

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 acustic 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 U.S.A. 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			
<p align="center">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</p>			

Table of contents

1. MEASUREMENT DIAGRAMS FOR GSM TECHNOLOGY	3
1.1. Spurious emissions radiated (850 MHz transmitting mode).....	3
1.2. Radiated emissions on 850 MHz transmitting band-edge.....	5
1.3. Spurious emissions radiated (1900 MHz transmitting mode).....	7
1.4. Radiated emissions on 1900 MHz transmitting band-edge.....	9
2. MEASUREMENT DIAGRAMS FOR W-CDMA MODE	11
2.1. Spurious emissions radiated (FDD Band II transmitting mode)	11
2.2. Spurious emissions radiated (FDD Band V transmitting mode).....	13
2.3. Radiated emissions on FDD Band II band-edge.....	15
2.4. Radiated emissions on FDD Band V band-edge.....	17
3. MEASUREMENT DIAGRAMS FOR LTE TECHNOLOGY	19
3.1. Spurious emissions radiated (LTE Band 2)	19
3.2. Spurious emissions radiated (LTE Band 4)	21
3.3. Spurious emissions radiated (LTE Band 5)	23
3.4. Spurious emissions radiated (LTE Band 17)	25
3.5. Radiated emissions – band-edge (LTE Band 2).....	27
3.6. Radiated emissions – band-edge (LTE Band 4).....	35
3.7. Radiated emissions – band-edge (LTE Band 5).....	43
3.8. Radiated emissions – band-edge (LTE Band 17).....	51

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

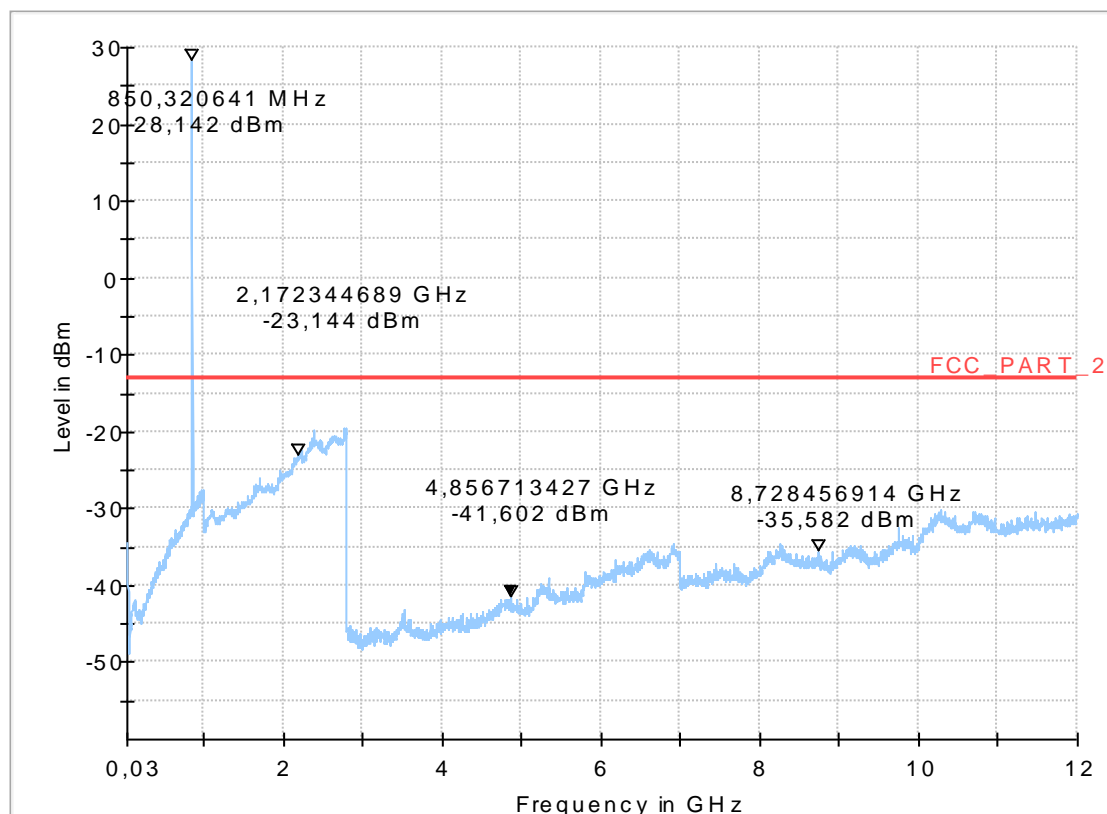
Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 251
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 38%RH; Temperature: 22°C
Operator: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

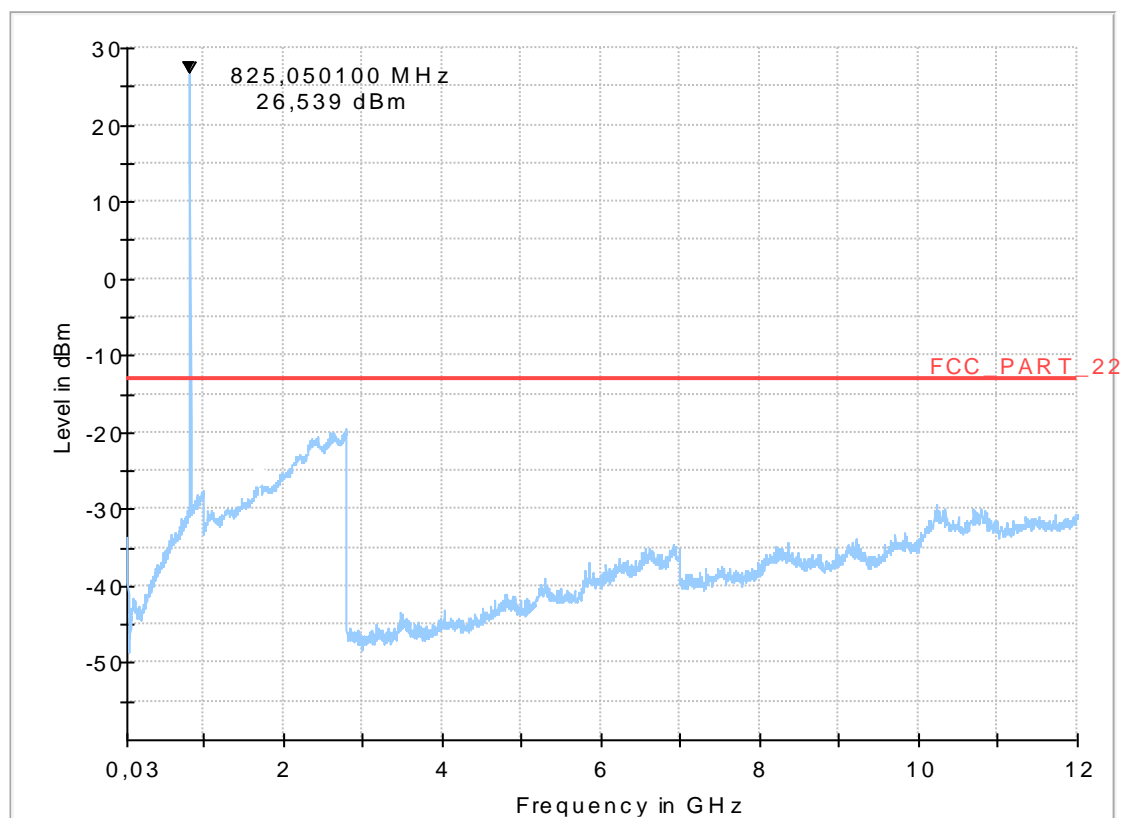
Test Description:	Radiated Emissions GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part22.917
Test Case:	-
Operating Mode:	MS allocated UL channel 128
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator: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

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

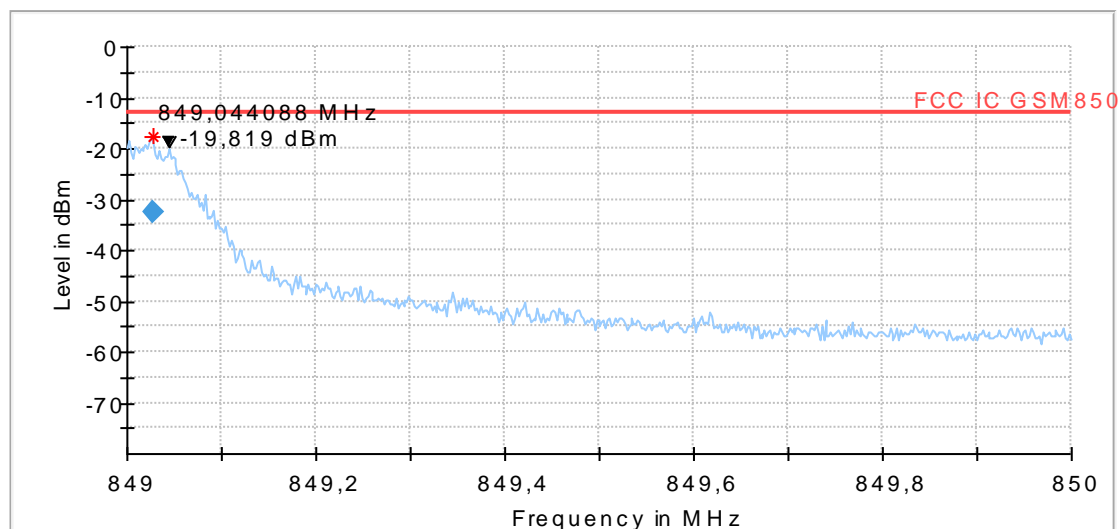
Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 251 (fc = 848.8MHz), Voice, PCL0 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: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

EUT Information

Manufacturer:	peiker 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



1.2.2. External antenna

9.09_BE_R_Ch128_GSM_850

Common Information

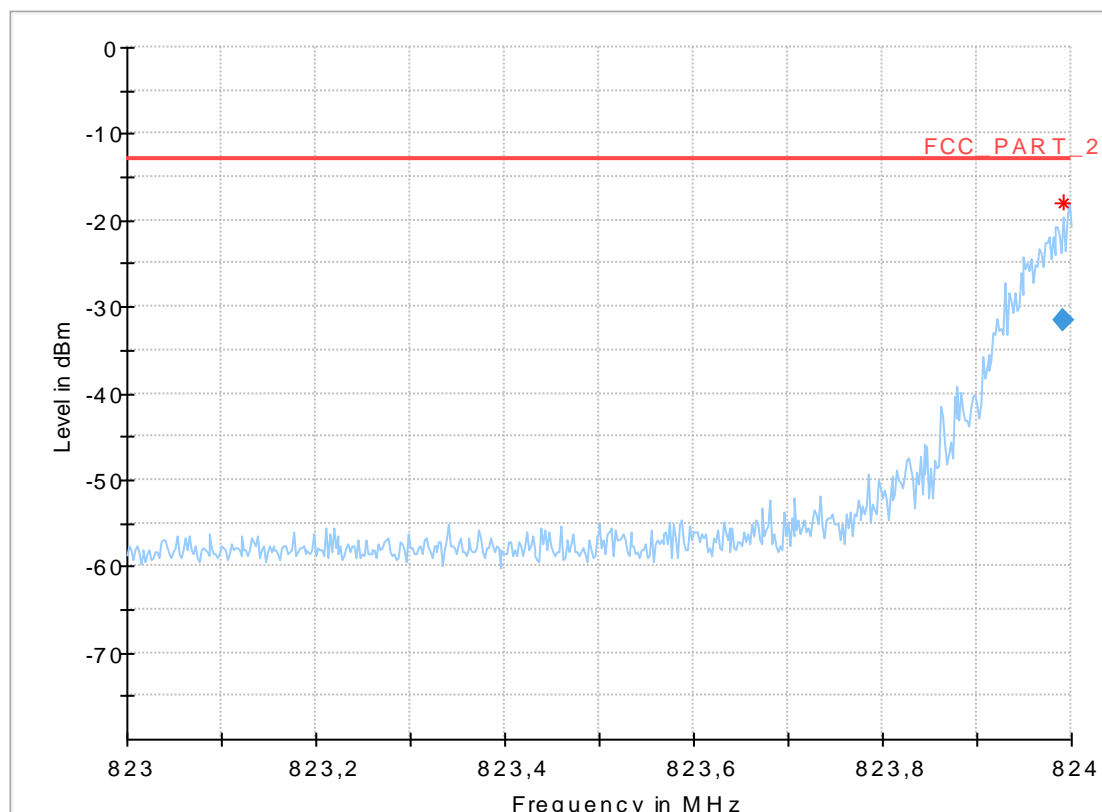
Test Description:	Radiated Band Edge Compliance GSM850
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917
Operating Mode:	MS allocated channel 128 (fc = 824.2MHz), Voice, PCL5 (+33dBm)
Exclusionband:	824 - 849MHz
Environmental Conditions:	Humidity: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



Final Result

Frequency (MHz)	Limit (dBm)	Margi n (dB)	Meas. Time (ms)	Bandwidt h (kHz)	Pol	Azimut h (deg)	Elevatio n (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

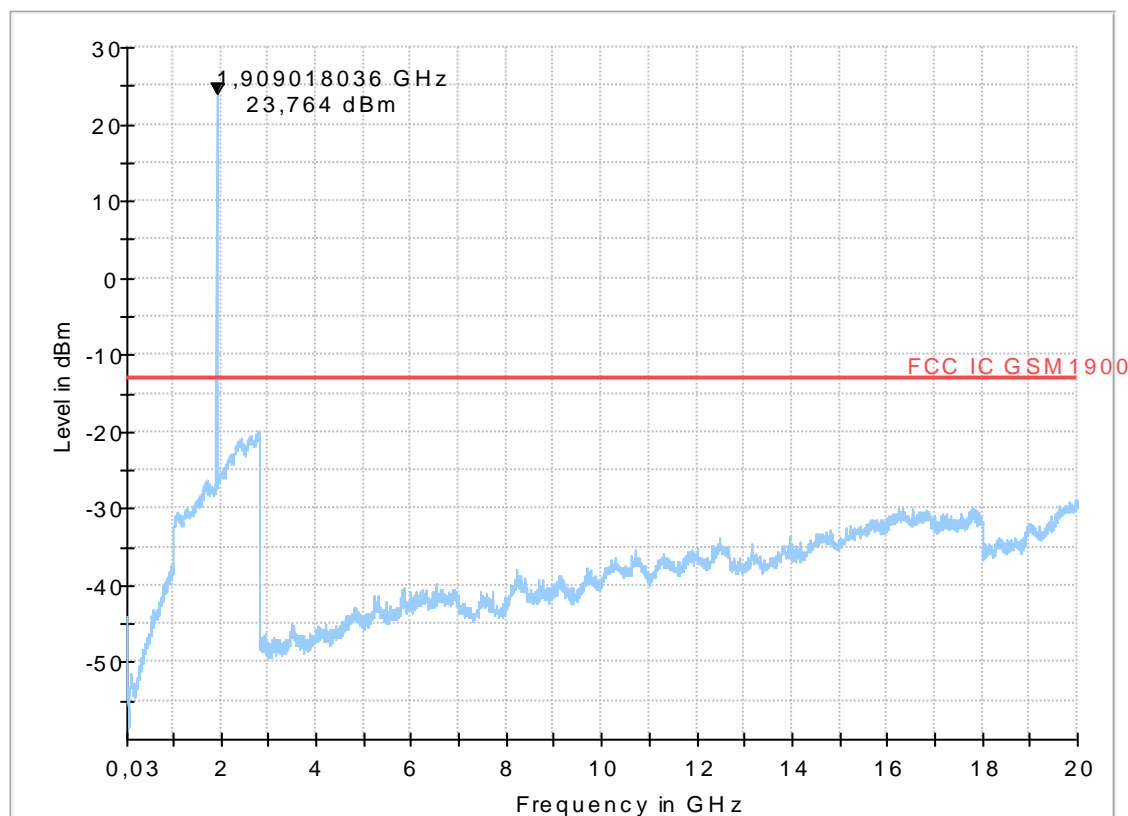
Test Description:	Radiated Emissions GPRS 1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 512,661,810
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 38%RH; Temperature: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

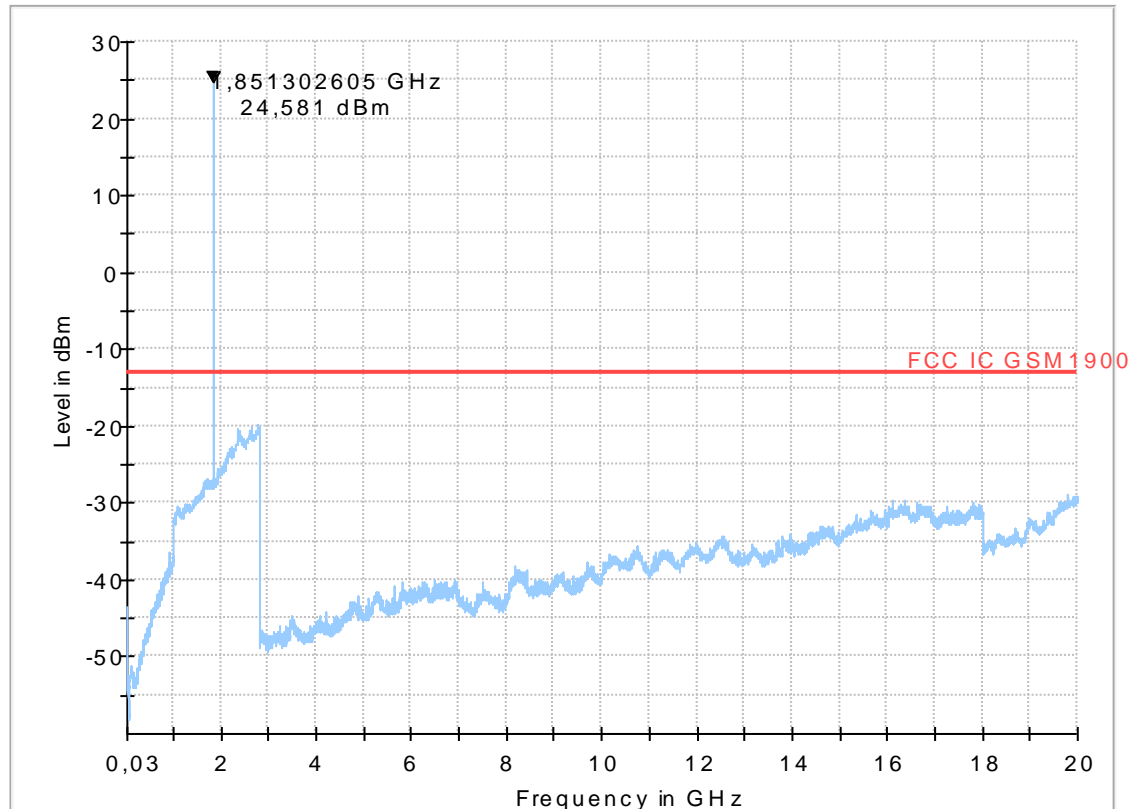
Test Description:	Radiated Emissions GSM1900
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part24.238
Test Case:	-
Operating Mode:	MS allocated UL channel 512
Exclusionband:	1850 - 1910MHz
Environmental Conditions:	Humidity: 38%rH; Temperature: 22°C
Operator: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

