1 of 51 Page:

# Appendix B

E-UTRA Band 41



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

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

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

2 of 51 Page:

#### CONTENT

1	EFFI	ECTIVE (ISOTROPIC) RADIATED POWER	3
	1.1.	TEST RESULT	3
2.	PEA	K-TO-AVERAGE RATIO (CCDF)	7
	2.1.	Test Result	7
	2.2.	TEST PLOTS	7
3.	МО	DULATION CHARACTERISTICS	11
	3.1.	TEST MODE = LTE /TM1 20MHz	11
	3.1.1.	TEST CHANNEL = MCH	11
	3.2.	TEST MODE = LTE /TM2 20MHz	12
	3.2.1.	TEST CHANNEL = MCH	12
4.	26D	B BANDWIDTH AND OCCUPIED BANDWIDTH	13
	4.1.	Test Result	13
	4.2.	TEST PLOTS	14
5.	BAN	ND EDGE COMPLIANCE	26
	5.1.	TEST PLOTS	26
6.	SPU	RIOUS EMISSION AT ANTENNA TERMINAL	42
	6.1.	TEST PLOTS	42
7.	FIEL	D STRENGTH OF SPURIOUS RADIATION	48
	7.1.	TEST MODE =LTE/TM1 20MHz	48
	7.1.1.	TEST CHANNEL = LCH	
	7.1.2.	TEST CHANNEL = MCH	
	7.1.3.	TEST CHANNEL = HCH	
8.	FRE	QUENCY STABILITY	50
	8.1.	FREQUENCY VS VOLTAGE	50
	8.2.	FREQUENCY VS TEMPERATURE	50



Page: 3 of 51

### 1 Effective (Isotropic) Radiated Power

#### 1.1. Test Result

					Conducted	EIRP	Limit	
Band	Bandwidth	Modulation	Channel	RB Configuration				Verdict
					Power(dBm)	(dBm)	(dBm)	
Band41	5MHz	QPSK	39675	1RB#0	23.95	26.31	30.00	PASS
Band41	5MHz	QPSK	39675	1RB#12	24.01	26.37	30.00	PASS
Band41	5MHz	QPSK	39675	1RB#24	23.84	26.20	30.00	PASS
Band41	5MHz	QPSK	39675	12RB#0	23.60	25.96	30.00	PASS
Band41	5MHz	QPSK	39675	12RB#6	23.55	25.91	30.00	PASS
Band41	5MHz	QPSK	39675	12RB#13	23.47	25.83	30.00	PASS
Band41	5MHz	QPSK	39675	25RB#0	23.57	25.93	30.00	PASS
Band41	5MHz	QPSK	40620	1RB#0	23.99	26.35	30.00	PASS
Band41	5MHz	QPSK	40620	1RB#24	24.20	26.56	30.00	PASS
Band41	5MHz	QPSK	40620	1RB#12	24.04	26.40	30.00	PASS
Band41	5MHz	QPSK	40620	12RB#0	23.76	26.12	30.00	PASS
Band41	5MHz	QPSK	40620	12RB#6	23.80	26.16	30.00	PASS
Band41	5MHz	QPSK	40620	12RB#13	23.68	26.04	30.00	PASS
Band41	5MHz	QPSK	40620	25RB#0	23.81	26.17	30.00	PASS
Band41	5MHz	QPSK	41565	1RB#24	24.36	26.72	30.00	PASS
Band41	5MHz	QPSK	41565	1RB#0	24.41	26.77	30.00	PASS
Band41	5MHz	QPSK	41565	1RB#12	24.17	26.53	30.00	PASS
Band41	5MHz	QPSK	41565	12RB#0	23.92	26.28	30.00	PASS
Band41	5MHz	QPSK	41565	12RB#6	23.80	26.16	30.00	PASS
Band41	5MHz	QPSK	41565	12RB#13	23.87	26.23	30.00	PASS
Band41	5MHz	QPSK	41565	25RB#0	23.88	26.24	30.00	PASS
Band41	5MHz	16QAM	39675	1RB#0	23.42	25.78	30.00	PASS
Band41	5MHz	16QAM	39675	1RB#12	23.72	26.08	30.00	PASS
Band41	5MHz	16QAM	39675	1RB#24	23.50	25.86	30.00	PASS
Band41	5MHz	16QAM	39675	12RB#6	23.43	25.79	30.00	PASS
Band41	5MHz	16QAM	39675	12RB#0	23.51	25.87	30.00	PASS
Band41	5MHz	16QAM	39675	12RB#13	23.38	25.74	30.00	PASS
Band41	5MHz	16QAM	39675	25RB#0	23.36	25.72	30.00	PASS
Band41	5MHz	16QAM	40620	1RB#0	23.61	25.97	30.00	PASS
Band41	5MHz	16QAM	40620	1RB#12	23.85	26.21	30.00	PASS
Band41	5MHz	16QAM	40620	1RB#24	23.61	25.97	30.00	PASS
Band41	5MHz	16QAM	40620	12RB#13	23.62	25.98	30.00	PASS
Band41	5MHz	16QAM	40620	12RB#0	23.66	26.02	30.00	PASS
Band41	5MHz	16QAM	40620	12RB#6	23.49	25.85	30.00	PASS
Band41	5MHz	16QAM	40620	25RB#0	23.62	25.98	30.00	PASS
Band41	5MHz	16QAM	41565	1RB#12	23.67	26.03	30.00	PASS
Band41	5MHz	16QAM	41565	1RB#0	23.86	26.22	30.00	PASS
Band41	5MHz	16QAM	41565	1RB#24	23.61	25.97	30.00	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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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



Report No.: ZR/2019/A000601

4 of 51 Page:

					22.55	25.00		2.00
Band41	5MHz	16QAM	41565	12RB#0	23.66	26.02	30.00	PASS
Band41	5MHz	16QAM	41565	12RB#6	23.60	25.96	30.00	PASS
Band41	5MHz	16QAM	41565	12RB#13	23.70	26.06	30.00	PASS
Band41	5MHz	16QAM	41565	25RB#0	23.55	25.91	30.00	PASS
Band41	10MHz	QPSK	39700	1RB#24	23.88	26.24	30.00	PASS
Band41	10MHz	QPSK	39700	1RB#49	23.93	26.29	30.00	PASS
Band41	10MHz	QPSK	39700	1RB#0	23.78	26.14	30.00	PASS
Band41	10MHz	QPSK	39700	25RB#0	23.51	25.87	30.00	PASS
Band41	10MHz	QPSK	39700	25RB#12	23.53	25.89	30.00	PASS
Band41	10MHz	QPSK	39700	25RB#25	23.52	25.88	30.00	PASS
Band41	10MHz	QPSK	39700	50RB#0	23.48	25.84	30.00	PASS
Band41	10MHz	QPSK	40620	1RB#0	24.06	26.42	30.00	PASS
Band41	10MHz	QPSK	40620	1RB#49	24.31	26.67	30.00	PASS
Band41	10MHz	QPSK	40620	1RB#24	24.06	26.42	30.00	PASS
Band41	10MHz	QPSK	40620	25RB#25	23.84	26.20	30.00	PASS
Band41	10MHz	QPSK	40620	25RB#0	23.69	26.05	30.00	PASS
Band41	10MHz	QPSK	40620	25RB#12	23.71	26.07	30.00	PASS
Band41	10MHz	QPSK	40620	50RB#0	23.72	26.08	30.00	PASS
Band41	10MHz	QPSK	41540	1RB#24	24.22	26.58	30.00	PASS
Band41	10MHz	QPSK	41540	1RB#0	24.52	26.88	30.00	PASS
Band41	10MHz	QPSK	41540	1RB#49	24.20	26.56	30.00	PASS
Band41	10MHz	QPSK	41540	25RB#0	23.88	26.24	30.00	PASS
Band41	10MHz	QPSK	41540	25RB#25	23.84	26.20	30.00	PASS
Band41	10MHz	QPSK	41540	25RB#12	23.79	26.15	30.00	PASS
Band41	10MHz	QPSK	41540	50RB#0	23.84	26.20	30.00	PASS
Band41	10MHz	16QAM	39700	1RB#49	23.48	25.84	30.00	PASS
Band41	10MHz	16QAM	39700	1RB#0	23.73	26.09	30.00	PASS
Band41	10MHz	16QAM	39700	1RB#24	23.42	25.78	30.00	PASS
Band41	10MHz	16QAM	39700	25RB#25	23.42	25.78	30.00	PASS
Band41	10MHz	16QAM	39700	25RB#12	23.40	25.76	30.00	PASS
Band41	10MHz	16QAM	39700	25RB#0	23.46	25.82	30.00	PASS
Band41	10MHz	16QAM	39700	50RB#0	23.41	25.77	30.00	PASS
Band41	10MHz	16QAM	40620	1RB#49	23.58	25.94	30.00	PASS
Band41	10MHz	16QAM	40620	1RB#0	23.76	26.12	30.00	PASS
Band41	10MHz	16QAM	40620	1RB#24	23.65	26.01	30.00	PASS
Band41	10MHz	16QAM	40620	25RB#25	23.59	25.95	30.00	PASS
Band41	10MHz	16QAM	40620	25RB#0	23.59	25.95	30.00	PASS
Band41	10MHz	16QAM	40620	25RB#12	23.52	25.88	30.00	PASS
Band41	10MHz	16QAM	40620	50RB#0	23.63	25.99	30.00	PASS
Band41	10MHz	16QAM	41540	1RB#24	23.68	26.04	30.00	PASS
Band41	10MHz	16QAM	41540	1RB#0	23.92	26.28	30.00	PASS
Band41	10MHz	16QAM	41540	1RB#49	23.49	25.85	30.00	PASS
Band41	10MHz	16QAM	41540	25RB#0	23.50	25.86	30.00	PASS
Band41	10MHz	16QAM	41540	25RB#12	23.56	25.92	30.00	PASS
Band41	10MHz	16QAM	41540	25RB#25	23.66	26.02	30.00	PASS
Band41	10MHz	16QAM	41540	50RB#0	23.58	25.94	30.00	PASS
Band41	15MHz	QPSK	39725	1RB#0	23.90	26.26	30.00	PASS
Danu <del>4</del> i	I JIVII IZ	QI SIN	33123	וועט#ט	23.30	20.20	30.00	1 733



