

Annex 1: Measurement diagrams to TEST REPORT No.: 16-1-0130001T07a-C1

According to:

FCC Regulations

Part 15.205
Part 15.209
Part 15.407

ISED-Regulations

RSS-Gen, Issue 4
RSS-247, Issue 2

for

Prodrive Technologies BV

Carrier Controller Master - CCM

FCC ID: Y2ICCMUL

ISED: 9389A-CCMUL

PMN: CCM-IO-ETH, UL

HVIN: 64533

Laboratory Accreditation and Listings			
  Deutsche Akreditierungsstelle D-PI-17047-01-01 D-PL-12047-01-03 D-PL 12047 01 04	 MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 AUTHORIZED RF LABORATORY	 Authorized TM Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
CETECOM GmbH Laboratory Radio Communications & Electromagnetic Compatibility Im Teelbruch 116 • 45219 Essen • Germany Registered in Essen, Germany, Reg. No.: HRB Essen 8984 Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964 E-mail: info@cetecom.com • Internet: www.cetecom.com			

Table of Contents

1. MEASUREMENT DIAGRAMS.....	3
1.1. Conducted emissions on AC-Power lines.....	3
1.2. Duty Cycle.....	6
1.3. Radiated magnetic field measurements below 30 MHz.....	7
1.4. Radiated electric field measurement 30 MHz to 1 GHz	13
1.5. Radiated electric field measurement 1GHz to 7 GHz.....	19
1.6. Radiated electric field measurement 7GHz to 18 GHz.....	27
1.7. Radiated electric field measurement 18GHz to 40 GHz	33
1.8. Radiated Band Edge measurement	36

1. Measurement diagrams

1.1. Conducted emissions on AC-Power lines

1.02

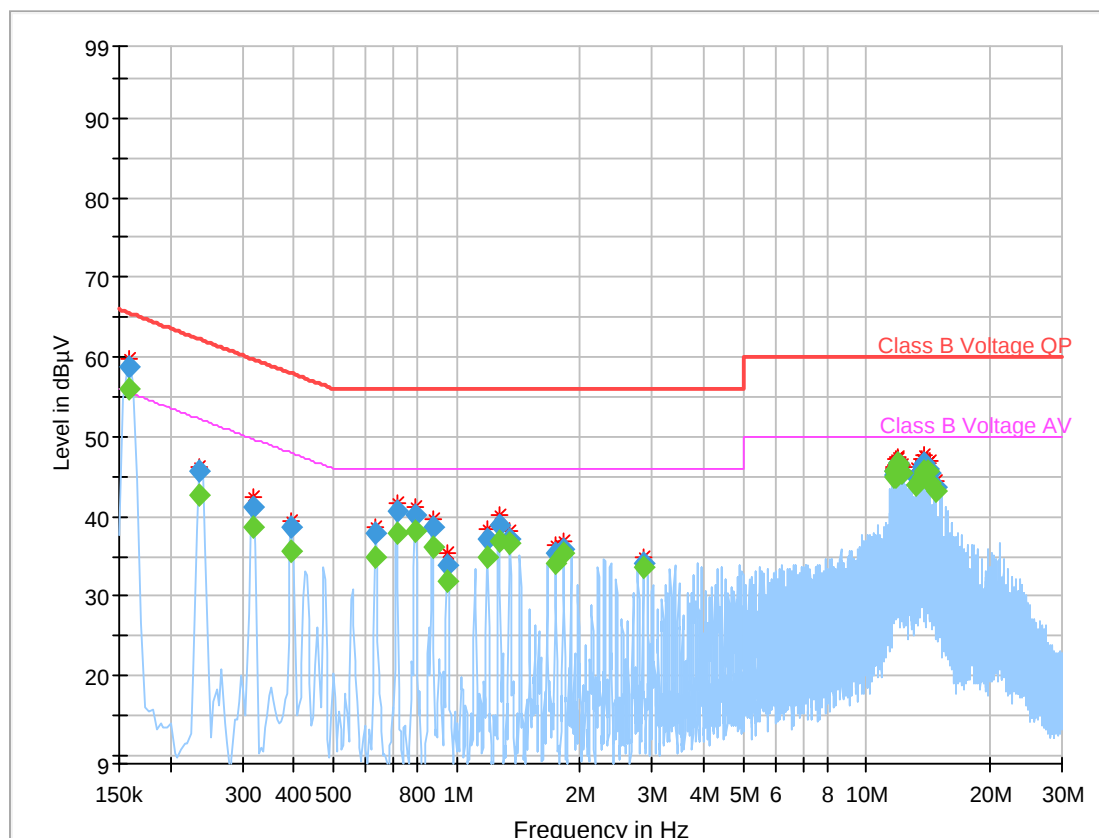
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test Site & Location:	Conducted Emission, CETECOM GmbH Essen
Test Software:	R&S EMC32 v9.15
Test Specification:	FCC 15.107/FCC 15.207
Operating Mode:	
Measured on line:	N/L1
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions:	Humidity: 42%rH; Temperature: 20°C
Operator:	Mar

