



# Appendix B

## E-UTRA Band 71



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (CSTC) 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](mailto: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](http://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](mailto:sgs.china@sgs.com)



## CONTENT

<b>1. EFFECTIVE (ISOTROPIC) RADIATED POWER.....</b>	<b>3</b>
1.1. TEST RESULT .....	3
<b>2. PEAK-TO-AVERAGE RATIO(CCDF).....</b>	<b>8</b>
2.1. TEST RESULT .....	8
2.2. TEST PLOTS.....	8
<b>3. MODULATION CHARACTERISTICS .....</b>	<b>12</b>
3.1. TEST BAND = LTE BAND 71 .....	12
3.2. TEST MODE = LTE /TM1 20MHZ.....	12
3.2.1. TEST CHANNEL = MCH.....	12
3.3. TEST MODE = LTE /TM2 20MHZ.....	13
3.3.1. TEST CHANNEL = MCH.....	13
<b>4. 26DB BANDWIDTH AND OCCUPIED BANDWIDTH .....</b>	<b>14</b>
4.1. TEST RESULT .....	14
4.2. TEST PLOTS.....	15
<b>5. BAND EDGE COMPLIANCE .....</b>	<b>27</b>
5.1. TEST PLOTS.....	27
<b>6. SPURIOUS EMISSION AT ANTENNA TERMINAL .....</b>	<b>43</b>
6.1. TEST PLOTS.....	43
<b>7. FIELD STRENGTH OF SPURIOUS RADIATION.....</b>	<b>49</b>
7.1. TEST BAND = LTE BAND 71 .....	49
7.1.1. TEST MODE =LTE/TM1 20MHZ.....	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
<b>8. FREQUENCY STABILITY .....</b>	<b>51</b>
8.1. FREQUENCY VS VOLTAGE .....	51
8.2. FREQUENCY VS TEMPERATURE .....	51





## 1. Effective (Isotropic) Radiated Power

### 1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band71	5MHz	QPSK	133147	1RB#0	23.36	25.21	34.77	PASS
Band71	5MHz	QPSK	133147	1RB#12	23.04	24.89	34.77	PASS
Band71	5MHz	QPSK	133147	1RB#24	23.55	25.40	34.77	PASS
Band71	5MHz	QPSK	133147	12RB#0	22.23	24.08	34.77	PASS
Band71	5MHz	QPSK	133147	12RB#6	22.24	24.09	34.77	PASS
Band71	5MHz	QPSK	133147	12RB#13	22.18	24.03	34.77	PASS
Band71	5MHz	QPSK	133147	25RB#0	22.35	24.20	34.77	PASS
Band71	5MHz	QPSK	133297	1RB#0	23.28	25.13	34.77	PASS
Band71	5MHz	QPSK	133297	1RB#12	23.23	25.08	34.77	PASS
Band71	5MHz	QPSK	133297	1RB#24	23.14	24.99	34.77	PASS
Band71	5MHz	QPSK	133297	12RB#0	22.37	24.22	34.77	PASS
Band71	5MHz	QPSK	133297	12RB#6	22.29	24.14	34.77	PASS
Band71	5MHz	QPSK	133297	12RB#13	22.35	24.20	34.77	PASS
Band71	5MHz	QPSK	133297	25RB#0	22.3	24.15	34.77	PASS
Band71	5MHz	QPSK	133447	1RB#0	23.19	25.04	34.77	PASS
Band71	5MHz	QPSK	133447	1RB#12	23.11	24.96	34.77	PASS
Band71	5MHz	QPSK	133447	1RB#24	22.73	24.58	34.77	PASS
Band71	5MHz	QPSK	133447	12RB#0	22.37	24.22	34.77	PASS
Band71	5MHz	QPSK	133447	12RB#6	22.2	24.05	34.77	PASS
Band71	5MHz	QPSK	133447	12RB#13	22.2	24.05	34.77	PASS
Band71	5MHz	QPSK	133447	25RB#0	22.38	24.23	34.77	PASS
Band71	5MHz	16QAM	133147	1RB#0	22.58	24.43	34.77	PASS
Band71	5MHz	16QAM	133147	1RB#12	22.59	24.44	34.77	PASS
Band71	5MHz	16QAM	133147	1RB#24	22.53	24.38	34.77	PASS
Band71	5MHz	16QAM	133147	12RB#0	21.18	23.03	34.77	PASS
Band71	5MHz	16QAM	133147	12RB#6	21.31	23.16	34.77	PASS
Band71	5MHz	16QAM	133147	12RB#13	21.24	23.09	34.77	PASS
Band71	5MHz	16QAM	133147	25RB#0	21.3	23.15	34.77	PASS
Band71	5MHz	16QAM	133297	1RB#0	22.7	24.55	34.77	PASS
Band71	5MHz	16QAM	133297	1RB#12	22.5	24.35	34.77	PASS
Band71	5MHz	16QAM	133297	1RB#24	22.73	24.58	34.77	PASS
Band71	5MHz	16QAM	133297	12RB#0	21.34	23.19	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](mailto: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



Band71	5MHz	16QAM	133297	12RB#6	21.28	23.13	34.77	PASS
Band71	5MHz	16QAM	133297	12RB#13	21.3	23.15	34.77	PASS
Band71	5MHz	16QAM	133297	25RB#0	21.24	23.09	34.77	PASS
Band71	5MHz	16QAM	133447	1RB#0	22.48	24.33	34.77	PASS
Band71	5MHz	16QAM	133447	1RB#12	22.29	24.14	34.77	PASS
Band71	5MHz	16QAM	133447	1RB#24	22.38	24.23	34.77	PASS
Band71	5MHz	16QAM	133447	12RB#0	21.2	23.05	34.77	PASS
Band71	5MHz	16QAM	133447	12RB#6	21.09	22.94	34.77	PASS
Band71	5MHz	16QAM	133447	12RB#13	21.17	23.02	34.77	PASS
Band71	5MHz	16QAM	133447	25RB#0	21.18	23.03	34.77	PASS
Band71	10MHz	QPSK	133172	1RB#0	23.25	25.10	34.77	PASS
Band71	10MHz	QPSK	133172	1RB#24	24.22	26.07	34.77	PASS
Band71	10MHz	QPSK	133172	1RB#49	22.73	24.58	34.77	PASS
Band71	10MHz	QPSK	133172	25RB#0	22.43	24.28	34.77	PASS
Band71	10MHz	QPSK	133172	25RB#12	22.54	24.39	34.77	PASS
Band71	10MHz	QPSK	133172	25RB#25	22.37	24.22	34.77	PASS
Band71	10MHz	QPSK	133172	50RB#0	22.05	23.90	34.77	PASS
Band71	10MHz	QPSK	133297	1RB#0	23.49	25.34	34.77	PASS
Band71	10MHz	QPSK	133297	1RB#24	23.41	25.26	34.77	PASS
Band71	10MHz	QPSK	133297	1RB#49	22.87	24.72	34.77	PASS
Band71	10MHz	QPSK	133297	25RB#0	22.56	24.41	34.77	PASS
Band71	10MHz	QPSK	133297	25RB#12	22.28	24.13	34.77	PASS
Band71	10MHz	QPSK	133297	25RB#25	22.31	24.16	34.77	PASS
Band71	10MHz	QPSK	133297	50RB#0	22.4	24.25	34.77	PASS
Band71	10MHz	QPSK	133422	1RB#0	23.16	25.01	34.77	PASS
Band71	10MHz	QPSK	133422	1RB#24	23.5	25.35	34.77	PASS
Band71	10MHz	QPSK	133422	1RB#49	22.48	24.33	34.77	PASS
Band71	10MHz	QPSK	133422	25RB#0	22.25	24.10	34.77	PASS
Band71	10MHz	QPSK	133422	25RB#12	22.33	24.18	34.77	PASS
Band71	10MHz	QPSK	133422	25RB#25	21.97	23.82	34.77	PASS
Band71	10MHz	QPSK	133422	50RB#0	22.17	24.02	34.77	PASS
Band71	10MHz	16QAM	133172	1RB#0	22.53	24.38	34.77	PASS
Band71	10MHz	16QAM	133172	1RB#24	22.4	24.25	34.77	PASS
Band71	10MHz	16QAM	133172	1RB#49	22.52	24.37	34.77	PASS
Band71	10MHz	16QAM	133172	25RB#0	21.34	23.19	34.77	PASS
Band71	10MHz	16QAM	133172	25RB#12	21.31	23.16	34.77	PASS
Band71	10MHz	16QAM	133172	25RB#25	21.3	23.15	34.77	PASS
Band71	10MHz	16QAM	133172	50RB#0	21.36	23.21	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](mailto: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



Band71	10MHz	16QAM	133297	1RB#0	22.83	24.68	34.77	PASS
Band71	10MHz	16QAM	133297	1RB#24	22.57	24.42	34.77	PASS
Band71	10MHz	16QAM	133297	1RB#49	22.47	24.32	34.77	PASS
Band71	10MHz	16QAM	133297	25RB#0	21.44	23.29	34.77	PASS
Band71	10MHz	16QAM	133297	25RB#12	21.32	23.17	34.77	PASS
Band71	10MHz	16QAM	133297	25RB#25	21.24	23.09	34.77	PASS
Band71	10MHz	16QAM	133297	50RB#0	21.33	23.18	34.77	PASS
Band71	10MHz	16QAM	133422	1RB#0	22.7	24.55	34.77	PASS
Band71	10MHz	16QAM	133422	1RB#24	22.49	24.34	34.77	PASS
Band71	10MHz	16QAM	133422	1RB#49	22.36	24.21	34.77	PASS
Band71	10MHz	16QAM	133422	25RB#0	21.13	22.98	34.77	PASS
Band71	10MHz	16QAM	133422	25RB#12	21.18	23.03	34.77	PASS
Band71	10MHz	16QAM	133422	25RB#25	21.2	23.05	34.77	PASS
Band71	10MHz	16QAM	133422	50RB#0	21.22	23.07	34.77	PASS
Band71	15MHz	QPSK	133197	1RB#0	23.48	25.33	34.77	PASS
Band71	15MHz	QPSK	133197	1RB#38	24.15	26.00	34.77	PASS
Band71	15MHz	QPSK	133197	1RB#74	22.48	24.33	34.77	PASS
Band71	15MHz	QPSK	133197	36RB#0	22.29	24.14	34.77	PASS
Band71	15MHz	QPSK	133197	36RB#18	22.53	24.38	34.77	PASS
Band71	15MHz	QPSK	133197	36RB#39	21.9	23.75	34.77	PASS
Band71	15MHz	QPSK	133197	75RB#0	22.31	24.16	34.77	PASS
Band71	15MHz	QPSK	133297	1RB#0	23.46	25.31	34.77	PASS
Band71	15MHz	QPSK	133297	1RB#38	22.86	24.71	34.77	PASS
Band71	15MHz	QPSK	133297	1RB#74	23.16	25.01	34.77	PASS
Band71	15MHz	QPSK	133297	36RB#0	22.37	24.22	34.77	PASS
Band71	15MHz	QPSK	133297	36RB#18	22.11	23.96	34.77	PASS
Band71	15MHz	QPSK	133297	36RB#39	22.18	24.03	34.77	PASS
Band71	15MHz	QPSK	133297	75RB#0	22.14	23.99	34.77	PASS
Band71	15MHz	QPSK	133397	1RB#0	22.9	24.75	34.77	PASS
Band71	15MHz	QPSK	133397	1RB#38	23.86	25.71	34.77	PASS
Band71	15MHz	QPSK	133397	1RB#74	22.57	24.42	34.77	PASS
Band71	15MHz	QPSK	133397	36RB#0	22.36	24.21	34.77	PASS
Band71	15MHz	QPSK	133397	36RB#18	22.13	23.98	34.77	PASS
Band71	15MHz	QPSK	133397	36RB#39	22.12	23.97	34.77	PASS
Band71	15MHz	QPSK	133397	75RB#0	22.19	24.04	34.77	PASS
Band71	15MHz	16QAM	133197	1RB#0	22.62	24.47	34.77	PASS
Band71	15MHz	16QAM	133197	1RB#38	22.51	24.36	34.77	PASS
Band71	15MHz	16QAM	133197	1RB#74	22.39	24.24	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](mailto: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



Band71	15MHz	16QAM	133197	36RB#0	21.42	23.27	34.77	PASS
Band71	15MHz	16QAM	133197	36RB#18	21.29	23.14	34.77	PASS
Band71	15MHz	16QAM	133197	36RB#39	21.27	23.12	34.77	PASS
Band71	15MHz	16QAM	133197	75RB#0	21.13	22.98	34.77	PASS
Band71	15MHz	16QAM	133297	1RB#0	22.77	24.62	34.77	PASS
Band71	15MHz	16QAM	133297	1RB#38	22.39	24.24	34.77	PASS
Band71	15MHz	16QAM	133297	1RB#74	22.47	24.32	34.77	PASS
Band71	15MHz	16QAM	133297	36RB#0	21.31	23.16	34.77	PASS
Band71	15MHz	16QAM	133297	36RB#18	21.07	22.92	34.77	PASS
Band71	15MHz	16QAM	133297	36RB#39	21.21	23.06	34.77	PASS
Band71	15MHz	16QAM	133297	75RB#0	21.09	22.94	34.77	PASS
Band71	15MHz	16QAM	133397	1RB#0	22.61	24.46	34.77	PASS
Band71	15MHz	16QAM	133397	1RB#38	22.47	24.32	34.77	PASS
Band71	15MHz	16QAM	133397	1RB#74	22.48	24.33	34.77	PASS
Band71	15MHz	16QAM	133397	36RB#0	21.23	23.08	34.77	PASS
Band71	15MHz	16QAM	133397	36RB#18	21.17	23.02	34.77	PASS
Band71	15MHz	16QAM	133397	36RB#39	21.16	23.01	34.77	PASS
Band71	15MHz	16QAM	133397	75RB#0	21.21	23.06	34.77	PASS
Band71	20MHz	QPSK	133222	1RB#0	23.41	25.26	34.77	PASS
Band71	20MHz	QPSK	133222	1RB#49	23.85	25.70	34.77	PASS
Band71	20MHz	QPSK	133222	1RB#99	22.17	24.02	34.77	PASS
Band71	20MHz	QPSK	133222	50RB#0	22.59	24.44	34.77	PASS
Band71	20MHz	QPSK	133222	50RB#25	22.27	24.12	34.77	PASS
Band71	20MHz	QPSK	133222	50RB#50	22.15	24.00	34.77	PASS
Band71	20MHz	QPSK	133222	100RB#0	22.34	24.19	34.77	PASS
Band71	20MHz	QPSK	133322	1RB#0	23.59	25.44	34.77	PASS
Band71	20MHz	QPSK	133322	1RB#49	22.99	24.84	34.77	PASS
Band71	20MHz	QPSK	133322	1RB#99	22.92	24.77	34.77	PASS
Band71	20MHz	QPSK	133322	50RB#0	22.28	24.13	34.77	PASS
Band71	20MHz	QPSK	133322	50RB#25	22.15	24.00	34.77	PASS
Band71	20MHz	QPSK	133322	50RB#50	22.14	23.99	34.77	PASS
Band71	20MHz	QPSK	133322	100RB#0	22.21	24.06	34.77	PASS
Band71	20MHz	QPSK	133372	1RB#0	23.31	25.16	34.77	PASS
Band71	20MHz	QPSK	133372	1RB#49	23.87	25.72	34.77	PASS
Band71	20MHz	QPSK	133372	1RB#99	22.36	24.21	34.77	PASS
Band71	20MHz	QPSK	133372	50RB#0	22.18	24.03	34.77	PASS
Band71	20MHz	QPSK	133372	50RB#25	22.27	24.12	34.77	PASS
Band71	20MHz	QPSK	133372	50RB#50	22.13	23.98	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](mailto: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