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

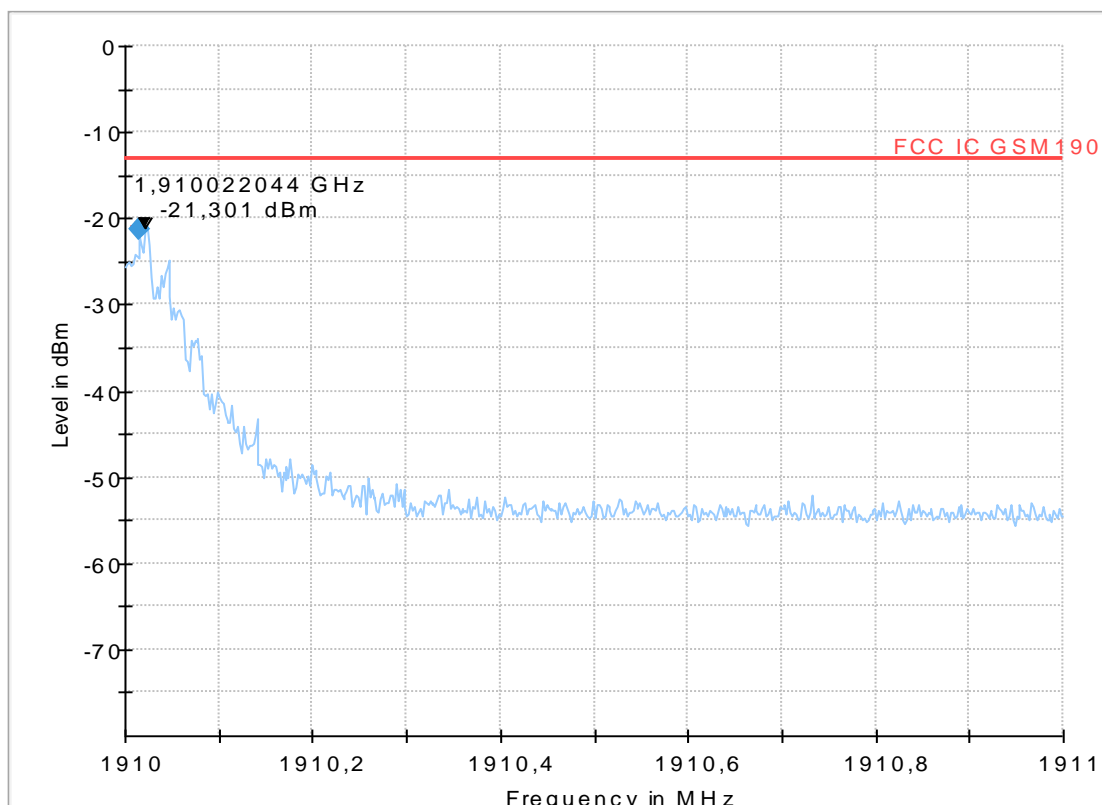
Common Information

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 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)	Margi n (dB)	Meas. Time (ms)	Bandwidt h (kHz)	Pol	Azimut h (deg)	Elevatio n (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

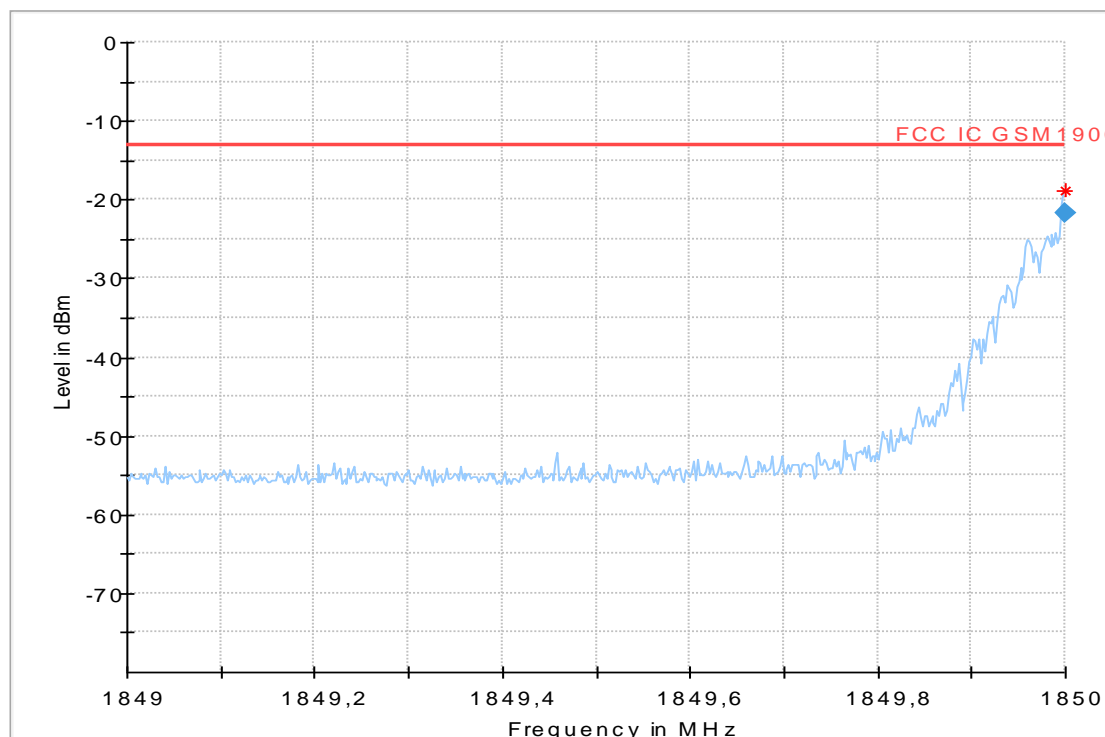
Common Information

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

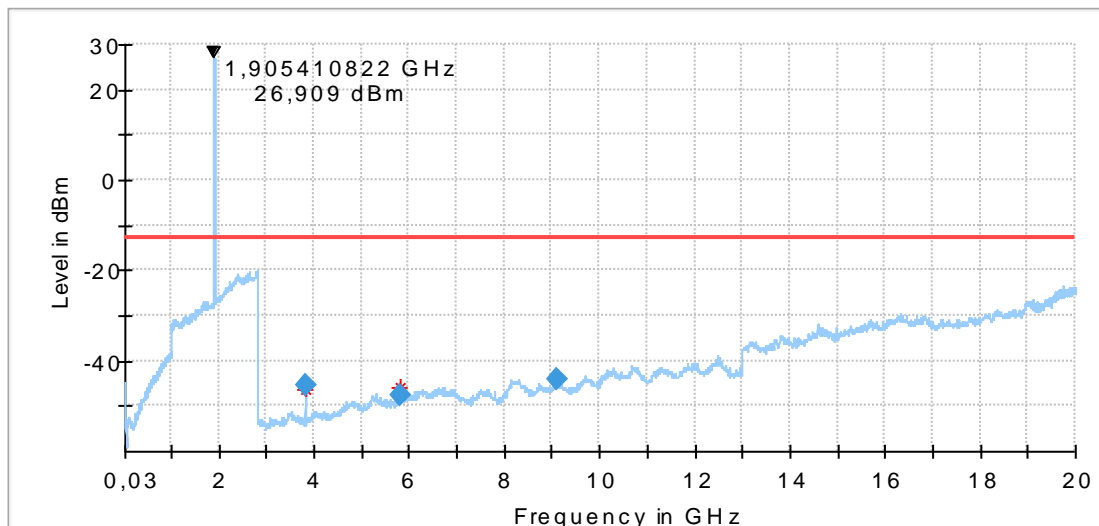
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9538 (fc =1907.6 MHz)
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr

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

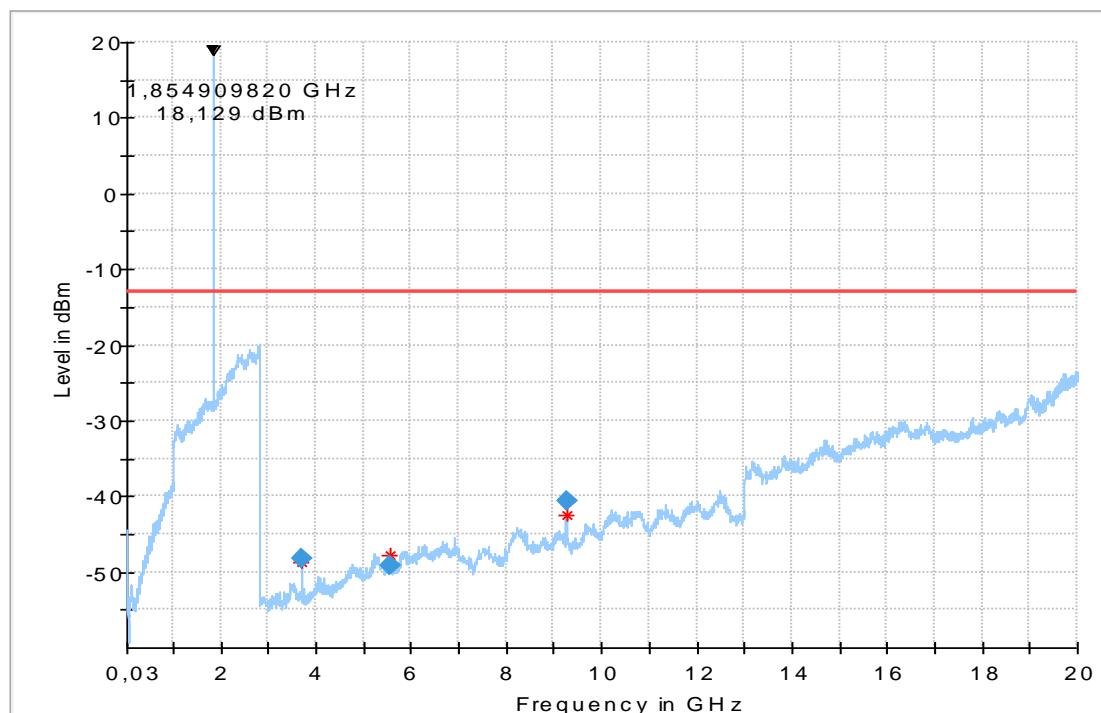
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 9262/9400/9538 (fc = 1852.4/1880.0/1907.6 MHz)
Environmental Conditions:	Humidity: 34%rH; Temperature: 23°C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

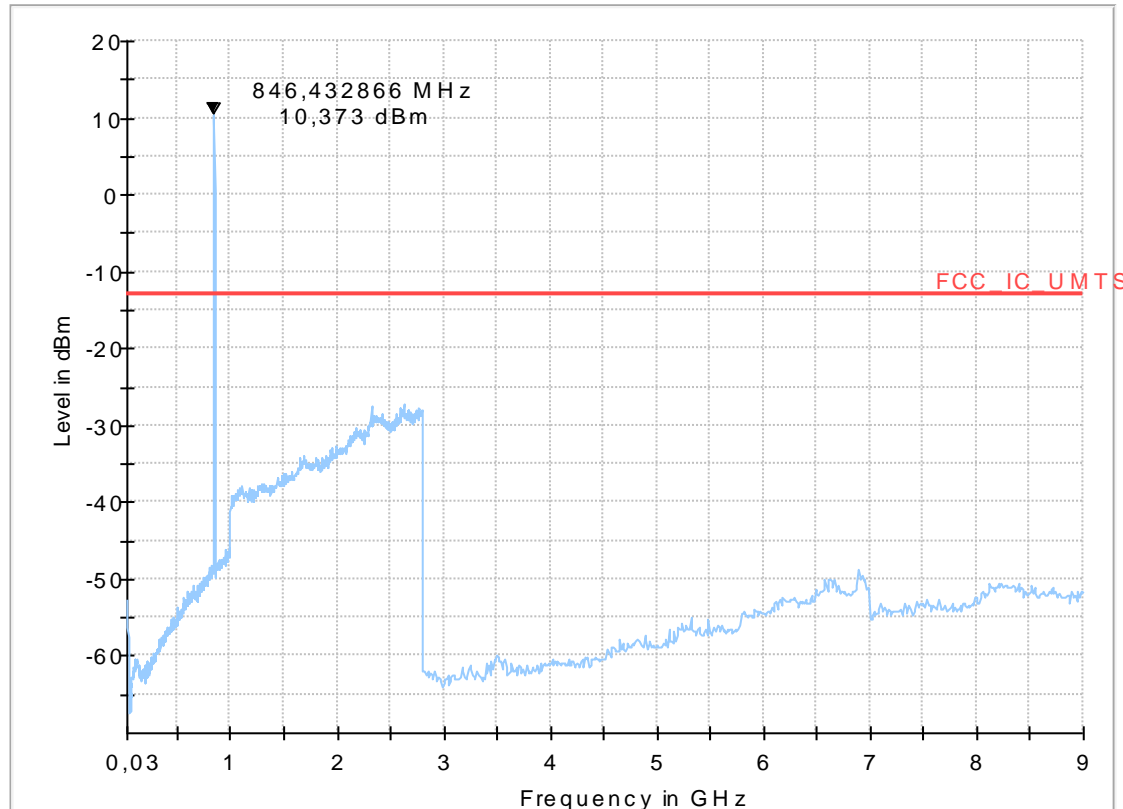
Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4233 (846.6 MHz), Voice/HSDPA/HSUPA/HSPA+, H-Set x
Environmental Conditions:	Humidity: 35%rH; Temperature: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

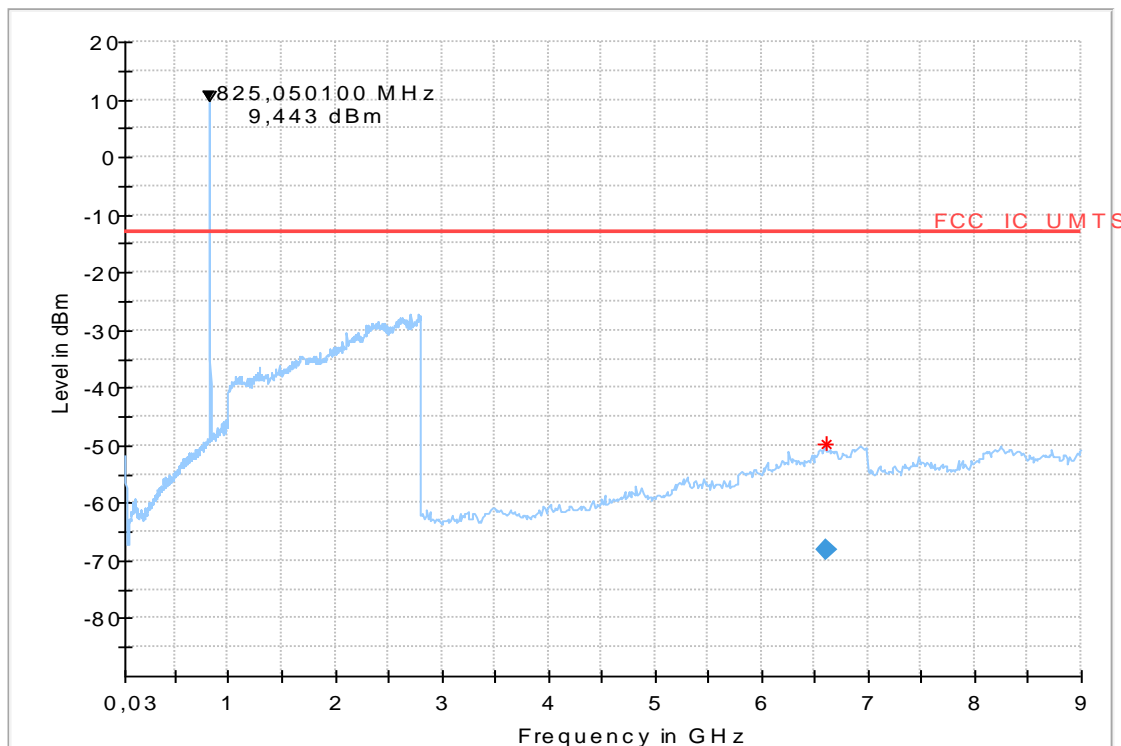
Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4132 (fc = 826.6 MHz)
Environmental Conditions:	Humidity: 34%rH; Temperature: 23°C
Operator:	RIs

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

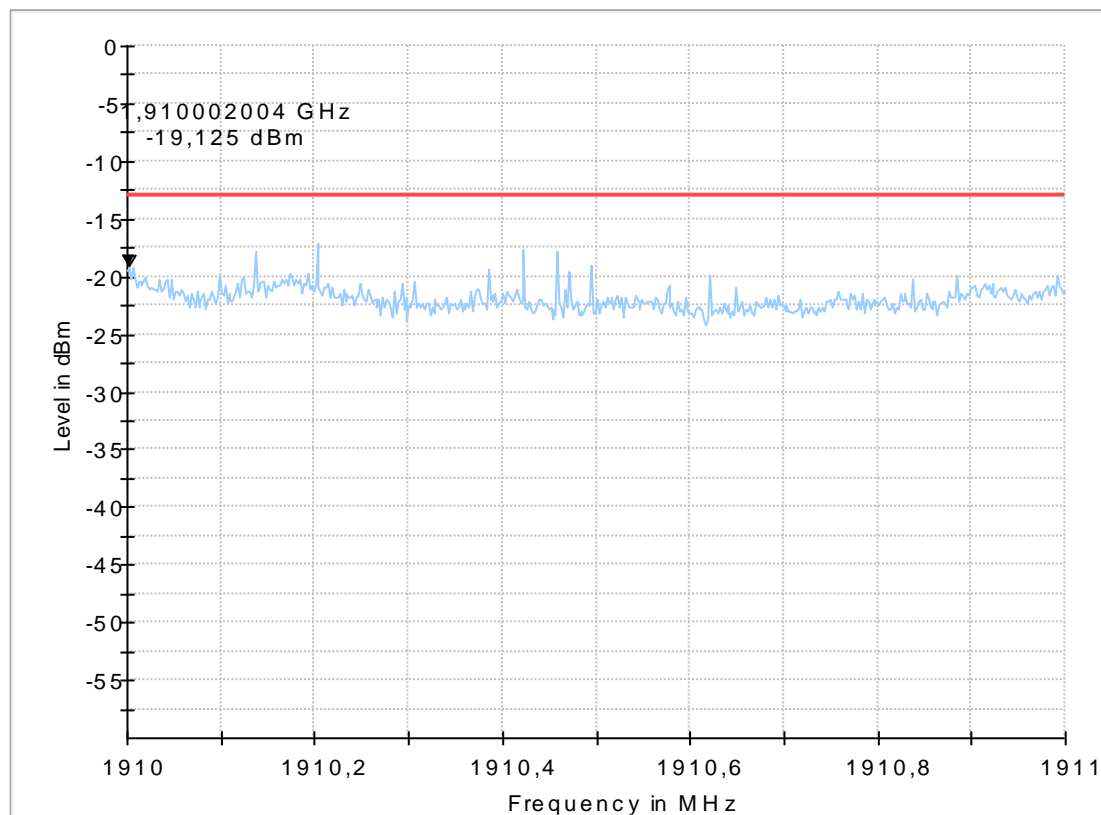
Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Operating Mode:	FCC Part 24
Operating Conditions:	UE allocated channel 9538 (fc =1907.6 MHz)
Operator Name:	KMo
Comment:	Backup Antenna

