

Annex 4: Measurement diagrams
to TEST REPORT
No.: 6-0491-14-13-2a-C2

According to:
FCC Regulations
Part 27

for

peiker acoustic GmbH & Co. KG

V1140-100
GSM/UMTS/LTE module

FCC-ID: QWY-V1140-100

Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01	 Reg. No.: 736496 MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 AUTHORIZED RF LABORATORY	 Authorized Test Lab LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

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1. Measurement diagrams LTE-mode

1.1. Magnetic emissions radiated (LTE Band 7)

Diagram No. 2.01

Test description:	Magnetic Field strength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V8.51.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209
Operator:	Yzh
Operating conditions:	TX LTE Band 7, Ch=20775, BW=5MHz, 1RB low, QPSK Modulation
Power during tests:	3.8V DC

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module
EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

FCC15.209_magn hor+vert

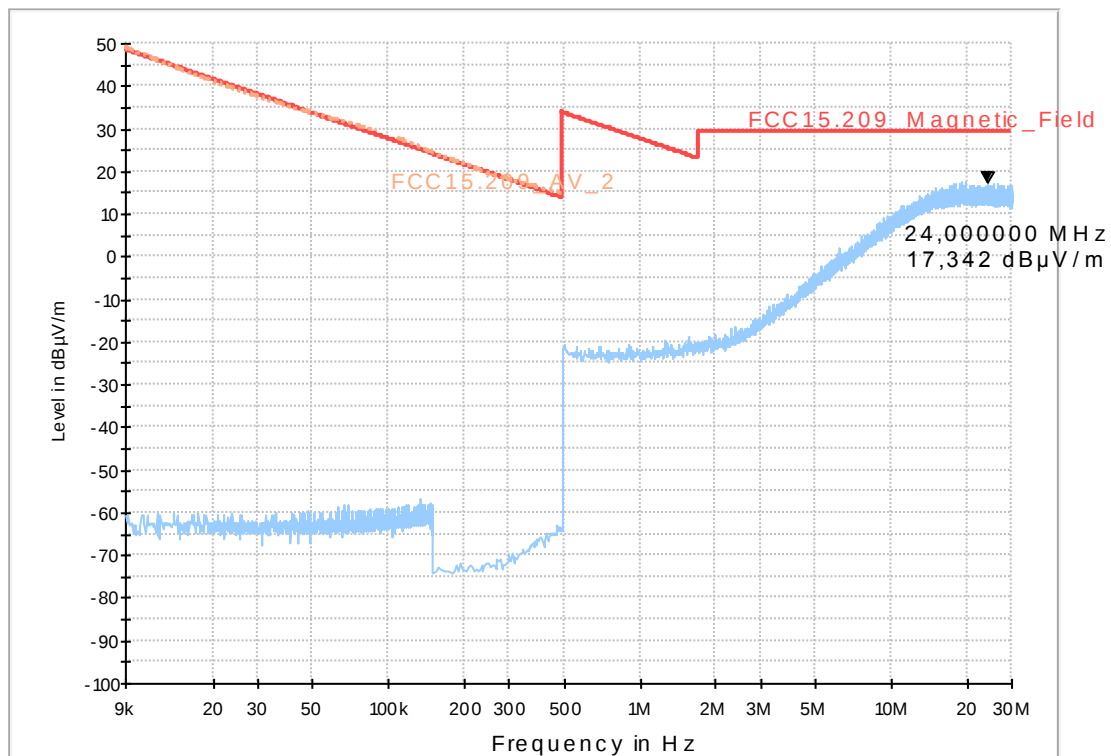


Diagram No. 2.02

Test description:	Magnetic Fieldstrength Measurement related to 30/300 m distance
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V8.51.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209
Operator:	Yzh
Operating conditions:	TX LTE Band 7, Ch=21100, BW=10MHz, 25 RB low, QPSK Modulation
Power during tests:	3.8V DC

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

FCC15.209_magn hor+vert

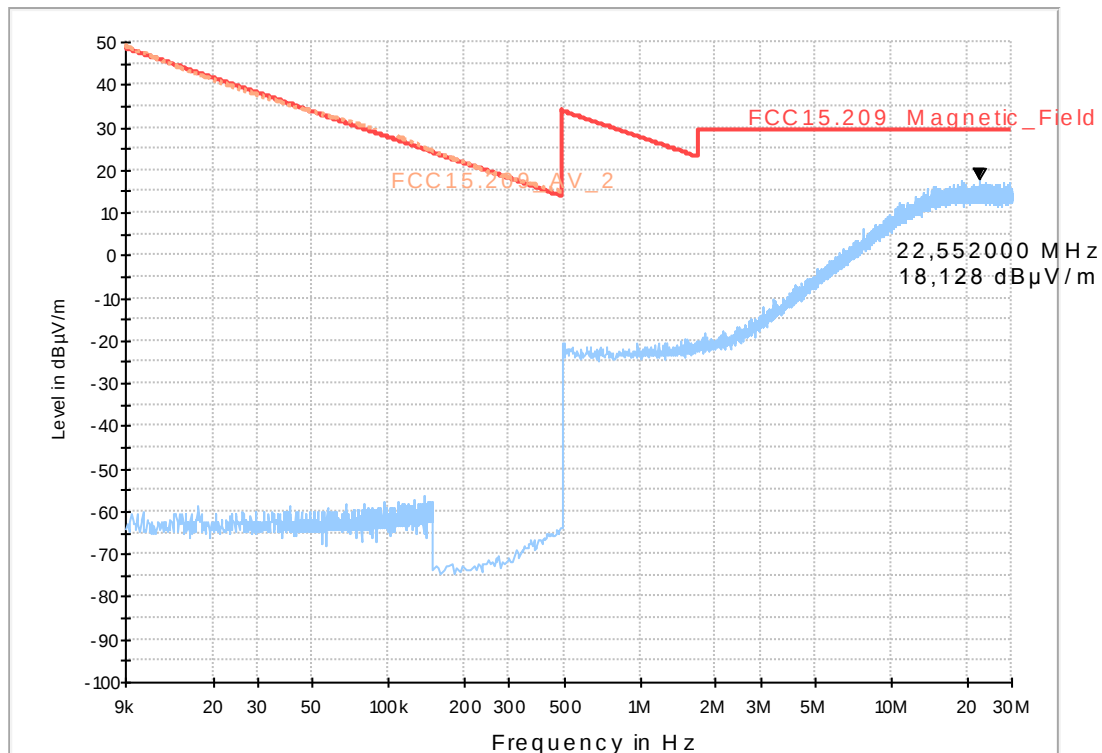


Diagram No. 2.03

Test description:	Date: 15.08.2014 Page 1 of 1
Test site and distance:	Magnetic Field strength Measurement related to 30/300 m distance
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	EMC32 V8.51.0
Technical Data:	used accord. table, pls. see test report
Rec. antenna (pre-scan):	Please see page 2 for detailed data of measurement setup
Used filter:	height 1.00 m, parallel and 90° to EUT polarisation
Test specification:	bypass
	FCC 15.205 § 15.209
Operator:	Yzh
Operating conditions:	TX LTE Band 7, Ch=21350, BW=20MHz, 50RB low, QPSK Modulation
Power during tests:	3.8V DC
Comment:	

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

FCC15.209_magn hor+vert

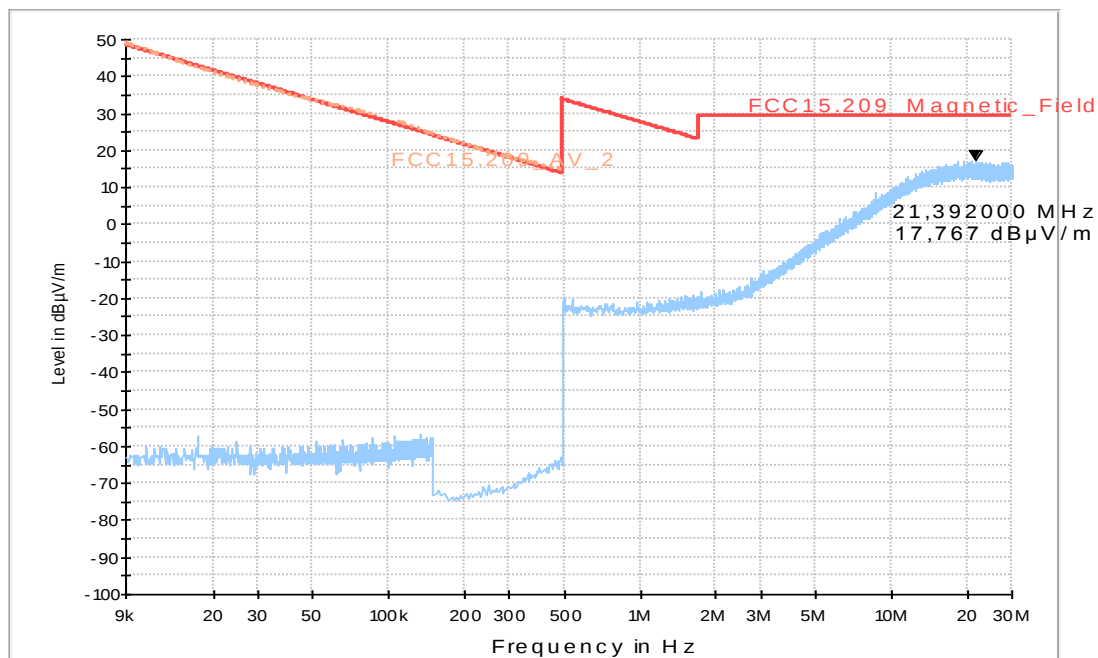


Diagram No. 2.04

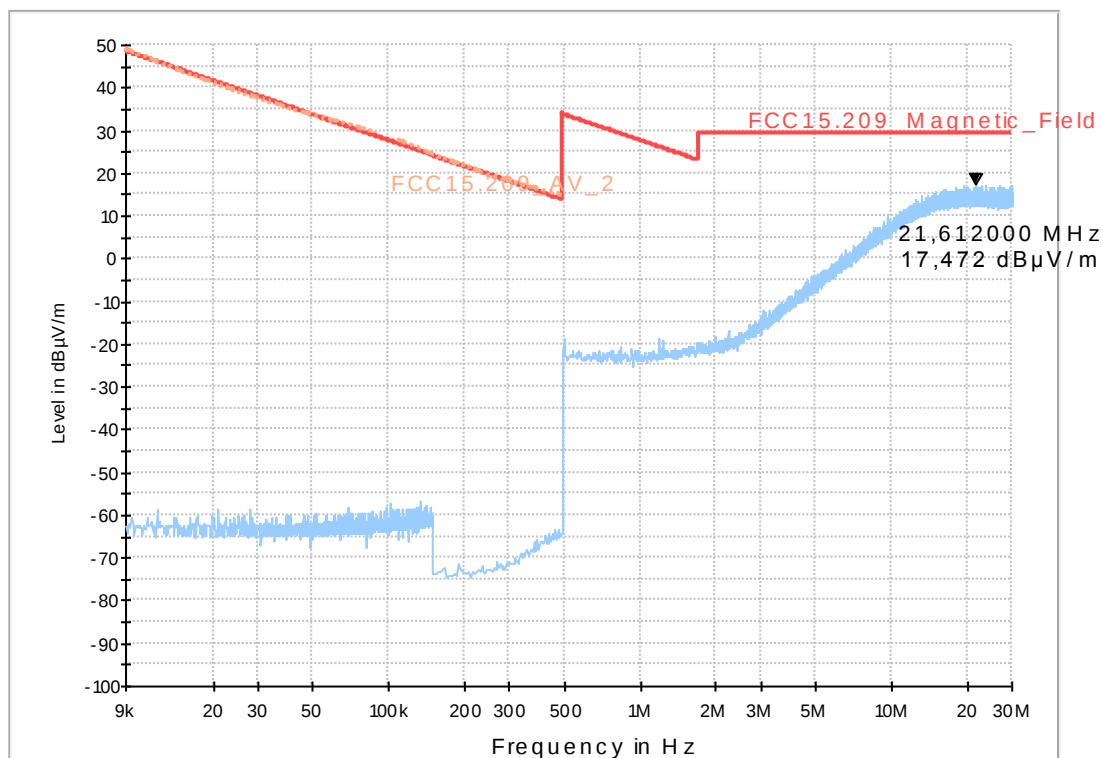
Test description:	Date: 15.08.2014 Page 1 of 1
Test site and distance:	Magnetic Field strength Measurement related to 30/300 m distance
Version of Testsoftware:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Distance correction:	EMC32 V8.51.0
Technical Data:	used accord. table, pls. see test report
Rec. antenna (pre-scan):	Please see page 2 for detailed data of measurement setup
Used filter:	height 1.00 m, parallel and 90° to EUT polarisation
Test specification:	bypass
	FCC 15.205 § 15.209
Operator:	Yzh
Operating conditions:	TX LTE Band 7, Ch=21100, BW=10MHz, 25 RB low, QPSK Modulation
Power during tests:	3.8V DC
Comment:	

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

FCC15.209_magn hor+vert



1.2. Spurious emissions radiated (LTE Band 7)

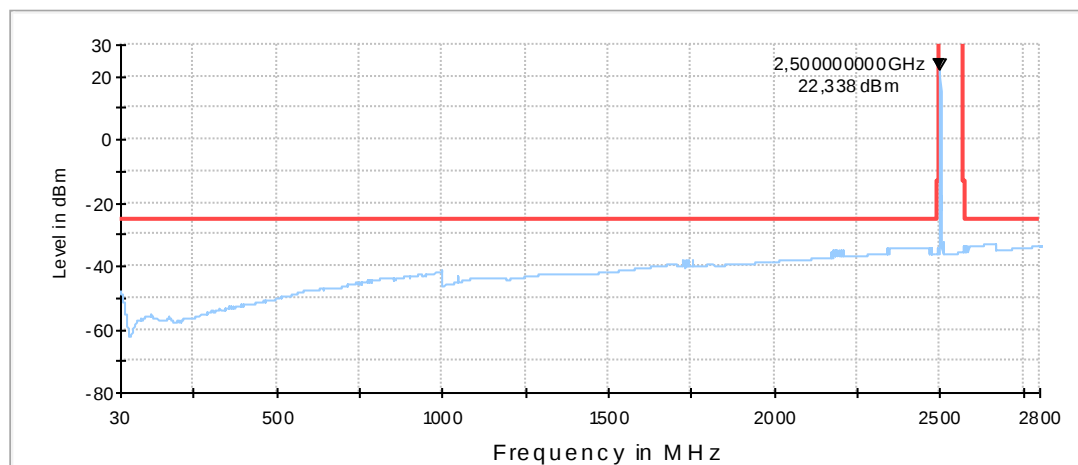
36.701a_RSE_R_Ch20775_BW_5MHz_QPSK

Common Information

Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5MHz/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module
EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1



36.701b_RSE_R_Ch20775_BW_5MHz_QPSK

Common Information

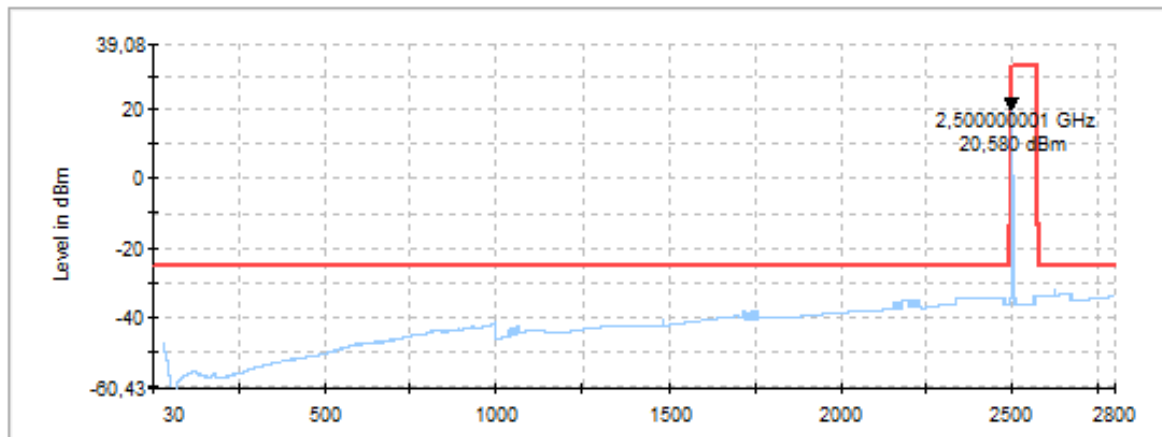
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5MHz/ RB: 1/ Position: Low
Environmental Conditions:	Humidity: 53%rH; Temperature: 22,8°C
Test SW Version:	EMC32 V8.53.0
Operator:	KMo
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_Sweep1_FCC_Part27_LTE7_TX_all_channels_30M-2.8GHz_no_kipp



36.702a_RSE_R_Ch20775_BW_5MHz_QPSK

Common Information

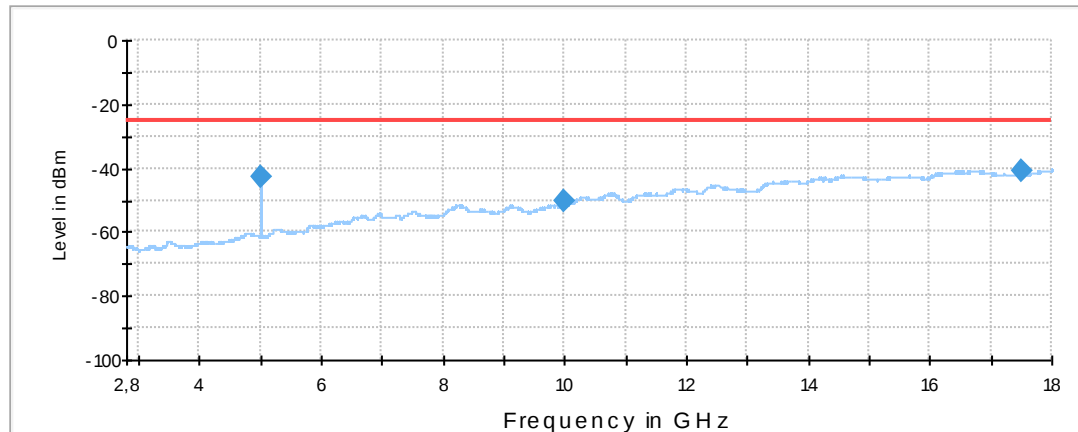
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Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5MHz/ RB: 1/ Position: Low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030421_Sweep2_FCC_Part27_LTE7_TX_all_channels_2.8-20GHz_no_kip|



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
5000.590219	-42.7	1000.0	1000.000	V	282.0	-91.2	17.7	-25.0
10001.21858	-50.2	1000.0	1000.000	V	135.0	-80.7	25.2	-25.0
17502.48756	-40.6	1000.0	1000.000	V	35.0	-70.1	15.6	-25.0

36.702b_RSE_R_Ch20775_BW_5MHz_QPSK

Common Information

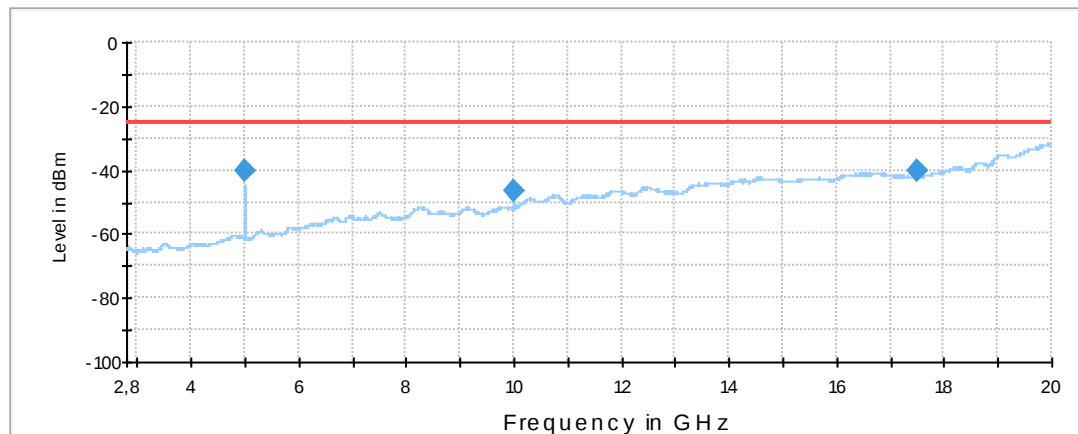
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5MHz/ RB: 1/ Position: Low
Environmental Conditions:	Humidity: 51%rH; Temperature: 23,9°C
Test SW Version:	EMC32 V8.53.0
Operator:	KMo
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030421_Sweep2_FCC_Part27_LTE7_TX_all_channels_2.8-20GHz_no_kip|



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
5000.661323	-40.1	1000.0	1000.000	H	282.0	-91.2	15.1	-25.0
10001.346862	-46.5	1000.0	1000.000	V	33.0	-80.7	21.5	-25.0
17502.419408	-40.3	1000.0	1000.000	V	35.0	-70.1	15.3	-25.0

Diagram No.: 36.709_RSE_R_Ch20775_BW_5MHz_QPSK

Common Information

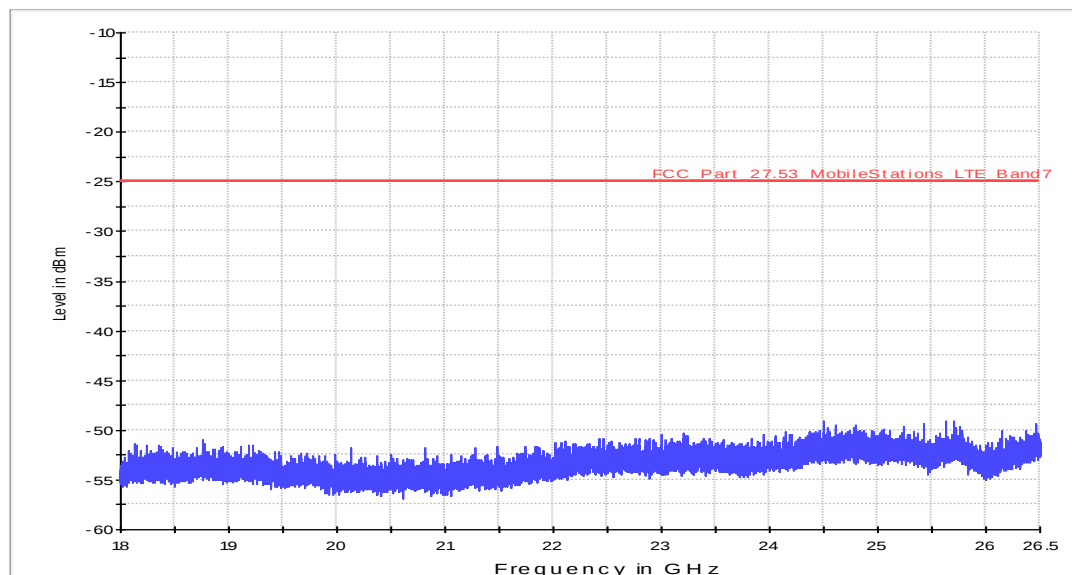
Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2, EMC 32 v. 8.53.0
Test Standard:	FCC Part 27(l)(4)
Environment conditions:	Normal conditions (Vnominal, Tnominal)
Operator name:	dpa
Operating mode:	LTE Band7 TX: TX - Channel 20775/ 1 RBlow/ BW= 5MHz / Modulation=QPSK
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

Fula2_FCC_Part27_LTE_Bd7_18_26.5GHz_Peak



Scan Setup: Fula2_FCC_Part27_LTE_Bd7_18_26.5GHz_Peak [EMI radiated]

Hardware Setup:	HW08b_15G- 26G_radiated_ESU26_dBm_PreampMiteq40G_1m_distance_dBm
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
18 GHz - 26.5 GHz	400 kHz	PK+	1 MHz	0.001 s	0 dB

36.704a_RSE_R_Ch21100_BW_10MHz_QPSK**Common Information**

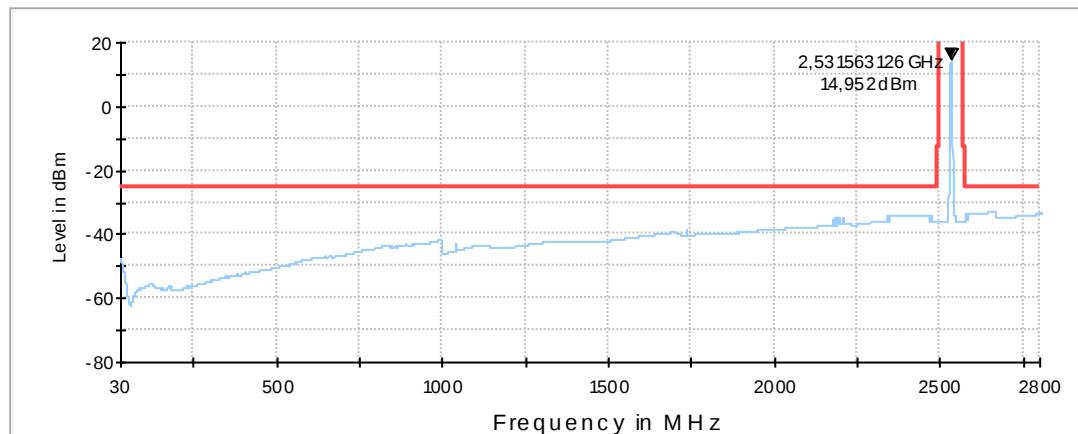
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21100/ BW: 10/ RB: 25/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_Sweep1_FCC_Part27_LTE7_TX_all_channels_30M-2.8GHz_no_kij



36.704b_RSE_R_Ch21100_BW_10MHz_QPSK

Common Information

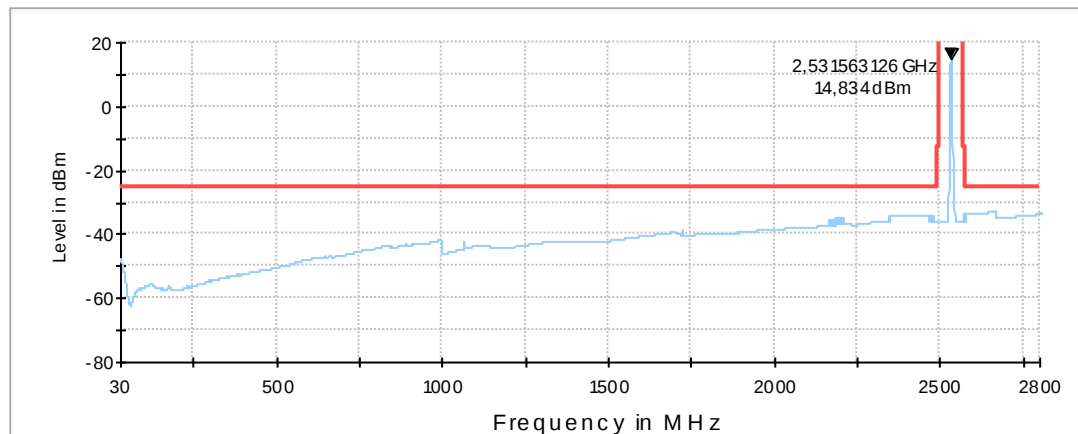
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21100/ BW: 10/ RB: 25/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_Sweep1_FCC_Part27_LTE7_TX_all_channels_30M-2.8GHz_no_kij



