



# Appendix B

## E-UTRA BAND 5



## CONTENT

1.	EFFECTIVE (ISOTROPIC) RADIATED POWER .....	3
1.1.	<i>Test Result</i> .....	3
2.	PEAK-TO-AVERAGE RATIO(CCDF) .....	10
2.1.	<i>Test Result</i> .....	10
2.2.	<i>Test Plots</i> .....	10
3.	MODULATION CHARACTERISTICS .....	14
3.1.	<i>Test BAND = LTE BAND5</i> .....	14
3.1.1.	<i>Test Mode = LTE /TM1 10MHz</i> .....	14
3.1.1.1.	<i>Test Channel = MCH</i> .....	14
3.1.2.	<i>Test Mode = LTE /TM2 10MHz</i> .....	15
3.1.2.1.	<i>Test Channel = MCH</i> .....	15
3.1.1.	<i>Test Mode = LTE /TM3 10MHz</i> .....	16
3.1.1.1.	<i>Test Channel = MCH</i> .....	16
4.	26dB BANDWIDTH AND OCCUPIED BANDWIDTH.....	17
4.1.	<i>Test Result</i> .....	17
4.2.	<i>Test Plots</i> .....	18
5.	BAND EDGE COMPLIANCE .....	31
5.1.	<i>Test Plots</i> .....	31
6.	SPURIOUS EMISSION AT ANTENNA TERMINAL .....	48
6.1.	<i>Test Plots</i> .....	48
7.	FIELD STRENGTH OF SPURIOUS RADIATION .....	51
7.1.	<i>Test BAND = LTE BAND 5</i> .....	51
7.1.1.	<i>Test Mode =LTE/TM1 10MHz</i> .....	51
7.1.1.1.	<i>Test Channel = LCH</i> .....	51
7.1.1.2.	<i>Test Channel = MCH</i> .....	51
7.1.1.3.	<i>Test Channel = HCH</i> .....	52
8.	FREQUENCY STABILITY .....	53
8.1.	<i>Frequency Vs Voltage</i> .....	53
8.2.	<i>Frequency Vs Temperature</i> .....	53



## 1. Effective (Isotropic) Radiated Power

### 1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
BAND5	1.4MHz	QPSK	20407	1RB#0	22.63	23.48	38.45	PASS
BAND5	1.4MHz	QPSK	20407	1RB#2	22.60	23.45	38.45	PASS
BAND5	1.4MHz	QPSK	20407	1RB#5	22.54	23.39	38.45	PASS
BAND5	1.4MHz	QPSK	20407	3RB#0	22.62	23.47	38.45	PASS
BAND5	1.4MHz	QPSK	20407	3RB#1	22.61	23.46	38.45	PASS
BAND5	1.4MHz	QPSK	20407	3RB#3	22.63	23.48	38.45	PASS
BAND5	1.4MHz	QPSK	20407	6RB#0	21.63	22.48	38.45	PASS
BAND5	1.4MHz	QPSK	20525	1RB#0	22.57	23.42	38.45	PASS
BAND5	1.4MHz	QPSK	20525	1RB#2	22.55	23.40	38.45	PASS
BAND5	1.4MHz	QPSK	20525	1RB#5	22.58	23.43	38.45	PASS
BAND5	1.4MHz	QPSK	20525	3RB#0	22.55	23.40	38.45	PASS
BAND5	1.4MHz	QPSK	20525	3RB#1	22.53	23.38	38.45	PASS
BAND5	1.4MHz	QPSK	20525	3RB#3	22.55	23.40	38.45	PASS
BAND5	1.4MHz	QPSK	20525	6RB#0	21.56	22.41	38.45	PASS
BAND5	1.4MHz	QPSK	20643	1RB#0	22.59	23.44	38.45	PASS
BAND5	1.4MHz	QPSK	20643	1RB#2	22.57	23.42	38.45	PASS
BAND5	1.4MHz	QPSK	20643	1RB#5	22.56	23.41	38.45	PASS
BAND5	1.4MHz	QPSK	20643	3RB#0	22.55	23.40	38.45	PASS
BAND5	1.4MHz	QPSK	20643	3RB#1	22.54	23.39	38.45	PASS
BAND5	1.4MHz	QPSK	20643	3RB#3	22.53	23.38	38.45	PASS
BAND5	1.4MHz	QPSK	20643	6RB#0	21.55	22.40	38.45	PASS
BAND5	1.4MHz	64QAM	20407	1RB#0	20.68	21.53	38.45	PASS
BAND5	1.4MHz	64QAM	20407	1RB#2	20.64	21.49	38.45	PASS
BAND5	1.4MHz	64QAM	20407	1RB#5	20.64	21.49	38.45	PASS
BAND5	1.4MHz	64QAM	20407	3RB#0	20.56	21.41	38.45	PASS
BAND5	1.4MHz	64QAM	20407	3RB#1	20.60	21.45	38.45	PASS
BAND5	1.4MHz	64QAM	20407	3RB#3	20.57	21.42	38.45	PASS
BAND5	1.4MHz	64QAM	20407	6RB#0	19.50	20.35	38.45	PASS
BAND5	1.4MHz	64QAM	20525	1RB#0	20.69	21.54	38.45	PASS
BAND5	1.4MHz	64QAM	20525	1RB#2	20.61	21.46	38.45	PASS
BAND5	1.4MHz	64QAM	20525	1RB#5	20.66	21.51	38.45	PASS
BAND5	1.4MHz	64QAM	20525	3RB#0	20.61	21.46	38.45	PASS
BAND5	1.4MHz	64QAM	20525	3RB#1	20.53	21.38	38.45	PASS
BAND5	1.4MHz	64QAM	20525	3RB#3	20.50	21.35	38.45	PASS



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

Report No.: SZEM180500437001

Page: 4 of 55

BAND5	1.4MHz	64QAM	20525	6RB#0	19.48	20.33	38.45	PASS
BAND5	1.4MHz	64QAM	20643	1RB#0	20.64	21.49	38.45	PASS
BAND5	1.4MHz	64QAM	20643	1RB#2	20.59	21.44	38.45	PASS
BAND5	1.4MHz	64QAM	20643	1RB#5	20.61	21.46	38.45	PASS
BAND5	1.4MHz	64QAM	20643	3RB#0	20.55	21.40	38.45	PASS
BAND5	1.4MHz	64QAM	20643	3RB#1	20.49	21.34	38.45	PASS
BAND5	1.4MHz	64QAM	20643	3RB#3	20.48	21.33	38.45	PASS
BAND5	1.4MHz	64QAM	20643	6RB#0	19.37	20.22	38.45	PASS
BAND5	1.4MHz	16QAM	20407	1RB#0	21.88	22.73	38.45	PASS
BAND5	1.4MHz	16QAM	20407	1RB#2	21.68	22.53	38.45	PASS
BAND5	1.4MHz	16QAM	20407	1RB#5	21.61	22.46	38.45	PASS
BAND5	1.4MHz	16QAM	20407	3RB#0	21.71	22.56	38.45	PASS
BAND5	1.4MHz	16QAM	20407	3RB#1	21.70	22.55	38.45	PASS
BAND5	1.4MHz	16QAM	20407	3RB#3	21.66	22.51	38.45	PASS
BAND5	1.4MHz	16QAM	20407	6RB#0	20.65	21.50	38.45	PASS
BAND5	1.4MHz	16QAM	20525	1RB#0	21.72	22.57	38.45	PASS
BAND5	1.4MHz	16QAM	20525	1RB#2	21.71	22.56	38.45	PASS
BAND5	1.4MHz	16QAM	20525	1RB#5	21.71	22.56	38.45	PASS
BAND5	1.4MHz	16QAM	20525	3RB#0	21.64	22.49	38.45	PASS
BAND5	1.4MHz	16QAM	20525	3RB#1	21.62	22.47	38.45	PASS
BAND5	1.4MHz	16QAM	20525	3RB#3	21.63	22.48	38.45	PASS
BAND5	1.4MHz	16QAM	20525	6RB#0	20.58	21.43	38.45	PASS
BAND5	1.4MHz	16QAM	20643	1RB#0	21.77	22.62	38.45	PASS
BAND5	1.4MHz	16QAM	20643	1RB#2	21.67	22.52	38.45	PASS
BAND5	1.4MHz	16QAM	20643	1RB#5	21.68	22.53	38.45	PASS
BAND5	1.4MHz	16QAM	20643	3RB#0	21.60	22.45	38.45	PASS
BAND5	1.4MHz	16QAM	20643	3RB#1	21.56	22.41	38.45	PASS
BAND5	1.4MHz	16QAM	20643	3RB#3	21.52	22.37	38.45	PASS
BAND5	1.4MHz	16QAM	20643	6RB#0	20.55	21.40	38.45	PASS
BAND5	3MHz	QPSK	20415	1RB#0	22.60	23.45	38.45	PASS
BAND5	3MHz	QPSK	20415	1RB#8	22.56	23.41	38.45	PASS
BAND5	3MHz	QPSK	20415	1RB#14	22.56	23.41	38.45	PASS
BAND5	3MHz	QPSK	20415	8RB#0	21.63	22.48	38.45	PASS
BAND5	3MHz	QPSK	20415	8RB#4	21.52	22.37	38.45	PASS
BAND5	3MHz	QPSK	20415	8RB#7	21.52	22.37	38.45	PASS
BAND5	3MHz	QPSK	20415	15RB#0	21.55	22.40	38.45	PASS
BAND5	3MHz	QPSK	20525	1RB#0	22.52	23.37	38.45	PASS
BAND5	3MHz	QPSK	20525	1RB#8	22.57	23.42	38.45	PASS
BAND5	3MHz	QPSK	20525	1RB#14	22.50	23.35	38.45	PASS
BAND5	3MHz	QPSK	20525	8RB#0	21.55	22.40	38.45	PASS
BAND5	3MHz	QPSK	20525	8RB#4	21.55	22.40	38.45	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.: SZEM180500437001

Page: 5 of 55

BAND5	3MHz	QPSK	20525	8RB#7	21.54	22.39	38.45	PASS
BAND5	3MHz	QPSK	20525	15RB#0	21.54	22.39	38.45	PASS
BAND5	3MHz	QPSK	20635	1RB#0	22.58	23.43	38.45	PASS
BAND5	3MHz	QPSK	20635	1RB#8	22.59	23.44	38.45	PASS
BAND5	3MHz	QPSK	20635	1RB#14	22.50	23.35	38.45	PASS
BAND5	3MHz	QPSK	20635	8RB#0	21.58	22.43	38.45	PASS
BAND5	3MHz	QPSK	20635	8RB#4	21.56	22.41	38.45	PASS
BAND5	3MHz	QPSK	20635	8RB#7	21.53	22.38	38.45	PASS
BAND5	3MHz	QPSK	20635	15RB#0	21.57	22.42	38.45	PASS
BAND5	3MHz	64QAM	20415	1RB#0	20.61	21.46	38.45	PASS
BAND5	3MHz	64QAM	20415	1RB#8	20.58	21.43	38.45	PASS
BAND5	3MHz	64QAM	20415	1RB#14	20.63	21.48	38.45	PASS
BAND5	3MHz	64QAM	20415	8RB#0	19.51	20.36	38.45	PASS
BAND5	3MHz	64QAM	20415	8RB#4	19.48	20.33	38.45	PASS
BAND5	3MHz	64QAM	20415	8RB#7	19.45	20.30	38.45	PASS
BAND5	3MHz	64QAM	20415	15RB#0	19.44	20.29	38.45	PASS
BAND5	3MHz	64QAM	20525	1RB#0	20.61	21.46	38.45	PASS
BAND5	3MHz	64QAM	20525	1RB#8	20.68	21.53	38.45	PASS
BAND5	3MHz	64QAM	20525	1RB#14	20.60	21.45	38.45	PASS
BAND5	3MHz	64QAM	20525	8RB#0	19.50	20.35	38.45	PASS
BAND5	3MHz	64QAM	20525	8RB#4	19.47	20.32	38.45	PASS
BAND5	3MHz	64QAM	20525	8RB#7	19.45	20.30	38.45	PASS
BAND5	3MHz	64QAM	20525	15RB#0	19.48	20.33	38.45	PASS
BAND5	3MHz	64QAM	20635	1RB#0	20.77	21.62	38.45	PASS
BAND5	3MHz	64QAM	20635	1RB#8	20.74	21.59	38.45	PASS
BAND5	3MHz	64QAM	20635	1RB#14	20.57	21.42	38.45	PASS
BAND5	3MHz	64QAM	20635	8RB#0	19.49	20.34	38.45	PASS
BAND5	3MHz	64QAM	20635	8RB#4	19.50	20.35	38.45	PASS
BAND5	3MHz	64QAM	20635	8RB#7	19.44	20.29	38.45	PASS
BAND5	3MHz	64QAM	20635	15RB#0	19.45	20.30	38.45	PASS
BAND5	3MHz	16QAM	20415	1RB#0	21.58	22.43	38.45	PASS
BAND5	3MHz	16QAM	20415	1RB#8	21.77	22.62	38.45	PASS
BAND5	3MHz	16QAM	20415	1RB#14	21.77	22.62	38.45	PASS
BAND5	3MHz	16QAM	20415	8RB#0	20.60	21.45	38.45	PASS
BAND5	3MHz	16QAM	20415	8RB#4	20.54	21.39	38.45	PASS
BAND5	3MHz	16QAM	20415	8RB#7	20.56	21.41	38.45	PASS
BAND5	3MHz	16QAM	20415	15RB#0	20.53	21.38	38.45	PASS
BAND5	3MHz	16QAM	20525	1RB#0	21.65	22.50	38.45	PASS
BAND5	3MHz	16QAM	20525	1RB#8	21.66	22.51	38.45	PASS
BAND5	3MHz	16QAM	20525	1RB#14	21.65	22.50	38.45	PASS
BAND5	3MHz	16QAM	20525	8RB#0	20.57	21.42	38.45	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.: SZEM180500437001

Page: 6 of 55

BAND5	3MHz	16QAM	20525	8RB#4	20.54	21.39	38.45	PASS
BAND5	3MHz	16QAM	20525	8RB#7	20.57	21.42	38.45	PASS
BAND5	3MHz	16QAM	20525	15RB#0	20.56	21.41	38.45	PASS
BAND5	3MHz	16QAM	20635	1RB#0	21.76	22.61	38.45	PASS
BAND5	3MHz	16QAM	20635	1RB#8	21.82	22.67	38.45	PASS
BAND5	3MHz	16QAM	20635	1RB#14	21.61	22.46	38.45	PASS
BAND5	3MHz	16QAM	20635	8RB#0	20.59	21.44	38.45	PASS
BAND5	3MHz	16QAM	20635	8RB#4	20.59	21.44	38.45	PASS
BAND5	3MHz	16QAM	20635	8RB#7	20.52	21.37	38.45	PASS
BAND5	3MHz	16QAM	20635	15RB#0	20.56	21.41	38.45	PASS
BAND5	5MHz	QPSK	20425	1RB#0	22.66	23.51	38.45	PASS
BAND5	5MHz	QPSK	20425	1RB#12	22.59	23.44	38.45	PASS
BAND5	5MHz	QPSK	20425	1RB#24	22.64	23.49	38.45	PASS
BAND5	5MHz	QPSK	20425	12RB#0	21.63	22.48	38.45	PASS
BAND5	5MHz	QPSK	20425	12RB#6	21.62	22.47	38.45	PASS
BAND5	5MHz	QPSK	20425	12RB#13	21.69	22.54	38.45	PASS
BAND5	5MHz	QPSK	20425	25RB#0	21.68	22.53	38.45	PASS
BAND5	5MHz	QPSK	20525	1RB#0	22.61	23.46	38.45	PASS
BAND5	5MHz	QPSK	20525	1RB#12	22.58	23.43	38.45	PASS
BAND5	5MHz	QPSK	20525	1RB#24	22.64	23.49	38.45	PASS
BAND5	5MHz	QPSK	20525	12RB#0	21.65	22.50	38.45	PASS
BAND5	5MHz	QPSK	20525	12RB#6	21.62	22.47	38.45	PASS
BAND5	5MHz	QPSK	20525	12RB#13	21.63	22.48	38.45	PASS
BAND5	5MHz	QPSK	20525	25RB#0	21.62	22.47	38.45	PASS
BAND5	5MHz	QPSK	20625	1RB#0	22.63	23.48	38.45	PASS
BAND5	5MHz	QPSK	20625	1RB#12	22.65	23.50	38.45	PASS
BAND5	5MHz	QPSK	20625	1RB#24	22.58	23.43	38.45	PASS
BAND5	5MHz	QPSK	20625	12RB#0	21.73	22.58	38.45	PASS
BAND5	5MHz	QPSK	20625	12RB#6	21.71	22.56	38.45	PASS
BAND5	5MHz	QPSK	20625	12RB#13	21.66	22.51	38.45	PASS
BAND5	5MHz	QPSK	20625	25RB#0	21.72	22.57	38.45	PASS
BAND5	5MHz	64QAM	20425	1RB#0	20.70	21.55	38.45	PASS
BAND5	5MHz	64QAM	20425	1RB#12	20.68	21.53	38.45	PASS
BAND5	5MHz	64QAM	20425	1RB#24	20.71	21.56	38.45	PASS
BAND5	5MHz	64QAM	20425	12RB#0	19.58	20.43	38.45	PASS
BAND5	5MHz	64QAM	20425	12RB#6	19.58	20.43	38.45	PASS
BAND5	5MHz	64QAM	20425	12RB#13	19.66	20.51	38.45	PASS
BAND5	5MHz	64QAM	20425	25RB#0	19.73	20.58	38.45	PASS
BAND5	5MHz	64QAM	20525	1RB#0	20.72	21.57	38.45	PASS
BAND5	5MHz	64QAM	20525	1RB#12	20.64	21.49	38.45	PASS
BAND5	5MHz	64QAM	20525	1RB#24	20.71	21.56	38.45	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.: SZEM180500437001

Page: 7 of 55

BAND5	5MHz	64QAM	20525	12RB#0	19.61	20.46	38.45	PASS
BAND5	5MHz	64QAM	20525	12RB#6	19.57	20.42	38.45	PASS
BAND5	5MHz	64QAM	20525	12RB#13	19.58	20.43	38.45	PASS
BAND5	5MHz	64QAM	20525	25RB#0	19.59	20.44	38.45	PASS
BAND5	5MHz	64QAM	20625	1RB#0	20.69	21.54	38.45	PASS
BAND5	5MHz	64QAM	20625	1RB#12	20.69	21.54	38.45	PASS
BAND5	5MHz	64QAM	20625	1RB#24	20.61	21.46	38.45	PASS
BAND5	5MHz	64QAM	20625	12RB#0	19.64	20.49	38.45	PASS
BAND5	5MHz	64QAM	20625	12RB#6	19.63	20.48	38.45	PASS
BAND5	5MHz	64QAM	20625	12RB#13	19.55	20.40	38.45	PASS
BAND5	5MHz	64QAM	20625	25RB#0	19.63	20.48	38.45	PASS
BAND5	5MHz	16QAM	20425	1RB#0	21.88	22.73	38.45	PASS
BAND5	5MHz	16QAM	20425	1RB#12	21.83	22.68	38.45	PASS
BAND5	5MHz	16QAM	20425	1RB#24	21.65	22.50	38.45	PASS
BAND5	5MHz	16QAM	20425	12RB#0	20.68	21.53	38.45	PASS
BAND5	5MHz	16QAM	20425	12RB#6	20.65	21.50	38.45	PASS
BAND5	5MHz	16QAM	20425	12RB#13	20.76	21.61	38.45	PASS
BAND5	5MHz	16QAM	20425	25RB#0	20.75	21.60	38.45	PASS
BAND5	5MHz	16QAM	20525	1RB#0	21.79	22.64	38.45	PASS
BAND5	5MHz	16QAM	20525	1RB#12	21.77	22.62	38.45	PASS
BAND5	5MHz	16QAM	20525	1RB#24	21.80	22.65	38.45	PASS
BAND5	5MHz	16QAM	20525	12RB#0	20.73	21.58	38.45	PASS
BAND5	5MHz	16QAM	20525	12RB#6	20.72	21.57	38.45	PASS
BAND5	5MHz	16QAM	20525	12RB#13	20.73	21.58	38.45	PASS
BAND5	5MHz	16QAM	20525	25RB#0	20.71	21.56	38.45	PASS
BAND5	5MHz	16QAM	20625	1RB#0	21.82	22.67	38.45	PASS
BAND5	5MHz	16QAM	20625	1RB#12	21.75	22.60	38.45	PASS
BAND5	5MHz	16QAM	20625	1RB#24	21.66	22.51	38.45	PASS
BAND5	5MHz	16QAM	20625	12RB#0	20.77	21.62	38.45	PASS
BAND5	5MHz	16QAM	20625	12RB#6	20.78	21.63	38.45	PASS
BAND5	5MHz	16QAM	20625	12RB#13	20.74	21.59	38.45	PASS
BAND5	5MHz	16QAM	20625	25RB#0	20.76	21.61	38.45	PASS
BAND5	10MHz	QPSK	20450	1RB#0	22.79	23.64	38.45	PASS
BAND5	10MHz	QPSK	20450	1RB#24	22.76	23.61	38.45	PASS
BAND5	10MHz	QPSK	20450	1RB#49	22.67	23.52	38.45	PASS
BAND5	10MHz	QPSK	20450	25RB#0	21.69	22.54	38.45	PASS
BAND5	10MHz	QPSK	20450	25RB#12	21.71	22.56	38.45	PASS
BAND5	10MHz	QPSK	20450	25RB#25	21.61	22.46	38.45	PASS
BAND5	10MHz	QPSK	20450	50RB#0	21.70	22.55	38.45	PASS
BAND5	10MHz	QPSK	20525	1RB#0	22.68	23.53	38.45	PASS
BAND5	10MHz	QPSK	20525	1RB#24	22.64	23.49	38.45	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.: SZEM180500437001

