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Report On

FCC Testing of the Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS

In accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (LTE)

COMMERCIAL-IN-CONFIDENCE

FCC ID: APYHRO00218

Document 75929719 Report 21 Issue 4

June 2015



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COMMERCIAL-IN-CONFIDENCE

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In accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (LTE)

Document 75929719 Report 21 Issue 4

June 2015

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DATED

25 June 2015

This report has been up-issued to Issue 3 to amend the antenna gain.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

N Rousell

T Guy





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SECTION 1

REPORT SUMMARY

FCC Testing of the
Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V),
Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with
Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS
In accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (LTE)



Product Service

1.1 INTRODUCTION

The information contained in this report is intended to show the verification of FCC Testing of the Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS to the requirements of FCC 47 CFR Part 22 and FCC 47 CFR Part 2.

Objective	To perform FCC Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	Sharp Corporation
Model Number(s)	SHV32
Serial Number(s)	IMEI 004401115406494 IMEI 004401115406767
Number of Samples Tested	2
Test Specification/Issue/Date	FCC 47 CFR Part 22 (2014) FCC 47 CFR Part 2 (2014)
Disposal	Held Pending Disposal
Reference Number	Not Applicable
Date	Not Applicable
Order Number	10477
Date	02 March 2015
Start of Test	27 April 2015
Finish of Test	11 May 2015
Name of Engineer(s)	N Rousell T Guy
Related Document(s)	ANSI C63.4 (2003) ANSI TIA-603-C (2004)



1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 is shown below.

Section	Specification Clause		Test Description	Result	Comments/Base Standard
	Part 22	Part 2			
LTE FDD 26					
2.2	22.905 and 22.917	2.1051	Spurious Emissions at Band Edge	Pass	
2.3	22.913 (a)	2.1046	Maximum Conducted Output Power	Pass	
2.4	22.913 (a)	2.1046	Peak to Average Ratio	Pass	
2.5	22.917	2.1053	Emission Limitations for Cellular Equipment	Pass	
2.6	22.917 (b)	2.1049 (h)	26 dB Bandwidth	Pass	
2.7	-	2.1047 (d)	Modulation Characteristics	-	Customer Declaration
LTE FDD 5					
2.1	22.355	2.1055	Frequency Tolerance	Pass	
2.2	22.905 and 22.917	2.1051	Spurious Emissions at Band Edge	Pass	
2.3	22.913 (a)	2.1046	Maximum Conducted Output Power	Pass	
2.4	22.913 (a)	2.1046	Peak to Average Ratio	Pass	
2.5	22.917	2.1053	Emission Limitations for Cellular Equipment	Pass	
2.6	22.917 (b)	2.1049 (h)	26 dB Bandwidth	Pass	
2.7	-	2.1047 (d)	Modulation Characteristics	-	Customer Declaration



1.3 PRODUCT TECHNICAL DESCRIPTION

Please refer to the SHV32 Model Description Form.

1.4 PRODUCT INFORMATION

1.4.1 Technical Description

The Equipment Under Test (EUT) was a Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V), Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with Bluetooth, WLAN, SRD (NFC,FeliCa) and GPS. A full technical description can be found in the manufacturer's documentation.

1.5 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure.

The EUT was powered from a 4.0 V DC supply.

Testing has been carried out in the following configurations to demonstrate compliance with bands 5 and 26.

Document	Test Band	LTE Bandwidths
75929719 Report 21	FDD 5: 824 MHz to 894 MHz	1.4 MHz / 3.0 MHz / 5.0 MHz and 10.0 MHz
	FDD 26: 824 MHz to 894 MHz	15.0 MHz
75929719 Report 22	FDD 26: 814 MHz to 824 MHz	1.4 MHz / 3.0 MHz / 5.0 MHz and 10.0 MHz

FCC Measurement Facility Registration Number
90987 Octagon House, Fareham Test Laboratory

1.6 DEVIATIONS FROM THE STANDARD

No deviations from the applicable test standard were made during testing.

1.7 MODIFICATION RECORD

Modification 0 - No modifications were made to the test sample during testing.



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SECTION 2

TEST DETAILS

FCC Testing of the
Sharp SHV32 Hex-band LTE (B1 / B3 / B5 / B17 / B26 / B28), Dual-band WCDMA (FDD I / V),
Quad-band GSM (850/900/1800/1900) & AXGP (TDD41) multi mode Smart phone with
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In accordance with FCC 47 CFR Part 22 and FCC 47 CFR Part 2 (LTE)



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2.1 FREQUENCY TOLERANCE

2.1.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.355
FCC 47 CFR Part 2, Clause 2.1055

2.1.2 Equipment Under Test and Modification State

SHV32 S/N: IMEI 004401115406494 - Modification State 0

2.1.3 Date of Test

7 May 2015

2.1.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02r02, Clause 9.

Remarks

Compliance is only required to be demonstrated once for each block where the configurations are the same, therefore compliance has been demonstrated for FDD band 26 using the measurements obtained for FDD Band 5.

Measurements for carrier frequencies within 814 MHz to 824 MHz fall under the scope of FCC 47 CFR Part 90 and results are contained in a separate report.

2.1.6 Environmental Conditions

Ambient Temperature	22.5°C
Relative Humidity	39.1%



2.1.7 Test Results

4.0 V DC Supply

LTE FDD 5, 836.5 MHz, 10 MHz Bandwidth, QPSK, Frequency Tolerance Under Temperature Variations Results

Temperature	Voltage	Fundamental Frequency Deviation
		All Resource Blocks (ppm)
+20 °C	3.7 V DC	0.0314
-30 °C	4.0 V DC	0.0339
-20 °C	4.0 V DC	0.0327
-10 °C	4.0 V DC	0.0481
0 °C	4.0 V DC	0.0265
+10 °C	4.0 V DC	0.0331
+20 °C	4.0 V DC	0.0320
+30 °C	4.0 V DC	0.0339
+40 °C	4.0 V DC	0.0330
+50 °C	4.0 V DC	0.0315

LTE FDD 5, 836.5 MHz, 10 MHz Bandwidth, 16-QAM, Frequency Tolerance Under Temperature Variations Results

Temperature	Voltage	Fundamental Frequency Deviation
		All Resource Blocks (ppm)
+20 °C	3.7 V DC	0.0325
-30 °C	4.0 V DC	0.0363
-20 °C	4.0 V DC	0.0310
-10 °C	4.0 V DC	0.0319
0 °C	4.0 V DC	0.0329
+10 °C	4.0 V DC	0.0354
+20 °C	4.0 V DC	0.0354
+30 °C	4.0 V DC	0.0321
+40 °C	4.0 V DC	0.0323
+50 °C	4.0 V DC	0.0335



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FCC 47 CFR Part 22, Limit Clause 22.355

Frequency Range (MHz)	Base, Fixed (ppm)	Mobile $\leq$ 3 watts (ppm)	Mobile $\leq$ 3 watts (ppm)
25 to 50	20	20	50
50 to 450	5	5	50
450 to 512	2.5	5	5
821 to 896	1.5	2.5	2.5
928 to 929	5.0	-	-
929 to 960	1.5	-	-
2110 to 2220	10	-	-



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2.2 SPURIOUS EMISSIONS AT BAND EDGE

2.2.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.905 and 22.917
FCC 47 CFR Part 2, Clause 2.1051

2.2.2 Equipment Under Test and Modification State

SHV32 S/N: IMEI 004401115406494 - Modification State 0

2.2.3 Date of Test

27 April 2015, 29 April 2015 & 11 May 2015

2.2.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02r02, Clause 6.

Remarks

For band 26, 15 MHz bandwidth measurements, a peak detector with the trace set to max hold was used. For all other measurements, an RMS detector with the trace set to max hold was used. In all cases, an RBW of at least 1% of the 26 dB bandwidth was used.

2.2.6 Environmental Conditions

Ambient Temperature	23.3 - 24.5°C
Relative Humidity	26.6 – 44.0%



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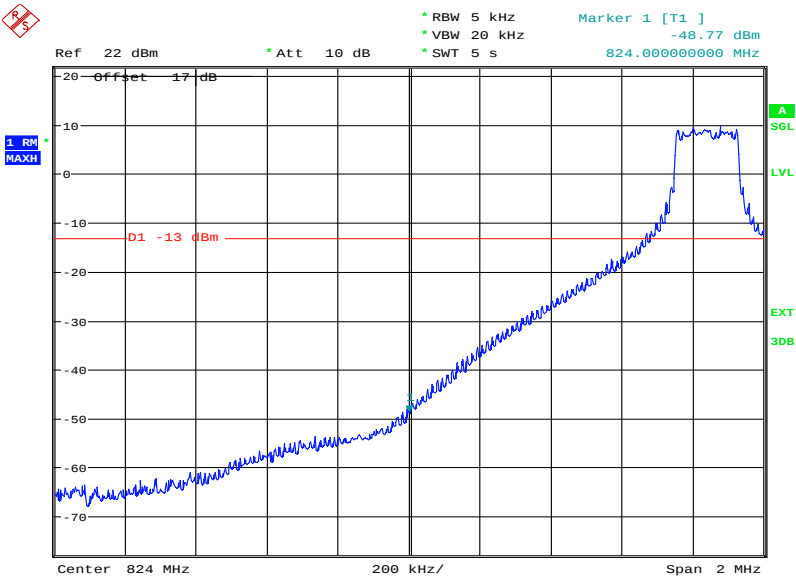
2.2.7 Test Results

4.0 V DC Supply

LTE FDD 26, 15.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
831.5 MHz		841.5 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-48.8	-28.8	-40.2	-19.0

LTE FDD 26, 831.5 MHz, 1 Resource Block – Low, 15.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

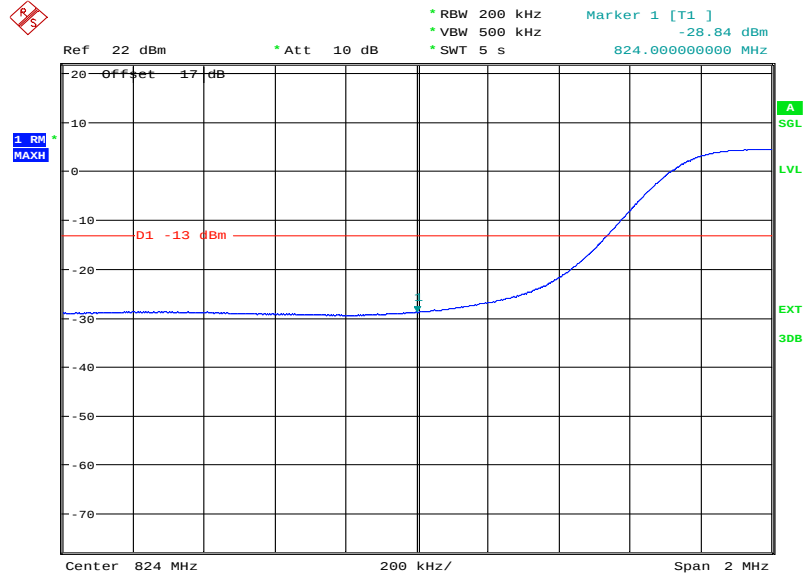


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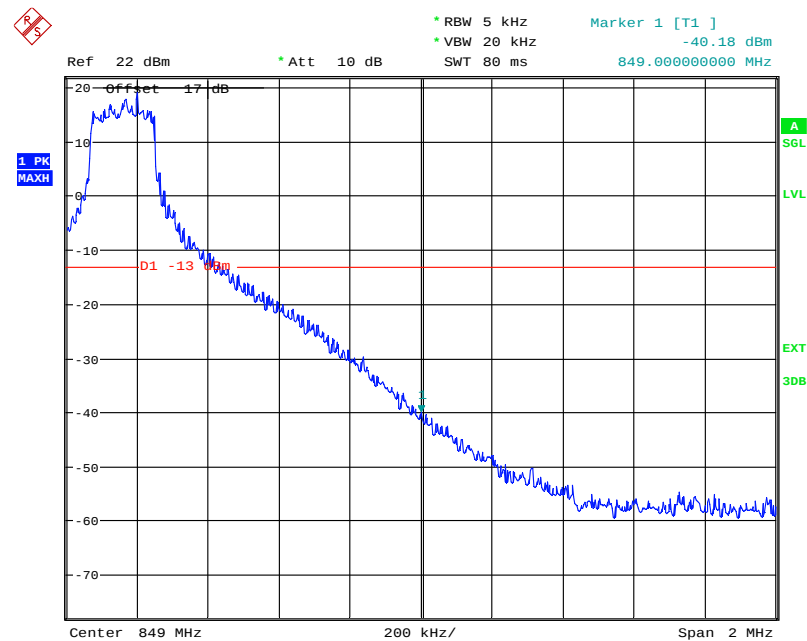
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LTE FDD 26, 831.5 MHz, All Resource Blocks, 15.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



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LTE FDD 26, 841.5 MHz, 1 Resource Block – High, 15.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

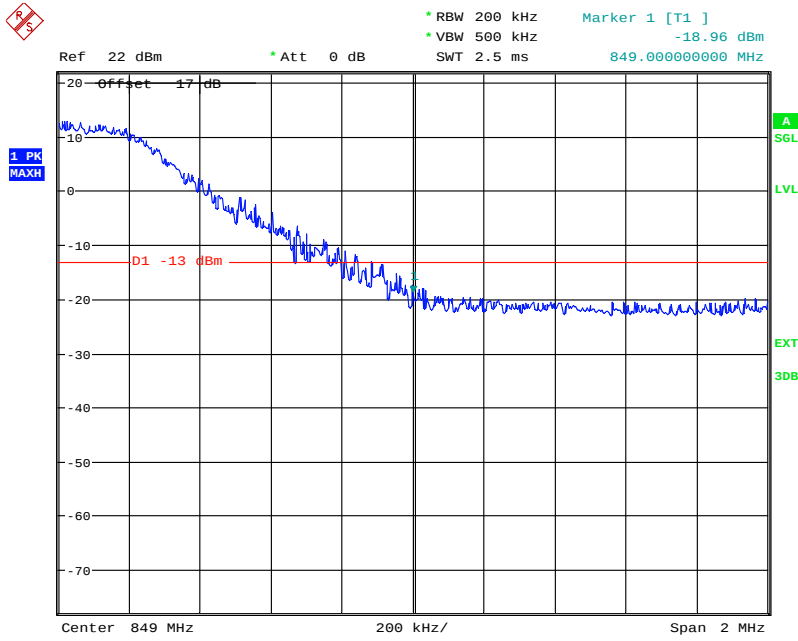


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LTE FDD 26, 841.5 MHz, All Resource Blocks, 15.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



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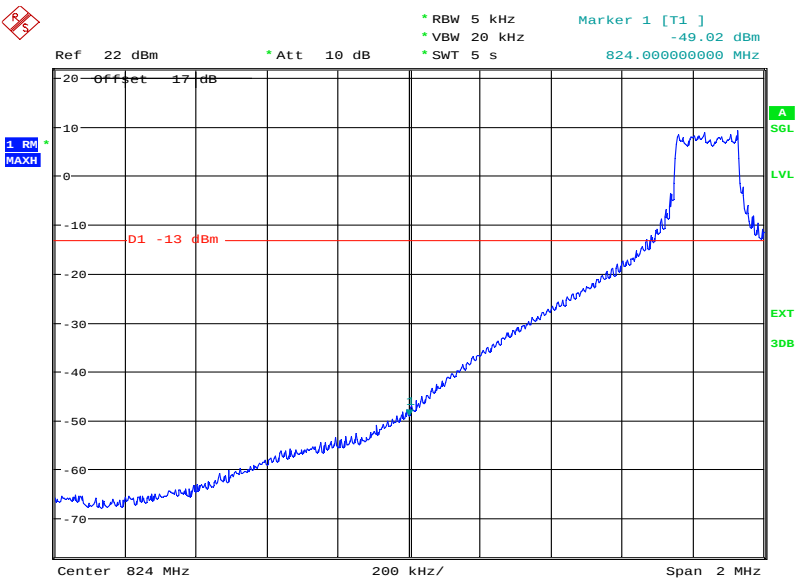


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LTE FDD 26, 15.0 MHz Bandwidth, 16-QAM, QPSK, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
831.5 MHz		841.5 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-49.0	-30.1	-40.1	-17.1

LTE FDD 26, 831.5 MHz, 1 Resource Block - Low, 15.0 MHz Bandwidth, 16-QAM, QPSK, Spurious Emissions at Band Edge Results

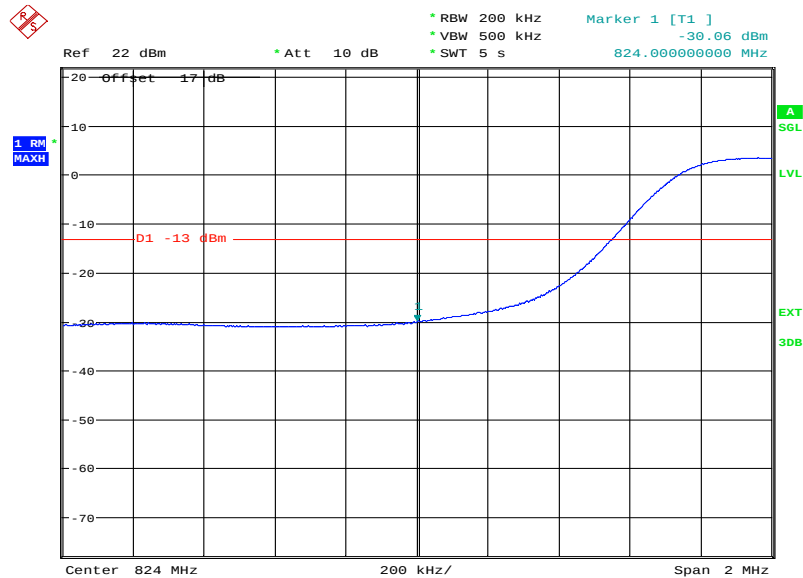


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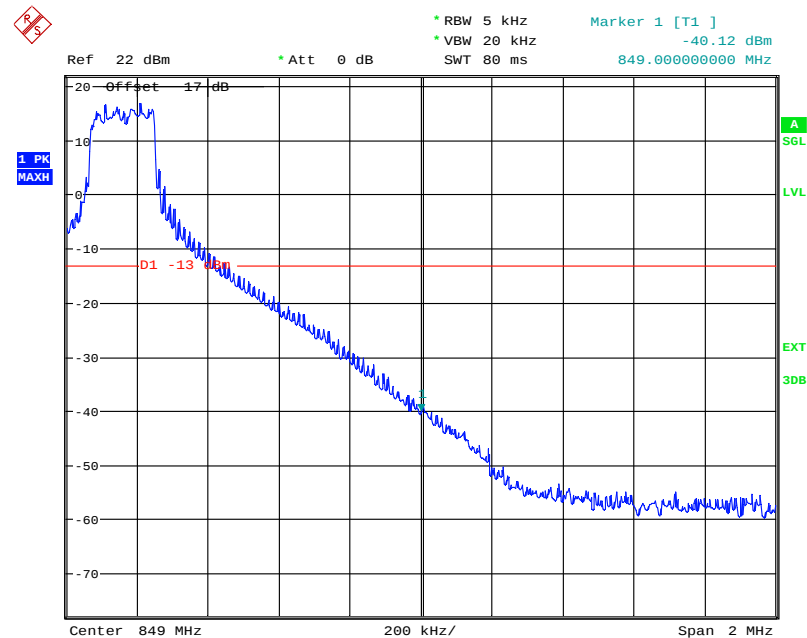
Product Service

LTE FDD 26, 831.5 MHz, All Resource Blocks, 15.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 11.MAY.2015 16:28:33

LTE FDD 26, 841.5 MHz, 1 Resource Block - High, 15.0 MHz Bandwidth, 16-QAM, QPSK, Spurious Emissions at Band Edge Results

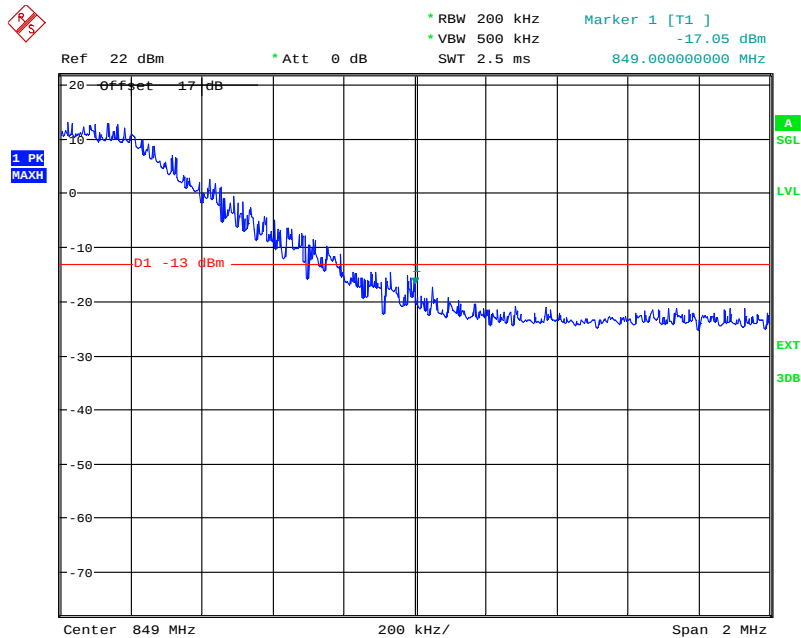


Date: 27.APR.2015 13:49:14



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LTE FDD 26, 841.5 MHz, All Resource Blocks, 15.0 MHz Bandwidth, 16-QAM, QPSK, Spurious Emissions at Band Edge Results



Date: 27.APR.2015 13:57:24

FCC 47 CFR Part 22, Limit Clause 22.905 and 22.917

-13 dBm at block edge.



