FCC Test Report

Product Name	:	Module
Trade Name	:	Telit
Model No.	:	LE910C1-LA
FCC ID	:	RI7LE910C1LA

Applicant : TELIT WIRELESS SOLUTIONS CO., LTD

Address : 12TH FL., SHINYOUNG SECURITIES BLD.SEOUL.REPUBLIC OF KOREA

Date of Receipt	:	Mar. 21, 2019
Issued Date	:	Jun. 10, 2019
Report No.	:	1930357R-HPUSP55V00
Report Version	:	V1.0

Testing Laboratory
3024

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Test Report Certification

Issued Date : Jun. 10, 2019
Report No. : 1930357R-HPUSP55V00

Product Name	:	Module
Applicant	:	TELIT WIRELESS SOLUTIONS CO., LTD
Address	:	12TH FL., SHINYOUNG SECURITIES BLD.SEOUL.REPUBLIC OF KOREA
Manufacturer	:	TELIT WIRELESS SOLUTIONS CO., LTD
Trade name	:	Telit
Model No.	:	LE910C1-LA
FCC ID	:	RI7LE910C1LA
EUT Voltage	:	DC 3.8V
Testing Voltage	:	DC 3.8V
Applicable Standard	:	FCC CFR Title 47 Part 22 Subpart H FCC CFR Title 47 Part 24 Subpart E FCC CFR Title 47 Part 27 Subpart L, Subpart M ANSI/TIA-603 KDB 971168 D01 Power Meas License Digital Systems v03
Test Lab	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied

Documented By : Fonbo Fang

(Fonbo Fang / Engineering Adm. Specialist)

Tested By : Clemens Fang

(Clemens Fang / Senior Engineer)

Approved By : Louis Hsu

(Louis Hsu / Deputy Manager)

Revision History

Report No.	Version	Description	Issued Date
1930357R-HPUSP55V00	V1.0	Initial issue of report	Jun. 10, 2019

TABLE OF CONTENTS

Description **Page**

1. General Information 6
   1.1. EUT Description 6
   1.2. Mode of Operation 7
   1.3. Tested System Details 8
   1.4. Configuration of Tested System 8
   1.5. EUT Exercise Software 8
2. Technical Test 9
   2.1. Summary of Test Result 9
   2.2. Test Environment 13
   2.3. Laboratory Information 13
   2.4. List of Test Equipment 14
   2.5. Uncertainty 16
3. RF Output Power 17
   3.1. Test Setup 17
   3.2. Test Procedure 17
   3.3. Test Method 17
   3.4. Test Result 18
4. Occupied Bandwidth 58
   4.1. Test Setup 58
   4.2. Test Procedure 58
   4.3. Test Method 58
   4.4. Test Result 59
5. Peak To Average Ratio 119
   5.1. Test Setup 119
   5.2. Test Procedure 119
   5.3. Test Method 119
   5.4. Limit 119
   5.5. Test Result 120
6. Spurious Emissions 180
   6.1. Test Setup 180
   6.2. Test Procedure 181
   6.3. Test Method 181
   6.4. Test Result 182
7. Spurious Emissions at Antenna Terminals 236
   7.1. Test Setup 236
   7.2. Test Procedure 236
   7.3. Test Method 236
   7.4. Test Result 237
8. Frequency Stability 317
   8.1. Test Setup 317
   8.2. Test Procedure 317
   8.3. Test Method 317

8.4. Test Result 318
Attachment 1 330
Test Setup Photograph 330
Attachment 2 333
EUT External Photograph 333
Attachment 3 337
EUT Internal Photograph 337

1. General Information

1.1. EUT Description

Product Name	Module
Trade Name	Telit
Model No.	LE910C1-LA
Uplink Frequency Range (MHz)	Band 2: 1850~1910MHz Band 4: 1710~1755MHz Band 5: 824~849MHz Band 7: 2500~2570MHz
Downlink Frequency Range (MHz)	Band 2: 1930~1990MHz Band 4: 2110~2155MHz Band 5: 869~894MHz Band 7: 2620~2690MHz
Modulation	QPSK /16QAM
HW Version	1.0
Firmware Version	25.20.272-B024

Accessories Information	
Antenna	1 pcs

Antenna Information	
MFR. / Model	Hankook / WE14-LF-07
Antenna Type	Dipole Antenna
Antenna Gain	LTE Band 2/4: 3.5dBi LTE Band 5: 1.5dBi LTE Band 7: 3dBi

Note:

1. This LE910C1-LA support GSM 850, PCS 1900, WCDMA Band 2/4/5 and LTE Band 2/4/5/7.
2. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: LTE Band 2
Mode 2: LTE Band 4
Mode 3: LTE Band 5
Mode 4: LTE Band 7

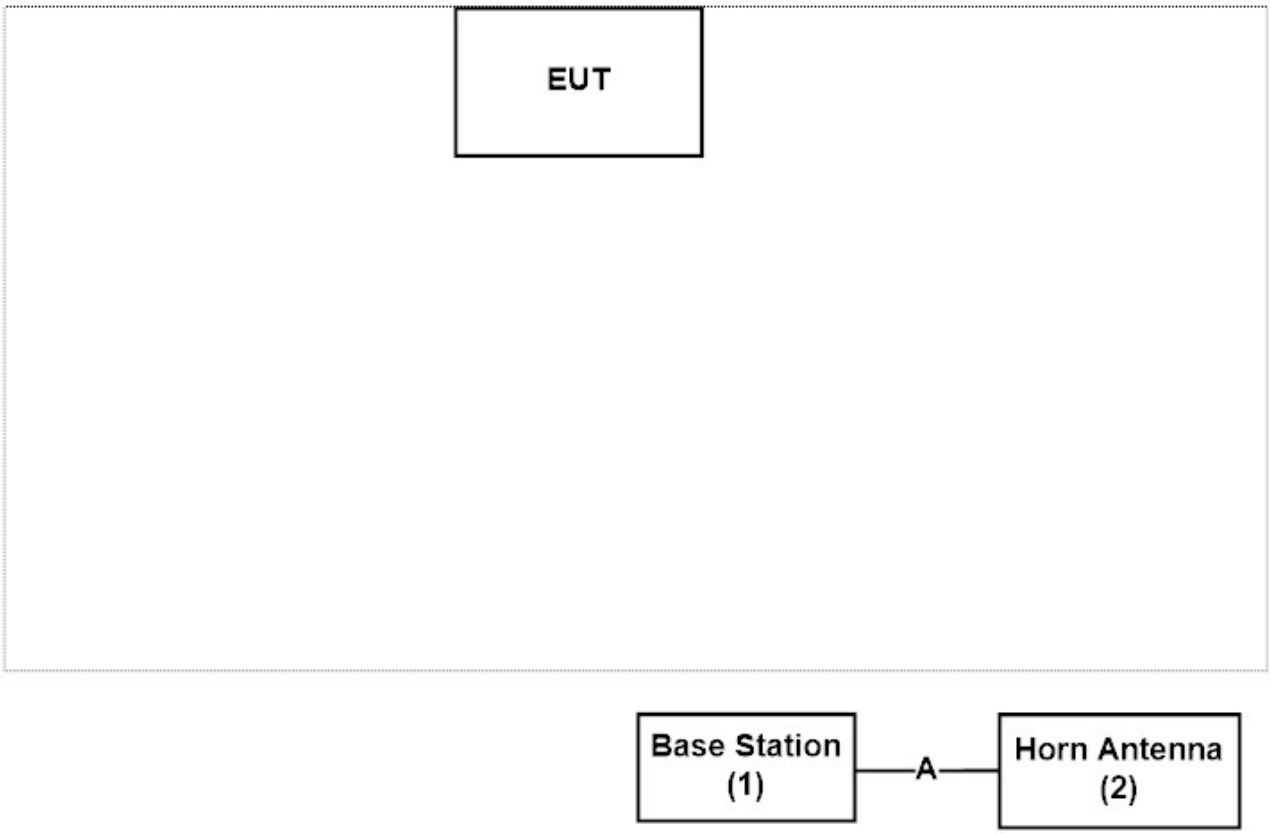
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Base Station	R&S	CMW500	106071	DoC	Non-Shielded, 2m.
2	Horn Antenna	scnwahzbeck	BBHA9120B	639	DoC	--

1.4. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	RF Cable	Shielded, 1m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment. Horn link with base station.
3	The EUT link with base station and it will continue receive the signal.
4	Repeat the above procedure.

2. Technical Test

2.1. Summary of Test Result

B2

Uplink: 1850-1910MHz

Downlink: 1930-1990MHz

LTE B2			
FCC Part 24 Subpart E			
Test item	FCC Reference section	FCC Limit	Result
RF Output Power	§2.1033 §2.1046 §24.232	<2 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§24.232	<13 dB	Pass
Spurious Emissions	§2.1053 §24.238	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.238	<-13dBm	Pass
Frequency Stability	§2.1055 §24.235	<±2.5 ppm	Pass

B4

Uplink: 1710-1755MHz

Downlink: 2110-2155MHz

LTE B4			
FCC Part 27 Subpart L			
Test item	FCC Reference section	FCC Limit	Result
RF Output Power	§2.1033 §2.1046 §27.50	<1 Watt	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§27.50	<13 dB	Pass
Spurious Emissions	§2.1053 §27.53	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.53	<-13dBm	Pass
Frequency Stability	§2.1055 §27.54	<2.5 ppm	Pass

B5

Uplink: 824-849MHz

Downlink: 869-894MHz

LTE B5			
FCC Part 22 Subpart H			
Test item	FCC Reference section	FCC Limit	Result
RF Output Power	§2.1033 §2.1046 §22.913	<7 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§22.913	<13 dB	Pass
Spurious Emissions	§2.1053 §22.917	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§22.917	<-13dBm	Pass
Frequency Stability	§2.1055 §22.335	<±2.5 ppm	Pass

B7

Uplink: 2500-2570MHz

Downlink: 2620-2690MHz

LTE B7			
FCC Part 27 Subpart M			
Test item	FCC Reference section	FCC Limit	Result
RF Output Power	§2.1033 §2.1046 §27.50	<2 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§27.50	<13 dB	Pass
Spurious Emissions	§2.1053 §27.53	<-25dBm	Pass
Spurious Emissions at Antenna Terminals	§27.53	<5MHz:-10dBm 5MHz-X MHz:-13dBm>X MHz:-25dBm	Pass
Frequency Stability	§2.1055 §27.54	<±2.5 ppm	Pass

2.2. Test Environment

Items	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	15-35	23	2 & 3
Humidity (%RH)	25-75	52	
Barometric pressure (mbar)	860-1060	950-1000	

Note: Test site information refers to Laboratory Information.

2.3. Laboratory Information

USA	**:**	**FCC Registration Number: TW3024**
Canada	**:**	**IC Registration Number: 22397-1 / 22397-2 / 22397-3**

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:
http://www.dekra.com.tw/english/about/certificates.aspx?bval=5
The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : http://www.dekra.com.tw/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

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2.4. List of Test Equipment

RF Output Power / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15

Peak To Average Ratio / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15

Conducted Spurious Emissions / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15

Radiated Spurious Emissions / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2018/06/01	2019/05/31
Bilog Antenna	Teseq	CBL6112D	23191	2018/06/26	2019/06/25
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Signal Analyzer	R&S	FSVA40	101455	2018/11/05	2019/11/04
Horn Antenna	Schwarzbeck	BBHA 9170	202	2019/01/16	2020/01/15
Pre-Amplifier	Dekra	AP-400C	201801231	2018/12/05	2019/12/04
Pre-Amplifier	EMCI	EMC11830I	980366	2018/12/21	2019/12/20
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2018/10/17	2019/10/16
Pre-Amplifier	Dekra	AP-025C	201801236	2019/02/18	2020/02/17
Signal Analyzer	R&S	FSV40	101435	2018/07/19	2019/07/18
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Coaxial Cable	Huber+Suhner	SF104_SF104_ SF104_SF104 (16.0m)	CB2-H	2018/08/21	2019/08/20

Spurious Emissions at Antenna Terminals / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15

Frequency Stability / SR10-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/12/21	2019/12/20
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2019/03/15	2020/03/14
Spectrum Analyzer	Keysight	N9030B	MY57140404	2018/06/26	2019/06/25
Spectrum Analyzer	Keysight	N9010B	MY57110159	2018/05/25	2019/05/24
Wireless Conn. Tseter	R&S	CMW500	157118	2018/08/16	2019/08/15
Wideband Radio Communication Tester	R&S	CMW500	106071	2019/01/16	2020/01/15

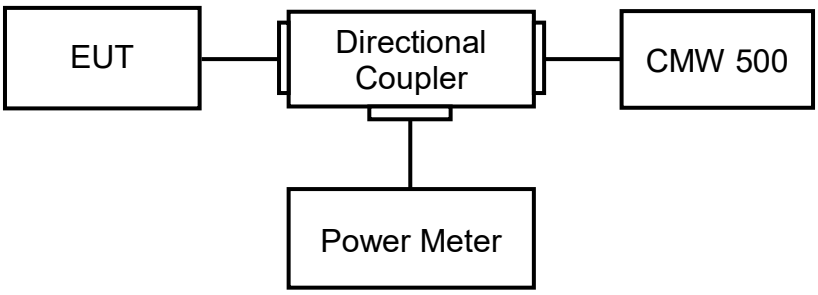
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.5. Uncertainty

Test Item	Uncertainty
RF Output Power	±1.27dB
Occupied Bandwidth	± 10 Hz
Peak To Average Ratio	not exceed 13 dB
Spurious Emissions	± 1.27 dB for Conducted Measurement ± 3.2 dB for Radiated Measurement
Spurious Emissions at Antenna Terminals	± 3.2 dB
Frequency Stability	± 10 Hz

3. RF Output Power

3.1. Test Setup



3.2. Test Procedure

a) The RF output of the transmitter was connected to base station simulator.
b) The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement..
c) Set EUT at maximum average power by base station simulator.
d) Measure lowest, middle, and highest channels for each bandwidth and different modulation.

Effective Isotropic Radiated Power = Conducted Power(dBm) + Antenna Gain(dBi)
Effective Radiated Power = Conducted Power(dBm) + Antenna Gain(dBi) - 2.15dB

3.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause5.2.4
ANSI C63.26: 2015 Sub-clause 5.2.4.2

3.4. Test Result

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 1.4MHz	CH 18607 1850.7MHz	QPSK	1	0	0	23.40	0.490	2
				2		23.33	0.482	2
				5		23.32	0.481	2
			3	0	0	22.95	0.442	2
				1		22.84	0.431	2
				3		22.89	0.436	2
			6	0	1	22.45	0.394	2
		16-QAM	1	0	1	22.41	0.390	2
				2		22.38	0.387	2
				5		22.31	0.381	2
			3	0	1	21.97	0.352	2
				1		21.90	0.347	2
				3		21.92	0.348	2
			6	0	2	21.64	0.327	2
	CH 18900 1880MHz	QPSK	1	0	0	23.37	0.486	2
				2		23.35	0.484	2
				5		23.31	0.480	2
			3	0	0	22.94	0.441	2
				1		22.88	0.435	2
				3		22.86	0.433	2
			6	0	1	22.30	0.380	2
		16-QAM	1	0	1	22.38	0.387	2
				2		22.35	0.385	2
				5		22.30	0.380	2
			3	0	1	21.91	0.348	2
				1		21.82	0.340	2
				3		21.85	0.343	2
			6	0	2	21.46	0.313	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 1.4MHz	CH 19193 1909.3MHz	QPSK	1	0	0	23.18	0.466	2
				2		23.12	0.459	2
				5		23.04	0.451	2
			3	0	0	22.74	0.421	2
				1		22.68	0.415	2
				3		22.66	0.413	2
			6	0	1	22.47	0.395	2
		16-QAM	1	0	1	22.36	0.385	2
				2		22.30	0.380	2
				5		22.15	0.367	2
			3	0	1	21.89	0.346	2
				1		21.80	0.339	2
				3		21.77	0.337	2
			6	0	2	21.37	0.307	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 3MHz	CH 18615 1851.5MHz	QPSK	1	0	0	23.36	0.485	2
				7		23.28	0.476	2
				14		23.25	0.473	2
			7	0	1	22.95	0.442	2
				4		22.90	0.437	2
				8		22.88	0.435	2
			15	0	1	22.52	0.400	2
		16-QAM	1	0	1	22.52	0.400	2
				7		22.50	0.398	2
				14		22.48	0.396	2
			7	0	2	21.94	0.350	2
				4		21.80	0.339	2
				8		21.77	0.337	2
			15	0	2	21.32	0.303	2
	CH 18900 1880MHz	QPSK	1	0	0	23.28	0.476	2
				7		23.26	0.474	2
				14		23.25	0.473	2
			7	0	1	22.82	0.429	2
				4		22.74	0.421	2
				8		22.66	0.413	2
			15	0	1	22.36	0.385	2
		16-QAM	1	0	1	22.64	0.411	2
				7		22.45	0.394	2
				14		22.29	0.379	2
			7	0	2	22.10	0.363	2
				4		22.05	0.359	2
				8		21.98	0.353	2
			15	0	2	21.72	0.333	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 3MHz	CH 19185 1908.5MHz	QPSK	1	0	0	23.33	0.482	2
				7		23.25	0.473	2
				14		23.01	0.448	2
			7	0	1	22.76	0.423	2
				4		22.55	0.403	2
				8		22.48	0.396	2
			15	0	1	22.20	0.372	2
		16-QAM	1	0	1	22.45	0.394	2
				7		22.41	0.390	2
				14		22.40	0.389	2
			7	0	2	21.85	0.343	2
				4		21.72	0.333	2
				8		21.64	0.327	2
			15	0	2	21.40	0.309	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 5MHz	CH 18625 1852.5MHz	QPSK	1	0	0	23.39	0.489	2
				12		23.30	0.479	2
				24		23.27	0.475	2
			12	0	1	22.89	0.436	2
				6		22.80	0.427	2
				13		22.69	0.416	2
			25	0		22.38	0.387	2
		16-QAM	1	0	1	22.57	0.405	2
				12		22.52	0.400	2
				24		22.51	0.399	2
			12	0	2	21.88	0.345	2
				6		21.75	0.335	2
				13		21.66	0.328	2
			25	0		21.26	0.299	2
	CH 18900 1880MHz	QPSK	1	0	0	23.37	0.486	2
				12		23.32	0.481	2
				24		23.28	0.476	2
			12	0	1	22.88	0.435	2
				6		22.79	0.426	2
				13		22.70	0.417	2
			25	0		22.34	0.384	2
		16-QAM	1	0	1	22.41	0.390	2
				12		22.37	0.386	2
				24		22.36	0.385	2
			12	0	2	21.89	0.346	2
				6		21.80	0.339	2
				13		21.67	0.329	2
			25	0		21.22	0.296	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 5MHz	CH 19175 1907.5MHz	QPSK	1	0	0	23.21	0.469	2
				12		23.19	0.467	2
				24		23.16	0.463	2
			12	0	1	22.80	0.427	2
				6		22.72	0.419	2
				13		22.59	0.406	2
			25	0		22.26	0.377	2
		16-QAM	1	0	1	22.50	0.398	2
				12		22.44	0.393	2
				24		22.41	0.390	2
			12	0	2	21.92	0.348	2
				6		21.80	0.339	2
				13		21.68	0.330	2
			25	0		21.28	0.301	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 10MHz	18650 1855 MHz	QPSK	1	0	0	23.22	0.470	2
				24		23.13	0.460	2
				49		23.05	0.452	2
			25	0	1	22.80	0.427	2
				12		22.69	0.416	2
				25		22.60	0.407	2
			50	0		22.28	0.378	2
		16-QAM	1	0	1	22.31	0.381	2
				24		22.20	0.372	2
				49		22.13	0.366	2
			27	0	2	21.46	0.313	2
				12		21.42	0.310	2
				23		21.32	0.303	2
	18900 1880 MHz	QPSK	1	0	0	23.20	0.468	2
				24		23.15	0.462	2
				49		23.04	0.451	2
			25	0	1	22.78	0.425	2
				12		22.70	0.417	2
				25		22.58	0.406	2
			50	0		22.22	0.373	2
		16-QAM	1	0	1	22.08	0.361	2
				24		21.94	0.350	2
				49		21.88	0.345	2
			27	0	2	21.25	0.299	2
				12		21.23	0.297	2
				23		21.14	0.291	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 10MHz	CH 19150 1905 MHz	QPSK	1	0	0	23.12	0.459	2
				24		23.10	0.457	2
				49		23.07	0.454	2
			25	0	1	22.77	0.424	2
				12		22.66	0.413	2
				25		22.52	0.400	2
			50	0		22.19	0.371	2
		16-QAM	1	0	1	22.09	0.362	2
				24		22.05	0.359	2
				49		21.97	0.352	2
			27	0	2	21.35	0.305	2
				12		21.30	0.302	2
				23		21.22	0.296	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 15MHz	18675 1857.5 MHz	QPSK	1	0	0	23.22	0.470	2
				37		23.18	0.466	2
				74		23.11	0.458	2
			37	0	1	22.82	0.429	2
				19		22.76	0.423	2
				38		22.68	0.415	2
			75	0		22.21	0.372	2
		16-QAM	1	0	1	22.31	0.381	2
				37		23.25	0.473	2
				74		22.14	0.366	2
			27	0	2	21.44	0.312	2
				24		21.41	0.310	2
				48		21.36	0.306	2
	18900 1880 MHz	QPSK	1	0	0	23.14	0.461	2
				37		23.05	0.452	2
				74		23.02	0.449	2
			37	0	1	22.65	0.412	2
				19		22.52	0.400	2
				38		22.45	0.394	2
			75	0		22.14	0.366	2
		16-QAM	1	0	1	22.23	0.374	2
				37		22.18	0.370	2
				74		22.15	0.367	2
			27	0	2	21.44	0.312	2
				24		21.40	0.309	2
				48		21.31	0.303	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 15MHz	19125 1902.5 MHz	QPSK	1	0	0	23.18	0.466	2
				37		23.15	0.462	2
				74		23.08	0.455	2
			37	0	1	22.71	0.418	2
				19		22.65	0.412	2
				38		22.49	0.397	2
			75	0		22.19	0.371	2
		16-QAM	1	0	1	22.09	0.362	2
				37		22.02	0.356	2
				74		21.94	0.350	2
			27	0	2	21.32	0.303	2
				24		21.29	0.301	2
				48		21.20	0.295	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 20MHz	18700 1860 MHz	QPSK	1	0	0	23.20	0.468	2
				49		23.15	0.462	2
				99		23.14	0.461	2
			50	0	1	22.88	0.435	2
				25		22.80	0.427	2
				50		22.68	0.415	2
			100	0		22.35	0.385	2
		16-QAM	1	0	1	22.42	0.391	2
				49		22.37	0.386	2
				99		22.35	0.385	2
			27	0	2	21.43	0.311	2
				36		21.40	0.309	2
				73		21.33	0.304	2
	18900 1880 MHz	QPSK	1	0	0	23.16	0.463	2
				49		23.13	0.460	2
				99		23.09	0.456	2
			50	0	1	22.75	0.422	2
				25		22.68	0.415	2
				50		22.56	0.404	2
			100	0		22.18	0.370	2
		16-QAM	1	0	1	22.13	0.366	2
				49		22.10	0.363	2
				99		22.05	0.359	2
			27	0	2	21.38	0.308	2
				36		21.35	0.305	2
				73		21.29	0.301	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 / 20MHz	19100 1900 MHz	QPSK	1	0	0	23.17	0.465	2
				49		23.10	0.457	2
				99		23.05	0.452	2
			50	0	1	22.68	0.415	2
				25		22.60	0.407	2
				50		22.49	0.397	2
			100	0		22.03	0.357	2
		16-QAM	1	0	1	22.30	0.380	2
				49		22.22	0.373	2
				99		22.15	0.367	2
			27	0	2	21.40	0.309	2
				36		21.37	0.307	2
				73		21.30	0.302	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 1.4MHz	19957 1710.7 MHz	QPSK	1	0	0	22.98	0.445	1
				2		22.90	0.437	1
				5		22.86	0.433	1
			3	0	0	22.45	0.394	1
				1		22.40	0.389	1
				3		22.32	0.382	1
			6	0	1	22.01	0.356	1
		16-QAM	1	0	1	22.06	0.360	1
				2		21.95	0.351	1
				5		21.84	0.342	1
			3	0	1	21.32	0.303	1
				1		21.25	0.299	1
				3		21.22	0.296	1
			6	0	2	20.99	0.281	1
	20175 1732.5 MHz	QPSK	1	0	0	23.02	0.449	1
				2		22.99	0.446	1
				5		22.98	0.445	1
			3	0	0	22.55	0.403	1
				1		22.50	0.398	1
				3		22.42	0.391	1
			6	0	1	22.03	0.357	1
		16-QAM	1	0	1	22.17	0.369	1
				2		22.15	0.367	1
				5		22.14	0.366	1
			3	0	1	21.63	0.326	1
				1		21.57	0.321	1
				3		21.49	0.316	1
			6	0	2	21.30	0.302	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 1.4MHz	20393 1754.3 MHz	QPSK	1	0	0	23.00	0.447	1
				2		22.95	0.442	1
				5		22.96	0.443	1
			3	0	0	22.41	0.390	1
				1		22.30	0.380	1
				3		22.25	0.376	1
			6	0	1	21.82	0.340	1
		16-QAM	1	0	1	22.10	0.363	1
				2		22.07	0.361	1
				5		22.06	0.360	1
			3	0	1	21.65	0.327	1
				1		21.51	0.317	1
				3		21.39	0.308	1
			6	0	2	20.84	0.272	1

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 3MHz	19965 1711.5 MHz	QPSK	1	0	0	22.99	0.446	1
				7		22.94	0.441	1
				14		22.88	0.435	1
			7	0	1	22.41	0.390	1
				4		22.35	0.385	1
				8		22.28	0.378	1
			15	0	1	22.00	0.355	1
		16-QAM	1	0	1	22.04	0.358	1
				7		22.01	0.356	1
				14		21.96	0.352	1
			7	0	2	21.45	0.313	1
				4		21.39	0.308	1
				8		21.30	0.302	1
			15	0	2	21.01	0.282	1
	20175 1732.5 MHz	QPSK	1	0	0	23.05	0.452	1
				7		23.02	0.449	1
				14		23.01	0.448	1
			7	0	1	22.52	0.400	1
				4		22.45	0.394	1
				8		22.36	0.385	1
			15	0	1	22.00	0.355	1
		16-QAM	1	0	1	22.04	0.358	1
				7		21.98	0.353	1
				14		21.90	0.347	1
			7	0	2	22.62	0.409	1
				4		22.50	0.398	1
				8		22.46	0.394	1
			15	0	2	21.04	0.284	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 3MHz	20385 1753.5 MHz	QPSK	1	0	0	22.90	0.437	1
				7		22.82	0.429	1
				14		22.75	0.422	1
			7	0	1	22.30	0.380	1
				4		22.25	0.376	1
				8		22.19	0.371	1
			15	0	1	22.15	0.367	1
		16-QAM	1	0	1	22.13	0.366	1
				7		22.10	0.363	1
				14		22.09	0.362	1
			7	0	2	21.60	0.324	1
				4		21.52	0.318	1
				8		21.44	0.312	1
			15	0	2	21.28	0.301	1

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 5MHz	19975 1712.5 MHz	QPSK	1	0	0	22.98	0.445	1
				12		22.96	0.443	1
				24		22.95	0.442	1
			12	0	1	22.35	0.385	1
				6		22.30	0.380	1
				13		22.18	0.370	1
			25	0		21.97	0.352	1
		16-QAM	1	0	1	22.20	0.372	1
				12		22.14	0.366	1
				24		22.08	0.361	1
			12	0	2	21.56	0.321	1
				6		21.45	0.313	1
				13		21.40	0.309	1
			25	0		21.00	0.282	1
	20175 1732.5 MHz	QPSK	1	0	0	23.11	0.458	1
				12		23.05	0.452	1
				24		22.98	0.445	1
			12	0	1	22.58	0.406	1
				6		22.45	0.394	1
				13		22.38	0.387	1
			25	0		22.10	0.363	1
		16-QAM	1	0	1	22.05	0.359	1
				12		22.02	0.356	1
				24		22.01	0.356	1
			12	0	2	21.49	0.316	1
				6		21.41	0.310	1
				13		21.32	0.303	1
			25	0		20.97	0.280	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 5MHz	20375 1752.5 MHz	QPSK	1	0	0	23.00	0.447	1
				12		22.98	0.445	1
				24		22.95	0.442	1
			12	0	1	22.49	0.397	1
				6		22.35	0.385	1
				13		22.22	0.373	1
			25	0		22.03	0.357	1
		16-QAM	1	0	1	22.05	0.359	1
				12		22.02	0.356	1
				24		21.96	0.352	1
			12	0	2	21.49	0.316	1
				6		21.41	0.310	1
				13		21.28	0.301	1
			25	0		21.05	0.285	1

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 10MHz	20000 1715 MHz	QPSK	1	0	0	22.98	0.445	1
				24		22.95	0.442	1
				49		22.94	0.441	1
			25	0	1	22.41	0.390	1
				12		22.35	0.385	1
				25		22.30	0.380	1
			50	0		22.03	0.357	1
		16-QAM	1	0	1	22.19	0.371	1
				24		22.12	0.365	1
				49		22.06	0.360	1
			27	0	2	21.67	0.329	1
				12		21.61	0.324	1
				23		21.53	0.318	1
	20175 1732.5 MHz	QPSK	1	0	0	23.06	0.453	1
				24		22.95	0.442	1
				49		22.91	0.438	1
			25	0	1	22.48	0.396	1
				12		22.40	0.389	1
				25		22.28	0.378	1
			50	0		22.07	0.361	1
		16-QAM	1	0	1	22.14	0.366	1
				24		22.08	0.361	1
				49		22.01	0.356	1
			27	0	2	21.56	0.321	1
				12		21.47	0.314	1
				23		21.33	0.304	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 10MHz	20350 1750 MHz	QPSK	1	0	0	23.03	0.450	1
				24		22.95	0.442	1
				49		22.80	0.427	1
			25	0	1	22.51	0.399	1
				12		22.43	0.392	1
				25		22.30	0.380	1
			50	0		22.08	0.361	1
		16-QAM	1	0	1	22.18	0.370	1
				24		22.10	0.363	1
				49		22.03	0.357	1
			27	0	2	21.61	0.324	1
				12		21.52	0.318	1
				23		21.38	0.308	1

