

Annex 1: Measurement diagrams to  
**PARTIAL TEST REPORT**  
No.: 18-1-0210201T04a

According to:

**FCC Regulations**  
Part 15.205, Part 15.209, Part 15.247

**ISED-Regulations**  
RSS-Gen, Issue 5, RSS-247, Issue 2




for

Miele & Cie. KG

Wireless Food Probe System  
(Host:HR1936-2)

Contains FCC ID: SSVNAEPI02

Contains ISED: 5669B-NAEPI02

Laboratory Accreditation and Listings	
  Deutsche Akkreditierungsstelle D-PL-12047-01-01 D-PL-12047-01-03 D-PL-12047-01-04	
Accredited EMC-Test Laboratory	
 <b>WiFi</b> ALLIANCE	<b>ctia</b> Authorized <sup>TM</sup> Test Lab Lab Code: 20011130-00
accredited according to DIN EN ISO/IEC 17025	
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## TABLE OF CONTENTS:

<b>1. CONDUCTED EMISSIONS ON AC-POWER LINES .....</b>	<b>3</b>
<b>2. CONDUCTED MEASUREMENTS .....</b>	<b>4</b>
2.1. Conducted Power .....	4
2.2. Time of Channel Occupancy.....	7
<b>3. RADIATED FIELD STRENGTH MEASUREMENTS.....</b>	<b>13</b>
3.1. Radiated Field Strength Emissions - 9kHz to 30MHz.....	13
3.2. Radiated Field Strength Emissions - 30MHz to 1GHz.....	14
3.3. Radiated Field Strength Emissions - 1GHz to 18GHz .....	15
3.4. Radiated Field Strength Emissions - 18GHz to 26.5GHz .....	17
3.5. Radiated Band-Edge Measurements .....	18

# 1. Conducted emissions on AC-Power lines

## 1.01

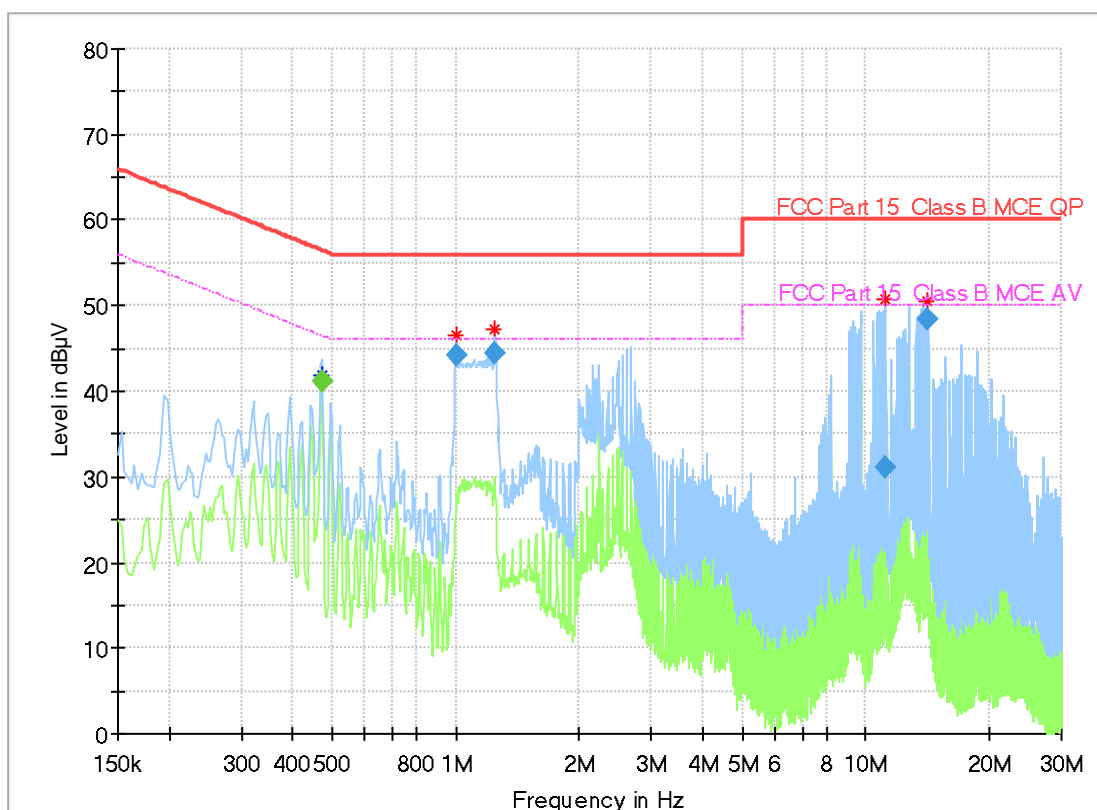
### Common Information

Test Description:	Conducted Voltage Measurement Class B
Test Site & Location:	Conducted Emission, CETECOM GmbH Düsseldorf
Test Software:	R&S EMC32 v9.15
Test Specification:	FCC 15.207, RSS 247
Operating Mode:	Oven heating up /Hopping Mode
Measured on line:	120V AC N/L1
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions:	Temperature: 20.5°C; Pressure: 997hPa; Humidity: 45%
Operator:	MAh

### EUT Information

Manufacturer:	Miele & Cie KG
EUT Model:	HR1936-2
HW:	Pre Production B0 Series
SW:	Pre Production B0 Series
Serial Nr.:	153703168

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	PE	Corr. (dB)
0.471000	---	41.27	46.50	5.23	1000.0	9.000	N	GND	0.1
1.002000	44.14	---	56.00	11.86	1000.0	9.000	N	GND	0.2
1.245000	44.46	---	56.00	11.54	1000.0	9.000	L1	GND	0.2
11.199000	31.09	---	60.00	28.91	1000.0	9.000	N	GND	0.6
14.196000	48.36	---	60.00	11.64	1000.0	9.000	L1	GND	0.9

## 2. Conducted Measurements

### 2.1. Conducted Power

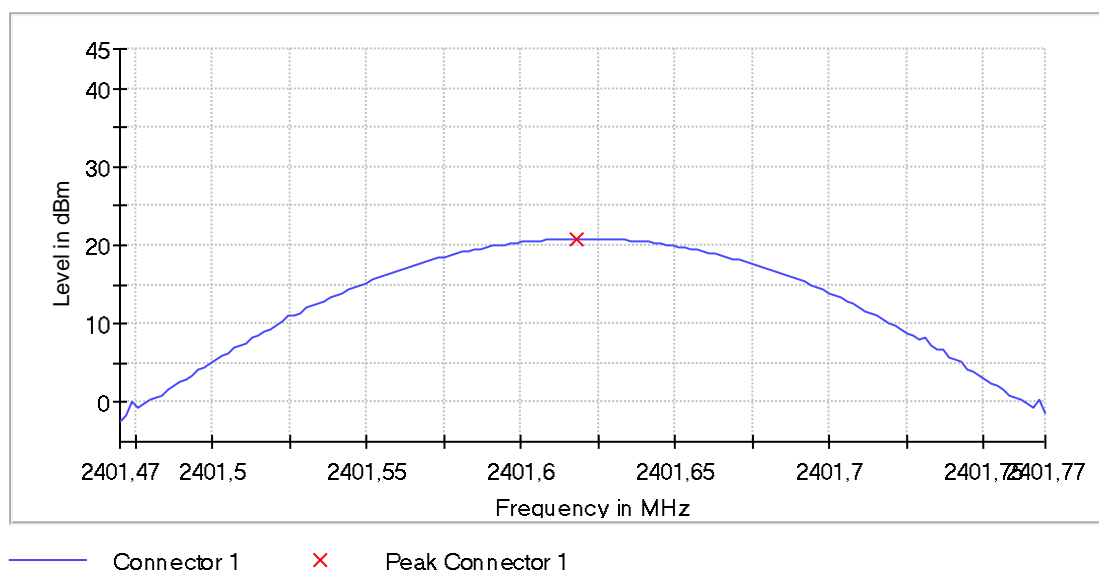
#### Peak output power (Sweep) (2401,62 MHz; 20,000 dBm; 133 kHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.  
Expanded Combined Uncertainty of absolute Level Measurement (K=2) < 1 dB

### Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2401.620000	20.8	21.0	PASS



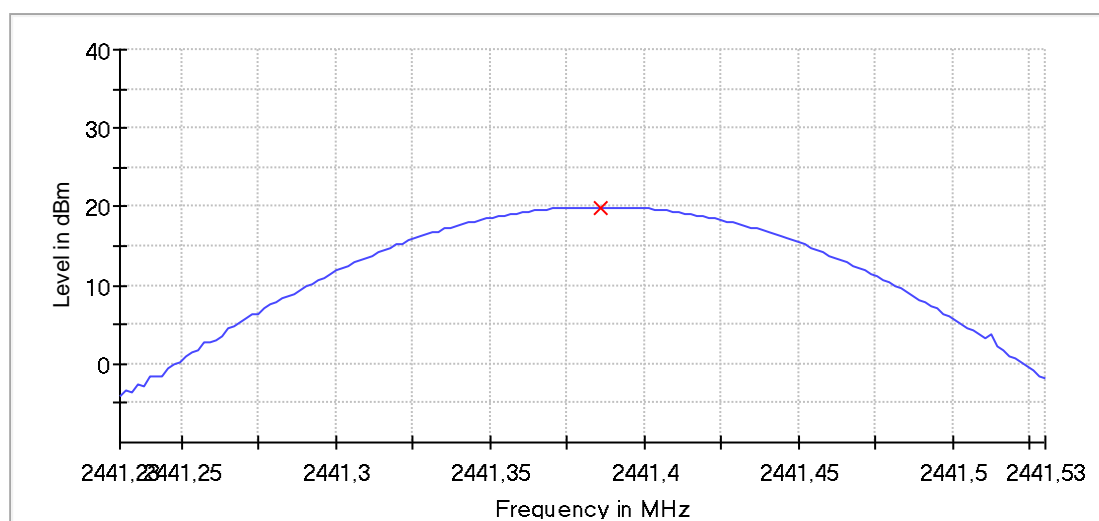
### Peak output power (Sweep) (2441,38 MHz; 20,000 dBm; 133 kHz; Test Mode)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.  
Expanded Combined Uncertainty of absolute Level Measurement (K=2) < 1 dB

### Result

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2441.380000	20.0	21.0	PASS



— Connector 1      × Peak Connector 1

Peak Power 1

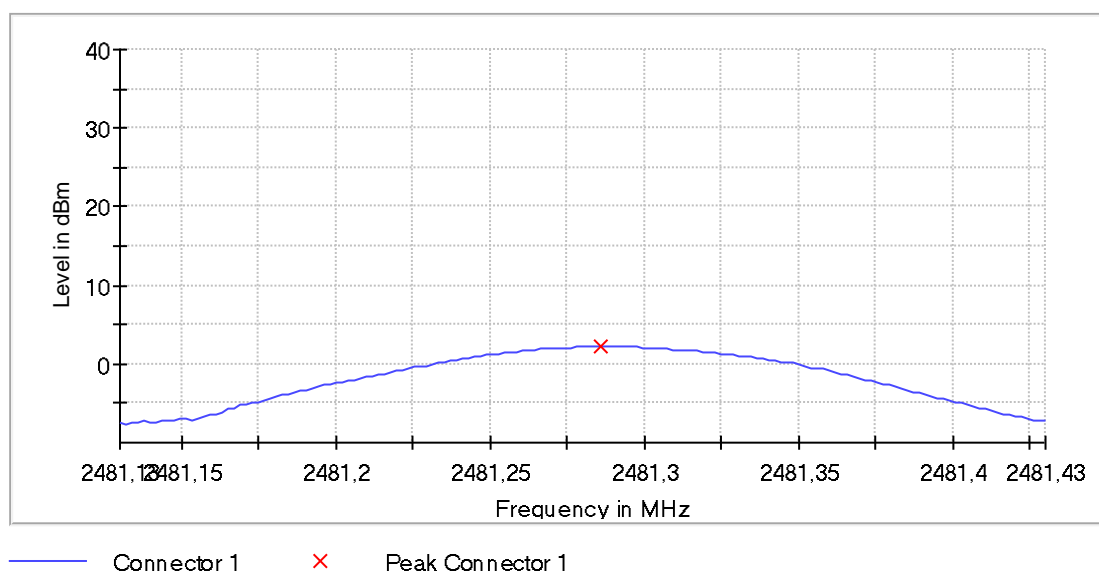
**Peak output power (Sweep) (2481,28 MHz; 20,000 dBm; 133 kHz; Test Mode)**

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.  
Expanded Combined Uncertainty of absolute Level Measurement (K=2) < 1 dB

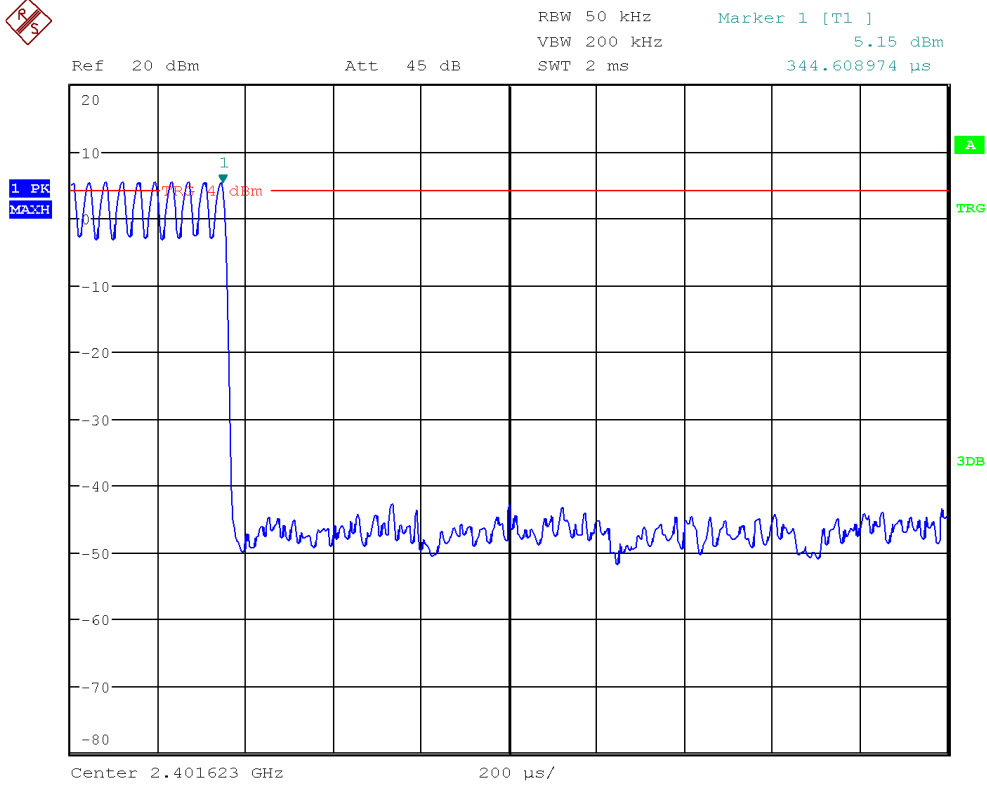
**Result**

DUT Frequency (MHz)	Peak Power (dBm)	Limit Max (dBm)	Result
2481.280000	2.2	21.0	PASS

