

## TEST REPORT

Test report no.: 1-2428-01-09/10-B Part 2



### Testing laboratory

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**Accredited test laboratory:**  
 The test laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025  
 DAR registration number: DGA-PL-176/94-D1  
 Area of Testing: Radio/Satellite Communications

### Applicant

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### Manufacturer

**Digi International GmbH**  
**Branch Breisach**  
 Kueferstr.8  
 79206 Breisach / Germany

### Test item

Kind of test item: **WLAN module**  
 Model name: **WLAN-Computer**  
 FCC ID: **MCQ-50M1699**  
 IC: **1846A-50M1699**  
 Frequency [MHz]: **5150 MHz – 5250 MHz ISM band 1**  
**5250 MHz – 5350 MHz ISM band 2**  
**5470 MHz – 5725 MHz ISM band 3**  
 Power supply: **3.3V DC by power supply**  
 Temperature range: **-20 °C to +55 °C**

This test report is electronically signed and valid without handwriting signature. For verification of the electrical signatures, the public keys can be requested at the testing laboratory.

### Test performed:

Marco Bertolino

### Test report authorised:

Andreas Keller

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## 1.1 TX spurious emissions radiated

### Description:

Measurement of the radiated spurious emissions in transmit mode. The measurement is performed at channel 1, 6 and 11. The measurement is repeated for all modulations.

### Measurement:

Measurement parameter	
Detector:	Peak / Quasi Peak
Sweep time:	Auto
Video bandwidth:	Sweep: 100 kHz RB Remeasurement: 10 Hz RB According Part 15.407 1 MHz
Resolution bandwidth:	F < 1 GHz: 100 kHz F > 1 GHz: 1 MHz
Span:	30 MHz to 40 GHz
Trace-Mode:	Max Hold
Measured Modulation	<input checked="" type="checkbox"/> OFDM

The modulation with the highest output power was used to perform the transmitter spurious emissions. If spurious were detected a re-measurement was performed on the detected frequency with each modulation.

### Limits:

FCC	IC
CFR Part 15.407 b (1)	RSS 210 Issue 8, Annex 9 3 (1)
TX Spurious Emissions Radiated	
<p>For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.</p>	

**Results: band 1 – 5150 MHz to 5250 MHz, a – mode**

TX Spurious Emissions Radiated [dBμV/m]								
OFDM - mode								
5180 MHz			5220 MHz			5240 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3453.3	No restricted band!		3466.6	No restricted band!		3493.4	No restricted band!	
6906.6	No restricted band!		6933.3	No restricted band!		6986.6	No restricted band!	
10362.0	No restricted band!		10396.0	No restricted band!		10480.0	No restricted band!	
15543.3	1 MHz / 1 MHz PP	52.28 vertical & horizontal	15593.8	1 MHz / 1 MHz PP	51.89 vertical & horizontal	15711.5	1 MHz / 1 MHz PP	50.98 vertical & horizontal
20730.8	1 MHz / 1 MHz PP	47.21 vertical & horizontal	20794.9	1 MHz / 1 MHz PP	49.29 vertical & horizontal	20974.4	1 MHz / 1 MHz PP	48.77 vertical & horizontal
31070.5	1 MHz / 1 MHz PP	49.86 vertical & horizontal	34548.1	1 MHz / 1 MHz PP	48.55 vertical & horizontal	31451.9	1 MHz / 1 MHz PP	49.43 vertical & horizontal
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBm]								
OFDM - mode								
5180 MHz			5220 MHz			5240 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
3453.2	1 MHz / 1 MHz PP	-47.11 dBm vertical -49.39 dBm horizontal	3466.8	1 MHz / 1 MHz PP	-48.76 dBm vertical -50.95 dBm horizontal	6986.6	1 MHz / 1 MHz PP	-46.44 dBm vertical -45.98 dBm horizontal
10360.0	1 MHz / 1 MHz PP	-31.69 dBm vertical -34.51 dBm horizontal	10400	1 MHz / 1 MHz PP	-32.68 dBm vertical -35.91 dBm horizontal	10480.0	1 MHz / 1 MHz PP	-33.66 dBm vertical -35.17 dBm horizontal
13809.3	1 MHz / 1 MHz PP	-55.03 vertical & horizontal	13865.4	1 MHz / 1 MHz PP	-56.29 vertical & horizontal	13969.6	1 MHz / 1 MHz PP	-53.70 vertical & horizontal
15540.1	1 MHz / 1 MHz PP	-37.64 vertical & horizontal	15604.2	1 MHz / 1 MHz PP	-36.10 vertical & horizontal	15724.4	1 MHz / 1 MHz PP	-36.32 vertical & horizontal
20730.8	1 MHz / 1 MHz PP	-45.64 vertical & horizontal	20794.9	1 MHz / 1 MHz PP	-44.86 vertical & horizontal	20961.5	1 MHz / 1 MHz PP	-48.11 vertical & horizontal
31092.9	1 MHz / 1 MHz PP	-36.49 vertical & horizontal	31182.7	1 MHz / 1 MHz PP	-42.90 vertical & horizontal	31451.9	1 MHz / 1 MHz PP	-40.54 vertical & horizontal
Measurement uncertainty			± 3 dB					

**Results: band 1 – 5150 MHz to 5250 MHz, n – mode**

TX Spurious Emissions Radiated [dB $\mu$ V/m]								
OFDM - mode								
5180 MHz			5220 MHz			5240 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3453.3	No restricted band!		3466.6	No restricted band!		3493.4	No restricted band!	
6906.6	No restricted band!		6933.3	No restricted band!		6986.6	No restricted band!	
10362.0	No restricted band!		10396.0	No restricted band!		10480.0	No restricted band!	
13811.0	1 MHz / 1 MHz PP	33.65 vertical & horizontal	13869.0	1 MHz / 1 MHz PP	34.47 vertical & horizontal	13970.0	1 MHz / 1 MHz PP	32.86 vertical & horizontal
15534.9	1 MHz / 1 MHz PP	52.47 vertical & horizontal	15585.3	1 MHz / 1 MHz PP	52.15 vertical & horizontal	15728.4	1 MHz / 1 MHz PP	50.89 vertical & horizontal
20717.9	1 MHz / 1 MHz PP	47.40 vertical & horizontal	20807.7	1 MHz / 1 MHz PP	46.62 vertical & horizontal	20974.4	1 MHz / 1 MHz PP	48.96 vertical & horizontal
31092.9	1 MHz / 1 MHz PP	51.85 vertical & horizontal	31205.1	1 MHz / 1 MHz PP	50.09 vertical & horizontal	31451.9	1 MHz / 1 MHz PP	50.91 vertical & horizontal
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBm]								
OFDM - mode								
5180 MHz			5220 MHz			5240 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
5453.2	1 MHz / 1 MHz PP	-47.83 dBm vertical -50.91 dBm horizontal	10400	1 MHz / 1 MHz PP	-33.08 dBm vertical -33.98 dBm horizontal	10480.0	1 MHz / 1 MHz PP	-32.92 dBm vertical -34.47 dBm horizontal
10360.0	1 MHz / 1 MHz PP	-31.88 dBm vertical -35.53 dBm horizontal	13865.4	1 MHz / 1 MHz PP	-53.84 vertical & horizontal	13969.6	1 MHz / 1 MHz PP	-52.37 vertical & horizontal
13809.3	1 MHz / 1 MHz PP	-54.49 vertical & horizontal	15596.2	1 MHz / 1 MHz PP	-34.22 vertical & horizontal	15732.4	1 MHz / 1 MHz PP	-36.19 vertical & horizontal
15556.1	1 MHz / 1 MHz PP	-35.44 vertical & horizontal	20794.9	1 MHz / 1 MHz PP	-45.25 vertical & horizontal	20961.5	1 MHz / 1 MHz PP	-45.00 vertical & horizontal
20705.1	1 MHz / 1 MHz PP	-48.13 vertical & horizontal	31205.1	1 MHz / 1 MHz PP	-39.98 vertical & horizontal	34121.8	1 MHz / 1 MHz PP	-43.85 vertical & horizontal
31070.5	1 MHz / 1 MHz PP	-39.57 vertical & horizontal						
Measurement uncertainty			± 3 dB					

**Results: band 2 – 5250 MHz to 5350 MHz, a – mode**

TX Spurious Emissions Radiated [dBμV/m]								
OFDM - mode								
5260 MHz			5280 MHz			5320 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3506.6	No restricted band!		3520.2	No restricted band!		3546.6	No restricted band!	
7016.6	No restricted band!		7040.0	No restricted band!		10641.4	1 MHz / 10 Hz PP	51.21 dBμV/m vertical 48.27 dBμV/m horizontal
10520.0	No restricted band!		10560.0	No restricted band!				
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBm]								
OFDM - mode								
5260 MHz			5280 MHz			5320 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
10520.0	1 MHz / 1 MHz PP	-32.79 dBm vertical -34.88 dBm horizontal	10560.0	1 MHz / 1 MHz PP	-34.26 dBm vertical -35.31 dBm horizontal	10640.0	1 MHz / 1 MHz PP	-31.97 dBm vertical -33.86 dBm horizontal
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

**Results: band 2 – 5250 MHz to 5350 MHz, n – mode**

TX Spurious Emissions Radiated [dBμV/m]								
OFDM - mode								
5260 MHz			5280 MHz			5320 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3506.6	No restricted band!		3520.2	No restricted band!		3546.6	No restricted band!	
7016.6	No restricted band!		7040.0	No restricted band!		10641.4	1 MHz / 10 Hz PP	52.33 dBμV/m vertical 48.49 dBμV/m horizontal
10520.0	No restricted band!		10560.0	No restricted band!				
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBm]								
OFDM - mode								
5260 MHz			5280 MHz			5320 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
10520.0	1 MHz / 1 MHz PP	-31.54 dBm vertical -34.83 dBm horizontal	10560.0	1 MHz / 1 MHz PP	-32.93 dBm vertical -34.17 dBm horizontal	10640.0	1 MHz / 1 MHz PP	-32.13 dBm vertical -34.87 dBm horizontal
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

**Results: band 3 – 5470 MHz to 5725 MHz, a – mode**

TX Spurious Emissions Radiated [dBμV/m]								
OFDM - mode								
5500 MHz			5600 MHz			5700 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3666.7	1 MHz / 10 Hz PP	48.37 dBμV/m vertical 47.28 dBμV/m horizontal	3733.3	1 MHz / 10 Hz PP	49.55 dBμV/m vertical 48.97 dBμV/m horizontal	3800.0	1 MHz / 10 Hz PP	50.86 dBμV/m vertical 49.78 dBμV/m horizontal
7333.3	1 MHz / 10 Hz PP	40.54 dBμV/m vertical 39.77 dBμV/m horizontal	7466.7	1 MHz / 10 Hz PP	43.65 dBμV/m vertical 39.49 dBμV/m horizontal	11400.0	1 MHz / 10 Hz PP	45.51 dBμV/m vertical 44.79 dBμV/m horizontal
11000.0	1 MHz / 10 Hz PP	45.32 dBμV/m vertical 42.94 dBμV/m horizontal	11200.0	1 MHz / 10 Hz PP	43.66 dBμV/m vertical 42.14 dBμV/m horizontal	-/-	-/-	-/-
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBm]								
OFDM - mode								
5500 MHz			5600 MHz			5700 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3666.8	1 MHz / 1 MHz PP	-46.71 dBm vertical -46.33 dBm horizontal	11200.0	1 MHz / 1 MHz PP	-36.19 dBm vertical -36.84 dBm horizontal	11400.0	1 MHz / 1 MHz PP	-38.32 dBm vertical -38.51 dBm horizontal
11000.0	1 MHz / 1 MHz PP	-35.27 dBm vertical -36.52 dBm horizontal	-/-	-/-	-/-	-/-	-/-	-/-
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					



**Results: band 2 – 5470 MHz to 5725 MHz, n – mode**

TX Spurious Emissions Radiated [dBμV/m]								
OFDM - mode								
5500 MHz			5600 MHz			5700 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
3666.7	1 MHz / 10 Hz PP	48.39 dBμV/m vertical 47.12 dBμV/m horizontal	3733.3	1 MHz / 10 Hz PP	49.93 dBμV/m vertical 48.81 dBμV/m horizontal	3800.0	1 MHz / 10 Hz PP	50.14 dBμV/m vertical 49.55 dBμV/m horizontal
7333.3	1 MHz / 10 Hz PP	38.01 dBμV/m vertical 37.27 dBμV/m horizontal	7466.7	1 MHz / 10 Hz PP	44.17 dBμV/m vertical 40.99 dBμV/m horizontal	11400.0	1 MHz / 10 Hz PP	45.99 dBμV/m vertical 45.64 dBμV/m horizontal
11000.0	1 MHz / 10 Hz PP	44.97 dBμV/m vertical 42.38 dBμV/m horizontal	11200.0	1 MHz / 10 Hz PP	43.57 dBμV/m vertical 42.29 dBμV/m horizontal	-/-	-/-	-/-
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

TX Spurious Emissions Radiated [dBm]								
OFDM - mode								
5500 MHz			5600 MHz			5700 MHz		
F [MHz]	Detector	Level	F [MHz]	Detector	Level	F [MHz]	Detector	Level
For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.			For emissions below 1 GHz – please take a look at the table below the 1 GHz plot.		
11000.0	1 MHz / 1 MHz PP	-35.97 dBm vertical -36.43 dBm horizontal	11200.0	1 MHz / 1 MHz PP	-36.47 dBm vertical -37.03 dBm horizontal	11400.0	1 MHz / 1 MHz PP	-37.96 dBm vertical -38.24 dBm horizontal
-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.			For emissions above 13 GHz – please take a look at the plots.		
Measurement uncertainty			± 3 dB					

**Band 1: 5150 MHz to 5250 MHz**

**OFDM – mode / a – mode (54 MBit/s):**

**Plot 1:** lowest channel; power index 30; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

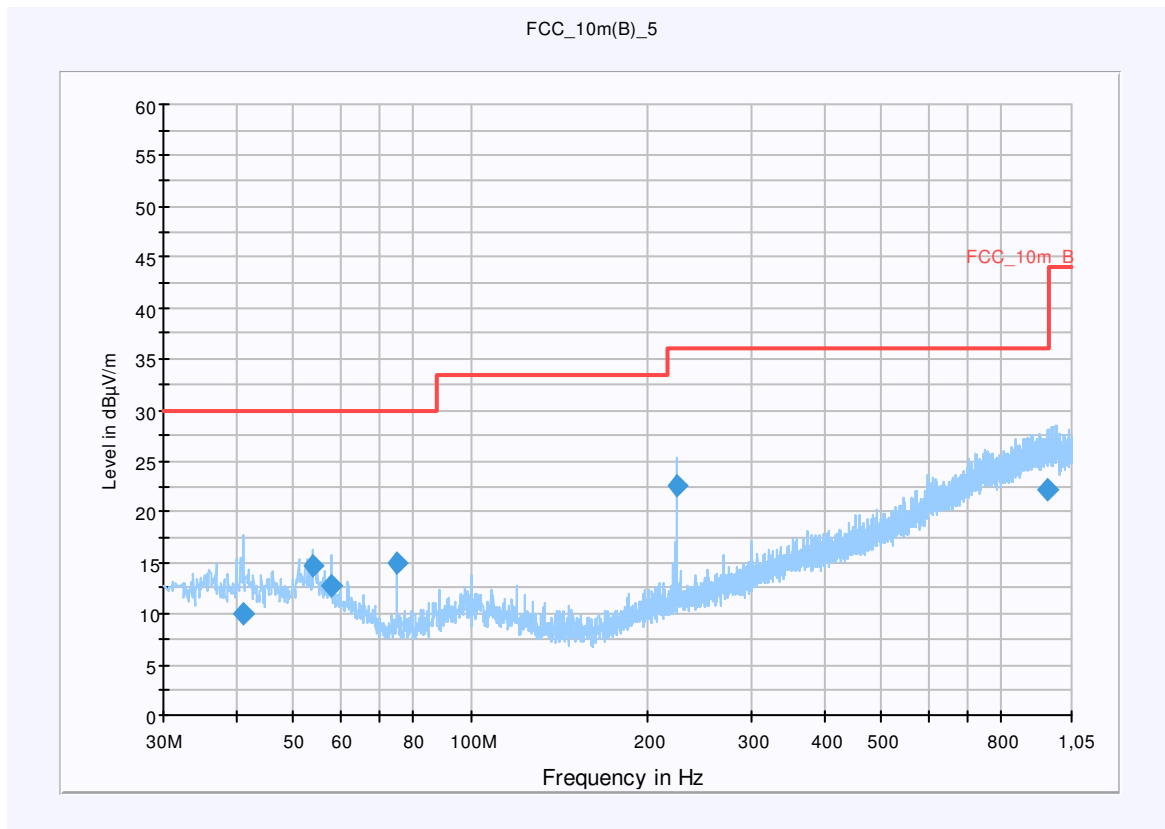
**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5180 MHz, a mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1,05 GHz	QuasiPeak	120 kHz	15 s	Receiver



**Final Result 1**

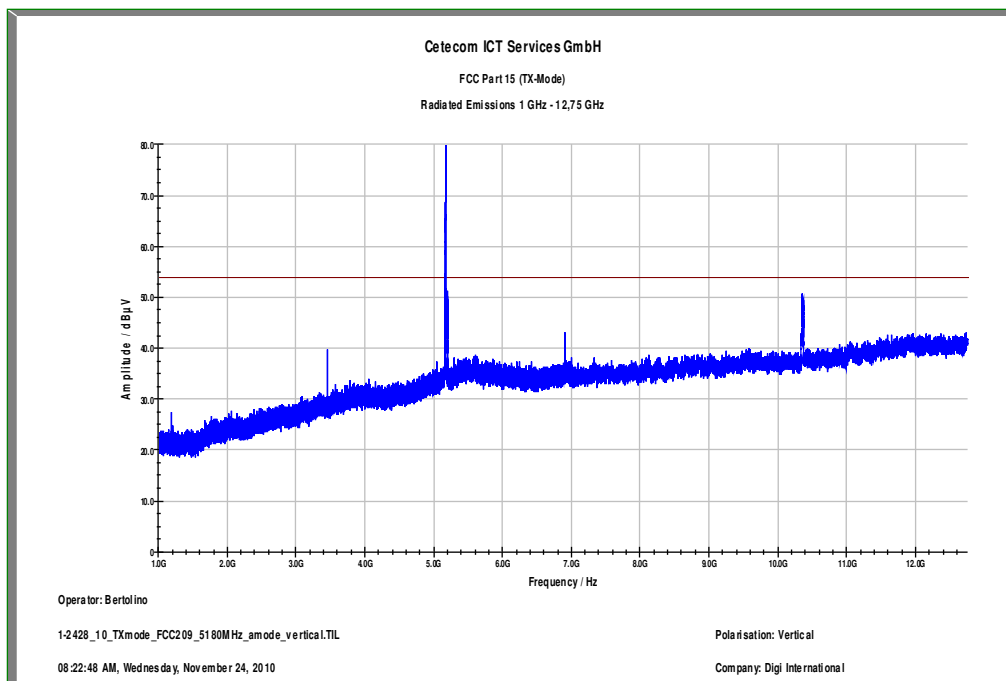
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
41.040000	10.0	15000.000	120.000	144.0	V	220.0	13.4	20.0	30.0	
54.000000	14.7	15000.000	120.000	270.0	V	293.0	13.0	15.3	30.0	
57.960000	12.7	15000.000	120.000	169.0	V	268.0	12.1	17.3	30.0	
75.000000	14.9	15000.000	120.000	188.0	V	228.0	9.2	15.1	30.0	
224.880000	22.7	15000.000	120.000	120.0	V	-2.0	12.5	13.3	36.0	
957.000000	22.3	15000.000	120.000	270.0	V	-2.0	25.4	13.7	36.0	

**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

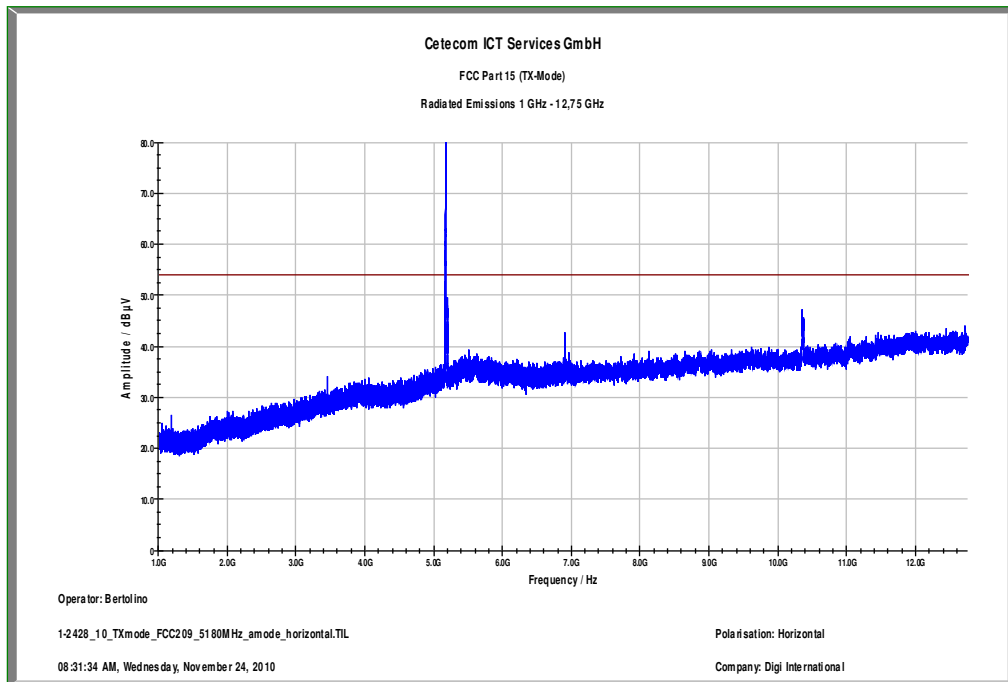
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

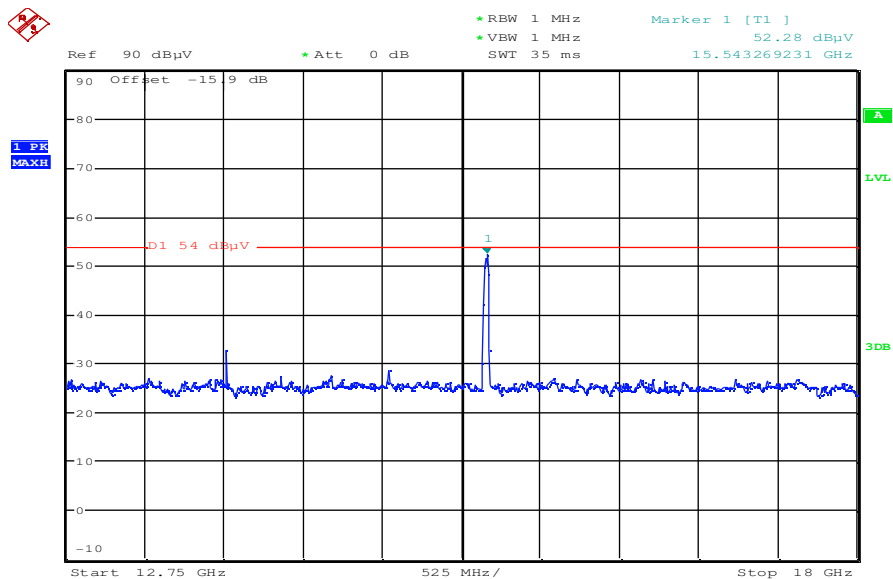
**Plot 2:** lowest channel; power index 30; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



**Plot 3:** lowest channel; power index 30; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209

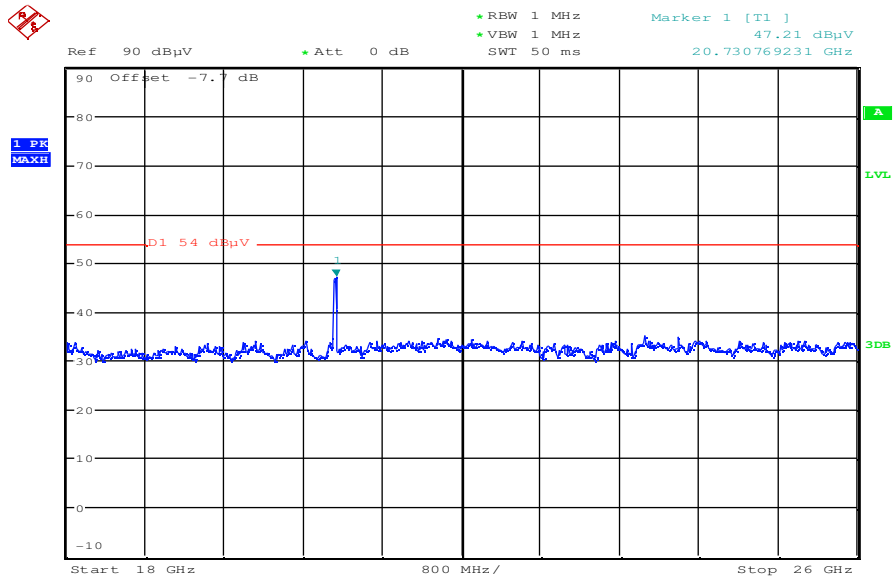


**Plot 4:** lowest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209



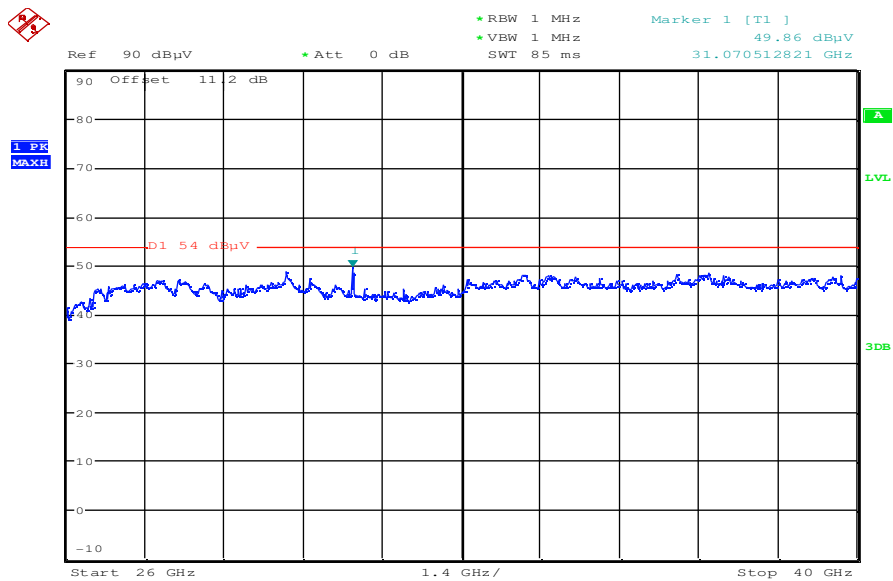
Date: 24.NOV.2010 13:15:24

Plot 5: lowest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



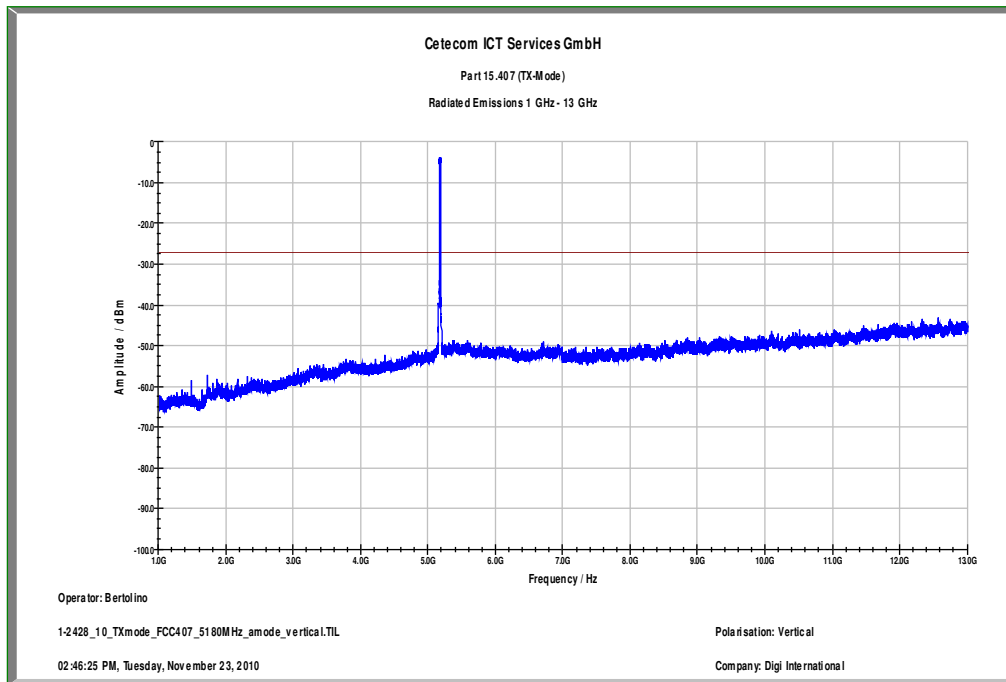
Date: 24.NOV.2010 13:45:35

Plot 6: lowest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

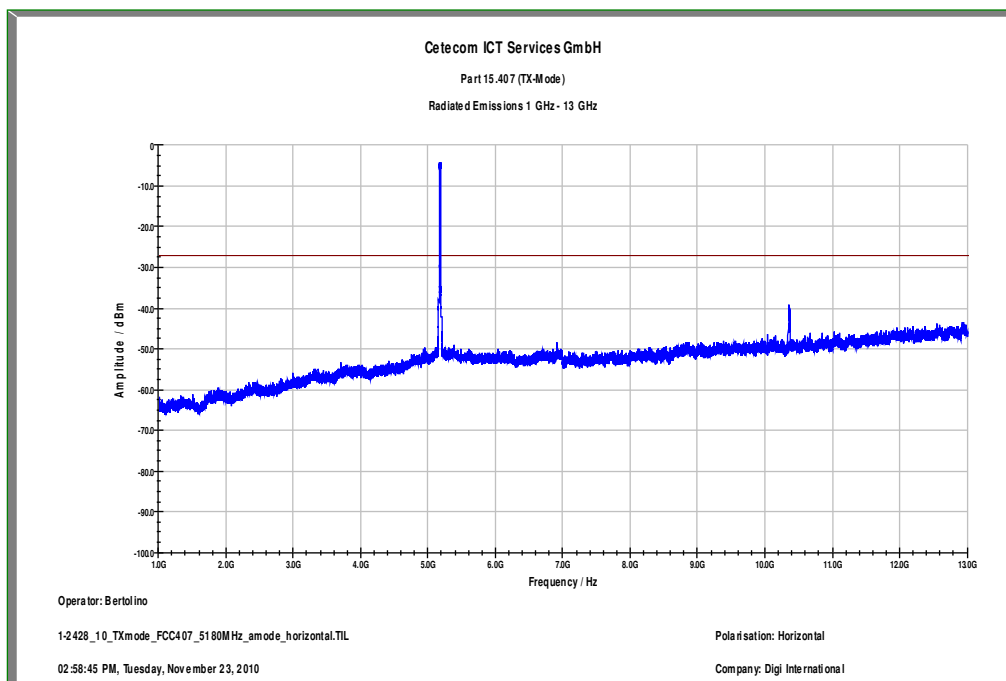


Date: 24.NOV.2010 14:14:05

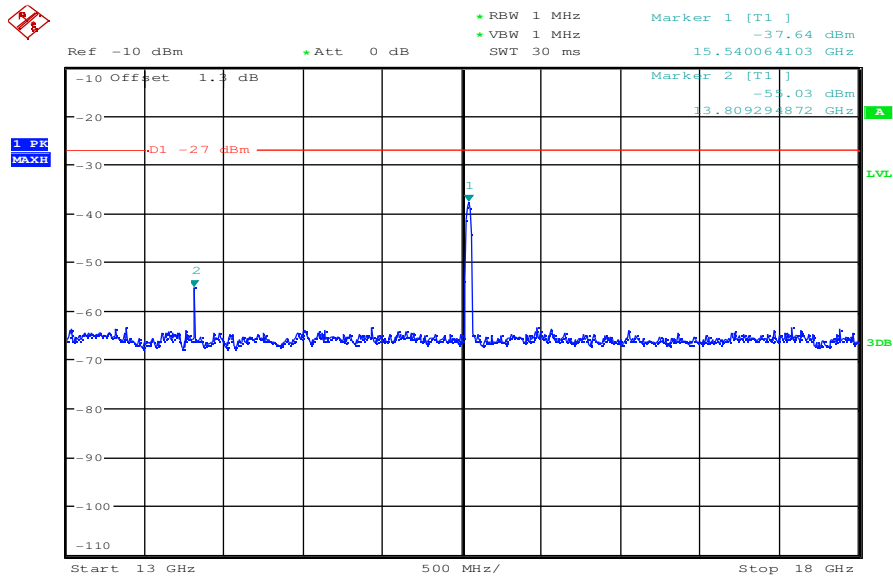
**Plot 7:** lowest channel; power index 30; 1 GHz to 13 GHz – vertical polarization, Part 15.407



