



Appendix B

E-UTRA BAND 7



CONTENT

1.	EFFECTIVE (ISOTROPIC) RADIATED POWER.....	3
1.1.	Test Result.....	3
2.	PEAK-TO-AVERAGE RATIO(CCDF).....	8
2.1.	Test Result.....	8
2.2.	Test Plots.....	8
3.	MODULATION CHARACTERISTICS	11
3.1.	Test BAND = LTE BAND7.....	11
3.1.1.	Test Mode = LTE /TM1 20MHz.....	11
3.1.1.1.	Test Channel = MCH.....	11
3.1.2.	Test Mode = LTE /TM2 20MHz.....	12
3.1.2.1.	Test Channel = MCH.....	12
4.	26dB BANDWIDTH AND OCCUPIED BANDWIDTH	13
4.1.	Test Result.....	13
4.2.	Test Plots.....	14
5.	BAND EDGE COMPLIANCE	23
5.1.	Test Plots.....	23
6.	SPURIOUS EMISSION AT ANTENNA TERMINAL	40
6.1.	Test Plots.....	40
7.	FIELD STRENGTH OF SPURIOUS RADIATION	45
7.1.	Test BAND = LTE BAND 7.....	45
7.1.1.	Test Mode =LTE/TM1 20MHz	45
7.1.1.1.	Test Channel = LCH	45
7.1.1.2.	Test Channel = MCH.....	45
7.1.1.3.	Test Channel = HCH.....	46
8.	APPENDIX F: FREQUENCY STABILITY	47
9.1.	Frequency Vs Voltage.....	47
9.2.	Frequency Vs Temperature	47



1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
BAND7	5MHz	QPSK	20775	1RB#0	21.39	20.89	33.00	PASS
BAND7	5MHz	QPSK	20775	1RB#12	21.62	21.12	33.00	PASS
BAND7	5MHz	QPSK	20775	1RB#24	21.38	20.88	33.00	PASS
BAND7	5MHz	QPSK	20775	12RB#0	20.42	19.92	33.00	PASS
BAND7	5MHz	QPSK	20775	12RB#6	20.52	20.02	33.00	PASS
BAND7	5MHz	QPSK	20775	12RB#13	20.46	19.96	33.00	PASS
BAND7	5MHz	QPSK	20775	25RB#0	20.46	19.96	33.00	PASS
BAND7	5MHz	QPSK	21100	1RB#0	21.45	20.95	33.00	PASS
BAND7	5MHz	QPSK	21100	1RB#12	21.67	21.17	33.00	PASS
BAND7	5MHz	QPSK	21100	1RB#24	21.41	20.91	33.00	PASS
BAND7	5MHz	QPSK	21100	12RB#0	20.48	19.98	33.00	PASS
BAND7	5MHz	QPSK	21100	12RB#6	20.58	20.08	33.00	PASS
BAND7	5MHz	QPSK	21100	12RB#13	20.52	20.02	33.00	PASS
BAND7	5MHz	QPSK	21100	25RB#0	20.52	20.02	33.00	PASS
BAND7	5MHz	QPSK	21425	1RB#0	21.42	20.92	33.00	PASS
BAND7	5MHz	QPSK	21425	1RB#12	21.61	21.11	33.00	PASS
BAND7	5MHz	QPSK	21425	1RB#24	21.36	20.86	33.00	PASS
BAND7	5MHz	QPSK	21425	12RB#0	20.49	19.99	33.00	PASS
BAND7	5MHz	QPSK	21425	12RB#6	20.55	20.05	33.00	PASS
BAND7	5MHz	QPSK	21425	12RB#13	20.45	19.95	33.00	PASS
BAND7	5MHz	QPSK	21425	25RB#0	20.52	20.02	33.00	PASS
BAND7	5MHz	16QAM	20775	1RB#0	20.63	20.13	33.00	PASS
BAND7	5MHz	16QAM	20775	1RB#12	20.81	20.31	33.00	PASS
BAND7	5MHz	16QAM	20775	1RB#24	20.58	20.08	33.00	PASS
BAND7	5MHz	16QAM	20775	12RB#0	19.42	18.92	33.00	PASS
BAND7	5MHz	16QAM	20775	12RB#6	19.52	19.02	33.00	PASS
BAND7	5MHz	16QAM	20775	12RB#13	19.49	18.99	33.00	PASS
BAND7	5MHz	16QAM	20775	25RB#0	19.41	18.91	33.00	PASS
BAND7	5MHz	16QAM	21100	1RB#0	20.62	20.12	33.00	PASS
BAND7	5MHz	16QAM	21100	1RB#12	20.84	20.34	33.00	PASS
BAND7	5MHz	16QAM	21100	1RB#24	20.65	20.15	33.00	PASS
BAND7	5MHz	16QAM	21100	12RB#0	19.49	18.99	33.00	PASS
BAND7	5MHz	16QAM	21100	12RB#6	19.61	19.11	33.00	PASS
BAND7	5MHz	16QAM	21100	12RB#13	19.57	19.07	33.00	PASS



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

Report No.: SZEM180500457101

Page: 4 of 48

BAND7	5MHz	16QAM	21100	25RB#0	19.51	19.01	33.00	PASS
BAND7	5MHz	16QAM	21425	1RB#0	20.65	20.15	33.00	PASS
BAND7	5MHz	16QAM	21425	1RB#12	20.90	20.40	33.00	PASS
BAND7	5MHz	16QAM	21425	1RB#24	20.57	20.07	33.00	PASS
BAND7	5MHz	16QAM	21425	12RB#0	19.51	19.01	33.00	PASS
BAND7	5MHz	16QAM	21425	12RB#6	19.60	19.10	33.00	PASS
BAND7	5MHz	16QAM	21425	12RB#13	19.45	18.95	33.00	PASS
BAND7	5MHz	16QAM	21425	25RB#0	19.46	18.96	33.00	PASS
BAND7	10MHz	QPSK	20800	1RB#0	21.49	20.99	33.00	PASS
BAND7	10MHz	QPSK	20800	1RB#24	21.61	21.11	33.00	PASS
BAND7	10MHz	QPSK	20800	1RB#49	21.50	21.00	33.00	PASS
BAND7	10MHz	QPSK	20800	25RB#0	20.48	19.98	33.00	PASS
BAND7	10MHz	QPSK	20800	25RB#12	20.57	20.07	33.00	PASS
BAND7	10MHz	QPSK	20800	25RB#25	20.51	20.01	33.00	PASS
BAND7	10MHz	QPSK	20800	50RB#0	20.51	20.01	33.00	PASS
BAND7	10MHz	QPSK	21100	1RB#0	21.55	21.05	33.00	PASS
BAND7	10MHz	QPSK	21100	1RB#24	21.62	21.12	33.00	PASS
BAND7	10MHz	QPSK	21100	1RB#49	21.48	20.98	33.00	PASS
BAND7	10MHz	QPSK	21100	25RB#0	20.53	20.03	33.00	PASS
BAND7	10MHz	QPSK	21100	25RB#12	20.63	20.13	33.00	PASS
BAND7	10MHz	QPSK	21100	25RB#25	20.62	20.12	33.00	PASS
BAND7	10MHz	QPSK	21100	50RB#0	20.59	20.09	33.00	PASS
BAND7	10MHz	QPSK	21400	1RB#0	21.49	20.99	33.00	PASS
BAND7	10MHz	QPSK	21400	1RB#24	21.57	21.07	33.00	PASS
BAND7	10MHz	QPSK	21400	1RB#49	21.45	20.95	33.00	PASS
BAND7	10MHz	QPSK	21400	25RB#0	20.58	20.08	33.00	PASS
BAND7	10MHz	QPSK	21400	25RB#12	20.59	20.09	33.00	PASS
BAND7	10MHz	QPSK	21400	25RB#25	20.58	20.08	33.00	PASS
BAND7	10MHz	QPSK	21400	50RB#0	20.59	20.09	33.00	PASS
BAND7	10MHz	16QAM	20800	1RB#0	20.72	20.22	33.00	PASS
BAND7	10MHz	16QAM	20800	1RB#24	20.87	20.37	33.00	PASS
BAND7	10MHz	16QAM	20800	1RB#49	20.74	20.24	33.00	PASS
BAND7	10MHz	16QAM	20800	25RB#0	19.46	18.96	33.00	PASS
BAND7	10MHz	16QAM	20800	25RB#12	19.54	19.04	33.00	PASS
BAND7	10MHz	16QAM	20800	25RB#25	19.48	18.98	33.00	PASS
BAND7	10MHz	16QAM	20800	50RB#0	19.47	18.97	33.00	PASS
BAND7	10MHz	16QAM	21100	1RB#0	20.77	20.27	33.00	PASS
BAND7	10MHz	16QAM	21100	1RB#24	20.81	20.31	33.00	PASS
BAND7	10MHz	16QAM	21100	1RB#49	20.73	20.23	33.00	PASS
BAND7	10MHz	16QAM	21100	25RB#0	19.49	18.99	33.00	PASS
BAND7	10MHz	16QAM	21100	25RB#12	19.57	19.07	33.00	PASS

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



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

Report No.: SZEM180500457101

Page: 5 of 48

BAND7	10MHz	16QAM	21100	25RB#25	19.54	19.04	33.00	PASS
BAND7	10MHz	16QAM	21100	50RB#0	19.55	19.05	33.00	PASS
BAND7	10MHz	16QAM	21400	1RB#0	20.84	20.34	33.00	PASS
BAND7	10MHz	16QAM	21400	1RB#24	20.90	20.40	33.00	PASS
BAND7	10MHz	16QAM	21400	1RB#49	20.63	20.13	33.00	PASS
BAND7	10MHz	16QAM	21400	25RB#0	19.53	19.03	33.00	PASS
BAND7	10MHz	16QAM	21400	25RB#12	19.55	19.05	33.00	PASS
BAND7	10MHz	16QAM	21400	25RB#25	19.51	19.01	33.00	PASS
BAND7	10MHz	16QAM	21400	50RB#0	19.54	19.04	33.00	PASS
BAND7	15MHz	QPSK	20825	1RB#0	21.42	20.92	33.00	PASS
BAND7	15MHz	QPSK	20825	1RB#38	21.52	21.02	33.00	PASS
BAND7	15MHz	QPSK	20825	1RB#74	21.45	20.95	33.00	PASS
BAND7	15MHz	QPSK	20825	36RB#0	20.49	19.99	33.00	PASS
BAND7	15MHz	QPSK	20825	36RB#18	20.53	20.03	33.00	PASS
BAND7	15MHz	QPSK	20825	36RB#39	20.49	19.99	33.00	PASS
BAND7	15MHz	QPSK	20825	75RB#0	20.51	20.01	33.00	PASS
BAND7	15MHz	QPSK	21100	1RB#0	21.50	21.00	33.00	PASS
BAND7	15MHz	QPSK	21100	1RB#38	21.53	21.03	33.00	PASS
BAND7	15MHz	QPSK	21100	1RB#74	21.39	20.89	33.00	PASS
BAND7	15MHz	QPSK	21100	36RB#0	20.51	20.01	33.00	PASS
BAND7	15MHz	QPSK	21100	36RB#18	20.56	20.06	33.00	PASS
BAND7	15MHz	QPSK	21100	36RB#39	20.55	20.05	33.00	PASS
BAND7	15MHz	QPSK	21100	75RB#0	20.55	20.05	33.00	PASS
BAND7	15MHz	QPSK	21375	1RB#0	21.49	20.99	33.00	PASS
BAND7	15MHz	QPSK	21375	1RB#38	21.50	21.00	33.00	PASS
BAND7	15MHz	QPSK	21375	1RB#74	21.37	20.87	33.00	PASS
BAND7	15MHz	QPSK	21375	36RB#0	20.60	20.10	33.00	PASS
BAND7	15MHz	QPSK	21375	36RB#18	20.57	20.07	33.00	PASS
BAND7	15MHz	QPSK	21375	36RB#39	20.55	20.05	33.00	PASS
BAND7	15MHz	QPSK	21375	75RB#0	20.57	20.07	33.00	PASS
BAND7	15MHz	16QAM	20825	1RB#0	20.60	20.10	33.00	PASS
BAND7	15MHz	16QAM	20825	1RB#38	20.72	20.22	33.00	PASS
BAND7	15MHz	16QAM	20825	1RB#74	20.66	20.16	33.00	PASS
BAND7	15MHz	16QAM	20825	36RB#0	19.50	19.00	33.00	PASS
BAND7	15MHz	16QAM	20825	36RB#18	19.54	19.04	33.00	PASS
BAND7	15MHz	16QAM	20825	36RB#39	19.49	18.99	33.00	PASS
BAND7	15MHz	16QAM	20825	75RB#0	19.47	18.97	33.00	PASS
BAND7	15MHz	16QAM	21100	1RB#0	20.66	20.16	33.00	PASS
BAND7	15MHz	16QAM	21100	1RB#38	20.68	20.18	33.00	PASS
BAND7	15MHz	16QAM	21100	1RB#74	20.55	20.05	33.00	PASS
BAND7	15MHz	16QAM	21100	36RB#0	19.52	19.02	33.00	PASS

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



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

Report No.: SZEM180500457101

Page: 6 of 48

BAND7	15MHz	16QAM	21100	36RB#18	19.54	19.04	33.00	PASS
BAND7	15MHz	16QAM	21100	36RB#39	19.53	19.03	33.00	PASS
BAND7	15MHz	16QAM	21100	75RB#0	19.52	19.02	33.00	PASS
BAND7	15MHz	16QAM	21375	1RB#0	20.72	20.22	33.00	PASS
BAND7	15MHz	16QAM	21375	1RB#38	20.66	20.16	33.00	PASS
BAND7	15MHz	16QAM	21375	1RB#74	20.58	20.08	33.00	PASS
BAND7	15MHz	16QAM	21375	36RB#0	19.60	19.10	33.00	PASS
BAND7	15MHz	16QAM	21375	36RB#18	19.56	19.06	33.00	PASS
BAND7	15MHz	16QAM	21375	36RB#39	19.54	19.04	33.00	PASS
BAND7	15MHz	16QAM	21375	75RB#0	19.55	19.05	33.00	PASS
BAND7	20MHz	QPSK	20850	1RB#0	21.28	20.78	33.00	PASS
BAND7	20MHz	QPSK	20850	1RB#49	21.61	21.11	33.00	PASS
BAND7	20MHz	QPSK	20850	1RB#99	21.31	20.81	33.00	PASS
BAND7	20MHz	QPSK	20850	50RB#0	20.53	20.03	33.00	PASS
BAND7	20MHz	QPSK	20850	50RB#25	20.57	20.07	33.00	PASS
BAND7	20MHz	QPSK	20850	50RB#50	20.52	20.02	33.00	PASS
BAND7	20MHz	QPSK	20850	100RB#0	20.51	20.01	33.00	PASS
BAND7	20MHz	QPSK	21100	1RB#0	21.36	20.86	33.00	PASS
BAND7	20MHz	QPSK	21100	1RB#49	21.61	21.11	33.00	PASS
BAND7	20MHz	QPSK	21100	1RB#99	21.26	20.76	33.00	PASS
BAND7	20MHz	QPSK	21100	50RB#0	20.47	19.97	33.00	PASS
BAND7	20MHz	QPSK	21100	50RB#25	20.60	20.10	33.00	PASS
BAND7	20MHz	QPSK	21100	50RB#50	20.59	20.09	33.00	PASS
BAND7	20MHz	QPSK	21100	100RB#0	20.52	20.02	33.00	PASS
BAND7	20MHz	QPSK	21350	1RB#0	21.35	20.85	33.00	PASS
BAND7	20MHz	QPSK	21350	1RB#49	21.59	21.09	33.00	PASS
BAND7	20MHz	QPSK	21350	1RB#99	21.18	20.68	33.00	PASS
BAND7	20MHz	QPSK	21350	50RB#0	20.69	20.19	33.00	PASS
BAND7	20MHz	QPSK	21350	50RB#25	20.61	20.11	33.00	PASS
BAND7	20MHz	QPSK	21350	50RB#50	20.60	20.10	33.00	PASS
BAND7	20MHz	QPSK	21350	100RB#0	20.63	20.13	33.00	PASS
BAND7	20MHz	16QAM	20850	1RB#0	20.45	19.95	33.00	PASS
BAND7	20MHz	16QAM	20850	1RB#49	20.85	20.35	33.00	PASS
BAND7	20MHz	16QAM	20850	1RB#99	20.44	19.94	33.00	PASS
BAND7	20MHz	16QAM	20850	50RB#0	19.48	18.98	33.00	PASS
BAND7	20MHz	16QAM	20850	50RB#25	19.54	19.04	33.00	PASS
BAND7	20MHz	16QAM	20850	50RB#50	19.48	18.98	33.00	PASS
BAND7	20MHz	16QAM	20850	100RB#0	19.47	18.97	33.00	PASS
BAND7	20MHz	16QAM	21100	1RB#0	20.49	19.99	33.00	PASS
BAND7	20MHz	16QAM	21100	1RB#49	20.86	20.36	33.00	PASS
BAND7	20MHz	16QAM	21100	1RB#99	20.43	19.93	33.00	PASS

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



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

Report No.: SZEM180500457101

Page: 7 of 48

BAND7	20MHz	16QAM	21100	50RB#0	19.46	18.96	33.00	PASS
BAND7	20MHz	16QAM	21100	50RB#25	19.56	19.06	33.00	PASS
BAND7	20MHz	16QAM	21100	50RB#50	19.54	19.04	33.00	PASS
BAND7	20MHz	16QAM	21100	100RB#0	19.47	18.97	33.00	PASS
BAND7	20MHz	16QAM	21350	1RB#0	20.59	20.09	33.00	PASS
BAND7	20MHz	16QAM	21350	1RB#49	20.80	20.30	33.00	PASS
BAND7	20MHz	16QAM	21350	1RB#99	20.42	19.92	33.00	PASS
BAND7	20MHz	16QAM	21350	50RB#0	19.62	19.12	33.00	PASS
BAND7	20MHz	16QAM	21350	50RB#25	19.57	19.07	33.00	PASS
BAND7	20MHz	16QAM	21350	50RB#50	19.56	19.06	33.00	PASS
BAND7	20MHz	16QAM	21350	100RB#0	19.61	19.11	33.00	PASS