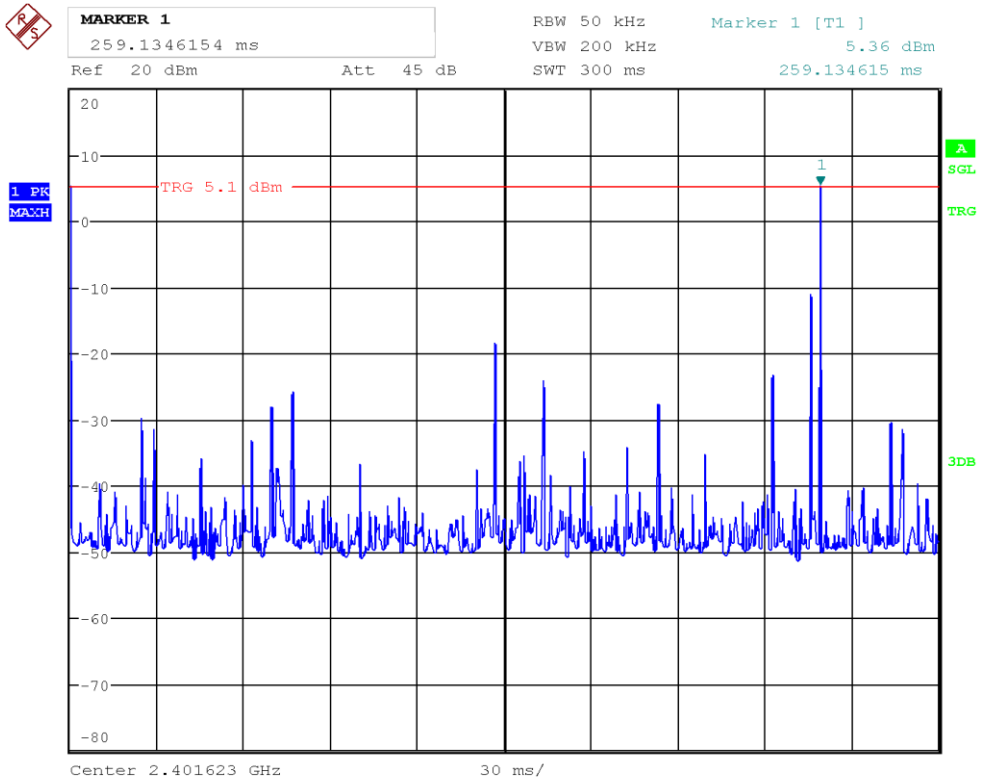


## 2.2. Time of Channel Occupancy

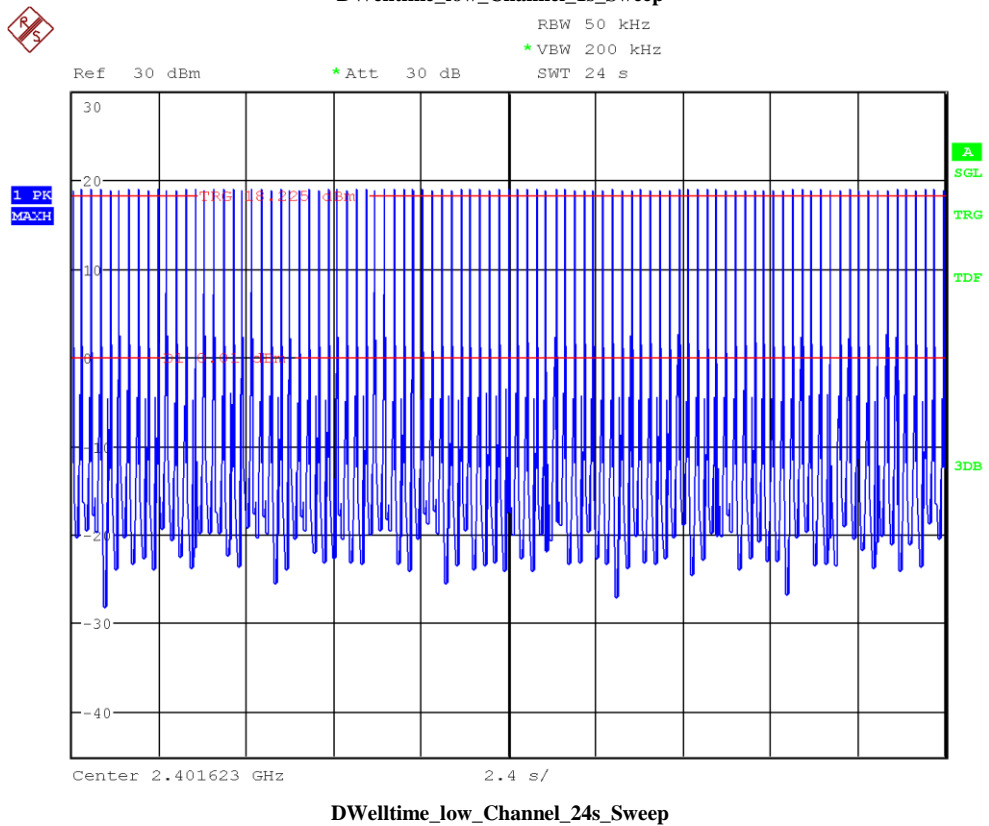
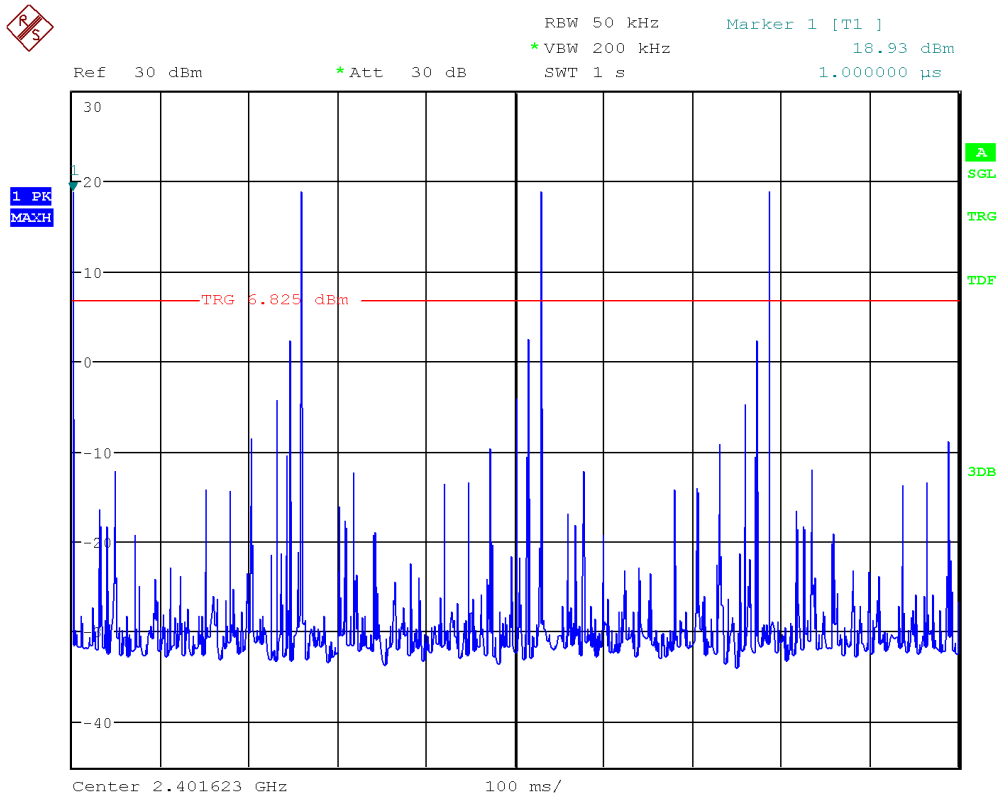
### 2.2.1. Low Channel