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions</a> of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx</a>. 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 turner of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

sgs.china@sgs.com



Report No.: ZR/2019/A000601

5 of 51 Page:

		1	T		1			
Band41	15MHz	QPSK	39725	1RB#38	24.05	26.41	30.00	PASS
Band41	15MHz	QPSK	39725	1RB#74	23.89	26.25	30.00	PASS
Band41	15MHz	QPSK	39725	36RB#0	23.54	25.90	30.00	PASS
Band41	15MHz	QPSK	39725	36RB#18	23.61	25.97	30.00	PASS
Band41	15MHz	QPSK	39725	36RB#39	23.48	25.84	30.00	PASS
Band41	15MHz	QPSK	39725	75RB#0	23.60	25.96	30.00	PASS
Band41	15MHz	QPSK	40620	1RB#0	24.01	26.37	30.00	PASS
Band41	15MHz	QPSK	40620	1RB#74	24.22	26.58	30.00	PASS
Band41	15MHz	QPSK	40620	1RB#38	24.02	26.38	30.00	PASS
Band41	15MHz	QPSK	40620	36RB#0	23.84	26.20	30.00	PASS
Band41	15MHz	QPSK	40620	36RB#18	23.77	26.13	30.00	PASS
Band41	15MHz	QPSK	40620	36RB#39	23.66	26.02	30.00	PASS
Band41	15MHz	QPSK	40620	75RB#0	23.73	26.09	30.00	PASS
Band41	15MHz	QPSK	41515	1RB#74	24.31	26.67	30.00	PASS
Band41	15MHz	QPSK	41515	1RB#0	24.43	26.79	30.00	PASS
Band41	15MHz	QPSK	41515	1RB#38	24.18	26.54	30.00	PASS
Band41	15MHz	QPSK	41515	36RB#0	23.88	26.24	30.00	PASS
Band41	15MHz	QPSK	41515	36RB#18	23.84	26.20	30.00	PASS
Band41	15MHz	QPSK	41515	36RB#39	23.87	26.23	30.00	PASS
Band41	15MHz	QPSK	41515	75RB#0	23.84	26.20	30.00	PASS
Band41	15MHz	16QAM	39725	1RB#0	23.39	25.75	30.00	PASS
Band41	15MHz	16QAM	39725	1RB#38	23.64	26.00	30.00	PASS
Band41	15MHz	16QAM	39725	1RB#74	23.40	25.76	30.00	PASS
Band41	15MHz	16QAM	39725	36RB#18	23.43	25.79	30.00	PASS
Band41	15MHz	16QAM	39725	36RB#0	23.44	25.80	30.00	PASS
Band41	15MHz	16QAM	39725	36RB#39	23.46	25.82	30.00	PASS
Band41	15MHz	16QAM	39725	75RB#0	23.37	25.73	30.00	PASS
Band41	15MHz	16QAM	40620	1RB#0	23.65	26.01	30.00	PASS
Band41	15MHz	16QAM	40620	1RB#38	23.79	26.15	30.00	PASS
Band41	15MHz	16QAM	40620	1RB#74	23.53	25.89	30.00	PASS
Band41	15MHz	16QAM	40620	36RB#39	23.57	25.93	30.00	PASS
Band41	15MHz	16QAM	40620	36RB#0	23.51	25.87	30.00	PASS
Band41	15MHz	16QAM	40620	36RB#18	23.53	25.89	30.00	PASS
Band41	15MHz	16QAM	40620	75RB#0	23.51	25.87	30.00	PASS
Band41	15MHz	16QAM	41515	1RB#38	23.68	26.04	30.00	PASS
Band41	15MHz	16QAM	41515	1RB#0	23.79	26.15	30.00	PASS
Band41	15MHz	16QAM	41515	1RB#74	23.55	25.91	30.00	PASS
Band41	15MHz	16QAM	41515	36RB#0	23.54	25.90	30.00	PASS
Band41	15MHz	16QAM	41515	36RB#18	23.67	26.03	30.00	PASS
Band41	15MHz	16QAM	41515	36RB#39	23.60	25.96	30.00	PASS
Band41	15MHz	16QAM	41515	75RB#0	23.56	25.92	30.00	PASS
Band41	20MHz	QPSK	39750	1RB#99	24.06	26.42	30.00	PASS
Band41	20MHz	QPSK	39750	1RB#49	24.18	26.54	30.00	PASS
Band41	20MHz	QPSK	39750	1RB#0	23.98	26.34	30.00	PASS
Band41	20MHz	QPSK	39750	50RB#0	23.76	26.12	30.00	PASS
Band41	20MHz	QPSK	39750	50RB#25	23.75	26.11	30.00	PASS
Band41	20MHz	QPSK	39750	50RB#50	23.70	26.06	30.00	PASS
								<del>-</del>



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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions</a> of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx</a>. 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 turner of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

sgs.china@sgs.com



Report No.: ZR/2019/A000601

Page: 6 of 51

		ı				1	1	
Band41	20MHz	QPSK	39750	100RB#0	23.70	26.06	30.00	PASS
Band41	20MHz	QPSK	40620	1RB#0	24.21	26.57	30.00	PASS
Band41	20MHz	QPSK	40620	1RB#99	24.43	26.79	30.00	PASS
Band41	20MHz	QPSK	40620	1RB#49	24.25	26.61	30.00	PASS
Band41	20MHz	QPSK	40620	50RB#50	23.92	26.28	30.00	PASS
Band41	20MHz	QPSK	40620	50RB#0	23.91	26.27	30.00	PASS
Band41	20MHz	QPSK	40620	50RB#25	23.89	26.25	30.00	PASS
Band41	20MHz	QPSK	40620	100RB#0	23.89	26.25	30.00	PASS
Band41	20MHz	QPSK	41490	1RB#49	24.44	26.80	30.00	PASS
Band41	20MHz	QPSK	41490	1RB#0	24.62	26.98	30.00	PASS
Band41	20MHz	QPSK	41490	1RB#99	24.35	26.71	30.00	PASS
Band41	20MHz	QPSK	41490	50RB#0	24.10	26.46	30.00	PASS
Band41	20MHz	QPSK	41490	50RB#50	24.01	26.37	30.00	PASS
Band41	20MHz	QPSK	41490	50RB#25	24.03	26.39	30.00	PASS
Band41	20MHz	QPSK	41490	100RB#0	24.06	26.42	30.00	PASS
Band41	20MHz	16QAM	39750	1RB#99	23.62	25.98	30.00	PASS
Band41	20MHz	16QAM	39750	1RB#0	23.83	26.19	30.00	PASS
Band41	20MHz	16QAM	39750	1RB#49	23.64	26.00	30.00	PASS
Band41	20MHz	16QAM	39750	50RB#50	23.53	25.89	30.00	PASS
Band41	20MHz	16QAM	39750	50RB#25	23.59	25.95	30.00	PASS
Band41	20MHz	16QAM	39750	50RB#0	23.55	25.91	30.00	PASS
Band41	20MHz	16QAM	39750	100RB#0	23.54	25.90	30.00	PASS
Band41	20MHz	16QAM	40620	1RB#99	23.73	26.09	30.00	PASS
Band41	20MHz	16QAM	40620	1RB#0	23.94	26.30	30.00	PASS
Band41	20MHz	16QAM	40620	1RB#49	23.73	26.09	30.00	PASS
Band41	20MHz	16QAM	40620	50RB#50	23.76	26.12	30.00	PASS
Band41	20MHz	16QAM	40620	50RB#0	23.74	26.10	30.00	PASS
Band41	20MHz	16QAM	40620	50RB#25	23.72	26.08	30.00	PASS
Band41	20MHz	16QAM	40620	100RB#0	23.74	26.10	30.00	PASS
Band41	20MHz	16QAM	41490	1RB#49	23.88	26.24	30.00	PASS
Band41	20MHz	16QAM	41490	1RB#0	24.04	26.40	30.00	PASS
Band41	20MHz	16QAM	41490	1RB#99	23.74	26.10	30.00	PASS
Band41	20MHz	16QAM	41490	50RB#0	23.74	26.10	30.00	PASS
Band41	20MHz	16QAM	41490	50RB#25	23.81	26.17	30.00	PASS
Band41	20MHz	16QAM	41490	50RB#50	23.81	26.17	30.00	PASS
Band41	20MHz	16QAM	41490	100RB#0	23.80	26.16	30.00	PASS

