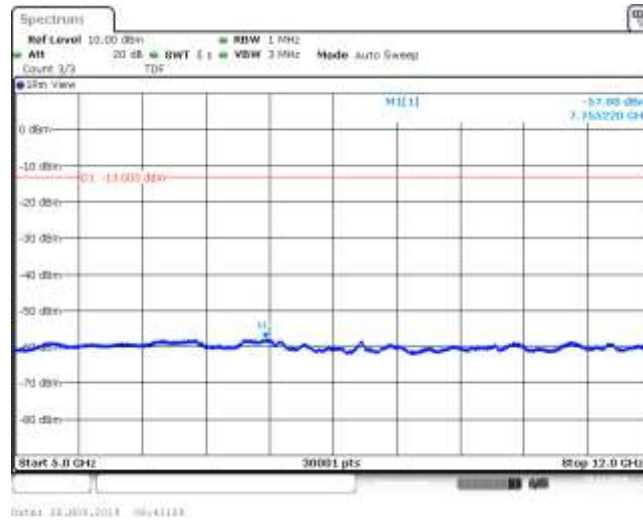
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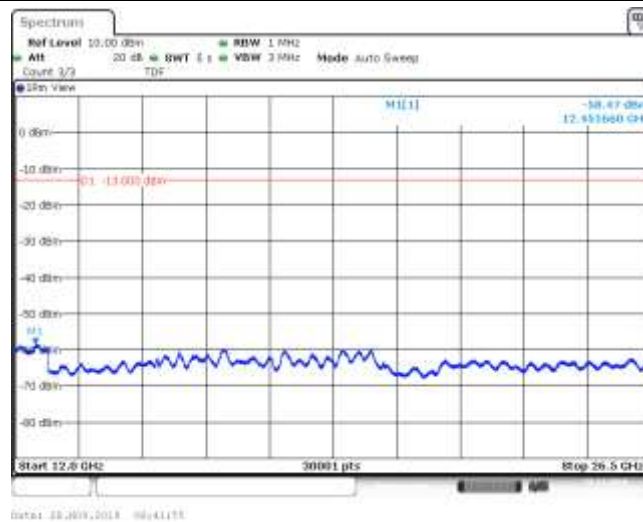
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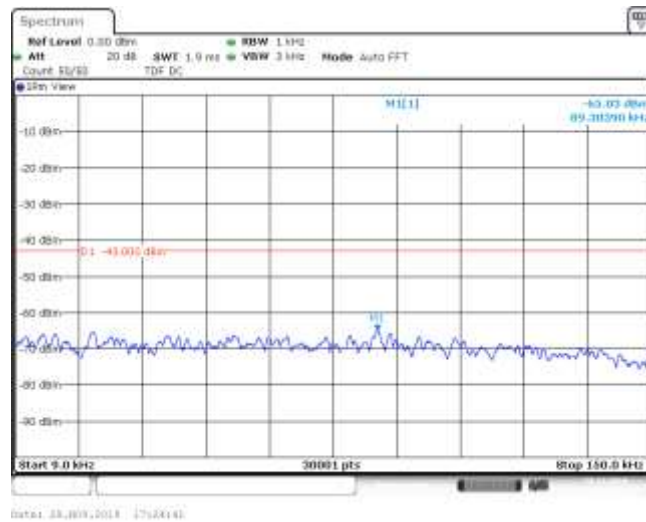
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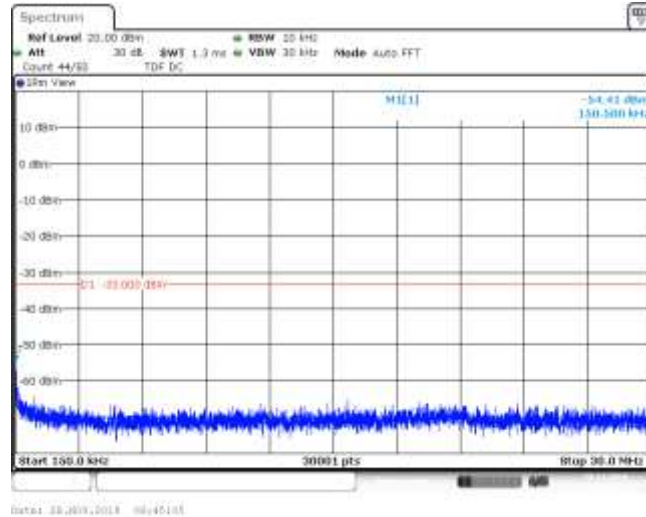
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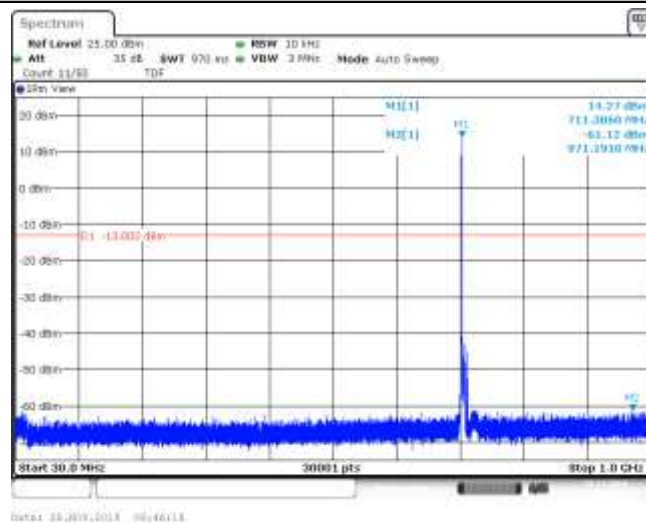
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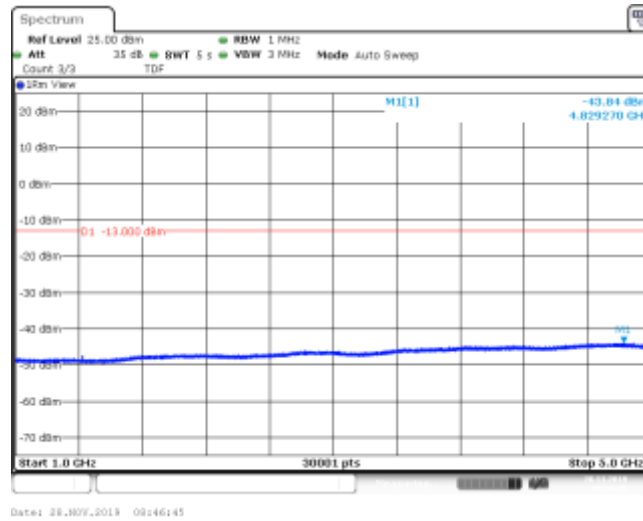
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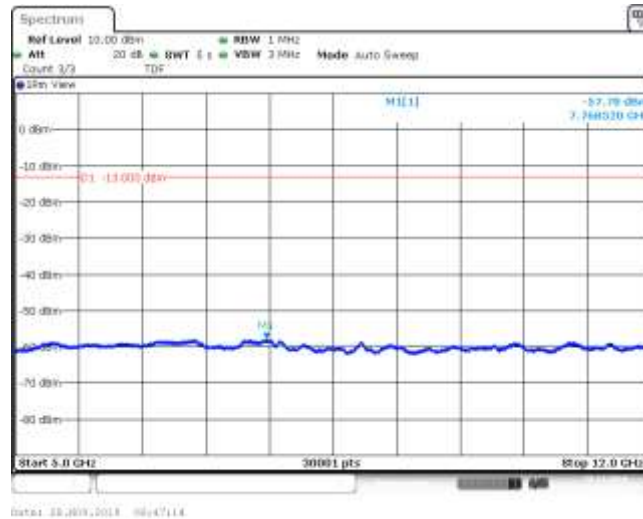