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 15MHz	20025 1717.5 MHz	QPSK	1	0	0	23.08	0.455	1
				37		22.98	0.445	1
				74		22.93	0.440	1
			37	0	1	22.46	0.394	1
				19		22.40	0.389	1
				38		22.28	0.378	1
			75	0		22.09	0.362	1
		16-QAM	1	0	1	21.93	0.349	1
				37		21.88	0.345	1
				74		21.85	0.343	1
			27	0	2	21.31	0.303	1
				24		21.25	0.299	1
				48		21.24	0.298	1
	20175 1732.5 MHz	QPSK	1	0	0	23.13	0.460	1
				37		23.04	0.451	1
				74		22.98	0.445	1
			37	0	1	22.49	0.397	1
				19		22.42	0.391	1
				38		22.34	0.384	1
			75	0		22.16	0.368	1
		16-QAM	1	0	1	22.13	0.366	1
				37		22.10	0.363	1
				74		22.07	0.361	1
			27	0	2	21.42	0.310	1
				24		21.35	0.305	1
				48		21.24	0.298	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 15MHz	20325 1747.5 MHz	QPSK	1	0	0	23.07	0.454	1
				37		23.05	0.452	1
				74		23.01	0.448	1
			37	0	1	22.41	0.390	1
				19		22.32	0.382	1
				38		22.29	0.379	1
			75	0		21.92	0.348	1
		16-QAM	1	0	1	22.29	0.379	1
				37		22.27	0.378	1
				74		22.22	0.373	1
			27	0	2	21.69	0.330	1
				24		21.60	0.324	1
				48		21.53	0.318	1

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 20MHz	20050 1720 MHz	QPSK	1	0	0	23.17	0.465	1
				49		22.95	0.442	1
				99		22.87	0.434	1
			50	0	1	22.55	0.403	1
				25		22.48	0.396	1
				50		22.4	0.389	1
			100	0		22.06	0.360	1
		16-QAM	1	0	1	22.28	0.378	1
				49		22.09	0.362	1
				99		21.92	0.348	1
			27	0	2	21.66	0.328	1
				36		21.60	0.324	1
				73		21.48	0.315	1
	20175 1732.5 MHz	QPSK	1	0	0	23.20	0.468	1
				49		23.12	0.459	1
				99		23.05	0.452	1
			50	0	1	22.58	0.406	1
				25		22.44	0.393	1
				50		22.32	0.382	1
			100	0		22.04	0.358	1
		16-QAM	1	0	1	22.24	0.375	1
				49		22.22	0.373	1
				99		22.18	0.370	1
			27	0	2	21.53	0.318	1
				36		21.48	0.315	1
				73		21.35	0.305	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 4 / 20MHz	20300 1745 MHz	QPSK	1	0	0	23.11	0.458	1
				49		23.05	0.452	1
				99		23.07	0.454	1
			50	0	1	22.54	0.402	1
				25		22.42	0.391	1
				50		22.35	0.385	1
			100	0		22.07	0.361	1
		16-QAM	1	0	1	22.20	0.372	1
				49		22.16	0.368	1
				99		22.14	0.366	1
			27	0	2	21.68	0.330	1
				36		21.60	0.324	1
				73		21.55	0.320	1

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 1.4MHz	20407 824.7 MHz	QPSK	1	0	0	23.32	0.185	7
				2		23.26	0.182	7
				5		23.12	0.177	7
			3	0	0	22.62	0.157	7
				1		22.55	0.155	7
				3		22.39	0.149	7
			6	0	1	22.14	0.141	7
		16-QAM	1	0	1	22.19	0.143	7
				2		22.11	0.140	7
				5		22.02	0.137	7
			3	0	1	21.66	0.126	7
				1		21.58	0.124	7
				3		21.50	0.122	7
			6	0	2	21.33	0.117	7
	20525 836.5 MHz	QPSK	1	0	0	23.24	0.182	7
				2		23.19	0.179	7
				5		23.18	0.179	7
			3	0	0	22.59	0.156	7
				1		22.48	0.152	7
				3		22.41	0.150	7
			6	0	1	22.24	0.144	7
		16-QAM	1	0	1	22.30	0.146	7
				2		22.27	0.145	7
				5		22.25	0.145	7
			3	0	1	21.75	0.129	7
				1		21.63	0.125	7
				3		21.55	0.123	7
			6	0	2	21.22	0.114	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 1.4MHz	20643 848.3 MHz	QPSK	1	0	0	23.49	0.192	7
				2		23.47	0.191	7
				5		23.43	0.190	7
			3	0	0	22.88	0.167	7
				1		22.76	0.163	7
				3		22.72	0.161	7
			6	0	1	22.47	0.152	7
		16-QAM	1	0	1	22.60	0.157	7
				2		22.56	0.155	7
				5		22.53	0.154	7
			3	0	1	21.99	0.136	7
				1		21.91	0.134	7
				3		21.79	0.130	7
			6	0	2	21.42	0.119	7

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 3MHz	20415 825.5 MHz	QPSK	1	0	0	23.20	0.180	7
				7		23.17	0.179	7
				14		23.15	0.178	7
			7	0	1	22.68	0.160	7
				4		22.60	0.157	7
				8		22.51	0.153	7
			15	0	1	22.29	0.146	7
		16-QAM	1	0	1	22.29	0.146	7
				7		22.23	0.144	7
				14		22.12	0.140	7
			7	0	2	21.68	0.127	7
				4		21.61	0.125	7
				8		21.53	0.122	7
			15	0	2	21.27	0.115	7
	20525 836.5 MHz	QPSK	1	0	0	23.22	0.181	7
				7		23.18	0.179	7
				14		23.15	0.178	7
			7	0	1	22.75	0.162	7
				4		22.61	0.157	7
				8		22.49	0.153	7
			15	0	1	22.28	0.146	7
		16-QAM	1	0	1	22.26	0.145	7
				7		22.22	0.144	7
				14		22.20	0.143	7
			7	0	2	21.70	0.127	7
				4		21.62	0.125	7
				8		21.54	0.123	7
			15	0	2	21.30	0.116	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 3MHz	20635 847.5 MHz	QPSK	1	0	0	23.31	0.185	7
				7		23.24	0.182	7
				14		23.17	0.179	7
			7	0	1	22.78	0.163	7
				4		22.66	0.159	7
				8		22.48	0.152	7
			15	0	1	22.32	0.147	7
		16-QAM	1	0	1	22.08	0.139	7
				7		22.01	0.137	7
				14		21.95	0.135	7
			7	0	2	21.48	0.121	7
				4		21.40	0.119	7
				8		21.36	0.118	7
			15	0	2	21.24	0.115	7

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 5MHz	20425 826.5 MHz	QPSK	1	0	0	23.36	0.187	7
				12		23.22	0.181	7
				24		23.11	0.176	7
			12	0	1	22.81	0.164	7
				6		22.68	0.160	7
				13		22.60	0.157	7
			25	0		22.31	0.147	7
		16-QAM	1	0	1	22.28	0.146	7
				12		22.19	0.143	7
				24		22.13	0.141	7
			12	0	2	21.66	0.126	7
				6		21.50	0.122	7
				13		21.46	0.121	7
			25	0		21.24	0.115	7
	20525 836.5 MHz	QPSK	1	0	0	23.28	0.183	7
				12		23.25	0.182	7
				24		23.23	0.181	7
			12	0	1	22.69	0.160	7
				6		22.60	0.157	7
				13		22.47	0.152	7
			25	0		22.29	0.146	7
		16-QAM	1	0	1	22.34	0.148	7
				12		22.32	0.147	7
				24		22.28	0.146	7
			12	0	2	21.82	0.131	7
				6		21.68	0.127	7
				13		21.54	0.123	7
			25	0		21.37	0.118	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 5MHz	20625 846.5 MHz	QPSK	1	0	0	23.29	0.184	7
				12		23.24	0.182	7
				24		23.20	0.180	7
			12	0	1	22.75	0.162	7
				6		22.68	0.160	7
				13		22.60	0.157	7
			25	0		22.44	0.151	7
		16-QAM	1	0	1	22.58	0.156	7
				12		22.44	0.151	7
				24		22.32	0.147	7
			12	0	2	21.94	0.135	7
				6		21.86	0.132	7
				13		21.77	0.129	7
			25	0		21.42	0.119	7

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 10MHz	20450 829 MHz	QPSK	1	0	0	23.30	0.184	7
				24		23.28	0.183	7
				49		23.24	0.182	7
			25	0	1	22.78	0.163	7
				12		22.70	0.160	7
				25		22.58	0.156	7
			50	0		22.30	0.146	7
		16-QAM	1	0	1	22.20	0.143	7
				24		22.17	0.142	7
				49		22.16	0.142	7
			27	0	2	21.82	0.131	7
				12		21.71	0.128	7
				23		21.66	0.126	7
	20525 836.5 MHz	QPSK	1	0	0	23.23	0.181	7
				24		23.16	0.178	7
				49		23.12	0.177	7
			25	0	1	22.72	0.161	7
				12		22.66	0.159	7
				25		22.54	0.155	7
			50	0		22.22	0.144	7
		16-QAM	1	0	1	22.16	0.142	7
				24		22.11	0.140	7
				49		22.08	0.139	7
			27	0	2	21.49	0.121	7
				12		21.42	0.119	7
				23		21.33	0.117	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) ERP
Band 5 / 10MHz	20600 844 MHz	QPSK	1	0	0	23.21	0.180	7
				24		23.15	0.178	7
				49		23.12	0.177	7
			25	0	1	22.66	0.159	7
				12		22.51	0.153	7
				25		22.42	0.150	7
			50	0		22.23	0.144	7
		16-QAM	1	0	1	22.13	0.141	7
				24		22.08	0.139	7
				49		22.04	0.138	7
			27	0	2	21.66	0.126	7
				12		21.53	0.122	7
				23		21.42	0.119	7

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 5MHz	20775 2502.5 MHz	QPSK	1	0	0	22.77	0.378	2
				12		22.73	0.374	2
				24		22.64	0.366	2
			12	0	1	21.88	0.308	2
				6		21.82	0.303	2
				13		21.69	0.294	2
			25	0		21.59	0.288	2
		16-QAM	1	0	1	21.53	0.284	2
				12		21.50	0.282	2
				24		21.47	0.280	2
			12	0	2	20.96	0.249	2
				6		20.92	0.247	2
				13		20.88	0.244	2
			25	0		20.78	0.239	2
	21100 2535 MHz	QPSK	1	0	0	23.44	0.441	2
				12		23.31	0.428	2
				24		23.19	0.416	2
			12	0	1	22.84	0.384	2
				6		22.77	0.378	2
				13		22.65	0.367	2
			25	0		22.33	0.341	2
		16-QAM	1	0	1	22.17	0.329	2
				12		22.13	0.326	2
				24		22.08	0.322	2
			12	0	2	21.45	0.279	2
				6		21.39	0.275	2
				13		21.33	0.271	2
			25	0		21.25	0.266	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 5MHz	21425 2567.5 MHz	QPSK	1	0	0	23.04	0.402	2
				12		22.98	0.396	2
				24		22.96	0.394	2
			12	0	1	22.36	0.344	2
				6		22.30	0.339	2
				13		22.19	0.330	2
			25	0		22.06	0.321	2
		16-QAM	1	0	1	22.14	0.327	2
				12		22.03	0.318	2
				24		21.89	0.308	2
			12	0	2	21.38	0.274	2
				6		21.24	0.265	2
				13		21.22	0.264	2
			25	0		21.04	0.254	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 10MHz	20800 2505 MHz	QPSK	1	0	0	22.83	0.383	2
				24		22.80	0.380	2
				49		22.78	0.378	2
			25	0	1	22.38	0.345	2
				12		22.30	0.339	2
				25		22.18	0.330	2
			50	0		21.87	0.307	2
		16-QAM	1	0	1	21.85	0.305	2
				24		21.80	0.302	2
				49		21.76	0.299	2
			27	0	2	21.44	0.278	2
				12		21.39	0.275	2
				23		21.33	0.271	2
	21100 2535 MHz	QPSK	1	0	0	23.27	0.424	2
				24		23.16	0.413	2
				49		23.04	0.402	2
			25	0	1	22.55	0.359	2
				12		22.48	0.353	2
				25		22.42	0.348	2
			50	0		22.36	0.344	2
		16-QAM	1	0	1	22.45	0.351	2
				24		22.28	0.337	2
				49		22.14	0.327	2
			27	0	2	21.69	0.294	2
				12		21.58	0.287	2
				23		21.46	0.279	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 10MHz	21400 2565 MHz	QPSK	1	0	0	23.23	0.420	2
				24		23.15	0.412	2
				49		23.06	0.404	2
			25	0	1	22.66	0.368	2
				12		22.59	0.362	2
				25		22.47	0.352	2
			50	0		22.20	0.331	2
		16-QAM	1	0	1	22.21	0.332	2
				24		22.07	0.321	2
				49		21.99	0.316	2
			27	0	2	21.68	0.294	2
				12		21.55	0.285	2
				23		21.42	0.277	2

Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 15MHz	20825 2507.5 MHz	QPSK	1	0	0	22.99	0.397	2
				37		22.95	0.394	2
				74		22.90	0.389	2
			37	0	1	22.40	0.347	2
				19		22.36	0.344	2
				38		22.24	0.334	2
			75	0		21.86	0.306	2
		16-QAM	1	0	1	22.22	0.333	2
				37		22.10	0.324	2
				74		21.99	0.316	2
			27	0	2	21.73	0.297	2
				24		21.66	0.292	2
				48		21.58	0.287	2
	21100 2535 MHz	QPSK	1	0	0	23.42	0.439	2
				37		23.34	0.431	2
				74		23.26	0.423	2
			37	0	1	22.86	0.385	2
				19		22.74	0.375	2
				38		22.70	0.372	2
			75	0		22.51	0.356	2
		16-QAM	1	0	1	22.11	0.324	2
				37		22.03	0.318	2
				74		21.92	0.310	2
			27	0	2	21.44	0.278	2
				24		21.39	0.275	2
				48		21.25	0.266	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 15MHz	21375 2562.5 MHz	QPSK	1	0	0	23.40	0.437	2
				37		23.34	0.431	2
				74		23.17	0.414	2
			37	0	1	22.88	0.387	2
				19		22.71	0.372	2
				38		22.63	0.366	2
			75	0		22.43	0.349	2
		16-QAM	1	0	1	22.40	0.347	2
				37		22.28	0.337	2
				74		22.01	0.317	2
			27	0	2	21.65	0.292	2
				24		21.59	0.288	2
				48		21.52	0.283	2

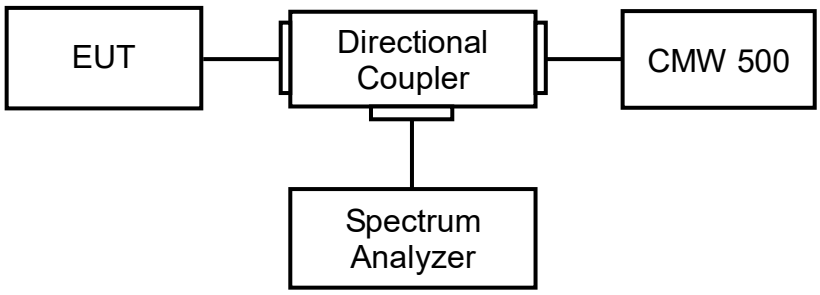
Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/25	Test Site	SR10-H

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 20MHz	20850 2510 MHz	QPSK	1	0	0	23.18	0.415	2
				49		23.10	0.407	2
				99		22.98	0.396	2
			50	0	1	22.50	0.355	2
				25		22.33	0.341	2
				50		22.25	0.335	2
			100	0		22.09	0.323	2
		16-QAM	1	0	1	22.16	0.328	2
				49		22.05	0.320	2
				99		21.89	0.308	2
			27	0	2	21.49	0.281	2
				36		21.42	0.277	2
				73		21.28	0.268	2
	21100 2535 MHz	QPSK	1	0	0	23.48	0.445	2
				49		23.40	0.437	2
				99		23.33	0.430	2
			50	0	1	22.88	0.387	2
				25		22.71	0.372	2
				50		22.60	0.363	2
			100	0		22.41	0.348	2
		16-QAM	1	0	1	22.50	0.355	2
				49		22.35	0.343	2
				99		22.26	0.336	2
			27	0	2	21.89	0.308	2
				36		21.83	0.304	2
				73		21.74	0.298	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 7 / 20MHz	21350 2560 MHz	QPSK	1	0	0	23.46	0.443	2
				49		23.29	0.426	2
				99		23.15	0.412	2
			50	0	1	22.84	0.384	2
				25		22.68	0.370	2
				50		22.53	0.357	2
			100	0		22.40	0.347	2
		16-QAM	1	0	1	22.51	0.356	2
				49		22.29	0.338	2
				99		22.20	0.331	2
			27	0	2	21.89	0.308	2
				36		21.74	0.298	2
				73		21.63	0.290	2

4. Occupied Bandwidth

4.1. Test Setup



4.2. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The 26 dB bandwidth and 99% occupied bandwidth of the low & middle & high channel for the highest RF powers were measured.

4.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause4.2 & 4.3
ANSI C63.26: 2015 Sub-clause 5.4.3 & 5.4.4

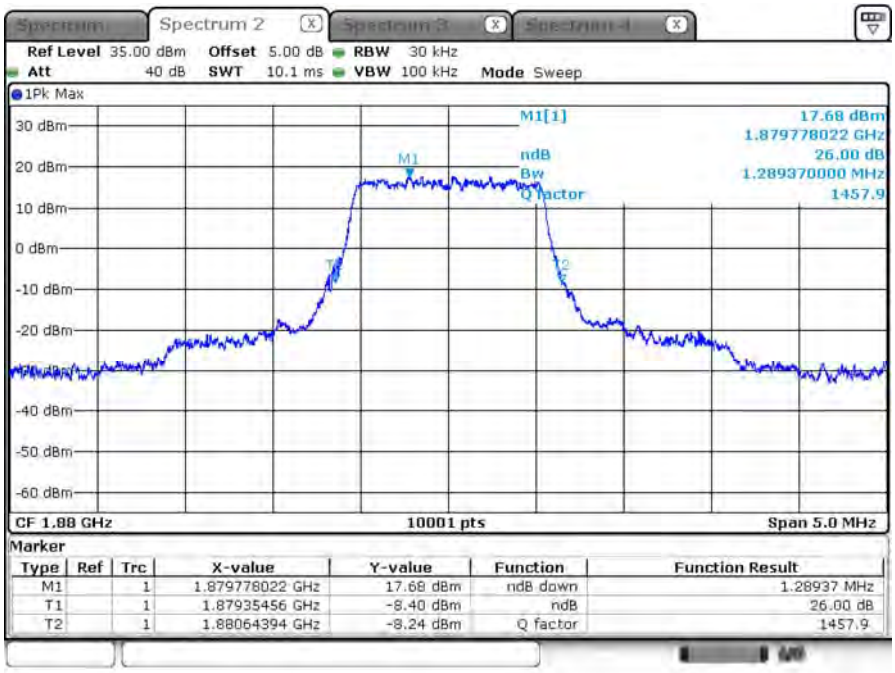
4.4. Test Result

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

1.4M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	1.289	1.098	N/A

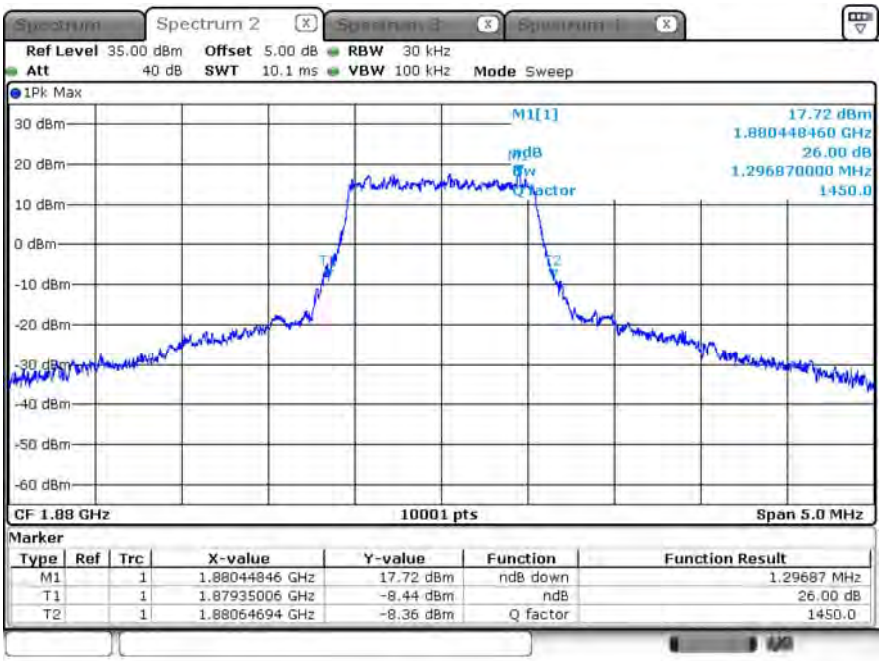
1.4M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	1.296	1.104	N/A

-26dB BW_CH18900_1.4M__QPSK_6RB0



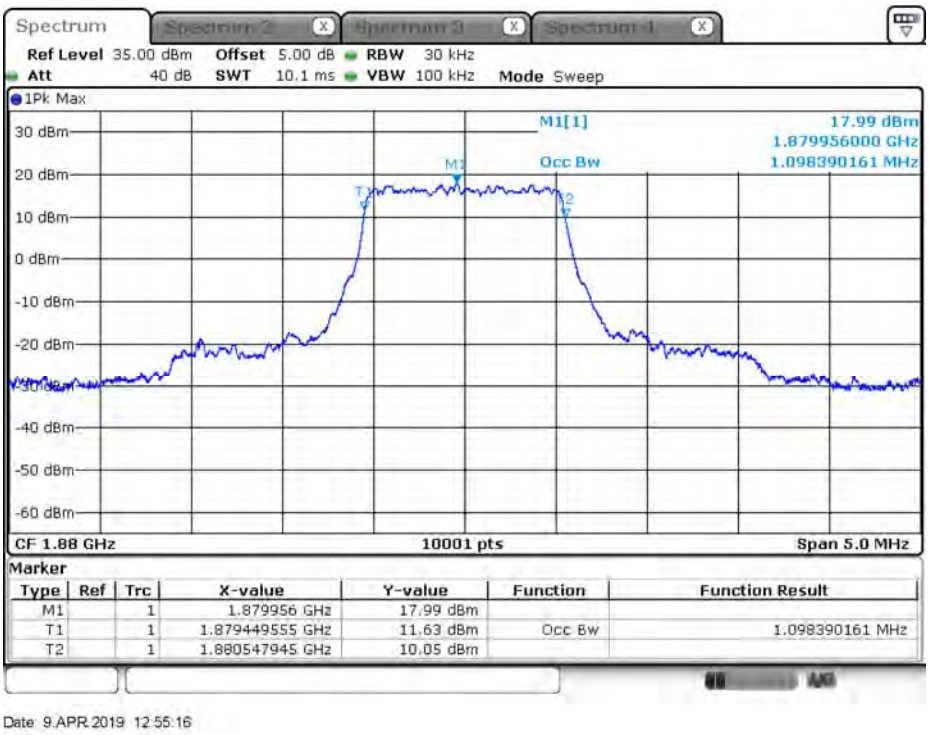
Date: 9.APR.2019 12:56:15

-26dB BW_CH18900_1.4M_16-QAM_6RB0



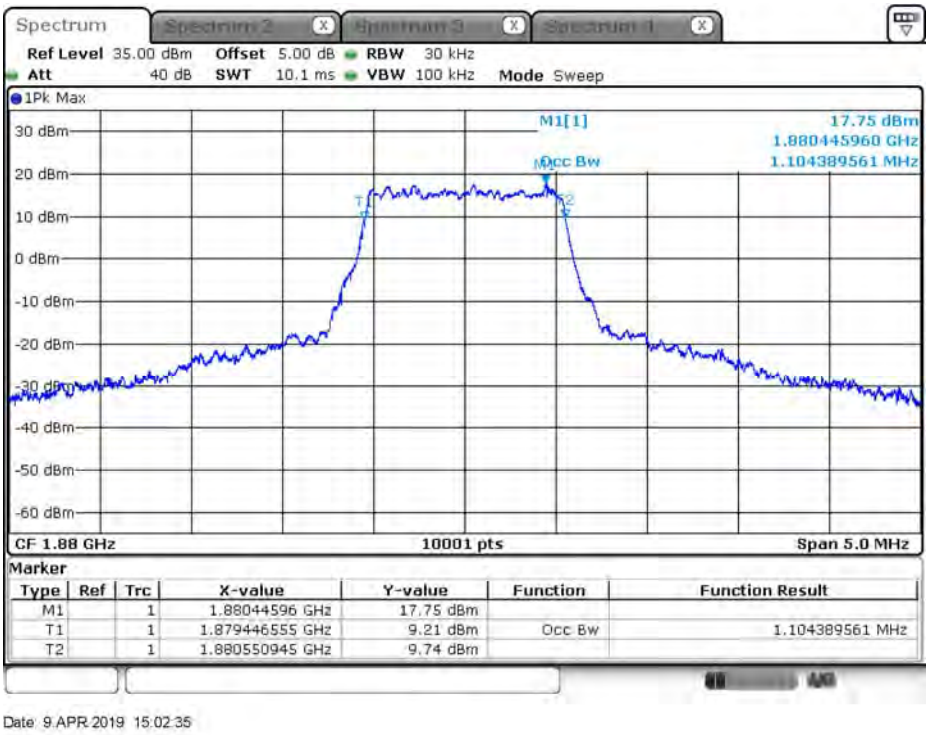
Date: 9.APR.2019 15:02:59

99% BW_CH18900_1.4M__QPSK_6RB0



Date: 9.APR.2019 12:55:16

99% BW_CH18900_1.4M_16-QAM_6RB0



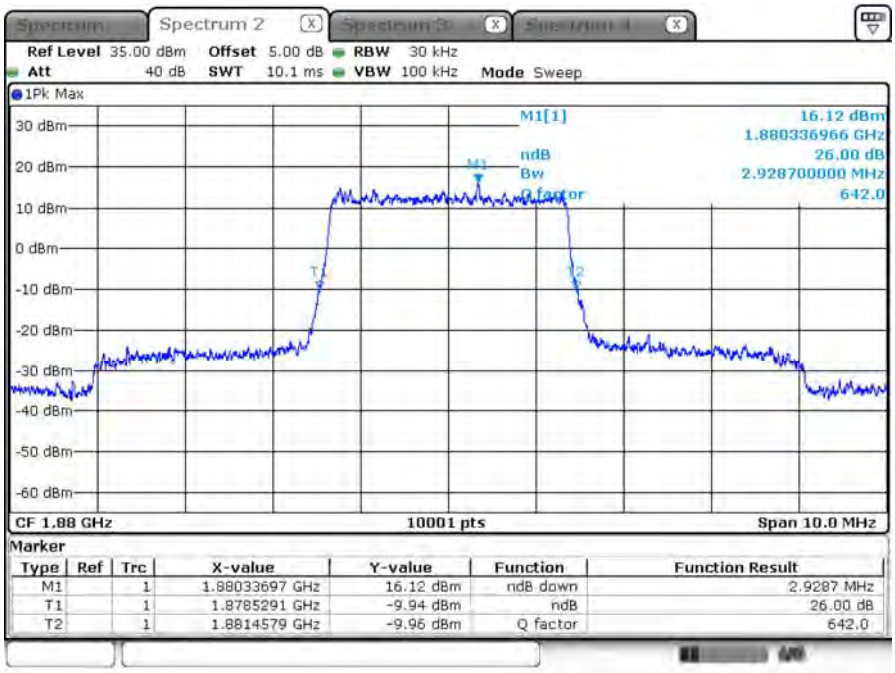
Date: 9.APR.2019 15:02:35

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

3M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	2.928	2.684	N/A

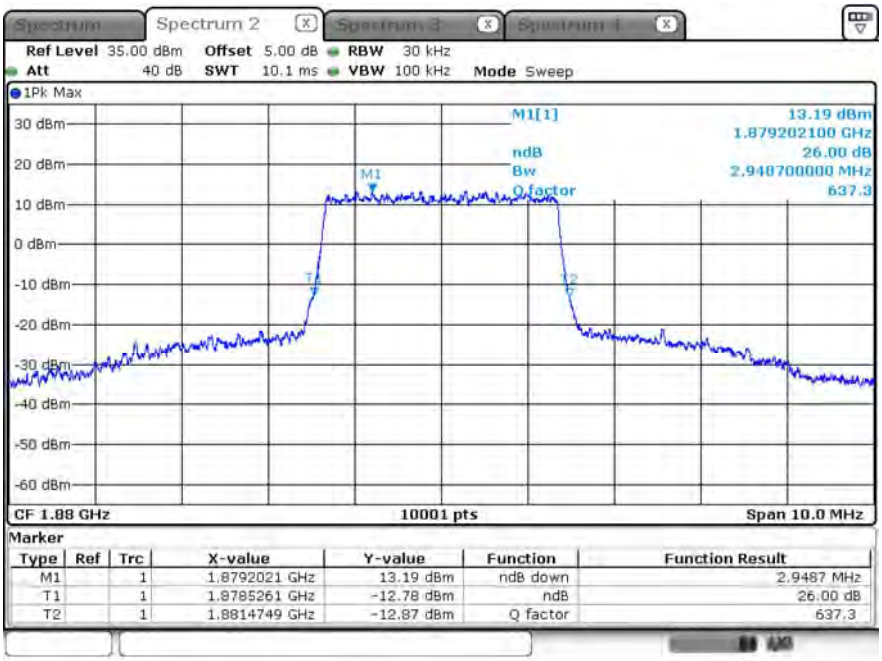
3M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	2.948	2.687	N/A