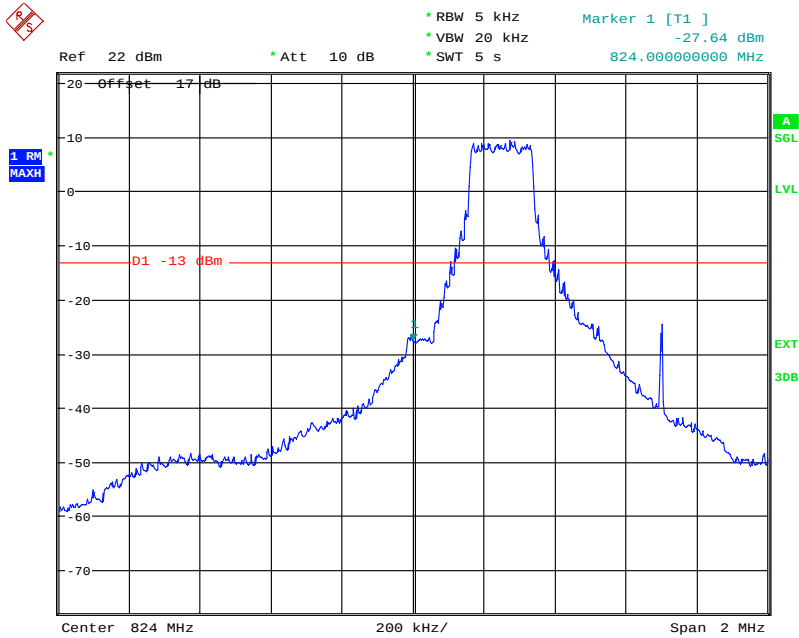
Product Service

4.0 V DC Supply

LTE FDD 5, 1.4 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
824.7 MHz		848.3 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-27.6	-32.0	-27.1	-32.4

LTE FDD 5, 824.7 MHz, 1 Resource Block - Low, 1.4 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

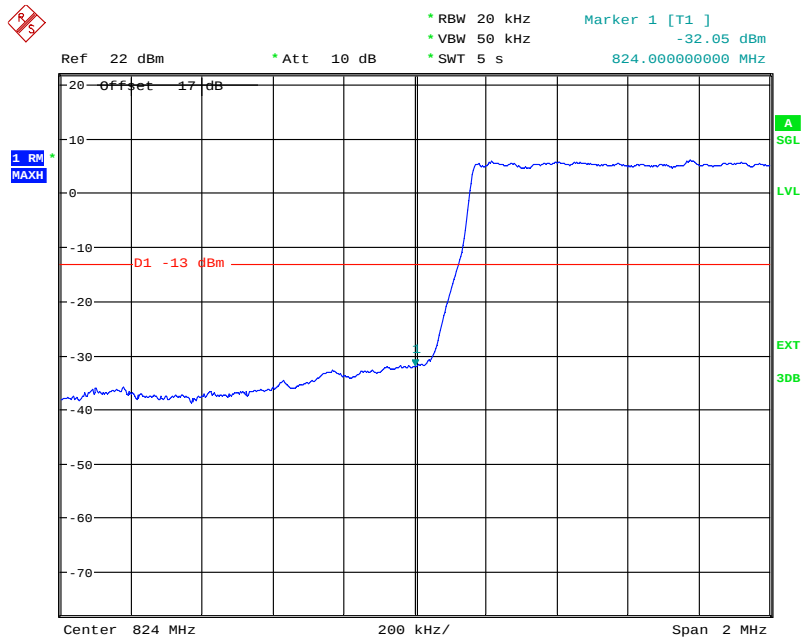


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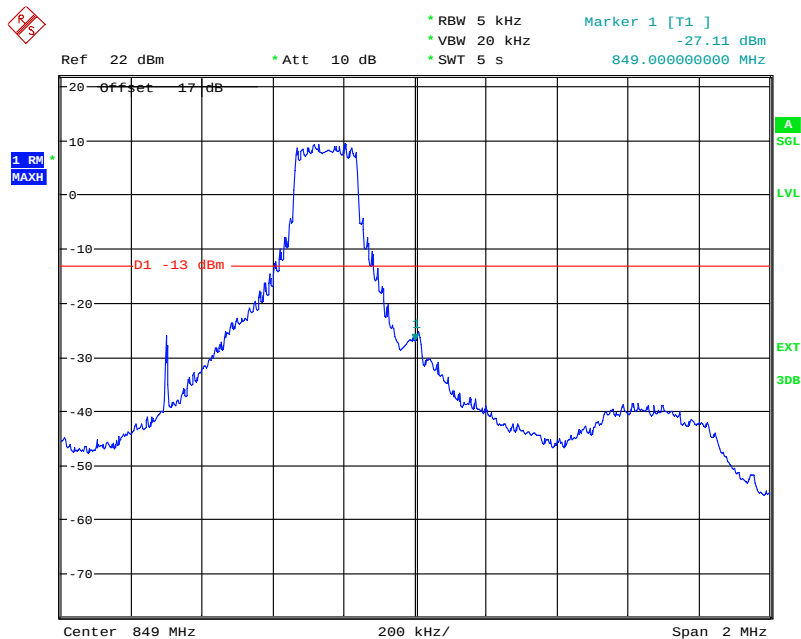
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LTE FDD 5, 824.7 MHz, All Resource Blocks, 1.4 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 16:21:32

LTE FDD 5, 848.3 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

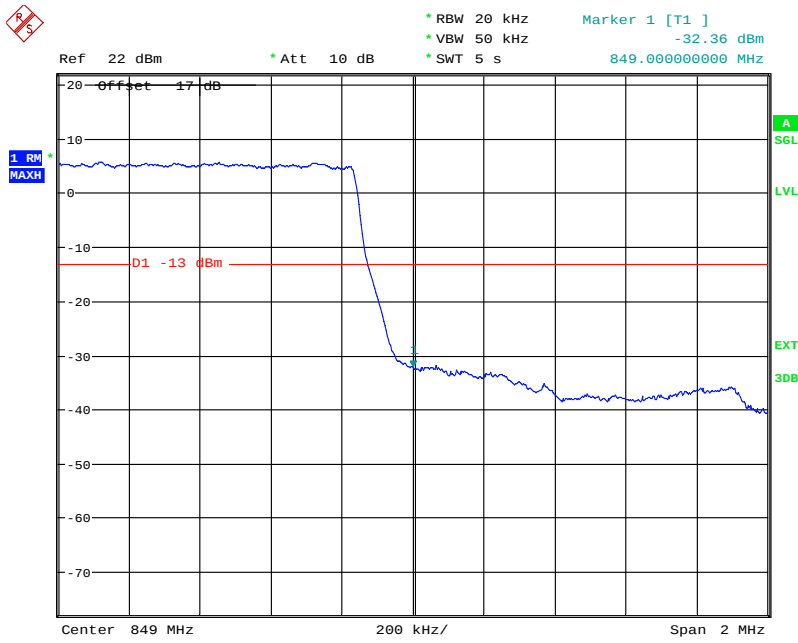


Date: 29.APR.2015 15:53:54



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LTE FDD 5, 848.3 MHz, All Resource Blocks, 1.4 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



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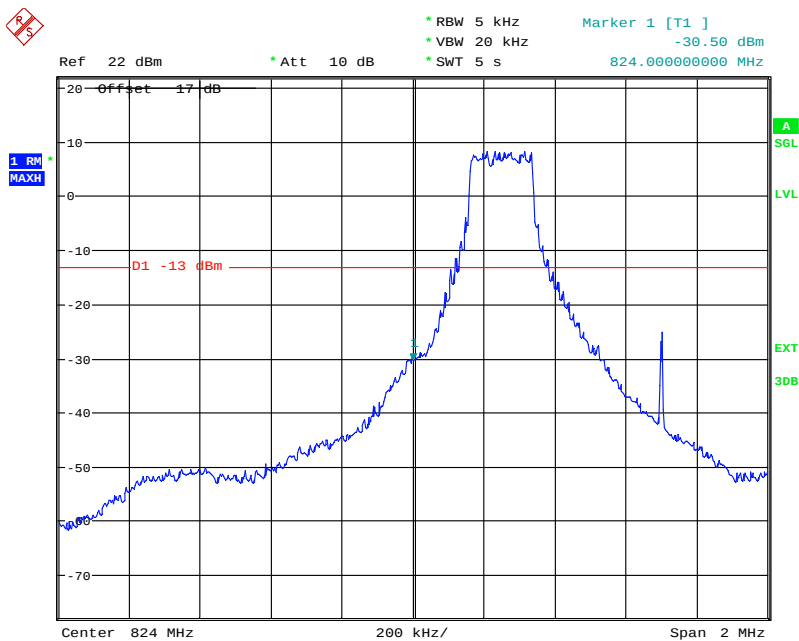


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LTE FDD 5, 1.4 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
824.7 MHz		848.3 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-30.5	-32.5	-30.7	-33.7

LTE FDD 5, 824.7 MHz, 1 Resource Block - Low, 1.4 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

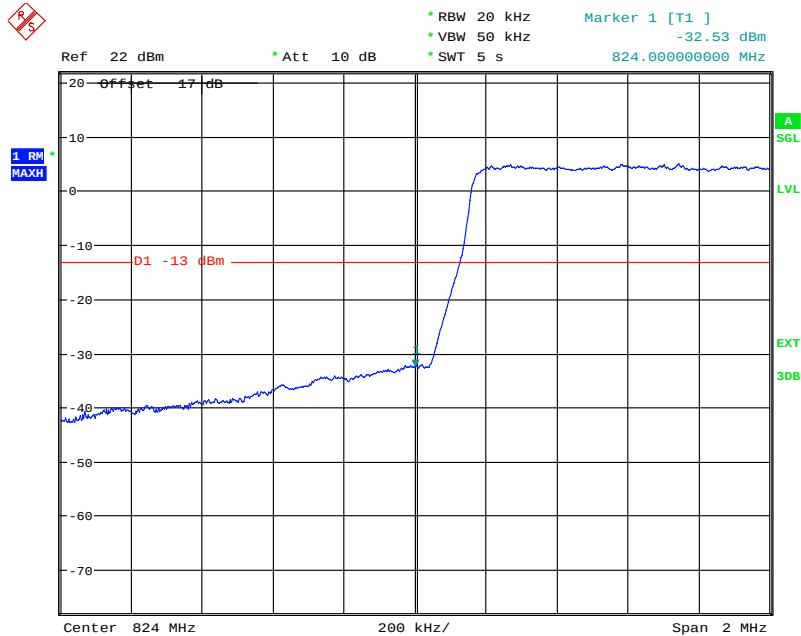


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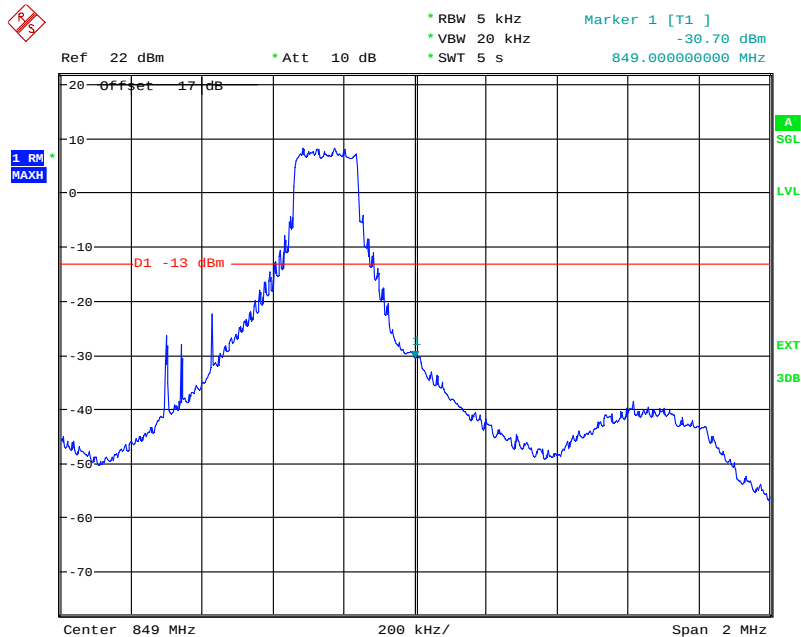
Product Service

LTE FDD 5, 824.7 MHz, All Resource Blocks, 1.4 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 16:24:27

LTE FDD 5, 848.3 MHz, 1 Resource Block - High, 1.4 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

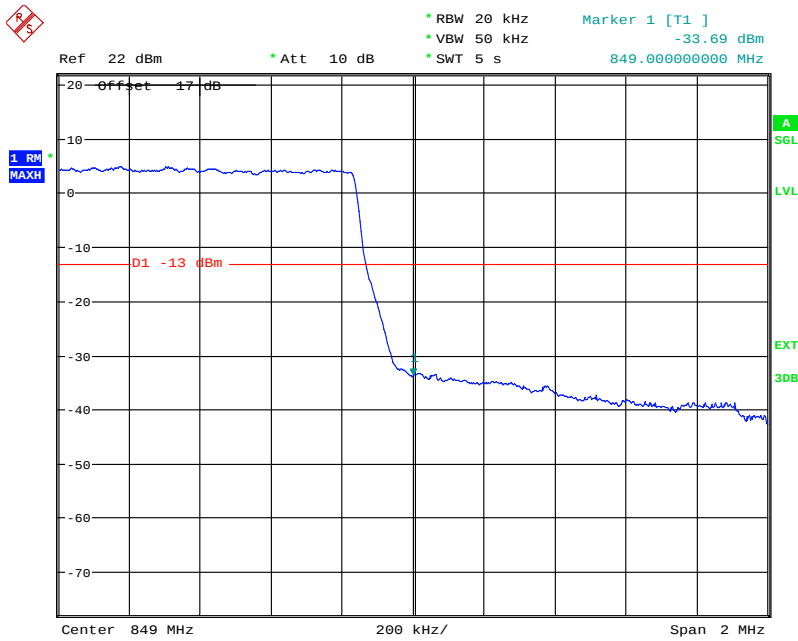


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Product Service

LTE FDD 5, 848.3 MHz, All Resource Blocks, 1.4 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



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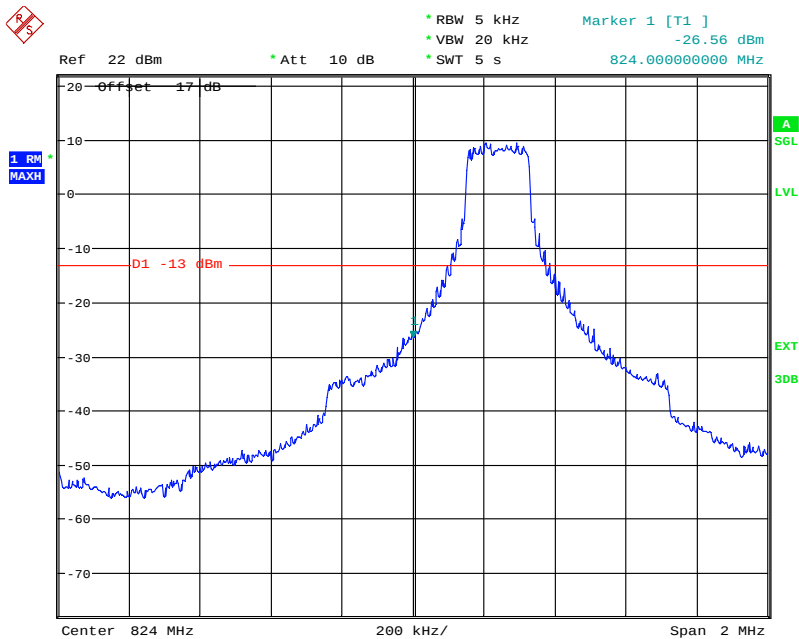


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LTE FDD 5, 3.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
825.5 MHz		847.5 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-26.6	-26.6	-25.2	-27.4

LTE FDD 5, 825.5 MHz, 1 Resource Block - Low, 3.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

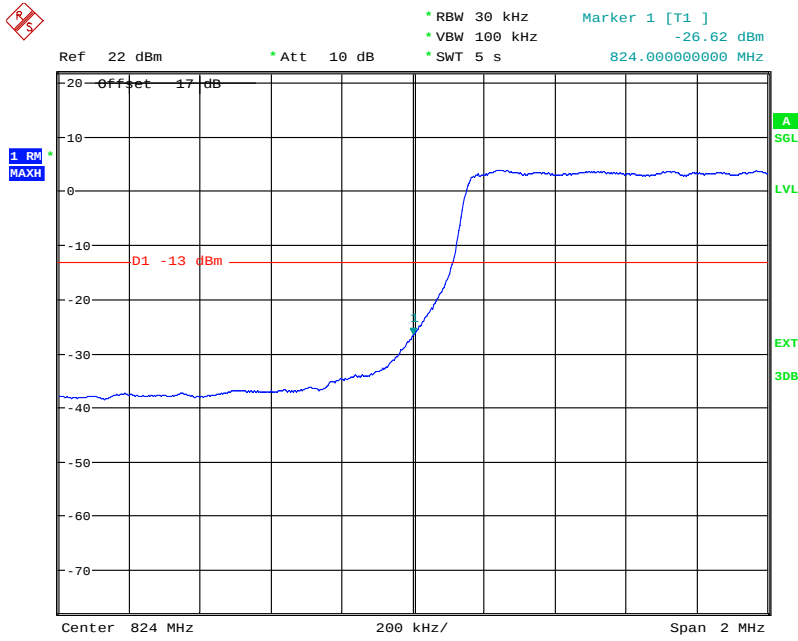


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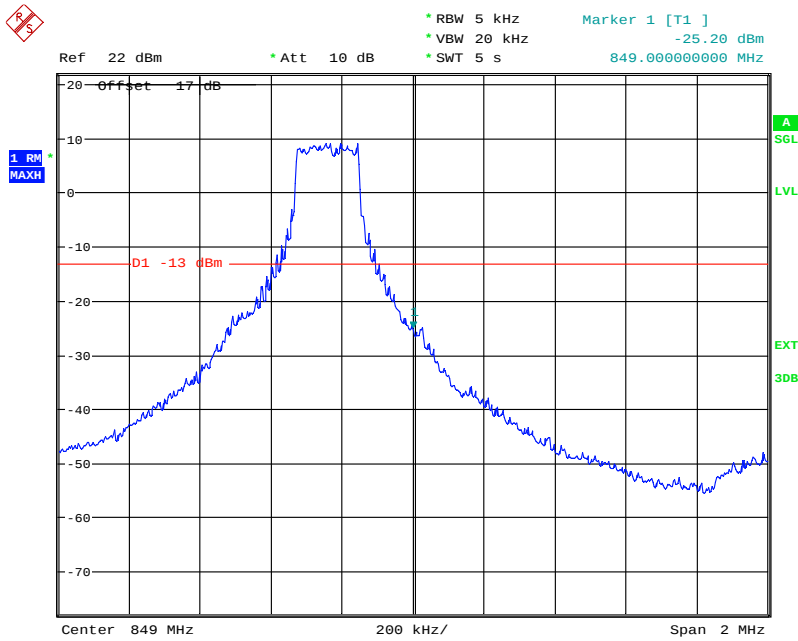
Product Service

LTE FDD 5, 825.5 MHz, All Resource Blocks, 3.0 MHz Bandwidth, QPSK,, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 14:37:46

LTE FDD 5, 847.5 MHz, 1 Resource Block - High, 3.0 MHz Bandwidth, QPSK,, Spurious Emissions at Band Edge Results

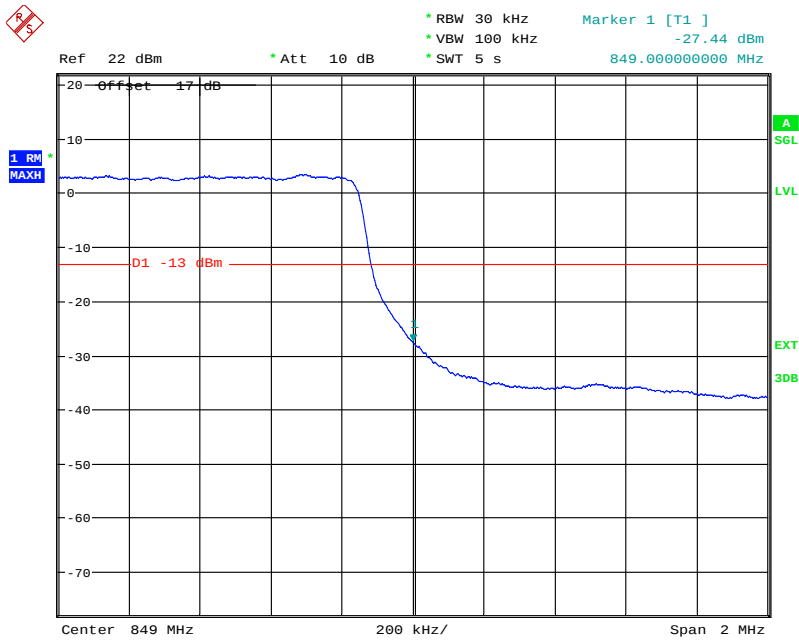


Date: 29.APR.2015 15:08:57



Product Service

LTE FDD 5, 847.5 MHz, All Resource Blocks, 3.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



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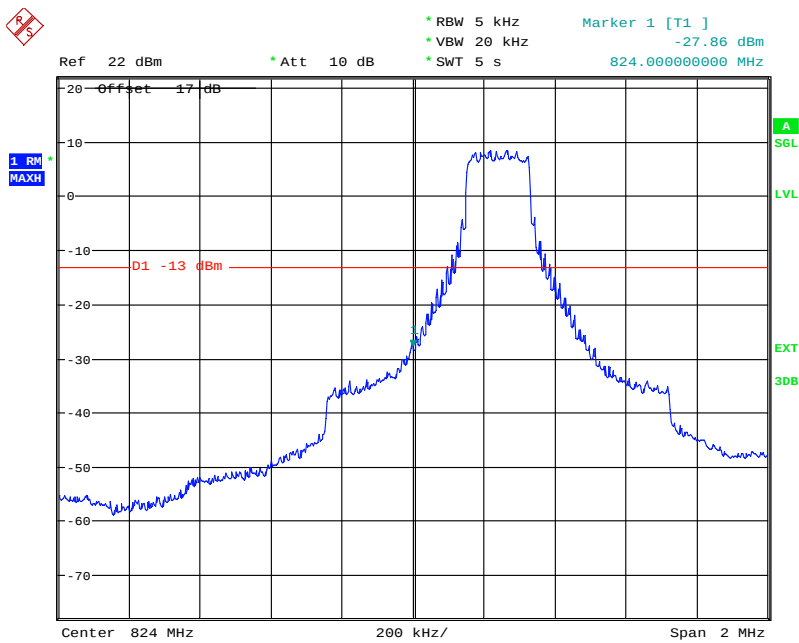


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LTE FDD 5, 3.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
825.5 MHz		847.5 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-27.9	-28.1	-26.5	-29.0

LTE FDD 5, 825.5 MHz, 1 Resource Block - Low, 3.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

