1 of 37 Page:

Appendix B

E-UTRA Band 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,

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

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

Page: 2 of 37

CONTENT

| 1. | EFF | ECTIVE (ISOTROPIC) RADIATED POWER | 3 |
|----|---------|-------------------------------------|----|
| | 1.1. | Test Result | 3 |
| 2. | PF A | NK-TO-AVERAGE RATIO(CCDF) | 6 |
| | | | |
| | 2.1. | TEST RESULT | |
| | 2.2. | TEST PLOTS | t |
| 3. | MO | DOULATION CHARACTERISTICS | 10 |
| | 3.1. | TEST BAND = LTE BAND 17 | 10 |
| | 3.2. | TEST MODE = LTE /TM1 10MHz | 10 |
| | 3.2.1. | TEST CHANNEL = MCH | 10 |
| | 3.3. | TEST MODE = LTE /TM2 10MHz | 11 |
| | 3.3.1. | TEST CHANNEL = MCH | 11 |
| 4. | 260 | OB BANDWIDTH AND OCCUPIED BANDWIDTH | 12 |
| | 4.1. | TEST RESULT | 12 |
| | 4.2. | TEST PLOTS | 12 |
| 5. | BAI | ND EDGE COMPLIANCE | 19 |
| | 5.1. | TEST PLOTS | 19 |
| 6. | SPL | JRIOUS EMISSION AT ANTENNA TERMINAL | 27 |
| | 6.1. | TEST PLOTS | 27 |
| 7. | EIEI | LD STRENGTH OF SPURIOUS RADIATION | 25 |
| /. | | | |
| | 7.1. | TEST BAND = LTE BAND 17 | |
| | 7.1.1. | TEST MODE =LTE/TM1 10MHz | |
| | 7.1.1.1 | | |
| | 7.1.1.2 | | |
| | 7.1.1.3 | 3. TEST CHANNEL = HCH | 34 |
| 8. | FRE | QUENCY STABILITY | 35 |
| | 8.1. | Frequency Vs Voltage | 35 |
| | 8.2. | Frequency Vs Temperature | 35 |
| | | | |



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 issue 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, **Certificate**.

Page: 3 of 37

1. Effective (Isotropic) Radiated Power

1.1. Test Result

| BAND | Bandwidth | Modulation | Channel | RB Configuration | Conducted Power(dBm) | ERP (dBm) | Limit (dBm) | Verdict |
|--------|-----------|------------|---------|---------------------|----------------------|--------------|----------------|---------|
| Band17 | 5MHz | QPSK | 23755 | 1RB#0 | 23.38 | 17.91 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23755 | 1RB#12 | 23.49 | 18.02 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23755 | 1RB#24 | 23.67 | 18.20 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23755 | 12RB#0 | 22.66 | 17.19 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23755 | 12RB#6 | 22.64 | 17.17 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23755 | 12RB#13 | 22.77 | 17.30 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23755 | 25RB#0 | 22.60 | 17.13 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 1RB#0 | 23.47 | 18.00 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 1RB#12 | 23.74 | 18.27 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 1RB#24 | 23.36 | 17.89 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 12RB#0 | 22.68 | 17.21 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 12RB#6 | 22.72 | 17.25 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 12RB#13 | 22.68 | 17.21 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 25RB#0 | 22.70 | 17.23 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 1RB#0 | 23.58 | 18.11 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 1RB#12 | 23.66 | 18.19 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 1RB#24 | 23.54 | 18.07 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 12RB#0 | 22.92 | 17.45 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 12RB#6 | 22.72 | 17.25 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 12RB#13 | 22.67 | 17.20 | 34.77 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 25RB#0 | 22.82 | 17.35 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 1RB#0 | 22.30 | 16.83 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 1RB#12 | 22.57 | 17.10 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 1RB#24 | 22.07 | 16.60 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 12RB#0 | 21.62 | 16.15 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 12RB#6 | 21.56 | 16.09 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 12RB#13 | 21.50 | 16.03 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 25RB#0 | 21.77 | 16.30 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23790 | 1RB#0 | 22.63 | 17.16 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23790 | 1RB#12 | 22.57 | 17.10 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23790 | 1RB#24 | 22.53 | 17.06 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23790 | 12RB#0 | 21.53 | 16.06 | 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 issue 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, **Certificate**.



Report No.: ZR/2019/2000801

Page: 4 of 37

| Band17 | 5MHz | 16QAM | 23790 | 12RB#6 | 21.73 | 16.26 | 34.77 | PASS |
|--------|-------|-------|-------|---------|-------|-------|-------|------|
| Band17 | 5MHz | 16QAM | 23790 | 12RB#13 | 21.69 | 16.22 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23790 | 25RB#0 | 21.69 | 16.22 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 1RB#0 | 22.31 | 16.84 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 1RB#12 | 22.79 | 17.32 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 1RB#24 | 22.36 | 16.89 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 12RB#0 | 21.72 | 16.25 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 12RB#6 | 21.81 | 16.34 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 12RB#13 | 21.68 | 16.21 | 34.77 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 25RB#0 | 21.90 | 16.43 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 1RB#0 | 23.52 | 18.05 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 1RB#24 | 24.25 | 18.78 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 1RB#49 | 23.30 | 17.83 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 25RB#0 | 23.13 | 17.66 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 25RB#12 | 22.90 | 17.43 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 25RB#25 | 22.67 | 17.20 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | 22.70 | 17.23 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 1RB#0 | 23.37 | 17.90 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 1RB#24 | 24.05 | 18.58 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 1RB#49 | 23.32 | 17.85 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 25RB#0 | 22.94 | 17.47 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 25RB#12 | 22.79 | 17.32 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 25RB#25 | 22.62 | 17.15 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | 22.72 | 17.25 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 1RB#0 | 23.28 | 17.81 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 1RB#24 | 24.25 | 18.78 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 1RB#49 | 22.95 | 17.48 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 25RB#0 | 23.02 | 17.55 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 25RB#12 | 22.86 | 17.39 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 25RB#25 | 22.73 | 17.26 | 34.77 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | 22.78 | 17.31 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 1RB#0 | 22.31 | 16.84 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 1RB#24 | 22.65 | 17.18 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 1RB#49 | 22.83 | 17.36 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 25RB#0 | 21.70 | 16.23 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 25RB#12 | 21.71 | 16.24 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 25RB#25 | 21.70 | 16.23 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | 21.83 | 16.36 | 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 issue 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 document does not exonerate parties to a transaction prome exercising all their rights and obligations under the transaction document. 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, **Contact University** in the content of the conte