Band71	20MHz	QPSK	133372	100RB#0	22.15	24.00	34.77	PASS
Band71	20MHz	16QAM	133222	1RB#0	22.78	24.63	34.77	PASS
Band71	20MHz	16QAM	133222	1RB#49	22.52	24.37	34.77	PASS
Band71	20MHz	16QAM	133222	1RB#99	22.52	24.37	34.77	PASS
Band71	20MHz	16QAM	133222	50RB#0	21.22	23.07	34.77	PASS
Band71	20MHz	16QAM	133222	50RB#25	21.15	23.00	34.77	PASS
Band71	20MHz	16QAM	133222	50RB#50	21.09	22.94	34.77	PASS
Band71	20MHz	16QAM	133222	100RB#0	21.37	23.22	34.77	PASS
Band71	20MHz	16QAM	133322	1RB#0	22.83	24.68	34.77	PASS
Band71	20MHz	16QAM	133322	1RB#49	22.35	24.20	34.77	PASS
Band71	20MHz	16QAM	133322	1RB#99	22.41	24.26	34.77	PASS
Band71	20MHz	16QAM	133322	50RB#0	21.24	23.09	34.77	PASS
Band71	20MHz	16QAM	133322	50RB#25	21.09	22.94	34.77	PASS
Band71	20MHz	16QAM	133322	50RB#50	21.17	23.02	34.77	PASS
Band71	20MHz	16QAM	133322	100RB#0	21.21	23.06	34.77	PASS
Band71	20MHz	16QAM	133372	1RB#0	22.89	24.74	34.77	PASS
Band71	20MHz	16QAM	133372	1RB#49	22.44	24.29	34.77	PASS
Band71	20MHz	16QAM	133372	1RB#99	22.54	24.39	34.77	PASS
Band71	20MHz	16QAM	133372	50RB#0	21.14	22.99	34.77	PASS
Band71	20MHz	16QAM	133372	50RB#25	21.18	23.03	34.77	PASS
Band71	20MHz	16QAM	133372	50RB#50	21.16	23.01	34.77	PASS
Band71	20MHz	16QAM	133372	100RB#0	21.27	23.12	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 [dBi]

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



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](mailto:CN.Doccheck@sgs.com)

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

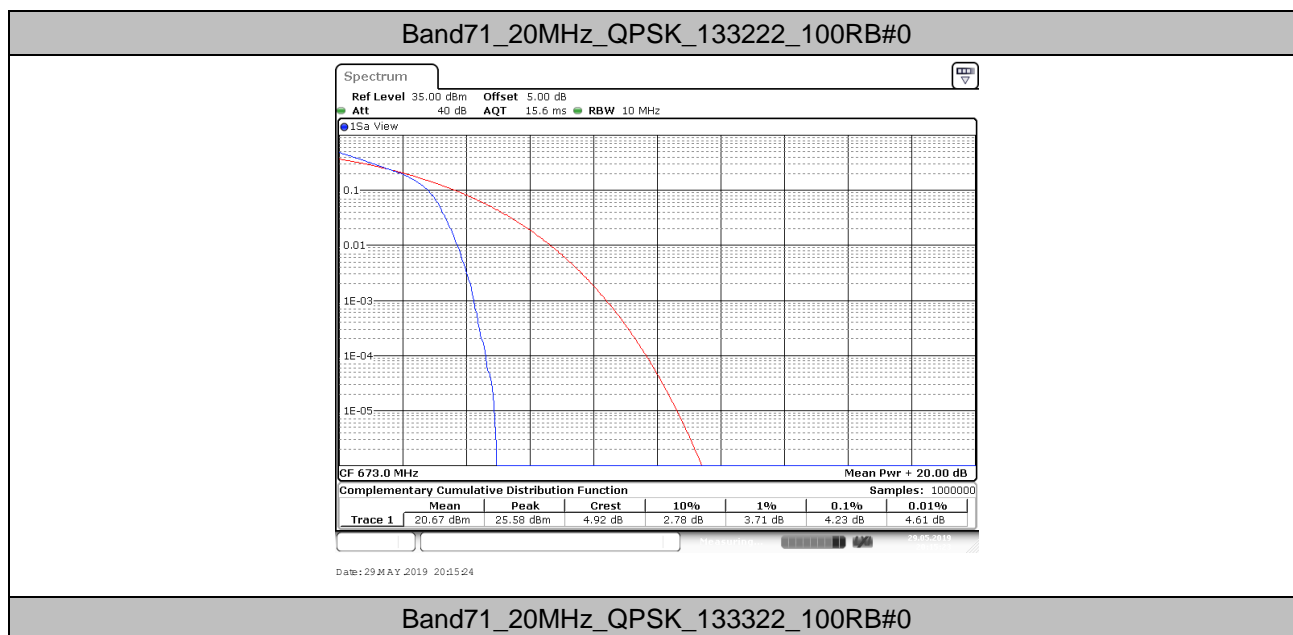
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

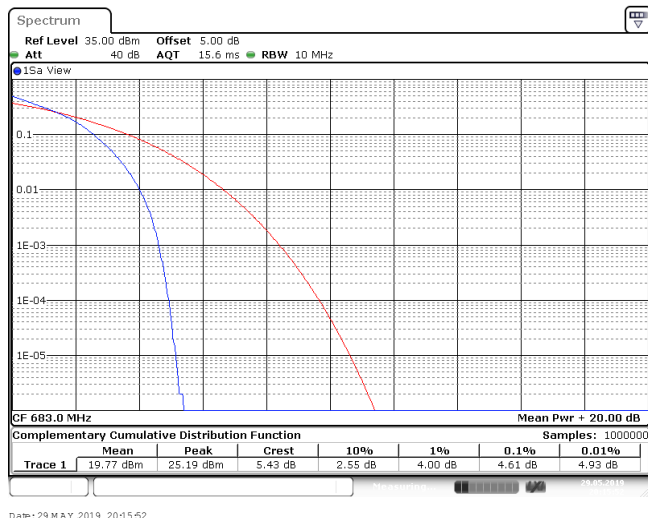
## 2. Peak-to-Average Ratio(CCDF)

### 2.1. Test Result

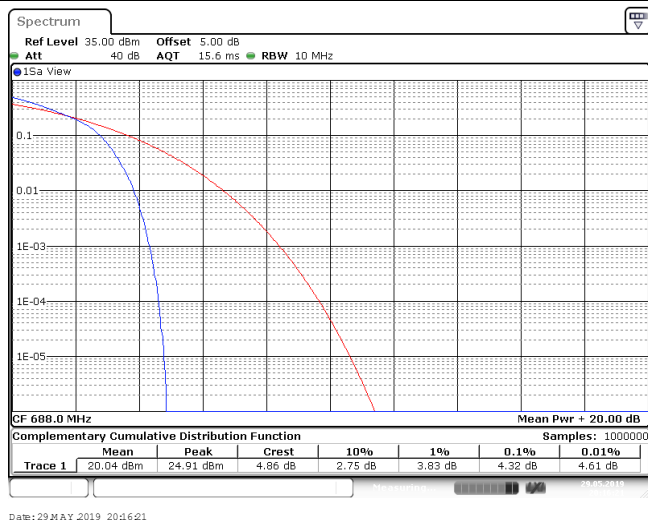
BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band71	20MHz	QPSK	133222	100RB#0	4.23	13	PASS
Band71	20MHz	QPSK	133322	100RB#0	4.61	13	PASS
Band71	20MHz	QPSK	133372	100RB#0	4.32	13	PASS
Band71	20MHz	16QAM	133222	100RB#0	5.97	13	PASS
Band71	20MHz	16QAM	133322	100RB#0	6.06	13	PASS
Band71	20MHz	16QAM	133372	100RB#0	6.00	13	PASS

### 2.2. Test Plots



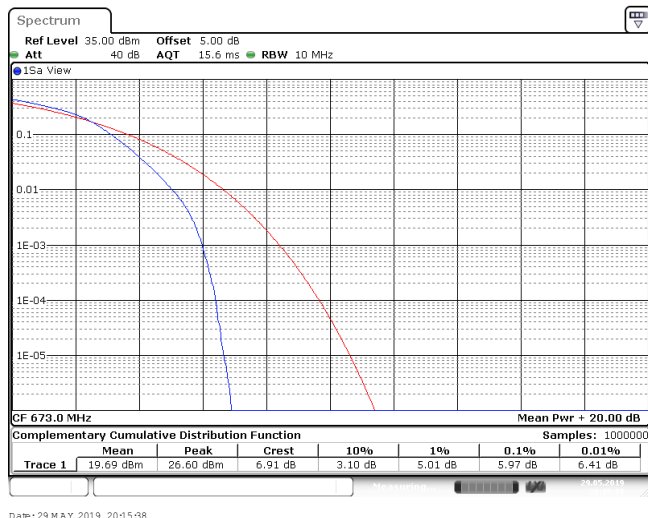


Band71\_20MHz\_QPSK\_133372\_100RB#0



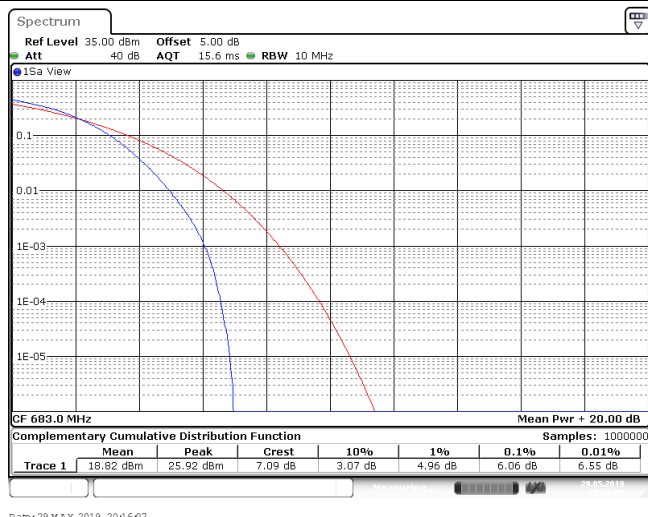
Band71\_20MHz\_16QAM\_133222\_100RB#0





Date: 29 MAY 2019 20:15:38

## Band71\_20MHz\_16QAM\_133322\_100RB#0



Date: 29 MAY 2019 20:16:07

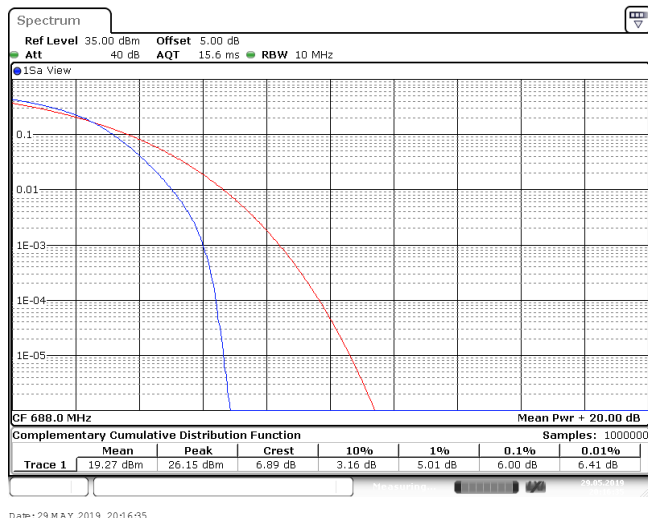
## Band71\_20MHz\_16QAM\_133372\_100RB#0



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](mailto: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



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.

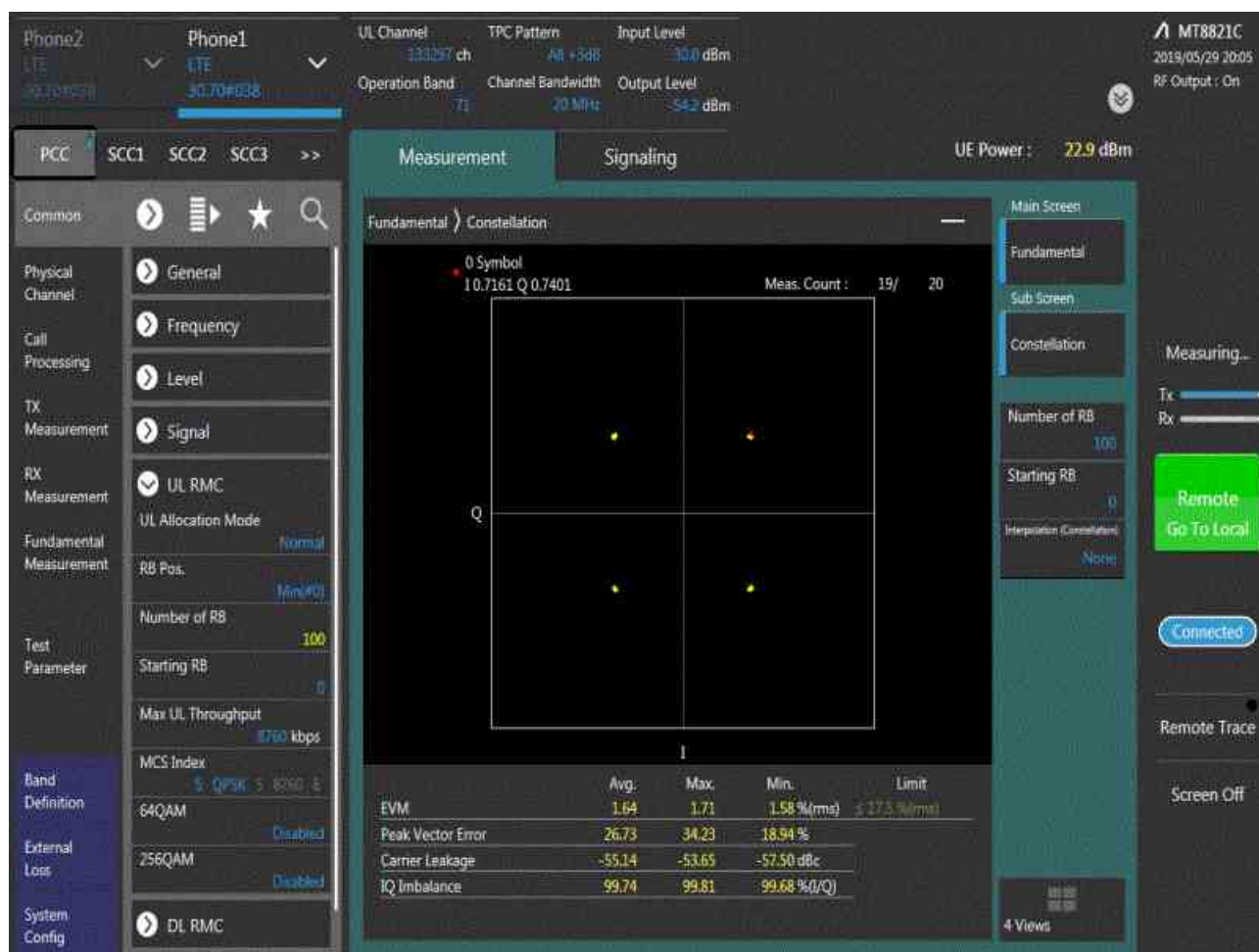
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

