



Appendix B

WCDMA BAND II & IV & V



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

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



CONTENT

	Page
1. EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA.....	4
1.1. Test Result	4
2. PEAK-TO-AVERAGE RATIO	5
2.1. Test Result	5
2.2. Test Plots.....	5
3. MODULATION CHARACTERISTICS	10
3.1. For WCDMA.....	10
3.1.1. Test BAND = WCDMA BAND II.....	10
3.1.1.1. Test Mode = UMTS/TM1	10
3.1.1.1.1. Test Channel = MCH.....	10
3.1.2. Test BAND = WCDMA BAND IV	11
3.1.2.1. Test Mode = UMTS/TM1	11
3.1.2.1.1. Test Channel = MCH.....	11
3.1.3. Test BAND = WCDMA BAND V	12
3.1.3.1. Test Mode = UMTS /TM1	12
3.1.3.1.1. Test Channel = MCH.....	12
4. 26dB BANDWIDTH AND OCCUPIED BANDWIDTH	13
4.1. Test Result	13
4.2. Test Plots.....	13
5. BAND EDGE COMPLIANCE.....	18
5.1. Test Plots.....	18
6. SPURIOUS EMISSION AT ANTENNA TERMINAL.....	21
6.1. Test Plots.....	21
7. FIELD STRENGTH OF SPURIOUS RADIATION.....	45
7.1. For WCDMA.....	45
7.1.1. Test Band = WCDMA BAND II.....	45
7.1.1.1. Test Mode = UMTS/TM1	45
7.1.1.1.1. Test Channel = LCH.....	45
7.1.1.1.2. Test Channel = MCH.....	45
7.1.1.1.3. Test Channel = HCH	46
7.1.1.1.4. Spot Check worse mode	46



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-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
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7.1.2.	Test Band = WCDMA BAND IV	47
7.1.2.1.	Test Mode = UMTS/TM1	47
7.1.2.1.1.	Test Channel = LCH.....	47
7.1.2.1.2.	Test Channel = MCH.....	47
7.1.2.1.3.	Test Channel = HCH	48
7.1.2.1.4.	Spot Check worse mode	48
7.1.3.	Test Band = WCDMA BAND V	49
7.1.3.1.	Test Mode = UMTS/TM1	49
7.1.3.1.1.	Test Channel = LCH.....	49
7.1.3.1.2.	Test Channel = MCH.....	49
7.1.3.1.3.	Test Channel = HCH	49
7.1.3.1.4.	Spot Check worse mode	50
8.	FREQUENCY STABILITY.....	51
8.1.	Frequency Vs Voltage.....	51
8.2.	Frequency Vs Temperature	52





1. Effective (Isotropic) Radiated Power Output Data

1.1. Test Result

BAND	Channel	Power(dBm)	EIRP(dBm)	Limit(dBm)	Verdict
Band II	9262	23.88	25.47	33.00	PASS
Band II	9400	23.79	25.38	33.00	PASS
Band II	9538	23.76	25.35	33.00	PASS
Band IV	1312	23.82	25.82	30.00	PASS
Band IV	1413	23.74	25.74	30.00	PASS
Band IV	1513	23.64	25.64	30.00	PASS

BAND	Channel	Power(dBm)	ERP(dBm)	Limit(dBm)	Verdict
Band V	4132	23.86	24.00	38.45	PASS
Band V	4182	23.81	23.95	38.45	PASS
Band V	4233	23.76	23.90	38.45	PASS

Remark:

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

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

b: SGP=Signal Generator Level



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

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

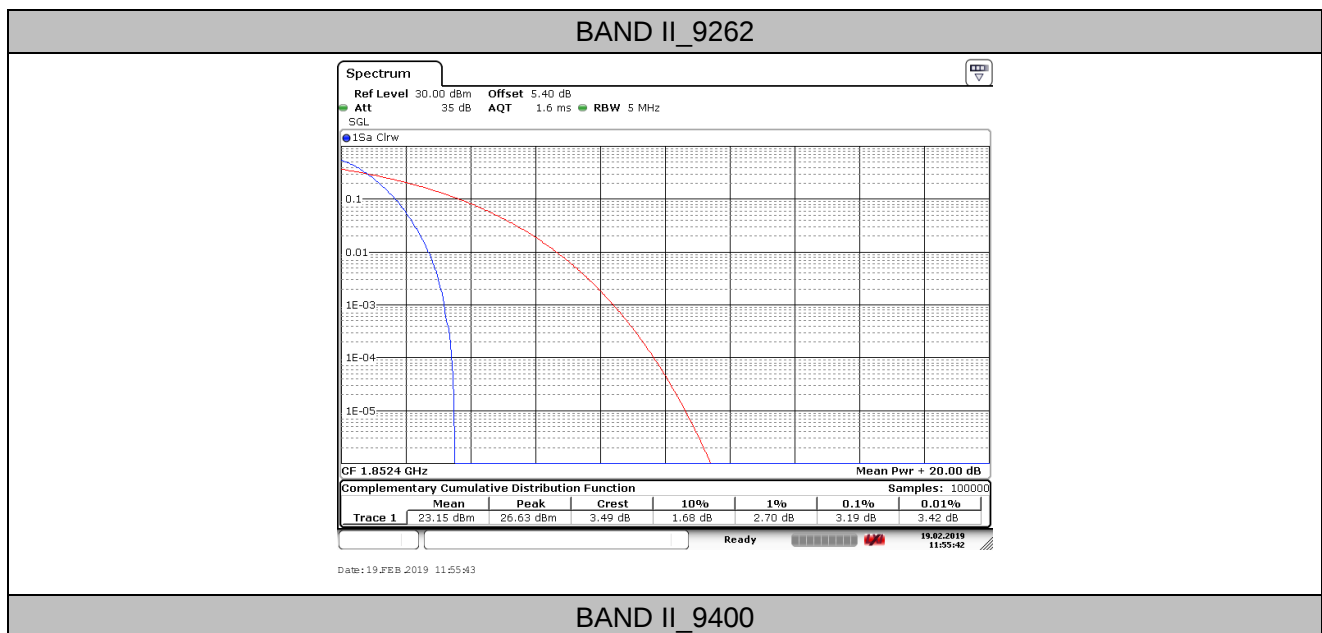


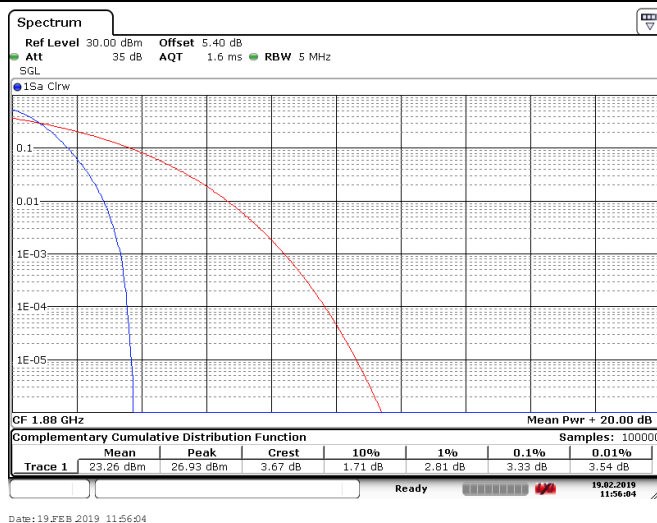
2. Peak-to-Average Ratio

2.1. Test Result

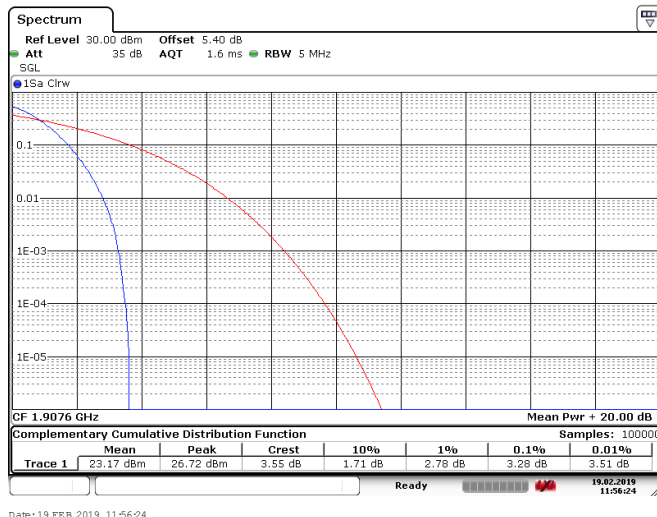
BAND	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
Band II	9262	3.19	13	PASS
Band II	9400	3.33	13	PASS
Band II	9538	3.28	13	PASS
Band IV	1312	3.28	13	PASS
Band IV	1413	3.22	13	PASS
Band IV	1513	3.25	13	PASS
Band V	4132	3.25	13	PASS
Band V	4182	3.22	13	PASS
Band V	4233	2.99	13	PASS

2.2. Test Plots



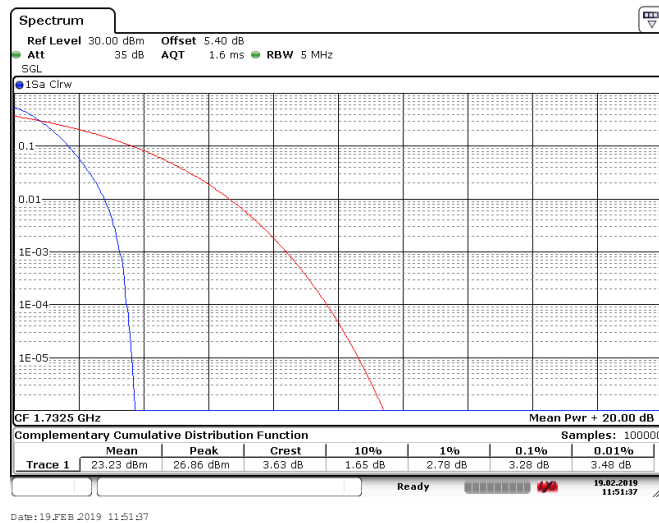


BAND II_9538

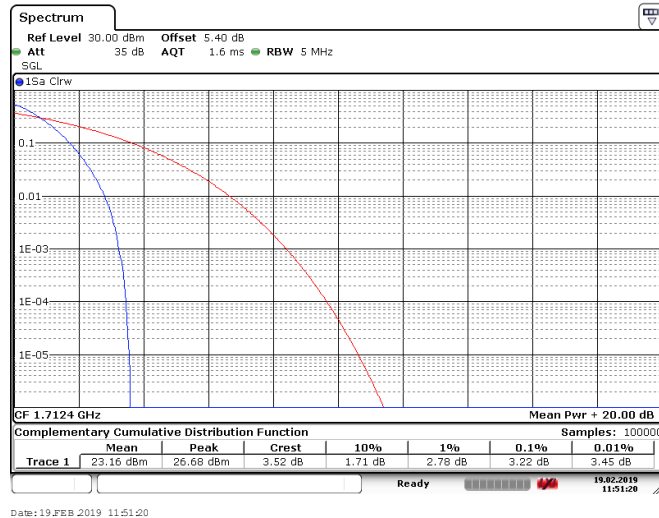


BAND IV_1312





BAND IV_1413



BAND IV_1513

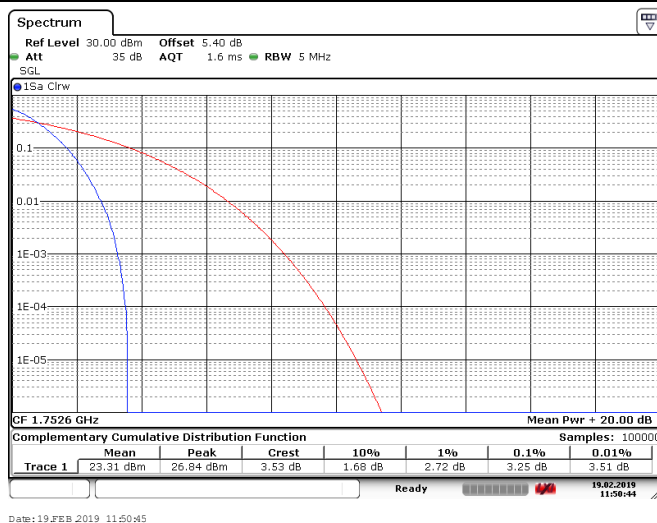


SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Testing Laboratory

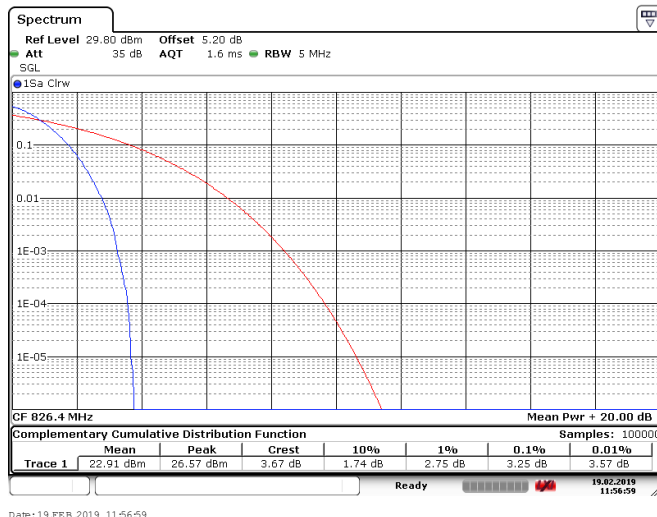
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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



