



# Appendix B

## E-UTRA Band 14



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

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

## CONTENT

<b>1</b>	<b>EFFECTIVE (ISOTROPIC) RADIATED POWER .....</b>	<b>3</b>
1.1	TEST RESULT.....	3
<b>2</b>	<b>PEAK-TO-AVERAGE RATIO (CCDF).....</b>	<b>5</b>
2.1	TEST RESULT.....	5
2.2	TEST PLOTS.....	5
<b>3</b>	<b>MODULATION CHARACTERISTICS.....</b>	<b>7</b>
3.1	TEST MODE = LTE /TM1 10MHZ.....	7
3.1.1	TEST CHANNEL = MCH .....	7
3.2	TEST MODE = LTE /TM2 10MHZ.....	8
3.2.1	TEST CHANNEL = MCH .....	8
<b>4</b>	<b>26DB BANDWIDTH AND OCCUPIED BANDWIDTH .....</b>	<b>9</b>
4.1	TEST RESULT.....	9
4.2	TEST PLOTS.....	9
<b>5</b>	<b>BAND EDGE COMPLIANCE .....</b>	<b>14</b>
5.1	TEST PLOTS.....	14
<b>6</b>	<b>EMISSION MASK .....</b>	<b>23</b>
<b>7</b>	<b>SPURIOUS EMISSION AT ANTENNA TERMINAL .....</b>	<b>31</b>
7.1	TEST PLOTS.....	31
<b>8</b>	<b>FIELD STRENGTH OF SPURIOUS RADIATION .....</b>	<b>33</b>
8.1	TEST MODE =LTE/TM1 10MHZ .....	33
8.1.1	TEST CHANNEL = MCH .....	33
<b>9</b>	<b>FREQUENCY STABILITY.....</b>	<b>34</b>
9.1	FREQUENCY VS VOLTAGE .....	34
9.2	FREQUENCY VS TEMPERATURE .....	34



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 Testing Center EEC Laboratory

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



## 1 Effective (Isotropic) Radiated Power

### 1.1 Test Result

Band	Bandwidth	Modulation	Channel	RB Config.	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band14	5MHz	QPSK	23305	1RB#0	23.02	20.97	34.77	PASS
Band14	5MHz	QPSK	23305	1RB#12	24.06	22.01	34.77	PASS
Band14	5MHz	QPSK	23305	1RB#24	23.34	21.29	34.77	PASS
Band14	5MHz	QPSK	23305	12RB#0	21.98	19.93	34.77	PASS
Band14	5MHz	QPSK	23305	12RB#6	22.53	20.48	34.77	PASS
Band14	5MHz	QPSK	23305	12RB#13	22.38	20.33	34.77	PASS
Band14	5MHz	QPSK	23305	25RB#0	22.13	20.08	34.77	PASS
Band14	5MHz	QPSK	23330	1RB#0	22.90	20.85	34.77	PASS
Band14	5MHz	QPSK	23330	1RB#12	23.35	21.30	34.77	PASS
Band14	5MHz	QPSK	23330	1RB#24	23.05	21.00	34.77	PASS
Band14	5MHz	QPSK	23330	12RB#0	22.35	20.30	34.77	PASS
Band14	5MHz	QPSK	23330	12RB#6	22.24	20.19	34.77	PASS
Band14	5MHz	QPSK	23330	12RB#13	22.15	20.10	34.77	PASS
Band14	5MHz	QPSK	23330	25RB#0	22.17	20.12	34.77	PASS
Band14	5MHz	QPSK	23355	1RB#0	23.18	21.13	34.77	PASS
Band14	5MHz	QPSK	23355	1RB#12	22.99	20.94	34.77	PASS
Band14	5MHz	QPSK	23355	1RB#24	22.72	20.67	34.77	PASS
Band14	5MHz	QPSK	23355	12RB#0	22.46	20.41	34.77	PASS
Band14	5MHz	QPSK	23355	12RB#6	22.10	20.05	34.77	PASS
Band14	5MHz	QPSK	23355	12RB#13	21.90	19.85	34.77	PASS
Band14	5MHz	QPSK	23355	25RB#0	22.25	20.20	34.77	PASS
Band14	5MHz	16QAM	23305	1RB#0	21.58	19.53	34.77	PASS
Band14	5MHz	16QAM	23305	1RB#12	22.63	20.58	34.77	PASS
Band14	5MHz	16QAM	23305	1RB#24	21.60	19.55	34.77	PASS
Band14	5MHz	16QAM	23305	12RB#0	20.68	18.63	34.77	PASS
Band14	5MHz	16QAM	23305	12RB#6	21.06	19.01	34.77	PASS
Band14	5MHz	16QAM	23305	12RB#13	20.94	18.89	34.77	PASS
Band14	5MHz	16QAM	23305	25RB#0	20.75	18.70	34.77	PASS
Band14	5MHz	16QAM	23330	1RB#0	21.77	19.72	34.77	PASS
Band14	5MHz	16QAM	23330	1RB#12	22.05	20.00	34.77	PASS
Band14	5MHz	16QAM	23330	1RB#24	21.72	19.67	34.77	PASS
Band14	5MHz	16QAM	23330	12RB#0	20.99	18.94	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 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



Band14	5MHz	16QAM	23330	12RB#6	20.71	18.66	34.77	PASS
Band14	5MHz	16QAM	23330	12RB#13	20.92	18.87	34.77	PASS
Band14	5MHz	16QAM	23330	25RB#0	20.84	18.79	34.77	PASS
Band14	5MHz	16QAM	23355	1RB#0	21.77	19.72	34.77	PASS
Band14	5MHz	16QAM	23355	1RB#12	21.68	19.63	34.77	PASS
Band14	5MHz	16QAM	23355	1RB#24	21.38	19.33	34.77	PASS
Band14	5MHz	16QAM	23355	12RB#0	21.01	18.96	34.77	PASS
Band14	5MHz	16QAM	23355	12RB#6	20.55	18.50	34.77	PASS
Band14	5MHz	16QAM	23355	12RB#13	20.45	18.40	34.77	PASS
Band14	5MHz	16QAM	23355	25RB#0	20.97	18.92	34.77	PASS
Band14	10MHz	QPSK	23330	1RB#0	22.93	20.88	34.77	PASS
Band14	10MHz	QPSK	23330	1RB#24	24.11	22.06	34.77	PASS
Band14	10MHz	QPSK	23330	1RB#49	22.29	20.24	34.77	PASS
Band14	10MHz	QPSK	23330	25RB#0	22.53	20.48	34.77	PASS
Band14	10MHz	QPSK	23330	25RB#12	22.58	20.53	34.77	PASS
Band14	10MHz	QPSK	23330	25RB#25	22.08	20.03	34.77	PASS
Band14	10MHz	QPSK	23330	50RB#0	21.92	19.87	34.77	PASS
Band14	10MHz	16QAM	23330	1RB#0	21.75	19.70	34.77	PASS
Band14	10MHz	16QAM	23330	1RB#24	21.98	19.93	34.77	PASS
Band14	10MHz	16QAM	23330	1RB#49	21.28	19.23	34.77	PASS
Band14	10MHz	16QAM	23330	25RB#0	21.03	18.98	34.77	PASS
Band14	10MHz	16QAM	23330	25RB#12	21.11	19.06	34.77	PASS
Band14	10MHz	16QAM	23330	25RB#25	20.63	18.58	34.77	PASS
Band14	10MHz	16QAM	23330	27RB#0	20.86	18.81	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]



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

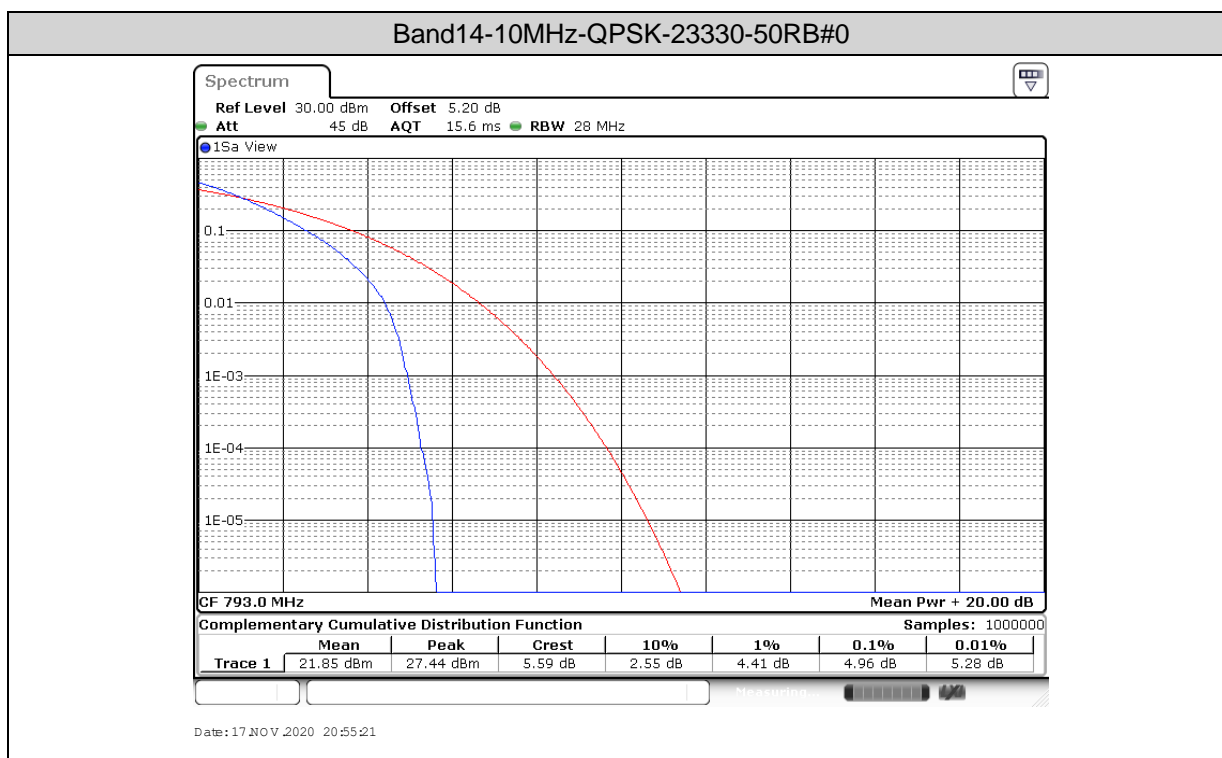


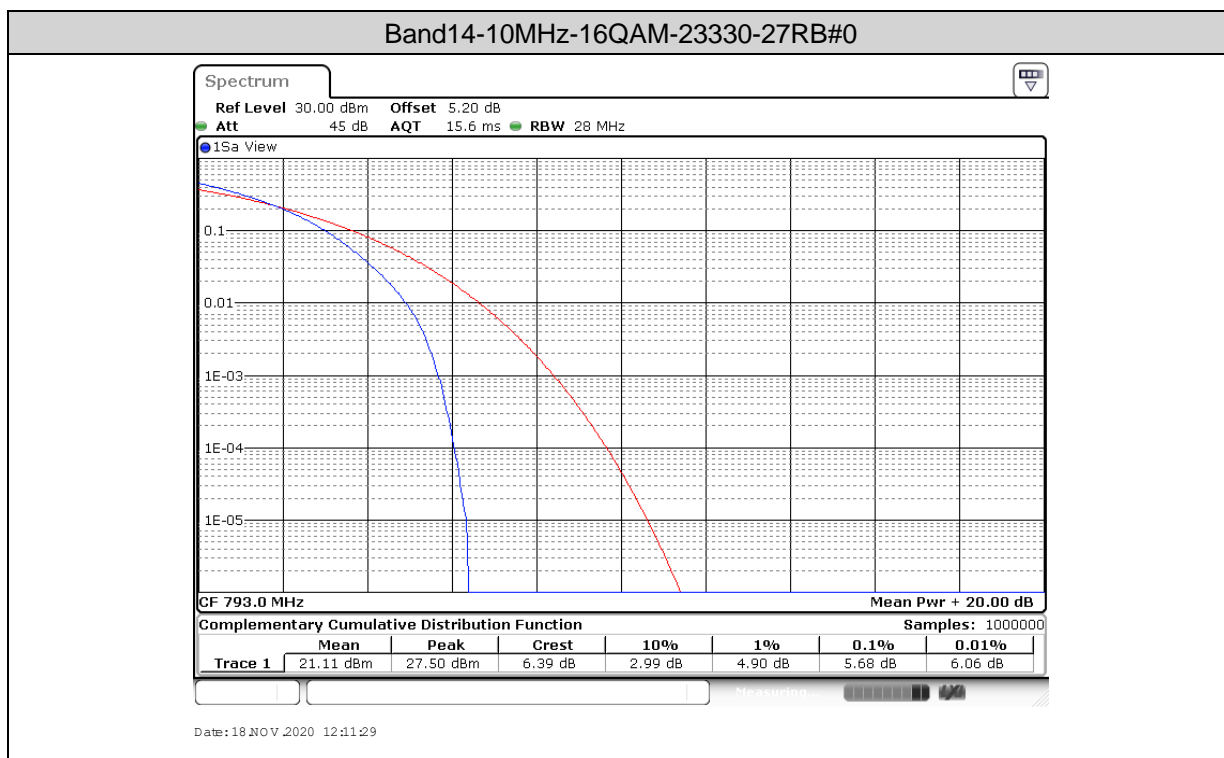
## 2 Peak-to-Average Ratio (CCDF)

