

EMC-ARF-05 Rev 1.1 Page: 1 of 61

FCC ID: OJFDHRU-G2-19

Appendix -

Test Data and Result for report GZCR231100125602

(A)

(For copied data from original report GZCR210300001502)



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 https://www.sgs.com/en/Terms-and-Conditions. 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.

中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555

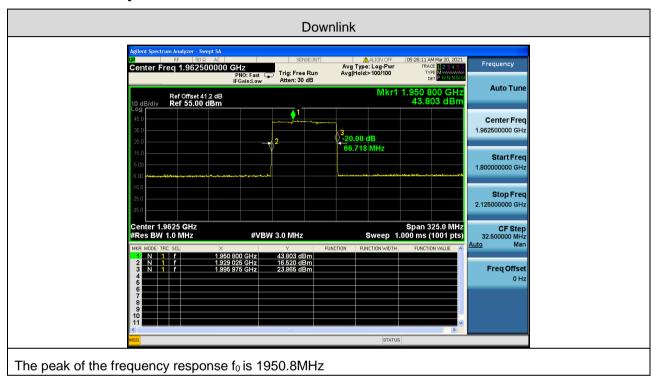
www.sgsgroup.com.cn sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 2 of 61

1 Broadband PCS (only for downlink: 1930-1995MHz)

1.1 Out-of-band rejection





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

10 No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cc

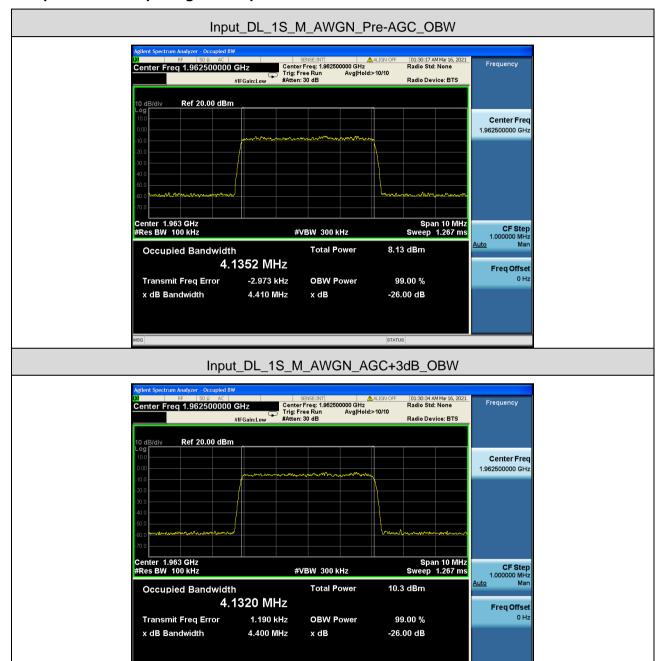
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 sgs.china@s



EMC-ARF-05 Rev 1.1 Page: 3 of 61

1.2 Input-versus-output signal comparison





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

sample(s) are retained for 30 days only.

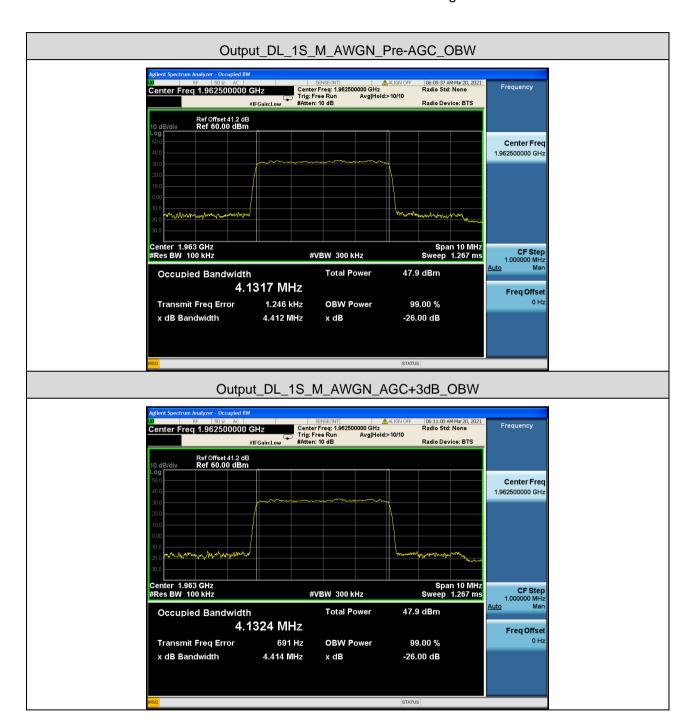
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN_Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 4 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

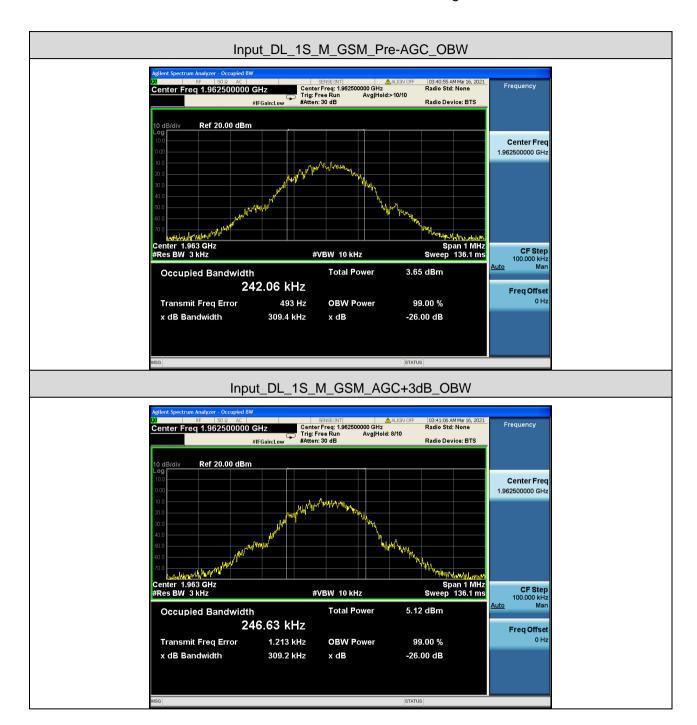
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Attention: 10 check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-75) 830/1443, or email: Ch. Doccheck@sgs.com

\$ Co., Ltd. [No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 Page: 5 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

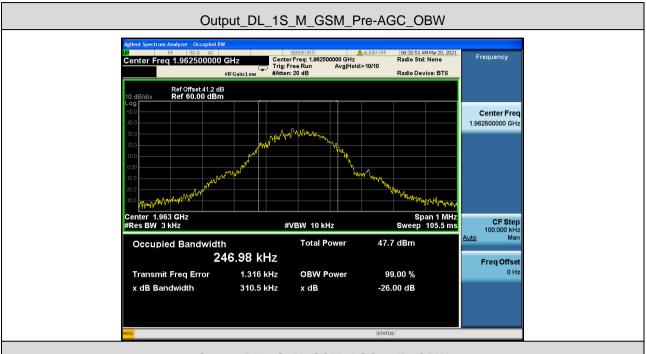
sample(s) are retained for 30 days only.

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

\$Co...Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 Page: 6 of 61



Output_DL_1S_M_GSM_AGC+3dB_OBW



Remark:

Compare the spectral plot of the input signal to the output signal affirm that they are similar (in passband and roll off characteristic features and relative spectral locations). The test result complies with the requirement.



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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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



EMC-ARF-05 Rev 1.1 Page: 7 of 61

1.3 Mean output power and amplifier/booster gain

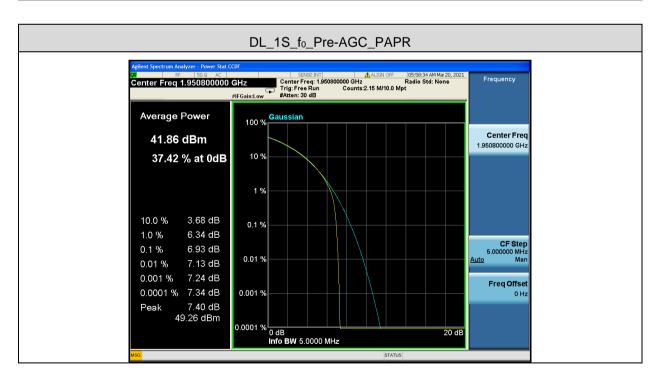
Test Conf.	Test Freq. fo (MHz)	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)	Verdict
DL_1S_AWGN	1950.8	Pre-AGC	-0.25	42.95	43.20	PASS
		AGC+3dB	2.75	42.79	/	PASS
DL_1S_GSM	1950.8	Pre-AGC	-0.28	43.03	43.31	PASS
		AGC+3dB	2.72	43.26	/	PASS

Remark:

According to the declaration from the applicant, the single antenna gain should not exceed 12.5dBi, the Directional gain = G_{ANT} + 10 log (N_{ANT}) dBi = 12.5dBi+10log (2) dBi= 15.5dBi.

The total maximum EIRP for the EUT is (43.26dBm+43.26dBm) +15.5dBidB=61.77dBm (1503.1W) which don't exceed the required EIRP limit (1640W/MHz).

Test Conf.	Test Freq. fo (MHz)	Signal Level	PAPR (dB)	Limit (dB)	Verdict
DL_1S_AWGN	1950.8	Pre-AGC	7.13	13	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 https://www.sgs.com/en/Terms-and-Conditions. 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, **Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Attention: 10 cleck the authenticity of resting /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: CN_Doccheck@sgs.com

Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cc

中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 www.sgsgroup.com.cn t (86–20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 8 of 61

1.4 Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions

Note:

The tested max conducted power for single antenna port is 43.26dBm, the power of any emission must be reduced below the mean output power (P) by at least 43 + 10log (P) dB Here, P=43.26dBm= 21.18W.

So the limit = P(dBm)- [43 + 10 log (21.18W)] =-13dBm

The EUT supports 2x2 MIMO and the emissions were measured at one of output port, so the limit line was set to -16.01dBm in following test plots in order to determine the test result conveniently.

