

Annex 1: Measurement diagrams to  
**TEST REPORT**  
 No.: 15-1-0007501-02b

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







**IC-Regulations**  
 RSS-132 Issue 3, RSS-133 Issue 6,  
 RSS-Gen Issue 4

for

peiker acoustic GmbH & Co. KG

**GSM/W-CDMA/LTE Module**  
**V1140-101-1**

**FCC-ID:** QWY-V1140-101-1  
**IC:** 6588A-V11401011  
**PMN:** V1140-101-1  
**HVIN:** V1140-101-1

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
 <b>WiFi</b> ™ AUTHORIZED RF LABORATORY ALLIANCE	 <b>CTIA Authorized Test Lab</b> LAB CODE 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
<p align="center"> <b>CETECOM GmbH</b>            Laboratory Radio Communications &amp; 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>			

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# 1. Measurement diagrams

## 1.1. Spurious emissions radiated (FDD Band II transmitting mode)

### 8.25\_FDDII\_CH9400

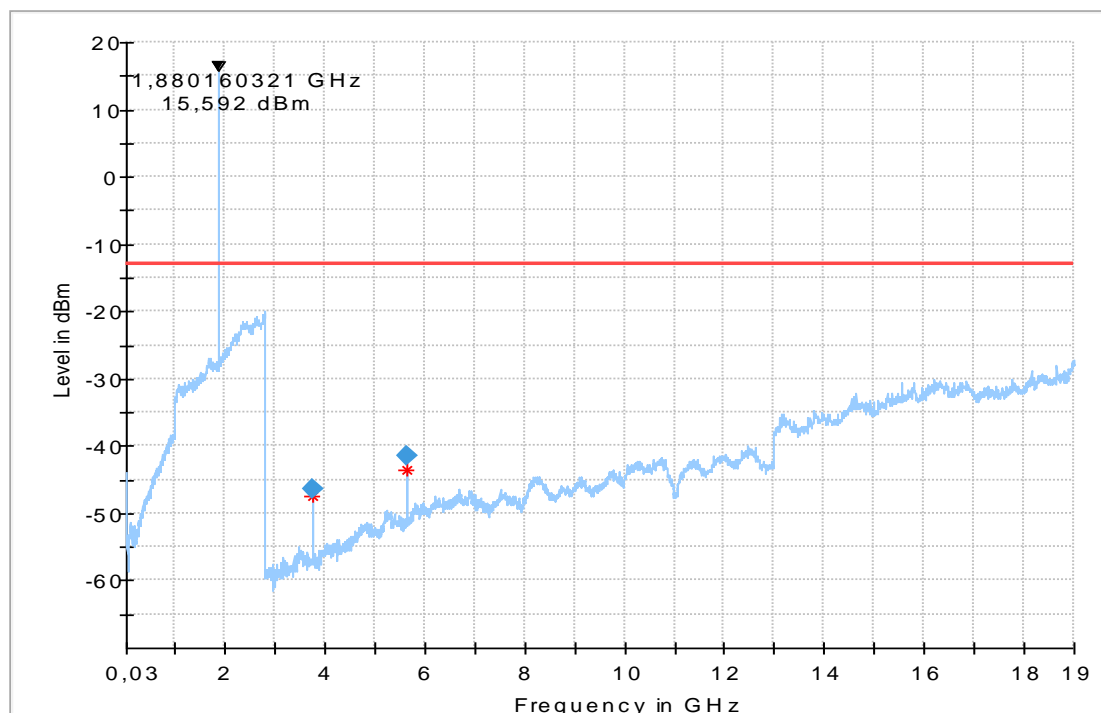
#### Common Information

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 9400 (fc = 1880 MHz)
Environmental Conditions:	Humidity: 45%rH; Temperature: 23°C
Operator:	MRA

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tbd (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum



#### Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3762.074148	-	33.39	10000.0	V	202.0	0.0	-95.1
5642.815632	-	28.36	10000.0	V	11.0	90.0	-89.7