### 2.1 Test Result

Band	Bandwidth h	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band14	10MHz	QPSK	23330	50RB#0	4.96	13	PASS
Band14	10MHz	16QAM	23330	27RB#0	5.68	13	PASS

### 2.2 Test Plots





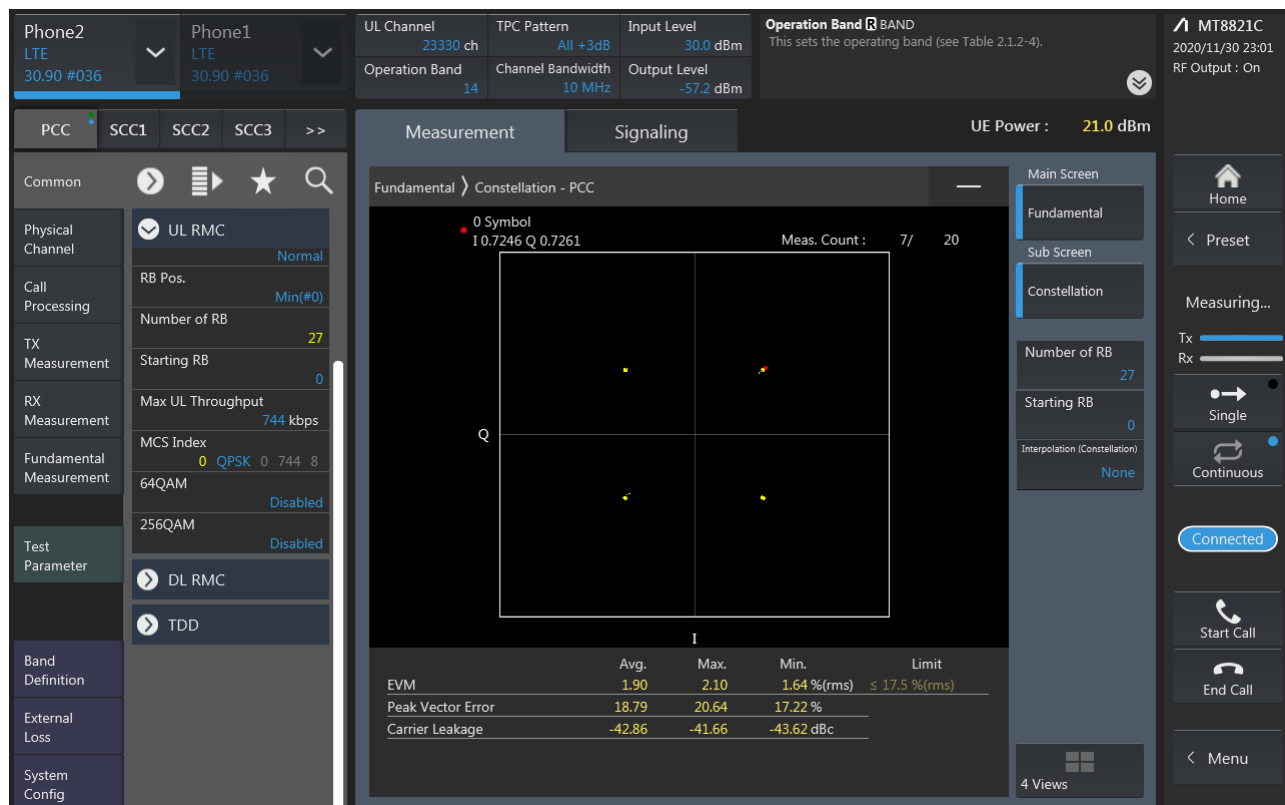
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

### 3 Modulation Characteristics

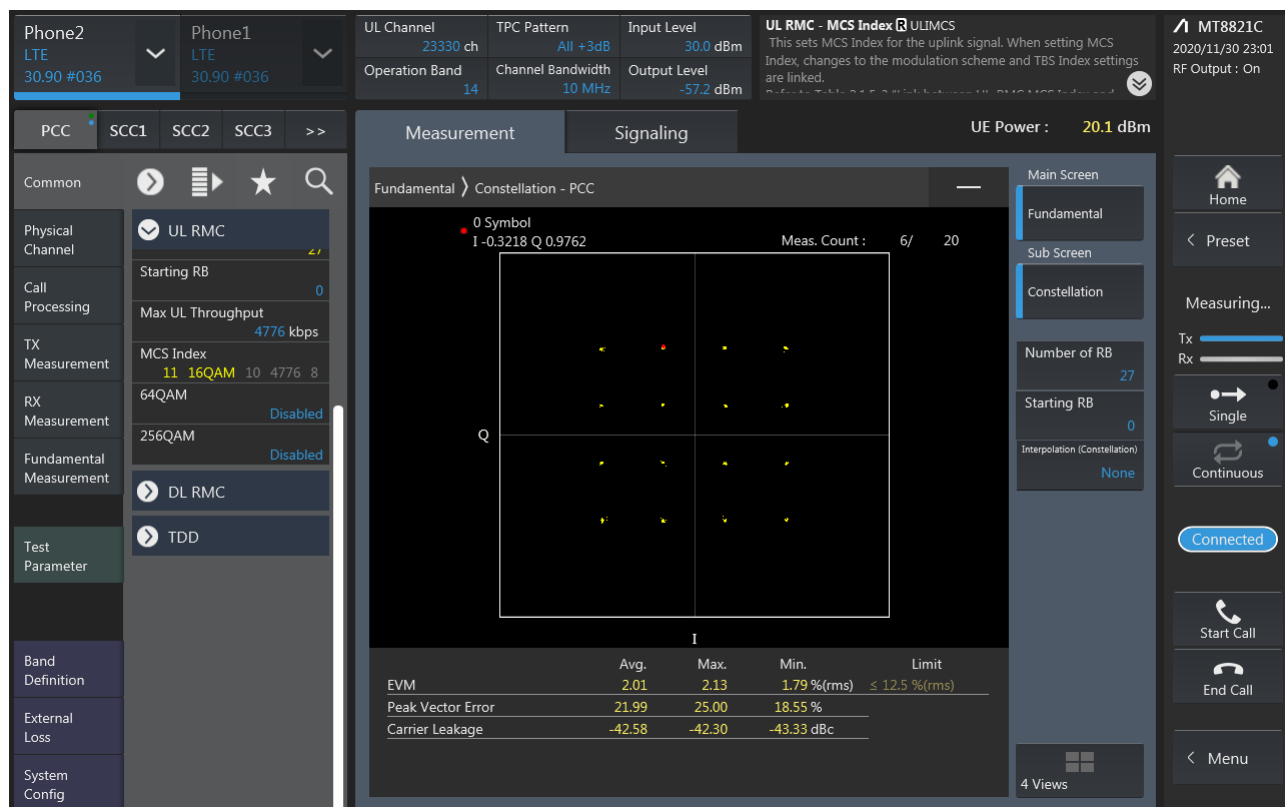
#### 3.1 Test Mode = LTE /TM1 10MHz

##### 3.1.1 Test Channel = MCH



### 3.2 Test Mode = LTE /TM2 10MHz

### 3.2.1 Test Channel = MCH



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed on the back of the report, available on request 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 contract from their obligations. The Company's responsibility is limited to the content of the report and does not extend to the use of the report, 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, [Attn:Zhechunli@sgs.com](mailto:Attn:Zhechunli@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory.

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



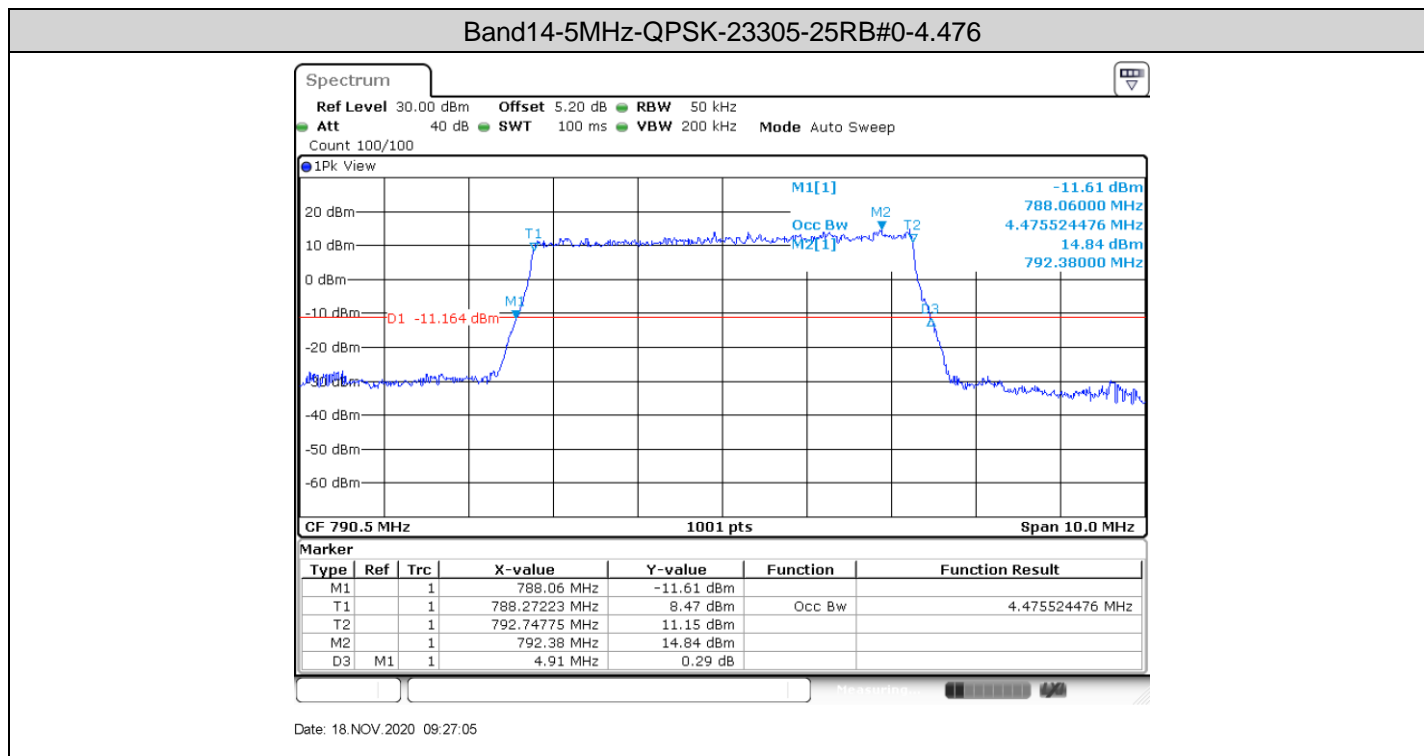


## 4 26dB Bandwidth and Occupied Bandwidth

### 4.1 Test Result

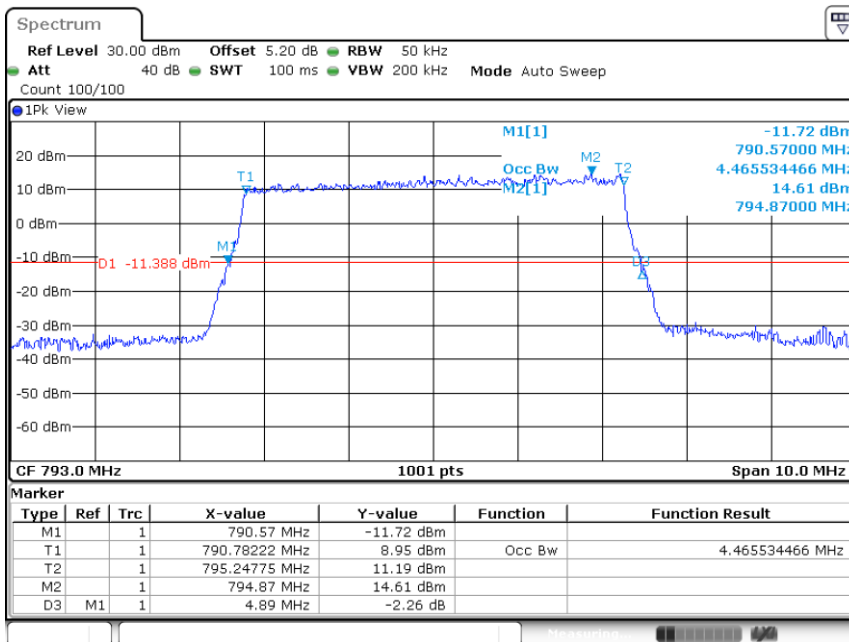
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band14	5MHz	QPSK	23305	25RB#0	4.476	4.910	PASS
Band14	5MHz	QPSK	23330	25RB#0	4.466	4.890	PASS
Band14	5MHz	QPSK	23355	25RB#0	4.456	4.900	PASS
Band14	5MHz	16QAM	23305	25RB#0	4.486	4.930	PASS
Band14	5MHz	16QAM	23330	25RB#0	4.476	4.930	PASS
Band14	5MHz	16QAM	23355	25RB#0	4.476	4.940	PASS
Band14	10MHz	QPSK	23330	50RB#0	8.911	9.660	PASS
Band14	10MHz	16QAM	23330	27RB#0	4.855	5.680	PASS