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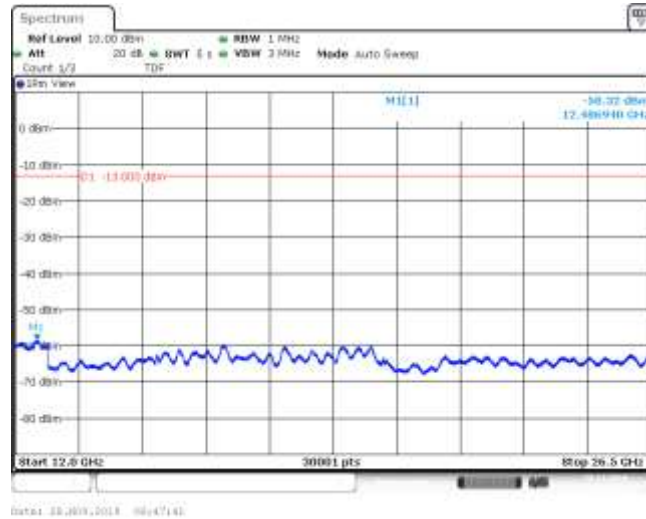
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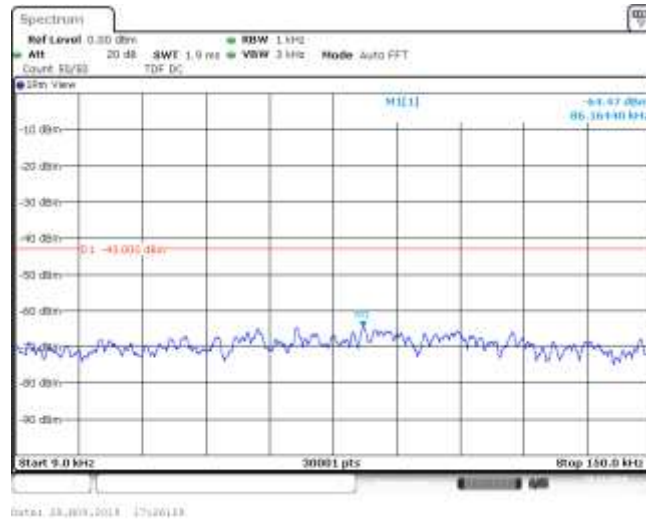
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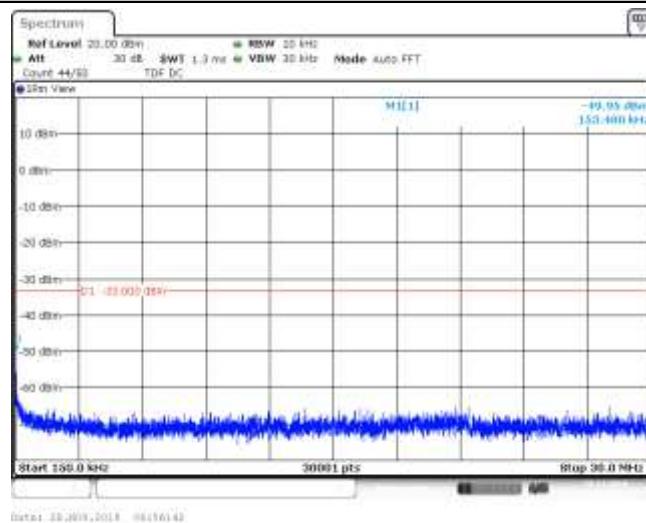
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Band12_10MHz_QPSK_23060_1RB#0



Band12_10MHz_QPSK_23060_1RB#0



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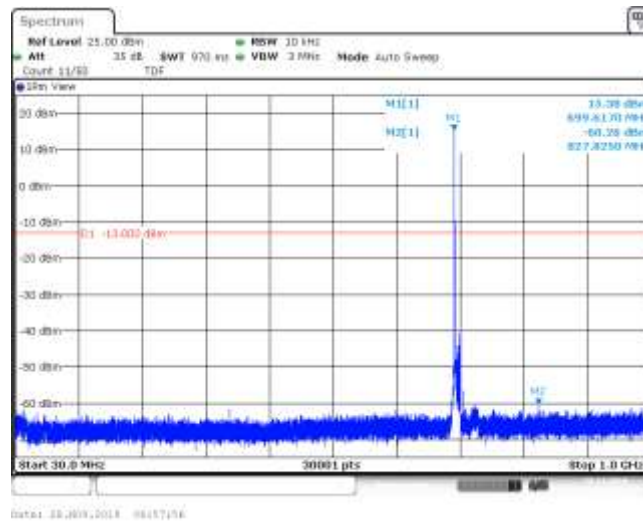
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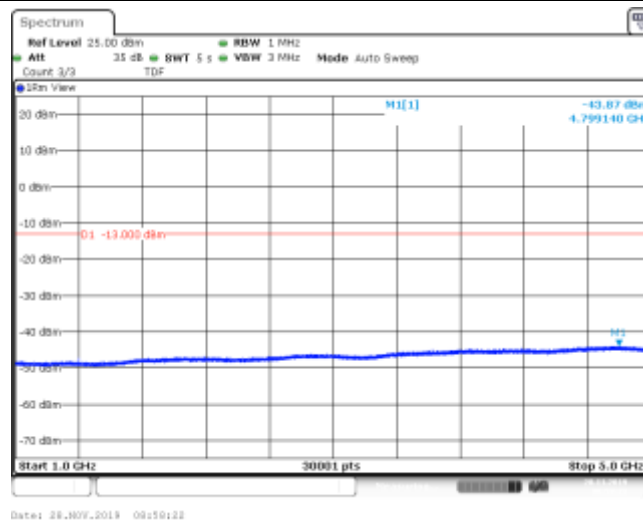