-26dB BW_CH18900_3M__QPSK_15RB0



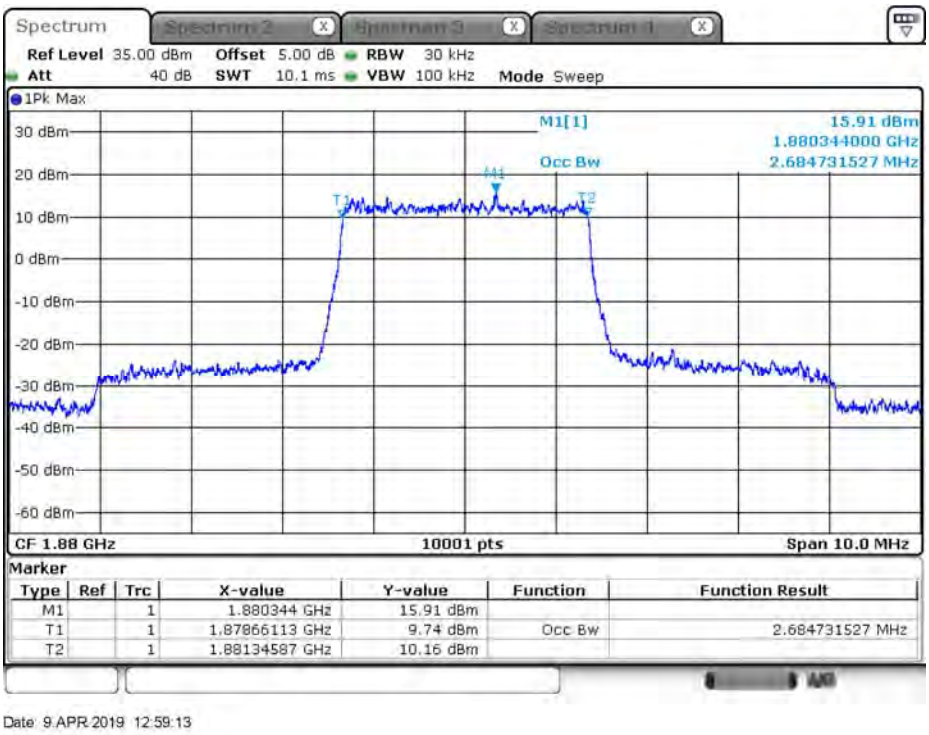
Date: 9.APR.2019 13:00:02

-26dB BW_CH18900_3M_16-QAM_15RB0



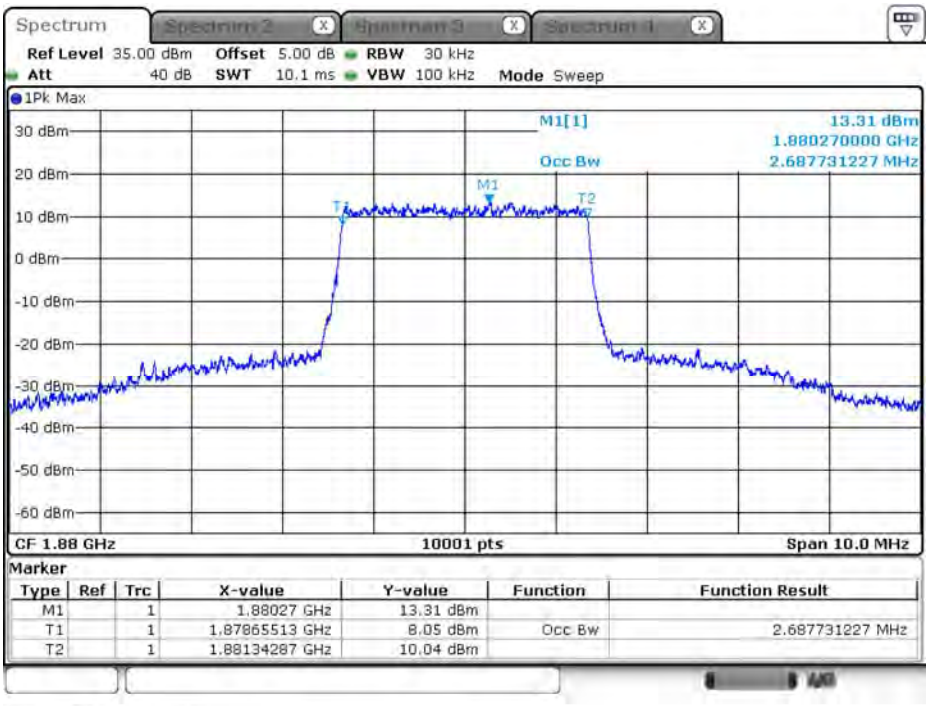
Date: 9.APR.2019 15:00:12

99% BW_CH18900_3M__QPSK_15RB0



Date: 9.APR.2019 12:59:13

99% BW_CH18900_3M_16-QAM_15RB0



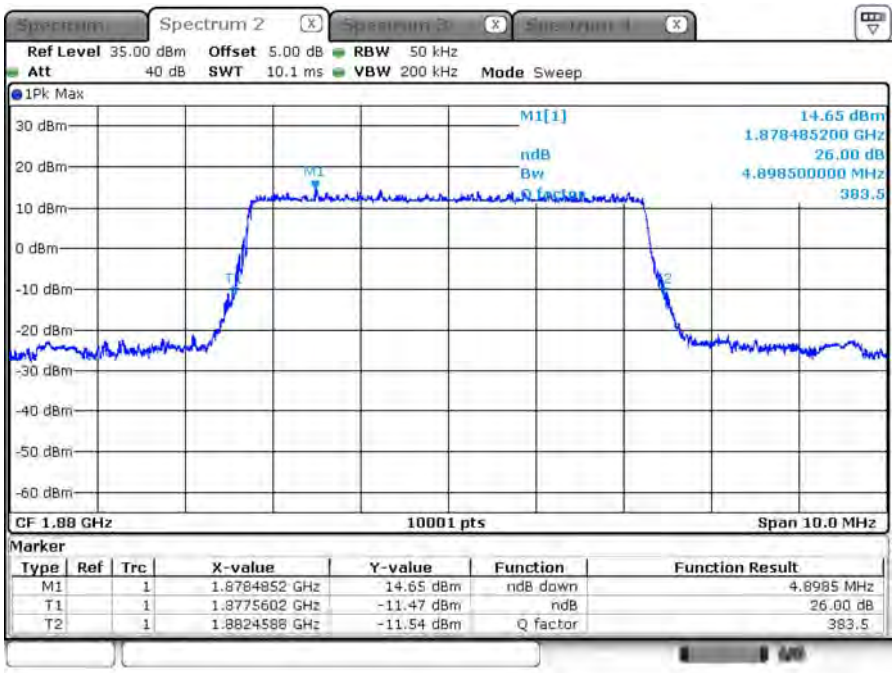
Date: 9.APR.2019 14:59:12

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	4.898	4.495	N/A

5M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	5.007	4.481	N/A

-26dB BW_CH18900_5M__QPSK_25RB0



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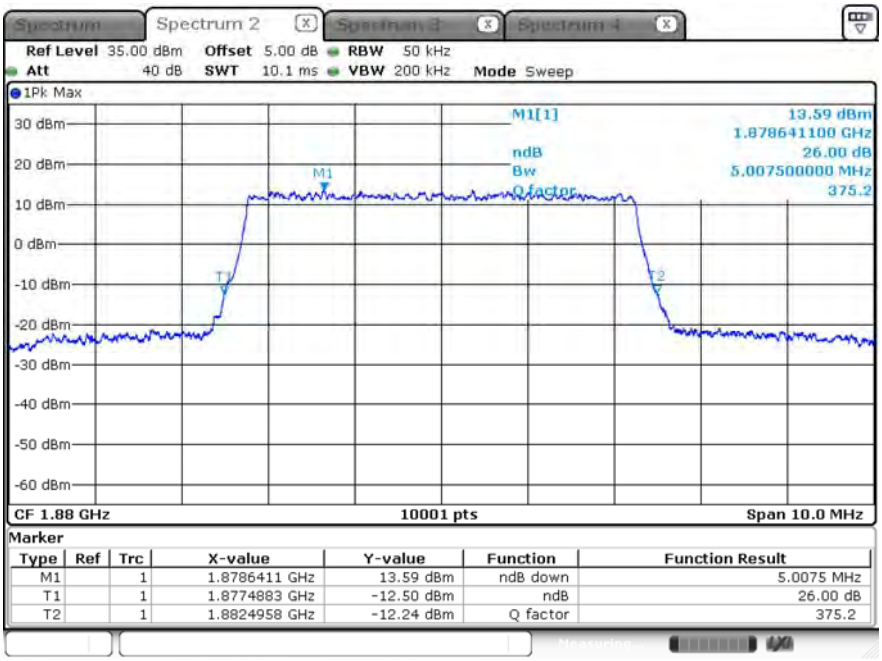
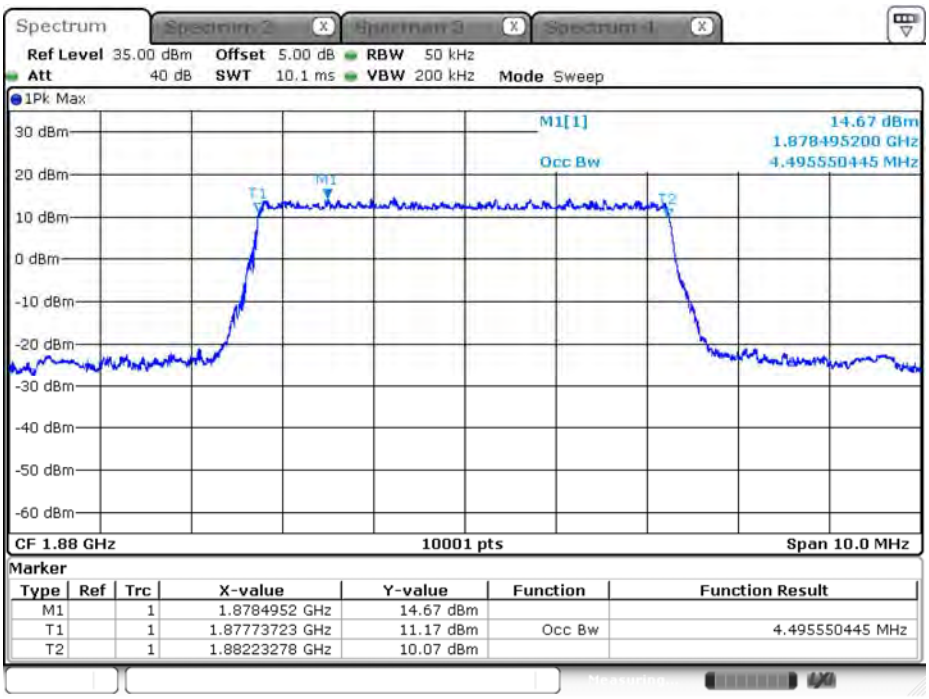
-26dB BW_CH18900_5M_16-QAM_25RB0



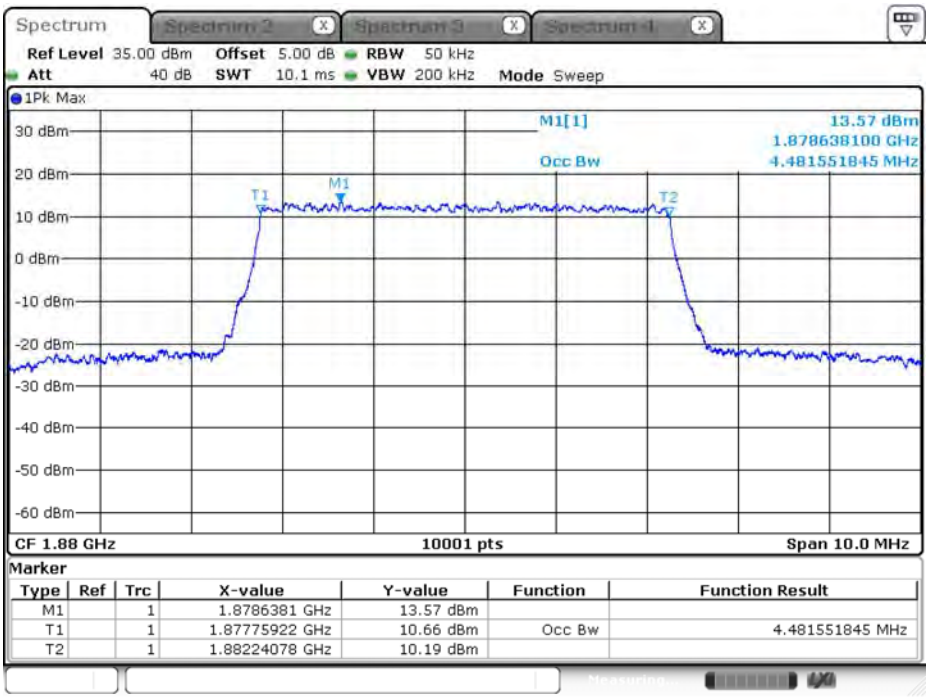
Date: 9.APR.2019 14:57:25

99% BW_CH18900_5M__QPSK_25RB0



Date: 9.APR.2019 13:01:32

99% BW_CH18900_5M_16-QAM_25RB0



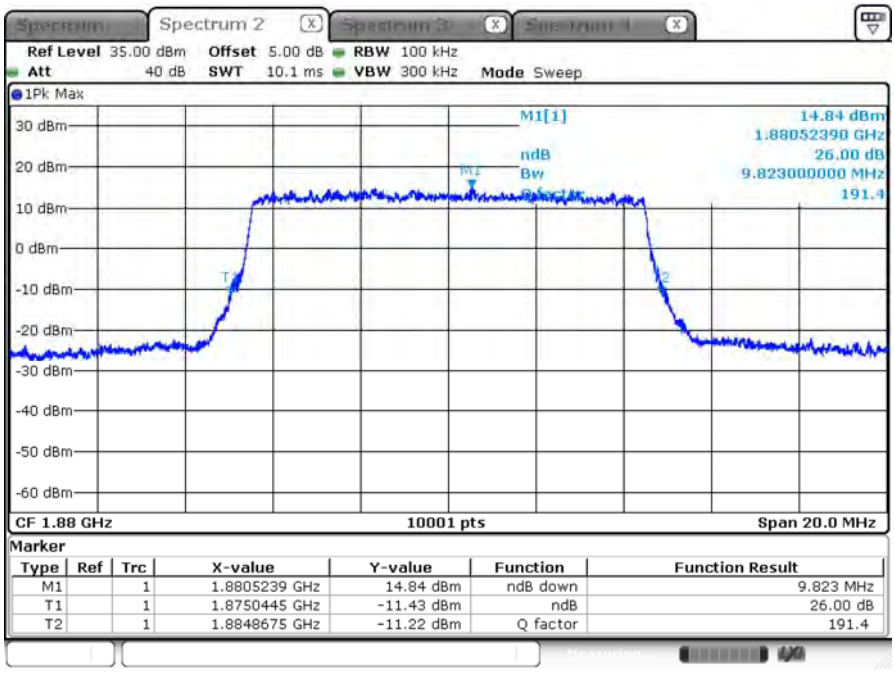
Date: 9.APR.2019 14:54:42

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

10M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	9.823	8.929	N/A

10M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	5.955	4.917	N/A

-26dB BW_CH18900_10M__QPSK_50RB0

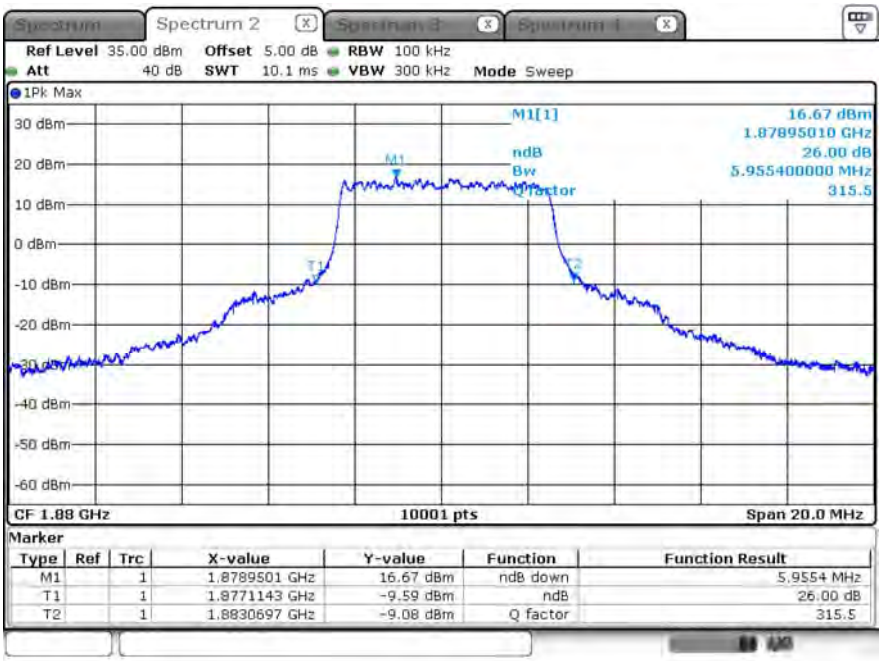


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.8805239 GHz	14.84 dBm	ndB down	9.823 MHz
T1		1	1.8750445 GHz	-11.43 dBm	ndB	26.00 dB
T2		1	1.8848675 GHz	-11.22 dBm	Q factor	191.4

Date: 9.APR.2019 13:08:25

-26dB BW _CH18900_10M_16-QAM_27RB12

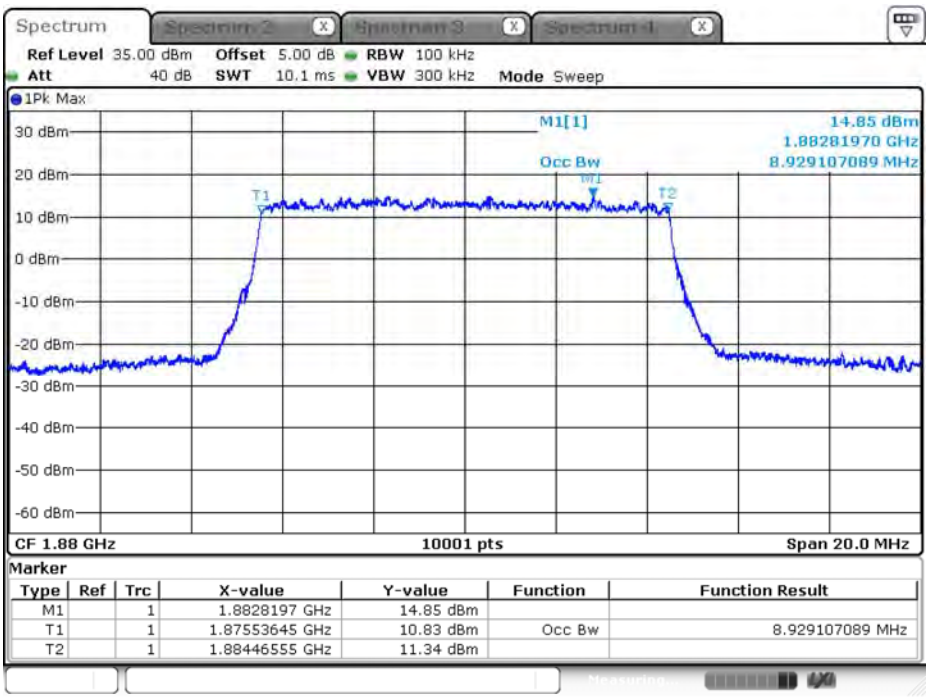


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.8789501 GHz	16.67 dBm	ndB down	5.9554 MHz
T1		1	1.8771143 GHz	-9.59 dBm	ndB	26.00 dB
T2		1	1.8830697 GHz	-9.08 dBm	Q factor	315.5

Date: 9.APR.2019 14:49:32

99% BW_CH18900_10M__QPSK_50RB0



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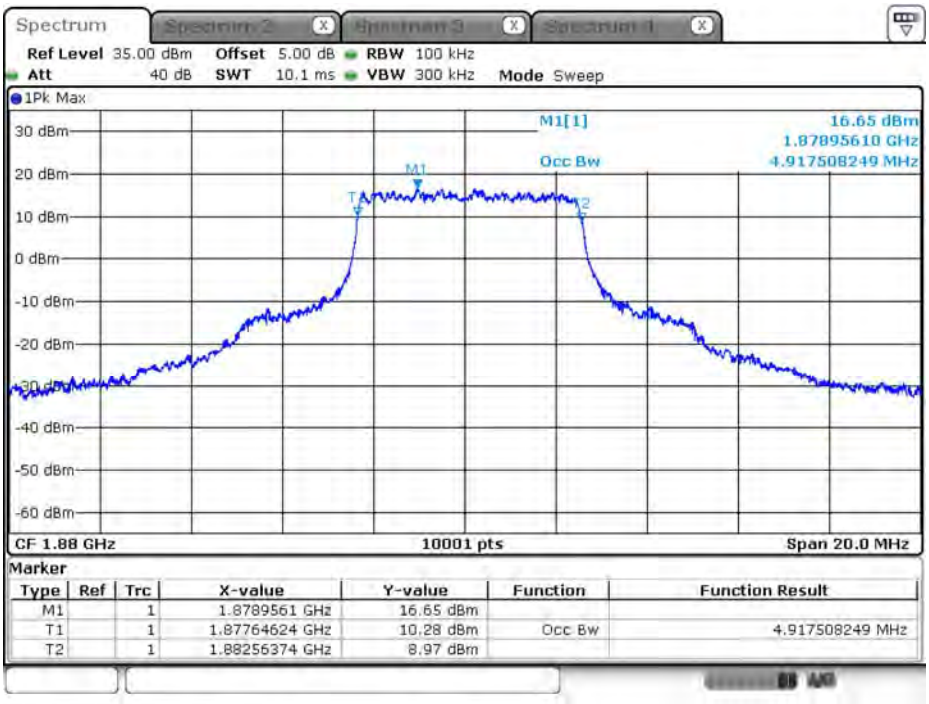
99% BW_CH18900_10M_16-QAM_27RB12



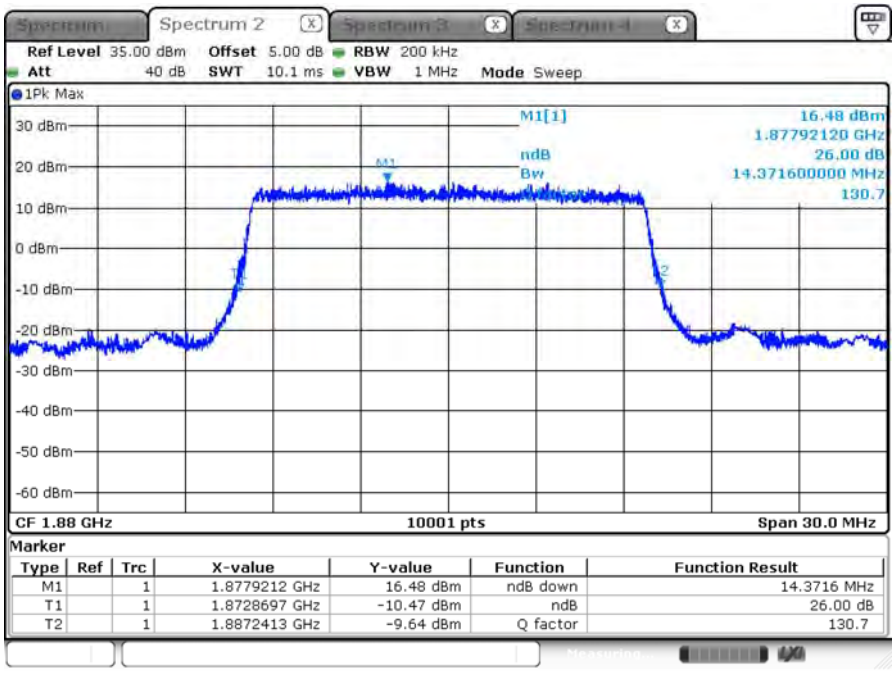
Date: 9.APR.2019 14:46:36

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

15M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	14.371	13.426	N/A

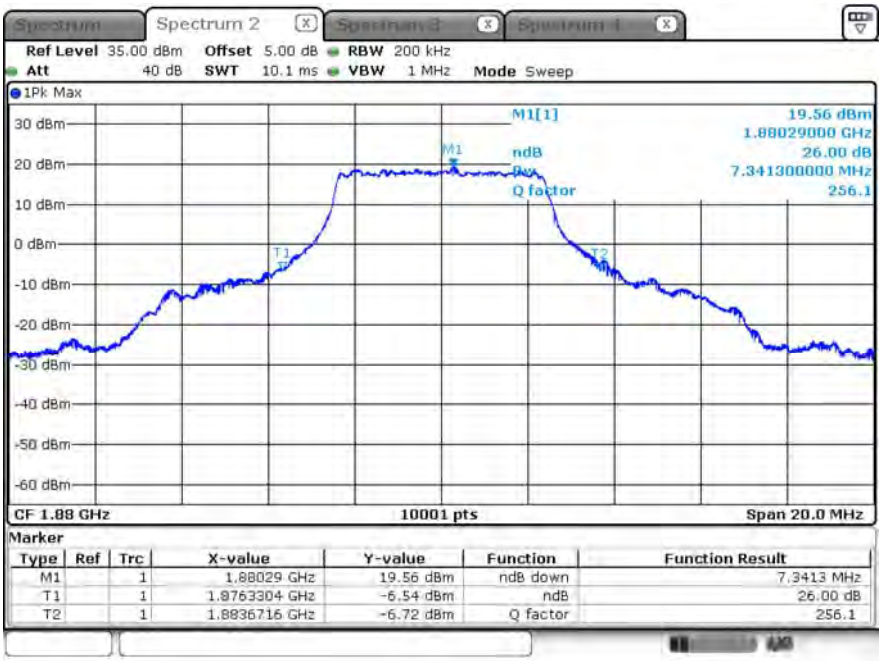
15M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	7.341	5.197	N/A

-26dB BW_CH18900_15M__QPSK_75RB0



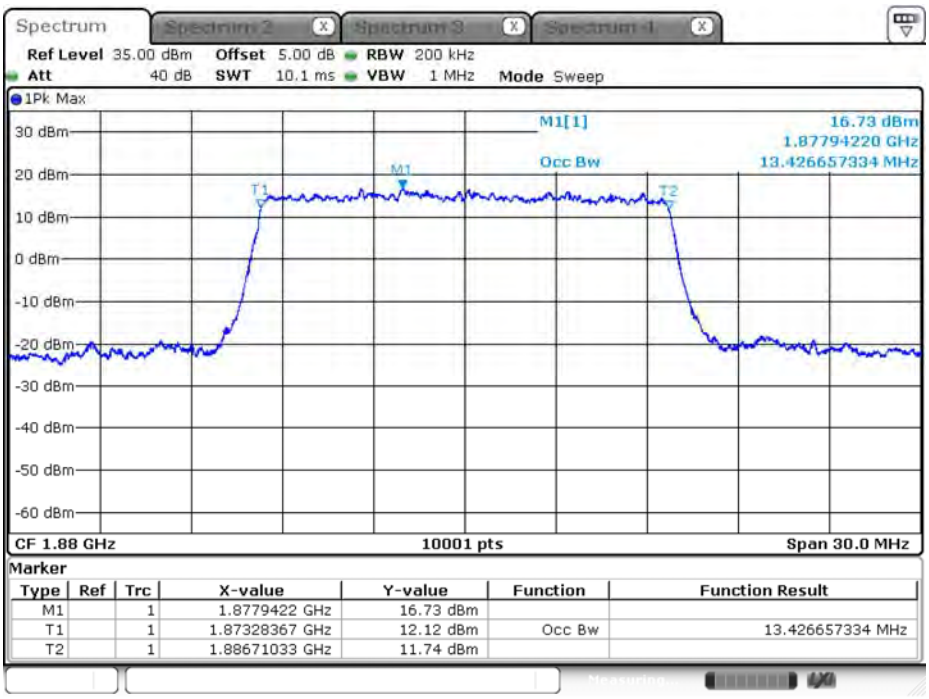
Date: 9.APR.2019 13:15:04

-26dB BW_CH18900_15M_16-QAM_27RB24



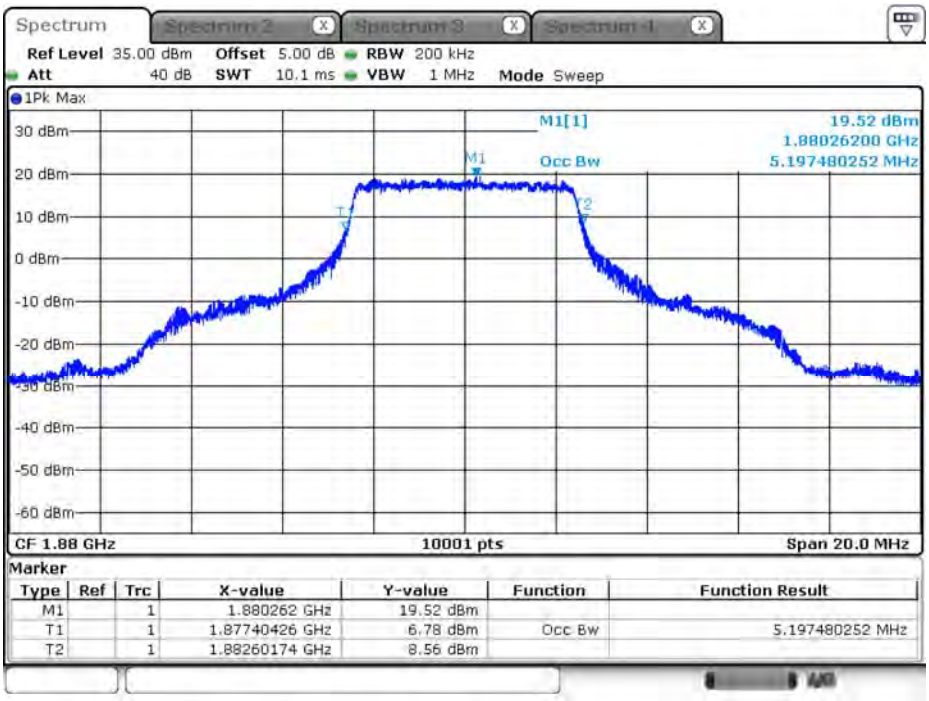
Date: 9.APR.2019 14:36:35

99% BW_CH18900_15M__QPSK_75RB0



Date: 9.APR.2019 13:14:28

99% BW_CH18900_15M_16-QAM_27RB24



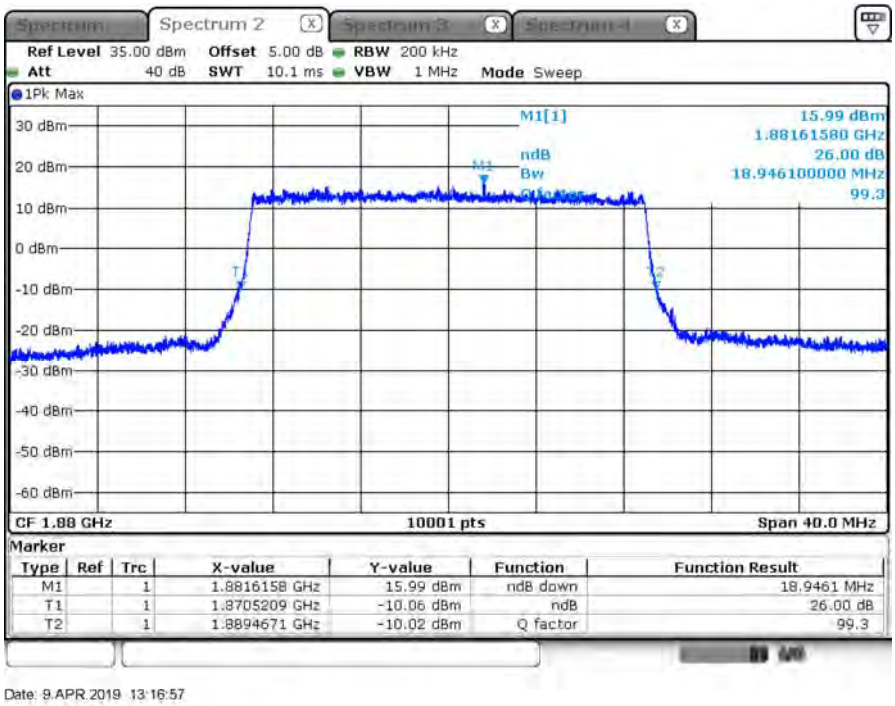
Date: 9.APR.2019 14:33:13

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

20M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	18.946	17.842	N/A

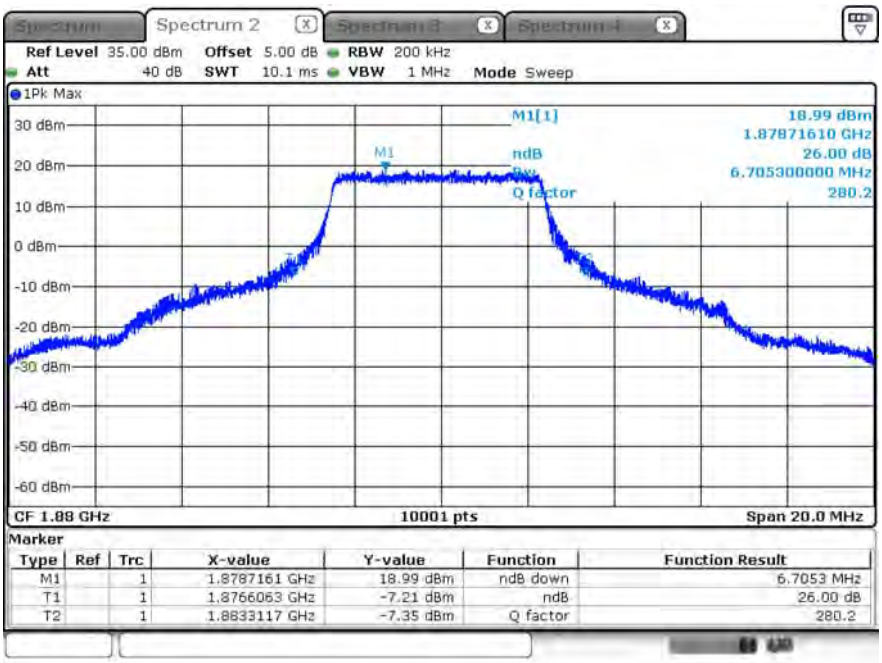
20M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	6.705	5.259	N/A