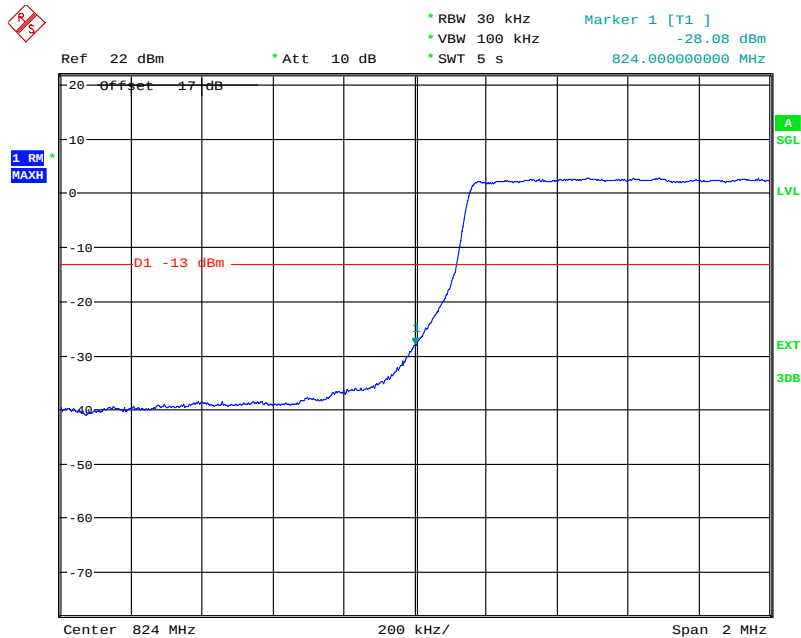


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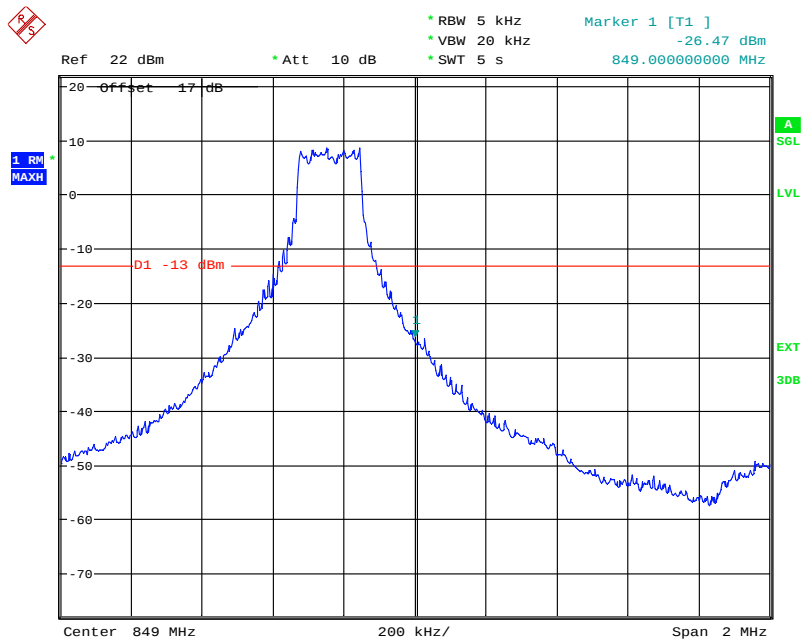
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LTE FDD 5, 825.5 MHz, All Resource Blocks, 3.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 14:30:43

LTE FDD 5, 847.5 MHz, 1 Resource Block - High, 3.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

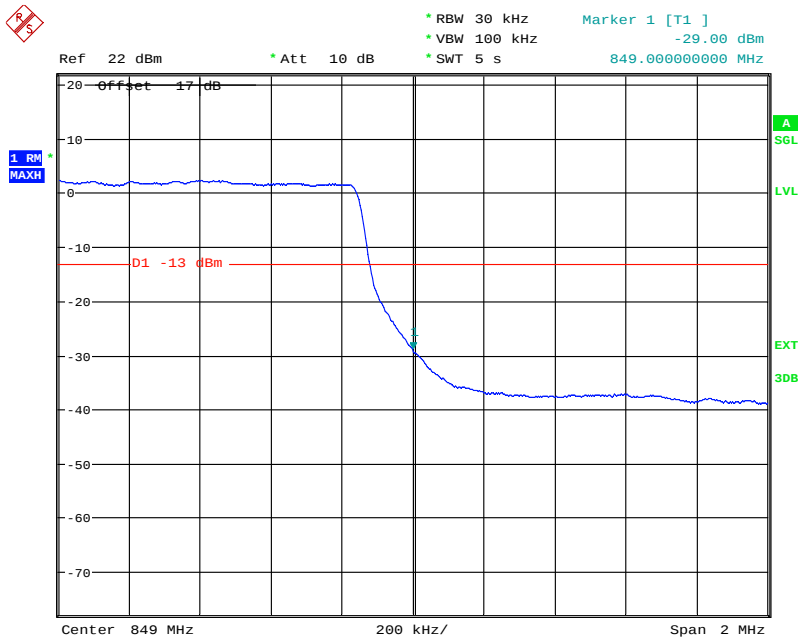


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Product Service

LTE FDD 5, 847.5 MHz, All Resource Blocks, 3.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 15:14:01

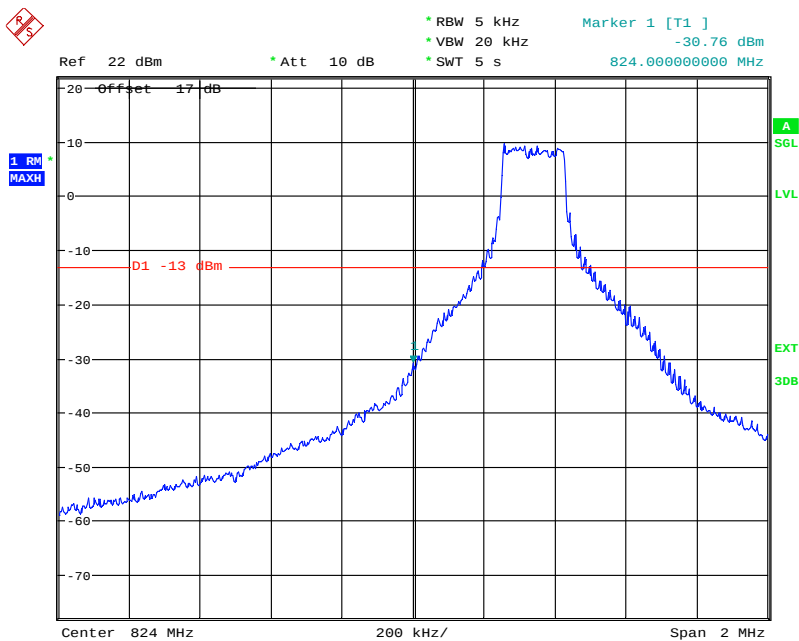


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LTE FDD 5, 5.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
826.5 MHz		846.5 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-30.8	-30.4	-31.0	-29.7

LTE FDD 5, 826.5 MHz, 1 Resource Block – Low, 5.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

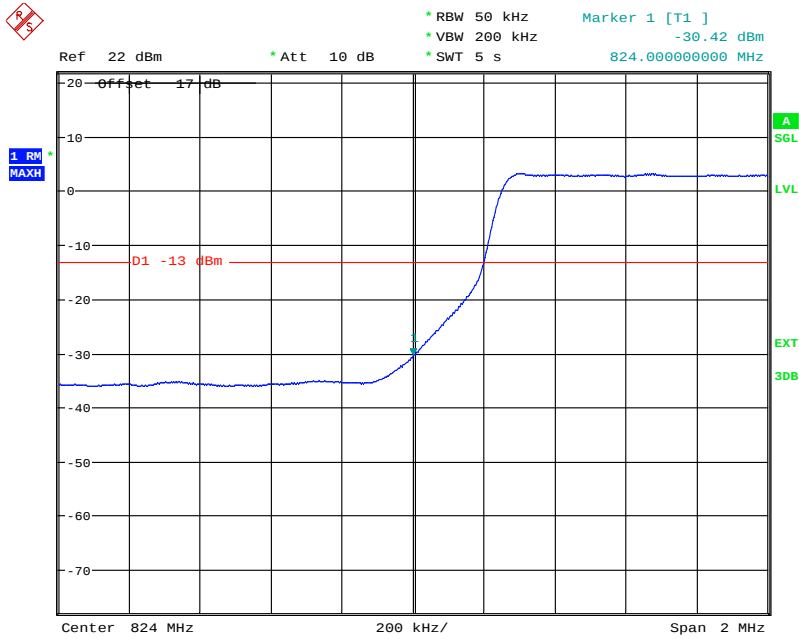


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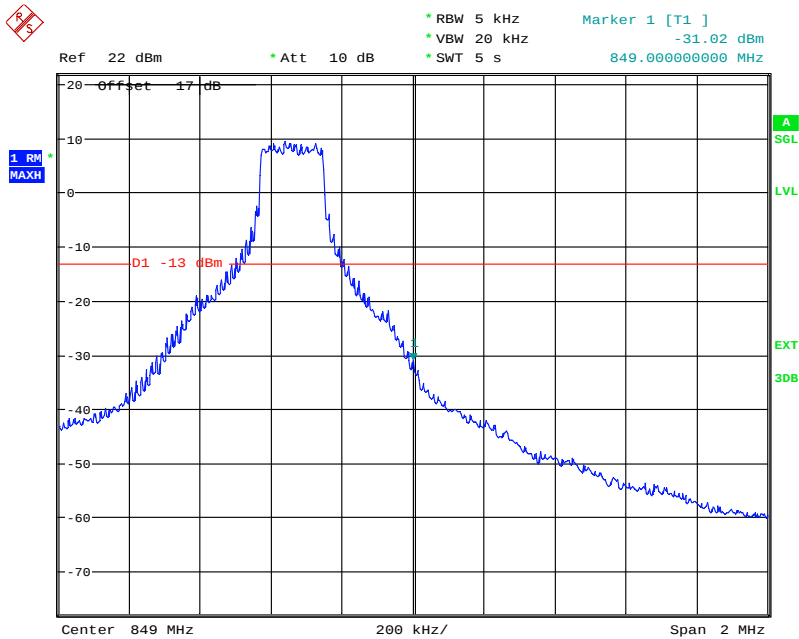
Product Service

LTE FDD 5, 826.5 MHz, All Resource Blocks, 5.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 14:02:22

LTE FDD 5, 846.5 MHz, 1 Resource Block - High, 5.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

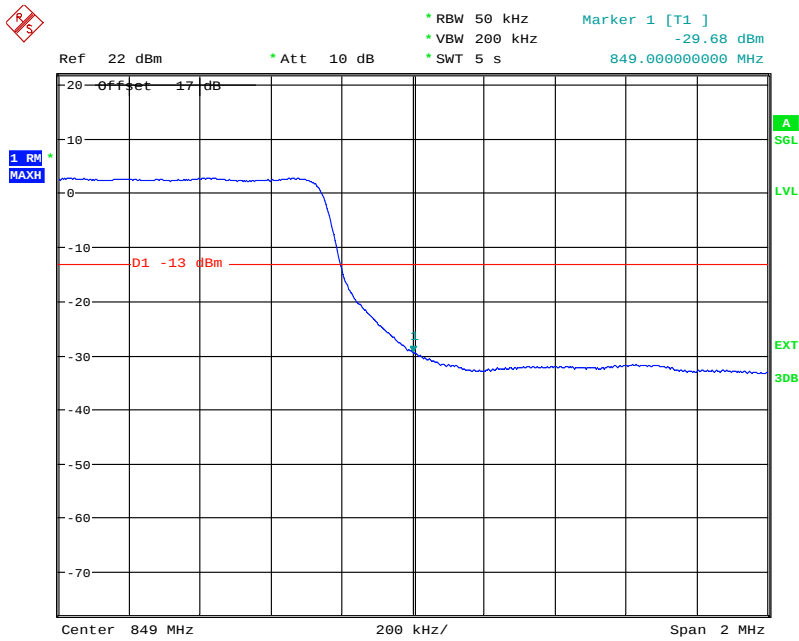


Date: 29.APR.2015 13:37:50



Product Service

LTE FDD 5, 846.5 MHz, All Resource Blocks, 5.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 13:26:08

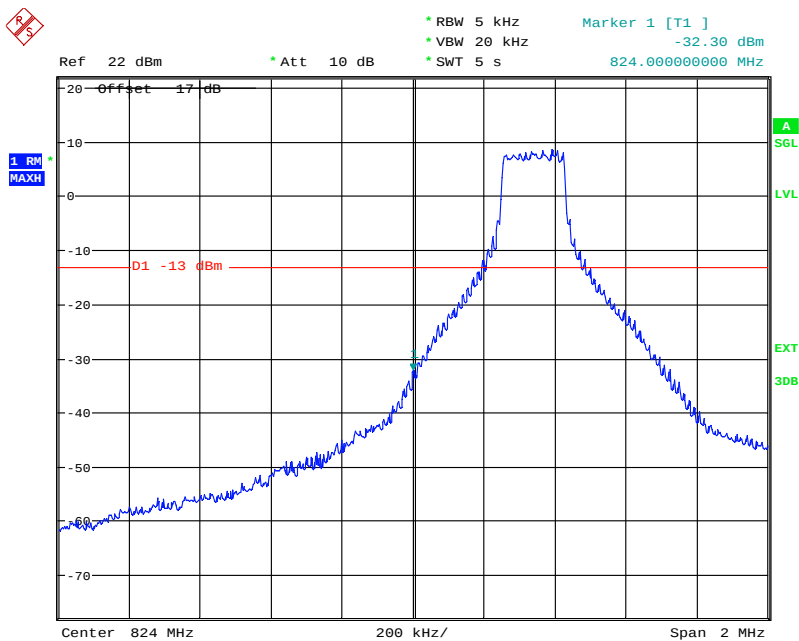


Product Service

LTE FDD 5, 5.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
826.5 MHz		846.5 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-32.3	-31.4	-32.7	-30.6

LTE FDD 5, 826.5 MHz, 1 Resource Block – Low, 5.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

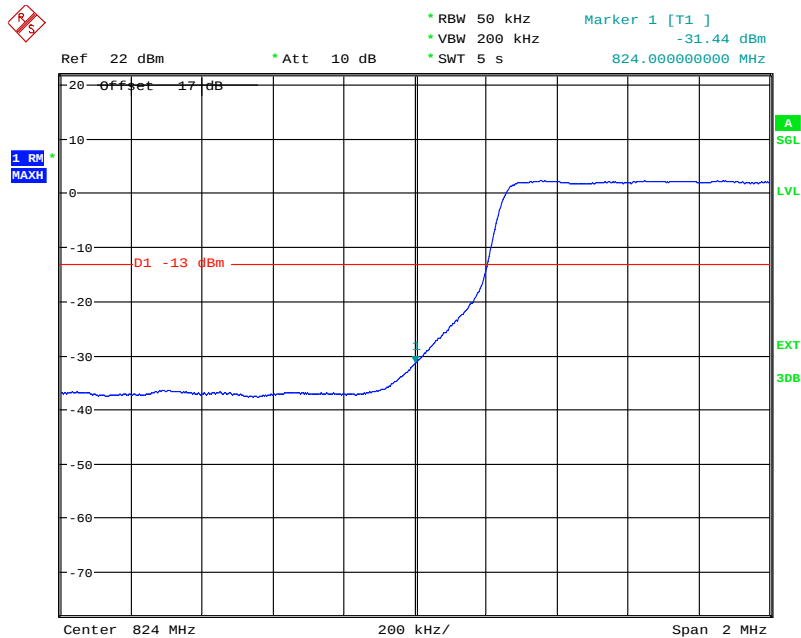


Date: 29. APR. 2015 14:07:31



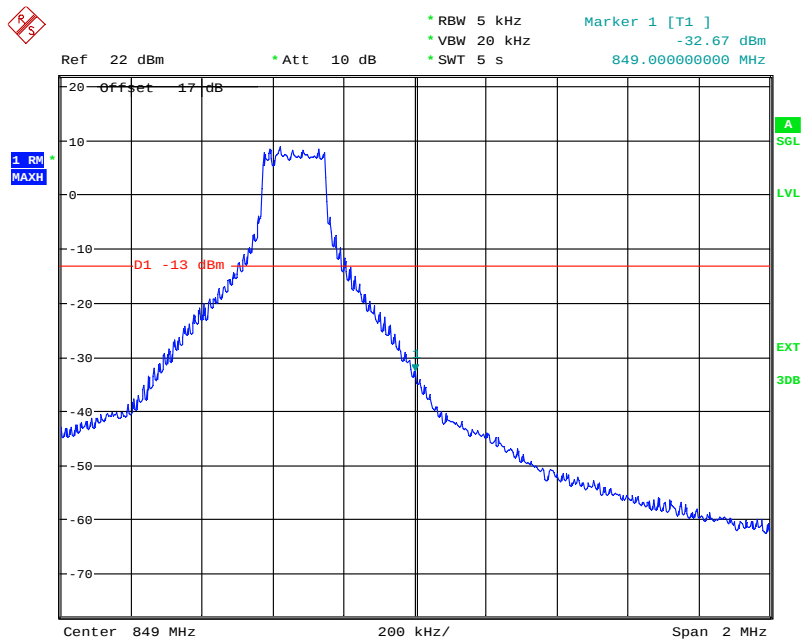
Product Service

LTE FDD 5, 826.5 MHz, All Resource Blocks, 5.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 14:05:15

LTE FDD 5, 846.5 MHz, 1 Resource Block – High, 5.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

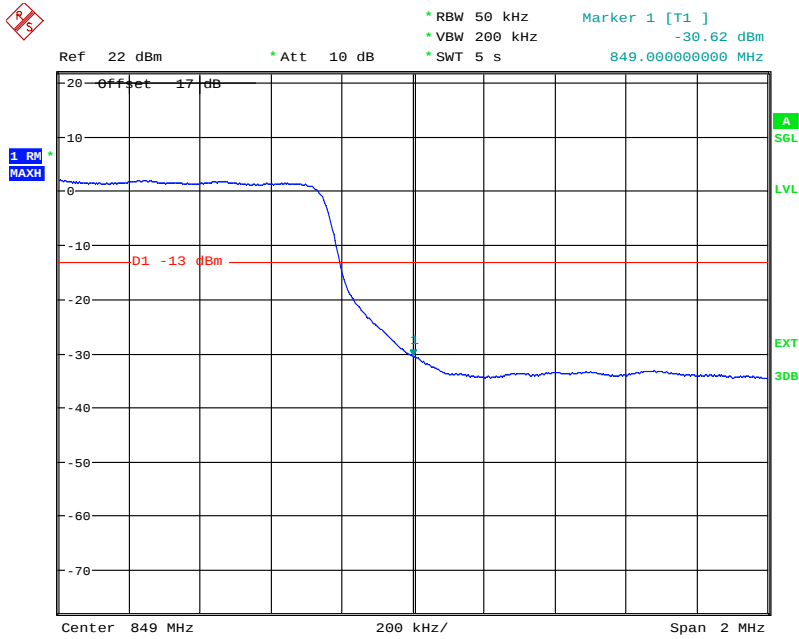


Date: 29.APR.2015 13:35:54



Product Service

LTE FDD 5, 846.5 MHz, All Resource Blocks, 5.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



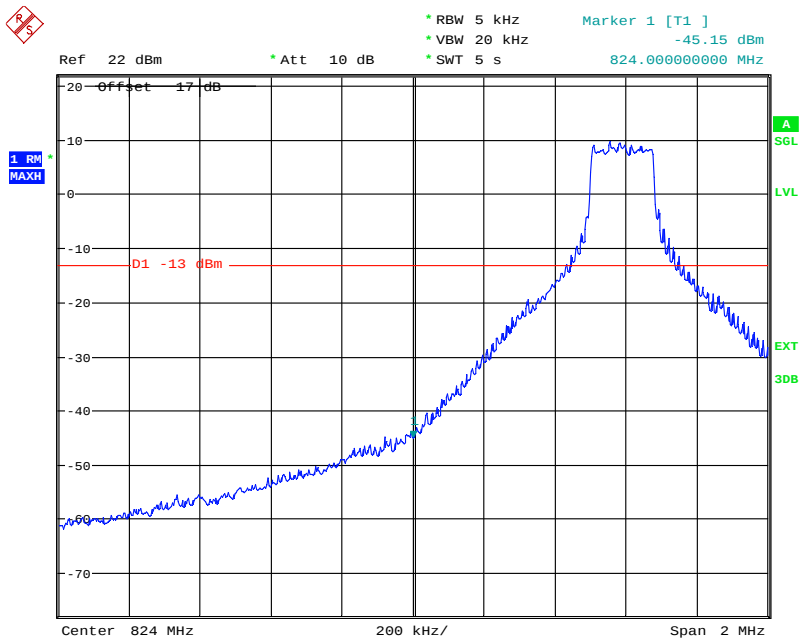
Date: 29.APR.2015 13:28:58



LTE FDD 5, 10.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

Band Edge (dBm)			
829.0 MHz		844.0 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-45.2	-32.0	-44.0	-32.0

LTE FDD 5, 829 MHz, 1 Resource Block - Low, 10.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

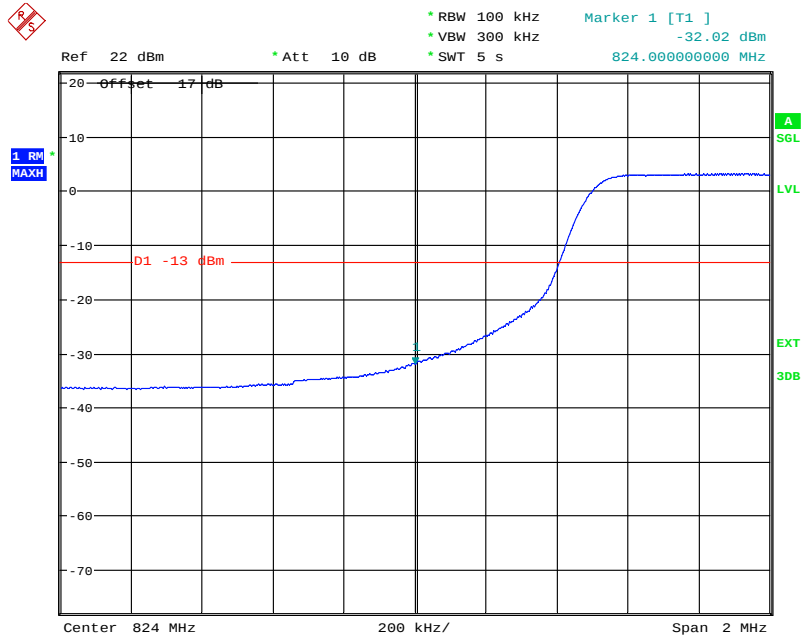


Date: 29. APR. 2015 11:23:16



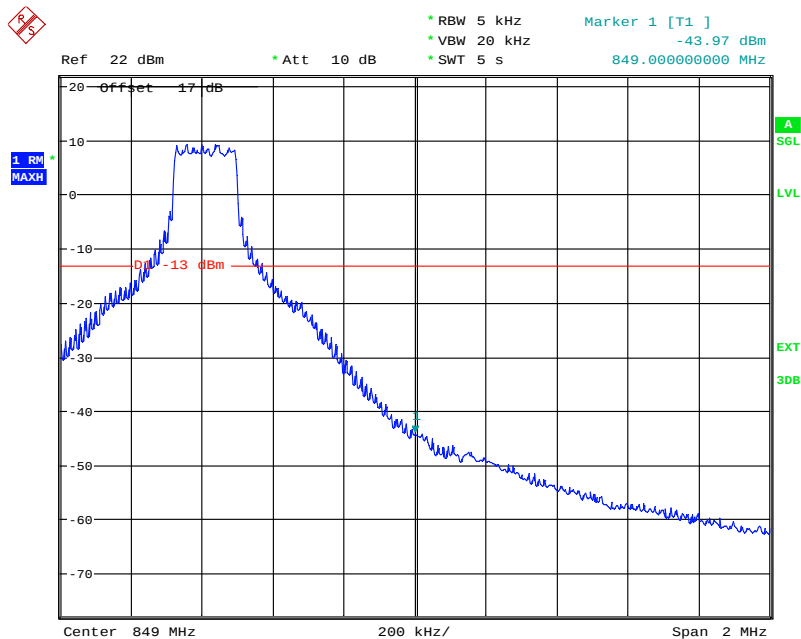
Product Service

LTE FDD 5, 829 MHz, All Resource Blocks, 10.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 11:13:01