### 3. Modulation Characteristics

#### 3.1. Test BAND = LTE Band 71

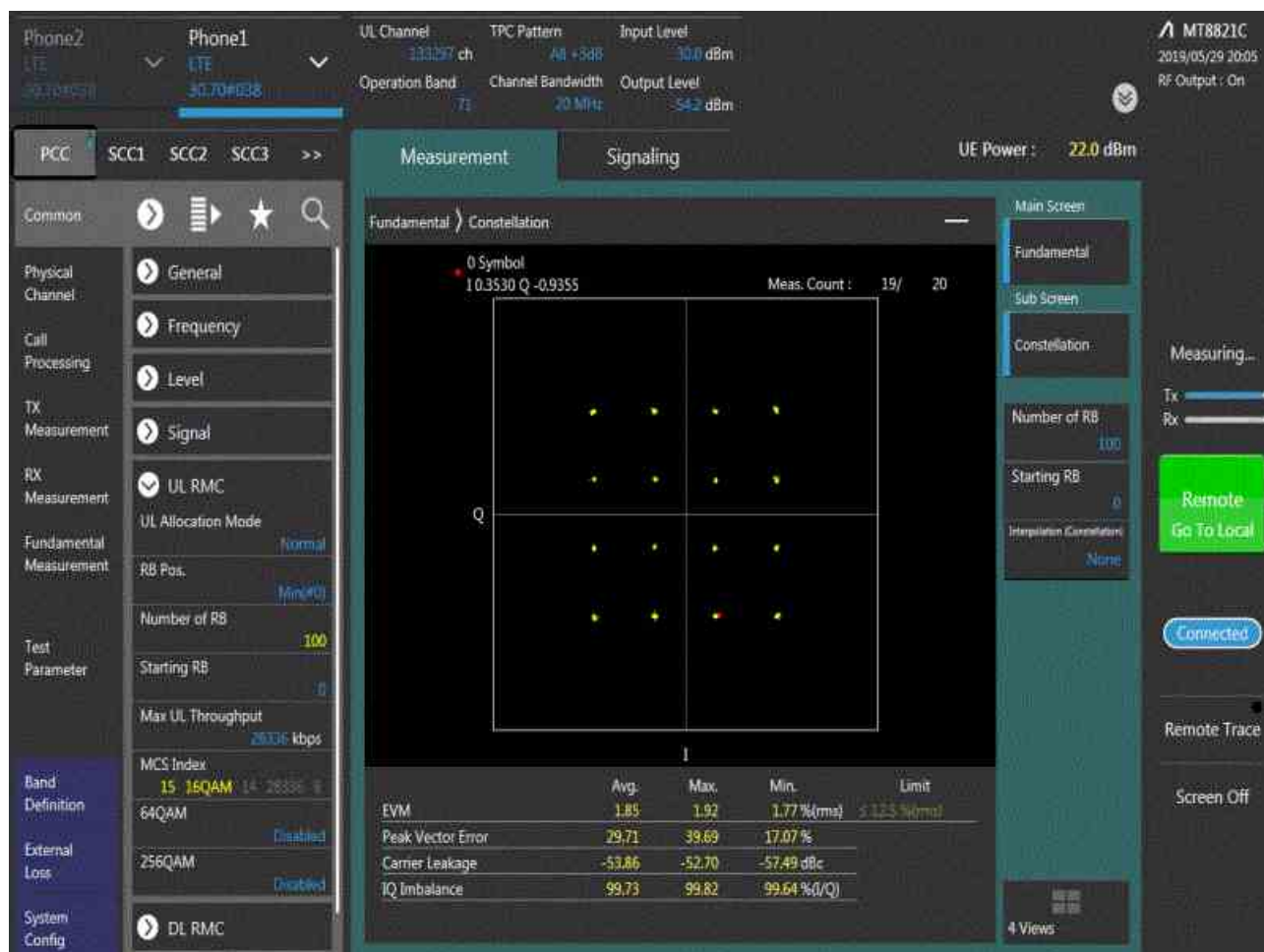
#### 3.2. Test Mode = LTE /TM1 20MHz

##### 3.2.1. Test Channel = MCH



### 3.3. Test Mode = LTE /TM2 20MHz

#### 3.3.1. Test Channel = MCH





## 4. 26dB Bandwidth and Occupied Bandwidth

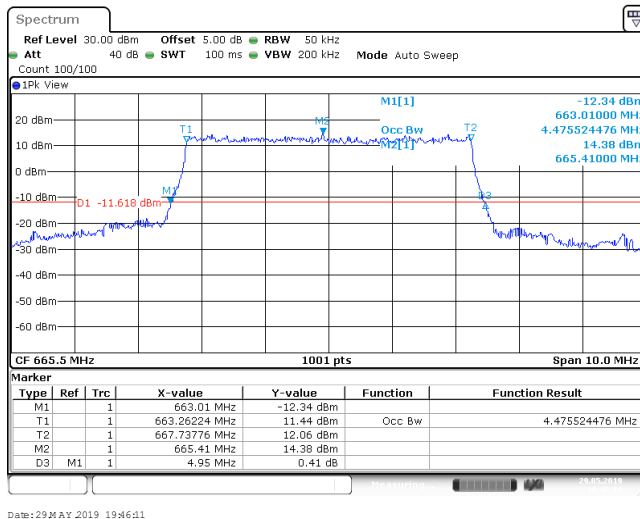
### 4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band71	5MHz	QPSK	133147	25RB#0	4.476	4.950	PASS
Band71	5MHz	QPSK	133297	25RB#0	4.476	4.940	PASS
Band71	5MHz	QPSK	133447	25RB#0	4.476	4.910	PASS
Band71	5MHz	16QAM	133147	25RB#0	4.486	4.970	PASS
Band71	5MHz	16QAM	133297	25RB#0	4.486	4.950	PASS
Band71	5MHz	16QAM	133447	25RB#0	4.486	4.940	PASS
Band71	10MHz	QPSK	133172	50RB#0	8.951	9.760	PASS
Band71	10MHz	QPSK	133297	50RB#0	8.931	9.720	PASS
Band71	10MHz	QPSK	133422	50RB#0	8.891	9.720	PASS
Band71	10MHz	16QAM	133172	50RB#0	8.951	9.780	PASS
Band71	10MHz	16QAM	133297	50RB#0	8.931	9.700	PASS
Band71	10MHz	16QAM	133422	50RB#0	8.911	9.640	PASS
Band71	15MHz	QPSK	133197	75RB#0	13.457	14.790	PASS
Band71	15MHz	QPSK	133297	75RB#0	13.487	14.760	PASS
Band71	15MHz	QPSK	133397	75RB#0	13.427	14.700	PASS
Band71	15MHz	16QAM	133197	75RB#0	13.457	14.730	PASS
Band71	15MHz	16QAM	133297	75RB#0	13.487	14.790	PASS
Band71	15MHz	16QAM	133397	75RB#0	13.397	14.670	PASS
Band71	20MHz	QPSK	133222	100RB#0	17.862	19.440	PASS
Band71	20MHz	QPSK	133322	100RB#0	17.942	19.560	PASS
Band71	20MHz	QPSK	133372	100RB#0	17.862	19.480	PASS
Band71	20MHz	16QAM	133222	100RB#0	17.822	19.320	PASS
Band71	20MHz	16QAM	133322	100RB#0	17.942	19.440	PASS
Band71	20MHz	16QAM	133372	100RB#0	17.862	19.400	PASS