#### Remark:

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

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



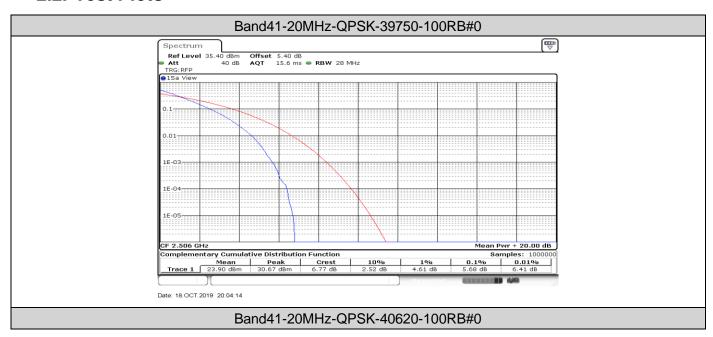
Page: 7 of 51

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

#### 2.1. Test Result

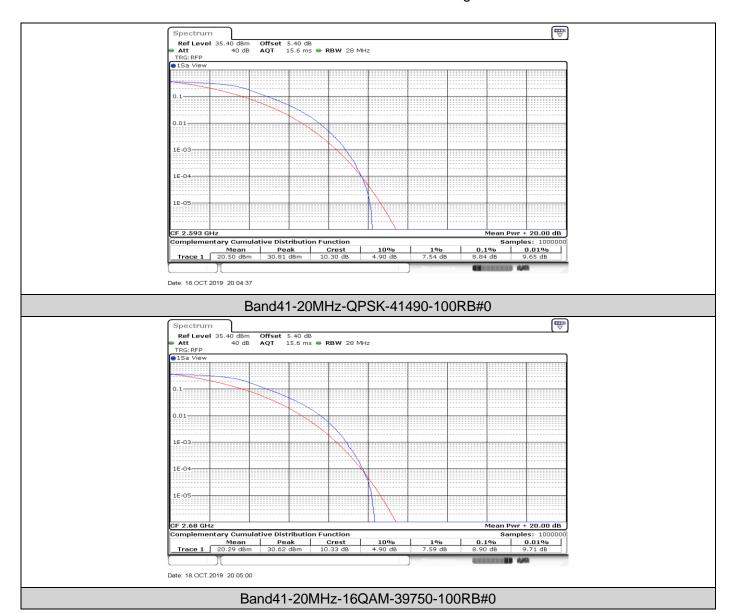
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	20MHz	QPSK	39750	100RB#0	5.68	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	8.84	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	8.90	13	PASS
Band41	20MHz	16QAM	39750	100RB#0	9.59	13	PASS
Band41	20MHz	16QAM	40620	100RB#0	9.54	13	PASS
Band41	20MHz	16QAM	41490	100RB#0	9.59	13	PASS

#### 2.2. Test Plots



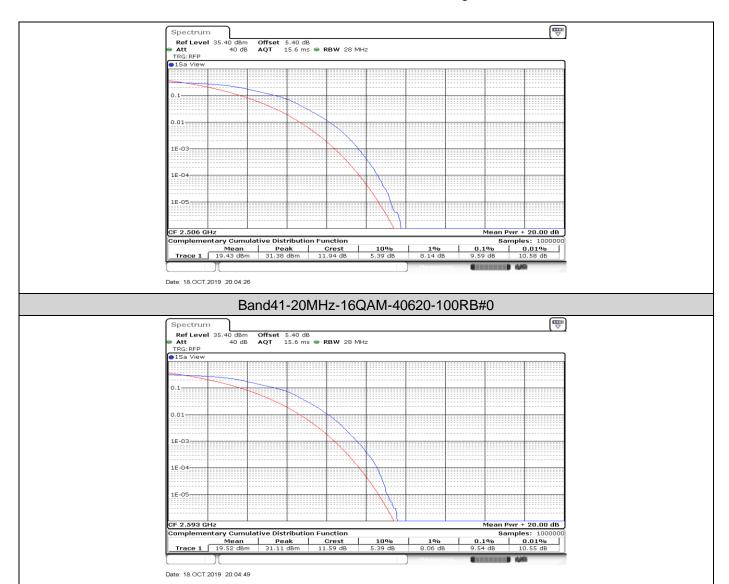


Page: 8 of 51





Page: 9 of 51

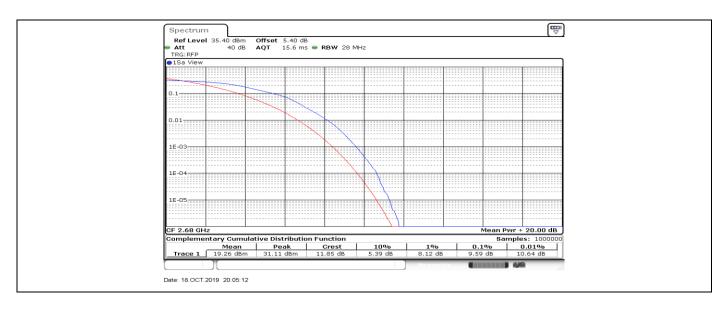


Band41-20MHz-16QAM-41490-100RB#0





Page: 10 of 51



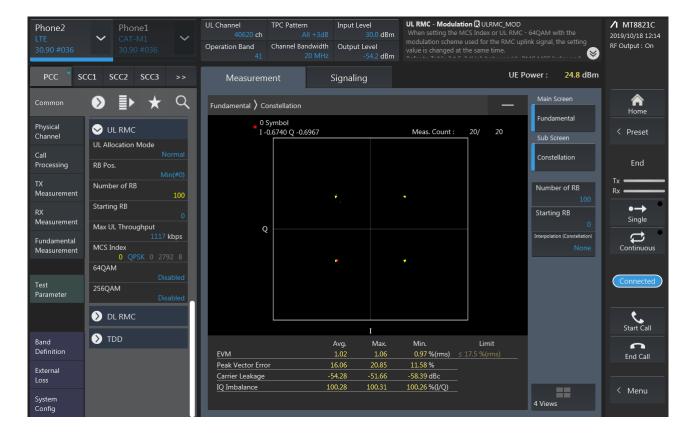


Page: 11 of 51

### 3. Modulation Characteristics

#### 3.1. Test Mode = LTE /TM1 20MHz

#### 3.1.1.Test Channel = MCH

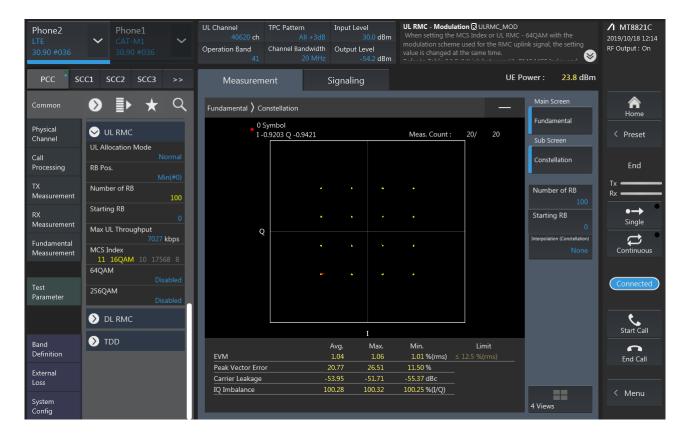




Page: 12 of 51

#### 3.2. Test Mode = LTE /TM2 20MHz

#### 3.2.1.Test Channel = MCH





Page: 13 of 51

### 4. 26dB Bandwidth and Occupied Bandwidth

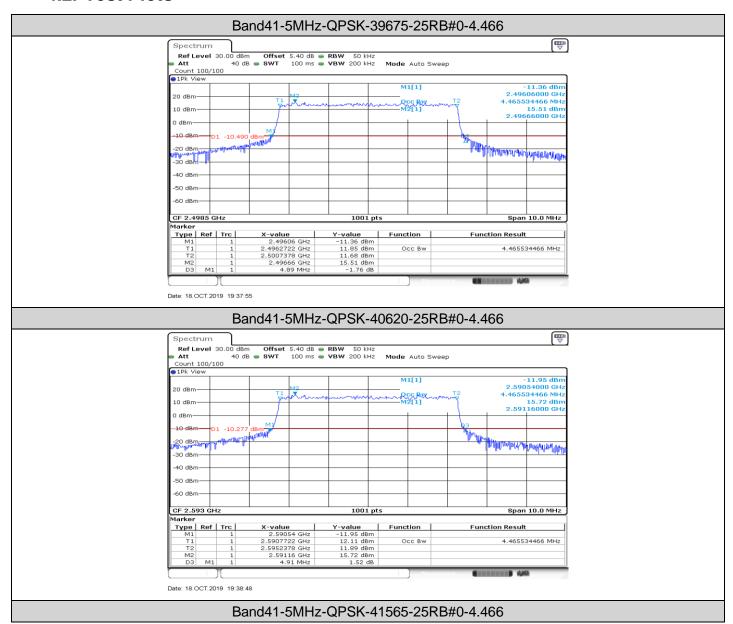
#### 4.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	4.466	4.890	PASS
Band41	5MHz	QPSK	40620	25RB#0	4.466	4.910	PASS
Band41	5MHz	QPSK	41565	25RB#0	4.466	4.870	PASS
Band41	5MHz	16QAM	39675	25RB#0	4.486	4.860	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.476	4.850	PASS
Band41	5MHz	16QAM	41565	25RB#0	4.486	4.870	PASS
Band41	10MHz	QPSK	39700	50RB#0	8.911	9.740	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.911	9.780	PASS
Band41	10MHz	QPSK	41540	50RB#0	8.911	9.860	PASS
Band41	10MHz	16QAM	39700	50RB#0	8.931	9.780	PASS
Band41	10MHz	16QAM	40620	50RB#0	8.931	9.620	PASS
Band41	10MHz	16QAM	41540	50RB#0	8.911	9.700	PASS
Band41	15MHz	QPSK	39725	75RB#0	13.487	16.380	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.487	16.170	PASS
Band41	15MHz	QPSK	41515	75RB#0	13.516	16.230	PASS
Band41	15MHz	16QAM	39725	75RB#0	13.457	15.600	PASS
Band41	15MHz	16QAM	40620	75RB#0	13.457	15.930	PASS
Band41	15MHz	16QAM	41515	75RB#0	13.487	15.390	PASS
Band41	20MHz	QPSK	39750	100RB#0	17.902	20.200	PASS
Band41	20MHz	QPSK	40620	100RB#0	17.942	20.160	PASS
Band41	20MHz	QPSK	41490	100RB#0	17.902	20.200	PASS
Band41	20MHz	16QAM	39750	100RB#0	17.902	19.680	PASS
Band41	20MHz	16QAM	40620	100RB#0	17.902	19.840	PASS
Band41	20MHz	16QAM	41490	100RB#0	17.902	19.800	PASS