**Plot 8:** lowest channel; power index 30; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

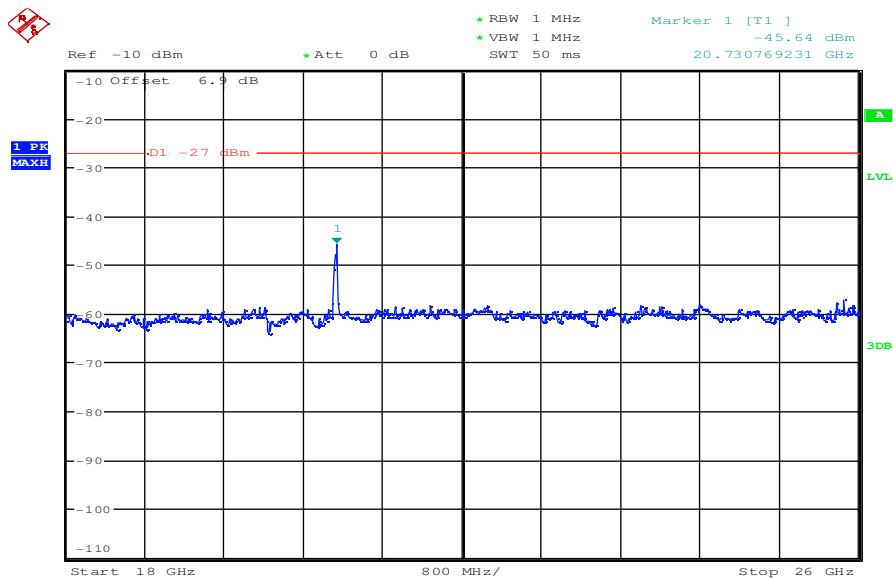


Plot 9: lowest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



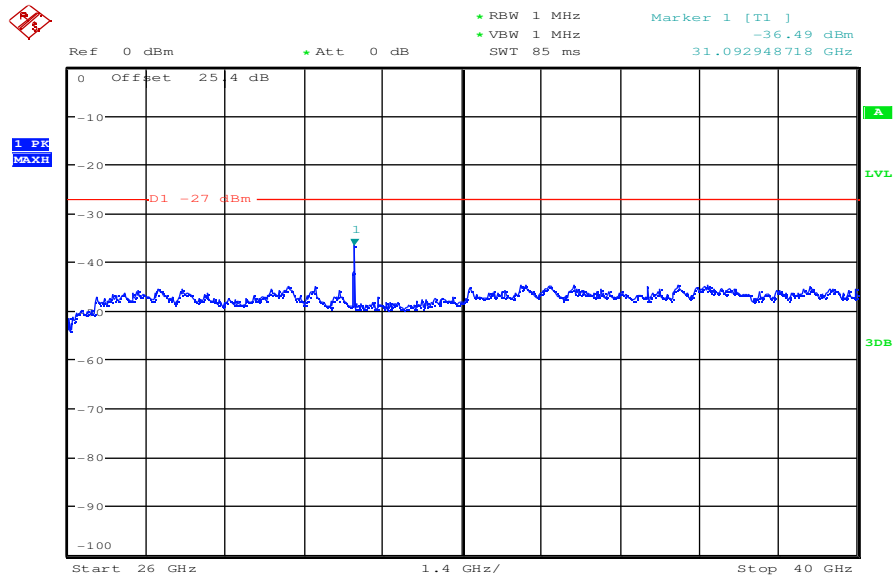
Date: 25.NOV.2010 11:29:10

Plot 10: lowest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 12:52:12

Plot 11: lowest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:37:13



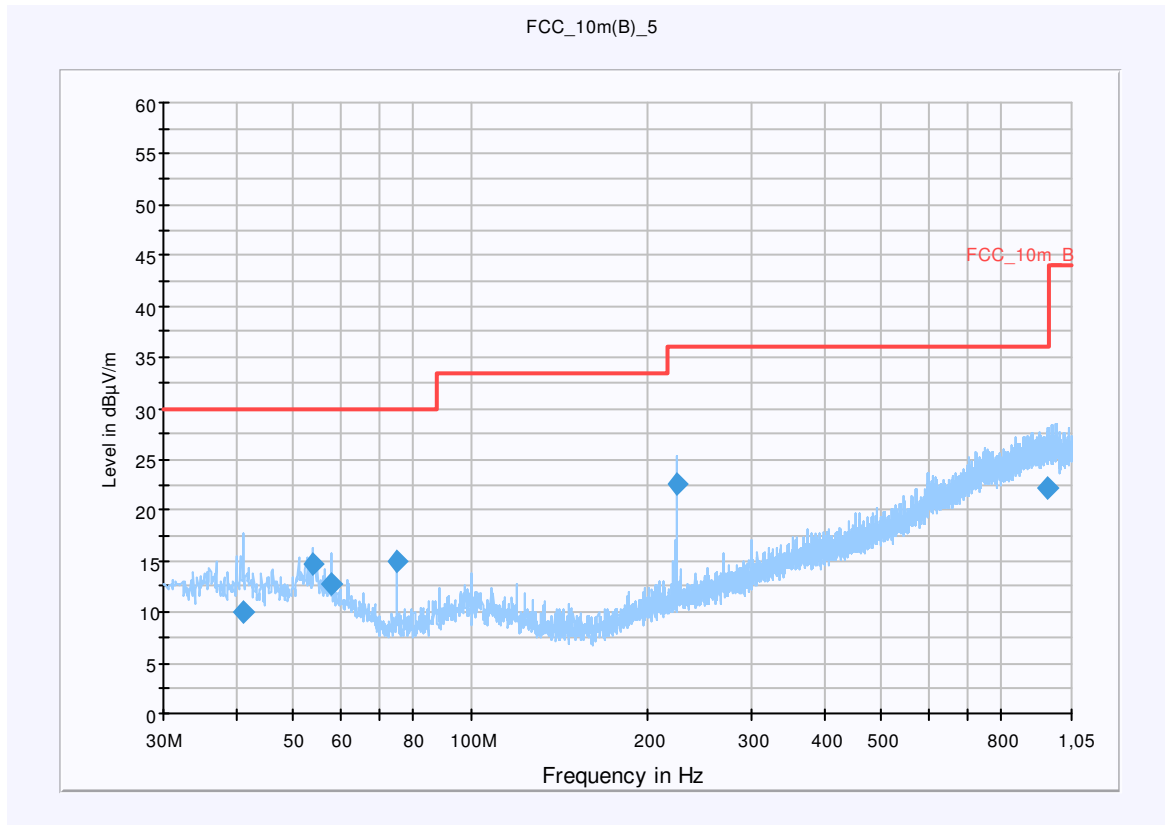
Plot 12: middle channel; power index 30; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5200 MHz, a mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m  
**Subrange**                      **Detectors**                      **IF Bandwidth**                      **Meas. Time**                      **Receiver**  
 30 MHz - 1,05 GHz              QuasiPeak                      120 kHz                      15 s                      Receiver



**Final Result 1**

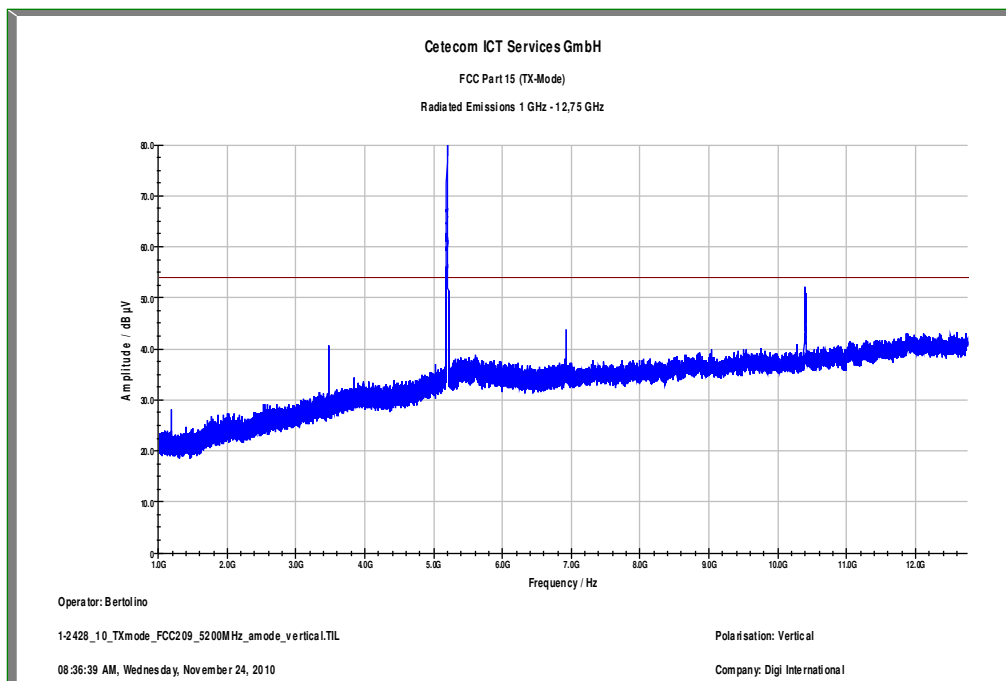
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
41.040000	10.0	15000.000	120.000	144.0	V	220.0	13.4	20.0	30.0	
54.000000	14.7	15000.000	120.000	270.0	V	293.0	13.0	15.3	30.0	
57.960000	12.7	15000.000	120.000	169.0	V	268.0	12.1	17.3	30.0	
75.000000	14.9	15000.000	120.000	188.0	V	228.0	9.2	15.1	30.0	
224.880000	22.7	15000.000	120.000	120.0	V	-2.0	12.5	13.3	36.0	
957.000000	22.3	15000.000	120.000	270.0	V	-2.0	25.4	13.7	36.0	

**Hardware Setup:** EMI radiated\Electric Field (NOS) - [EMI radiated]

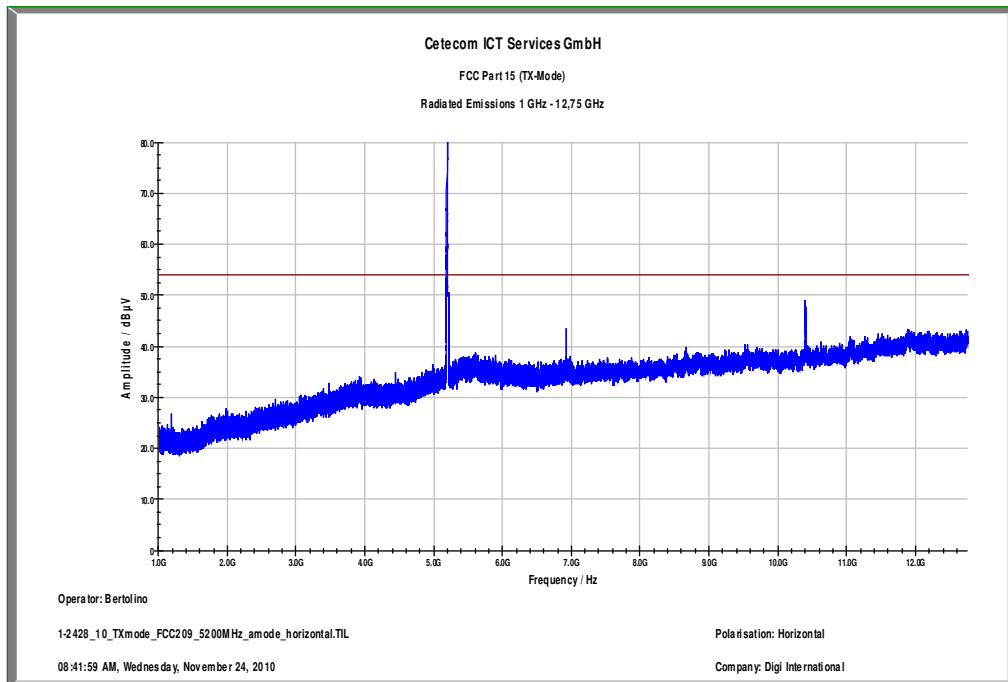
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

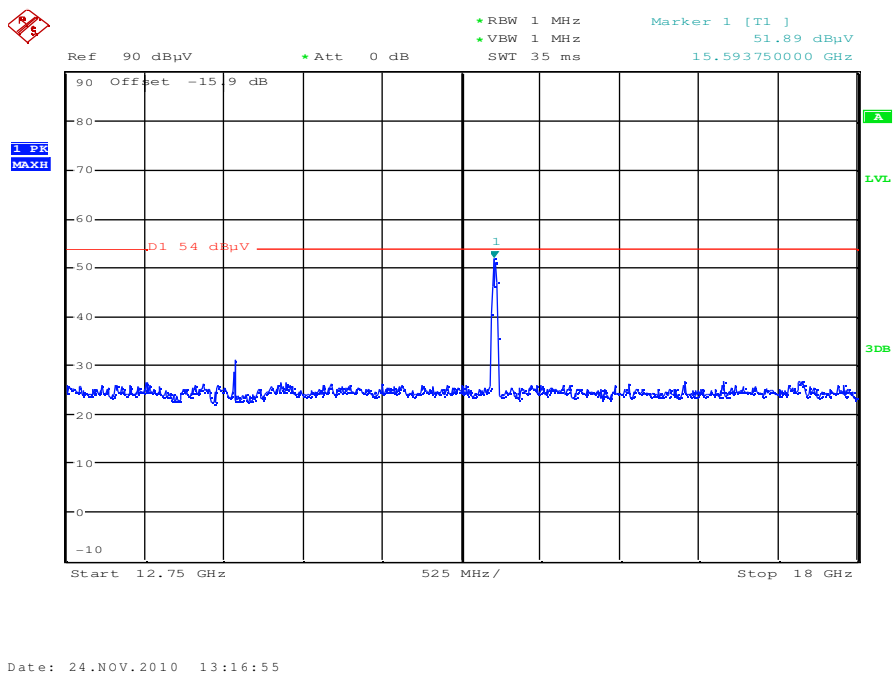
**Plot 13:** middle channel; power index 30; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



Plot 14: middle channel; power index 30; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209



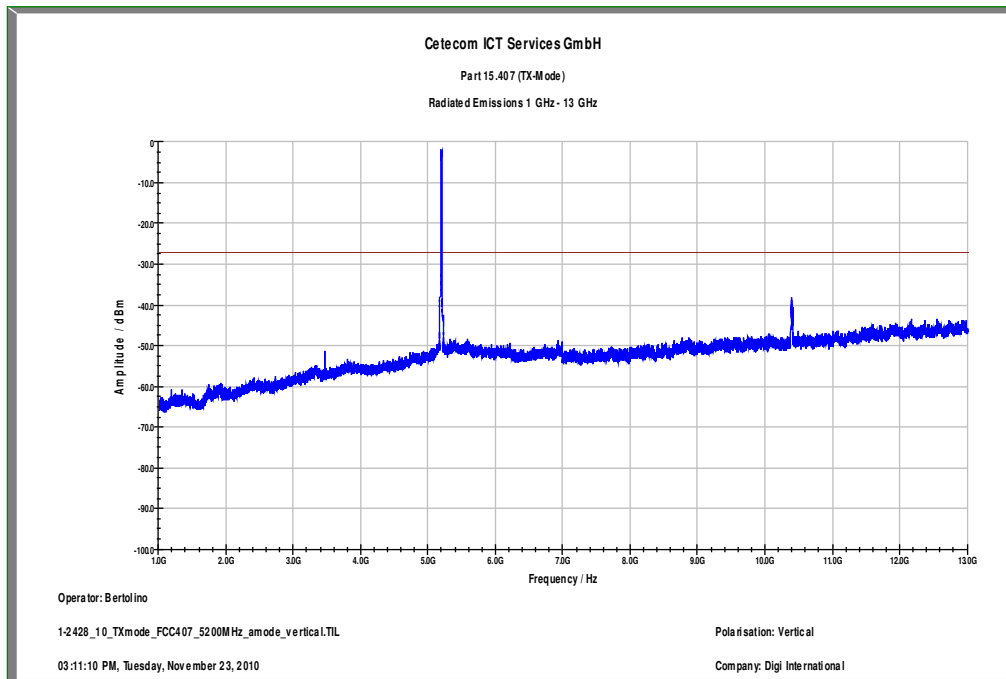
Plot 15: middle channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209



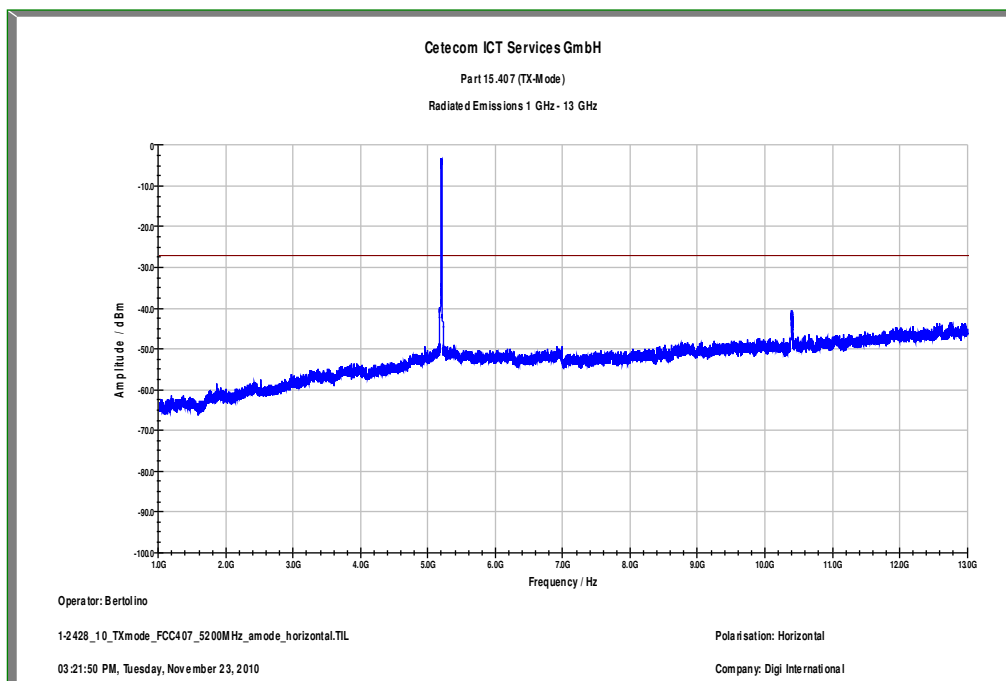
Date: 24.NOV.2010 13:16:55



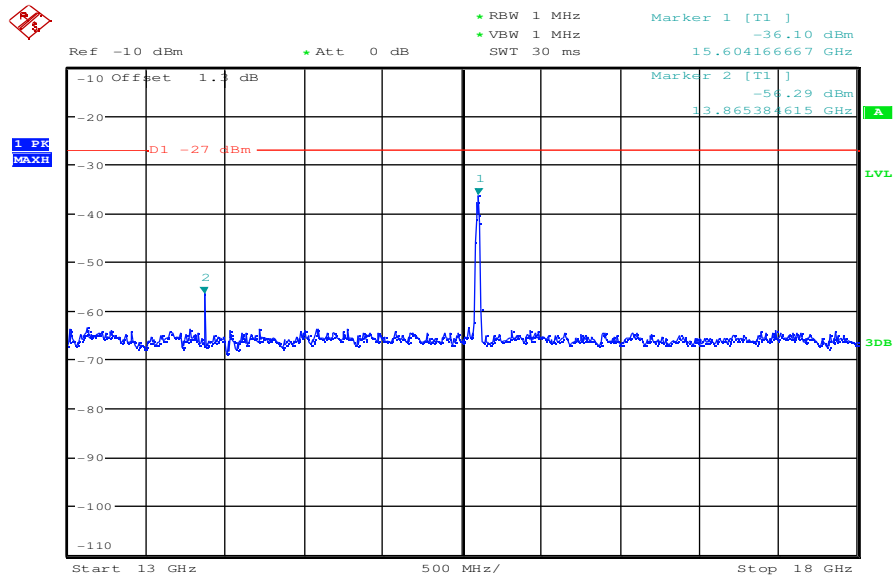
**Plot 18:** middle channel; power index 30; 1 GHz to 13 GHz – vertical polarization, Part 15.407



**Plot 19:** middle channel; power index 30; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

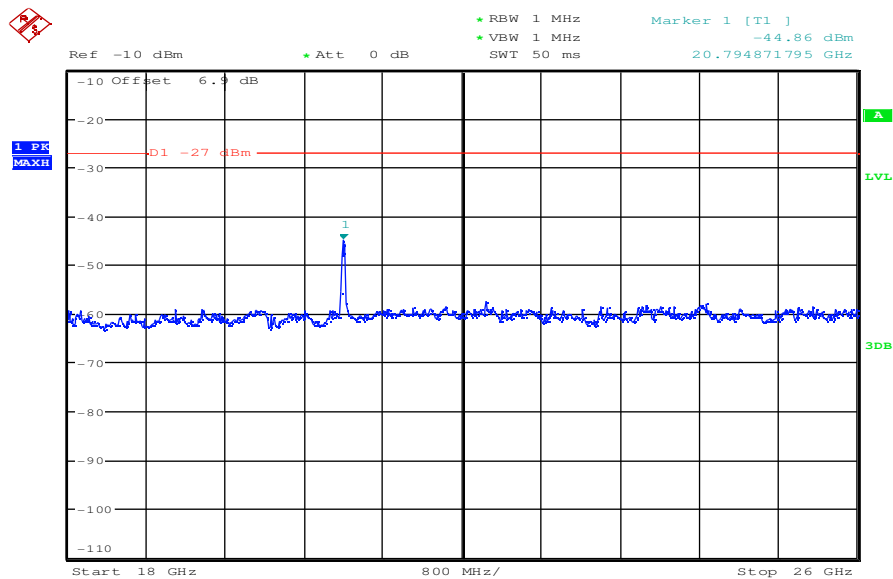


Plot 20: middle channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



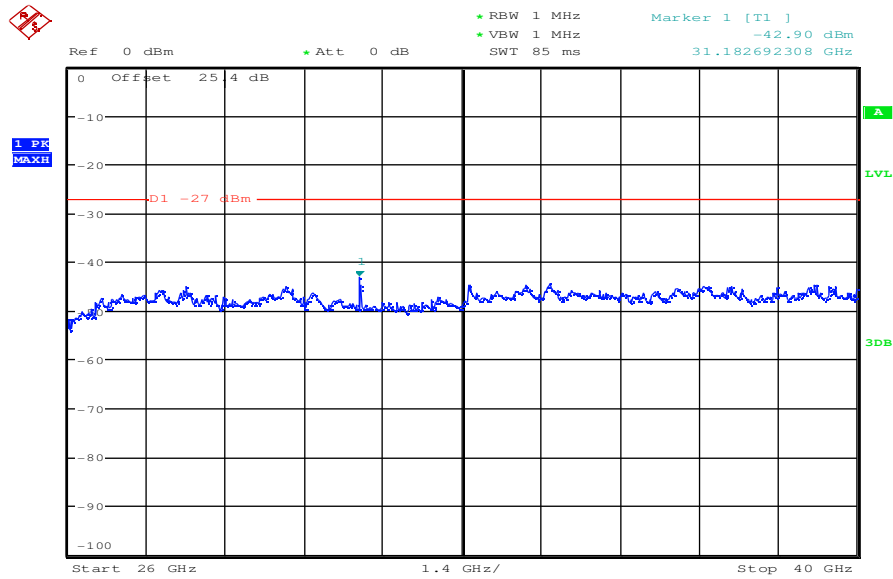
Date: 25.NOV.2010 11:31:00

Plot 21: middle channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 12:53:21

Plot 22: middle channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:38:55

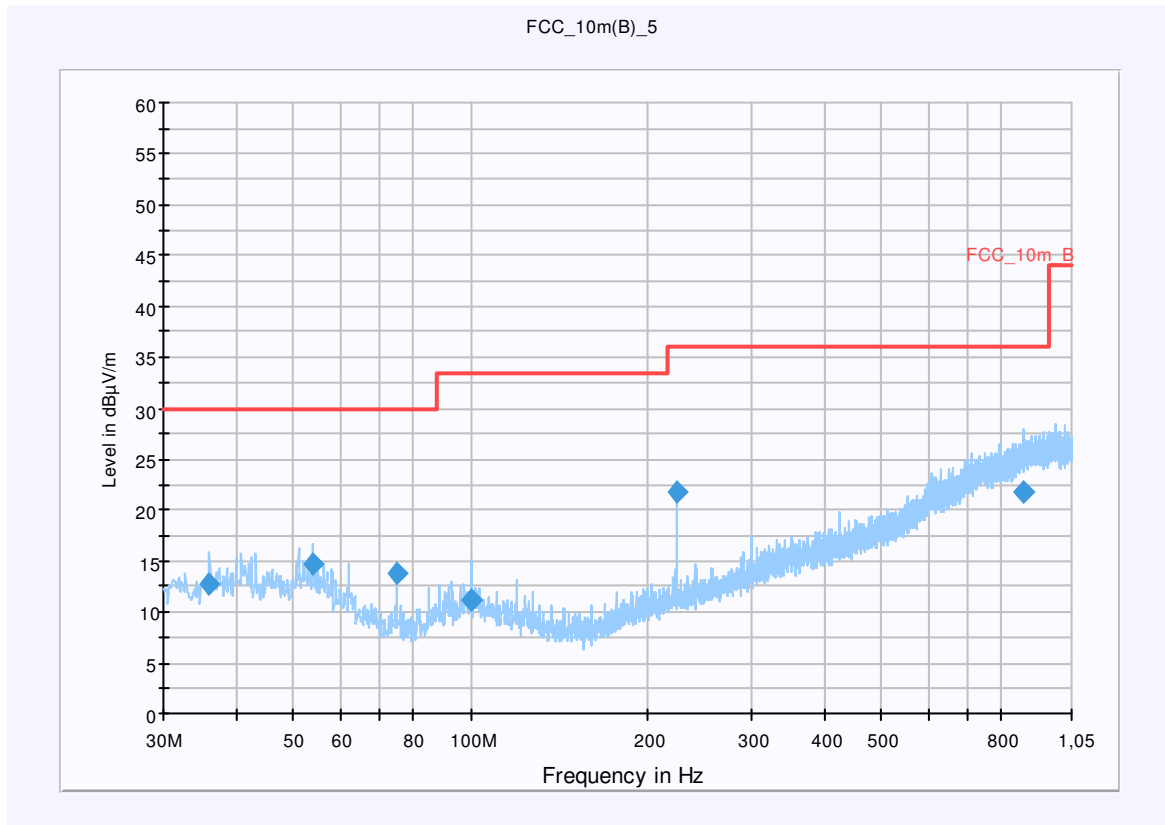
Plot 23: highest channel; power index 30; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5240 MHz, a mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m  
**Subrange**                      **Detectors**                      **IF Bandwidth**                      **Meas. Time**                      **Receiver**  
 30 MHz - 1,05 GHz              QuasiPeak                      120 kHz                      15 s                      Receiver



**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
36.000000	12.8	15000.000	120.000	181.0	V	231.0	13.1	17.2	30.0	
54.000000	14.7	15000.000	120.000	270.0	V	131.0	13.0	15.3	30.0	
75.000000	13.9	15000.000	120.000	213.0	V	-2.0	9.2	16.1	30.0	
99.960000	11.1	15000.000	120.000	205.0	V	172.0	11.9	22.4	33.5	
224.880000	21.8	15000.000	120.000	124.0	V	347.0	12.5	14.2	36.0	
871.560000	21.8	15000.000	120.000	235.0	V	150.0	24.8	14.2	36.0	

