



Appendix B

E-UTRA Band 13



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	4
1.1.	TEST RESULT	4
2.	PEAK-TO-AVERAGE RATIO (CCDF)	10
2.1.	TEST RESULT	10
2.2.	TEST PLOTS.....	10
3.	MODULATION CHARACTERISTICS	12
3.1.	TEST MODE = LTE /TM1 10MHZ.....	12
3.1.1.	TEST CHANNEL = MCH.....	12
3.2.	TEST MODE = LTE /TM2 10MHZ.....	13
3.2.1.	TEST CHANNEL = MCH.....	13
3.3.	TEST MODE = LTE /TM3 10MHZ.....	14
3.3.1.	TEST CHANNEL = MCH.....	14
4.	26DB BANDWIDTH AND OCCUPIED BANDWIDTH	15
4.1.	TEST RESULT	15
4.2.	TEST PLOTS.....	16
5.	BAND EDGE COMPLIANCE	22
5.1.	TEST PLOTS.....	22
6.	SPURIOUS EMISSION AT ANTENNA TERMINAL	33
6.1.	TEST PLOTS.....	33
7.	FIELD STRENGTH OF SPURIOUS RADIATION	36
7.1.	Test Band = LTE_13 _TM1 ANT1	36
7.1.1.	Test Channel = Mid Channel	36
7.2.	Test Band = LTE_13 _TM1 ANT1	37
7.2.1.	Test Channel = Mid Channel	37
7.3.	Test Band = LTE_13 _TM1 ANT4	38
7.3.1.	Test Channel = Mid Channel	38
7.4.	Test Band = LTE_13 _TM1 ANT4	39
7.4.1.	Test Channel = Mid Channel	39
8.	FREQUENCY STABILITY	40



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



8.1.	FREQUENCY VS VOLTAGE	40
8.2.	FREQUENCY VS TEMPERATURE	40



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



1 Effective (Isotropic) Radiated Power

1.1. Test Result

ANT1:

Band	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	24.03	15.38	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#12	24.11	15.46	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#24	24.03	15.38	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#13	23.20	14.55	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#0	23.24	14.59	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#6	23.17	14.52	34.77	PASS
Band13	5MHz	QPSK	23205	25RB#0	23.20	14.55	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	24.00	15.35	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#24	24.06	15.41	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#12	24.02	15.37	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#0	23.11	14.46	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#13	23.08	14.43	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#6	23.21	14.56	34.77	PASS
Band13	5MHz	QPSK	23230	25RB#0	23.13	14.48	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#12	24.02	15.37	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#24	24.19	15.54	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#0	24.09	15.44	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#0	23.11	14.46	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#6	23.11	14.46	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#13	23.19	14.54	34.77	PASS
Band13	5MHz	QPSK	23255	25RB#0	23.07	14.42	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#24	23.26	14.61	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.38	14.73	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#12	23.43	14.78	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#13	22.16	13.51	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#6	22.20	13.55	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#0	22.26	13.61	34.77	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 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



Band13	5MHz	16QAM	23205	25RB#0	22.22	13.57	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#0	23.58	14.93	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#12	23.71	15.06	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#24	23.28	14.63	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#0	22.16	13.51	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#6	22.18	13.53	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#13	22.19	13.54	34.77	PASS
Band13	5MHz	16QAM	23230	25RB#0	22.19	13.54	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#0	23.54	14.89	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#12	23.32	14.67	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#24	23.38	14.73	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#0	22.19	13.54	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#6	22.27	13.62	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#13	22.20	13.55	34.77	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.17	13.52	34.77	PASS
Band13	5MHz	64QAM	23205	1RB#24	22.36	13.71	34.77	PASS
Band13	5MHz	64QAM	23205	1RB#12	22.30	13.65	34.77	PASS
Band13	5MHz	64QAM	23205	1RB#0	22.32	13.67	34.77	PASS
Band13	5MHz	64QAM	23205	12RB#0	21.44	12.79	34.77	PASS
Band13	5MHz	64QAM	23205	12RB#6	21.43	12.78	34.77	PASS
Band13	5MHz	64QAM	23205	12RB#13	21.33	12.68	34.77	PASS
Band13	5MHz	64QAM	23205	25RB#0	21.41	12.76	34.77	PASS
Band13	5MHz	64QAM	23230	1RB#0	22.22	13.57	34.77	PASS
Band13	5MHz	64QAM	23230	1RB#24	22.30	13.65	34.77	PASS
Band13	5MHz	64QAM	23230	1RB#12	22.33	13.68	34.77	PASS
Band13	5MHz	64QAM	23230	12RB#6	21.44	12.79	34.77	PASS
Band13	5MHz	64QAM	23230	12RB#0	21.37	12.72	34.77	PASS
Band13	5MHz	64QAM	23230	12RB#13	21.40	12.75	34.77	PASS
Band13	5MHz	64QAM	23230	25RB#0	21.45	12.80	34.77	PASS
Band13	5MHz	64QAM	23255	1RB#12	22.37	13.72	34.77	PASS
Band13	5MHz	64QAM	23255	1RB#24	22.36	13.71	34.77	PASS
Band13	5MHz	64QAM	23255	1RB#0	22.38	13.73	34.77	PASS
Band13	5MHz	64QAM	23255	12RB#13	21.31	12.66	34.77	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.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



Band13	5MHz	64QAM	23255	12RB#0	21.40	12.75	34.77	PASS
Band13	5MHz	64QAM	23255	12RB#6	21.51	12.86	34.77	PASS
Band13	5MHz	64QAM	23255	25RB#0	21.53	12.88	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#0	24.13	15.48	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#24	24.05	15.40	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#49	24.22	15.57	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#12	23.16	14.51	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#25	23.19	14.54	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#0	23.15	14.50	34.77	PASS
Band13	10MHz	QPSK	23230	50RB#0	23.18	14.53	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#49	23.46	14.81	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#0	23.40	14.75	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#24	23.36	14.71	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#12	22.15	13.50	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#0	22.16	13.51	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#25	22.19	13.54	34.77	PASS
Band13	10MHz	16QAM	23230	50RB#0	22.12	13.47	34.77	PASS
Band13	10MHz	64QAM	23230	1RB#49	22.34	13.69	34.77	PASS
Band13	10MHz	64QAM	23230	1RB#24	22.34	13.69	34.77	PASS
Band13	10MHz	64QAM	23230	1RB#0	22.34	13.69	34.77	PASS
Band13	10MHz	64QAM	23230	25RB#12	21.52	12.87	34.77	PASS
Band13	10MHz	64QAM	23230	25RB#0	21.52	12.87	34.77	PASS
Band13	10MHz	64QAM	23230	25RB#25	21.37	12.72	34.77	PASS
Band13	10MHz	64QAM	23230	50RB#0	21.55	12.90	34.77	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 and 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 (CMAA) Calibration 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



ANT4:

Band	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	23.23	16.78	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.33	16.88	34.77	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.17	16.72	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.28	15.83	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.34	15.89	34.77	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.38	15.93	34.77	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.36	15.91	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.19	16.74	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.30	16.85	34.77	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.13	16.68	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#0	22.30	15.85	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#13	22.23	15.78	34.77	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.33	15.88	34.77	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.28	15.83	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.10	16.65	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.21	16.76	34.77	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.20	16.75	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.32	15.87	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#6	22.29	15.84	34.77	PASS
Band13	5MHz	QPSK	23255	12RB#13	22.32	15.87	34.77	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.35	15.90	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#24	22.34	15.89	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#0	22.96	16.51	34.77	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.66	16.21	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#13	21.29	14.84	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#6	21.41	14.96	34.77	PASS
Band13	5MHz	16QAM	23205	12RB#0	21.29	14.84	34.77	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.33	14.88	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.76	16.31	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.47	16.02	34.77	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.42	15.97	34.77	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 (CMAA) Testing 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



Band13	5MHz	16QAM	23230	12RB#0	21.38	14.93	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.27	14.82	34.77	PASS
Band13	5MHz	16QAM	23230	12RB#13	21.36	14.91	34.77	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.31	14.86	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#0	22.81	16.36	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.83	16.38	34.77	PASS
Band13	5MHz	16QAM	23255	1RB#24	22.13	15.68	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#0	21.24	14.79	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#6	21.38	14.93	34.77	PASS
Band13	5MHz	16QAM	23255	12RB#13	21.32	14.87	34.77	PASS
Band13	5MHz	16QAM	23255	25RB#0	21.27	14.82	34.77	PASS
Band13	5MHz	64QAM	23205	1RB#24	21.18	14.73	34.77	PASS
Band13	5MHz	64QAM	23205	1RB#12	21.17	14.72	34.77	PASS
Band13	5MHz	64QAM	23205	1RB#0	21.23	14.78	34.77	PASS
Band13	5MHz	64QAM	23205	12RB#0	20.44	13.99	34.77	PASS
Band13	5MHz	64QAM	23205	12RB#6	20.44	13.99	34.77	PASS
Band13	5MHz	64QAM	23205	12RB#13	20.21	13.76	34.77	PASS
Band13	5MHz	64QAM	23205	25RB#0	20.31	13.86	34.77	PASS
Band13	5MHz	64QAM	23230	1RB#0	21.22	14.77	34.77	PASS
Band13	5MHz	64QAM	23230	1RB#24	21.11	14.66	34.77	PASS
Band13	5MHz	64QAM	23230	1RB#12	21.15	14.70	34.77	PASS
Band13	5MHz	64QAM	23230	12RB#6	20.32	13.87	34.77	PASS
Band13	5MHz	64QAM	23230	12RB#0	20.39	13.94	34.77	PASS
Band13	5MHz	64QAM	23230	12RB#13	20.38	13.93	34.77	PASS
Band13	5MHz	64QAM	23230	25RB#0	20.41	13.96	34.77	PASS
Band13	5MHz	64QAM	23255	1RB#12	21.19	14.74	34.77	PASS
Band13	5MHz	64QAM	23255	1RB#24	21.18	14.73	34.77	PASS
Band13	5MHz	64QAM	23255	1RB#0	21.16	14.71	34.77	PASS
Band13	5MHz	64QAM	23255	12RB#13	20.29	13.84	34.77	PASS
Band13	5MHz	64QAM	23255	12RB#0	20.42	13.97	34.77	PASS
Band13	5MHz	64QAM	23255	12RB#6	20.47	14.02	34.77	PASS
Band13	5MHz	64QAM	23255	25RB#0	20.46	14.01	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.35	16.90	34.77	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.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

Band13	10MHz	QPSK	23230	1RB#24	23.17	16.72	34.77	PASS
Band13	10MHz	QPSK	23230	1RB#49	23.39	16.94	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#12	22.31	15.86	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#25	22.40	15.95	34.77	PASS
Band13	10MHz	QPSK	23230	25RB#0	22.32	15.87	34.77	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.32	15.87	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#49	22.47	16.02	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#0	22.55	16.10	34.77	PASS
Band13	10MHz	16QAM	23230	1RB#24	22.60	16.15	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.25	14.80	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.36	14.91	34.77	PASS
Band13	10MHz	16QAM	23230	25RB#25	21.28	14.83	34.77	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.44	14.99	34.77	PASS
Band13	10MHz	64QAM	23230	1RB#49	21.23	14.78	34.77	PASS
Band13	10MHz	64QAM	23230	1RB#24	21.22	14.77	34.77	PASS
Band13	10MHz	64QAM	23230	1RB#0	21.23	14.78	34.77	PASS
Band13	10MHz	64QAM	23230	25RB#12	20.23	13.78	34.77	PASS
Band13	10MHz	64QAM	23230	25RB#0	20.39	13.94	34.77	PASS
Band13	10MHz	64QAM	23230	25RB#25	20.26	13.81	34.77	PASS
Band13	10MHz	64QAM	23230	50RB#0	20.23	13.78	34.77	PASS

Remark:

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

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



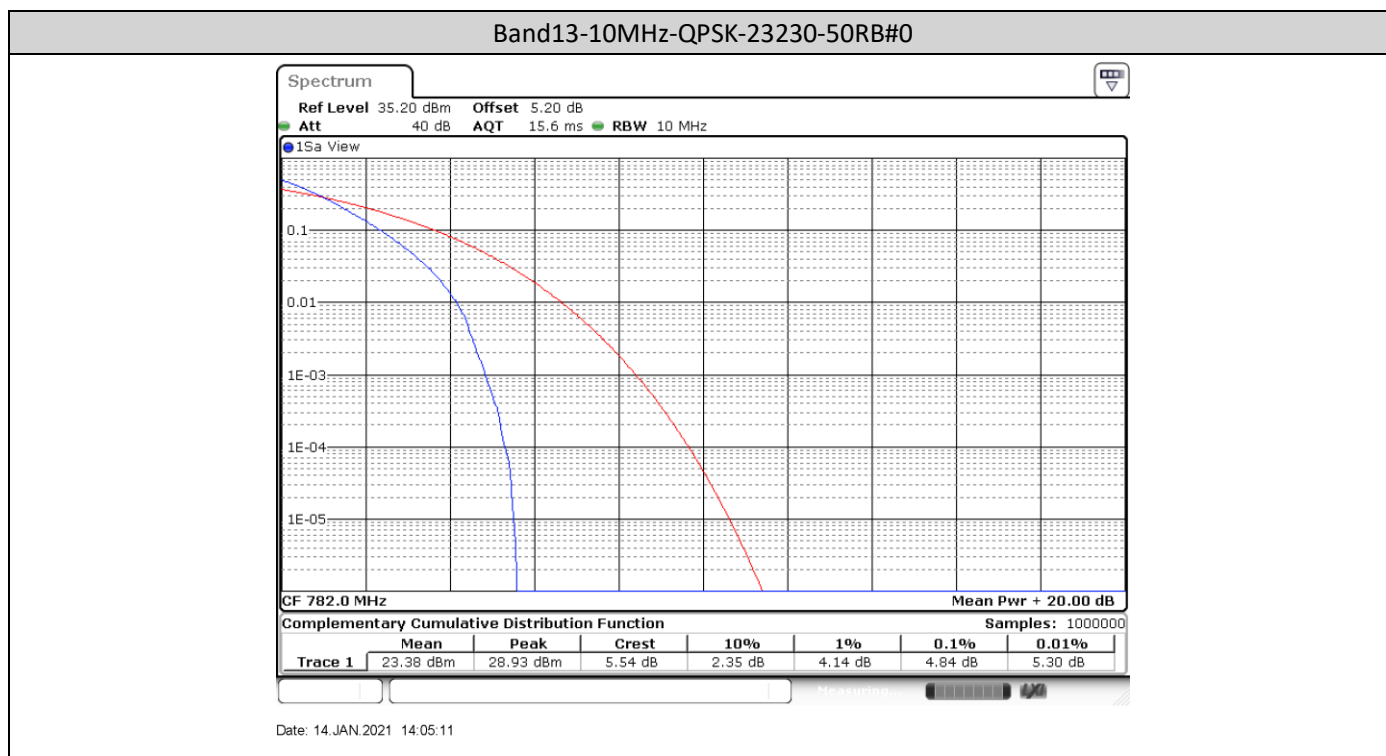


2. Peak-to-Average Ratio (CCDF)

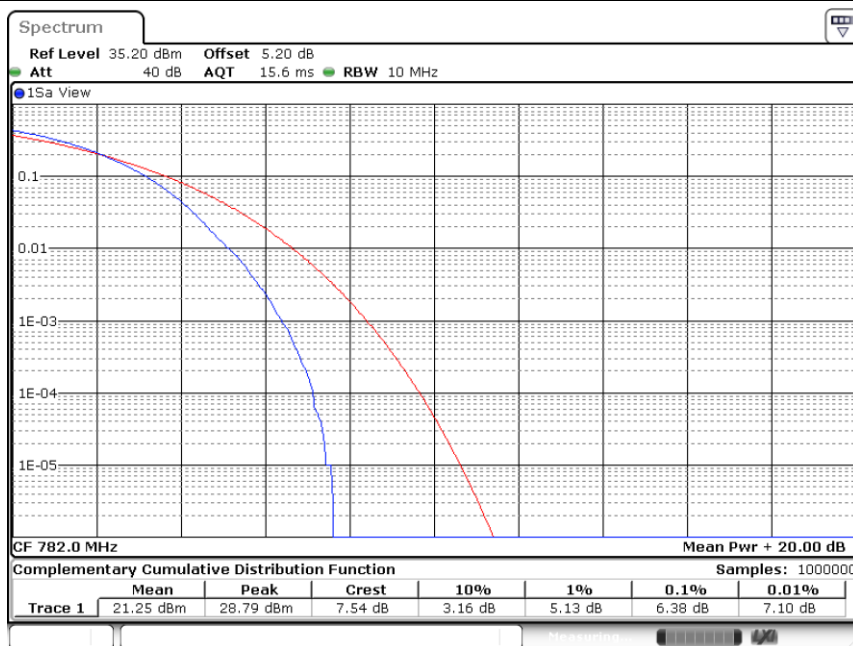
2.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	4.84	13	PASS
Band13	10MHz	64QAM	23230	50RB#0	6.38	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	5.83	13	PASS