Page: 14 of 51

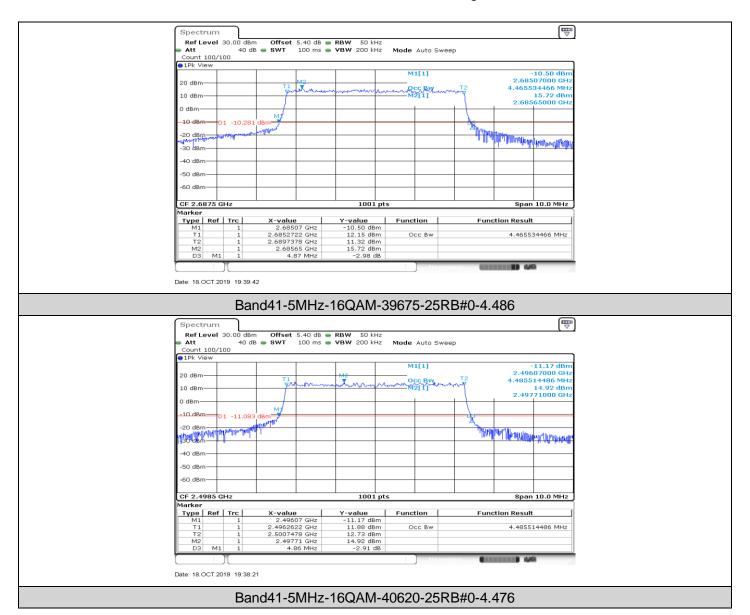
#### 4.2. Test Plots





Report No.: ZR/2019/A000601

Page: 15 of 51





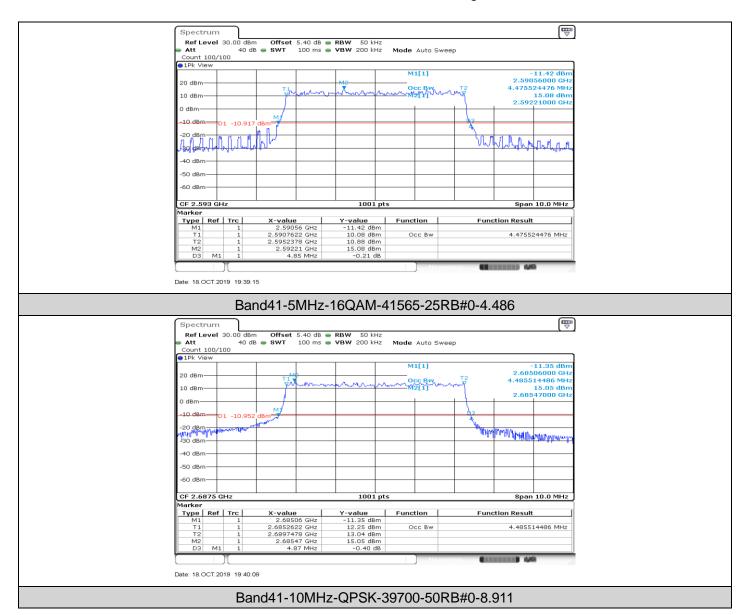
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

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

Report No.: ZR/2019/A000601

Page: 16 of 51





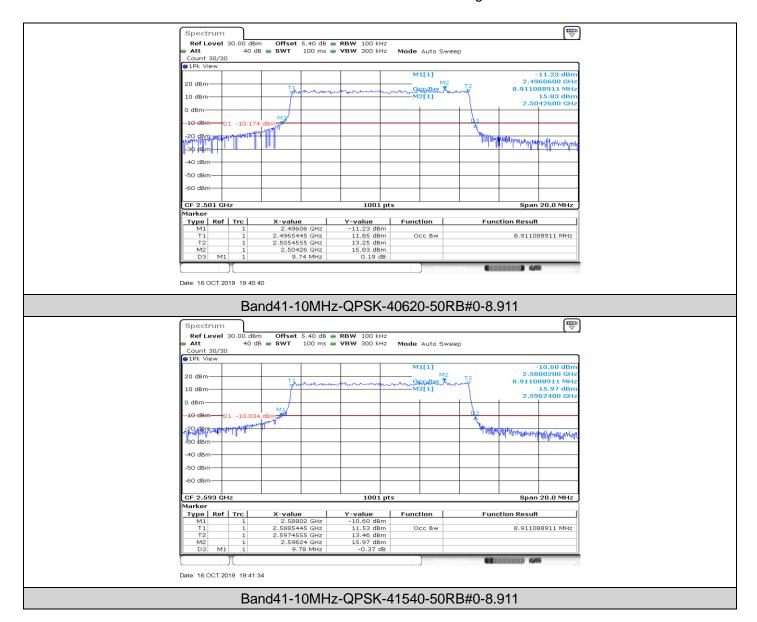
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

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

Report No.: ZR/2019/A000601

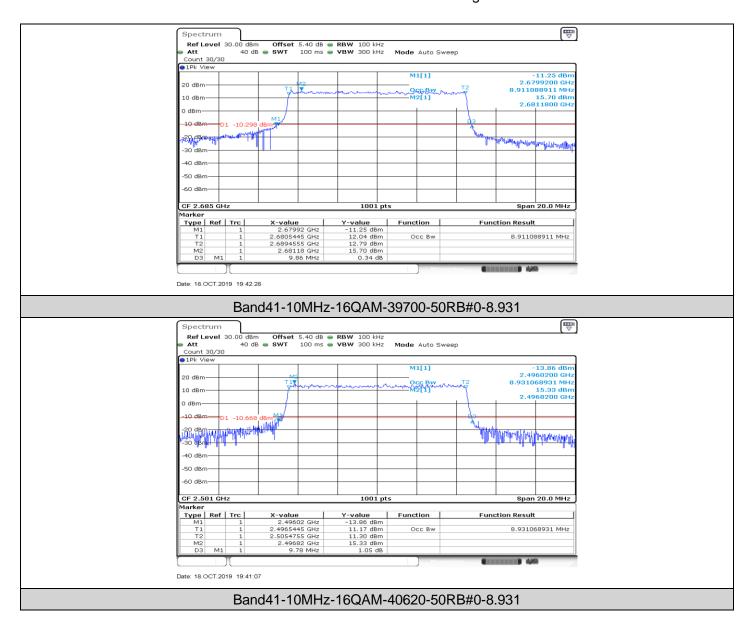
Page: 17 of 51





Report No.: ZR/2019/A000601

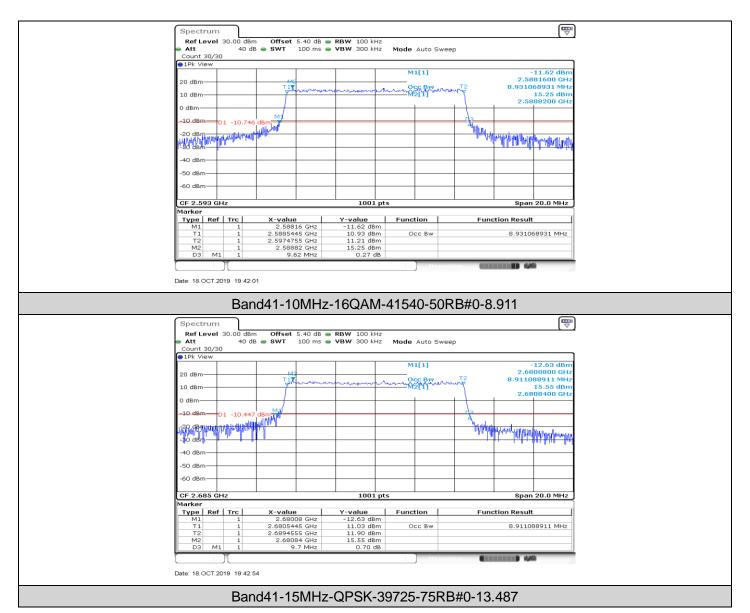
Page: 18 of 51





Report No.: ZR/2019/A000601

Page: 19 of 51





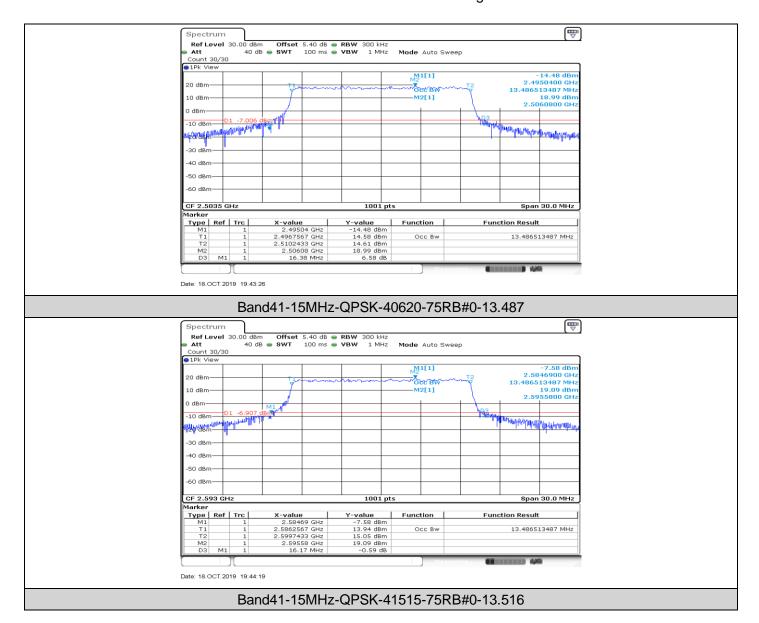
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

