



Appendix B

E-UTRA BAND 7



CONTENT

1. EFFECTIVE (ISOTROPIC) RADIATED POWER	4
1.1. Test Result	4
2. PEAK-TO-AVERAGE RATIO(CCDF)	11
2.1. Test Result	11
2.2. Test Plots.....	11
3. MODULATION CHARACTERISTICS	15
3.1. Test BAND = LTE BAND7	15
3.1.1. Test Mode = LTE /TM1 20MHz	15
3.1.1.1. Test Channel = MCH.....	15
3.1.2. Test Mode = LTE /TM2 20MHz	16
3.1.2.1. Test Channel = MCH.....	16
3.1.1. Test Mode = LTE /TM3 20MHz	17
3.1.1.1. Test Channel = MCH.....	17
4. 26dB BANDWIDTH AND OCCUPIED BANDWIDTH.....	18
4.1. Test Result	18
4.2. Test Plots.....	19
5. BAND EDGE COMPLIANCE	32
5.1. Test Plots.....	32
6. SPURIOUS EMISSION AT ANTENNA TERMINAL	49
6.1. Test Plots.....	49
7. FIELD STRENGTH OF SPURIOUS RADIATION	56
7.1. Test BAND = LTE BAND 7-Main Antenna	56
7.1.1. Test Channel = LCH_H	56
7.1.2. Test Channel = LCH_V	57
7.1.3. Test Channel = MCH_H	57
7.1.4. Test Channel = MCH_V	58
7.1.5. Test Channel = HCH_H	58
7.1.6. Test Channel = HCH_V.....	59
7.2. Test BAND = LTE BAND 7-Secend Antenna.....	60
7.2.1. Test Channel = LCH_H	60
7.2.2. Test Channel = LCH_V	61
7.2.3. Test Channel = MCH_H	61
7.2.4. Test Channel = MCH_V	62
7.2.5. Test Channel = HCH_H	62



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

Report No.: SZEM180700654901

Page: 3 of 69

7.2.6.	Test Channel = HCH_V.....	63
8.	FREQUENCY STABILITY	64
9.1.	Frequency Vs Voltage	64
9.2.	Frequency Vs Temperature	64



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	23.15	24.16	33.00	PASS
BAND7	5MHz	QPSK	20775	1RB#12	22.49	23.5	33.00	PASS
BAND7	5MHz	QPSK	20775	1RB#24	23.10	24.11	33.00	PASS
BAND7	5MHz	QPSK	20775	12RB#0	22.22	23.23	33.00	PASS
BAND7	5MHz	QPSK	20775	12RB#6	21.99	23	33.00	PASS
BAND7	5MHz	QPSK	20775	12RB#13	22.22	23.23	33.00	PASS
BAND7	5MHz	QPSK	20775	25RB#0	22.16	23.17	33.00	PASS
BAND7	5MHz	QPSK	21100	1RB#0	23.03	24.04	33.00	PASS
BAND7	5MHz	QPSK	21100	1RB#12	22.30	23.31	33.00	PASS
BAND7	5MHz	QPSK	21100	1RB#24	22.87	23.88	33.00	PASS
BAND7	5MHz	QPSK	21100	12RB#0	22.07	23.08	33.00	PASS
BAND7	5MHz	QPSK	21100	12RB#6	22.02	23.03	33.00	PASS
BAND7	5MHz	QPSK	21100	12RB#13	21.97	22.98	33.00	PASS
BAND7	5MHz	QPSK	21100	25RB#0	22.03	23.04	33.00	PASS
BAND7	5MHz	QPSK	21425	1RB#0	23.07	24.08	33.00	PASS
BAND7	5MHz	QPSK	21425	1RB#12	22.39	23.4	33.00	PASS
BAND7	5MHz	QPSK	21425	1RB#24	23.05	24.06	33.00	PASS
BAND7	5MHz	QPSK	21425	12RB#0	22.10	23.11	33.00	PASS
BAND7	5MHz	QPSK	21425	12RB#6	21.96	22.97	33.00	PASS
BAND7	5MHz	QPSK	21425	12RB#13	22.02	23.03	33.00	PASS
BAND7	5MHz	QPSK	21425	25RB#0	22.03	23.04	33.00	PASS
BAND7	5MHz	64QAM	20775	1RB#0	22.21	23.22	33.00	PASS
BAND7	5MHz	64QAM	20775	1RB#12	21.49	22.5	33.00	PASS
BAND7	5MHz	64QAM	20775	1RB#24	22.11	23.12	33.00	PASS
BAND7	5MHz	64QAM	20775	12RB#0	21.18	22.19	33.00	PASS
BAND7	5MHz	64QAM	20775	12RB#6	21.14	22.15	33.00	PASS
BAND7	5MHz	64QAM	20775	12RB#13	21.11	22.12	33.00	PASS
BAND7	5MHz	64QAM	20775	25RB#0	21.09	22.1	33.00	PASS
BAND7	5MHz	64QAM	21100	1RB#0	21.04	22.05	33.00	PASS
BAND7	5MHz	64QAM	21100	1RB#12	20.49	21.5	33.00	PASS
BAND7	5MHz	64QAM	21100	1RB#24	20.97	21.98	33.00	PASS
BAND7	5MHz	64QAM	21100	12RB#0	20.02	21.03	33.00	PASS
BAND7	5MHz	64QAM	21100	12RB#6	19.83	20.84	33.00	PASS
BAND7	5MHz	64QAM	21100	12RB#13	19.99	21	33.00	PASS



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

Report No.: SZEM180700654901

Page: 5 of 69

BAND7	5MHz	64QAM	21100	25RB#0	19.97	20.98	33.00	PASS
BAND7	5MHz	64QAM	21425	1RB#0	21.22	22.23	33.00	PASS
BAND7	5MHz	64QAM	21425	1RB#12	20.51	21.52	33.00	PASS
BAND7	5MHz	64QAM	21425	1RB#24	21.27	22.28	33.00	PASS
BAND7	5MHz	64QAM	21425	12RB#0	20.08	21.09	33.00	PASS
BAND7	5MHz	64QAM	21425	12RB#6	20.01	21.02	33.00	PASS
BAND7	5MHz	64QAM	21425	12RB#13	20.01	21.02	33.00	PASS
BAND7	5MHz	64QAM	21425	25RB#0	19.88	20.89	33.00	PASS
BAND7	5MHz	16QAM	20775	1RB#0	22.32	23.33	33.00	PASS
BAND7	5MHz	16QAM	20775	1RB#12	21.46	22.47	33.00	PASS
BAND7	5MHz	16QAM	20775	1RB#24	22.21	23.22	33.00	PASS
BAND7	5MHz	16QAM	20775	12RB#0	21.13	22.14	33.00	PASS
BAND7	5MHz	16QAM	20775	12RB#6	21.13	22.14	33.00	PASS
BAND7	5MHz	16QAM	20775	12RB#13	21.10	22.11	33.00	PASS
BAND7	5MHz	16QAM	20775	25RB#0	21.15	22.16	33.00	PASS
BAND7	5MHz	16QAM	21100	1RB#0	22.15	23.16	33.00	PASS
BAND7	5MHz	16QAM	21100	1RB#12	21.38	22.39	33.00	PASS
BAND7	5MHz	16QAM	21100	1RB#24	22.08	23.09	33.00	PASS
BAND7	5MHz	16QAM	21100	12RB#0	20.97	21.98	33.00	PASS
BAND7	5MHz	16QAM	21100	12RB#6	20.98	21.99	33.00	PASS
BAND7	5MHz	16QAM	21100	12RB#13	20.94	21.95	33.00	PASS
BAND7	5MHz	16QAM	21100	25RB#0	20.94	21.95	33.00	PASS
BAND7	5MHz	16QAM	21425	1RB#0	22.09	23.1	33.00	PASS
BAND7	5MHz	16QAM	21425	1RB#12	21.25	22.26	33.00	PASS
BAND7	5MHz	16QAM	21425	1RB#24	22.14	23.15	33.00	PASS
BAND7	5MHz	16QAM	21425	12RB#0	21.05	22.06	33.00	PASS
BAND7	5MHz	16QAM	21425	12RB#6	20.94	21.95	33.00	PASS
BAND7	5MHz	16QAM	21425	12RB#13	20.99	22	33.00	PASS
BAND7	5MHz	16QAM	21425	25RB#0	20.83	21.84	33.00	PASS
BAND7	10MHz	QPSK	20800	1RB#0	23.01	24.02	33.00	PASS
BAND7	10MHz	QPSK	20800	1RB#24	22.95	23.96	33.00	PASS
BAND7	10MHz	QPSK	20800	1RB#49	23.09	24.1	33.00	PASS
BAND7	10MHz	QPSK	20800	25RB#0	21.98	22.99	33.00	PASS
BAND7	10MHz	QPSK	20800	25RB#12	21.92	22.93	33.00	PASS
BAND7	10MHz	QPSK	20800	25RB#25	21.84	22.85	33.00	PASS
BAND7	10MHz	QPSK	20800	50RB#0	21.89	22.9	33.00	PASS
BAND7	10MHz	QPSK	21100	1RB#0	23.00	24.01	33.00	PASS
BAND7	10MHz	QPSK	21100	1RB#24	22.87	23.88	33.00	PASS
BAND7	10MHz	QPSK	21100	1RB#49	22.98	23.99	33.00	PASS
BAND7	10MHz	QPSK	21100	25RB#0	21.99	23	33.00	PASS
BAND7	10MHz	QPSK	21100	25RB#12	21.85	22.86	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.: SZEM180700654901

Page: 6 of 69

BAND7	10MHz	QPSK	21100	25RB#25	21.81	22.82	33.00	PASS
BAND7	10MHz	QPSK	21100	50RB#0	21.86	22.87	33.00	PASS
BAND7	10MHz	QPSK	21400	1RB#0	23.04	24.05	33.00	PASS
BAND7	10MHz	QPSK	21400	1RB#24	22.86	23.87	33.00	PASS
BAND7	10MHz	QPSK	21400	1RB#49	22.83	23.84	33.00	PASS
BAND7	10MHz	QPSK	21400	25RB#0	21.92	22.93	33.00	PASS
BAND7	10MHz	QPSK	21400	25RB#12	21.86	22.87	33.00	PASS
BAND7	10MHz	QPSK	21400	25RB#25	22.04	23.05	33.00	PASS
BAND7	10MHz	QPSK	21400	50RB#0	21.86	22.87	33.00	PASS
BAND7	10MHz	64QAM	20800	1RB#0	22.10	23.11	33.00	PASS
BAND7	10MHz	64QAM	20800	1RB#24	21.80	22.81	33.00	PASS
BAND7	10MHz	64QAM	20800	1RB#49	22.14	23.15	33.00	PASS
BAND7	10MHz	64QAM	20800	25RB#0	20.91	21.92	33.00	PASS
BAND7	10MHz	64QAM	20800	25RB#12	20.87	21.88	33.00	PASS
BAND7	10MHz	64QAM	20800	25RB#25	20.79	21.8	33.00	PASS
BAND7	10MHz	64QAM	20800	50RB#0	20.86	21.87	33.00	PASS
BAND7	10MHz	64QAM	21100	1RB#0	21.10	22.11	33.00	PASS
BAND7	10MHz	64QAM	21100	1RB#24	20.80	21.81	33.00	PASS
BAND7	10MHz	64QAM	21100	1RB#49	21.05	22.06	33.00	PASS
BAND7	10MHz	64QAM	21100	25RB#0	19.93	20.94	33.00	PASS
BAND7	10MHz	64QAM	21100	25RB#12	19.82	20.83	33.00	PASS
BAND7	10MHz	64QAM	21100	25RB#25	19.78	20.79	33.00	PASS
BAND7	10MHz	64QAM	21100	50RB#0	19.81	20.82	33.00	PASS
BAND7	10MHz	64QAM	21400	1RB#0	21.23	22.24	33.00	PASS
BAND7	10MHz	64QAM	21400	1RB#24	20.89	21.9	33.00	PASS
BAND7	10MHz	64QAM	21400	1RB#49	21.12	22.13	33.00	PASS
BAND7	10MHz	64QAM	21400	25RB#0	19.88	20.89	33.00	PASS
BAND7	10MHz	64QAM	21400	25RB#12	19.80	20.81	33.00	PASS
BAND7	10MHz	64QAM	21400	25RB#25	19.99	21	33.00	PASS
BAND7	10MHz	64QAM	21400	50RB#0	19.82	20.83	33.00	PASS
BAND7	10MHz	16QAM	20800	1RB#0	22.10	23.11	33.00	PASS
BAND7	10MHz	16QAM	20800	1RB#24	22.00	23.01	33.00	PASS
BAND7	10MHz	16QAM	20800	1RB#49	22.22	23.23	33.00	PASS
BAND7	10MHz	16QAM	20800	25RB#0	20.94	21.95	33.00	PASS
BAND7	10MHz	16QAM	20800	25RB#12	20.88	21.89	33.00	PASS
BAND7	10MHz	16QAM	20800	25RB#25	20.78	21.79	33.00	PASS
BAND7	10MHz	16QAM	20800	50RB#0	20.83	21.84	33.00	PASS
BAND7	10MHz	16QAM	21100	1RB#0	22.13	23.14	33.00	PASS
BAND7	10MHz	16QAM	21100	1RB#24	21.80	22.81	33.00	PASS
BAND7	10MHz	16QAM	21100	1RB#49	22.10	23.11	33.00	PASS
BAND7	10MHz	16QAM	21100	25RB#0	20.93	21.94	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.: SZEM180700654901

Page: 7 of 69

BAND7	10MHz	16QAM	21100	25RB#12	20.78	21.79	33.00	PASS
BAND7	10MHz	16QAM	21100	25RB#25	20.72	21.73	33.00	PASS
BAND7	10MHz	16QAM	21100	50RB#0	20.79	21.8	33.00	PASS
BAND7	10MHz	16QAM	21400	1RB#0	22.17	23.18	33.00	PASS
BAND7	10MHz	16QAM	21400	1RB#24	21.91	22.92	33.00	PASS
BAND7	10MHz	16QAM	21400	1RB#49	22.13	23.14	33.00	PASS
BAND7	10MHz	16QAM	21400	25RB#0	20.88	21.89	33.00	PASS
BAND7	10MHz	16QAM	21400	25RB#12	20.79	21.8	33.00	PASS
BAND7	10MHz	16QAM	21400	25RB#25	20.99	22	33.00	PASS
BAND7	10MHz	16QAM	21400	50RB#0	20.77	21.78	33.00	PASS
BAND7	15MHz	QPSK	20825	1RB#0	22.97	23.98	33.00	PASS
BAND7	15MHz	QPSK	20825	1RB#38	22.89	23.9	33.00	PASS
BAND7	15MHz	QPSK	20825	1RB#74	22.84	23.85	33.00	PASS
BAND7	15MHz	QPSK	20825	36RB#0	22.02	23.03	33.00	PASS
BAND7	15MHz	QPSK	20825	36RB#18	21.87	22.88	33.00	PASS
BAND7	15MHz	QPSK	20825	36RB#39	21.89	22.9	33.00	PASS
BAND7	15MHz	QPSK	20825	75RB#0	21.90	22.91	33.00	PASS
BAND7	15MHz	QPSK	21100	1RB#0	22.97	23.98	33.00	PASS
BAND7	15MHz	QPSK	21100	1RB#38	23.00	24.01	33.00	PASS
BAND7	15MHz	QPSK	21100	1RB#74	22.84	23.85	33.00	PASS
BAND7	15MHz	QPSK	21100	36RB#0	22.01	23.02	33.00	PASS
BAND7	15MHz	QPSK	21100	36RB#18	22.06	23.07	33.00	PASS
BAND7	15MHz	QPSK	21100	36RB#39	21.95	22.96	33.00	PASS
BAND7	15MHz	QPSK	21100	75RB#0	21.99	23	33.00	PASS
BAND7	15MHz	QPSK	21375	1RB#0	22.90	23.91	33.00	PASS
BAND7	15MHz	QPSK	21375	1RB#38	22.93	23.94	33.00	PASS
BAND7	15MHz	QPSK	21375	1RB#74	22.74	23.75	33.00	PASS
BAND7	15MHz	QPSK	21375	36RB#0	22.16	23.17	33.00	PASS
BAND7	15MHz	QPSK	21375	36RB#18	21.91	22.92	33.00	PASS
BAND7	15MHz	QPSK	21375	36RB#39	22.09	23.1	33.00	PASS
BAND7	15MHz	QPSK	21375	75RB#0	21.88	22.89	33.00	PASS
BAND7	15MHz	64QAM	20825	1RB#0	22.03	23.04	33.00	PASS
BAND7	15MHz	64QAM	20825	1RB#38	22.00	23.01	33.00	PASS
BAND7	15MHz	64QAM	20825	1RB#74	21.94	22.95	33.00	PASS
BAND7	15MHz	64QAM	20825	36RB#0	20.99	22	33.00	PASS
BAND7	15MHz	64QAM	20825	36RB#18	20.83	21.84	33.00	PASS
BAND7	15MHz	64QAM	20825	36RB#39	20.84	21.85	33.00	PASS
BAND7	15MHz	64QAM	20825	75RB#0	20.83	21.84	33.00	PASS
BAND7	15MHz	64QAM	21100	1RB#0	21.14	22.15	33.00	PASS
BAND7	15MHz	64QAM	21100	1RB#38	21.24	22.25	33.00	PASS
BAND7	15MHz	64QAM	21100	1RB#74	21.04	22.05	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.: SZEM180700654901

Page: 8 of 69

BAND7	15MHz	64QAM	21100	36RB#0	19.97	20.98	33.00	PASS
BAND7	15MHz	64QAM	21100	36RB#18	20.00	21.01	33.00	PASS
BAND7	15MHz	64QAM	21100	36RB#39	19.94	20.95	33.00	PASS
BAND7	15MHz	64QAM	21100	75RB#0	19.98	20.99	33.00	PASS
BAND7	15MHz	64QAM	21375	1RB#0	21.09	22.1	33.00	PASS
BAND7	15MHz	64QAM	21375	1RB#38	21.10	22.11	33.00	PASS
BAND7	15MHz	64QAM	21375	1RB#74	21.18	22.19	33.00	PASS
BAND7	15MHz	64QAM	21375	36RB#0	20.09	21.1	33.00	PASS
BAND7	15MHz	64QAM	21375	36RB#18	19.88	20.89	33.00	PASS
BAND7	15MHz	64QAM	21375	36RB#39	20.03	21.04	33.00	PASS
BAND7	15MHz	64QAM	21375	75RB#0	19.87	20.88	33.00	PASS
BAND7	15MHz	16QAM	20825	1RB#0	22.15	23.16	33.00	PASS
BAND7	15MHz	16QAM	20825	1RB#38	22.03	23.04	33.00	PASS
BAND7	15MHz	16QAM	20825	1RB#74	21.99	23	33.00	PASS
BAND7	15MHz	16QAM	20825	36RB#0	20.98	21.99	33.00	PASS
BAND7	15MHz	16QAM	20825	36RB#18	20.83	21.84	33.00	PASS
BAND7	15MHz	16QAM	20825	36RB#39	20.83	21.84	33.00	PASS
BAND7	15MHz	16QAM	20825	75RB#0	20.83	21.84	33.00	PASS
BAND7	15MHz	16QAM	21100	1RB#0	22.01	23.02	33.00	PASS
BAND7	15MHz	16QAM	21100	1RB#38	22.18	23.19	33.00	PASS
BAND7	15MHz	16QAM	21100	1RB#74	22.02	23.03	33.00	PASS
BAND7	15MHz	16QAM	21100	36RB#0	20.96	21.97	33.00	PASS
BAND7	15MHz	16QAM	21100	36RB#18	20.95	21.96	33.00	PASS
BAND7	15MHz	16QAM	21100	36RB#39	20.92	21.93	33.00	PASS
BAND7	15MHz	16QAM	21100	75RB#0	20.94	21.95	33.00	PASS
BAND7	15MHz	16QAM	21375	1RB#0	22.15	23.16	33.00	PASS
BAND7	15MHz	16QAM	21375	1RB#38	22.11	23.12	33.00	PASS
BAND7	15MHz	16QAM	21375	1RB#74	22.16	23.17	33.00	PASS
BAND7	15MHz	16QAM	21375	36RB#0	21.11	22.12	33.00	PASS
BAND7	15MHz	16QAM	21375	36RB#18	20.84	21.85	33.00	PASS
BAND7	15MHz	16QAM	21375	36RB#39	21.03	22.04	33.00	PASS
BAND7	15MHz	16QAM	21375	75RB#0	20.80	21.81	33.00	PASS
BAND7	20MHz	QPSK	20850	1RB#0	23.11	24.12	33.00	PASS
BAND7	20MHz	QPSK	20850	1RB#49	22.87	23.88	33.00	PASS
BAND7	20MHz	QPSK	20850	1RB#99	23.03	24.04	33.00	PASS
BAND7	20MHz	QPSK	20850	50RB#0	21.99	23	33.00	PASS
BAND7	20MHz	QPSK	20850	50RB#25	21.90	22.91	33.00	PASS
BAND7	20MHz	QPSK	20850	50RB#50	21.94	22.95	33.00	PASS
BAND7	20MHz	QPSK	20850	100RB#0	21.98	22.99	33.00	PASS
BAND7	20MHz	QPSK	21100	1RB#0	23.22	24.23	33.00	PASS
BAND7	20MHz	QPSK	21100	1RB#49	22.86	23.87	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.: SZEM180700654901