2.2. Test Plots

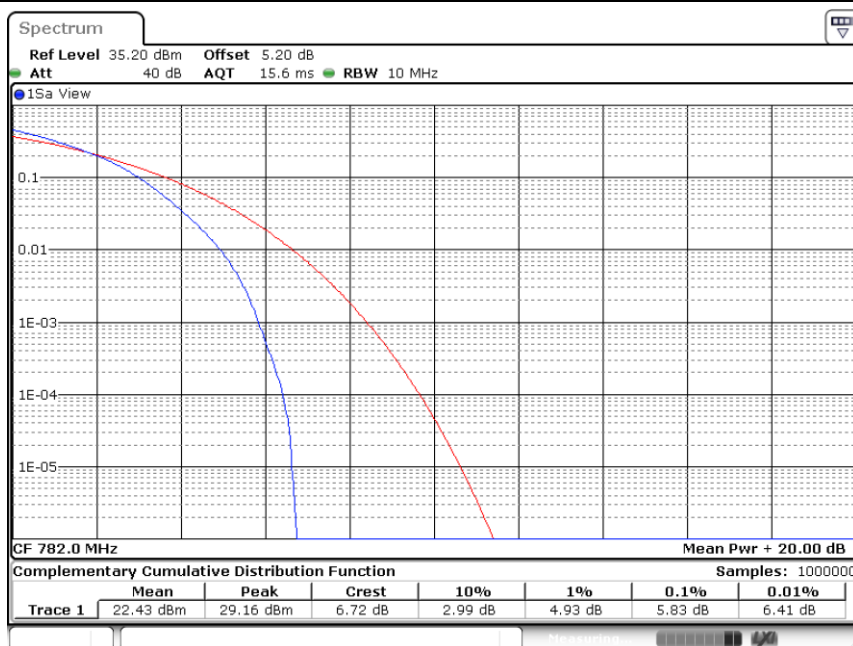


Band13-10MHz-64QAM-23230-50RB#0



Date: 14 JAN 2021 14:13:19

Band13-10MHz-16QAM-23230-50RB#0



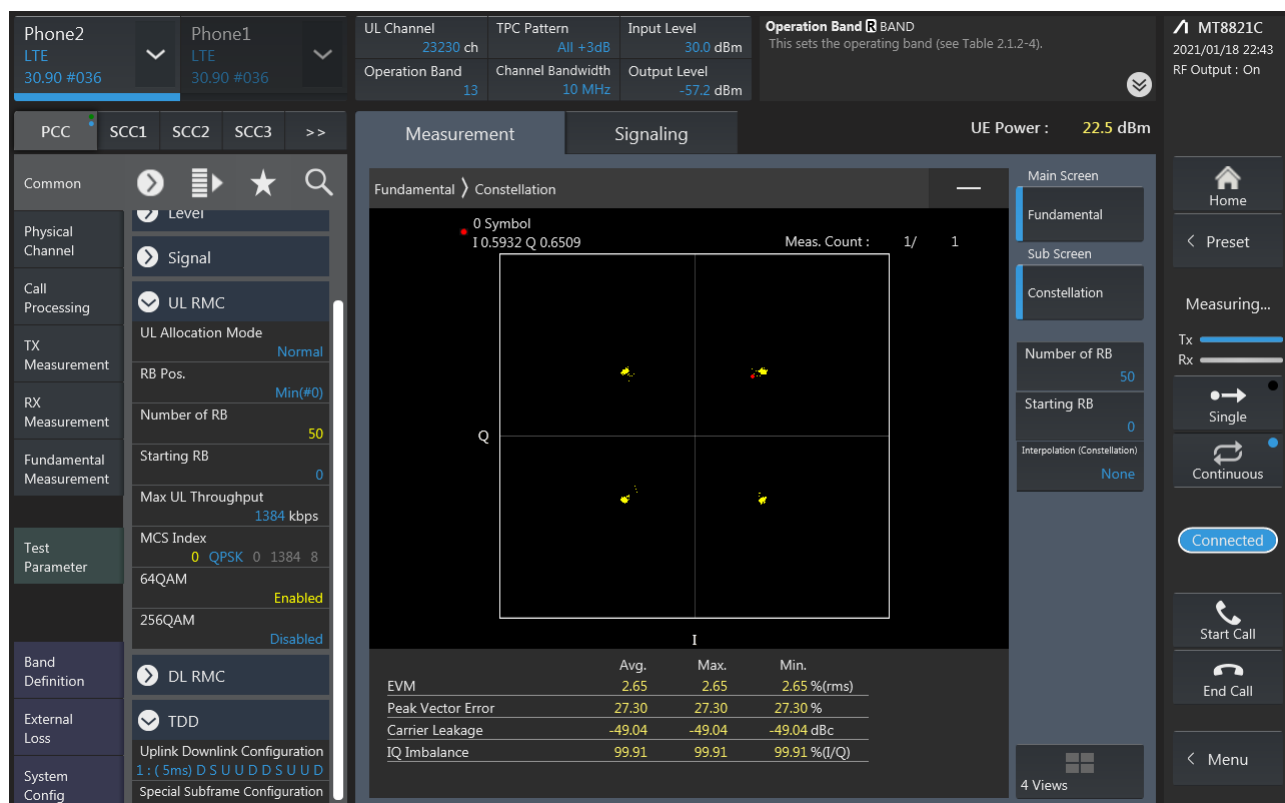
Date: 14 JAN 2021 14:05:23



3. Modulation Characteristics

3.1. Test Mode = LTE /TM1 10MHz

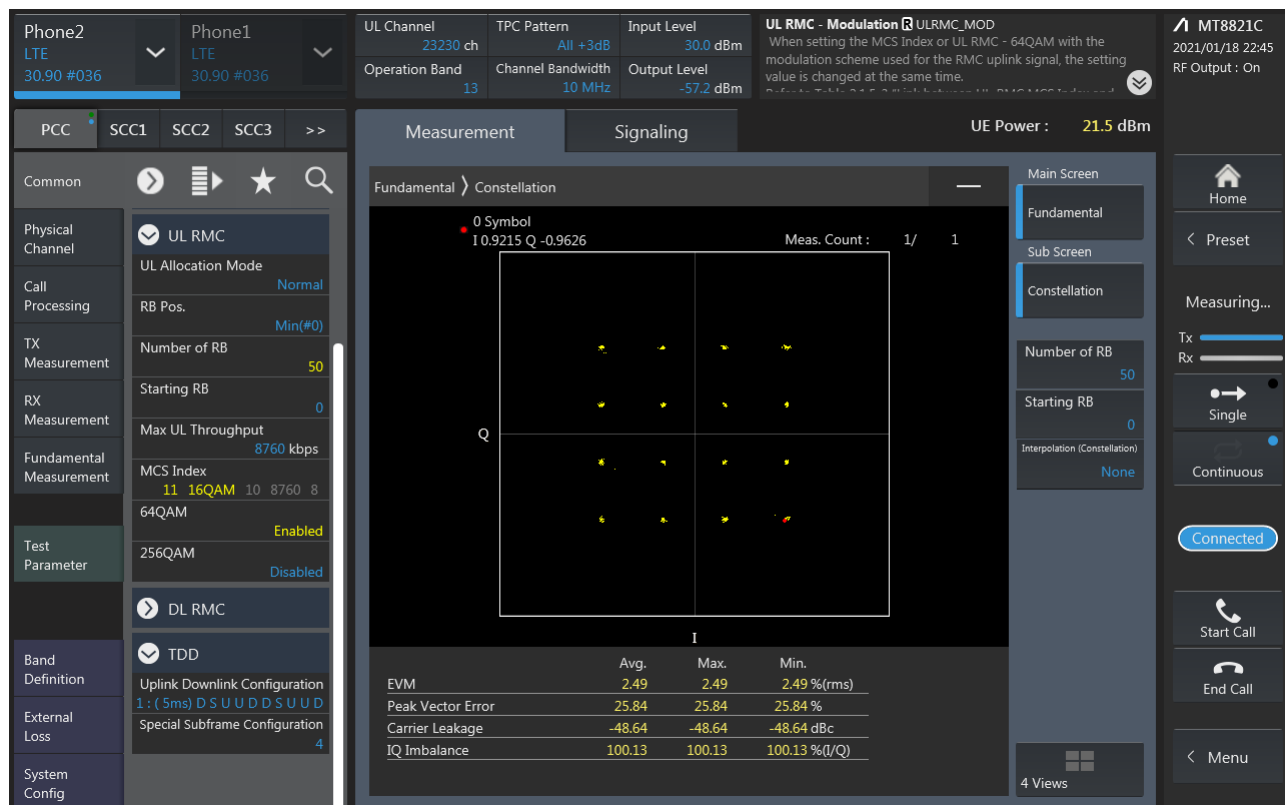
3.1.1. Test Channel = MCH





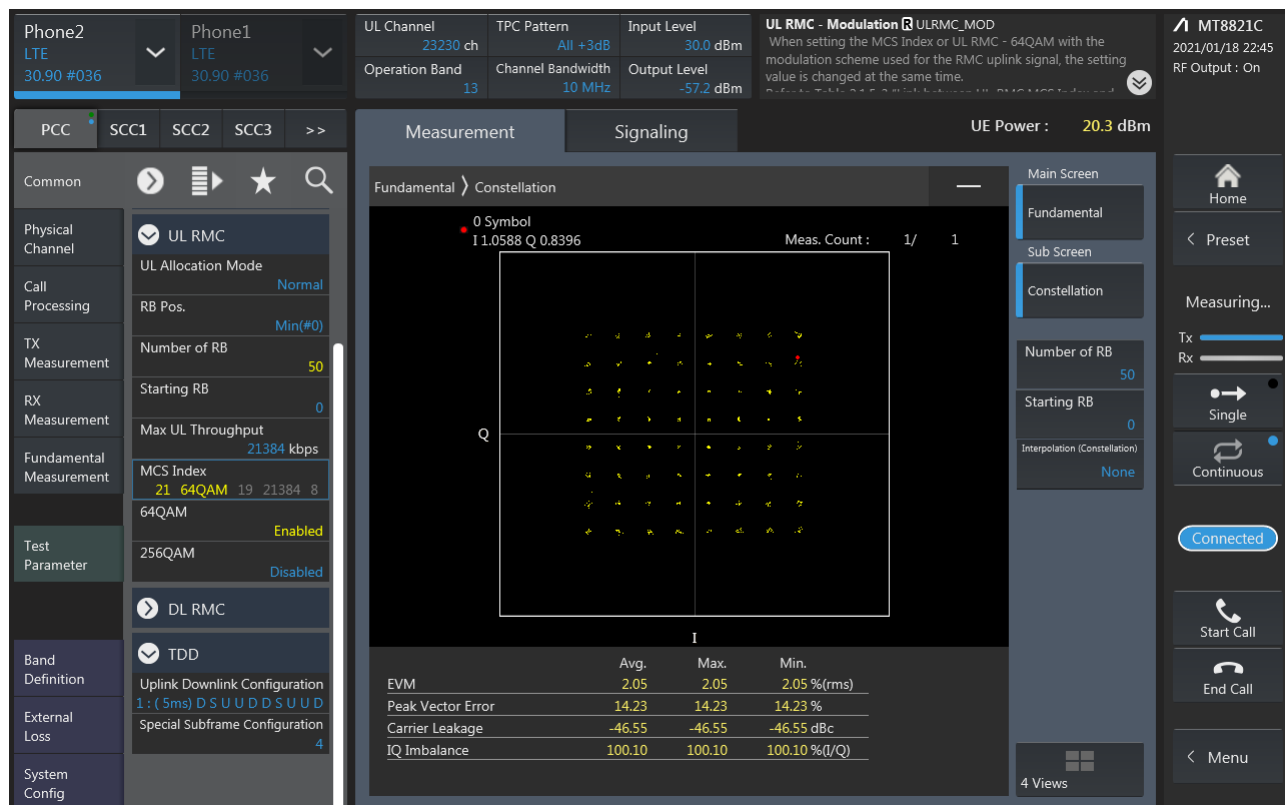
3.2. Test Mode = LTE /TM2 10MHz

3.2.1. Test Channel = MCH



3.3. Test Mode = LTE /TM3 10MHz

3.3.1.Test Channel = MCH





4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

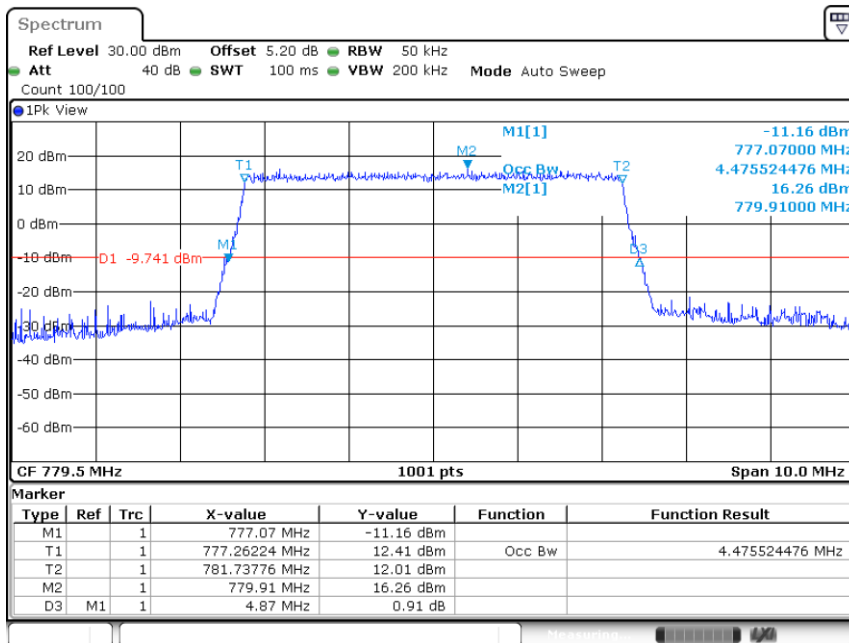
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.476	4.870	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.476	4.770	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.476	4.880	PASS
Band13	5MHz	64QAM	23205	25RB#0	4.466	4.880	PASS
Band13	5MHz	64QAM	23230	25RB#0	4.476	4.880	PASS
Band13	5MHz	64QAM	23255	25RB#0	4.466	4.870	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.486	4.830	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.476	4.920	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.486	4.900	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.911	9.620	PASS
Band13	10MHz	64QAM	23230	50RB#0	8.911	9.600	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.931	9.680	PASS





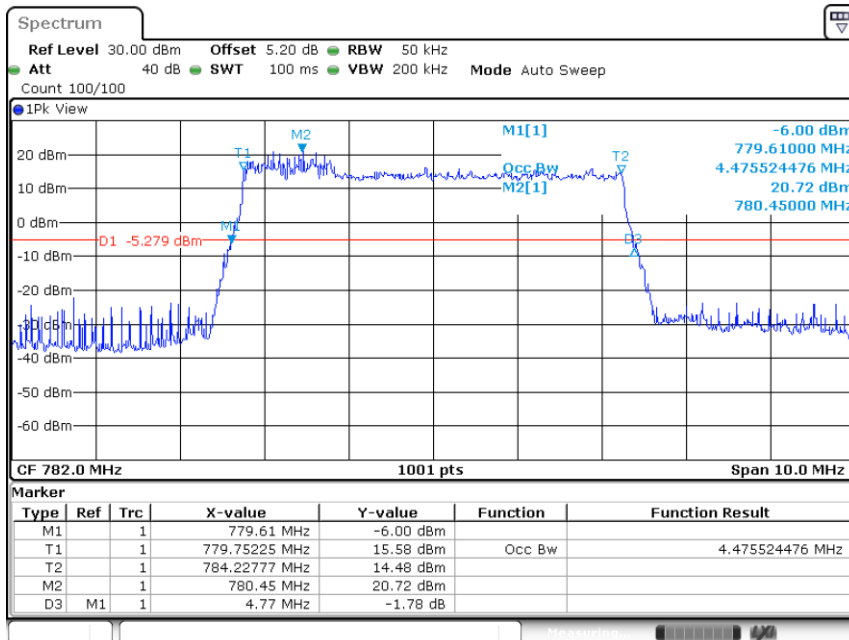
4.2. Test Plots

Band13-5MHz-QPSK-23205-25RB#0-4.476



Date: 14.JAN.2021 13:49:00

Band13-5MHz-QPSK-23230-25RB#0-4.476



Date: 14.JAN.2021 13:50:50



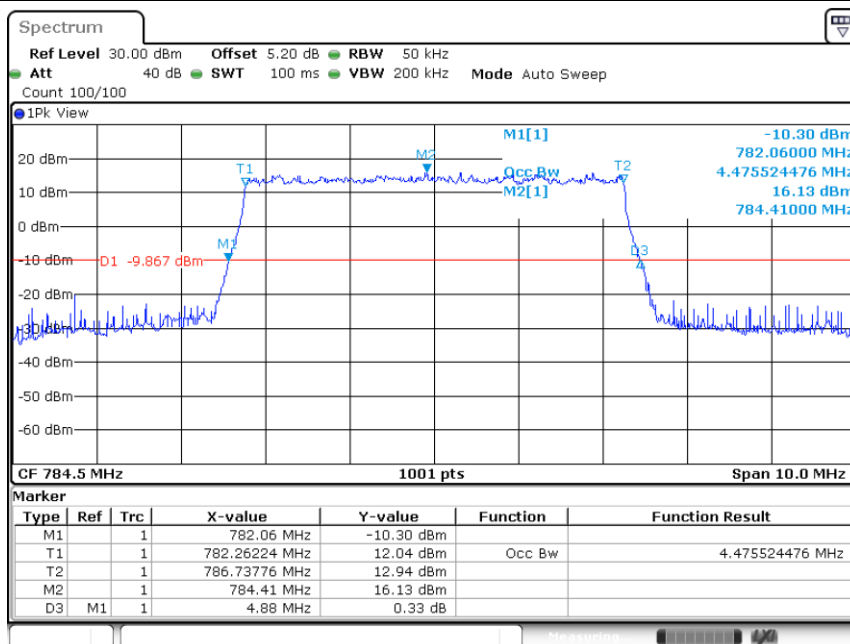
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

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.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

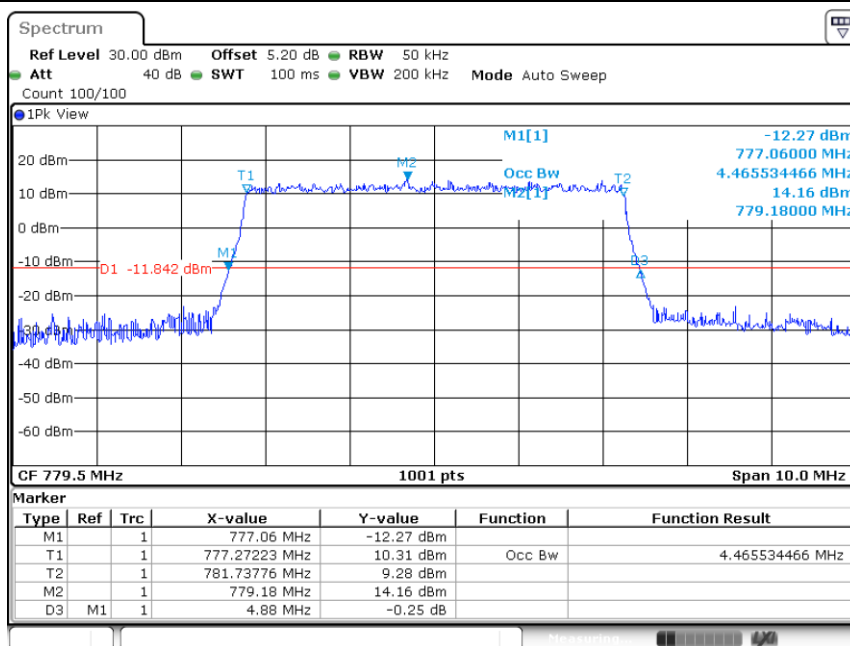


Band13-5MHz-QPSK-23255-25RB#0-4.476



Date: 14.JAN.2021 13:51:29

Band13-5MHz-64QAM-23205-25RB#0-4.466



Date: 14.JAN.2021 14:05:47



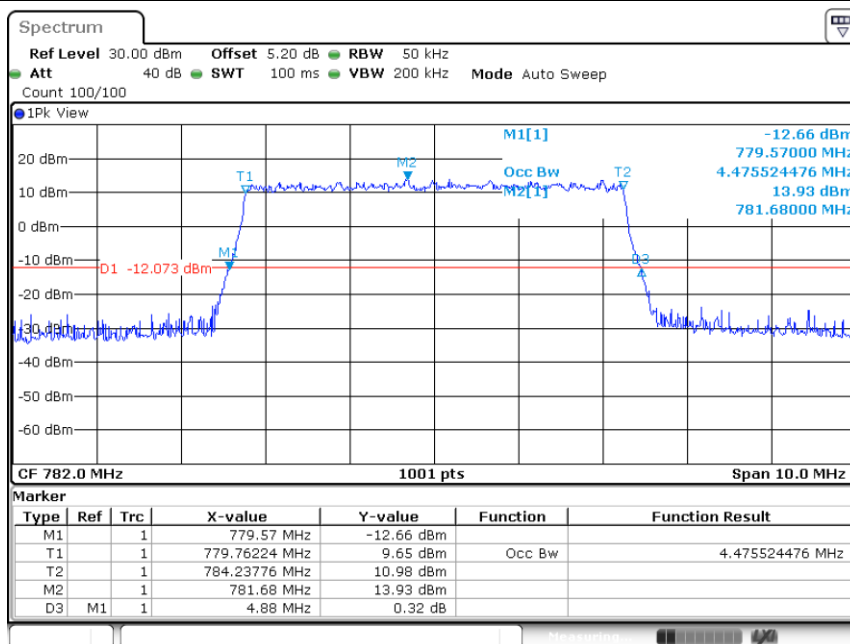
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