## 8.26\_FDDII\_CH9538

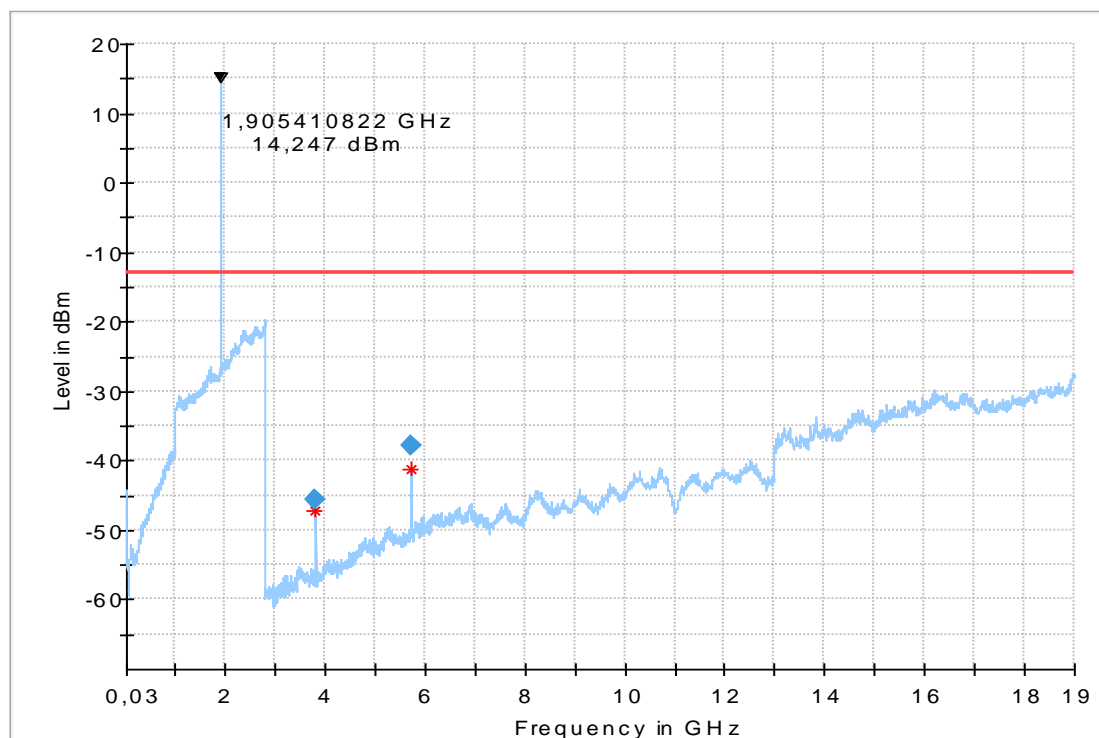
### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
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 9538 (fc = 1907.6 MHz)
Environmental Conditions:	Humidity: 53%rH; Temperature: 23°C
Operator:	Kmo/AHo

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tbd (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum



### Final Result

Frequency (MHz)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
3812.815631	-	32.53	10000.0	V	205.0	0.0	-95.1
5719.168337	-	24.82	10000.0	V	12.0	90.0	-89.5