Page: 8 of 55

BAND5	10MHz	QPSK	20525	1RB#49	22.72	23.57	38.45	PASS
BAND5	10MHz	QPSK	20525	25RB#0	21.63	22.48	38.45	PASS
BAND5	10MHz	QPSK	20525	25RB#12	21.59	22.44	38.45	PASS
BAND5	10MHz	QPSK	20525	25RB#25	21.65	22.50	38.45	PASS
BAND5	10MHz	QPSK	20525	50RB#0	21.60	22.45	38.45	PASS
BAND5	10MHz	QPSK	20600	1RB#0	22.68	23.53	38.45	PASS
BAND5	10MHz	QPSK	20600	1RB#24	22.68	23.53	38.45	PASS
BAND5	10MHz	QPSK	20600	1RB#49	22.67	23.52	38.45	PASS
BAND5	10MHz	QPSK	20600	25RB#0	21.72	22.57	38.45	PASS
BAND5	10MHz	QPSK	20600	25RB#12	21.79	22.64	38.45	PASS
BAND5	10MHz	QPSK	20600	25RB#25	21.68	22.53	38.45	PASS
BAND5	10MHz	QPSK	20600	50RB#0	21.65	22.50	38.45	PASS
BAND5	10MHz	64QAM	20450	1RB#0	20.82	21.67	38.45	PASS
BAND5	10MHz	64QAM	20450	1RB#24	20.83	21.68	38.45	PASS
BAND5	10MHz	64QAM	20450	1RB#49	20.77	21.62	38.45	PASS
BAND5	10MHz	64QAM	20450	25RB#0	19.64	20.49	38.45	PASS
BAND5	10MHz	64QAM	20450	25RB#12	19.64	20.49	38.45	PASS
BAND5	10MHz	64QAM	20450	25RB#25	19.58	20.43	38.45	PASS
BAND5	10MHz	64QAM	20450	50RB#0	19.62	20.47	38.45	PASS
BAND5	10MHz	64QAM	20525	1RB#0	20.74	21.59	38.45	PASS
BAND5	10MHz	64QAM	20525	1RB#24	20.67	21.52	38.45	PASS
BAND5	10MHz	64QAM	20525	1RB#49	20.82	21.67	38.45	PASS
BAND5	10MHz	64QAM	20525	25RB#0	19.57	20.42	38.45	PASS
BAND5	10MHz	64QAM	20525	25RB#12	19.56	20.41	38.45	PASS
BAND5	10MHz	64QAM	20525	25RB#25	19.60	20.45	38.45	PASS
BAND5	10MHz	64QAM	20525	50RB#0	19.48	20.33	38.45	PASS
BAND5	10MHz	64QAM	20600	1RB#0	20.84	21.69	38.45	PASS
BAND5	10MHz	64QAM	20600	1RB#24	20.71	21.56	38.45	PASS
BAND5	10MHz	64QAM	20600	1RB#49	20.63	21.48	38.45	PASS
BAND5	10MHz	64QAM	20600	25RB#0	19.62	20.47	38.45	PASS
BAND5	10MHz	64QAM	20600	25RB#12	19.56	20.41	38.45	PASS
BAND5	10MHz	64QAM	20600	25RB#25	19.62	20.47	38.45	PASS
BAND5	10MHz	64QAM	20600	50RB#0	19.53	20.38	38.45	PASS
BAND5	10MHz	16QAM	20450	1RB#0	21.91	22.76	38.45	PASS
BAND5	10MHz	16QAM	20450	1RB#24	21.80	22.65	38.45	PASS
BAND5	10MHz	16QAM	20450	1RB#49	21.83	22.68	38.45	PASS
BAND5	10MHz	16QAM	20450	25RB#0	20.74	21.59	38.45	PASS
BAND5	10MHz	16QAM	20450	25RB#12	20.78	21.63	38.45	PASS
BAND5	10MHz	16QAM	20450	25RB#25	20.68	21.53	38.45	PASS
BAND5	10MHz	16QAM	20450	50RB#0	20.76	21.61	38.45	PASS
BAND5	10MHz	16QAM	20525	1RB#0	21.89	22.74	38.45	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 herein 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.: SZEM180500437001

Page: 9 of 55

BAND5	10MHz	16QAM	20525	1RB#24	21.89	22.74	38.45	PASS
BAND5	10MHz	16QAM	20525	1RB#49	22.01	22.86	38.45	PASS
BAND5	10MHz	16QAM	20525	25RB#0	20.69	21.54	38.45	PASS
BAND5	10MHz	16QAM	20525	25RB#12	20.66	21.51	38.45	PASS
BAND5	10MHz	16QAM	20525	25RB#25	20.72	21.57	38.45	PASS
BAND5	10MHz	16QAM	20525	50RB#0	20.63	21.48	38.45	PASS
BAND5	10MHz	16QAM	20600	1RB#0	21.77	22.62	38.45	PASS
BAND5	10MHz	16QAM	20600	1RB#24	21.80	22.65	38.45	PASS
BAND5	10MHz	16QAM	20600	1RB#49	21.84	22.69	38.45	PASS
BAND5	10MHz	16QAM	20600	25RB#0	20.88	21.73	38.45	PASS
BAND5	10MHz	16QAM	20600	25RB#12	20.70	21.55	38.45	PASS
BAND5	10MHz	16QAM	20600	25RB#25	20.76	21.61	38.45	PASS
BAND5	10MHz	16QAM	20600	50RB#0	20.68	21.53	38.45	PASS

Remark:

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

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

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

b: SGP=Signal Generator Level

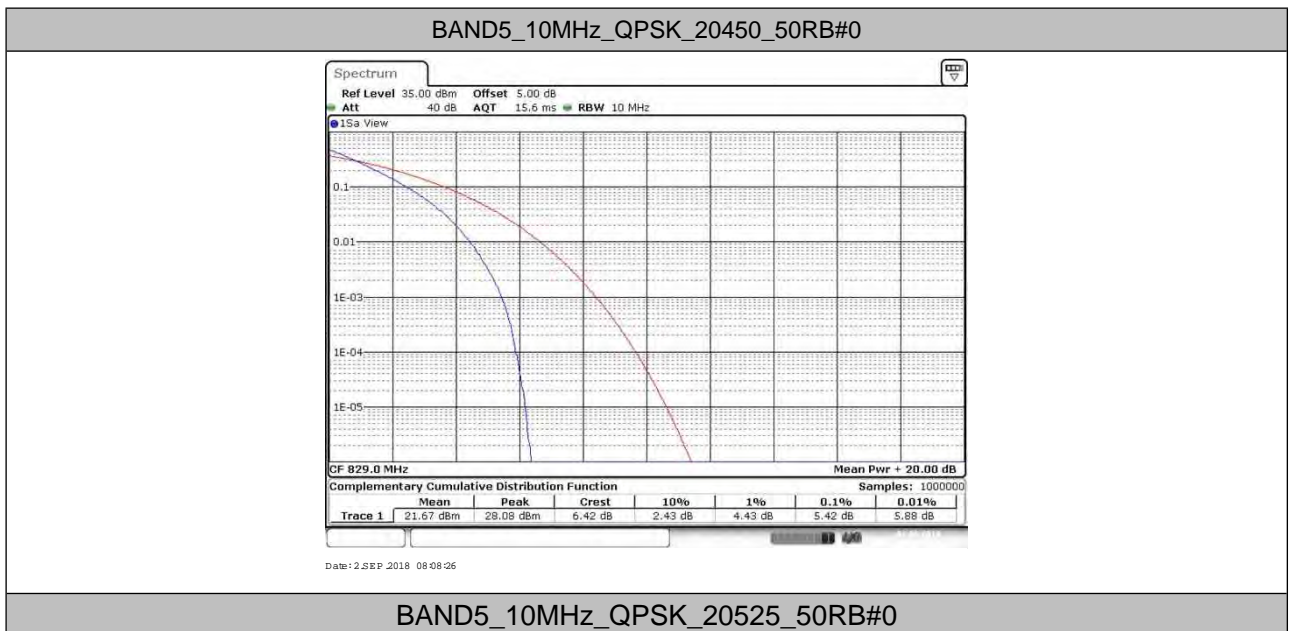


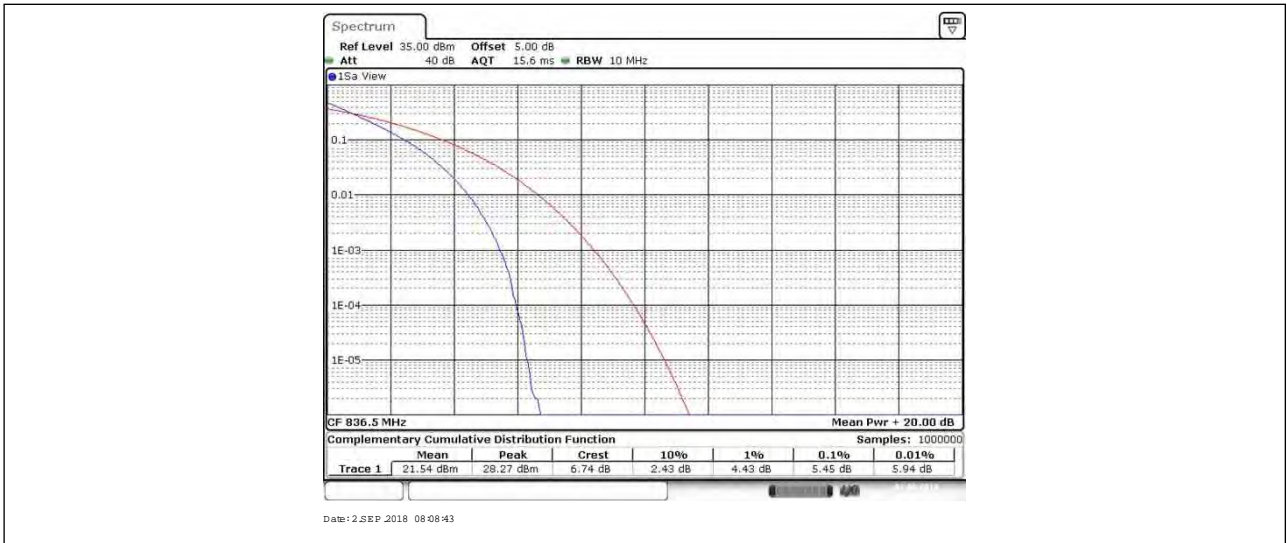
## 2. Peak-to-Average Ratio(CCDF)

### 2.1. Test Result

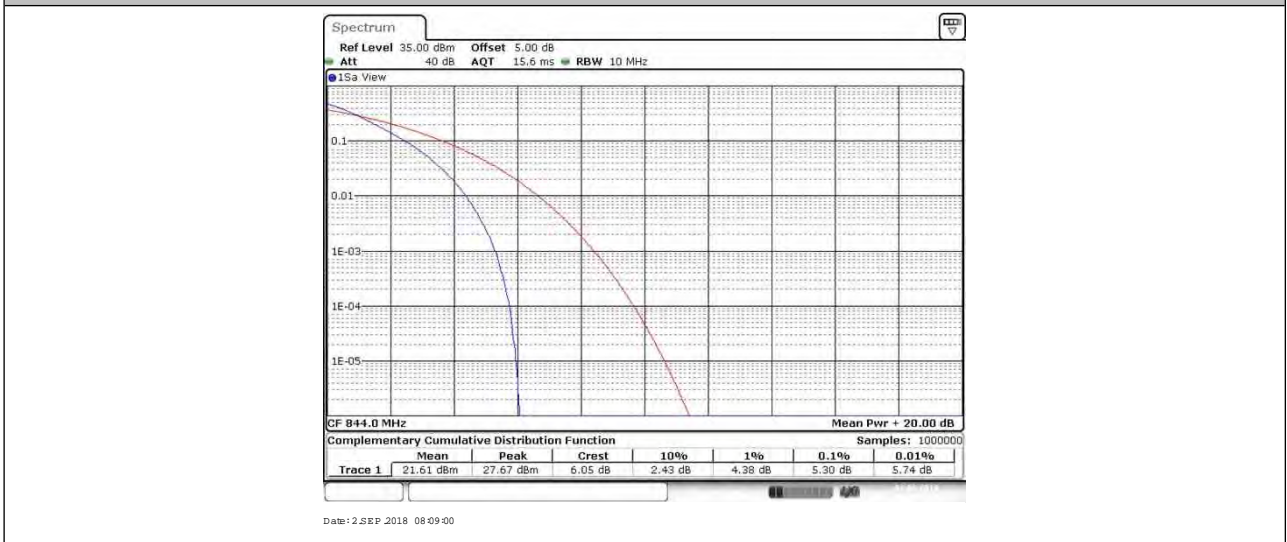
BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
BAND5	10MHz	QPSK	20450	50RB#0	5.42	13	PASS
BAND5	10MHz	QPSK	20525	50RB#0	5.45	13	PASS
BAND5	10MHz	QPSK	20600	50RB#0	5.30	13	PASS
BAND5	10MHz	64QAM	20450	50RB#0	5.88	13	PASS
BAND5	10MHz	64QAM	20525	50RB#0	5.88	13	PASS
BAND5	10MHz	64QAM	20600	50RB#0	5.62	13	PASS
BAND5	10MHz	16QAM	20450	50RB#0	6.12	13	PASS
BAND5	10MHz	16QAM	20525	50RB#0	6.09	13	PASS
BAND5	10MHz	16QAM	20600	50RB#0	5.86	13	PASS

