

# Appendix B

## E-UTRA Band 13



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

**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>5</b>  |
| 2.1. TEST RESULT .....                                | 5         |
| 2.2. TEST PLOTS .....                                 | 5         |
| <b>3. 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. 26DB BANDWIDTH AND OCCUPIED BANDWIDTH .....</b> | <b>9</b>  |
| 4.1. TEST RESULT .....                                | 9         |
| 4.2. TEST PLOTS .....                                 | 9         |
| <b>5. BAND EDGE COMPLIANCE .....</b>                  | <b>14</b> |
| 5.1. TEST PLOTS .....                                 | 14        |
| <b>6. SPURIOUS EMISSION AT ANTENNA TERMINAL .....</b> | <b>23</b> |
| 6.1. TEST PLOTS .....                                 | 23        |
| <b>7. FIELD STRENGTH OF SPURIOUS RADIATION .....</b>  | <b>25</b> |
| 7.1. TEST MODE =LTE/TM1 10MHz .....                   | 25        |
| 7.1.1. TEST CHANNEL = MCH .....                       | 25        |
| <b>8. FREQUENCY STABILITY .....</b>                   | <b>26</b> |
| 8.1. FREQUENCY Vs VOLTAGE .....                       | 26        |
| 8.2. FREQUENCY Vs TEMPERATURE .....                   | 26        |



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)**

# 1 Effective (Isotropic) Radiated Power

## 1.1. Test Result

| Band   | Bandwidth | Modulation | Channel | RB Config. | Result (dBm) | ERP (dBm) | Limit (dBm) | Verdict |
|--------|-----------|------------|---------|------------|--------------|-----------|-------------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#0      | 23.24        | 13.59     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#12     | 23.22        | 13.57     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 1RB#24     | 23.1         | 13.45     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 12RB#0     | 22.34        | 12.69     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 12RB#6     | 22.32        | 12.67     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 12RB#13    | 22.33        | 12.68     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23205   | 25RB#0     | 22.37        | 12.72     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#0      | 23.02        | 13.37     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#12     | 23.31        | 13.66     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 1RB#24     | 23.43        | 13.78     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 12RB#0     | 22.34        | 12.69     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 12RB#6     | 22.3         | 12.65     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 12RB#13    | 22.38        | 12.73     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 25RB#0     | 22.36        | 12.71     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#0      | 22.94        | 13.29     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#12     | 23.39        | 13.74     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 1RB#24     | 22.96        | 13.31     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 12RB#0     | 22.26        | 12.61     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 12RB#6     | 22.26        | 12.61     | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 12RB#13    | 22.15        | 12.5      | 34.77       | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 25RB#0     | 22.23        | 12.58     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#0      | 22.09        | 12.44     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#12     | 22.13        | 12.48     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 1RB#24     | 22.04        | 12.39     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 12RB#0     | 21.5         | 11.85     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 12RB#6     | 21.47        | 11.82     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 12RB#13    | 21.27        | 11.62     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 25RB#0     | 21.15        | 11.5      | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#0      | 22.14        | 12.49     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#12     | 21.88        | 12.23     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 1RB#24     | 22.49        | 12.84     | 34.77       | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 12RB#0     | 21.24        | 11.59     | 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 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 | (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)

|        |       |       |       |         |       |       |       |      |
|--------|-------|-------|-------|---------|-------|-------|-------|------|
| Band13 | 5MHz  | 16QAM | 23230 | 12RB#6  | 21.41 | 11.76 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23230 | 12RB#13 | 21.33 | 11.68 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23230 | 25RB#0  | 21.36 | 11.71 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 1RB#0   | 22.02 | 12.37 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 1RB#12  | 22.24 | 12.59 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 1RB#24  | 21.91 | 12.26 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 12RB#0  | 21.22 | 11.57 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 12RB#6  | 21.25 | 11.6  | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 12RB#13 | 21.08 | 11.43 | 34.77 | PASS |
| Band13 | 5MHz  | 16QAM | 23255 | 25RB#0  | 21.04 | 11.39 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 1RB#0   | 23.41 | 13.76 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 1RB#24  | 23.57 | 13.92 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 1RB#49  | 23.12 | 13.47 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 25RB#0  | 22.33 | 12.68 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 25RB#12 | 22.23 | 12.58 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 25RB#25 | 22.34 | 12.69 | 34.77 | PASS |
| Band13 | 10MHz | QPSK  | 23230 | 50RB#0  | 22.37 | 12.72 | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#0   | 22.43 | 12.78 | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#24  | 22.56 | 12.91 | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 1RB#49  | 22.25 | 12.6  | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 25RB#0  | 21.37 | 11.72 | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 25RB#12 | 21.51 | 11.86 | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 25RB#25 | 21.36 | 11.71 | 34.77 | PASS |
| Band13 | 10MHz | 16QAM | 23230 | 50RB#0  | 21.1  | 11.45 | 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-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 Inspection & Testing Services Laboratory

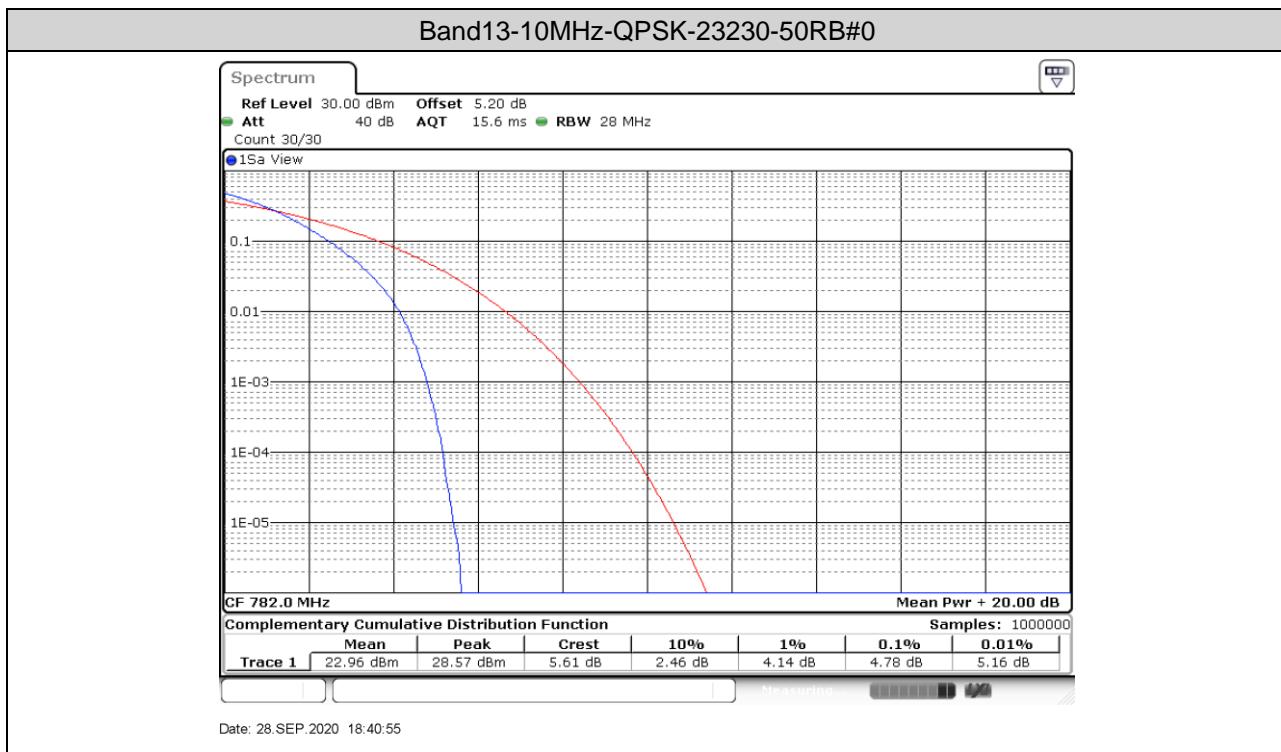
| No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (86-755) 26012053 f (86-755) 26710594 | [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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

### 2.1. Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|--------|-----------|------------|---------|------------------|------------|-----------|---------|
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0           | 4.78       | 13        | PASS    |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0           | 5.57       | 13        | PASS    |

### 2.2. Test Plots

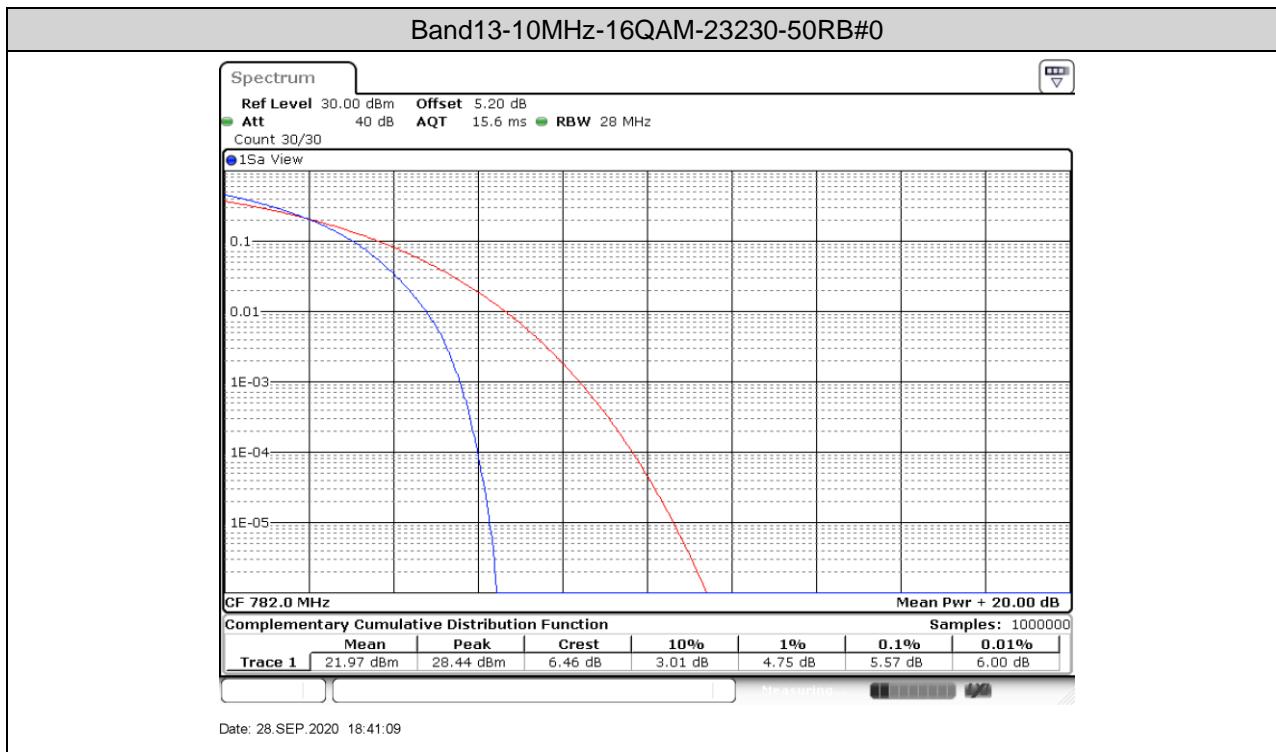


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



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)