36.705a_RSE_R_Ch21100_BW_10MHz_QPSK

Common Information

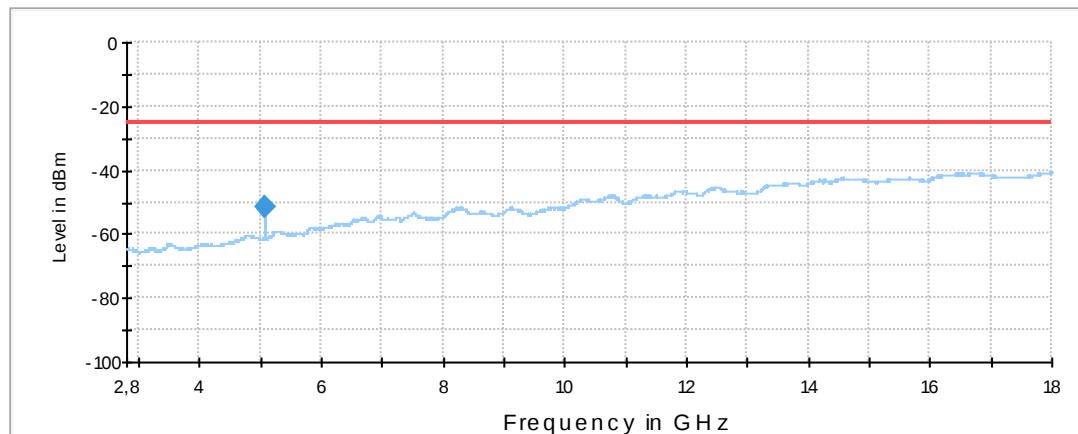
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21100/ BW: 10/ RB: 25/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030421_Sweep2_FCC_Part27_LTE7_TX_all_channels_2.8-20GHz_no_kip|



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
5065.360722	-51.7	1000.0	1000.000	V	85.0	-91.1	26.7	-25.0

36.705b_RSE_R_Ch21100_BW_10MHz_QPSK

Common Information

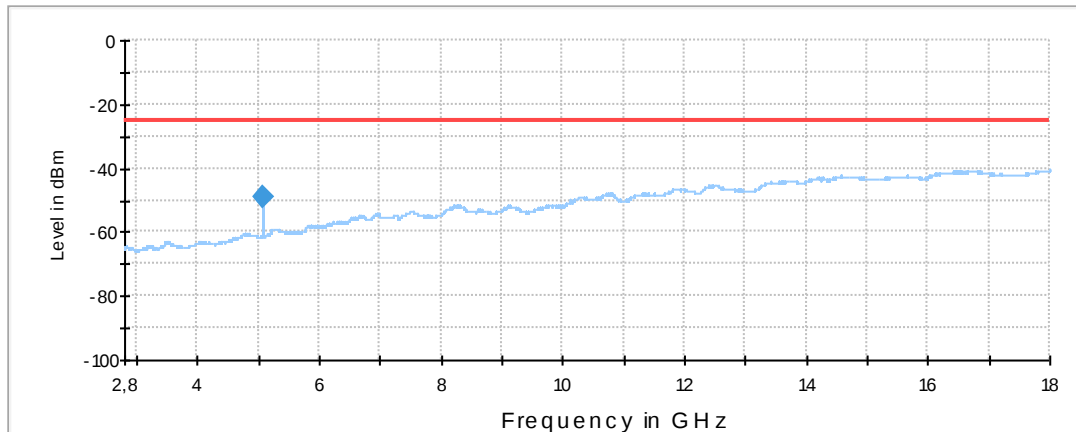
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21100/ BW: 10/ RB: 25/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030421_Sweep2_FCC_Part27_LTE7_TX_all_channels_2.8-20GHz_no_kip|



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
5065.781564	-49.1	1000.0	1000.000	H	288.0	-91.1	24.1	-25.0

Diagram No.: 36.710_RSE_R_Ch21100_BW_10MHz_QPSK

Common Information

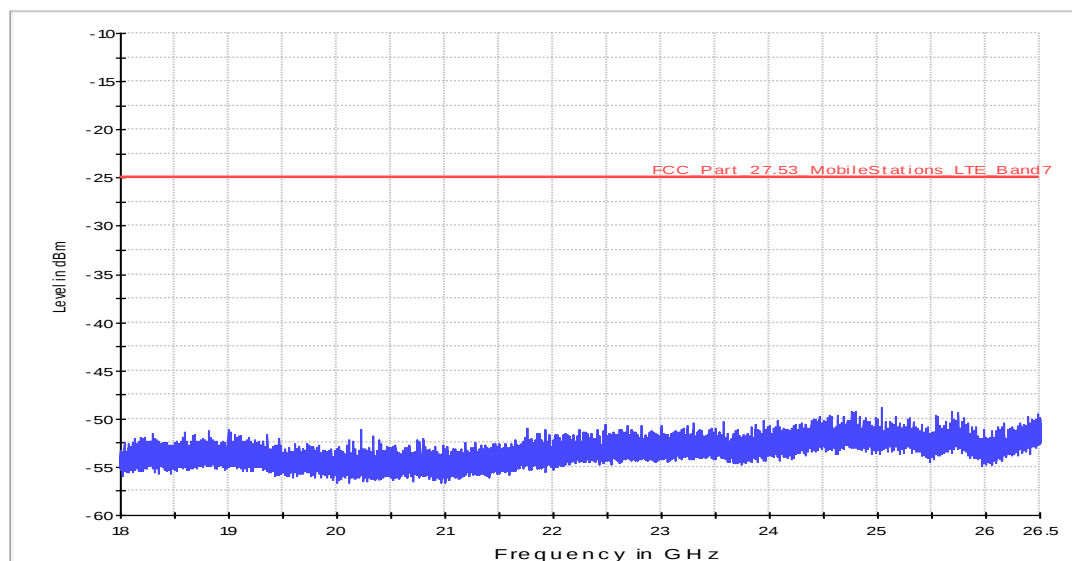
Test Description:	TX Spurious Emission Conducted S2.1051
Test Site:	Radio laboratory 2, EMC 32 v. 8.53.0
Test Standard:	FCC Part 27(l)(4)
Environment conditions:	Normal conditions (Vnominal, Tnominal)
Operator name:	dpa
Operating mode:	LTE Band7 TX: TX - Channel 21100/ 25 RBlow/ BW= 10MHz / Modulation=QPSK
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

Fula2_FCC_Part27_LTE_Bd7_18_26.5GHz_Peak



Scan Setup: Fula2_FCC_Part27_LTE_Bd7_18_26.5GHz_Peak [EMI radiated]

Hardware Setup:	HW08b_15G- 26G_radiated_ESU26_dBm_PreamplMiteq40G_1m_distance_dBm
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preampl
18 GHz - 26.5 GHz	400 kHz	PK+	1 MHz	0.001 s	0 dB

36.707a_RSE_R_Ch21350_BW_20MHz_QPSK**Common Information**

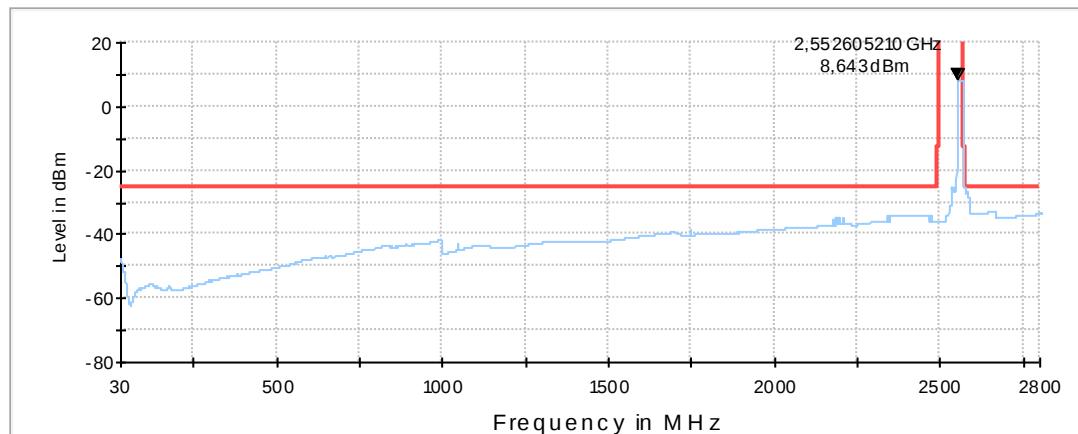
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20/ RB: 100/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_Sweep1_FCC_Part27_LTE7_TX_all_channels_30M-2.8GHz_no_kij



36.707b_RSE_R_Ch21350_BW_20MHz_QPSK**Common Information**

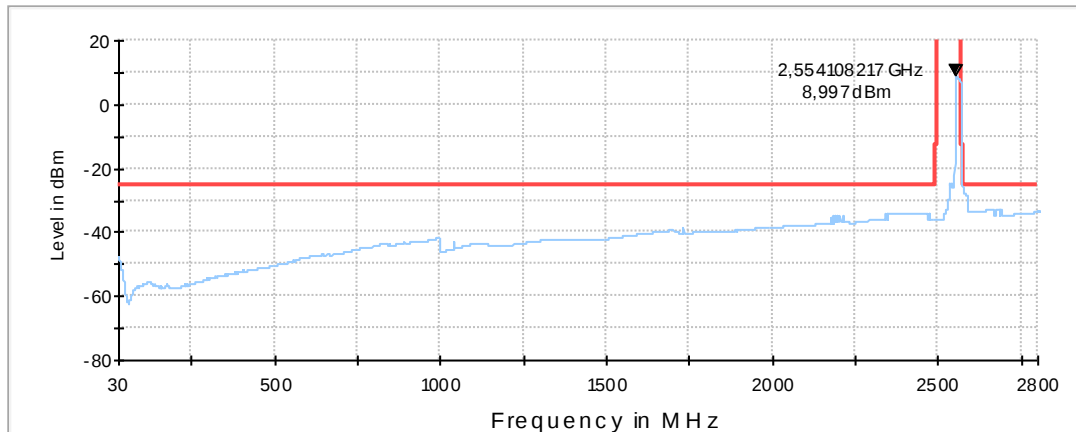
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20/ RB: 100/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_Sweep1_FCC_Part27_LTE7_TX_all_channels_30M-2.8GHz_no_kij



36.708a_RSE_R_Ch21350_BW_20MHz_QPSK

Common Information

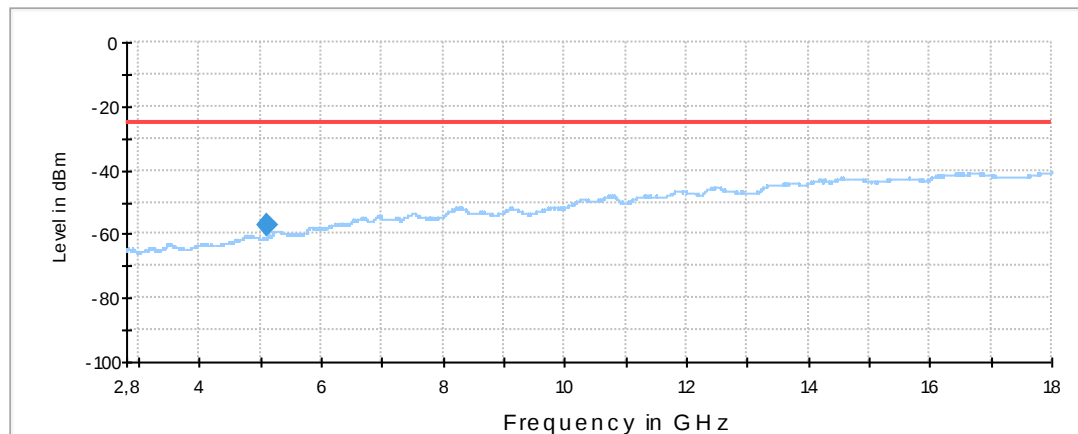
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20/ RB: 100/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030421_Sweep2_FCC_Part27_LTE7_TX_all_channels_2.8-20GHz_no_kip|



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
5120.410822	-56.9	1000.0	1000.000	V	50.0	-90.7	31.9	-25.0

36.708b_RSE_R_Ch21350_BW_20MHz_QPSK

Common Information

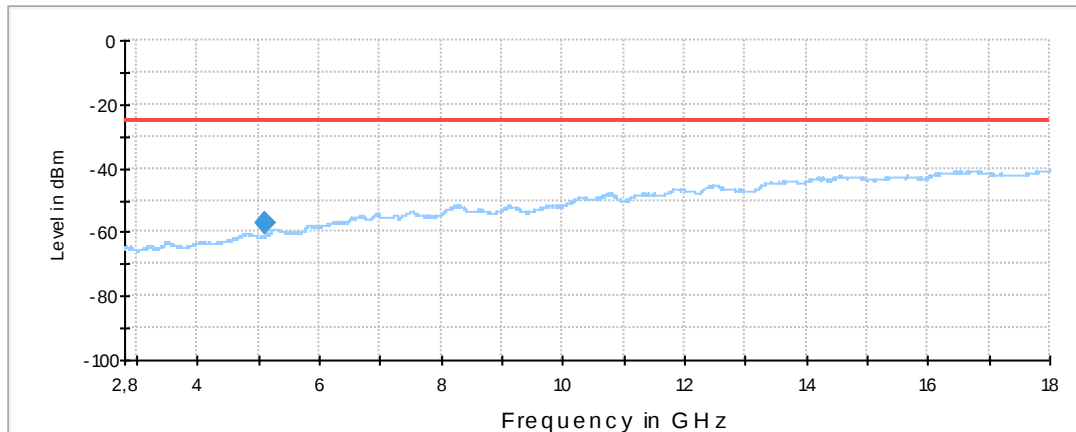
Test Description:	Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20/ RB: 100/ Position: low
Environmental Conditions:	Humidity: 24%rH; Temperature: 51°C
Test SW Version:	EMC32 V8.53.0
Operator:	GAr
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030421_Sweep2_FCC_Part27_LTE7_TX_all_channels_2.8-20GHz_no_kip|



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
5120.030060	-57.5	1000.0	1000.000	V	39.0	-90.7	32.5	-25.0

Diagram No.: 36.711_RSE_R_Ch21350_BW_20MHz_QPSK

Common Information

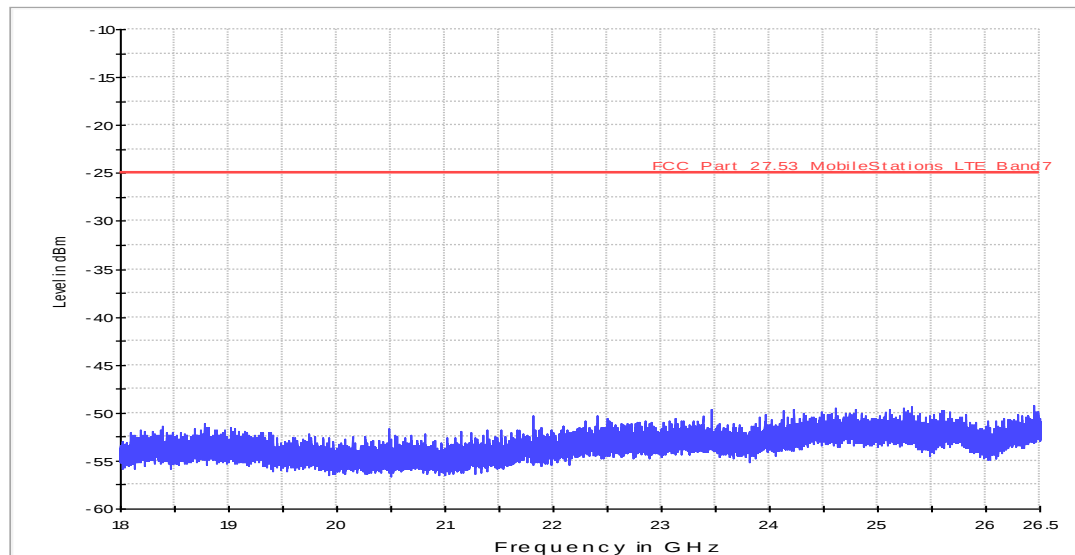
Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2, EMC 32 v. 8.53.0
Test Standard:	FCC Part 27(l)(4)
Environment conditions:	Normal conditions (Vnominal, Tnominal)
Operator name:	dpa
Operating mode:	LTE Band7 TX: TX - Channel 21350/ 100 RB/ BW= 20MHz / Modulation=QPSK
Remarks:	EUT - laying position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

Fula2_FCC_Part27_LTE_Bd7_18_26.5GHz_Peak



Scan Setup: Fula2_FCC_Part27_LTE_Bd7_18_26.5GHz_Peak [EMI radiated]

Hardware Setup:	HW08b_15G- 26G_radiated_ESU26_dBm_PreampMiteq40G_1m_distance_dBm
Receiver:	[ESU 26]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
18 GHz - 26.5 GHz	400 kHz	PK+	1 MHz	0.001 s	0 dB

1.3. Radiated emissions – band-edge (LTE Band 7)

1.3.1. Band - edge low

37.17_BE_R_Ch20850_BW20_100RB_QPSK

Common Information

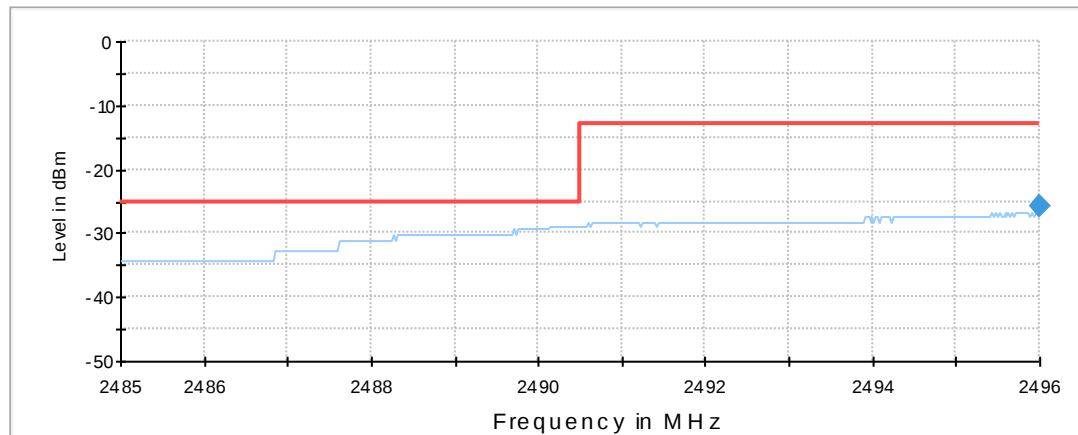
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20850/ BW: 20MHz/ RB: 100/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-25.9	1000.0	1000.000	H	62.0	-59.6	12.9	-13.0

37.18_BE_R_Ch20850_BW20_100RB_QAM

Common Information

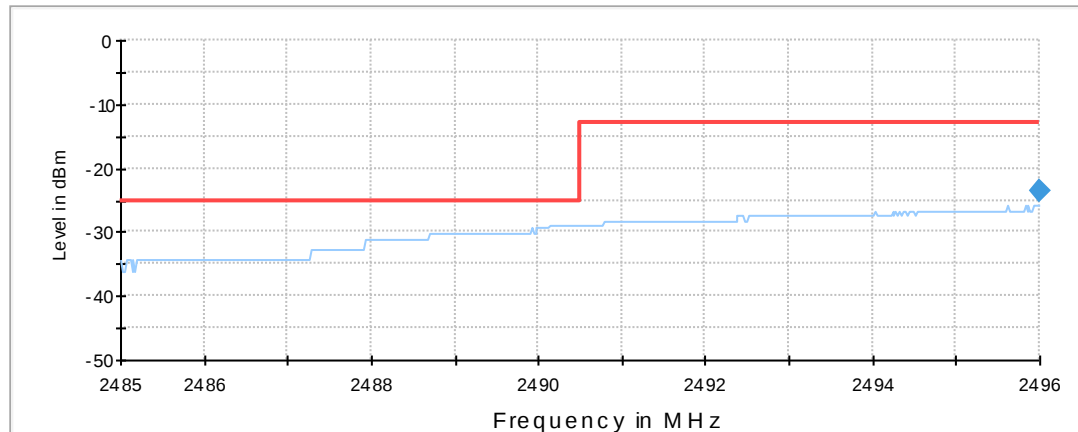
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20850/ BW: 20MHz/ RB: 100/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-23.6	1000.0	1000.000	H	62.0	-59.6	10.6	-13.0

37.19_BE_R_Ch20850_BW20_1RB_QPSK

Common Information

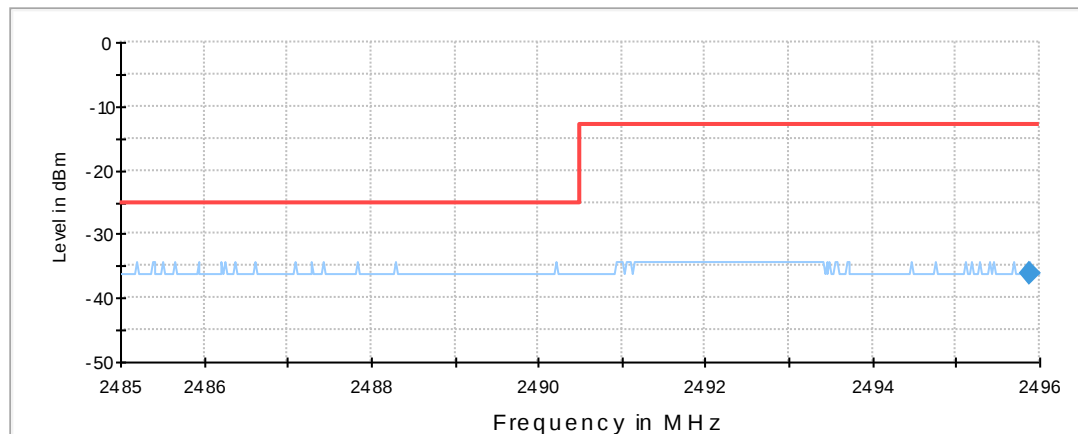
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20850/ BW: 20MHz/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2495.889780	-36.1	1000.0	1000.000	H	27.0	-59.6	23.1	-13.0

37.20_BE_R_Ch20850_BW20_1RB_QAM

Common Information

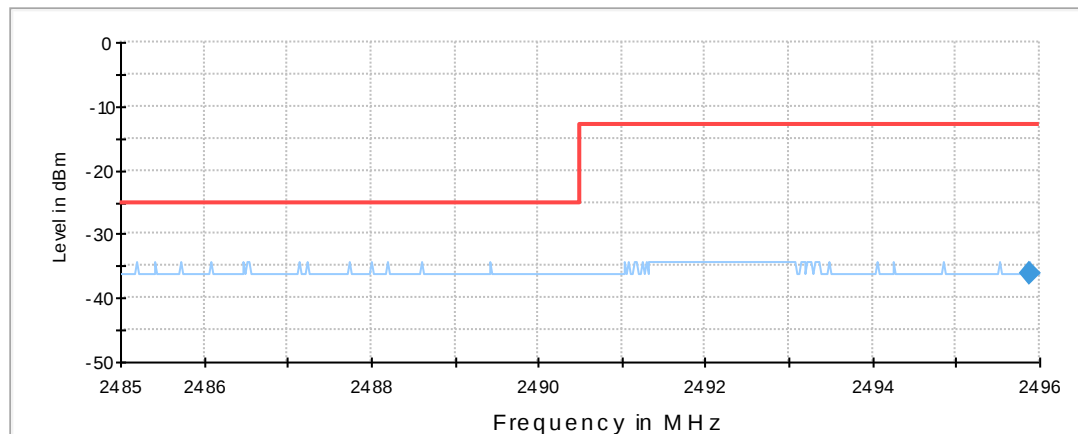
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20850/ BW: 20MHz/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2495.889780	-36.1	1000.0	1000.000	H	28.0	-59.6	23.1	-13.0

37.21_BE_R_Ch20800_BW10_50RB_QPSK

Common Information

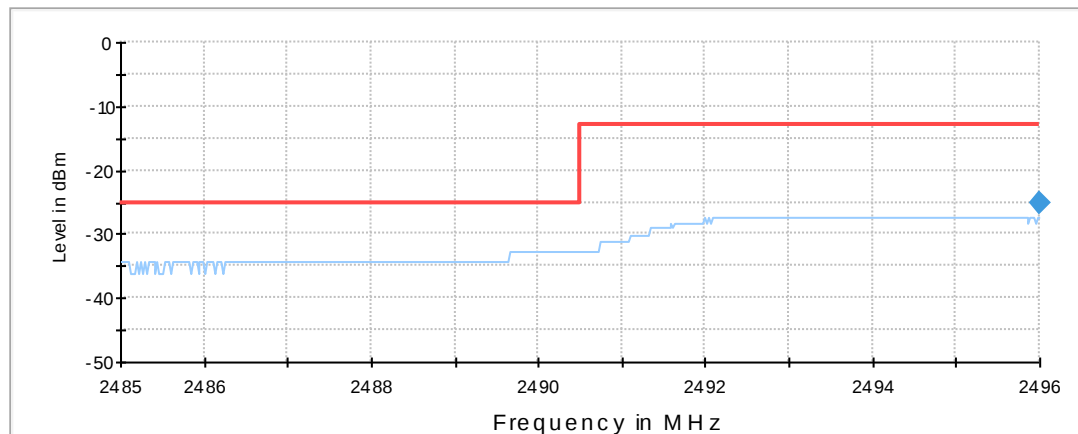
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20800/ BW: 10M/ RB: 50/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-25.2	1000.0	1000.000	H	62.0	-59.6	12.2	-13.0

37.22_BE_R_Ch20800_BW10_50RB_QAM

Common Information

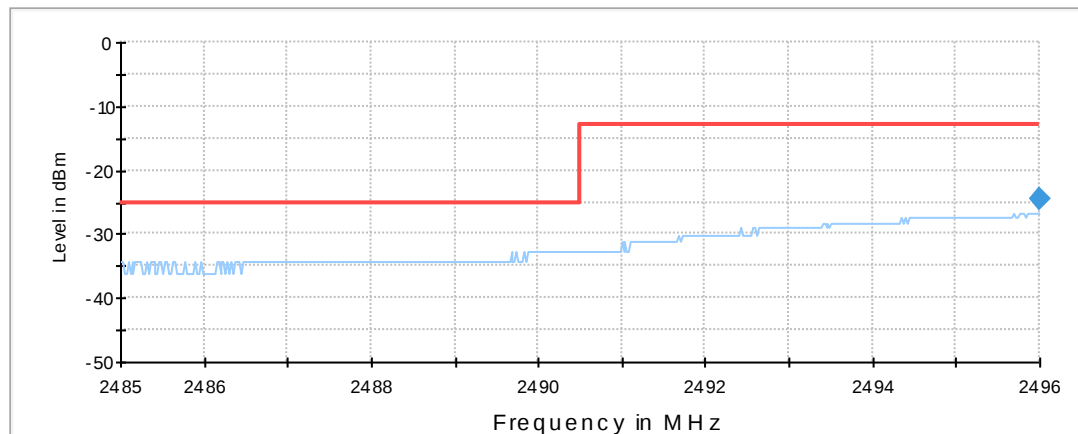
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20800/ BW: 10M/ RB: 50/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-24.6	1000.0	1000.000	H	62.0	-59.6	11.6	-13.0

37.23_BE_R_Ch20800_BW10_1RB_QPSK

Common Information

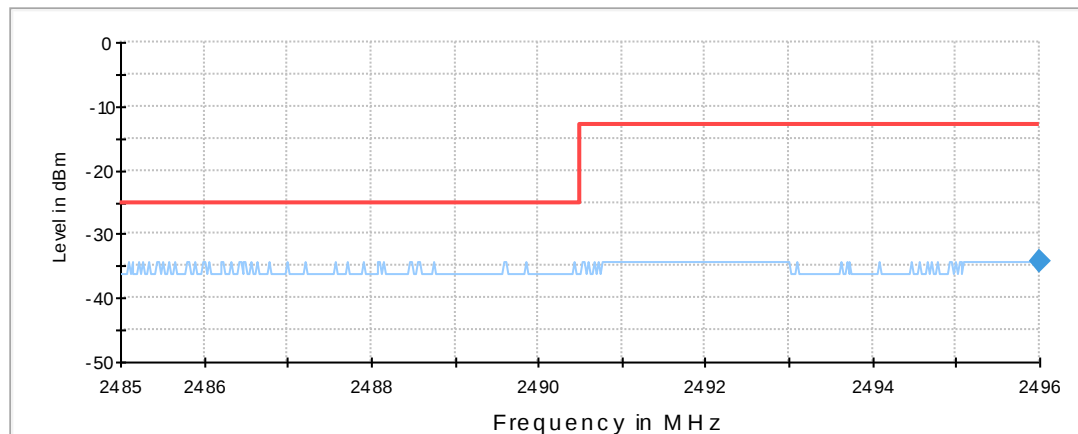
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20800/ BW: 10M/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-34.2	1000.0	1000.000	H	-30.0	-59.6	21.2	-13.0