**DWelltime\_low Channel**

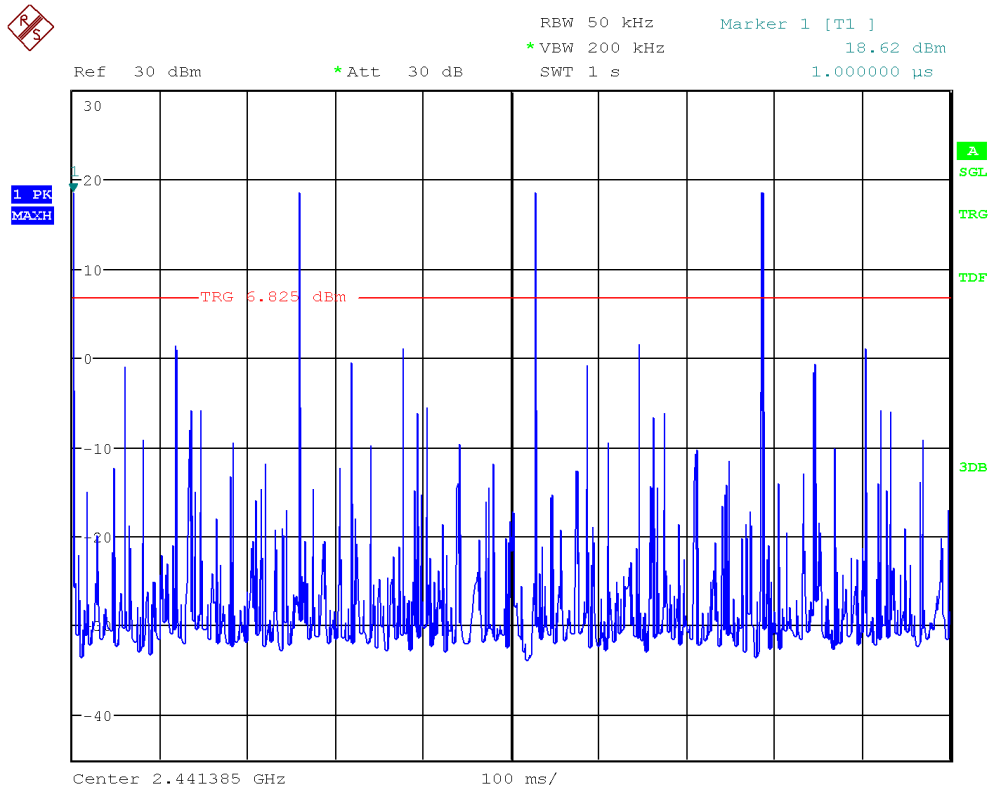


**DWelltime\_low Channel\_300ms Sweep**

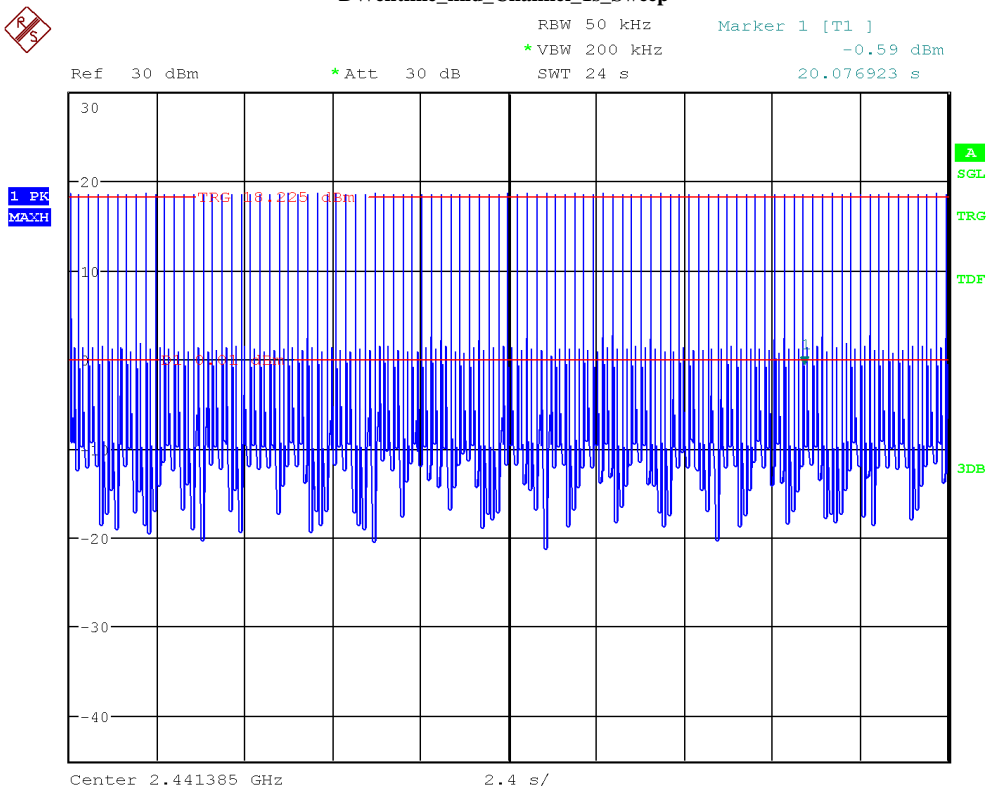






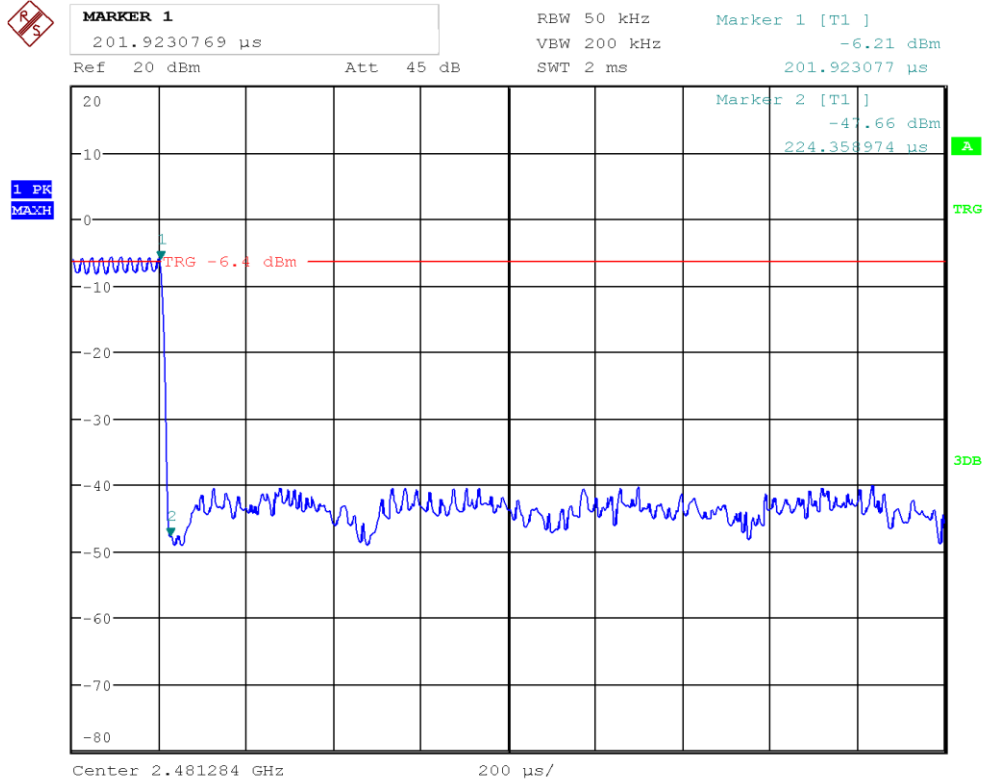


**DWelltime\_mid\_Channel\_1s\_Sweep**

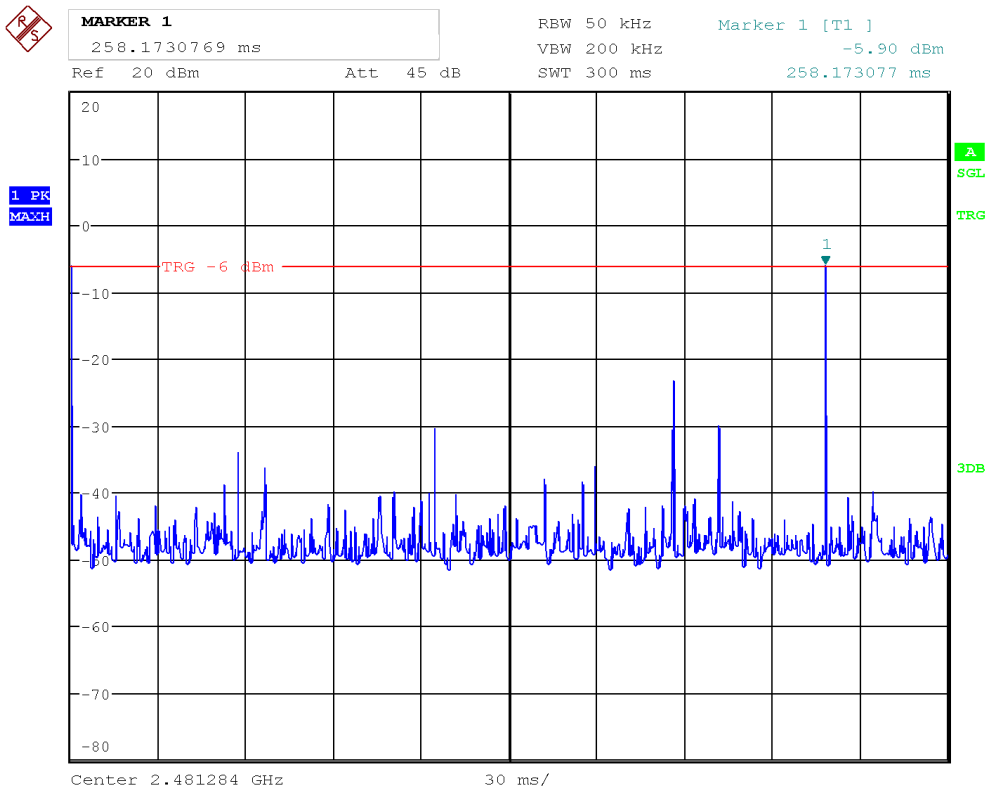


**DWelltime\_mid\_Channel\_24s\_Sweep**

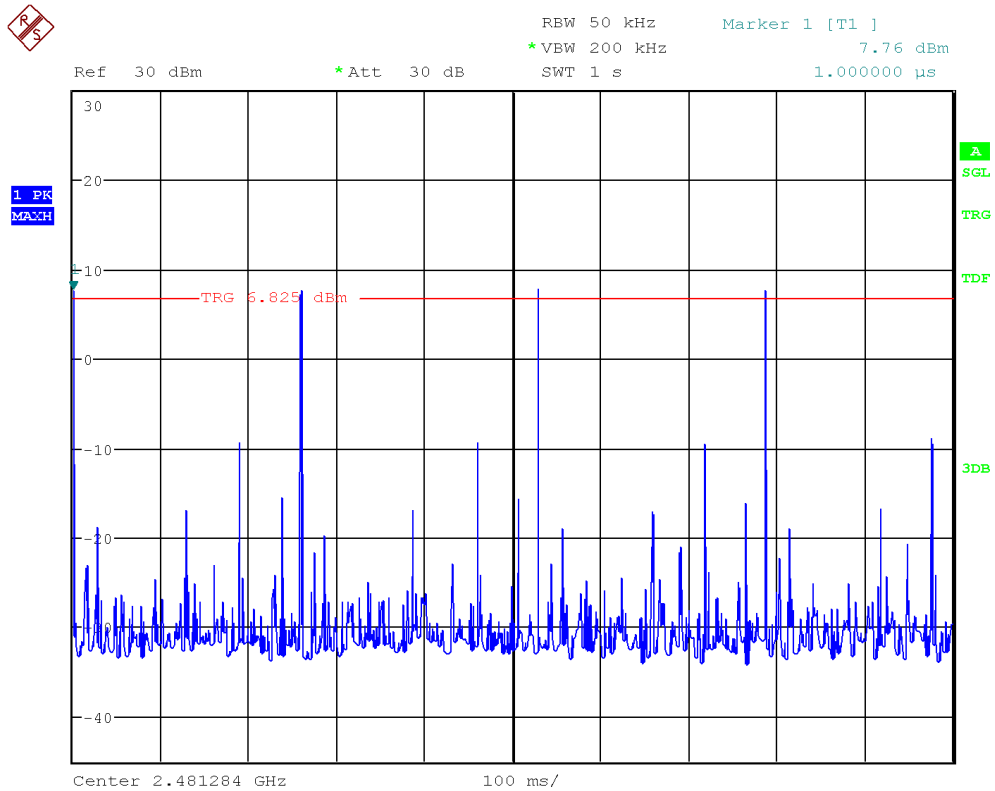
### 2.2.3. High Channel



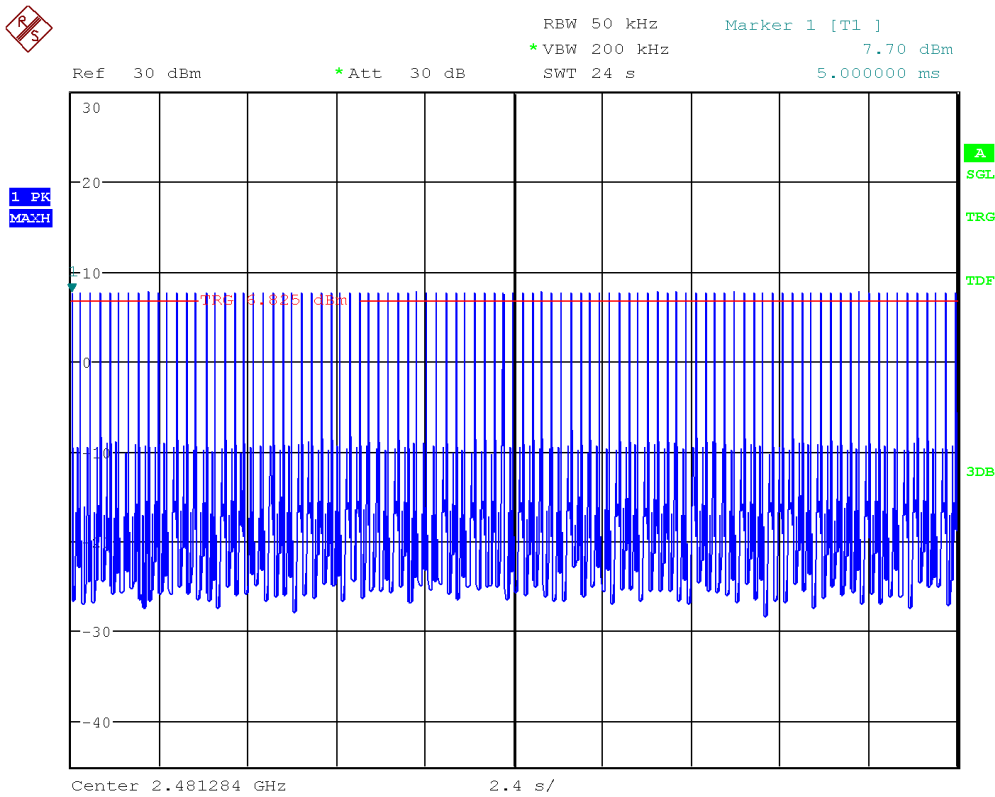
DWelltime\_high Channel



DWelltime\_high Channel\_300ms\_Sweep



DWelltime\_highChannel\_1s\_Sweep



DWelltime\_highChannel\_24s\_Sweep

### 3. Radiated Field Strength Measurements

#### 3.1. Radiated Field Strength Emissions - 9kHz to 30MHz

##### 2.01

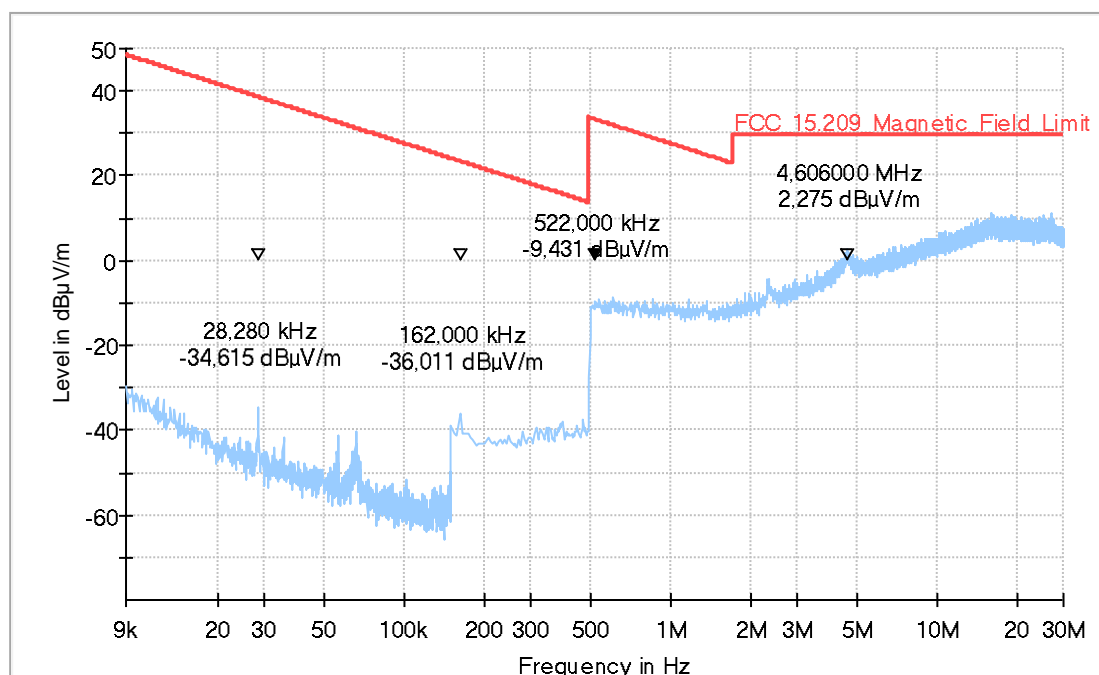
#### Common Information

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
Test Location	Cetecom GmbH Düsseldorf
Version of Testsoftware:	EMC32 V9.25.0
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	MAh
Operating conditions:	Oven heating up, TX-on, Ch low
Power during tests:	120V AC

#### EUT Information

Manufacturer:	Miele & Cie KG
EUT Model:	HR1936-2