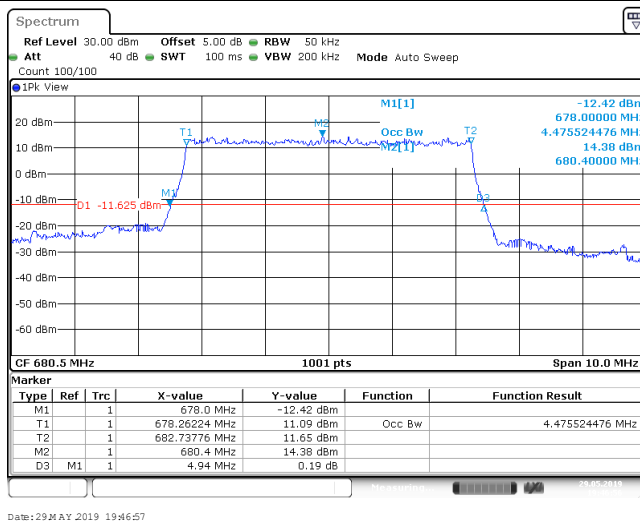


## 4.2. Test Plots

Band71\_5MHz\_QPSK\_133147\_25RB#0

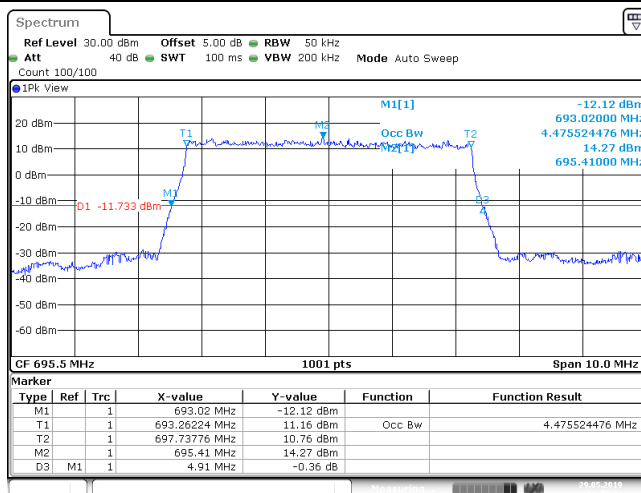


Band71\_5MHz\_QPSK\_133297\_25RB#0



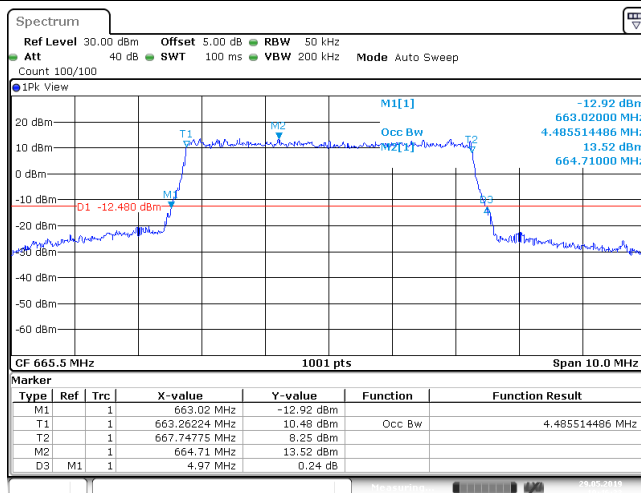
Band71\_5MHz\_QPSK\_133447\_25RB#0





Date: 29 MAY 2019 19:47:42

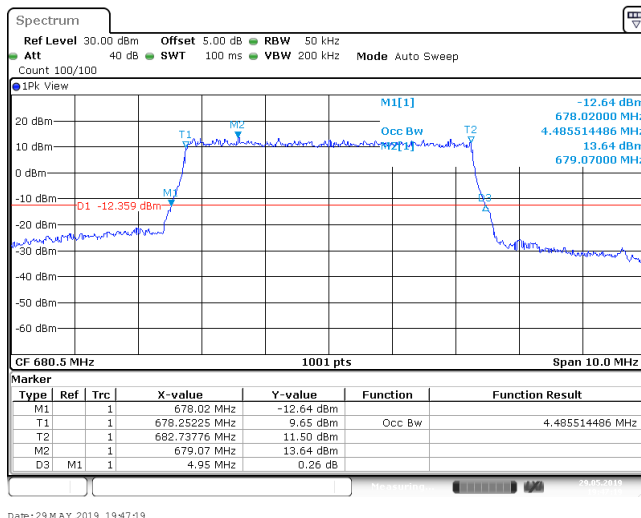
## Band71\_5MHz\_16QAM\_133147\_25RB#0



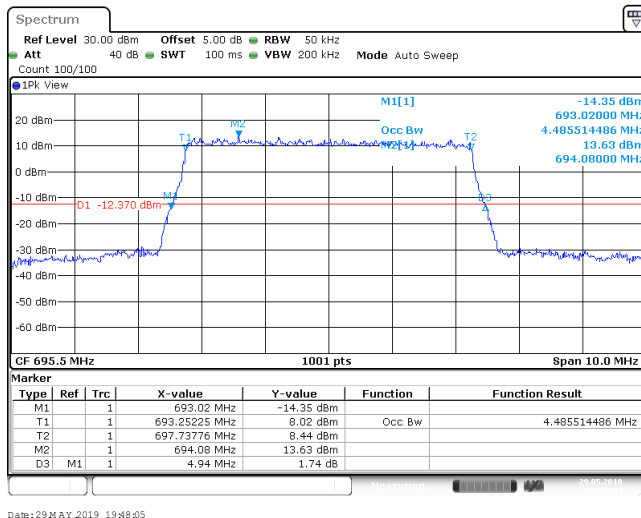
Date: 29 MAY 2019 19:46:34

## Band71\_5MHz\_16QAM\_133297\_25RB#0



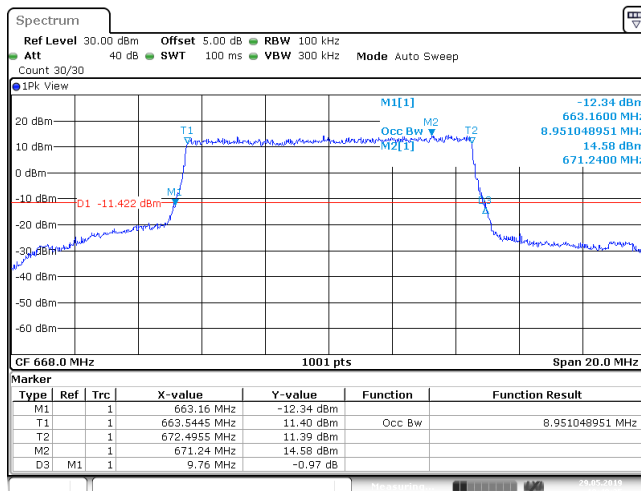


## Band71\_5MHz\_16QAM\_133447\_25RB#0



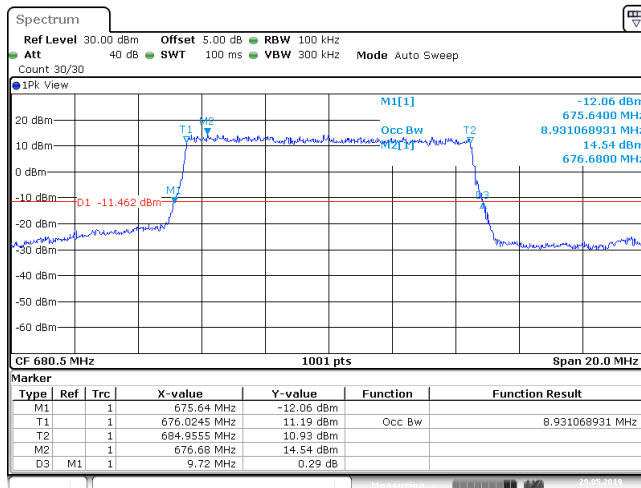
## Band71\_10MHz\_QPSK\_133172\_50RB#0





Date: 29 MAY 2019 19:48:25

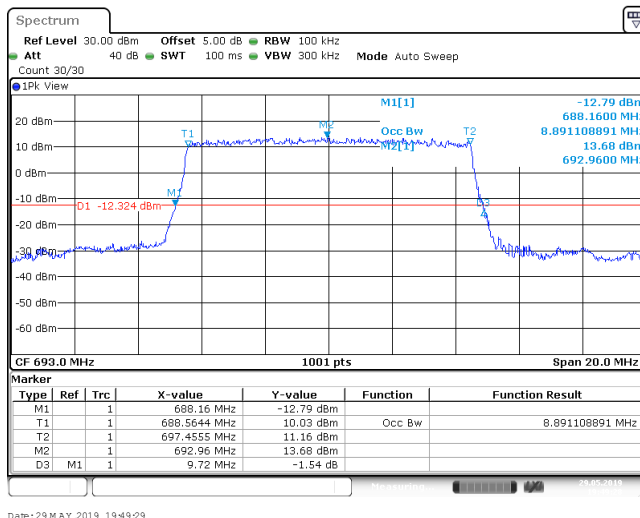
## Band71\_10MHz\_QPSK\_133297\_50RB#0



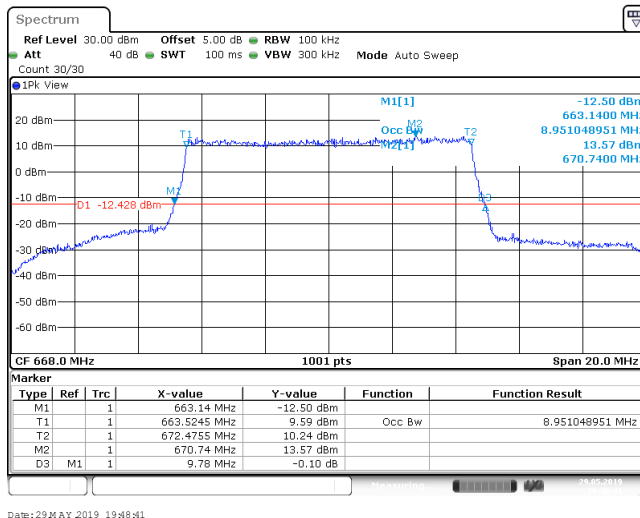
Date: 29 MAY 2019 19:48:57

## Band71\_10MHz\_QPSK\_133422\_50RB#0



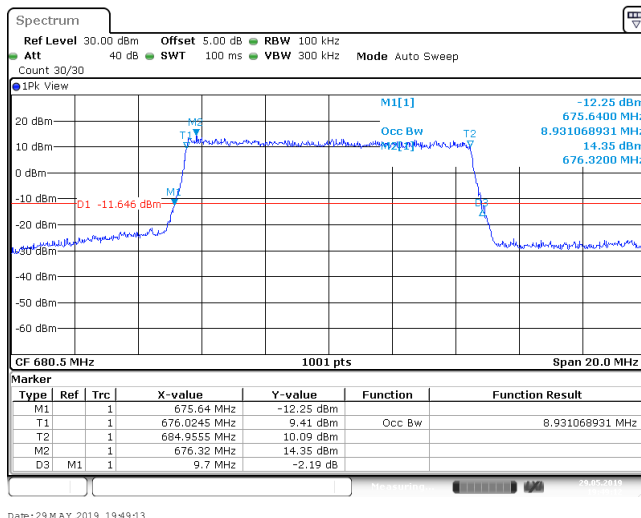


## Band71\_10MHz\_16QAM\_133172\_50RB#0

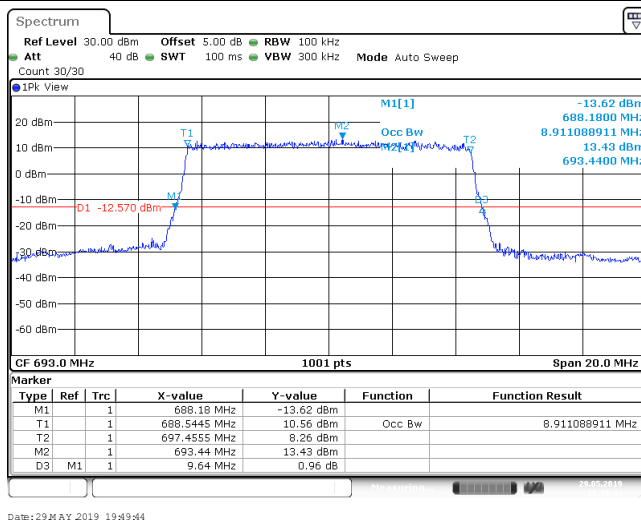


## Band71\_10MHz\_16QAM\_133297\_50RB#0



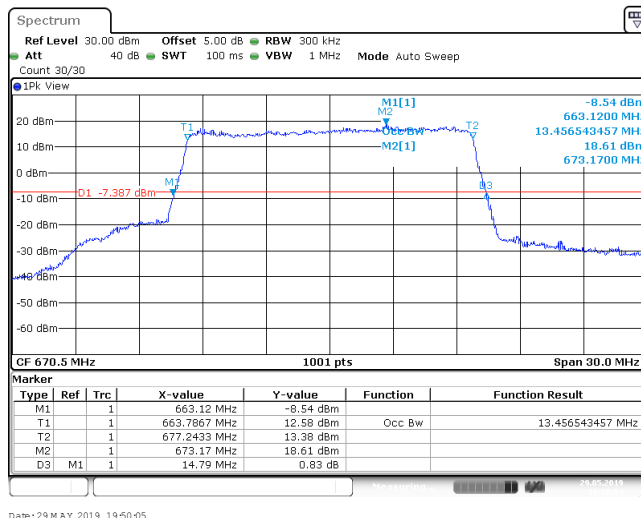


## Band71\_10MHz\_16QAM\_133422\_50RB#0

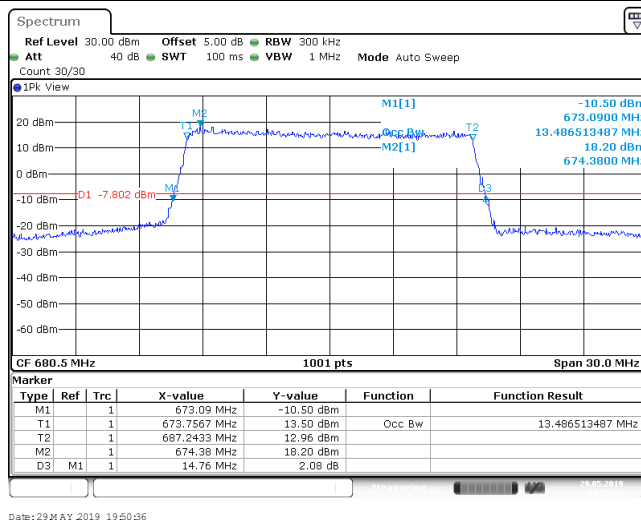