### 4.2 Test Plots



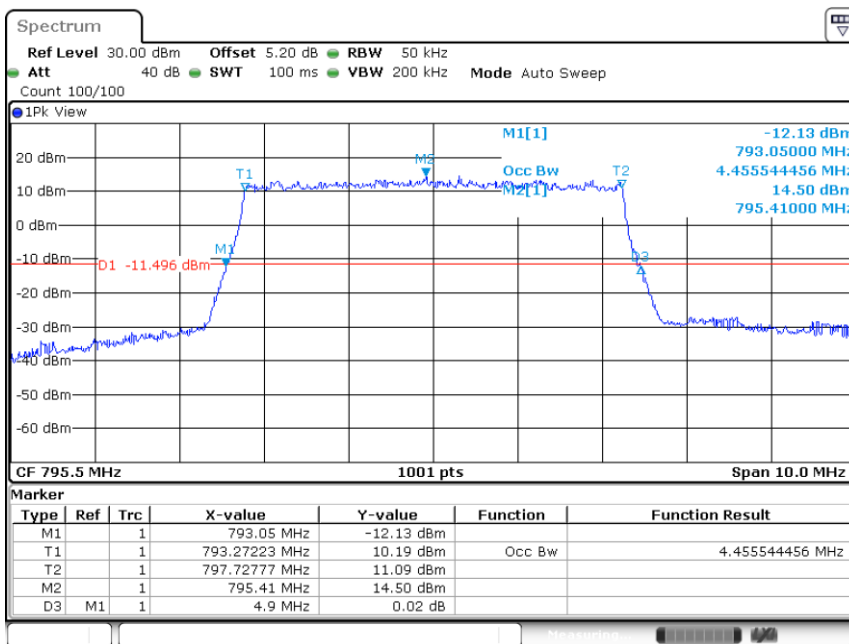


Band14-5MHz-QPSK-23330-25RB#0-4.466



Date: 18.NOV.2020 09:27:25

Band14-5MHz-QPSK-23355-25RB#0-4.456



Date: 18.NOV.2020 09:27:45



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

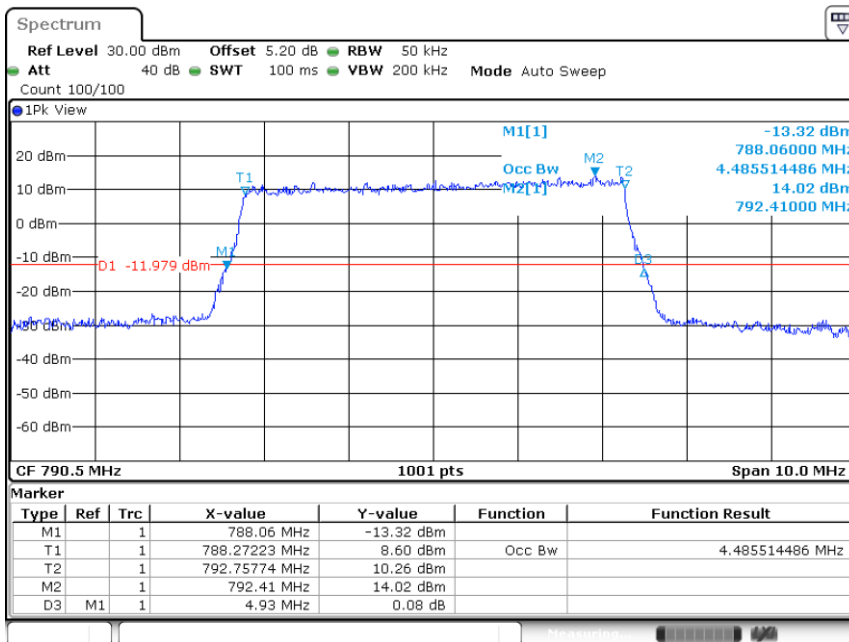
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

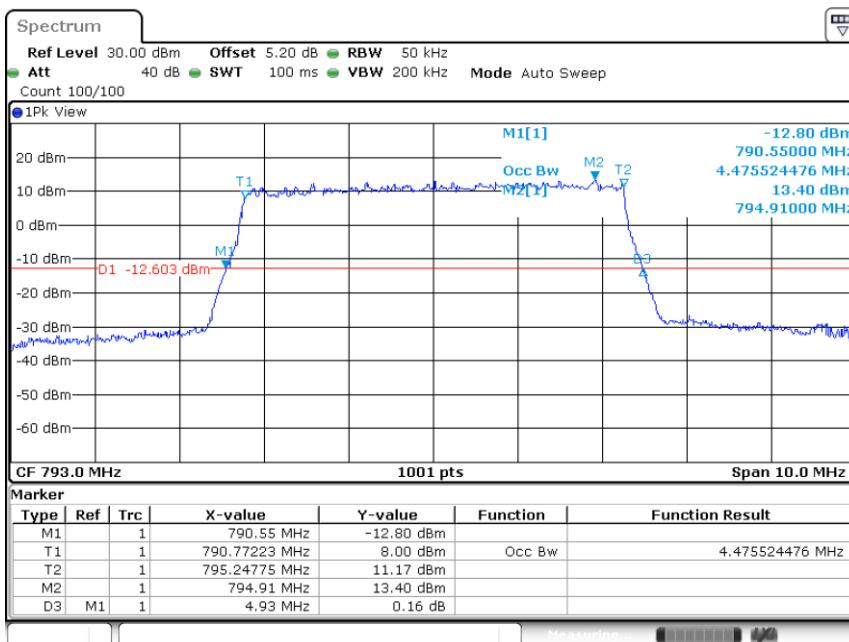


Band14-5MHz-16QAM-23305-25RB#0-4.486



Date: 18.NOV.2020 10:06:18

Band14-5MHz-16QAM-23330-25RB#0-4.476



Date: 18.NOV.2020 10:06:37



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

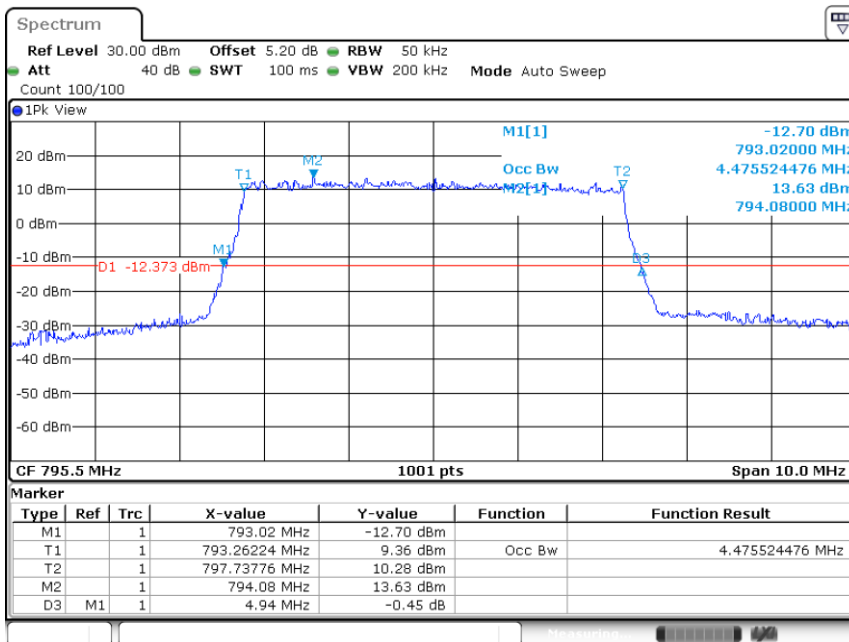
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

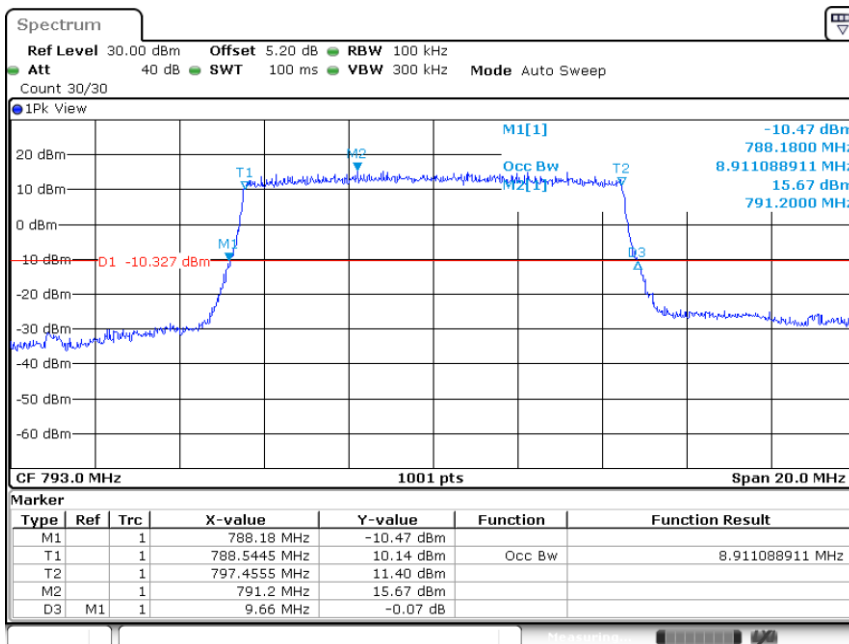


Band14-5MHz-16QAM-23355-25RB#0-4.476



Date: 18.NOV.2020 10:06:58

Band14-10MHz-QPSK-23330-50RB#0-8.911



Date: 26.NOV.2020 17:35:42



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

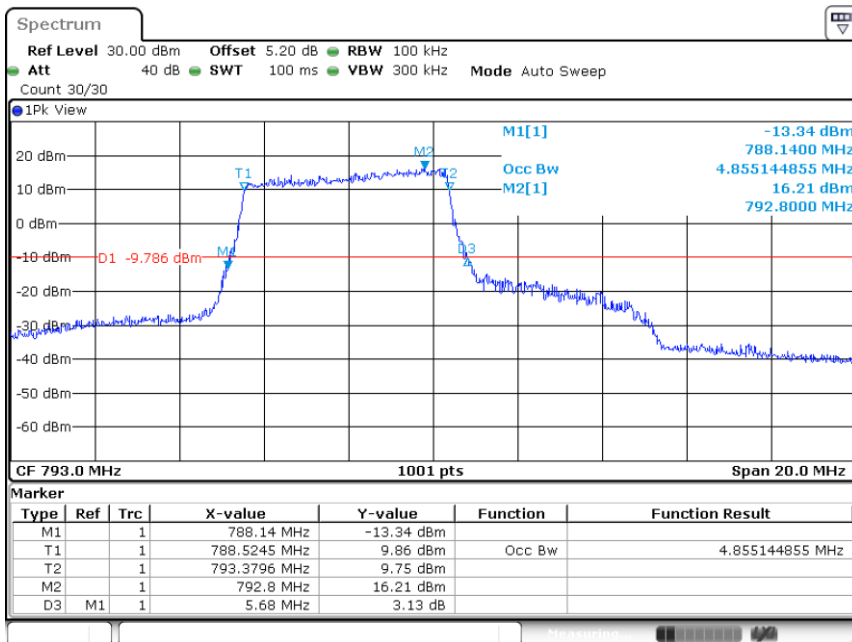
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



## Band14-10MHz-16QAM-23330-27RB#0-4.855



Date: 18.NOV.2020 10:07:15



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)