BAND V_4132



BAND V_4182

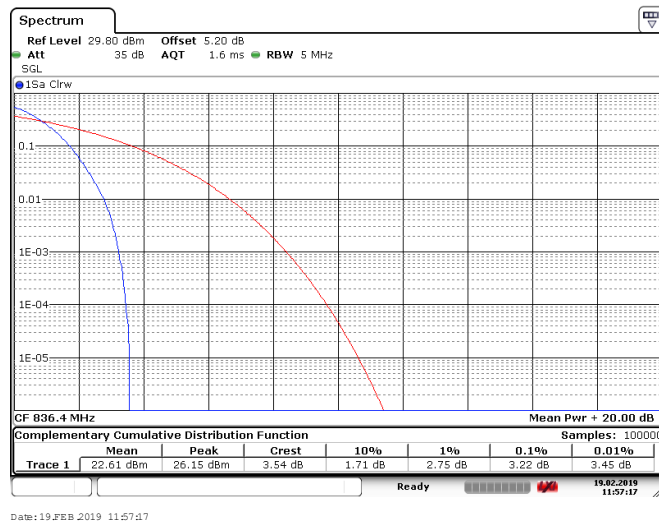


SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Laboratory

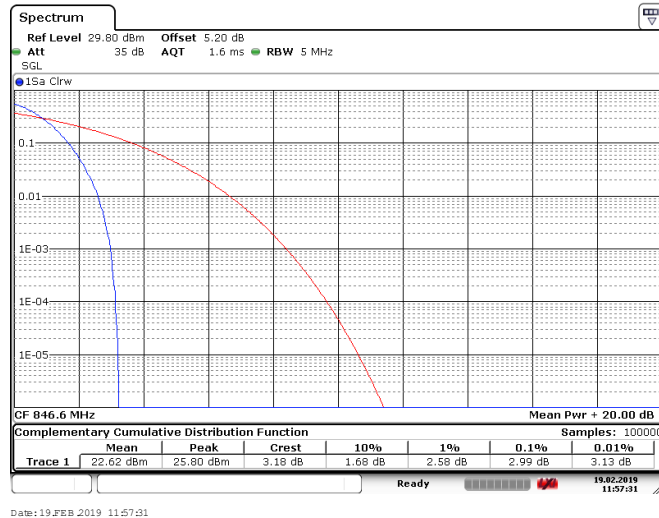
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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



BAND V_4233



3. Modulation Characteristics

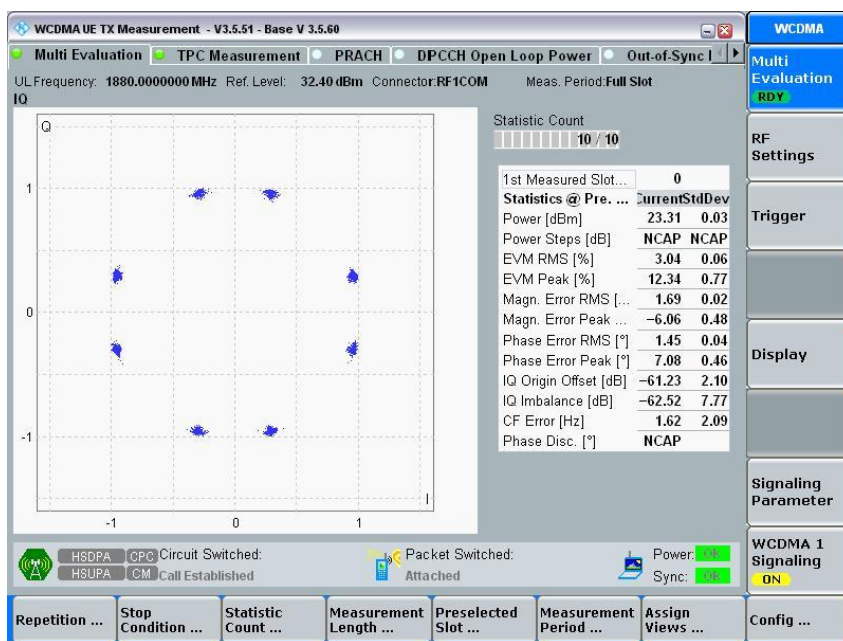
Part I - Test Plots

3.1. For WCDMA

3.1.1. Test BAND = WCDMA BAND II

3.1.1.1. Test Mode = UMTS/TM1

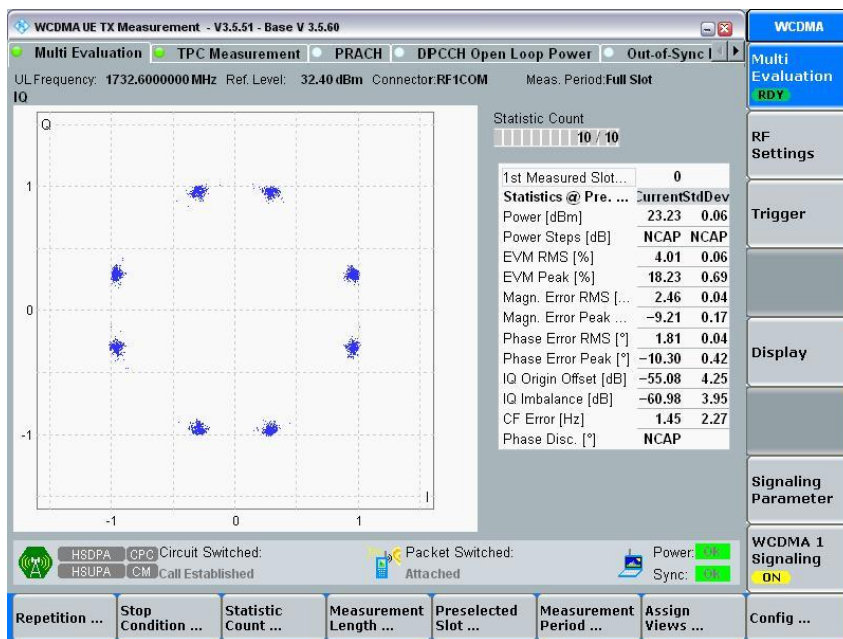
3.1.1.1.1. Test Channel = MCH



3.1.2. Test BAND = WCDMA BAND IV

3.1.2.1. Test Mode = UMTS/TM1

3.1.2.1.1. 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-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

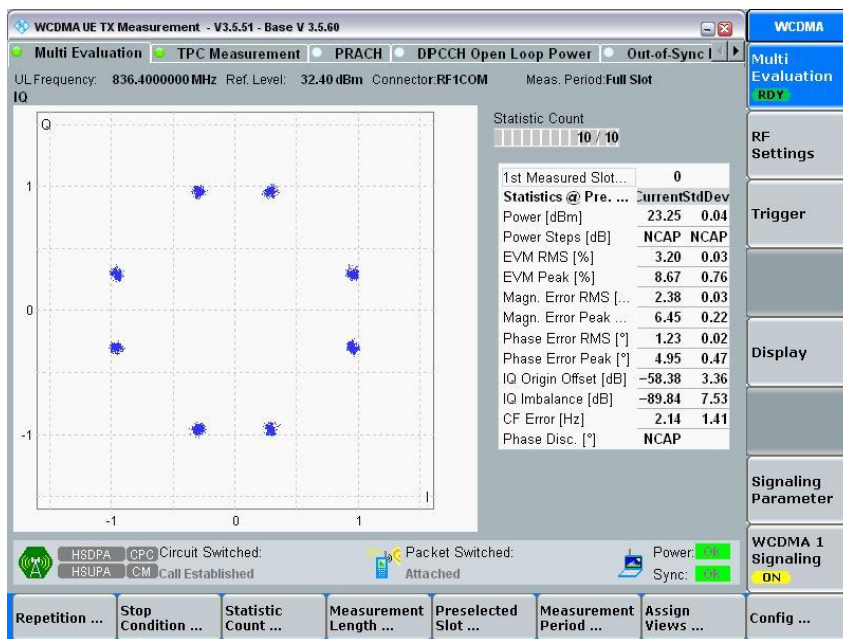
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (SGS-CSTC) Laboratory

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

3.1.3. Test BAND = WCDMA BAND V

3.1.3.1. Test Mode = UMTS /TM1

3.1.3.1.1. Test Channel = MCH

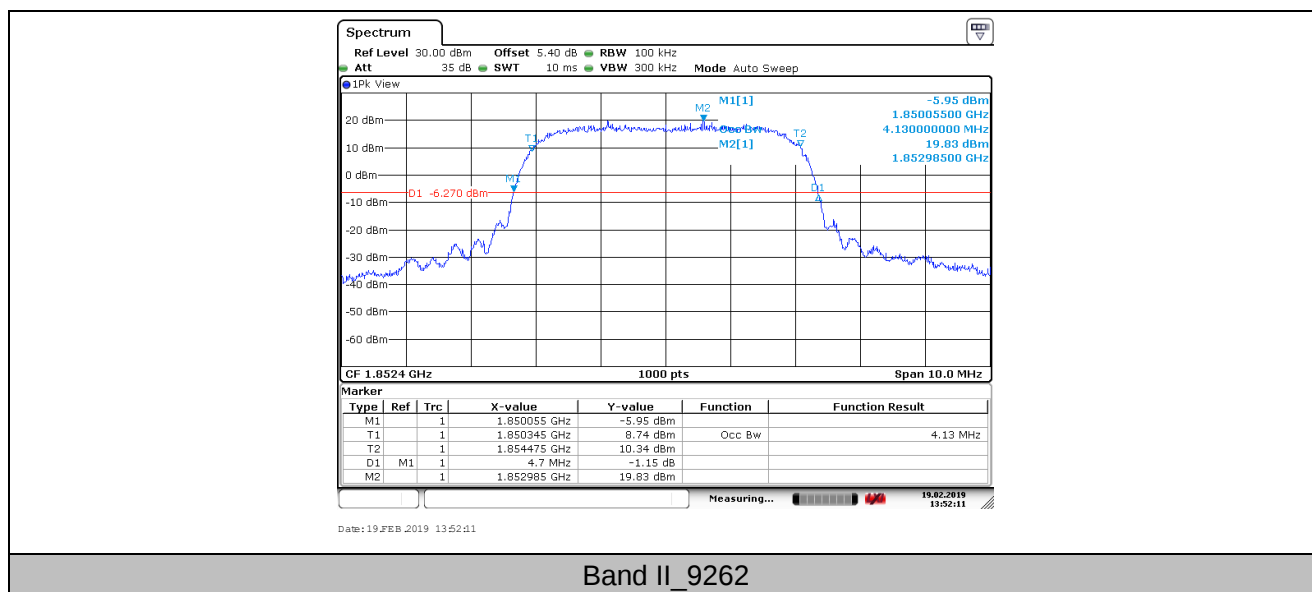


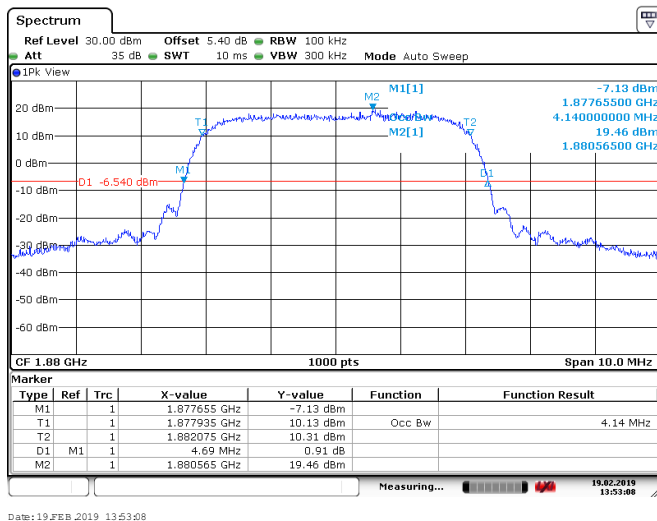
4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

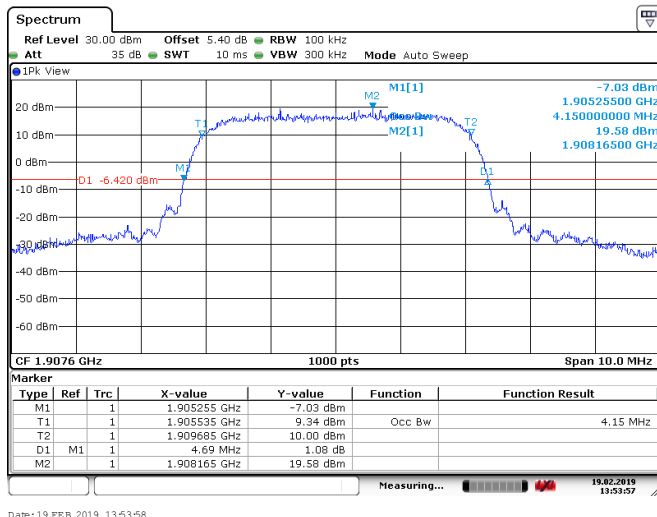
BAND	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band II	9262	4130.00	4700.00	---	PASS
Band II	9400	4140.00	4690.00	---	PASS
Band II	9538	4150.00	4690.00	---	PASS
Band IV	1312	4130.00	4700.00	---	PASS
Band IV	1413	4140.00	4690.00	---	PASS
Band IV	1513	4130.00	4680.00	---	PASS
Band V	4132	4130.00	4700.00	---	PASS
Band V	4182	4120.00	4690.00	---	PASS
Band V	4233	4130.00	4710.00	---	PASS