Report No.: ZR/2019/2000801

Page: 5 of 37

| Band17 | 10MHz | 16QAM | 23790 | 1RB#0 | 22.18 | 16.71 | 34.77 | PASS |
|--------|-------|-------|-------|---------|-------|-------|-------|------|
| Band17 | 10MHz | 16QAM | 23790 | 1RB#24 | 22.18 | 16.71 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 1RB#49 | 22.28 | 16.81 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 25RB#0 | 21.84 | 16.37 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 25RB#12 | 21.77 | 16.30 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 25RB#25 | 21.69 | 16.22 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | 21.68 | 16.21 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 1RB#0 | 22.20 | 16.73 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 1RB#24 | 22.50 | 17.03 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 1RB#49 | 22.18 | 16.71 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 25RB#0 | 21.59 | 16.12 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 25RB#12 | 21.65 | 16.18 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 25RB#25 | 21.73 | 16.26 | 34.77 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | 21.80 | 16.33 | 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]



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, **Certificate**, please contact us at telephone: (86-755) 8307 1443, **Certificate**, please contact us at telephone: (86-755) 8307 1443, **Certificate**, please contact us at telephone: (86-755) 8307 1443, **Certificate**, please contact us at telephone: (86-755) 8307 1443, **Certificate**, please contact us at telephone: (86-755) 8307 1443, **Certificate**, please contact us at telephone: (86-755) 8307 1443, **Certificate**, please contact us at teleph

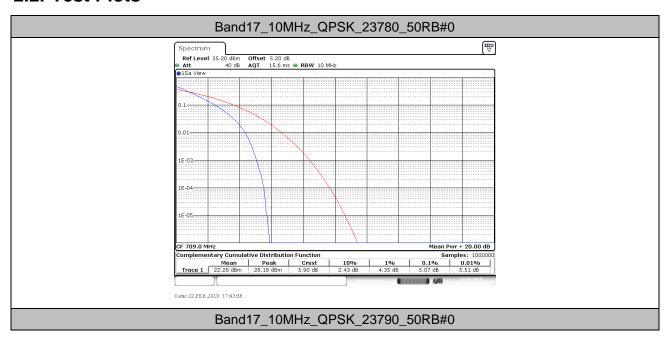
Page: 6 of 37

2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

| BAND | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|--------|-----------|------------|---------|------------------|------------|-----------|---------|
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | 5.07 | 13 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | 4.99 | 13 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | 4.90 | 13 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | 5.88 | 13 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | 5.86 | 13 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | 5.86 | 13 | PASS |

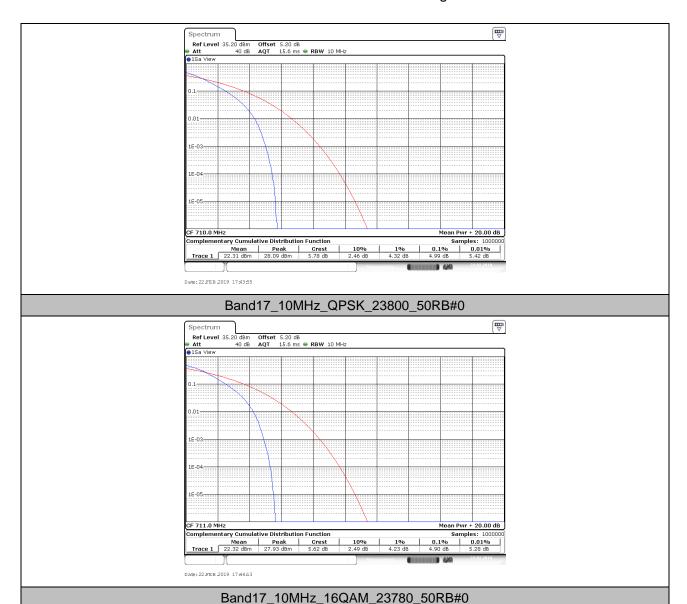
2.2. Test Plots





Report No.: ZR/2019/2000801

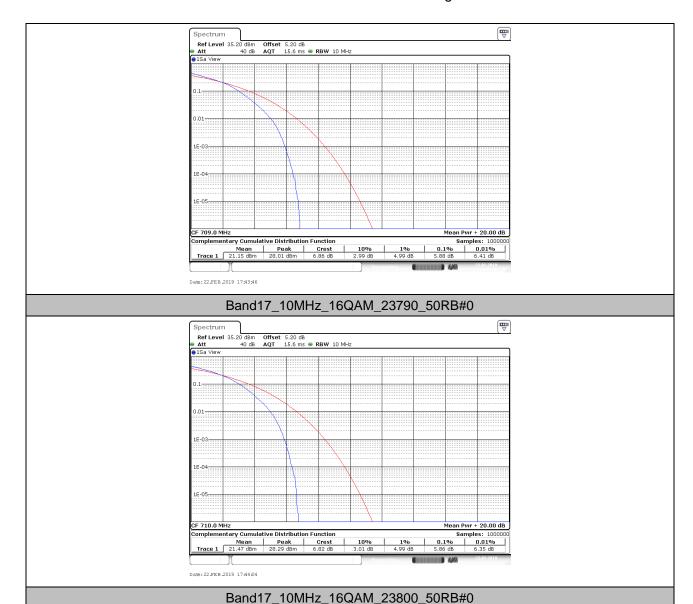
Page: 7 of 37





Report No.: ZR/2019/2000801

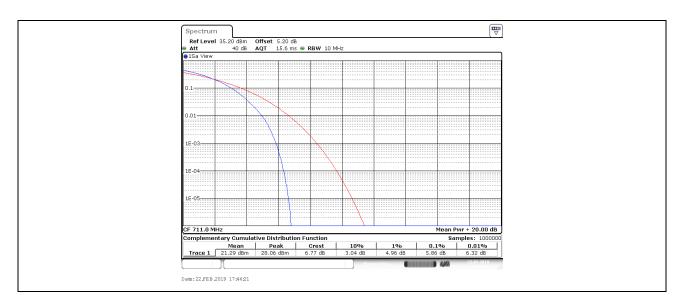
Page: 8 of 37





Report No.: ZR/2019/2000801

Page: 9 of 37

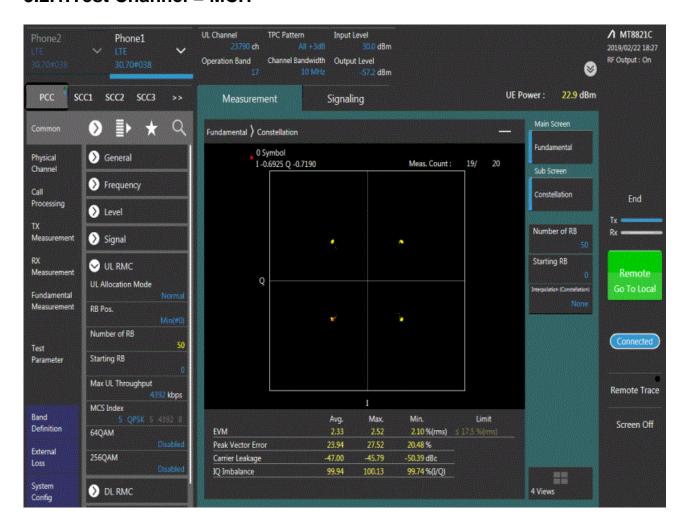




Page: 10 of 37

3. Modulation Characteristics

- 3.1. Test BAND = LTE Band 17
- 3.2. Test Mode = LTE /TM1 10MHz
- 3.2.1.Test Channel = MCH