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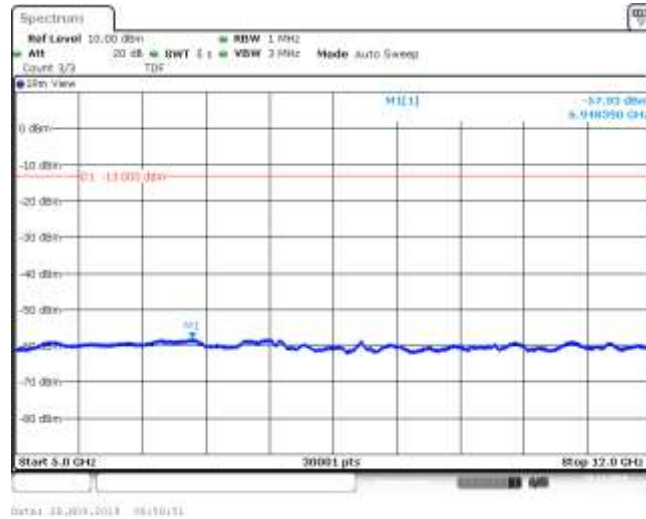
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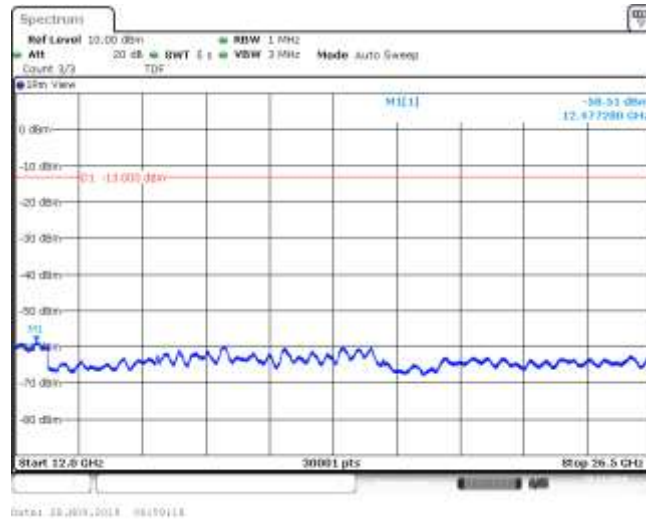
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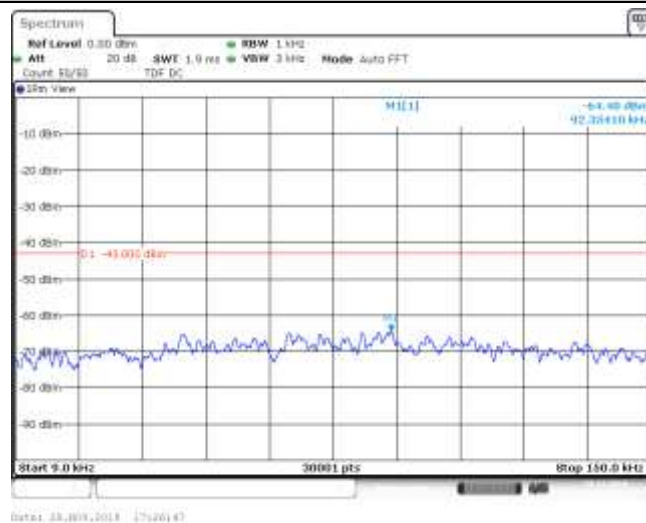

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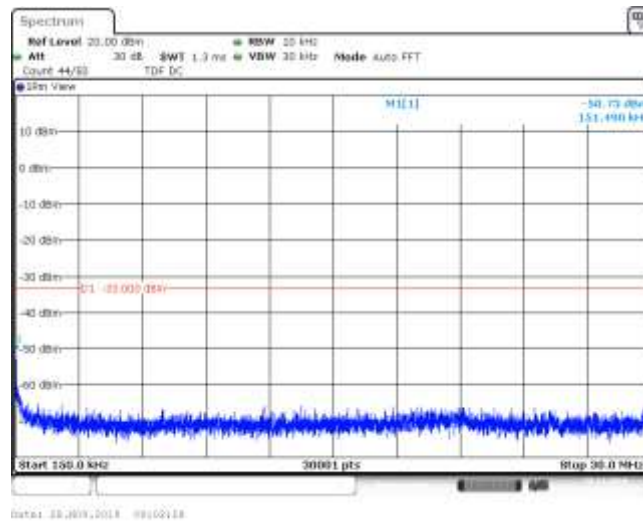
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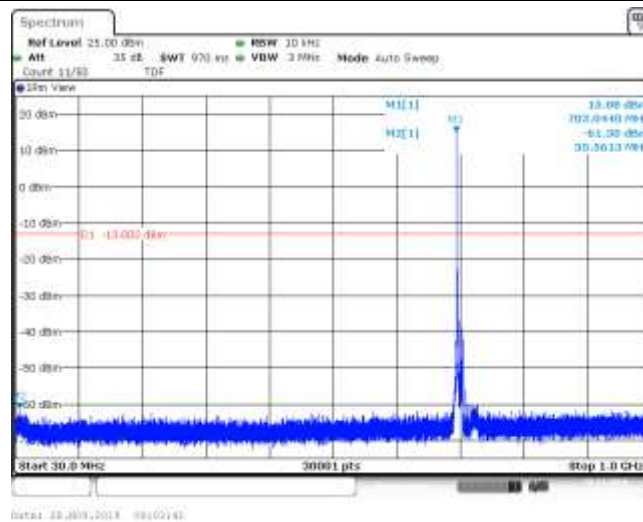
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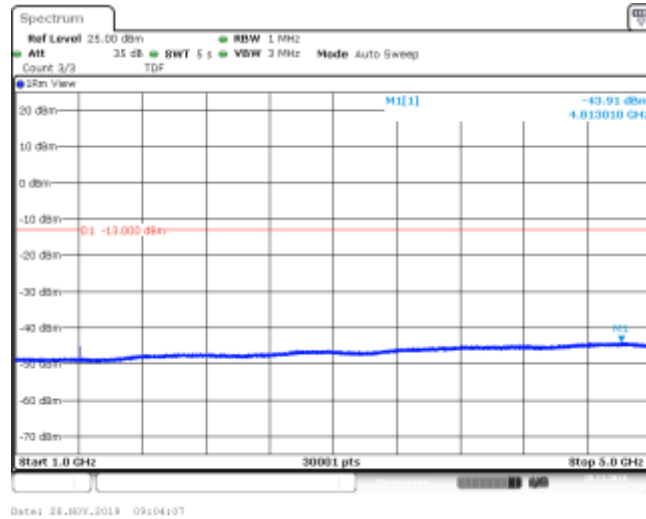
