



Appendix B

E-UTRA BAND 5



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com



CONTENT

1. EFFECTIVE (ISOTROPIC) RADIATED POWER	3
1.1. Test Result	3
2. PEAK-TO-AVERAGE RATIO(CCDF).....	8
2.1. Test Result	8
2.2. Test Plots.....	8
3. MODULATION CHARACTERISTICS	12
3.1. Test BAND = LTE BAND5	12
3.1.1. Test Mode = LTE /TM1 10MHz.....	12
3.1.1.1. Test Channel = MCH.....	12
3.1.2. Test Mode = LTE /TM2 10MHz.....	13
3.1.2.1. Test Channel = MCH.....	13
4. 26dB BANDWIDTH AND OCCUPIED BANDWIDTH	14
4.1. Test Result	14
4.2. Test Plots.....	15
5. BAND EDGE COMPLIANCE.....	27
5.1. Test Plots.....	27
6. SPURIOUS EMISSION AT ANTENNA TERMINAL.....	43
6.1. Test Plots.....	43
7. FIELD STRENGTH OF SPURIOUS RADIATION.....	49
7.1. Test BAND = LTE BAND 5.....	49
7.1.1. Test Mode =LTE/TM1 10MHz.....	49
7.1.1.1. Test Channel = LCH.....	49
7.1.1.2. Test Channel = MCH.....	49
7.1.1.3. Test Channel = HCH	50
7.1.1.4. Spot Check worse mode.....	50
8. FREQUENCY STABILITY.....	52
8.1. Frequency Vs Voltage	52
8.2. Frequency Vs Temperature	52



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CCC Laboratory)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	23.01	23.15	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.23	23.37	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.38	23.52	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	23.47	23.61	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	23.50	23.64	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.46	23.60	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.50	22.64	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.25	23.39	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	23.30	23.44	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.18	23.32	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	23.33	23.47	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	23.36	23.50	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	23.37	23.51	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.28	22.42	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.29	23.43	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	23.36	23.50	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.31	23.45	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	23.41	23.55	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	23.44	23.58	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	23.33	23.47	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	22.48	22.62	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	21.99	22.13	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	22.21	22.35	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	22.07	22.21	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	22.63	22.77	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	22.52	22.66	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	22.73	22.87	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.28	21.42	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	22.11	22.25	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	22.10	22.24	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	21.88	22.02	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	22.49	22.63	38.45	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CSTC) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5	1.4MHz	16QAM	20525	3RB#1	22.29	22.43	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	22.41	22.55	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.31	21.45	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	22.02	22.16	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	21.94	22.08	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.79	21.93	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	22.62	22.76	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	22.46	22.60	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	22.60	22.74	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.29	21.43	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.47	23.61	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.49	23.63	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.30	23.44	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	22.60	22.74	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	22.51	22.65	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	22.58	22.72	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.55	22.69	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.40	23.54	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.32	23.46	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.04	23.18	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#0	22.43	22.57	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#4	22.51	22.65	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#7	22.31	22.45	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	22.32	22.46	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	23.47	23.61	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	23.57	23.71	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	23.27	23.41	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#0	22.56	22.70	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#4	22.48	22.62	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#7	22.45	22.59	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	22.51	22.65	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	22.09	22.23	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.01	22.15	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.73	21.87	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#0	21.39	21.53	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.47	21.61	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#7	21.46	21.60	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.55	21.69	38.45	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5	3MHz	16QAM	20525	1RB#0	22.17	22.31	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	22.06	22.20	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	22.06	22.20	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#0	21.32	21.46	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#4	21.23	21.37	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#7	21.28	21.42	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.56	21.70	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	22.14	22.28	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	22.09	22.23	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	22.07	22.21	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#0	21.28	21.42	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#4	21.31	21.45	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#7	21.44	21.58	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.49	21.63	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.41	23.55	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.43	23.57	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.24	23.38	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	22.68	22.82	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#6	22.56	22.70	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#13	22.49	22.63	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.55	22.69	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.11	23.25	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.29	23.43	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.15	23.29	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	22.48	22.62	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#6	22.46	22.60	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#13	22.46	22.60	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	22.41	22.55	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.13	23.27	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	23.40	23.54	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.33	23.47	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#0	22.45	22.59	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	22.58	22.72	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#13	22.37	22.51	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.39	22.53	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	21.87	22.01	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.31	22.45	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	21.55	21.69	38.45	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5	5MHz	16QAM	20425	12RB#0	21.45	21.59	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#6	21.44	21.58	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#13	21.23	21.37	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.48	21.62	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.85	21.99	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	22.36	22.50	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	21.96	22.10	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#0	21.36	21.50	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#6	21.21	21.35	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#13	21.20	21.34	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.43	21.57	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	21.95	22.09	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	22.52	22.66	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.96	22.10	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#0	21.43	21.57	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#6	21.30	21.44	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#13	21.26	21.40	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.25	21.39	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.51	23.65	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.53	23.67	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.04	23.18	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	22.61	22.75	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#12	22.66	22.80	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#25	22.28	22.42	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.38	22.52	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.22	23.36	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	24.00	24.14	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	23.03	23.17	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	22.57	22.71	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	22.53	22.67	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	22.33	22.47	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.43	22.57	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.30	23.44	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.54	23.68	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	23.00	23.14	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	22.51	22.65	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	22.45	22.59	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	22.35	22.49	38.45	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CSTC) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5	10MHz	QPSK	20600	50RB#0	22.43	22.57	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	22.12	22.26	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	22.04	22.18	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	22.06	22.20	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#0	21.59	21.73	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#12	21.53	21.67	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#25	21.33	21.47	38.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	21.30	21.44	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	22.06	22.20	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	21.98	22.12	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	21.94	22.08	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#0	21.52	21.66	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#12	21.65	21.79	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#25	21.41	21.55	38.45	PASS
Band5	10MHz	16QAM	20525	50RB#0	21.48	21.62	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	22.17	22.31	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	22.01	22.15	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.99	22.13	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#0	21.50	21.64	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#12	21.32	21.46	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#25	21.31	21.45	38.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	21.44	21.58	38.45	PASS

Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CCC Laboratory)

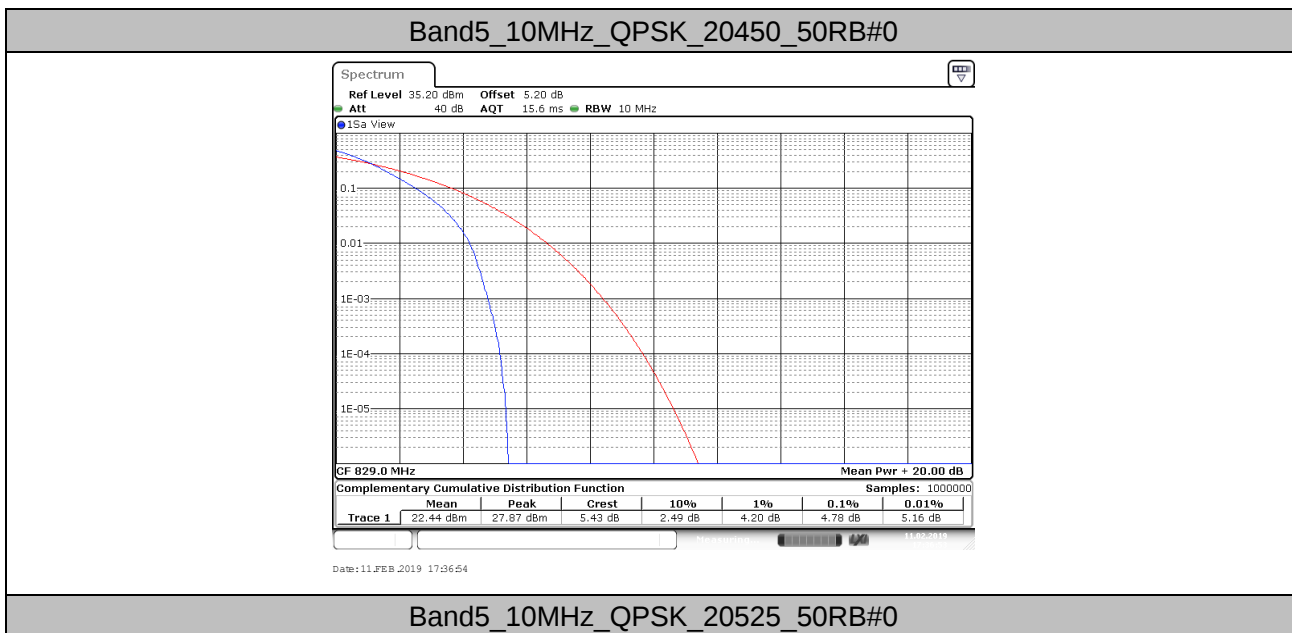
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

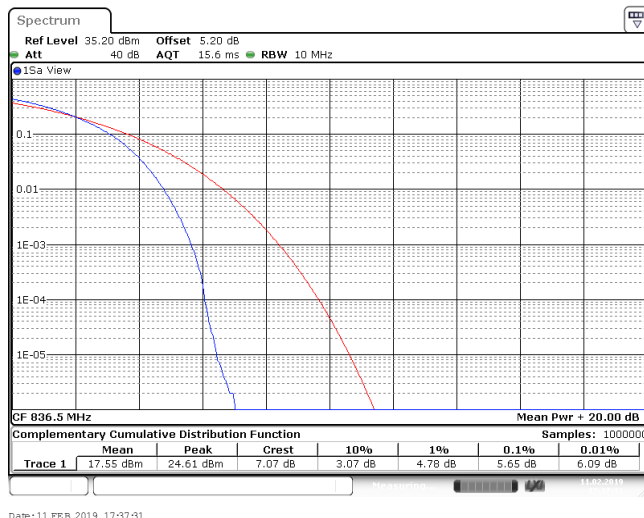
BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	4.78	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.65	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.65	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	5.80	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	5.91	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	5.65	13	PASS

2.2. Test Plots

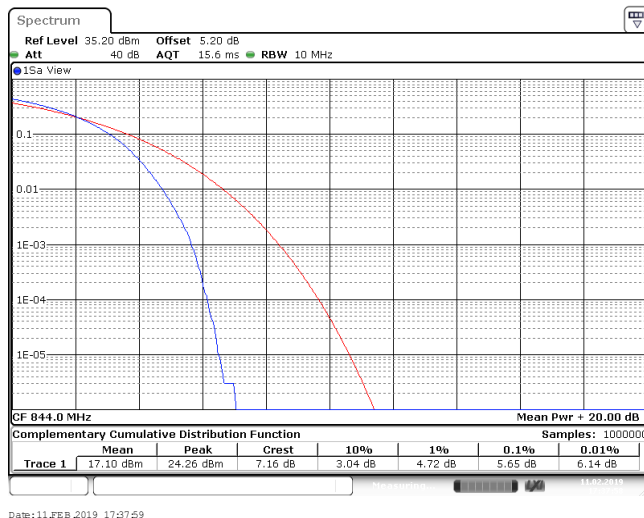


Band5_10MHz_QPSK_20525_50RB#0





Band5_10MHz_QPSK_20600_50RB#0



Band5_10MHz_16QAM_20450_50RB#0

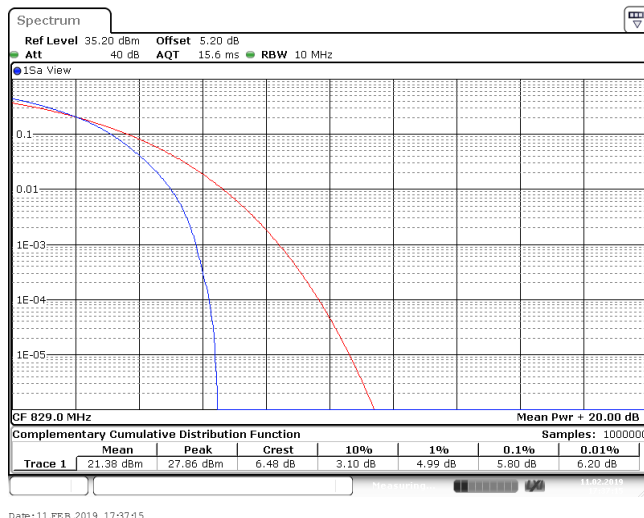


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

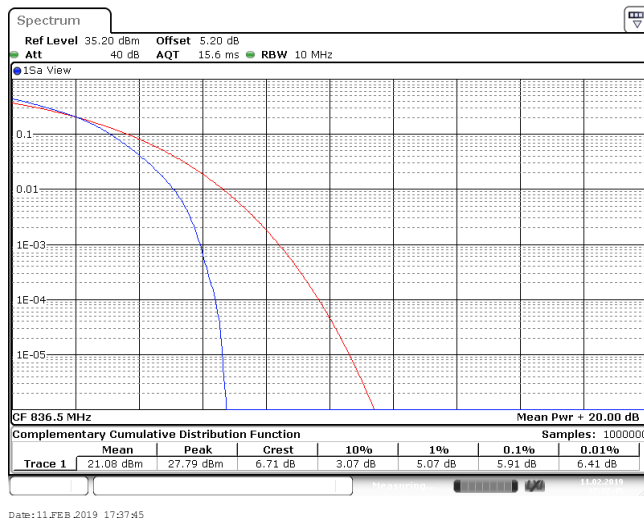
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CCC Laboratory)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