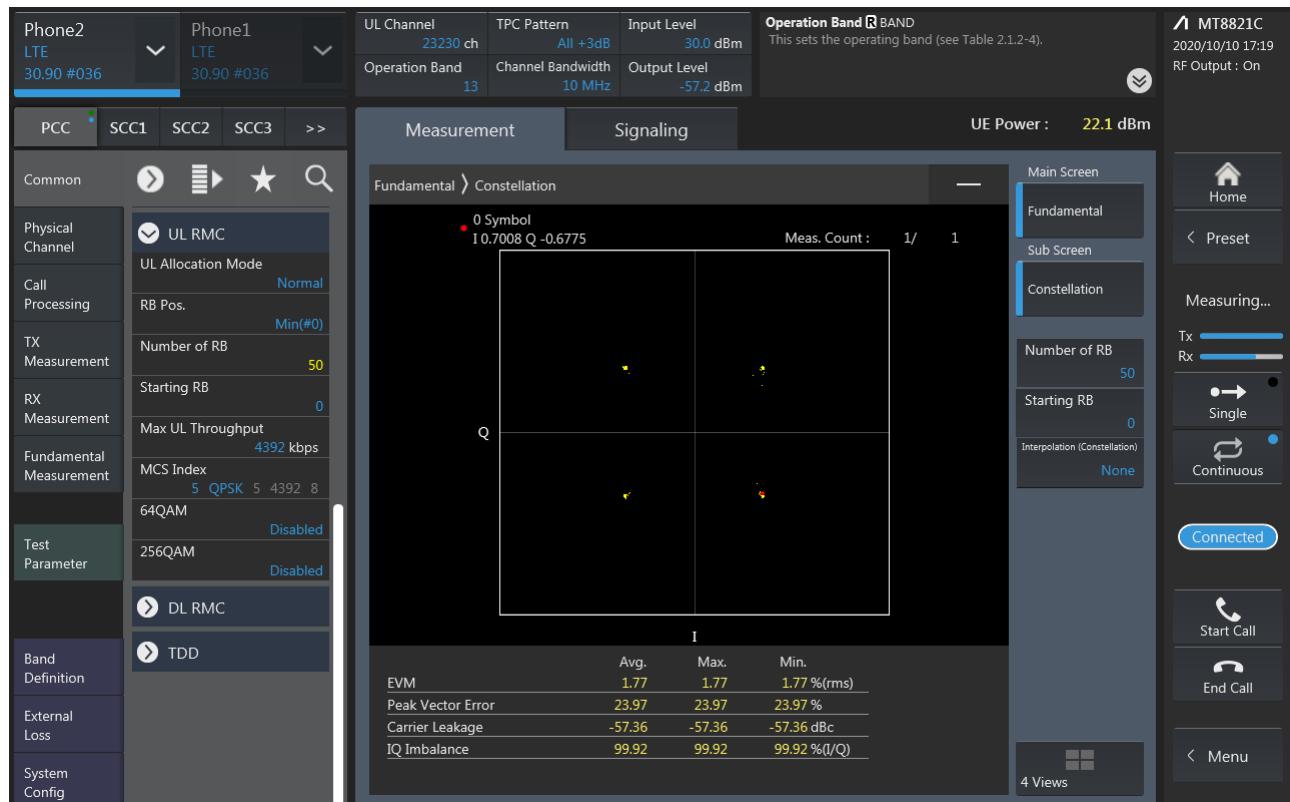
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Inspection & Testing Services Laboratory

| No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (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 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

### 3. Modulation Characteristics

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

##### 3.1.1. Test Channel = MCH



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)

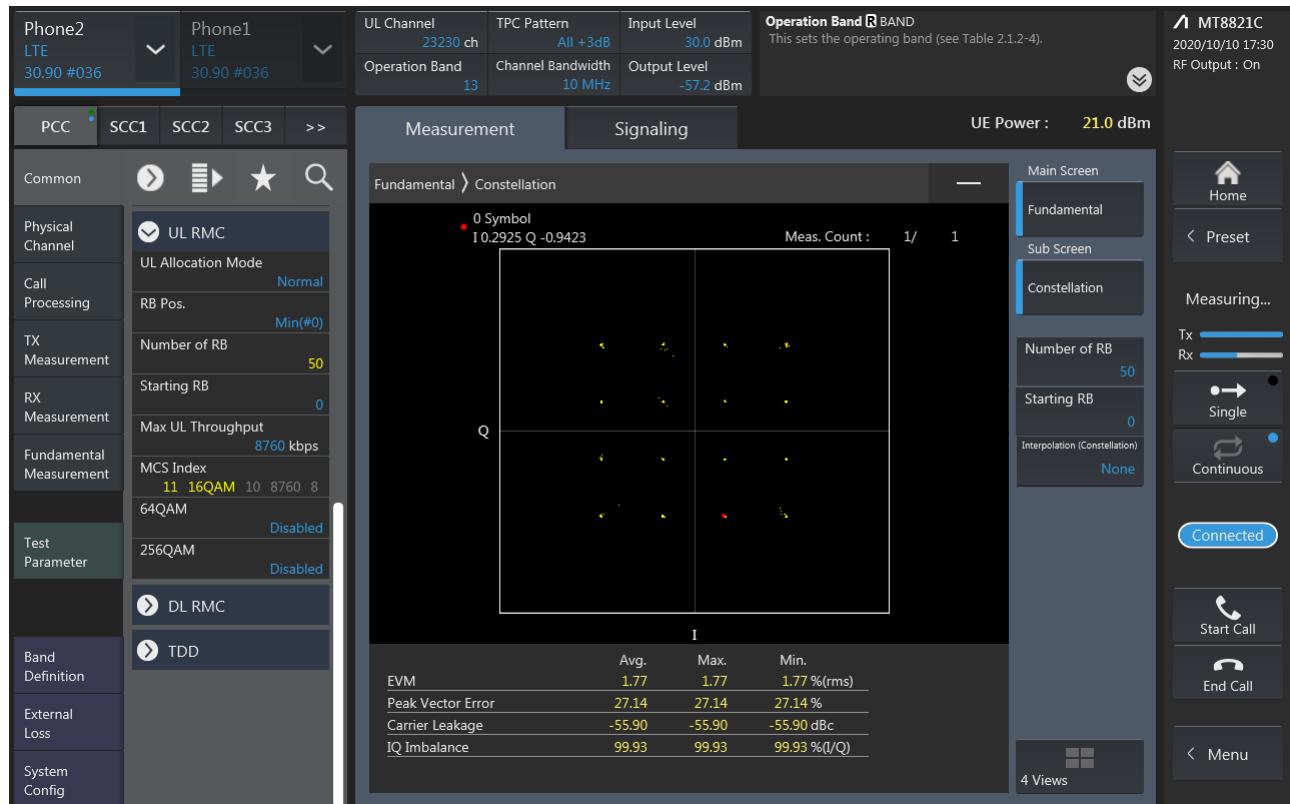


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Inspection & Testing Services Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (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 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 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 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 Inspection & Testing Services Laboratory

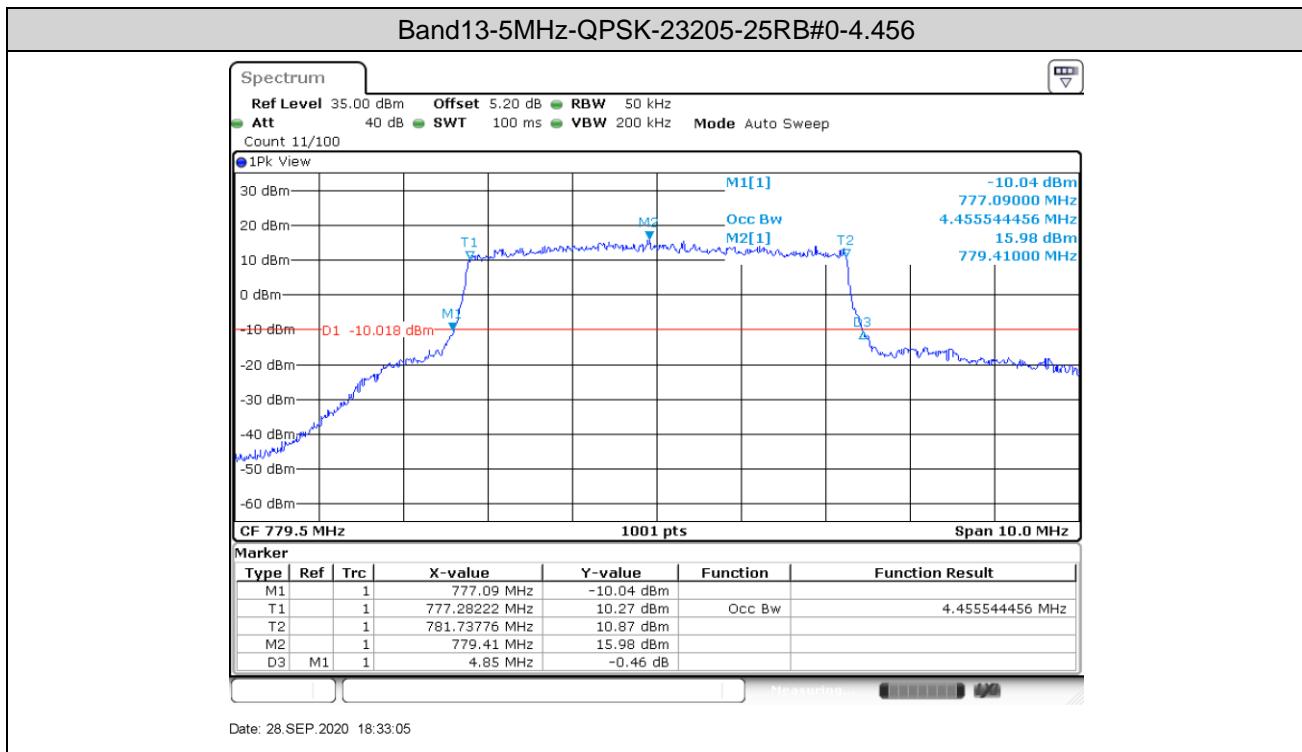
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (86-755) 26012053 f (86-755) 26710594 | [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 | 邮编: 518057 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 4. 26dB Bandwidth and Occupied Bandwidth