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

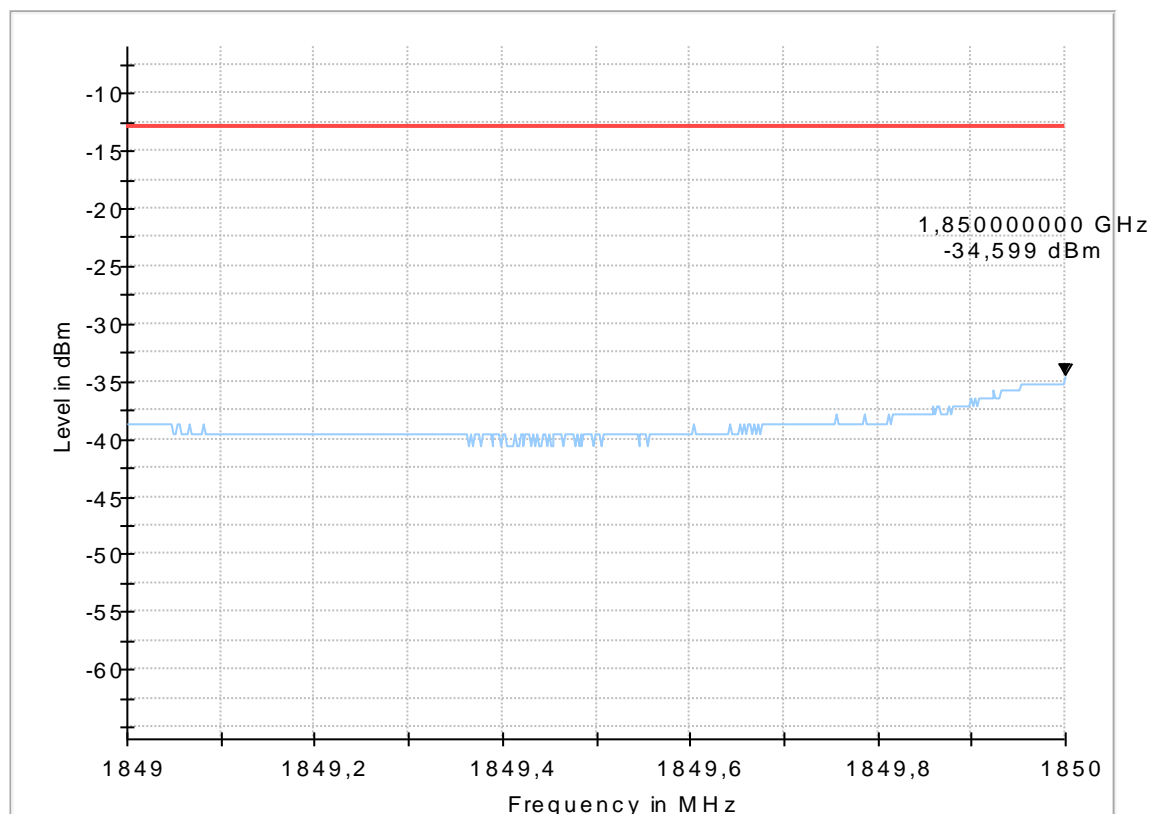
Test Description:	Radiated Band Edge Compliance UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.232(x) - Limitation of mobile transmitters
Operating Mode:	UE allocated channel 9262 (fc = 1852.4 MHz)
Environmental Conditions:	Humidity: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

EUT Information

Manufacturer:	peiker 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. Radiated emissions on FDD Band V band-edge

2.4.1. Internal antenna

9.51_BE_R_Ch4233

Common Information

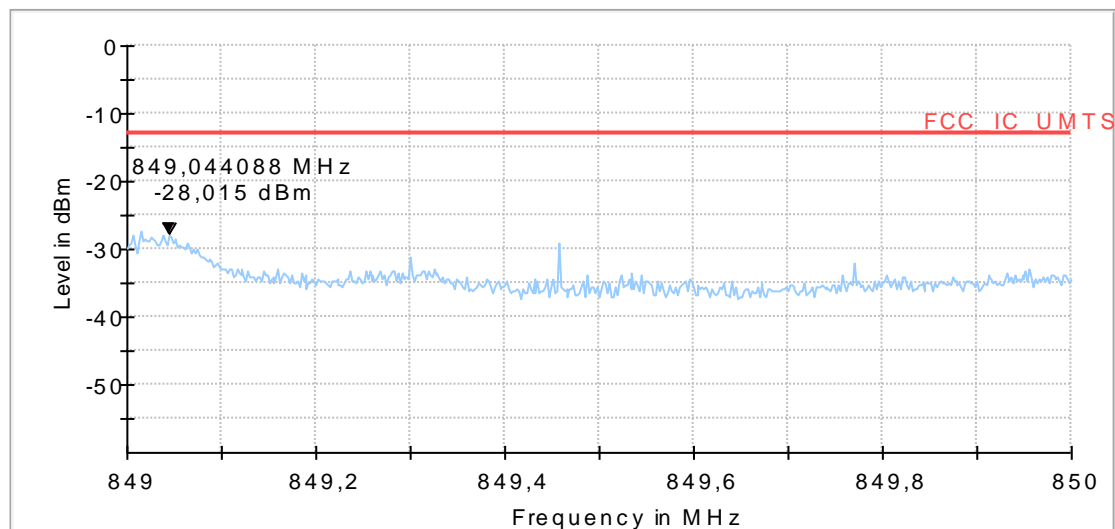
Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4233 (fc = 848 MHz)
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator: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

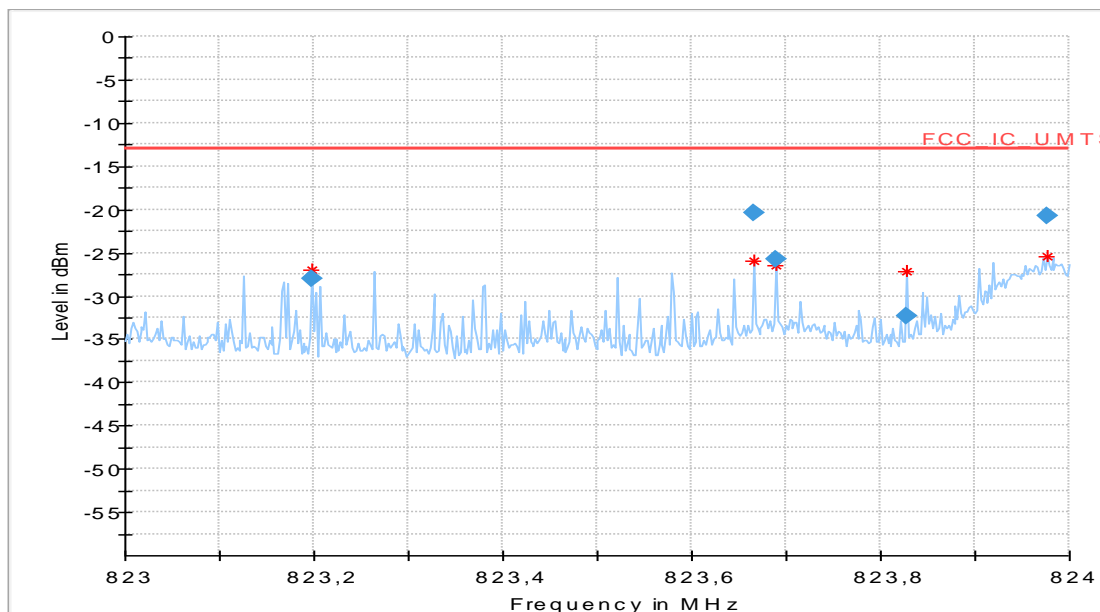
Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4132 (fc = 826.6 MHz)
Environmental Conditions:	Humidity: 34%rH; Temperature: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

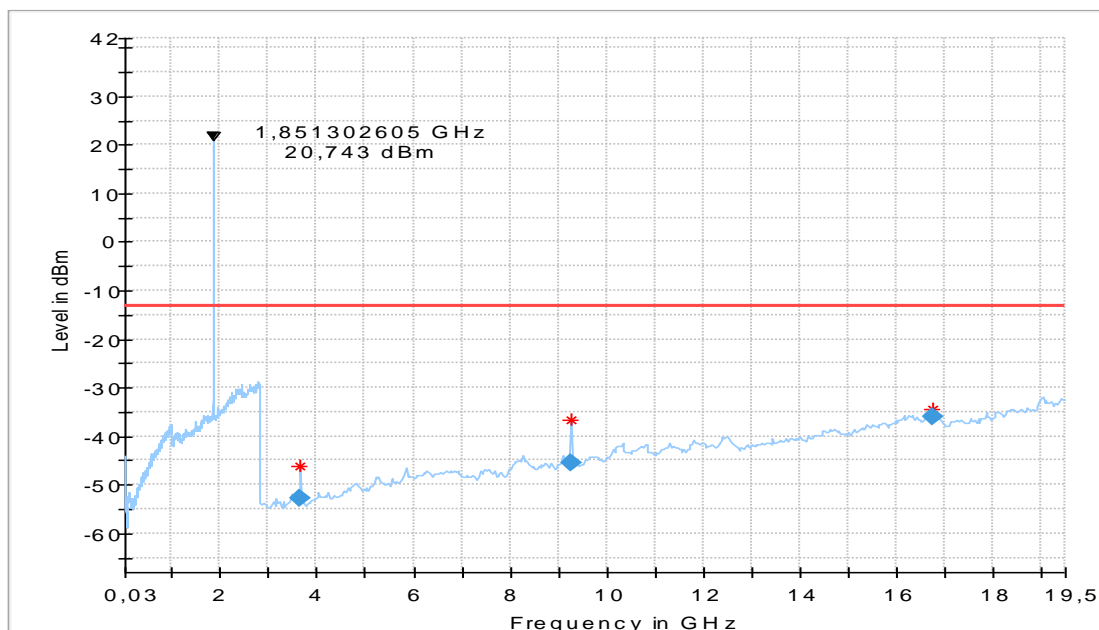
Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 18607(fc = 1850.7MHz); Channel Bandwidth: 1.4MHz; # RB: 1; RB Pos: Low ; Modulation: QPSK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

EUT Information

Manufacturer:	peiker 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

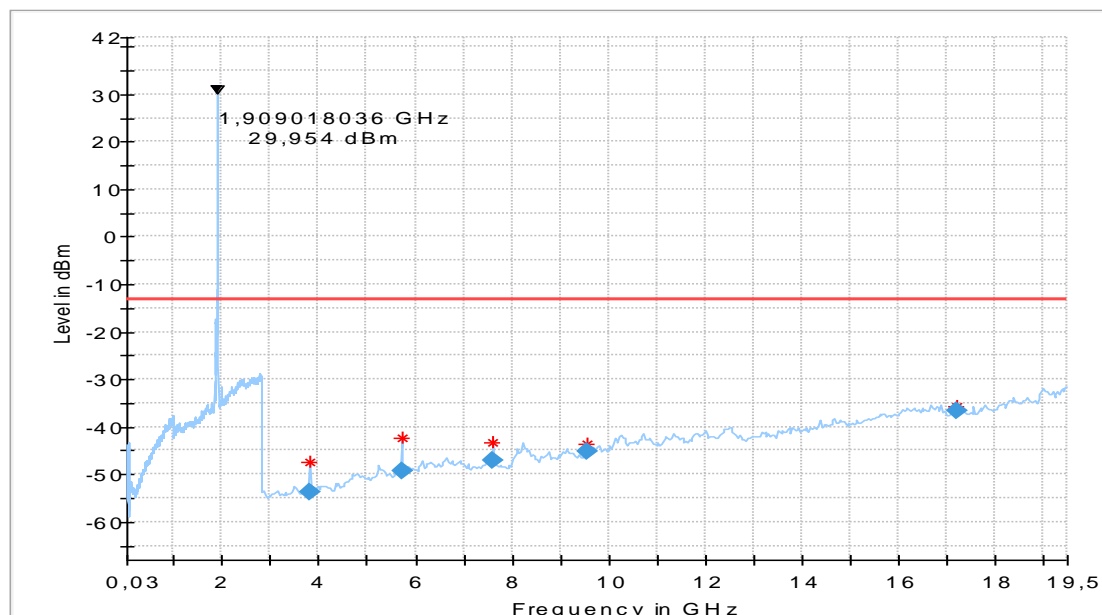
Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24
Operating Mode:	UE allocated channel 19193(fc =1909,3MHz), BW=1,4 MHz, RB=1, high,QPSK
Environmental Conditions:	Humidity: 35%rH; Temperature: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

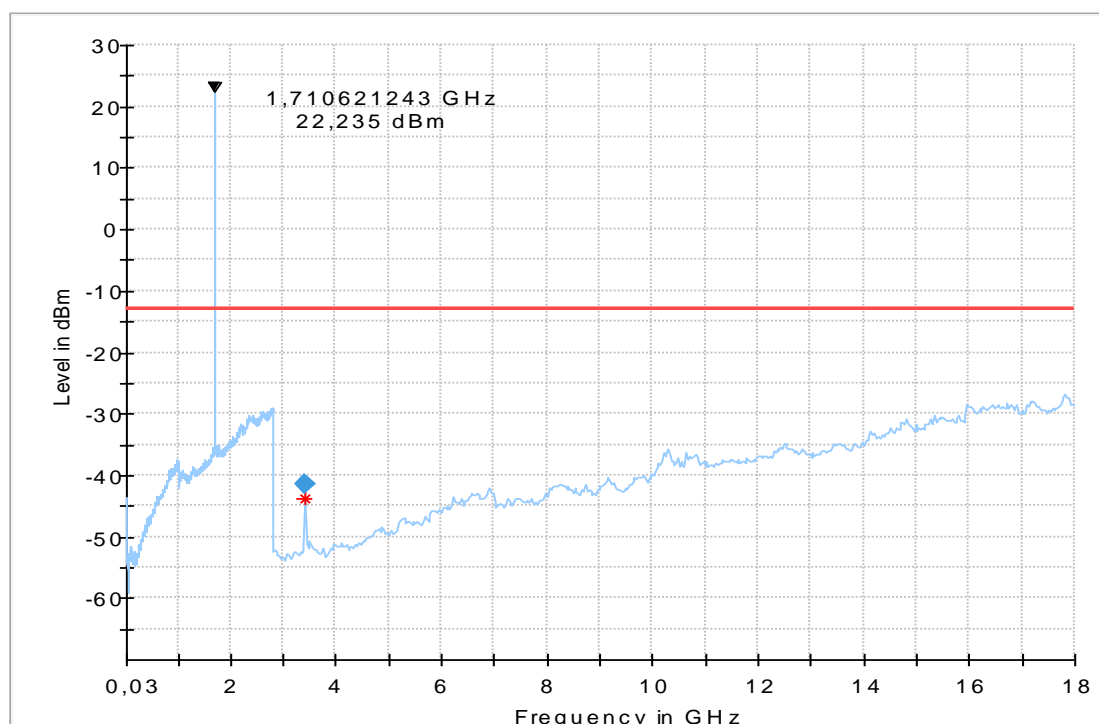
Test Description:	Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Comm. Link:	LTE Band 4
Operating Mode:	UE allocated channel 19957 (fc =1710.7MHz),BW=1.4 MHz, RB=1 Low, Modulation=QPSK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

EUT Information

Manufacturer:	peiker 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)	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**

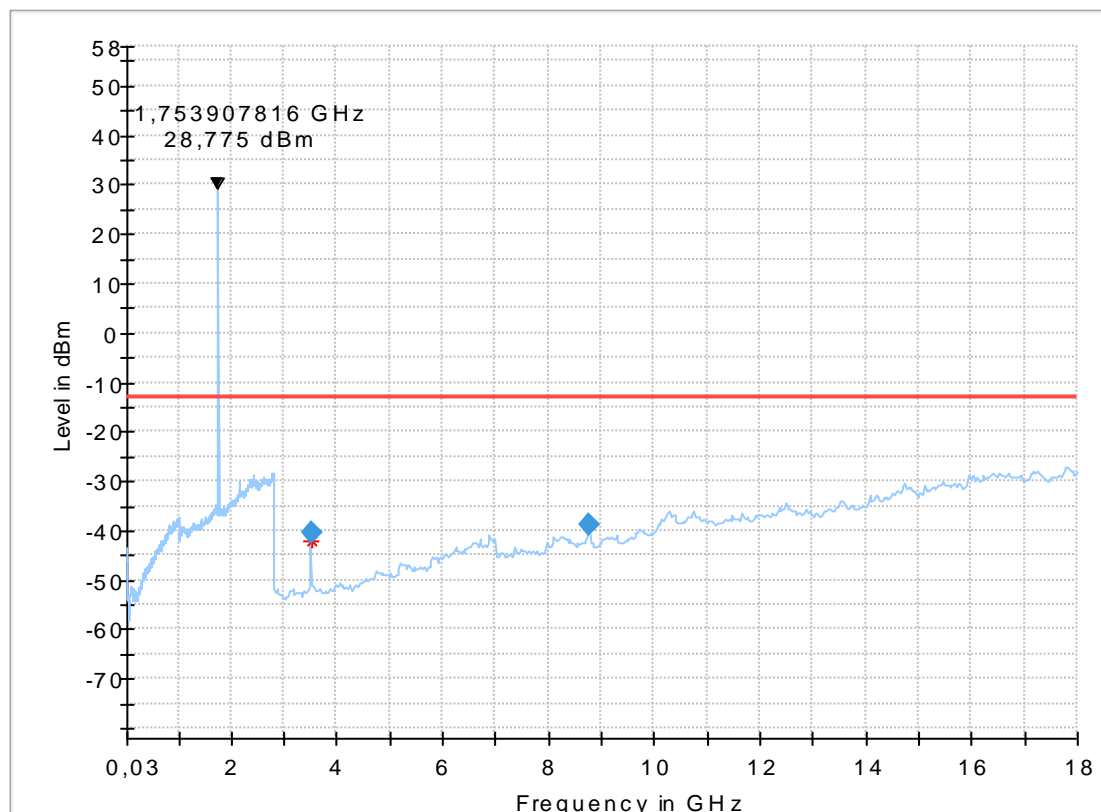
Test Description:	Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=1, high,QPSK
Environmental Conditions:	Humidity: 35%rH;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

EUT Information

Manufacturer:	peiker 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. Spurious emissions radiated (LTE Band 5)