Note:

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

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

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

b: SGP=Signal Generator Level

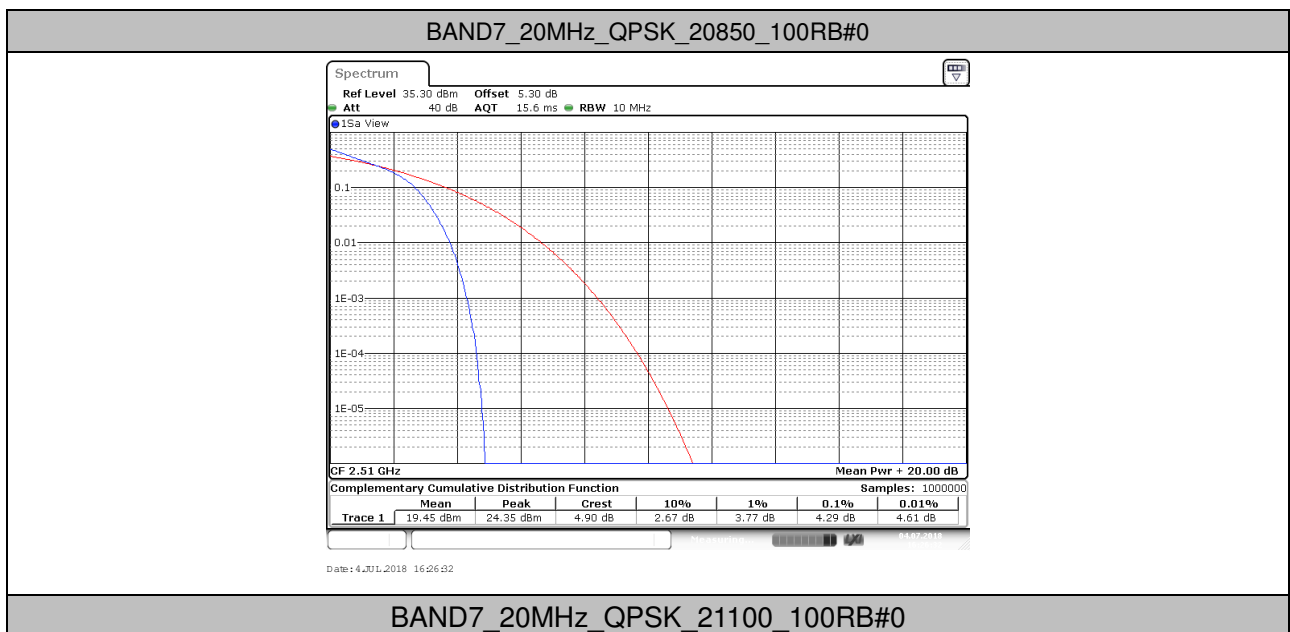


2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
BAND7	20MHz	QPSK	20850	100RB#0	4.29	13	PASS
BAND7	20MHz	QPSK	21100	100RB#0	4.14	13	PASS
BAND7	20MHz	QPSK	21350	100RB#0	4.32	13	PASS
BAND7	20MHz	16QAM	20850	100RB#0	5.88	13	PASS
BAND7	20MHz	16QAM	21100	100RB#0	5.80	13	PASS
BAND7	20MHz	16QAM	21350	100RB#0	5.91	13	PASS

2.2. Test Plots

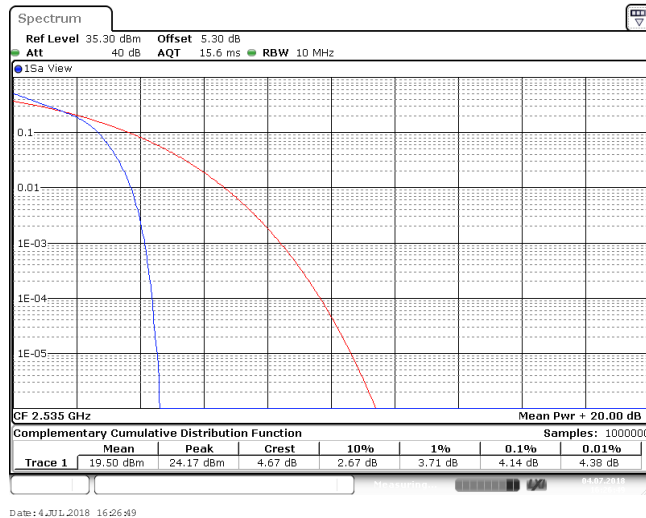




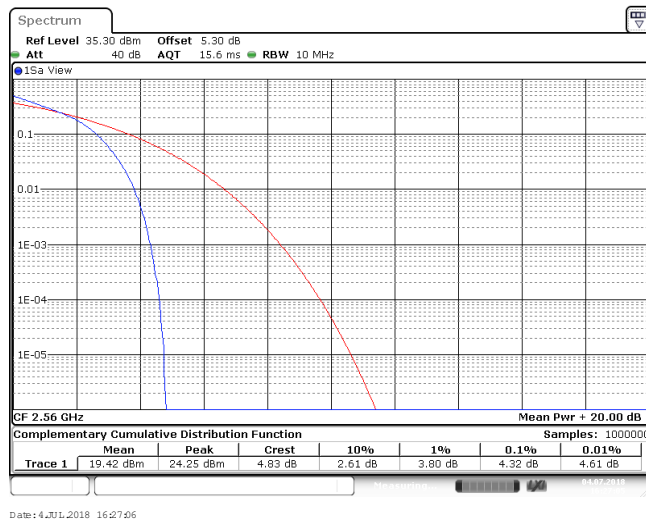
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

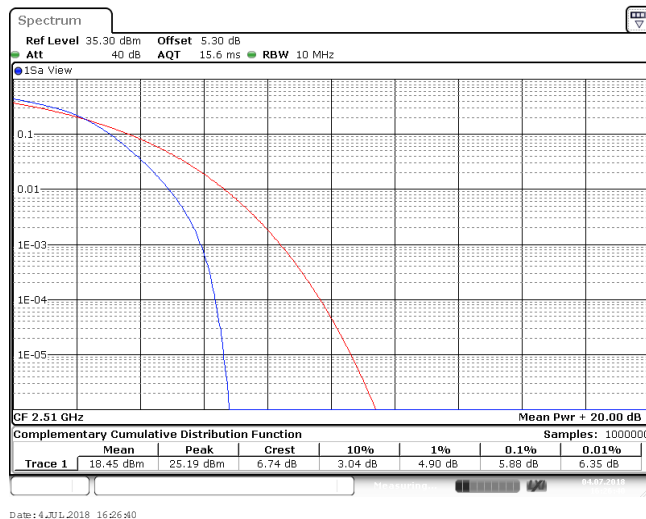
Page: 9 of 48



BAND7_20MHz_QPSK_21350_100RB#0



BAND7_20MHz_16QAM_20850_100RB#0



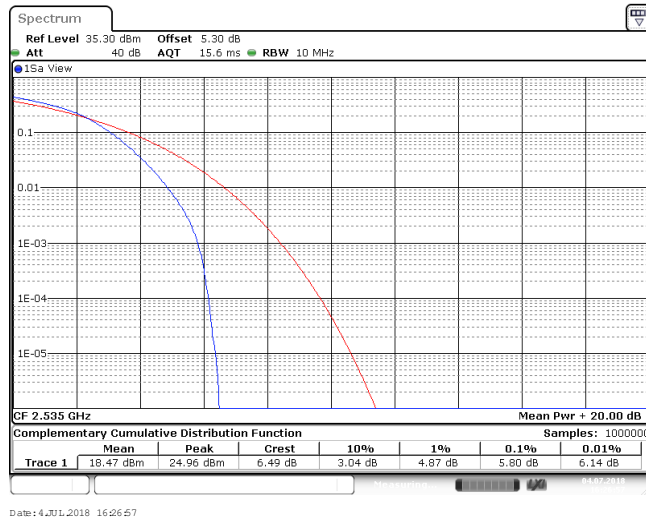
BAND7_20MHz_16QAM_21100_100RB#0



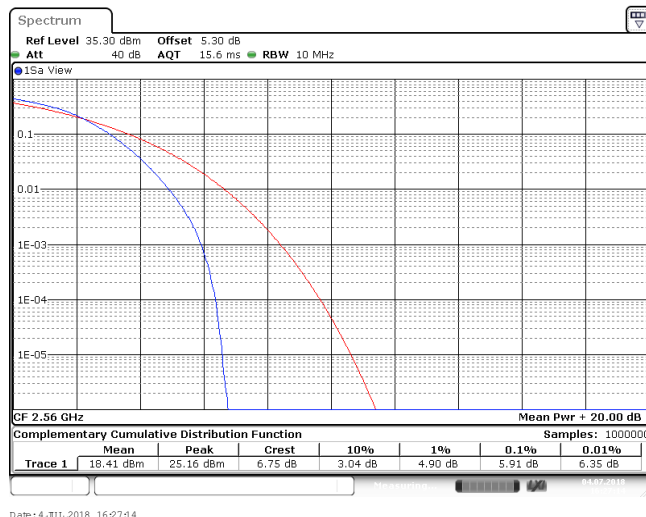
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

Page: 10 of 48



BAND7_20MHz_16QAM_21350_100RB#0

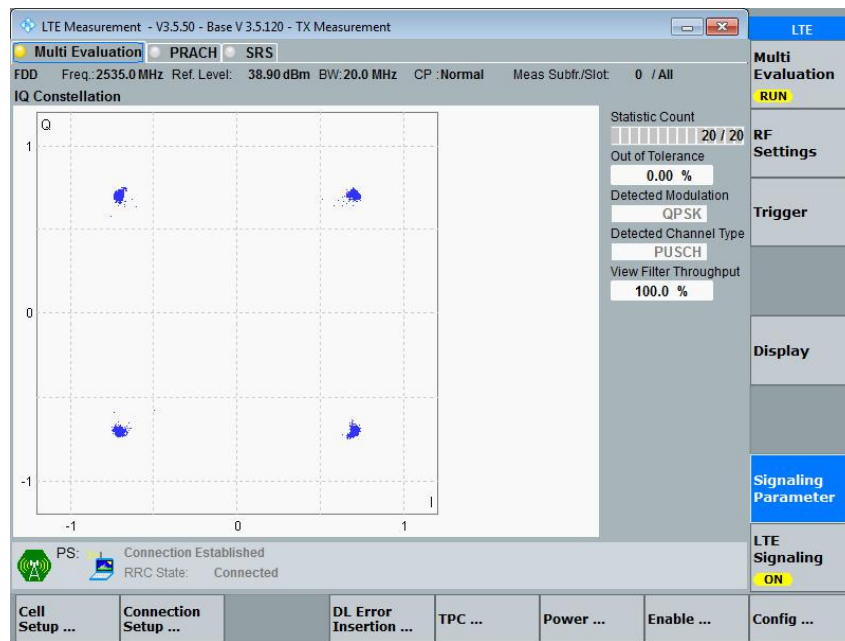


3. Modulation Characteristics

3.1. Test BAND = LTE BAND7

3.1.1. Test Mode = LTE /TM1 20MHz

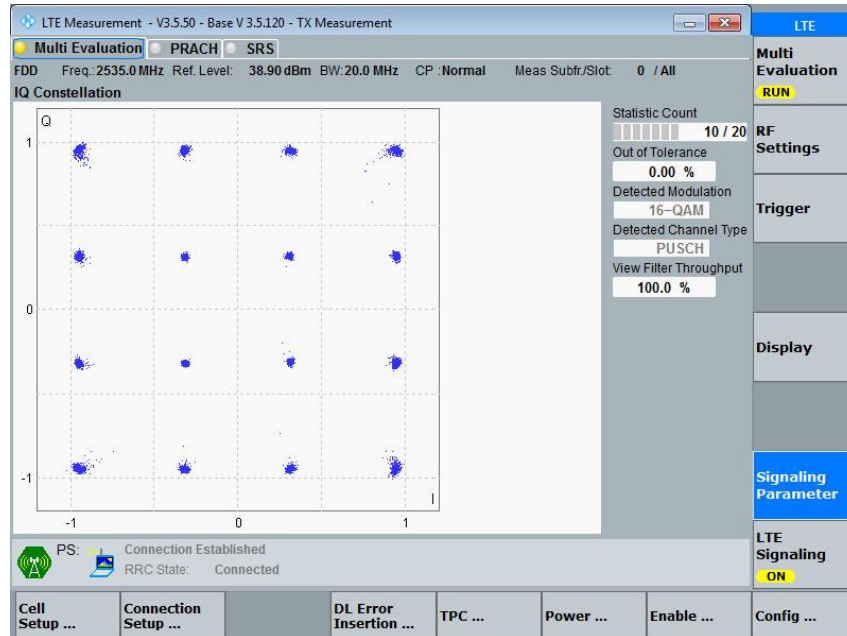
3.1.1.1. Test Channel = MCH





3.1.2. Test Mode = LTE /TM2 20MHz

3.1.2.1. Test Channel = MCH





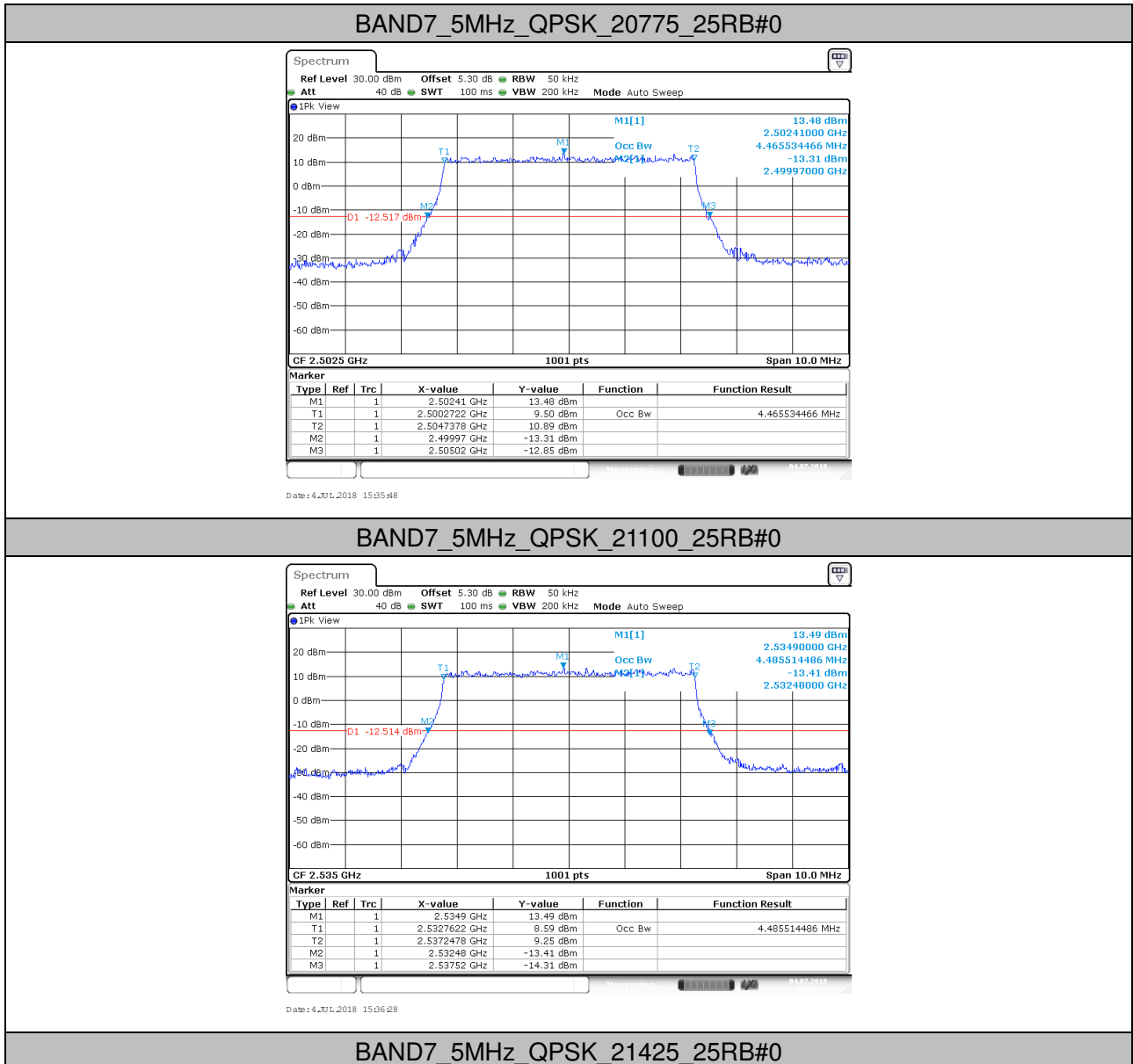
4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
BAND7	5MHz	QPSK	20775	25RB#0	4.466	5.050	PASS
BAND7	5MHz	QPSK	21100	25RB#0	4.486	5.040	PASS
BAND7	5MHz	QPSK	21425	25RB#0	4.486	5.060	PASS
BAND7	5MHz	16QAM	20775	25RB#0	4.486	5.080	PASS
BAND7	5MHz	16QAM	21100	25RB#0	4.486	5.070	PASS
BAND7	5MHz	16QAM	21425	25RB#0	4.496	5.070	PASS
BAND7	10MHz	QPSK	20800	50RB#0	8.931	9.860	PASS
BAND7	10MHz	QPSK	21100	50RB#0	8.931	9.900	PASS
BAND7	10MHz	QPSK	21400	50RB#0	8.931	9.880	PASS
BAND7	10MHz	16QAM	20800	50RB#0	8.931	9.940	PASS
BAND7	10MHz	16QAM	21100	50RB#0	8.931	9.940	PASS
BAND7	10MHz	16QAM	21400	50RB#0	8.931	9.900	PASS
BAND7	15MHz	QPSK	20825	75RB#0	13.457	15.000	PASS
BAND7	15MHz	QPSK	21100	75RB#0	13.457	14.970	PASS
BAND7	15MHz	QPSK	21375	75RB#0	13.487	15.090	PASS
BAND7	15MHz	16QAM	20825	75RB#0	13.457	15.090	PASS
BAND7	15MHz	16QAM	21100	75RB#0	13.457	14.970	PASS
BAND7	15MHz	16QAM	21375	75RB#0	13.487	15.120	PASS
BAND7	20MHz	QPSK	20850	100RB#0	17.942	19.720	PASS
BAND7	20MHz	QPSK	21100	100RB#0	17.902	19.680	PASS
BAND7	20MHz	QPSK	21350	100RB#0	17.942	19.800	PASS
BAND7	20MHz	16QAM	20850	100RB#0	17.942	19.600	PASS
BAND7	20MHz	16QAM	21100	100RB#0	17.862	19.640	PASS
BAND7	20MHz	16QAM	21350	100RB#0	17.942	19.720	PASS