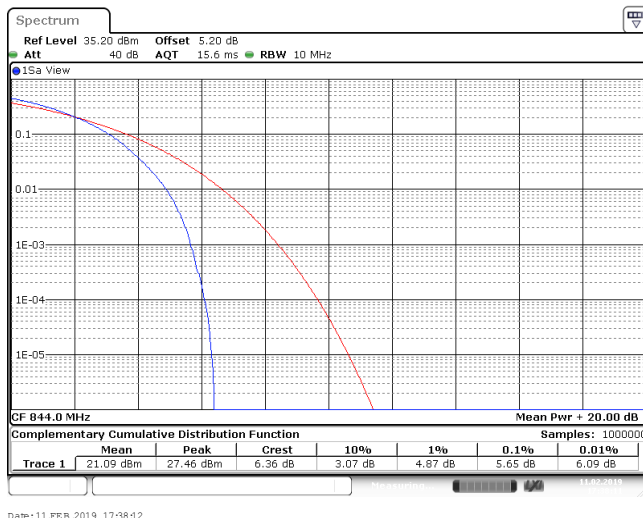


Band5_10MHz_16QAM_20525_50RB#0



Band5_10MHz_16QAM_20600_50RB#0





Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

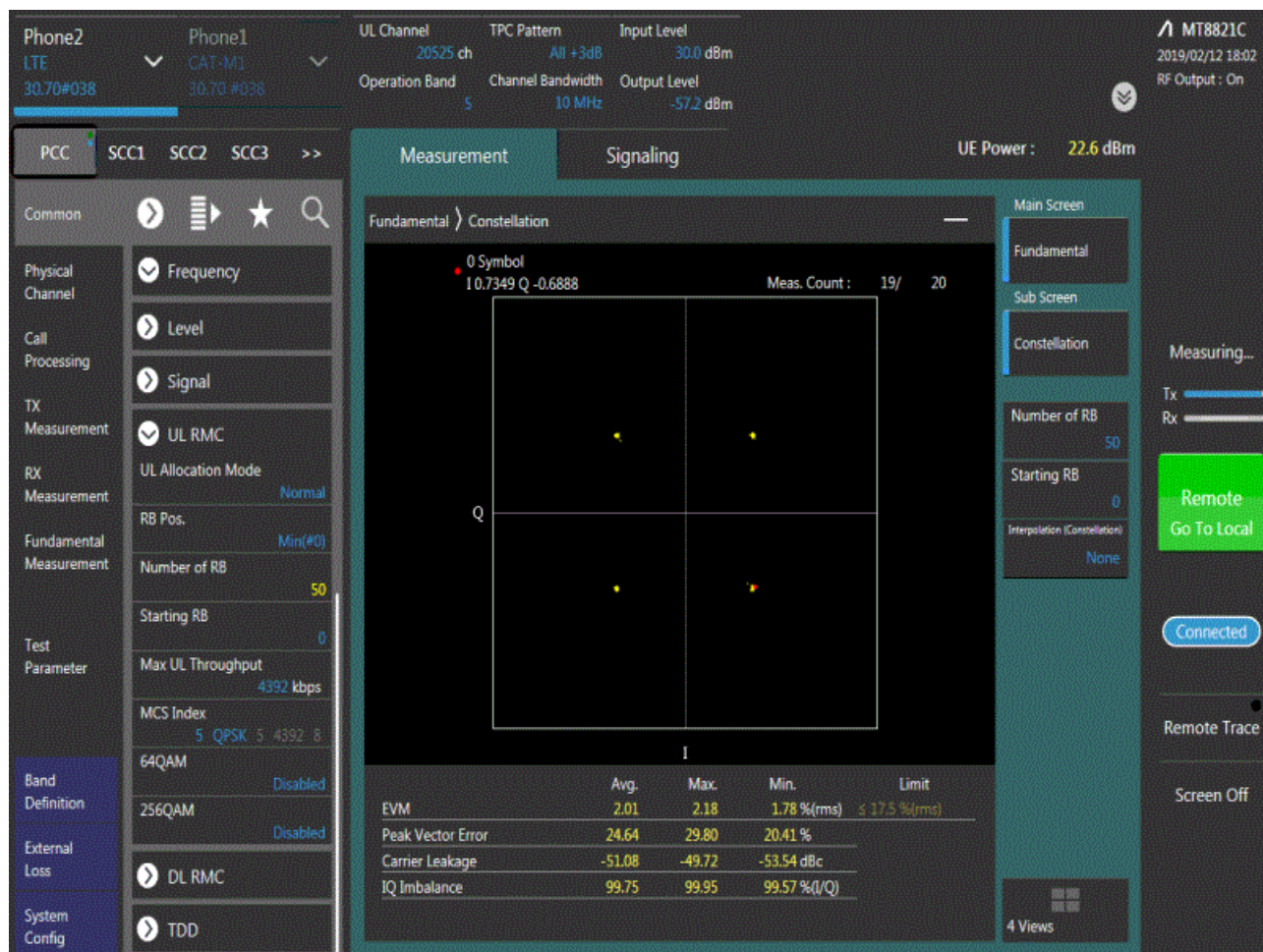
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

3. Modulation Characteristics

3.1. Test BAND = LTE BAND5

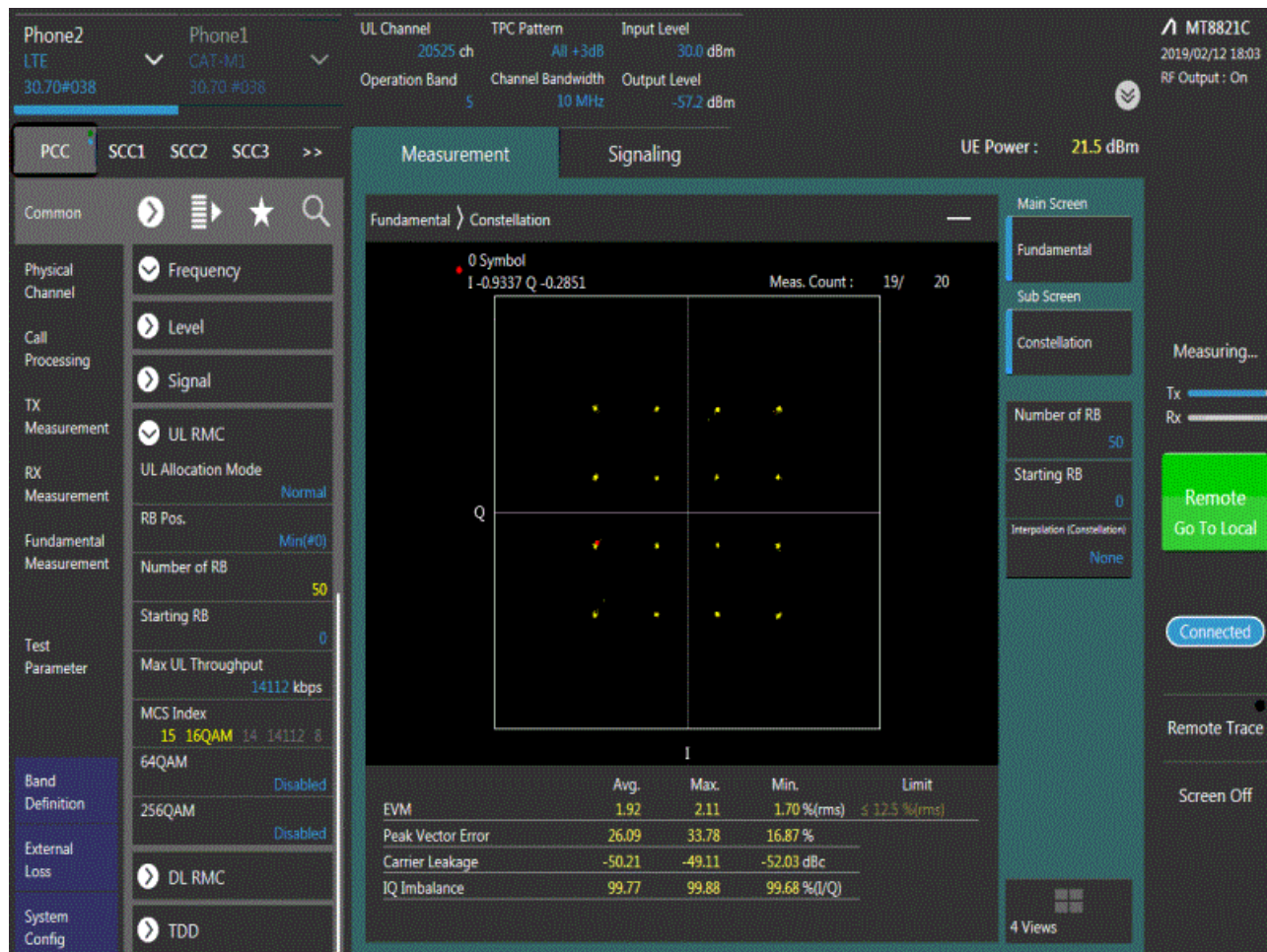
3.1.1. Test Mode = LTE /TM1 10MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 10MHz

3.1.2.1. Test Channel = MCH





4. 26dB Bandwidth and Occupied Bandwidth

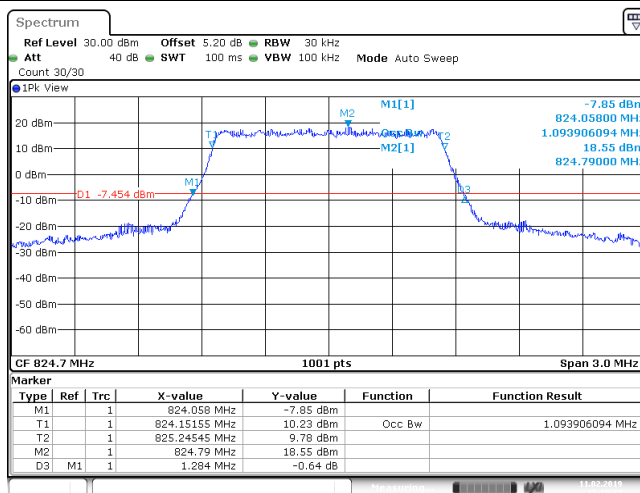
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.094	1.284	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.094	1.293	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.091	1.296	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.094	1.278	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.091	1.281	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.091	1.284	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.697	2.994	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.703	3.000	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.697	3.006	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.685	2.982	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.691	2.970	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.685	2.976	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.466	4.910	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.476	4.940	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.466	4.900	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.486	4.940	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.486	4.960	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.486	4.950	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.911	9.720	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.931	9.720	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.891	9.680	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.931	9.680	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.931	9.740	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.891	9.700	PASS