EUT Information

Manufacturer:	Prodrive Technologies B.V.
Model:	Carrier Control Master + Carrier Control Slave
Type:	CCM-IO-ETH + CCL, UL
HW version:	6752-1500-0103 + 6752-1600-1500
SW version:	CPU: 6752-1400-2608, uC: 6752-1400-2912
Serial Number:	1uC: 67528-08-858-1400-611 +2912 18-1 0-A02-FW3
Connected Interfaces:	Motor, Antenna, LAN cablePower
Supply:	100VDC
Comments:	with Slotted Wave Guide Antenna

Full Spectrum



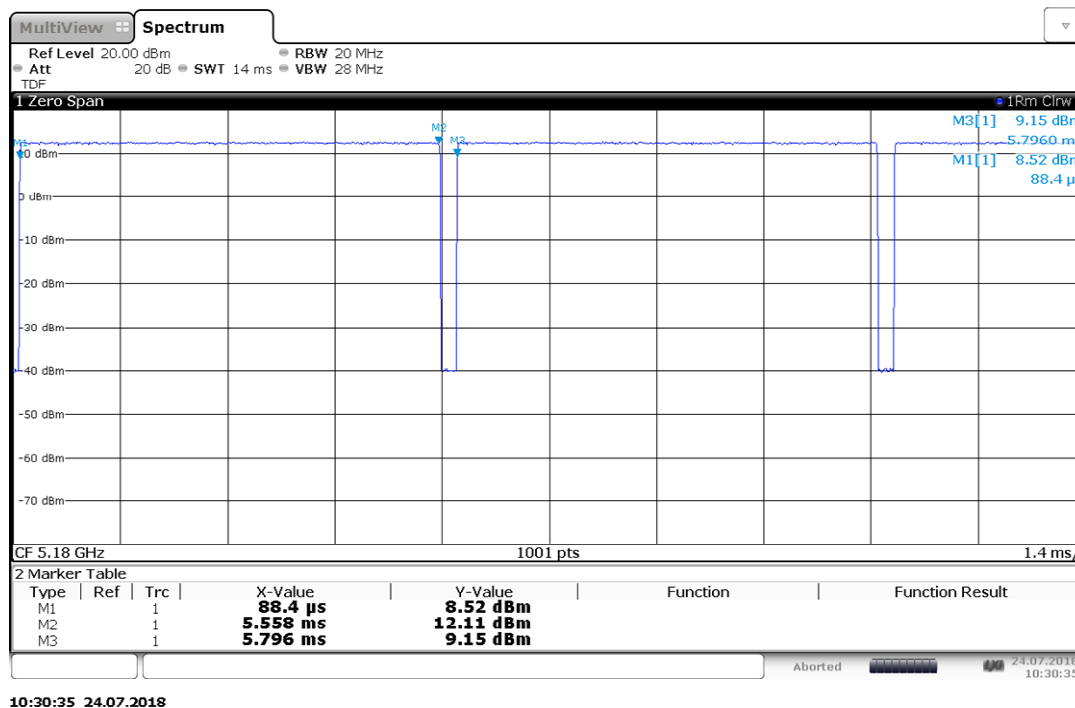
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)
0.157813	---	54.95	55.58
0.157813	58.90	---	65.58
0.235938	---	42.78	52.24
0.235938	45.81	---	62.24
0.317969	---	38.72	49.76
0.317969	41.30	---	59.76
0.396094	---	35.53	47.93
0.396094	38.69	---	57.93
0.634375	---	34.92	46.00
0.634375	37.98	---	56.00
0.712500	40.66	---	56.00
0.712500	---	37.95	46.00
0.790625	---	38.09	46.00
0.790625	40.25	---	56.00
0.872656	---	36.06	46.00
0.872656	38.78	---	56.00
0.950781	---	31.79	46.00
0.950781	33.83	---	56.00
1.189063	37.28	---	56.00
1.189063	---	34.94	46.00
1.267188	---	36.93	46.00
1.267188	38.81	---	56.00
1.345313	37.27	---	56.00
1.345313	---	36.53	46.00
1.743750	---	34.06	46.00
1.743750	35.29	---	56.00
1.821875	---	35.49	46.00
1.821875	35.82	---	56.00
2.849219	---	33.73	46.00
2.849219	34.25	---	56.00
11.599219	45.25	---	60.00
11.599219	---	44.93	50.00
11.677344	45.59	---	60.00
11.677344	---	45.64	50.00
11.755469	---	45.57	50.00
11.755469	45.66	---	60.00
11.833594	---	45.03	50.00
11.833594	45.91	---	60.00
11.915625	---	46.76	50.00
11.915625	46.74	---	60.00
11.993750	---	46.35	50.00
11.993750	46.47	---	60.00
12.153906	45.41	---	60.00
12.153906	---	45.46	50.00
13.263281	44.99	---	60.00
13.263281	---	43.85	50.00
13.665625	---	45.04	50.00
13.665625	46.21	---	60.00
13.739844	---	45.51	50.00
13.739844	46.71	---	60.00
13.821875	---	45.73	50.00
13.821875	45.78	---	60.00
14.138281	---	45.61	50.00
14.138281	46.02	---	60.00
14.216406	---	44.16	50.00
14.216406	45.55	---	60.00
14.696875	43.64	---	60.00
14.696875	---	43.19	50.00

