

Annex 1: Measurement diagrams to  
**TEST REPORT**  
 No.: 16-1-0001901T67a

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







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

for

peiker acustic GmbH

Telematic Device  
 ATM-02-US-T1

FCC: QWY-ATM2-T-11  
 ISED: 6588A-ATM2T11  
 PMN: ATM 02 Trunk version  
 HVIN: ATM-02-US-T1

Laboratory Accreditation and Listings			
 <p><b>DAkKS</b>            Deutsche            Akkreditierungsstelle            D-PL-12047-01-01</p>	 <p>FEDERAL COMMUNICATIONS COMMISSION  <b>FCC</b>            • USA •            MRA US-EU 0003</p>	 <p>Industry Canada            Reg. No.: 3462D-1            Reg. No.: 3462D-2            Reg. No.: 3462D-3</p>	 <p>Voluntary Controls for            Electromagnetic Emissions            Reg. No.:            R-2666 C-2914,            T-1967, G-301</p>
 <p><b>WiFi</b>            ALLIANCE            AUTHORIZED            RF LABORATORY</p>	 <p><b>ctia</b> Authorized<sup>TM</sup>            Test Lab            Lab Code: 20011130-00</p>		
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>			

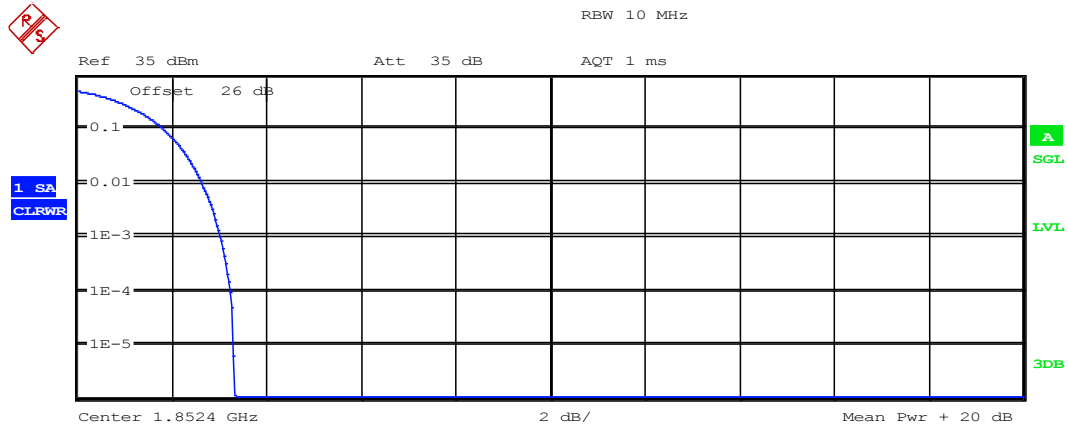
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# 1. Measurement diagrams

## 1.1. Peak power output and PAPR-Value

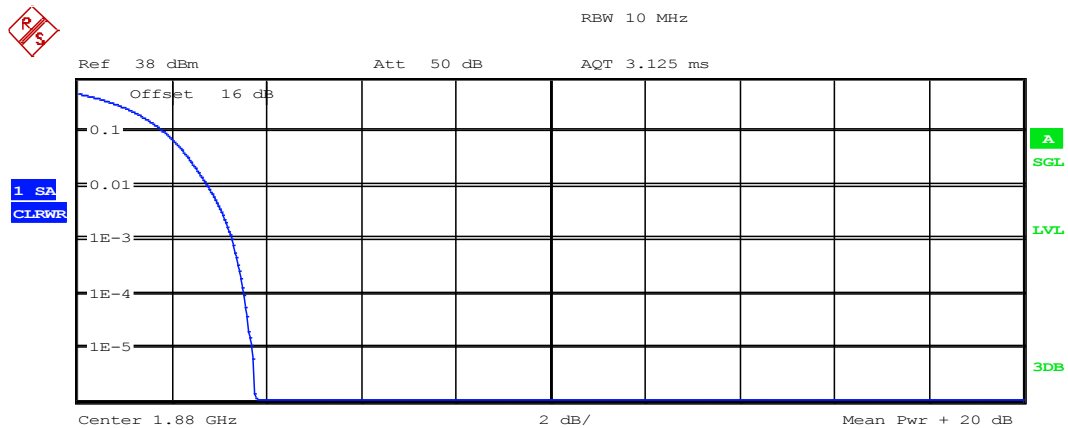
### 1.1.1. FDD Band II



Complementary Cumulative Distribution Function (32000 samples)

Trace 1	
Mean	21.34 dBm
Peak	24.64 dBm
Crest	3.30 dB
10 %	1.79 dB
1 %	2.63 dB
.1 %	3.01 dB
.01 %	3.24 dB

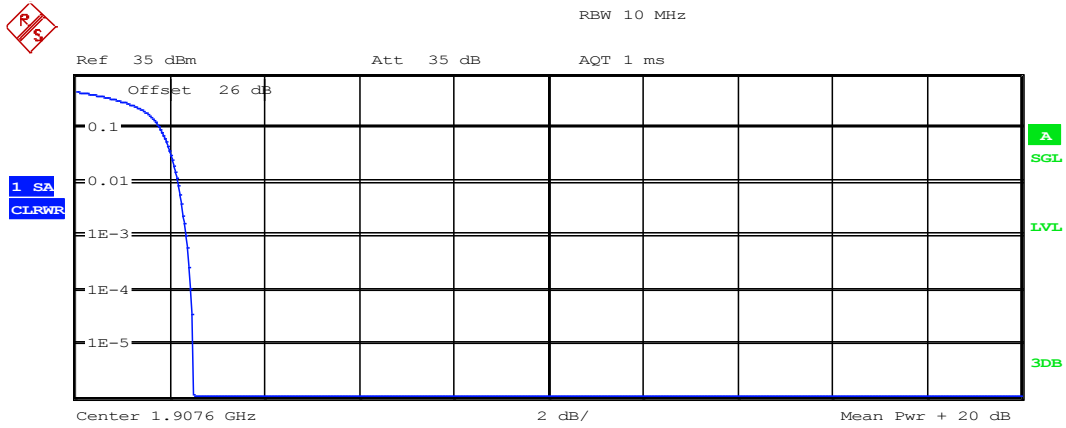
Diagram CCDF\_Ch\_9262



Complementary Cumulative Distribution Function (100000 samples)

Trace 1	
Mean	21.28 dBm
Peak	25.03 dBm
Crest	3.75 dB
10 %	1.83 dB
1 %	2.76 dB
.1 %	3.27 dB
.01 %	3.53 dB

Diagram CCDF\_Ch\_9400



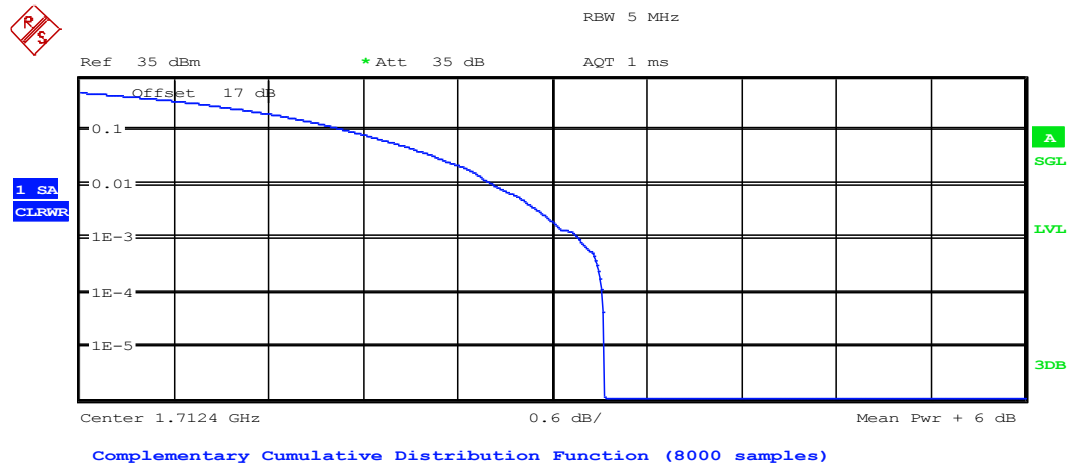
Complementary Cumulative Distribution Function (32000 samples)

Trace 1

Mean	19.55 dBm
Peak	22.03 dBm
Crest	2.48 dB
10 %	1.76 dB
1 %	2.18 dB
.1 %	2.34 dB
.01 %	2.44 dB

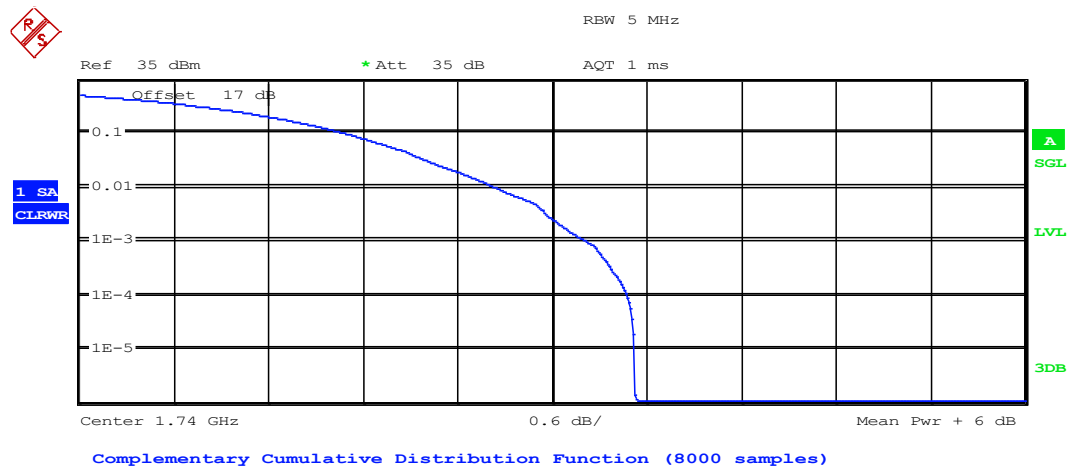
Diagram CCDF\_Ch\_9538

1.1.2. FDD Band IV



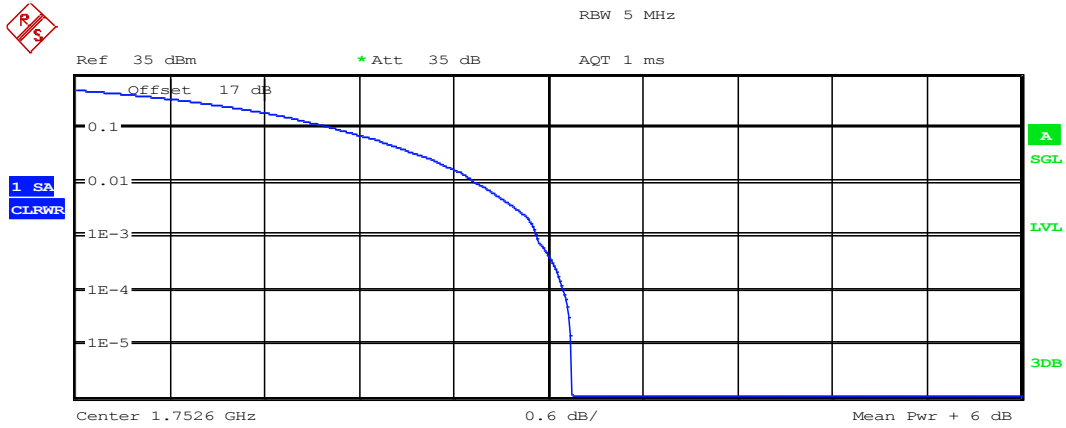
Trace 1	
Mean	22.21 dBm
Peak	25.54 dBm
Crest	3.33 dB
10 %	1.72 dB
1 %	2.63 dB
.1 %	3.16 dB
.01 %	3.32 dB

Diagram CCDF\_Ch\_1312



Trace 1	
Mean	22.30 dBm
Peak	25.82 dBm
Crest	3.52 dB
10 %	1.69 dB
1 %	2.63 dB
.1 %	3.21 dB
.01 %	3.47 dB

Diagram CCDF\_Ch\_1450



Complementary Cumulative Distribution Function (8000 samples)

Trace 1	
Mean	22.46 dBm
Peak	25.61 dBm
Crest	3.15 dB
10 %	1.65 dB
1 %	2.54 dB
.1 %	2.92 dB
.01 %	3.10 dB

Diagram CCDF\_Ch\_1513

### 1.1.3. FDD Band 5

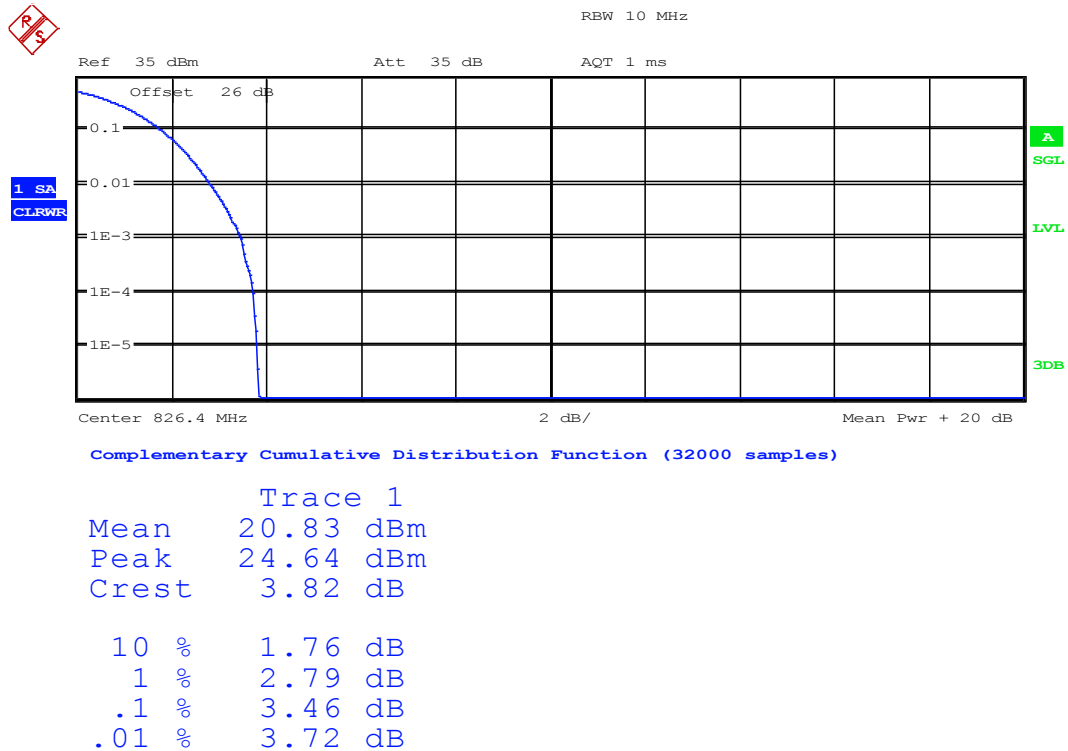


Diagram CCDF\_Ch\_4132

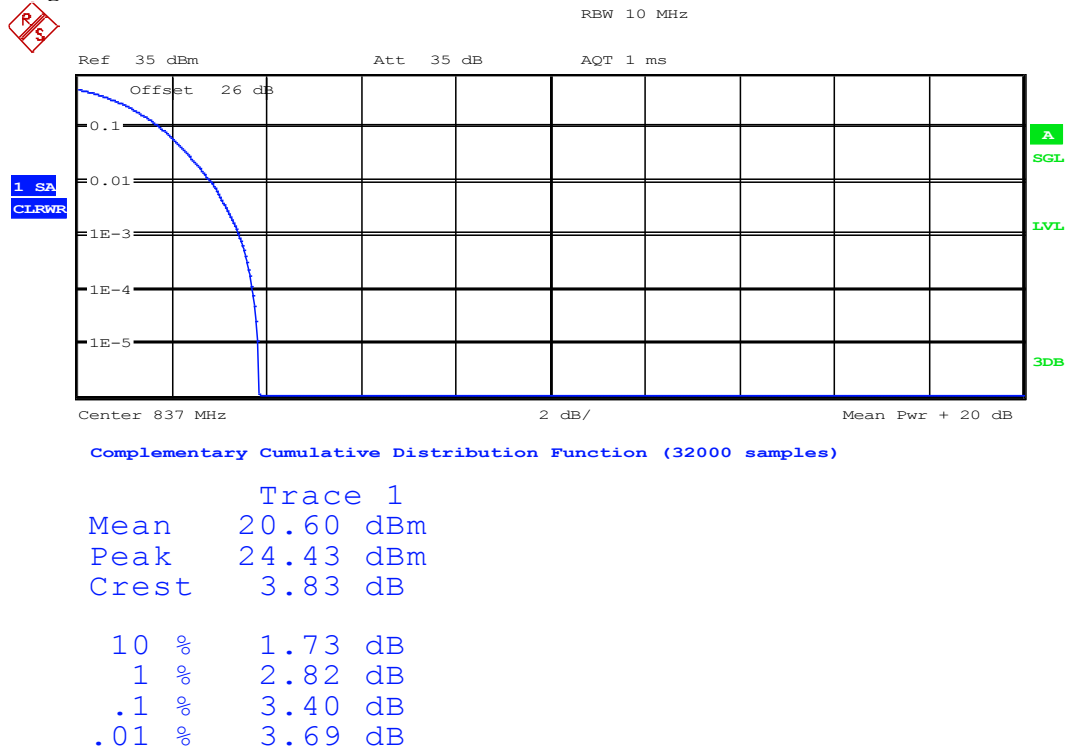
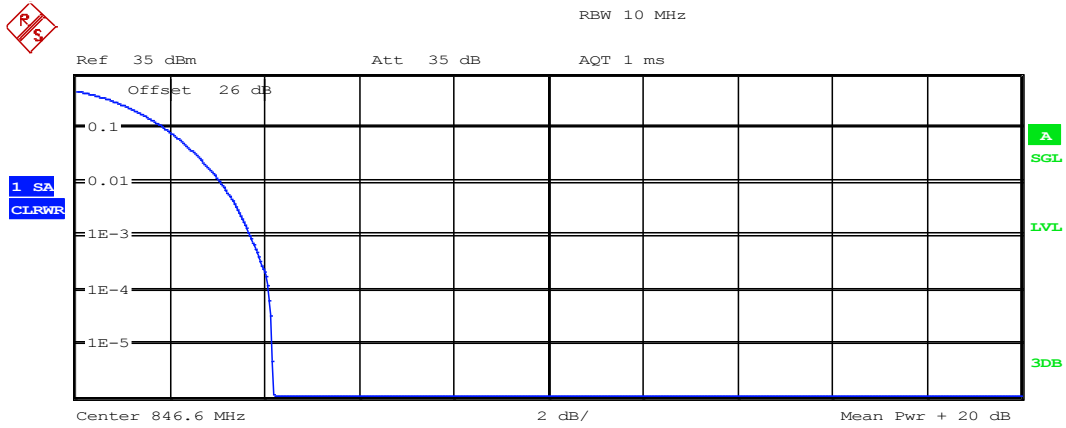