-26dB BW_CH18900_20M__QPSK_100RB0



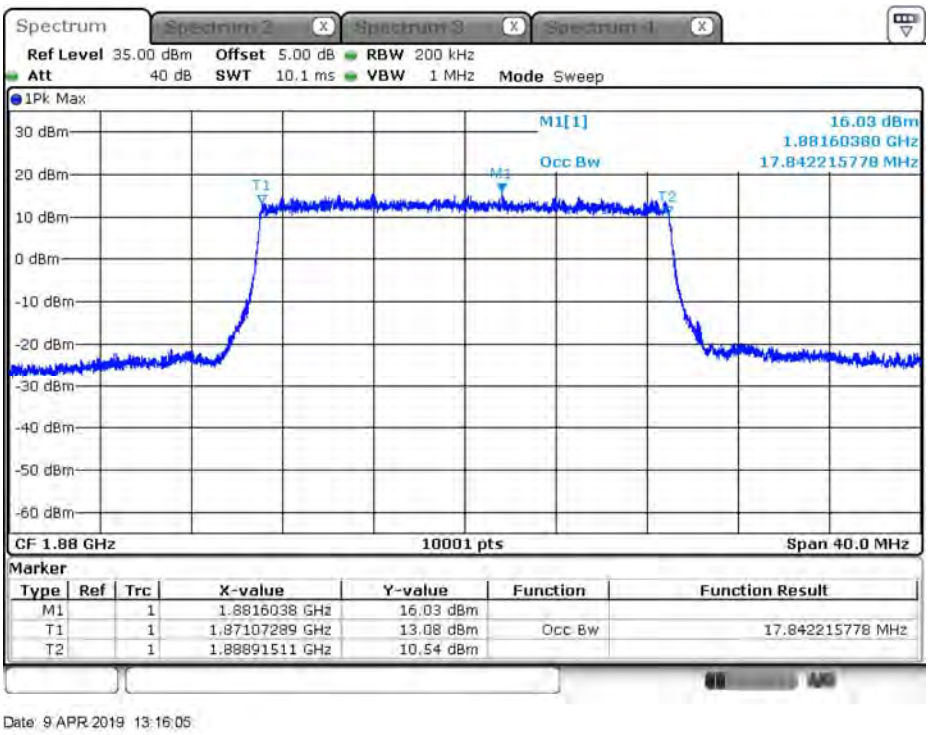
Date: 9.APR.2019 13:16:57

-26dB BW_CH18900_20M_16-QAM_27RB36

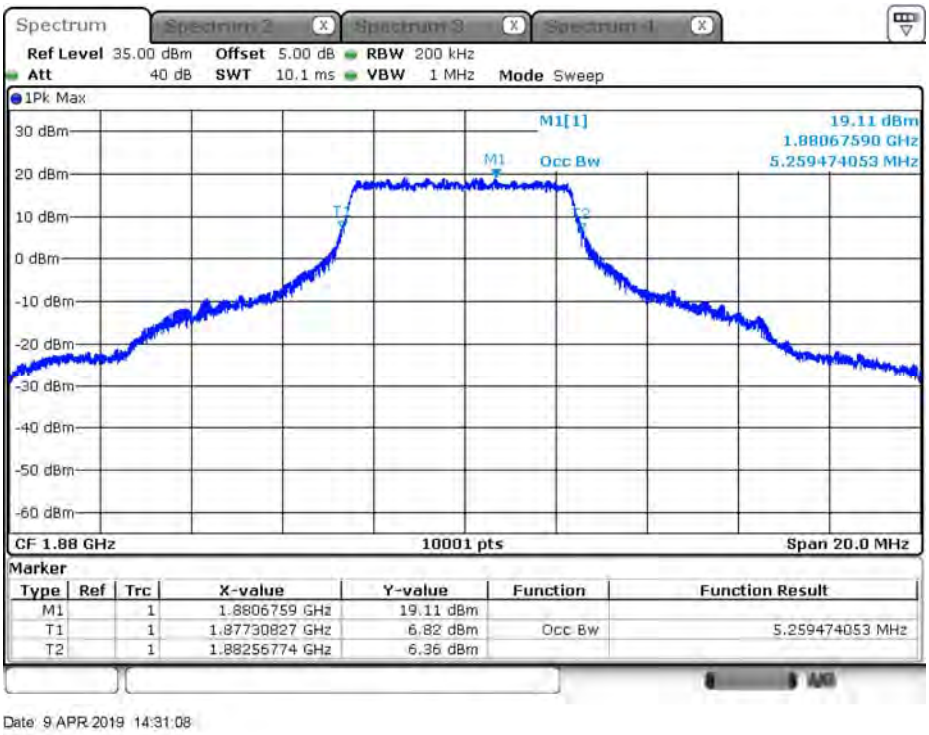


Date: 9.APR.2019 14:31:51

99% BW_CH18900_20M__QPSK_100RB0



99% BW_CH18900_20M_16-QAM_27RB36

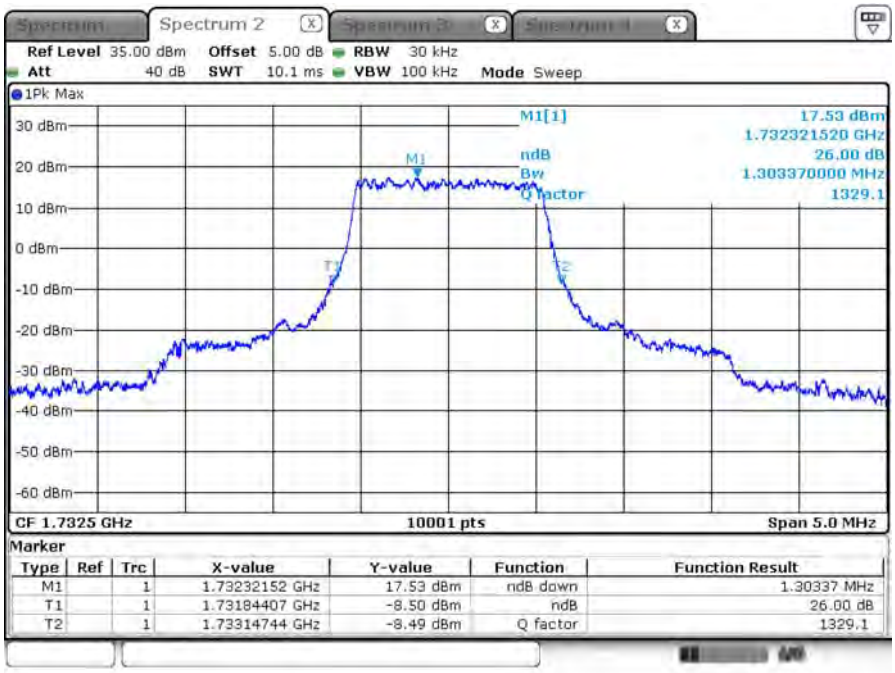


Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

1.4M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	1.303	1.093	N/A

1.4M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	1.326	1.095	N/A

-26dB BW_CH20175_1.4M__QPSK_6RB0



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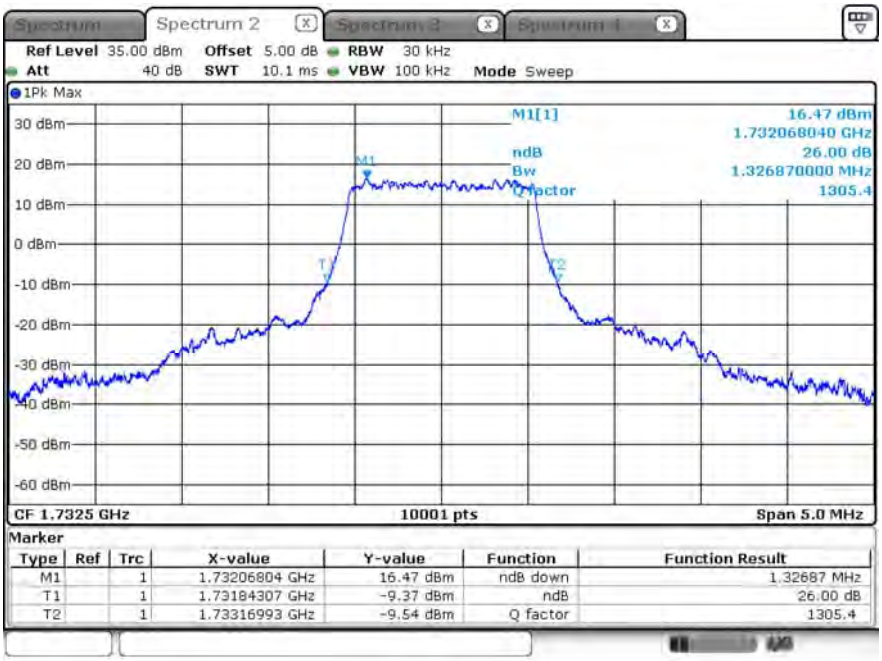
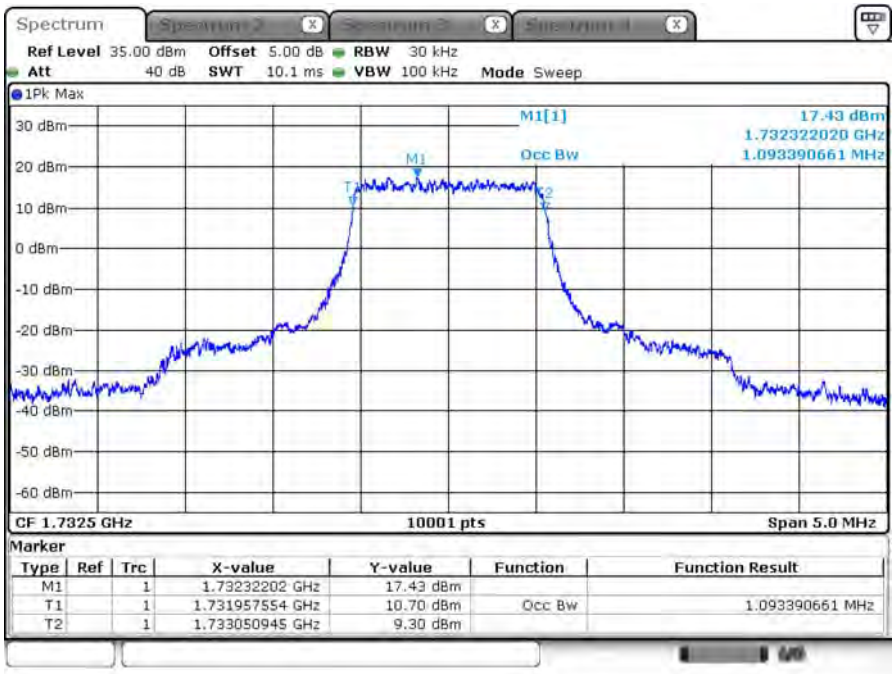
-26dB BW_CH20175_1.4M_16-QAM_6RB0



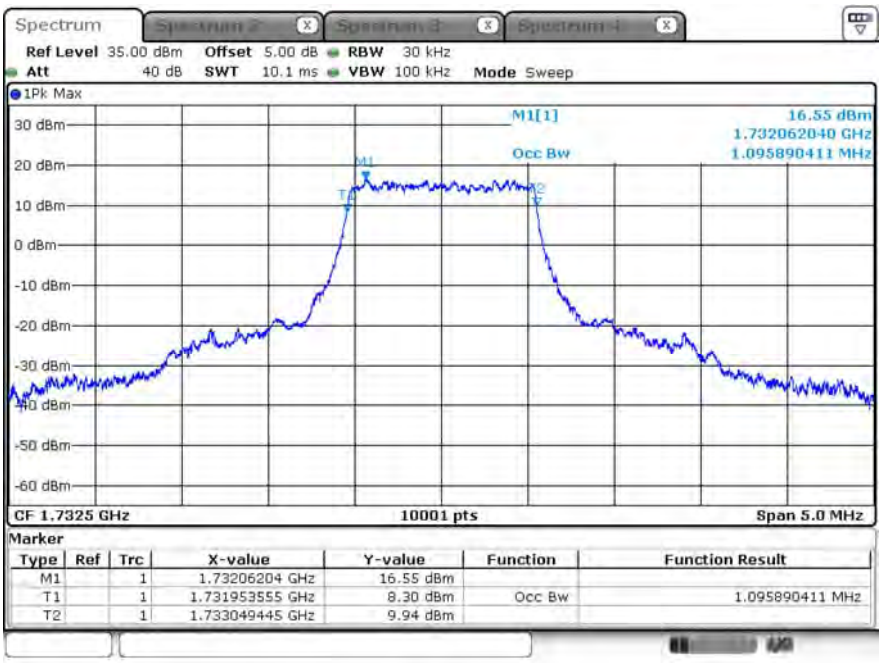
Date: 9.APR.2019 15:29:42

99% BW_CH20175_1.4M__QPSK_6RB0



Date: 9.APR.2019 15:24:00

99% BW_CH20175_1.4M_16-QAM_6RB0



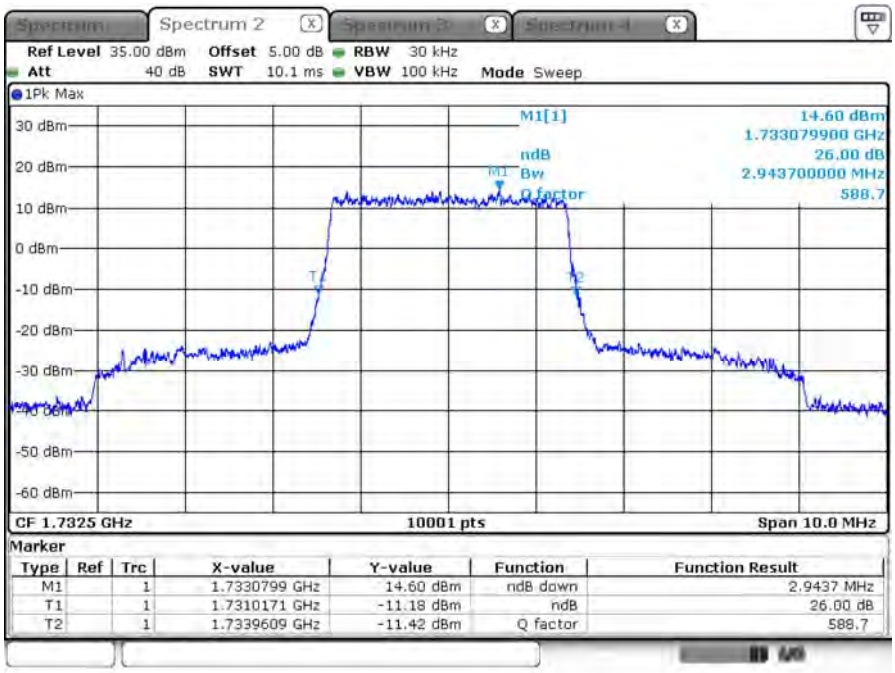
Date: 9.APR.2019 15:24:42

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

3M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	2.943	2.684	N/A

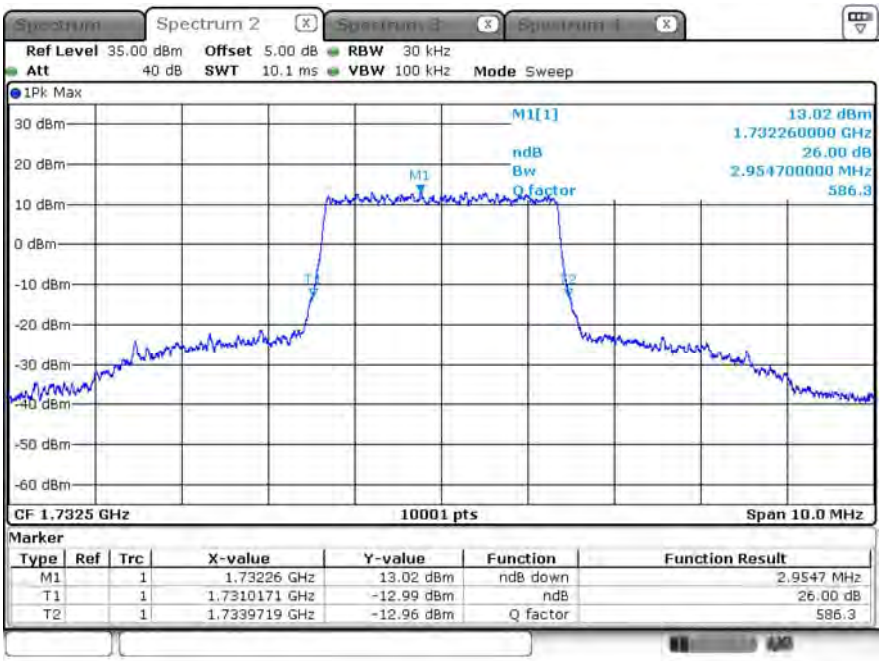
3M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	2.954	2.683	N/A

-26dB BW_CH20175_3M__QPSK_6RB0



Date: 9.APR.2019 16:13:28

-26dB BW_CH20175_3M_16-QAM_6RB0



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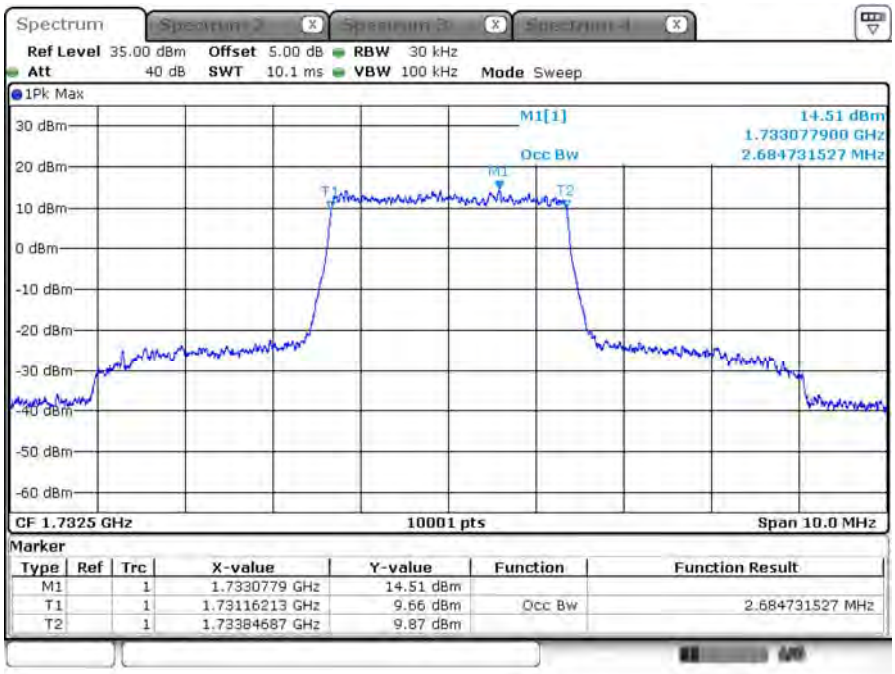
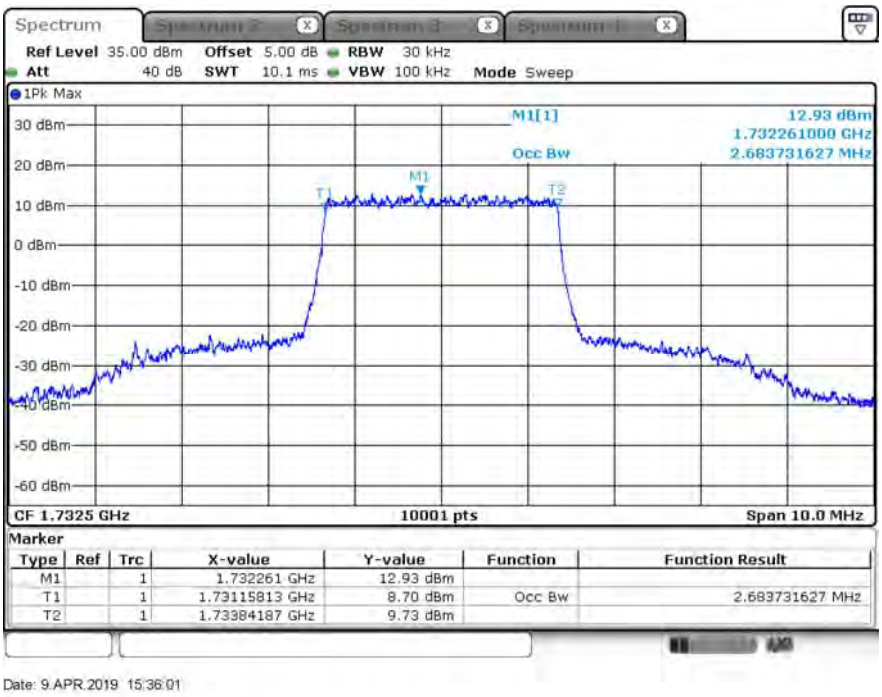
99% BW_CH20175_3M__QPSK_6RB0



99% BW_CH20175_3M_16-QAM_6RB0

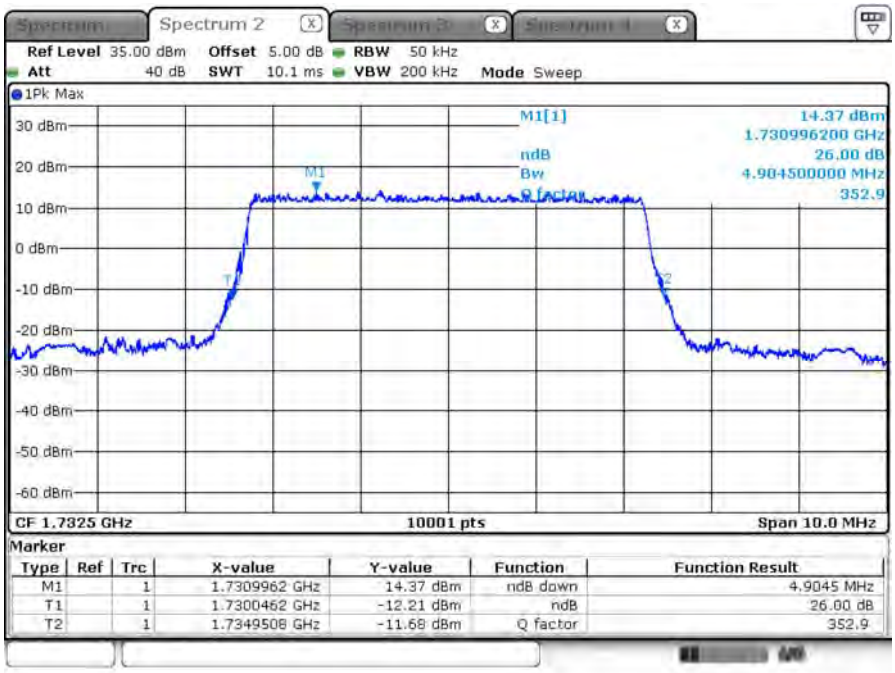


Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	4.904	4.497	N/A

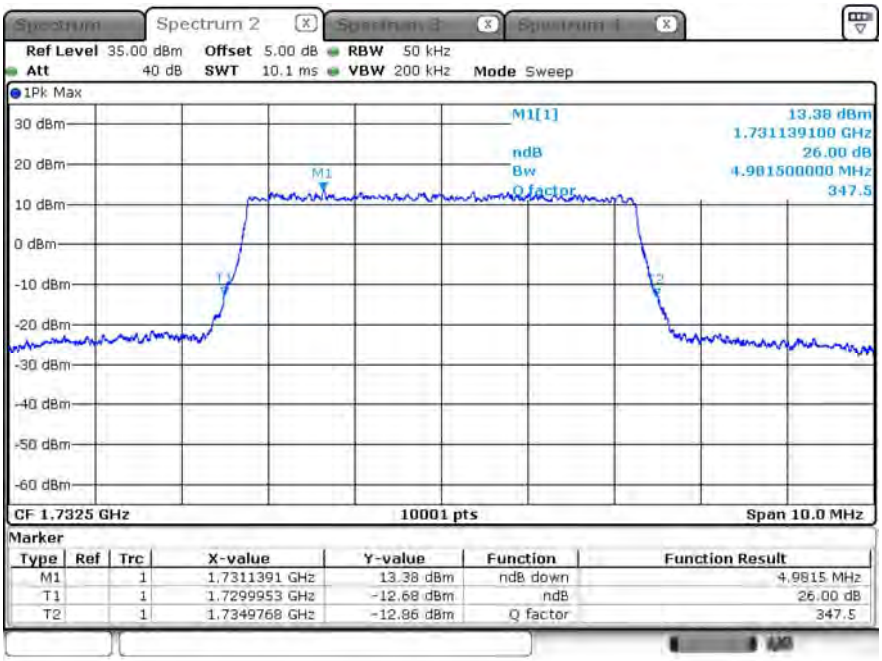
5M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	4.981	4.480	N/A