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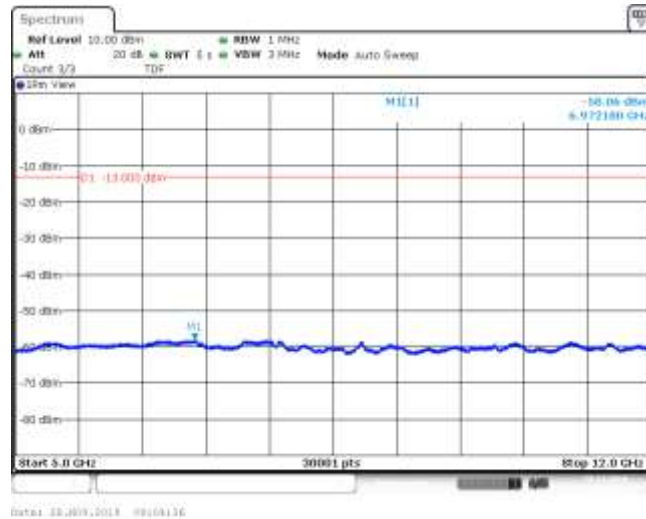
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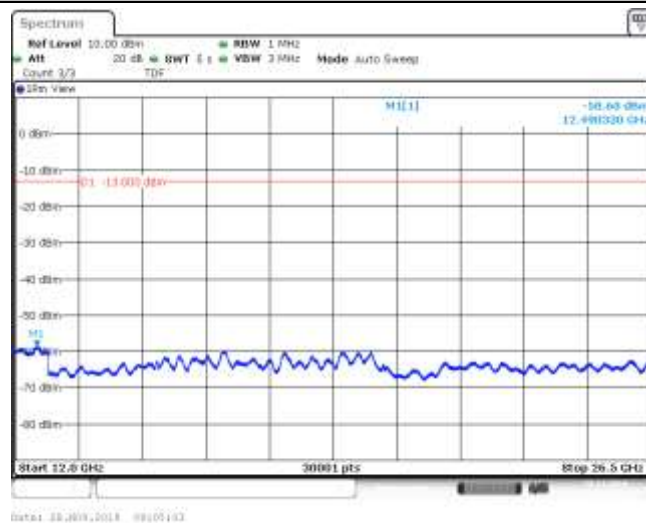

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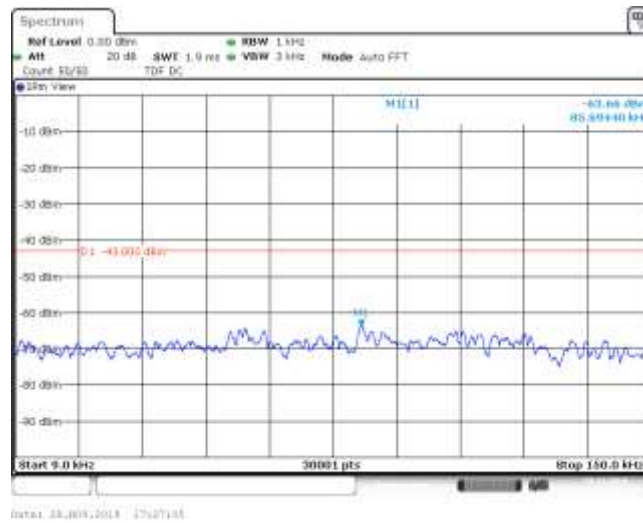
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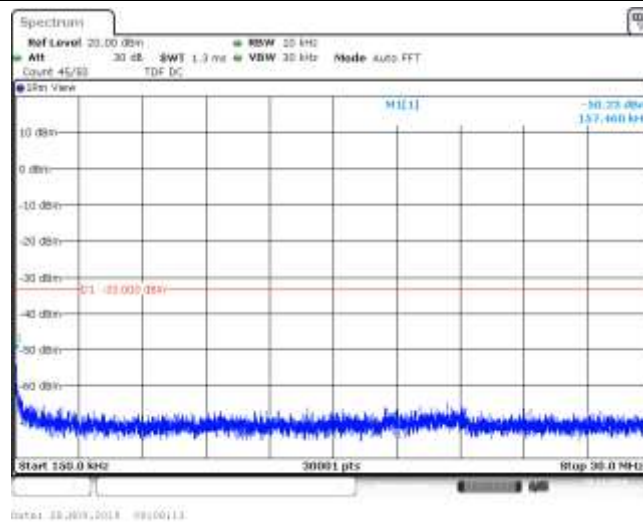
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Band12_10MHz_QPSK_23130_1RB#0



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CTC Laboratories, Inc.

