

FCC Test Report

Product Name : Module
Trade Name : 
Model No. : LE910C1-LA, LE910C4-LA
FCC ID : RI7LE910CXLA

Applicant : Telit Communications S.p.A.

Address : Viale Stazione di Prosecco, 5/B, 34010 Sgonico TRIESTE – ITALY

Date of Receipt : Jul. 15, 2019
Issued Date : Jul. 25, 2019
Report No. : 1970268R-HPUSP55V00
Report Version : V1.0



The test results relate only to the samples tested.

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Test Report Certification

Issued Date : Jul. 25, 2019

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Product Name : Module
Applicant : Telit Communications S.p.A.
Address : Viale Stazione di Prosecco, 5/B, 34010 Sgonico TRIESTE – ITALY
Manufacturer : Telit Communications S.p.A.
Address : Via Stazione di Prosecco, 5/B, 34010 Sgonico TRIESTE – ITALY
Trade name : 
Model No. : LE910C1-LA, LE910C4-LA
FCC ID : RI7LE910CXLA
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 / Engineering Adm. Specialist)

Tested By :



(Clemens Fang / Senior Engineer)

Approved By :



(Louis Hsu / Deputy Manager)

Revision History

Report No.	Version	Description	Issued Date
1970268R-HPUSP55V00	V1.0	Initial issue of report	Jul. 25, 2019

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1. General Information

1.1. EUT Description

Product Name	Module
Trade Name	
Model No.	LE910C1-LA, LE910C4-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 device 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.
3. For customer needs, reuse the LE910C1-LA test data from original report 1930357R and add one model LE910C4-LA to apply for a new FCC ID. Please find the declaration in attachment 4, the difference between LE910C1-LA and LE910C4-LA is replace a baseband chip, two of baseband Qualcomm chip has different capability. The different of each model is shown as below:

Report Number	Model Name	Description
1930357R	LE910C1-LA (FCC ID: RI7LE910C1LA)	LE910C1-LA: Qualcomm (MDM9207-1) support DL speed for category 1.
1970268R	LE910C1-LA, LE910C4-LA (FCC ID: RI7LE910CXLA)	LE910C4-LA: Qualcomm (MDM9207-0) support DL speed for category 4.

After the evaluation, this change does not affect the RF function, so no verification is required.
In addition to the above information, this device is identical with original project.

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:

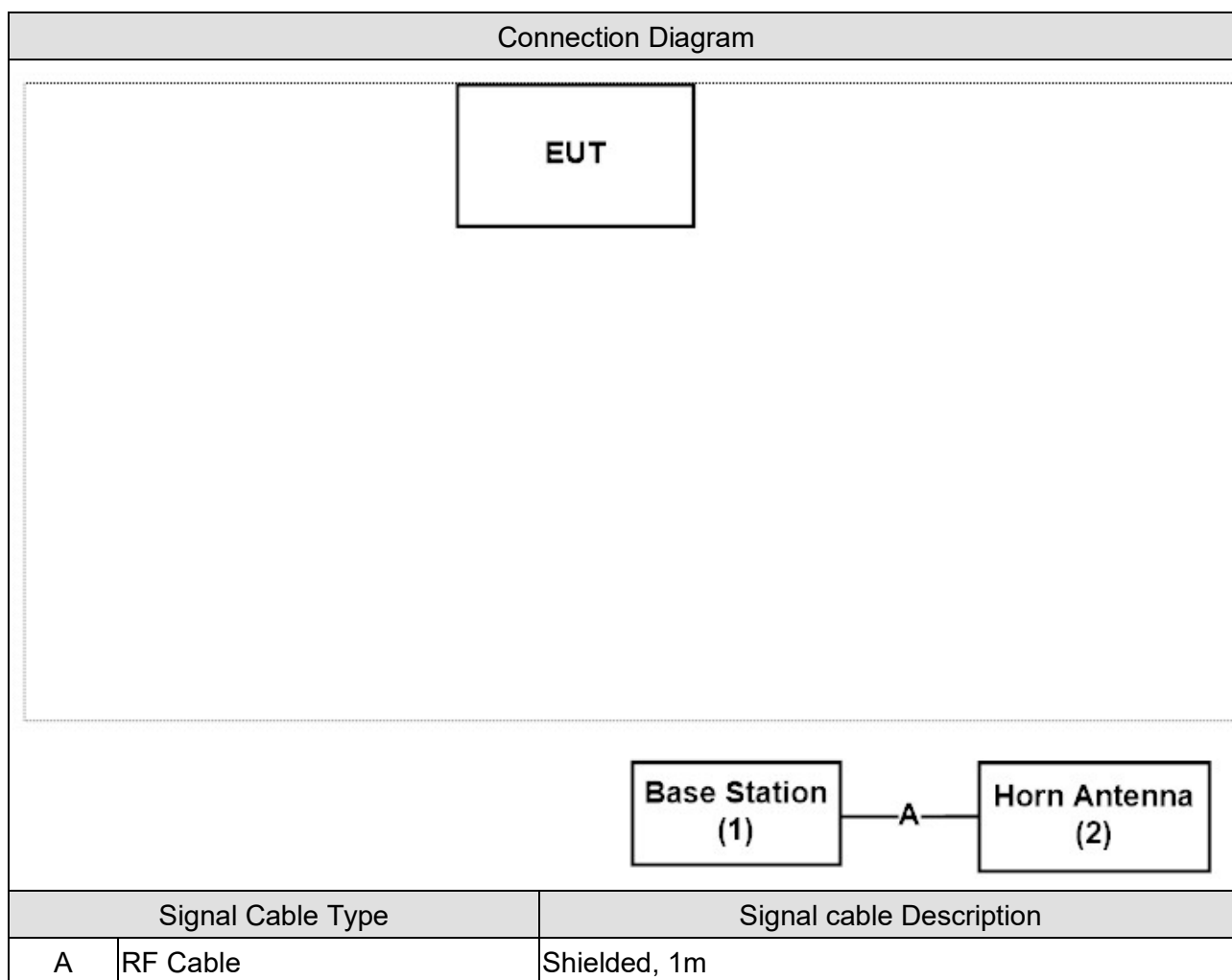
Test Mode
Mode 1: LTE Band 2
Mode 2: LTE Band 4
Mode 3: LTE Band 5
Mode 4: LTE Band 7

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	schwazbeck	BBHA9120B	639	DoC	--

1.4. Configuration of Tested System



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

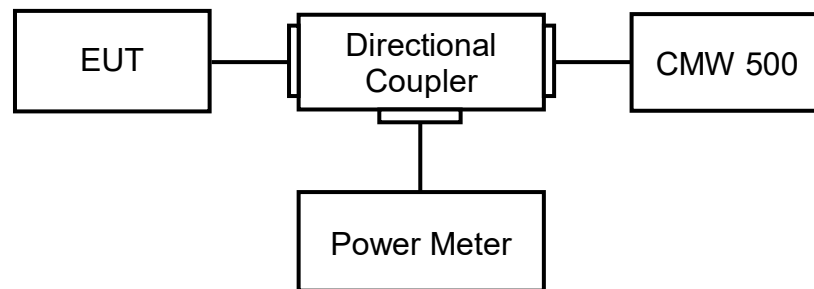
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.5. Uncertainty

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

3. RF Output Power

3.1. Test Setup



3.2. Test Procedure

- The RF output of the transmitter was connected to base station simulator.
- 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..
- Set EUT at maximum average power by base station simulator.
- 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-clause 5.2.4

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
		16-QAM	25	0	1	21.97	0.352	1
				0		22.20	0.372	1
				12		22.14	0.366	1
			12	0	2	22.08	0.361	1
				6		21.56	0.321	1
				13		21.45	0.313	1
	20175 1732.5 MHz	QPSK	1	0	0	21.40	0.309	1
				0		21.00	0.282	1
				12		23.11	0.458	1
			12	0	1	23.05	0.452	1
				6		22.98	0.445	1
				13		22.58	0.406	1
		16-QAM	25	0	1	22.45	0.394	1
				0		22.38	0.387	1
				12		22.10	0.363	1
			1	0	1	22.05	0.359	1
				12		22.02	0.356	1
				24		22.01	0.356	1
		16-QAM	12	0	2	21.49	0.316	1
				6		21.41	0.310	1
				13		21.32	0.303	1
		16-QAM	25	0	2	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	1	22.03	0.357	1
		16-QAM	1	0		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	1	22.07	0.361	1
		16-QAM	1	0		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) ERP	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) ERP	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) ERP	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) ERP	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) ERP	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) ERP	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) ERP	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) ERP	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	1	21.87	0.307	2
		16-QAM	1	0		21.85	0.305	2
				24		21.80	0.302	2
				49		21.76	0.299	2
			27	0		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	1	22.36	0.344	2
		16-QAM	1	0		22.45	0.351	2
				24		22.28	0.337	2
				49		22.14	0.327	2
			27	0		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
		16-QAM	75	0	1	21.86	0.306	2
				0		22.22	0.333	2
				37		22.10	0.324	2
			27	74	2	21.99	0.316	2
				0		21.73	0.297	2
				24		21.66	0.292	2
	21100 2535 MHz	QPSK	48	0	0	21.58	0.287	2
				0		23.42	0.439	2
				37		23.34	0.431	2
		16-QAM	74	0	1	23.26	0.423	2
				0		22.86	0.385	2
				19		22.74	0.375	2
		QPSK	38	0	1	22.70	0.372	2
				0		22.51	0.356	2
				37		22.11	0.324	2
		16-QAM	74	0	1	22.03	0.318	2
				37		21.92	0.310	2
			27	74	2	21.44	0.278	2
				0		21.39	0.275	2
				24		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

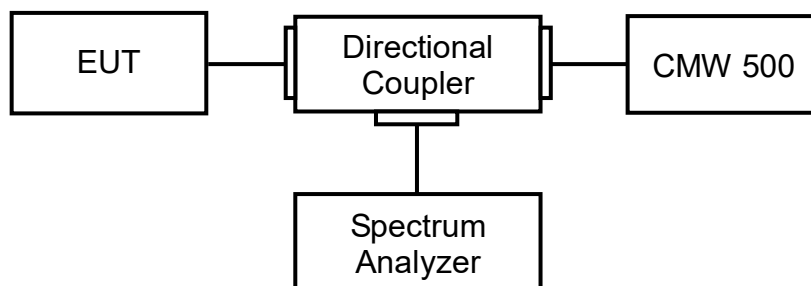
Product	Module		
Test Item	RF Output Power		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/25	Test Site	SR10-H

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		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-clause 4.2 & 4.3
ANSI C63.26: 2015 Sub-clause 5.4.3 & 5.4.4

4.4. Test Result

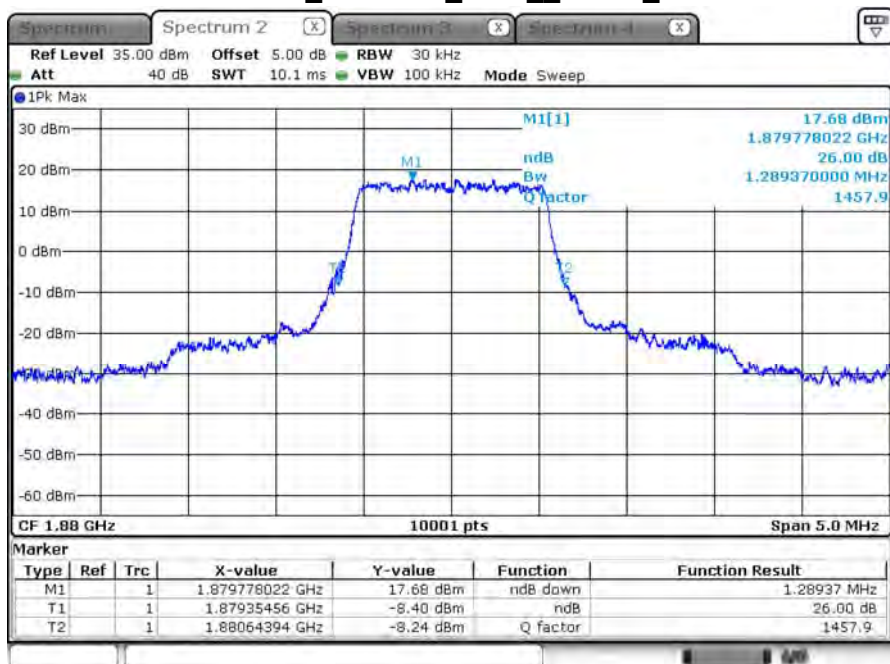
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

1.4M_QPSK

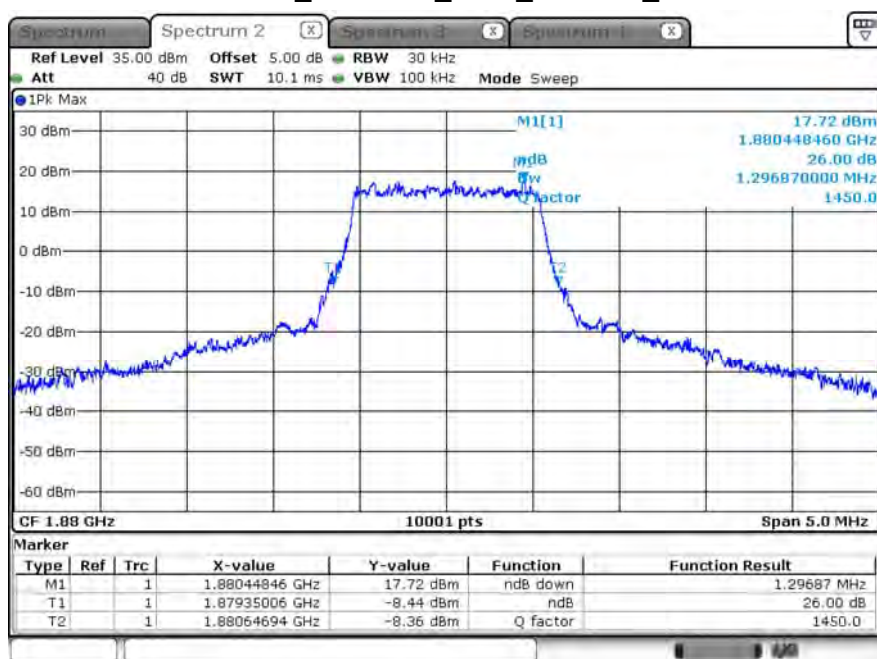
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	1.289	1.098	N/A

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

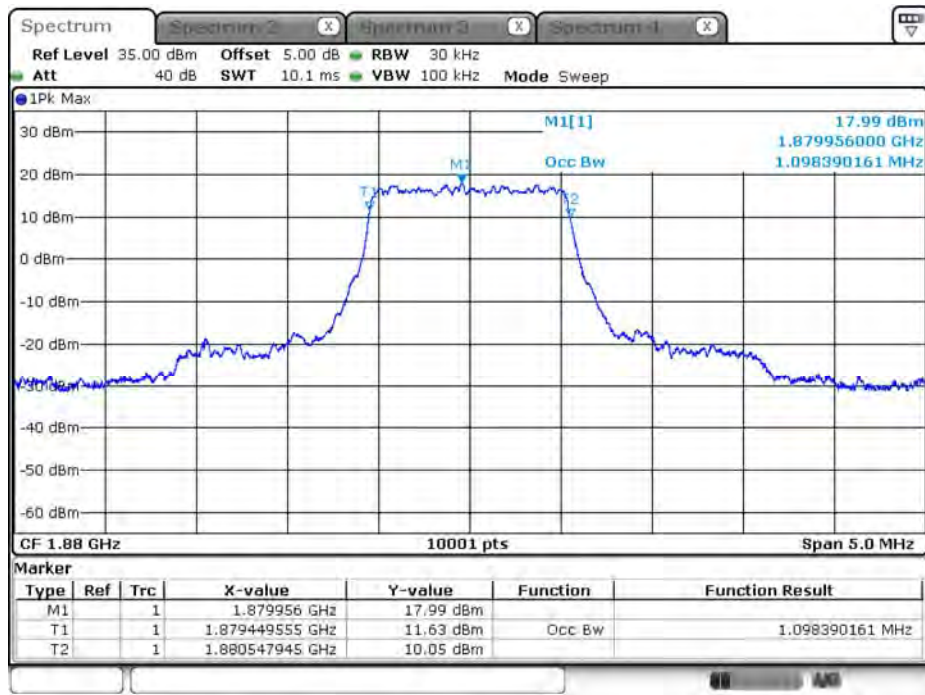
-26dB BW_CH18900_1.4M_QPSK_6RB0

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

-26dB BW_CH18900_1.4M_16-QAM_6RB0

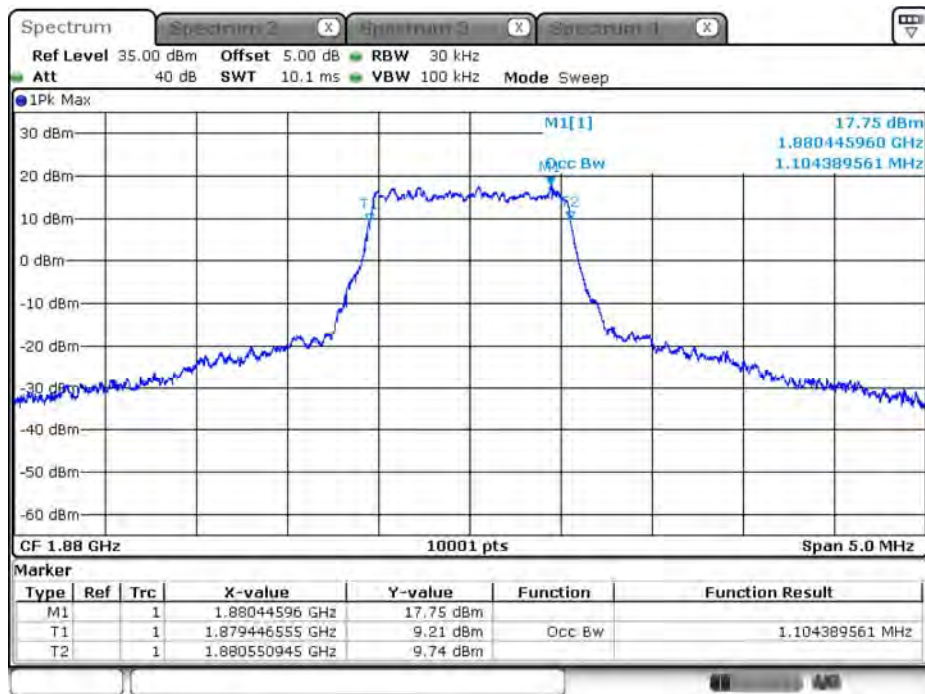
Date: 9.APR.2019 15:02:59

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

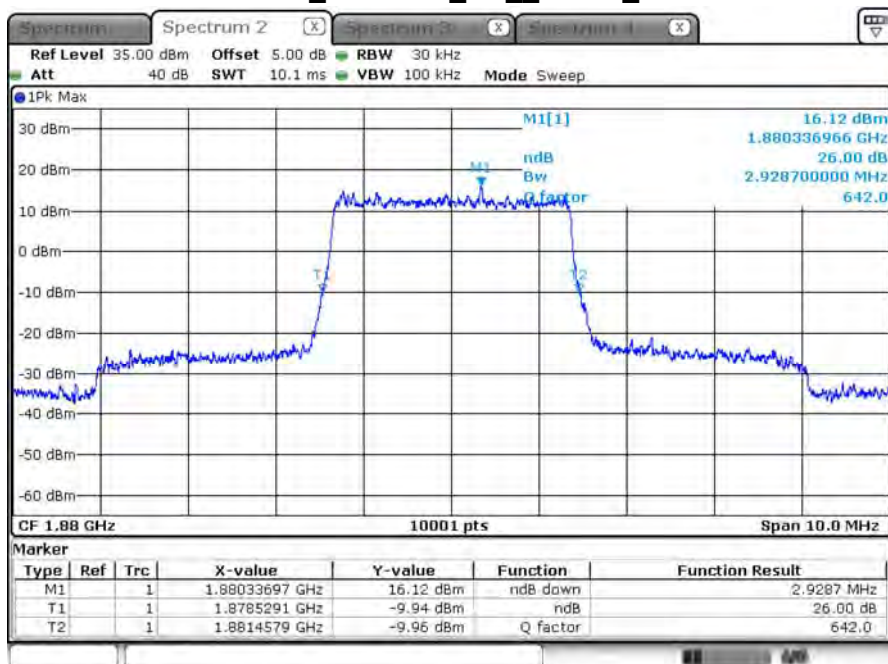
3M_QPSK

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

3M_16-QAM

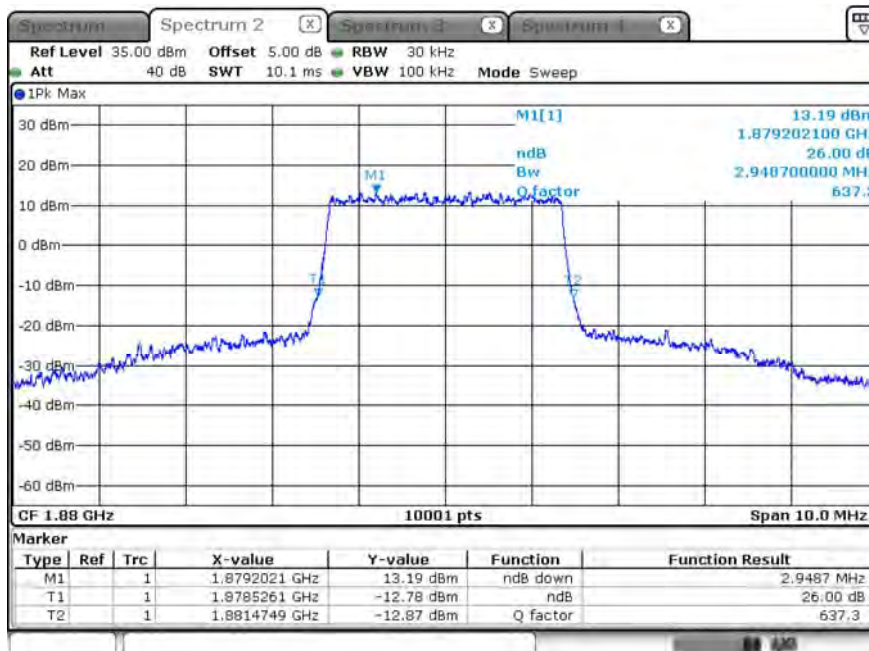
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	2.948	2.687	N/A

-26dB BW_CH18900_3M_QPSK_15RB0



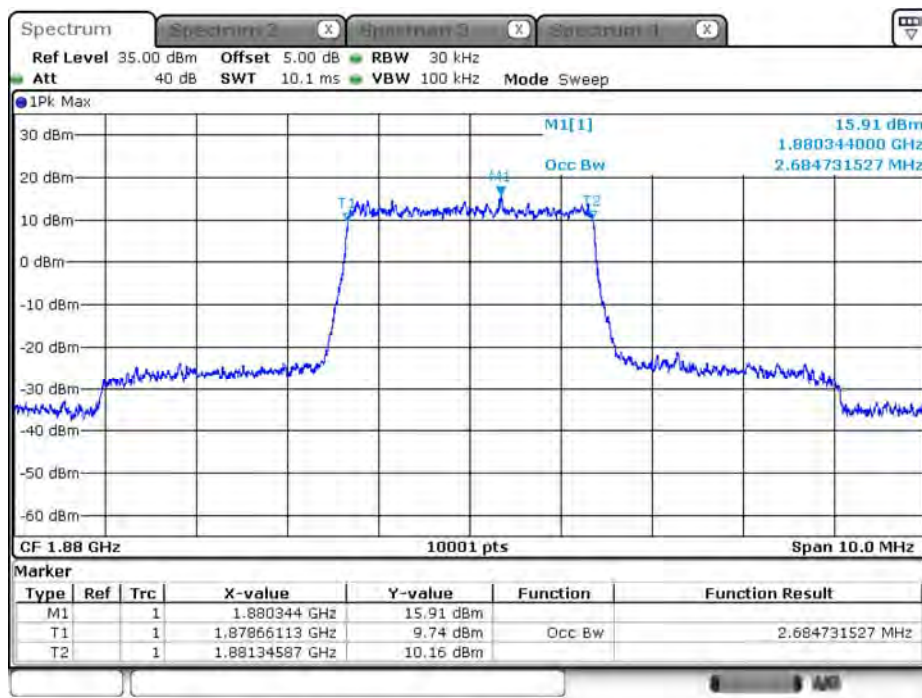
Date: 9 APR 2019 13:00:02

-26dB BW_CH18900_3M_16-QAM_15RB0



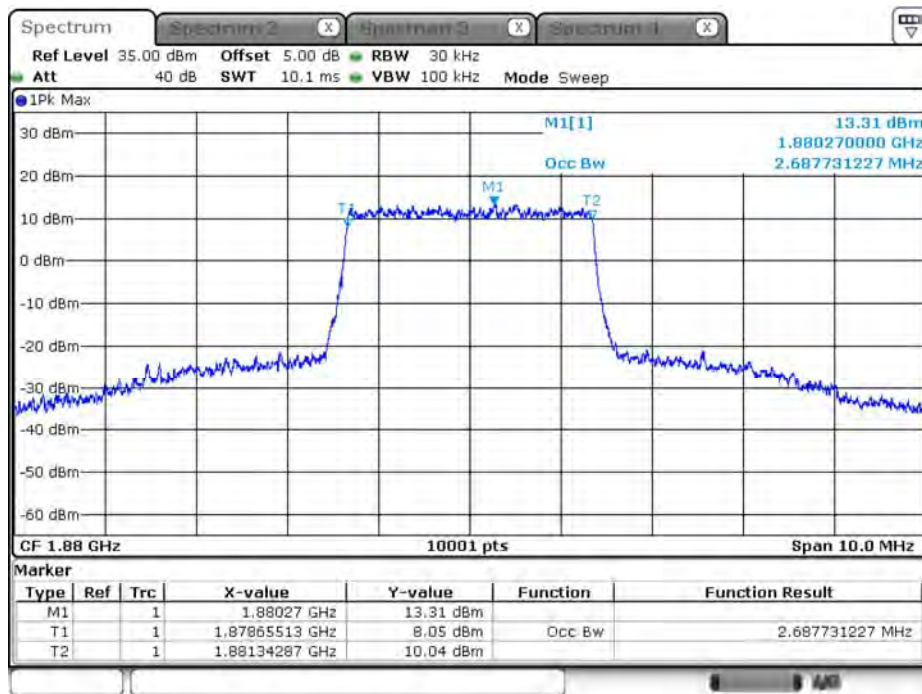
Date: 9 APR 2019 15:00:12

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

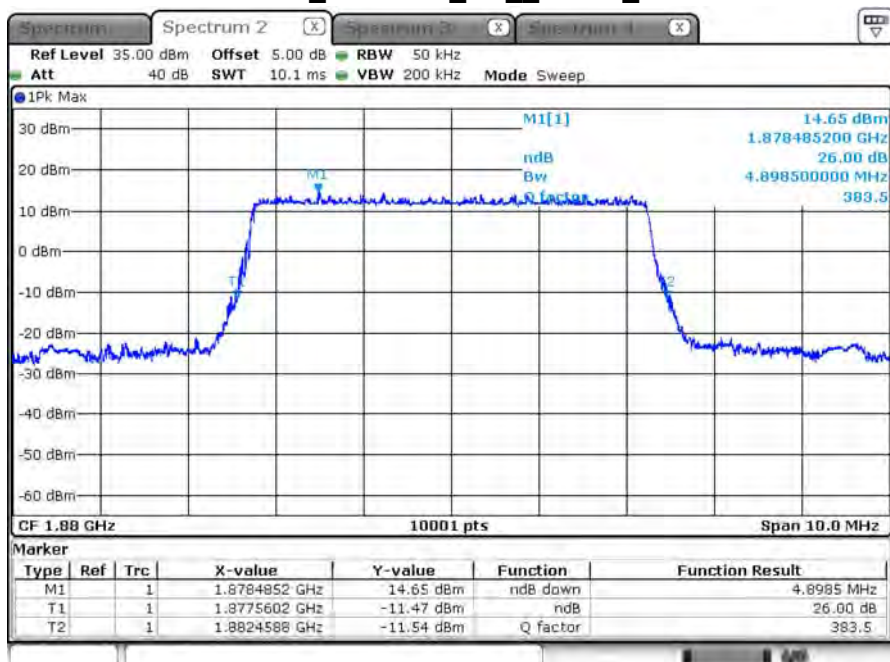
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK