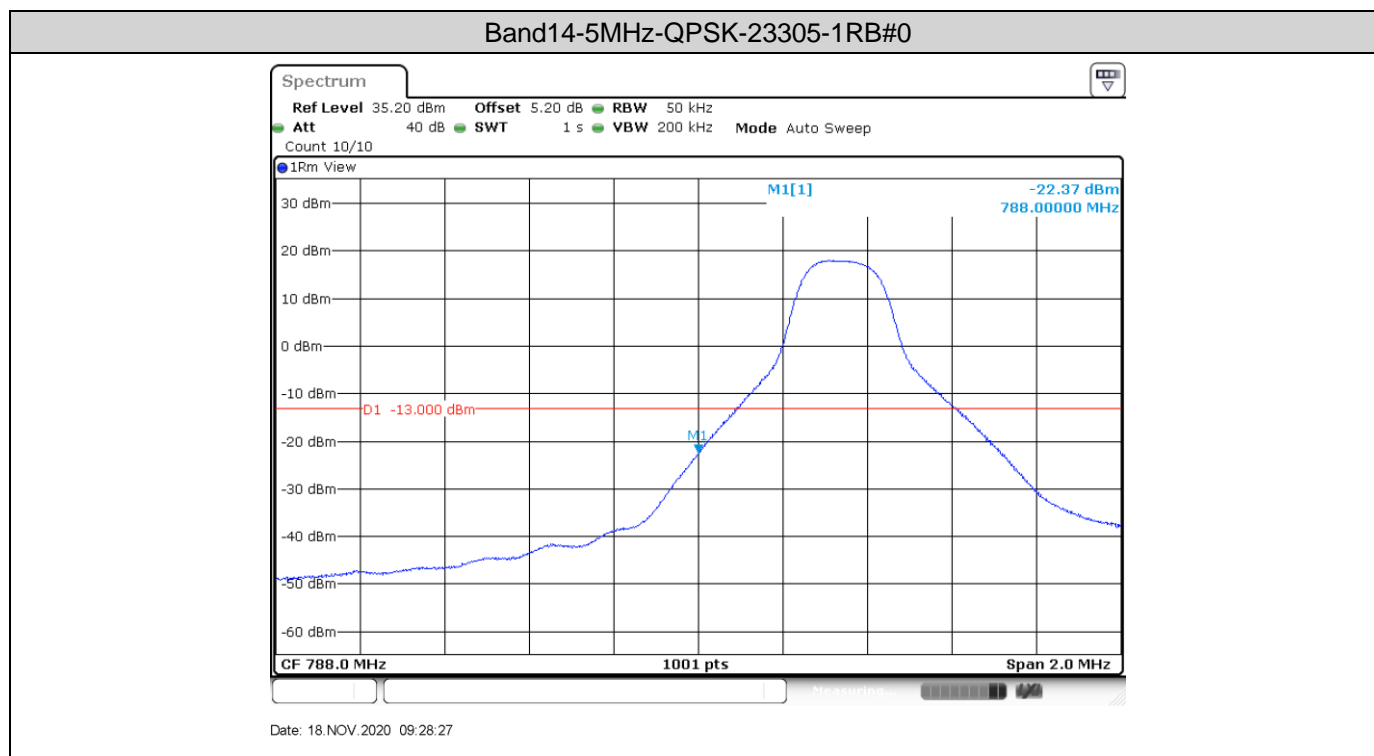
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

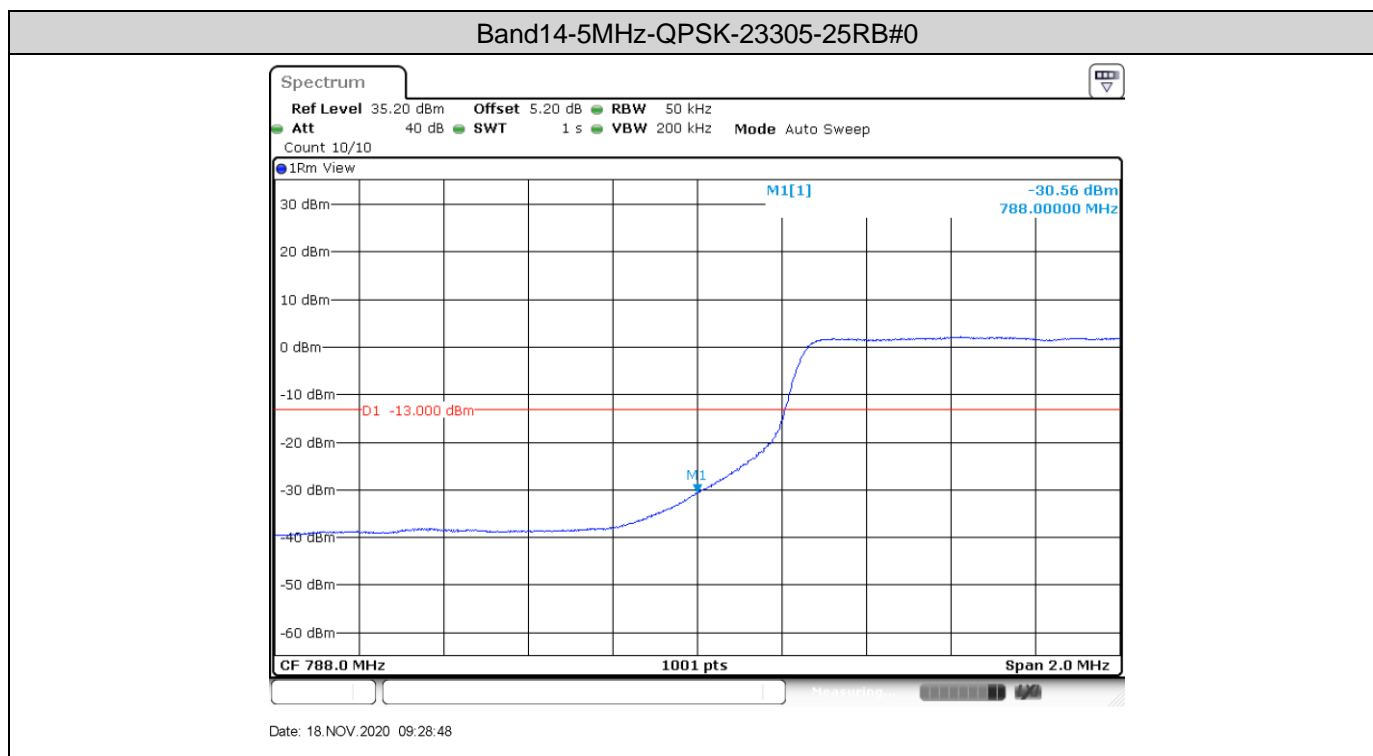




## 5 Band Edge Compliance

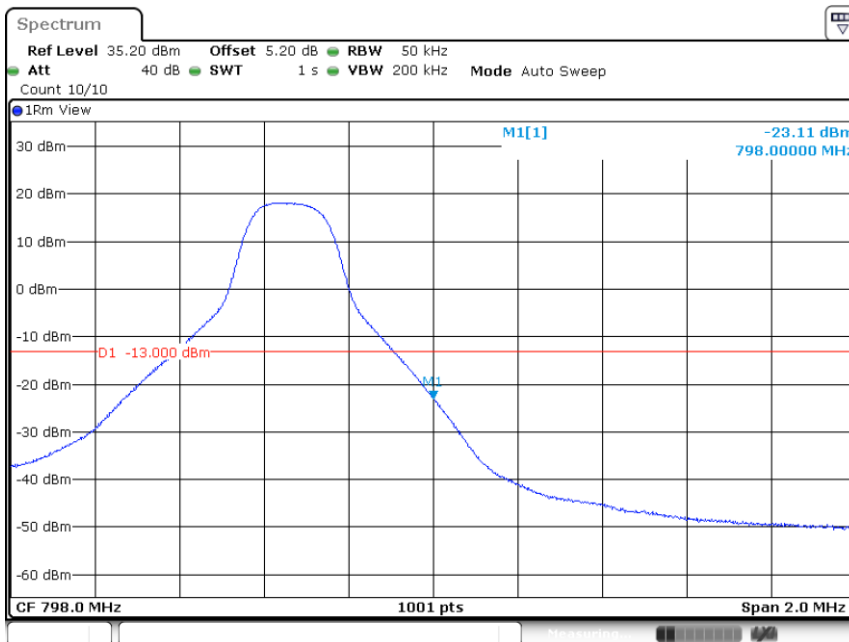
### 5.1 Test Plots





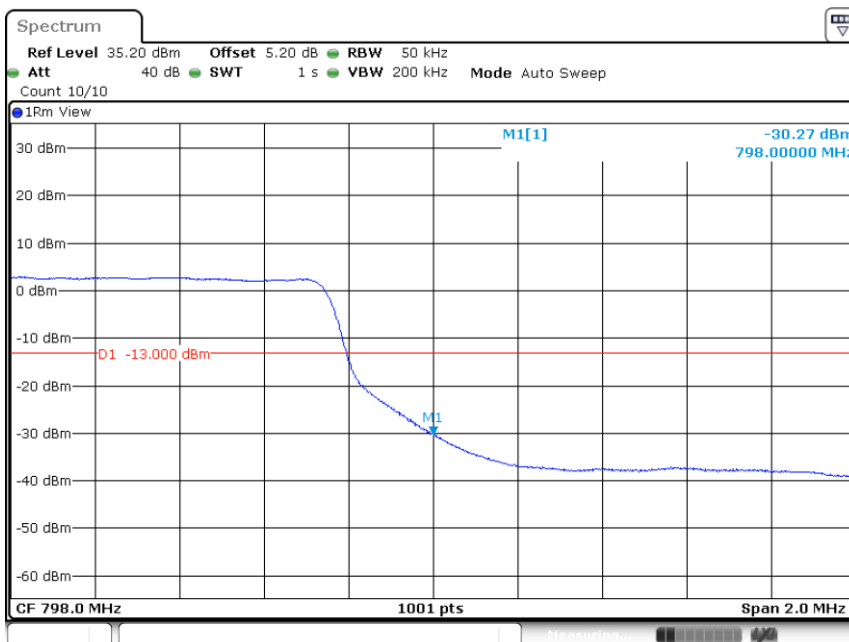


Band14-5MHz-QPSK-23355-1RB#24



Date: 18.NOV.2020 09:29:13

Band14-5MHz-QPSK-23355-25RB#0



Date: 18.NOV.2020 09:29:33

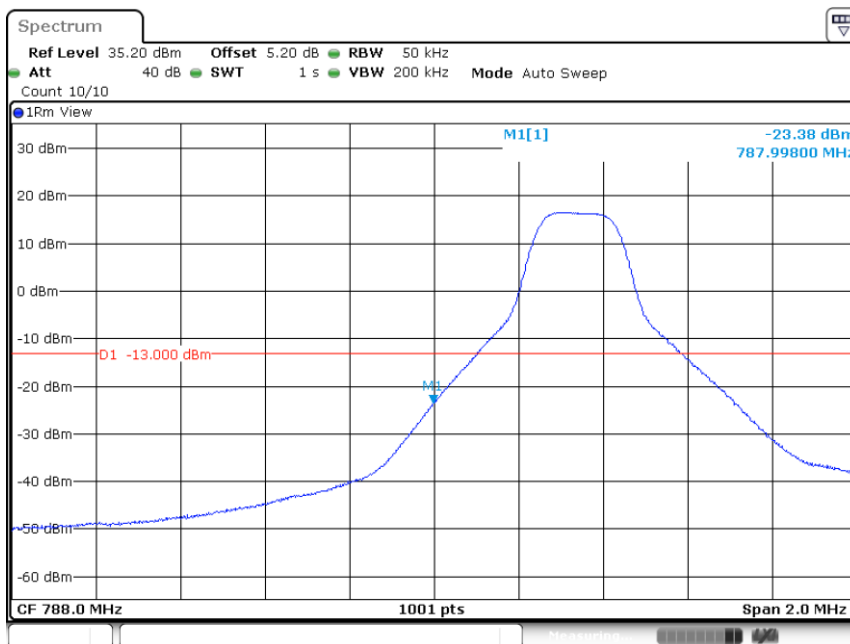


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Inspection & Testing Services