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.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

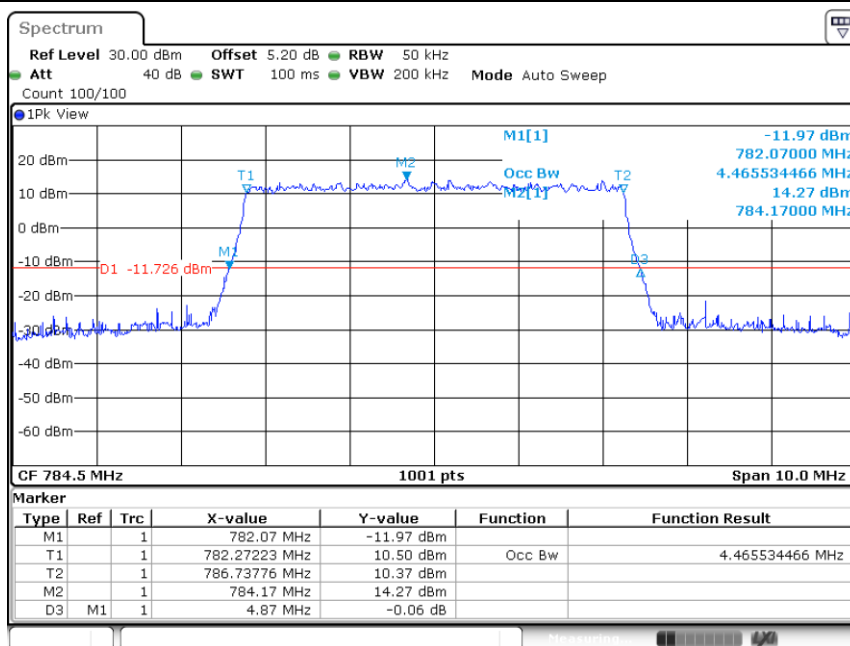


Band13-5MHz-64QAM-23230-25RB#0-4.476



Date: 14.JAN.2021 14:06:07

Band13-5MHz-64QAM-23255-25RB#0-4.466



Date: 14.JAN.2021 14:06:27



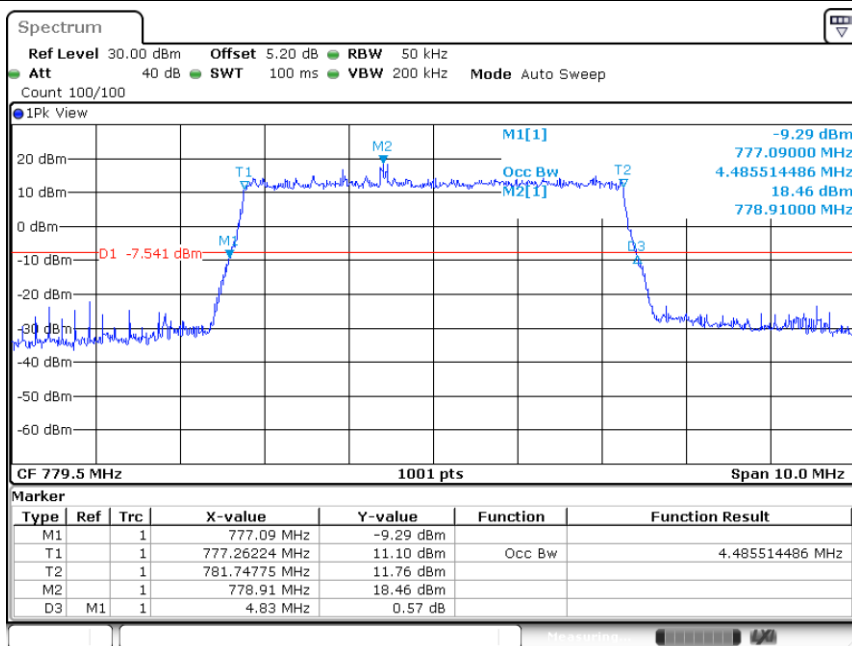
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

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

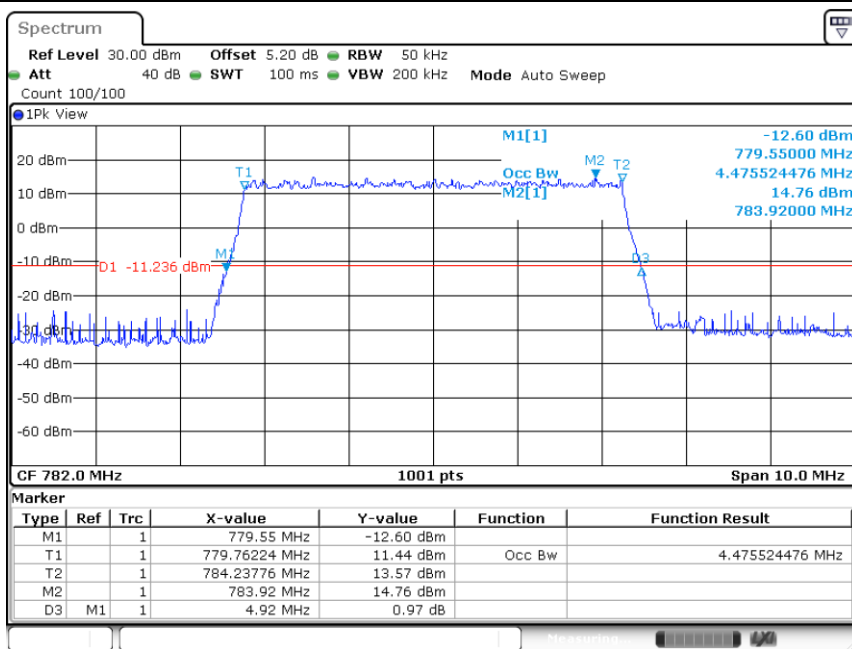
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Band13-5MHz-16QAM-23205-25RB#0-4.486



Date: 14.JAN.2021 13:49:19

Band13-5MHz-16QAM-23230-25RB#0-4.476

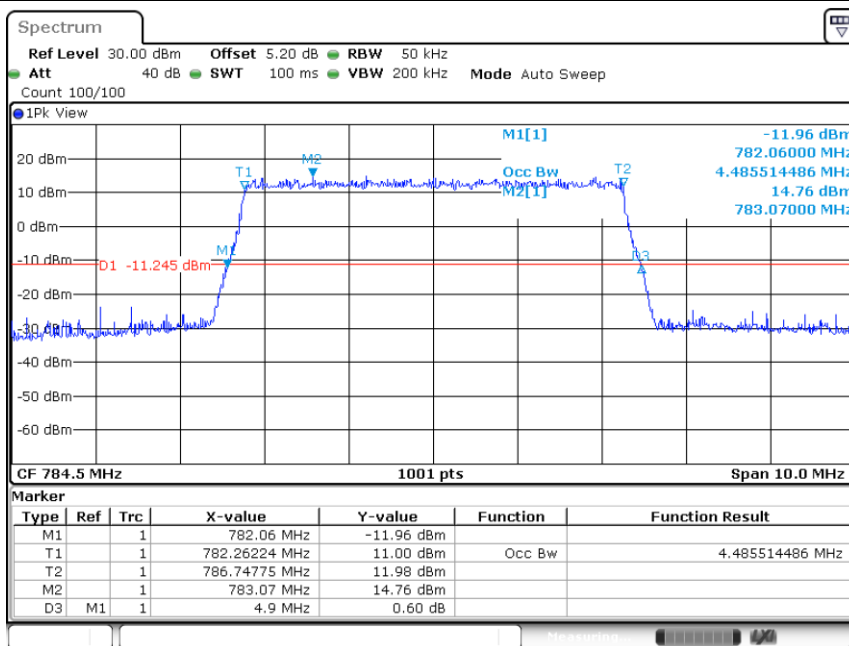


Date: 14.JAN.2021 13:51:10



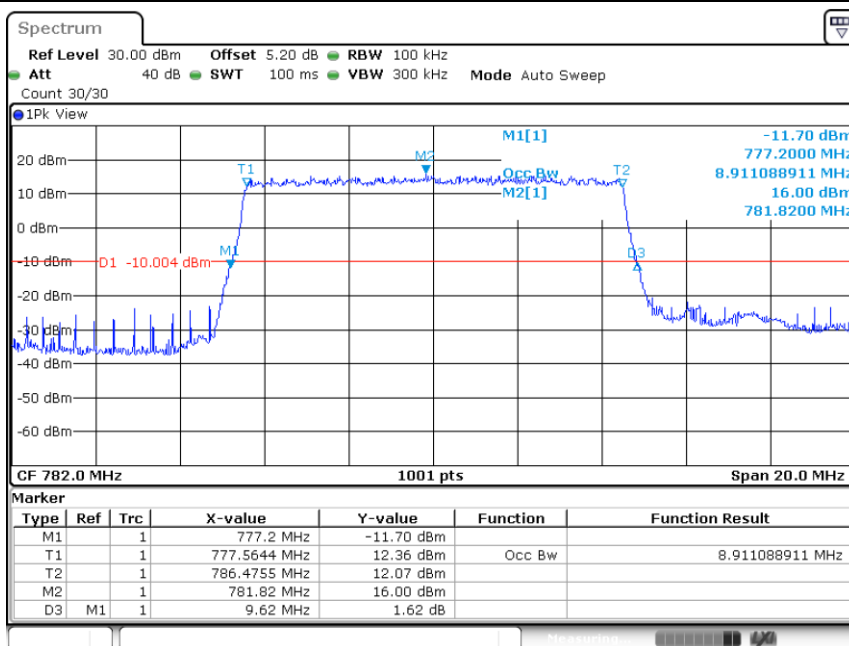


Band13-5MHz-16QAM-23255-25RB#0-4.486



Date: 14.JAN.2021 13:51:49

Band13-10MHz-QPSK-23230-50RB#0-8.911



Date: 14.JAN.2021 13:53:17

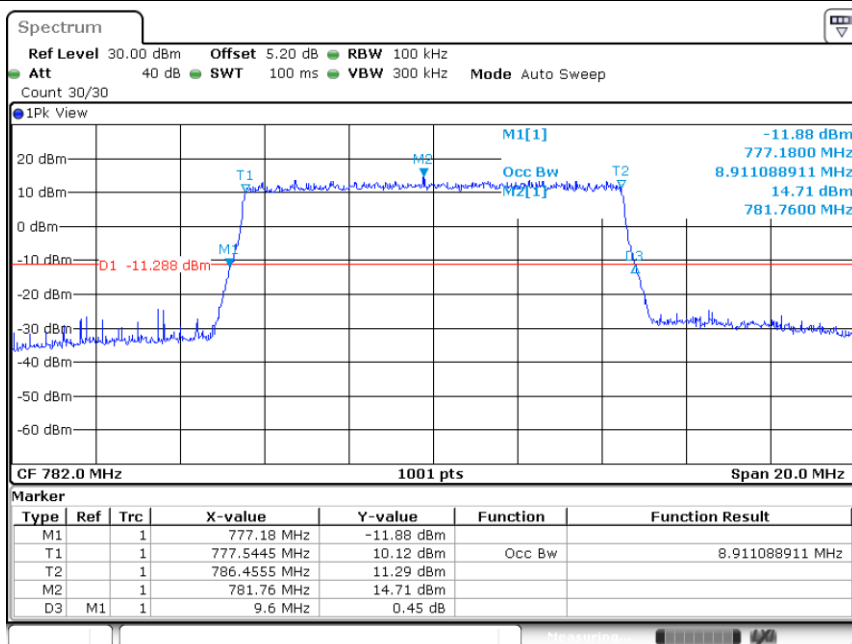


SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

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.