LTE FDD 5, 844 MHz, 1 Resource Block - High, 10.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results

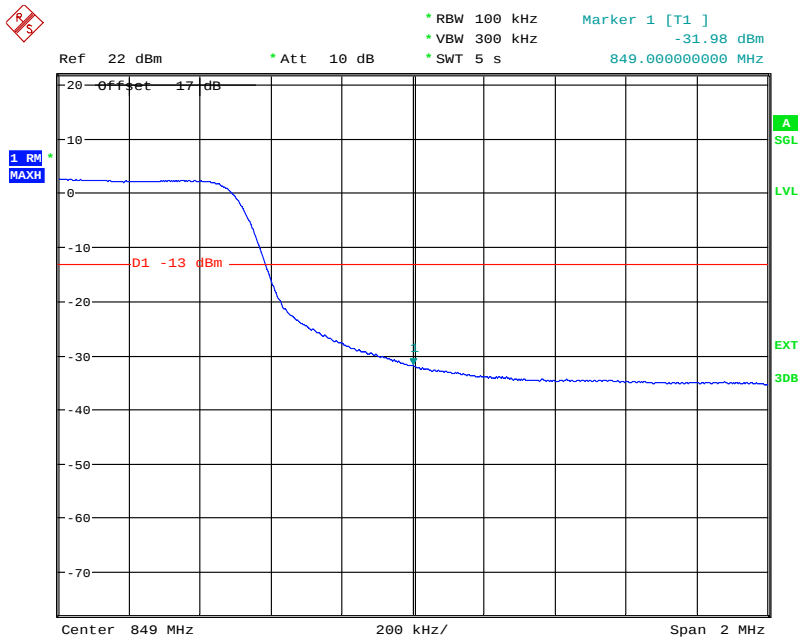


Date: 29.APR.2015 11:56:36



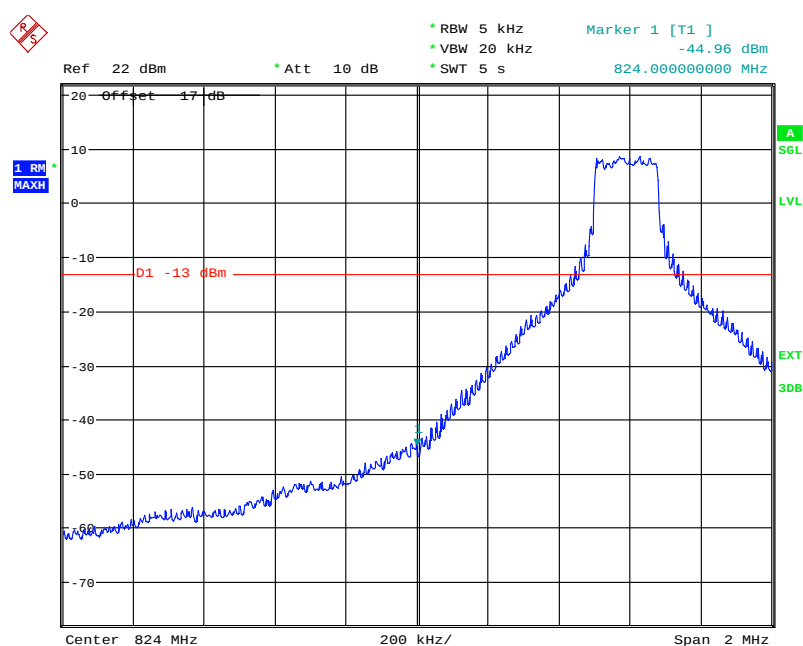
Product Service

LTE FDD 5, 844 MHz, All Resource Blocks, 10.0 MHz Bandwidth, QPSK, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 11:48:35

Band Edge (dBm)			
829.0 MHz		844.0 MHz	
1 Resource Block	All Resource Blocks	1 Resource Block	All Resource Blocks
Low		High	
-45.0	-33.3	-46.7	-33.6

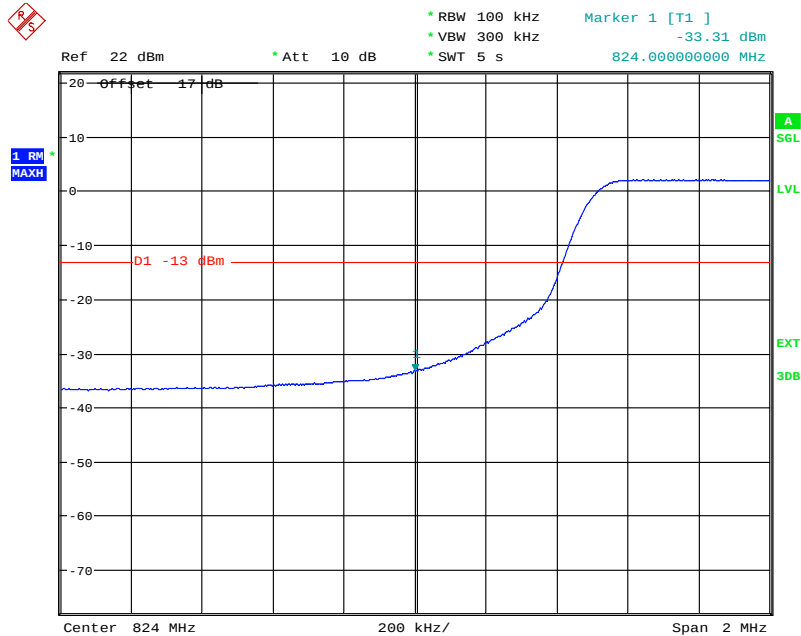


Date: 29.APR.2015 11:20:24



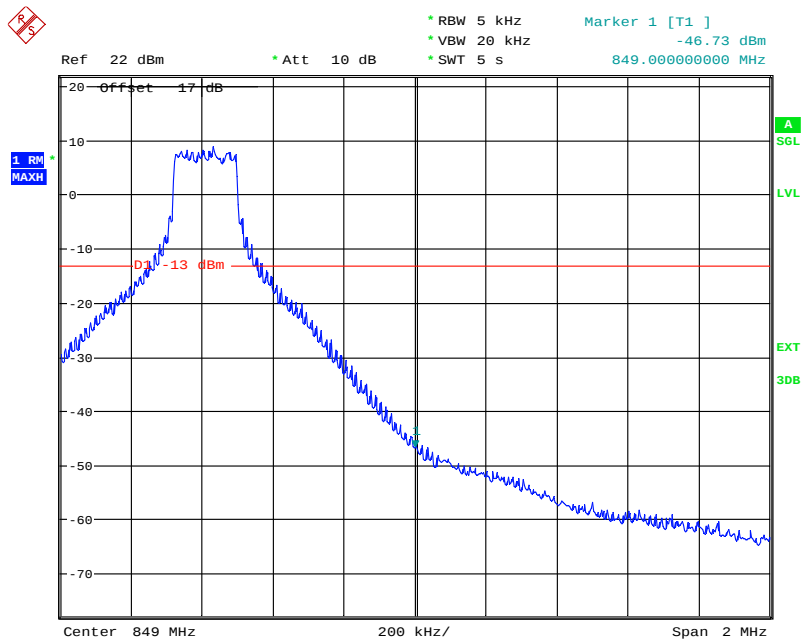
Product Service

LTE FDD 5, 829 MHz, All Resource Blocks, 10.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 11:16:25

LTE FDD 5, 844 MHz, 1 Resource Block - High, 10.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results

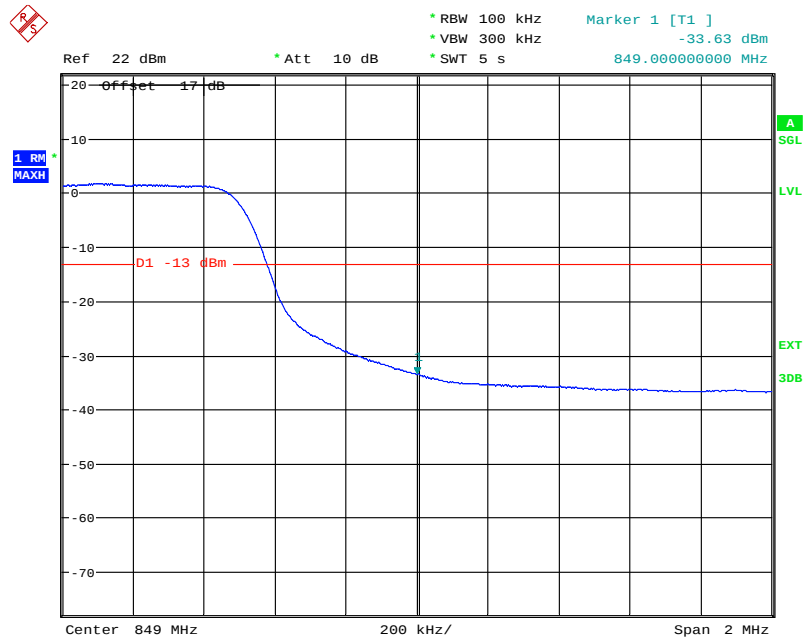


Date: 29.APR.2015 11:54:43



Product Service

LTE FDD 5, 844 MHz, All Resource Blocks, 10.0 MHz Bandwidth, 16-QAM, Spurious Emissions at Band Edge Results



Date: 29.APR.2015 11:52:13

FCC 47 CFR Part 22, Limit Clause 22.905 and 22.917

-13 dBm at block edge.



Product Service

2.3 MAXIMUM CONDUCTED OUTPUT POWER

2.3.1 Specification Reference

FCC 47 CFR Part 22, Clause 22.913 (a)
FCC 47 CFR Part 2, Clause 2.1046

2.3.2 Equipment Under Test and Modification State

SHV32 S/N: IMEI 004401115406494 - Modification State 0

2.3.3 Date of Test

27 April 2015 & 29 April 2015

2.3.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.5 Test Procedure

Carrier power measurements were performed in accordance with KDB 971168 D01 v02r02, Clause 5.2.3.

2.3.6 Environmental Conditions

Ambient Temperature	23.3 - 24.1°C
Relative Humidity	21.8 - 34.8%



2.3.7 Test Results

4.0 V DC Supply

LTE FDD 26, 15.0 MHz Bandwidth, QPSK, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)							
831.5 MHz				841.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High	
23.79	23.56	23.82	22.52	23.72	23.57	23.55	22.57

LTE FDD 26, 15.0 MHz Bandwidth, 16-QAM, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)							
831.5 MHz				841.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High	
23.08	22.68	22.96	21.39	22.44	22.16	22.3	21.13

FCC 47 CFR Part 22, Limit Clause 22.913 (a)(2)

Mobile Transmitters: 7 W or 38.45 dBm



4.0 V DC Supply

LTE FDD 5, 1.4 MHz Bandwidth, QPSK, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
824.7 MHz				836.5 MHz				848.3 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
23.02	23.09	23.15	22.2	23.15	23.27	23.16	22.21	22.86	22.84	22.73	21.87

LTE FDD 5, 1.4 MHz Bandwidth, 16-QAM, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
824.7 MHz				836.5 MHz				848.3 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
22.16	22.31	22.33	21.22	22.4	22.6	22.44	21.17	21.99	22	21.9	20.85

LTE FDD 5, 3.0 MHz Bandwidth, QPSK, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
825.5 MHz				836.5 MHz				847.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
23.13	23.13	23.11	22.15	23.27	23.34	23.29	22.06	23.08	22.91	22.79	21.96

LTE FDD 5, 3.0 MHz Bandwidth, 16-QAM, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
825.5 MHz				836.5 MHz				847.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
22.22	22.22	22.2	22.17	23.27	23.34	23.29	22.08	23.17	22.94	22.87	22.04

LTE FDD 5, 5.0 MHz Bandwidth, QPSK, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
826.5 MHz				836.5 MHz				846.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
23.2	23.38	23.4	22.17	23.49	23.48	23.31	22.14	23.14	23.17	22.87	22.13



LTE FDD 5, 5.0 MHz Bandwidth, 16-QAM, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
826.5 MHz				836.5 MHz				846.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
22.44	22.66	22.57	21.23	23.39	22.33	22.31	21.18	22.68	22.44	22.17	21.08

LTE FDD 5, 10.0 MHz Bandwidth, QPSK, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
829.0 MHz				836.5 MHz				844.0 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
23.57	23.65	23.58	22.48	23.68	23.7	23.5	22.39	23.54	23.49	23.1	22.43

LTE FDD 5, 10.0 MHz Bandwidth, 16-QAM, Maximum Peak Conducted Output Power Results

Carrier Power ERP (dBm)											
829.0 MHz				836.5 MHz				844.0 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
22.52	22.52	22.39	21.25	22.02	22.78	22.86	21.12	22.82	22.95	22.06	21.11

FCC 47 CFR Part 22, Limit Clause 22.913 (a)(2)

Mobile Transmitters: 7 W or 38.45 dBm



Product Service

2.4 PEAK TO AVERAGE RATIO**2.4.1 Specification Reference**

FCC 47 CFR Part 22, Clause 22.913 (a)
FCC 47 CFR Part 2, Clause 2.1046

2.4.2 Equipment Under Test and Modification State

SHV32 S/N: IMEI 004401115406494 - Modification State 0

2.4.3 Date of Test

27 April 2015 & 29 April 2015

2.4.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.5 Test Procedure

Peak to average ratio measurements were performed in accordance with KDB 971168 D01 v02r02, Clause 5.7.1.

2.4.6 Environmental Conditions

Ambient Temperature	23.3 - 24.1°C
Relative Humidity	21.8 - 34.8%



2.4.7 Test Results

4.0 V DC Supply

LTE FDD 26, 15.0 MHz Bandwidth, QPSK, Peak to Average Ratio Results

Peak to Average Ratio (dB)							
831.5 MHz				841.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High	
5.1	4.9	5.3	6.8	5.1	4.9	4.9	6.9

LTE FDD 26, 15.0 MHz Bandwidth, 16-QAM, Peak to Average Ratio Results

Peak to Average Ratio (dB)							
831.5 MHz				841.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High	
6.0	5.8	6.2	7.6	6.1	5.8	5.9	7.9

FCC 47 CFR Part 22, Limit Clause

No limit defined.

LTE FDD 5, 1.4 MHz Bandwidth, QPSK, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
824.7 MHz				836.5 MHz				848.3 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
3.7	3.6	3.8	4.8	4.1	4.2	4.2	5.1	3.8	3.7	3.8	5.0

LTE FDD 5, 1.4 MHz Bandwidth, 16-QAM, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
824.7 MHz				836.5 MHz				848.3 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
4.7	4.7	4.9	5.8	5.1	4.9	5.0	6.1	4.7	5.8	4.8	6.0



LTE FDD 5, 3.0 MHz Bandwidth, QPSK, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
825.5 MHz				836.5 MHz				847.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
3.9	4.0	4.1	4.9	4.3	4.2	4.3	5.3	4.0	3.9	3.9	5.1

LTE FDD 5, 3.0 MHz Bandwidth, 16-QAM, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
825.5 MHz				836.5 MHz				847.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
4.9	5.0	5.2	6.0	5.2	5.1	5.3	6.4	4.7	4.6	4.7	6.1

LTE FDD 5, 5.0 MHz Bandwidth, QPSK, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
826.5 MHz				836.5 MHz				846.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
3.6	3.9	4.1	5.1	4.2	4.3	4.4	5.4	4.3	3.6	3.8	5.6

LTE FDD 5, 5.0 MHz Bandwidth, 16-QAM, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
826.5 MHz				836.5 MHz				846.5 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
4.9	4.9	5.1	6.1	5.2	5.1	5.4	6.5	5.1	4.4	4.7	6.4

LTE FDD 5, 10.0 MHz Bandwidth, QPSK, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
829.0 MHz				836.5 MHz				844.0 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
3.8	4.0	4.2	5.3	4.4	4.3	4.4	5.8	4.5	4.5	3.9	5.9



LTE FDD 5, 10.0 MHz Bandwidth, 16-QAM, Peak to Average Ratio Results

Peak To Average Ratio (dB)											
829.0 MHz				836.5 MHz				844.0 MHz			
1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks	1 Resource Block			All Resource Blocks
Low	Mid	High		Low	Mid	High		Low	Mid	High	
4.5	4.4	4.9	6.3	5.4	5.0	5.2	6.8	5.4	5.4	4.9	6.8

FCC 47 CFR Part 22, Limit Clause

No limit defined.



Product Service

2.5 EMISSION LIMITATIONS FOR CELLULAR EQUIPMENT**2.5.1 Specification Reference**

FCC 47 CFR Part 22, Clause 22.917
FCC 47 CFR Part 2, Clause 2.1053

2.5.2 Equipment Under Test and Modification State

SHV32 S/N: IMEI 004401115406767 - Modification State 0

2.5.3 Date of Test

3 May 2015 & 11 May 2015

2.5.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.5 Test Procedure

The test was performed in accordance with KDB 971168 D01 v02r02, Clause 5.8 and 7, ANSI C63.4, Clause 8.3 and ANSI TIA-603-C.

2.5.6 Environmental Conditions

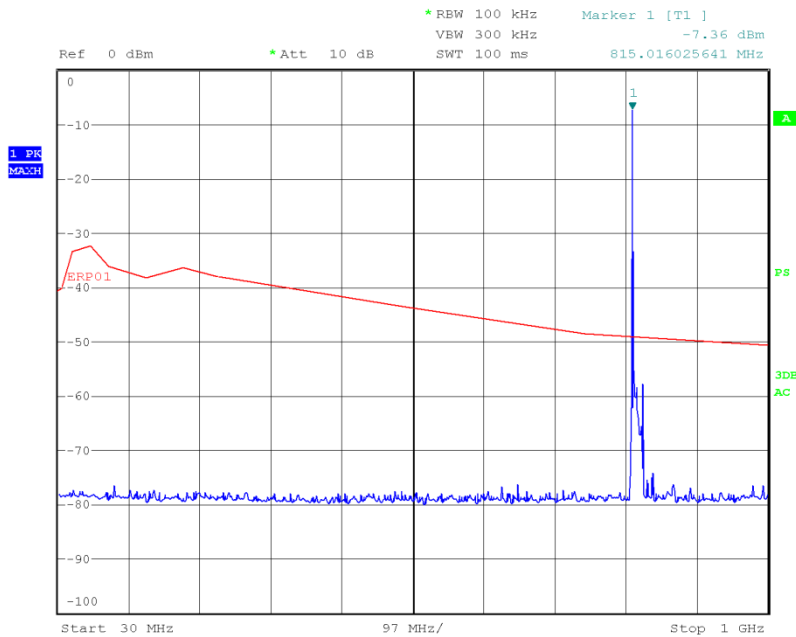
Ambient Temperature	20.1 - 21.4°C
Relative Humidity	30.6 - 37.2%



Product Service

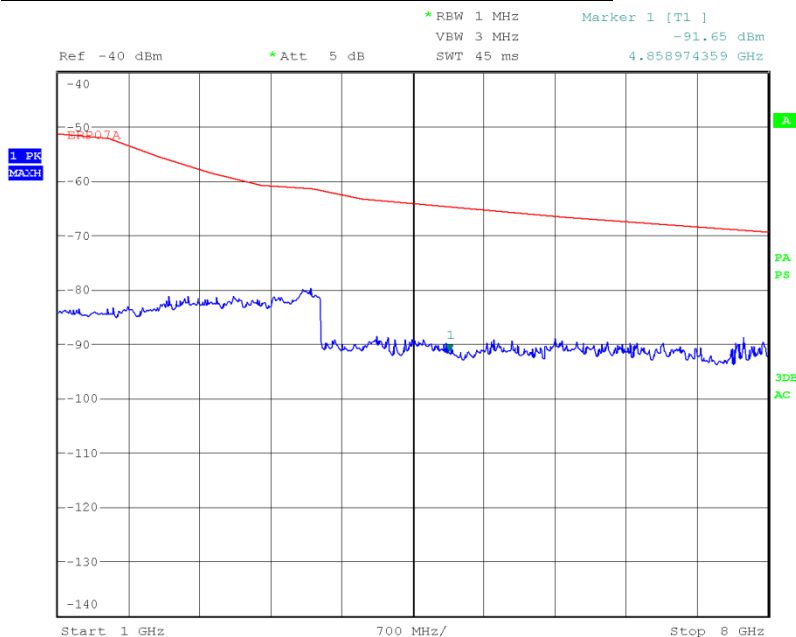
2.5.7 Test Results

LTE FDD 26, 821.5 MHz, 1 Resource Block – Low, 15 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 9.MAY.2015 05:03:58

LTE FDD 26, 821.5 MHz, 1 Resource Block – Low, 15 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

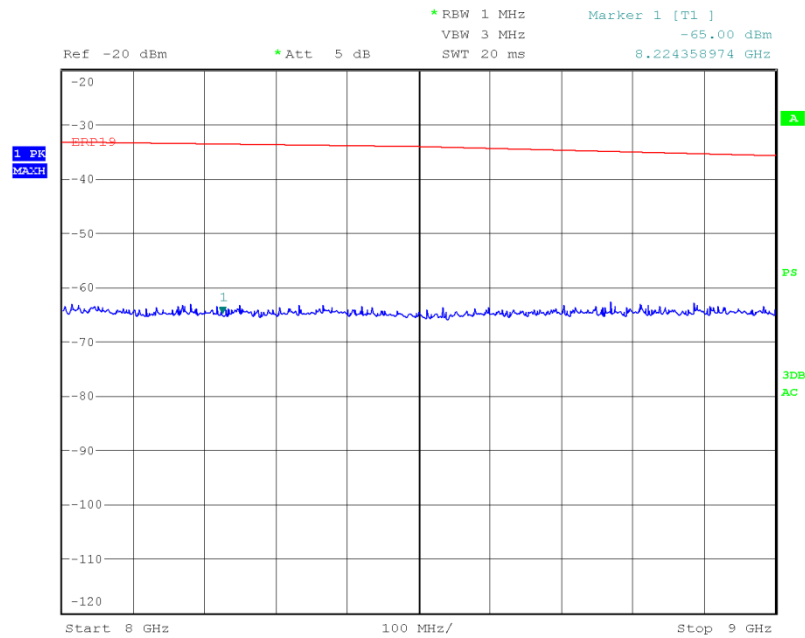


Date: 9.MAY.2015 05:44:42



Product Service

LTE FDD 26, 821.5 MHz, 1 Resource Block – Low, 15 MHz Bandwidth, QPSK, 8 GHz to 9 GHz,
Emission Limitations for Cellular Equipment Results