## Band71\_15MHz\_QPSK\_133197\_75RB#0



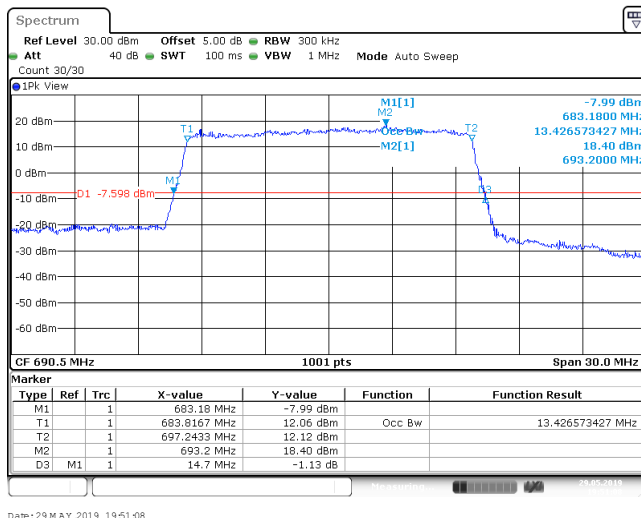


## Band71\_15MHz\_QPSK\_133297\_75RB#0

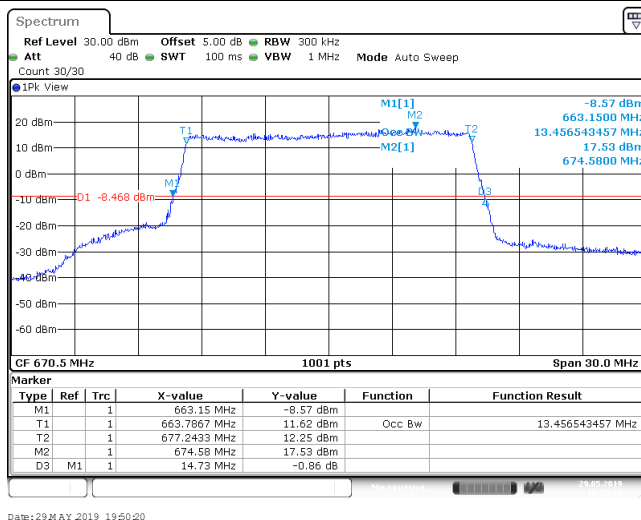


## Band71\_15MHz\_QPSK\_133397\_75RB#0



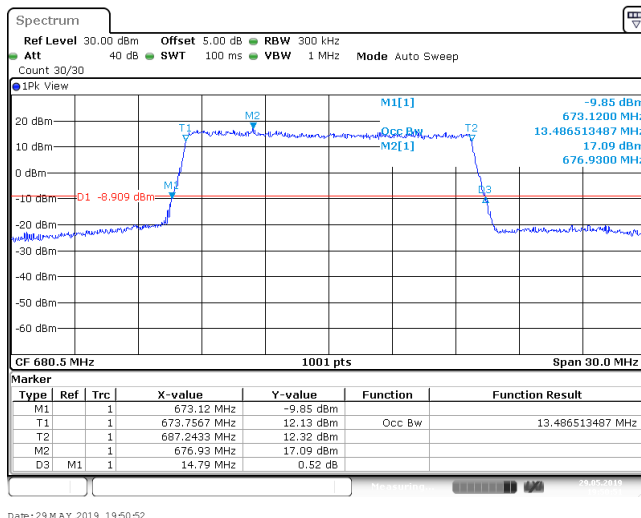


## Band71\_15MHz\_16QAM\_133197\_75RB#0

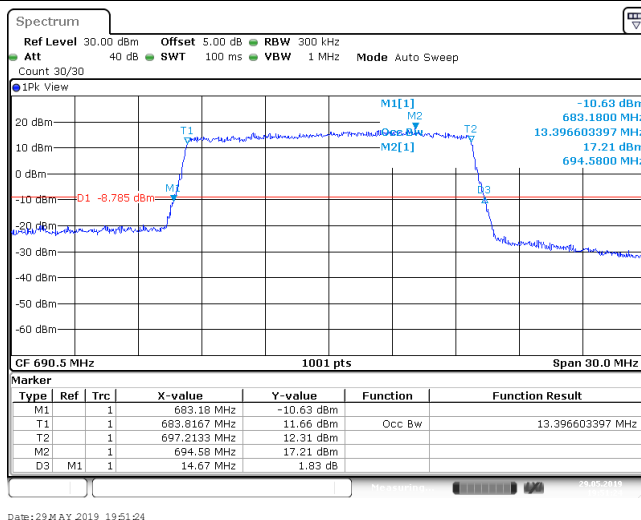


## Band71\_15MHz\_16QAM\_133297\_75RB#0



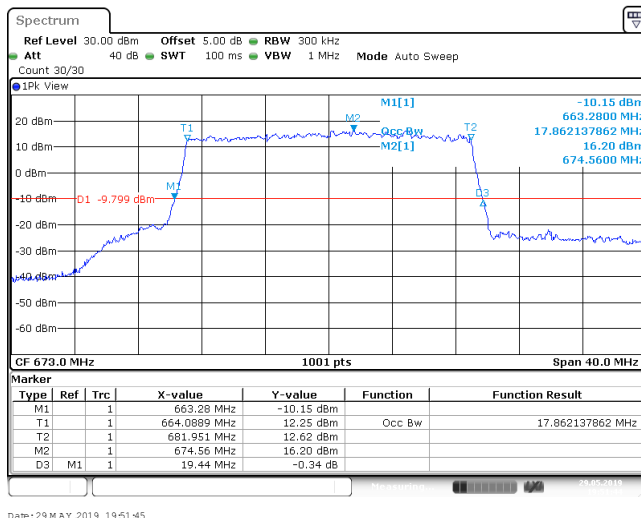


## Band71\_15MHz\_16QAM\_133397\_75RB#0

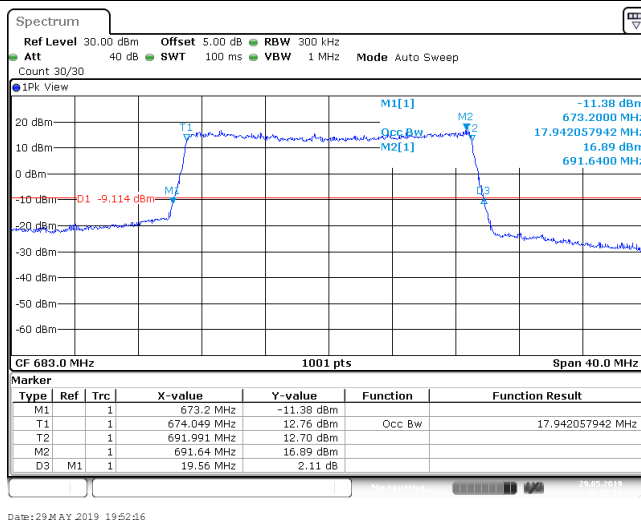


## Band71\_20MHz\_QPSK\_133222\_100RB#0



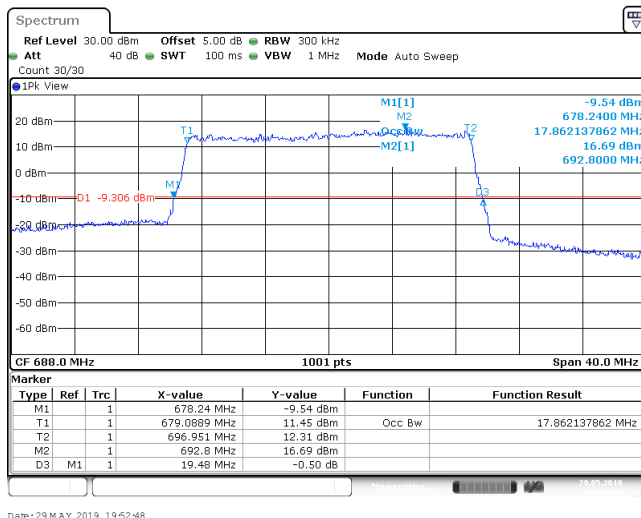


## Band71\_20MHz\_QPSK\_133322\_100RB#0



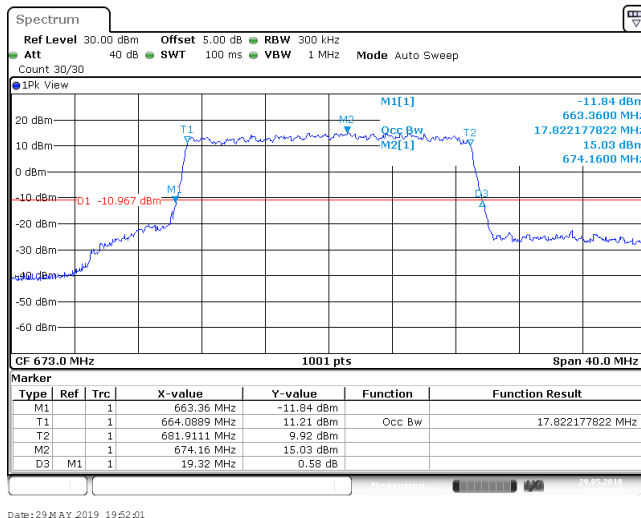
## Band71\_20MHz\_QPSK\_133372\_100RB#0





Date: 29 MAY 2019 19:52:48

## Band71\_20MHz\_16QAM\_133222\_100RB#0



Date: 29 MAY 2019 19:52:01

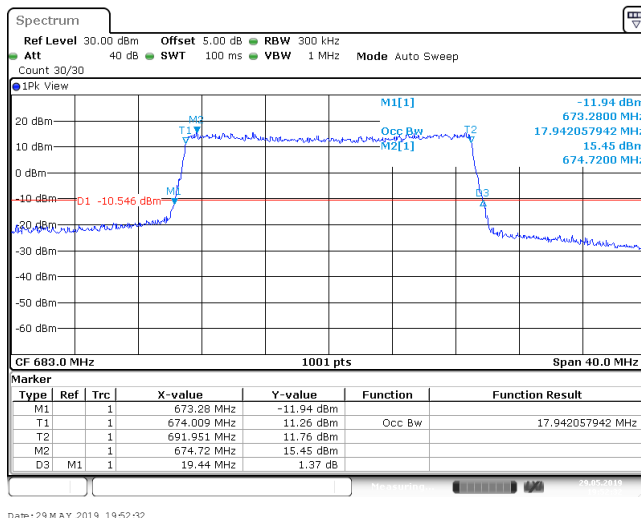
## Band71\_20MHz\_16QAM\_133322\_100RB#0



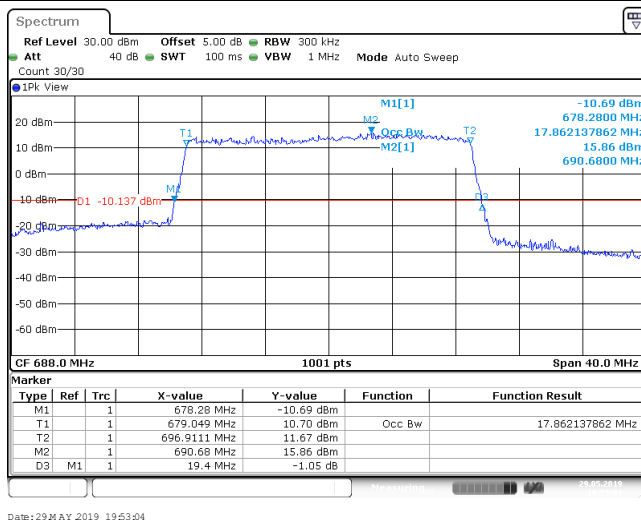
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (CCC Laboratory)

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](mailto: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



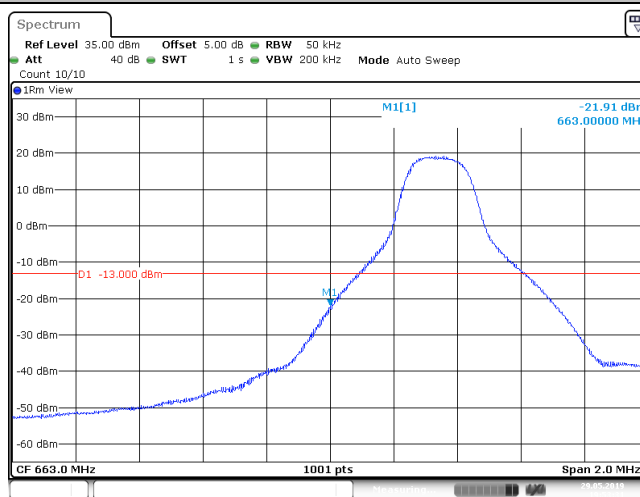
## Band71\_20MHz\_16QAM\_133372\_100RB#0