4.2. Test Plots

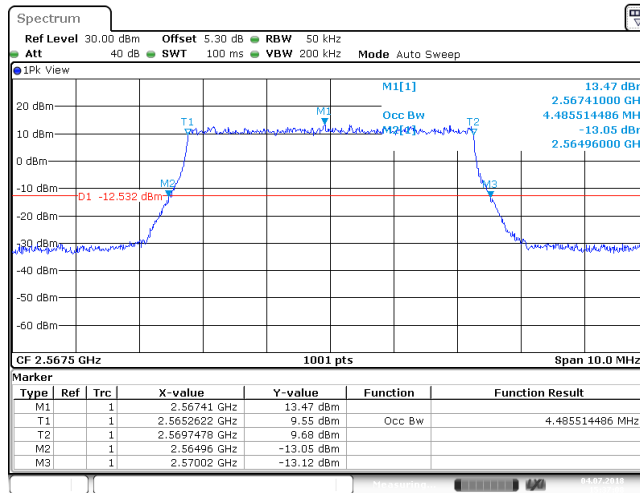




SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

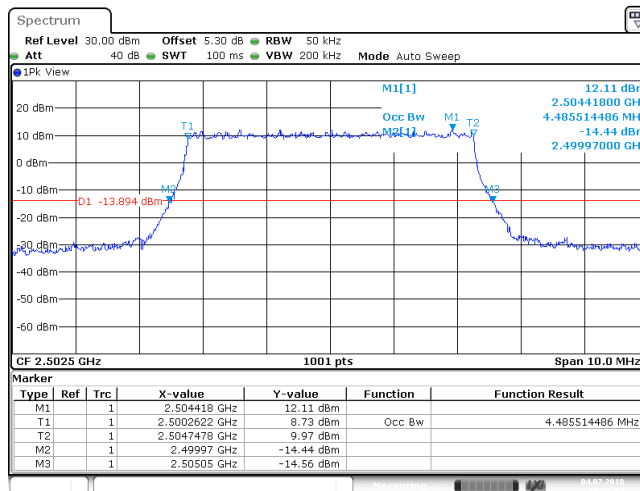
Report No.: SZEM180500457101

Page: 15 of 48



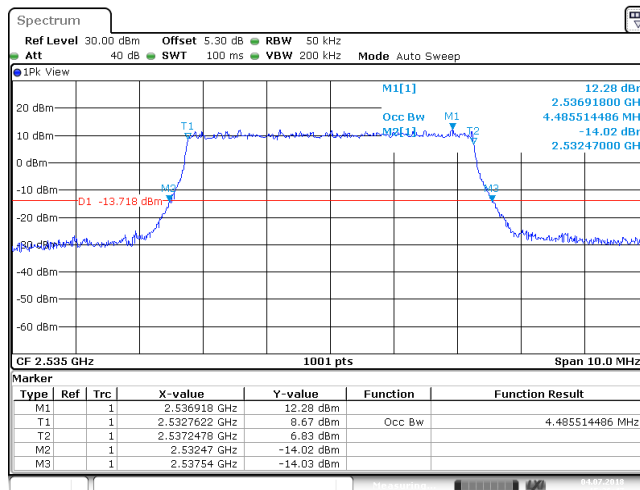
Date: 4 JUL 2018 15:37:08

BAND7_5MHz_16QAM_20775_25RB#0



Date: 4 JUL 2018 15:36:08

BAND7_5MHz_16QAM_21100_25RB#0



Date: 4 JUL 2018 15:36:48

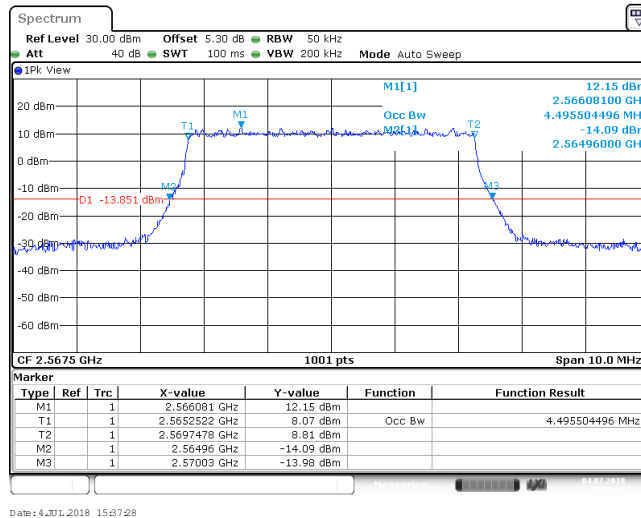
BAND7_5MHz_16QAM_21425_25RB#0



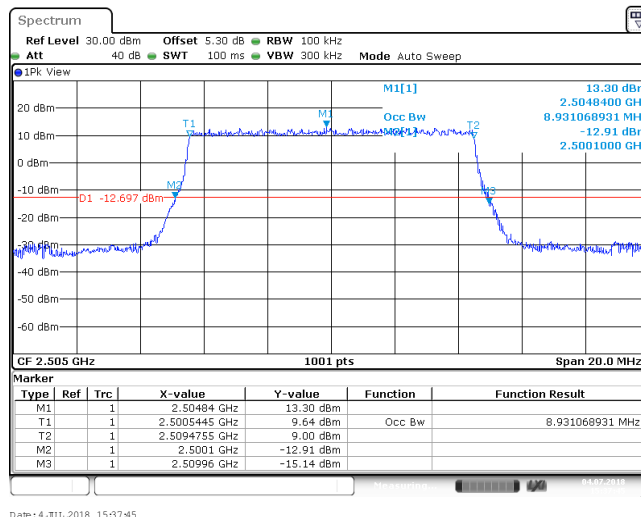
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

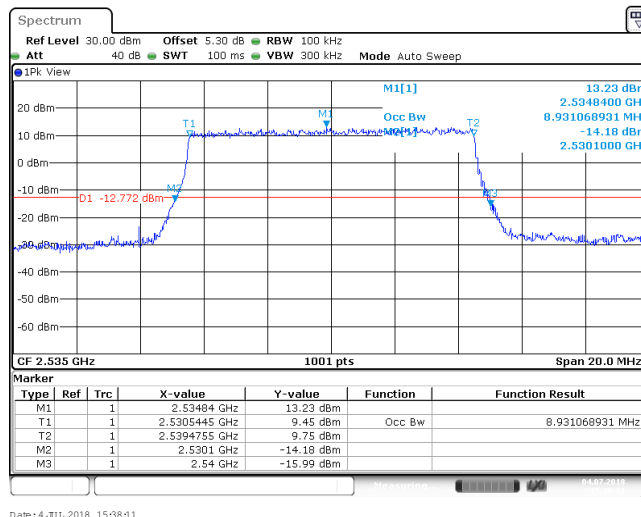
Page: 16 of 48



BAND7_10MHz_QPSK_20800_50RB#0



BAND7_10MHz_QPSK_21100_50RB#0



BAND7_10MHz_QPSK_21400_50RB#0

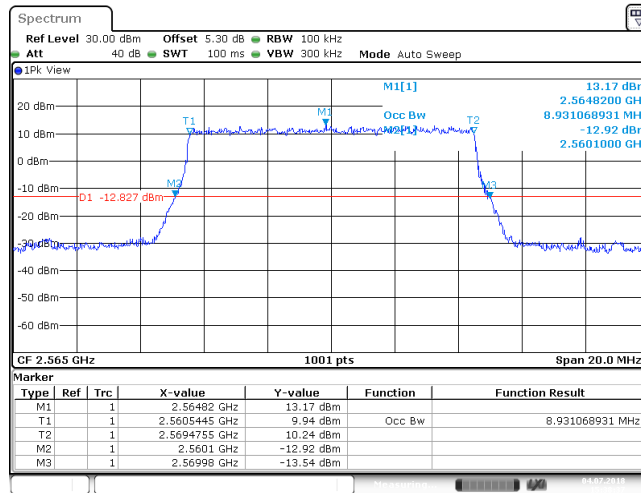
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



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

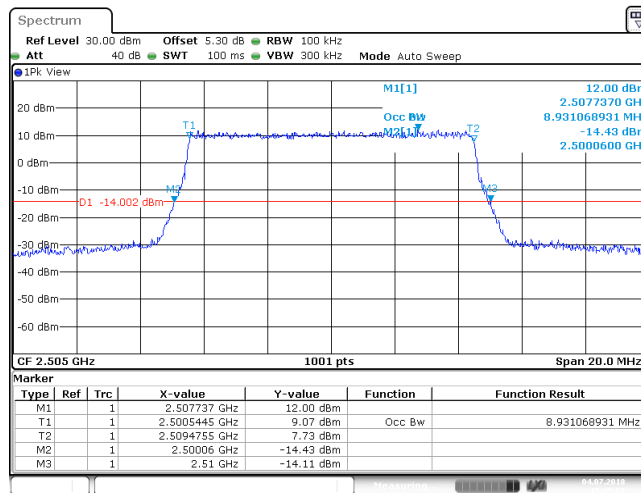
Report No.: SZEM180500457101

Page: 17 of 48



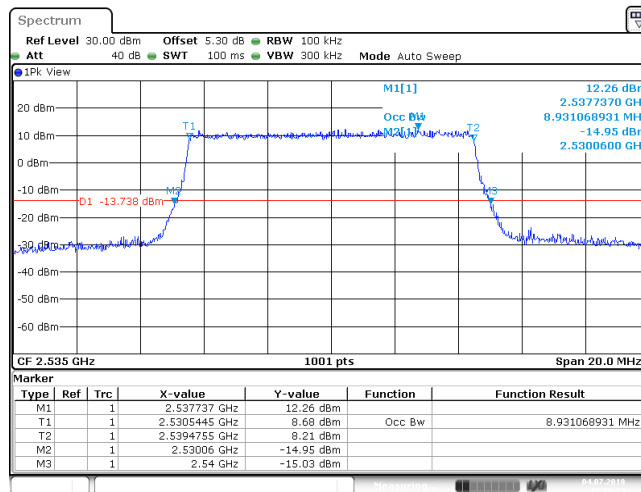
Date: 4 JUL 2018 15:38:37

BAND7_10MHz_16QAM_20800_50RB#0



Date: 4 JUL 2018 15:37:58

BAND7_10MHz_16QAM_21100_50RB#0



Date: 4 JUL 2018 15:38:24

BAND7_10MHz_16QAM_21400_50RB#0

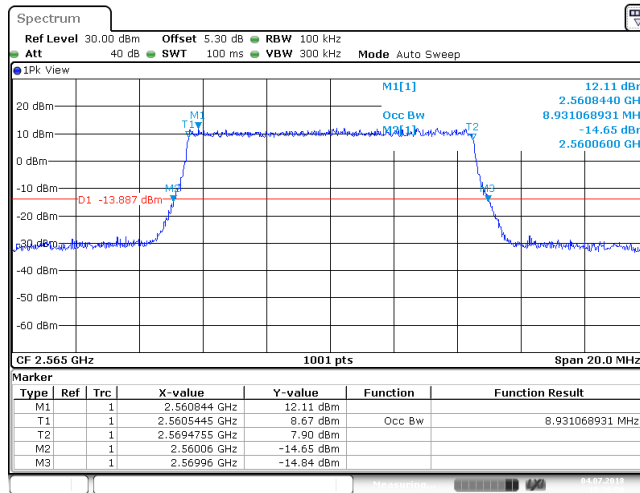
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



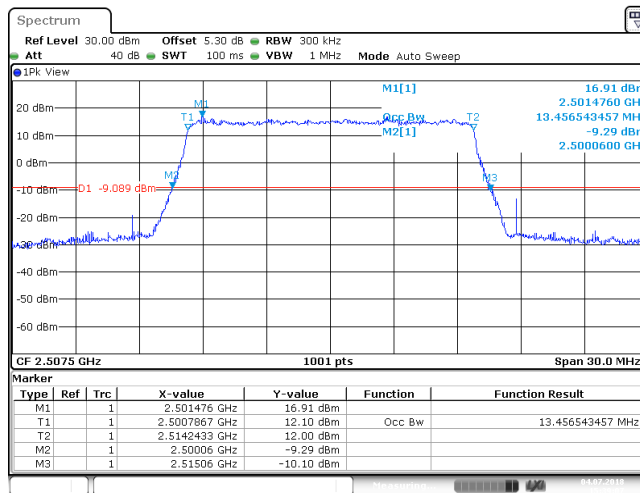
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