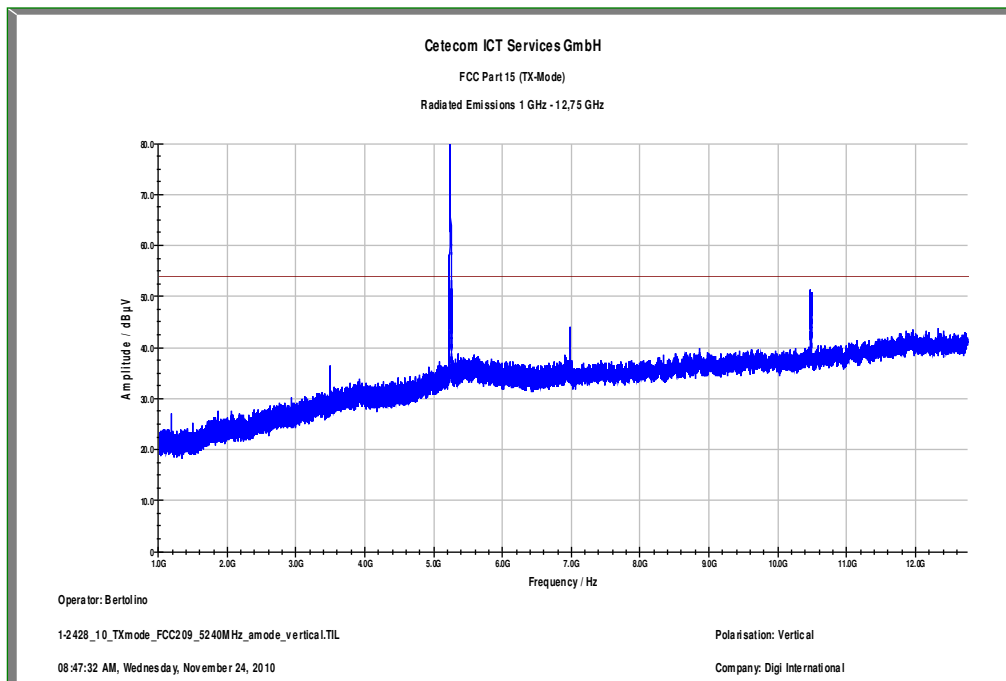


**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

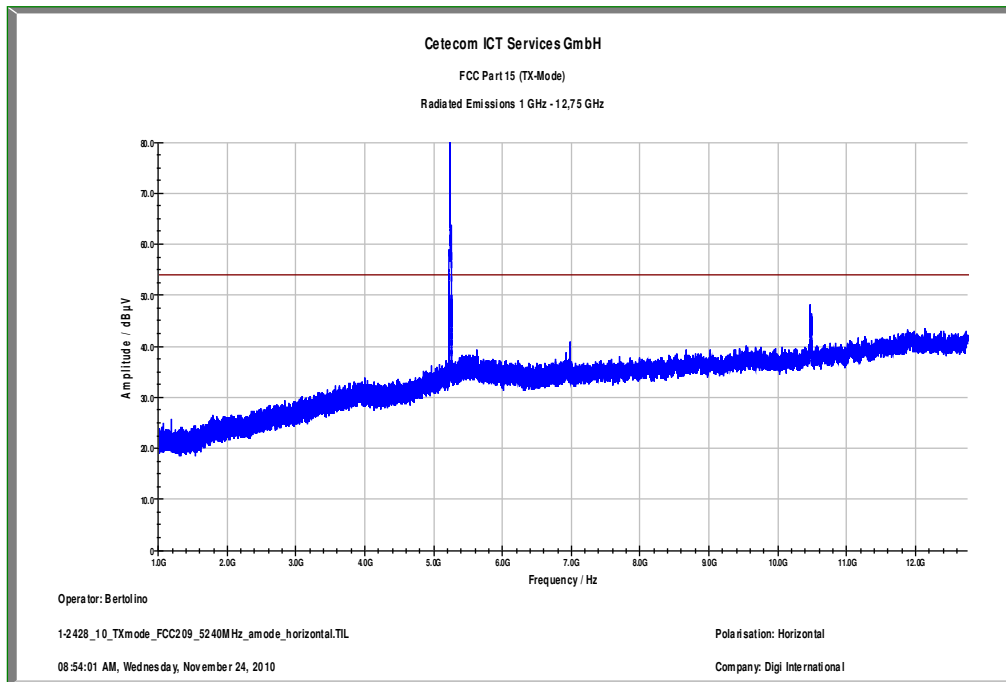
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

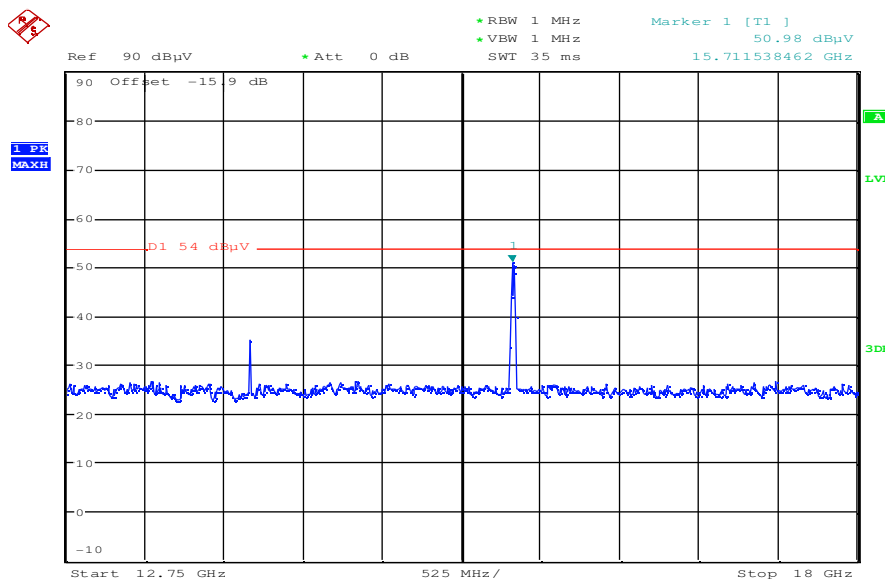
**Plot 24:** highest channel; power index 30; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



Plot 25: highest channel; power index 30; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209



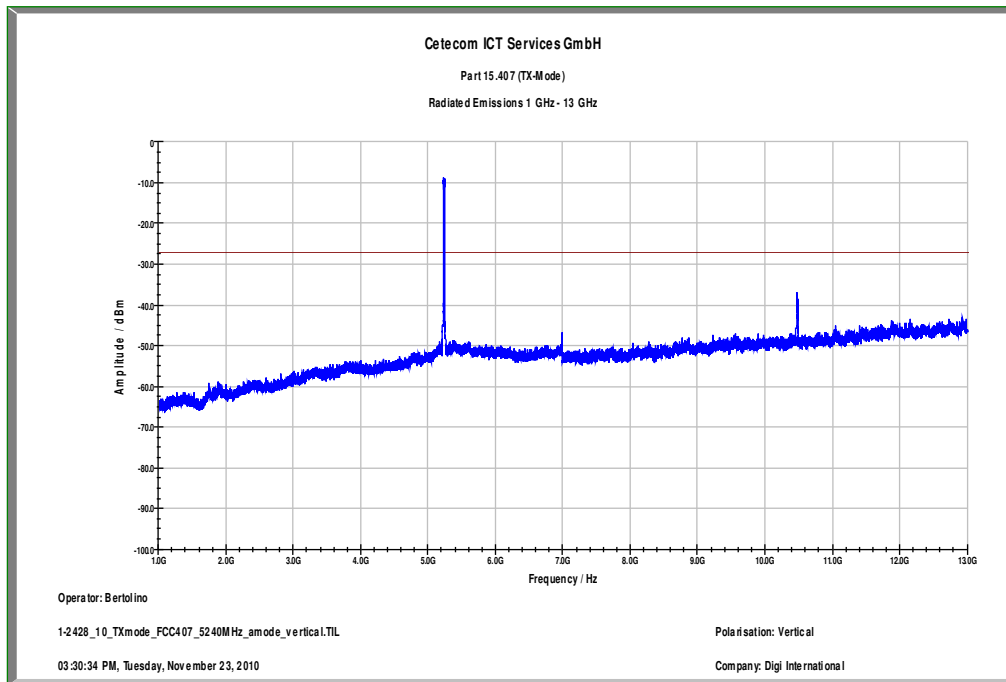
Plot 26: highest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209



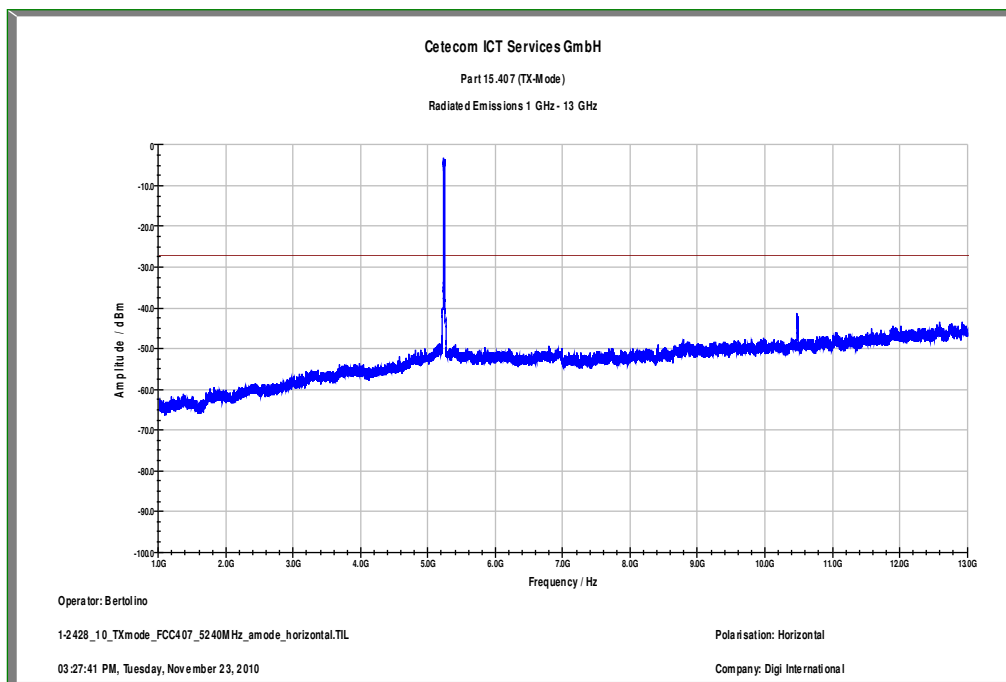
Date: 24.NOV.2010 13:18:24



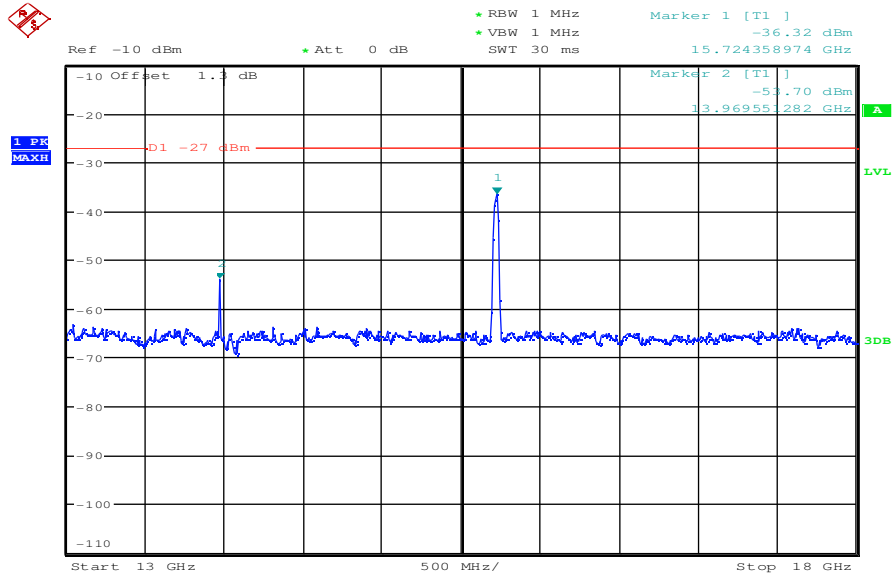
Plot 29: highest channel; power index 30; 1 GHz to 13 GHz – vertical polarization, Part 15.407



Plot 30: highest channel; power index 30; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

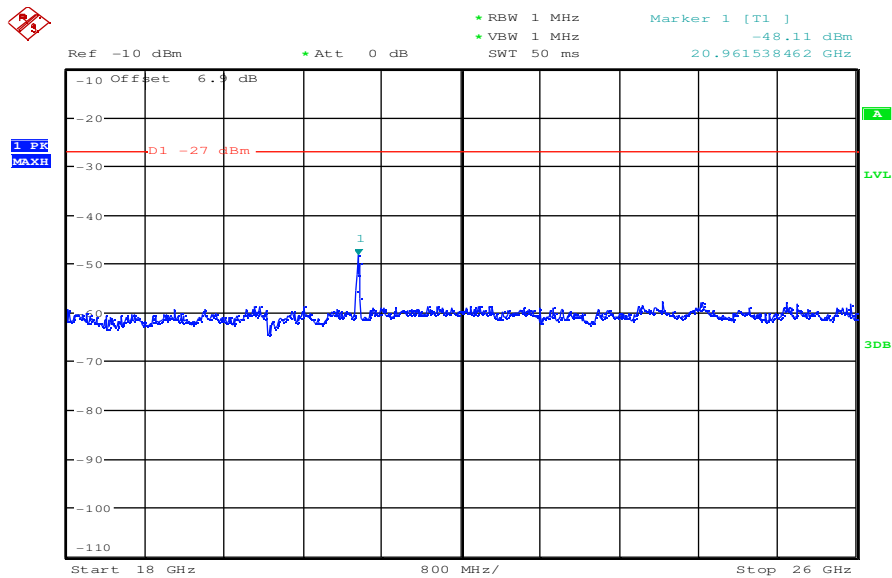


Plot 31: highest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



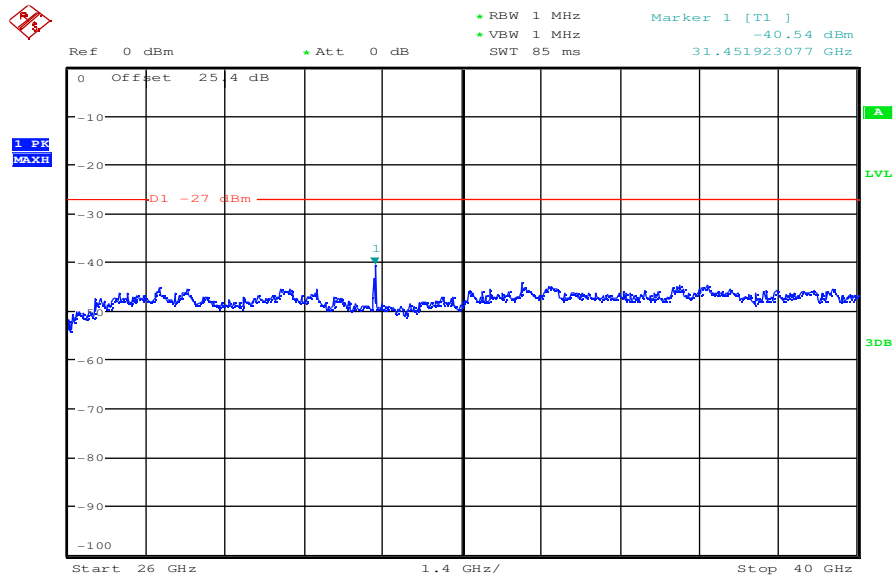
Date: 25.NOV.2010 11:32:37

Plot 32: highest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 12:54:13

Plot 33: highest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:39:54

**OFDM – mode / n – mode (mcs7):**

**Plot 1:** lowest channel; power index 30; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

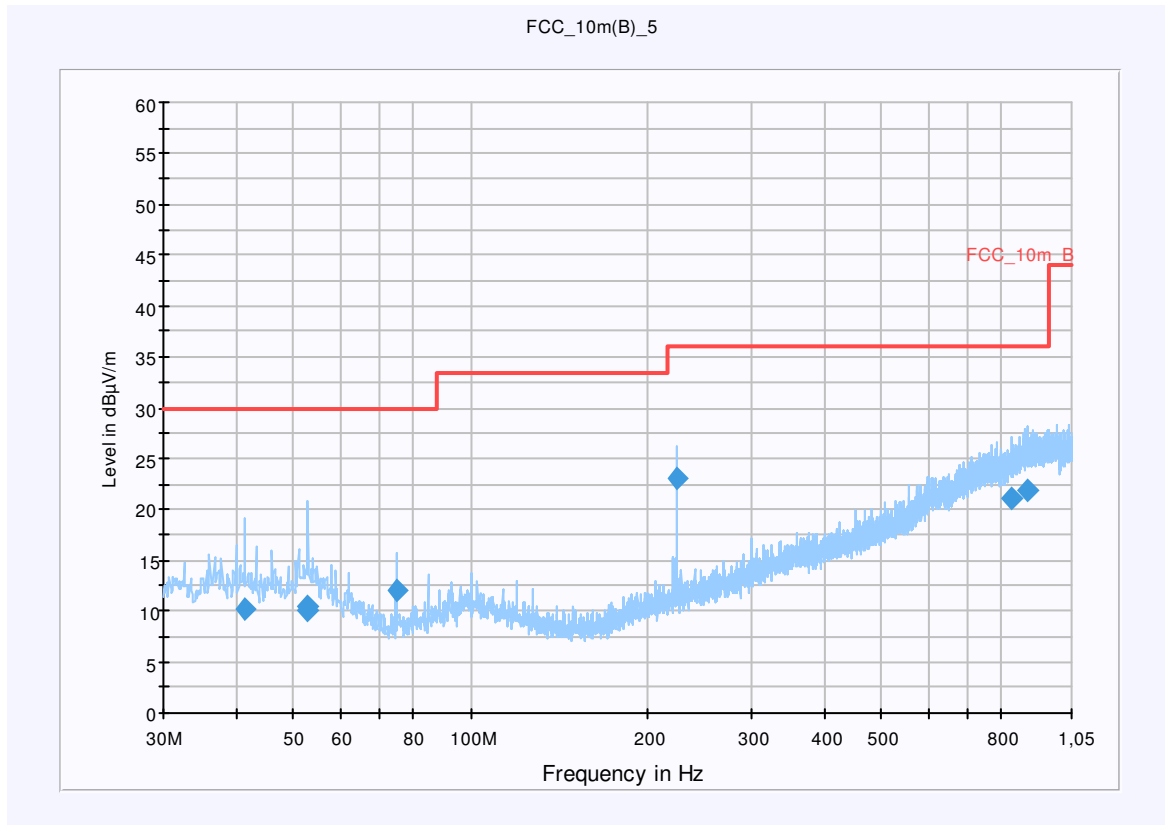
**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5180 MHz, n mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1,05 GHz	QuasiPeak	120 kHz	15 s	Receiver



**Final Result 1**

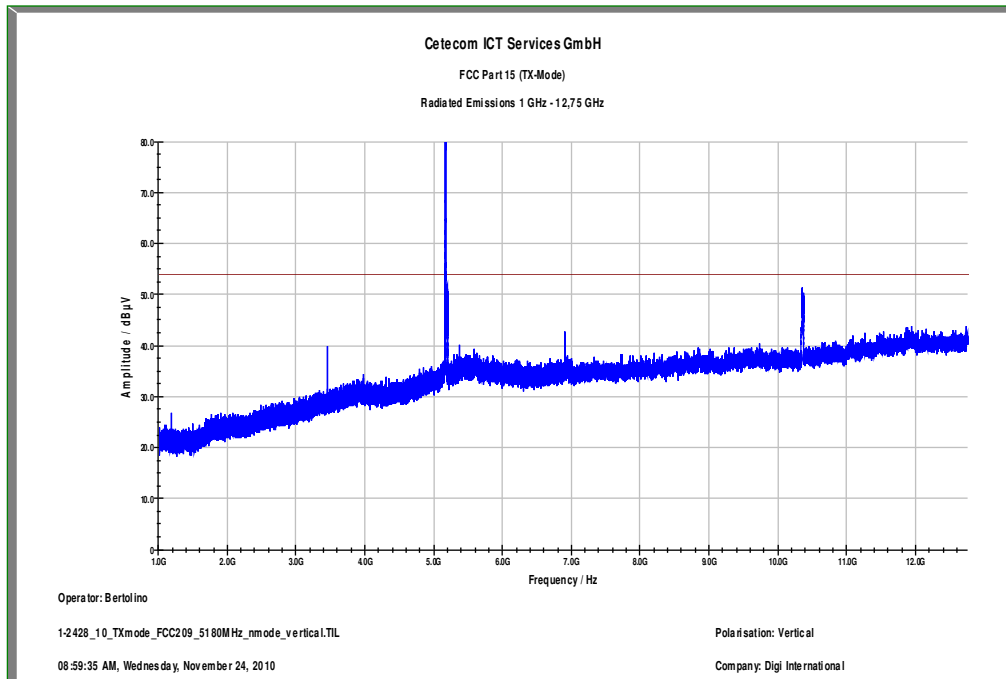
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
41.400000	10.2	15000.000	120.000	192.0	V	47.0	13.4	19.8	30.0	
52.680000	10.4	15000.000	120.000	270.0	V	77.0	13.1	19.6	30.0	
52.920000	10.1	15000.000	120.000	270.0	V	29.0	13.1	19.9	30.0	
75.000000	12.1	15000.000	120.000	110.0	V	326.0	9.2	17.9	30.0	
224.880000	23.1	15000.000	120.000	98.0	V	104.0	12.5	12.9	36.0	
831.480000	21.0	15000.000	120.000	126.0	V	228.0	24.3	15.0	36.0	
...	...	...	...	...	...	...	...	...	...	...

**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

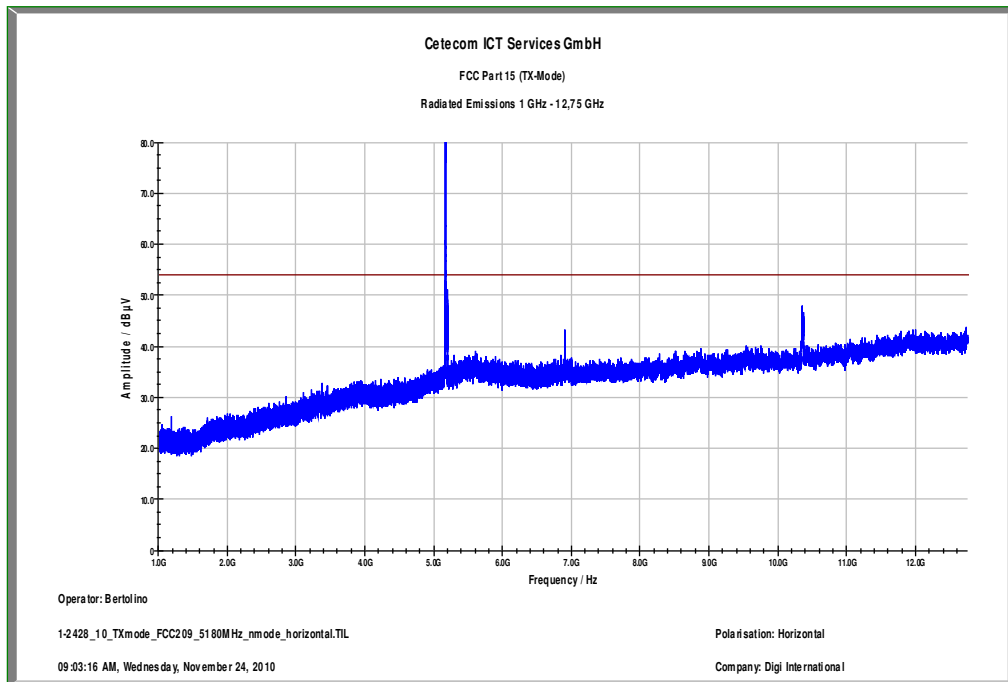
EMC 32 Version 8.10.00

**Plot 2:** lowest channel; power index 30; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209

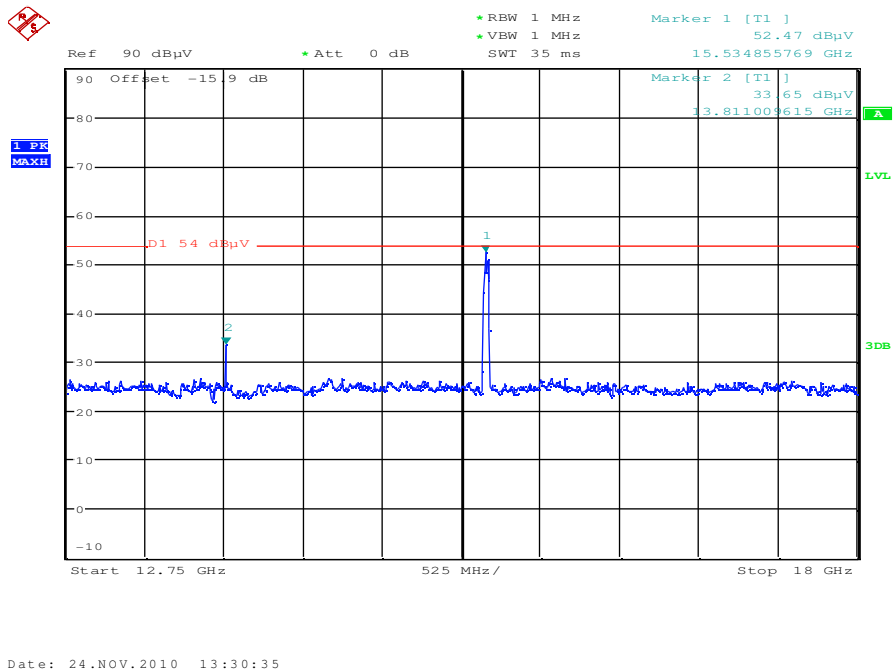




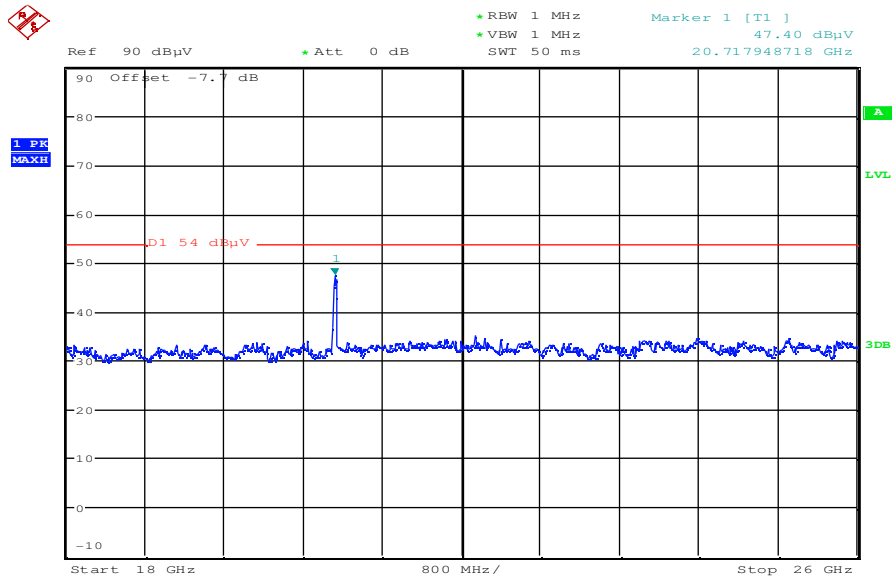
**Plot 3:** lowest channel; power index 30; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209