## 1.2. Spurious emissions radiated (FDD Band V transmitting mode)

### 8.54\_RSE\_R\_UMTS\_FDDV\_CH4183

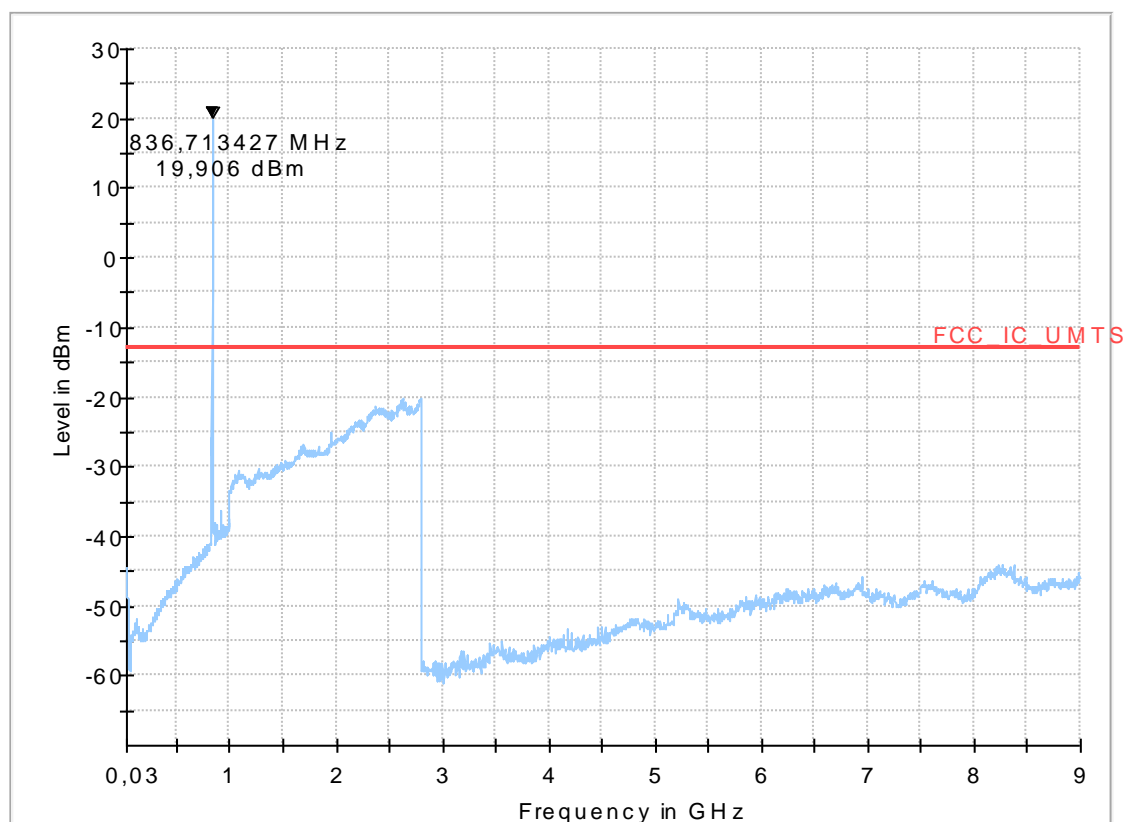
#### Common Information

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 4183 (fc = 836.4) ,HSUPA
Environmental Conditions:	Humidity: 45%rH; Temperature: 23°C
Operator:	MRA

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tbd (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum



### 1.3. Radiated emissions on FDD Band II band-edge

#### 9.20\_BE\_R\_Ch9262\_UMTS\_Band II

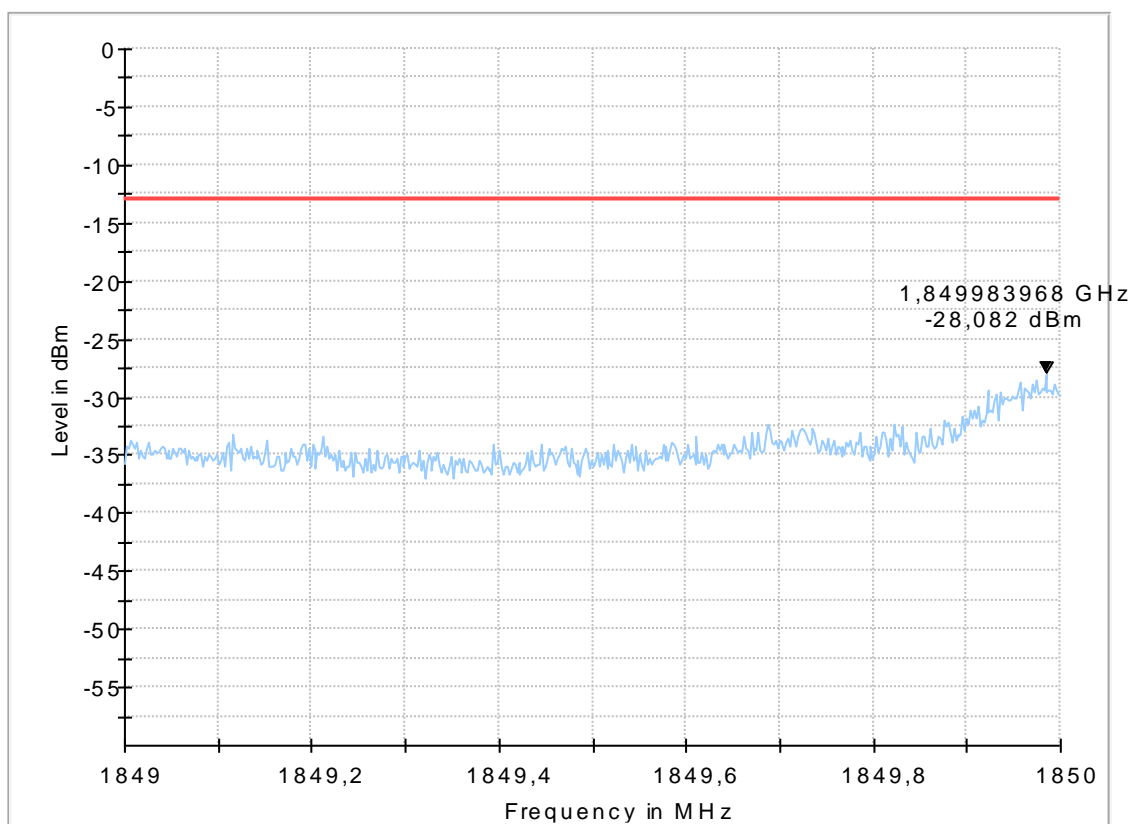
##### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 24.238
Operating Mode:	UE allocated channel 9262(fc = 1852.4)
Environmental Conditions:	Humidity: 53%rH; Temperature: 23°C
Operator:	Kmo/AHo

##### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tbd (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum



## 9.21\_BE\_R\_Ch9538\_UMTS\_Band II

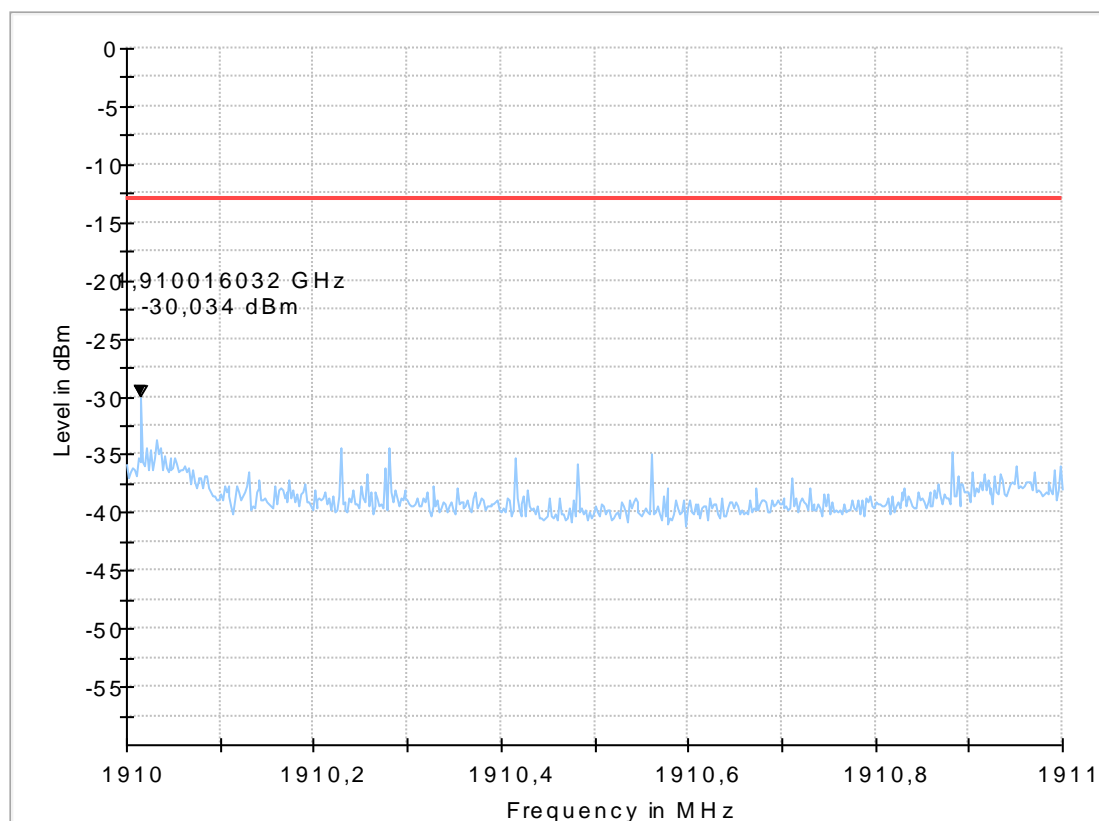
### Common Information

Test Description:	Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR) - EMC32 V9.21.0
Test Standard:	FCC Part 24.238
Operating Mode:	UE allocated channel 9538 (fc = 1907.6 MHz)
Environmental Conditions:	Humidity: 53%rH; Temperature: 23°C
Operator:	Kmo/AHo

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tdb (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum



## 1.4. Radiated emissions on FDD Band V band-edge

### 9.52\_BE\_R\_Ch4132\_HUSPA

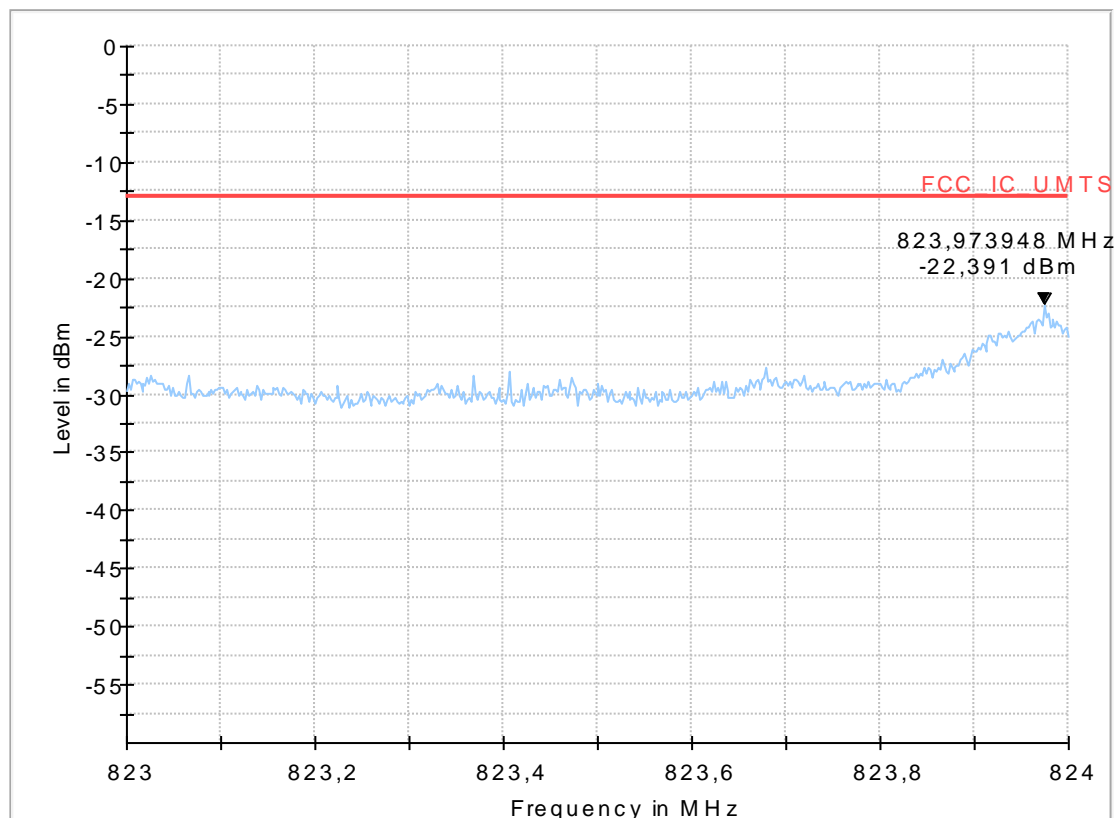
#### Common Information

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
Environmental Conditions:	Humidity: 53%rH; Temperature: 23°C
Operator:	Kmo/AHo

