FCC RF Test Report

APPLICANT	:	Brightstar Corporation
EQUIPMENT	:	Mobile phone
BRAND NAME	:	Avvio
MODEL NAME	:	Avvio L500
FCC ID	:	WVBAL500
STANDARD	:	47 CFR Part 2, 27(L), 27(M)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was testing completed on May 21, 2014. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-C-2004 and the testing has shown the tested sample to be in compliance with the applicable technical standards. The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory
2353

SPORTON INTERNATIONAL (SHENZHEN) INC.
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APPENDIX A. SETUP PHOTOGRAPHS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG441505B	Rev. 01	Initial issue of report	Jun. 04, 2014

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.2	§27.50(d)(5)	Peak-to-Average Ratio	<13 dB	PASS	-
3.3	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4)	EIRP < 1Watt	PASS	-
	§27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 7)	EIRP < 2Watt		
3.4	§2.1049 §27.53(g)(3) §27.53(l)(6)	99% Occupied Bandwidth and 26dB Bandwidth	Reporting Only	PASS	-
3.5	§2.1051 §27.53(g)	Conducted Band Edge Measurement (Band 4)	< 43+10log10(P[Watt])	PASS	-
	§2.1051 §27.53(l)(4)	Conducted Band Edge Measurement (Band 7)	< 5.5MHz: -13 dBm ≥5.5MHz: -25 dBm		
3.6	§2.1051 §27.53(g)	Conducted Spurious Emission (Band 4)	< 43+10log$_{10}$(P[Watts])	PASS	-
	§2.1051 §27.53(l)(4)	Conducted Spurious Emission (Band 7)	< 55+10log10(P[Watts])	PASS	-
3.7	§2.1053 §27.53(g)	Radiated Spurious Emission (Band 4)	< 43+10log10(P[Watts])	PASS	Under limit 24.19 dB at 7710.000 MHz
	§2.1053 §27.53(l)(4)	Radiated Spurious Emission (Band 7)	< 55+10log10(P[Watts])	PASS	
3.8	§2.1055 §27.54	Frequency Stability Temperature & Voltage	< 2.5 ppm	PASS	-

1 General Description

1.1 Applicant

Brightstar Corporation
9725 NW 117th Ave., Miami, Florida, FL 33178, United States

1.2 Manufacturer

YULONG COMPUTER TELECOMMUNICATION SCIENTIFIC(SHENZHEN) CO., LTD
Coolpad Information Harbor, 2nd Mengxi Road, High-Tech Industrial Park(North), NanShan District, ShenZhen, P. R. C.

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile phone
Brand Name	Avvio
Model Name	Avvio L500
FCC ID	WVBAL500
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+(Downlink Only)/ DC-HSDPA/LTE/WLAN 2.4GHz 802.11b/g/n HT20/HT40/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
HW Version	P1
SW Version	P1
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz
Rx Frequency	LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz
Bandwidth	LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 4 : 23.55 dBm LTE Band 7 : 22.85 dBm
Antenna Type	PIFA Antenna
Type of Modulation	QPSK / 16QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	BW	Maximum EIRP (W)	Frequency Tolerance (%, Hz, ppm)	Emission Designator
Part 27L	LTE Band 4	QPSK	1.4MHz	0.31 W	-	1M10G7D
Part 27L	LTE Band 4	16QAM	1.4MHz	0.23 W	-	1M10D7W
Part 27L	LTE Band 4	QPSK	3MHz	0.32 W	-	2M73G7D
Part 27L	LTE Band 4	16QAM	3MHz	0.24 W	-	2M73D7W
Part 27L	LTE Band 4	QPSK	5MHz	0.33 W	-	4M50G7D
Part 27L	LTE Band 4	16QAM	5MHz	0.24 W	-	4M50D7W
Part 27L	LTE Band 4	QPSK	10MHz	0.31 W	0.0053 ppm	9M09G7D
Part 27L	LTE Band 4	16QAM	10MHz	0.24 W	-	9M01D7W
Part 27L	LTE Band 4	QPSK	15MHz	0.30 W	-	13M4G7D
Part 27L	LTE Band 4	16QAM	15MHz	0.23 W	-	13M4D7W
Part 27L	LTE Band 4	QPSK	20MHz	0.30 W	-	18M3G7D
Part 27L	LTE Band 4	16QAM	20MHz	0.23 W	-	18M3D7W
Part 27M	LTE Band 7	QPSK	5MHz	0.28 W	-	4M50G7D
Part 27M	LTE Band 7	16QAM	5MHz	0.28 W	-	4M50D7W
Part 27M	LTE Band 7	QPSK	10MHz	0.25 W	0.0069 ppm	9M07G7D
Part 27M	LTE Band 7	16QAM	10MHz	0.24 W	-	9M01D7W
Part 27M	LTE Band 7	QPSK	15MHz	0.29 W	-	13M5G7D
Part 27M	LTE Band 7	16QAM	15MHz	0.24 W	-	13M4D7W
Part 27M	LTE Band 7	QPSK	20MHz	0.30 W	-	18M3G7D
Part 27M	LTE Band 7	16QAM	20MHz	0.23 W	-	18M3D7W

1.7 Testing Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.		
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. C. TEL: +86-755- 3320-2398		
Test Site No.	**Sporton Site No.**		**FCC Registration No.**
	TH01-SZ	03CH01-SZ	831040

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.
Test Site Location	No. 101, Complex Building C, Guanlong Village, Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. C. TEL: +86-755-8637-9589 FAX: +86-755-8637-9595
Test Site No.	**Sporton Site No.**
	OTA01-SZ

Note: The test site complies with ANSI C63.4 2003 requirement

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 27(L), 27(M)
- ANSI / TIA / EIA-603-C-2004
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

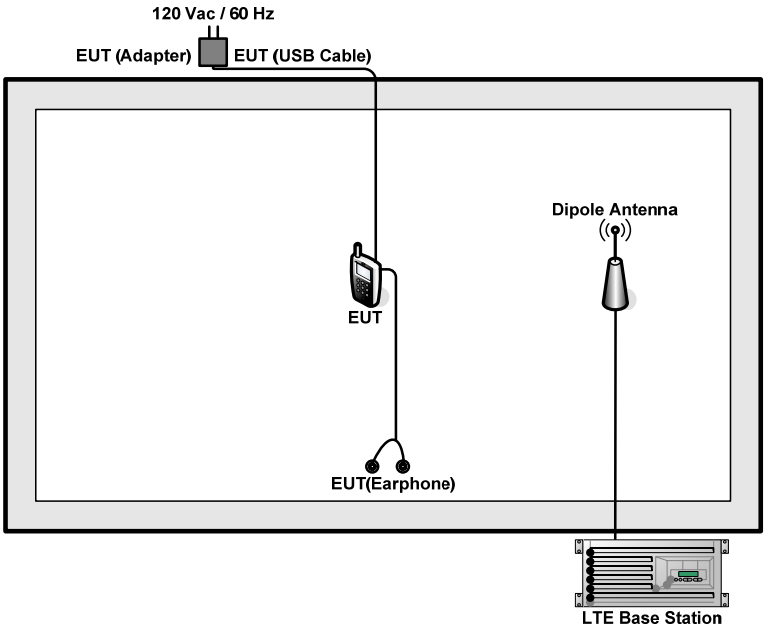
2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r01 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission (Y plane).

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	4						v		v	v		v		v	
	7	-	-				v		v	v		v		v	
26dB and 99% Bandwidth	4	v	v	v	v	v	v	v	v			v		v	
	7	-	-	v	v	v	v	v	v			v		v	
Conducted Band Edge	4	v	v	v	v	v	v	v	v	v		v	v		v
	7	-	-	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	4	v	v	v	v	v	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
Frequency Stability	4				v			v				v		v	
	7	-	-		v			v				v		v	
E.R.P./ E.I.R.P.	4	v	v	v	v	v	v	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	4	v	v	v	v	v	v	v		v				v	
	7	-	-	v	v	v	v	v		v				v	
Note	1. The mark “v” means that this configuration is chosen for testing. 2. The mark “-” means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	TOPWORD	3303DR	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 7.5 dB and 10dB attenuator.

Offset (dB) = RF cable loss (dB) + attenuator factor (dB).

= 7.5 + 10 = 17.5 (dB)

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

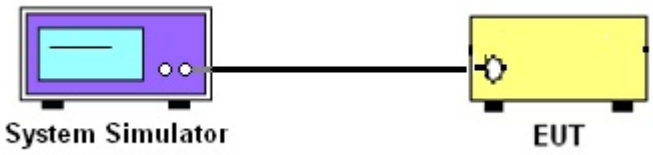
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

<LTE Band 4 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20050**	**20175**	**20300**
Frequency (MHz)				**1720**	**1732.5**	**1745**
20	QPSK	1	0	23.24	23.34	23.55
20	QPSK	1	49	23.08	23.36	23.46
20	QPSK	1	99	23.12	23.29	23.50
20	QPSK	50	0	22.17	22.33	22.50
20	QPSK	50	24	22.15	22.26	22.48
20	QPSK	50	49	22.15	22.32	22.46
20	QPSK	100	0	22.10	22.28	22.43
20	16QAM	1	0	22.50	22.82	22.58
20	16QAM	1	49	22.21	22.83	22.64
20	16QAM	1	99	22.30	22.50	22.59
20	16QAM	50	0	21.17	21.18	21.36
20	16QAM	50	24	21.12	21.21	21.38
20	16QAM	50	49	21.11	21.19	21.36
20	16QAM	100	0	21.09	21.20	21.42
Channel				**20025**	**20175**	**20325**
Frequency (MHz)				**1717.5**	**1732.5**	**1747.5**
15	QPSK	1	0	23.16	23.30	23.49
15	QPSK	1	37	23.06	23.26	23.44
15	QPSK	1	74	23.10	23.32	23.48
15	QPSK	36	0	22.18	22.32	22.41
15	QPSK	36	18	22.16	22.36	22.45
15	QPSK	36	37	22.03	22.26	22.42
15	QPSK	75	0	22.05	22.24	22.46
15	16QAM	1	0	22.01	22.70	22.80
15	16QAM	1	37	22.05	22.65	22.84
15	16QAM	1	74	22.00	22.68	22.55
15	16QAM	36	0	21.17	21.18	21.47
15	16QAM	36	18	21.10	21.16	21.34
15	16QAM	36	37	20.95	21.26	21.36
15	16QAM	75	0	21.09	21.21	21.35

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				20000	20175	20350
Frequency (MHz)				1715	1732.5	1750
10	QPSK	1	0	23.19	23.32	23.41
10	QPSK	1	24	23.10	23.22	23.48
10	QPSK	1	49	23.00	23.30	23.45
10	QPSK	25	0	22.25	22.28	22.45
10	QPSK	25	12	22.10	22.22	22.46
10	QPSK	25	24	22.07	22.31	22.31
10	QPSK	50	0	22.01	22.29	22.41
10	16QAM	1	0	21.97	22.40	22.43
10	16QAM	1	24	21.99	22.20	22.45
10	16QAM	1	49	21.89	22.42	22.32
10	16QAM	25	0	21.00	21.24	21.50
10	16QAM	25	12	21.12	21.24	21.42
10	16QAM	25	24	21.02	21.30	21.43
10	16QAM	50	0	21.01	21.16	21.44
Channel				19975	20175	20375
Frequency (MHz)				1712.5	1732.5	1752.5
5	QPSK	1	0	23.04	23.30	23.44
5	QPSK	1	12	23.02	23.26	23.48
5	QPSK	1	24	23.06	23.13	23.49
5	QPSK	12	0	22.17	22.28	22.57
5	QPSK	12	6	22.00	22.20	22.37
5	QPSK	12	11	21.95	22.35	22.29
5	QPSK	25	0	21.91	22.29	22.51
5	16QAM	1	0	22.06	22.21	22.76
5	16QAM	1	12	22.04	22.20	22.54
5	16QAM	1	24	22.02	22.23	22.35
5	16QAM	12	0	21.06	21.36	21.39
5	16QAM	12	6	21.01	21.17	21.40
5	16QAM	12	11	20.94	21.19	21.35
5	16QAM	25	0	20.96	21.30	21.36

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				19965	20175	20385
Frequency (MHz)				1711.5	1732.5	1753.5
3	QPSK	1	0	23.09	23.29	23.32
3	QPSK	1	7	23.11	23.17	23.26
3	QPSK	1	14	22.94	23.14	23.30
3	QPSK	8	0	21.98	22.26	22.46
3	QPSK	8	4	22.03	22.18	22.39
3	QPSK	8	7	21.99	22.23	22.41
3	QPSK	15	0	21.98	22.23	22.42
3	16QAM	1	0	21.85	22.07	22.11
3	16QAM	1	7	21.84	22.13	22.15
3	16QAM	1	14	21.80	22.10	22.13
3	16QAM	8	0	20.96	21.07	21.30
3	16QAM	8	4	20.90	21.23	21.22
3	16QAM	8	7	20.88	21.16	21.28
3	16QAM	15	0	21.01	21.19	21.27
Channel				19957	20175	20393
Frequency (MHz)				1710.7	1732.5	1754.3
1.4	QPSK	1	0	22.95	23.26	23.46
1.4	QPSK	1	2	22.93	23.11	23.38
1.4	QPSK	1	5	22.94	23.24	23.39
1.4	QPSK	3	0	22.96	23.22	23.40
1.4	QPSK	3	1	22.86	23.27	23.43
1.4	QPSK	3	2	22.87	23.25	23.40
1.4	QPSK	6	0	22.09	22.27	22.46
1.4	16QAM	1	0	21.92	22.36	22.28
1.4	16QAM	1	2	21.82	22.11	22.22
1.4	16QAM	1	5	21.95	22.18	22.35
1.4	16QAM	3	0	21.86	22.29	22.33
1.4	16QAM	3	1	21.83	22.39	22.26
1.4	16QAM	3	2	21.80	22.16	22.30
1.4	16QAM	6	0	21.05	21.18	21.36

<LTE Band 7 Conducted Power>

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20850**	**21100**	**21350**
Frequency (MHz)				**2510**	**2535**	**2560**
20	QPSK	1	0	22.43	22.65	22.66
20	QPSK	1	49	22.20	22.85	22.69
20	QPSK	1	99	22.36	22.75	22.57
20	QPSK	50	0	21.06	21.63	21.70
20	QPSK	50	24	21.09	21.72	21.76
20	QPSK	50	49	21.21	21.78	21.77
20	QPSK	100	0	21.30	21.68	21.63
20	16QAM	1	0	21.50	21.85	21.97
20	16QAM	1	49	21.45	21.77	21.96
20	16QAM	1	99	21.54	21.80	21.99
20	16QAM	50	0	20.07	20.66	20.67
20	16QAM	50	24	20.06	20.78	20.69
20	16QAM	50	49	20.22	20.82	20.60
20	16QAM	100	0	20.15	20.78	20.61
Channel				**20825**	**21100**	**21375**
Frequency (MHz)				**2507.5**	**2535**	**2562.5**
15	QPSK	1	0	22.19	22.68	22.76
15	QPSK	1	37	22.16	22.57	22.72
15	QPSK	1	74	22.08	22.78	22.78
15	QPSK	36	0	21.11	21.60	21.78
15	QPSK	36	18	21.12	21.73	21.76
15	QPSK	36	37	21.23	21.80	21.76
15	QPSK	75	0	21.15	21.30	21.73
15	16QAM	1	0	21.59	21.82	21.98
15	16QAM	1	37	21.63	21.83	21.69
15	16QAM	1	74	21.58	21.87	21.95
15	16QAM	36	0	19.88	20.68	20.63
15	16QAM	36	18	20.00	20.73	20.68
15	16QAM	36	37	20.08	20.79	20.71
15	16QAM	75	0	20.13	20.75	20.60

BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Low Ch. / Freq.	Power (dBm) Middle Ch. / Freq.	Power (dBm) High Ch. / Freq.
Channel				**20800**	**21100**	**21400**
Frequency (MHz)				**2505**	**2535**	**2565**
10	QPSK	1	0	22.00	22.79	22.73
10	QPSK	1	24	21.95	22.76	22.81
10	QPSK	1	49	21.99	22.70	22.62
10	QPSK	25	0	21.03	21.66	21.76
10	QPSK	25	12	20.99	21.71	21.83
10	QPSK	25	24	20.94	21.78	21.69
10	QPSK	50	0	20.88	21.71	21.59
10	16QAM	1	0	21.03	21.75	21.91
10	16QAM	1	24	21.07	21.66	21.86
10	16QAM	1	49	21.00	21.79	21.73
10	16QAM	25	0	19.94	20.74	20.57
10	16QAM	25	12	19.93	20.72	20.74
10	16QAM	25	24	19.90	20.82	20.66
10	16QAM	50	0	19.98	20.76	20.62
Channel				**20775**	**21100**	**21425**
Frequency (MHz)				**2502.5**	**2535**	**2567.5**
5	QPSK	1	0	22.00	22.67	22.78
5	QPSK	1	12	21.94	22.71	22.70
5	QPSK	1	24	21.98	22.68	22.79
5	QPSK	12	0	20.87	21.70	21.87
5	QPSK	12	6	21.02	21.72	21.72
5	QPSK	12	11	20.97	21.74	21.61
5	QPSK	25	0	20.93	21.76	21.74
5	16QAM	1	0	20.97	21.70	21.89
5	16QAM	1	12	20.90	21.65	21.80
5	16QAM	1	24	20.95	21.60	21.83
5	16QAM	12	0	19.85	20.65	20.79
5	16QAM	12	6	19.98	20.63	20.59
5	16QAM	12	11	19.91	20.66	20.58
5	16QAM	25	0	19.82	20.82	20.62

Note: Maximum average power for LTE.

3.2 Peak-to-Average Ratio

3.2.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

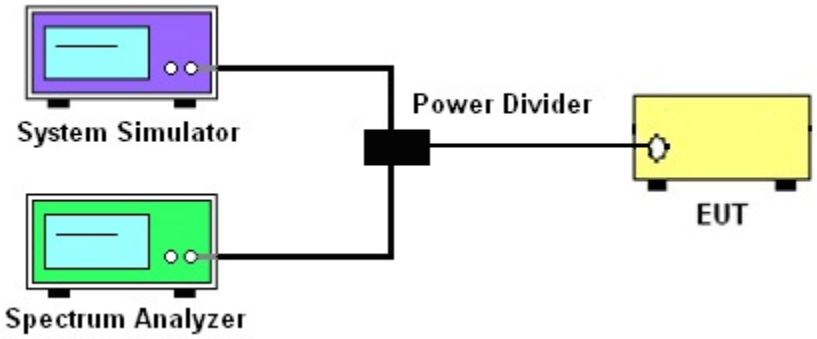
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The EUT was connected to spectrum and system simulator via a power divider.
2. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
3. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
4. Record the deviation as Peak to Average Ratio.

3.2.4 Test Setup



3.2.5 Test Result of Peak-to-Average Ratio

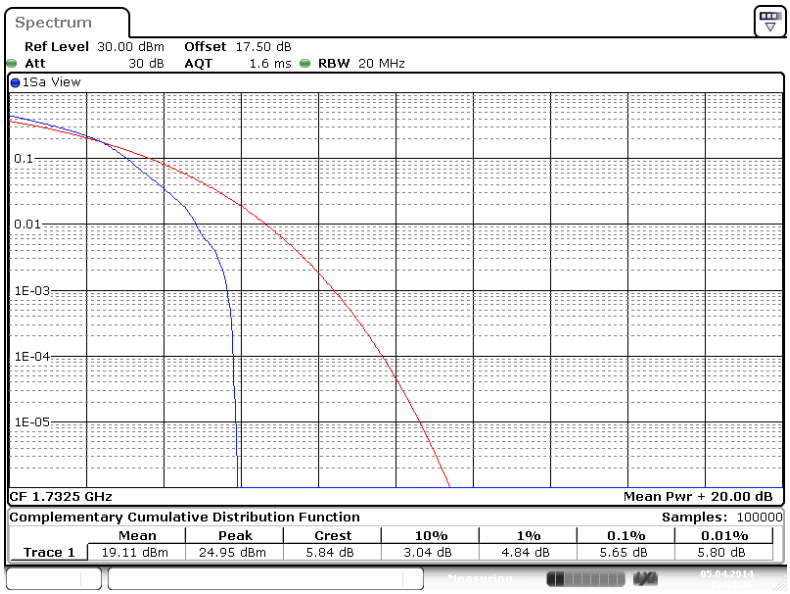
LTE Band 4				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				20175
Frequency (MHz)				1732.5
20	16QAM	1	0	5.65
20	16QAM	100	0	5.74

LTE Band 7				
BW [MHz]	Modulation	RB Size	RB Offset	Power (dBm) Middle Ch. / Freq.
Channel				21100
Frequency (MHz)				2535
20	16QAM	1	0	5.65
20	16QAM	100	0	6.06

3.2.6 Peak to Average Power Ratio

Peak-to-Average Ratio on LTE Band 4

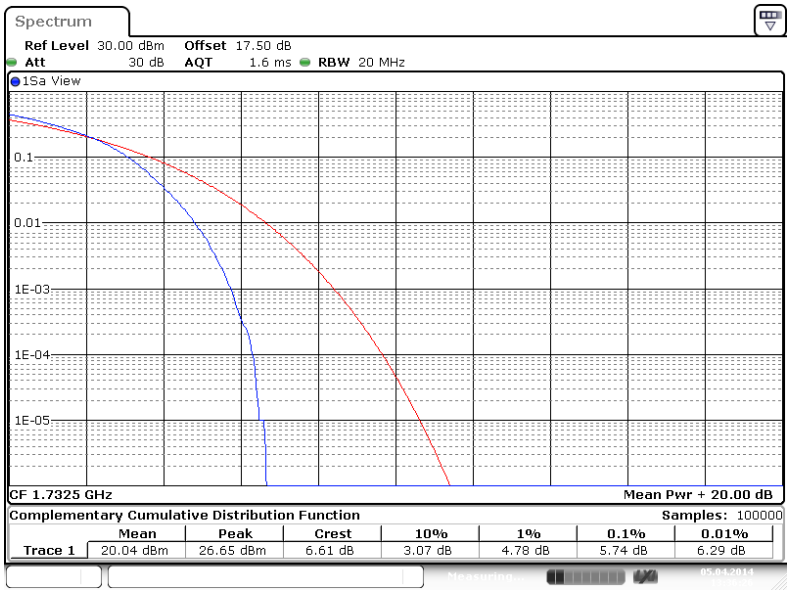
20MHz / 16QAM in Ch. 20175 (1RB Size)



Date: 5.APR.2014 13:35:27

Peak-to-Average Ratio on LTE Band 4

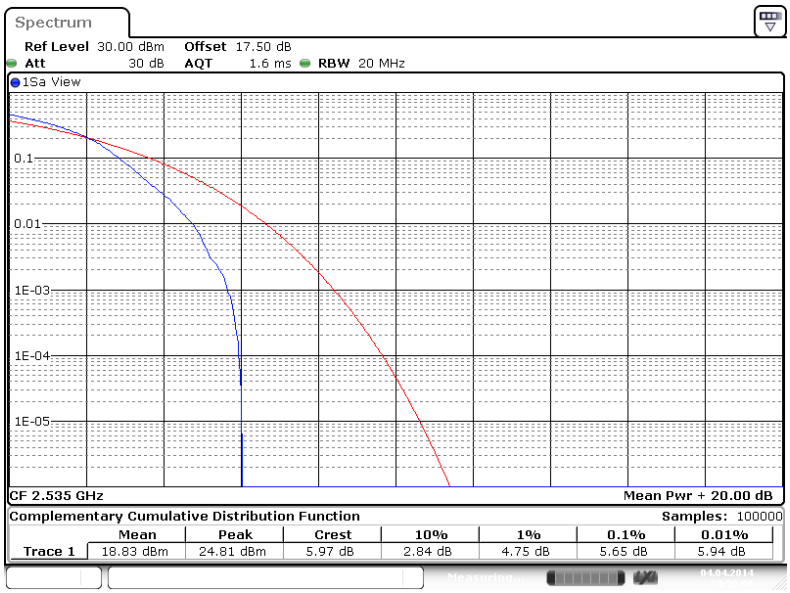
20MHz / 16QAM in Ch. 20175 (100RB Size)



Date: 5.APR.2014 13:36:27

Peak-to-Average Ratio on LTE Band 7

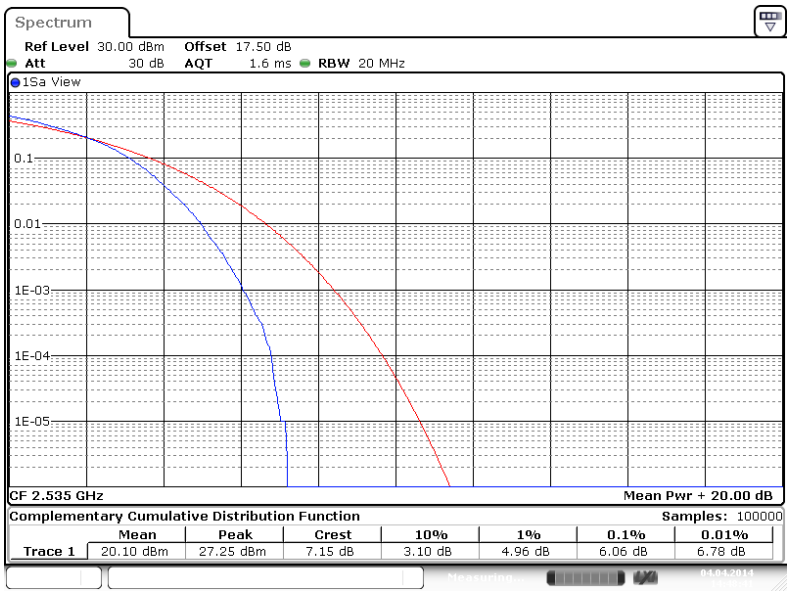
20MHz / 16QAM in Ch. 21100 (1RB Size)



Date: 4.APR.2014 14:50:00

Peak-to-Average Ratio on LTE Band 7

20MHz / 16QAM in Ch. 21100 (100RB Size)



Date: 4.APR.2014 14:48:41

3.3 Equivalent Isotropic Radiated Power Measurement

3.3.1 Description of the EIRP Measurement

Equivalent isotropic radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r01. Mobile and portable (hand-held) stations operating are limited to average EIRP of 2 watts with LTE band7 and 1 watt with LTE band 4.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer which used a channel power option across EUT's signal bandwidth per section 4.0 of KDB 971168 D01.
4. The table was rotated 360 degrees to determine the position of the highest radiated power.
5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
6. Taking the record of maximum ERP/EIRP.
7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
8. The conducted power at the terminal of the dipole antenna is measured.
9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
10. ERP/EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs

    Ps (dBm)：Input power to substitution antenna.

    Gs (dBi or dBd)：Substitution antenna Gain.

    Et = Rt + AF

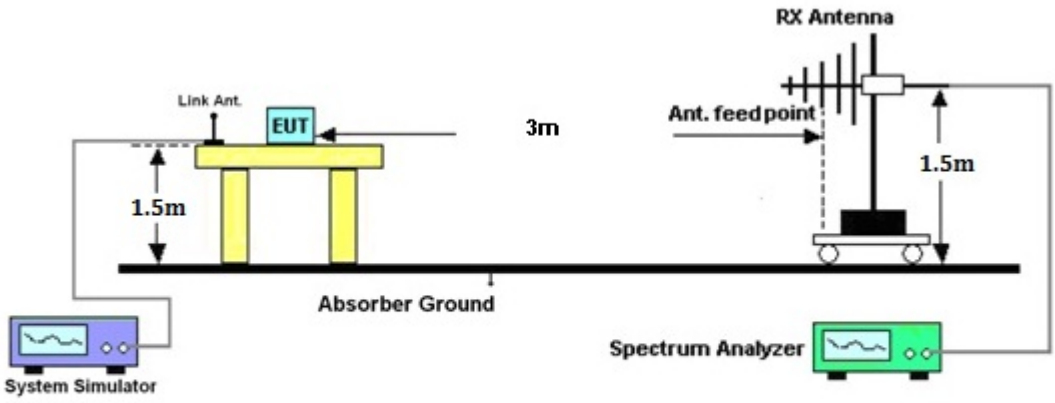
    Es = Rs + AF

    AF (dB/m)：Receive antenna factor

    Rt：The highest received signal in spectrum analyzer for EUT.

    Rs：The highest received signal in spectrum analyzer for substitution antenna.

3.3.4 Test Setup



3.3.5 Test Result of EIRP

LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	1.4	QPSK	3	0	1710.7	23.37	0.22	H
4	1.4	QPSK	3	1	1732.5	23.97	0.25	H
4	1.4	QPSK	1	0	1754.3	24.79	0.30	H
4	1.4	QPSK	3	0	1710.7	23.48	0.22	V
4	1.4	QPSK	3	1	1732.5	23.98	0.25	V
4	1.4	QPSK	1	0	1754.3	24.88	0.31	V
4	1.4	16QAM	1	5	1710.7	22.54	0.18	H
4	1.4	16QAM	3	1	1732.5	23.20	0.21	H
4	1.4	16QAM	1	5	1754.3	23.57	0.23	H
4	1.4	16QAM	1	5	1710.7	22.72	0.19	V
4	1.4	16QAM	3	1	1732.5	23.29	0.21	V
4	1.4	16QAM	1	5	1754.3	23.63	0.23	V
4	3	QPSK	1	7	1711.5	23.68	0.23	H
4	3	QPSK	1	0	1732.5	24.39	0.27	H
4	3	QPSK	1	0	1753.5	25.11	0.32	H
4	3	QPSK	1	7	1711.5	23.92	0.25	V
4	3	QPSK	1	0	1732.5	24.44	0.28	V
4	3	QPSK	1	0	1753.5	25.05	0.32	V
4	3	16QAM	1	0	1711.5	22.68	0.19	H
4	3	16QAM	1	7	1732.5	23.76	0.24	H
4	3	16QAM	1	7	1753.5	23.17	0.21	H
4	3	16QAM	1	0	1711.5	22.90	0.19	V
4	3	16QAM	1	7	1732.5	23.89	0.24	V
4	3	16QAM	1	7	1753.5	23.26	0.21	V

LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	5	QPSK	1	24	1712.5	24.07	0.26	H
4	5	QPSK	1	0	1732.5	24.38	0.27	H
4	5	QPSK	1	24	1752.5	25.16	0.33	H
4	5	QPSK	1	24	1712.5	24.23	0.26	V
4	5	QPSK	1	0	1732.5	24.41	0.28	V
4	5	QPSK	1	24	1752.5	25.04	0.32	V
4	5	16QAM	1	0	1712.5	22.64	0.18	H
4	5	16QAM	1	24	1732.5	23.26	0.21	H
4	5	16QAM	1	0	1752.5	23.78	0.24	H
4	5	16QAM	1	0	1712.5	22.80	0.19	V
4	5	16QAM	1	24	1732.5	23.30	0.21	V
4	5	16QAM	1	0	1752.5	23.88	0.24	V
4	10	QPSK	1	0	1715	23.70	0.23	H
4	10	QPSK	1	0	1732.5	24.38	0.27	H
4	10	QPSK	1	24	1750	24.91	0.31	H
4	10	QPSK	1	0	1715	23.93	0.25	V
4	10	QPSK	1	0	1732.5	24.41	0.28	V
4	10	QPSK	1	24	1750	24.90	0.31	V
4	10	16QAM	1	24	1715	22.82	0.19	H
4	10	16QAM	1	49	1732.5	22.95	0.20	H
4	10	16QAM	1	24	1750	23.69	0.23	H
4	10	16QAM	1	24	1715	22.97	0.20	V
4	10	16QAM	1	49	1732.5	22.99	0.20	V
4	10	16QAM	1	24	1750	23.78	0.24	V

LTE Band 4 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
4	15	QPSK	1	0	1717.5	23.71	0.23	H
4	15	QPSK	1	74	1732.5	24.68	0.29	H
4	15	QPSK	1	0	1747.5	24.75	0.30	H
4	15	QPSK	1	0	1717.5	24.03	0.25	V
4	15	QPSK	1	74	1732.5	24.57	0.29	V
4	15	QPSK	1	0	1747.5	24.65	0.29	V
4	15	16QAM	1	37	1717.5	22.88	0.19	H
4	15	16QAM	1	0	1732.5	23.15	0.21	H
4	15	16QAM	1	37	1747.5	23.69	0.23	H
4	15	16QAM	1	37	1717.5	22.95	0.20	V
4	15	16QAM	1	0	1732.5	23.20	0.21	V
4	15	16QAM	1	37	1747.5	23.67	0.23	V
4	20	QPSK	1	0	1720	23.74	0.24	H
4	20	QPSK	1	49	1732.5	24.64	0.29	H
4	20	QPSK	1	0	1745	24.69	0.29	H
4	20	QPSK	1	0	1720	23.91	0.25	V
4	20	QPSK	1	49	1732.5	24.78	0.30	V
4	20	QPSK	1	0	1745	24.57	0.29	V
4	20	16QAM	1	0	1720	22.54	0.18	H
4	20	16QAM	1	49	1732.5	23.17	0.21	H
4	20	16QAM	1	49	1745	23.64	0.23	H
4	20	16QAM	1	0	1720	22.74	0.19	V
4	20	16QAM	1	49	1732.5	23.32	0.21	V
4	20	16QAM	1	49	1745	23.59	0.23	V

LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	5	QPSK	1	0	2502.5	23.34	0.22	H
7	5	QPSK	1	12	2535	24.53	0.28	H
7	5	QPSK	1	24	2567.5	23.46	0.22	H
7	5	QPSK	1	0	2502.5	23.19	0.21	V
7	5	QPSK	1	12	2535	24.33	0.27	V
7	5	QPSK	1	24	2567.5	23.70	0.23	V
7	5	16QAM	1	0	2502.5	22.21	0.17	H
7	5	16QAM	1	0	2535	23.45	0.22	H
7	5	16QAM	1	0	2567.5	24.53	0.28	H
7	5	16QAM	1	0	2502.5	21.99	0.16	V
7	5	16QAM	1	0	2535	23.25	0.21	V
7	5	16QAM	1	0	2567.5	24.39	0.27	V
7	10	QPSK	1	0	2505	23.37	0.22	H
7	10	QPSK	1	0	2535	24.06	0.25	H
7	10	QPSK	1	24	2565	23.58	0.23	H
7	10	QPSK	1	0	2505	23.19	0.21	V
7	10	QPSK	1	0	2535	23.91	0.25	V
7	10	QPSK	1	24	2565	23.67	0.23	V
7	10	16QAM	1	24	2505	22.38	0.17	H
7	10	16QAM	1	49	2535	23.76	0.24	H
7	10	16QAM	1	0	2565	23.58	0.23	H
7	10	16QAM	1	24	2505	22.06	0.16	V
7	10	16QAM	1	49	2535	23.52	0.22	V
7	10	16QAM	1	0	2565	23.61	0.23	V

LTE Band 7 Radiated Power EIRP								
LTE Band	Channel BW (MHz)	Modulation	RB Configuration		Freq. (MHz)	EIRP (dBm)	EIRP (W)	H/V
			RB Size	RB Offset				
7	15	QPSK	1	0	2507.5	23.35	0.22	H
7	15	QPSK	1	74	2535	24.47	0.28	H
7	15	QPSK	1	74	2562.5	24.46	0.28	H
7	15	QPSK	1	0	2507.5	23.28	0.21	V
7	15	QPSK	1	74	2535	24.31	0.27	V
7	15	QPSK	1	74	2562.5	24.55	0.29	V
7	15	16QAM	1	37	2507.5	22.54	0.18	H
7	15	16QAM	1	74	2535	23.80	0.24	H
7	15	16QAM	1	0	2562.5	23.52	0.22	H
7	15	16QAM	1	37	2507.5	22.20	0.17	V
7	15	16QAM	1	74	2535	23.58	0.23	V
7	15	16QAM	1	0	2562.5	23.48	0.22	V
7	20	QPSK	1	0	2510	23.23	0.21	H
7	20	QPSK	1	49	2535	24.56	0.29	H
7	20	QPSK	1	49	2560	24.71	0.30	H
7	20	QPSK	1	0	2510	23.21	0.21	V
7	20	QPSK	1	49	2535	24.36	0.27	V
7	20	QPSK	1	49	2560	24.71	0.30	V
7	20	16QAM	1	99	2510	22.93	0.20	H
7	20	16QAM	1	0	2535	23.25	0.21	H
7	20	16QAM	1	99	2560	23.62	0.23	H
7	20	16QAM	1	99	2510	22.81	0.19	V
7	20	16QAM	1	0	2535	23.46	0.22	V
7	20	16QAM	1	99	2560	23.71	0.23	V

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.4.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

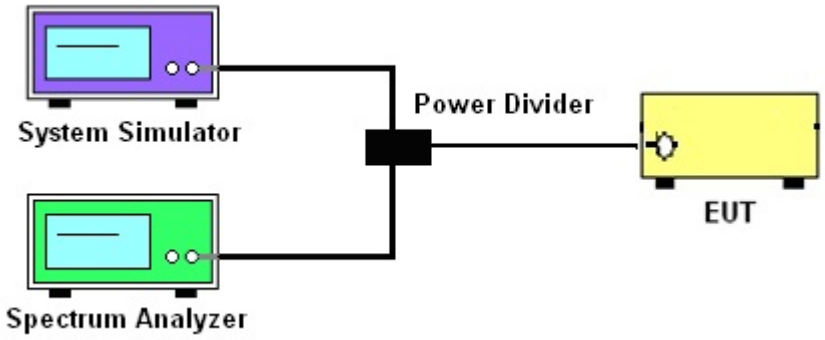
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

3.4.4 Test Setup



3.4.5 Test Result of 99% Occupied Bandwidth and 26dB Bandwidth

Modes	LTE Band 4			
BW / Mod.	1.4MHz / QPSK	1.4MHz / 16QAM	3MHz / QPSK	3MHz / 16QAM
99% OBW (MHz)	1.10	1.10	2.73	2.73
26dB BW (MHz)	1.28	1.29	3.05	3.05
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.50	4.50	9.09	9.01
26dB BW (MHz)	5.05	5.03	10.07	9.99
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.43	13.43	18.34	18.26
26dB BW (MHz)	14.75	14.84	20.42	20.34

Modes	LTE Band 7			
BW / Mod.	5MHz / QPSK	5MHz / 16QAM	10MHz / QPSK	10MHz / 16QAM
99% OBW (MHz)	4.50	4.50	9.07	9.01
26dB BW (MHz)	5.06	5.05	10.03	9.97
BW / Mod.	15MHz / QPSK	15MHz / 16QAM	20MHz / QPSK	20MHz / 16QAM
99% OBW (MHz)	13.46	13.43	18.34	18.30
26dB BW (MHz)	14.75	14.81	20.46	20.30

Note:

The maximum RB configurations of the 99% Occupied Bandwidth and 26dB Bandwidth summary as below:

BW1.4MHz RB setting：RB Size 6, RB offset 0

BW3.0MHz RB setting：RB Size 15, RB offset 0

BW5.0MHz RB setting：RB Size 25, RB offset 0

BW10MHz RB setting：RB Size 50, RB offset 0

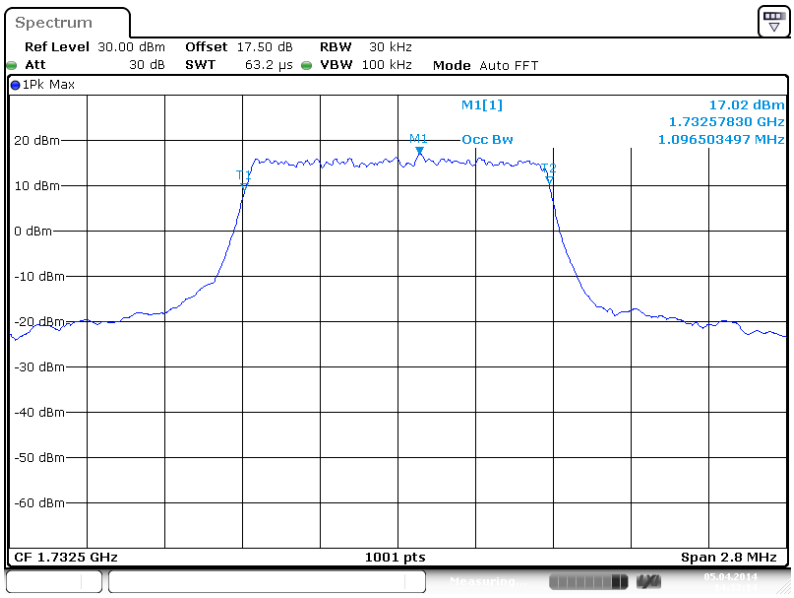
BW15MHz RB setting：RB Size 75, RB offset 0

BW20MHz RB setting：RB Size 100, RB offset 0

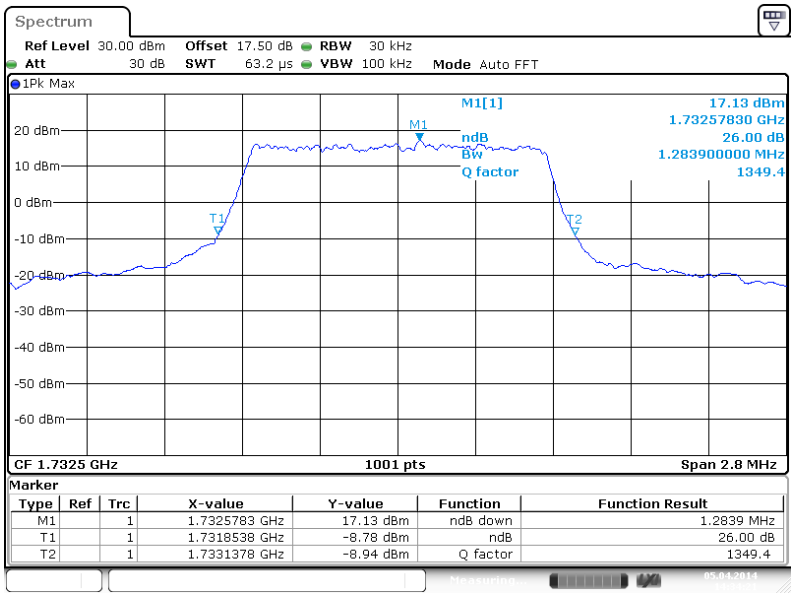
3.4.6 Test Result (Plots) of 99% Occupied Bandwidth and 26dB Bandwidth

Band :	LTE Band 4	BW / Mod. :	1.4MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

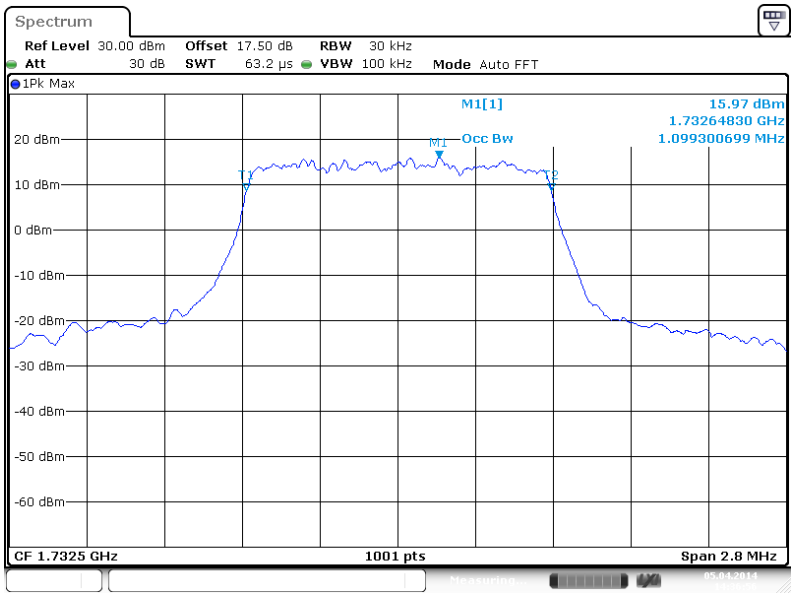


26dB Bandwidth Plot on Channel 20175

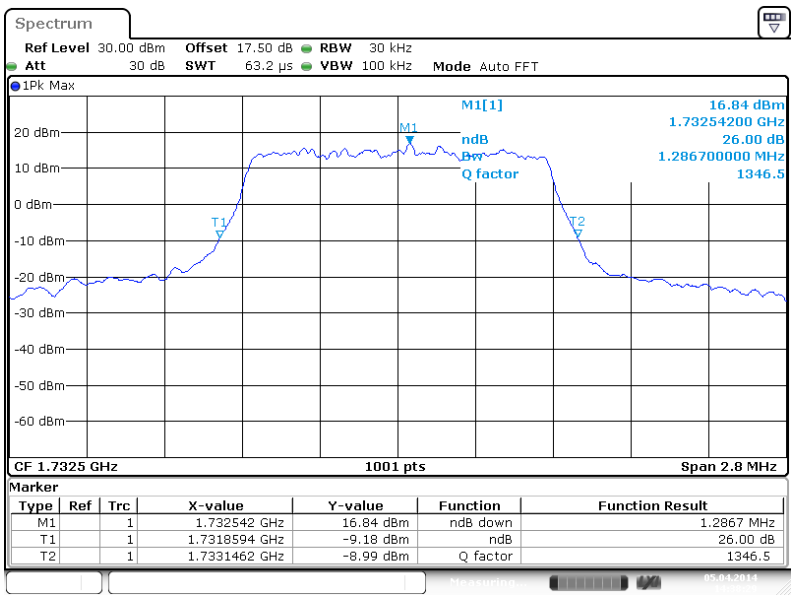


Band :	LTE Band 4	BW / Mod. :	1.4MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175

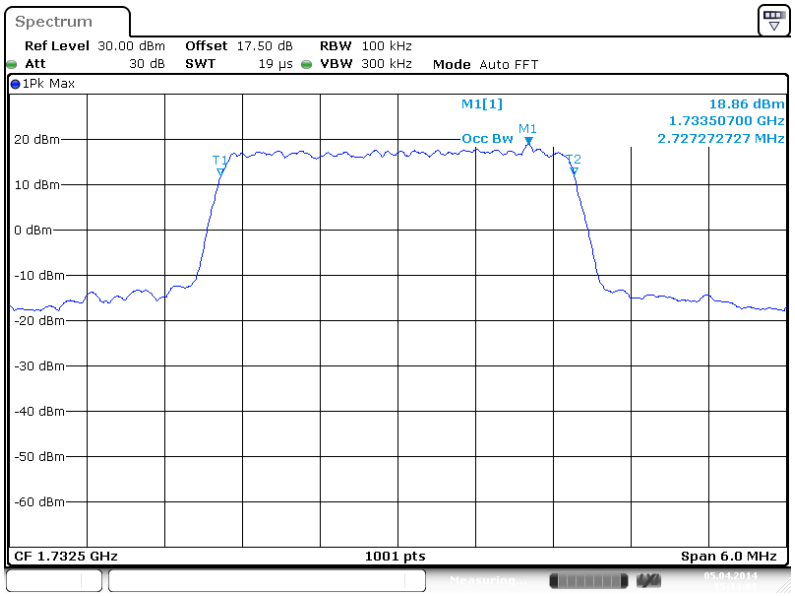


26dB Bandwidth Plot on Channel 20175

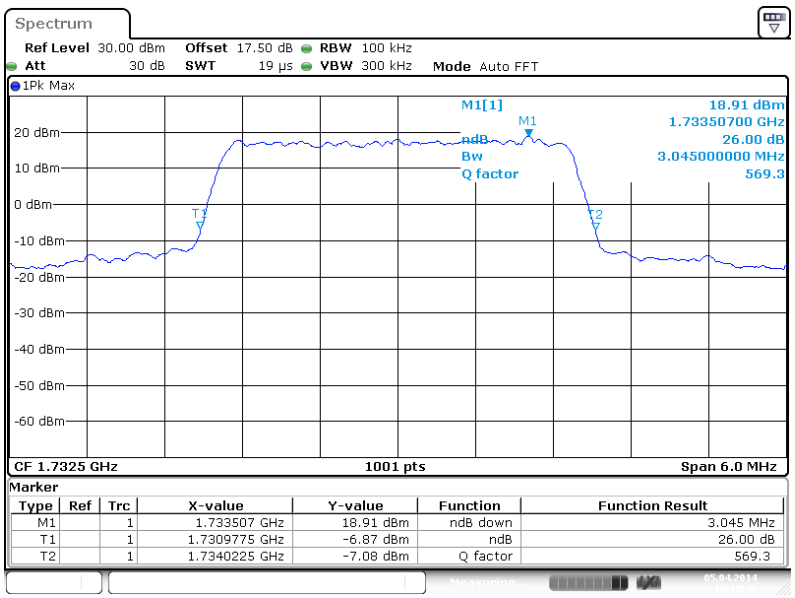


Band :	LTE Band 4	BW / Mod. :	3MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



26dB Bandwidth Plot on Channel 20175

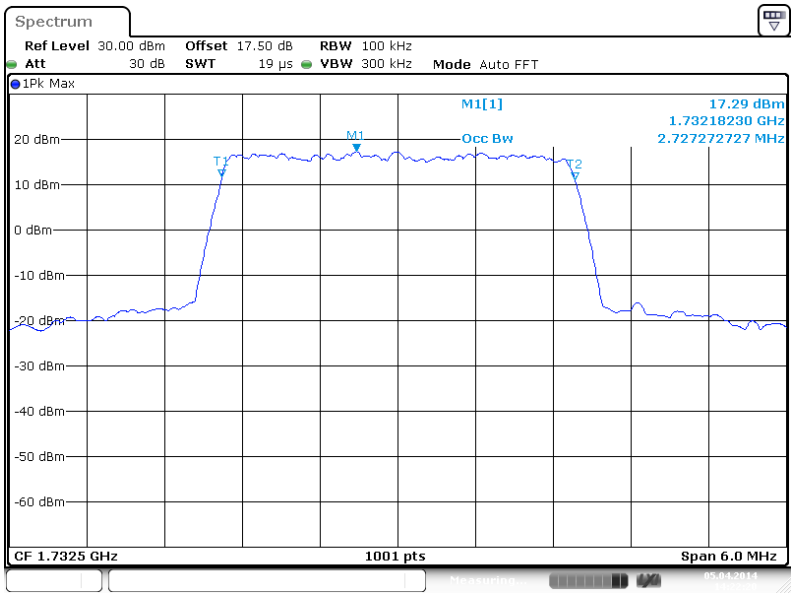


Marker

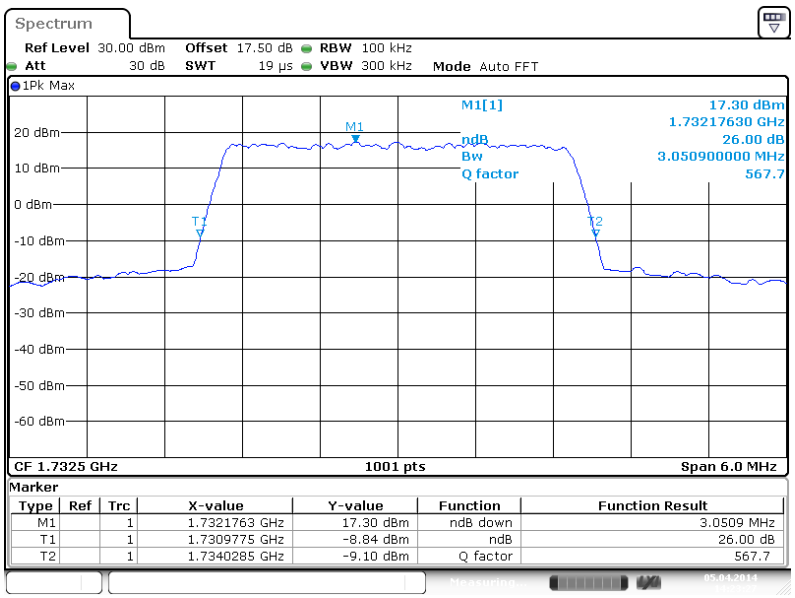
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.733507 GHz	18.91 dBm	ndB down	3.045 MHz
T1		1	1.7309775 GHz	-6.87 dBm	ndB	26.00 dB
T2		1	1.7340225 GHz	-7.08 dBm	Q factor	569.3

Band :	LTE Band 4	BW / Mod. :	3MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