HW:	Pre Production B0 Series
SW:	Pre Production B0 Series
Serial Nr.:	153703168

Full Spectrum



◆ Preview Result 1-PK+ [Preview Result 1.Result 1]

### 3.2. Radiated Field Strength Emissions - 30MHz to 1GHz

#### 3.01

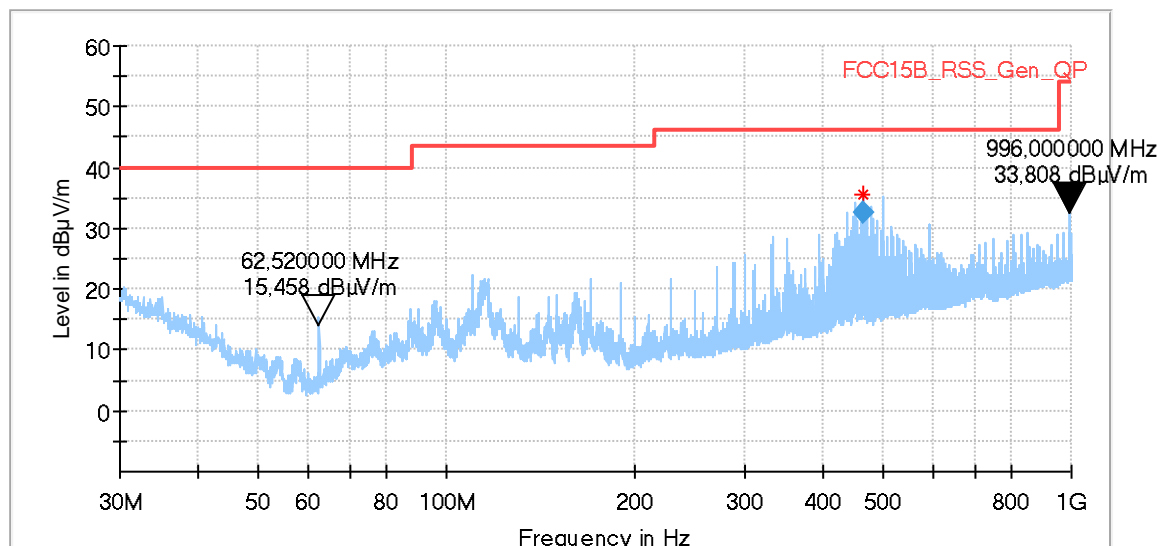
##### Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Chamber 2 (SAC5) with 3m measurement distance
Test location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V9.25.0
Test specification:	FCC15.109, class B; RSS-Gen.: Issue 4
Measured sides of EUT:	front, right, rear, left
Environmental Conditions:	Temperature: 20.5°C; Pressure: 997hPa; Humidity: 45%
Operator:	MAh
Operating conditions:	Oven heating up, TX-on, Ch low
Power during tests:	120V AC

##### EUT Information

Manufacturer:	Miele & Cie KG
EUT Model:	HR1936-2
HW:	Pre Production B0 Series
SW:	Pre Production B0 Series
Serial Nr.:	153703168

Full Spectrum



◆ Preview Result 1-PK+ [Preview Result 1.Result 1]

##### Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
465.000000	32.69	46.00	13.31	120.000	104.0	V	2.0	16.9