**Plot 4:** lowest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209

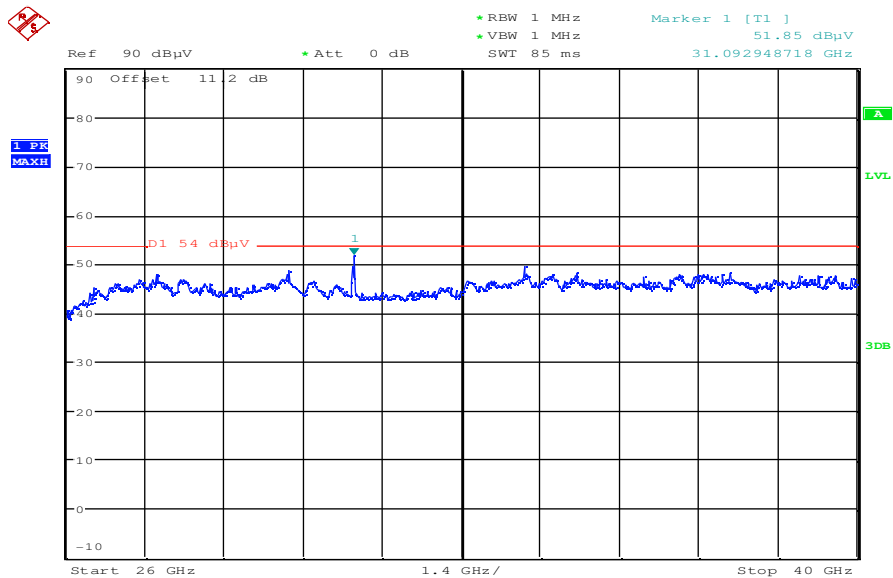


Plot 5: lowest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



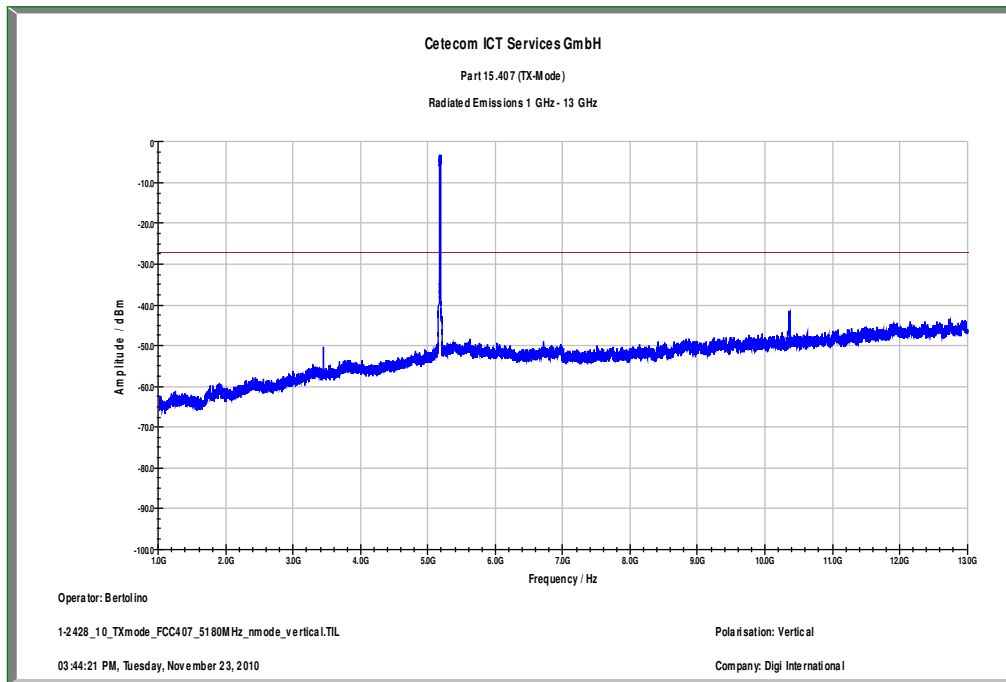
Date: 24.NOV.2010 13:57:06

Plot 6: lowest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

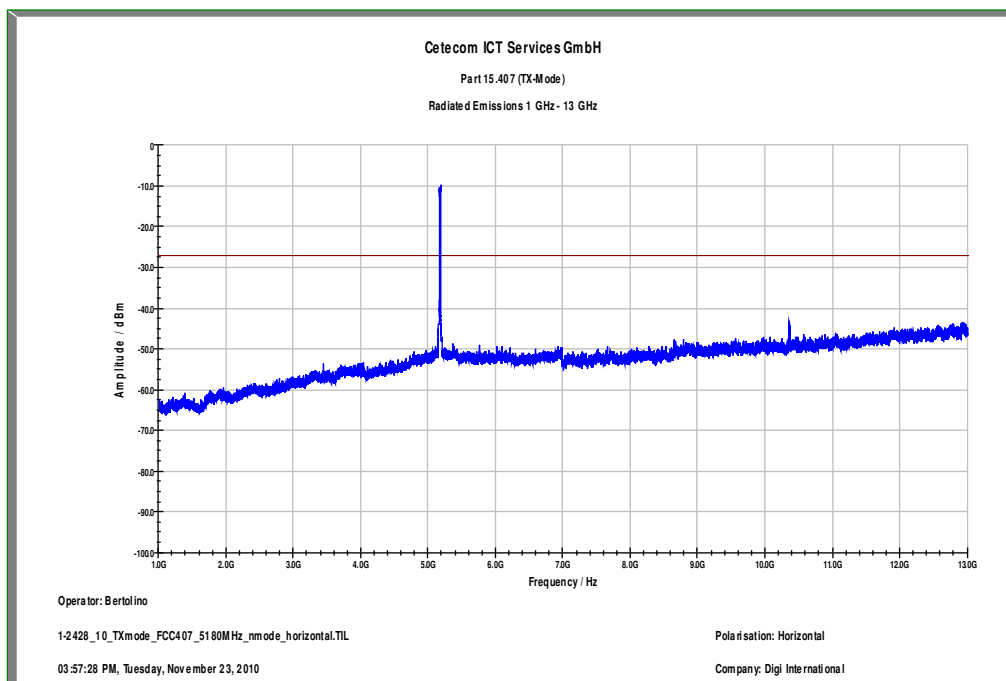


Date: 24.NOV.2010 14:24:03

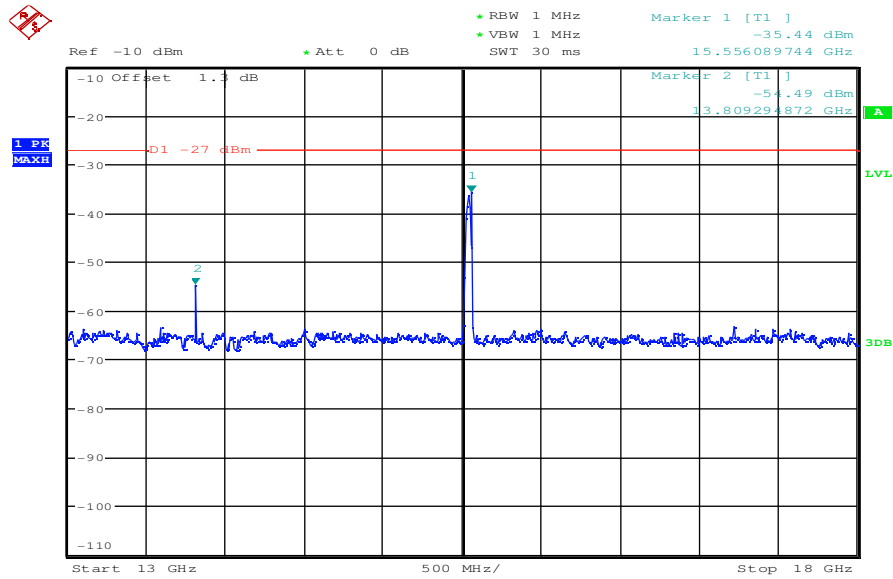
**Plot 7:** lowest channel; power index 30; 1 GHz to 13 GHz – vertical polarization, Part 15.407



**Plot 8:** lowest channel; power index 30; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

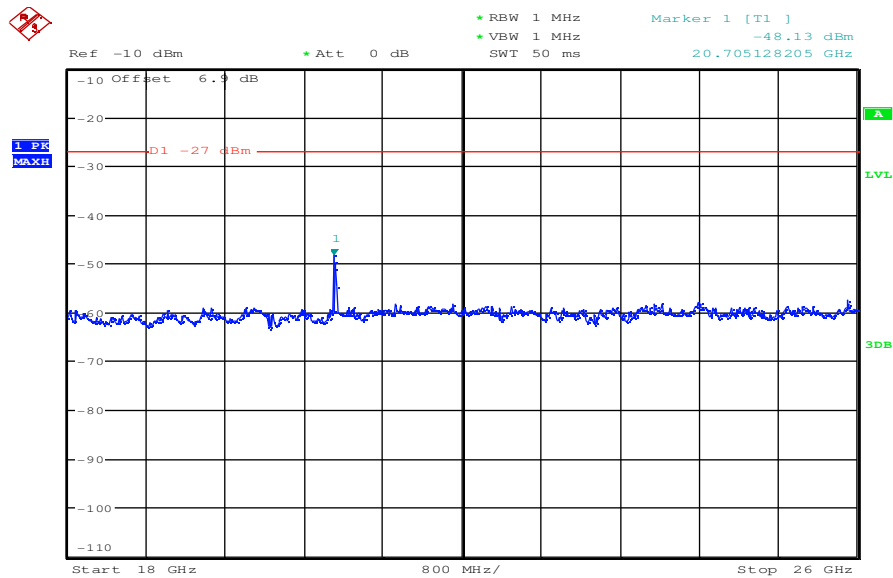


Plot 9: lowest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



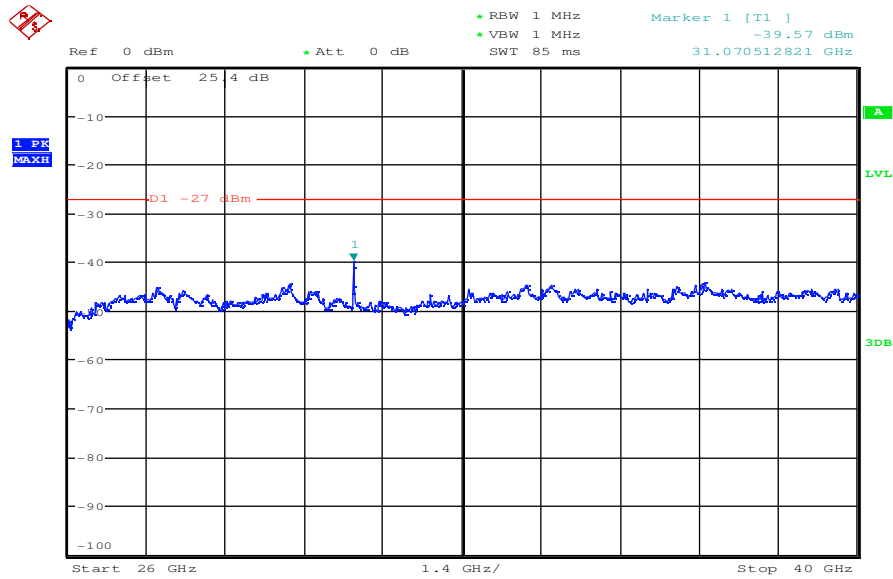
Date: 25.NOV.2010 11:40:56

Plot 10: lowest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:00:43

Plot 11: lowest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:47:06

Plot 12: middle channel; power index 30; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

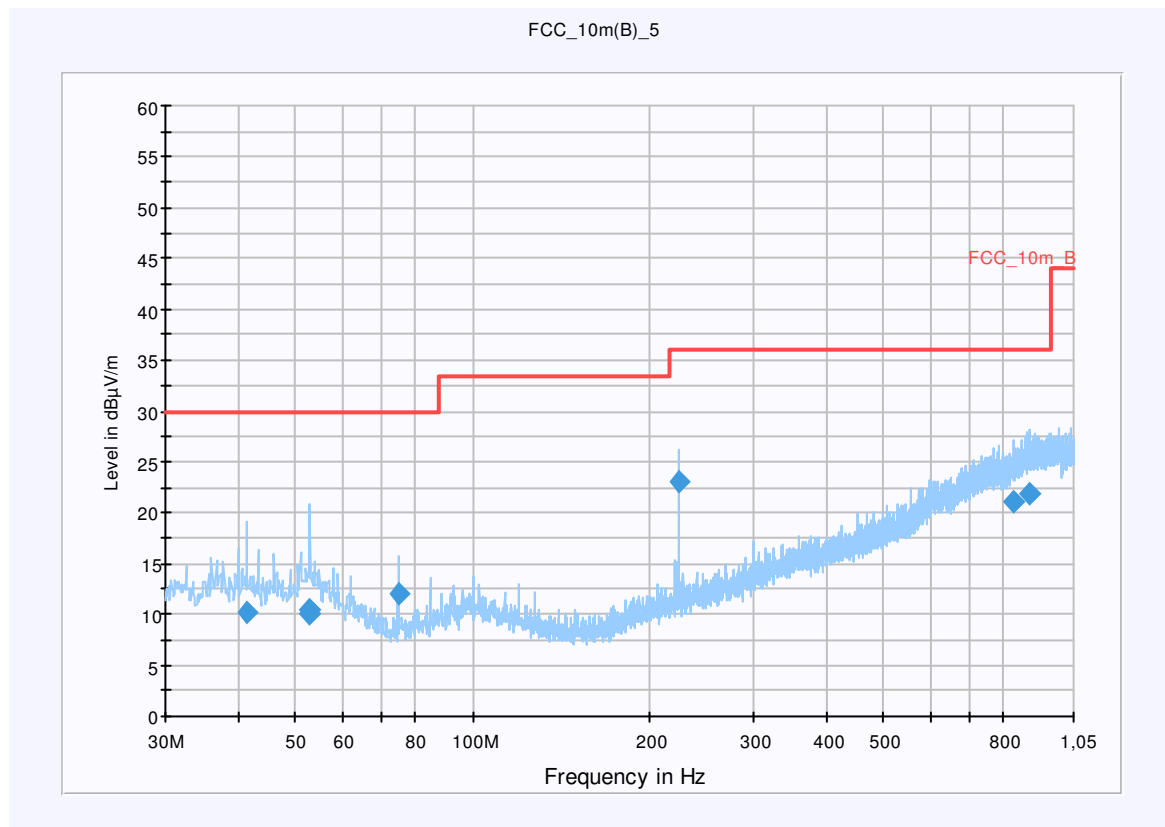
### Common Information

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5200 MHz, n mode  
 Operator Name: HNA  
 Comment: 3.3V DC

### Scan Setup: STAN\_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)  
 Level Unit: dB $\mu$ V/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1,05 GHz	QuasiPeak	120 kHz	15 s	Receiver



### Final Result 1

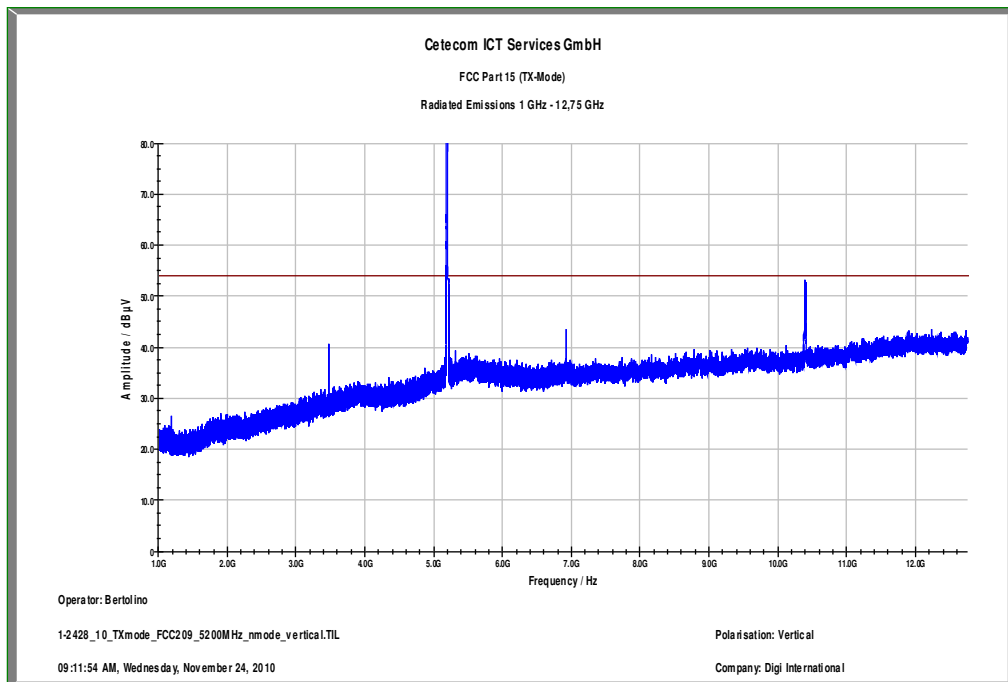
Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)	Comment
41.400000	10.2	15000.000	120.000	192.0	V	47.0	13.4	19.8	30.0	
52.680000	10.4	15000.000	120.000	270.0	V	77.0	13.1	19.6	30.0	
52.920000	10.1	15000.000	120.000	270.0	V	29.0	13.1	19.9	30.0	
75.000000	12.1	15000.000	120.000	110.0	V	326.0	9.2	17.9	30.0	
224.880000	23.1	15000.000	120.000	98.0	V	104.0	12.5	12.9	36.0	
831.480000	21.0	15000.000	120.000	126.0	V	228.0	24.3	15.0	36.0	
...	...	...	...	...	...	...	...	...	...	...

**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

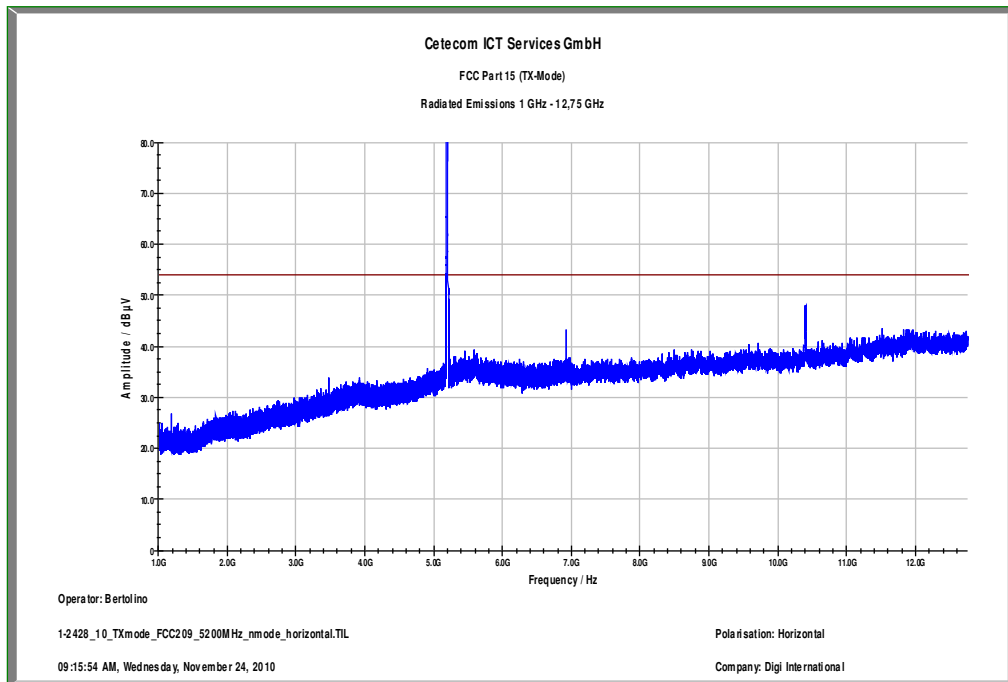
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

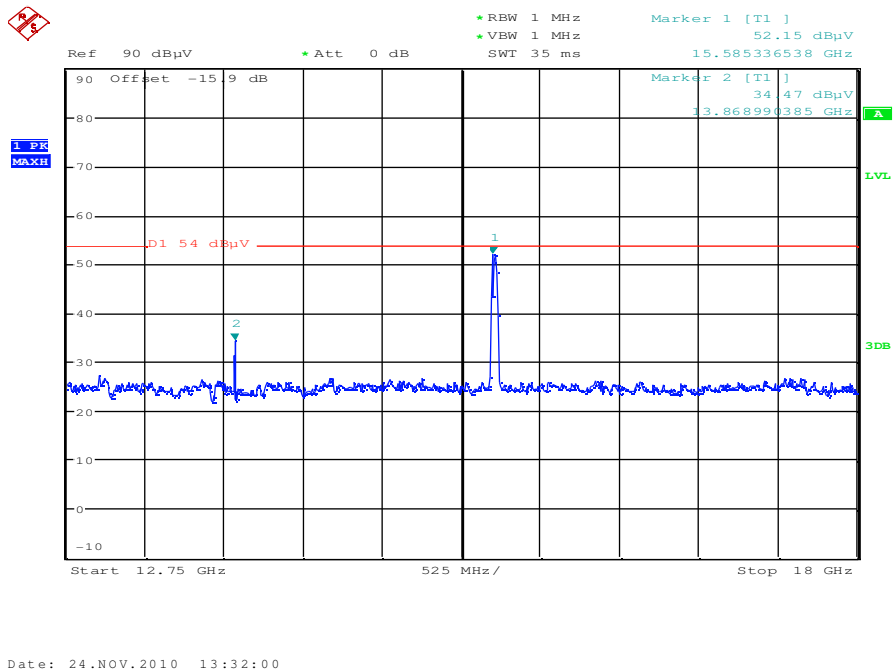
**Plot 13:** middle channel; power index 30; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



Plot 14: middle channel; power index 30; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209

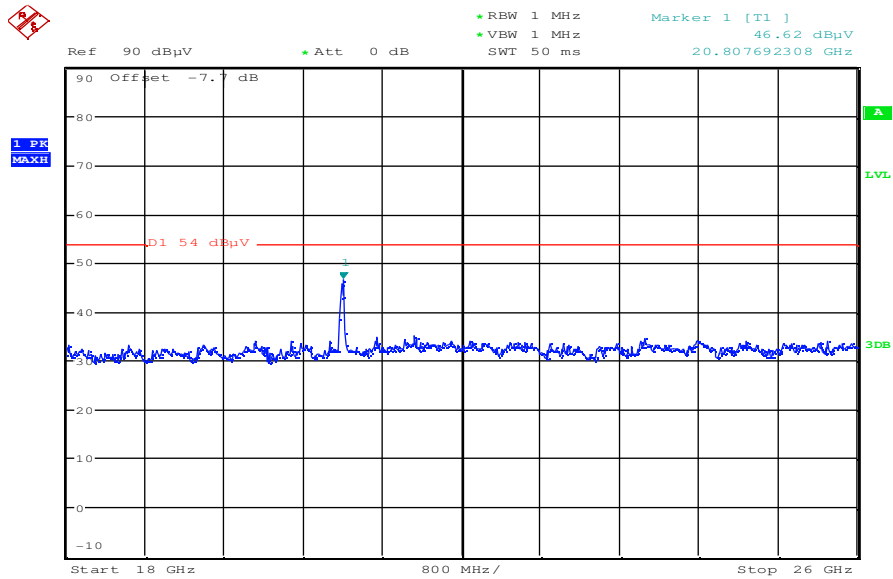


Plot 15: middle channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209



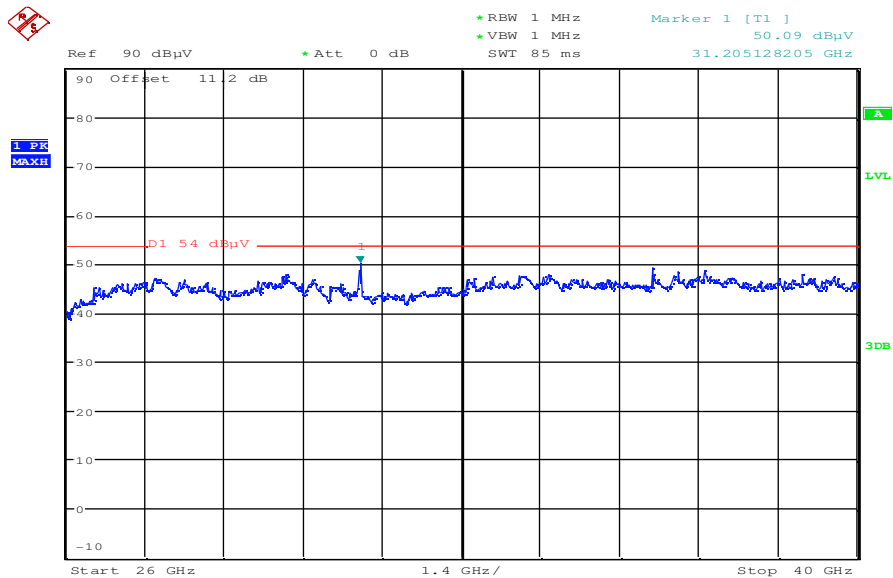


Plot 16: middle channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



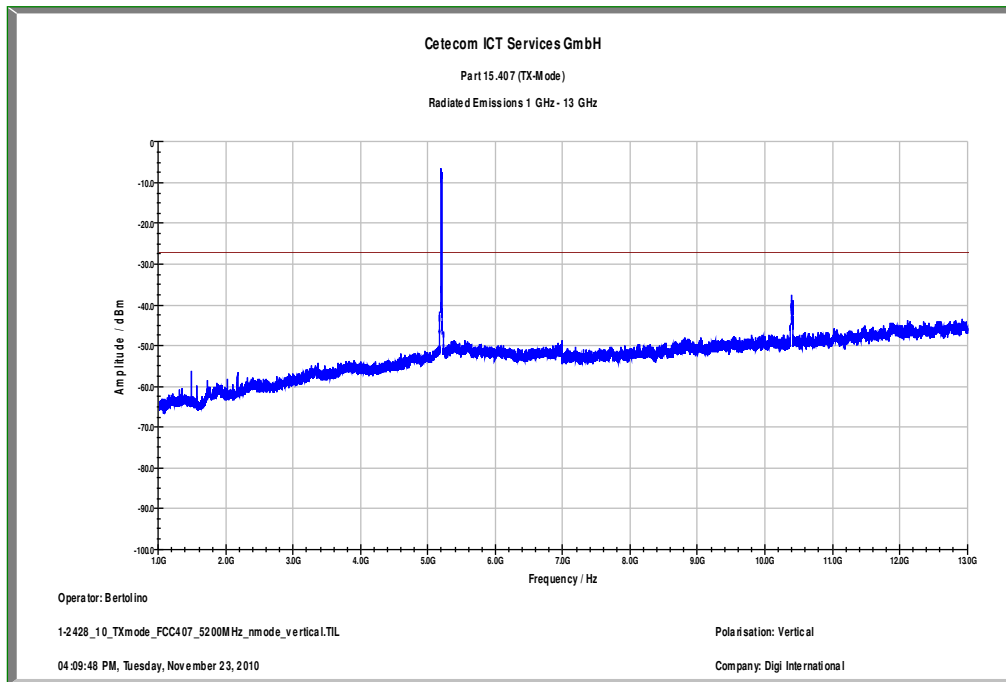
Date: 24.NOV.2010 13:58:09

Plot 17: middle channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

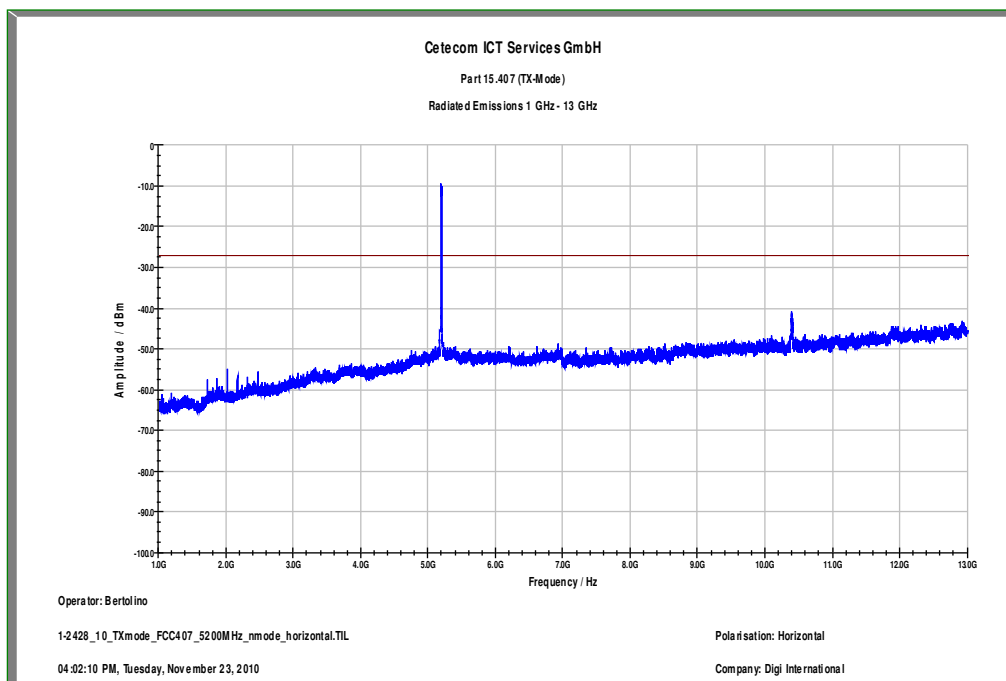


Date: 24.NOV.2010 14:24:53

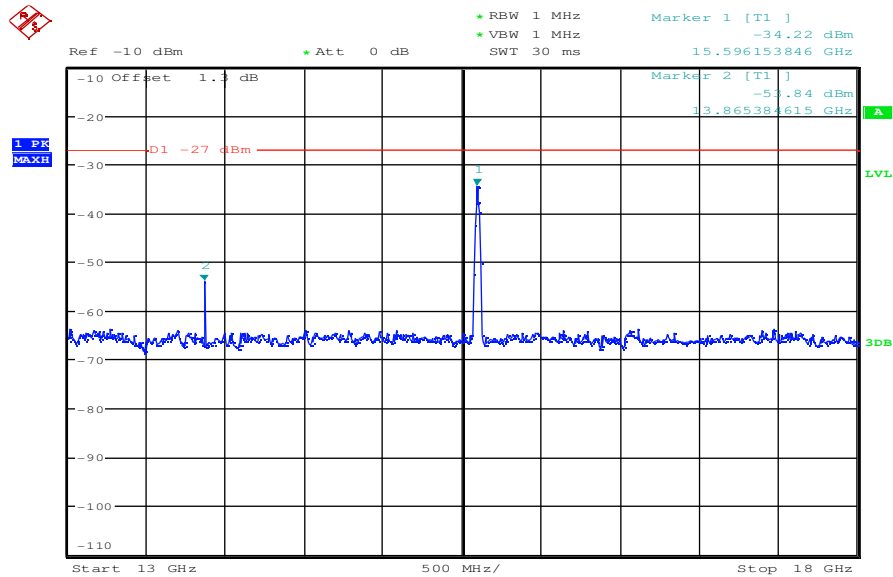
**Plot 18:** middle channel; power index 30; 1 GHz to 13 GHz – vertical polarization, Part 15.407