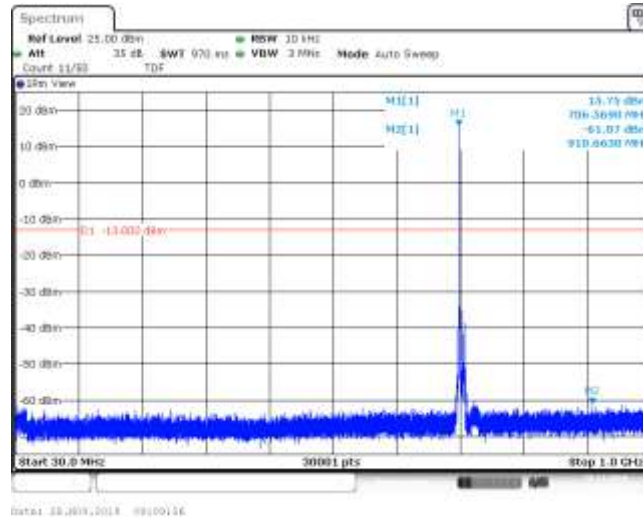
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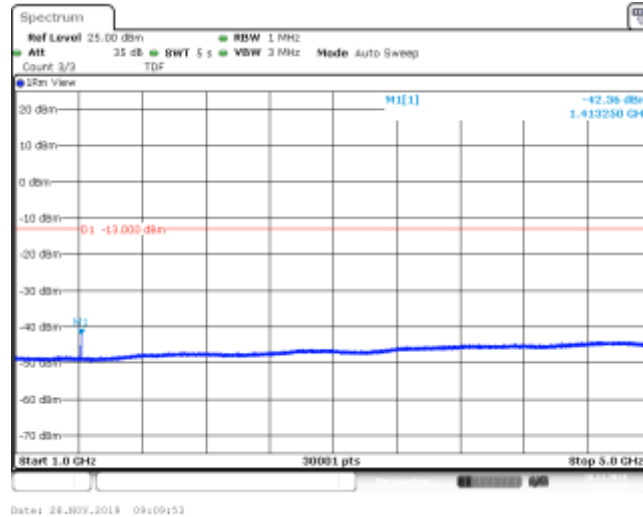
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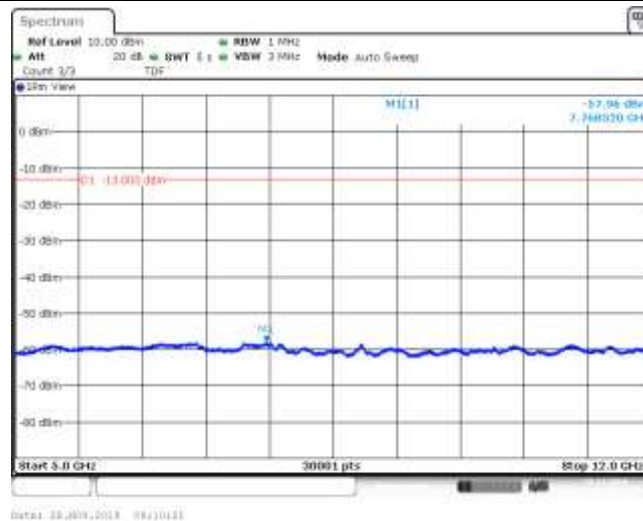

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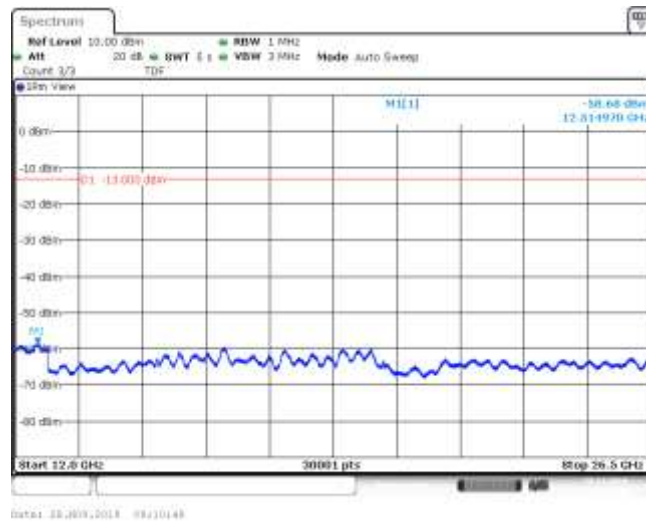
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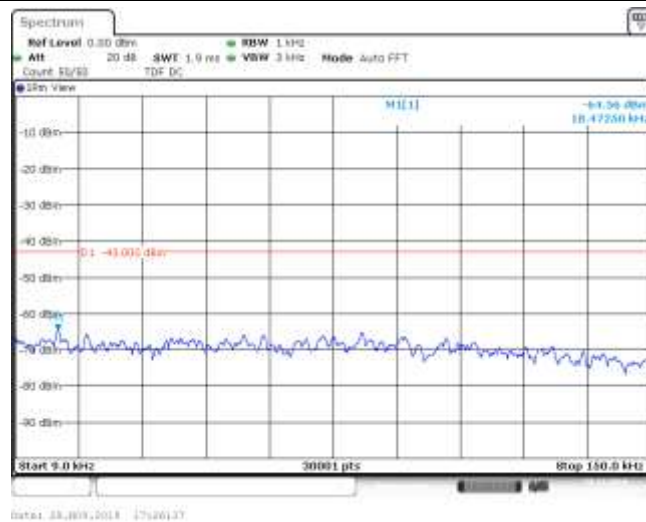
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Band12_10MHz_QPSK_23130_1RB#0



Band12_10MHz_16QAM_23060_1RB#0



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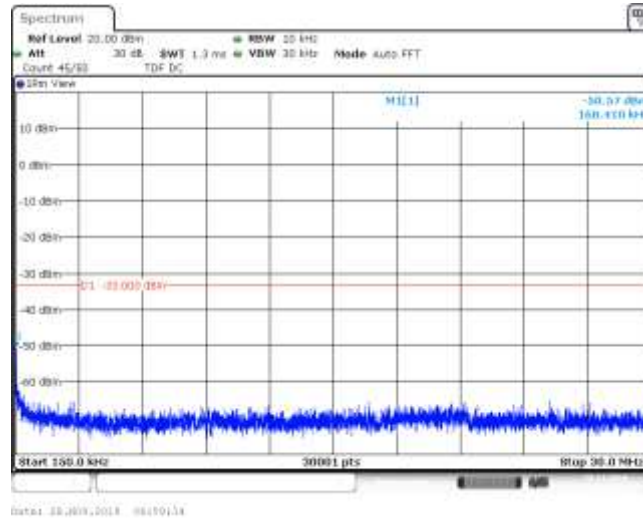
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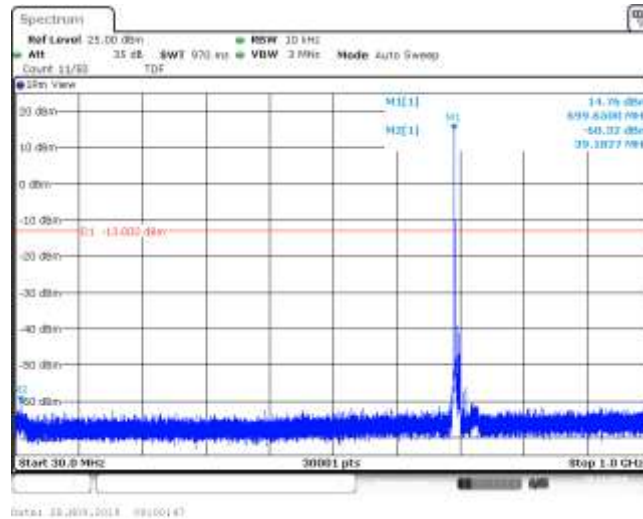
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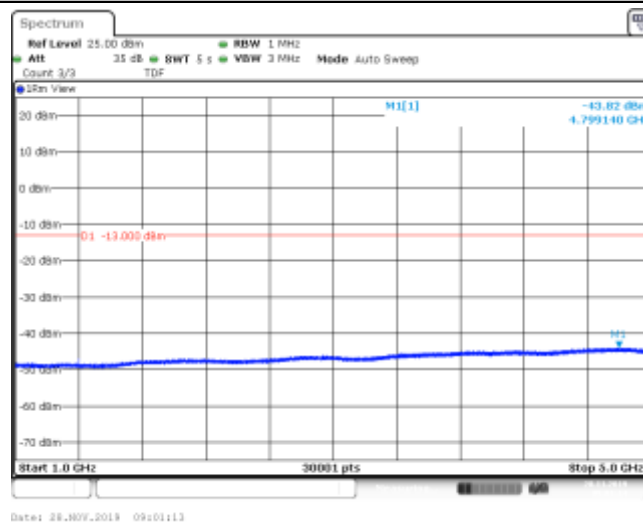

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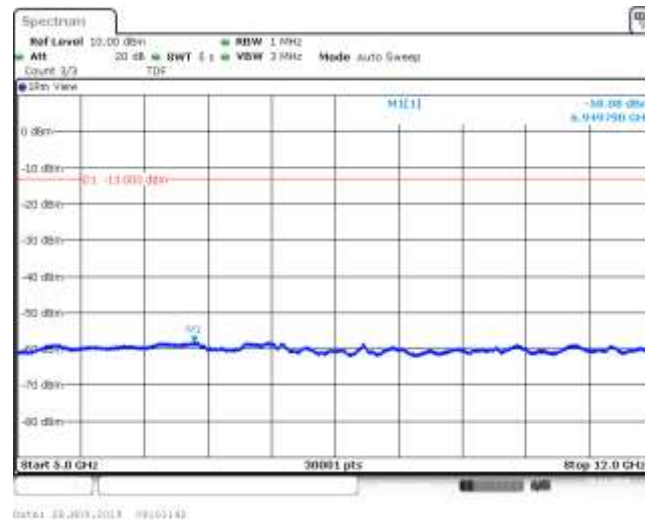
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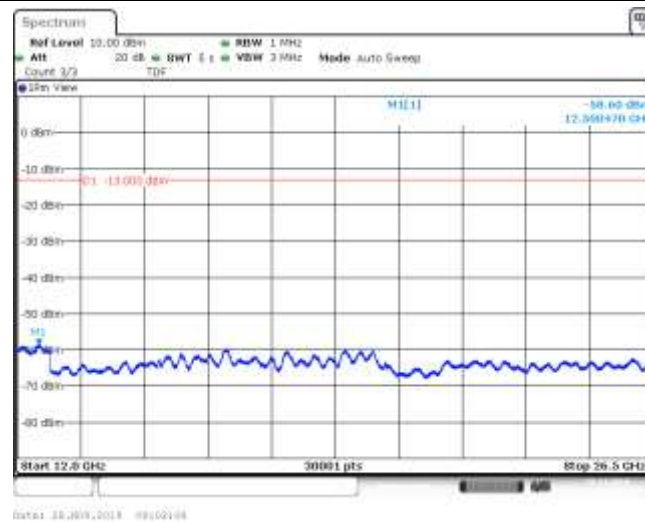
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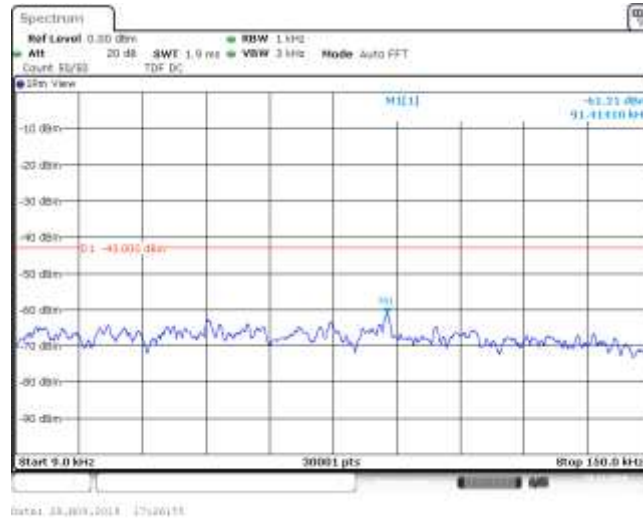
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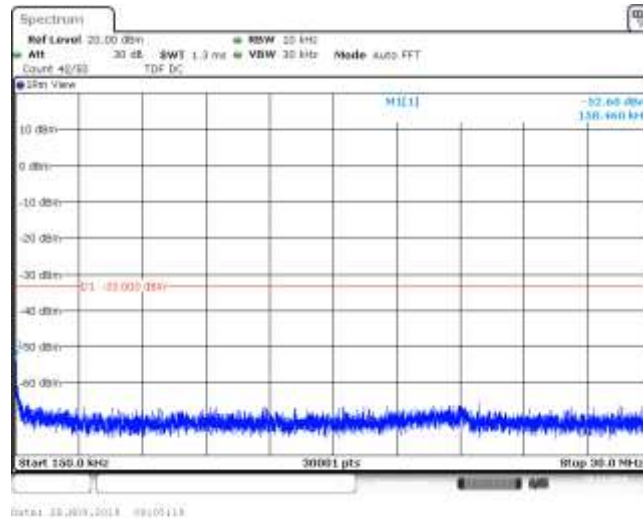