### 4.1. Test Result

| Band   | Bandwidth | Modulation | Channel | RB Configuration | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|--------|-----------|------------|---------|------------------|--------------------------|----------------------|---------|
| Band13 | 5MHz      | QPSK       | 23205   | 25RB#0           | 4.456                    | 4.850                | PASS    |
| Band13 | 5MHz      | QPSK       | 23230   | 25RB#0           | 4.486                    | 4.940                | PASS    |
| Band13 | 5MHz      | QPSK       | 23255   | 25RB#0           | 4.446                    | 4.830                | PASS    |
| Band13 | 5MHz      | 16QAM      | 23205   | 25RB#0           | 4.466                    | 4.900                | PASS    |
| Band13 | 5MHz      | 16QAM      | 23230   | 25RB#0           | 4.505                    | 4.980                | PASS    |
| Band13 | 5MHz      | 16QAM      | 23255   | 25RB#0           | 4.456                    | 4.890                | PASS    |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0           | 8.891                    | 9.600                | PASS    |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0           | 8.891                    | 9.680                | PASS    |

### 4.2. Test Plots

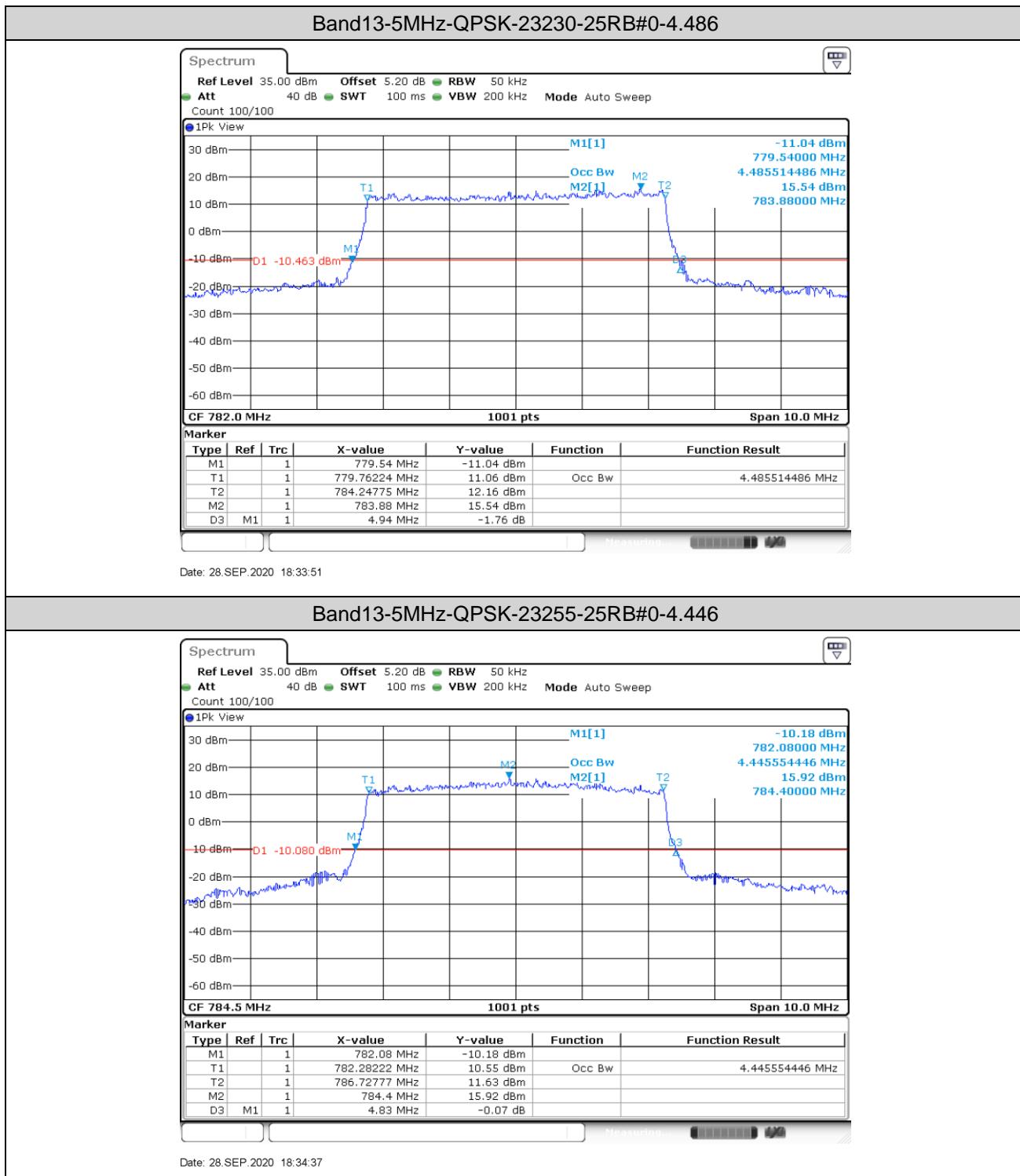


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



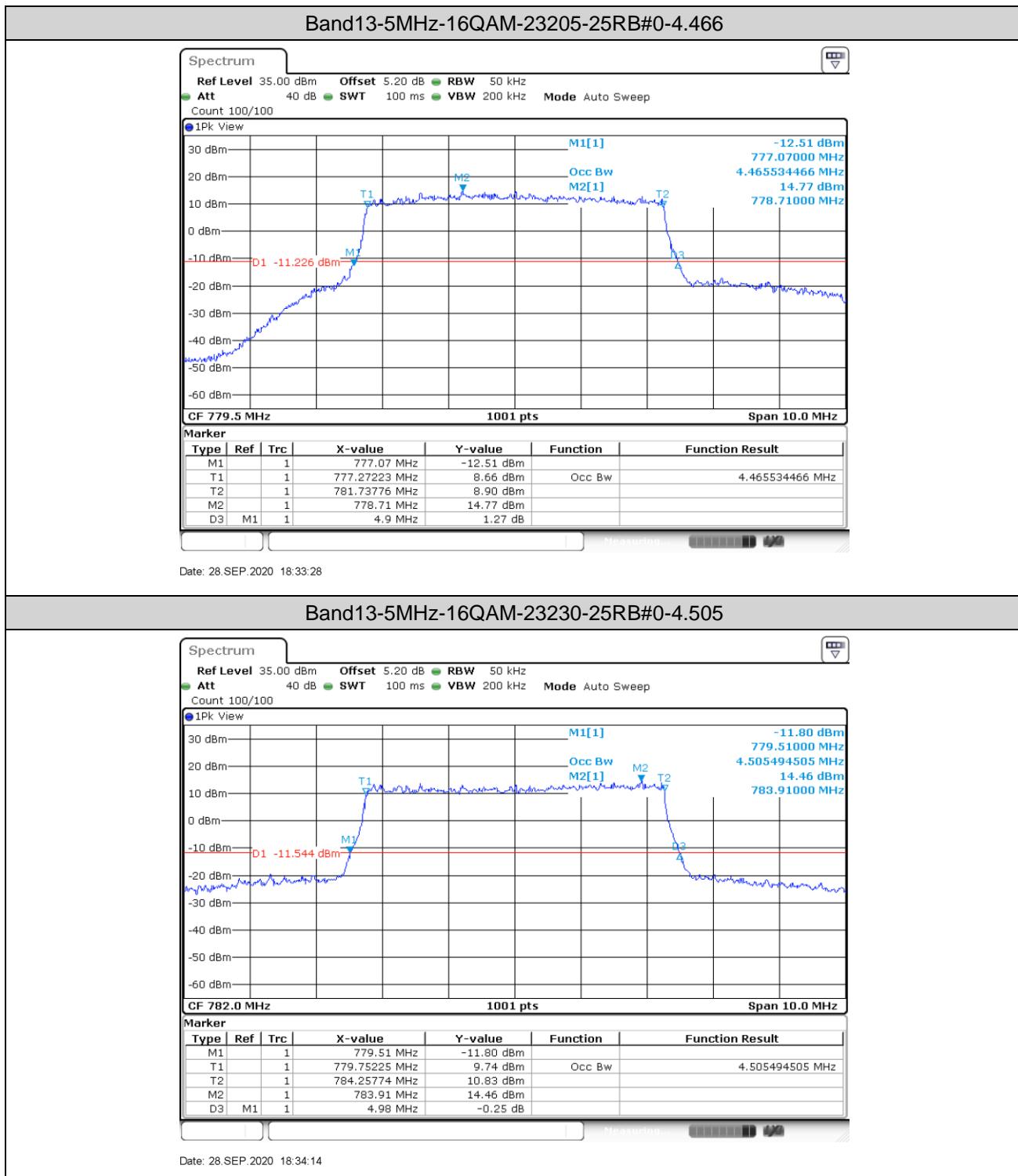
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