37.24_BE_R_Ch20800_BW10_1RB_QAM

Common Information

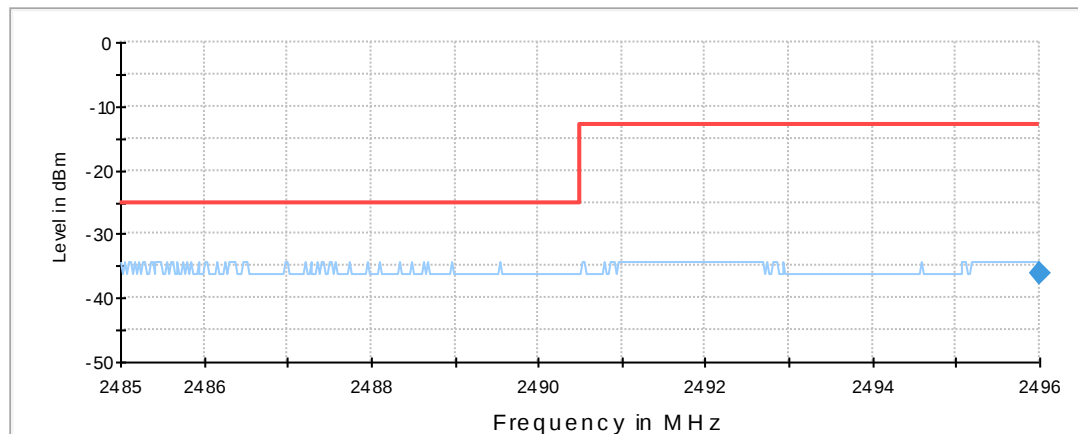
Test Description: Band-Edge low - Radiated Spurious Emissions LTE Band 7
 Test Site Location: CETECOM GmbH Essen
 Test Site: Fully Anechoic Room (FAR)
 Test Standard: FCC Part 27.53(m)(4) Mobile stations limits
 Operating Mode: UE allocated channel 20800/ BW: 10M/ RB: 1/ Position: low
 Environmental Conditions: Humidity: 47%rH; Temperature: 23,2°C
 Test SW Version: EMC32 V8.53.0
 Operator: Kre
 Remarks: EUT -standing position

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

 EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-36.1	1000.0	1000.000	H	27.0	-59.6	23.1	-13.0

37.25_BE_R_Ch20775_BW5_25RB_QPSK

Common Information

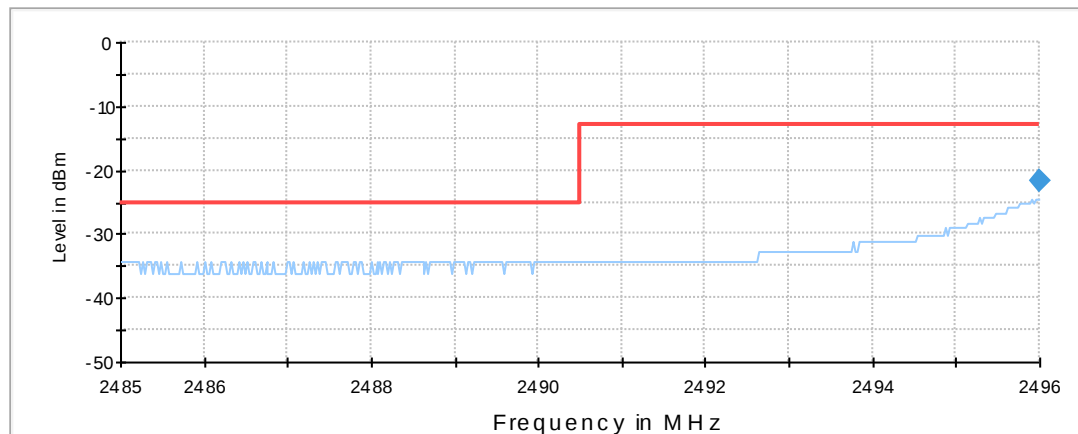
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5M/ RB: 25/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-21.7	1000.0	1000.000	H	62.0	-59.6	8.7	-13.0

37.26_BE_R_Ch20775_BW5_25RB_QAM

Common Information

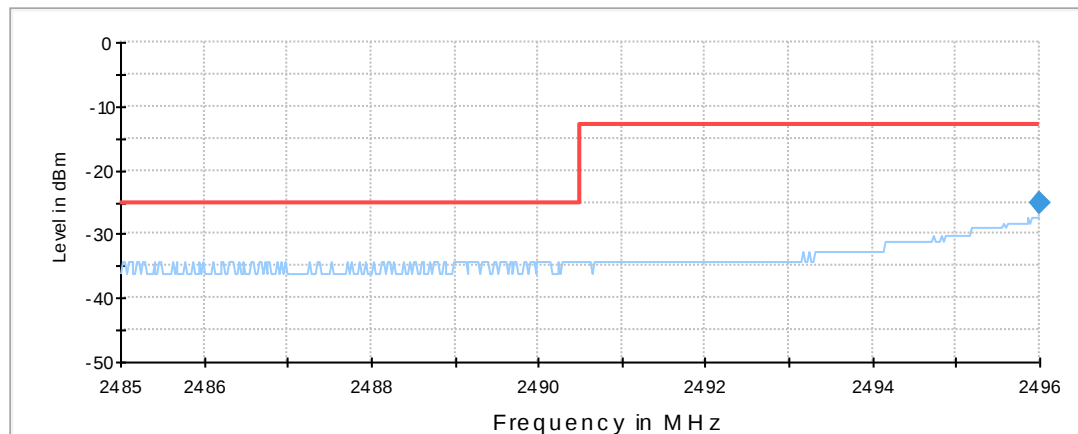
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5M/ RB: 25/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-25.2	1000.0	1000.000	H	65.0	-59.6	12.2	-13.0

37.27_BE_R_Ch20775_BW5_1RB_QPSK

Common Information

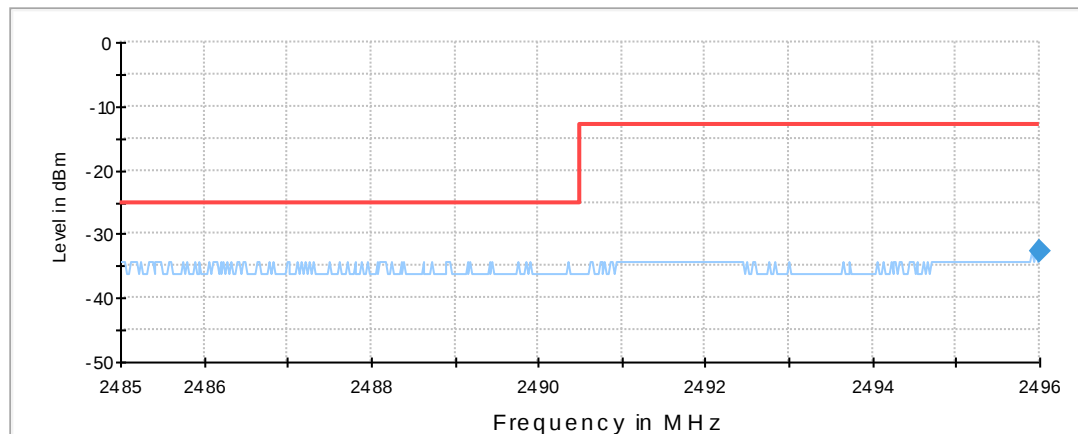
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5M/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-32.6	1000.0	1000.000	H	61.0	-59.6	19.6	-13.0

37.28_BE_R_Ch20775_BW5_1RB_QAM

Common Information

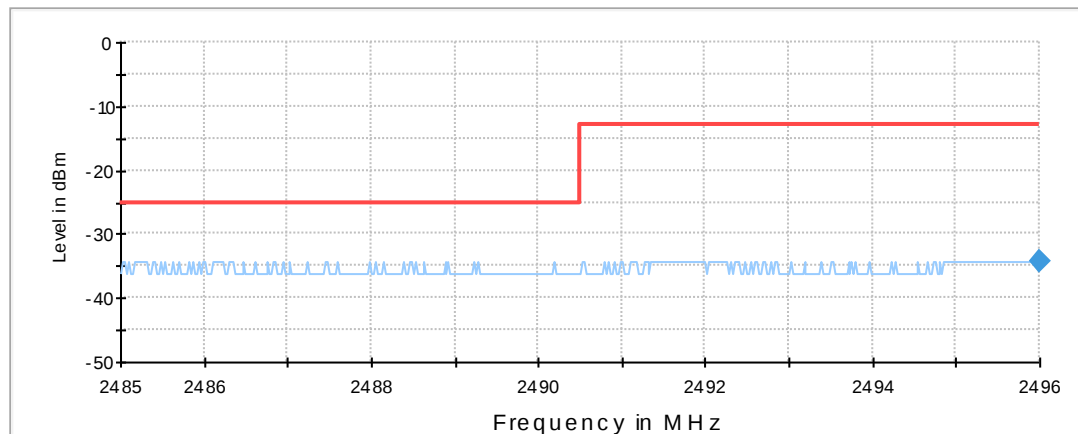
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20775/ BW: 5M/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-34.2	1000.0	1000.000	H	70.0	-59.6	21.2	-13.0

37.29_BE_R_Ch20825_BW15_75RB_QPSK

Common Information

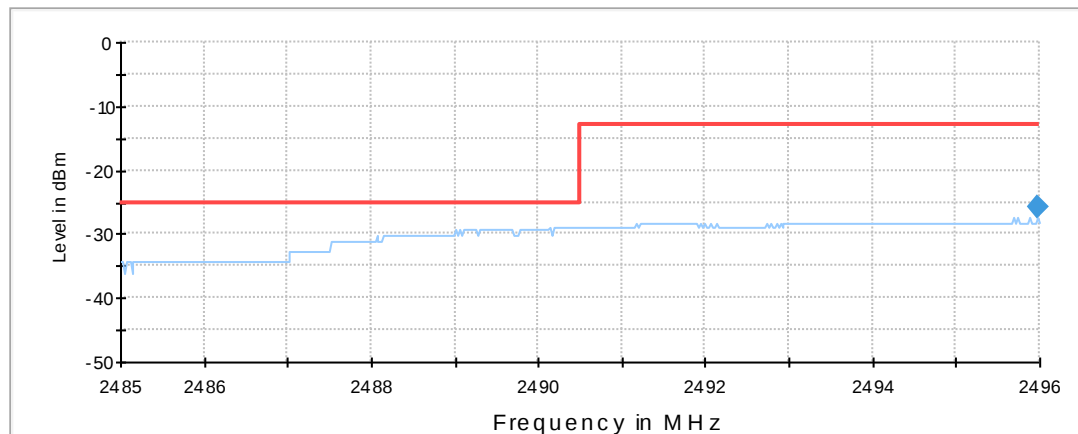
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20825/ BW: 15MHz/ RB: 75/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2495.977956	-25.9	1000.0	1000.000	H	67.0	-59.6	12.9	-13.0

37.30_BE_R_Ch20825_BW15_75RB_QAM

Common Information

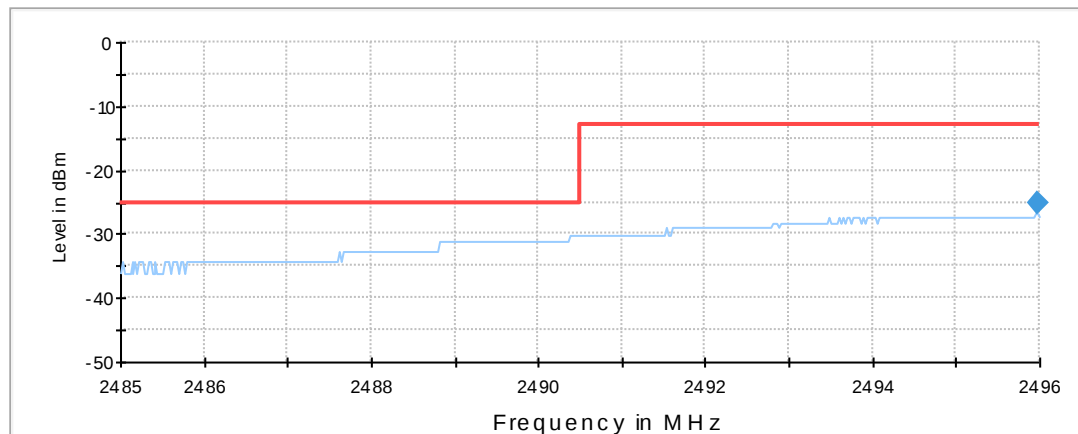
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20825/ BW: 15MHz/ RB: 75/ Position: 0
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2495.977956	-25.2	1000.0	1000.000	H	68.0	-59.6	12.2	-13.0

37.31_BE_R_Ch20825_BW15_1RB_QPSK

Common Information

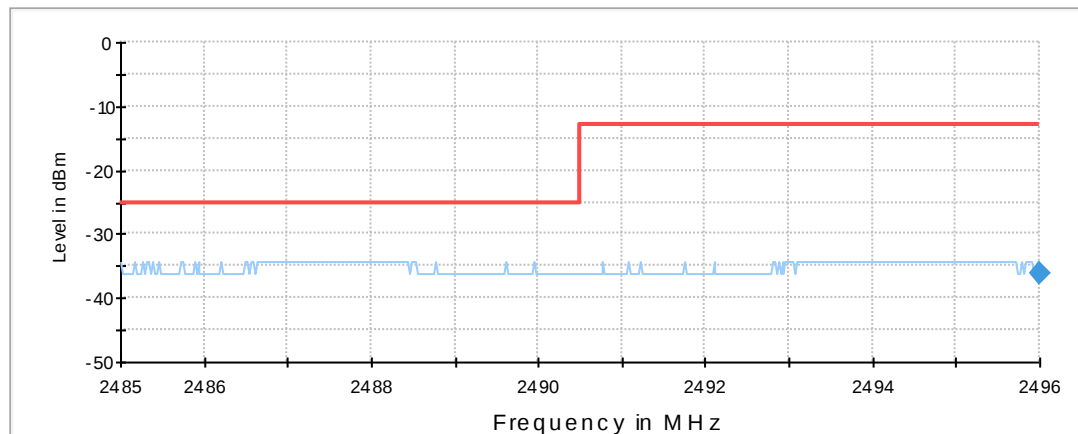
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20825/ BW: 15MHz/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-36.1	1000.0	1000.000	V	-18.0	-59.6	23.1	-13.0

37.32_BE_R_Ch20825_BW15_1RB_QAM

Common Information

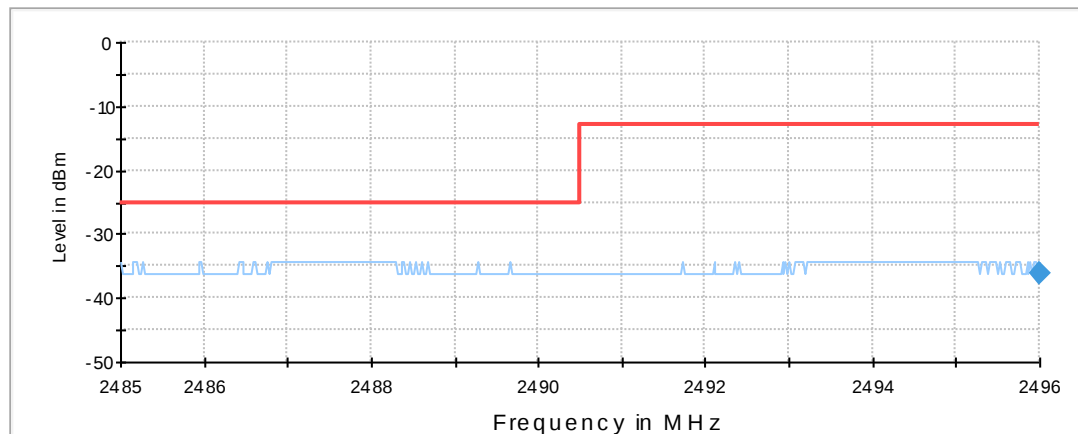
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 20825/ BW: 15MHz/ RB: 1/ Position: low
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT -standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_Low_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2496.000000	-36.1	1000.0	1000.000	H	28.0	-59.6	23.1	-13.0

1.3.2. Band - edge high

37.01_BE_R_Ch21425_BW5M_25RB_QPSK

Common Information

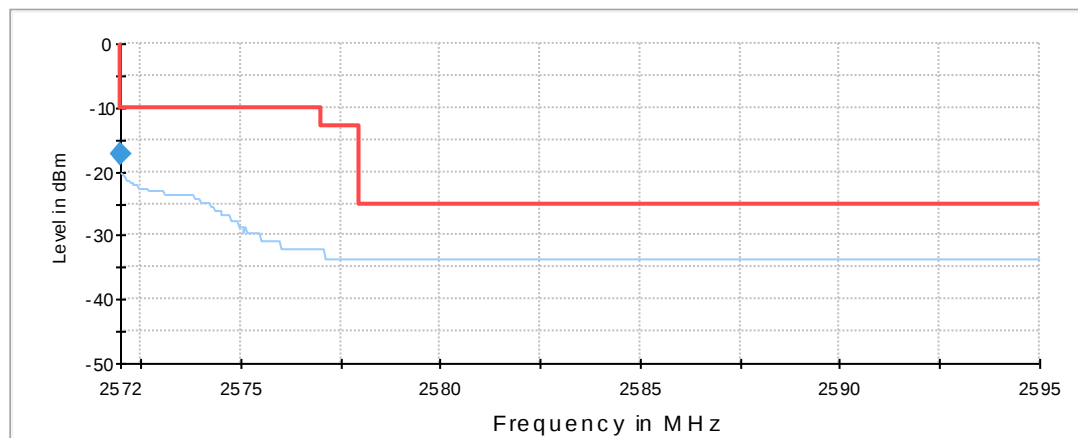
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21425/ BW: 5M/ RB: 25/ Position: --
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2572.000000	-17.4	1000.0	1000.000	H	292.0	-59.2	-7.4	-10.0

37.02_BE_R_Ch21425_BW5M_25RB_QAM

Common Information

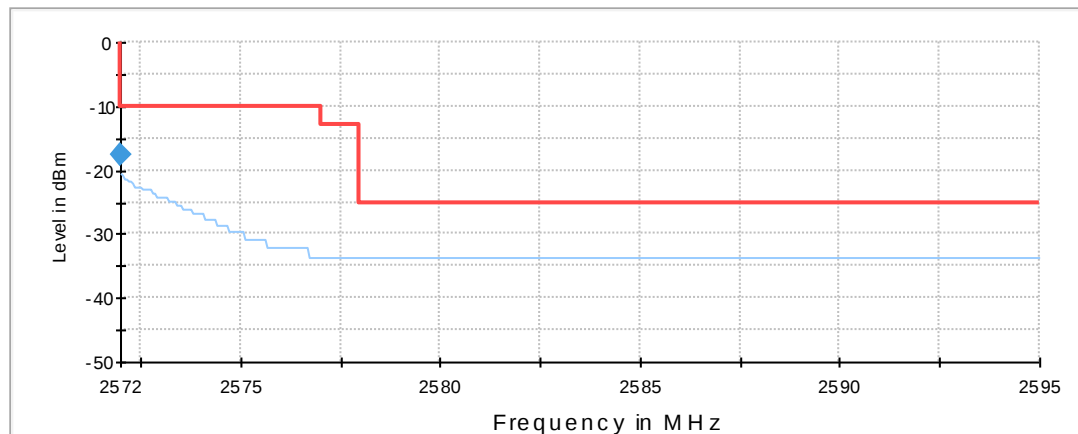
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21425/ BW: 5M/ RB: 25/ Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2572.000000	-17.6	1000.0	1000.000	H	292.0	-59.2	-7.6	-10.0

37.03_BE_R_Ch21425_BW5M_1RBhigh_QPSK

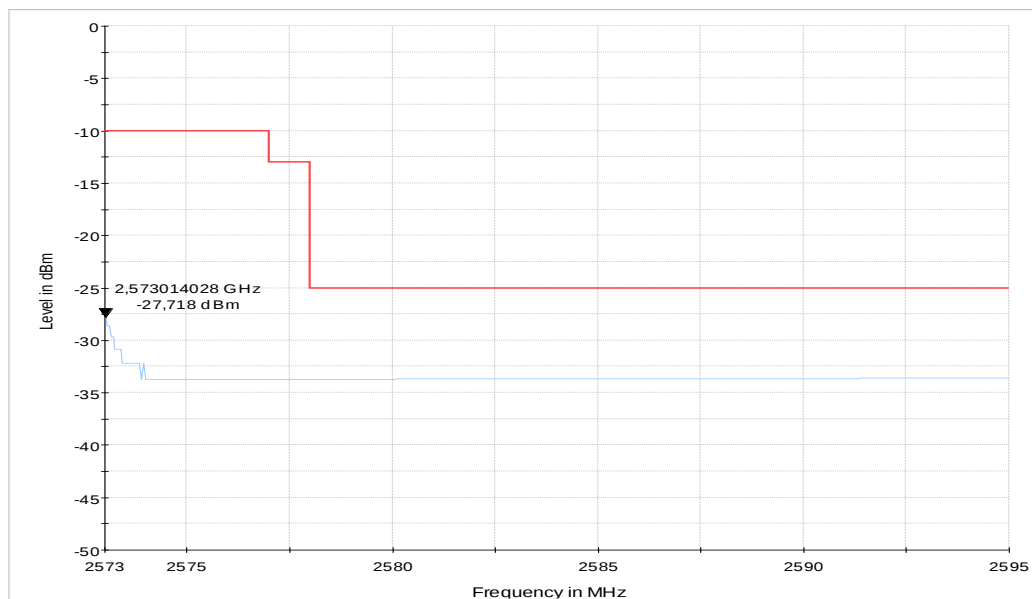
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21425/ BW: 5M/ RB: 1 high/ Position: --/QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position
Remark2:	1MHz immediately the band-Edge re-measurement with lower RBW necessary

EUT Information

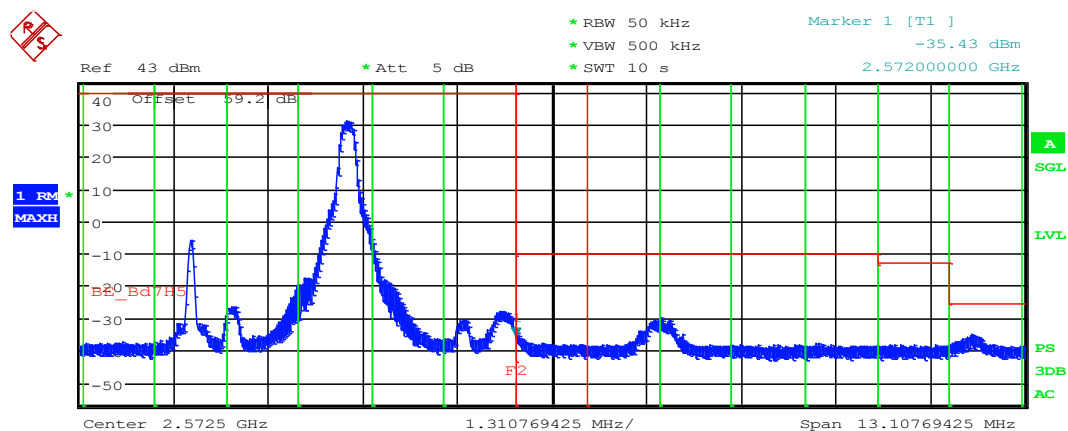
Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1



Measurement 37.03b_BE_R_Ch21425_BW5M_1RBhigh_QPSK

A Integrated Bandwidth method was used for the first 1MHz immediately following the band-edge. Value for Band edge corresponds to TX-channel power in the diagram below.



Channel	Bandwidth	Spacing	Lower	Upper
Tx Channel	1.000 MHz			-26.79 dBm
Adjacent	1.000 MHz	1.000 MHz	-20.50 dB	-24.06 dB
Alternate	1.000 MHz	2.000 MHz	-7.62 dB	-24.47 dB
2nd Alt	1.000 MHz	3.000 MHz	34.79 dB	-27.75 dB
3rd Alt	1.000 MHz	4.000 MHz	-18.33 dB	-27.71 dB
4th Alt	1.000 MHz	5.000 MHz	-6.21 dB	-27.76 dB
5th Alt	1.000 MHz	6.000 MHz	-26.94 dB	-26.50 dB

Date: 21.AUG.2014 15:38:49

37.04_BE_R_Ch21425_BW5M_1RBhigh_QAM

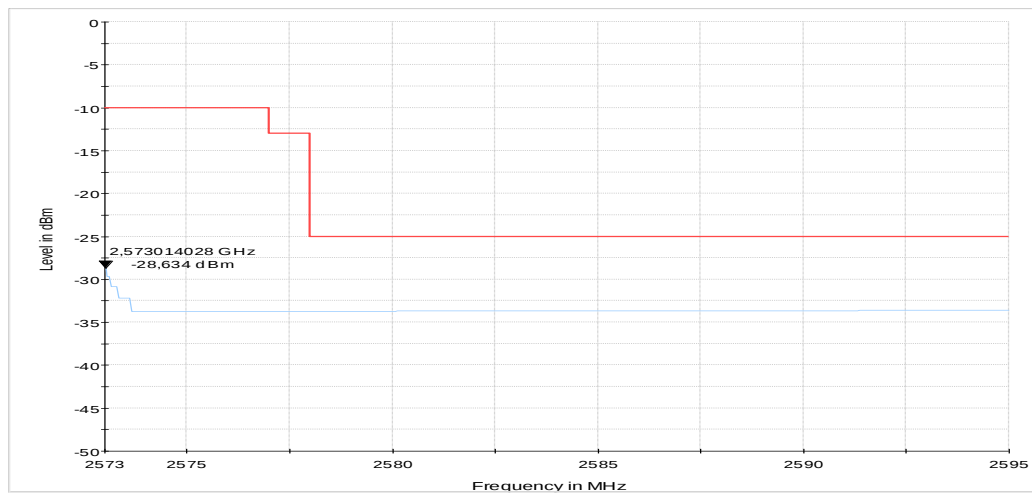
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21425/ BW: 5M/ RB: 1 high/ Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position
Remark2:	1MHz immediately the band-Edge re-measurement with lower RBW necessary

EUT Information

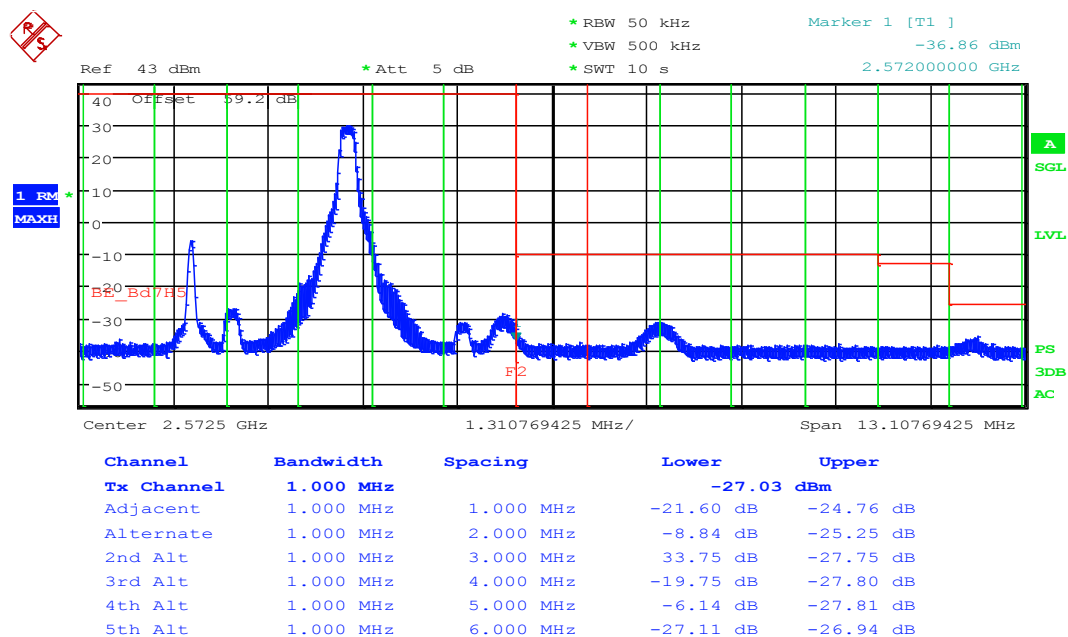
Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1



Measurement 37.04b_BE_R_Ch21425_BW5M_1RBhigh_QAM

A Integrated Bandwidth method was used for the first 1MHz immediately following the band-edge. Value for Band edge corresponds to TX-channel power in the diagram below.