26dB Bandwidth Plot on Channel 20175

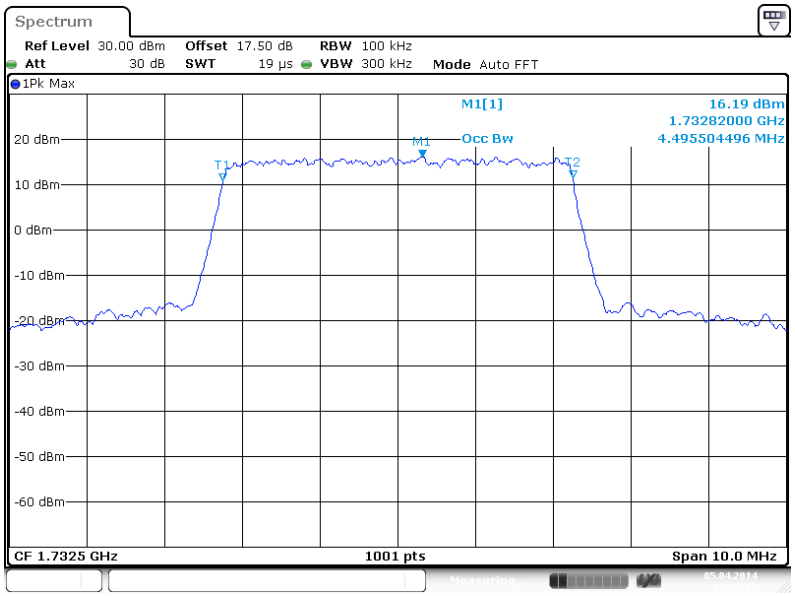


Marker

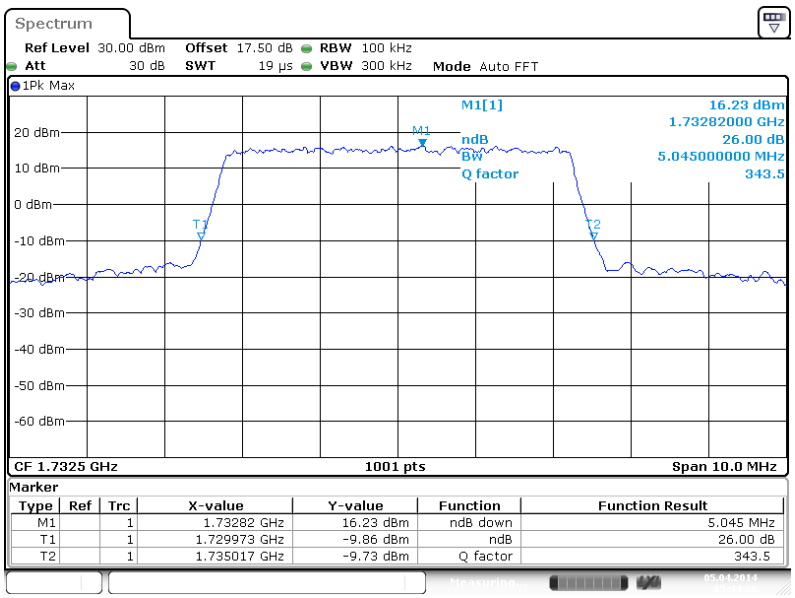
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.7321763 GHz	17.30 dBm	ndB down	3.0509 MHz
T1		1	1.7309775 GHz	-8.84 dBm	ndB	26.00 dB
T2		1	1.7340285 GHz	-9.10 dBm	Q factor	567.7

Band :	LTE Band 4	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

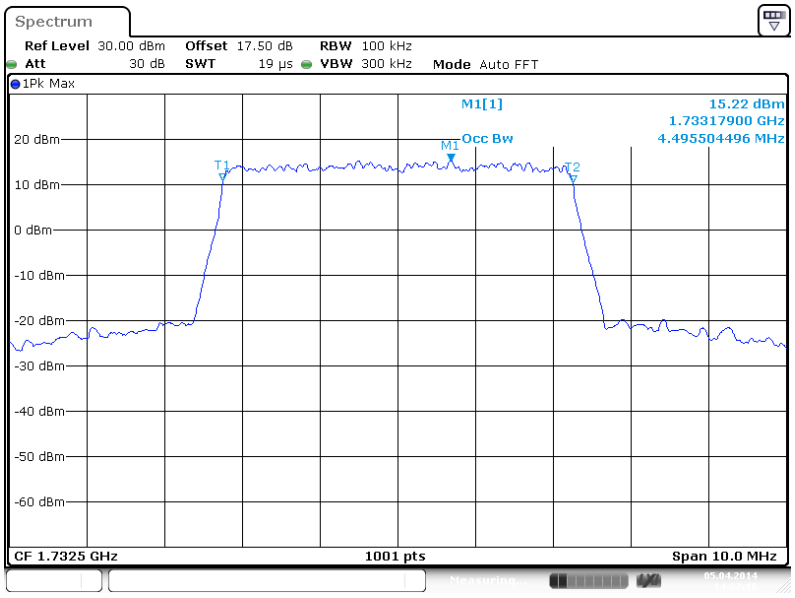


26dB Bandwidth Plot on Channel 20175

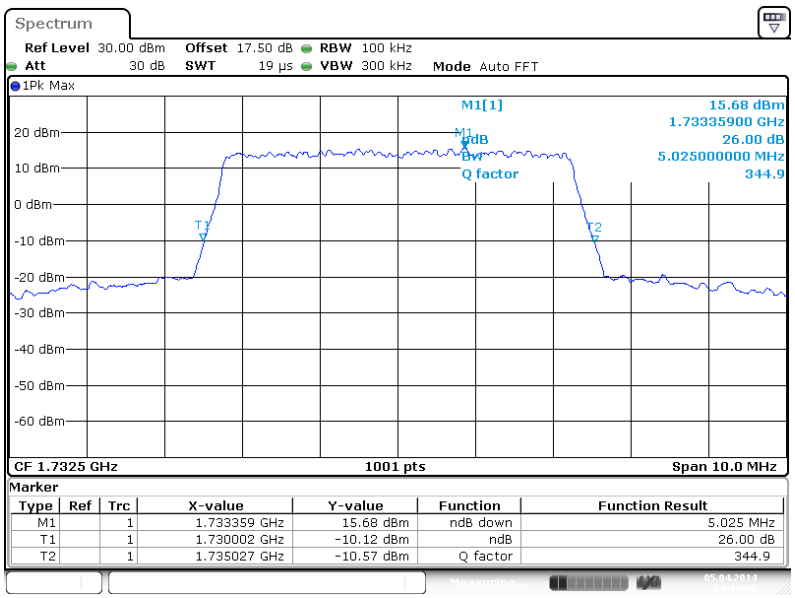


Band :	LTE Band 4	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



26dB Bandwidth Plot on Channel 20175

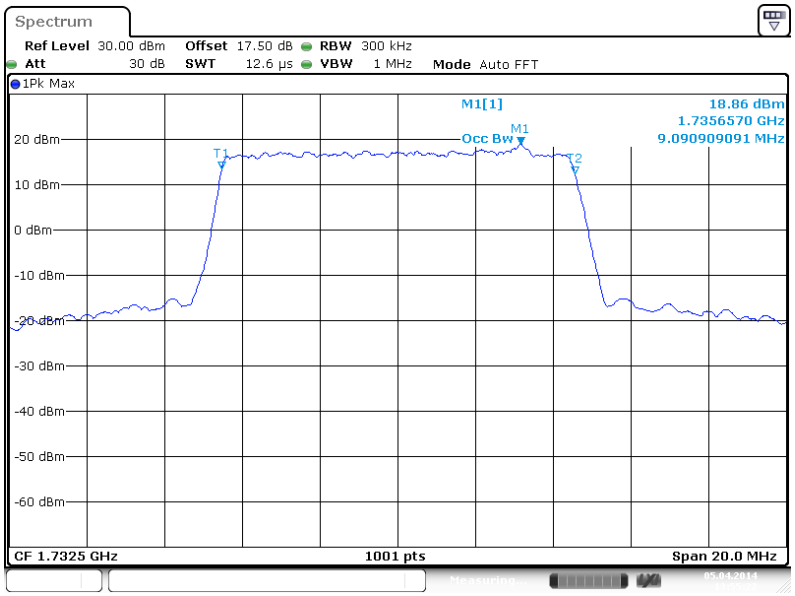


Marker

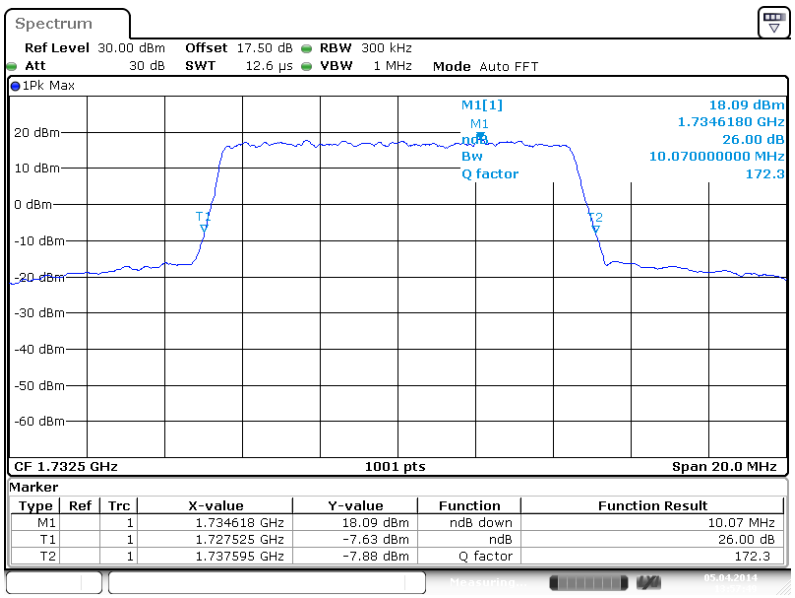
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.733359 GHz	15.68 dBm	ndB down	5.025 MHz
T1		1	1.730002 GHz	-10.12 dBm	ndB	26.00 dB
T2		1	1.735027 GHz	-10.57 dBm	Q factor	344.9

Band :	LTE Band 4	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175



26dB Bandwidth Plot on Channel 20175

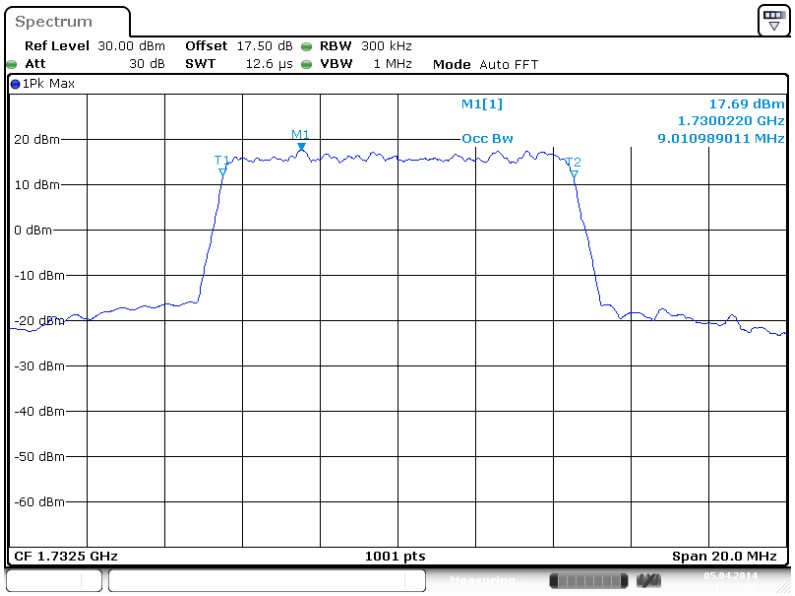


Marker

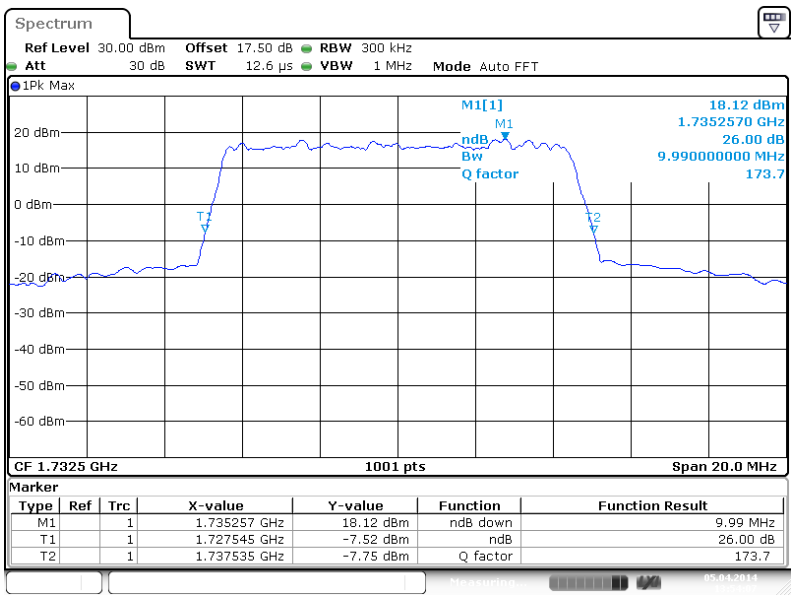
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.734618 GHz	18.09 dBm	ndB down	10.07 MHz
T1		1	1.727525 GHz	-7.63 dBm	ndB	26.00 dB
T2		1	1.737595 GHz	-7.88 dBm	Q factor	172.3

Band :	LTE Band 4	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175

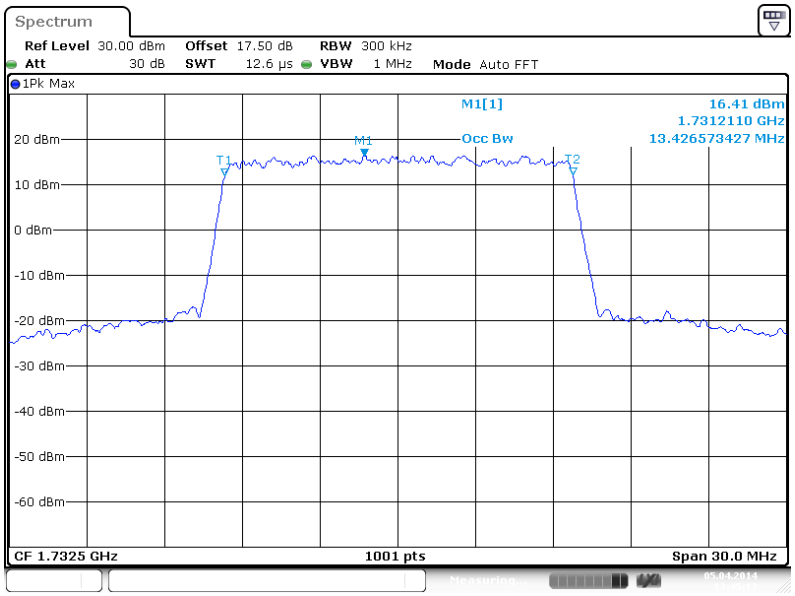


26dB Bandwidth Plot on Channel 20175

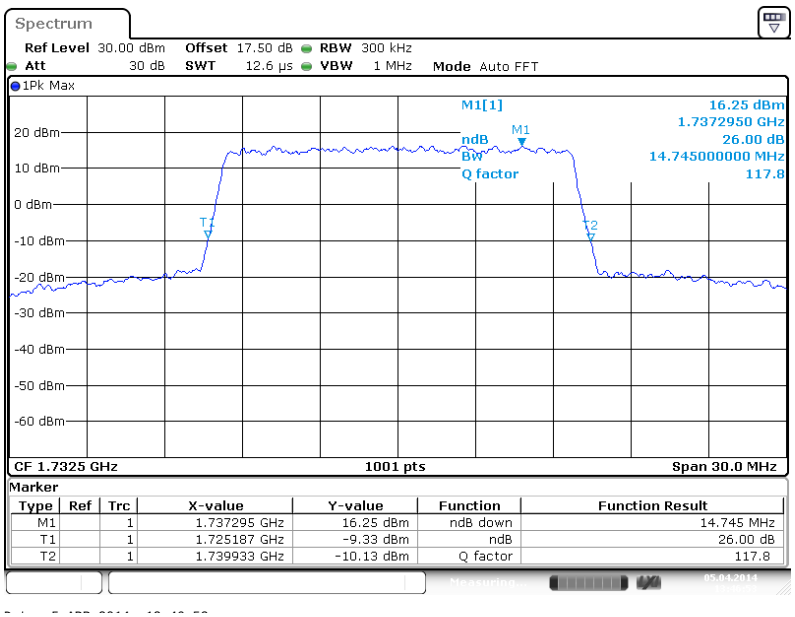


Band :	LTE Band 4	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

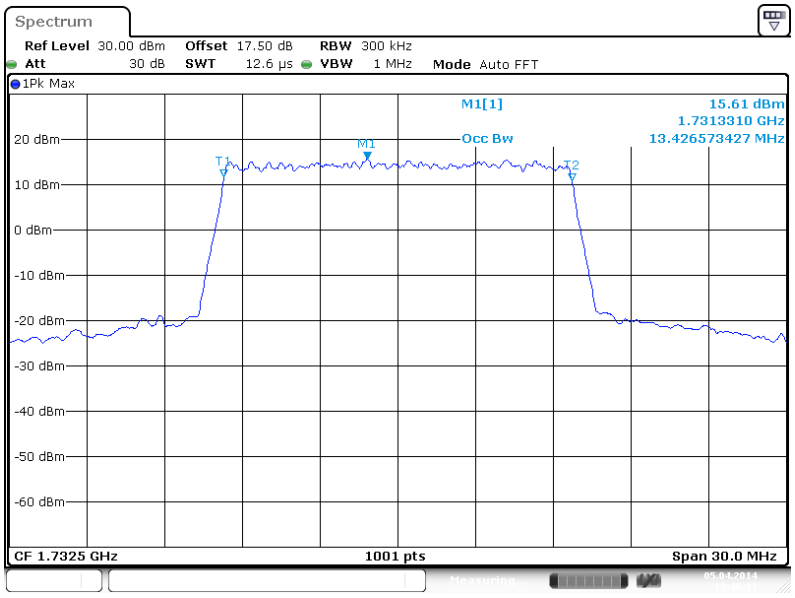


26dB Bandwidth Plot on Channel 20175

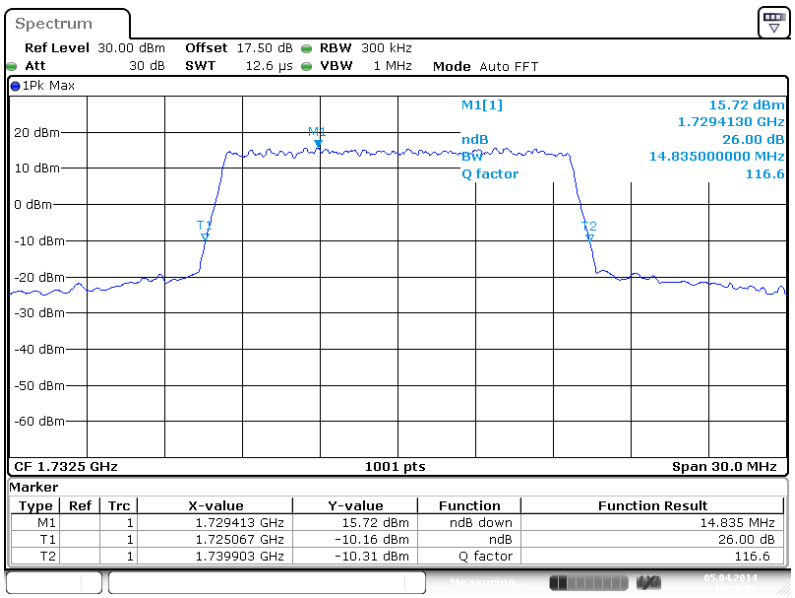


Band :	LTE Band 4	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175



26dB Bandwidth Plot on Channel 20175

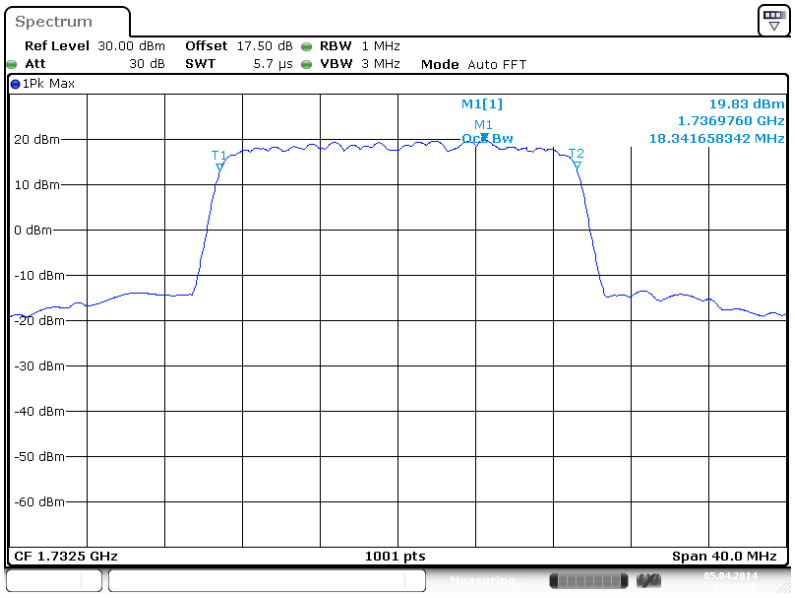


Marker

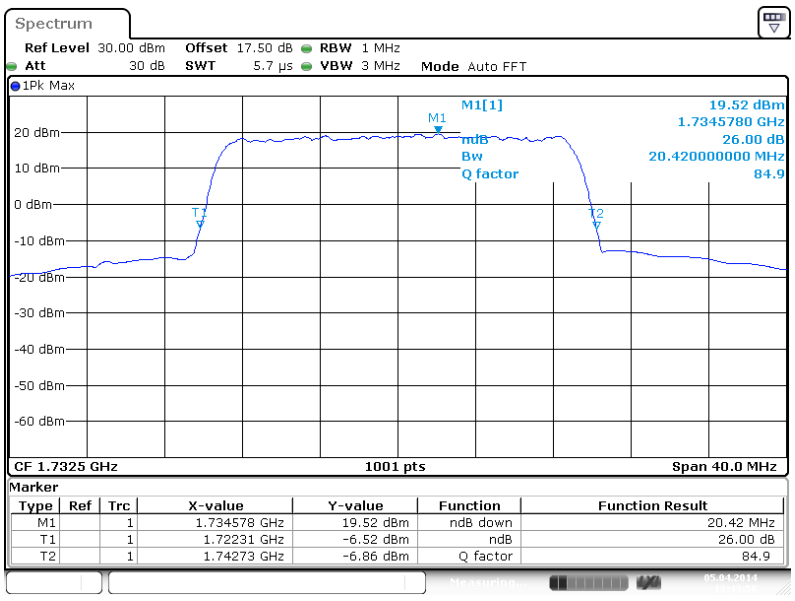
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.729413 GHz	15.72 dBm	ndB down	14.835 MHz
T1		1	1.725067 GHz	-10.16 dBm	ndB	26.00 dB
T2		1	1.739903 GHz	-10.31 dBm	Q factor	116.6

Band :	LTE Band 4	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 20175

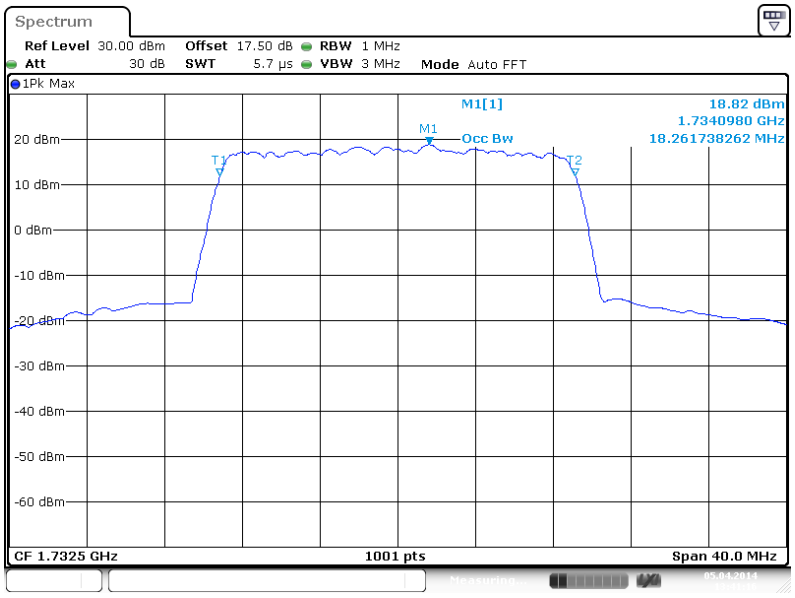


26dB Bandwidth Plot on Channel 20175

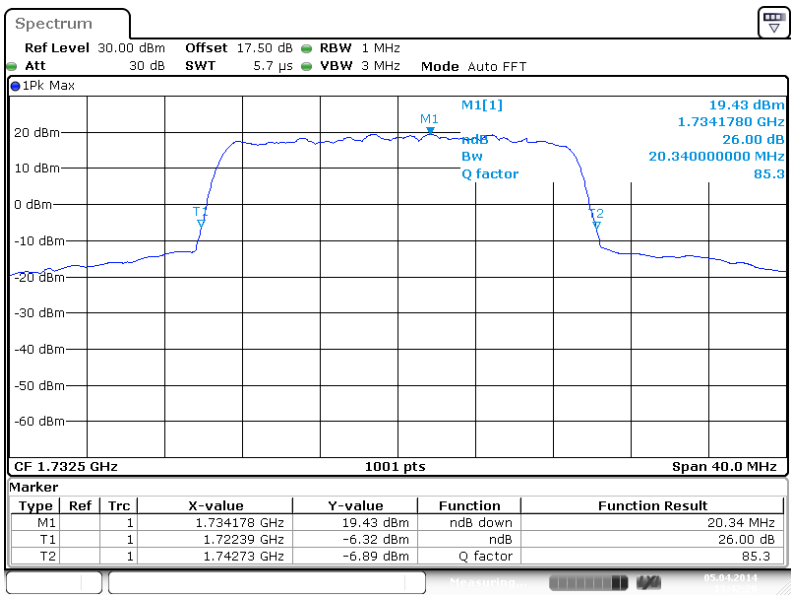


Band :	LTE Band 4	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 20175

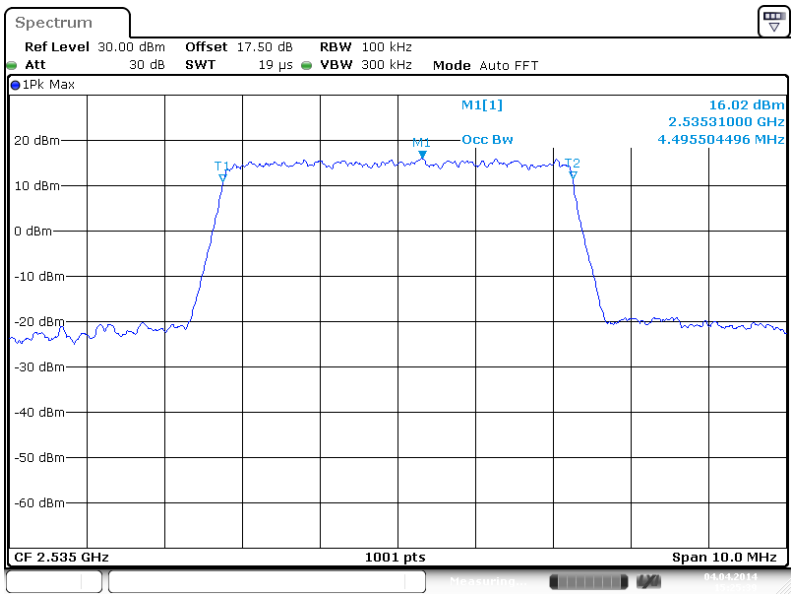


26dB Bandwidth Plot on Channel 20175

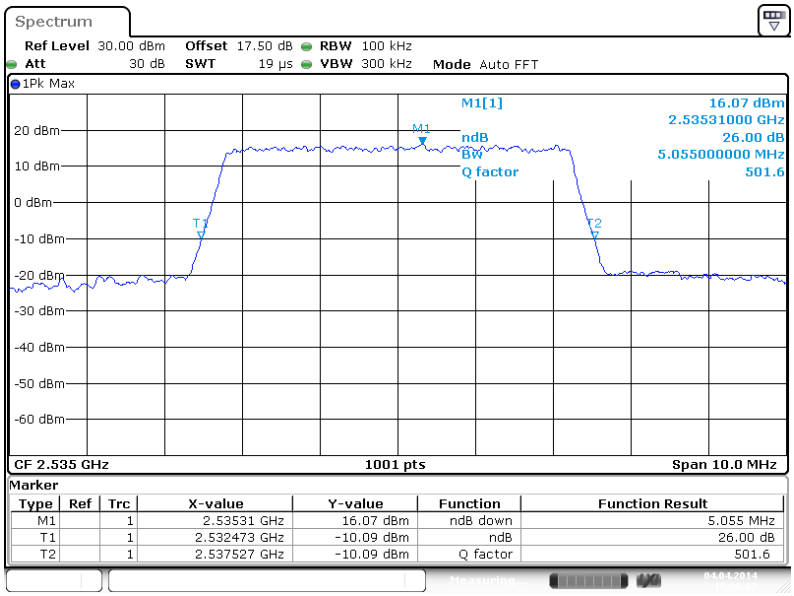


Band :	LTE Band 7	BW / Mod. :	5MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100

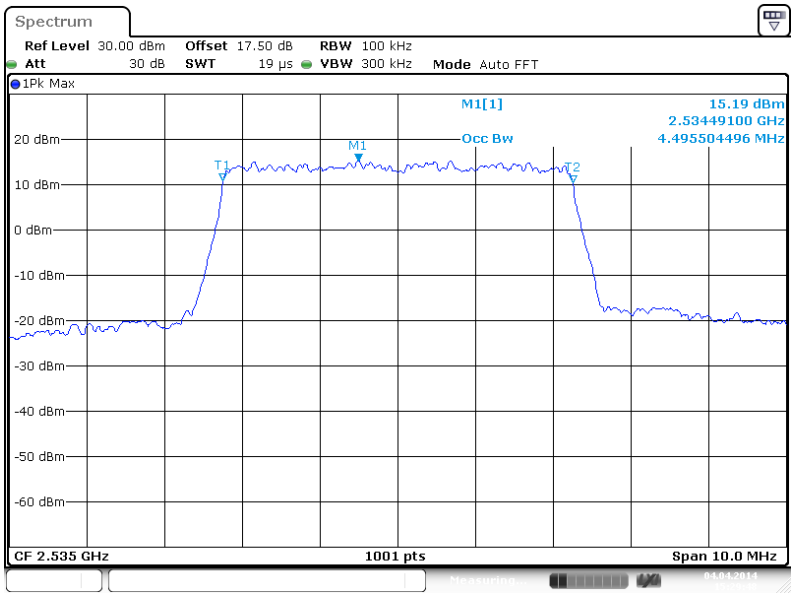


26dB Bandwidth Plot on Channel 21100

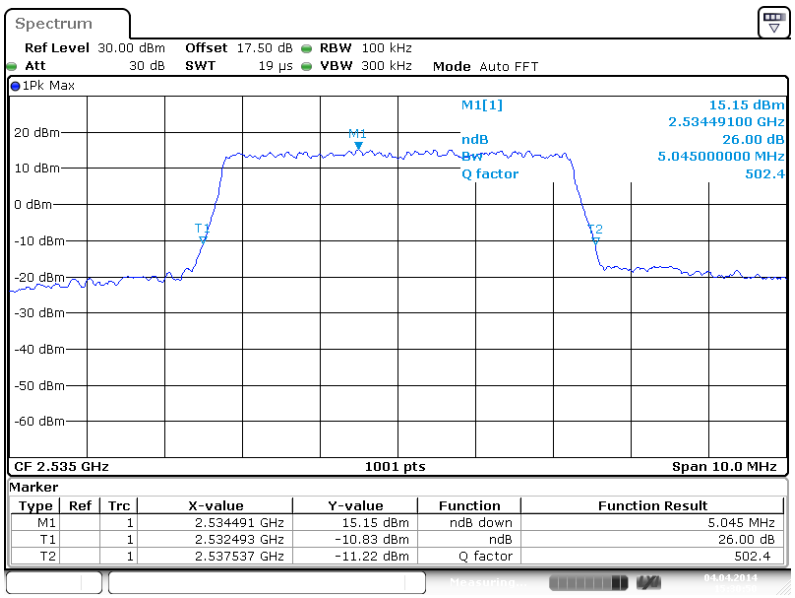


Band :	LTE Band 7	BW / Mod. :	5MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100

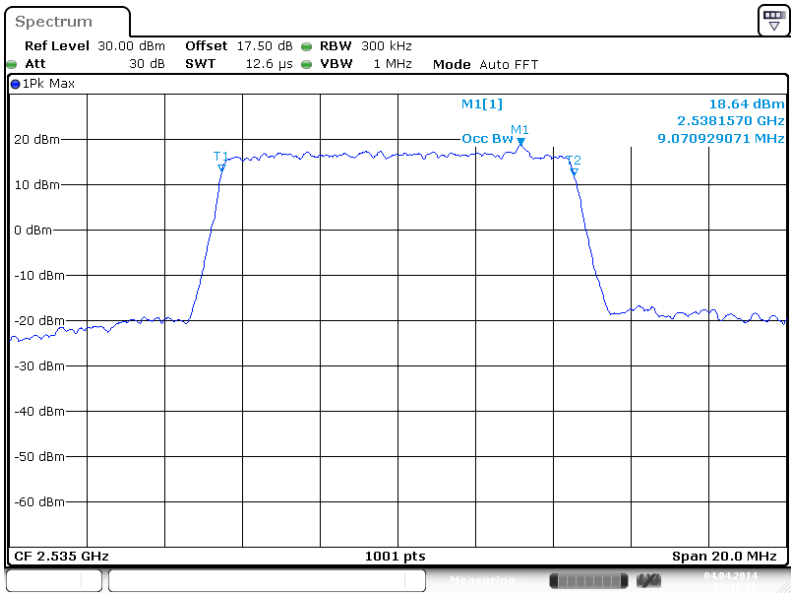


26dB Bandwidth Plot on Channel 21100

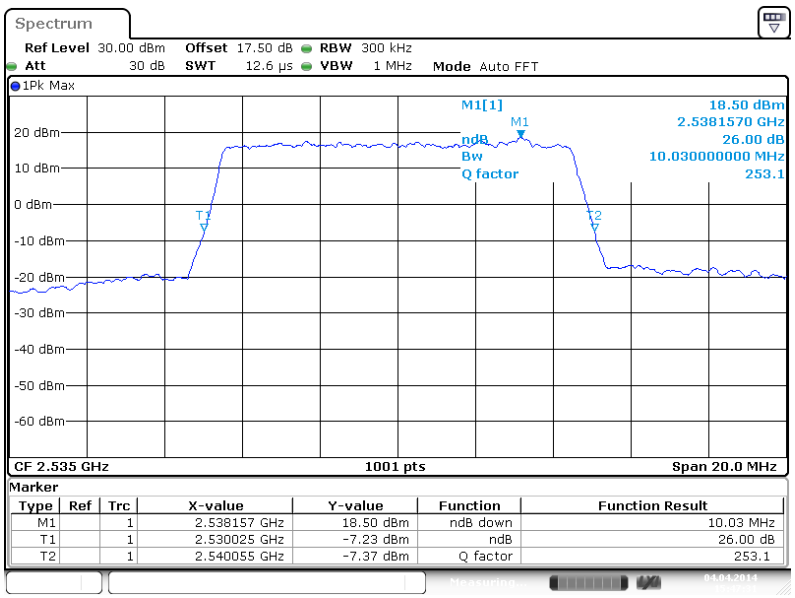


Band :	LTE Band 7	BW / Mod. :	10MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100

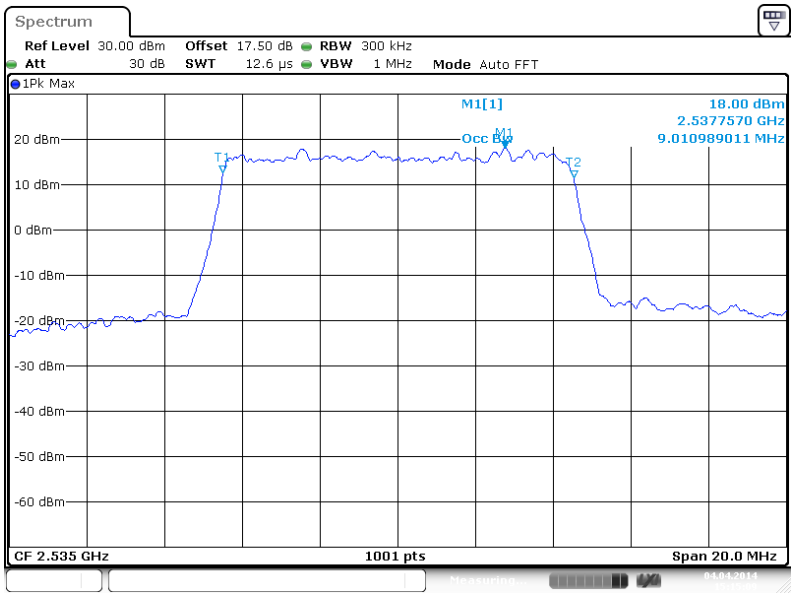


26dB Bandwidth Plot on Channel 21100

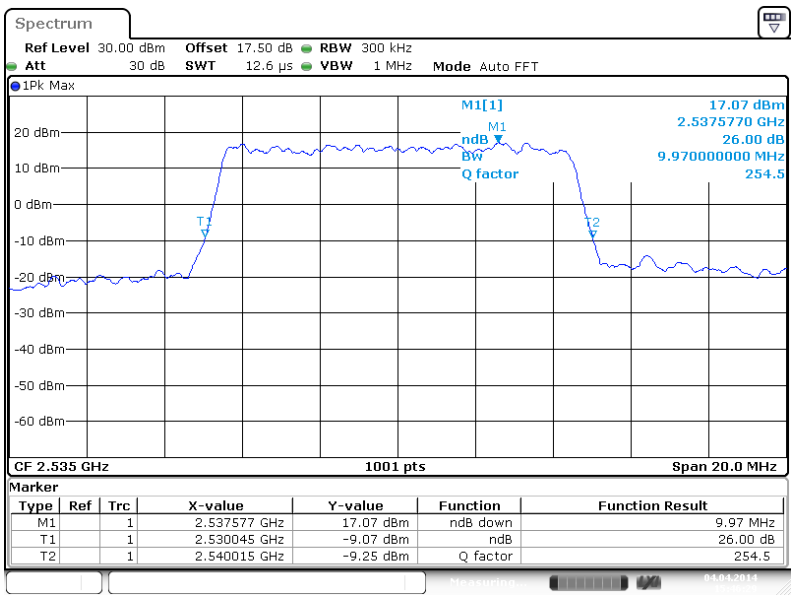


Band :	LTE Band 7	BW / Mod. :	10MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100

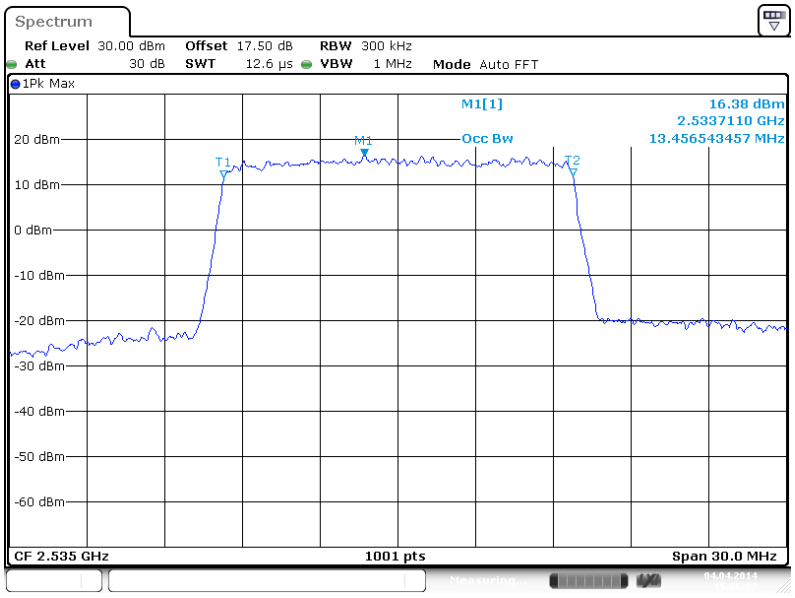


26dB Bandwidth Plot on Channel 21100

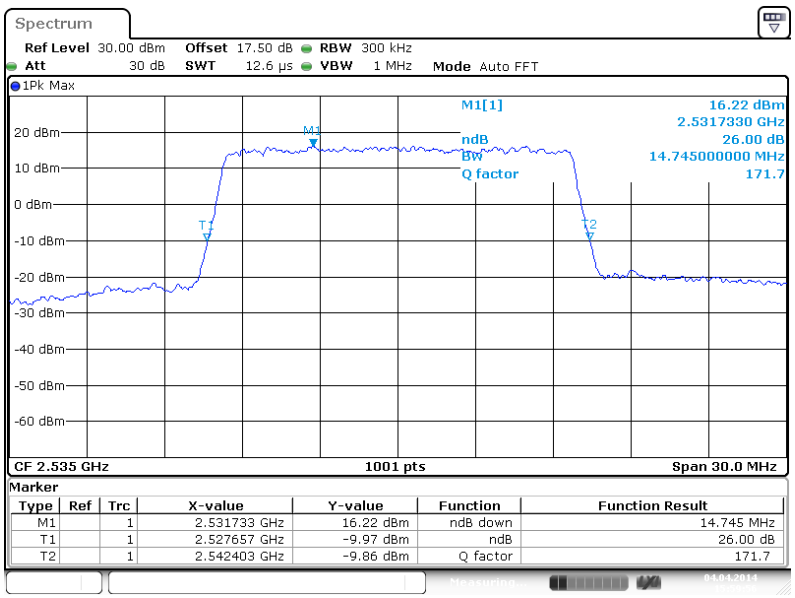


Band :	LTE Band 7	BW / Mod. :	15MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100

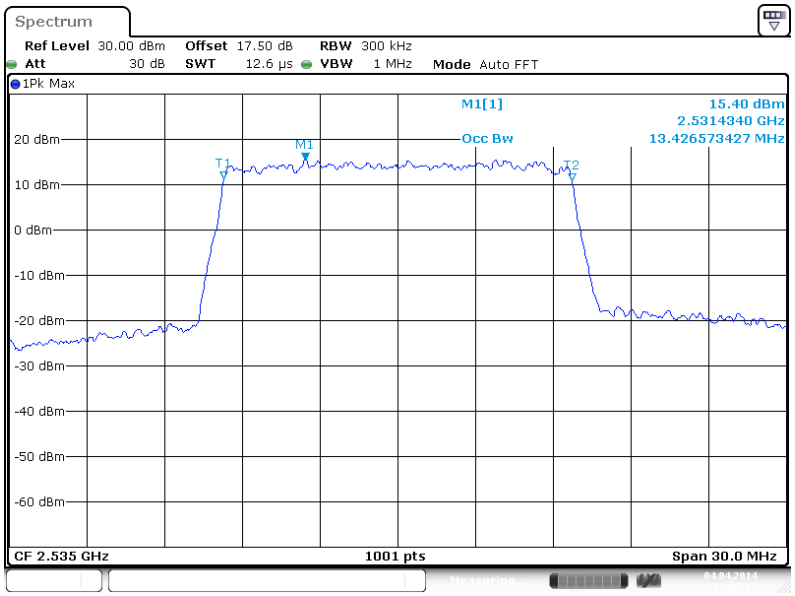


26dB Bandwidth Plot on Channel 21100

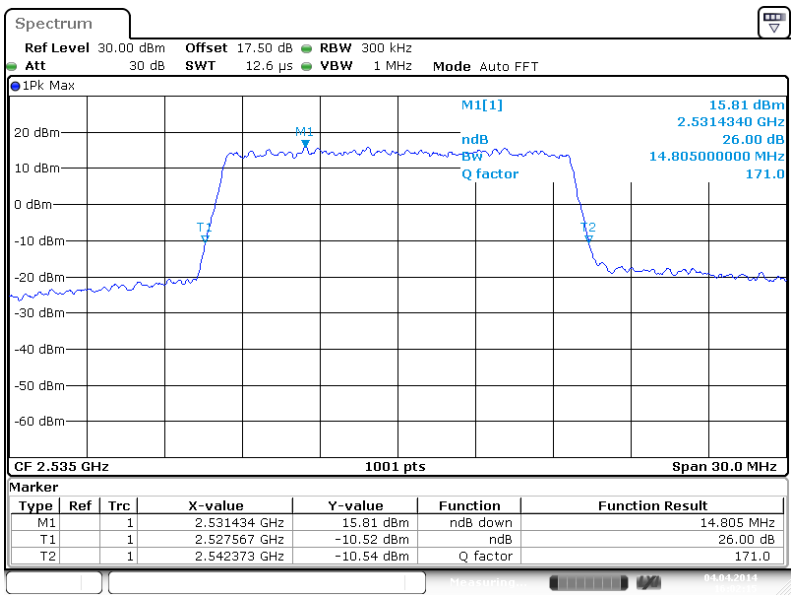


Band :	LTE Band 7	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100

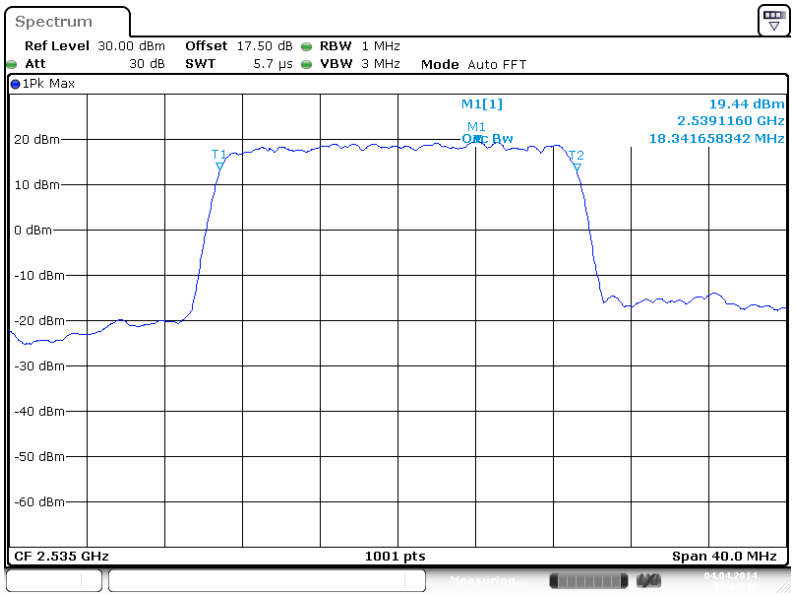


26dB Bandwidth Plot on Channel 21100

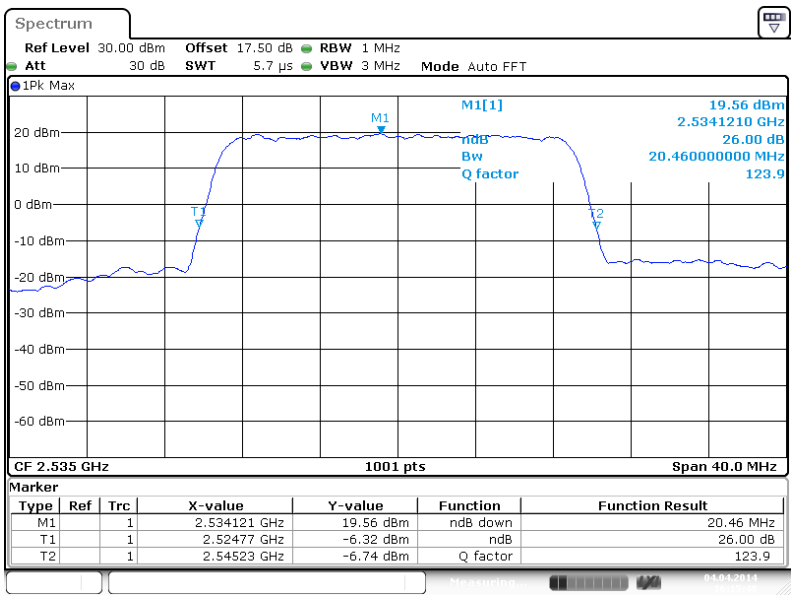


Band :	LTE Band 7	BW / Mod. :	20MHz / QPSK

99% Occupied Bandwidth Plot on Channel 21100

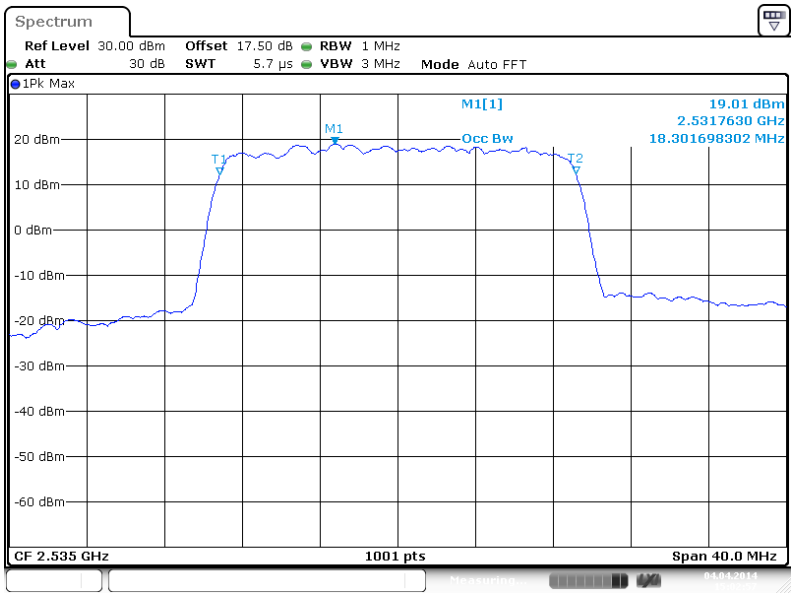


26dB Bandwidth Plot on Channel 21100

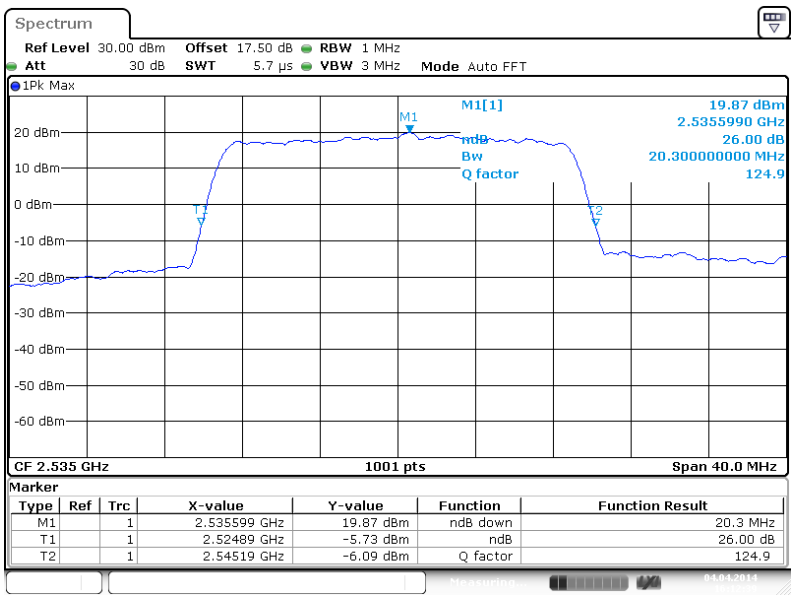


Band :	LTE Band 7	BW / Mod. :	20MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 21100



26dB Bandwidth Plot on Channel 21100



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.535599 GHz	19.87 dBm	ndB down	20.3 MHz
T1		1	2.52489 GHz	-5.73 dBm	ndB	26.00 dB
T2		1	2.54519 GHz	-6.09 dBm	Q factor	124.9

3.5 Conducted Band Edge Measurement

3.5.1 Description of Conducted Band Edge Measurement

27.53 (g) for Band 4

For operations in the 1710 – 1755 MHz band, the FCC limit is 43 + $10\log_{10}$(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (l)(4) for Band 7

The emissions be operated in the 2496-2690 MHz band, the attenuation factor of transmitter Power (P) shall be not less than 43 + 10 log (P) dB at the channel edge and 55 + 10 log (P) dB at 5.5 MHz from the channel edges.