Page: 9 of 69

BAND7	20MHz	QPSK	21100	1RB#99	23.13	24.14	33.00	PASS
BAND7	20MHz	QPSK	21100	50RB#0	22.06	23.07	33.00	PASS
BAND7	20MHz	QPSK	21100	50RB#25	21.83	22.84	33.00	PASS
BAND7	20MHz	QPSK	21100	50RB#50	21.86	22.87	33.00	PASS
BAND7	20MHz	QPSK	21100	100RB#0	21.90	22.91	33.00	PASS
BAND7	20MHz	QPSK	21350	1RB#0	23.07	24.08	33.00	PASS
BAND7	20MHz	QPSK	21350	1RB#49	22.94	23.95	33.00	PASS
BAND7	20MHz	QPSK	21350	1RB#99	22.94	23.95	33.00	PASS
BAND7	20MHz	QPSK	21350	50RB#0	22.17	23.18	33.00	PASS
BAND7	20MHz	QPSK	21350	50RB#25	22.10	23.11	33.00	PASS
BAND7	20MHz	QPSK	21350	50RB#50	22.11	23.12	33.00	PASS
BAND7	20MHz	QPSK	21350	100RB#0	22.07	23.08	33.00	PASS
BAND7	20MHz	64QAM	20850	1RB#0	22.27	23.28	33.00	PASS
BAND7	20MHz	64QAM	20850	1RB#49	21.78	22.79	33.00	PASS
BAND7	20MHz	64QAM	20850	1RB#99	21.98	22.99	33.00	PASS
BAND7	20MHz	64QAM	20850	50RB#0	20.98	21.99	33.00	PASS
BAND7	20MHz	64QAM	20850	50RB#25	20.86	21.87	33.00	PASS
BAND7	20MHz	64QAM	20850	50RB#50	20.87	21.88	33.00	PASS
BAND7	20MHz	64QAM	20850	100RB#0	20.92	21.93	33.00	PASS
BAND7	20MHz	64QAM	21100	1RB#0	21.28	22.29	33.00	PASS
BAND7	20MHz	64QAM	21100	1RB#49	20.86	21.87	33.00	PASS
BAND7	20MHz	64QAM	21100	1RB#99	21.30	22.31	33.00	PASS
BAND7	20MHz	64QAM	21100	50RB#0	20.01	21.02	33.00	PASS
BAND7	20MHz	64QAM	21100	50RB#25	19.80	20.81	33.00	PASS
BAND7	20MHz	64QAM	21100	50RB#50	19.78	20.79	33.00	PASS
BAND7	20MHz	64QAM	21100	100RB#0	19.87	20.88	33.00	PASS
BAND7	20MHz	64QAM	21350	1RB#0	21.16	22.17	33.00	PASS
BAND7	20MHz	64QAM	21350	1RB#49	20.99	22	33.00	PASS
BAND7	20MHz	64QAM	21350	1RB#99	21.34	22.35	33.00	PASS
BAND7	20MHz	64QAM	21350	50RB#0	20.12	21.13	33.00	PASS
BAND7	20MHz	64QAM	21350	50RB#25	20.05	21.06	33.00	PASS
BAND7	20MHz	64QAM	21350	50RB#50	19.86	20.87	33.00	PASS
BAND7	20MHz	64QAM	21350	100RB#0	20.02	21.03	33.00	PASS
BAND7	20MHz	16QAM	20850	1RB#0	22.23	23.24	33.00	PASS
BAND7	20MHz	16QAM	20850	1RB#49	21.71	22.72	33.00	PASS
BAND7	20MHz	16QAM	20850	1RB#99	22.13	23.14	33.00	PASS
BAND7	20MHz	16QAM	20850	50RB#0	20.98	21.99	33.00	PASS
BAND7	20MHz	16QAM	20850	50RB#25	20.87	21.88	33.00	PASS
BAND7	20MHz	16QAM	20850	50RB#50	20.89	21.9	33.00	PASS
BAND7	20MHz	16QAM	20850	100RB#0	20.92	21.93	33.00	PASS
BAND7	20MHz	16QAM	21100	1RB#0	22.24	23.25	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.: SZEM180700654901

Page: 10 of 69

BAND7	20MHz	16QAM	21100	1RB#49	21.71	22.72	33.00	PASS
BAND7	20MHz	16QAM	21100	1RB#99	22.24	23.25	33.00	PASS
BAND7	20MHz	16QAM	21100	50RB#0	20.99	22	33.00	PASS
BAND7	20MHz	16QAM	21100	50RB#25	20.77	21.78	33.00	PASS
BAND7	20MHz	16QAM	21100	50RB#50	20.75	21.76	33.00	PASS
BAND7	20MHz	16QAM	21100	100RB#0	20.82	21.83	33.00	PASS
BAND7	20MHz	16QAM	21350	1RB#0	22.17	23.18	33.00	PASS
BAND7	20MHz	16QAM	21350	1RB#49	21.82	22.83	33.00	PASS
BAND7	20MHz	16QAM	21350	1RB#99	22.26	23.27	33.00	PASS
BAND7	20MHz	16QAM	21350	50RB#0	21.11	22.12	33.00	PASS
BAND7	20MHz	16QAM	21350	50RB#25	21.04	22.05	33.00	PASS
BAND7	20MHz	16QAM	21350	50RB#50	21.03	22.04	33.00	PASS
BAND7	20MHz	16QAM	21350	100RB#0	21.03	22.04	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

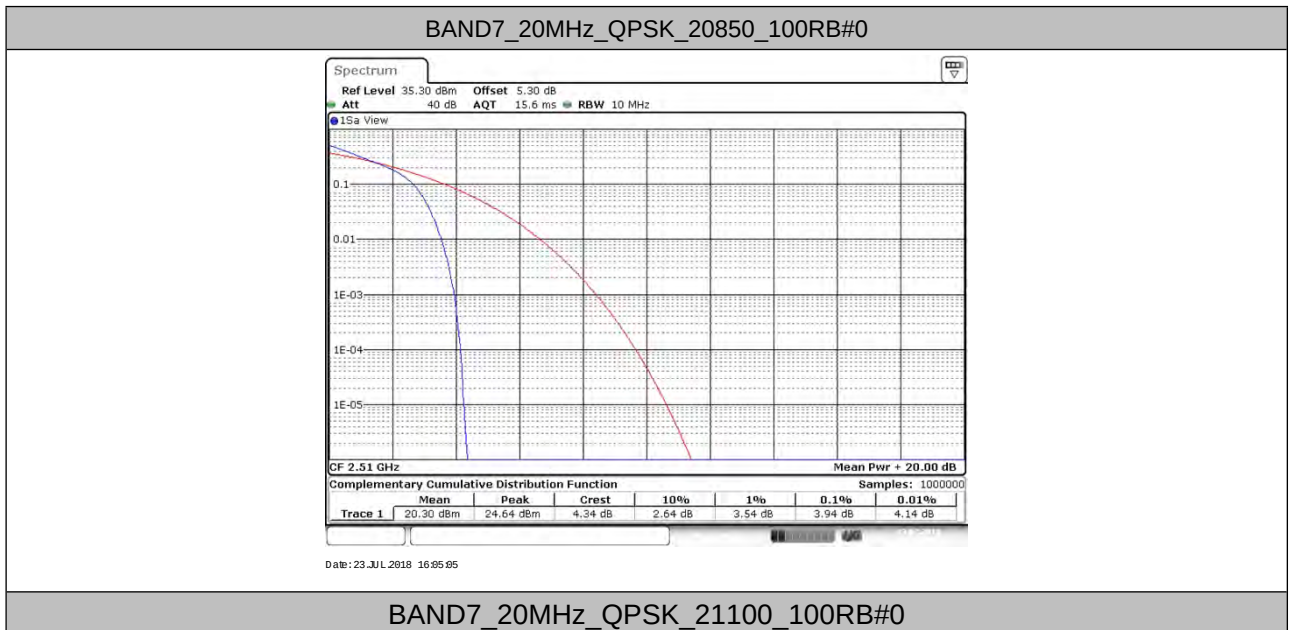


2. Peak-to-Average Ratio(CCDFF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
BAND7	20MHz	QPSK	20850	100RB#0	3.94	13	PASS
BAND7	20MHz	QPSK	21100	100RB#0	3.83	13	PASS
BAND7	20MHz	QPSK	21350	100RB#0	4.06	13	PASS
BAND7	20MHz	64QAM	20850	100RB#0	5.71	13	PASS
BAND7	20MHz	64QAM	21100	100RB#0	6.12	13	PASS
BAND7	20MHz	64QAM	21350	100RB#0	6.29	13	PASS
BAND7	20MHz	16QAM	20850	100RB#0	5.68	13	PASS
BAND7	20MHz	16QAM	21100	100RB#0	5.65	13	PASS
BAND7	20MHz	16QAM	21350	100RB#0	5.88	13	PASS

2.2. Test Plots

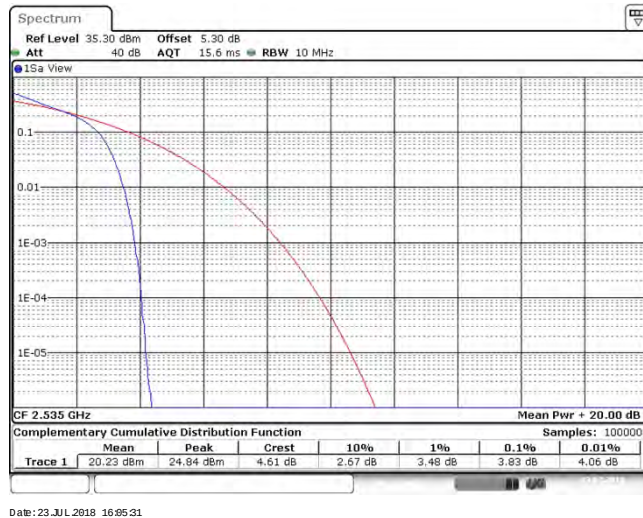




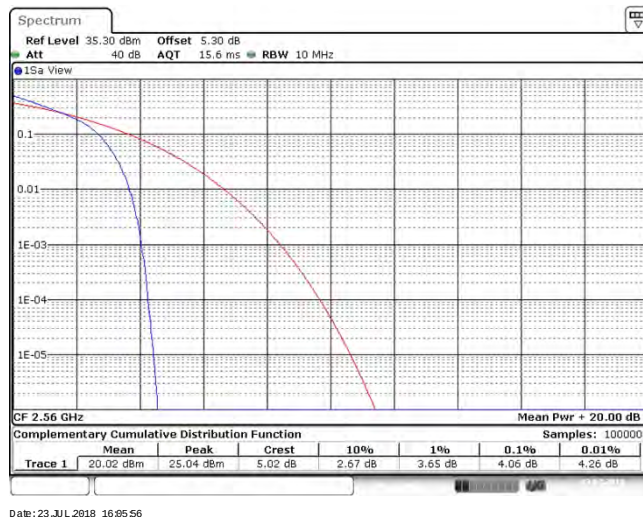
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

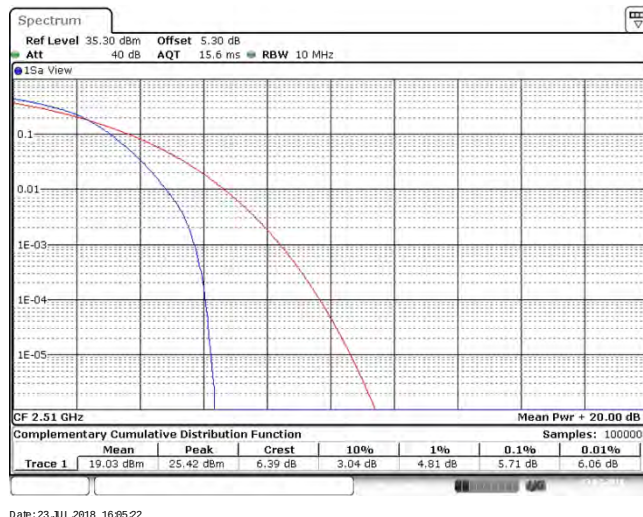
Page: 12 of 69



BAND7_20MHz_QPSK_21350_100RB#0



BAND7_20MHz_64QAM_20850_100RB#0



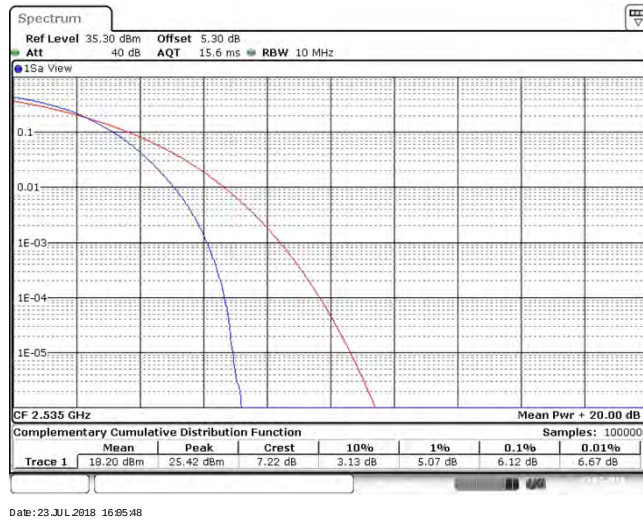
BAND7_20MHz_64QAM_21100_100RB#0



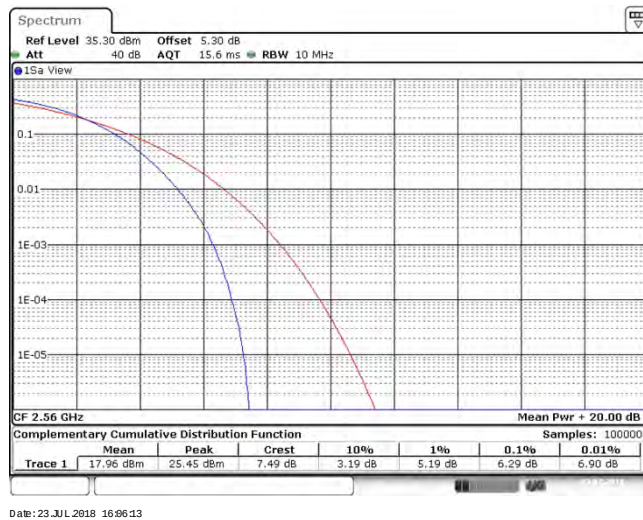
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

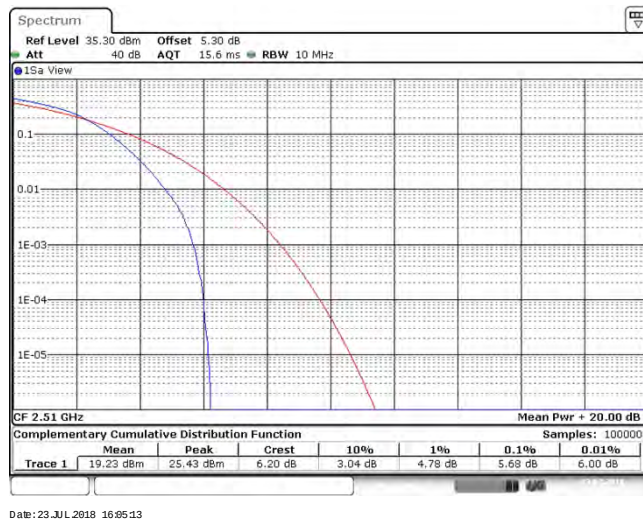
Page: 13 of 69



BAND7_20MHz_64QAM_21350_100RB#0



BAND7_20MHz_16QAM_20850_100RB#0



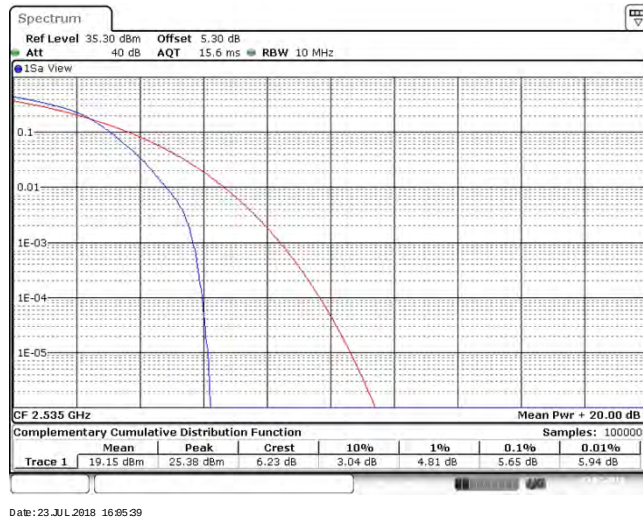
BAND7_20MHz_16QAM_21100_100RB#0



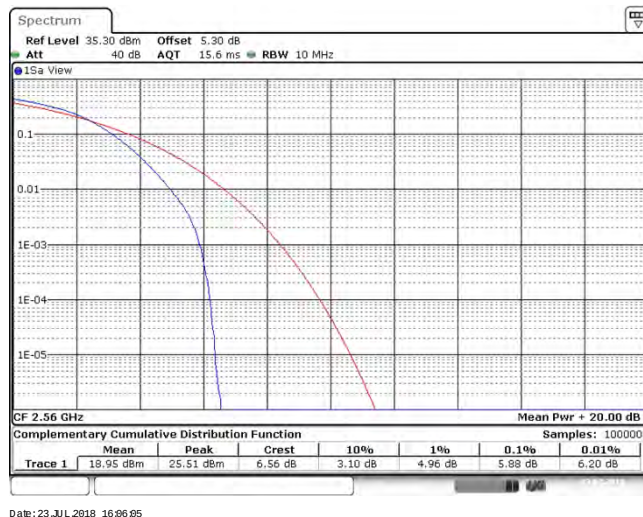
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