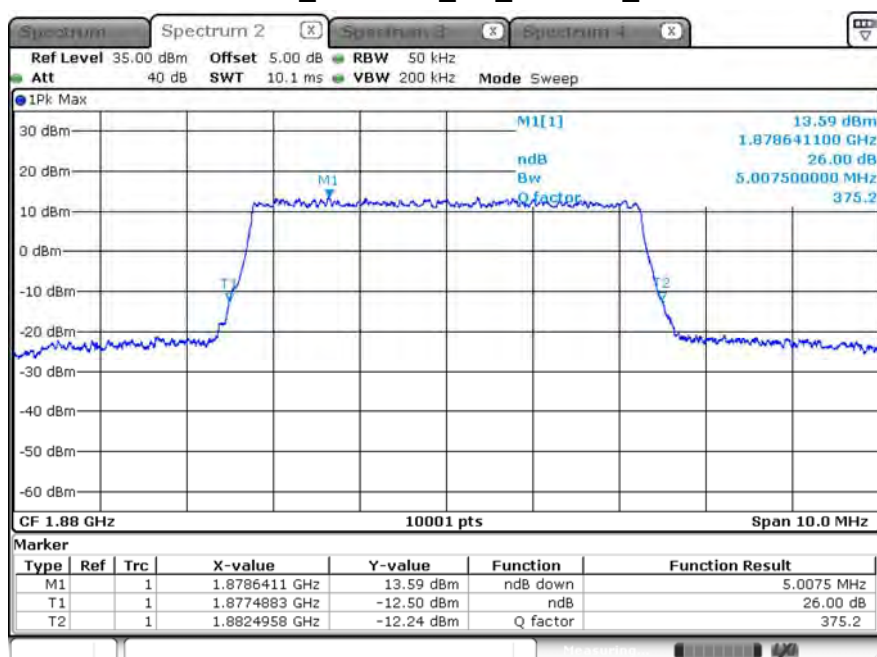
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	4.898	4.495	N/A

5M_16-QAM

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

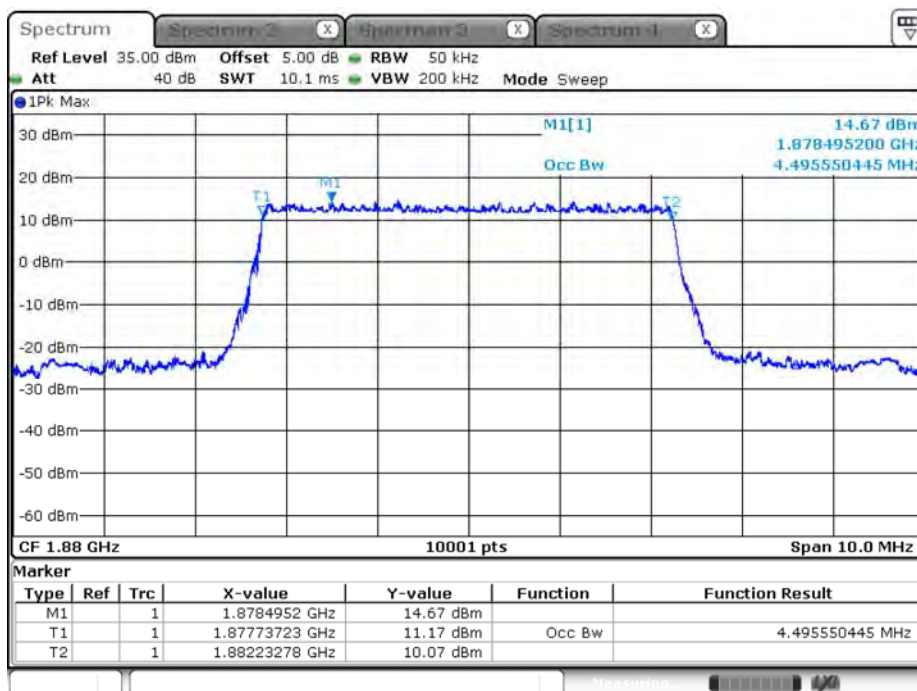
-26dB BW_CH18900_5M__QPSK_25RB0

Date: 9 APR 2019 13:02:45

-26dB BW_CH18900_5M_16-QAM_25RB0

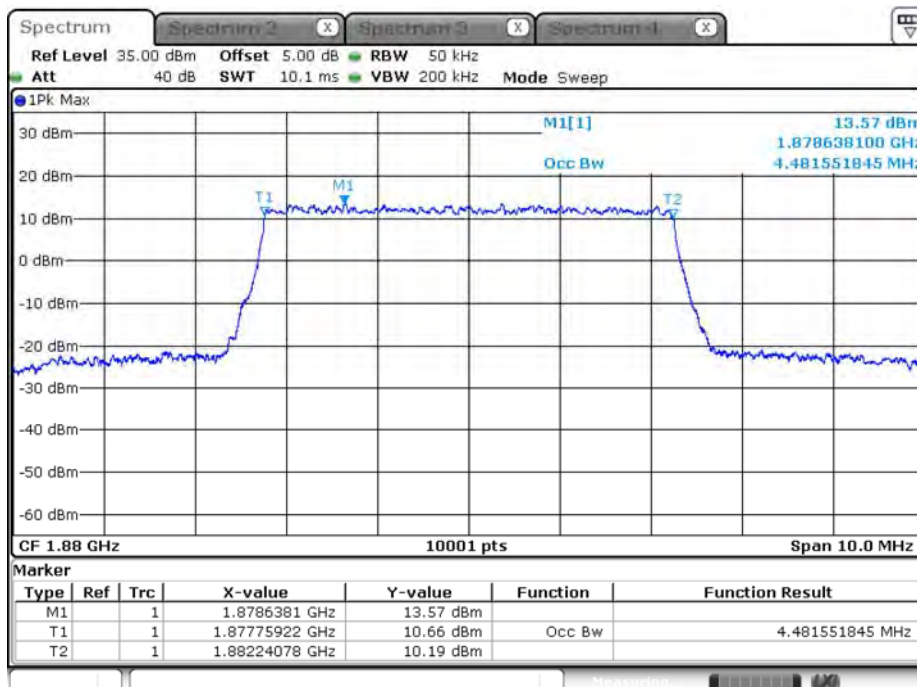
Date: 9 APR 2019 14:57:25

99% BW_CH18900_5M_QPSK_25RB0



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

99% BW_CH18900_5M_16-QAM_25RB0

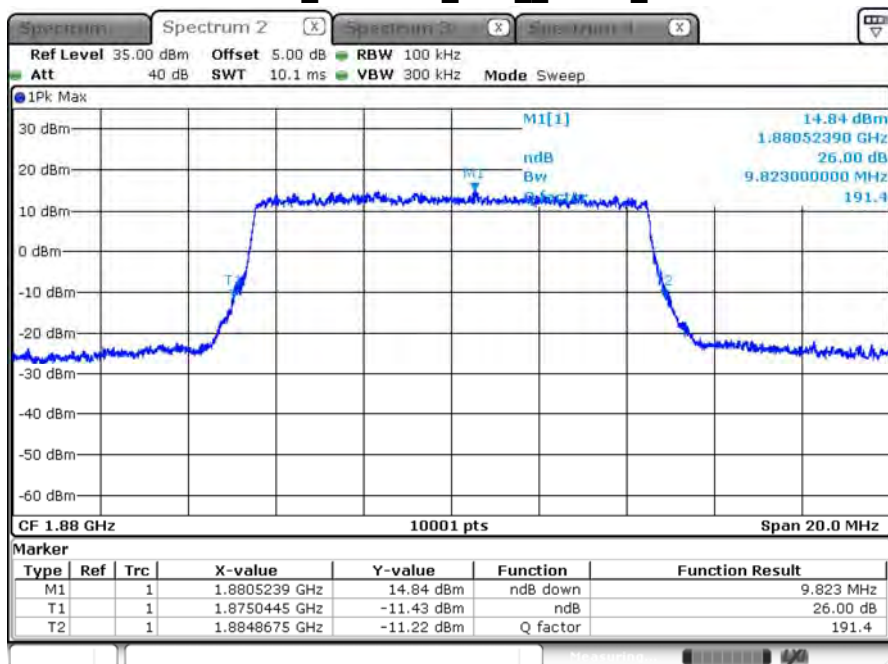


Date: 9.APR.2019 14:54:42

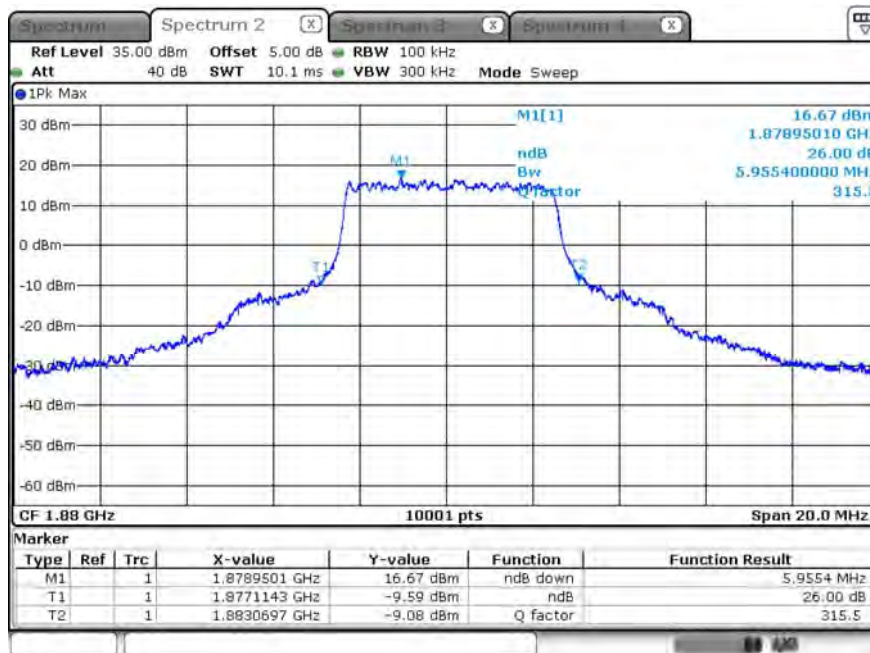
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

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

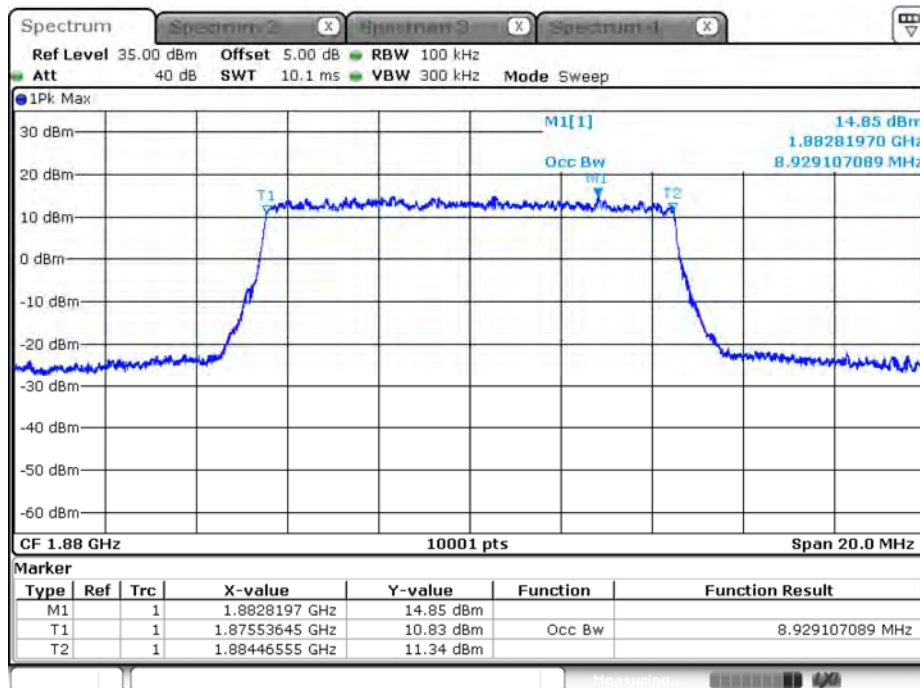
-26dB BW_CH18900_10M_QPSK_50RB0

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

-26dB BW_CH18900_10M_16-QAM_27RB12

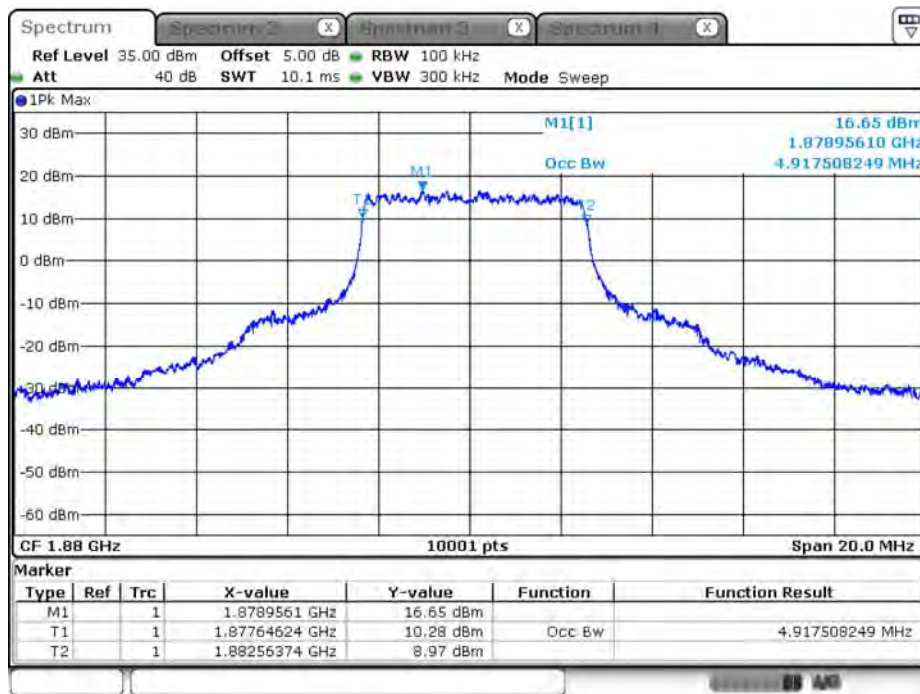
Date: 9.APR.2019 14:49:32

99% BW_CH18900_10M_QPSK_50RB0



Date: 9 APR 2019 13:07:24

99% BW_CH18900_10M_16-QAM_27RB12

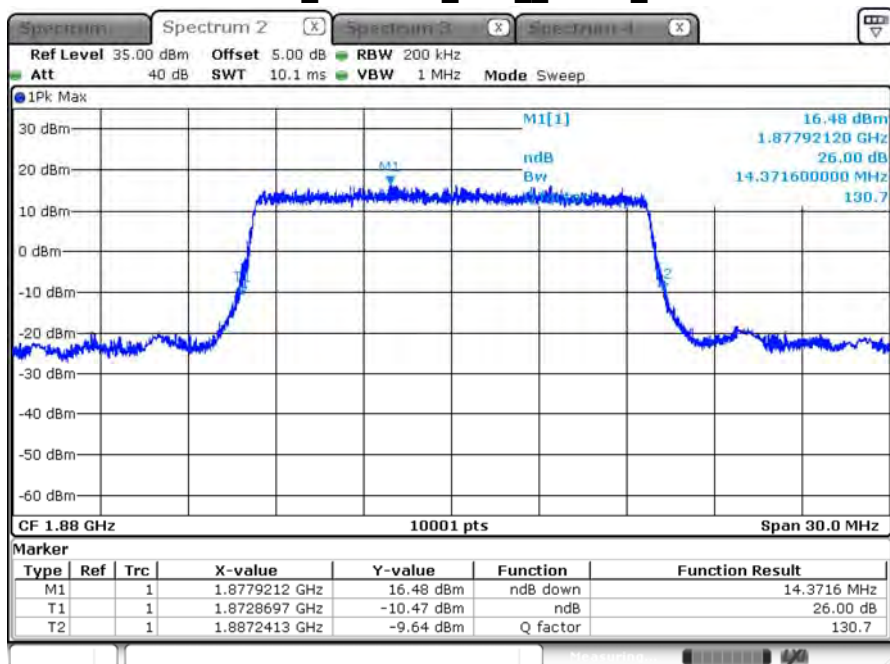


Date: 9 APR 2019 14:46:36

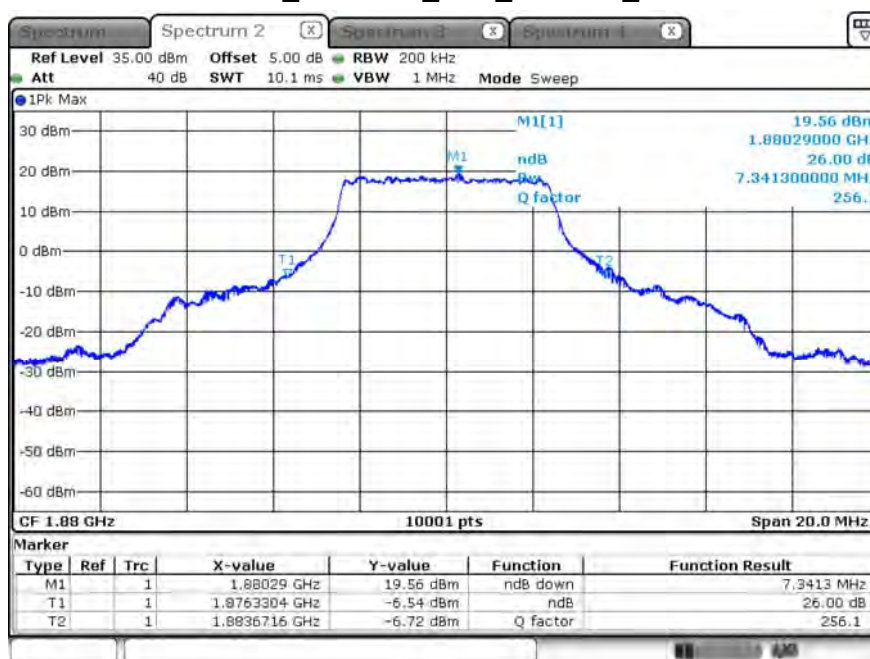
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

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

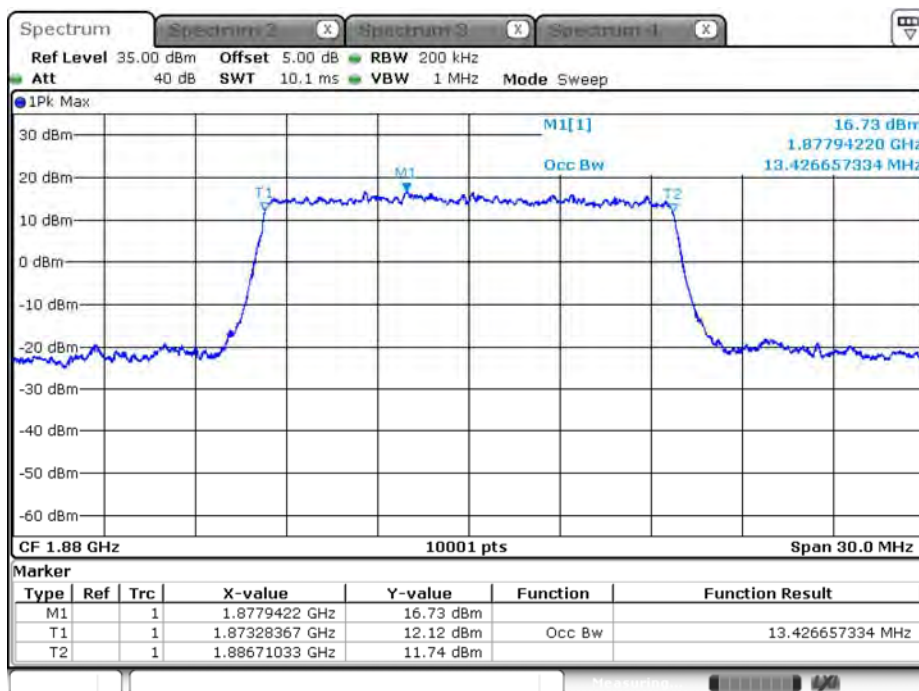
-26dB BW_CH18900_15M__QPSK_75RB0

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

-26dB BW_CH18900_15M_16-QAM_27RB24

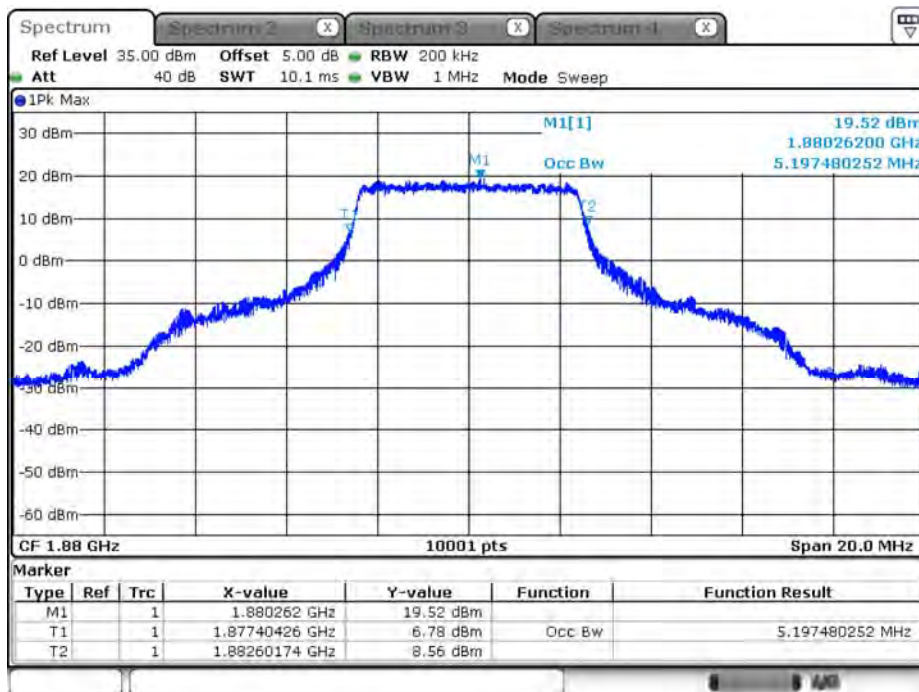
Date: 9.APR.2019 14:36:35

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

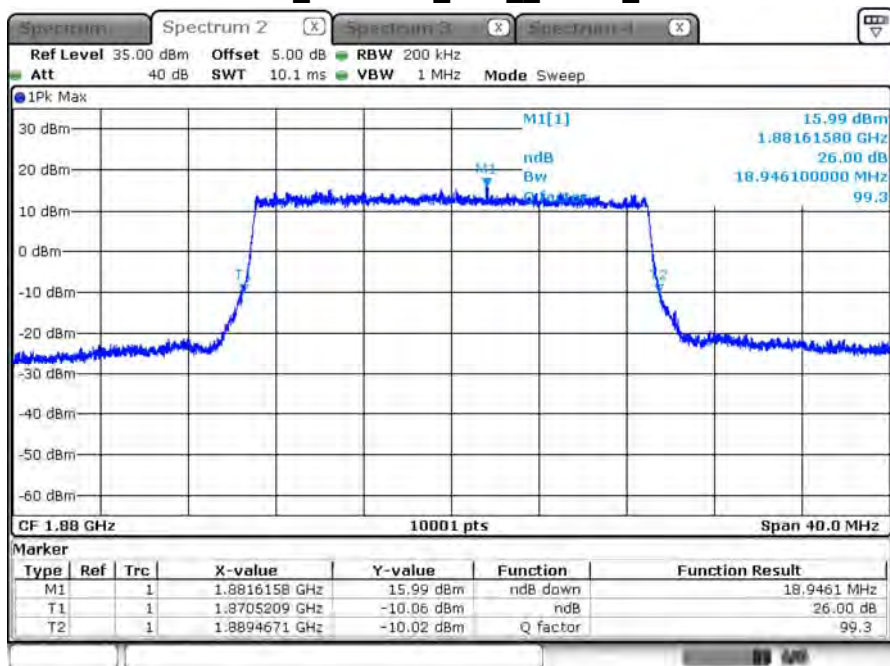
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2019/04/09	Test Site	SR10-H