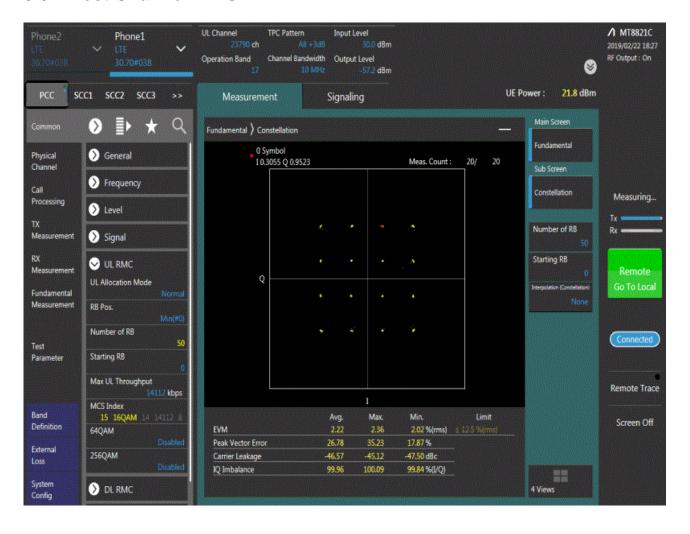




Page: 11 of 37

3.3. Test Mode = LTE /TM2 10MHz

3.3.1.Test Channel = MCH





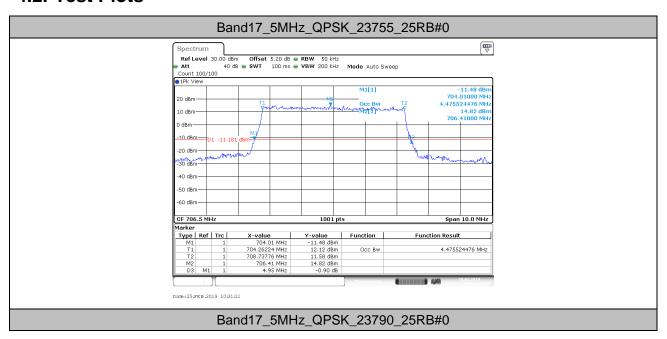
Page: 12 of 37

4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

| BAND | Bandwidth | Modulation | Channel | RB Configuration | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Verdict |
|--------|-----------|------------|---------|---------------------|--------------------------------|----------------------------|---------|
| Band17 | 5MHz | QPSK | 23755 | 25RB#0 | 4.476 | 4.950 | PASS |
| Band17 | 5MHz | QPSK | 23790 | 25RB#0 | 4.476 | 4.940 | PASS |
| Band17 | 5MHz | QPSK | 23825 | 25RB#0 | 4.466 | 4.870 | PASS |
| Band17 | 5MHz | 16QAM | 23755 | 25RB#0 | 4.486 | 4.960 | PASS |
| Band17 | 5MHz | 16QAM | 23790 | 25RB#0 | 4.496 | 4.950 | PASS |
| Band17 | 5MHz | 16QAM | 23825 | 25RB#0 | 4.476 | 4.940 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | 8.951 | 9.740 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | 8.931 | 9.720 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | 8.931 | 9.720 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | 8.951 | 9.780 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | 8.931 | 9.700 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | 8.911 | 9.700 | PASS |

4.2. Test Plots



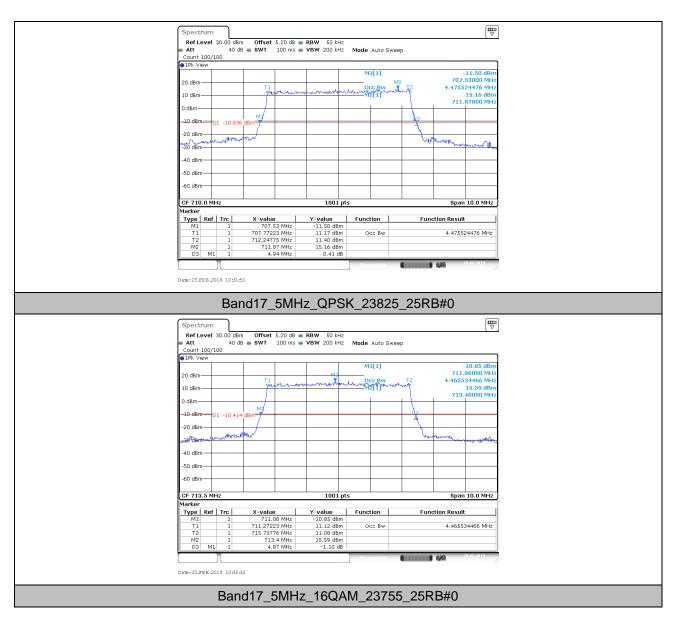


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic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