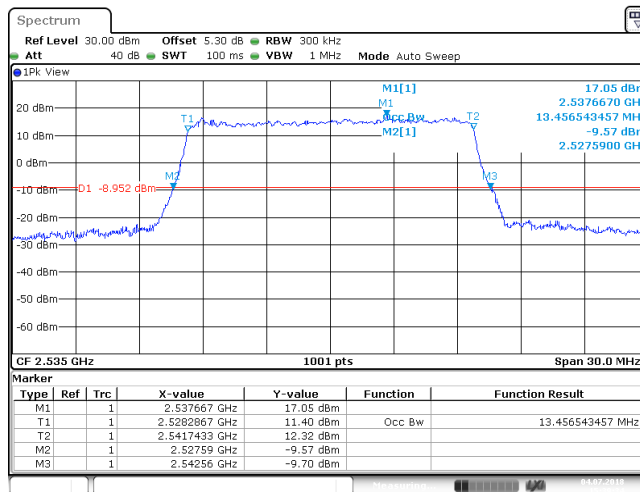
Page: 18 of 48



BAND7_15MHz_QPSK_20825_75RB#0



BAND7_15MHz_QPSK_21100_75RB#0



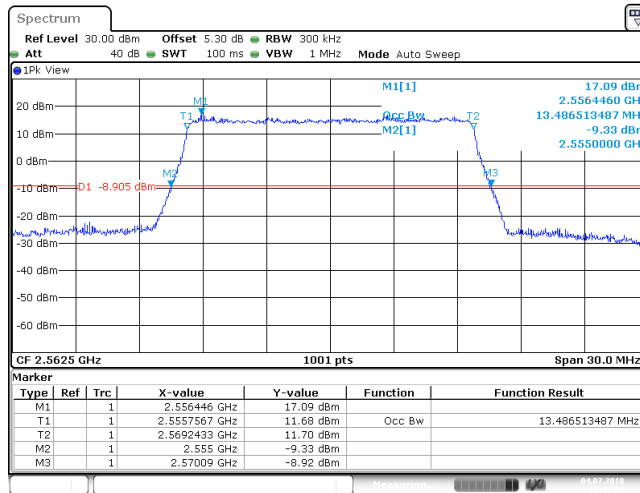
BAND7_15MHz_QPSK_21375_75RB#0



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

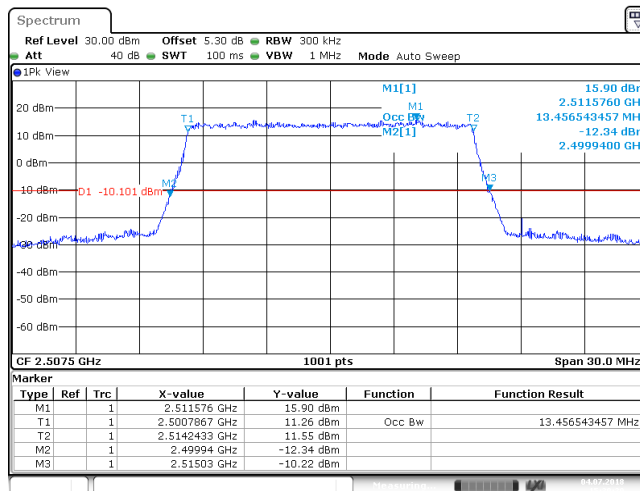
Report No.: SZEM180500457101

Page: 19 of 48



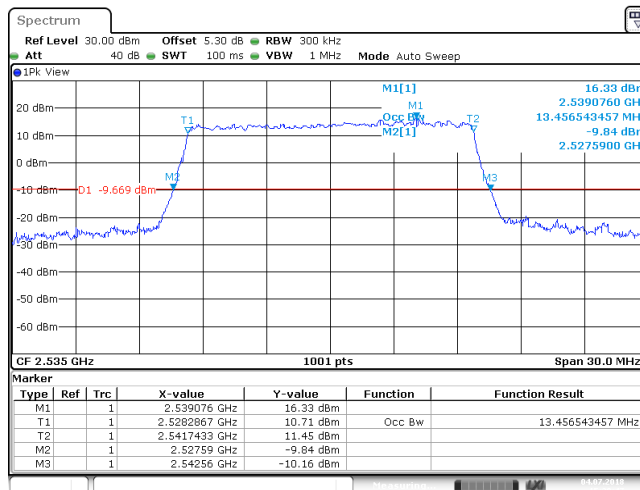
Date: 4 JUL 2018 15:40:00

BAND7_15MHz_16QAM_20825_75RB#0



Date: 4 JUL 2018 15:39:21

BAND7_15MHz_16QAM_21100_75RB#0



Date: 4 JUL 2018 15:39:47

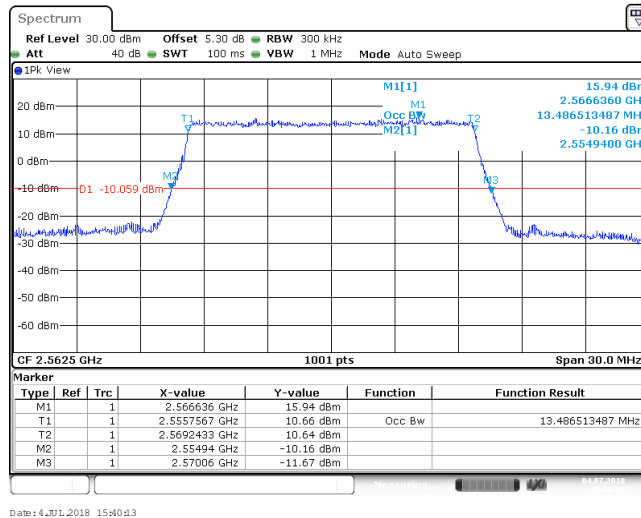
BAND7_15MHz_16QAM_21375_75RB#0



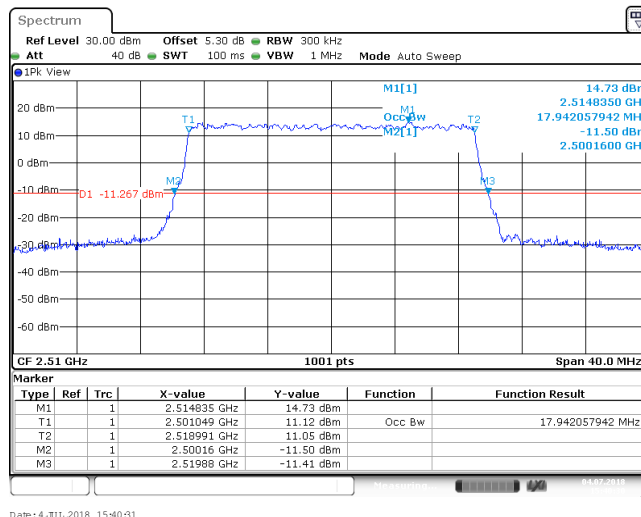
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

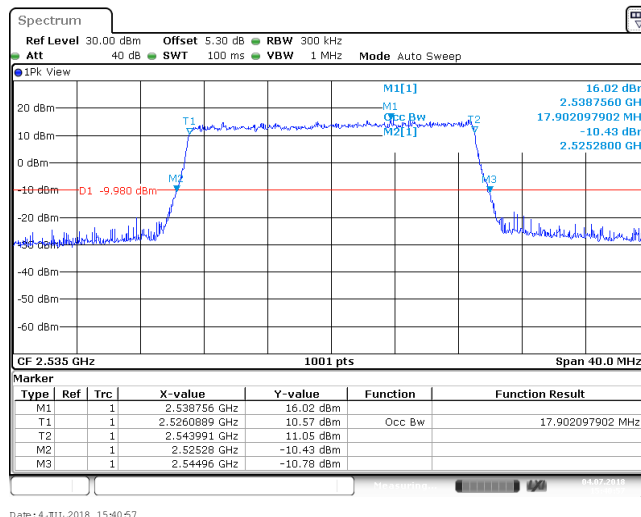
Page: 20 of 48



BAND7_20MHz_QPSK_20850_100RB#0



BAND7_20MHz_QPSK_21100_100RB#0



BAND7_20MHz_QPSK_21350_100RB#0

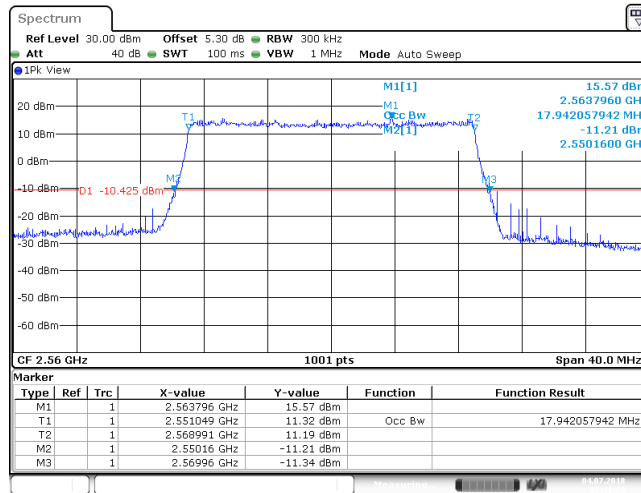
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



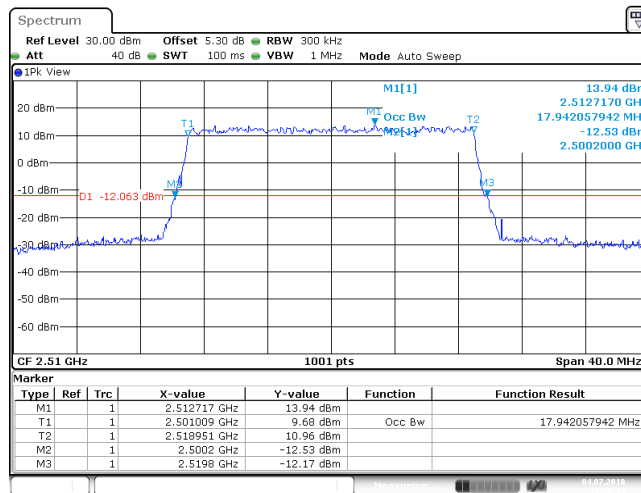
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

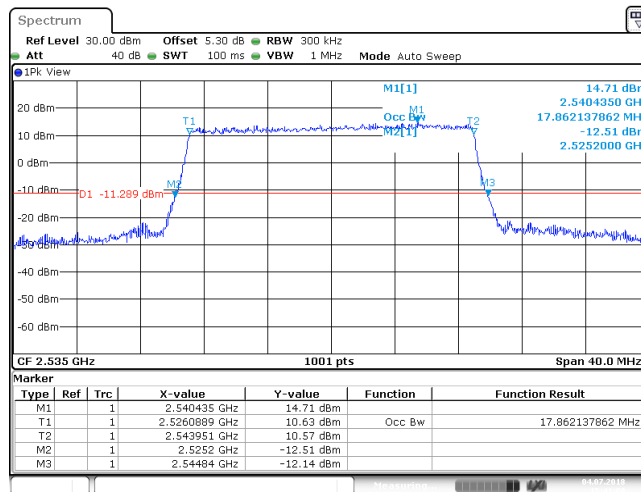
Page: 21 of 48



BAND7_20MHz_16QAM_20850_100RB#0



BAND7_20MHz_16QAM_21100_100RB#0



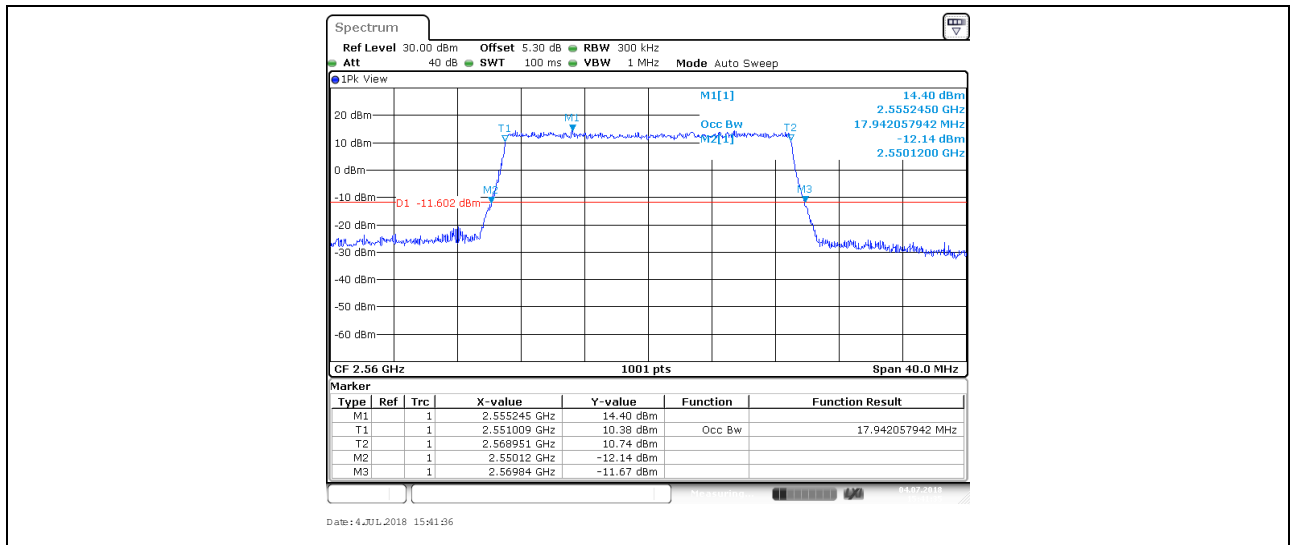
BAND7_20MHz_16QAM_21350_100RB#0



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

Report No.: SZEM180500457101

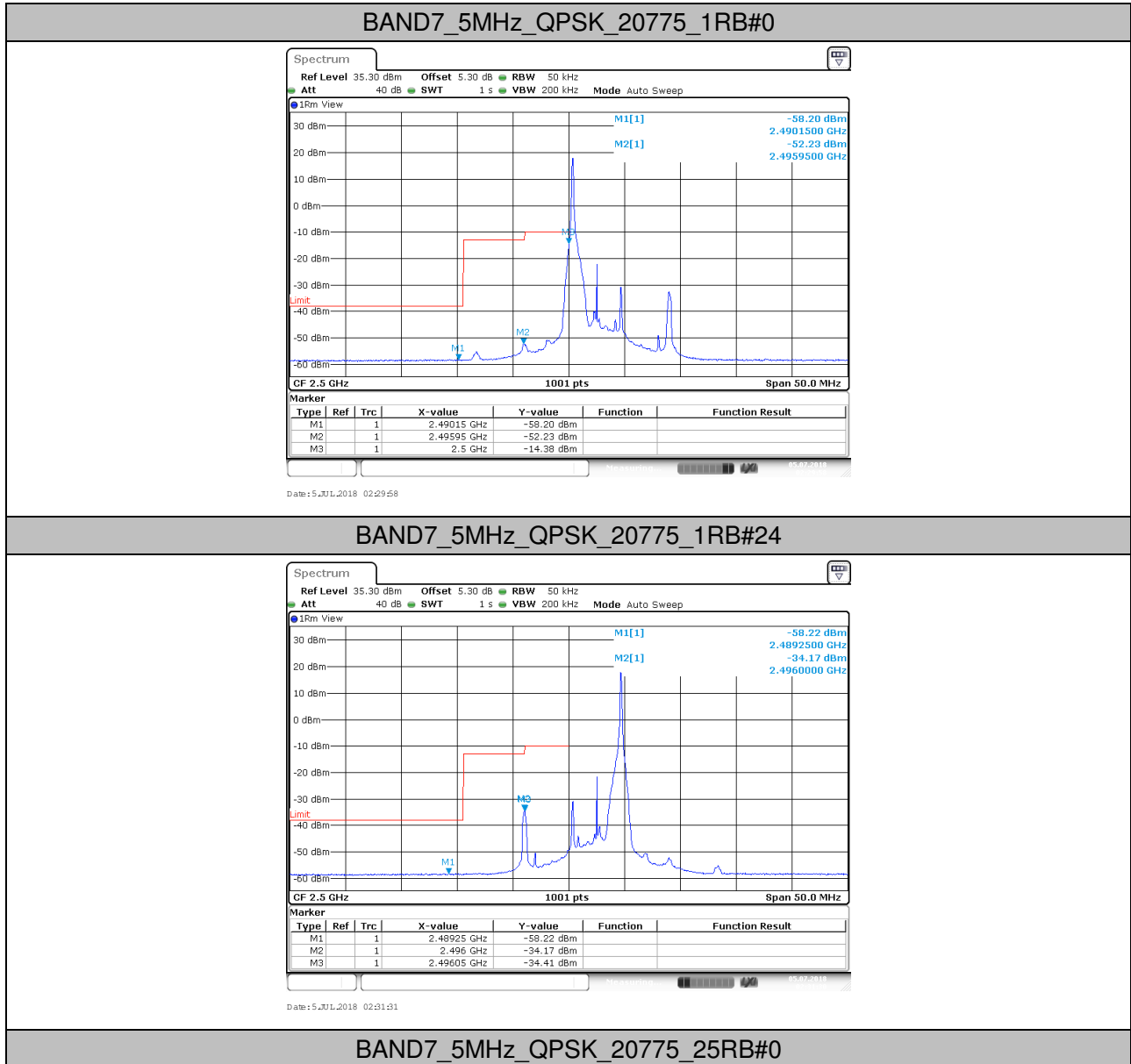
Page: 22 of 48





5. Band Edge Compliance

5.1. Test Plots

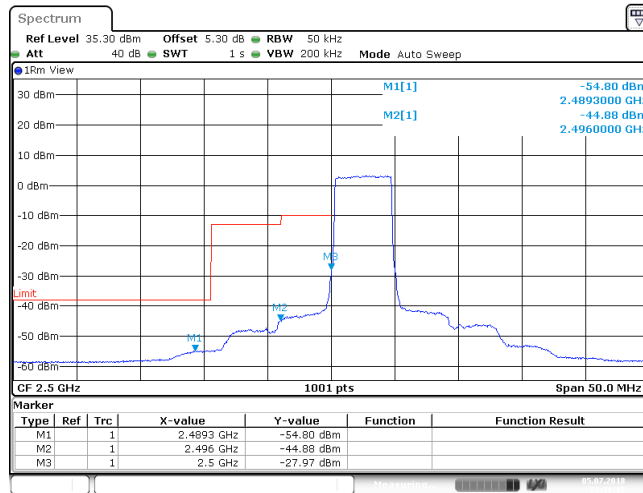




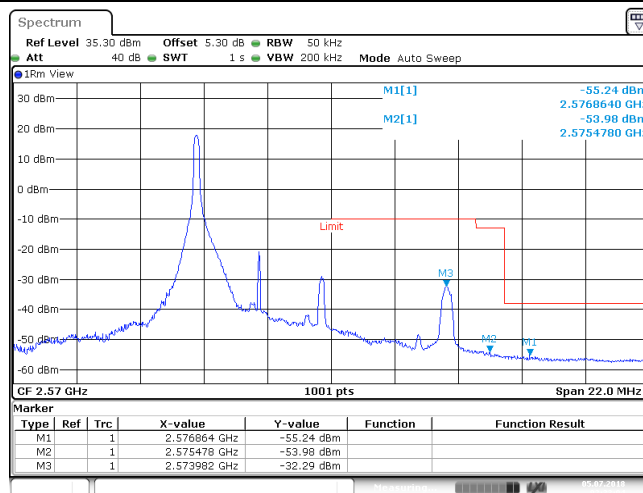
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

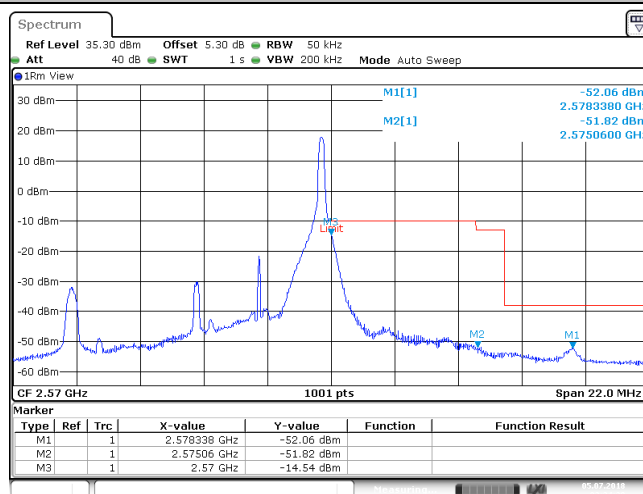
Page: 24 of 48



BAND7_5MHz_QPSK_21425_1RB#0



BAND7_5MHz_QPSK_21425_1RB#24



BAND7_5MHz_QPSK_21425_25RB#0

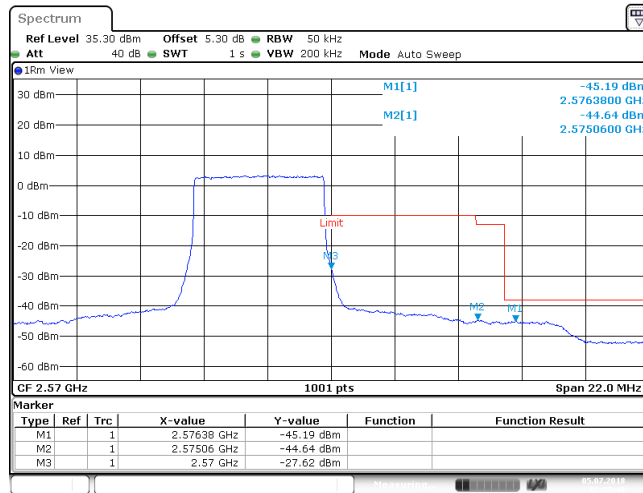
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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