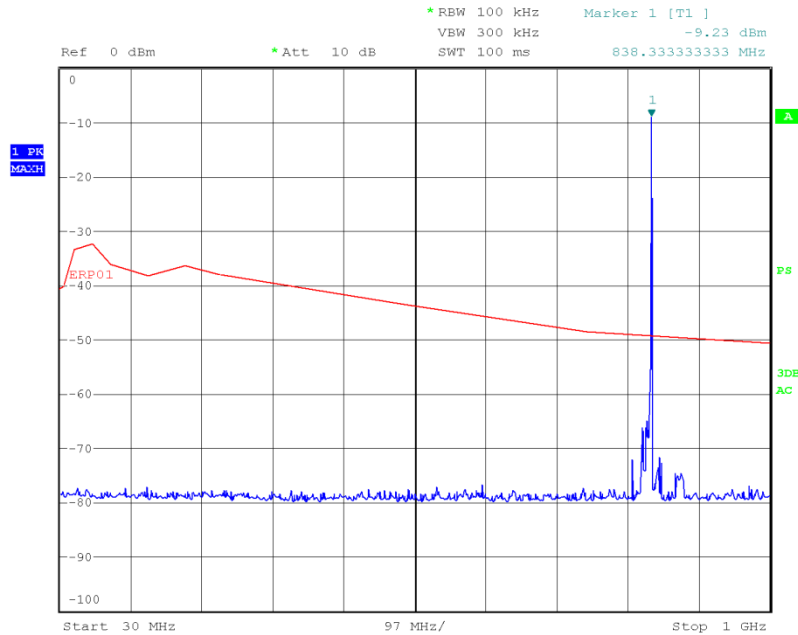


Date: 11.MAY.2015 01:01:22



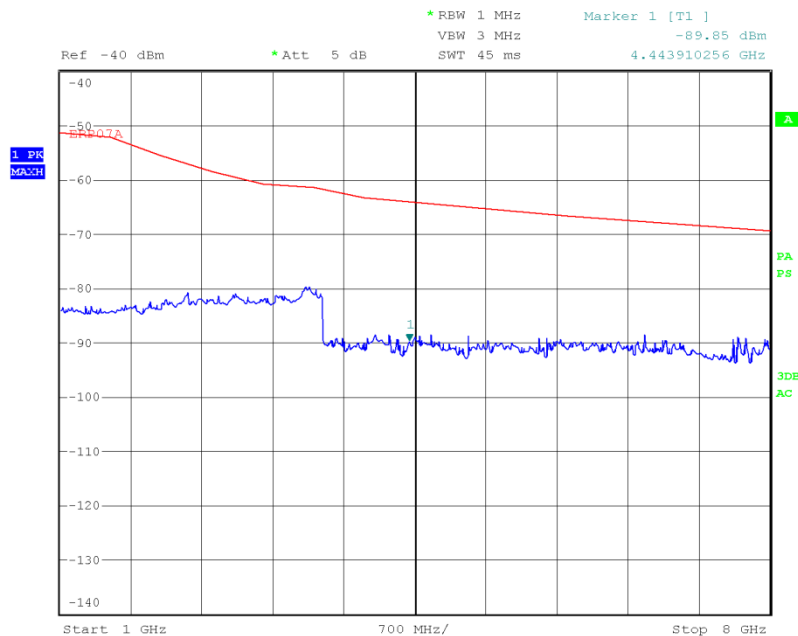
Product Service

LTE FDD 26, 831.5 MHz, 1 Resource Block – High, 15 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 9.MAY.2015 05:01:43

LTE FDD 26, 831.5 MHz, 1 Resource Block – High, 15 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

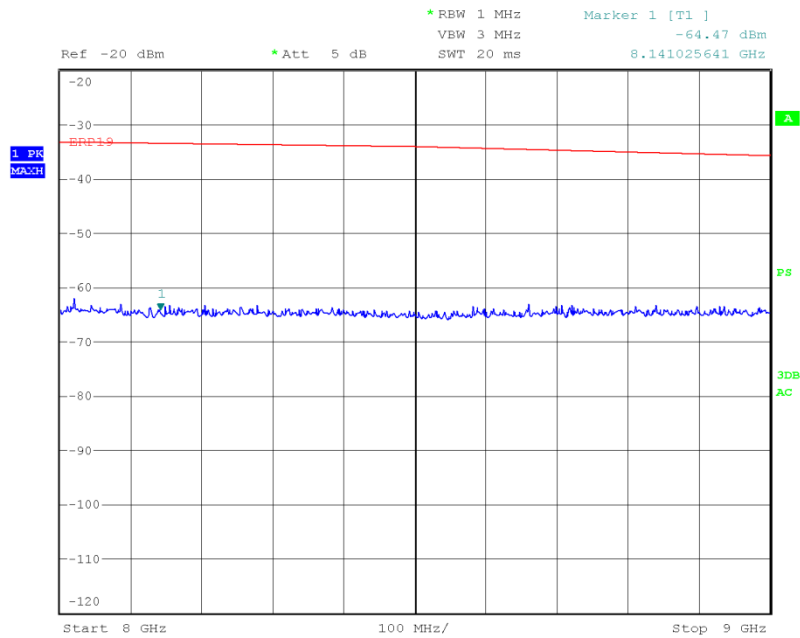


Date: 9.MAY.2015 05:34:18



Product Service

LTE FDD 26, 831.5 MHz, 1 Resource Block – High, 15 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

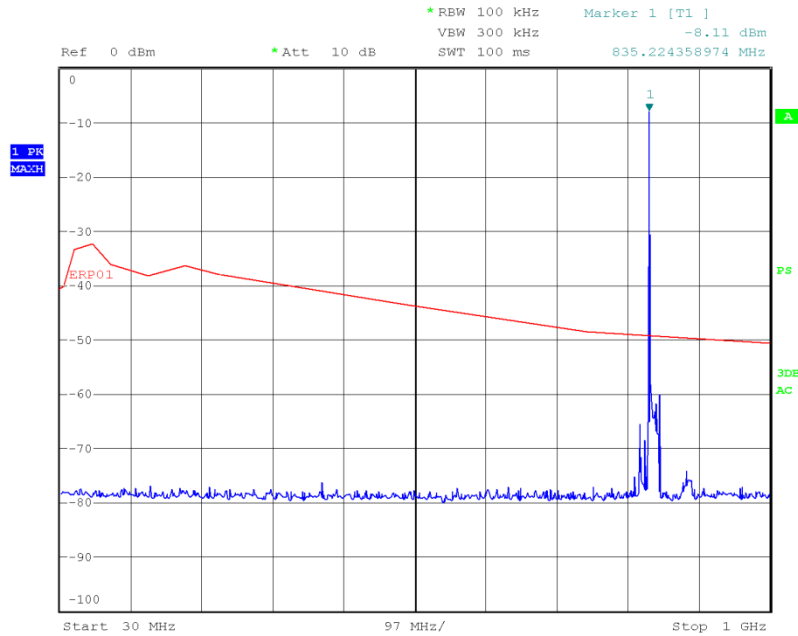


Date: 11.MAY.2015 00:47:03



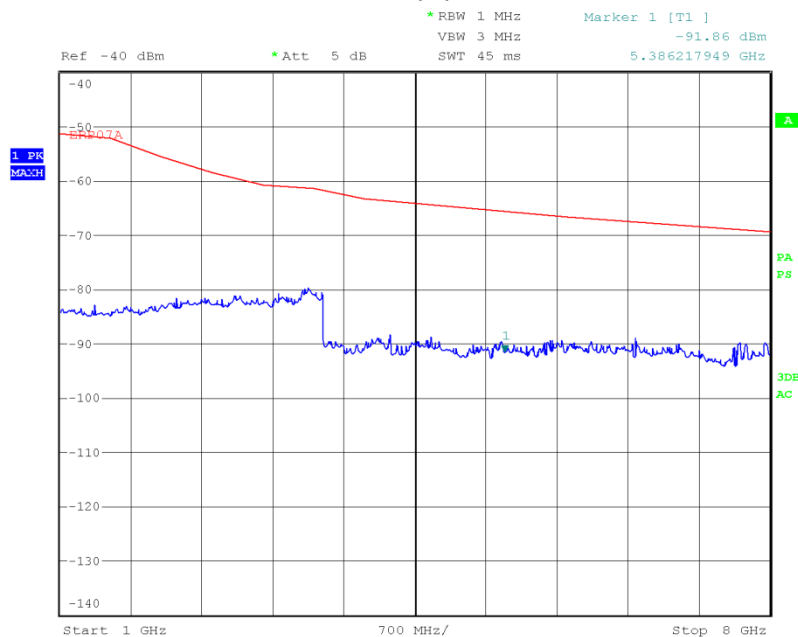
Product Service

LTE FDD 26, 841.5 MHz, 1 Resource Block – Low, 15 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 9.MAY.2015 05:11:22

LTE FDD 26, 841.5 MHz, 1 Resource Block – Low, 15 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

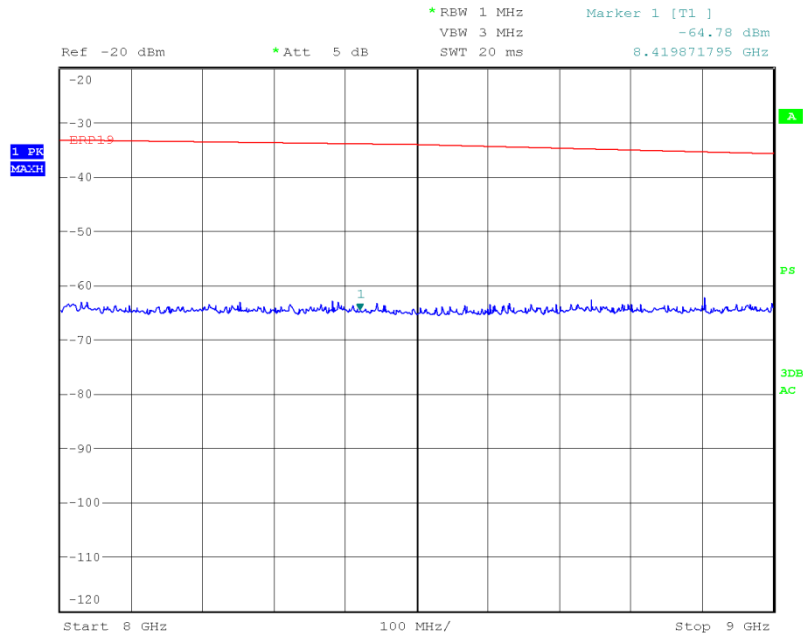


Date: 9.MAY.2015 05:29:58



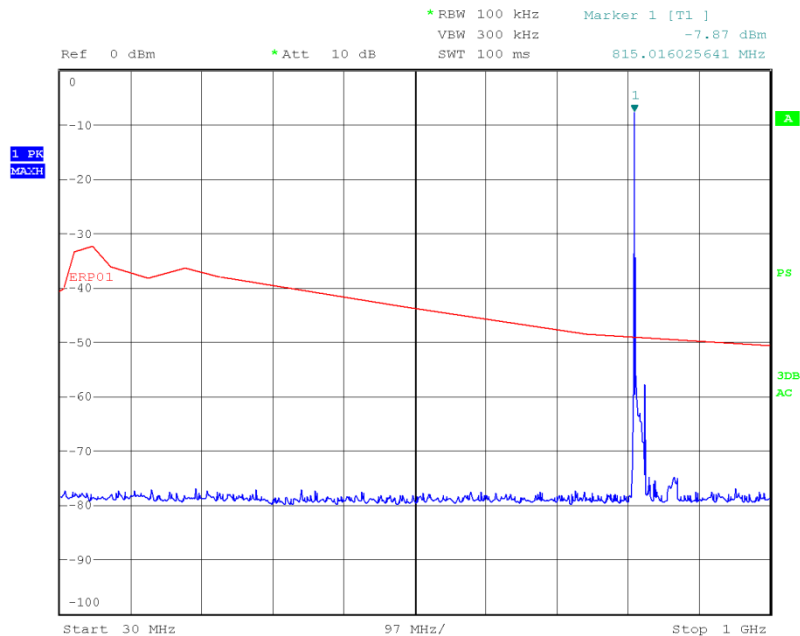
Product Service

LTE FDD 26, 841.5 MHz, 1 Resource Block – Low, 15 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 11.MAY.2015 01:06:15

LTE FDD 26, 821.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

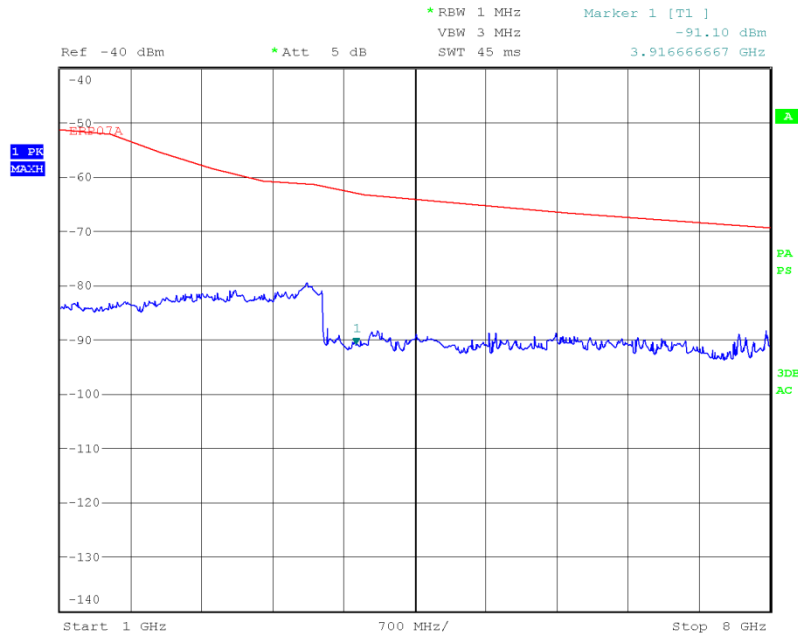


Date: 9.MAY.2015 05:06:00



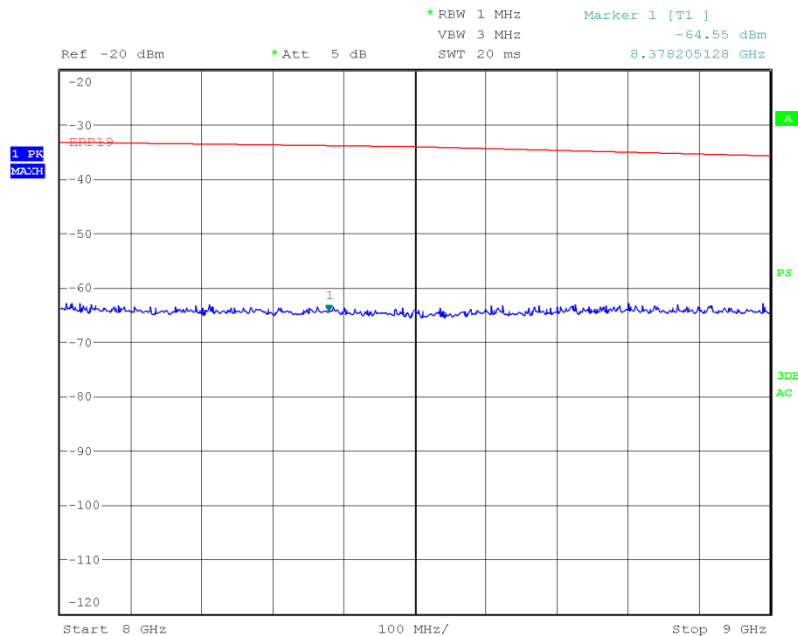
Product Service

LTE FDD 26, 821.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 9.MAY.2015 05:41:53

LTE FDD 26, 821.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

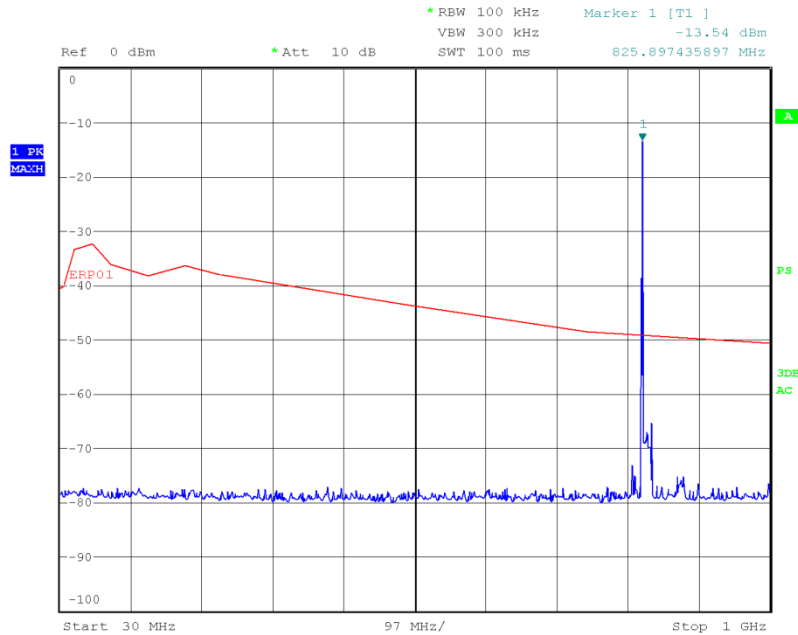


Date: 11.MAY.2015 00:58:16



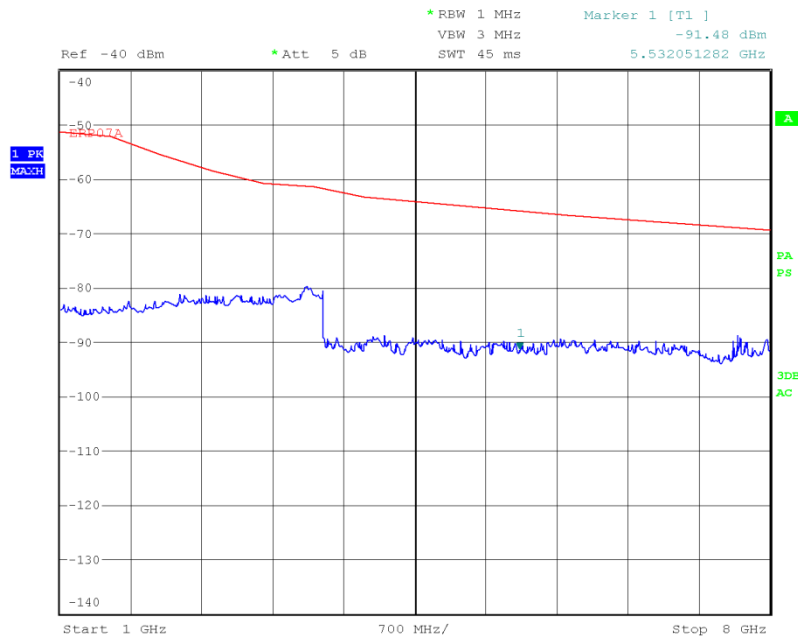
Product Service

LTE FDD 26, 831.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 9.MAY.2015 05:00:01

LTE FDD 26, 831.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

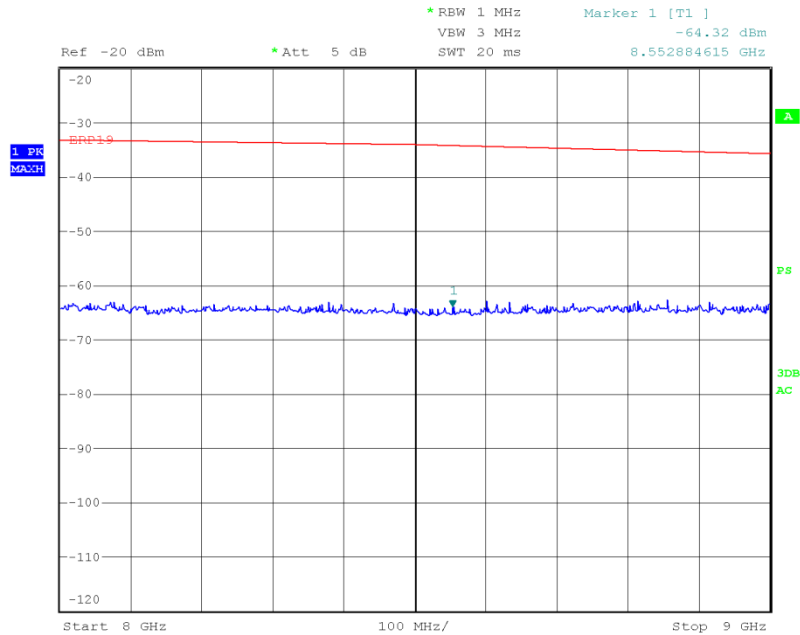


Date: 9.MAY.2015 05:37:02



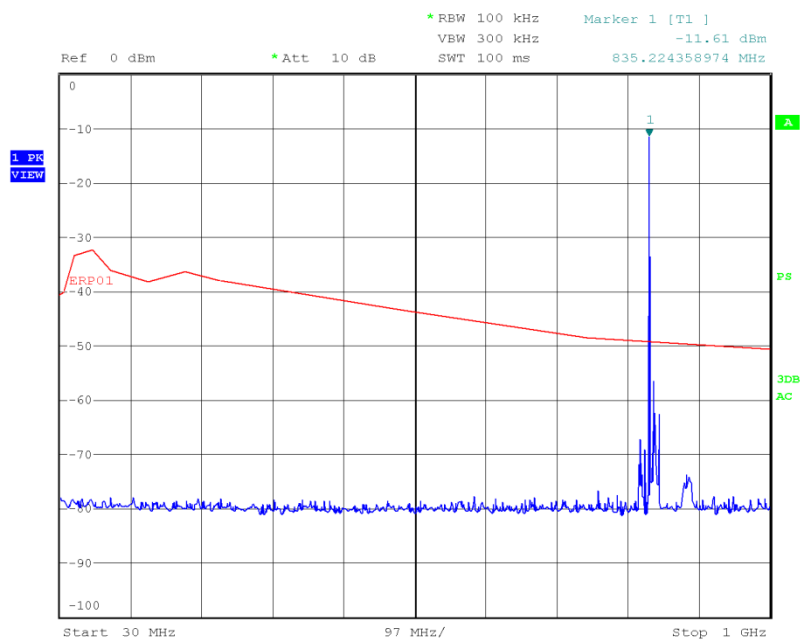
Product Service

LTE FDD 26, 831.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 11.MAY.2015 00:51:41