Date: 21.AUG.2014 15:35:48

37.05_BE_R_Ch21400_BW10M_50RB_QPSK

Common Information

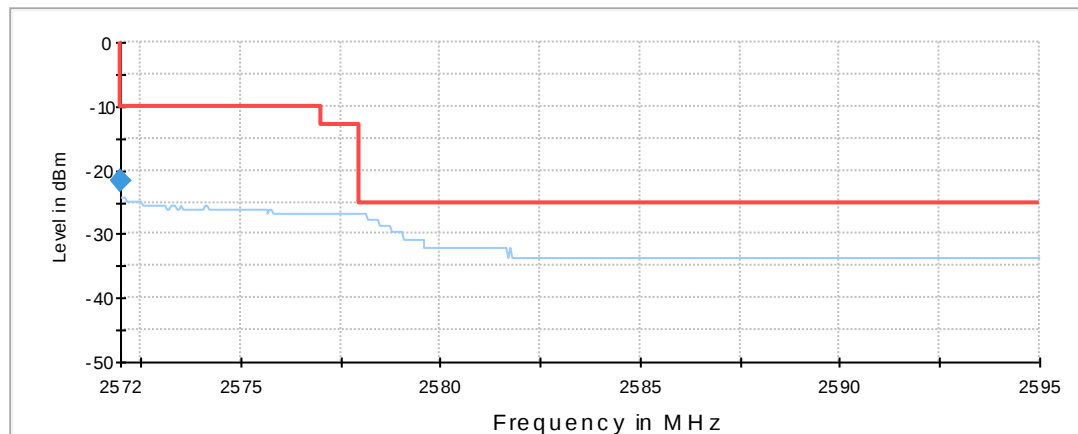
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21400/ BW: 10M/ RB: 50 / Position: --/QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2572.000000	-21.7	1000.0	1000.000	H	292.0	-59.2	54.7	33.0

37.06_BE_R_Ch21400_BW10M_50RB_QAM

Common Information

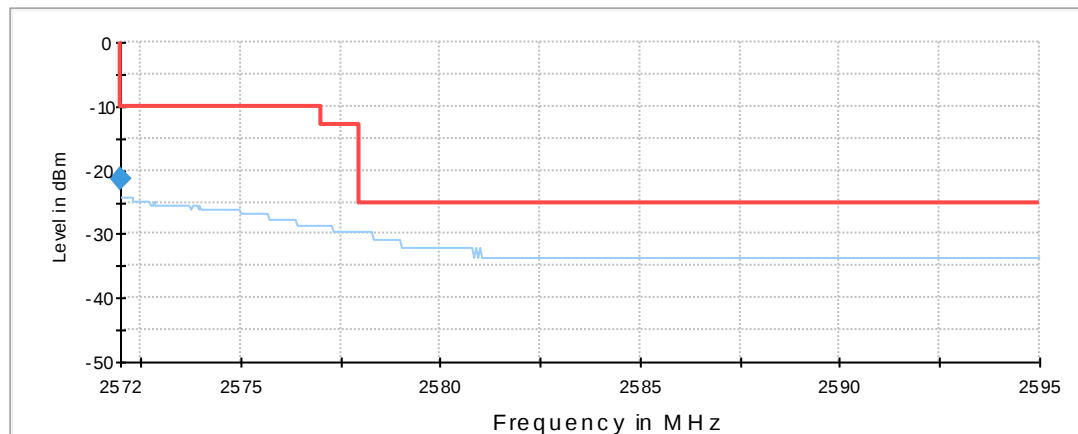
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21400/ BW: 10M/ RB: 50 / Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2572.000000	-21.3	1000.0	1000.000	H	292.0	-59.2	54.3	33.0

37.07_BE_R_Ch21400_BW10M_1RBhigh_QPSK

Common Information

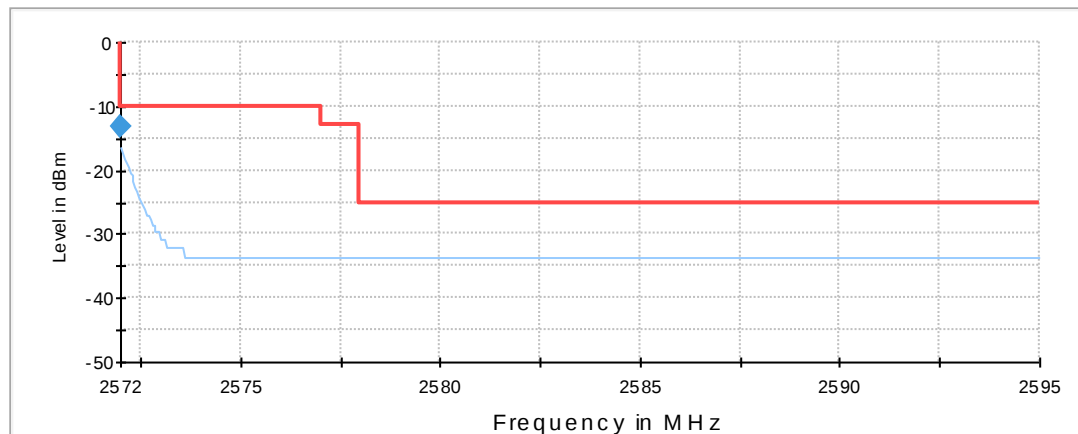
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21400/ BW: 10M/ RB: 1 high/ Position: --/QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2572.000000	-13.1	1000.0	1000.000	H	292.0	-59.2	46.1	33.0

37.08_BE_R_Ch21400_BW10M_1RBhigh_QAM

Common Information

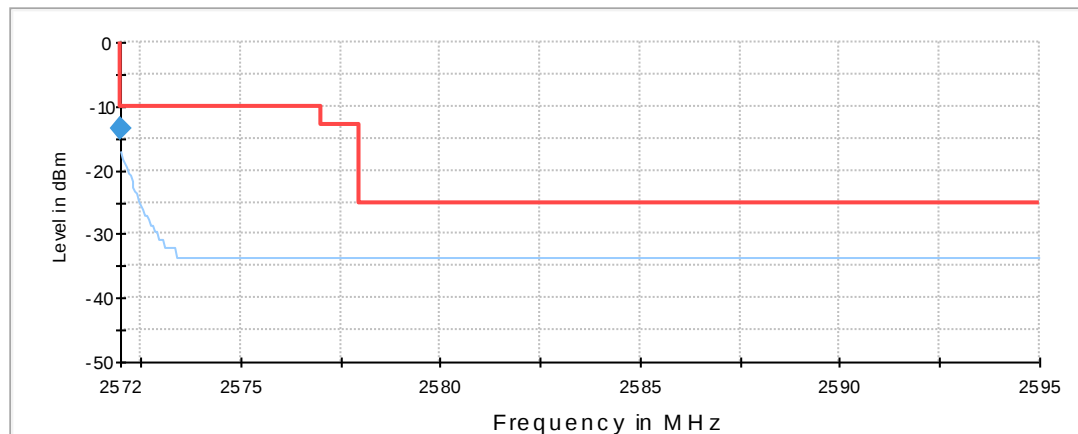
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21400/ BW: 10M/ RB: 1 high/ Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBm)
2572.000000	-13.6	1000.0	1000.000	H	291.0	-59.2	46.6	33.0

37.09_BE_R_Ch21375_BW15M_75RB_QPSK

Common Information

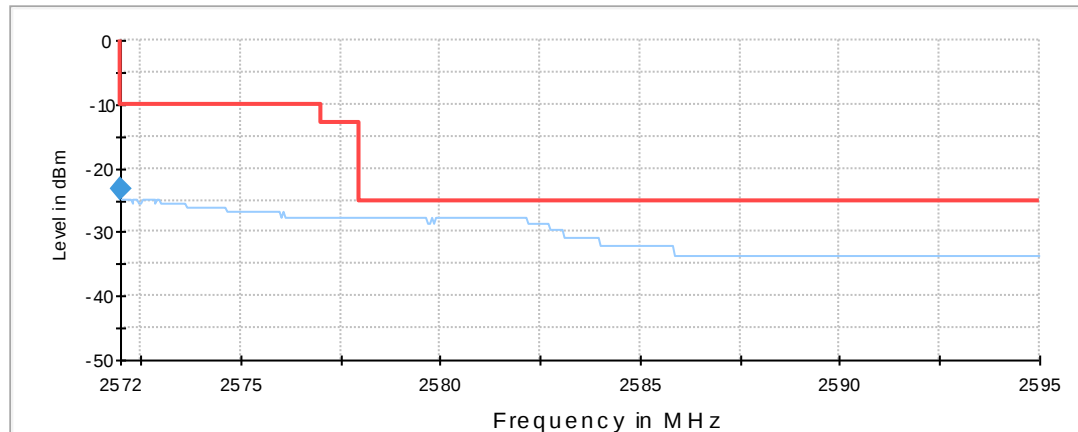
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21375/ BW: 15M/ RB: 75 / Position: --/QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-23.1	1000.0	1000.000	H	297.0	-59.2	56.1	33.0

37.10_BE_R_Ch21375_BW15M_75RB_QAM

Common Information

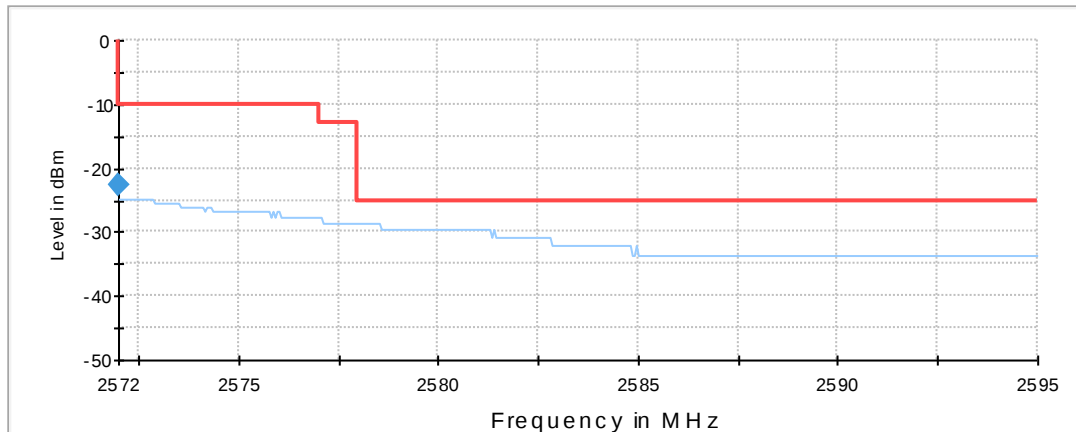
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21375/ BW: 15M/ RB: 75 / Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-22.6	1000.0	1000.000	H	292.0	-59.2	-12.6	-10.0

37.11_BE_R_Ch21375_BW15M_1RB_QPSK

Common Information

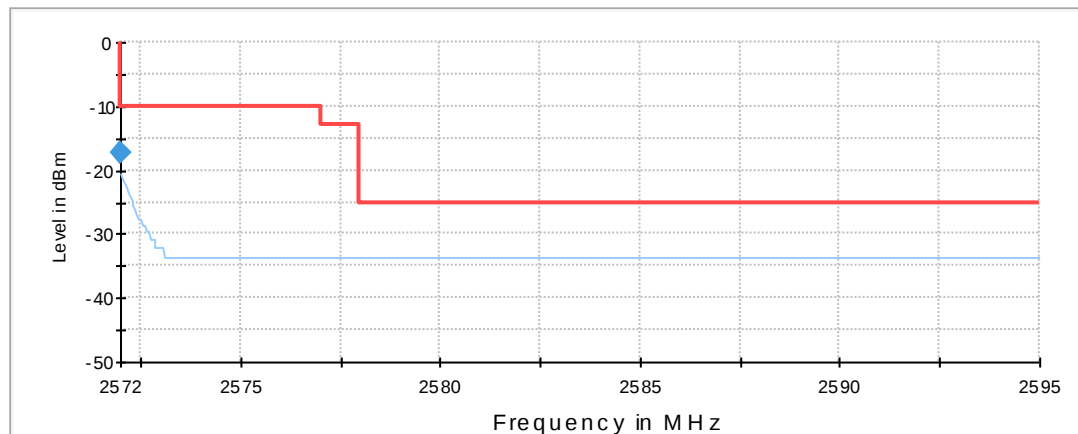
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21375/ BW: 15M/ RB: 1 high/ Position: --/QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-17.4	1000.0	1000.000	H	292.0	-59.2	-7.4	-10.0

37.12_BE_R_Ch21375_BW15M_1RB_QAM

Common Information

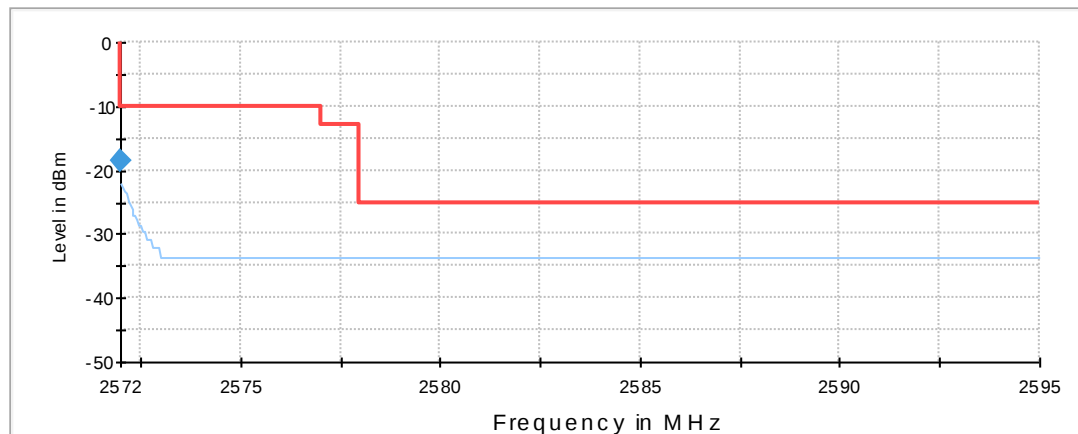
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21375/ BW: 15M/ RB: 1 high/ Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-18.5	1000.0	1000.000	H	292.0	-59.2	-8.5	-10

37.13_BE_R_Ch21350_BW20M_100RB_QPSK

Common Information

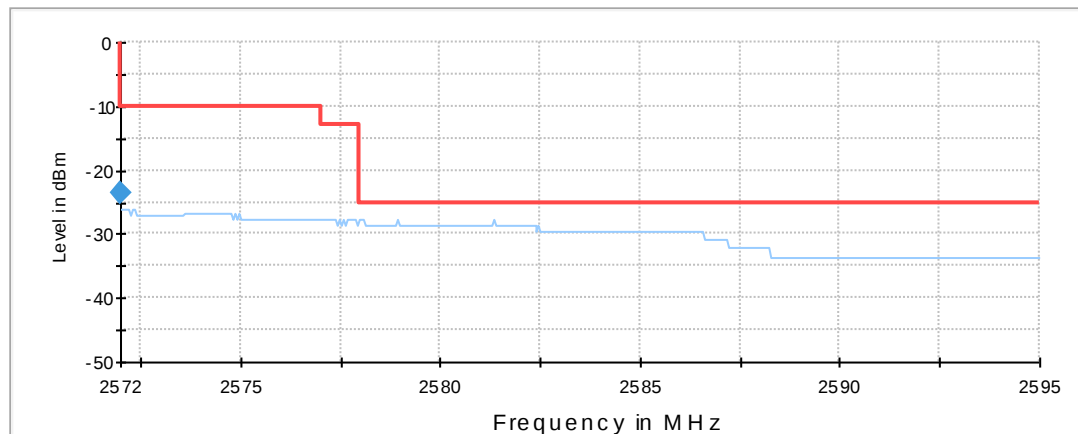
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20M/ RB: 100 / Position: --/QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-23.6	1000.0	1000.000	H	292.0	-59.2	-13.6	-10

37.14_BE_R_Ch21350_BW20M_100RB_QAM

Common Information

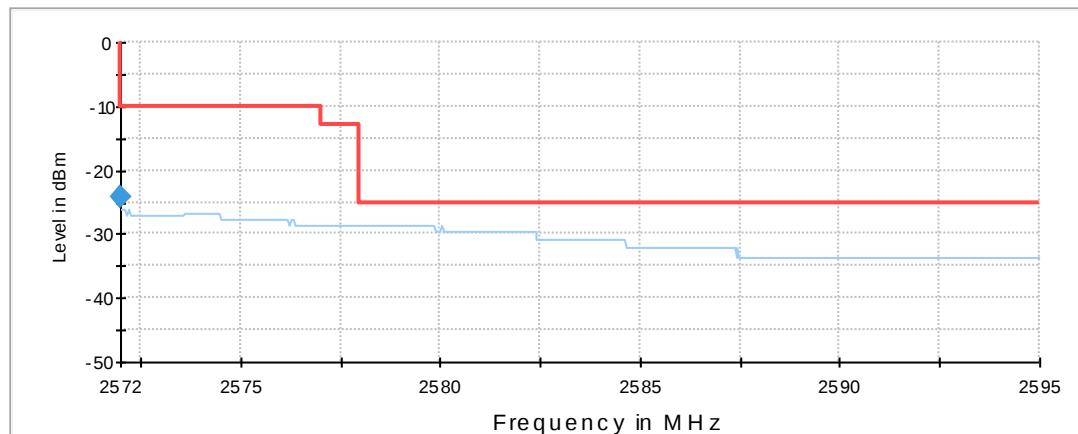
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20M/ RB: 100 / Position: --/QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-24.2	1000.0	1000.000	H	291.0	-59.2	-14.2	-10

37.15_BE_R_Ch21350_BW20M_1RB_QPSK

Common Information

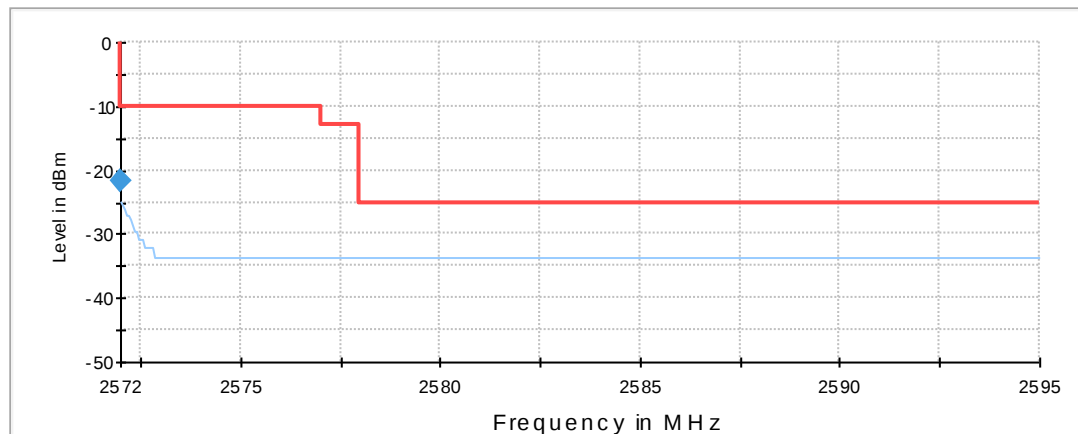
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20M/ RB: 1 / Position: QPSK
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Kre
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-21.7	1000.0	1000.000	H	291.0	-59.2	-	-10

37.16_BE_R_Ch21350_BW20M_1RB_QAM

Common Information

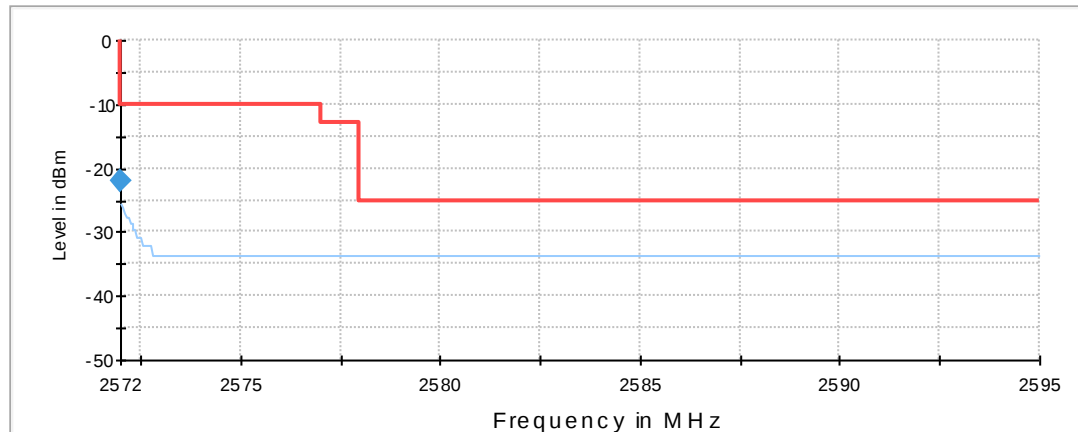
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 7
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(m)(4) Mobile stations limits
Operating Mode:	UE allocated channel 21350/ BW: 20M/ RB: 1 / Position: QAM
Environmental Conditions:	Humidity: 47%rH; Temperature: 23,2°C
Test SW Version:	EMC32 V8.53.0
Operator:	Hla
Remarks:	EUT - standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

030420_BandEdge_High_FCC_Part27_LTE7_All-Channels_nokipp



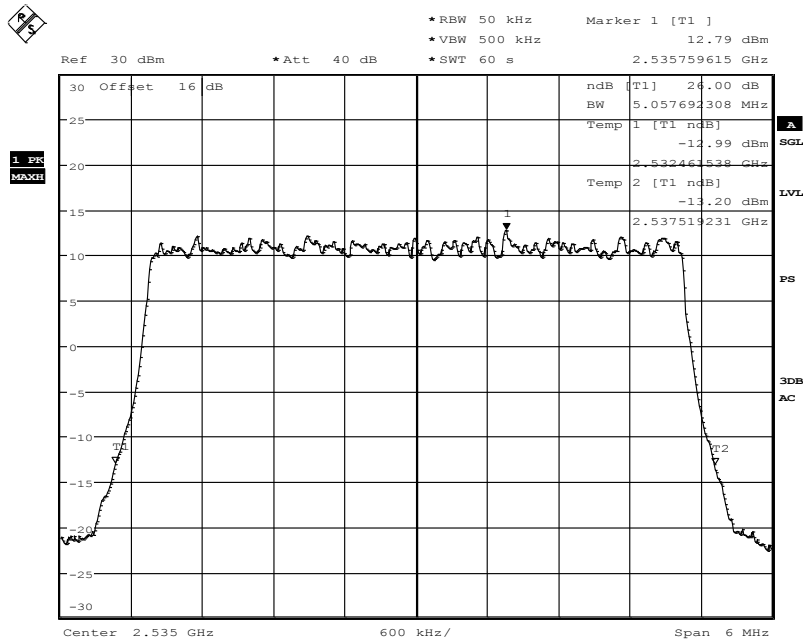
Final Result 1

Frequency (MHz)	RMS (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Azimuth (deg)	Corr. (dB)	Margin - RMS (dB)	Limit - RMS (dBm)
2572.000000	-22.2	1000.0	1000.000	H	292.0	-59.2	-12.2	-10.0

1.4. 26dBc Emission bandwidth

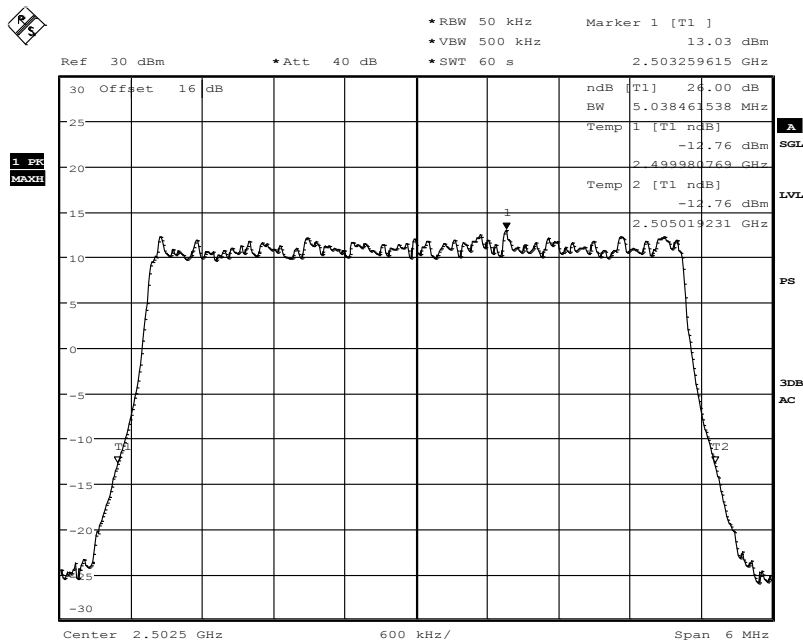
1.4.1. LTE Band 7

1.4.1.1. BW = 5MHz



Date: 18.AUG.2014 11:22:51

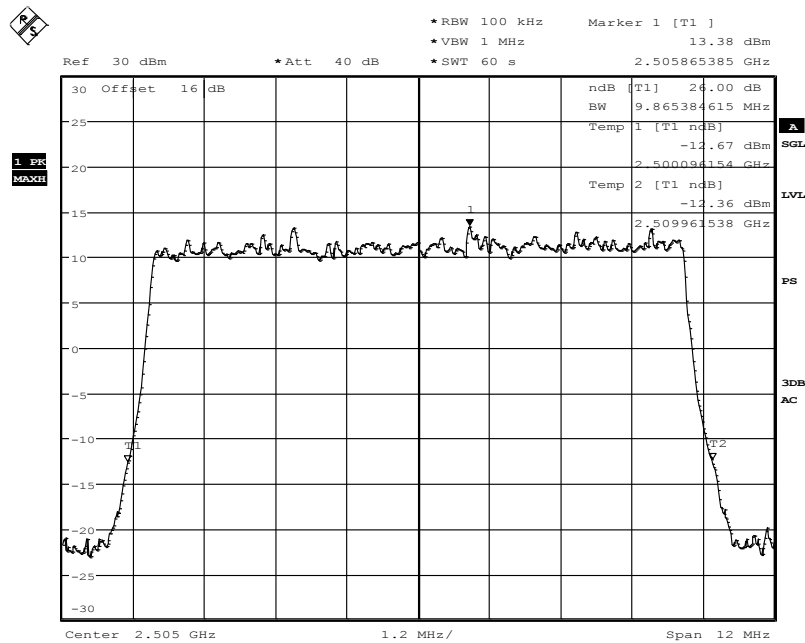
Diagram 34.702; Channel 21100; Value = 5.0576MHz
QPSK-Modulation