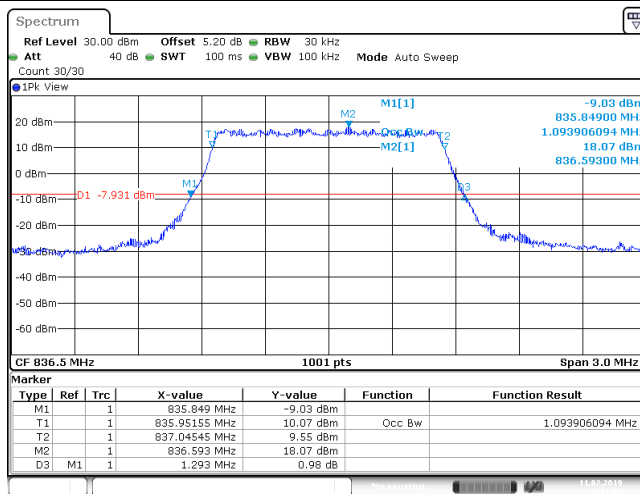
4.2. Test Plots

Band5_1.4MHz_QPSK_20407_6RB#0



Date: 11 FEB 2019 17:00:37

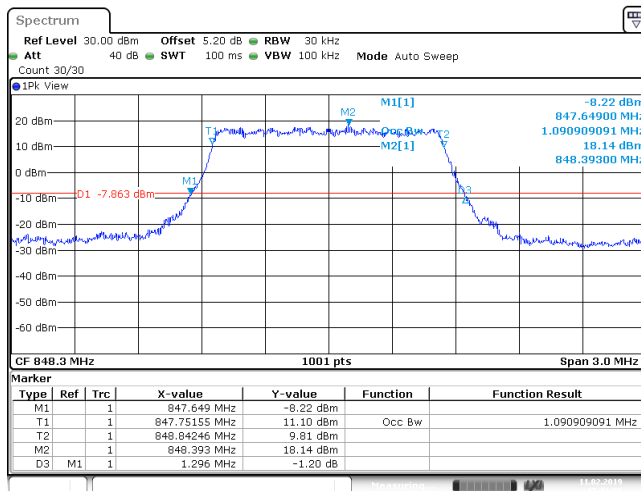
Band5_1.4MHz_QPSK_20525_6RB#0



Date: 11 FEB 2019 17:11:04

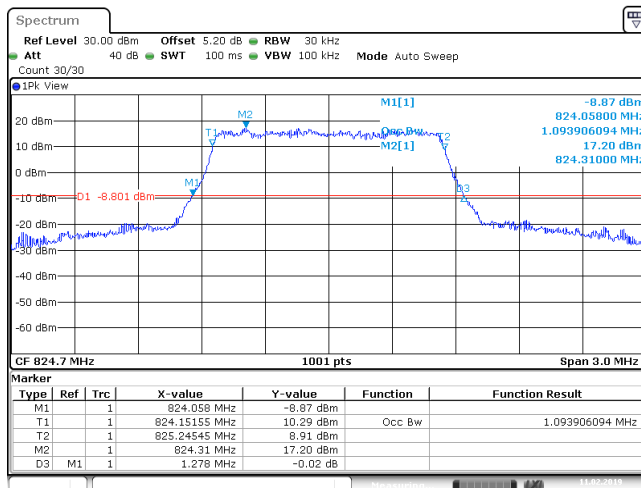
Band5_1.4MHz_QPSK_20643_6RB#0





Date: 11 FEB 2019 17:11:30

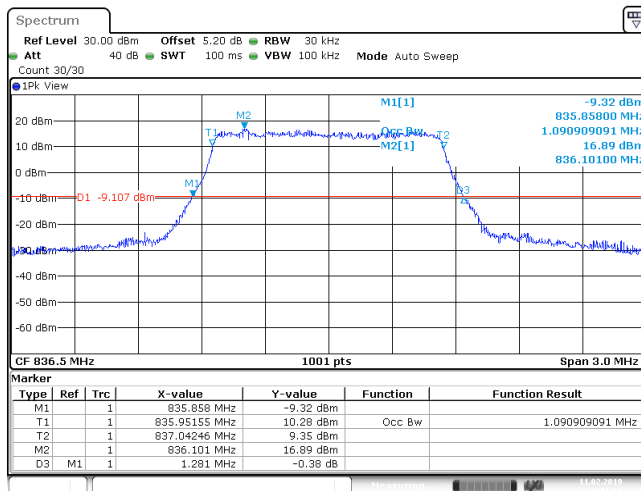
Band5_1.4MHz_16QAM_20407_6RB#0



Date: 11 FEB 2019 17:10:50

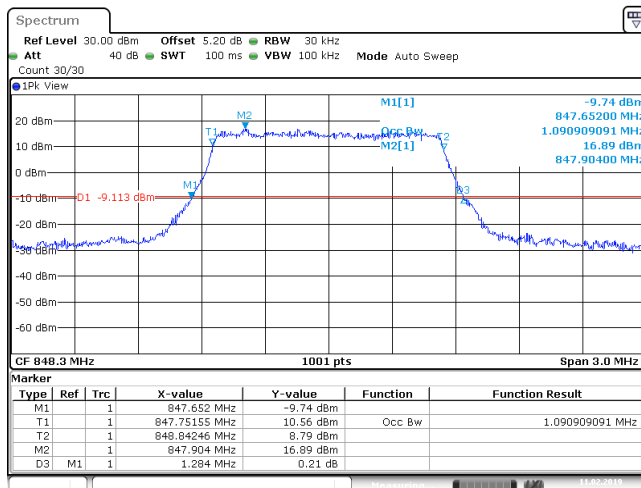
Band5_1.4MHz_16QAM_20525_6RB#0





Date: 11 FEB 2019 17:11:17

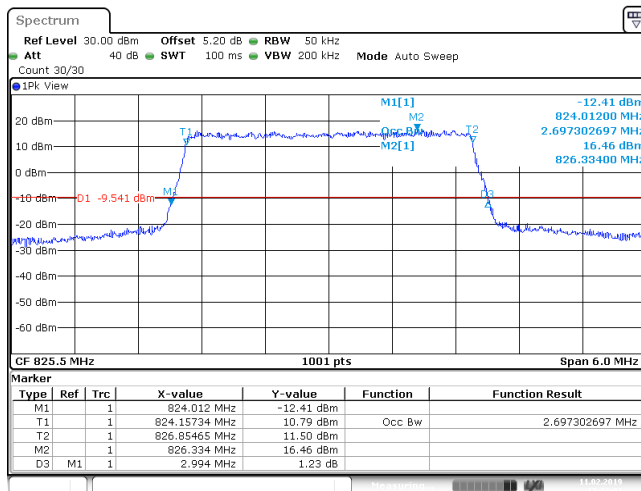
Band5_1.4MHz_16QAM_20643_6RB#0



Date: 11 FEB 2019 17:11:43

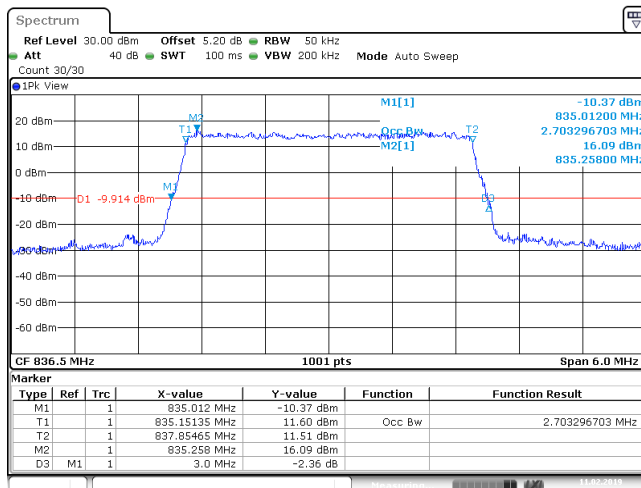
Band5_3MHz_QPSK_20415_15RB#0





Date: 11 FEB 2019 17:12:01

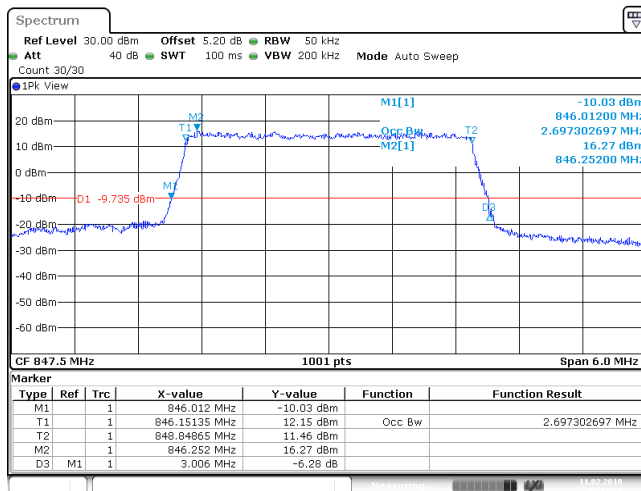
Band5_3MHz_QPSK_20525_15RB#0



Date: 11 FEB 2019 17:12:27

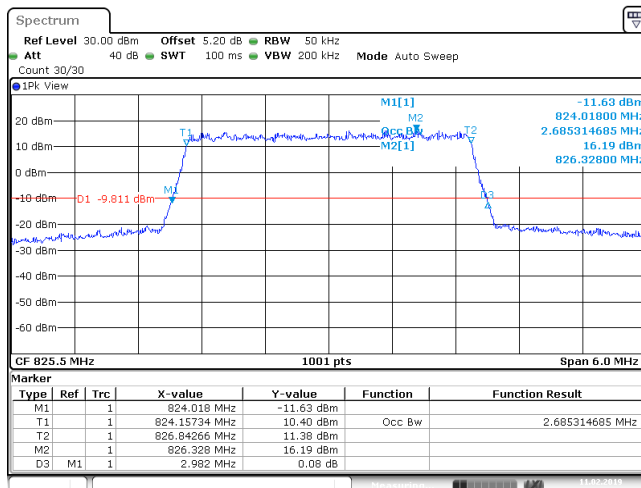
Band5_3MHz_QPSK_20635_15RB#0





Date: 11 FEB 2019 17:25:4

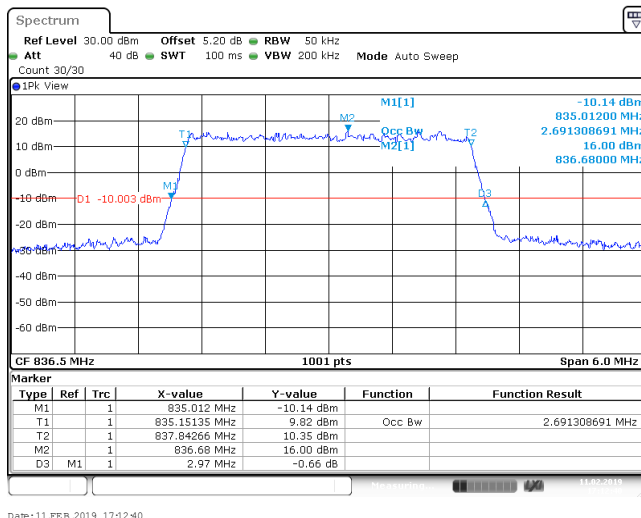
Band5_3MHz_16QAM_20415_15RB#0



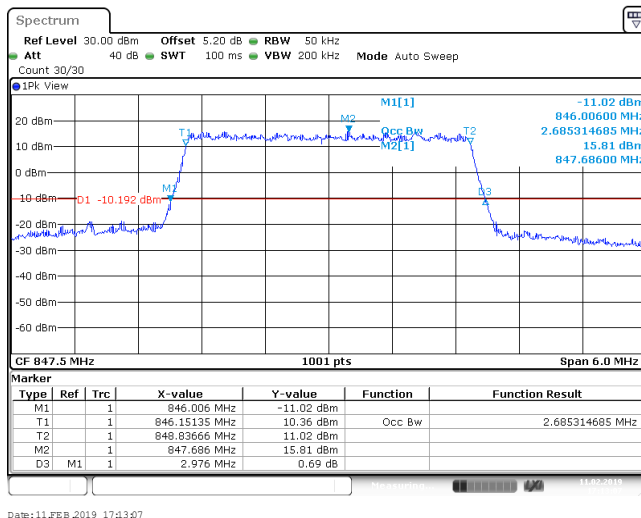
Date: 11 FEB 2019 17:22:44

Band5_3MHz_16QAM_20525_15RB#0



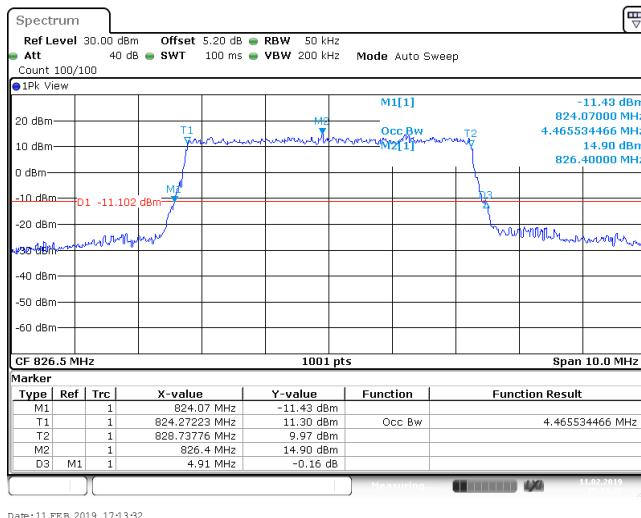