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

Report No.: ZR/2019/A000601

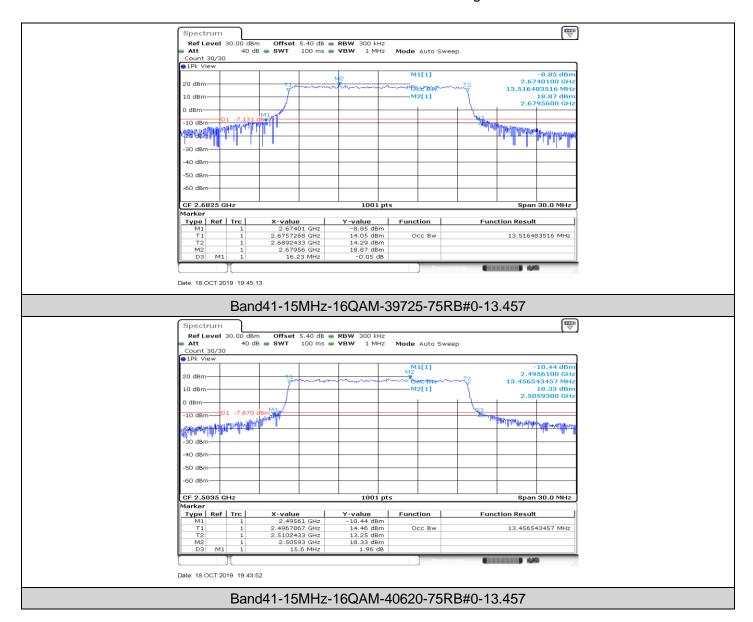
Page: 20 of 51





Report No.: ZR/2019/A000601

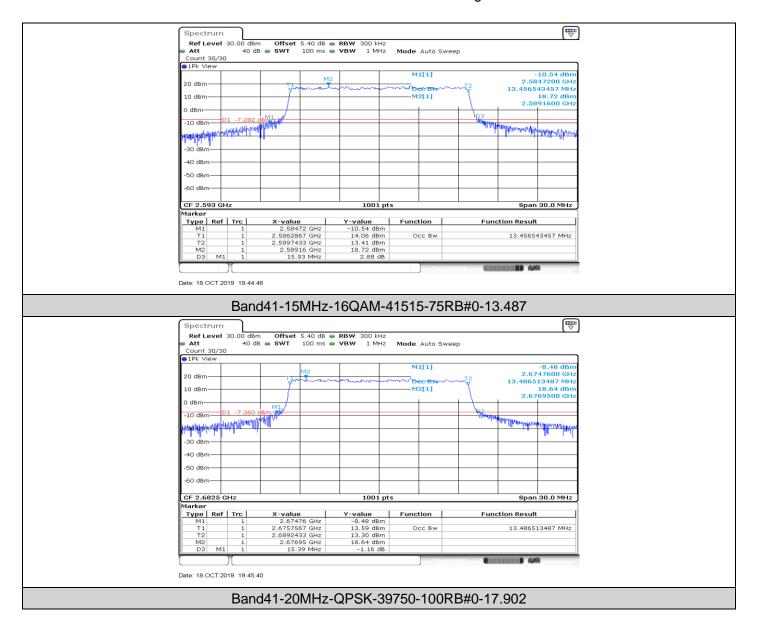
Page: 21 of 51





Report No.: ZR/2019/A000601

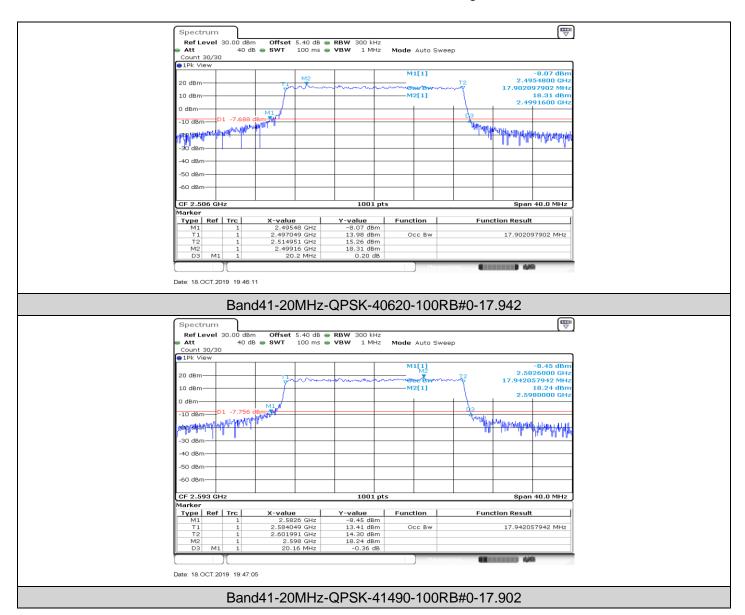
Page: 22 of 51





Report No.: ZR/2019/A000601

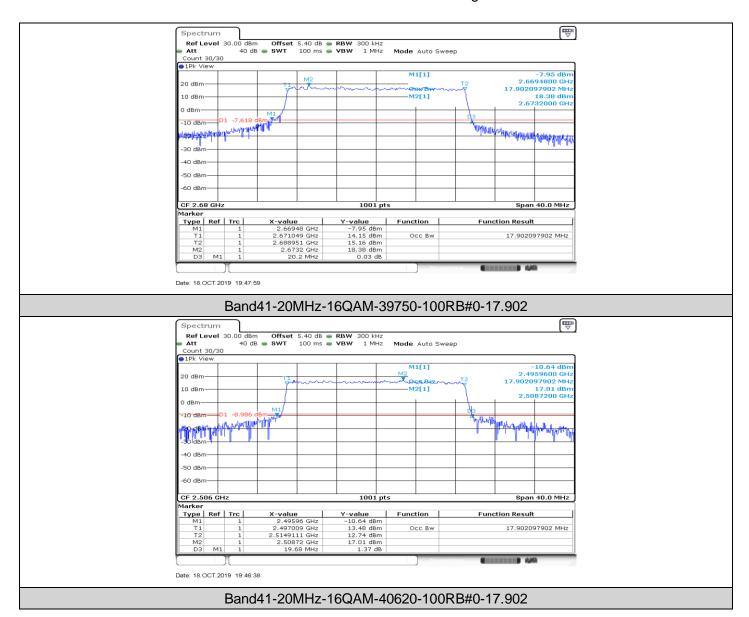
Page: 23 of 51





Report No.: ZR/2019/A000601

Page: 24 of 51





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

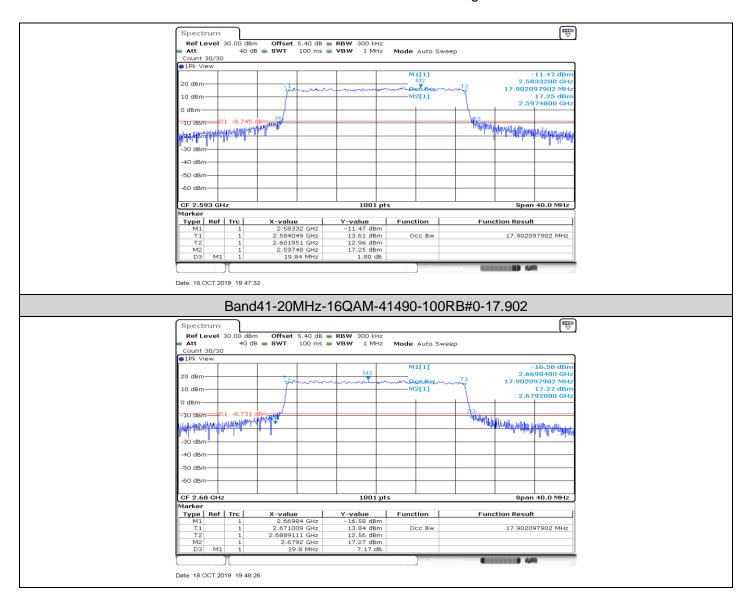
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sas.com