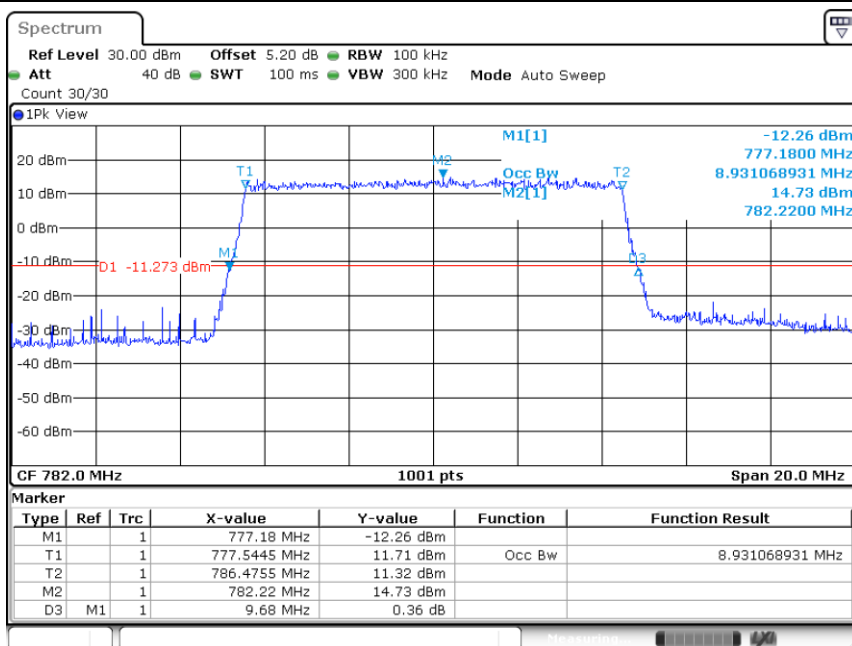
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn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

Band13-10MHz-64QAM-23230-50RB#0-8.911



Date: 14.JAN.2021 14:06:44

Band13-10MHz-16QAM-23230-50RB#0-8.931



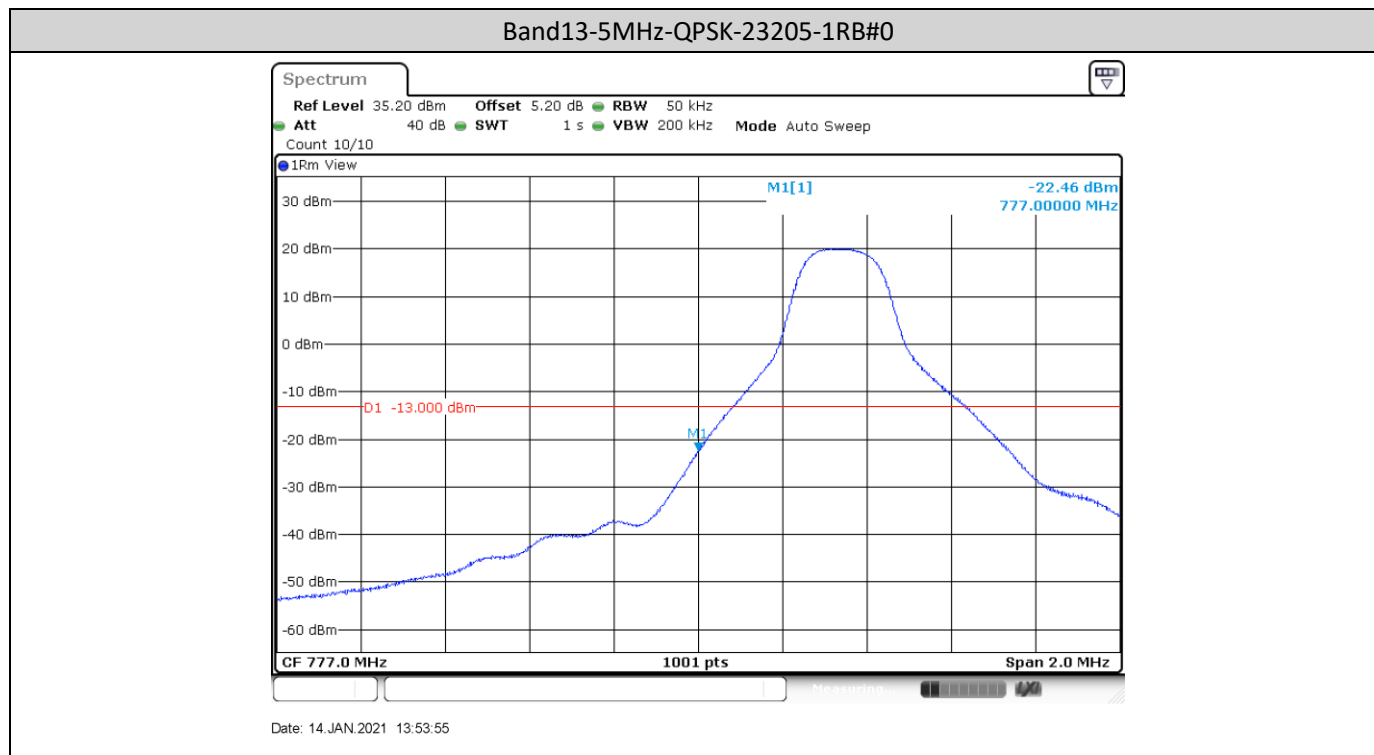
Date: 14.JAN.2021 13:53:30





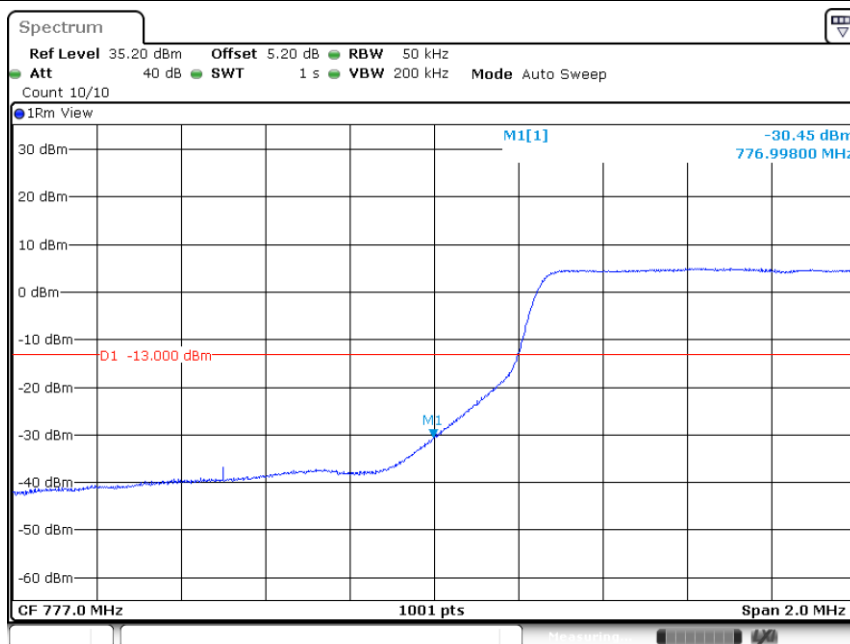
5. Band Edge Compliance

5.1. Test Plots





Band13-5MHz-QPSK-23205-25RB#0



Date: 14.JAN.2021 13:55:01

Band13-5MHz-QPSK-23255-1RB#24



Date: 14.JAN.2021 13:57:04



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

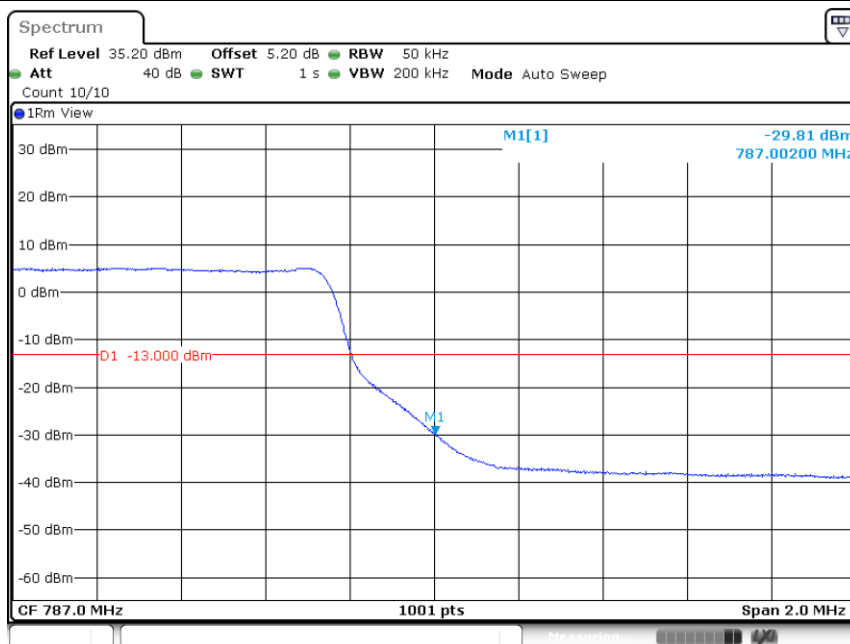
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, CCC Laboratory

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

Member of the SGS Group (SGS SA)

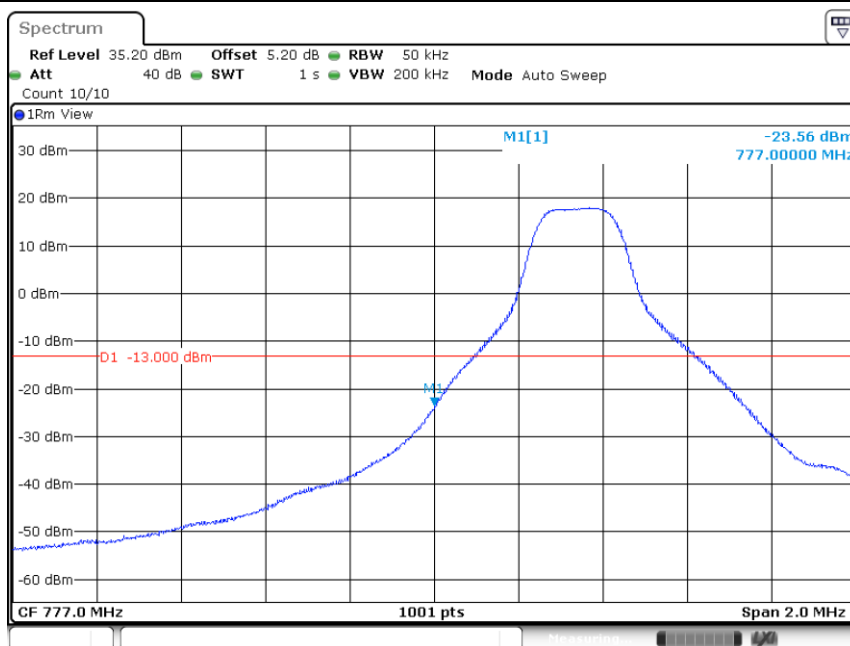


Band13-5MHz-QPSK-23255-25RB#0



Date: 14.JAN.2021 13:57:46

Band13-5MHz-64QAM-23205-1RB#0



Date: 14.JAN.2021 14:07:09



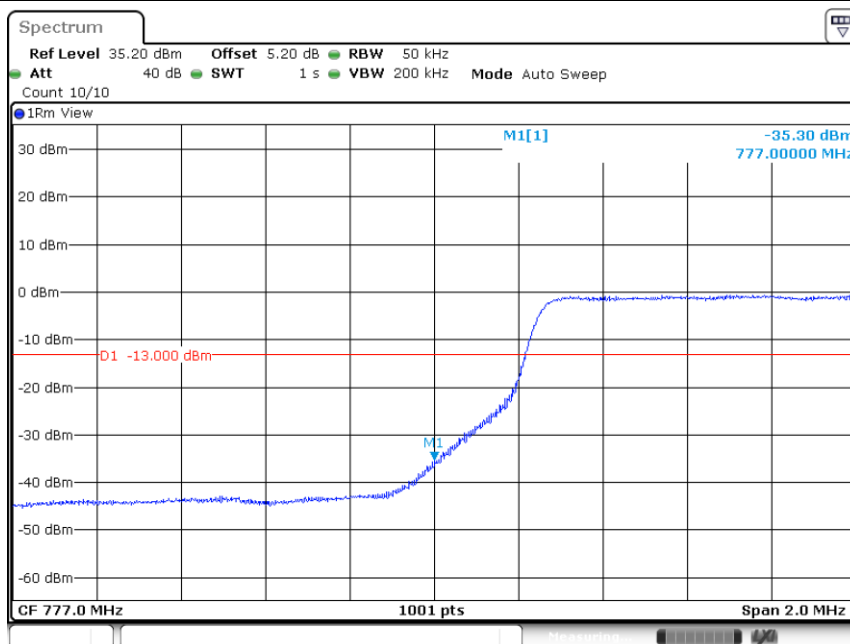
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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 (2010) China 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