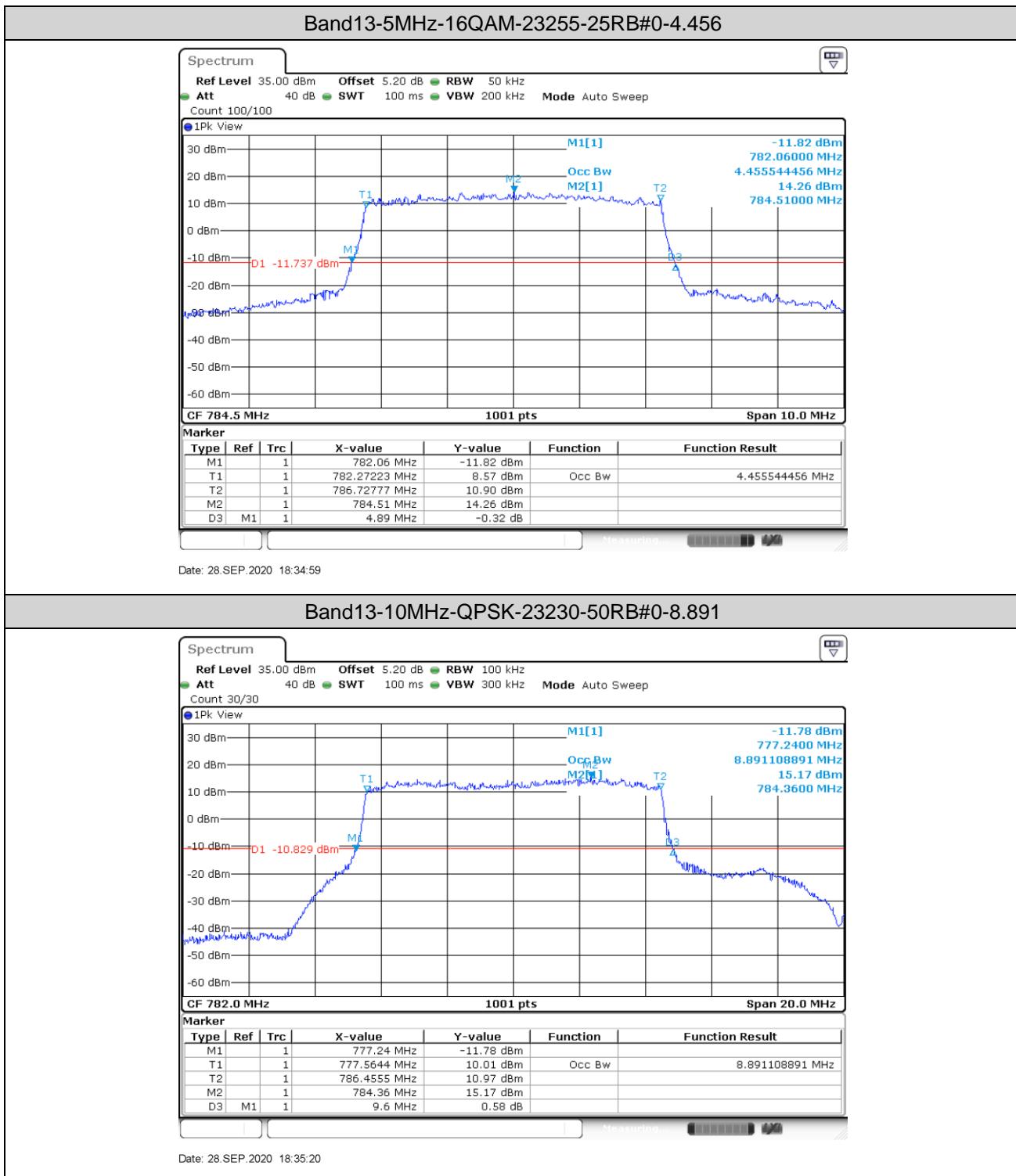
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

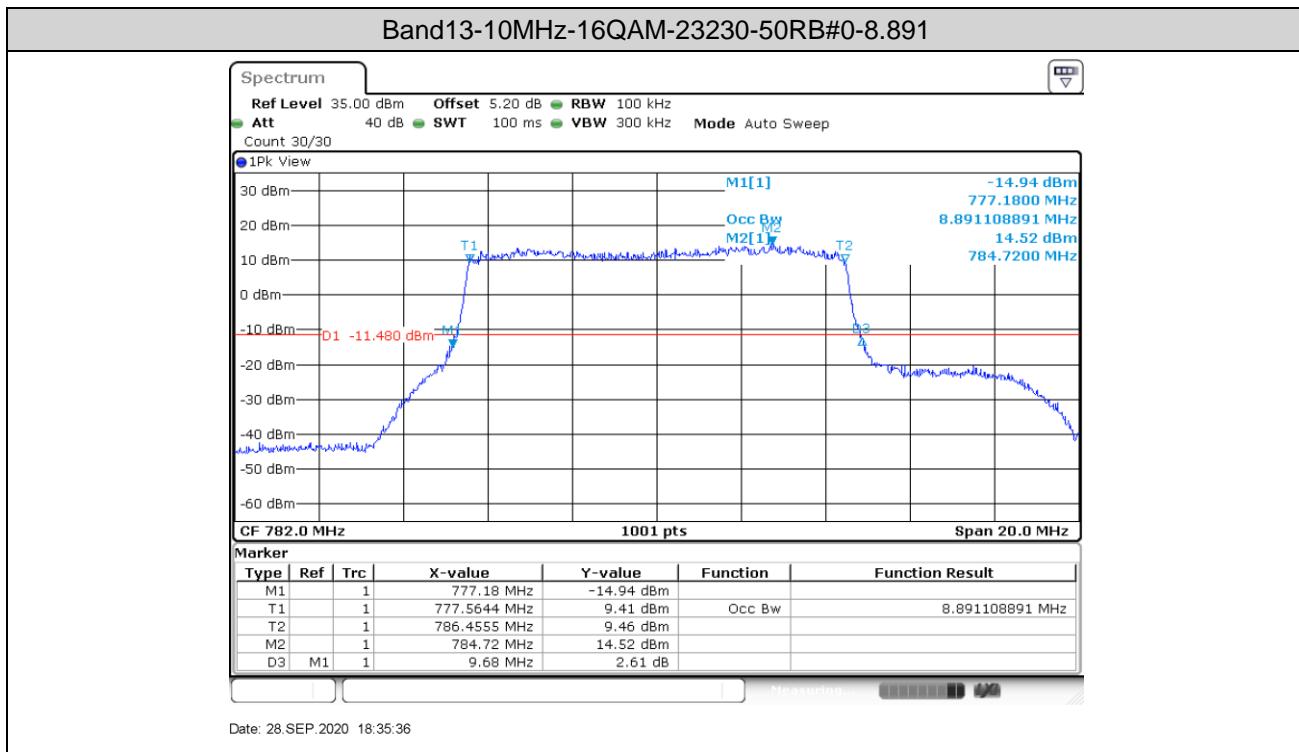


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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



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)

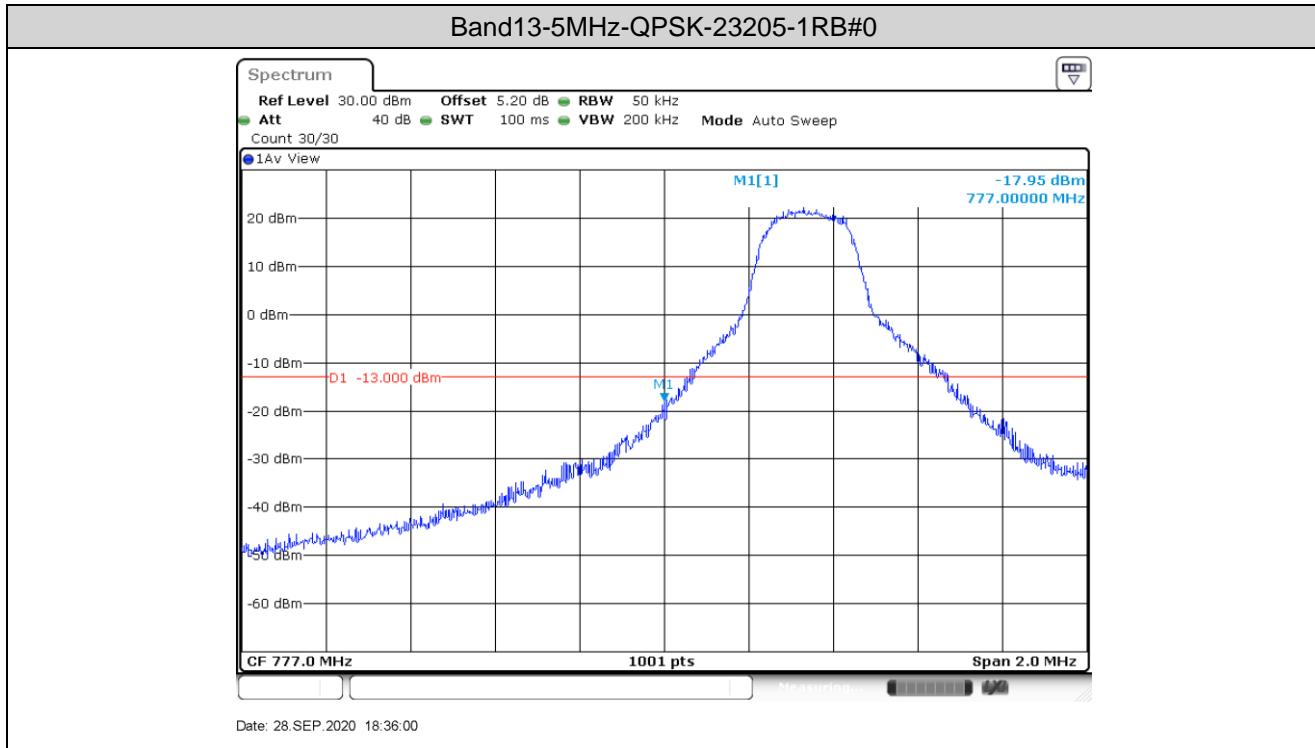


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Inspection & Testing Services Laboratory

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](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)