**Plot 19:** middle channel; power index 30; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

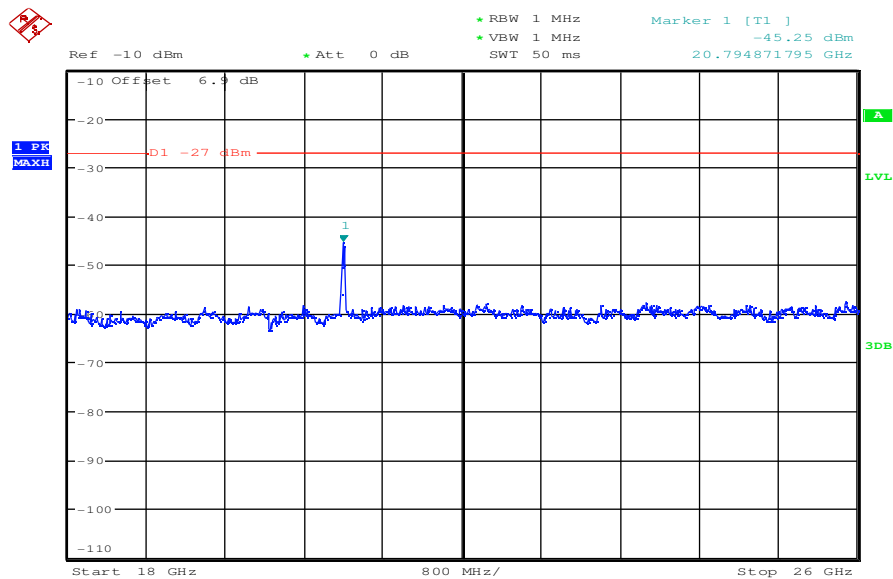


Plot 20: middle channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



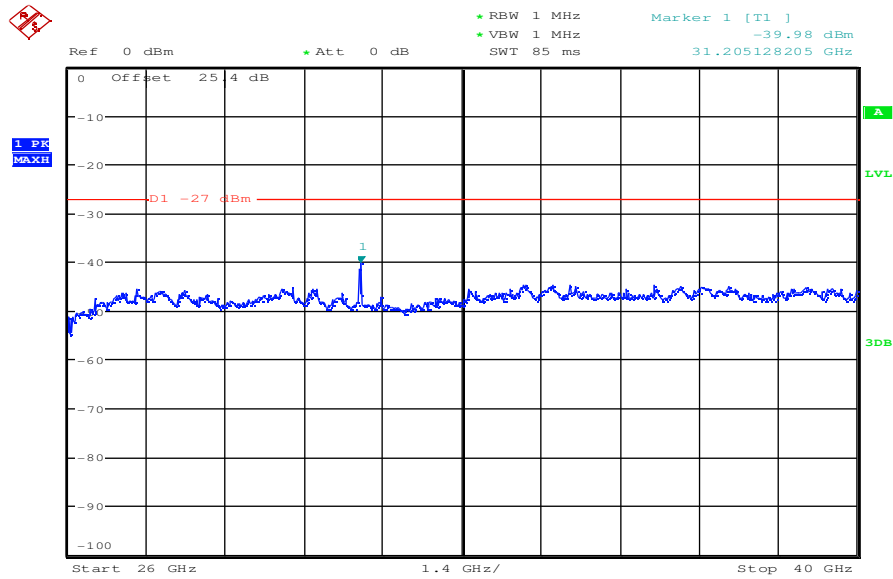
Date: 25.NOV.2010 11:42:10

Plot 21: middle channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:02:19

Plot 22: middle channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:48:14

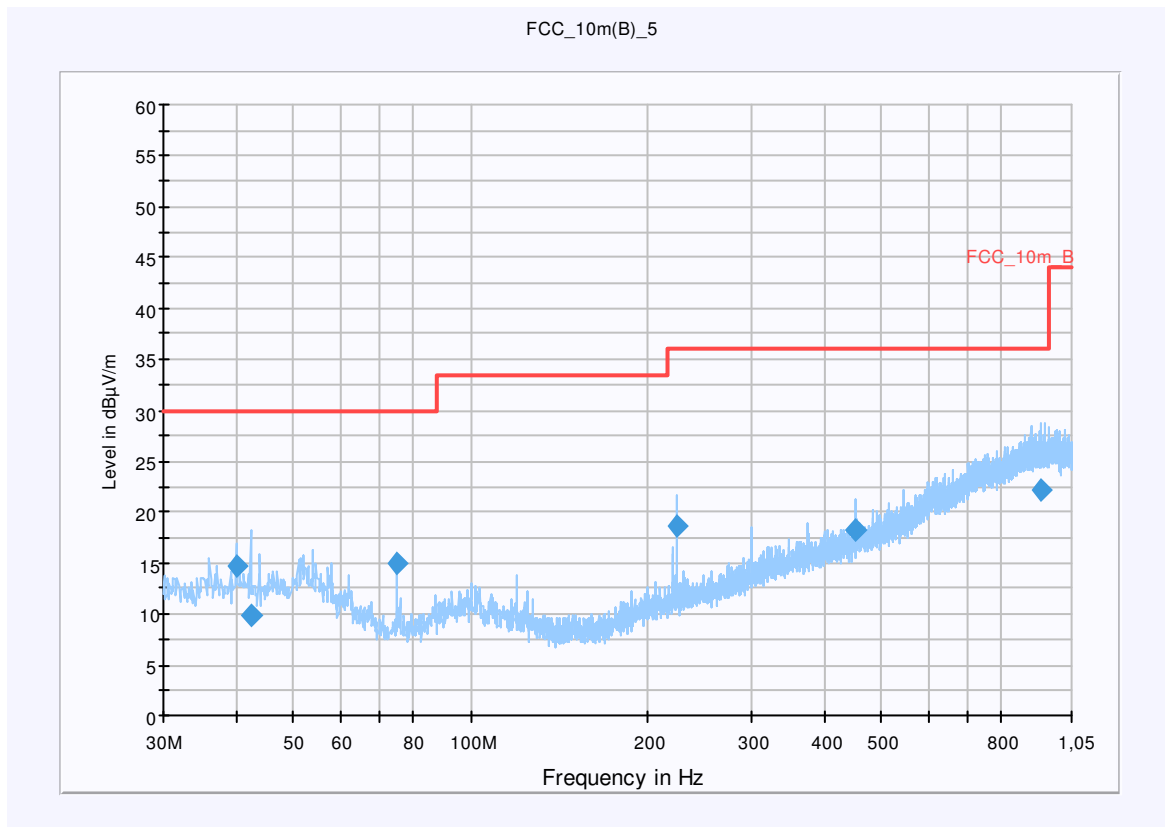
Plot 23: highest channel; power index 30; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

### Common Information

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5240 MHz, n mode  
 Operator Name: HNA  
 Comment: 3.3V DC

### Scan Setup: STAN\_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)  
 Level Unit: dB $\mu$ V/m  
**Subrange**                      **Detectors**                      **IF Bandwidth**                      **Meas. Time**                      **Receiver**  
 30 MHz - 1,05 GHz              QuasiPeak                      120 kHz                      15 s                      Receiver



### Final Result 1

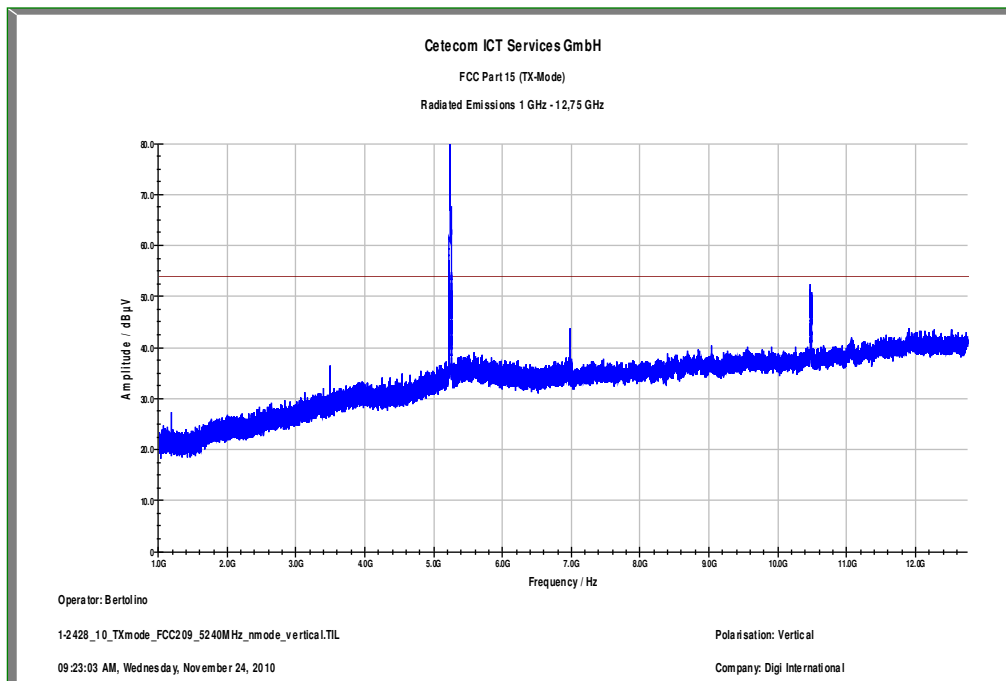
Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)	Comment
39.960000	14.8	15000.000	120.000	120.0	V	-2.0	13.4	15.2	30.0	
42.240000	9.9	15000.000	120.000	98.0	V	303.0	13.4	20.1	30.0	
75.000000	15.0	15000.000	120.000	202.0	V	163.0	9.2	15.0	30.0	
224.880000	18.6	15000.000	120.000	98.0	V	201.0	12.5	17.4	36.0	
449.760000	18.2	15000.000	120.000	270.0	H	241.0	17.7	17.8	36.0	
934.080000	22.1	15000.000	120.000	270.0	H	102.0	25.3	13.9	36.0	

**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

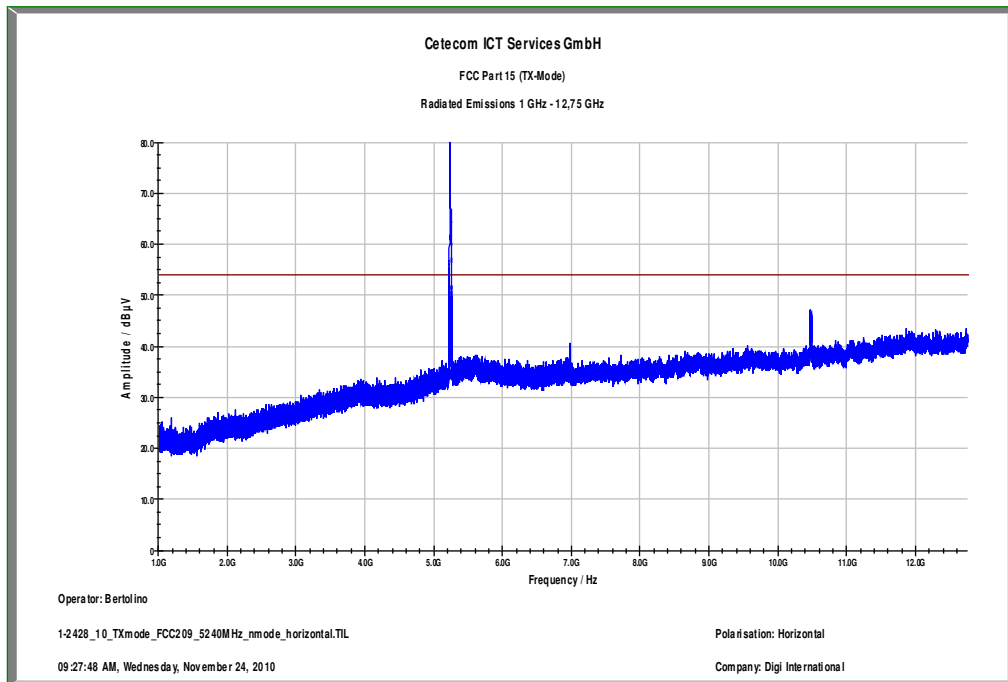
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

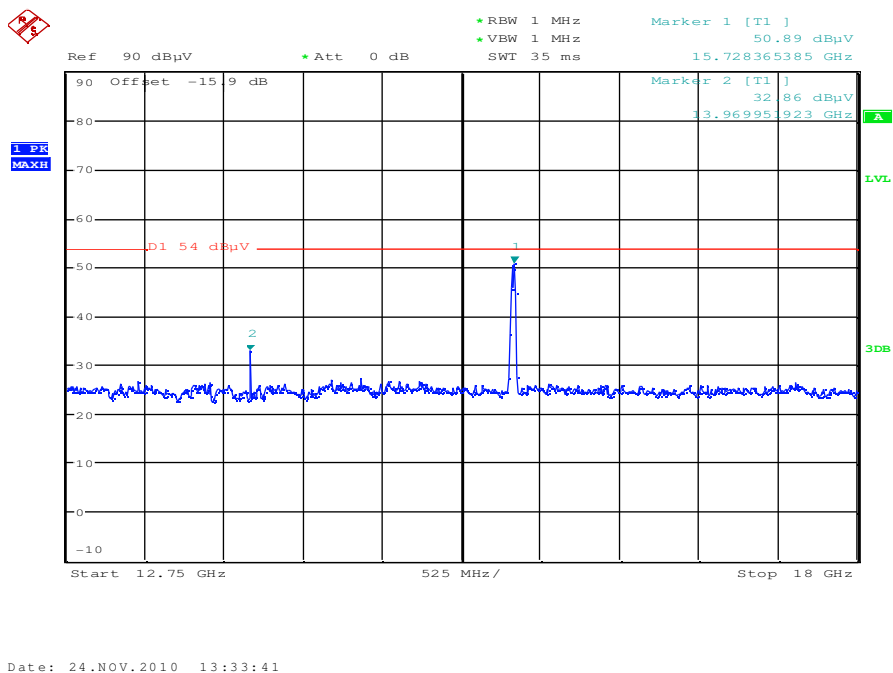
**Plot 24:** highest channel; power index 30; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



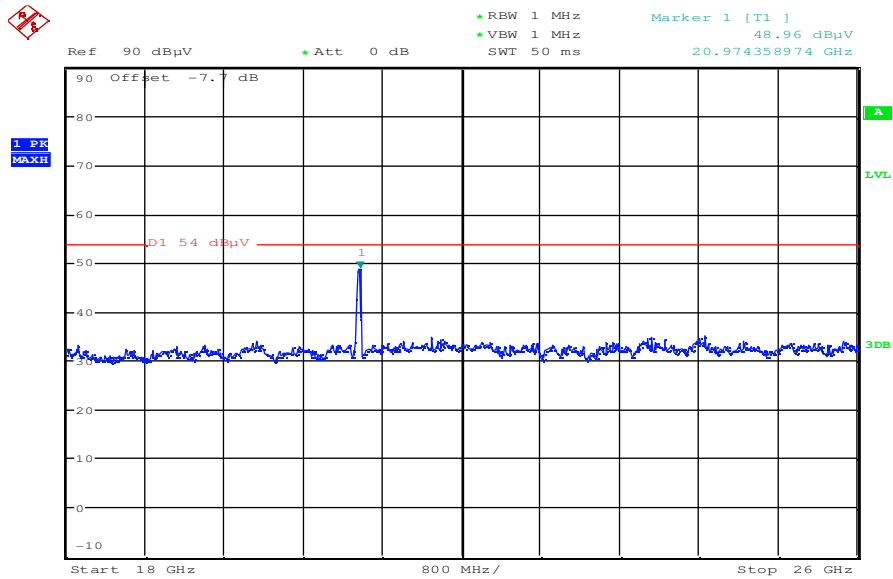
Plot 25: highest channel; power index 30; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209



Plot 26: highest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209

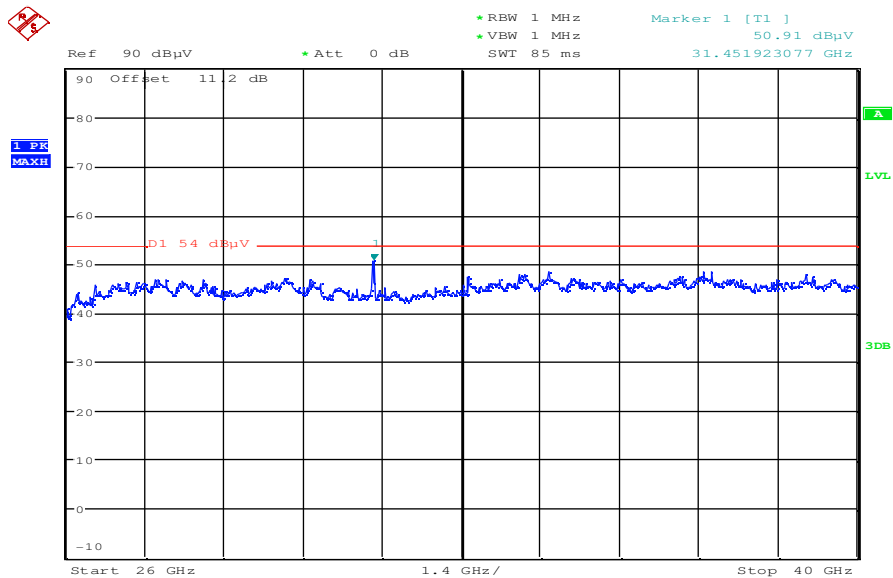


**Plot 27:** highest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



Date: 24.NOV.2010 13:59:08

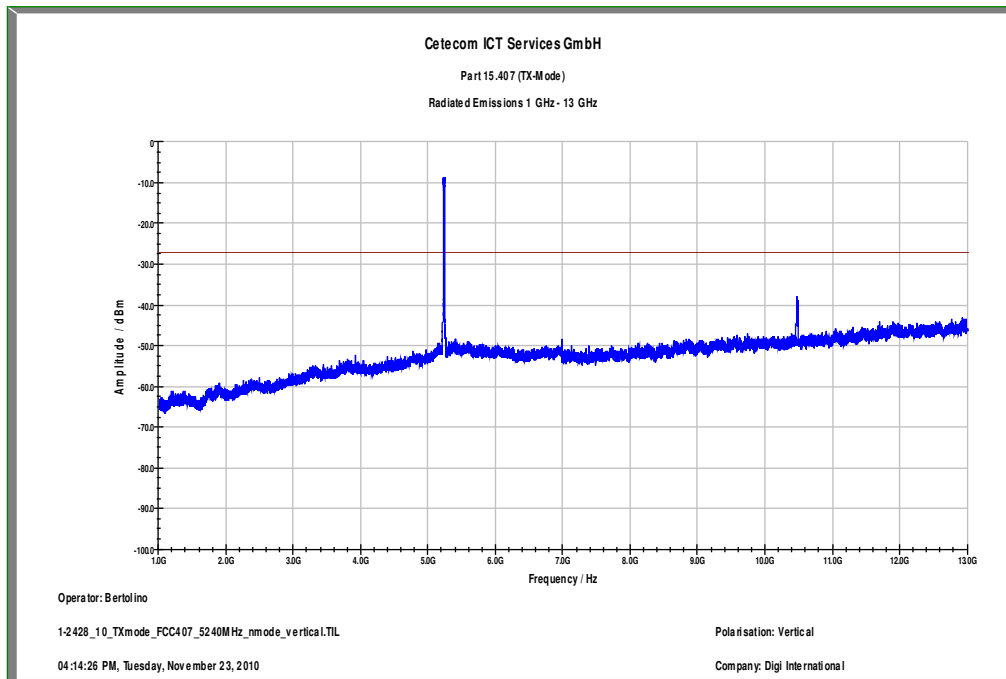
**Plot 28:** highest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209



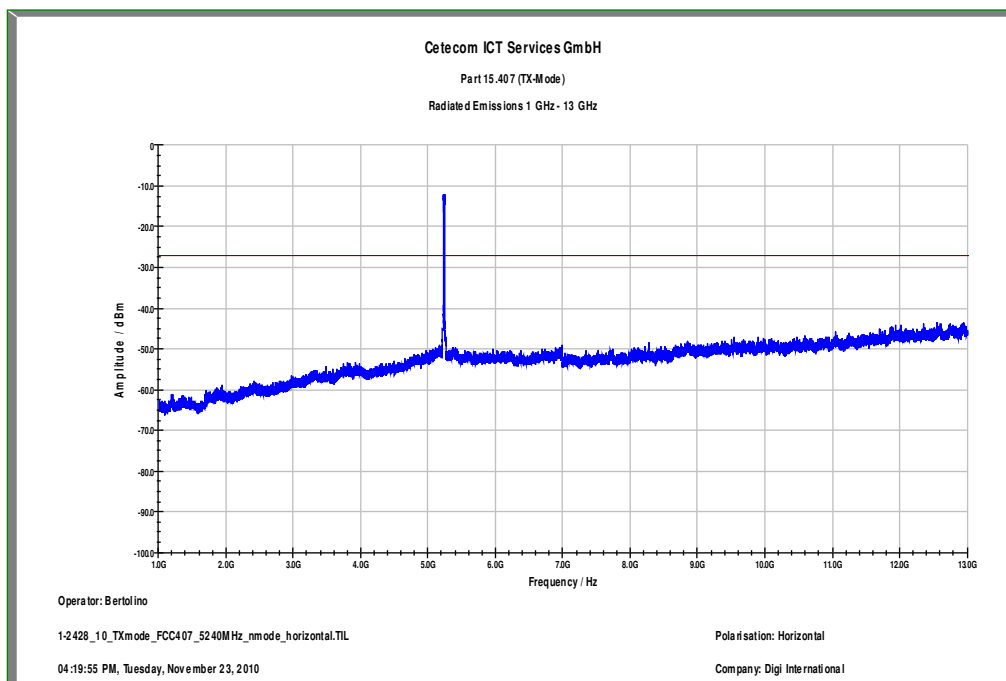
Date: 24.NOV.2010 14:25:48



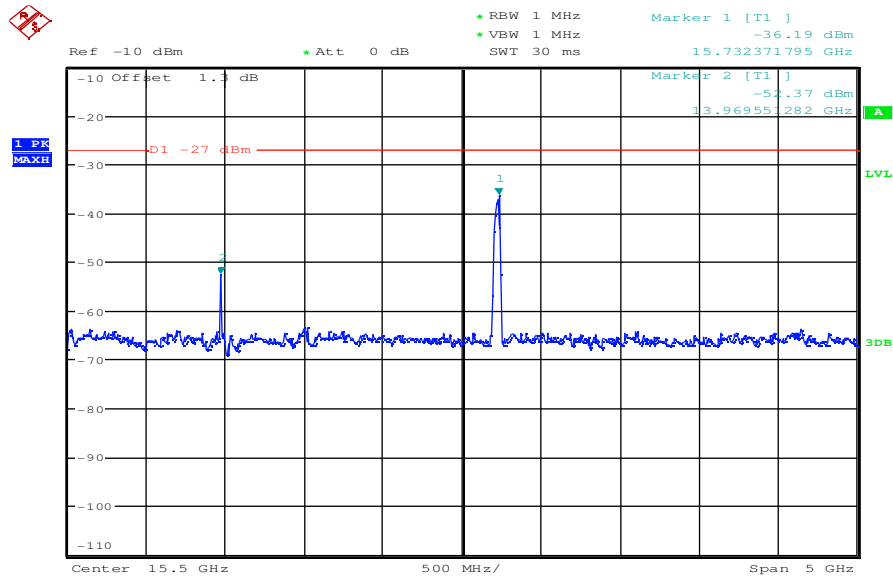
Plot 29: highest channel; power index 30; 1 GHz to 13 GHz – vertical polarization, Part 15.407



Plot 30: highest channel; power index 30; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

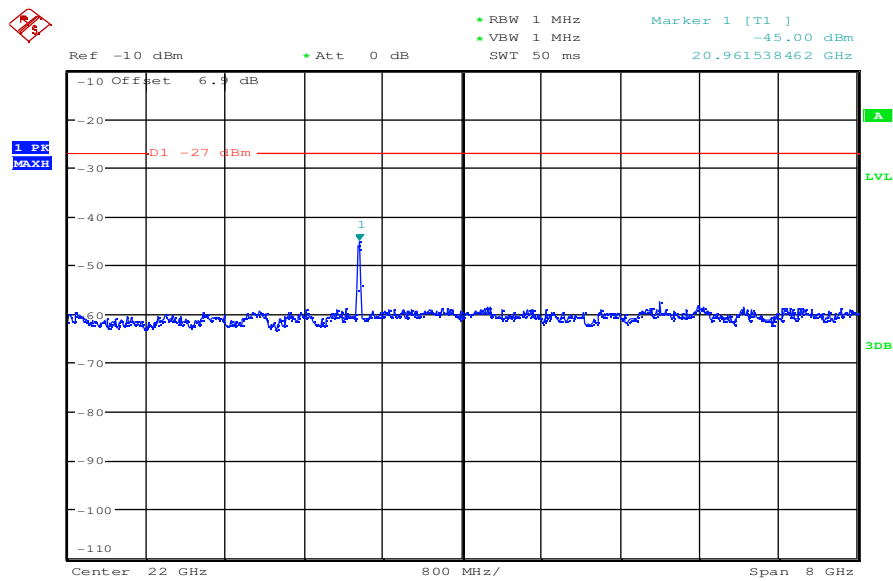


Plot 31: highest channel; power index 30; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



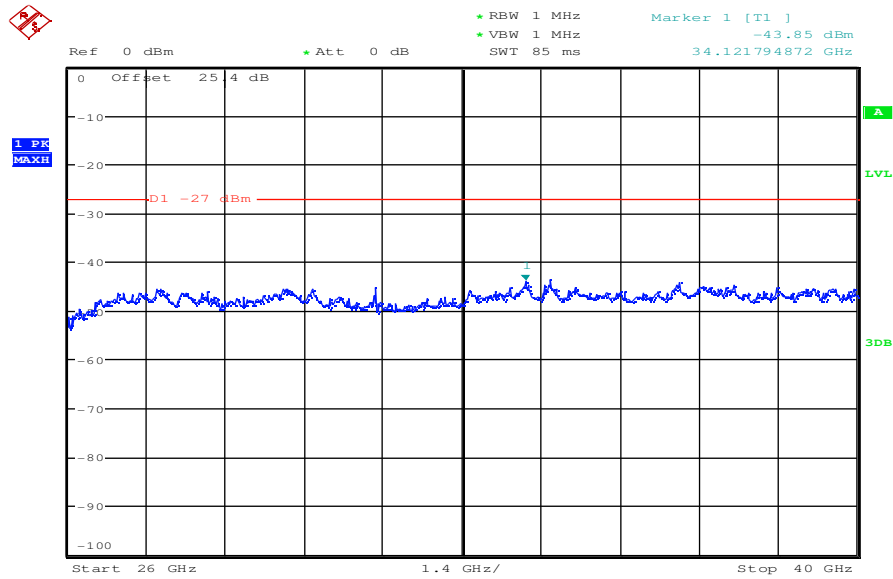
Date: 25.NOV.2010 11:43:40

Plot 32: highest channel; power index 30; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:20:18

Plot 33: highest channel; power index 30; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:49:25

**Band 1: 5250 MHz to 5350 MHz**

**OFDM – mode / a – mode (54 MBit/s):**

**Plot 1:** lowest channel; power index 28; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

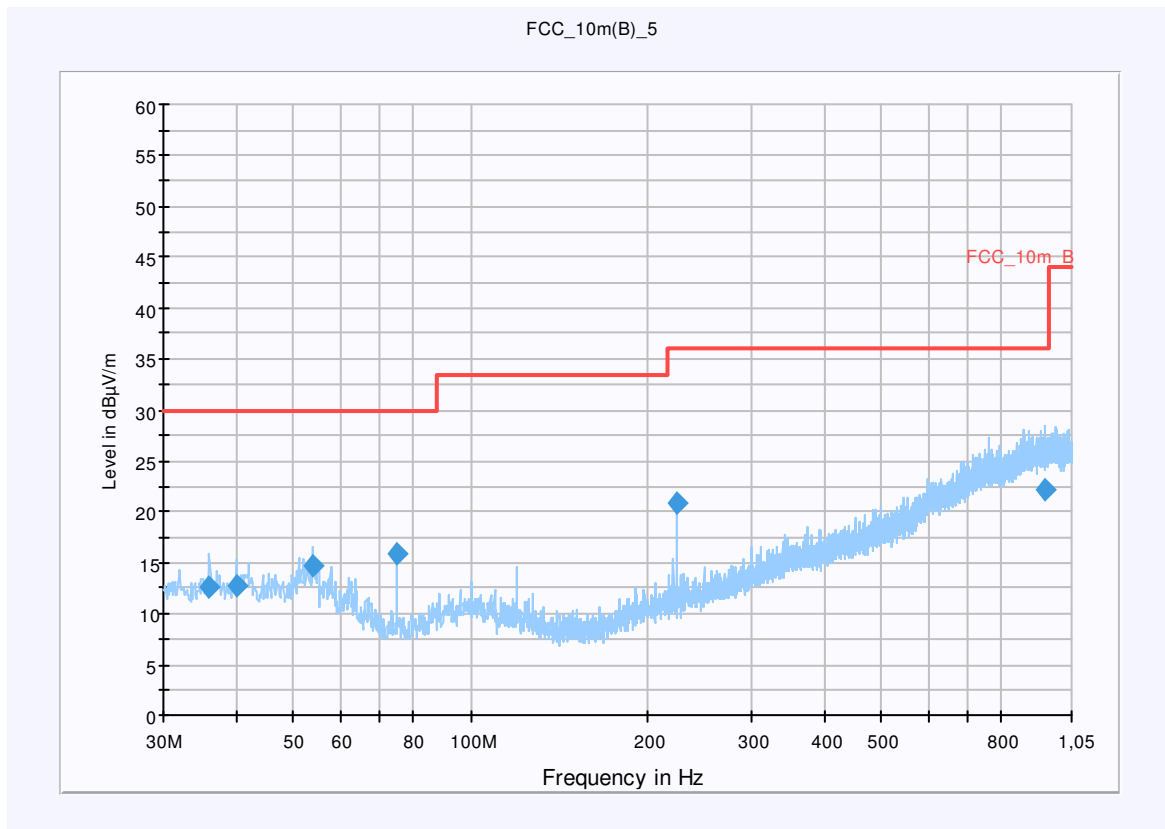
**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5260 MHz, a mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1,05 GHz	QuasiPeak	120 kHz	15 s	Receiver



**Final Result 1**

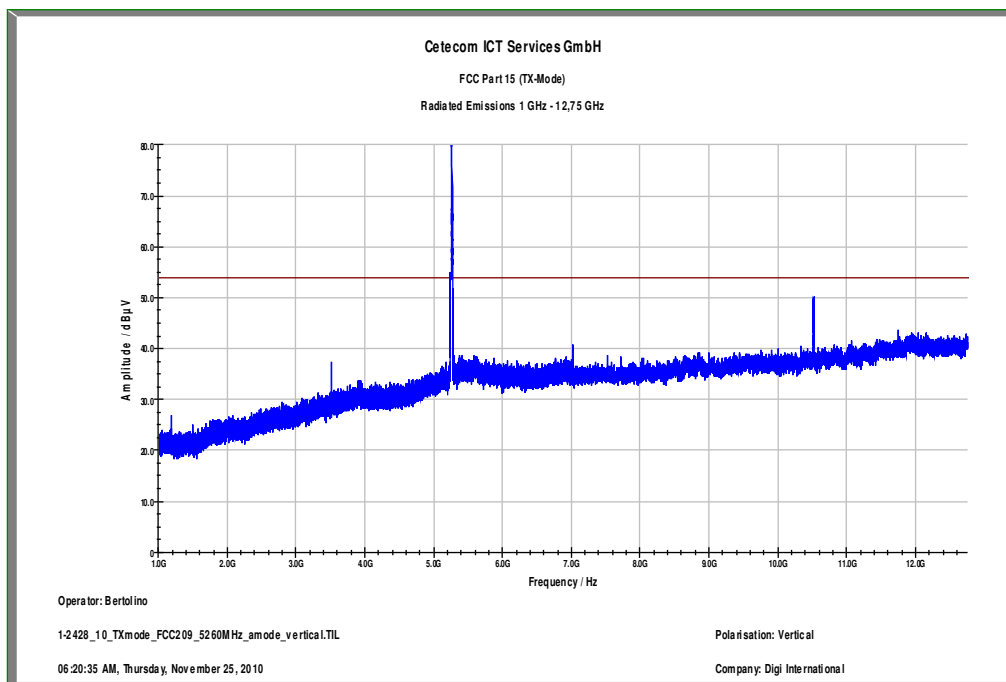
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
36.000000	12.7	15000.000	120.000	196.0	V	137.0	13.1	17.3	30.0	
39.960000	12.8	15000.000	120.000	262.0	V	230.0	13.4	17.2	30.0	
54.000000	14.7	15000.000	120.000	270.0	V	280.0	13.0	15.3	30.0	
75.000000	16.0	15000.000	120.000	205.0	V	328.0	9.2	14.0	30.0	
224.880000	20.8	15000.000	120.000	109.0	V	-2.0	12.5	15.2	36.0	
946.200000	22.3	15000.000	120.000	270.0	V	230.0	25.3	13.7	36.0	