The spurious emissions from 9kHz to 30MHz was very low and 20dB below the limit, therefore, the data was not recorded in the 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 https://www.sgs.com/en/Terms-and-Conditions. 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, **Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

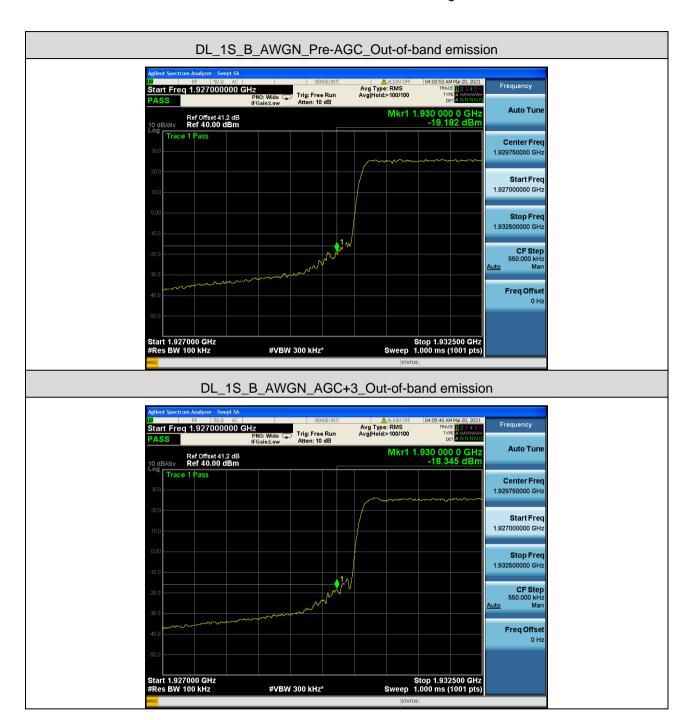
Attention: 10 check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 t (86-20) 82155555

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



EMC-ARF-05 Rev 1.1 Page: 9 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

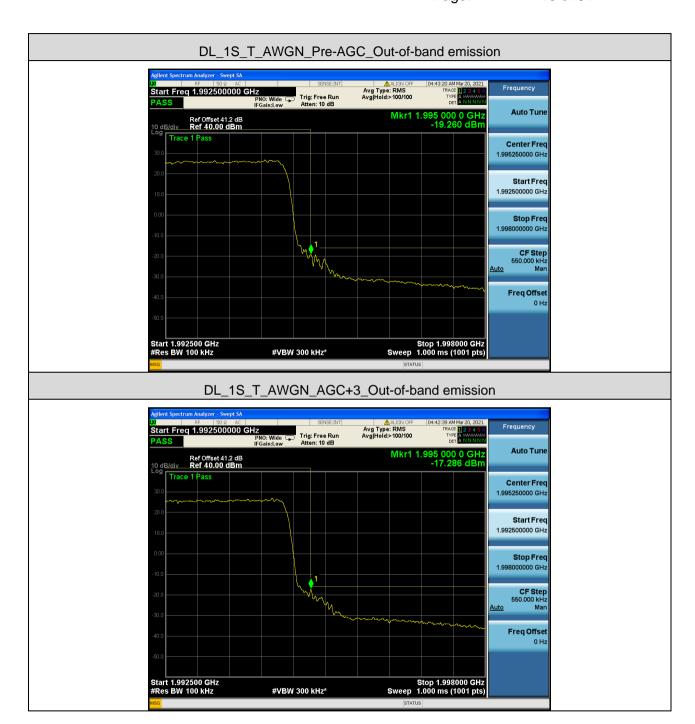
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

\$Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 いのはいた。 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮編:510663

t (86–20) 82155555 sgs.chi



EMC-ARF-05 Rev 1.1 Page: 10 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

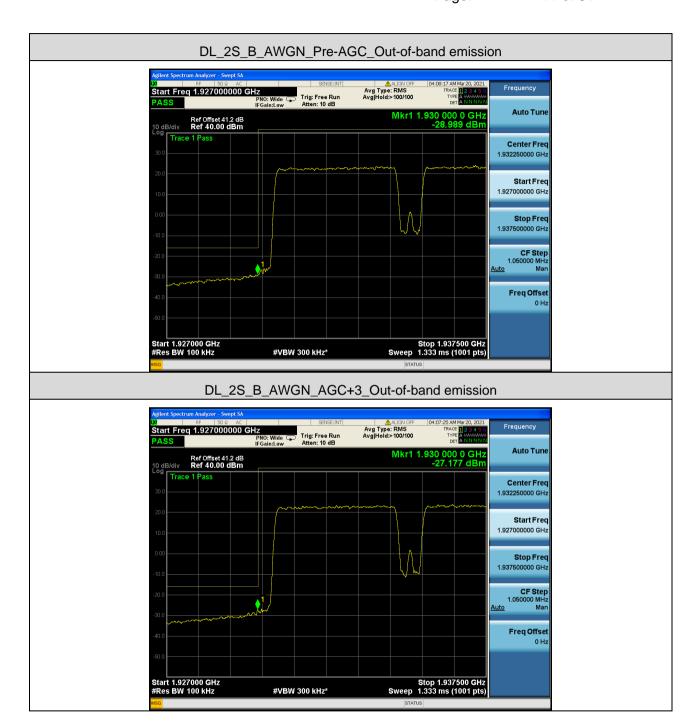
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
Noralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 sgs.china@sgs.c



EMC-ARF-05 Rev 1.1 Page: 11 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

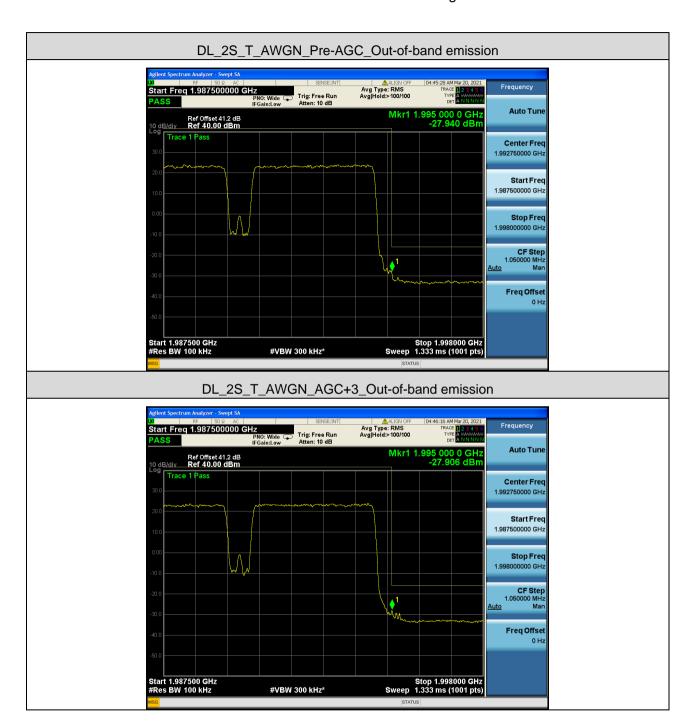
s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Doralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 sgs

sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 12 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

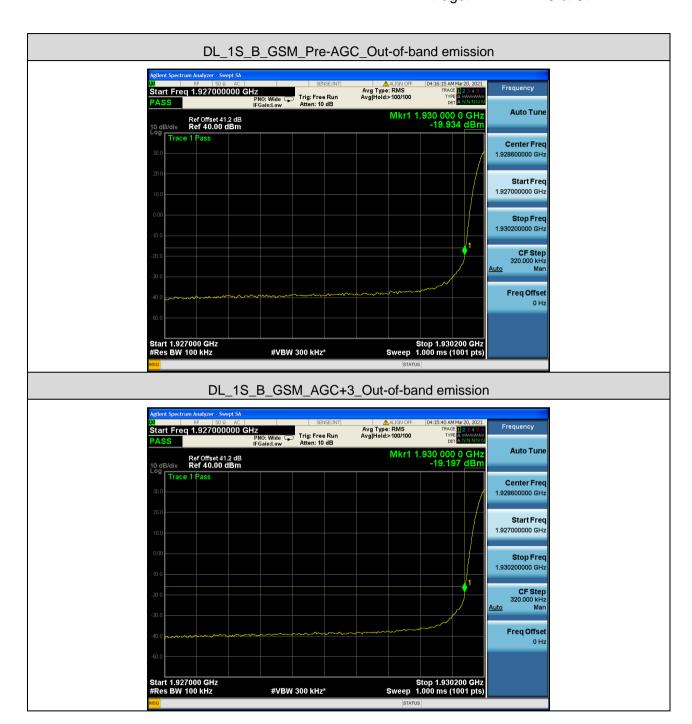
s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 2007 1079. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 sgs.chi

sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 13 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

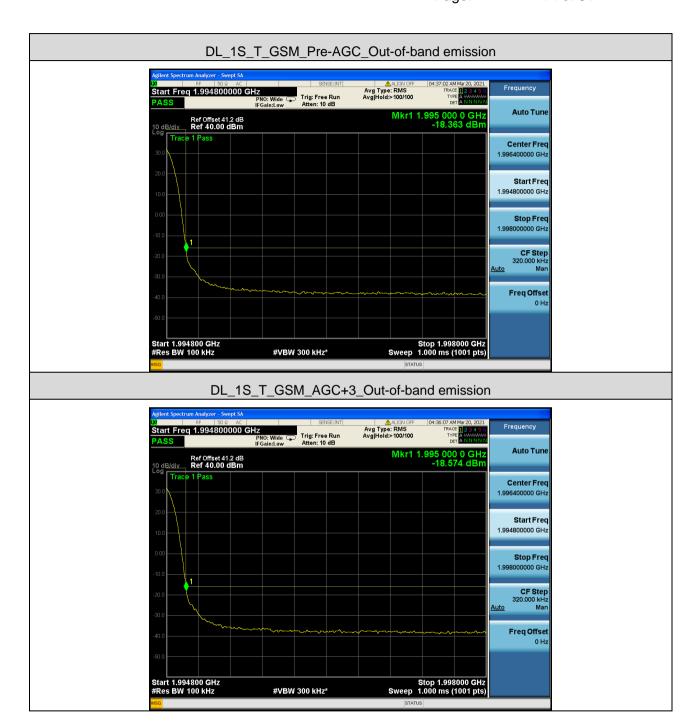
t (86-20) 82155555 www.sgsgroup.com.cn

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 14 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