3.3.1. External antenna

8.50_RSE_R_Ch20407_BW_1_4

Common Information

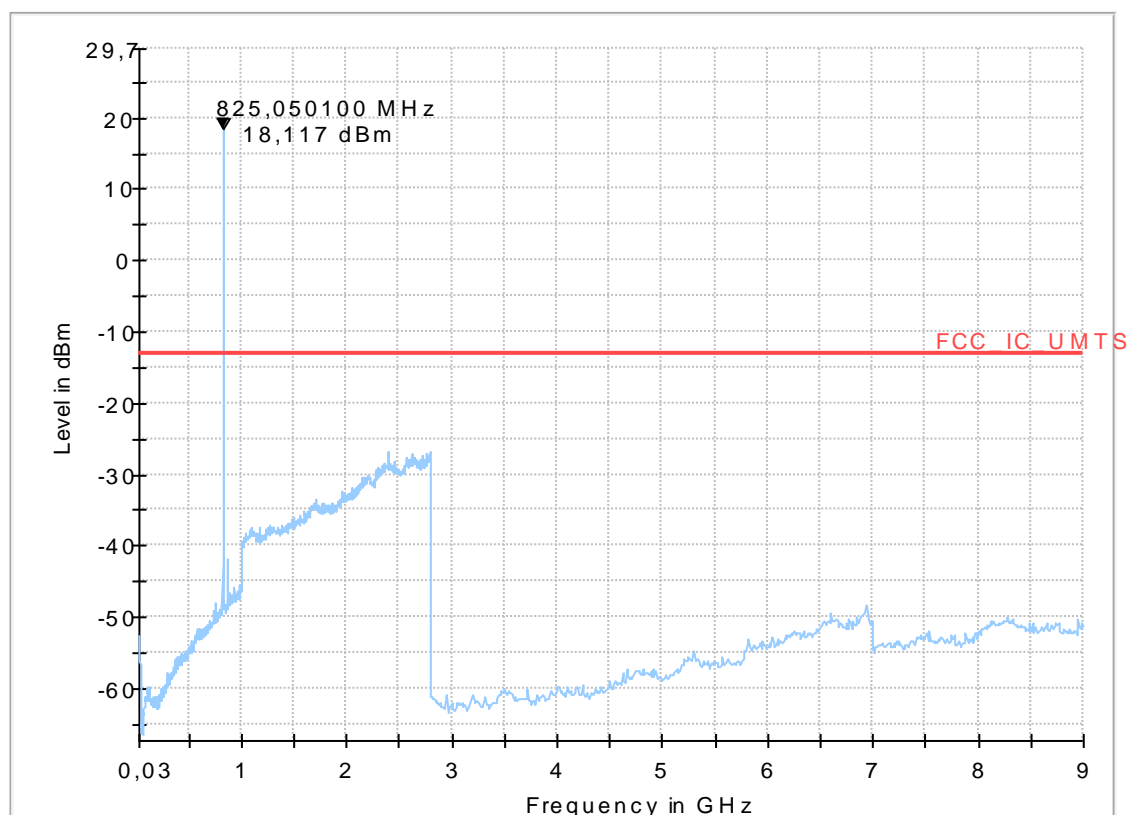
Test Description:	Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20407($f_c = 824,7\text{MHz}$), BW=1.4 MHz, RB=1, Low, QPSK
Environmental Conditions: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

EUT Information

Manufacturer:	peiker 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



3.3.2. Internal antenna

8.52_RSE_R_Ch20643_LTE5

Common Information

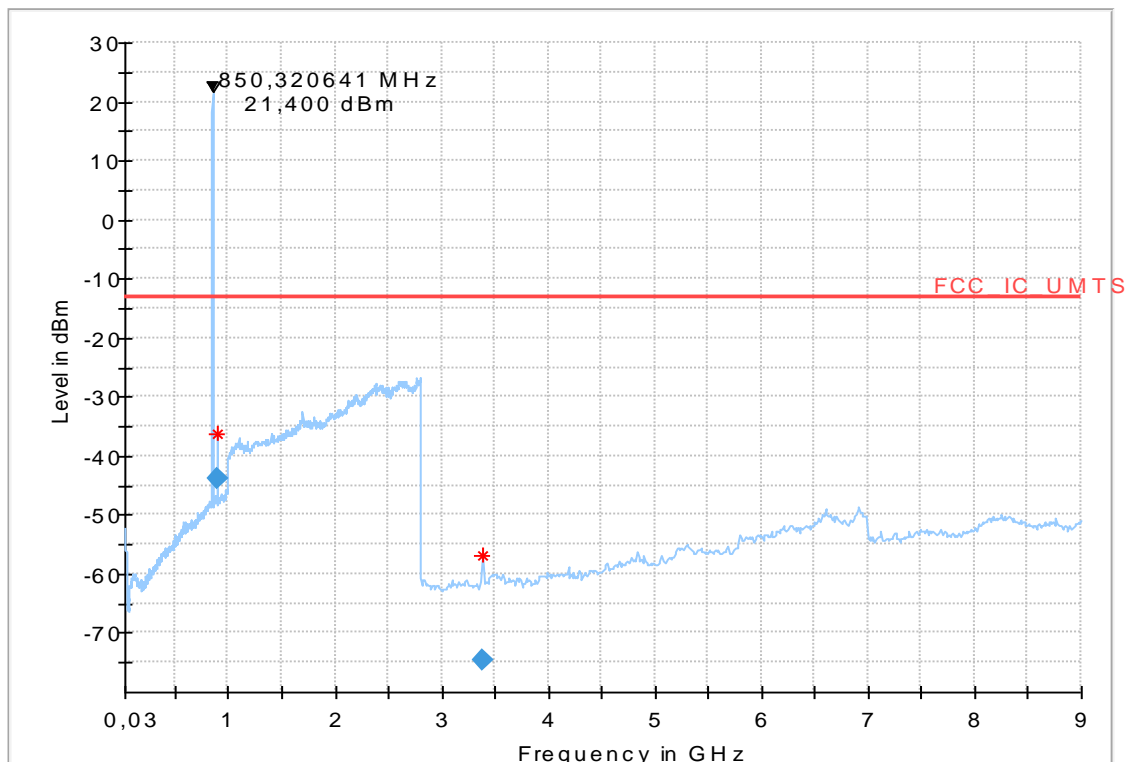
Test Description:	Radiated Spurious Emissions LTE Band 5
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643(fc =848,3MHz), BW=1,4 MHz, RB=1, QPSK
Environmental Conditions:	Humidity: 32%rH; Temperature: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

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

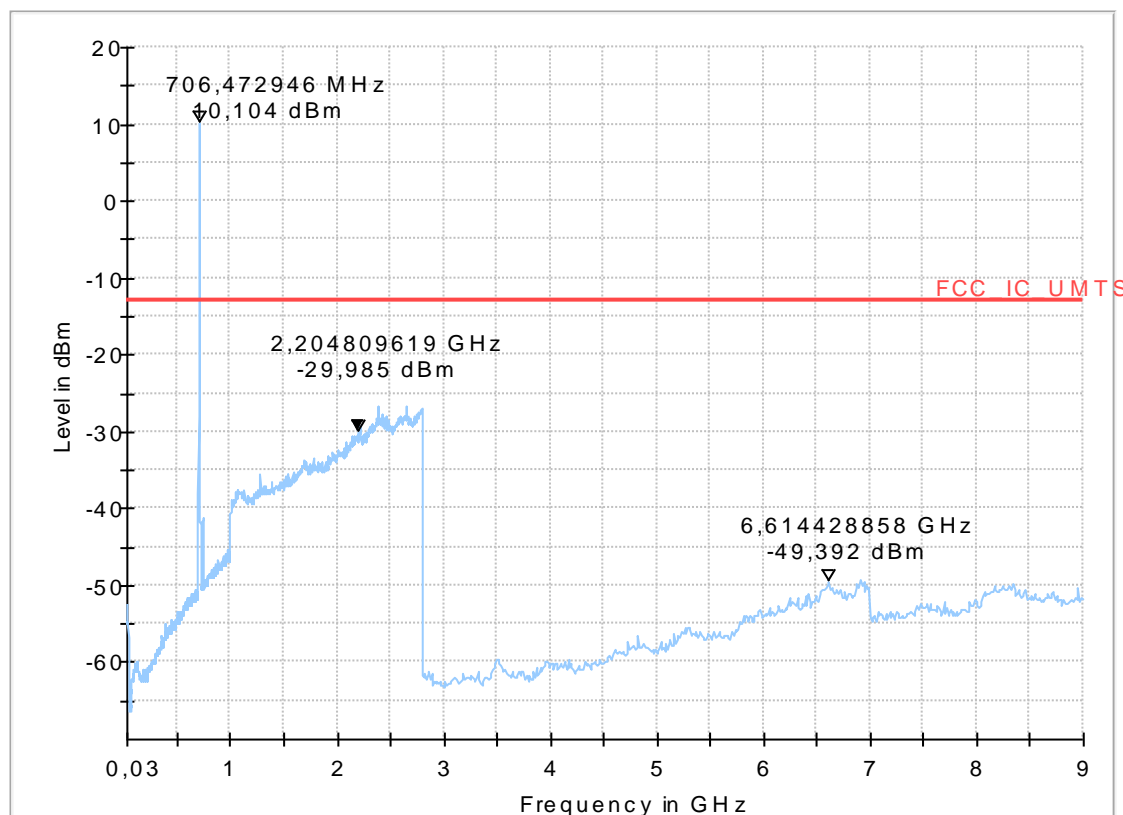
Test Description:	Radiated Spurious Emissions LTE FDD 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , QPSK, RB: 1
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Operator:	MFr

EUT Information

Manufacturer:	peiker 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



3.4.2. Internal antenna**8.173_RSE_R_CH23825_BW5_LTE17****Common Information**

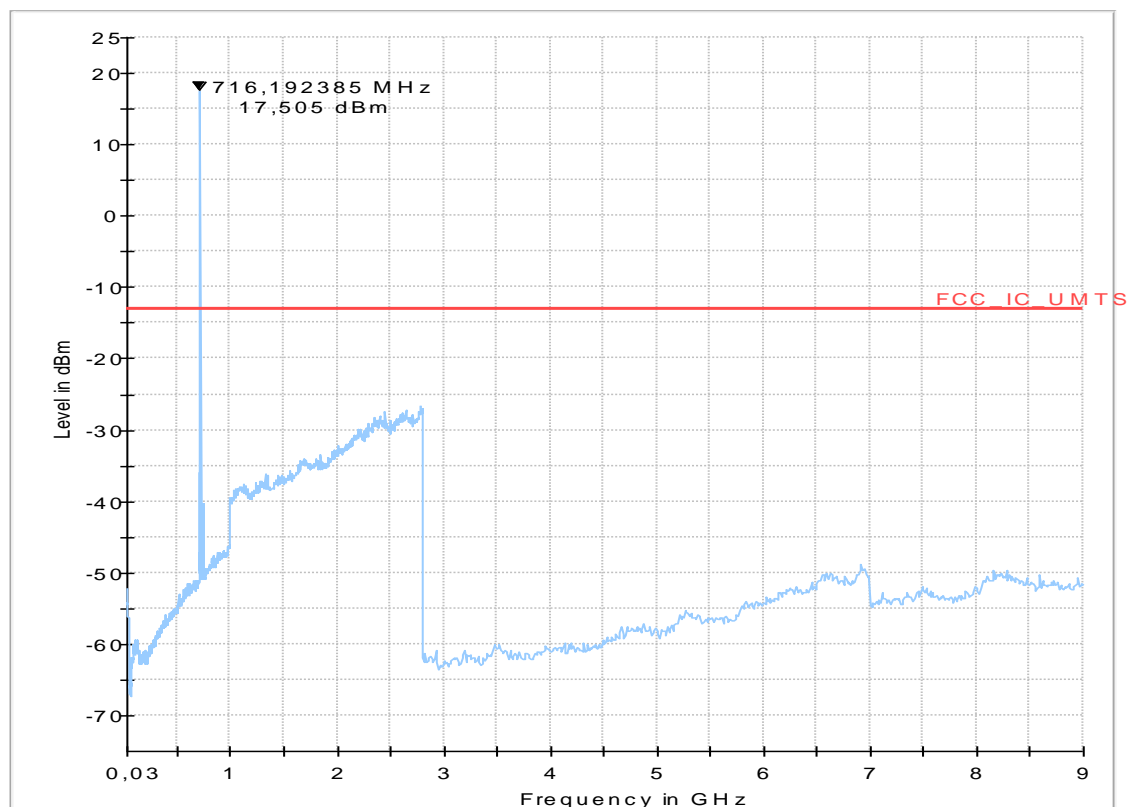
Test Description:	Radiated Spurious Emissions LTE Band 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 23825(fc =713,5MHz), BW=5 MHz, RB=1, high, QPSK
Environmental Conditions:	Humidity: 28%rH; Temperature: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

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

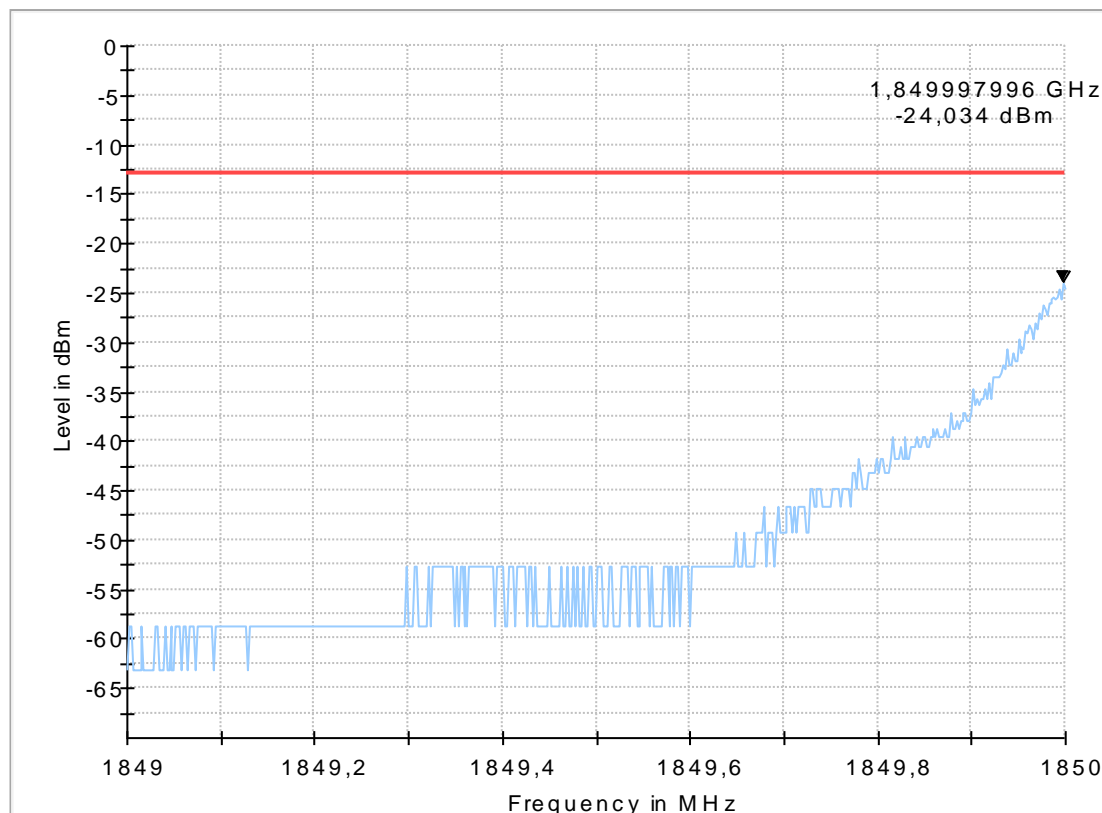
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 18607(fc = 1850.7MHz); Channel Bandwidth: 1.4MHz; # RB: 1; RB Pos: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

EUT Information

Manufacturer:	peiker 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



3.5.1.2. Channel 18607, 16-QAM, 1RBs

9.20b_BE_R_Ch18607_1RB_low_BW_1_4_QAM

Common Information

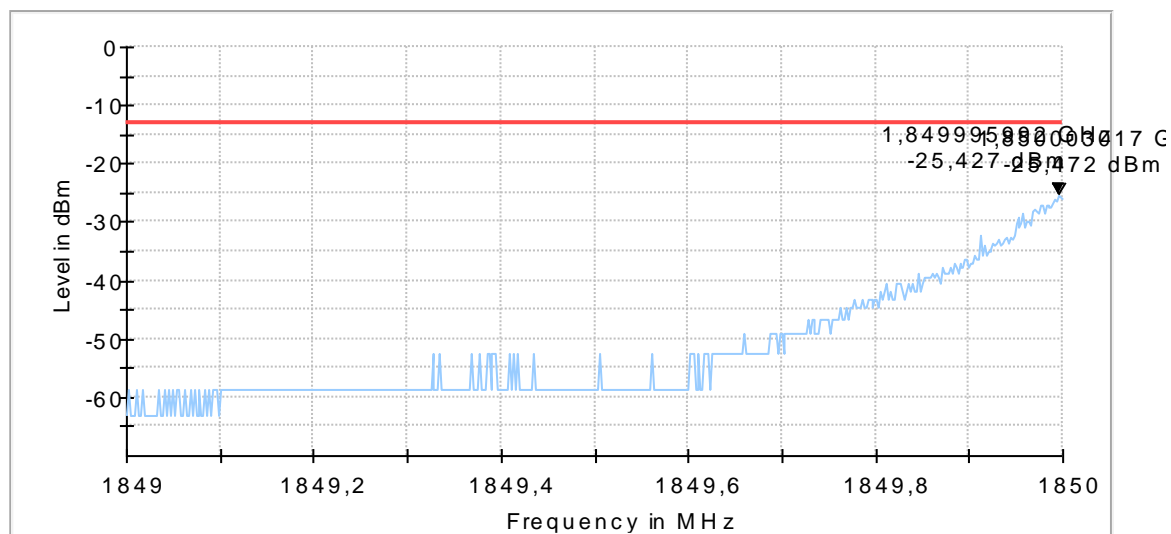
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode	UE allocated channel 18607
Environmental Conditions	Humidity: 35%rH; Temperature: 22°C
Test SW Version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

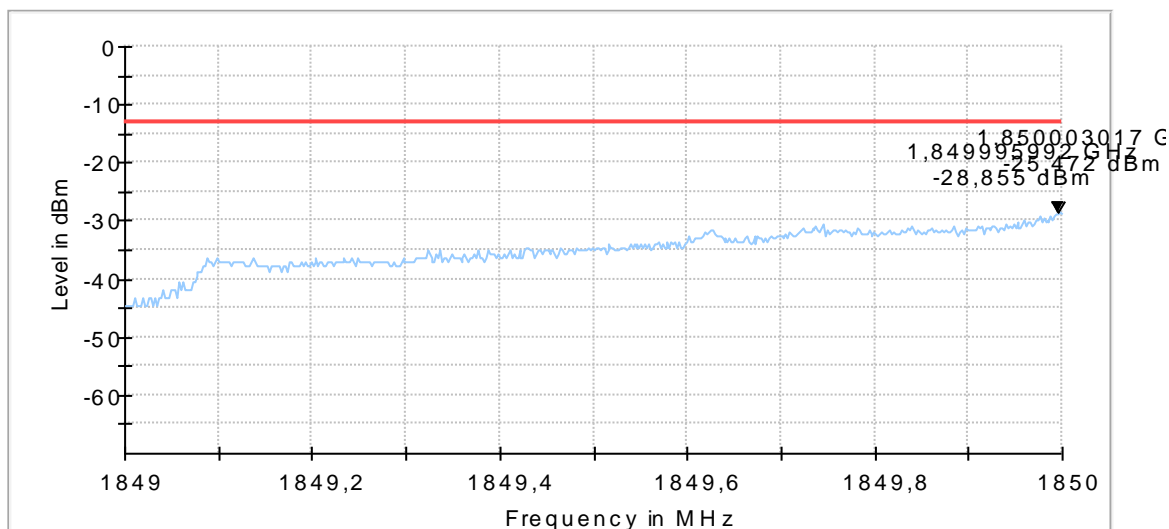
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode	UE allocated channel 18607
Environmental Conditions	Humidity: 35%rH; Temperature: 22°C
Test SW Version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