Diagram CCDF\_Ch\_4185



Complementary Cumulative Distribution Function (32000 samples)

	Trace 1
Mean	21.11 dBm
Peak	25.28 dBm
Crest	4.17 dB
10 %	1.86 dB
1 %	3.04 dB
.1 %	3.69 dB
.01 %	4.07 dB

Diagram CCDF\_Ch\_4233



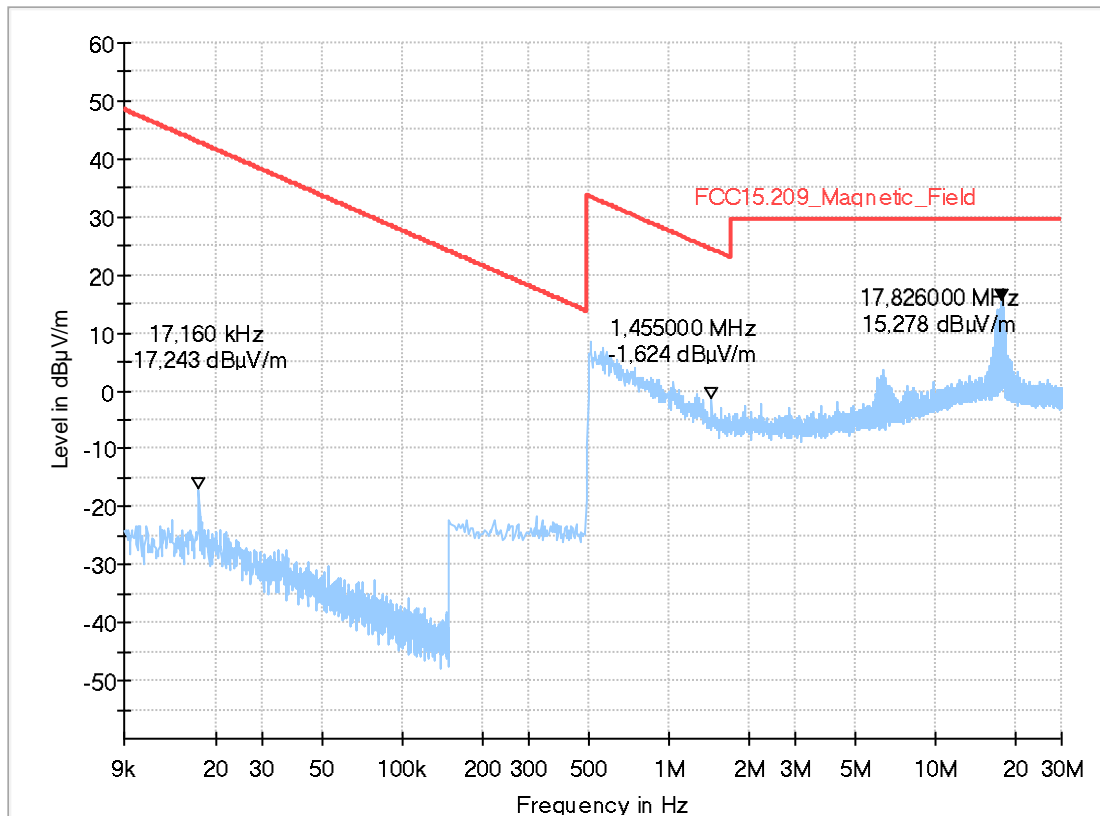
## 1.2. Magnetic field emissions radiated (FDD Band II,IV and V transmitting mode) 2.01a\_RSE\_CH\_9262RMC\_Standing

Date:	30.12.2017	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	HEI	
Operating conditions:	Humidity: 48%rH; Temperature: 20°C	
Power during tests:	12V DC	
Comment 1:	Channel :9262,UMTS_Band:2	
Comment 2:	Standing	

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



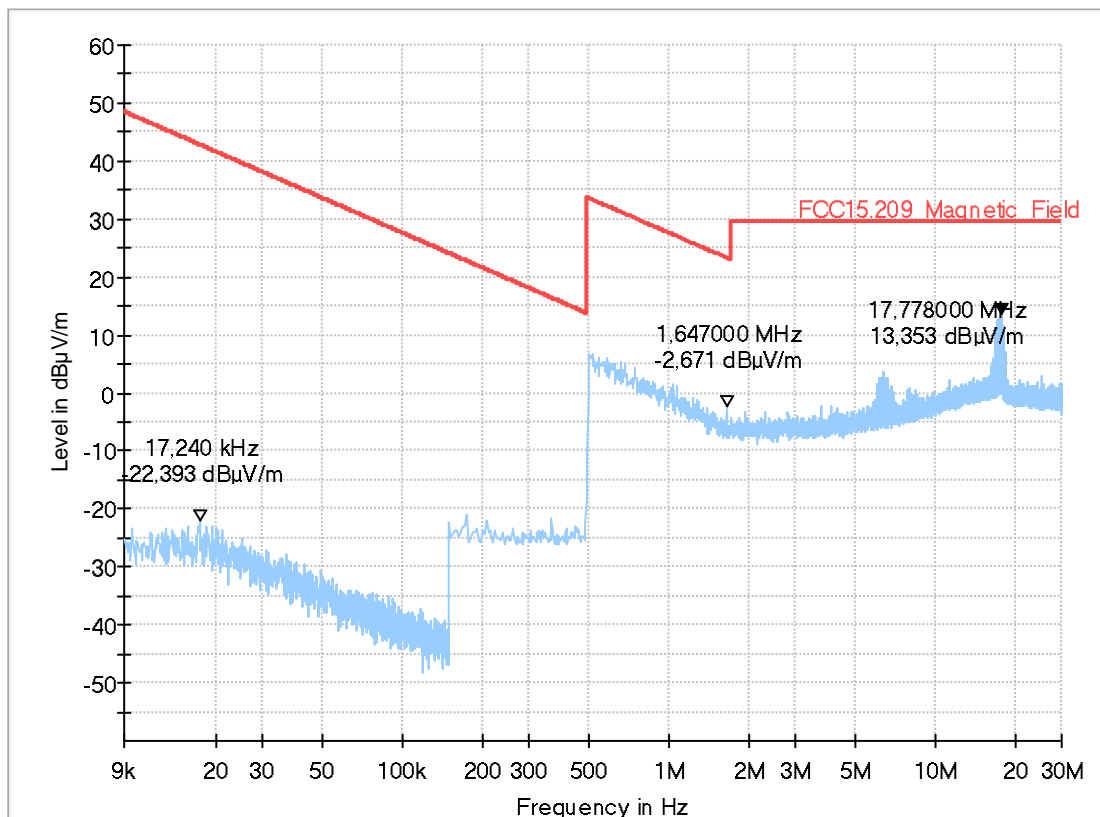
## 2.01b\_RSE\_CH\_9262RMC\_laying

Date:	30.12.2017	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	HEI	
Operating conditions:	Humidity: 48%rH; Temperature: 20°C	
Power during tests:	12V DC	
Comment 1:	Channel 19262,UMTS_Band:2	
Comment 2:	laying	

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



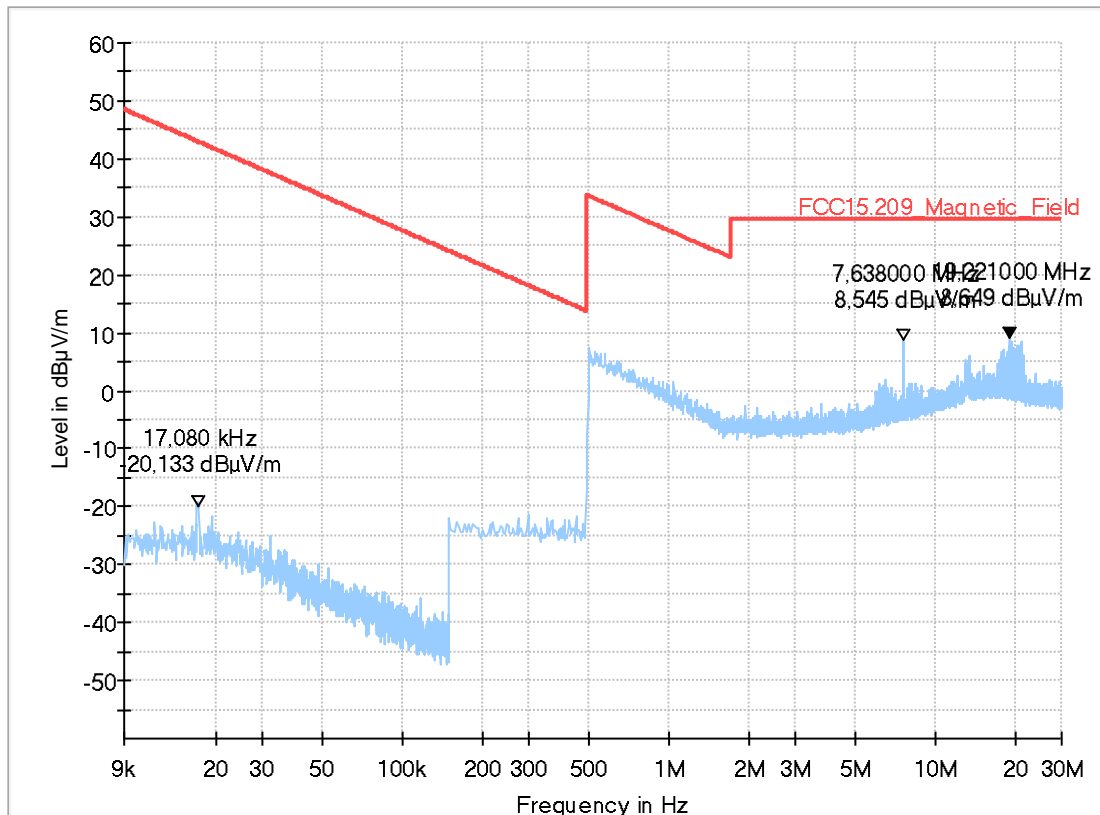
## 2.02a\_RSE\_R\_Ch1450\_RMC\_Standing

Date:	24.12.2017	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	TFr	
Operating conditions:	Humidity: 48%rH; Temperature: 20°C	
Power during tests:	12V DC	
Comment 2:	DUT Standing	

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



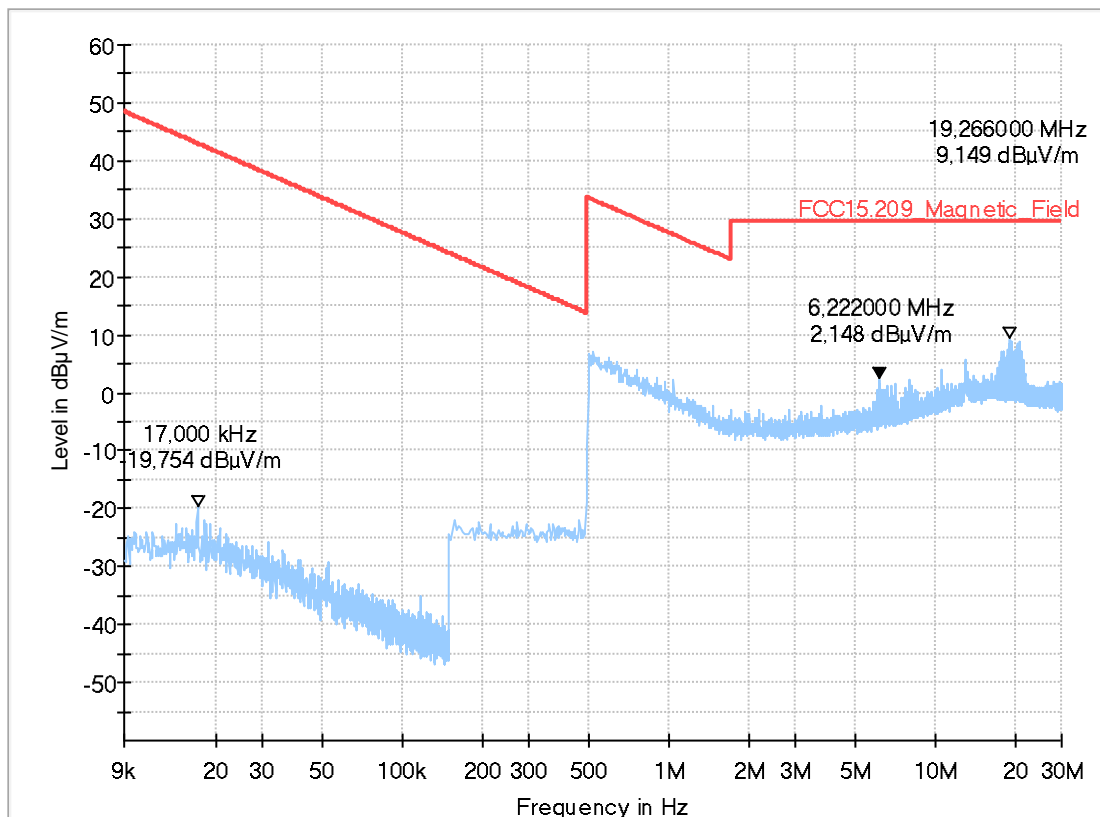
## 2.02b\_RSE\_R\_Ch1450\_RMC\_laying

Date:	24.12.2017	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	TFR	
Operating conditions:	Humidity: 48%rH; Temperature: 20°C	
Power during tests:	12V DC	
Comment 2:	DUT Laying	

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



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## 2.03b\_RSE\_R\_Ch4132\_RMC\_Laying

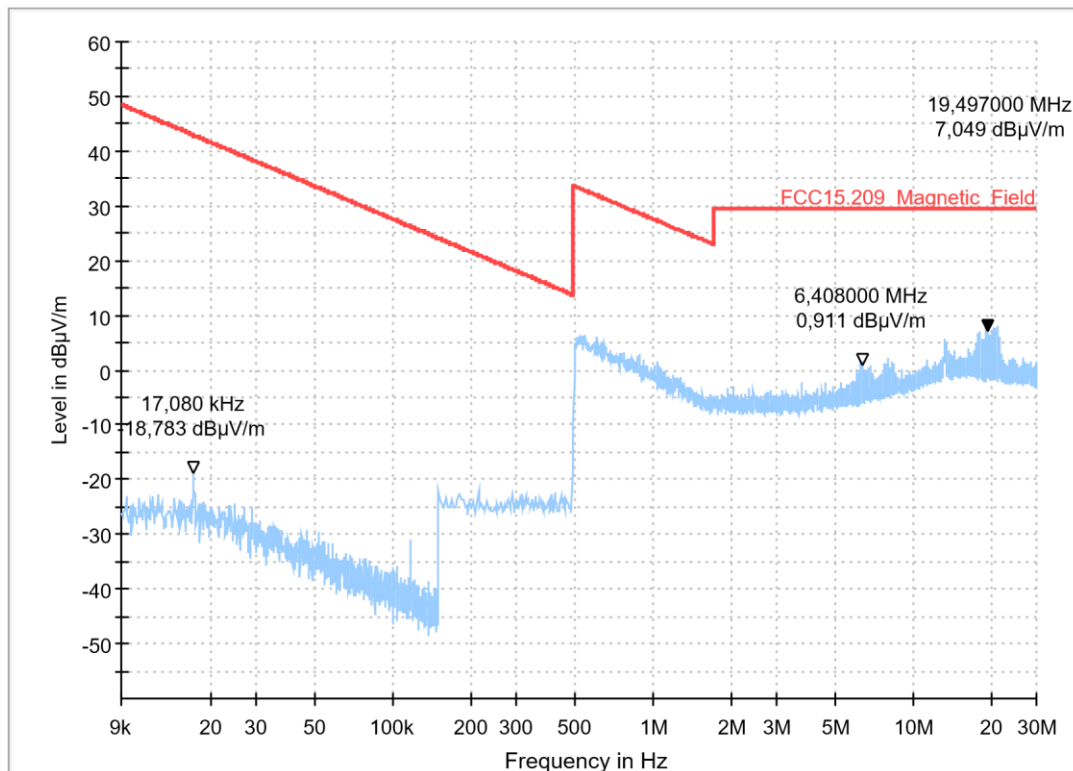
### Common Information

	Date: 24.12.2017	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement	
Rec. antenna (pre-scan):	setup height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	TFR	
Operating conditions:	Humidity: 48%rH; Temperature: 20°C	
Power during tests:	12V DC	
Comment 2:	DUT Laying	

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



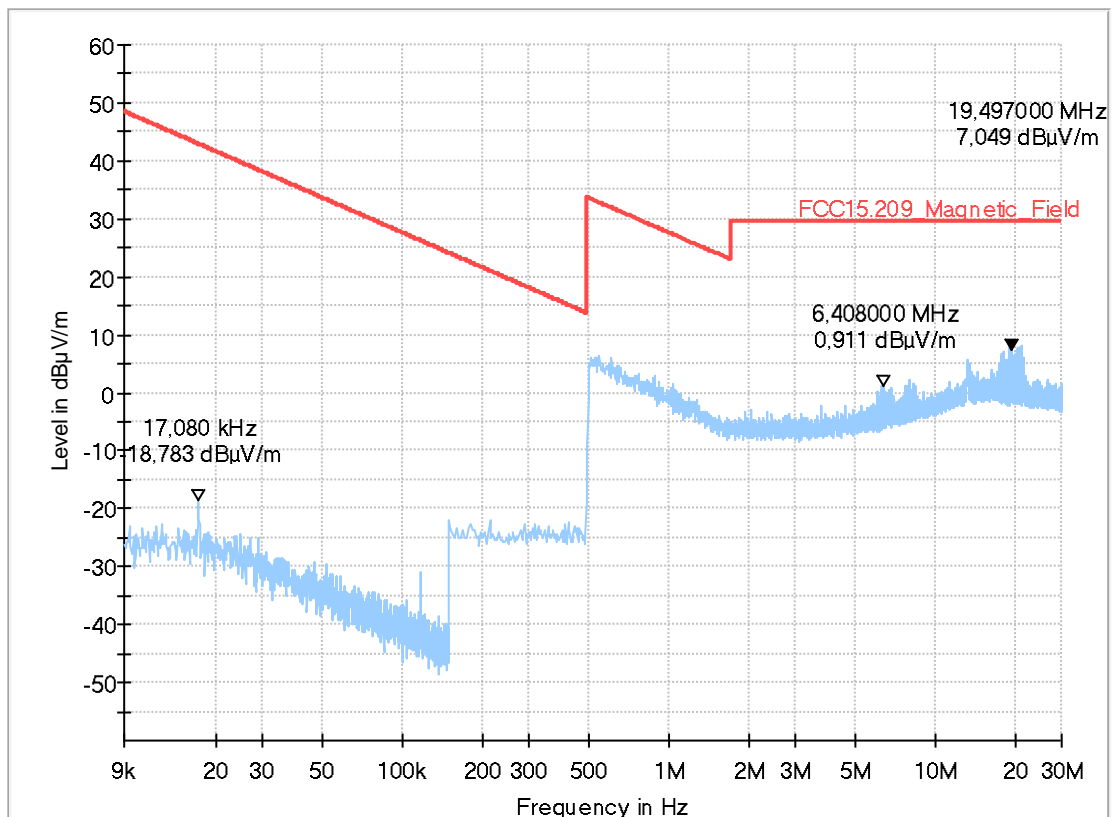
## 2.03b\_RSE\_R\_Ch4132\_RMC\_Laying

Date:	24.12.2017	Page 1 of 1
Test description:	Magnetic Field Strength Measurement related to 30/300 m distance	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	used accord. table, pls. see test report	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation	
Used filter:	bypass	
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4	
Operator:	TFr	
Operating conditions:	Humidity: 48%rH; Temperature: 20°C	
Power during tests:	12V DC	
Comment 2:	DUT Laying	