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

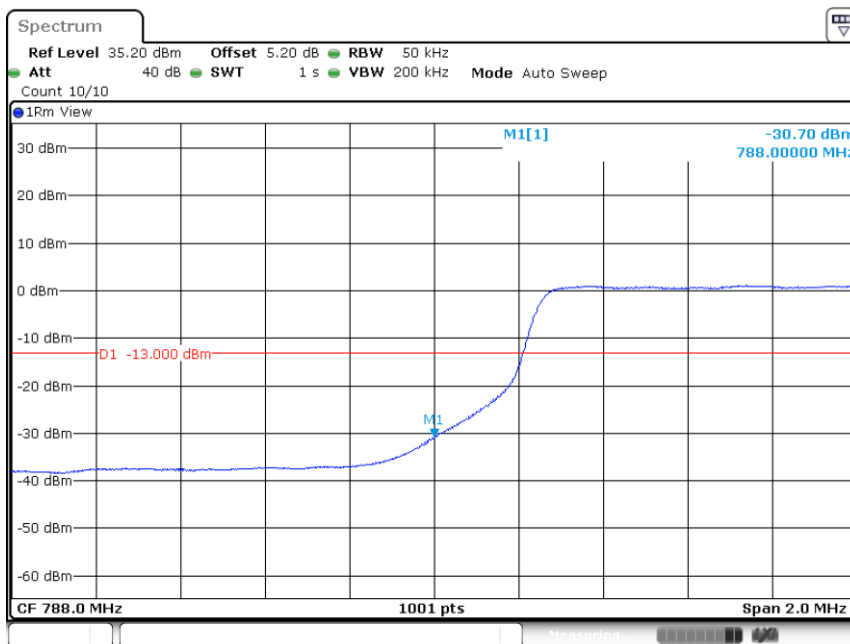


Band14-5MHz-16QAM-23305-1RB#0



Date: 18.NOV.2020 10:07:40

Band14-5MHz-16QAM-23305-25RB#0



Date: 18.NOV.2020 10:08:00

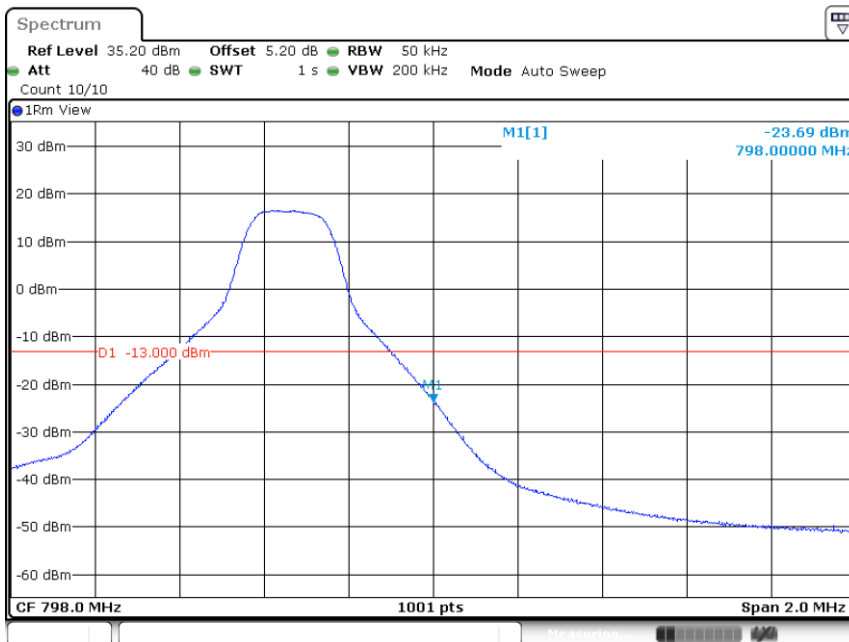


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

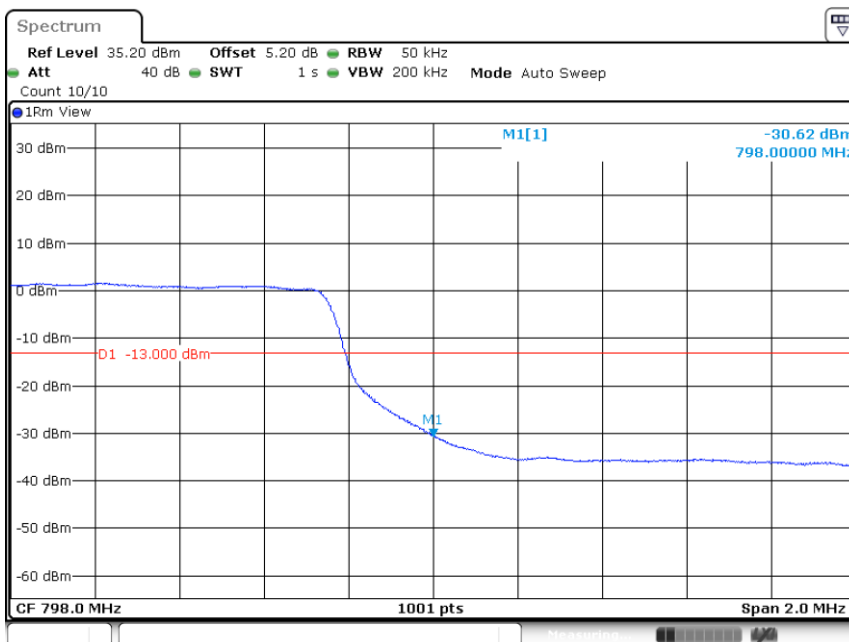


Band14-5MHz-16QAM-23355-1RB#24



Date: 18.NOV.2020 10:08:26

Band14-5MHz-16QAM-23355-25RB#0



Date: 18.NOV.2020 10:08:46

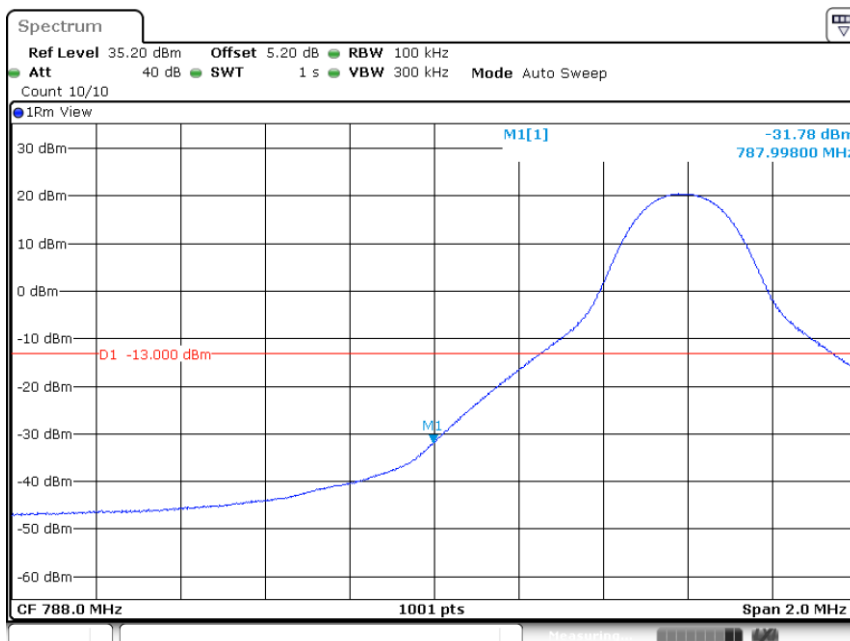


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



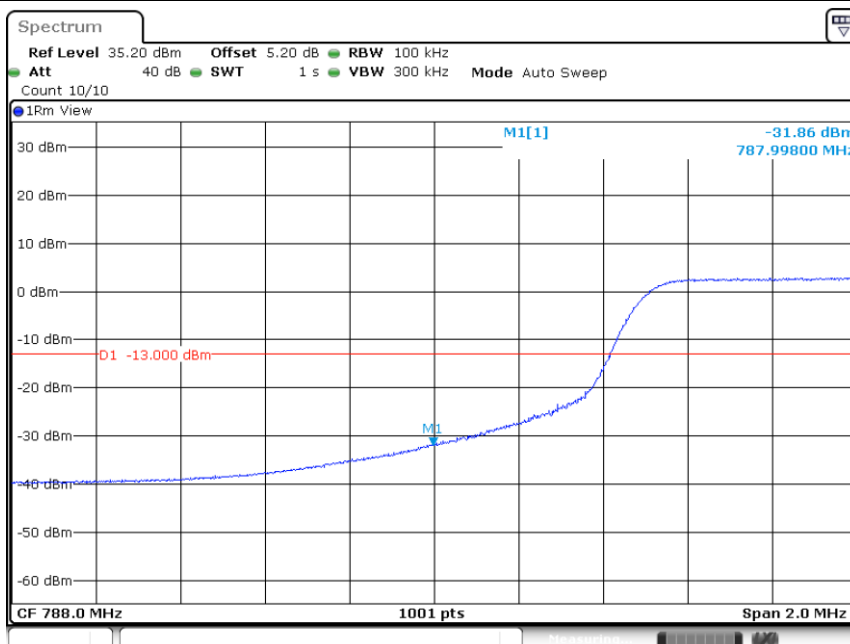


Band14-10MHz-QPSK-23330\_Left-1RB#0



Date: 18.NOV.2020 09:39:16

Band14-10MHz-QPSK-23330\_Left-50RB#0

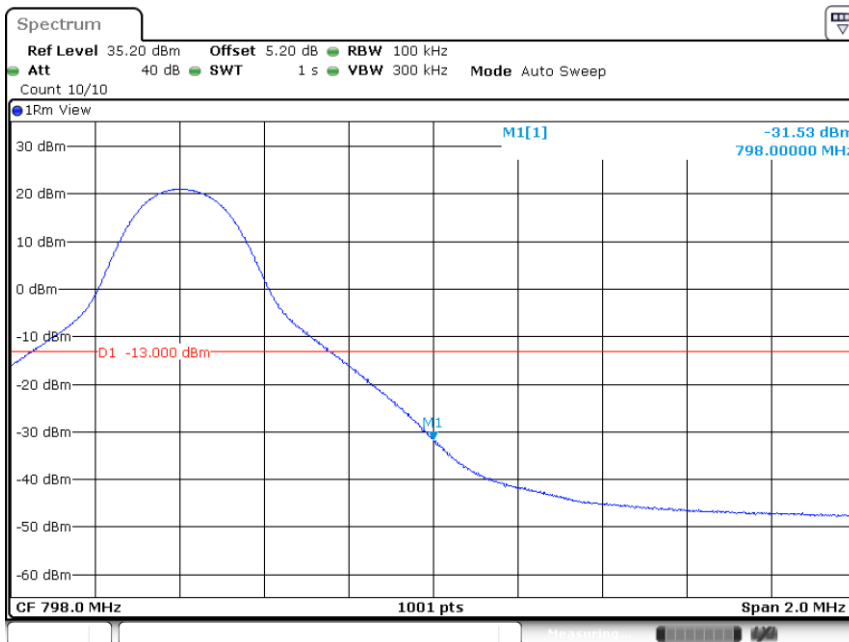


Date: 26.NOV.2020 17:36:06



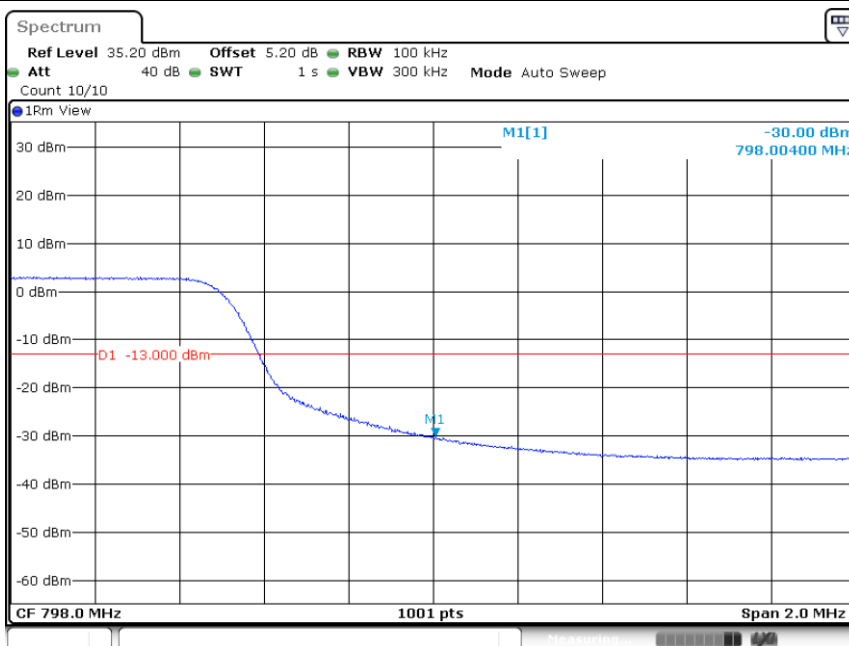


Band14-10MHz-QPSK-23330\_Right-1RB#49



Date: 18.NOV.2020 09:30:23

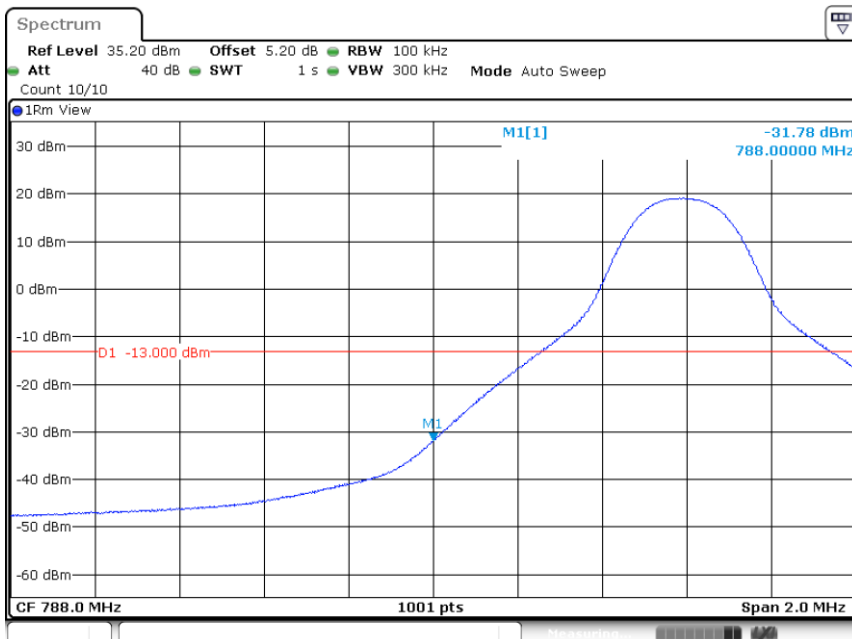
Band14-10MHz-QPSK-23330\_Right-50RB#0



Date: 26.NOV.2020 17:36:30

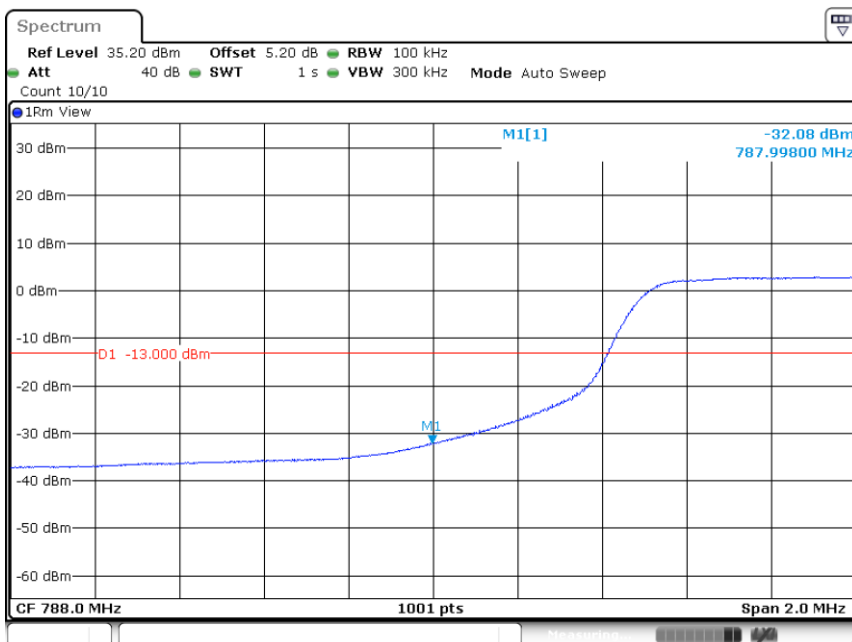


Band14-10MHz-16QAM-23330 Left-1RB#0



Date: 18.NOV.2020 10:09:11

Band14-10MHz-16QAM-23330 Left-27RB#0



Date: 18.NOV.2020 10:09:31



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory.