## 5. Band Edge Compliance

### 5.1. 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-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.

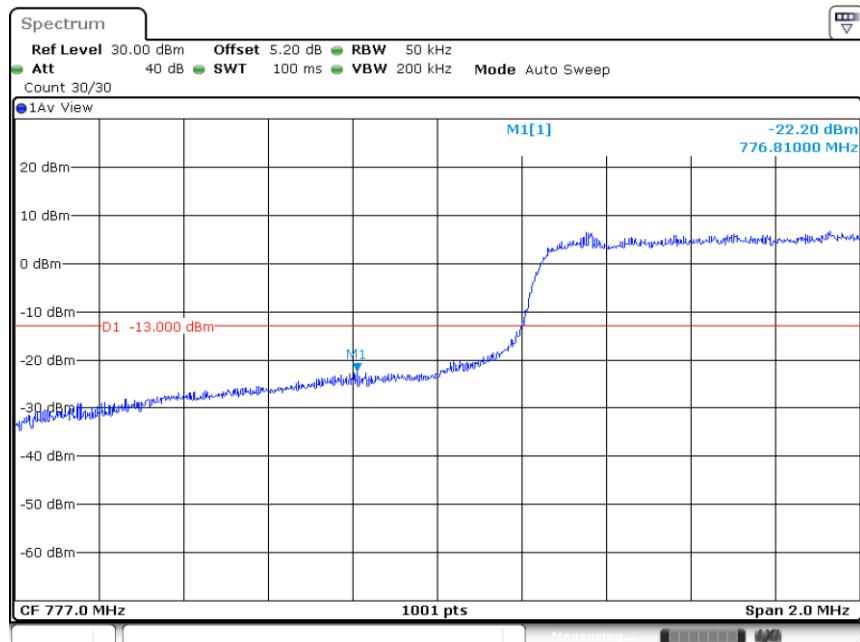
**Attention:** To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)



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

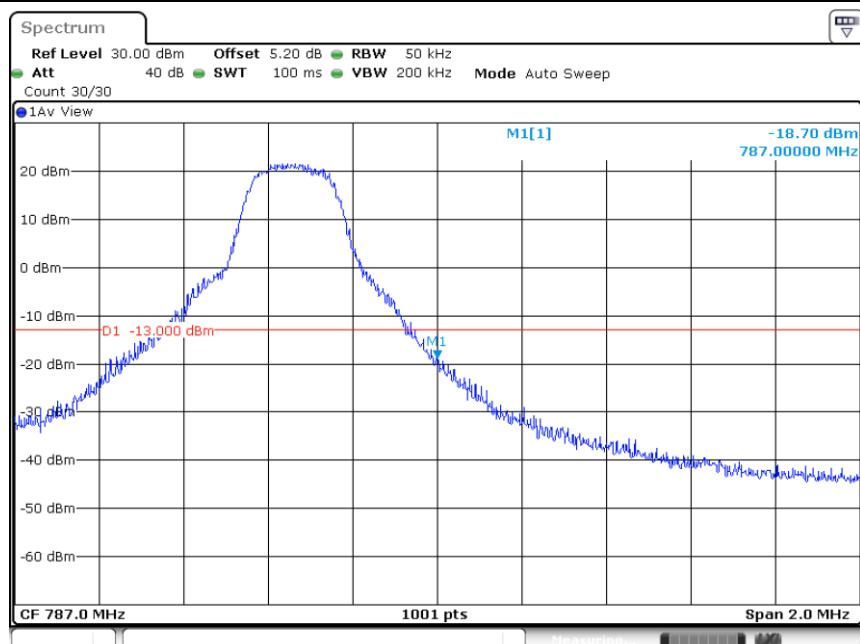
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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



Date: 28.SEP.2020 18:36:33

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



Date: 28.SEP.2020 18:37:14

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-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.

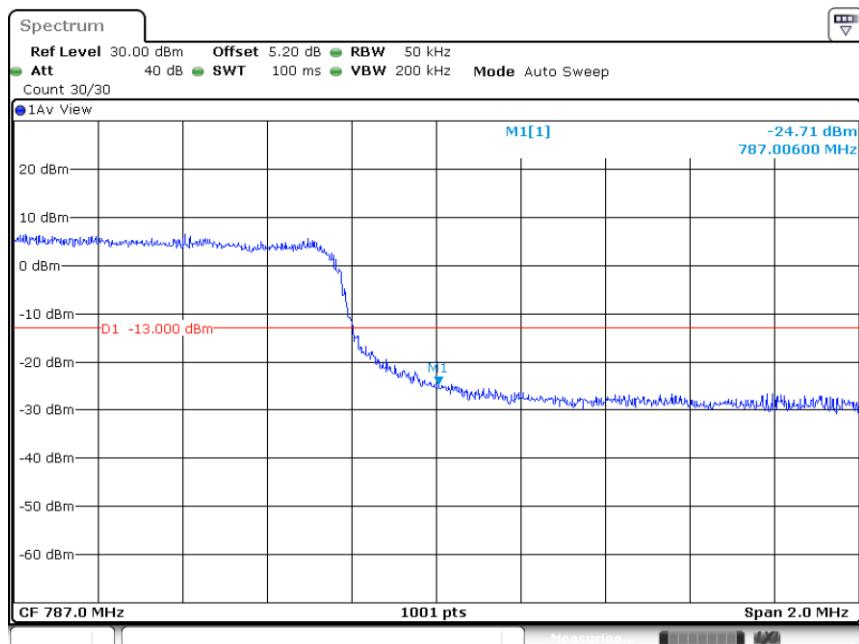
**Attention:** To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)



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

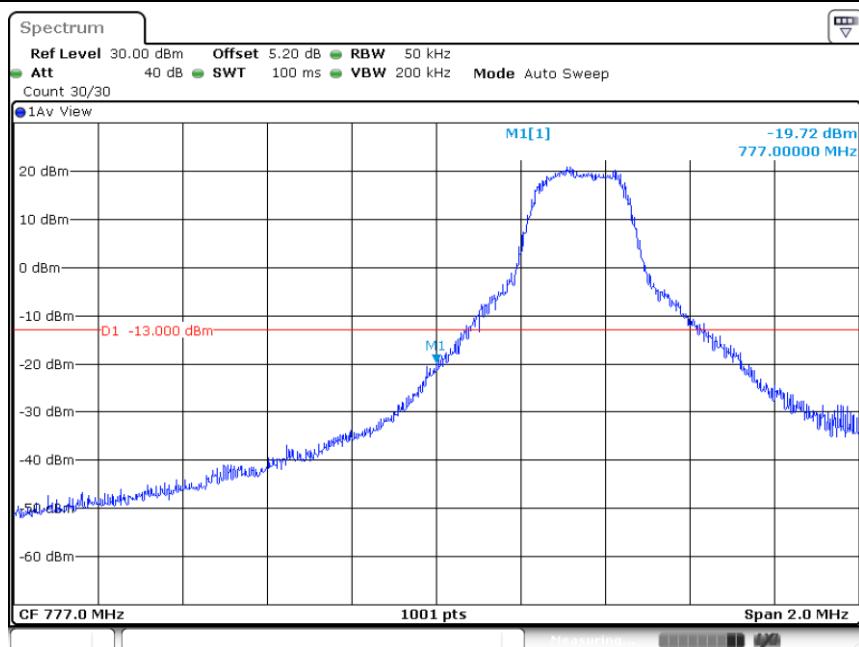
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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



Date: 28.SEP.2020 18:37:47

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



Date: 28.SEP.2020 18:36:17

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.

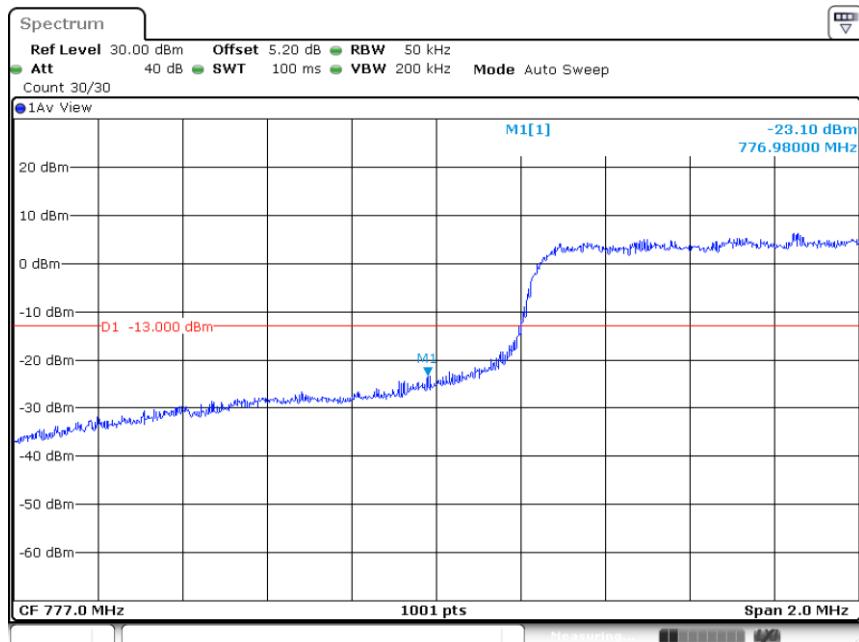
**Attention:** To check the authenticity of testing /Inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)



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

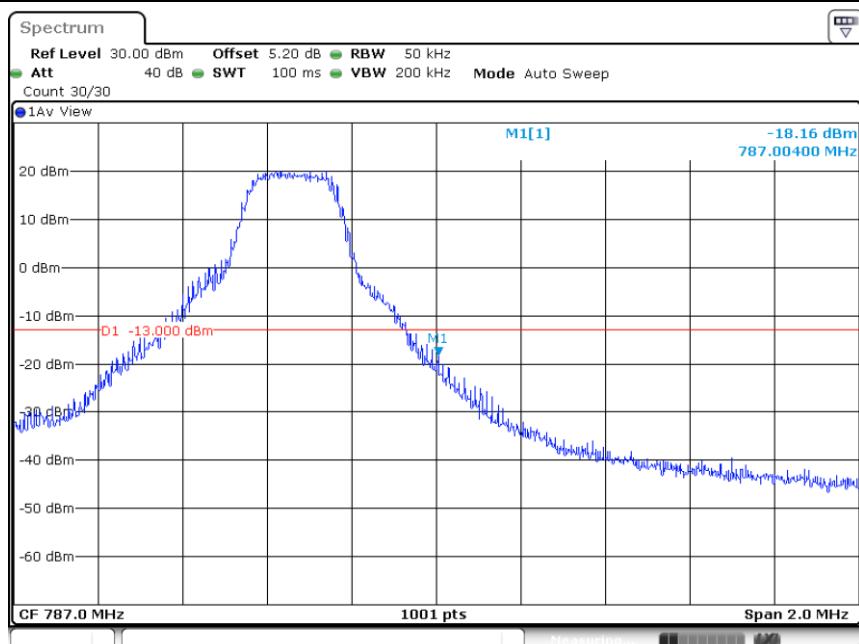
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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



Date: 28.SEP.2020 18:36:50

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



Date: 28.SEP.2020 18:37:30

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.