Band5_3MHz_16QAM_20635_15RB#0

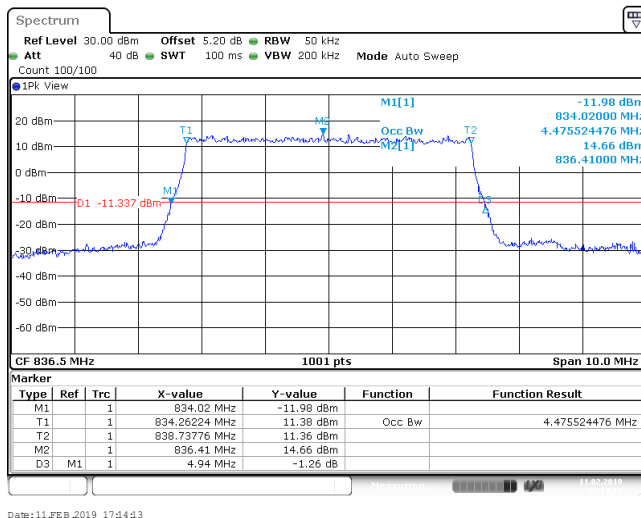


Band5_5MHz_QPSK_20425_25RB#0



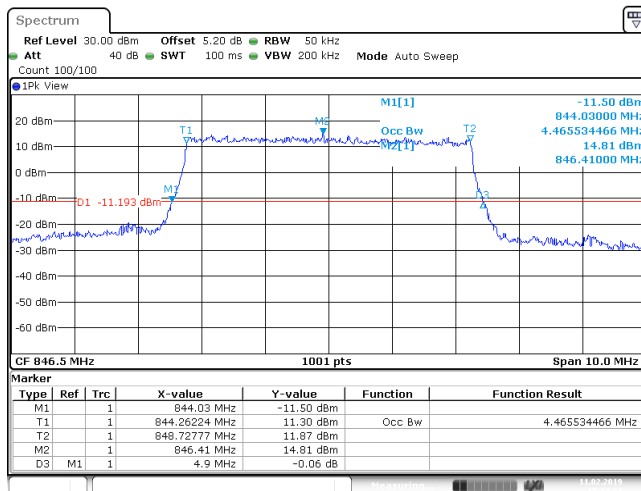


Band5_5MHz_QPSK_20525_25RB#0



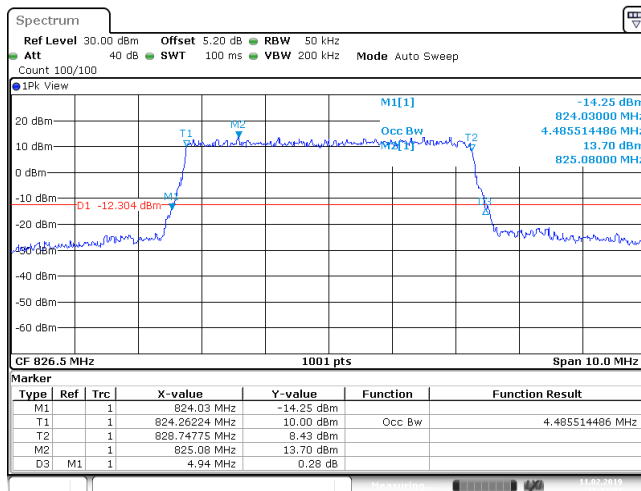
Band5_5MHz_QPSK_20625_25RB#0





Date: 11 FEB 2019 17:14:53

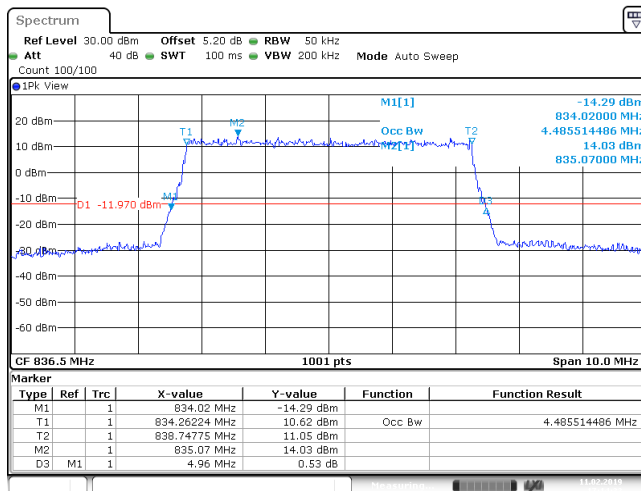
Band5_5MHz_16QAM_20425_25RB#0



Date: 11 FEB 2019 17:13:52

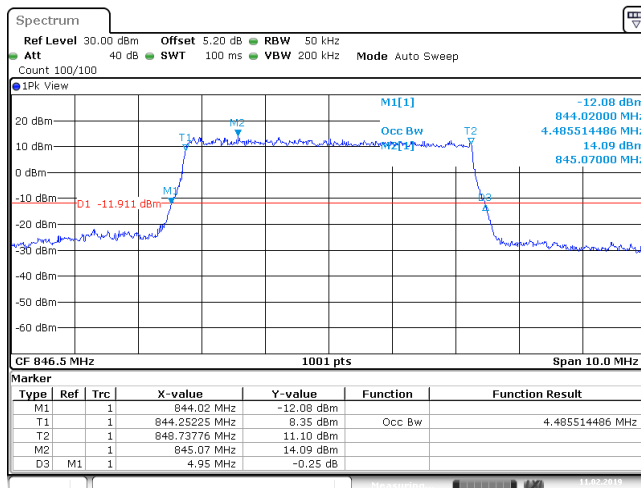
Band5_5MHz_16QAM_20525_25RB#0





Date: 11 FEB 2019 17:14:33

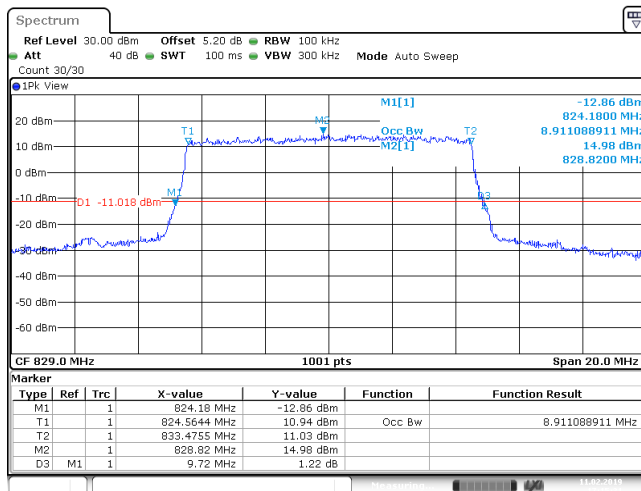
Band5_5MHz_16QAM_20625_25RB#0



Date: 11 FEB 2019 17:15:13

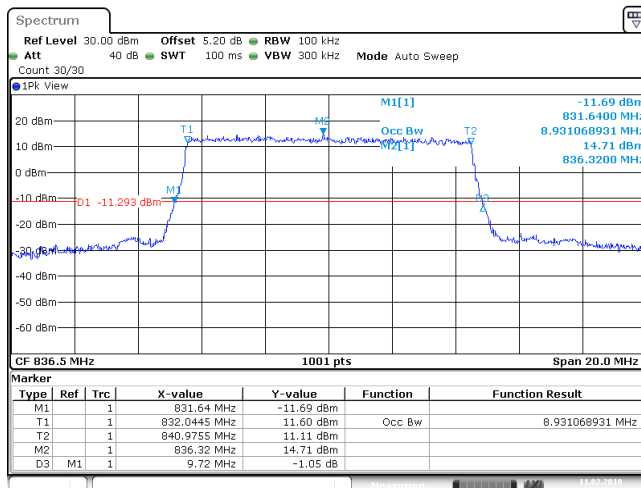
Band5_10MHz_QPSK_20450_50RB#0





Date: 11 FEB 2019 17:15:31

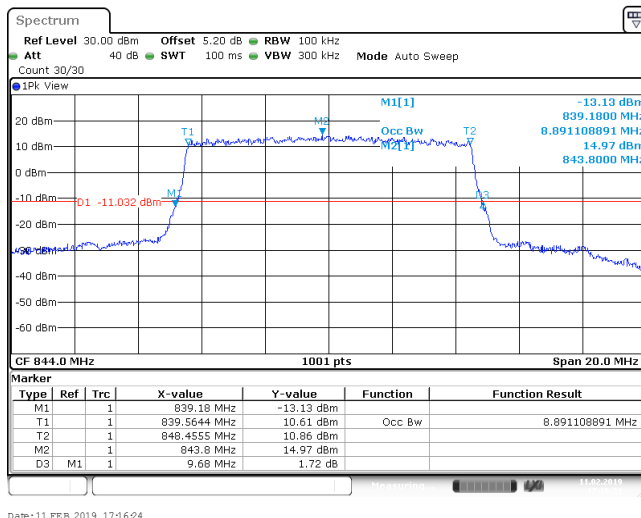
Band5_10MHz_QPSK_20525_50RB#0



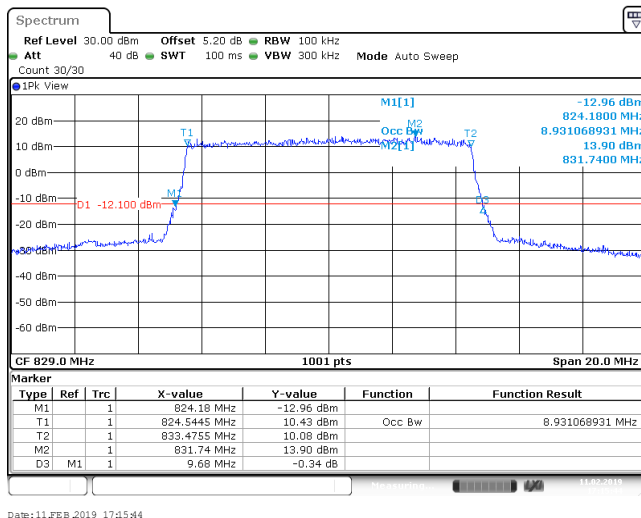
Date: 11 FEB 2019 17:15:58

Band5_10MHz_QPSK_20600_50RB#0



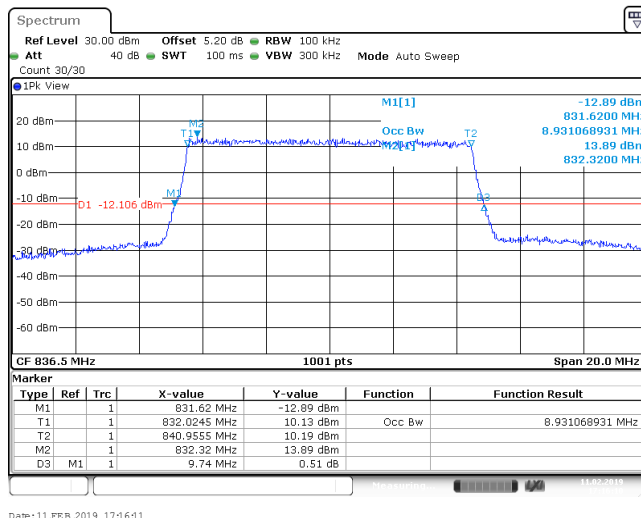


Band5_10MHz_16QAM_20450_50RB#0

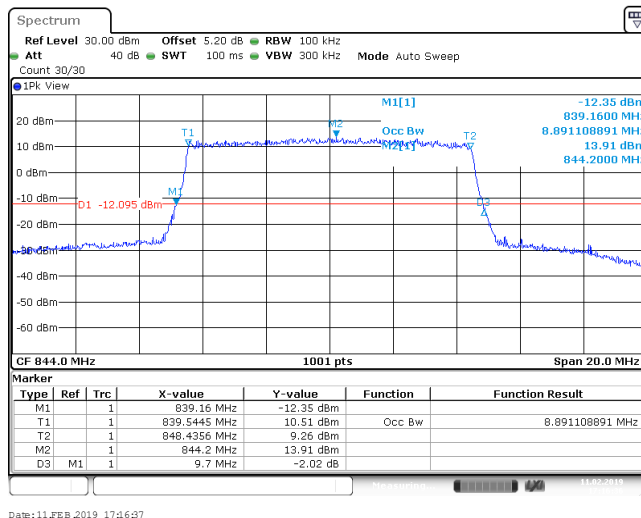


Band5_10MHz_16QAM_20525_50RB#0





Band5_10MHz_16QAM_20600_50RB#0



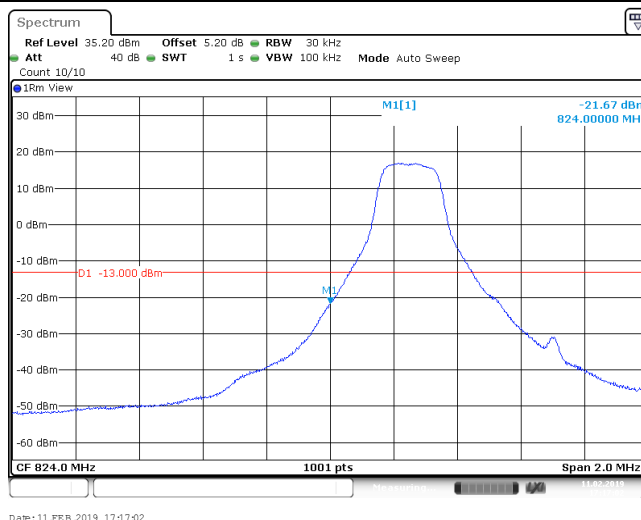
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