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



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

#### 1.3.1. Radiated emissions on FDD Band II - Main Antenna

## 8.01a\_RSE\_CH\_9262RMC\_Standing

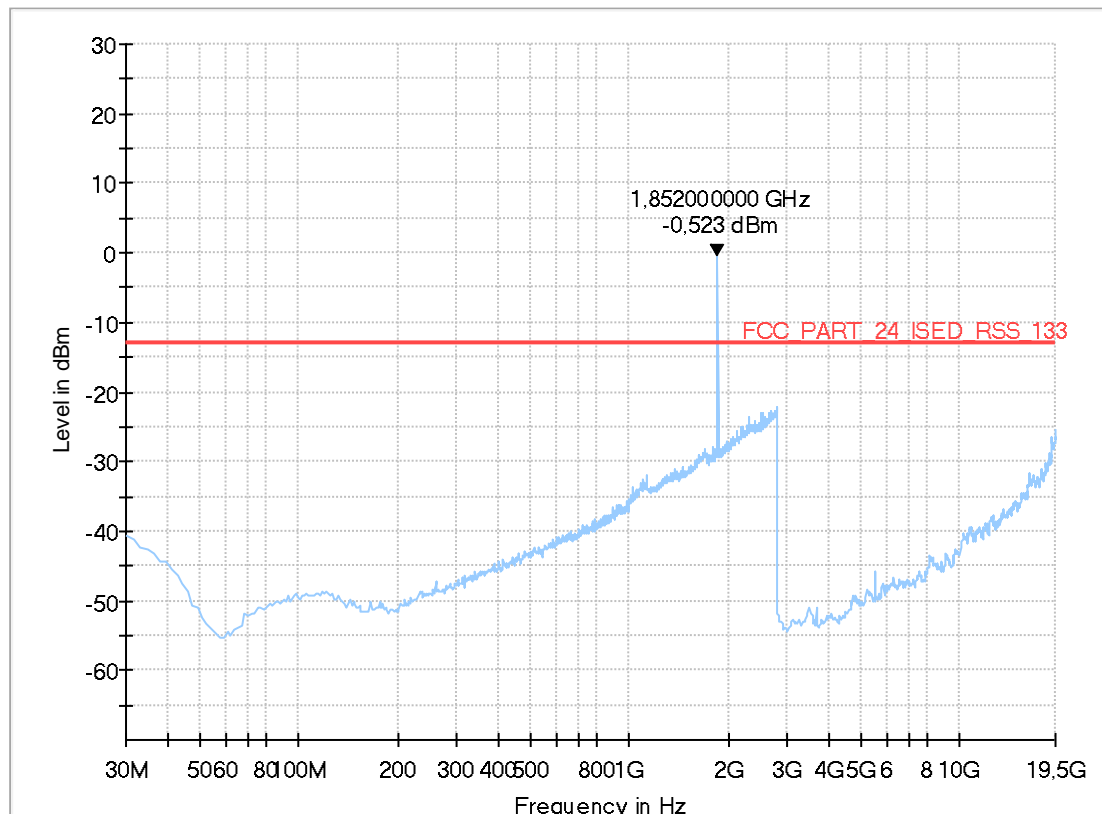
#### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operation mode:	UMTS_Band 2_CH:9262
Operator Name:	HEI
Comment:	EUT Standing

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 8.01b\_RSE\_CH\_9262RMC\_laying

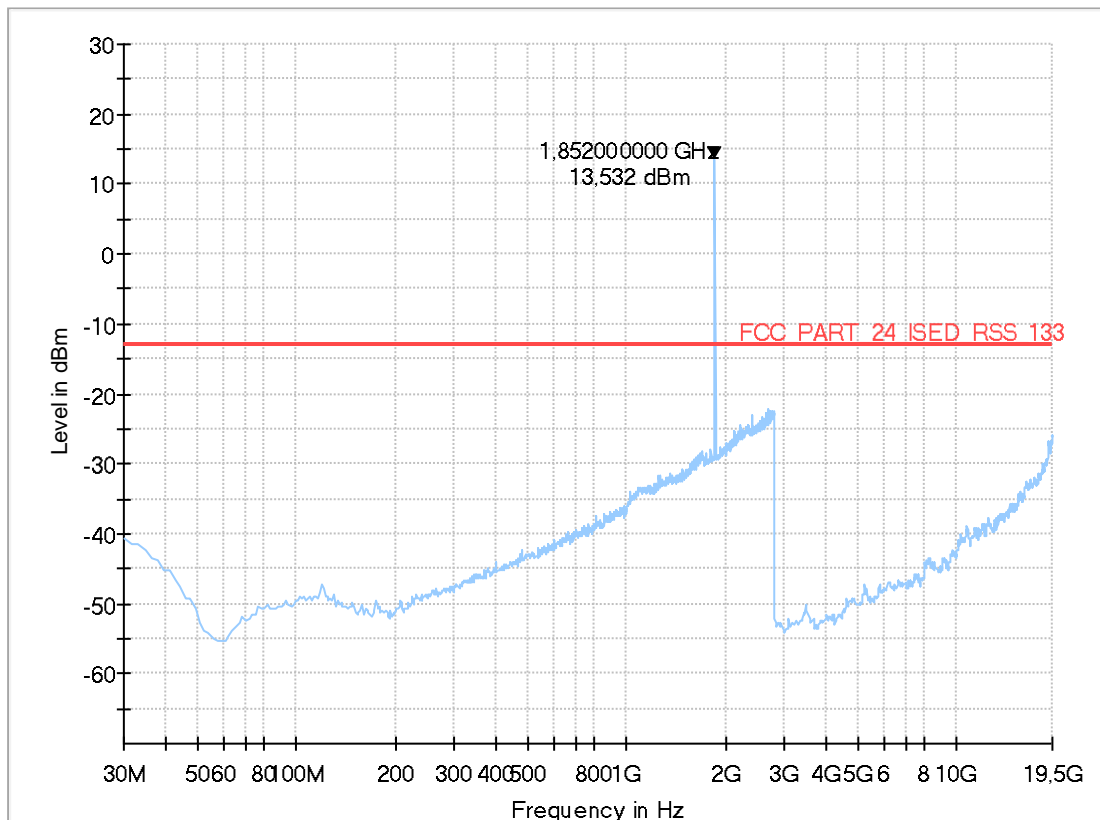
### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operation mode:	UMTS_Band 2_CH:9262
Operator Name:	HEI
Comment:	EUT Laying

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum





### 1.3.2. Radiated emissions on FDD Band II- Backup Antenna

## 8.04a\_RSE\_CH\_9538RMC\_Standing

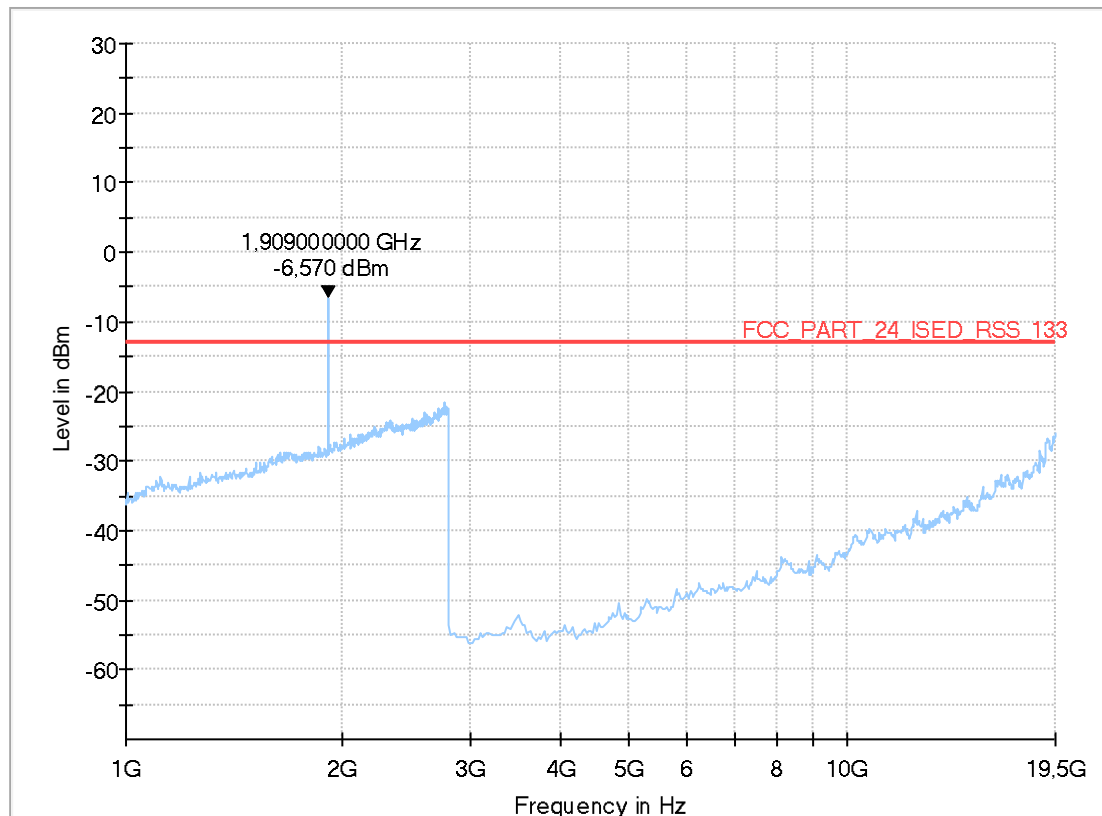
#### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
EUT:	ATM02_ROW_R1
Operation mode:	UMTSFDDII CH. 9538
Operating conditions:	Humidity: 30%rH; Temperature: 20°C
Operator Name:	HEI
Comment:	Backup Antenna

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 8.04b\_RSE\_CH\_9538RMC\_laying

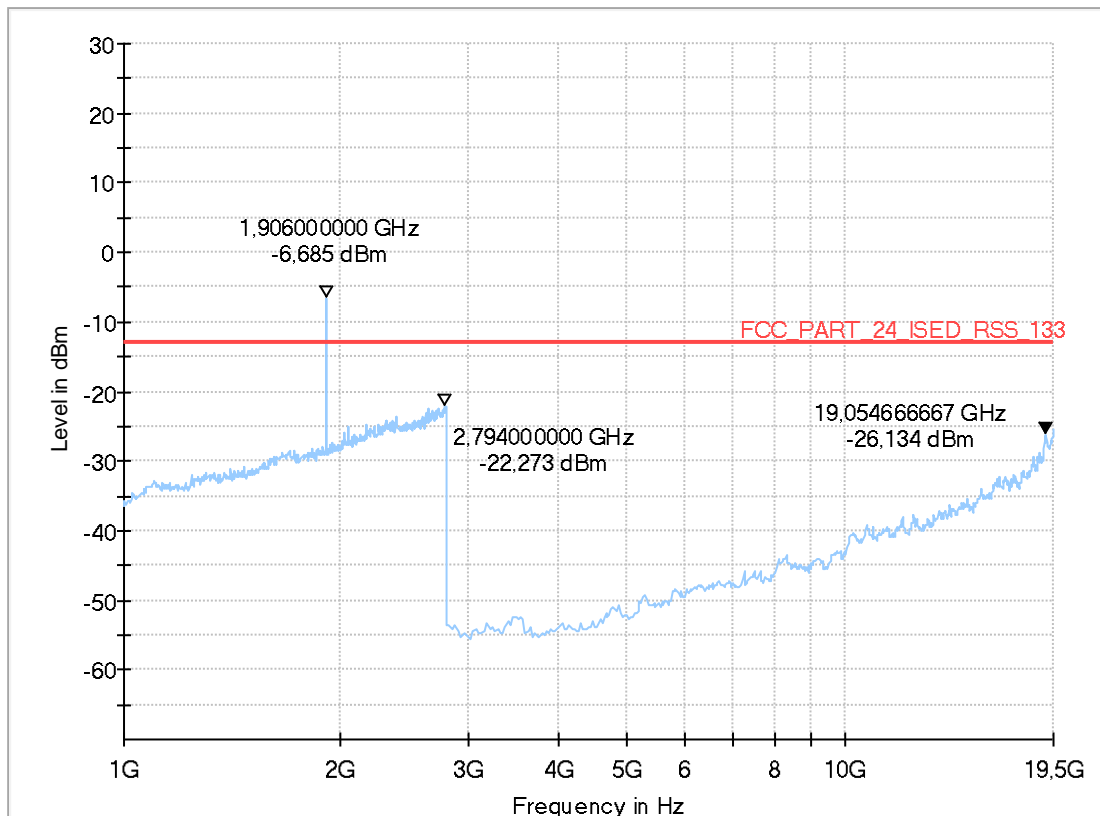
### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operation mode:	UMTS_Band 2_CH:9538
Operator Name:	TFra
Comment:	EUT Laying

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 1.4. Spurious emissions radiated (FDD Band IV transmitting mode)

### 1.4.1. Radiated emissions on FDD Band IV - Main Antenna

#### 8.02a\_RSE\_R\_Ch1450\_RMC\_Standing

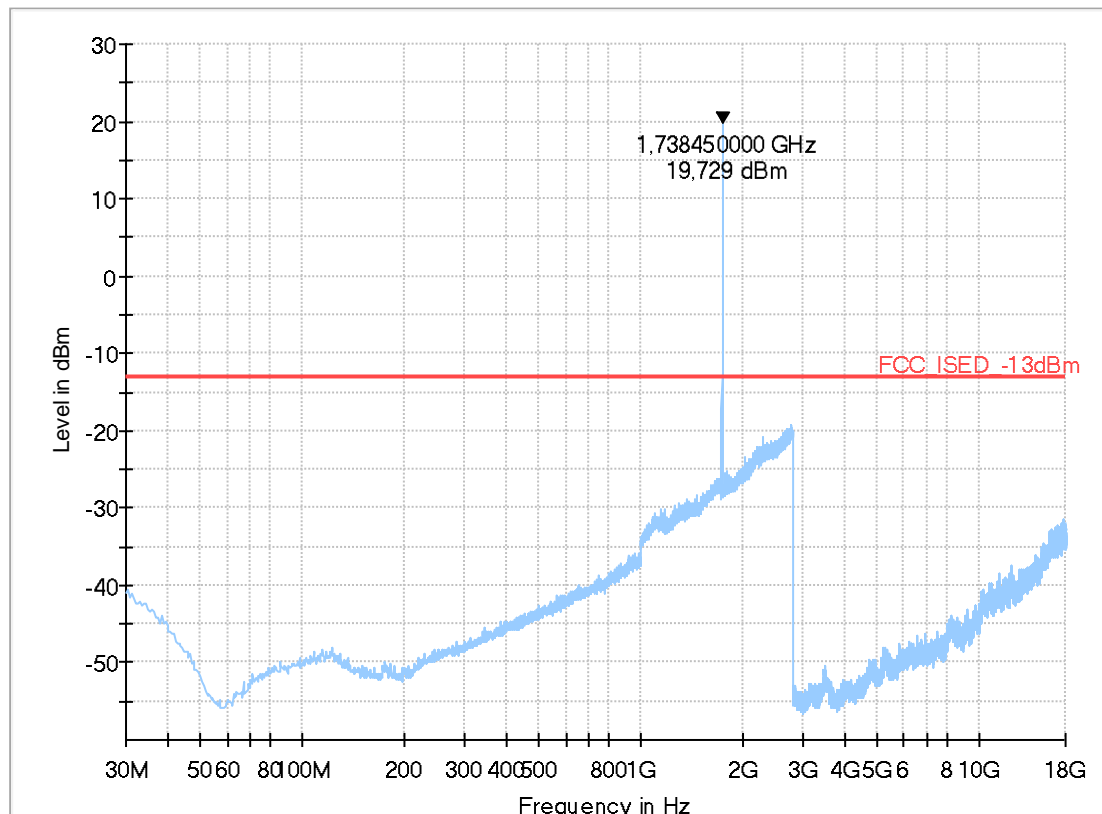
##### Common Information

Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version:	EMC32 V9.26.0
Operation mode:	UMTS_Band:4_CH:1450
Operator Name:	HEI
Comment:	EUT - laying

##### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 8.02b\_RSE\_R\_Ch1450\_RMC\_laying

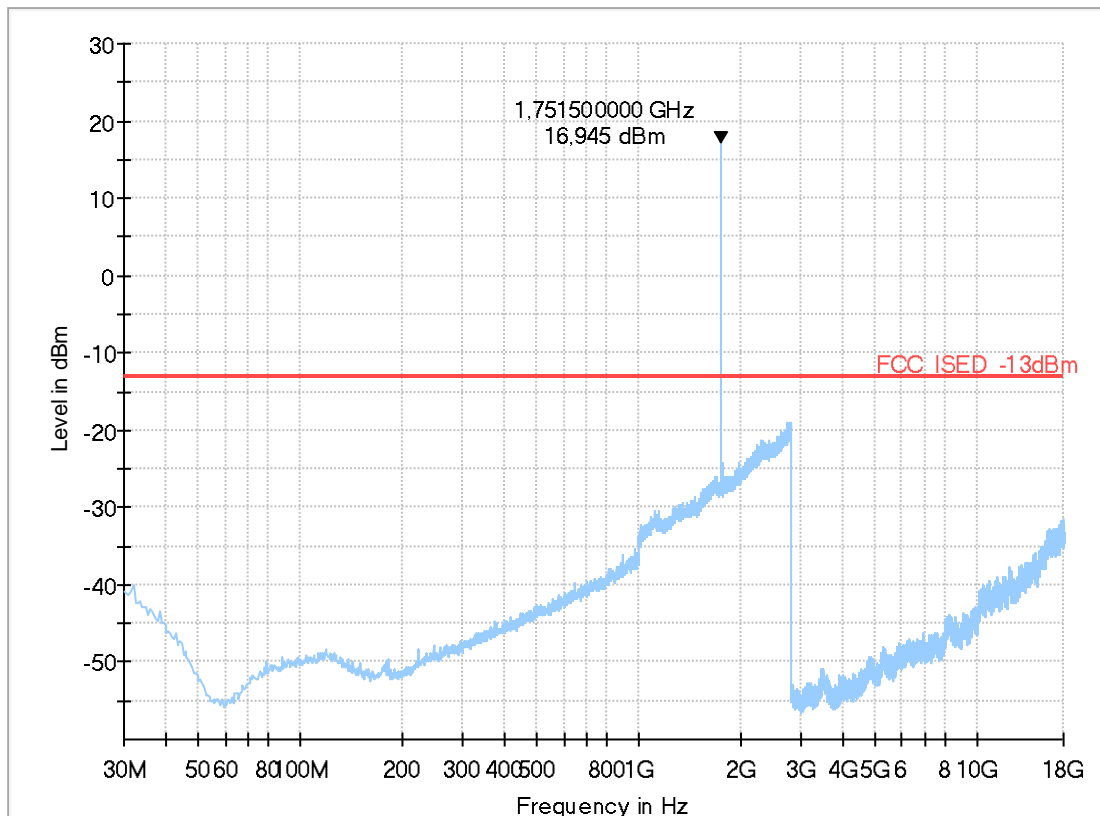
### Common Information

Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V9.26.0
Operation mode:	LTE Band 4, channel no= BW= RB= Modulation=
Operator Name:	TFR
Comment:	EUT - laying