20M_QPSK

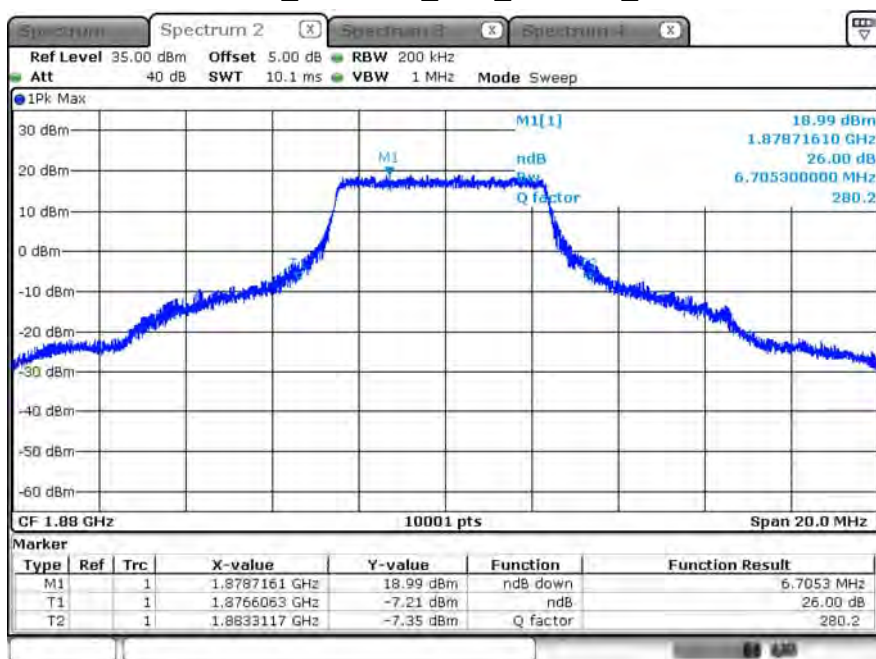
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1880	18.946	17.842	N/A

20M_16-QAM

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

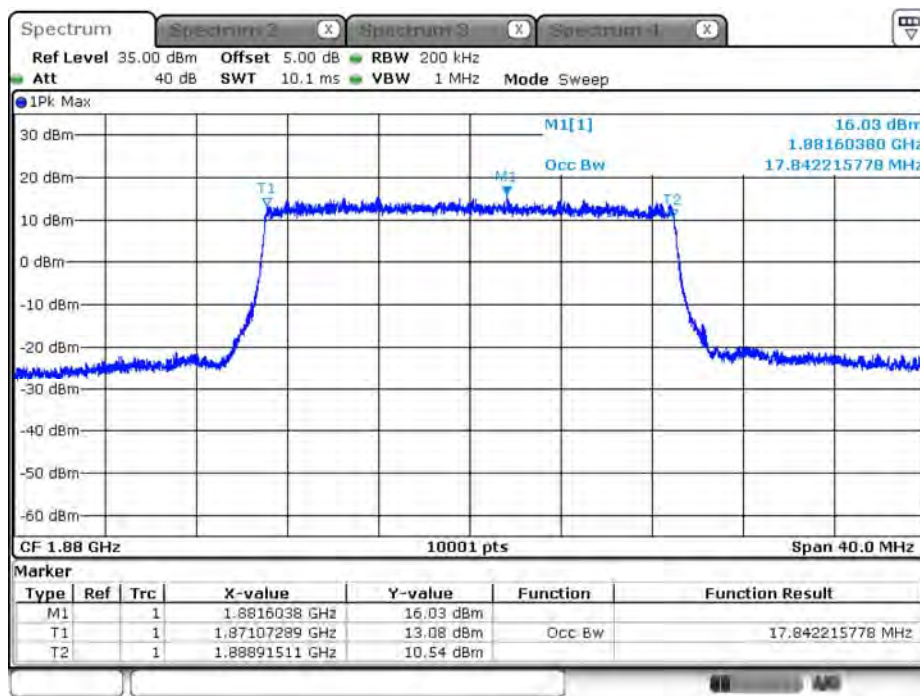
-26dB BW_CH18900_20M__QPSK_100RB0

Date: 9 APR 2019 13:16:57

-26dB BW_CH18900_20M_16-QAM_27RB36

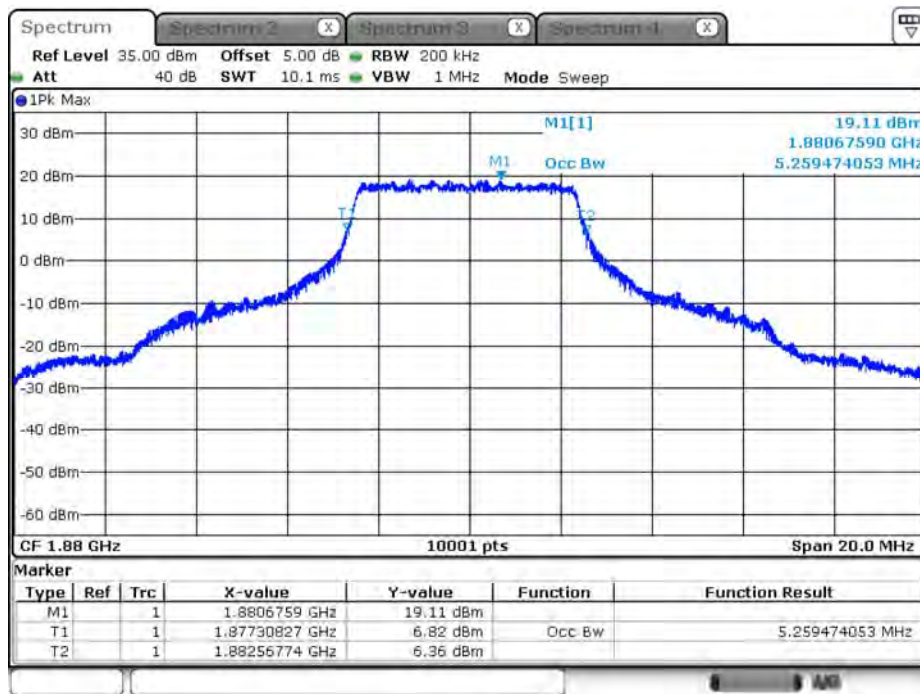
Date: 9 APR 2019 14:31:51

99% BW_CH18900_20M_QPSK_100RB0



Date: 9 APR 2019 13:16:05

99% BW_CH18900_20M_16-QAM_27RB36



Date: 9 APR 2019 14:31:08

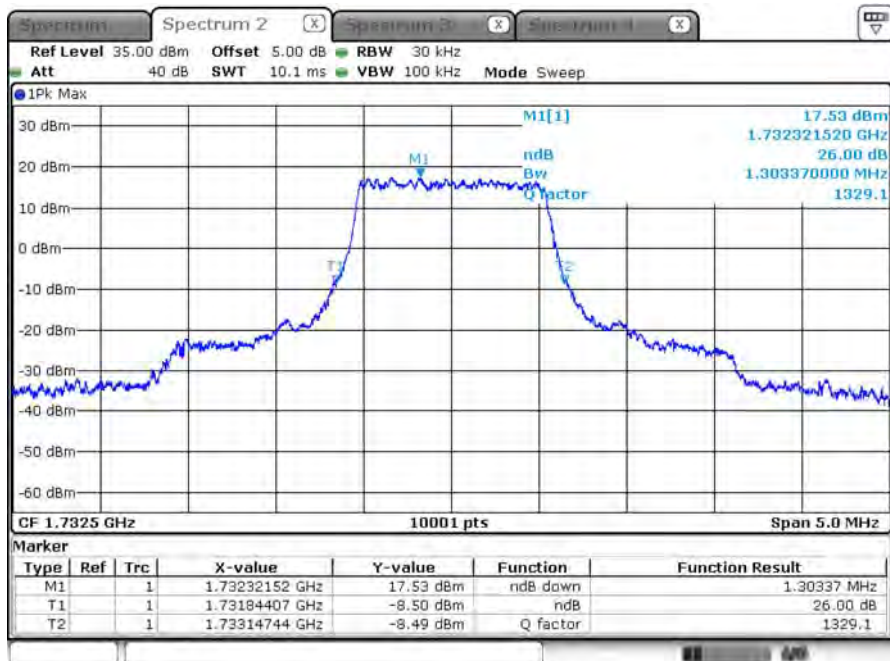
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

1.4M_QPSK

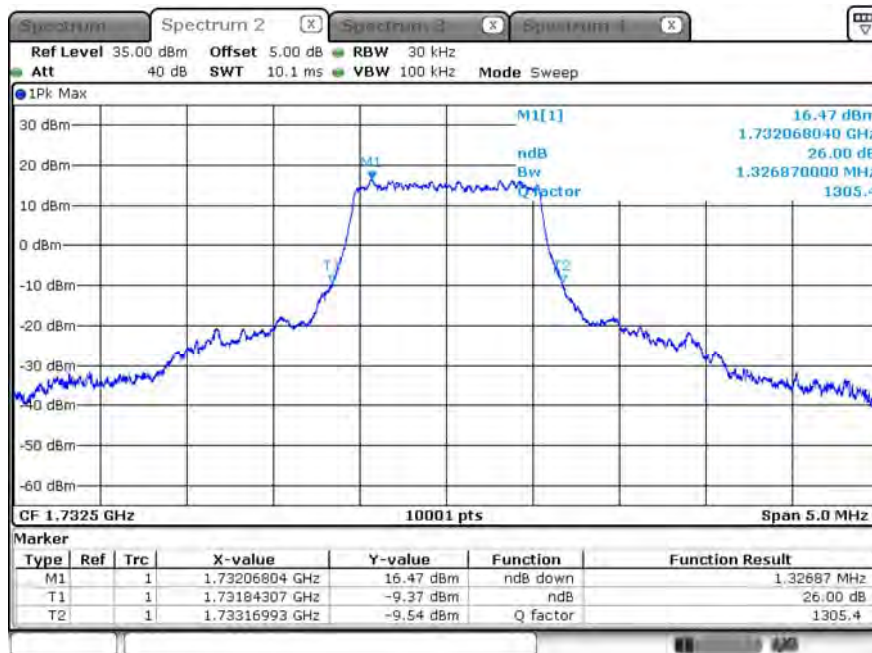
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	1.303	1.093	N/A

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

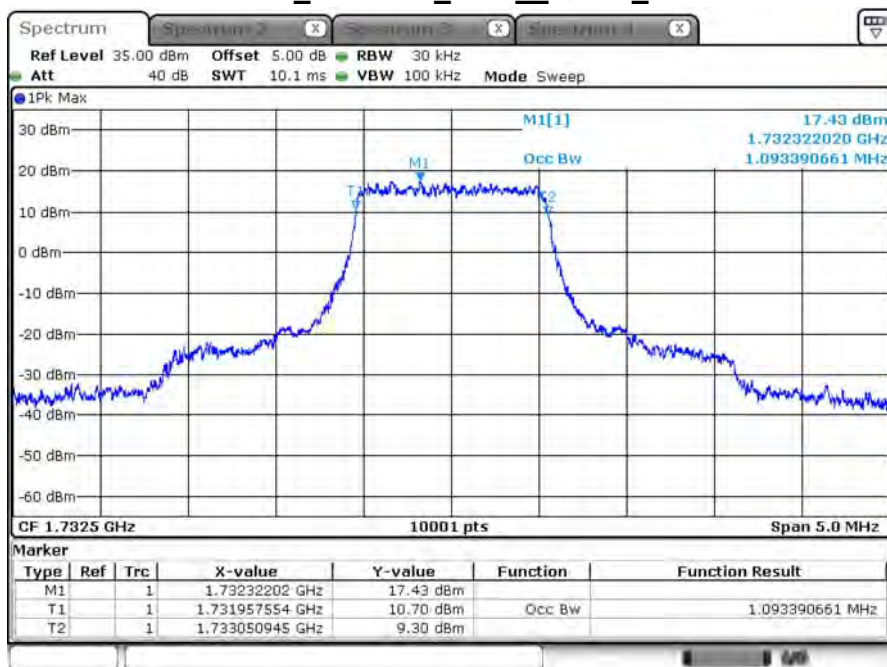
-26dB BW_CH20175_1.4M_QPSK_6RB0

Date: 9 APR 2019 15:30:19

-26dB BW_CH20175_1.4M_16-QAM_6RB0

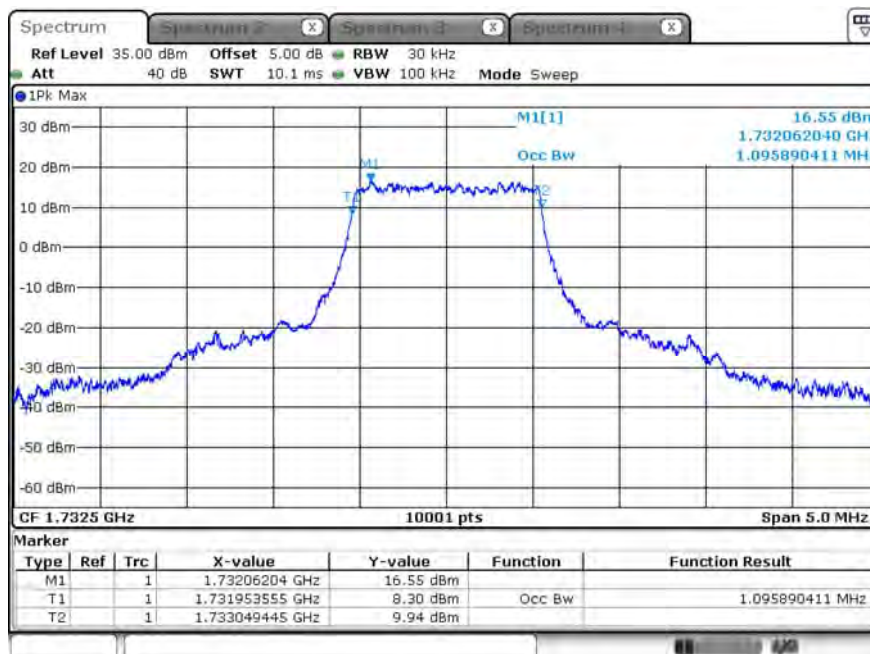
Date: 9 APR 2019 15:29:42

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

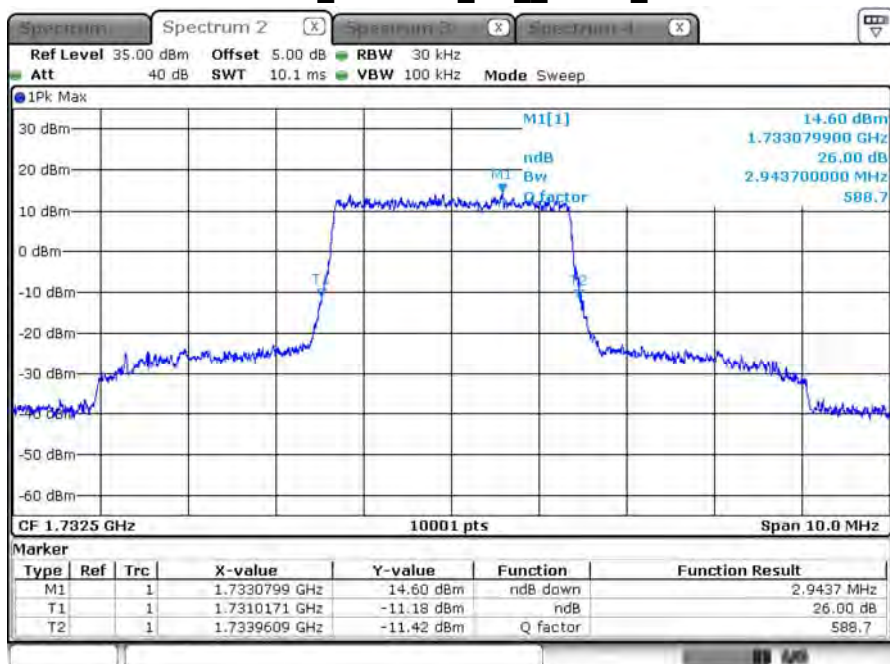
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

3M_QPSK

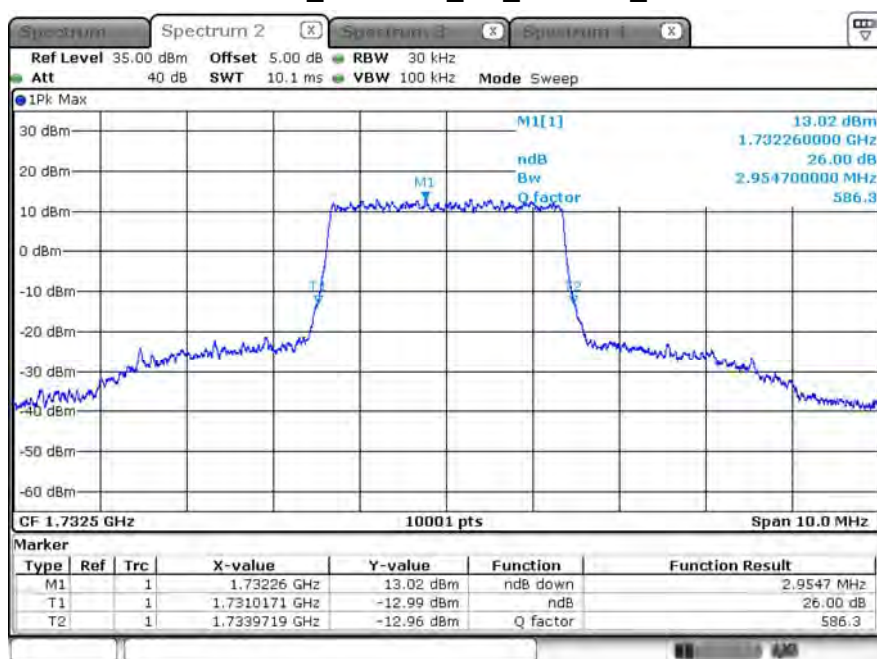
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	2.943	2.684	N/A

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

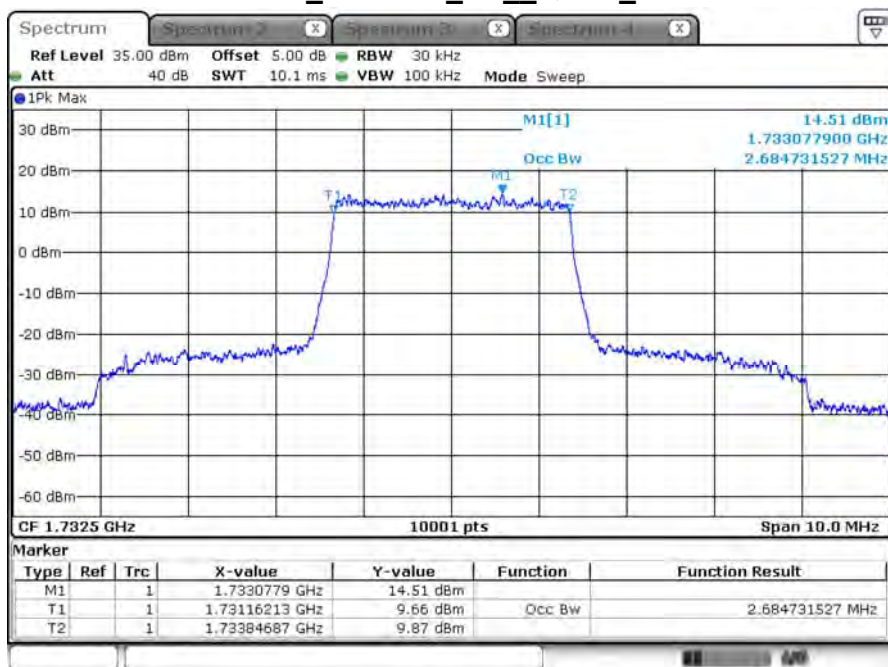
-26dB BW_CH20175_3M_QPSK_6RB0

Date: 9 APR 2019 16:13:28

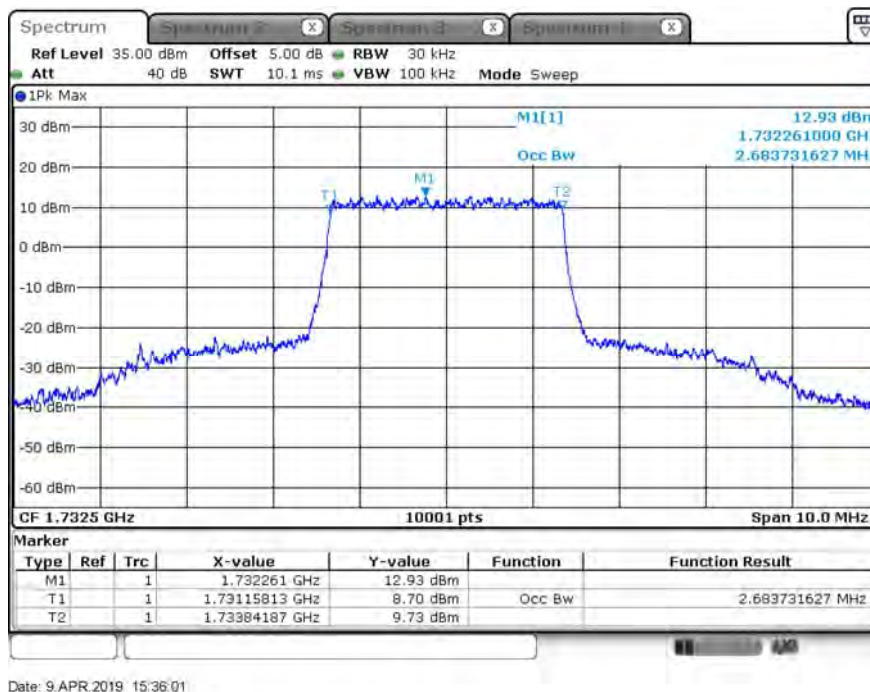
-26dB BW_CH20175_3M_16-QAM_6RB0

Date: 9 APR 2019 16:12:56

99% BW_CH20175_3M__QPSK_6RB0



99% BW_CH20175_3M_16-QAM_6RB0



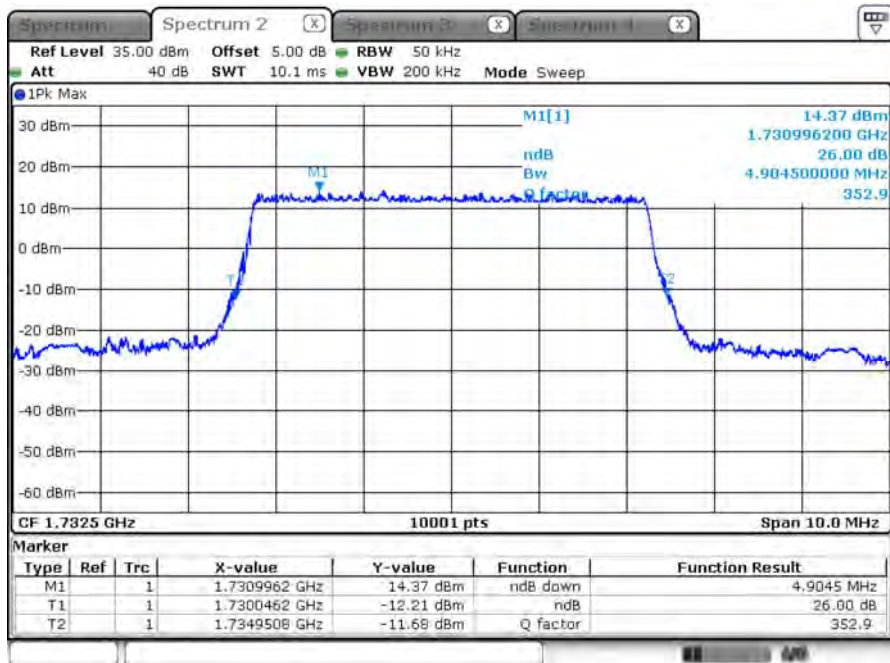
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK

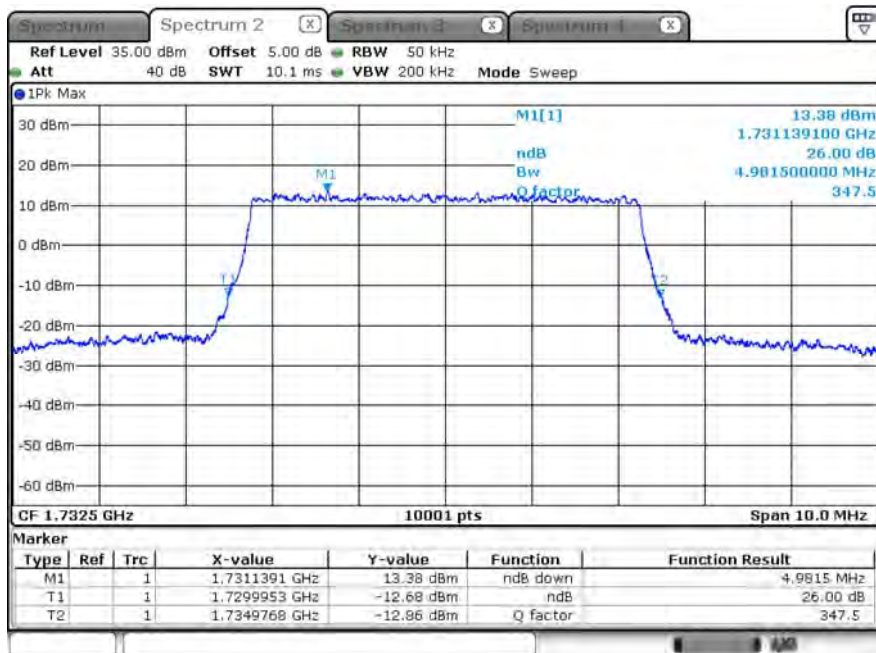
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	4.904	4.497	N/A

