

Annex 1: Measurement diagrams
to TEST REPORT
No.:15-1-0017001T37a

According to:
FCC Regulations
Part 22, Part 24, Part 27

IC-Regulations
RSS-132 Issue 3, RSS-133 Issue 6,
RSS-139 Issue 2, RSS-Gen Issue 4
RSS-130, Issue 1

for

Peiker acoustic GmbH & Co. KG

ATM-01 R2-US-4GW

FCC-ID: QWY-ATM-R-622
IC: 6588A-ATMR622
PMN: ATM roof version
HVIN: ATM-01 R2-US-4GW

Laboratory Accreditation and Listings			
 Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FEDERAL COMMUNICATIONS COMMISSION USA 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	 AuthorizedTM Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
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1. Measurement diagrams for GSM technology

1.1. Spurious emissions radiated (850 MHz transmitting mode)

1.1.1. Internal antenna

8.03_RSE_R_Ch251_GSM

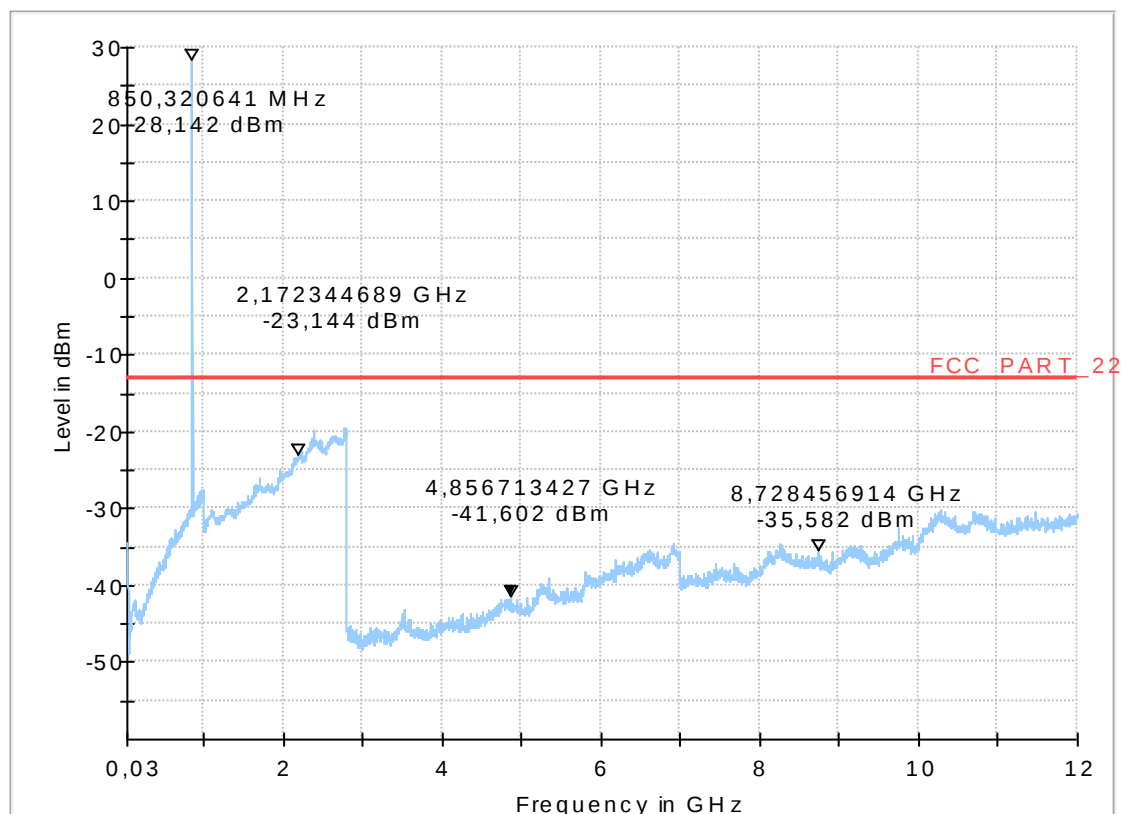
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator:	MFr
Comments:	Internal Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



1.1.2. External antenna

8.04_RSE_R_Ch128_GSM_850

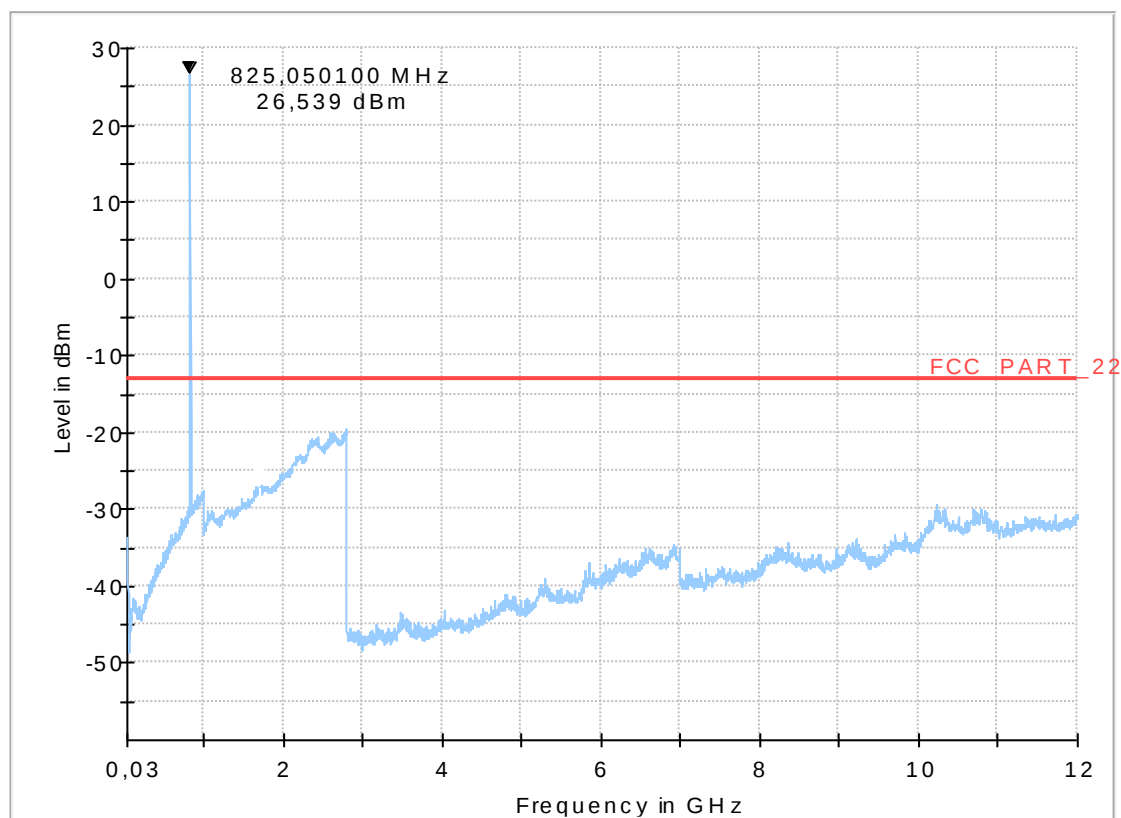
Common Information

Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 128
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator:	RLs

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



1.2. Radiated emissions on 850 MHz transmitting band-edge

1.2.1. Internal antenna

9.02_BE_R_Ch251_GSM

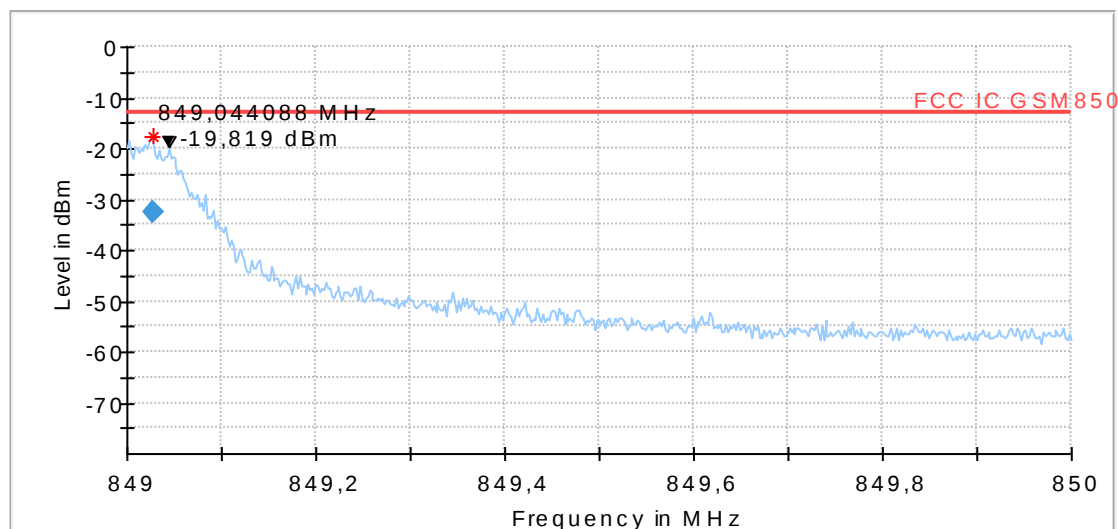
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 251 (fc = 848.8MHz), Voice, PCL0 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 40%rH; Temperature: 22°C
Operator:	MFr

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



1.2.2. External antenna

9.09_BE_R_Ch128_GSM_850

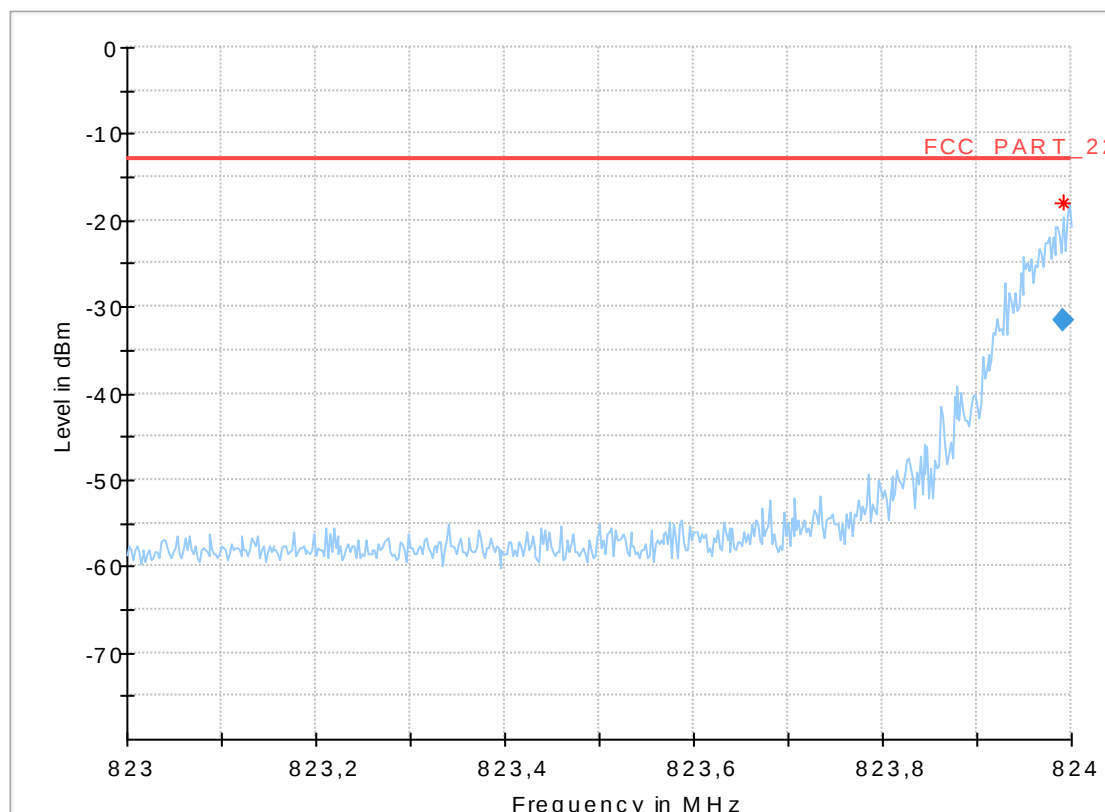
Common Information

Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 128 (fc = 824.2MHz), Voice, PCL5 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 35%rH; Temperature: 23°C
Operator:	RI5

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
-----	-----
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
823.991984	-13.00	18.57	10000.0	3.000	H	68.0	90.0	-75.8

1.3. Spurious emissions radiated (1900 MHz transmitting mode)

1.3.1. Internal antenna

8.12_RSE_R_CH810_GPRS_1900

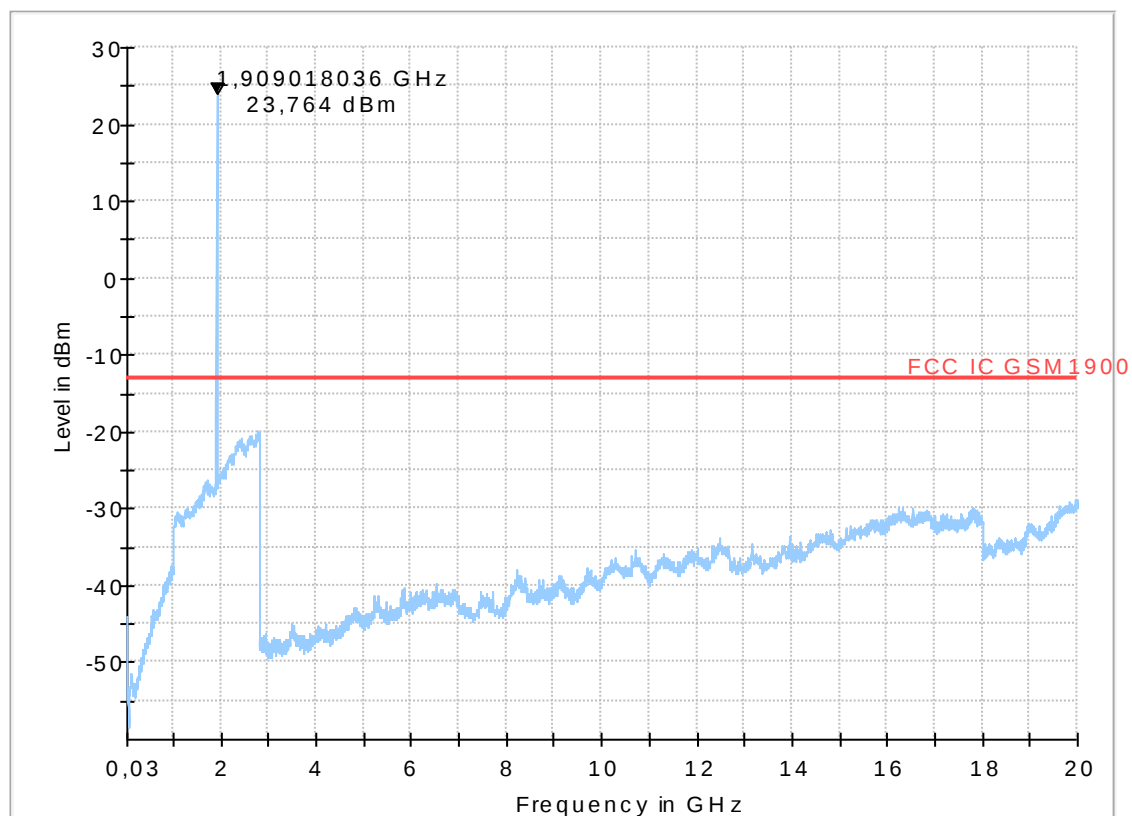
Common Information

Test Description:	Radiated Emissions GPRS 1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 512,661,810
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 38%RH; Temperature: 22°C
Operator:	
Comments	Internal Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



1.3.2. External antenna

8.13_RSE_R_Ch512_GSM_1900

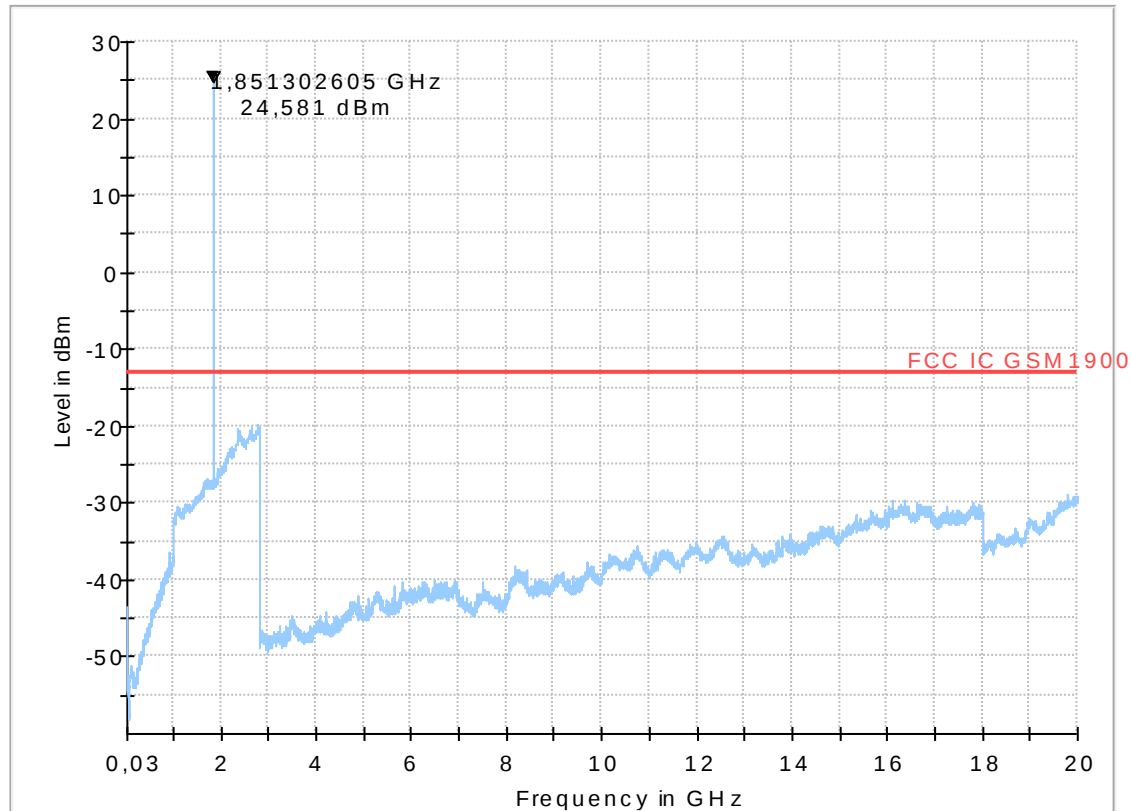
Common Information

Test Description:	Radiated Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 512
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator:	RI

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



1.4. Radiated emissions on 1900 MHz transmitting band-edge

1.4.1. Internal antenna

9.08_BE_R_Ch810_GSM

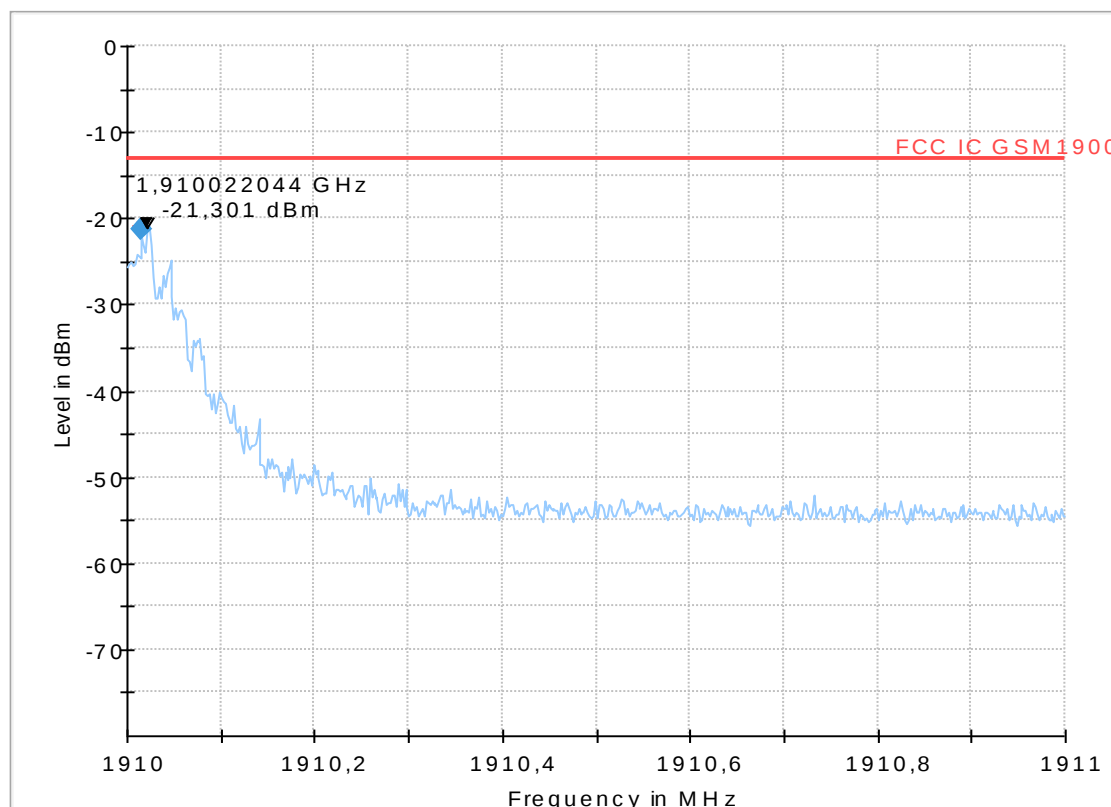
Common Information

Test Description:	Radiated Band Edge Compliance GSM1900
Operating Conditions:	CETECOM GmbH Essen
Operator Name:	Fully Anechoic Room (FAR)
Comment:	FCC Part 24
Operating Mode	MS allocated channel 810), Voice,
Environmental Conditions	Humidity: 40%rH; Temperature: 22°C
Operator	MFr
Comments	Interne Antenna