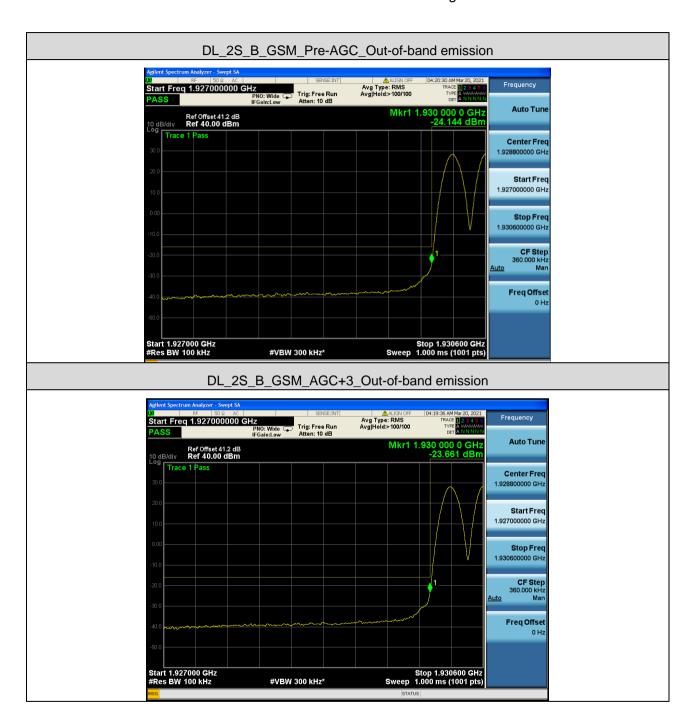
t (86-20) 82155555 www.sgsgroup.com.cn

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 15 of 61





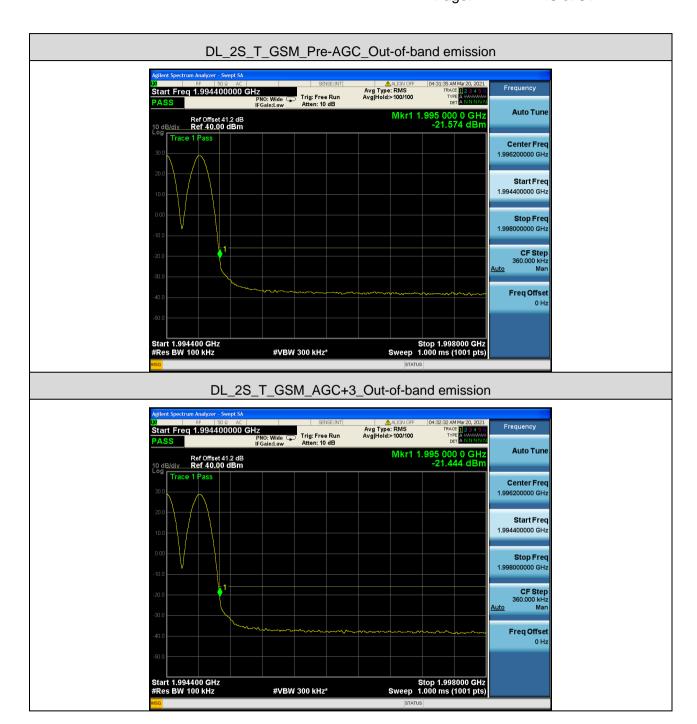
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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: <u>CN.Doccheck@sgs.com</u> \$ Co.Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn いのADVIV. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 16 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the sample(s) are retained for 30 days only.

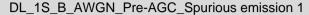
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 17 of 61 Page:





DL_1S_B_AWGN_Pre-AGC_Spurious emission 2





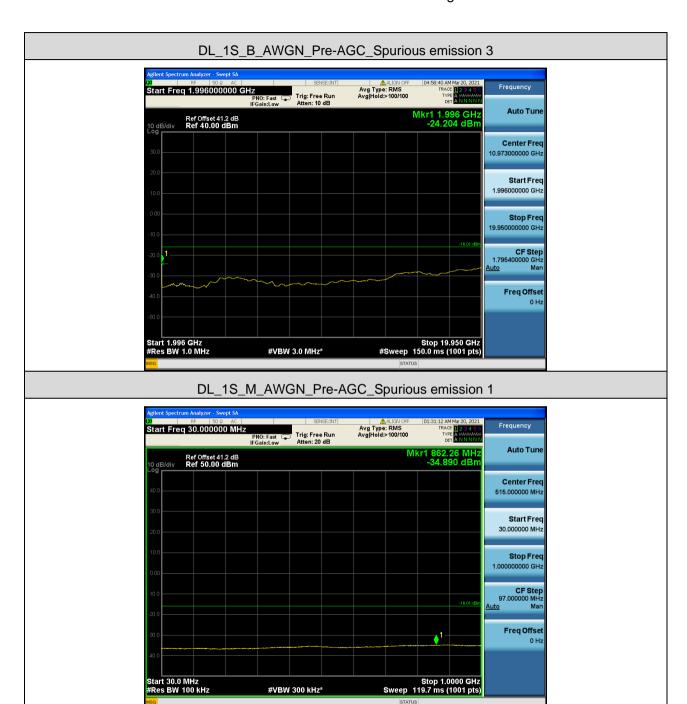
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 18 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

to the fullest contained 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

s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Noralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 www.sgsgroup.com.cn t (86–20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 19 of 61 Page:

DL 1S M AWGN Pre-AGC Spurious emission 2 Start Freq 1.0000000000 GHz PNO: Fast | PNO: Fast | Fig. | Free Run | Rem: 20 dB Avg Type: RMS Avg|Hold:>100/100 Auto Tune 1.929 0 GH -20.207 dBn Ref Offset 41.2 dB Ref 50.00 dBm Center Free 1.464500000 GH Start Fred 1.000000000 GH: Stop Free 1.929000000 GH CF Step 92.900000 MHz Freq Offse Stop 1.9290 GHz Sweep 1.200 ms (1001 pts) #VBW 3.0 MHz* DL_1S_M_AWGN_Pre-AGC_Spurious emission 3 Avg Type: RMS AvgIHold:>100/100 Frequency Start Freq 1.996000000 GHz PNO: Fast Trig: Free Run Atten: 10 dB **Auto Tun** Ref Offset 41.2 dB Ref 40.00 dBm Center Fred Start Freq 1.996000000 GHz Stop Freq 19.950000000 GH CF Step 1.795400000 GHz



Start 1.996 GHz #Res BW 1.0 MHz

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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Stop 19.950 GHz #Sweep 150.0 ms (1001 pts)

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

#VBW 3.0 MHz*

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 20 of 61 Page:





DL_1S_T_AWGN_Pre-AGC_Spurious emission 2





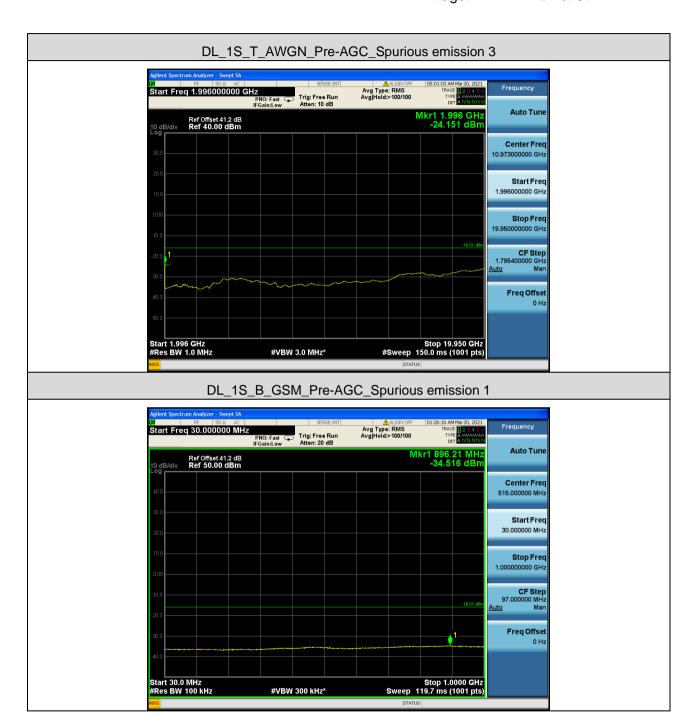
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 21 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

t (86–20) 82155555 s

Member of the SGS Group (SGS SA)



EMC-ARF-05 Rev 1.1 22 of 61 Page:

DL 1S B GSM Pre-AGC Spurious emission 2 Start Freq 1.000000000 GHz PNO: Fast IFGain:Low Atten: 20 dB Avg Type: RMS Avg|Hold:>100/100 Auto Tune 1.929 0 GH -23.835 dBr Ref Offset 41.2 dB Ref 50.00 dBm Center Free 1.464500000 GH Start Fred 1.000000000 GH: Stop Free 1.929000000 GH CF Step 92.900000 MHz Freq Offse Stop 1.9290 GHz Sweep 1.200 ms (1001 pts) #VBW 3.0 MHz* DL_1S_B_GSM_Pre-AGC_Spurious emission 3 Avg Type: RMS AvgIHold:>100/100 Frequency Start Freq 1.996000000 GHz PNO: Fast Trig: Free Run Atten: 10 dB **Auto Tun** Ref Offset 41.2 dB Ref 40.00 dBm Center Fred Start Freq 1.996000000 GHz Stop Freq 19.950000000 GH



Start 1.996 GHz #Res BW 1.0 MHz

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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Stop 19.950 GHz #Sweep 150.0 ms (1001 pts)

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

#VBW 3.0 MHz*

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555

CF Step 1.795400000 GHz



EMC-ARF-05 Rev 1.1 23 of 61 Page:





DL_1S_M_GSM_Pre-AGC_Spurious emission 2





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the sample(s) are retained for 30 days only.

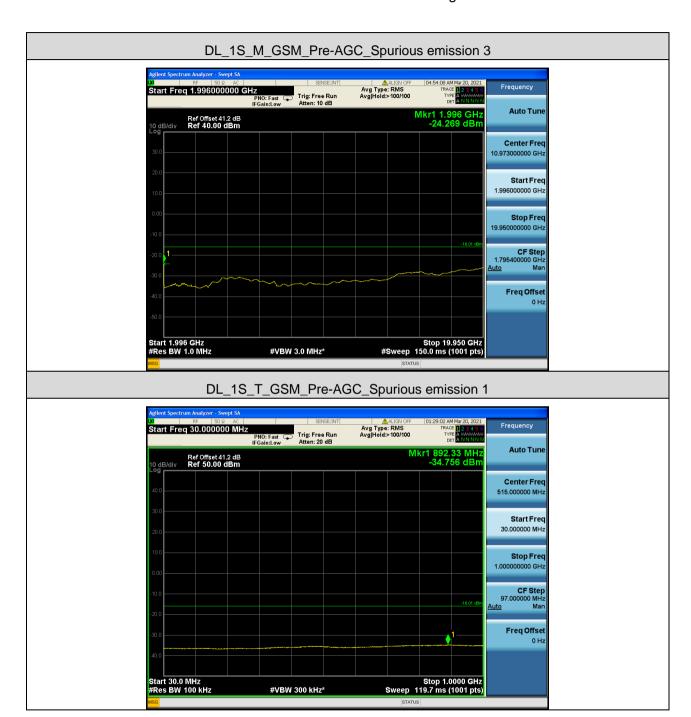
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 24 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the sample(s) are retained for 30 days only.