4.2. Test Plots



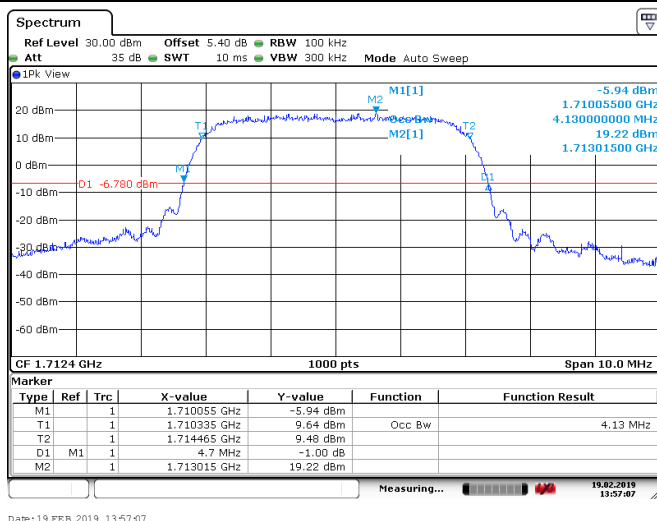


Band II_9400

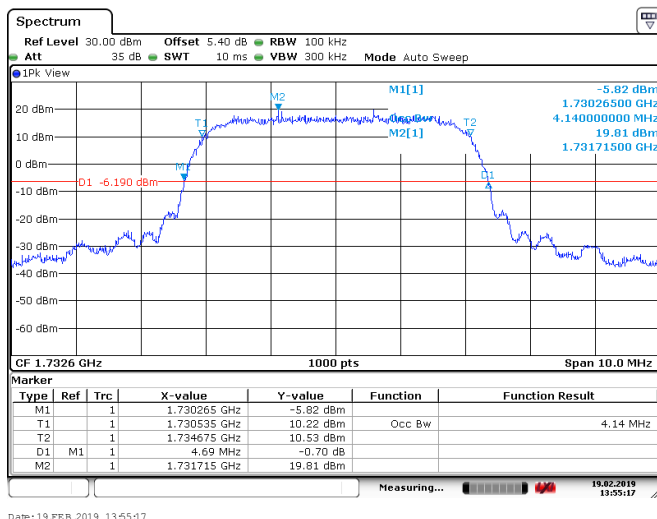


Band II_9538





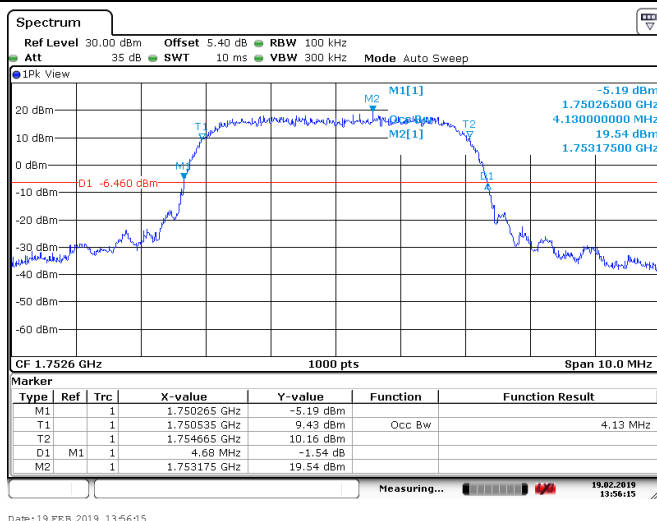
Band IV_1312



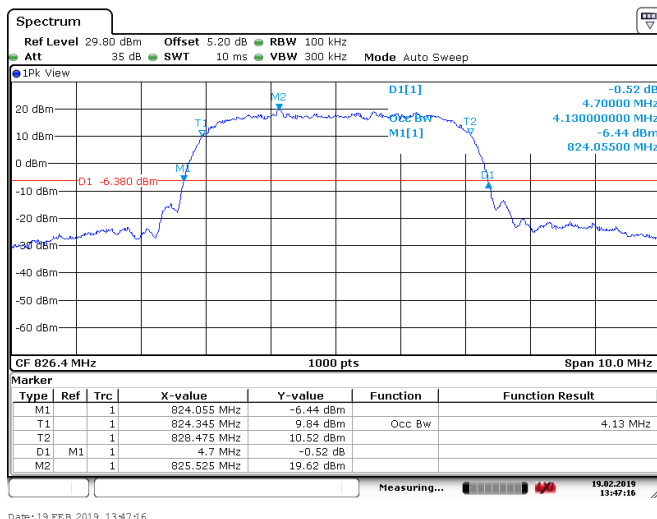
Band IV_1413



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

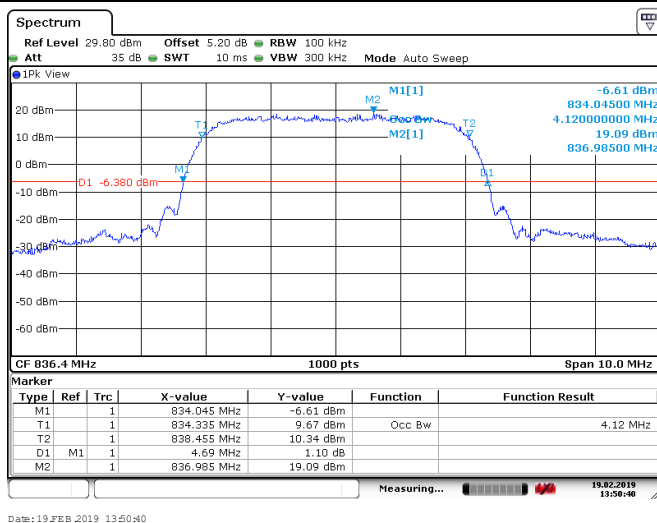


Band IV_1513

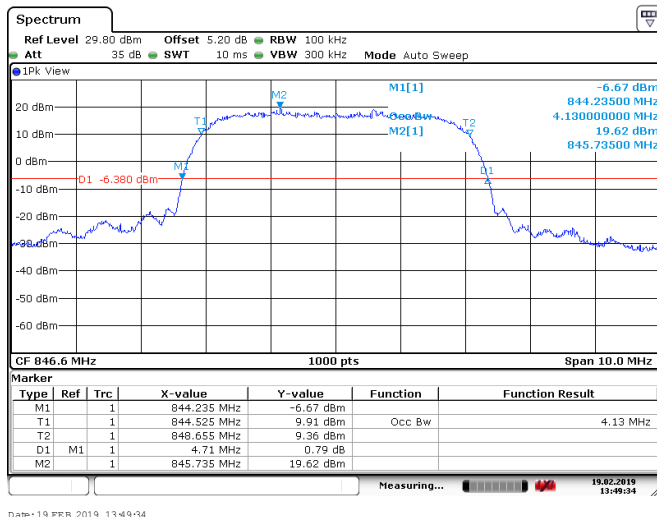


Band V_4132





Band V_4182

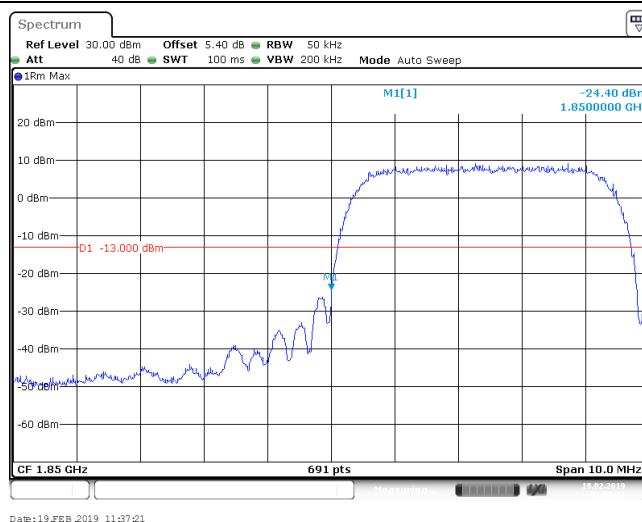


Band V_4233

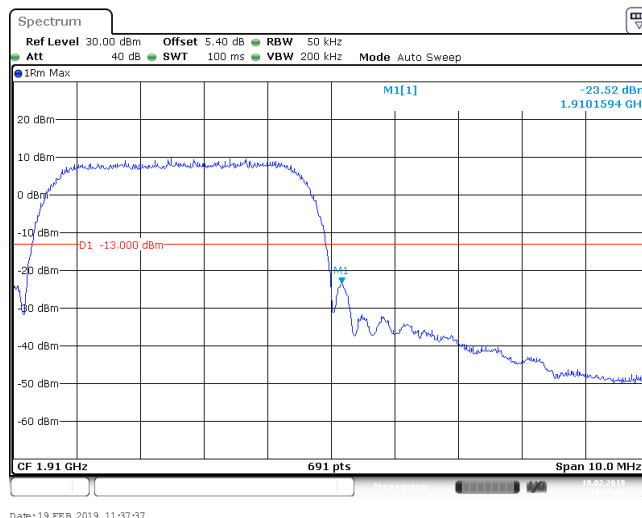


5. Band Edge Compliance

5.1. Test Plots



Band II_9262



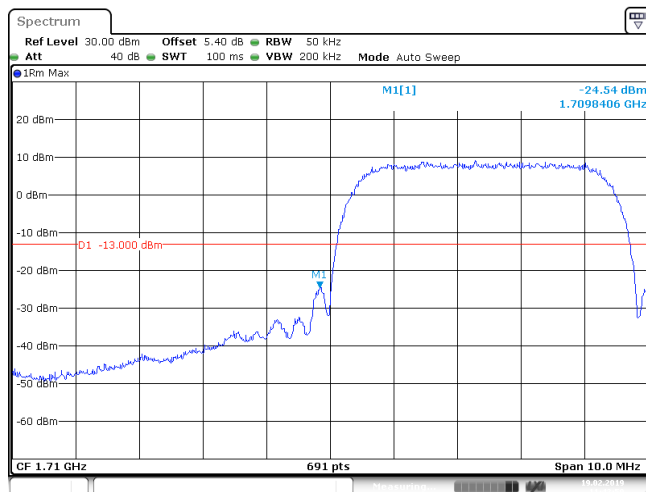
Band II_9538



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

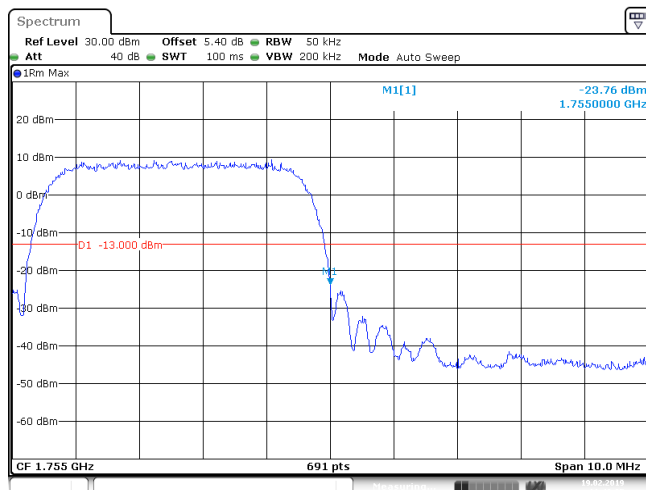
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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



Date: 19_FEB_2019 11:42:50

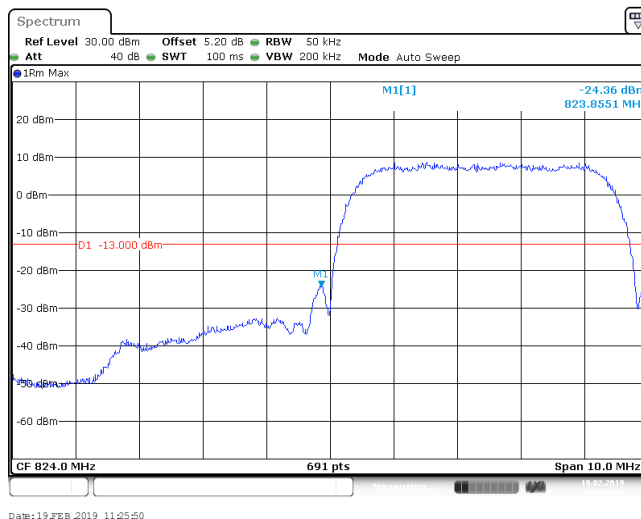
Band IV_1312



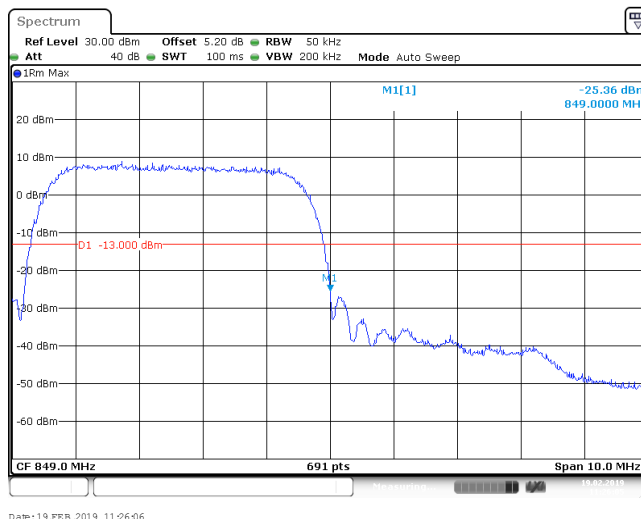
Date: 19_FEB_2019 11:43:05

Band IV_1513





Band V_4132



Band V_4233

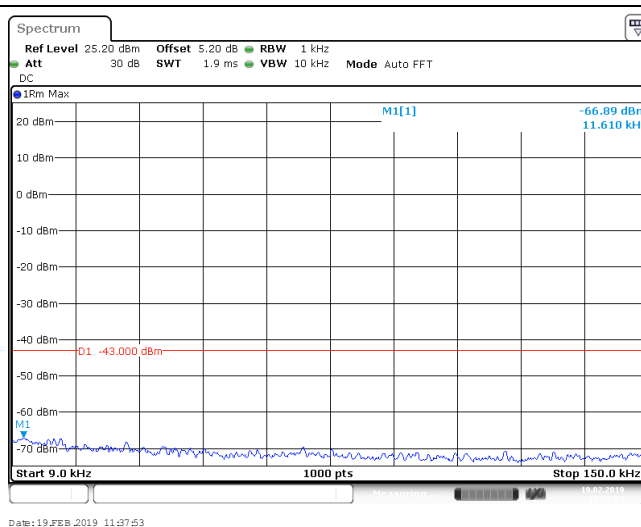


6. Spurious Emission at Antenna Terminal

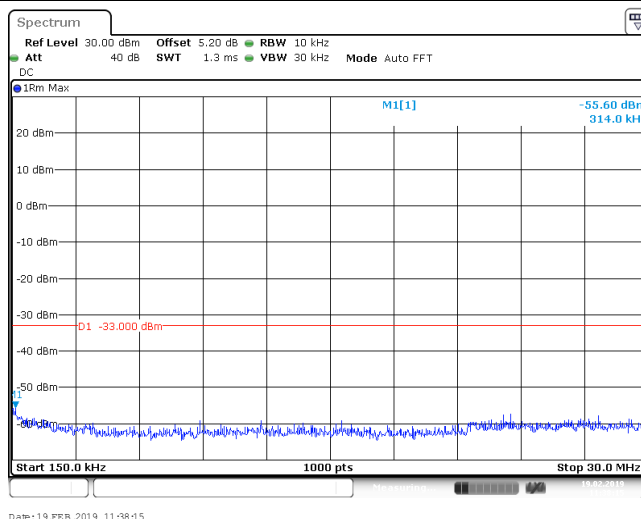
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (\text{Span} / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