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

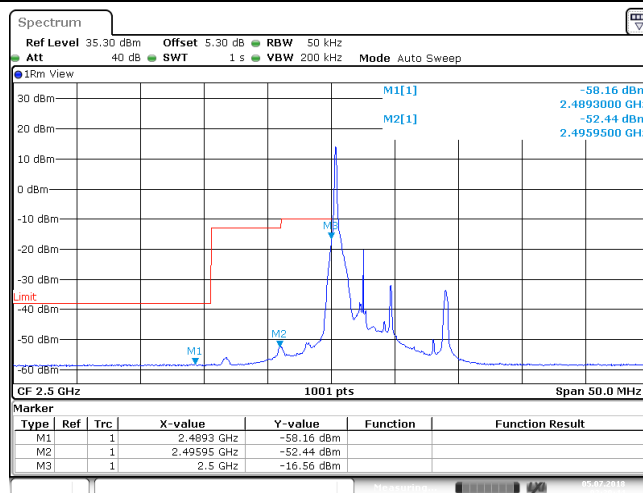
Report No.: SZEM180500457101

Page: 25 of 48



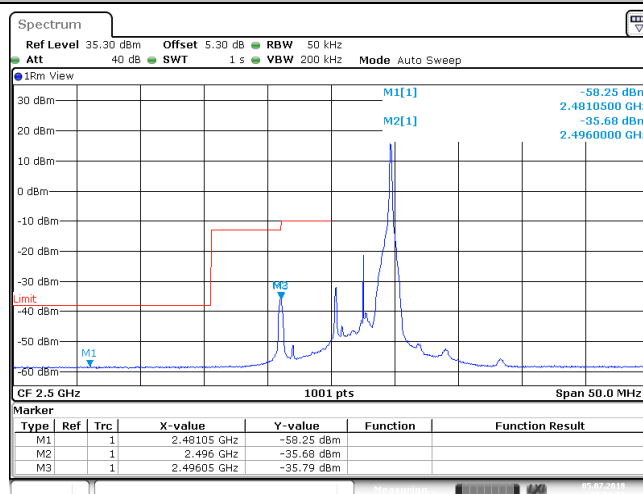
Date: 5/31/2018 02:37:49

BAND7_5MHz_16QAM_20775_1RB#0



Date: 5/31/2018 02:30:44

BAND7_5MHz_16QAM_20775_1RB#24



Date: 5/31/2018 02:32:17

BAND7_5MHz_16QAM_20775_25RB#0

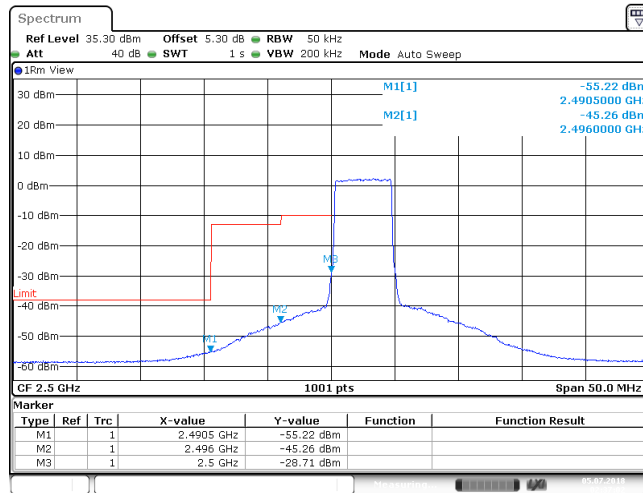
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



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

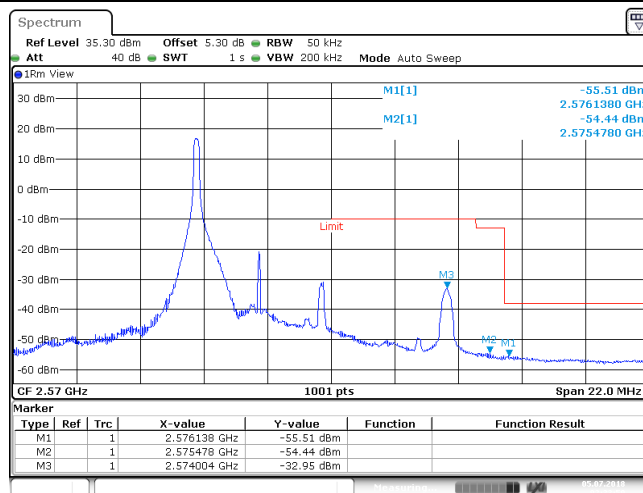
Report No.: SZEM180500457101

Page: 26 of 48



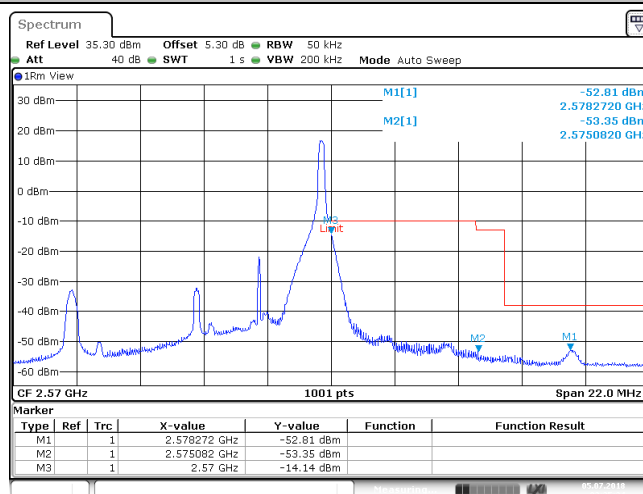
Date: 5/31/2018 02:37:02

BAND7_5MHz_16QAM_21425_1RB#0



Date: 5/31/2018 02:35:51

BAND7_5MHz_16QAM_21425_1RB#24



Date: 5/31/2018 02:35:24

BAND7_5MHz_16QAM_21425_25RB#0

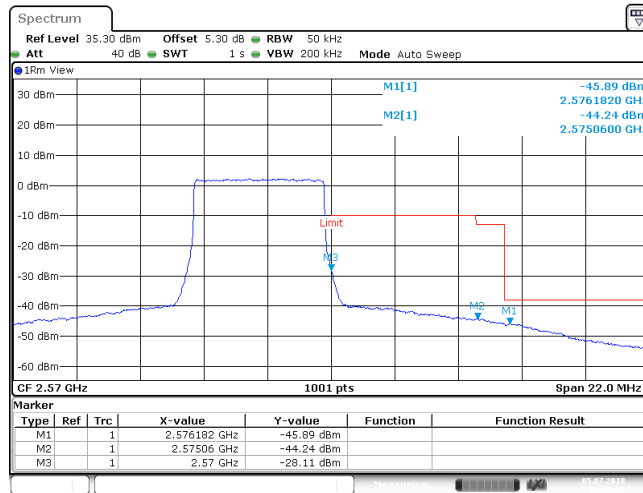
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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



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

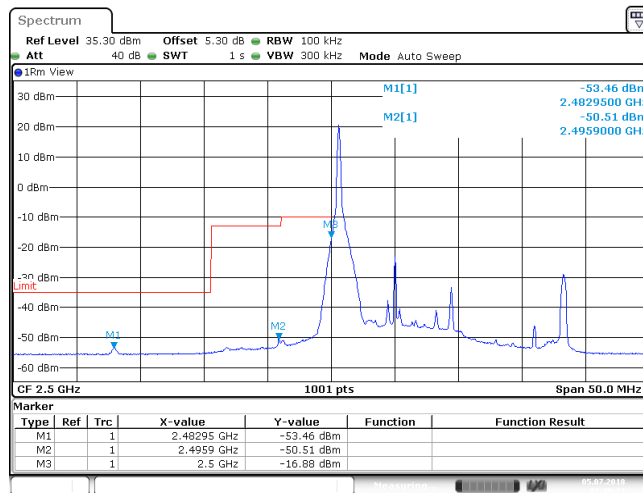
Report No.: SZEM180500457101

Page: 27 of 48



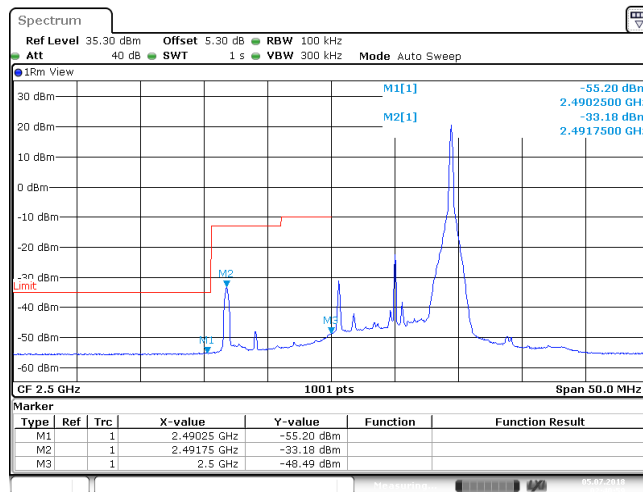
Date: 5/31/2018 02:38:35

BAND7_10MHz_QPSK_20800_1RB#0



Date: 5/31/2018 02:39:27

BAND7_10MHz_QPSK_20800_1RB#49



Date: 5/31/2018 02:41:00

BAND7_10MHz_QPSK_20800_50RB#0

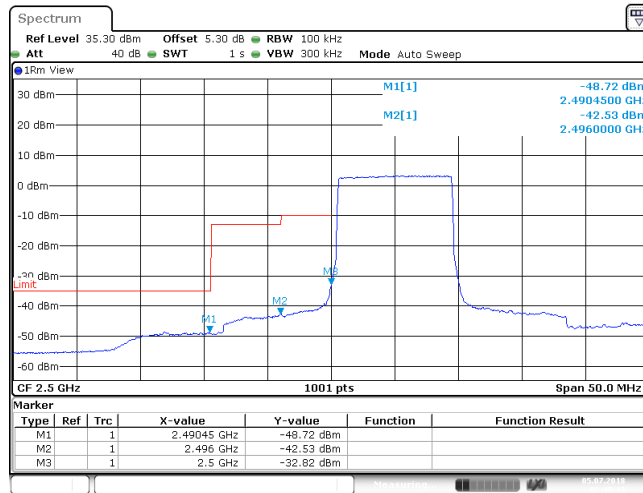
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



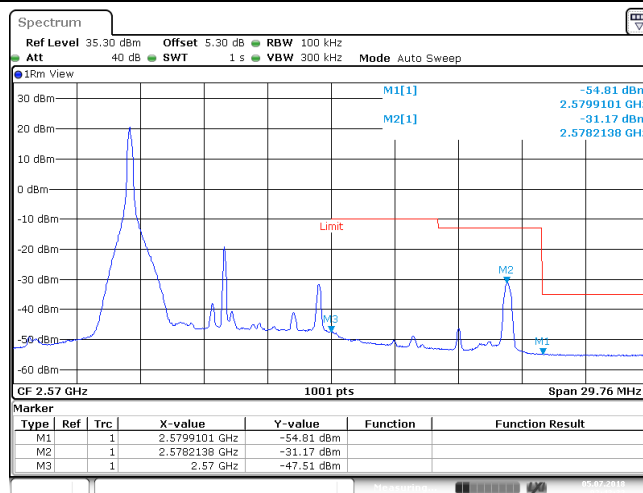
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

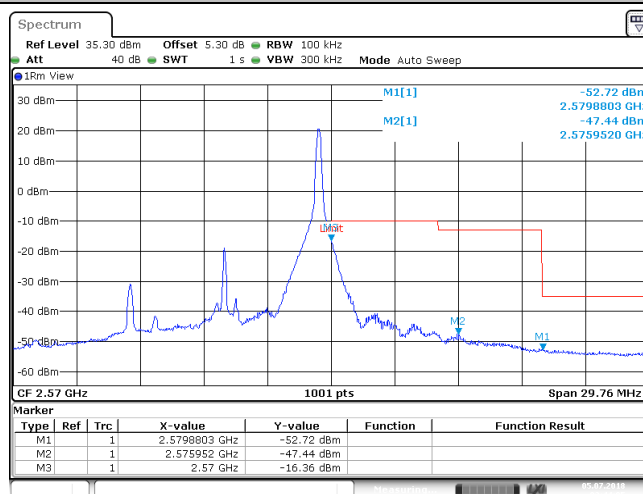
Page: 28 of 48



BAND7_10MHz_QPSK_21400_1RB#0



BAND7_10MHz_QPSK_21400_1RB#49



BAND7_10MHz_QPSK_21400_50RB#0

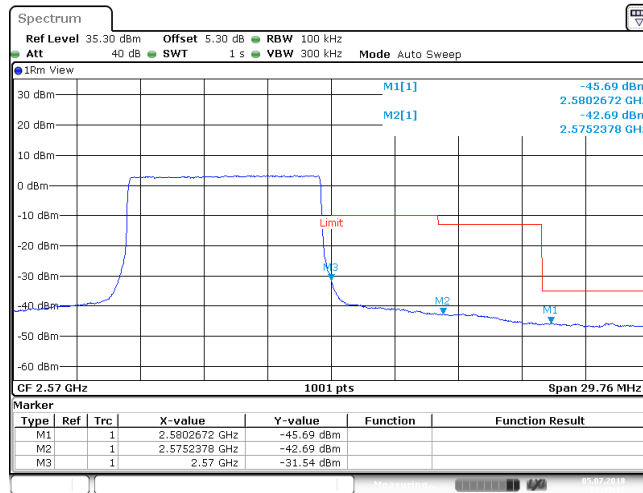
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



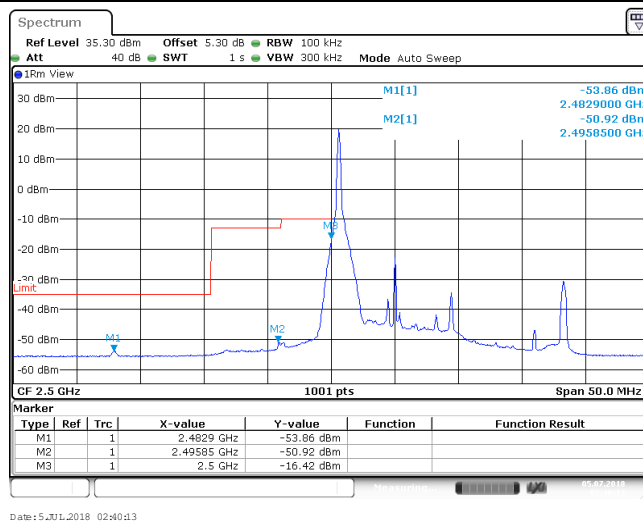
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

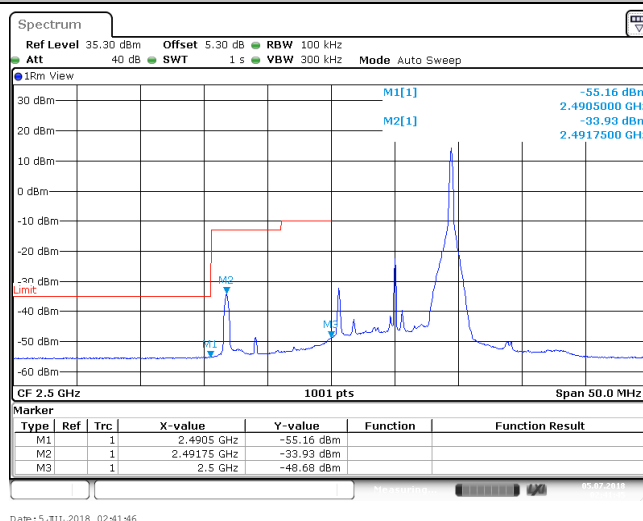
Page: 29 of 48



BAND7_10MHz_16QAM_20800_1RB#0



BAND7_10MHz_16QAM_20800_1RB#49



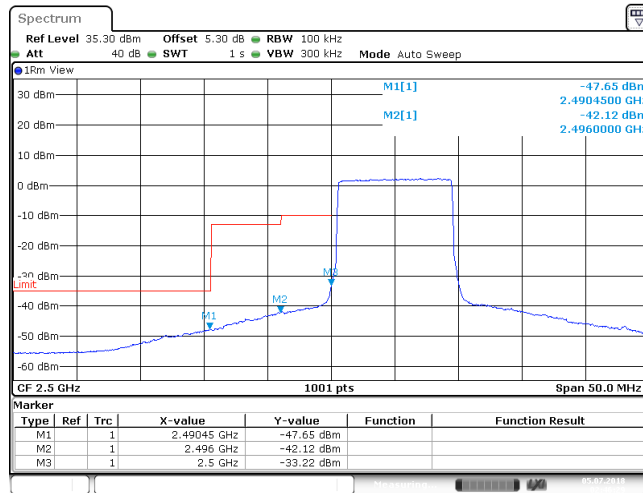
BAND7_10MHz_16QAM_20800_50RB#0



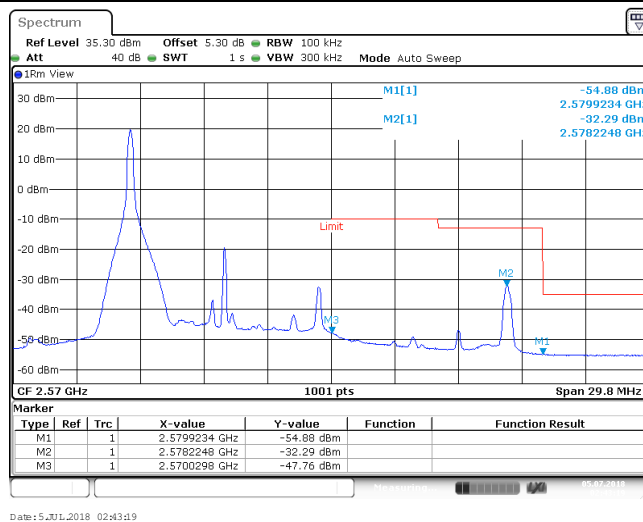
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