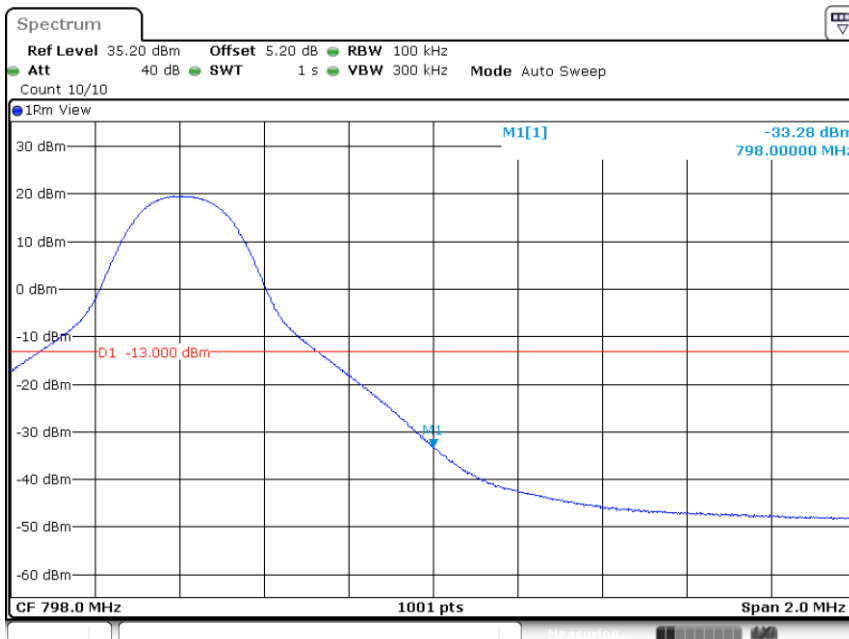
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic 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 deemed to have read, understood and accepted the Terms and Conditions of the document and to have agreed to be bound by the 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 the prior written approval of the Company. Any unauthorized alteration, forgery or falsification in the content or appearance of this document is strictly prohibited and may expose the holder to legal action. 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@sigs.com](mailto:CN.Doccheck@sigs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China	518057	t (86-755) 26012053	f (86-755) 26710594	<a href="http://www.sigsgroup.com.cn">www.sigsgroup.com.cn</a>
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	<a href="http://www.sigschina@sigs.com">www.sigschina@sigs.com</a>

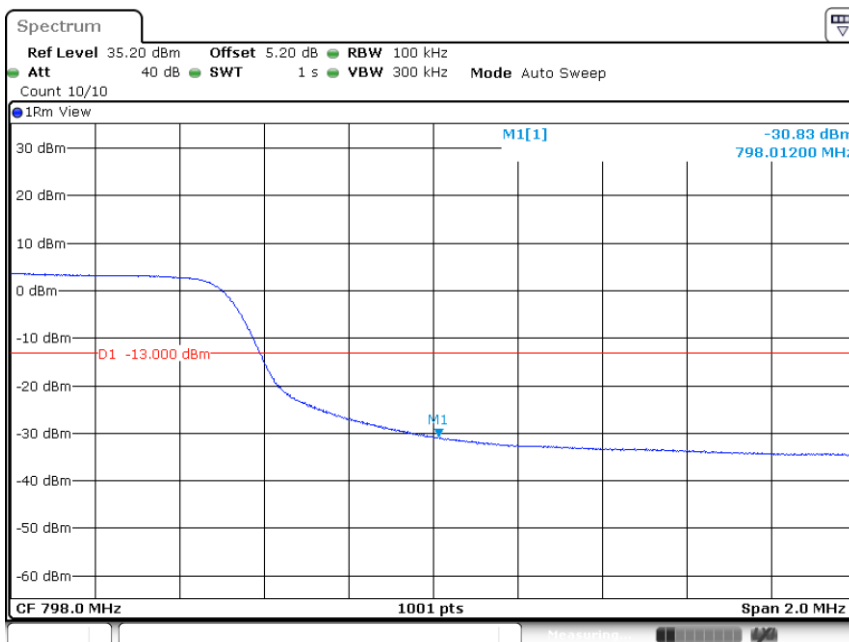


Band14-10MHz-16QAM-23330\_Right-1RB#49



Date: 18.NOV.2020 10:09:56

Band14-10MHz-16QAM-23330\_Right-27RB#23



Date: 18.NOV.2020 10:10:16

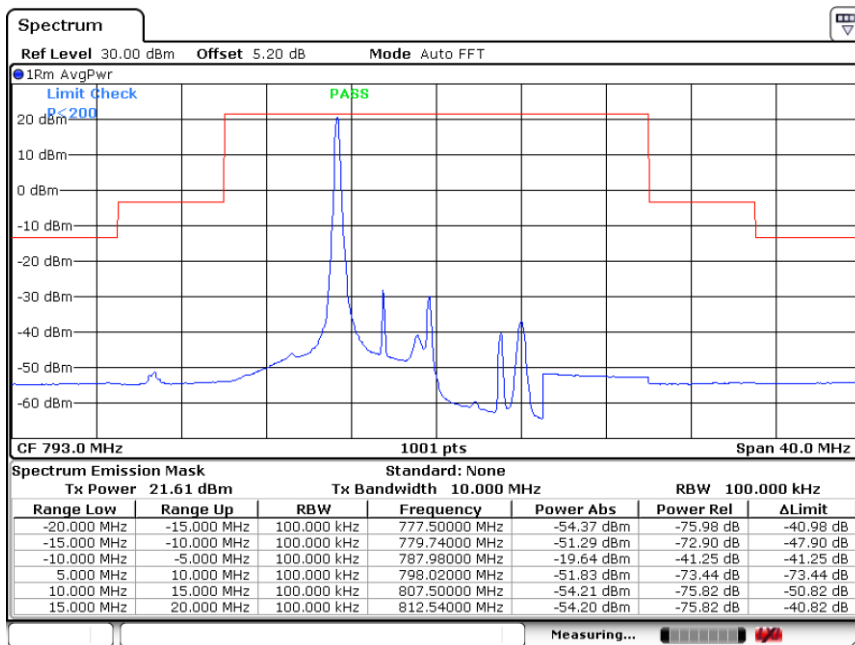


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center CCC Laboratory

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

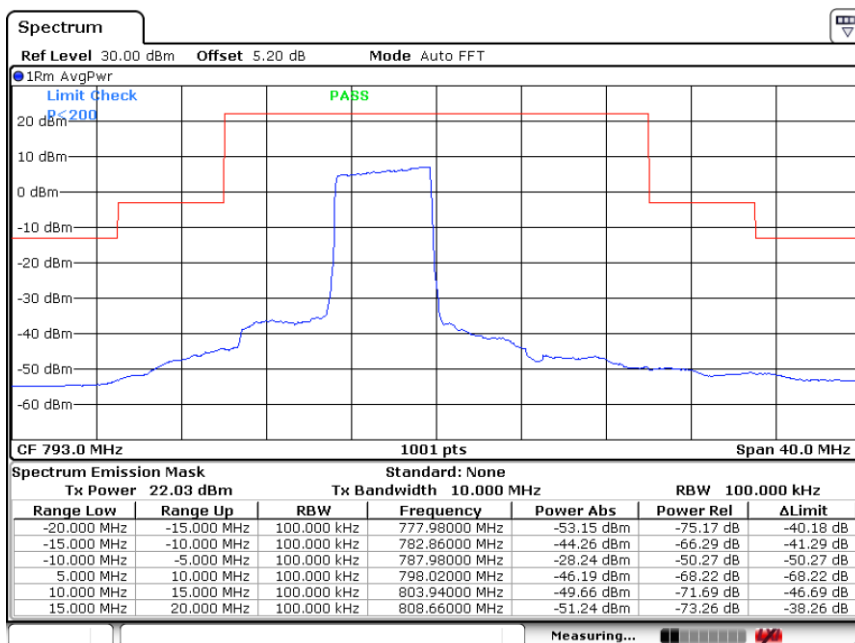
## 6 Emission mask

Band14-5MHz-QPSK-23305-1RB#0



Date: 18.NOV.2020 09:49:02

Band14-5MHz-QPSK-23305-25RB#0



Date: 18.NOV.2020 09:48:36



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)

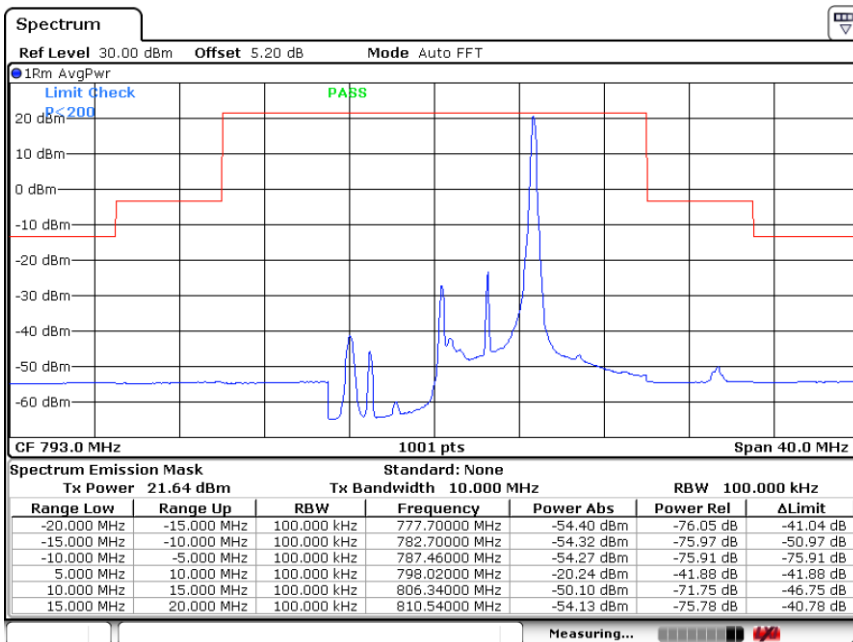
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (SGS-CSTC Laboratory)

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

Member of the SGS Group (SGS SA)