### 2.2. Test Plots

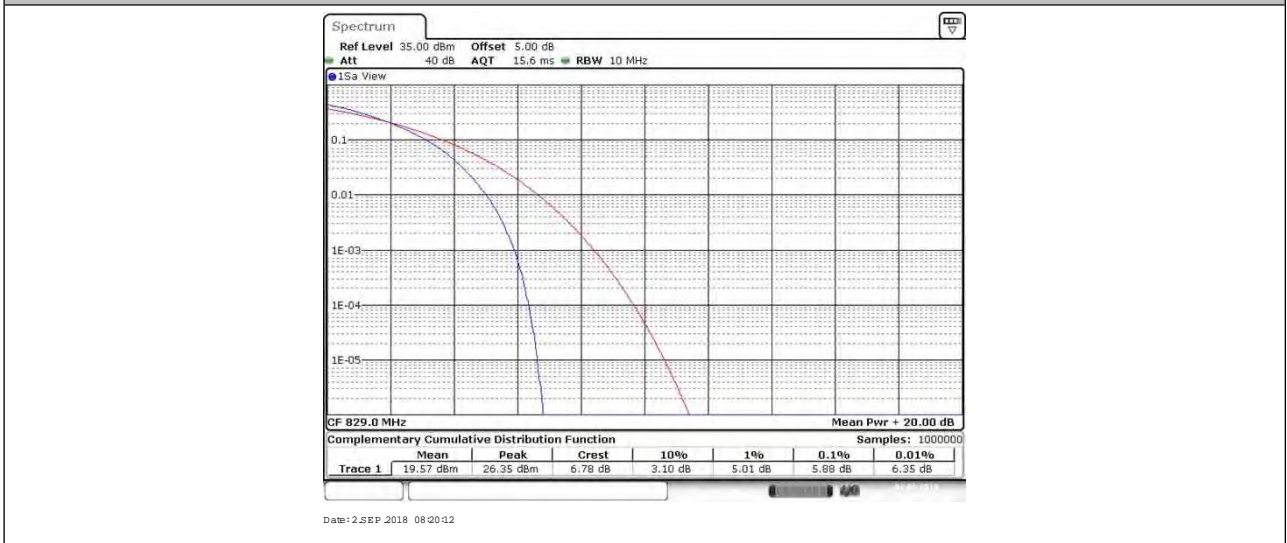




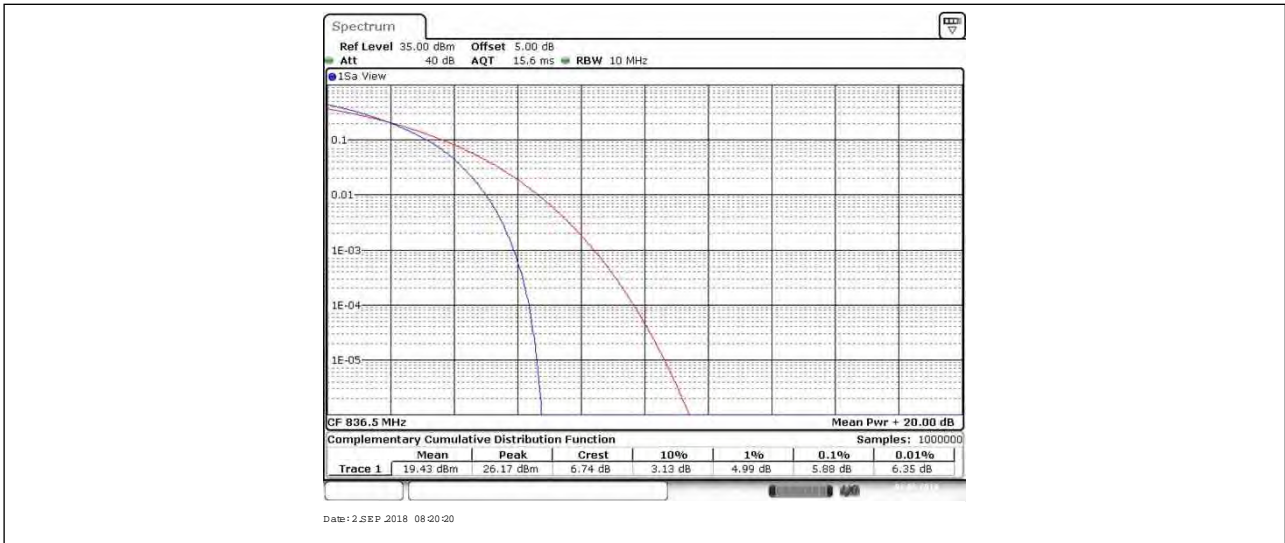
BAND5\_10MHz\_QPSK\_20600\_50RB#0



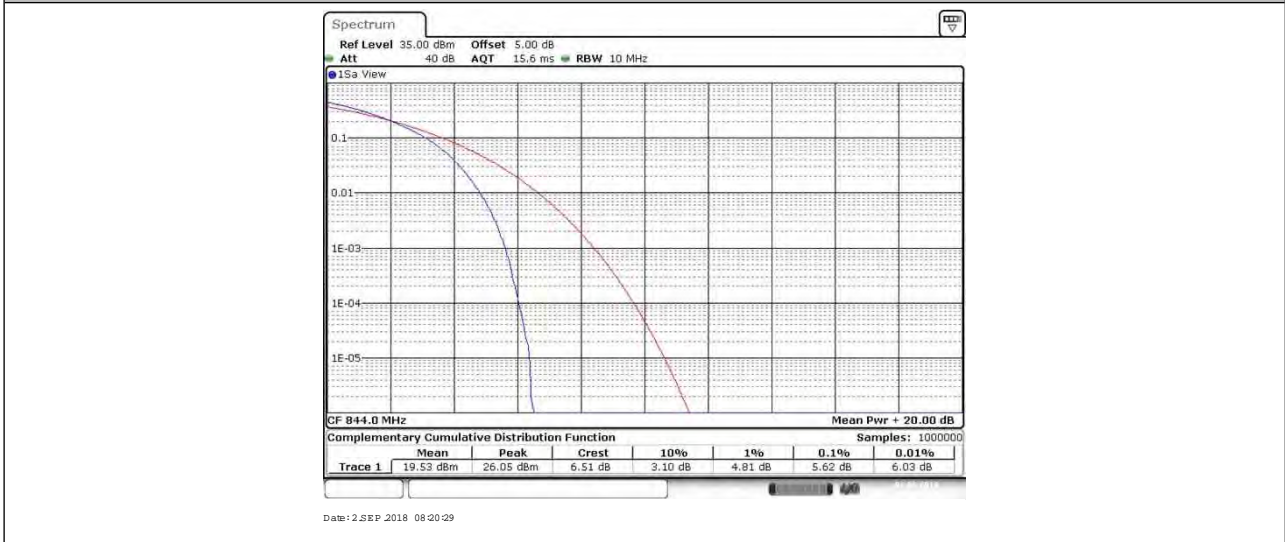
BAND5\_10MHz\_64QAM\_20450\_50RB#0



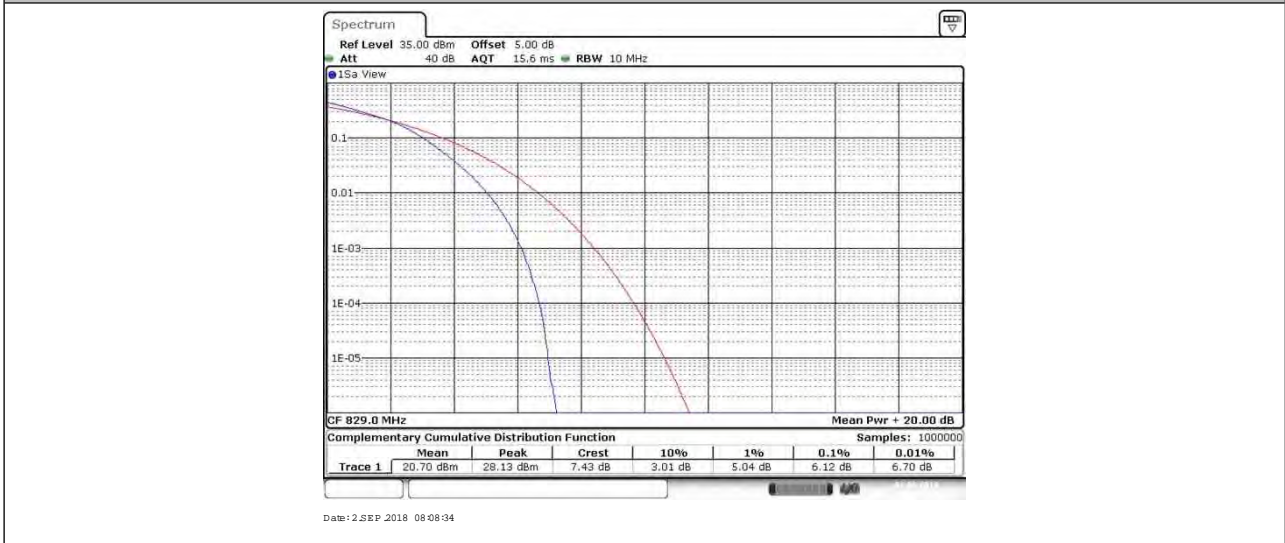
BAND5\_10MHz\_64QAM\_20525\_50RB#0



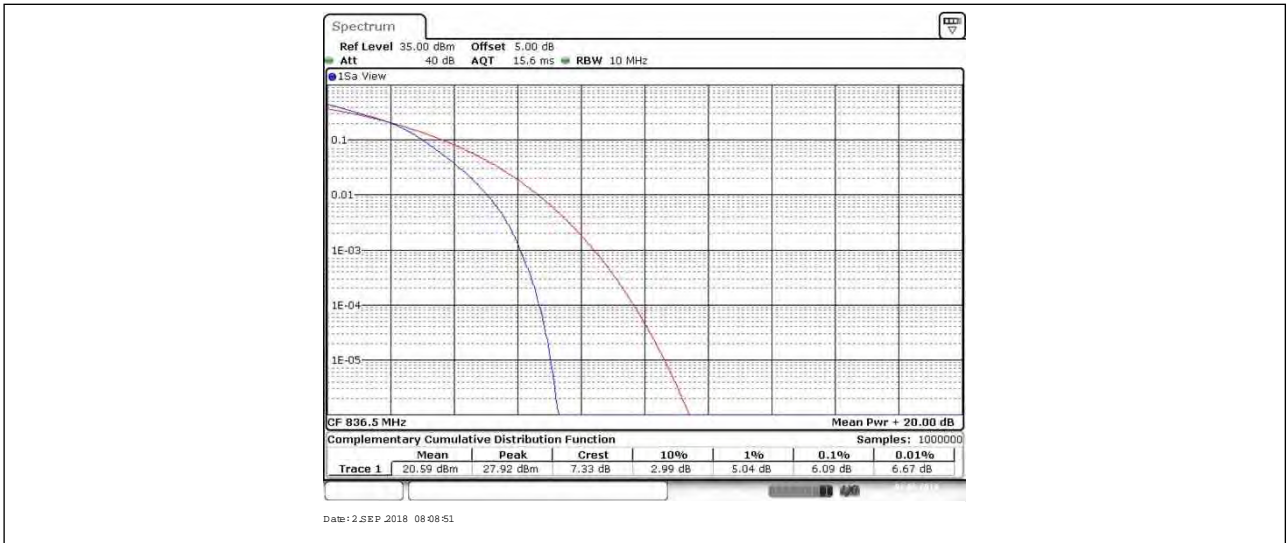
BAND5\_10MHz\_64QAM\_20600\_50RB#0



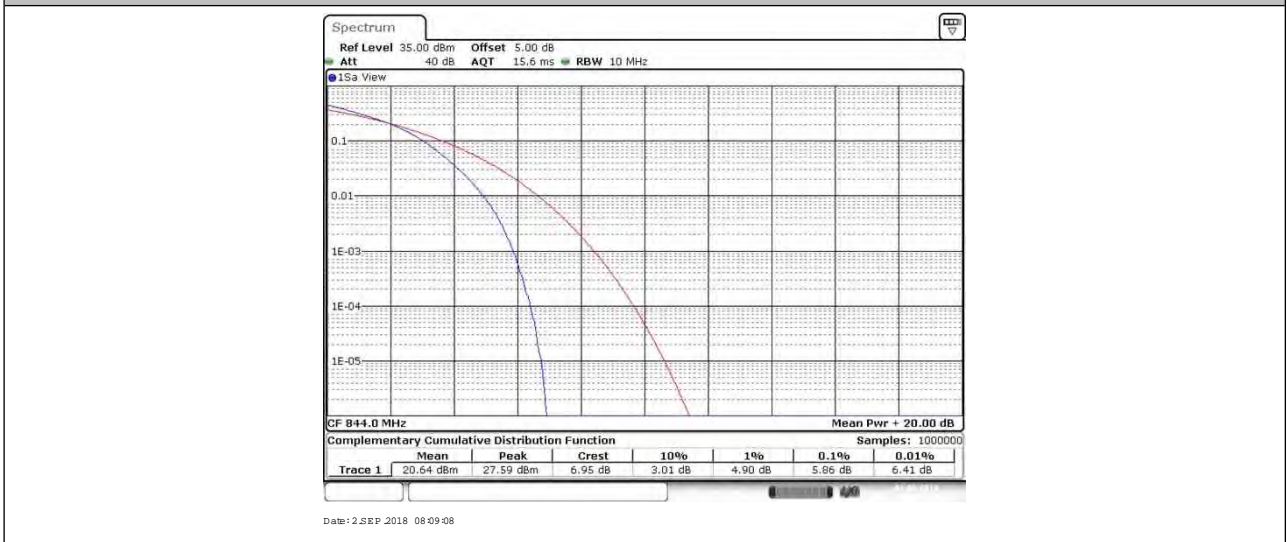
BAND5\_10MHz\_16QAM\_20450\_50RB#0



BAND5\_10MHz\_16QAM\_20525\_50RB#0



BAND5\_10MHz\_16QAM\_20600\_50RB#0

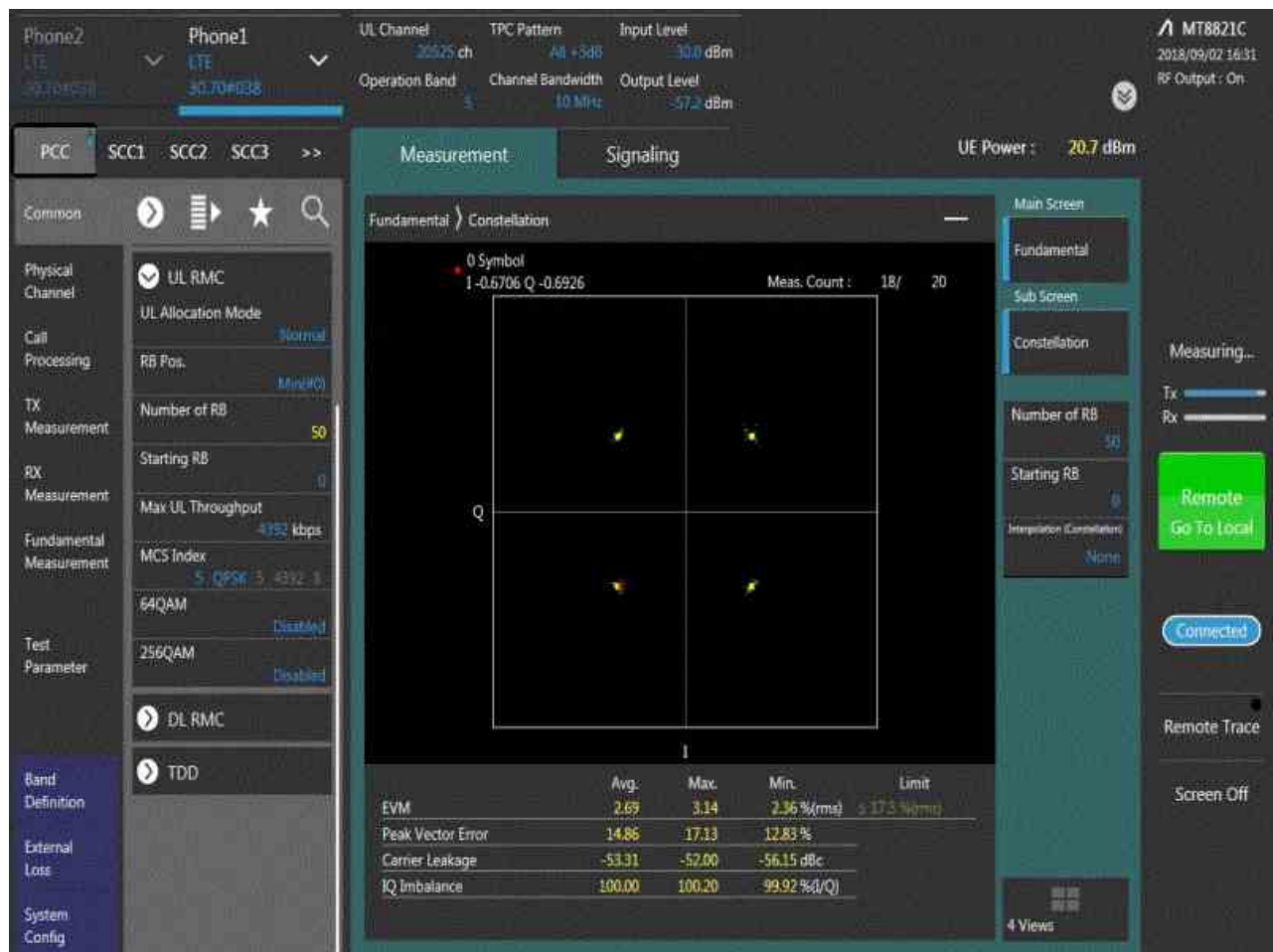


### 3. Modulation Characteristics

#### 3.1. Test BAND = LTE BAND5

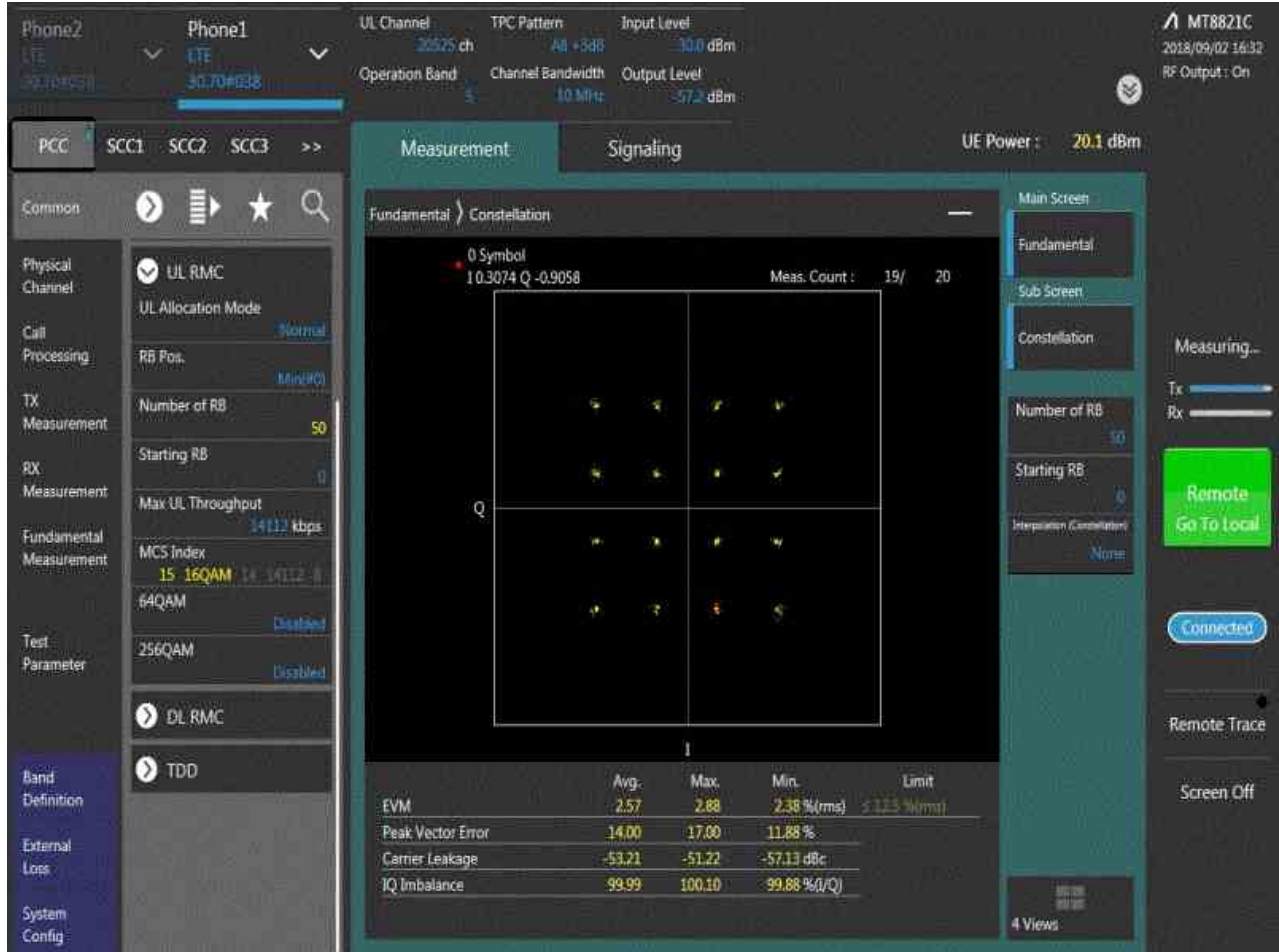
##### 3.1.1. Test Mode = LTE /TM1 10MHz

##### 3.1.1.1. Test Channel = MCH



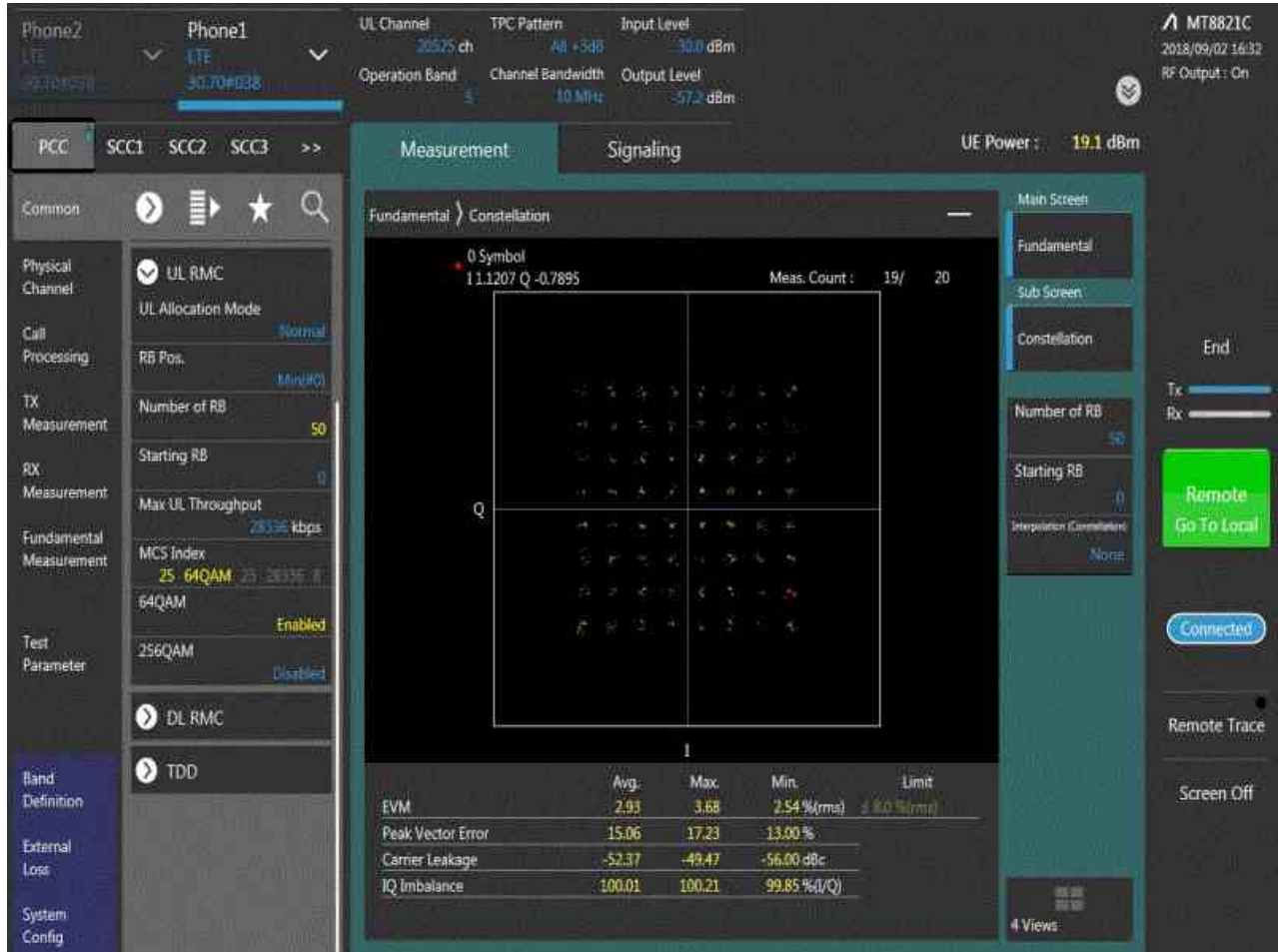
### 3.1.2. Test Mode = LTE /TM2 10MHz

#### 3.1.2.1. Test Channel = MCH



### 3.1.1. Test Mode = LTE /TM3 10MHz

#### 3.1.1.1. Test Channel = MCH







## 4. 26dB Bandwidth and Occupied Bandwidth

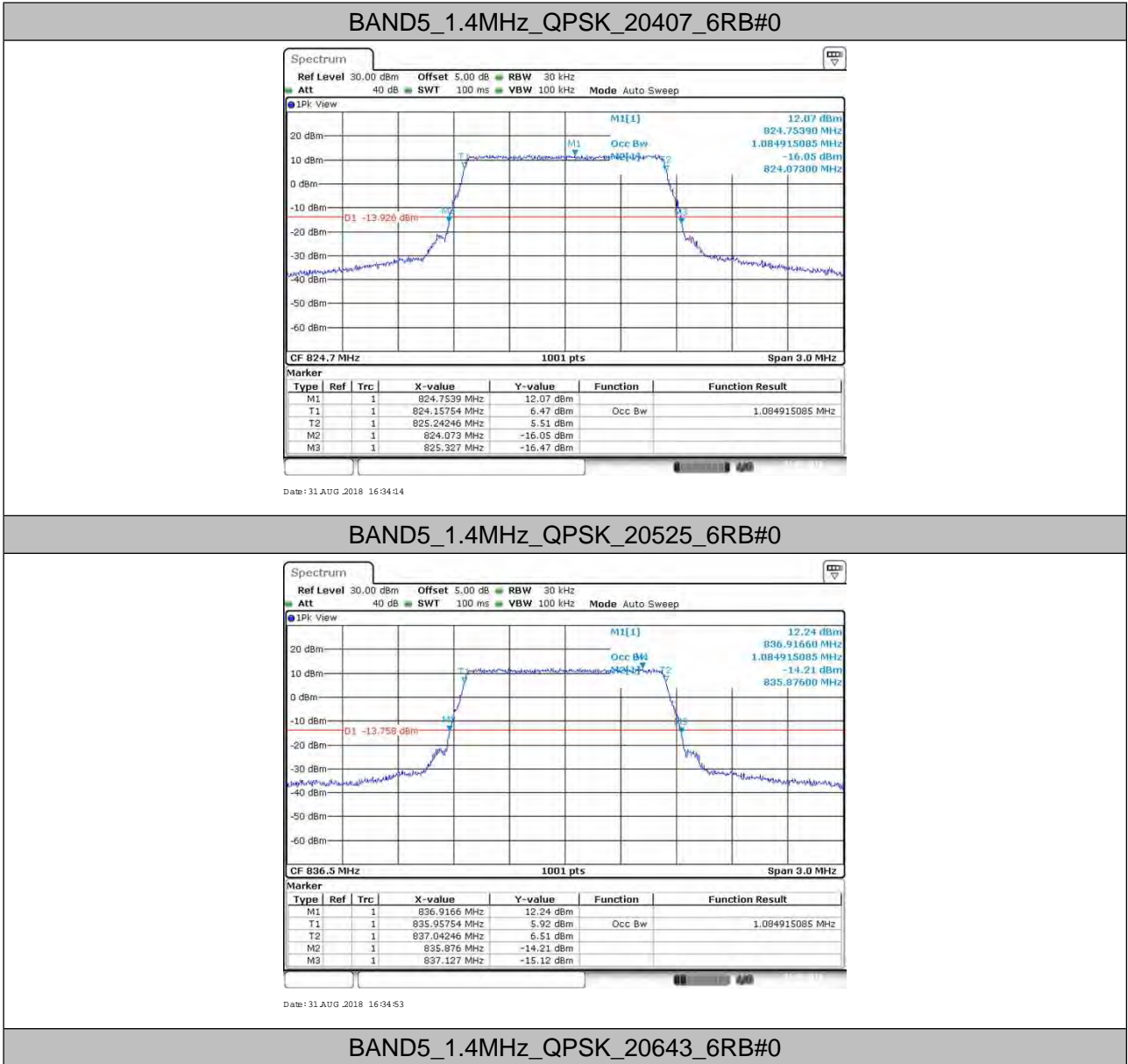
### 4.1. Test Result

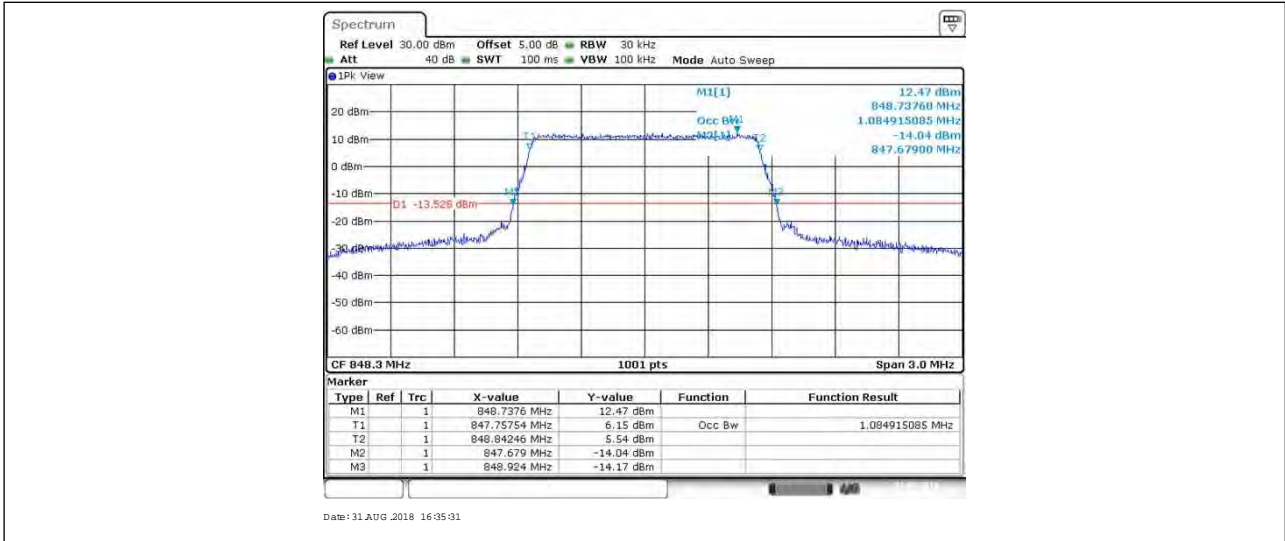
BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
BAND5	1.4MHz	QPSK	20407	6RB#0	1.085	1.254	PASS
BAND5	1.4MHz	QPSK	20525	6RB#0	1.085	1.251	PASS
BAND5	1.4MHz	QPSK	20643	6RB#0	1.085	1.245	PASS
BAND5	1.4MHz	64QAM	20407	6RB#0	1.085	1.242	PASS
BAND5	1.4MHz	64QAM	20525	6RB#0	1.085	1.254	PASS
BAND5	1.4MHz	64QAM	20643	6RB#0	1.088	1.260	PASS
BAND5	1.4MHz	16QAM	20407	6RB#0	1.085	1.248	PASS
BAND5	1.4MHz	16QAM	20525	6RB#0	1.085	1.248	PASS
BAND5	1.4MHz	16QAM	20643	6RB#0	1.088	1.251	PASS
BAND5	3MHz	QPSK	20415	15RB#0	2.685	2.976	PASS
BAND5	3MHz	QPSK	20525	15RB#0	2.685	2.994	PASS
BAND5	3MHz	QPSK	20635	15RB#0	2.685	2.988	PASS
BAND5	3MHz	64QAM	20415	15RB#0	2.685	2.982	PASS
BAND5	3MHz	64QAM	20525	15RB#0	2.685	2.970	PASS
BAND5	3MHz	64QAM	20635	15RB#0	2.691	2.994	PASS
BAND5	3MHz	16QAM	20415	15RB#0	2.685	2.976	PASS
BAND5	3MHz	16QAM	20525	15RB#0	2.685	2.976	PASS
BAND5	3MHz	16QAM	20635	15RB#0	2.685	2.982	PASS
BAND5	5MHz	QPSK	20425	25RB#0	4.456	4.870	PASS
BAND5	5MHz	QPSK	20525	25RB#0	4.456	4.860	PASS
BAND5	5MHz	QPSK	20625	25RB#0	4.456	4.860	PASS
BAND5	5MHz	64QAM	20425	25RB#0	4.456	4.850	PASS
BAND5	5MHz	64QAM	20525	25RB#0	4.456	4.870	PASS
BAND5	5MHz	64QAM	20625	25RB#0	4.456	4.870	PASS
BAND5	5MHz	16QAM	20425	25RB#0	4.456	4.840	PASS
BAND5	5MHz	16QAM	20525	25RB#0	4.456	4.840	PASS
BAND5	5MHz	16QAM	20625	25RB#0	4.456	4.830	PASS
BAND5	10MHz	QPSK	20450	50RB#0	8.911	10.160	PASS
BAND5	10MHz	QPSK	20525	50RB#0	8.951	10.160	PASS
BAND5	10MHz	QPSK	20600	50RB#0	8.911	10.160	PASS
BAND5	10MHz	64QAM	20450	50RB#0	8.911	10.120	PASS
BAND5	10MHz	64QAM	20525	50RB#0	8.931	10.220	PASS
BAND5	10MHz	64QAM	20600	50RB#0	8.911	10.220	PASS