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

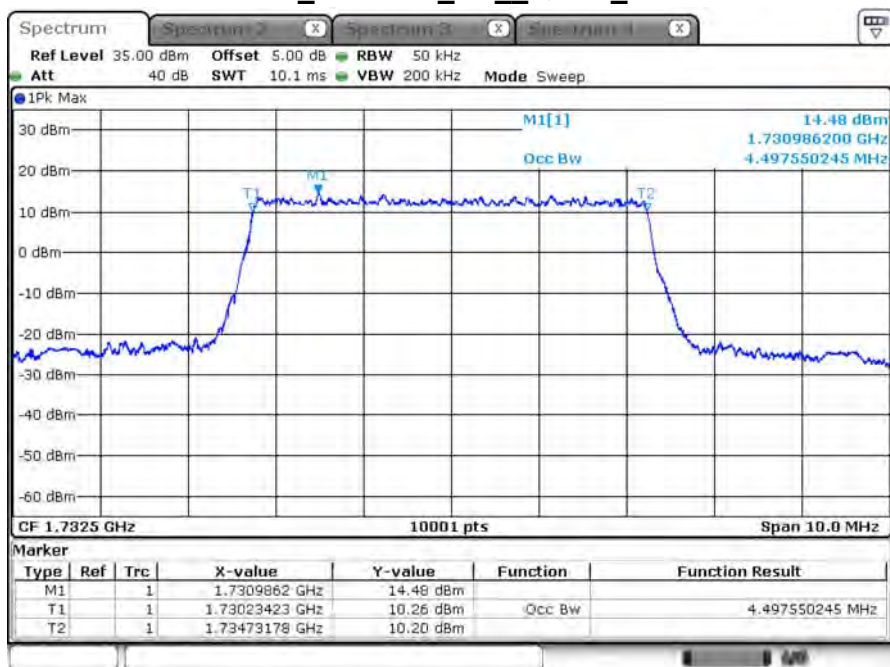
-26dB BW_CH20175_5M_QPSK_25RB0

Date: 9 APR 2019 16:22:11

-26dB BW_CH20175_5M_16-QAM_25RB0

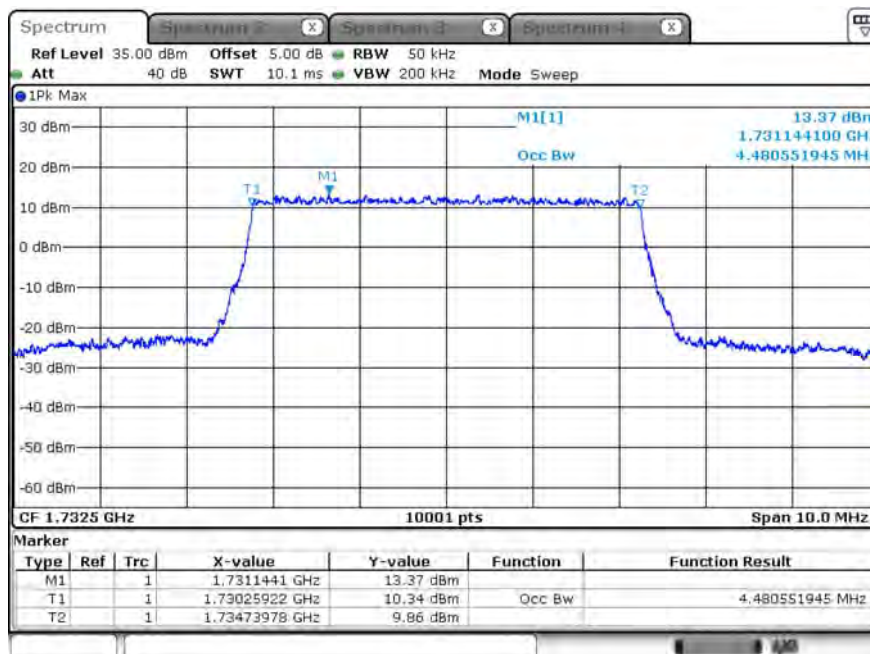
Date: 9 APR 2019 16:21:30

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

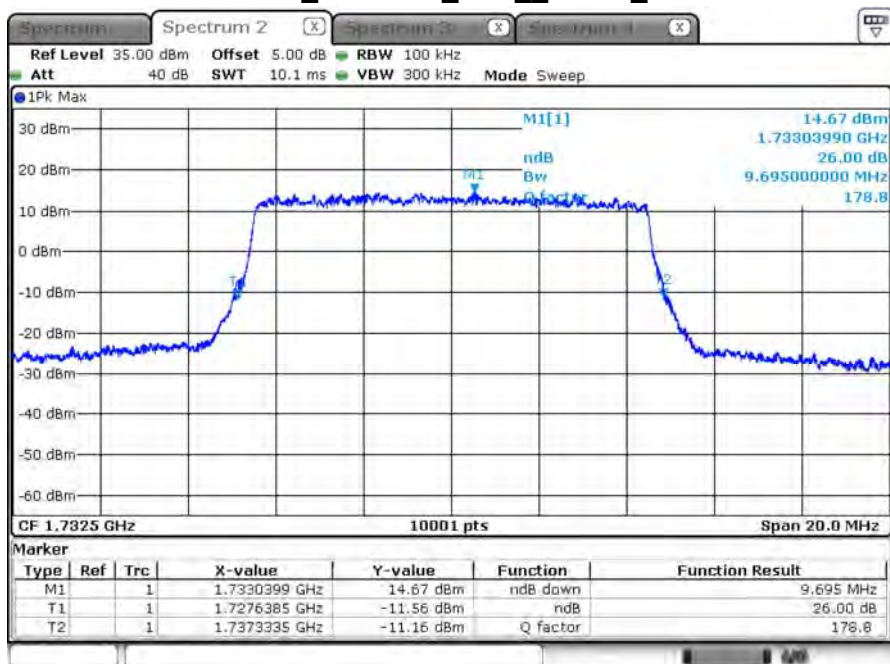
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

10M_QPSK

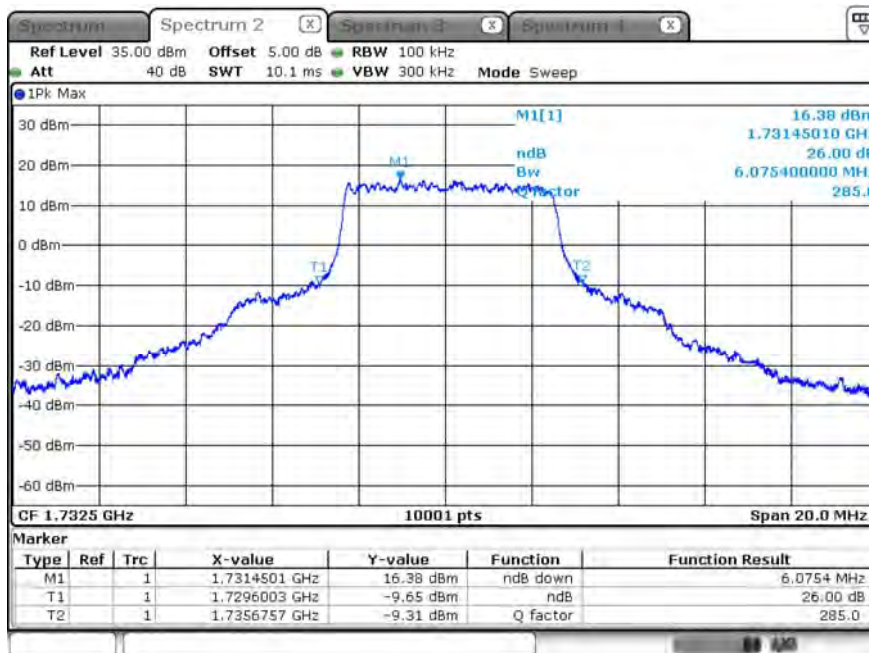
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	9.695	8.921	N/A

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

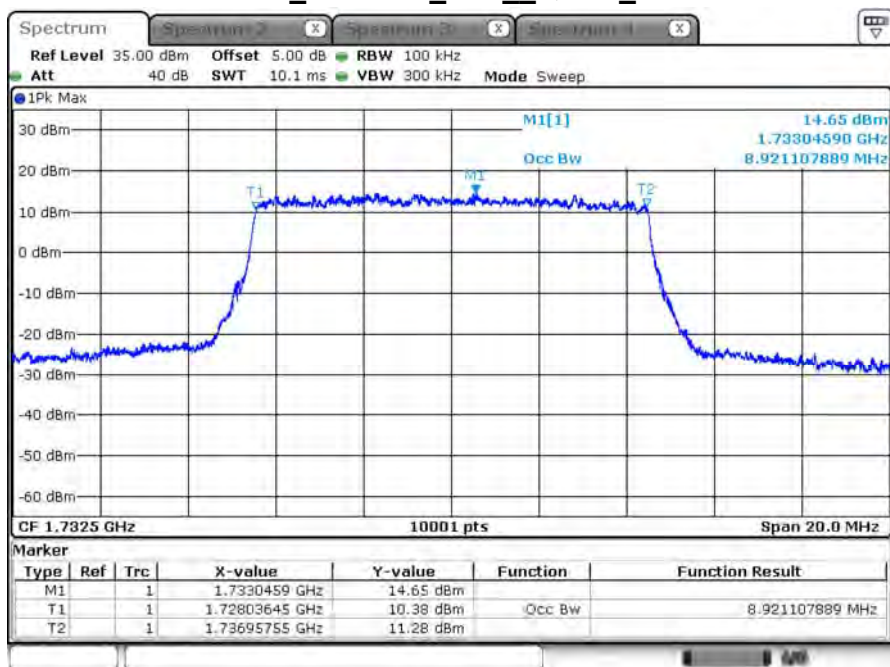
-26dB BW_CH20175_10M_QPSK_50RB0

Date: 9 APR 2019 16:33:01

-26dB BW_CH20175_10M_16-QAM_27RB12

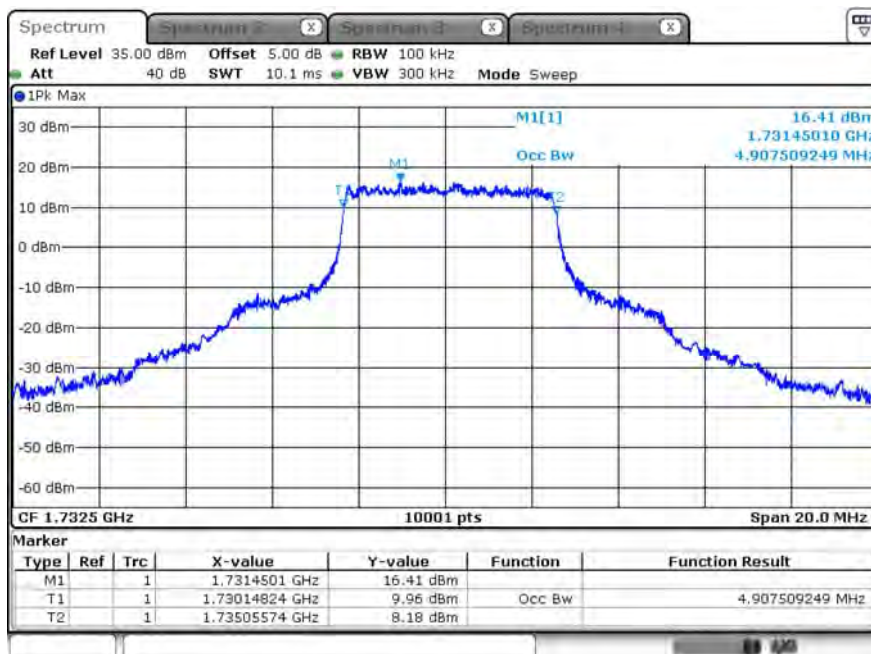
Date: 9 APR 2019 16:31:23

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

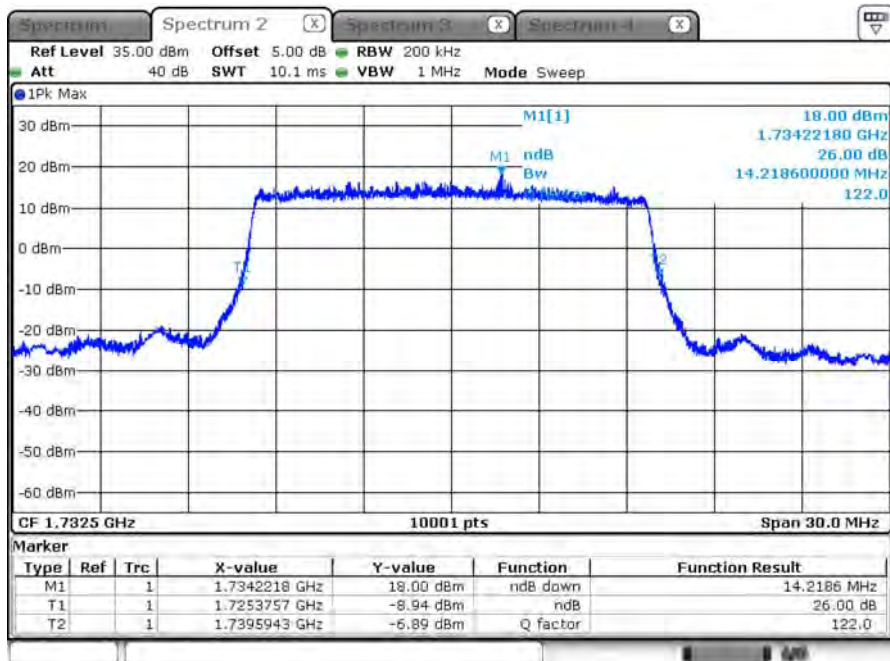
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

15M_QPSK

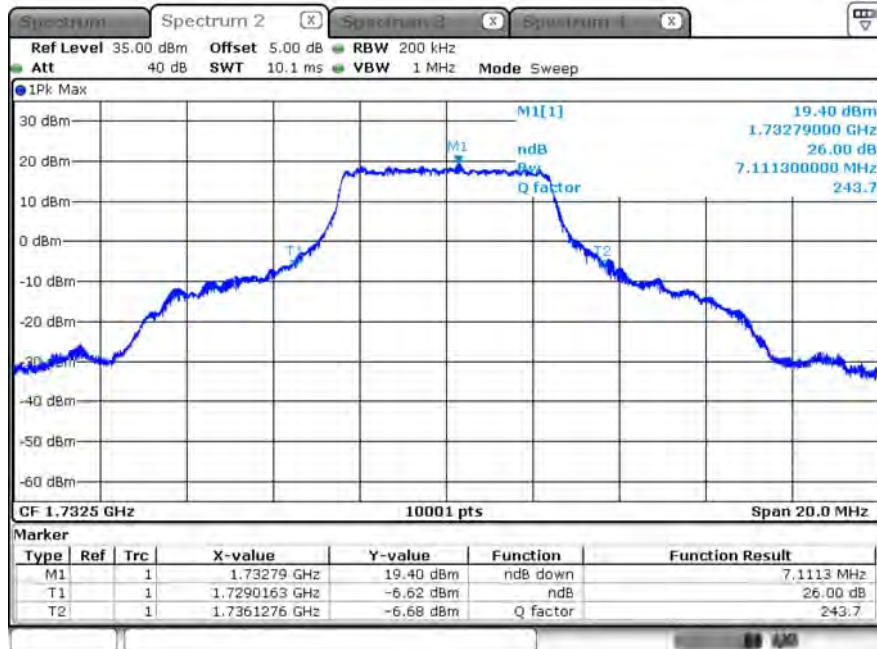
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	14.218	13.390	N/A

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

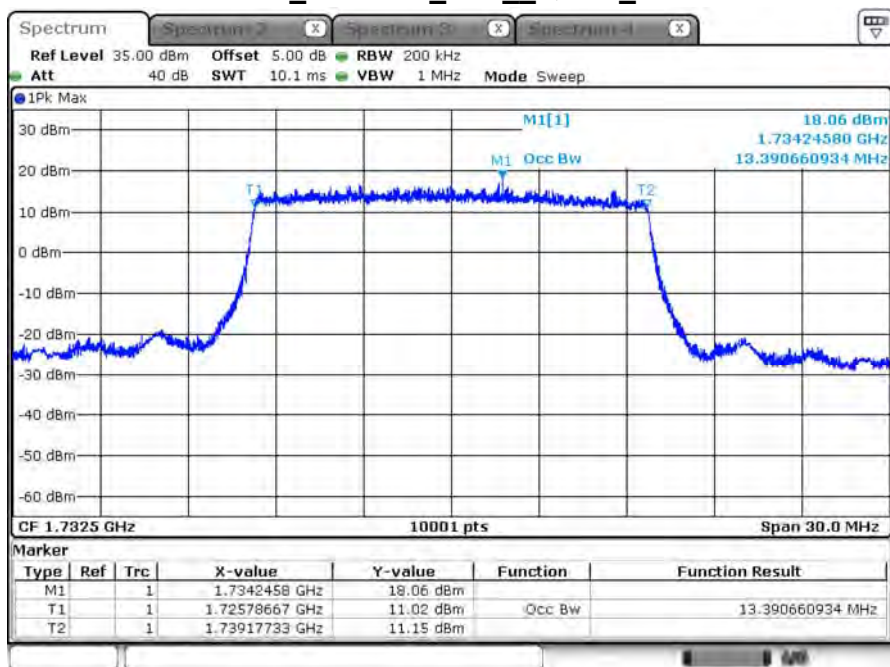
-26dB BW_CH20175_15M__QPSK_75RB0

Date: 9 APR 2019 16:39:49

-26dB BW_CH20175_15M_16-QAM_27RB24

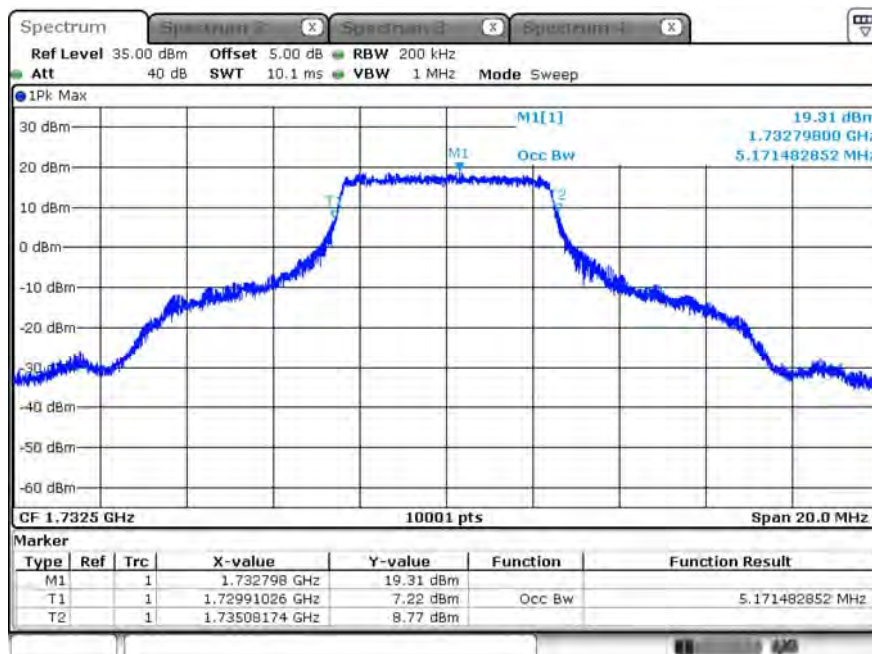
Date: 9 APR 2019 16:39:05

99% BW_CH20175_15M__QPSK_75RB0



Date: 9 APR 2019 16:35:49

99% BW_CH20175_15M_16-QAM_27RB24



Date: 9 APR 2019 16:36:52

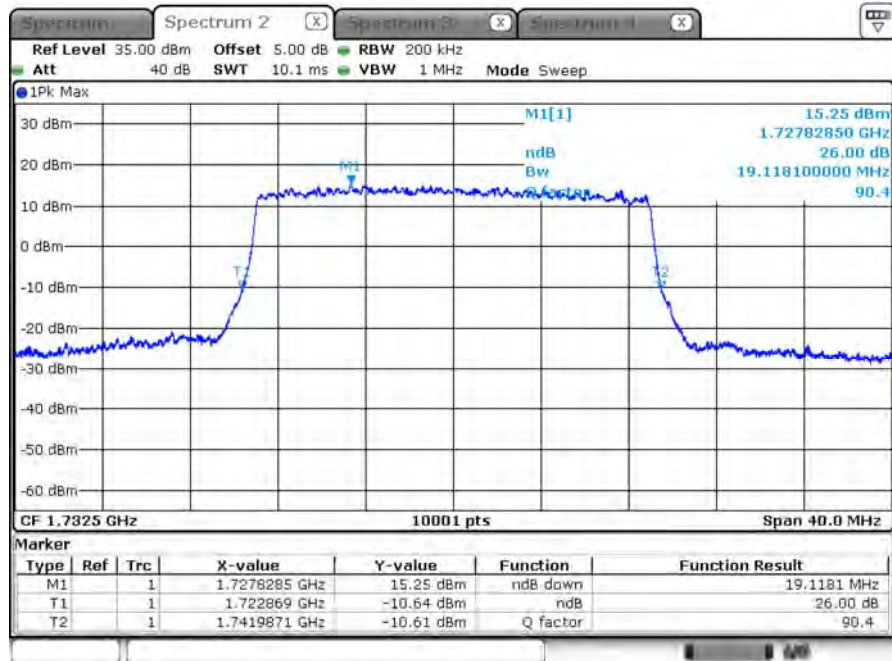
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 4		
Date of Test	2019/04/09	Test Site	SR10-H

20M_QPSK

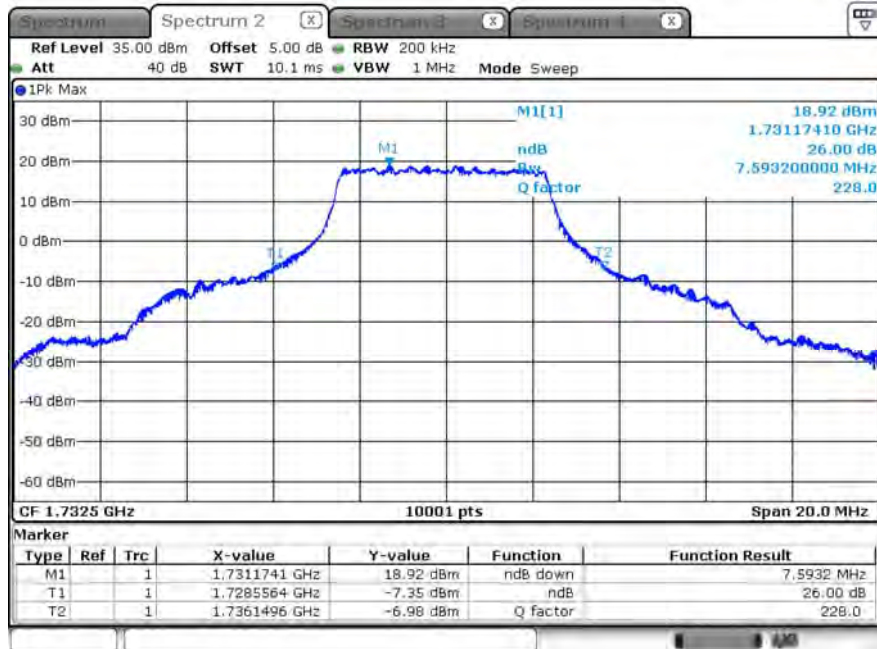
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
1732.5	19.118	17.810	N/A