Page: 14 of 69



BAND7_20MHz_16QAM_21350_100RB#0



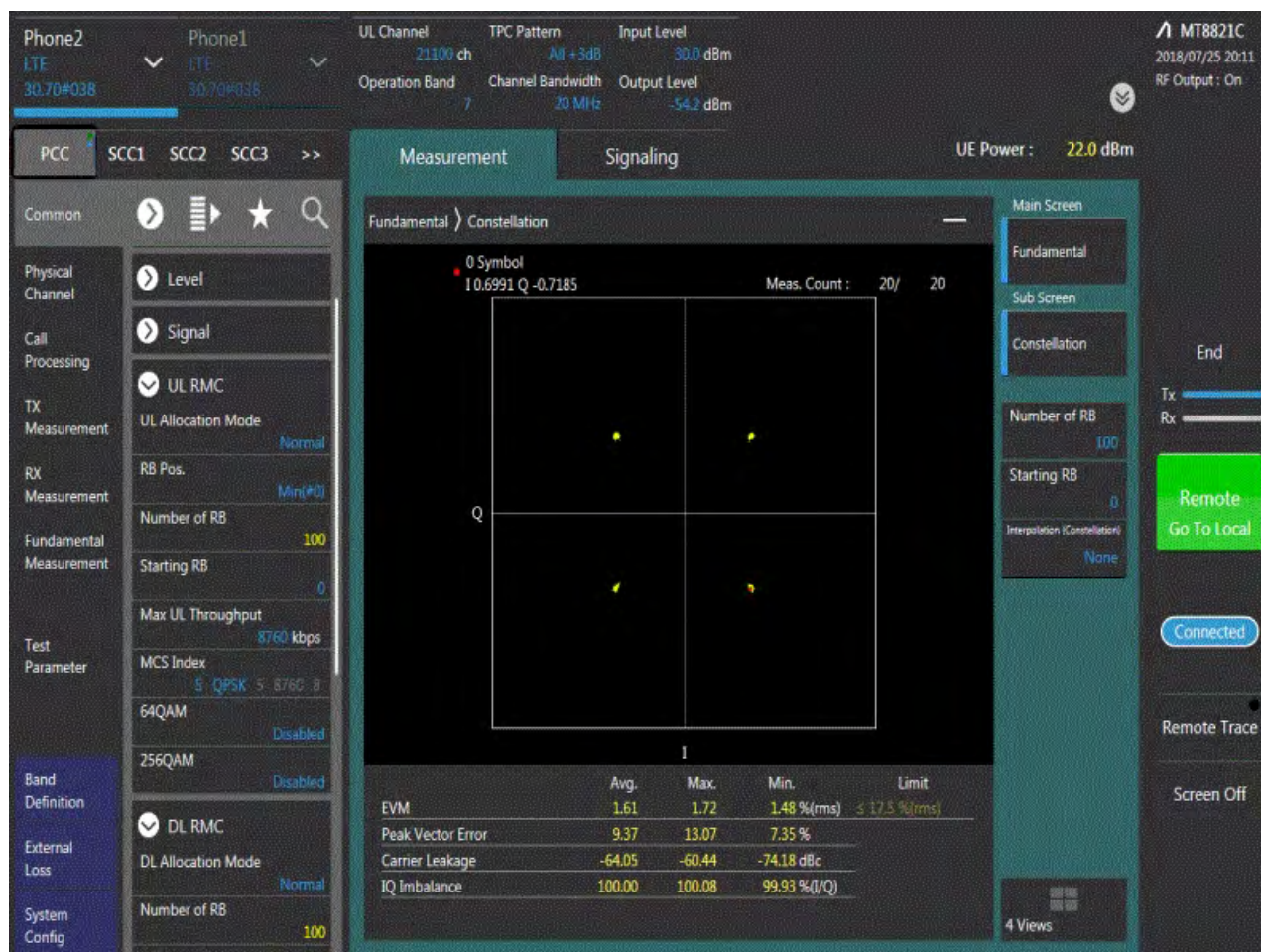


3. Modulation Characteristics

3.1. Test BAND = LTE BAND7

3.1.1. Test Mode = LTE /TM1 20MHz

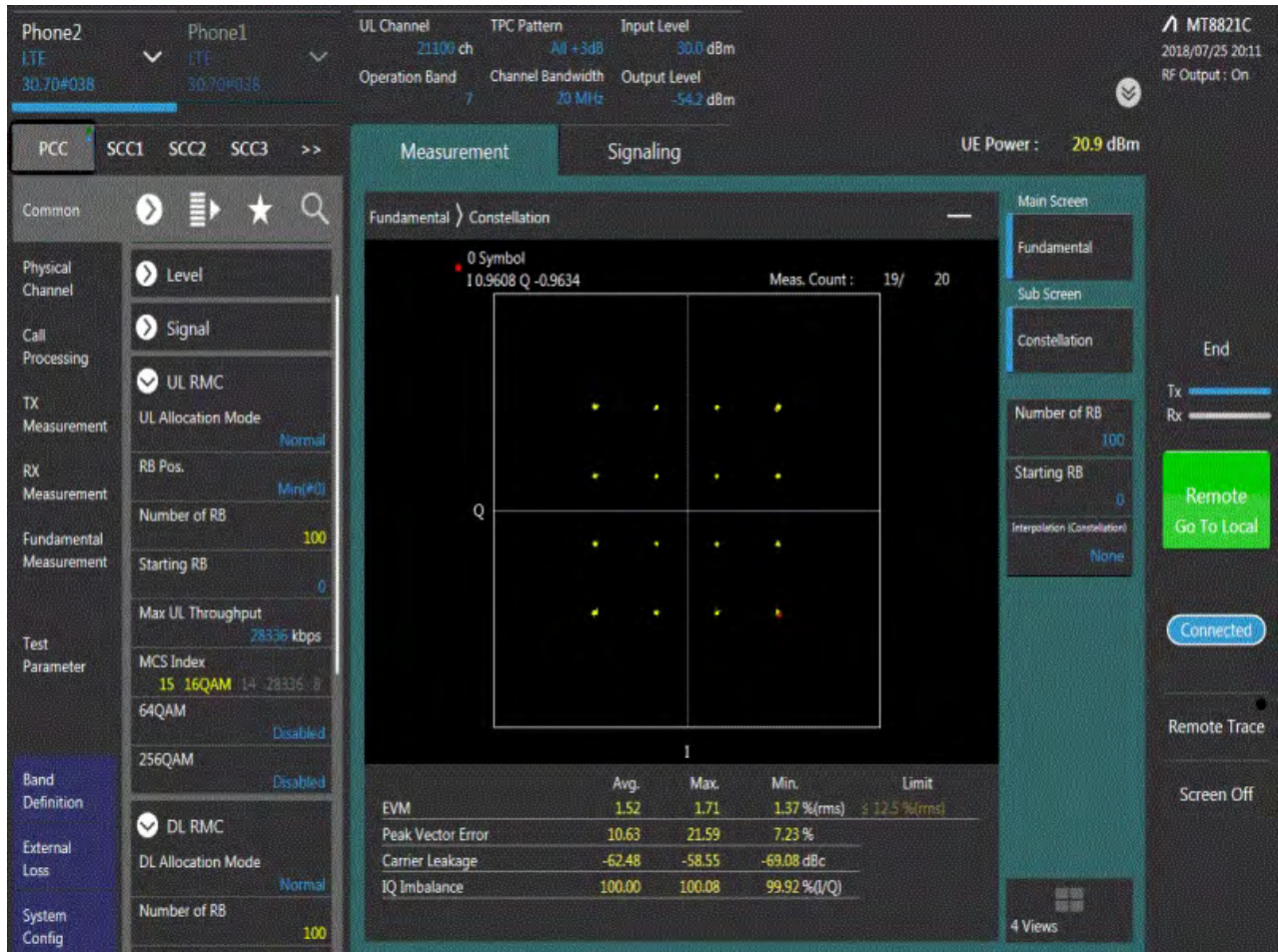
3.1.1.1. Test Channel = MCH





3.1.2. Test Mode = LTE /TM2 20MHz

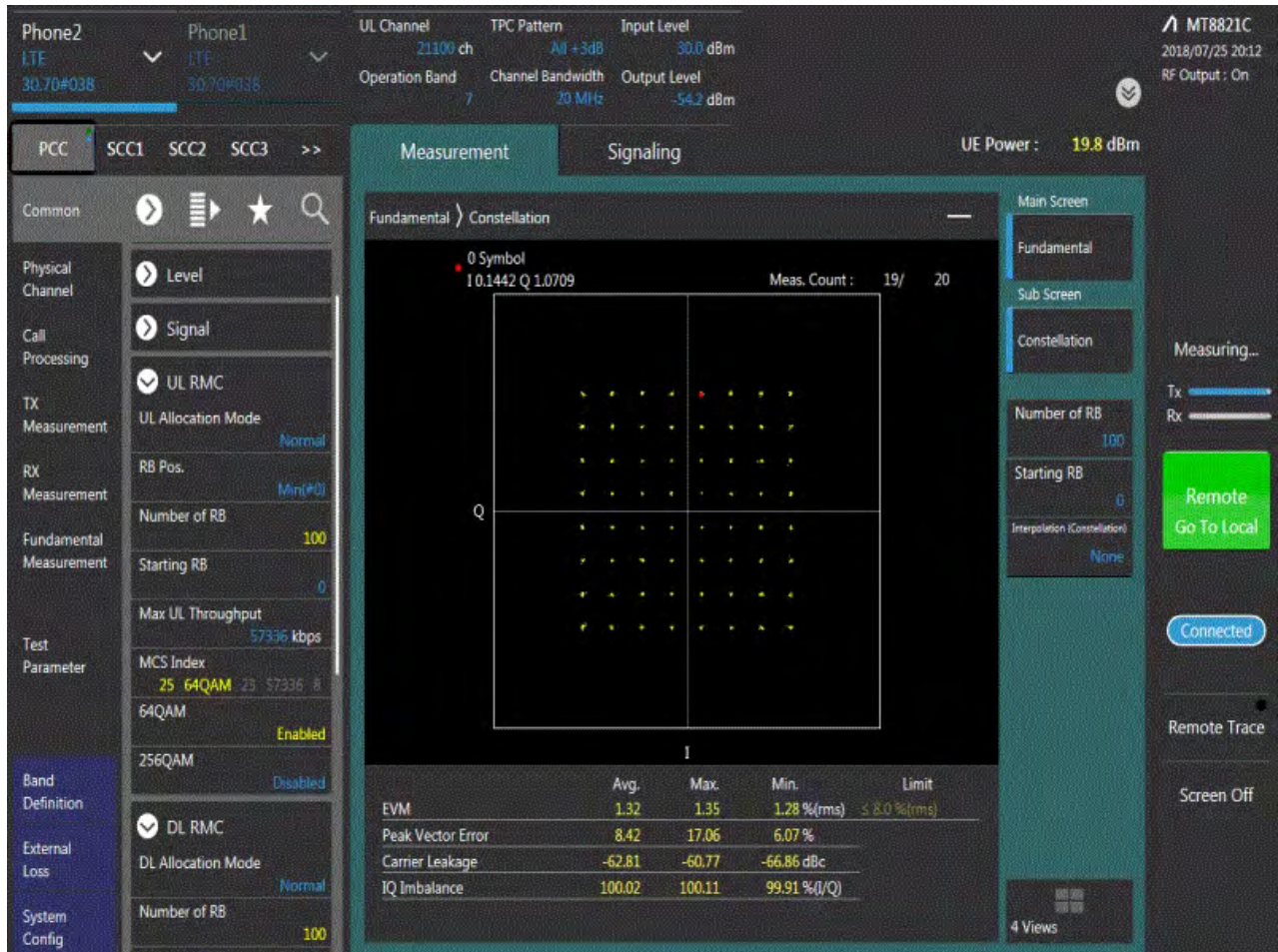
3.1.2.1. Test Channel = MCH





3.1.1. Test Mode = LTE /TM3 20MHz

3.1.1.1. 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	4.476	4.910	PASS
BAND7	5MHz	QPSK	21100	25RB#0	4.476	4.900	PASS
BAND7	5MHz	QPSK	21425	25RB#0	4.476	4.880	PASS
BAND7	5MHz	64QAM	20775	25RB#0	4.476	4.880	PASS
BAND7	5MHz	64QAM	21100	25RB#0	4.476	4.930	PASS
BAND7	5MHz	64QAM	21425	25RB#0	4.466	4.910	PASS
BAND7	5MHz	16QAM	20775	25RB#0	4.476	4.930	PASS
BAND7	5MHz	16QAM	21100	25RB#0	4.476	4.900	PASS
BAND7	5MHz	16QAM	21425	25RB#0	4.466	4.930	PASS
BAND7	10MHz	QPSK	20800	50RB#0	8.951	9.780	PASS
BAND7	10MHz	QPSK	21100	50RB#0	8.931	9.760	PASS
BAND7	10MHz	QPSK	21400	50RB#0	8.911	9.780	PASS
BAND7	10MHz	64QAM	20800	50RB#0	8.951	9.760	PASS
BAND7	10MHz	64QAM	21100	50RB#0	8.931	9.740	PASS
BAND7	10MHz	64QAM	21400	50RB#0	8.931	9.760	PASS
BAND7	10MHz	16QAM	20800	50RB#0	8.951	9.780	PASS
BAND7	10MHz	16QAM	21100	50RB#0	8.931	9.740	PASS
BAND7	10MHz	16QAM	21400	50RB#0	8.931	9.760	PASS
BAND7	15MHz	QPSK	20825	75RB#0	13.487	15.030	PASS
BAND7	15MHz	QPSK	21100	75RB#0	13.516	15.030	PASS
BAND7	15MHz	QPSK	21375	75RB#0	13.516	15.060	PASS
BAND7	15MHz	64QAM	20825	75RB#0	13.516	15.090	PASS
BAND7	15MHz	64QAM	21100	75RB#0	13.516	15.060	PASS
BAND7	15MHz	64QAM	21375	75RB#0	13.457	15.120	PASS
BAND7	15MHz	16QAM	20825	75RB#0	13.487	15.090	PASS
BAND7	15MHz	16QAM	21100	75RB#0	13.487	15.030	PASS
BAND7	15MHz	16QAM	21375	75RB#0	13.487	15.030	PASS
BAND7	20MHz	QPSK	20850	100RB#0	17.942	19.840	PASS
BAND7	20MHz	QPSK	21100	100RB#0	17.942	19.720	PASS
BAND7	20MHz	QPSK	21350	100RB#0	17.942	19.840	PASS
BAND7	20MHz	64QAM	20850	100RB#0	17.942	19.760	PASS
BAND7	20MHz	64QAM	21100	100RB#0	17.902	19.840	PASS
BAND7	20MHz	64QAM	21350	100RB#0	17.982	19.800	PASS



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

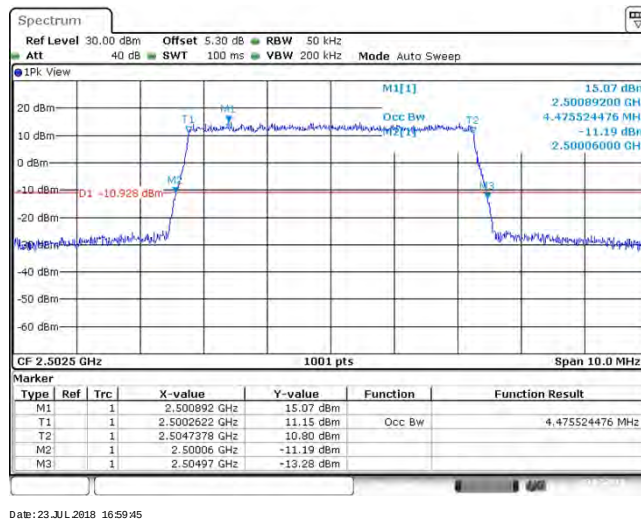
Report No.: SZEM180700654901

Page: 19 of 69

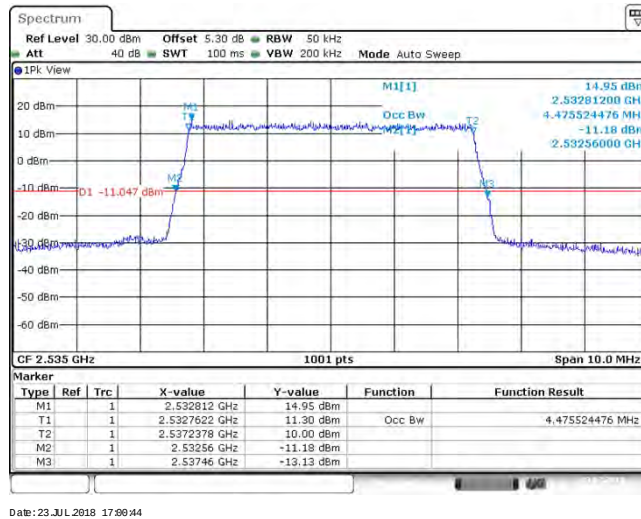
BAND7	20MHz	16QAM	20850	100RB#0	17.942	19.800	PASS
BAND7	20MHz	16QAM	21100	100RB#0	17.982	19.680	PASS
BAND7	20MHz	16QAM	21350	100RB#0	17.942	19.840	PASS

4.2. Test Plots

BAND7_5MHz_QPSK_20775_25RB#0



BAND7_5MHz_QPSK_21100_25RB#0



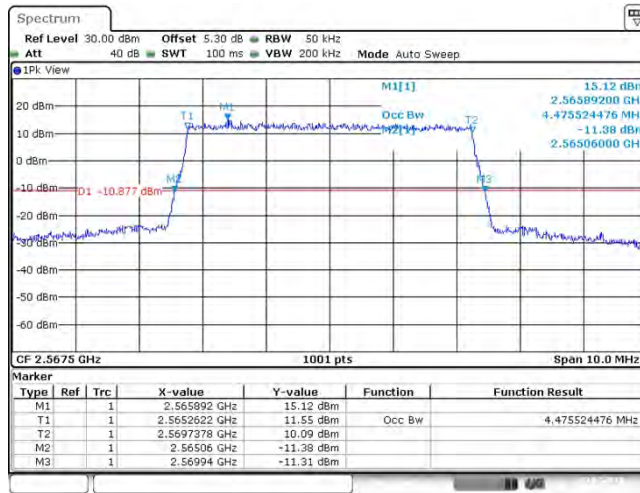
BAND7_5MHz_QPSK_21425_25RB#0



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

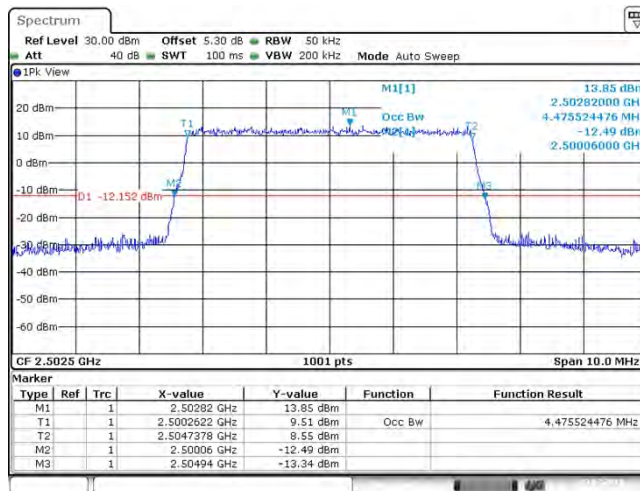
Report No.: SZEM180700654901

Page: 20 of 69



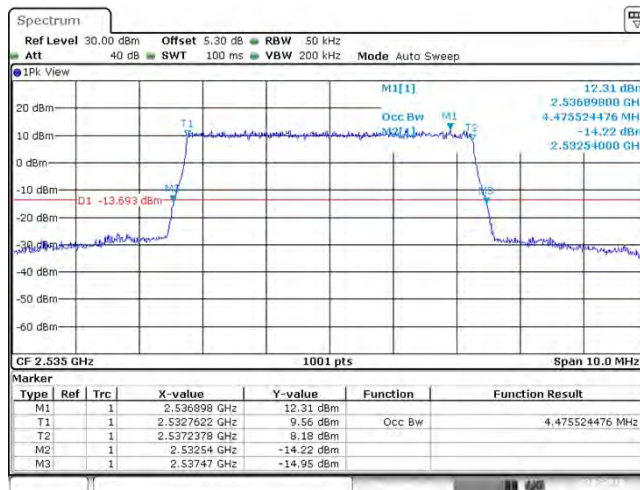
Date: 23 JUL 2018 17:01:44

BAND7_5MHz_64QAM_20775_25RB#0



Date: 23 JUL 2018 17:00:24

BAND7_5MHz_64QAM_21100_25RB#0



Date: 23 JUL 2018 17:01:24

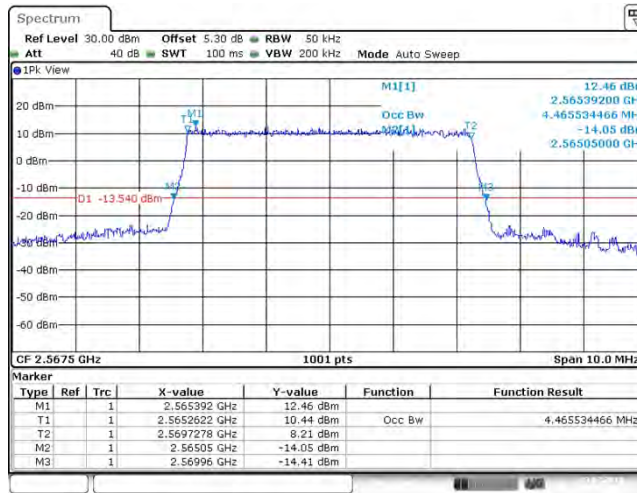
BAND7_5MHz_64QAM_21425_25RB#0



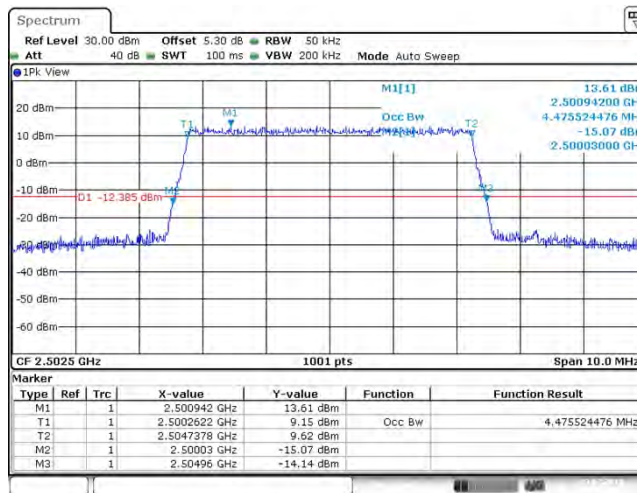
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