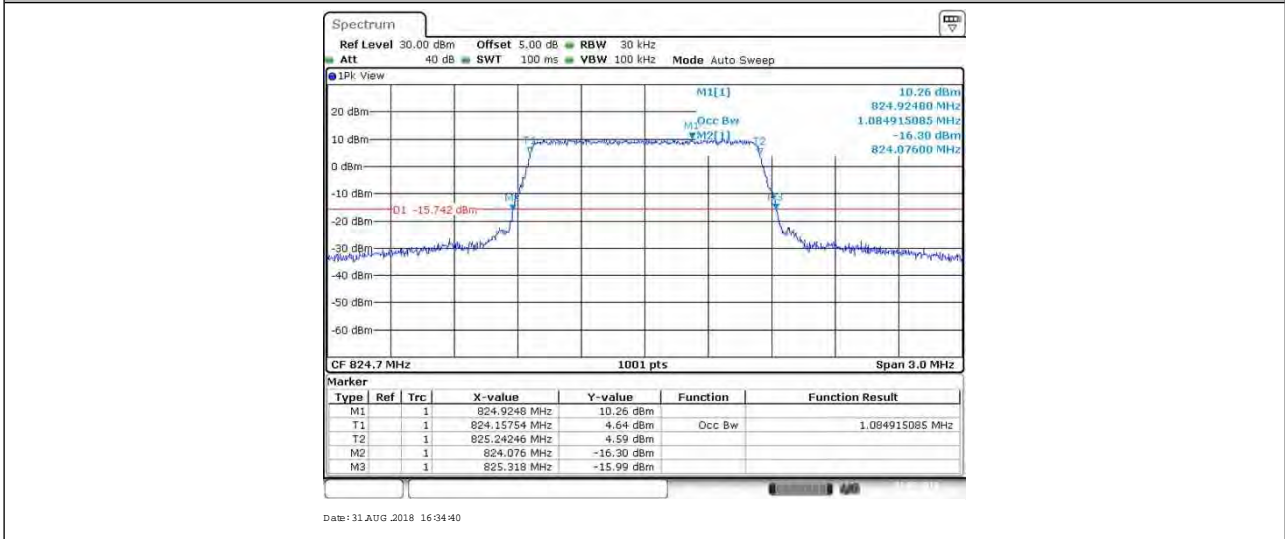
BAND5	10MHz	16QAM	20450	50RB#0	8.931	10.240	PASS
BAND5	10MHz	16QAM	20525	50RB#0	8.931	10.180	PASS
BAND5	10MHz	16QAM	20600	50RB#0	8.911	10.140	PASS