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

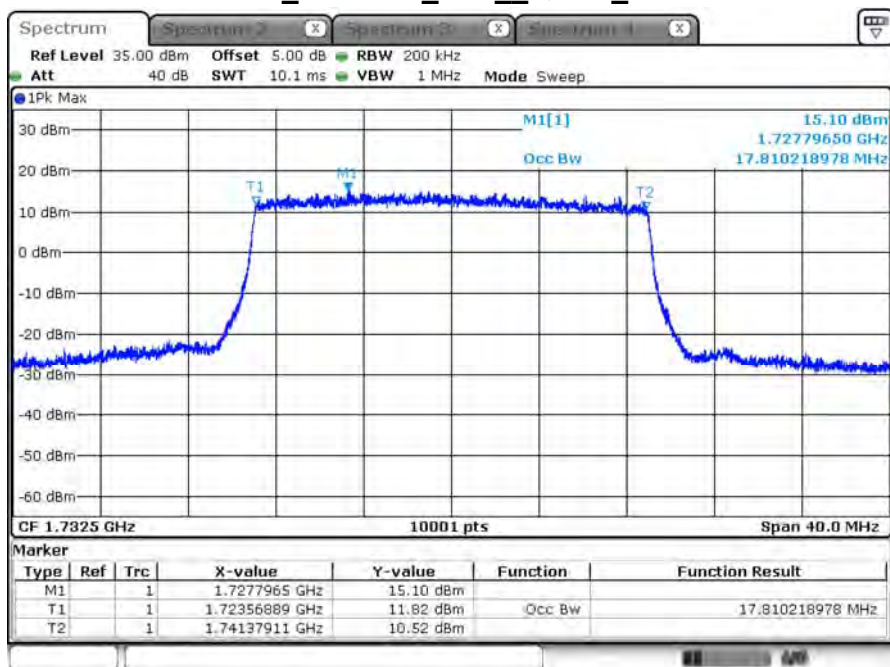
-26dB BW_CH20175_20M__QPSK_100RB0

Date: 9 APR 2019 16:44:32

-26dB BW_CH20175_20M_16-QAM_27RB36

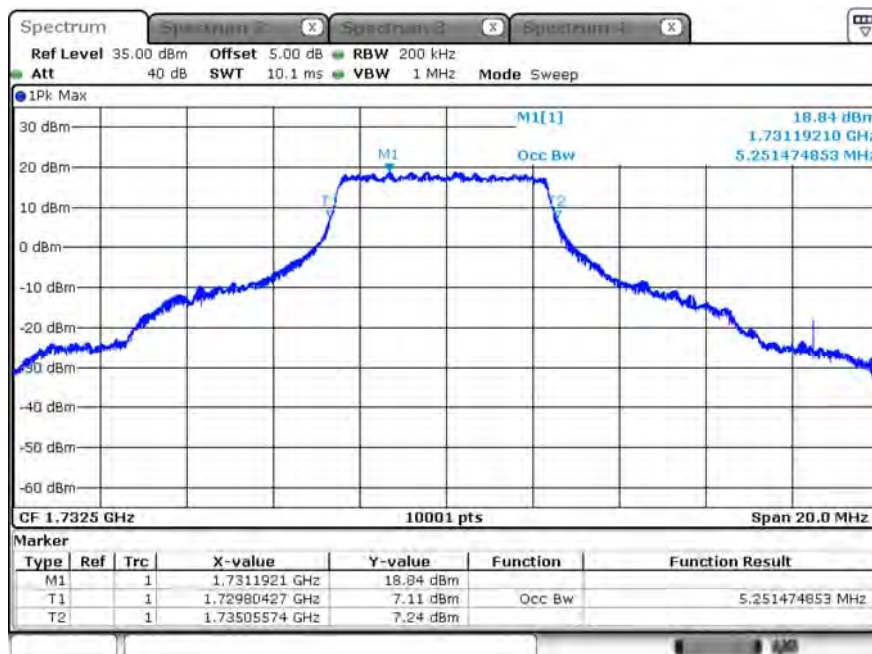
Date: 9 APR 2019 16:53:57

99% BW_CH20175_20M_QPSK_100RB0



Date: 9 APR 2019 16:45:19

99% BW_CH20175_20M_16-QAM_27RB36



Date: 9 APR 2019 16:47:41

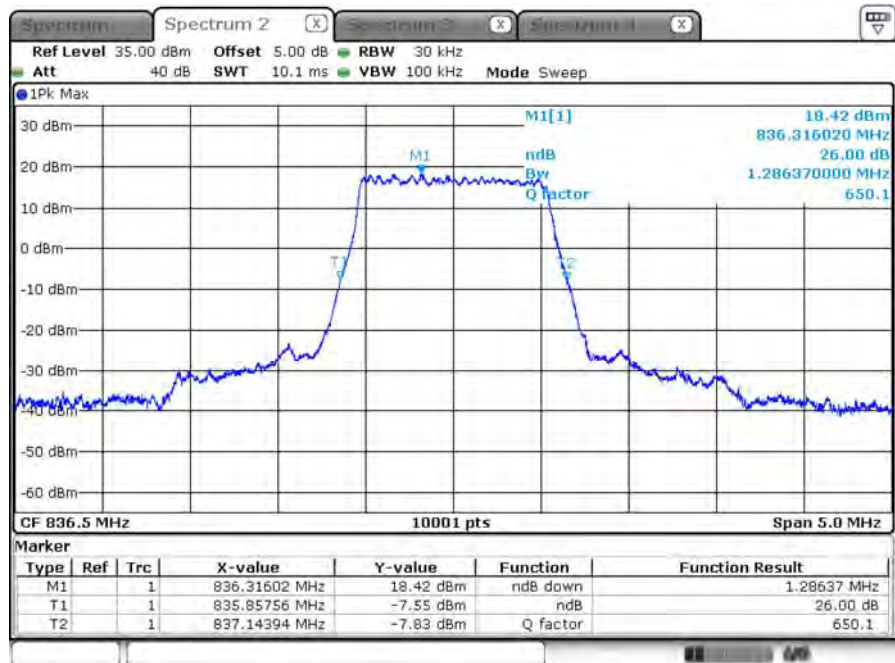
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

1.4M_QPSK

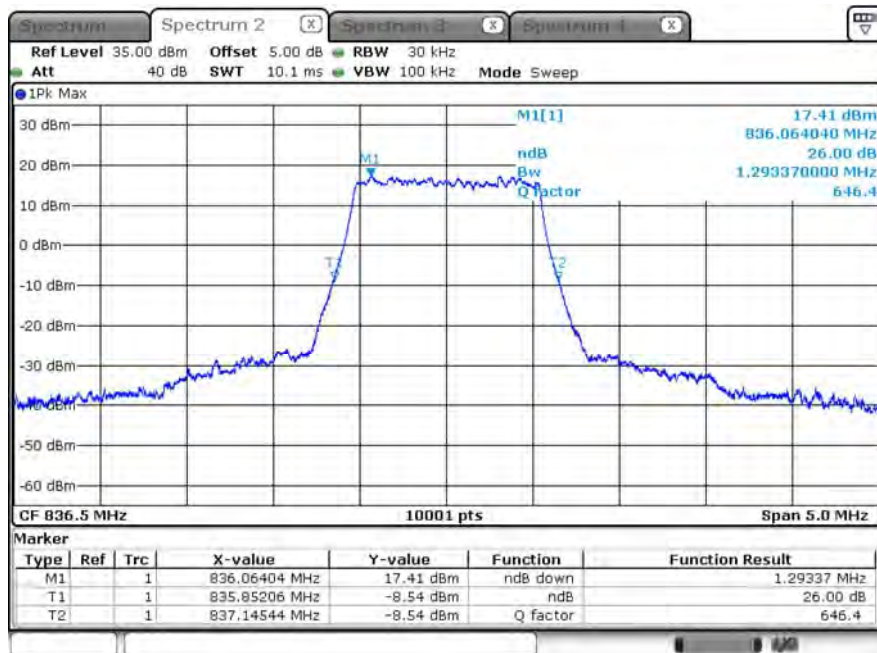
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	1.286	1.088	N/A

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

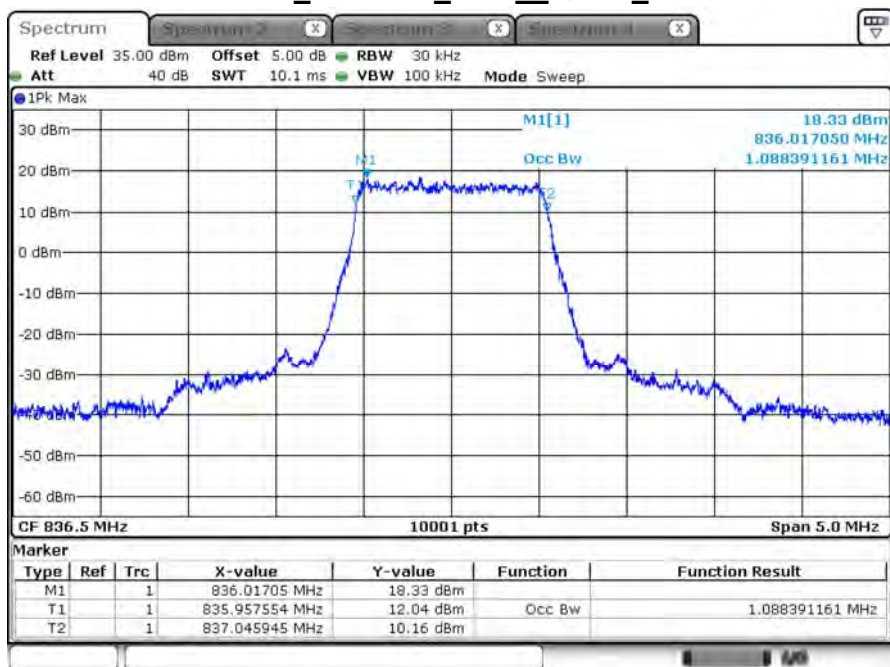
-26dB BW_CH20525_1.4M_QPSK_6RB0

Date: 9 APR 2019 17:09:25

-26dB BW_CH20525_1.4M_16-QAM_6RB0

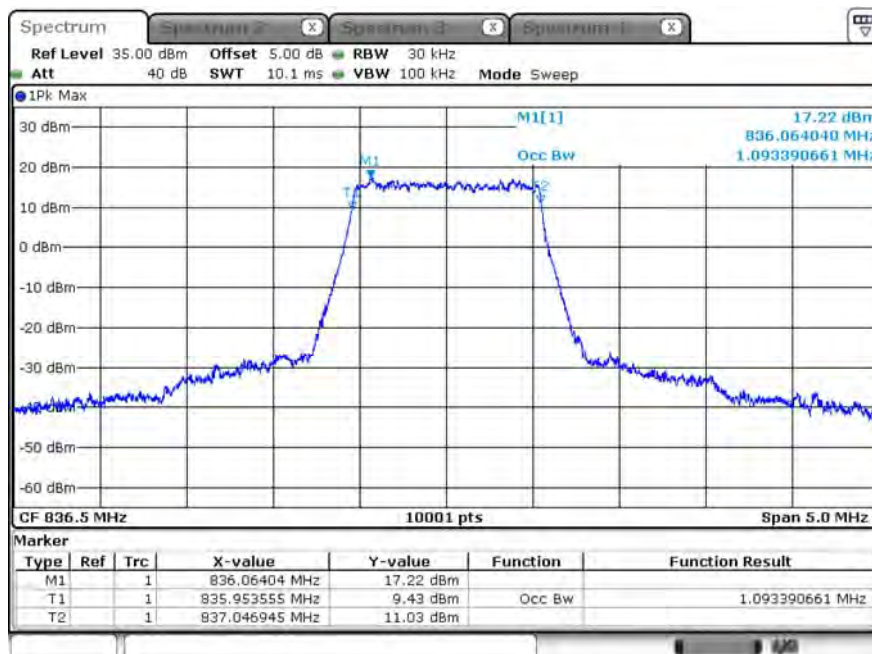
Date: 9 APR 2019 17:08:22

99% BW_CH20525_1.4M_QPSK_6RB0



Date: 9 APR 2019 17:03:34

99% BW_CH20525_1.4M_16-QAM_6RB0



Date: 9 APR 2019 17:06:50

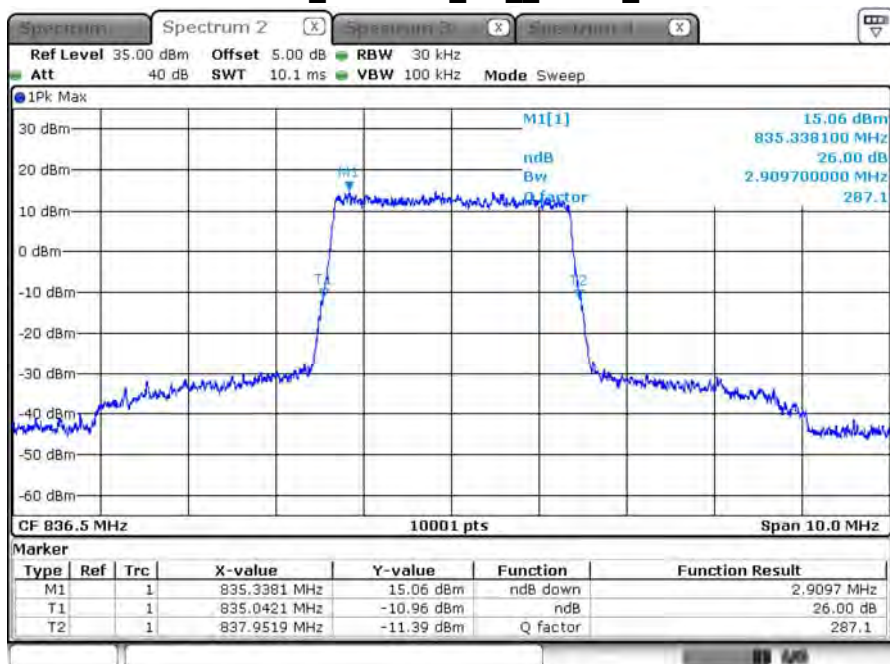
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

3M_QPSK

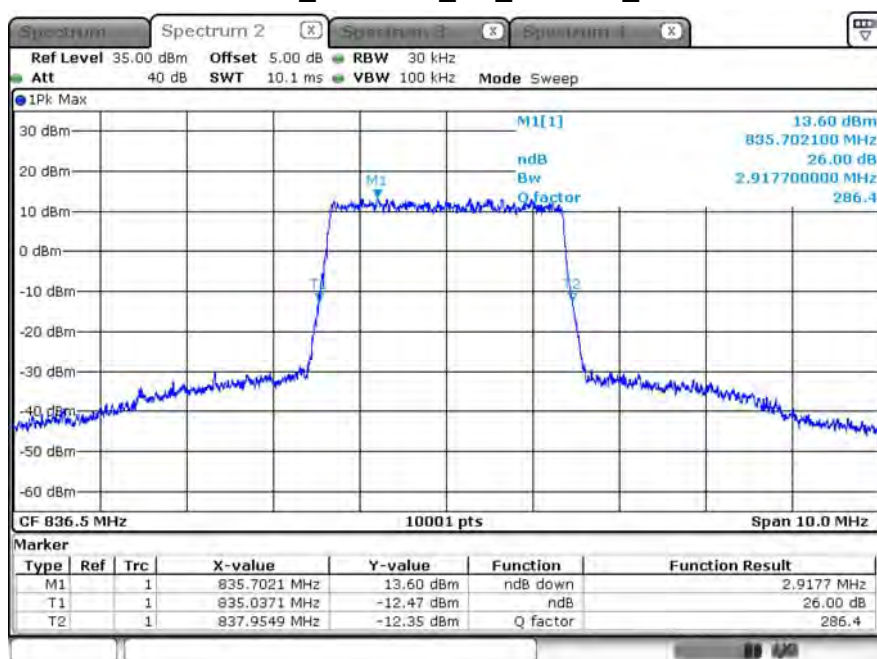
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	2.909	2.679	N/A

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

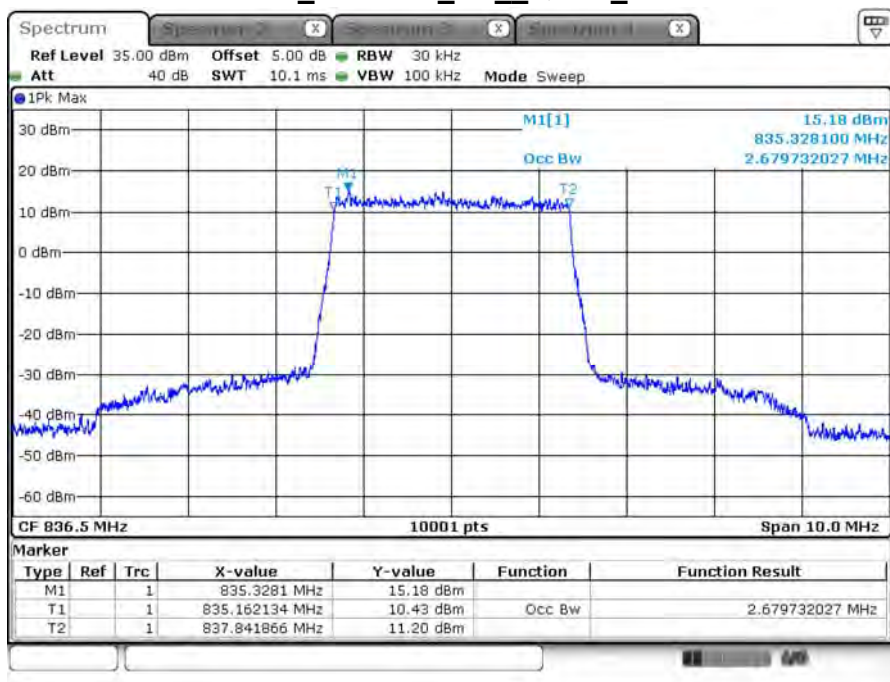
-26dB BW_CH20525_3M__QPSK_15RB0

Date: 9 APR 2019 17:31:17

-26dB BW_CH20525_3M_16-QAM_15RB0

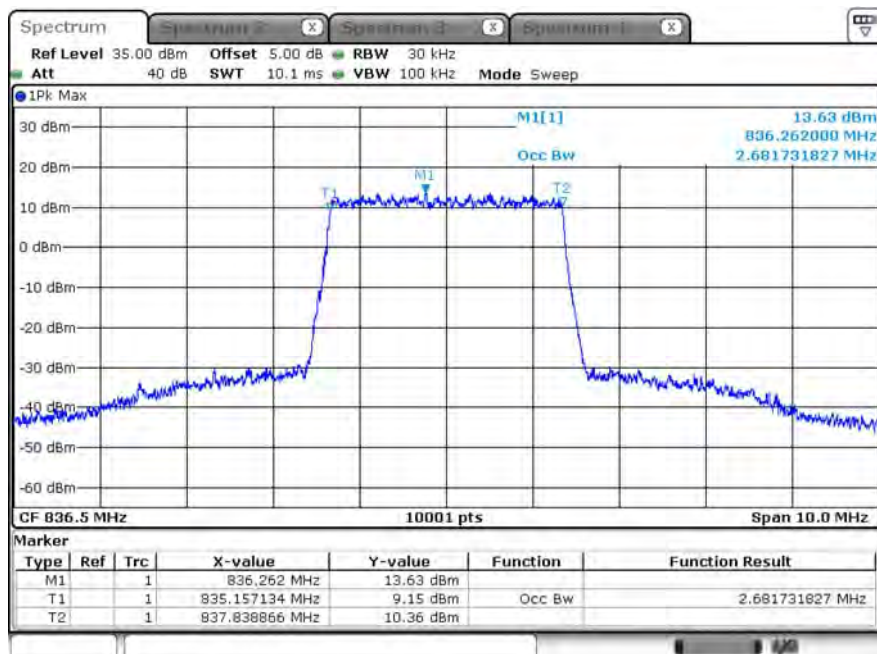
Date: 9 APR 2019 17:27:05

99% BW_CH20525_3M_QPSK_15RB0



Date: 9 APR 2019 17:25:43

99% BW_CH20525_3M_16-QAM_15RB0



Date: 9 APR 2019 17:26:42

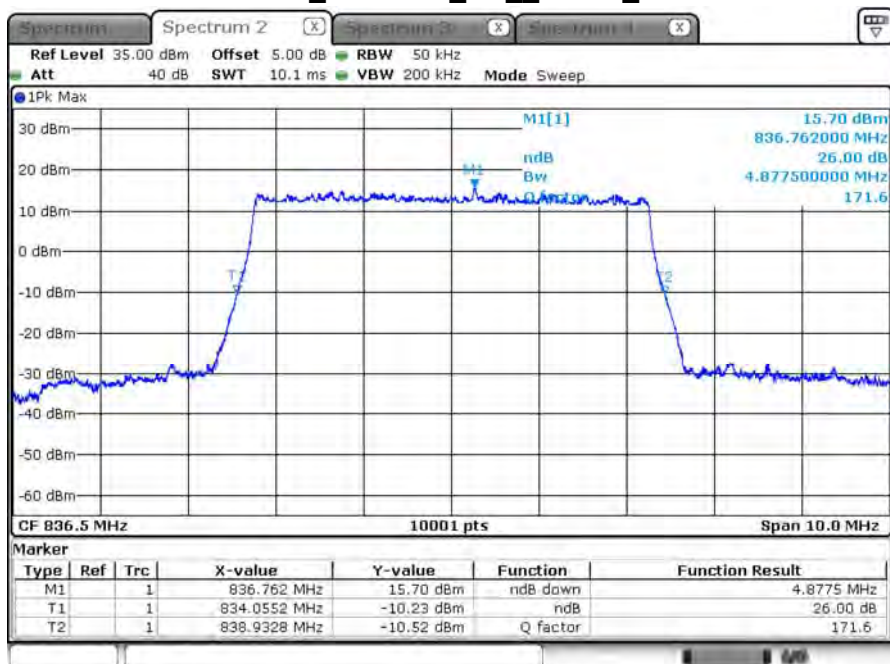
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK

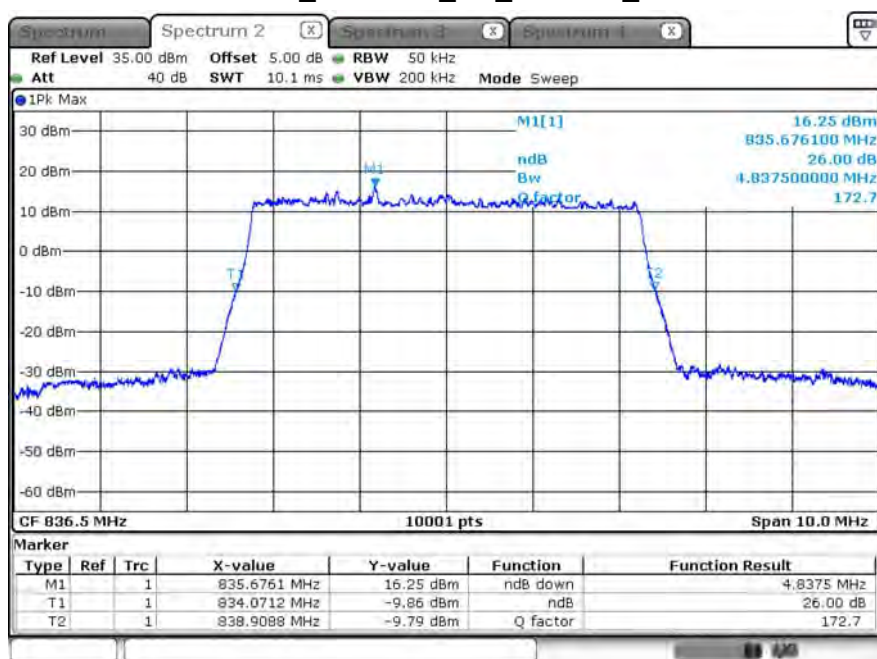
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
836.5	4.877	4.478	N/A