6.1. Test Plots

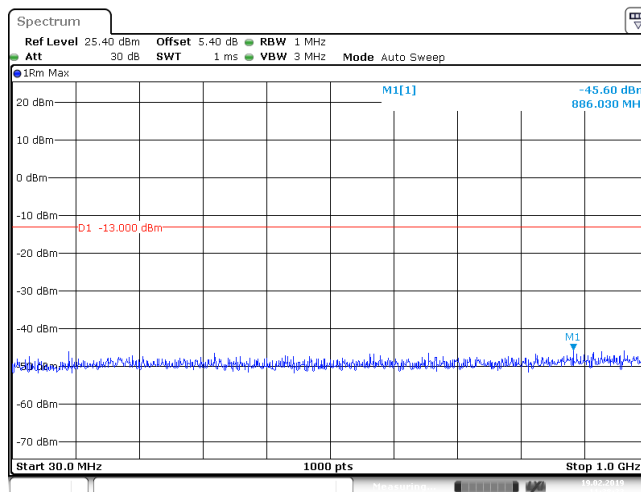


Band II_9262



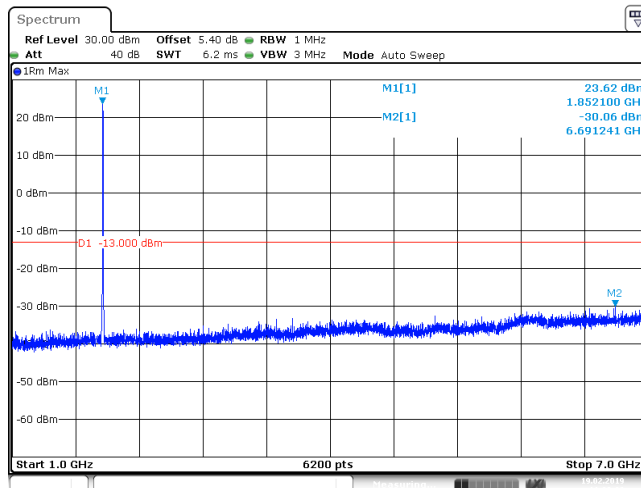
Band II_9262





Date: 19_FEB_2019 11:38:23

Band II_9262



Date: 19_FEB_2019 11:38:32

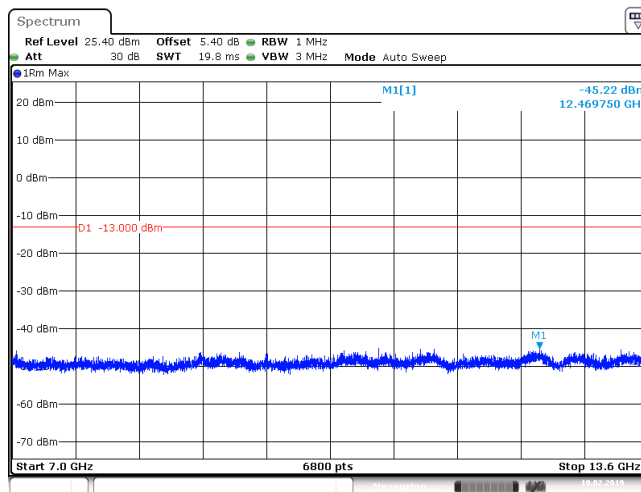
Band II_9262



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

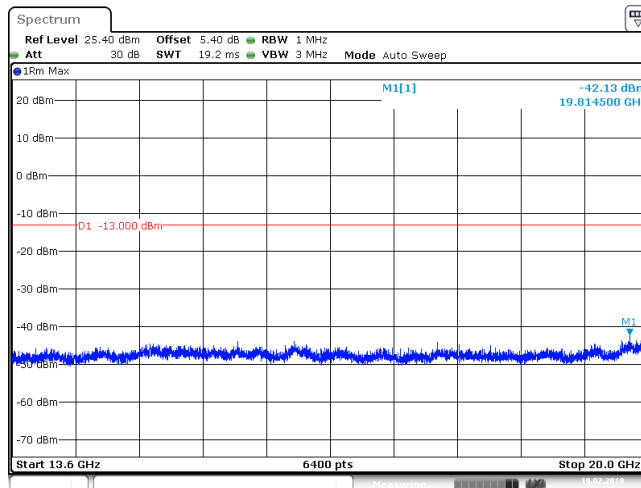
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Date: 19_FEB_2019 11:38:40

Band II_9262



Date: 19_FEB_2019 11:38:48

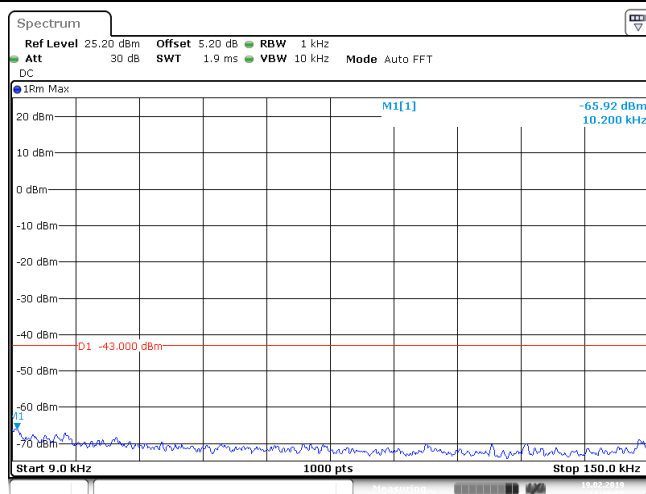
Band II_9262



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

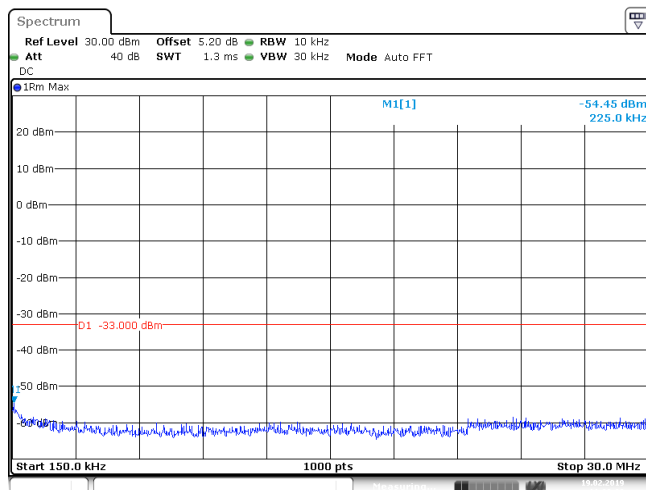
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Date: 19 FEB 2019 11:38:59

Band II 9400



Date: 19 FEB 2019 11:39:20

Band II 9400

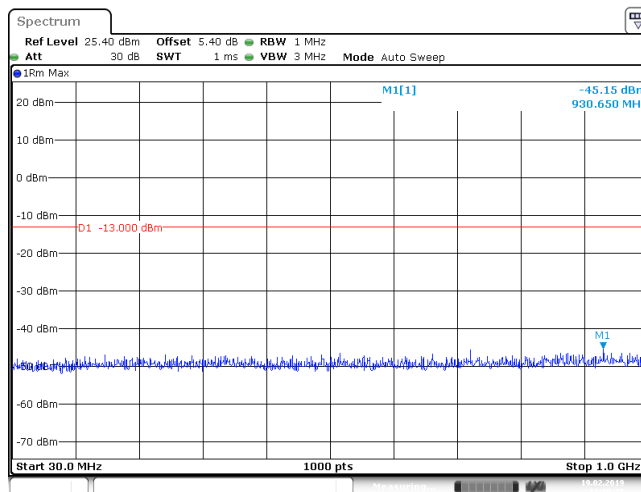


SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Testing Center EEC Laboratory.

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

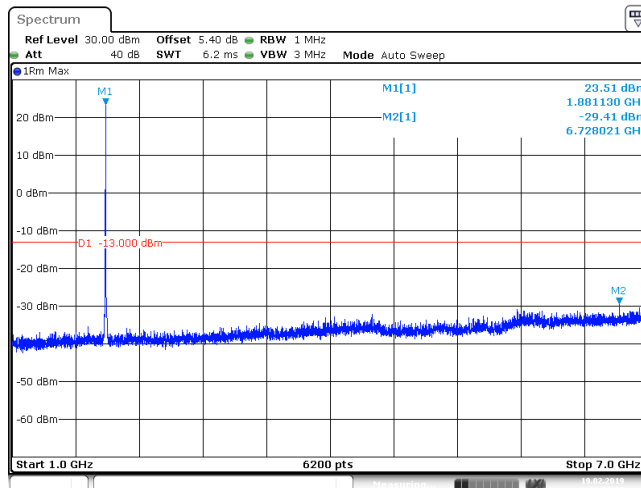
Attention: To ensure the integrity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doecheck@sgs.com.

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



Date: 19_FEB_2019 11:39:28

Band II_9400



Date: 19_FEB_2019 11:39:38

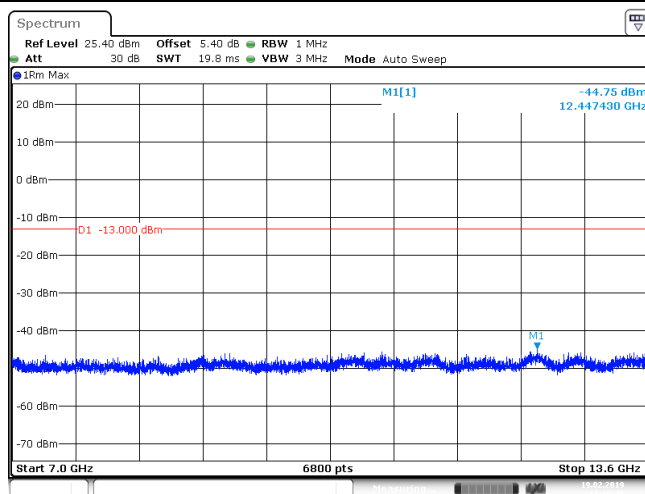
Band II_9400



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

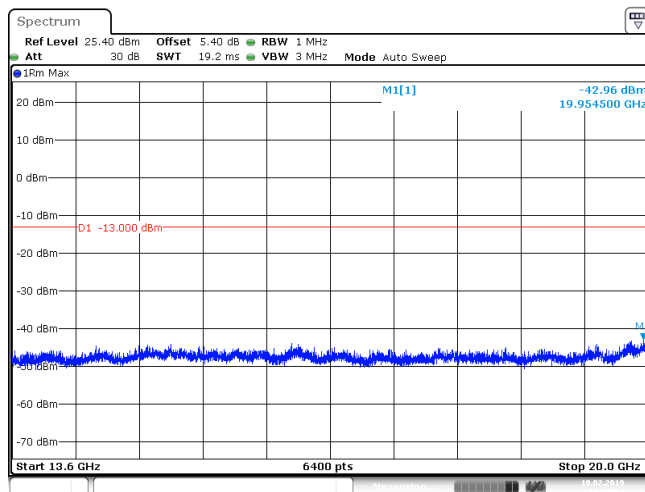
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Date: 19_FEB_2019 11:39:46