LTE FDD 26, 841.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

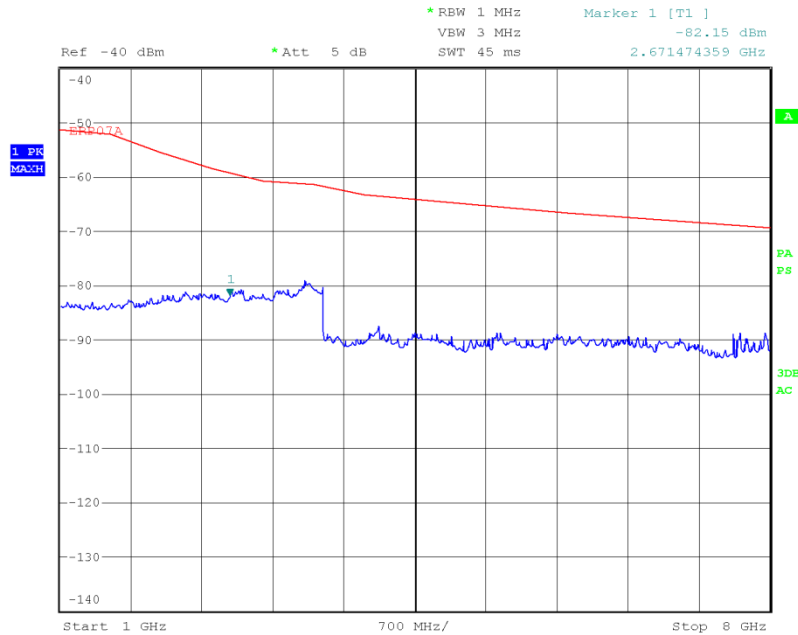


Date: 9.MAY.2015 05:09:06



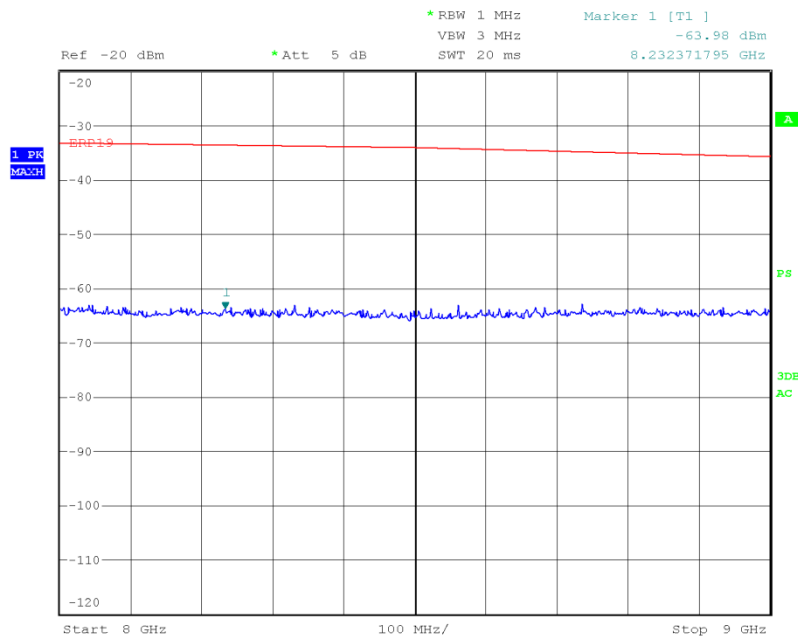
Product Service

LTE FDD 26, 841.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 9.MAY.2015 05:27:21

LTE FDD 26, 841.5 MHz, 1 Resource Block – Mid, 15 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 11.MAY.2015 01:10:27

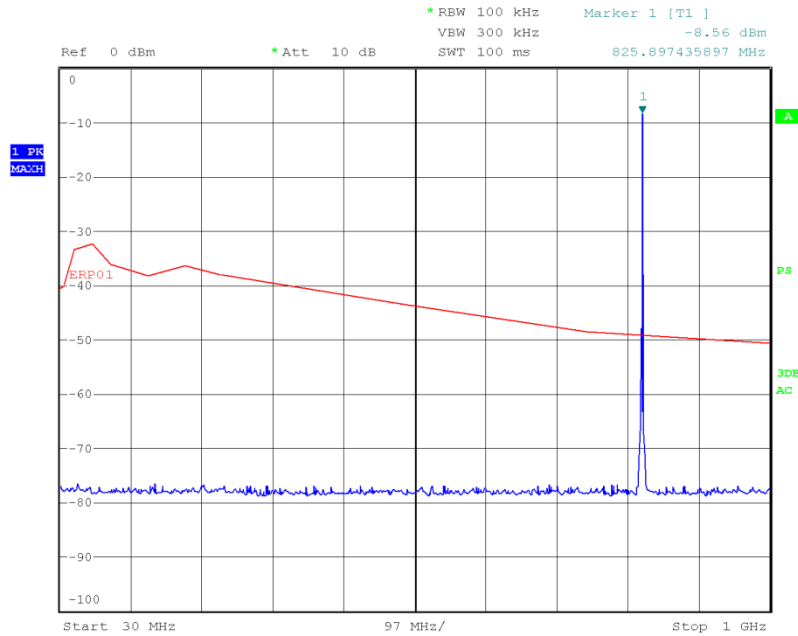
FCC 47 CFR Part 22, Limit Clause 22.917 (a)

$43 + 10 \log(P)$ or -13 dBm



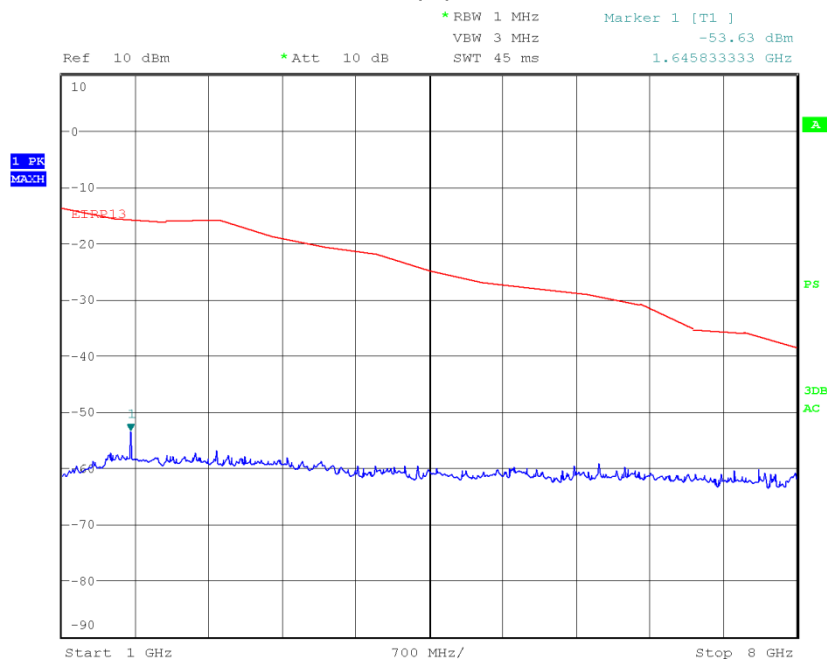
Product Service

LTE FDD 5, 824.7 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 30.APR.2015 23:36:40

LTE FDD 5, 824.7 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

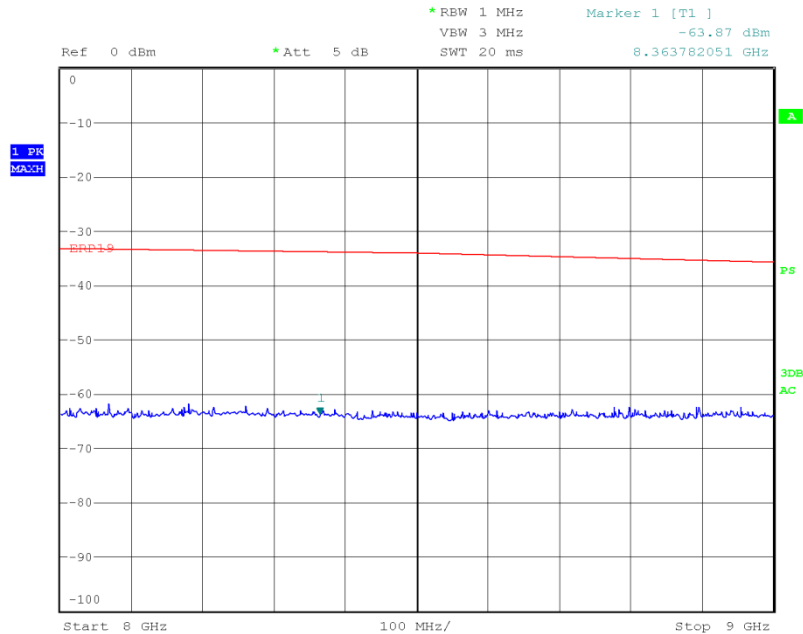


Date: 2.MAY.2015 01:02:22



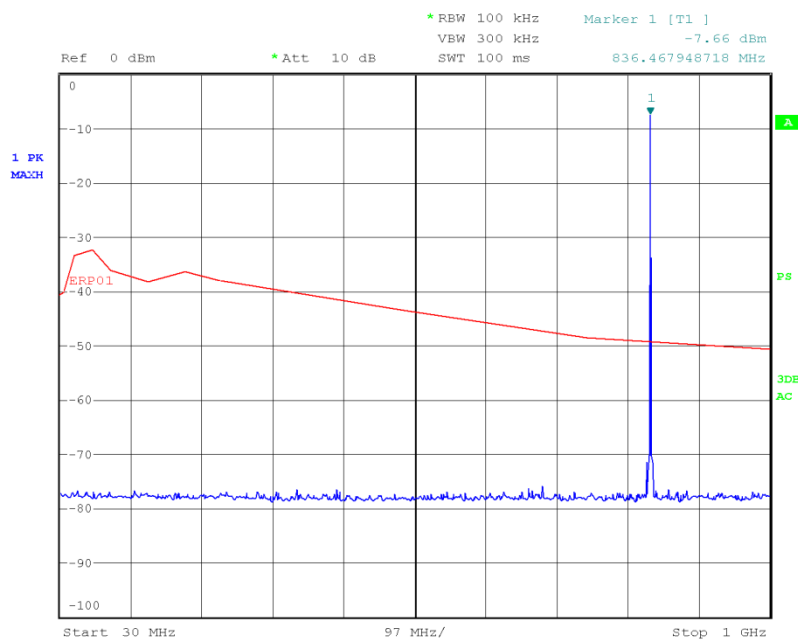
Product Service

LTE FDD 5, 824.7 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 3.MAY.2015 01:45:09

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

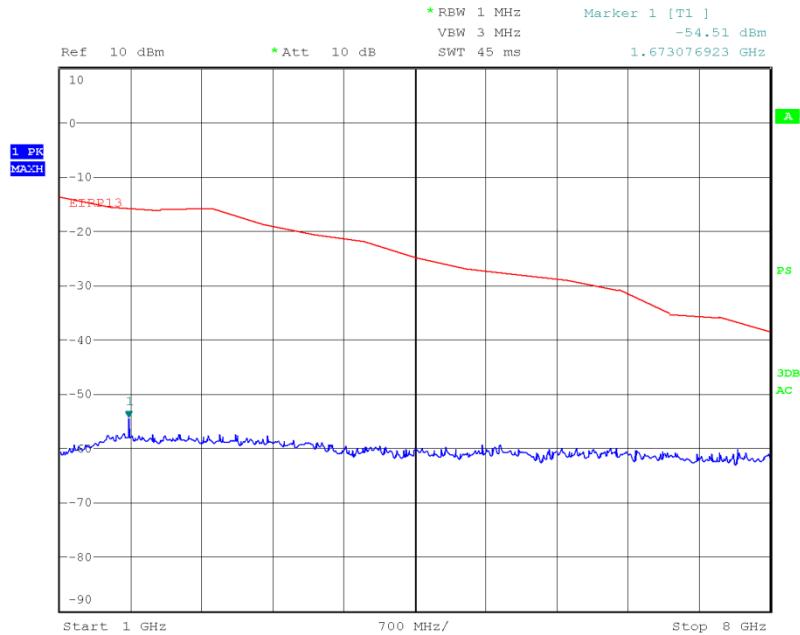


Date: 30.APR.2015 23:20:51



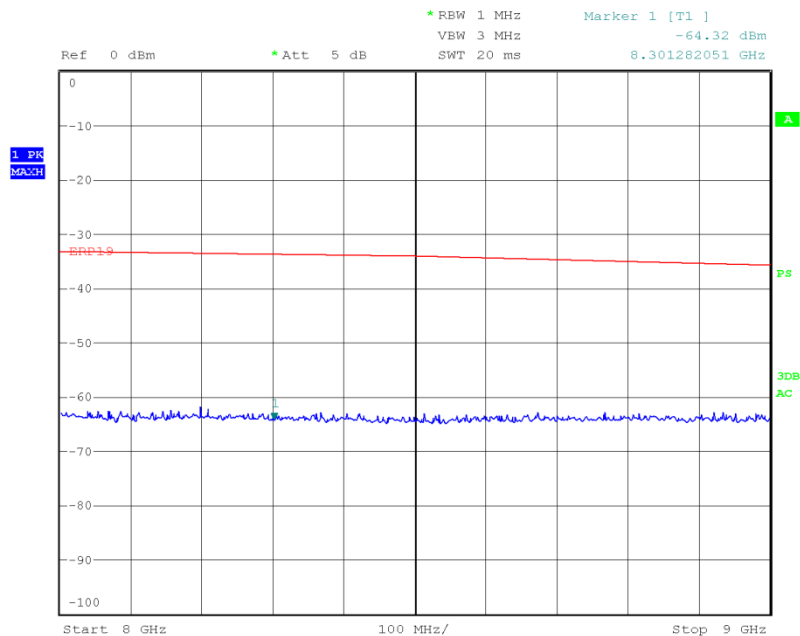
Product Service

**LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, QPSK, 1 GHz to 8 GHz,
Emission Limitations for Cellular Equipment Results**



Date: 2.MAY.2015 01:07:09

**LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, QPSK, 8 GHz to 9 GHz,
Emission Limitations for Cellular Equipment Results**

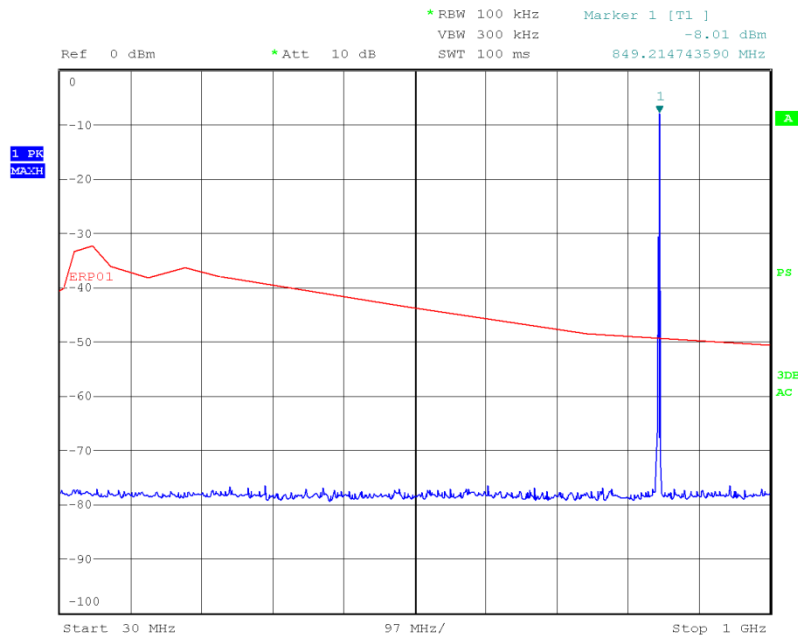


Date: 3.MAY.2015 01:32:40



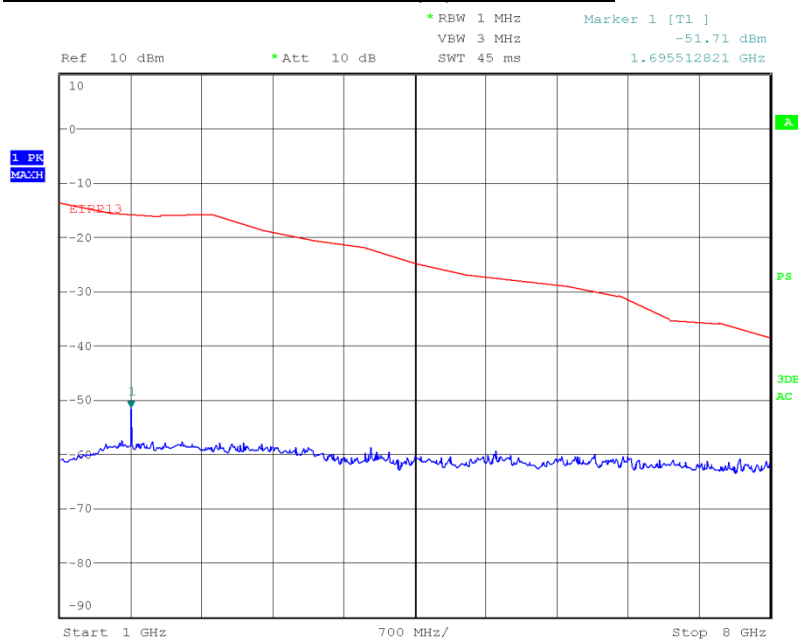
Product Service

LTE FDD 5, 848.3 MHz, 1 Resource Block – Low, 1.4 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 30.APR.2015 23:43:10

LTE FDD 5, 848.3 MHz, 1 Resource Block – Low, 1.4 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

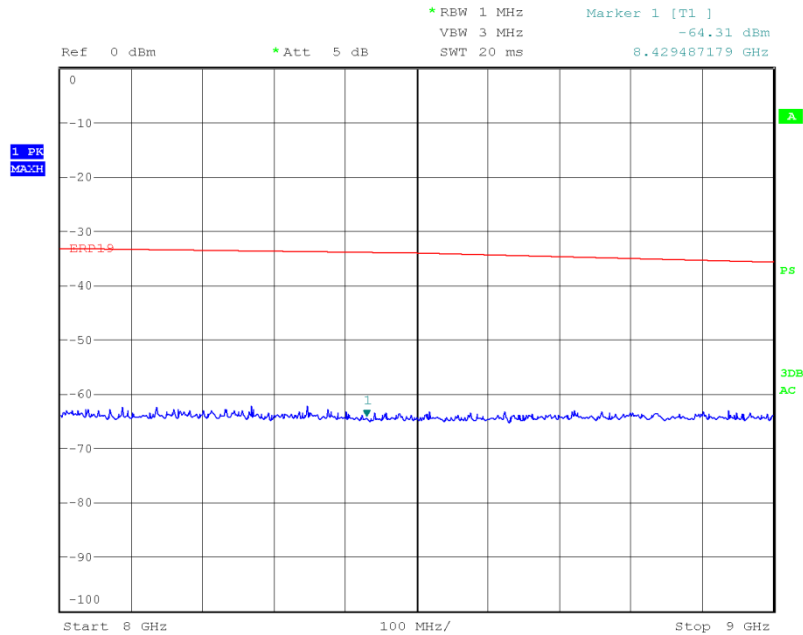


Date: 2.MAY.2015 01:09:01



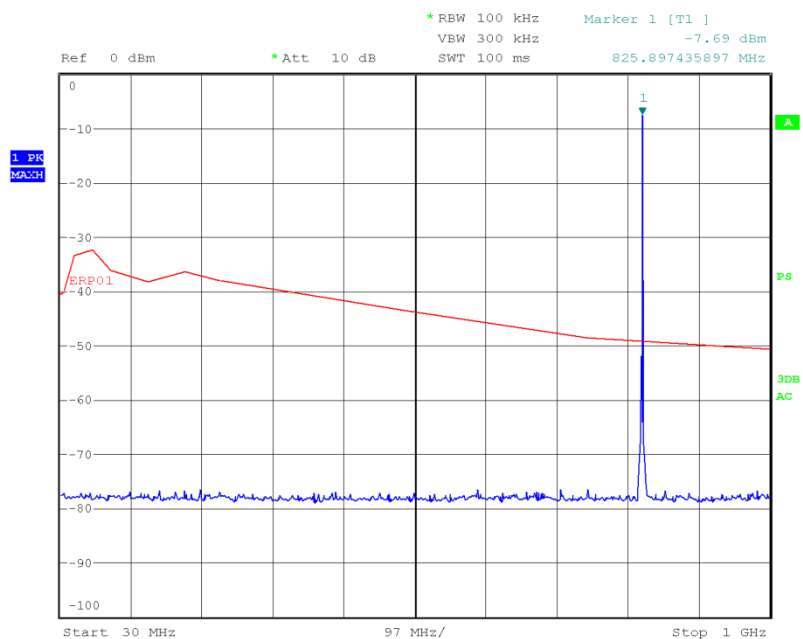
Product Service

LTE FDD 5, 848.3 MHz, 1 Resource Block – Low, 1.4 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 3.MAY.2015 01:36:39

LTE FDD 5, 824.7 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

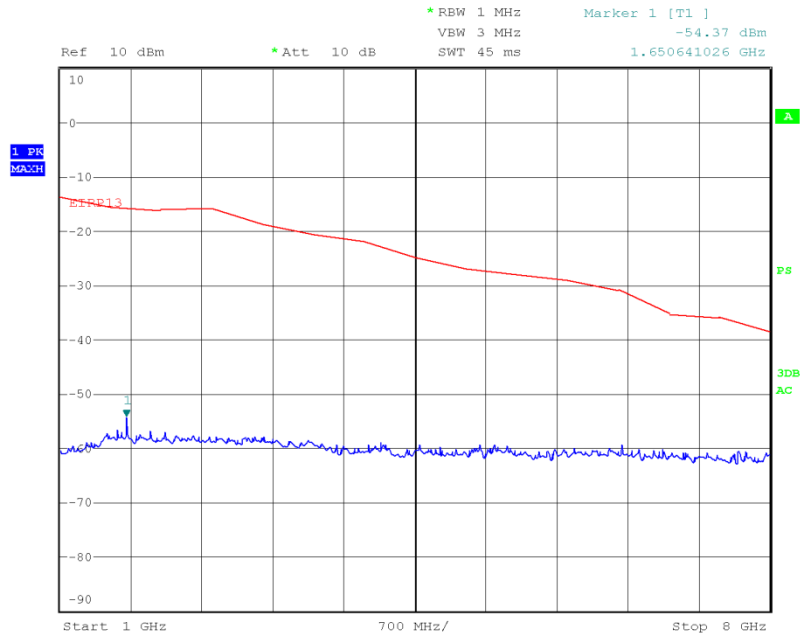


Date: 1.MAY.2015 00:08:01



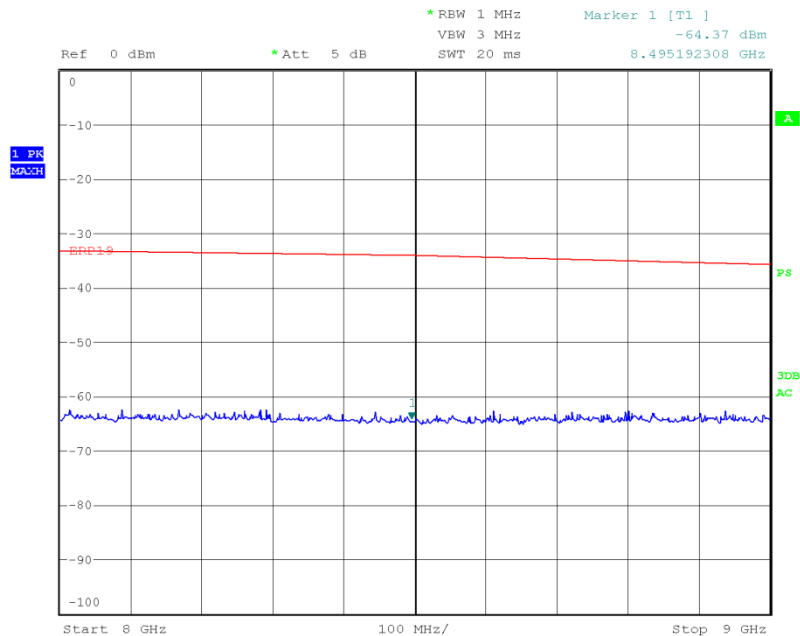
Product Service

LTE FDD 5, 824.7 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 2.MAY.2015 01:27:02