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1910.016032	-21.18	-13.00	8.18	10000.0	3.000	V	172.0	0.0	-62.8

1.4.2. External antenna

9.09_BE_R_Ch512_GPRS

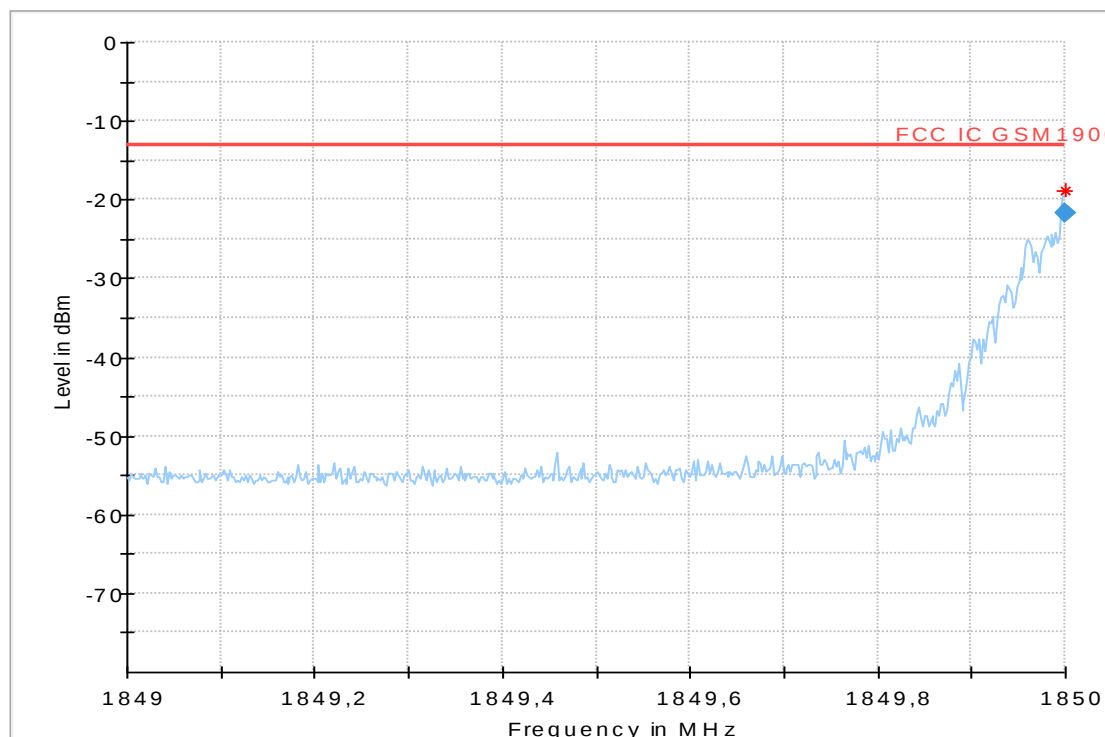
Common Information

Test Description:	Radiated Band Edge Compliance GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 24
Test Case:	-
Operating Mode:	MS allocated channel 512 GPRS
Environmental Conditions:	Humidity: 40%rH; Temperature: 22°C
Operator:	HLA

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1850.000000	-21.71	-13.00	8.71	10000.0	3.000	V	355.0	90.0	-63.1

2. Measurement diagrams for W-CDMA Mode

2.1. Spurious emissions radiated (FDD Band II transmitting mode)

2.1.1. Internal antenna

8.22_RSE_R_Ch9538

Common Information

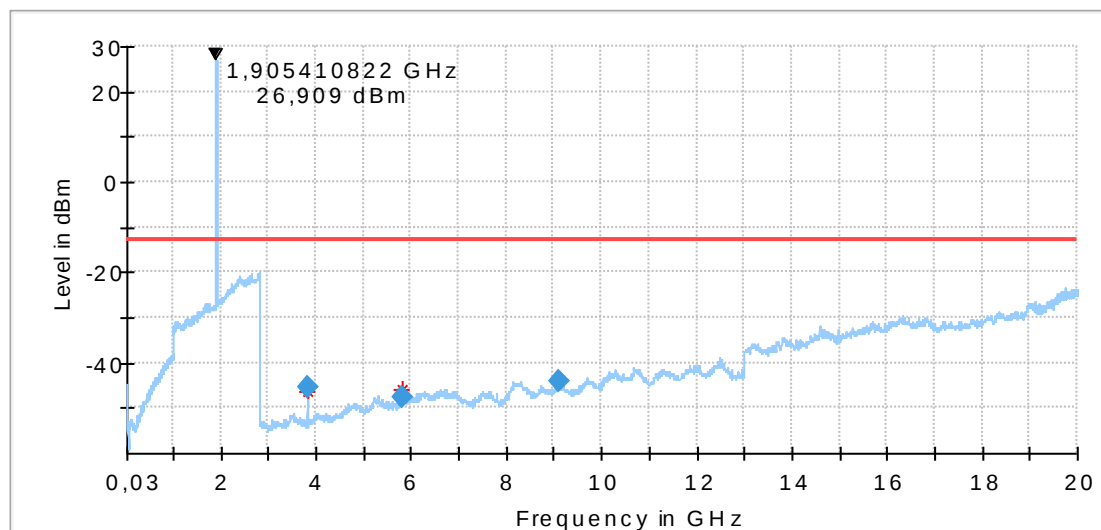
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9538 (fc =1907.6 MHz)
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3817.625251	-45.57	-13.00	32.57	10000.0	H	222.0	90.0	-95.1
5830.751503	-47.43	-13.00	34.43	10000.0	V	156.0	90.0	-87.7
9119.829659	-43.98	-13.00	30.98	10000.0	V	-3.0	0.0	-81.3

2.1.2. External antenna

8.23_RSE_R_Ch9262_UMTS II

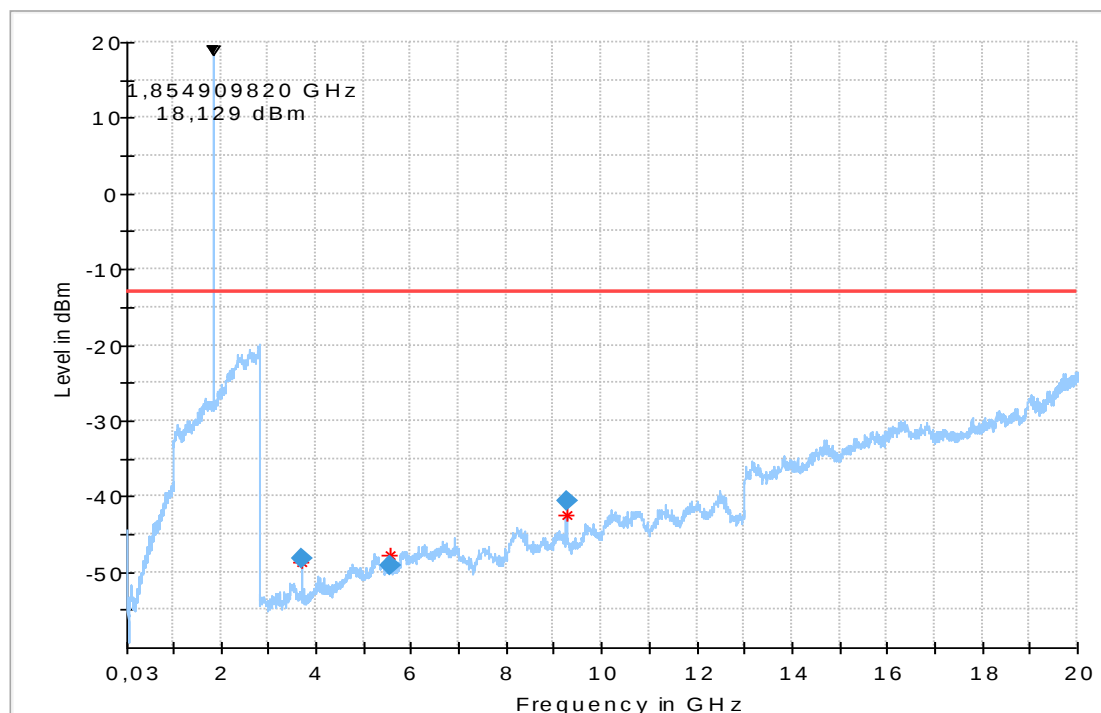
Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9262/9400/9538 (fc = 1852.4/1880.0/1907.6 MHz)
Environmental Conditions:	Humidity: 34%rH; Temperature: 23°C
Operator:	RI's

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3707.404809	-13.00	35.31	10000.0	H	80.0	90.0	-94.9
5554.338677	-13.00	36.08	10000.0	H	194.0	0.0	-89.9
9268.086172	-13.00	27.53	10000.0	H	223.0	90.0	-81.8

2.2. Spurious emissions radiated (FDD Band V transmitting mode)

2.2.1. Internal antenna

8.52_RSE_R_Ch4233

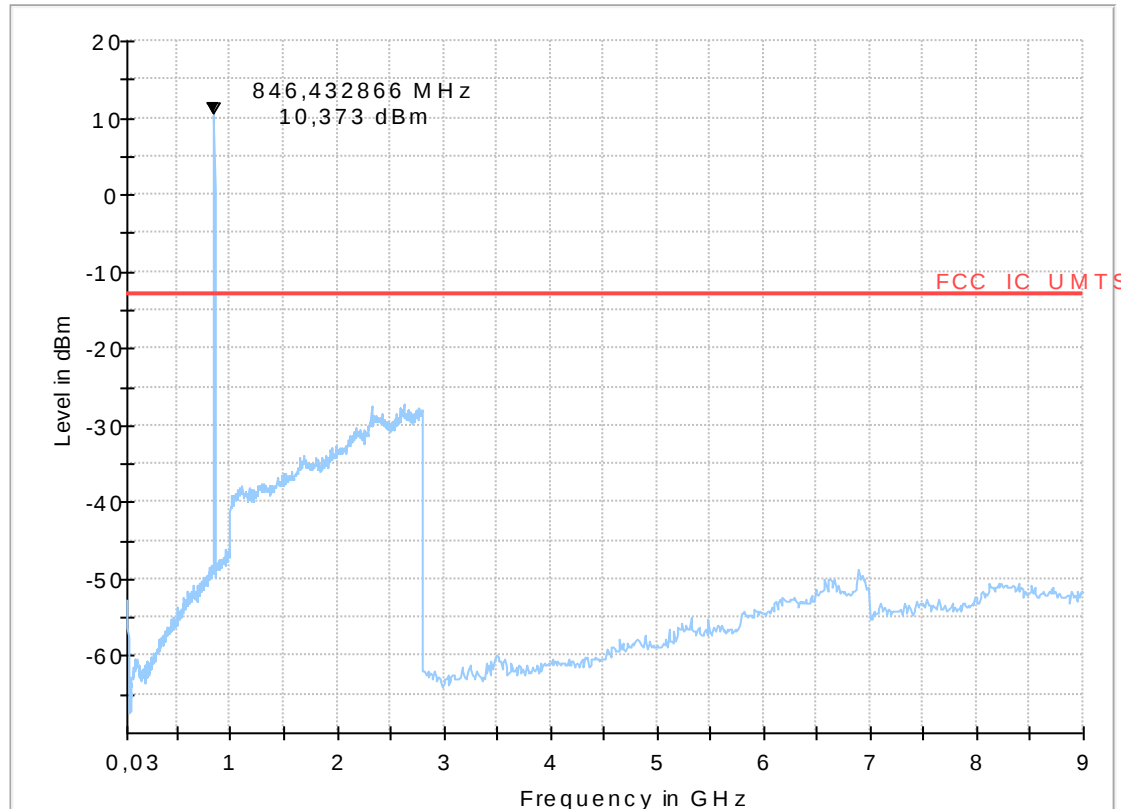
Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4233 (846.6 MHz), Voice/HSDPA/HSUPA/HSPA+, H-Set x
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr
Comments	Interne Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



2.2.2. External antenna

8.53_RSE_R_Ch4132_UMTS V

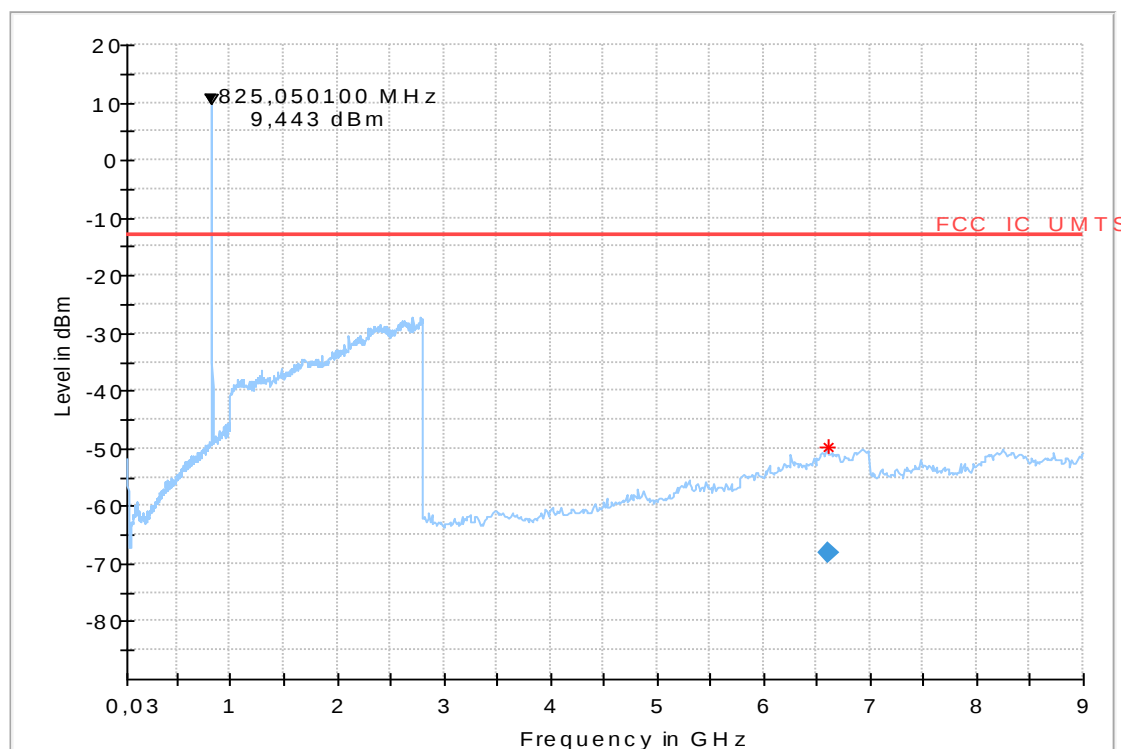
Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4132 (fc = 826.6 MHz)
Environmental Conditions:	Humidity: 34%rH; Temperature: 23°C
Operator:	RLs

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
6598.366733	-	55.02	1000.0	H	192.0	90.0	-86.3

2.3. Radiated emissions on FDD Band II band-edge

2.3.1. Internal antenna

9.21_RSE_R_Ch9538

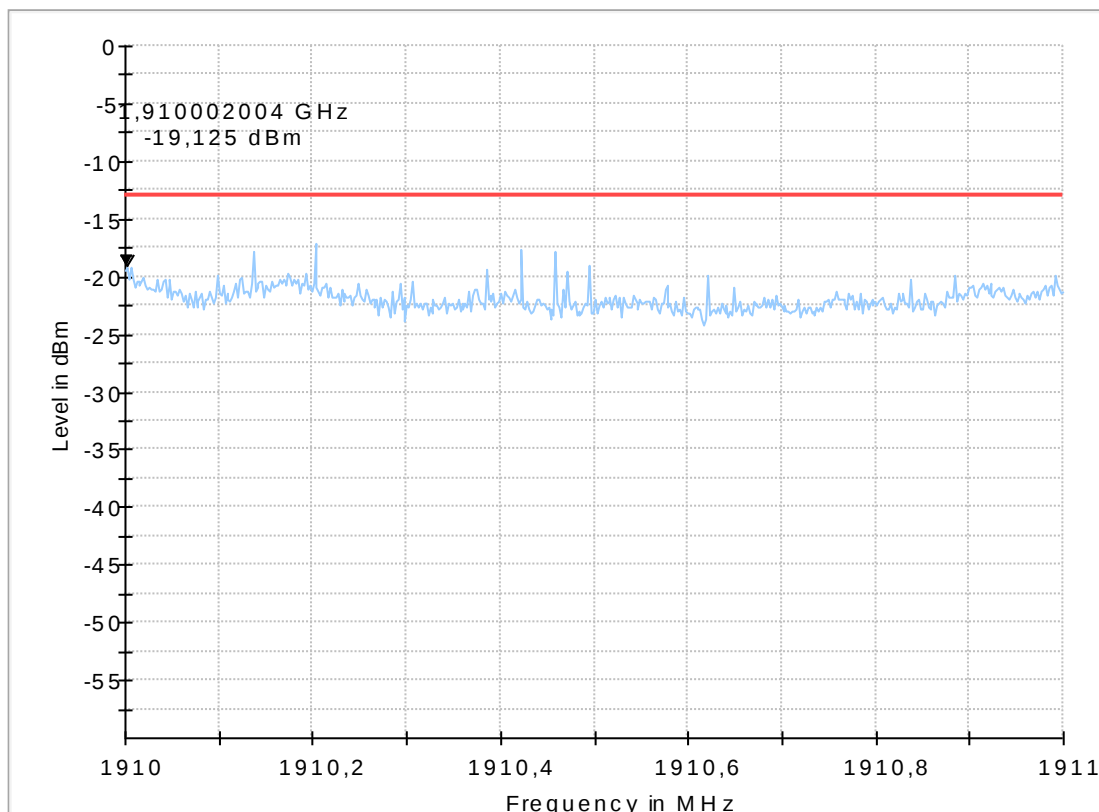
Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Operating Mode:	FCC Part 24
Operating Conditions:	UE allocated channel 9538 (fc =1907.6 MHz)
Operator Name:	KMo
Comment:	Backup Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