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
3. Set spectrum analyzer with RMS detector.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5. For LTE Band 4:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

   = -13dBm.
6. For LTE Band 7:

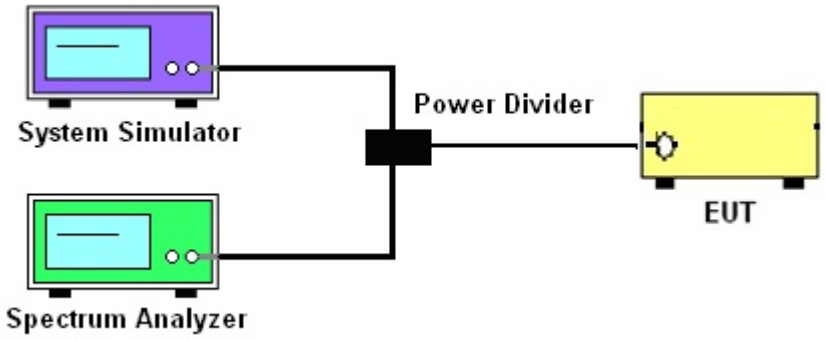
   The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [55 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)

   = -25dBm.

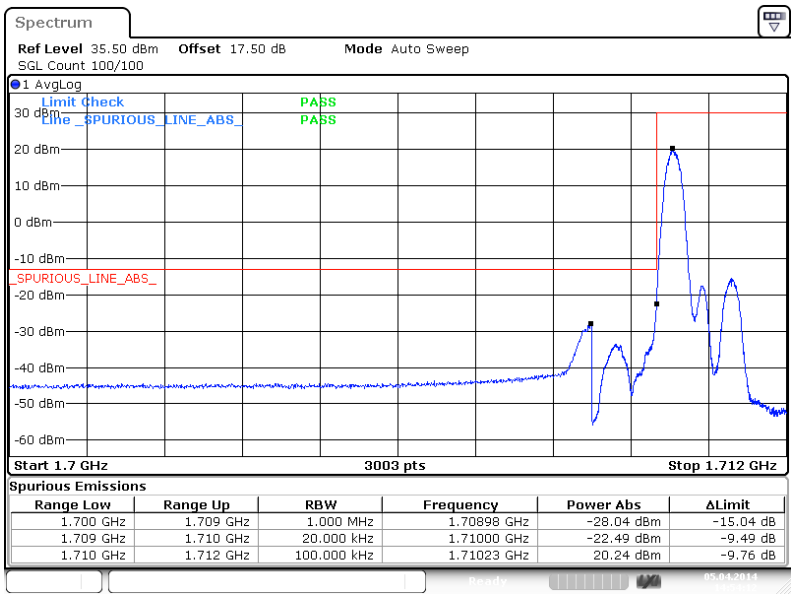
3.5.4 Test Setup



3.5.5 Test Result (Plots) of Conducted Band Edge

Band :	LTE Band 4	Band Width :	1.4MHz / QPSK

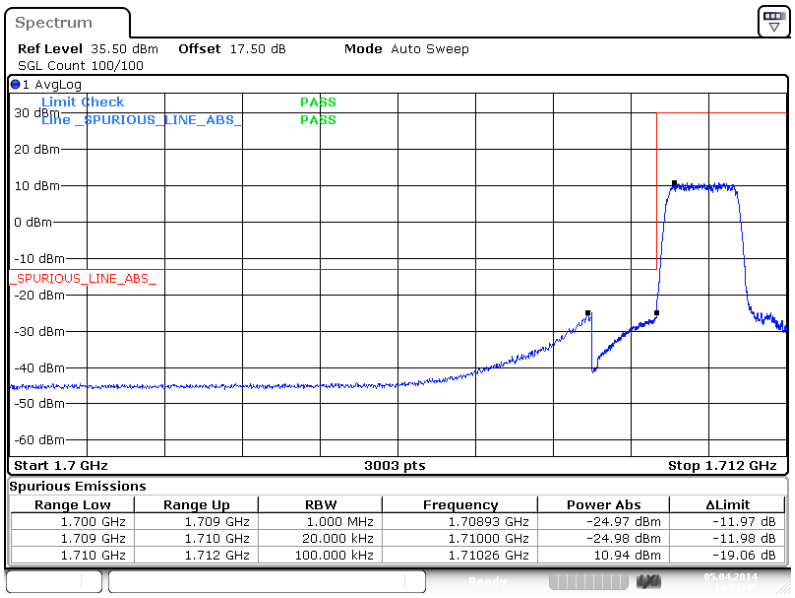
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70898 GHz	-28.04 dBm	-15.04 dB
1.709 GHz	1.710 GHz	20.000 kHz	1.71000 GHz	-22.49 dBm	-9.49 dB
1.710 GHz	1.712 GHz	100.000 kHz	1.71023 GHz	20.24 dBm	-9.76 dB

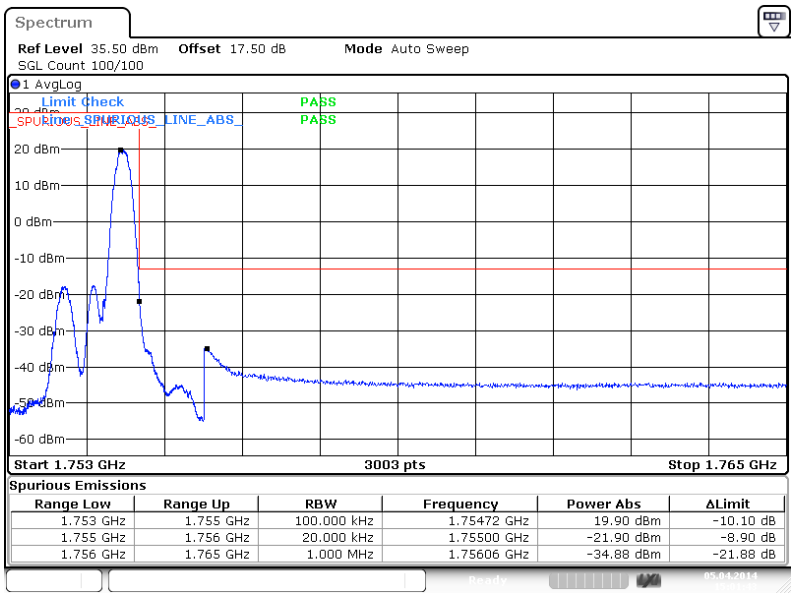
Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70893 GHz	-24.97 dBm	-11.97 dB
1.709 GHz	1.710 GHz	20.000 kHz	1.71000 GHz	-24.98 dBm	-11.98 dB
1.710 GHz	1.712 GHz	100.000 kHz	1.71026 GHz	10.94 dBm	-19.06 dB

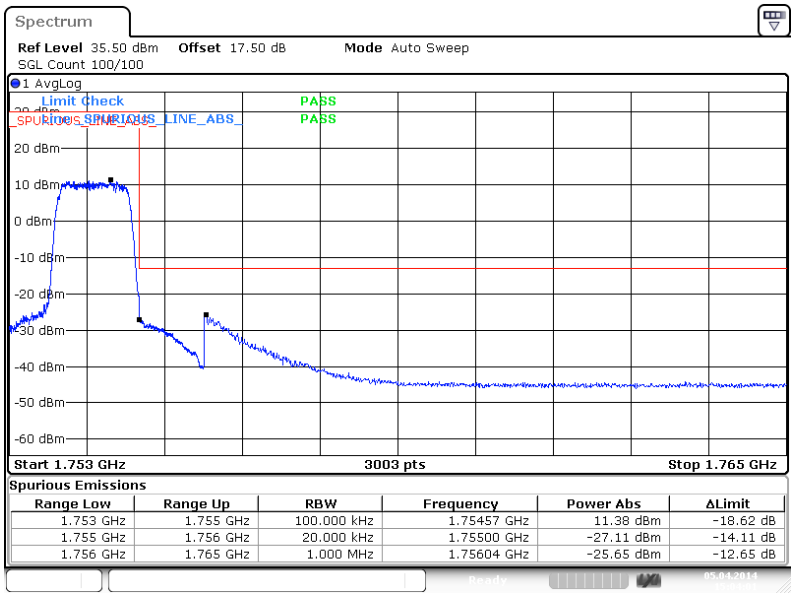
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.753 GHz	1.755 GHz	100.000 kHz	1.75472 GHz	19.90 dBm	-10.10 dB
1.755 GHz	1.756 GHz	20.000 kHz	1.75500 GHz	-21.90 dBm	-8.90 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75606 GHz	-34.88 dBm	-21.88 dB

Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0

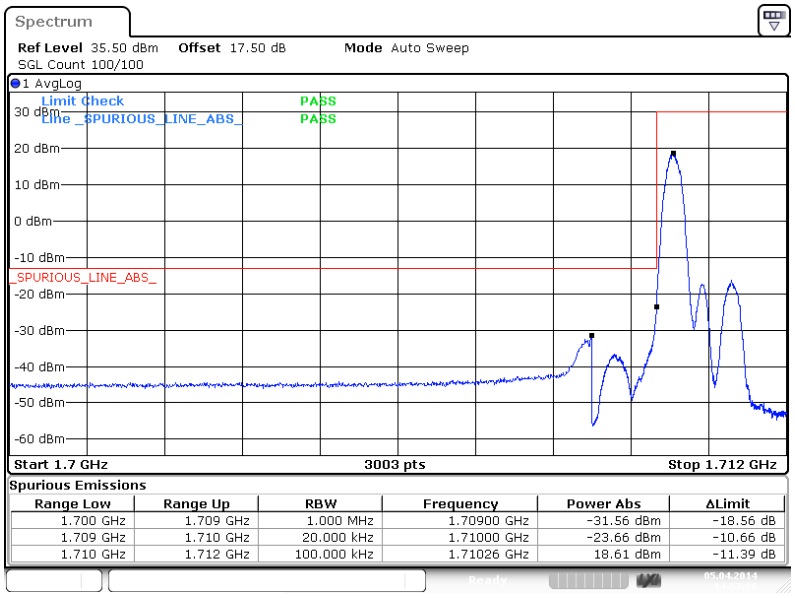


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.753 GHz	1.755 GHz	100.000 kHz	1.75457 GHz	11.38 dBm	-18.62 dB
1.755 GHz	1.756 GHz	20.000 kHz	1.75500 GHz	-27.11 dBm	-14.11 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75604 GHz	-25.65 dBm	-12.65 dB

Band :	LTE Band 4	Band Width :	1.4MHz / 16QAM

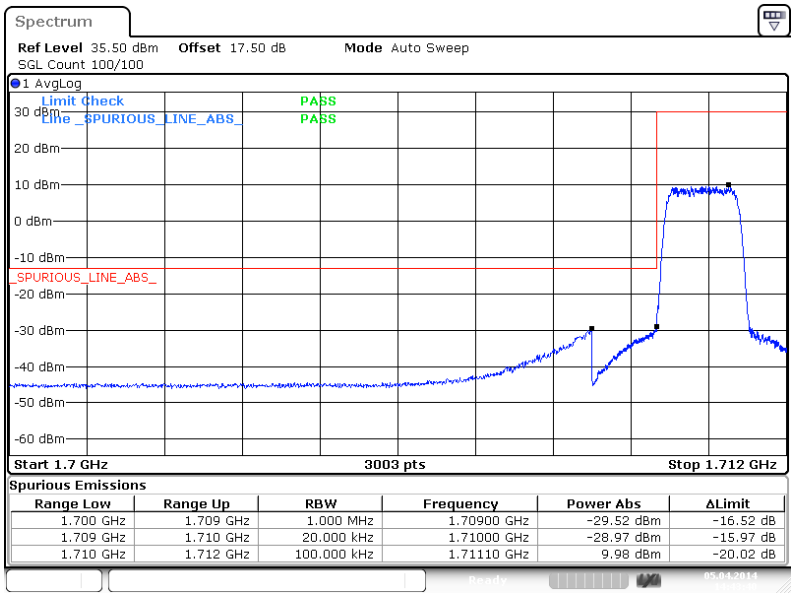
Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70900 GHz	-31.56 dBm	-18.56 dB
1.709 GHz	1.710 GHz	20.000 kHz	1.71000 GHz	-23.66 dBm	-10.66 dB
1.710 GHz	1.712 GHz	100.000 kHz	1.71026 GHz	18.61 dBm	-11.39 dB

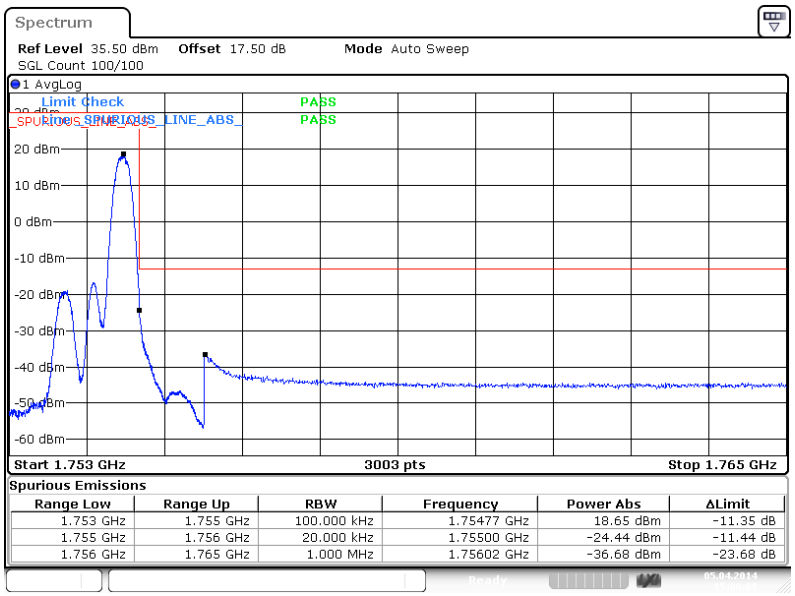
Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Spurious Emissions

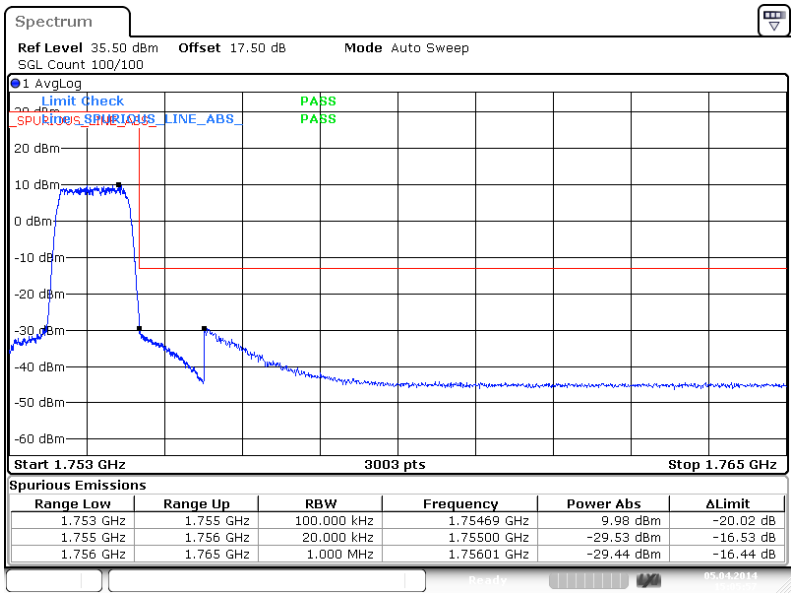
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70900 GHz	-29.52 dBm	-16.52 dB
1.709 GHz	1.710 GHz	20.000 kHz	1.71000 GHz	-28.97 dBm	-15.97 dB
1.710 GHz	1.712 GHz	100.000 kHz	1.71110 GHz	9.98 dBm	-20.02 dB

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.753 GHz	1.755 GHz	100.000 kHz	1.75477 GHz	18.65 dBm	-11.35 dB
1.755 GHz	1.756 GHz	20.000 kHz	1.75500 GHz	-24.44 dBm	-11.44 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75602 GHz	-36.68 dBm	-23.68 dB

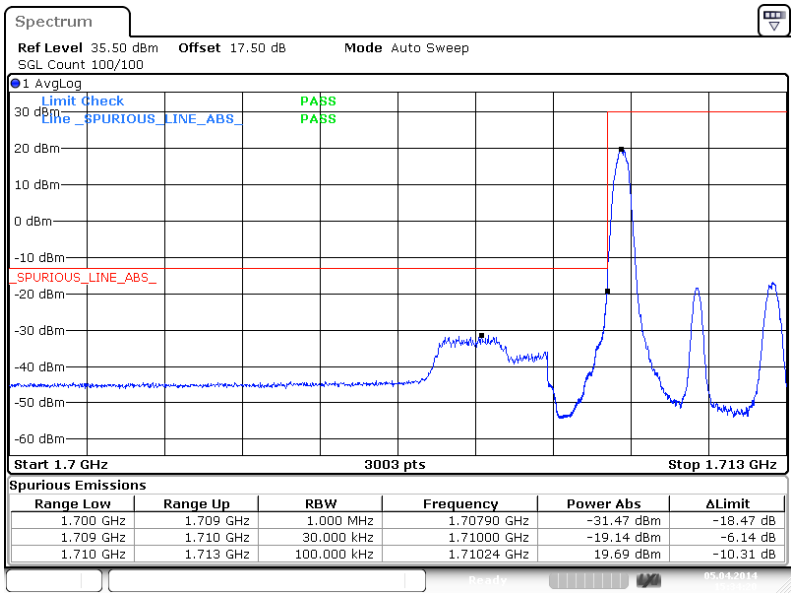
Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.753 GHz	1.755 GHz	100.000 kHz	1.75469 GHz	9.98 dBm	-20.02 dB
1.755 GHz	1.756 GHz	20.000 kHz	1.75500 GHz	-29.53 dBm	-16.53 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75601 GHz	-29.44 dBm	-16.44 dB

Band :	LTE Band 4	Band Width :	3MHz / QPSK

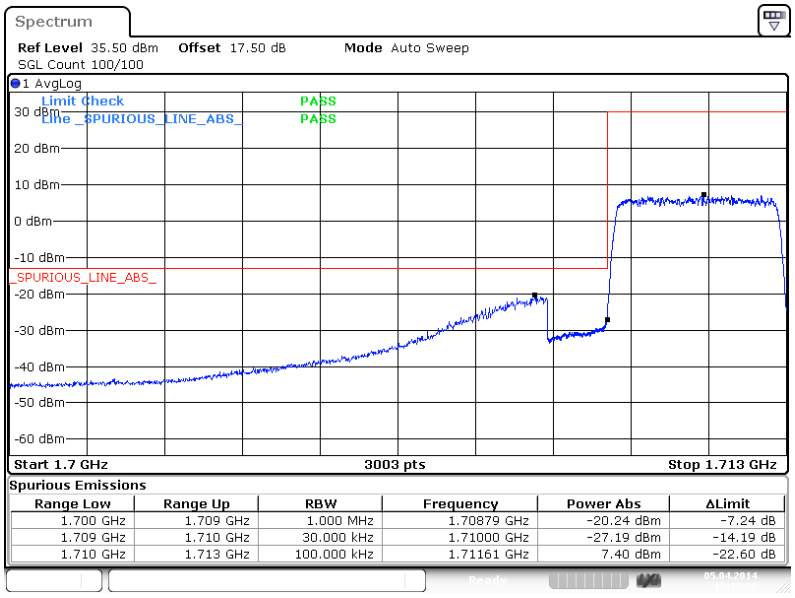
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70790 GHz	-31.47 dBm	-18.47 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-19.14 dBm	-6.14 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71024 GHz	19.69 dBm	-10.31 dB

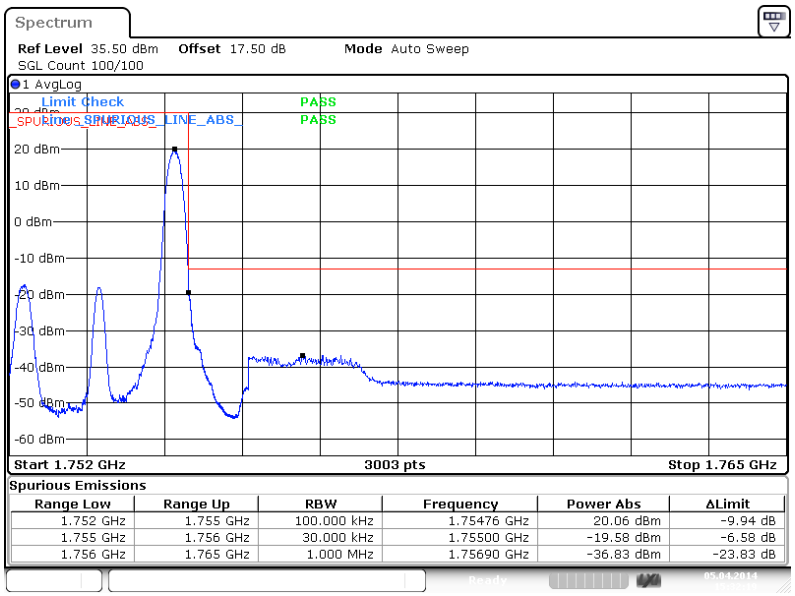
Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70879 GHz	-20.24 dBm	-7.24 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-27.19 dBm	-14.19 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71161 GHz	7.40 dBm	-22.60 dB

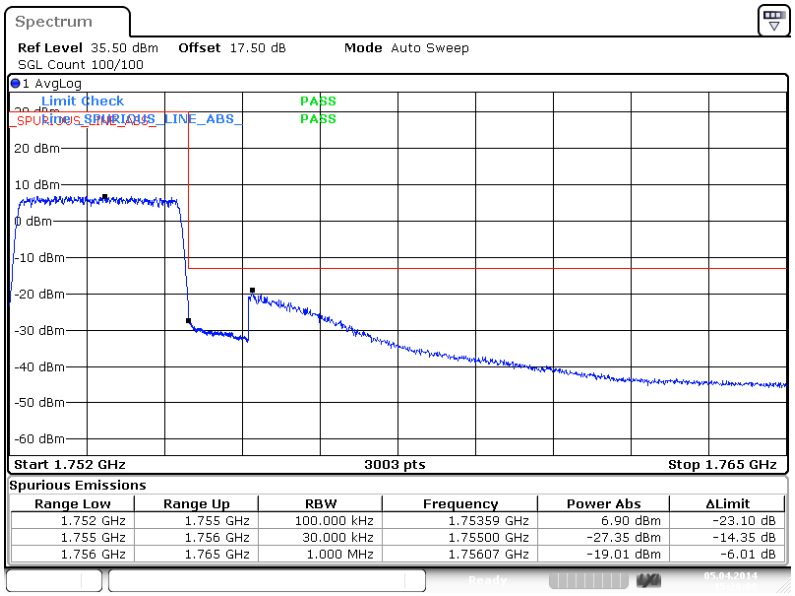
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75476 GHz	20.06 dBm	-9.94 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-19.58 dBm	-6.58 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75690 GHz	-36.83 dBm	-23.83 dB

Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0

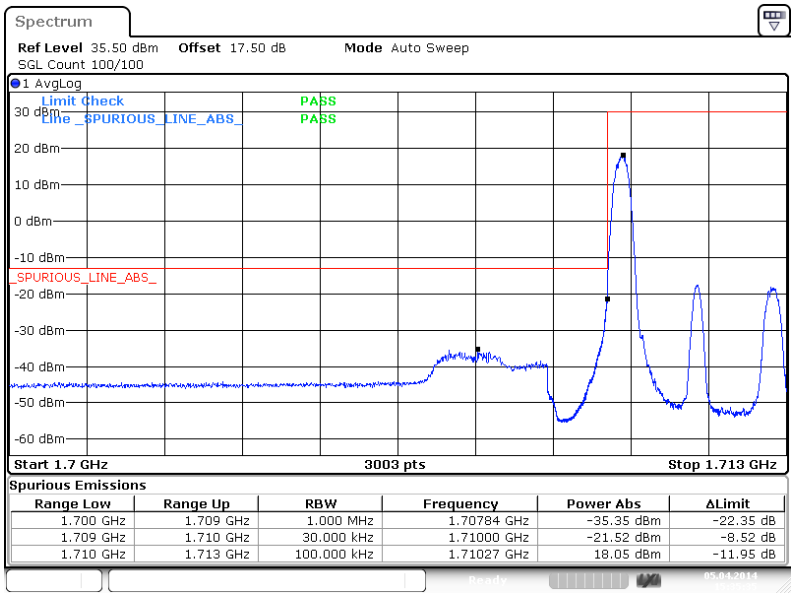


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75359 GHz	6.90 dBm	-23.10 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-27.35 dBm	-14.35 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75607 GHz	-19.01 dBm	-6.01 dB

Band :	LTE Band 4	Band Width :	3MHz / 16QAM

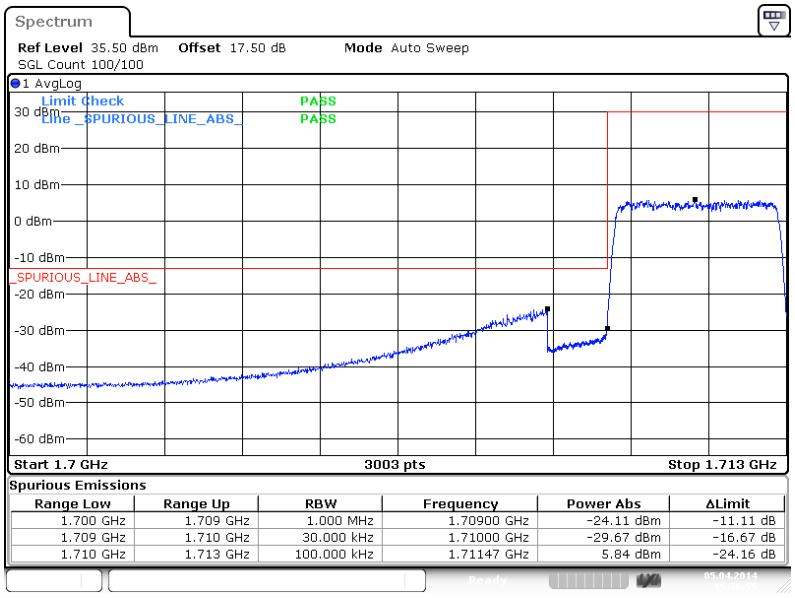
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70784 GHz	-35.35 dBm	-22.35 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-21.52 dBm	-8.52 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71027 GHz	18.05 dBm	-11.95 dB

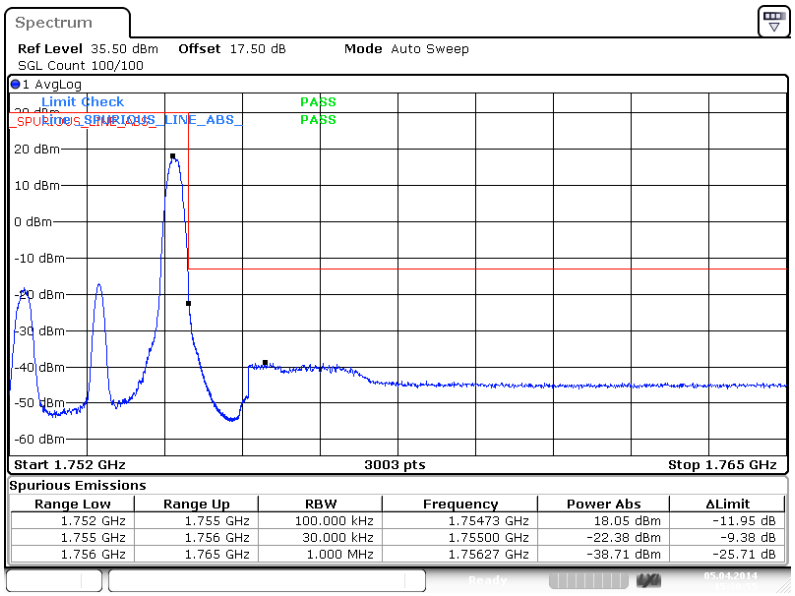
Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Spurious Emissions

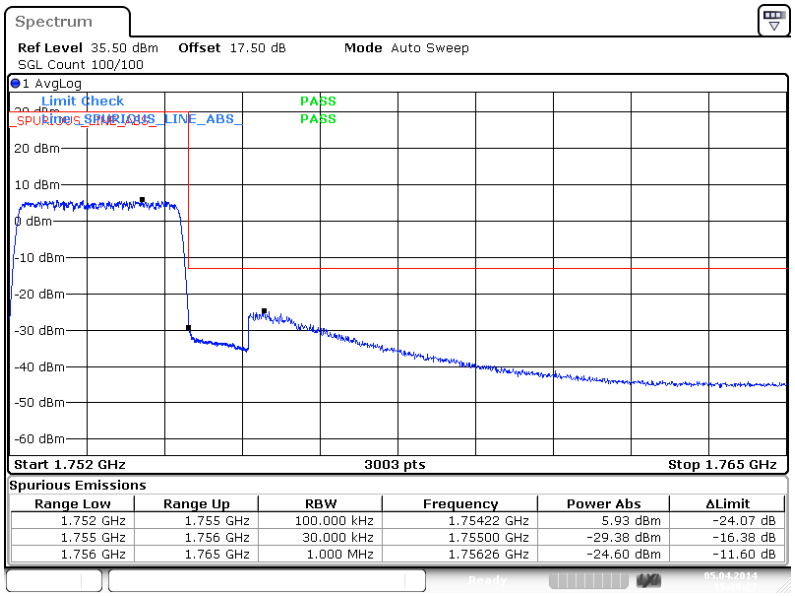
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70900 GHz	-24.11 dBm	-11.11 dB
1.709 GHz	1.710 GHz	30.000 kHz	1.71000 GHz	-29.67 dBm	-16.67 dB
1.710 GHz	1.713 GHz	100.000 kHz	1.71147 GHz	5.84 dBm	-24.16 dB

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75473 GHz	18.05 dBm	-11.95 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-22.38 dBm	-9.38 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75627 GHz	-38.71 dBm	-25.71 dB

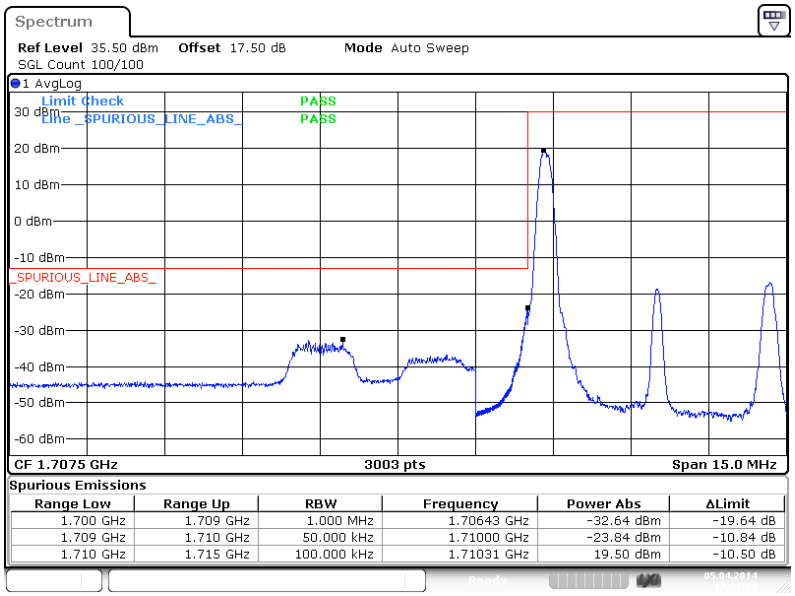
Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.752 GHz	1.755 GHz	100.000 kHz	1.75422 GHz	5.93 dBm	-24.07 dB
1.755 GHz	1.756 GHz	30.000 kHz	1.75500 GHz	-29.38 dBm	-16.38 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75626 GHz	-24.60 dBm	-11.60 dB

Band :	LTE Band 4	Band Width :	5MHz / QPSK

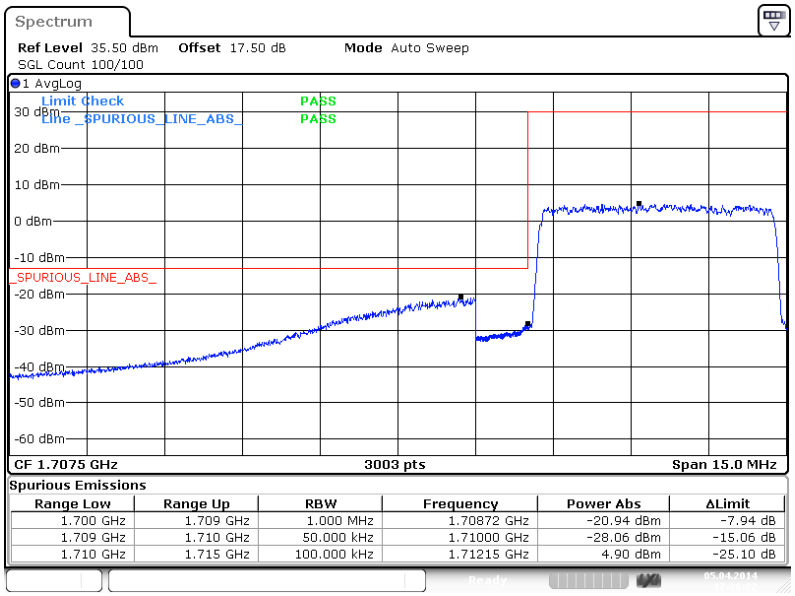
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70643 GHz	-32.64 dBm	-19.64 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.71000 GHz	-23.84 dBm	-10.84 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71031 GHz	19.50 dBm	-10.50 dB

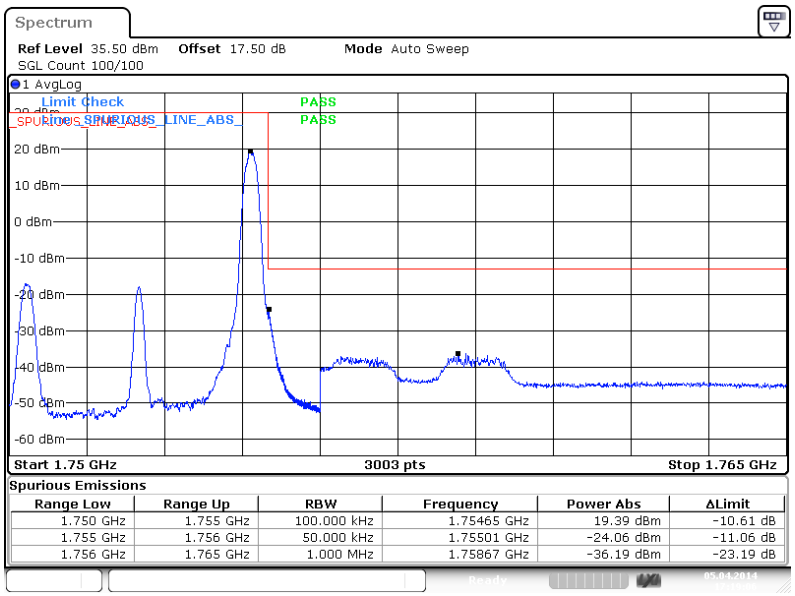
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Spurious Emissions

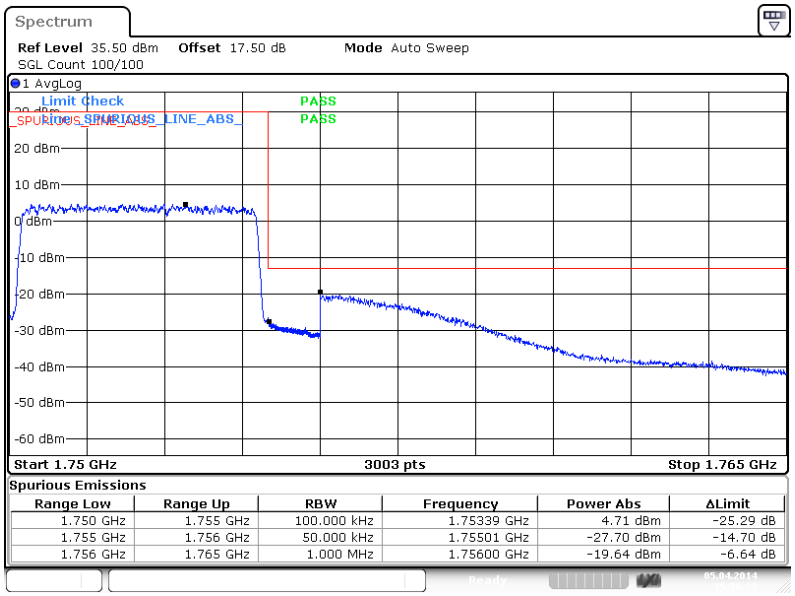
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70872 GHz	-20.94 dBm	-7.94 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.71000 GHz	-28.06 dBm	-15.06 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71215 GHz	4.90 dBm	-25.10 dB

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75465 GHz	19.39 dBm	-10.61 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75501 GHz	-24.06 dBm	-11.06 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75867 GHz	-36.19 dBm	-23.19 dB

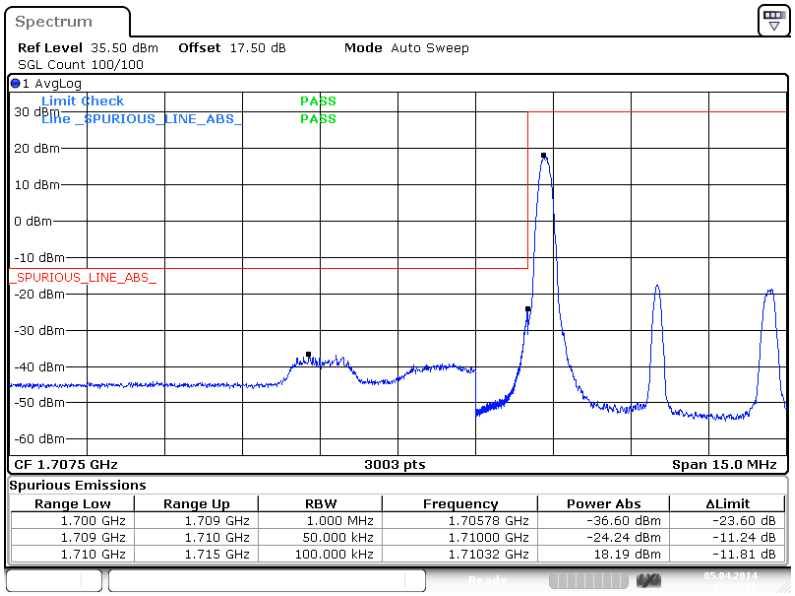
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75339 GHz	4.71 dBm	-25.29 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75501 GHz	-27.70 dBm	-14.70 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75600 GHz	-19.64 dBm	-6.64 dB

Band :	LTE Band 4	Band Width :	5MHz / 16QAM

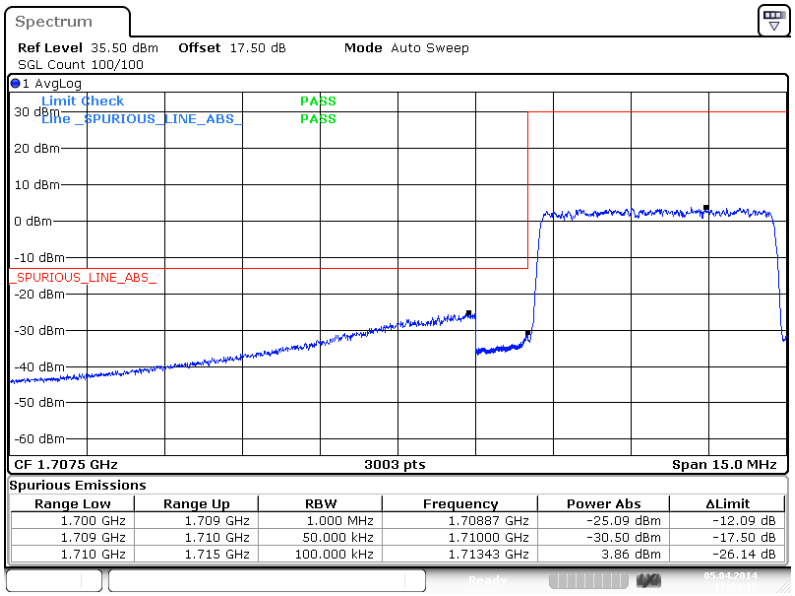
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70578 GHz	-36.60 dBm	-23.60 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.71000 GHz	-24.24 dBm	-11.24 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71032 GHz	18.19 dBm	-11.81 dB

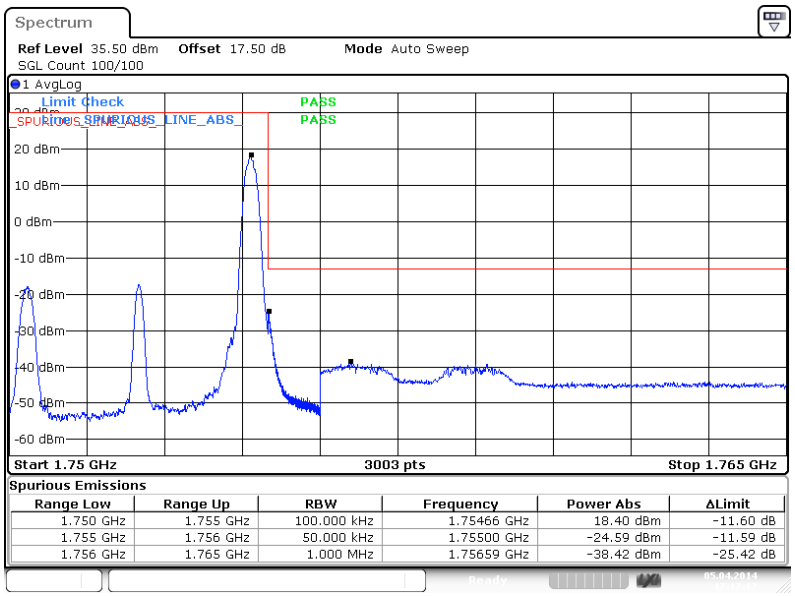
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Spurious Emissions

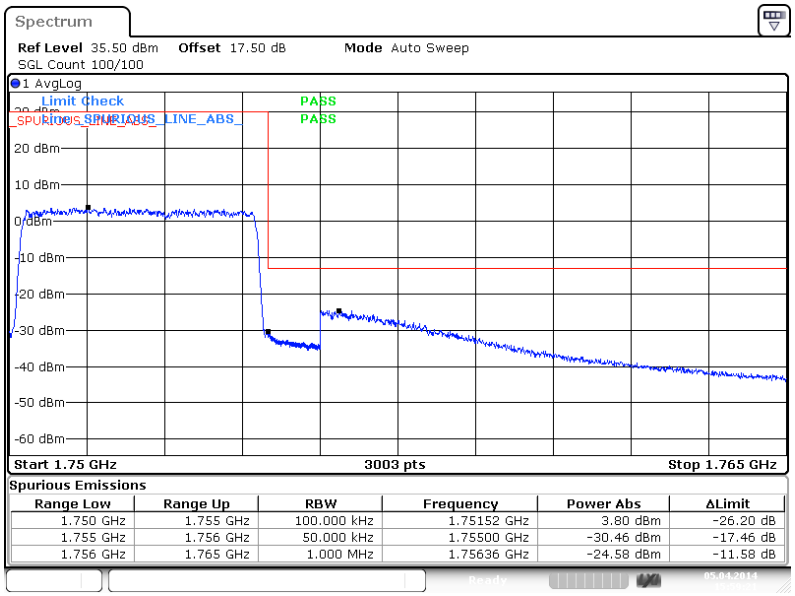
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70887 GHz	-25.09 dBm	-12.09 dB
1.709 GHz	1.710 GHz	50.000 kHz	1.71000 GHz	-30.50 dBm	-17.50 dB
1.710 GHz	1.715 GHz	100.000 kHz	1.71343 GHz	3.86 dBm	-26.14 dB

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75466 GHz	18.40 dBm	-11.60 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-24.59 dBm	-11.59 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75659 GHz	-38.42 dBm	-25.42 dB

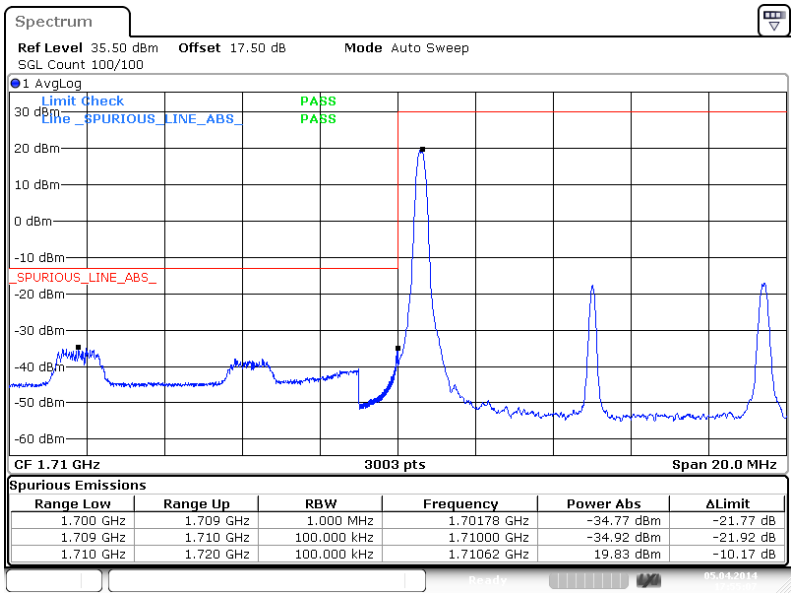
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.750 GHz	1.755 GHz	100.000 kHz	1.75152 GHz	3.80 dBm	-26.20 dB
1.755 GHz	1.756 GHz	50.000 kHz	1.75500 GHz	-30.46 dBm	-17.46 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75636 GHz	-24.58 dBm	-11.58 dB

Band :	LTE Band 4	Band Width :	10MHz / QPSK

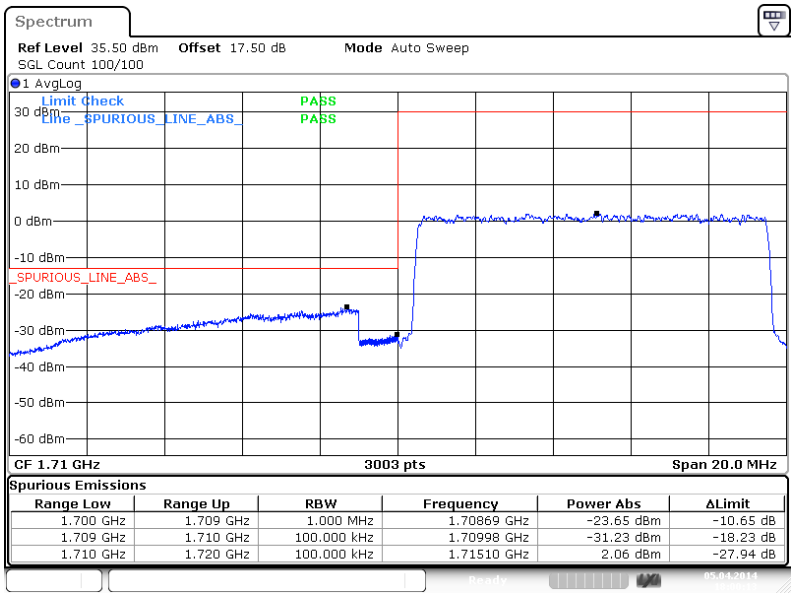
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70178 GHz	-34.77 dBm	-21.77 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.71000 GHz	-34.92 dBm	-21.92 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71062 GHz	19.83 dBm	-10.17 dB

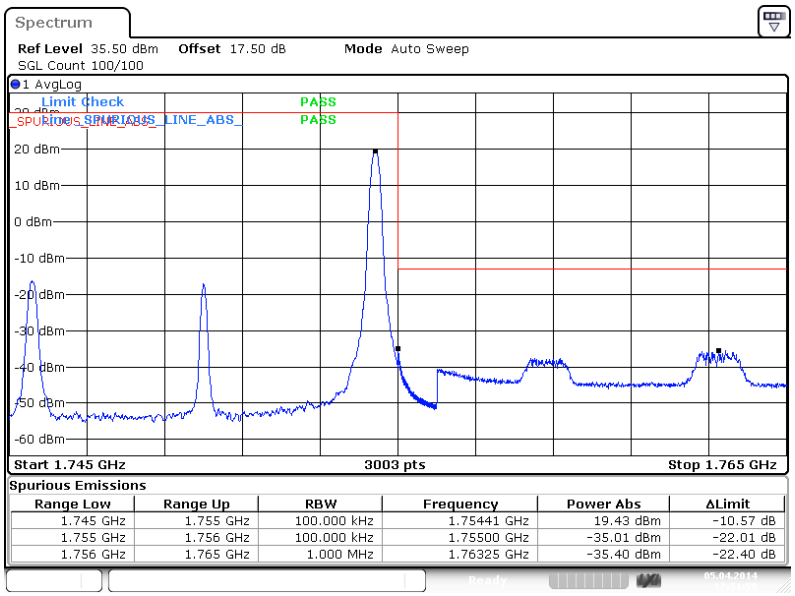
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70869 GHz	-23.65 dBm	-10.65 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.70998 GHz	-31.23 dBm	-18.23 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71510 GHz	2.06 dBm	-27.94 dB

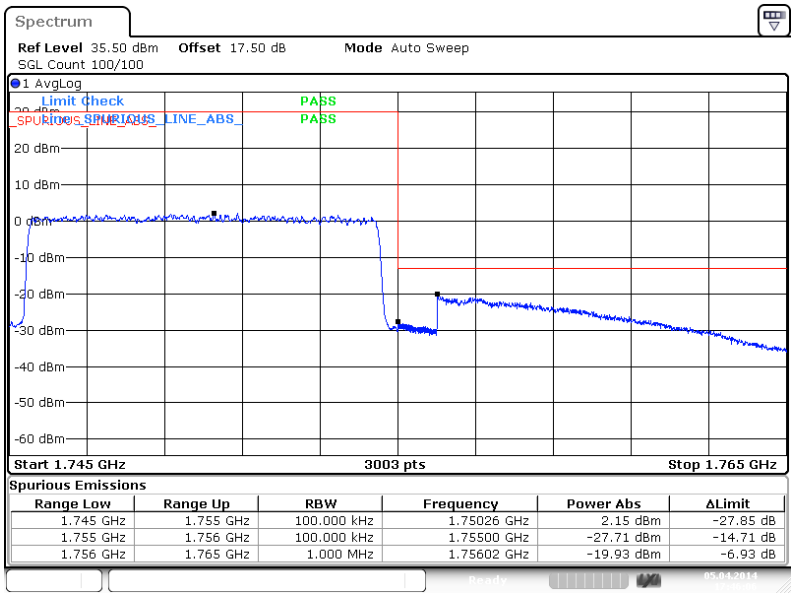
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.75441 GHz	19.43 dBm	-10.57 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75500 GHz	-35.01 dBm	-22.01 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.76325 GHz	-35.40 dBm	-22.40 dB

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

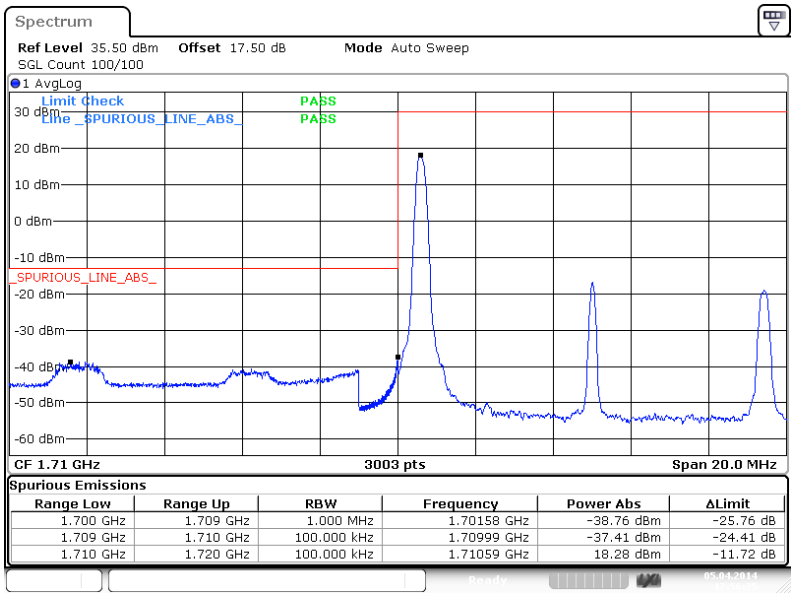


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.75026 GHz	2.15 dBm	-27.85 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75500 GHz	-27.71 dBm	-14.71 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75602 GHz	-19.93 dBm	-6.93 dB