LTE FDD 5, 824.7 MHz, 1 Resource Block – High, 1.4 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

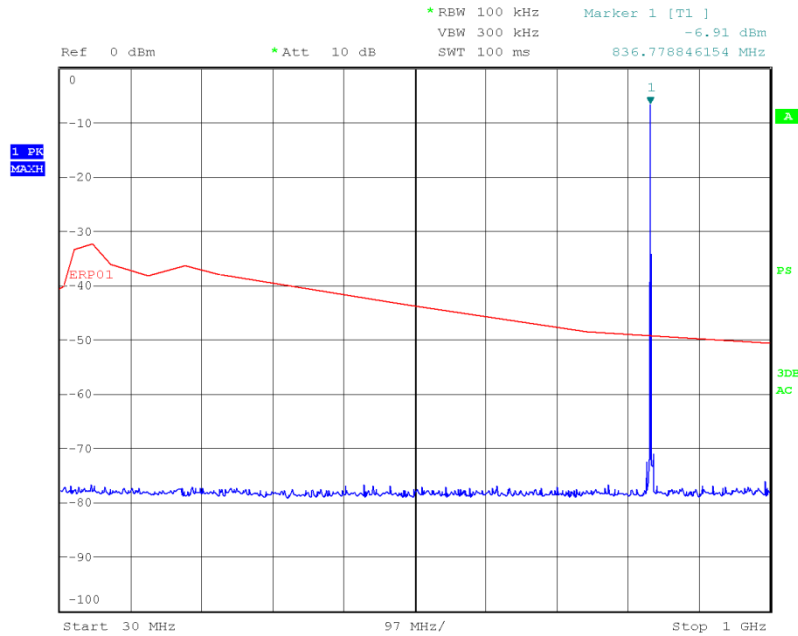


Date: 3.MAY.2015 01:49:38



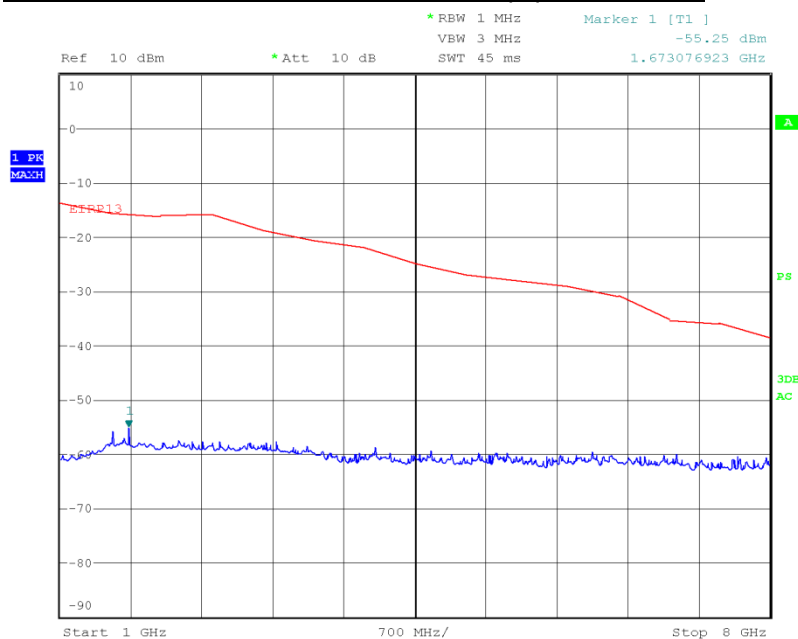
Product Service

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 30.APR.2015 23:55:37

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

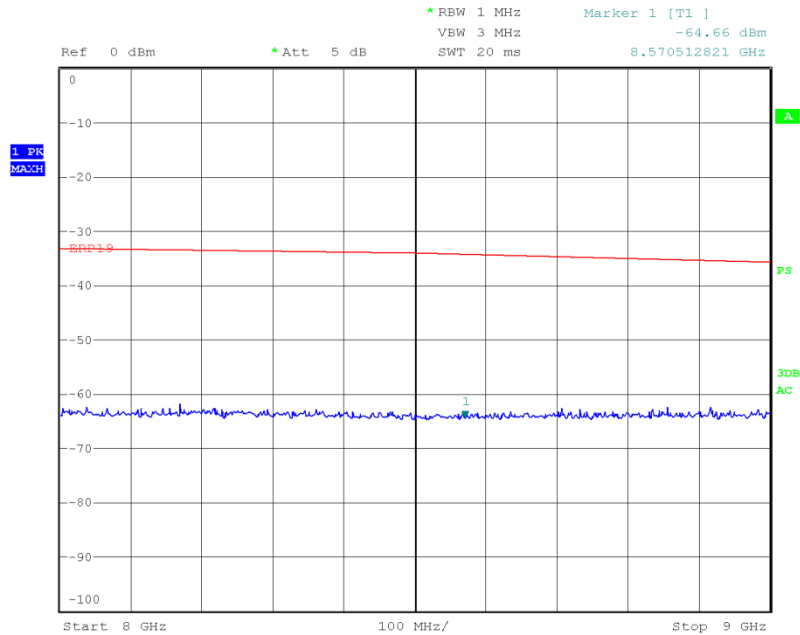


Date: 2.MAY.2015 01:21:23



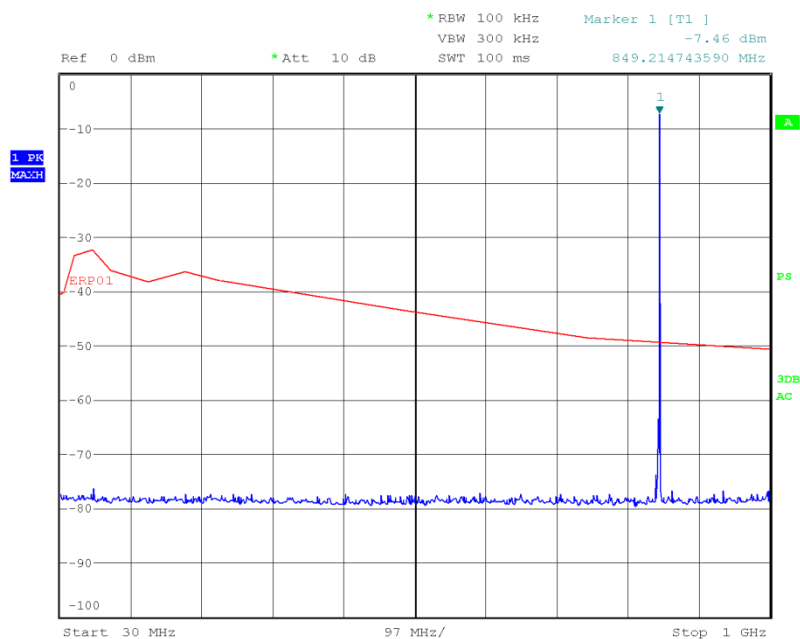
Product Service

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 3.MAY.2015 01:58:44

LTE FDD 5, 848.3 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

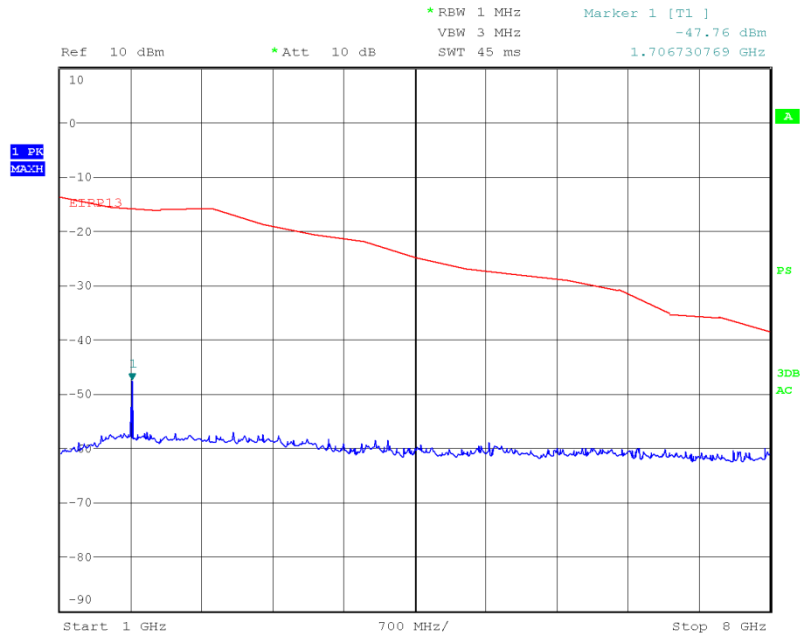


Date: 30.APR.2015 23:47:07



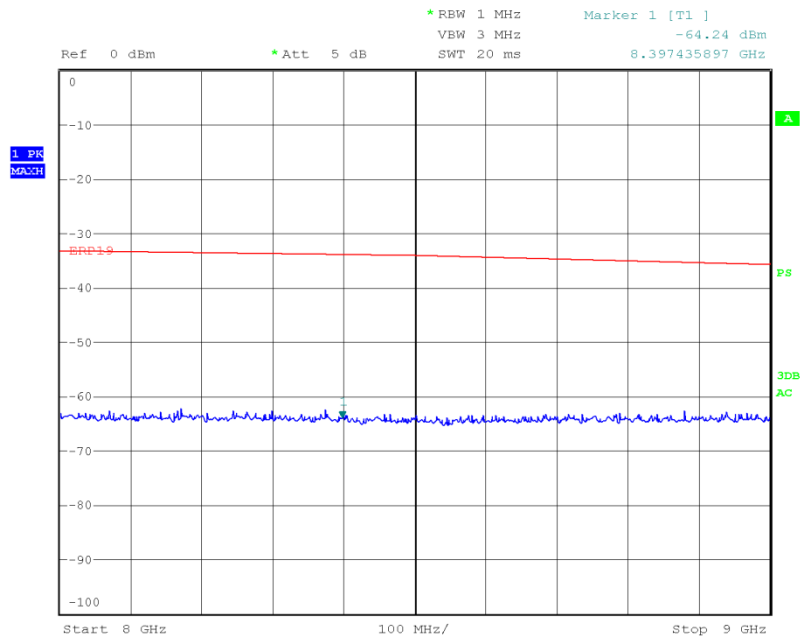
Product Service

LTE FDD 5, 848.3 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 2.MAY.2015 01:18:06

LTE FDD 5, 848.3 MHz, 1 Resource Block – Mid, 1.4 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

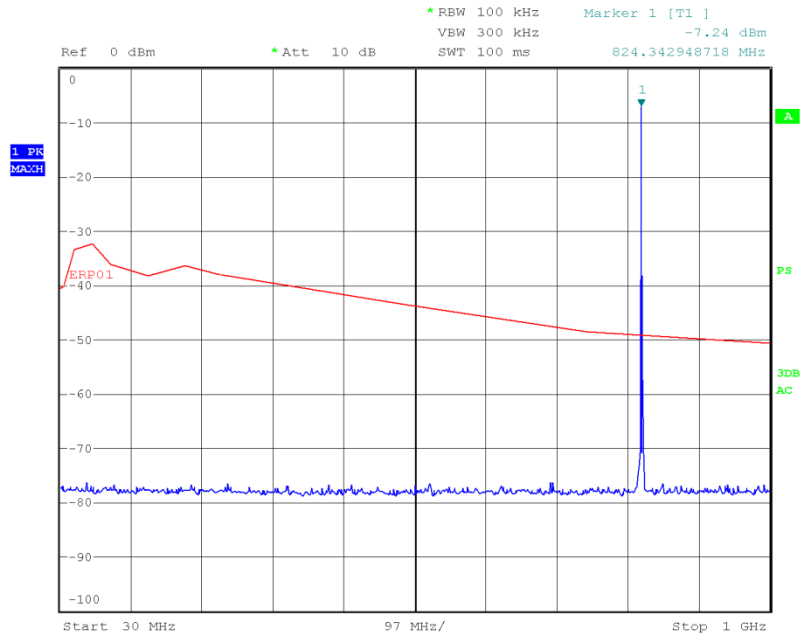


Date: 3.MAY.2015 02:03:03



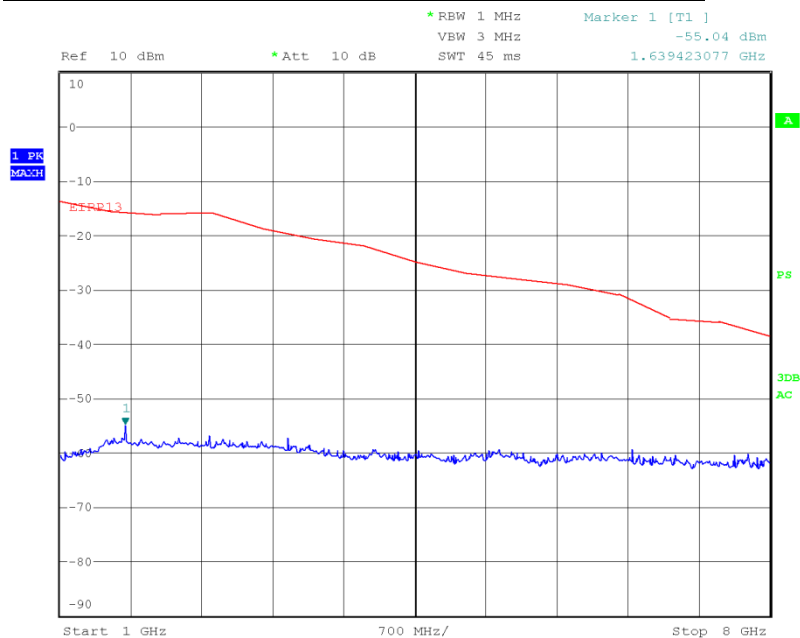
Product Service

LTE FDD 5, 825.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 1.MAY.2015 00:44:13

LTE FDD 5, 825.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

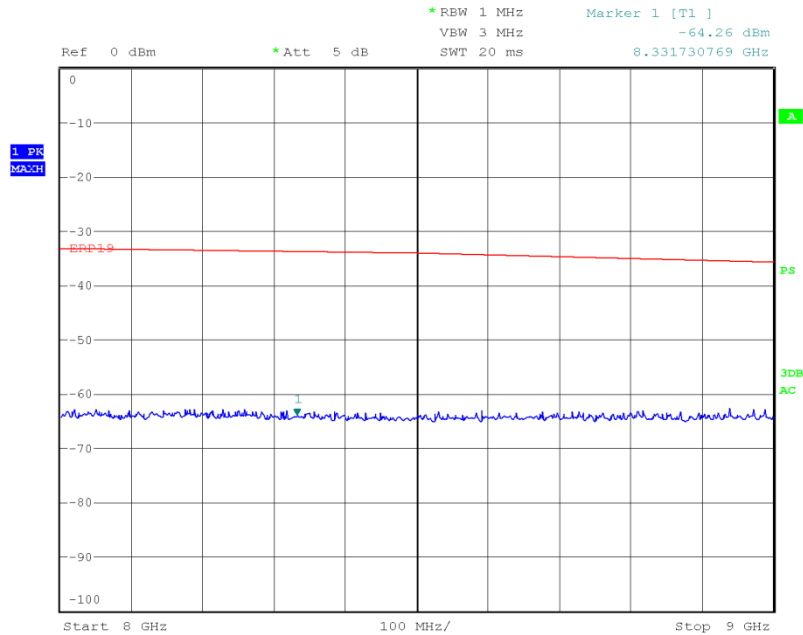


Date: 2.MAY.2015 01:34:47



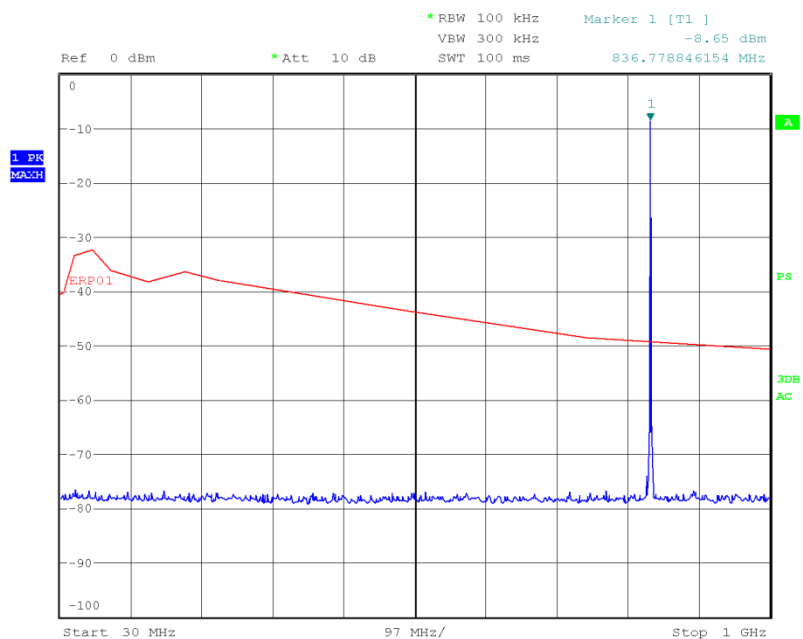
Product Service

LTE FDD 5, 825.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 3.MAY.2015 02:12:32

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 3.0 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

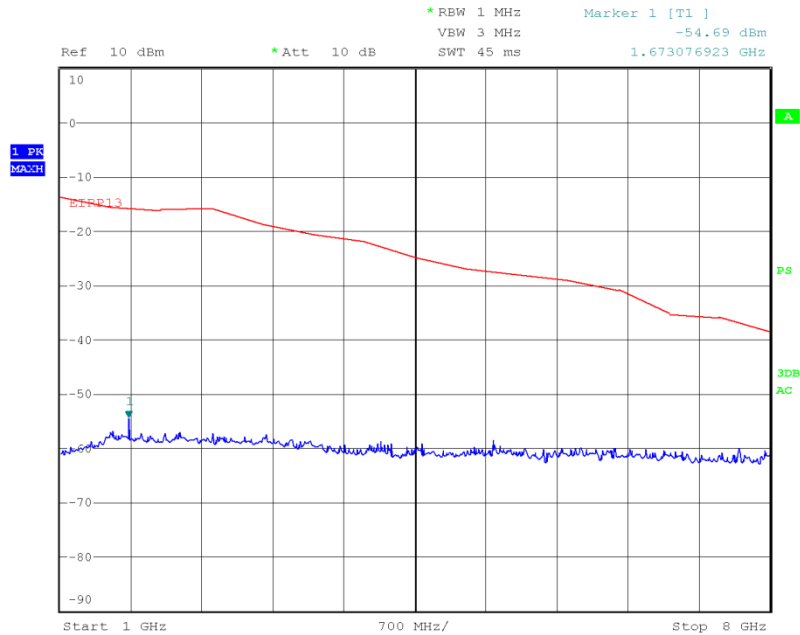


Date: 1.MAY.2015 00:17:23



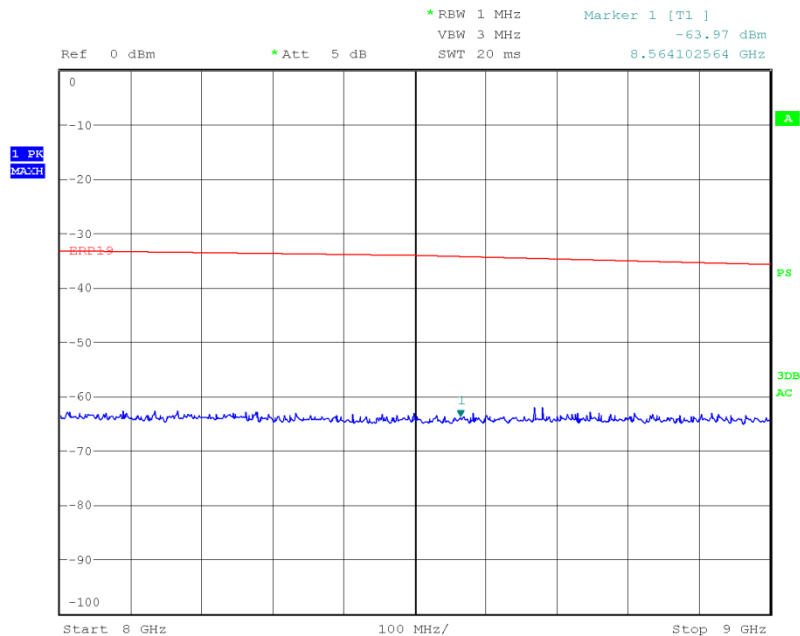
Product Service

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 3.0 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 2.MAY.2015 01:39:39

LTE FDD 5, 836.5 MHz, 1 Resource Block – Mid, 3.0 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