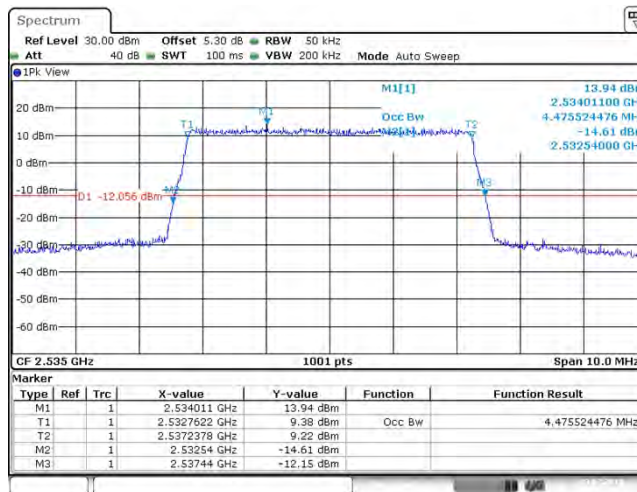
Page: 21 of 69



BAND7_5MHz_16QAM_20775_25RB#0



BAND7_5MHz_16QAM_21100_25RB#0



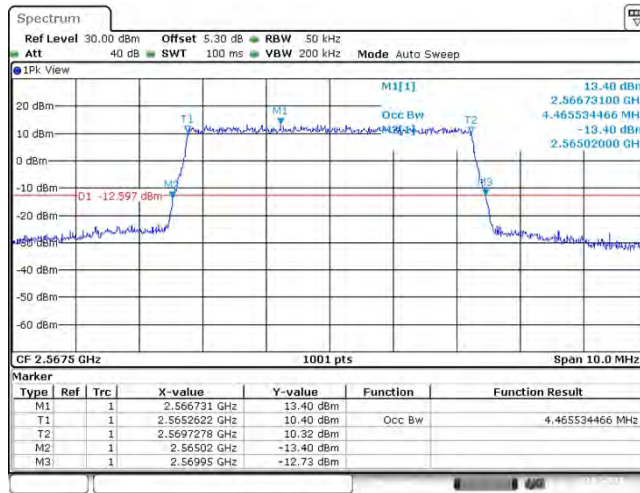
BAND7_5MHz_16QAM_21425_25RB#0



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

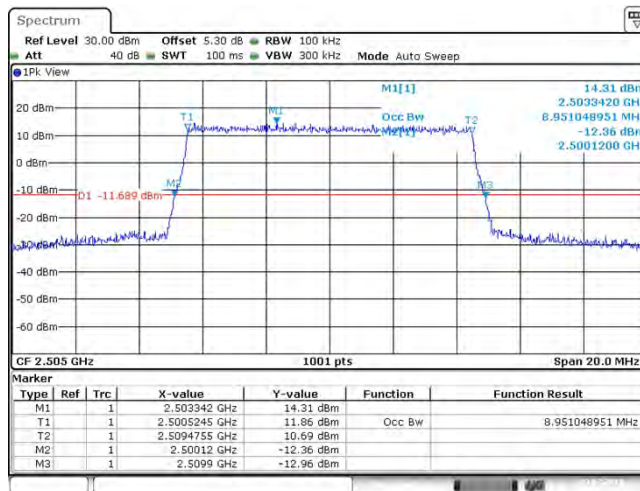
Report No.: SZEM180700654901

Page: 22 of 69



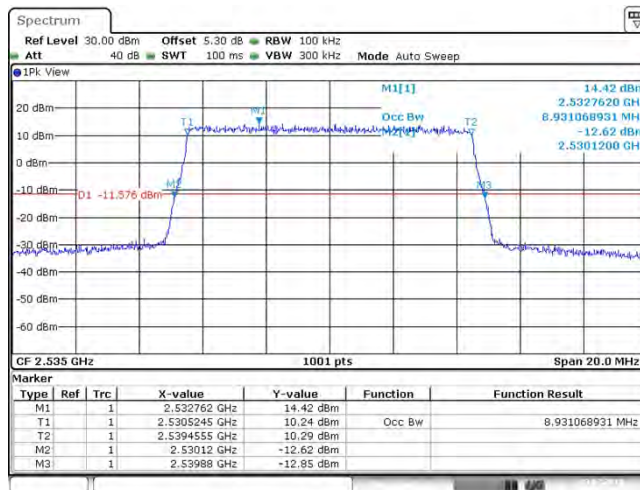
Date: 23 JUL 2018 17:02:03

BAND7_10MHz_QPSK_20800_50RB#0



Date: 23 JUL 2018 17:02:41

BAND7_10MHz_QPSK_21100_50RB#0



Date: 23 JUL 2018 17:03:19

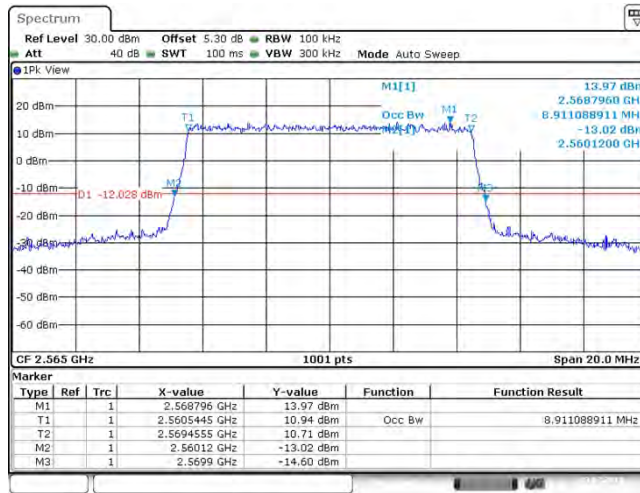
BAND7_10MHz_QPSK_21400_50RB#0



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

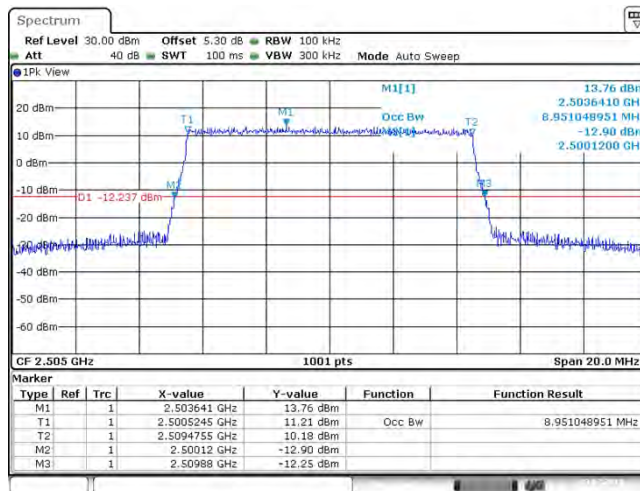
Report No.: SZEM180700654901

Page: 23 of 69



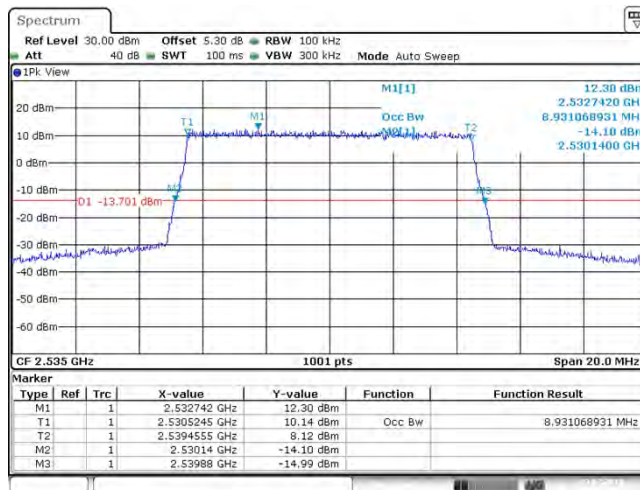
Date: 23 JUL 2018 17:53:58

BAND7_10MHz_64QAM_20800_50RB#0



Date: 23 JUL 2018 17:53:97

BAND7_10MHz_64QAM_21100_50RB#0



Date: 23 JUL 2018 17:53:45

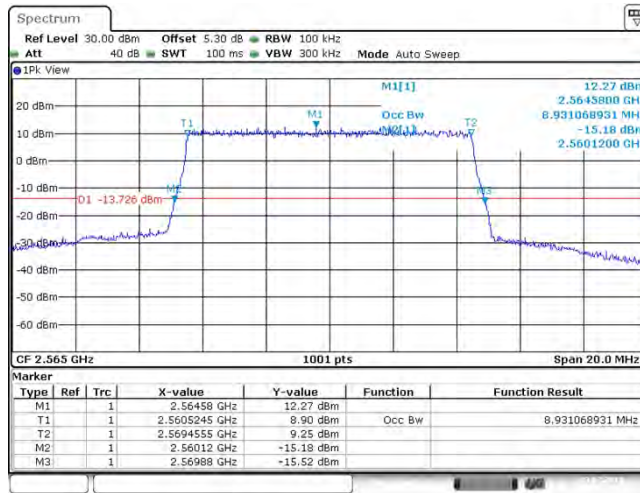
BAND7_10MHz_64QAM_21400_50RB#0



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

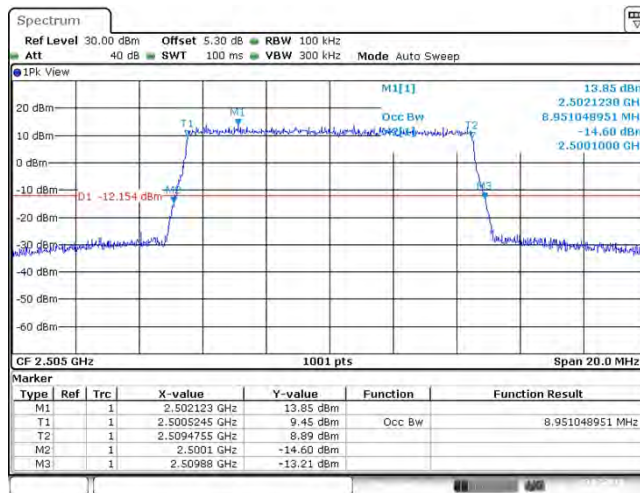
Report No.: SZEM180700654901

Page: 24 of 69



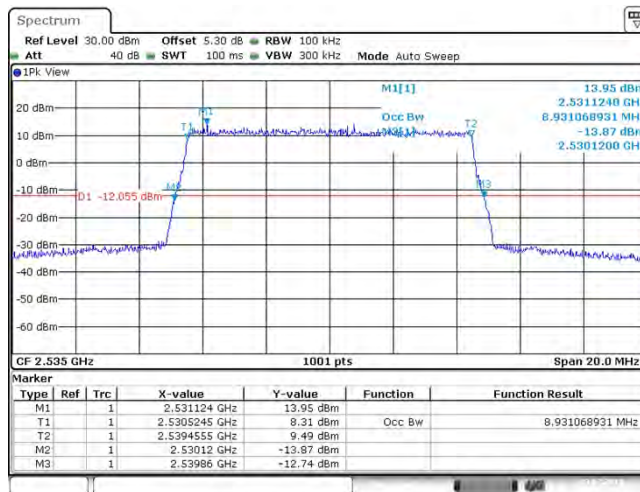
Date: 23 JUL 2018 17:04:23

BAND7_10MHz_16QAM_20800_50RB#0



Date: 23 JUL 2018 17:02:54

BAND7_10MHz_16QAM_21100_50RB#0



Date: 23 JUL 2018 17:03:32

BAND7_10MHz_16QAM_21400_50RB#0

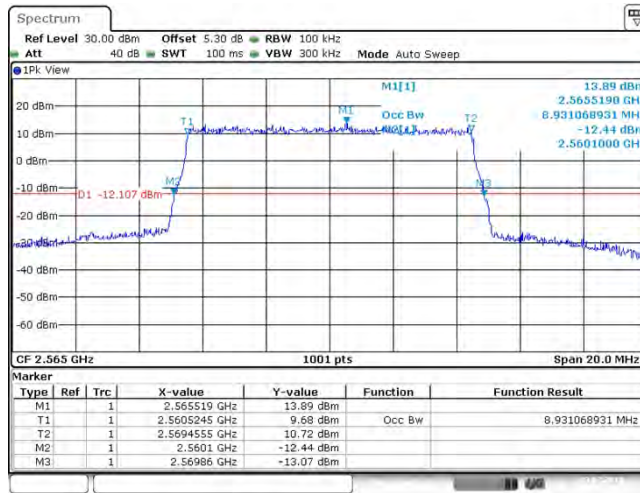
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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

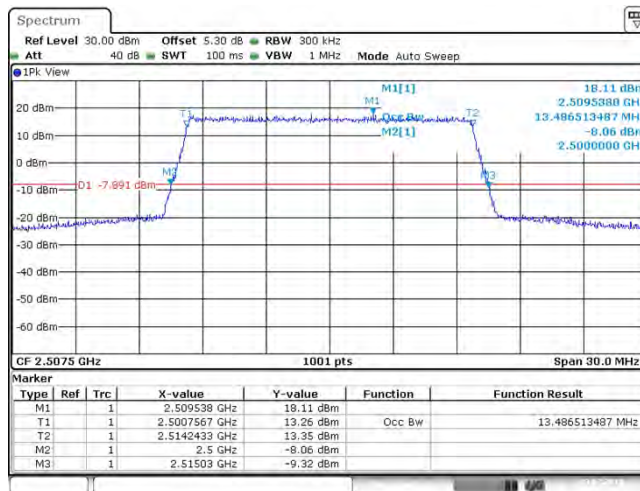
Report No.: SZEM180700654901

Page: 25 of 69



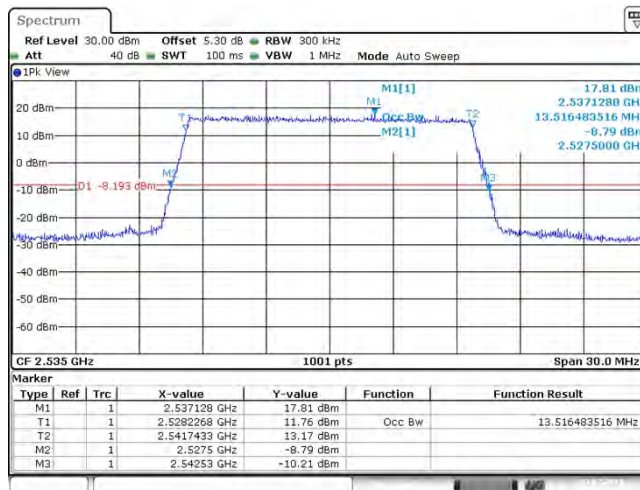
Date: 23 JUL 2018 17:04:11

BAND7_15MHz_QPSK_20825_75RB#0



Date: 23 JUL 2018 17:04:11

BAND7_15MHz_QPSK_21100_75RB#0



Date: 23 JUL 2018 17:05:29

BAND7_15MHz_QPSK_21375_75RB#0

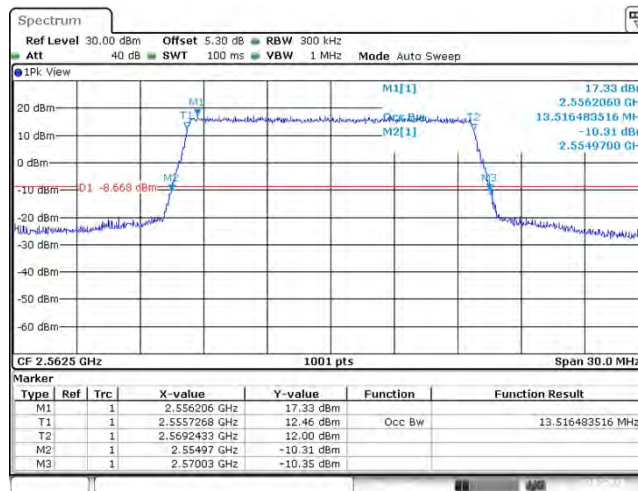
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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

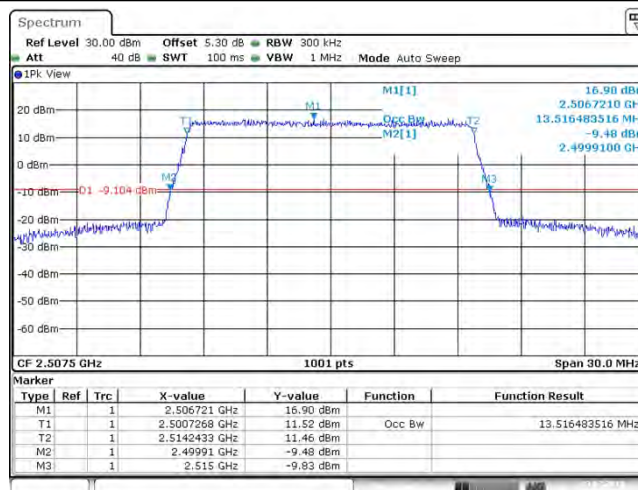
Report No.: SZEM180700654901

Page: 26 of 69



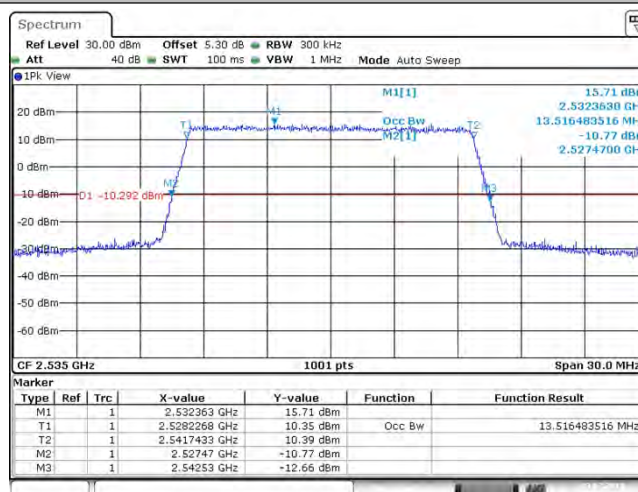
Date: 23 JUL 2018 17:55:58

BAND7_15MHz_64QAM_20825_75RB#0



Date: 23 JUL 2018 17:55:57

BAND7_15MHz_64QAM_21100_75RB#0



Date: 23 JUL 2018 17:55:45

BAND7_15MHz_64QAM_21375_75RB#0

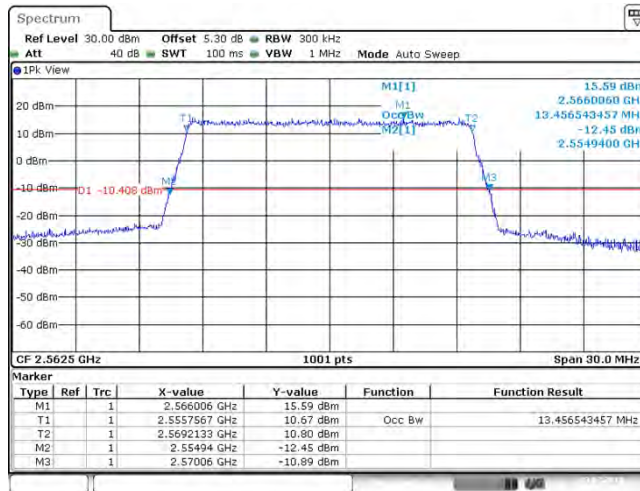
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