**Hardware Setup:** EMI radiated\Electric Field (NOS) - [EMI radiated]

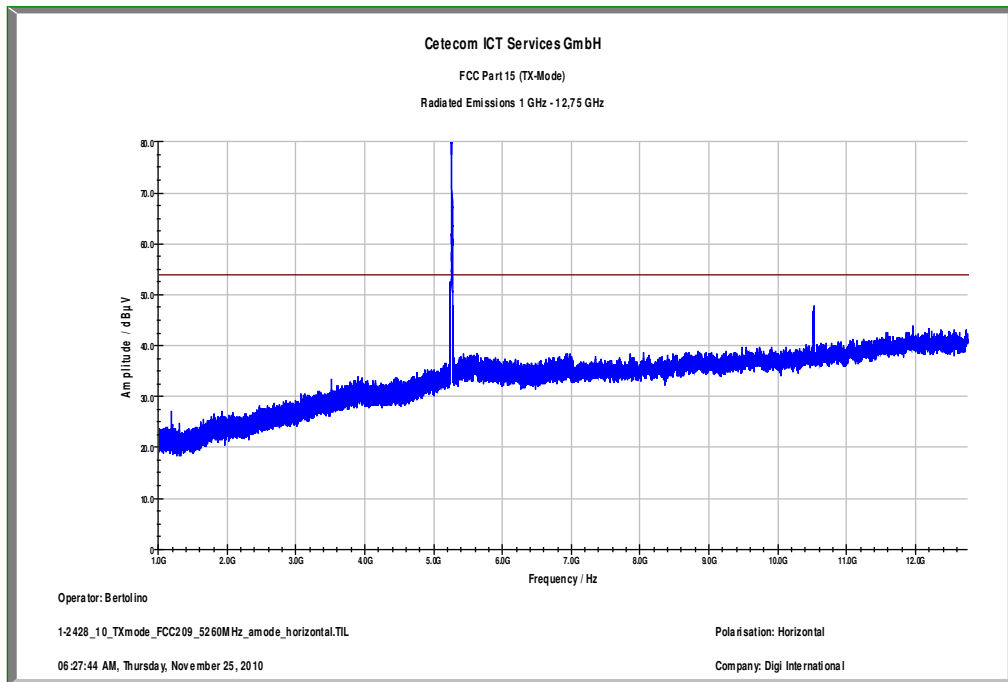
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

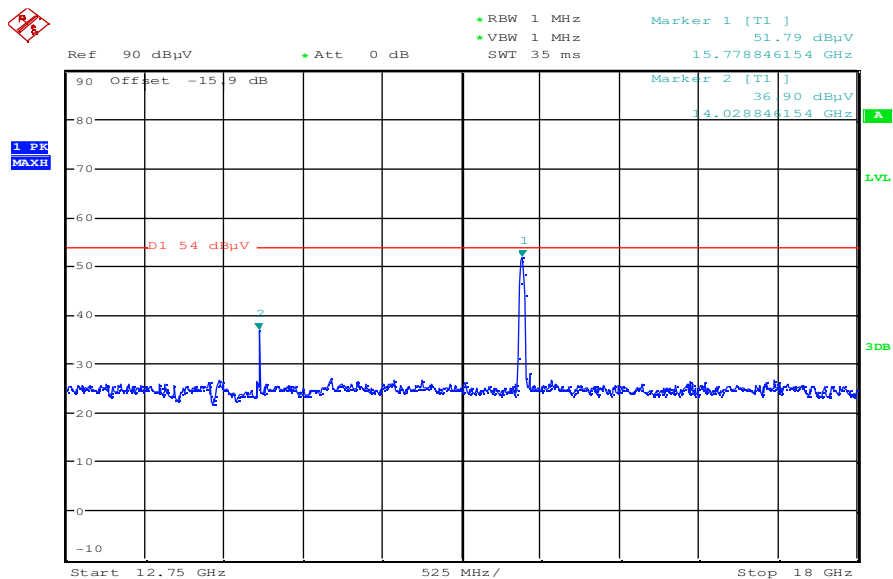
**Plot 2:** lowest channel; power index 28; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



**Plot 3:** lowest channel; power index 28; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209

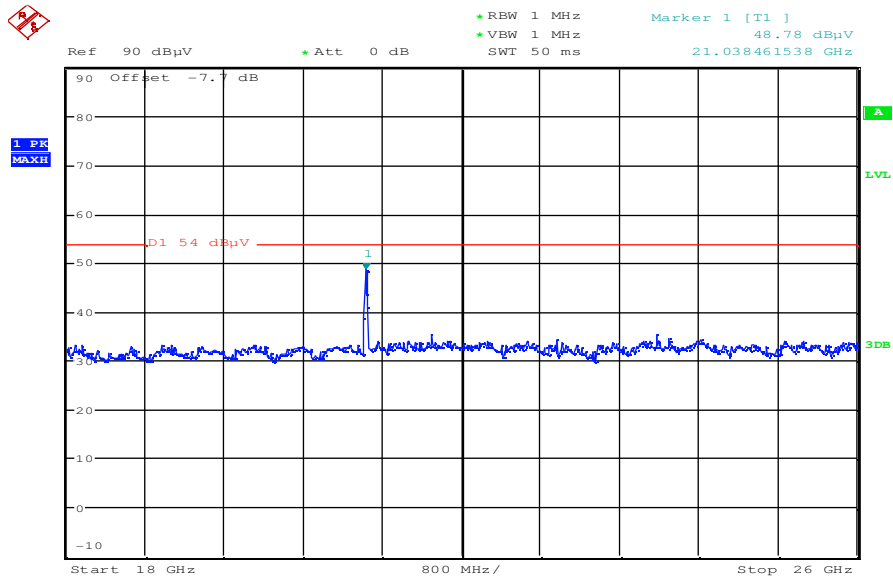


**Plot 4:** lowest channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209



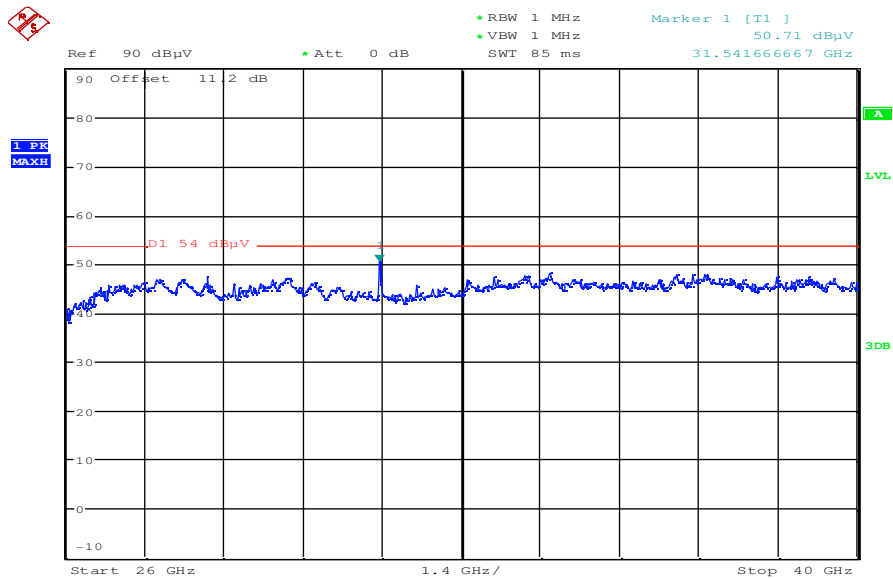
Date: 24.NOV.2010 13:19:42

**Plot 5:** lowest channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



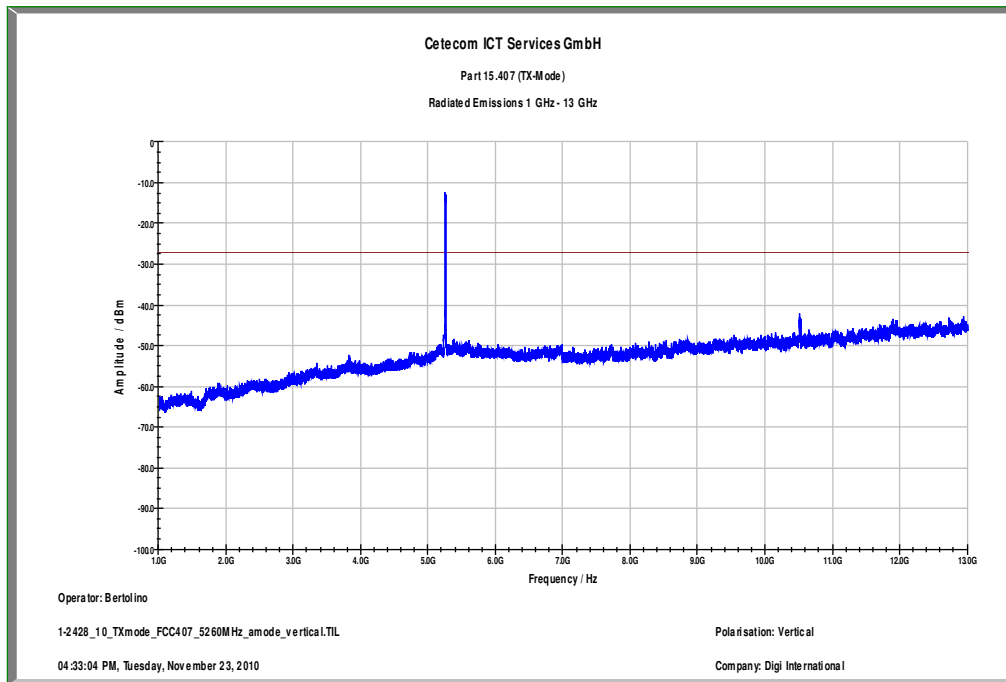
Date: 24.NOV.2010 13:49:13

**Plot 6:** lowest channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

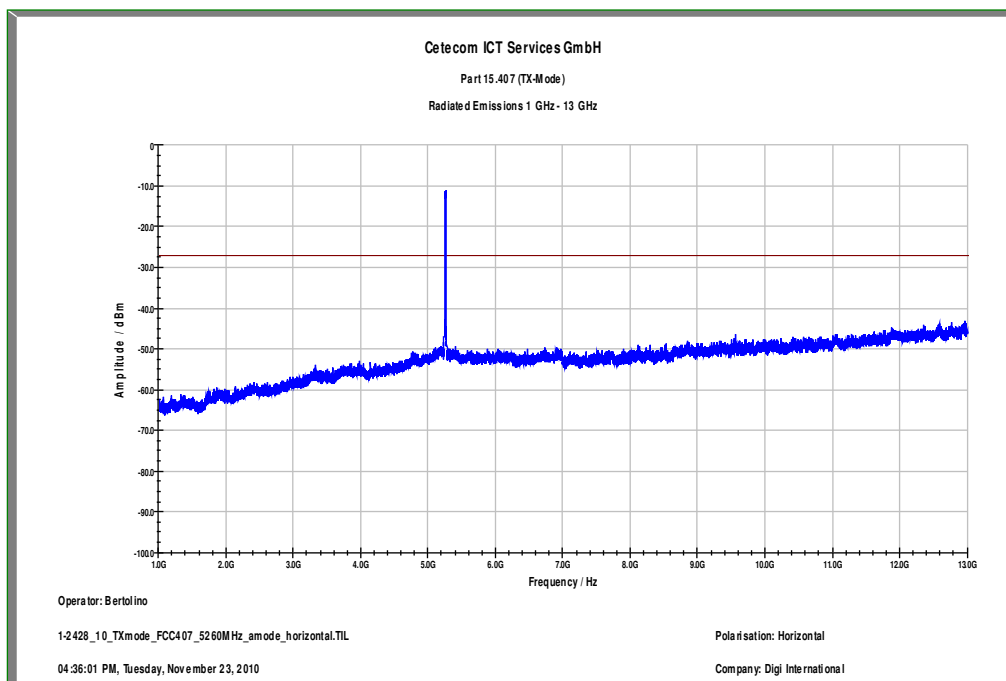


Date: 24.NOV.2010 14:17:12

**Plot 7:** lowest channel; power index 28; 1 GHz to 13 GHz – vertical polarization, Part 15.407

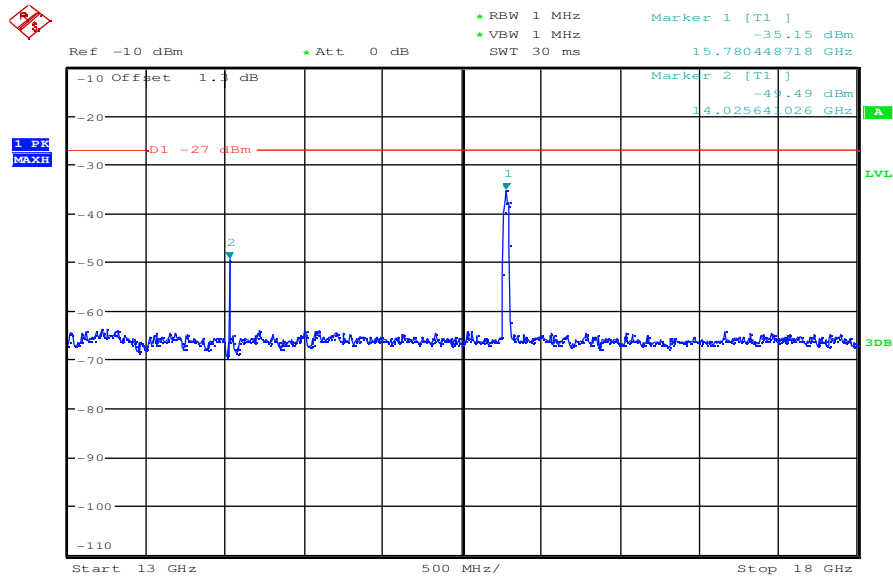


**Plot 8:** lowest channel; power index 28; 1 GHz to 13 GHz – horizontal polarization, Part 15.407



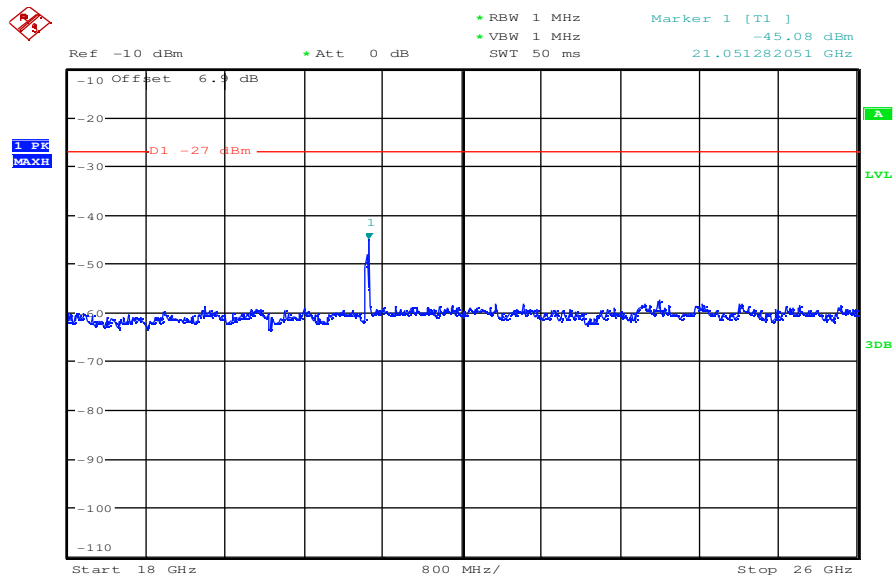


Plot 9: lowest channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



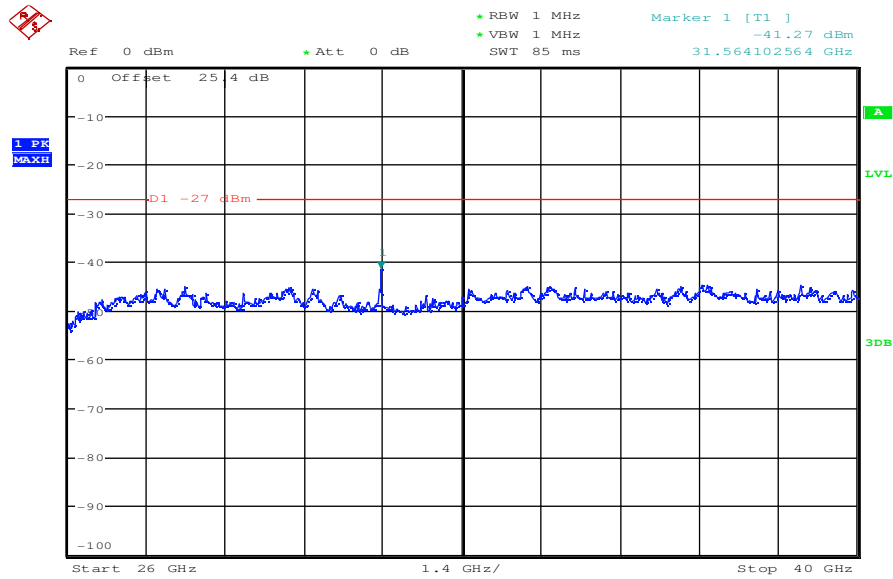
Date: 25.NOV.2010 11:33:54

Plot 10: lowest channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 12:55:05

Plot 11: lowest channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:40:49

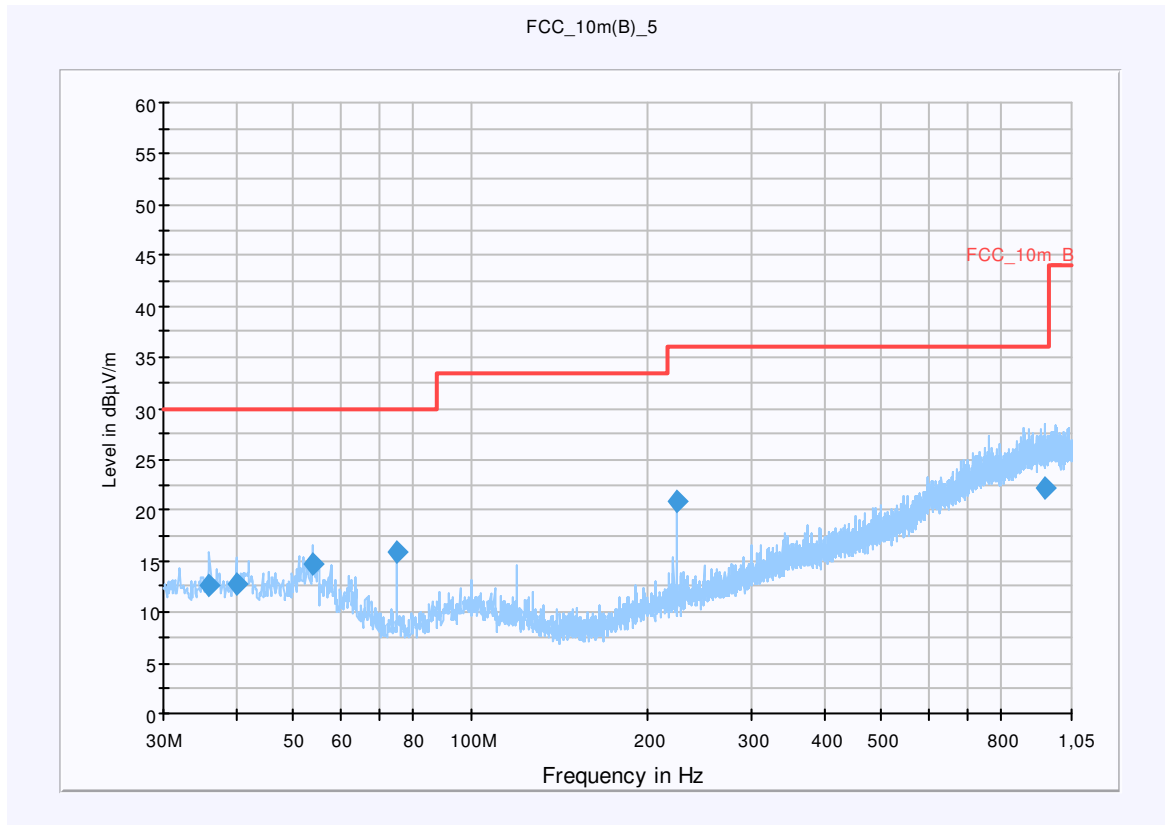
Plot 12: middle channel; power index 28; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5280 MHz, a mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m  
**Subrange**                      **Detectors**                      **IF Bandwidth**                      **Meas. Time**                      **Receiver**  
 30 MHz - 1,05 GHz              QuasiPeak                      120 kHz                      15 s                      Receiver



**Final Result 1**

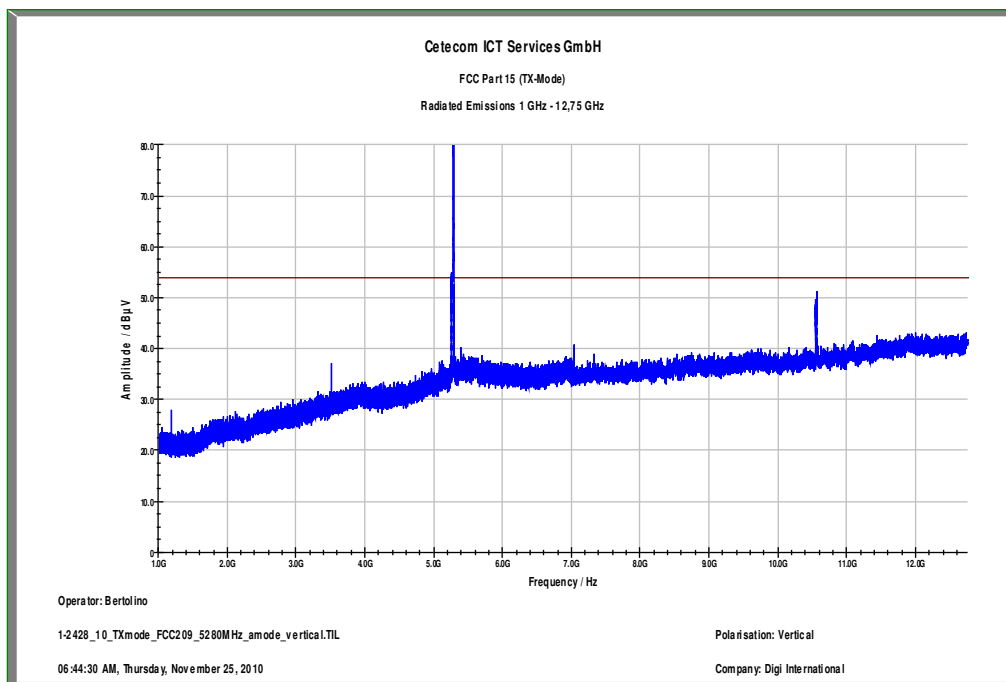
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
36.000000	12.7	15000.000	120.000	196.0	V	137.0	13.1	17.3	30.0	
39.960000	12.8	15000.000	120.000	262.0	V	230.0	13.4	17.2	30.0	
54.000000	14.7	15000.000	120.000	270.0	V	280.0	13.0	15.3	30.0	
75.000000	16.0	15000.000	120.000	205.0	V	328.0	9.2	14.0	30.0	
224.880000	20.8	15000.000	120.000	109.0	V	-2.0	12.5	15.2	36.0	
946.200000	22.3	15000.000	120.000	270.0	V	230.0	25.3	13.7	36.0	

**Hardware Setup:** EMI radiated\Electric Field (NOS) - [EMI radiated]

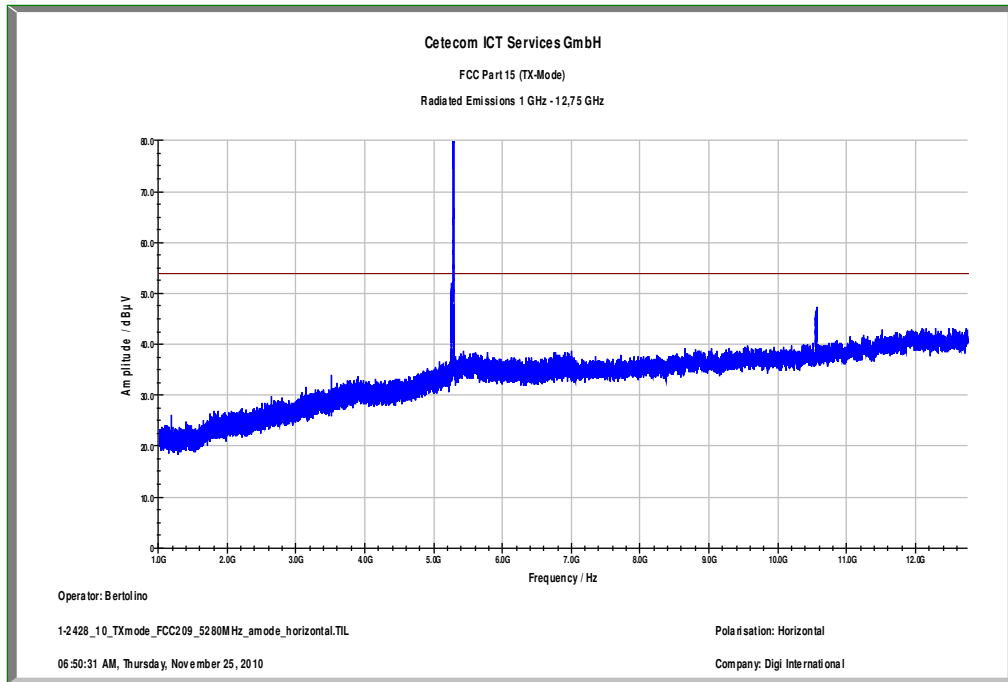
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

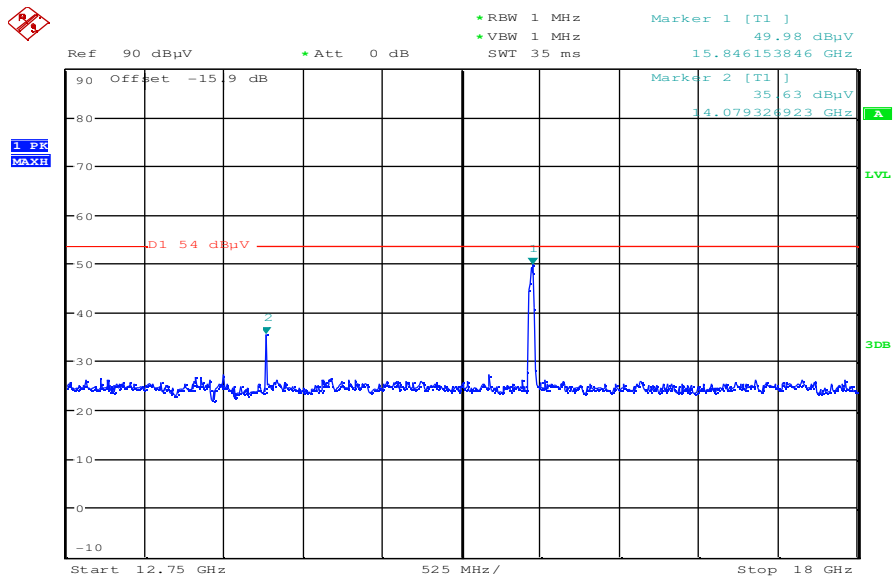
**Plot 13:** middle channel; power index 28; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



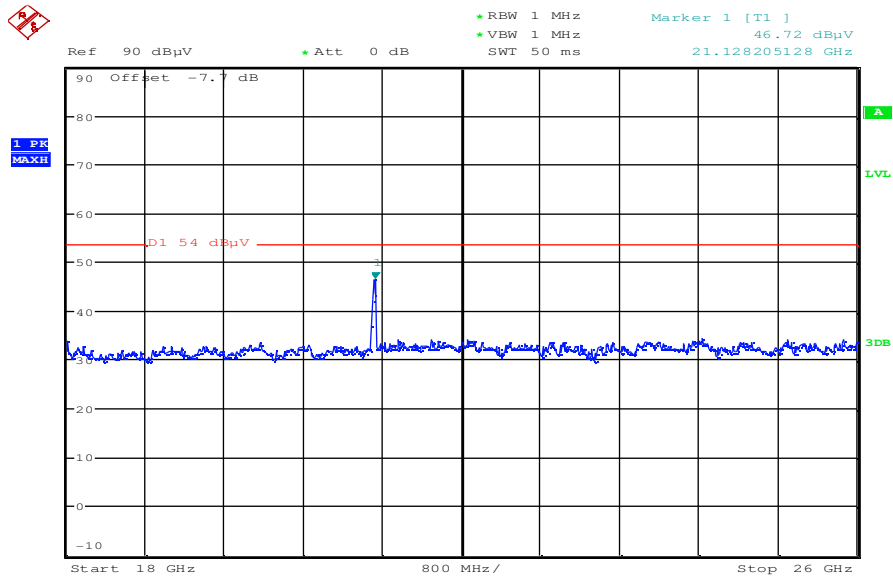
Plot 14: middle channel; power index 28; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209