Report No.: ZR/2019/2000801

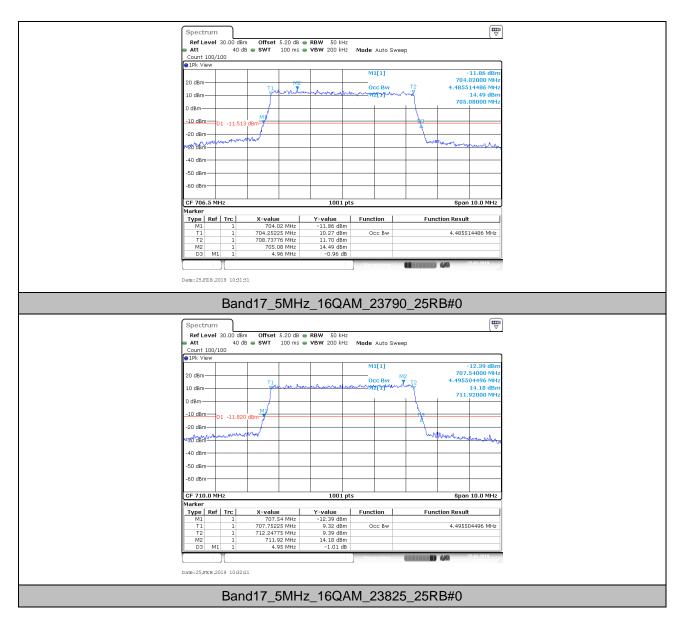
Page: 13 of 37





Report No.: ZR/2019/2000801

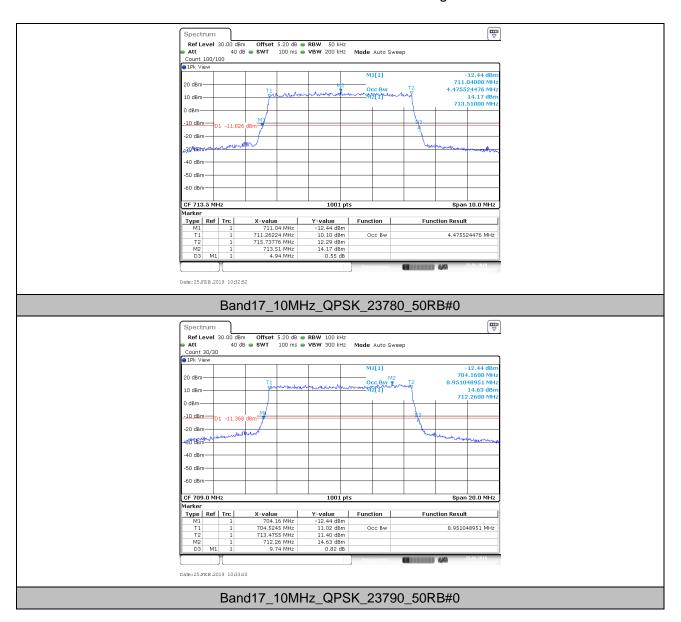
Page: 14 of 37





Report No.: ZR/2019/2000801

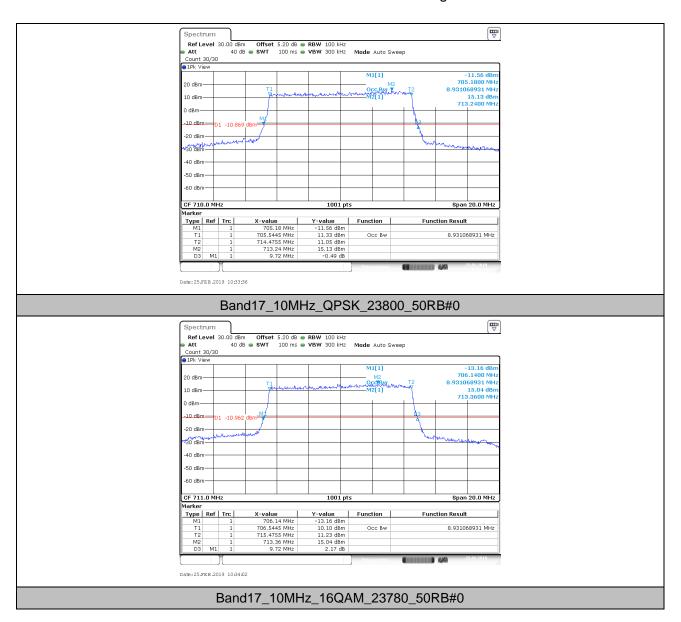
Page: 15 of 37





Report No.: ZR/2019/2000801

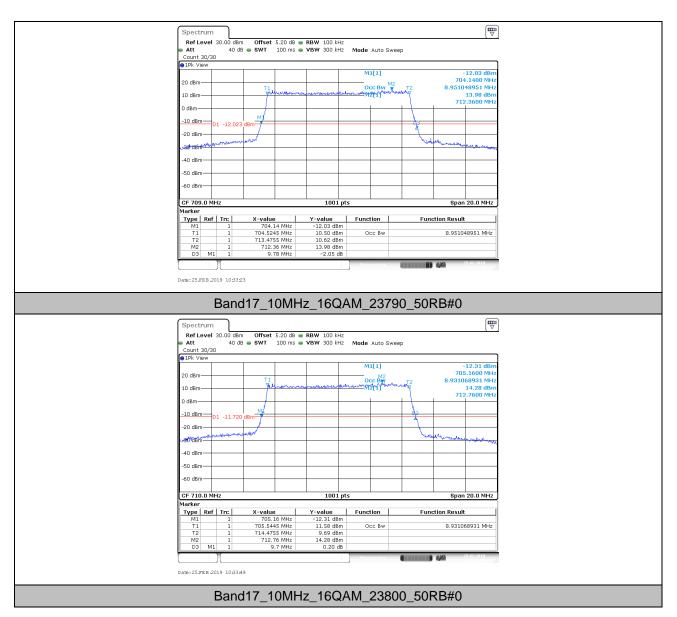
Page: 16 of 37





Report No.: ZR/2019/2000801

Page: 17 of 37





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 issue 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, **Certificate**.

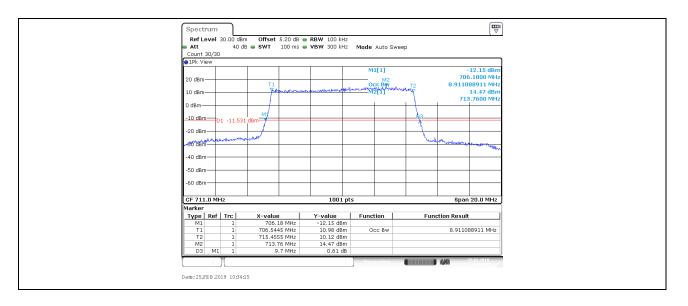
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: ZR/2019/2000801