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



1.4.2. Radiated emissions on FDD Band IV - Backup Antenna

8.05a\_RSE\_R\_Ch1312\_RMC\_Standing

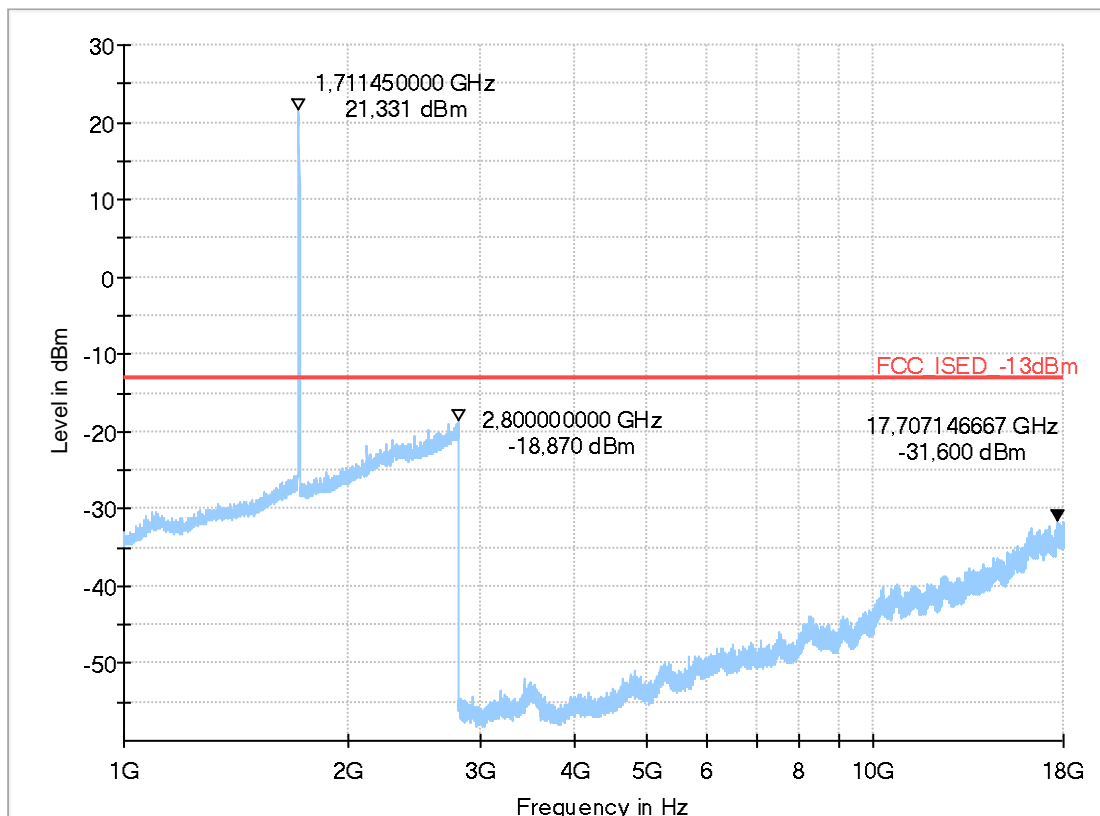
Common Information

Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version:	EMC32 V9.26.0
Operation mode:	UMTS_Band 4_CH:1312
Operator Name:	TFra
Comment:	

EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 8.05b\_RSE\_R\_Ch1312\_RMC\_laying

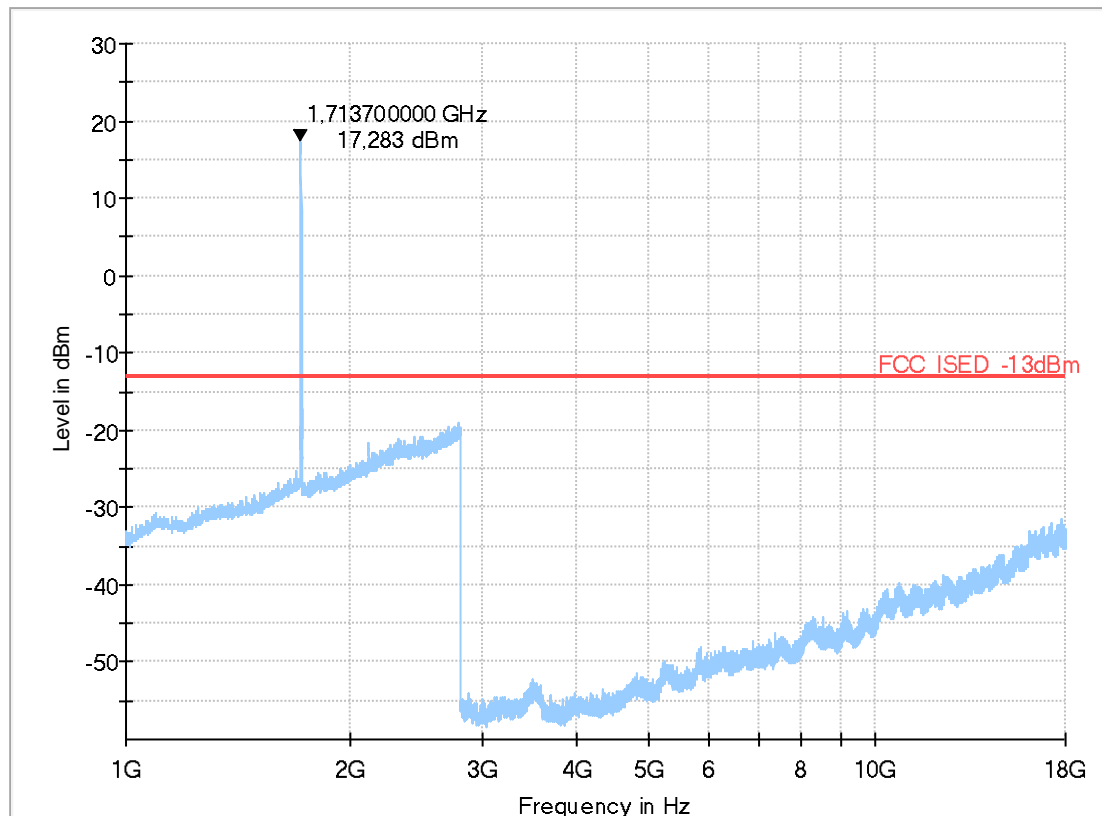
### Common Information

Test Description:	Radiated emission
Test Site:	Fully-Anechoic Room
Test Standard:	FCC FCC Part 27.53(h) AWS emission limits / RSS-139, Issue 3
Antenna polarisation:	vertical / horizontal
Measurement software version	EMC32 V9.26.0
Operation mode:	LTE Band 4, channel no= BW= RB= Modulation=
Operator Name:	TFra
Comment:	

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



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

### 1.5.1. Radiated emissions on FDD Band V - Main Antenna

#### 8.03a\_RSE\_R\_Ch4233\_RMC\_Standing

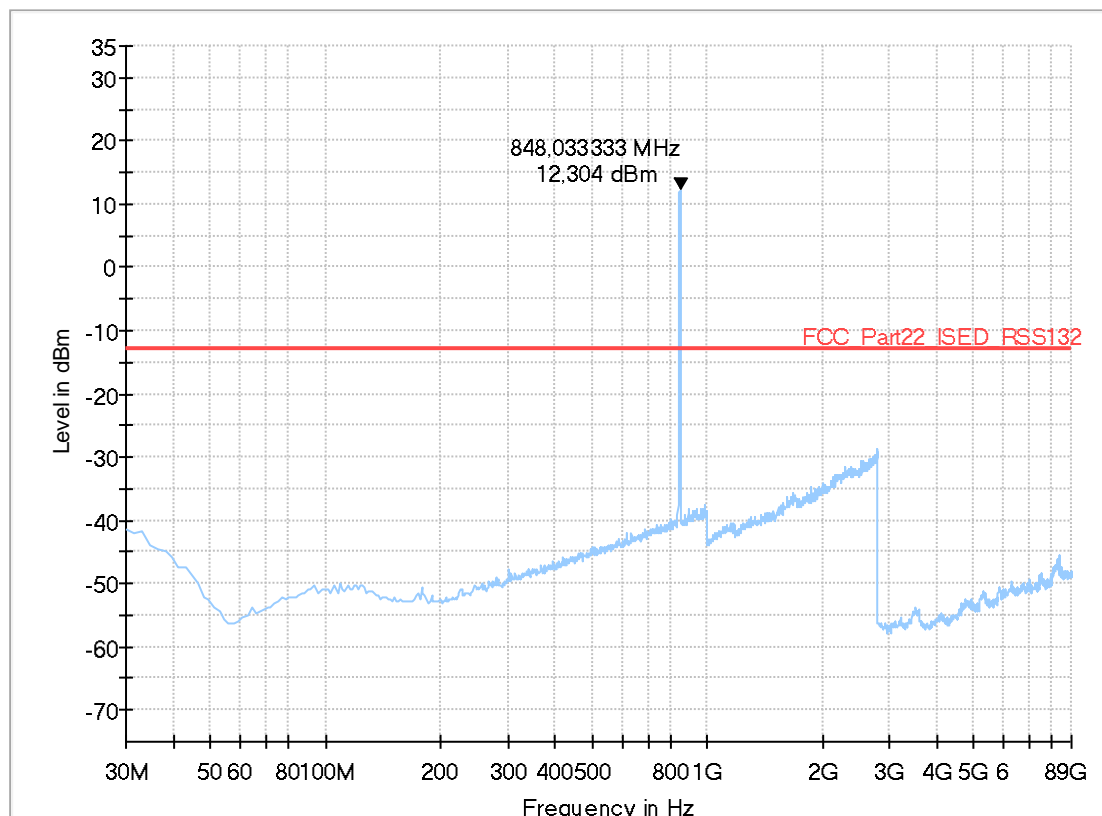
#### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Operation mode:	UMTS_Band 5_CH:4233
Operating conditions:	Humidity: 40%rH; Temperature: 20°C
Operator Name:	HEI

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-ROW-R1 (Sample 1030)
-----	
HW version:	103.004.004
SW version:	001.009.020
Serial number:	4355
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 8.03b\_RSE\_R\_Ch4233\_RMC\_Laying

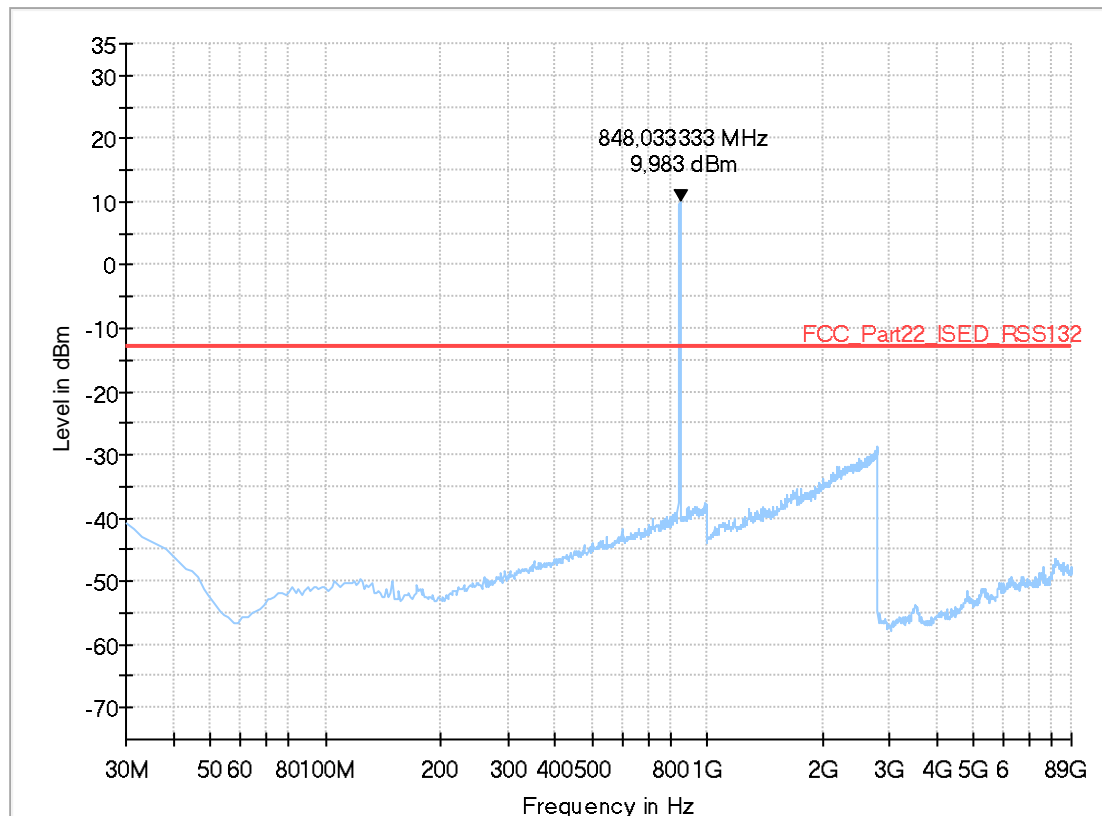
### Common Information

Test Description:	Radiated emission related to 1m
Test Site:	FAR
Test Standard:	FCC FCC Part 24.238 Broadband PCS
Antenna polarisation:	vertical / horizontal
Operation mode:	UMTS_Band 5_CH:4233
Operating conditions:	Humidity: 40%rH; Temperature: 20°C
Operator Name:	HEI
Comment:	DUT Laying

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum





### 1.5.2. Radiated emissions on FDD Band V - Backup Antenna

## 8.06a\_RSE\_R\_Ch4132\_RMC\_Standing

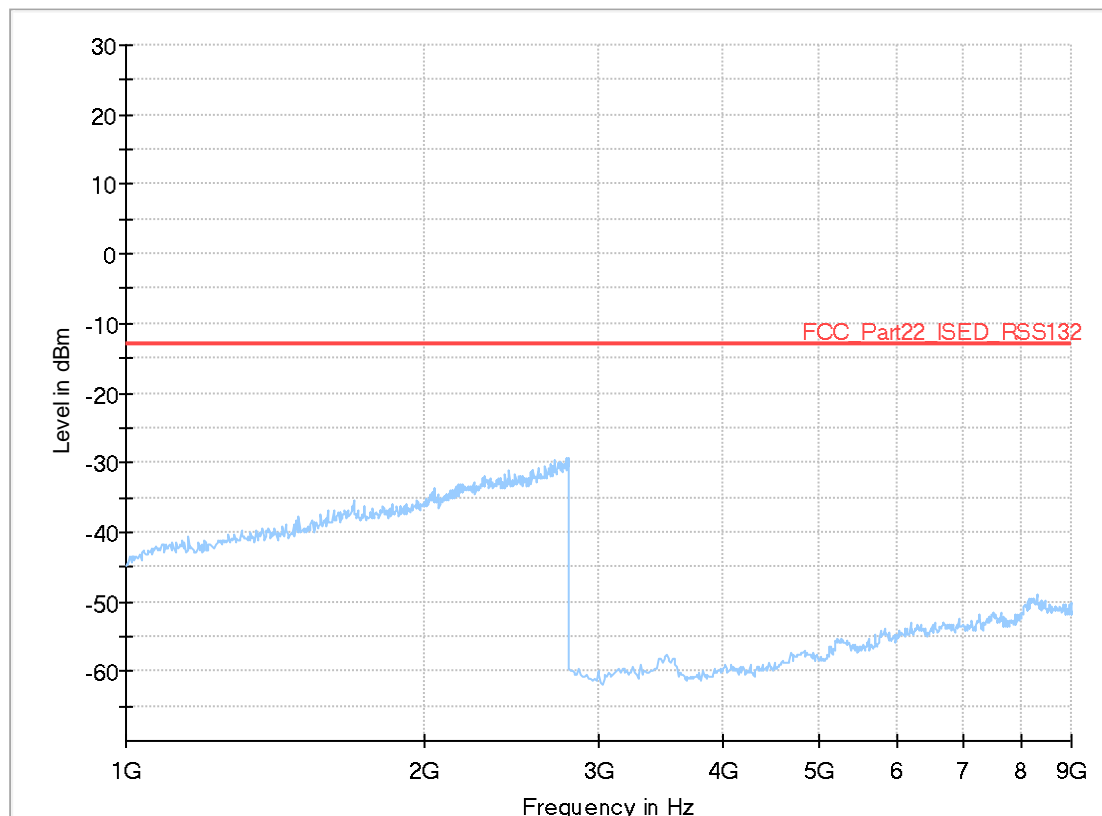
#### Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR)
Antenna polarisation:	vertical / horizontal
Operation mode:	UMTSV_Ch4132
Operator Name:	TFra
Comment:	

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 8.06b\_RSE\_R\_Ch4132\_RMC\_Laying