2.3.2. External antenna

9.22_BE_R_Ch9262_UMTS II

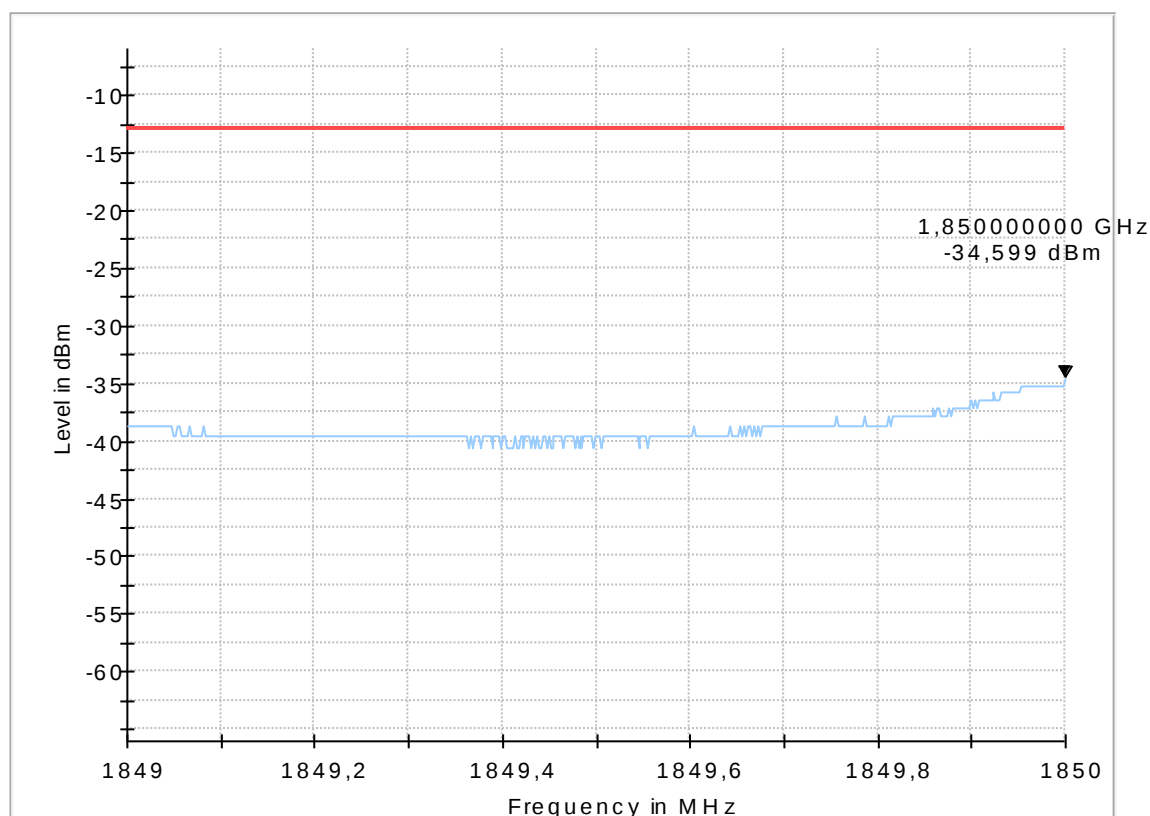
Common Information

Test Description:	Radiated Band Edge Compliance UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.232(x) - Limitation of mobile transmitters
Operating Mode:	UE allocated channel 9262 (fc = 1852.4 MHz)
Environmental Conditions:	Humidity: 34%rH; Temperature: 23°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



2.4. Radiated emissions on FDD Band V band-edge

2.4.1. Internal antenna

9.51_BE_R_Ch4233

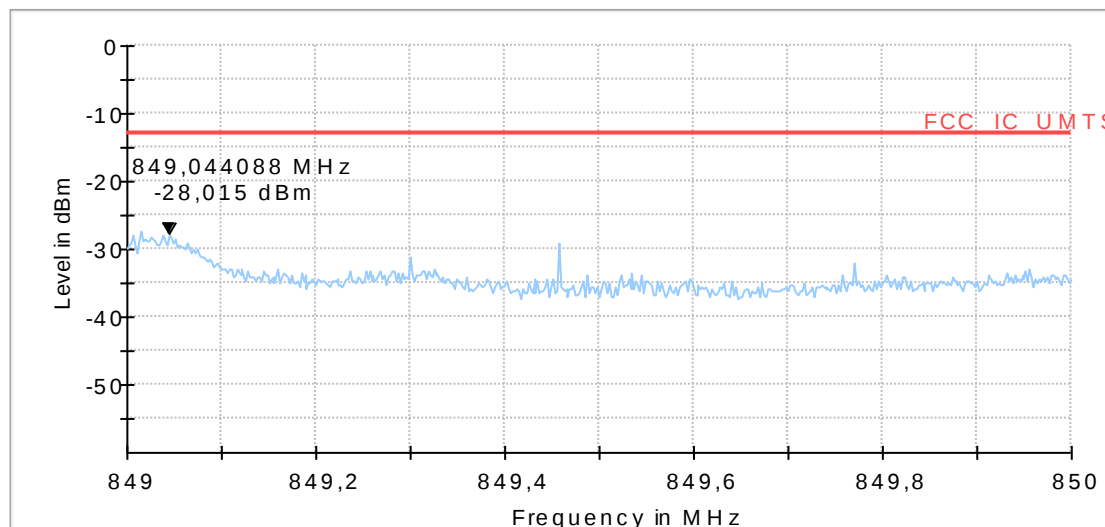
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4233 (fc = 848 MHz)
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr
Remarks:	Interne Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



2.4.2. External antenna

9.52_BE_R_Ch4132_UMTS V

Common Information

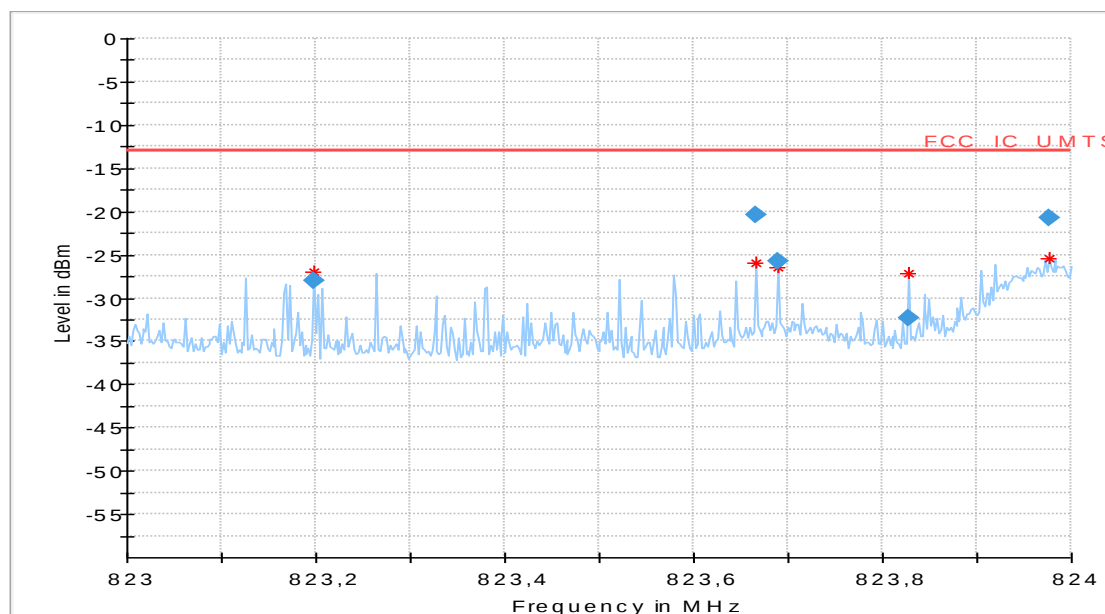
Test Description: Band-Edge low - Radiated Spurious Emissions UMTS FDDV
 Test Site Location: CETECOM GmbH Essen
 Test Site: Fully Anechoic Room (FAR) - EMC32 V9.21.0
 Test Standard: FCC Part 22.917(a)
 Operating Mode: UE allocated channel 4132 (fc = 826.6 MHz)
 Environmental Conditions: Humidity: 34%rH; Temperature: 23°C
 Operator: KMo

EUT Information

Manufacturer: peiker acustic GmbH & Co. KG
 EuT: ATM-01 R2-US-4GW

 HW Version: 113.002.002
 SW Version: 001.024.047
 Serial Number: 747793
 IMEI: 353813070003073
 Connected Interfaces: shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
 Power Supply: 14.0 V DC
 Comments:

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
823.198397	-27.94	-13.00	14.94	500.0	100.000	155.0	H	306.0	90.0	-75.8
823.665331	-20.34	-13.00	7.34	500.0	100.000	155.0	H	307.0	90.0	-75.8
823.689379	-25.71	-13.00	12.71	500.0	100.000	155.0	H	303.0	90.0	-75.8
823.827655	-32.31	-13.00	19.31	500.0	100.000	155.0	V	70.0	0.0	-75.8
823.975952	-20.70	-13.00	7.70	500.0	100.000	155.0	H	55.0	90.0	-75.8

3. Measurement diagrams for LTE technology

3.1. Spurious emissions radiated (LTE Band 2)

3.1.1. External antenna

8.20_RSE_R_CH18607_BW_1_4

Common Information

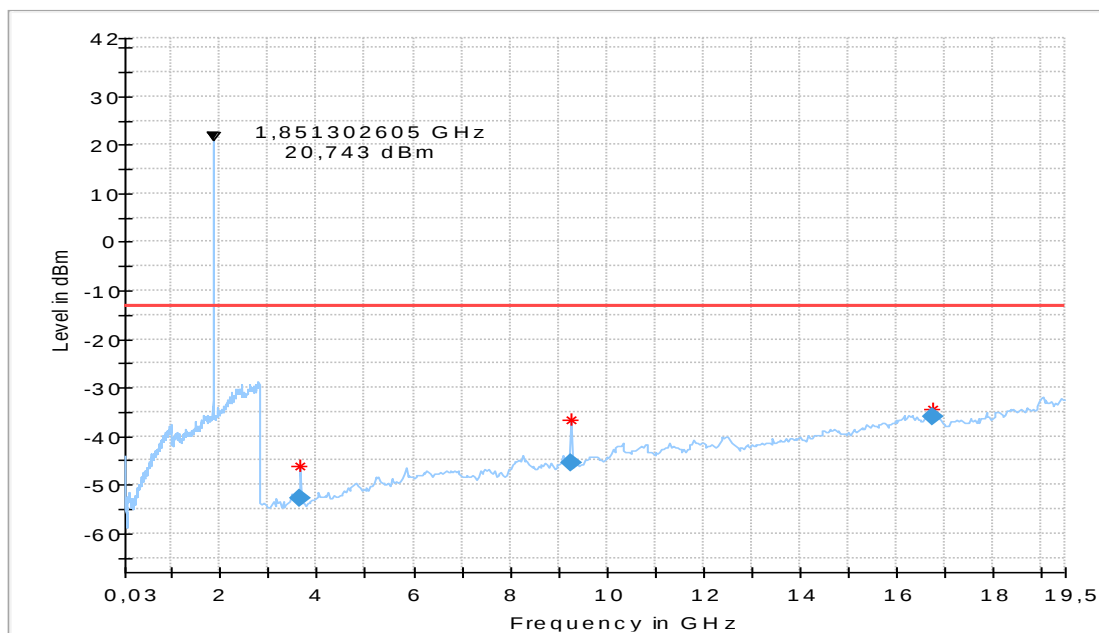
Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 18607(f _c = 1850.7MHz); Channel Bandwidth: 1.4MHz; # RB: 1; RB Pos: Low ; Modulation: QPSK
Environmental Conditions:	Humidity: 35%RH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3670.086173	-52.89	-13.00	39.89	10000.0	1000.000	H	163.0	90.0	-94.8
9258.707415	-45.61	-13.00	32.61	10000.0	1000.000	H	148.0	90.0	-81.7
16755.817635	-35.94	-13.00	22.94	10000.0	1000.000	H	-14.0	90.0	-69.2

3.1.2. Internal antenna

8.22_RSE_R_Ch19193_BW_1_4_RB 1_High_QPSK

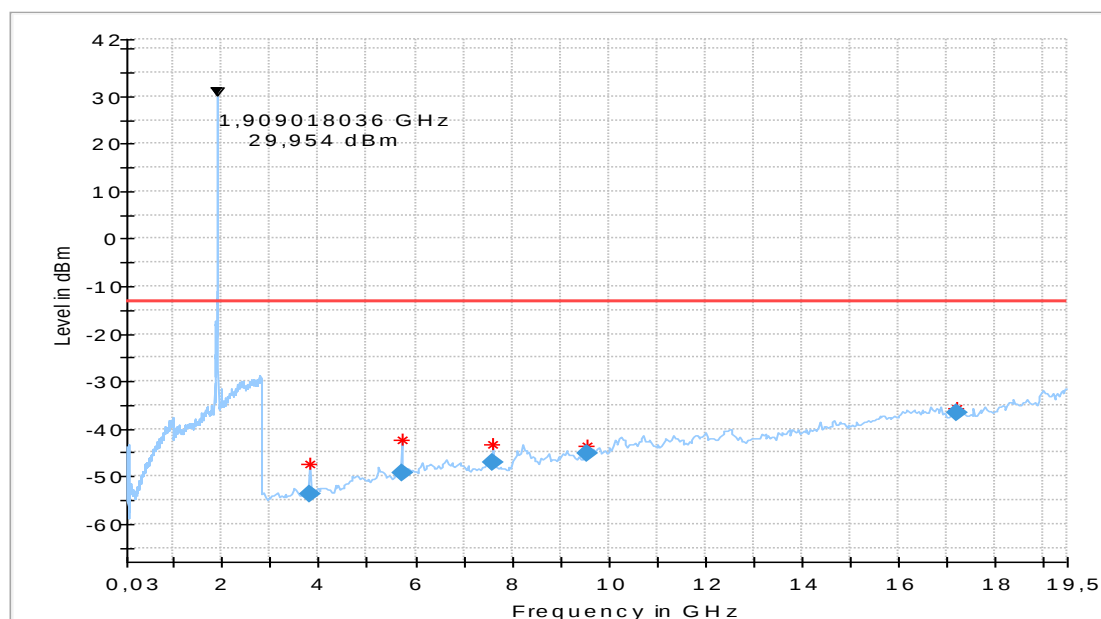
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 19193(f _c =1909,3MHz), BW=1,4 MHz, RB=1, high,QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
3804.142285	-53.60	-13.00	40.60	10000.0	1000.000	155.0	V	54.0	0.0
5711.008017	-49.20	-13.00	36.20	10000.0	1000.000	155.0	H	146.0	90.0
7619.617235	-47.09	-13.00	34.09	10000.0	1000.000	155.0	V	78.0	0.0
9560.943887	-45.14	-13.00	32.14	10000.0	1000.000	155.0	V	115.0	90.0
17224.370741	-36.53	-13.00	23.53	10000.0	1000.000	155.0	V	192.0	0.0

3.2. Spurious emissions radiated (LTE Band 4)

3.2.1. External antenna

8.40_RSE_R_CH19957_BW_1_4

Common Information

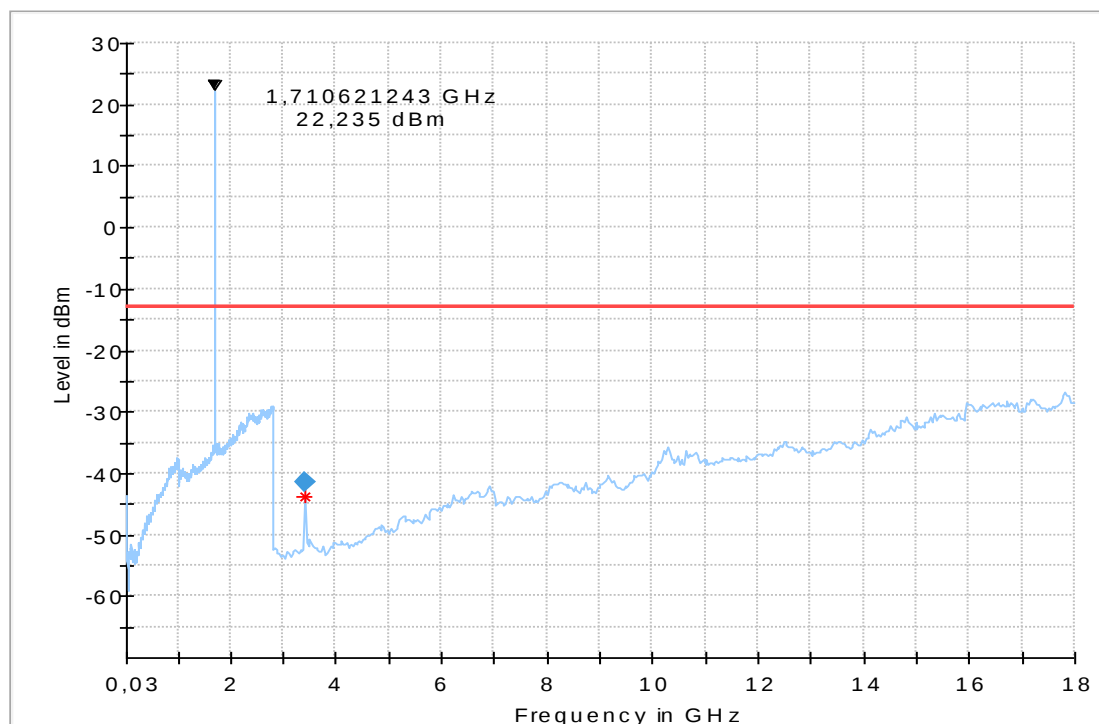
Test Description:	Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Comm. Link:	LTE Band 4
Operating Mode:	UE allocated channel 19957 (fc =1710.7MHz),BW=1.4 MHz, RB=1 Low, Modulation=QPSK
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3420.551102	-41.52	-13.00	28.52	10000.0	1000.000	155.0	H	147.0	90.0	-95.0

3.2.2. Internal antenna

8.42_RSE_R_Ch20393_BW_1_4_RB 1_High_QPSK

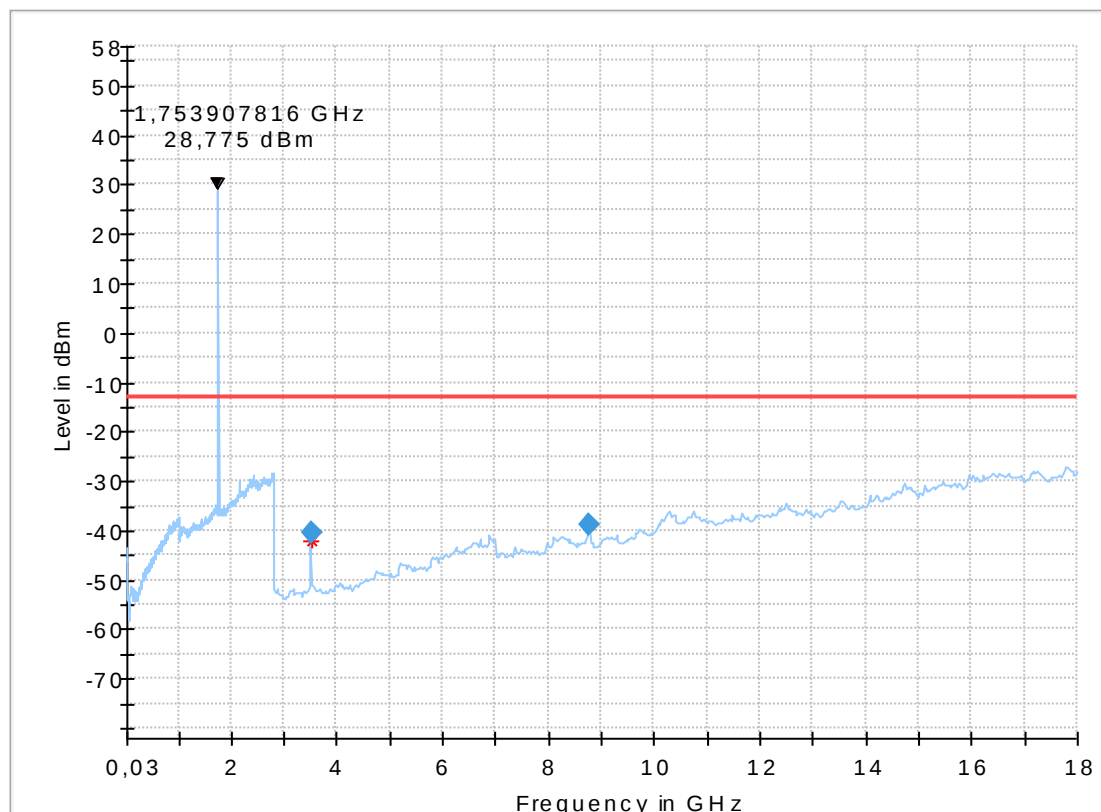
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=1, high,QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.3. Spurious emissions radiated (LTE Band 5)