-26dB BW_CH20175_5M__QPSK_25RB0



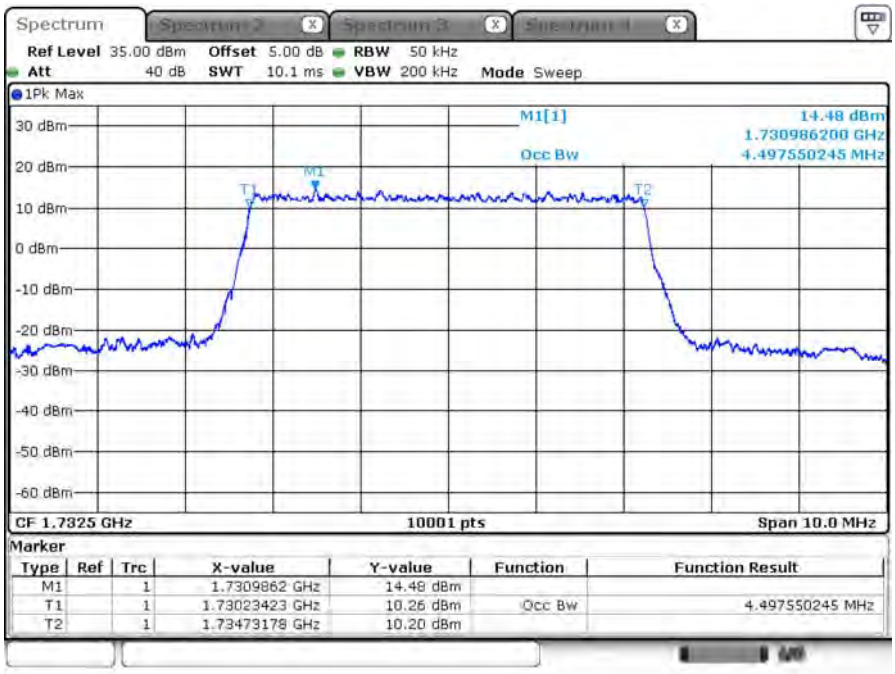
Date: 9.APR.2019 16:22:11

-26dB BW_CH20175_5M_16-QAM_25RB0



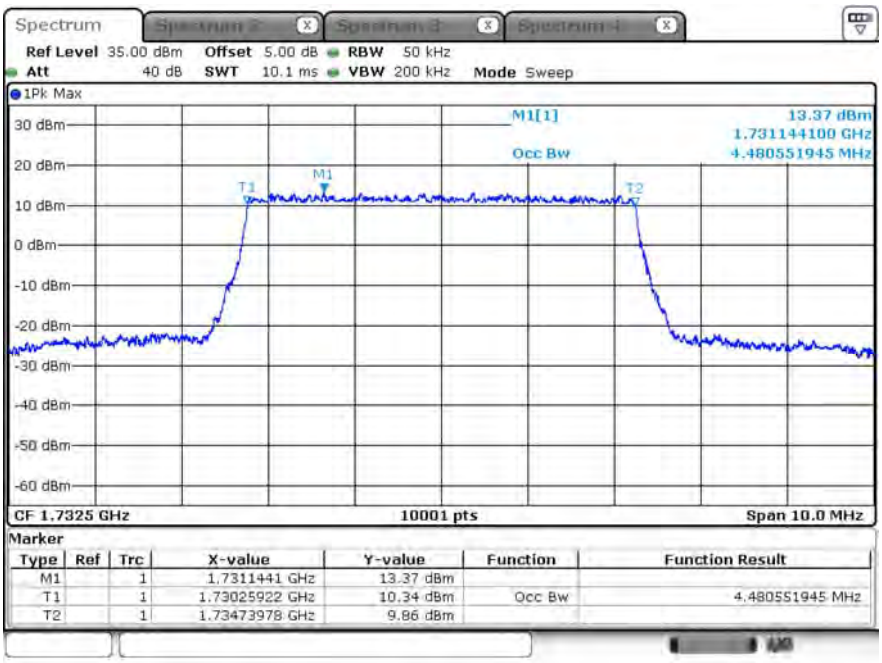
Date: 9.APR.2019 16:21:30

99% BW_CH20175_5M__QPSK_25RB0



Date: 9.APR.2019 16:16:57

99% BW_CH20175_5M_16-QAM_25RB0



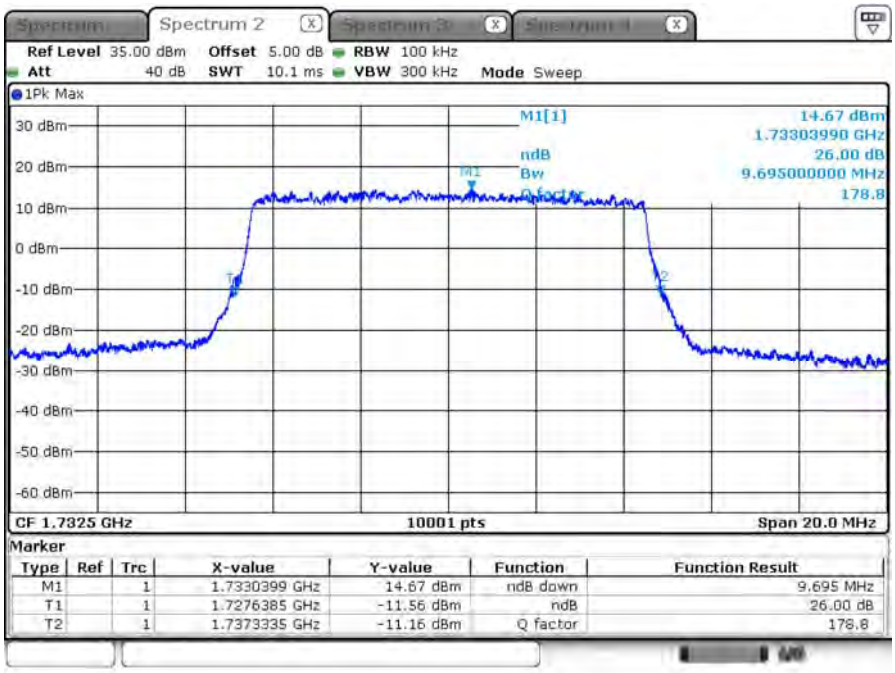
Date: 9.APR.2019 16:17:55

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

10M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	9.695	8.921	N/A

10M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	6.075	4.907	N/A

-26dB BW_CH20175_10M__QPSK_50RB0



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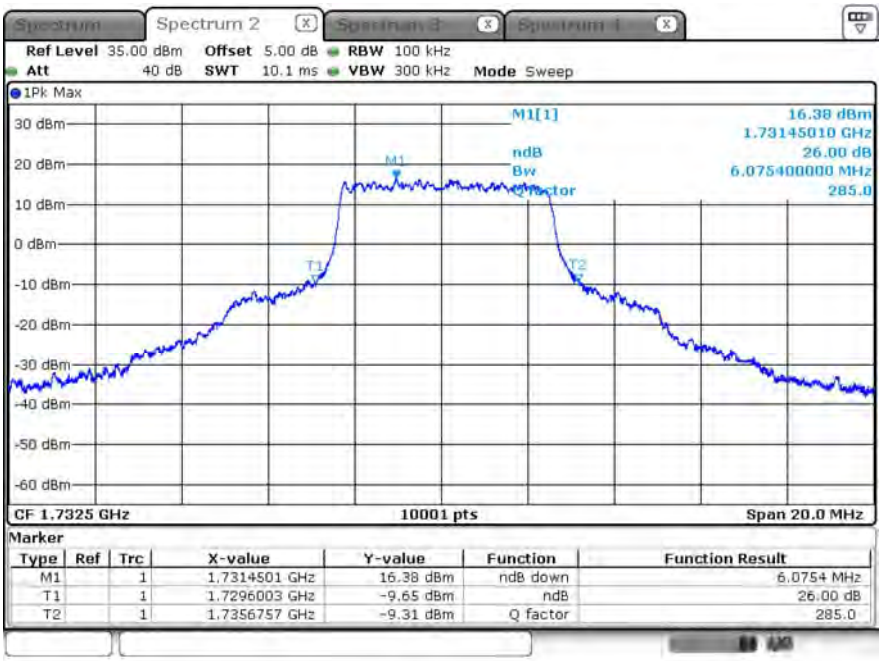
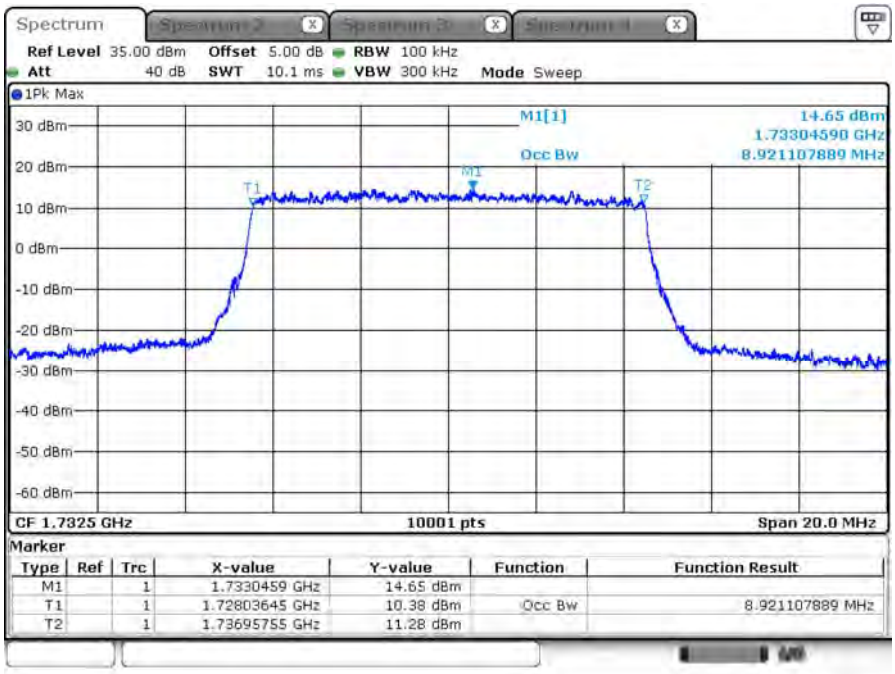
-26dB BW_CH20175_10M_16-QAM_27RB12



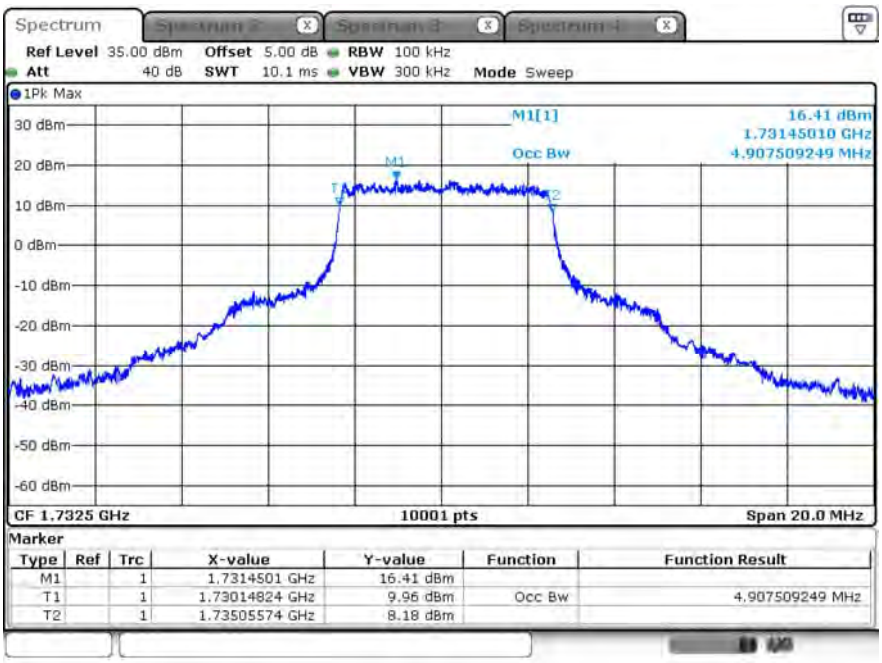
Date: 9.APR.2019 16:31:23

99% BW_CH20175_10M__QPSK_50RB0



Date: 9.APR.2019 16:26:16

99% BW_CH20175_10M_16-QAM_27RB12



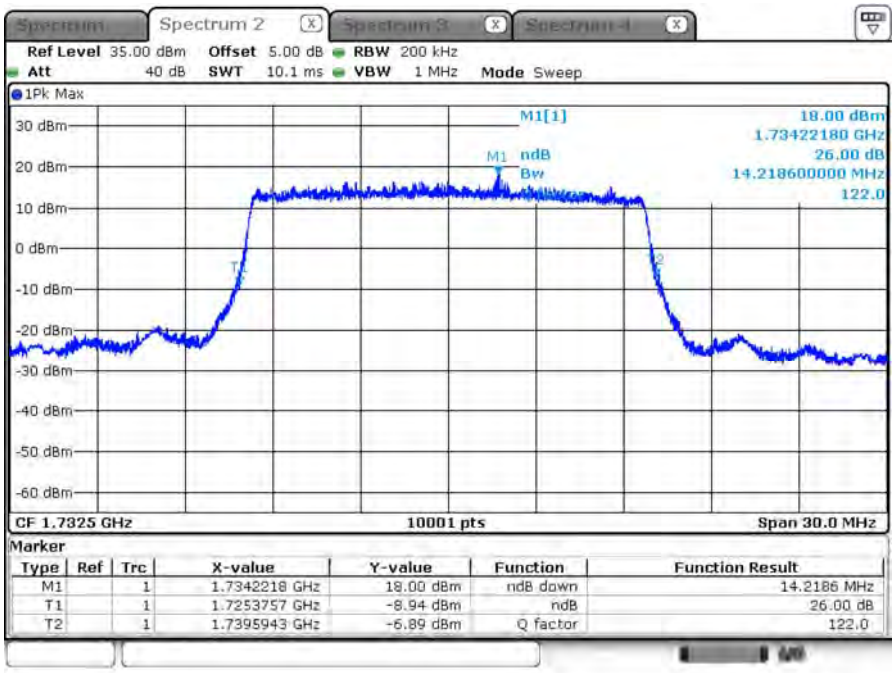
Date: 9.APR.2019 16:27:50

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

15M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	14.218	13.390	N/A

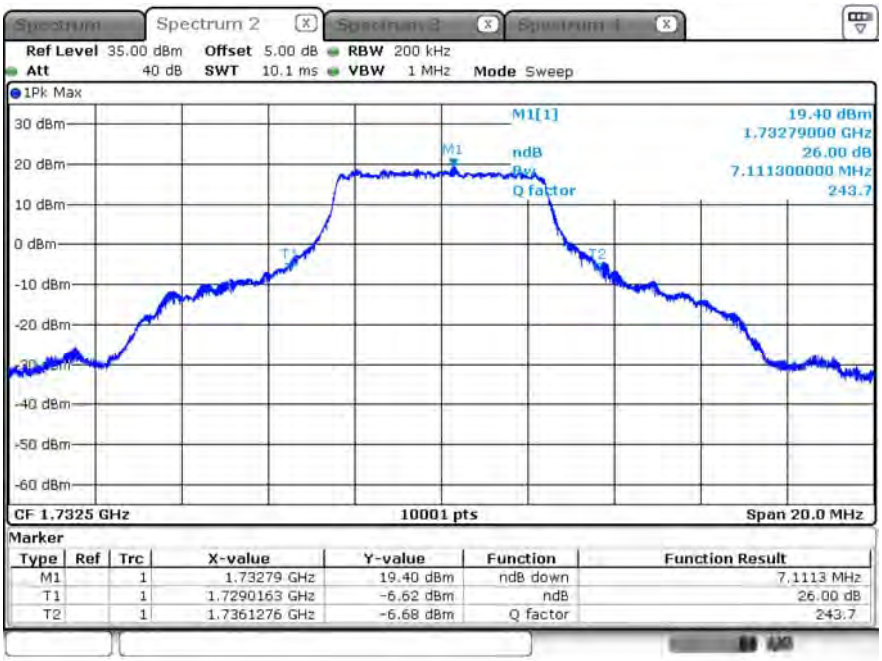
15M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	7.111	5.171	N/A

-26dB BW_CH20175_15M__QPSK_75RB0



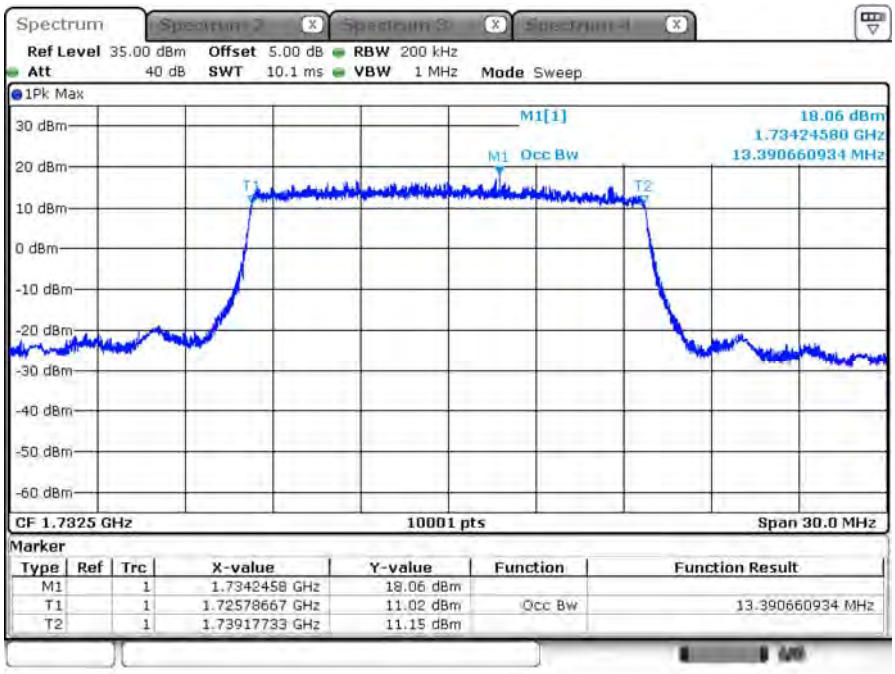
Date: 9.APR.2019 16:39:49

-26dB BW_CH20175_15M_16-QAM_27RB24

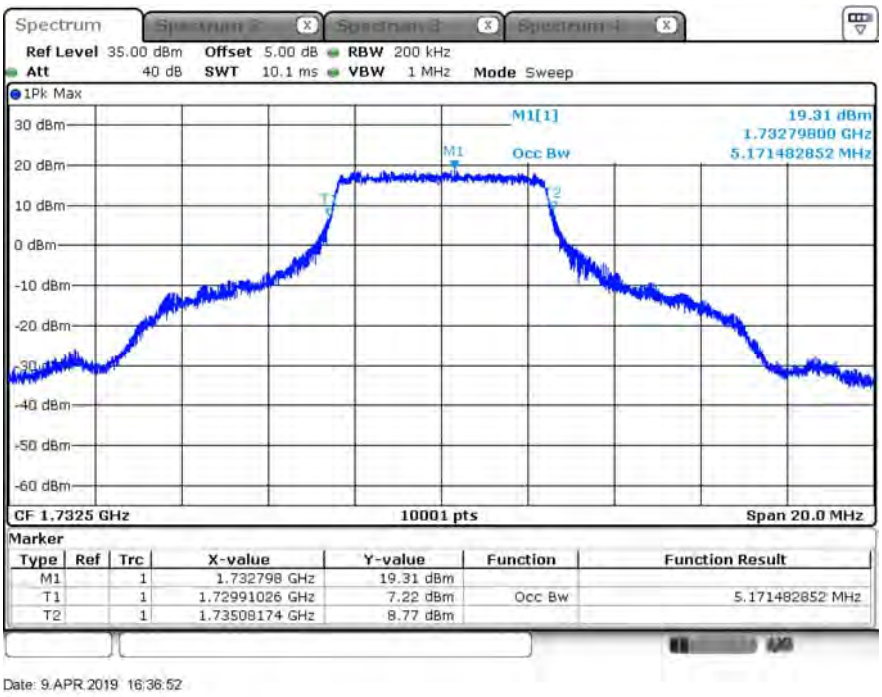


Date: 9.APR.2019 16:39:05

99% BW_CH20175_15M__QPSK_75RB0



99% BW_CH20175_15M_16-QAM_27RB24

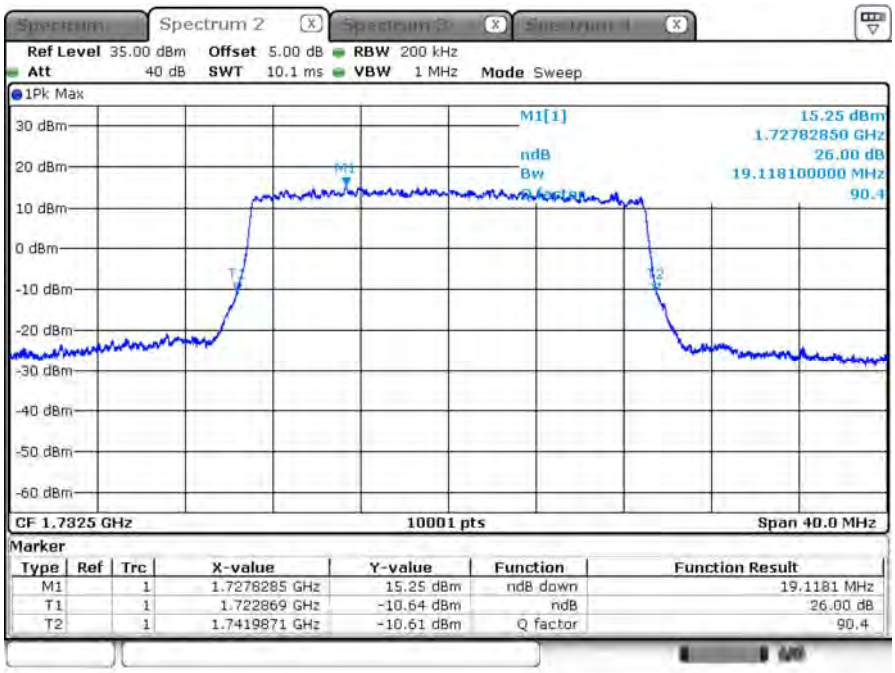


Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

20M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	19.118	17.810	N/A

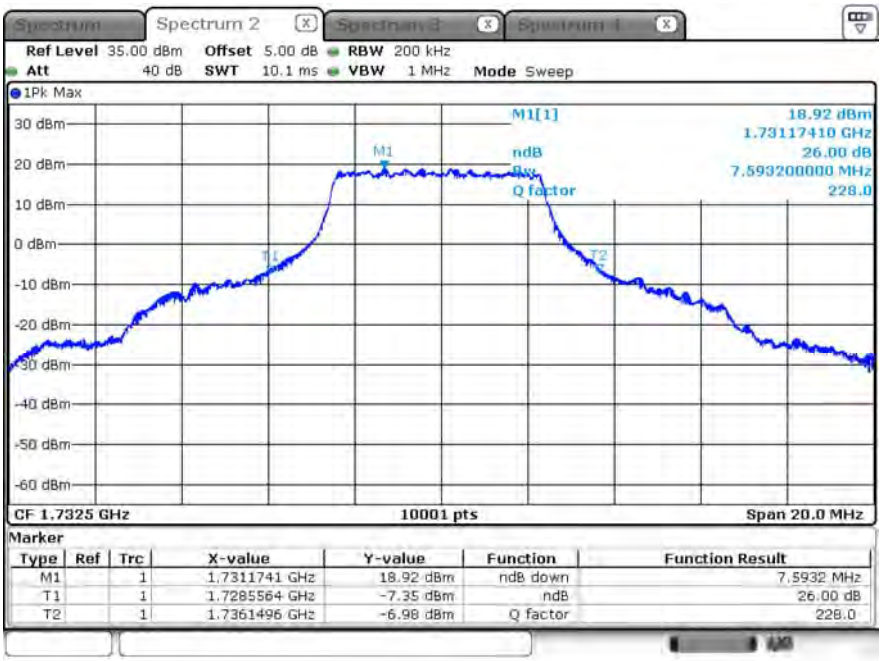
20M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	7.593	5.251	N/A

-26dB BW_CH20175_20M__QPSK_100RB0



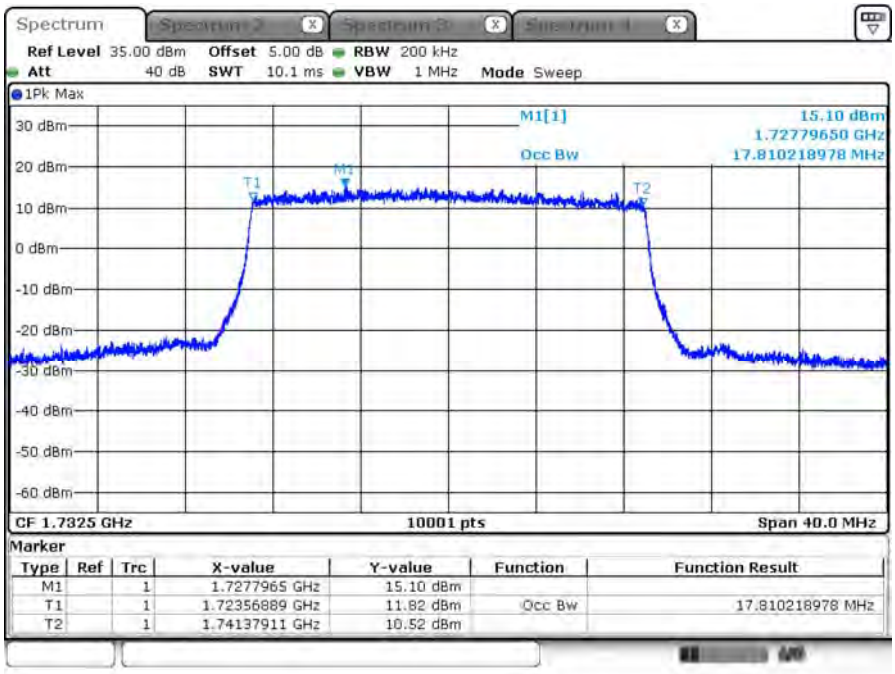
Date: 9.APR.2019 16:44:32

-26dB BW_CH20175_20M_16-QAM_27RB36

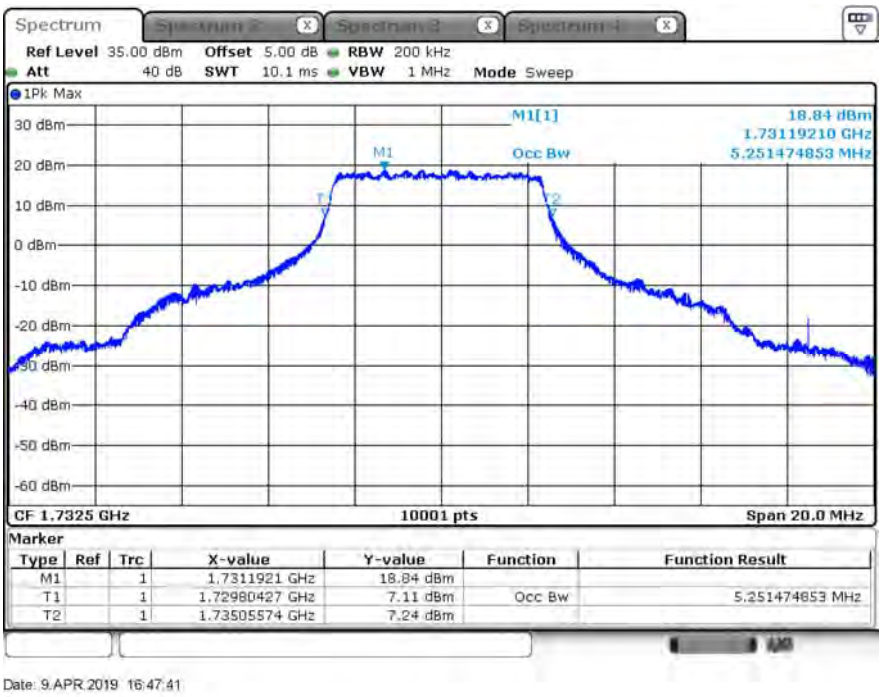


Date: 9.APR.2019 16:53:57

99% BW_CH20175_20M__QPSK_100RB0



99% BW_CH20175_20M_16-QAM_27RB36

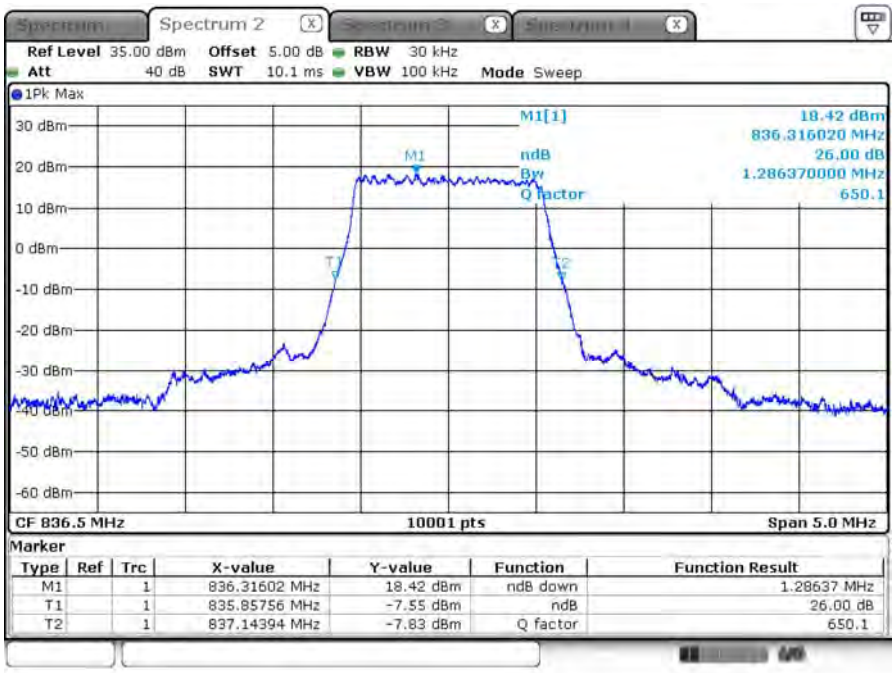


Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

1.4M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	1.286	1.088	N/A

1.4M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	1.293	1.093	N/A

-26dB BW_CH20525_1.4M__QPSK_6RB0



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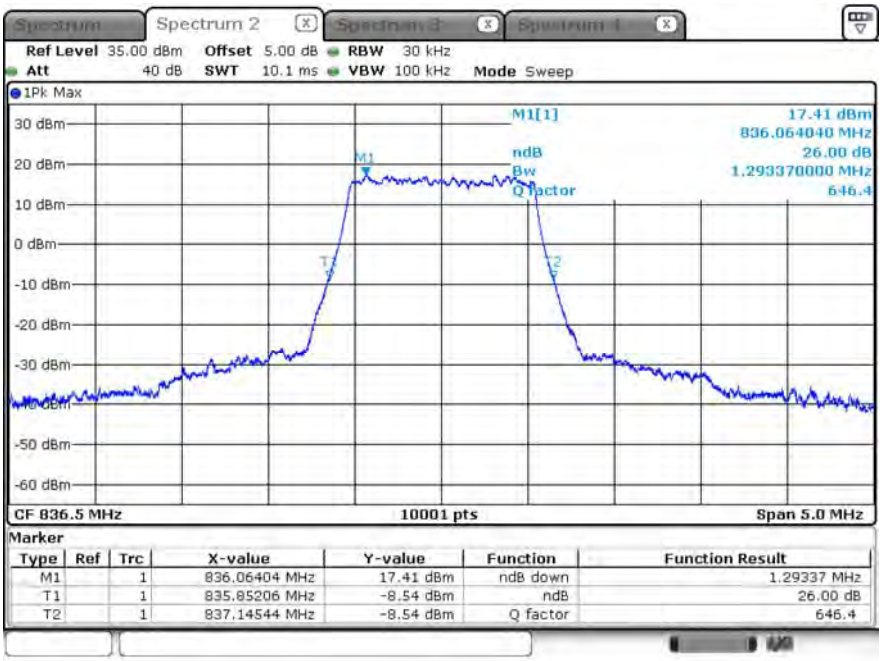
-26dB BW_CH20525_1.4M_16-QAM_6RB0



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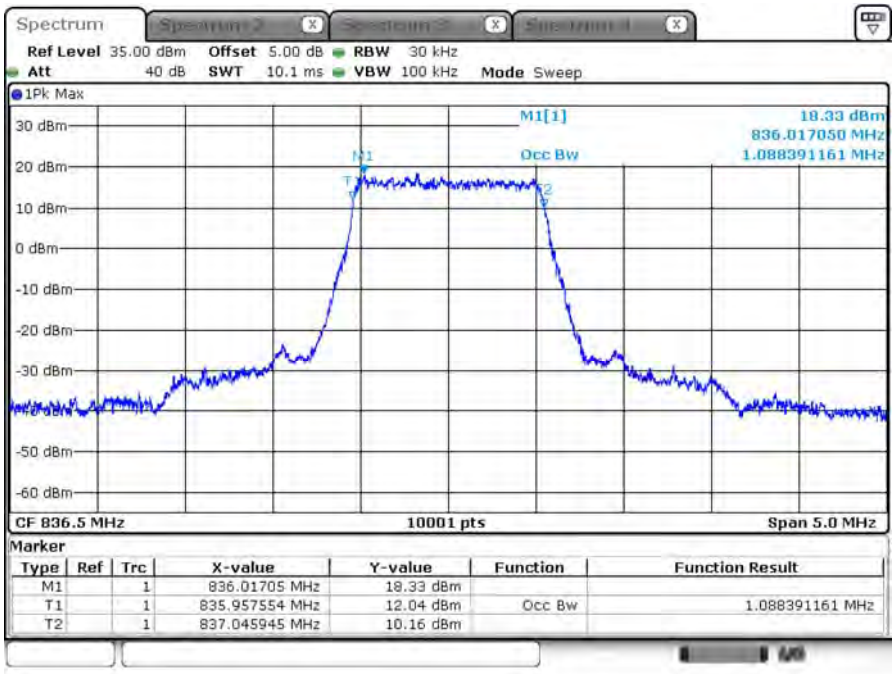
99% BW_CH20525_1.4M__QPSK_6RB0