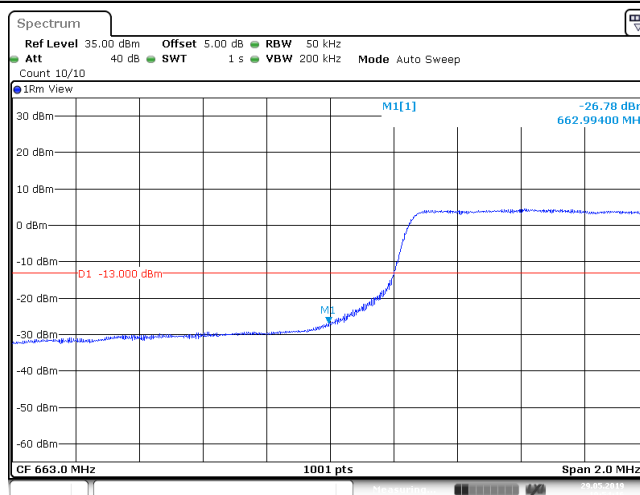
## 5. Band Edge Compliance

### 5.1. Test Plots

Band71\_5MHz\_QPSK\_133147\_1RB#0

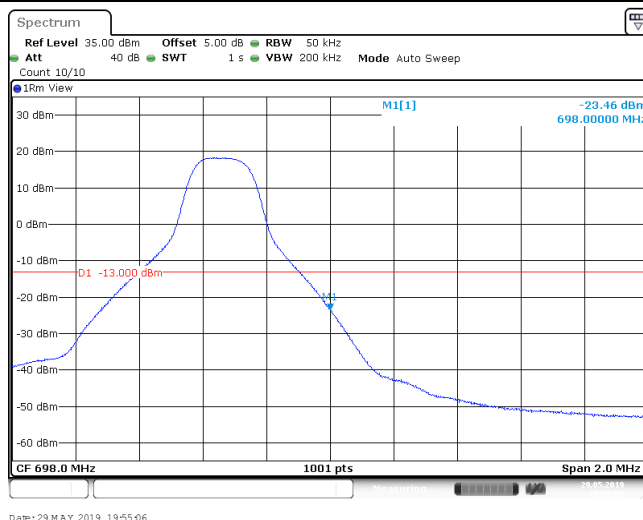


Band71\_5MHz\_QPSK\_133147\_25RB#0

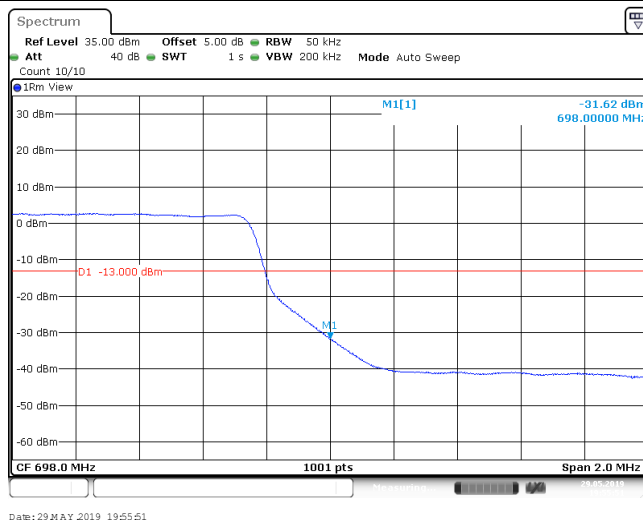


Band71\_5MHz\_QPSK\_133447\_1RB#24



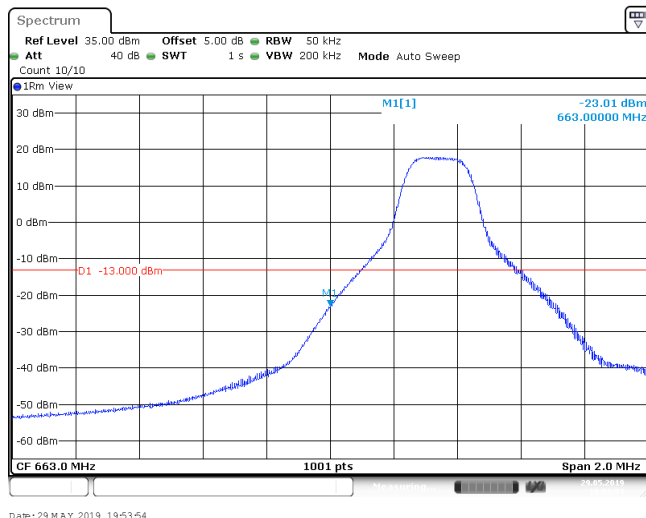


Band71\_5MHz\_QPSK\_133447\_25RB#0

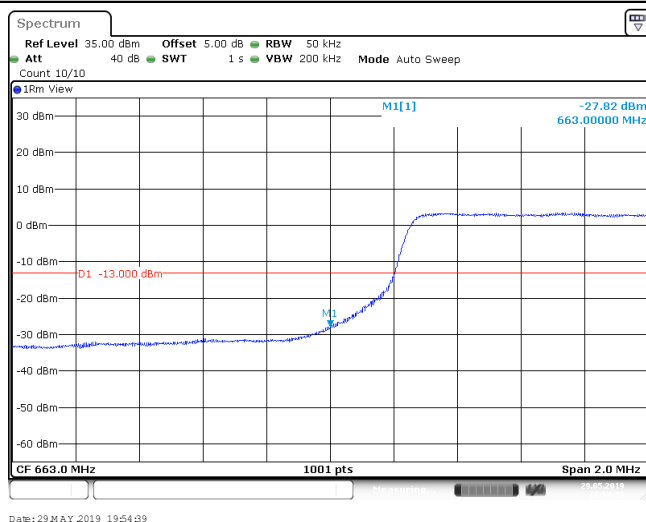


Band71\_5MHz\_16QAM\_133147\_1RB#0



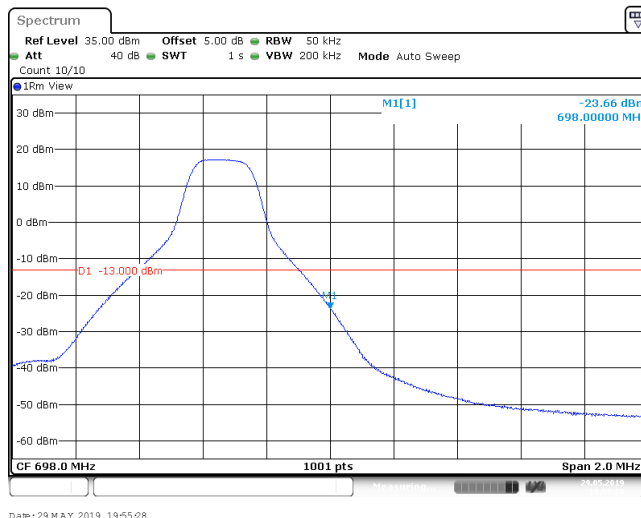


Band71\_5MHz\_16QAM\_133147\_25RB#0

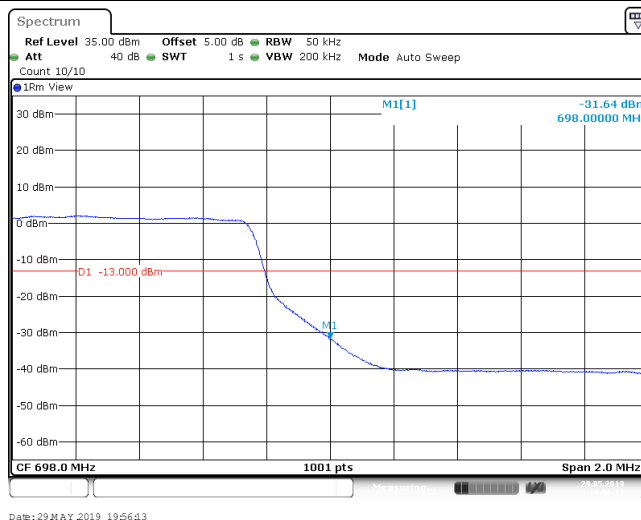


Band71\_5MHz\_16QAM\_133447\_1RB#24





Band71\_5MHz\_16QAM\_133447\_25RB#0

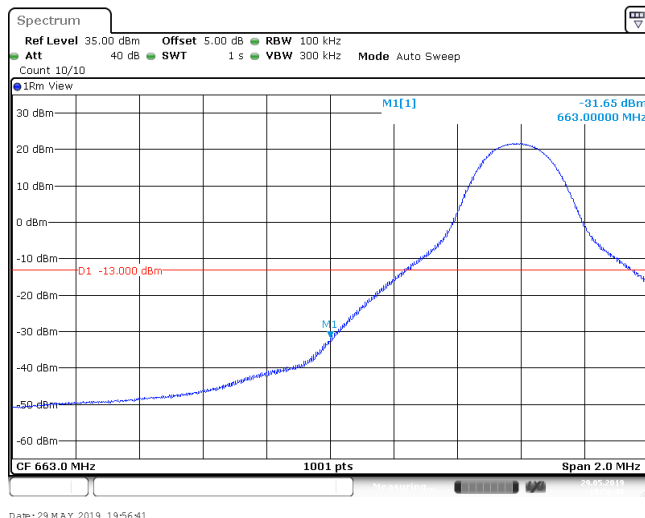


Band71\_10MHz\_QPSK\_133172\_1RB#0

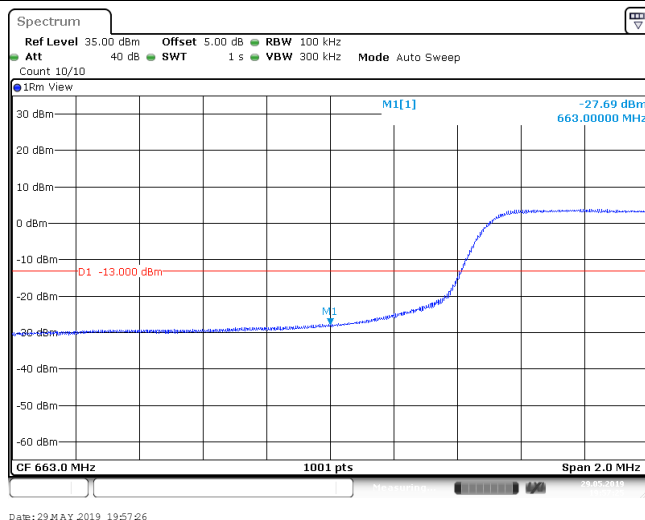


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

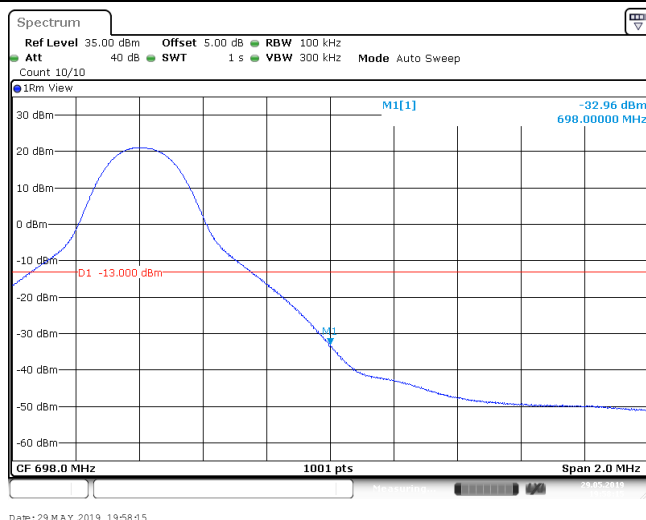


Band71\_10MHz\_QPSK\_133172\_50RB#0

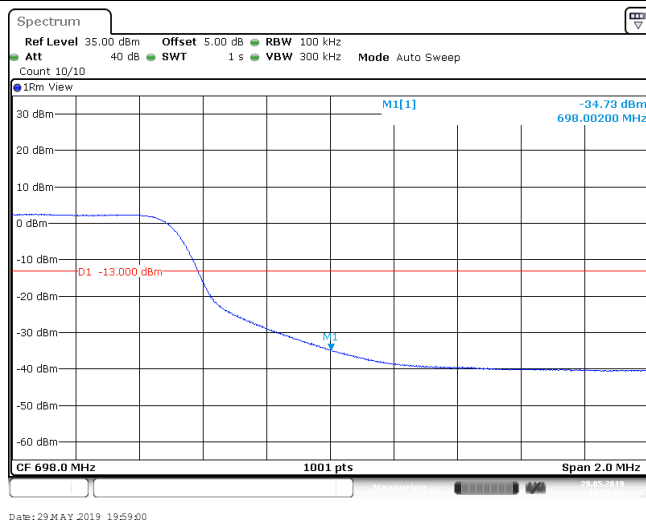


Band71\_10MHz\_QPSK\_133422\_1RB#49



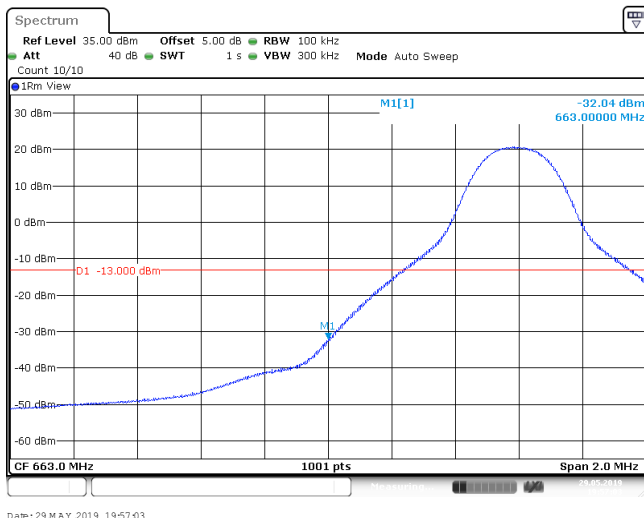


Band71\_10MHz\_QPSK\_133422\_50RB#0

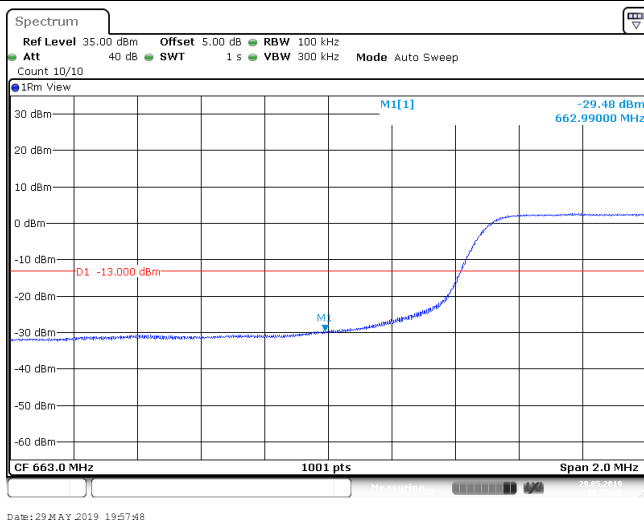


Band71\_10MHz\_16QAM\_133172\_1RB#0





**Band71\_10MHz\_16QAM\_133172\_50RB#0**



**Band71\_10MHz\_16QAM\_133422\_1RB#49**

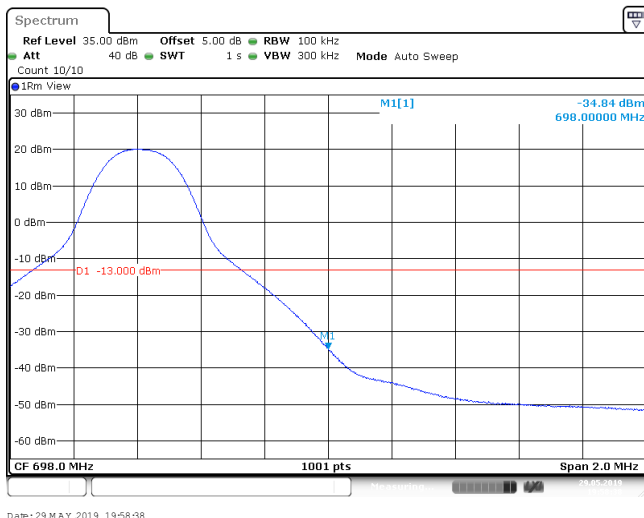


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

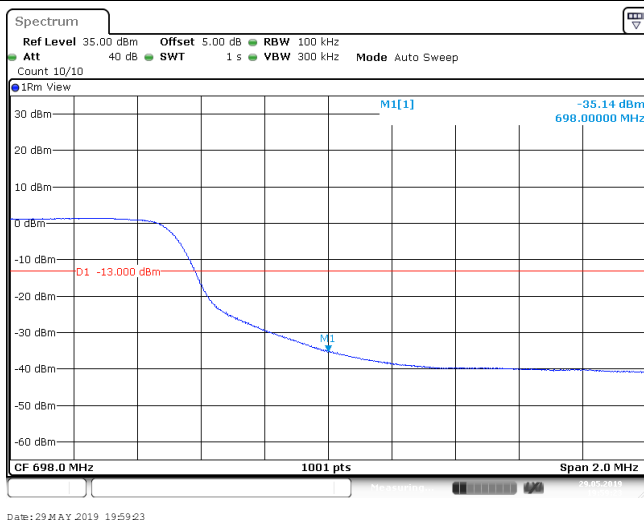
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

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



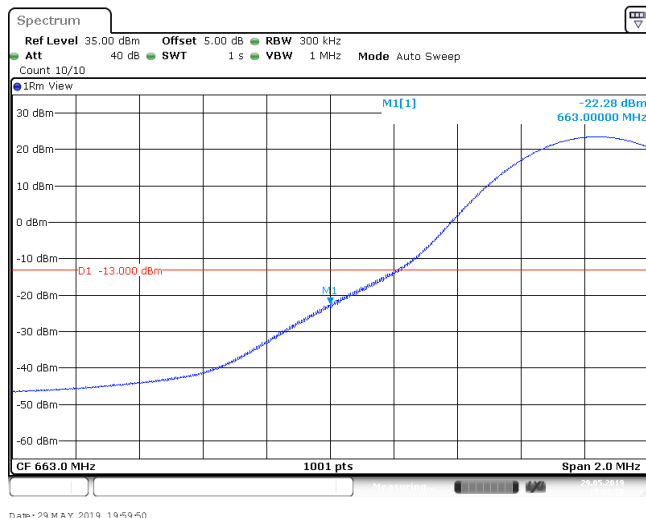
Band71\_10MHz\_16QAM\_133422\_50RB#0



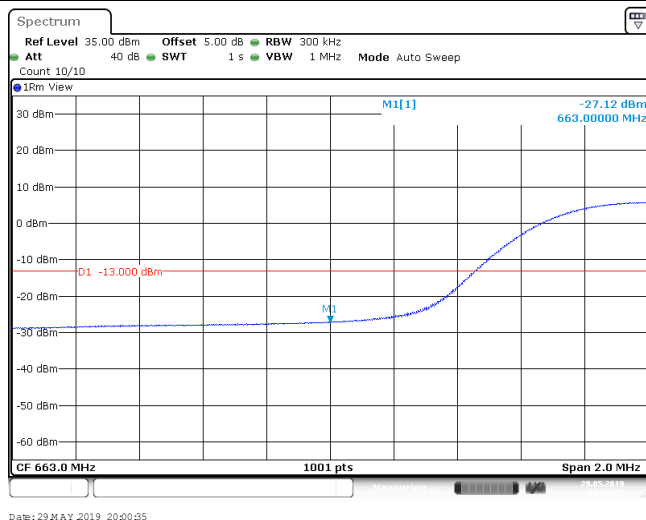
Band71\_15MHz\_QPSK\_133197\_1RB#0



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](mailto:CN.Doccheck@sgs.com)