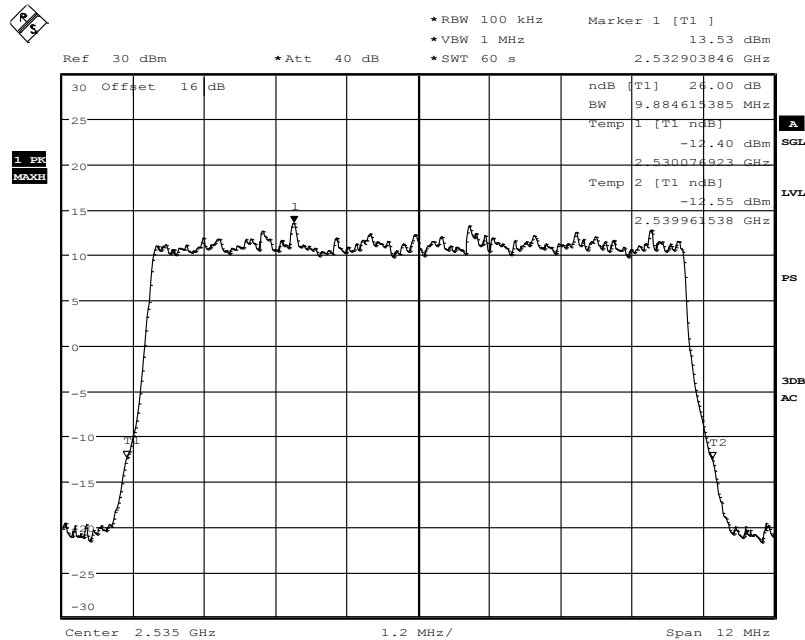
Date: 18.AUG.2014 14:53:28

Diagram: 34.713 Channel 20775 Value = 5.0384MHz
16-QAM-Modulation

1.4.1.2. BW = 10MHz



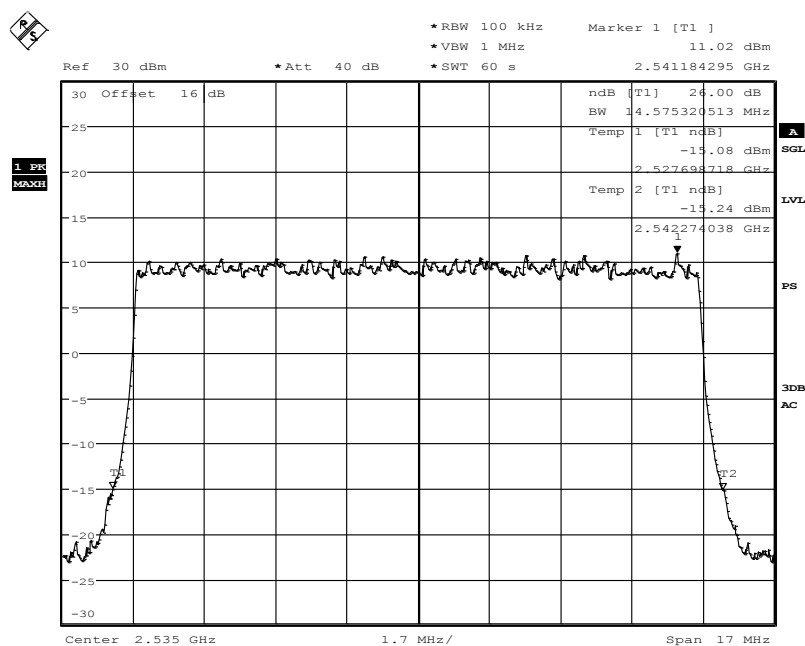
Date: 18.AUG.2014 11:34:21

Diagram 34.704 Channel 20800 Value = 9.8653MHz
QPSK-Modulation

Date: 18.AUG.2014 14:48:48

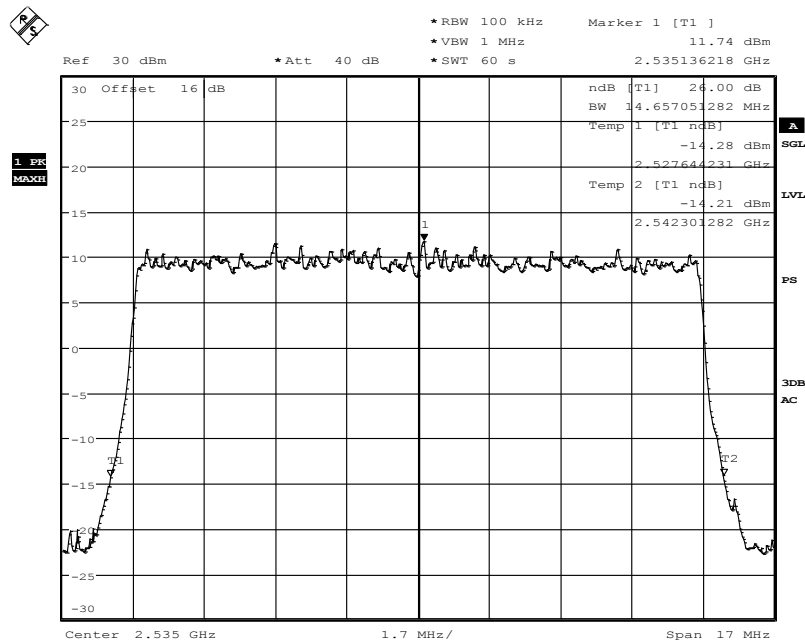
Diagram 34.717 Channel 21100 Value = 9.8846MHz
16-QAM-Modulation

1.4.1.3. BW = 15MHz



Date: 18.AUG.2014 11:51:52

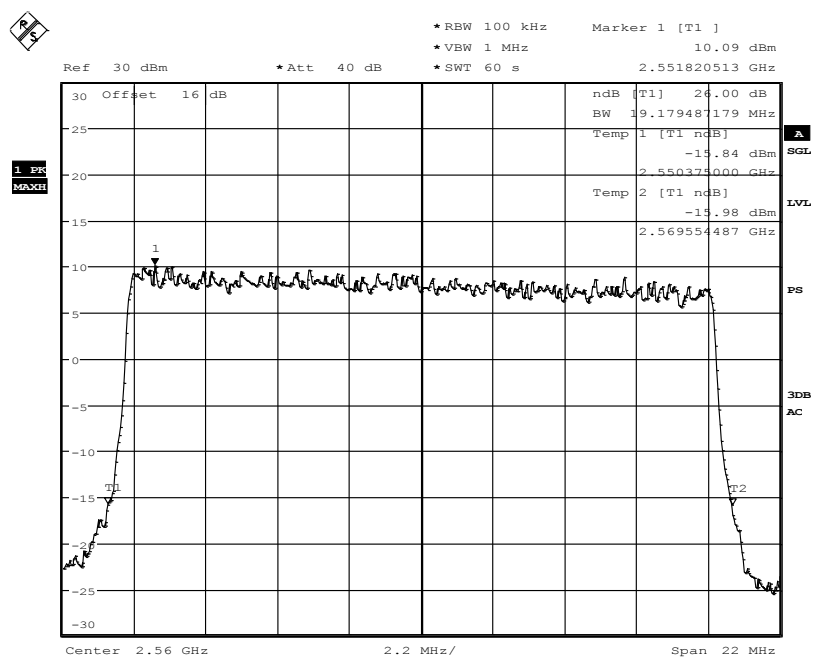
Diagram 34.708 Channel 21100 Value = 14.5753MHz
QPSK-Modulation



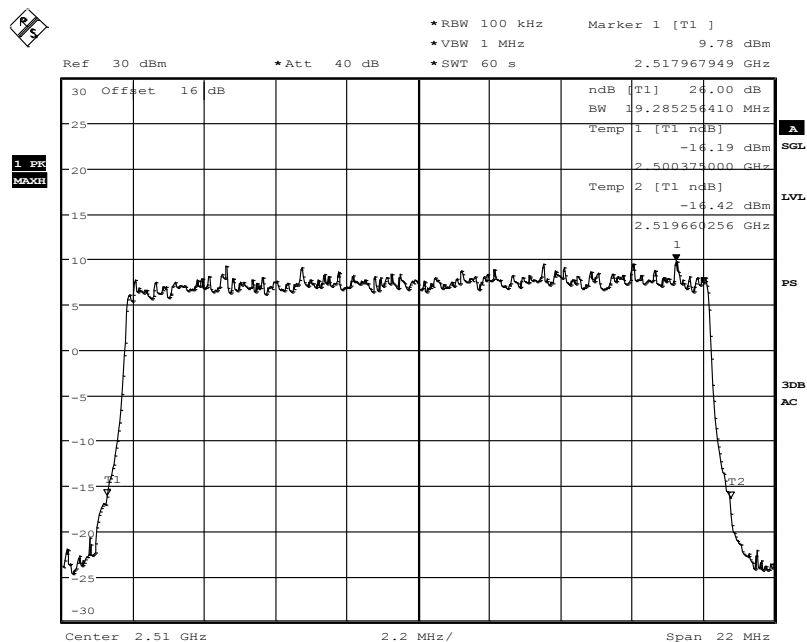
Date: 18.AUG.2014 14:33:33

Diagram 34.720 Channel 21100 Value = 14.6570MHz
16-QAM-Modulation

1.4.1.4. BW = 20MHz



Date: 18.AUG.2014 13:20:32

Diagram 34.712 Channel 21350 Value = 19.1789MHz
QPSK-Modulation

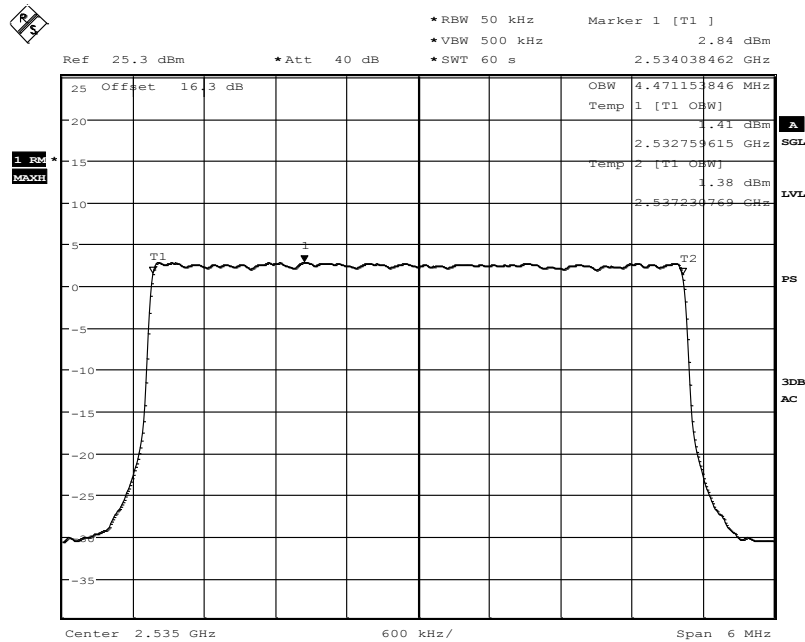
Date: 18.AUG.2014 14:26:39

Diagram 34.722 Channel 20850 Value = 19.2852MHz
16-QAM-Modulation

1.5. 99% occupied bandwidth

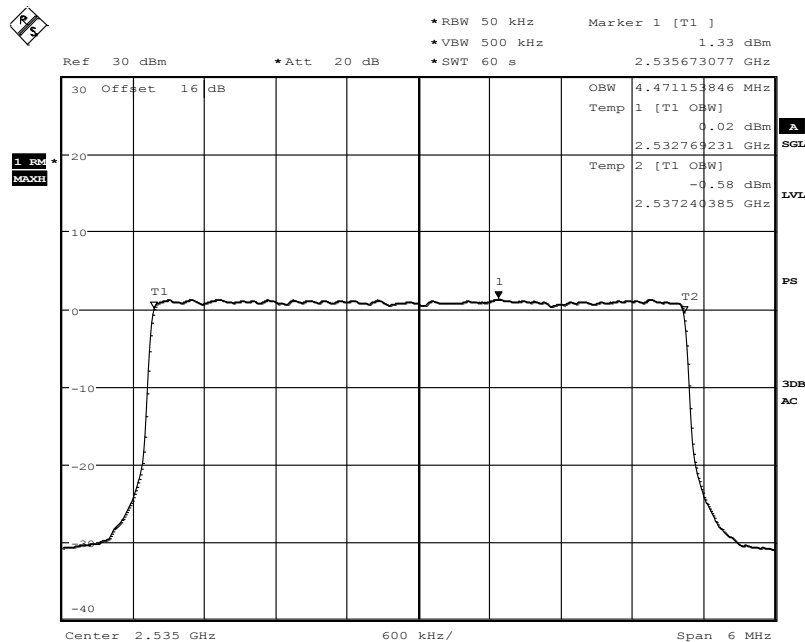
1.5.1. LTE Band 7

1.5.1.1. BW = 5MHz



Date: 15.AUG.2014 21:55:48

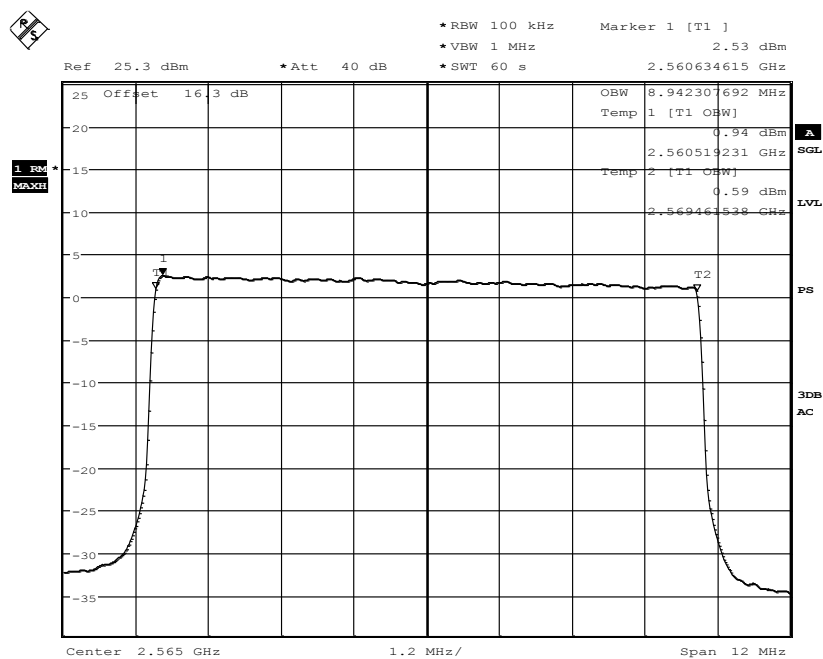
Diagram 35.702 Channel 21100 Value = 4.4711MHz
QPSK-Modulation



Date: 18.AUG.2014 15:12:38

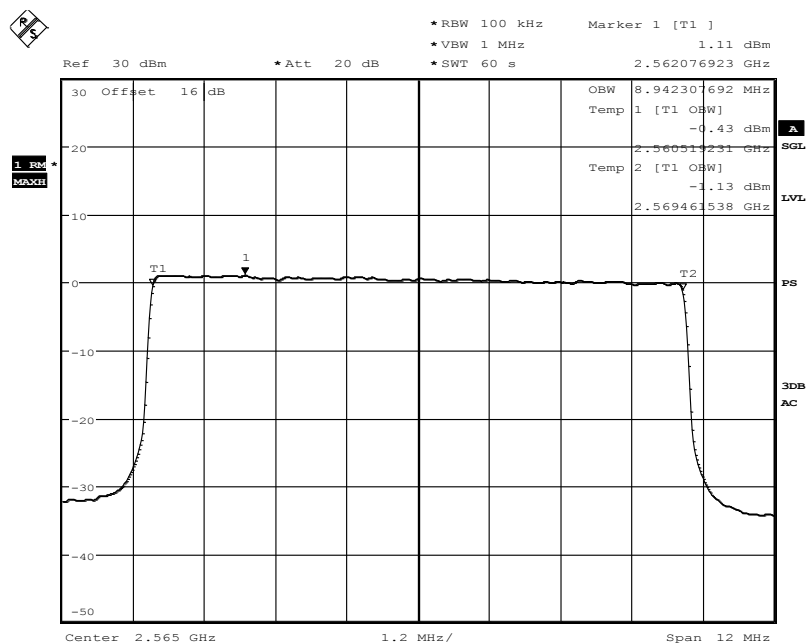
Diagram 35.714 Channel 21100 Value = 4.4711MHz
16-QAM-Modulation

1.5.1.2. BW = 10MHz



Date: 15.AUG.2014 21:44:43

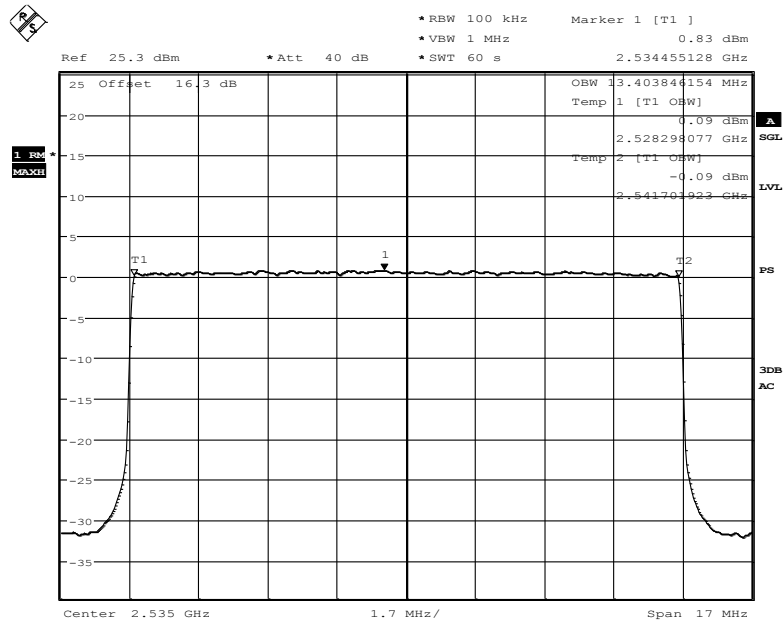
Diagram 35.706 Channel 21400 Value = 8.9423MHz
QPSK-Modulation



Date: 18.AUG.2014 15:34:38

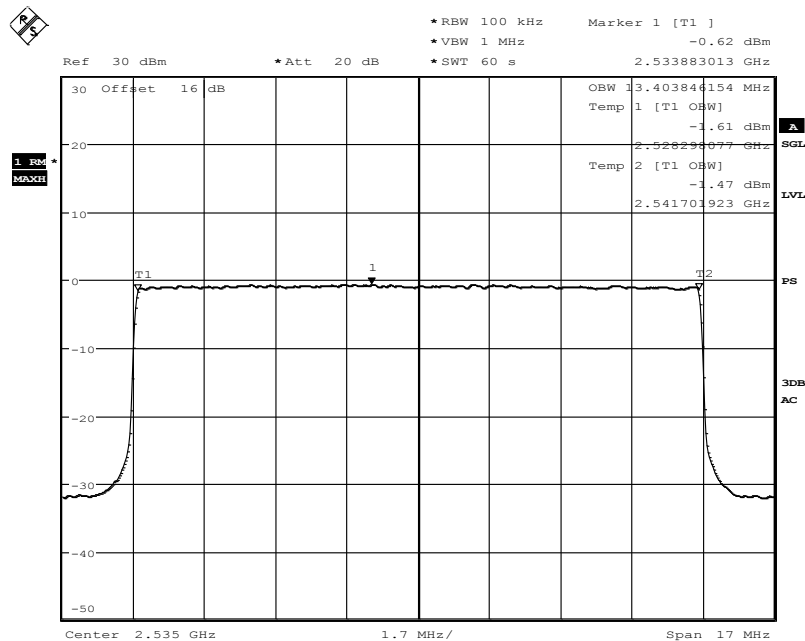
Diagram 35.718 Channel 21400 Value = 8.9423MHz
16-QAM-Modulation

1.5.1.3. BW = 15MHz



Date: 15.AUG.2014 21:28:56

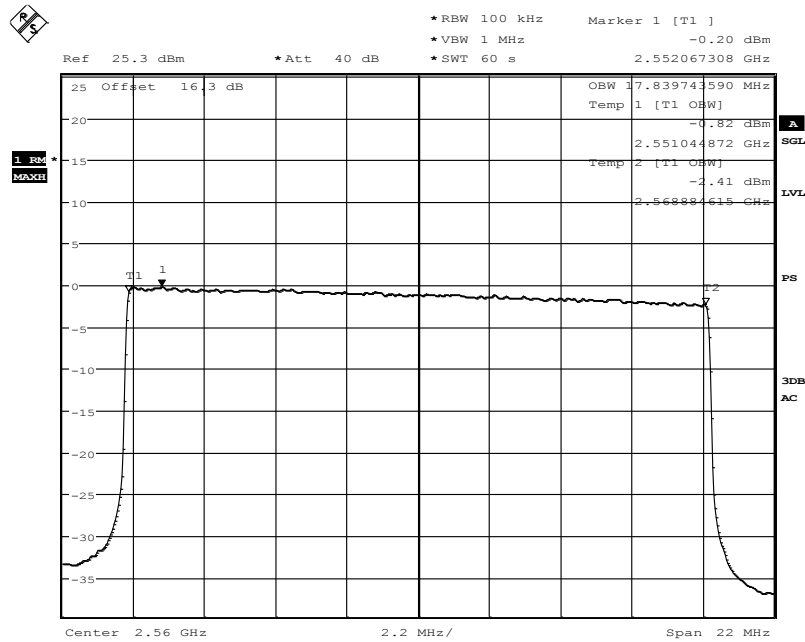
Diagram 35.708 Channel 21100 Value = 13.4038MHz
QPSK-Modulation



Date: 18.AUG.2014 16:02:49

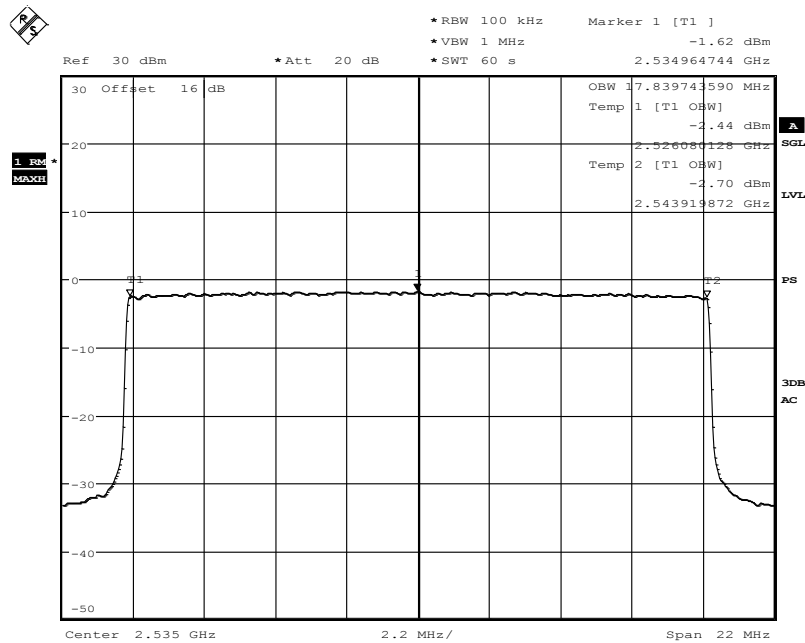
Diagram 35.720 Channel 21100 Value = 13,4038MHz
16-QAM-Modulation

1.5.1.4. BW = 20MHz



Date: 15.AUG.2014 22:03:43

Diagram 35.712 Channel 21350 Value = 17.8397MHz
QPSK-Modulation



Date: 18.AUG.2014 16:10:05

Diagram 35.723 Channel 21100 Value = 17.8397MHz
16-QAM-Modulation

1.6. Spurious emissions conducted (LTE Band 7)

Diagram No.: 36.720_RSE_C_Ch20775_BW_5_QPSK

Common Information

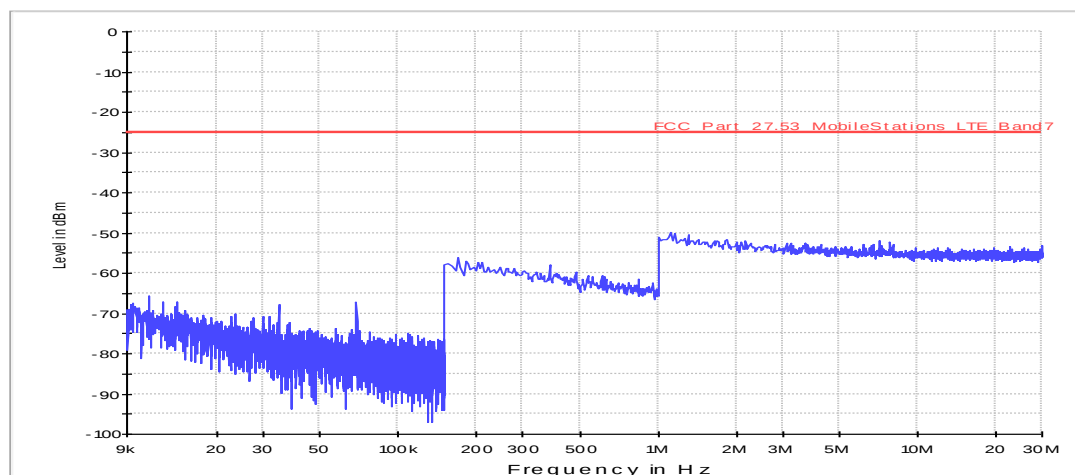
Test Description:	TX Spurious Emission Conducted §2.1051
Test Site:	Radio laboratory 2
Test Standard:	FCC Part 27(l)(4)
Environment conditions:	Normal conditions (Vnominal, Tnominal)
Operator name:	kre
Operating mode:	LTE Band7 TX: TX - Channel 20775/ 1RB low/ BW=5MHz / Modulation=QPSK
Test SW Version:	EMC32 V8.53.0

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
Model:	LTE-NAD solution
Type:	GSM/UMTS/LTE module

EUT:	V1140-100
HW version:	3.0
SW version:	M9615A-CETWTAZM-50110118
SVN:	03
Config:	C40
Serial number:	355092-05-001511-4
Connected Interfaces:	microphone + loudspeaker
Power Supply:	external 3.8V DC
Comments:	Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup:	Fula2_HW_08_FCC_22_24_6dB_coupler
Receiver:	[ESU 40]
Level Unit:	dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.721_RSE_C_Ch20775_BW_5_QPSK

Common Information

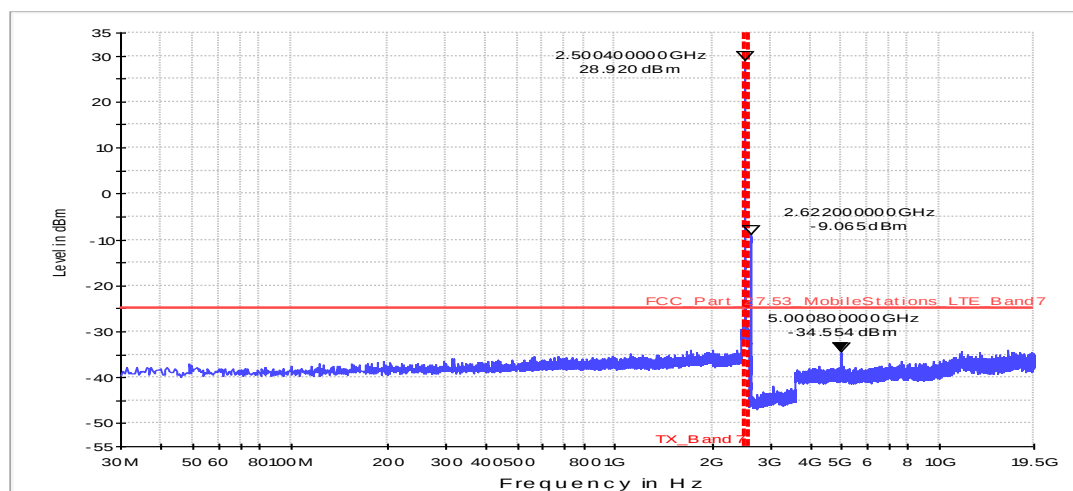
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 20775/ 1RB low/ BW=5MHz / Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.722_RSE_C_Ch21100_BW_10_QPSK