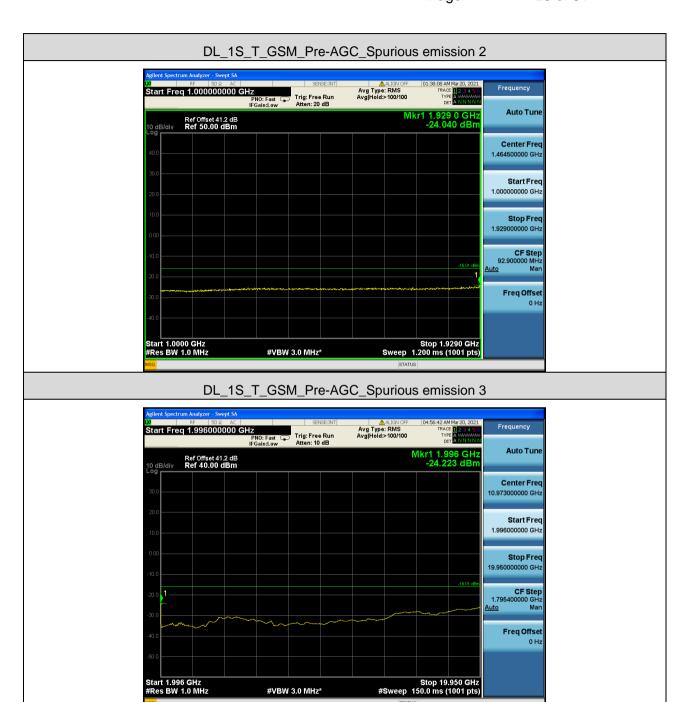
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 25 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 26 of 61

1.5 Frequency Stability

Note:

- 1. At 10 °C intervals of temperatures between −30 °C and +50 °C at the manufacturer's rated supply voltage, here the rated supply voltage is AC 110V.
- 2. At +20 °C temperature and $\pm15\%$ supply voltage variations. If a product is specified to operate over a range of input voltage, then the -15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.
- 3. The frequency stabilities can be maintained within the authorized bands of operation and less than 1.5ppm. Meet the requirement.
- 4. Frequency stability has been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.

Frequency stability vs temperature						
Temperature (°C)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict		
50		1962.502437	-0.56	PASS		
40		1962.502347	-0.61	PASS		
30		1962.504352	0.41	PASS		
20		1962.503543	Reference	PASS		
10	DL_1S_M_AWGN	1962.503274	-0.14	PASS		
0		1962.503234	-0.16	PASS		
-10		1962.502735	-0.41	PASS		
-20		1962.502353	0.61	PASS		
-30		1962.503724	0.09	PASS		

Frequency stability vs voltage						
Voltage (V)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict		
AC 93.5		1962.503243	-0.15	PASS		
AC 110	DL_1S_M_AWGN	1962.503543	Reference	PASS		
AC 126.5		1962.503497	-0.23	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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86–20) 82155555 www.sgsgroup.com t (86–20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 27 of 61

1.6 Radiated spurious emissions

Note:

1.The tested max conducted power for single antenna port is 43.26dBm, the 2x2 MIMO total power is 43.26dBm+43.26dBm= 42.36W.

The power of any emission must be reduced below the mean output power (P) by at least 43 + 10log (P) dB

Here, P=42.36W.

the limit = P(dBm)- [43 + 10 log (42.36W)] =-13dBm

- 2. The radiated test performed at bottom / middle / top channel, the data with more than 20db margin, therefore, only the worst-case middle channel test data was recorded in the report.
- 3. The disturbance from 9kHz to 30MHz was very low and 20db below the limit, therefore, the data was not recorded in the 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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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: <u>CN. Doccheck@sgs.com</u>

Id [No.198, Kerbu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.c

中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 ww t (86–20) 82155555 sg

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



EMC-ARF-05 Rev 1.1 28 of 61 Page:

DL 1S M AWGN Horizontal 30MHz~1GHz Level (dBm) 10 -13DBM -10 -30 -50 5 -70 -90 -110 -12050 100 200 500 1000 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq MHz dB dBm dB dBm dBm 3.33 -78.82 -12.99 -65.83 1 31.84 -82.15 HORIZONTAL 51.12 -77.50 -1.35 -78.85 -12.99 -65.86 HORIZONTAL -68.15 -7.70 -75.85 -12.99 -62.86 3 141.83 HORIZONTAL 4 -65.23 -5.95 -71.18 -12.99 -58.19 243.38 HORIZONTAL 5 375.94 -70.68 -1.19 -71.87 -12.99 -58.88 HORIZONTAL 7.05 -72.46 -12.99 -59.47 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 29 of 61 Page:

DL 1S M AWGN Horizontal above 1GHz Level (dBm) 13DBM -10 -30 6 -50 2 -70 -90 -110 -120 1000 1500 2000 5000 10000 18000 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq MHz dBm dB dBm dB dBm 4.40 1 1366.37 -60.49 -56.09 -12.99 -43.10 HORIZONTAL 2956.16 -62.56 3.14 -59.42 -12.99 -46.43 HORIZONTAL -63.45 12.53 -50.92 -12.99 -37.93 3 5300.20 HORIZONTAL -65.10 14.44 -50.66 -12.99 -37.67 4 7762.26 HORIZONTAL 5 11837.45 -68.01 21.17 -46.84 -12.99 -33.85 HORIZONTAL 15942.30 -68.37 23.10 -45.27 -12.99 -32.28 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

S Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 30 of 61 Page:

DL 1S M AWGN Vertical 30MHz~1GHz Level (dBm) 10 -13DBM -10 -30 -50 5 6 -70 -90 -110 -120₃₀ 50 100 200 500 1000 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq dBm MHz dBm dB dB dBm -69.56 -2.63 -72.19 -12.99 -59.20 VERTICAL 1 58.20 2 101.29 -68.64 -5.08 -73.72 -12.99 -60.73 VERTICAL -69.60 -6.15 -75.75 -12.99 -62.76 3 226.10 VERTICAL 4 -67.58 -2.64 -70.22 -12.99 -57.23 304.61 VERTICAL 5 364.26 -65.77 -1.72 -67.49 -12.99 -54.50 VERTICAL -80.42 7.92 -72.50 -12.99 -59.51 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 31 of 61

DL 1S M AWGN Vertical above 1GHz 20 Level (dBm) 13DBM -10 -30 5 6 2 -50 -70 -90 -110 -120 1000 1500 2000 5000 10000 18000 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq dBm MHz dBm dB dB dBm 4.06 -57.15 -12.99 -44.16 1 1386.26 -61.21 VERTICAL 2120.17 -61.20 9.15 -52.05 -12.99 -39.06 VERTICAL -63.66 12.38 -51.28 -12.99 -38.29 3 5179.05 VERTICAL 4 -63.62 19.89 -43.73 -12.99 -30.74 7056.09 VERTICAL 5 10453.97 -67.50 24.28 -43.22 -12.99 -30.23 VERTICAL -68.86 25.01 -43.85 -12.99 -30.86 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

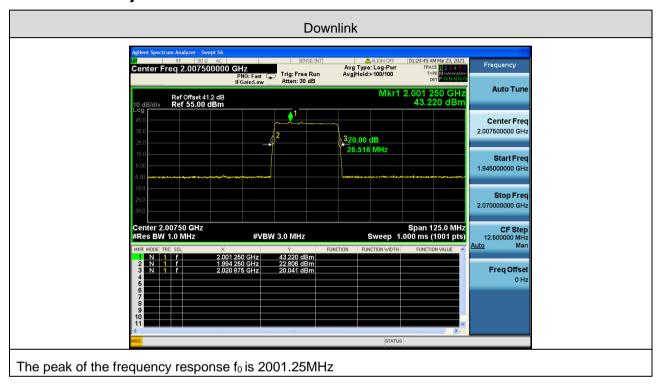
t (86-20) 82155555 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 32 of 61

2 AWS-2 & AWS-4 (only for downlink: 1995-2020MHz)

2.1 Out-of-band rejection





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

10 No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

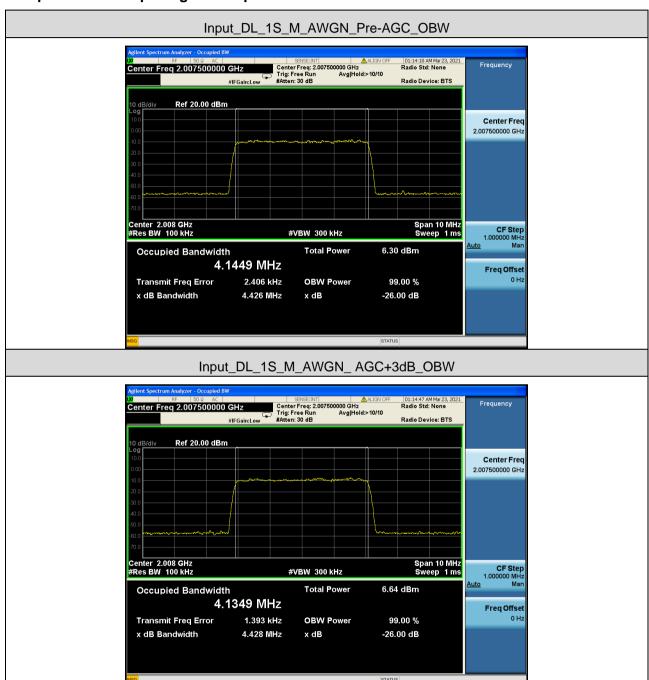
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 sgs.china@s



EMC-ARF-05 Rev 1.1 Page: 33 of 61

2.2 Input-versus-output signal comparison





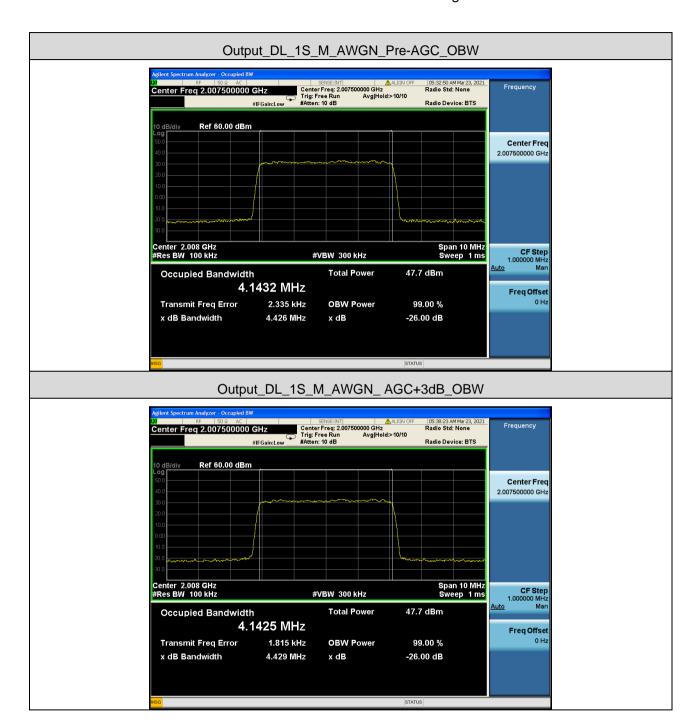
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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: <u>CN.Doccheck@sgs.com</u>
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86–20) 82155555 www.sgsgroup.com.cn
中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86–20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 34 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the sample(s) are retained for 30 days only.