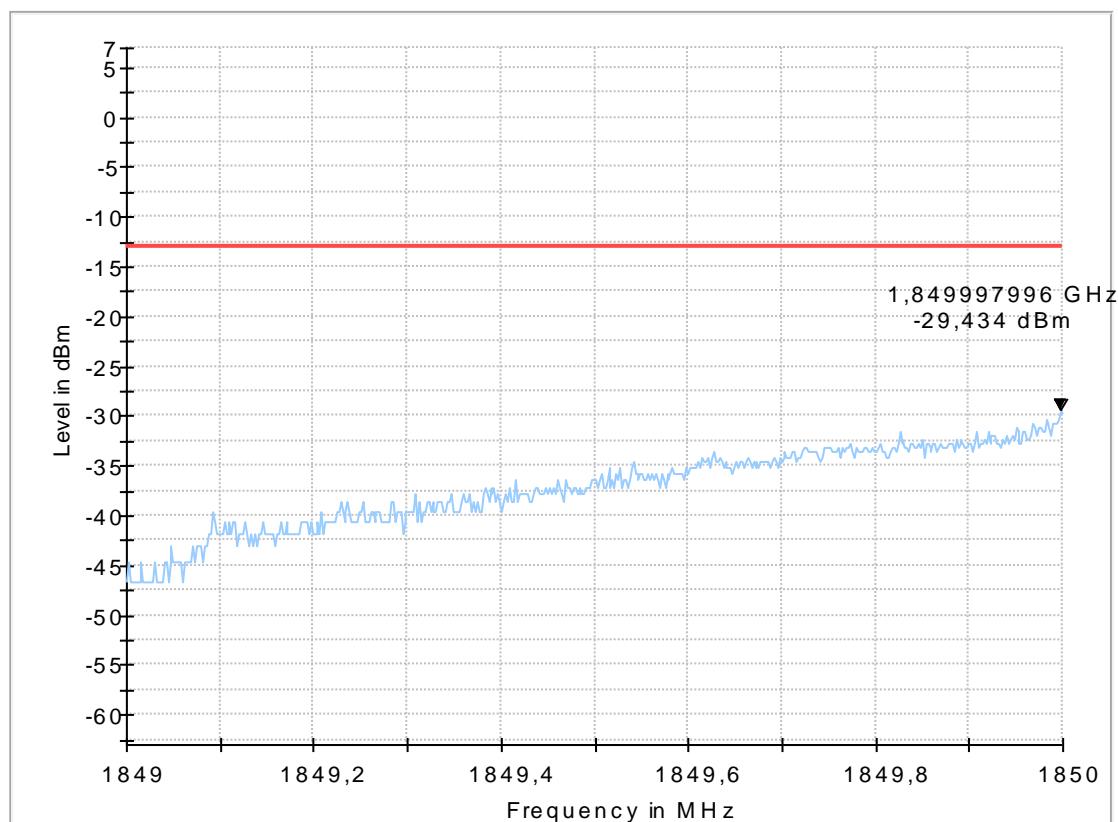
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 18607(fc = 1850.7MHz); Channel Bandwidth: 1.4MHz; # RB: 6; RB; Modulation: 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



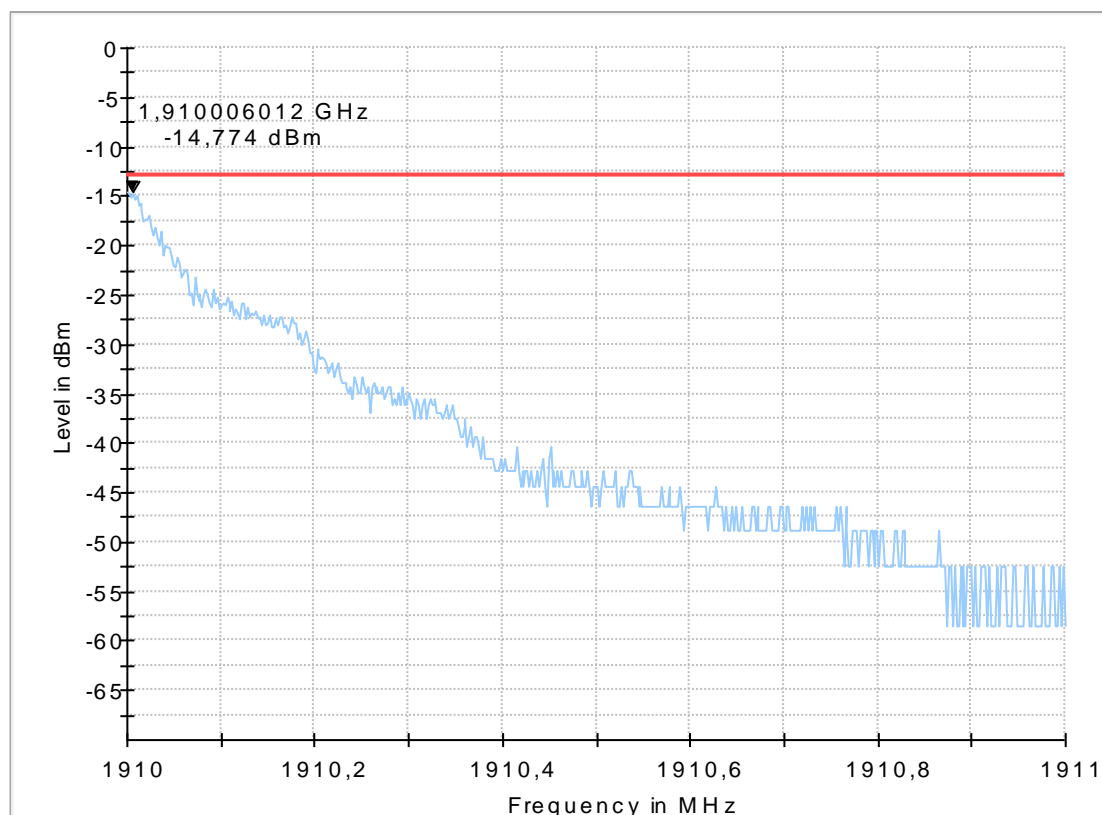
3.5.2. Internal antenna – High Band-edge**3.5.2.1. Channel 19193, QPSK, 1RBs****9.23a_BE_R_Ch19193_1RB_high_BW_1_4_QPSK****Common Information**

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(fc =1909,3MHz), 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



3.5.2.2. Channel 19193, 16-QAM, 1RBs**9.23b_BE_R_Ch19193_1RB_high_BW_1_4_QAM****Common Information**

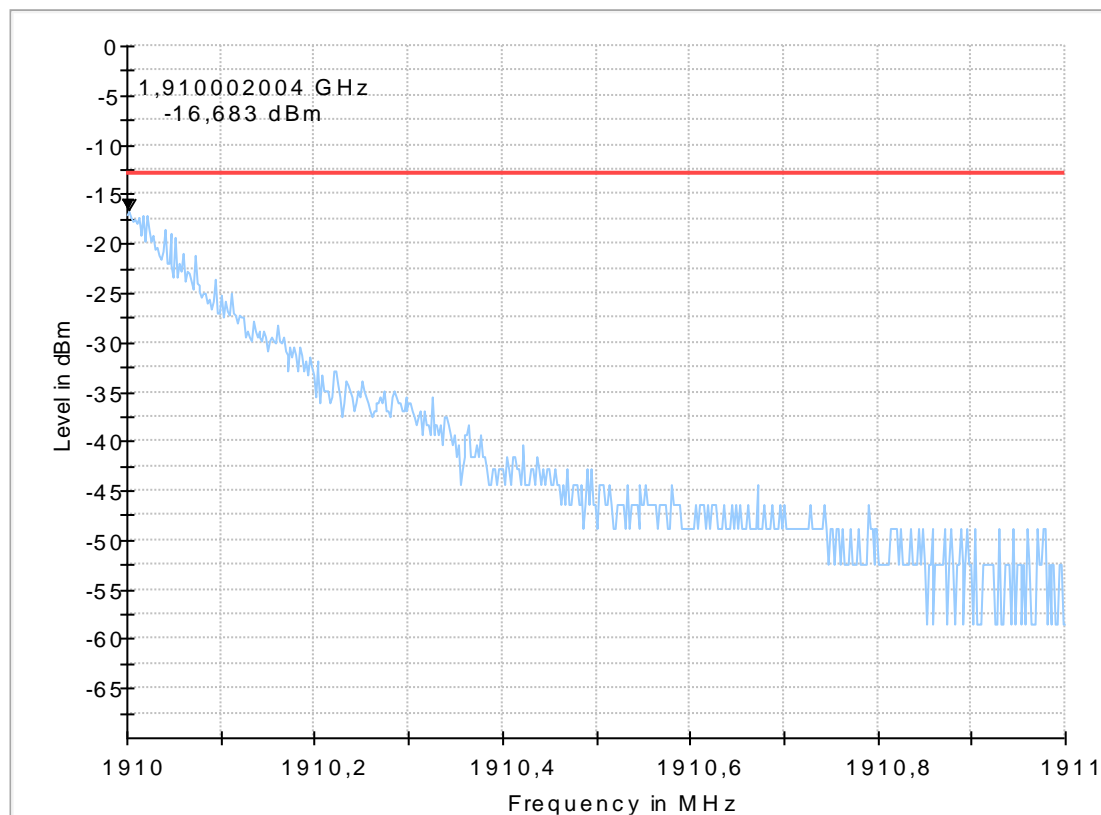
Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193(fc =1909,3MHz), BW=1,4 MHz, RB=1, high,QAM
Environmental Conditions:	Humidity: 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**

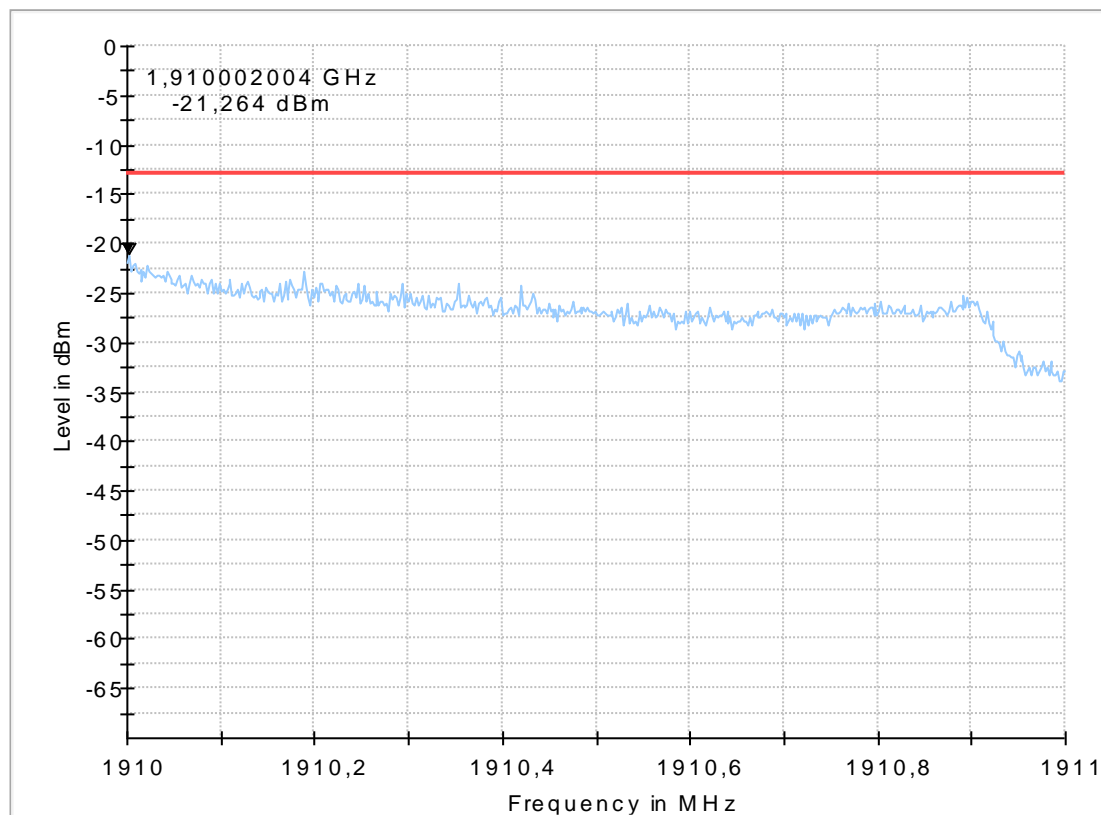
Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193(fc =1909,3MHz), BW=1,4 MHz, RB=6,QPSK
Environmental Conditions:	Humidity: 35%rH;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

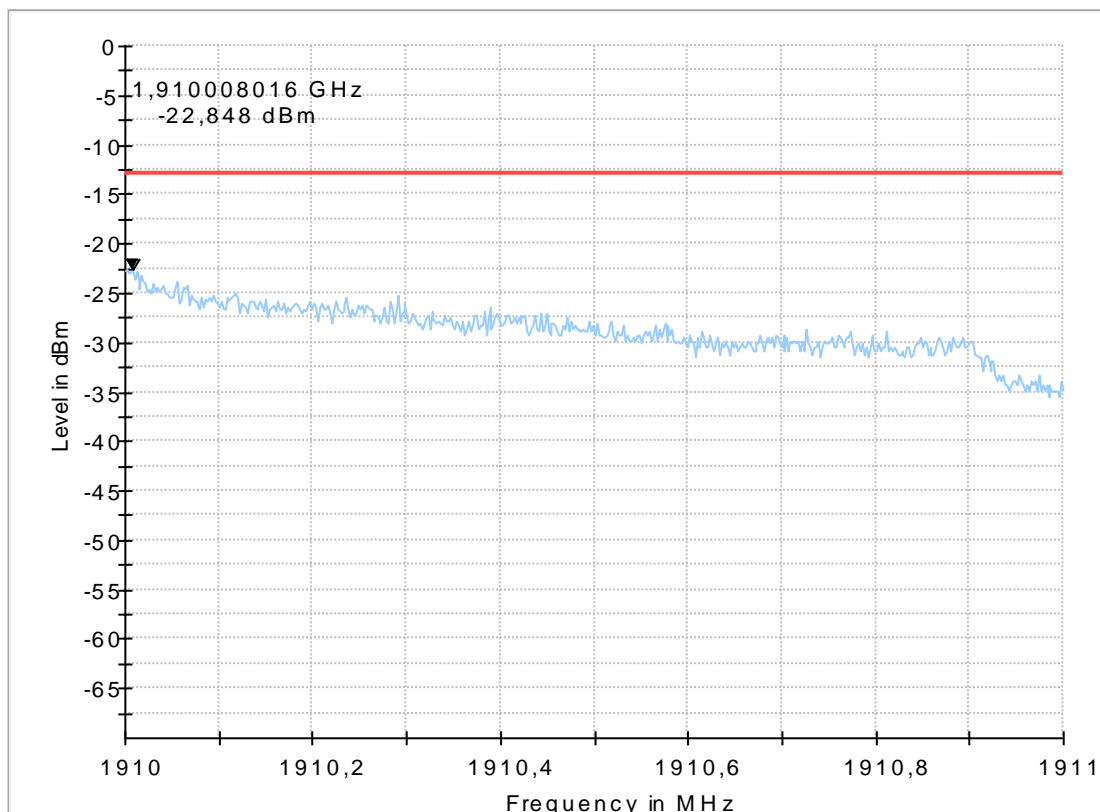
Test Description:	Radiated Spurious Emissions LTE Band 2
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part24.238(x)
Operating Mode:	UE allocated channel 19193(fc =1909,3MHz), BW=1,4 MHz, RB=6,QAM
Environmental Conditions:	Humidity: 35%rH;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

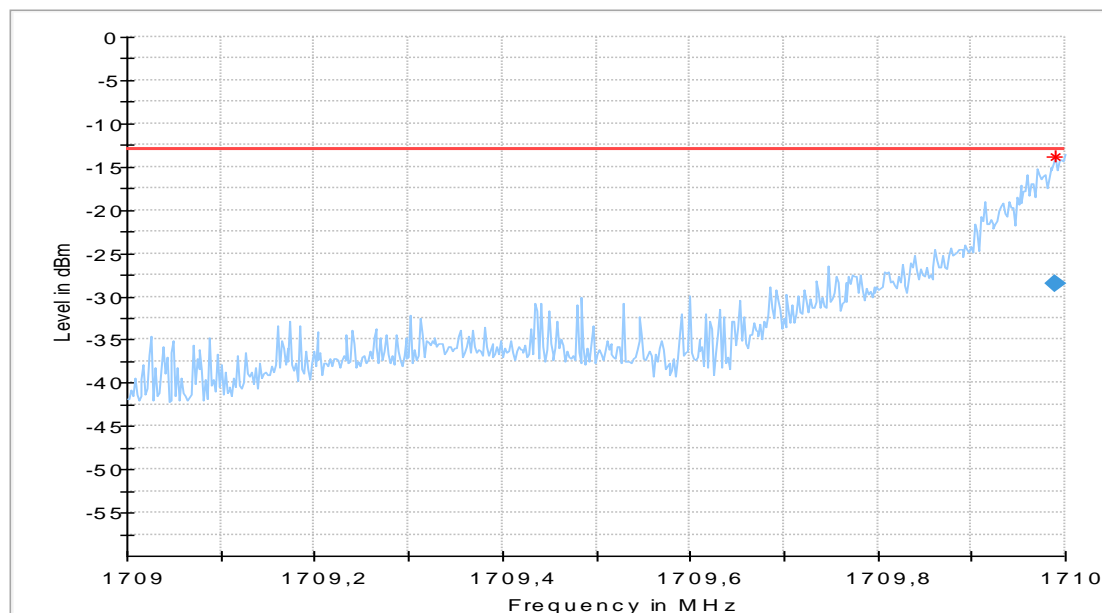
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Comm. Link:	LTE Band 4
Operating Mode:	UE allocated channel 19957 (fc =1710.7MHz),BW=1.4 MHz, RB=1 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

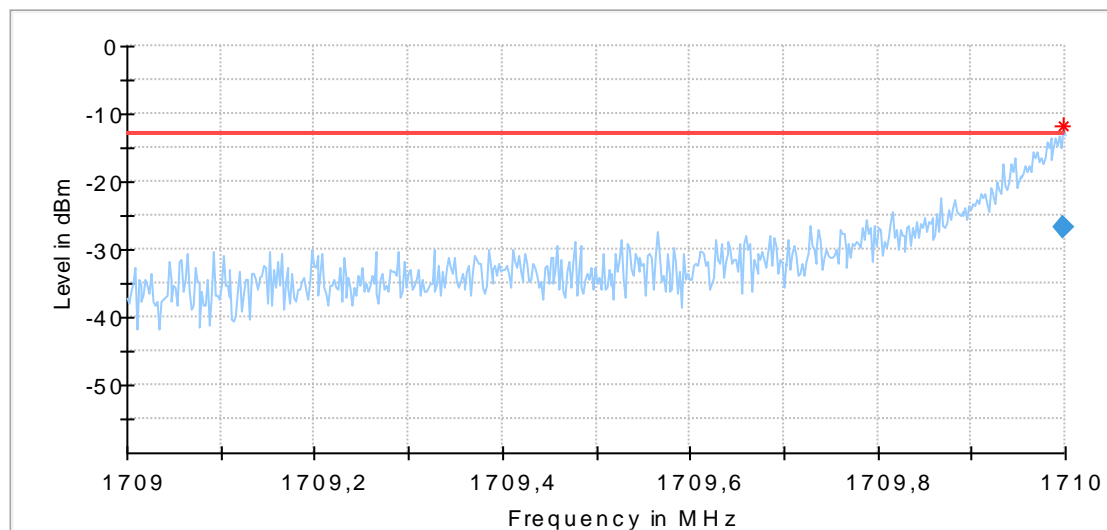
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(a)
Operating Mode:	UE allocated channel 19957(fc =1710,7MHz), BW=1.4 MHz, RB=1, Low, QAM
Exclusionband:	--
Environmental Conditions:	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