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



Report No.: ZR/2019/A000601

Page: 25 of 51

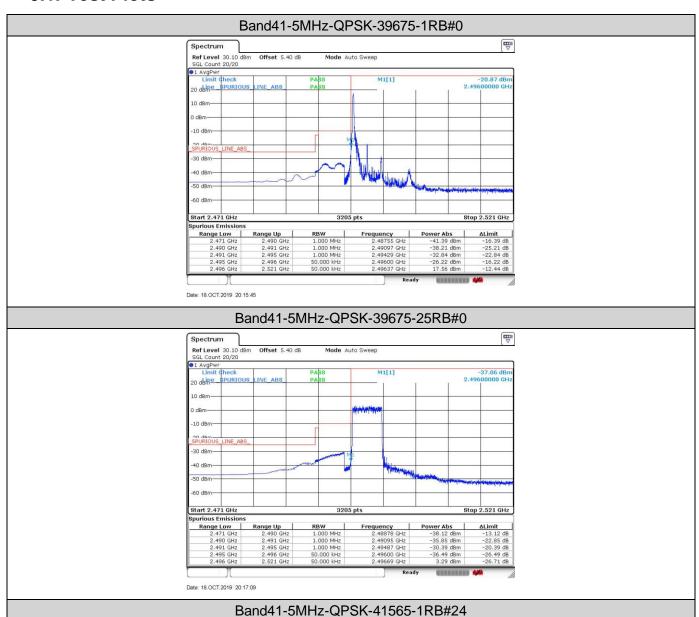




Page: 26 of 51

### 5. Band Edge Compliance

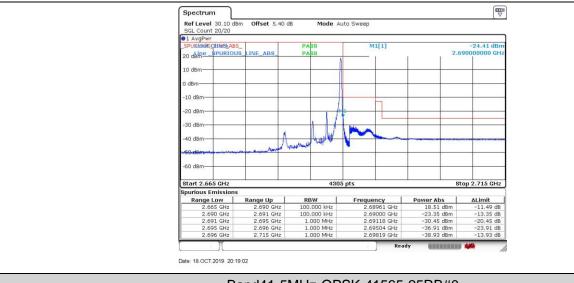
#### 5.1. Test Plots



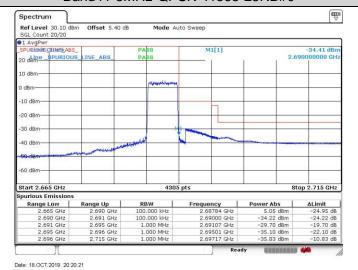


Report No.: ZR/2019/A000601

Page: 27 of 51



#### Band41-5MHz-QPSK-41565-25RB#0

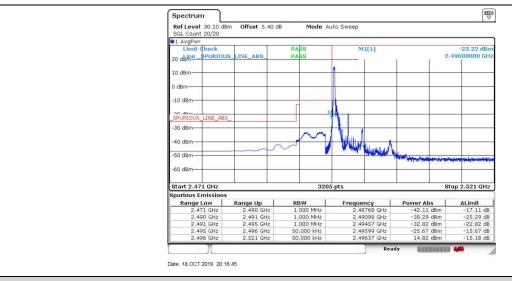


Band41-5MHz-16QAM-39675-1RB#0

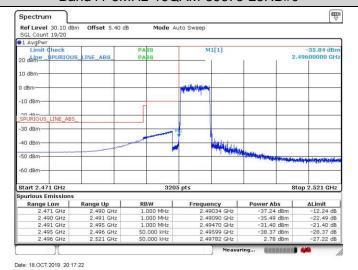


Report No.: ZR/2019/A000601

Page: 28 of 51



#### Band41-5MHz-16QAM-39675-25RB#0



Band41-5MHz-16QAM-41565-1RB#24

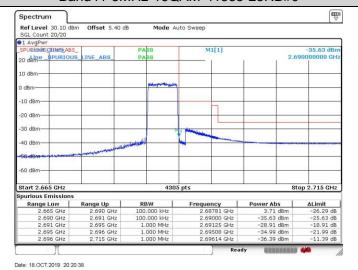


Report No.: ZR/2019/A000601

Page: 29 of 51



#### Band41-5MHz-16QAM-41565-25RB#0



Band41-10MHz-QPSK-39700-1RB#0

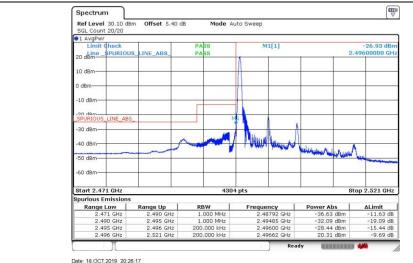


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

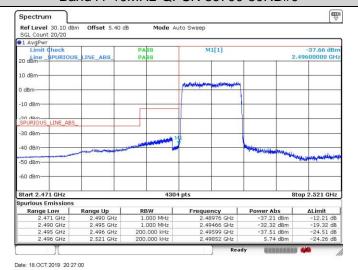
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

Page: 30 of 51



ile. 16.0C1.2019 20.20.17

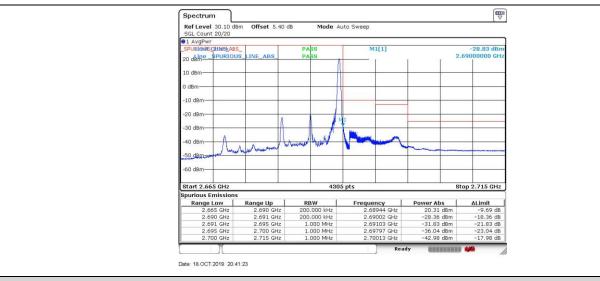
#### Band41-10MHz-QPSK-39700-50RB#0



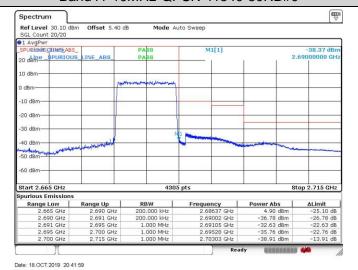
Band41-10MHz-QPSK-41540-1RB#49



Page: 31 of 51



#### Band41-10MHz-QPSK-41540-50RB#0



Band41-10MHz-16QAM-39700-1RB#0



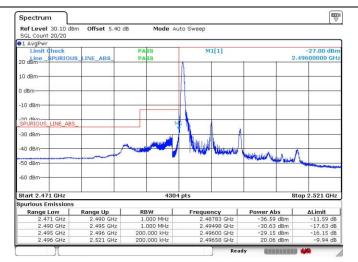
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

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

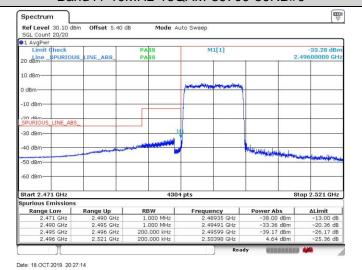
Report No.: ZR/2019/A000601

Page: 32 of 51



Date: 18.OCT.2019 20:26:38

#### Band41-10MHz-16QAM-39700-50RB#0

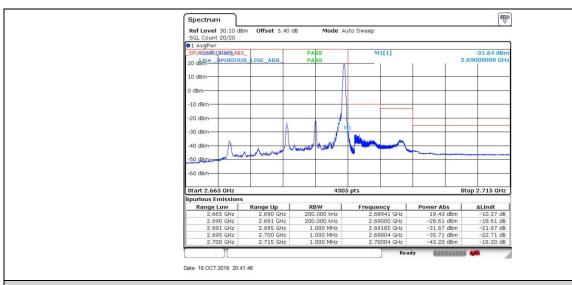


Band41-10MHz-16QAM-41540-1RB#49

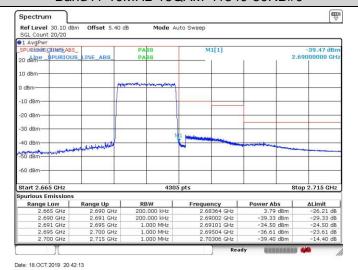


Report No.: ZR/2019/A000601

Page: 33 of 51



#### Band41-10MHz-16QAM-41540-50RB#0



Band41-15MHz-QPSK-39725-1RB#0



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

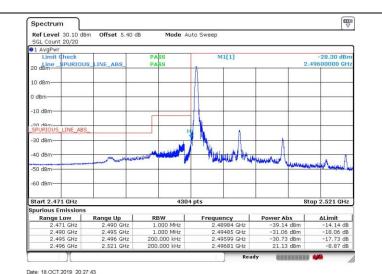
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sas.com

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

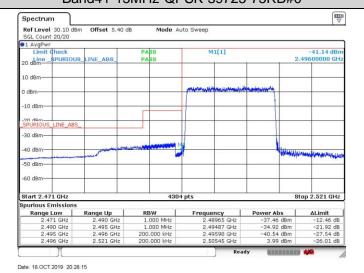
003 | (66-755) 207 (0594 sgs.china@sgs.com

Report No.: ZR/2019/A000601

Page: 34 of 51



#### Band41-15MHz-QPSK-39725-75RB#0



Band41-15MHz-QPSK-41515-1RB#74



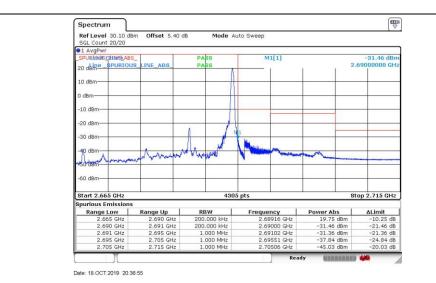
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

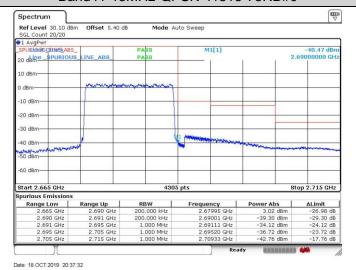
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

Report No.: ZR/2019/A000601

Page: 35 of 51



#### Band41-15MHz-QPSK-41515-75RB#0



Band41-15MHz-16QAM-39725-1RB#0



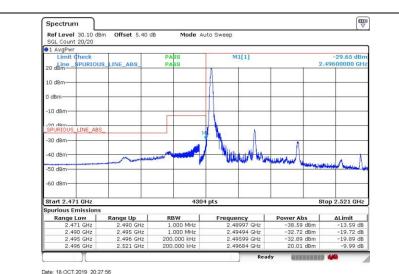
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

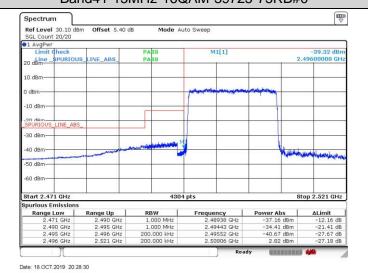
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