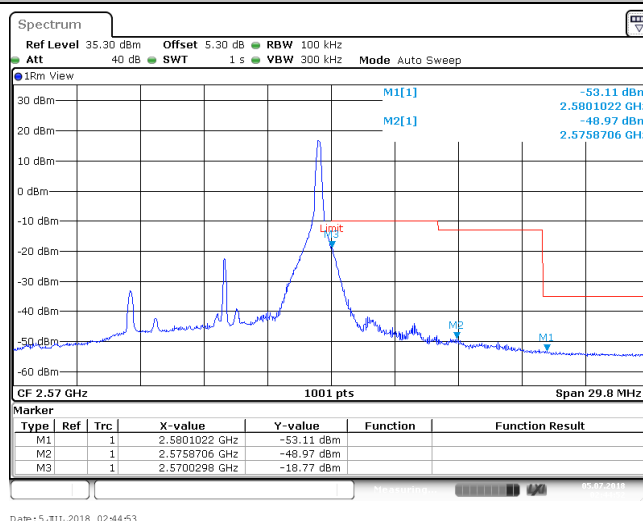
Page: 30 of 48



BAND7_10MHz_16QAM_21400_1RB#0



BAND7_10MHz_16QAM_21400_1RB#49



BAND7_10MHz_16QAM_21400_50RB#0

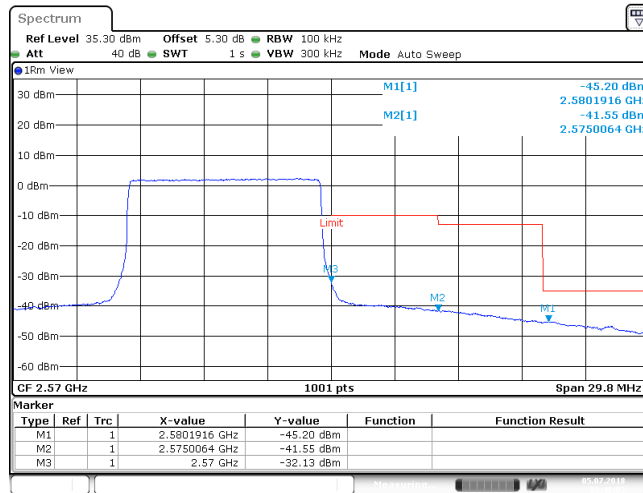
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



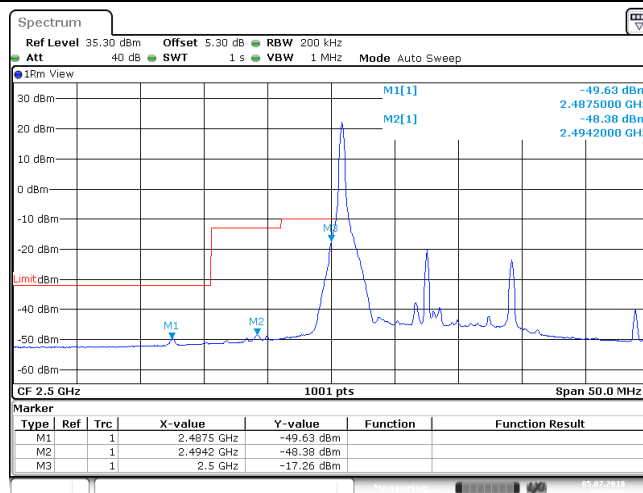
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

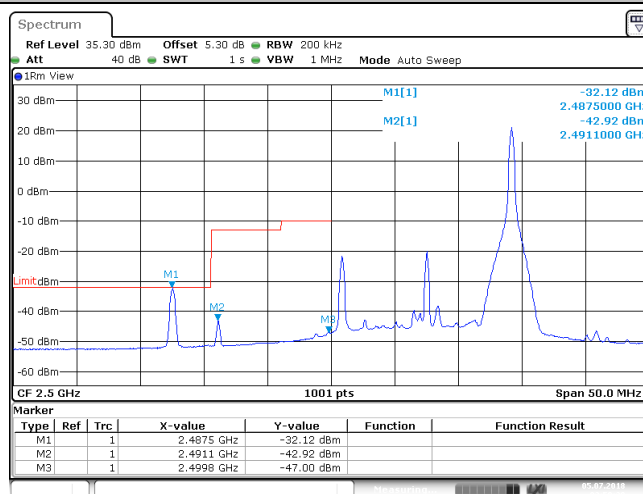
Page: 31 of 48



BAND7_15MHz_QPSK_20825_1RB#0



BAND7_15MHz_QPSK_20825_1RB#74



BAND7_15MHz_QPSK_20825_75RB#0

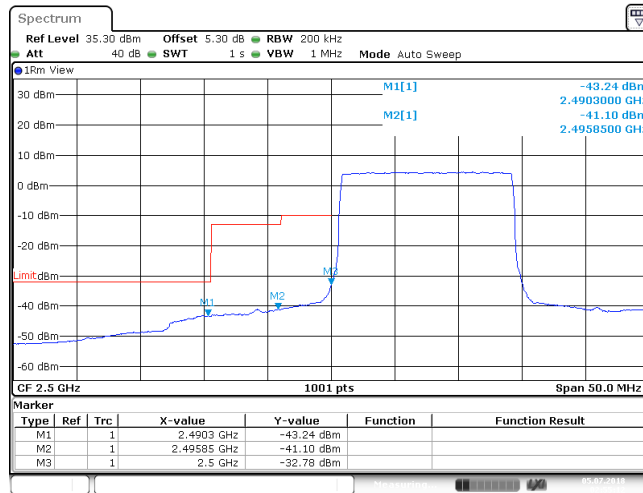
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



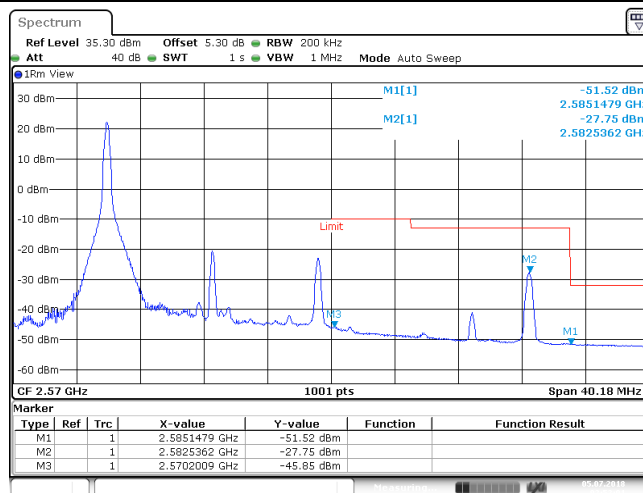
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

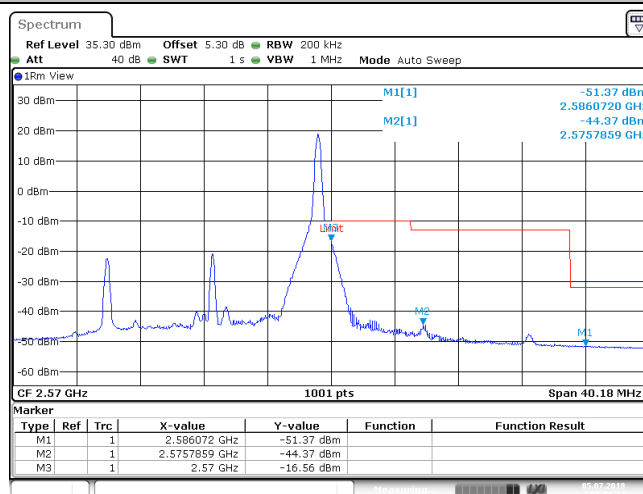
Page: 32 of 48



BAND7_15MHz_QPSK_21375_1RB#0



BAND7_15MHz_QPSK_21375_1RB#74



BAND7_15MHz_QPSK_21375_75RB#0

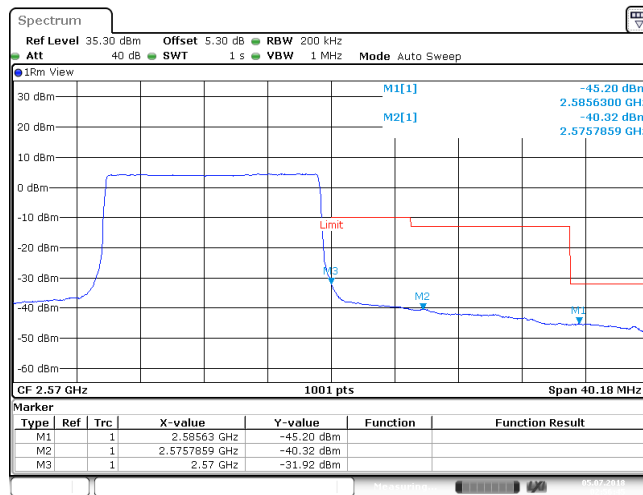
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



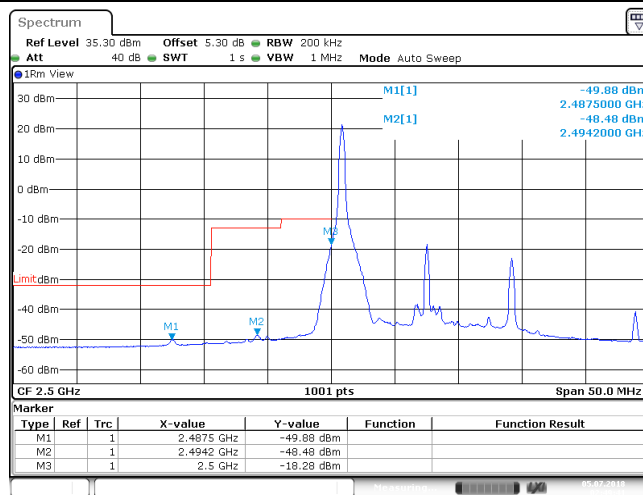
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

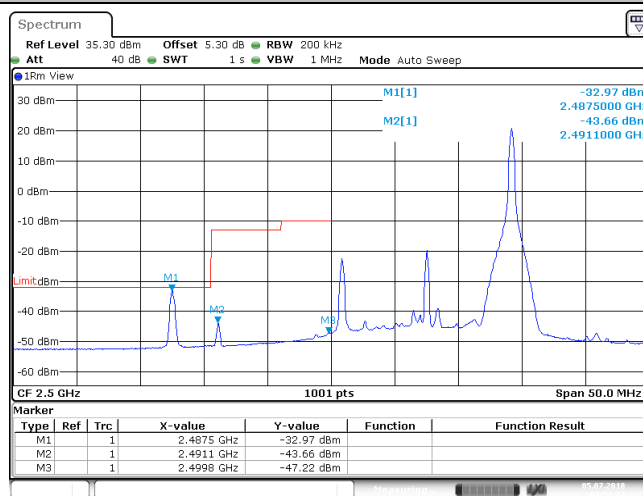
Page: 33 of 48



BAND7_15MHz_16QAM_20825_1RB#0



BAND7_15MHz_16QAM_20825_1RB#74



BAND7_15MHz_16QAM_20825_75RB#0

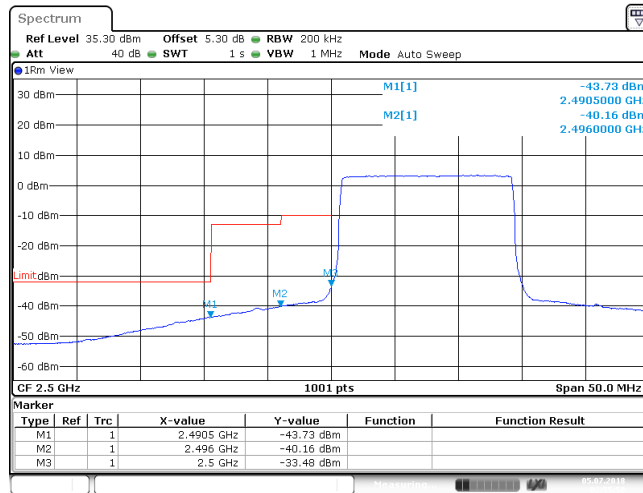
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



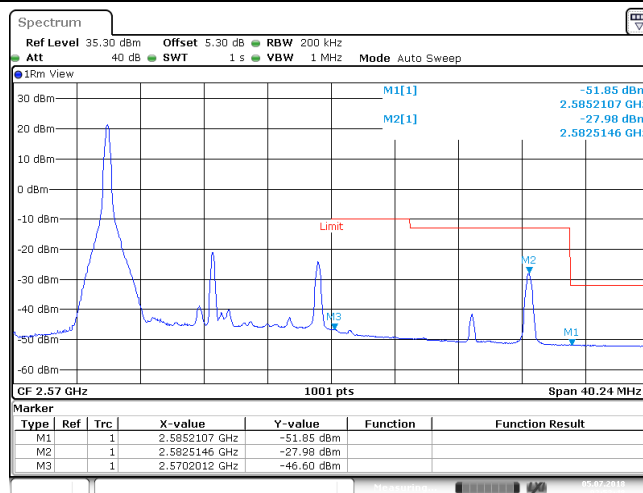
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

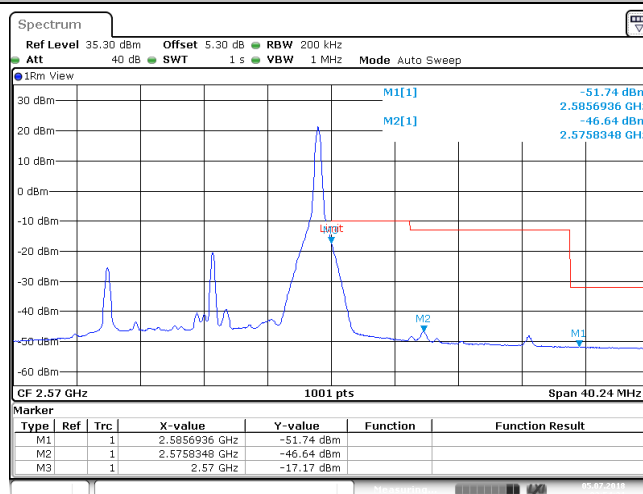
Page: 34 of 48



BAND7_15MHz_16QAM_21375_1RB#0



BAND7_15MHz_16QAM_21375_1RB#74



BAND7_15MHz_16QAM_21375_75RB#0

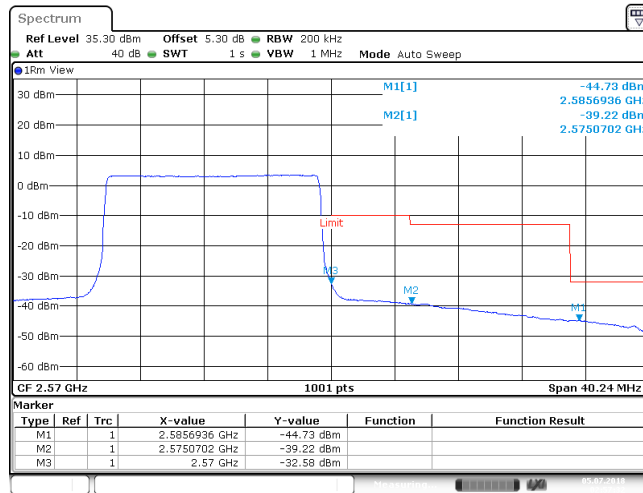
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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