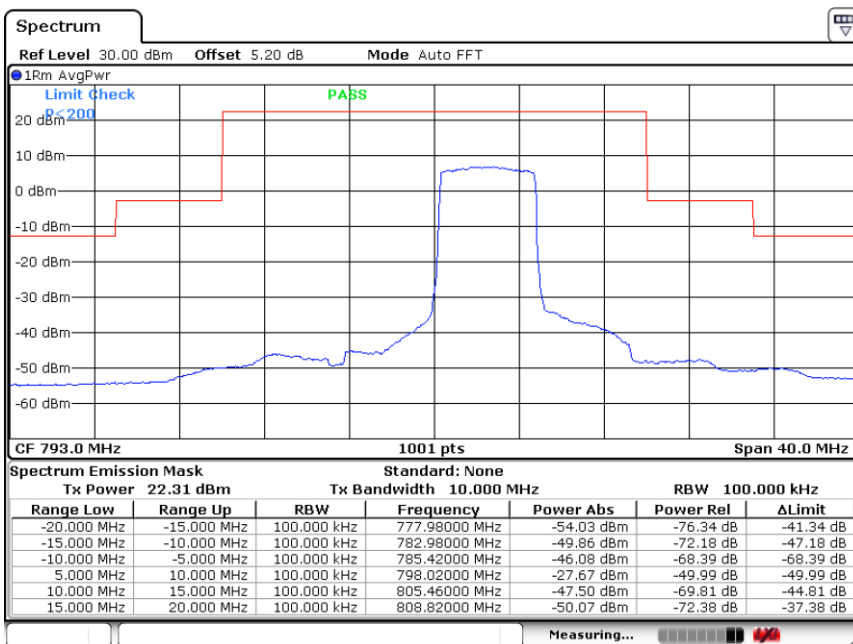


## Band14-5MHz-QPSK-23355-1RB#24



Date: 18.NOV.2020 09:49:41

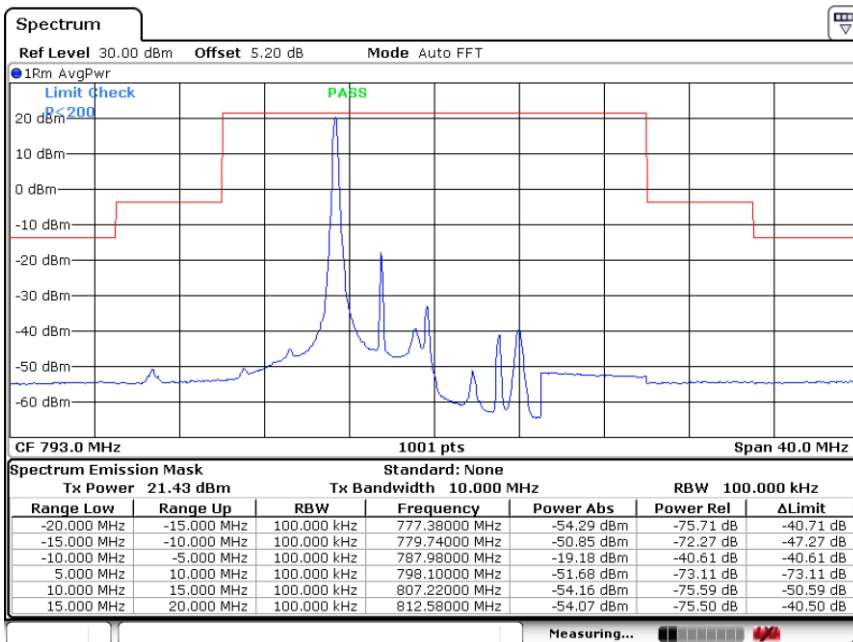
## Band14-5MHz-QPSK-23355-25RB#0



Date: 18.NOV.2020 09:49:58

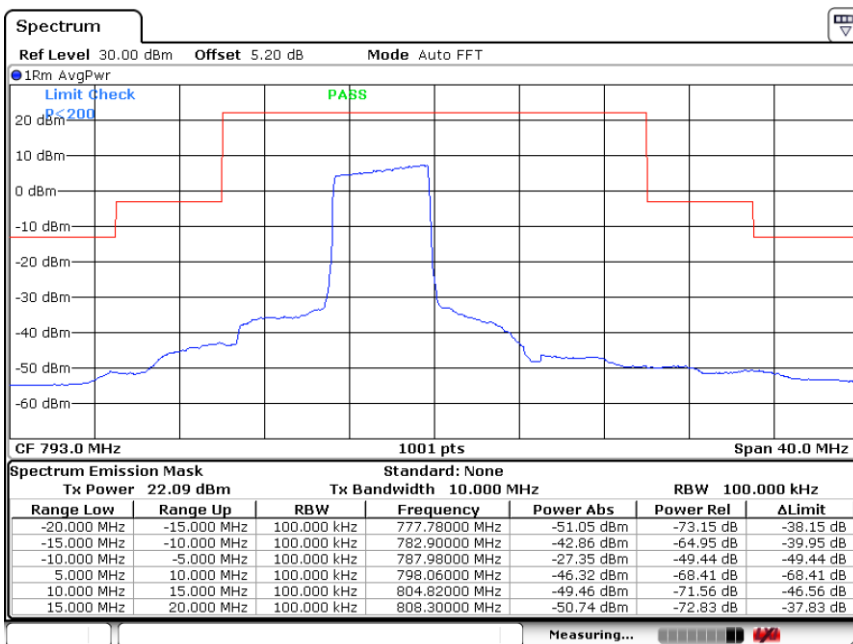


## Band14-5MHz-16QAM-23305-1RB#0



Date: 18.NOV.2020 10:41:15

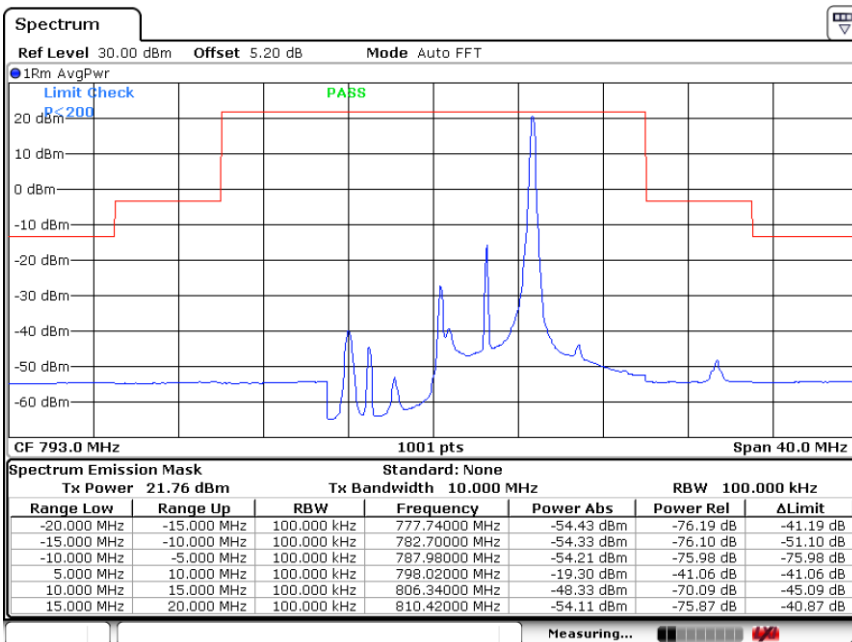
## Band14-5MHz-16QAM-23305-25RB#0



Date: 18.NOV.2020 10:41:34

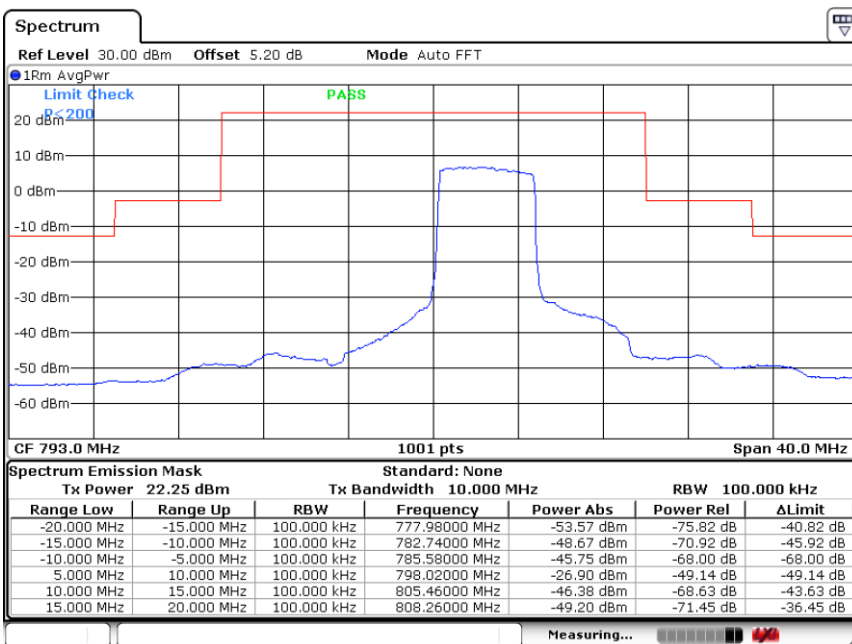


## Band14-5MHz-16QAM-23355-1RB#24



Date: 18.NOV.2020 10:42:45

## Band14-5MHz-16QAM-23355-25RB#0

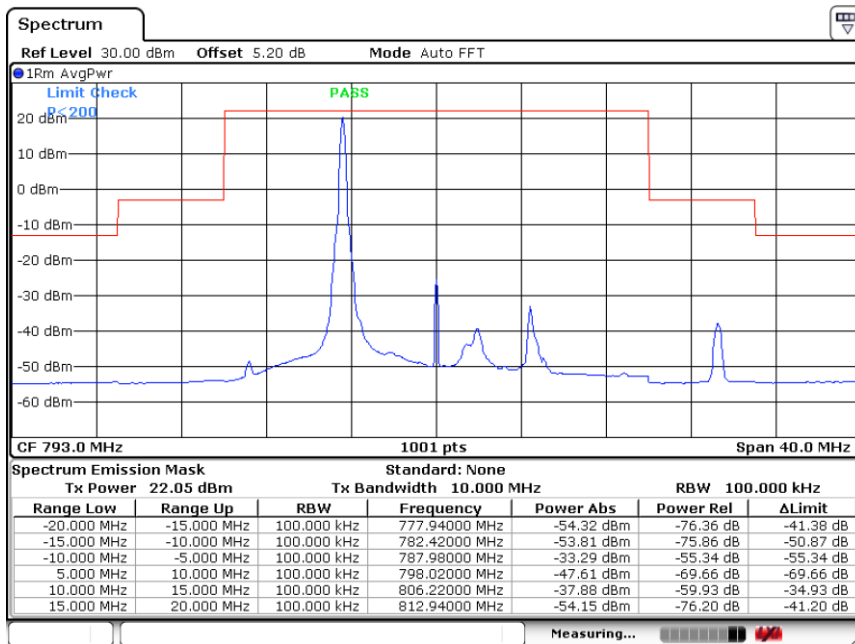


Date: 18.NOV.2020 10:42:23



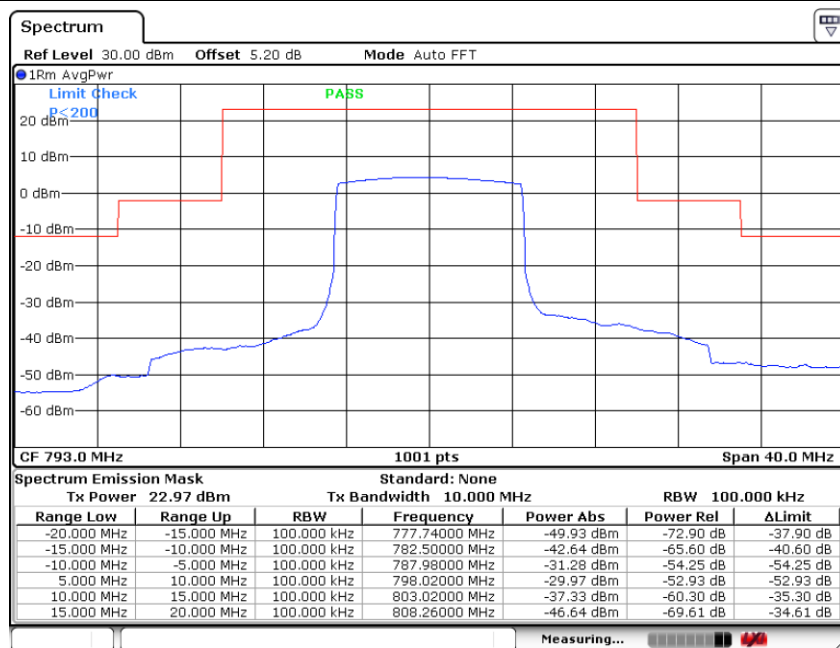


Band14-10MHz-QPSK-23330\_Left-1RB#0



Date: 18.NOV.2020 09:47:21

Band14-10MHz-QPSK-23330\_50RB#0



Date: 26.NOV.2020 17:45:19

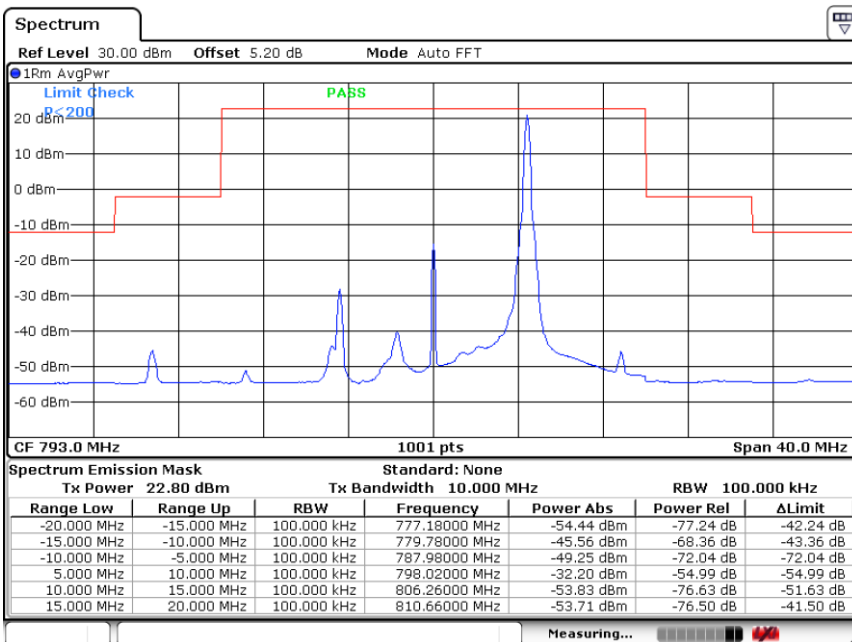


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



## Band14-10MHz-QPSK-23330\_Right-1RB#49

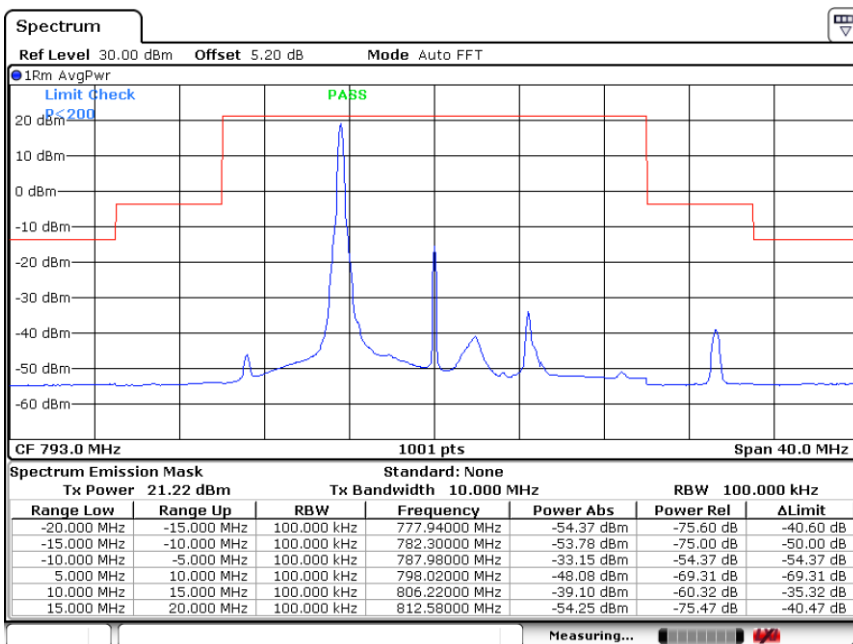


Date: 18.NOV.2020 10:40:19



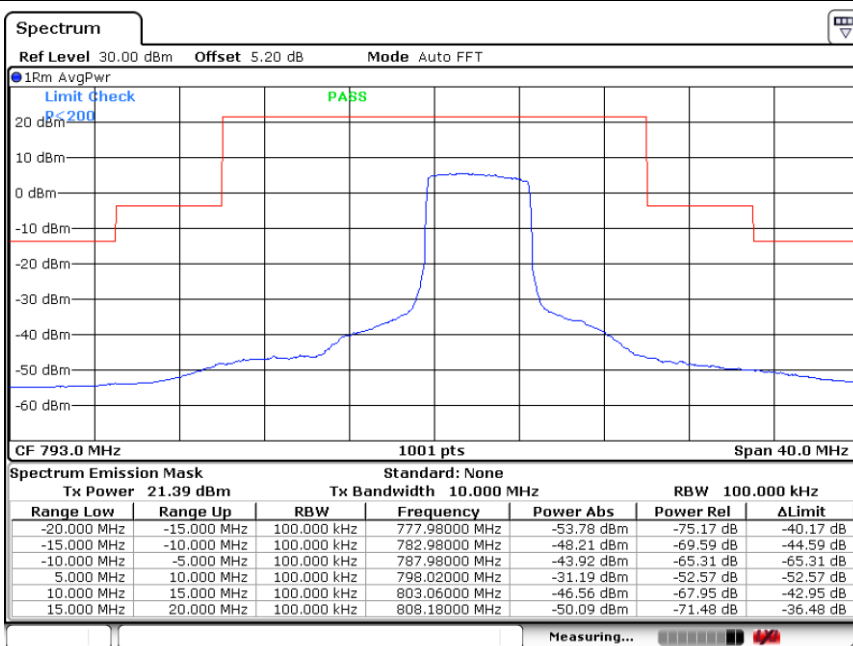


## Band14-10MHz-16QAM-23330\_Left-1RB#0



Date: 18.NOV.2020 10:39:08

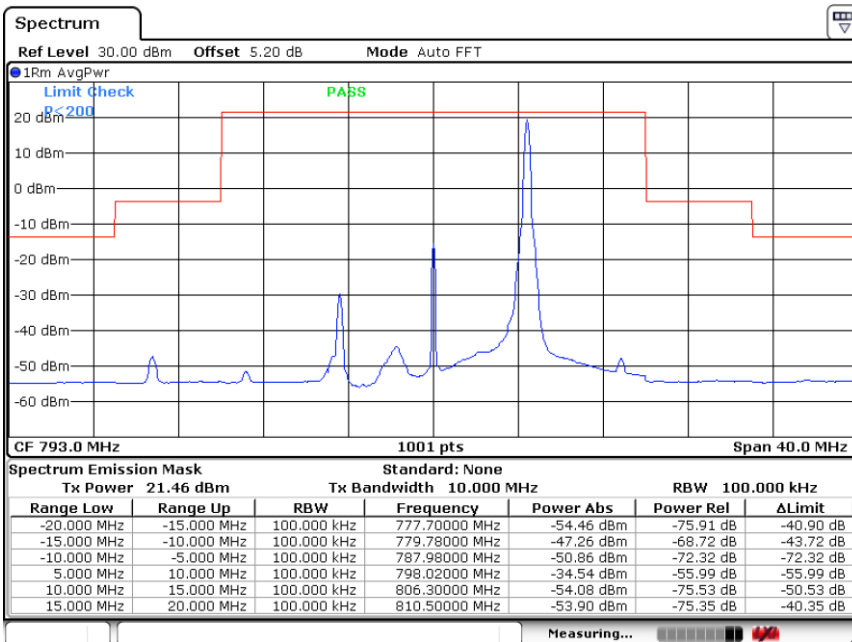
## Band14-10MHz-16QAM-23330\_27RB#0



Date: 18.NOV.2020 10:38:39



## Band14-10MHz-16QAM-23330\_Right-1RB#49



Date: 18.NOV.2020 10:39:32

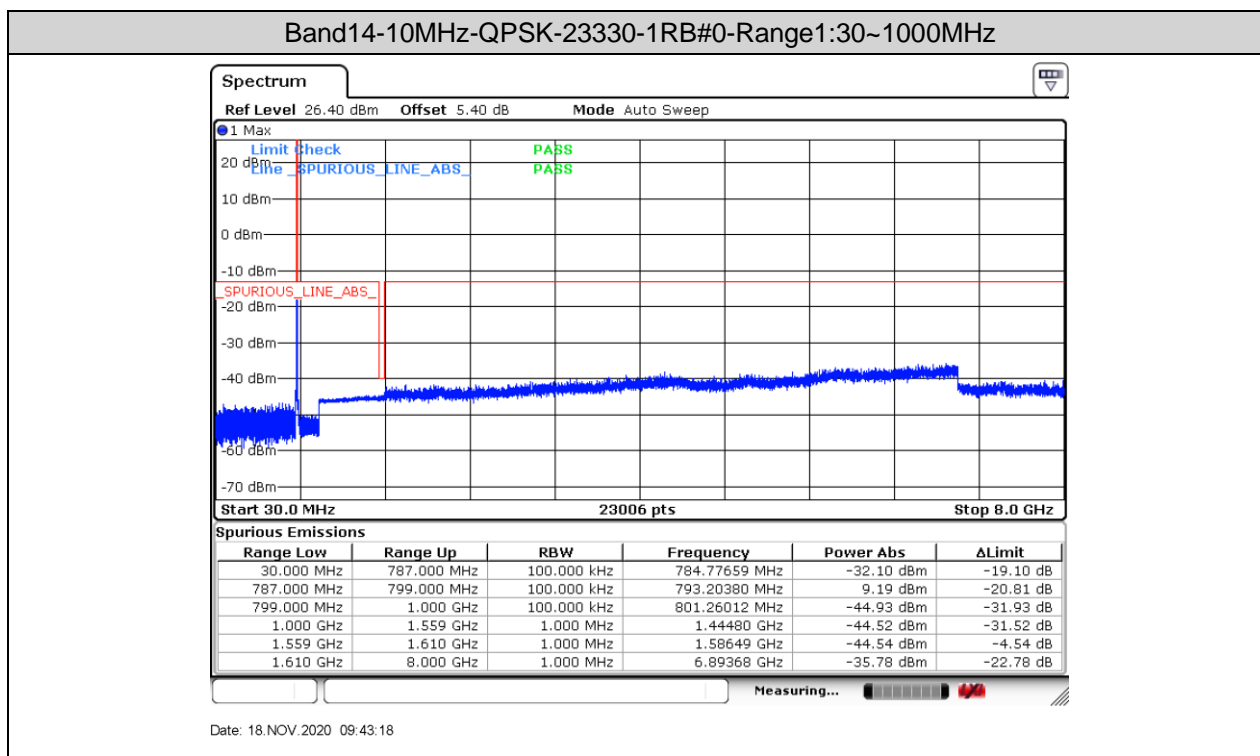


## 7 Spurious Emission at Antenna Terminal

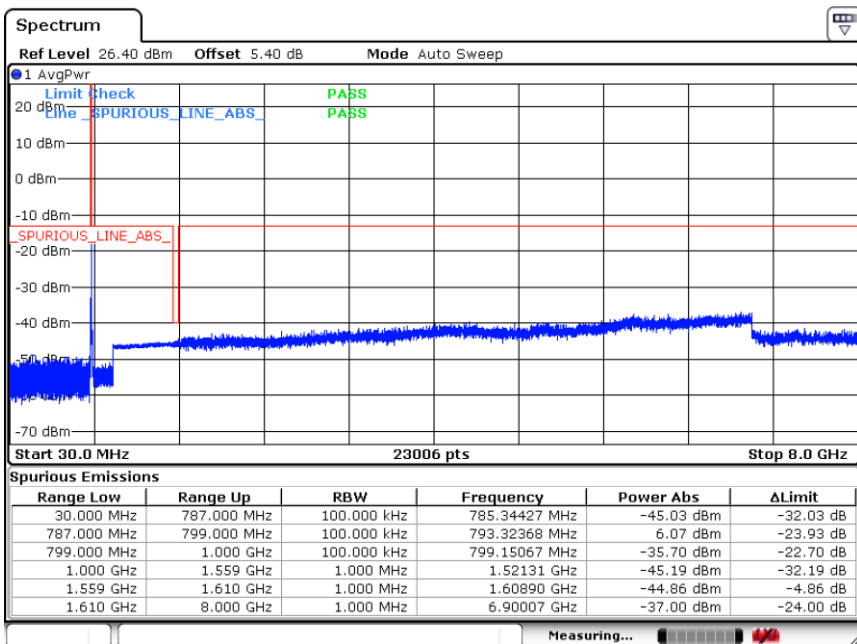
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points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

### 7.1 Test Plots



## Band14-10MHz-16QAM-23330-1RB#0-Range1:30~1000MHz



Date: 18.NOV.2020 10:38:03





## 8 Field Strength of Spurious Radiation

### 8.1 Test Mode =LTE/TM1 10MHz

#### 8.1.1 Test Channel = MCH

Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
46.1028	-57.75	-13.00	44.75	196	322	Horizontal
120.8450	-67.79	-13.00	54.79	122	301	Horizontal
236.7658	-66.93	-13.00	53.93	138	343	Horizontal
1577.3155	-57.82	-40.00	17.82	141	246	Horizontal
2365.8732	-37.50	-13.00	24.50	288	76	Horizontal
9323.7730	-52.65	-13.00	39.65	264	153	Horizontal
30.2910	-62.27	-13.00	49.27	116	111	Vertical