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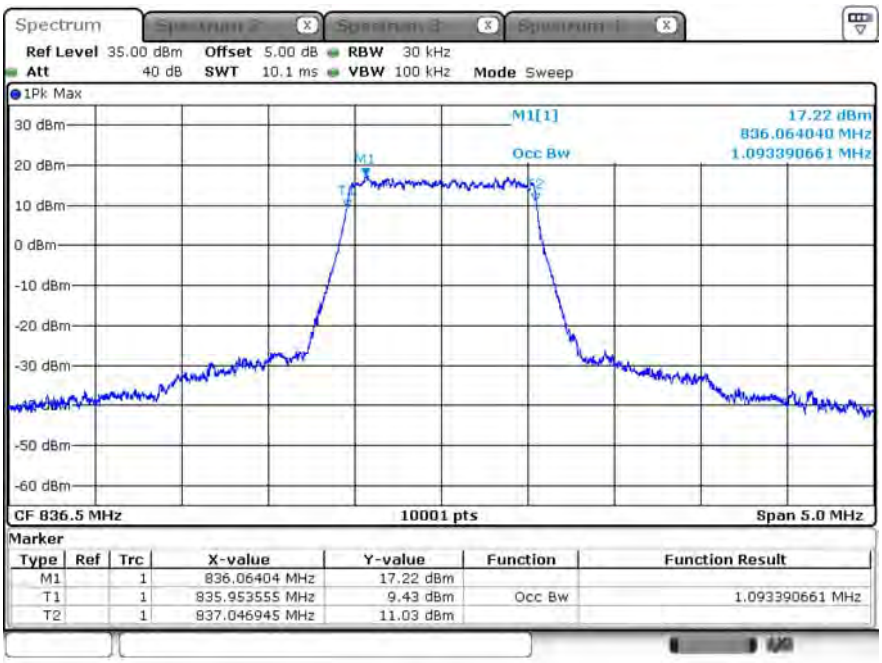
99% BW_CH20525_1.4M_16-QAM_6RB0



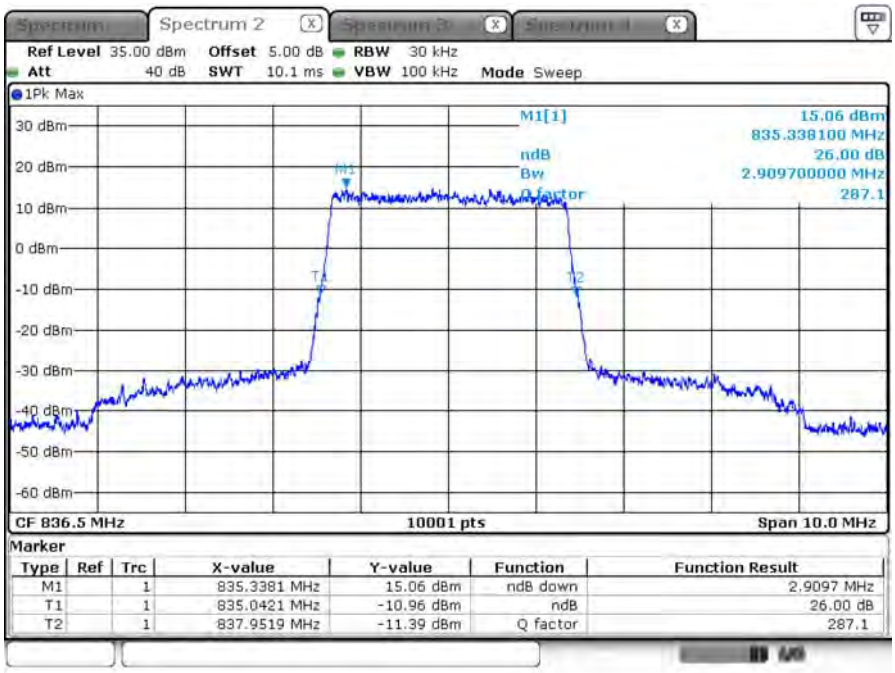
Date: 9.APR.2019 17:06:50

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

3M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	2.909	2.679	N/A

3M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	2.917	2.681	N/A

-26dB BW_CH20525_3M__QPSK_15RB0



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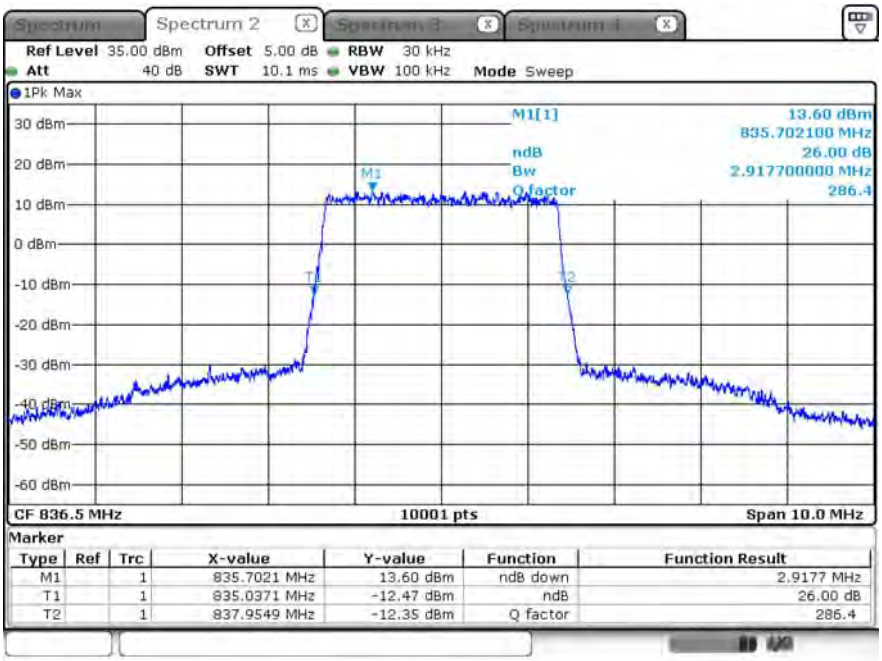
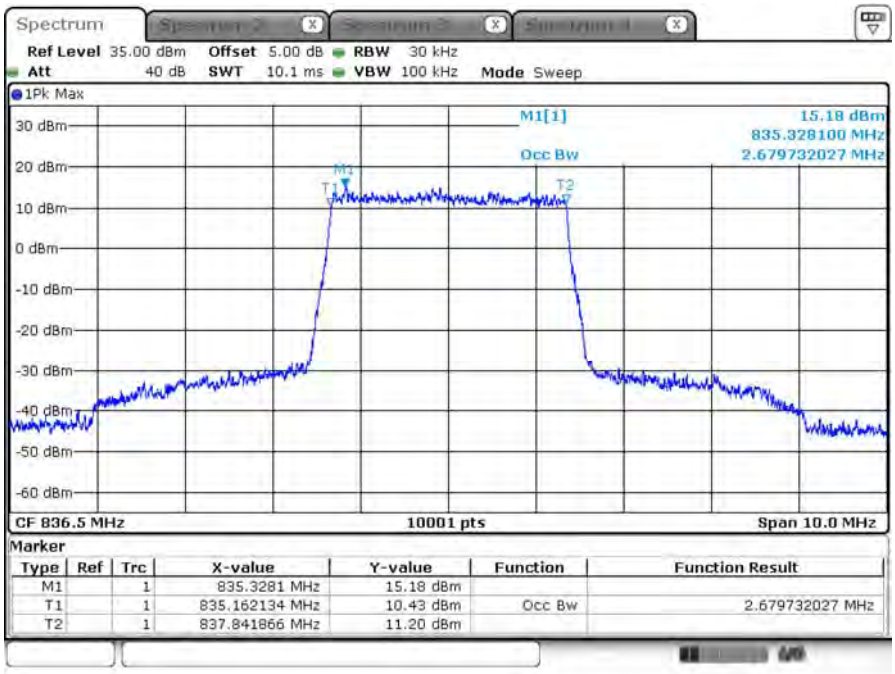
-26dB BW_CH20525_3M_16-QAM_15RB0



Date: 9.APR.2019 17:27:05

99% BW_CH20525_3M__QPSK_15RB0



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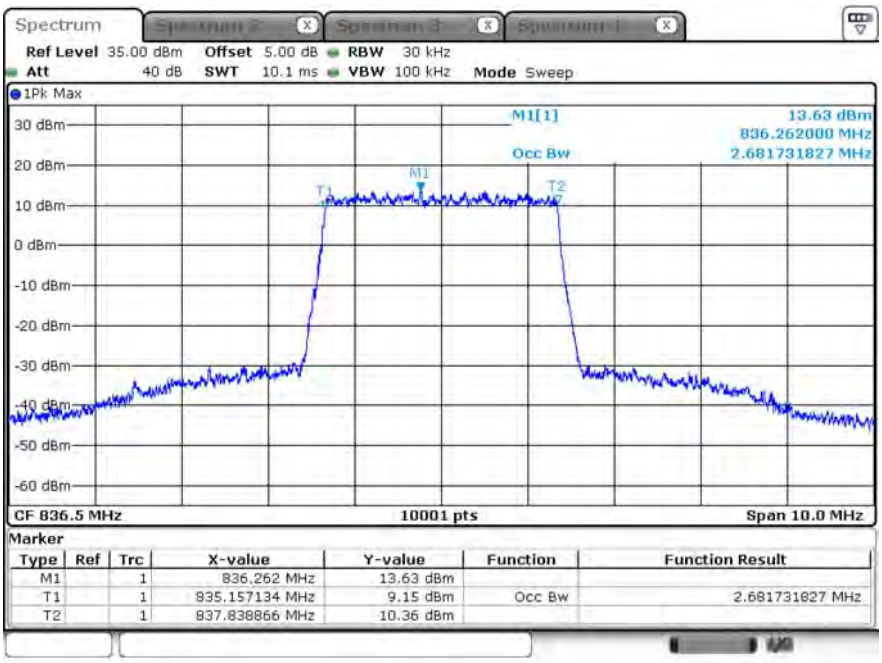
99% BW_CH20525_3M_16-QAM_15RB0



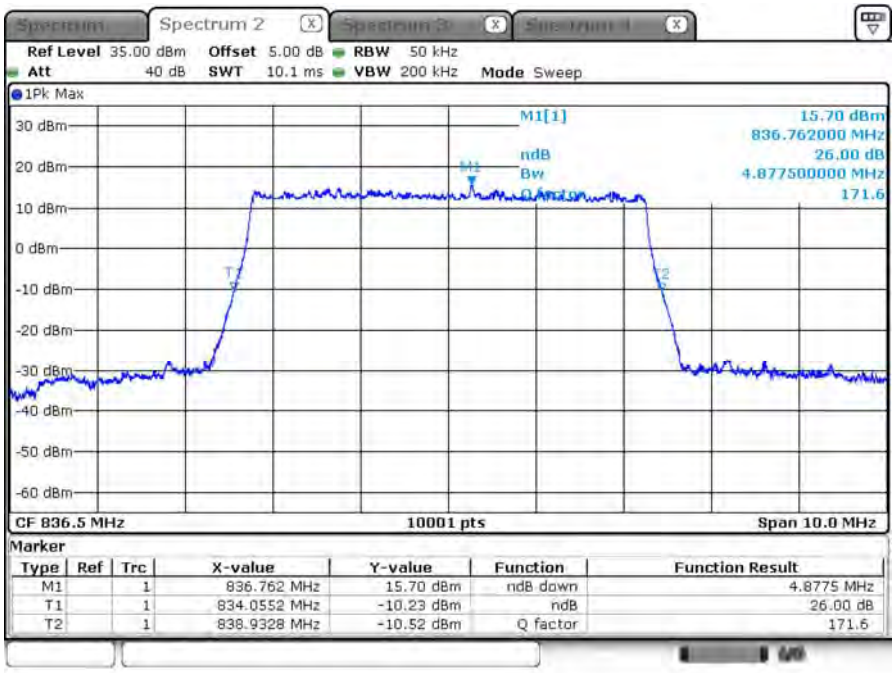
Date: 9.APR.2019 17:26:42

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	4.877	4.478	N/A

5M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	4.837	4.464	N/A

-26dB BW_CH20525_5M__QPSK_25RB0



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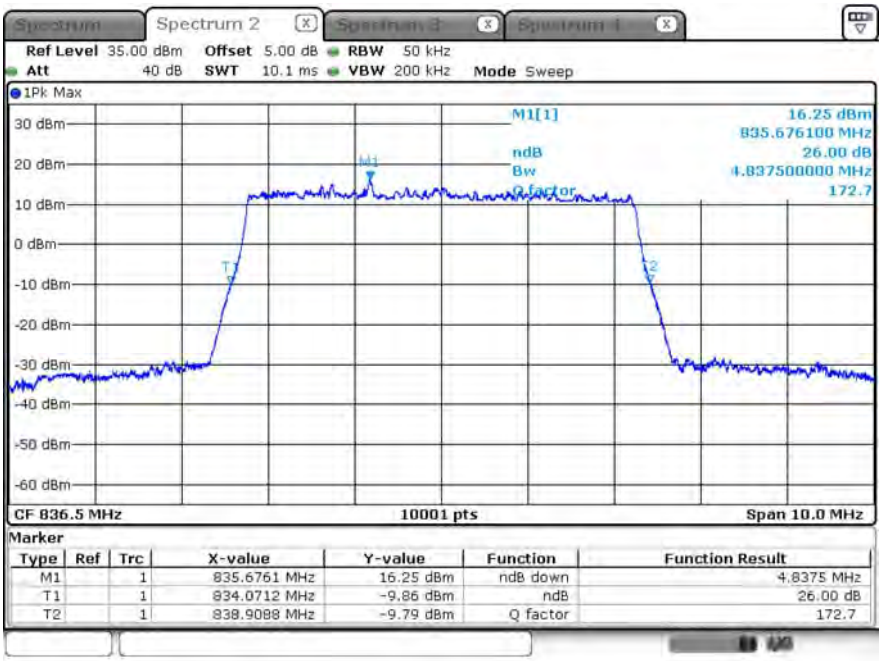
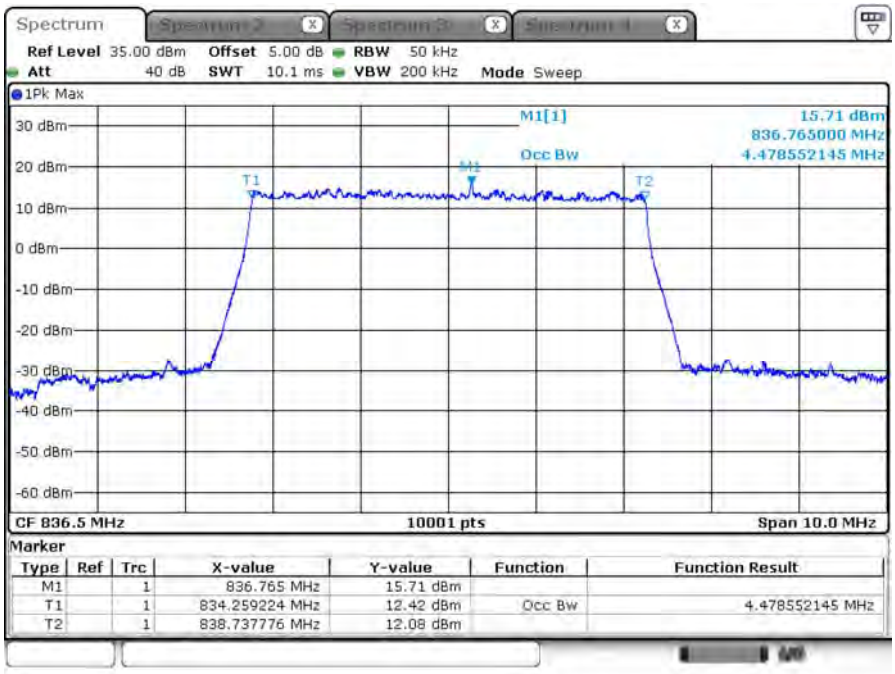
-26dB BW_CH20525_5M_16-QAM_25RB0



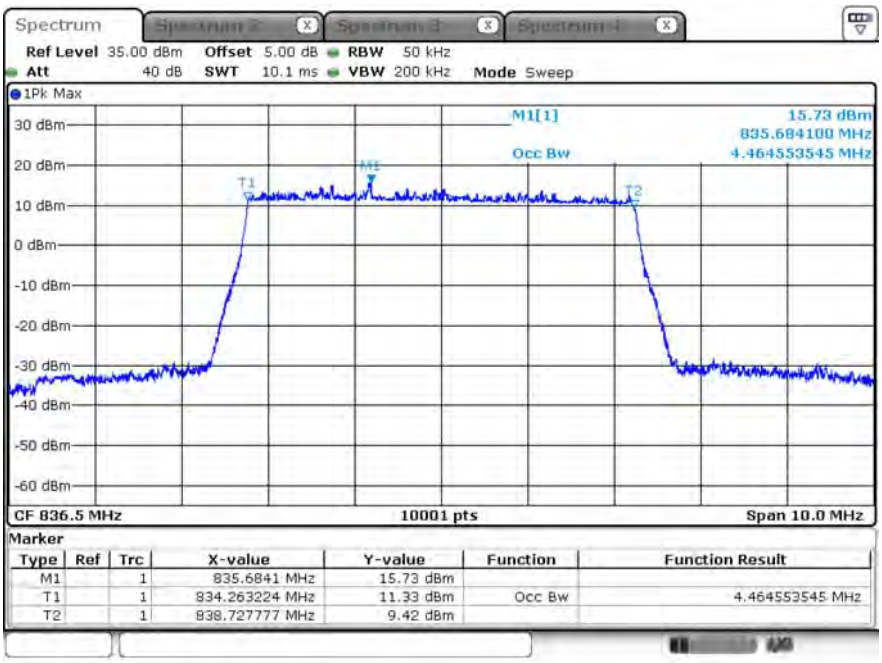
Date: 9.APR.2019 17:38:45

99% BW_CH20525_5M__QPSK_25RB0



Date: 9.APR.2019 17:37:01

99% BW_CH20525_5M_16-QAM_25RB0



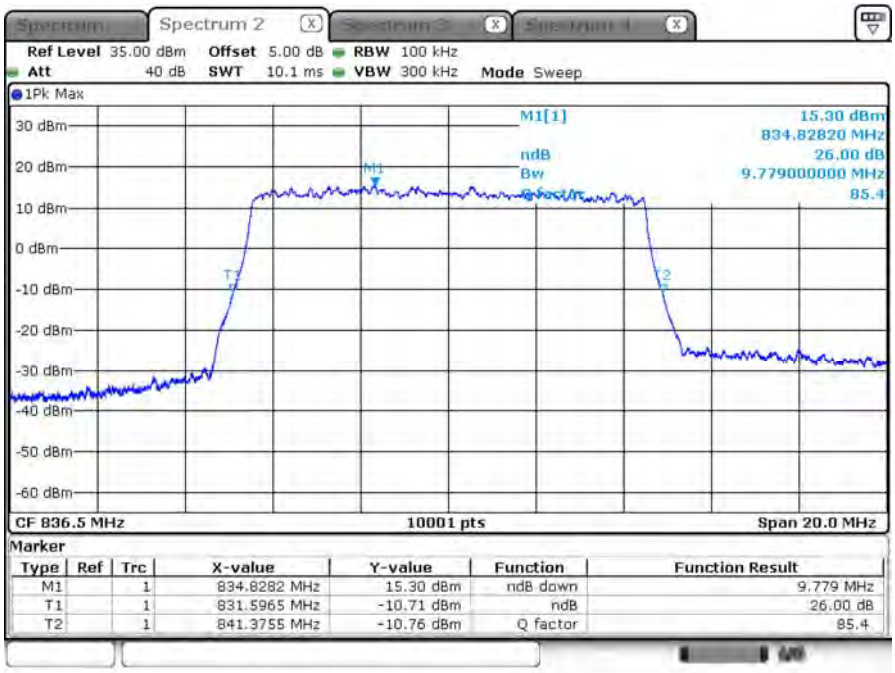
Date: 9.APR.2019 17:37:44

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

10M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	9.779	8.919	N/A

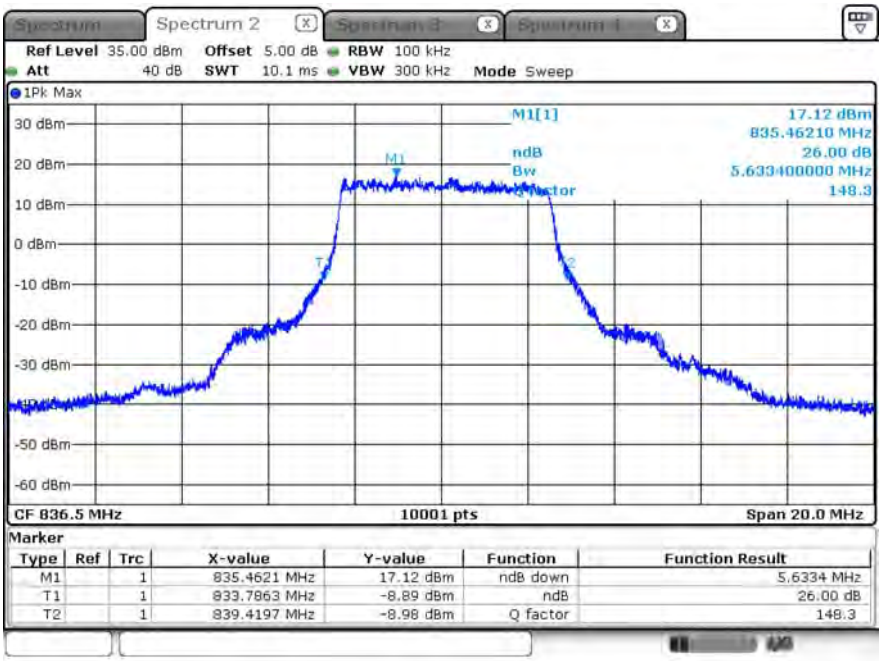
10M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	5.633	4.897	N/A

-26dB BW_CH20525_10M__QPSK_50RB0



Date: 9.APR.2019 17:53:51

-26dB BW_CH20525_10M_16-QAM_27RB12



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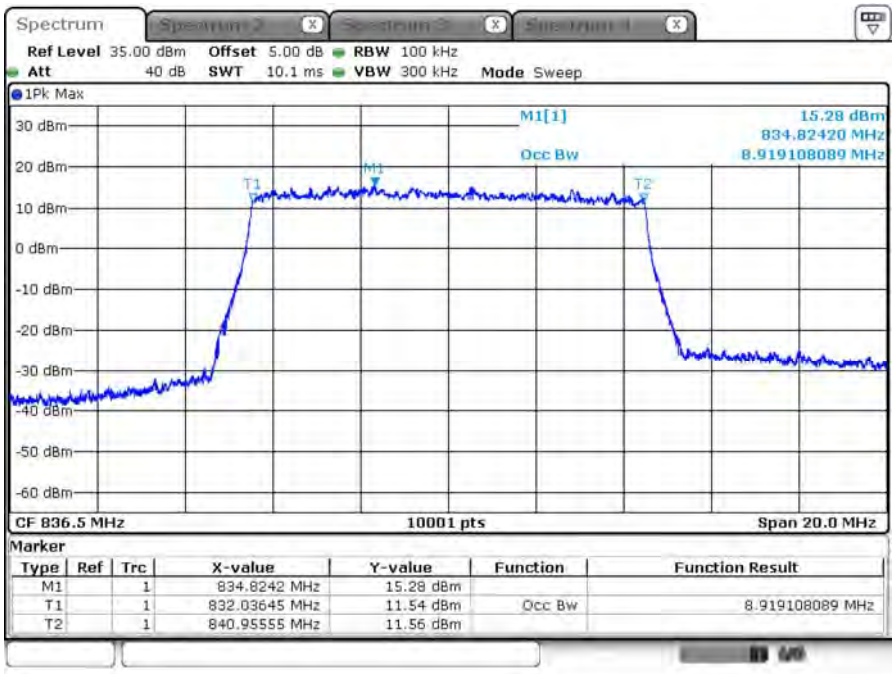
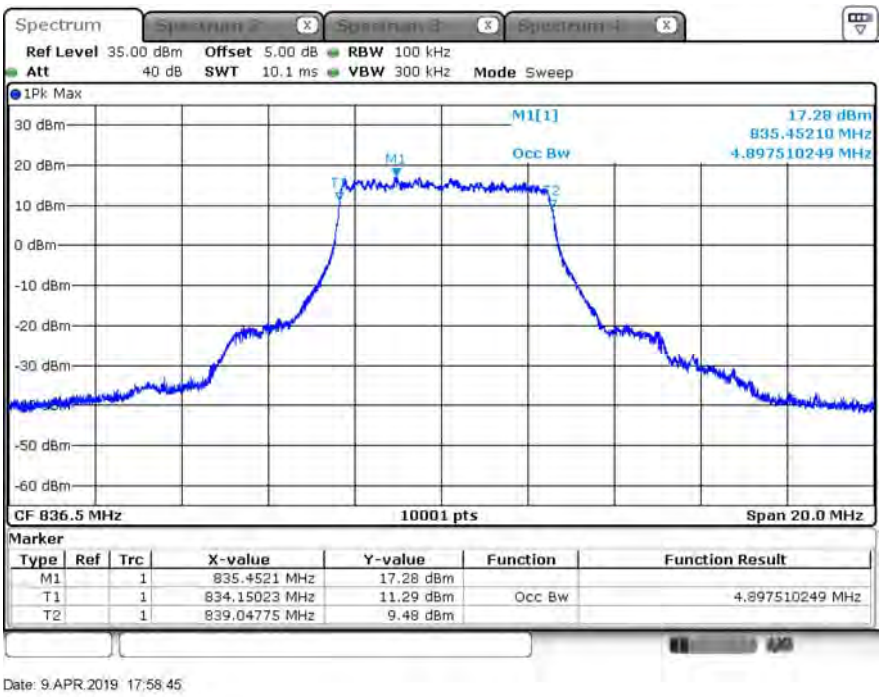
99% BW_CH20525_10M__QPSK_50RB0



99% BW_CH20525_10M_16-QAM_27RB12

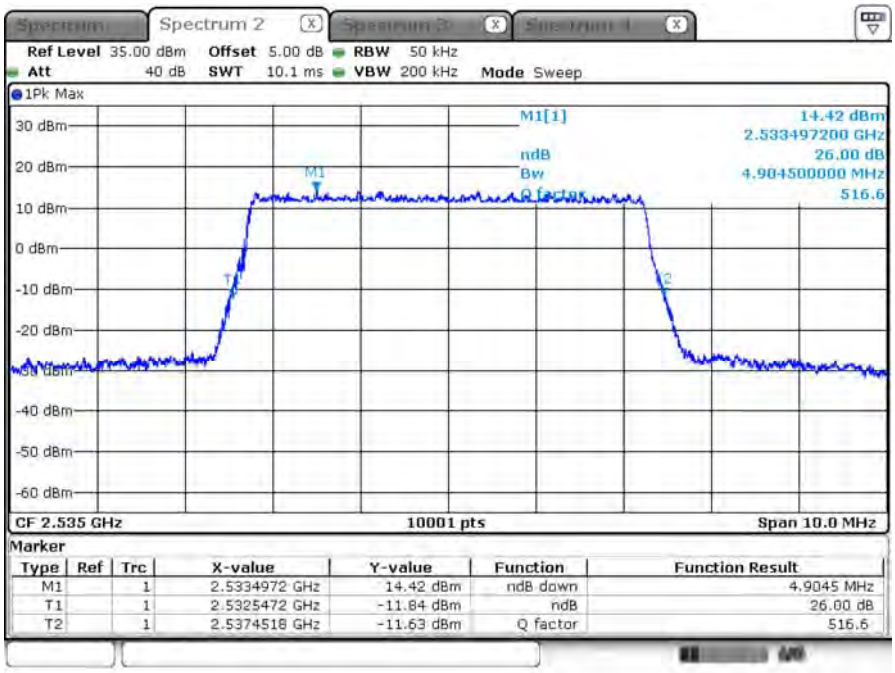


Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	4.904	4.488	N/A

5M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	4.894	4.478	N/A

-26dB BW_CH21100_5M__QPSK_25RB0



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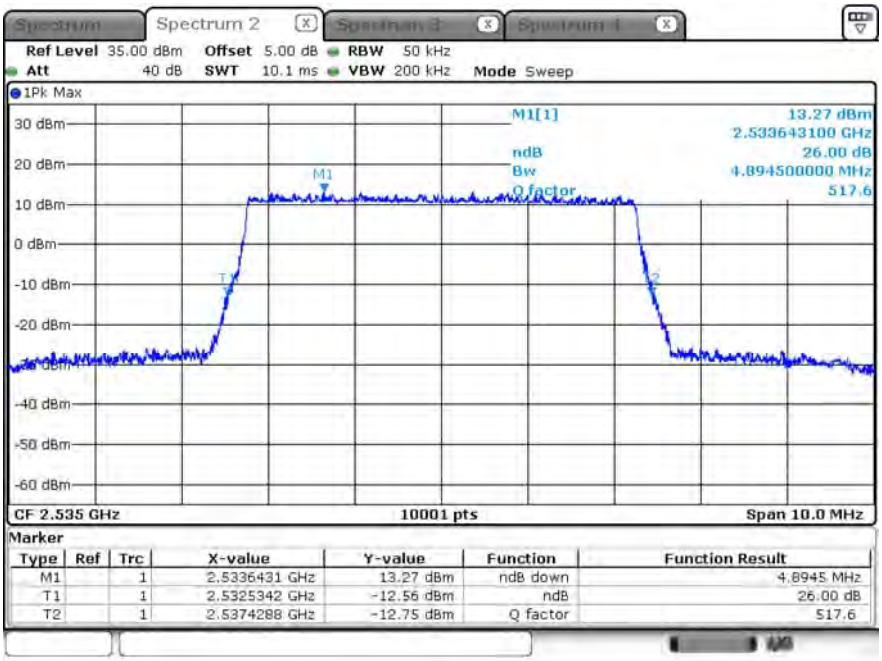
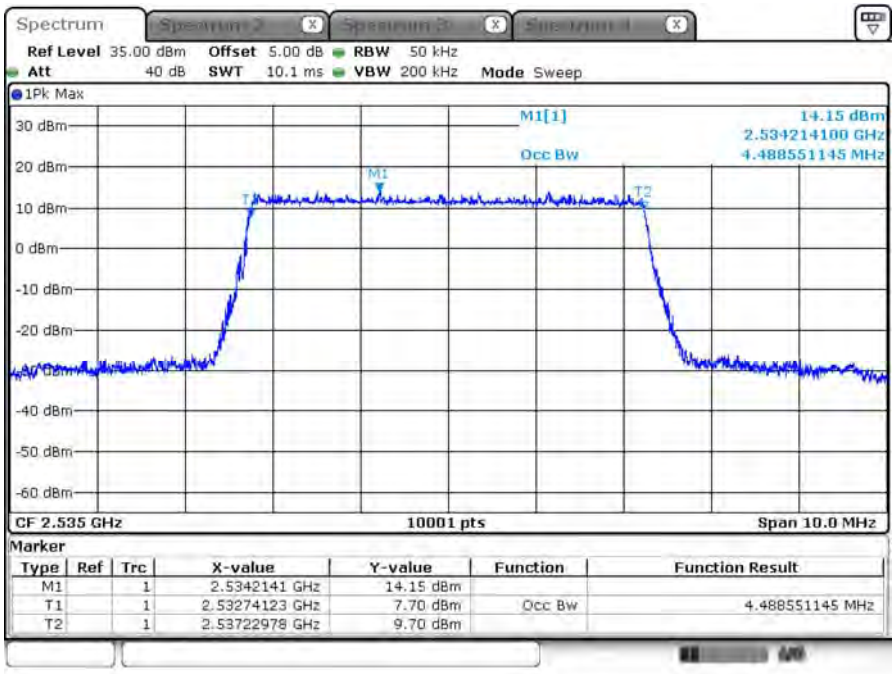
-26dB BW_CH21100_5M_16-QAM_25RB0