Plot 15: middle channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209

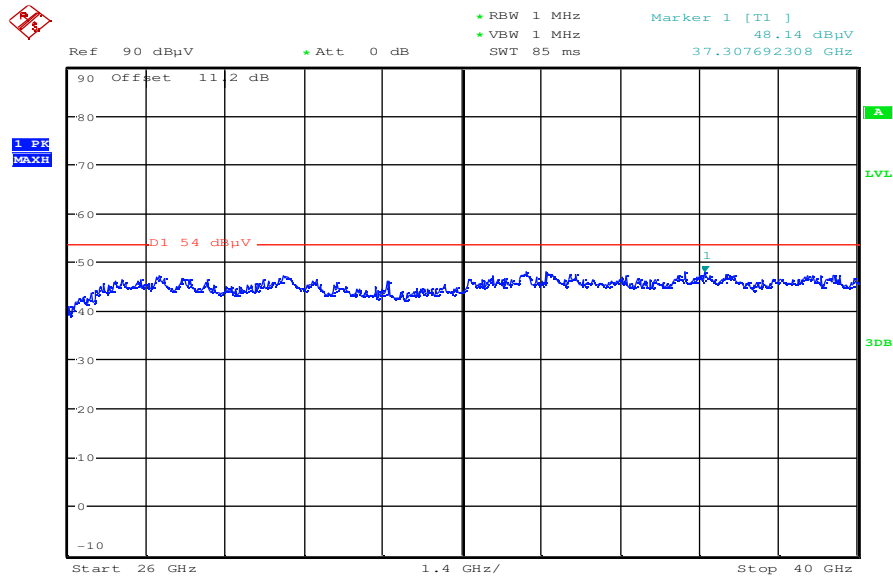


Plot 16: middle channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



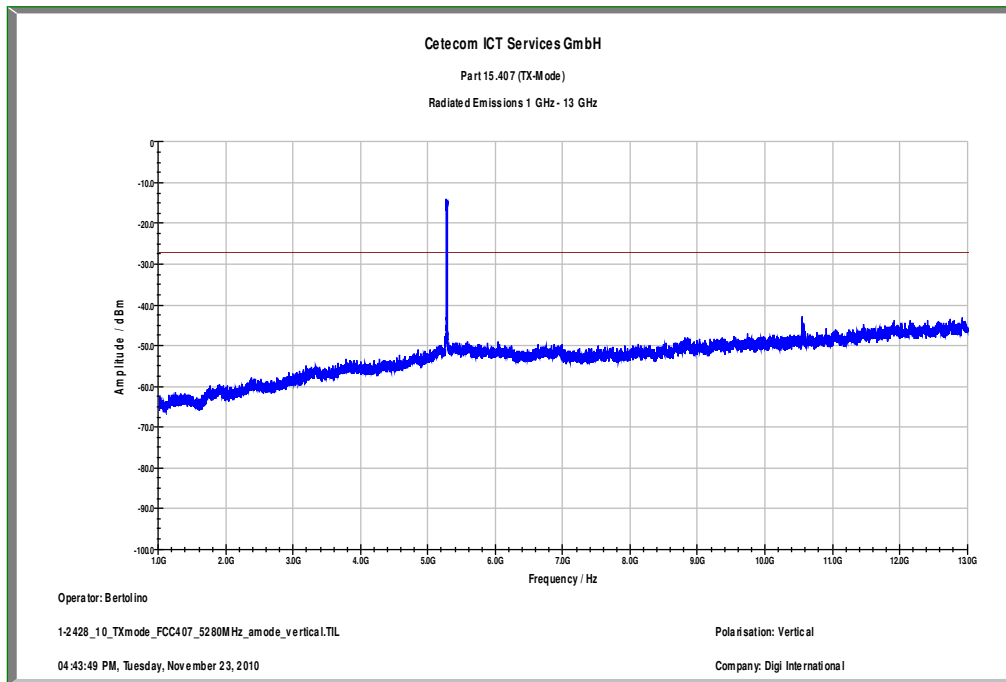
Date: 24.NOV.2010 13:50:22

Plot 17: middle channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

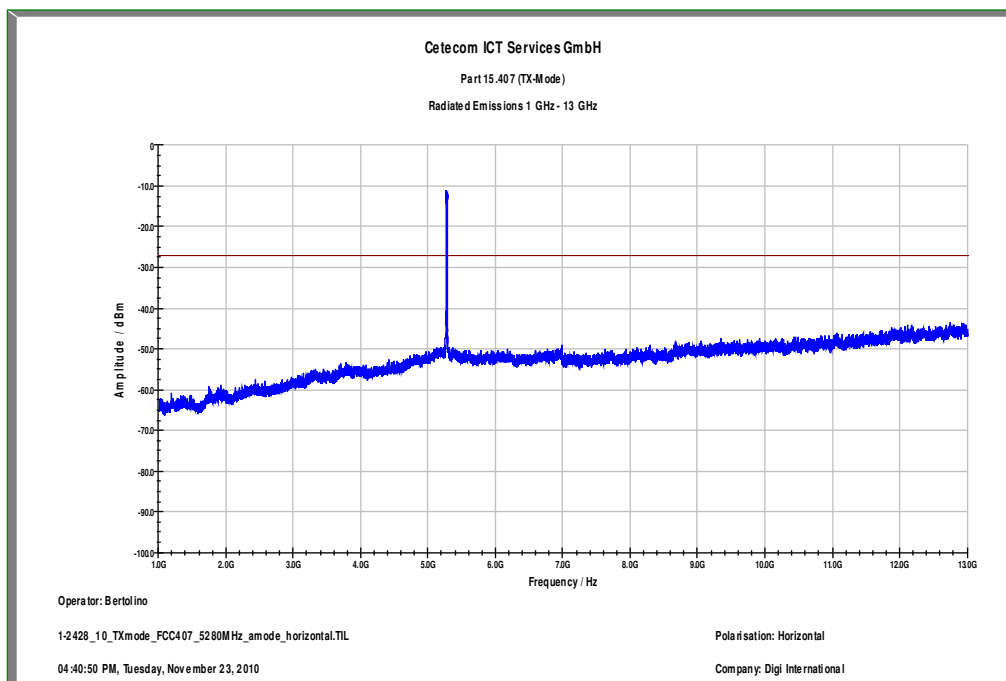


Date: 24.NOV.2010 14:18:12

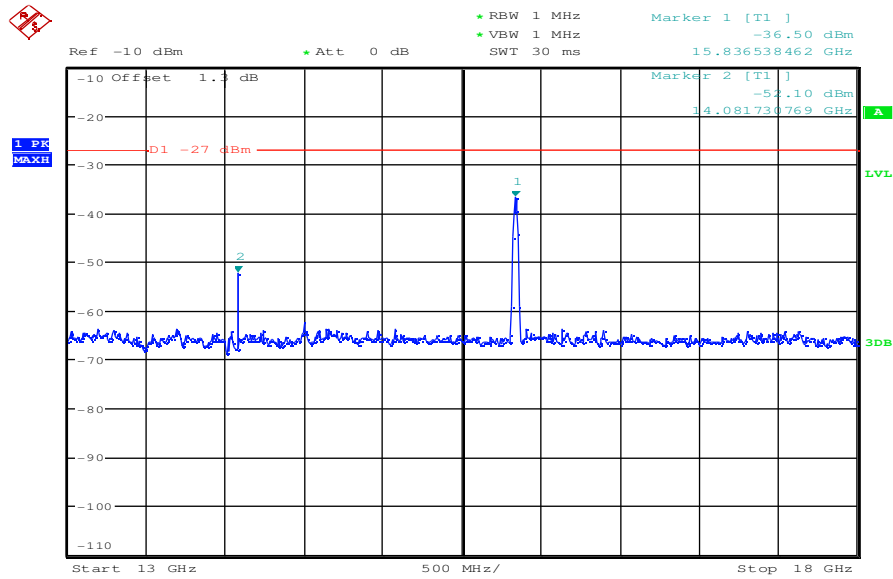
**Plot 18:** middle channel; power index 28; 1 GHz to 13 GHz – vertical polarization, Part 15.407



**Plot 19:** middle channel; power index 28; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

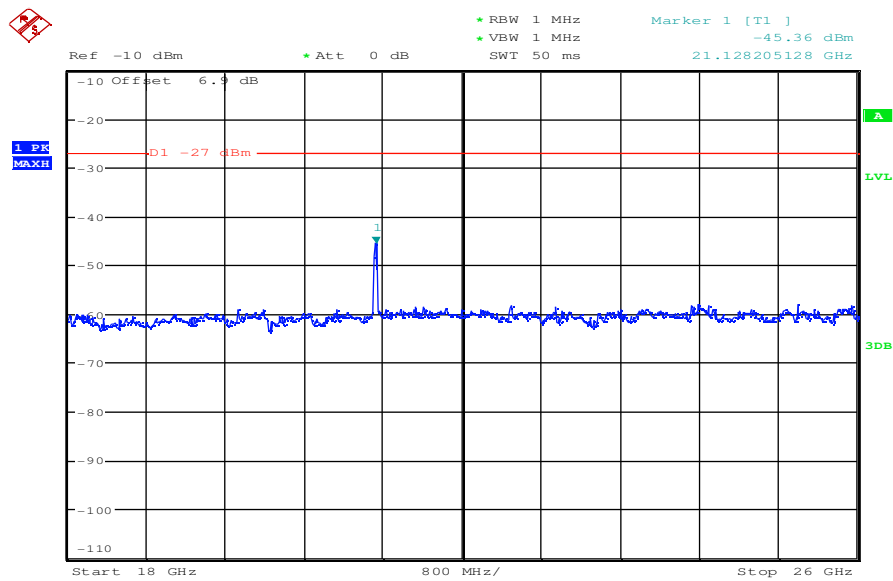


Plot 20: middle channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 11:34:54

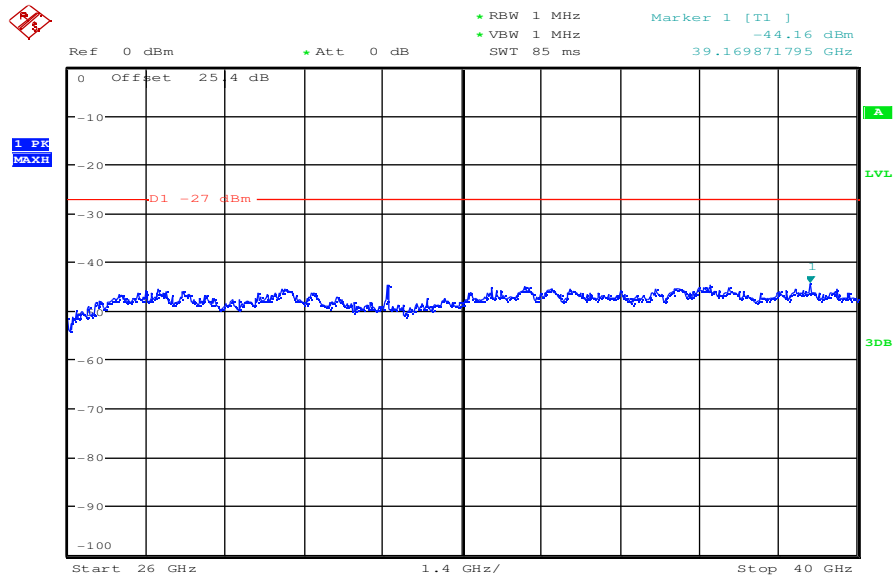
Plot 21: middle channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 12:56:06



Plot 22: middle channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:41:45

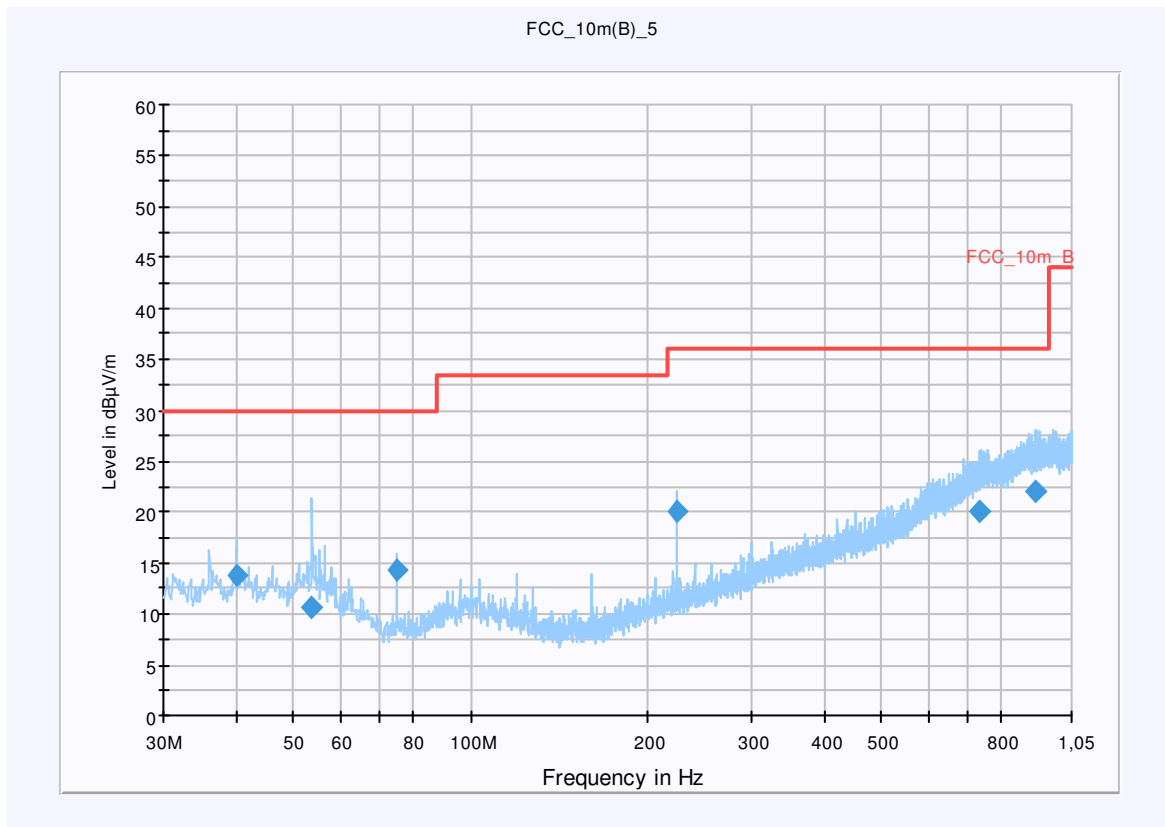
Plot 23: highest channel; power index 28; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

### Common Information

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5320 MHz, a mode  
 Operator Name: HNA  
 Comment: 3.3V DC

### Scan Setup: STAN\_Fin [EMI radiated]

Hardware Setup: Electric Field (NOS)  
 Level Unit: dB $\mu$ V/m  
**Subrange**                      **Detectors**                      **IF Bandwidth**                      **Meas. Time**                      **Receiver**  
 30 MHz - 1,05 GHz              QuasiPeak                      120 kHz                      15 s                      Receiver



### Final Result 1

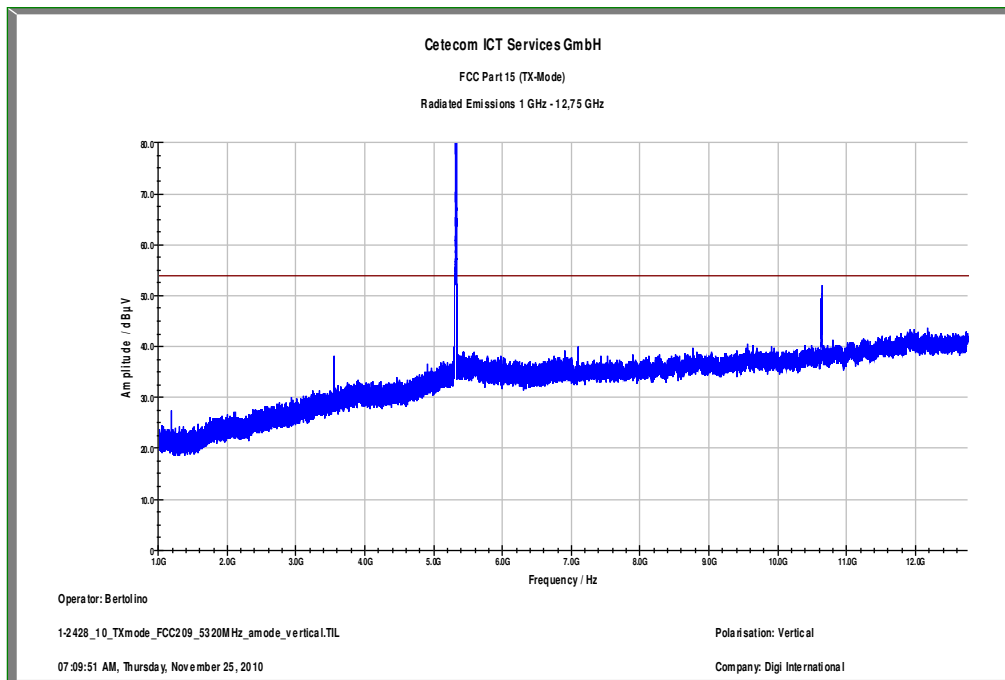
Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)	Comment
39.960000	13.7	15000.000	120.000	258.0	V	222.0	13.4	16.3	30.0	
53.760000	10.6	15000.000	120.000	270.0	V	328.0	13.0	19.4	30.0	
75.000000	14.4	15000.000	120.000	270.0	V	118.0	9.2	15.6	30.0	
224.880000	20.0	15000.000	120.000	98.0	V	167.0	12.5	16.0	36.0	
734.400000	20.1	15000.000	120.000	111.0	V	43.0	23.3	15.9	36.0	
913.080000	22.1	15000.000	120.000	212.0	H	103.0	25.2	13.9	36.0	

**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

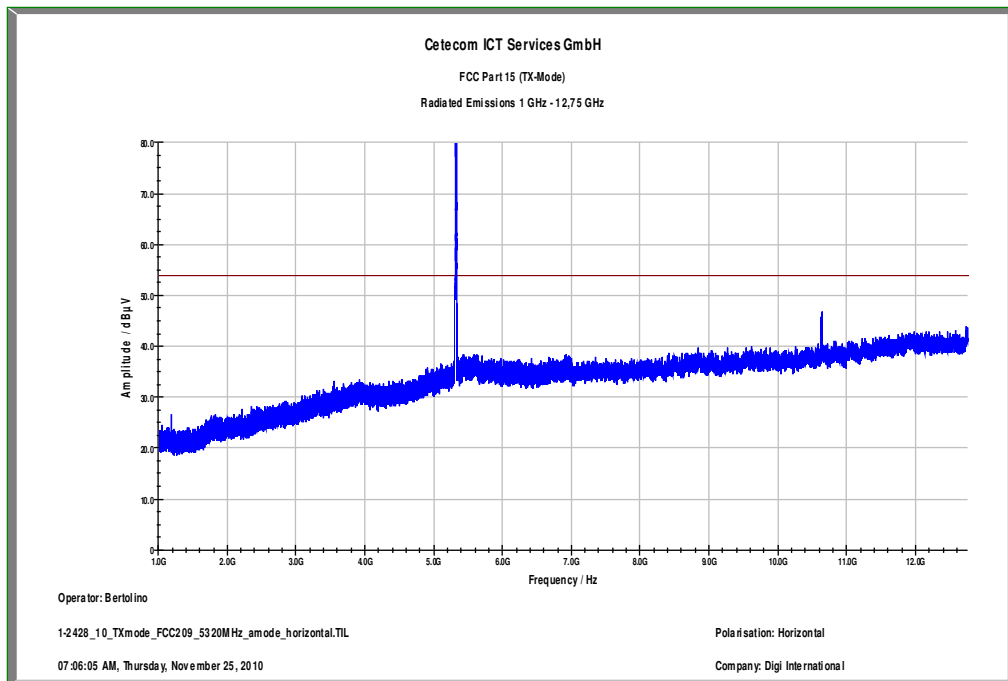
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

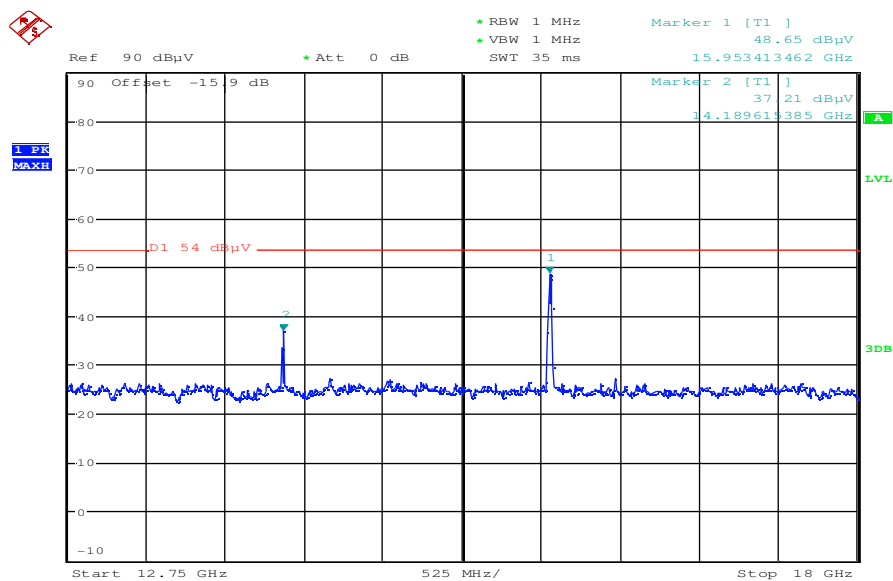
**Plot 24:** highest channel; power index 28; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



Plot 25: highest channel; power index 28; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209

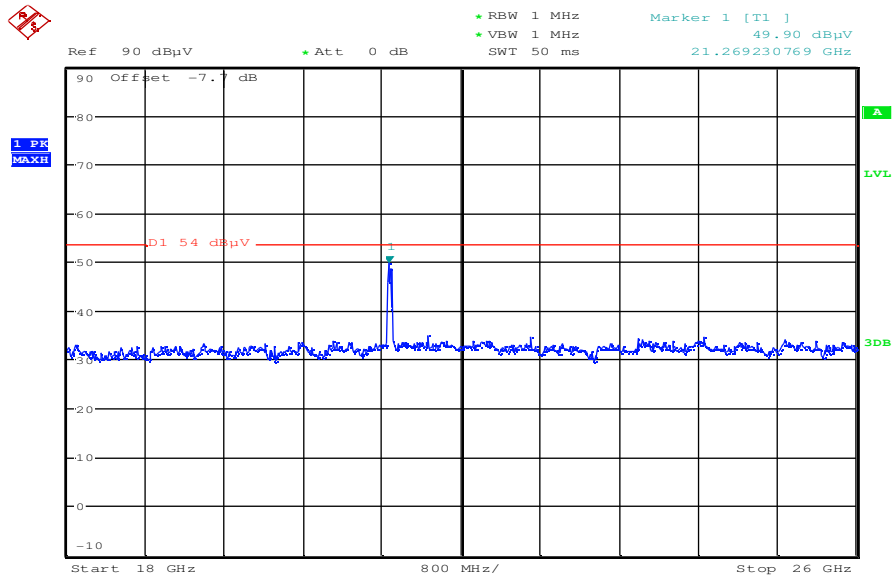


Plot 26: highest channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209



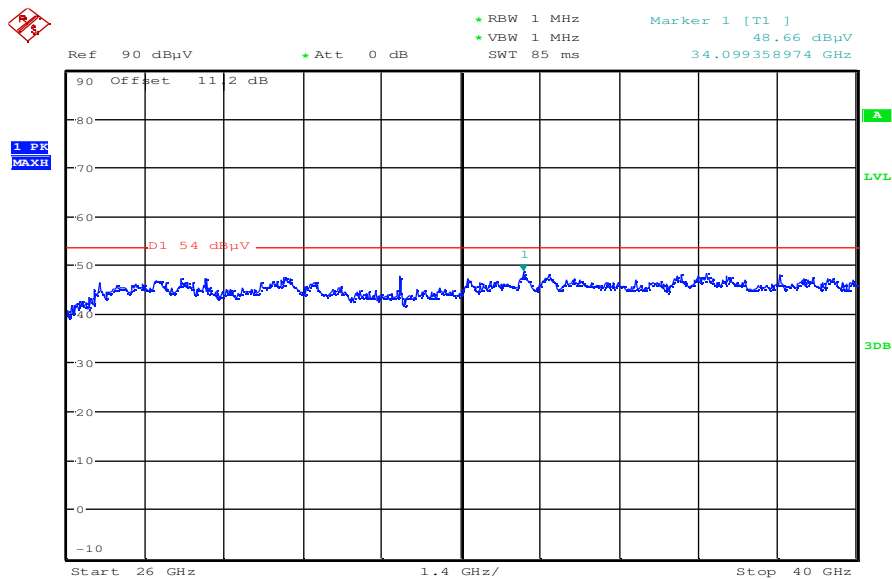
Date: 24.NOV.2010 13:24:10

Plot 27: highest channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



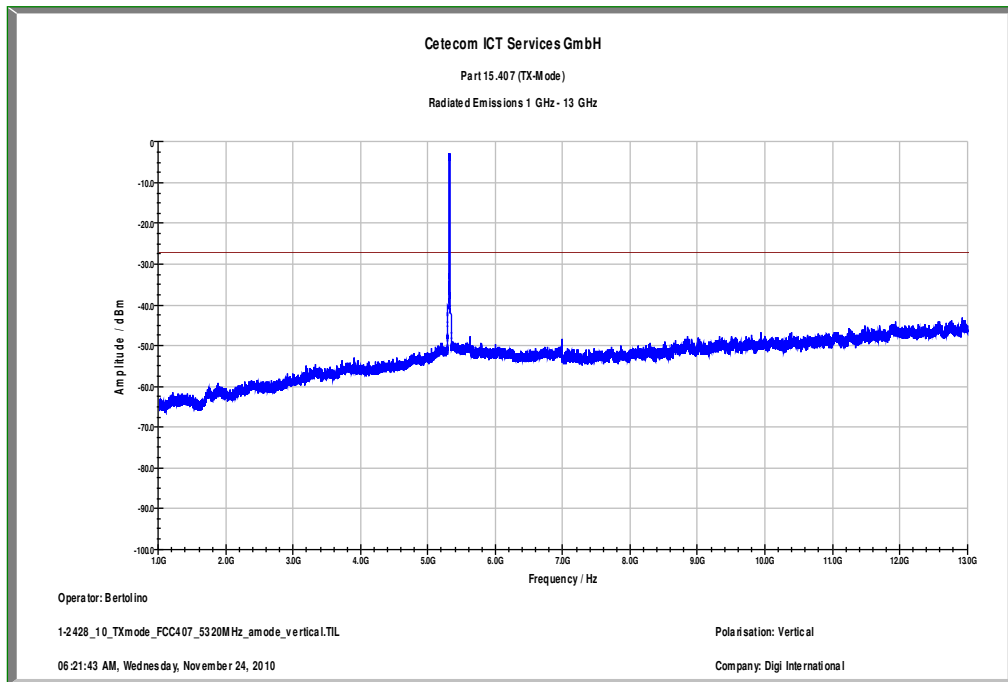
Date: 24.NOV.2010 13:51:39

Plot 28: highest channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

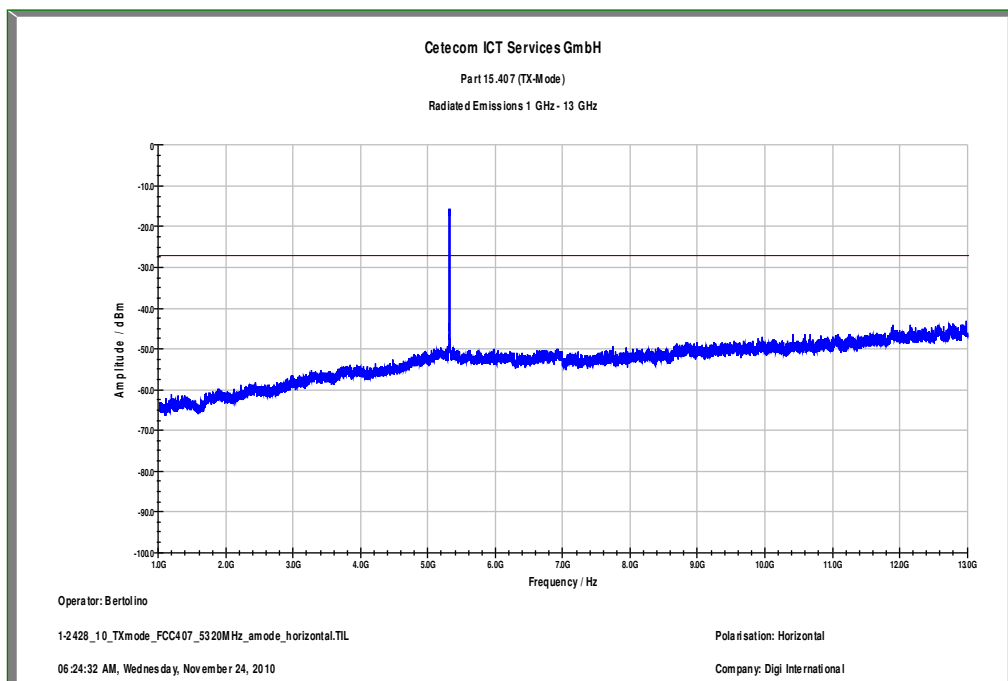


Date: 24.NOV.2010 14:19:17

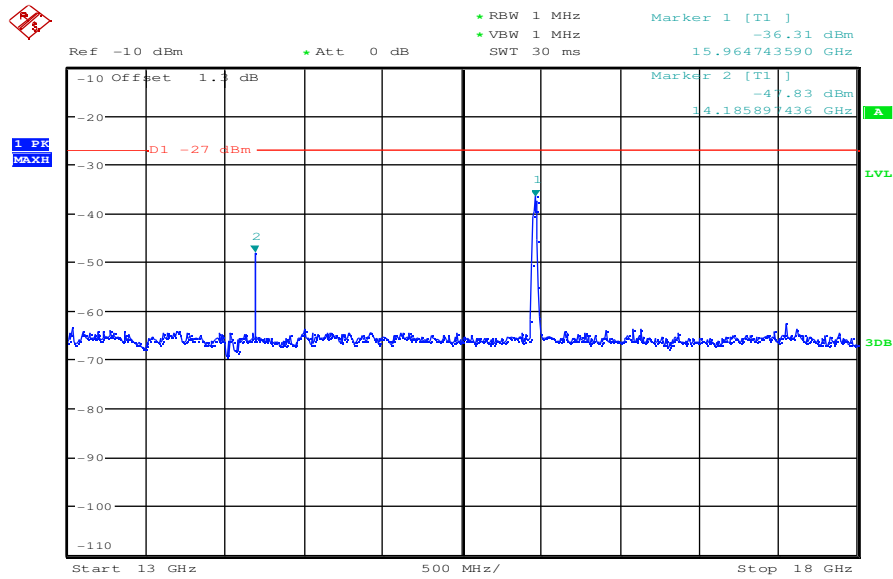
Plot 29: highest channel; power index 28; 1 GHz to 13 GHz – vertical polarization, Part 15.407



Plot 30: highest channel; power index 28; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