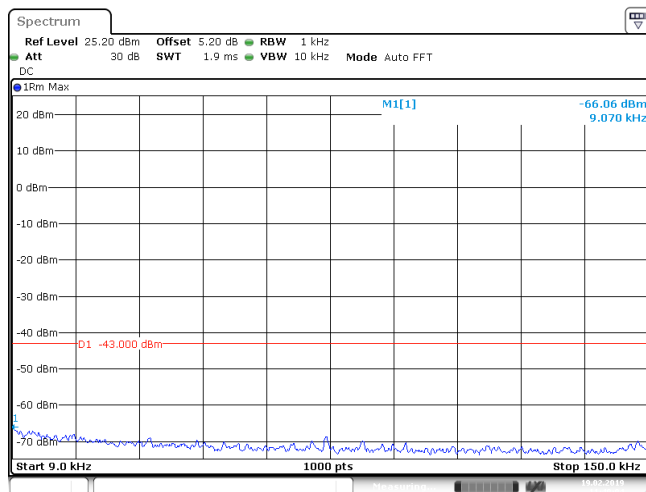
Band II_9400



Date: 19_FEB_2019 11:39:54

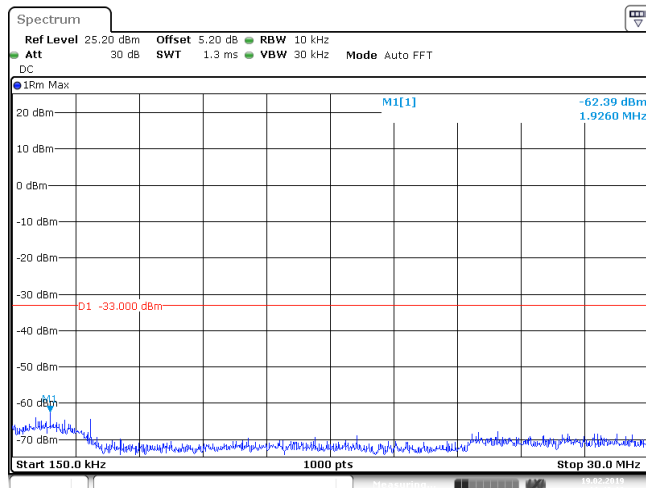
Band II_9400





Date: 19_FEB_2019 11:40:05

Band II_9538



Date: 19_FEB_2019 11:40:13

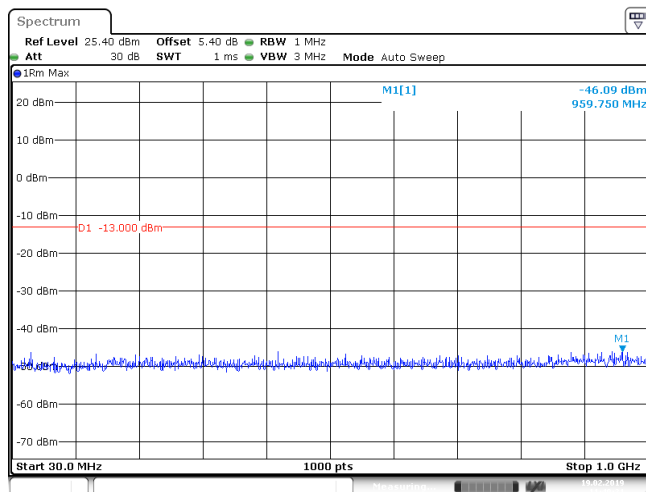
Band II_9538



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

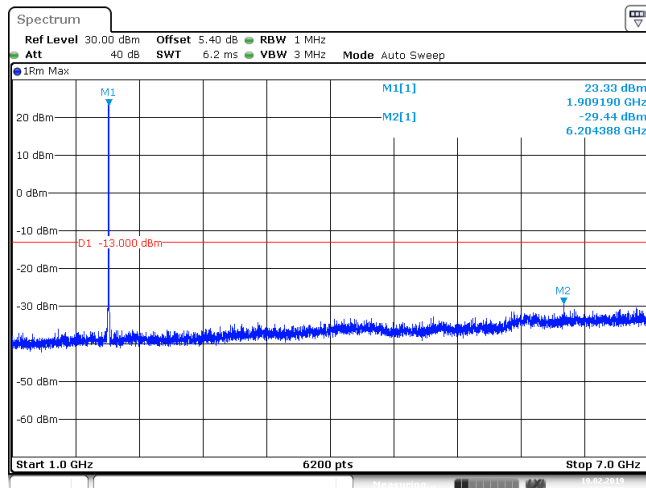
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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



Date: 19_FEB_2019 11:40:21

Band II_9538



Date: 19_FEB_2019 11:40:31

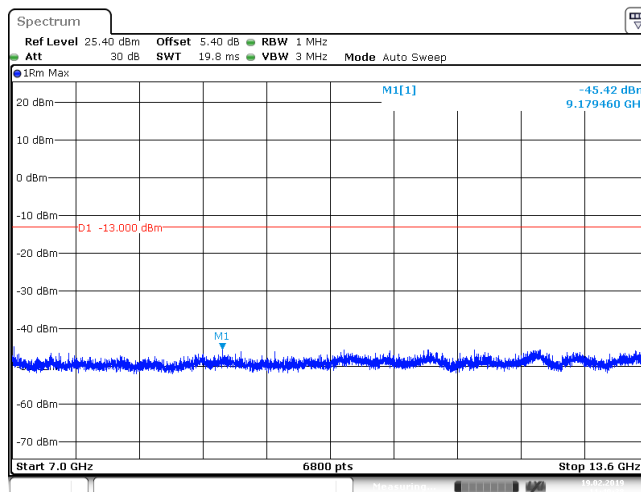
Band II_9538



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

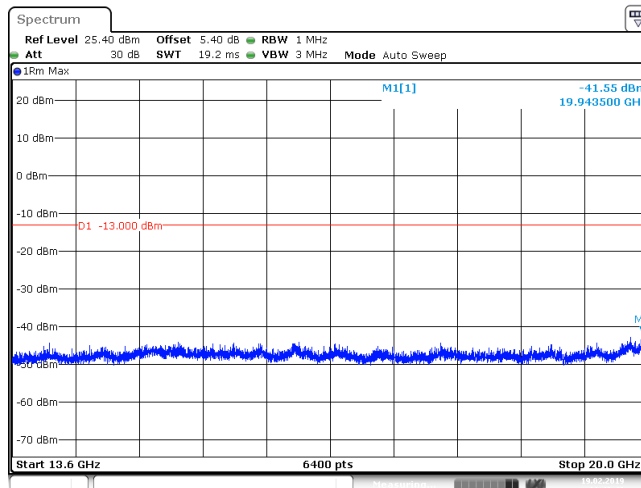
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Date: 19_FEB_2019 11:40:39

Band II_9538



Date: 19_FEB_2019 11:40:47

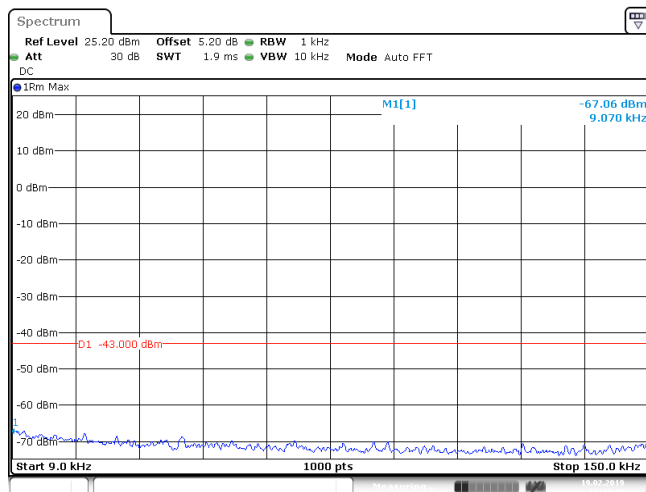
Band II_9538



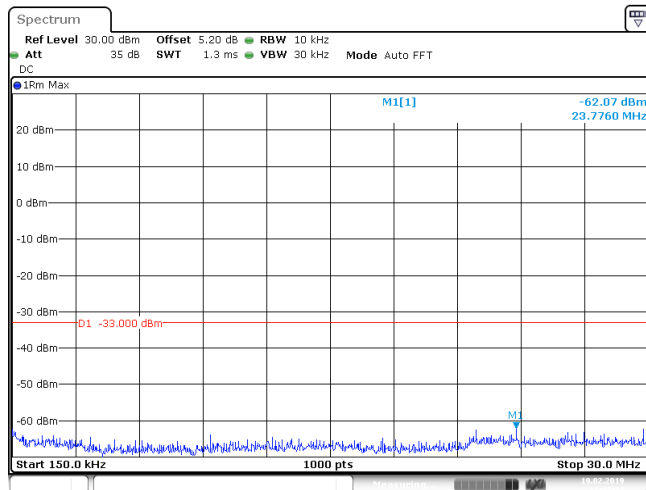
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (CCC Laboratory)

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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