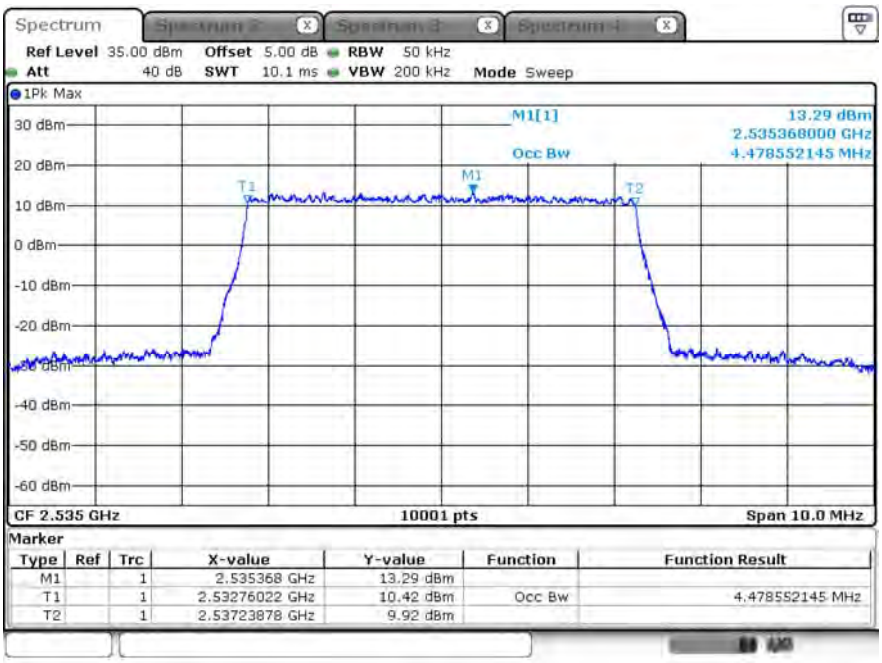


Date: 9.APR.2019 18:19:50

99% BW_CH21100_5M__QPSK_25RB0



99% BW_CH21100_5M_16-QAM_25RB0

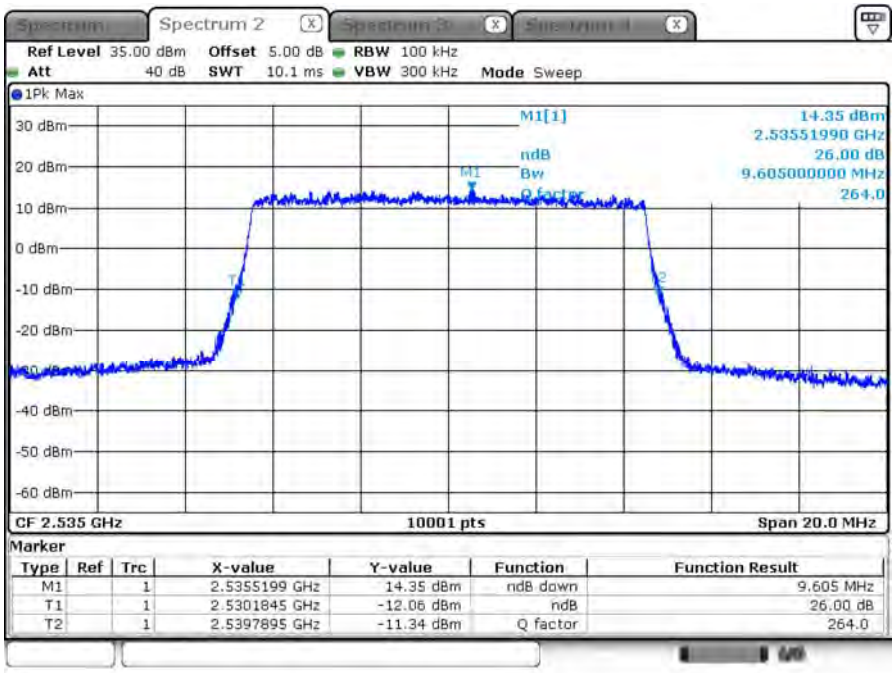


Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

10M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	9.605	8.927	N/A

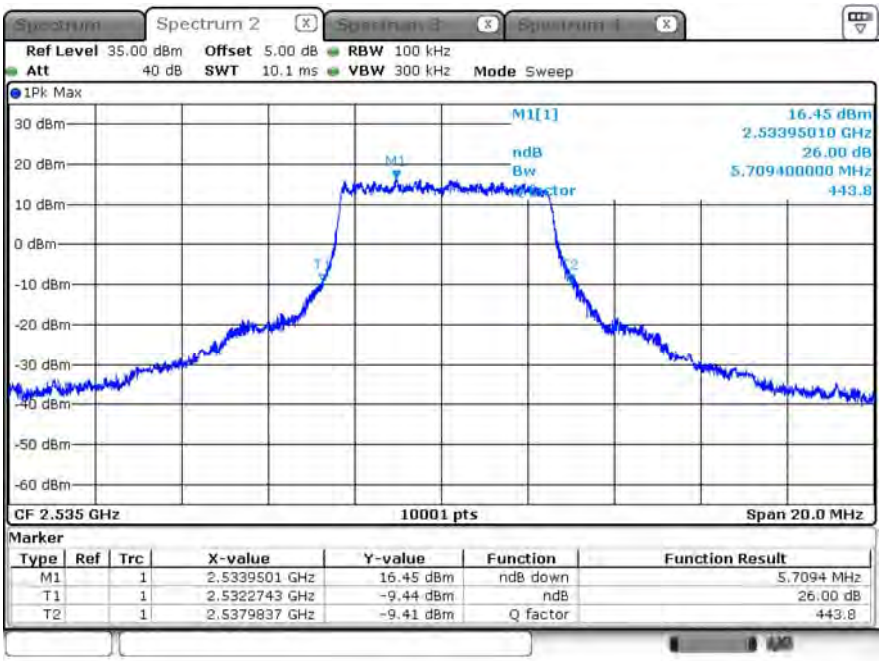
10M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	5.709	4.883	N/A

-26dB BW_CH21100_10M__QPSK_50RB0



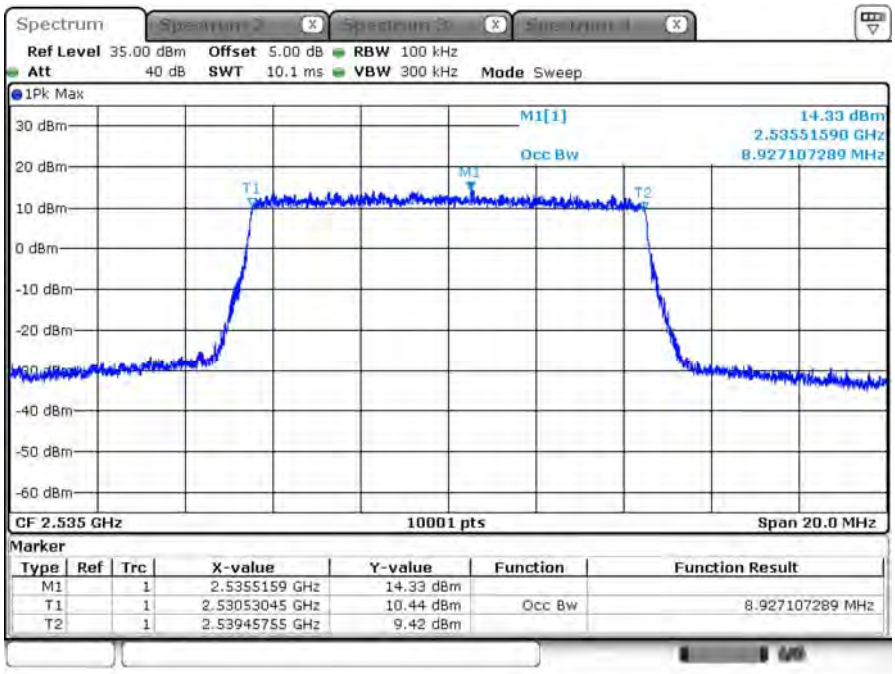
Date: 9.APR.2019 18:25:34

-26dB BW_CH21100_10M_16-QAM_27RB12



Date: 9.APR.2019 18:23:27

99% BW_CH21100_10M__QPSK_50RB0



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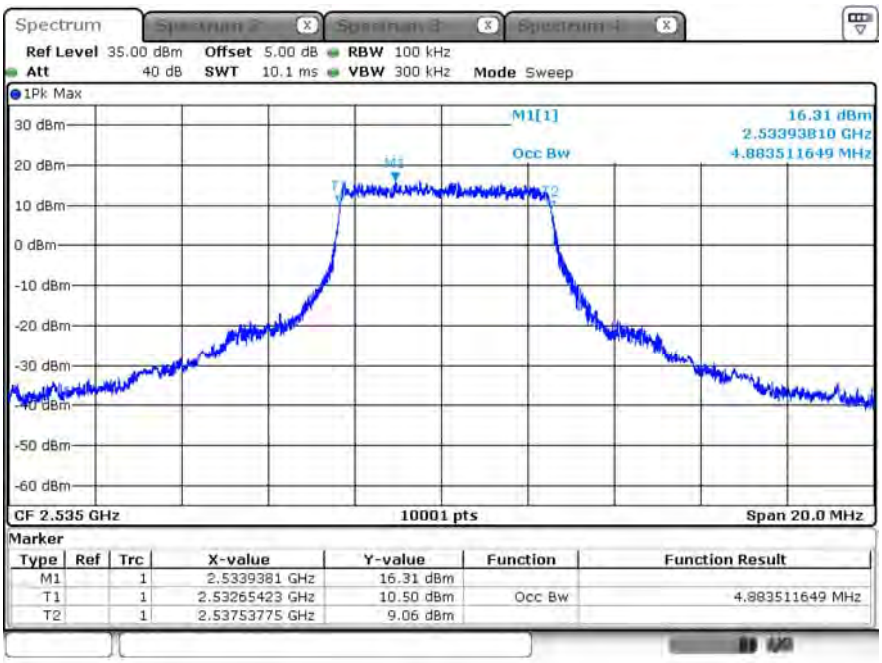
99% BW_CH21100_10M_16-QAM_27RB12



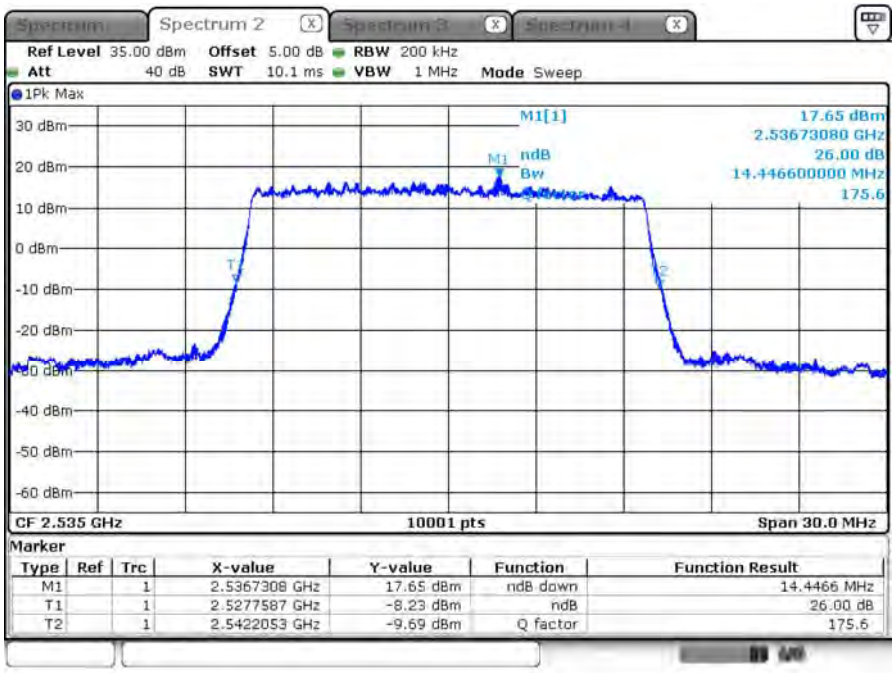
Date: 9.APR.2019 18:22:24

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

15M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	14.446	13.396	N/A

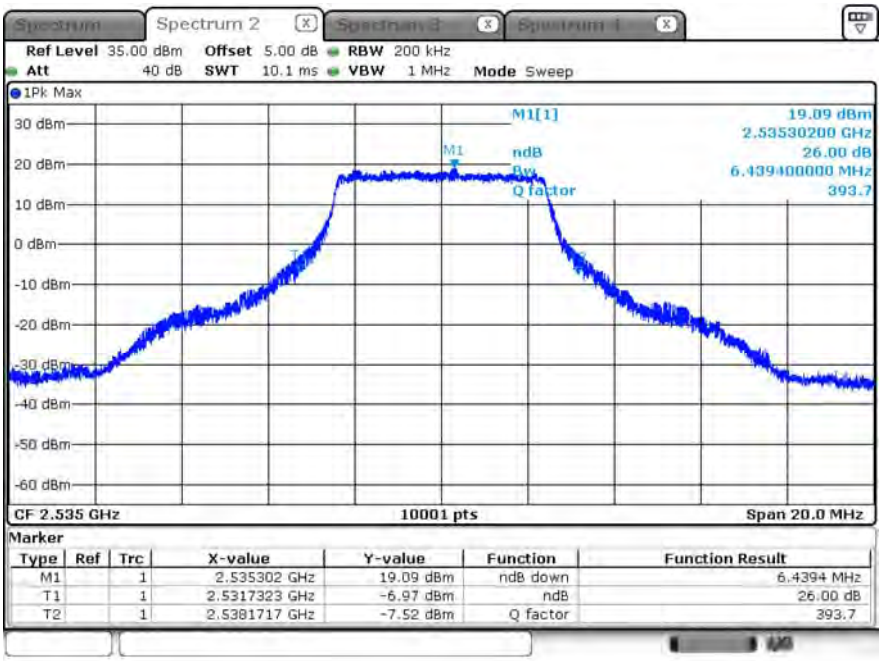
15M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	6.439	5.095	N/A

-26dB BW_CH21100_15M__QPSK_75RB0



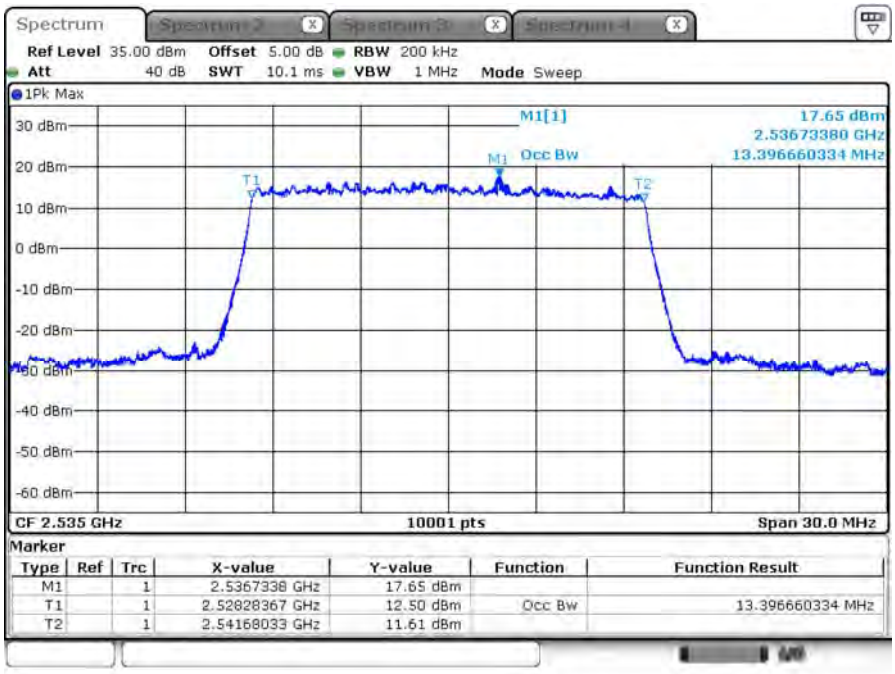
Date: 9.APR.2019 18:30:15

-26dB BW_CH21100_15M_16-QAM_27RB24



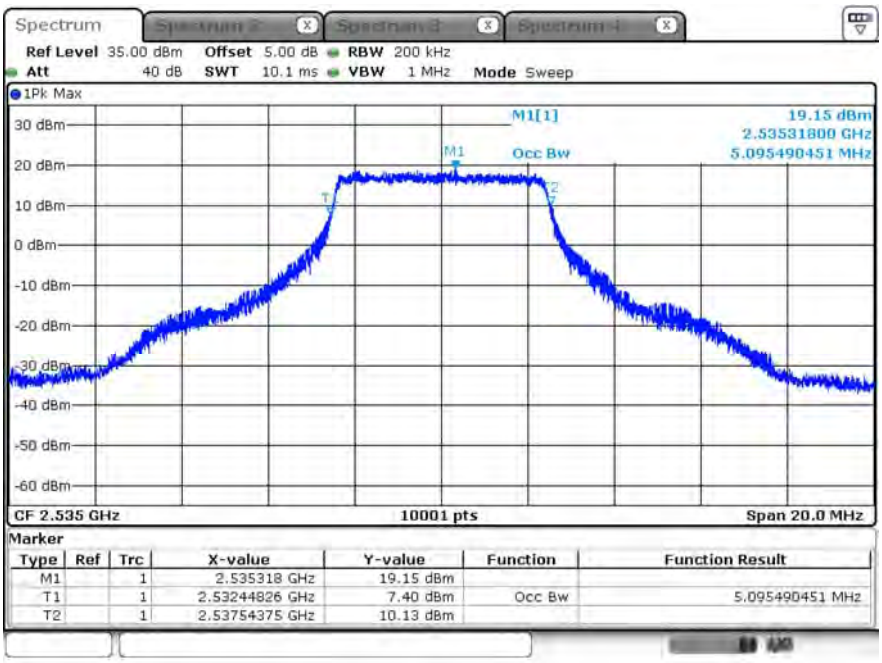
Date: 9.APR.2019 18:36:50

99% BW_CH21100_15M__QPSK_75RB0



Date: 9.APR.2019 18:28:52

99% BW_CH21100_15M_16-QAM_27RB24



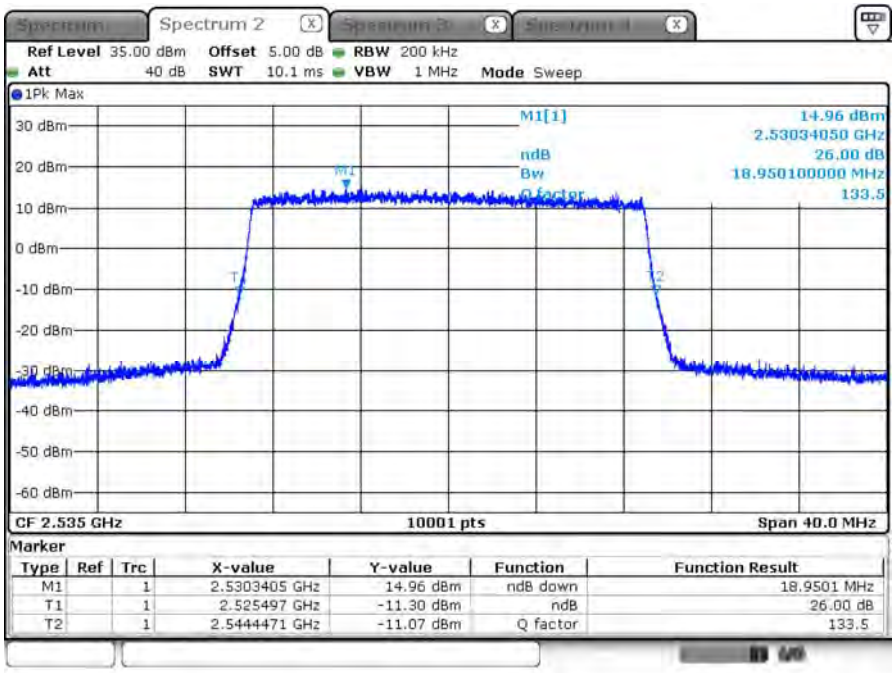
Date: 9.APR.2019 18:36:04

Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

20M_QPSK			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	18.950	17.826	N/A

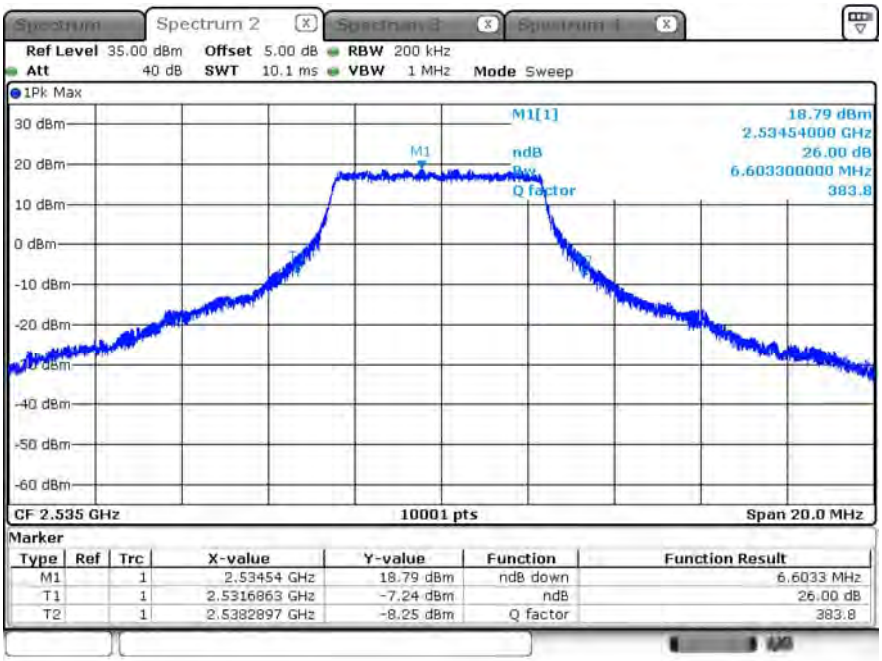
20M_16-QAM			
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	6.603	5.183	N/A

-26dB BW_CH21100_20M__QPSK_100RB0



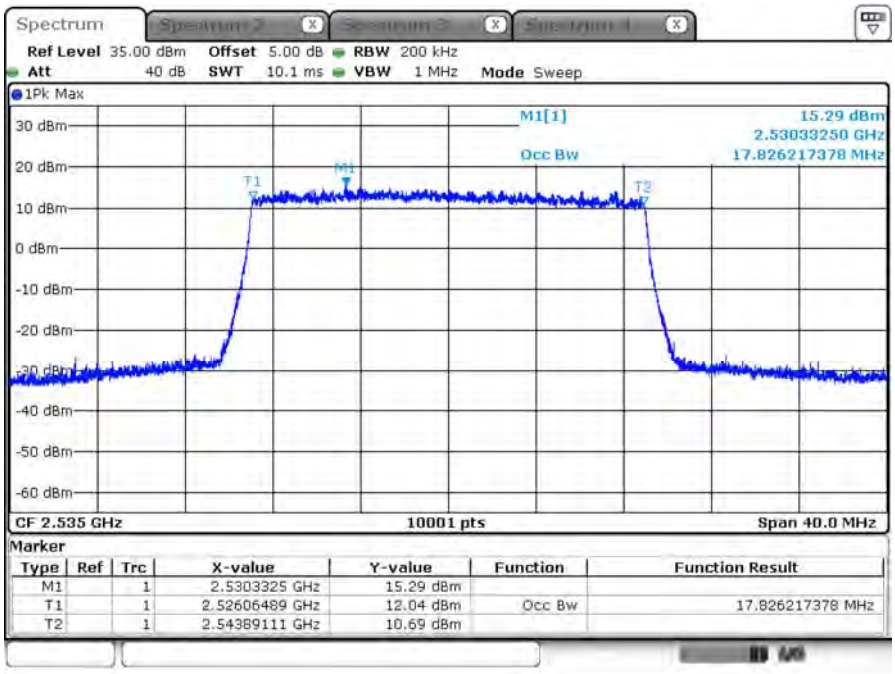
Date: 9.APR.2019 18:41:44

-26dB BW_CH21100_20M_16-QAM_27RB36

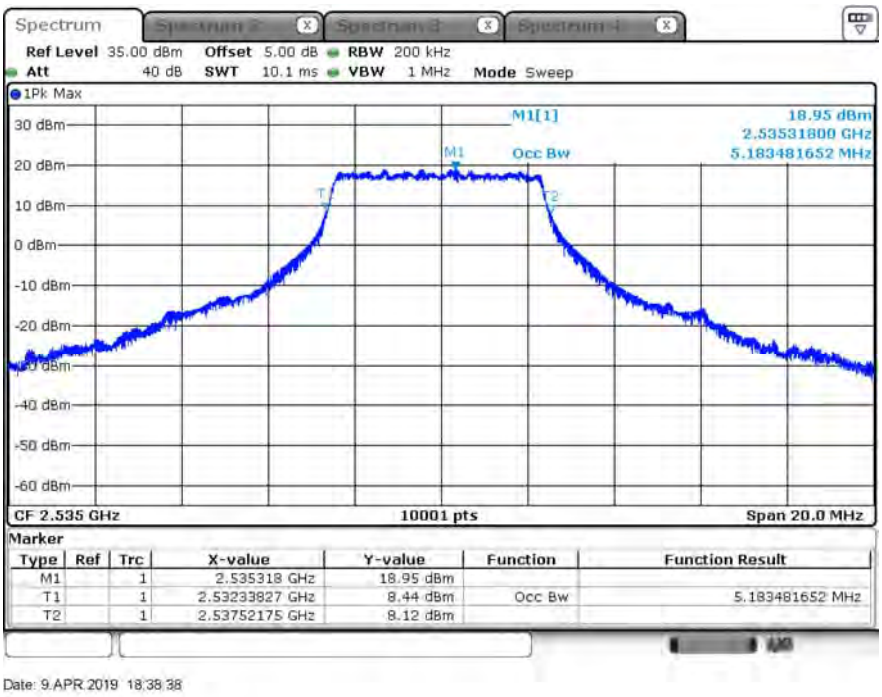


Date: 9.APR.2019 18:39:22

99% BW_CH21100_20M__QPSK_100RB0

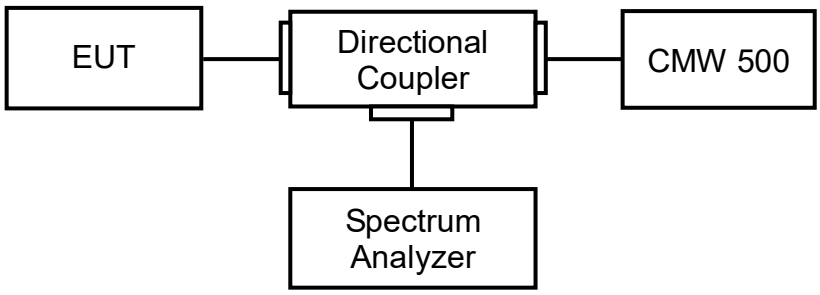


99% BW_CH21100_20M_16-QAM_27RB36



5. Peak To Average Ratio

5.1. Test Setup



5.2. Test Procedure

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth.
2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Record the maximum PAPR level associated with a probability of 0.1 %.

5.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause5.7.2
ANSI C63.26: 2015 Sub-clause 5.2.3.4

5.4. Limit

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13dB.