#### 4.2. Test Plots

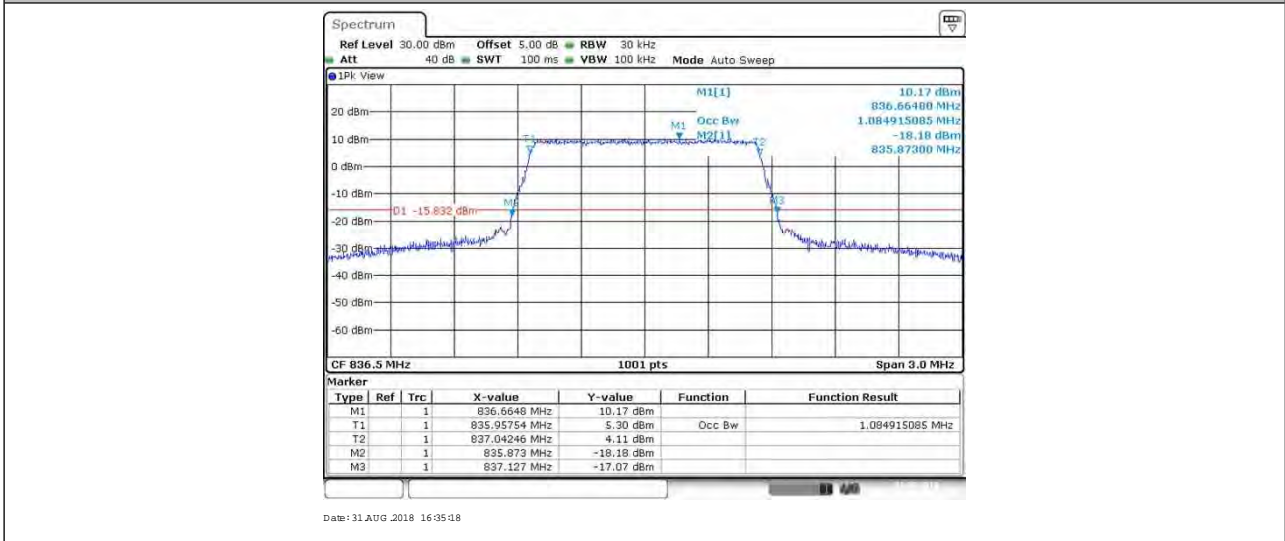




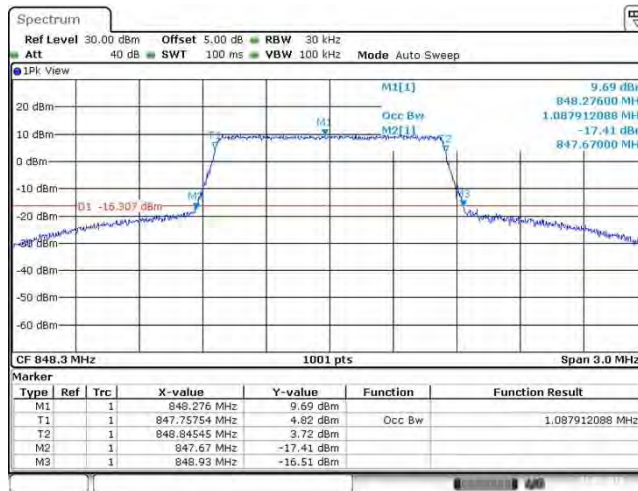
**BAND5\_1.4MHz\_64QAM\_20407\_6RB#0**



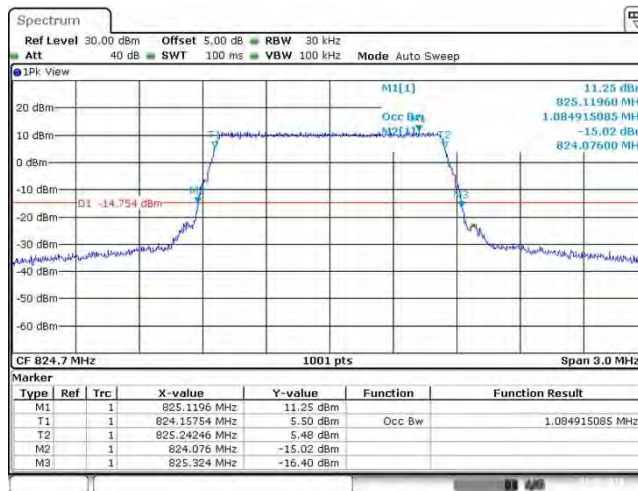
**BAND5\_1.4MHz\_64QAM\_20525\_6RB#0**



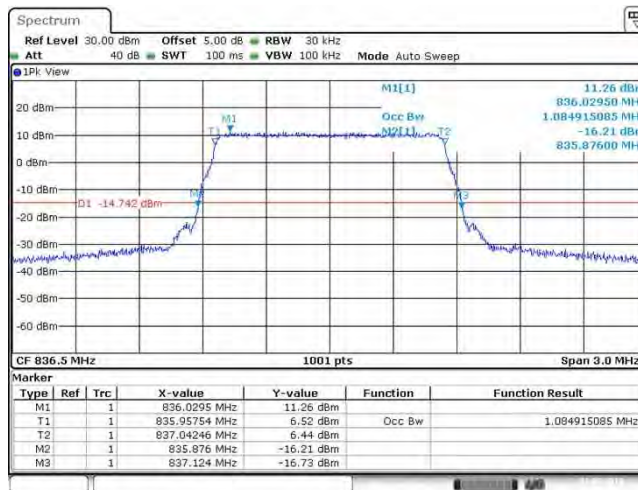
**BAND5\_1.4MHz\_64QAM\_20643\_6RB#0**



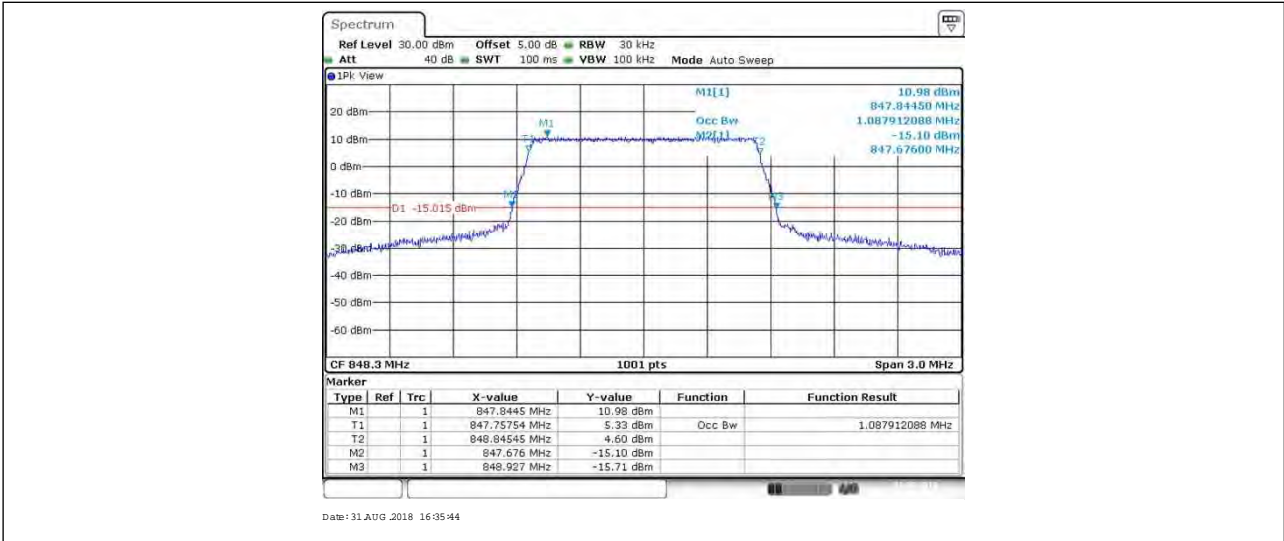
**BAND5\_1.4MHz\_16QAM\_20407\_6RB#0**



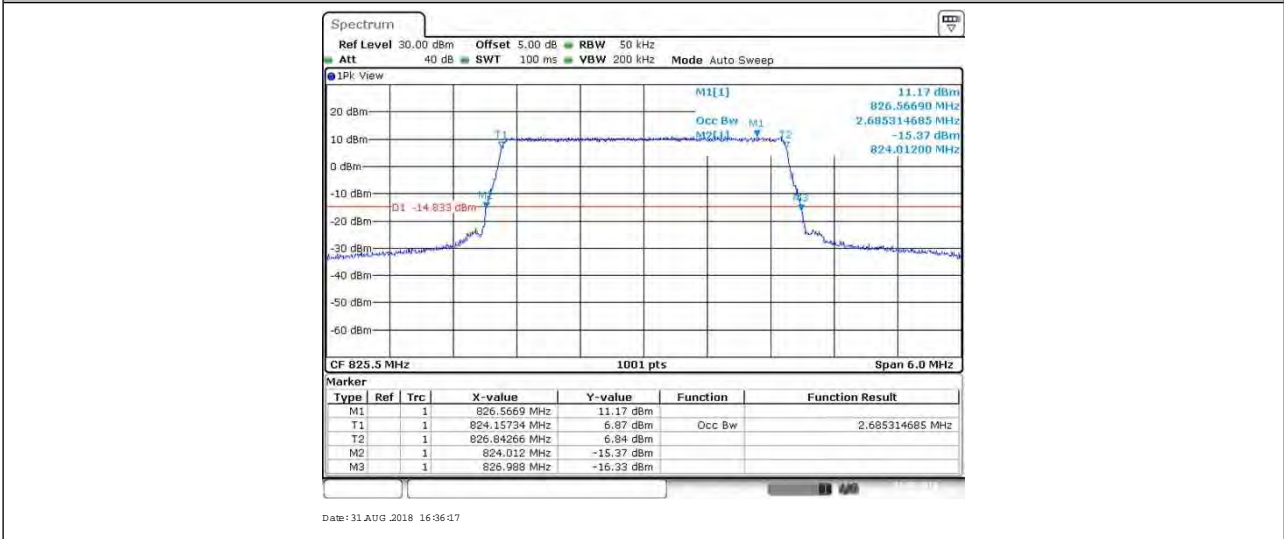
**BAND5\_1.4MHz\_16QAM\_20525\_6RB#0**



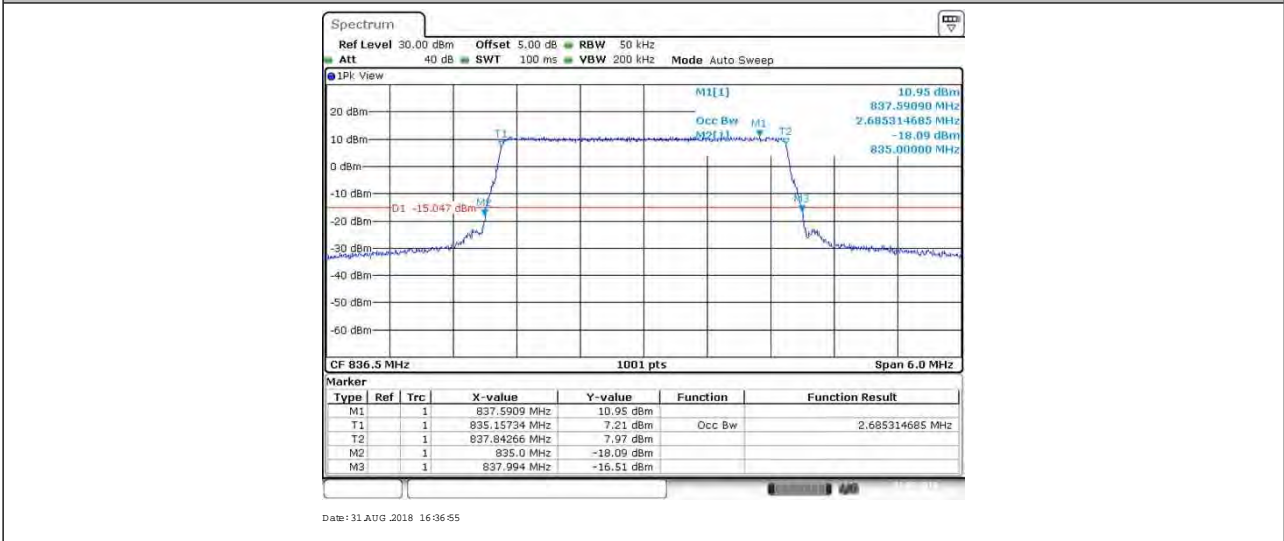
**BAND5\_1.4MHz\_16QAM\_20643\_6RB#0**



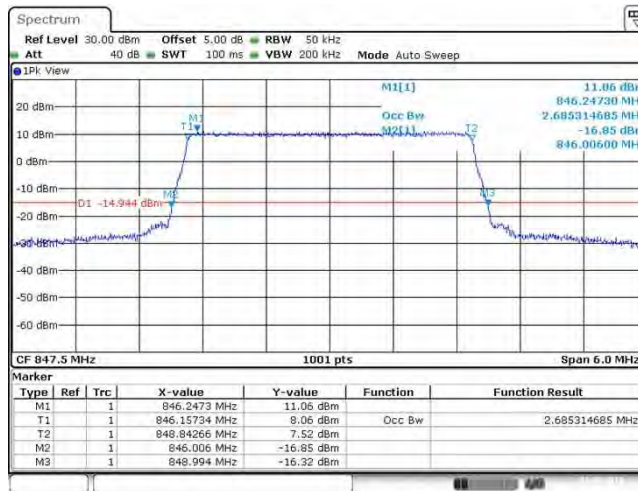
**BAND5\_3MHz\_QPSK\_20415\_15RB#0**



**BAND5\_3MHz\_QPSK\_20525\_15RB#0**

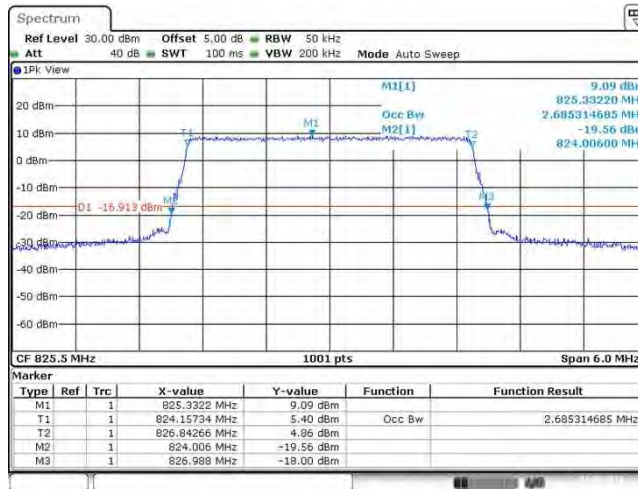


**BAND5\_3MHz\_QPSK\_20635\_15RB#0**



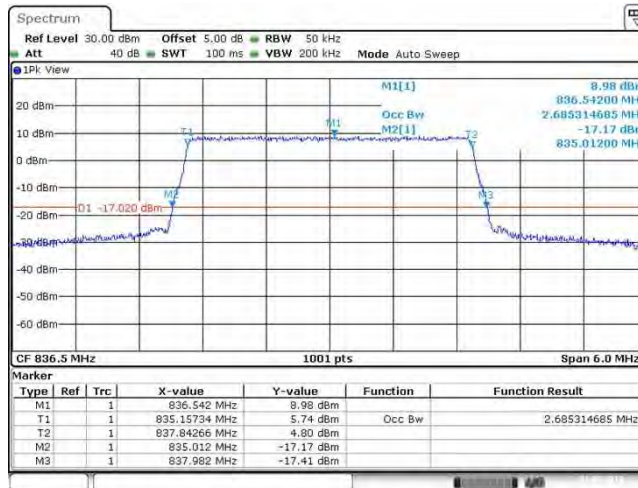
Date: 31.AUG.2018 16:37:34

**BAND5\_3MHz\_64QAM\_20415\_15RB#0**



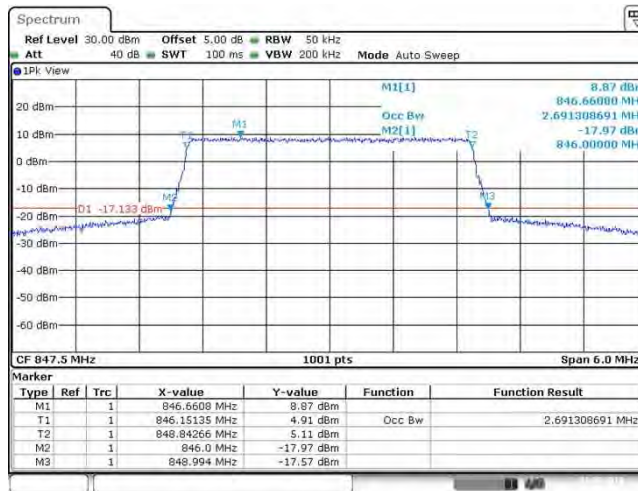
Date: 31.AUG.2018 16:36:42

**BAND5\_3MHz\_64QAM\_20525\_15RB#0**



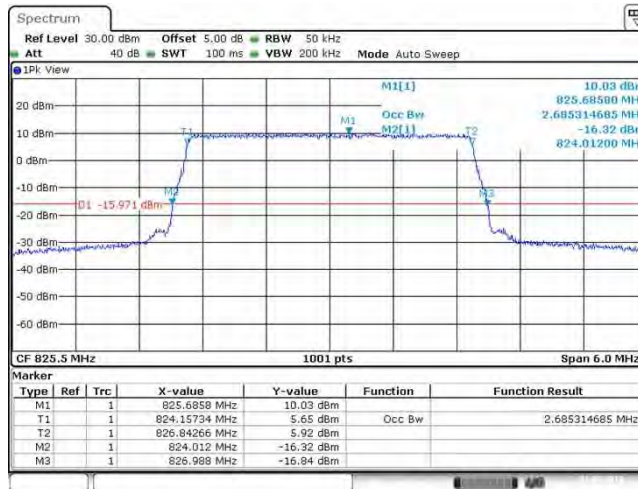
Date: 31.AUG.2018 16:37:21

**BAND5\_3MHz\_64QAM\_20635\_15RB#0**



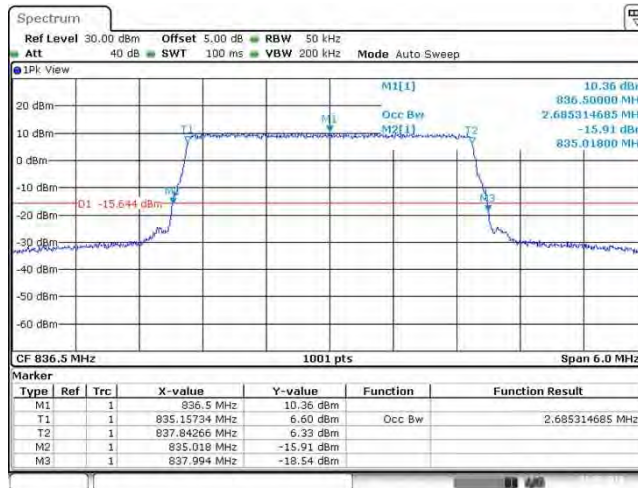
Date: 31.AUG.2018 16:37:59