Band :	LTE Band 4	Band Width :	10MHz / 16QAM

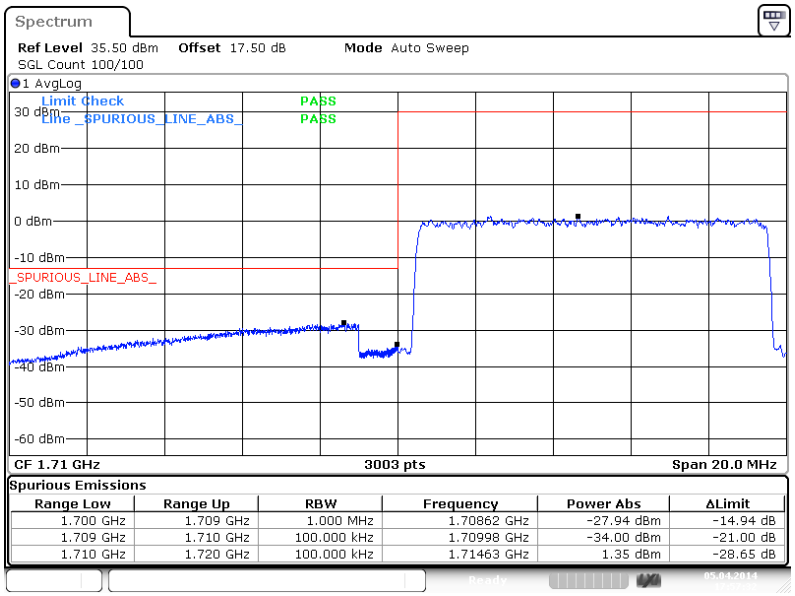
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70158 GHz	-38.76 dBm	-25.76 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.70999 GHz	-37.41 dBm	-24.41 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71059 GHz	18.28 dBm	-11.72 dB

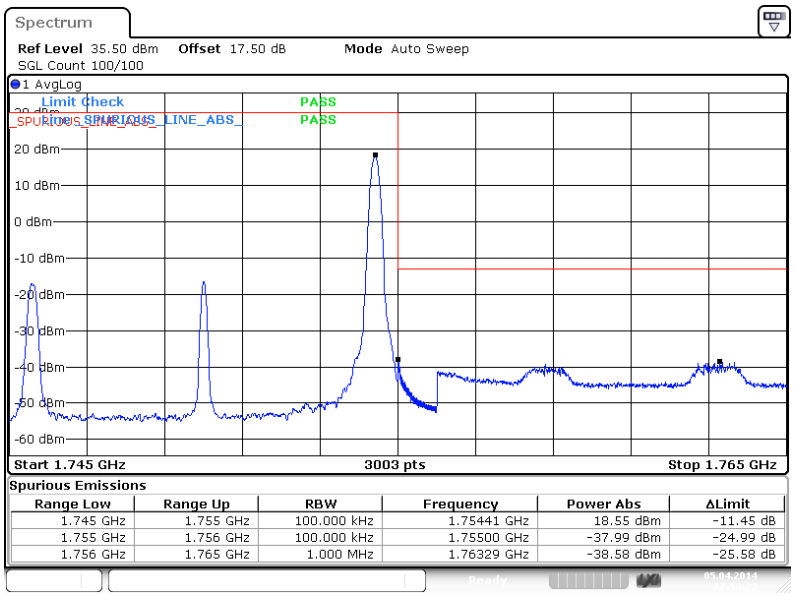
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Spurious Emissions

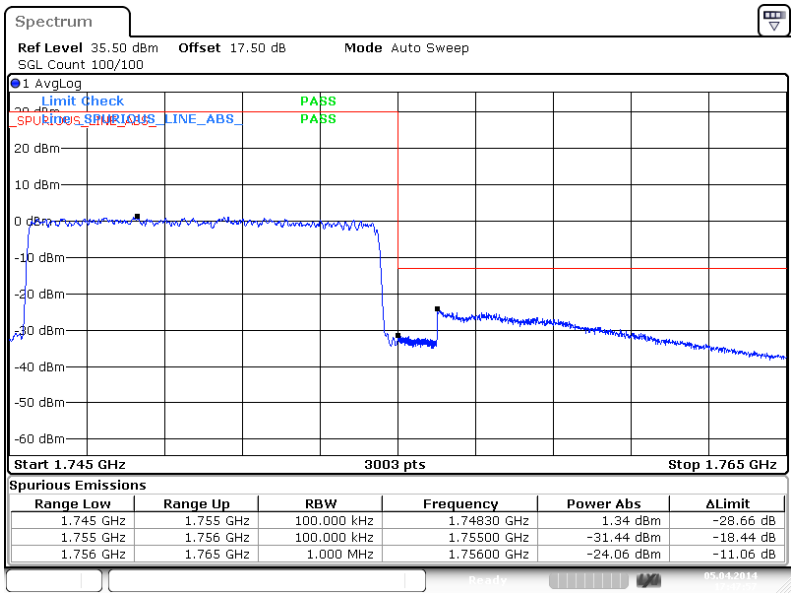
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70862 GHz	-27.94 dBm	-14.94 dB
1.709 GHz	1.710 GHz	100.000 kHz	1.70998 GHz	-34.00 dBm	-21.00 dB
1.710 GHz	1.720 GHz	100.000 kHz	1.71463 GHz	1.35 dBm	-28.65 dB

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.75441 GHz	18.55 dBm	-11.45 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75500 GHz	-37.99 dBm	-24.99 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.76329 GHz	-38.58 dBm	-25.58 dB

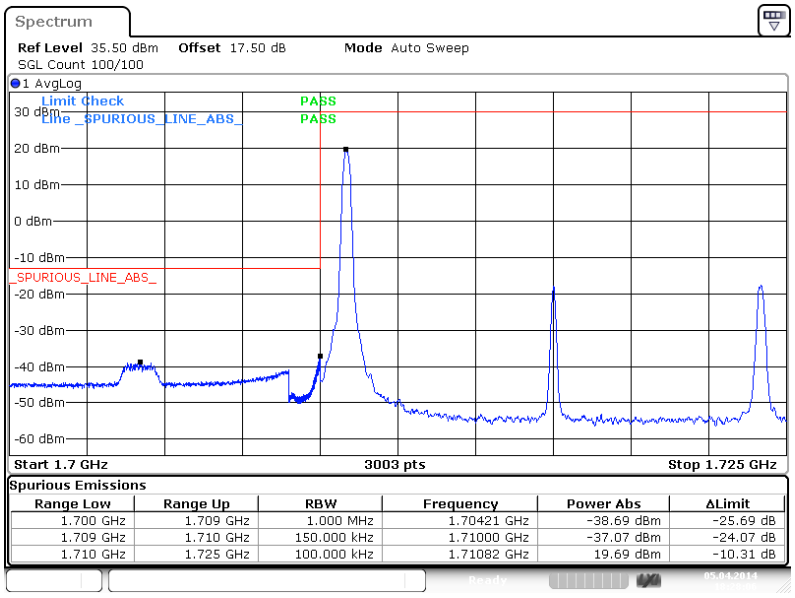
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.745 GHz	1.755 GHz	100.000 kHz	1.74830 GHz	1.34 dBm	-28.66 dB
1.755 GHz	1.756 GHz	100.000 kHz	1.75500 GHz	-31.44 dBm	-18.44 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75600 GHz	-24.06 dBm	-11.06 dB

Band :	LTE Band 4	Band Width :	15MHz / QPSK

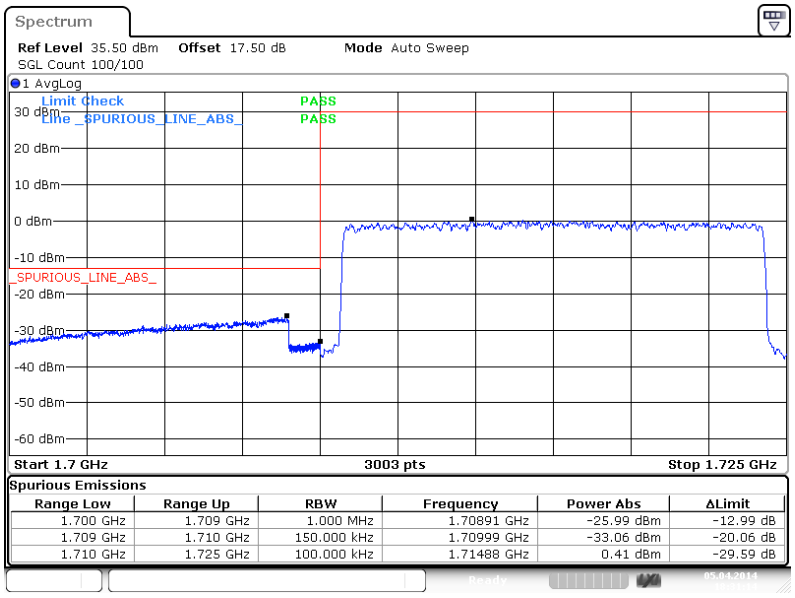
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70421 GHz	-38.69 dBm	-25.69 dB
1.709 GHz	1.710 GHz	150.000 kHz	1.71000 GHz	-37.07 dBm	-24.07 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.71082 GHz	19.69 dBm	-10.31 dB

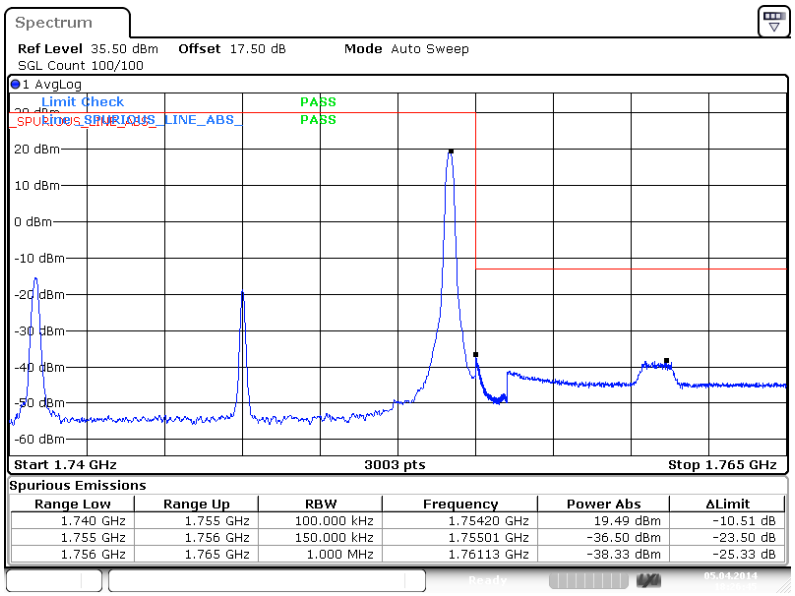
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70891 GHz	-25.99 dBm	-12.99 dB
1.709 GHz	1.710 GHz	150.000 kHz	1.70999 GHz	-33.06 dBm	-20.06 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.71488 GHz	0.41 dBm	-29.59 dB

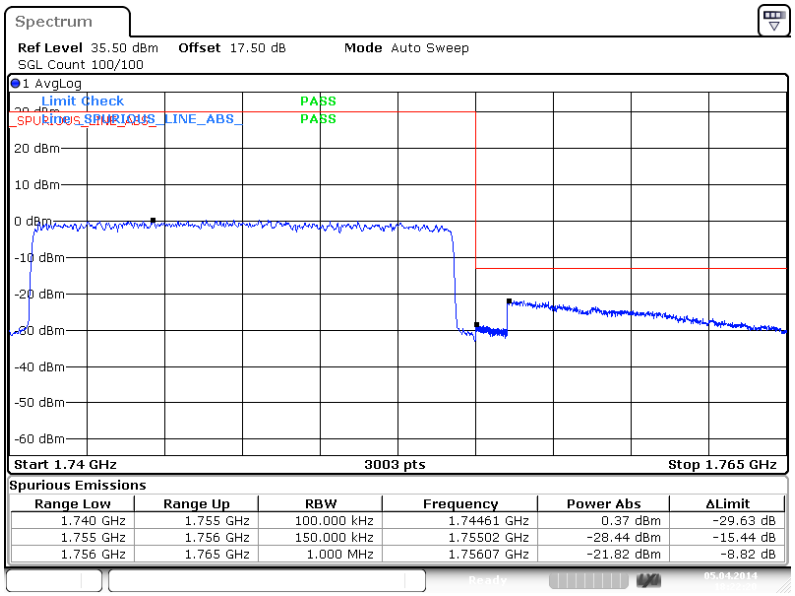
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.75420 GHz	19.49 dBm	-10.51 dB
1.755 GHz	1.756 GHz	150.000 kHz	1.75501 GHz	-36.50 dBm	-23.50 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.76113 GHz	-38.33 dBm	-25.33 dB

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

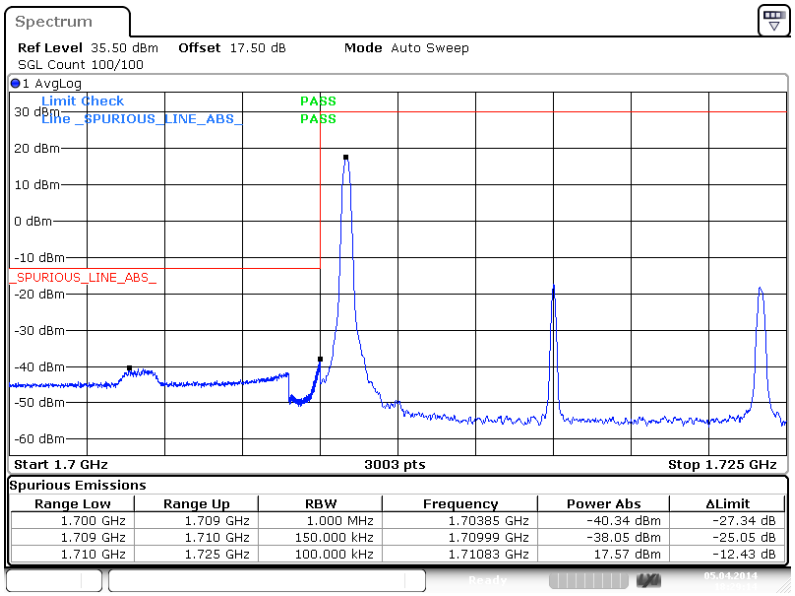


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.74461 GHz	0.37 dBm	-29.63 dB
1.755 GHz	1.756 GHz	150.000 kHz	1.75502 GHz	-28.44 dBm	-15.44 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75607 GHz	-21.82 dBm	-8.82 dB

Band :	LTE Band 4	Band Width :	15MHz / 16QAM

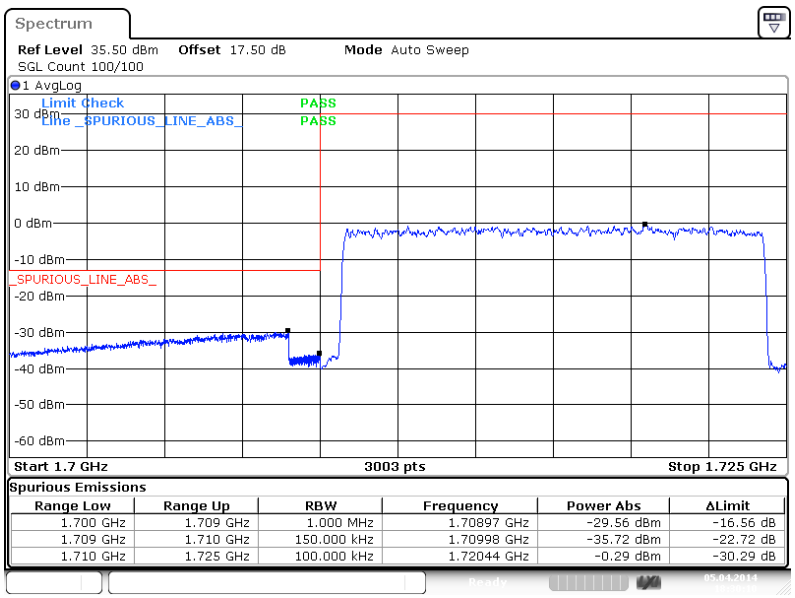
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70385 GHz	-40.34 dBm	-27.34 dB
1.709 GHz	1.710 GHz	150.000 kHz	1.70999 GHz	-38.05 dBm	-25.05 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.71083 GHz	17.57 dBm	-12.43 dB

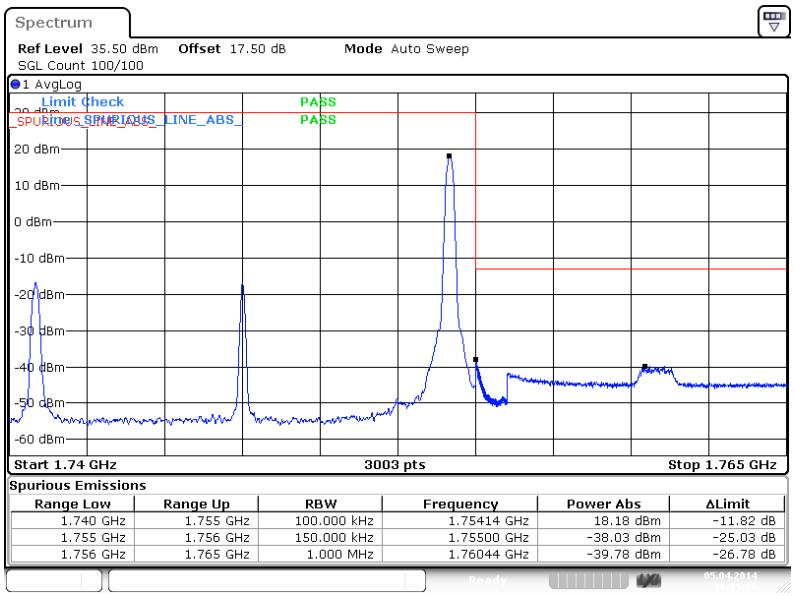
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Spurious Emissions

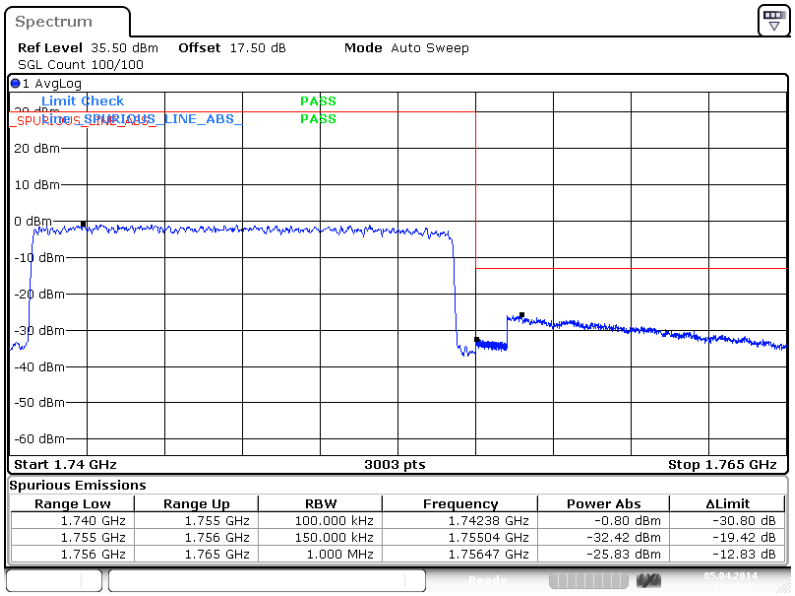
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70897 GHz	-29.56 dBm	-16.56 dB
1.709 GHz	1.710 GHz	150.000 kHz	1.70998 GHz	-35.72 dBm	-22.72 dB
1.710 GHz	1.725 GHz	100.000 kHz	1.72044 GHz	-0.29 dBm	-30.29 dB

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.75414 GHz	18.18 dBm	-11.82 dB
1.755 GHz	1.756 GHz	150.000 kHz	1.75500 GHz	-38.03 dBm	-25.03 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.76044 GHz	-39.78 dBm	-26.78 dB

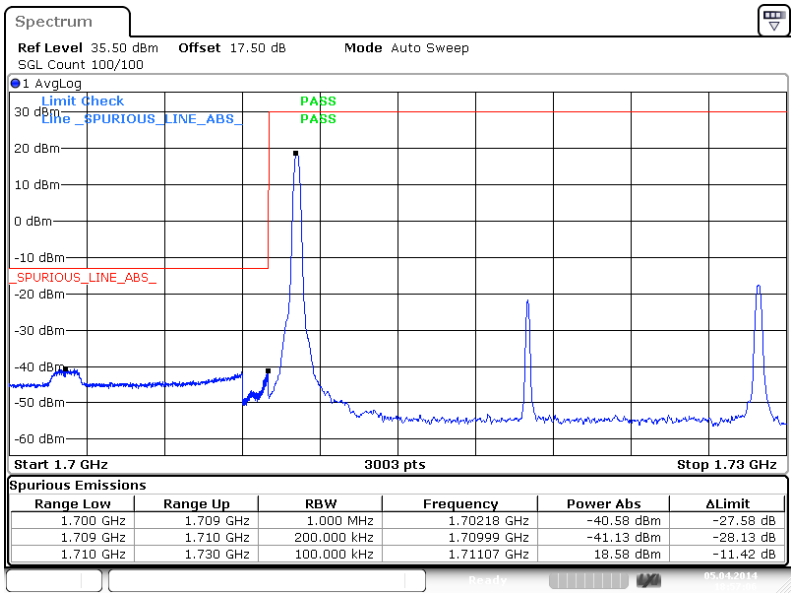
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.740 GHz	1.755 GHz	100.000 kHz	1.74238 GHz	-0.80 dBm	-30.80 dB
1.755 GHz	1.756 GHz	150.000 kHz	1.75504 GHz	-32.42 dBm	-19.42 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75647 GHz	-25.83 dBm	-12.83 dB

Band :	LTE Band 4	Band Width :	20MHz / QPSK

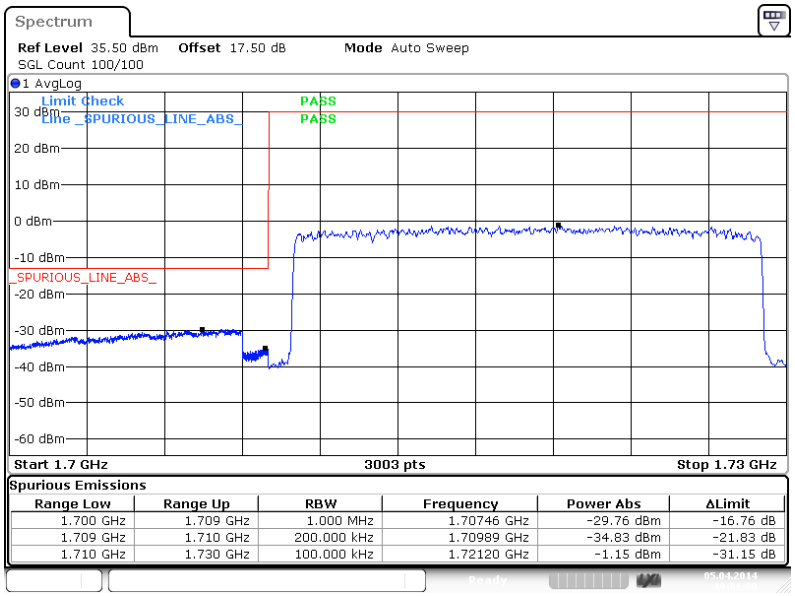
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70218 GHz	-40.58 dBm	-27.58 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70999 GHz	-41.13 dBm	-28.13 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.71107 GHz	18.58 dBm	-11.42 dB

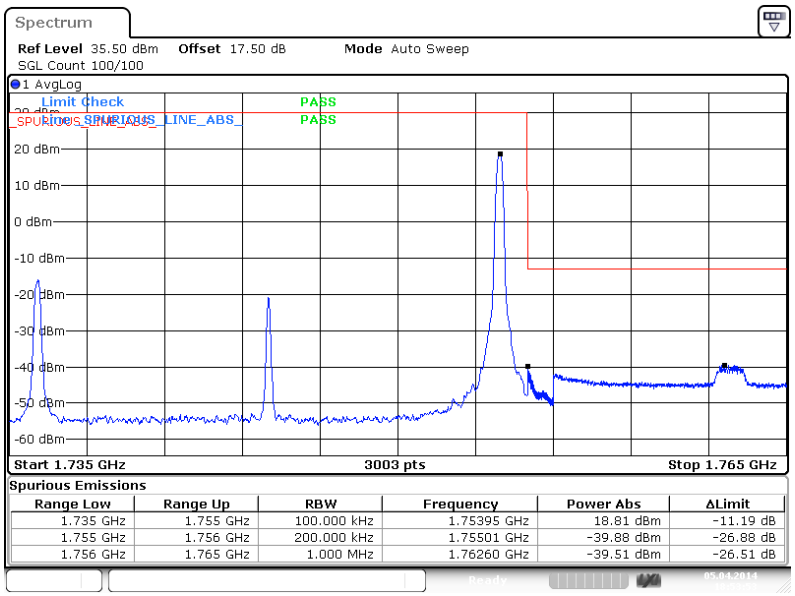
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70746 GHz	-29.76 dBm	-16.76 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70989 GHz	-34.83 dBm	-21.83 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.72120 GHz	-1.15 dBm	-31.15 dB

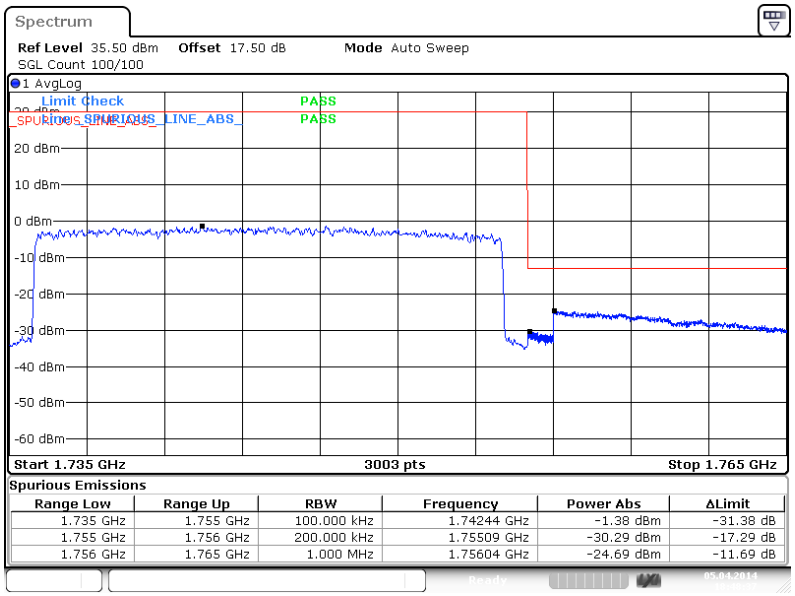
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.735 GHz	1.755 GHz	100.000 kHz	1.75395 GHz	18.81 dBm	-11.19 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75501 GHz	-39.88 dBm	-26.88 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.76260 GHz	-39.51 dBm	-26.51 dB

Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

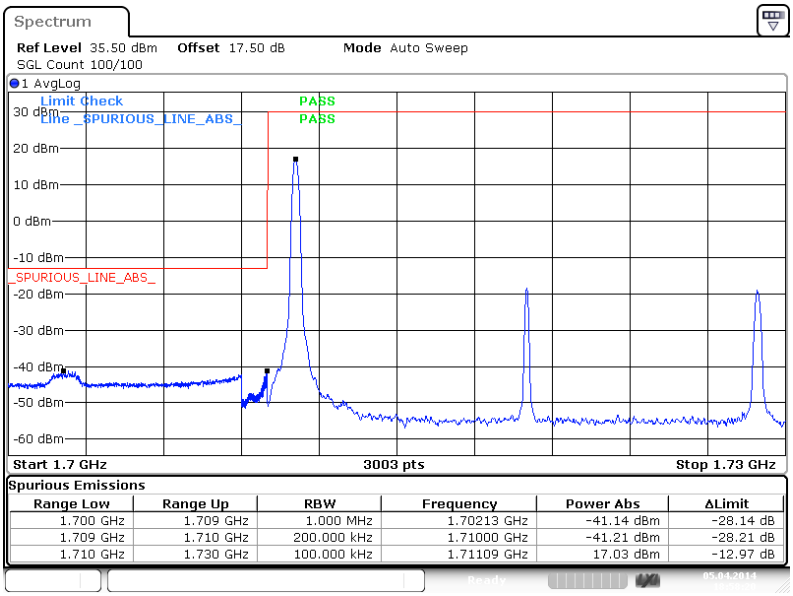


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.735 GHz	1.755 GHz	100.000 kHz	1.74244 GHz	-1.38 dBm	-31.38 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75509 GHz	-30.29 dBm	-17.29 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75604 GHz	-24.69 dBm	-11.69 dB

Band :	LTE Band 4	Band Width :	20MHz / 16QAM

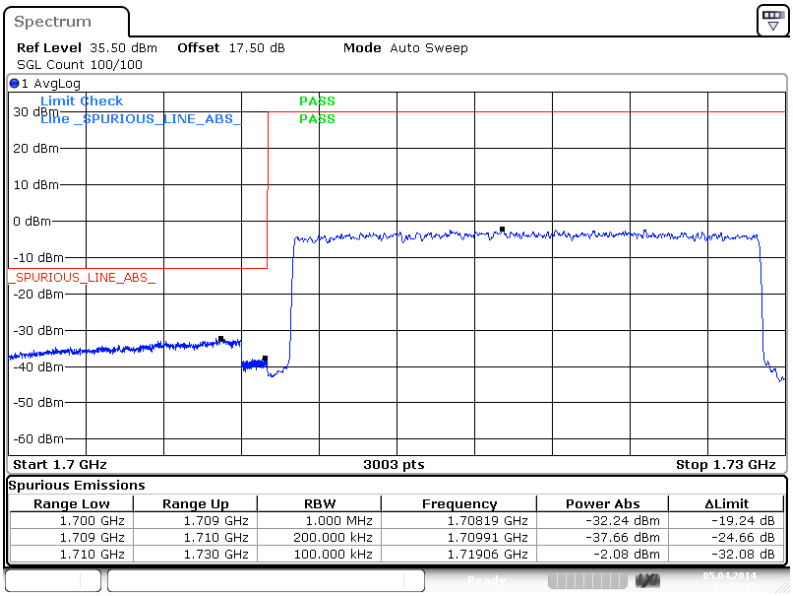
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70213 GHz	-41.14 dBm	-28.14 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.71000 GHz	-41.21 dBm	-28.21 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.71109 GHz	17.03 dBm	-12.97 dB

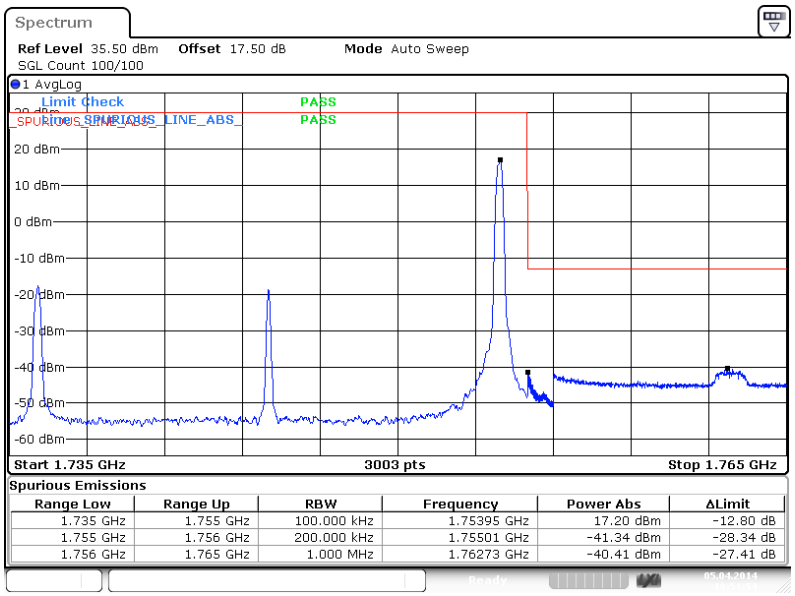
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.700 GHz	1.709 GHz	1.000 MHz	1.70819 GHz	-32.24 dBm	-19.24 dB
1.709 GHz	1.710 GHz	200.000 kHz	1.70991 GHz	-37.66 dBm	-24.66 dB
1.710 GHz	1.730 GHz	100.000 kHz	1.71906 GHz	-2.08 dBm	-32.08 dB

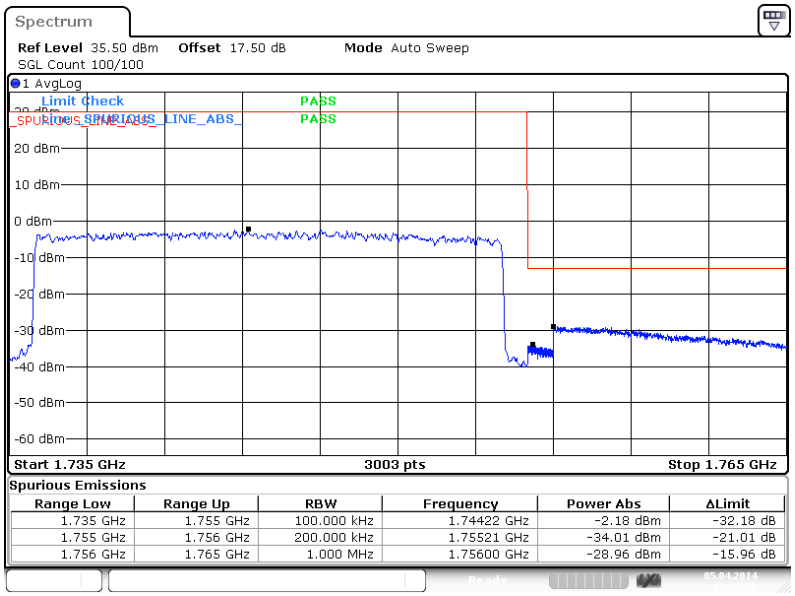
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.735 GHz	1.755 GHz	100.000 kHz	1.75395 GHz	17.20 dBm	-12.80 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75501 GHz	-41.34 dBm	-28.34 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.76273 GHz	-40.41 dBm	-27.41 dB

Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

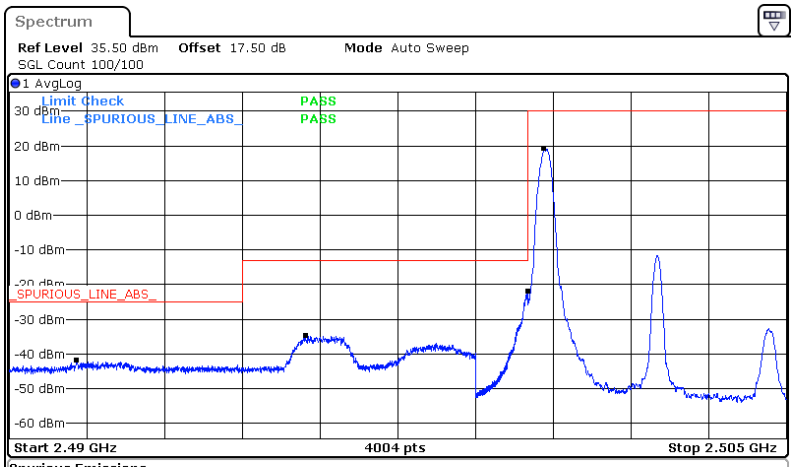


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
1.735 GHz	1.755 GHz	100.000 kHz	1.74422 GHz	-2.18 dBm	-32.18 dB
1.755 GHz	1.756 GHz	200.000 kHz	1.75521 GHz	-34.01 dBm	-21.01 dB
1.756 GHz	1.765 GHz	1.000 MHz	1.75600 GHz	-28.96 dBm	-15.96 dB

Band :	LTE Band 7	Band Width :	5MHz / QPSK

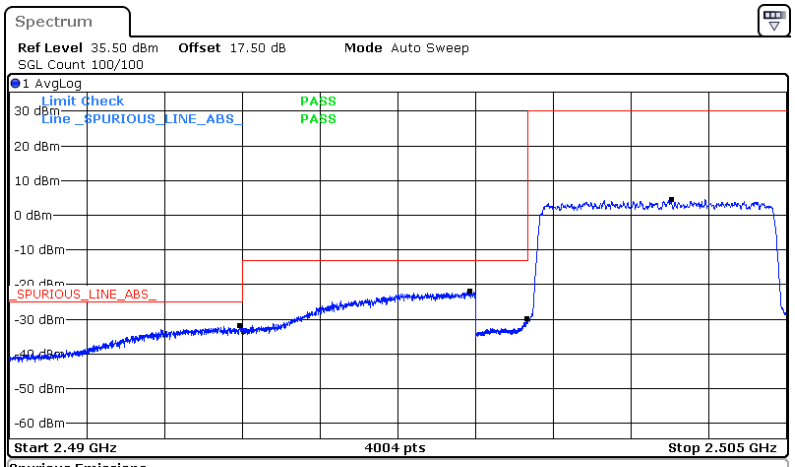
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49129 GHz	-41.82 dBm	-16.82 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49571 GHz	-34.58 dBm	-21.58 dB
2.499 GHz	2.500 GHz	50.000 kHz	2.50000 GHz	-22.00 dBm	-9.00 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50032 GHz	19.19 dBm	-10.81 dB

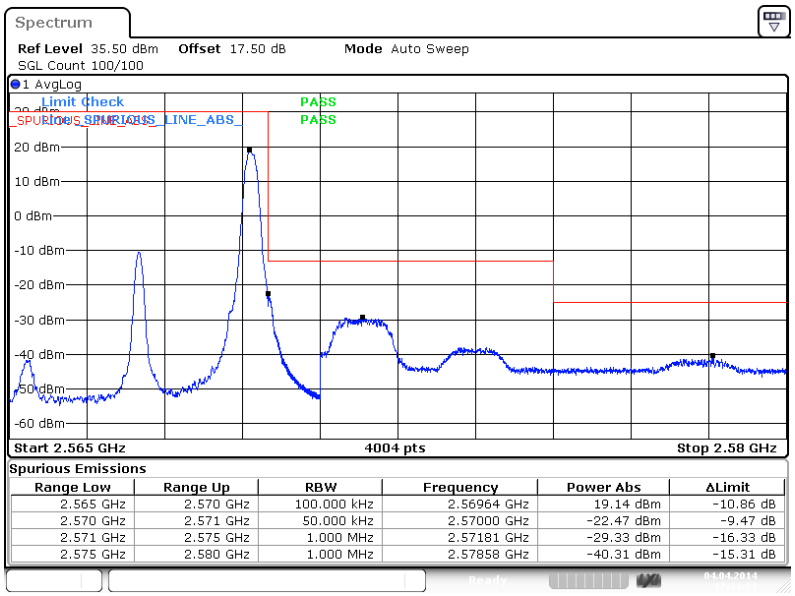
Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49444 GHz	-31.83 dBm	-6.83 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49888 GHz	-21.98 dBm	-8.98 dB
2.499 GHz	2.500 GHz	50.000 kHz	2.50000 GHz	-29.94 dBm	-16.94 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50277 GHz	4.41 dBm	-25.59 dB

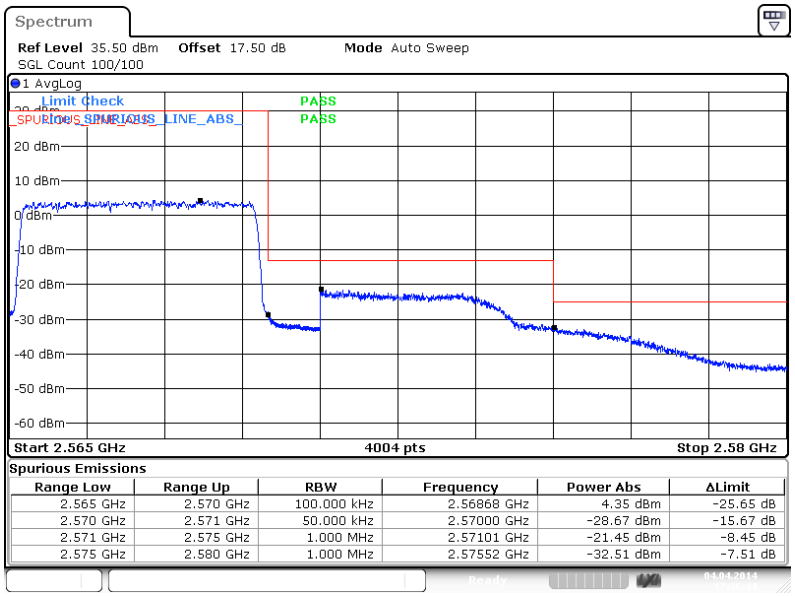
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56964 GHz	19.14 dBm	-10.86 dB
2.570 GHz	2.571 GHz	50.000 kHz	2.57000 GHz	-22.47 dBm	-9.47 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57181 GHz	-29.33 dBm	-16.33 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57858 GHz	-40.31 dBm	-15.31 dB

Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

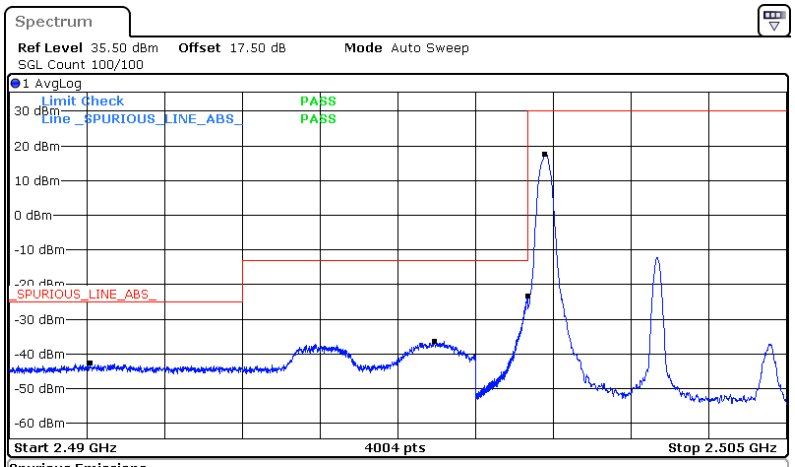


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56868 GHz	4.35 dBm	-25.65 dB
2.570 GHz	2.571 GHz	50.000 kHz	2.57000 GHz	-28.67 dBm	-15.67 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57101 GHz	-21.45 dBm	-8.45 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57552 GHz	-32.51 dBm	-7.51 dB

Band :	LTE Band 7	Band Width :	5MHz / 16QAM

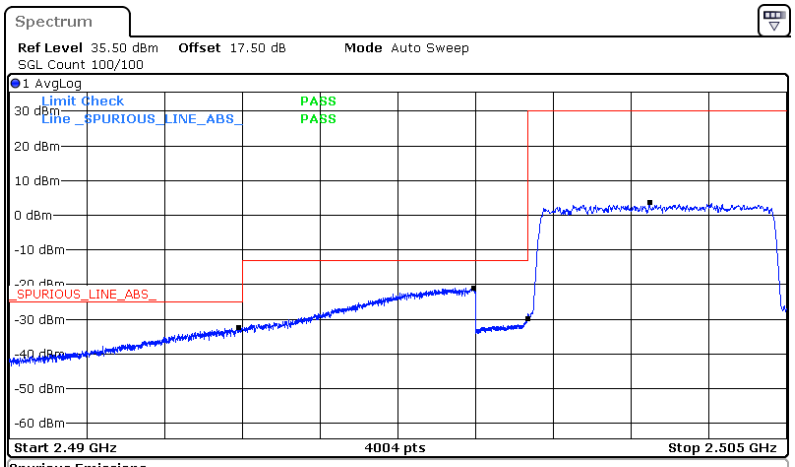
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49156 GHz	-42.70 dBm	-17.70 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49821 GHz	-36.28 dBm	-23.28 dB
2.499 GHz	2.500 GHz	50.000 kHz	2.50000 GHz	-23.17 dBm	-10.17 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50033 GHz	17.73 dBm	-12.27 dB

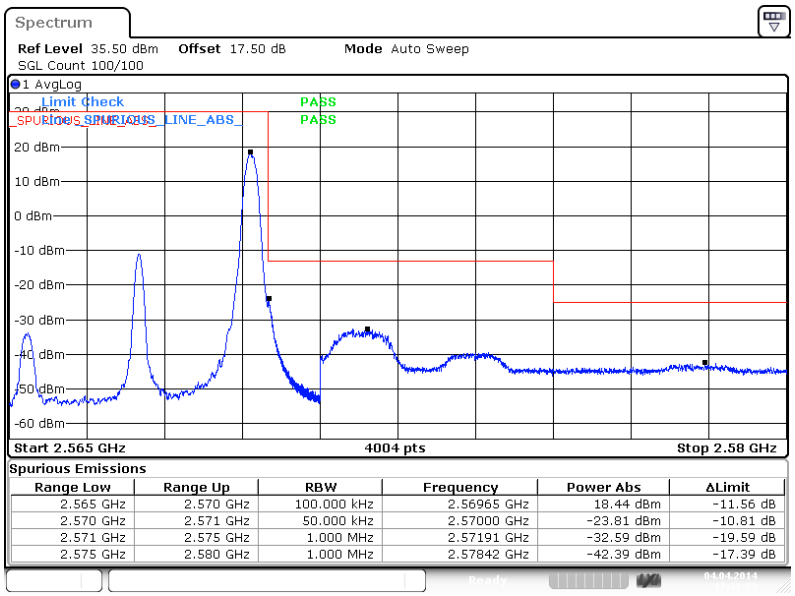
Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49442 GHz	-32.51 dBm	-7.51 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49895 GHz	-21.08 dBm	-8.08 dB
2.499 GHz	2.500 GHz	50.000 kHz	2.50000 GHz	-29.87 dBm	-16.87 dB
2.500 GHz	2.505 GHz	100.000 kHz	2.50235 GHz	3.59 dBm	-26.41 dB

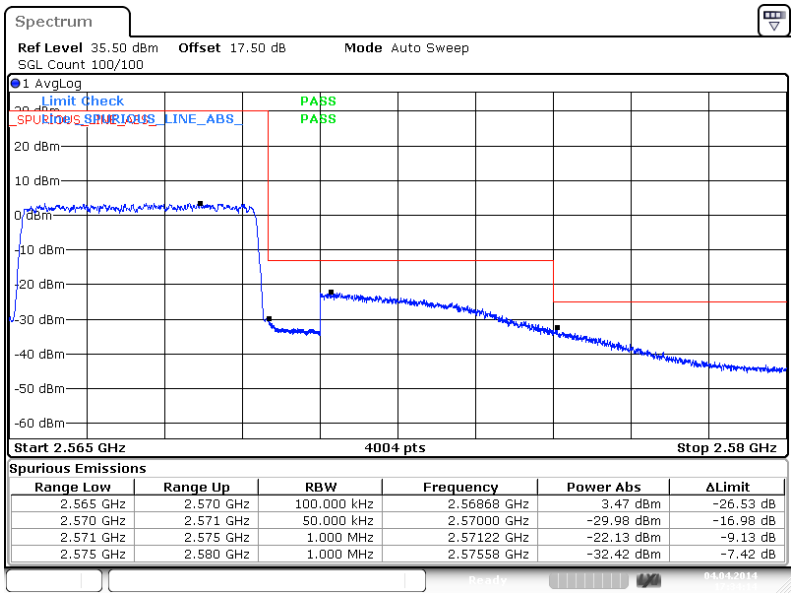
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56965 GHz	18.44 dBm	-11.56 dB
2.570 GHz	2.571 GHz	50.000 kHz	2.57000 GHz	-23.81 dBm	-10.81 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57191 GHz	-32.59 dBm	-19.59 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57842 GHz	-42.39 dBm	-17.39 dB

Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

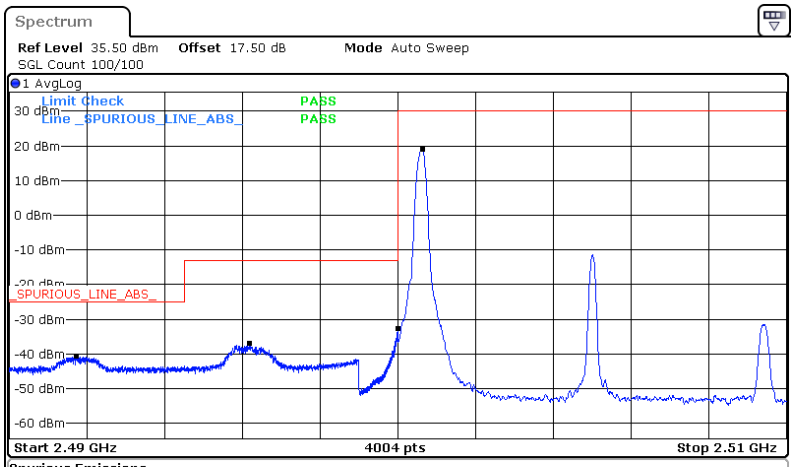


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.565 GHz	2.570 GHz	100.000 kHz	2.56868 GHz	3.47 dBm	-26.53 dB
2.570 GHz	2.571 GHz	50.000 kHz	2.57000 GHz	-29.98 dBm	-16.98 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57122 GHz	-22.13 dBm	-9.13 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57558 GHz	-32.42 dBm	-7.42 dB

Band :	LTE Band 7	Band Width :	10MHz / QPSK

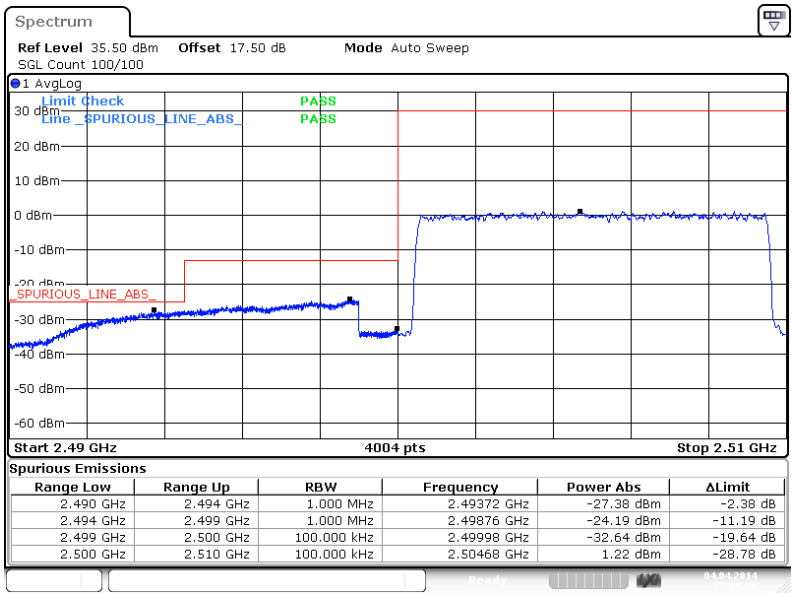
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49172 GHz	-40.75 dBm	-15.75 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49618 GHz	-37.02 dBm	-24.02 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.50000 GHz	-32.73 dBm	-19.73 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50063 GHz	19.13 dBm	-10.87 dB

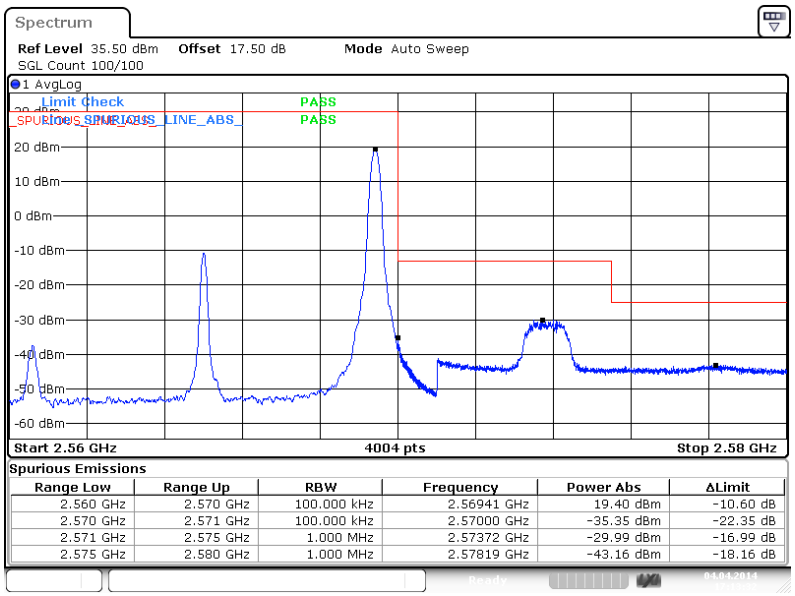
Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49372 GHz	-27.38 dBm	-2.38 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49876 GHz	-24.19 dBm	-11.19 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49998 GHz	-32.64 dBm	-19.64 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50468 GHz	1.22 dBm	-28.78 dB