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**

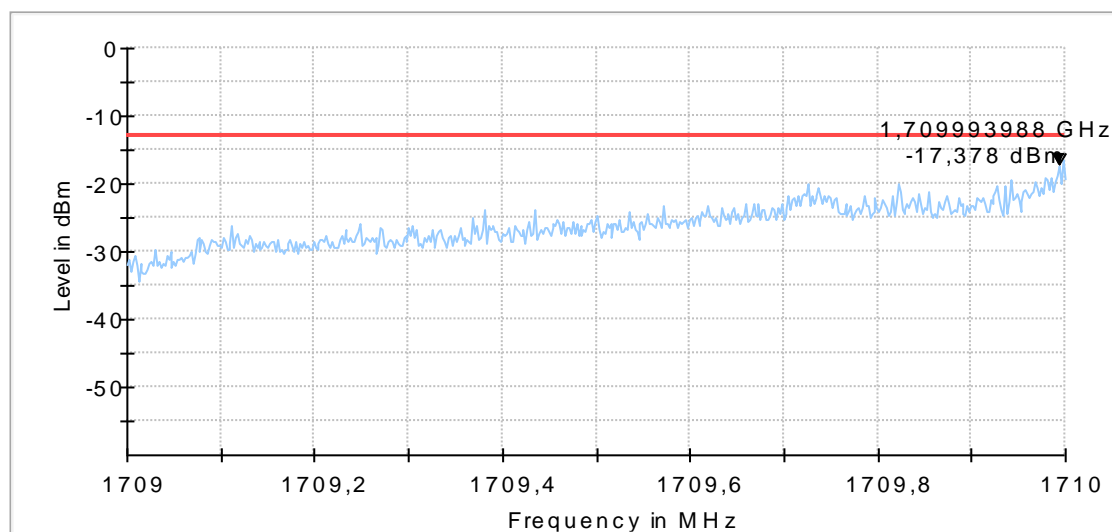
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53(a)
Operating Mode:	UE allocated channel 19957(fc =1710,7MHz), BW=1.4 MHz, RB=1, Low, QAM
Exclusionband:	--
Environmental Conditions:	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

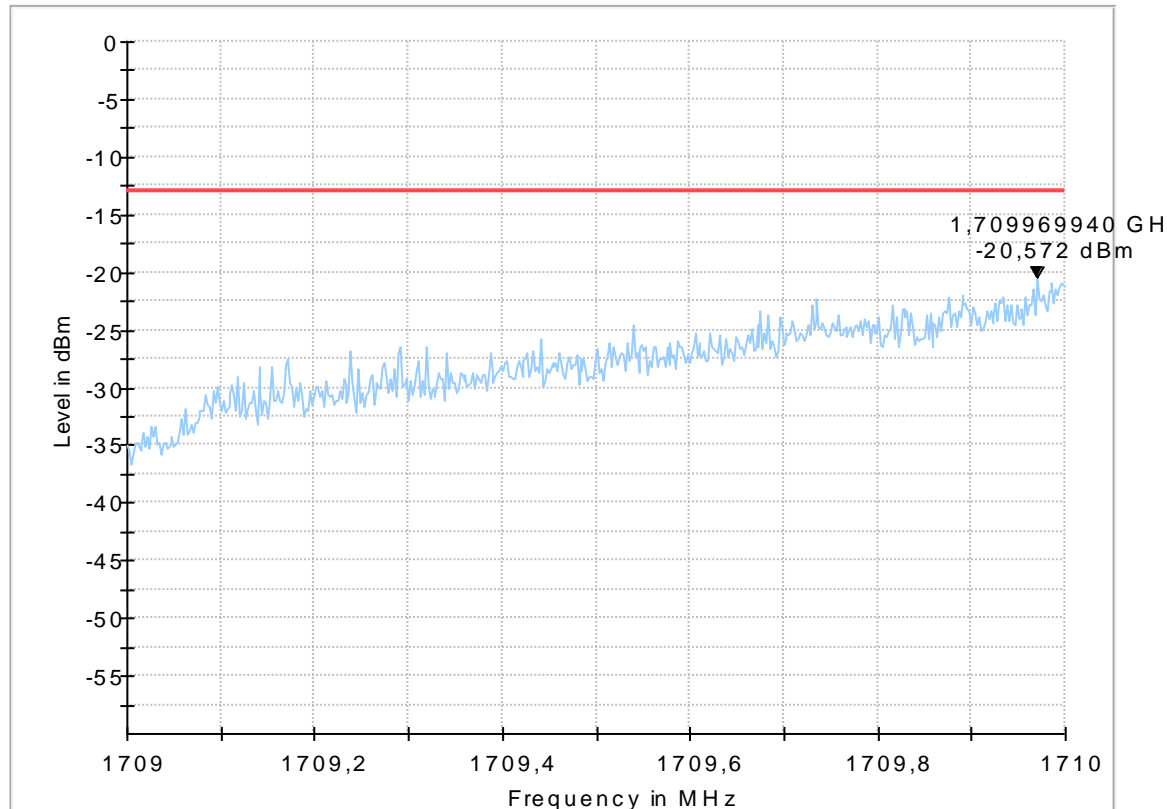
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27.53 / RSS-139
Comm. Link:	LTE Band 4
Operating Mode:	UE allocated channel 19957 (fc =1710.7MHz),BW=1.4 MHz, RB=6 , 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

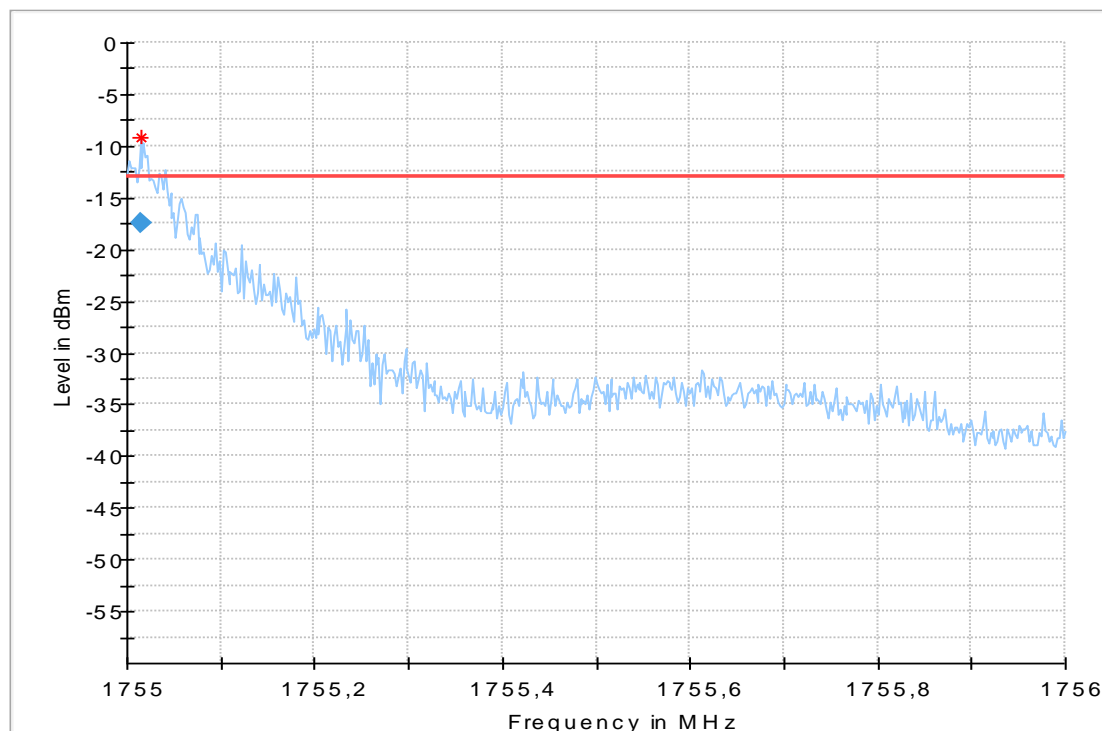
Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=1, high,QPSK
Environmental Conditions: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

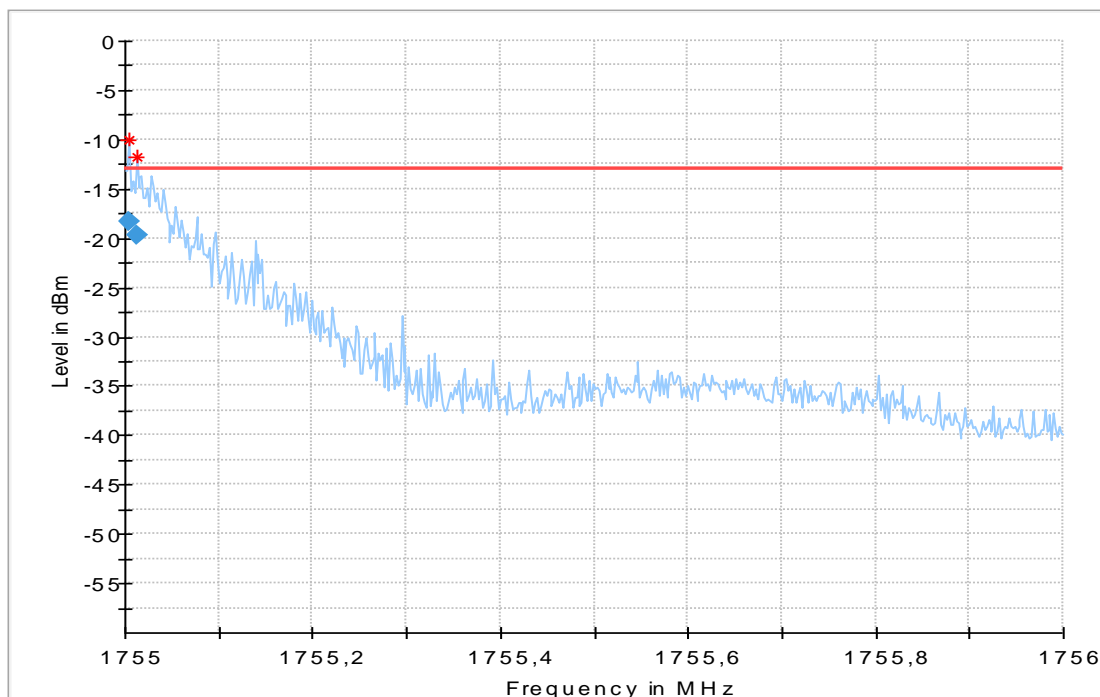
Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=1, high,QAM
Environmental Conditions: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

EUT Information

Manufacturer:	peiker 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)	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**

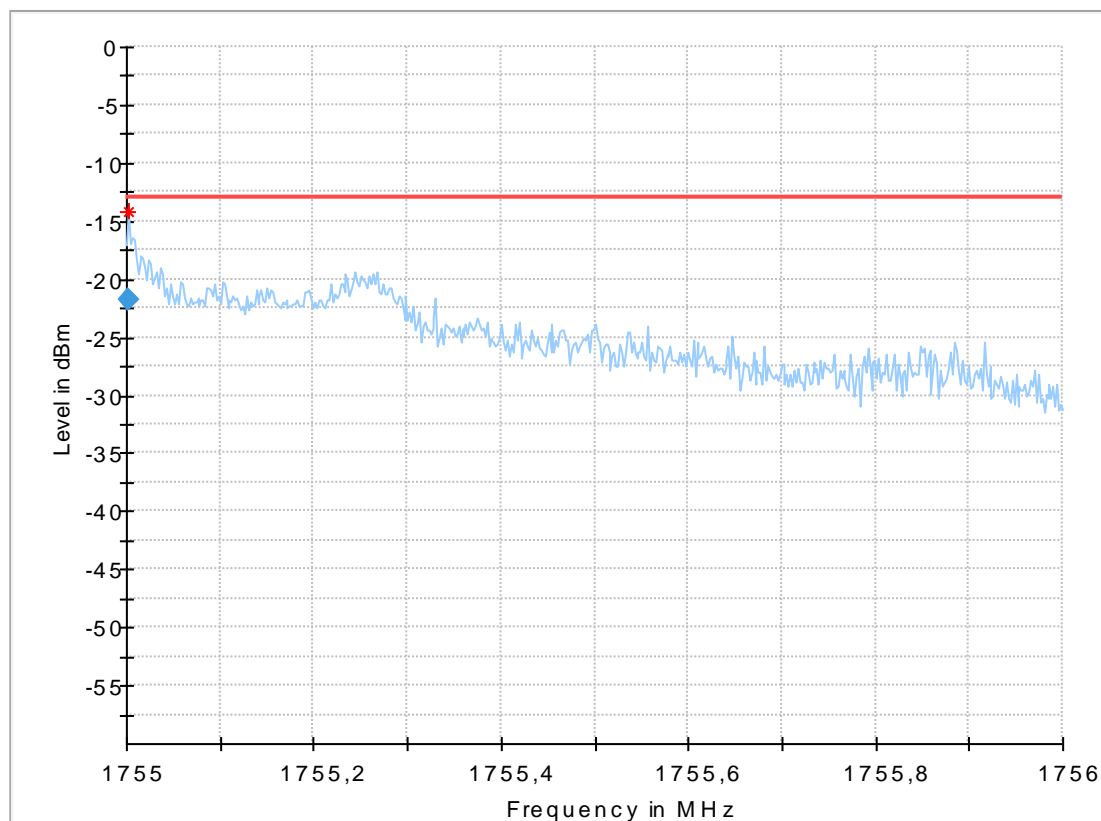
Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=6,,QAM
Environmental Conditions:	Humidity: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

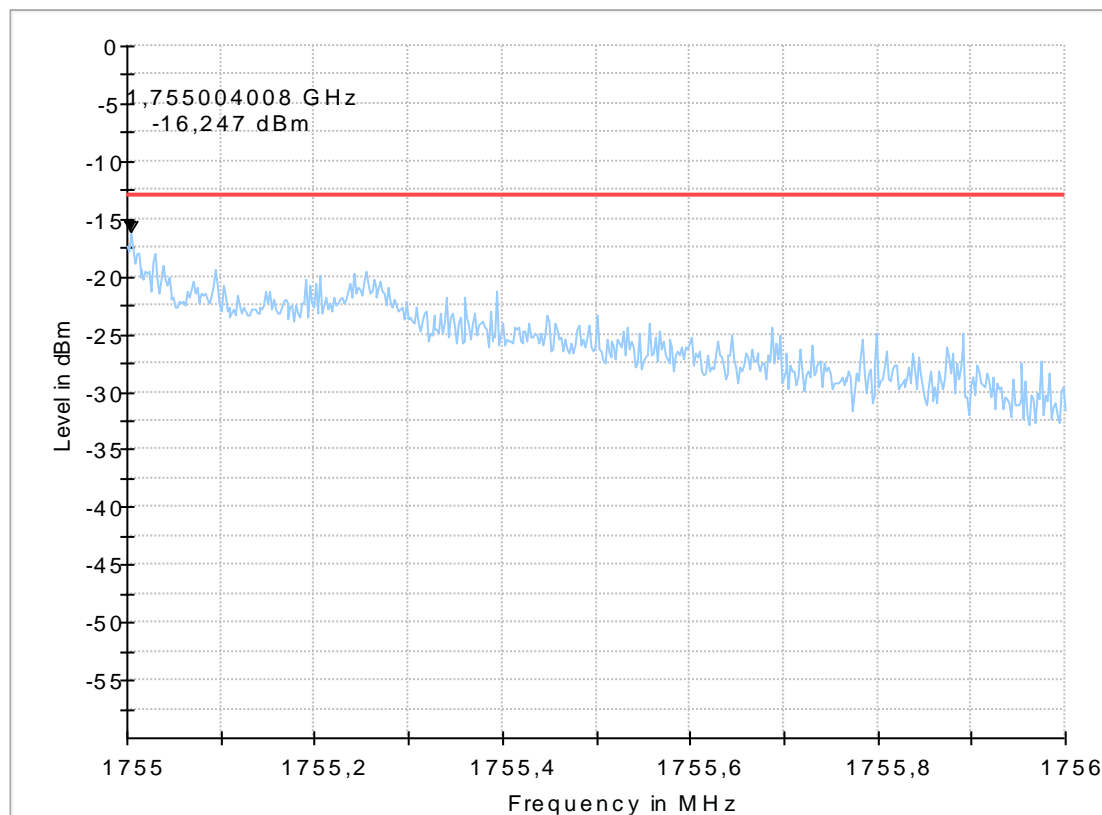
Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 4
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 27
Operating Mode:	UE allocated channel 20393 (fc =1754.3MHz),BW=1.4 MHz, RB=6,,QAM
Environmental Conditions:	Humidity: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

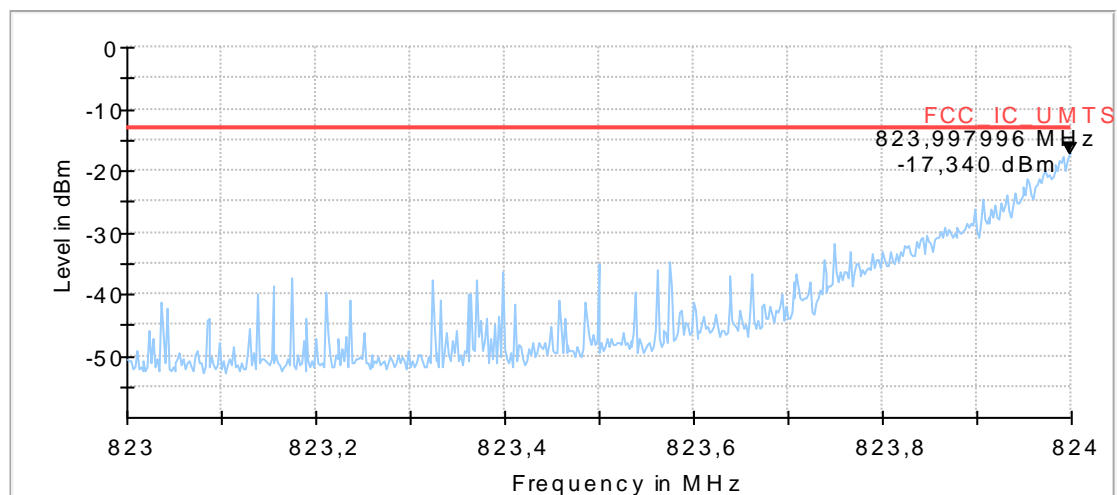
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version: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