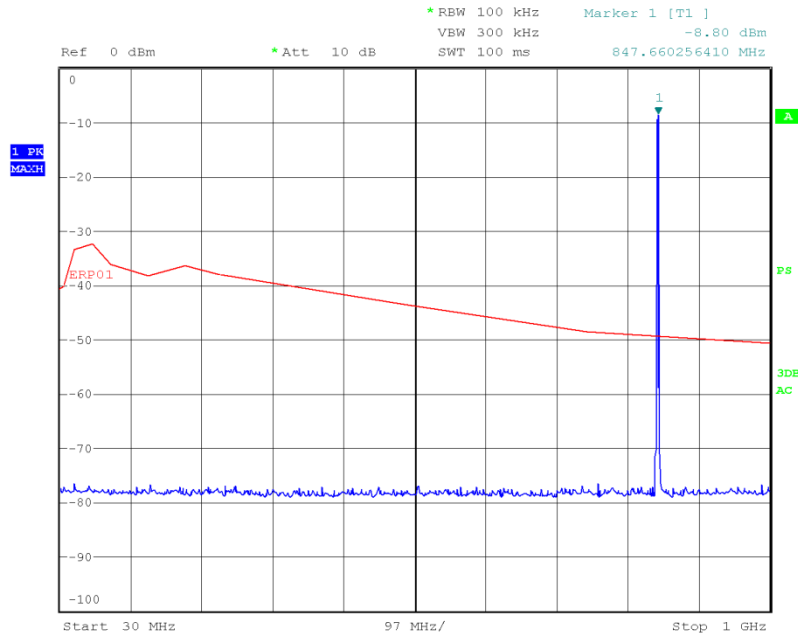


Date: 3.MAY.2015 02:08:24



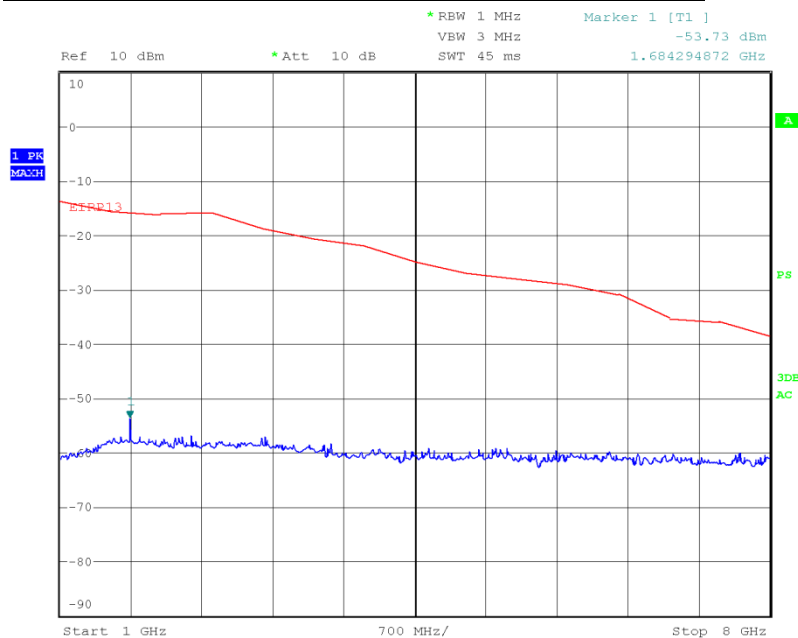
Product Service

LTE FDD 5, 847.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 1.MAY.2015 00:26:32

LTE FDD 5, 847.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

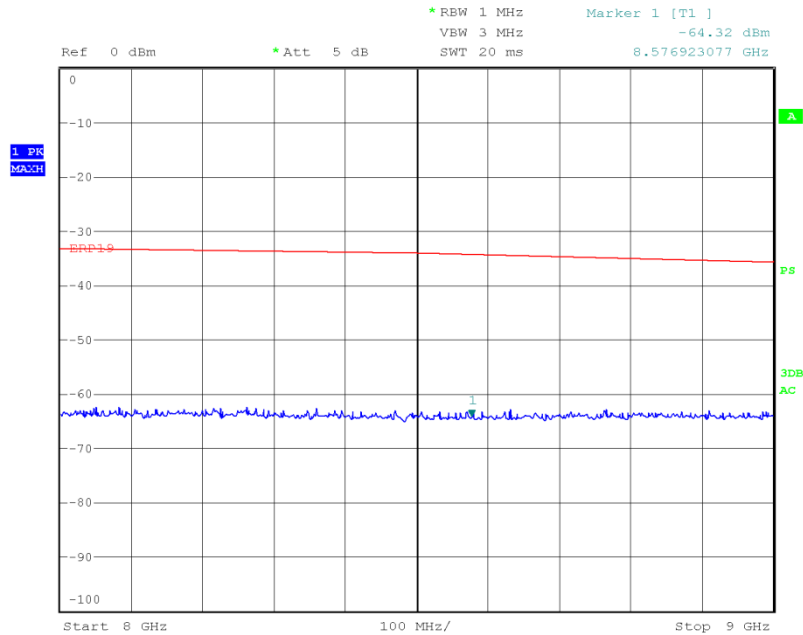


Date: 2.MAY.2015 01:46:53



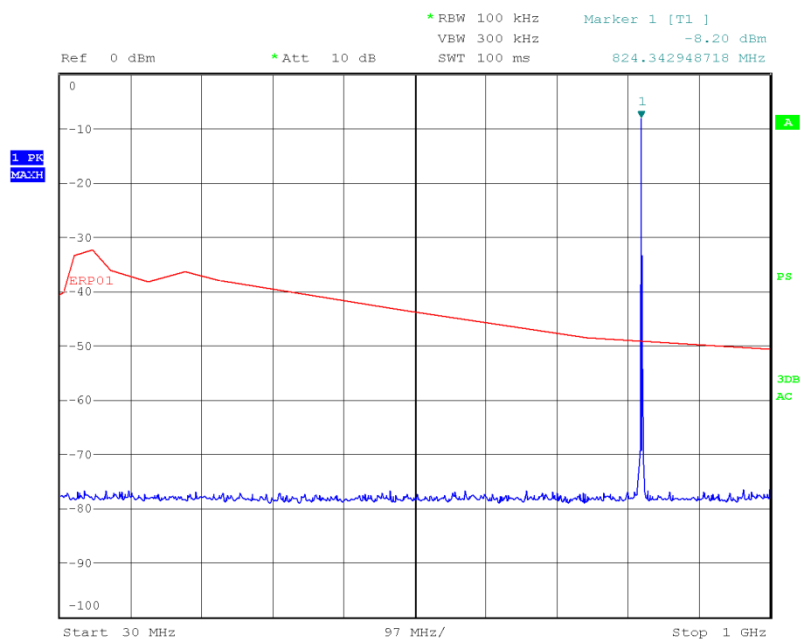
Product Service

LTE FDD 5, 847.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, QPSK, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 3.MAY.2015 02:19:09

LTE FDD 5, 825.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

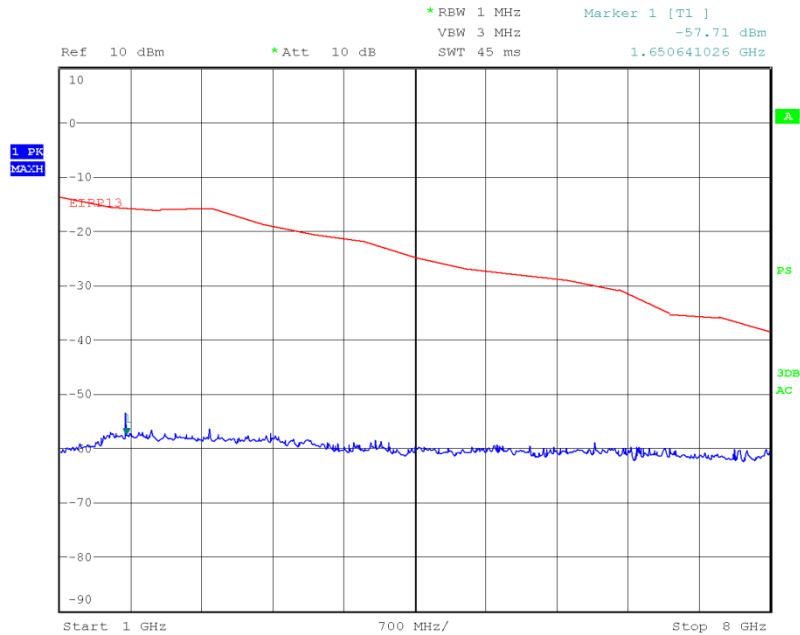


Date: 1.MAY.2015 00:55:48



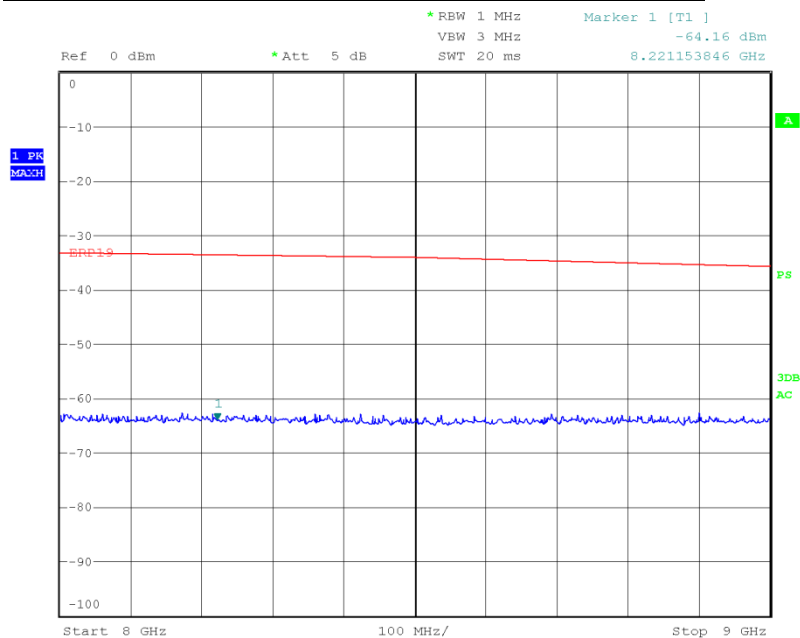
Product Service

LTE FDD 5, 825.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 2.MAY.2015 02:18:37

LTE FDD 5, 825.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

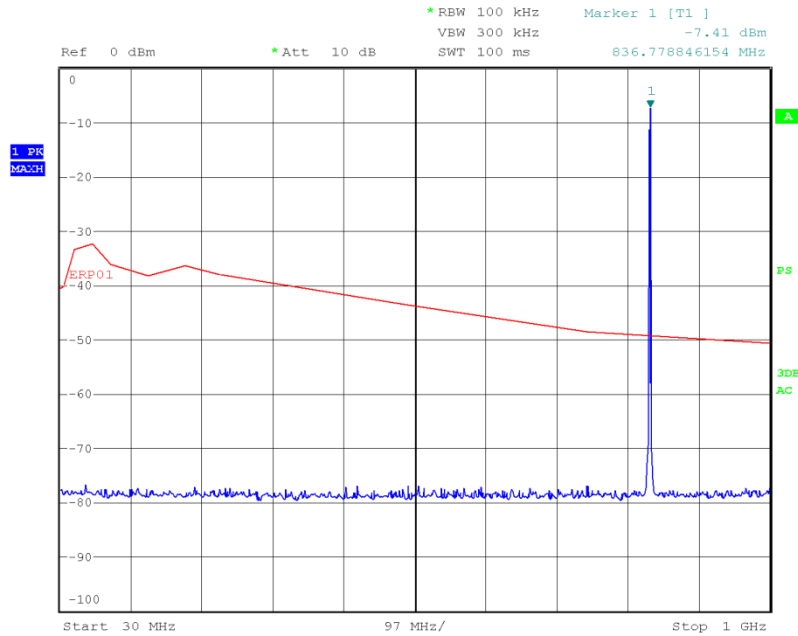


Date: 3.MAY.2015 02:43:33



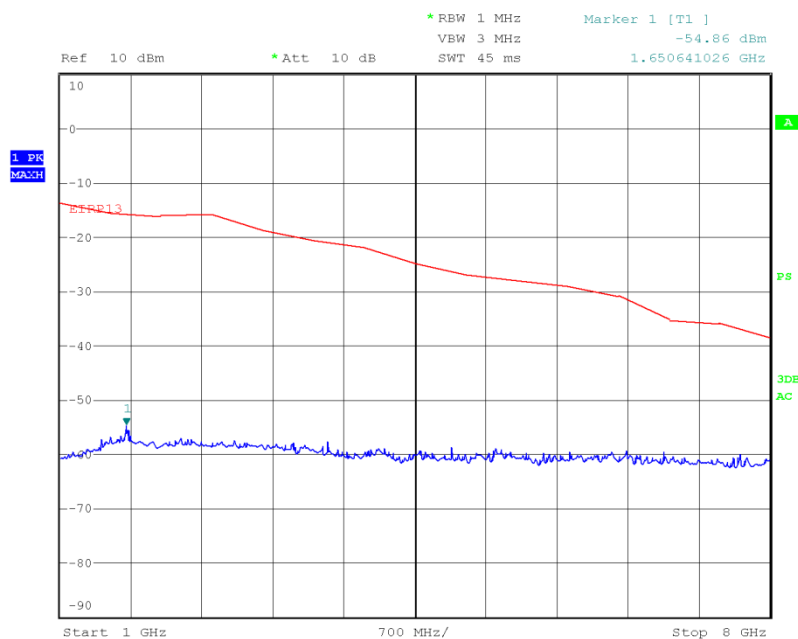
Product Service

LTE FDD 5, 836.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 1.MAY.2015 00:59:28

LTE FDD 5, 836.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results

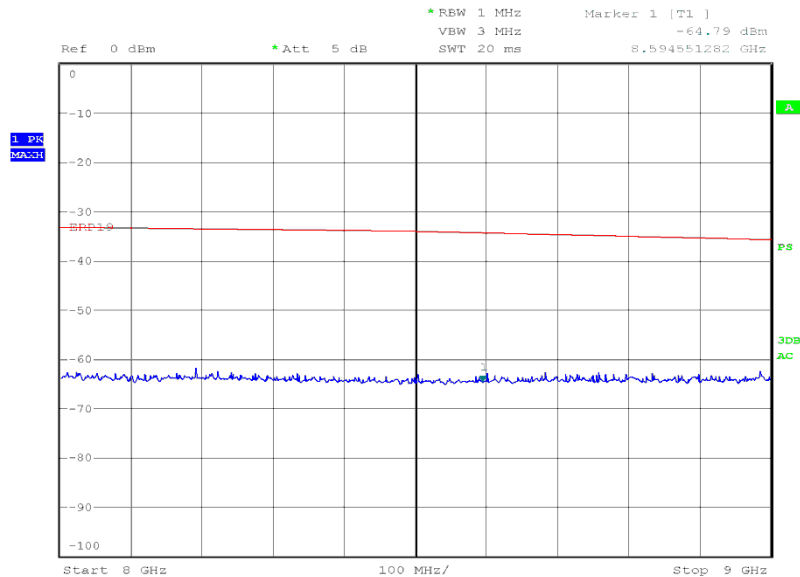


Date: 2.MAY.2015 02:02:58



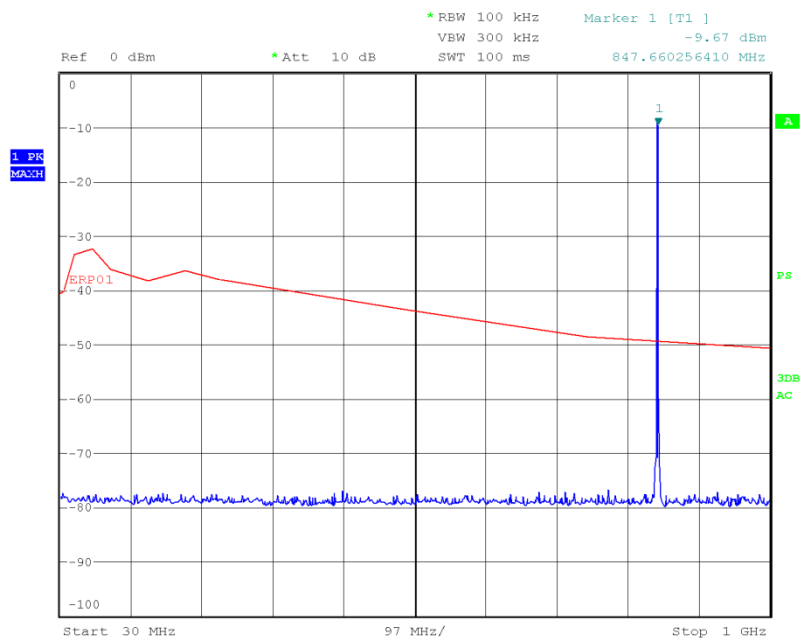
Product Service

LTE FDD 5, 836.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results



Date: 3.MAY.2015 02:37:53

LTE FDD 5, 847.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results

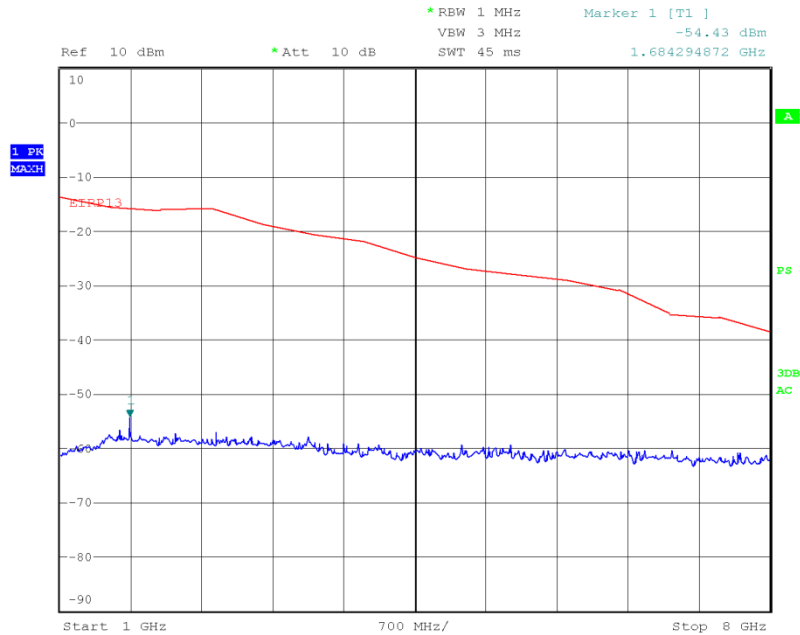


Date: 1.MAY.2015 01:01:43



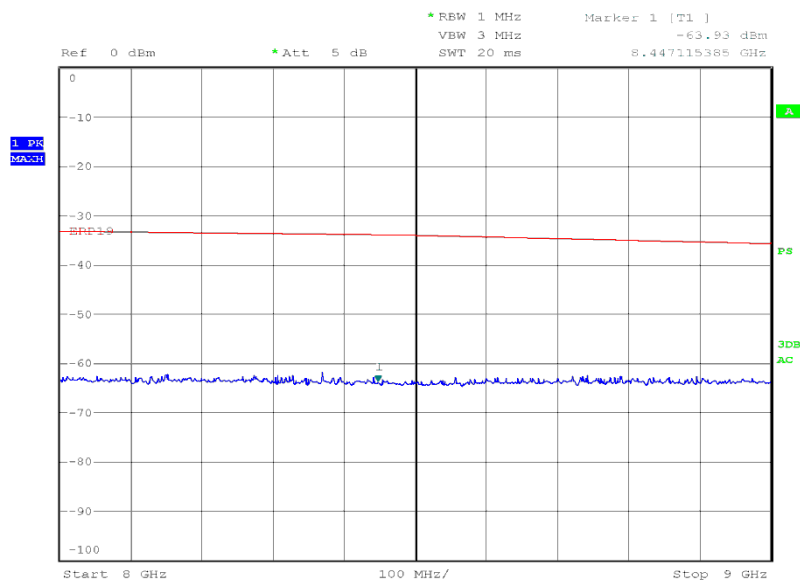
Product Service

LTE FDD 5, 847.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 2.MAY.2015 01:49:33

LTE FDD 5, 847.5 MHz, 1 Resource Block – Low, 3.0 MHz Bandwidth, 16-QAM, 8 GHz to 9 GHz, Emission Limitations for Cellular Equipment Results

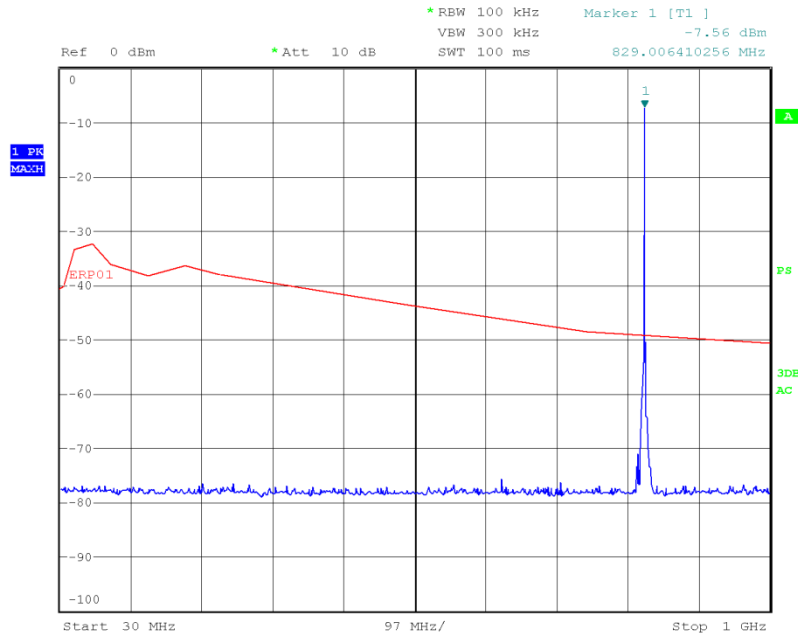


Date: 3.MAY.2015 02:32:16



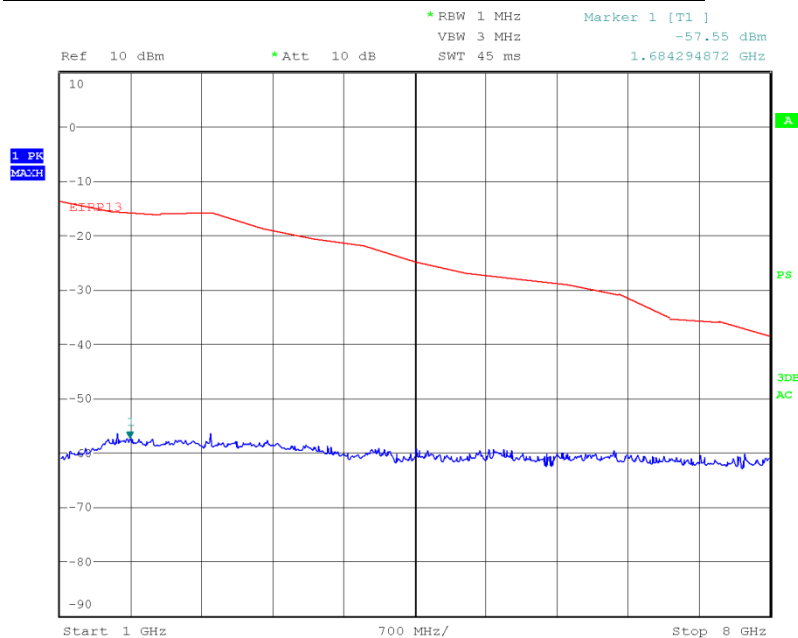
Product Service

LTE FDD 5, 826.5 MHz, 1 Resource Block – High, 5.0 MHz Bandwidth, QPSK, 30 MHz to 1 GHz, Emission Limitations for Cellular Equipment Results



Date: 1.MAY.2015 01:32:41

LTE FDD 5, 826.5 MHz, 1 Resource Block – High, 5.0 MHz Bandwidth, QPSK, 1 GHz to 8 GHz, Emission Limitations for Cellular Equipment Results



Date: 2.MAY.2015 02:37:57