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

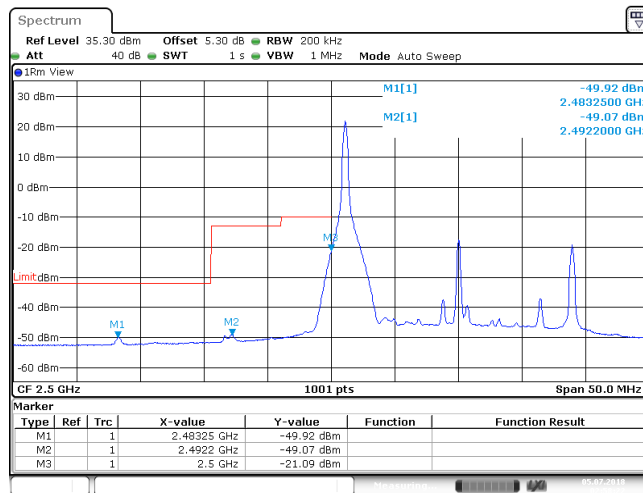
Report No.: SZEM180500457101

Page: 35 of 48



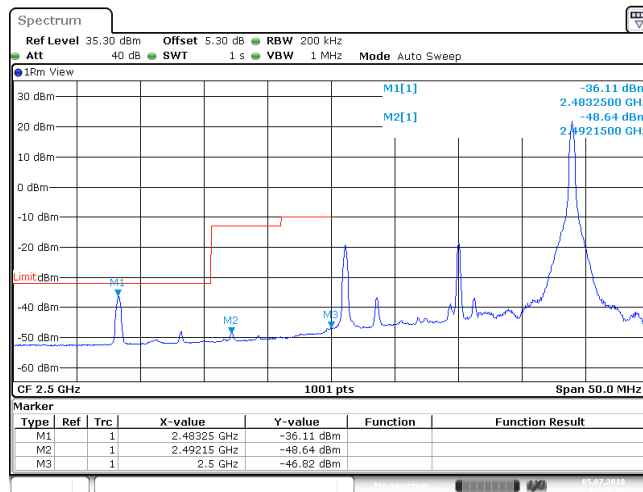
Date: 5/31/2018 02:57:32

BAND7_20MHz_QPSK_20850_1RB#0



Date: 5/31/2018 02:58:23

BAND7_20MHz_QPSK_20850_1RB#99



Date: 5/31/2018 02:59:56

BAND7_20MHz_QPSK_20850_100RB#0

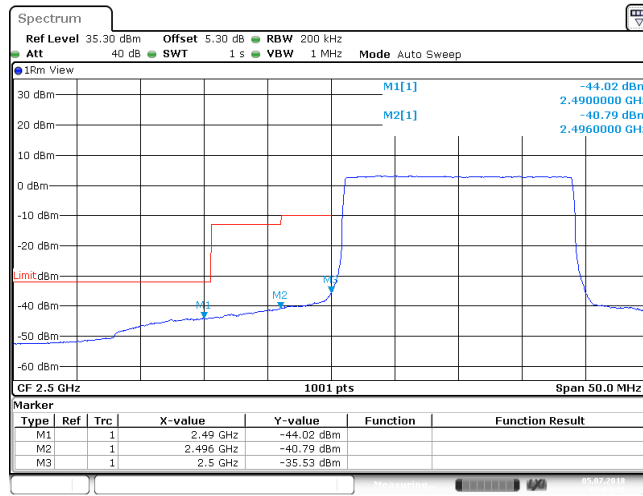
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



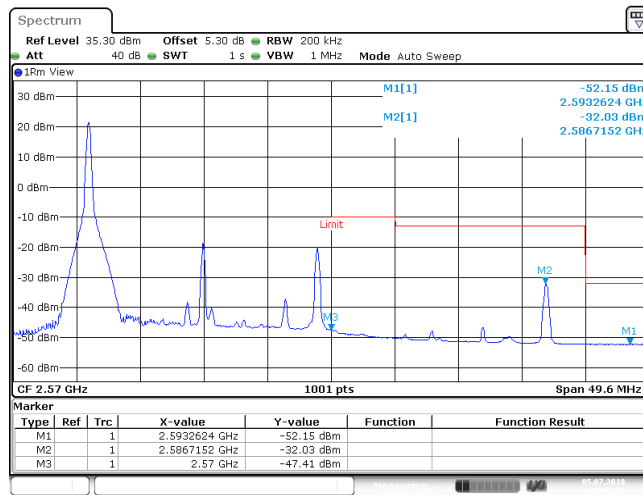
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

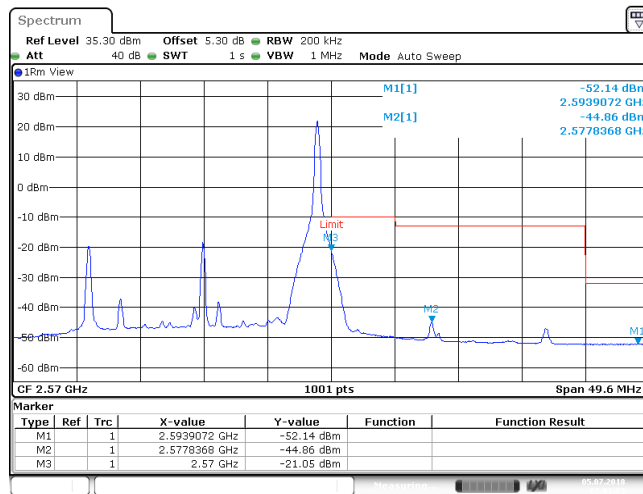
Page: 36 of 48



BAND7_20MHz_QPSK_21350_1RB#0



BAND7_20MHz_QPSK_21350_1RB#99



BAND7_20MHz_QPSK_21350_100RB#0

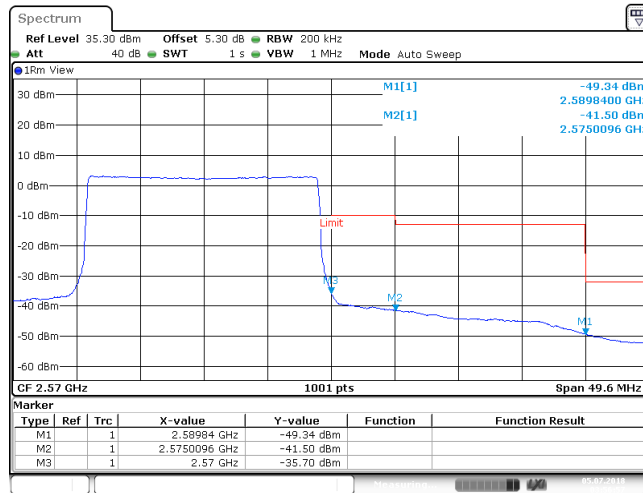
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



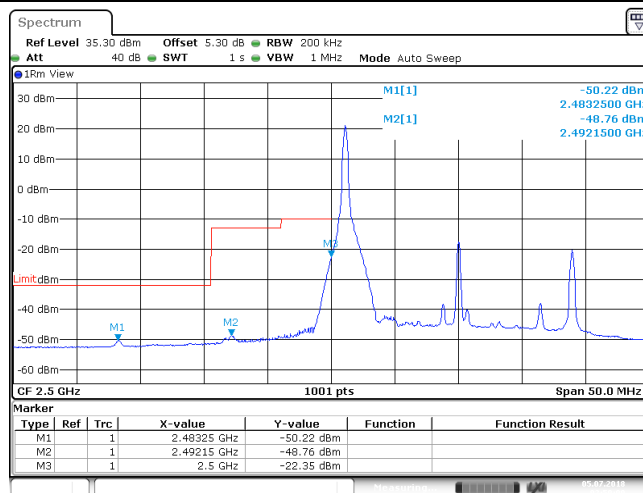
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

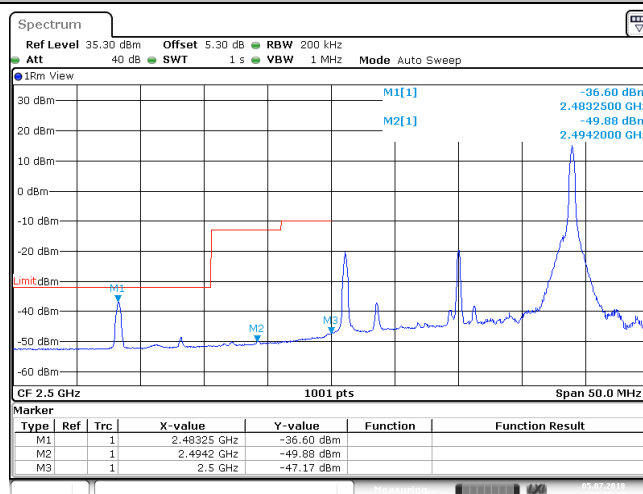
Page: 37 of 48



BAND7_20MHz_16QAM_20850_1RB#0



BAND7_20MHz_16QAM_20850_1RB#99



BAND7_20MHz_16QAM_20850_100RB#0

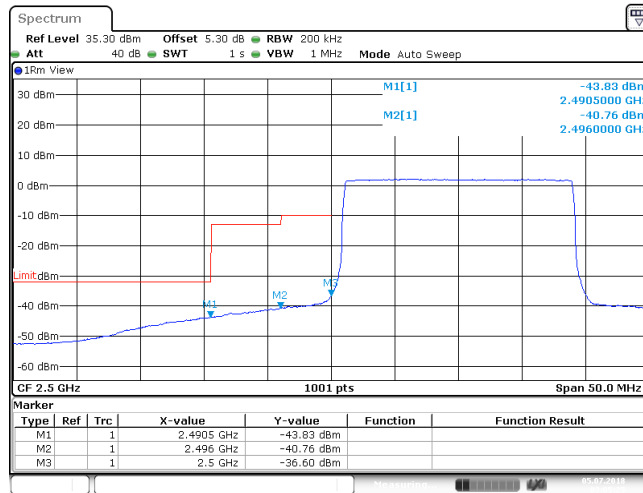
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



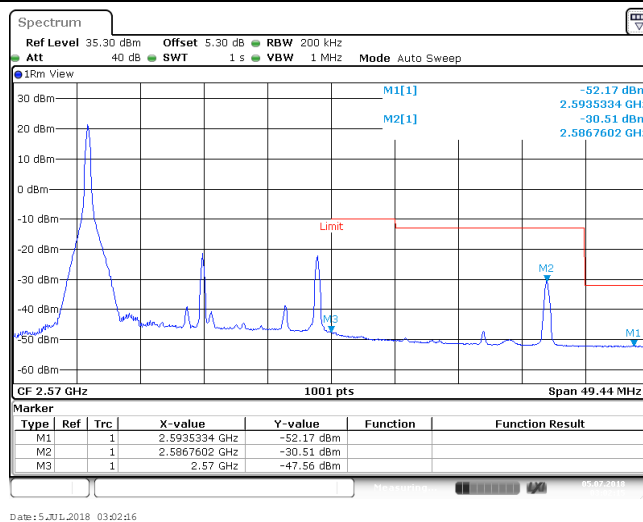
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180500457101

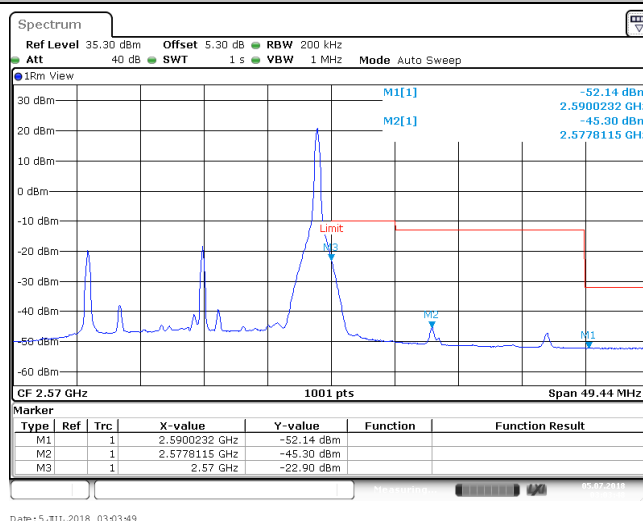
Page: 38 of 48



BAND7_20MHz_16QAM_21350_1RB#0



BAND7_20MHz_16QAM_21350_1RB#99



BAND7_20MHz_16QAM_21350_100RB#0

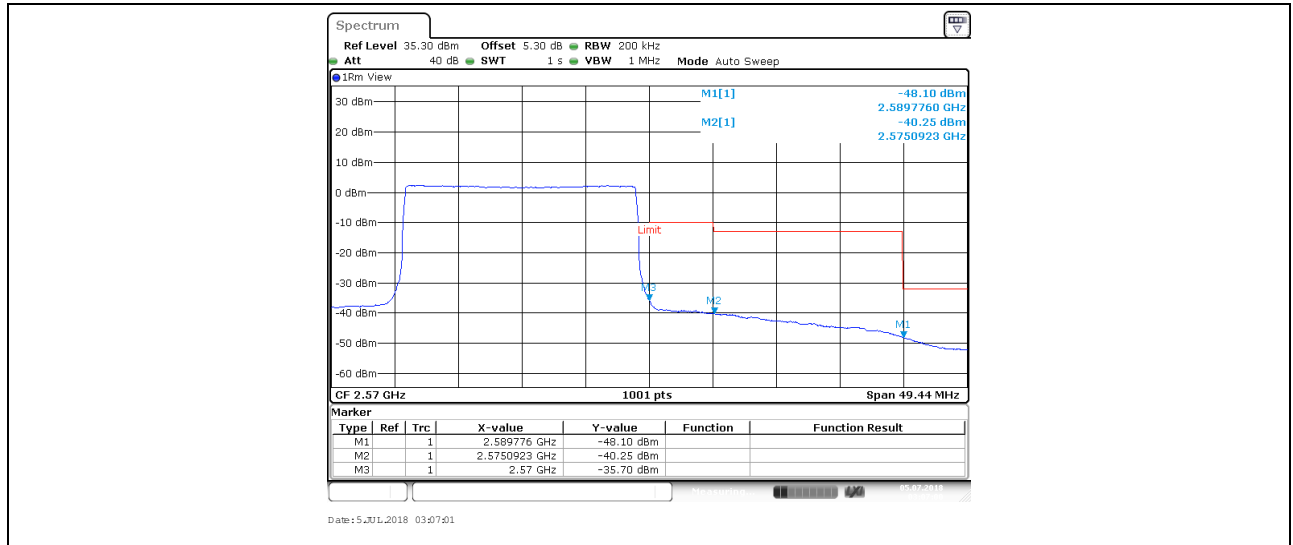
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



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

Report No.: SZEM180500457101

Page: 39 of 48

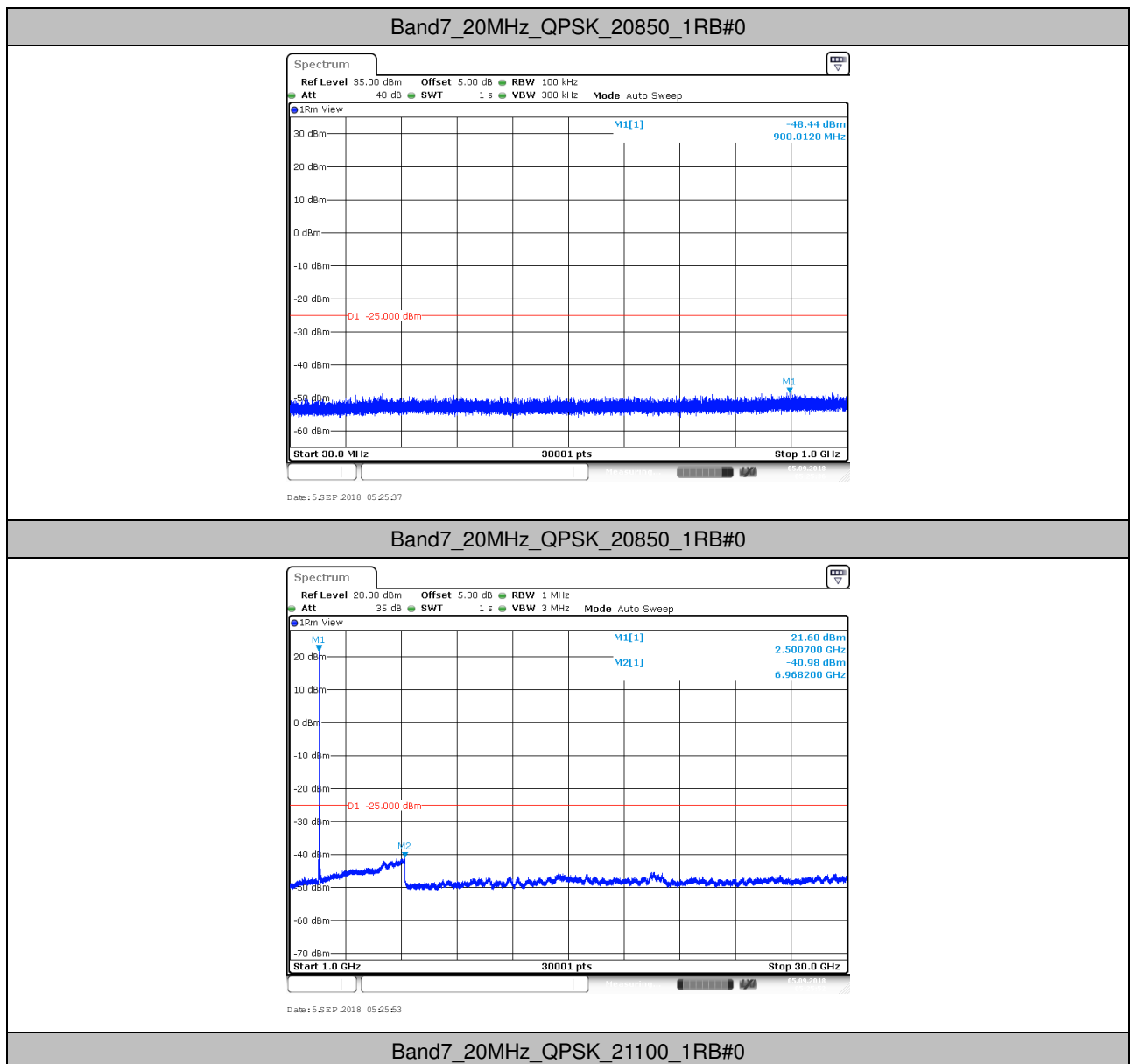




6. Spurious Emission at Antenna Terminal

NOTE: 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.