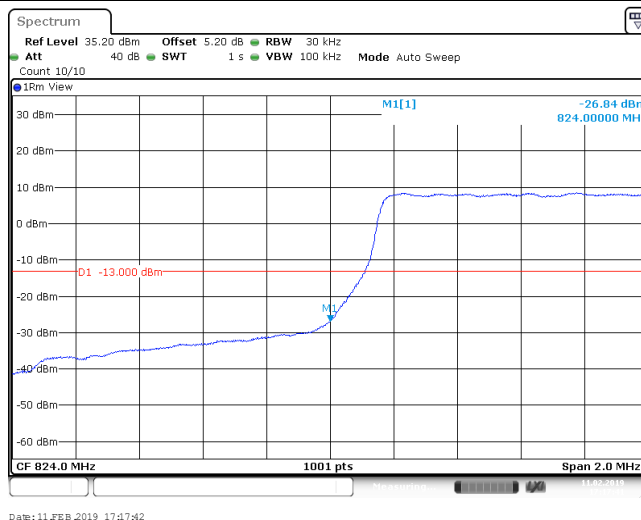
5. Band Edge Compliance

5.1. Test Plots

Band5_1.4MHz_QPSK_20407_1RB#0

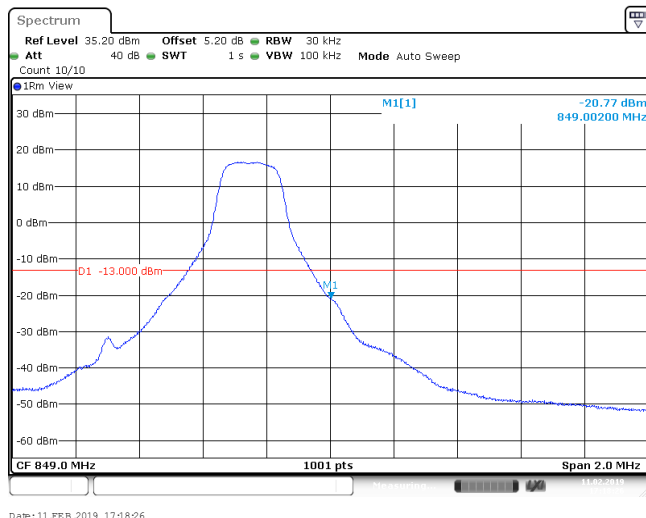


Band5_1.4MHz_QPSK_20407_6RB#0

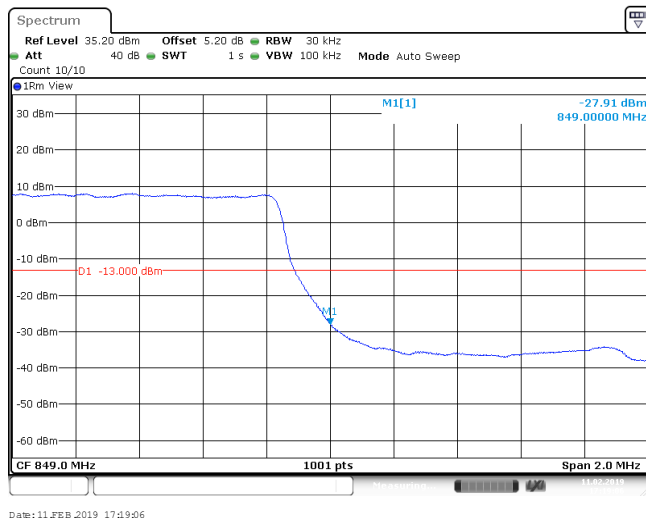


Band5_1.4MHz_QPSK_20643_1RB#5



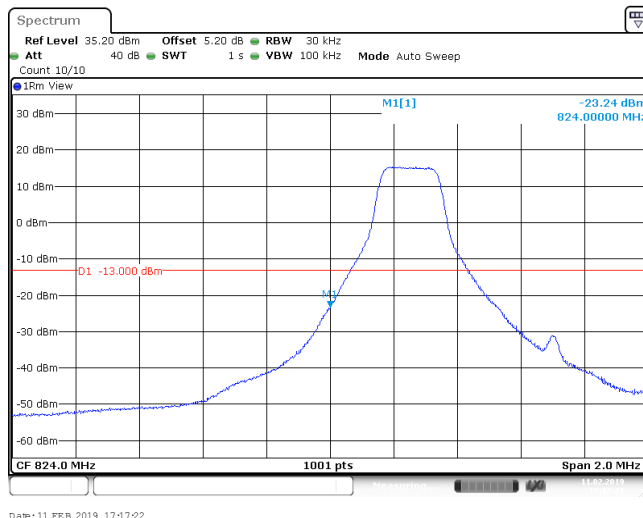


Band5_1.4MHz_QPSK_20643_6RB#0

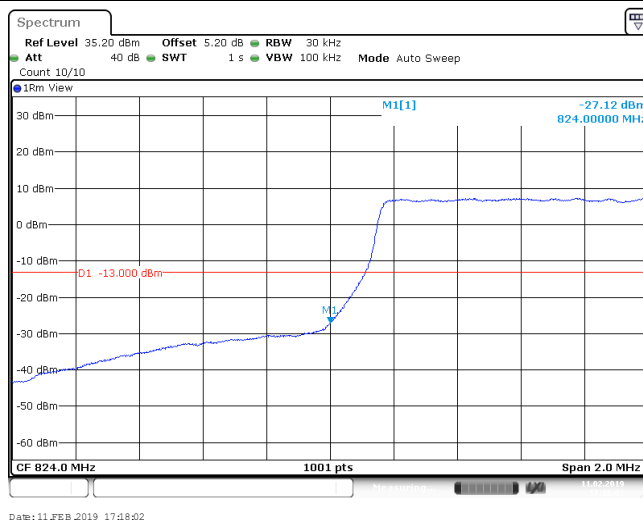


Band5_1.4MHz_16QAM_20407_1RB#0



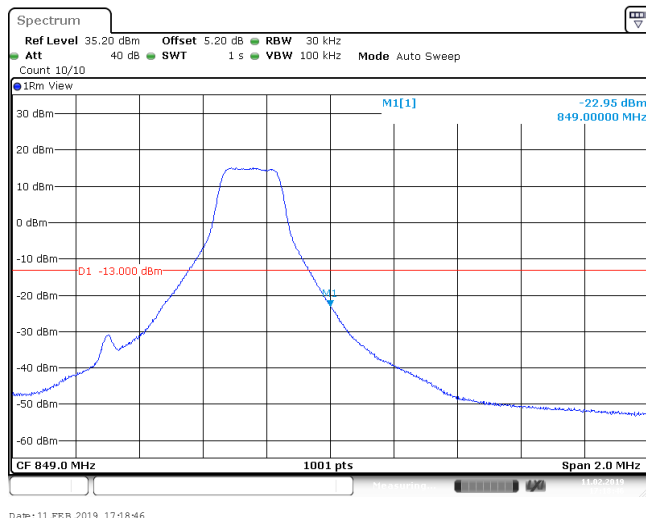


Band5_1.4MHz_16QAM_20407_6RB#0

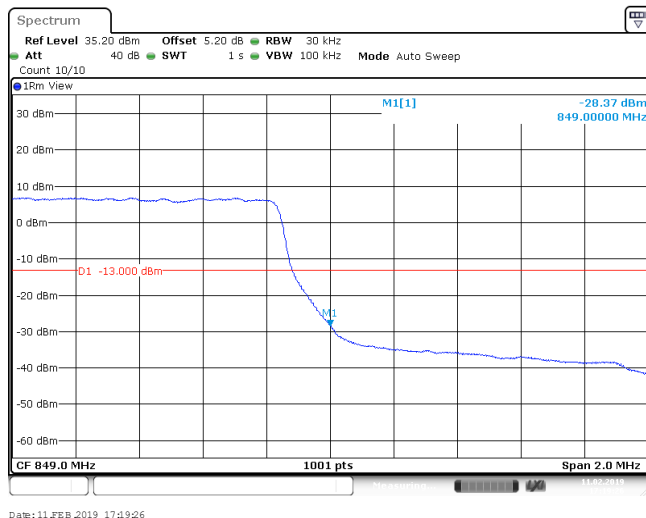


Band5_1.4MHz_16QAM_20643_1RB#5





Band5_1.4MHz_16QAM_20643_6RB#0



Band5_3MHz_QPSK_20415_1RB#0

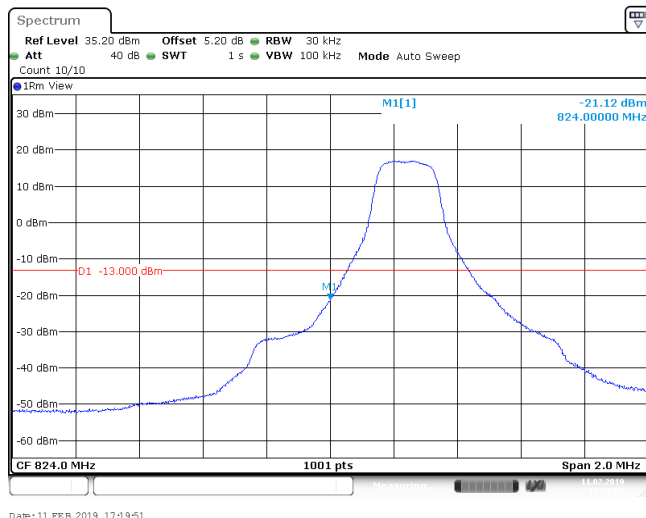


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

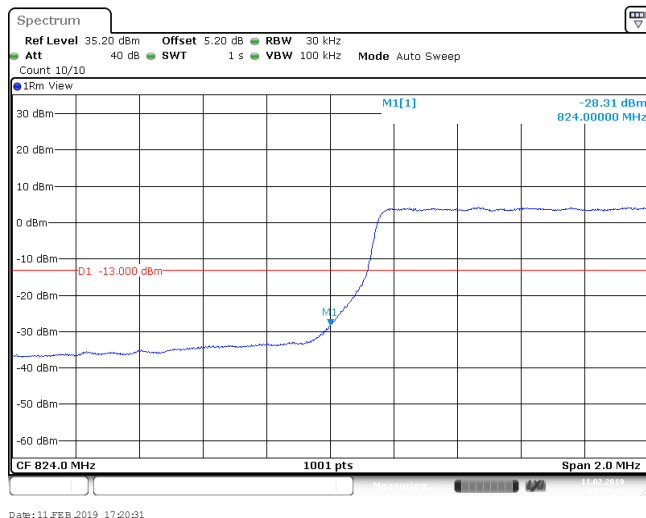
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5_3MHz_QPSK_20415_15RB#0



Band5_3MHz_QPSK_20635_1RB#14

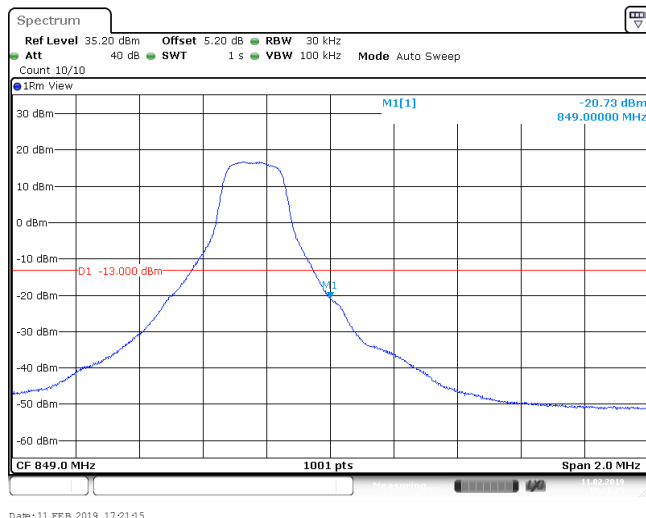


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

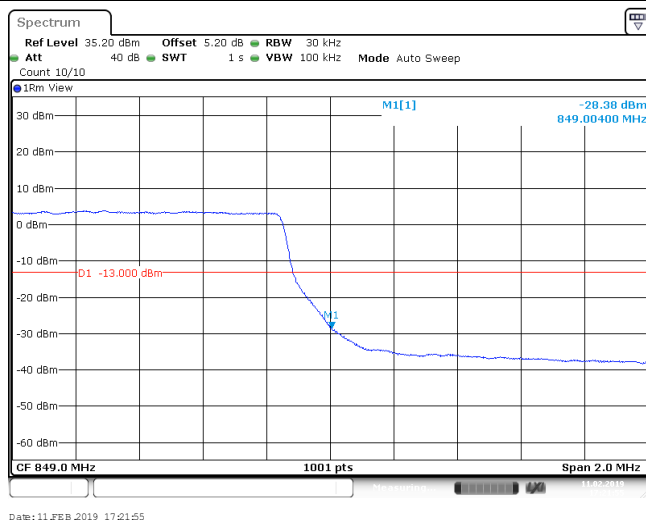
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