**BAND5\_3MHz\_16QAM\_20415\_15RB#0**



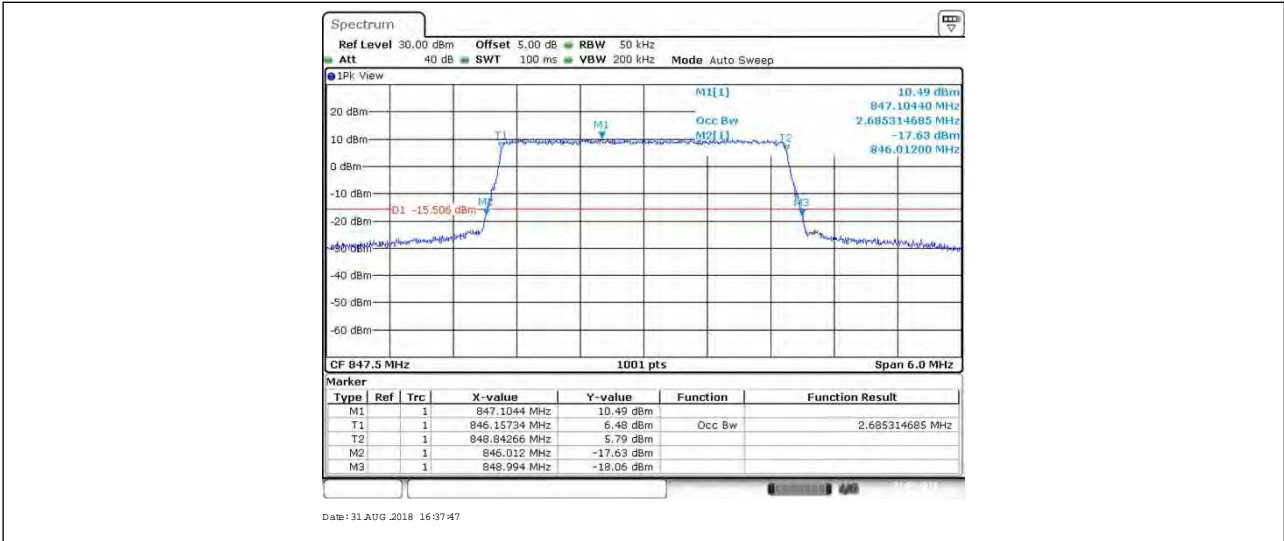
Date: 31.AUG.2018 16:36:30

**BAND5\_3MHz\_16QAM\_20525\_15RB#0**

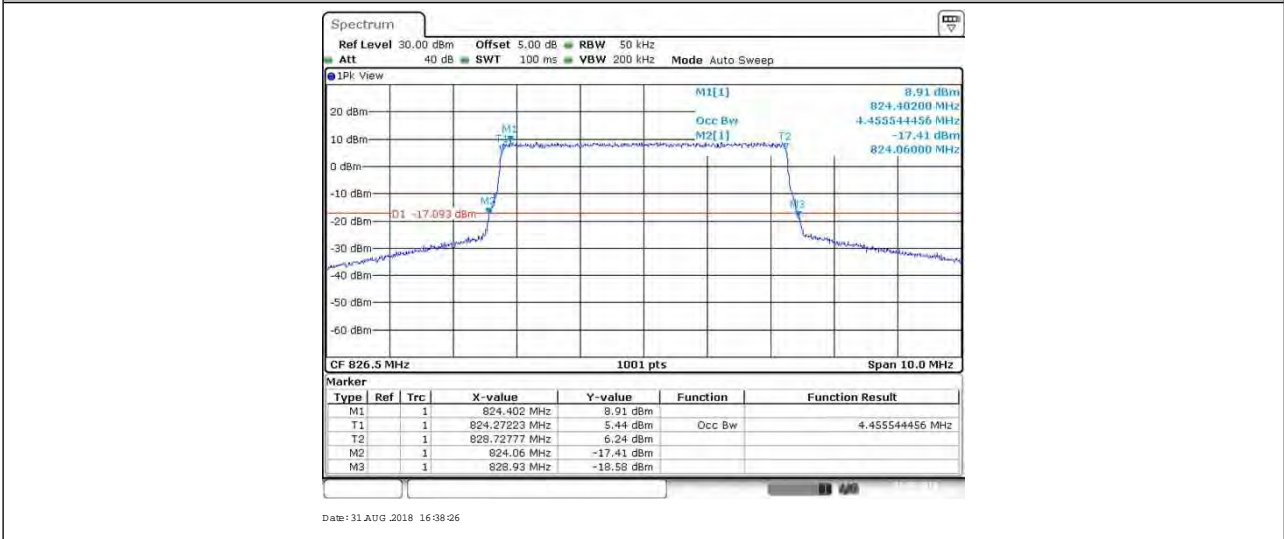


Date: 31.AUG.2018 16:37:08

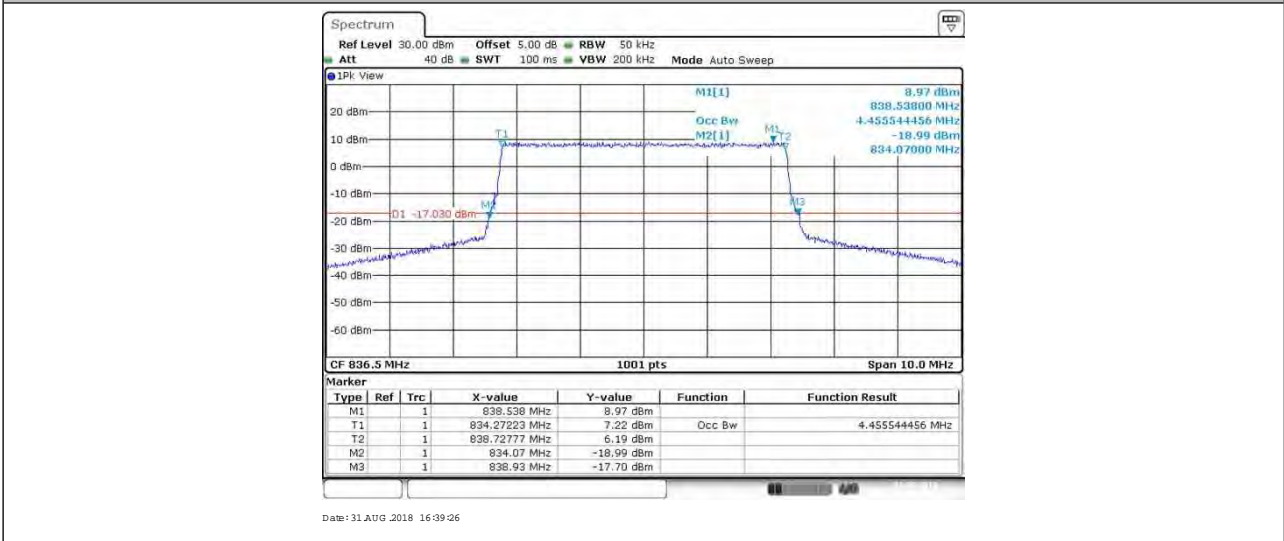
**BAND5\_3MHz\_16QAM\_20635\_15RB#0**



**BAND5\_5MHz\_QPSK\_20425\_25RB#0**

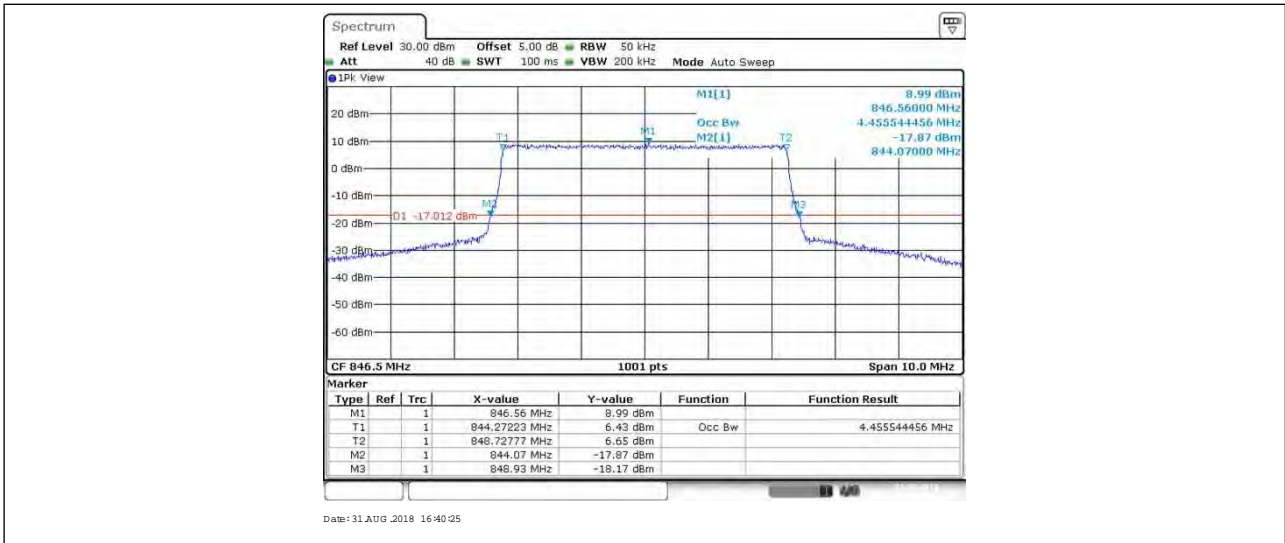


**BAND5\_5MHz\_QPSK\_20525\_25RB#0**

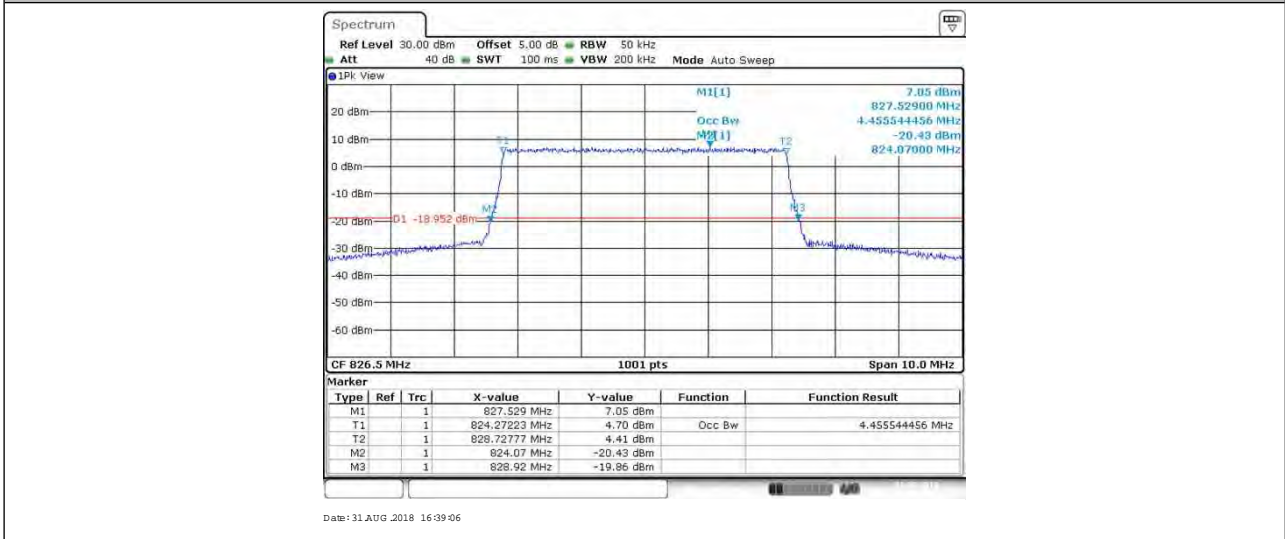


**BAND5\_5MHz\_QPSK\_20625\_25RB#0**

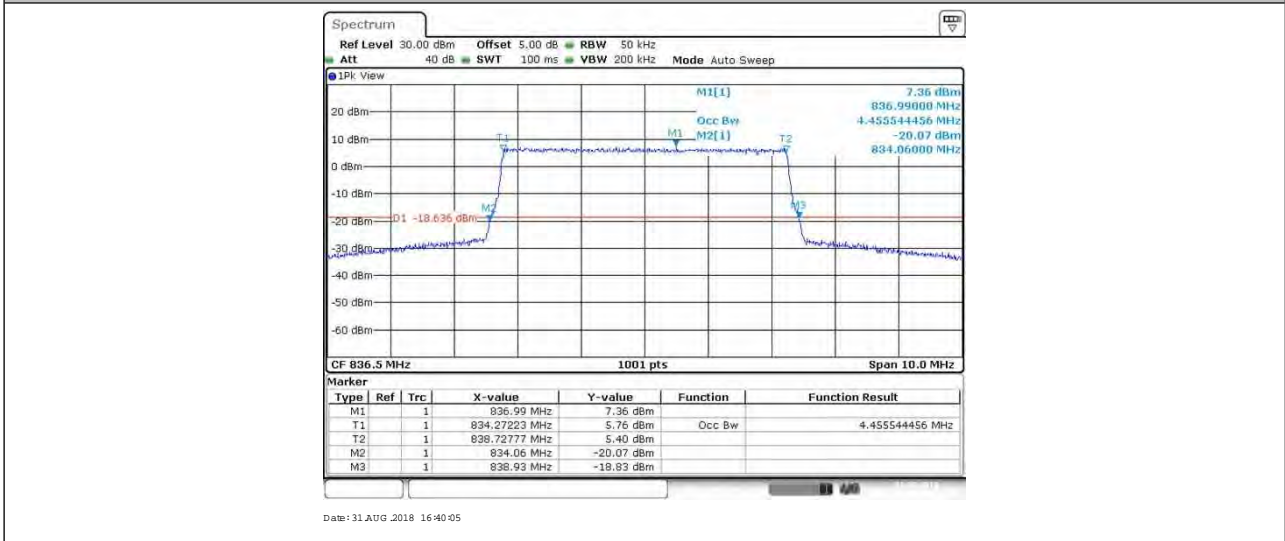




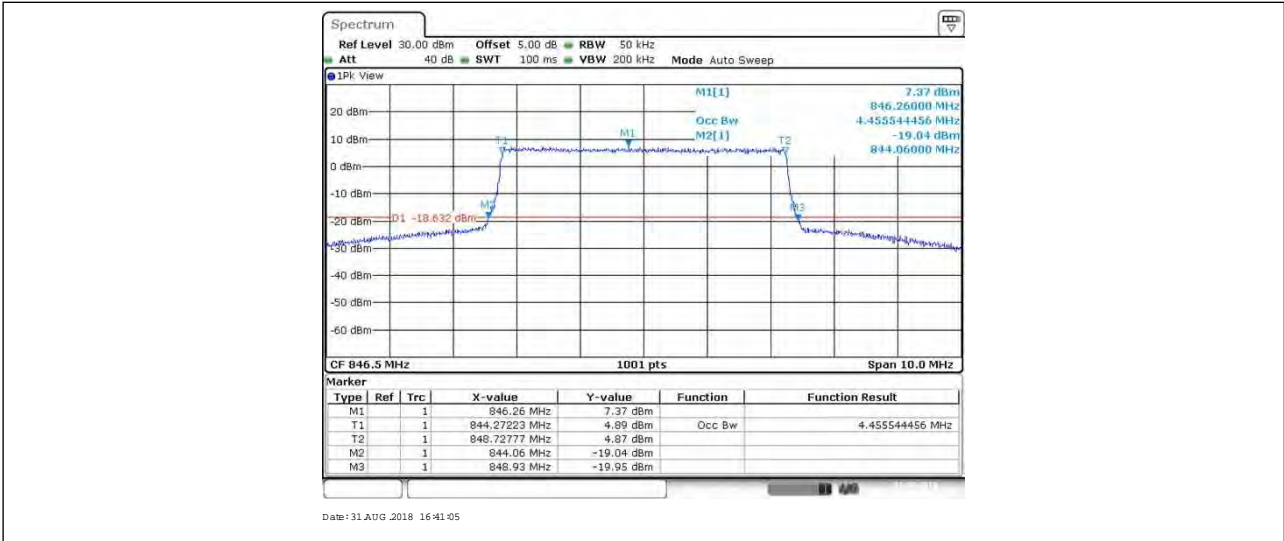
**BAND5\_5MHz\_64QAM\_20425\_25RB#0**



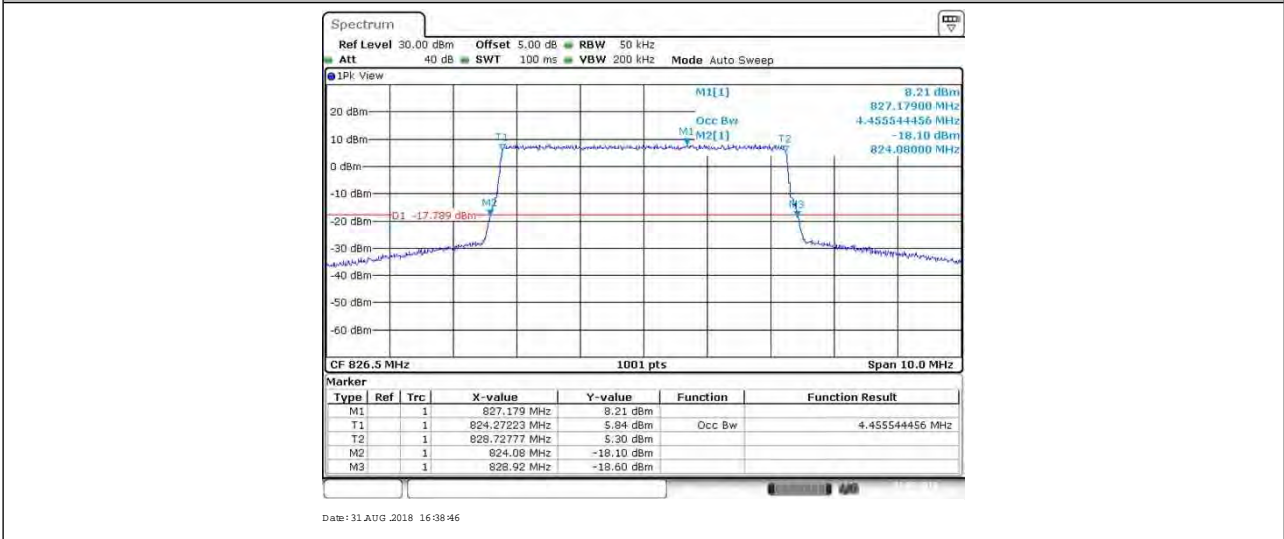
**BAND5\_5MHz\_64QAM\_20525\_25RB#0**



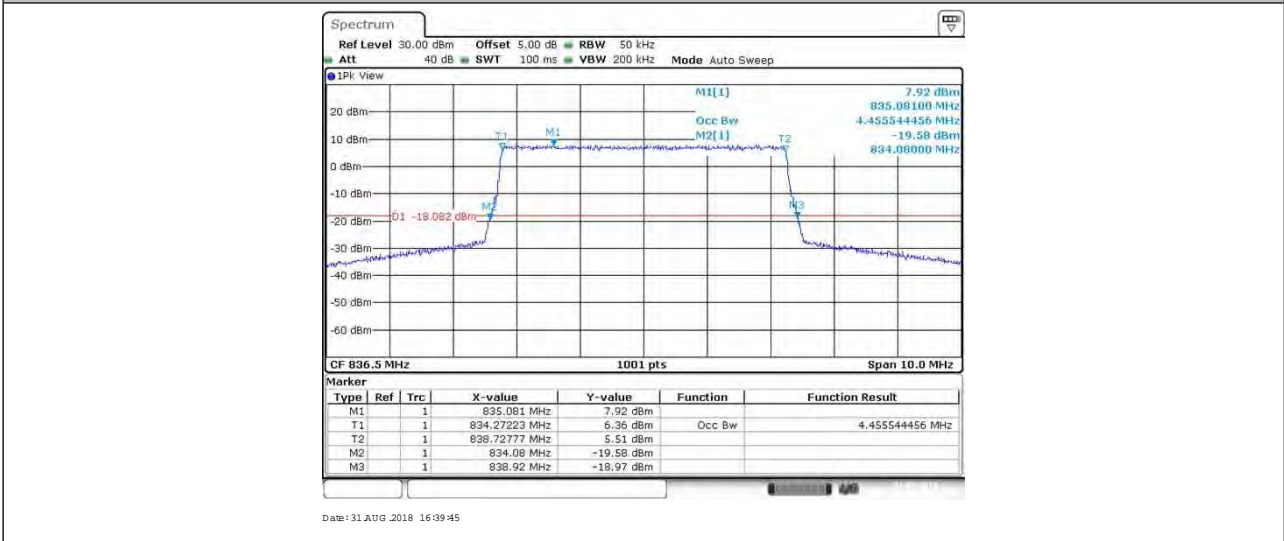
**BAND5\_5MHz\_64QAM\_20625\_25RB#0**



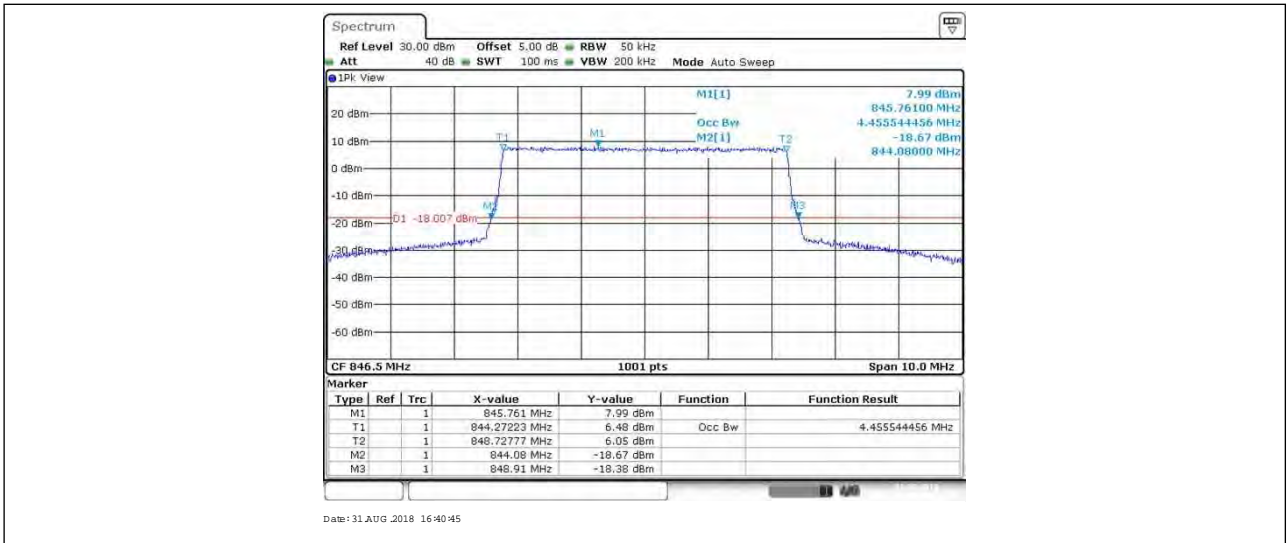
**BAND5\_5MHz\_16QAM\_20425\_25RB#0**



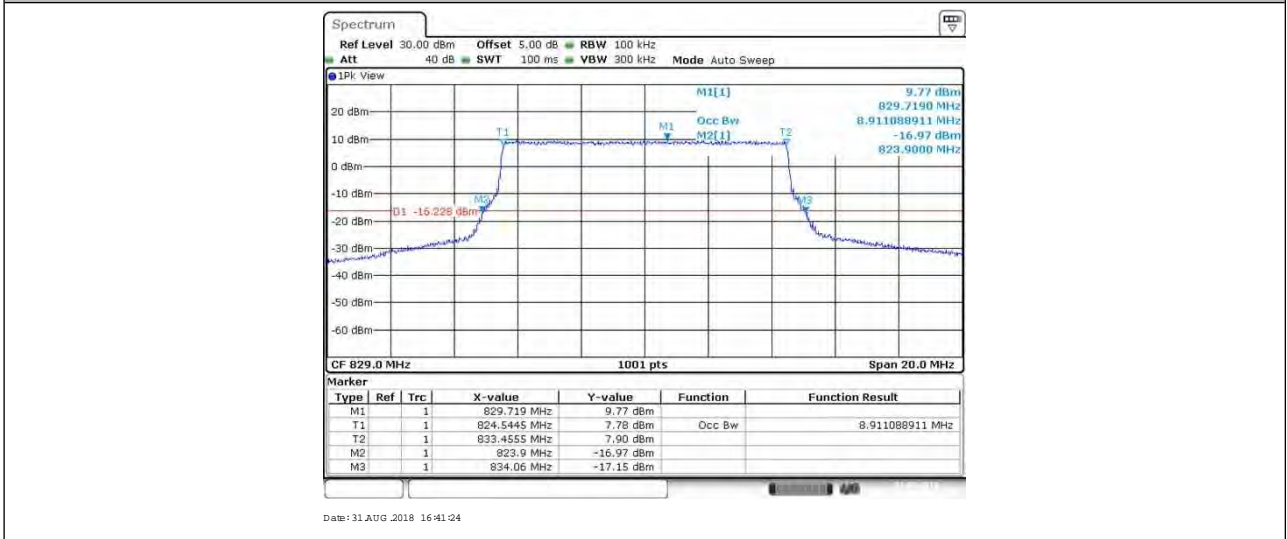
**BAND5\_5MHz\_16QAM\_20525\_25RB#0**



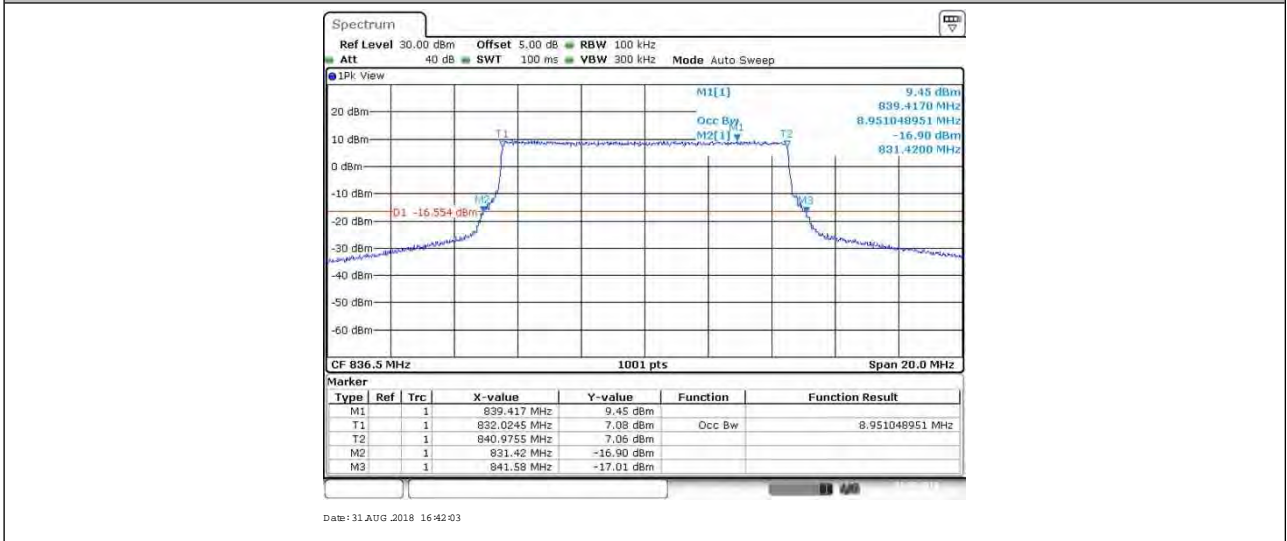
**BAND5\_5MHz\_16QAM\_20625\_25RB#0**



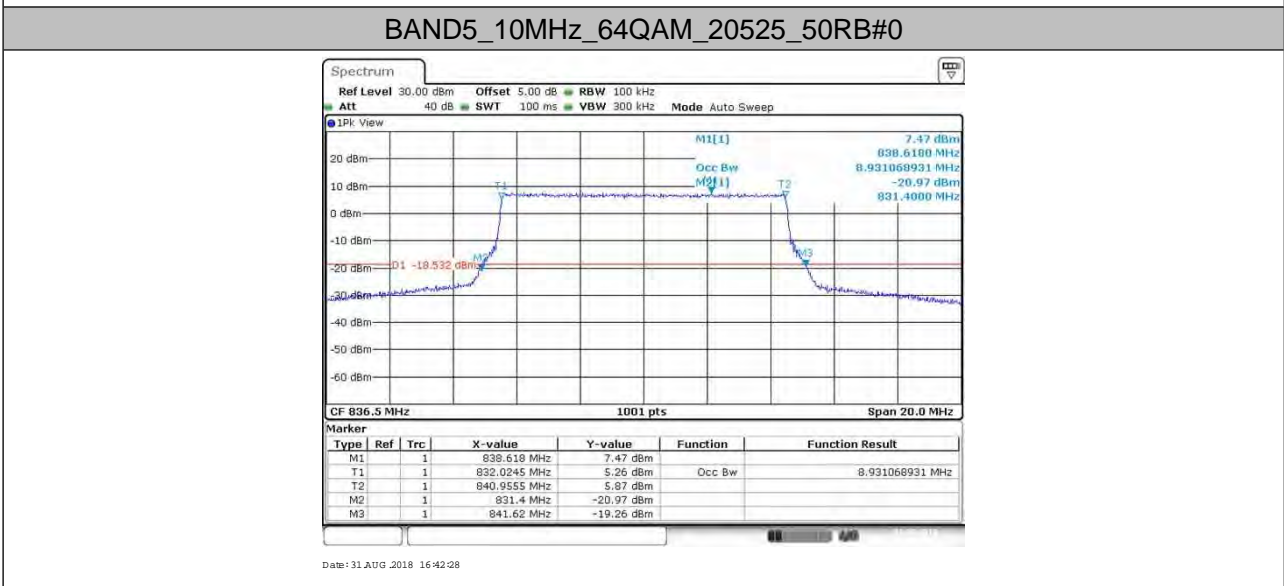
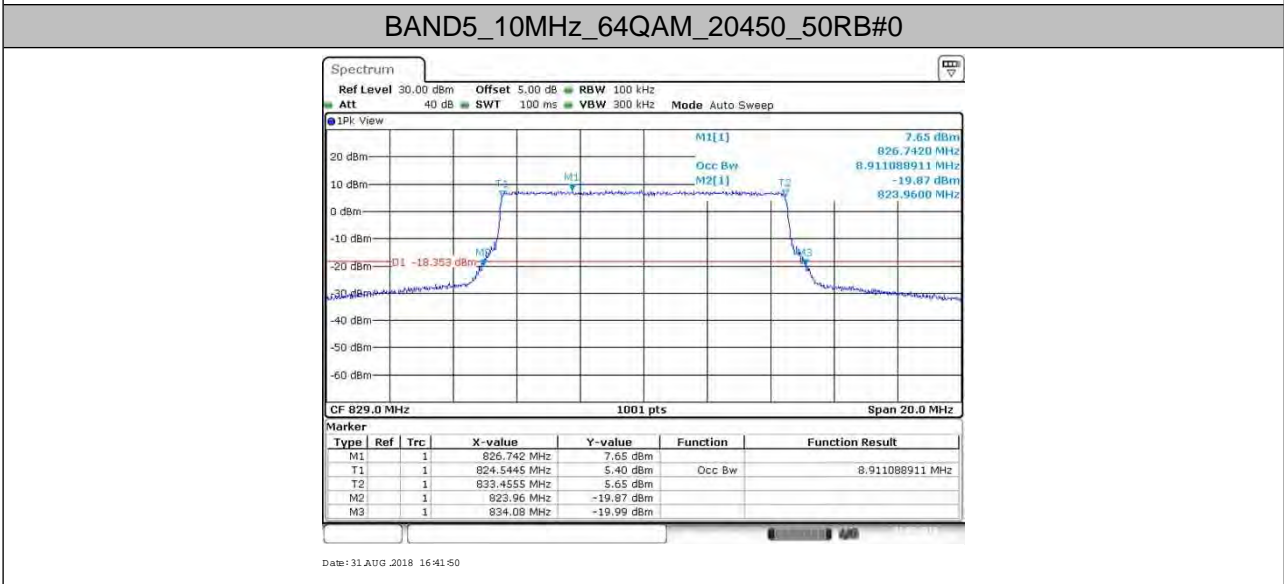
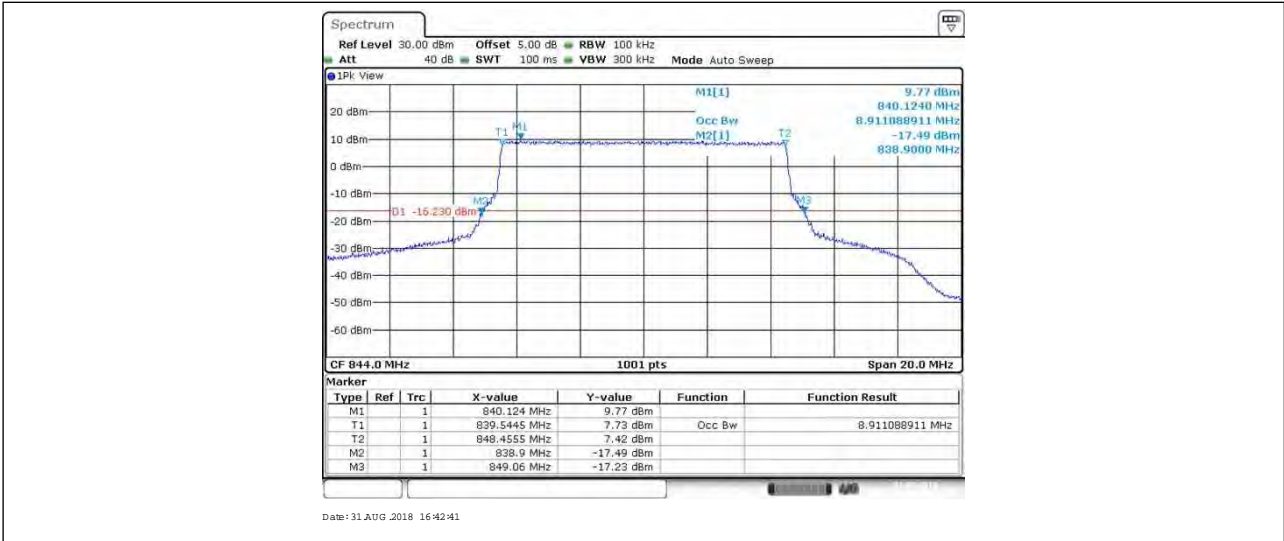
**BAND5\_10MHz\_QPSK\_20450\_50RB#0**