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

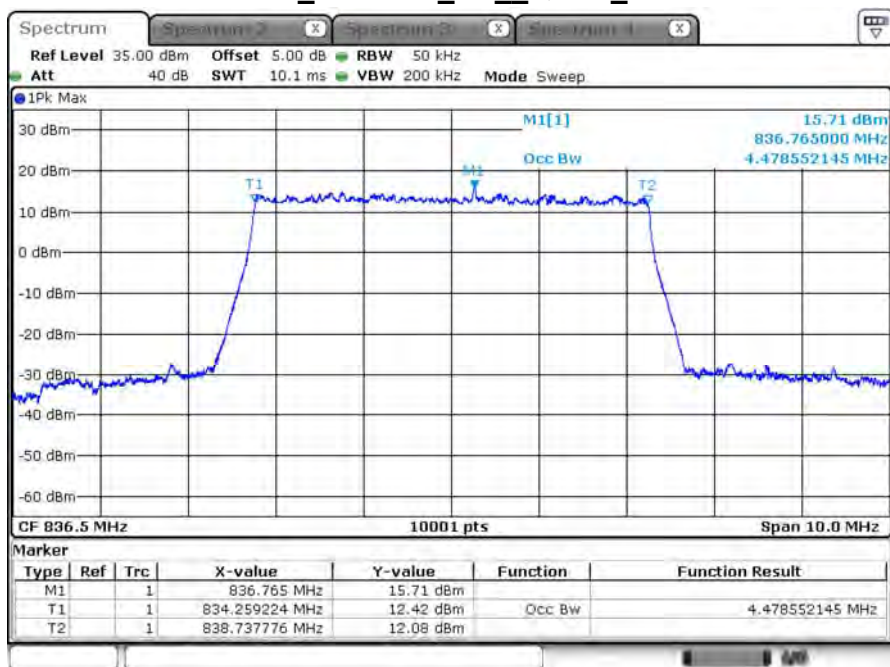
-26dB BW_CH20525_5M__QPSK_25RB0

Date: 9 APR 2019 17:40:10

-26dB BW_CH20525_5M_16-QAM_25RB0

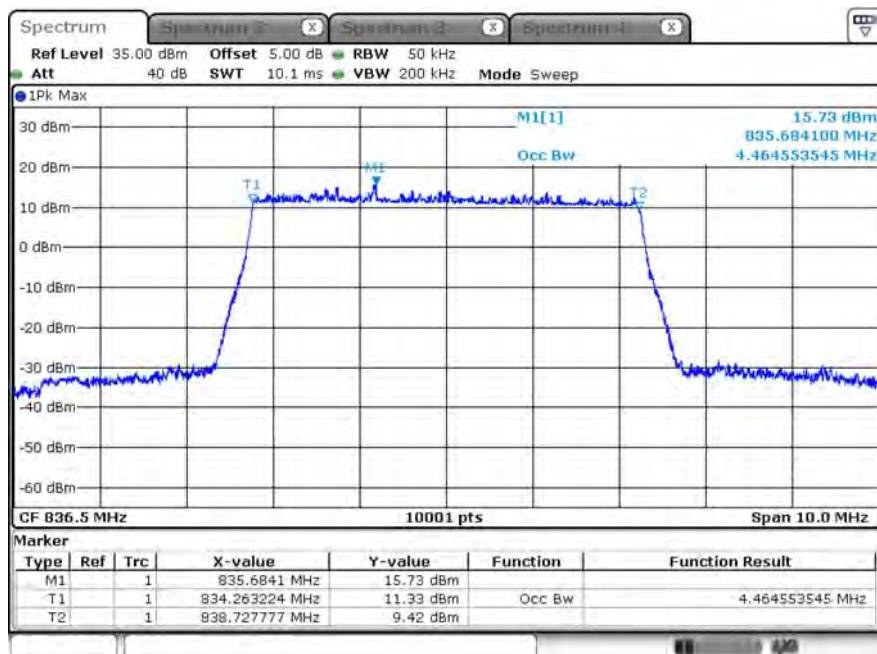
Date: 9 APR 2019 17:38:45

99% BW_CH20525_5M_QPSK_25RB0



Date: 9 APR.2019 17:37:01

99% BW_CH20525_5M_16-QAM_25RB0

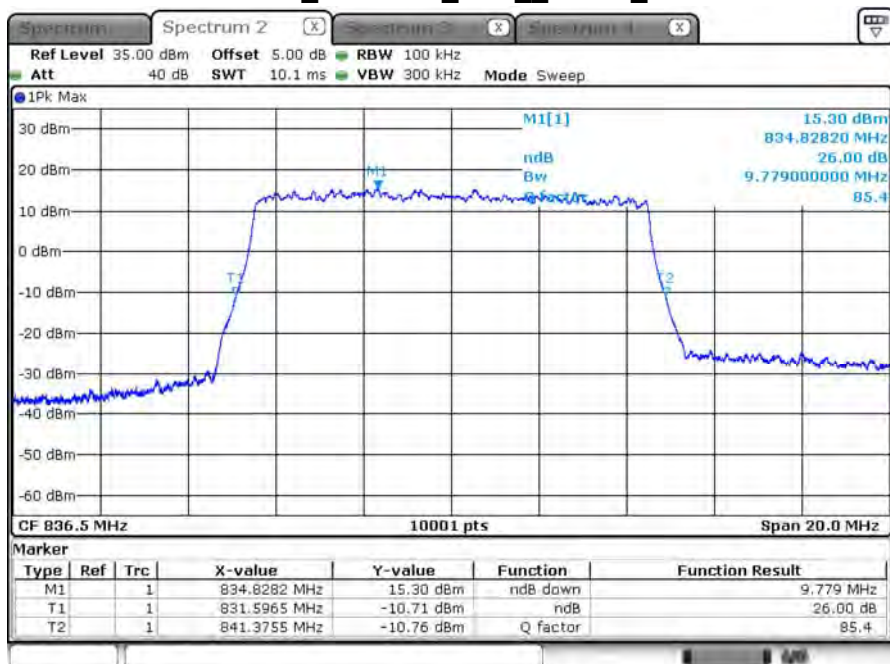


Date: 9 APR.2019 17:37:44

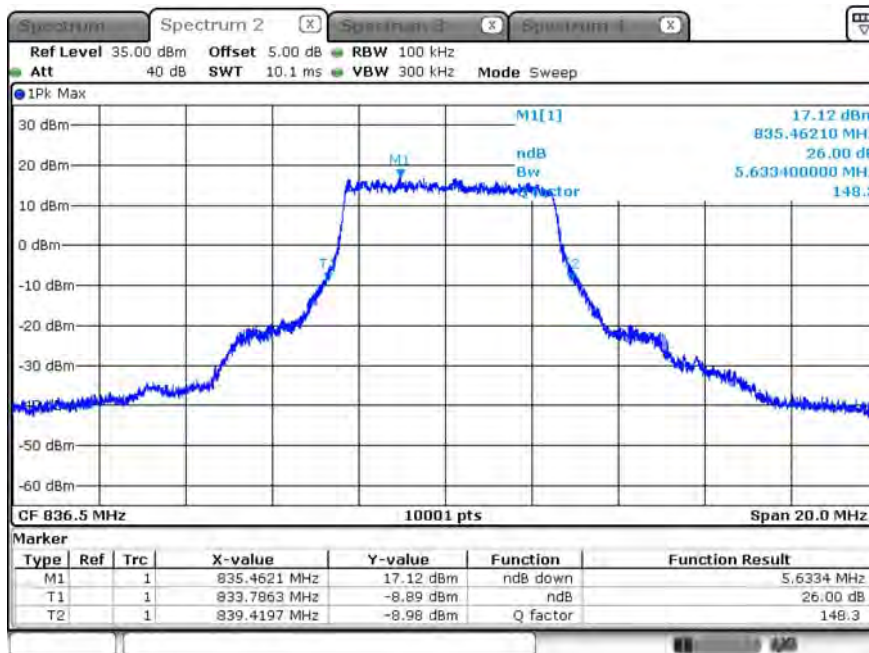
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 5		
Date of Test	2019/04/09	Test Site	SR10-H

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

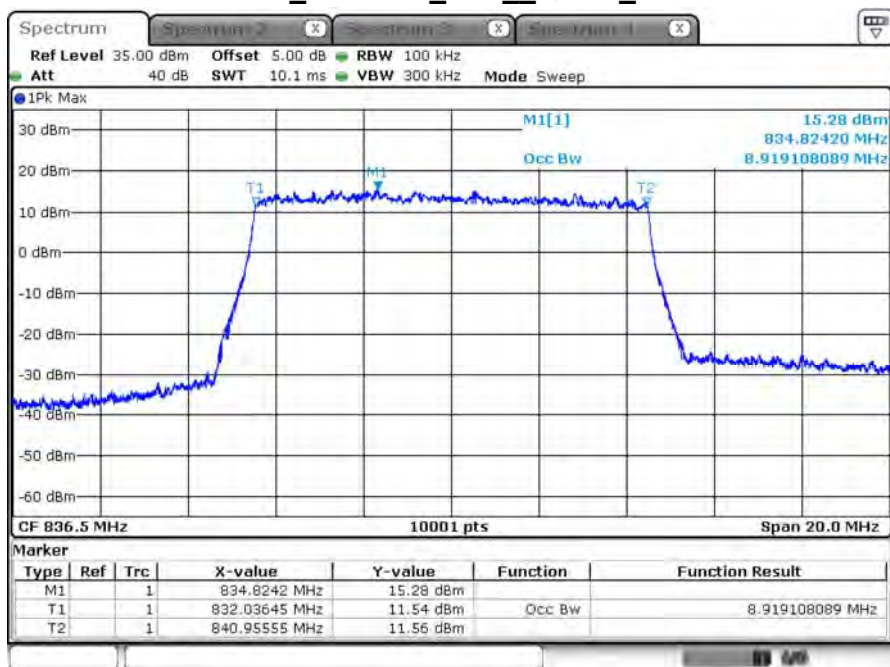
-26dB BW_CH20525_10M_QPSK_50RB0

Date: 9 APR 2019 17:53:51

-26dB BW_CH20525_10M_16-QAM_27RB12

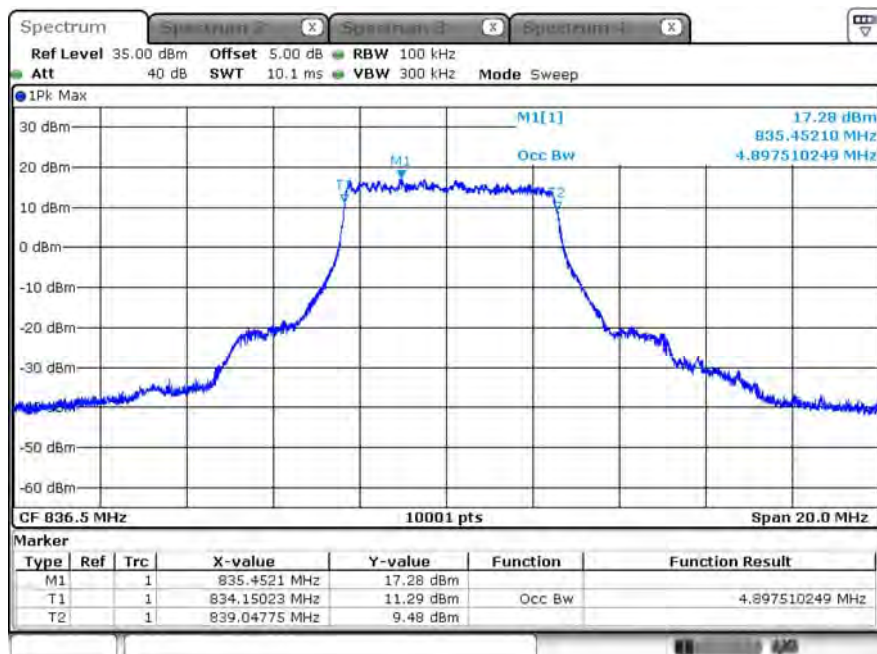
Date: 9 APR 2019 17:59:25

99% BW_CH20525_10M__QPSK_50RB0



Date: 9 APR 2019 17:48:13

99% BW_CH20525_10M_16-QAM_27RB12



Date: 9 APR 2019 17:58:45

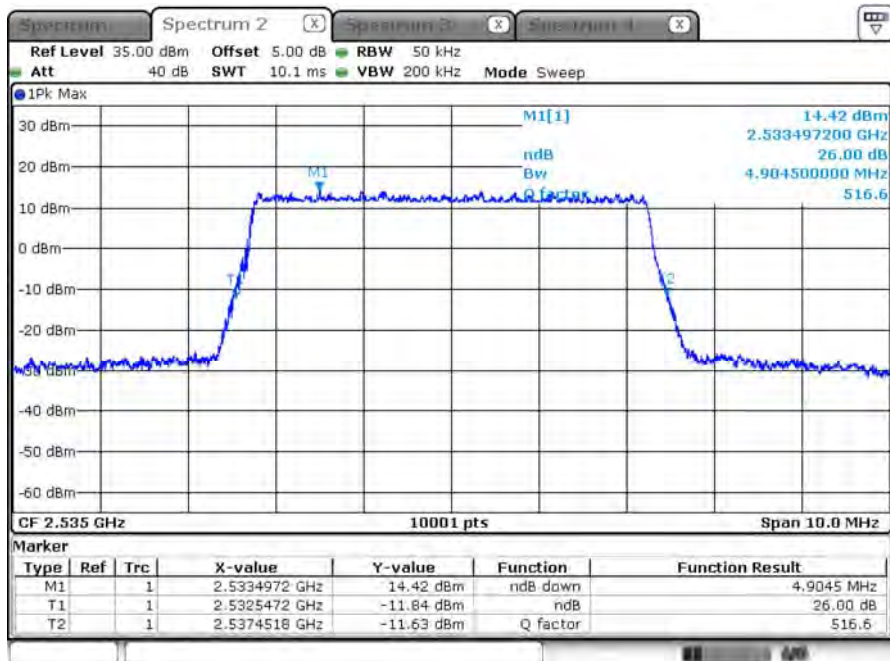
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

5M_QPSK

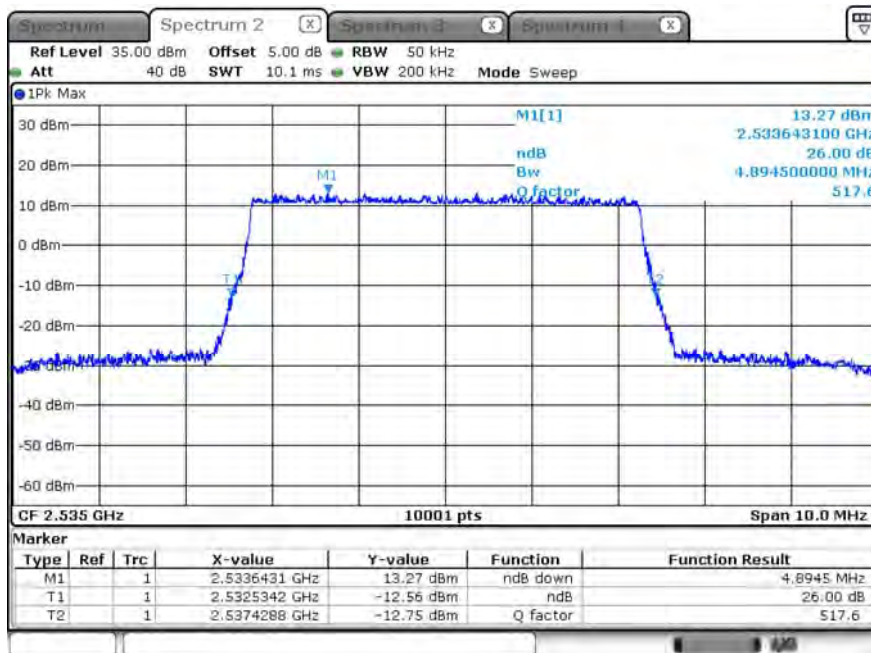
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	4.904	4.488	N/A

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

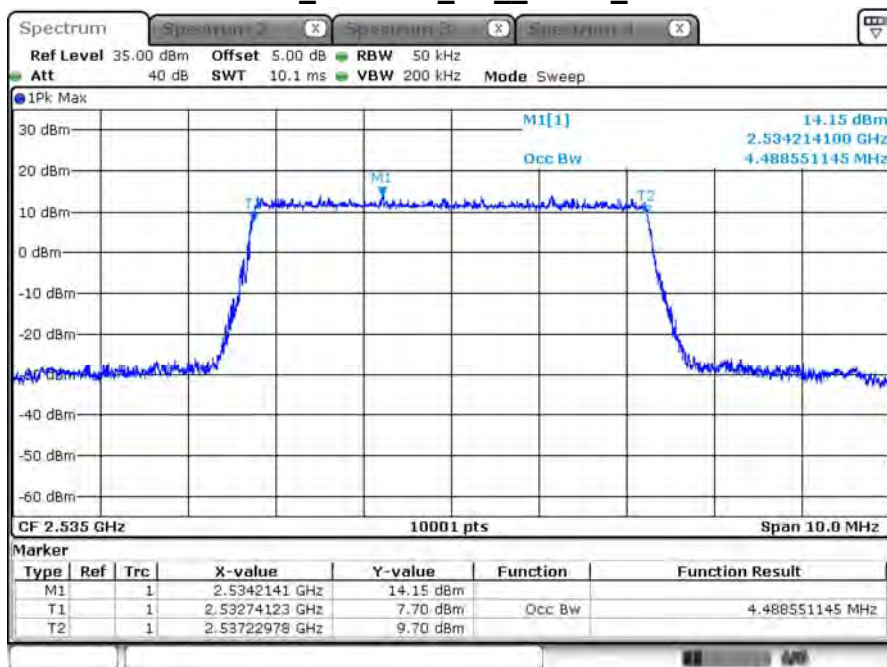
-26dB BW_CH21100_5M_QPSK_25RB0

Date: 9 APR 2019 18:20:47

-26dB BW_CH21100_5M_16-QAM_25RB0

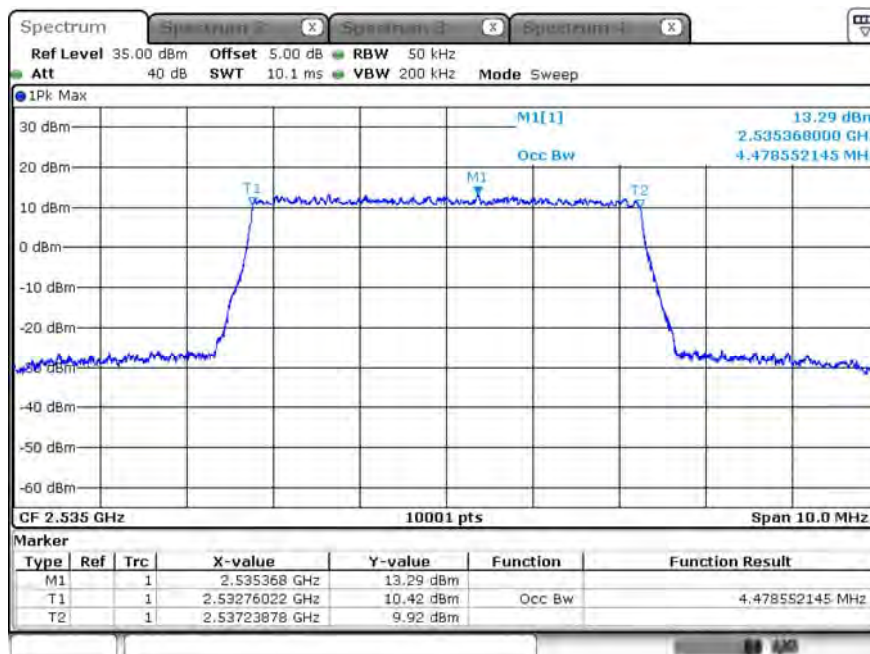
Date: 9 APR 2019 18:19:50

99% BW_CH21100_5M_QPSK_25RB0



Date: 9 APR 2019 18:17:32

99% BW_CH21100_5M_16-QAM_25RB0

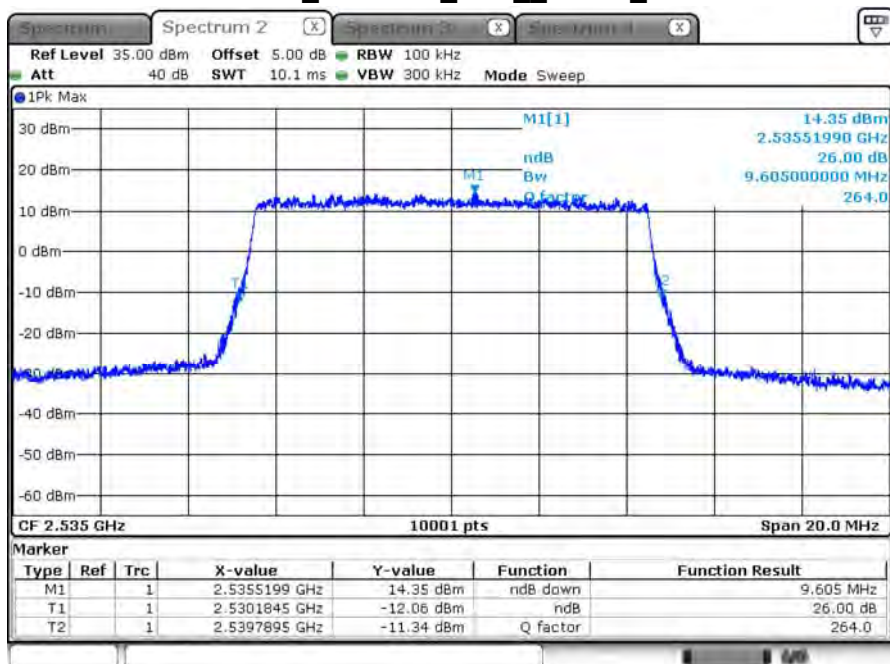


Date: 9 APR 2019 18:18:56

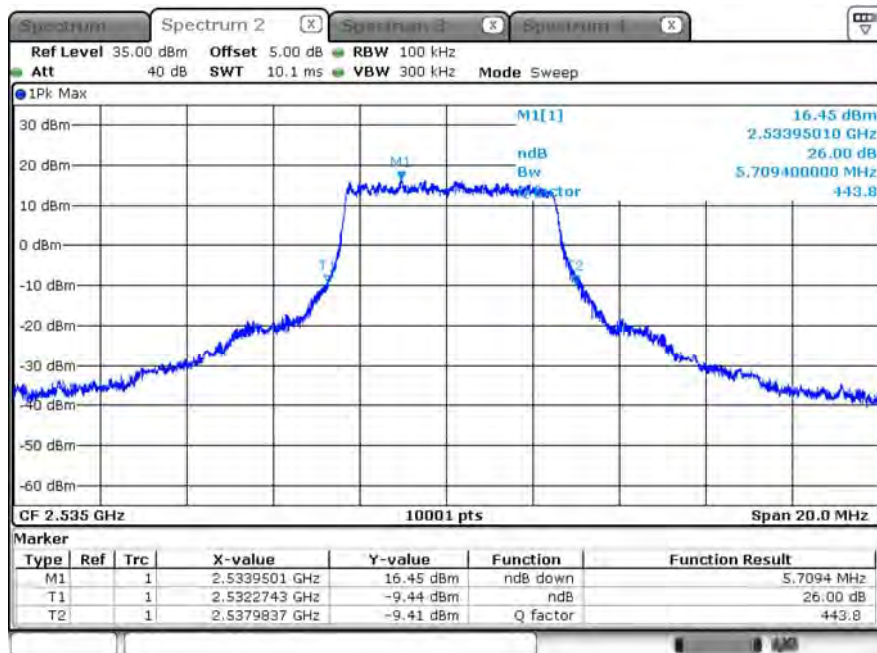
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

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

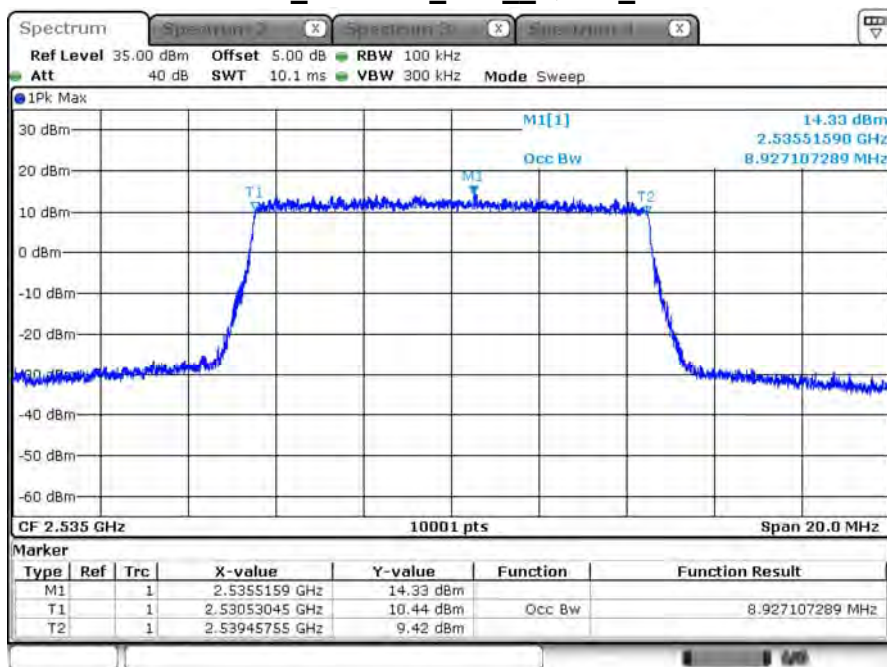
-26dB BW_CH21100_10M_QPSK_50RB0

Date: 9 APR.2019 18:25:34

-26dB BW_CH21100_10M_16-QAM_27RB12

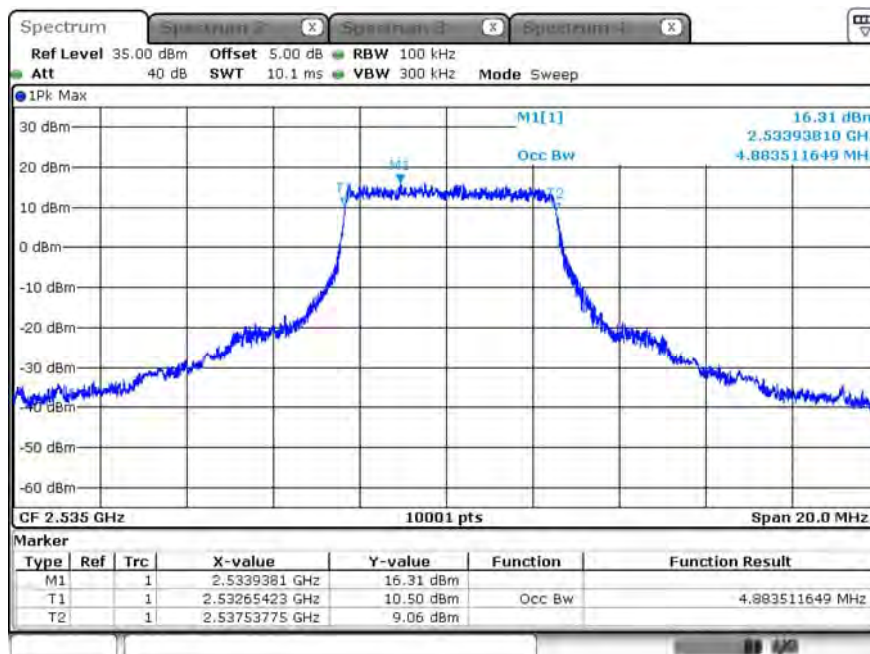
Date: 9 APR.2019 18:23:27

99% BW_CH21100_10M_QPSK_50RB0



Date: 9 APR 2019 18:24:51

99% BW_CH21100_10M_16-QAM_27RB12

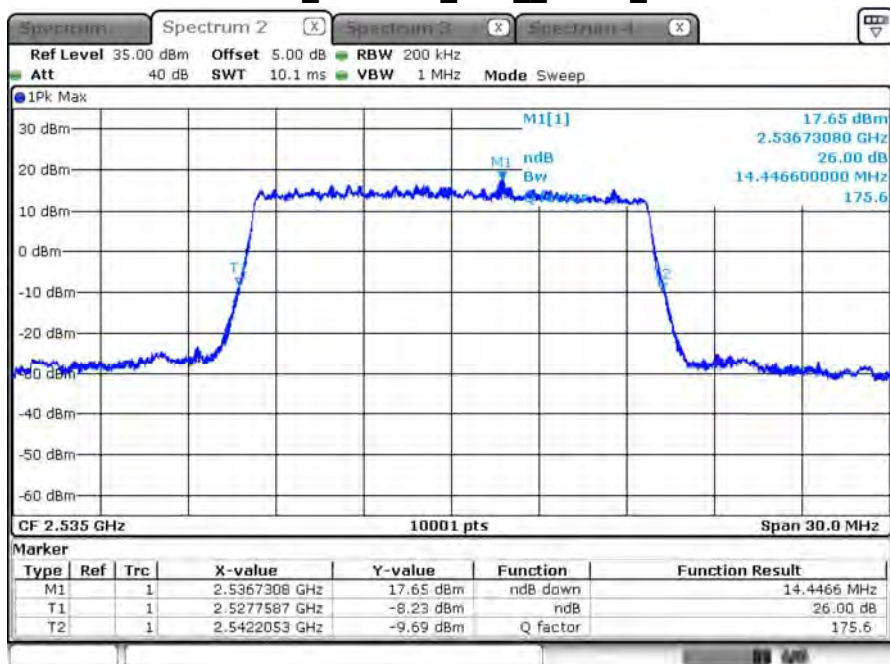


Date: 9 APR 2019 18:22:24

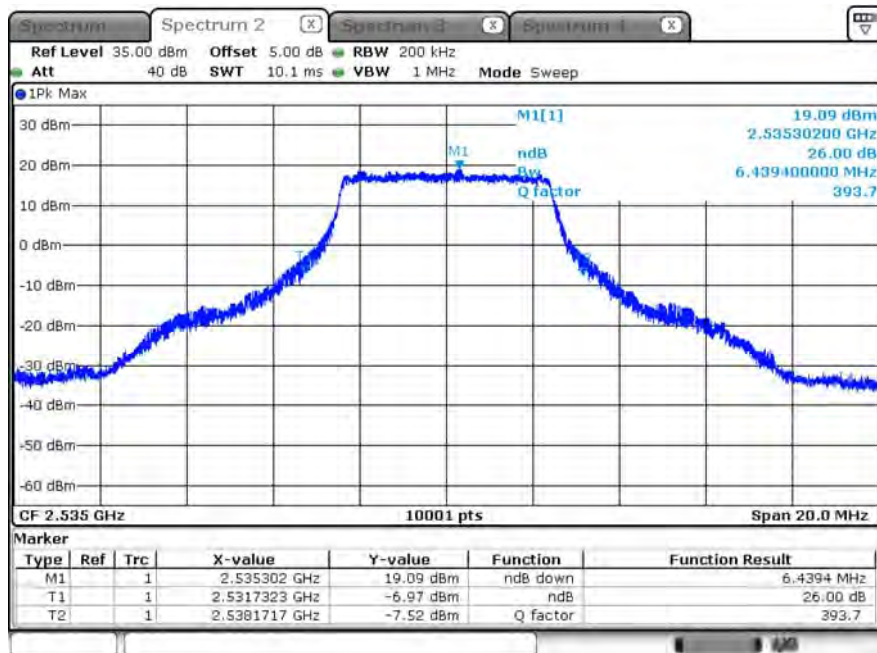
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