3.3.1. External antenna

8.50_RSE_R_Ch20407_BW_1_4

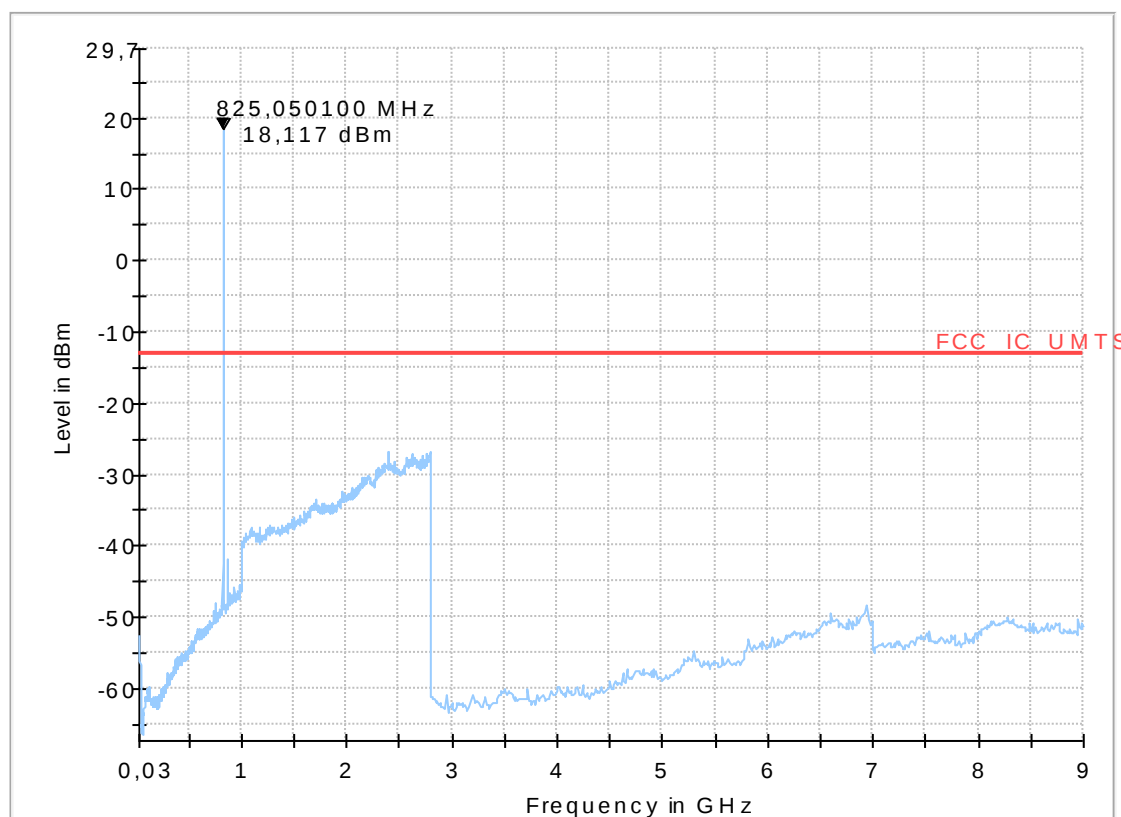
Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20407($f_c = 824,7\text{MHz}$), BW=1.4 MHz, RB=1, Low, QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.3.2. Internal antenna

8.52_RSE_R_Ch20643_LTE5

Common Information

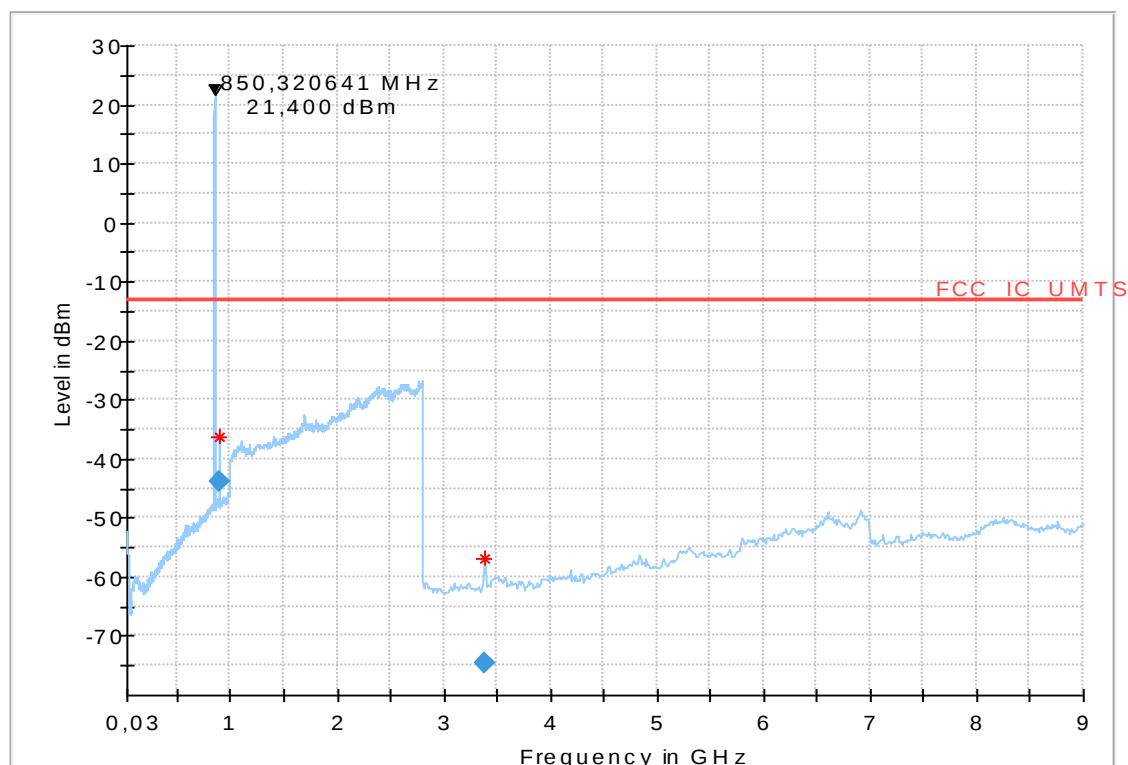
Test Description:	Radiated Spurious Emissions LTE Band 5
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643(f _c = 848,3MHz), BW=1,4 MHz, RB=1, QPSK
Environmental Conditions:	Humidity: 32%rH; Temperature: 20°C
Operator:	RI

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC

Full Spectrum



Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
893.677354	-13.00	30.80	1000.0	H	75.0	90.0	-75.1
3388.066132	-13.00	61.58	1000.0	H	172.0	90.0	-95.5

3.4. Spurious emissions radiated (LTE Band 17)

3.4.1. External antenna

8.171_RSE_R_CH23755_BW5_LTE17

Common Information

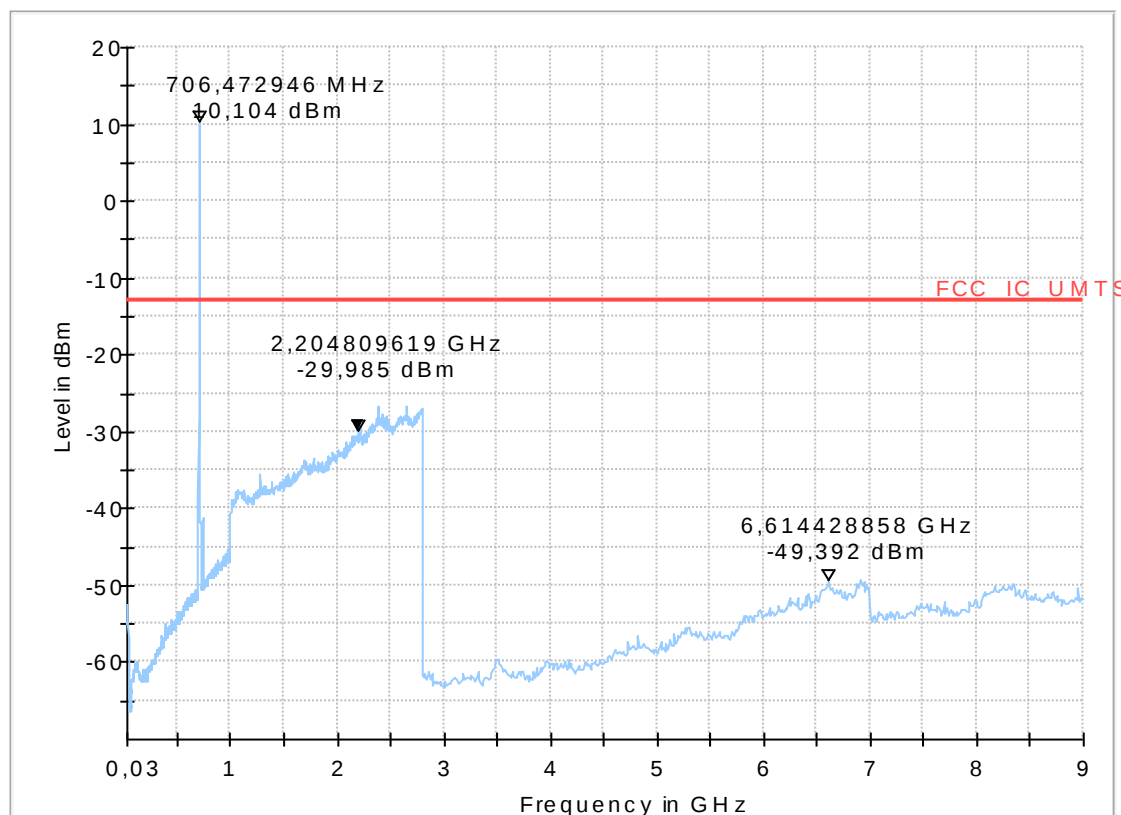
Test Description:	Radiated Spurious Emissions LTE FDD 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , QPSK, RB: 1
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.4.2. Internal antenna

8.173_RSE_R_CH23825_BW5_LTE17

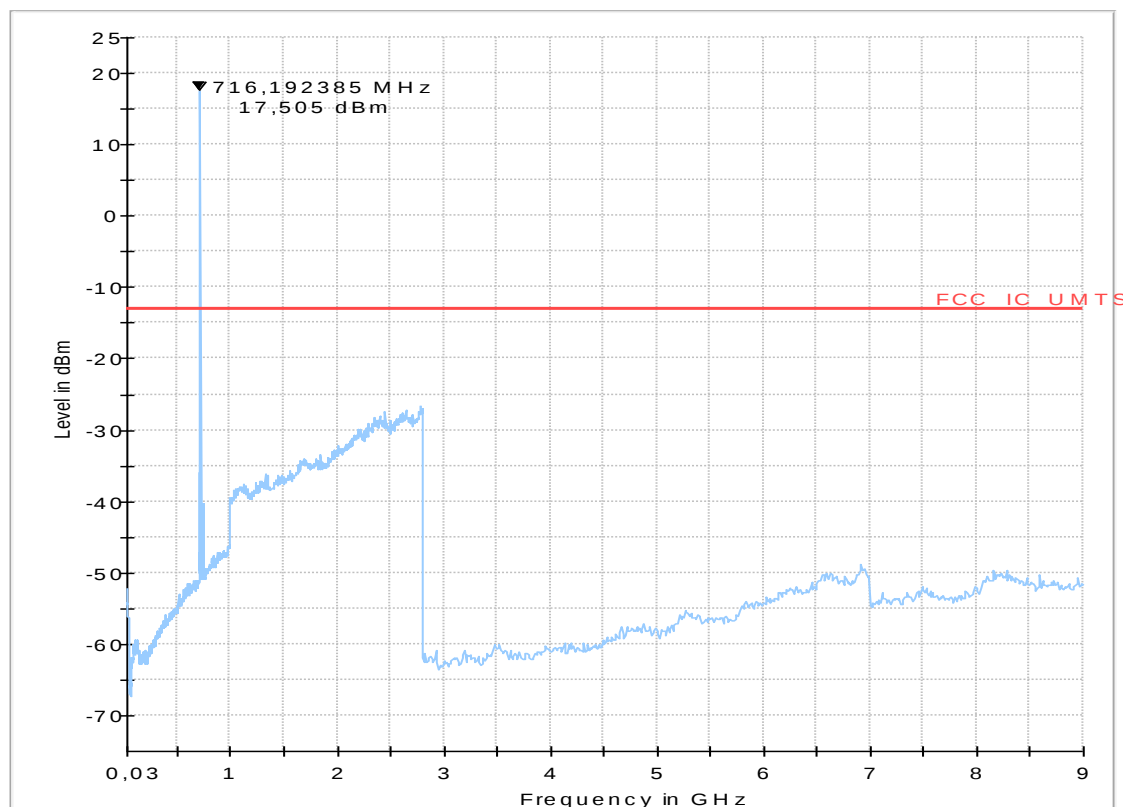
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 23825($f_c = 713,5\text{MHz}$), BW=5 MHz, RB=1, high, QPSK
Environmental Conditions:	Humidity: 28%rH; Temperature: 23,6°C
Operator:	RLS

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC

Full Spectrum



3.5. Radiated emissions – band-edge (LTE Band 2)

3.5.1. External antenna – Low Band-Edge

3.5.1.1. Channel 18607, QPSK, 1RBs

9.20a_BE_R_Ch18607_1RB_low_BW_1_4_QPSK

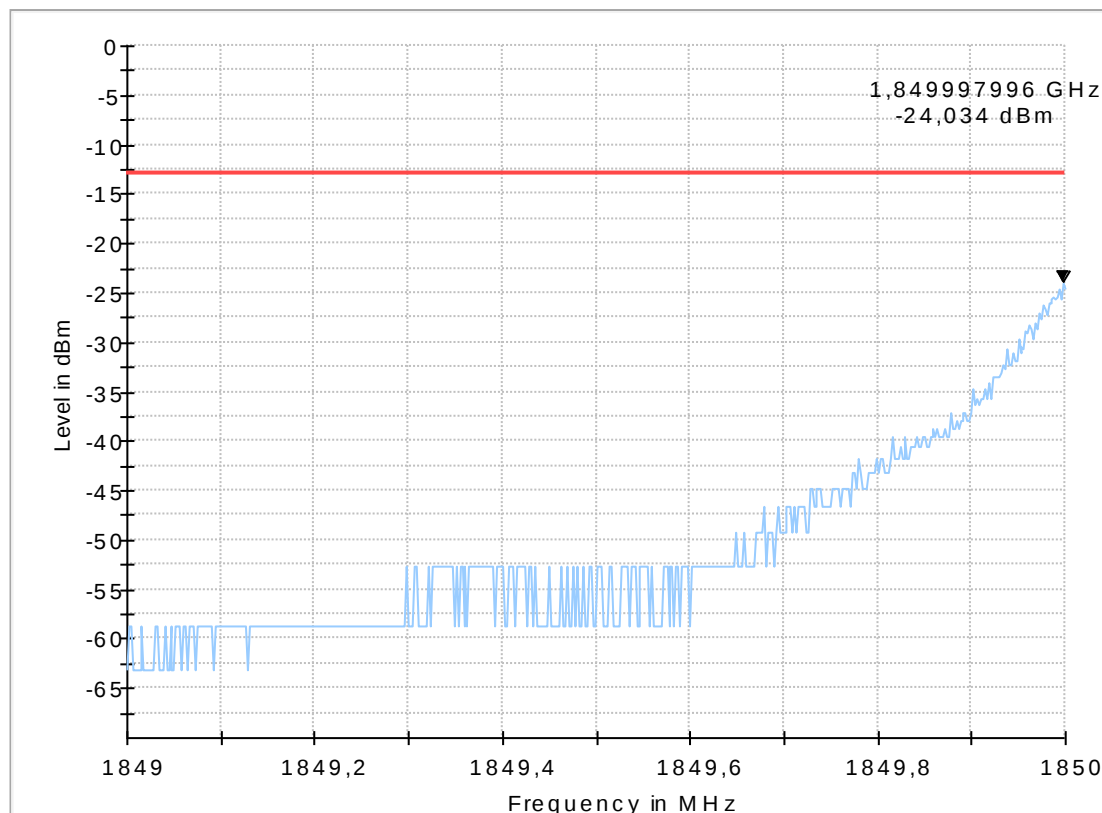
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 18607(fc = 1850.7MHz); Channel Bandwidth: 1.4MHz; # RB: 1; RB Pos: Low ; Modulation: QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.1.2. Channel 18607, 16-QAM, 1RBs

9.20b_BE_R_Ch18607_1RB_low_BW_1_4_QAM

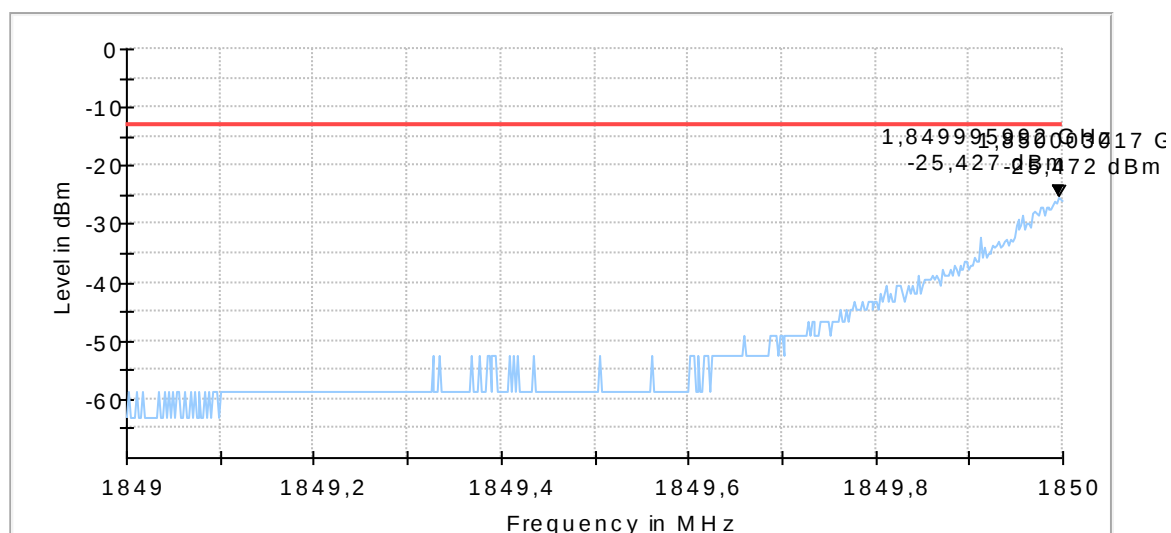
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode	UE allocated channel 18607
Environmental Conditions	Humidity: 35%rH; Temperature: 22°C
Test SW Version	EMC32 V9.21.0
Operator	MFr
Comments	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.1.3. Channel 18607, QPSK, 6RBs

9.21a_BE_R_Ch18607_6RB_low_BW_1_4_QPSK

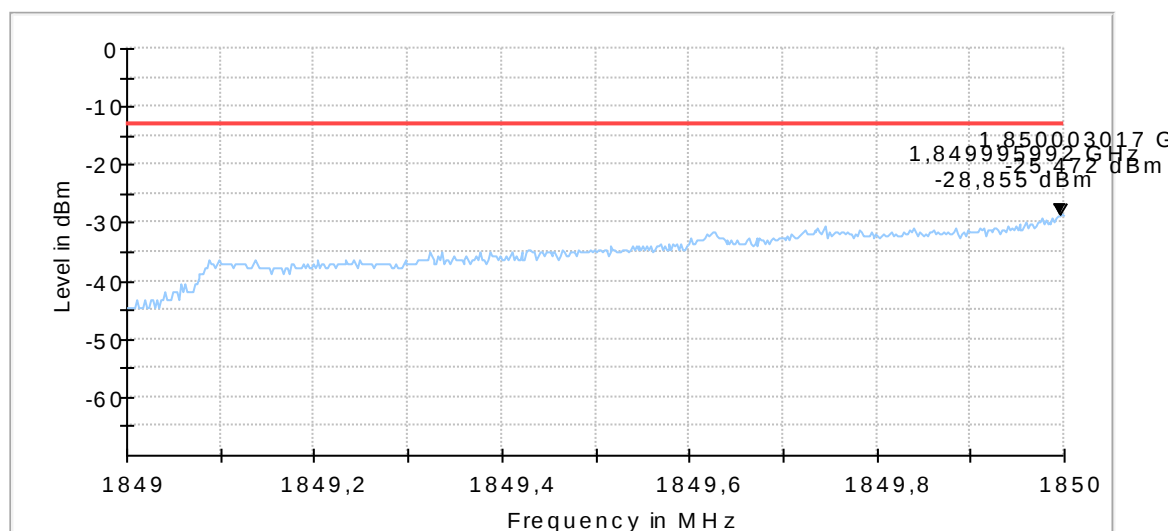
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode	UE allocated channel 18607
Environmental Conditions	Humidity: 35%rH; Temperature: 22°C
Test SW Version	EMC32 V9.21.0
Operator	MFr
Comments	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.1.4. Channel 18607, 16-QAM, 6RBs