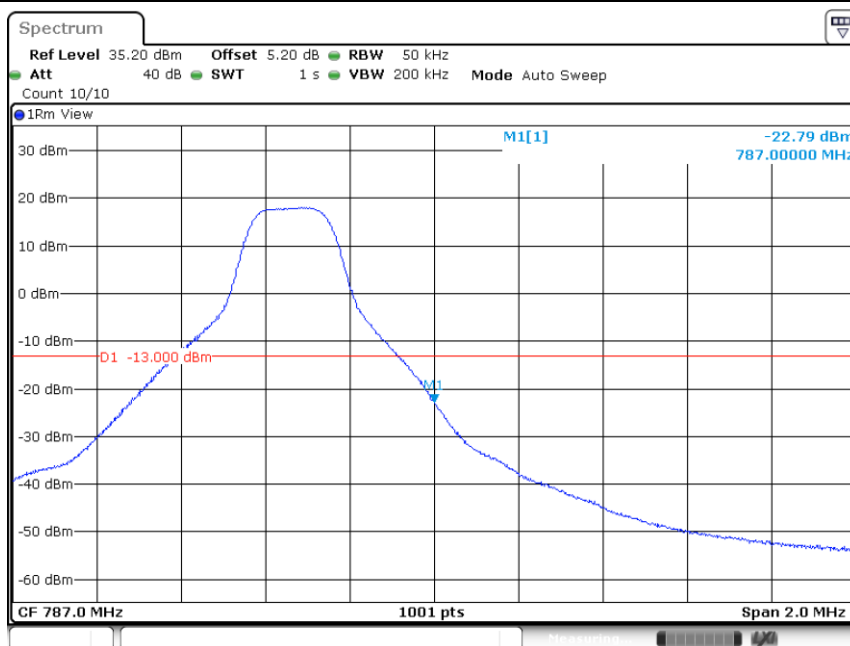


Band13-5MHz-64QAM-23205-25RB#0



Date: 14.JAN.2021 14:07:30

Band13-5MHz-64QAM-23255-1RB#24



Date: 14.JAN.2021 14:08:50



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 (2020) China 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

Member of the SGS Group (SGS SA)

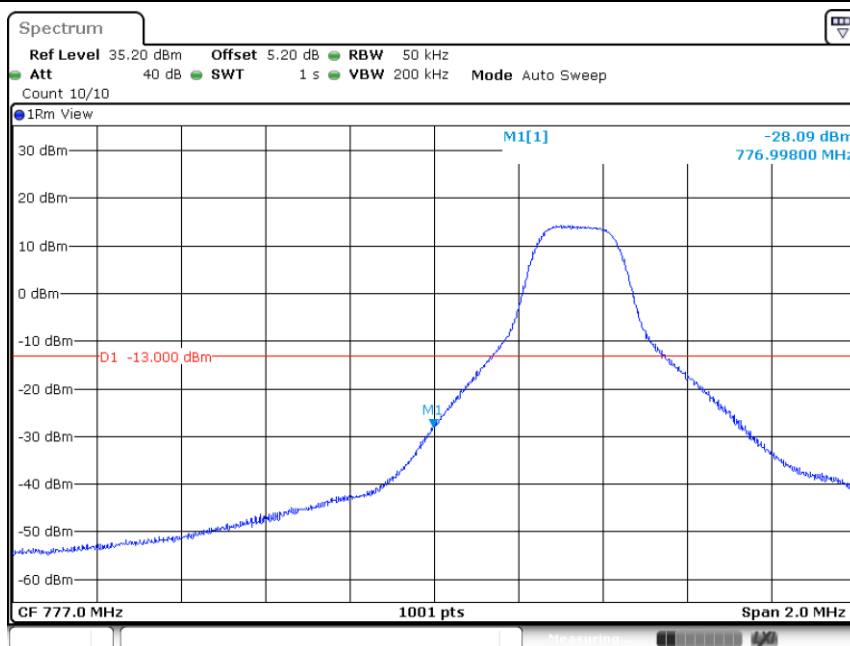


Band13-5MHz-64QAM-23255-25RB#0



Date: 14 JAN 2021 14:09:11

Band13-5MHz-16QAM-23205-1RB#0



Date: 14 JAN 2021 13:54:16



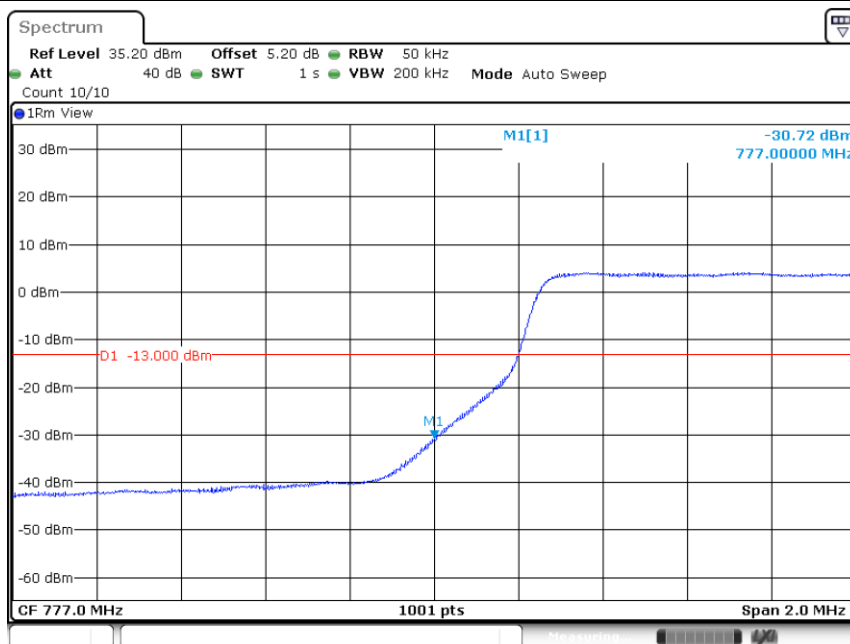
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CCC Laboratory)

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-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

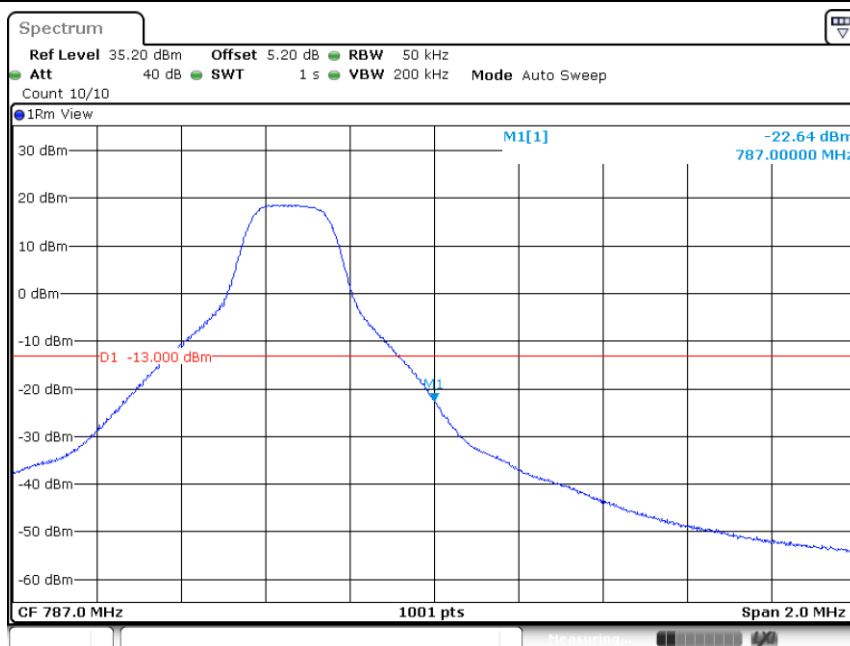


Band13-5MHz-16QAM-23205-25RB#0



Date: 14.JAN.2021 13:55:21

Band13-5MHz-16QAM-23255-1RB#24



Date: 14.JAN.2021 13:57:24



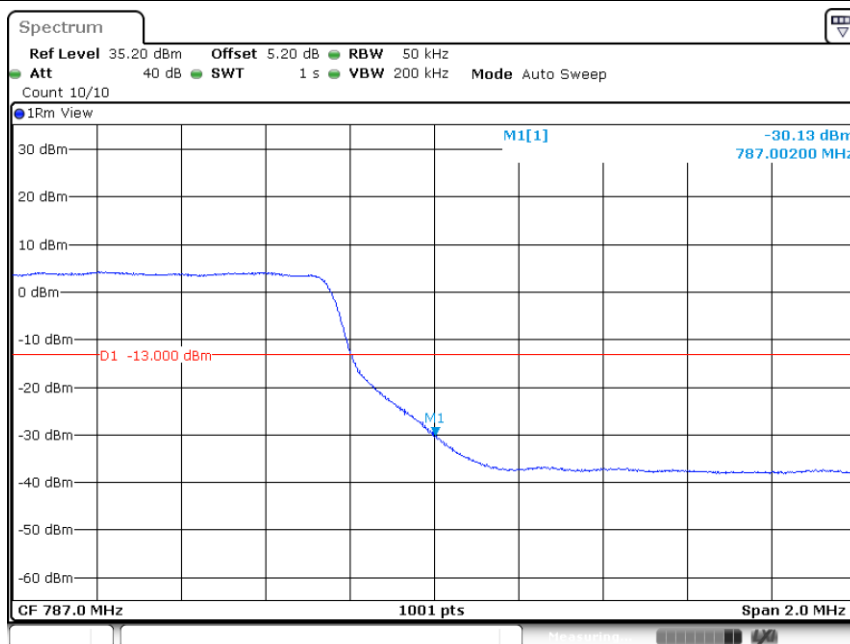
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (2010) China CCC Laboratory

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-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

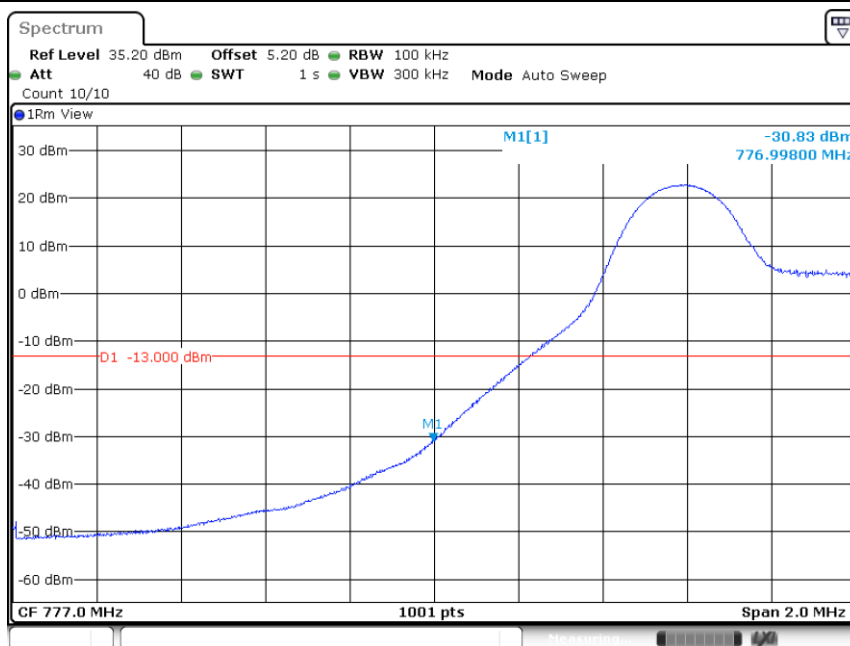


Band13-5MHz-16QAM-23255-25RB#0



Date: 14.JAN.2021 13:58:06

Band13-10MHz-QPSK-23230_Left-1RB#0



Date: 14.JAN.2021 13:58:48



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

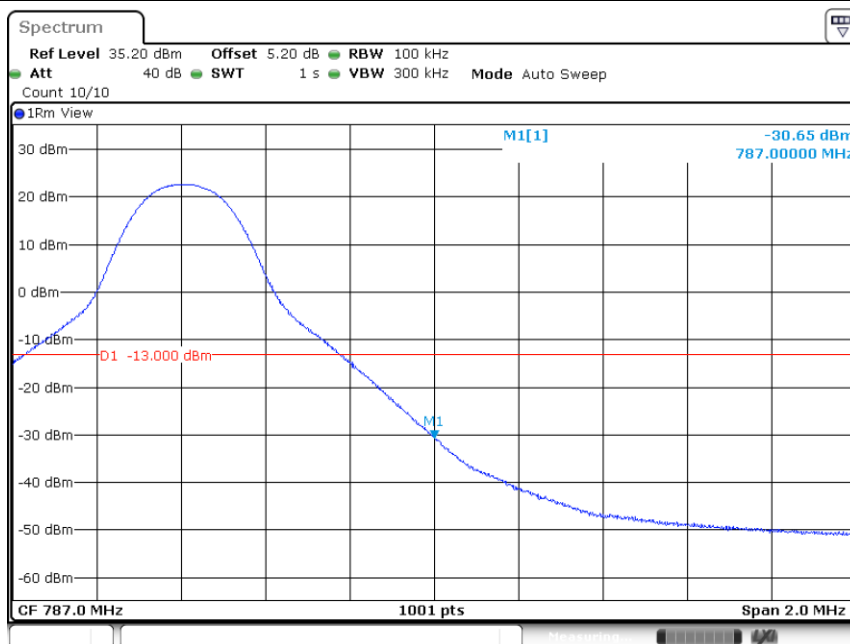
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (2010) China CCC Laboratory