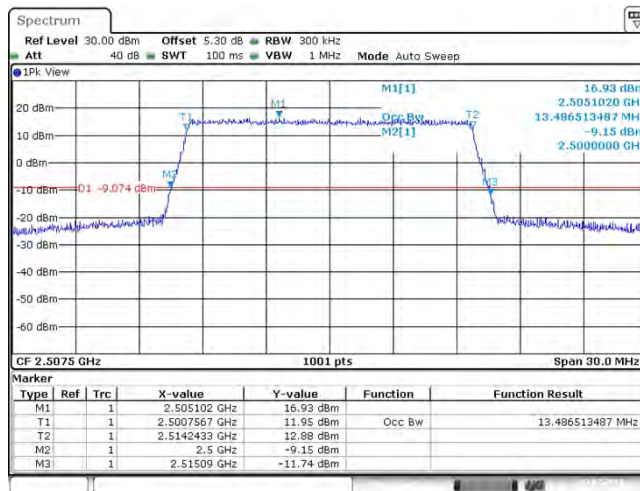
Report No.: SZEM180700654901

Page: 27 of 69



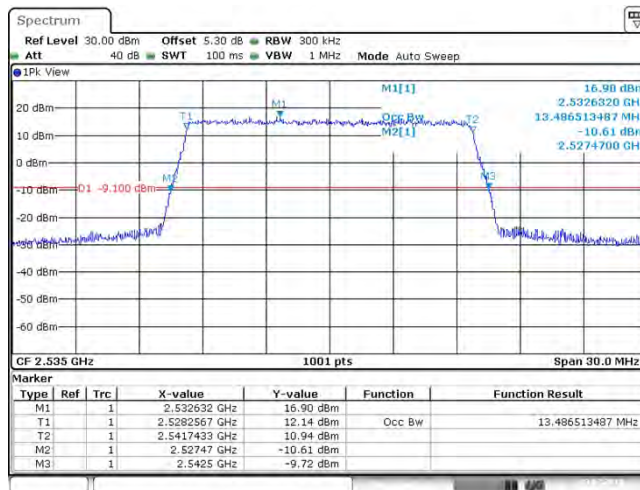
Date: 23 JUL 2018 17:06:24

BAND7_15MHz_16QAM_20825_75RB#0



Date: 23 JUL 2018 17:04:54

BAND7_15MHz_16QAM_21100_75RB#0



Date: 23 JUL 2018 17:05:33

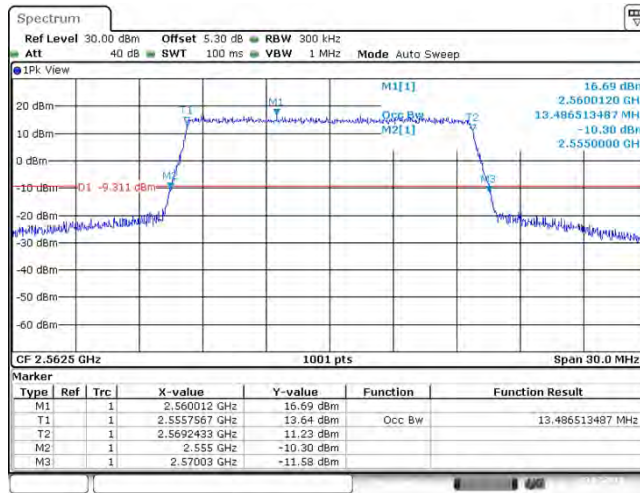
BAND7_15MHz_16QAM_21375_75RB#0



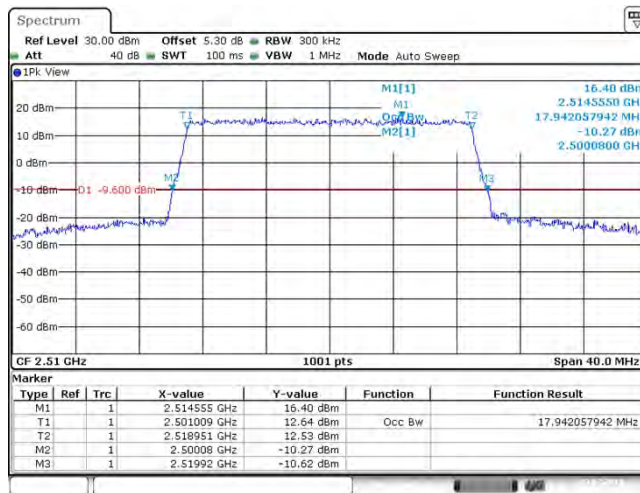
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

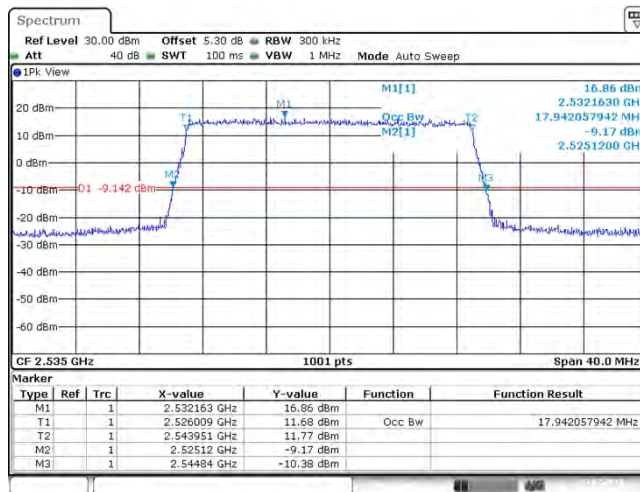
Page: 28 of 69



BAND7_20MHz_QPSK_20850_100RB#0



BAND7_20MHz_QPSK_21100_100RB#0



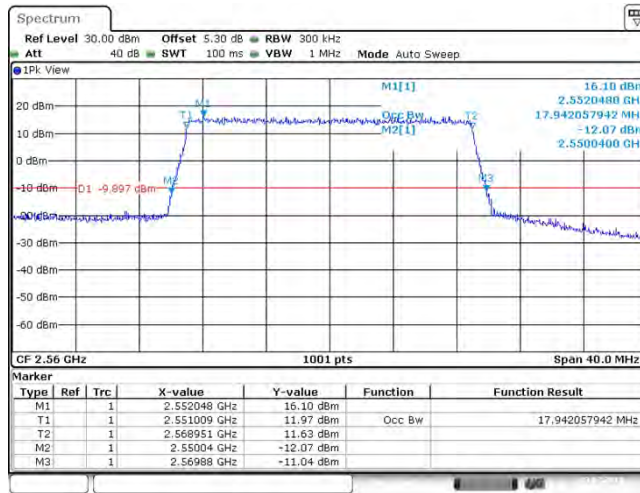
BAND7_20MHz_QPSK_21350_100RB#0



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

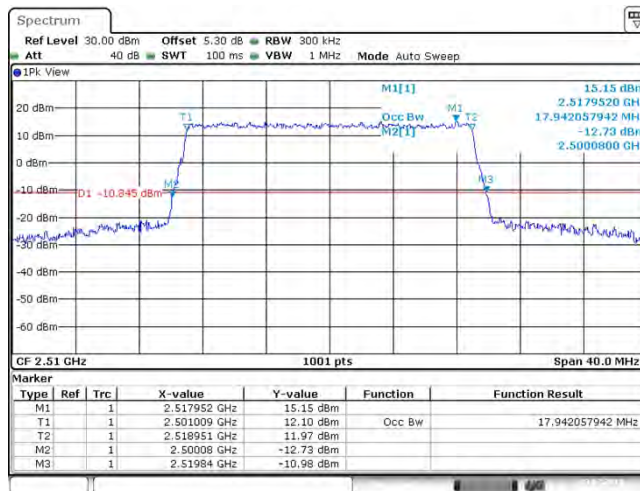
Report No.: SZEM180700654901

Page: 29 of 69



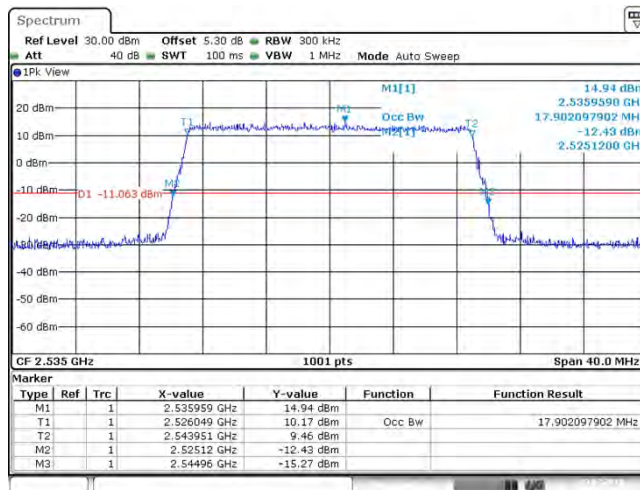
Date: 23 JUL 2018 17:57:59

BAND7_20MHz_64QAM_20850_100RB#0



Date: 23 JUL 2018 17:57:57

BAND7_20MHz_64QAM_21100_100RB#0



Date: 23 JUL 2018 17:57:46

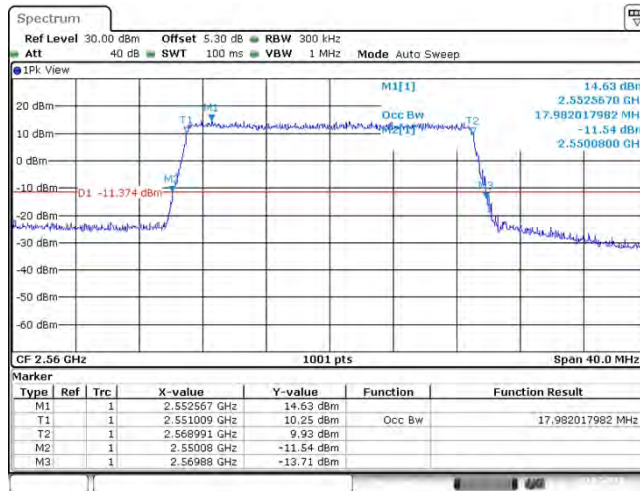
BAND7_20MHz_64QAM_21350_100RB#0



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

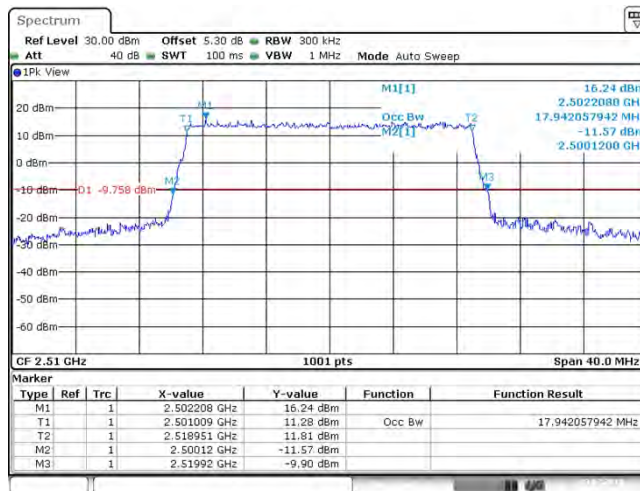
Report No.: SZEM180700654901

Page: 30 of 69



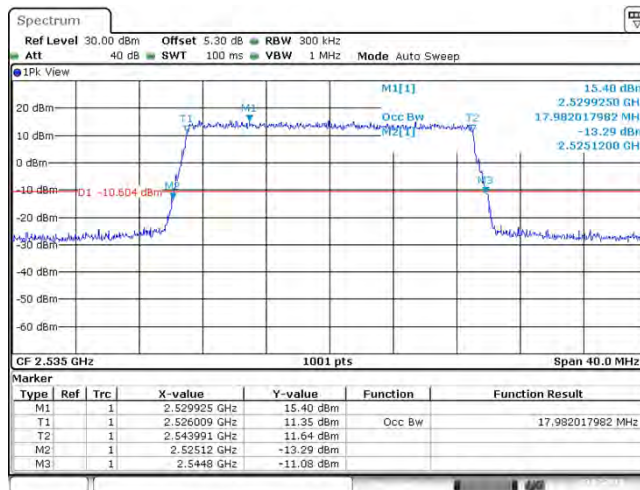
Date: 23.JUL 2018 17:88:25

BAND7_20MHz_16QAM_20850_100RB#0



Date: 23.JUL 2018 17:86:55

BAND7_20MHz_16QAM_21100_100RB#0



Date: 23.JUL 2018 17:97:33

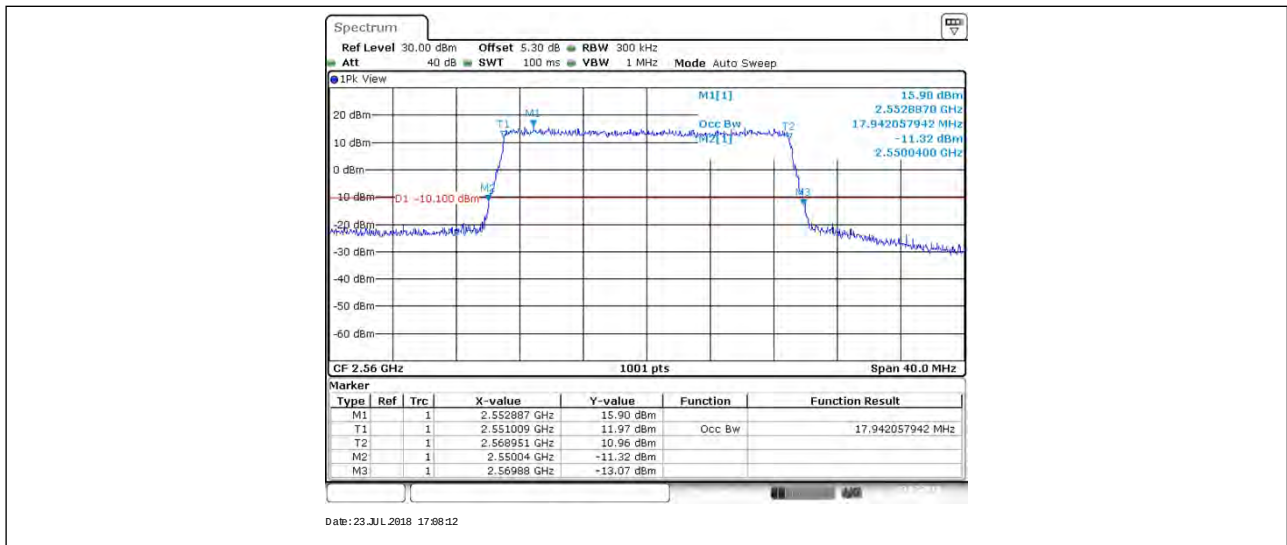
BAND7_20MHz_16QAM_21350_100RB#0



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

Report No.: SZEM180700654901

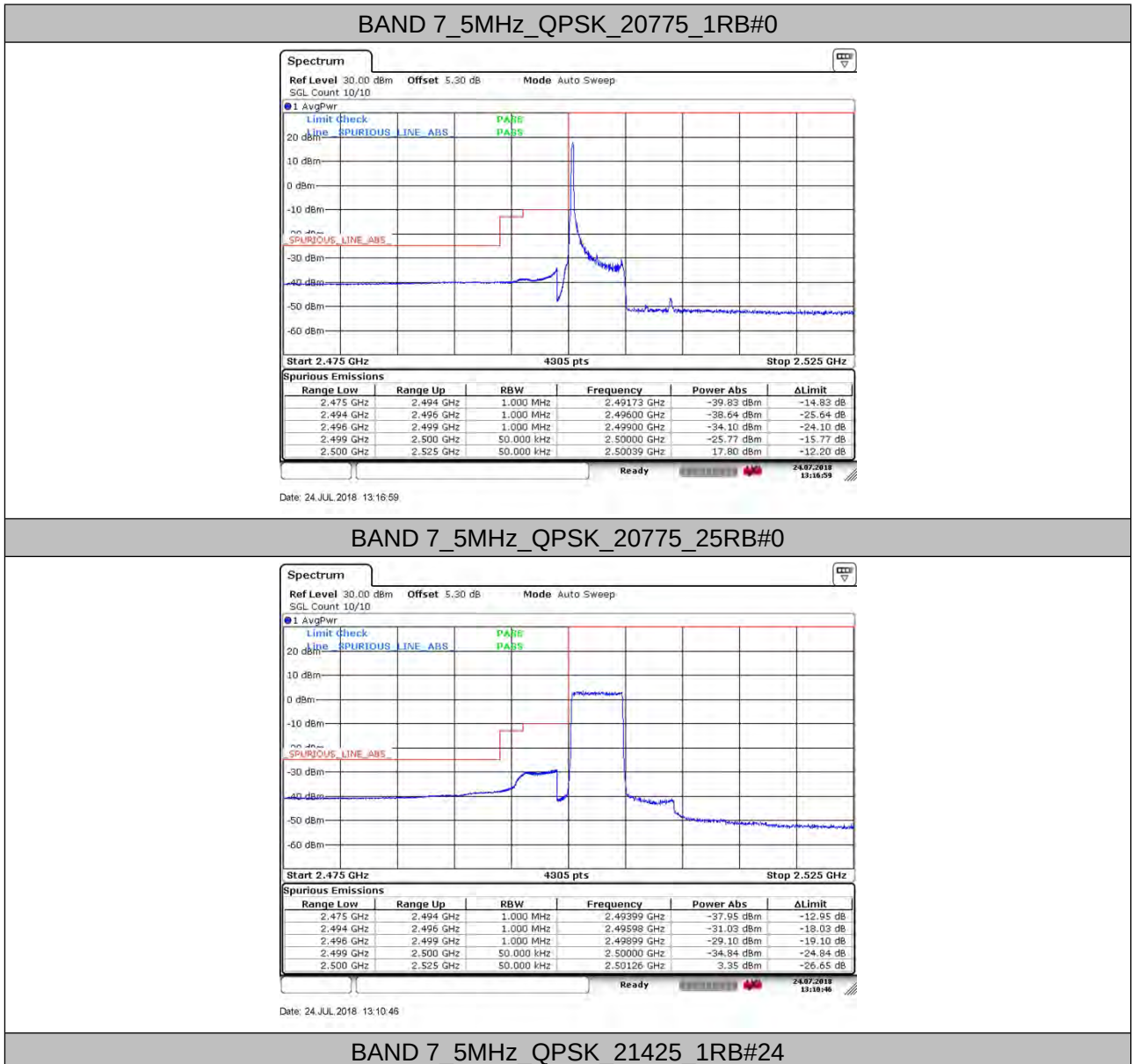
Page: 31 of 69





5. Band Edge Compliance

5.1. Test Plots

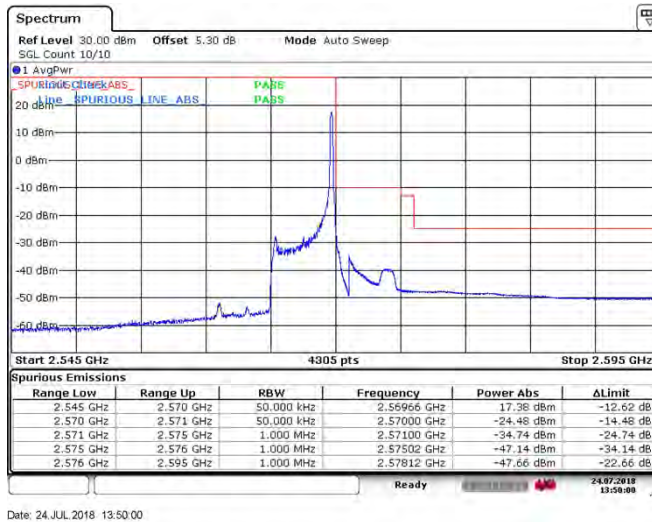




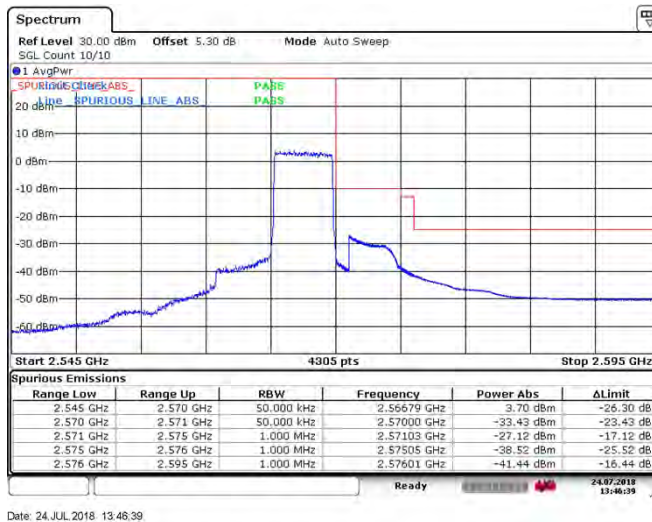
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