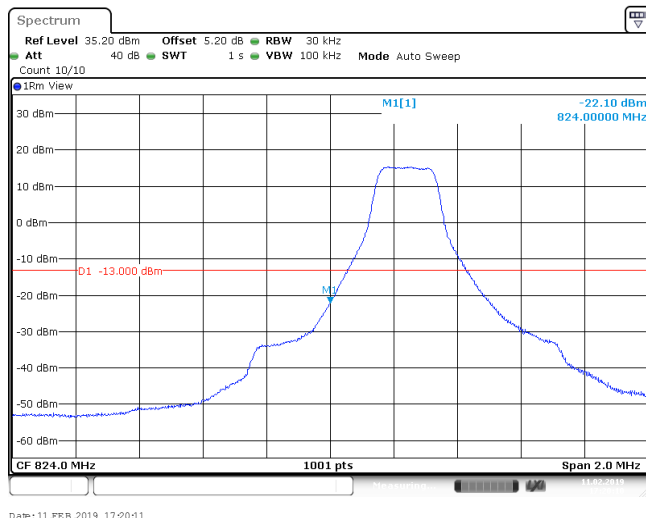


Band5_3MHz_QPSK_20635_15RB#0

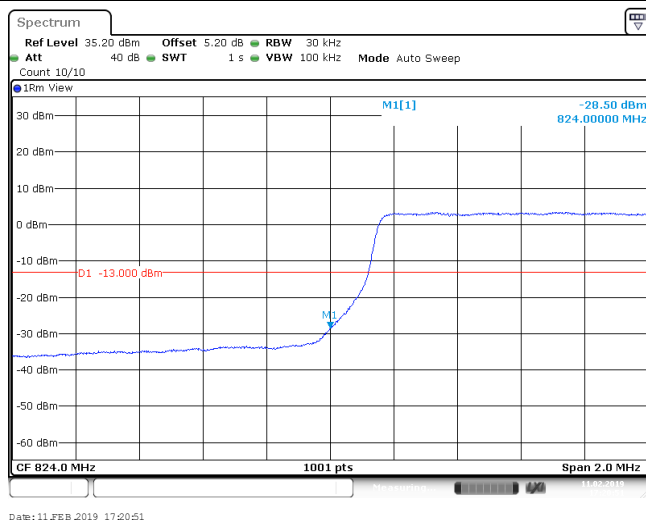


Band5_3MHz_16QAM_20415_1RB#0



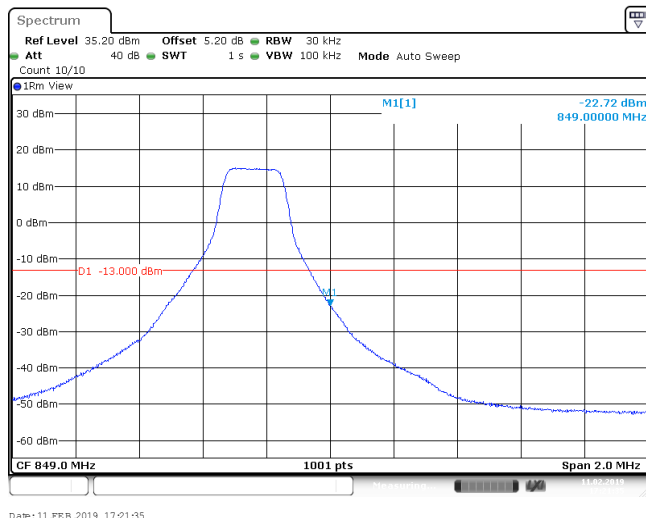


Band5_3MHz_16QAM_20415_15RB#0

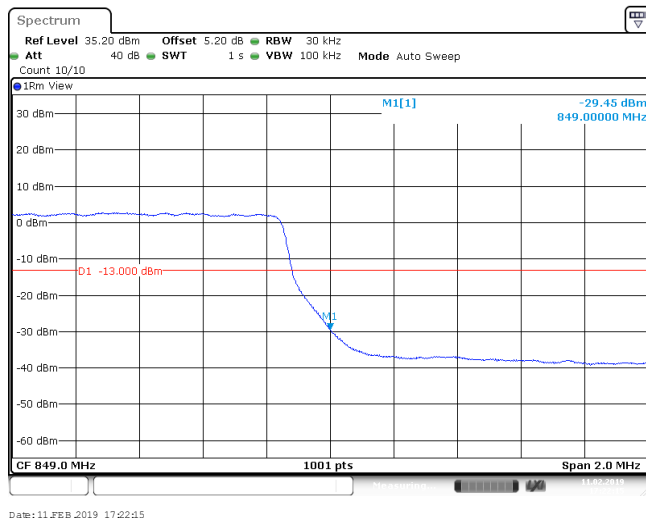


Band5_3MHz_16QAM_20635_1RB#14



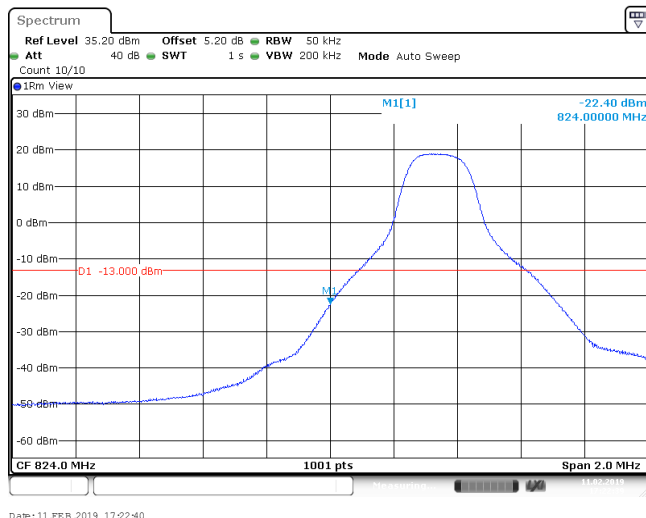


Band5_3MHz_16QAM_20635_15RB#0

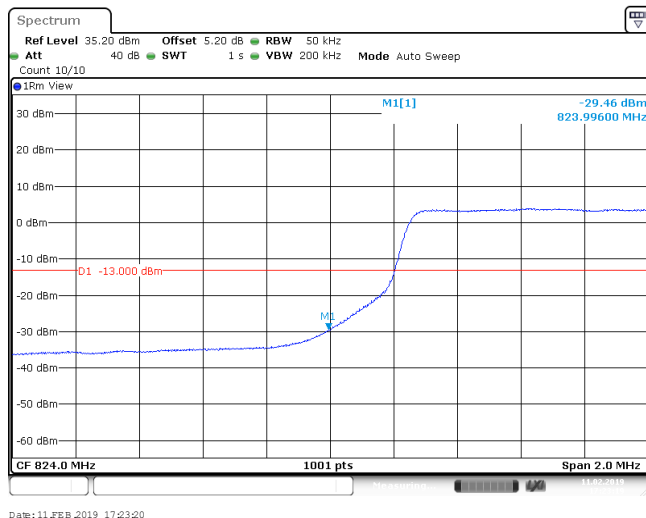


Band5_5MHz_QPSK_20425_1RB#0





Band5_5MHz_QPSK_20425_25RB#0



Band5_5MHz_QPSK_20625_1RB#24

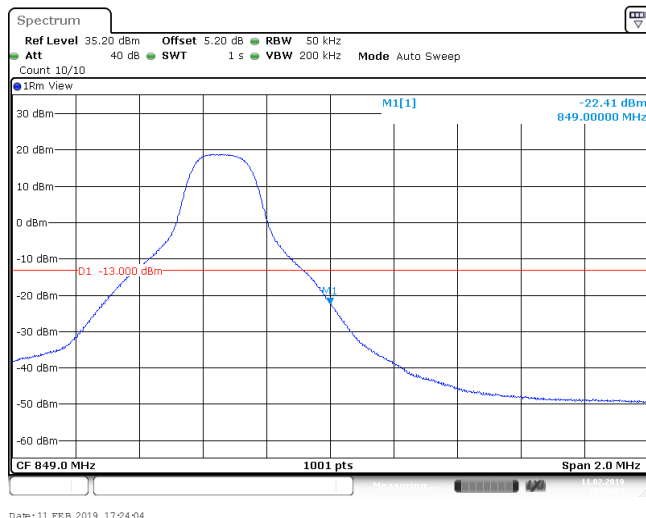


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

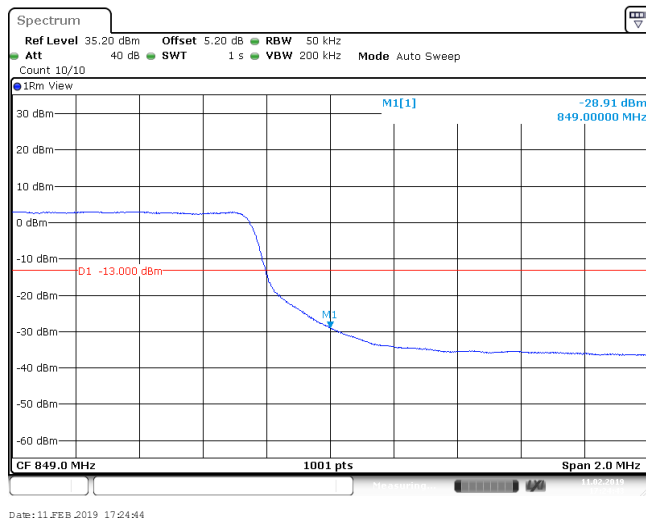
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5_5MHz_QPSK_20625_25RB#0