**Band71\_15MHz\_QPSK\_133197\_75RB#0**

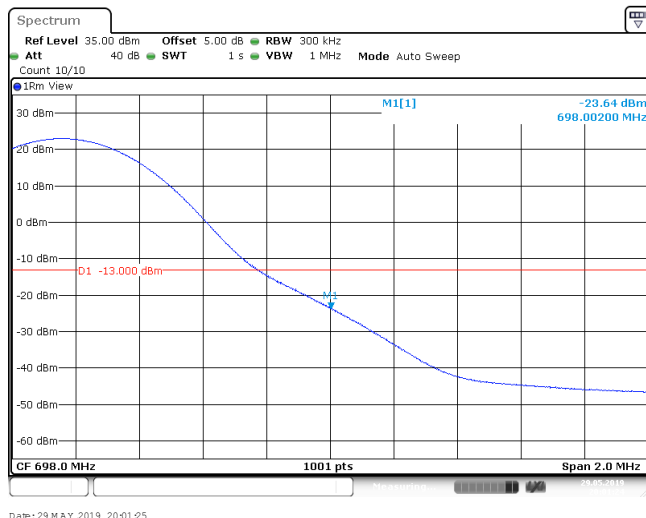


**Band71\_15MHz\_QPSK\_133397\_1RB#74**

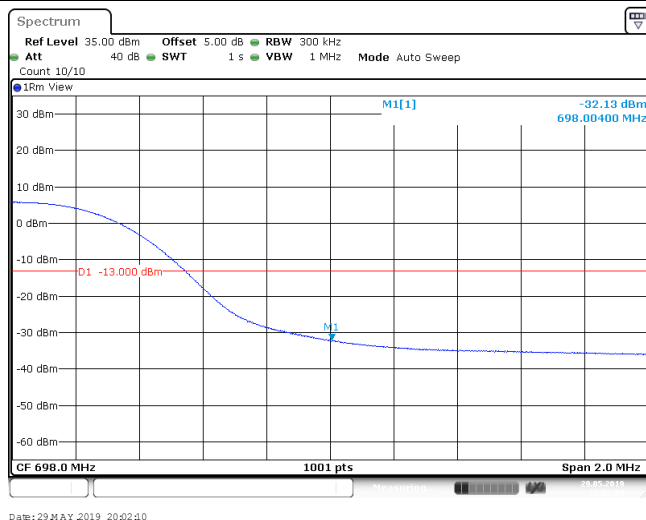


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



Band71\_15MHz\_QPSK\_133397\_75RB#0

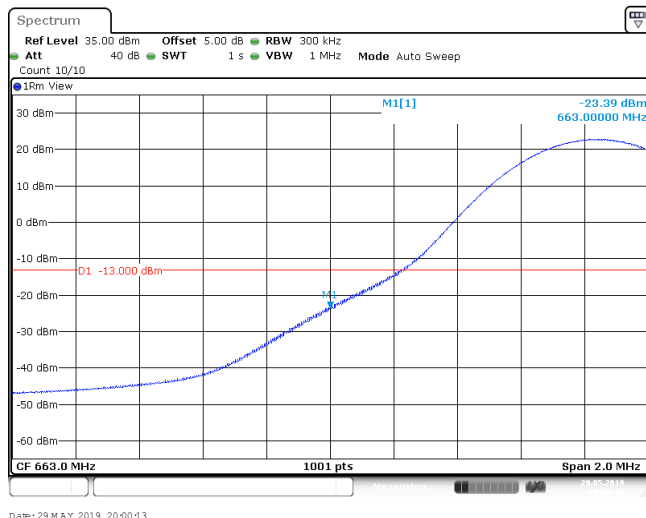


Band71\_15MHz\_16QAM\_133197\_1RB#0

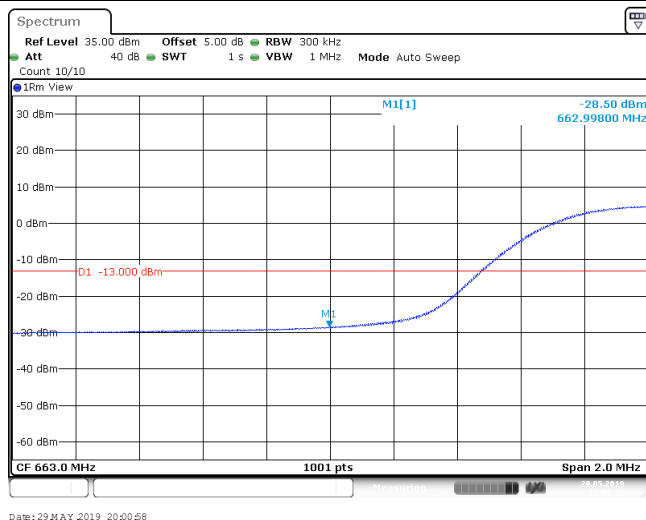


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



Band71\_15MHz\_16QAM\_133197\_75RB#0

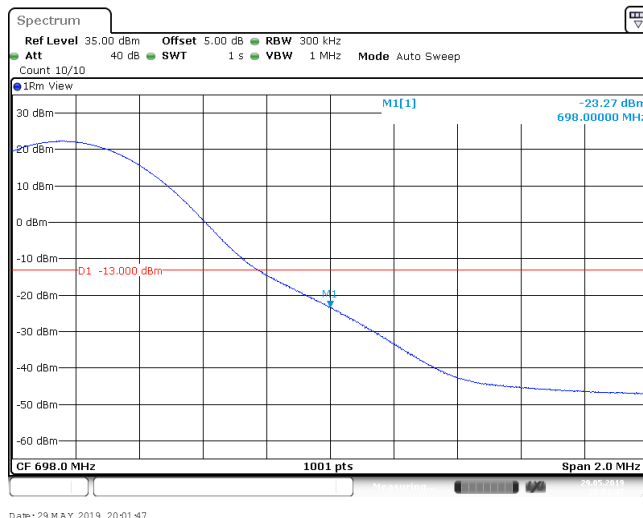


Band71\_15MHz\_16QAM\_133397\_1RB#74

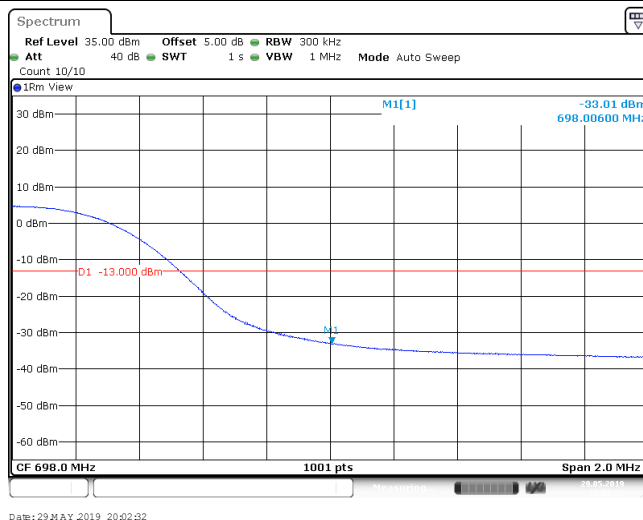


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

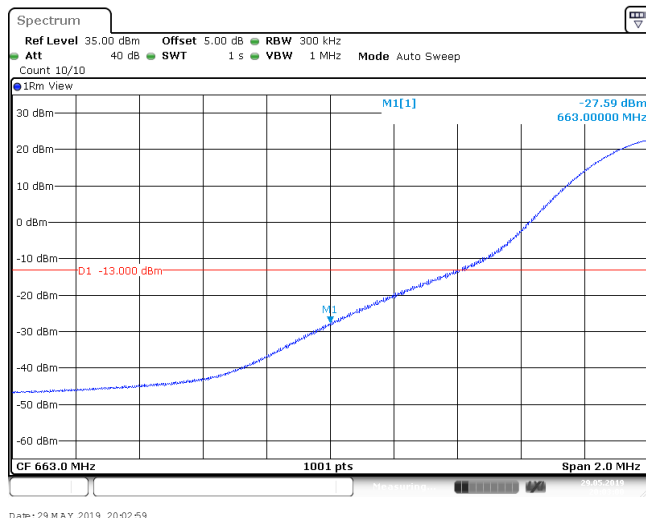


Band71\_15MHz\_16QAM\_133397\_75RB#0

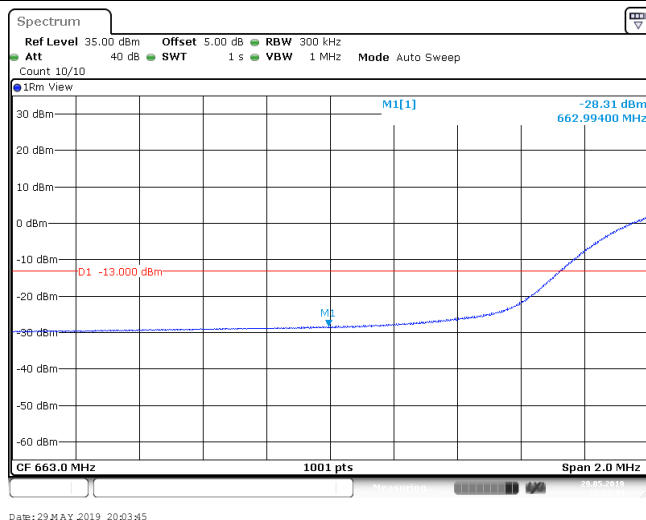


Band71\_20MHz\_QPSK\_133222\_1RB#0





Band71\_20MHz\_QPSK\_133222\_100RB#0



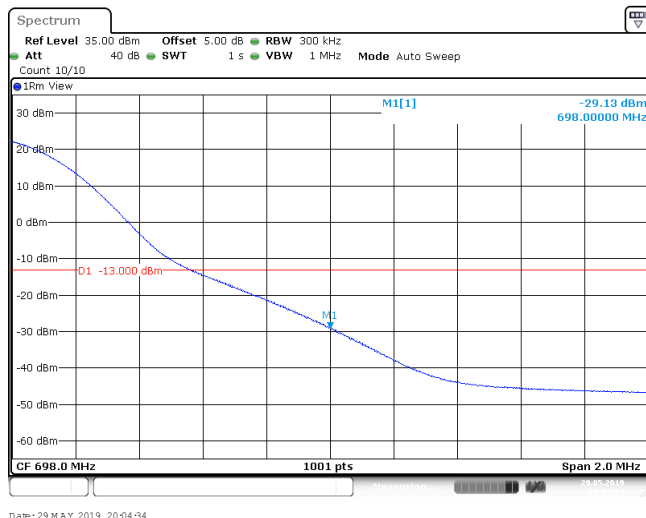
Band71\_20MHz\_QPSK\_133372\_1RB#99



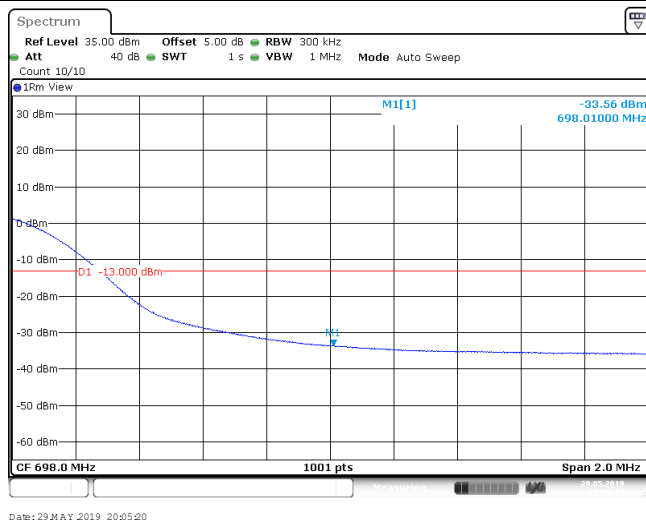
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

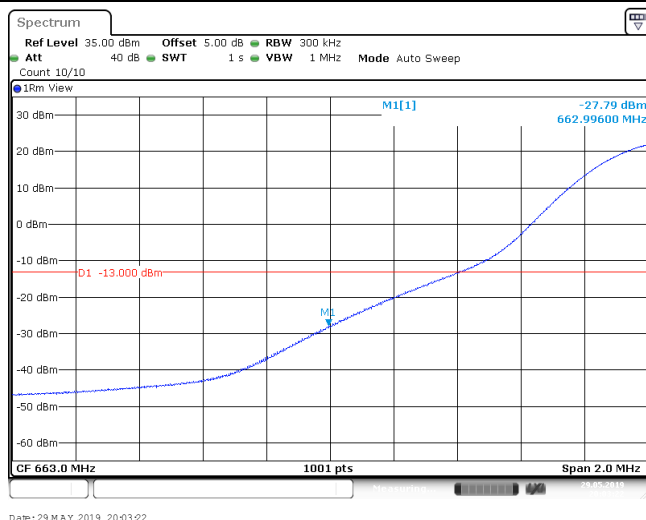


Band71\_20MHz\_QPSK\_133372\_100RB#0

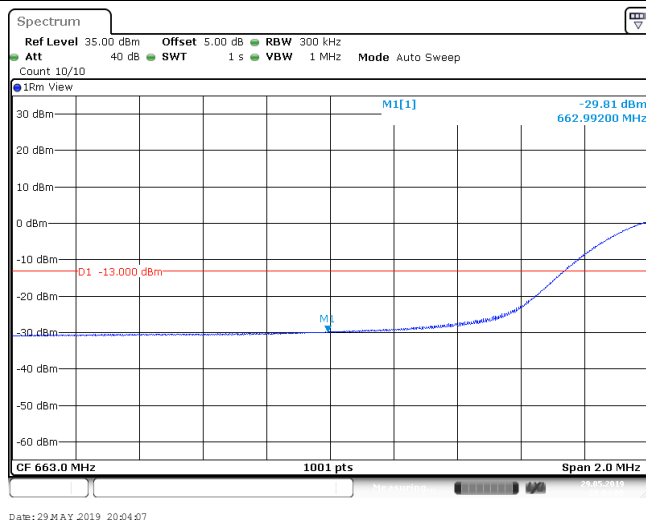


Band71\_20MHz\_16QAM\_133222\_1RB#0



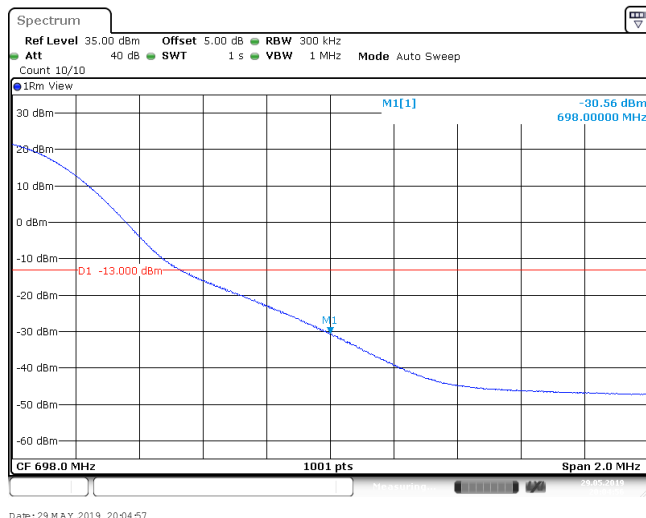


Band71\_20MHz\_16QAM\_133222\_100RB#0

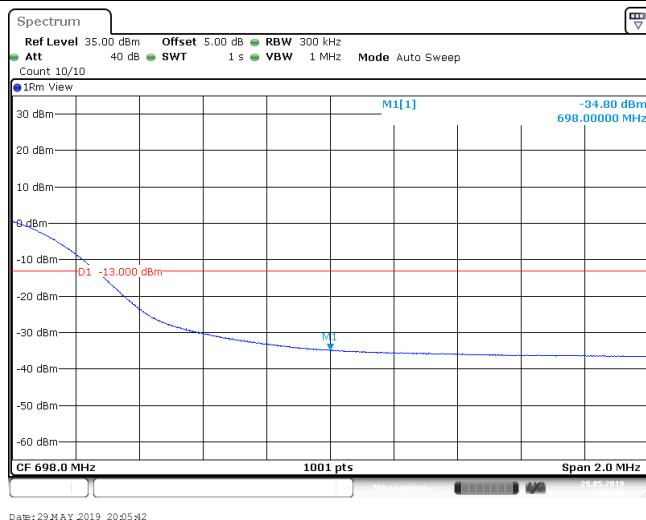


Band71\_20MHz\_16QAM\_133372\_1RB#99





**Band71\_20MHz\_16QAM\_133372\_100RB#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](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (2019) 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

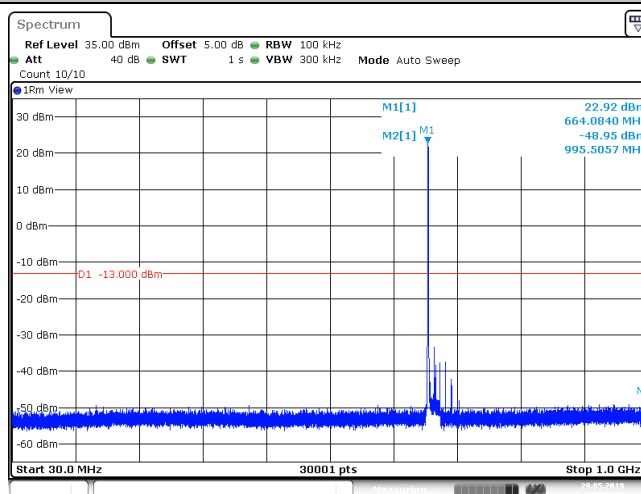
## 6. Spurious Emission at Antenna Terminal

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.