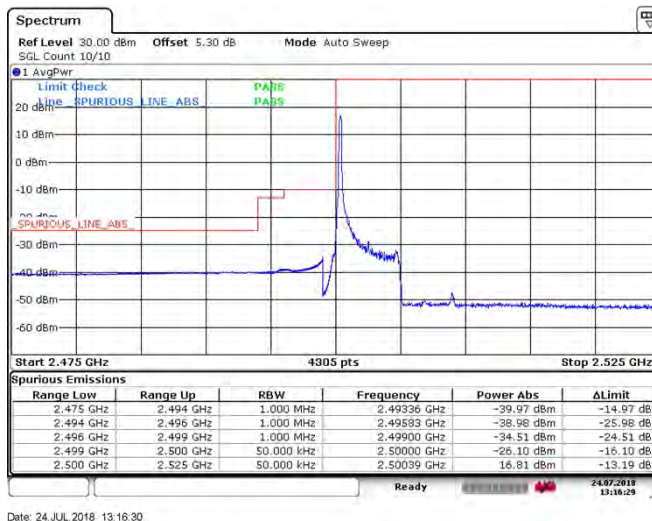
Page: 33 of 69



BAND 7_5MHz_QPSK_21425_25RB#0



BAND 7_5MHz_16QAM_20775_1RB#0



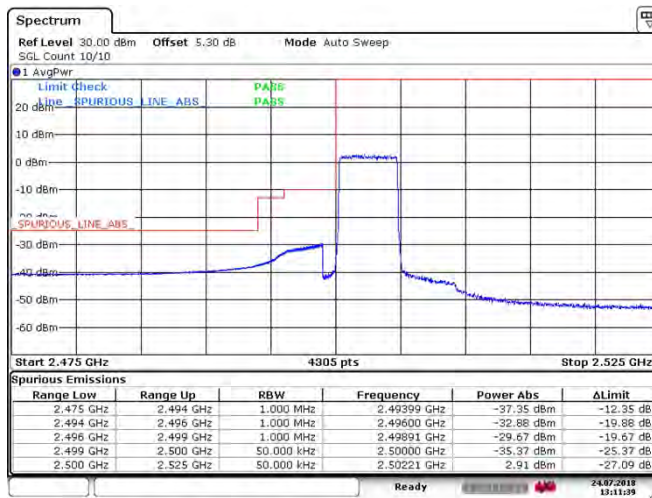
BAND 7_5MHz_16QAM_20775_25RB#0



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

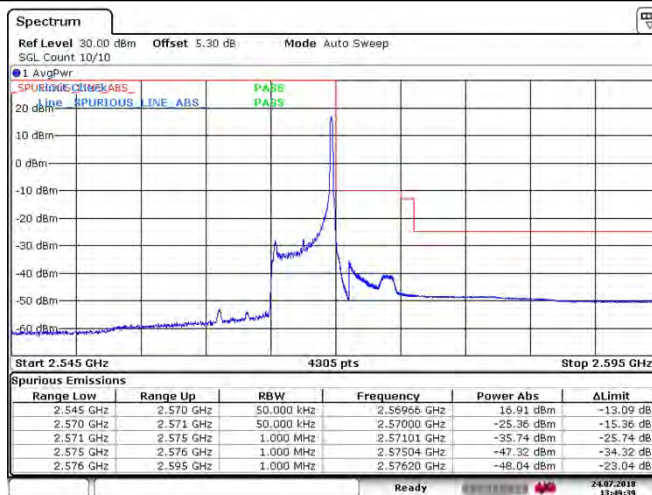
Report No.: SZEM180700654901

Page: 34 of 69



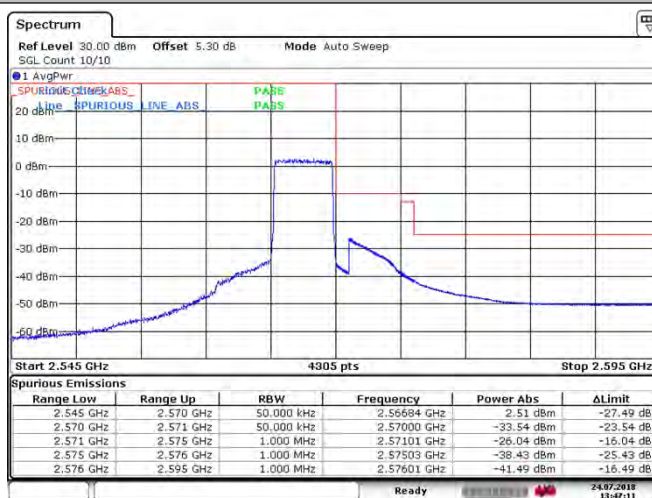
Date: 24 JUL 2018 13:11:39

BAND 7_5MHz_16QAM_21425_1RB#24



Date: 24 JUL 2018 13:49:39

BAND 7_5MHz_16QAM_21425_25RB#0



Date: 24 JUL 2018 13:47:11

BAND 7_5MHz_64QAM_20775_1RB#0

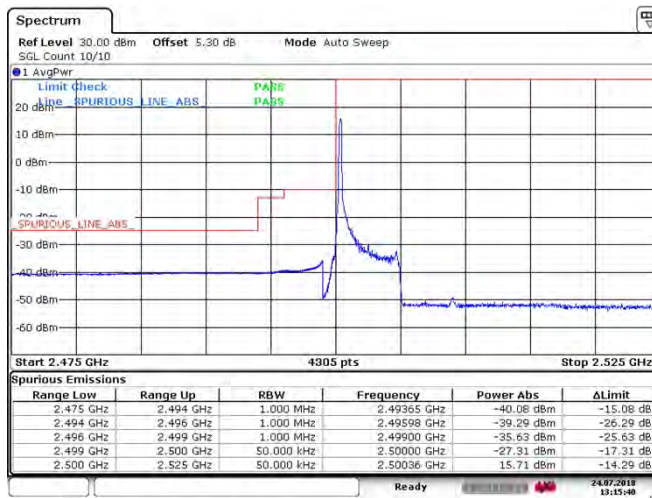
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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

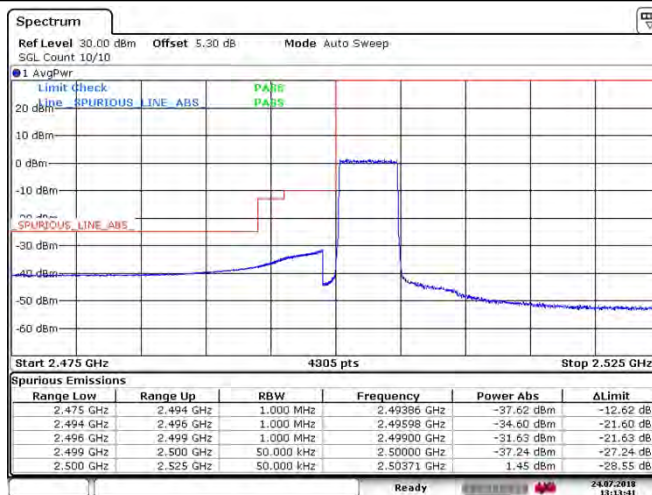
Report No.: SZEM180700654901

Page: 35 of 69



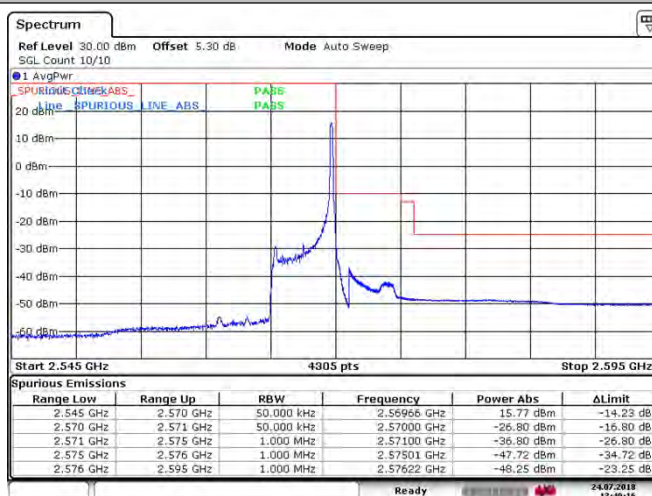
Date: 24 JUL 2018 13:15:40

BAND 7_5MHz_64QAM_20775_25RB#0



Date: 24 JUL 2018 13:13:41

BAND 7_5MHz_64QAM_21425_1RB#24



Date: 24 JUL 2018 13:49:17

BAND 7_5MHz_64QAM_21425_25RB#0

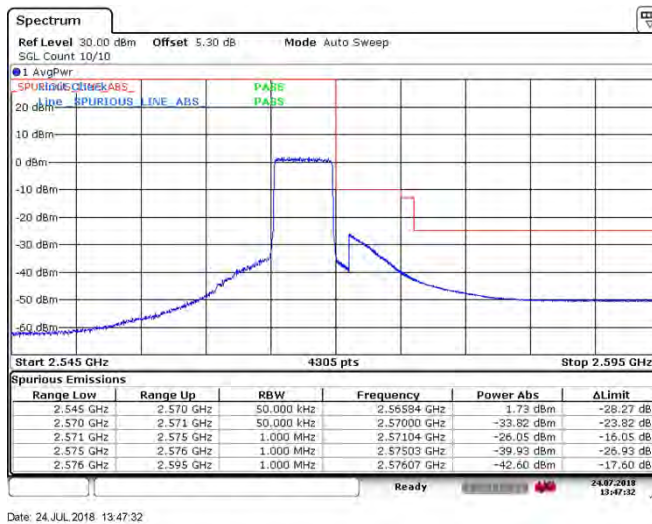
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

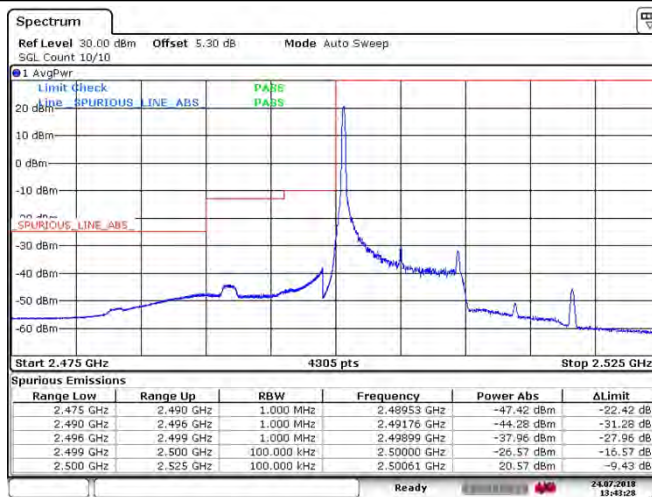
Report No.: SZEM180700654901

Page: 36 of 69



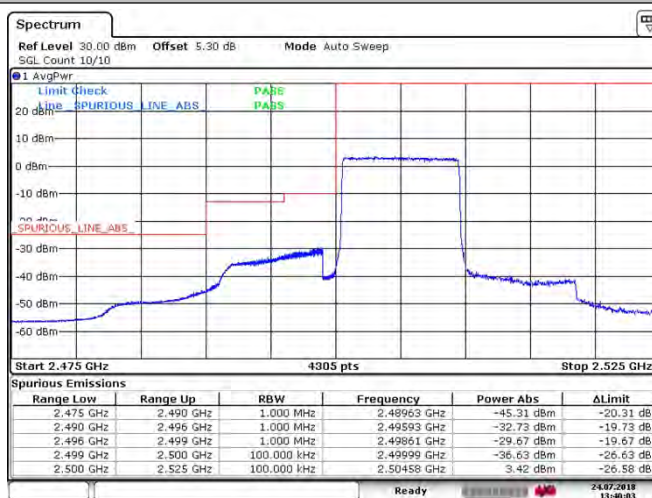
Date: 24 JUL 2018 13:47:32

BAND 7_10MHz_QPSK_20800_1RB#0



Date: 24 JUL 2018 13:43:28

BAND 7_10MHz_QPSK_20800_50RB#0



Date: 24 JUL 2018 13:40:03

BAND 7_10MHz_QPSK_21400_1RB#49

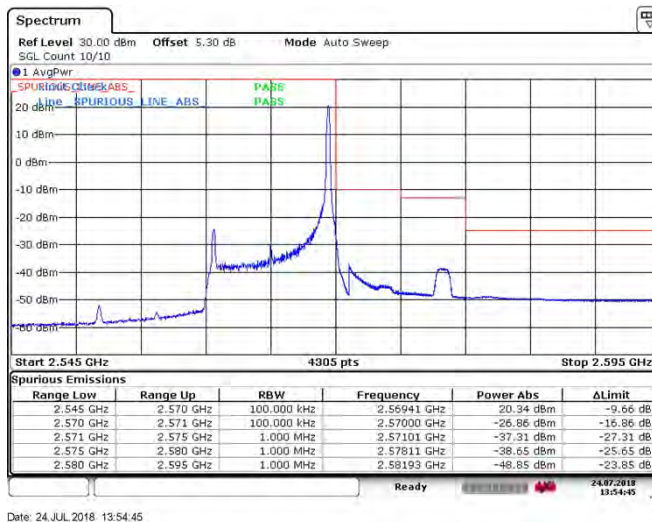
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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



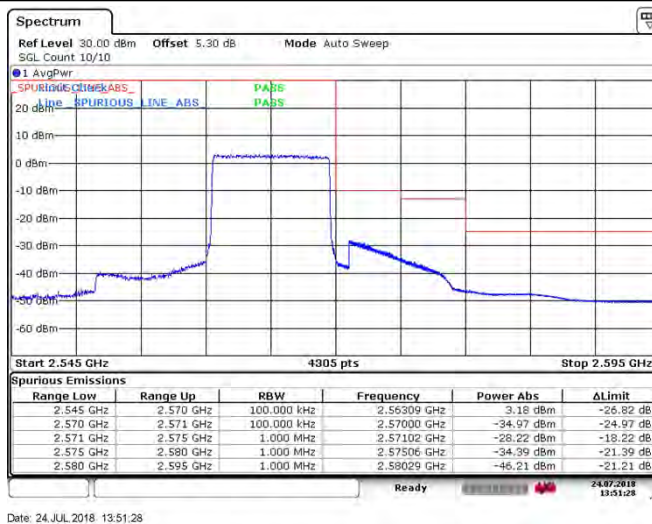
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

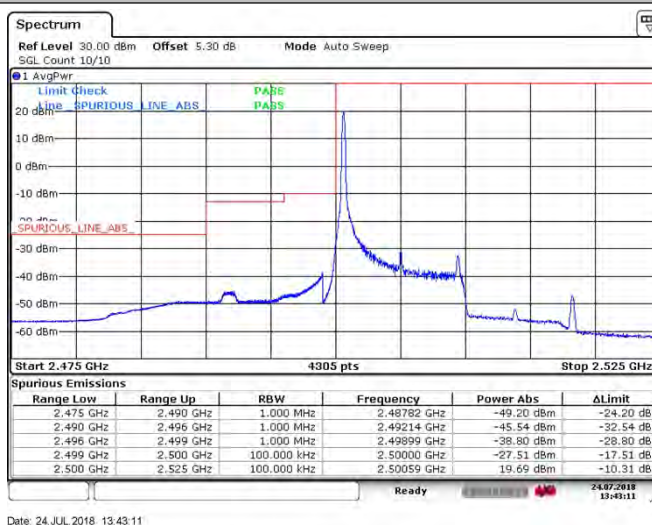
Page: 37 of 69



BAND 7_10MHz_QPSK_21400_50RB#0



BAND 7_10MHz_16QAM_20800_1RB#0



BAND 7_10MHz_16QAM_20800_50RB#0

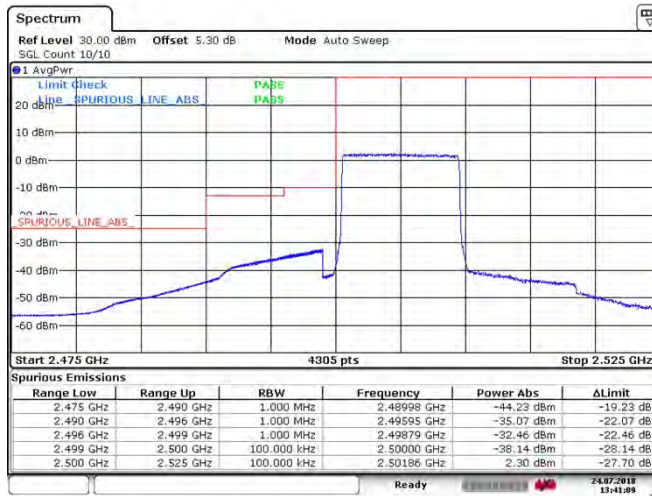
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

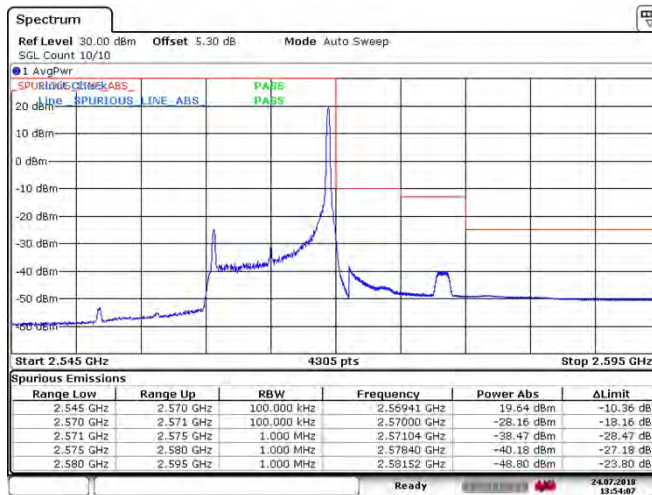
Report No.: SZEM180700654901

Page: 38 of 69



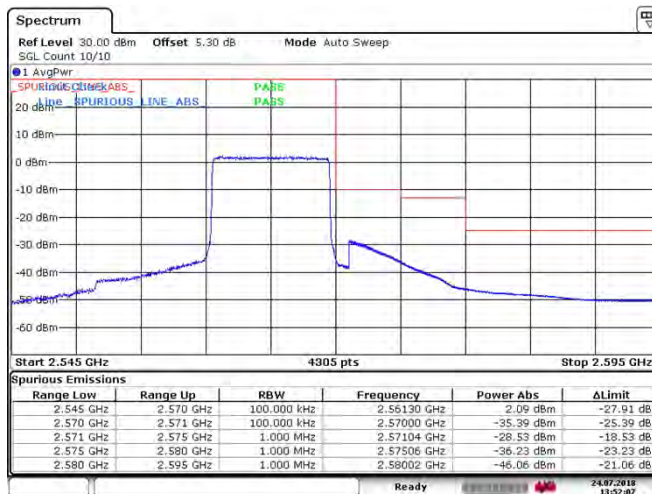
Date: 24 JUL 2018 13:41:09

BAND 7_10MHz_16QAM_21400_1RB#49



Date: 24 JUL 2018 13:54:08

BAND 7_10MHz_16QAM_21400_50RB#0



Date: 24 JUL 2018 13:52:07

BAND 7_10MHz_64QAM_20800_1RB#0

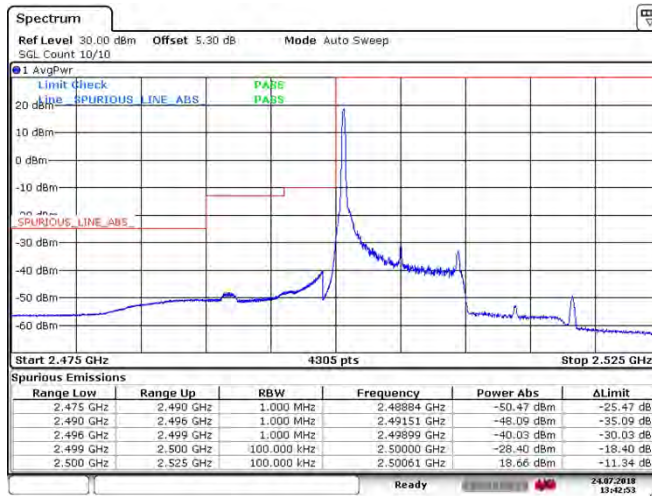
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