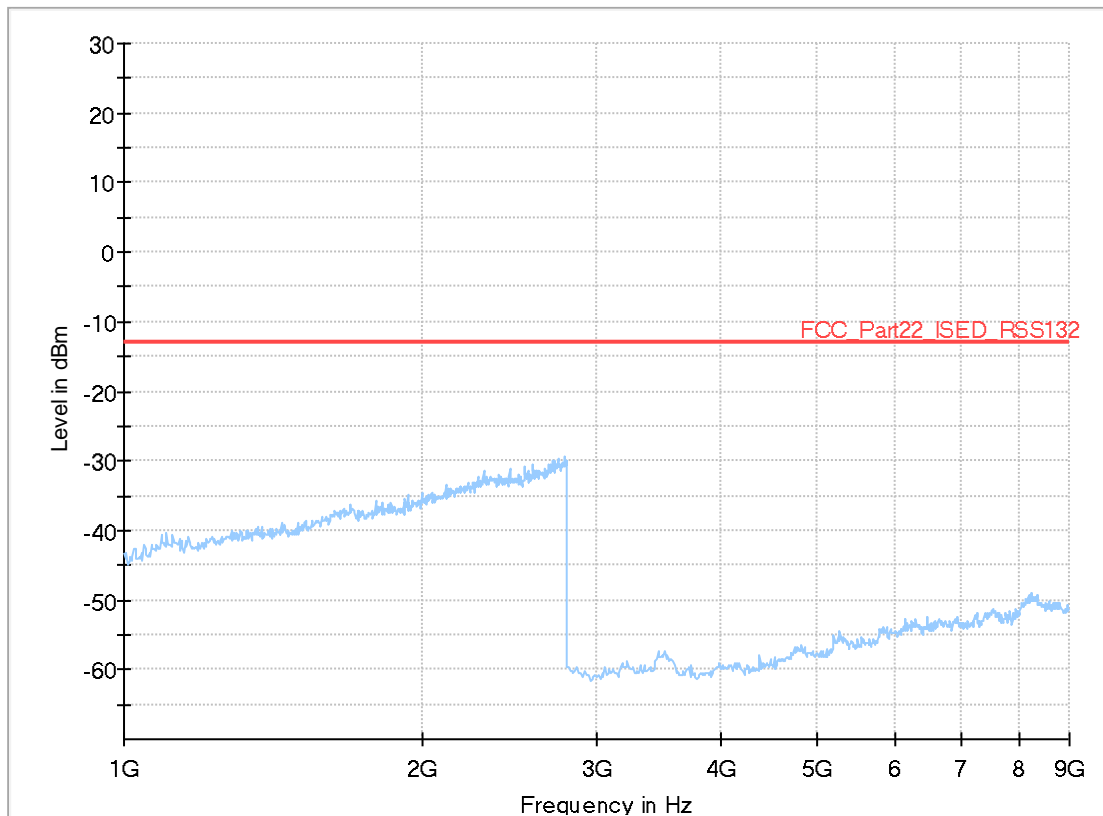
### Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	Fully Anechoic Room (FAR)
Antenna polarisation:	vertical / horizontal
Operation mode:	UMTSV_Ch4132
Operator Name:	MBe
Comment:	

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-R1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



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

### 1.6.1. Radiated emissions on FDD Band II band-edge - Main Antenna

#### 9.01a\_RSE\_CH\_9262RMC\_Standing

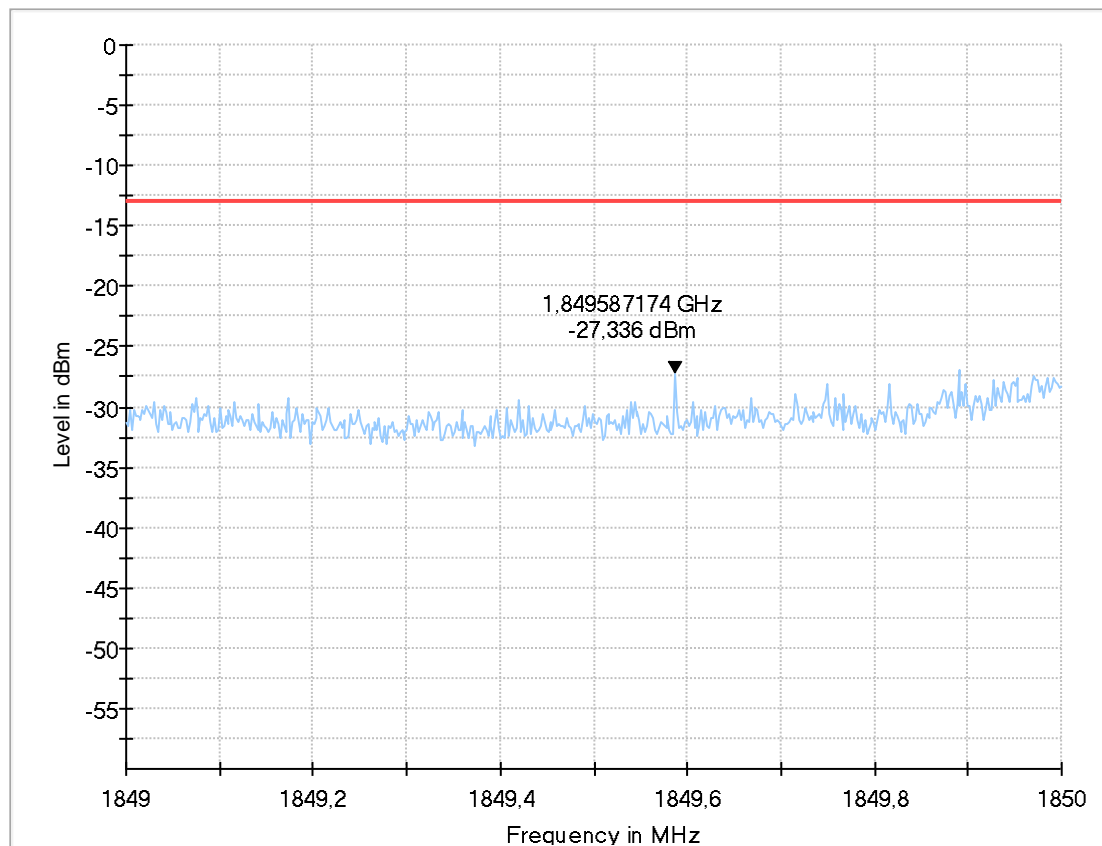
##### Common Information

Test Description:	Radiated Band Edge Compliance UMTS-FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Operating Mode:	UMTS_Band 2_CH: 9262
Environmental Conditions:	Humidity: 30%rH; Temperature: 20°C
Operator:	HEI
Comment:	EUT Standing

##### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

##### Full Spectrum



## 9.01b\_RSE\_CH\_9262RMC\_laying

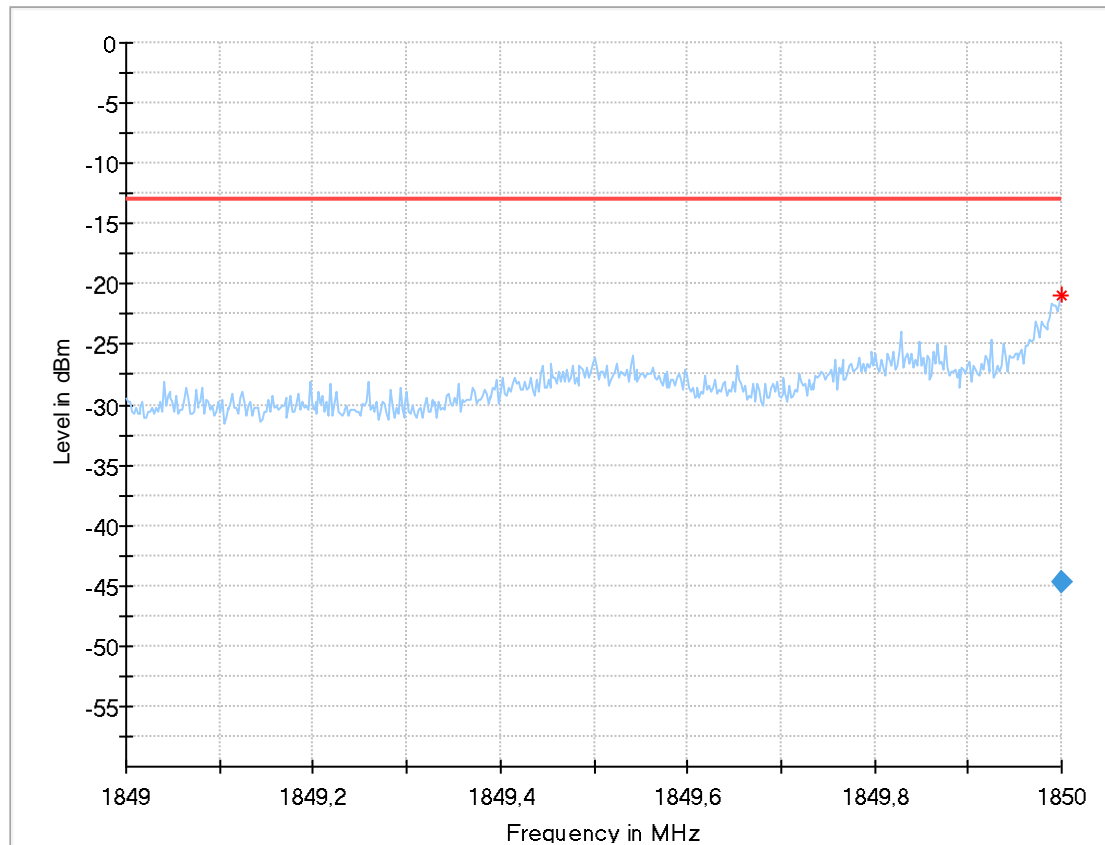
### Common Information

Test Description:	Radiated Band Edge Compliance UMTS-FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Operating Mode:	UMTS_Band 2 _CH: 9262
Environmental Conditions:	Humidity: 30%rH; Temperature: 20°C
Operator:	HEI

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

### Full Spectrum



### Final Result

Frequency (MHz)	Average (dBm)	Limit (dBm)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Pol	Azimuth (deg)	Corr. (dB)
1850.000000	-44.70	-13.00	31.70	10000.0	5.000	H	184.0	-63.1

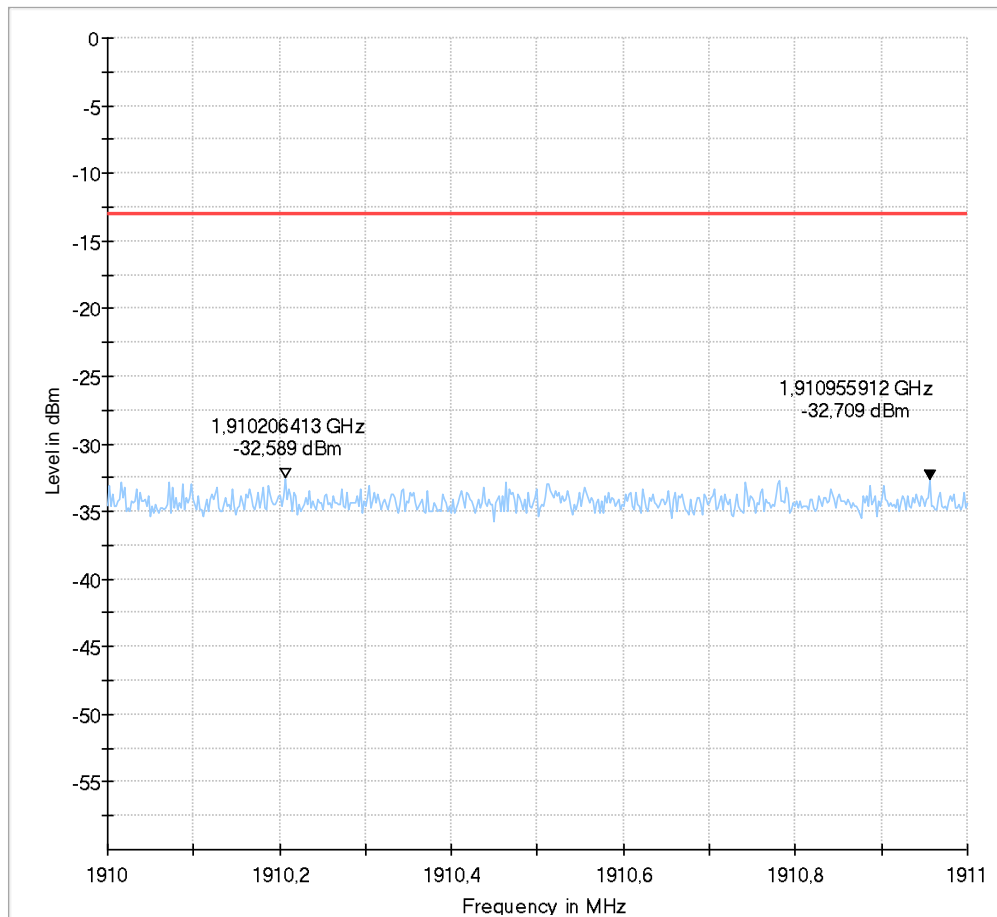
## 9.02b\_RSE\_CH\_9538RMC\_standing

### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UMTS_Band 2 _CH: 9538
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - laying

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-



## 9.02b\_RSE\_CH\_9538RMC\_laying

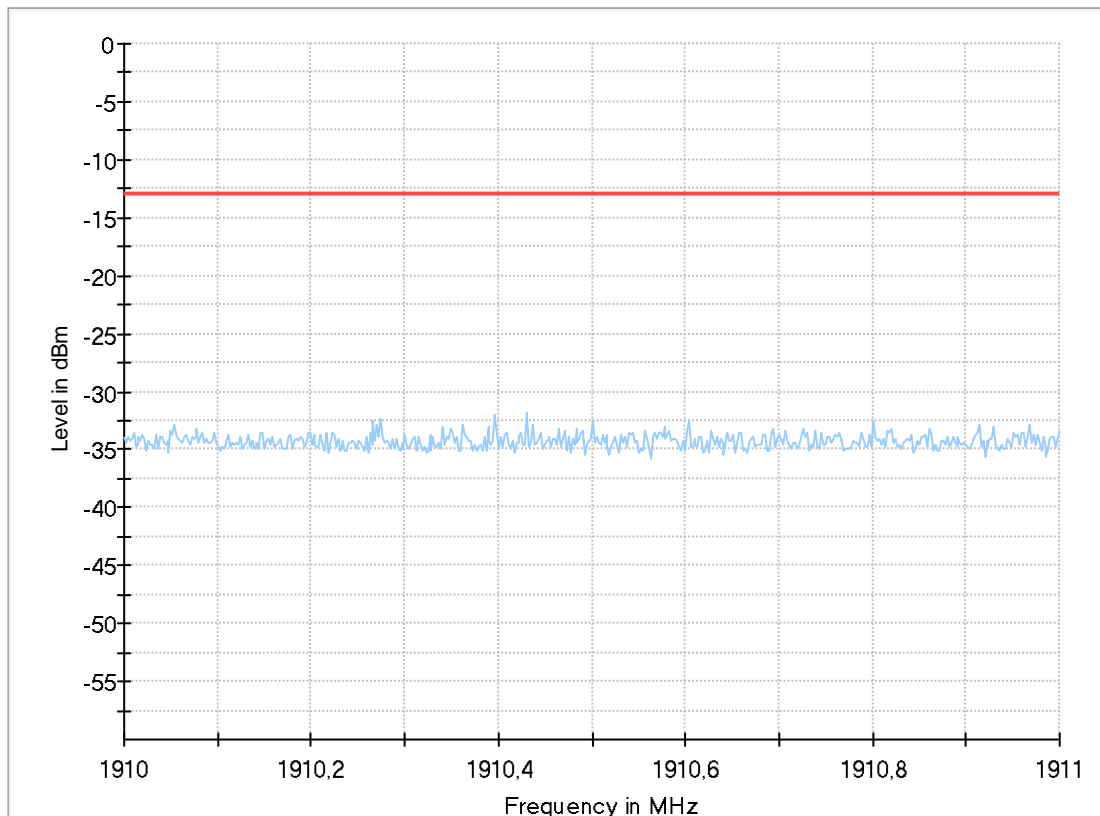
### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UMTS_Band 2 _CH: 9538
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - laying

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



### 1.6.2. Radiated emissions on FDD Band II band-edge - Backup Antenna

## 9.03a\_RSE\_CH\_9262RMC\_Standing

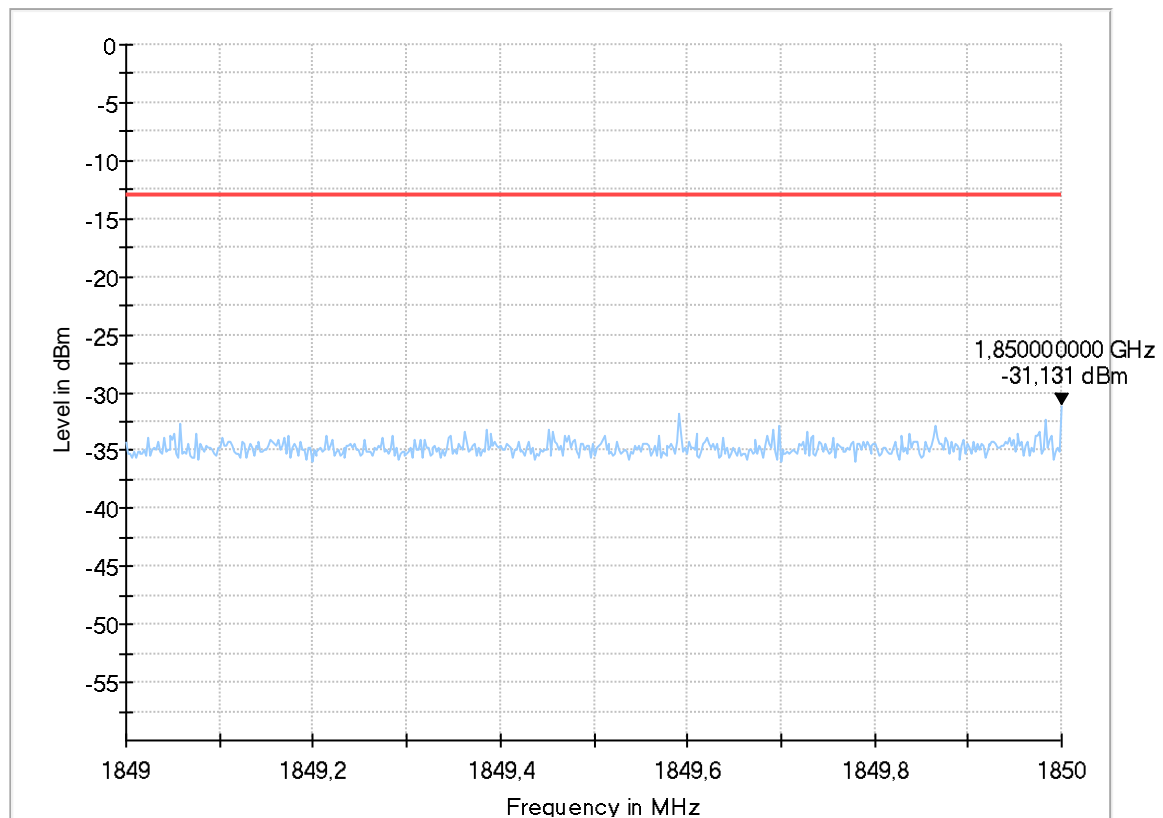
#### Common Information

Test Description:	Radiated Band Edge Compliance UMTS-FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Operating Mode:	UMTS_Band 2_CH: 9262
Environmental Conditions:	Humidity: 30%RH; Temperature: 20°C
Operator:	HEI
Comment:	Backup Antenna

#### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



### 9.03b\_RSE\_CH\_9262RMC\_laying

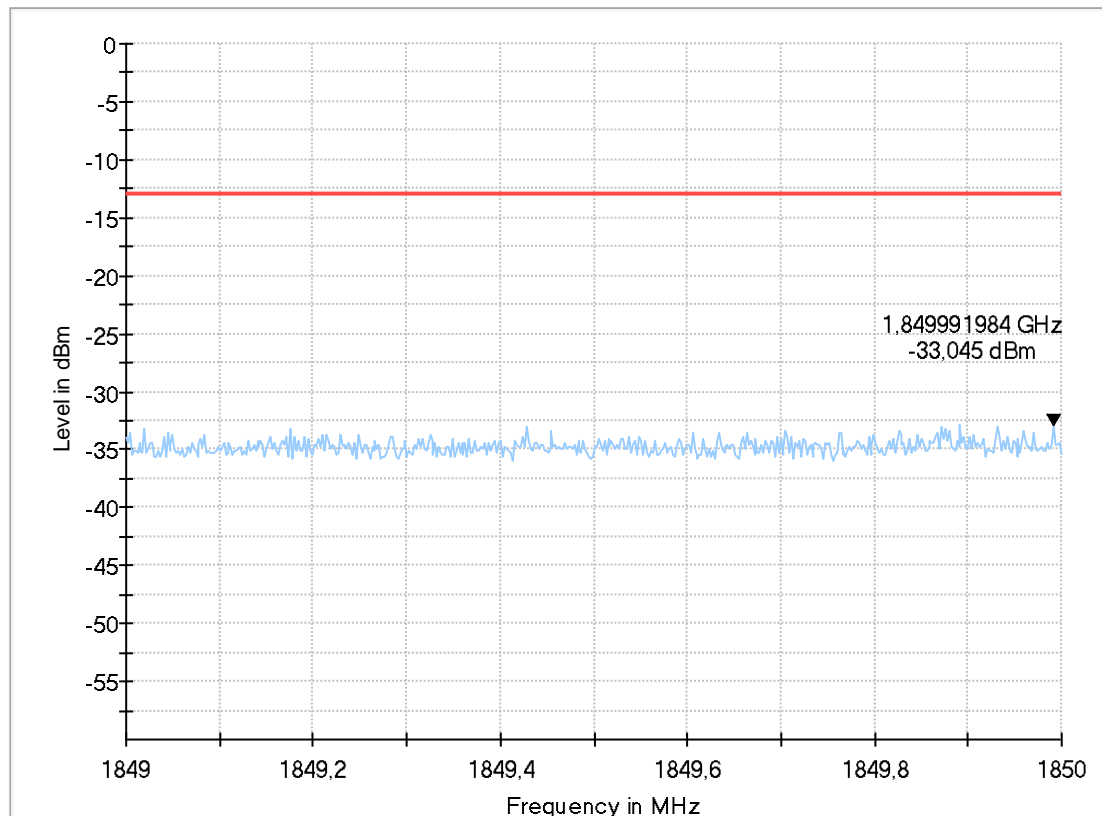
#### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Operating Mode:	UE allocated channel 9262
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFra
Remarks:	EUT - Laying

#### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum





## 9.04a\_RSE\_CH\_9538RMC\_Standing

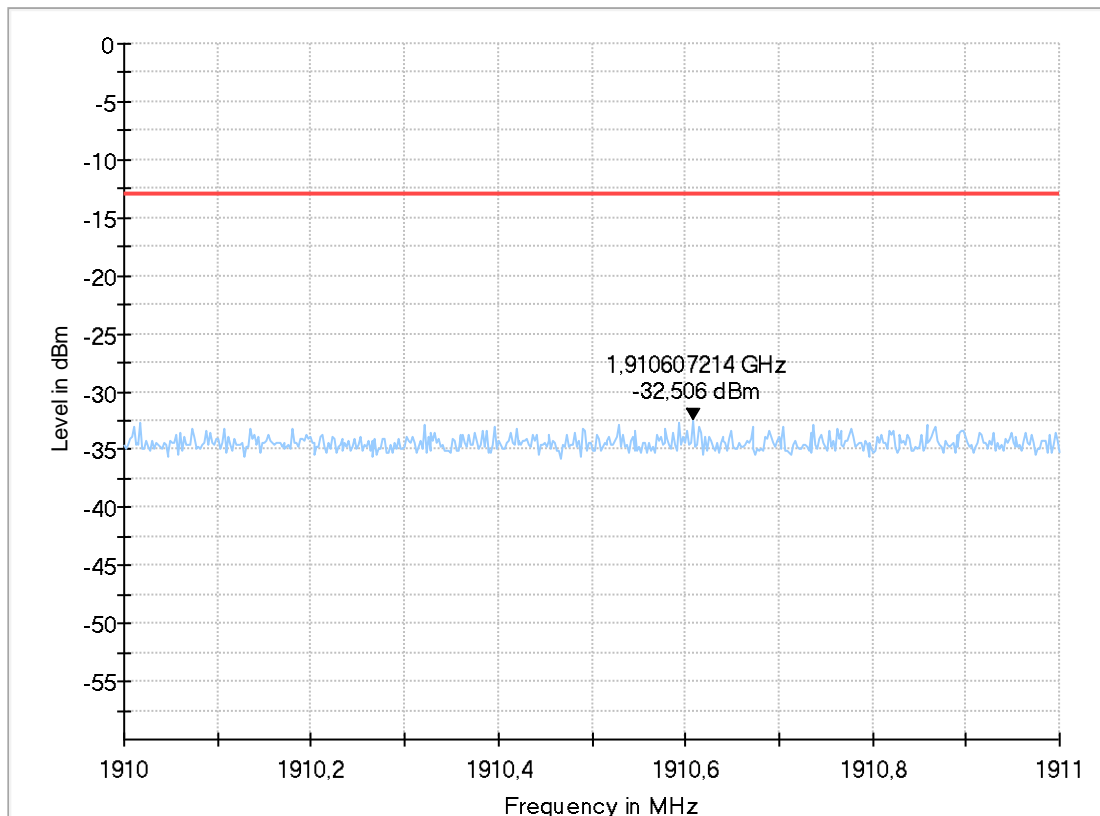
### Common Information

Test Description:	Radiated Band Edge Compliance UMTS-FDDII
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 24.238
Operating Mode:	UMTS_Band 2_CH: 9538
Environmental Conditions:	Humidity: 30%rH; Temperature: 20°C
Operator:	HEI
Comment:	Backup Antenna

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.04b\_RSE\_CH\_9538RMC\_laying

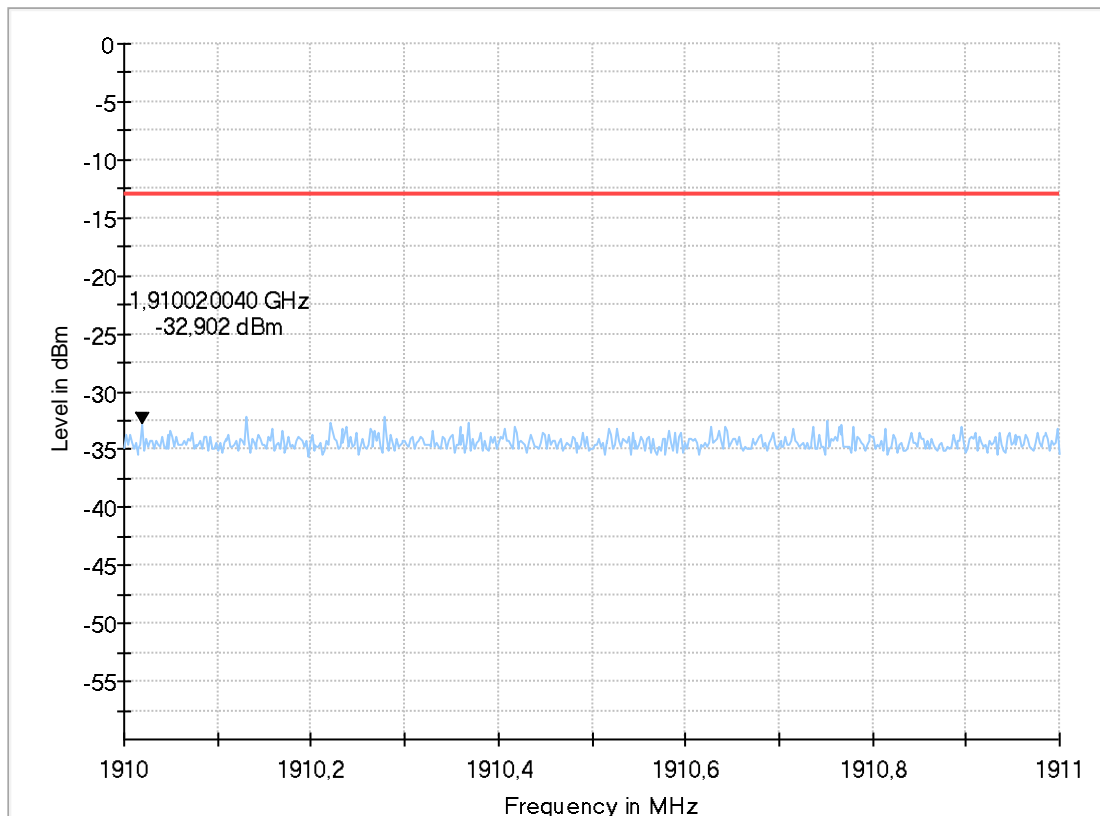
### Common Information

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: 40%rH; Temperature: 20°C
Operator:	TFra

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 1.7. Radiated emissions on FDD Band IV band-edge

### 1.7.1. Radiated emissions on FDD Band IV band-edge - Main Antenna

#### 9.05a\_BE\_R\_Ch1312\_RMC\_Laying

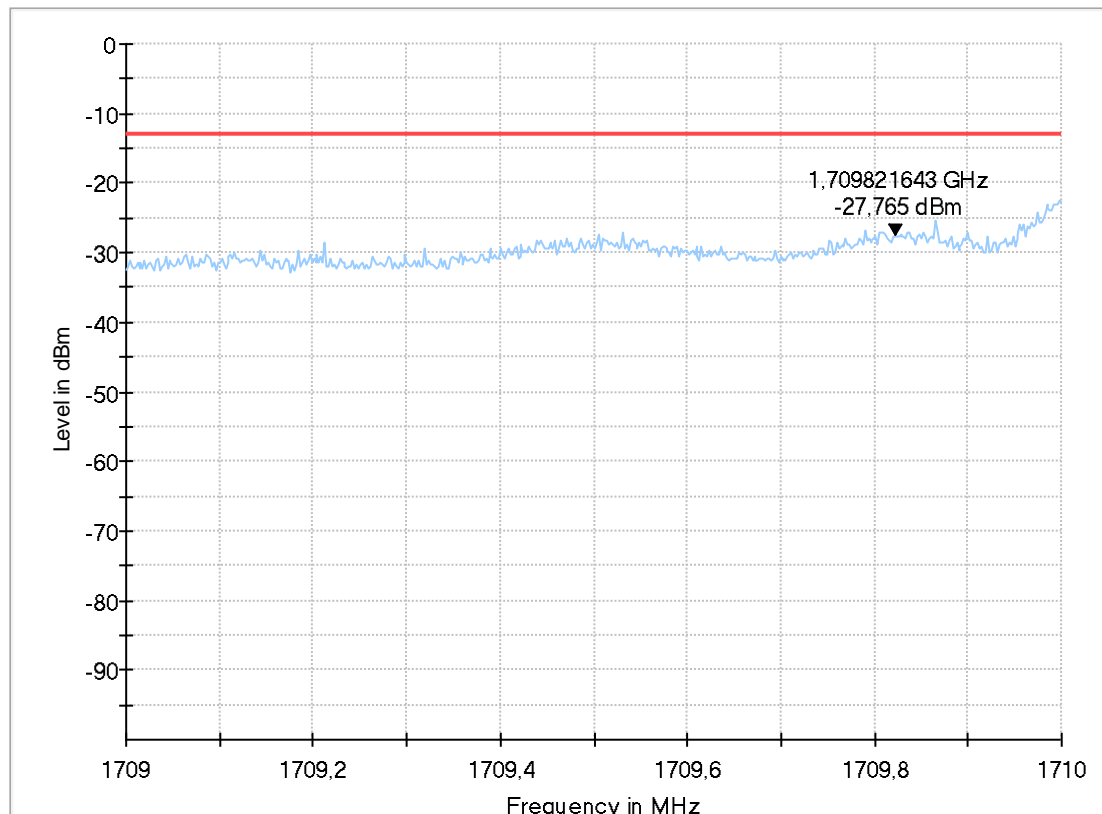
##### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 1312
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFr
Remarks:	EUT - laying

##### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.05b\_BE\_R\_Ch1312\_RMC\_Standing

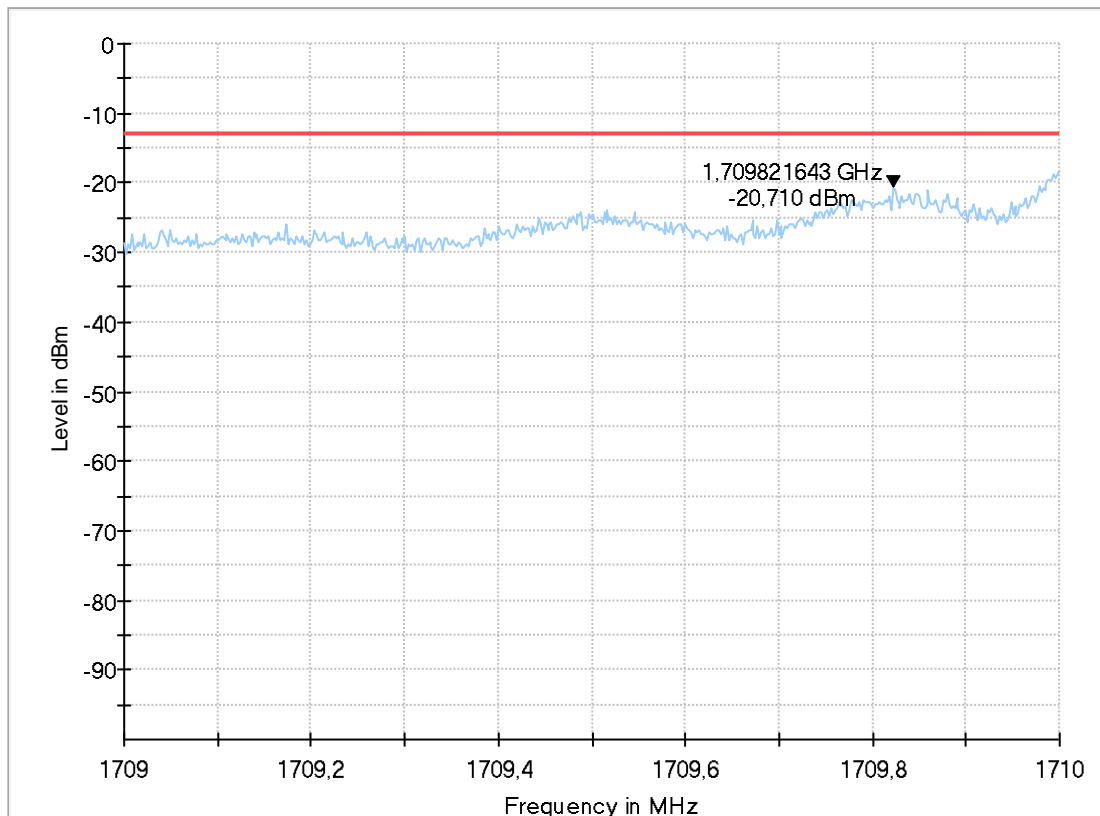
### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 1312
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - Standing

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.06a\_BE\_R\_Ch1513\_RMC\_Laying

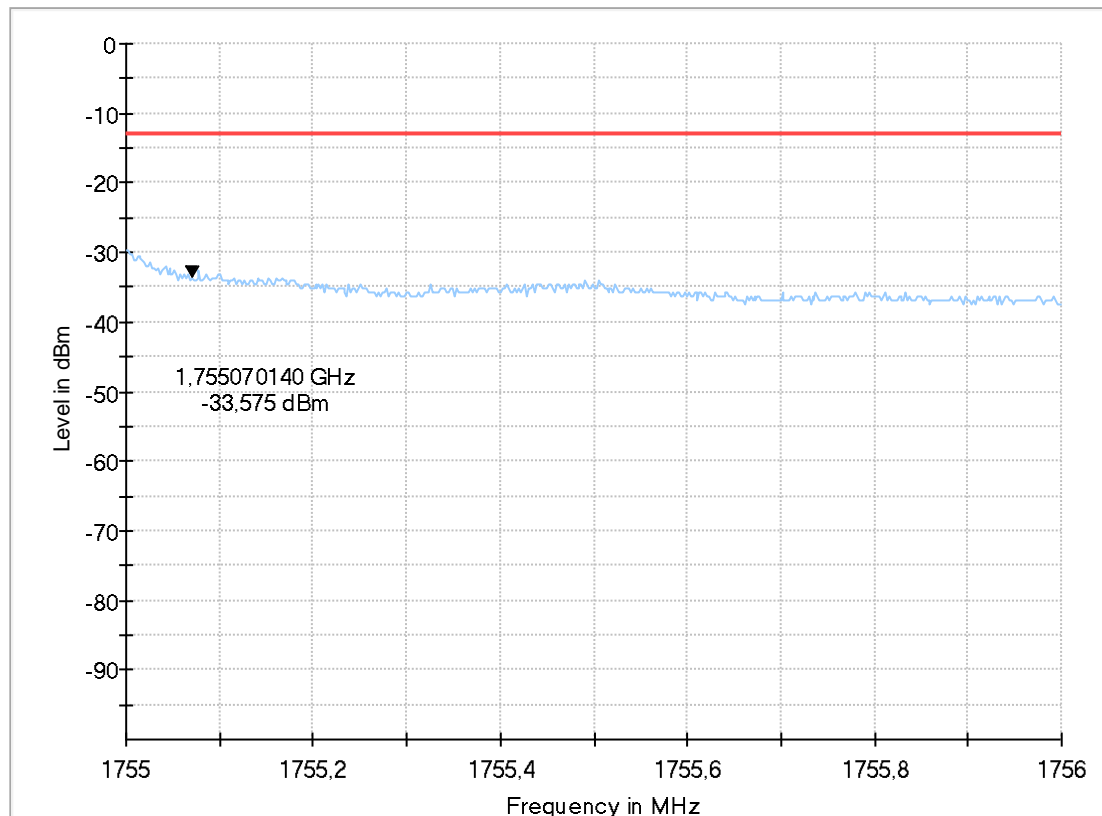
### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 1513
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFr
Remarks:	EUT - laying

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.06b\_BE\_R\_Ch1513\_RMC\_Standing