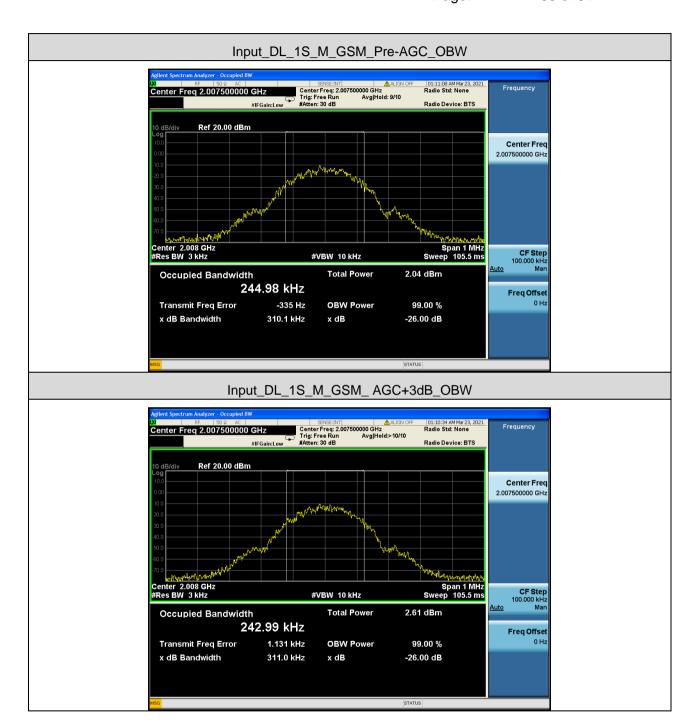
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 35 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

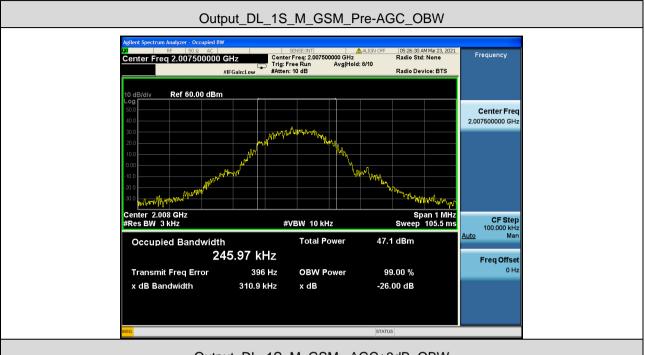
sample(s) are retained for 30 days only.

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

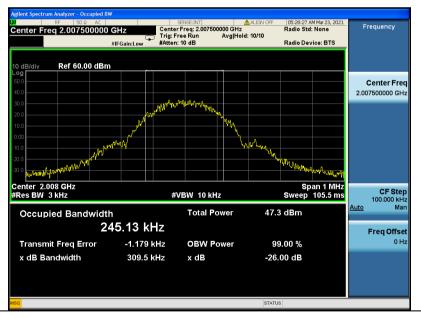
Id. [No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 Page: 36 of 61



Output DL 1S M GSM AGC+3dB OBW



Remark:

Compare the spectral plot of the input signal to the output signal affirm that they are similar (in passband and roll off characteristic features and relative spectral locations). The test result complies with the requirement.



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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 Page: 37 of 61

2.3 Mean output power and amplifier/booster gain

Test Conf.	Test Freq. fo (MHz)	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)	Verdict
DL_1S_AWGN	2001.25	Pre-AGC	0.22	43.06	42.84	PASS
		AGC+3dB	2.78	42.87	/	PASS
DL_1S_GSM	2001.25	Pre-AGC	0.10	42.95	42.85	PASS
		AGC+3dB	2.90	43.01	/	PASS

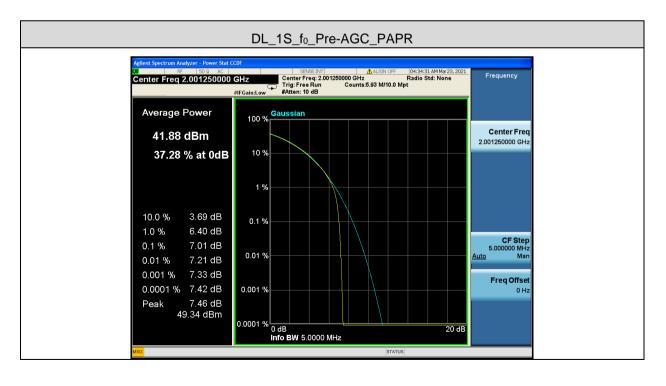
Remark:

1. According to the declaration from the applicant, the single antenna gain should not exceed 12.5dBi, the Directional gain = G_{ANT} + 10 log (N_{ANT}) dBi = 12.5dBi+10log (2) dBi= 15.5dBi.

The total maximum EIRP for the EUT is (43.06dBm+43.06dBm) +15.5dBi=61.57dBm (1435.5W) which don't exceed the required EIRP limit (1640W/MHz).

2. Based on discussion in docket No. DA 13-2409 (section 26 & 47) for operation in 2000-2020MHz in downlink, only 27.50(d)(1) and 27.50(d)(2) apply.

Test Conf.	Test Freq. f ₀ (MHz)	Signal Level	PAPR (dB)	Limit (dB)	Verdict
DL_1S_AWGN	2001.25	Pre-AGC	7.21	13	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 https://www.sgs.com/en/Terms-and-Conditions. 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, **Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Attention: 10 cleck the authenticity of resting /inspection report & certificate, please contact us at telephone: (86-75) 8307 1443, or email: CN_Doccheck@sgs.com

Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cc

中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 www.sgsgroup.com t (86–20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 38 of 61

2.4 Out-of-band/out-of-block (including intermodulation) emissions and spurious emissions

Note:

The EUT support 2x2 MIMO, Per 662911 D01 Multiple Transmitter Output v02r01 clause (3)(a)(iii): Measure and add 10 log(NANT) dB, where NANT is the number of outputs to combine the emission measurements from multiple outputs prior to comparing to the emission limit.

Here, the factor 10 log (NANT) dB= 10 log (2) dB=3.01dB.

1. The tested max conducted power for single antenna port is 43.06dBm, the power of any emission must be reduced below the mean output power (P) by at least 43 + 10log (P) dB Here.

P=43.06dBm= 20.23W.

So the limit =

P(dBm)- [43 + 10 log (20.23W)] = -13dBm.

The EUT supports 2x2 MIMO and the both antenna port with identical out emissions, therefore only perform measurement at output port 1, the limit line was decreased 3.01dB as -16.01dBm in following test plots in order to determine the test result conveniently.

- 2. Based on discussion in docket No. DA 13-2409 (section 26 & 47) for operation in 2000-2020MHz in downlink, only 27.53(h)(1) and 27.53(h)(3) Apply.
- 3. Pretest performe at AWS-2: 1995MHz to 2000MHz block;

Pretest performe at AWS-4: 2000MHz to 2020MHz block;

Pretest performe at combined AWS-4 and AWS-2: 1995MHz to 2020MHz block;

As the emission limit of above sub-block are identical, therefore, only the worst-case combined AWS-4 and AWS-2 block test plot was record in the report.

4. The spurious emissions from 9kHz to 30MHz was very low and 20dB below the limit, therefore, the data was not recorded in the report.



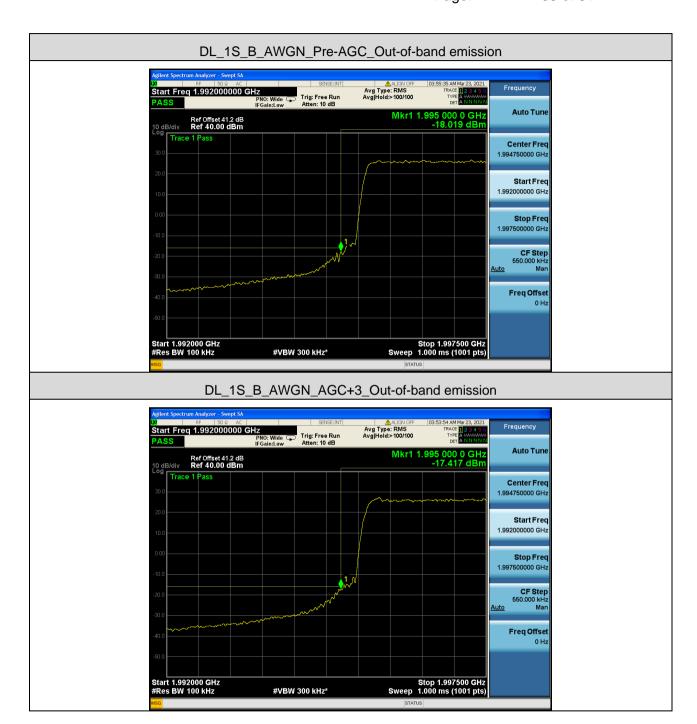
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86–20) 82155555 www.sgsgroup.com.ci t (86–20) 82155555 sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 39 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