### 3.3. Radiated Field Strength Emissions - 1GHz to 18GHz

#### 4.01a

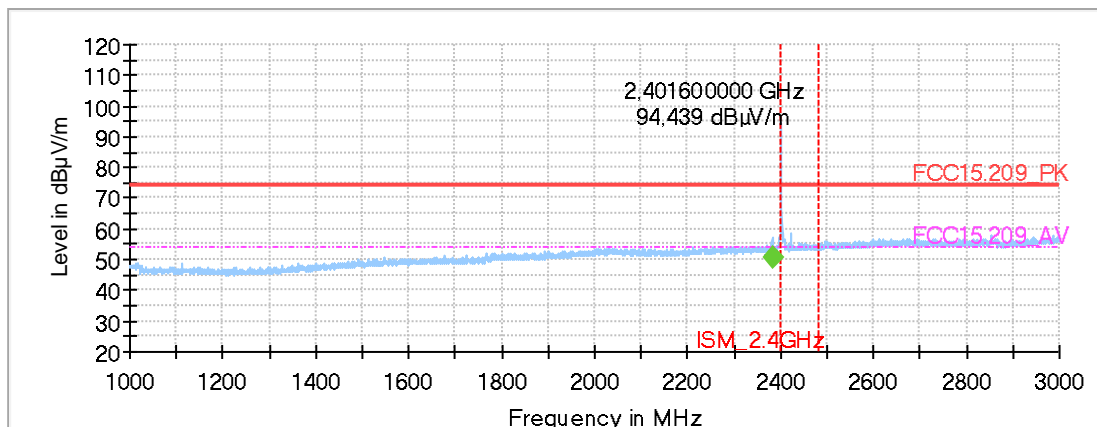
##### Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Chamber 2 (SAC5) with 3m measurement distance
Test location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V9.25.0
Test specification:	FCC15.209 / RSS-Gen Issue 5
Measured sides of EUT:	front, right, rear, left Height 100-250
Used filter:	none up to 3GHz / High Pass from 3GHz
Environmental Conditions:	Temperature: 20.5°C; Pressure: 997hPa; Humidity: 45%
Operator:	MAh
Operating conditions:	Oven heating up, TX-on, Ch low
Power during tests:	120V AC

##### EUT Information

Manufacturer:	Miele & Cie KG
EUT Model:	HR1936-2
HW:	Pre Production B0 Series
SW:	Pre Production B0 Series
Serial Nr.:	153703168

Full Spectrum



- \* Preview Result 2-AVG [Preview Result 2.Result 2]
- Preview Result 1-PK+ [Preview Result 1.Result 1]
- Critical\_Freqs AVG [Critical\_Freqs.Result 5]
- - - Critical\_Freqs PK+ [Critical\_Freqs.Result 4]
- ◆ FCC15.209\_PK [..\02 EMI FCC\FCC\_Part15\FCC\_Part15.209\]
- ◆ FCC15.209\_AV [..\02 EMI FCC\FCC\_Part15\FCC\_Part15.209\]