9.21b_BE_R_Ch18607_6RB_BW_1_4_QAM#

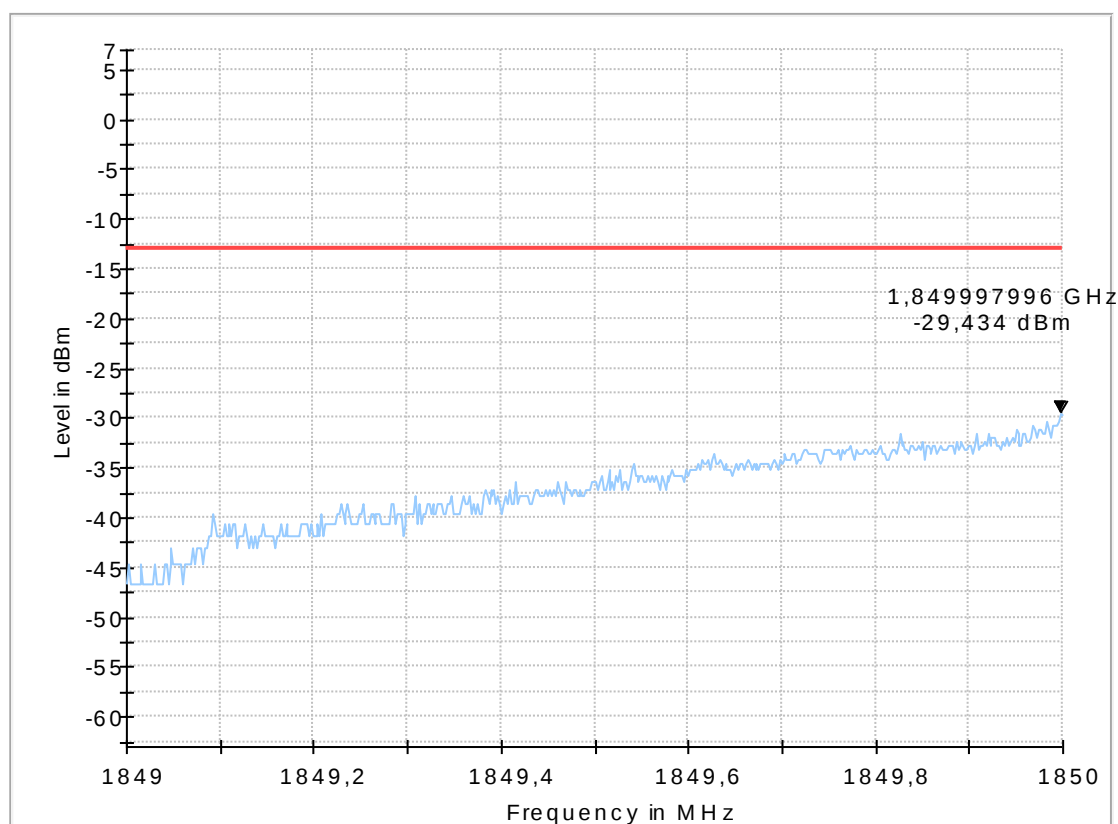
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 18607($f_c = 1850.7\text{MHz}$); Channel Bandwidth: 1.4MHz; # RB: 6; RB; Modulation: QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.2. Internal antenna – High Band-edge

3.5.2.1. Channel 19193, QPSK, 1RBs

9.23a_BE_R_Ch19193_1RB_high_BW_1_4_QPSK

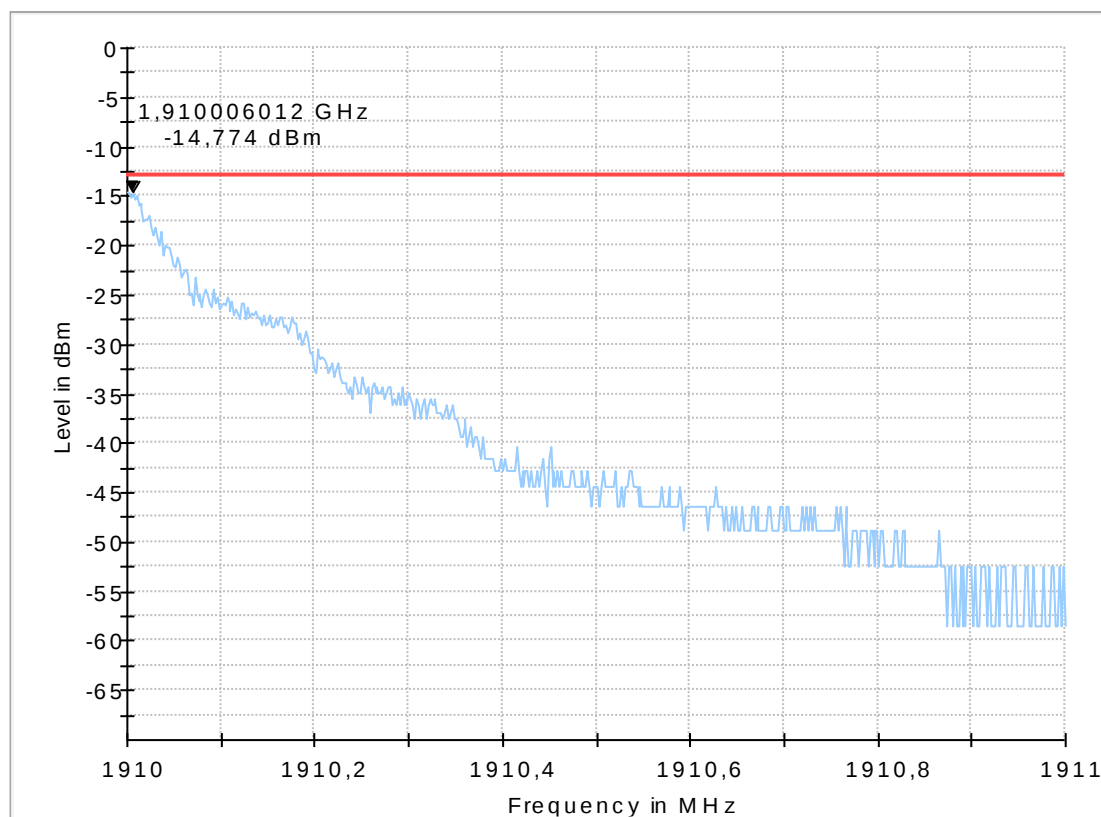
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193($f_c = 1909,3\text{MHz}$), BW=1,4 MHz, RB=1, high,QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.2.2. Channel 19193, 16-QAM, 1RBs

9.23b_BE_R_Ch19193_1RB_high_BW_1_4_QAM

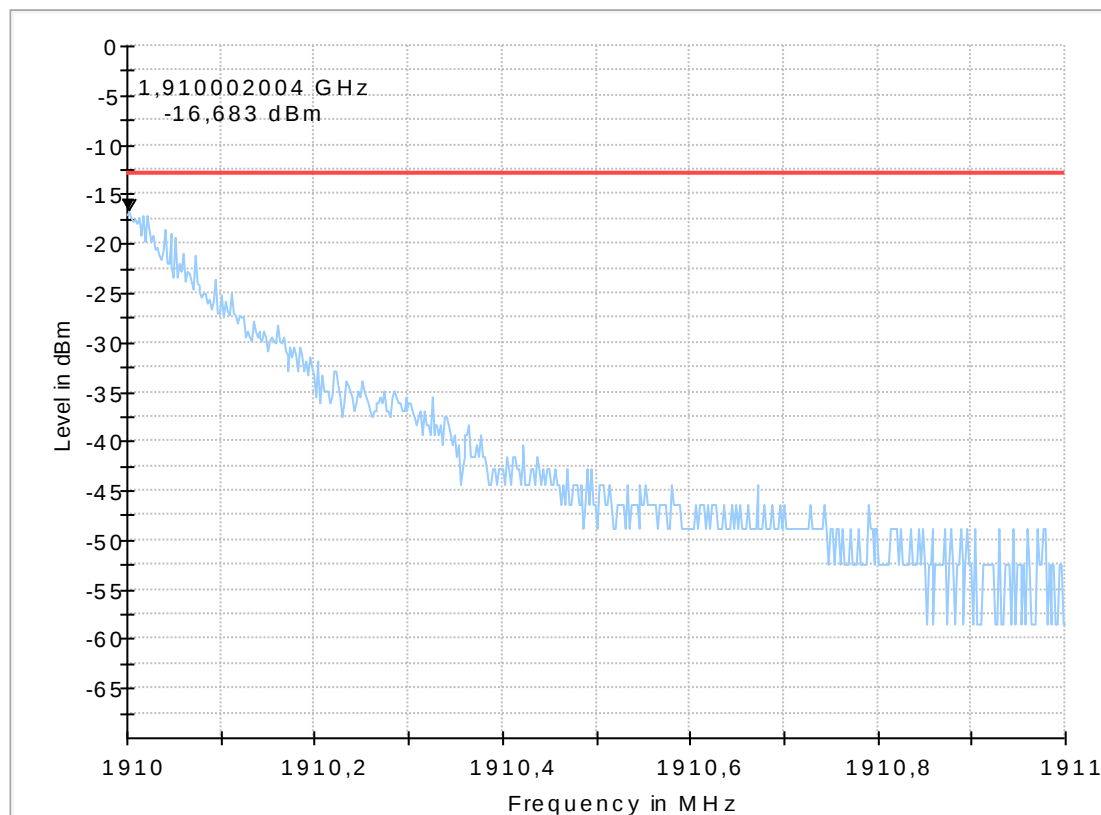
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193($f_c = 1909,3\text{MHz}$), BW=1,4 MHz, RB=1, high,QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.2.3. Channel 19193, QPSK, 6RBs

9.22a_BE_R_Ch19193_6RB_BW_1_4_QPSK

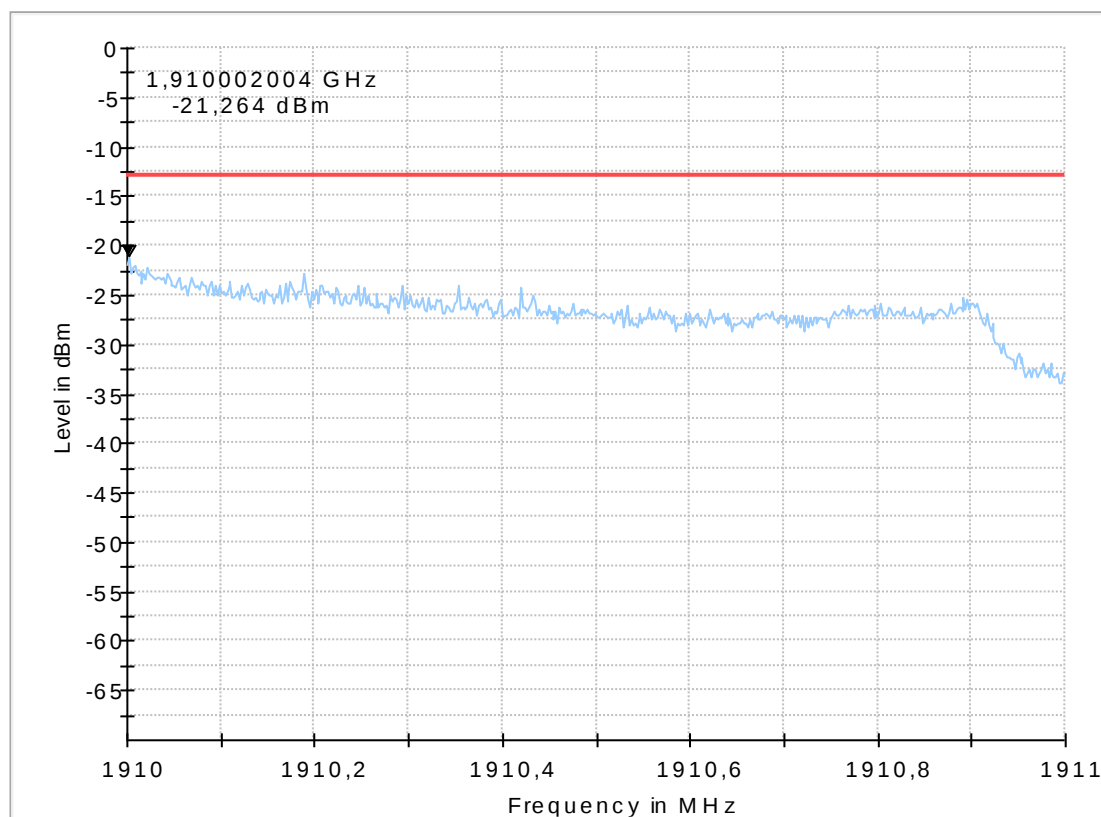
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193($f_c = 1909,3\text{ MHz}$), BW=1,4 MHz, RB=6,QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.5.2.4. Channel 19193, 16-QAM, 6RBs

9.22b_BE_R_Ch19193_6RB_BW_1_4_QAM

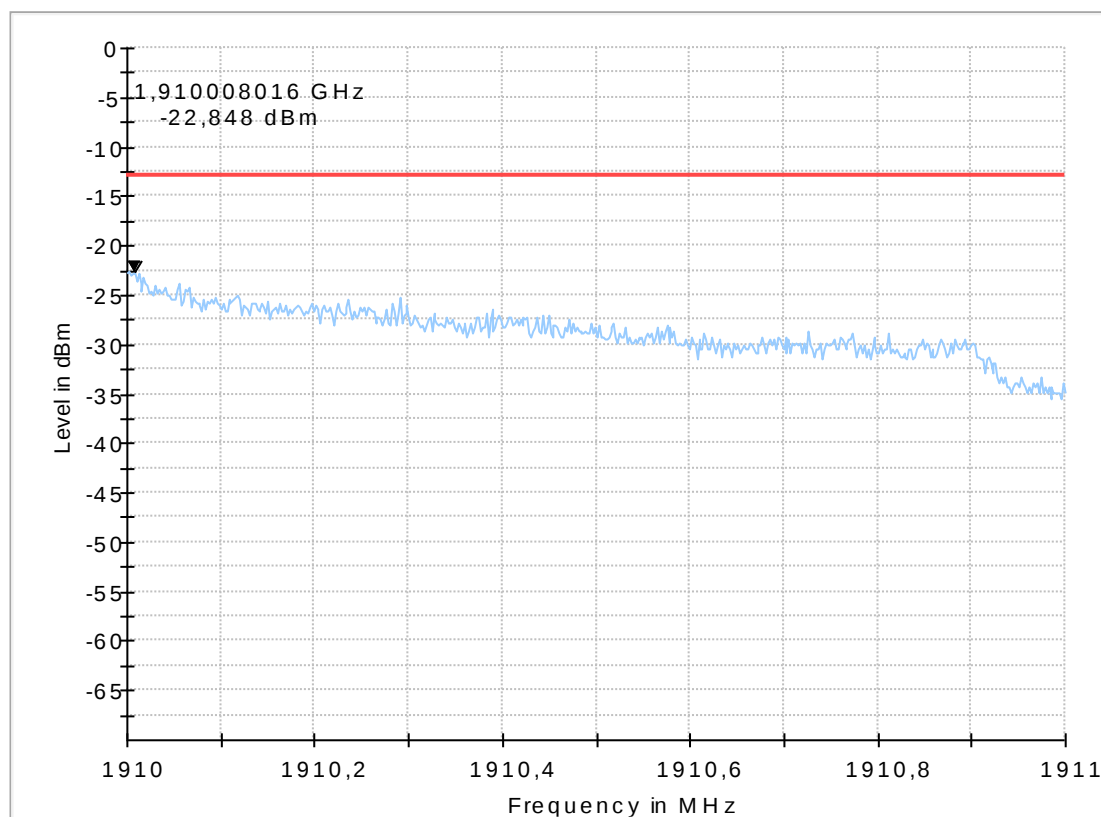
Common Information

Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193($f_c = 1909,3\text{MHz}$), BW=1,4 MHz, RB=6,QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.6. Radiated emissions – band-edge (LTE Band 4)

3.6.1. External Antenna - Low Band-Edge

3.6.1.1. Channel 19957, QPSK, 1RBs

9.40a_BE_R_CH19957_1RB_low_BW_1.4_QPSK

Common Information

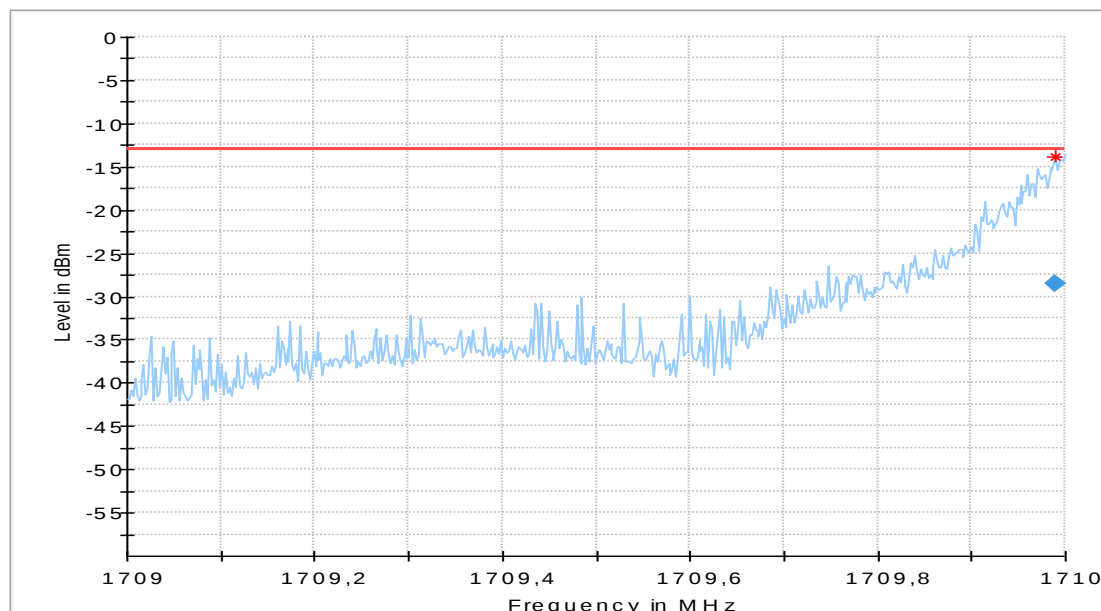
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Comm. Link:	LTE Band 4
Operating Mode:	UE allocated channel 19957 (fc =1710.7MHz),BW=1.4 MHz, RB=1 Low, Modulation=QPSK
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
1709.989980	-28.54	-	15.54	100.0	155.0	V	40.0	90.0	-63.3

3.6.1.2. Channel 19957, 16-QAM, 1RBs

9.40b_BE_R_CH19957_1RB_low_BW1_4_QAM

Common Information

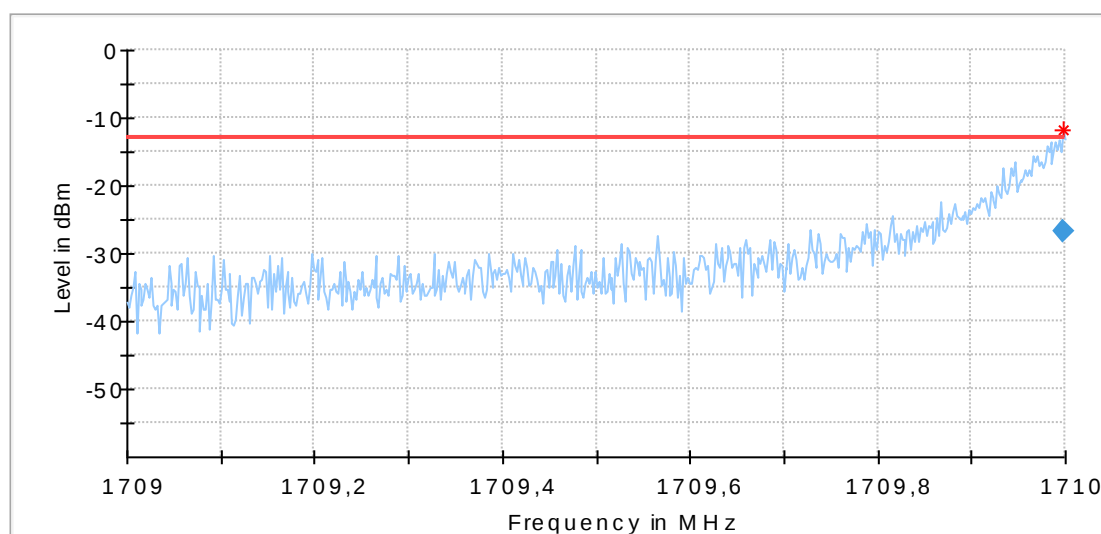
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(a)
Operating Mode:	UE allocated channel 19957($f_c = 1710,7\text{MHz}$), BW=1.4 MHz, RB=1, Low, QAM
Exclusionband:	--
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Measurement Time	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
1709.997996	-26.66	-13.00	13.66	100.0	20.000	V	52.0	90.0	-63.3