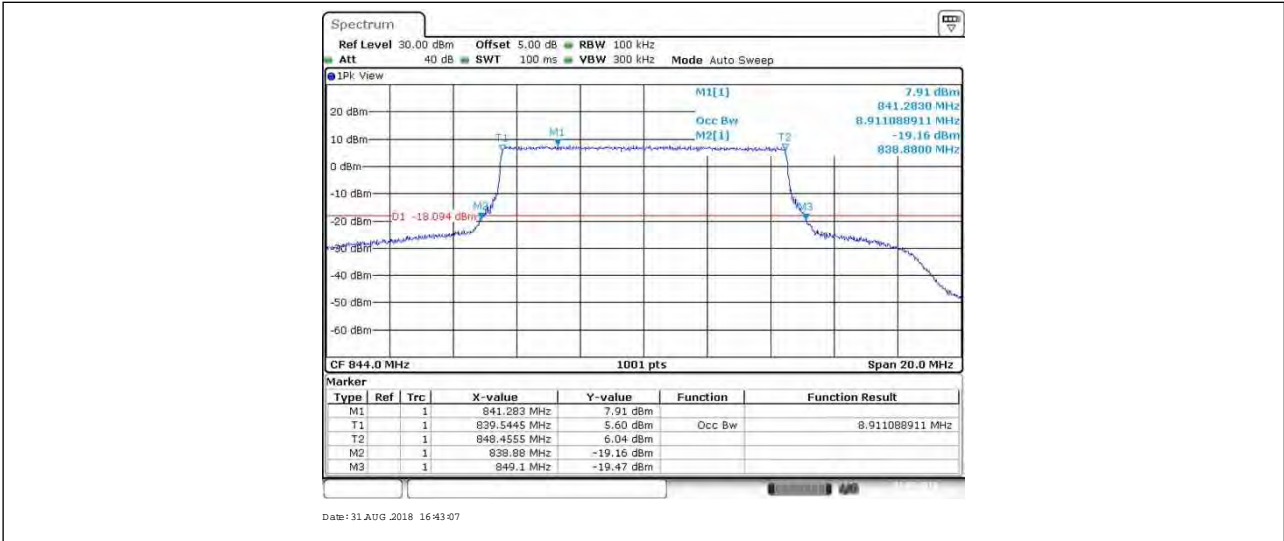


**BAND5\_10MHz\_QPSK\_20525\_50RB#0**

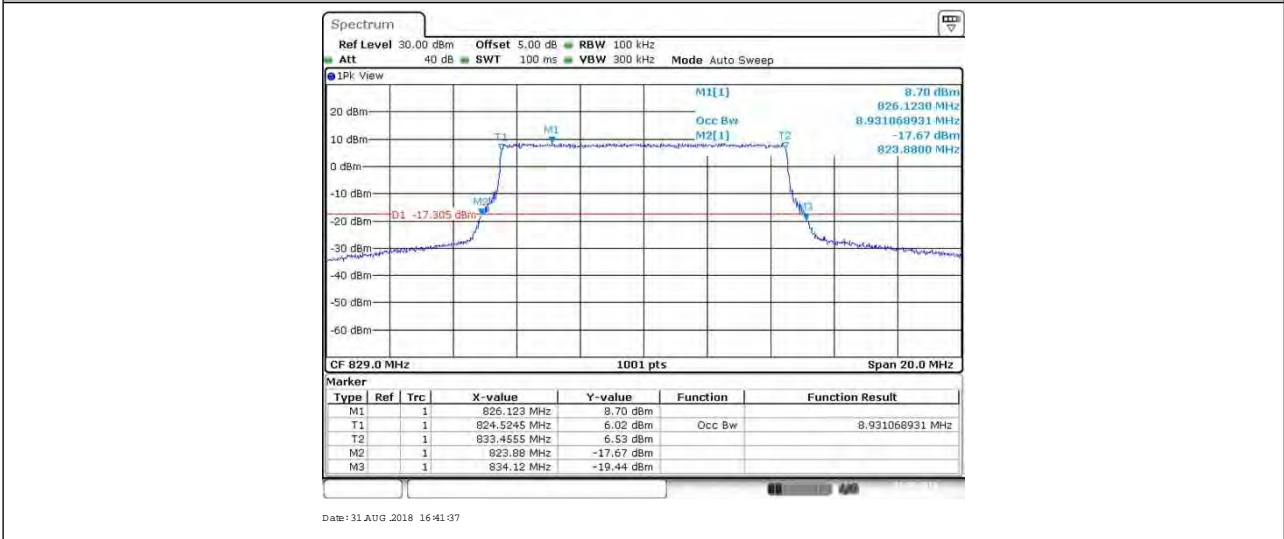


**BAND5\_10MHz\_QPSK\_20600\_50RB#0**

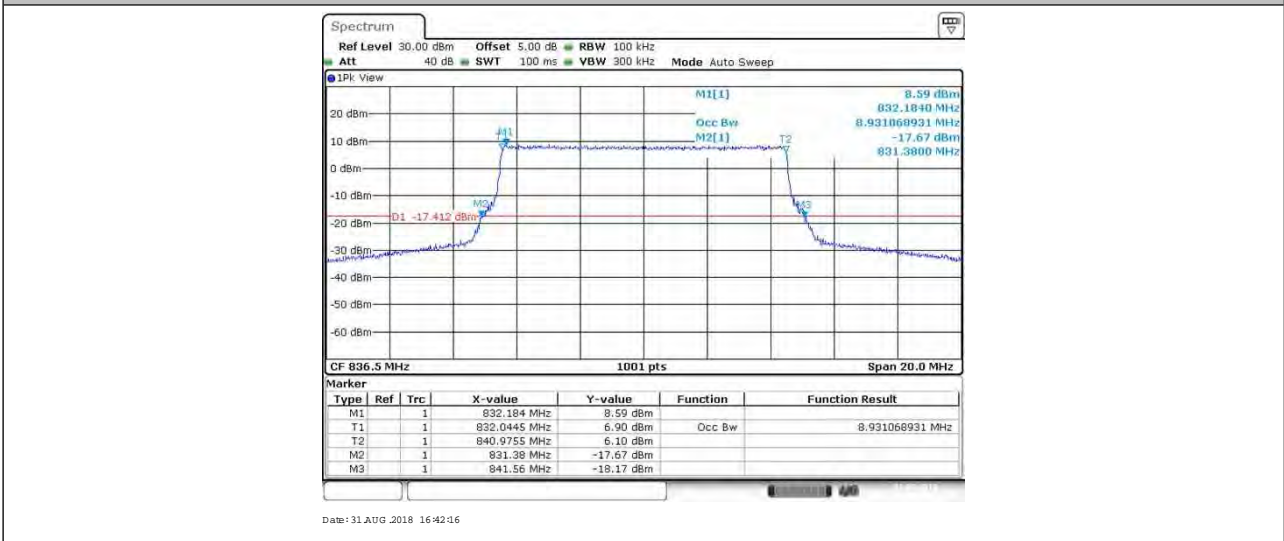




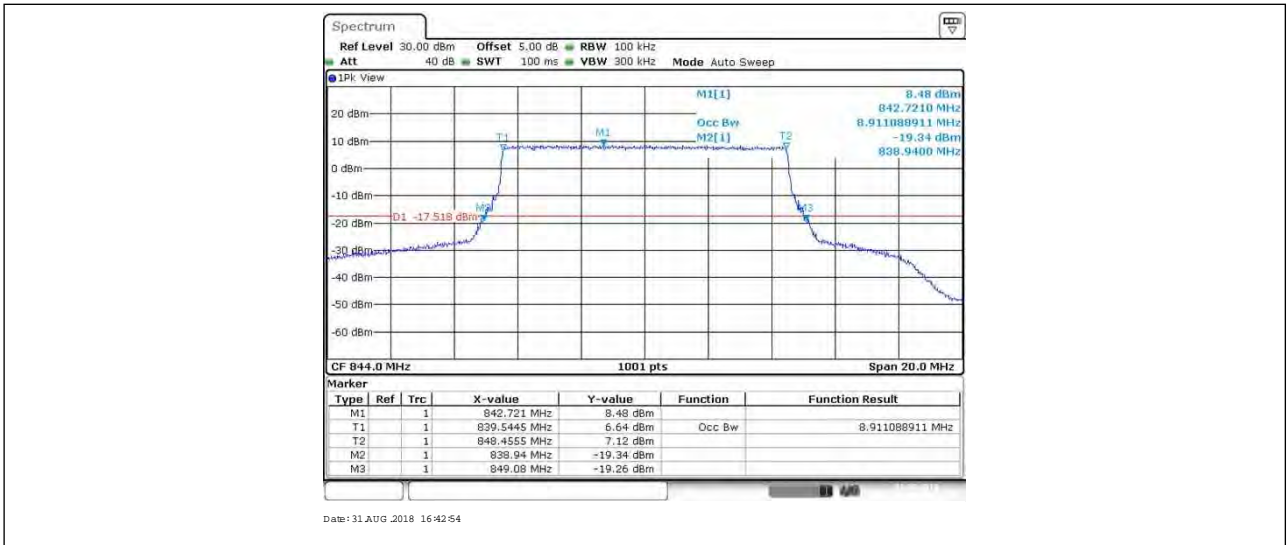
**BAND5\_10MHz\_16QAM\_20450\_50RB#0**



**BAND5\_10MHz\_16QAM\_20525\_50RB#0**



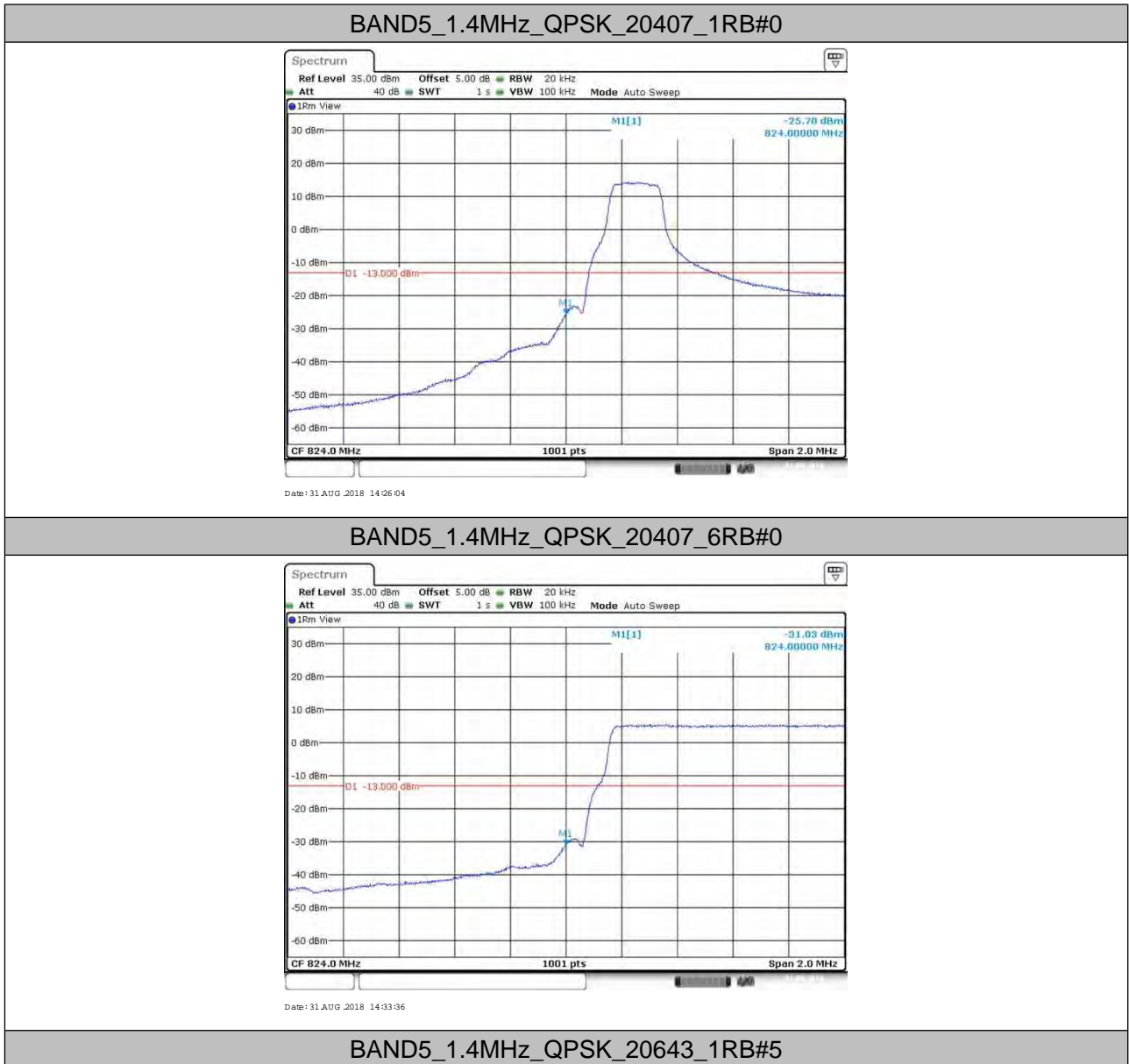
**BAND5\_10MHz\_16QAM\_20600\_50RB#0**





## 5. Band Edge Compliance

### 5.1. Test Plots





**BAND5\_1.4MHz\_QPSK\_20643\_6RB#0**

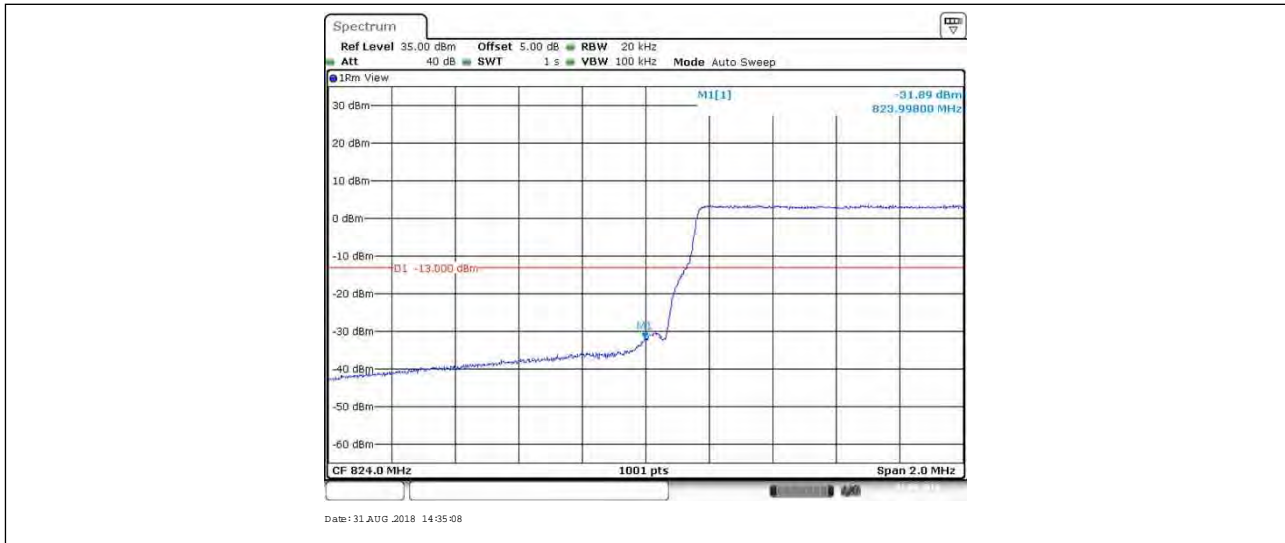


**BAND5\_1.4MHz\_64QAM\_20407\_1RB#0**



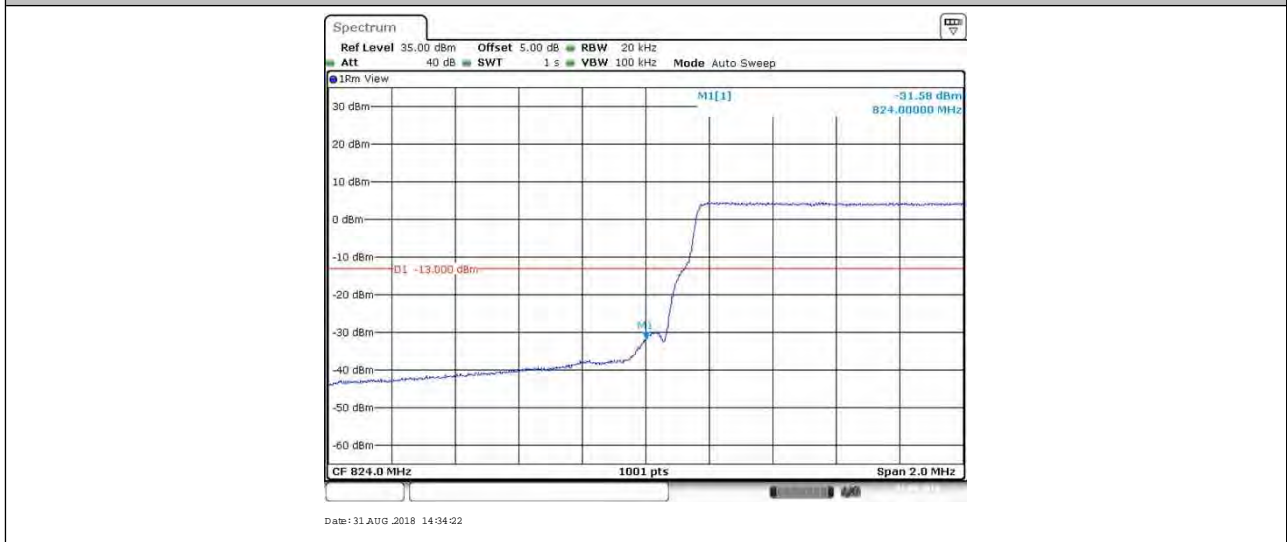
**BAND5\_1.4MHz\_64QAM\_20407\_6RB#0**



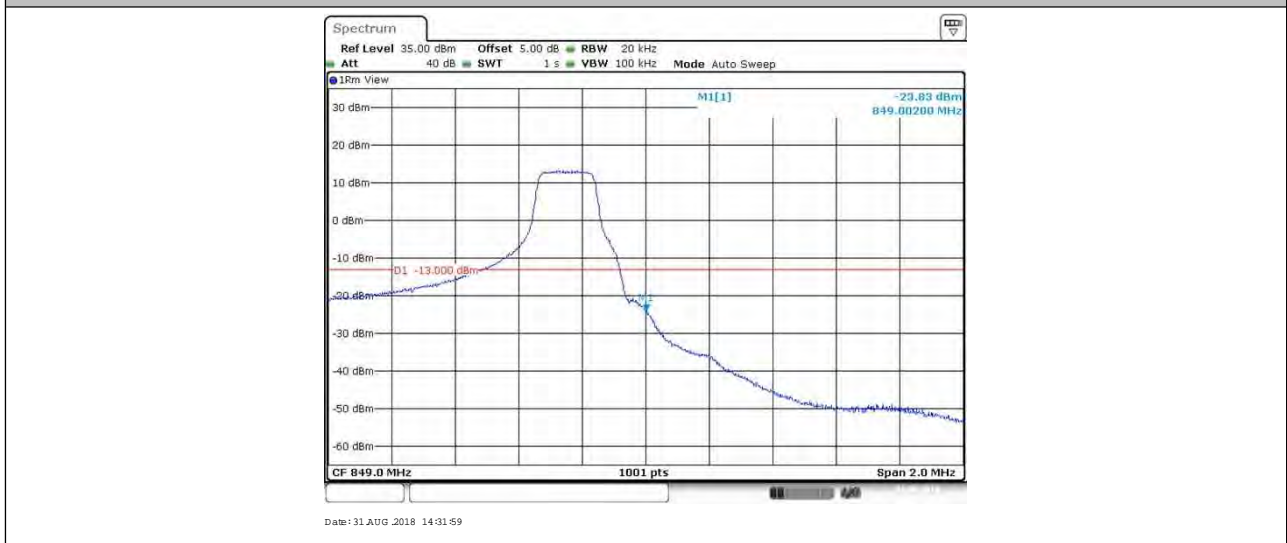




**BAND5\_1.4MHz\_16QAM\_20407\_6RB#0**



**BAND5\_1.4MHz\_16QAM\_20643\_1RB#5**



**BAND5\_1.4MHz\_16QAM\_20643\_6RB#0**



BAND5\_3MHz\_QPSK\_20415\_1RB#0



BAND5\_3MHz\_QPSK\_20415\_15RB#0



BAND5\_3MHz\_QPSK\_20635\_1RB#14



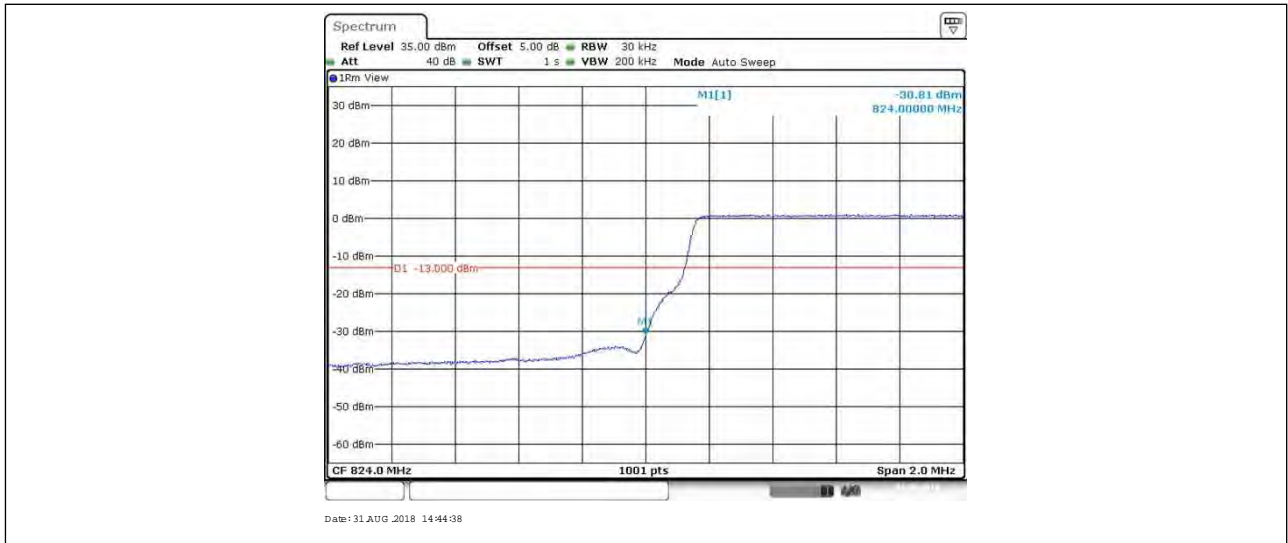
BAND5\_3MHz\_QPSK\_20635\_15RB#0



BAND5\_3MHz\_64QAM\_20415\_1RB#0



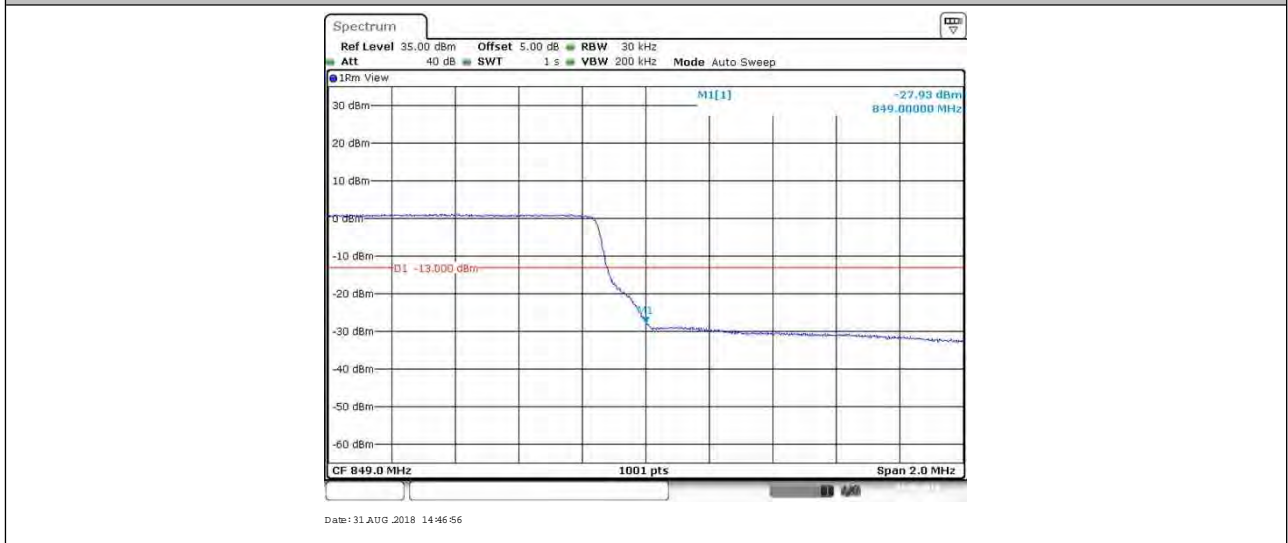
BAND5\_3MHz\_64QAM\_20415\_15RB#0



BAND5\_3MHz\_64QAM\_20635\_1RB#14



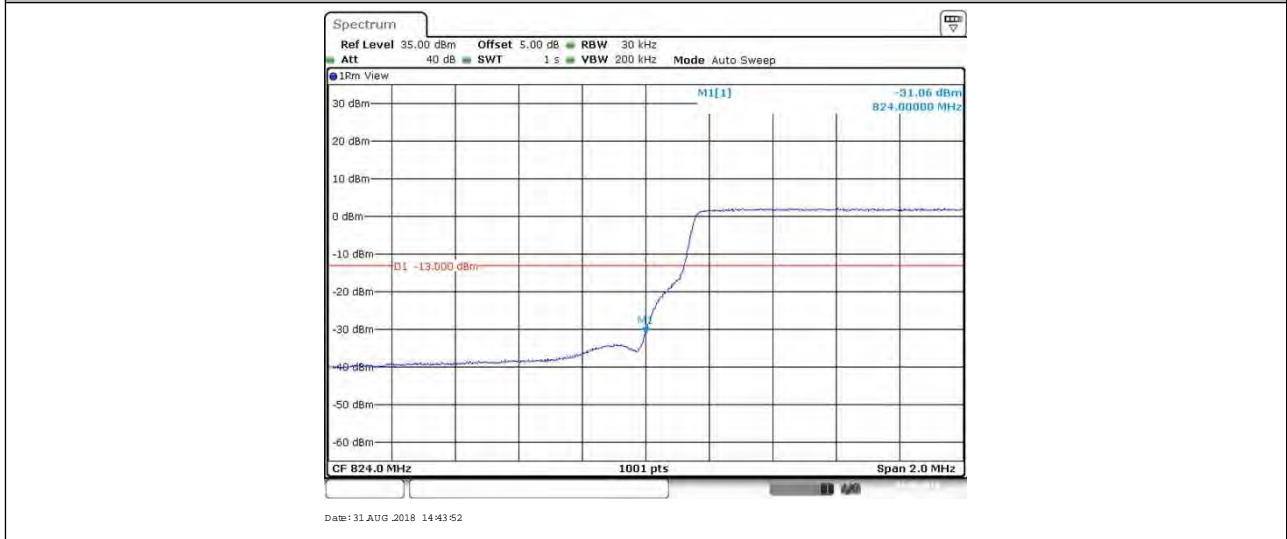
BAND5\_3MHz\_64QAM\_20635\_15RB#0



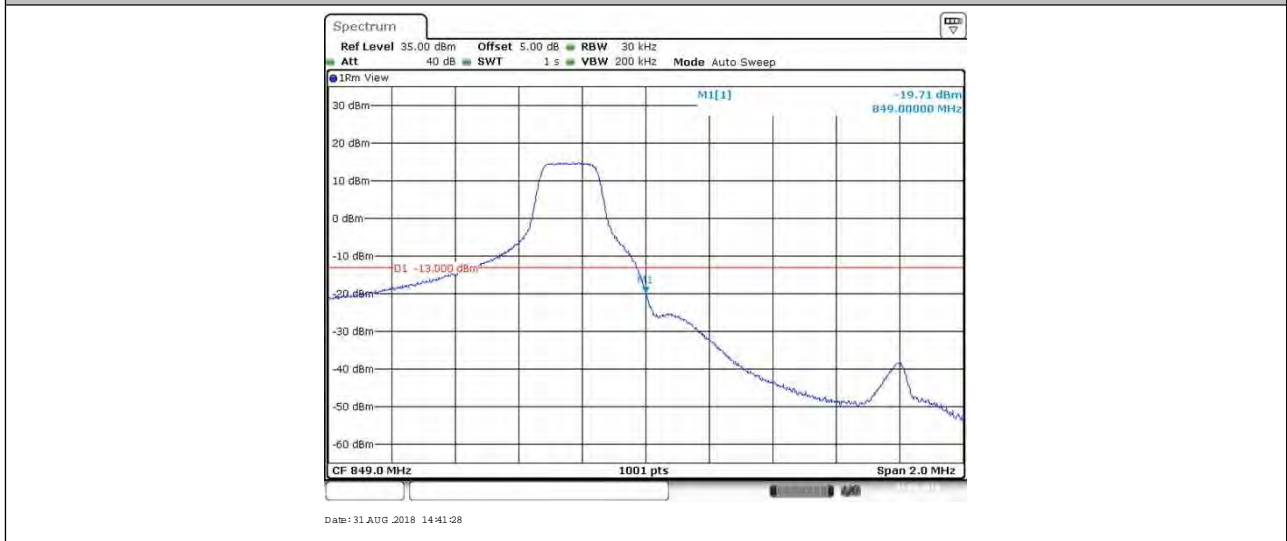
BAND5\_3MHz\_16QAM\_20415\_1RB#0



BAND5\_3MHz\_16QAM\_20415\_15RB#0



BAND5\_3MHz\_16QAM\_20635\_1RB#14



BAND5\_3MHz\_16QAM\_20635\_15RB#0



BAND5\_5MHz\_QPSK\_20425\_1RB#0



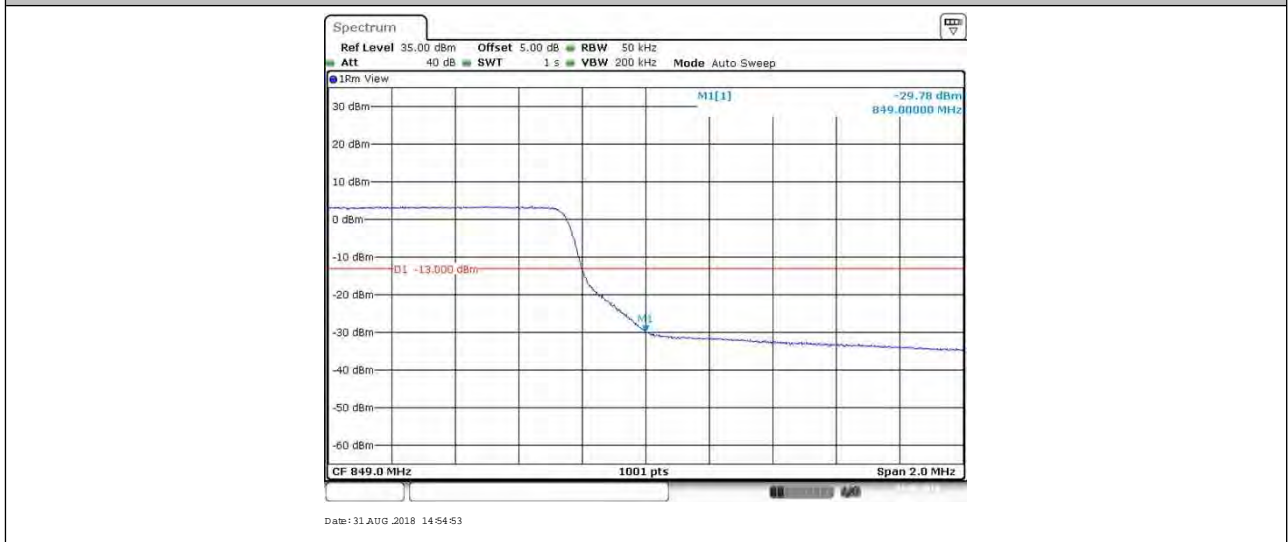
BAND5\_5MHz\_QPSK\_20425\_25RB#0



BAND5\_5MHz\_QPSK\_20625\_1RB#24



BAND5\_5MHz\_QPSK\_20625\_25RB#0



BAND5\_5MHz\_64QAM\_20425\_1RB#0



BAND5\_5MHz\_64QAM\_20425\_25RB#0





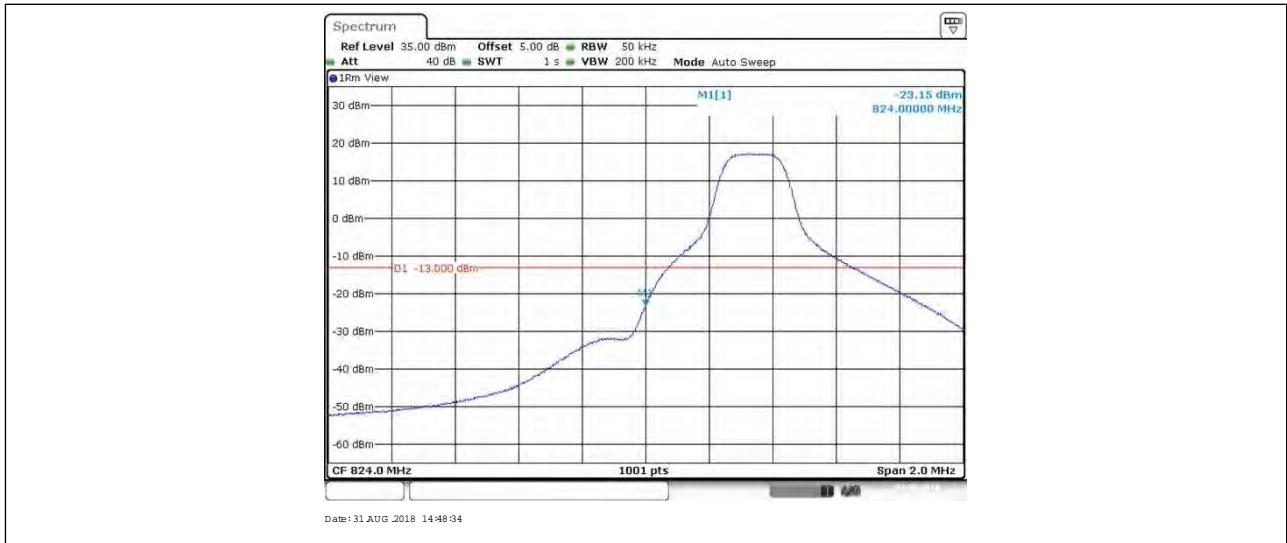
BAND5\_5MHz\_64QAM\_20625\_1RB#24



BAND5\_5MHz\_64QAM\_20625\_25RB#0



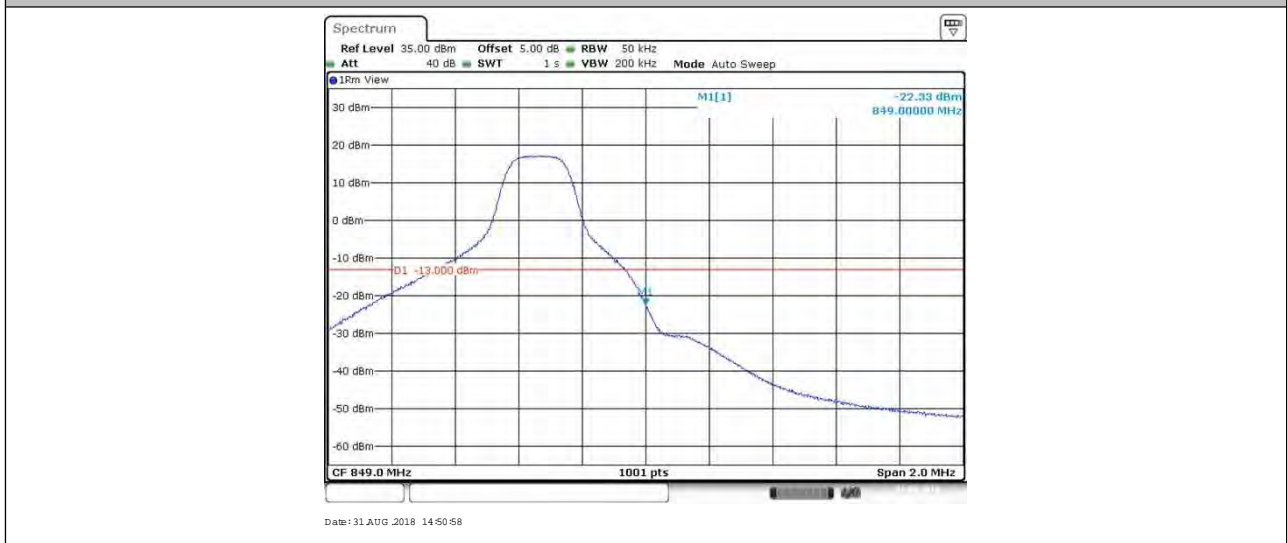
BAND5\_5MHz\_16QAM\_20425\_1RB#0



BAND5\_5MHz\_16QAM\_20425\_25RB#0



BAND5\_5MHz\_16QAM\_20625\_1RB#24



BAND5\_5MHz\_16QAM\_20625\_25RB#0



BAND5\_10MHz\_QPSK\_20450\_1RB#0



BAND5\_10MHz\_QPSK\_20450\_50RB#0



BAND5\_10MHz\_QPSK\_20600\_1RB#49



BAND5\_10MHz\_QPSK\_20600\_50RB#0



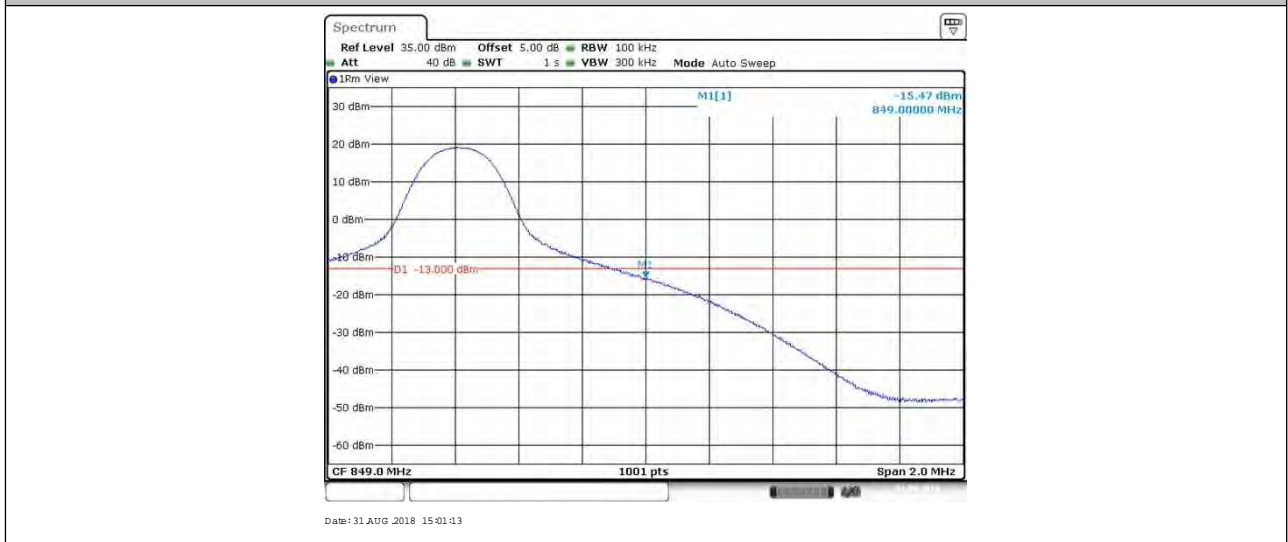
BAND5\_10MHz\_64QAM\_20450\_1RB#0



BAND5\_10MHz\_64QAM\_20450\_50RB#0



**BAND5\_10MHz\_64QAM\_20600\_1RB#49**



**BAND5\_10MHz\_64QAM\_20600\_50RB#0**



**BAND5\_10MHz\_16QAM\_20450\_1RB#0**



BAND5\_10MHz\_16QAM\_20450\_50RB#0



BAND5\_10MHz\_16QAM\_20600\_1RB#49



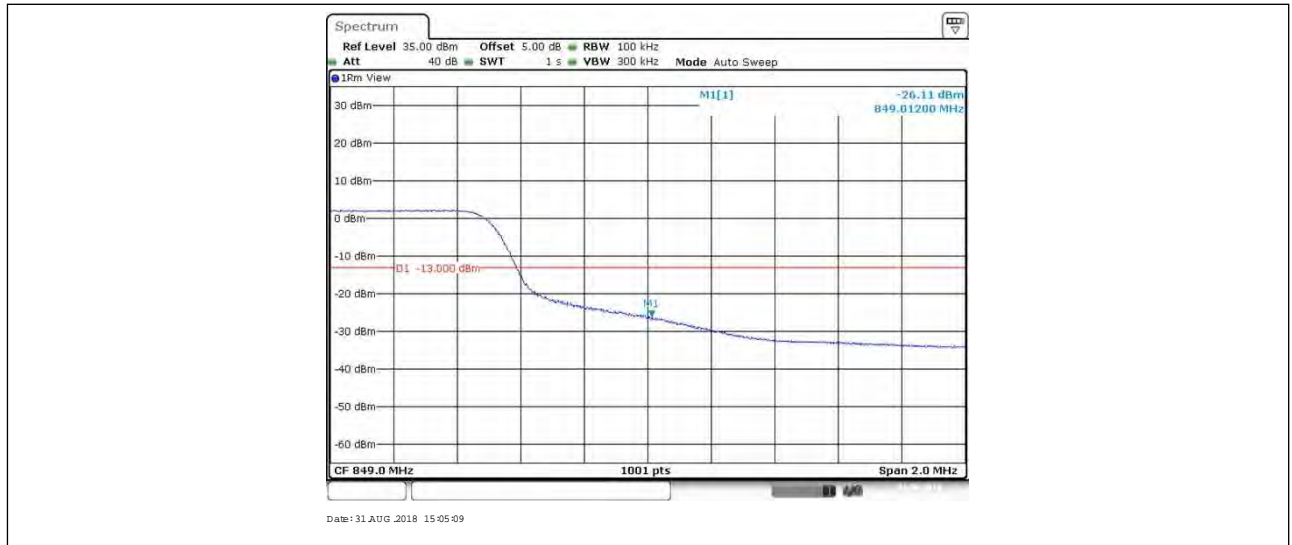
BAND5\_10MHz\_16QAM\_20600\_50RB#0



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

Report No.: SZEM180500437001

Page: 47 of 55



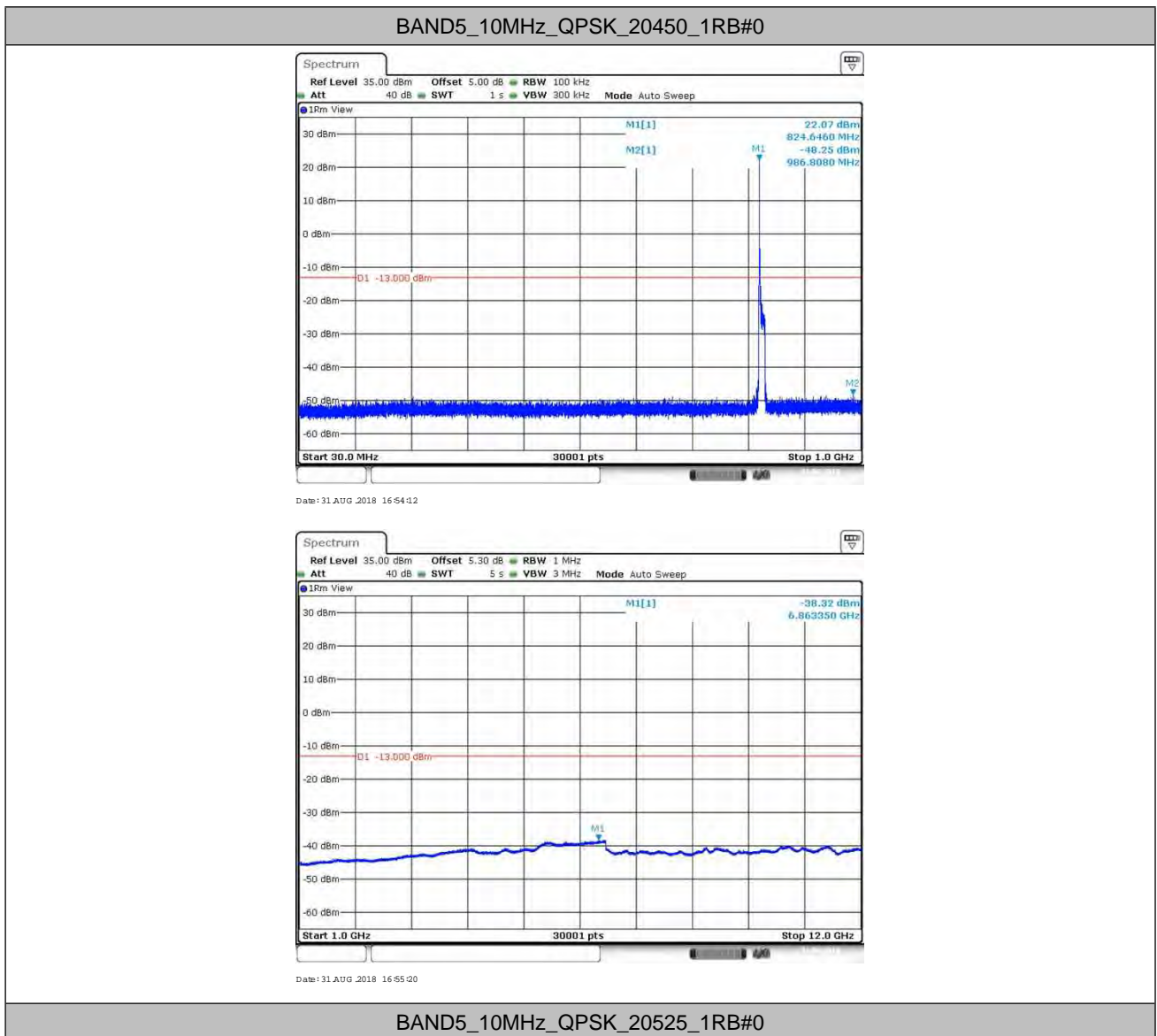


## 6. Spurious Emission at Antenna Terminal

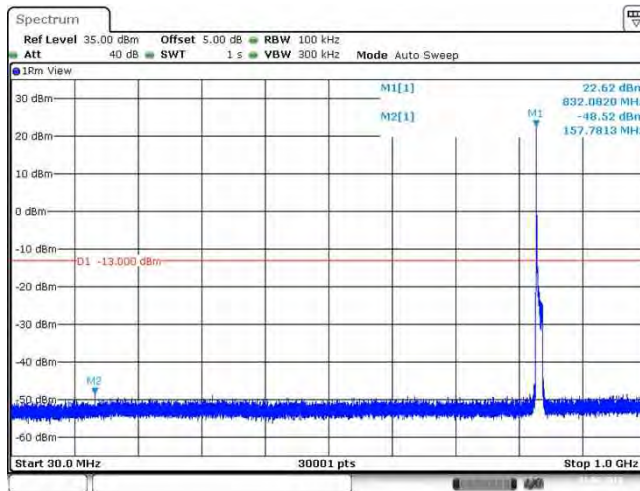
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points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

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

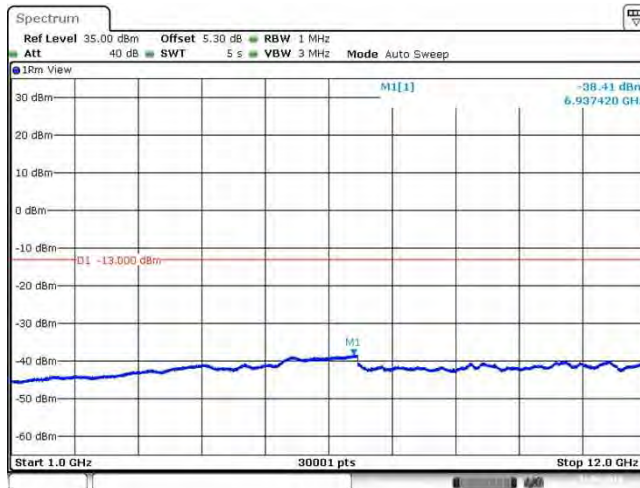
### 6.1. Test Plots





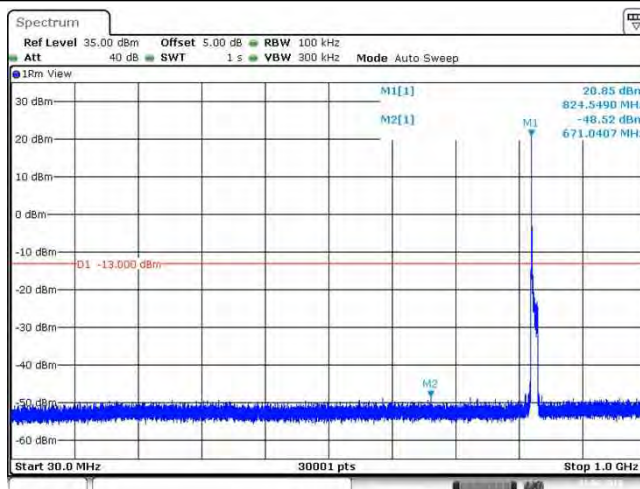


Date: 31 AUG 2018 16:58:33

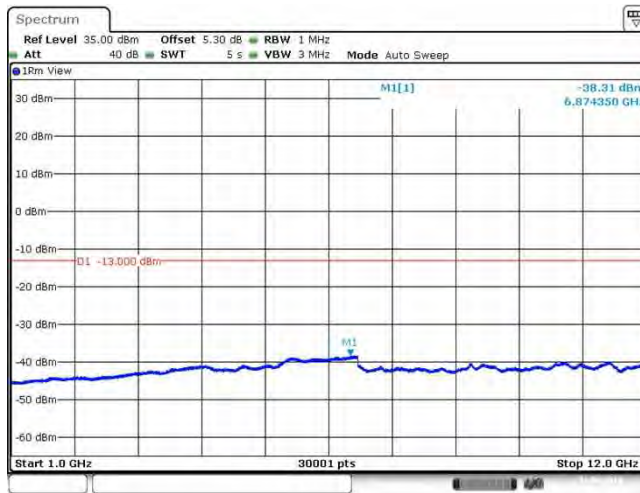


Date: 31 AUG 2018 16:59:40

BAND5\_10MHz\_64QAM\_20450\_1RB#0

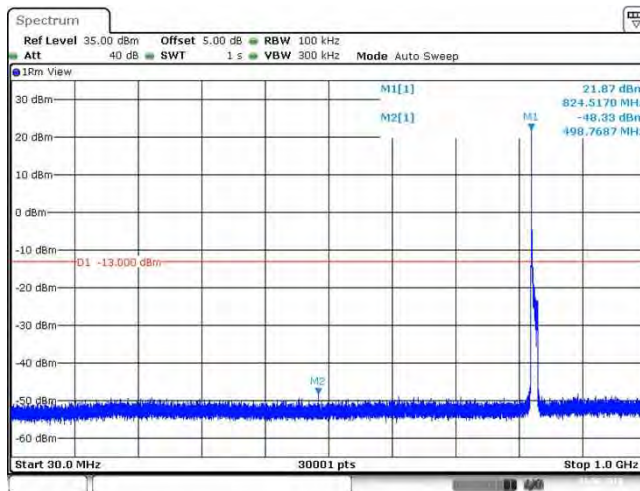


Date: 31 AUG 2018 16:57:06

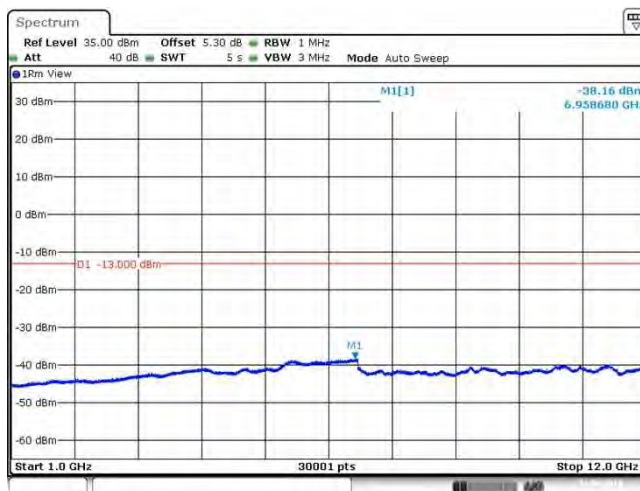


Date: 31 AUG 2018 16:58:13

BAND5\_10MHz\_16QAM\_20450\_1RB#0



Date: 31 AUG 2018 16:55:39



Date: 31 AUG 2018 16:56:47



## 7. Field Strength of Spurious Radiation

### 7.1. Test BAND = LTE BAND 5

#### 7.1.1. Test Mode = LTE/TM1 10MHz

##### 7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
65.046667	-82.42	-13.00	69.42	Vertical
104.293333	-65.07	-13.00	52.07	Vertical
1648.500000	-65.40	-13.00	52.40	Vertical
4298.700000	-67.04	-13.00	54.04	Vertical
6048.337500	-65.14	-13.00	52.14	Vertical
7990.537500	-63.90	-13.00	50.90	Vertical
62.666667	-77.93	-13.00	64.93	Horizontal
104.293333	-81.09	-13.00	68.09	Horizontal
1645.000000	-65.55	-13.00	52.55	Horizontal
3520.650000	-69.15	-13.00	56.15	Horizontal
6028.837500	-65.50	-13.00	52.50	Horizontal
9265.350000	-63.68	-13.00	50.68	Horizontal

##### 7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.813333	-81.82	-13.00	68.82	Vertical
104.293333	-64.93	-13.00	51.93	Vertical
1663.500000	-65.10	-13.00	52.10	Vertical
3287.625000	-68.79	-13.00	55.79	Vertical
4267.012500	-67.14	-13.00	54.14	Vertical
7938.375000	-63.81	-13.00	50.81	Vertical
62.900000	-77.75	-13.00	64.75	Horizontal
104.293333	-80.32	-13.00	67.32	Horizontal
1657.000000	-65.12	-13.00	52.12	Horizontal
4338.187500	-67.10	-13.00	54.10	Horizontal



6169.237500	-65.47	-13.00	52.47	Horizontal
8501.925000	-64.83	-13.00	51.83	Horizontal

### 7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.160000	-81.63	-13.00	68.63	Vertical
104.246667	-65.13	-13.00	52.13	Vertical
1684.000000	-64.77	-13.00	51.77	Vertical
4378.650000	-67.45	-13.00	54.45	Vertical
6057.112500	-65.09	-13.00	52.09	Vertical
9248.775000	-63.50	-13.00	50.50	Vertical
62.946667	-77.69	-13.00	64.69	Horizontal
104.293333	-81.07	-13.00	68.07	Horizontal
1679.000000	-64.99	-13.00	51.99	Horizontal
4249.462500	-67.16	-13.00	54.16	Horizontal
6053.212500	-65.48	-13.00	52.48	Horizontal
7953.487500	-63.81	-13.00	50.81	Horizontal

Remark:

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



## 8. Frequency Stability

### 8.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND5	10MHz	QPSK	20450	50RB#0	VL	NT	1.20	0.001448	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	VN	NT	5.00	0.006031	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	VH	NT	2.40	0.002895	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	VL	NT	5.80	0.006934	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	VN	NT	5.80	0.006934	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	VH	NT	2.50	0.002989	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	VL	NT	1.50	0.001777	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	VN	NT	7.50	0.008886	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	VH	NT	4.20	0.004976	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	VL	NT	2.20	0.002654	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	VN	NT	0.40	0.000483	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	VH	NT	1.40	0.001689	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	VL	NT	3.10	0.003706	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	VN	NT	5.50	0.006575	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	VH	NT	1.40	0.001674	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	VL	NT	2.30	0.002725	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	VN	NT	1.50	0.001777	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	VH	NT	1.00	0.001185	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	VL	NT	2.40	0.002895	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	VN	NT	2.80	0.003378	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	VH	NT	3.90	0.004704	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	VL	NT	4.90	0.005858	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	VN	NT	3.30	0.003945	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	VH	NT	4.30	0.005140	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	VL	NT	8.40	0.009953	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	VN	NT	3.90	0.004621	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	VH	NT	5.70	0.006754	±2.5	PASS

### 8.