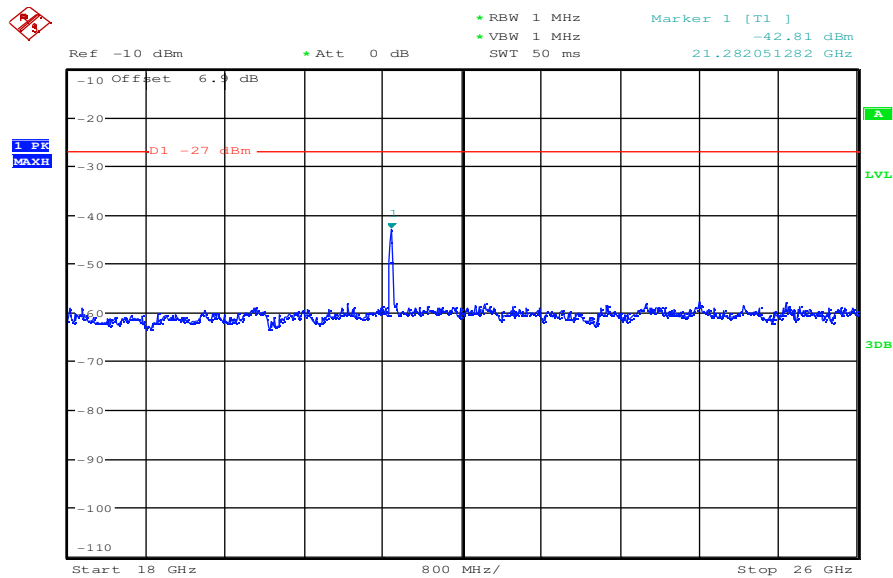


Plot 31: highest channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



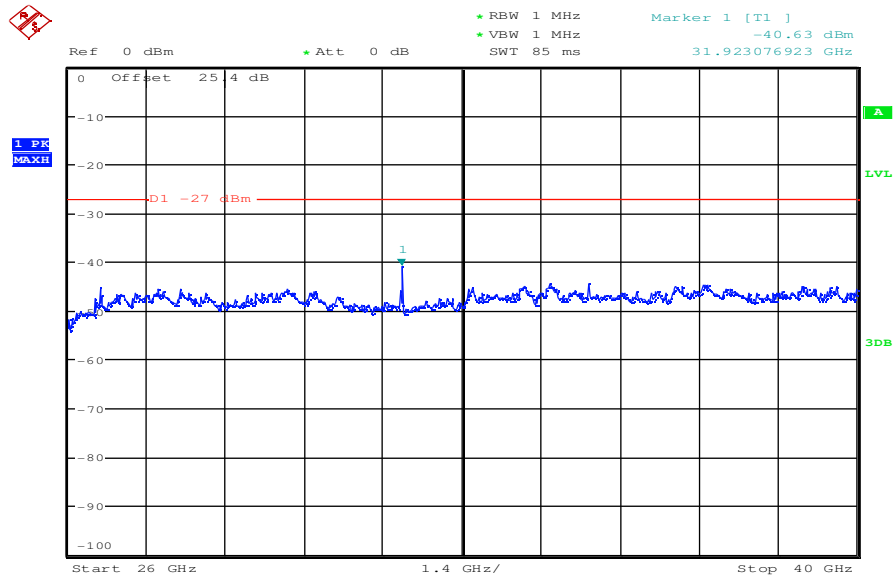
Date: 25.NOV.2010 11:36:09

Plot 32: highest channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 12:56:55

Plot 33: highest channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:42:37



**OFDM – mode / n – mode (mcs7):**

**Plot 1:** lowest channel; power index 28; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

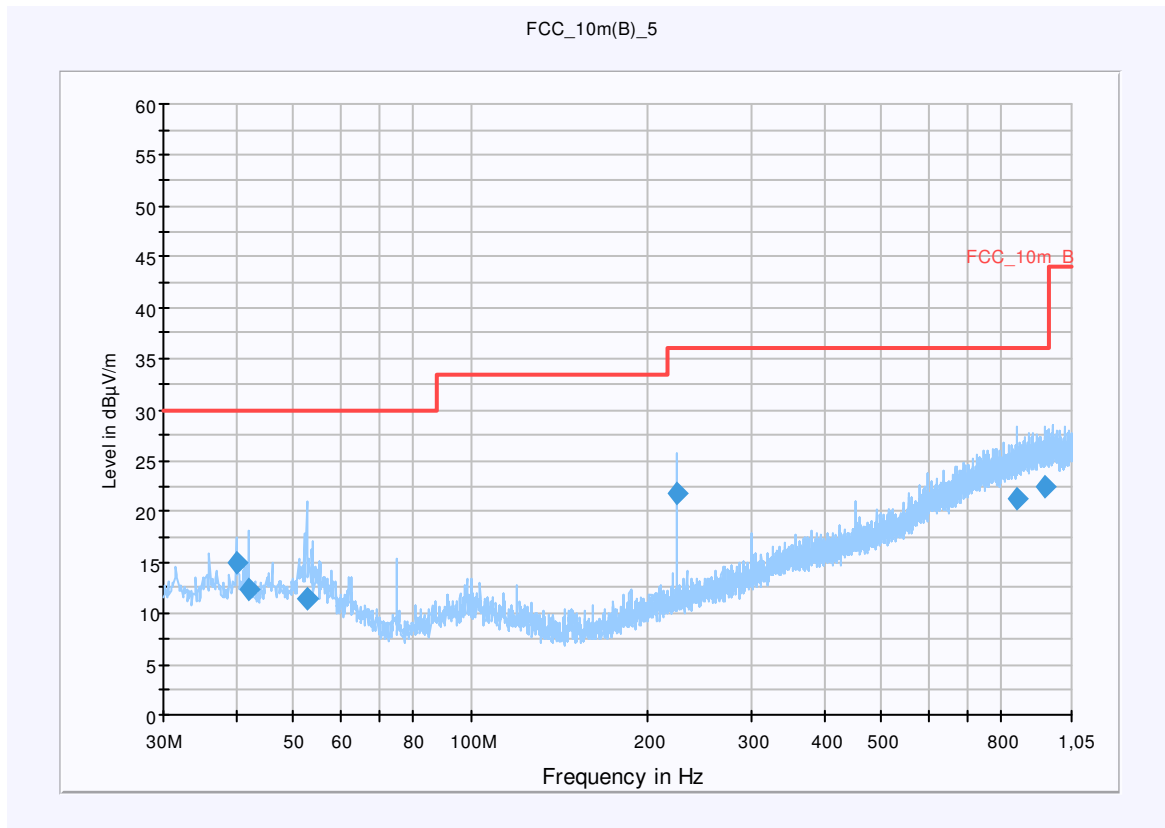
**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5260 MHz, n mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m

Subrange	Detectors	IF Bandwidth	Meas. Time	Receiver
30 MHz - 1,05 GHz	QuasiPeak	120 kHz	15 s	Receiver



**Final Result 1**

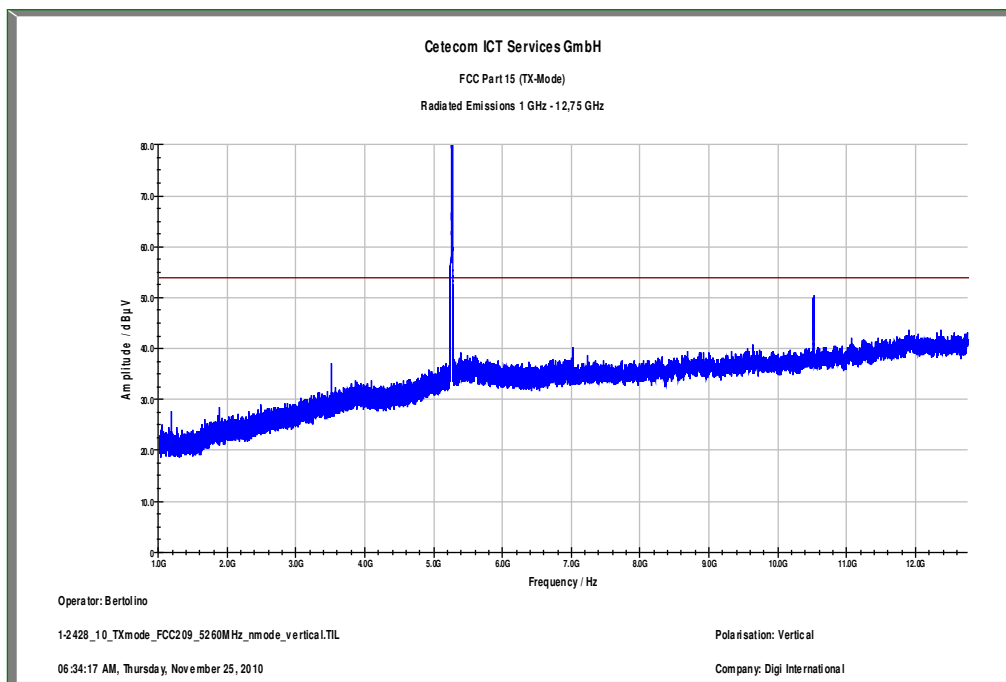
Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
39.960000	15.0	15000.000	120.000	98.0	V	65.0	13.4	15.0	30.0	
42.000000	12.3	15000.000	120.000	98.0	V	217.0	13.4	17.7	30.0	
52.560000	11.5	15000.000	120.000	98.0	V	315.0	13.1	18.5	30.0	
224.880000	21.9	15000.000	120.000	98.0	V	96.0	12.5	14.1	36.0	
848.520000	21.3	15000.000	120.000	270.0	V	-2.0	24.5	14.7	36.0	
949.680000	22.4	15000.000	120.000	154.0	H	-2.0	25.4	13.6	36.0	

**Hardware Setup: EMI radiated\Electric Field (NOS) - [EMI radiated]**

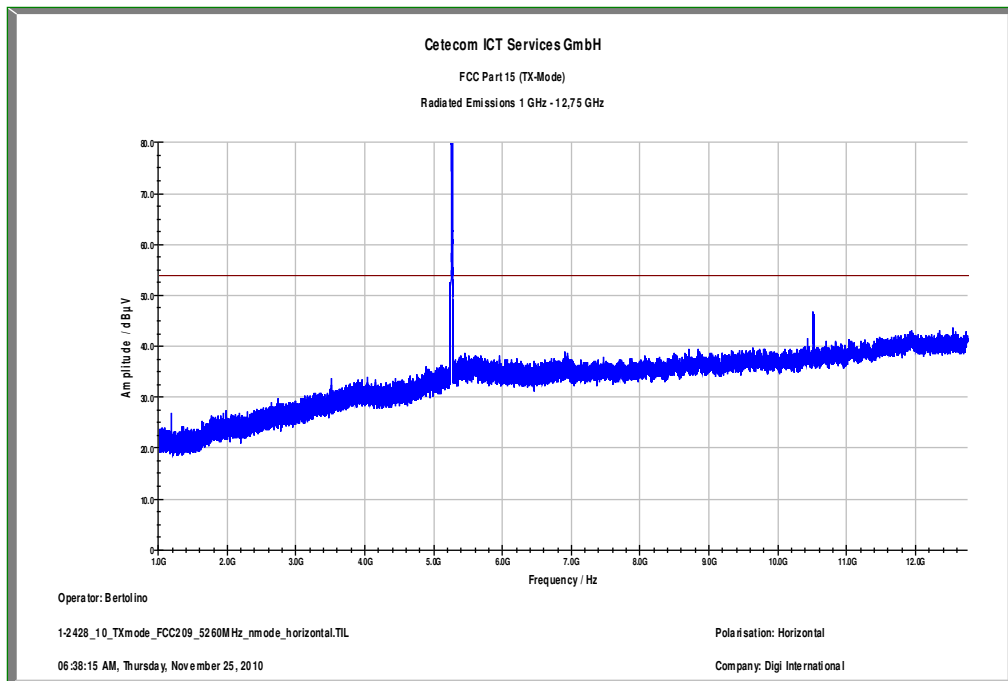
Subrange 1	
Frequency Range:	30 MHz - 2 GHz
Receiver:	Receiver [ESCI 3] @ GPIB0 (ADR 20), SN 100083/003, FW 4.32
Signal Path:	without Notch FW 1.0
Antenna:	VULB 9163 SN 9163-295, FW --- Correction Table (vertical): VULP6113 Correction Table (horizontal): VULP6113 Correction Table: Cable_EN_1GHz (0909)
Antenna Tower:	Tower [EMCO 2090 Antenna Tower] @ GPIB0 (ADR 8), FW REV 3.12
Turntable:	Turntable [EMCO Turntable] @ GPIB0 (ADR 9), FW REV 3.12

EMC 32 Version 8.10.00

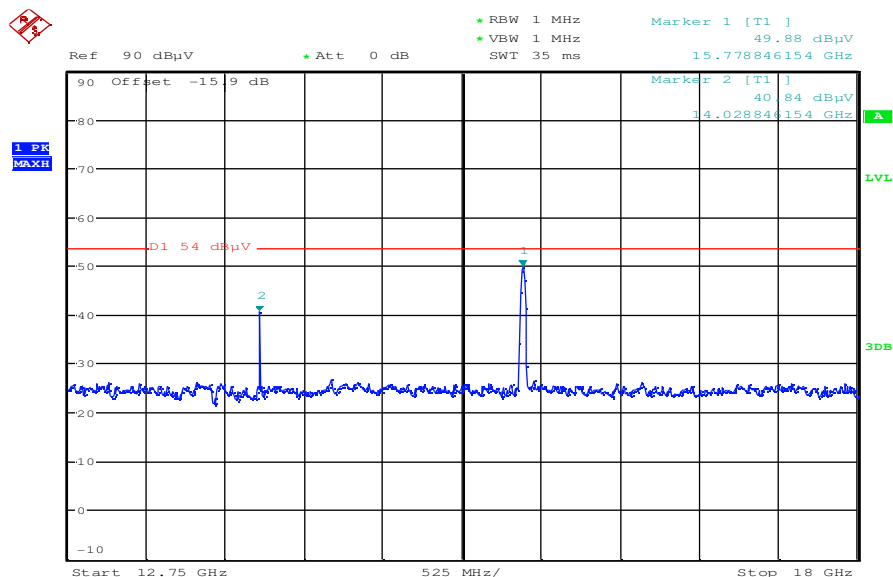
**Plot 2:** lowest channel; power index 28; 1 GHz to 12.75 GHz – vertical polarization, Part 15.209



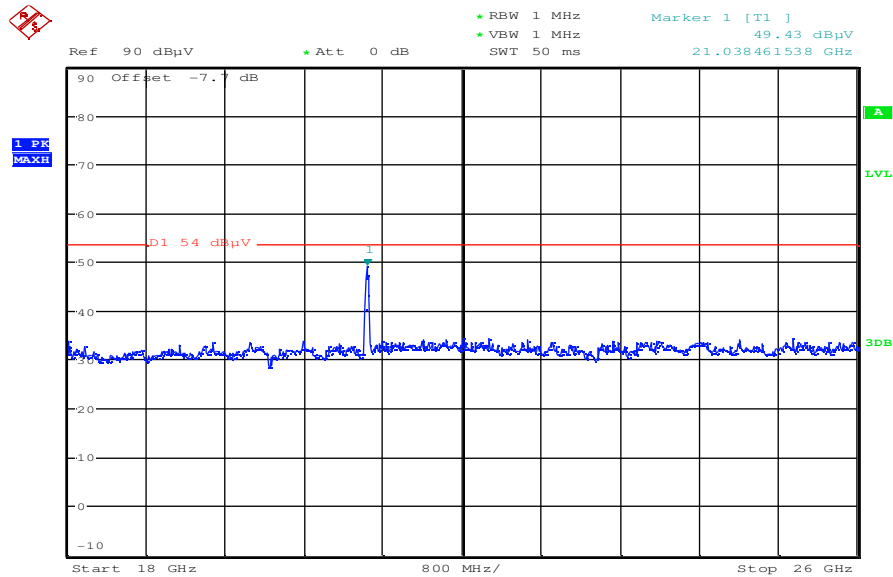
**Plot 3:** lowest channel; power index 28; 1 GHz to 12.75 GHz – horizontal polarization, Part 15.209



**Plot 4:** lowest channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.209

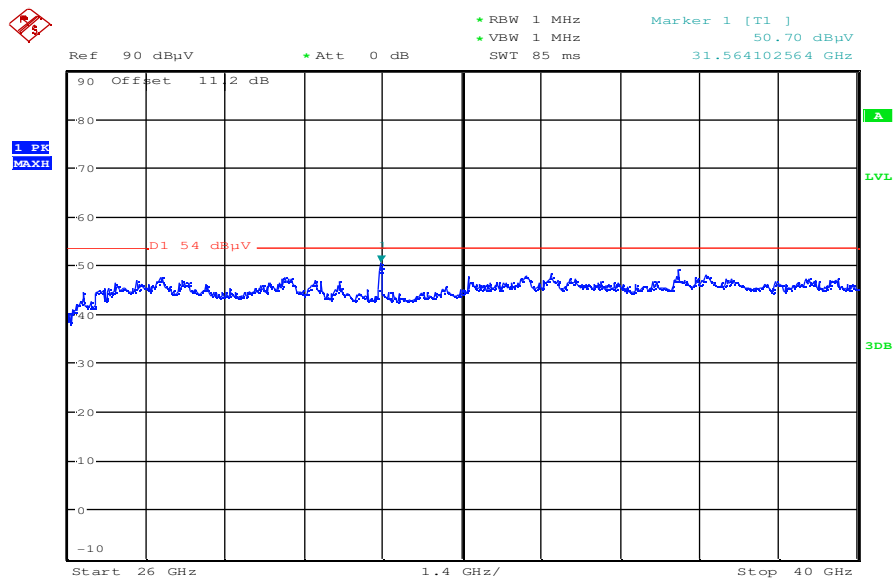


Plot 5: lowest channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.209



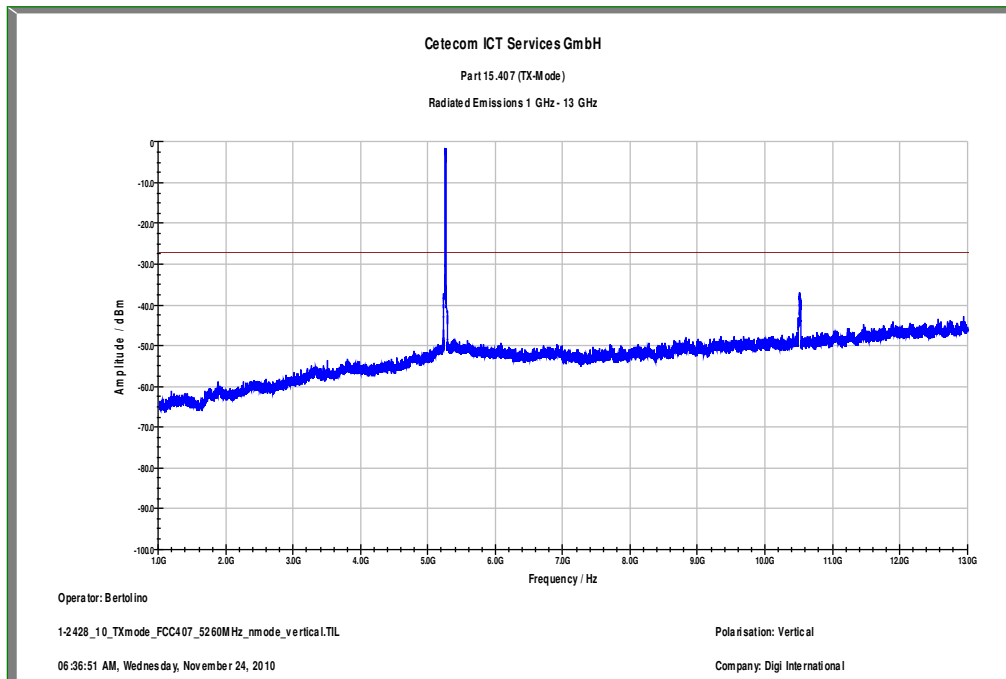
Date: 24.NOV.2010 14:00:04

Plot 6: lowest channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.209

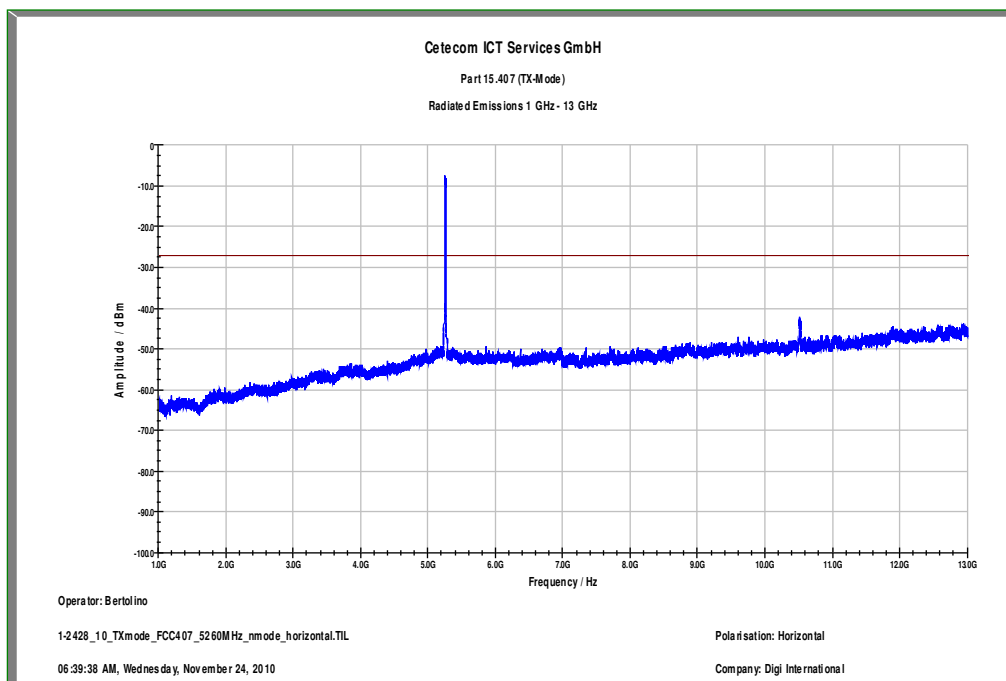


Date: 24.NOV.2010 14:26:46

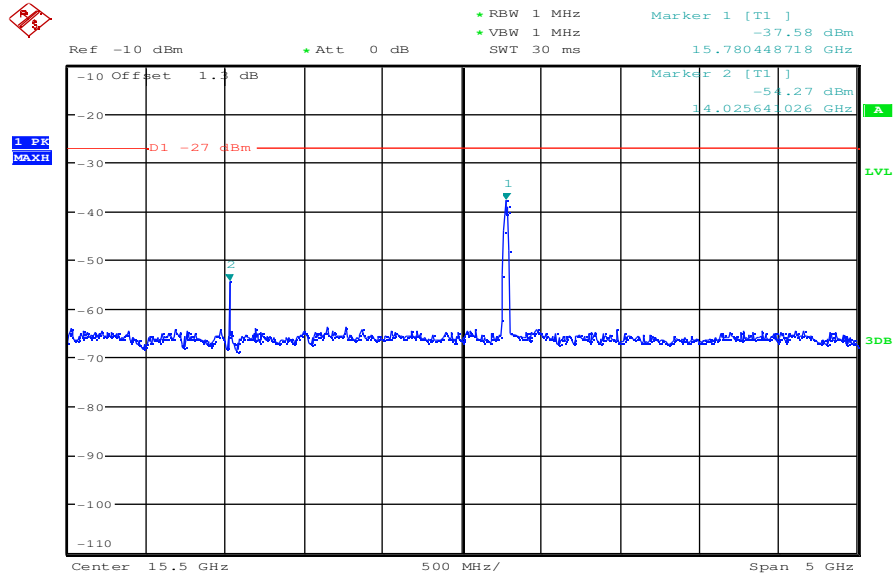
**Plot 7:** lowest channel; power index 28; 1 GHz to 13 GHz – vertical polarization, Part 15.407



**Plot 8:** lowest channel; power index 28; 1 GHz to 13 GHz – horizontal polarization, Part 15.407

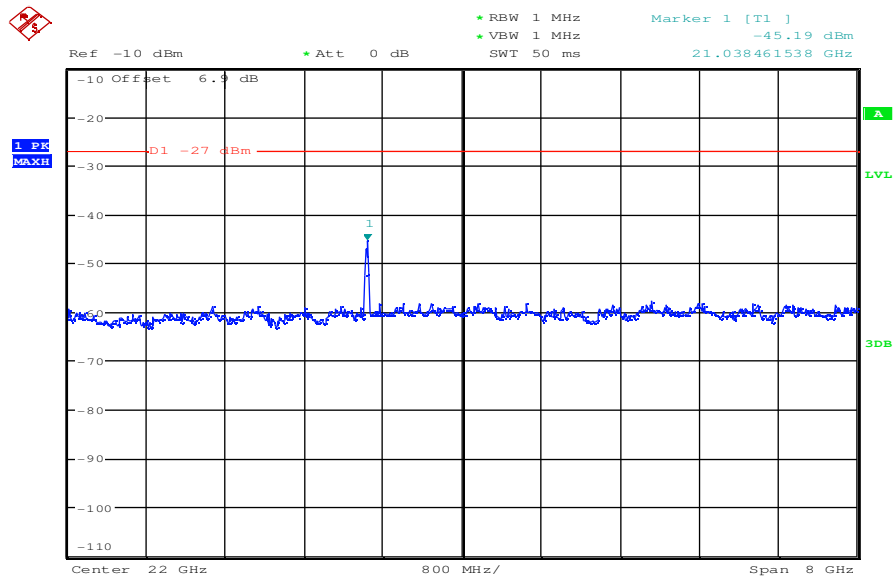


Plot 9: lowest channel; power index 28; 12.75 GHz to 18 GHz – vertical & horizontal polarization, Part 15.407



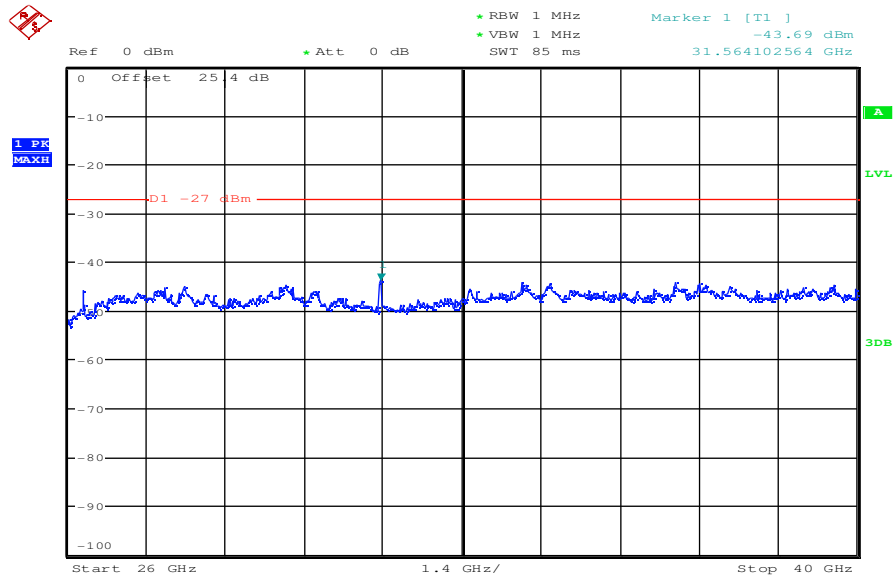
Date: 25.NOV.2010 11:44:37

Plot 10: lowest channel; power index 28; 18 GHz to 26 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:21:13

Plot 11: lowest channel; power index 28; 26 GHz to 40 GHz – vertical & horizontal polarization, Part 15.407



Date: 25.NOV.2010 13:50:44

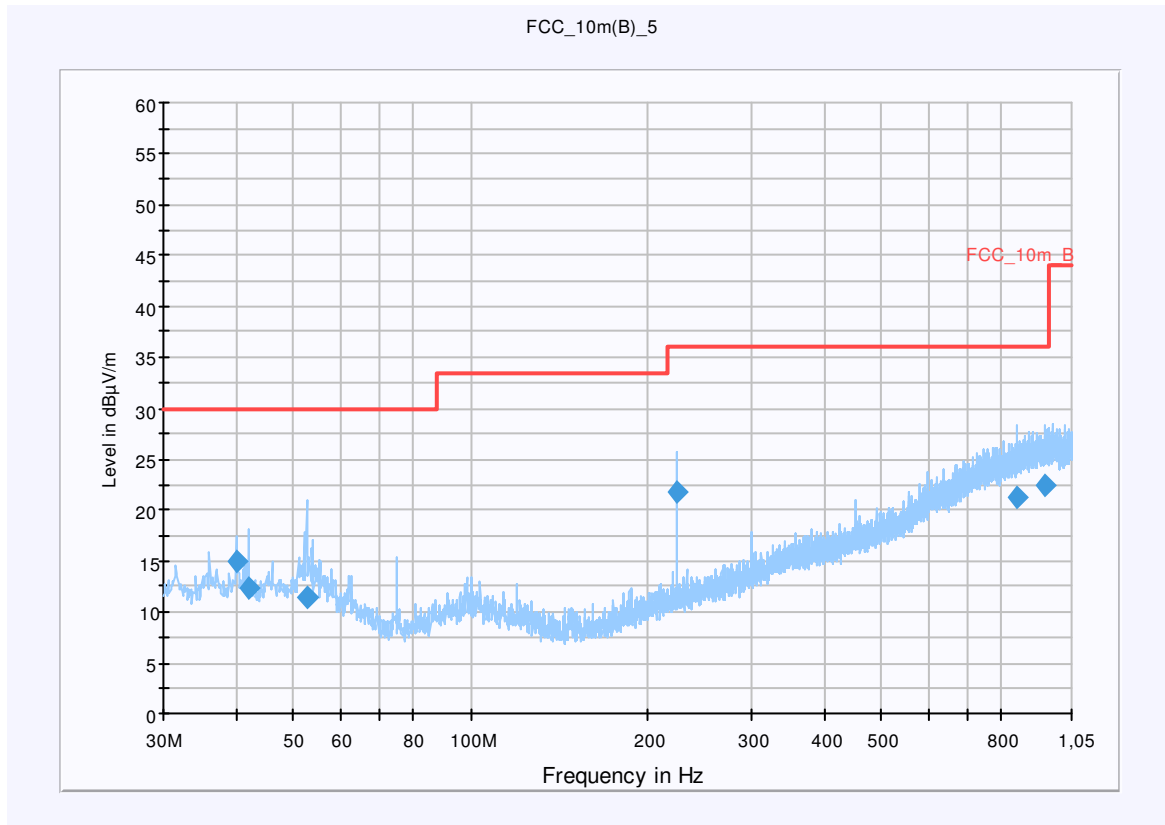
Plot 12: middle channel; power index 28; 30 MHz to 1 GHz – vertical & horizontal polarization, Part 15.209

**Common Information**

EUT: WLAN computer embex  
 Serial Number: Proto  
 Test Description: FCC part 15 @ 10 m  
 Operating Conditions: TX, 5280 MHz, n mode  
 Operator Name: HNA  
 Comment: 3.3V DC

**Scan Setup: STAN\_Fin [EMI radiated]**

Hardware Setup: Electric Field (NOS)  
 Level Unit: dBµV/m  
**Subrange**                      **Detectors**                      **IF Bandwidth**                      **Meas. Time**                      **Receiver**  
 30 MHz - 1,05 GHz              QuasiPeak                      120 kHz                      15 s                      Receiver



**Final Result 1**

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
39.960000	15.0	15000.000	120.000	98.0	V	65.0	13.4	15.0	30.0	
42.000000	12.3	15000.000	120.000	98.0	V	217.0	13.4	17.7	30.0	
52.560000	11.5	15000.000	120.000	98.0	V	315.0	13.1	18.5	30.0	
224.880000	21.9	15000.000	120.000	98.0	V	96.0	12.5	14.1	36.0	
848.520000	21.3	15000.000	120.000	270.0	V	-2.0	24.5	14.7	36.0	
949.680000	22.4	15000.000	120.000	154.0	H	-2.0	25.4	13.6	36.0	