##### Final Result Peak

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Corr. (dB)
2381.800000	50.67	74.00	23.33	100.0	1000.000	111.0	34.0

##### Final Result Average

Frequency (MHz)	MaxPeak (dBµV/m)	DC (dB)	Avg (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2381.800	50.67	28.76	21.91	54.00	32.09

### 4.01b

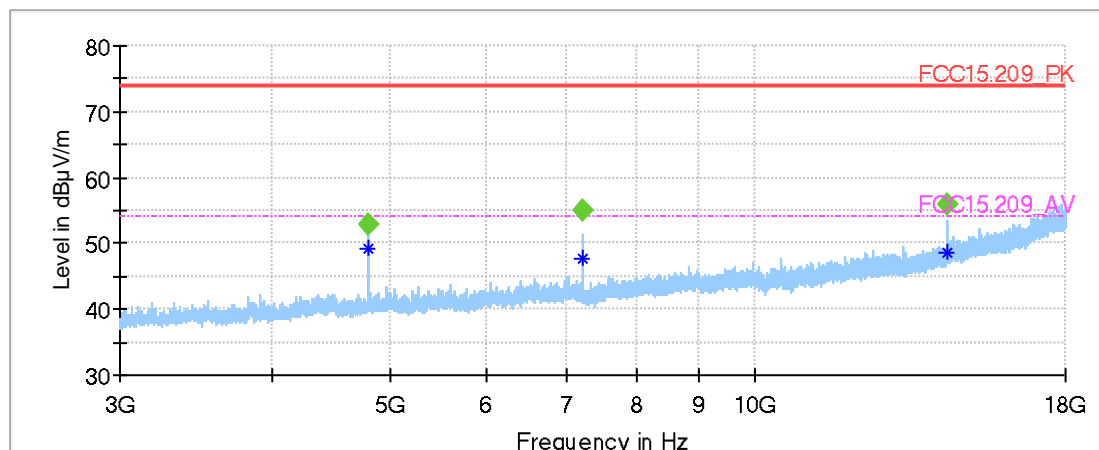
#### Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Chamber 2 (SAC5) with 3m measurement distance
Test location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V9.25.0
Test specification:	FCC15.209 / RSS-Gen Issue 5
Measured sides of EUT:	front, right, rear, left
Used filter:	none up to 3GHz / High Pass from 3GHz
Environmental Conditions:	Temperature: 20.5°C; Pressure: 997hPa; Humidity: 45%
Operator:	MAh
Operating conditions:	Oven heating up, TX-on, Ch low
Power during tests:	120V AC

#### EUT Information

Manufacturer:	Miele & Cie KG
EUT Model:	HR1936-2
HW:	Pre Production B0 Series
SW:	Pre Production B0 Series
Serial Nr.:	153703168

Full Spectrum



- \* Preview Result 2-AVG [Preview Result 2.Result 2]
- Preview Result 1-PK+ [Preview Result 1.Result 1]
- - - Critical\_Freqs AVG [Critical\_Freqs.Result 5]
- ◆ Critical\_Freqs PK+ [Critical\_Freqs.Result:4]
- ◆ FCC15.209\_PK [.\02 EMI FCC\FCC\_Part15\FCC\_Part15.209]

#### Final Result Peak

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
4803.235000	52.89	74.00	21,11	100.0	1000.000	193.0	V	-44.0	-15.5
7204.851667	55.12	74.00	18,88	100.0	1000.000	158.0	V	108.0	-10.9
14409.703333	55.83	74.00	18,17	100.0	1000.000	100.0	H	110.0	3.9

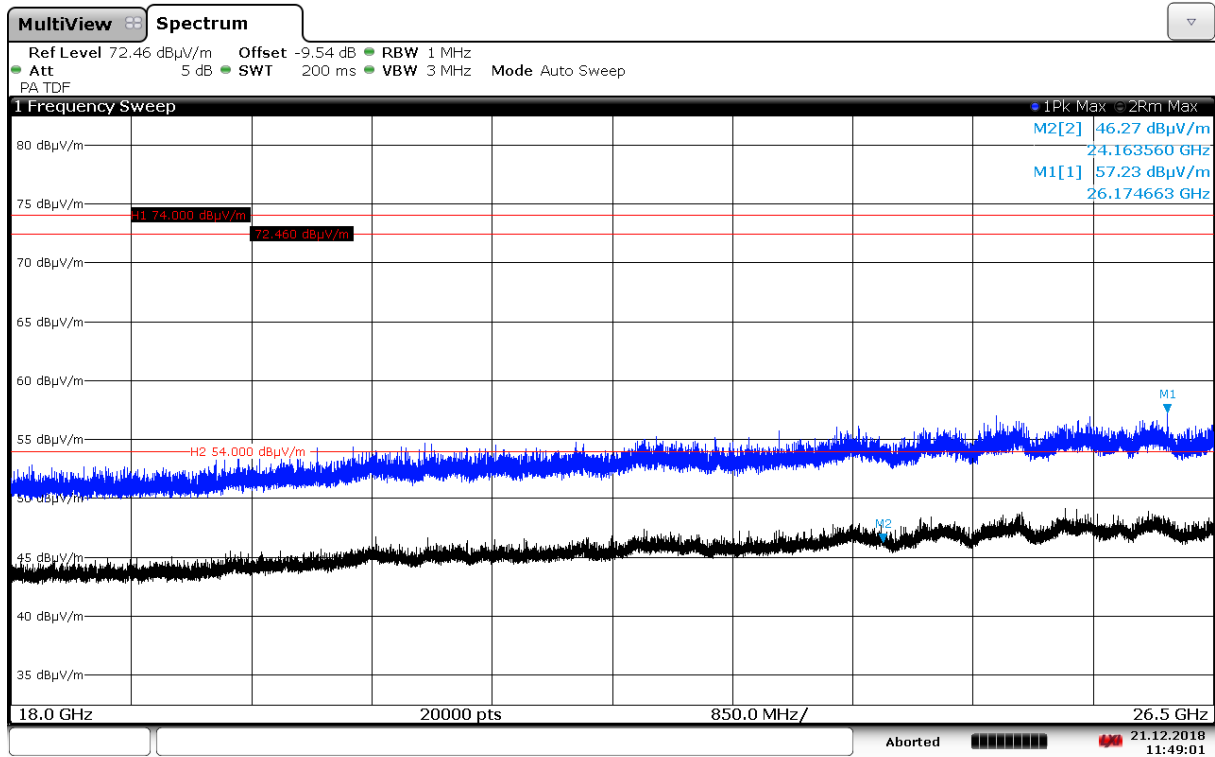
#### Final Result Average

Frequency (MHz)	MaxPeak (dBµV/m)	DC (dB)	Avg (dBµV/m)	Limit (dBµV/m)	Margin (dB)
4803.235	52.89	28,76	24,13	54,00	29,87
7204.851	55.12	28,76	26,36	54,00	27,64
14409.703	55.83	28,76	27,07	54,00	26,93