Page: 18 of 37

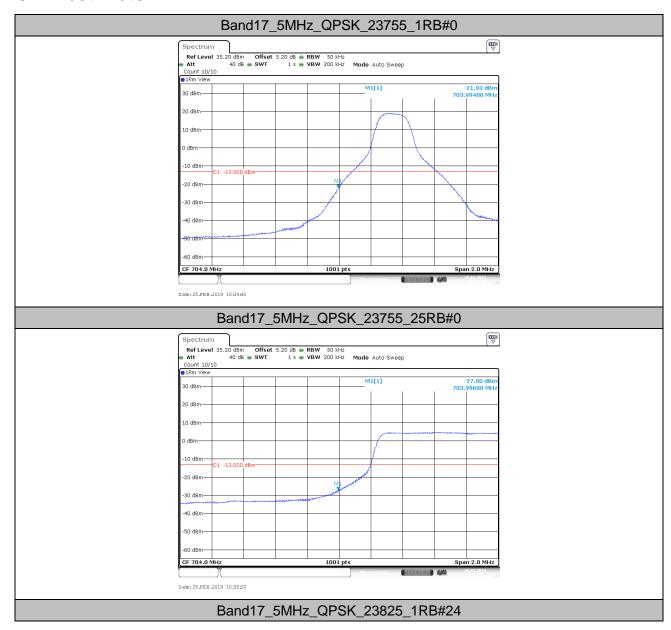




Page: 19 of 37

5. Band Edge Compliance

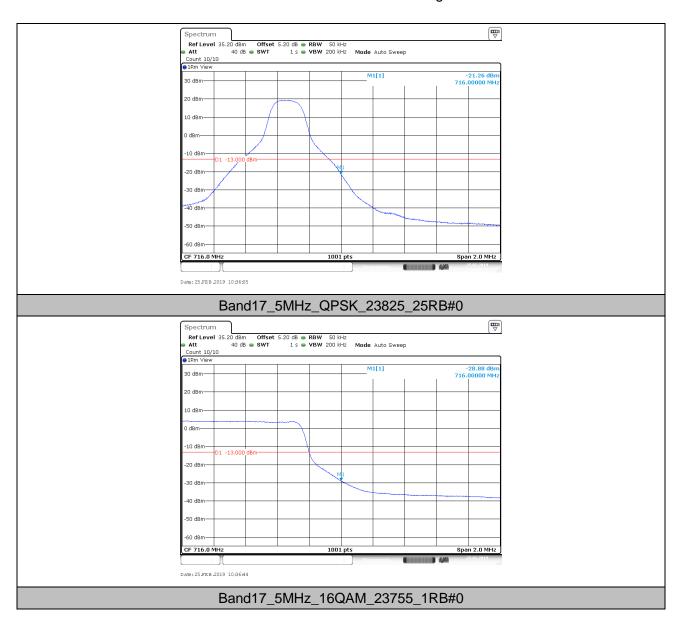
5.1. Test Plots





Report No.: ZR/2019/2000801

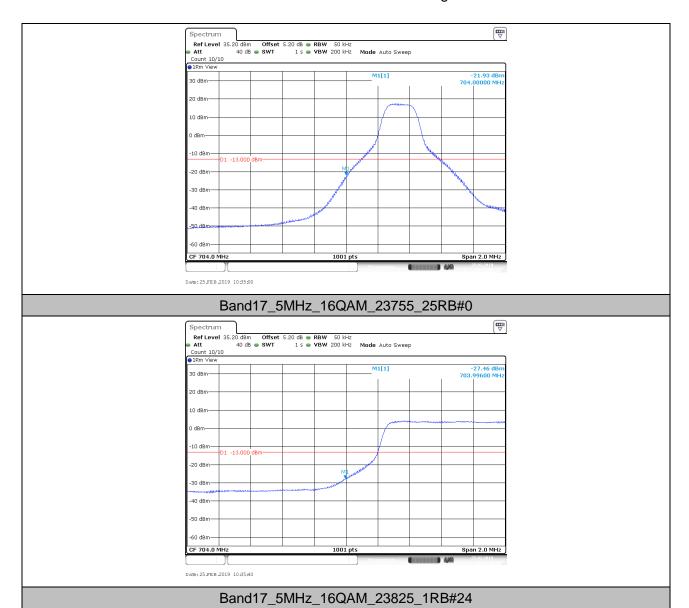
Page: 20 of 37





Report No.: ZR/2019/2000801

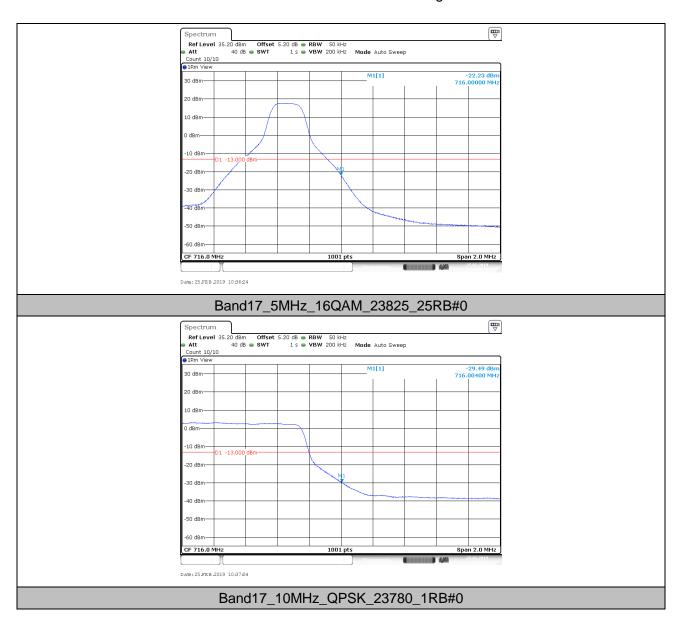
Page: 21 of 37





Report No.: ZR/2019/2000801

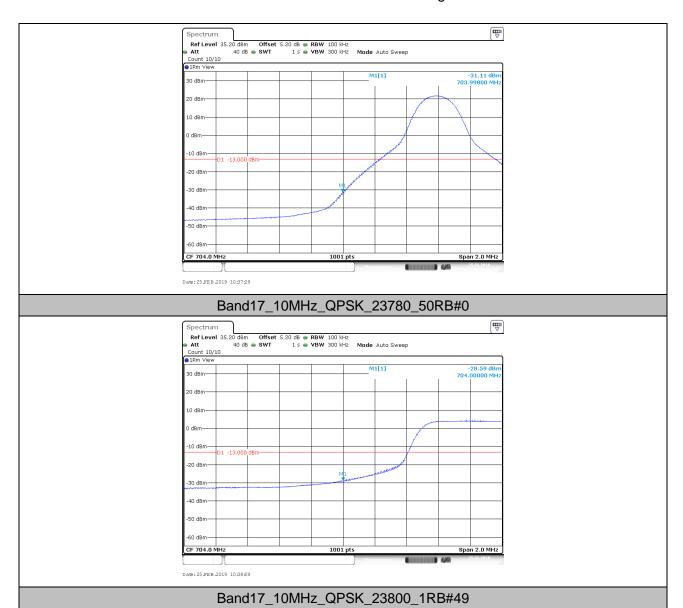
Page: 22 of 37





Report No.: ZR/2019/2000801

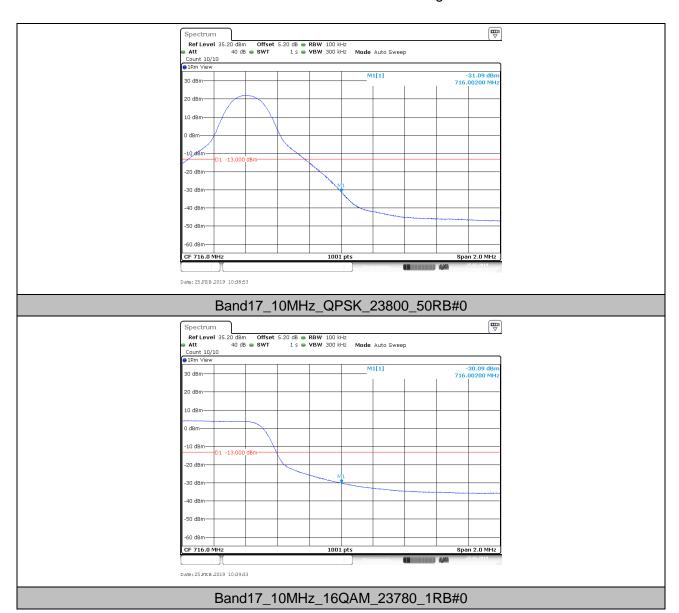
Page: 23 of 37





Report No.: ZR/2019/2000801

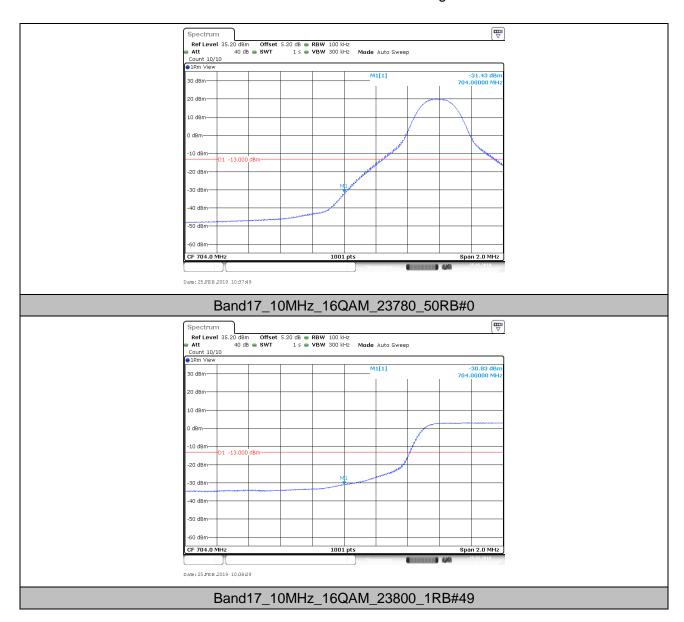
Page: 24 of 37





Report No.: ZR/2019/2000801

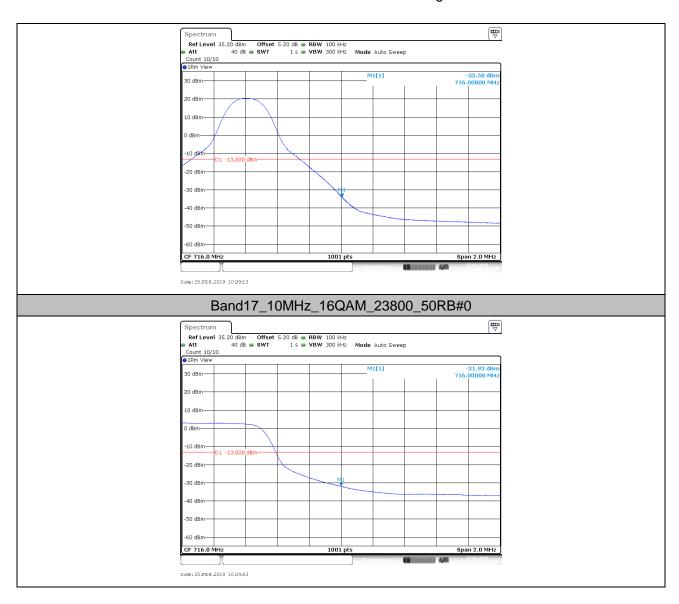
Page: 25 of 37





Report No.: ZR/2019/2000801

Page: 26 of 37





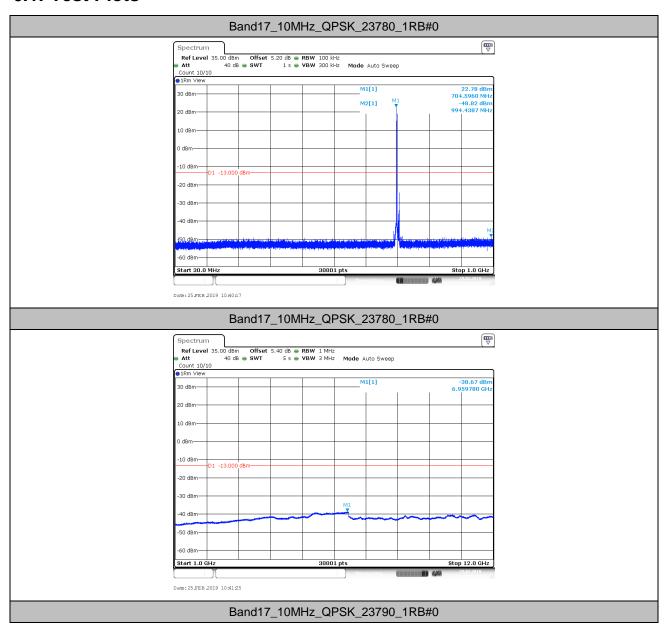
Page: 27 of 37

6. Spurious Emission at Antenna Terminal

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

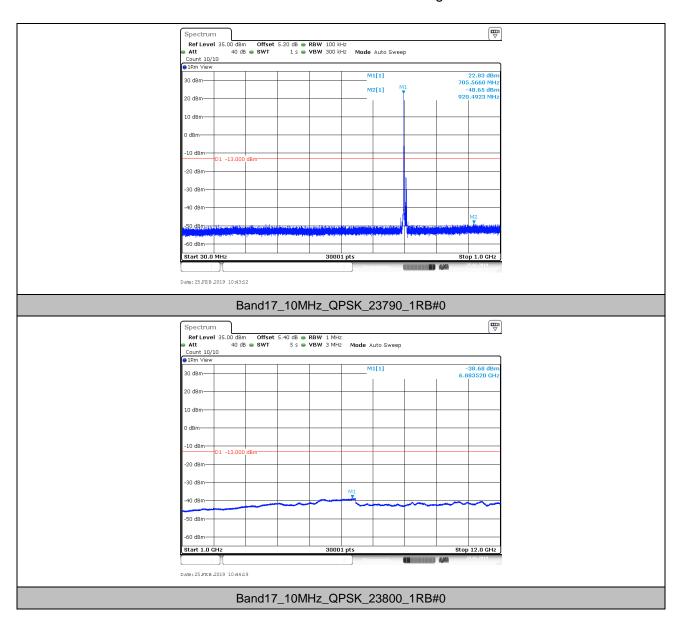
6.1. Test Plots





Report No.: ZR/2019/2000801

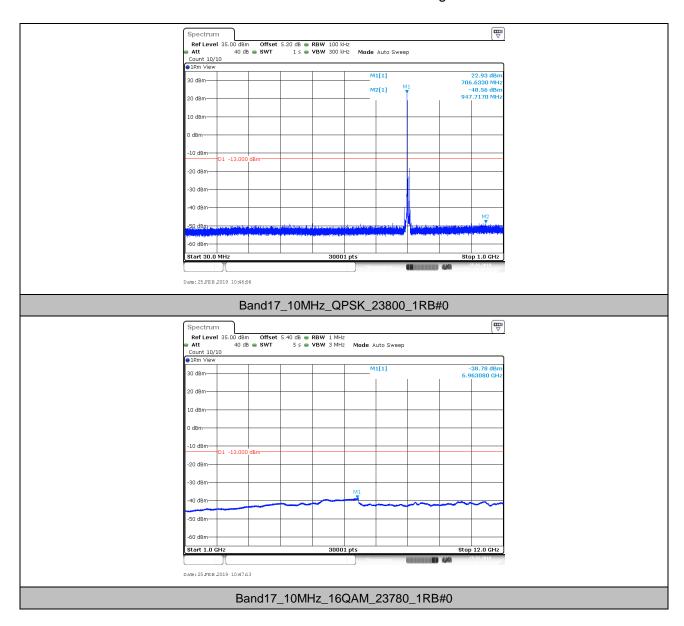
Page: 28 of 37