Common Information

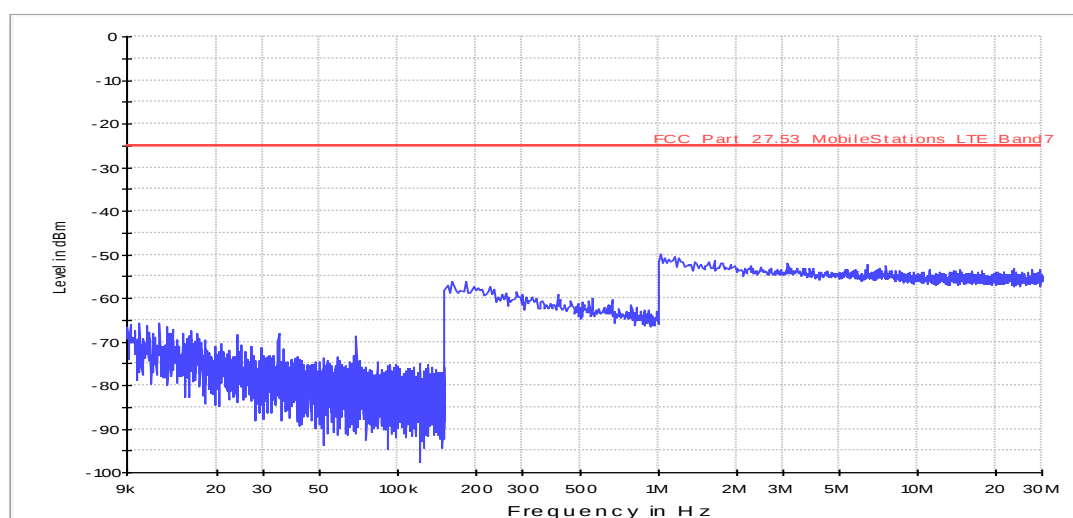
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21100/ 25 RB/ BW= 10MHz / Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.723_RSE_C_Ch21100_BW_10_QPSK

Common Information

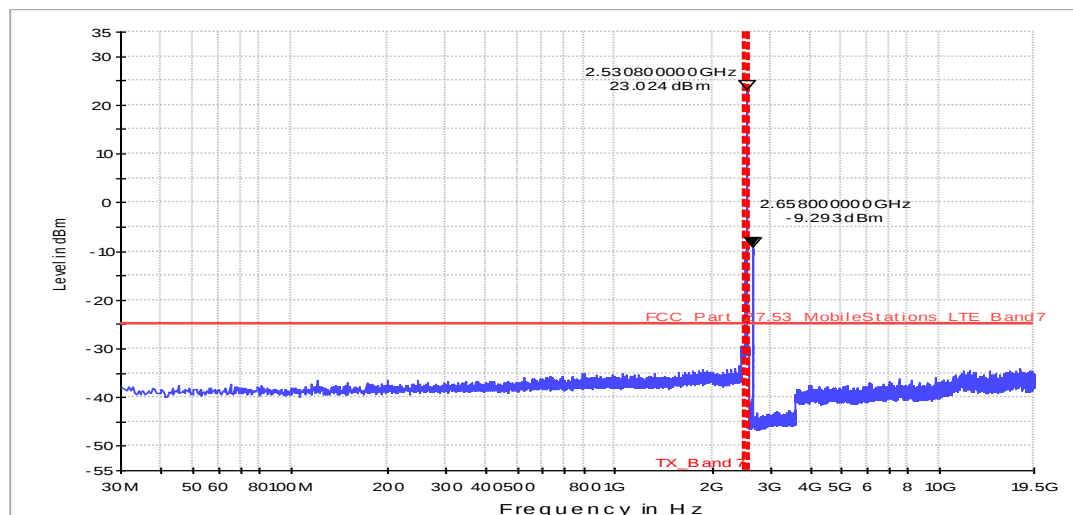
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21100/ 25 RB/ BW= 10MHz /
 Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.724_RSE_C_Ch21350_BW_20_QPSK

Common Information

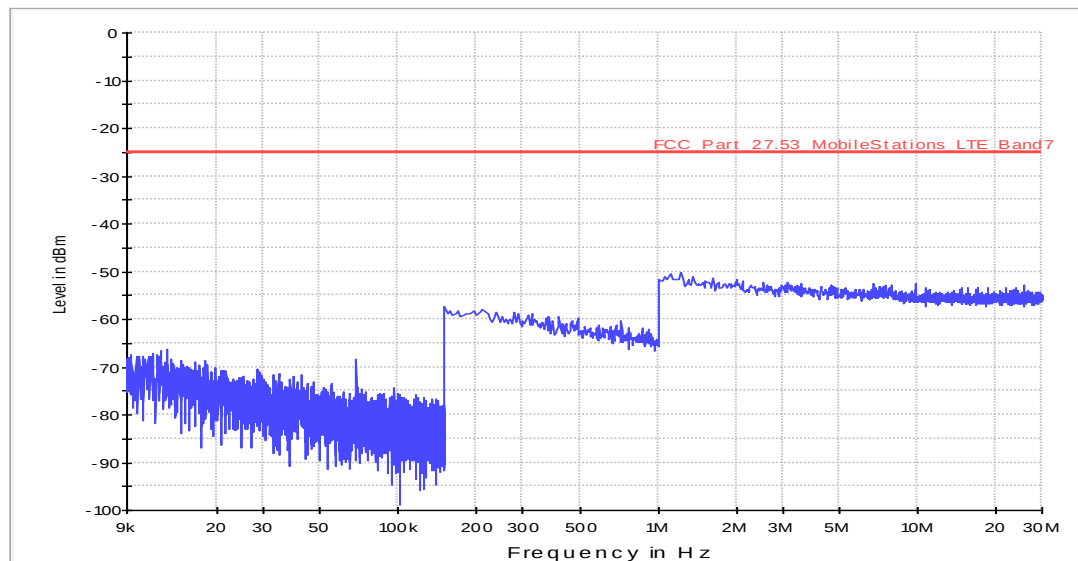
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21350/ 100 RB/ BW= 20MHz / Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.725_RSE_C_Ch21350_BW_20_QPSK

Common Information

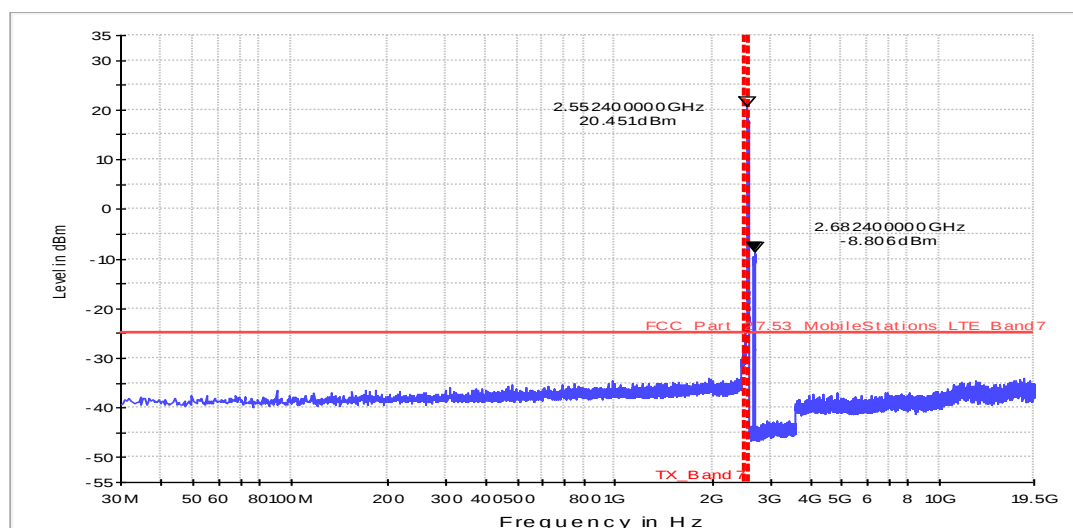
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21350/ 100 RB/ BW= 20MHz / Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.726_RSE_C_Ch20775_BW_5_QAM

Common Information

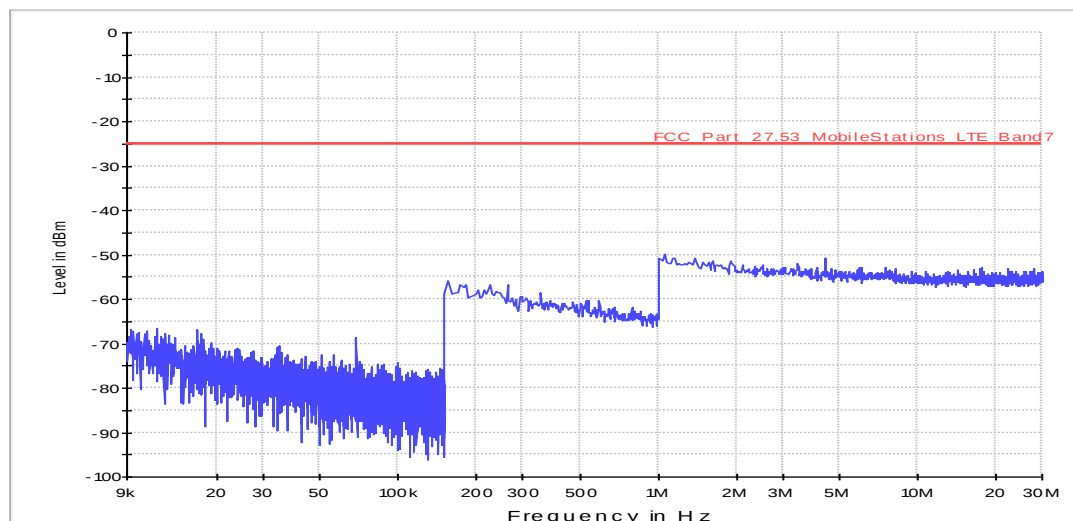
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 20775/ 1RB low/ BW=5MHz / Modulation=QAM
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.727_RSE_C_Ch20775_BW_5_QAM

Common Information

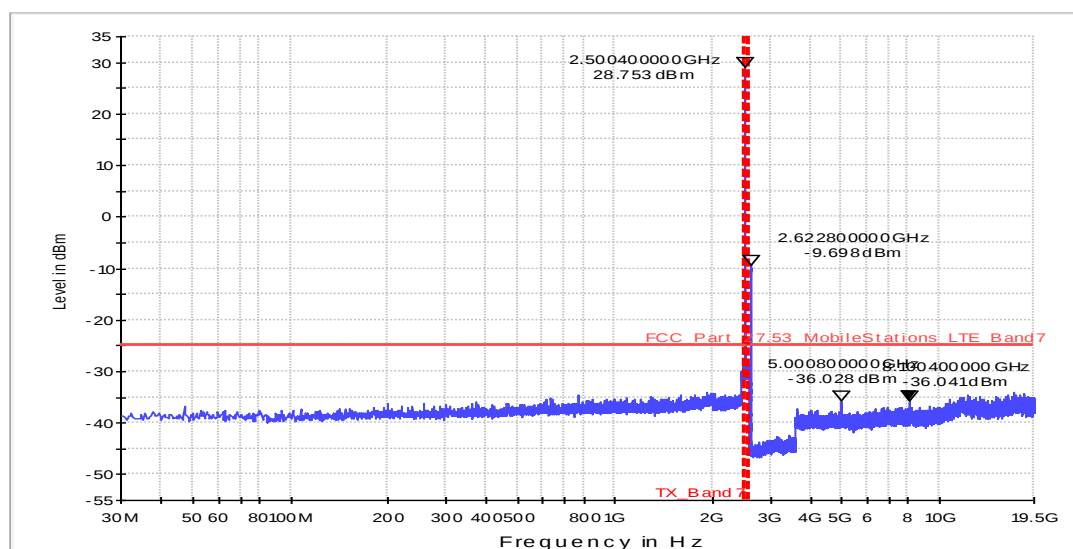
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 20775/ 1RB low/ BW=5MHz / Modulation=QAM
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.728_RSE_C_Ch21100_BW_10_QAM

Common Information

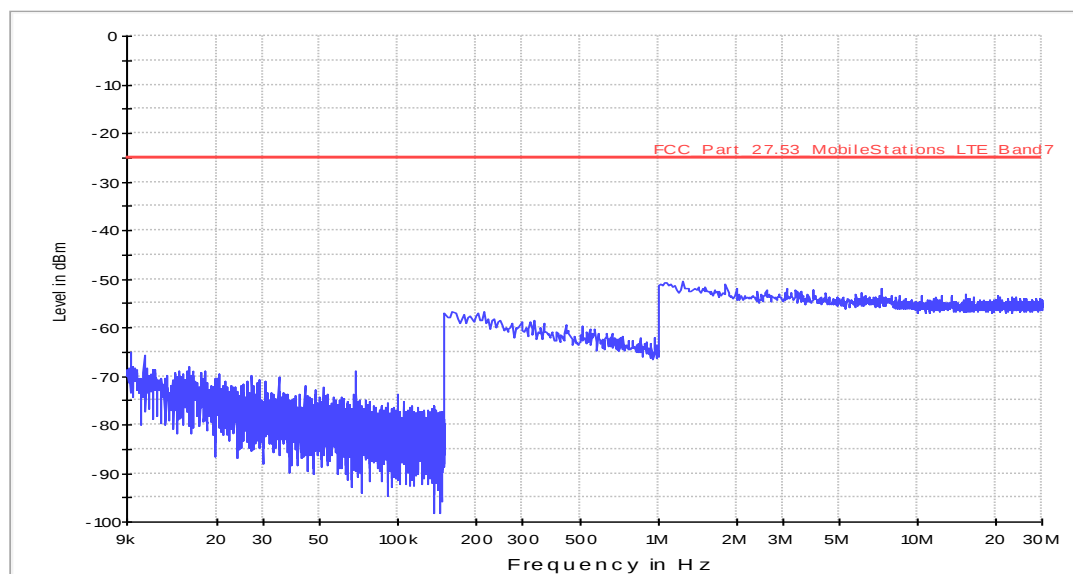
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21100/ 25 RB middle/ BW= 10MHz / Modulation=QAM
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.729_RSE_C_Ch21100_BW_10_QAM

Common Information

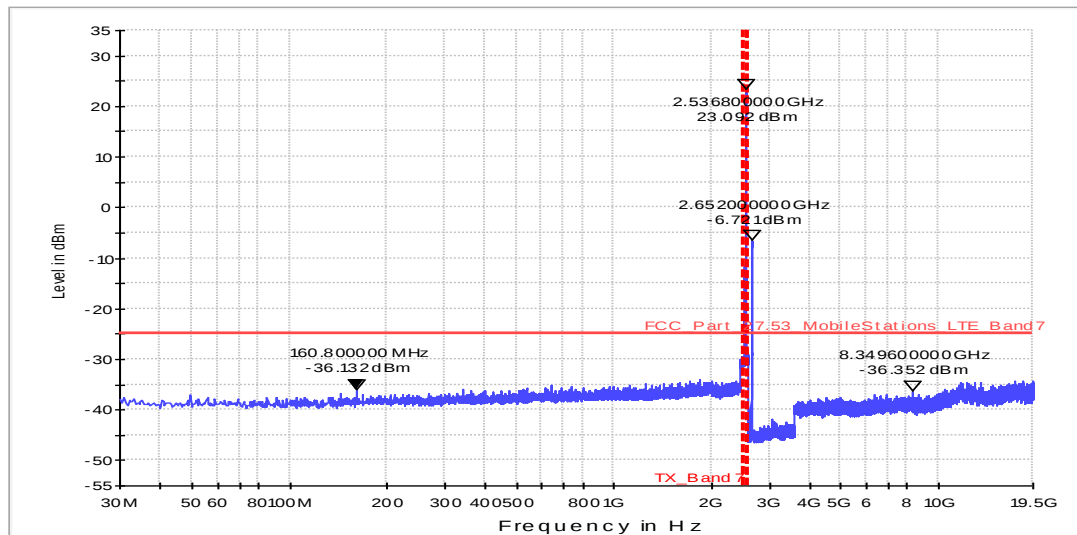
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21100/ 25 RB middle/ BW= 10MHz / Modulation=QAM
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.730_RSE_C_Ch21350_BW_20_QAM

Common Information

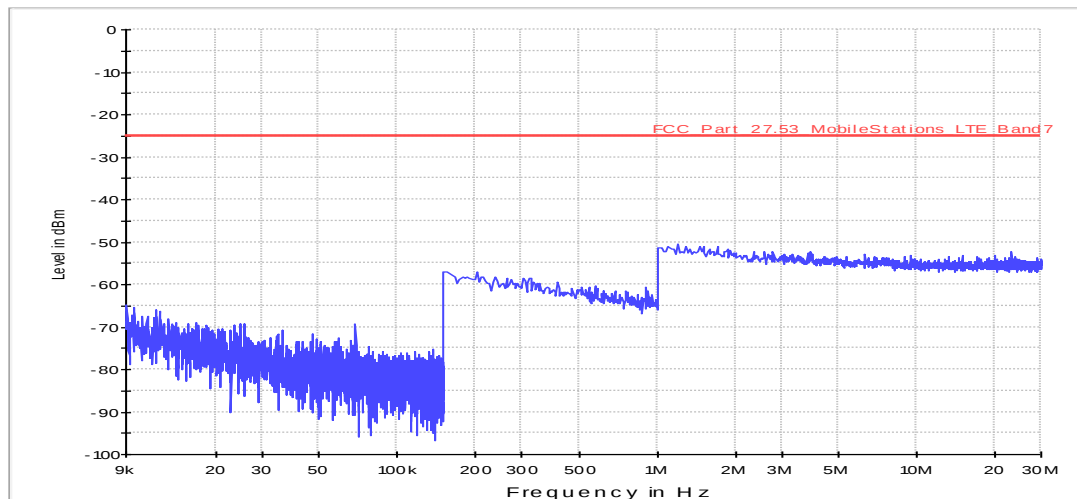
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21350/ 100 RB/ BW= 20MHz / Modulation=QAM
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan1_9kHz_30MHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	40 Hz	PK+	100 Hz	0.01 s	0 dB
150 kHz - 1 MHz	4 kHz	PK+	9 kHz	0.01 s	0 dB
1 MHz - 30 MHz	20 kHz	PK+	100 kHz	0.01 s	0 dB

Diagram No.: 36.731_RSE_C_Ch21350_BW_20_QAM

Common Information

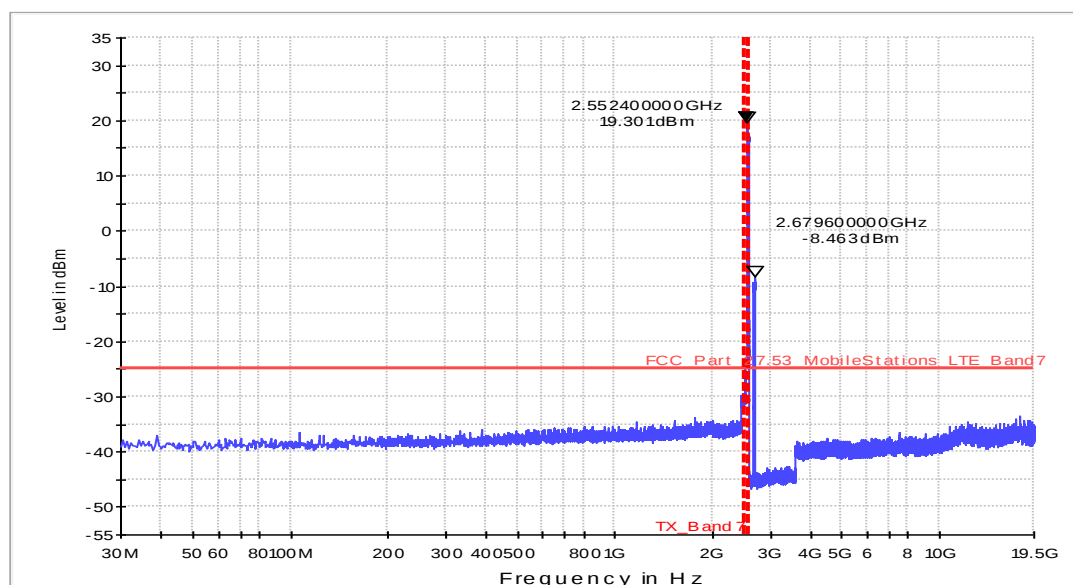
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21350/ 100 RB/ BW= 20MHz / Modulation=QAM
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.732_RSE_C_Ch21100_BW_5_QPSK

Common Information

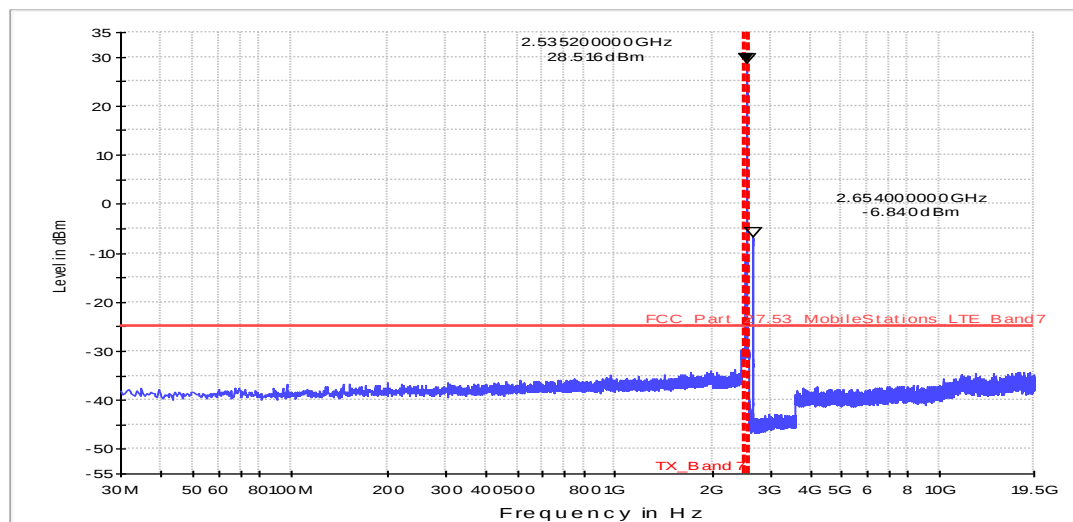
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21100/ 1 RB middle/ BW= 5MHz / Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

Diagram No.: 36.733_RSE_C_Ch21425_BW_5_QPSK

Common Information

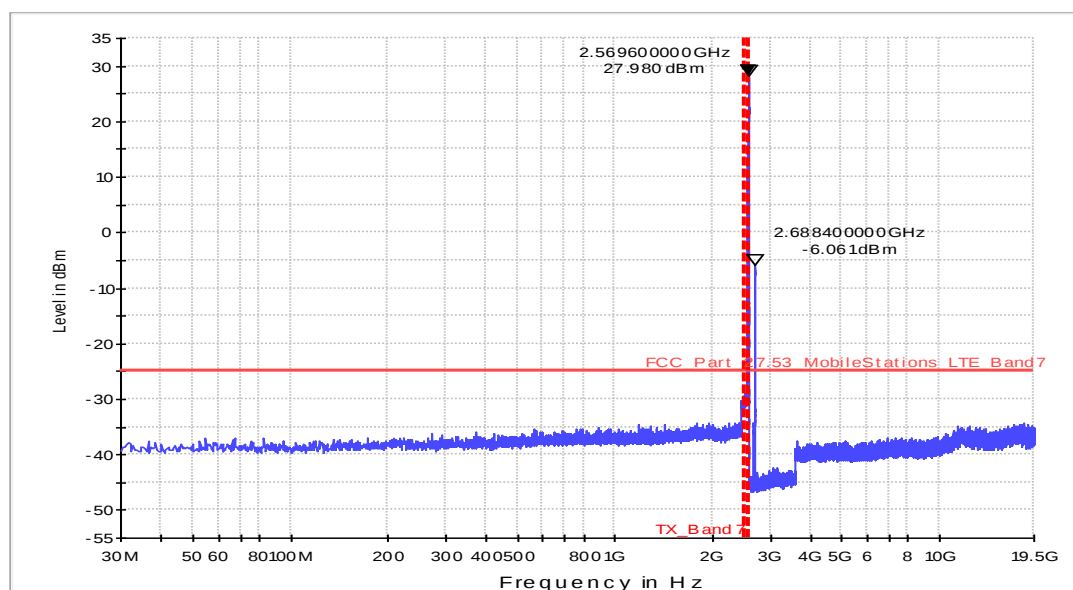
Test Description: TX Spurious Emission Conducted §2.1051
 Test Site: Radio laboratory 2
 Test Standard: FCC Part 27(l)(4)
 Environment conditions: Normal conditions (Vnominal, Tnominal)
 Operator name: kre
 Operating mode: LTE Band7 TX: TX - Channel 21425/ 1 RB high/ BW= 5MHz / Modulation=QPSK
 Test SW Version: EMC32 V8.53.0

EUT Information

Manufacturer: peiker acoustic GmbH & Co. KG
 Model: LTE-NAD solution
 Type: GSM/UMTS/LTE module

EUT: V1140-100
 HW version: 3.0
 SW version: M9615A-CETWTAZM-50110118
 SVN: 03
 Config: C40
 Serial number: 355092-05-001511-4
 Connected Interfaces: microphone + loudspeaker
 Power Supply: external 3.8V DC
 Comments: Testboard LP1307-1

Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz



Scan Setup: Fula2_FCC_27_LTE_Bd7_Scan2_30MHz_19.5GHz [EMI radiated]

Hardware Setup: Fula2_HW_08_FCC_22_24_6dB_coupler
 Receiver: [ESU 40]
 Level Unit: dBm

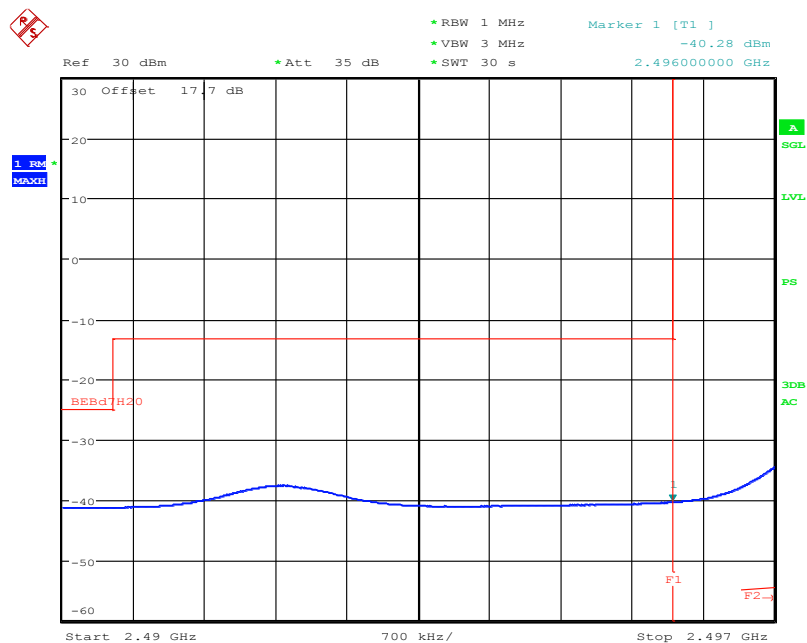
Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
30 MHz - 2.45 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.45 GHz - 2.572 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB
2.572 GHz - 19.5 GHz	400 kHz	PK+	1 MHz	0.01 s	0 dB