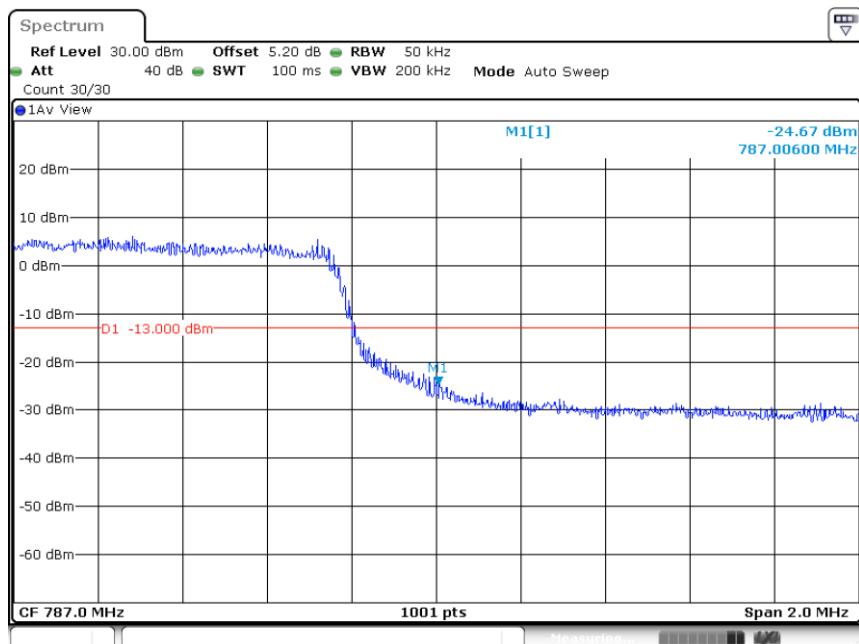
**Attention:** To check the authenticity of testing /Inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)



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

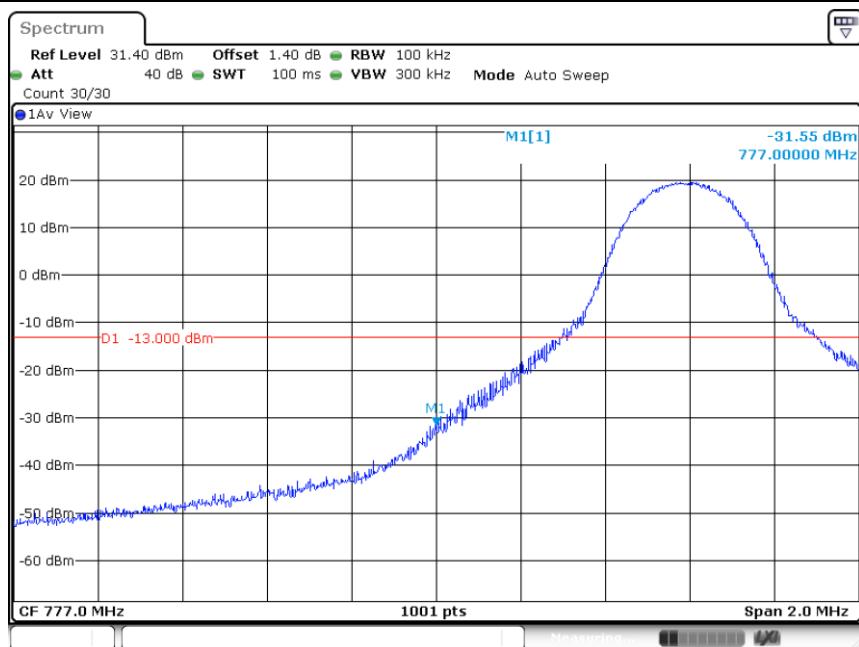
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 | (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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



Date: 28.SEP.2020 18:38:03

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



Date: 12.OCT.2020 14:07:51

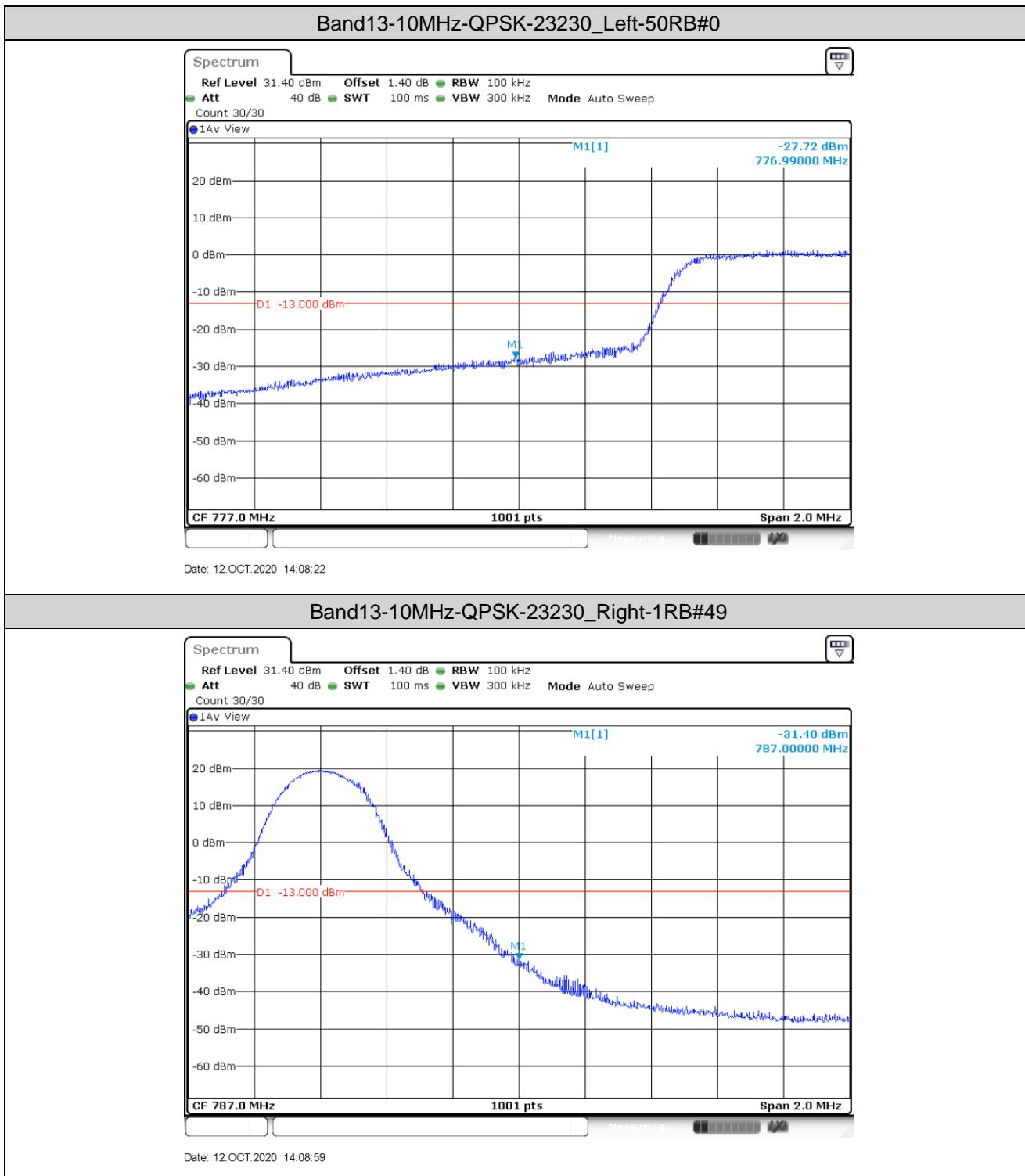
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (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 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto: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-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.