Report No.: ZR/2019/2000801

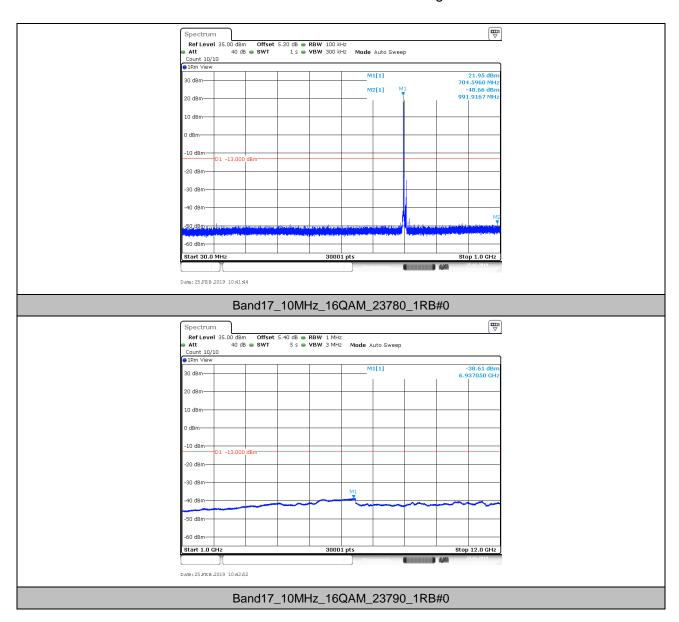
Page: 29 of 37





Report No.: ZR/2019/2000801

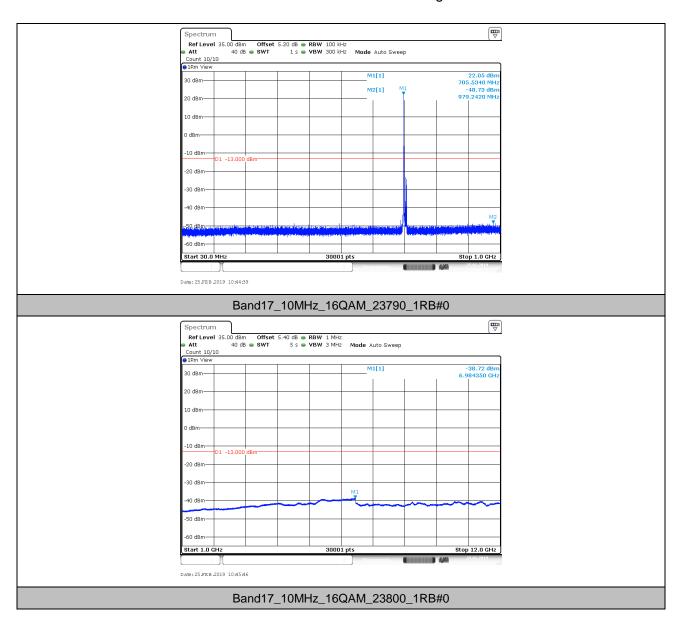
Page: 30 of 37





Report No.: ZR/2019/2000801

Page: 31 of 37

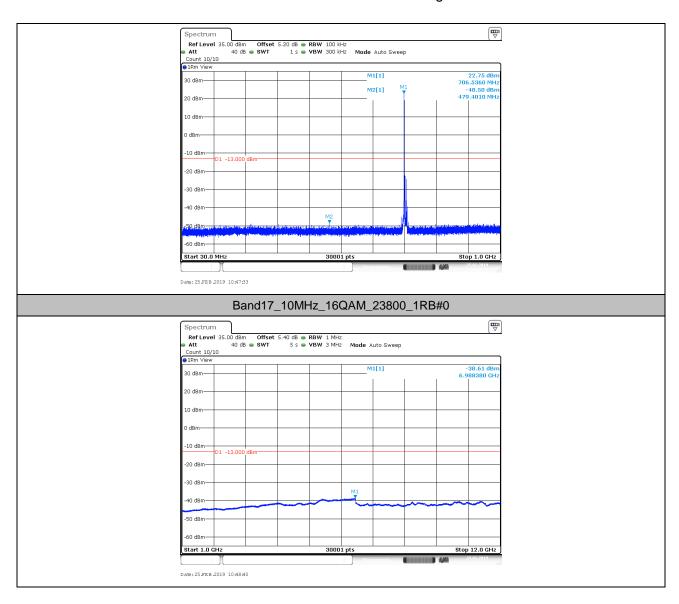






Report No.: ZR/2019/2000801

Page: 32 of 37





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 issue 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, **Certificate**.

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

Page: 33 of 37

7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE Band 17

7.1.1.Test Mode =LTE/TM1 10MHz

7.1.1.1. Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 48.7704 | -67.93 | -13.00 | 54.93 | Vertical |
| 109.7865 | -65.01 | -13.00 | 52.01 | Vertical |
| 994.1797 | -57.51 | -13.00 | 44.51 | Vertical |
| 1408.8818 | -56.58 | -13.00 | 43.58 | Vertical |
| 3523.2209 | -51.29 | -13.00 | 38.29 | Vertical |
| 17997.5999 | -33.37 | -13.00 | 20.37 | Vertical |
| 43.7747 | -63.62 | -13.00 | 50.62 | Horizontal |