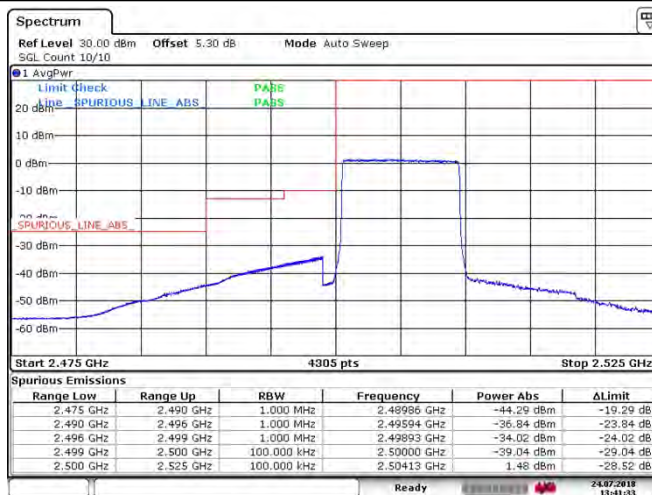
Report No.: SZEM180700654901

Page: 39 of 69



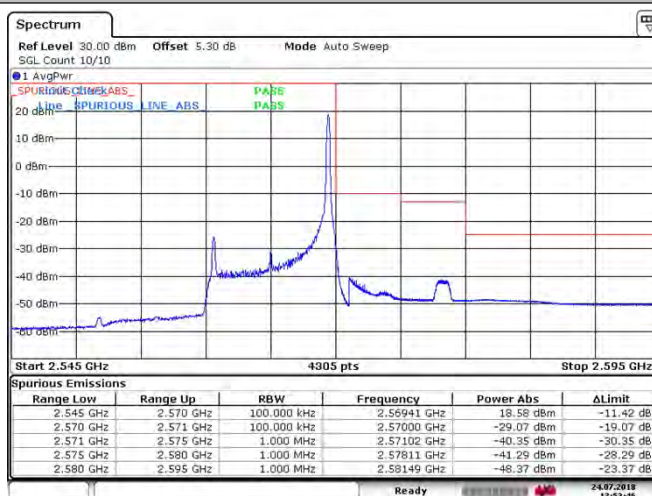
Date: 24 JUL 2018 13:42:53

BAND 7_10MHz_64QAM_20800_50RB#0



Date: 24 JUL 2018 13:41:33

BAND 7_10MHz_64QAM_21400_1RB#49



Date: 24 JUL 2018 13:53:47

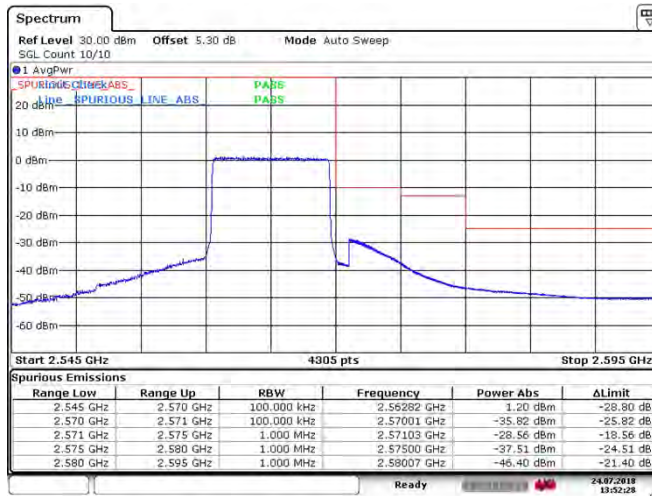
BAND 7_10MHz_64QAM_21400_50RB#0



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

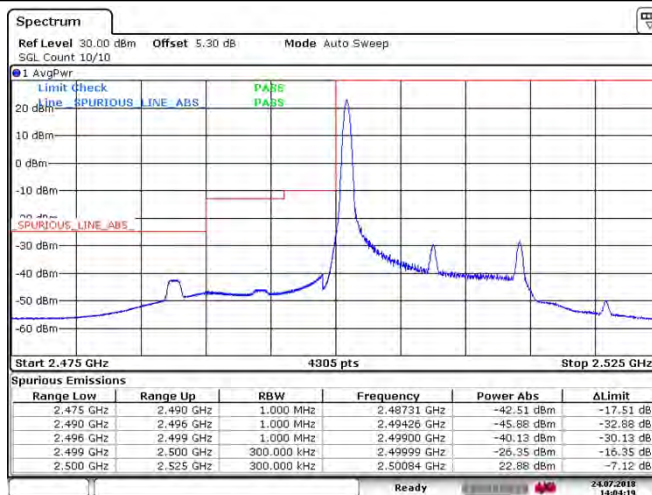
Report No.: SZEM180700654901

Page: 40 of 69



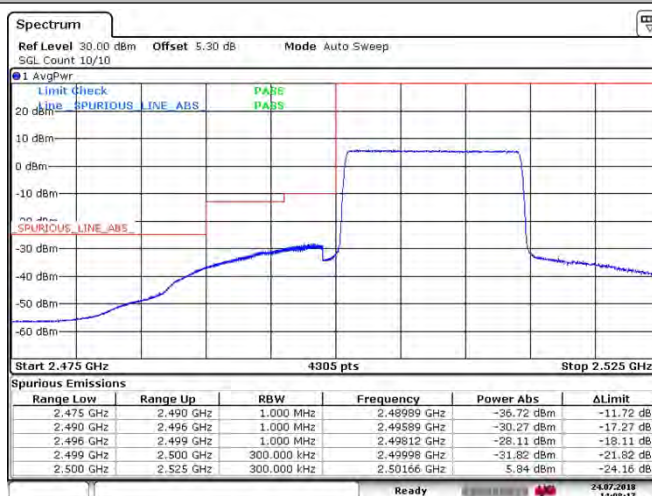
Date: 24 JUL 2018 13:52:28

BAND 7_15MHz_QPSK_20825_1RB#0



Date: 24 JUL 2018 14:04:19

BAND 7_15MHz_QPSK_20825_75RB#0



Date: 24 JUL 2018 14:08:17

BAND 7_15MHz_QPSK_21375_1RB#74

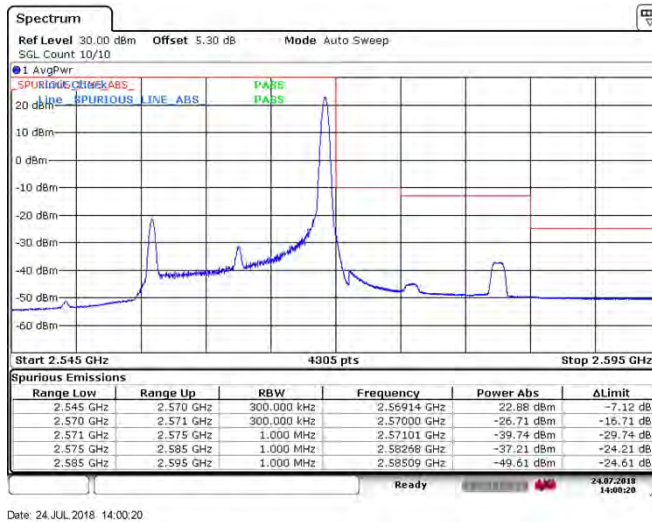
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



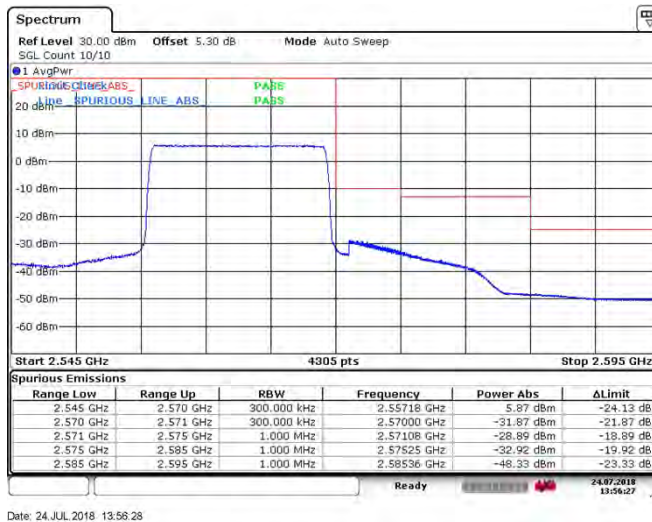
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

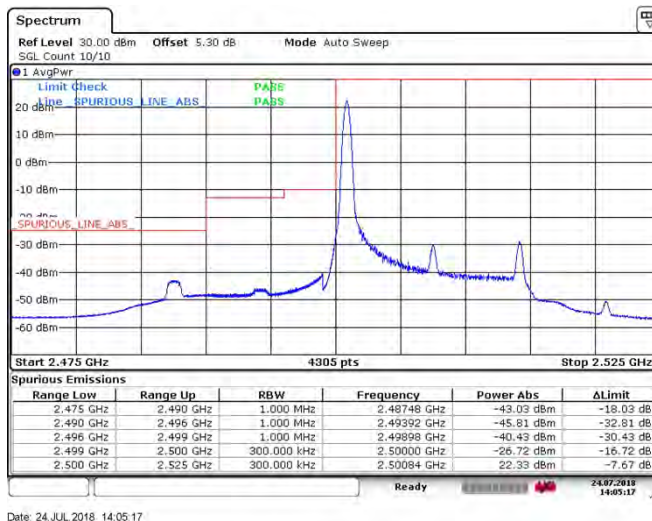
Page: 41 of 69



BAND 7_15MHz_QPSK_21375_75RB#0



BAND 7_15MHz_16QAM_20825_1RB#0



BAND 7_15MHz_16QAM_20825_75RB#0

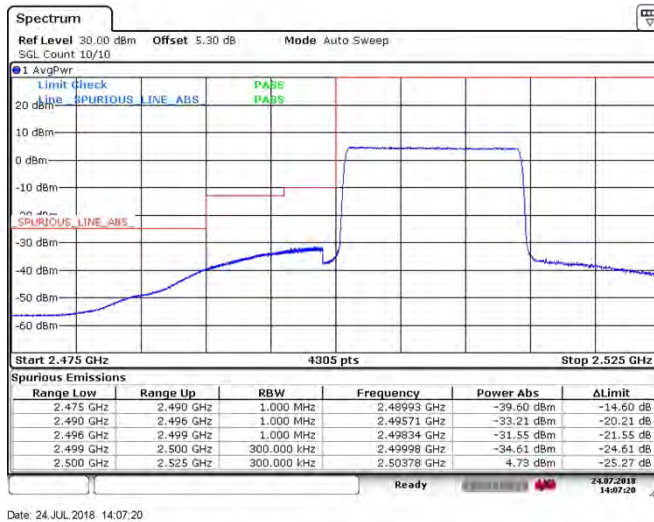
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

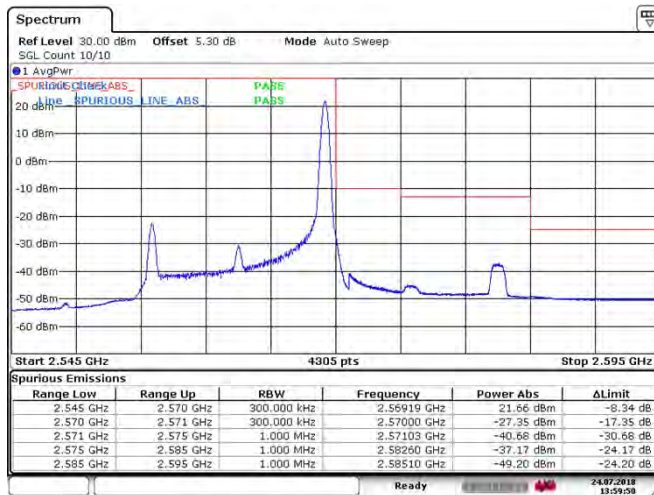
Report No.: SZEM180700654901

Page: 42 of 69



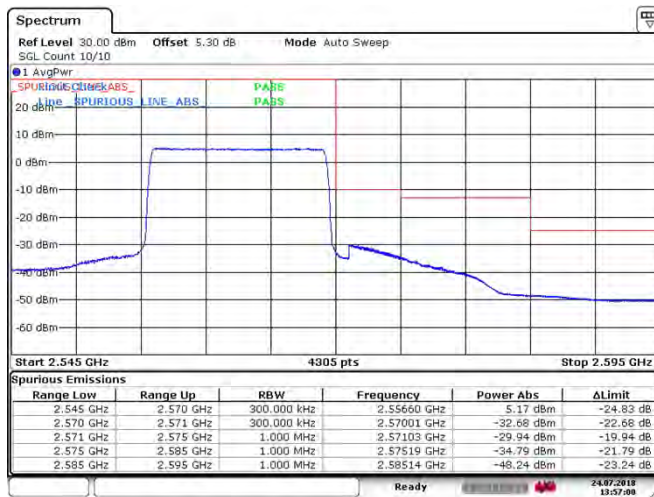
Date: 24 JUL 2018 14:07:20

BAND 7_15MHz_16QAM_21375_1RB#74



Date: 24 JUL 2018 13:59:51

BAND 7_15MHz_16QAM_21375_75RB#0



Date: 24 JUL 2018 13:57:00

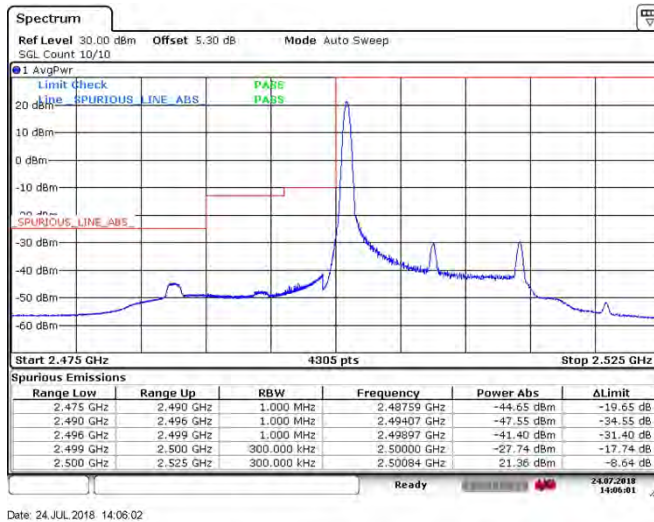
BAND 7_15MHz_64QAM_20825_1RB#0



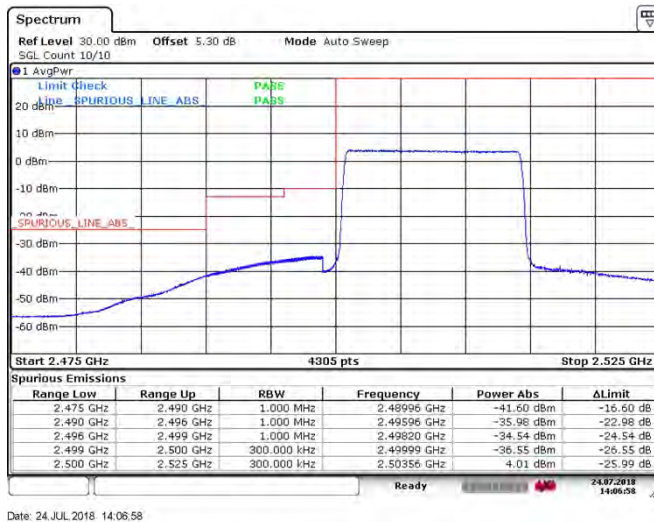
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

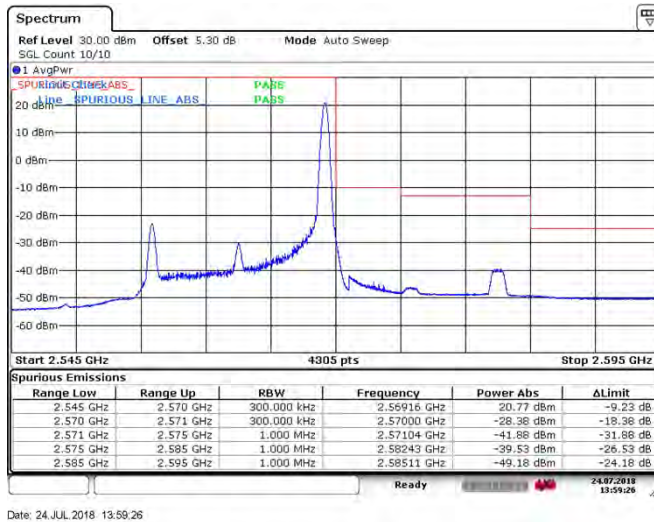
Page: 43 of 69



BAND 7_15MHz_64QAM_20825_75RB#0



BAND 7_15MHz_64QAM_21375_1RB#74



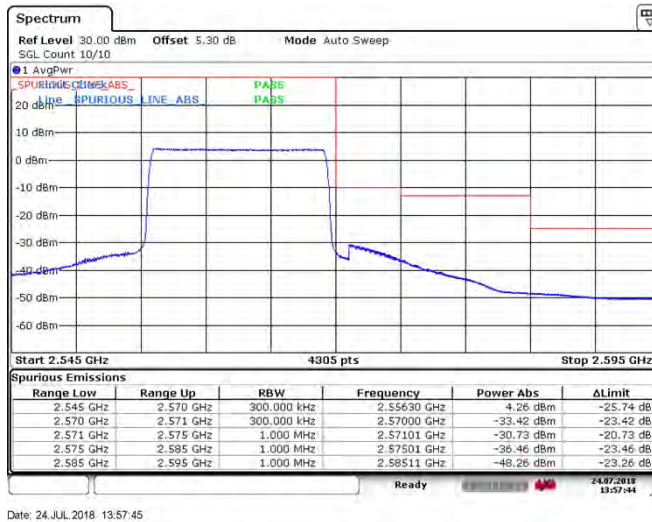
BAND 7_15MHz_64QAM_21375_75RB#0



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

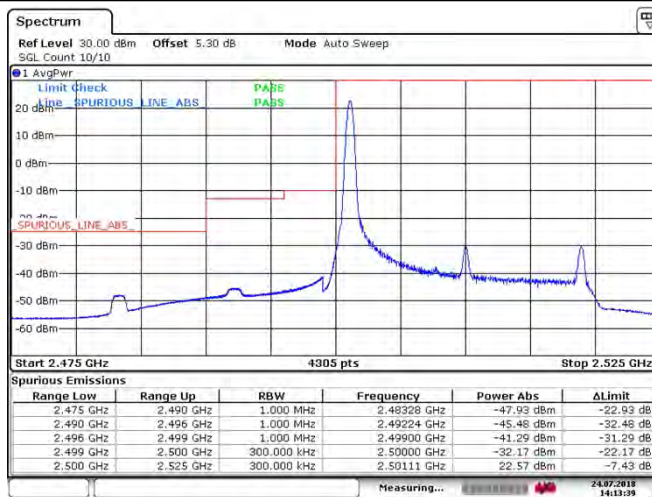
Report No.: SZEM180700654901

Page: 44 of 69



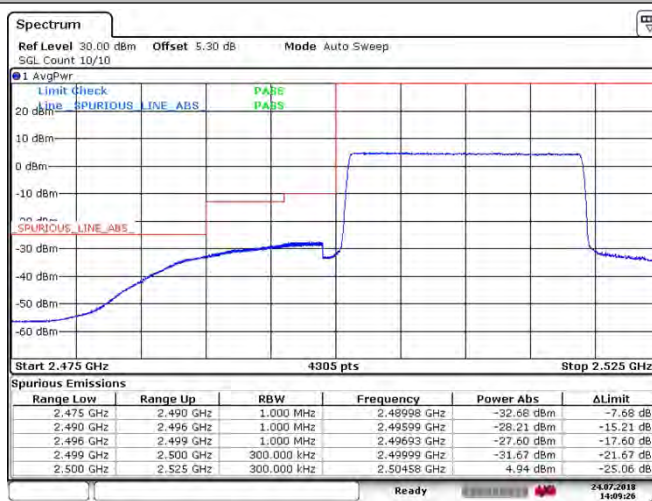
Date: 24 JUL 2018 13:57:45

BAND 7_20MHz_QPSK_20850_1RB#0



Date: 24 JUL 2018 14:13:39

BAND 7_20MHz_QPSK_20850_100RB#0



Date: 24 JUL 2018 14:09:26

BAND 7_20MHz_QPSK_21350_1RB#99

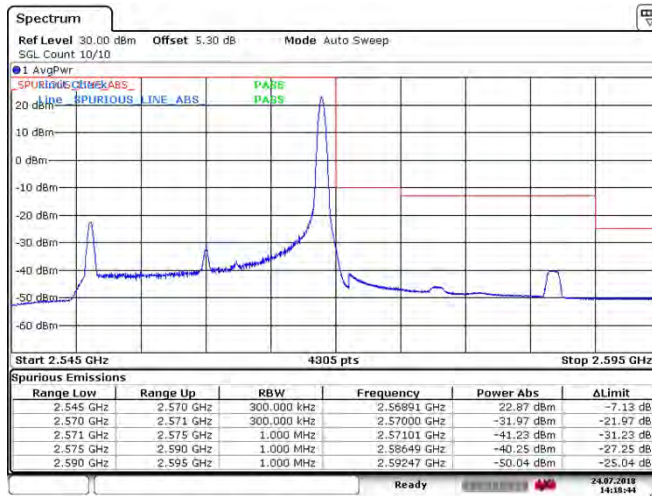
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

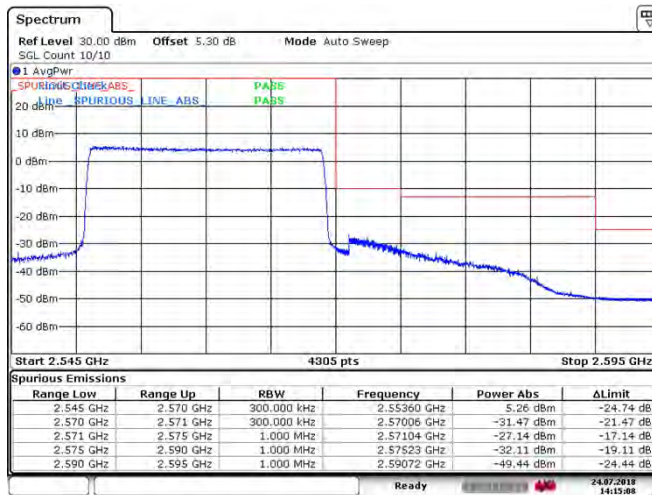
Report No.: SZEM180700654901

Page: 45 of 69



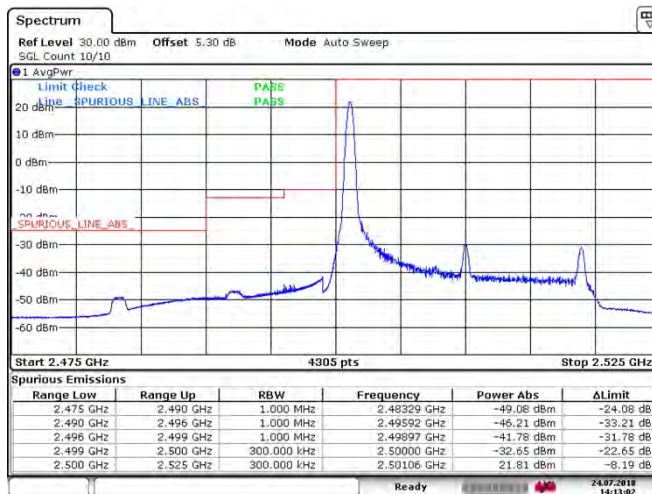
Date: 24.JUL.2018 14:18:45

BAND 7_20MHz_QPSK_21350_100RB#0



Date: 24.JUL.2018 14:15:08

BAND 7_20MHz_16QAM_20850_1RB#0



Date: 24.JUL.2018 14:13:02

BAND 7_20MHz_16QAM_20850_100RB#0

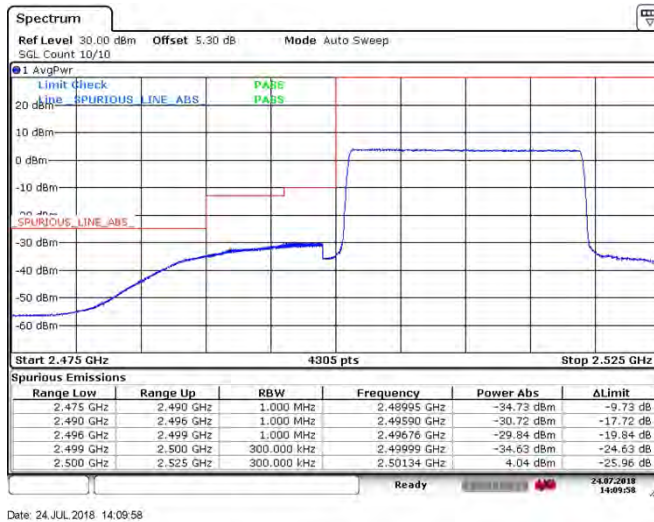
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>.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