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tbd (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum





## 9.53\_BE\_R\_Ch4233\_UMTS\_Band V

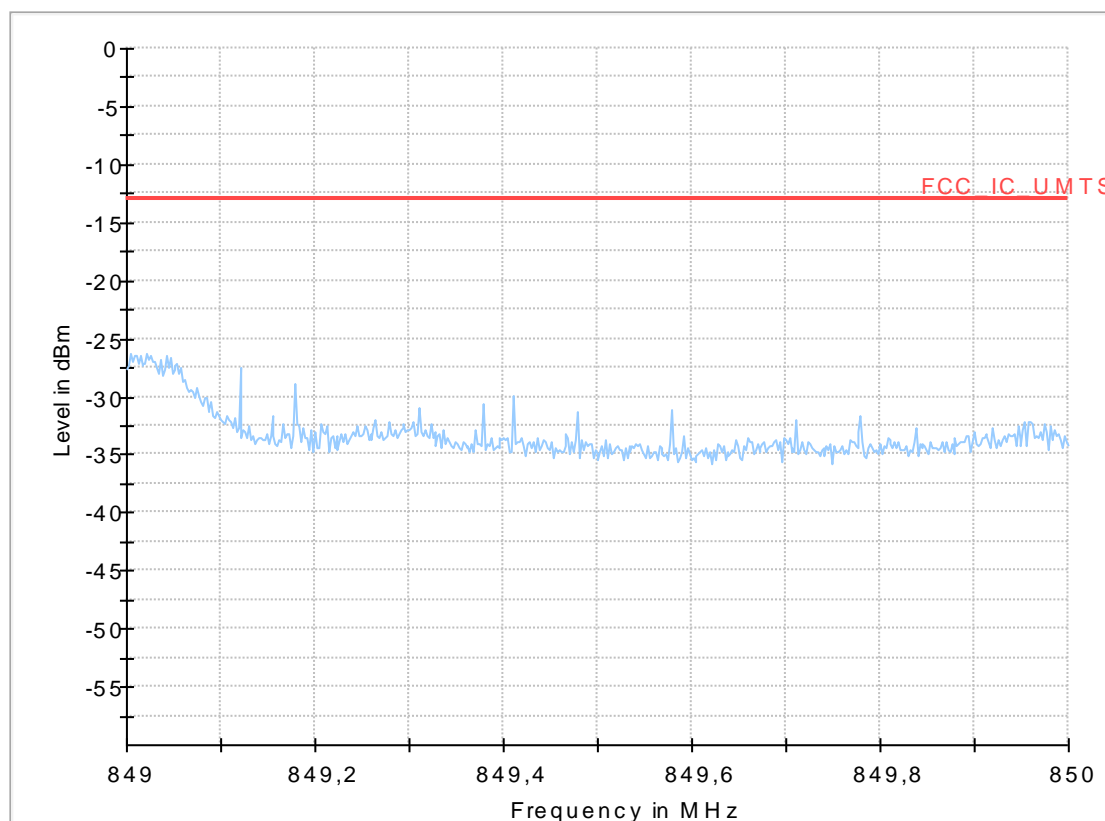
### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 4132
Environmental Conditions:	Humidity: 53%rH; Temperature: 23°C
Operator:	HLa