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

Member of the SGS Group (SGS SA)

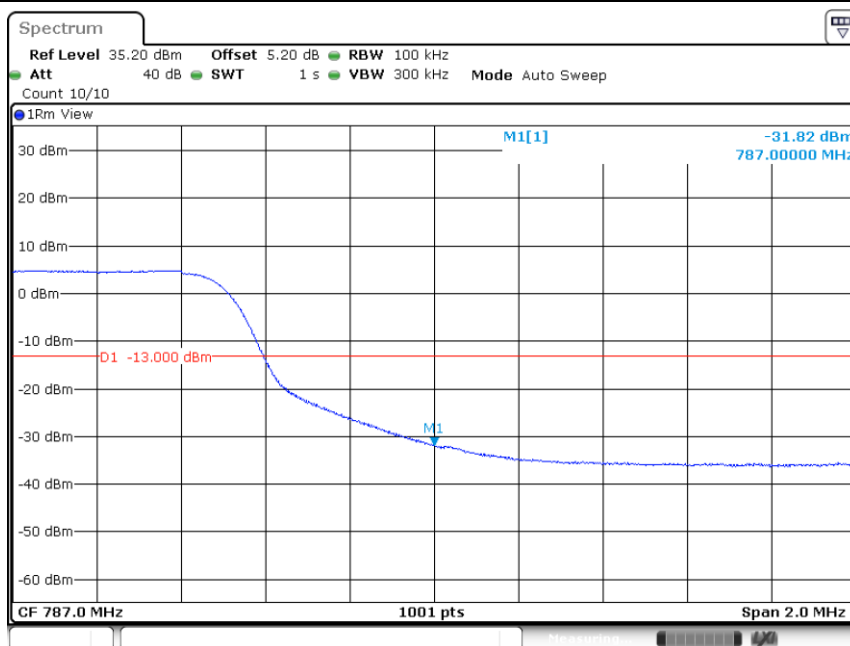


Band13-10MHz-QPSK-23230_Right-1RB#49



Date: 14.JAN.2021 14:02:17

Band13-10MHz-QPSK-23230_Right-50RB#0



Date: 14.JAN.2021 14:02:59

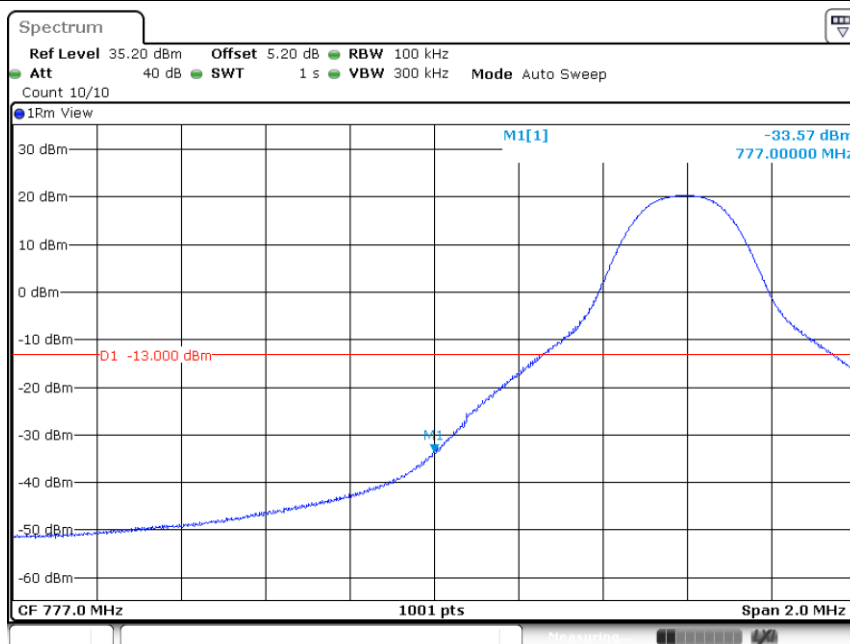


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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 (CMAA) Calibration Laboratory

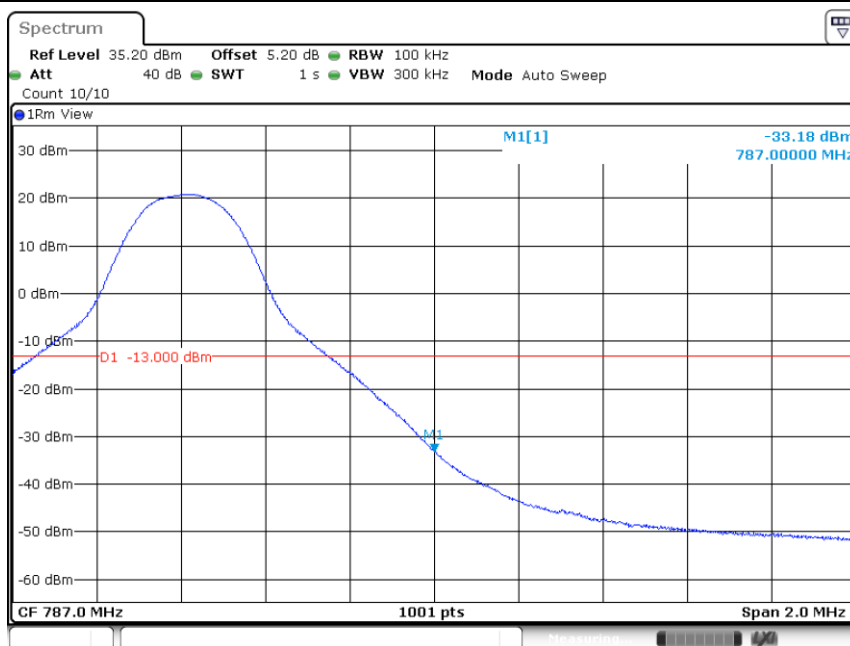
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Band13-10MHz-64QAM-23230_Left-1RB#0



Date: 14.JAN.2021 14:09:38

Band13-10MHz-64QAM-23230_Right-1RB#49



Date: 14.JAN.2021 14:10:03



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

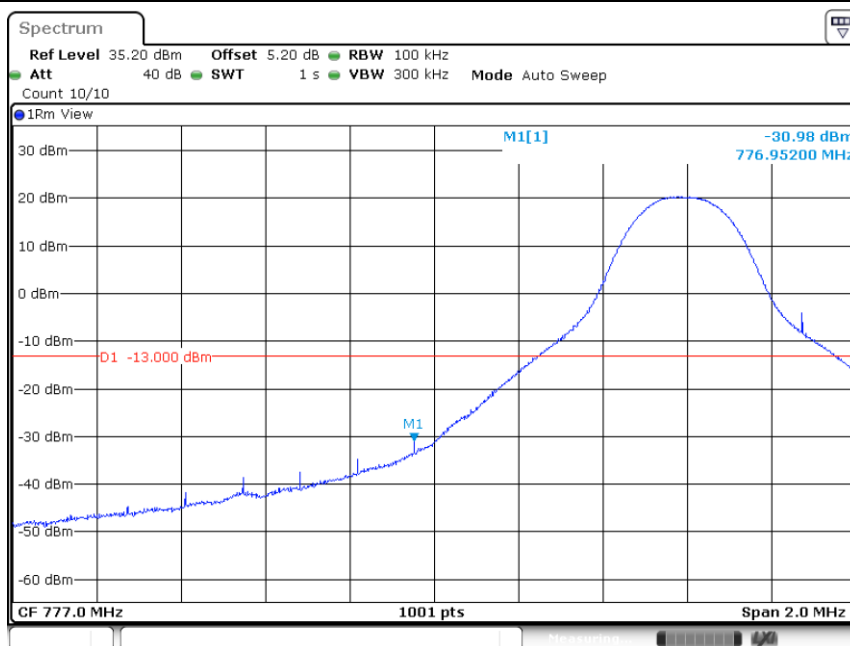


Band13-10MHz-64QAM-23230_Right-50RB#0



Date: 14.JAN.2021 14:13:02

Band13-10MHz-16QAM-23230_Left-1RB#0



Date: 14.JAN.2021 14:00:55

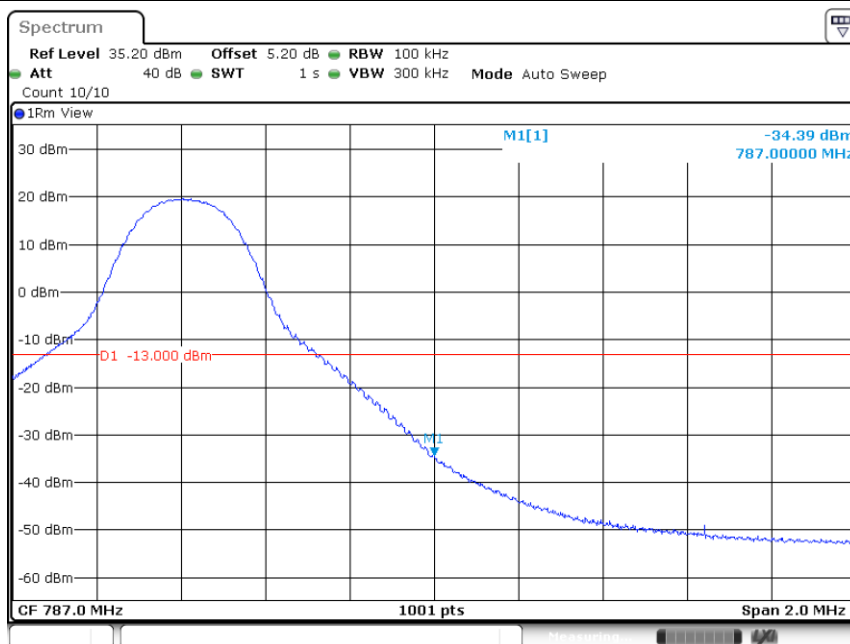


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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