3.6.1.3. Channel 19957, QPSK, 6RBs

9.41a_BE_R_CH19957_6RB_low_BW1_4_QPSK

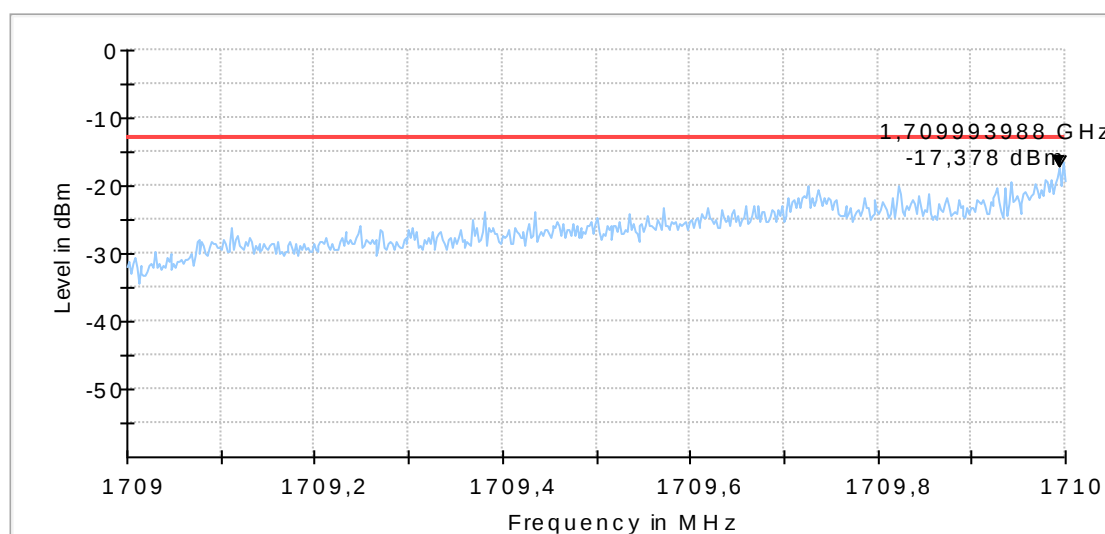
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(a)
Operating Mode:	UE allocated channel 19957($f_c = 1710,7\text{MHz}$), BW=1.4 MHz, RB=1, Low, QAM
Exclusionband:	--
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.6.1.4. Channel 19957, 16-QAM, 6RBs

9.41b_BE_R_CH19957_6RB_BW_1.4_QAM

Common Information

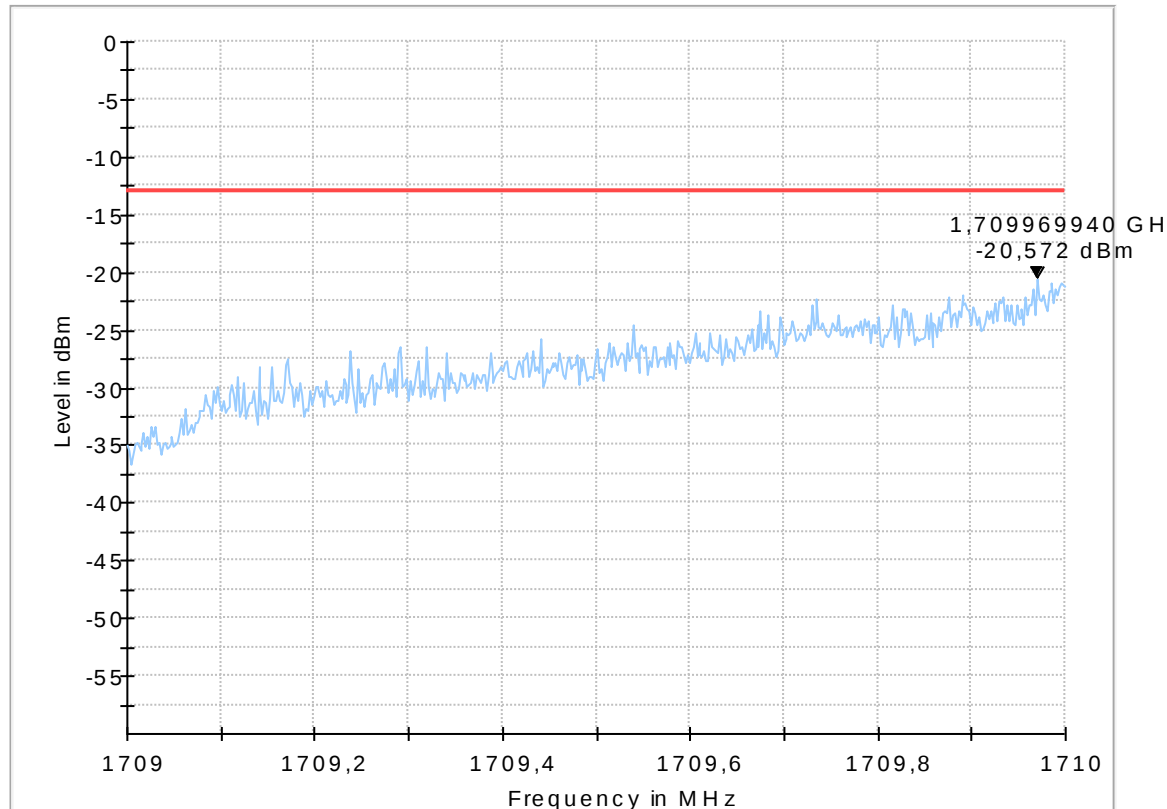
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Comm. Link:	LTE Band 4
Operating Mode:	UE allocated channel 19957 (fc =1710.7MHz),BW=1.4 MHz, RB=6 , Modulation=QAM
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.6.2. Internal antenna - High Band-Edge

3.6.2.1. Channel 20393, QPSK, 1RBs

9.42a_BE_R_Ch20393_1RB_high_BW_1_4_QPSK

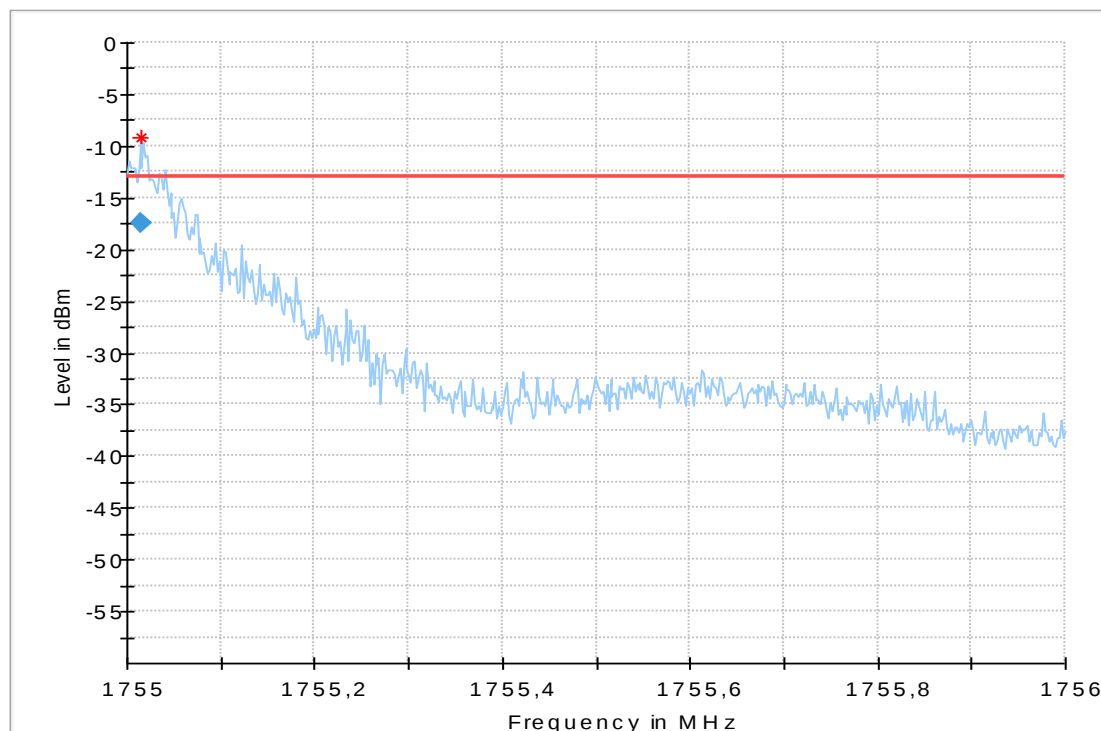
Common Information

Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=1, high,QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
1755.014028	-17.49	-	4.49	100.0	20.000	155.0	H	173.0	90.0

3.6.2.2. Channel 20393, 16-QAM, 1RBs

9.42b_BE_R_Ch20393_1RB_high_BW_1_4_QAM

Common Information

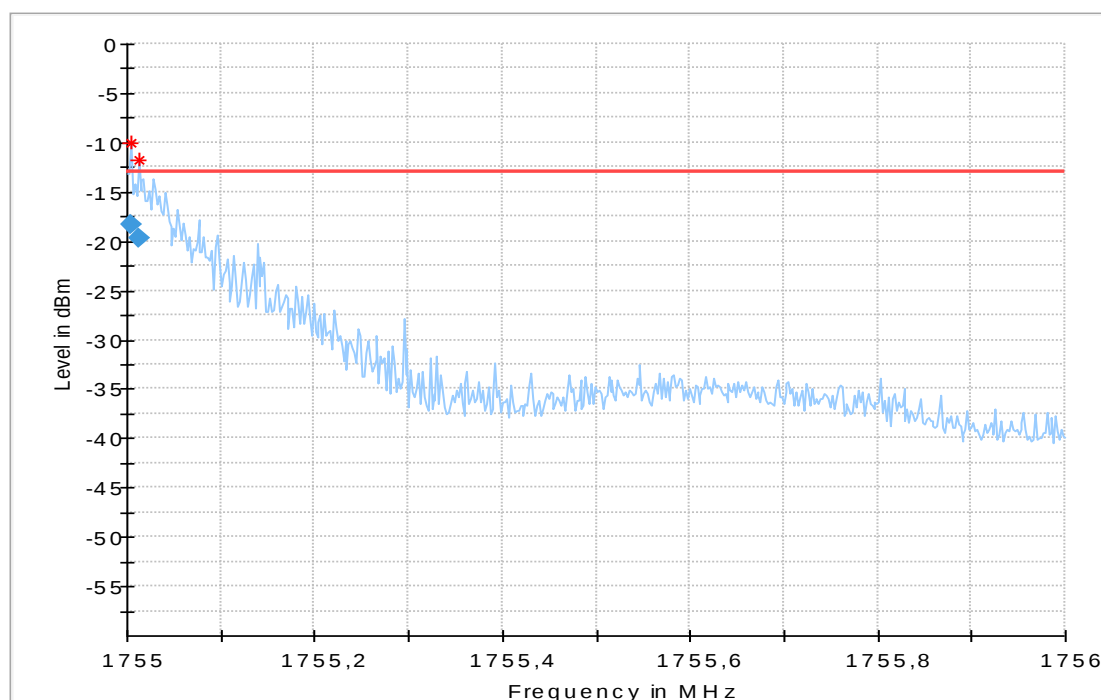
Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=1, high,QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



Final Result

Frequency (MHz)	RMS (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)
1755.004008	-18.24	-	5.24	100.0	20.000	155.0	H	184.0	90.0
1755.012024	-19.78	-	6.78	100.0	20.000	155.0	H	188.0	90.0

3.6.2.3. Channel 20393, QPSK, 6RBs

9.43a_BE_R_Ch20393_6RB_BW_1_4_QPSK

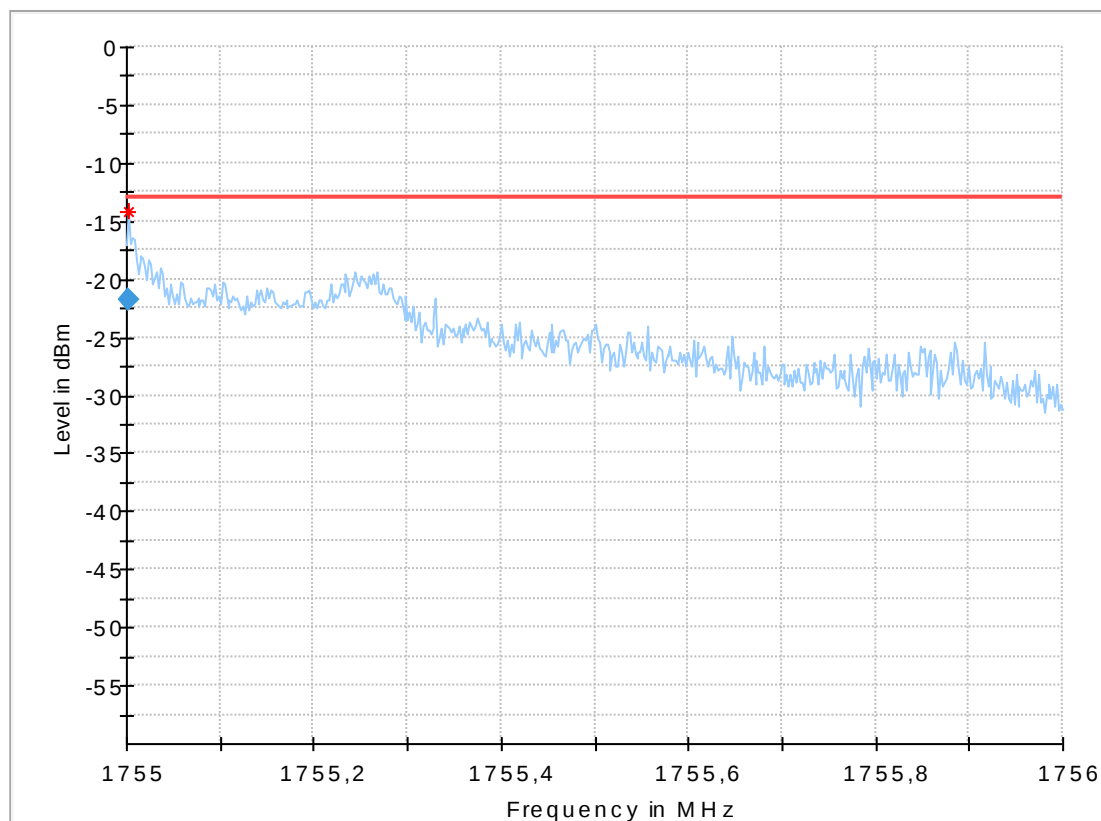
Common Information

Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=6,,QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.6.2.4. Channel 20393, 16-QAM, 6RBs

9.43b_BE_R_Ch20393_6RB_BW_1_4_QAM

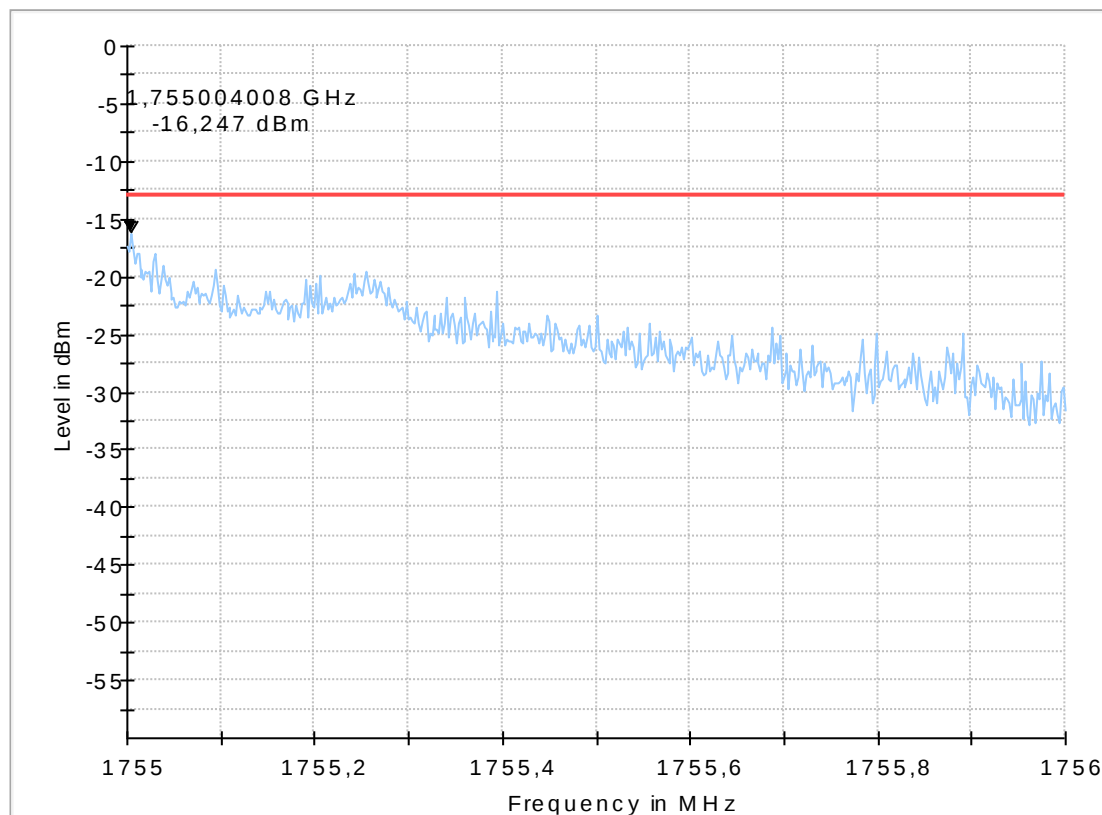
Common Information

Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=6,,QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7. Radiated emissions – band-edge (LTE Band 5)

3.7.1. External antenna - Low Band-Edge

3.7.1.1. Channel 20407, QPSK, 1RBs

9.500a_BE_R_Ch20407_1RB_low_BW_1_4_QPSK

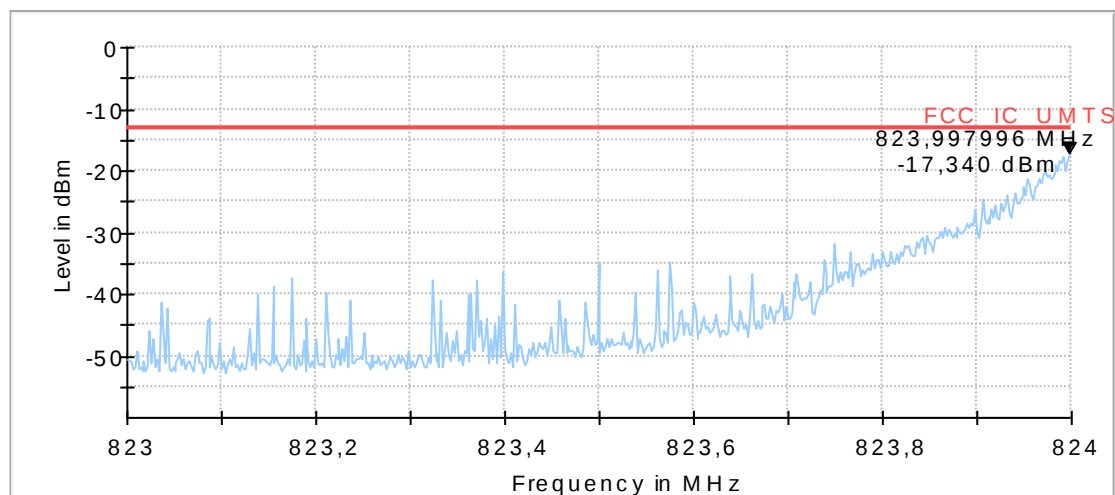
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	EMC32 V9.21.0
Operator:	MFr
Remarks:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.1.2. Channel 20407, 16-QAM, 1RBs

9.500b_BE_R_Ch20407_1RB_low_BW_1_4_QAM

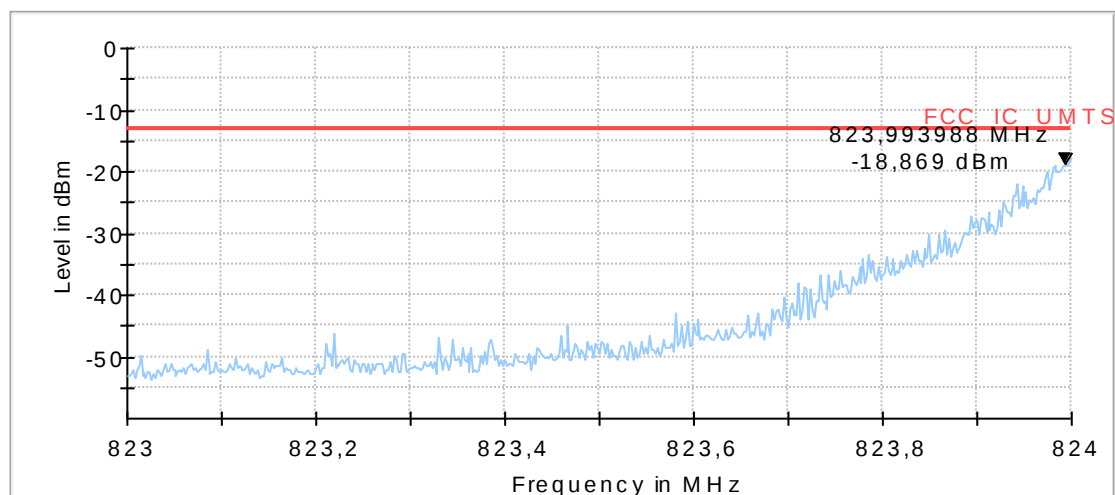
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	EMC32 V9.21.0
Operator:	MFr
Remarks:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.1.3. Channel 20407, QPSK, 6RBs