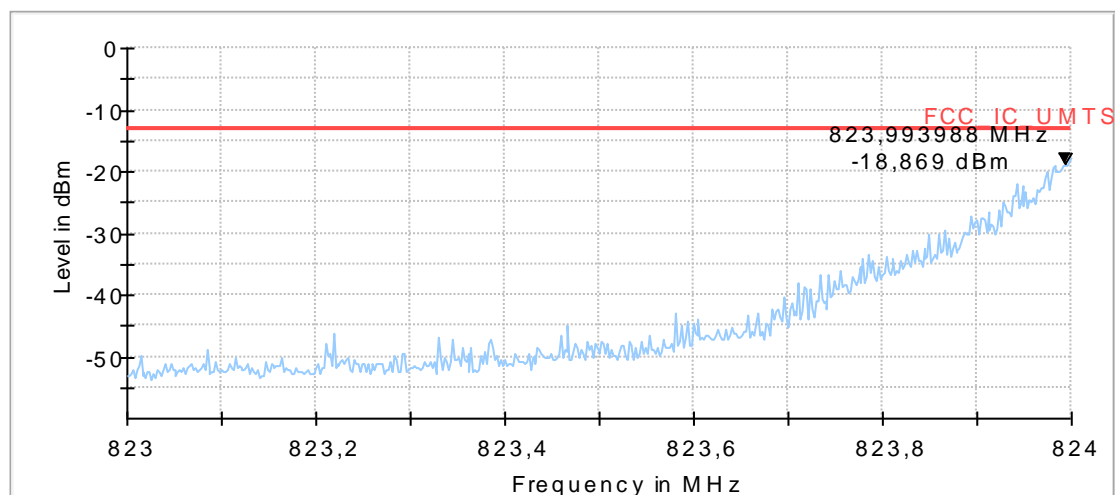
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version: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

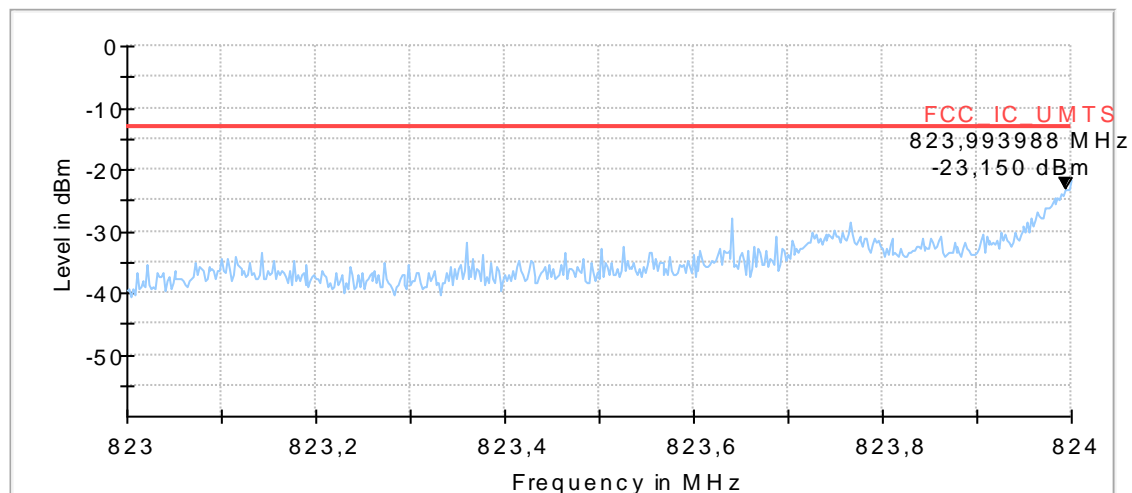
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version: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

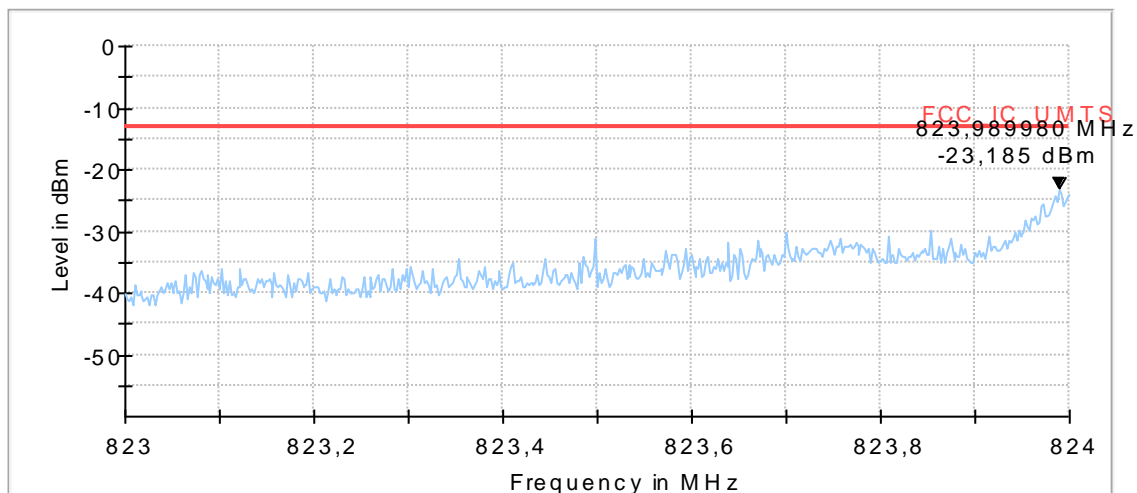
Test Description:	Band-Edge low - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel xxx
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version: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

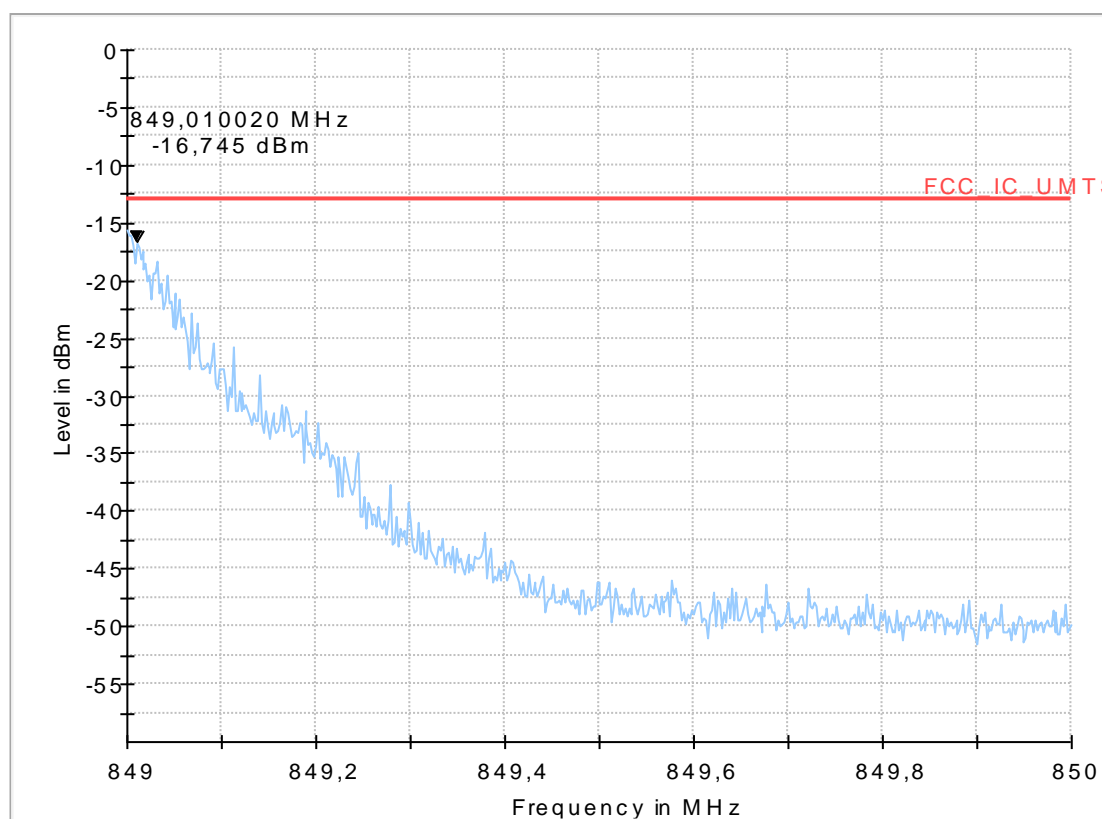
Test Description:	Band-Edge High - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643(fc =848,3MHz), BW=1,4 MHz, RB=1, high, QPSK
Environmental 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



3.7.2.2. Channel 20643, 16-QAM, 1RBs

9.50b_BE_R_Ch20643_1RB_high_BW_1_4_QAM

Common Information

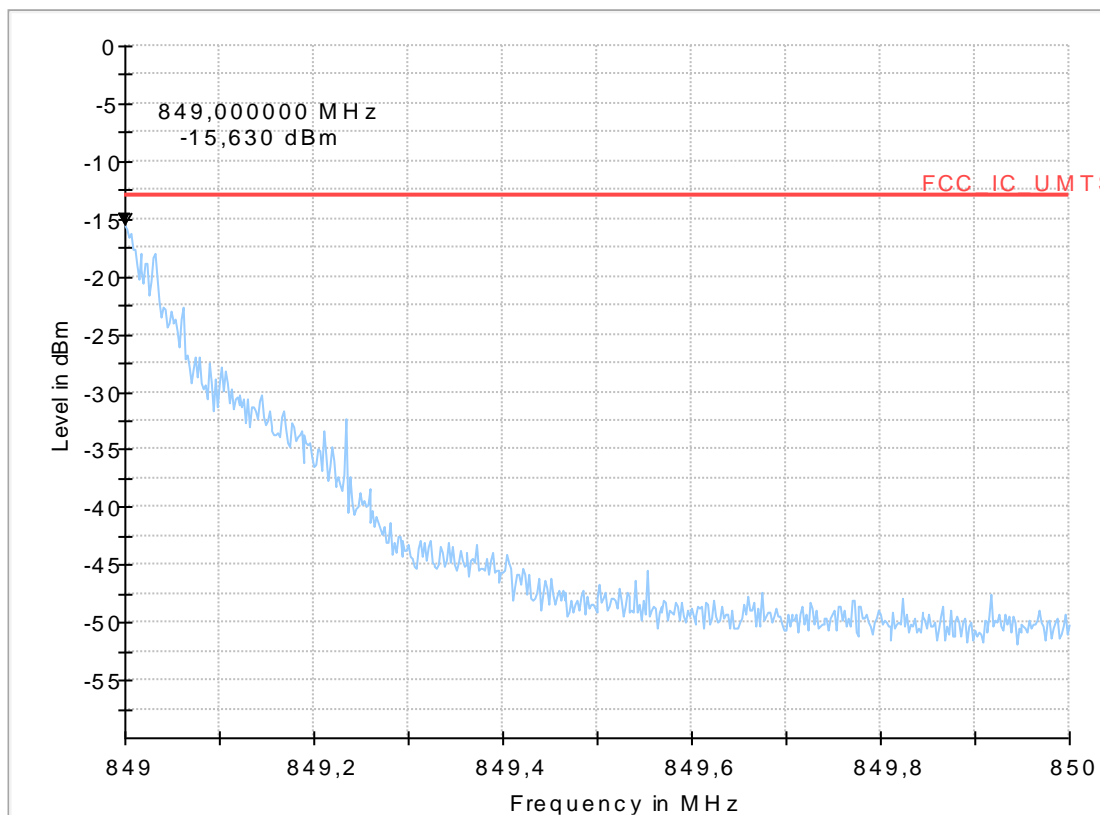
Test Description:	Band-Edge High - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643(fc =848,3MHz), BW=1,4 MHz, RB=1, high, QAM
Environmental Conditions:	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

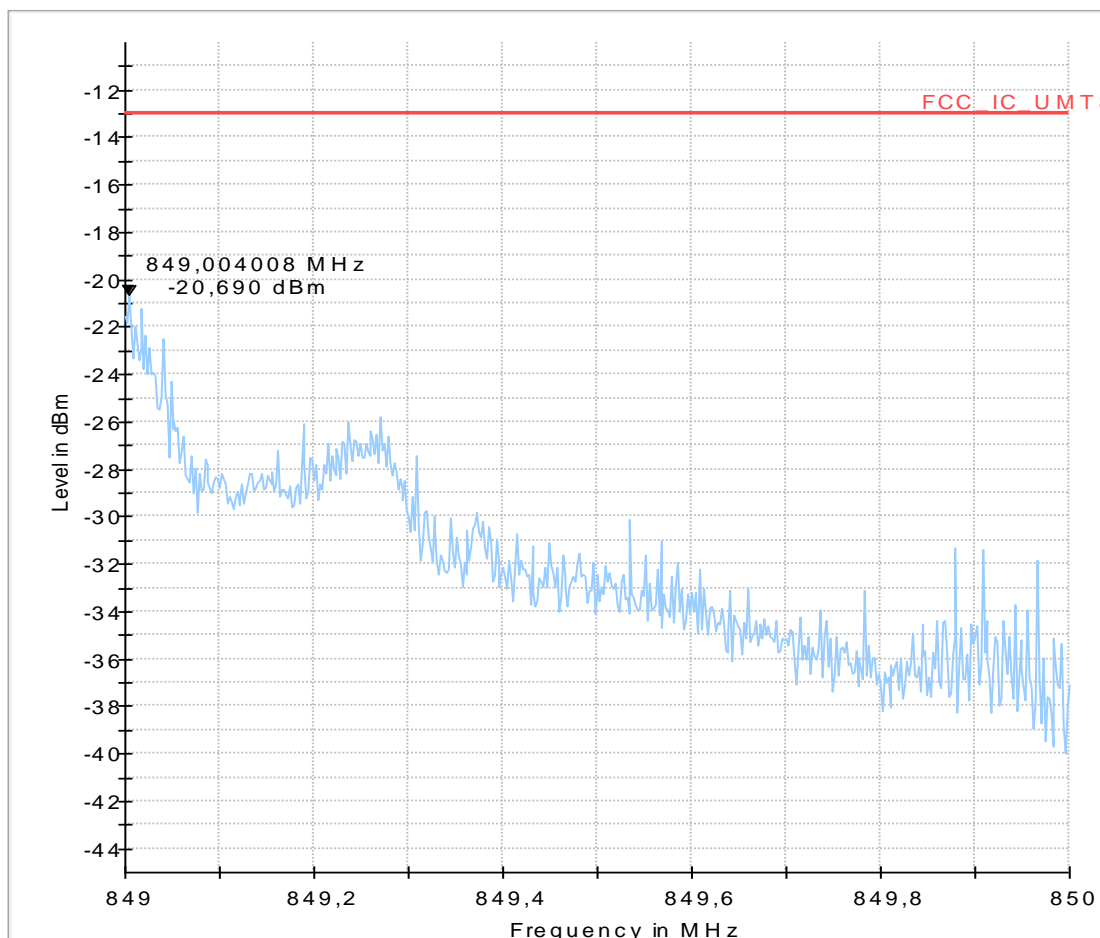
Test Description:	Band-Edge High- Radiated Spurious Emissions LTE Band 5
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643(fc =848,3MHz), BW=1,4 MHz, RB=6, QPSK
Environmental Conditions:	Humidity: 32%rH;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

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**

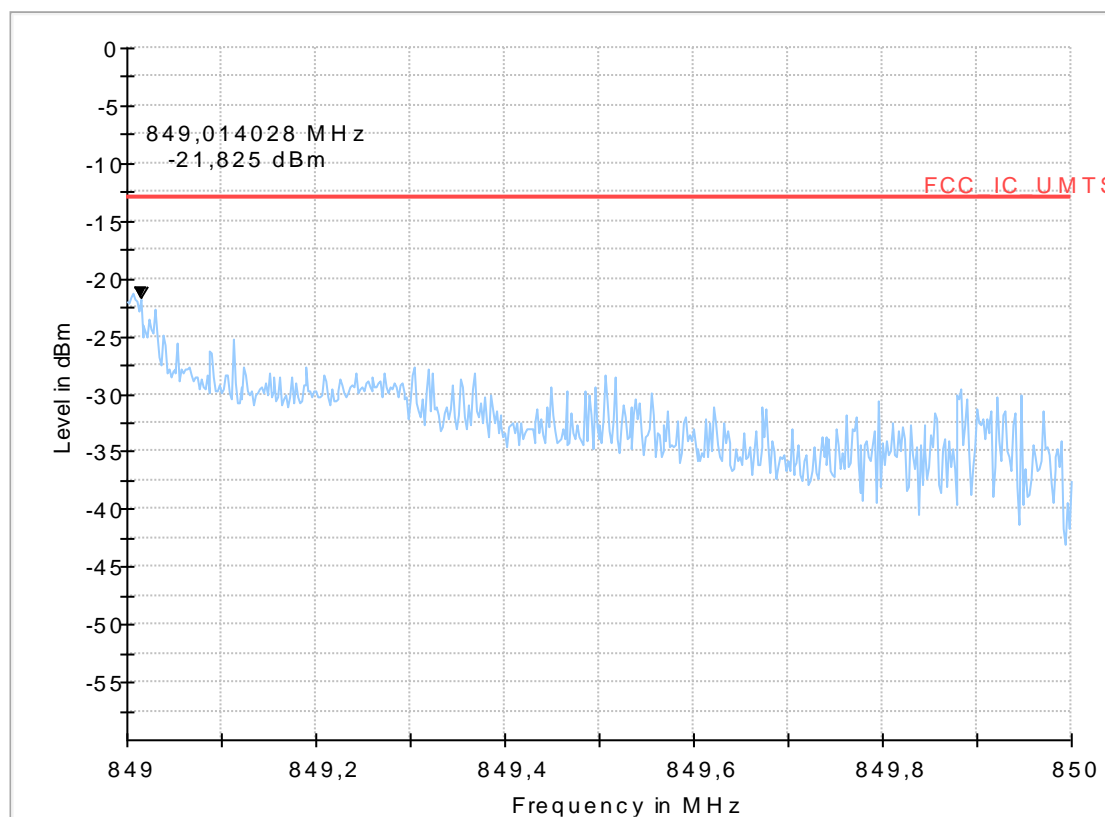
Test Description:	Band-Edge High - Radiated Spurious Emissions LTE Band V
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 20643(fc =848,3MHz), BW=1,4 MHz, RB=6, QAM
Environmental Conditions:	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



3.8. 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

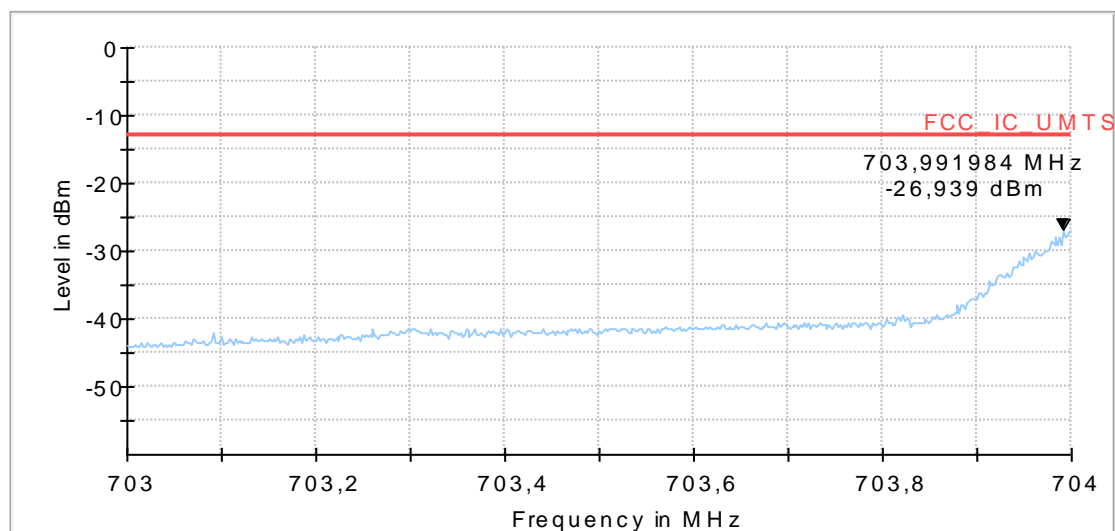
Test Description:	Band Edge LTE FDD 17
Test Site Location :	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , QPSK, RB: 1
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	MFr
Operator:	External Antenna