1.7. Conducted emissions – band - edge (LTE Band 7)

1.7.1. Band - edge low

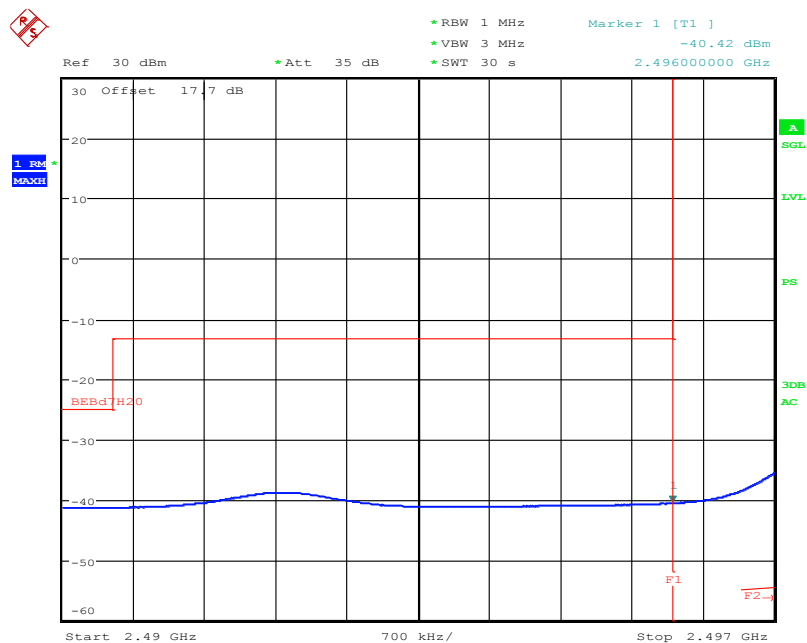
Channel 20850

37.19_BE_C_Ch20850_BW20_RB1_QPSK

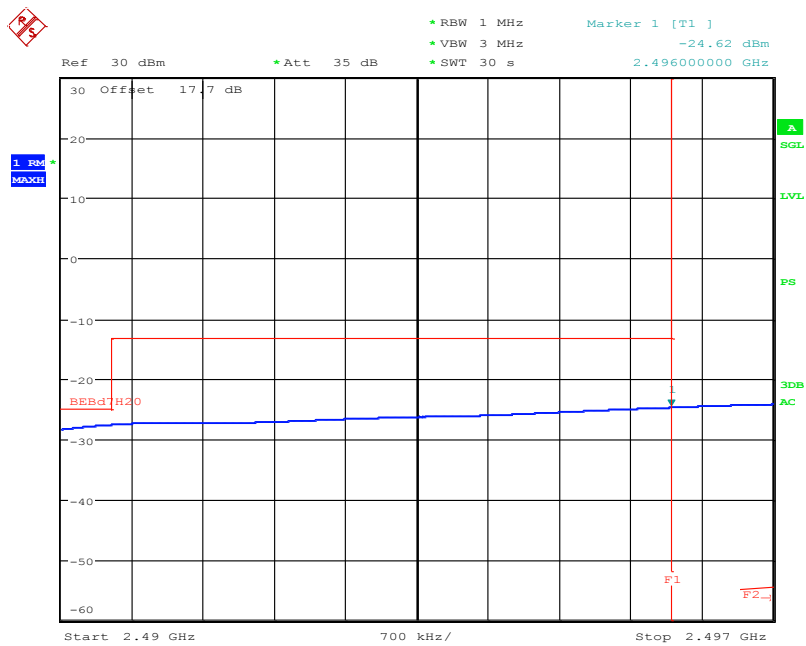


Date: 19.AUG.2014 17:04:43

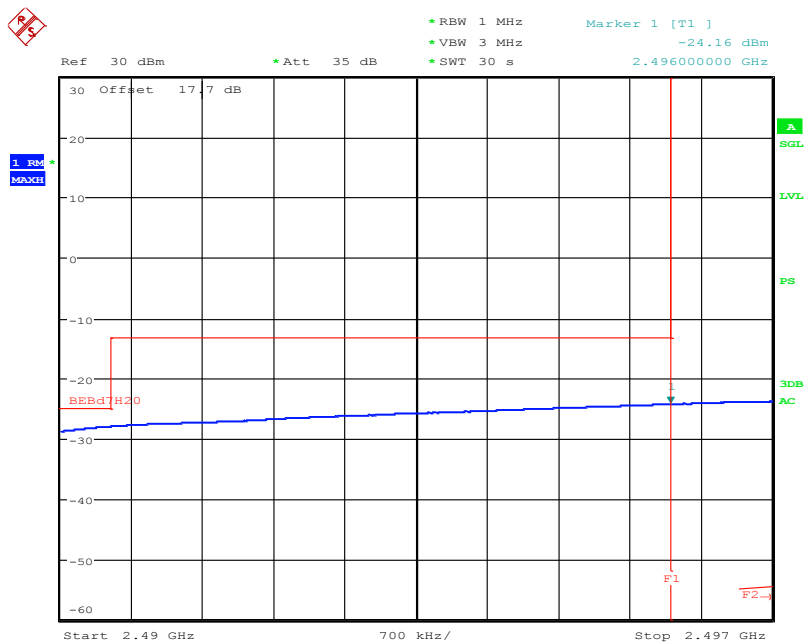
37.20_BE_C_Ch20850_BW20_RB1_QAM



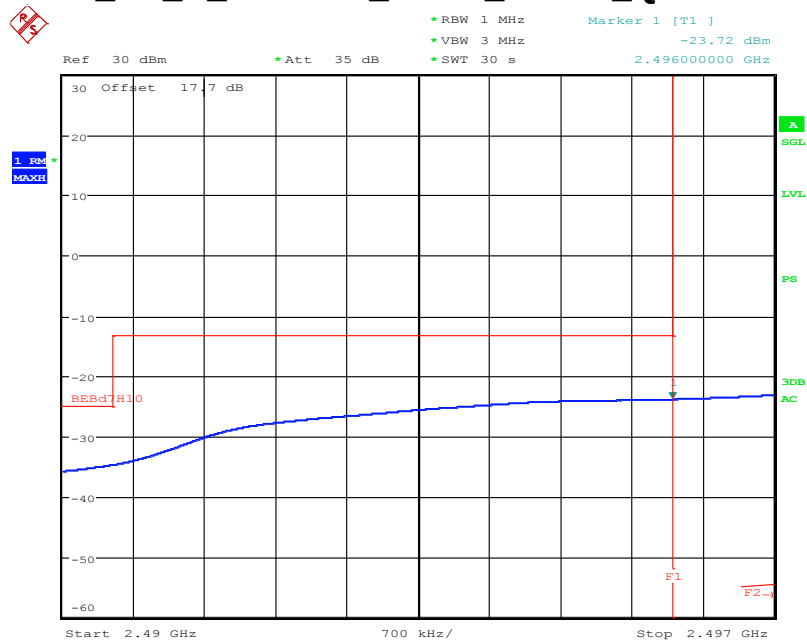
Date: 19.AUG.2014 17:04:02

37.17_BE_C_Ch20850_BW20_RB100_QPSK

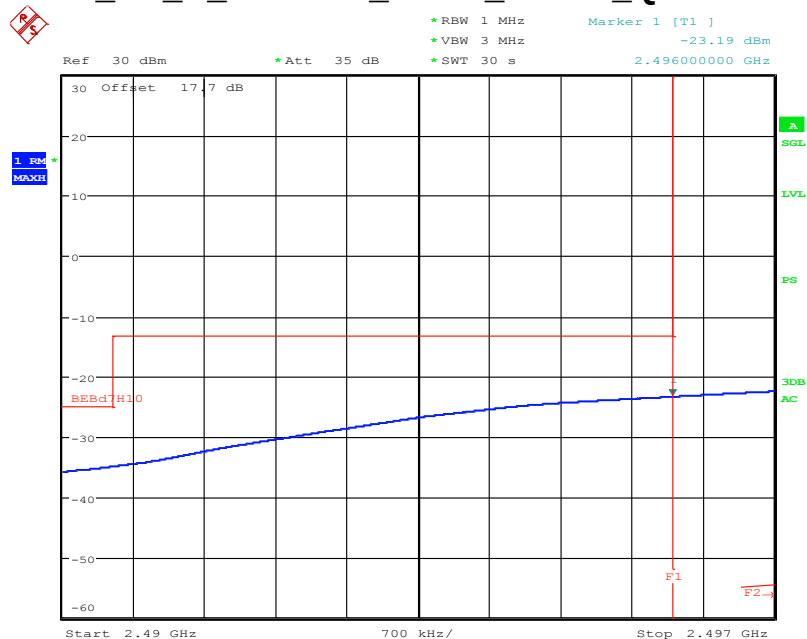
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37.18_BE_C_Ch20850_BW20_RB100_QAM

Date: 19.AUG.2014 17:03:18

37.21_BE_C_Ch20800_BW10_100RB_QPSK

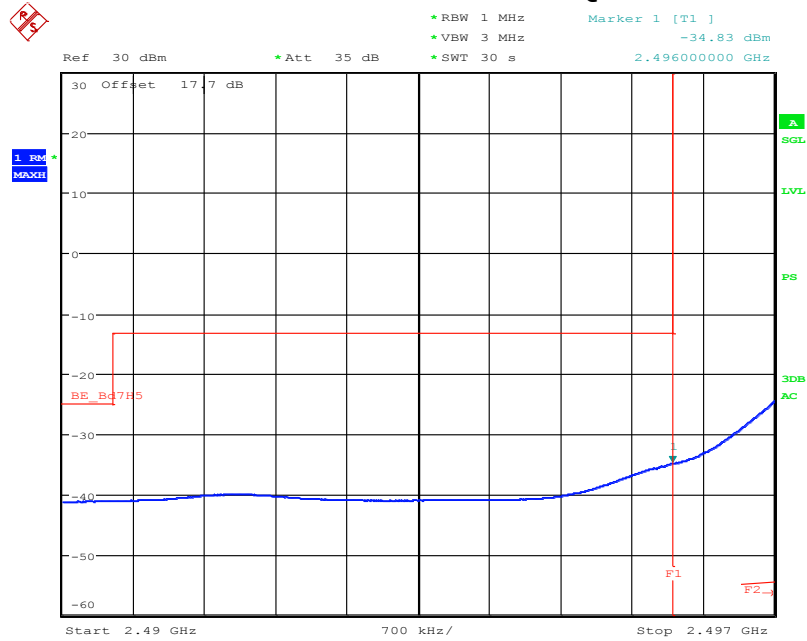
Date: 19.AUG.2014 17:10:15

37.22_BE_C_Ch20800_BW10_100RB_QAM

Date: 19.AUG.2014 17:11:50

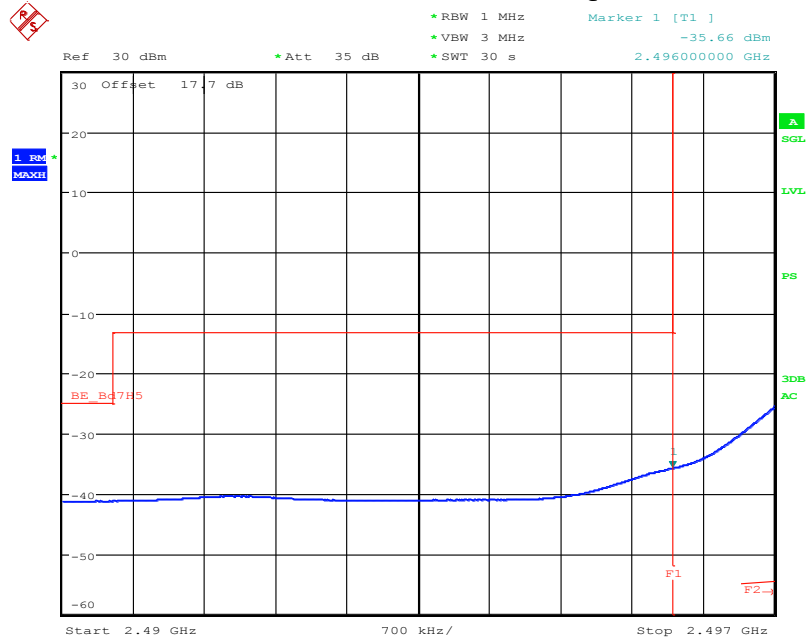
Channel 20775

37.27_BE_C_Ch20775_BW5_1RB_QPSK

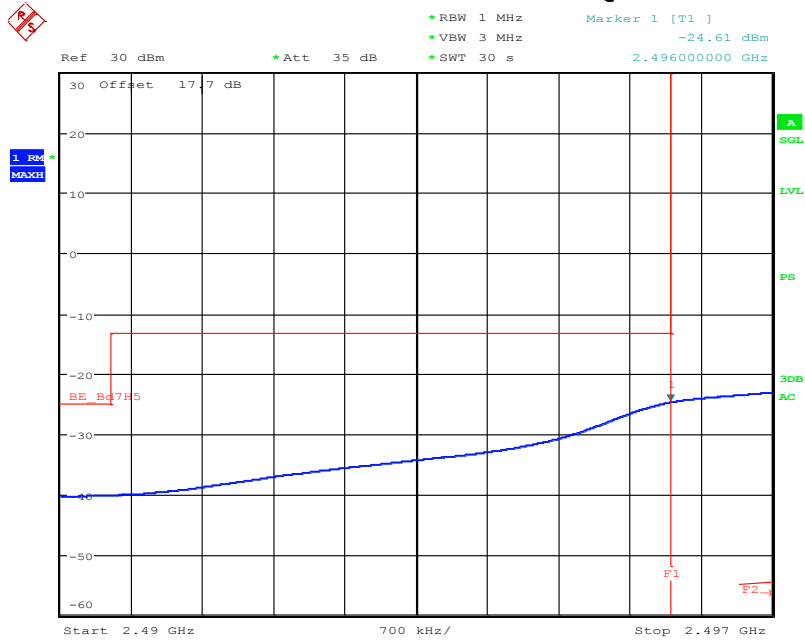


Date: 19.AUG.2014 17:18:54

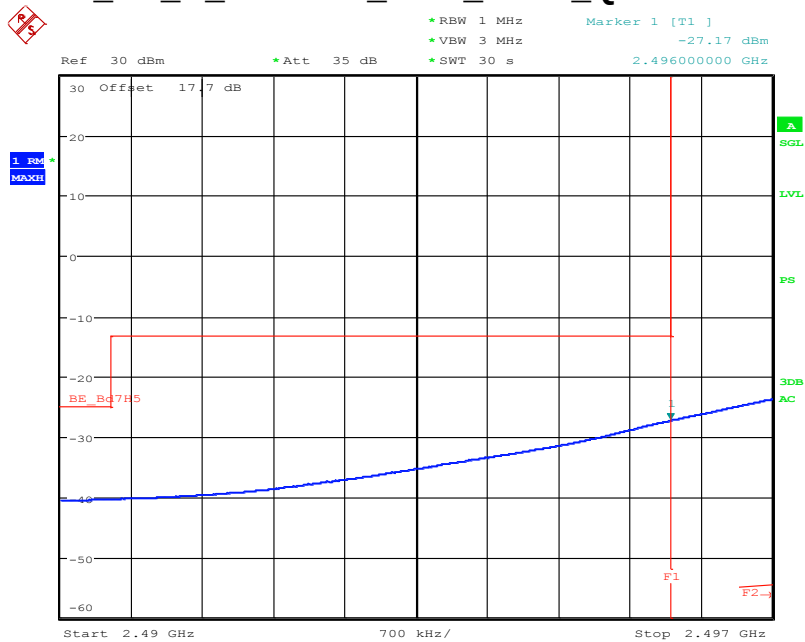
37.28_BE_C_Ch20775_BW5_1RB_QAM



Date: 19.AUG.2014 17:18:13

37.25_BE_C_Ch20775_BW5_25RB_QPSK

Date: 19.AUG.2014 17:16:25

37.26_BE_C_Ch20775_BW5_25RB_QAM

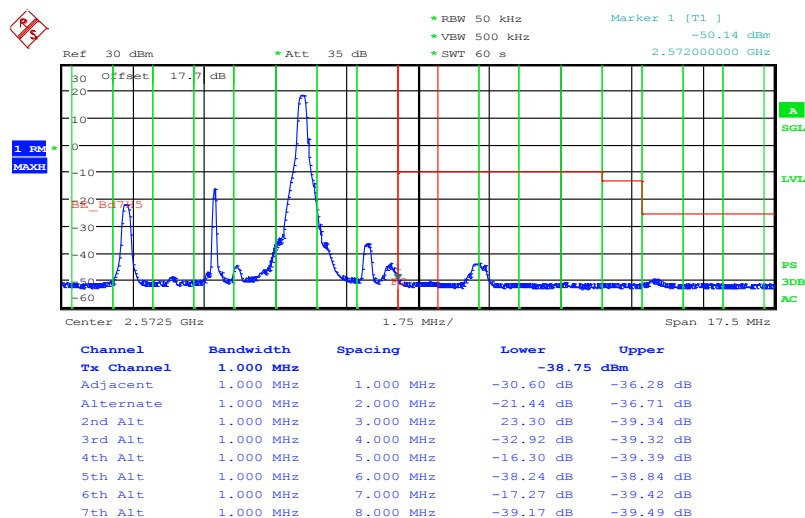
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TR6-0491-14-13-2a-C2_A4

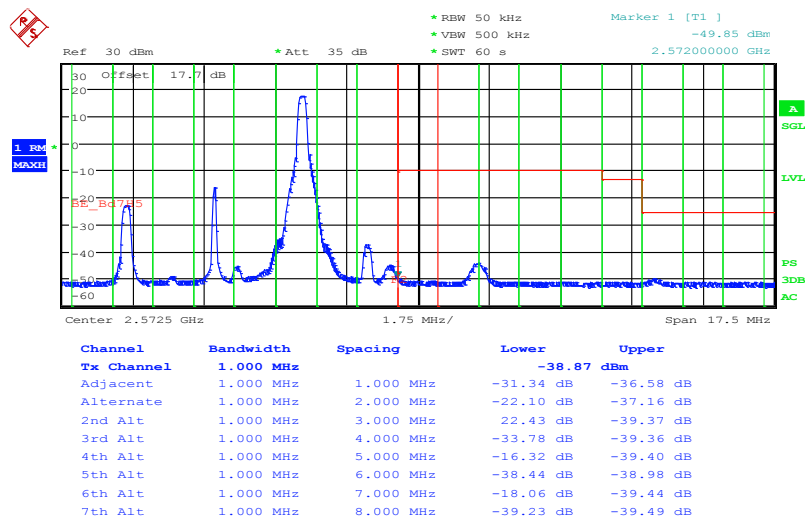
1.7.2. Band - edge high

37.03_BE_C_Ch21425_BW5M_1RB_QPSK



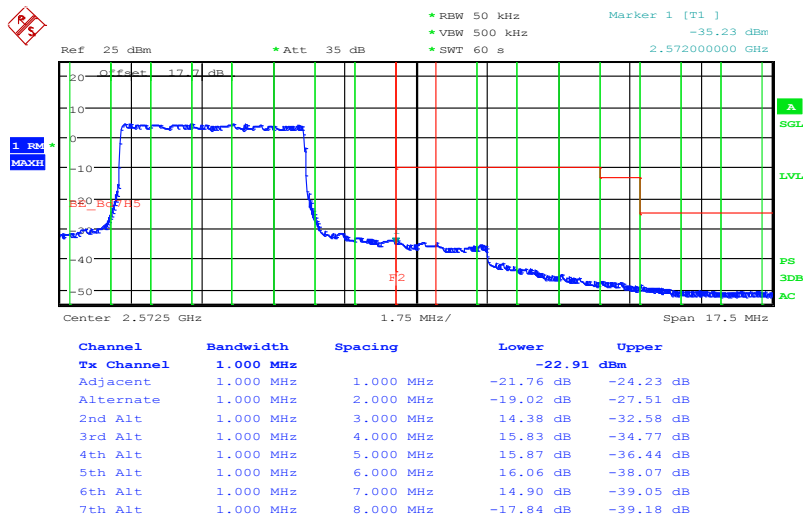
Date: 19.AUG.2014 16:08:00

37.04_BE_C_Ch21425_BW5M_1RB_QAM



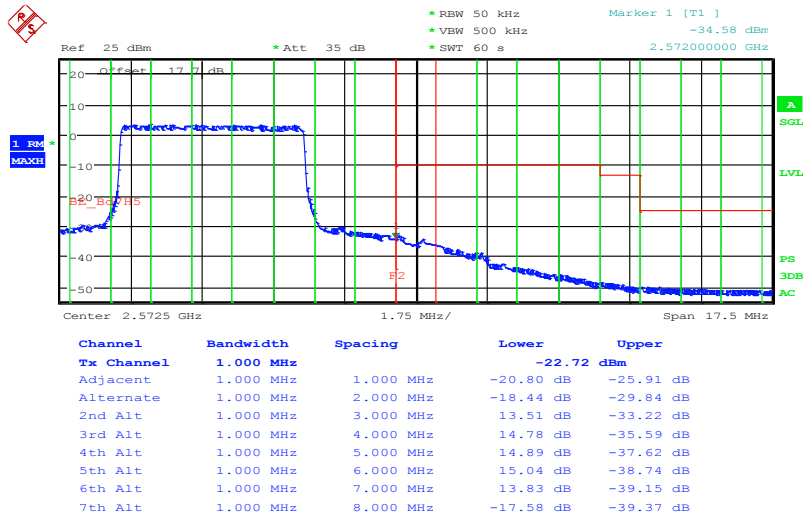
Date: 19.AUG.2014 16:09:18

37.01_BE_C_Ch21425_BW5M_25RB_QPSK



Date: 19.AUG.2014 16:05:19

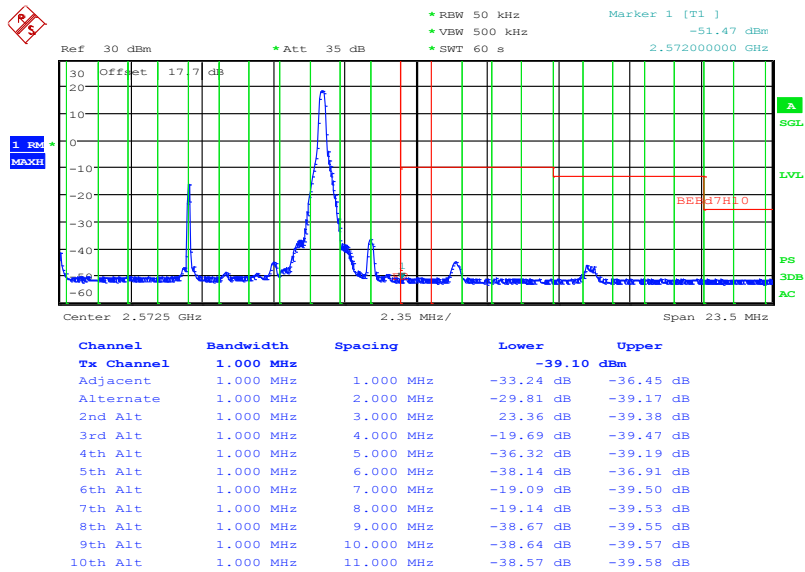
37.02_BE_C_Ch21425_BW5M_25RB_QAM



Date: 19.AUG.2014 16:03:59

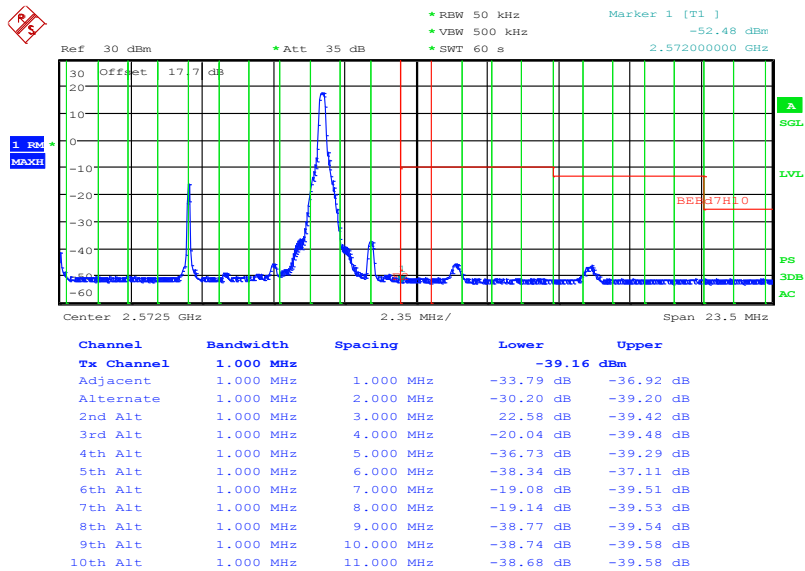
Channel21400

37.07_BE_C_Ch21400_BW10M_1RB_QPSK



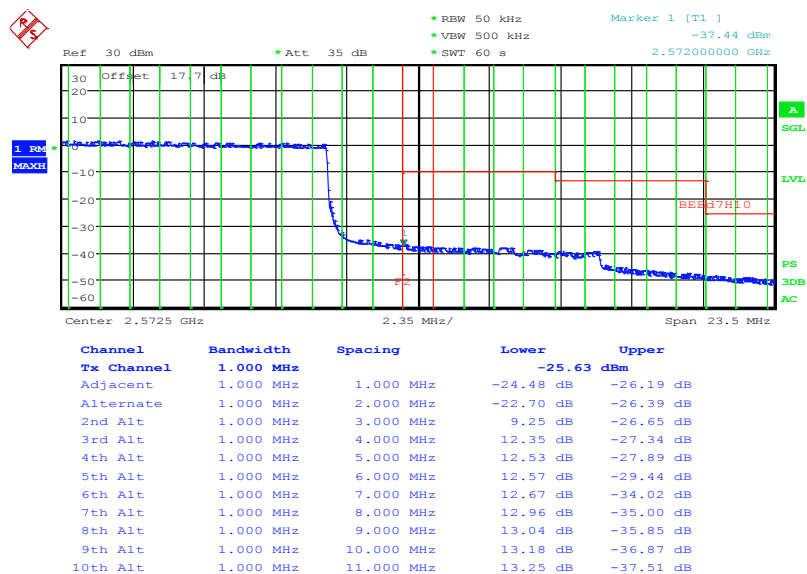
Date: 19.AUG.2014 16:20:23

37.08_BE_C_Ch21400_BW10M_1RB_QAM



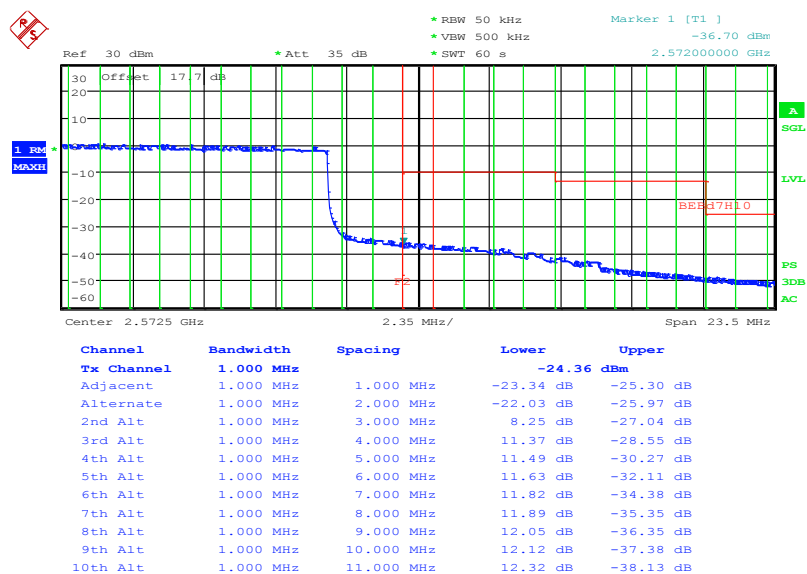
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37.05_BE_C_Ch21400_BW10M_50RB_QPSK