5.5. Test Result

Product	Module		
Test Item	Peak To Average Ratio		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/10	Test Site	SR10-H

B2_CH18607_1.4M_1RB2_QPSK

B2_CH18900_1.4M_1RB2_QPSK

B2_CH19193_1.4M_1RB2_QPSK

Date: 10.APR.2019 14:42:02

B2_CH18607_1.4M_1RB2_16-QAM

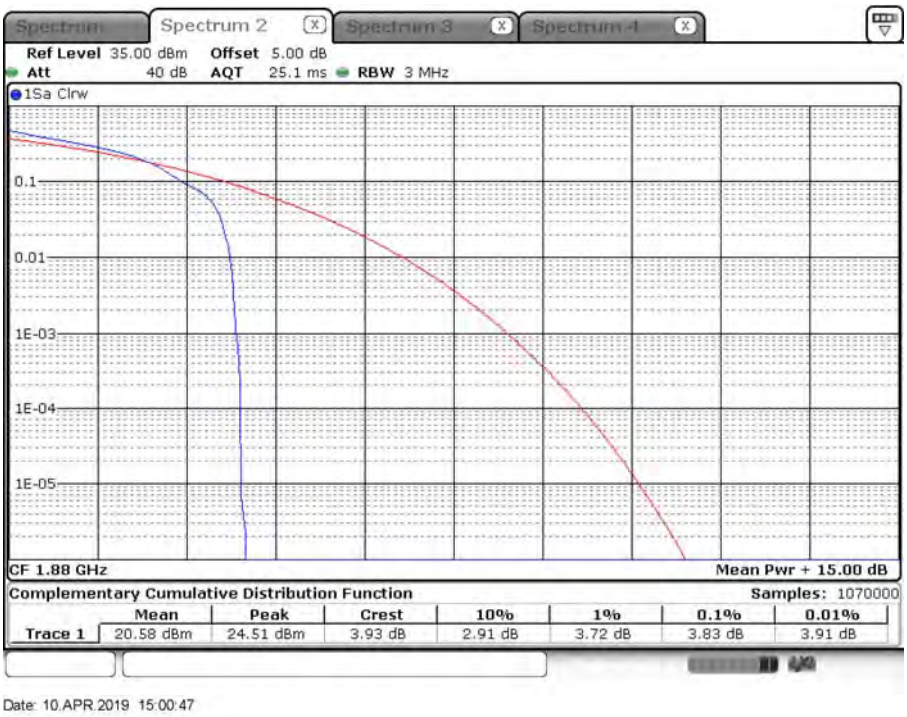
Date: 10.APR.2019 12:35:26

B2_CH18900_1.4M_1RB2_16-QAM_

B2_CH19193_1.4M_1RB2_16-QAM

B2_CH18615_3M_1RB7_QPSK

B2_CH18900_3M_1RB7_QPSK

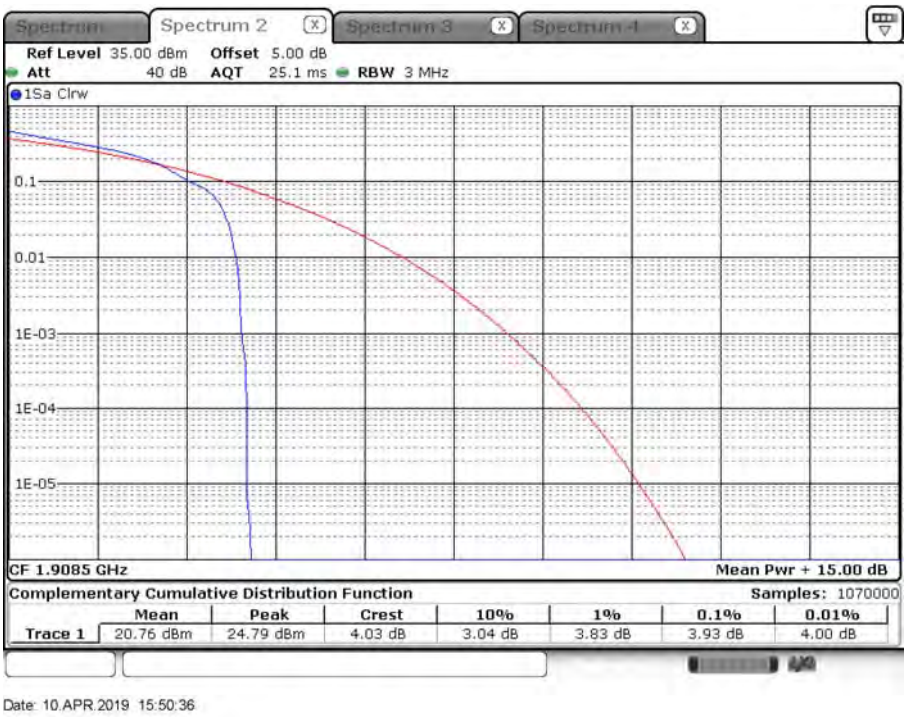


B2_CH19185_3M_1RB7_QPSK

B2_CH18615_3M_1RB7_16-QAM

B2_CH18900_3M_1RB7_16-QAM

B2_CH19185_3M_1RB7_16-QAM



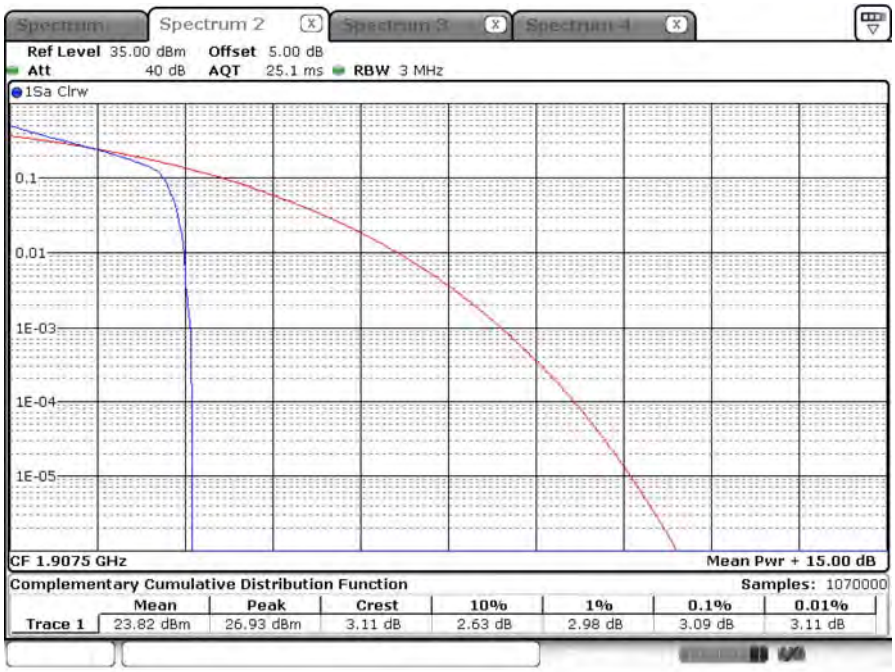
B2_CH18625_5M_1RB12_QPSK

Date: 11.APR.2019 12:46:59

B2_CH18900_5M_1RB12_QPSK

Date: 11.APR.2019 12:49:16

B2_CH19175_5M_1RB12_QPSK



Date: 11.APR.2019 12:49:52

B2_CH18625_5M_1RB12_16-QAM

Date: 11.APR.2019 12:47:24

B2_CH18900_5M_1RB12_16-QAM

Date: 11.APR.2019 12:49:00

B2_CH19175_5M_1RB12_16-QAM

Date: 11.APR.2019 12:50:13

B2_CH18650_10M_1RB24_QPSK

Date: 11.APR.2019 14:34:15

B2_CH18900_10M_1RB24_QPSK

Date: 11.APR.2019 14:41:22

B2_CH19150_10M_1RB24_QPSK

Date: 11.APR.2019 15:18:39

B2_CH18650_10M_1RB24_16-QAM

Date: 11.APR.2019 14:29:45

B2_CH18900_10M_1RB24_16-QAM

Date: 11.APR.2019 15:17:11

B2_CH19150_10M_1RB24_16-QAM

Date: 11.APR.2019 15:18:13

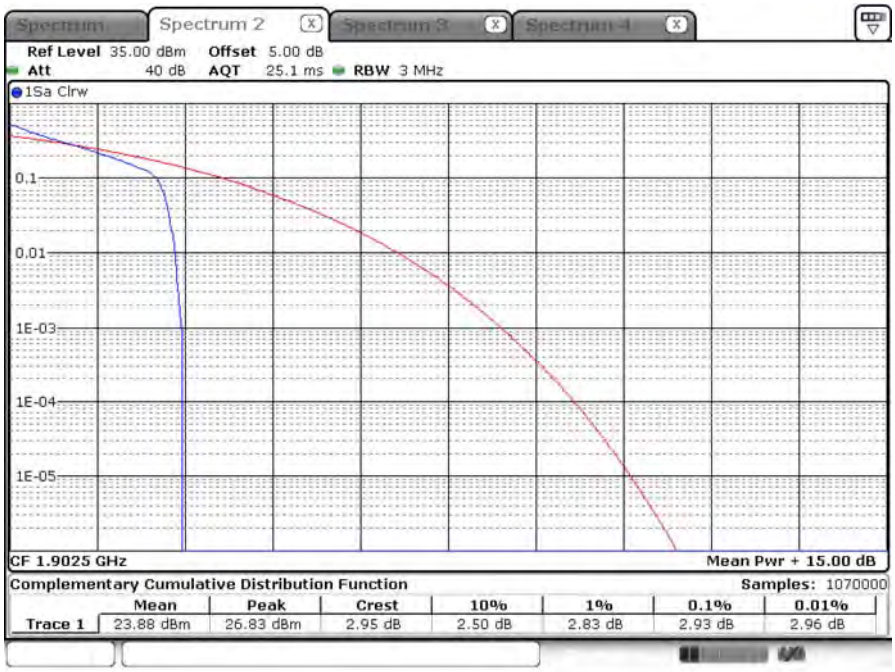
B2_CH18675_15M_1RB37_QPSK

Date: 11.APR.2019 16:09:24

B2_CH18900_15M_1RB37_QPSK

Date: 11.APR.2019 16:12:54

B2_CH19125_15M_1RB37_QPSK



Date: 11.APR.2019 16:14:58

B2_CH18675_15M_1RB37_16-QAM

Date: 11.APR.2019 16:10:23

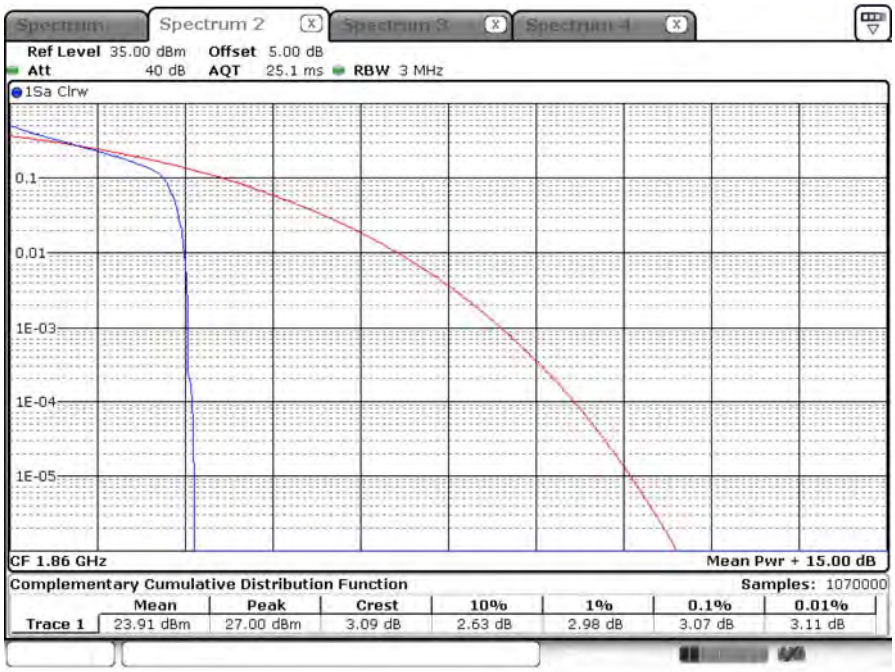
B2_CH18900_15M_1RB37_16-QAM

Date: 11.APR.2019 16:12:01

B2_CH19125_15M_1RB37_16-QAM

Date: 11.APR.2019 16:18:15

B2_CH18700_20M_1RB49_QPSK



Date: 11.APR.2019 16:37:29

B2_CH18900_20M_1RB49_QPSK

Date: 11.APR.2019 16:52:45

B2_CH19100_20M_1RB49_QPSK

Date: 11.APR.2019 17:12:39

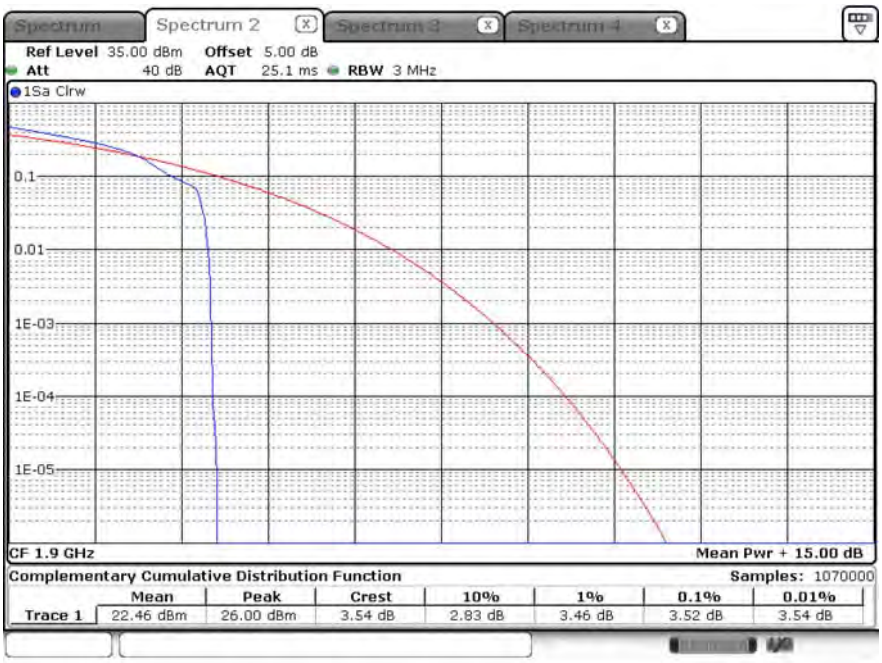
B2_CH18700_20M_1RB49_16-QAM

Date: 11.APR.2019 16:36:42

B2_CH18900_20M_1RB49_16-QAM

Date: 11.APR.2019 17:00:53

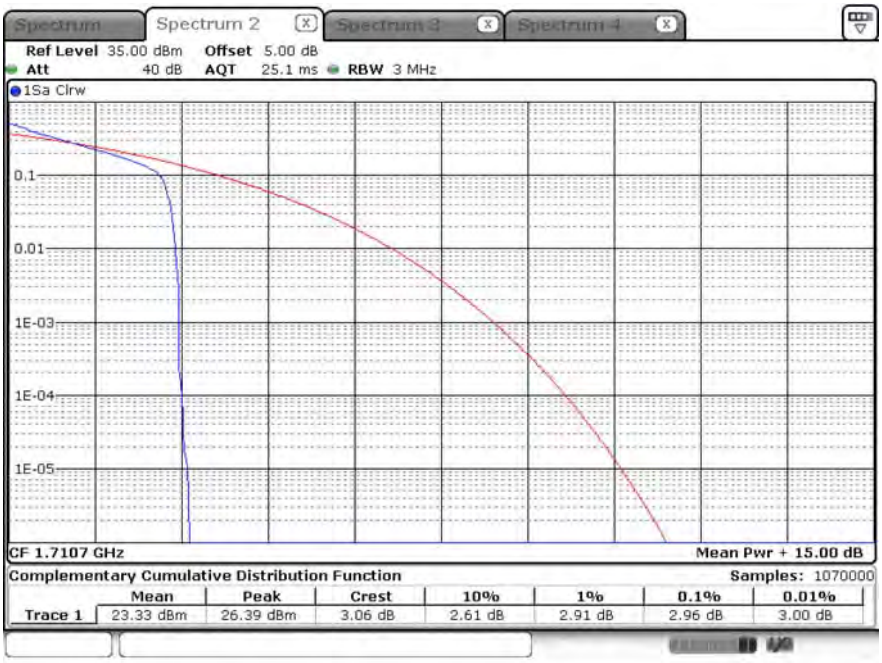
B2_CH19100_20M_1RB49_16-QAM



Date: 11.APR.2019 17:06:42

Product	Module		
Test Item	Peak To Average Ratio		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/11	Test Site	SR10-H

B4_CH19957_1.4M_1RB2_QPSK



Date: 11.APR.2019 11:40:12

B4_CH20175_1.4M_1RB2_QPSK

Date: 11.APR.2019 11:58:27

B4_CH20393_1.4M_1RB2_QPSK

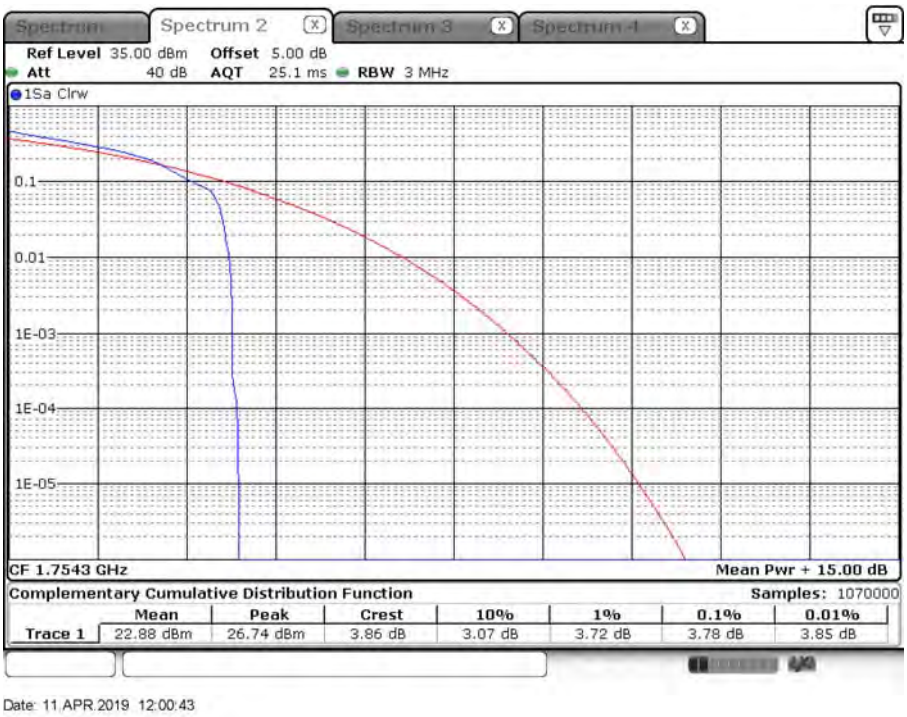
Date: 11.APR.2019 12:00:09

B4_CH19957_1.4M_1RB2_16-QAM

Date: 11.APR.2019 11:45:40

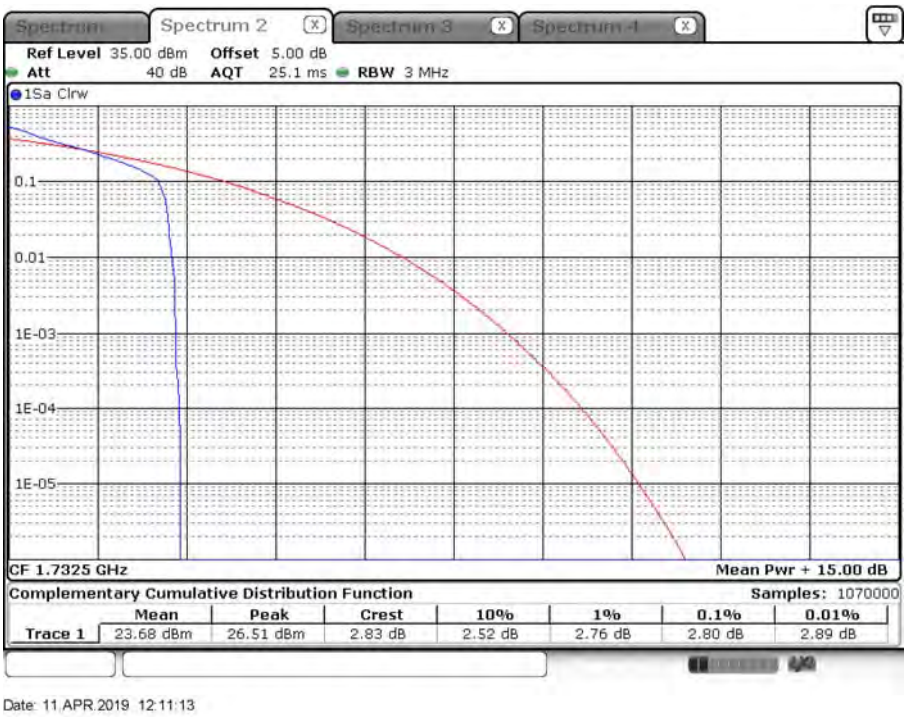
B4_CH20175_1.4M_1RB2_16-QAM

B4_CH20393_1.4M_1RB2_16-QAM

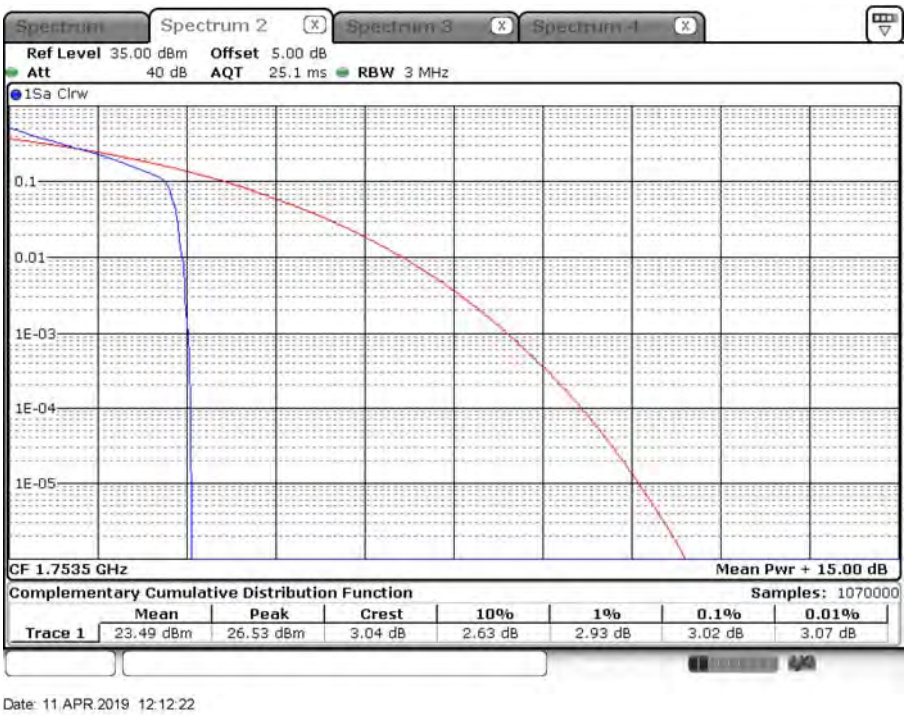


B4_CH19965_3M_1RB7_QPSK

B4_CH20175_3M_1RB7_QPSK



B4_CH20385_3M_1RB7_QPSK



Date: 11.APR.2019 12:12:22

B4_CH19965_3M_1RB7_16-QAM

Date: 11.APR.2019 12:07:02

B4_CH20175_3M_1RB7_16-QAM

Date: 11.APR.2019 12:10:03

B4_CH20385_3M_1RB7_16-QAM

Date: 11.APR.2019 12:13:15

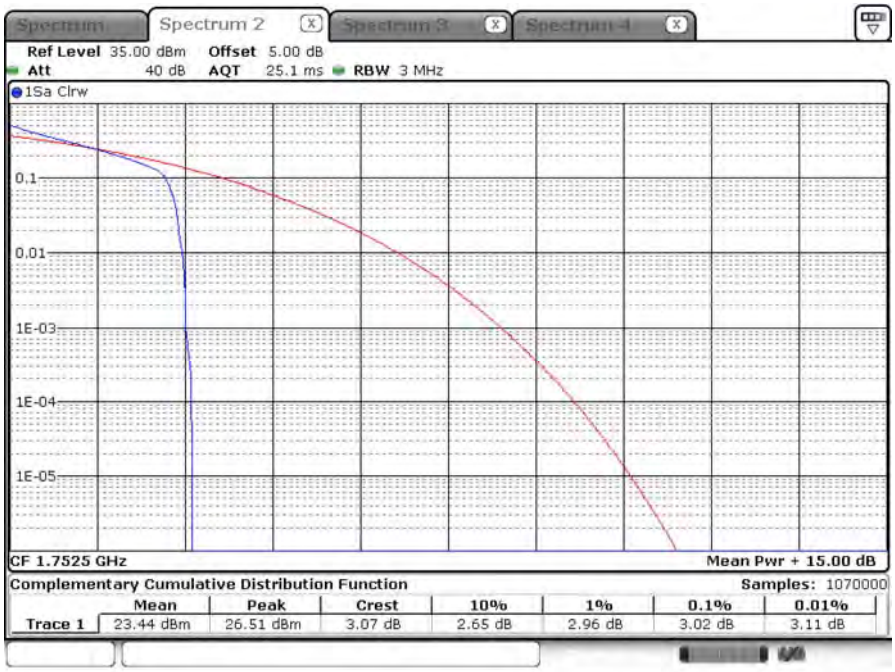
B4_CH19975_5M_1RB12_QPSK

Date: 11.APR.2019 12:19:48

B4_CH20175_5M_1RB12_QPSK

Date: 11.APR.2019 12:21:28

B4_CH20375_5M_1RB12_QPSK



Date: 11.APR.2019 12:23:50

B4_CH19975_5M_1RB12_16-QAM

Date: 11.APR.2019 12:18:42

B4_CH20175_5M_1RB12_16-QAM

Date: 11.APR.2019 12:21:58

B4_CH20375_5M_1RB12_16-QAM

Date: 11.APR.2019 12:23:31

B4_CH20000_10M_1RB24_QPSK

Date: 11.APR.2019 12:29:48

B4_CH20175_10M_1RB24_QPSK

Date: 11.APR.2019 12:32:12

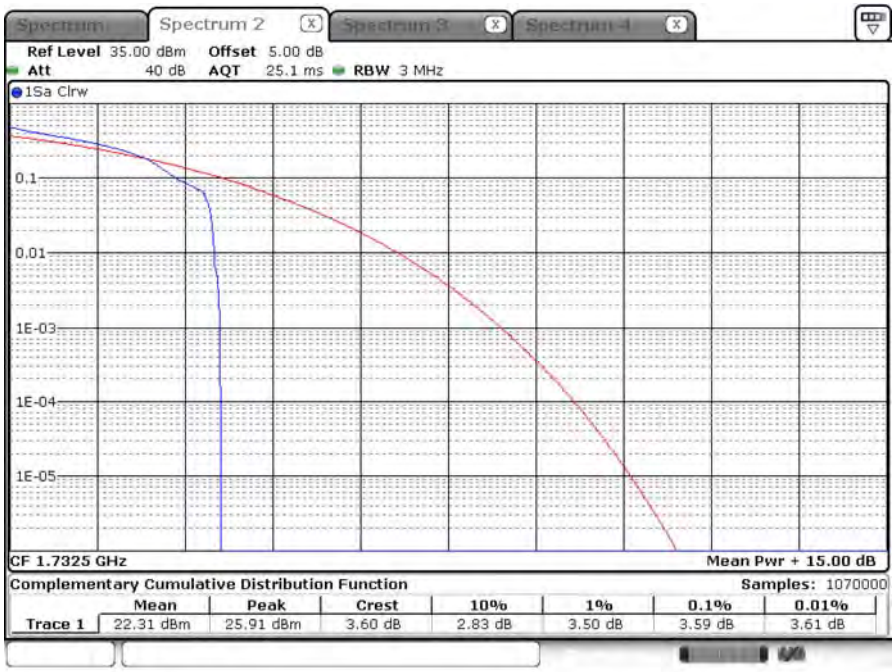
B4_CH20350_10M_1RB24_QPSK

Date: 11.APR.2019 12:34:03

B4_CH20000_10M_1RB24_16-QAM

Date: 11.APR.2019 12:30:24

B4_CH20175_10M_1RB24_16-QAM



Date: 11.APR.2019 12:31:44

B4_CH20350_10M_1RB24_16-QAM

Date: 11.APR.2019 12:34:52

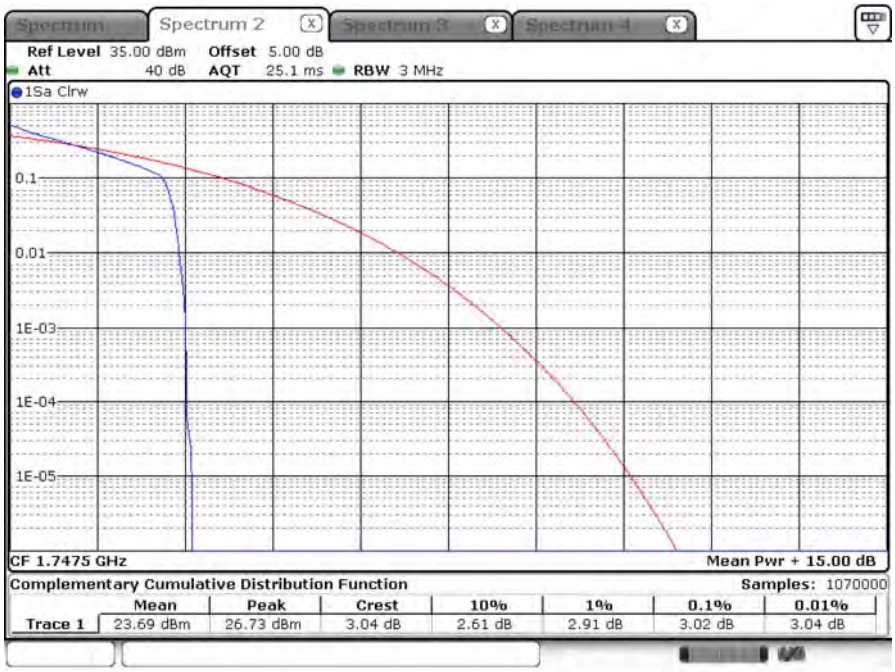
B4_CH20025_15M_1RB37_QPSK

Date: 11.APR.2019 12:40:49

B4_CH20175_15M_1RB37_QPSK

Date: 11.APR.2019 12:42:08

B4_CH20325_15M_1RB37_QPSK



Date: 11.APR.2019 12:44:34

B4_CH20025_15M_1RB37_16-QAM

Date: 11.APR.2019 12:40:26

B4_CH20175_15M_1RB37_16-QAM

Date: 11.APR.2019 12:42:28

B4_CH20325_15M_1RB37_16-QAM

Date: 11.APR.2019 12:44:10

B4_CH20050_20M_1RB49_QPSK

Date: 11.APR.2019 10:42:30

B4_CH20175_20M_1RB49_QPSK

Date: 11.APR.2019 10:57:56

B4_CH20300_20M_1RB49_QPSK

Date: 11.APR.2019 11:15:18

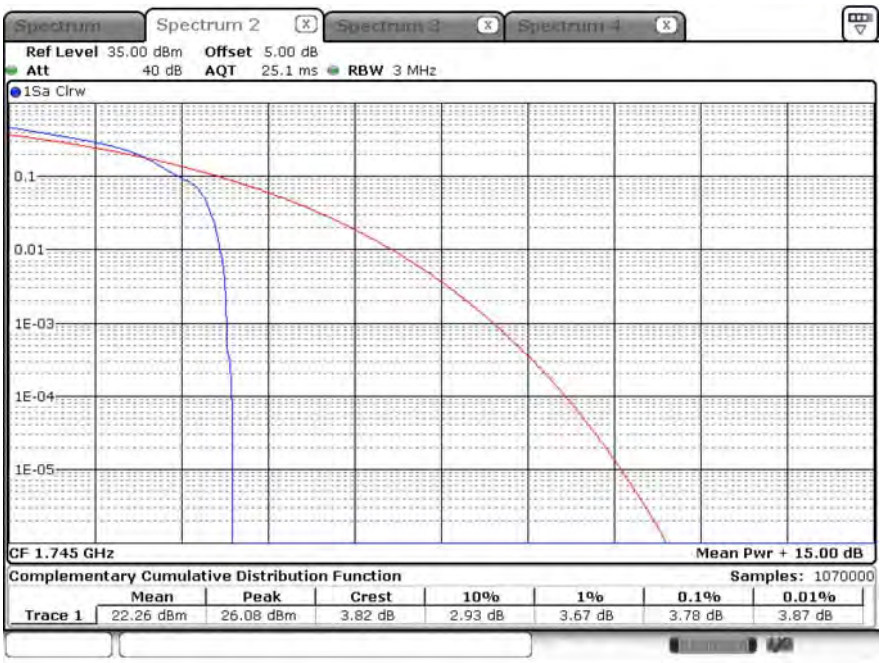
B4_CH20050_20M_1RB49_16-QAM

Date: 11.APR.2019 10:47:50

B4_CH20175_20M_1RB49_16-QAM

Date: 11.APR.2019 10:57:18

B4_CH20300_20M_1RB49_16-QAM



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