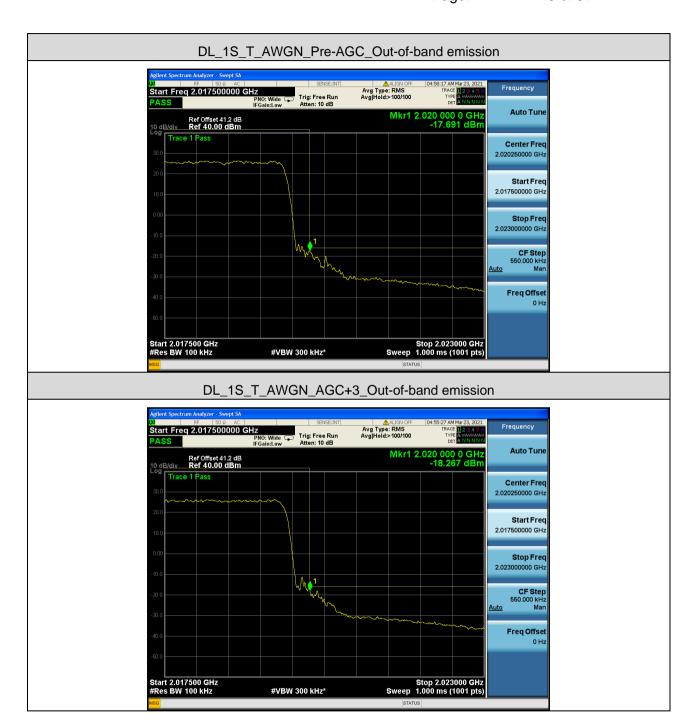
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 いには、中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 sgs.chir



EMC-ARF-05 Rev 1.1 Page: 40 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

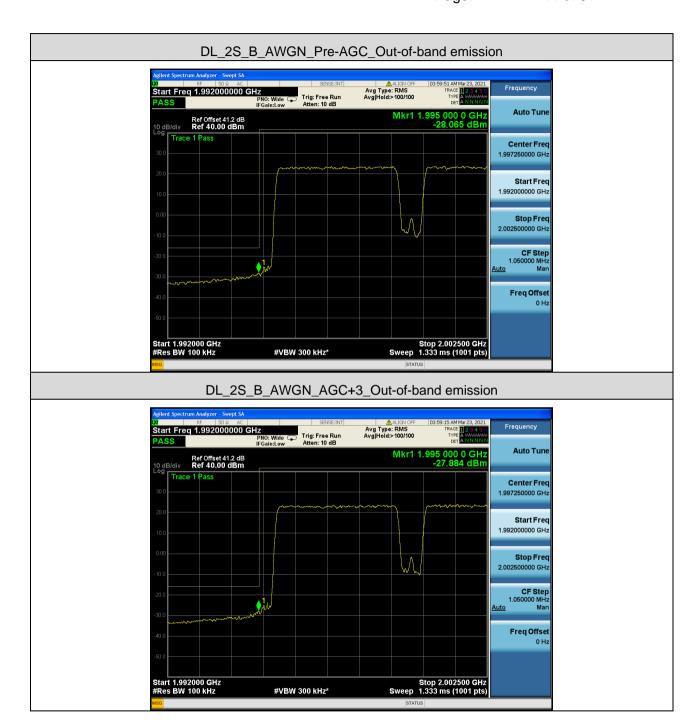
s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 いには、いた。 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 sgs.c

sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 41 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

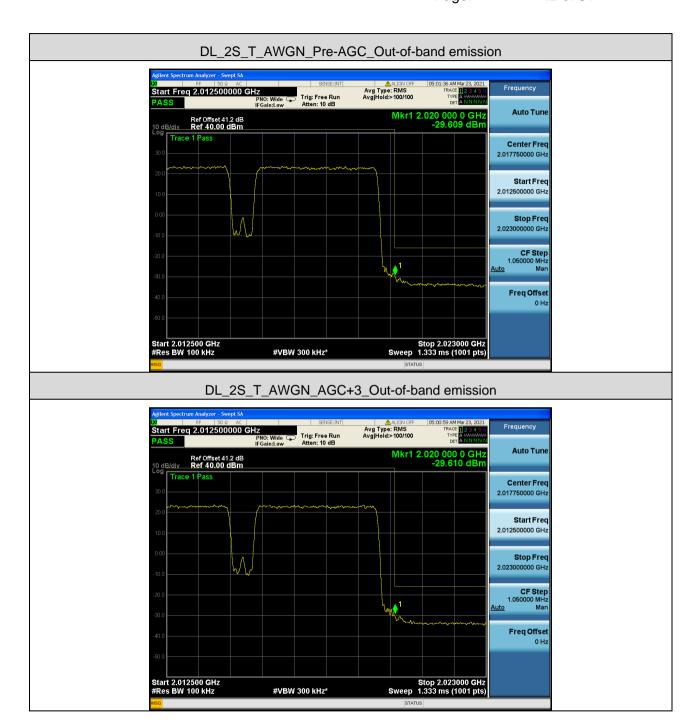
s Co.,Ltd., No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 boralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 sgs

sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 42 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

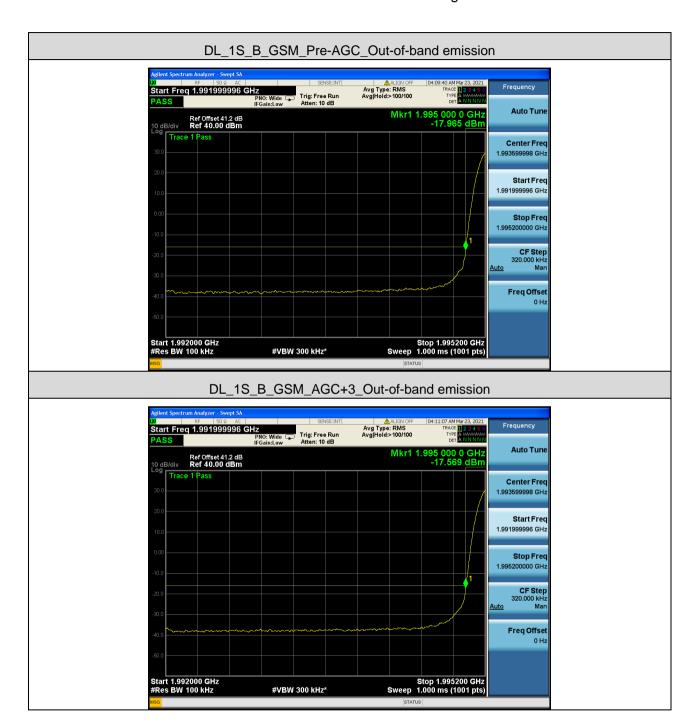
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 2007 1079. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86–20) 82155555 sgs.china



EMC-ARF-05 Rev 1.1 Page: 43 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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

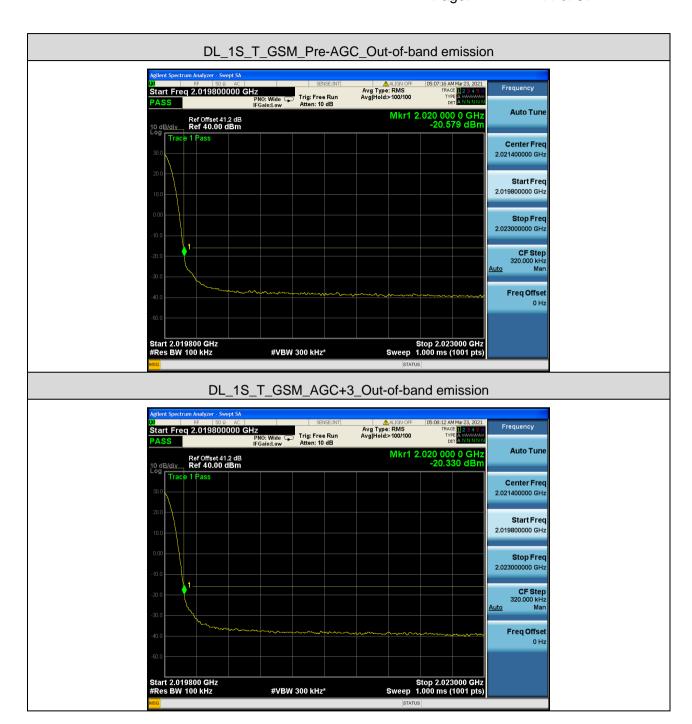
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Doralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 sgs.chi



EMC-ARF-05 Rev 1.1 Page: 44 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

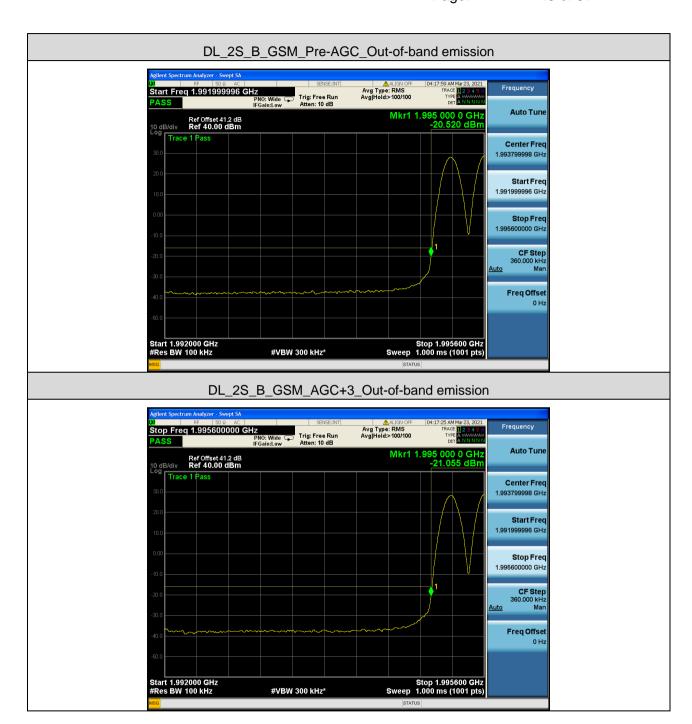
\$Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 いのはいた。 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮編:510663

t (86–20) 82155555 sgs.ch

sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 45 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