| 243.1197 | -68.93 | -13.00 | 55.93 | Horizontal |
| 996.8473 | -56.98 | -13.00 | 43.98 | Horizontal |
| 1409.2819 | -54.89 | -13.00 | 41.89 | Horizontal |
| 3523.2209 | -46.95 | -13.00 | 33.95 | Horizontal |
| 16397.3359 | -38.69 | -13.00 | 25.69 | Horizontal |

7.1.1.2. Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 43.0957 | -70.10 | -13.00 | 57.10 | Vertical |
| 110.8535 | -65.33 | -13.00 | 52.33 | Vertical |
| 994.8102 | -57.71 | -13.00 | 44.71 | Vertical |
| 1410.8822 | -56.34 | -13.00 | 43.34 | Vertical |
| 3528.0211 | -49.34 | -13.00 | 36.34 | Vertical |
| 17992.1997 | -32.62 | -13.00 | 19.62 | Vertical |
| 44.8902 | -64.85 | -13.00 | 51.85 | Horizontal |
| 245.5448 | -68.33 | -13.00 | 55.33 | Horizontal |
| 999.0300 | -56.98 | -13.00 | 43.98 | Horizontal |
| 1411.2823 | -55.41 | -13.00 | 42.41 | Horizontal |
| 3528.0211 | -47.43 | -13.00 | 34.43 | Horizontal |
| 17999.4000 | -37.92 | -13.00 | 24.92 | Horizontal |



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue 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, **Certificate**.