6.1. Test Plots

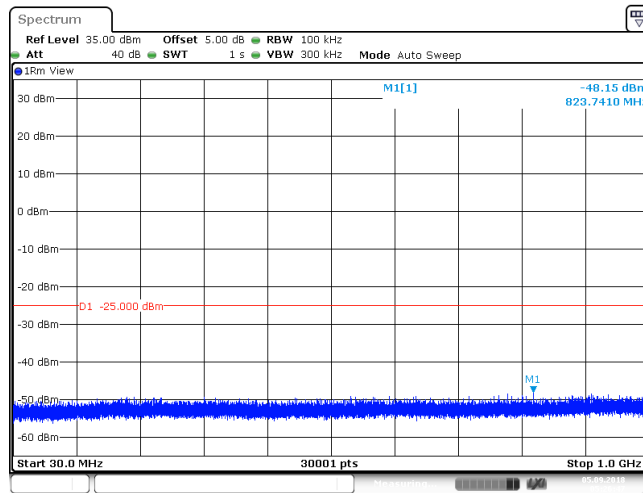




SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch

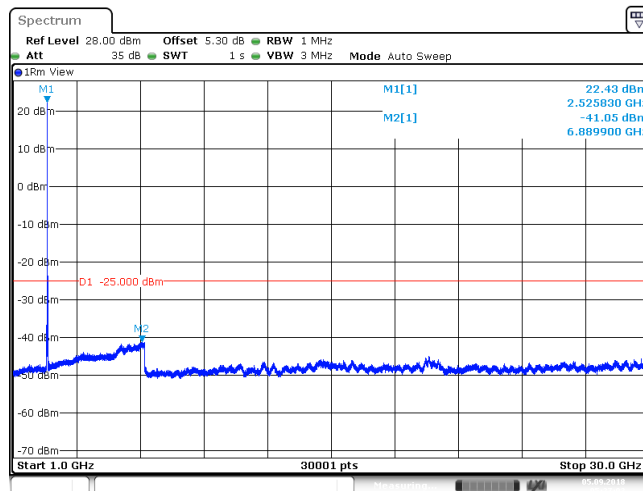
Report No.: SZEM180500457101

Page: 41 of 48



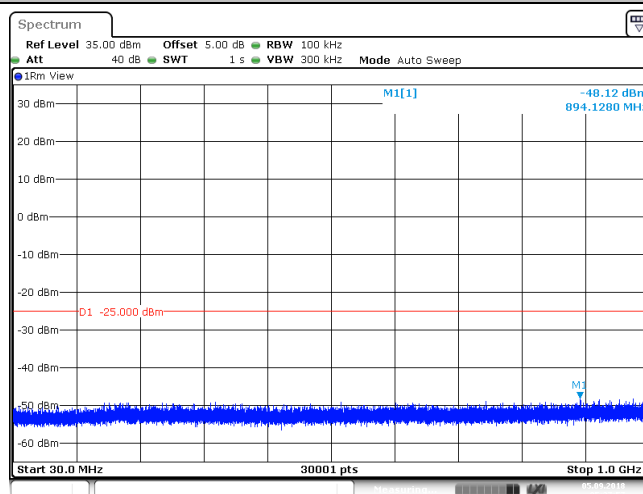
Date: 5 SEP 2018 05:26:47

Band7_20MHz_QPSK_21100_1RB#0



Date: 5 SEP 2018 05:27:03

Band7_20MHz_QPSK_21350_1RB#0



Date: 5 SEP 2018 05:27:58

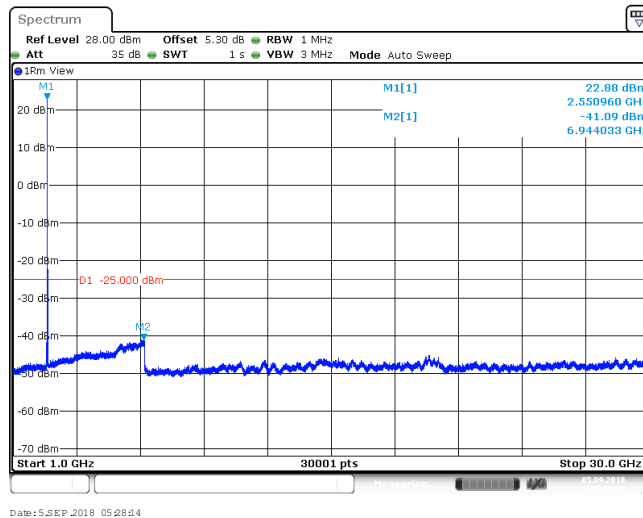
Band7_20MHz_QPSK_21350_1RB#0



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

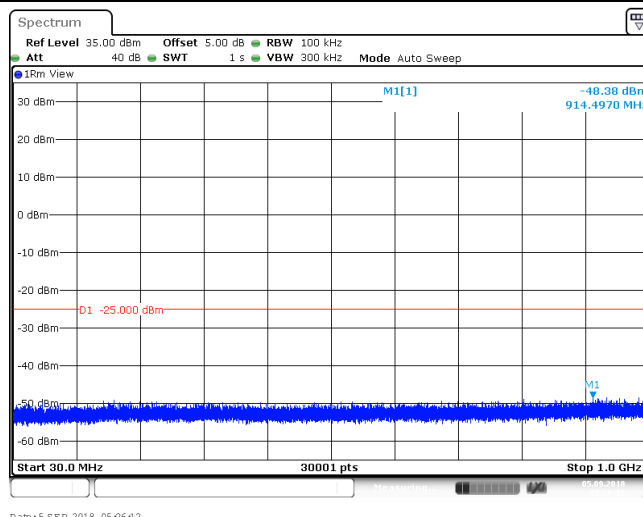
Report No.: SZEM180500457101

Page: 42 of 48



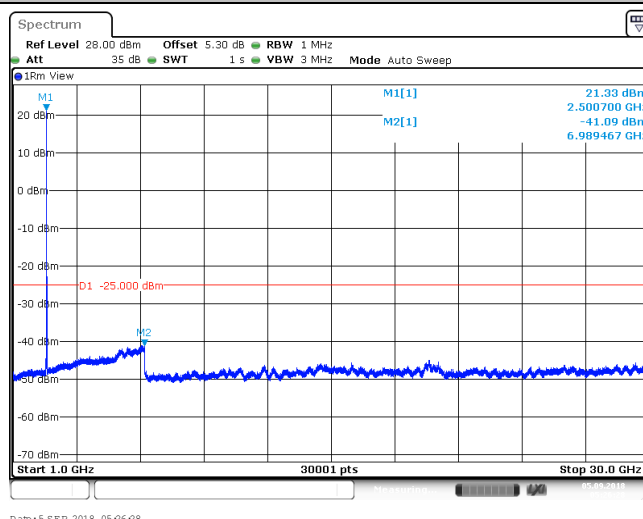
Date: 5 SEP 2018 05:28:14

Band7_20MHz_16QAM_20850_1RB#0



Date: 5 SEP 2018 05:26:12

Band7_20MHz_16QAM_20850_1RB#0



Date: 5 SEP 2018 05:26:28

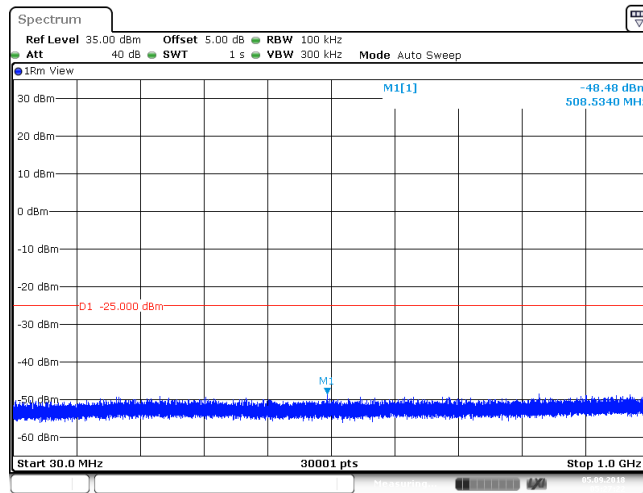
Band7_20MHz_16QAM_21100_1RB#0



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

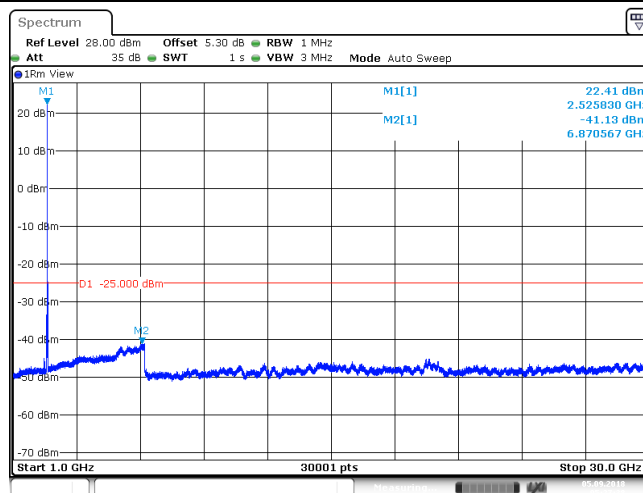
Report No.: SZEM180500457101

Page: 43 of 48



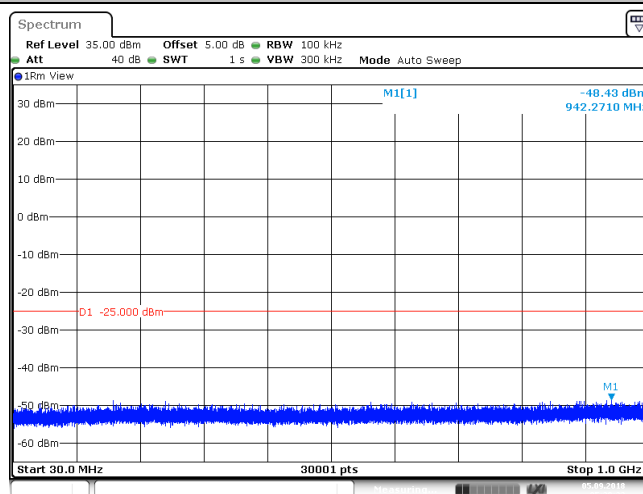
Date: 15 SEP 2018 05:27:22

Band7_20MHz_16QAM_21100_1RB#0



Date: 15 SEP 2018 05:27:38

Band7_20MHz_16QAM_21350_1RB#0



Date: 15 SEP 2018 05:28:33

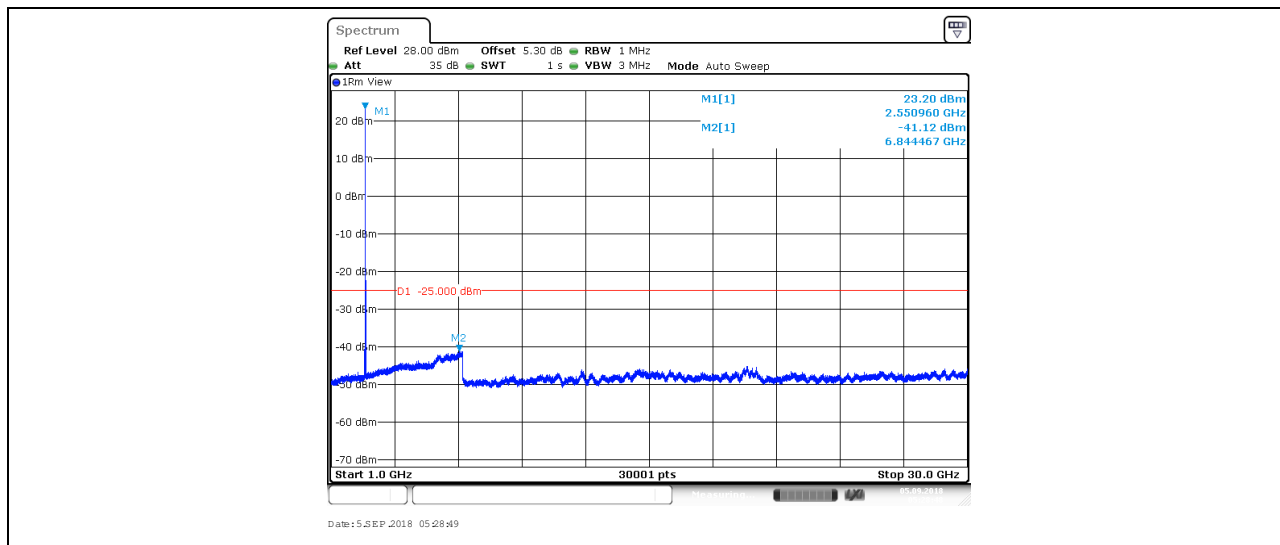
Band7_20MHz_16QAM_21350_1RB#0



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

Report No.: SZEM180500457101

Page: 44 of 48





7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 7

7.1.1. Test Mode = LTE/TM1 20MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
55.100000	-82.76	-25.00	57.76	Vertical
125.000000	-85.30	-25.00	60.30	Vertical
314.900000	-83.98	-25.00	58.98	Vertical
7503.000000	-62.90	-25.00	37.90	Vertical
10004.500000	-56.54	-25.00	31.54	Vertical
12505.500000	-56.19	-25.00	31.19	Vertical
62.550000	-77.50	-25.00	52.50	Horizontal
260.700000	-88.02	-25.00	63.02	Horizontal
620.454167	-83.06	-25.00	58.06	Horizontal
7503.000000	-64.73	-25.00	39.73	Horizontal
10004.500000	-60.48	-25.00	35.48	Horizontal
12505.500000	-53.76	-25.00	28.76	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.400000	-81.51	-25.00	56.51	Vertical
124.950000	-86.18	-25.00	61.18	Vertical
314.200000	-84.28	-25.00	59.28	Vertical
7578.000000	-63.22	-25.00	38.22	Vertical
10104.500000	-54.12	-25.00	29.12	Vertical
12630.500000	-56.40	-25.00	31.40	Vertical
62.150000	-77.94	-25.00	52.94	Horizontal
263.550000	-87.64	-25.00	62.64	Horizontal
621.233333	-82.82	-25.00	57.82	Horizontal
7842.500000	-64.10	-25.00	39.10	Horizontal



10104.500000	-58.64	-25.00	33.64	Horizontal
12631.000000	-54.25	-25.00	29.25	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.950000	-81.45	-25.00	56.45	Vertical
125.000000	-85.48	-25.00	60.48	Vertical
314.550000	-84.18	-25.00	59.18	Vertical
5114.000000	-66.69	-25.00	41.69	Vertical
7653.000000	-63.90	-25.00	38.90	Vertical
10204.500000	-56.44	-25.00	31.44	Vertical
63.100000	-77.14	-25.00	52.14	Horizontal
110.900000	-92.15	-25.00	67.15	Horizontal
611.470833	-83.53	-25.00	58.53	Horizontal
4871.500000	-66.63	-25.00	41.63	Horizontal
7653.000000	-63.61	-25.00	38.61	Horizontal
10204.000000	-62.69	-25.00	37.69	Horizontal

NOTE:

- 1) All modes are tested, but the data presented above is the worst case. the disturbance above 12.75GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and all Bandwidth, but only the worst case data presented in this report.



8. Appendix F: Frequency Stability

9.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND7	20MHz	QPSK	20850	100RB#0	VL	NT	7.90	0.003147	±2.5	PASS
BAND7	20MHz	QPSK	20850	100RB#0	VN	NT	-1.00	-0.000398	±2.5	PASS
BAND7	20MHz	QPSK	20850	100RB#0	VH	NT	5.80	0.002311	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	VL	NT	3.20	0.001262	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	VN	NT	-2.10	-0.000828	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	VH	NT	-4.50	-0.001775	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	VL	NT	-7.30	-0.002852	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	VN	NT	-14.80	-0.005781	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	VH	NT	-15.10	-0.005898	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	VL	NT	-11.90	-0.004741	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	VN	NT	2.70	0.001076	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	VH	NT	5.10	0.002032	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	VL	NT	-0.70	-0.000276	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	VN	NT	-11.20	-0.004418	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	VH	NT	-10.70	-0.004221	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	VL	NT	-17.30	-0.006758	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	VN	NT	3.80	0.001484	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	VH	NT	-8.70	-0.003398	±2.5	PASS

9.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND7	20MHz	QPSK	20850	100RB#0	NV	-30	-2.80	-0.001116	±2.5	PASS
BAND7	20MHz	QPSK	20850	100RB#0	NV	-20	-7.40	-0.002948	±2.5	PASS
BAND7	20MHz	QPSK	20850	100RB#0	NV	0	2.50	0.000996	±2.5	PASS
BAND7	20MHz	QPSK	20850	100RB#0	NV	10	-3.40	-0.001355	±2.5	PASS
BAND7	20MHz	QPSK	20850	100RB#0	NV	20	3.20	0.001275	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	NV	-30	-8.00	-0.003156	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	NV	-20	3.50	0.001381	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	NV	0	6.40	0.002525	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	NV	10	-2.90	-0.001144	±2.5	PASS
BAND7	20MHz	QPSK	21100	100RB#0	NV	20	-16.20	-0.006391	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	NV	-30	-17.60	-0.006875	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	NV	-20	-5.90	-0.002305	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	NV	0	-18.80	-0.007344	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	NV	10	2.90	0.001133	±2.5	PASS
BAND7	20MHz	QPSK	21350	100RB#0	NV	20	-1.80	-0.000703	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	NV	-30	-13.90	-0.005538	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	NV	-20	-8.40	-0.003347	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	NV	0	-8.70	-0.003466	±2.5	PASS



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

Report No.: SZEM180500457101

Page: 48 of 48

BAND7	20MHz	16QAM	20850	100RB#0	NV	10	3.50	0.001394	±2.5	PASS
BAND7	20MHz	16QAM	20850	100RB#0	NV	20	3.70	0.001474	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	NV	-30	-2.70	-0.001065	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	NV	-20	-1.40	-0.000552	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	NV	0	-19.10	-0.007535	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	NV	10	-12.90	-0.005089	±2.5	PASS
BAND7	20MHz	16QAM	21100	100RB#0	NV	20	0.50	0.000197	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	NV	-30	-16.30	-0.006367	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	NV	-20	-13.70	-0.005352	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	NV	0	-6.50	-0.002539	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	NV	10	-7.70	-0.003008	±2.5	PASS
BAND7	20MHz	16QAM	21350	100RB#0	NV	20	-13.00	-0.005078	±2.5	PASS

The End