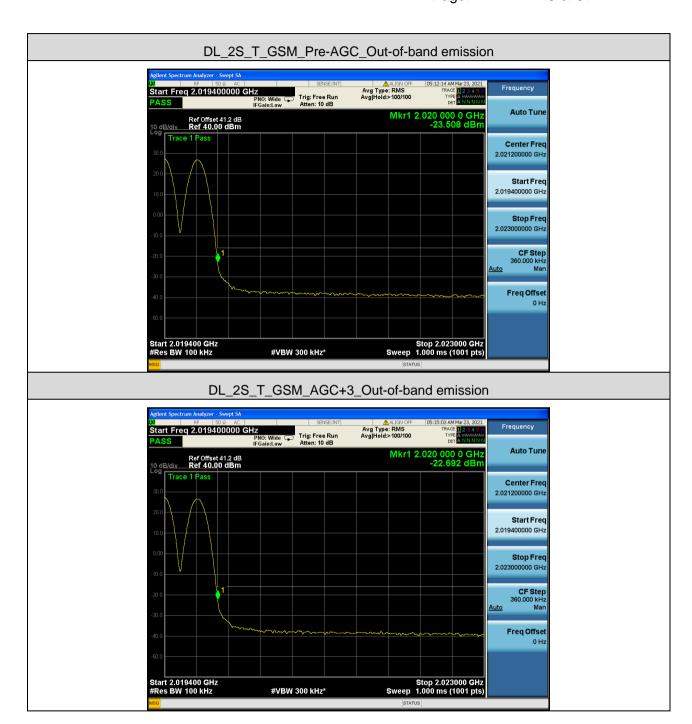
S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 46 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555

t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 47 of 61 Page:





DL_1S_B_AWGN_Pre-AGC_Spurious emission 2





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

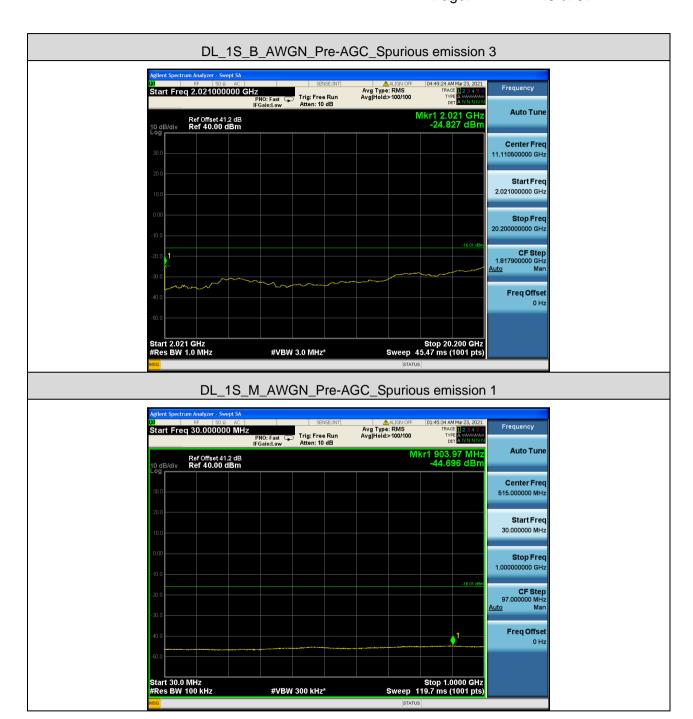
Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555

t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 Page: 48 of 61





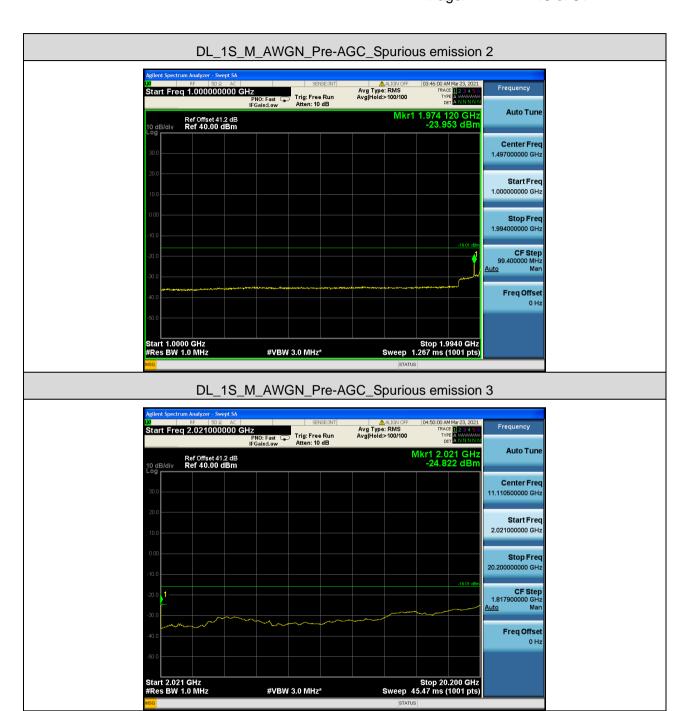
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555



EMC-ARF-05 Rev 1.1 49 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555

t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 50 of 61 Page:

DL 1S T AWGN Pre-AGC Spurious emission 1 Start Freq 30.000000 MHz PNO: Fast Trig: Free Run IFGain:Low Atten: 10 dB Avg Type: RMS Avg|Hold:>100/100 Auto Tune 1 887.48 MH -44.713 dBr Ref Offset 41.2 dB Ref 40.00 dBm Center Fred 515.000000 MH Start Free 30.000000 MH Stop Free 1.000000000 GH **CF Step** 97.000000 MHz Freq Offse Stop 1.0000 GHz Sweep 119.7 ms (1001 pts) #VBW 300 kHz* DL_1S_T_AWGN_Pre-AGC_Spurious emission 2 Avg Type: RMS AvgIHold:>100/100 Frequency Start Freq 1.000000000 GHz PNO: Fast Trig: Free Run Atten: 10 dB Auto Tun Ref Offset 41.2 dB Ref 40.00 dBm Center Fred Start Freq 1.00000000 GHz Stop Freq 1.994000000 GH CF Step 99.400000 MHz Man



Start 1.0000 GHz #Res BW 1.0 MHz

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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Stop 1.9940 GHz Sweep 1.267 ms (1001 pts)

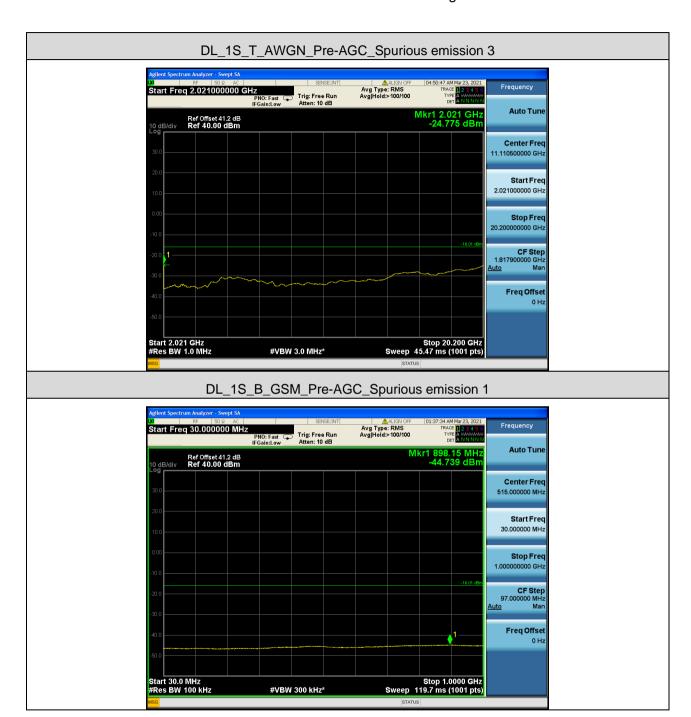
Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

#VBW 3.0 MHz*

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 51 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

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.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

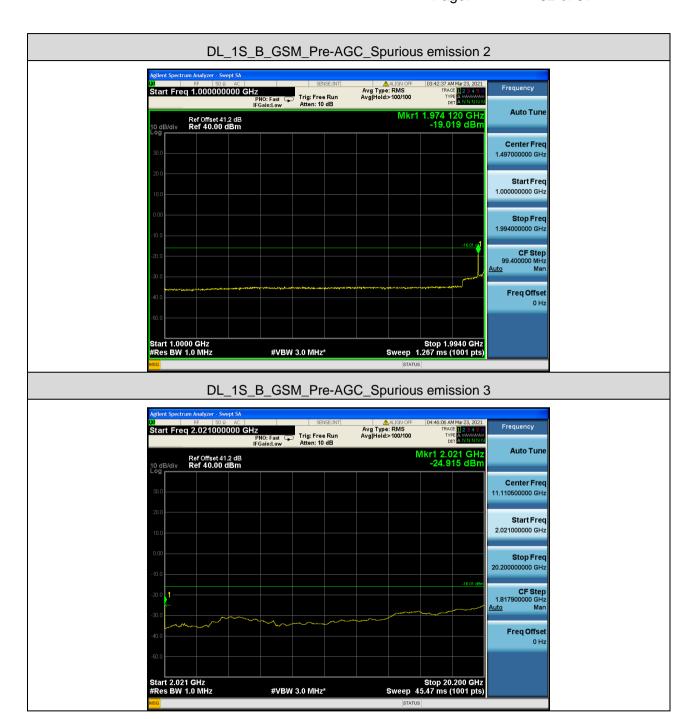
s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
Noralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 sgs.c

Member of the SGS Group (SGS SA)



EMC-ARF-05 Rev 1.1 Page: 52 of 61





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555

t (86-20) 82155555 www.sgsgroup.com.cn



EMC-ARF-05 Rev 1.1 Page: 53 of 61

DL 1S M GSM Pre-AGC Spurious emission 1 Start Freq 30.000000 MHz PNO: Fast Trig: Free Run IFGain:Low Atten: 10 dB Avg Type: RMS Avg|Hold:>100/100 Auto Tune 1 896.21 MH -44.702 dBr Ref Offset 41.2 dB Ref 40.00 dBm Center Fred 515.000000 MH Start Free 30.000000 MH Stop Free 1.000000000 GH CF Step 97.000000 MHz Freq Offse #VBW 300 kHz* DL_1S_M_GSM_Pre-AGC_Spurious emission 2 Avg Type: RMS AvgIHold:>100/100 Frequency Start Freq 1.000000000 GHz PNO: Fast Trig: Free Run Atten: 10 dB Auto Tun Ref Offset 41.2 dB Ref 40.00 dBm Center Fred Start Freq 1.00000000 GHz



Start 1.0000 GHz #Res BW 1.0 MHz

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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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.