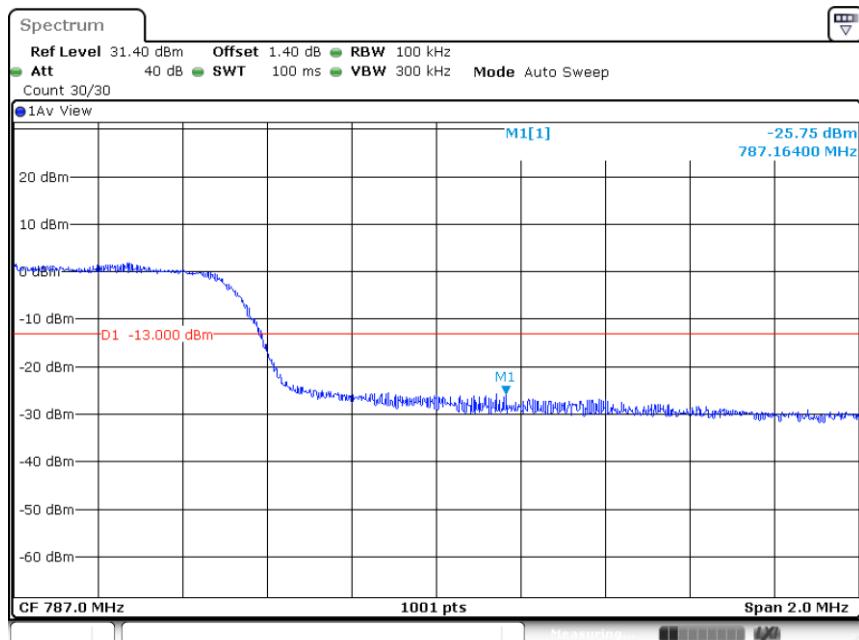
**Attention:** To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)



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

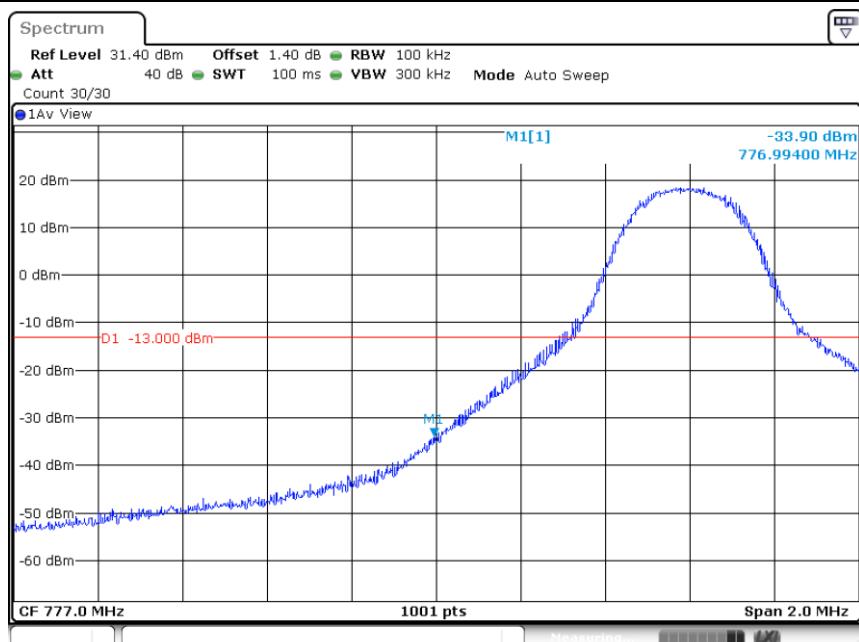
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (86-755) 26012053 f (86-755) 26710594 | [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 | 邮编: 518057 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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



Date: 12.OCT.2020 14:09:30

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



Date: 12.OCT.2020 14:08:06

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.

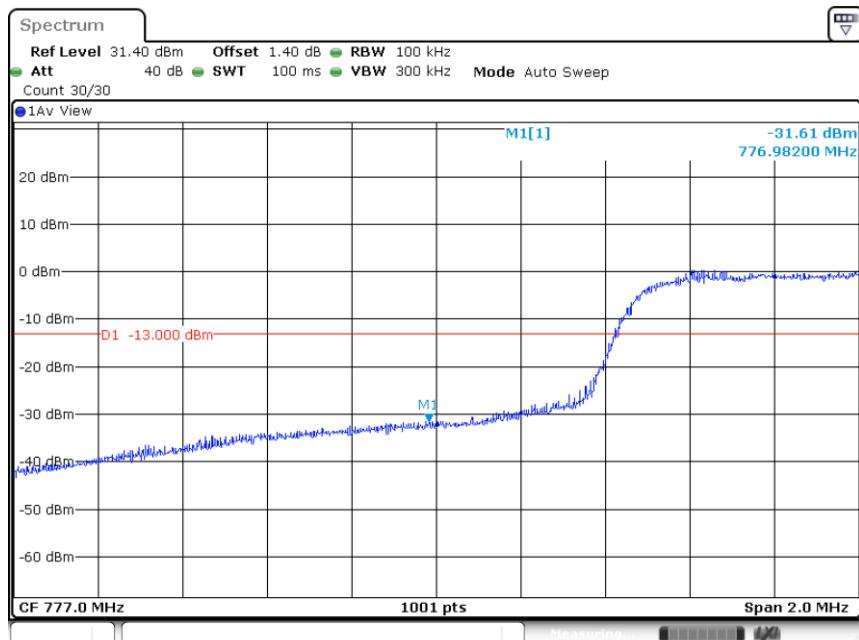
**Attention:** To check the authenticity of testing /Inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)



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

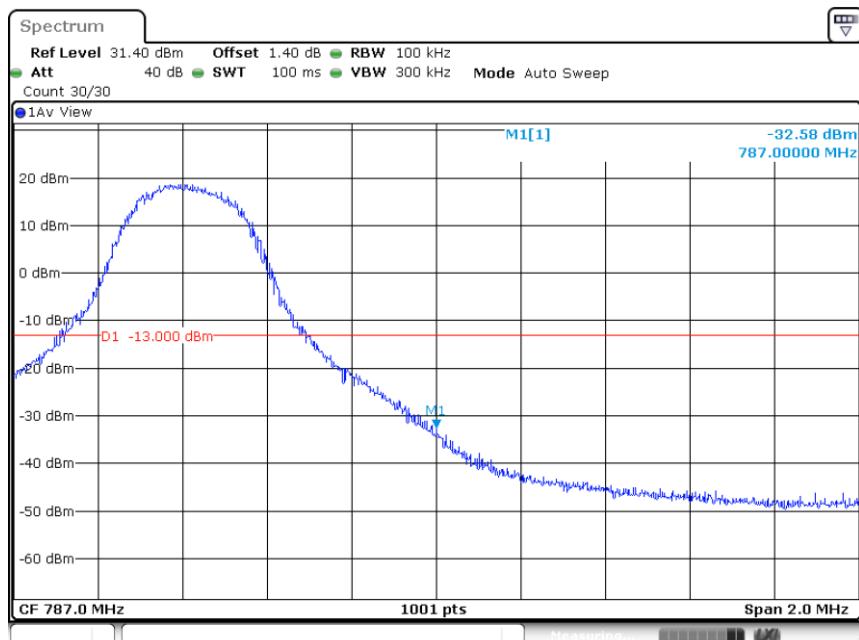
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

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



Date: 12.OCT.2020 14:08:38

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



Date: 12.OCT.2020 14:09:15

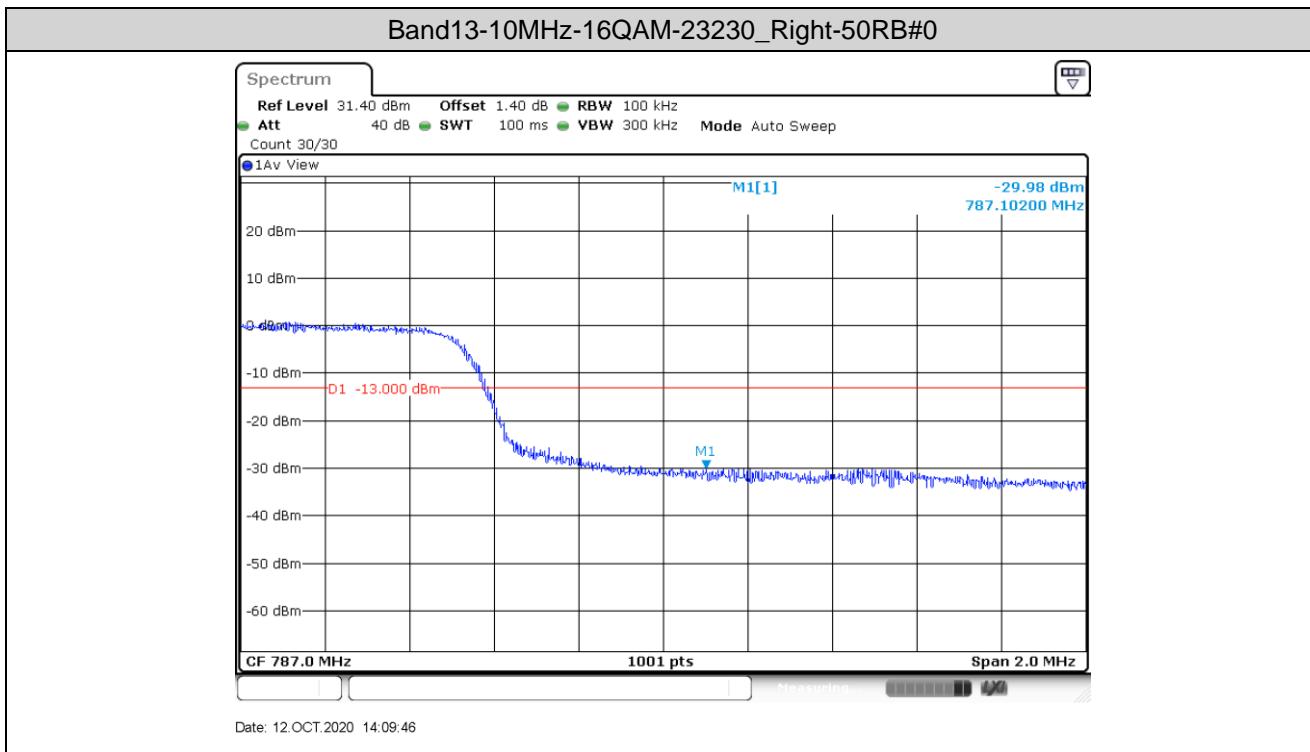
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (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)



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 Inspection & Testing Services Laboratory