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

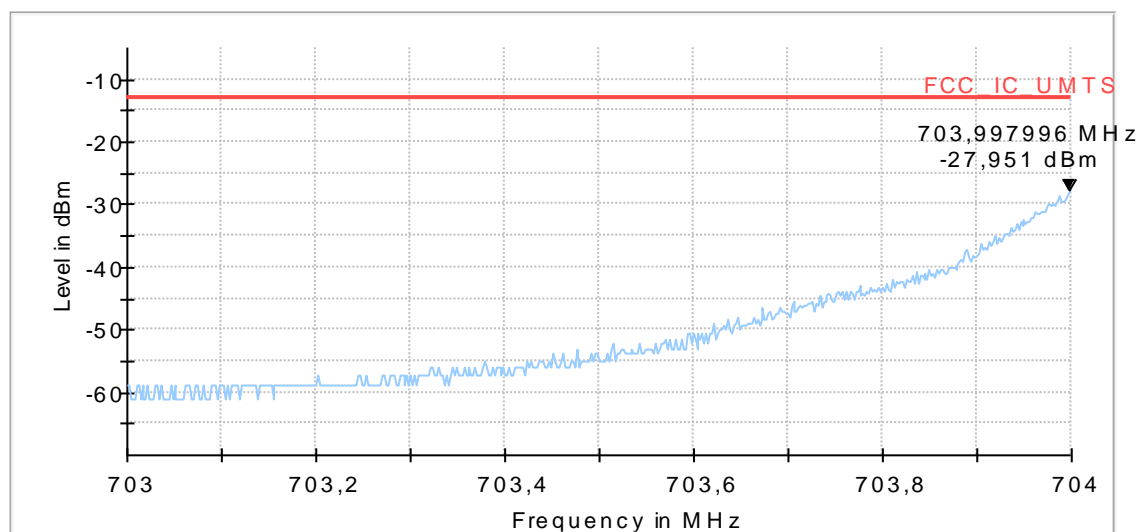
Test Description:	Band Edge LTE FDD 17
Test Site Location :	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , 16-QAM, RB: 1
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	MFr
Operator:	External Antenna

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

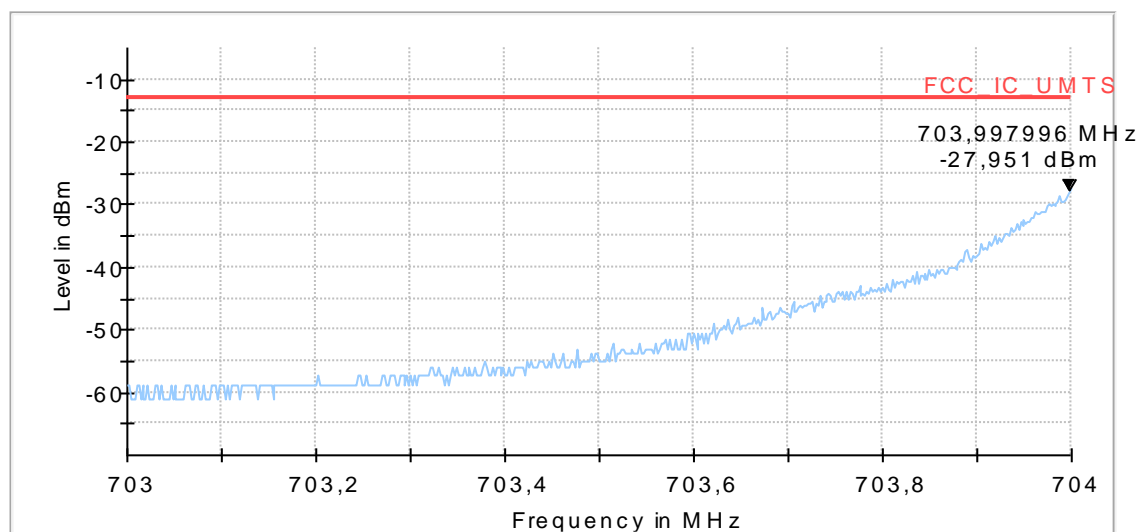
Test Description:	Band Edge LTE FDD 17
Test Site Location :	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	Ch 23755 , QPSK, RB: 25
Environmental Conditions:	Humidity: 35%rH; Temperature: 22°C
Test SW Version:	MFr
Operator:	External Antenna

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

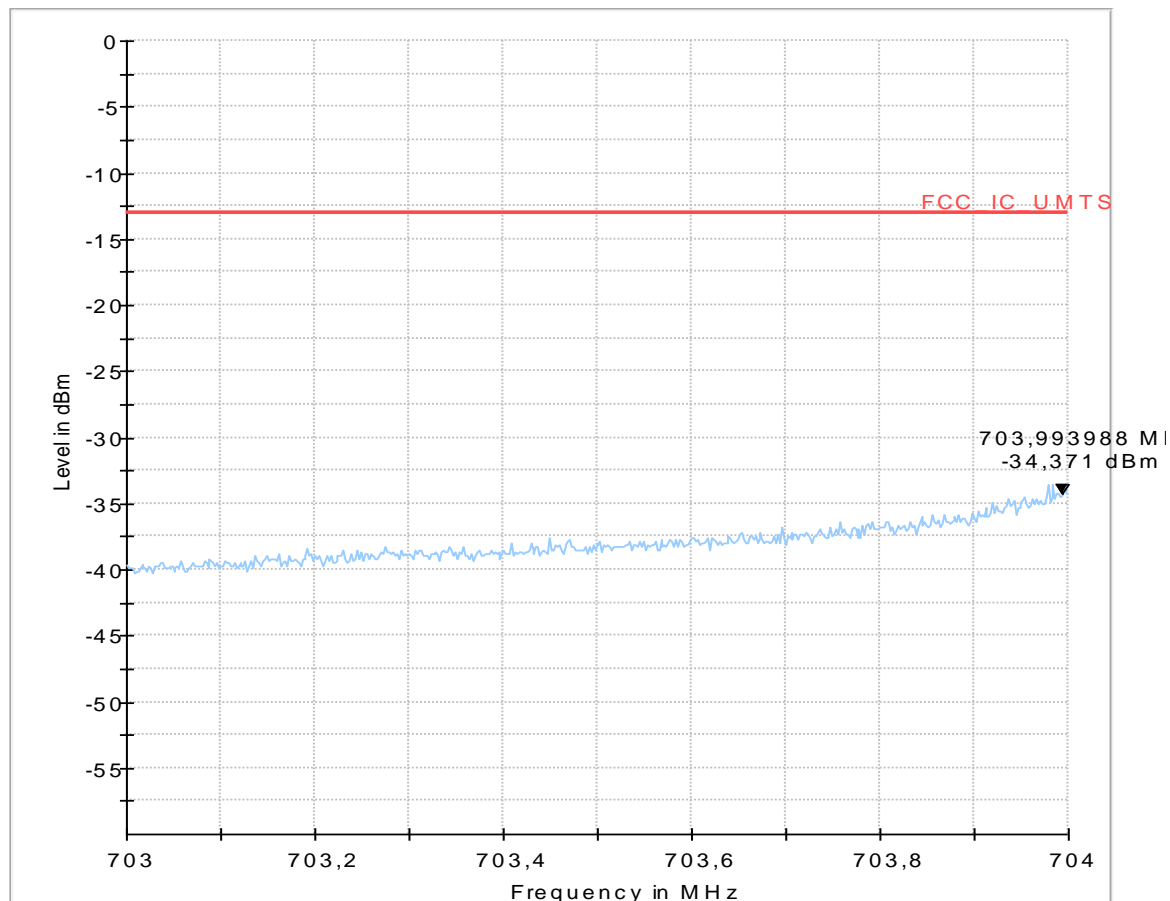
Test Description:	Band-Edge - Radiated Spurious Emissions LTE Band 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22 / RSS-130
Operating Mode:	UE allocated channel 23755
Environmental Conditions:	Humidity: 30%rH; Temperature: 24.2°C
Test SW Version: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

EUT Information

Manufacturer:	peiker 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 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

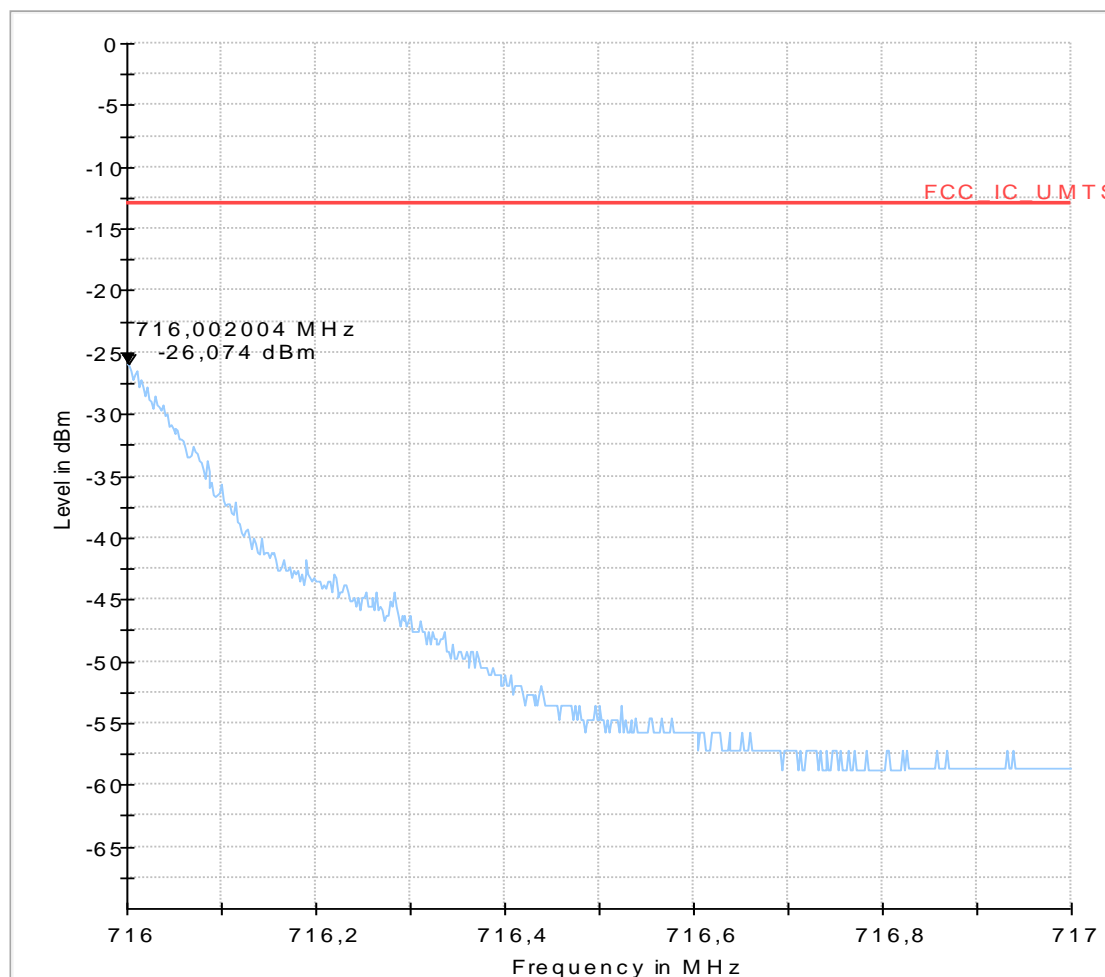
Test Description:	Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.53 / RSS-139
Operating Mode:	UE allocated channel 23843(fc =715,3MHz), BW=5 MHz, RB=1, high, QPSK
Environmental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

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



3.8.2.2. Channel 23825, 16-QAM, 1RBs

9.1704b_BE_R_Ch23825_1RB_high_BW5_QAM

Common Information

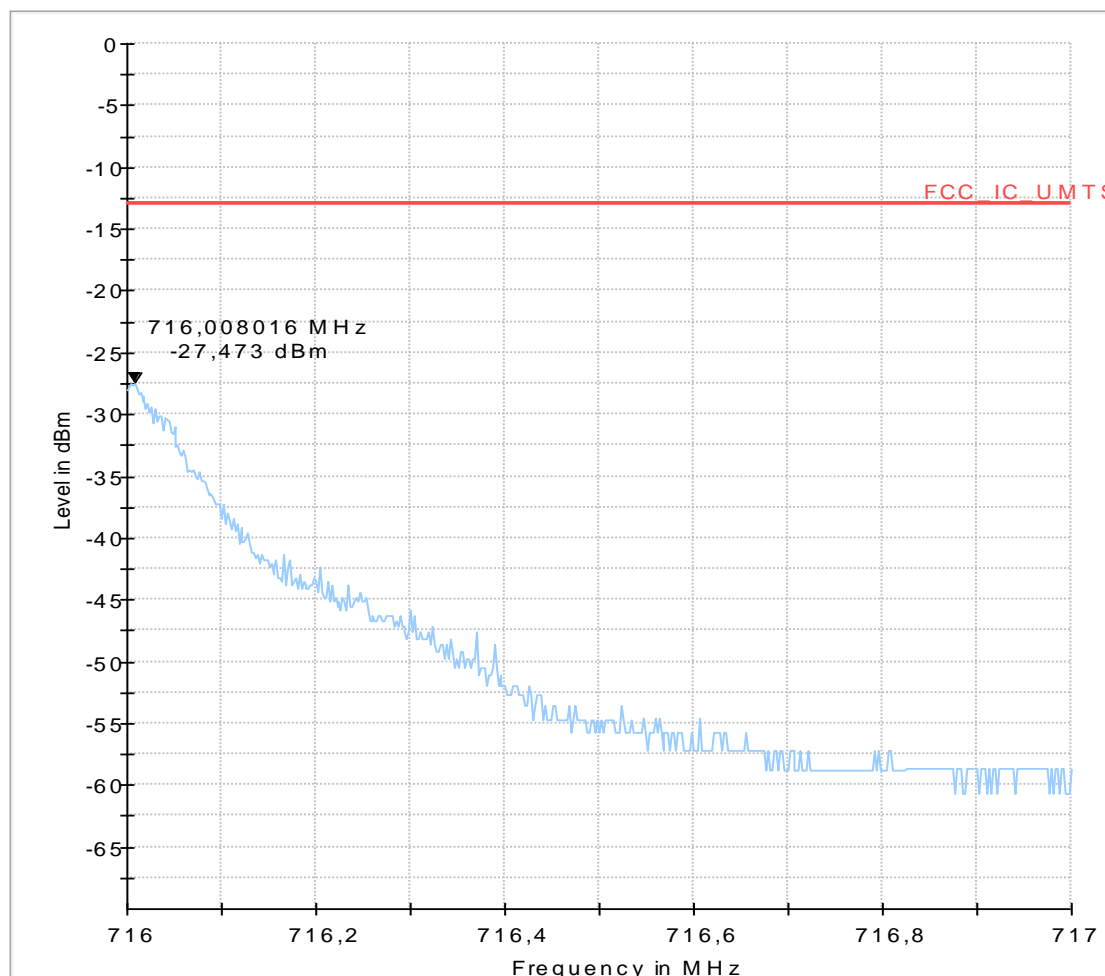
Test Description:	Band-Edge - Radiated Field Strength Emissions in 3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	UE allocated channel 23843(fc =715,3MHz), BW=5 MHz, RB=1, high, QAM
Environmental Conditions: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

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

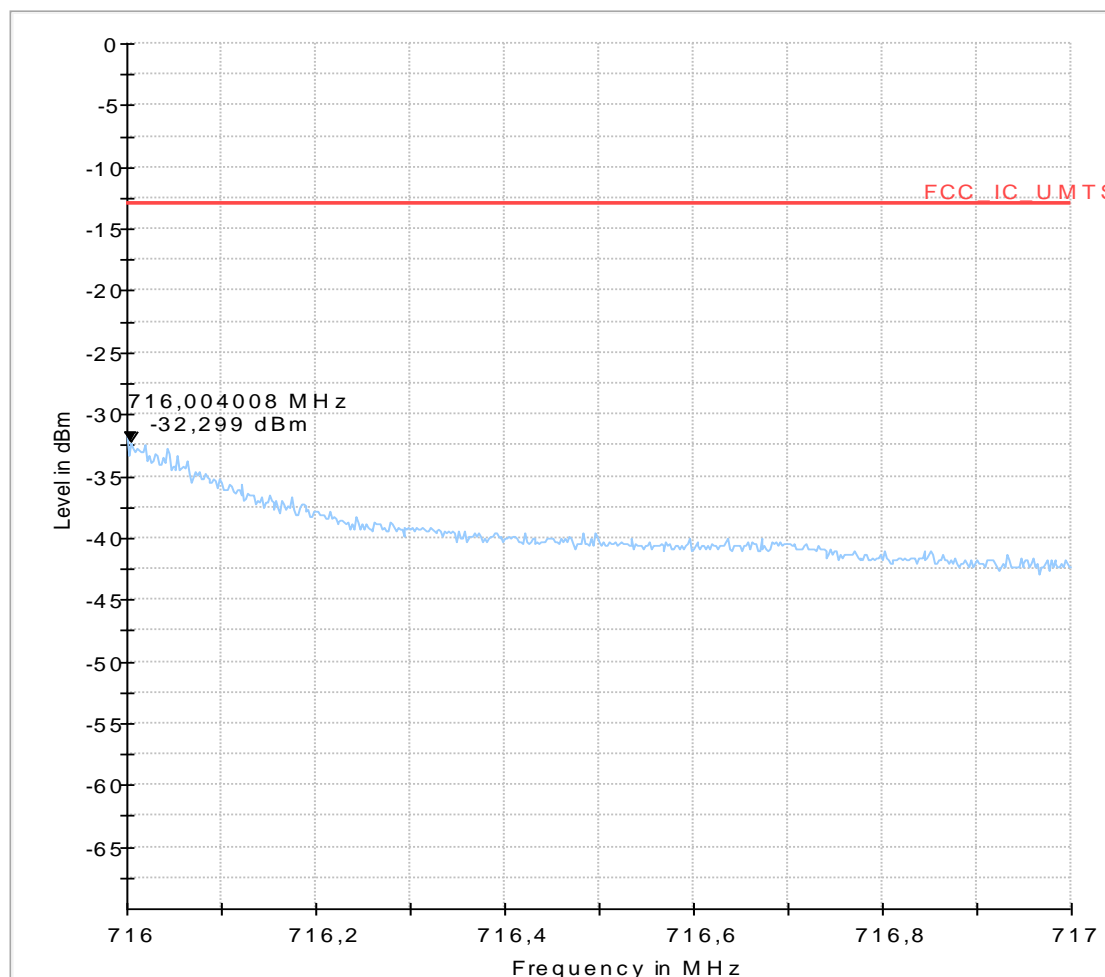
Test Description:	Band-Edge - Radiated Spurious Emissions LTE Band 17
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27.53 / RSS-139
Operating Mode:	UE allocated channel 23825(fc =713,5MHz), BW=5 MHz, RB=25, high, QPSK
Environmental Conditions:	Humidity: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



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(fc =715,3MHz), BW=5 MHz, RB=25, high, QAM
Environmental Conditions:	Humidity: 29%rH; Temperature: 23,6°C
Operator:	RIs

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