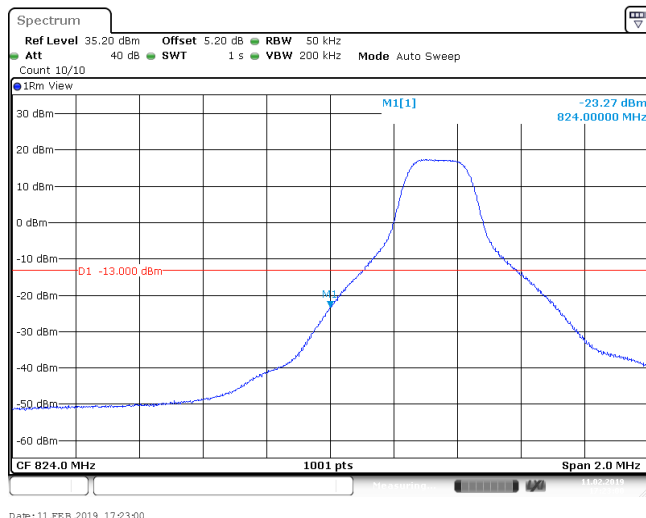


Band5_5MHz_16QAM_20425_1RB#0

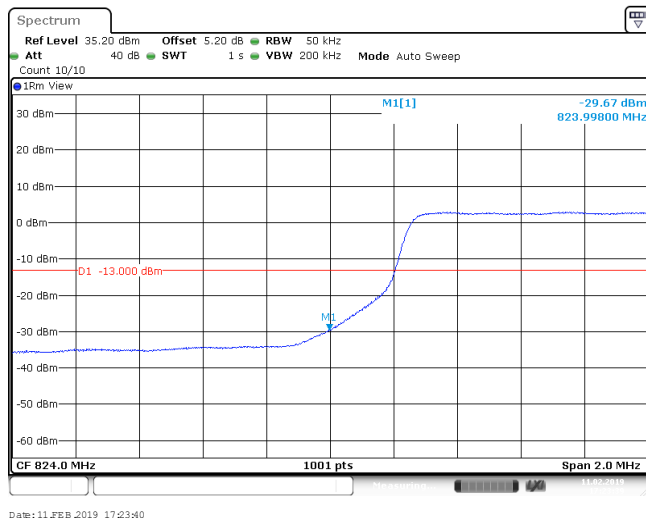


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

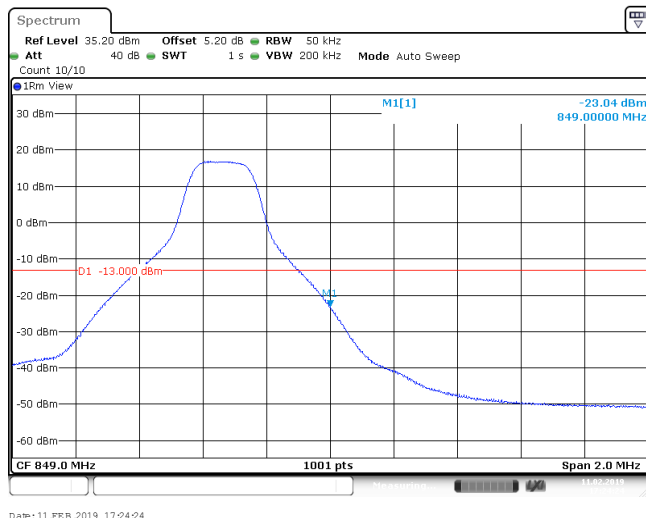


Band5_5MHz_16QAM_20425_25RB#0

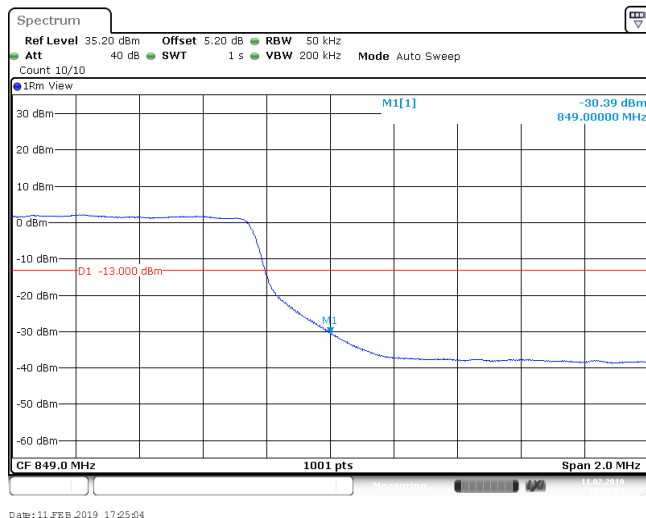


Band5_5MHz_16QAM_20625_1RB#24



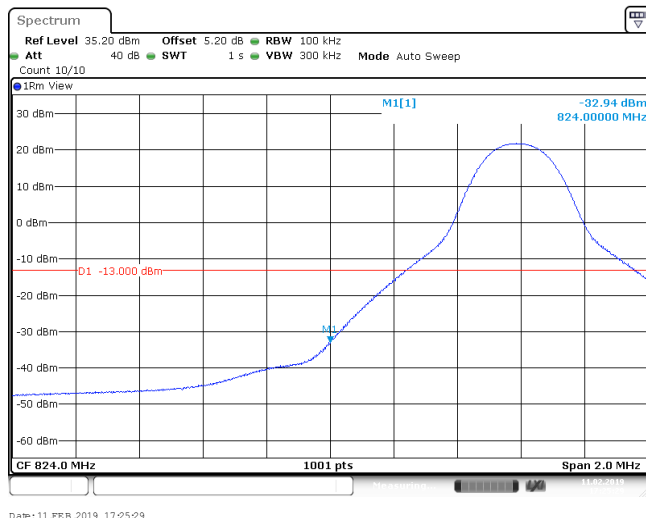


Band5_5MHz_16QAM_20625_25RB#0

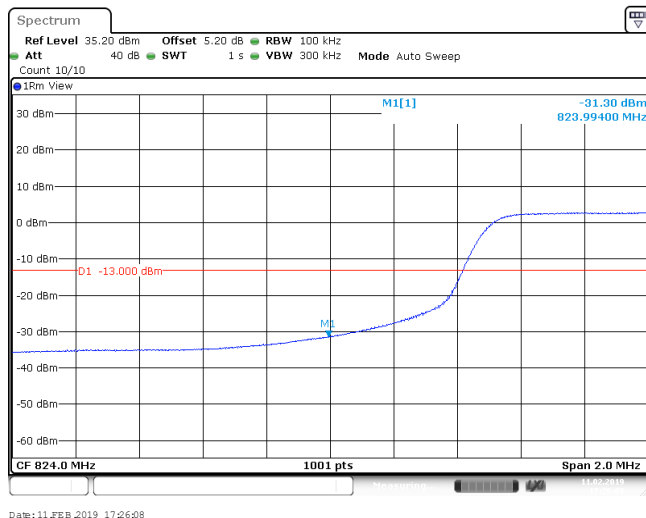


Band5_10MHz_QPSK_20450_1RB#0





Band5_10MHz_QPSK_20450_50RB#0



Band5_10MHz_QPSK_20600_1RB#49

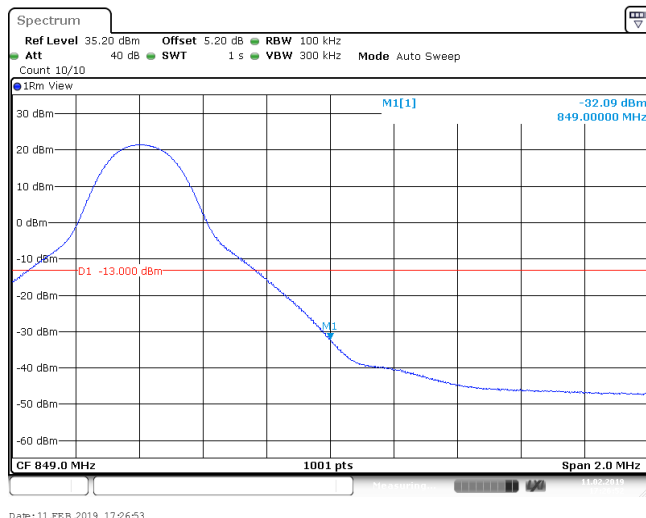


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

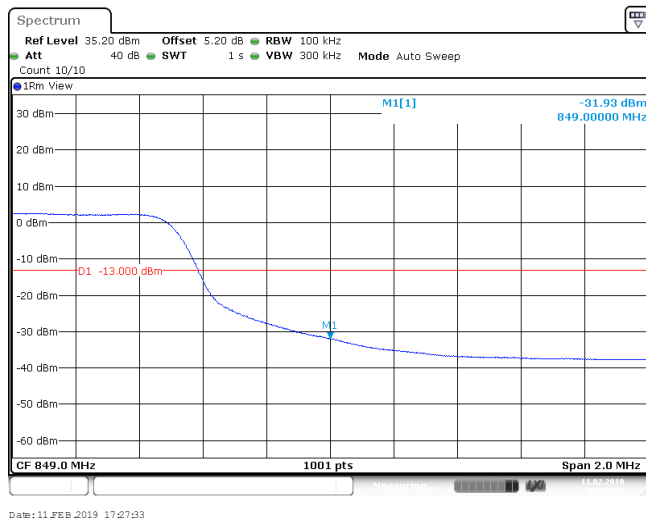
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

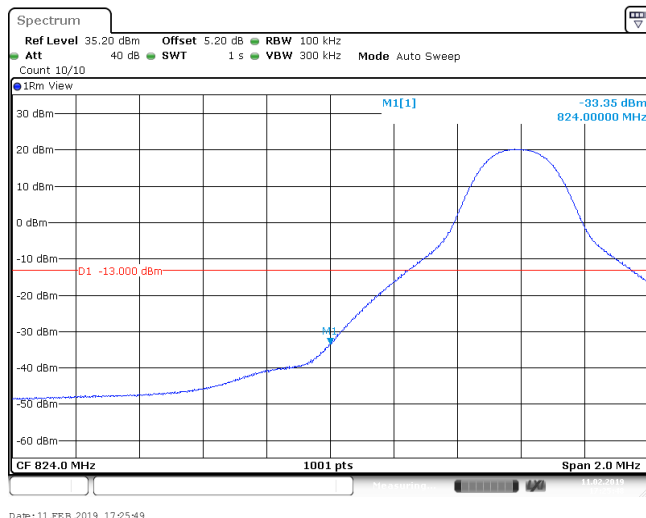


Band5_10MHz_QPSK_20600_50RB#0

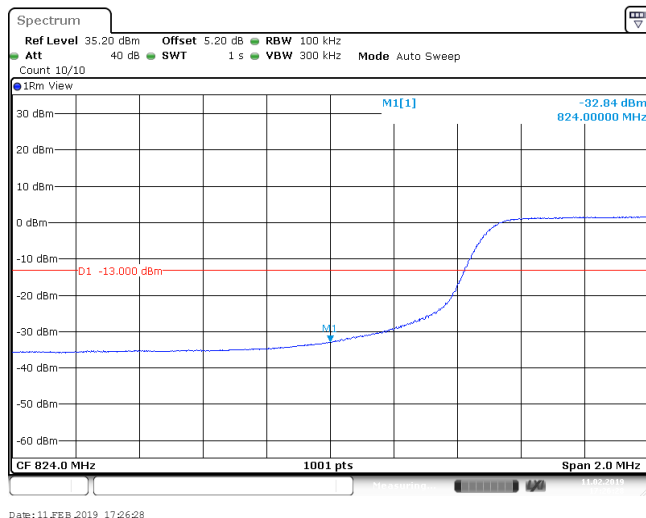


Band5_10MHz_16QAM_20450_1RB#0



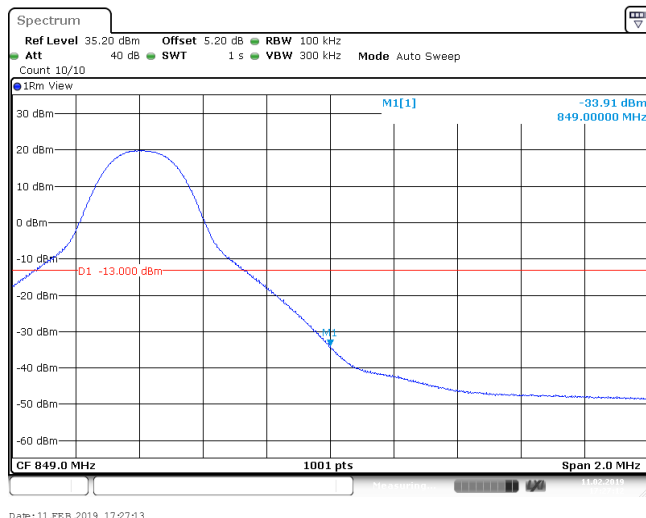


Band5_10MHz_16QAM_20450_50RB#0

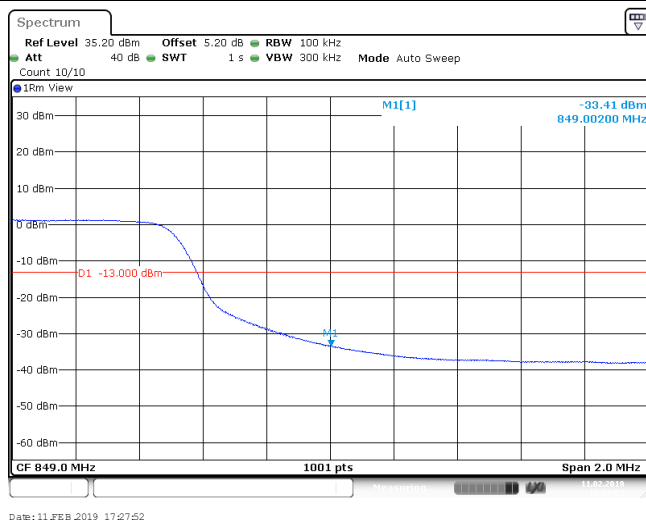


Band5_10MHz_16QAM_20600_1RB#49





Band5_10MHz_16QAM_20600_50RB#0



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

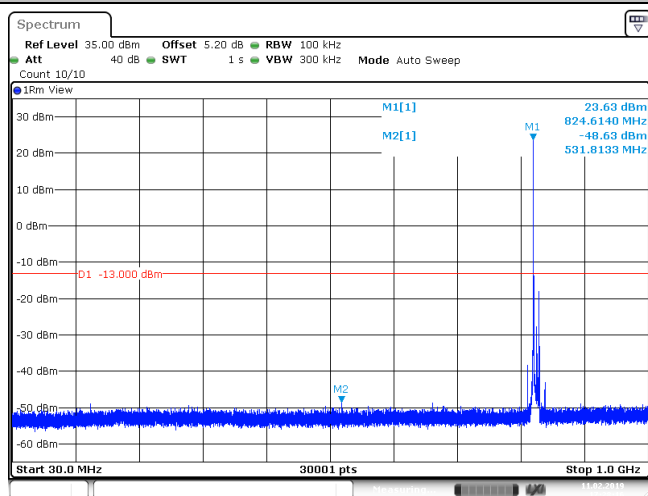
6. Spurious Emission at Antenna Terminal

Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (\text{Span} / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