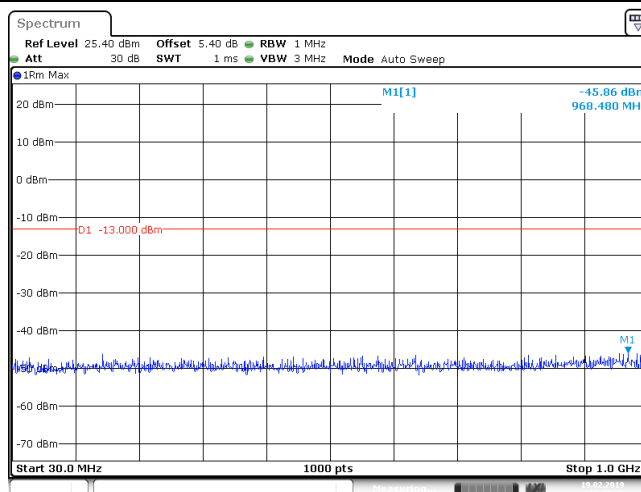


Band IV_1312



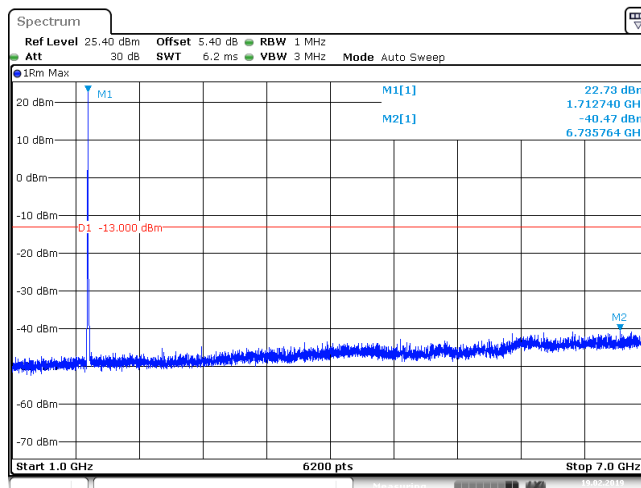
Band IV_1312





Date: 19_FEB_2019 11:43:42

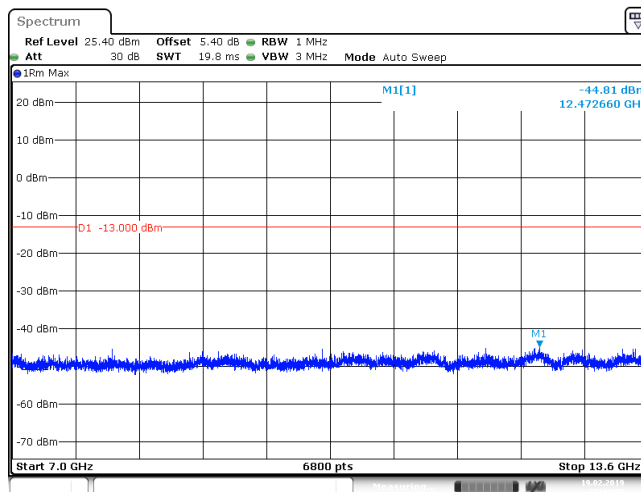
Band IV_1312



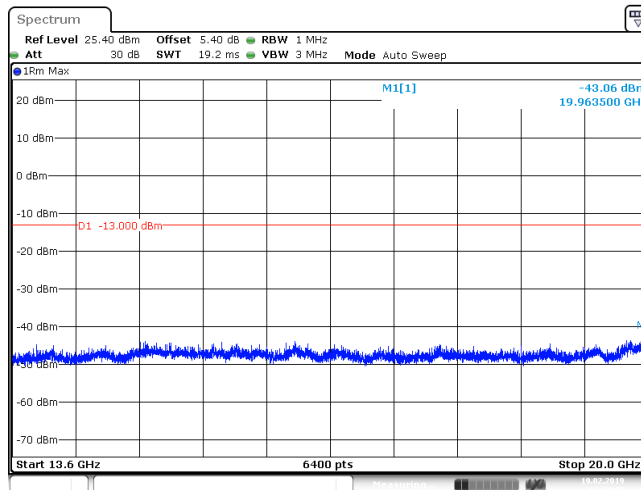
Date: 19_FEB_2019 11:43:52

Band IV_1312





Band IV_1312

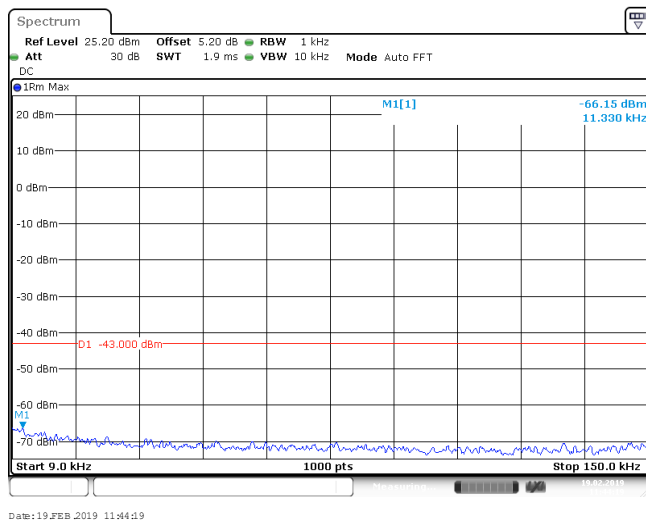


Band IV_1312

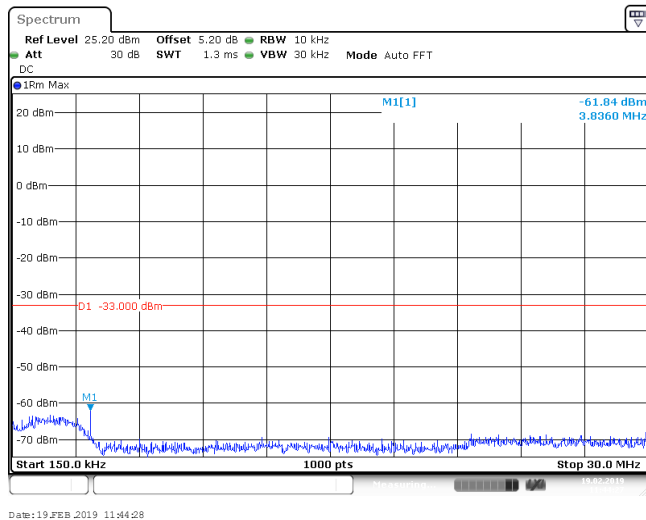


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

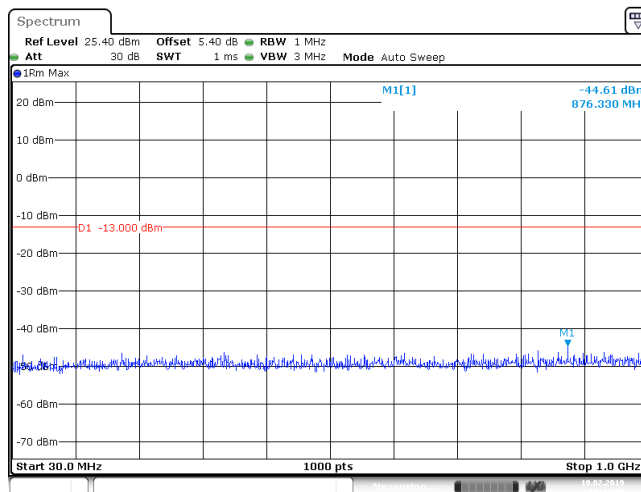


Band IV_1413

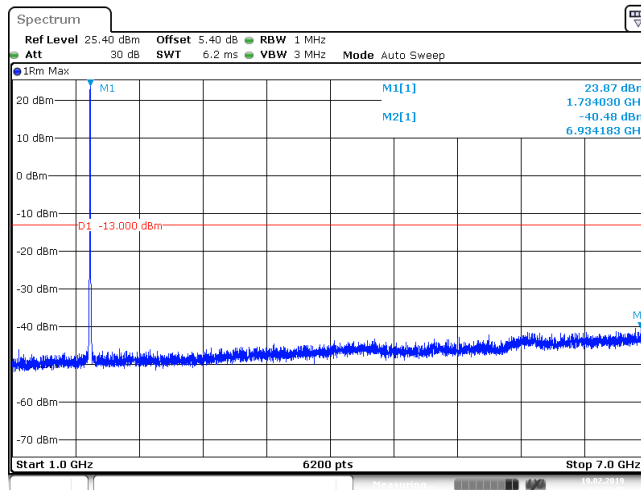


Band IV_1413



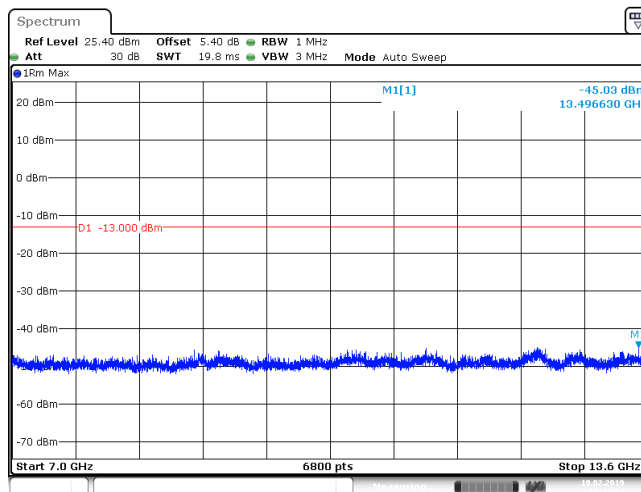


Band IV_1413



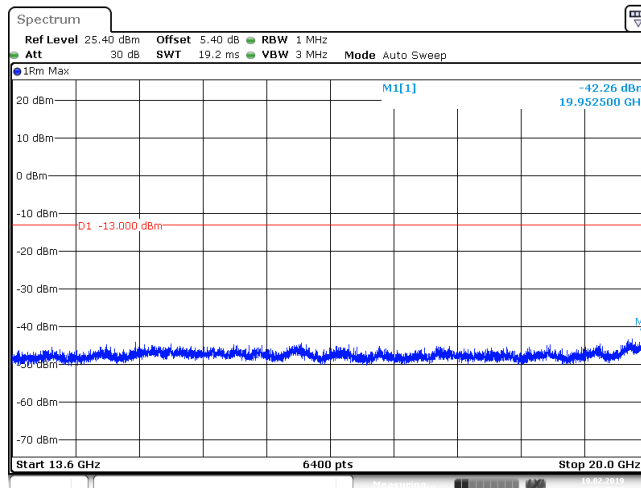
Band IV_1413





Date: 19_FEB_2019 11:44:54

Band IV_1413



Date: 19_FEB_2019 11:45:02

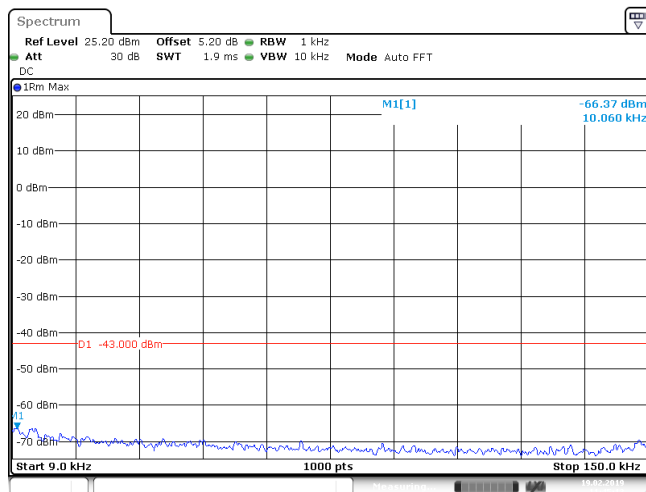
Band IV_1413



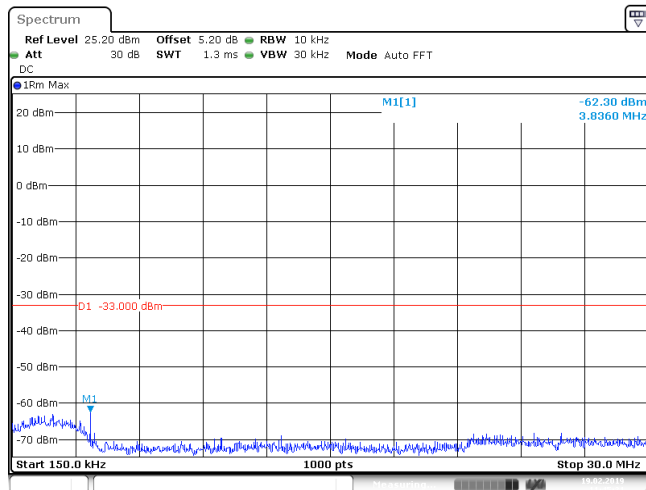
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