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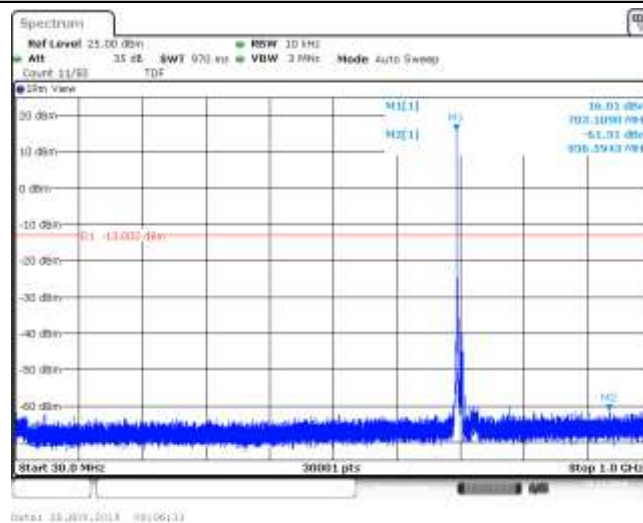
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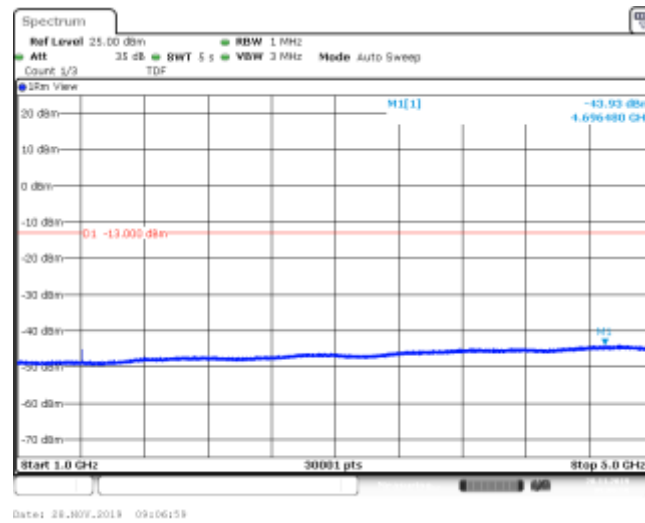
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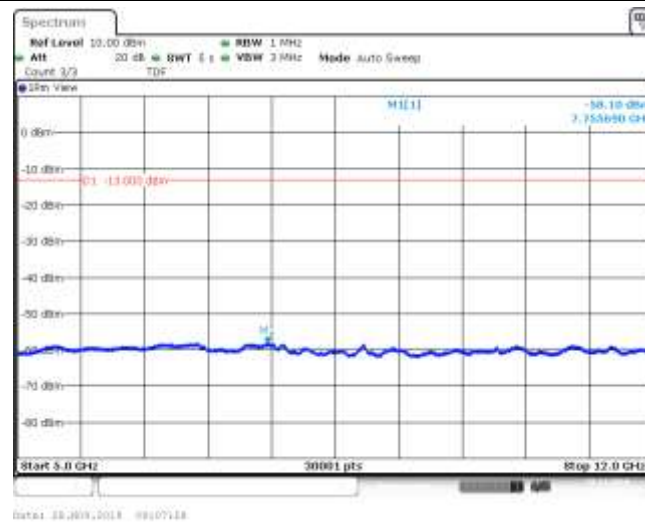
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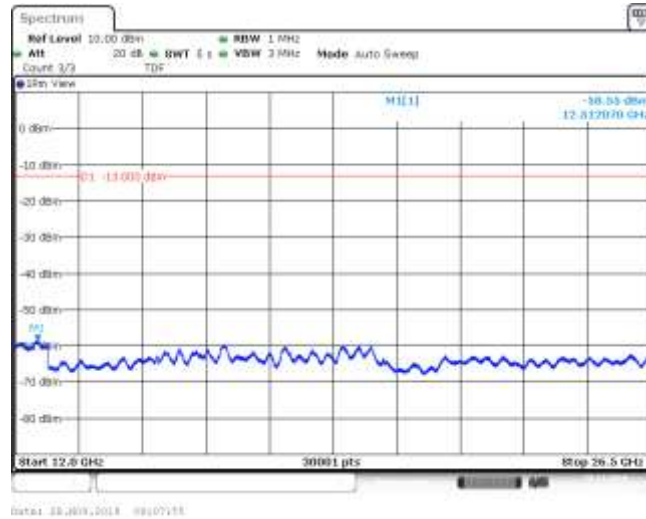
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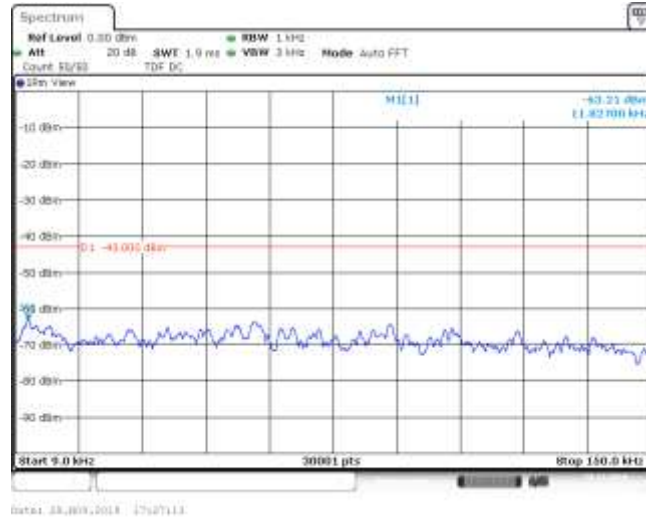
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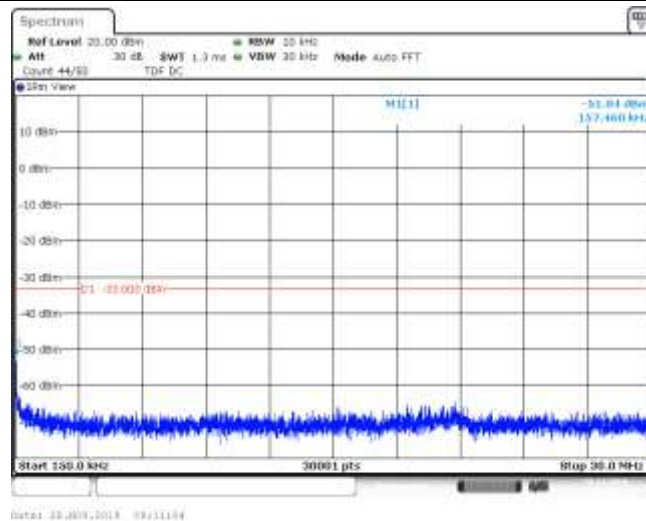
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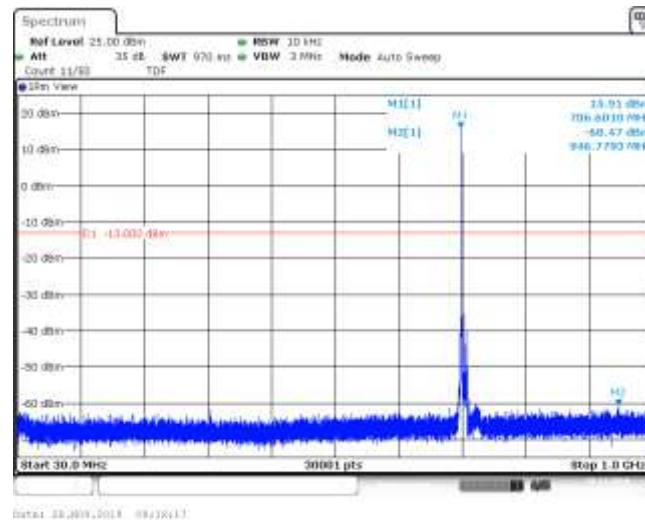
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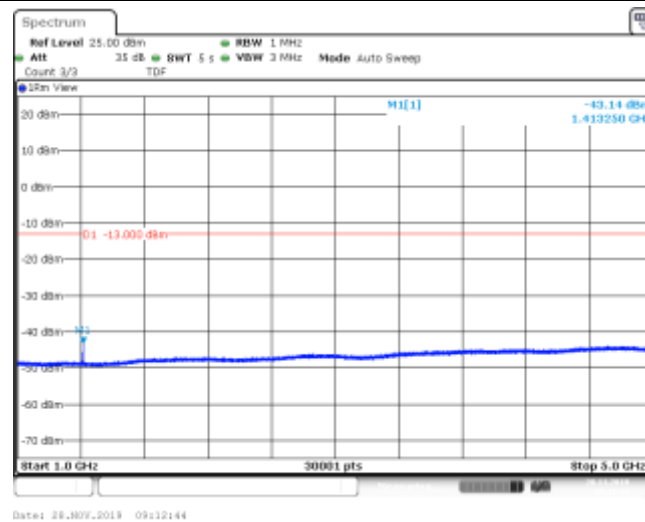
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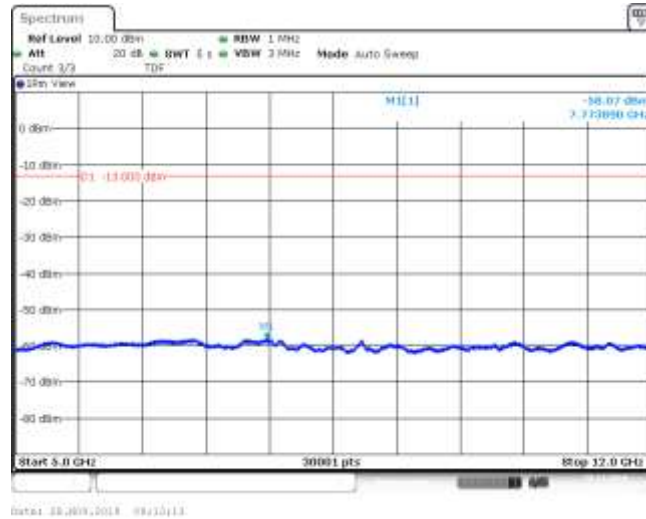
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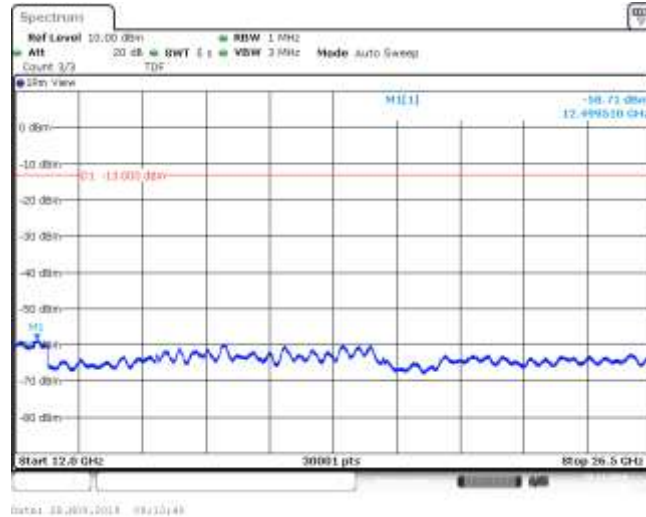
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Appendix F: Frequency Stability