Report No.: ZR/2019/A000601

Page: 36 of 51



### Band41-15MHz-16QAM-39725-75RB#0

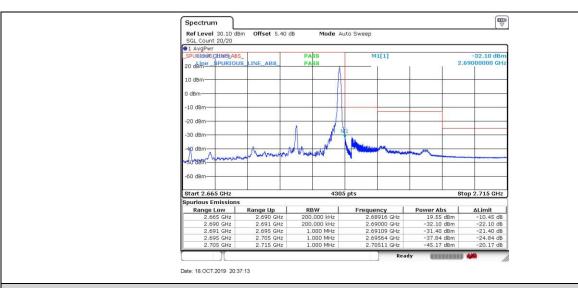


Band41-15MHz-16QAM-41515-1RB#74

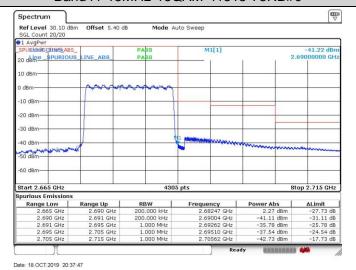


Report No.: ZR/2019/A000601

Page: 37 of 51



#### Band41-15MHz-16QAM-41515-75RB#0



Band41-20MHz-QPSK-39750-1RB#0



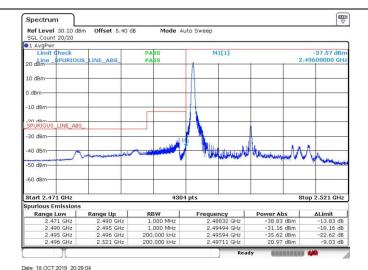
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

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

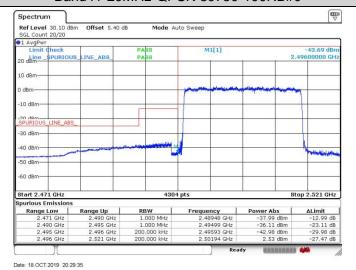
Report No.: ZR/2019/A000601

Page: 38 of 51



Date: 18.OCT.2019 20:29:04

#### Band41-20MHz-QPSK-39750-100RB#0

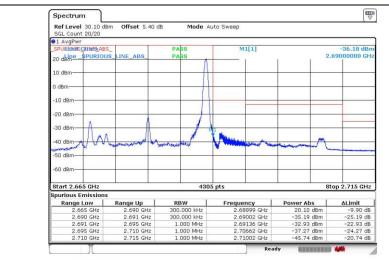


Band41-20MHz-QPSK-41490-1RB#99



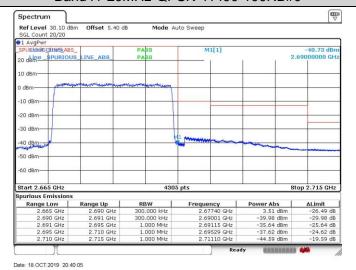
Report No.: ZR/2019/A000601

Page: 39 of 51



Date: 18.OCT.2019 20:39:26

#### Band41-20MHz-QPSK-41490-100RB#0



Band41-20MHz-16QAM-39750-1RB#0



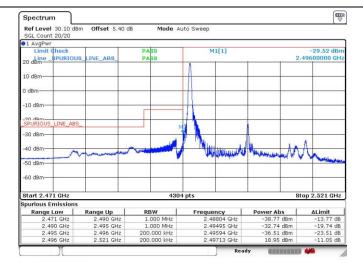
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

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

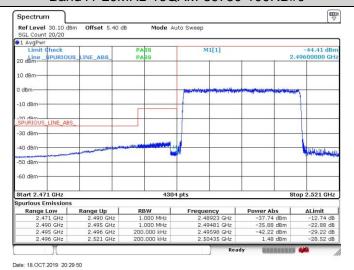
Report No.: ZR/2019/A000601

Page: 40 of 51



Date: 18.OCT.2019 20:29:17

#### Band41-20MHz-16QAM-39750-100RB#0



Band41-20MHz-16QAM-41490-1RB#99



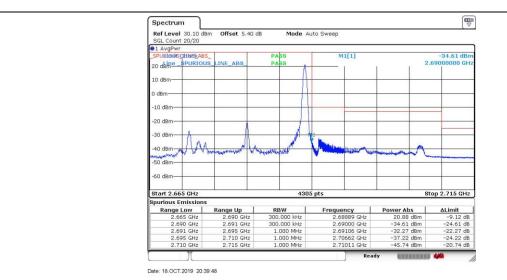
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic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

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

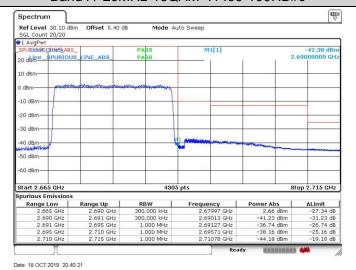
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

Report No.: ZR/2019/A000601

Page: 41 of 51



#### Band41-20MHz-16QAM-41490-100RB#0





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

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

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

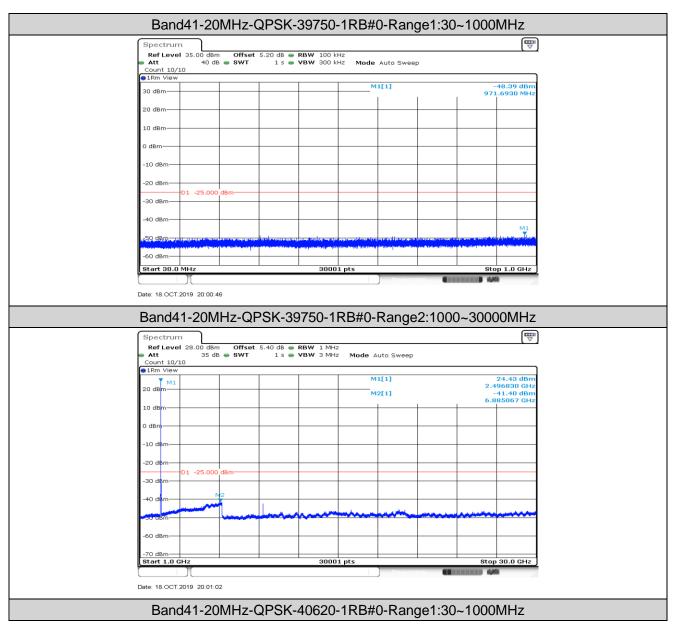
Page: 42 of 51

### 6. Spurious Emission at Antenna Terminal

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

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

#### 6.1. Test Plots





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

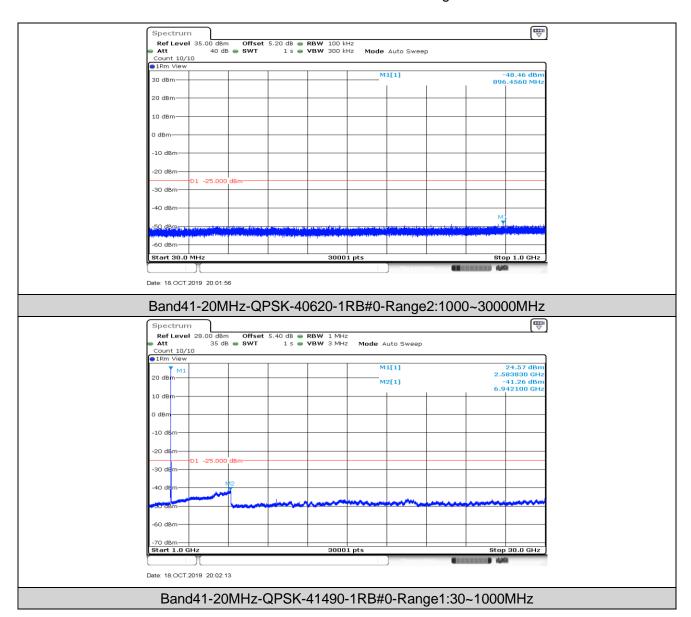
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or small: CND Doccheck-Ross.com.