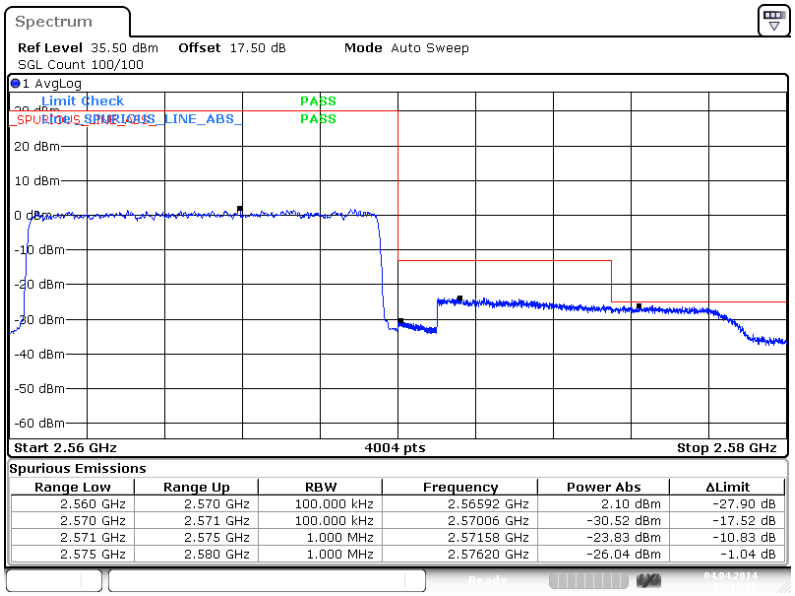
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56941 GHz	19.40 dBm	-10.60 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-35.35 dBm	-22.35 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57372 GHz	-29.99 dBm	-16.99 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57819 GHz	-43.16 dBm	-18.16 dB

Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

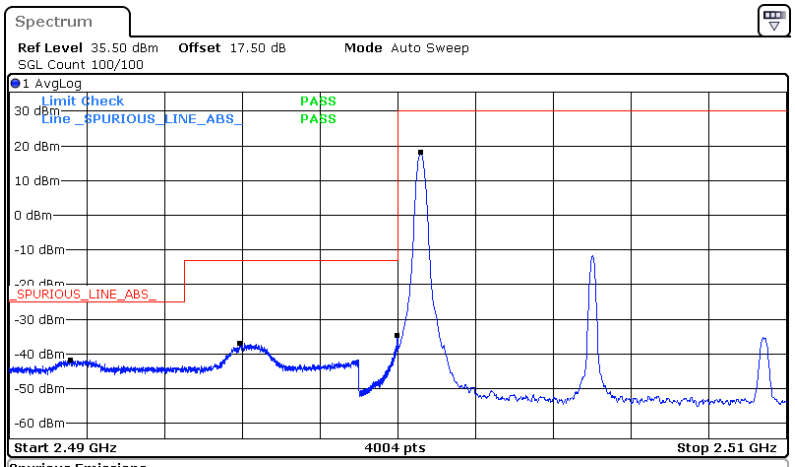


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56592 GHz	2.10 dBm	-27.90 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57006 GHz	-30.52 dBm	-17.52 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57158 GHz	-23.83 dBm	-10.83 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57620 GHz	-26.04 dBm	-1.04 dB

Band :	LTE Band 7	Band Width :	10MHz / 16QAM

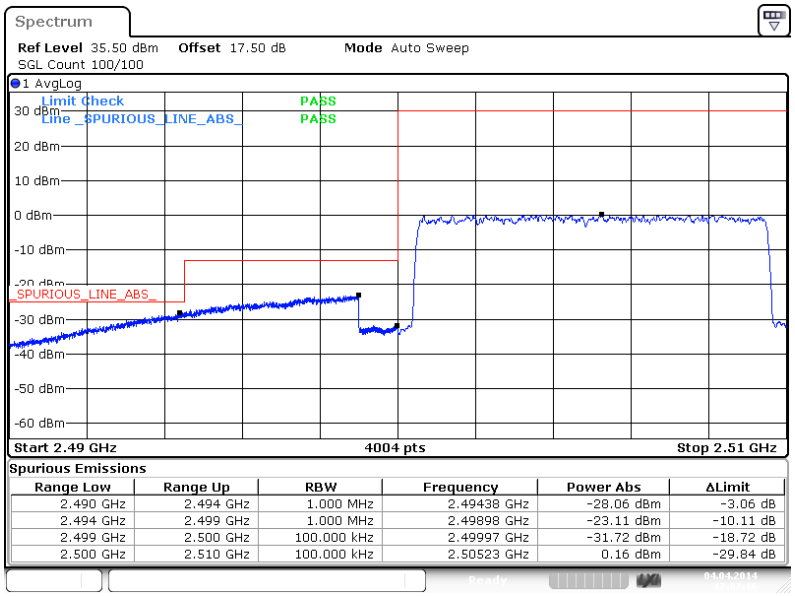
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49157 GHz	-41.91 dBm	-16.91 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49593 GHz	-36.88 dBm	-23.88 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49998 GHz	-34.72 dBm	-21.72 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50058 GHz	18.25 dBm	-11.75 dB

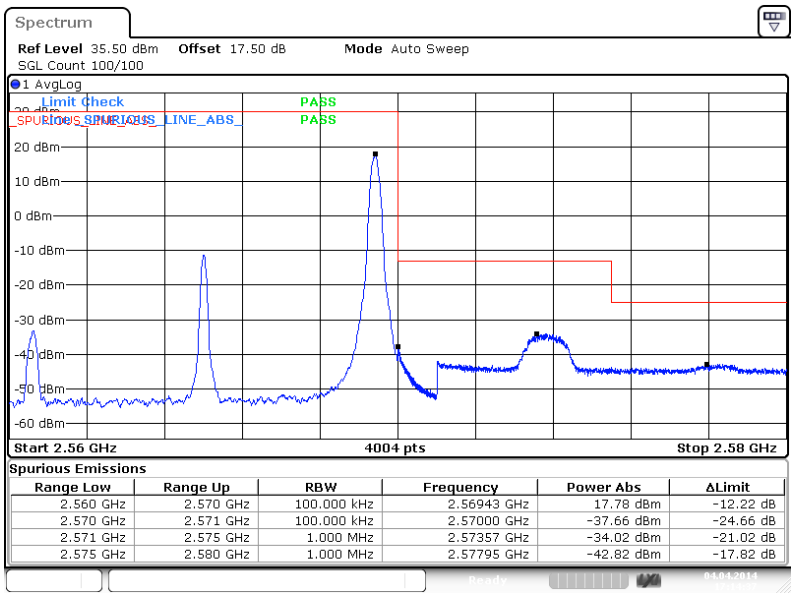
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49438 GHz	-28.06 dBm	-3.06 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49898 GHz	-23.11 dBm	-10.11 dB
2.499 GHz	2.500 GHz	100.000 kHz	2.49997 GHz	-31.72 dBm	-18.72 dB
2.500 GHz	2.510 GHz	100.000 kHz	2.50523 GHz	0.16 dBm	-29.84 dB

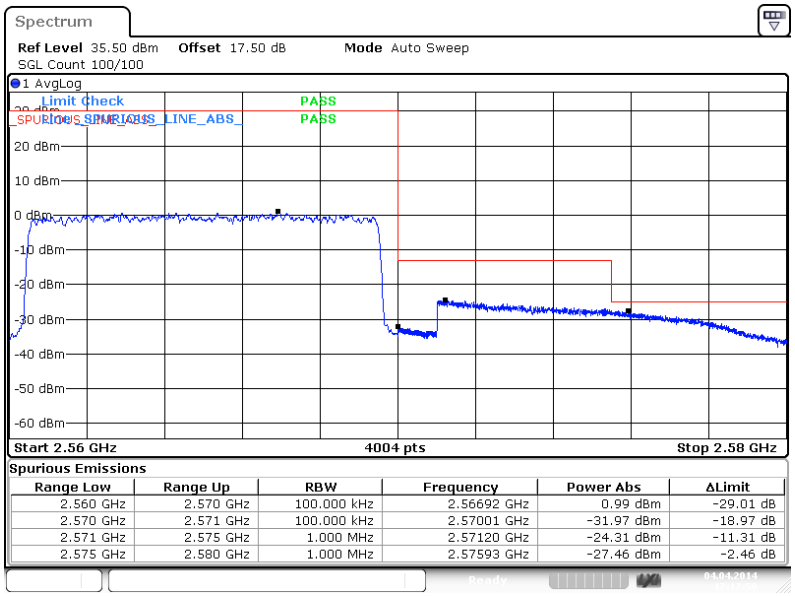
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56943 GHz	17.78 dBm	-12.22 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-37.66 dBm	-24.66 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57357 GHz	-34.02 dBm	-21.02 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57795 GHz	-42.82 dBm	-17.82 dB

Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

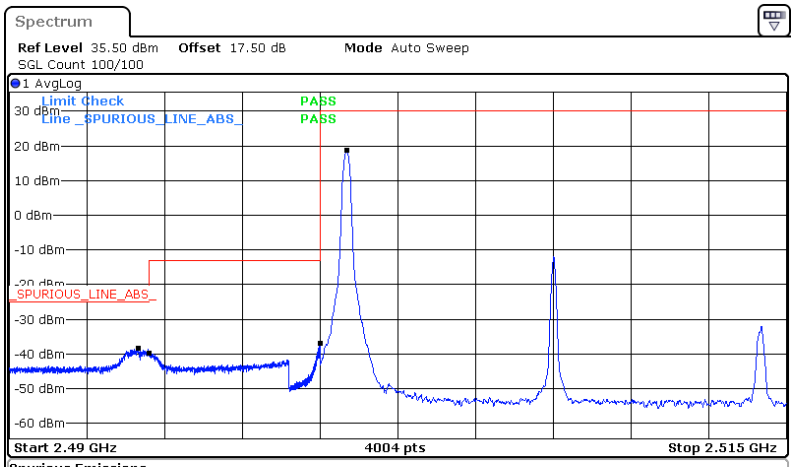


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.560 GHz	2.570 GHz	100.000 kHz	2.56692 GHz	0.99 dBm	-29.01 dB
2.570 GHz	2.571 GHz	100.000 kHz	2.57001 GHz	-31.97 dBm	-18.97 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57120 GHz	-24.31 dBm	-11.31 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57593 GHz	-27.46 dBm	-2.46 dB

Band :	LTE Band 7	Band Width :	15MHz / QPSK

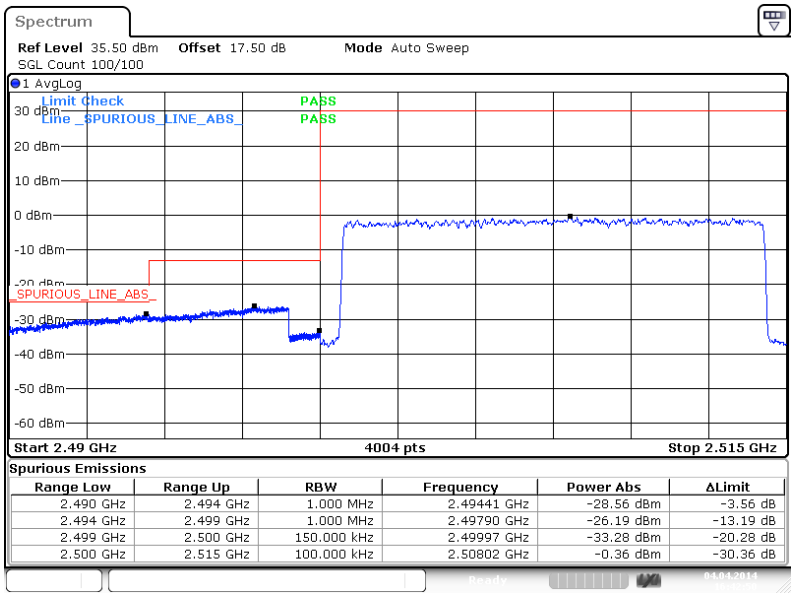
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49413 GHz	-38.26 dBm	-13.26 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49451 GHz	-39.65 dBm	-26.65 dB
2.499 GHz	2.500 GHz	150.000 kHz	2.49999 GHz	-36.84 dBm	-23.84 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50085 GHz	18.86 dBm	-11.14 dB

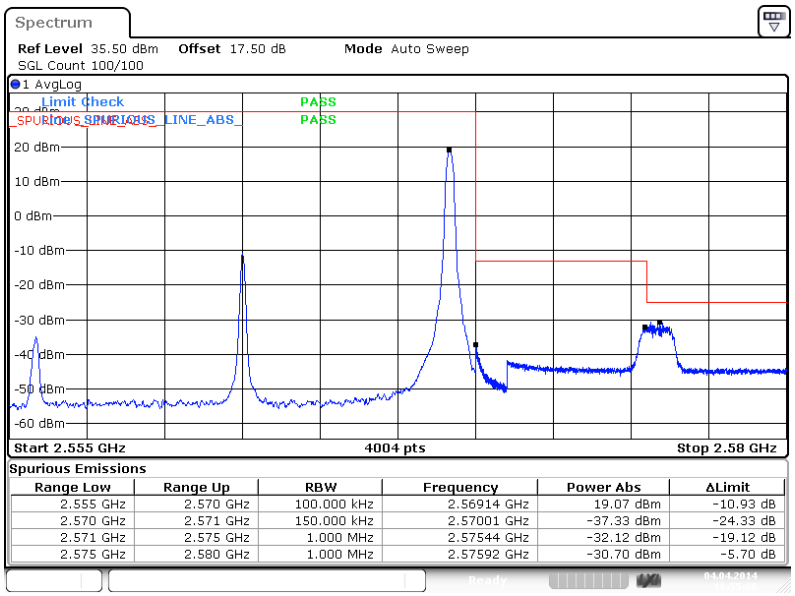
Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49441 GHz	-28.56 dBm	-3.56 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49790 GHz	-26.19 dBm	-13.19 dB
2.499 GHz	2.500 GHz	150.000 kHz	2.49997 GHz	-33.28 dBm	-20.28 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50802 GHz	-0.36 dBm	-30.36 dB

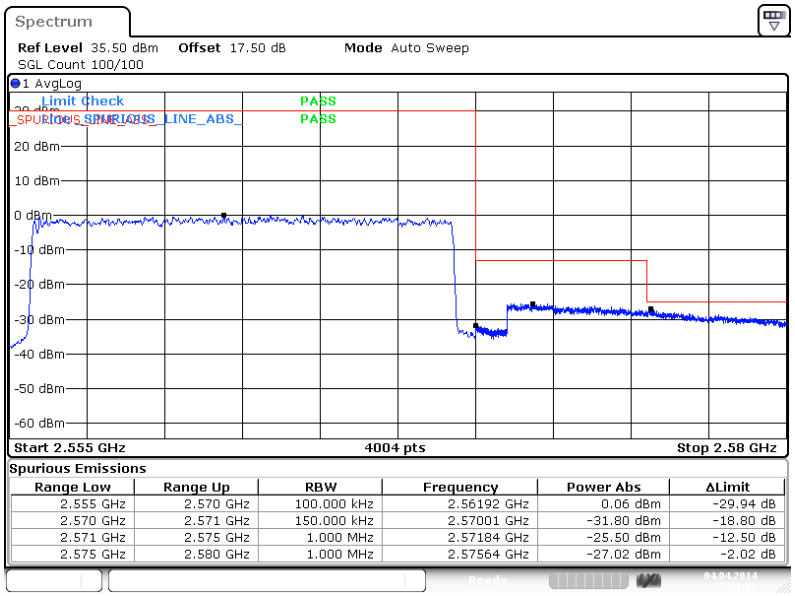
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56914 GHz	19.07 dBm	-10.93 dB
2.570 GHz	2.571 GHz	150.000 kHz	2.57001 GHz	-37.33 dBm	-24.33 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57544 GHz	-32.12 dBm	-19.12 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57592 GHz	-30.70 dBm	-5.70 dB

Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

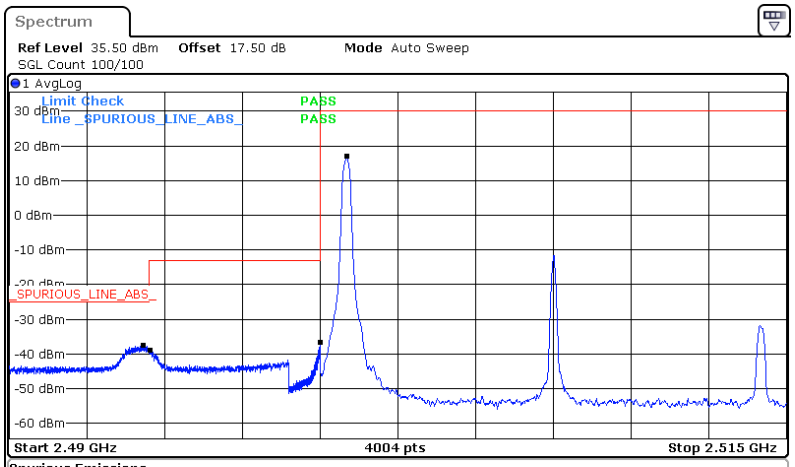


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56192 GHz	0.06 dBm	-29.94 dB
2.570 GHz	2.571 GHz	150.000 kHz	2.57001 GHz	-31.80 dBm	-18.80 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57184 GHz	-25.50 dBm	-12.50 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57564 GHz	-27.02 dBm	-2.02 dB

Band :	LTE Band 7	Band Width :	15MHz / 16QAM

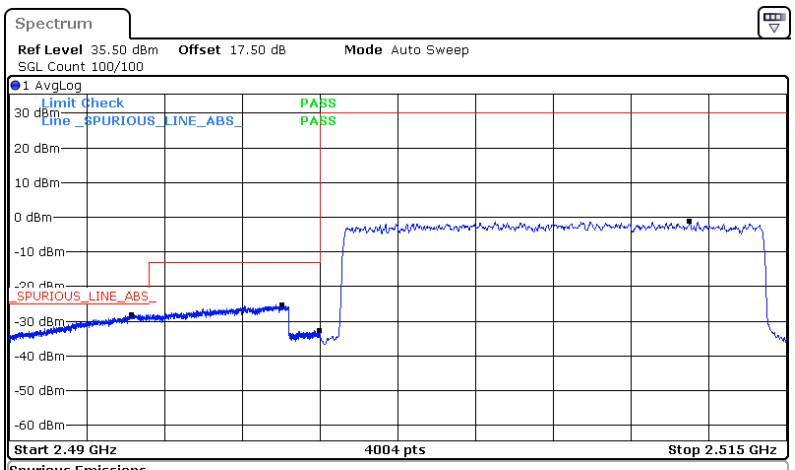
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49430 GHz	-37.54 dBm	-12.54 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49452 GHz	-39.06 dBm	-26.06 dB
2.499 GHz	2.500 GHz	150.000 kHz	2.50000 GHz	-36.73 dBm	-23.73 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.50086 GHz	16.98 dBm	-13.02 dB

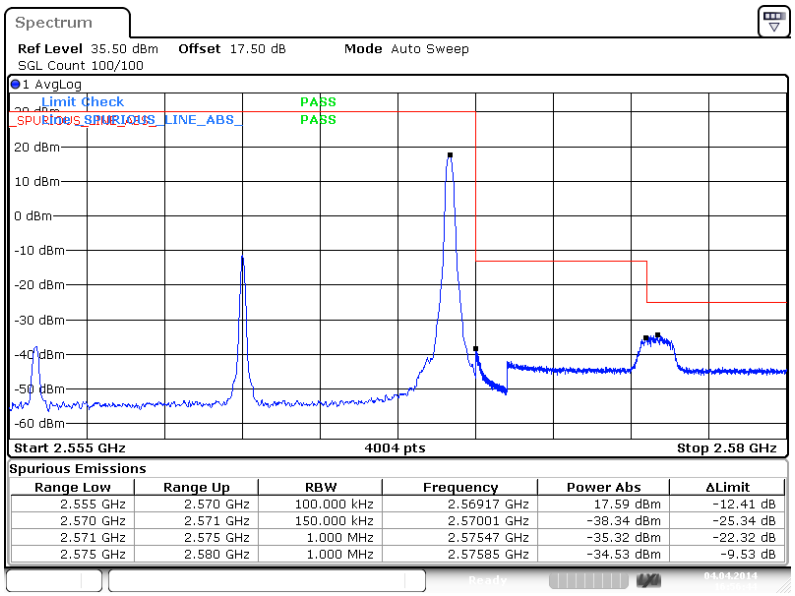
Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49393 GHz	-28.07 dBm	-3.07 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49878 GHz	-25.24 dBm	-12.24 dB
2.499 GHz	2.500 GHz	150.000 kHz	2.49996 GHz	-32.56 dBm	-19.56 dB
2.500 GHz	2.515 GHz	100.000 kHz	2.51188 GHz	-1.19 dBm	-31.19 dB

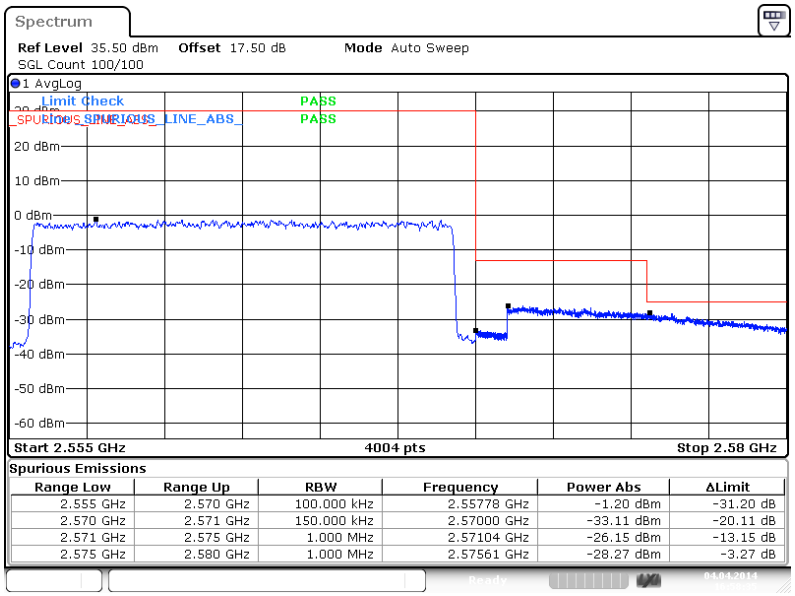
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.56917 GHz	17.59 dBm	-12.41 dB
2.570 GHz	2.571 GHz	150.000 kHz	2.57001 GHz	-38.34 dBm	-25.34 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57547 GHz	-35.32 dBm	-22.32 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57585 GHz	-34.53 dBm	-9.53 dB

Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

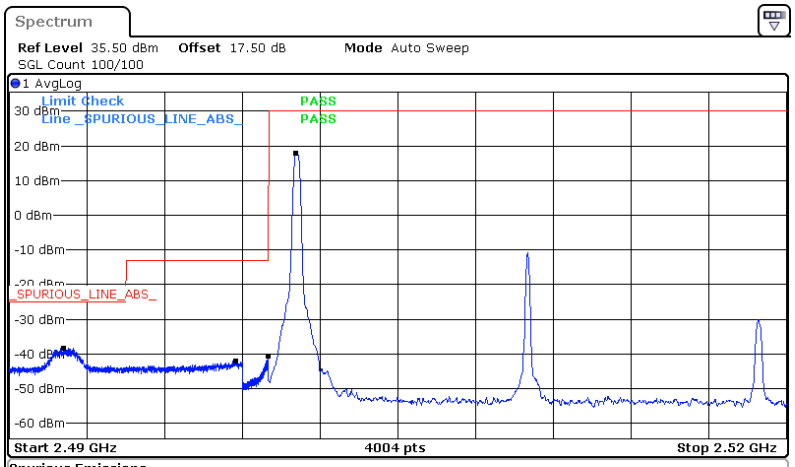


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.555 GHz	2.570 GHz	100.000 kHz	2.55778 GHz	-1.20 dBm	-31.20 dB
2.570 GHz	2.571 GHz	150.000 kHz	2.57000 GHz	-33.11 dBm	-20.11 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57104 GHz	-26.15 dBm	-13.15 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57561 GHz	-28.27 dBm	-3.27 dB

Band :	LTE Band 7	Band Width :	20MHz / QPSK

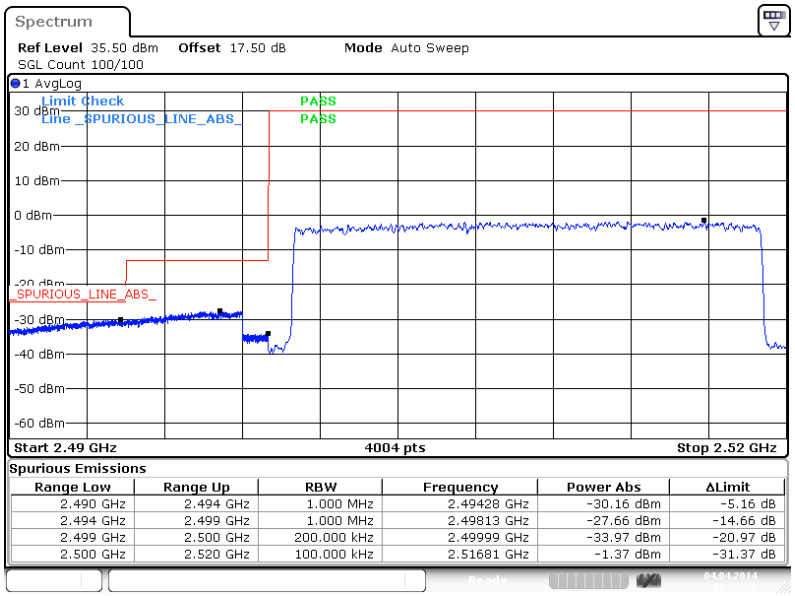
Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49208 GHz	-38.41 dBm	-13.41 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49874 GHz	-42.02 dBm	-29.02 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.50000 GHz	-40.55 dBm	-27.55 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50107 GHz	17.93 dBm	-12.07 dB

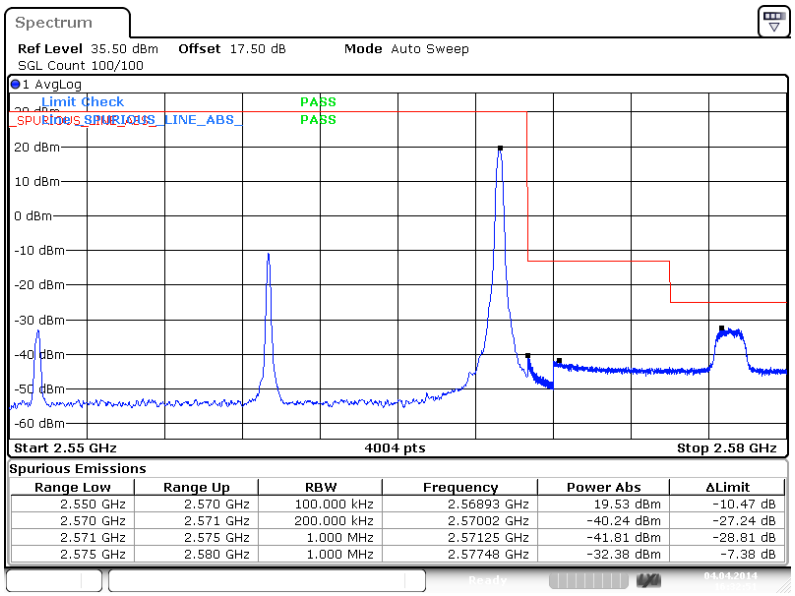
Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49428 GHz	-30.16 dBm	-5.16 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49813 GHz	-27.66 dBm	-14.66 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-33.97 dBm	-20.97 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51681 GHz	-1.37 dBm	-31.37 dB

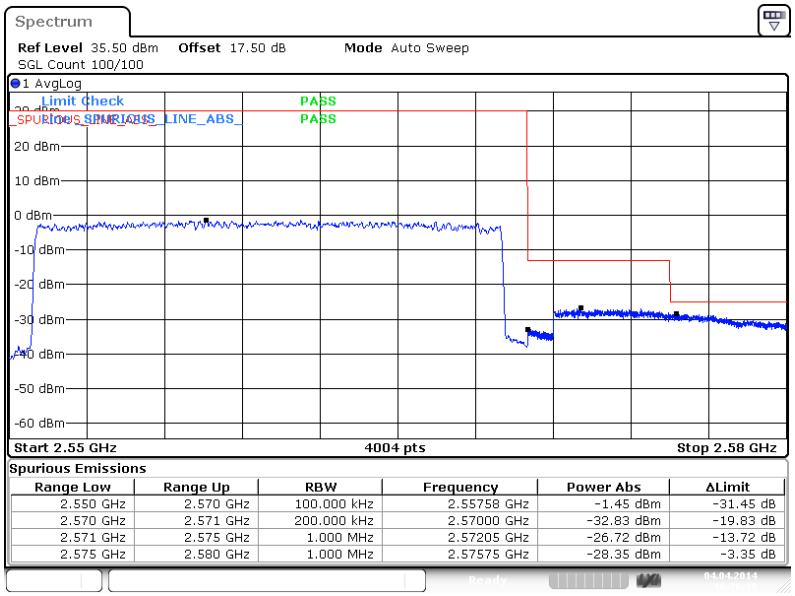
Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56893 GHz	19.53 dBm	-10.47 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57002 GHz	-40.24 dBm	-27.24 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57125 GHz	-41.81 dBm	-28.81 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57748 GHz	-32.38 dBm	-7.38 dB

Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

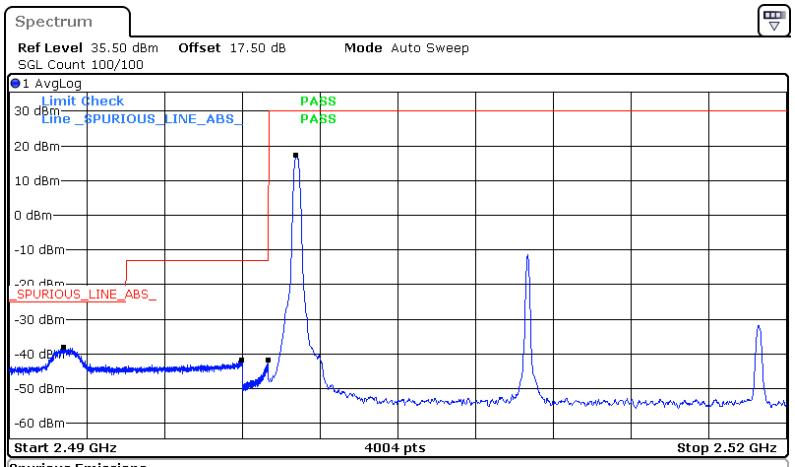


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.55758 GHz	-1.45 dBm	-31.45 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57000 GHz	-32.83 dBm	-19.83 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57205 GHz	-26.72 dBm	-13.72 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57575 GHz	-28.35 dBm	-3.35 dB

Band :	LTE Band 7	Band Width :	20MHz / 16QAM

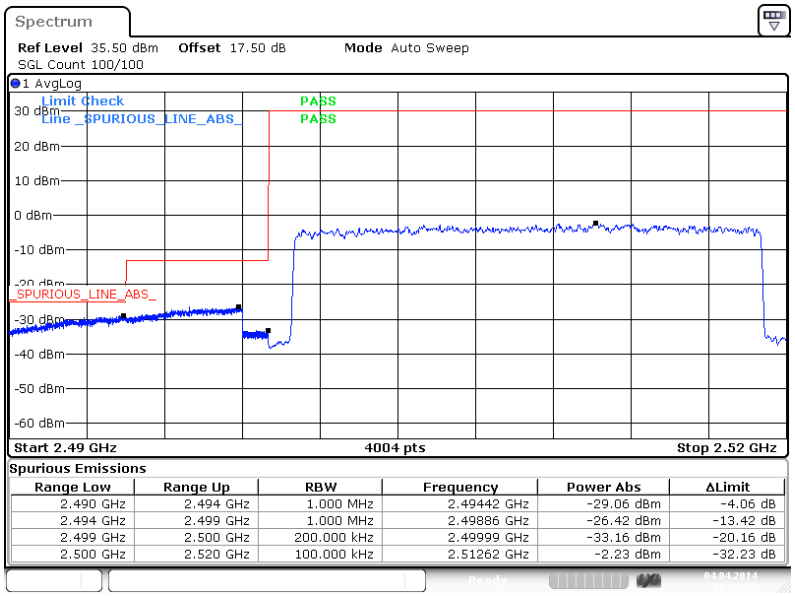
Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49211 GHz	-38.15 dBm	-13.15 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49897 GHz	-41.88 dBm	-28.88 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49998 GHz	-41.79 dBm	-28.79 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.50107 GHz	17.39 dBm	-12.61 dB

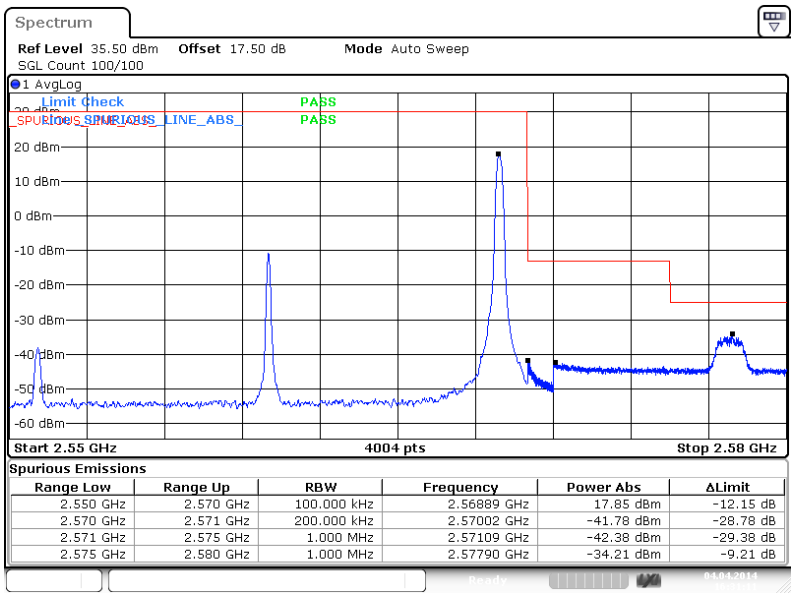
Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.490 GHz	2.494 GHz	1.000 MHz	2.49442 GHz	-29.06 dBm	-4.06 dB
2.494 GHz	2.499 GHz	1.000 MHz	2.49886 GHz	-26.42 dBm	-13.42 dB
2.499 GHz	2.500 GHz	200.000 kHz	2.49999 GHz	-33.16 dBm	-20.16 dB
2.500 GHz	2.520 GHz	100.000 kHz	2.51262 GHz	-2.23 dBm	-32.23 dB

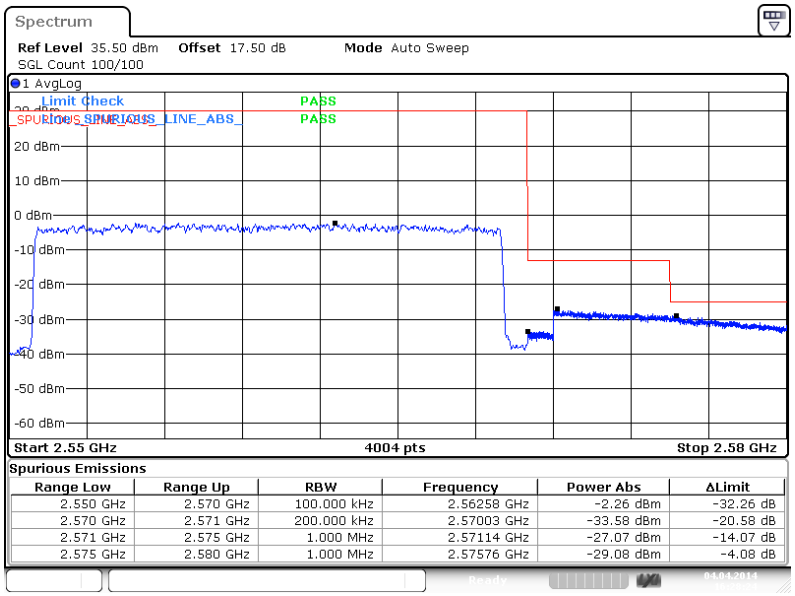
Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56889 GHz	17.85 dBm	-12.15 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57002 GHz	-41.78 dBm	-28.78 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57109 GHz	-42.38 dBm	-29.38 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57790 GHz	-34.21 dBm	-9.21 dB

Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
2.550 GHz	2.570 GHz	100.000 kHz	2.56258 GHz	-2.26 dBm	-32.26 dB
2.570 GHz	2.571 GHz	200.000 kHz	2.57003 GHz	-33.58 dBm	-20.58 dB
2.571 GHz	2.575 GHz	1.000 MHz	2.57114 GHz	-27.07 dBm	-14.07 dB
2.575 GHz	2.580 GHz	1.000 MHz	2.57576 GHz	-29.08 dBm	-4.08 dB

3.6 Conducted Spurious Emission Measurement

3.6.1 Description of Conducted Spurious Emission Measurement

For Band 4

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30MHz up to a frequency including its 10th harmonic.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a 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 middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. For LTE Band 4:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

   = -13dBm.
8. For LTE Band 7:

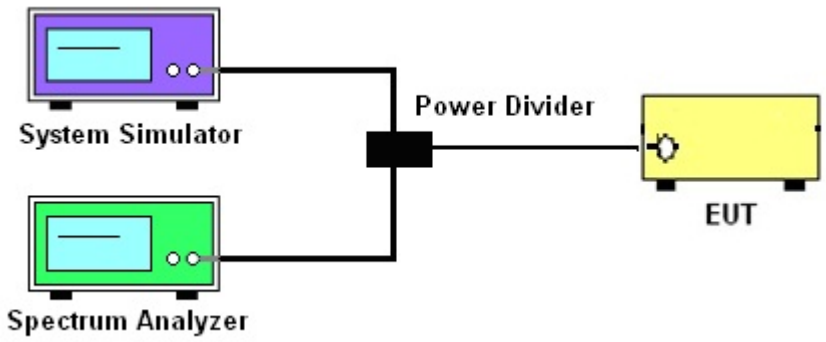
   The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [55 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)

   = -25dBm.

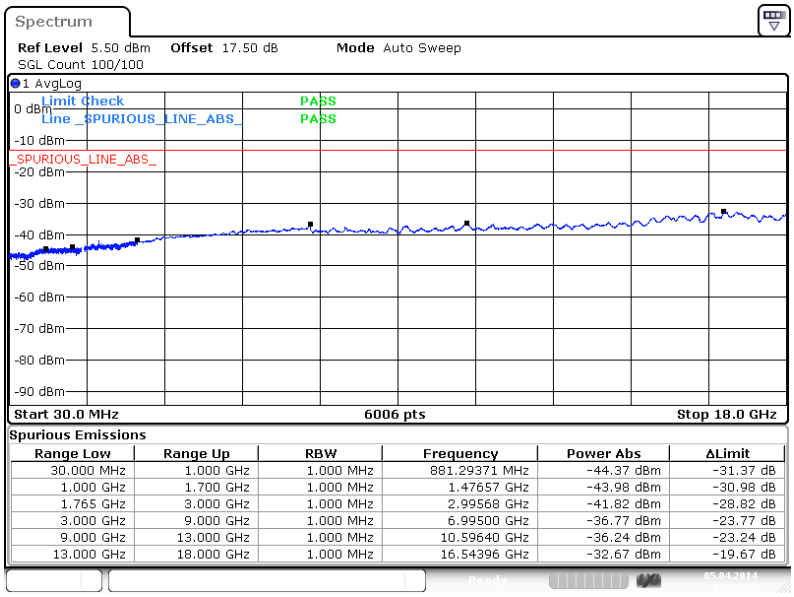
3.6.4 Test Setup



3.6.5 Test Result (Plots) of Conducted Spurious Emission

Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

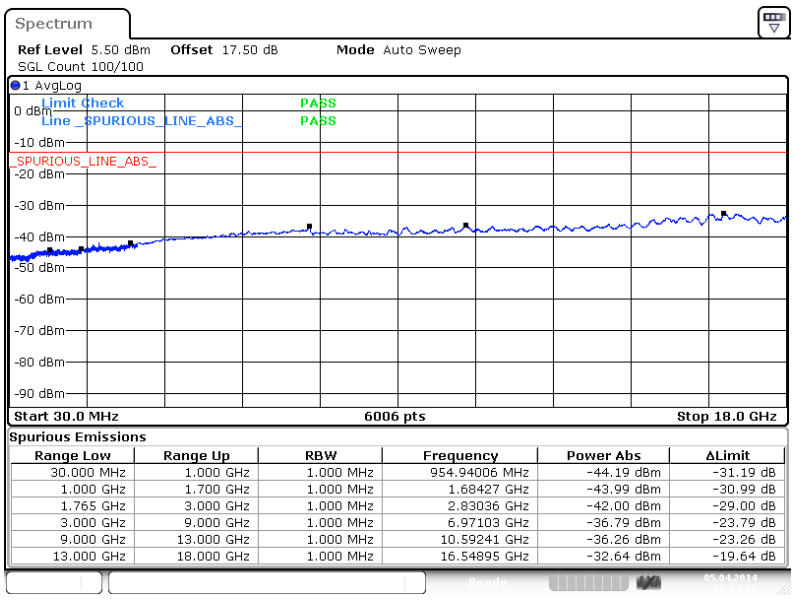
QPSK (RB Size 3, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	881.29371 MHz	-44.37 dBm	-31.37 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.47657 GHz	-43.98 dBm	-30.98 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99568 GHz	-41.82 dBm	-28.82 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.77 dBm	-23.77 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59640 GHz	-36.24 dBm	-23.24 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54396 GHz	-32.67 dBm	-19.67 dB

16QAM (RB Size 1, RB Offset 5)

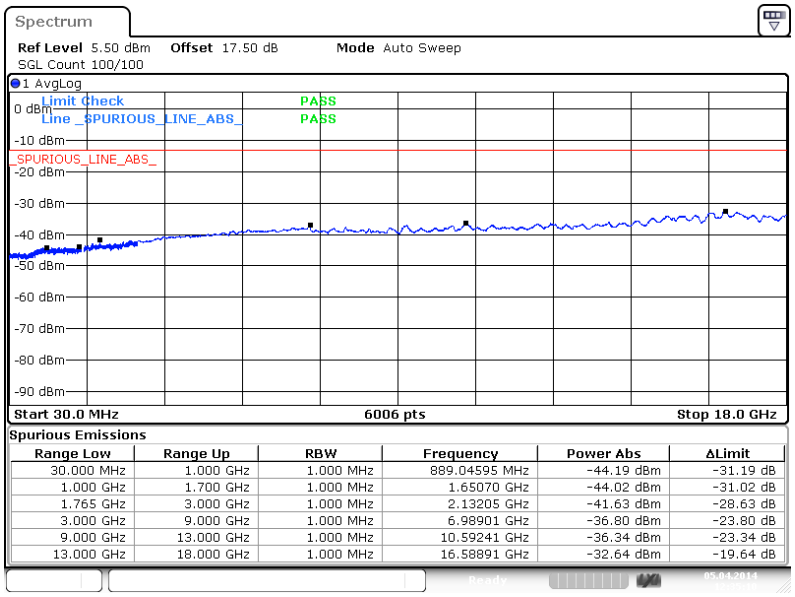


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	954.94006 MHz	-44.19 dBm	-31.19 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68427 GHz	-43.99 dBm	-30.99 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.83036 GHz	-42.00 dBm	-29.00 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97103 GHz	-36.79 dBm	-23.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.26 dBm	-23.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.64 dBm	-19.64 dB

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

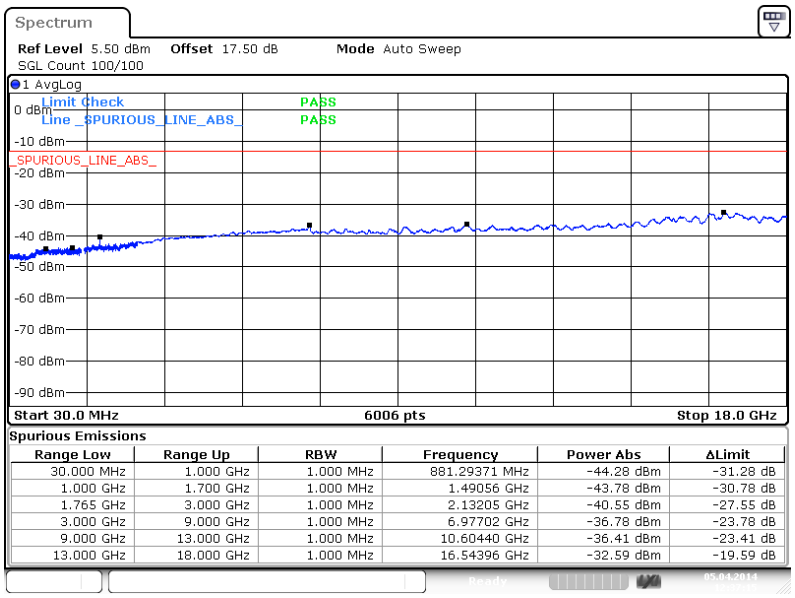
QPSK (RB Size 3, RB Offset 1)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	889.04595 MHz	-44.19 dBm	-31.19 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65070 GHz	-44.02 dBm	-31.02 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13205 GHz	-41.63 dBm	-28.63 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.80 dBm	-23.80 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.34 dBm	-23.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.58891 GHz	-32.64 dBm	-19.64 dB

16QAM (RB Size 3, RB Offset 1)

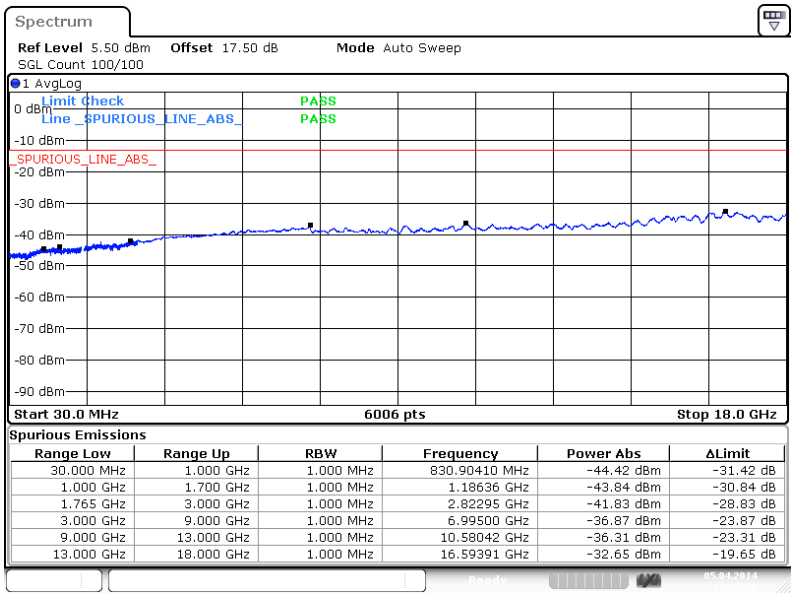


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	881.29371 MHz	-44.28 dBm	-31.28 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.49056 GHz	-43.78 dBm	-30.78 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13205 GHz	-40.55 dBm	-27.55 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97702 GHz	-36.78 dBm	-23.78 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60440 GHz	-36.41 dBm	-23.41 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54396 GHz	-32.59 dBm	-19.59 dB

Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

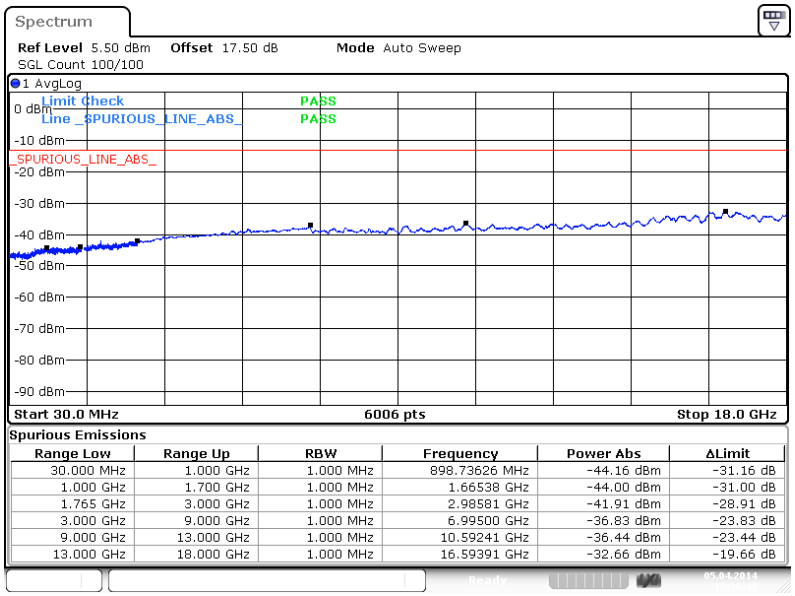
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	830.90410 MHz	-44.42 dBm	-31.42 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.18636 GHz	-43.84 dBm	-30.84 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.82295 GHz	-41.83 dBm	-28.83 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.87 dBm	-23.87 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58042 GHz	-36.31 dBm	-23.31 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.59391 GHz	-32.65 dBm	-19.65 dB

16QAM (RB Size 1, RB Offset 5)

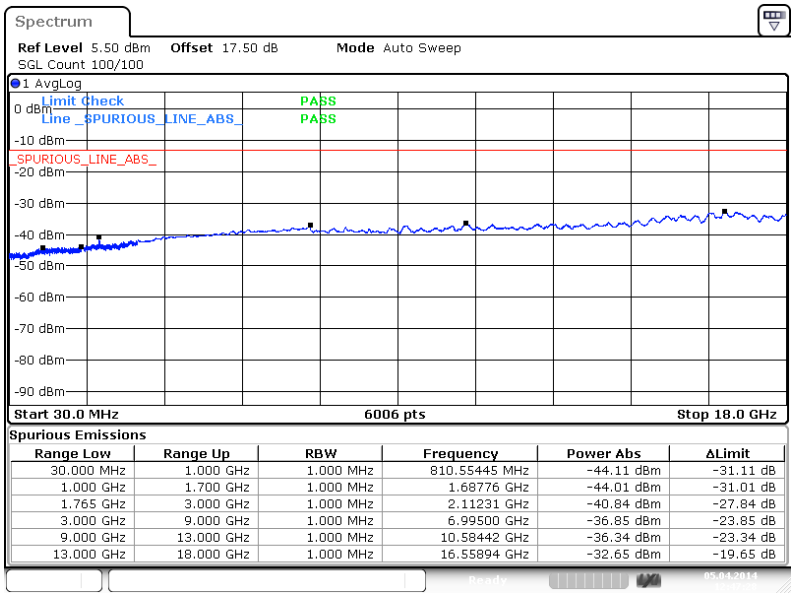


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	898.73626 MHz	-44.16 dBm	-31.16 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.66538 GHz	-44.00 dBm	-31.00 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98581 GHz	-41.91 dBm	-28.91 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.83 dBm	-23.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.44 dBm	-23.44 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.59391 GHz	-32.66 dBm	-19.66 dB

Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

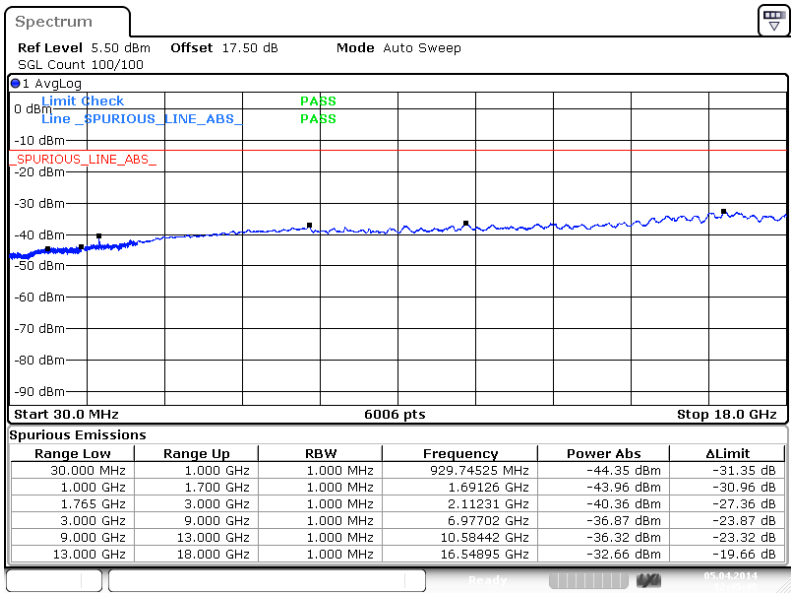
QPSK (RB Size 1, RB Offset 7)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	810.55445 MHz	-44.11 dBm	-31.11 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68776 GHz	-44.01 dBm	-31.01 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11231 GHz	-40.84 dBm	-27.84 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.85 dBm	-23.85 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.34 dBm	-23.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55894 GHz	-32.65 dBm	-19.65 dB