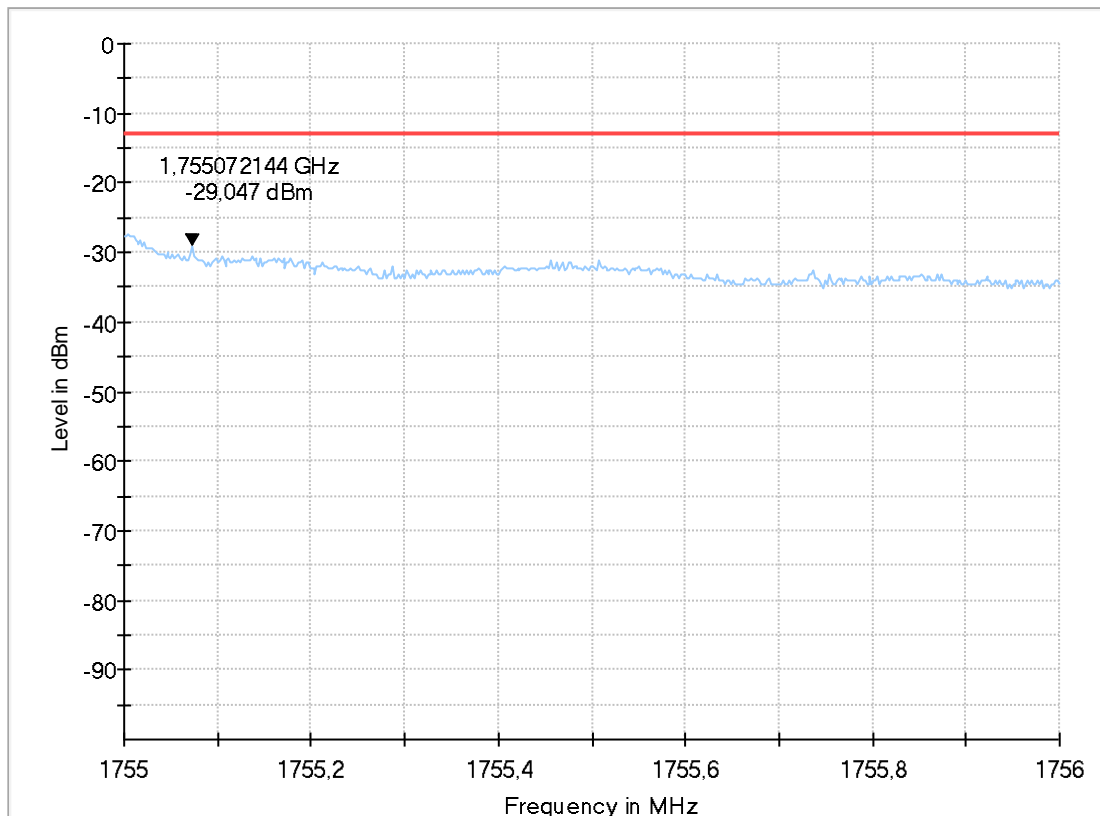
### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDIV
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 22.917(a)
Operating Mode:	UE allocated channel 1513
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - Standing

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



### 1.7.2. Radiated emissions on FDD Band IV band-edge - Backup Antenna

## 9.07a\_BE\_R\_Ch1312\_RMC\_Laying

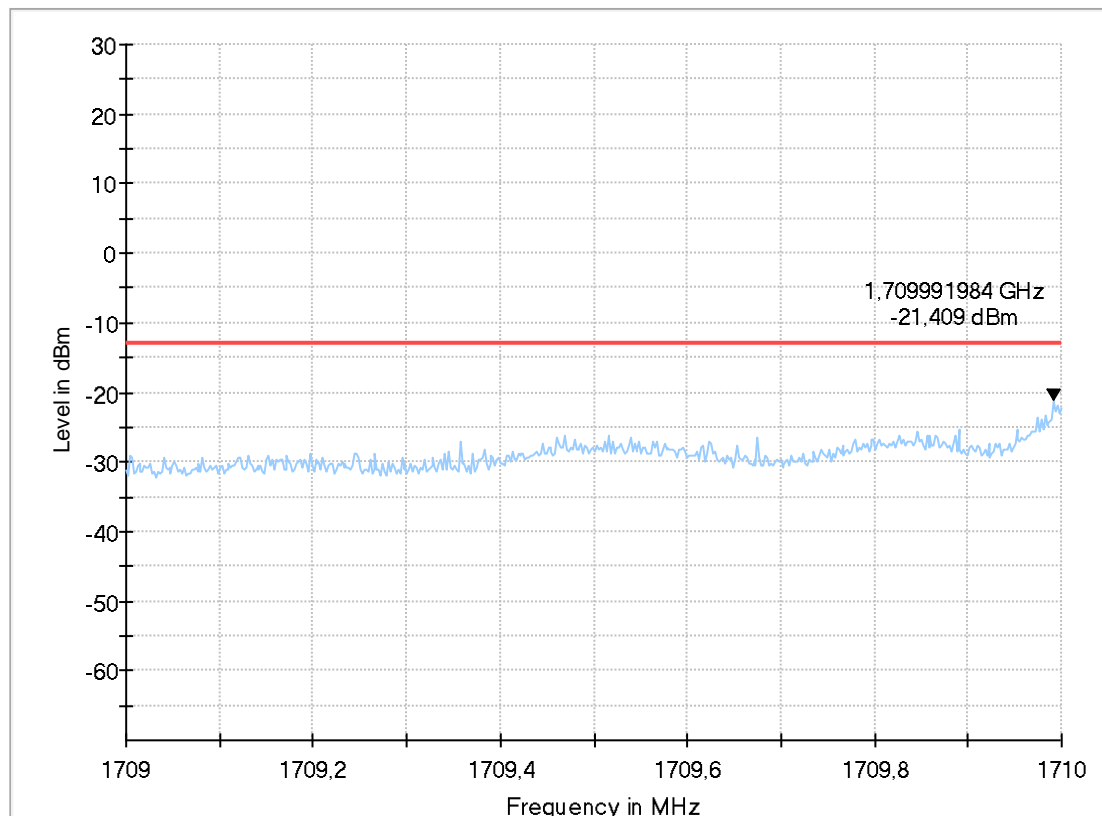
#### Common Information

Test Description:	Radiated Spurious Emissions Part 27
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Operating Mode:	UE allocated channel 1312
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFra

#### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.07a\_BE\_R\_Ch1312\_RMC\_Standing

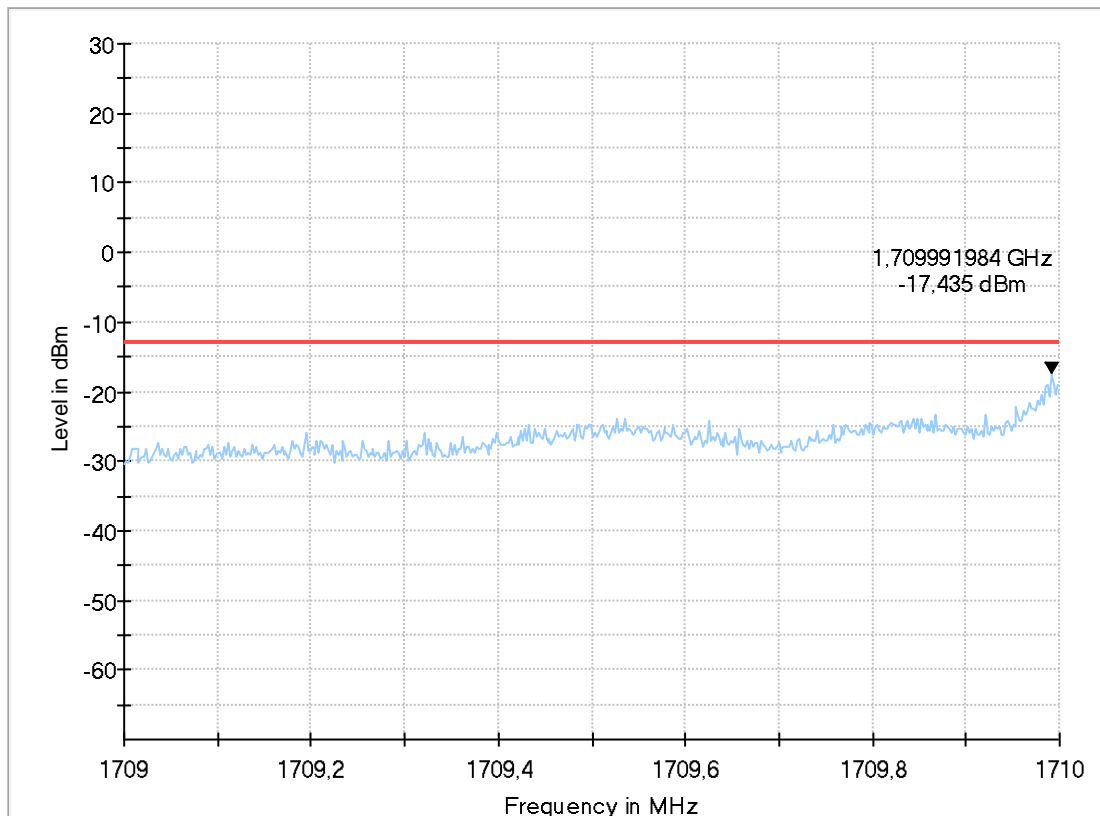
### Common Information

Test Description:	Radiated Spurious Emissions Part 27
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27
Comm. Link:	UMTS FDDIV
Operating Mode:	UE allocated channel 1312
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFra

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum





## 9.08b\_BE\_R\_Ch1513\_RMC\_Laying

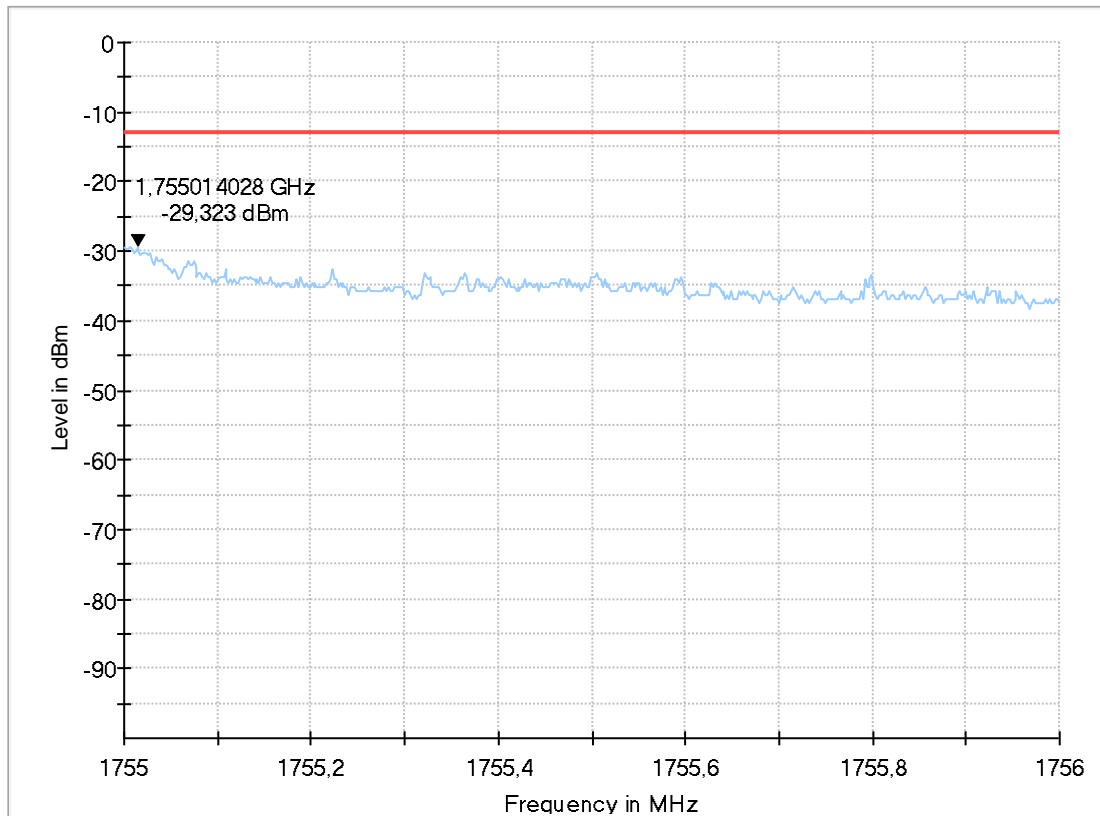
### Common Information

Test Description:	Radiated Spurious Emissions Part 27
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Operating Mode:	UE allocated channel 1513
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFra

### EUT Information

Manufacturer:	peiker acoustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.08b\_BE\_R\_Ch1513\_RMC\_Standing

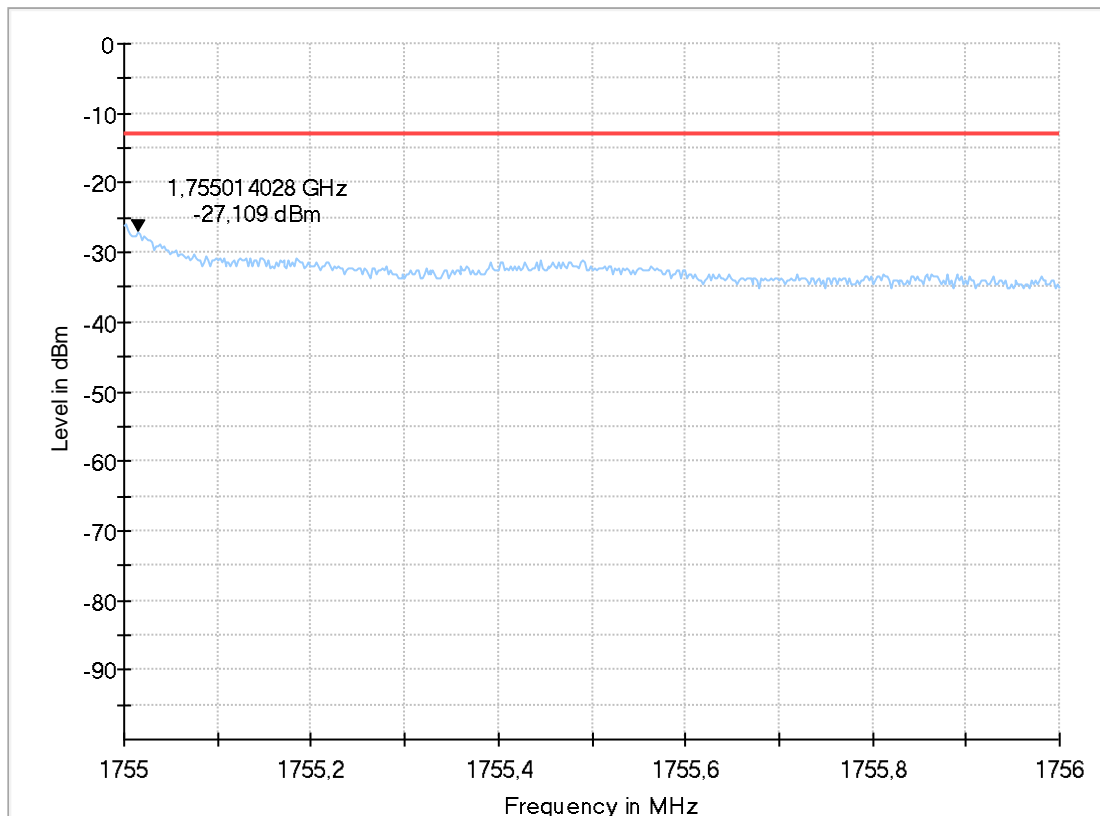
### Common Information

Test Description:	Radiated Spurious Emissions Part 27
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 27
Comm. Link:	UMTS FDDIV
Operating Mode:	UE allocated channel 1513
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFra

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



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

### 1.8.1. Radiated emissions on FDD Band V band-edge - Main Antenna

#### 9.09a\_BE\_R\_Ch4132\_RMC\_Standing

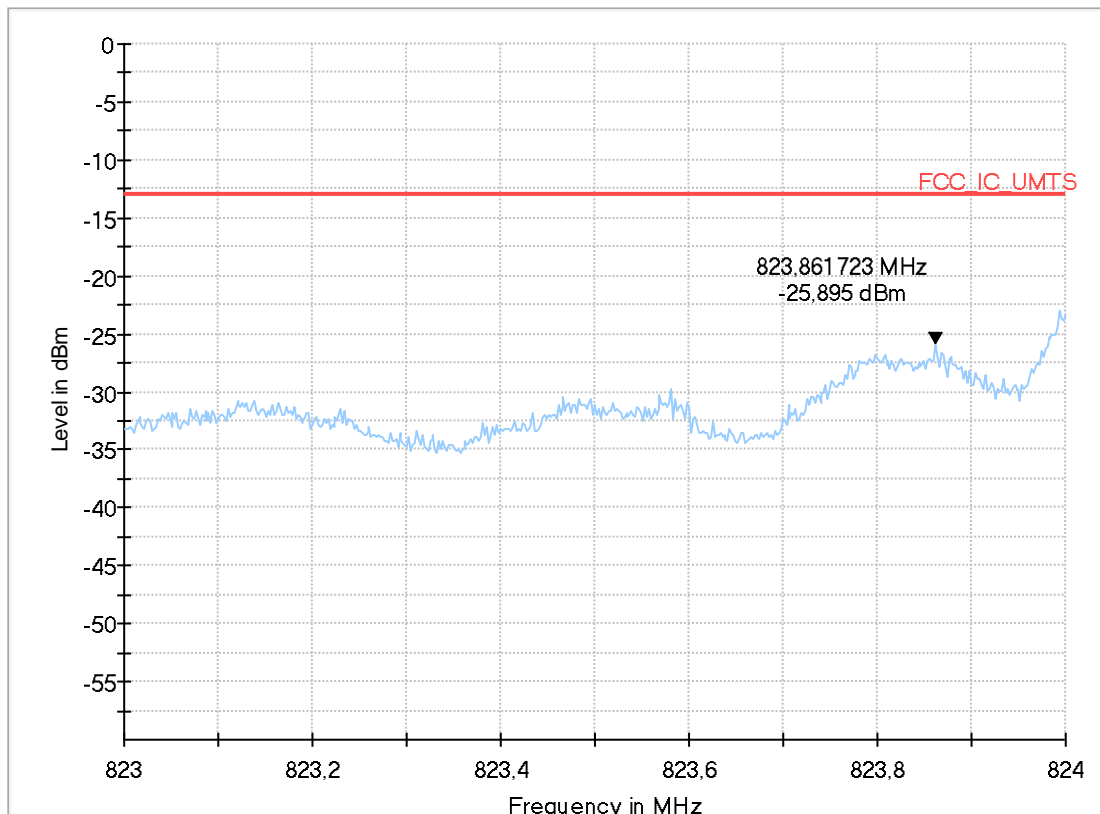
##### Common Information

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: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - laying position

##### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.09b\_BE\_R\_Ch4132\_RMC\_Laying