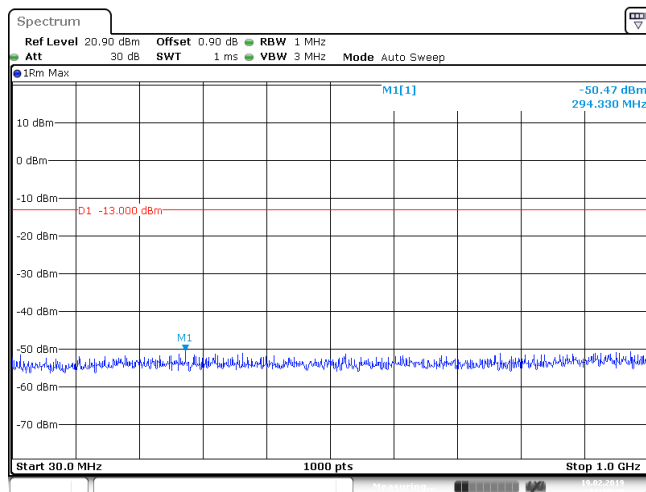


Band IV_1513



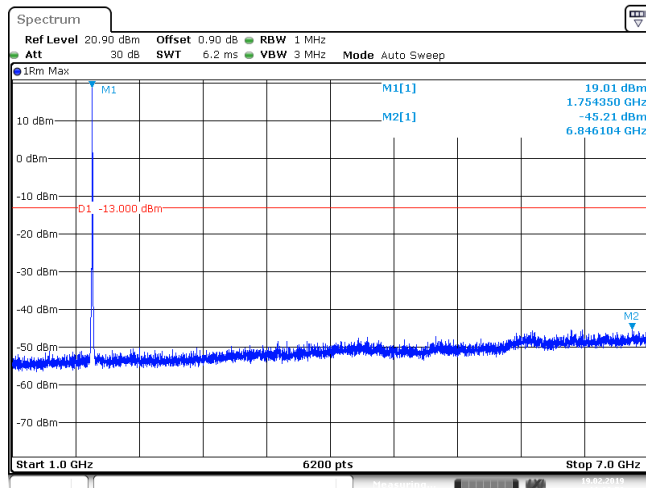
Band IV_1513





Date: 19_FEB_2019 11:20:41

Band IV_1513



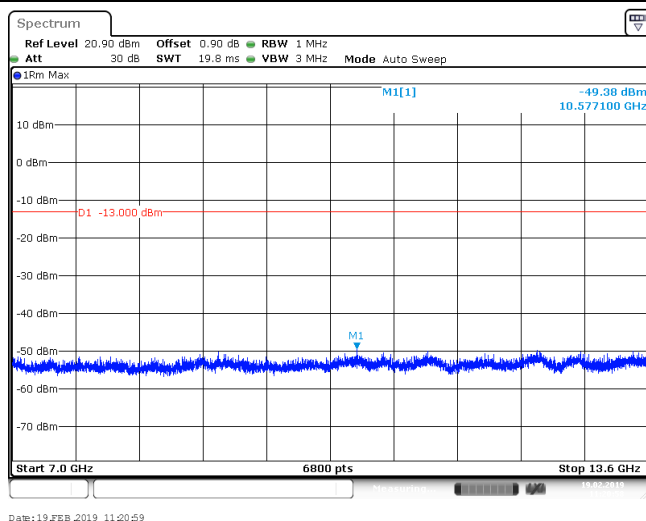
Date: 19_FEB_2019 11:20:50

Band IV_1513

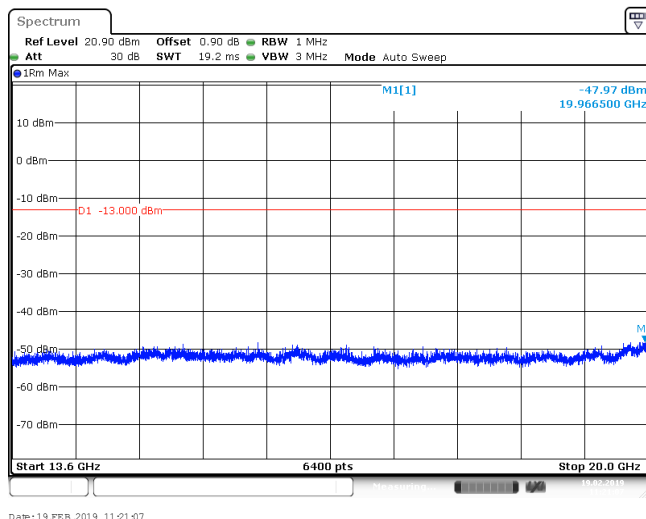


SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

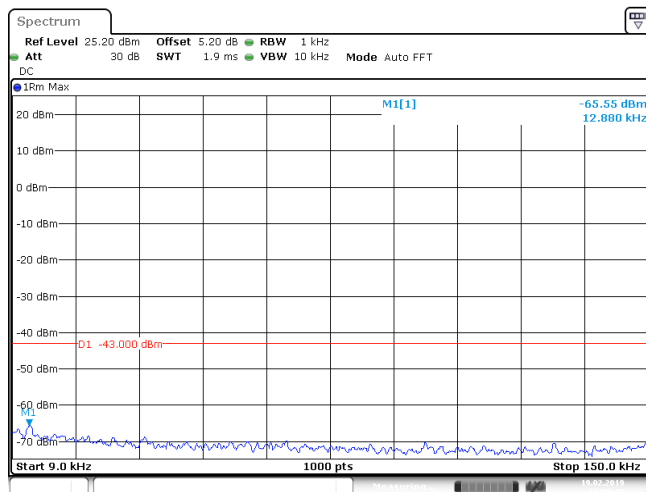


Band IV_1513

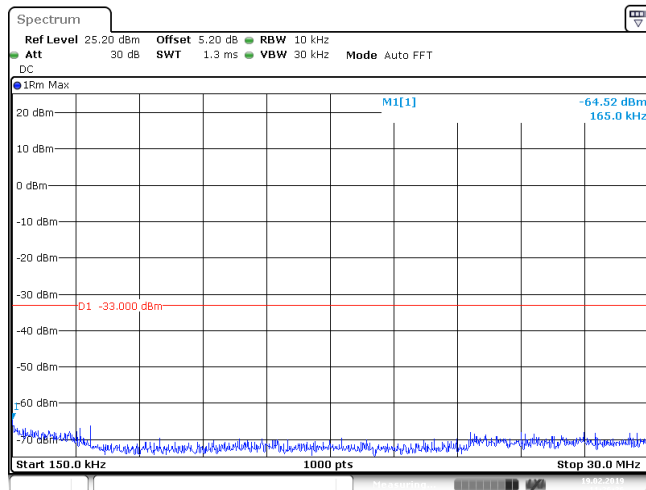


Band IV_1513



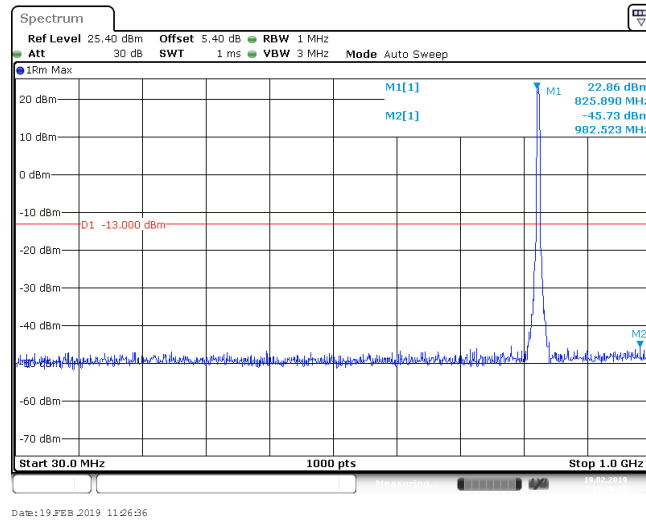


Band V_4132

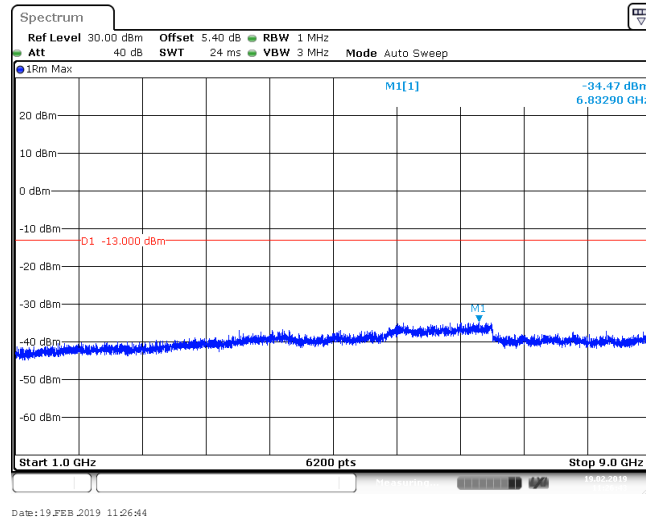


Band V_4132



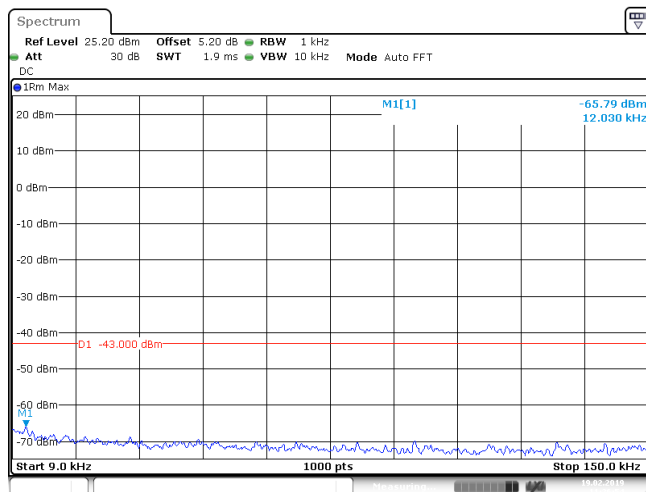


Band V_4132



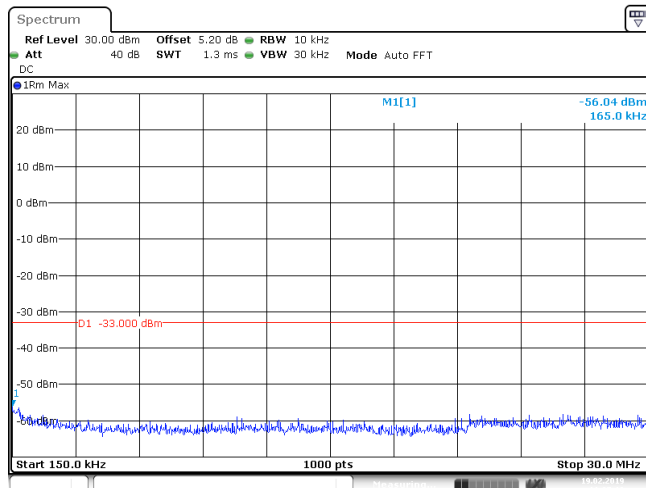
Band V_4132





Date: 19_FEB_2019 11:26:55

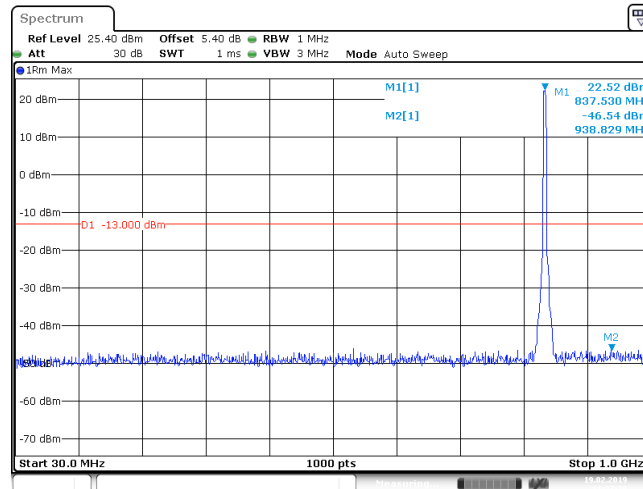
Band V_4182



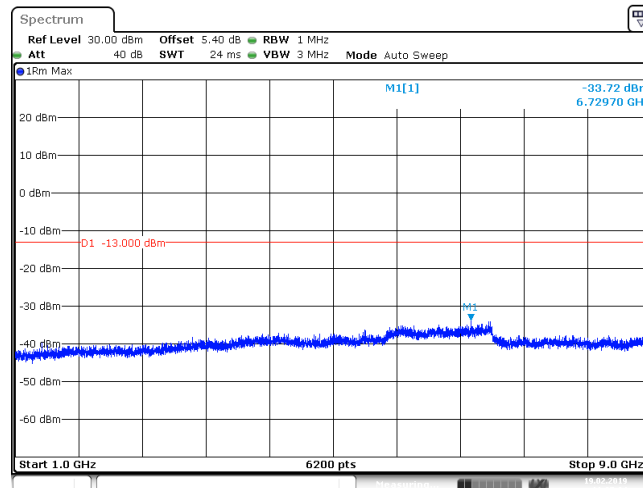
Date: 19_FEB_2019 11:27:16

Band V_4182



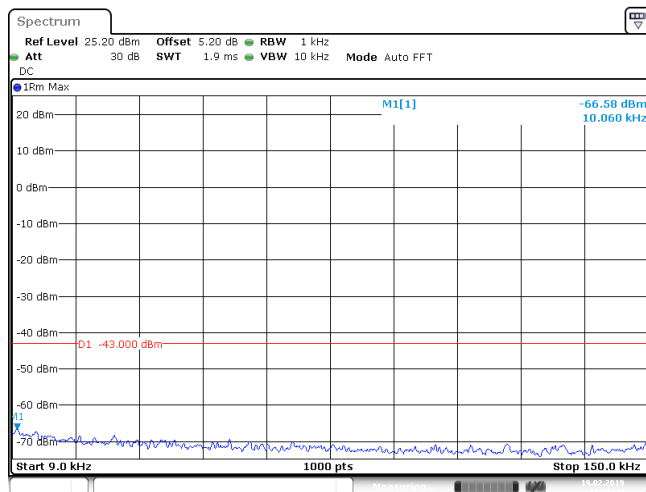


Band V_4182

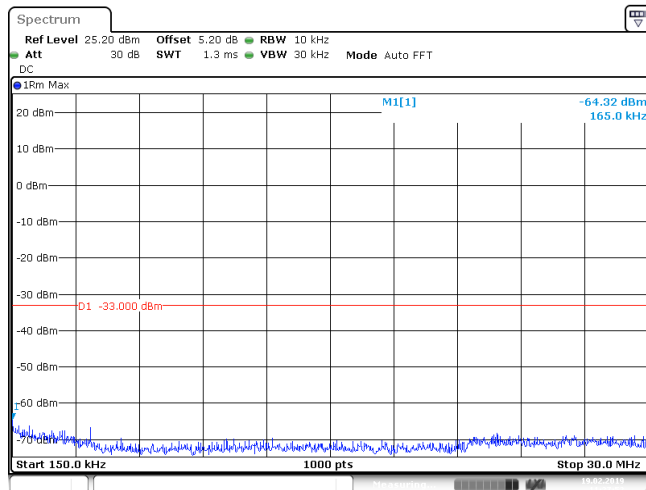


Band V_4182



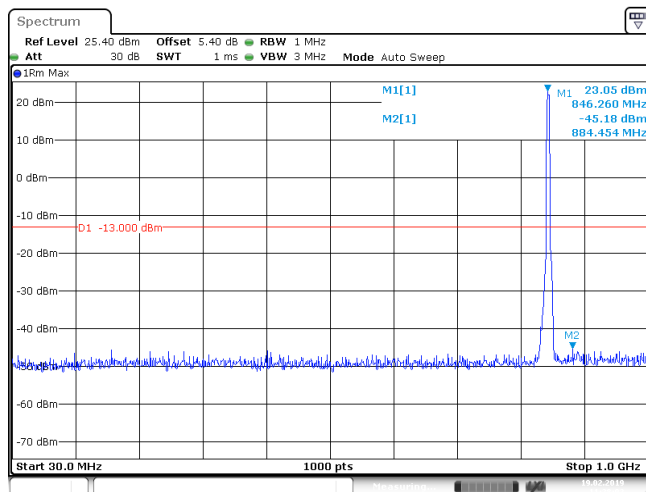


Band V_4233



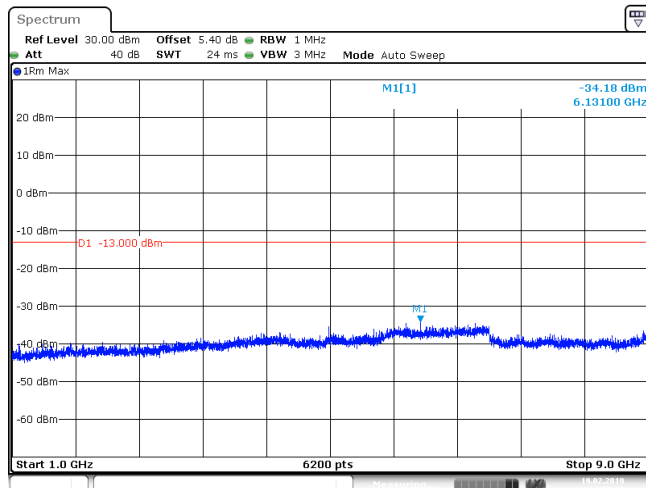
Band V_4233





Date: 19_FEB_2019 11:28:02

Band V_4233



Date: 19_FEB_2019 11:28:11

Band V_4233



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

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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

7. Field Strength of Spurious Radiation

Part I - Test Plots

7.1. For WCDMA

7.1.1. Test Band = WCDMA BAND II

7.1.1.1. Test Mode = UMTS/TM1

7.1.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
69.8690	-69.70	-13.00	56.70	Vertical
114.1032	-65.06	-13.00	52.06	Vertical
746.9143	-62.55	-13.00	49.55	Vertical
3703.0234	-56.41	-13.00	43.41	Vertical
5554.5852	-54.23	-13.00	41.23	Vertical
17993.4998	-32.88	-13.00	19.88	Vertical
42.6106	-64.70	-13.00	51.70	Horizontal
151.1106	-71.29	-13.00	58.29	Horizontal
230.9941	-67.90	-13.00	54.90	Horizontal
2697.1394	-35.76	-13.00	22.76	Horizontal
10069.2356	-47.92	-13.00	34.92	Horizontal
17997.9999	-37.78	-13.00	24.78	Horizontal

7.1.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
78.4054	-69.43	-13.00	56.43	Vertical
117.5469	-65.02	-13.00	52.02	Vertical
589.6210	-64.30	-13.00	51.30	Vertical
2695.9392	-37.15	-13.00	24.15	Vertical
5643.5881	-54.95	-13.00	41.95	Vertical



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



17998.5000	-34.23	-13.00	21.23	Vertical
45.1328	-62.68	-13.00	49.68	Horizontal
164.1092	-70.42	-13.00	57.42	Horizontal
238.8999	-68.43	-13.00	55.43	Horizontal
2701.1402	-36.04	-13.00	23.04	Horizontal
9296.7099	-50.64	-13.00	37.64	Horizontal
17992.9998	-39.11	-13.00	26.11	Horizontal

7.1.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
79.2785	-69.70	-13.00	56.70	Vertical
116.5768	-64.98	-13.00	51.98	Vertical
609.2645	-63.65	-13.00	50.65	Vertical
2742.3485	-37.66	-13.00	24.66	Vertical
7988.6663	-52.11	-13.00	39.11	Vertical
17999.0000	-32.88	-13.00	19.88	Vertical
43.7262	-62.78	-13.00	49.78	Horizontal
151.9351	-69.81	-13.00	56.81	Horizontal
615.9578	-63.98	-13.00	50.98	Horizontal
2703.1406	-35.64	-13.00	22.64	Horizontal
9053.7018	-50.71	-13.00	37.71	Horizontal
17994.4998	-37.68	-13.00	24.68	Horizontal

7.1.1.1.4. Spot Check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
53.5722	-71.75	-13.00	58.75	Vertical
108.7194	-63.75	-13.00	50.75	Vertical
695.0168	-62.51	-13.00	49.51	Vertical
5637.0879	-44.76	-13.00	31.76	Vertical
12216.3072	-47.61	-13.00	34.61	Vertical
17978.4993	-33.55	-13.00	20.55	Vertical
43.3867	-63.27	-13.00	50.27	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 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



165.5158	-69.62	-13.00	56.62	Horizontal
580.2600	-63.13	-13.00	50.13	Horizontal
5636.5879	-55.53	-13.00	42.53	Horizontal
10018.7340	-48.78	-13.00	35.78	Horizontal
17996.9999	-38.15	-13.00	25.15	Horizontal

7.1.2. Test Band = WCDMA BAND IV

7.1.2.1. Test Mode = UMTS/TM1

7.1.2.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
43.4837	-68.87	-13.00	55.87	Vertical
107.2159	-65.20	-13.00	52.20	Vertical
444.7442	-66.92	-13.00	53.92	Vertical
3426.5142	-53.77	-13.00	40.77	Vertical
5139.5713	-49.60	-13.00	36.60	Vertical
17987.4996	-32.57	-13.00	19.57	Vertical
44.6477	-64.07	-13.00	51.07	Horizontal
151.7896	-69.33	-13.00	56.33	Horizontal
232.0126	-68.47	-13.00	55.47	Horizontal
2700.3401	-35.64	-13.00	22.64	Horizontal
5135.0712	-53.65	-13.00	40.65	Horizontal
16400.9467	-37.86	-13.00	24.86	Horizontal

7.1.2.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
48.8674	-71.26	-13.00	58.26	Vertical
113.0847	-65.22	-13.00	52.22	Vertical
458.3249	-66.80	-13.00	53.80	Vertical
3467.5156	-55.45	-13.00	42.45	Vertical
9593.2198	-48.94	-13.00	35.94	Vertical
17980.4994	-32.69	-13.00	19.69	Vertical
44.1627	-64.72	-13.00	51.72	Horizontal
163.7697	-70.09	-13.00	57.09	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 issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