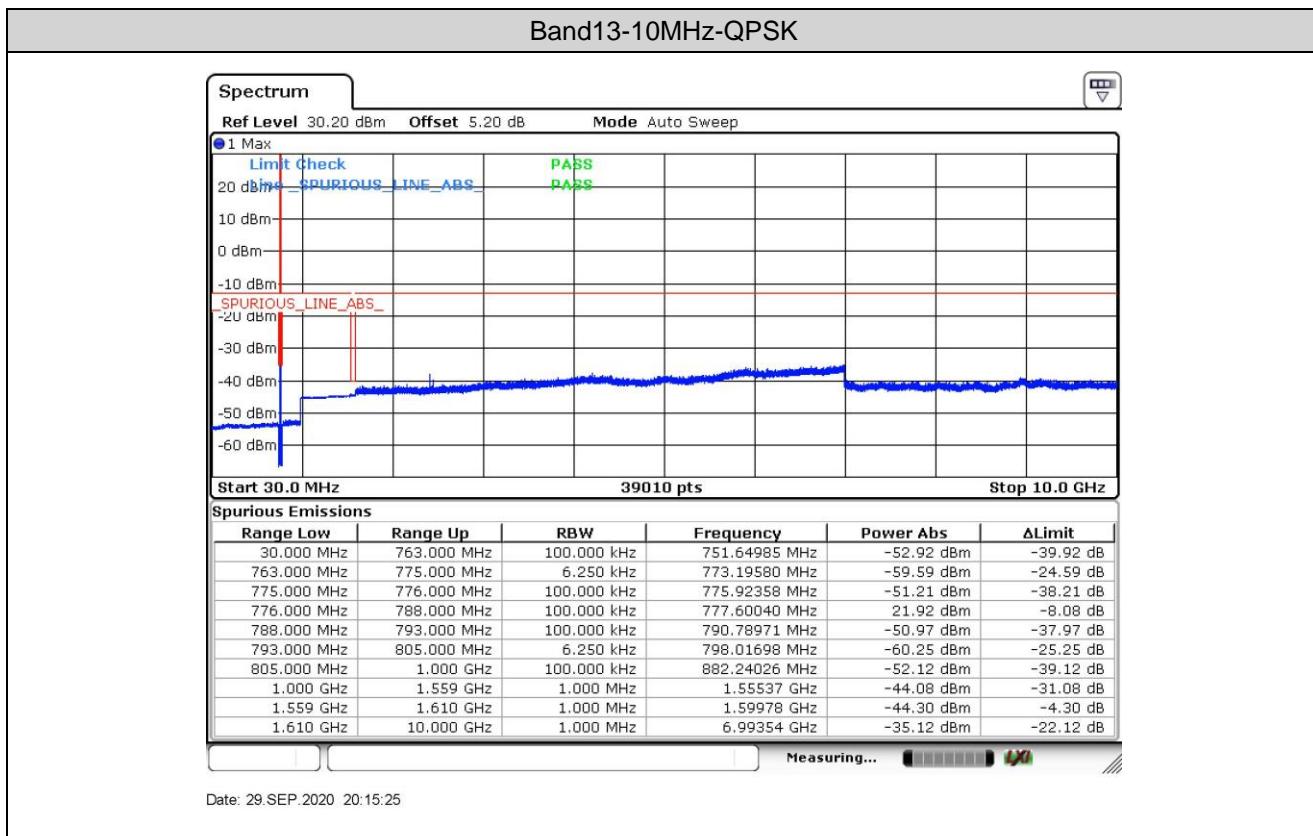
| No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (86-755) 26012053 f (86-755) 26710594 | [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 | (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 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  $< \text{RBW}/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (\text{Span} / \text{RBW})$ " 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



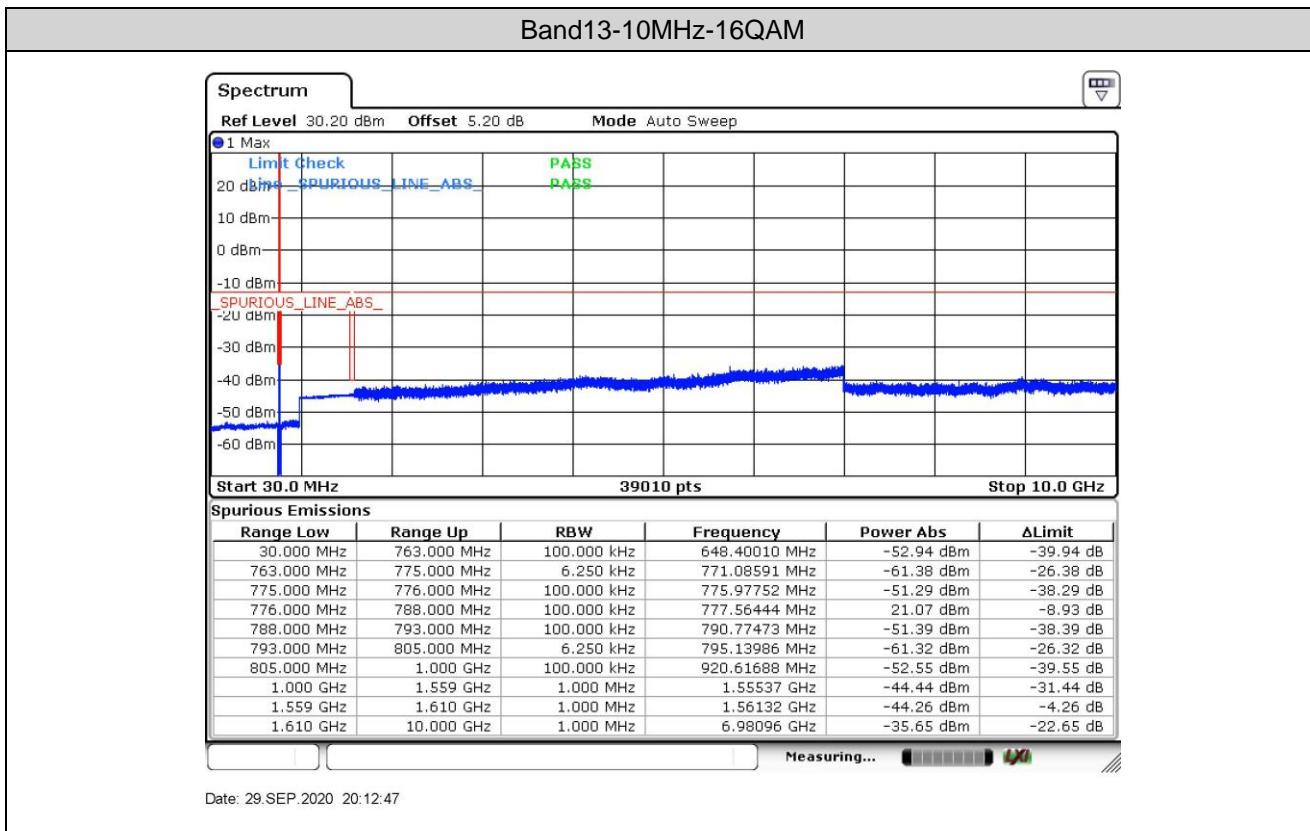
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

| No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (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-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 Inspection & Testing Services 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](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)

## 7. Field Strength of Spurious Radiation

### 7.1. Test Mode =LTE/TM1 10MHz

#### 7.1.1. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Height [cm] | Angle [°] | Polarization |
|-----------------|-------------|------------------|-------------|-------------|-----------|--------------|
| 30.6305         | -72.66      | -13.00           | 59.66       | 282         | 89        | Vertical     |
| 108.4769        | -65.10      | -13.00           | 52.10       | 233         | 346       | Vertical     |
| 303.1172        | -69.84      | -13.00           | 56.84       | 196         | 239       | Vertical     |
| 1582.9166       | -65.07      | -40.00           | 25.07       | 143         | 70        | Vertical     |
| 2332.6665       | -57.58      | -13.00           | 44.58       | 178         | 174       | Vertical     |
| 9912.3565       | -52.57      | -13.00           | 39.57       | 152         | 47        | Vertical     |
| 44.4537         | -64.97      | -13.00           | 51.97       | 199         | 175       | Horizontal   |
| 104.9847        | -75.75      | -13.00           | 62.75       | 153         | 112       | Horizontal   |
| 249.5705        | -68.35      | -13.00           | 55.35       | 252         | 197       | Horizontal   |
| 1586.9174       | -64.99      | -40.00           | 24.99       | 117         | 298       | Horizontal   |
| 2463.0926       | -56.21      | -13.00           | 43.21       | 186         | 293       | Horizontal   |
| 9322.3729       | -52.84      | -13.00           | 39.84       | 131         | 154       | Horizontal   |

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-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 Inspection & Testing Services Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 | (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 | (86-755) 26012053 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 8. Frequency Stability

### 8.1. Frequency Vs Voltage

| Band   | Bandwidth | Modulation | Channel | RB Configure | Voltage       |                  |                |                 |             |      | Verdict |
|--------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|------|---------|
|        |           |            |         |              | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) |      |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | VL            | NT               | -0.10          | -0.000128       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | VN            | NT               | -7.70          | -0.009847       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | VH            | NT               | 0.50           | 0.000639        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | VL            | NT               | -0.90          | -0.001151       | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | VN            | NT               | 0.50           | 0.000639        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | VH            | NT               | -0.50          | -0.000639       | ±2.5        | PASS |         |

### 8.2. Frequency Vs Temperature

| Band   | Bandwidth | Modulation | Channel | RB Configure | Temperature   |                  |                |                 |             |      | Verdict |
|--------|-----------|------------|---------|--------------|---------------|------------------|----------------|-----------------|-------------|------|---------|
|        |           |            |         |              | Voltage [Vdc] | Temperature (°C) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) |      |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | -30              | -10.30         | -0.013171       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | -20              | -5.70          | -0.007289       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | -10              | -5.10          | -0.006522       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | 0                | -0.20          | -0.000256       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | 10               | -5.30          | -0.006777       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | 20               | 0.70           | 0.000895        | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | 30               | -2.30          | -0.002941       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | 40               | -3.00          | -0.003836       | ±2.5        | PASS |         |
| Band13 | 10MHz     | QPSK       | 23230   | 50RB#0       | NV            | 50               | 0.10           | 0.000128        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | -30              | 2.40           | 0.003069        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | -20              | 1.30           | 0.001662        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | -10              | 1.80           | 0.002302        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | 0                | -0.10          | -0.000128       | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | 10               | 0.60           | 0.000767        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | 20               | 0.70           | 0.000895        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | 30               | 1.80           | 0.002302        | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | 40               | -0.70          | -0.000895       | ±2.5        | PASS |         |
| Band13 | 10MHz     | 16QAM      | 23230   | 50RB#0       | NV            | 50               | -0.60          | -0.000767       | ±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-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 | (86-755) 26012053 f (86-755) 26710594 | [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
邮编: 518057 | t (86-755) 26012053 f (86-755) 26710594 | [sgs.china@sgs.com](mailto:sgs.china@sgs.com)