9.501a_BE_R_Ch20407_6RB_low_BW_1_4_QPSK

Common Information

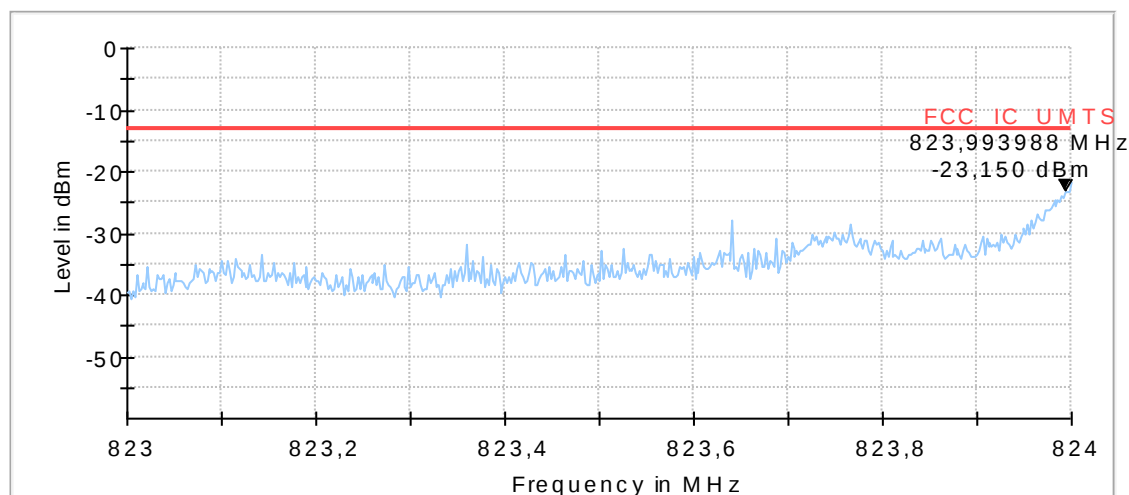
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	EMC32 V9.21.0
Operator:	MFr
Remarks:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW

HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.1.4. Channel 20407, 16-QAM, 6RBs

9.501b_BE_R_Ch20407_6RB_low_BW_1_4_QAM

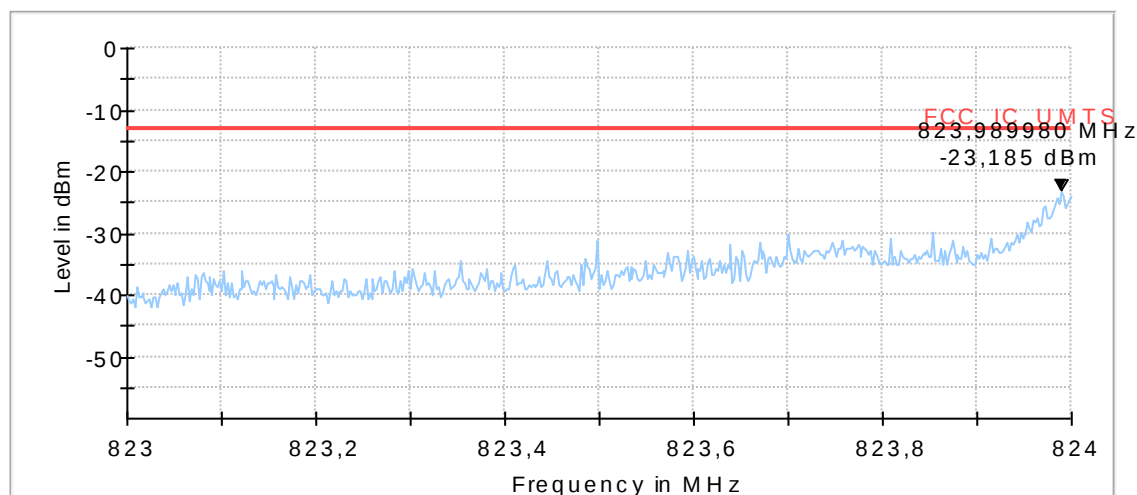
Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	EMC32 V9.21.0
Operator:	MFr
Remarks:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.2. Internal antenna - High Band-Edge

3.7.2.1. Channel 20643, QPSK, 1RBs

9.50a_BE_R_Ch20643_1RB_high_BW_1_4_QPSK

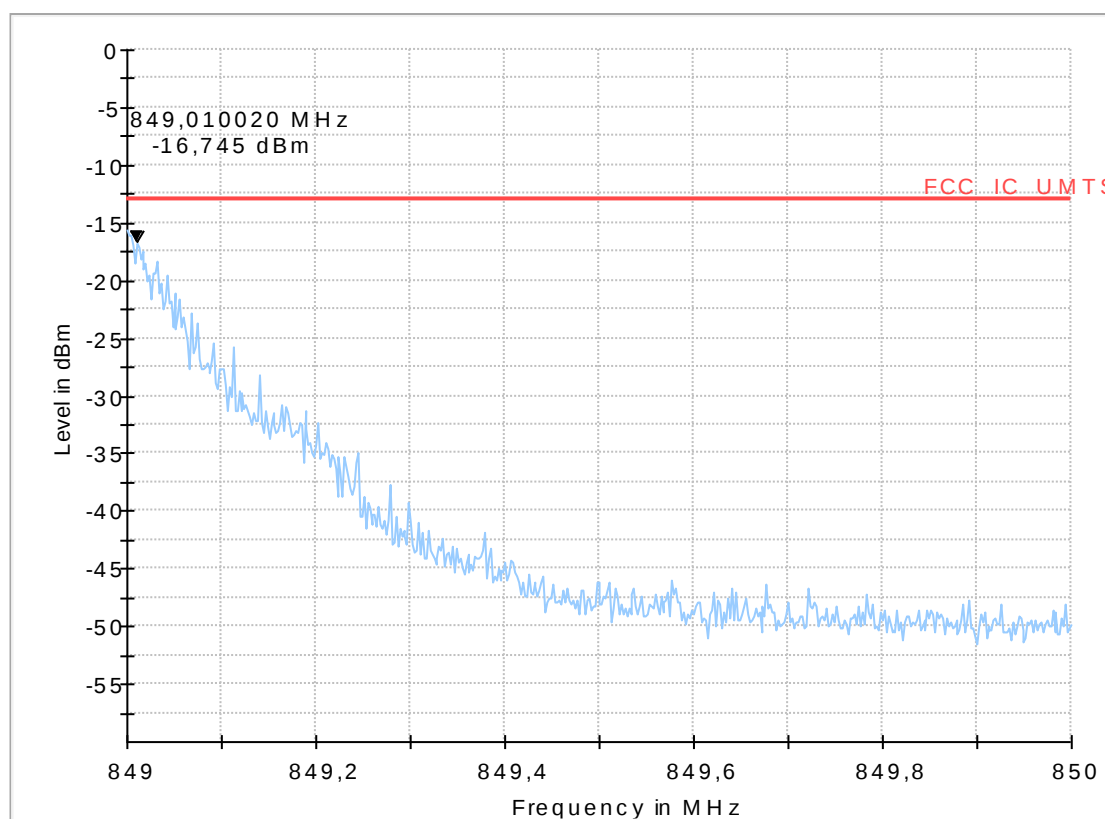
Common Information

Test Description:	Band-Edge High - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643($f_c = 848,3\text{MHz}$), BW=1,4 MHz, RB=1, high, QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.2.2. Channel 20643, 16-QAM, 1RBs

9.50b_BE_R_Ch20643_1RB_high_BW_1_4_QAM

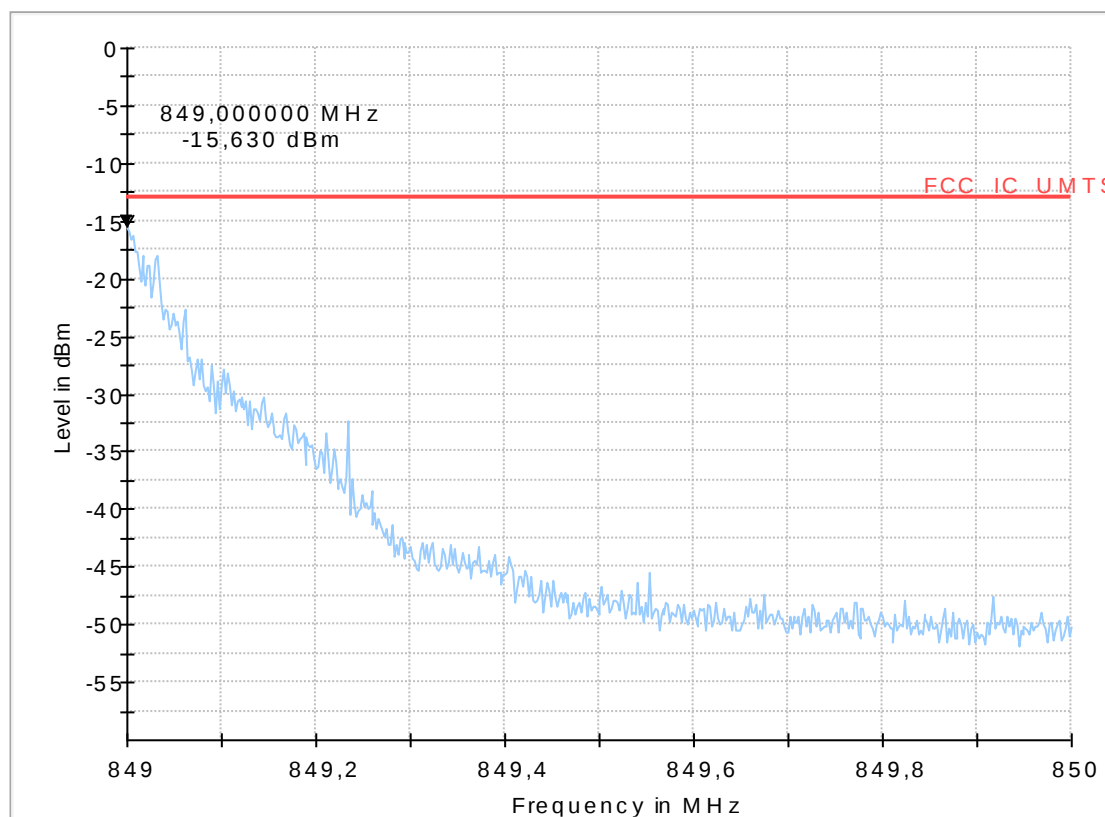
Common Information

Test Description:	Band-Edge High - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643($f_c = 848,3\text{MHz}$), BW=1,4 MHz, RB=1, high, QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.2.3. Channel 20643, QPSK, 6RBs

9.503a_BE_R_Ch20643_6RB_BW_1_4_QPSK

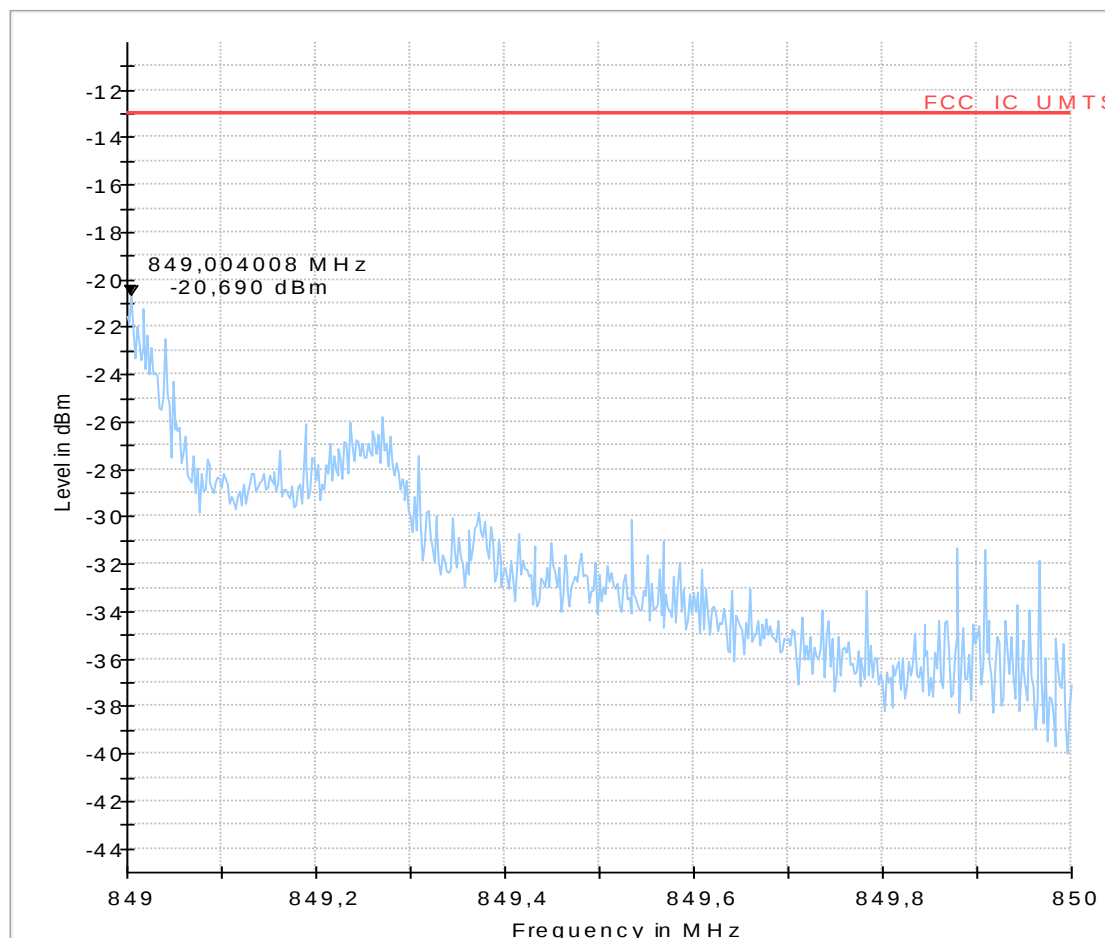
Common Information

Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 5
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643($f_c = 848,3\text{MHz}$), BW=1,4 MHz, RB=6, QPSK
Environmental Conditions:	Humidity: 32%rH; Temperature: 20°C
Operator:	RI

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.7.2.4. Channel 20643, 16-QAM, 6RBs

9.503b_BE_R_Ch20643_6RB_high_BW_1_4_QAM

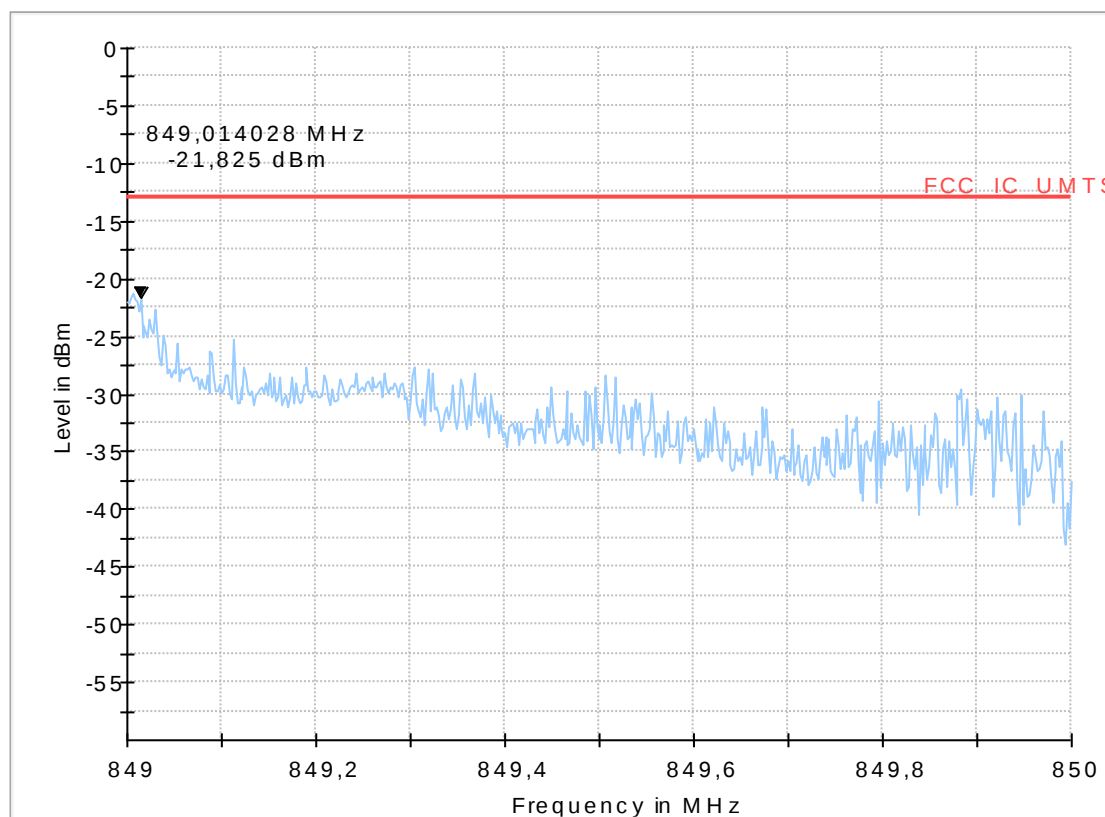
Common Information

Test Description:	Band-Edge High - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643($f_c = 848,3\text{MHz}$), BW=1,4 MHz, RB=6, QAM
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	KMo

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.8. Radiated emissions – band-edge (LTE Band 17)

3.8.1. External antenna - Low Band-Edge

3.8.1.1. Channel 23755, QPSK, 1RBs

9.1701a_BE_R_CH23755_1RB_Low_QPSK_LTE17_External

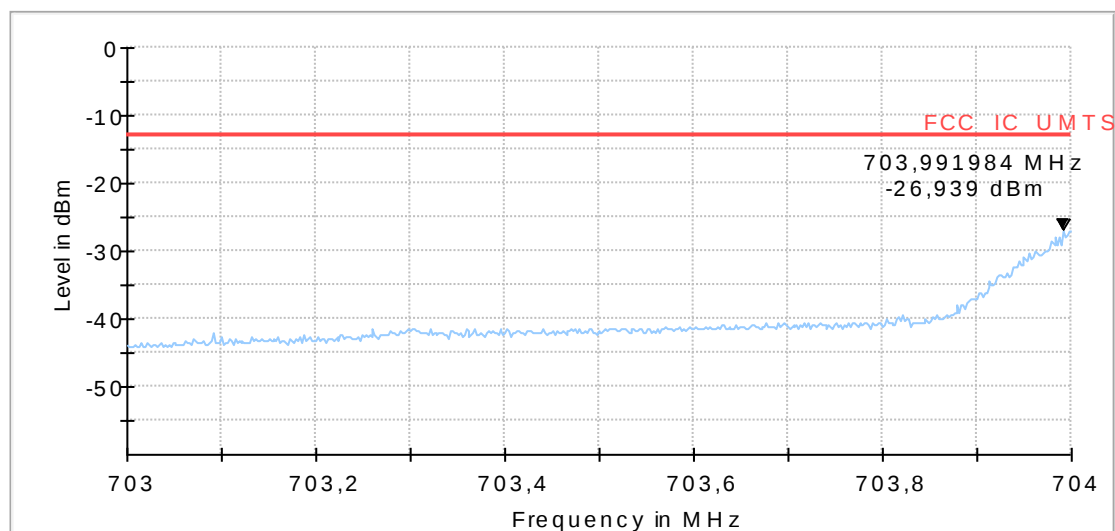
Common Information

Test Description:	Band Edge LTE FDD 17
Test Site Location :	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , QPSK, RB: 1
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	MFr
Operator:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.8.1.2. Channel 23755, 16-QAM, 1RBs