233.6132	-68.23	-13.00	55.23	Horizontal
2702.3405	-35.62	-13.00	22.62	Horizontal
5902.0967	-55.13	-13.00	42.13	Horizontal
17989.9997	-37.17	-13.00	24.17	Horizontal

7.1.2.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
49.6920	-72.63	-13.00	59.63	Vertical
113.6182	-65.19	-13.00	52.19	Vertical
453.8627	-66.93	-13.00	53.93	Vertical
3506.5169	-54.43	-13.00	41.43	Vertical
5259.0753	-53.46	-13.00	40.46	Vertical
17979.4993	-32.34	-13.00	19.34	Vertical
43.9202	-64.73	-13.00	51.73	Horizontal
164.8367	-70.25	-13.00	57.25	Horizontal
230.6060	-68.22	-13.00	55.22	Horizontal
2698.7397	-35.65	-13.00	22.65	Horizontal
3503.0168	-55.54	-13.00	42.54	Horizontal
17991.4997	-37.30	-13.00	24.30	Horizontal

7.1.2.1.4. Spot Check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
48.5764	-71.86	-13.00	58.86	Vertical
113.4727	-64.43	-13.00	51.43	Vertical
377.5684	-67.21	-13.00	54.21	Vertical
4892.5631	-57.51	-13.00	44.51	Vertical
10713.2571	-47.96	-13.00	34.96	Vertical
17998.5000	-33.62	-13.00	20.62	Vertical
44.3082	-63.77	-13.00	50.77	Horizontal
149.5100	-69.43	-13.00	56.43	Horizontal
237.3964	-67.06	-13.00	54.06	Horizontal
5096.5699	-56.82	-13.00	43.82	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 issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



10608.7536	-48.52	-13.00	35.52	Horizontal
16392.9464	-38.55	-13.00	25.55	Horizontal

7.1.3. Test Band = WCDMA BAND V

7.1.3.1. Test Mode = UMTS/TM1

7.1.3.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
48.8189	-71.73	-13.00	58.73	Vertical
111.5811	-65.04	-13.00	52.04	Vertical
319.8505	-69.04	-13.00	56.04	Vertical
1654.1308	-57.94	-13.00	44.94	Vertical
3000.0000	-55.98	-13.00	42.98	Vertical
17986.4996	-32.56	-13.00	19.56	Vertical
43.5322	-62.79	-13.00	49.79	Horizontal
67.9289	-56.69	-13.00	43.69	Horizontal
237.7359	-68.54	-13.00	55.54	Horizontal
1650.5301	-62.08	-13.00	49.08	Horizontal
2696.3393	-55.61	-13.00	42.61	Horizontal
17989.4997	-37.63	-13.00	24.63	Horizontal

7.1.3.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
69.0445	-69.63	-13.00	56.63	Vertical
112.6966	-64.71	-13.00	51.71	Vertical
392.9436	-68.48	-13.00	55.48	Vertical
1674.5349	-58.10	-13.00	45.10	Vertical
5110.0703	-55.81	-13.00	42.81	Vertical
17984.4995	-32.58	-13.00	19.58	Vertical
43.8232	-63.96	-13.00	50.96	Horizontal
152.7111	-70.69	-13.00	57.69	Horizontal
241.3251	-68.44	-13.00	55.44	Horizontal
1671.3343	-61.76	-13.00	48.76	Horizontal
3562.5188	-57.10	-13.00	44.10	Horizontal
16396.9466	-37.73	-13.00	24.73	Horizontal

7.1.3.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
-----------------	-------------	------------------	-------------	--------------



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



77.0474	-69.67	-13.00	56.67	Vertical
111.7751	-64.61	-13.00	51.61	Vertical
341.4341	-69.22	-13.00	56.22	Vertical
1694.5389	-58.77	-13.00	45.77	Vertical
2985.5971	-55.81	-13.00	42.81	Vertical
17997.4999	-32.94	-13.00	19.94	Vertical
43.8232	-64.28	-13.00	51.28	Horizontal
151.7411	-69.49	-13.00	56.49	Horizontal
340.7550	-66.73	-13.00	53.73	Horizontal
1766.1532	-62.05	-13.00	49.05	Horizontal
2698.7397	-55.61	-13.00	42.61	Horizontal
16390.9464	-37.74	-13.00	24.74	Horizontal

7.1.3.1.4. Spot Check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
49.7405	-71.12	-13.00	58.12	Vertical
110.5625	-62.78	-13.00	49.78	Vertical
326.5438	-68.37	-13.00	55.37	Vertical
1671.3343	-57.90	-13.00	44.90	Vertical
2995.5991	-55.14	-13.00	42.14	Vertical
17966.4989	-33.62	-13.00	20.62	Vertical
43.8717	-63.13	-13.00	50.13	Horizontal
152.3231	-69.23	-13.00	56.23	Horizontal
242.5376	-67.88	-13.00	54.88	Horizontal
1670.9342	-60.93	-13.00	47.93	Horizontal
2999.5999	-55.24	-13.00	42.24	Horizontal
17994.9998	-38.01	-13.00	25.01	Horizontal

Remark:

- 1) The disturbance above 12.75GHz and 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.
- 2) We have tested all modulation and all Bandwidth , but only the worst case data presented in this report.



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

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

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057
中国·深圳·科技园中区M-10栋一号厂房

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

www.sgsgroup.com.cn
sgs.china@sgs.com

8. Frequency Stability

8.1. Frequency Vs Voltage

Voltage							
BAND	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	9262	VL	TN	-1.12	-0.000602	±2.5	PASS
Band II	9262	VN	TN	-0.51	-0.000278	±2.5	PASS
Band II	9262	VH	TN	0.69	0.000375	±2.5	PASS
Band II	9400	VL	TN	1.19	0.000632	±2.5	PASS
Band II	9400	VN	TN	1.34	0.000715	±2.5	PASS
Band II	9400	VH	TN	0.04	0.000019	±2.5	PASS
Band II	9538	VL	TN	-3.31	-0.001736	±2.5	PASS
Band II	9538	VN	TN	-4.88	-0.002557	±2.5	PASS
Band II	9538	VH	TN	-4.58	-0.002400	±2.5	PASS
Band IV	1312	VL	TN	6.22	0.003630	±2.5	PASS
Band IV	1312	VN	TN	6.68	0.003901	±2.5	PASS
Band IV	1312	VH	TN	6.52	0.003809	±2.5	PASS
Band IV	1413	VL	TN	4.94	0.002848	±2.5	PASS
Band IV	1413	VN	TN	6.04	0.003488	±2.5	PASS
Band IV	1413	VH	TN	5.57	0.003216	±2.5	PASS
Band IV	1513	VL	TN	-6.76	-0.003857	±2.5	PASS
Band IV	1513	VN	TN	-8.05	-0.004595	±2.5	PASS
Band IV	1513	VH	TN	-7.34	-0.004187	±2.5	PASS
Band V	4132	VL	TN	0.62	0.000753	±2.5	PASS
Band V	4132	VN	TN	0.44	0.000528	±2.5	PASS
Band V	4132	VH	TN	0.26	0.000312	±2.5	PASS
Band V	4182	VL	TN	-1.31	-0.001565	±2.5	PASS
Band V	4182	VN	TN	-0.44	-0.000522	±2.5	PASS
Band V	4182	VH	TN	-0.62	-0.000735	±2.5	PASS
Band V	4233	VL	TN	-2.32	-0.002746	±2.5	PASS
Band V	4233	VN	TN	-1.65	-0.001943	±2.5	PASS
Band V	4233	VH	TN	-1.92	-0.002264	±2.5	PASS



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



8.2. Frequency Vs Temperature

Temperature							
BAND	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band II	9262	VN	-30	-0.24	-0.000127	±2.5	PASS
Band II	9262	VN	-20	0.53	0.000286	±2.5	PASS
Band II	9262	VN	-10	0.34	0.000181	±2.5	PASS
Band II	9262	VN	0	0.43	0.000232	±2.5	PASS
Band II	9262	VN	10	0.09	0.000046	±2.5	PASS
Band II	9262	VN	20	0.10	0.000054	±2.5	PASS
Band II	9262	VN	30	0.16	0.000089	±2.5	PASS
Band II	9262	VN	40	0.79	0.000429	±2.5	PASS
Band II	9262	VN	50	0.32	0.000174	±2.5	PASS
Band II	9400	VN	-30	1.36	0.000723	±2.5	PASS
Band II	9400	VN	-20	-0.39	-0.000209	±2.5	PASS
Band II	9400	VN	-10	0.47	0.000251	±2.5	PASS
Band II	9400	VN	0	1.36	0.000723	±2.5	PASS
Band II	9400	VN	10	0.54	0.000289	±2.5	PASS
Band II	9400	VN	20	0.67	0.000354	±2.5	PASS
Band II	9400	VN	30	-0.46	-0.000243	±2.5	PASS
Band II	9400	VN	40	0.98	0.000521	±2.5	PASS
Band II	9400	VN	50	-0.05	-0.000027	±2.5	PASS
Band II	9538	VN	-30	-5.06	-0.002655	±2.5	PASS
Band II	9538	VN	-20	-4.25	-0.002227	±2.5	PASS
Band II	9538	VN	-10	-5.29	-0.002771	±2.5	PASS
Band II	9538	VN	0	-3.96	-0.002073	±2.5	PASS
Band II	9538	VN	10	-5.31	-0.002786	±2.5	PASS
Band II	9538	VN	20	-5.19	-0.002722	±2.5	PASS
Band II	9538	VN	30	-5.63	-0.002951	±2.5	PASS
Band II	9538	VN	40	-5.16	-0.002707	±2.5	PASS
Band II	9538	VN	50	-4.03	-0.002115	±2.5	PASS
Band IV	1312	VN	-30	5.82	0.003400	±2.5	PASS
Band IV	1312	VN	-20	6.24	0.003646	±2.5	PASS
Band IV	1312	VN	-10	6.31	0.003684	±2.5	PASS
Band IV	1312	VN	0	5.88	0.003433	±2.5	PASS
Band IV	1312	VN	10	6.47	0.003776	±2.5	PASS
Band IV	1312	VN	20	6.59	0.003851	±2.5	PASS



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band IV	1312	VN	30	5.72	0.003342	±2.5	PASS
Band IV	1312	VN	40	6.34	0.003701	±2.5	PASS
Band IV	1312	VN	50	6.18	0.003609	±2.5	PASS
Band IV	1413	VN	-30	6.72	0.003876	±2.5	PASS
Band IV	1413	VN	-20	6.33	0.003653	±2.5	PASS
Band IV	1413	VN	-10	6.32	0.003645	±2.5	PASS
Band IV	1413	VN	0	6.14	0.003546	±2.5	PASS
Band IV	1413	VN	10	5.99	0.003459	±2.5	PASS
Band IV	1413	VN	20	5.82	0.003360	±2.5	PASS
Band IV	1413	VN	30	6.09	0.003513	±2.5	PASS
Band IV	1413	VN	40	6.65	0.003839	±2.5	PASS
Band IV	1413	VN	50	6.24	0.003600	±2.5	PASS
Band IV	1513	VN	-30	-8.65	-0.004934	±2.5	PASS
Band IV	1513	VN	-20	-8.22	-0.004689	±2.5	PASS
Band IV	1513	VN	-10	-9.05	-0.005163	±2.5	PASS
Band IV	1513	VN	0	-9.68	-0.005526	±2.5	PASS
Band IV	1513	VN	10	-8.48	-0.004840	±2.5	PASS
Band IV	1513	VN	20	-9.11	-0.005195	±2.5	PASS
Band IV	1513	VN	30	-9.87	-0.005632	±2.5	PASS
Band IV	1513	VN	40	-9.57	-0.005461	±2.5	PASS
Band IV	1513	VN	50	-10.80	-0.006162	±2.5	PASS
Band V	4132	VN	-30	1.07	0.001298	±2.5	PASS
Band V	4132	VN	-20	0.54	0.000649	±2.5	PASS
Band V	4132	VN	-10	-0.04	-0.000043	±2.5	PASS
Band V	4132	VN	0	0.44	0.000537	±2.5	PASS
Band V	4132	VN	10	0.49	0.000597	±2.5	PASS
Band V	4132	VN	20	1.35	0.001636	±2.5	PASS
Band V	4132	VN	30	0.62	0.000753	±2.5	PASS
Band V	4132	VN	40	0.29	0.000355	±2.5	PASS
Band V	4132	VN	50	0.56	0.000675	±2.5	PASS
Band V	4182	VN	-30	0.21	0.000248	±2.5	PASS
Band V	4182	VN	-20	-0.60	-0.000718	±2.5	PASS
Band V	4182	VN	-10	-0.13	-0.000154	±2.5	PASS
Band V	4182	VN	0	-0.25	-0.000299	±2.5	PASS
Band V	4182	VN	10	0.01	0.000017	±2.5	PASS
Band V	4182	VN	20	-0.67	-0.000804	±2.5	PASS
Band V	4182	VN	30	-0.45	-0.000539	±2.5	PASS
Band V	4182	VN	40	-0.34	-0.000402	±2.5	PASS



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Band V	4182	VN	50	-0.99	-0.001189	±2.5	PASS
Band V	4233	VN	-30	-1.65	-0.001952	±2.5	PASS
Band V	4233	VN	-20	-1.39	-0.001647	±2.5	PASS
Band V	4233	VN	-10	-0.83	-0.000980	±2.5	PASS
Band V	4233	VN	0	-1.25	-0.001478	±2.5	PASS
Band V	4233	VN	10	-1.40	-0.001656	±2.5	PASS
Band V	4233	VN	20	-1.90	-0.002247	±2.5	PASS
Band V	4233	VN	30	-2.12	-0.002509	±2.5	PASS
Band V	4233	VN	40	-1.53	-0.001808	±2.5	PASS
Band V	4233	VN	50	-1.30	-0.001538	±2.5	PASS

The End