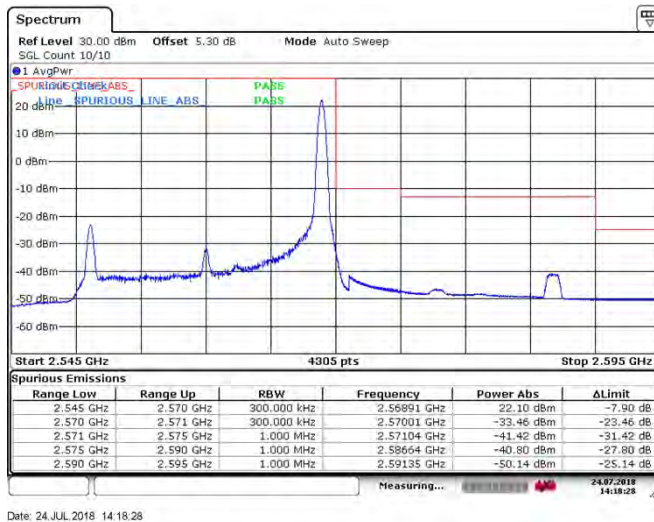
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

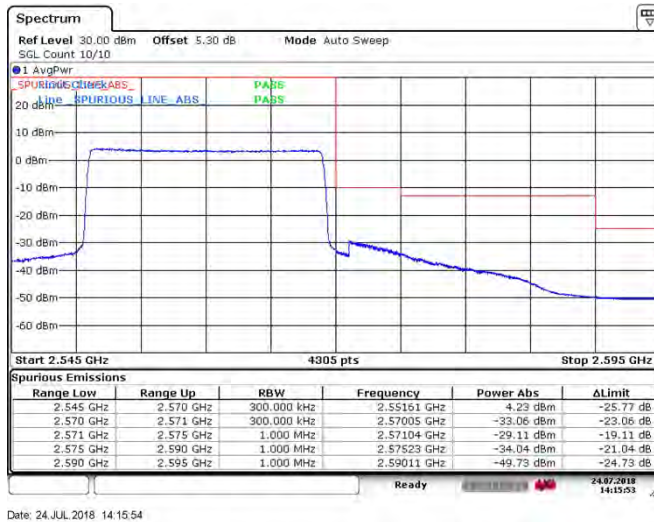
Page: 46 of 69



BAND 7_20MHz_16QAM_21350_1RB#99



BAND 7_20MHz_16QAM_21350_100RB#0



BAND 7_20MHz_64QAM_20850_1RB#0

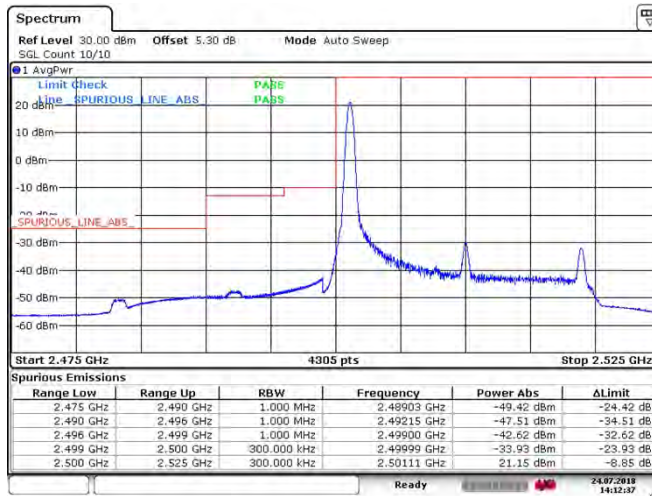
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>.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

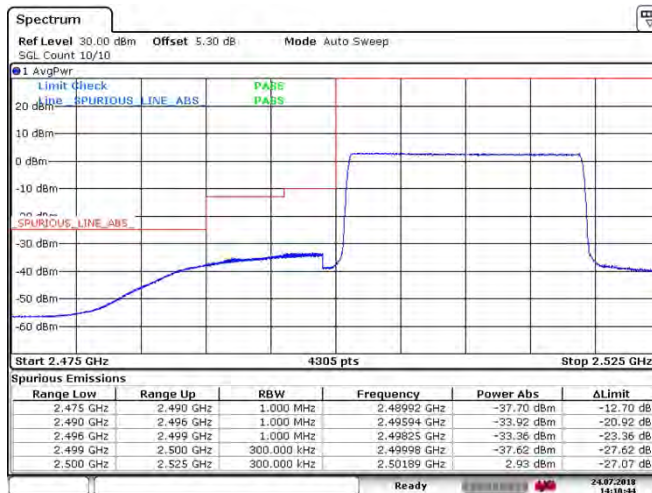
Report No.: SZEM180700654901

Page: 47 of 69



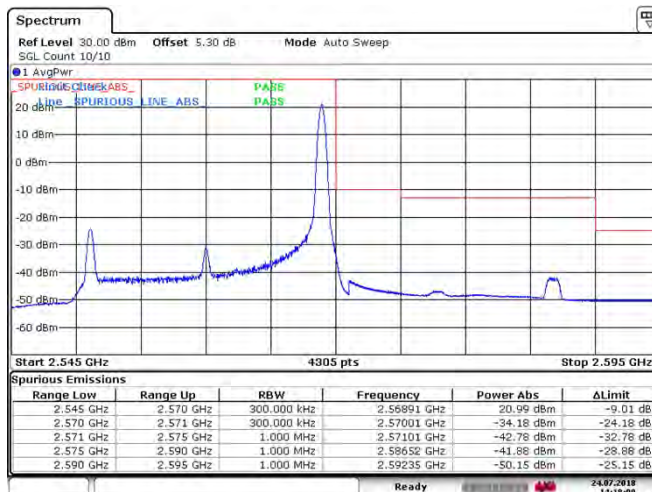
Date: 24.JUL.2018 14:12:38

BAND 7_20MHz_64QAM_20850_100RB#0



Date: 24.JUL.2018 14:10:45

BAND 7_20MHz_64QAM_21350_1RB#99



Date: 24.JUL.2018 14:18:09

BAND 7_20MHz_64QAM_21350_100RB#0

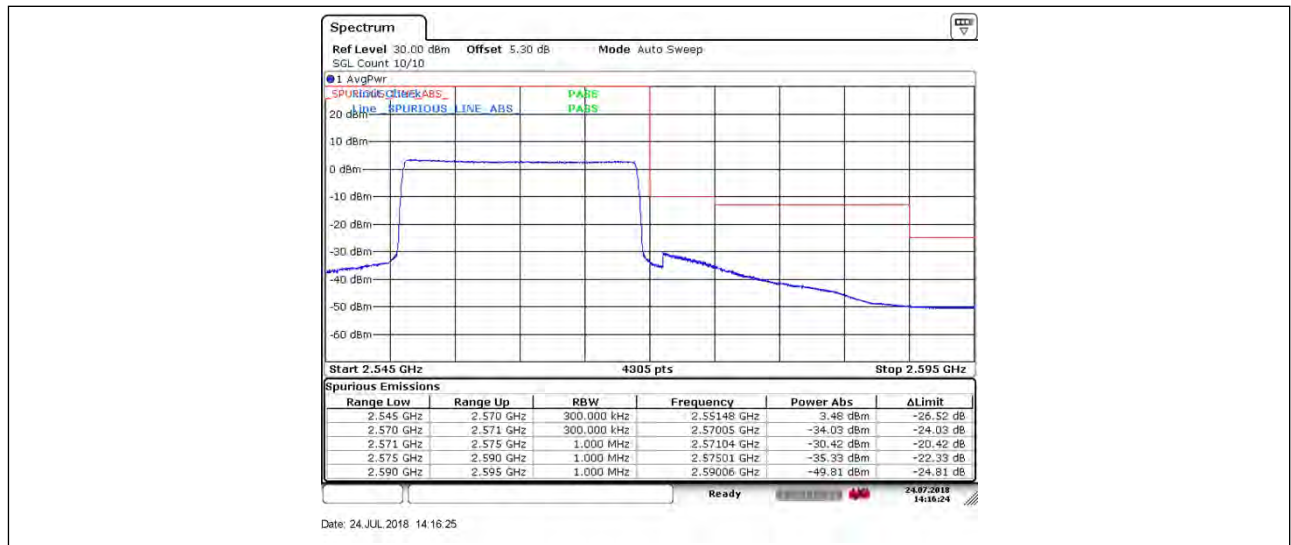
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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.: SZEM180700654901

Page: 48 of 69



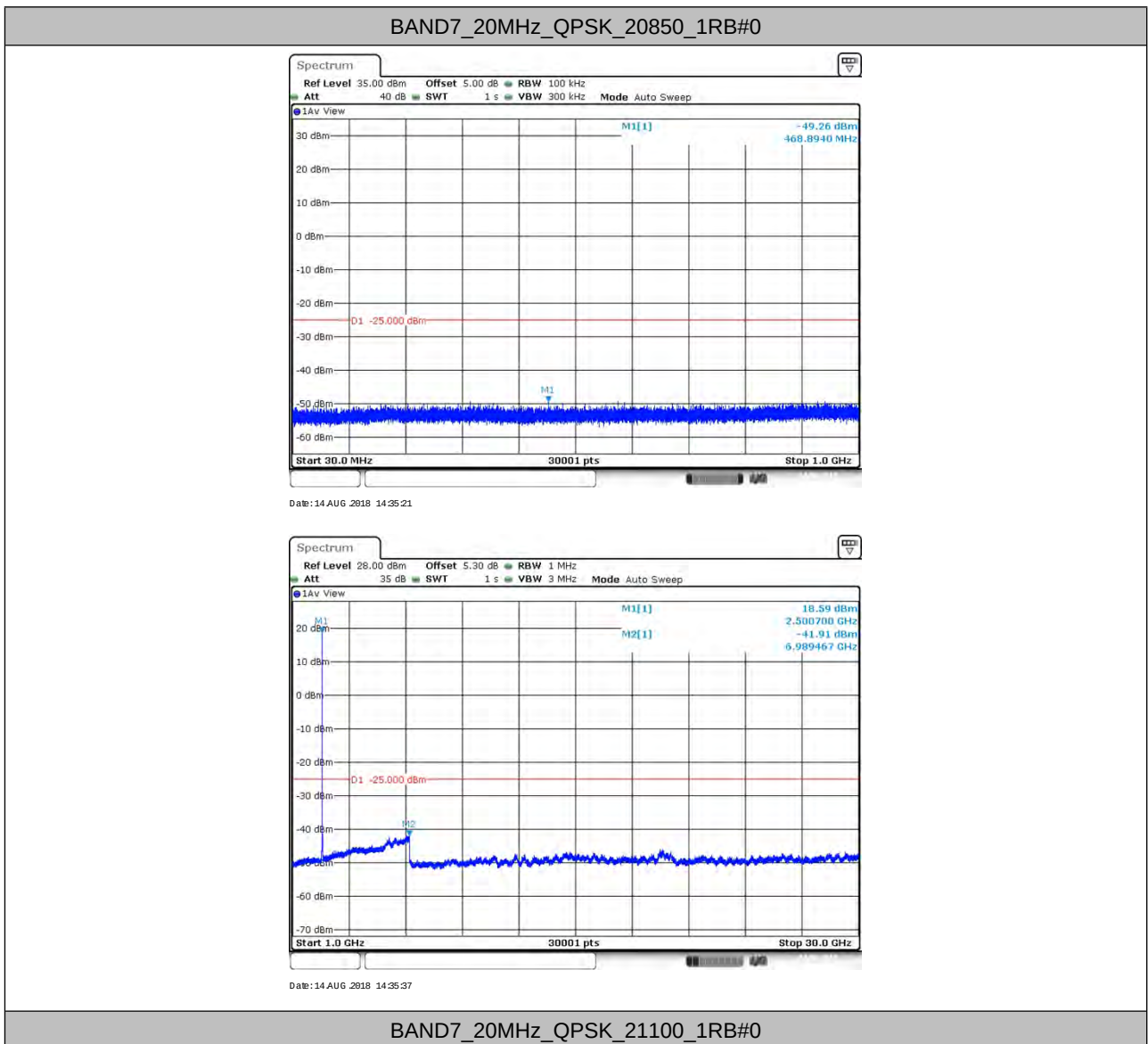


6. Spurious Emission at Antenna Terminal

NOTE1: 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.

NOTE2: only the worst case data displayed in this report.

6.1. Test Plots

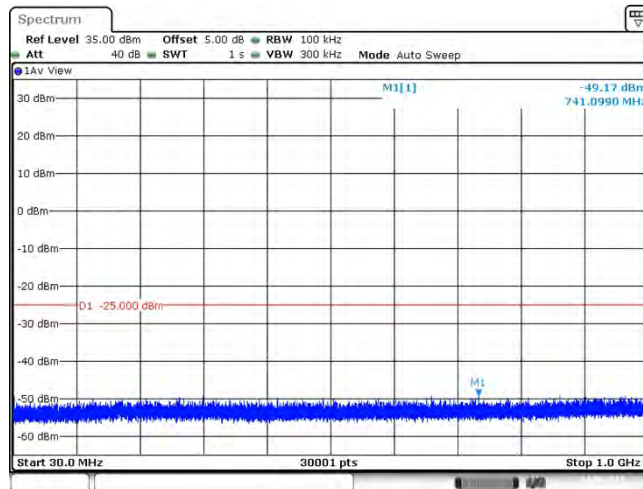




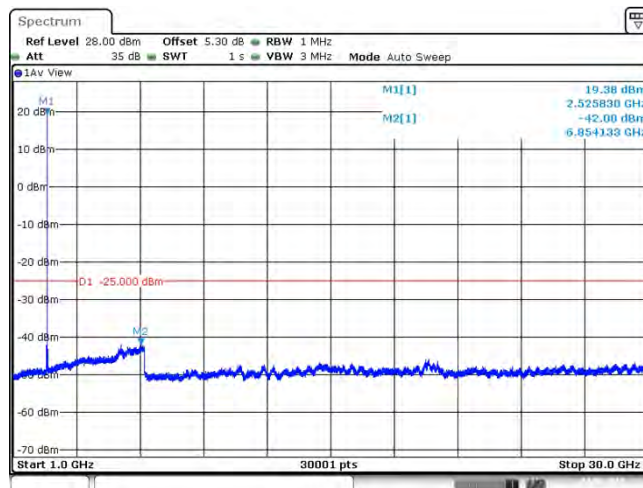
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

Report No.: SZEM180700654901

Page: 50 of 69

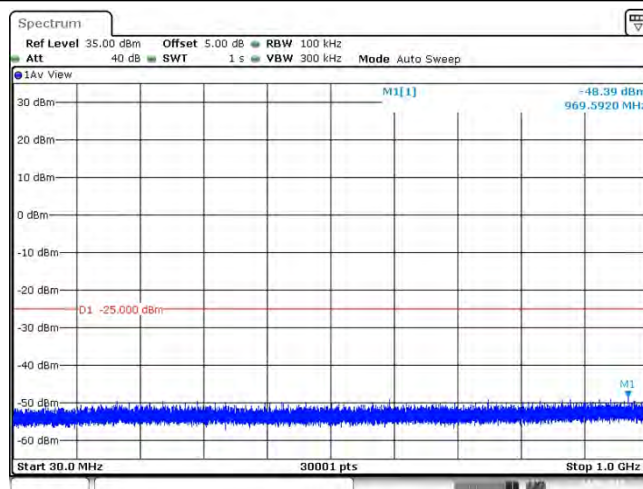


Date: 14 AUG 2018 14:36:39



Date: 14 AUG 2018 14:36:46

BAND7_20MHz_QPSK_21350_1RB#0



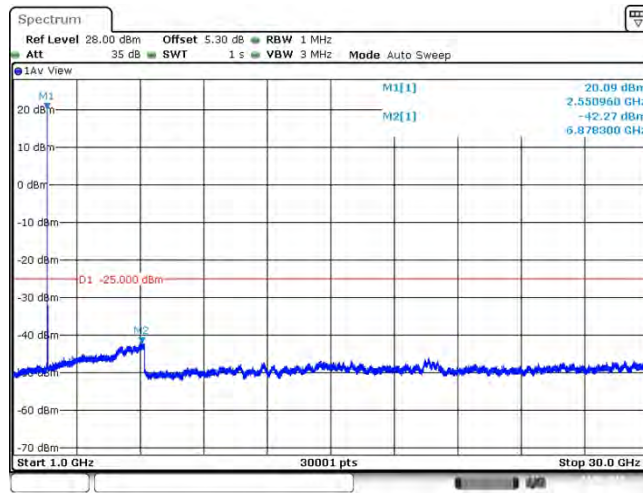
Date: 14 AUG 2018 14:37:39



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

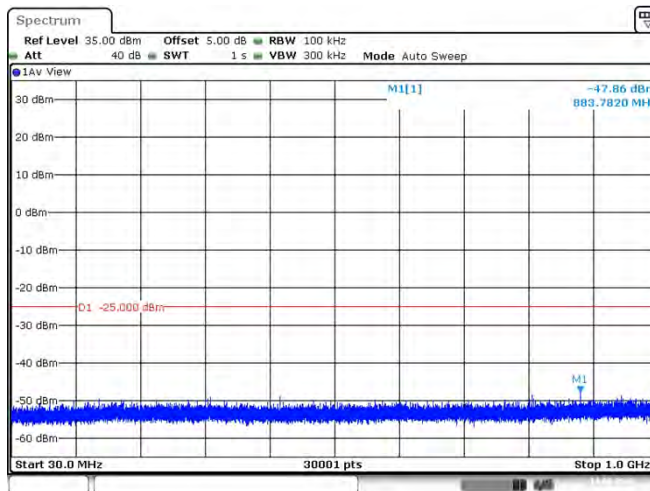
Report No.: SZEM180700654901

Page: 51 of 69

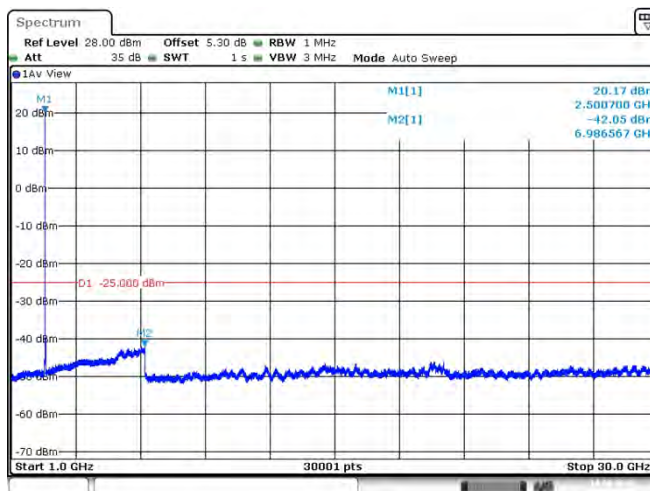


Date: 14 AUG 2018 14:37:55

BAND7_20MHz_64QAM_20850_1RB#0



Date: 14 AUG 2018 15:09:48



Date: 14 AUG 2018 15:10:04

BAND7_20MHz_64QAM_21100_1RB#0