Page: 34 of 37

7.1.1.3. Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Margin (dB) | Polarization |
|-----------------|-------------|------------------|-------------|--------------|
| 48.7704 | -69.72 | -13.00 | 56.72 | Vertical |
| 120.3115 | -65.62 | -13.00 | 52.62 | Vertical |
| 995.8773 | -57.44 | -13.00 | 44.44 | Vertical |
| 1413.2827 | -56.96 | -13.00 | 43.96 | Vertical |
| 3532.8213 | -50.69 | -13.00 | 37.69 | Vertical |
| 17993.3997 | -33.40 | -13.00 | 20.40 | Vertical |
| 45.5208 | -64.87 | -13.00 | 51.87 | Horizontal |
| 230.8970 | -68.35 | -13.00 | 55.35 | Horizontal |
| 994.9072 | -56.75 | -13.00 | 43.75 | Horizontal |
| 1412.8826 | -55.32 | -13.00 | 42.32 | Horizontal |
| 3532.8213 | -48.61 | -13.00 | 35.61 | Horizontal |
| 17997.5999 | -37.61 | -13.00 | 24.61 | Horizontal |

Remark:

The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.

We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



Page: 35 of 37

8. Frequency Stability

8.1. Frequency Vs Voltage

| | | | | Vo | ltage | | | | | |
|----------|-------------|------------|---|-----------|---------|-------------|-----------|-----------|-------|---------|
| BAND | Bandwidth | Modulation | Channel | RB | Voltage | Temperature | Deviation | Deviation | Limit | Verdict |
| 27.11.12 | 20.1011.011 | | • · · · · · · · · · · · · · · · · · · · | Configure | [Vdc] | (°C) | (Hz) | (ppm) | (ppm) | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | VL | NT | -0.60 | -0.000846 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | VN | NT | 1.30 | 0.001834 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | VH | NT | -1.30 | -0.001834 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | VL | NT | 0.30 | 0.000423 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | VN | NT | 1.40 | 0.001972 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | VH | NT | 0.20 | 0.000282 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | VL | NT | -2.10 | -0.002954 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | VN | NT | -1.40 | -0.001969 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | VH | NT | -2.60 | -0.003657 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | VL | NT | -0.30 | -0.000423 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | VN | NT | -0.10 | -0.000141 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | VH | NT | 0.80 | 0.001128 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | VL | NT | 0.60 | 0.000845 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | VN | NT | 0.30 | 0.000423 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | VH | NT | 0.50 | 0.000704 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | VL | NT | -1.20 | -0.001688 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | VN | NT | -0.40 | -0.000563 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | VH | NT | -0.70 | -0.000985 | ±2.5 | PASS |

8.2. Frequency Vs Temperature

| Temperatur | Temperature | | | | | | | | | | | | |
|------------|-------------|------------|---------|-----------|---------|-------------|-----------|-----------|-------|---------|--|--|--|
| BAND | Bandwidth | Modulation | Channel | RB | Voltage | Temperature | Deviation | Deviation | Limit | Verdict | | | |
| DAND | | Modulation | Charmer | Configure | [Vdc] | (°C) | (Hz) | (ppm) | (ppm) | verdict | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | -30 | -0.10 | -0.000141 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | -20 | -0.40 | -0.000564 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | 0 | 0.90 | 0.001269 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | 10 | -0.30 | -0.000423 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | 20 | -0.40 | -0.000564 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | 30 | -1.30 | -0.001834 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | 40 | 0.00 | 0.000000 | ±2.5 | PASS | | | |
| Band17 | 10MHz | QPSK | 23780 | 50RB#0 | NV | 50 | -0.30 | -0.000423 | ±2.5 | PASS | | | |





Report No.: ZR/2019/2000801

Page: 36 of 37

| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | -30 | 0.60 | 0.000845 | ±2.5 | PASS |
|--------|-------|-------|-------|--------|----|-----|-------|-----------|------|------|
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | -20 | -1.10 | -0.001549 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | 0 | -0.20 | -0.000282 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | 10 | -0.20 | -0.000282 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | 20 | 0.90 | 0.001268 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | 30 | -0.50 | -0.000704 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | 40 | -0.60 | -0.000845 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23790 | 50RB#0 | NV | 50 | -0.60 | -0.000845 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | -30 | -3.30 | -0.004641 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | -20 | -0.90 | -0.001266 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | 0 | -1.60 | -0.002250 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | 10 | -2.30 | -0.003235 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | 20 | -2.10 | -0.002954 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | 30 | -2.20 | -0.003094 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | 40 | -1.40 | -0.001969 | ±2.5 | PASS |
| Band17 | 10MHz | QPSK | 23800 | 50RB#0 | NV | 50 | -1.20 | -0.001688 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | -30 | -0.70 | -0.000987 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | -20 | 0.20 | 0.000282 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | 0 | -1.20 | -0.001693 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | 10 | -0.90 | -0.001269 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | 20 | -0.30 | -0.000423 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | 30 | 0.50 | 0.000705 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | 40 | 0.30 | 0.000423 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23780 | 50RB#0 | NV | 50 | -1.10 | -0.001551 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | -30 | 0.40 | 0.000563 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | -20 | -0.30 | -0.000423 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | 0 | -0.90 | -0.001268 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | 10 | -0.60 | -0.000845 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | 20 | -1.20 | -0.001690 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | 30 | 0.20 | 0.000282 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | 40 | -0.40 | -0.000563 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23790 | 50RB#0 | NV | 50 | 0.40 | 0.000563 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | -30 | -1.50 | -0.002110 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | -20 | -1.80 | -0.002532 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | 0 | -0.40 | -0.000563 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | 10 | -2.00 | -0.002813 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | 20 | -1.30 | -0.001828 | ±2.5 | PASS |
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | 30 | 0.40 | 0.000563 | ±2.5 | PASS |



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue 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, **Certificate**.



Report No.: ZR/2019/2000801

37 of 37 Page:

| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | 40 | -0.20 | -0.000281 | ±2.5 | PASS |
|--------|-------|-------|-------|--------|----|----|-------|-----------|------|------|
| Band17 | 10MHz | 16QAM | 23800 | 50RB#0 | NV | 50 | -0.10 | -0.000141 | ±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 issue 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 document does not exonerate parties to a transaction prome exercising all their rights and obligations under the transaction document. 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, **Contact University** in the content of the conte