Date: 19.AUG.2014 16:18:38

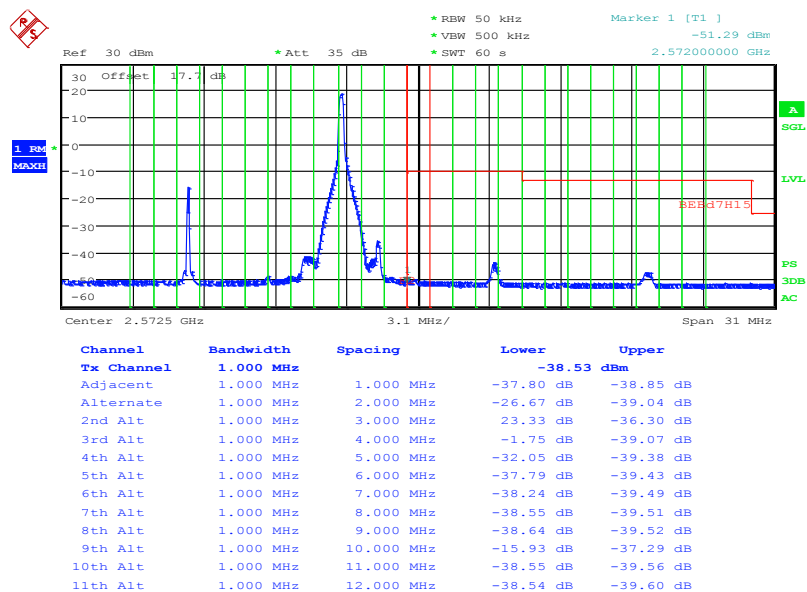
37.06_BE_C_Ch21400_BW10M_50RB_QAM



Date: 19.AUG.2014 16:16:49

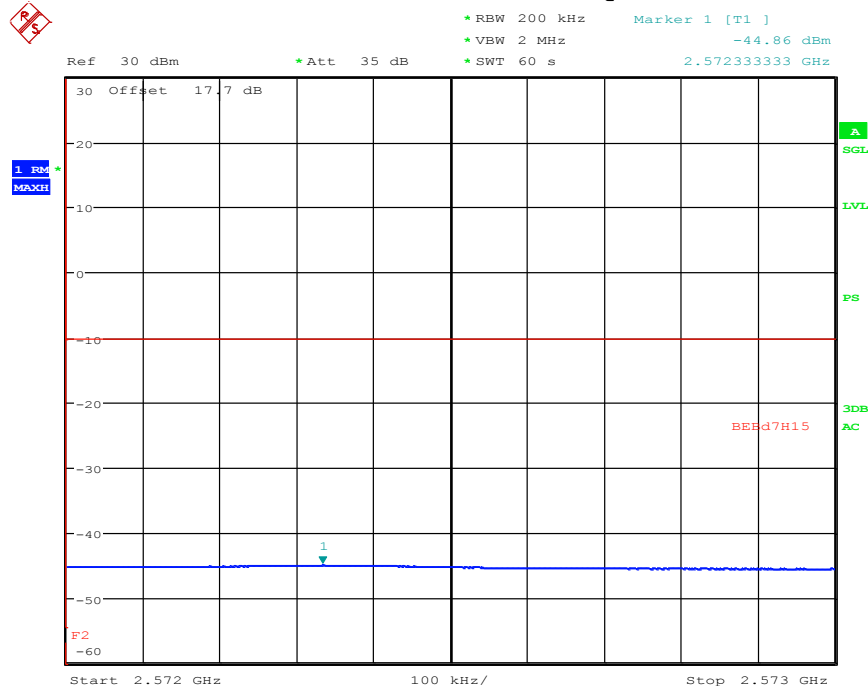
Channel 21375

37.11_BE_C_Ch21375_BW15M_1RB_QPSK



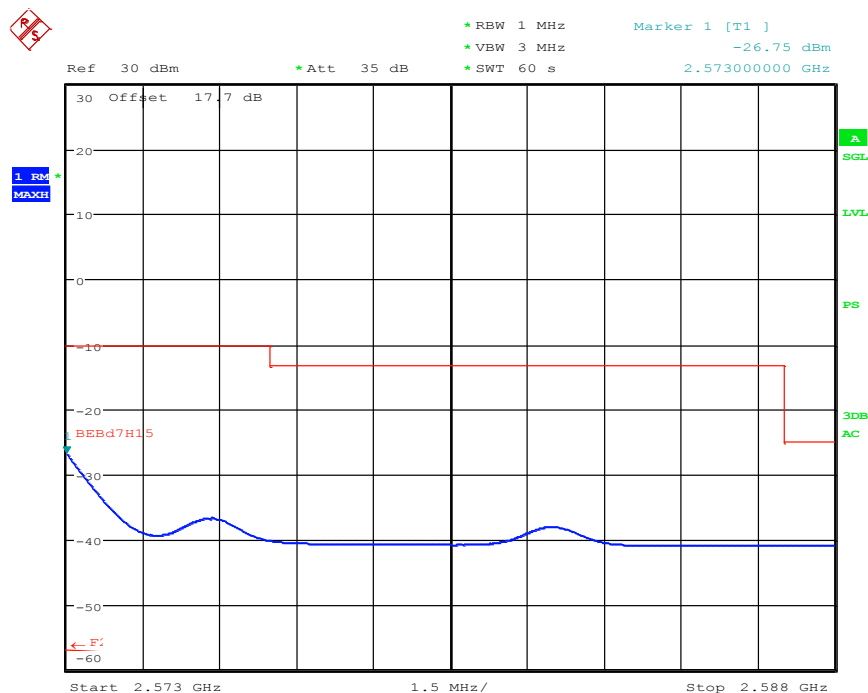
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37.11a_BE_C_Ch21375_BW15M_1RB_QPSK



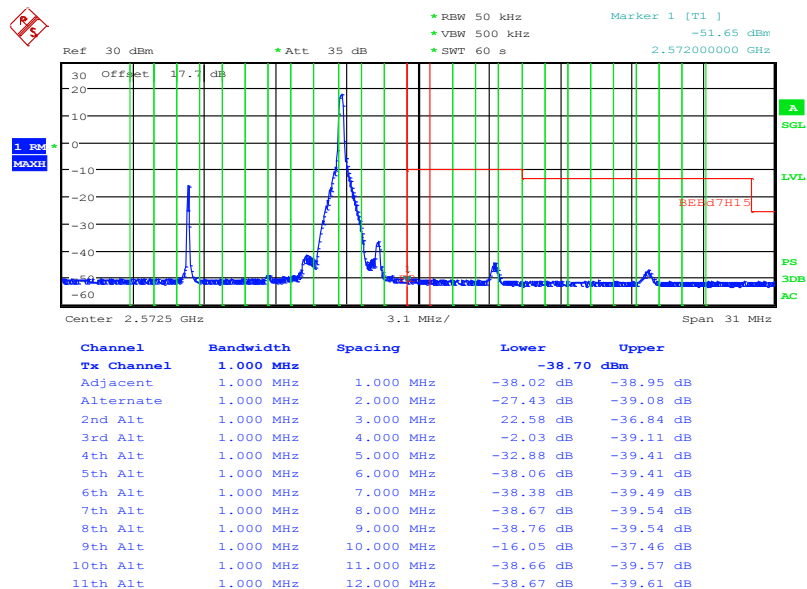
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37.11b_BE_C_Ch21375_BW15M_1RB_QPSK



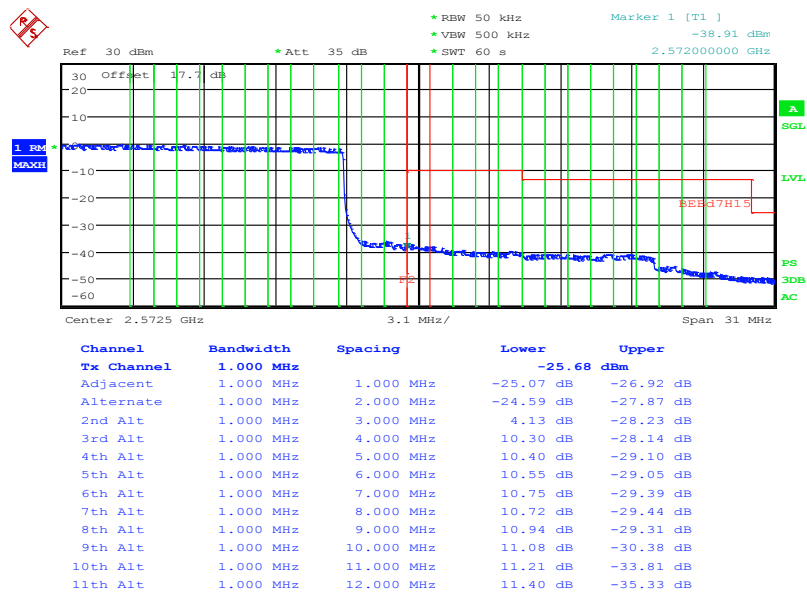
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37.12_BE_C_Ch21375_BW15M_1RB_QAM



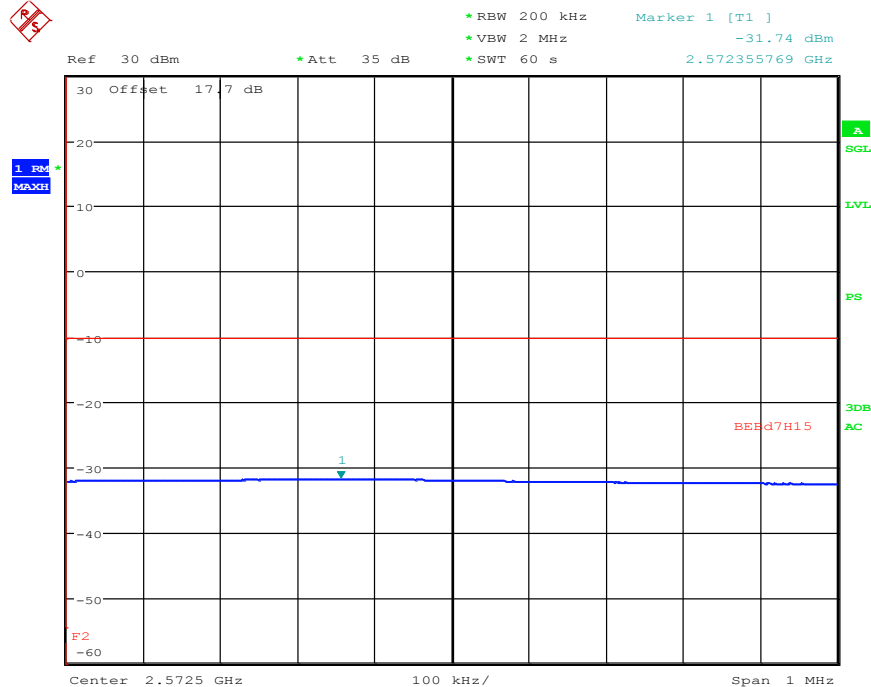
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37.09_BE_C_Ch21375_BW15M_75RB_QPSK



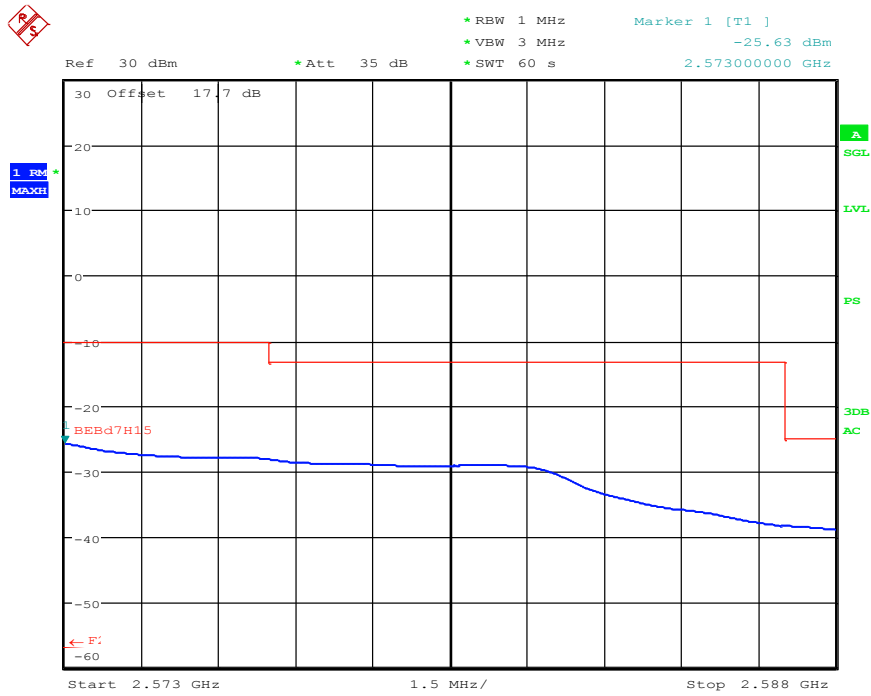
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37.09a_BE_C_Ch21375_BW15M_75RB_QPSK



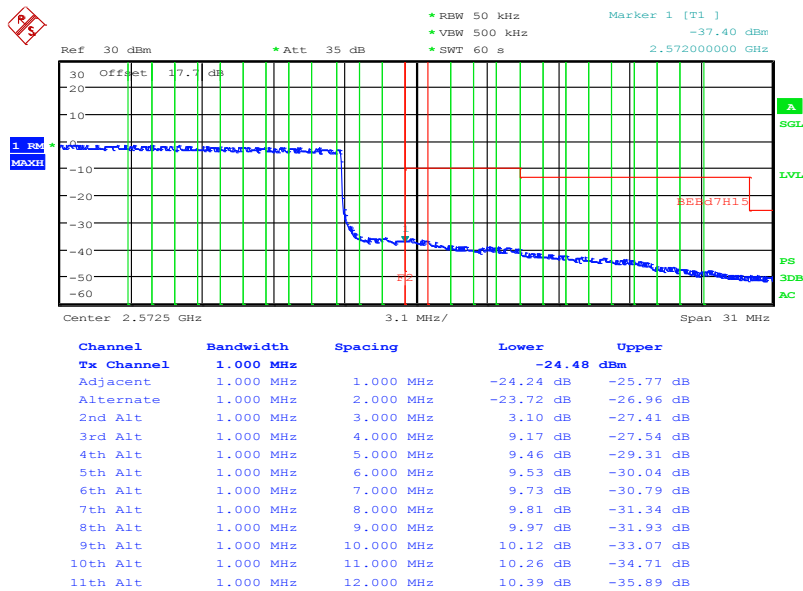
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37.09b_BE_C_Ch21375_BW15M_75RB_QPSK

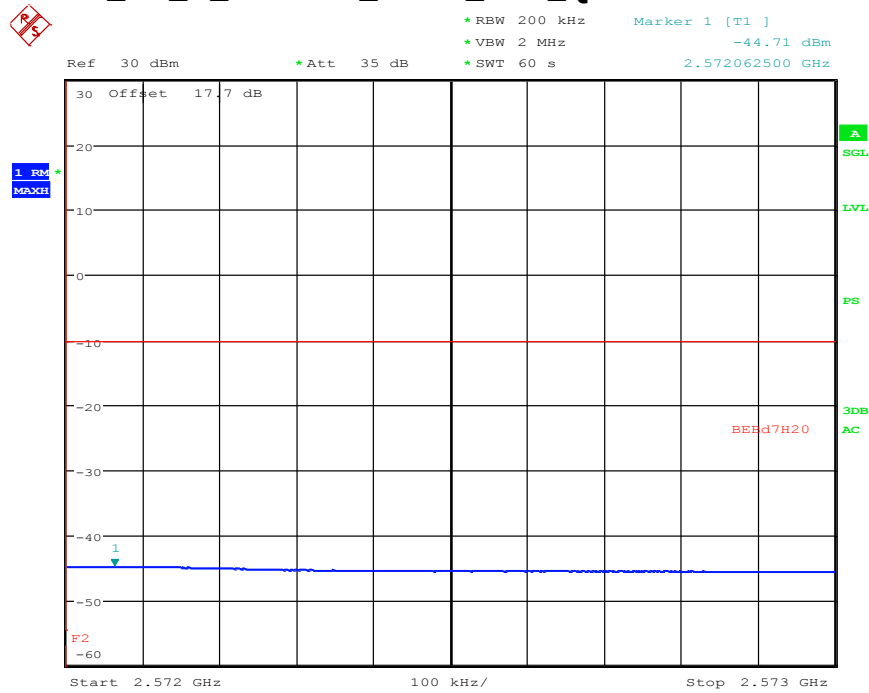


Date: 19.AUG.2014 16:37:54

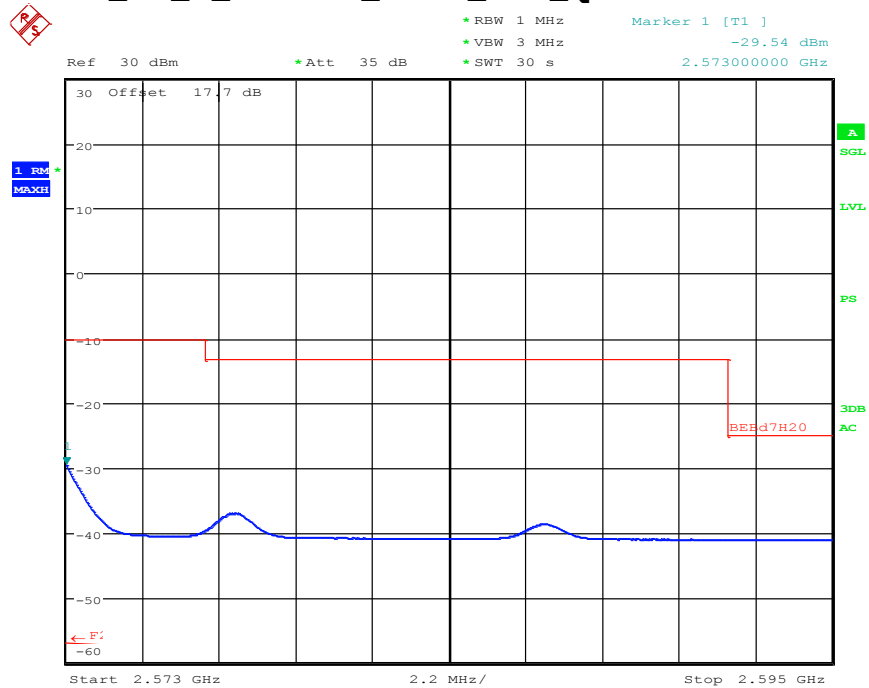
37.10_BE_C_Ch21375_BW15M_75RB_QAM



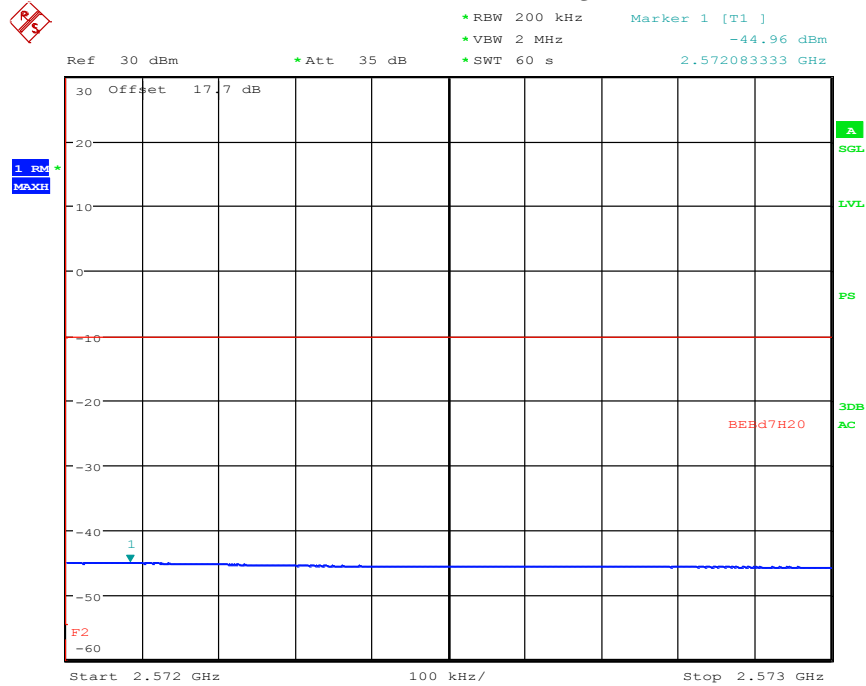
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Channel21350**37.15a_BE_C_Ch21350_BW20_1RB_QPSK**

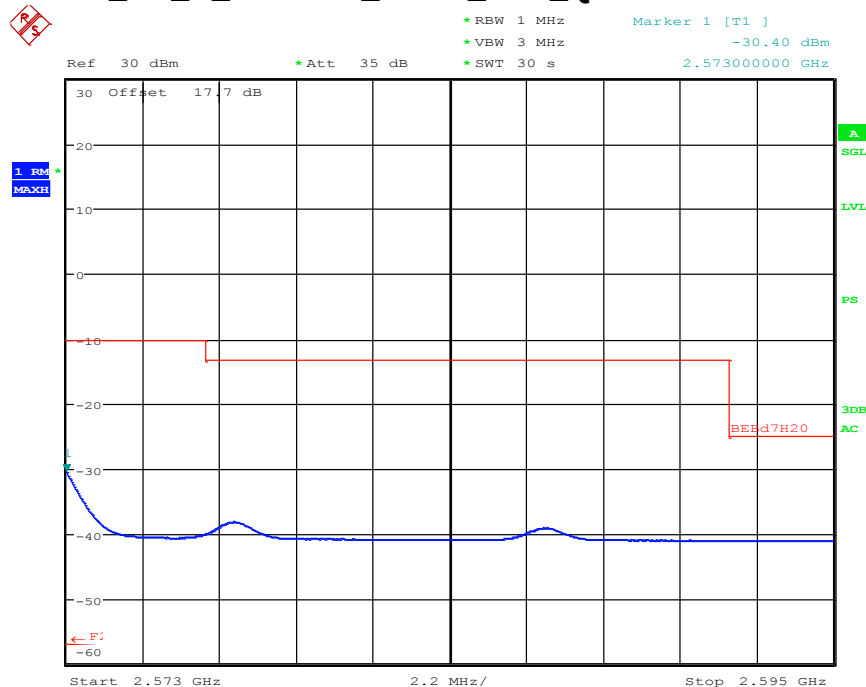
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37.15b_BE_C_Ch21350_BW20_1RB_QPSK

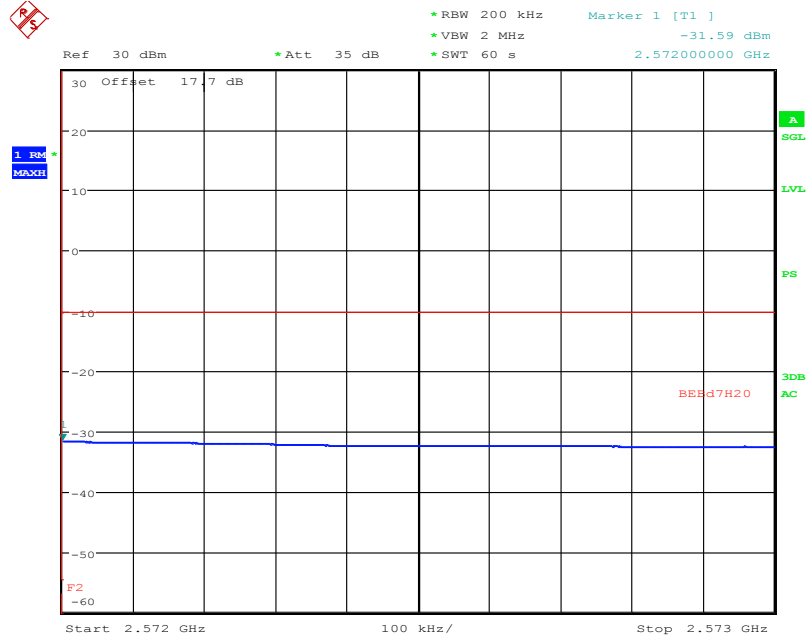
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37.16a_BE_C_Ch21350_BW20_1RB_QAM

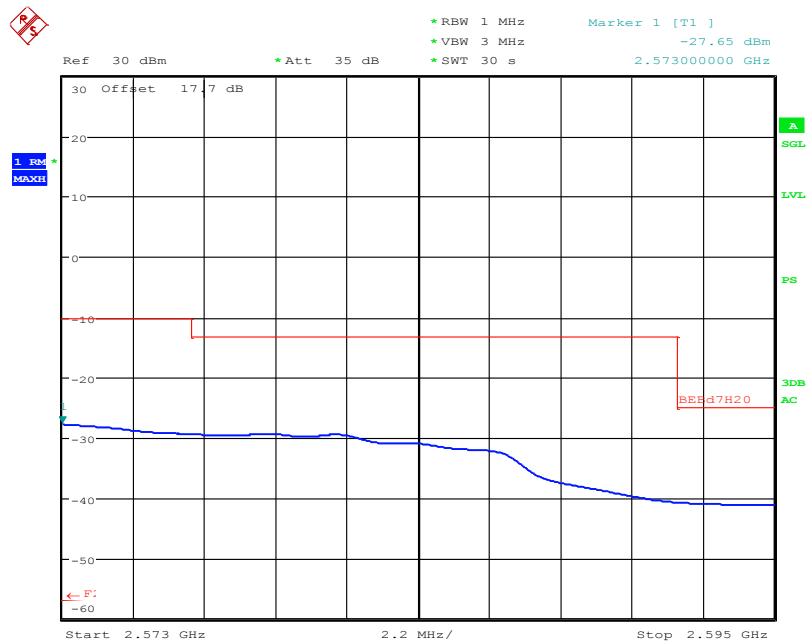
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37.16b_BE_C_Ch21350_BW20_1RB_QAM

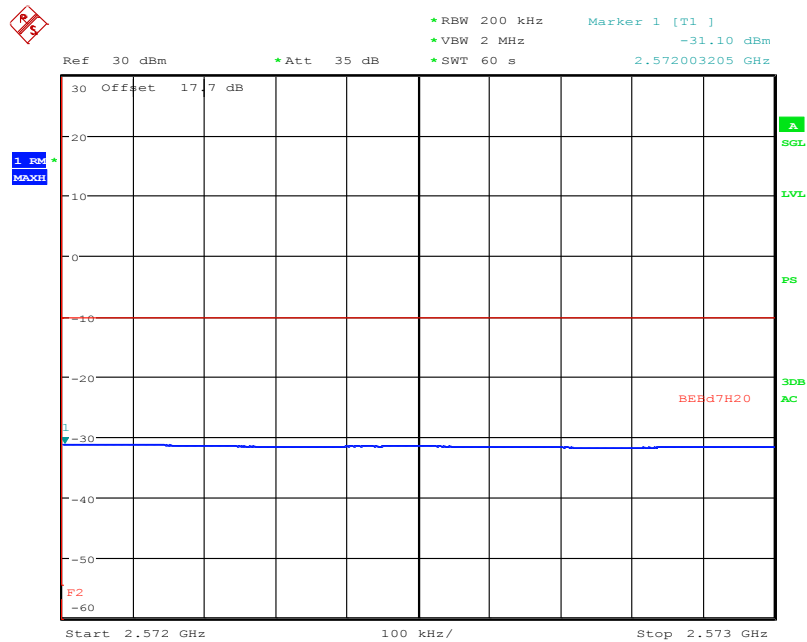
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37.13a_BE_C_Ch21350_BW20_100RB_QPSK

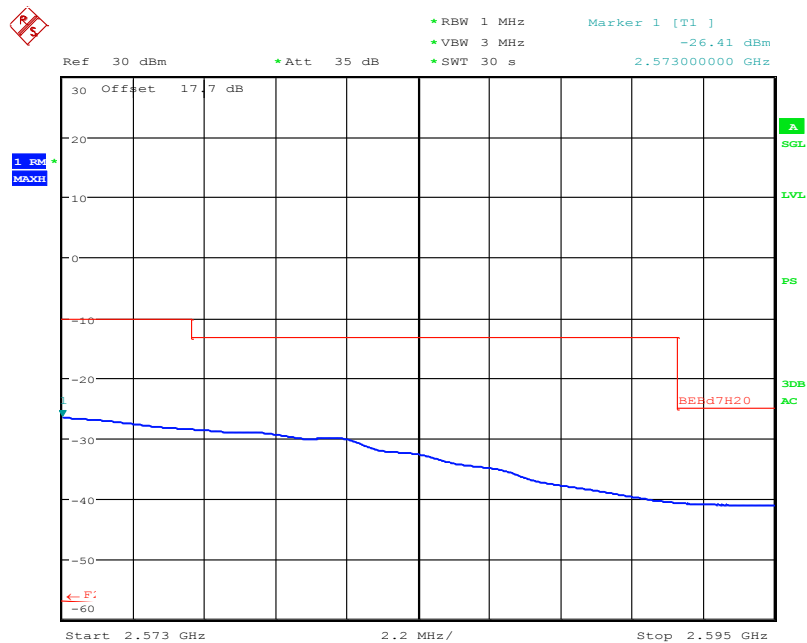
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37.13b_BE_C_Ch21350_BW20_100RB_QPSK

Date: 19.AUG.2014 16:56:24

37.14a_BE_C_Ch21350_BW20M_100RB_QAM

Date: 19.AUG.2014 16:48:40

37.14b_BE_C_Ch21350_BW20_100RB_QAM

Date: 19.AUG.2014 16:55:04