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

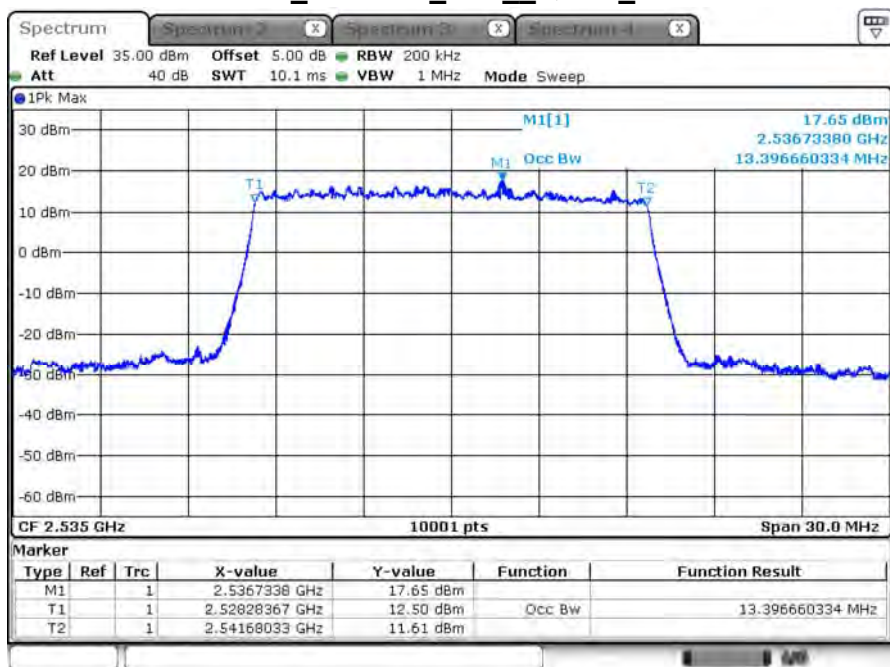
-26dB BW_CH21100_15M__QPSK_75RB0

Date: 9 APR 2019 18:30:15

-26dB BW_CH21100_15M_16-QAM_27RB24

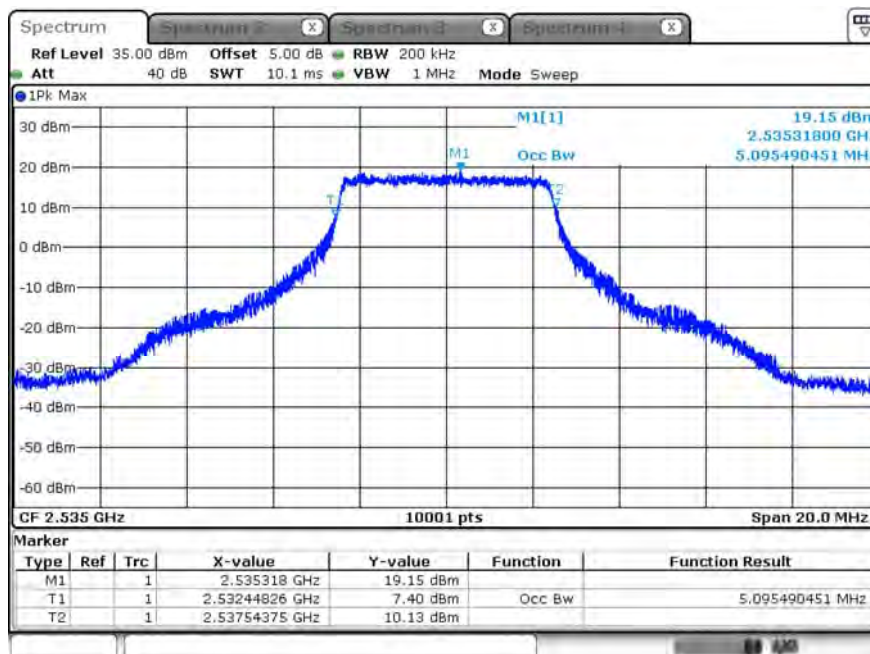
Date: 9 APR 2019 18:36:50

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

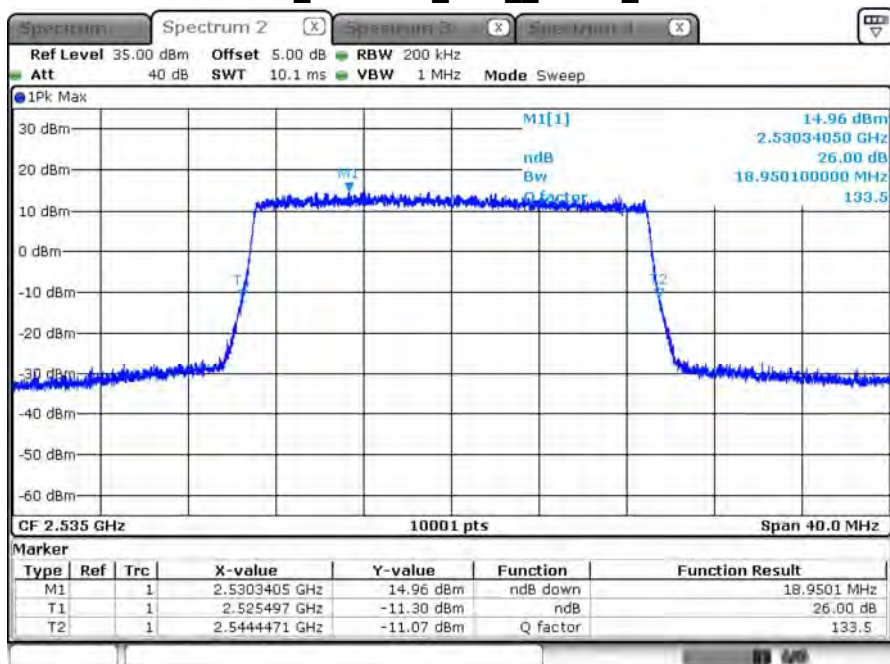
Product	Module		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 7		
Date of Test	2019/04/09	Test Site	SR10-H

20M_QPSK

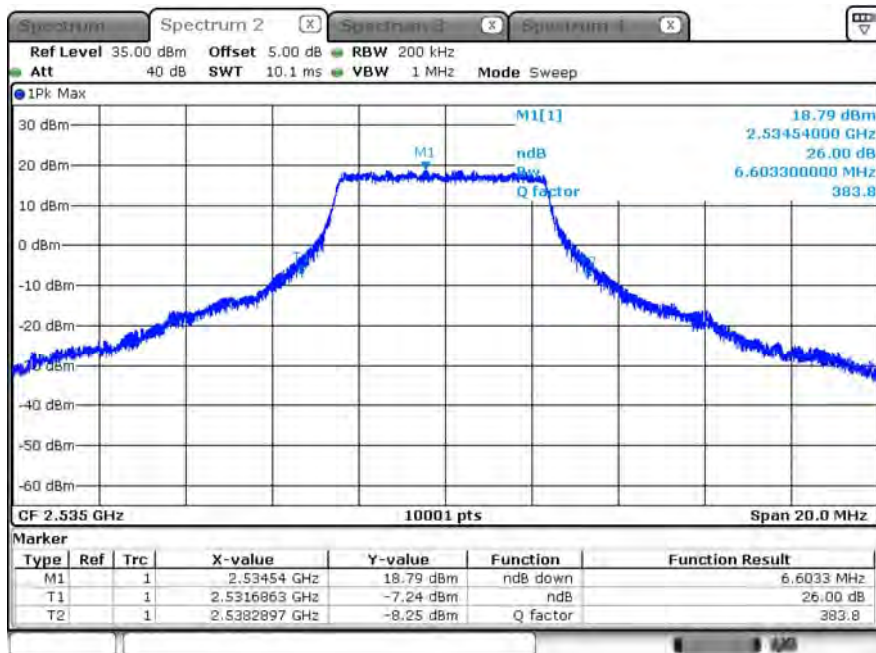
Frequency (MHz)	-26dB BW Measure Level (MHz)	99% BW Measure Level (MHz)	Limit (MHz)
2535.0	18.950	17.826	N/A

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

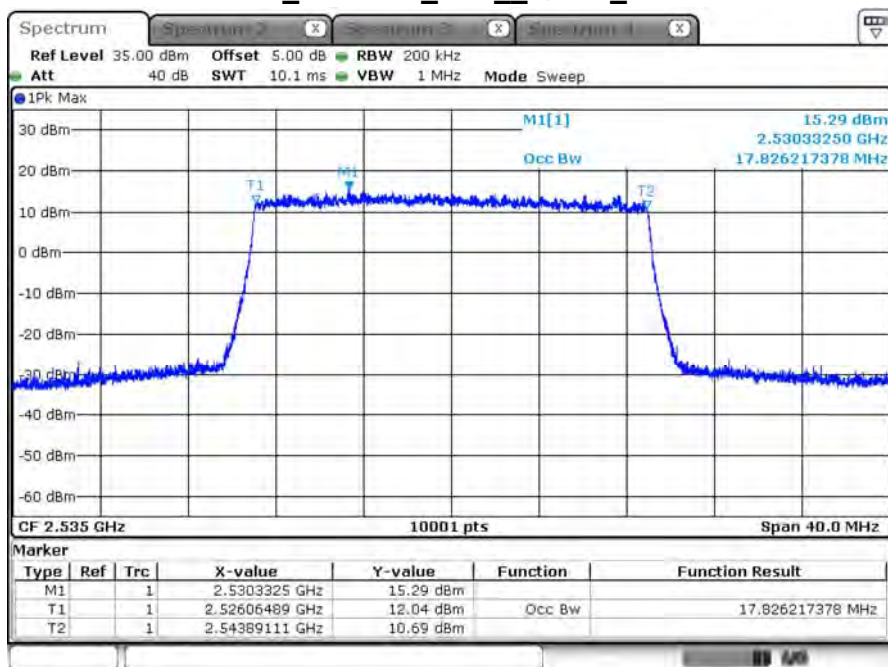
-26dB BW_CH21100_20M_QPSK_100RB0

Date: 9 APR 2019 18:41:44

-26dB BW_CH21100_20M_16-QAM_27RB36

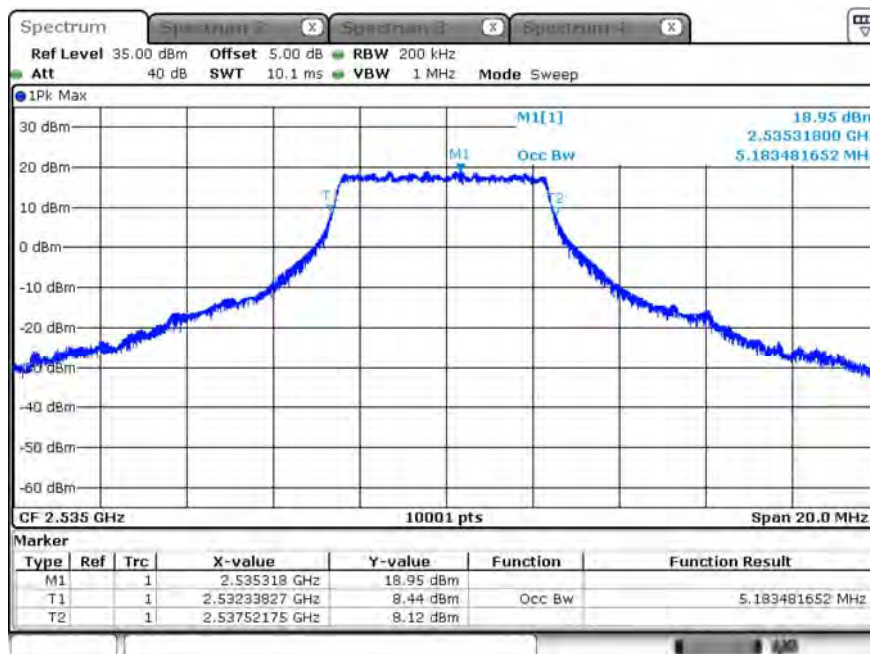
Date: 9 APR 2019 18:39:22

99% BW_CH21100_20M_QPSK_100RB0



Date: 9 APR 2019 18:40:28

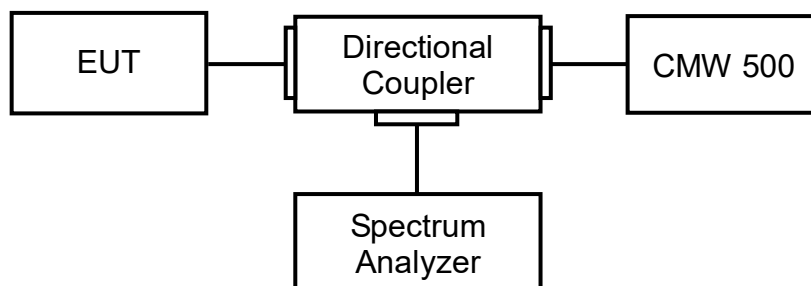
99% BW_CH21100_20M_16-QAM_27RB36



Date: 9 APR 2019 18:38:38

5. Peak To Average Ratio

5.1. Test Setup



5.2. Test Procedure

1. Set resolution/measurement bandwidth $\geq$ 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-clause 5.7.2

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



Date: 10 APR 2019 12:34:42

B2_CH18900_1.4M_1RB2_QPSK



Date: 10 APR 2019 14:35:12

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_

Date: 10.APR 2019 14:34:35

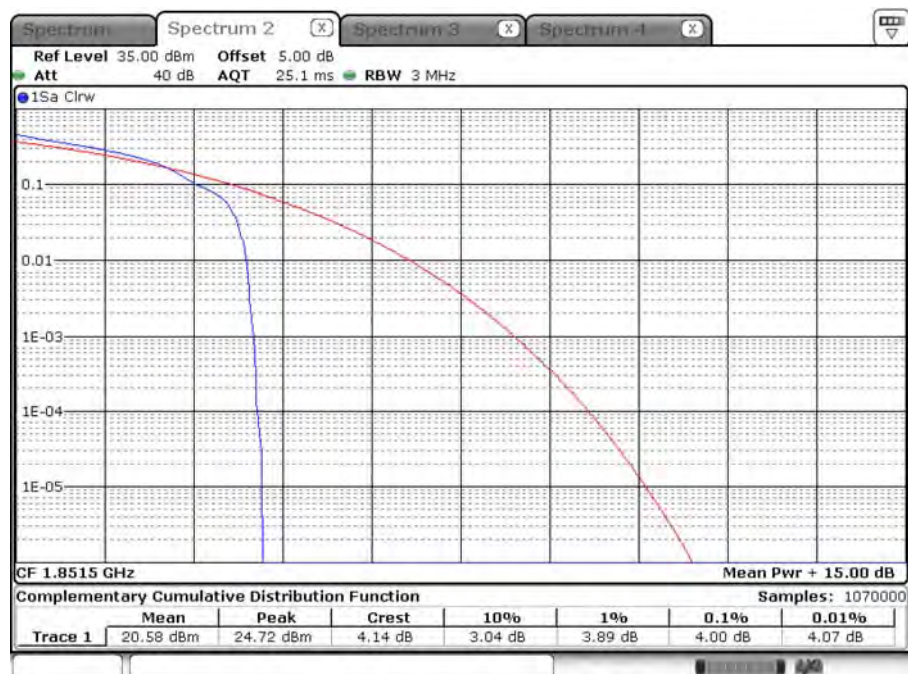
B2_CH19193_1.4M_1RB2_16-QAM

Date: 10.APR 2019 14:42:44

B2_CH18615_3M_1RB7_QPSK**B2_CH18900_3M_1RB7_QPSK**

B2_CH19185_3M_1RB7_QPSK

Date: 10.APR 2019 15:51:25

B2_CH18615_3M_1RB7_16-QAM

Date: 10.APR 2019 14:55:01

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

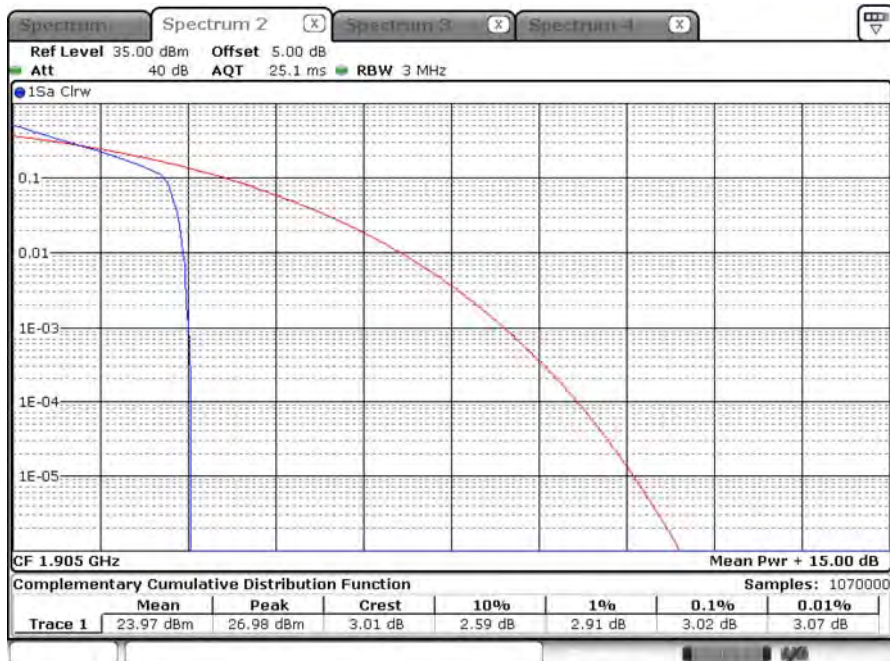
B2_CH18900_5M_1RB12_16-QAM

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**B2_CH18900_10M_1RB24_QPSK**