16QAM (RB Size 1, RB Offset 0)

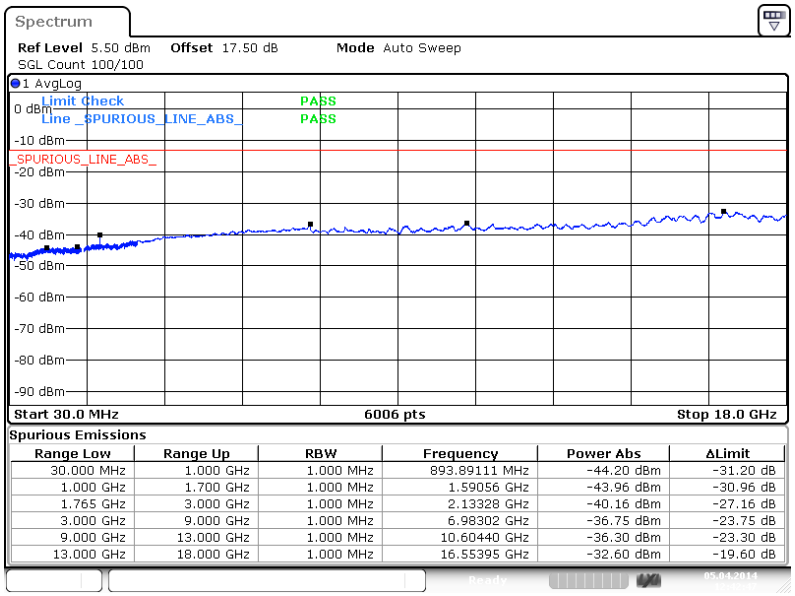


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	929.74525 MHz	-44.35 dBm	-31.35 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69126 GHz	-43.96 dBm	-30.96 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11231 GHz	-40.36 dBm	-27.36 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97702 GHz	-36.87 dBm	-23.87 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.32 dBm	-23.32 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.66 dBm	-19.66 dB

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

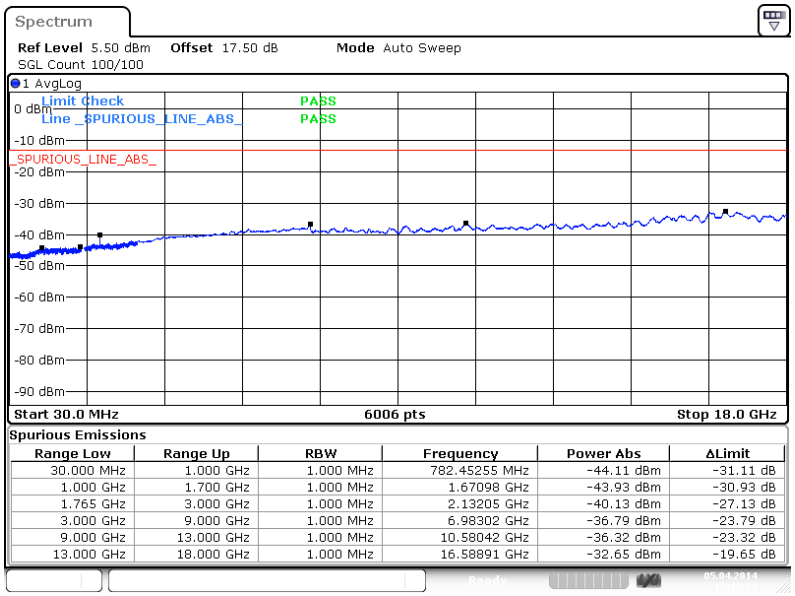
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	893.89111 MHz	-44.20 dBm	-31.20 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59056 GHz	-43.96 dBm	-30.96 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13328 GHz	-40.16 dBm	-27.16 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98302 GHz	-36.75 dBm	-23.75 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60440 GHz	-36.30 dBm	-23.30 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55395 GHz	-32.60 dBm	-19.60 dB

16QAM (RB Size 1, RB Offset 7)

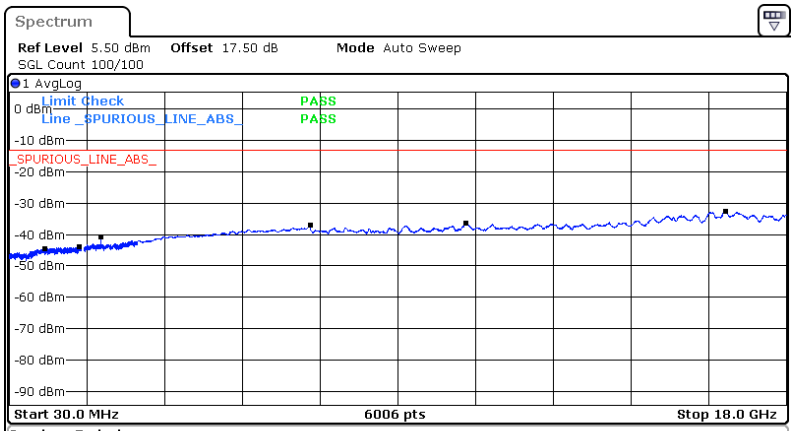


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	782.45255 MHz	-44.11 dBm	-31.11 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.67098 GHz	-43.93 dBm	-30.93 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13205 GHz	-40.13 dBm	-27.13 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98302 GHz	-36.79 dBm	-23.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58042 GHz	-36.32 dBm	-23.32 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.58891 GHz	-32.65 dBm	-19.65 dB

Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

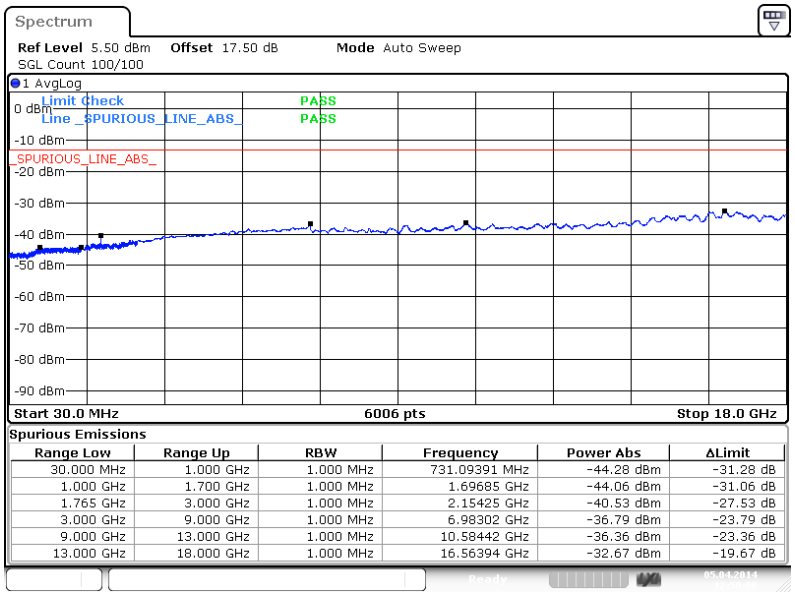
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	860.94406 MHz	-44.40 dBm	-31.40 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65629 GHz	-43.87 dBm	-30.87 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15425 GHz	-40.82 dBm	-27.82 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.83 dBm	-23.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58841 GHz	-36.34 dBm	-23.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.59391 GHz	-32.53 dBm	-19.53 dB

16QAM (RB Size 1, RB Offset 7)

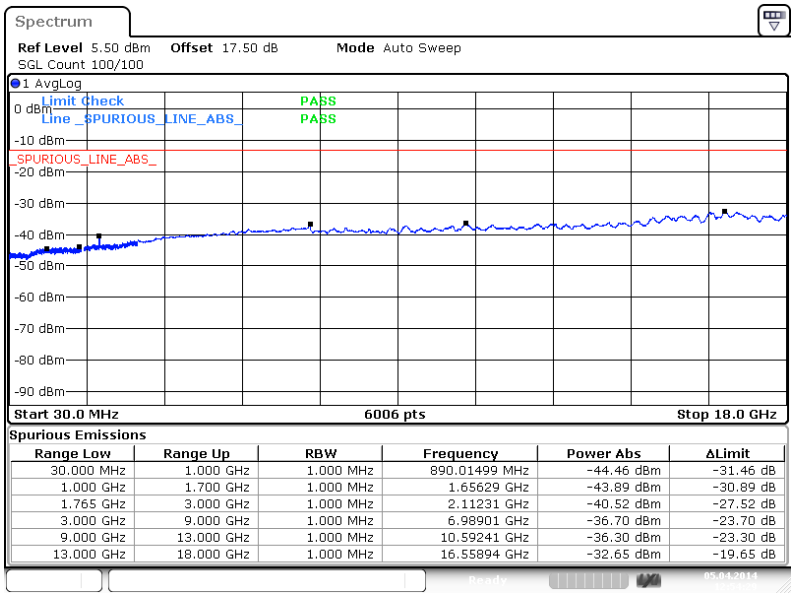


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	731.09391 MHz	-44.28 dBm	-31.28 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69685 GHz	-44.06 dBm	-31.06 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15425 GHz	-40.53 dBm	-27.53 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98302 GHz	-36.79 dBm	-23.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.36 dBm	-23.36 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.56394 GHz	-32.67 dBm	-19.67 dB

Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

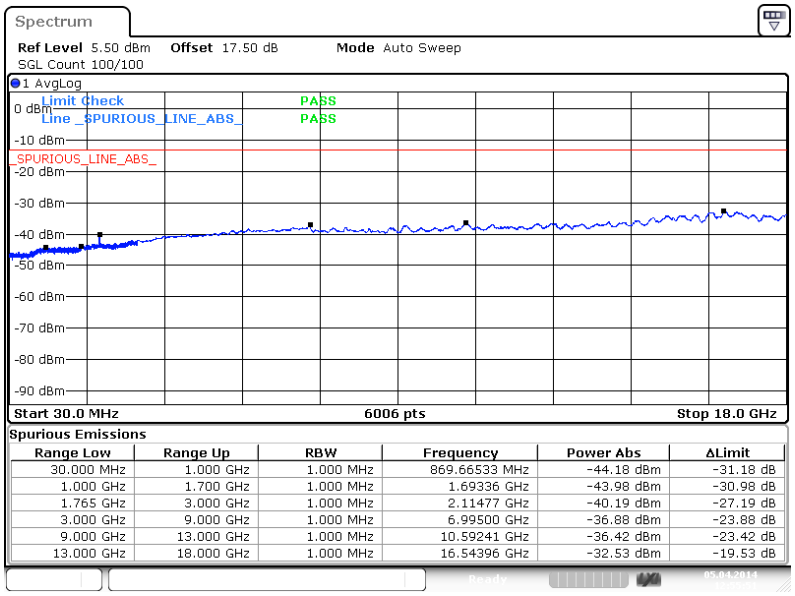
QPSK (RB Size 1, RB Offset 24)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	890.01499 MHz	-44.46 dBm	-31.46 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65629 GHz	-43.89 dBm	-30.89 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11231 GHz	-40.52 dBm	-27.52 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.70 dBm	-23.70 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.30 dBm	-23.30 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55894 GHz	-32.65 dBm	-19.65 dB

16QAM (RB Size 1, RB Offset 0)

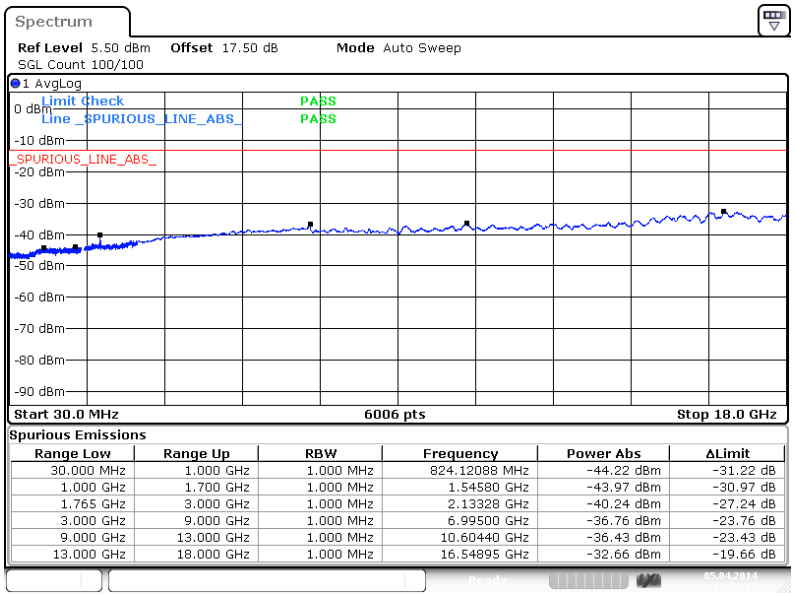


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	869.66533 MHz	-44.18 dBm	-31.18 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69336 GHz	-43.98 dBm	-30.98 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11477 GHz	-40.19 dBm	-27.19 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.88 dBm	-23.88 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.42 dBm	-23.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54396 GHz	-32.53 dBm	-19.53 dB

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

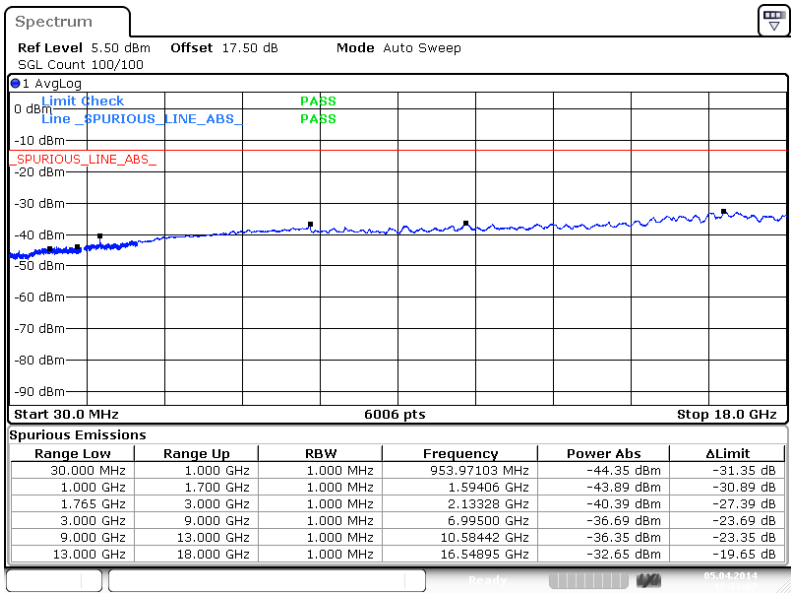
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	824.12088 MHz	-44.22 dBm	-31.22 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.54580 GHz	-43.97 dBm	-30.97 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13328 GHz	-40.24 dBm	-27.24 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.76 dBm	-23.76 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60440 GHz	-36.43 dBm	-23.43 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.66 dBm	-19.66 dB

16QAM (RB Size 1, RB Offset 24)

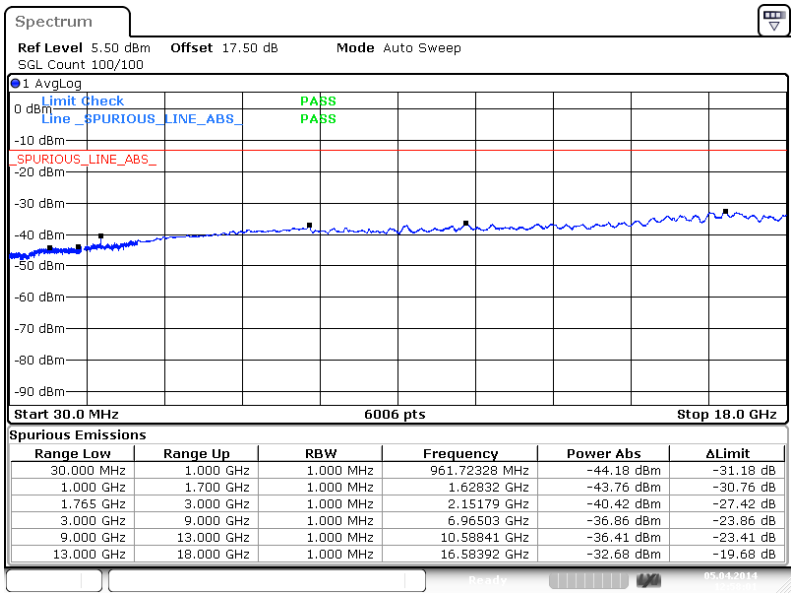


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	953.97103 MHz	-44.35 dBm	-31.35 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.59406 GHz	-43.89 dBm	-30.89 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13328 GHz	-40.39 dBm	-27.39 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.69 dBm	-23.69 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.35 dBm	-23.35 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.65 dBm	-19.65 dB

Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

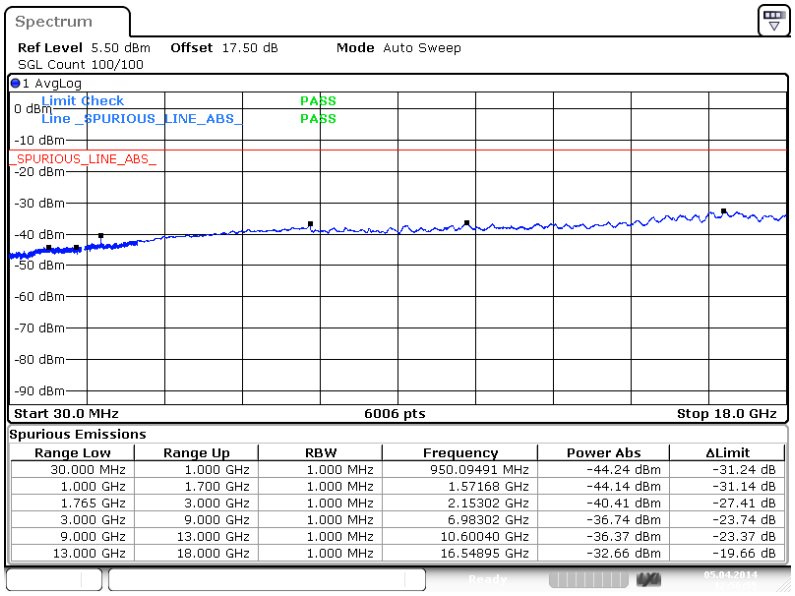
QPSK (RB Size 1, RB Offset 24)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	961.72328 MHz	-44.18 dBm	-31.18 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62832 GHz	-43.76 dBm	-30.76 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15179 GHz	-40.42 dBm	-27.42 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.96503 GHz	-36.86 dBm	-23.86 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58841 GHz	-36.41 dBm	-23.41 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.58392 GHz	-32.68 dBm	-19.68 dB

16QAM (RB Size 1, RB Offset 0)

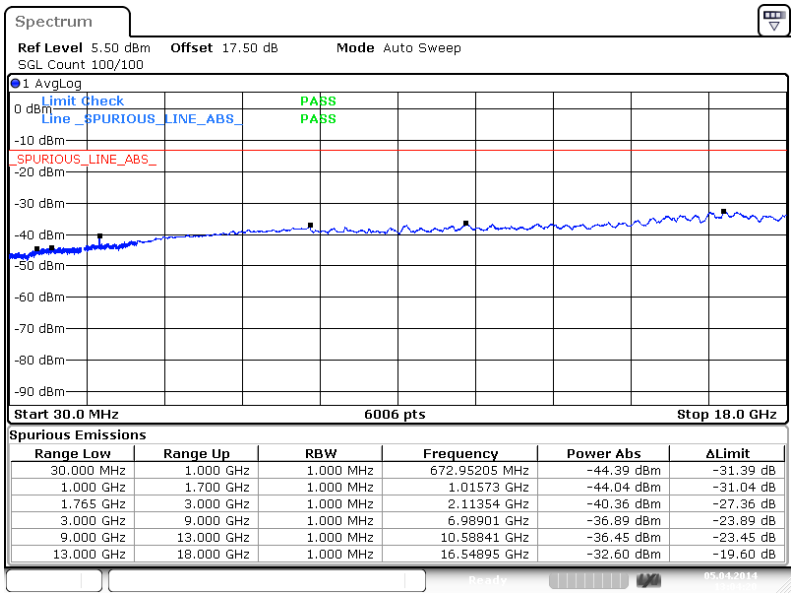


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	950.09491 MHz	-44.24 dBm	-31.24 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.57168 GHz	-44.14 dBm	-31.14 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15302 GHz	-40.41 dBm	-27.41 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98302 GHz	-36.74 dBm	-23.74 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60040 GHz	-36.37 dBm	-23.37 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.66 dBm	-19.66 dB

Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

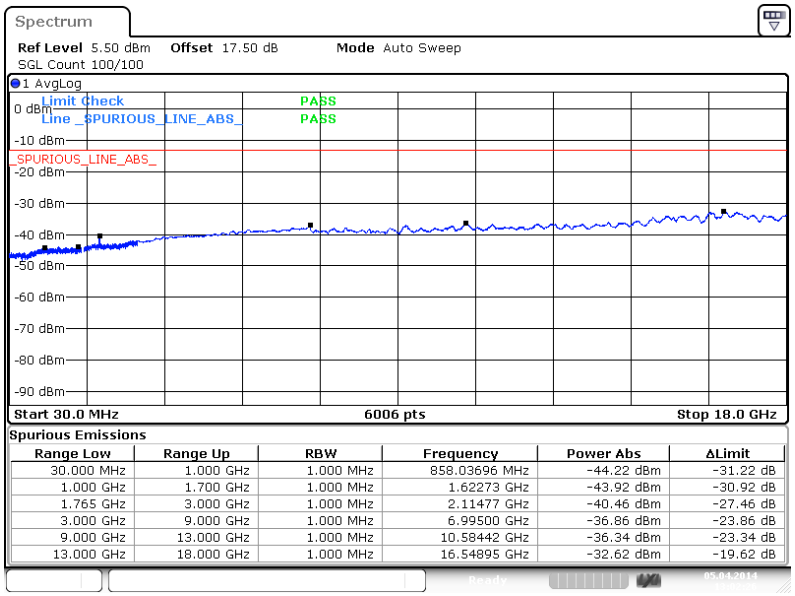
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	672.95205 MHz	-44.39 dBm	-31.39 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.01573 GHz	-44.04 dBm	-31.04 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11354 GHz	-40.36 dBm	-27.36 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.89 dBm	-23.89 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58841 GHz	-36.45 dBm	-23.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.60 dBm	-19.60 dB

16QAM (RB Size 1, RB Offset 24)

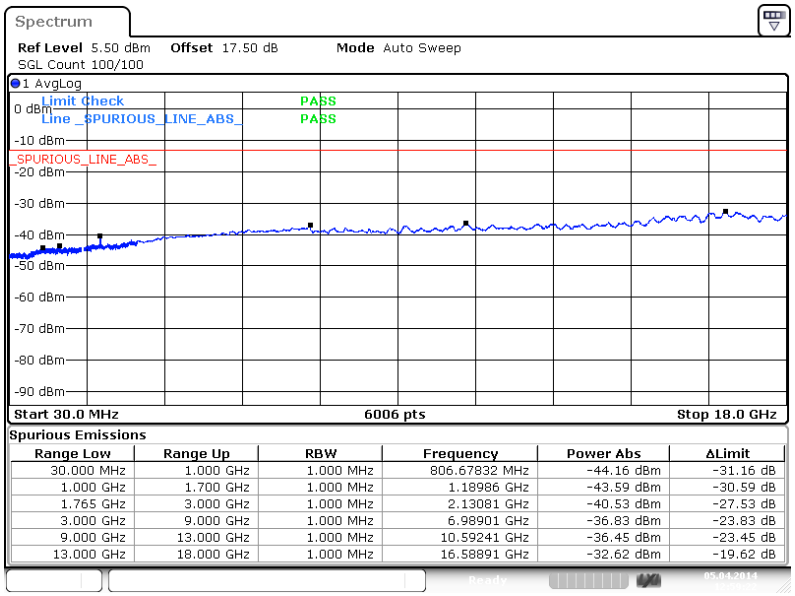


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	858.03696 MHz	-44.22 dBm	-31.22 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62273 GHz	-43.92 dBm	-30.92 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11477 GHz	-40.46 dBm	-27.46 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.86 dBm	-23.86 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.34 dBm	-23.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.62 dBm	-19.62 dB

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

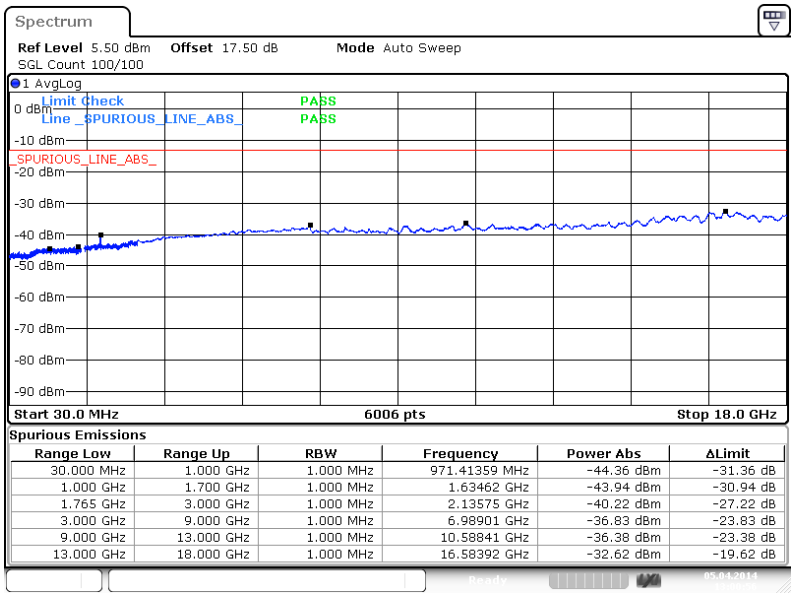
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	806.67832 MHz	-44.16 dBm	-31.16 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.18986 GHz	-43.59 dBm	-30.59 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13081 GHz	-40.53 dBm	-27.53 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.83 dBm	-23.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.45 dBm	-23.45 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.58891 GHz	-32.62 dBm	-19.62 dB

16QAM (RB Size 1, RB Offset 49)

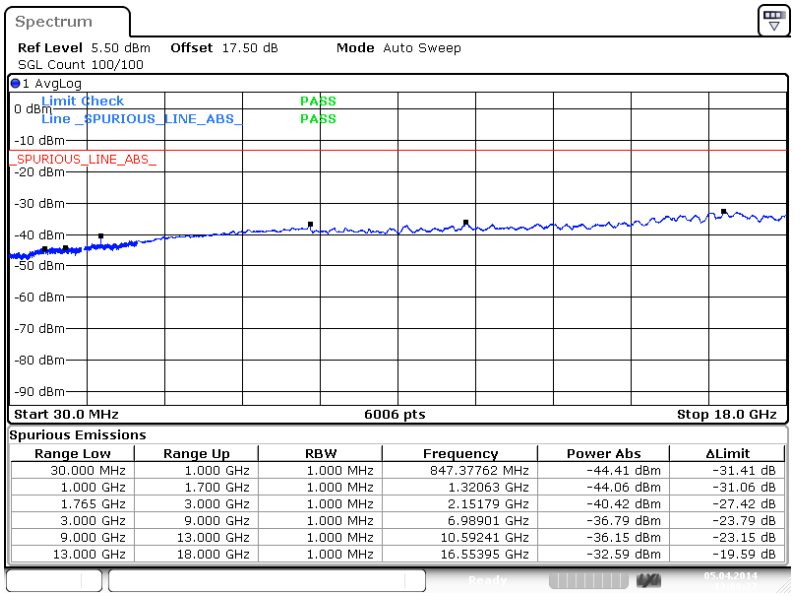


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	971.41359 MHz	-44.36 dBm	-31.36 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.63462 GHz	-43.94 dBm	-30.94 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13575 GHz	-40.22 dBm	-27.22 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.83 dBm	-23.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58841 GHz	-36.38 dBm	-23.38 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.58392 GHz	-32.62 dBm	-19.62 dB

Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

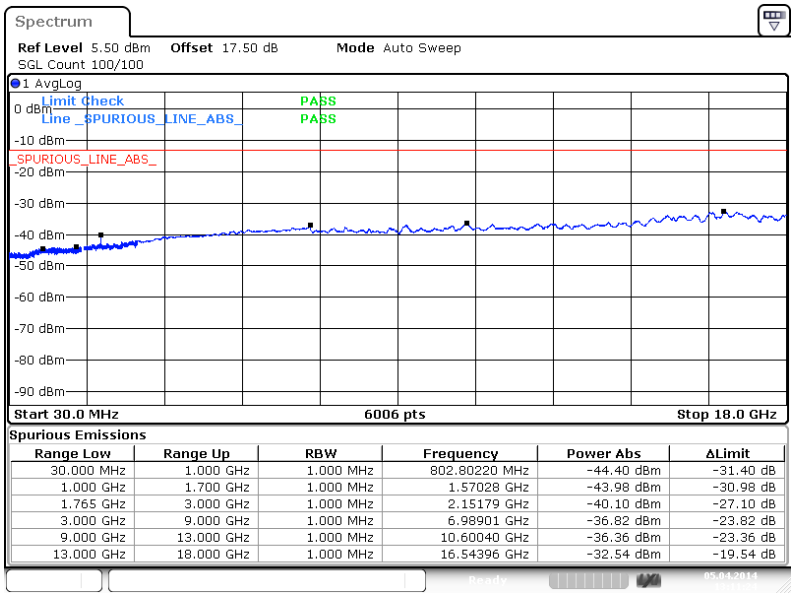
QPSK (RB Size 1, RB Offset 24)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	847.37762 MHz	-44.41 dBm	-31.41 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.32063 GHz	-44.06 dBm	-31.06 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15179 GHz	-40.42 dBm	-27.42 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.79 dBm	-23.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.15 dBm	-23.15 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55395 GHz	-32.59 dBm	-19.59 dB

16QAM (RB Size 1, RB Offset 24)

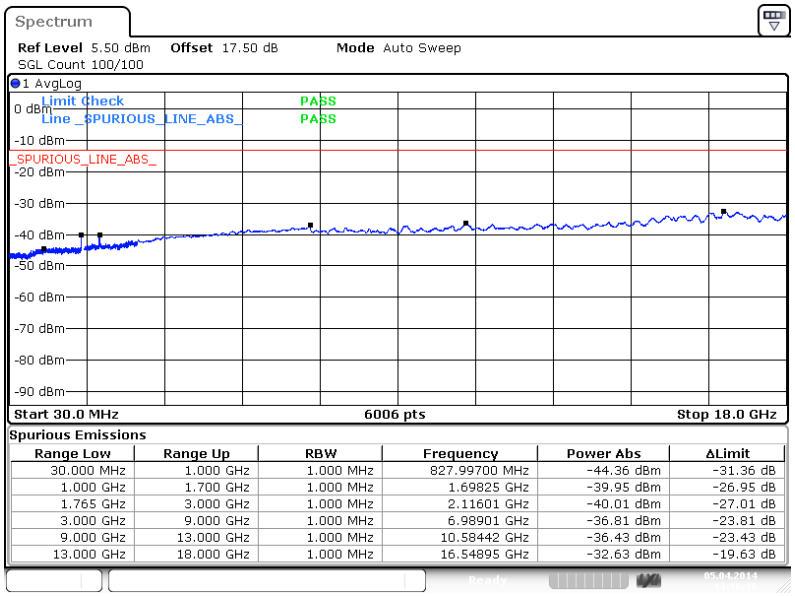


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	802.80220 MHz	-44.40 dBm	-31.40 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.57028 GHz	-43.98 dBm	-30.98 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15179 GHz	-40.10 dBm	-27.10 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.82 dBm	-23.82 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60040 GHz	-36.36 dBm	-23.36 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54396 GHz	-32.54 dBm	-19.54 dB

Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

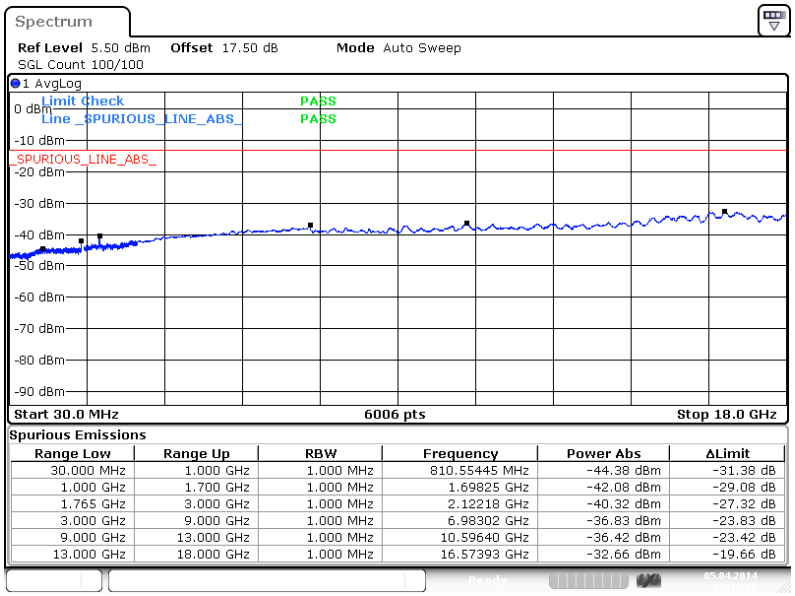
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	827.99700 MHz	-44.36 dBm	-31.36 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69825 GHz	-39.95 dBm	-26.95 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11601 GHz	-40.01 dBm	-27.01 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.81 dBm	-23.81 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.43 dBm	-23.43 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.63 dBm	-19.63 dB

16QAM (RB Size 1, RB Offset 37)

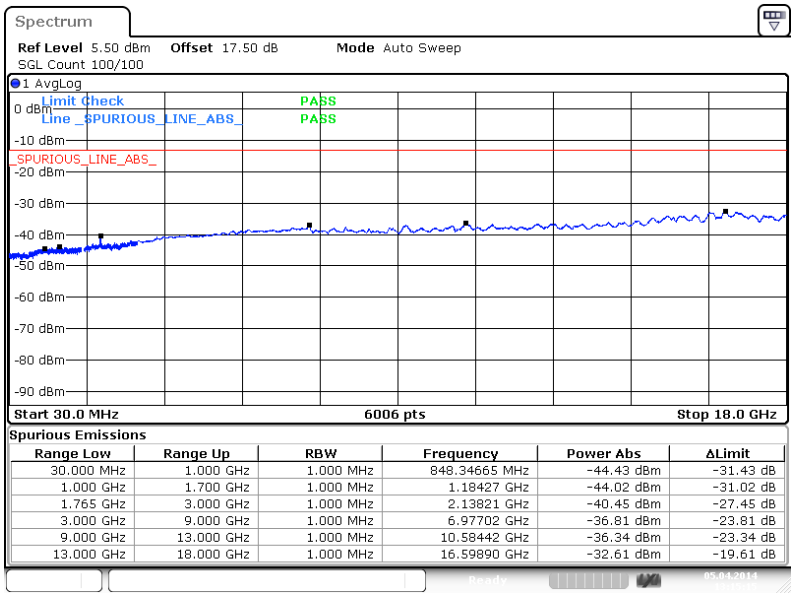


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	810.55445 MHz	-44.38 dBm	-31.38 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69825 GHz	-42.08 dBm	-29.08 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.12218 GHz	-40.32 dBm	-27.32 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98302 GHz	-36.83 dBm	-23.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59640 GHz	-36.42 dBm	-23.42 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.57393 GHz	-32.66 dBm	-19.66 dB

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

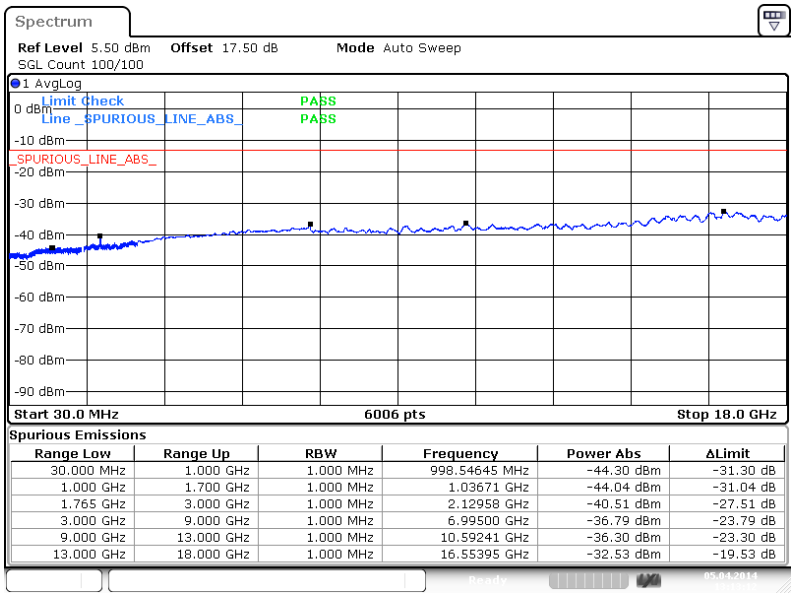
QPSK (RB Size 1, RB Offset 74)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	848.34665 MHz	-44.43 dBm	-31.43 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.18427 GHz	-44.02 dBm	-31.02 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13821 GHz	-40.45 dBm	-27.45 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97702 GHz	-36.81 dBm	-23.81 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.34 dBm	-23.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.59890 GHz	-32.61 dBm	-19.61 dB

16QAM (RB Size 1, RB Offset 0)

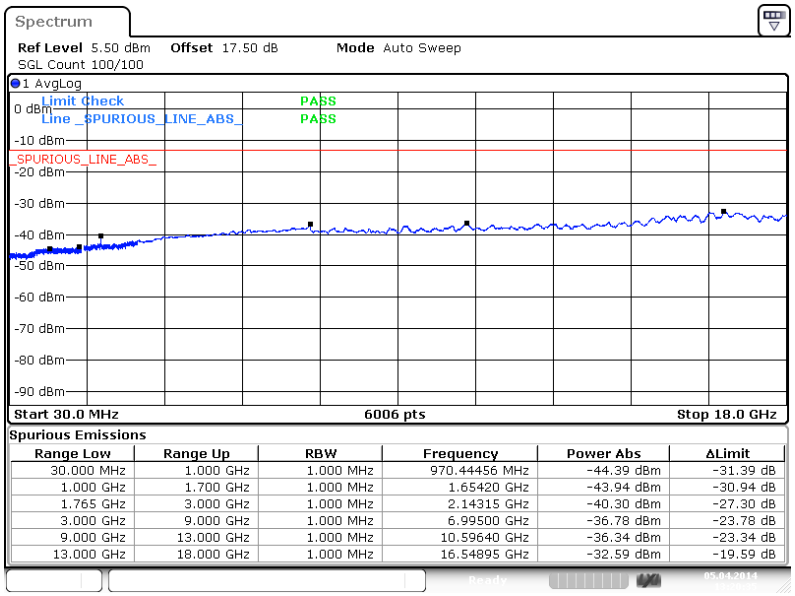


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	998.54645 MHz	-44.30 dBm	-31.30 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.03671 GHz	-44.04 dBm	-31.04 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.12958 GHz	-40.51 dBm	-27.51 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.79 dBm	-23.79 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59241 GHz	-36.30 dBm	-23.30 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55395 GHz	-32.53 dBm	-19.53 dB

Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

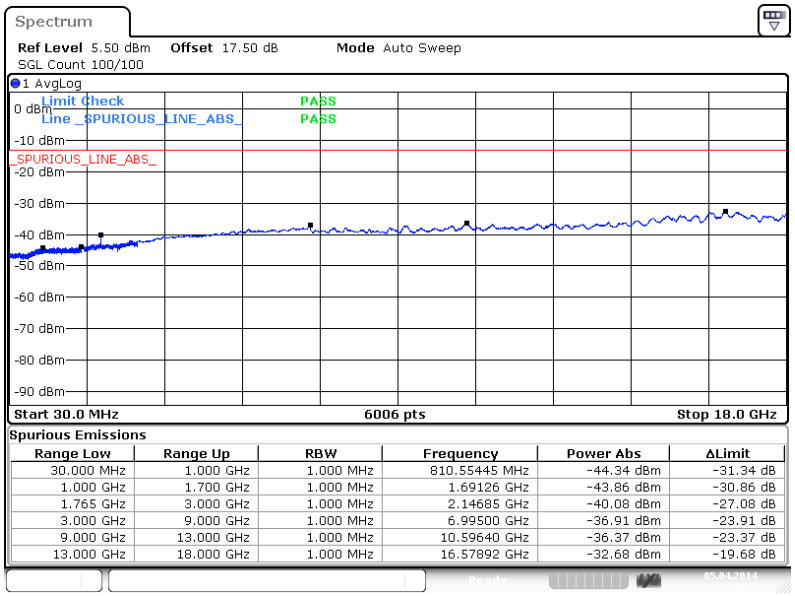
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	970.44456 MHz	-44.39 dBm	-31.39 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65420 GHz	-43.94 dBm	-30.94 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.14315 GHz	-40.30 dBm	-27.30 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.78 dBm	-23.78 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59640 GHz	-36.34 dBm	-23.34 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.59 dBm	-19.59 dB

16QAM (RB Size 1, RB Offset 37)

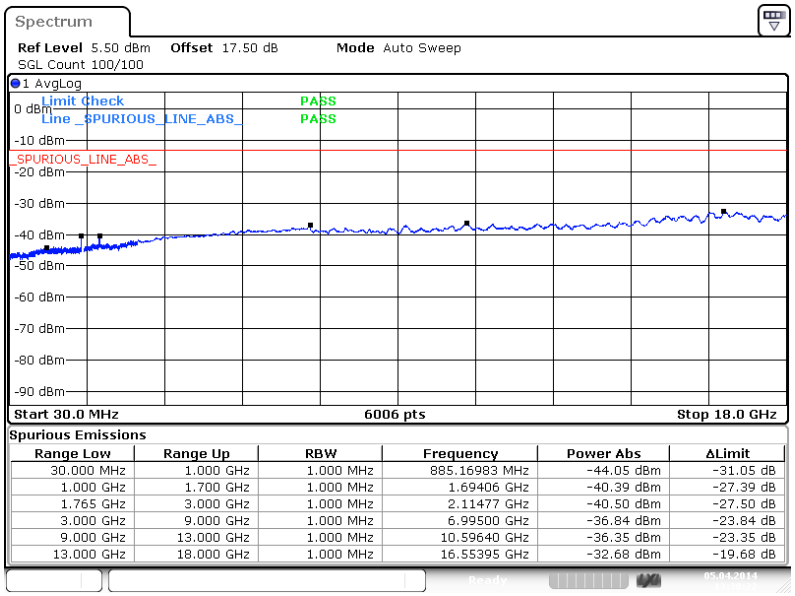


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	810.55445 MHz	-44.34 dBm	-31.34 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69126 GHz	-43.86 dBm	-30.86 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.14685 GHz	-40.08 dBm	-27.08 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.91 dBm	-23.91 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59640 GHz	-36.37 dBm	-23.37 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.57892 GHz	-32.68 dBm	-19.68 dB

Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

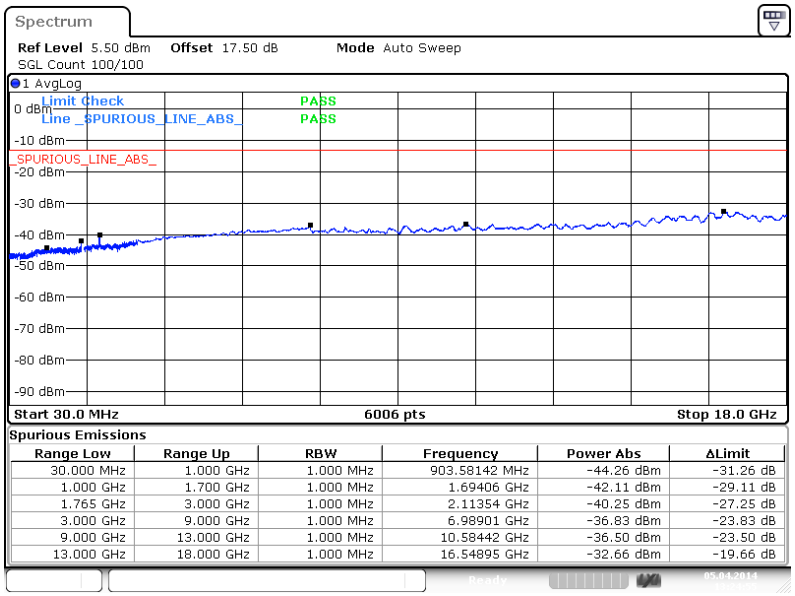
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	885.16983 MHz	-44.05 dBm	-31.05 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69406 GHz	-40.39 dBm	-27.39 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11477 GHz	-40.50 dBm	-27.50 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.99500 GHz	-36.84 dBm	-23.84 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59640 GHz	-36.35 dBm	-23.35 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55395 GHz	-32.68 dBm	-19.68 dB

16QAM (RB Size 1, RB Offset 0)

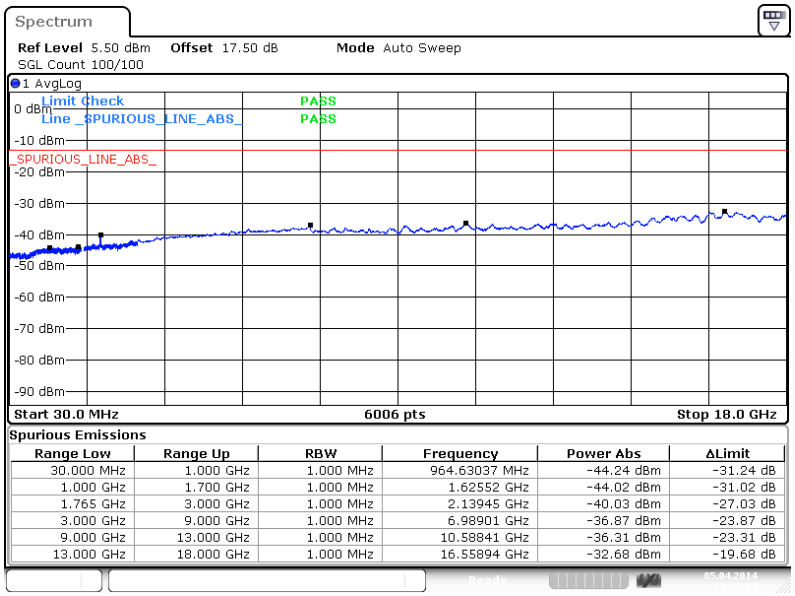


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	903.58142 MHz	-44.26 dBm	-31.26 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69406 GHz	-42.11 dBm	-29.11 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.11354 GHz	-40.25 dBm	-27.25 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.83 dBm	-23.83 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58442 GHz	-36.50 dBm	-23.50 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.66 dBm	-19.66 dB

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

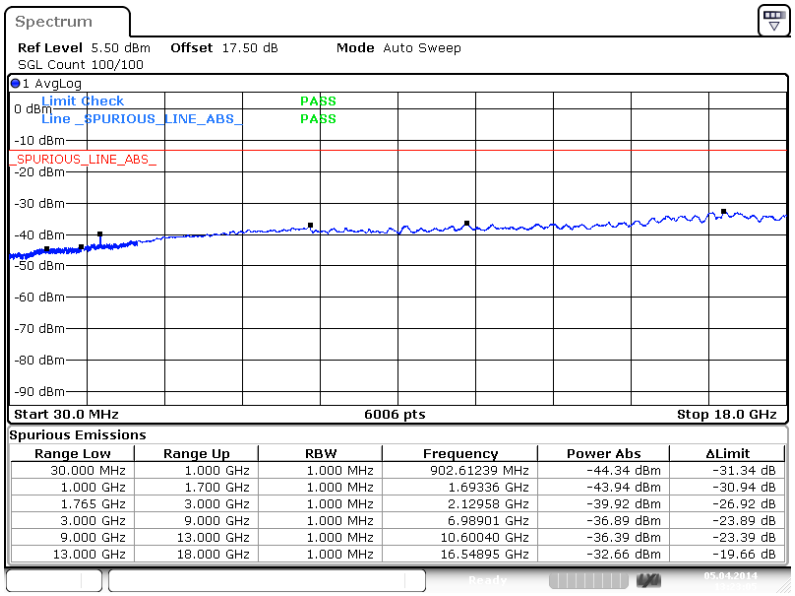
QPSK (RB Size 1, RB Offset 49)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	964.63037 MHz	-44.24 dBm	-31.24 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62552 GHz	-44.02 dBm	-31.02 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.13945 GHz	-40.03 dBm	-27.03 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.87 dBm	-23.87 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58841 GHz	-36.31 dBm	-23.31 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.55894 GHz	-32.68 dBm	-19.68 dB

16QAM (RB Size 1, RB Offset 49)

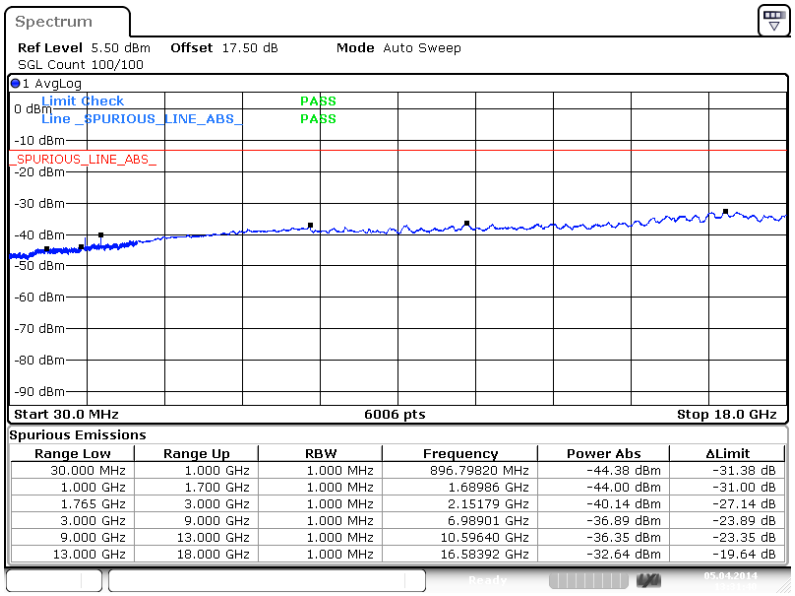


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	902.61239 MHz	-44.34 dBm	-31.34 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69336 GHz	-43.94 dBm	-30.94 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.12958 GHz	-39.92 dBm	-26.92 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.89 dBm	-23.89 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.60040 GHz	-36.39 dBm	-23.39 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54895 GHz	-32.66 dBm	-19.66 dB

Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

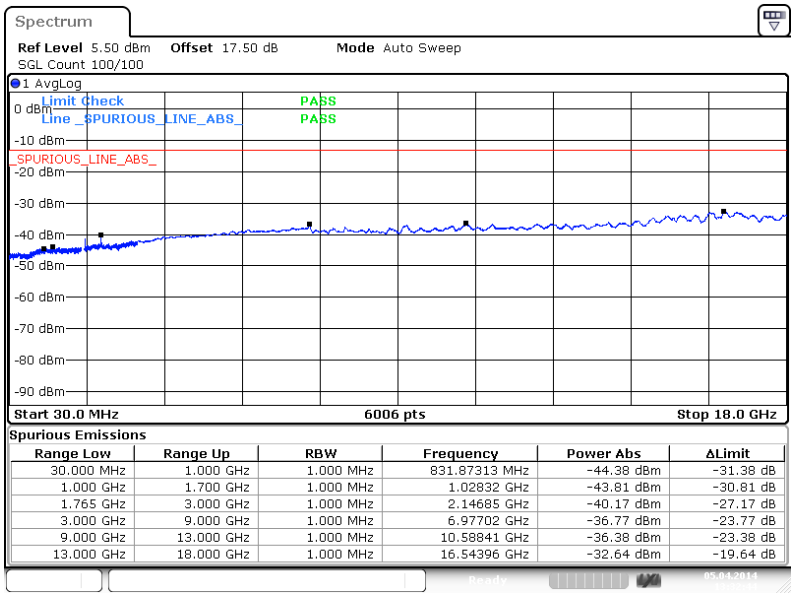
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	896.79820 MHz	-44.38 dBm	-31.38 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68986 GHz	-44.00 dBm	-31.00 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.15179 GHz	-40.14 dBm	-27.14 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.98901 GHz	-36.89 dBm	-23.89 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.59640 GHz	-36.35 dBm	-23.35 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.58392 GHz	-32.64 dBm	-19.64 dB

16QAM (RB Size 1, RB Offset 49)