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



Report No.: ZR/2019/A000601

Page: 43 of 51

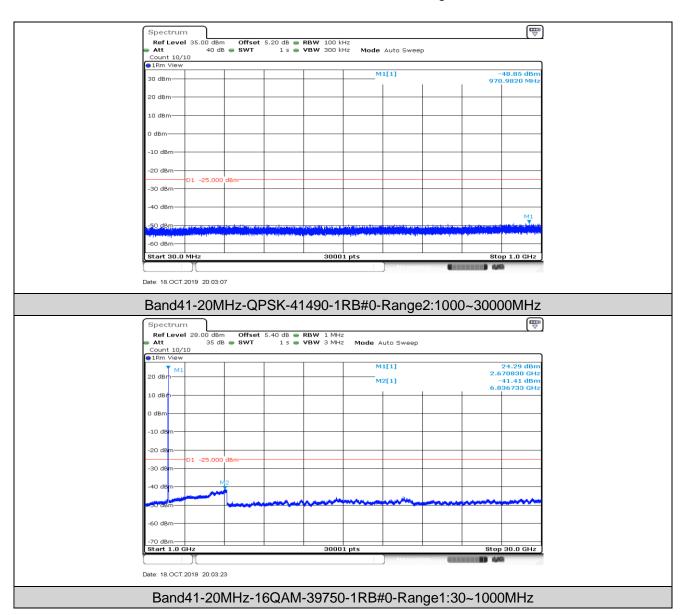






Report No.: ZR/2019/A000601

Page: 44 of 51

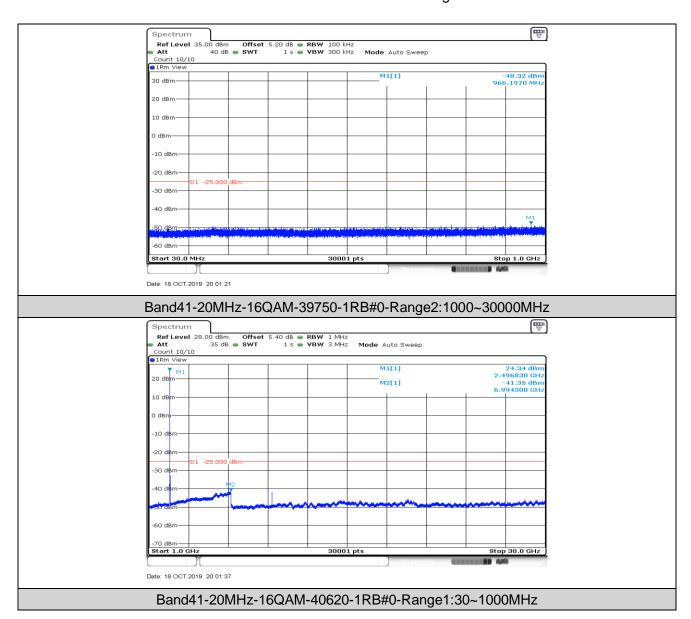






Report No.: ZR/2019/A000601

Page: 45 of 51

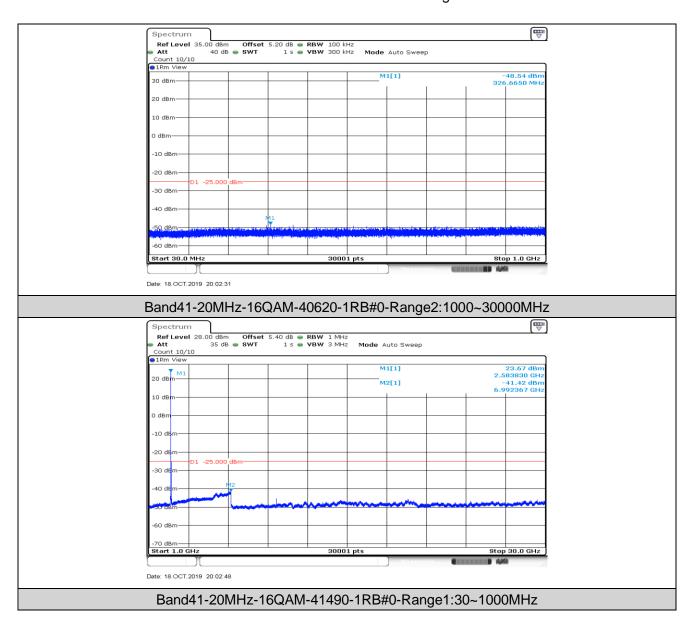






Report No.: ZR/2019/A000601

Page: 46 of 51

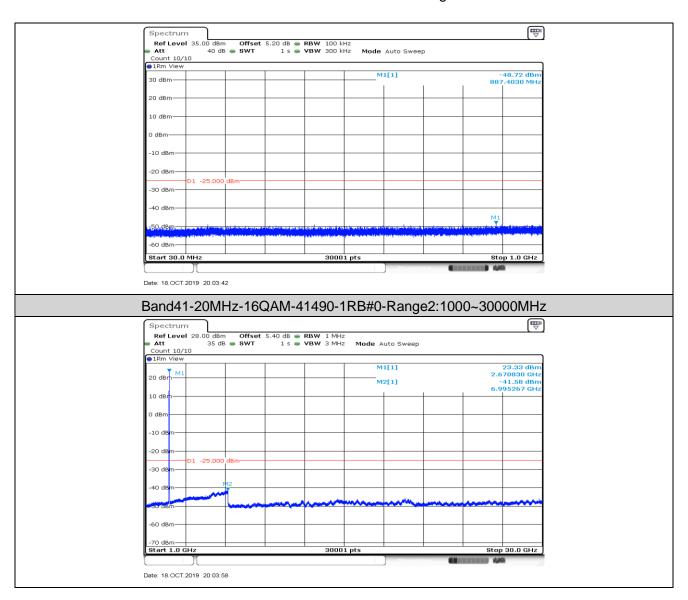






Report No.: ZR/2019/A000601

Page: 47 of 51





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

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

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

Page: 48 of 51

### 7. Field Strength of Spurious Radiation

#### 7.1. Test Mode =LTE/TM1 20MHz

#### 7.1.1.Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.8906	-62.94	-25.00	37.94	Vertical
2996.3993	-37.45	-25.00	12.45	Vertical
7472.6491	-53.15	-25.00	28.15	Vertical
14500.3833	-42.69	-25.00	17.69	Vertical
16893.9631	-40.62	-25.00	15.62	Vertical
17998.5000	-33.29	-25.00	8.29	Vertical
44.2597	-63.91	-25.00	38.91	Horizontal
225.2708	-67.59	-25.00	42.59	Horizontal
2700.3401	-35.40	-25.00	10.40	Horizontal
12975.3325	-45.77	-25.00	20.77	Horizontal
16392.9464	-38.45	-25.00	13.45	Horizontal
17991.9997	-37.92	-25.00	12.92	Horizontal

#### 7.1.2.Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
48.7219	-69.43	-25.00	44.43	Vertical
113.1332	-64.76	-25.00	39.76	Vertical
2995.1990	-37.44	-25.00	12.44	Vertical
9331.7111	-49.44	-25.00	24.44	Vertical
14703.3901	-42.42	-25.00	17.42	Vertical
17987.4996	-33.22	-25.00	8.22	Vertical
44.0657	-62.99	-25.00	37.99	Horizontal
239.8700	-67.61	-25.00	42.61	Horizontal
2998.7998	-37.62	-25.00	12.62	Horizontal
12871.8291	-45.48	-25.00	20.48	Horizontal
16397.9466	-38.15	-25.00	13.15	Horizontal
17995.9999	-37.94	-25.00	12.94	Horizontal



Page: 49 of 51

#### 7.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
115.5583	-64.78	-25.00	39.78	Vertical
853.6682	-60.74	-25.00	35.74	Vertical
2995.1990	-37.42	-25.00	12.42	Vertical
9297.7099	-48.57	-25.00	23.57	Vertical
14647.8883	-42.37	-25.00	17.37	Vertical
17986.9996	-33.14	-25.00	8.14	Vertical
45.1328	-62.46	-25.00	37.46	Horizontal
242.0526	-68.17	-25.00	43.17	Horizontal
2956.7914	-37.65	-25.00	12.65	Horizontal
12927.3309	-45.48	-25.00	20.48	Horizontal
16398.4466	-38.64	-25.00	13.64	Horizontal
17998.5000	-37.86	-25.00	12.86	Horizontal

#### Remark:

- According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2 The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data displayed in this report.
- 3 all modulation and all Bandwidth had been tested, but only the worst case data displayed in this report.



Page: 50 of 51

### 8. Frequency Stability

### 8.1. Frequency Vs Voltage

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temper ature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band41	20MHz	QPSK	39750	100RB#0	VL	NT	2.60	0.001038	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	VN	NT	3.30	0.001317	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	VH	NT	-10.30	-0.004110	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VL	NT	0.40	0.000154	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VN	NT	-1.70	-0.000656	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VH	NT	-6.80	-0.002622	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VL	NT	-3.90	-0.001455	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VN	NT	-0.10	-0.000037	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VH	NT	-0.40	-0.000149	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	VL	NT	-4.20	-0.001676	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	VN	NT	-0.20	-0.000080	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	VH	NT	-6.90	-0.002753	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	VL	NT	-10.10	-0.003895	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	VN	NT	-3.10	-0.001196	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	VH	NT	-16.60	-0.006402	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	VL	NT	-9.90	-0.003694	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	VN	NT	-10.30	-0.003843	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	VH	NT	-6.60	-0.002463	±2.5	PASS

### 8.2. Frequency Vs Temperature

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temper ature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band41	20MHz	QPSK	39750	100RB#0	NV	-30	-1.90	-0.000758	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	-20	-0.40	-0.000160	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	0	2.60	0.001038	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	10	-8.40	-0.003352	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	20	-8.90	-0.003551	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	30	-1.70	-0.000678	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	40	-0.90	-0.000359	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	50	-4.90	-0.001955	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	-30	-6.50	-0.002507	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	-20	-5.00	-0.001928	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	0	-13.00	-0.005013	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	10	-13.40	-0.005168	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	20	-13.00	-0.005013	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	30	-4.50	-0.001735	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	40	-14.30	-0.005515	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	50	-14.50	-0.005592	±2.5	PASS



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

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

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



Report No.: ZR/2019/A000601

Page: 51 of 51

				1		1	1	Т		
Band41	20MHz	QPSK	41490	100RB#0	NV	-30	5.10	0.001903	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	-20	-10.60	-0.003955	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	0	-3.80	-0.001418	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	10	-11.00	-0.004104	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	20	-14.00	-0.005224	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	30	-0.90	-0.000336	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	40	-5.70	-0.002127	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	50	-4.70	-0.001754	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	-30	-1.10	-0.000439	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	-20	-6.80	-0.002713	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	0	-3.40	-0.001357	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	10	-0.80	-0.000319	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	20	-7.60	-0.003033	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	30	3.00	0.001197	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	40	-0.10	-0.000040	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	50	-13.90	-0.005547	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	-30	-17.30	-0.006672	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	-20	-2.40	-0.000926	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	0	-1.70	-0.000656	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	10	-14.50	-0.005592	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	20	-1.20	-0.000463	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	30	-12.50	-0.004821	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	40	-11.20	-0.004319	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	50	-10.00	-0.003857	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	-30	-12.70	-0.004739	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	-20	-0.20	-0.000075	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	0	-1.00	-0.000373	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	10	-0.40	-0.000149	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	20	-6.40	-0.002388	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	30	-2.80	-0.001045	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	40	-15.10	-0.005634	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	50	0.60	0.000224	±2.5	PASS

The End