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
BAND5	10MHz	QPSK	20450	50RB#0	NV	-30	4.90	0.005911	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	-20	3.60	0.004343	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	-10	4.80	0.005790	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	0	2.70	0.003257	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	10	2.30	0.002774	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	20	-0.30	-0.000362	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	30	7.80	0.009409	±2.5	PASS



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

Report No.: SZEM180500437001

Page: 54 of 55

BAND5	10MHz	QPSK	20450	50RB#0	NV	40	4.60	0.005549	±2.5	PASS
BAND5	10MHz	QPSK	20450	50RB#0	NV	50	6.00	0.007238	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	-30	2.30	0.002750	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	-20	2.70	0.003228	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	-10	6.70	0.008010	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	0	2.20	0.002630	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	10	1.60	0.001913	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	20	3.00	0.003586	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	30	6.50	0.007770	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	40	4.20	0.005021	±2.5	PASS
BAND5	10MHz	QPSK	20525	50RB#0	NV	50	3.60	0.004304	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	-30	2.30	0.002725	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	-20	8.70	0.010308	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	-10	6.80	0.008057	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	0	6.40	0.007583	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	10	3.50	0.004147	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	20	2.50	0.002962	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	30	2.60	0.003081	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	40	3.80	0.004502	±2.5	PASS
BAND5	10MHz	QPSK	20600	50RB#0	NV	50	6.40	0.007583	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	-30	2.40	0.002895	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	-20	2.60	0.003136	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	-10	2.70	0.003257	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	0	2.70	0.003257	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	10	1.50	0.001809	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	20	3.70	0.004463	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	30	0.20	0.000241	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	40	4.50	0.005428	±2.5	PASS
BAND5	10MHz	64QAM	20450	50RB#0	NV	50	3.40	0.004101	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	-30	2.70	0.003228	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	-20	2.70	0.003228	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	-10	6.70	0.008010	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	0	3.40	0.004065	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	10	2.30	0.002750	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	20	3.90	0.004662	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	30	2.70	0.003228	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	40	6.40	0.007651	±2.5	PASS
BAND5	10MHz	64QAM	20525	50RB#0	NV	50	2.10	0.002510	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	-30	5.30	0.006280	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	-20	4.80	0.005687	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	-10	2.20	0.002607	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	0	3.80	0.004502	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	10	3.10	0.003673	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	20	5.80	0.006872	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	30	4.10	0.004858	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	40	2.70	0.003199	±2.5	PASS
BAND5	10MHz	64QAM	20600	50RB#0	NV	50	2.60	0.003081	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	-30	2.00	0.002413	±2.5	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 herein 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.: SZEM180500437001

Page: 55 of 55

BAND5	10MHz	16QAM	20450	50RB#0	NV	-20	6.90	0.008323	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	-10	3.00	0.003619	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	0	0.80	0.000965	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	10	2.10	0.002533	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	20	3.70	0.004463	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	30	2.60	0.003136	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	40	2.90	0.003498	±2.5	PASS
BAND5	10MHz	16QAM	20450	50RB#0	NV	50	1.90	0.002292	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	-30	7.00	0.008368	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	-20	4.50	0.005380	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	-10	1.60	0.001913	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	0	3.50	0.004184	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	10	3.30	0.003945	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	20	2.00	0.002391	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	30	3.00	0.003586	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	40	5.00	0.005977	±2.5	PASS
BAND5	10MHz	16QAM	20525	50RB#0	NV	50	3.30	0.003945	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	-30	3.50	0.004147	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	-20	4.70	0.005569	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	-10	1.70	0.002014	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	0	3.50	0.004147	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	10	3.20	0.003791	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	20	0.30	0.000355	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	30	5.90	0.006991	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	40	7.30	0.008649	±2.5	PASS
BAND5	10MHz	16QAM	20600	50RB#0	NV	50	2.50	0.002962	±2.5	PASS

The End