### EUT Information

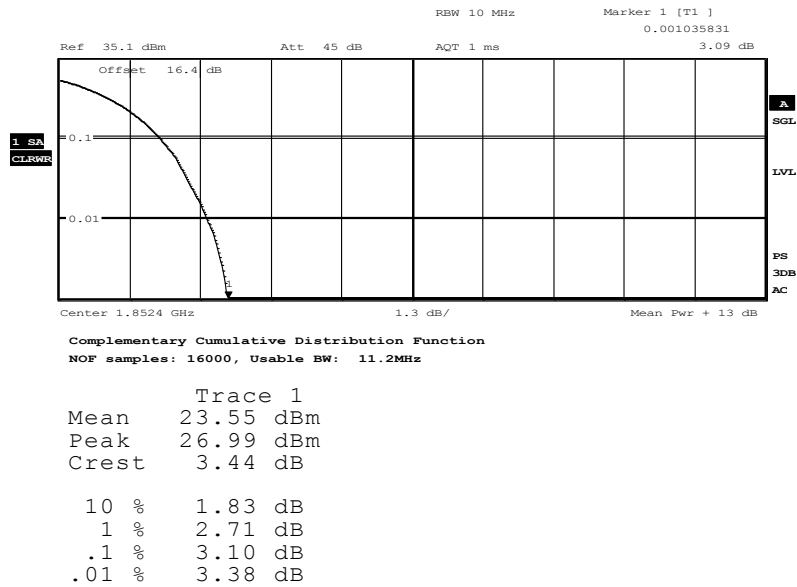
Manufacturer:	peiker acoustic GmbH & Co. KG
EuT:	PKD0424AB1 (f)
Model:	V1140-101-1
-----	
HW Version:	tdb (please refer to test report)
SW Version:	M9615A-CETWTDZM-6.3.1.100087
Serial Number:	NA#1036
IMEI:	353812-07-000002-2
Connected Interfaces:	shark antenna (US version) with ground plane, microphone, loudspeaker, cables
Power Supply:	12 VDC
Comments:	

Full Spectrum



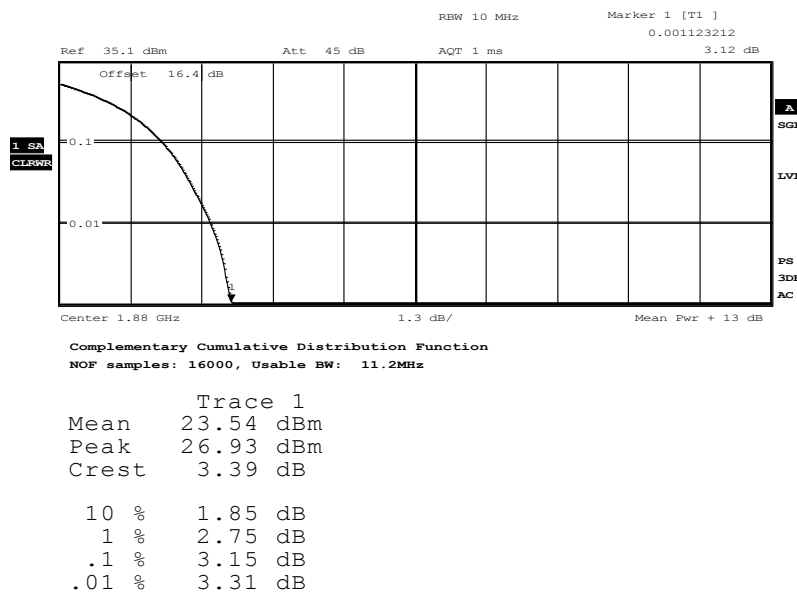
## 1.5. Peak power output and PAPR-Value

### 1.5.1. FDD Band 2



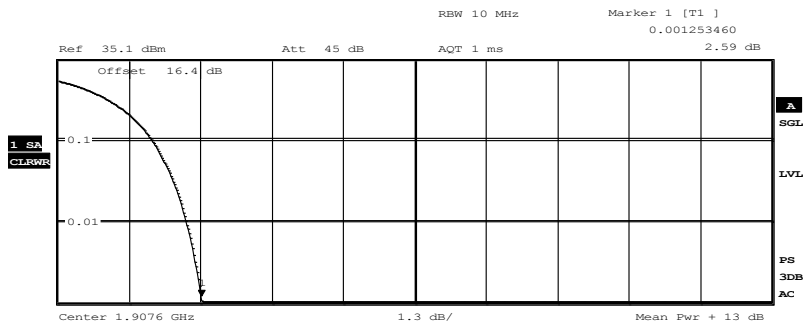
Date: 30.SEP.2015 09:48:58

### Channel 9262



Date: 30.SEP.2015 09:53:34

### Channel 9400



Complementary Cumulative Distribution Function  
 NOF samples: 16000, Usable BW: 11.2MHz