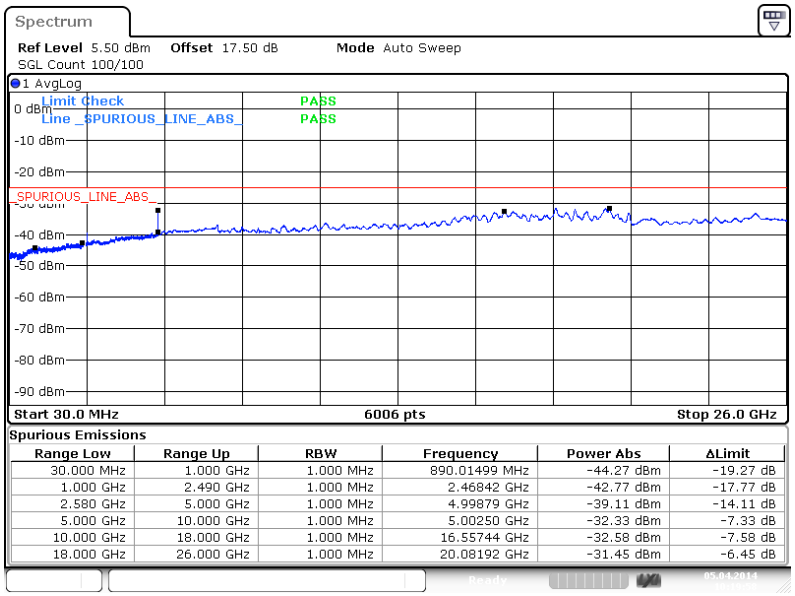


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	831.87313 MHz	-44.38 dBm	-31.38 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.02832 GHz	-43.81 dBm	-30.81 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.14685 GHz	-40.17 dBm	-27.17 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97702 GHz	-36.77 dBm	-23.77 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.58841 GHz	-36.38 dBm	-23.38 dB
13.000 GHz	18.000 GHz	1.000 MHz	16.54396 GHz	-32.64 dBm	-19.64 dB

Band :	LTE Band 7	Channel :	CH20775 (Low)
Band Width :	5MHz		

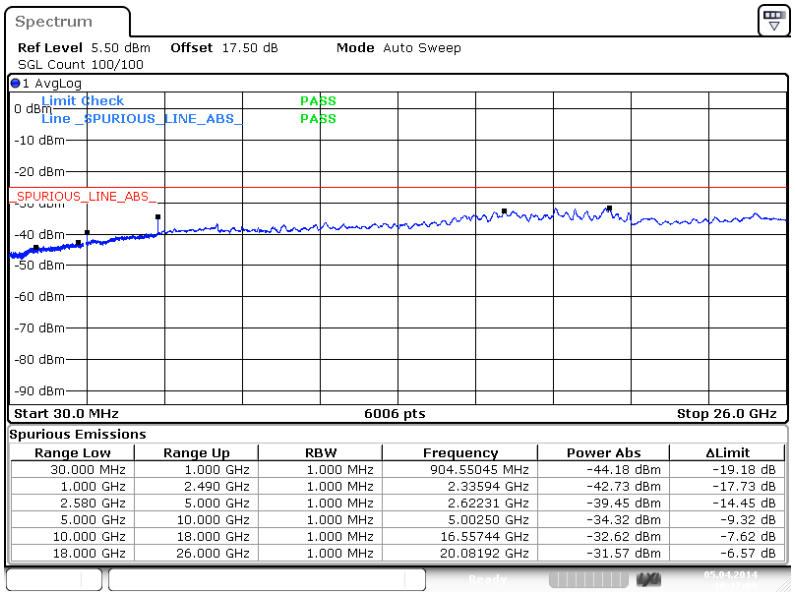
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	890.01499 MHz	-44.27 dBm	-19.27 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.46842 GHz	-42.77 dBm	-17.77 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99879 GHz	-39.11 dBm	-14.11 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-32.33 dBm	-7.33 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.55744 GHz	-32.58 dBm	-7.58 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.45 dBm	-6.45 dB

16QAM (RB Size 1, RB Offset 0)

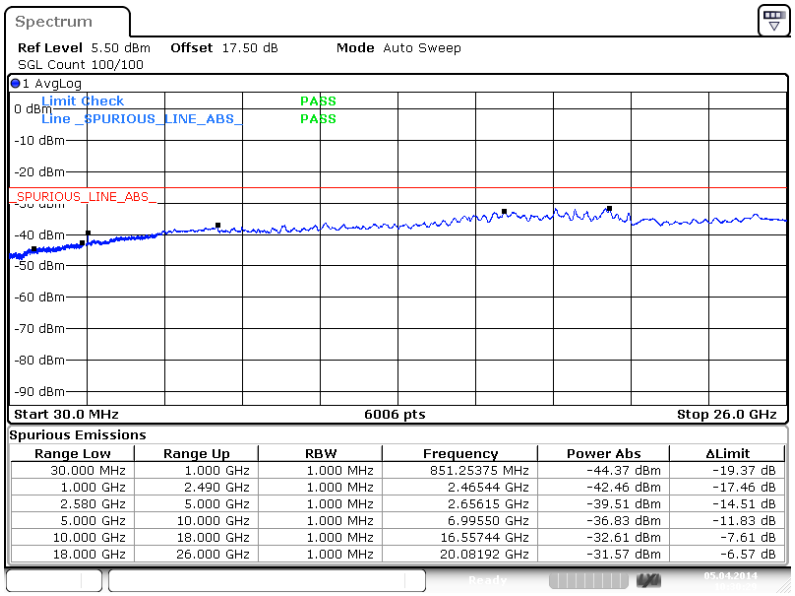


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	904.55045 MHz	-44.18 dBm	-19.18 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.33594 GHz	-42.73 dBm	-17.73 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.62231 GHz	-39.45 dBm	-14.45 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-34.32 dBm	-9.32 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.55744 GHz	-32.62 dBm	-7.62 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.57 dBm	-6.57 dB

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	5MHz		

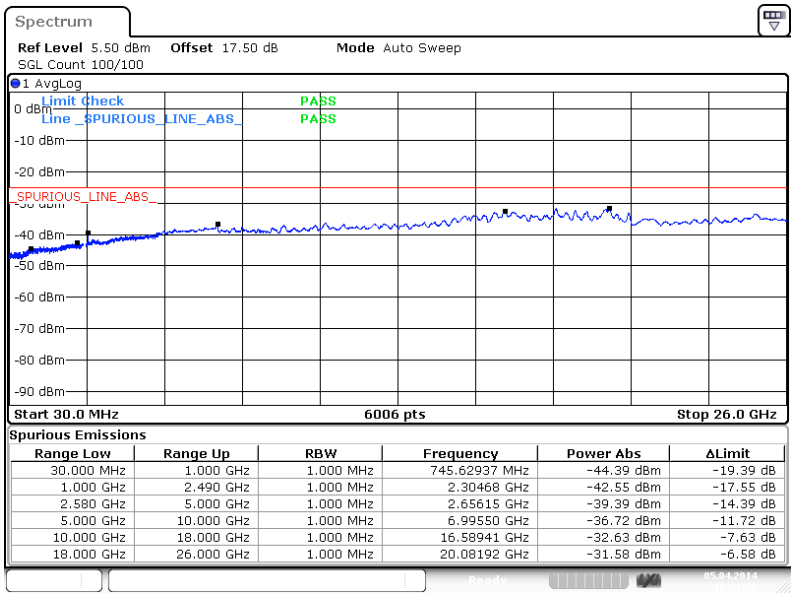
QPSK (RB Size 1, RB Offset 12)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	851.25375 MHz	-44.37 dBm	-19.37 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.46544 GHz	-42.46 dBm	-17.46 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65615 GHz	-39.51 dBm	-14.51 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99550 GHz	-36.83 dBm	-11.83 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.55744 GHz	-32.61 dBm	-7.61 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.57 dBm	-6.57 dB

16QAM (RB Size 1, RB Offset 0)

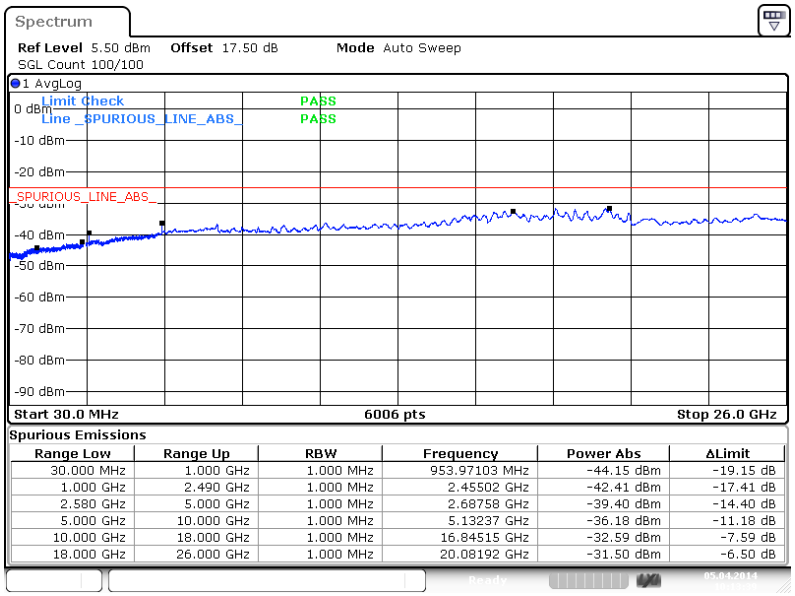


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	745.62937 MHz	-44.39 dBm	-19.39 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.30468 GHz	-42.55 dBm	-17.55 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65615 GHz	-39.39 dBm	-14.39 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99550 GHz	-36.72 dBm	-11.72 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.58941 GHz	-32.63 dBm	-7.63 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.58 dBm	-6.58 dB

Band :	LTE Band 7	Channel :	CH21425 (High)
Band Width :	5MHz		

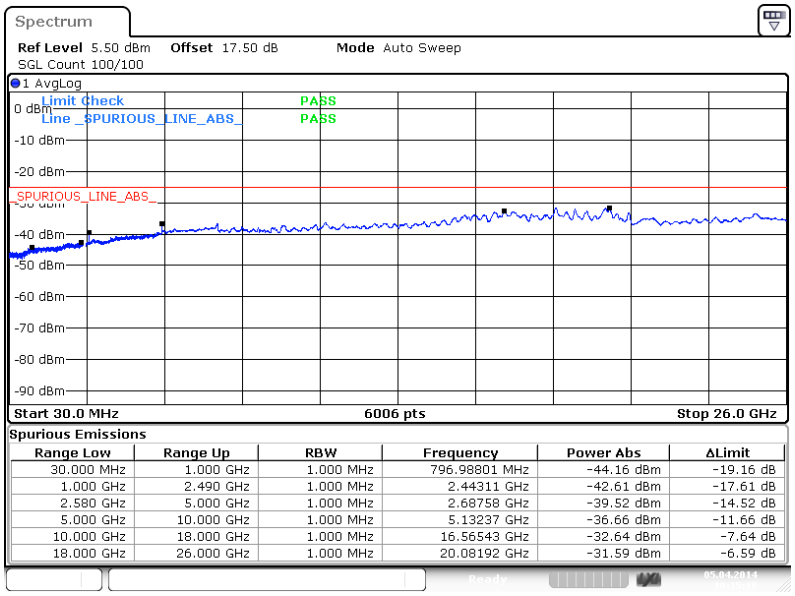
QPSK (RB Size 1, RB Offset 24)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	953.97103 MHz	-44.15 dBm	-19.15 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.45502 GHz	-42.41 dBm	-17.41 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.68758 GHz	-39.40 dBm	-14.40 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.13237 GHz	-36.18 dBm	-11.18 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.84515 GHz	-32.59 dBm	-7.59 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.50 dBm	-6.50 dB

16QAM (RB Size 1, RB Offset 0)

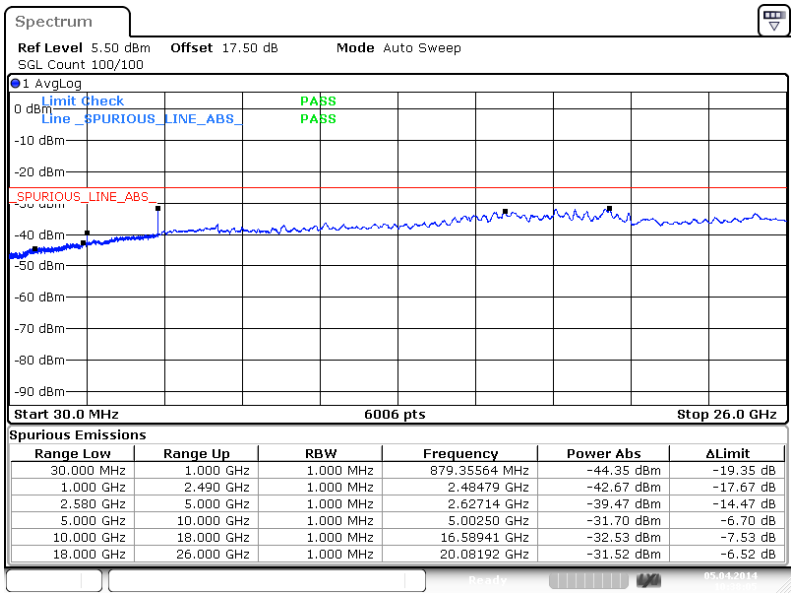


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	796.98801 MHz	-44.16 dBm	-19.16 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.44311 GHz	-42.61 dBm	-17.61 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.68758 GHz	-39.52 dBm	-14.52 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.13237 GHz	-36.66 dBm	-11.66 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.56543 GHz	-32.64 dBm	-7.64 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.59 dBm	-6.59 dB

Band :	LTE Band 7	Channel :	CH20800 (Low)
Band Width :	10MHz		

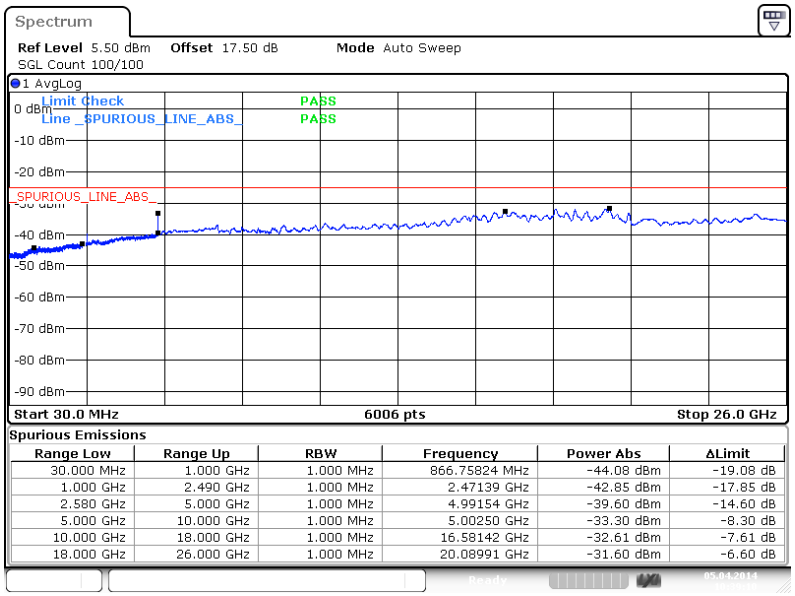
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	879.35564 MHz	-44.35 dBm	-19.35 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48479 GHz	-42.67 dBm	-17.67 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.62714 GHz	-39.47 dBm	-14.47 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-31.70 dBm	-6.70 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.58941 GHz	-32.53 dBm	-7.53 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.52 dBm	-6.52 dB

16QAM (RB Size 1, RB Offset 24)

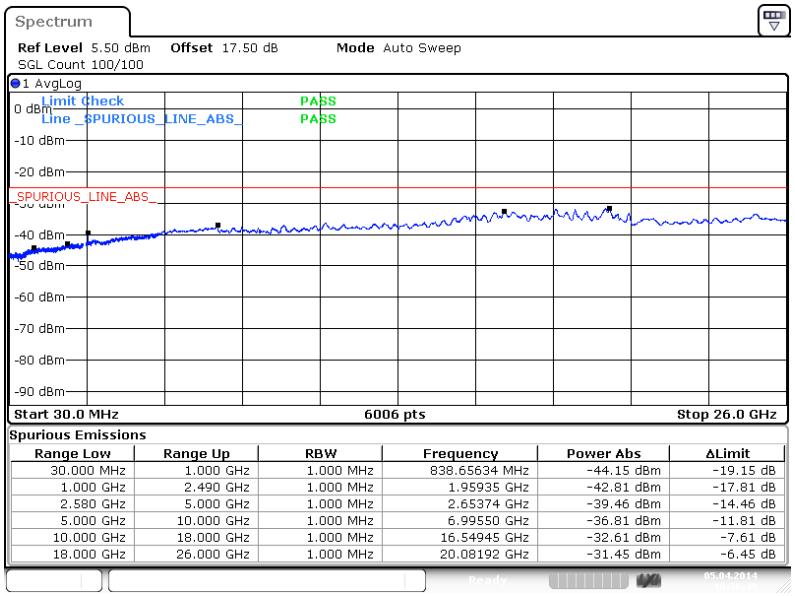


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	866.75824 MHz	-44.08 dBm	-19.08 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.47139 GHz	-42.85 dBm	-17.85 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99154 GHz	-39.60 dBm	-14.60 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-33.30 dBm	-8.30 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.58142 GHz	-32.61 dBm	-7.61 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08991 GHz	-31.60 dBm	-6.60 dB

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	10MHz		

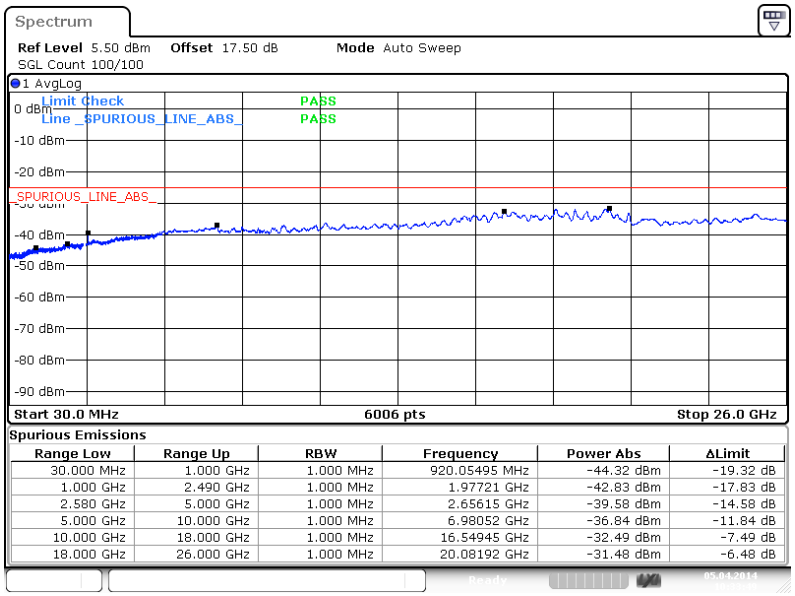
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	838.65634 MHz	-44.15 dBm	-19.15 dB
1.000 GHz	2.490 GHz	1.000 MHz	1.95935 GHz	-42.81 dBm	-17.81 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65374 GHz	-39.46 dBm	-14.46 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99550 GHz	-36.81 dBm	-11.81 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.54945 GHz	-32.61 dBm	-7.61 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.45 dBm	-6.45 dB

16QAM (RB Size 1, RB Offset 49)

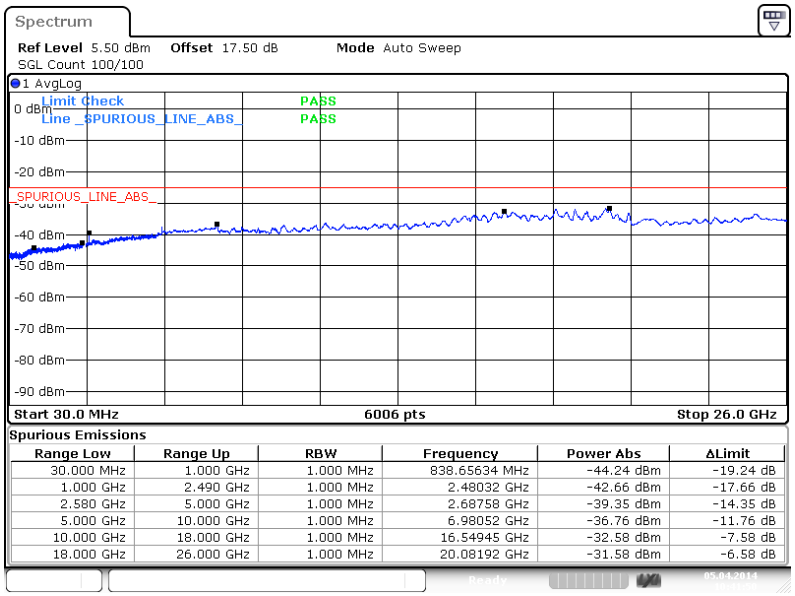


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	920.05495 MHz	-44.32 dBm	-19.32 dB
1.000 GHz	2.490 GHz	1.000 MHz	1.97721 GHz	-42.83 dBm	-17.83 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65615 GHz	-39.58 dBm	-14.58 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98052 GHz	-36.84 dBm	-11.84 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.54945 GHz	-32.49 dBm	-7.49 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.48 dBm	-6.48 dB

Band :	LTE Band 7	Channel :	CH21400 (High)
Band Width :	10MHz		

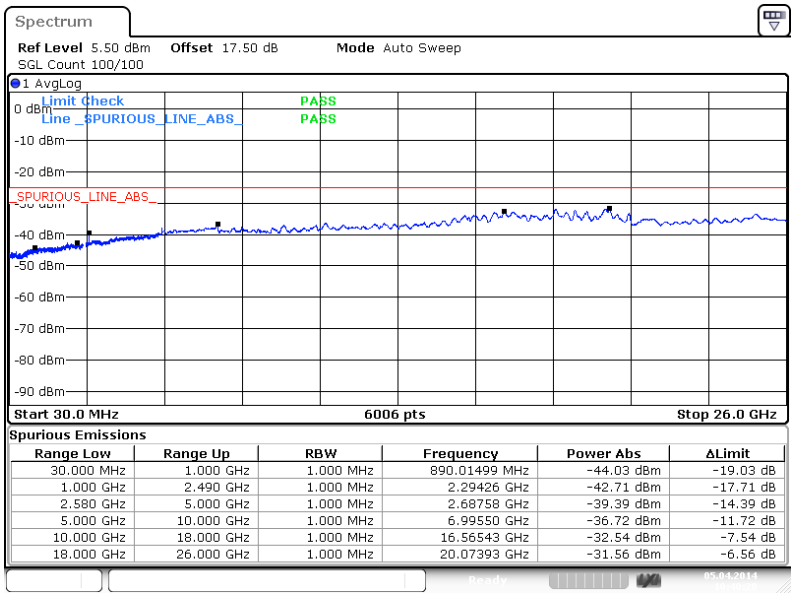
QPSK (RB Size 1, RB Offset 24)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	838.65634 MHz	-44.24 dBm	-19.24 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48032 GHz	-42.66 dBm	-17.66 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.68758 GHz	-39.35 dBm	-14.35 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98052 GHz	-36.76 dBm	-11.76 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.54945 GHz	-32.58 dBm	-7.58 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.58 dBm	-6.58 dB

16QAM (RB Size 1, RB Offset 0)

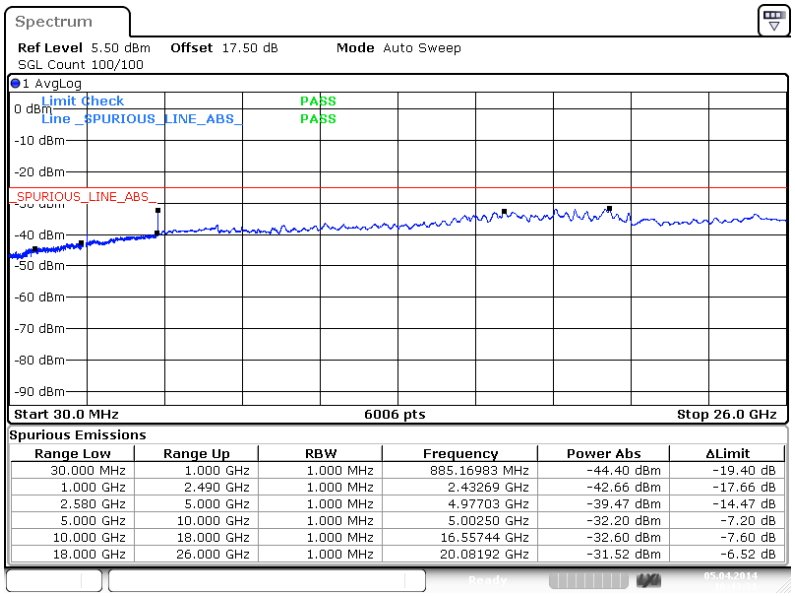


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	890.01499 MHz	-44.03 dBm	-19.03 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.29426 GHz	-42.71 dBm	-17.71 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.68758 GHz	-39.39 dBm	-14.39 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99550 GHz	-36.72 dBm	-11.72 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.56543 GHz	-32.54 dBm	-7.54 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.07393 GHz	-31.56 dBm	-6.56 dB

Band :	LTE Band 7	Channel :	CH20825 (Low)
Band Width :	15MHz		

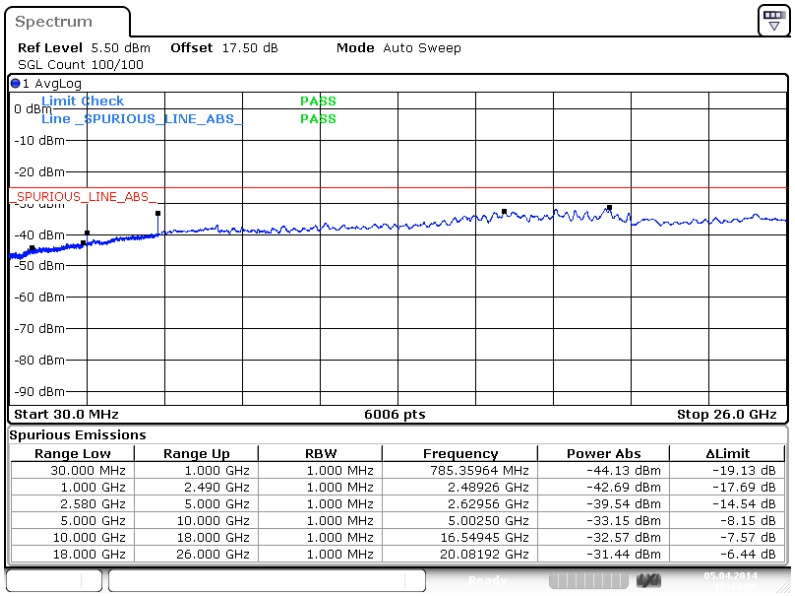
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	885.16983 MHz	-44.40 dBm	-19.40 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.43269 GHz	-42.66 dBm	-17.66 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.97703 GHz	-39.47 dBm	-14.47 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-32.20 dBm	-7.20 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.55744 GHz	-32.60 dBm	-7.60 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.52 dBm	-6.52 dB

16QAM (RB Size 1, RB Offset 37)

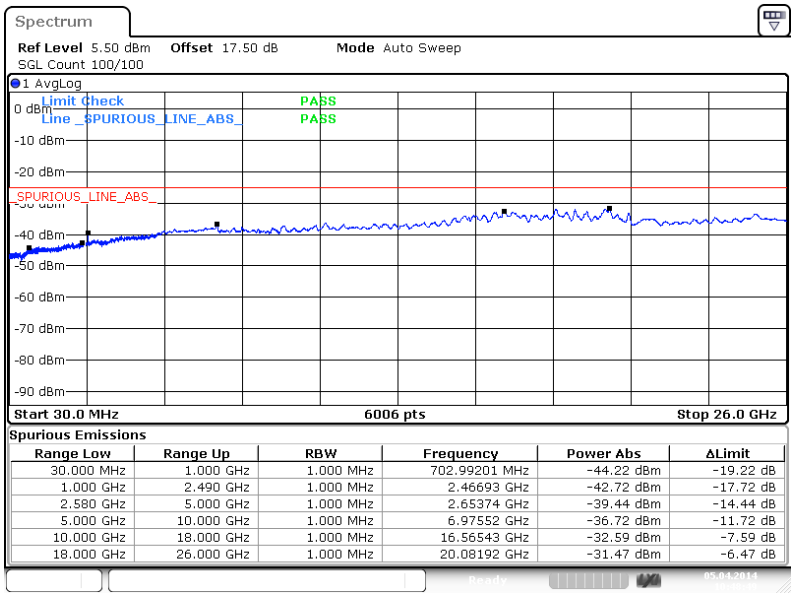


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	785.35964 MHz	-44.13 dBm	-19.13 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48926 GHz	-42.69 dBm	-17.69 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.62956 GHz	-39.54 dBm	-14.54 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-33.15 dBm	-8.15 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.54945 GHz	-32.57 dBm	-7.57 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.44 dBm	-6.44 dB

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	15MHz		

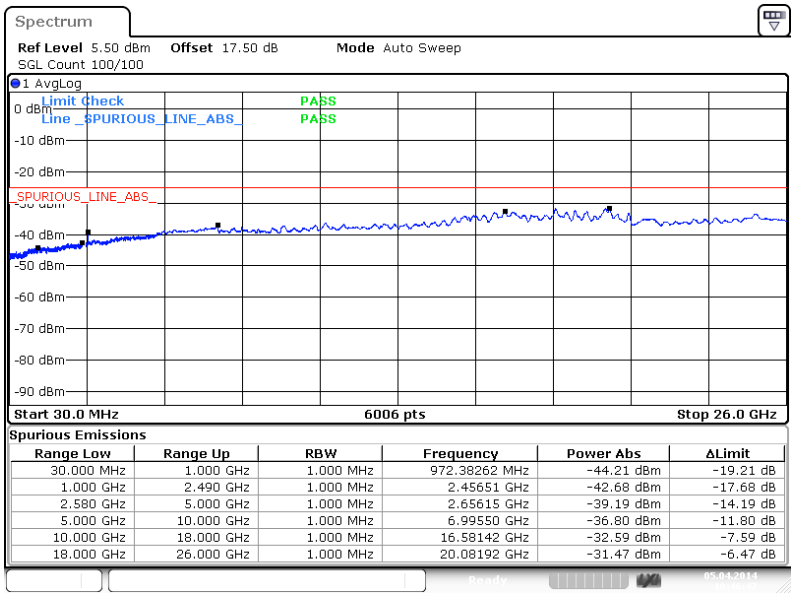
QPSK (RB Size 1, RB Offset 74)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	702.99201 MHz	-44.22 dBm	-19.22 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.46693 GHz	-42.72 dBm	-17.72 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65374 GHz	-39.44 dBm	-14.44 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.97552 GHz	-36.72 dBm	-11.72 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.56543 GHz	-32.59 dBm	-7.59 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.47 dBm	-6.47 dB

16QAM (RB Size 1, RB Offset 74)

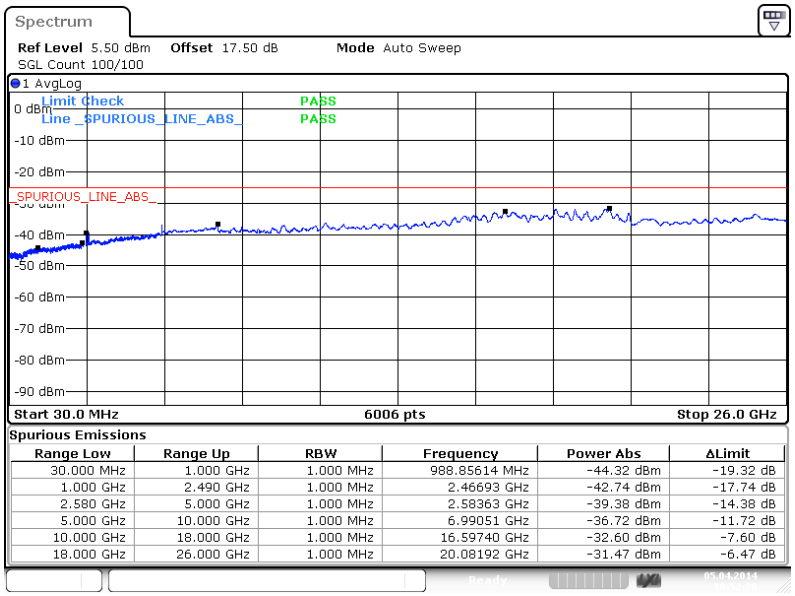


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	972.38262 MHz	-44.21 dBm	-19.21 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.45651 GHz	-42.68 dBm	-17.68 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65615 GHz	-39.19 dBm	-14.19 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99550 GHz	-36.80 dBm	-11.80 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.58142 GHz	-32.59 dBm	-7.59 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.47 dBm	-6.47 dB

Band :	LTE Band 7	Channel :	CH21375 (High)
Band Width :	15MHz		

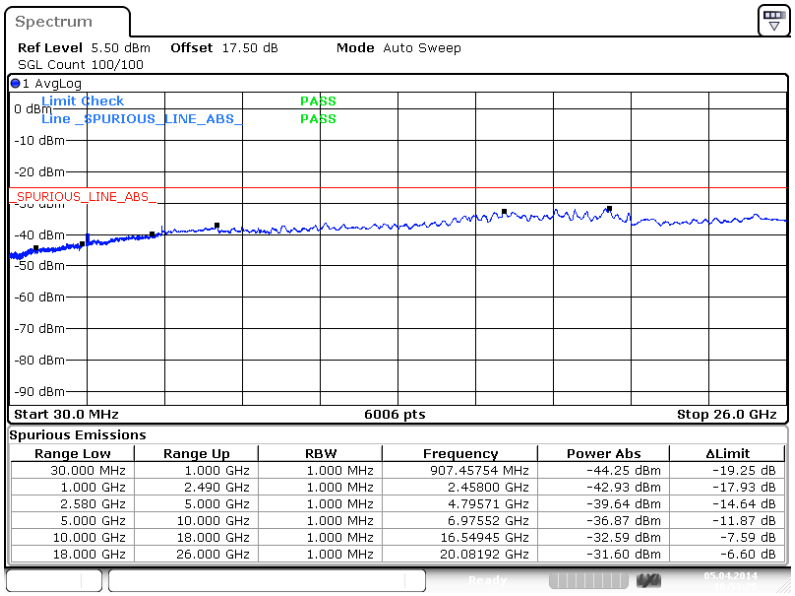
QPSK (RB Size 1, RB Offset 74)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	988.85614 MHz	-44.32 dBm	-19.32 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.46693 GHz	-42.74 dBm	-17.74 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.58363 GHz	-39.38 dBm	-14.38 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99051 GHz	-36.72 dBm	-11.72 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.59740 GHz	-32.60 dBm	-7.60 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.47 dBm	-6.47 dB

16QAM (RB Size 1, RB Offset 0)

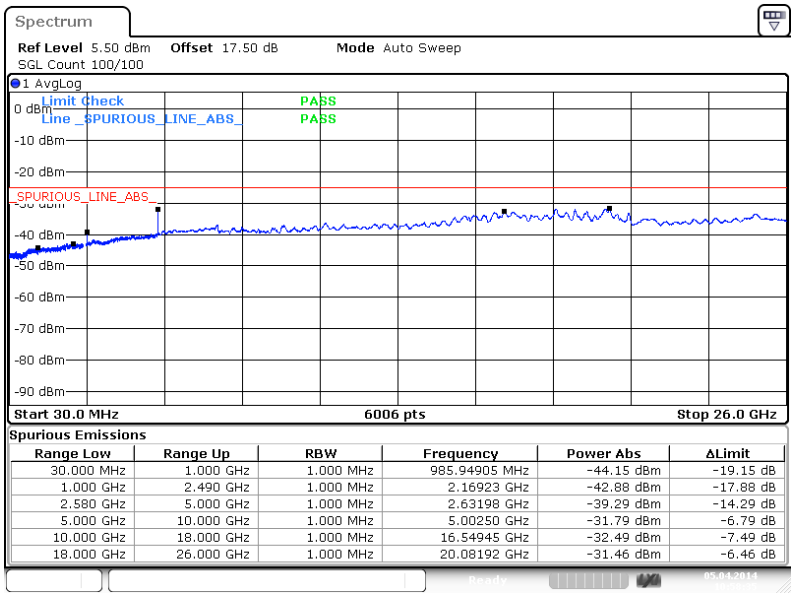


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	907.45754 MHz	-44.25 dBm	-19.25 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.45800 GHz	-42.93 dBm	-17.93 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.79571 GHz	-39.64 dBm	-14.64 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.97552 GHz	-36.87 dBm	-11.87 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.54945 GHz	-32.59 dBm	-7.59 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.60 dBm	-6.60 dB

Band :	LTE Band 7	Channel :	CH20850 (Low)
Band Width :	20MHz		

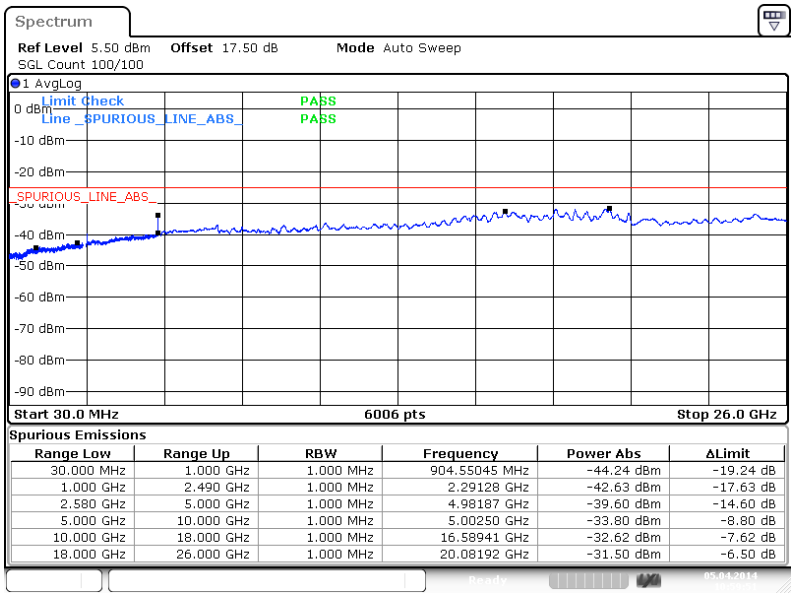
QPSK (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	985.94905 MHz	-44.15 dBm	-19.15 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.16923 GHz	-42.88 dBm	-17.88 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.63198 GHz	-39.29 dBm	-14.29 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-31.79 dBm	-6.79 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.54945 GHz	-32.49 dBm	-7.49 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.46 dBm	-6.46 dB

16QAM (RB Size 1, RB Offset 99)

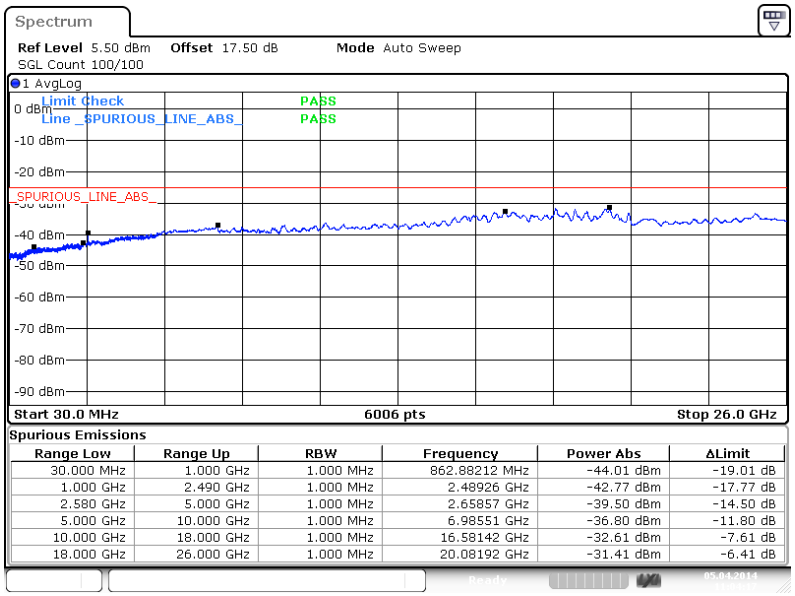


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	904.55045 MHz	-44.24 dBm	-19.24 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.29128 GHz	-42.63 dBm	-17.63 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.98187 GHz	-39.60 dBm	-14.60 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.00250 GHz	-33.80 dBm	-8.80 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.58941 GHz	-32.62 dBm	-7.62 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.50 dBm	-6.50 dB

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	20MHz		

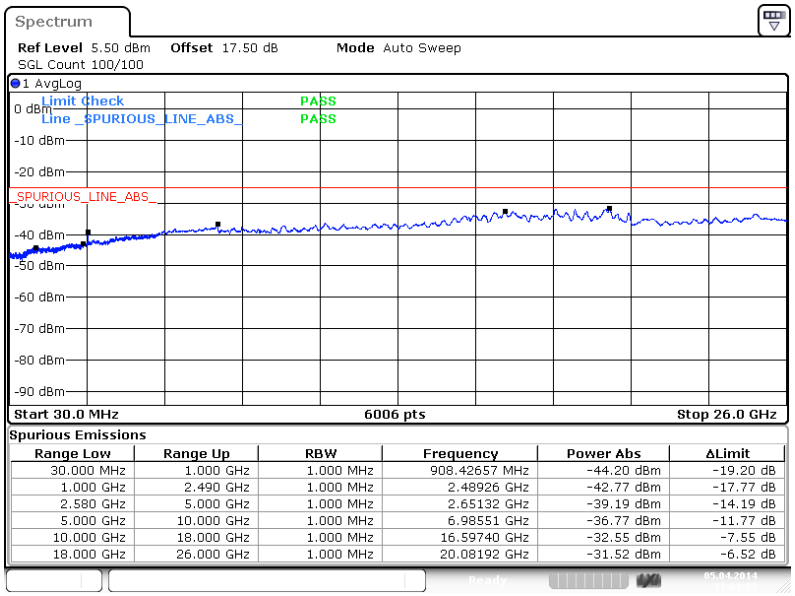
QPSK (RB Size 1, RB Offset 49)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	862.88212 MHz	-44.01 dBm	-19.01 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48926 GHz	-42.77 dBm	-17.77 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65857 GHz	-39.50 dBm	-14.50 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98551 GHz	-36.80 dBm	-11.80 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.58142 GHz	-32.61 dBm	-7.61 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.41 dBm	-6.41 dB

16QAM (RB Size 1, RB Offset 0)

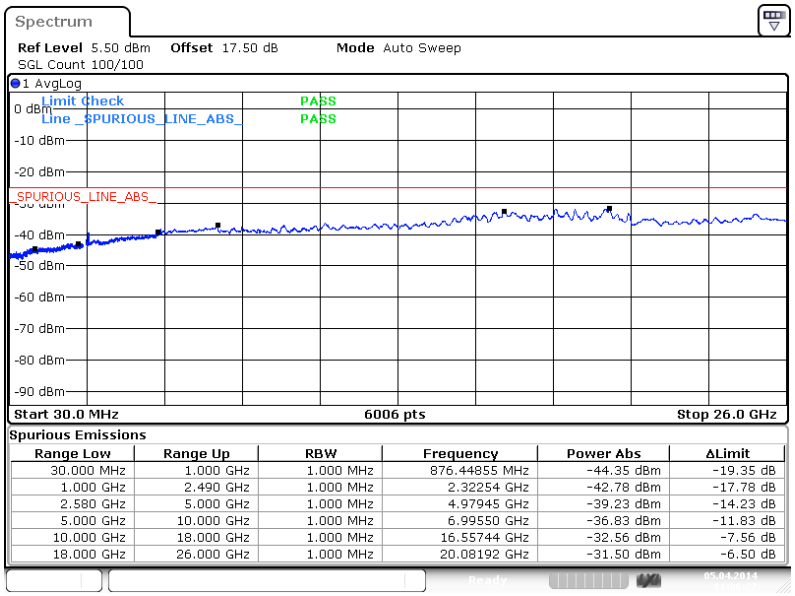


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	908.42657 MHz	-44.20 dBm	-19.20 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48926 GHz	-42.77 dBm	-17.77 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.65132 GHz	-39.19 dBm	-14.19 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98551 GHz	-36.77 dBm	-11.77 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.59740 GHz	-32.55 dBm	-7.55 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.52 dBm	-6.52 dB

Band :	LTE Band 7	Channel :	CH21350 (High)
Band Width :	20MHz		

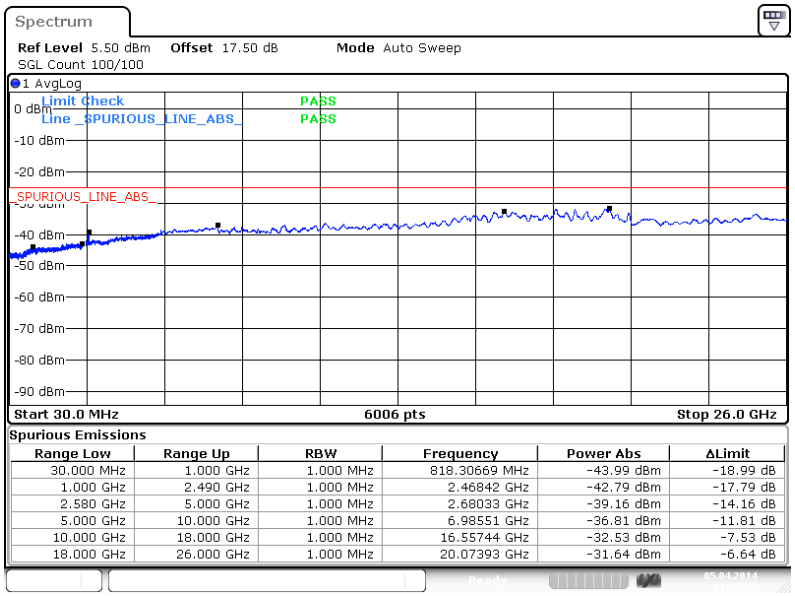
QPSK (RB Size 1, RB Offset 49)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	876.44855 MHz	-44.35 dBm	-19.35 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.32254 GHz	-42.78 dBm	-17.78 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.97945 GHz	-39.23 dBm	-14.23 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99550 GHz	-36.83 dBm	-11.83 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.55744 GHz	-32.56 dBm	-7.56 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.08192 GHz	-31.50 dBm	-6.50 dB

16QAM (RB Size 1, RB Offset 99)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	818.30669 MHz	-43.99 dBm	-18.99 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.46842 GHz	-42.79 dBm	-17.79 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.68033 GHz	-39.16 dBm	-14.16 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98551 GHz	-36.81 dBm	-11.81 dB
10.000 GHz	18.000 GHz	1.000 MHz	16.55744 GHz	-32.53 dBm	-7.53 dB
18.000 GHz	26.000 GHz	1.000 MHz	20.07393 GHz	-31.64 dBm	-6.64 dB

3.7 Radiated Spurious Emission Measurement

3.7.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004.

For Band 4

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

    For Band 4

    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

    = P(W)- [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

    = -13dBm.