116.6738	-60.72	-13.00	47.72	138	323	Vertical
399.6855	-67.53	-13.00	54.53	229	281	Vertical
1576.9154	-58.63	-40.00	18.63	246	10	Vertical
2365.8732	-39.68	-13.00	26.68	132	334	Vertical
9806.2322	-52.79	-13.00	39.79	211	47	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.





## 9 Frequency Stability

### 9.1 Frequency Vs Voltage

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band14	10MHz	QPSK	23330	50RB#0	VL	NT	-0.30	-0.000378	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	VN	NT	0.40	0.000504	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	VH	NT	1.10	0.001387	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	VL	NT	0.10	0.000126	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	VN	NT	-0.30	-0.000378	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	VH	NT	0.30	0.000378	±2.5	PASS

### 9.2 Frequency Vs Temperature

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band14	10MHz	QPSK	23330	50RB#0	NV	-30	0.50	0.000631	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	-20	-0.50	-0.000631	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	0	-1.10	-0.001387	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	10	0.20	0.000252	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	20	-0.60	-0.000757	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	30	-0.60	-0.000757	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	40	-1.60	-0.002018	±2.5	PASS
Band14	10MHz	QPSK	23330	50RB#0	NV	50	-0.70	-0.000883	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	-30	-0.10	-0.000126	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	-20	-0.20	-0.000252	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	0	-2.00	-0.002522	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	10	1.30	0.001639	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	20	0.90	0.001135	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	30	0.00	0.000000	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	40	-0.80	-0.001009	±2.5	PASS
Band14	10MHz	16QAM	23330	27RB#0	NV	50	-2.00	-0.002522	±2.5	PASS

The End



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.

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

Member of the SGS Group (SGS SA)