### 3.4. Radiated Field Strength Emissions - 18GHz to 26.5GHz

#### 4.01c



11:49:02 21.12.2018

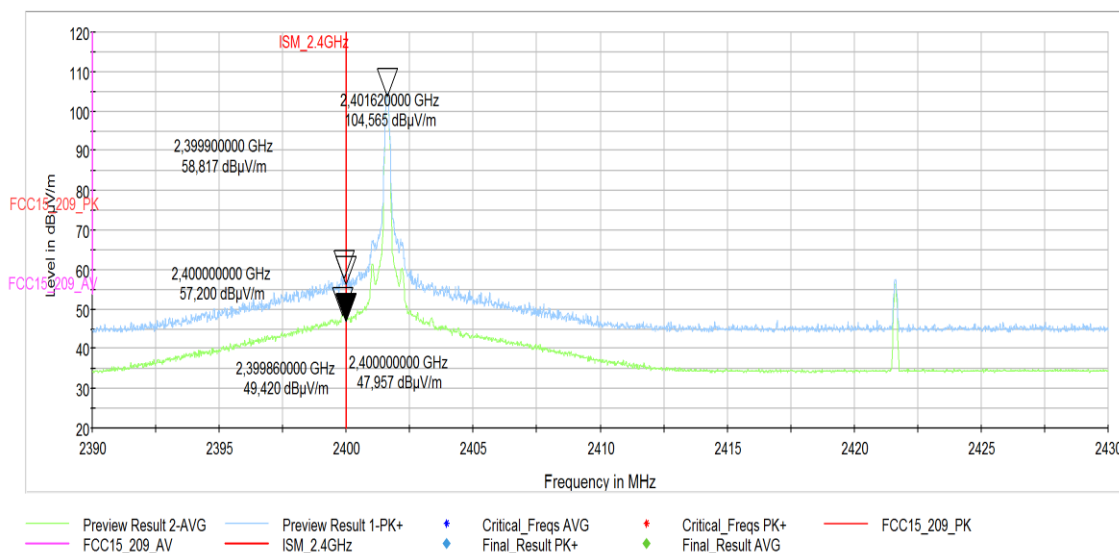
### 3.5. Radiated Band-Edge Measurements

#### 3.5.1. Low Channel 2402.5 MHz (2.4 GHz ISM: left band edge)

#### 9.01a

##### Common Information

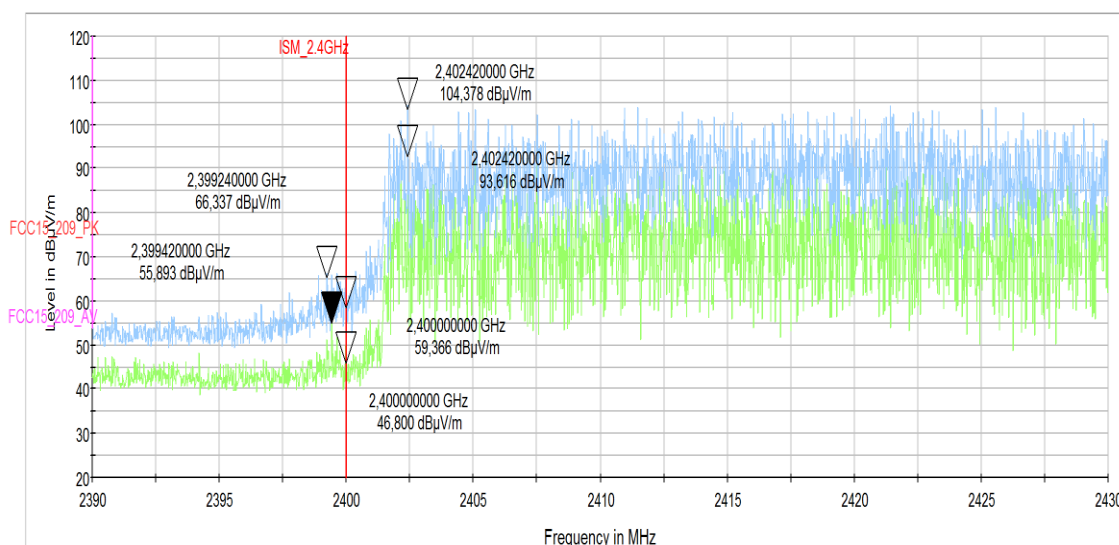
Test description:	Band-Edge Electric Field Strength Measurement related to 3m distance
Test site and distance:	Ref.-Nr. 441x Semi Anechoic Chamber (SAC5) with 3m measurement distance
Test Location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V10.0.0
Test specification:	FCC15.209 / RSS-Gen Issue 5
Distance correction:	none
Operating Mode:	Channel low, Non Hopping Mode on
Used filter:	none
Power during test:	120V AC 60 Hz
Measured side(s):	front, right, rear, left
Operator:	MAh



## 9.02a

### Common Information

Test description:	Band-Edge Electric Field Strength Measurement related to 3m distance
Test site and distance:	Ref.-Nr. 441x Semi Anechoic Chamber (SAC5) with 3m measurement distance
Test Location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V10.0.0
Test specification:	FCC15.209 / RSS-Gen Issue 5
Distance correction:	none
Operating Mode:	Channel low, Hopping Mode on
Used filter:	none
Power during test:	120V AC 60 Hz
Measured side(s):	front, right, rear, left
Operator:	MAh



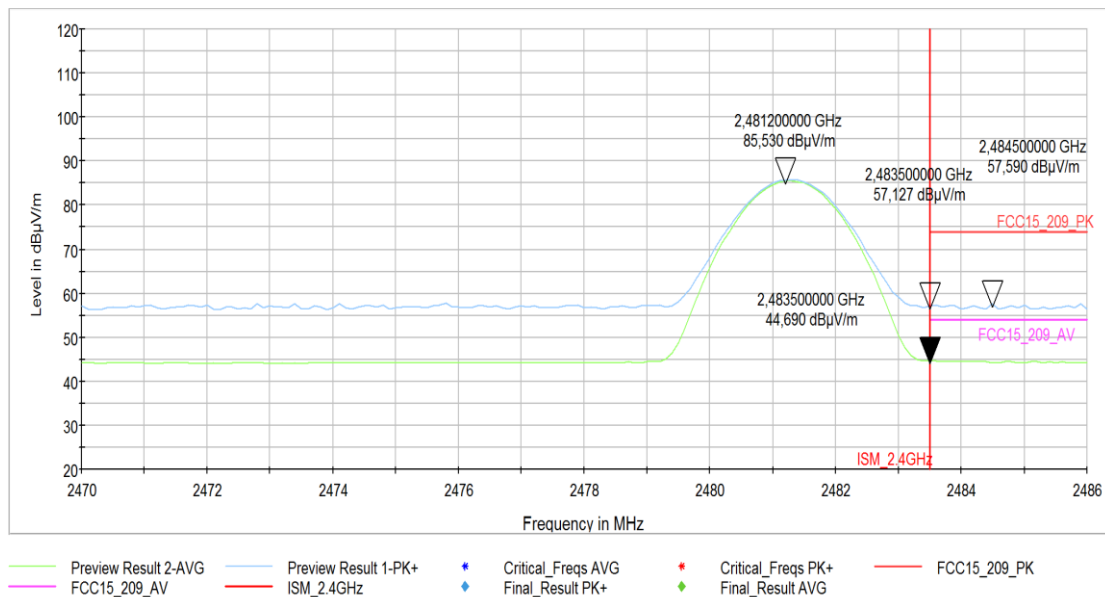
— Preview Result 2-AVG   
 — Preview Result 1-PK+   
 \* Critical\_Freqs AVG   
 \* Critical\_Freqs PK+   
 — FCC15\_209\_PK  
— FCC15\_209\_AV   
 — ISM\_2.4GHz   
 ♦ Final\_Result PK+   
 ♦ Final\_Result AVG

### 3.5.2. High Channel 2471.5 MHz ( 2.4 GHz ISM: right band edge)

## 9.01b

#### Common Information

Test description:	Band-Edge Electric Field Strength Measurement related to 3m distance
Test site and distance:	Ref.-Nr. 441x Semi Anechoic Chamber (SAC5) with 3m measurement distance
Test Location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V10.0.0
Test specification:	FCC15.209 / RSS-Gen Issue 5
Distance correction:	none
Operating Mode:	Channel high, non Hopping Mode on
Used filter:	none
Power during test:	120V AC 60 Hz
Measured side(s):	front, right, rear, left
Operator:	MAh



## 9.02b

### Common Information

Test description:	Band-Edge Electric Field Strength Measurement related to 3m distance
Test site and distance:	Ref.-Nr. 441x Semi Anechoic Chamber (SAC5) with 3m measurement distance
Test Location:	CETECOM GmbH Düsseldorf
Version of Testsoftware:	EMC32 V10.0.0
Test specification:	FCC15.209 / RSS-Gen Issue 5
Distance correction:	none
Operating Mode:	Channel high, Hopping Mode on
Used filter:	none
Power during test:	120V AC 60 Hz
Measured side(s):	front, right, rear, left
Operator:	MAh