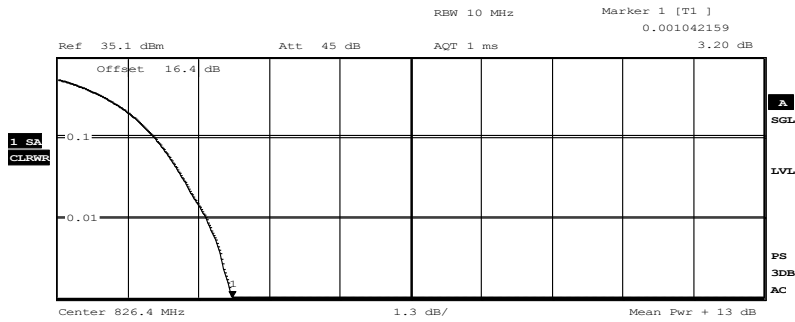
Trace 1  
 Mean 22.96 dBm  
 Peak 25.80 dBm  
 Crest 2.84 dB

10 % 1.71 dB  
 1 % 2.33 dB  
 .1 % 2.63 dB  
 .01 % 2.77 dB

Date: 30.SEP.2015 10:20:34

**Channel 9538**

### 1.5.2. FDD Band 5



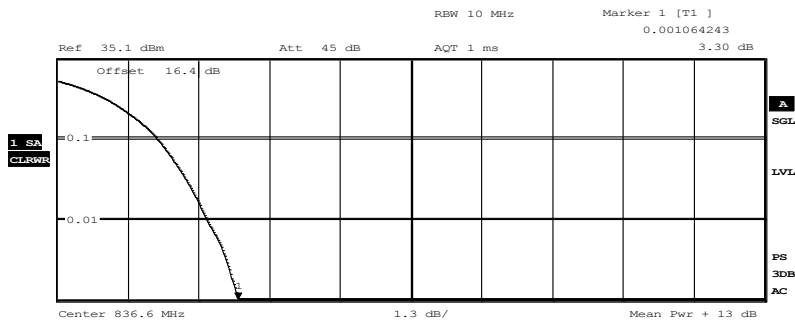
Complementary Cumulative Distribution Function  
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1  
 Mean 23.45 dBm  
 Peak 26.92 dBm  
 Crest 3.47 dB

10 % 1.79 dB  
 1 % 2.73 dB  
 .1 % 3.21 dB  
 .01 % 3.46 dB

Date: 28.OCT.2015 10:50:34

### Channel 4132



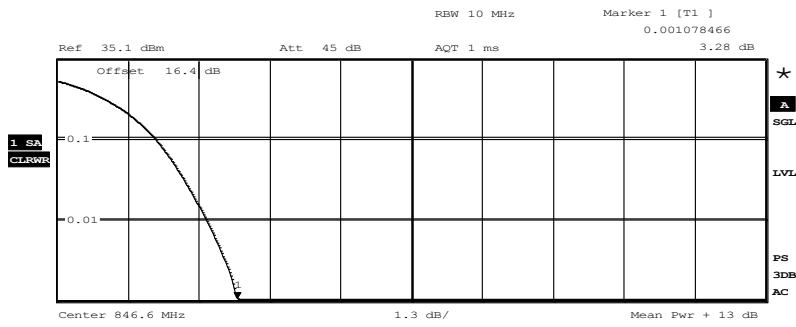
Complementary Cumulative Distribution Function  
 NOF samples: 16000, Usable BW: 11.2MHz

Trace 1  
 Mean 23.23 dBm  
 Peak 26.85 dBm  
 Crest 3.62 dB

10 % 1.83 dB  
 1 % 2.75 dB  
 .1 % 3.31 dB  
 .01 % 3.58 dB

Date: 28.OCT.2015 10:49:43

### Channel 4183



Complementary Cumulative Distribution Function  
 NOF samples: 16000, Usable BW: 11.2MHz

	Trace 1
Mean	23.28 dBm
Peak	26.90 dBm
Crest	3.61 dB
10 %	1.79 dB
1 %	2.73 dB
.1 %	3.31 dB
.01 %	3.56 dB

Date: 28.OCT.2015 10:48:35

**Channel 4233**