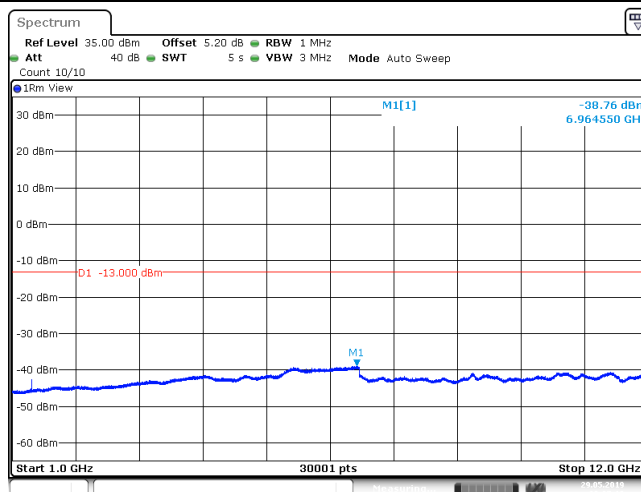
### 6.1. Test Plots

Band71\_20MHz\_QPSK\_133222\_1RB#0



Date: 29 MAY 2019 20:06:09

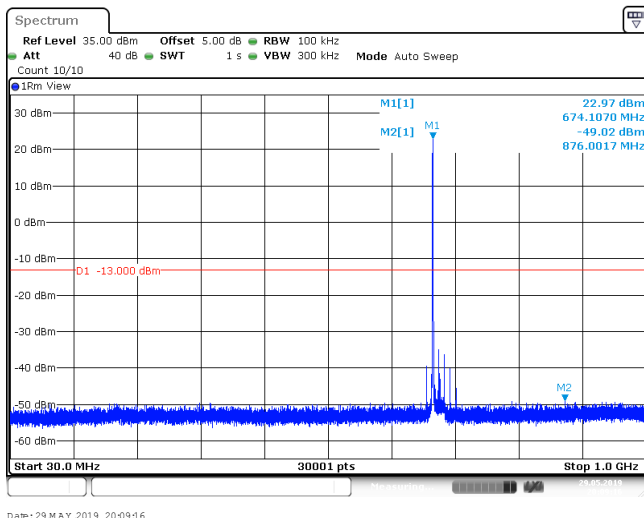
Band71\_20MHz\_QPSK\_133222\_1RB#0



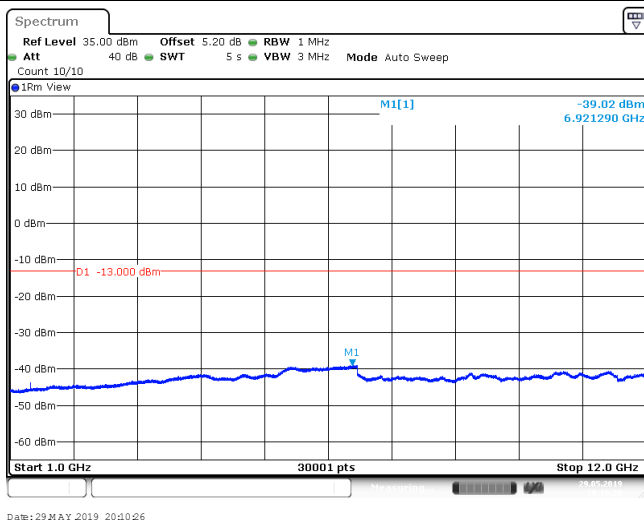
Date: 29 MAY 2019 20:07:19

Band71\_20MHz\_QPSK\_133222\_1RB#0



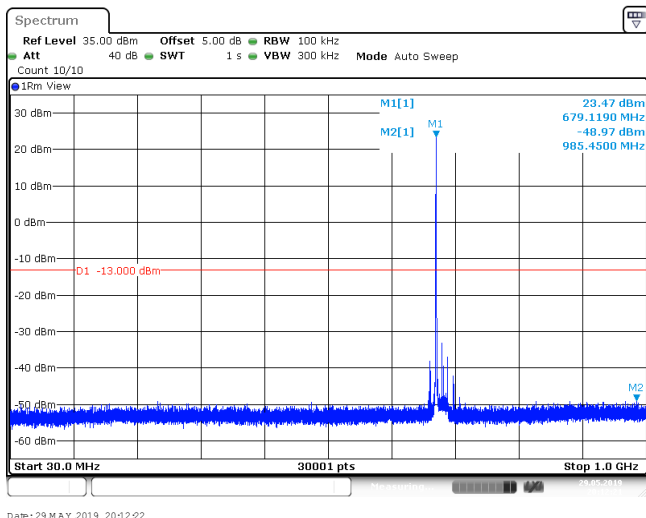


Band71\_20MHz\_QPSK\_133322\_1RB#0

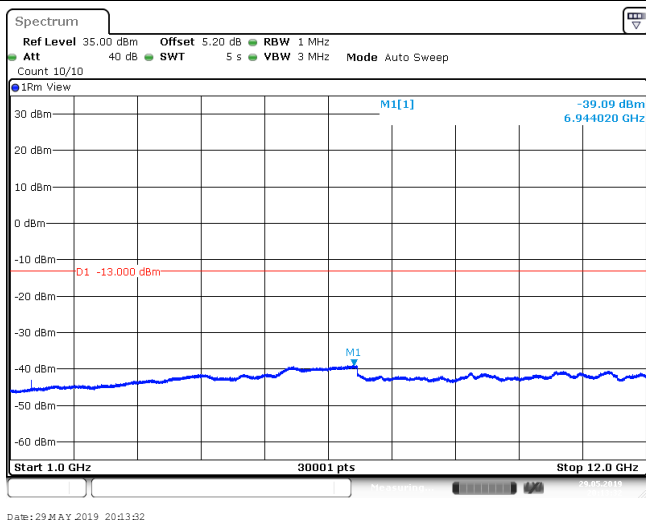


Band71\_20MHz\_QPSK\_133372\_1RB#0



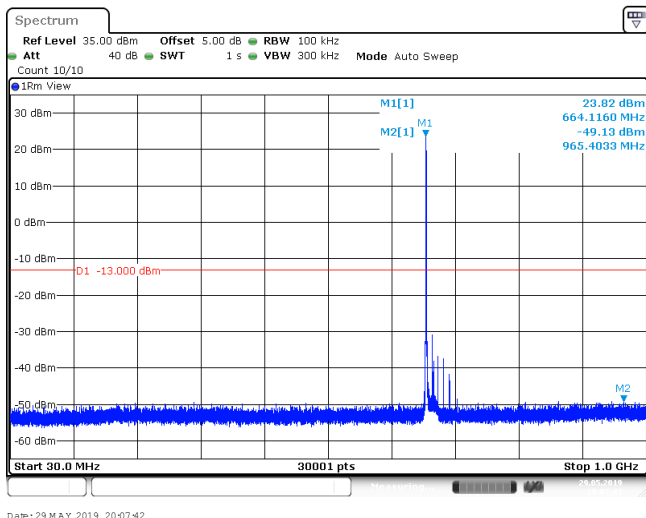


Band71\_20MHz\_QPSK\_133372\_1RB#0

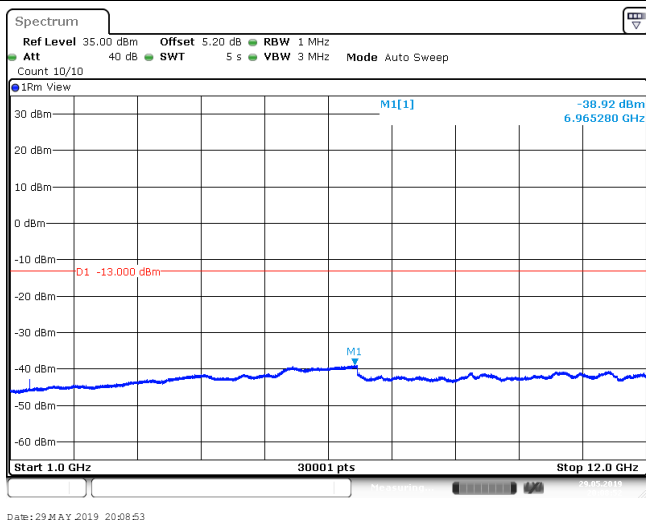


Band71\_20MHz\_16QAM\_133222\_1RB#0



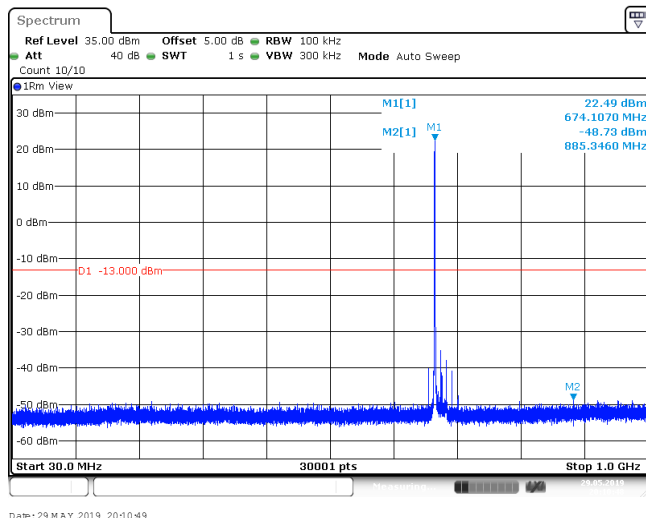


Band71\_20MHz\_16QAM\_133222\_1RB#0

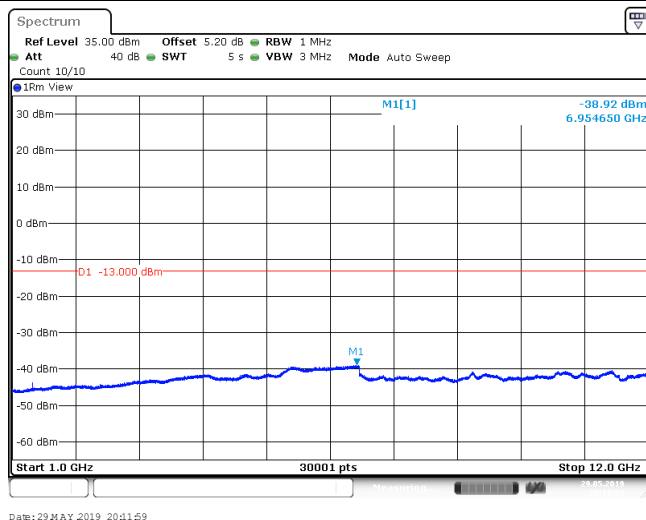


Band71\_20MHz\_16QAM\_133322\_1RB#0



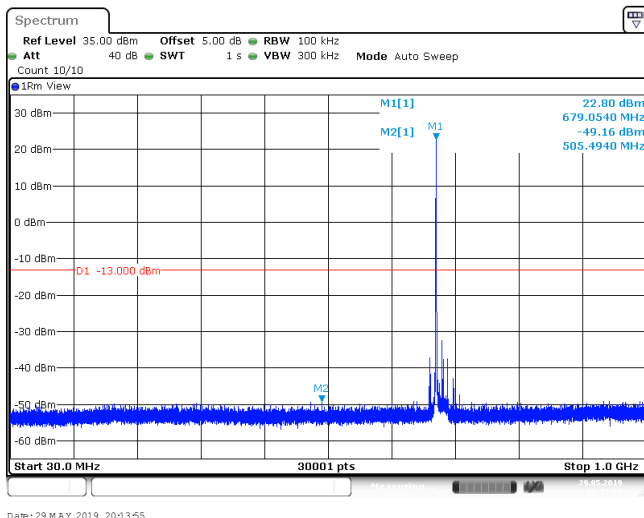


Band71\_20MHz\_16QAM\_133322\_1RB#0

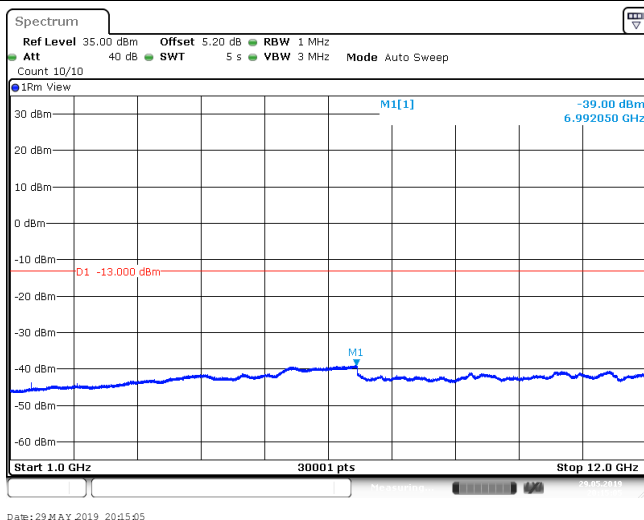


Band71\_20MHz\_16QAM\_133372\_1RB#0





## Band71\_20MHz\_16QAM\_133372\_1RB#0





## 7. Field Strength of Spurious Radiation

### 7.1. Test BAND = LTE Band 71

#### 7.1.1. Test Mode = LTE/TM1 20MHz

##### 7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.226667	-79.94	-13.00	66.94	Vertical
104.293333	-84.65	-13.00	71.65	Vertical
1328.000000	-55.12	-13.00	42.12	Vertical
1992.000000	-59.60	-13.00	46.60	Vertical
4049.587500	-66.17	-13.00	53.17	Vertical
7852.575000	-62.72	-13.00	49.72	Vertical
55.013333	-76.45	-13.00	63.45	Horizontal
104.293333	-85.34	-13.00	72.34	Horizontal
1328.000000	-50.21	-13.00	37.21	Horizontal
1992.500000	-58.18	-13.00	45.18	Horizontal
4283.587500	-65.50	-13.00	52.50	Horizontal
7711.200000	-63.13	-13.00	50.13	Horizontal

##### 7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.300000	-79.75	-13.00	66.75	Vertical
125.013333	-84.89	-13.00	71.89	Vertical
348.126667	-84.57	-13.00	71.57	Vertical
1343.000000	-55.85	-13.00	42.85	Vertical
2015.000000	-60.97	-13.00	47.97	Vertical
6027.375000	-63.90	-13.00	50.90	Vertical
62.480000	-75.60	-13.00	62.60	Horizontal
104.293333	-86.57	-13.00	73.57	Horizontal
1343.000000	-49.03	-13.00	36.03	Horizontal
2015.000000	-60.31	-13.00	47.31	Horizontal
2446.000000	-56.92	-13.00	43.92	Horizontal
4366.950000	-65.14	-13.00	52.14	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](mailto: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

### 7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.786667	-80.60	-13.00	67.60	Vertical
125.013333	-84.48	-13.00	71.48	Vertical
1358.000000	-56.06	-13.00	43.06	Vertical
2037.500000	-60.37	-13.00	47.37	Vertical
4248.975000	-65.89	-13.00	52.89	Vertical
7925.700000	-62.35	-13.00	49.35	Vertical
62.666667	-77.05	-13.00	64.05	Horizontal
257.126667	-75.95	-13.00	62.95	Horizontal
1358.000000	-51.64	-13.00	38.64	Horizontal
2037.500000	-59.90	-13.00	46.90	Horizontal
4228.012500	-65.79	-13.00	52.79	Horizontal
6053.212500	-63.88	-13.00	50.88	Horizontal

#### Remark:

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.

We have tested all modulation and all Bandwidth , but only the worst case data presented 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](mailto: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



## 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
Band71	20MHz	QPSK	133222	100RB#0	VL	NT	-3.50	-0.005201	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	VN	NT	-4.10	-0.006092	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	VH	NT	-2.00	-0.002972	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	VL	NT	1.40	0.002050	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	VN	NT	-1.40	-0.002050	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	VH	NT	0.90	0.001318	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	VL	NT	-2.70	-0.003924	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	VN	NT	-4.00	-0.005814	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	VH	NT	-1.30	-0.001890	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	VL	NT	-0.10	-0.000149	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	VN	NT	-2.50	-0.003715	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	VH	NT	-1.50	-0.002229	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	VL	NT	0.30	0.000439	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	VN	NT	0.90	0.001318	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	VH	NT	0.80	0.001171	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	VL	NT	-0.20	-0.000291	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	VN	NT	-1.90	-0.002762	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	VH	NT	-0.80	-0.001163	±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
Band71	20MHz	QPSK	133222	100RB#0	NV	-30	-0.70	-0.001040	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	-20	-3.10	-0.004606	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	0	-2.60	-0.003863	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	10	-2.70	-0.004012	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	20	-1.30	-0.001932	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	30	-2.60	-0.003863	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	40	-2.80	-0.004160	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	50	-2.00	-0.002972	±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 herein 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](mailto: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



Band71	20MHz	QPSK	133322	100RB#0	NV	-30	1.70	0.002489	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	-20	-0.20	-0.000293	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	0	1.00	0.001464	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	10	1.60	0.002343	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	20	2.20	0.003221	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	30	1.60	0.002343	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	40	0.50	0.000732	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	50	1.10	0.001611	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	-30	-0.60	-0.000872	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	-20	-3.20	-0.004651	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	0	-2.70	-0.003924	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	10	-4.50	-0.006541	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	20	-1.30	-0.001890	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	30	-3.50	-0.005087	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	40	-2.70	-0.003924	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	50	-2.40	-0.003488	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	-30	-2.70	-0.004012	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	-20	-1.00	-0.001486	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	0	-3.20	-0.004755	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	10	-2.50	-0.003715	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	20	-2.00	-0.002972	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	30	-1.30	-0.001932	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	40	-3.60	-0.005349	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	50	-1.30	-0.001932	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	-30	1.80	0.002635	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	-20	1.80	0.002635	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	0	1.90	0.002782	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	10	0.20	0.000293	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	20	1.30	0.001903	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	30	-0.80	-0.001171	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	40	-0.40	-0.000586	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	50	0.70	0.001025	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	-30	-1.90	-0.002762	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	-20	-1.50	-0.002180	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	0	-2.20	-0.003198	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	10	-2.20	-0.003198	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	20	-1.70	-0.002471	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	30	-2.80	-0.004070	±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](mailto: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.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



Band71	20MHz	16QAM	133372	100RB#0	NV	40	-2.50	-0.003634	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	50	-1.30	-0.001890	±2.5	PASS

The End