9.1701b_BE_R_CH23755_1RB_Low_16-QAM_LTE17_External

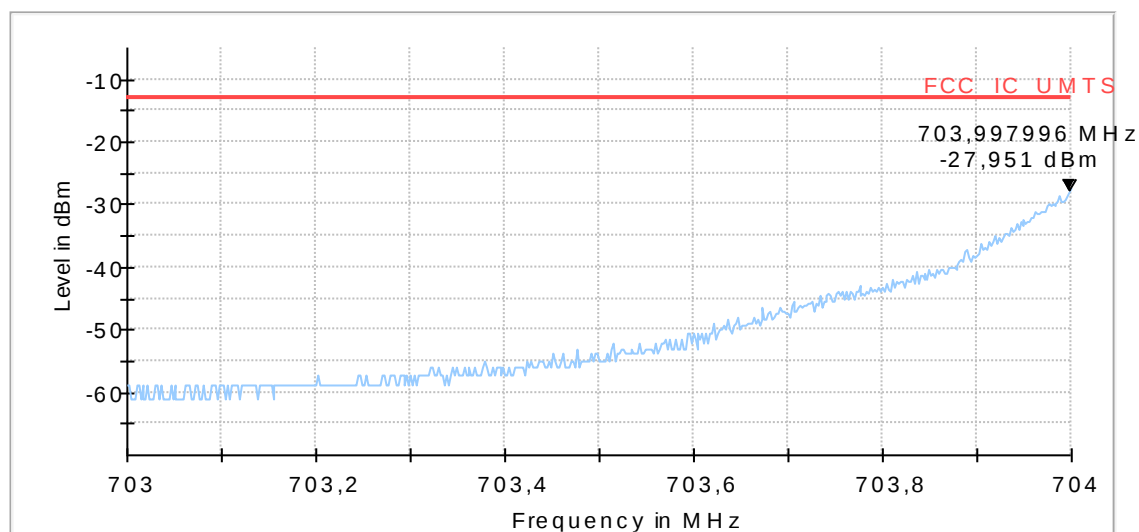
Common Information

Test Description:	Band Edge LTE FDD 17
Test Site Location :	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , 16-QAM, RB: 1
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	MFr
Operator:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.8.1.3. Channel 23755, QPSK, 25RBs

9.1702a_BE_R_CH23755_25RB_Low_QPSK_LTE17_External

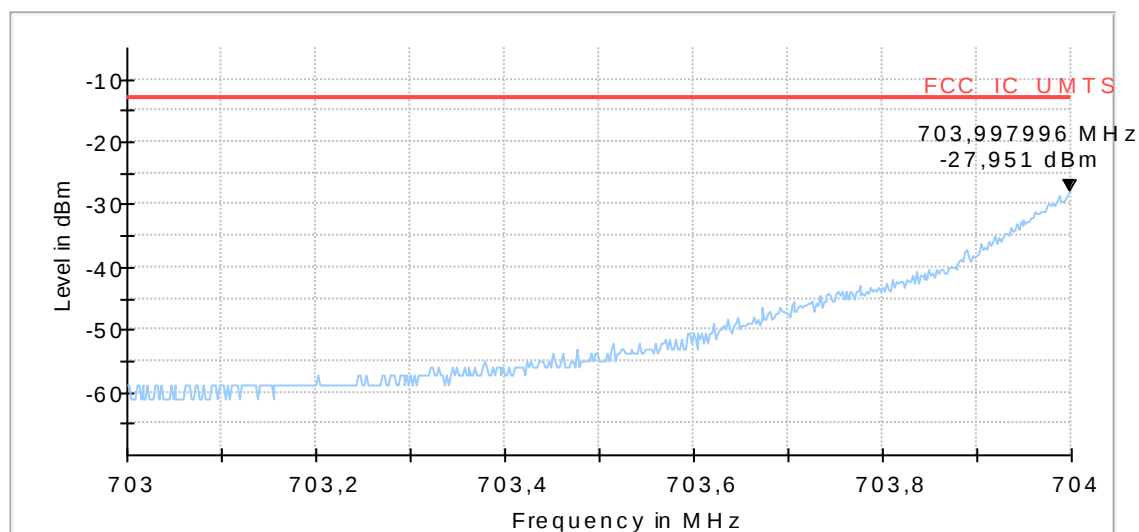
Common Information

Test Description:	Band Edge LTE FDD 17
Test Site Location :	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , QPSK, RB: 25
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	MFr
Operator:	External Antenna

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum



3.8.1.4. Channel 23755, 16-QAM, 25RBs

9.1702b_BE_R_CH23755_25RB_Low_QAM_LTE17_External

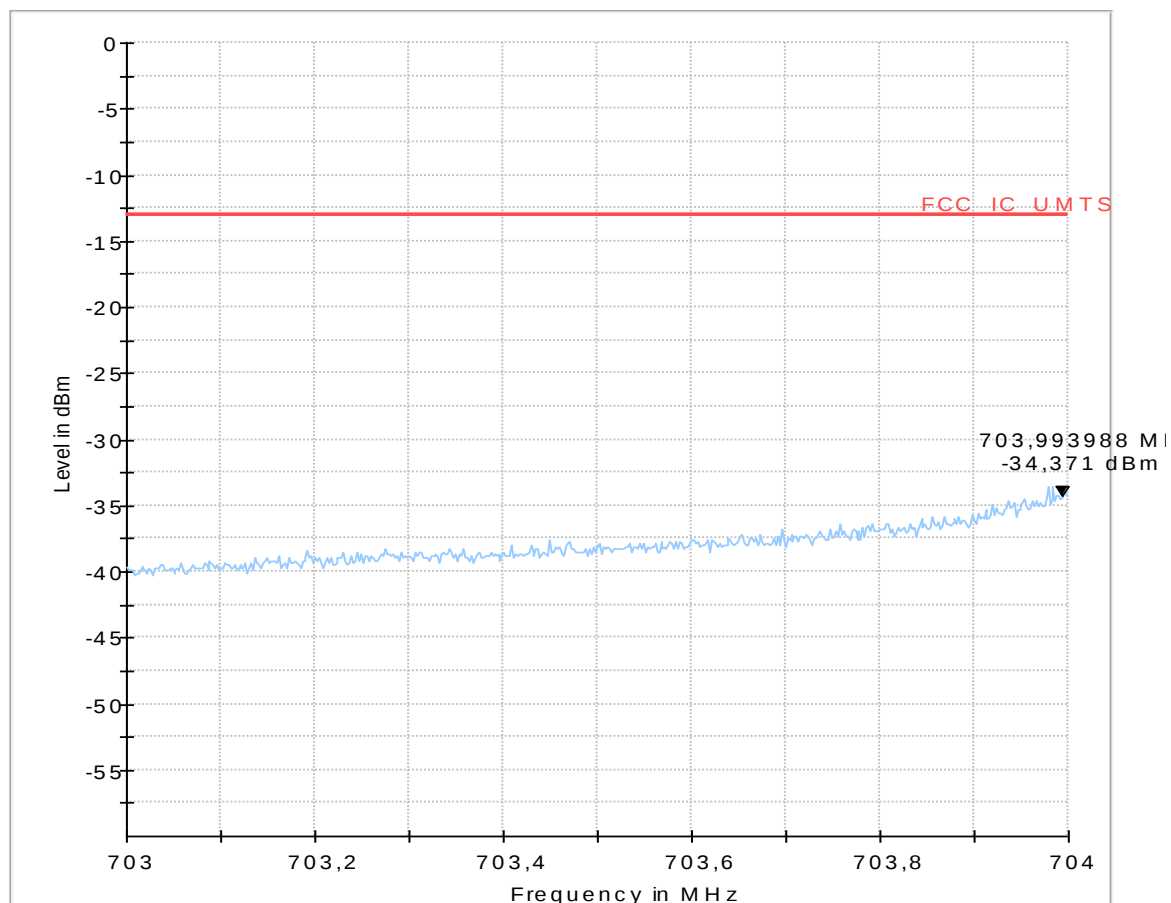
Common Information

Test Description:	Band-Edge - Radiated Spurious Emissions LTE Band 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22 / RSS-130
Operating Mode:	UE allocated channel 23755
Environmental Conditions:	Humidity: 30%rH; Temperature: 24.2°C
Test SW Version:	EMC32 V9.26.0
Operator:	Lor
Remarks:	EUT - laying/standing position

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 VDC
Comments:	

Full Spectrum



3.8.2. Internal antenna - High Band-Edge

3.8.2.1. Channel 23825, QPSK, 1RBs

9.1704a_BE_R_Ch23825_1RB_high_BW5_QPSK

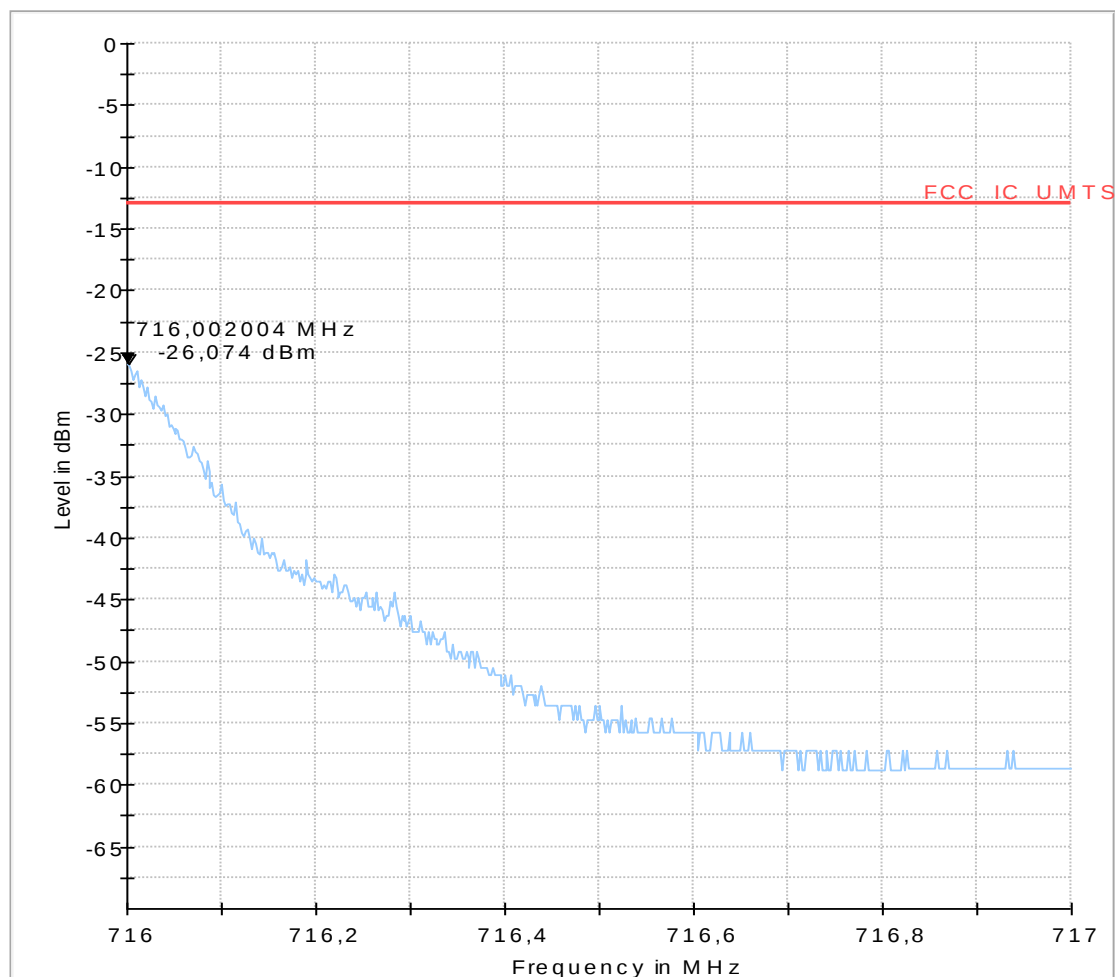
Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.53 / RSS-139
Operating Mode:	UE allocated channel 23843($f_c = 715,3\text{MHz}$), BW=5 MHz, RB=1, high, QPSK
Environmental Conditions:	Humidity: __%rH; Temperature: __°C
Operator:	RLS

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC

Full Spectrum



3.8.2.2. Channel 23825, 16-QAM, 1RBs

9.1704b_BE_R_Ch23825_1RB_high_BW5_QAM

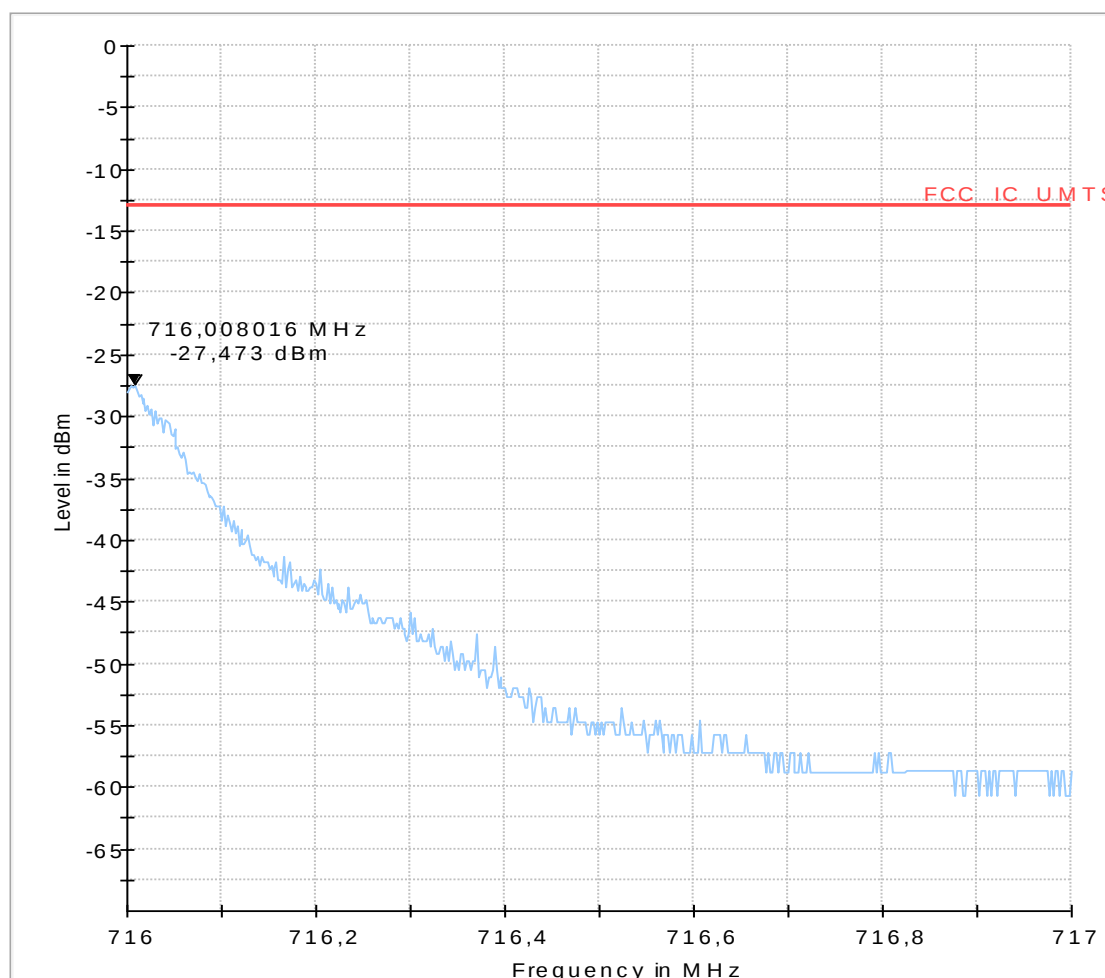
Common Information

Test Description:	Band-Edge - Radiated Field Strength Emissions in 3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	UE allocated channel 23843($f_c = 715,3\text{MHz}$), BW=5 MHz, RB=1, high, QAM
Environmental Conditions:	Humidity: 28%rH; Temperature: 23,6°C
Operator:	RLs

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC

Full Spectrum



3.8.2.3. Channel 23825, QPSK, 25RBs

9.1705a_BE_R_Ch23825_25RB_BW5_QPSK

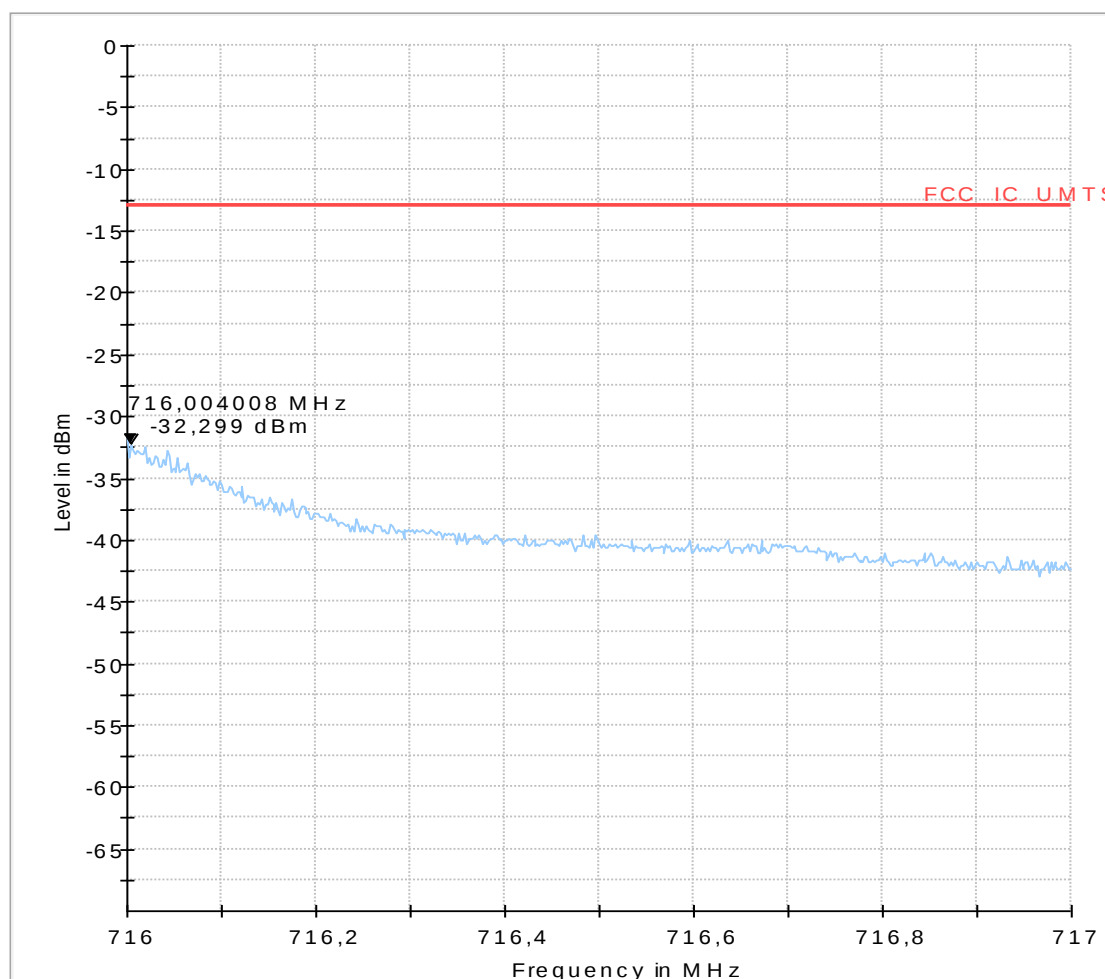
Common Information

Test Description:	Band-Edge - Radiated Spurious Emissions LTE Band 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	UE allocated channel 23825($f_c = 713,5\text{MHz}$), BW=5 MHz, RB=25, high, QPSK
Environmental Conditions:	Humidity: 29%rH; Temperature: 23,6°C
Operator:	RLS

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	ATM-01 R2-US-4GW
HW Version:	113.002.002
SW Version:	001.024.047
Serial Number:	747793
IMEI:	353813070003073
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC

Full Spectrum



3.8.2.4. Channel 23825, 16-QAM, 25RBs

9.1705b_BE_R_Ch23825_25RB_BW5_QAM

Common Information

Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	UE allocated channel 23843(f _c =715,3MHz), BW=5 MHz, RB=25, high, QAM
Environmental Conditions:	Humidity: 29%rH; Temperature: 23,6°C
Operator:	RLs

EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG
EuT:	ATM-01 T2-US-4GW
HW Version:	213.002.002
SW Version:	001.024.047
Serial Number:	748740
IMEI:	353824070000894
Connected Interfaces:	shark antenna with ground plane, Backup antenna, microphone, loudspeaker, cables
Power Supply:	14.0 V DC
Comments:	

Full Spectrum