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	1.4MHz	QPSK	23095	6RB#0	VL	NT	-2.89	-0.004085	±2.5	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	VN	NT	-3.60	-0.005088	±2.5	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	VH	NT	-3.13	-0.004424	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	VL	NT	-2.49	-0.003519	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	VN	NT	-3.10	-0.004382	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	VH	NT	-3.79	-0.005357	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	VL	NT	3.02	0.004269	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	VN	NT	-3.23	-0.004565	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	VH	NT	-5.59	-0.007901	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-5.31	-0.007505	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-4.09	-0.005781	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-4.08	-0.005767	±2.5	PASS

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	1.4MHz	QPSK	23095	6RB#0	NV	-30	-5.04	-0.007124	±2.5	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	NV	-20	-3.96	-0.005597	±2.5	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	NV	0	-3.88	-0.005484	±2.5	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	NV	10	-3.26	-0.004608	±2.5	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	NV	20	-3.53	-0.004989	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	NV	-30	-2.98	-0.004212	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	NV	-20	-2.93	-0.004141	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	NV	0	-2.85	-0.004028	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	NV	10	-3.89	-0.005498	±2.5	PASS
Band12	3MHz	QPSK	23095	15RB#0	NV	20	-3.30	-0.004664	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	NV	-30	-5.39	-0.007618	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	NV	-20	-3.83	-0.005413	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	NV	0	-3.52	-0.004975	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	NV	10	-4.92	-0.006954	±2.5	PASS
Band12	5MHz	QPSK	23095	25RB#0	NV	20	-4.22	-0.005965	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-5.04	-0.007124	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	3.65	0.005159	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-3.73	-0.005272	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	3.02	0.004269	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-3.15	-0.004452	±2.5	PASS

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