Stop 1.9940 GHz Sweep 1.267 ms (1001 pts)

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

Id. [No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn

s Co.,Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663
Noralory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

#VBW 3.0 MHz*

t (86–20) 82155555 sgs

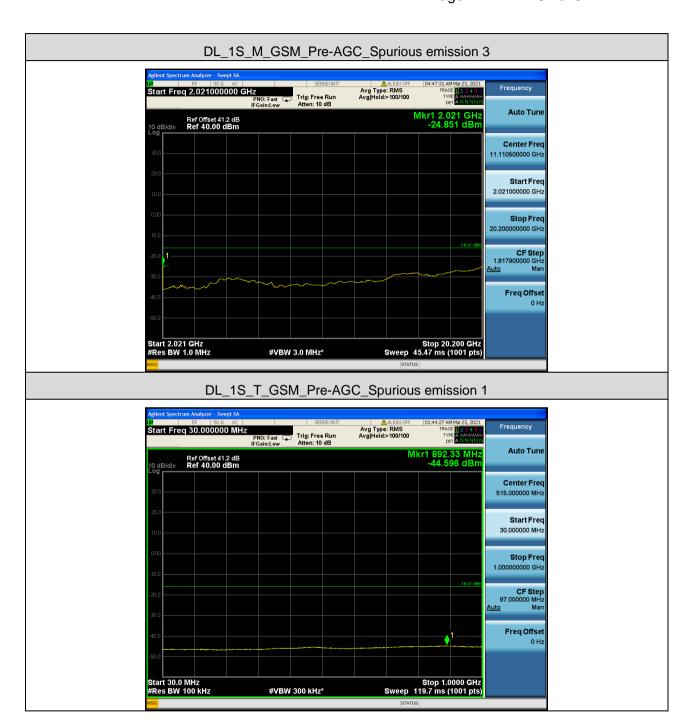
Stop Freq 1.994000000 GHz

CF Step 99.400000 MHz Man

sgs.china@sgs.com



EMC-ARF-05 Rev 1.1 Page: 54 of 61





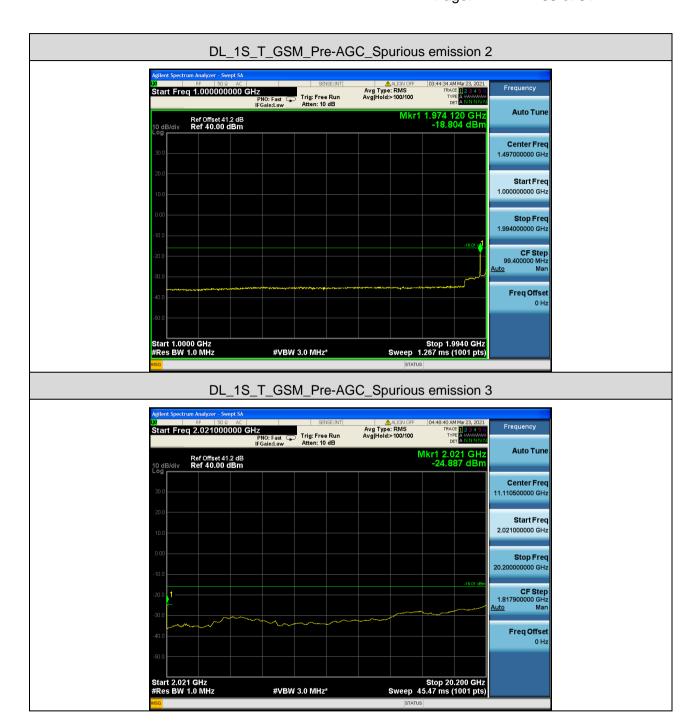
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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 to the funds of the following of the 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,

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555



EMC-ARF-05 Rev 1.1 55 of 61 Page:





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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

t (86-20) 82155555 www.sgsgroup.com.cn

Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 56 of 61

2.5 Frequency Stability

Note:

- 1. At 10 °C intervals of temperatures between −30 °C and +50 °C at the manufacturer's rated supply voltage, here the rated supply voltage is AC 110V.
- 2. At +20 °C temperature and ±15% supply voltage variations. If a product is specified to operate over a range of input voltage, then the −15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.
- 3. The frequency stabilities can be maintained within the authorized bands of operation. Meet the requirement.
- 4. Frequency stability has been tested using an AWGN test signal and a GSM-TDMA test signal, only the worst-case was recorded in this report.

Frequency stability vs temperature					
Temperature (°C)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict	
50		2007.502031	0.25	PASS	
40		2007.501836	0.15	PASS	
30		2007.501123	-0.21	PASS	
20		2007.501535	Reference	PASS	
10	DL_1S_M_AWGN	2007.501653	0.06	PASS	
0		2007.503023	0.07	PASS	
-10		2007.501023	-0.25	PASS	
-20		2007.500534	-0.05	PASS	
-30		2007.502594	0.52	PASS	

Frequency stability vs voltage						
Voltage (V)	Test Conf.	Test data (MHz)	Tolerance (ppm)	Verdict		
AC 93.5		2007.501976	0.22	PASS		
AC 110	DL_1S_M_AWGN	2007.501535	Reference	PASS		
AC 126.5		2007.500753	-0.39	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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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@sg.com
Ltd | No.198, Keyu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cc

中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 www.sgsgroup.co t (86–20) 82155555 sgs.china@sgs.cc



EMC-ARF-05 Rev 1.1 Page: 57 of 61

2.6 Radiated spurious emissions

Note:

1. The tested max conducted power for single antenna port is 43.06dBm, the 2x2 MIMO total power is 43.06dBm+43.06dBm=40.46W, the power of any emission must be reduced below the mean output power (P) by at least 43 + 10log (P) dB

Here,

P=40.46W.

So the limit =

P(dBm)- [43 + 10 log (40.46W)] = -13dBm

- 2. The radiated test performed at bottom / middle / top channel, the data with more than 20db margin, therefore, only the worst-case middle channel test data was recorded in the report.
- 3. The disturbance from 9kHz to 30MHz was very low and 20db below the limit, therefore, the data was not recorded in the 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 https://www.sgs.com/en/Terms-and-Conditions. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information containined hereon reflects the Company's findings at the time of its intervention only and within the limits of Cilent'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: <u>CN. Doccheck@sgs.com</u>

Id [No.198, Kerbu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.c

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555

ene china@ene com



EMC-ARF-05 Rev 1.1 Page: 58 of 61

DL 1S M AWGN Horizontal 30MHz~1GHz Level (dBm) -13DBM -10 -30 -50 5 -70 6 2 -90 -110 -120₃₀ 50 100 200 500 1000 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq dBm MHz dBm dB dB dBm 58.41 -75.91 -2.40 -78.31 1 -12.99 -65.32 HORIZONTAL 2 101.64 -69.90 -9.56 -79.46 -12.99 -66.47 HORIZONTAL 166.65 -60.67 -6.26 -66.93 -12.99 -53.94 3 HORIZONTAL 4 -64.80 -5.32 -70.12 -12.99 -57.13 251.18 HORIZONTAL 5 359.19 -67.64 -1.33 -68.97 -12.99 -55.98 HORIZONTAL 7.09 -74.43 -12.99 -61.44 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

S Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 59 of 61

DL 1S M AWGN Horizontal above 1GHz Level (dBm) 13DBM -10 -30 6 5 3 -50 -70 -90 -110 -120 1000 1500 2000 5000 10000 18000 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq dB dBm dB MHz dBm dBm 2.93 -57.99 -12.99 -45.00 1 1185.94 -60.92 HORIZONTAL 1726.82 -57.82 6.24 -51.58 -12.99 -38.59 HORIZONTAL -64.18 12.96 -51.22 -12.99 -38.23 3 5392.92 HORIZONTAL 7898.05 -63.96 13.86 -50.10 -12.99 -37.11 4 HORIZONTAL 5 11269.86 -69.06 22.05 -47.01 -12.99 -34.02 HORIZONTAL 16174.37 -68.17 23.09 -45.08 -12.99 -32.09 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

S Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 60 of 61 Page:

DL 1S M AWGN Vertical 30MHz~1GHz Level (dBm) 10 -13DBM -10 -30 -50 3 -70 -90 -110 -120₃₀ 50 100 200 1000 500 Frequency (MHz) Limit Read Correction 0ver Level Factor Level Line Limit Pol/Phase Freq MHz dBm dB dBm dB dBm 59.23 -69.28 VERTICAL 1 -2.32 -71.60 -12.99 -58.61 103.81 -68.71 -4.97 -73.68 -12.99 -60.69 VERTICAL 279.04 -64.92 -2.76 -67.68 -12.99 -54.69 3 VERTICAL 4 365.54 -72.46 -1.67 -74.13 -12.99 -61.14 VERTICAL 5 494.20 -73.28 1.92 -71.36 -12.99 -58.37 VERTICAL -79.53 9.69 -69.84 -12.99 -56.85 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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the sample(s) are retained for 30 days only.

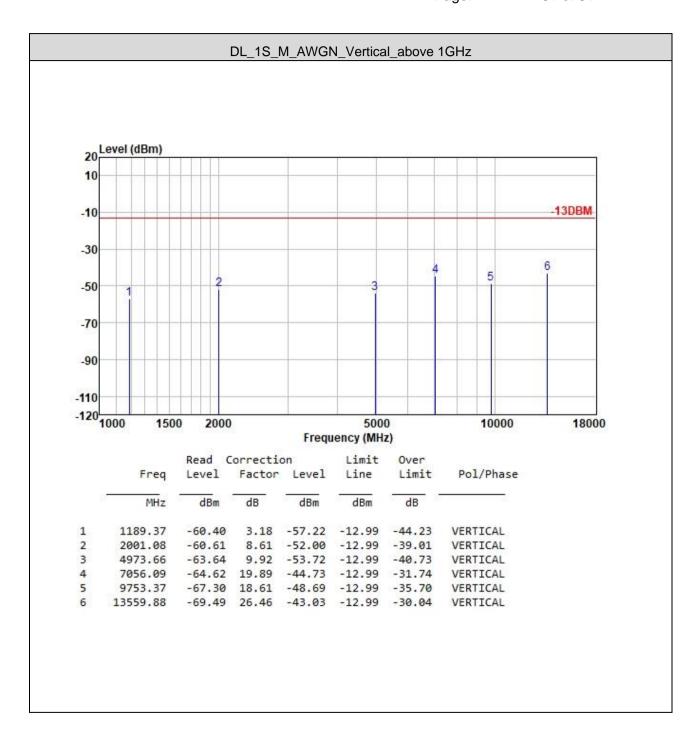
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 t (86-20) 82155555



EMC-ARF-05 Rev 1.1 Page: 61 of 61



-- End of Appendix -



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 https://www.sgs.com/en/Terms-and-Conditions. 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 to the funds of the following of the 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,

S Co., Ltd. No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555