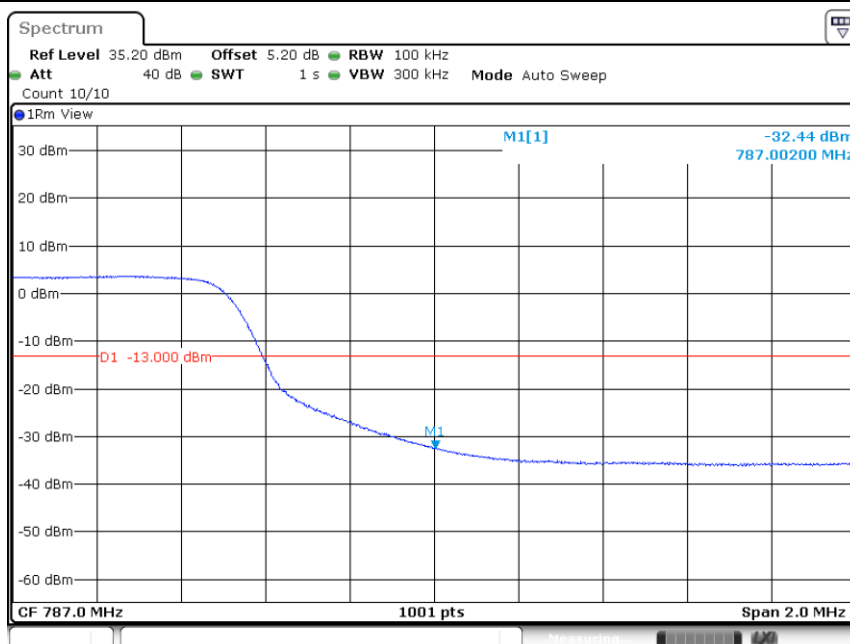


Band13-10MHz-16QAM-23230_Right-1RB#49



Date: 14.JAN.2021 14:02:38

Band13-10MHz-16QAM-23230_Right-50RB#0



Date: 14.JAN.2021 14:04:11

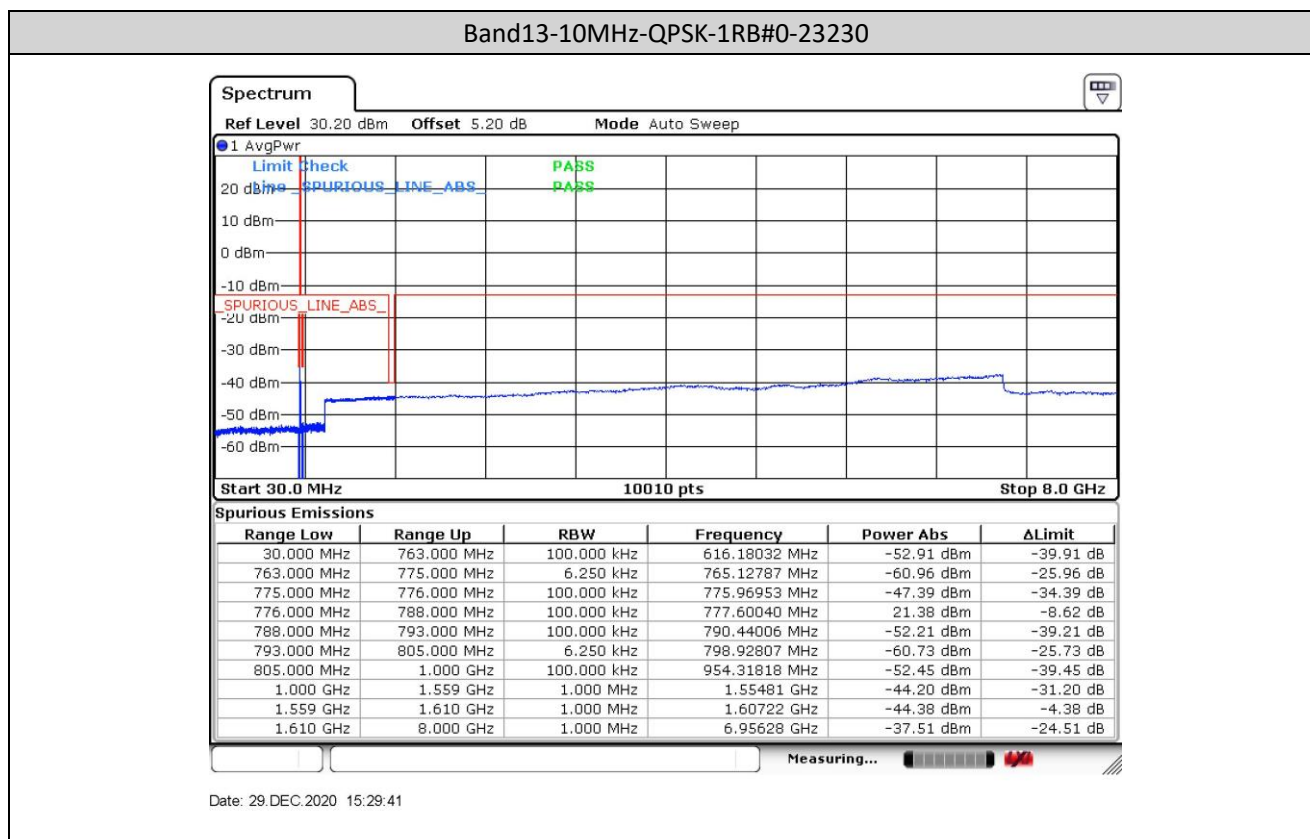


6. Spurious Emission at Antenna Terminal

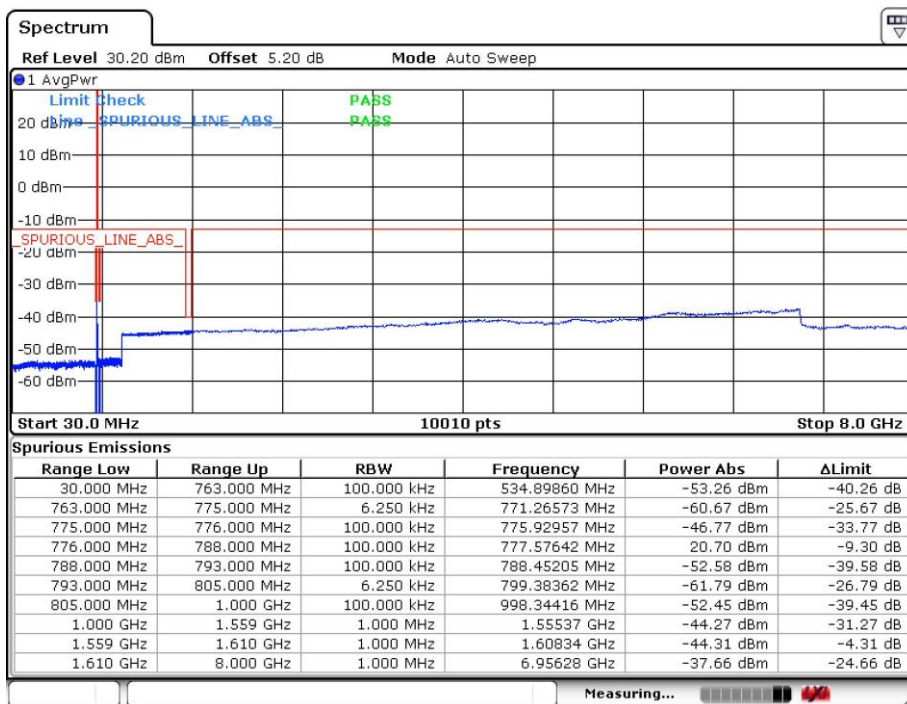
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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



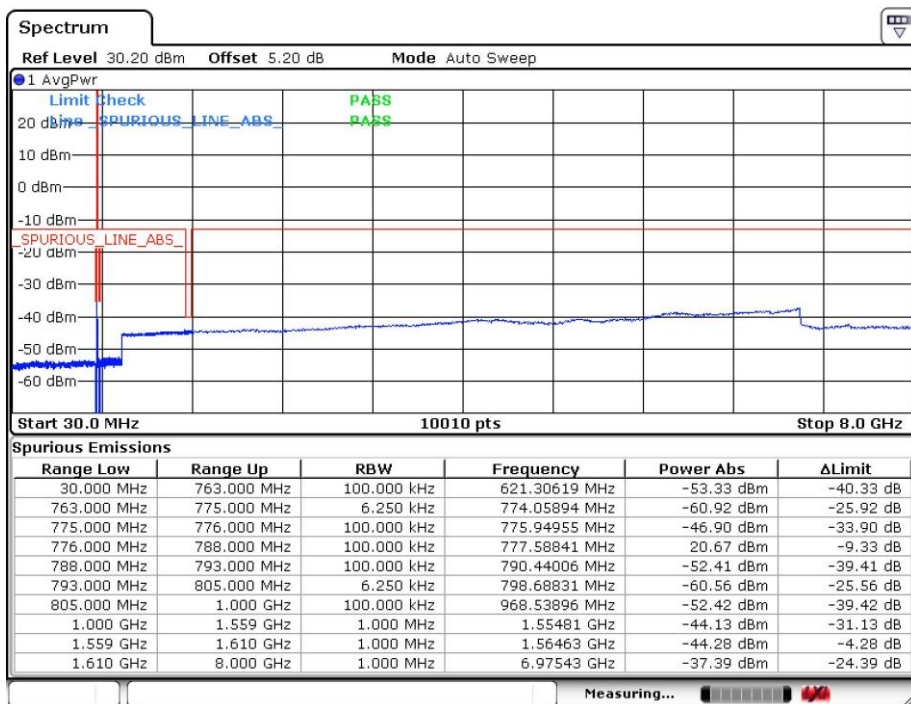
Band13-10MHz-16QAM-1RB#0-23230



Date: 29 DEC 2020 15:29:57



Band13-10MHz-64QAM-1RB#0-23230



Date: 29 DEC 2020 15:30:08



7. Field Strength of Spurious Radiation

7.1. Test Band = LTE_13_TM1 ANT1

7.1.1. Test Channel = Mid Channel

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	41.9801	-73.46	-66.60	-13.00	53.60	Horizontal
2	66.1343	-73.57	-74.90	-13.00	61.90	Horizontal
3	232.2066	-73.51	-70.69	-13.00	57.69	Horizontal
4	1600.1200	-71.57	-67.04	-40.00	27.04	Horizontal
5	2424.2849	-66.45	-56.67	-13.00	43.67	Horizontal
6	7449.3780	-56.20	-56.23	-13.00	43.23	Horizontal



7.2. Test Band = LTE_13_TM1 ANT1**7.2.1. Test Channel = Mid Channel**

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	37.0814	-70.14	-78.19	-13.00	65.19	Vertical
2	77.6779	-71.90	-70.42	-13.00	57.42	Vertical
3	109.7380	-73.33	-66.98	-13.00	53.98	Vertical
4	1619.7239	-71.18	-66.60	-13.00	53.60	Vertical
5	2481.4963	-57.85	-48.40	-13.00	35.40	Vertical
6	9328.8132	-57.98	-52.16	-13.00	39.16	Vertical



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

7.3. Test Band = LTE_13_TM1 ANT4

7.3.1. Test Channel = Mid Channel

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	45.1328	-73.56	-66.62	-13.00	53.62	Horizontal
2	237.9299	-74.20	-71.40	-13.00	58.40	Horizontal
3	1555.3111	-70.70	-66.61	-13.00	53.61	Horizontal
4	2703.5407	-71.21	-58.38	-13.00	45.38	Horizontal
5	7445.7378	-56.02	-56.05	-13.00	43.05	Horizontal
6	9312.2925	-57.90	-52.08	-13.00	39.08	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

7.4. Test Band = LTE_13_TM1 ANT4

7.4.1. Test Channel = Mid Channel

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	77.7264	-72.18	-70.69	-13.00	57.69	Vertical
2	114.5882	-73.70	-67.69	-13.00	54.69	Vertical
3	1607.7215	-71.41	-66.87	-40.00	26.87	Vertical
4	2309.4619	-71.17	-61.03	-13.00	48.03	Vertical
5	7454.4182	-56.26	-55.96	-13.00	42.96	Vertical
6	9330.4932	-57.87	-52.06	-13.00	39.06	Vertical

Remark:

- 1 According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2 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 displayed in this report.
- 3 all modulation and all Bandwidth had been tested, but only the worst case data displayed in this report.



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 (CMAA) Calibration 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



8. Frequency Stability

8.1. Frequency Vs Voltage

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	VL	NT	1.70	0.002174	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	VN	NT	0.80	0.001023	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	VH	NT	1.40	0.001790	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	VL	NT	2.70	0.003453	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	VN	NT	1.00	0.001279	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	VH	NT	-1.90	-0.002430	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	VL	NT	2.50	0.003197	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	VN	NT	-3.50	-0.004476	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	VH	NT	3.20	0.004092	±2.5	PASS

8.2. Frequency Vs Temperature

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	10MHz	QPSK	23230	50RB#0	NV	-30	2.60	0.003325	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-20	-1.00	-0.001279	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-10	-2.10	-0.002685	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	0	-2.00	-0.002558	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	10	4.20	0.005371	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	20	0.70	0.000895	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	30	-0.20	-0.000256	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	40	-0.10	-0.000128	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	50	3.00	0.003836	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	-30	2.40	0.003069	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	-20	4.60	0.005882	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	-10	-3.40	-0.004348	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	0	0.20	0.000256	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	10	1.90	0.002430	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	20	0.40	0.000512	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	30	1.70	0.002174	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	40	-4.30	-0.005499	±2.5	PASS
Band13	10MHz	64QAM	23230	50RB#0	NV	50	0.80	0.001023	±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-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 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



Band13	10MHz	16QAM	23230	50RB#0	NV	-30	-0.20	-0.000256	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-20	1.80	0.002302	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-10	-2.30	-0.002941	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	0	-1.10	-0.001407	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	10	0.30	0.000384	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	20	2.00	0.002558	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	30	-0.80	-0.001023	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	40	3.00	0.003836	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	50	-4.60	-0.005882	±2.5	PASS