    For Band 7

    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)

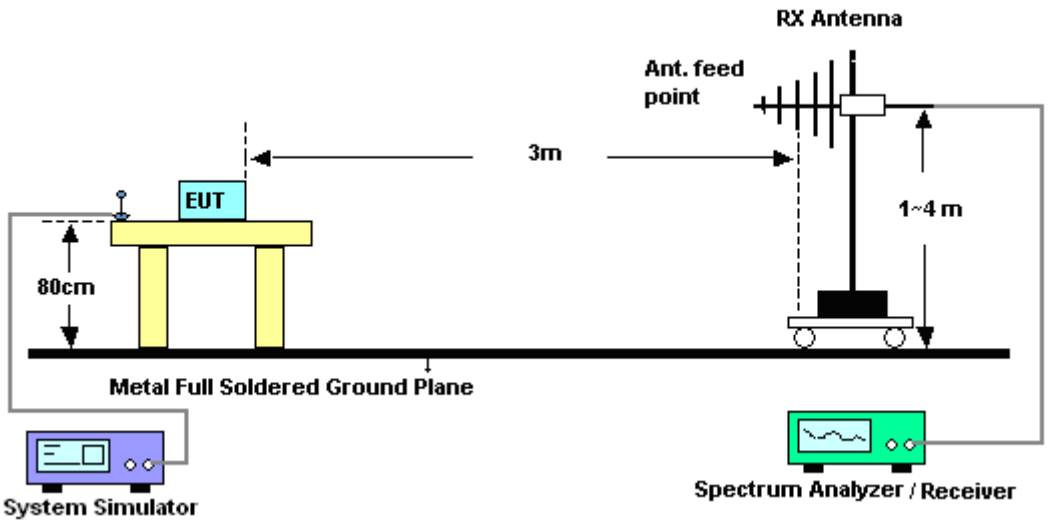
    = P(W)- [55 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)

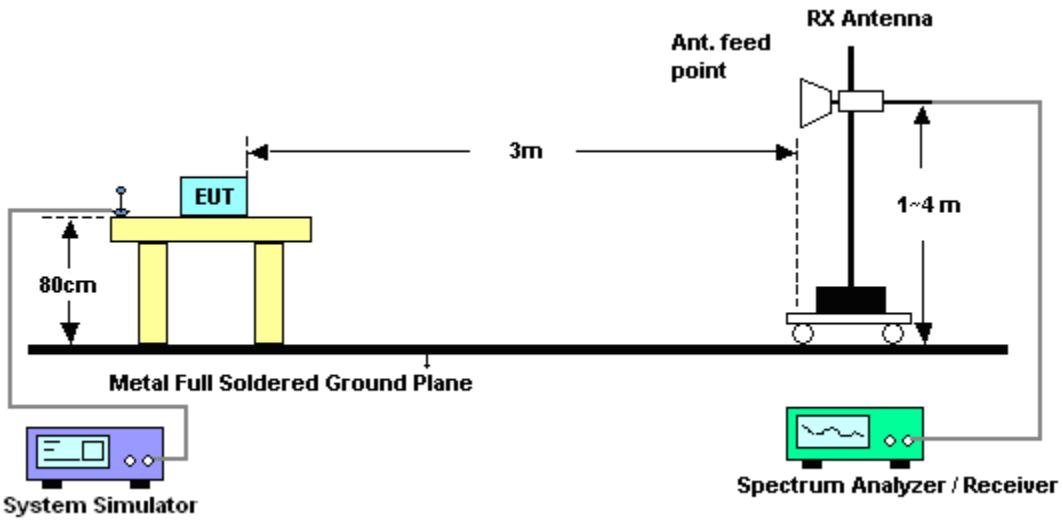
    = -25dBm.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz

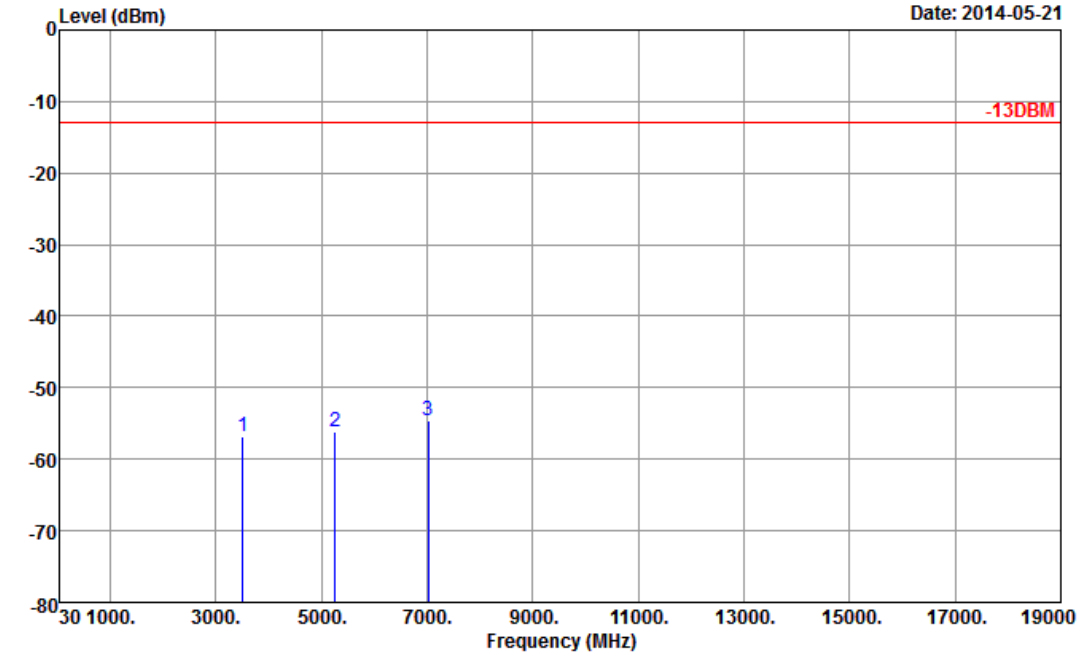


For radiated emissions above 1GHz



3.7.5 Test Result of Field Strength of Spurious Radiated

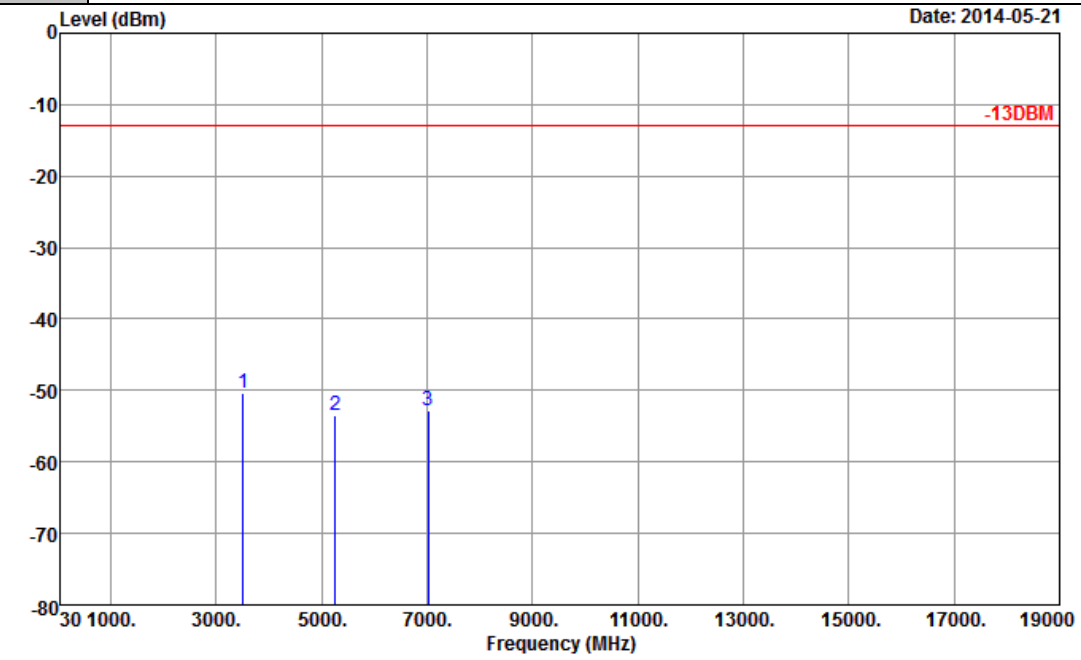
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508	-56.75	-13	-43.75	-69.42	-63.75	1.3	8.30	H	Pass
5262	-56.12	-13	-43.12	-73.85	-64.64	1.6	10.12	H	Pass
7016	-54.52	-13	-41.52	-76.26	-64.92	1.7	12.10	H	Pass

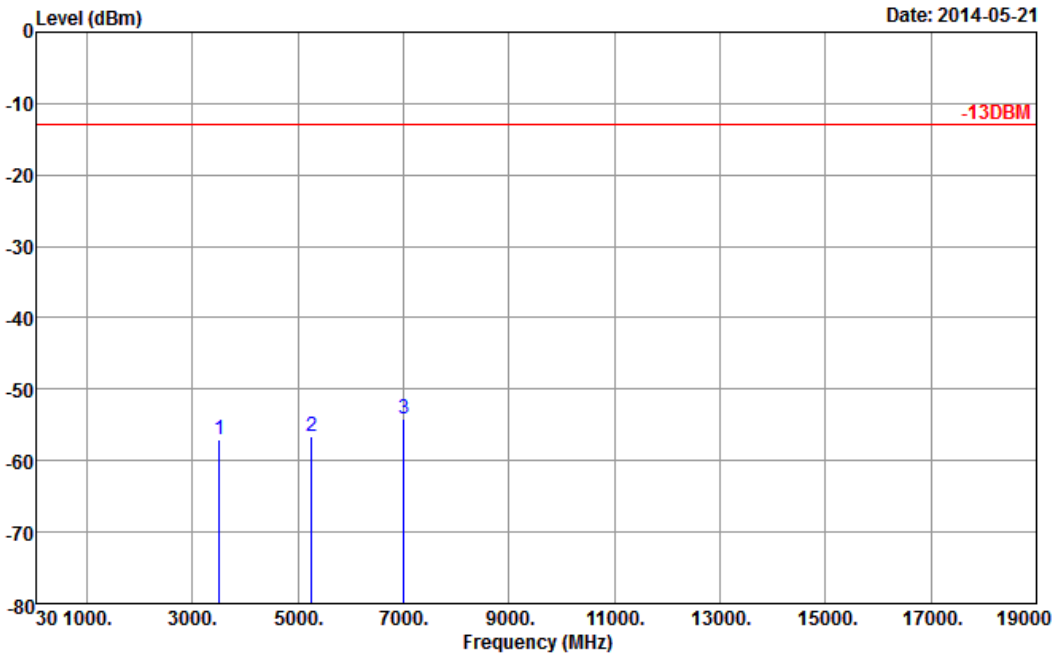
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508	-50.35	-13	-37.35	-65.9	-57.35	1.3	8.3	V	Pass
5262	-53.59	-13	-40.59	-70.41	-62.11	1.6	10.12	V	Pass
7016	-52.79	-13	-39.79	-74.84	-63.19	1.7	12.1	V	Pass

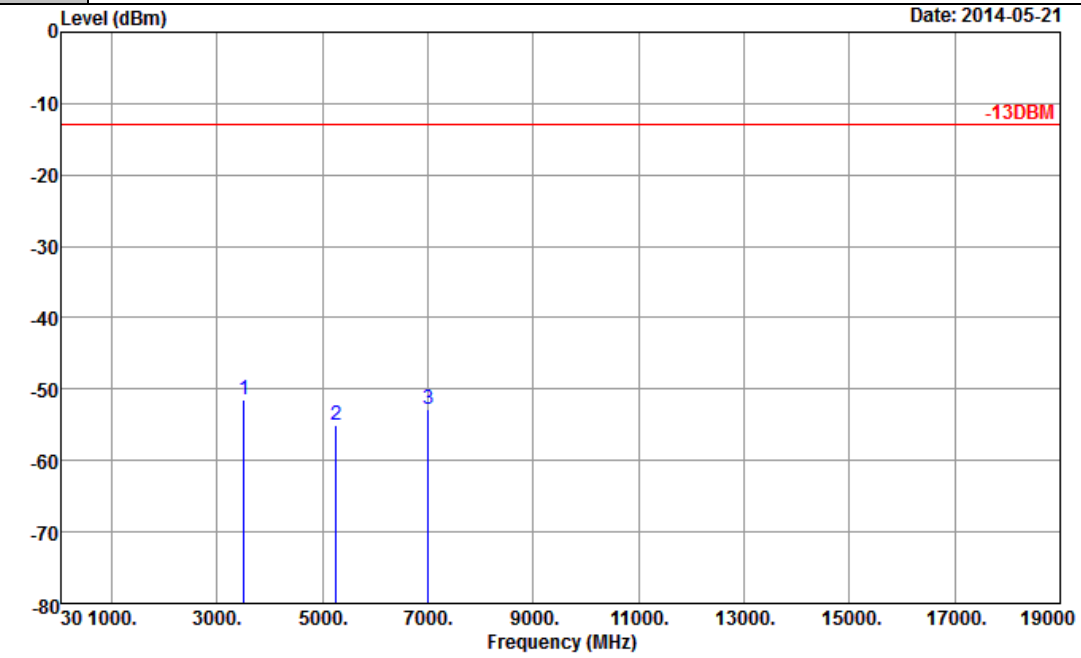
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3504	-57.15	-13	-44.15	-69.82	-64.15	1.3	8.30	H	Pass
5256	-56.60	-13	-43.60	-74.33	-65.12	1.6	10.12	H	Pass
7008	-54.07	-13	-41.07	-75.81	-64.47	1.7	12.10	H	Pass

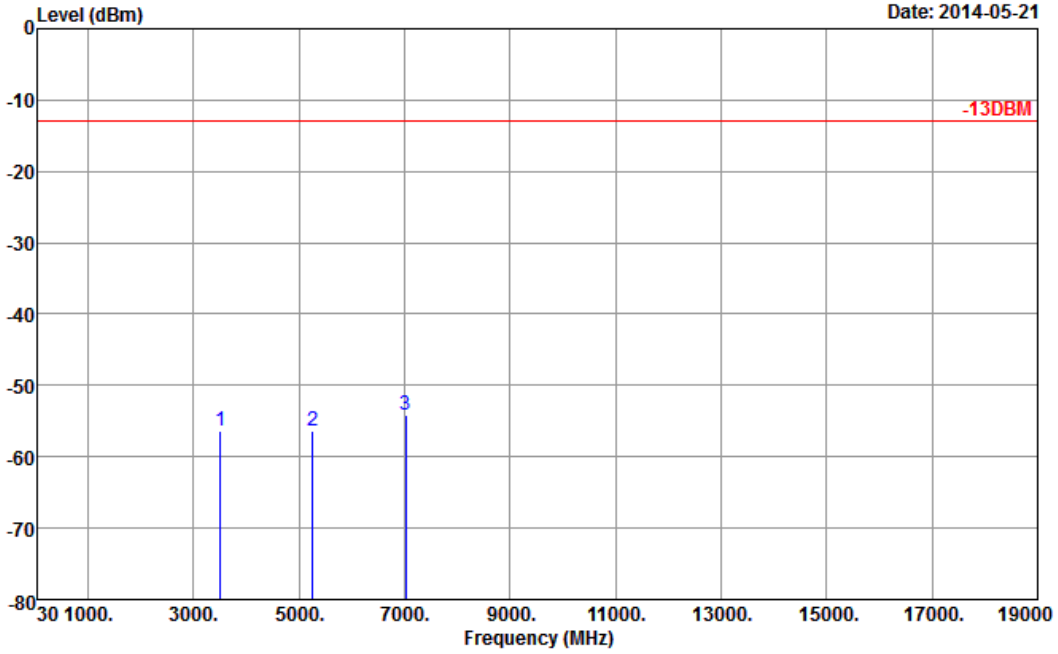
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3504	-51.53	-13	-38.53	-67.08	-58.53	1.3	8.3	V	Pass
5256	-54.97	-13	-41.97	-71.79	-63.49	1.6	10.12	V	Pass
7008	-52.89	-13	-39.89	-74.94	-63.29	1.7	12.1	V	Pass

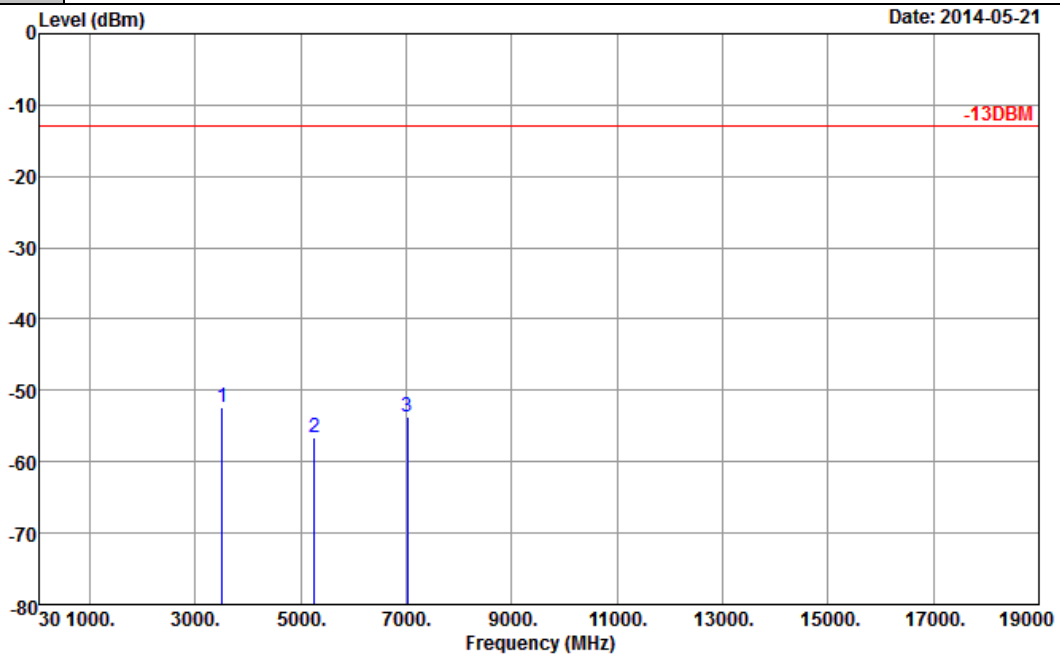
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508	-56.38	-13	-43.38	-69.05	-63.38	1.3	8.30	H	Pass
5262	-56.30	-13	-43.30	-74.03	-64.82	1.6	10.12	H	Pass
7016	-54.15	-13	-41.15	-75.89	-64.55	1.7	12.10	H	Pass

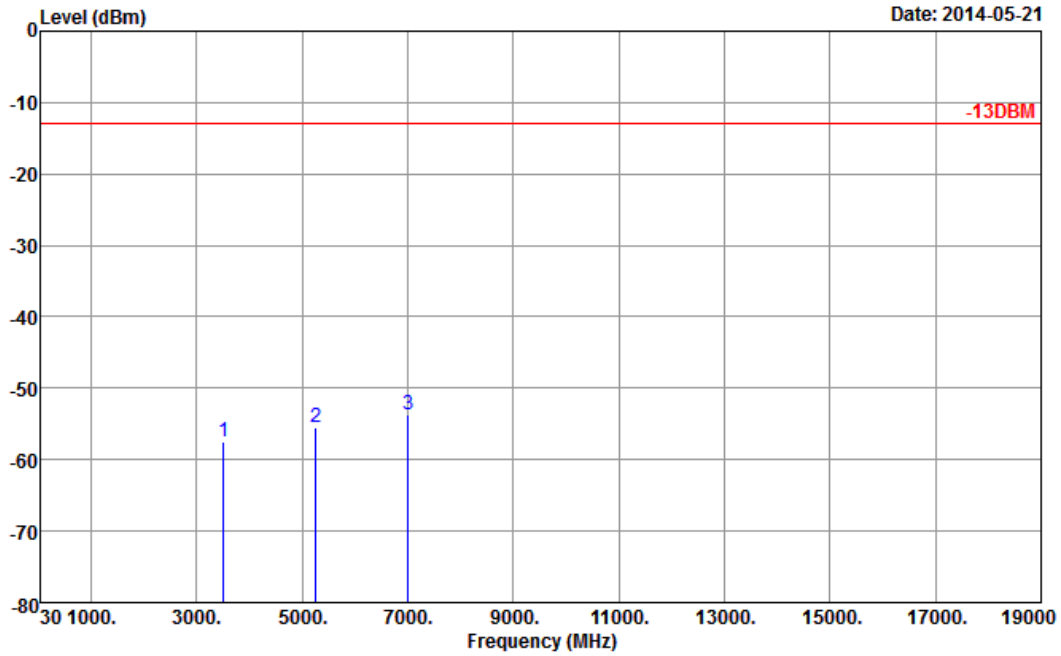
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3508	-52.40	-13	-39.40	-67.95	-59.40	1.3	8.3	V	Pass
5262	-56.59	-13	-43.59	-73.41	-65.11	1.6	10.12	V	Pass
7016	-53.67	-13	-40.67	-75.72	-64.07	1.7	12.1	V	Pass

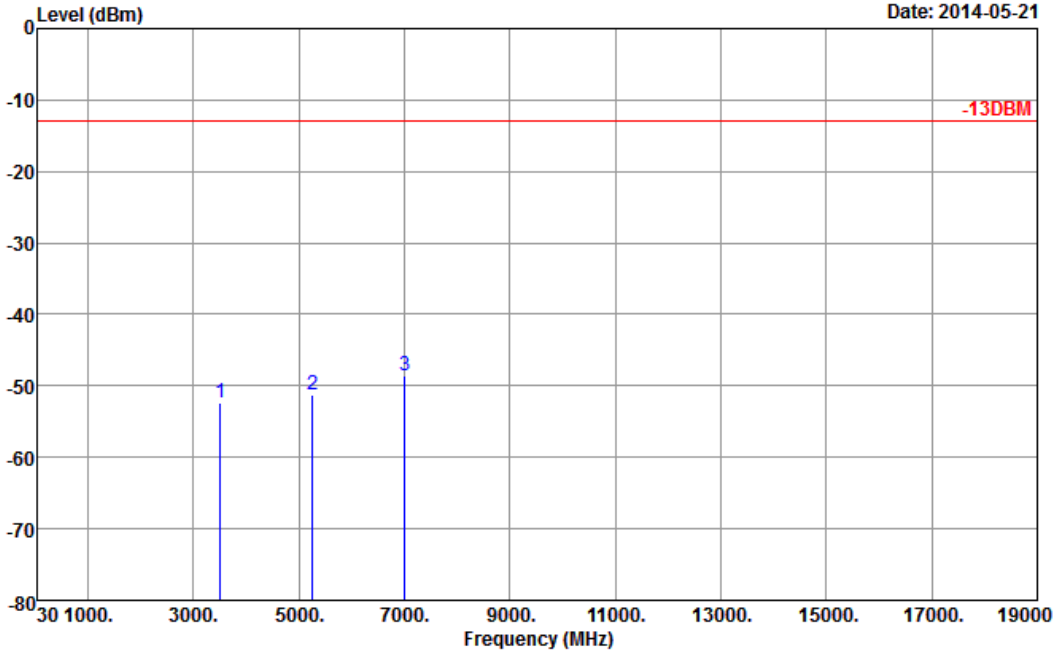
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3500	-57.59	-13	-44.59	-70.26	-64.59	1.3	8.30	H	Pass
5250	-55.55	-13	-42.55	-73.28	-64.07	1.6	10.12	H	Pass
7000	-53.64	-13	-40.64	-75.38	-64.04	1.7	12.10	H	Pass

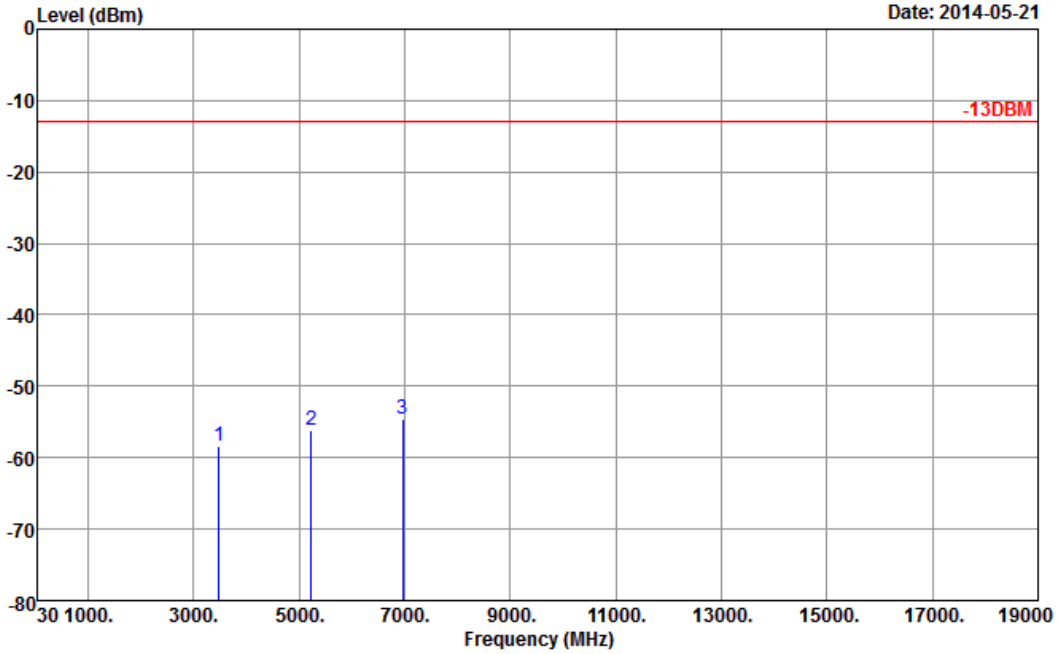
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3500	-52.38	-13	-39.38	-67.93	-59.38	1.3	8.3	V	Pass
5250	-51.17	-13	-38.17	-67.99	-59.69	1.6	10.12	V	Pass
7000	-48.65	-13	-35.65	-70.7	-59.05	1.7	12.1	V	Pass

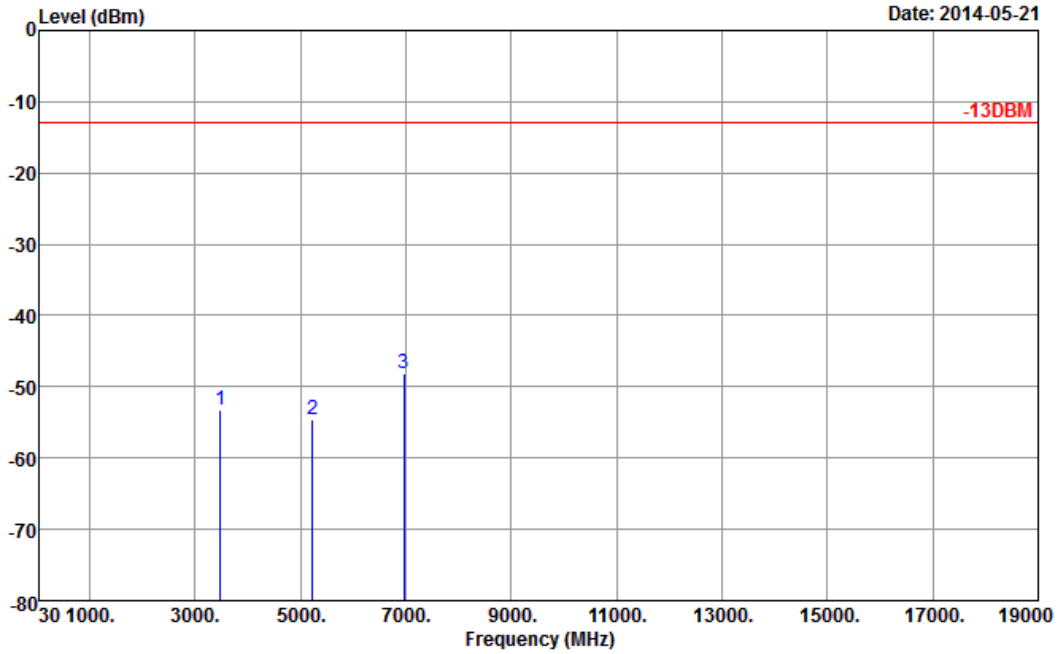
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3480	-58.40	-13	-45.40	-71.07	-65.40	1.3	8.30	H	Pass
5220	-56.25	-13	-43.25	-73.98	-64.77	1.6	10.12	H	Pass
6960	-54.52	-13	-41.52	-76.26	-64.92	1.7	12.10	H	Pass

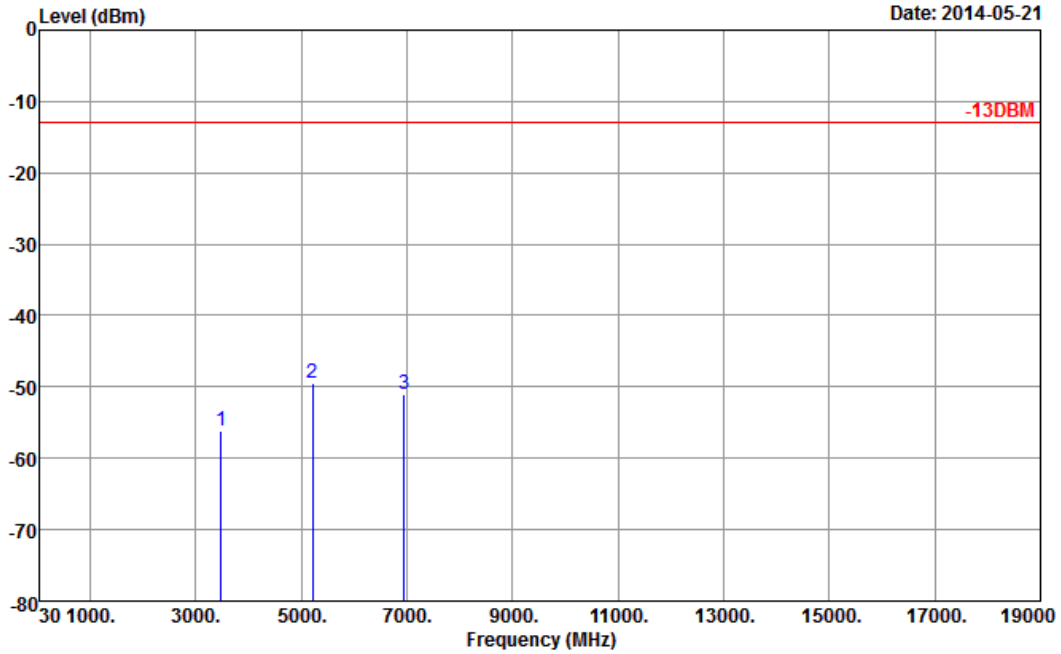
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3480	-53.31	-13	-40.31	-68.86	-60.31	1.3	8.3	V	Pass
5220	-54.67	-13	-41.67	-71.49	-63.19	1.6	10.12	V	Pass
6960	-48.21	-13	-35.21	-70.26	-58.61	1.7	12.1	V	Pass

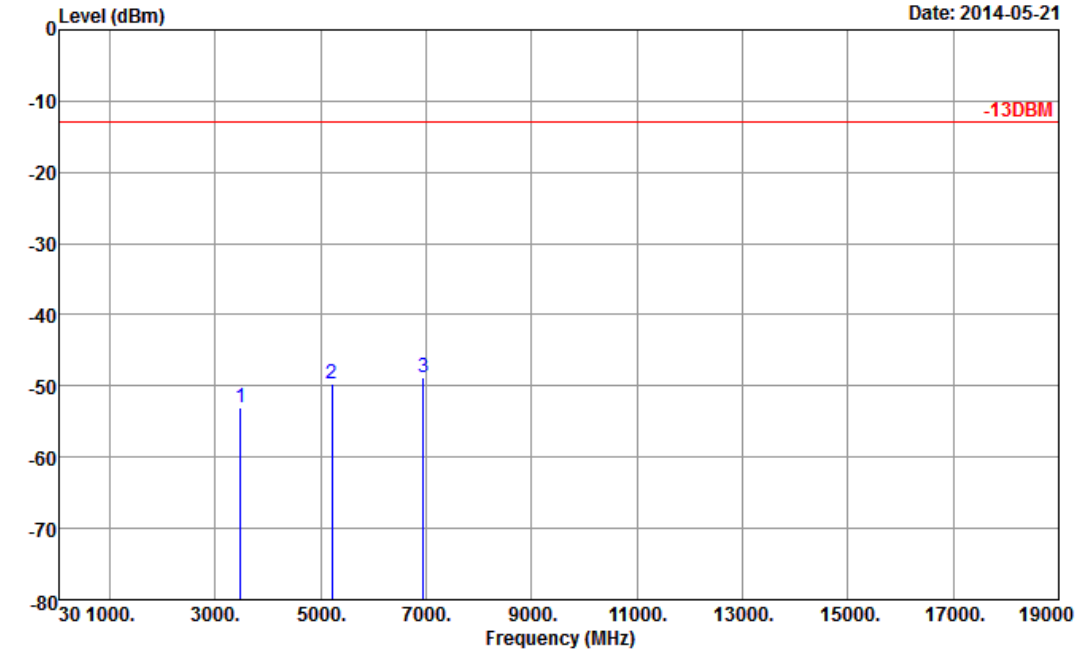
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3490	-56.05	-13	-43.05	-68.72	-63.05	1.3	8.30	H	Pass
5235	-49.49	-13	-36.49	-67.22	-58.01	1.6	10.12	H	Pass
6980	-51.00	-13	-38.00	-72.74	-61.40	1.7	12.10	H	Pass

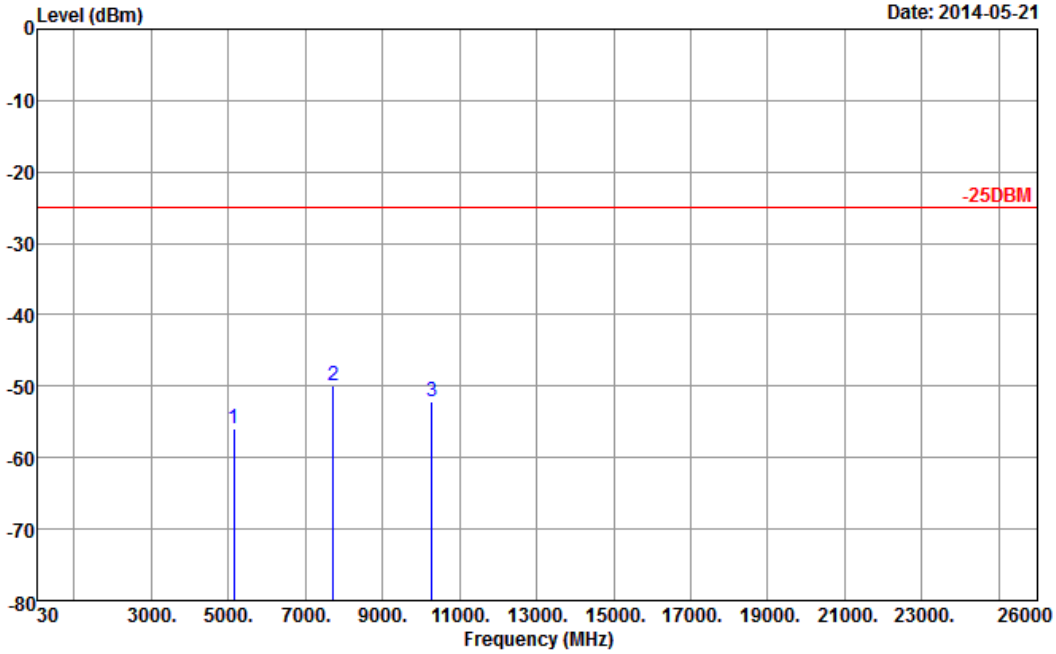
Band :	LTE Band 4	**Temperature :**	23~25°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -13DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3490	-53.13	-13	-40.13	-68.68	-60.13	1.3	8.3	V	Pass
5235	-49.75	-13	-36.75	-66.57	-58.27	1.6	10.12	V	Pass
6980	-48.80	-13	-35.80	-70.85	-59.20	1.7	12.1	V	Pass

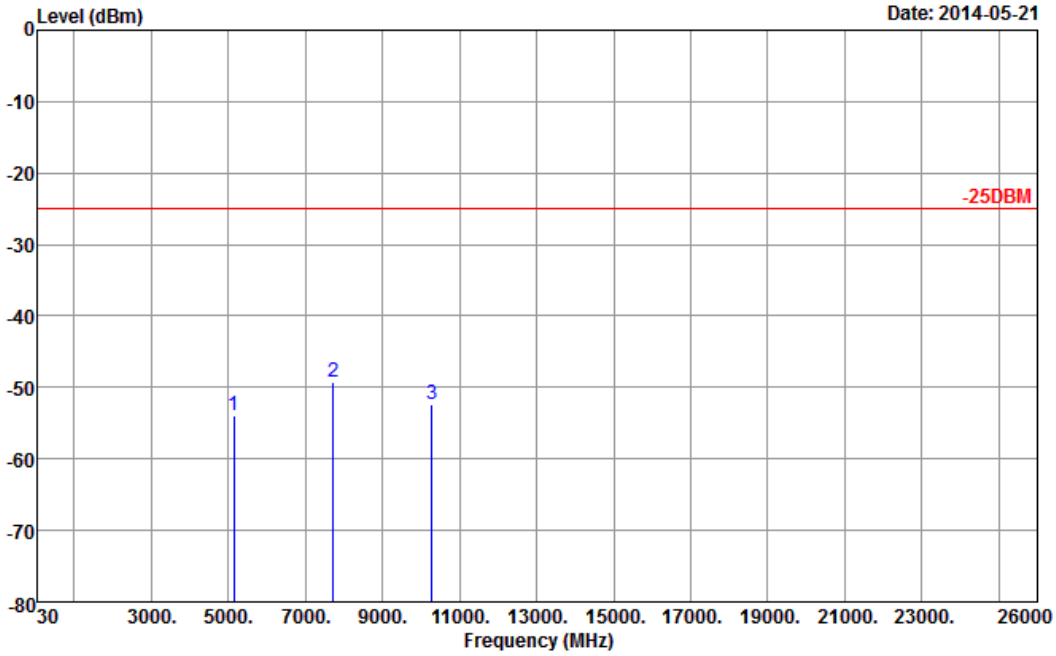
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5140.00	-55.88	-25	-30.88	-66.82	-38.20	1.2	7.60	H	Pass
7710.00	-49.89	-25	-24.89	-68.70	-68.60	1.56	9.90	H	Pass
10280.00	-52.11	-25	-27.11	-75.63	-67.90	1.78	11.60	H	Pass

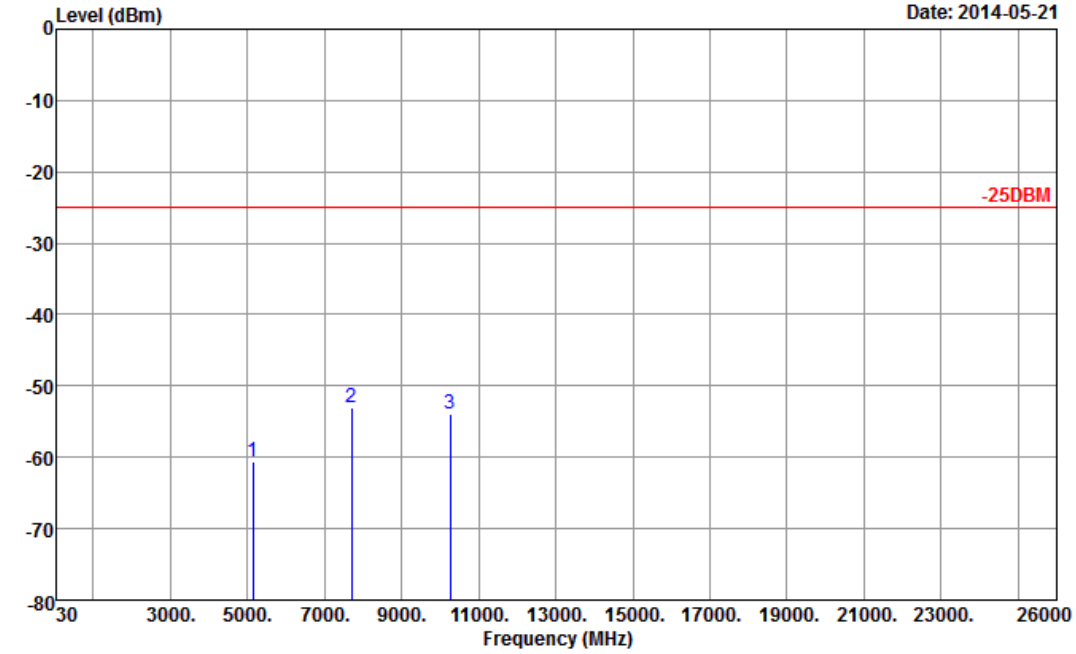
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5140	-54.01	-25.00	-29.01	-66.73	-43.20	1.2	7.60	V	Pass
7710	-49.19	-25.00	-24.19	-68.44	-70.30	1.56	9.90	V	Pass
10280	-52.44	-25.00	-27.44	-75.67	-64.60	1.78	11.60	V	Pass

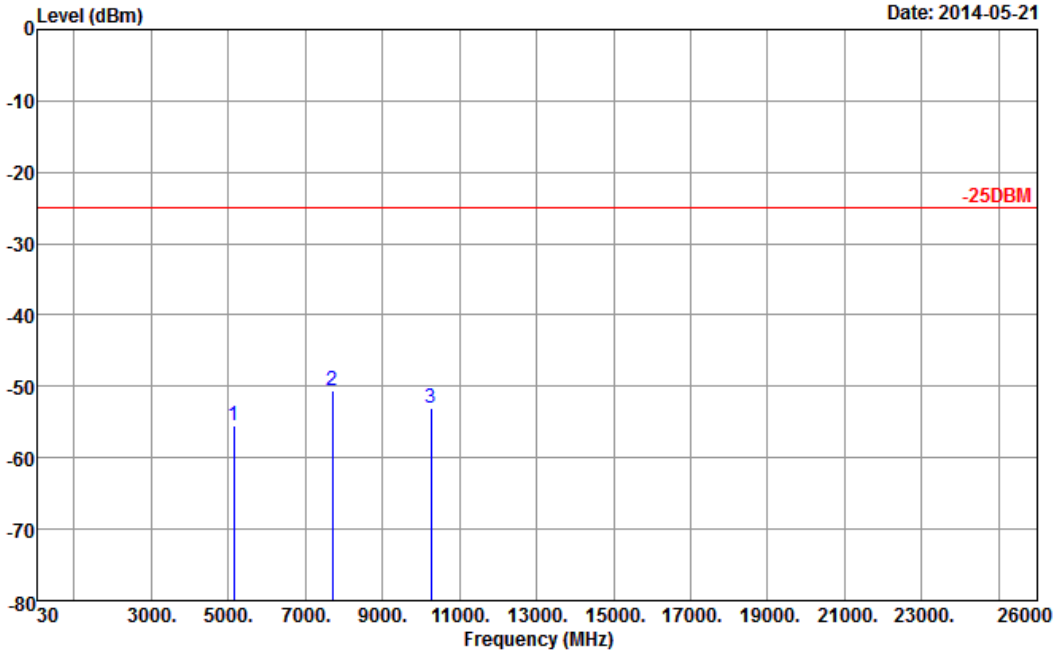
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5130.00	-60.53	-25	-35.53	-71.47	-38.20	1.2	7.60	H	Pass
7695.00	-53.01	-25	-28.01	-71.82	-68.60	1.56	9.90	H	Pass
10260.00	-53.93	-25	-28.93	-77.45	-67.90	1.78	11.60	H	Pass

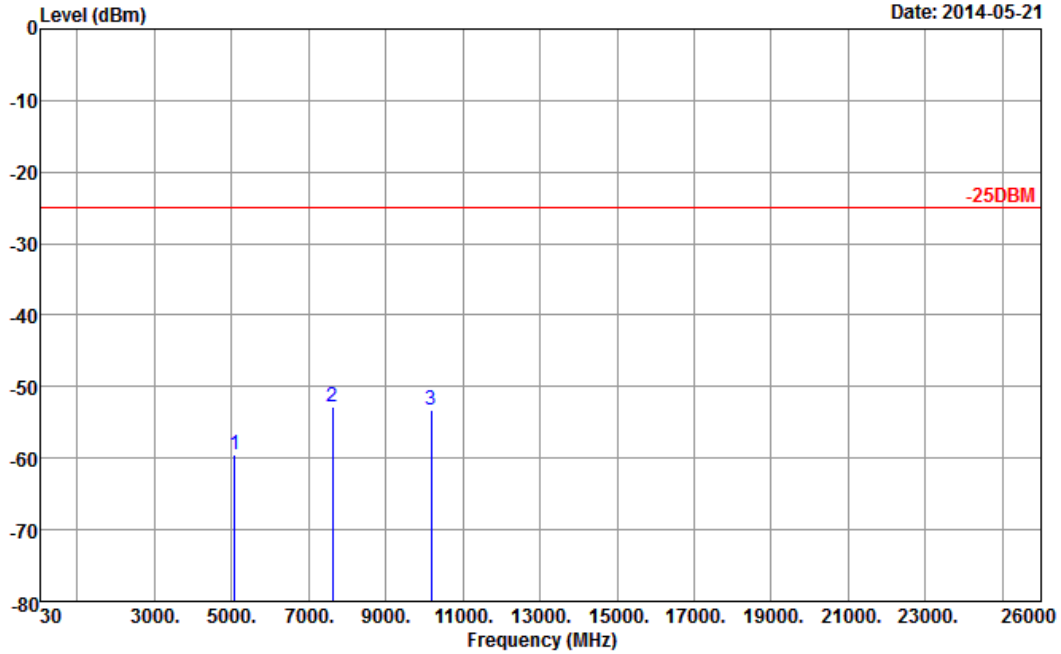
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 24	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5130	-55.55	-25	-30.55	-68.27	-43.20	1.2	7.60	V	Pass
7695	-50.61	-25	-25.61	-69.86	-70.30	1.56	9.90	V	Pass
10260	-52.93	-25	-27.93	-76.16	-64.60	1.78	11.60	V	Pass

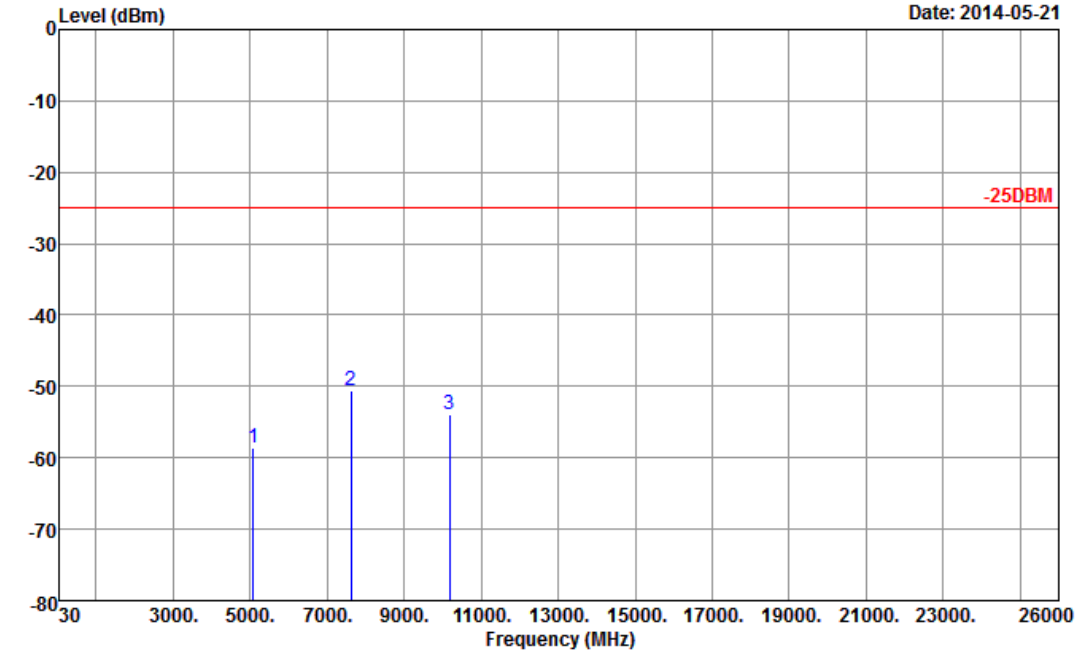
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	15MHz QPSK RB Size 1 Offset 74	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5084.00	-59.39	-25	-34.39	-70.33	-38.20	1.2	7.60	H	Pass
7626.00	-52.84	-25	-27.84	-71.65	-68.60	1.56	9.90	H	Pass
10168.00	-53.28	-25	-28.28	-76.80	-67.90	1.78	11.60	H	Pass

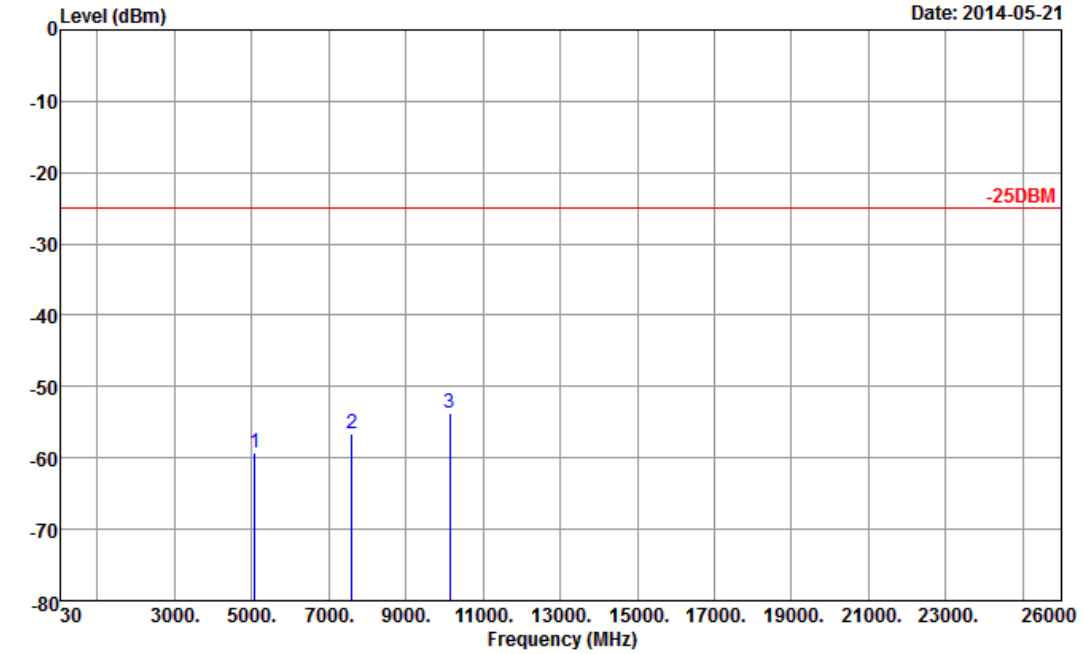
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	15MHz QPSK RB Size 1 Offset 74	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5084	-58.56	-25	-33.56	-71.28	-43.20	1.2	7.60	V	Pass
7626	-50.57	-25	-25.57	-69.82	-70.30	1.56	9.90	V	Pass
10168	-53.89	-25	-28.89	-77.12	-64.60	1.78	11.60	V	Pass

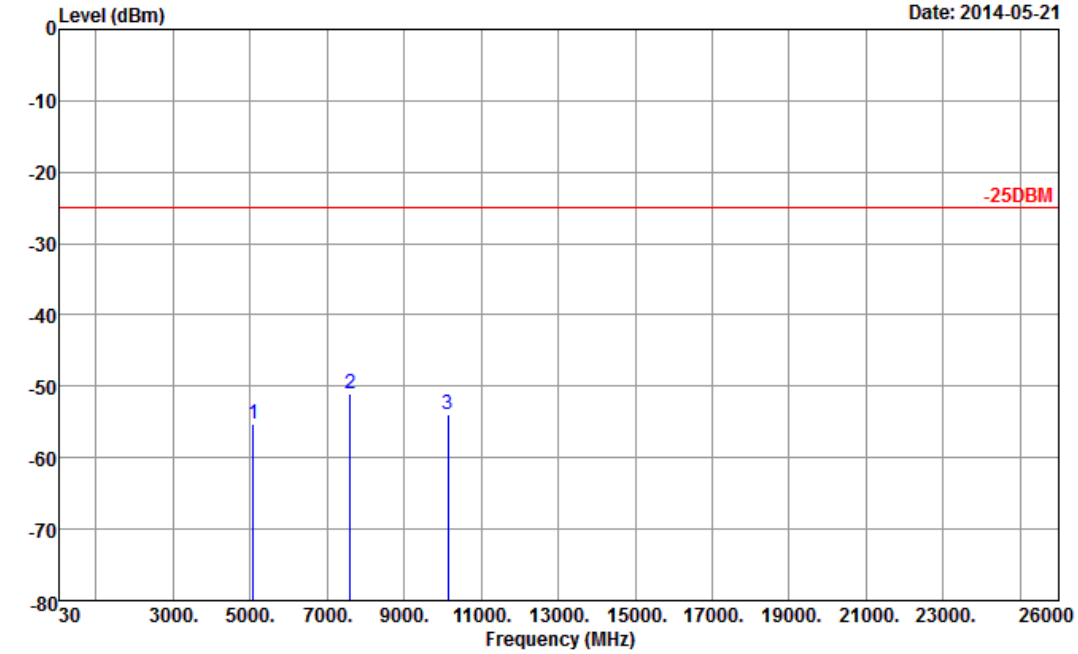
Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	20MHz QPSK RB Size 1 Offset 49	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_H_130101 HORIZONTAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5070.00	-59.29	-25	-34.29	-70.23	-38.20	1.2	7.60	H	Pass
7605.00	-56.67	-25	-31.67	-75.48	-68.60	1.56	9.90	H	Pass
10140.00	-53.64	-25	-28.64	-77.16	-67.90	1.78	11.60	H	Pass

Band :	LTE Band 7	**Temperature :**	23~25°C
Test Mode :	20MHz QPSK RB Size 1 Offset 49	**Relative Humidity :**	48~52%
Test Engineer :	Kaer Huang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.		



Site : 03CH01-SZ
Condition : -25DBM HF_EIRP_V_130101 VERTICAL

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5070	-55.27	-25.00	-30.27	-67.99	-43.20	1.2	7.60	V	Pass
7605	-50.93	-25.00	-25.93	-70.18	-70.30	1.56	9.90	V	Pass
10140	-53.96	-25.00	-28.96	-77.19	-64.60	1.78	11.60	V	Pass

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.8.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

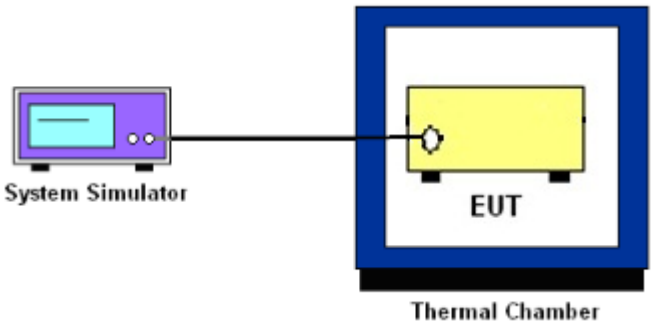
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation

Band :	LTE Band 4 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 10MHz Deviation (ppm)	Result
50	+0.0042	PASS
40	+0.0040	
30	+0.0036	
20	+0.0036	
10	+0.0044	
0	+0.0040	
-10	+0.0051	
-20	+0.0036	
-30	+0.0043	

Band :	LTE Band 7 (QPSK)	Limit (ppm) :	2.5

Temperature (°C)	BW 10MHz Deviation (ppm)	Result
50	+0.0056	PASS
40	+0.0054	
30	+0.0043	
20	+0.0046	
10	+0.0049	
0	+0.0048	
-10	+0.0061	
-20	+0.0055	
-30	+0.0069	

3.8.7 Test Result of Voltage Variation

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 4	10M	4.2	+0.0046	2.5	PASS
		Normal	+0.0036		
		3.6	+0.0053		
LTE Band 7	10M	4.2	+0.0042	2.5	PASS
		Normal	+0.0056		
		3.6	+0.0054		

Remark:

1. Normal Voltage = 3.7V.
2. The manufacturer declared that the EUT could work properly between voltage 3.6V ~ 4.2V.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Jun. 17, 2013	Apr. 04, 2014~ Apr. 05, 2014	Jun. 16, 2014	Conducted (TH01-SZ)
Thermal Chamber	Hongzhan	LP-150U	HD20120425	-40℃~150℃	Feb. 21, 2014	Apr. 04, 2014~ Apr. 05, 2014	Feb. 20, 2015	Conducted (TH01-SZ)
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	May 21, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Signal Analyzer	R&S	FSV40	101078	10Hz~40GHz	Jun. 17, 2013	May 21, 2014	Jun. 16, 2014	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	23188	30MHz~2GHz	Oct. 26, 2013	May 21, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 26, 2013	May 21, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Double Ridged Horn Antenna	COM-POWER	AH-840	101073	18GHz~40GHz	Jan. 27, 2014	May 21, 2014	Jan. 26, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	May 21, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Agilent	83017A	MY39501302	3Hz~26.5GHz	Mar. 03, 2014	May 21, 2014	Mar. 02, 2015	Radiation (03CH01-SZ)
AC Source(AVR)	Chroma	61601	616010001985	100Vac~250Vac	Mar. 25, 2014	May 21, 2014	Mar. 24, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	May 21, 2014	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	May 21, 2014	NCR	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Sep. 03, 2013	May 21, 2014	Sep. 02, 2014	ERP/EIRP (OTA01-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000MHz	N/A	May 21, 2014	N/A	ERP/EIRP (OTA01-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	N/A	May 21, 2014	N/A	ERP/EIRP (OTA01-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	N/A	May 21, 2014	N/A	ERP/EIRP (OTA01-SZ)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.90