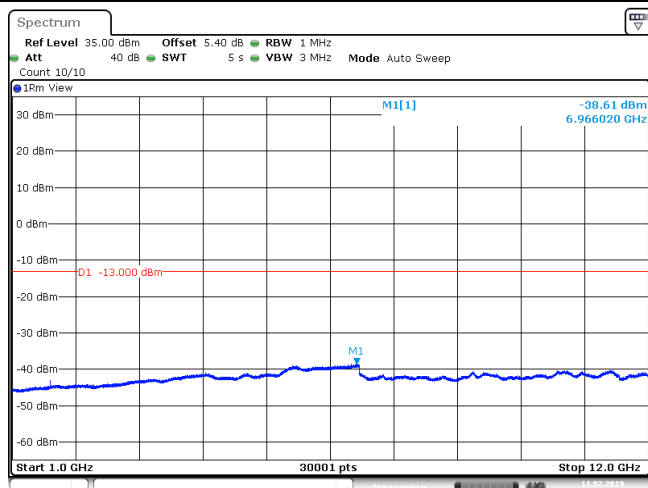
6.1. Test Plots

Band5_10MHz_QPSK_20450_1RB#0



Date: 11 FEB 2019 17:28:17

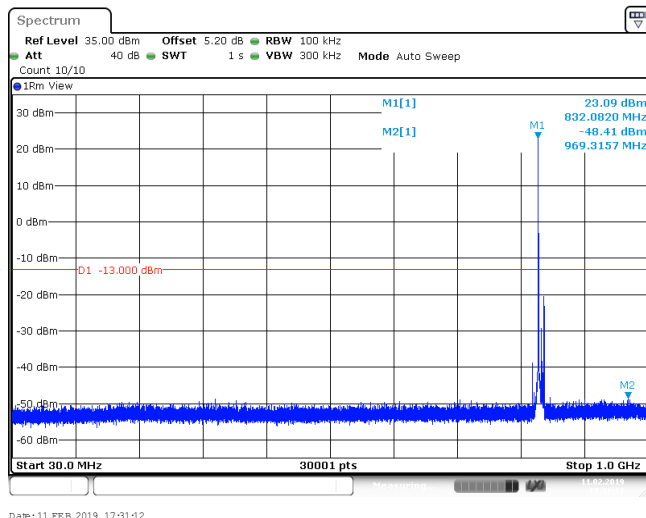
Band5_10MHz_QPSK_20450_1RB#0



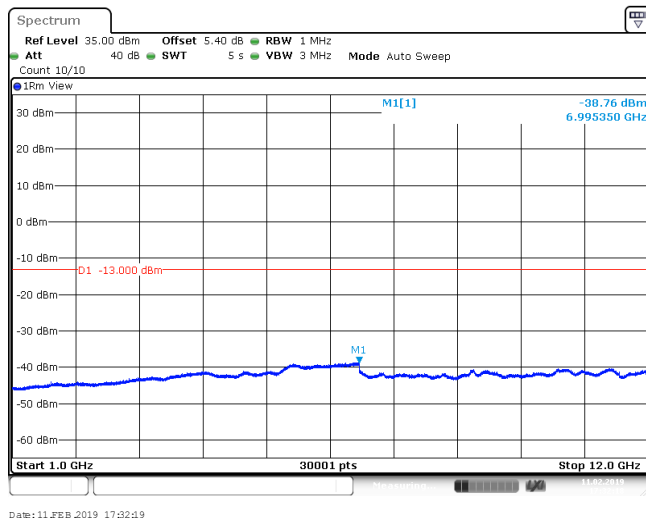
Date: 11 FEB 2019 17:29:24

Band5_10MHz_QPSK_20525_1RB#0



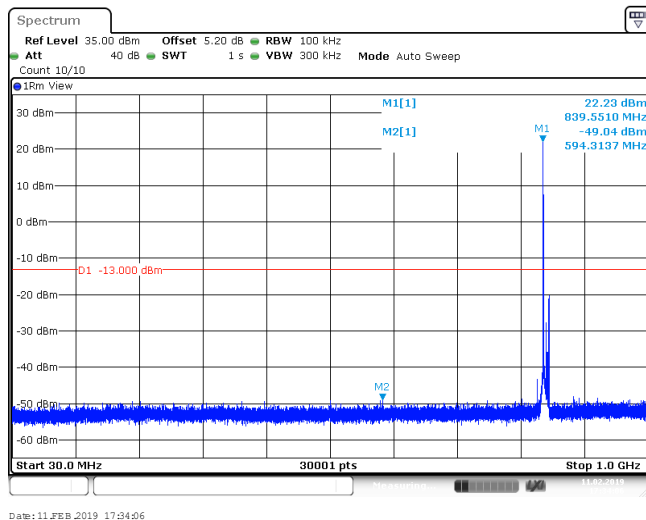


Band5_10MHz_QPSK_20525_1RB#0

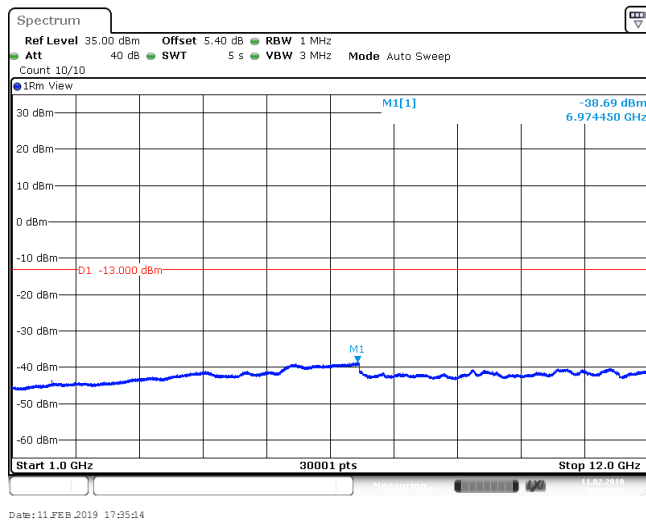


Band5_10MHz_QPSK_20600_1RB#0



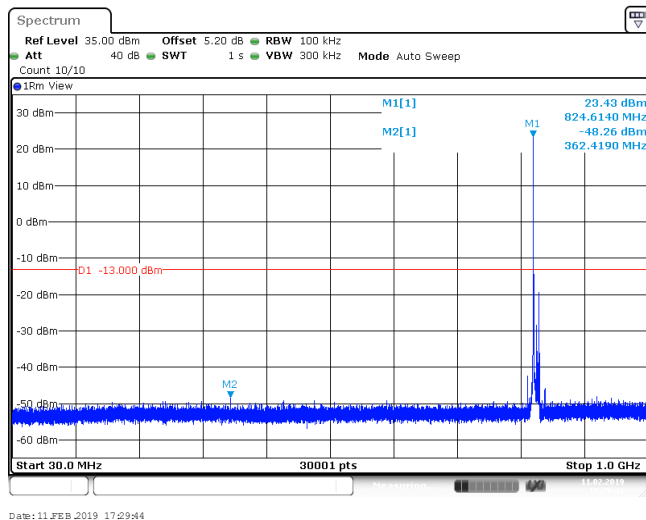


Band5_10MHz_QPSK_20600_1RB#0

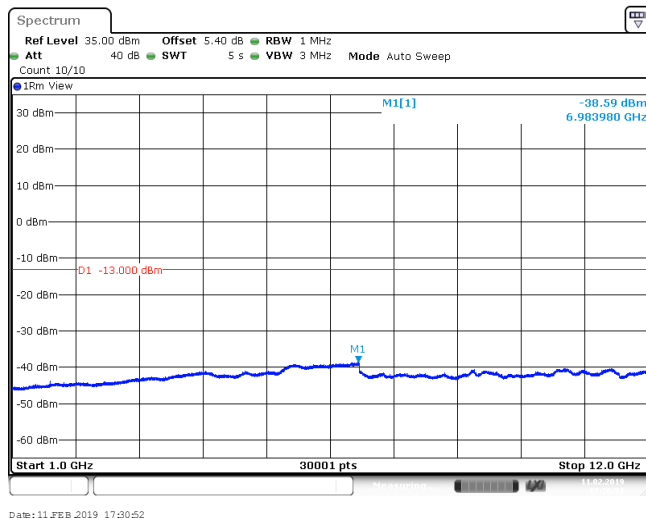


Band5_10MHz_16QAM_20450_1RB#0



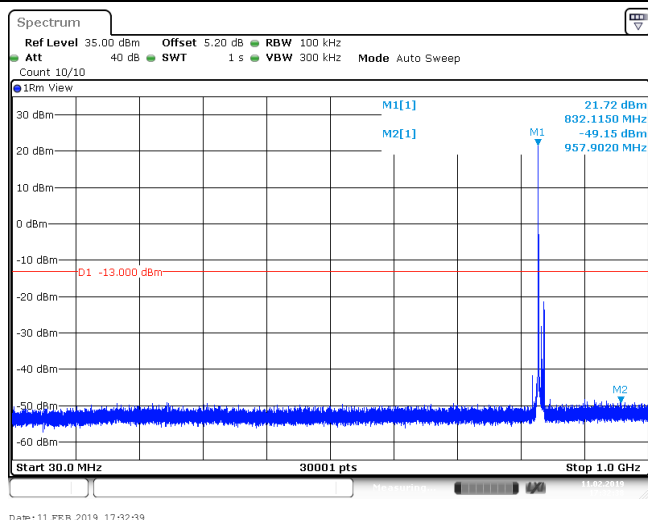


Band5_10MHz_16QAM_20450_1RB#0

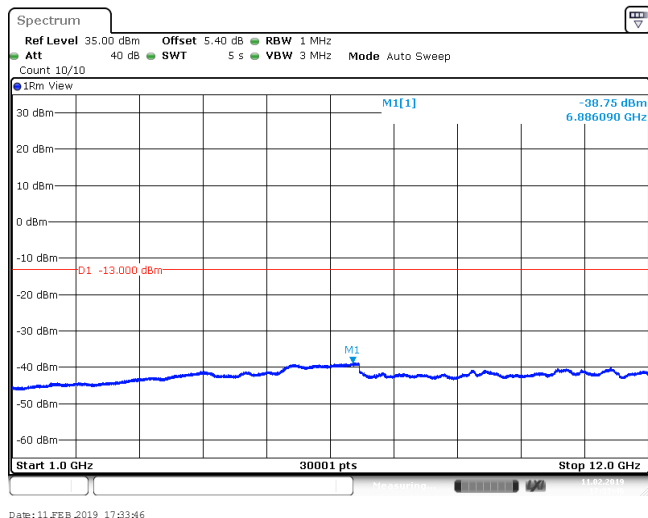


Band5_10MHz_16QAM_20525_1RB#0



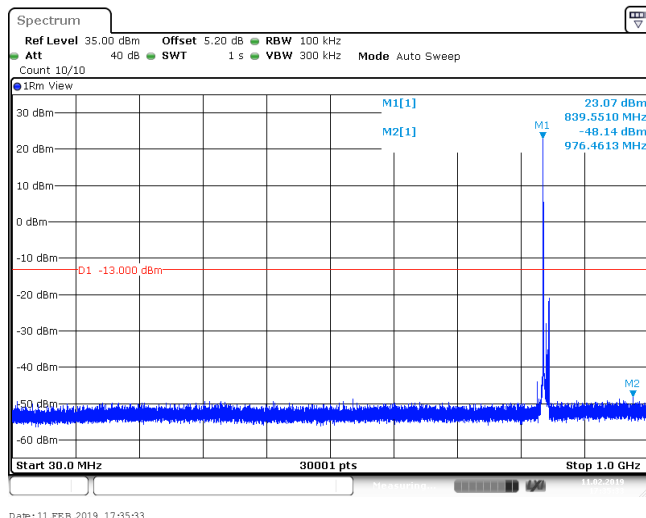


Band5_10MHz_16QAM_20525_1RB#0

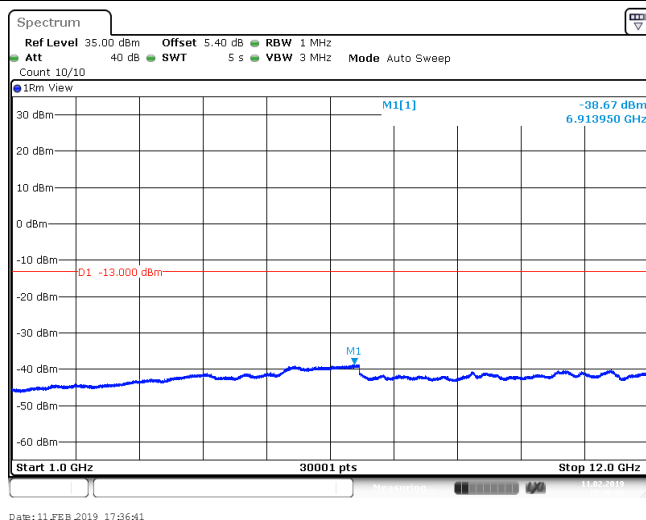


Band5_10MHz_16QAM_20600_1RB#0





Band5_10MHz_16QAM_20600_1RB#0



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 5

7.1.1. Test Mode = LTE/TM1 10MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
75.4468	-69.35	-13.00	56.35	Vertical
116.3828	-65.25	-13.00	52.25	Vertical
451.0981	-67.09	-13.00	54.09	Vertical
1648.9298	-59.00	-13.00	46.00	Vertical
3298.2099	-52.77	-13.00	39.77	Vertical
4947.4649	-49.70	-13.00	36.70	Vertical
45.5208	-63.94	-13.00	50.94	Horizontal
234.1952	-68.36	-13.00	55.36	Horizontal
563.5752	-64.67	-13.00	51.67	Horizontal
1648.9298	-61.69	-13.00	48.69	Horizontal
2473.8948	-56.56	-13.00	43.56	Horizontal
8495.7832	-52.68	-13.00	39.68	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
69.0445	-69.49	-13.00	56.49	Vertical
109.9805	-64.89	-13.00	51.89	Vertical
399.9765	-67.27	-13.00	54.27	Vertical
1664.1328	-57.97	-13.00	44.97	Vertical
3328.2109	-52.44	-13.00	39.44	Vertical
4992.6664	-47.39	-13.00	34.39	Vertical
44.5992	-64.82	-13.00	51.82	Horizontal
164.8852	-69.30	-13.00	56.30	Horizontal
578.9504	-64.42	-13.00	51.42	Horizontal
1664.1328	-60.04	-13.00	47.04	Horizontal
2496.2993	-56.50	-13.00	43.50	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CSTC) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7899.5633	-53.68	-13.00	40.68	Horizontal
-----------	--------	--------	-------	------------

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
49.7890	-72.81	-13.00	59.81	Vertical
110.7565	-65.15	-13.00	52.15	Vertical
403.8082	-68.08	-13.00	55.08	Vertical
1678.9358	-59.01	-13.00	46.01	Vertical
3358.2119	-53.27	-13.00	40.27	Vertical
5037.4679	-49.28	-13.00	36.28	Vertical
42.8046	-64.55	-13.00	51.55	Horizontal
164.8852	-69.73	-13.00	56.73	Horizontal
624.8822	-62.76	-13.00	49.76	Horizontal
1678.9358	-61.81	-13.00	48.81	Horizontal
3358.2119	-56.56	-13.00	43.56	Horizontal
7400.1467	-54.64	-13.00	41.64	Horizontal

7.1.1.4. Spot Check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
47.6064	-70.63	-13.00	57.63	Vertical
112.9876	-61.78	-13.00	48.78	Vertical
391.5856	-64.78	-13.00	51.78	Vertical
1664.1328	-46.04	-13.00	33.04	Vertical
2496.2993	-51.11	-13.00	38.11	Vertical
3328.4109	-47.34	-13.00	34.34	Vertical
43.8717	-61.50	-13.00	48.50	Horizontal
151.4501	-67.28	-13.00	54.28	Horizontal
233.8557	-64.66	-13.00	51.66	Horizontal
1664.1328	-50.88	-13.00	37.88	Horizontal
2496.2993	-50.82	-13.00	37.82	Horizontal
3328.4109	-49.00	-13.00	36.00	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Remark:

- 1) The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.
- 2) We have tested all modulation and all Bandwidth , but only the worst case data presented in this report.





8. Frequency Stability

8.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	VL	NT	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	-0.30	-0.000362	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-1.10	-0.001315	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-0.50	-0.000592	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-1.00	-0.001185	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VL	NT	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VN	NT	-0.10	-0.000121	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VH	NT	0.50	0.000603	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VL	NT	-0.60	-0.000717	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VN	NT	0.10	0.000120	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VH	NT	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VL	NT	-1.00	-0.001185	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VN	NT	-0.80	-0.000948	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VH	NT	-0.10	-0.000118	±2.5	PASS

8.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	NV	-30	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-0.50	-0.000603	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	-1.80	-0.002171	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	-2.00	-0.002413	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-1.00	-0.001206	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	-1.90	-0.002292	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-2.10	-0.002510	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	-0.10	-0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	-0.10	-0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	0.40	0.000478	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	-0.70	-0.000837	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	0.10	0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	0.20	0.000239	±2.5	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band5	10MHz	QPSK	20525	50RB#0	NV	50	1.20	0.001435	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	-0.40	-0.000474	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	-0.30	-0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	-0.30	-0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-0.80	-0.000948	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-0.10	-0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-30	0.60	0.000724	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-20	-0.30	-0.000362	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	0	0.30	0.000362	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	10	-0.40	-0.000483	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	20	-1.30	-0.001568	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	30	-1.90	-0.002292	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	40	0.40	0.000483	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	50	0.40	0.000483	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-30	0.10	0.000120	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-20	-0.40	-0.000478	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	0	-1.20	-0.001435	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	10	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	20	-0.60	-0.000717	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	30	0.30	0.000359	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	40	-0.70	-0.000837	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	50	0.20	0.000239	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-30	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-20	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	0	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	10	-0.50	-0.000592	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	20	0.50	0.000592	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	30	-0.20	-0.000237	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	40	-1.00	-0.001185	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	50	-1.30	-0.001540	±2.5	PASS

The End



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CMA, CNAS) Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com