B2_CH19150_10M_1RB24_QPSK

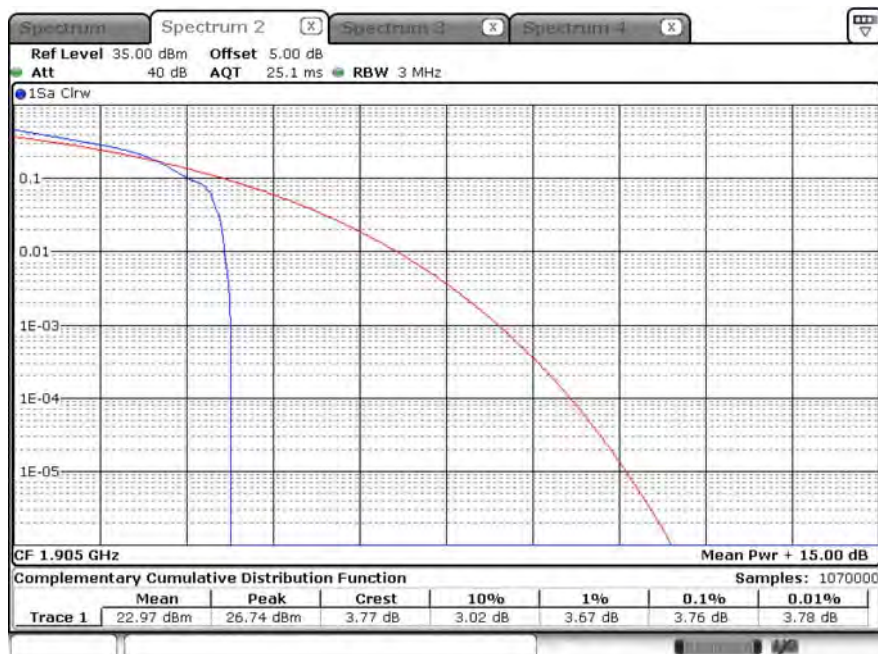
Date: 11.APR.2019 15:18:39

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

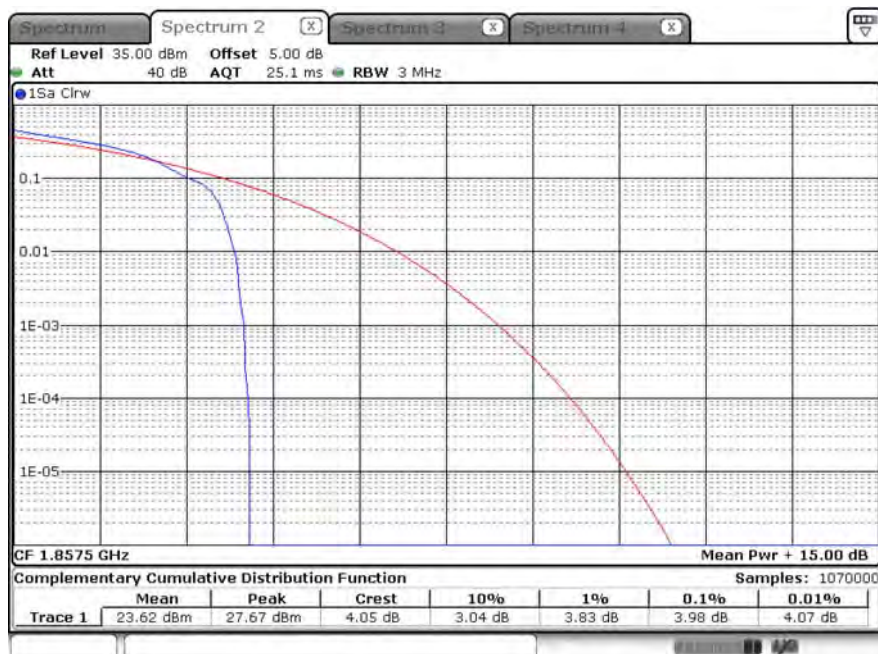
Date: 11.APR.2019 16:09:24

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

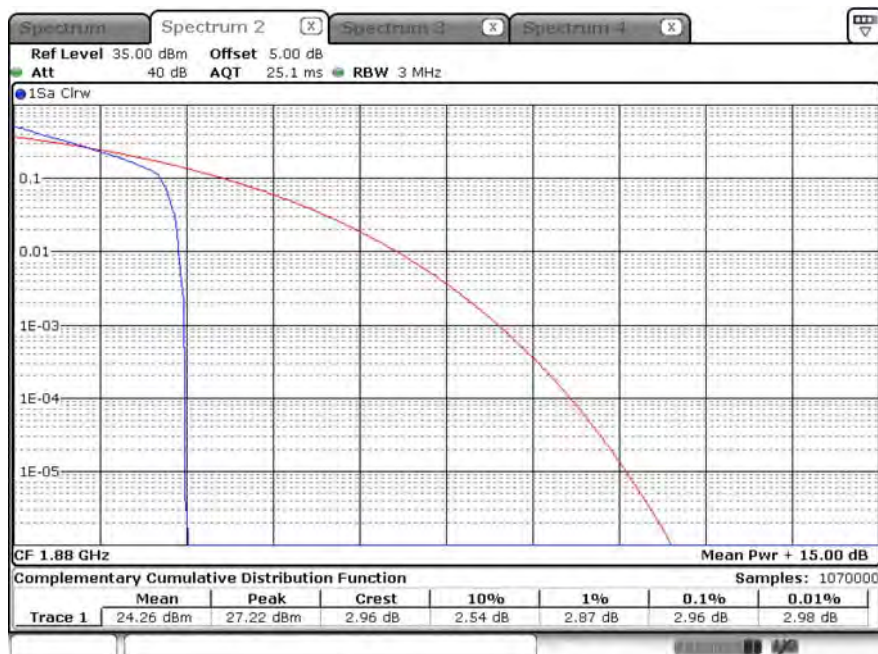
Date: 11.APR.2019 16:12:01

B2_CH19125_15M_1RB37_16-QAM

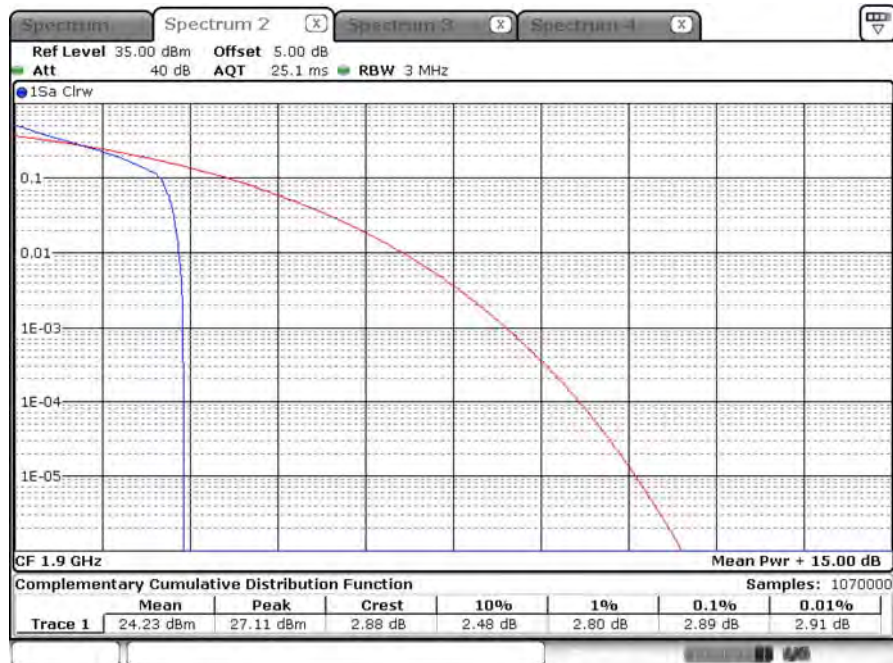
Date: 11.APR.2019 16:18:15

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

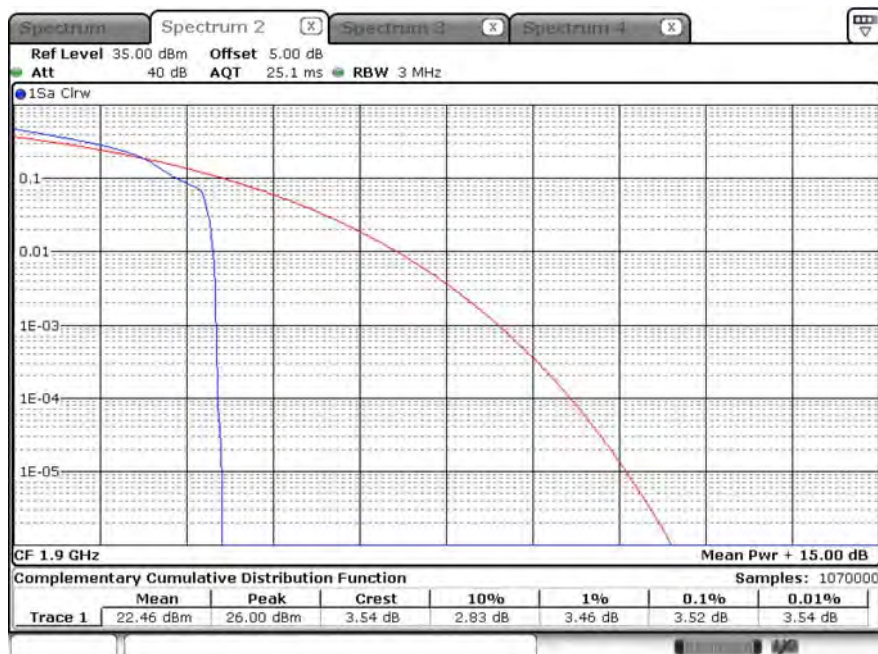
Date: 11.APR.2019 17:12:39

B2_CH18700_20M_1RB49_16-QAM

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

B2_CH18900_20M_1RB49_16-QAM

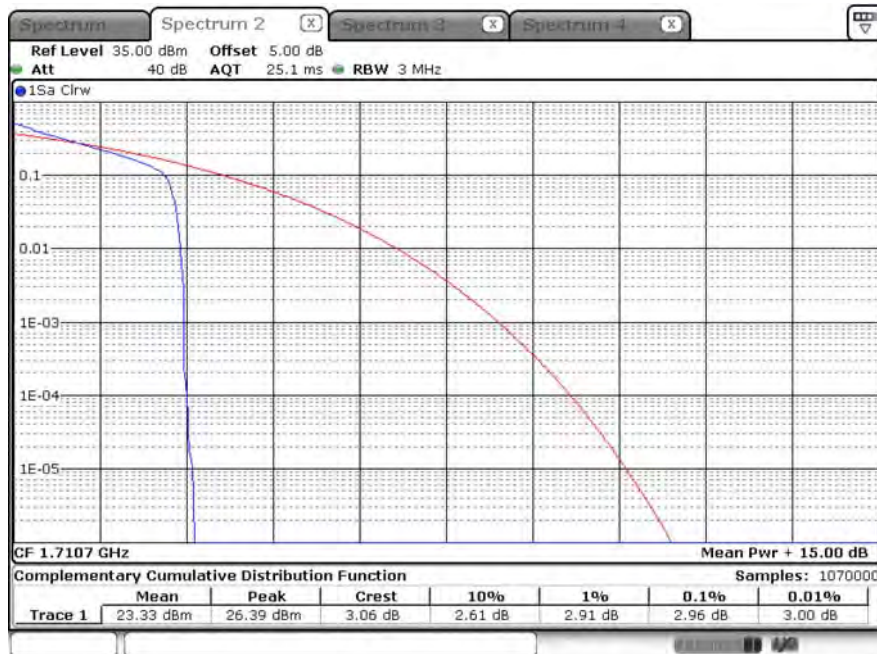
Date: 11.APR.2019 17:00:53

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

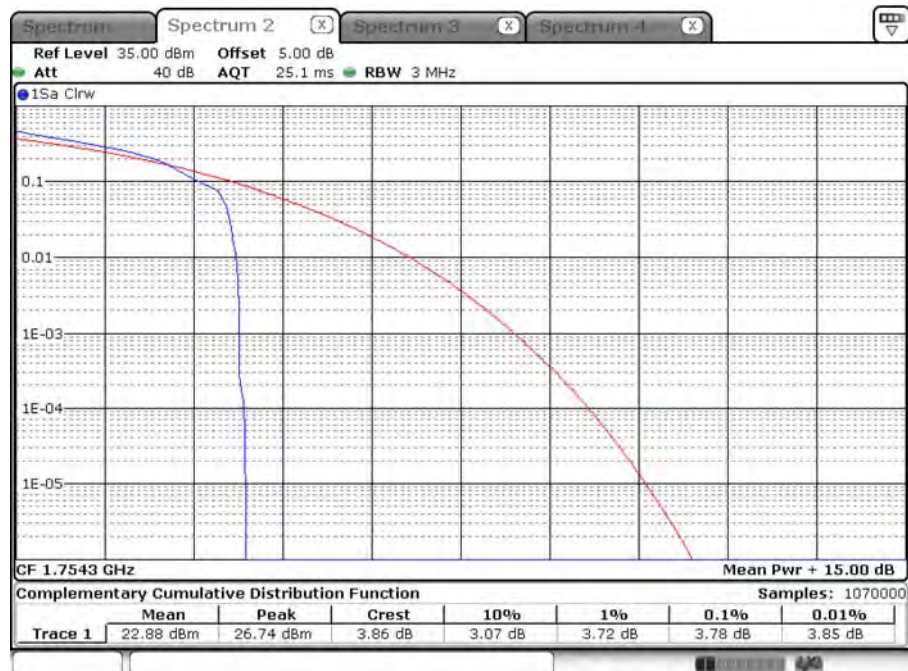
Date: 11.APR.2019 12:00:09

B4_CH19957_1.4M_1RB2_16-QAM

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

B4_CH20175_1.4M_1RB2_16-QAM

Date: 11 APR 2019 11:54:25

B4_CH20393_1.4M_1RB2_16-QAM

Date: 11 APR 2019 12:00:43

B4_CH19965_3M_1RB7_QPSK



Date: 11 APR 2019 12:04:32

B4_CH20175_3M_1RB7_QPSK



Date: 11 APR 2019 12:11:13

B4_CH20385_3M_1RB7_QPSK

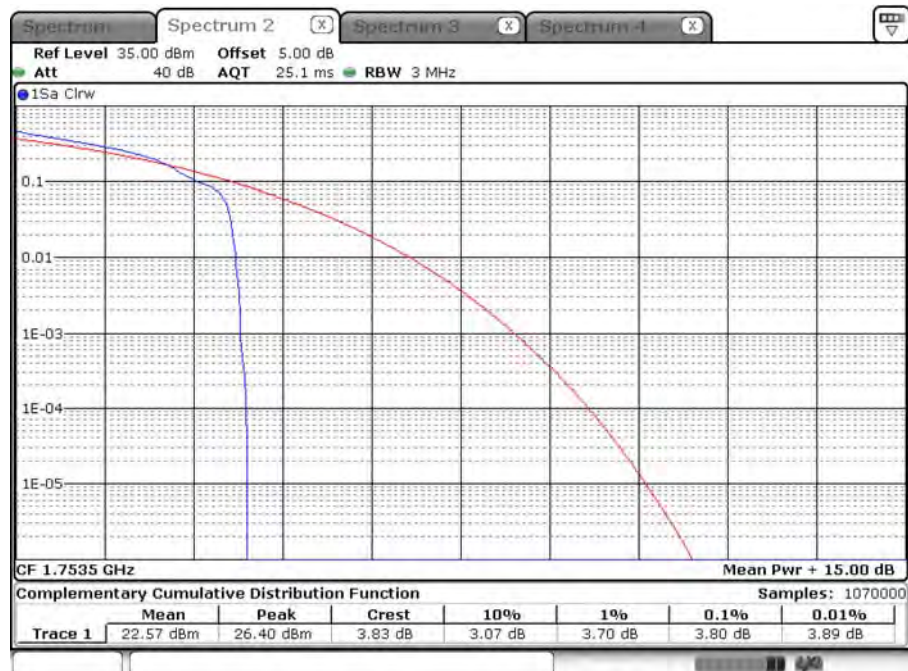
Date: 11 APR 2019 12:12:22

B4_CH19965_3M_1RB7_16-QAM

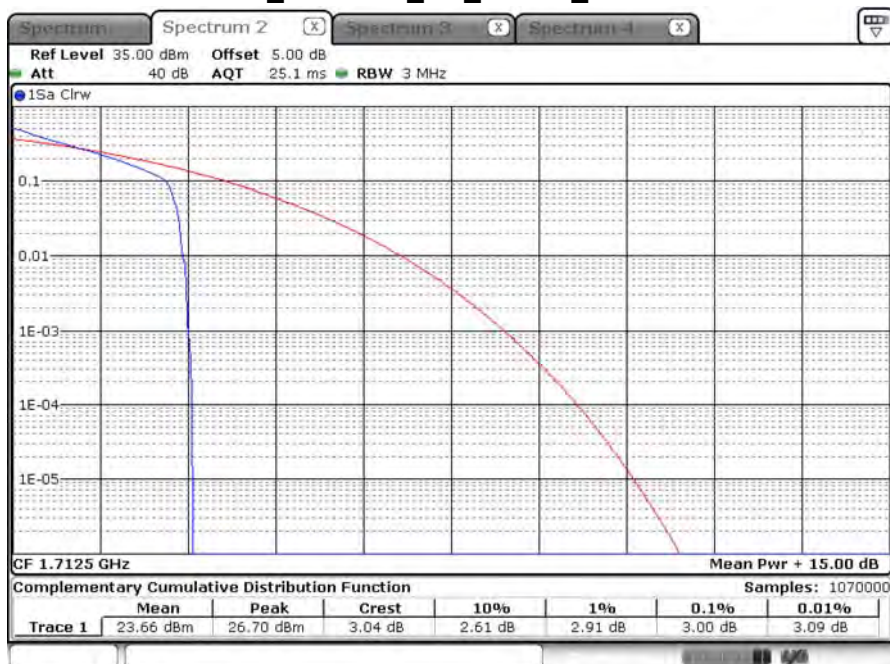
Date: 11 APR 2019 12:07:02

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

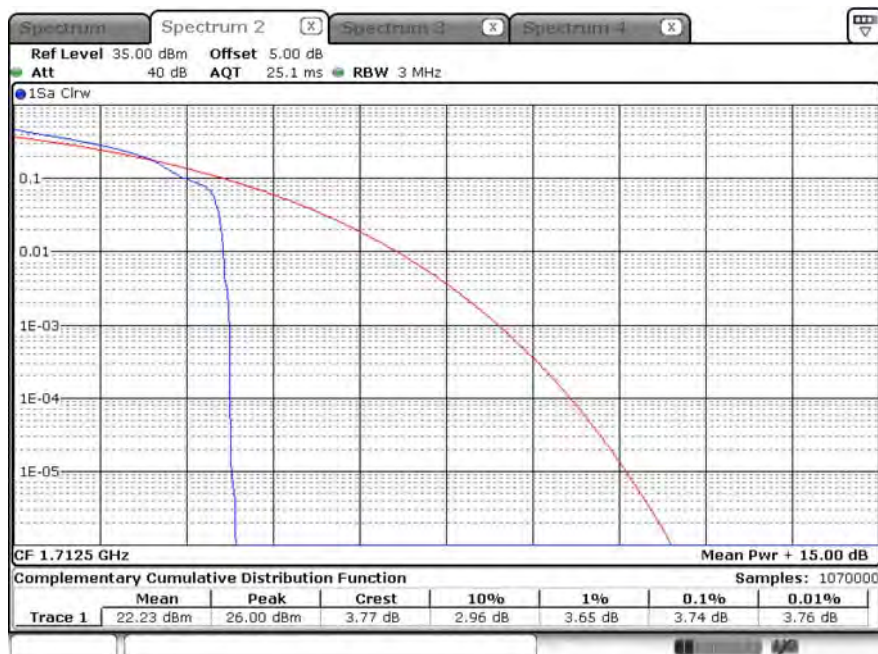
Date: 11.APR.2019 12:19:48

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

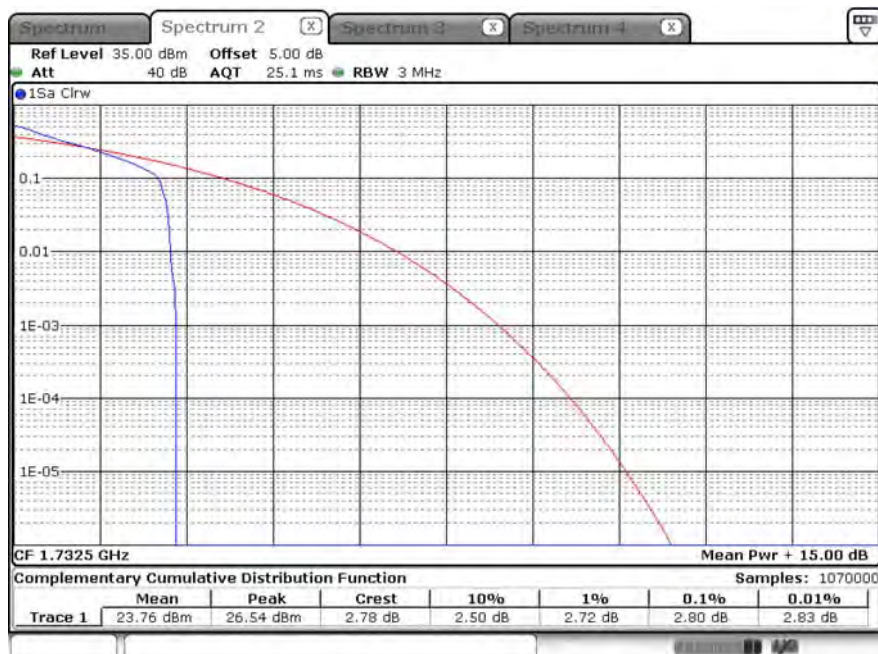
Date: 11.APR.2019 12:23:31

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

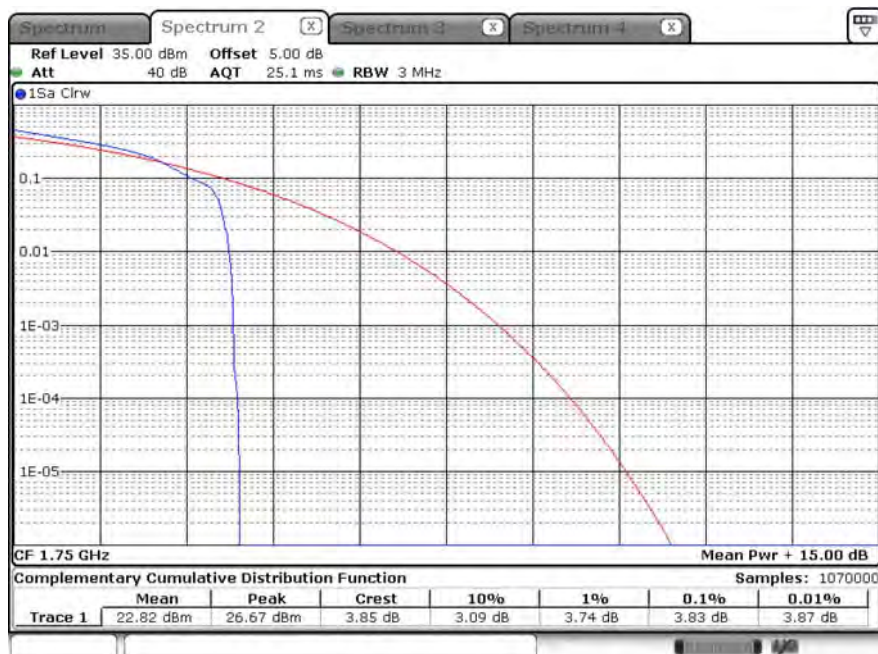
Date: 11 APR 2019 12:34:03

B4_CH20000_10M_1RB24_16-QAM

Date: 11 APR 2019 12:30:24

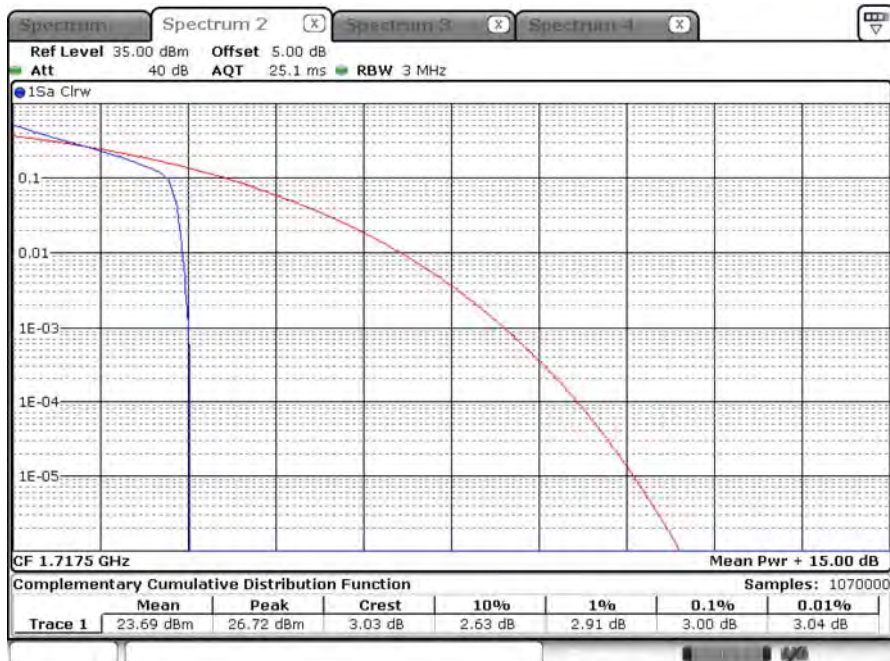
B4_CH20175_10M_1RB24_16-QAM

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

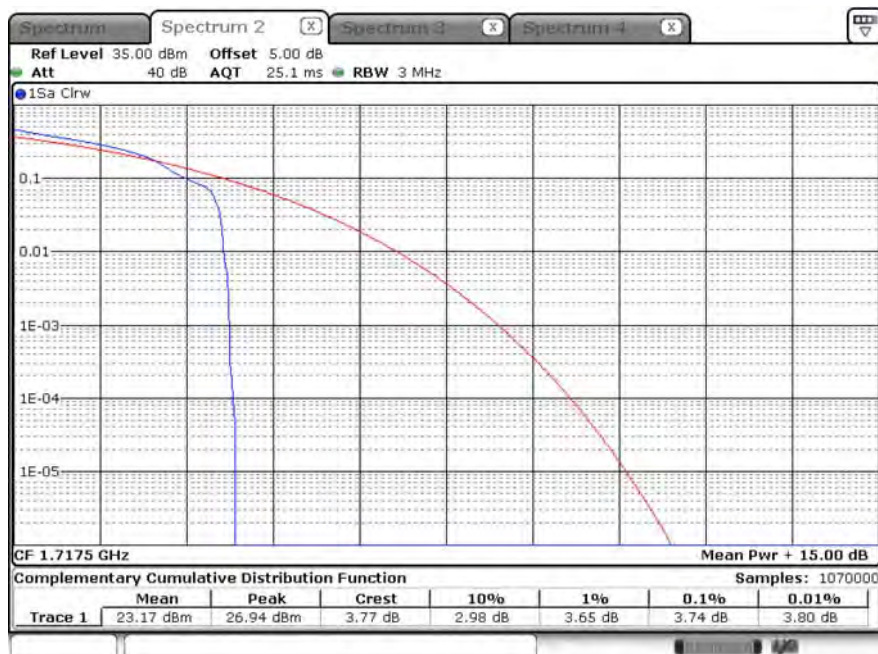
B4_CH20175_15M_1RB37_QPSK



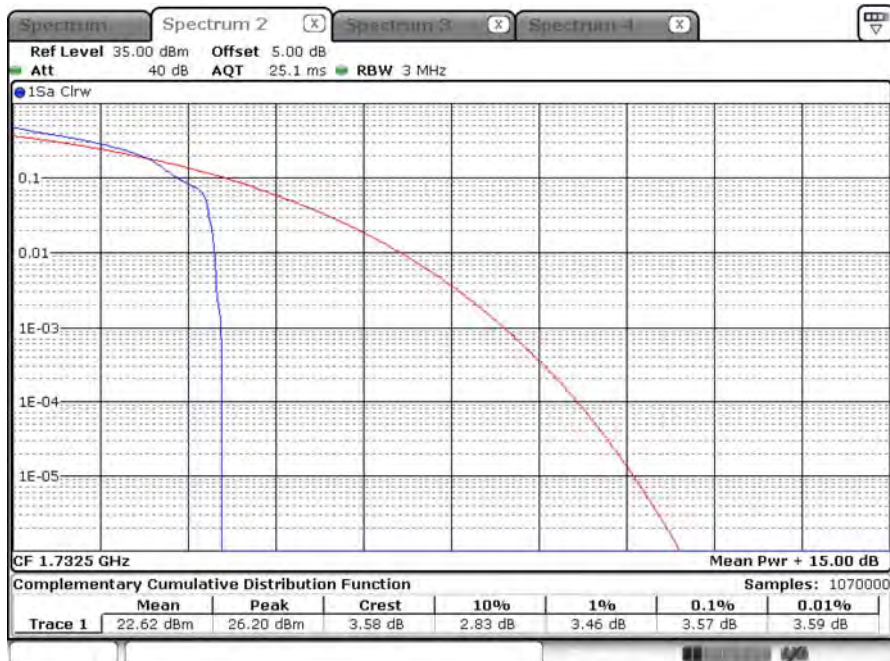
Date: 11.APR.2019 12:42:08

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

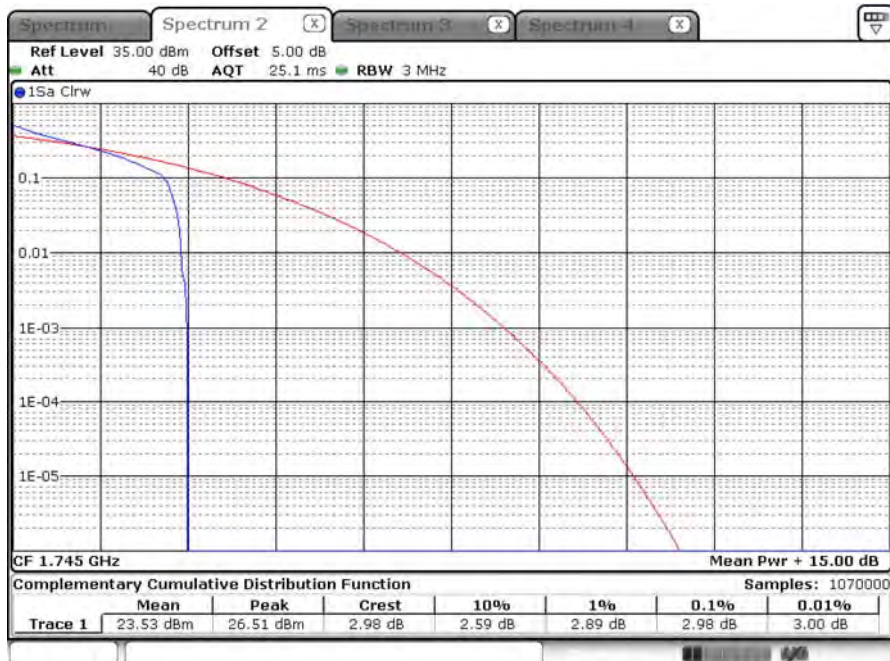
B4_CH20175_15M_1RB37_16-QAM

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**B4_CH20175_20M_1RB49_QPSK**

B4_CH20300_20M_1RB49_QPSK

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B4_CH20050_20M_1RB49_16-QAM

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