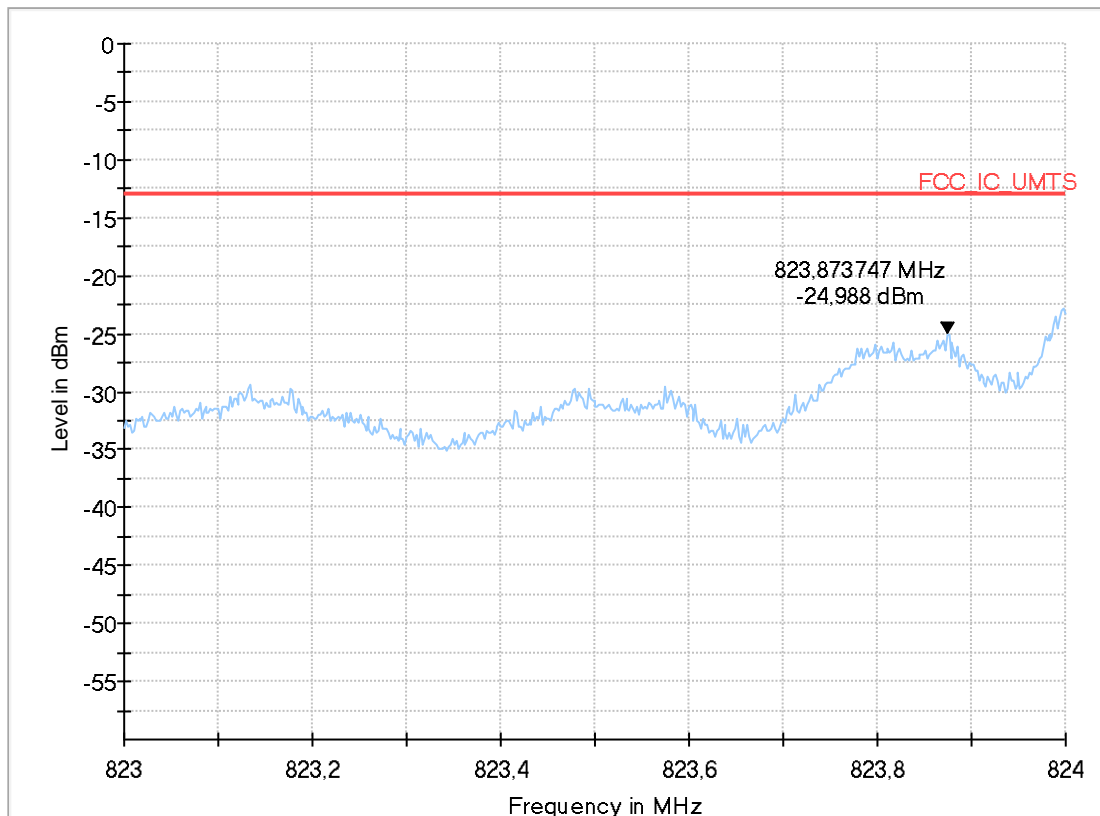
### Common Information

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: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - laying position

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.10a\_BE\_R\_Ch4233\_RMC\_Standing

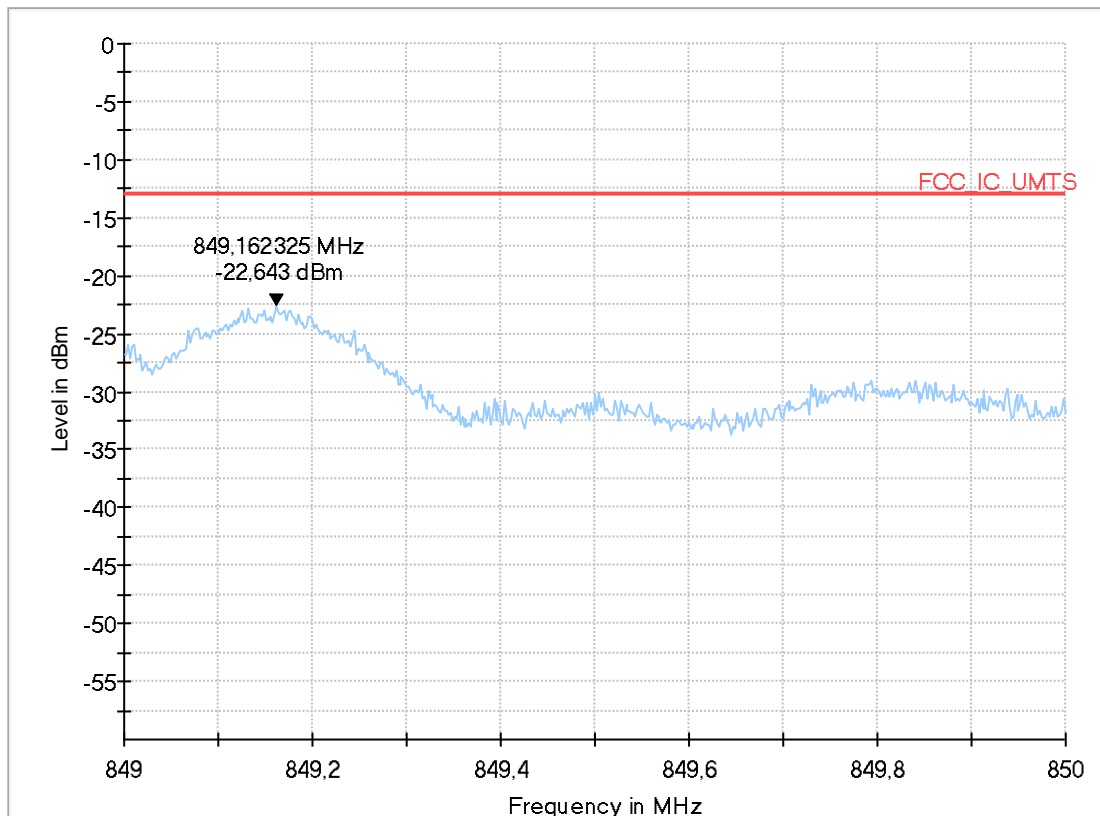
### Common Information

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: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - Standing

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.10b\_BE\_R\_Ch4233\_RMC\_Laying

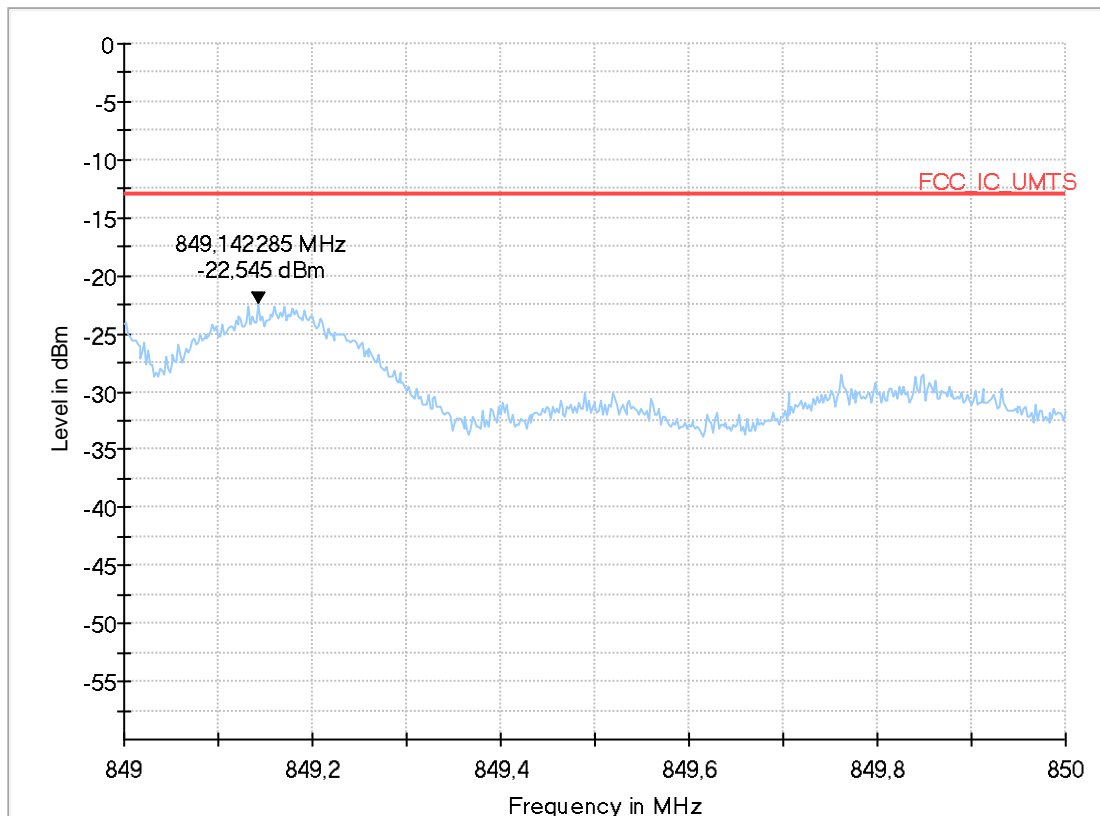
### Common Information

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: 40%rH; Temperature: 20°C
Operator:	HEI
Remarks:	EUT - laying

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 1.8.2. Radiated emissions on FDD Band V band-edge - Backup Antenna 9.11a\_BE\_R\_Ch4132\_RMC\_Standing

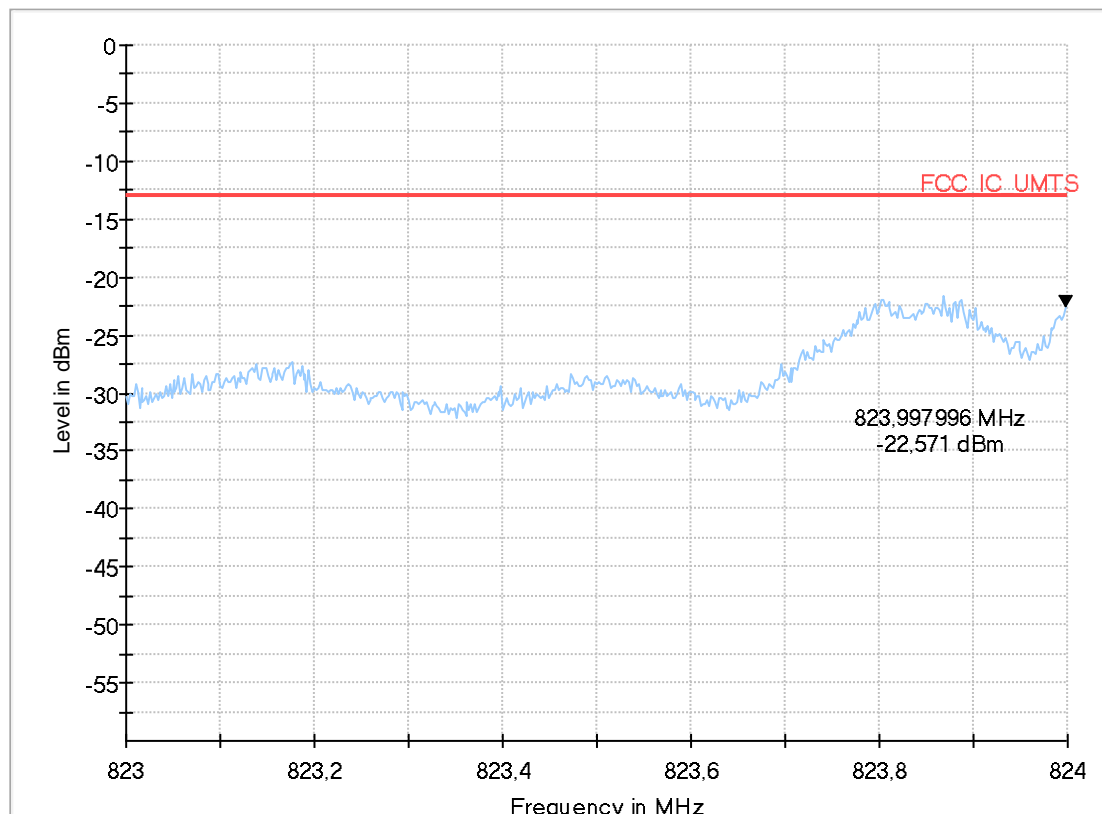
### Common Information

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: 50%rH; Temperature: 20°C
Operator:	
Remarks:	EUT - standing position

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.11b\_BE\_R\_Ch4132\_RMC\_Laying

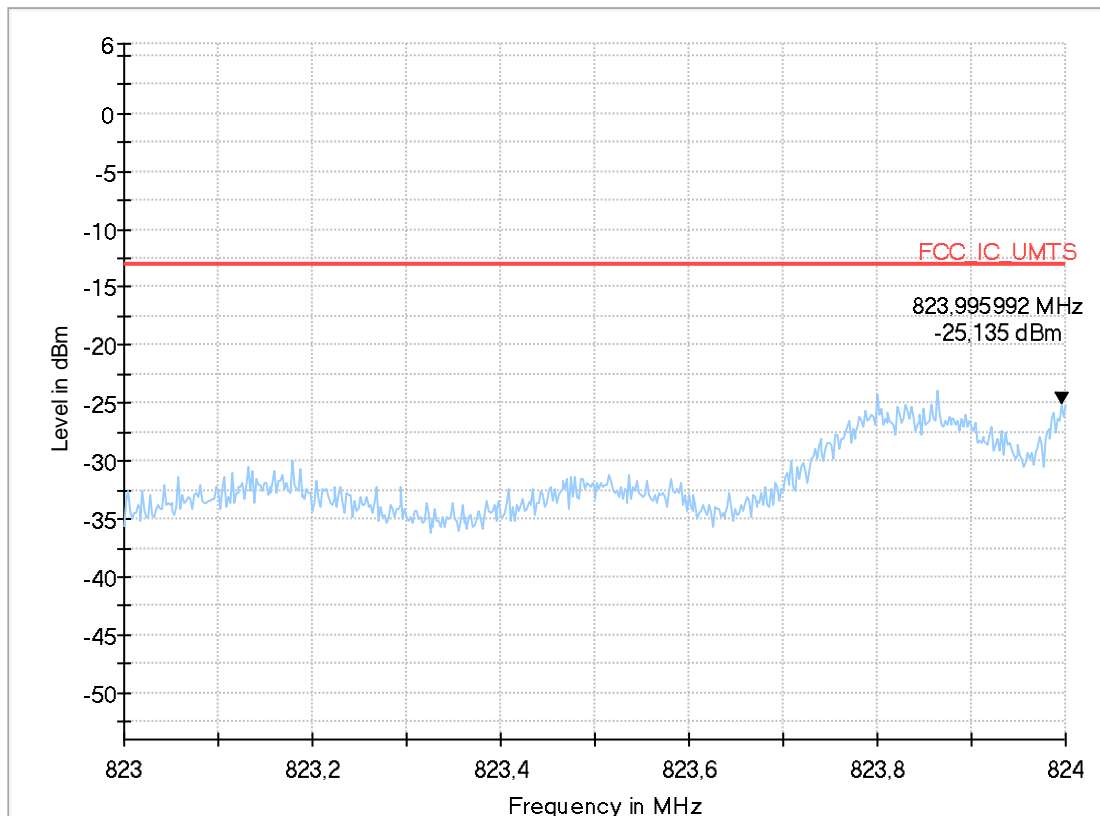
### Common Information

Test Description:	Band-Edge low - Radiated Spurious Emissions UMTS FDDIV
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: 40%rH; Temperature: 20°C
Operator:	TFra
Remarks:	EUT - Laying

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum





## 9.12a\_BE\_R\_Ch4233\_RMC\_Standing

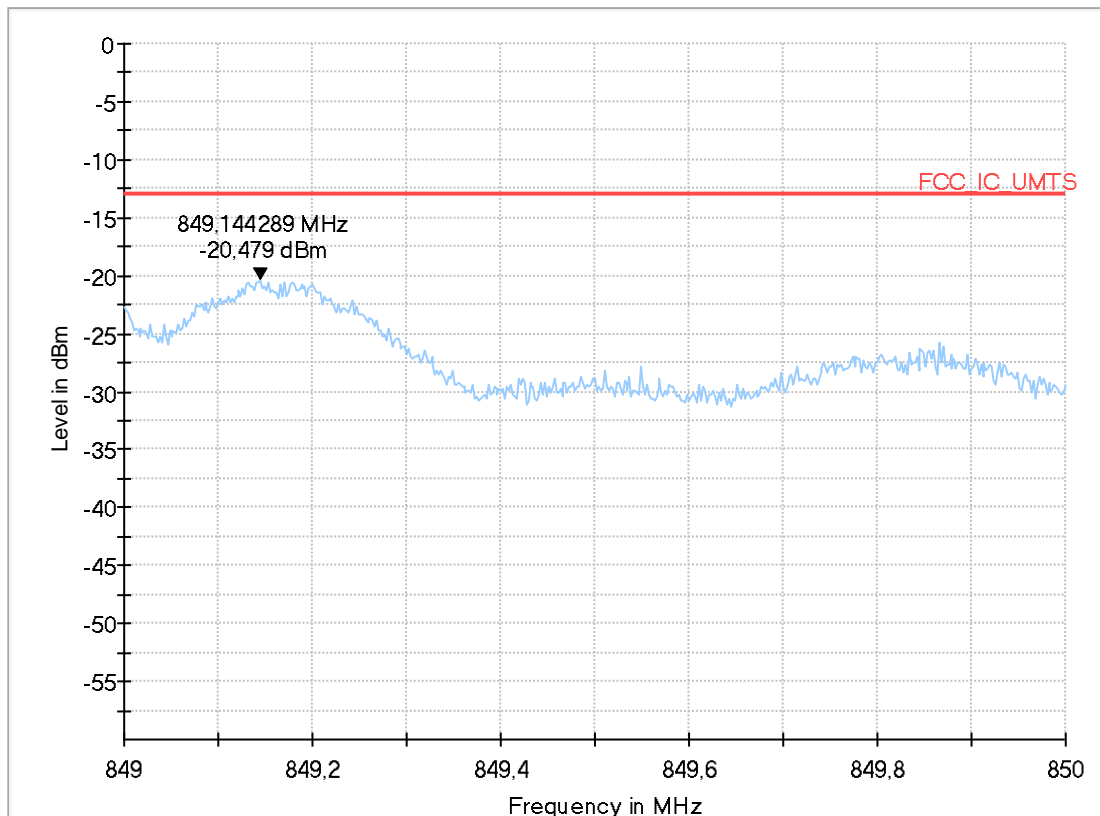
### Common Information

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
Environmental Conditions:	Humidity: 50%rH; Temperature: 20°C
Operator:	Humidity: 50%rH; Temperature: 25°C
Remarks:	Backup Antenna

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum



## 9.12b\_BE\_R\_Ch4233\_RMC\_Laying

### 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
Environmental Conditions:	Humidity: 40%rH; Temperature: 20°C
Operator:	TFra
Remarks:	EUT - Laying

### EUT Information

Manufacturer:	peiker acustic GmbH & Co. KG a valeo Brand
EUT:	ATM-02-US-T1 (Sample 1010)
-----	
HW version:	103.004.004
SW version:	001.009.015
Serial number:	4326
Connected Interfaces:	Antenna (65206826326-03) + EMC Control Unit
Power Supply:	12VDC
Comments:	-

Full Spectrum