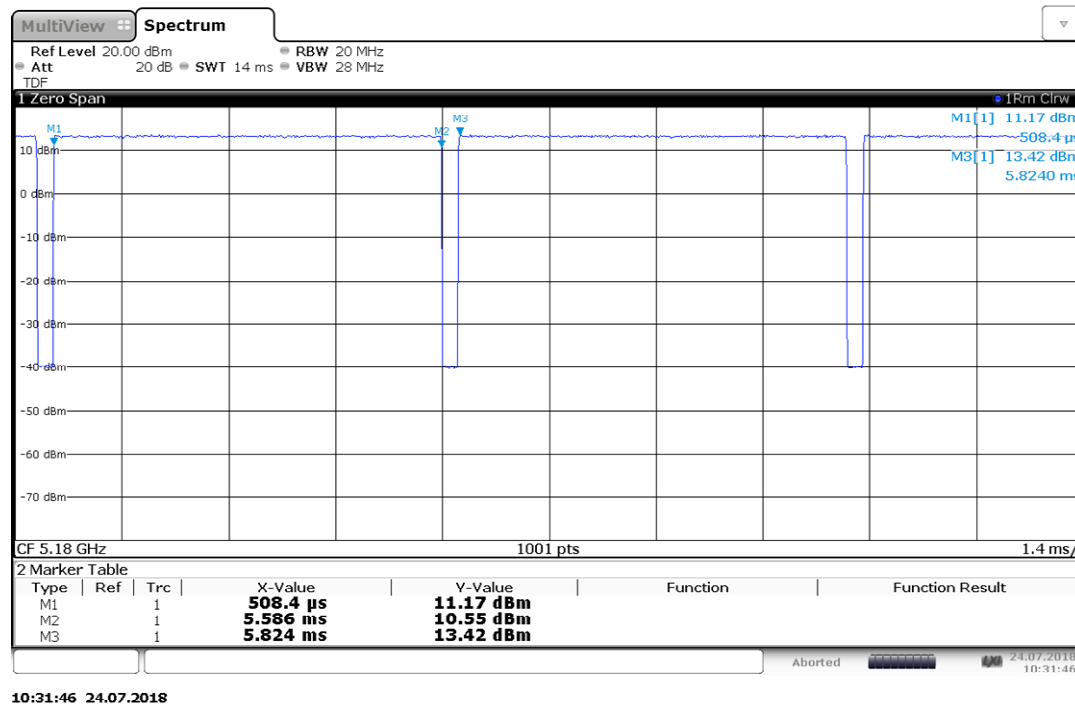
Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)
0.157813	---	55.95	55.58
0.157813	58.90	---	65.58
0.235938	---	42.78	52.24
0.235938	45.81	---	62.24
0.317969	---	38.72	49.76
0.317969	41.30	---	59.76
0.396094	---	35.53	47.93
0.396094	38.69	---	57.93
0.634375	---	34.92	46.00
0.634375	37.98	---	56.00
0.712500	40.66	---	56.00
0.712500	---	37.95	46.00
0.790625	---	38.09	46.00
0.790625	40.25	---	56.00
0.872656	---	36.06	46.00
0.872656	38.78	---	56.00
0.950781	---	31.79	46.00
0.950781	33.83	---	56.00
1.189063	37.28	---	56.00
1.189063	---	34.94	46.00
1.267188	---	36.93	46.00
1.267188	38.81	---	56.00
1.345313	37.27	---	56.00
1.345313	---	36.53	46.00
1.743750	---	34.06	46.00
1.743750	35.29	---	56.00
1.821875	---	35.49	46.00
1.821875	35.82	---	56.00
2.849219	---	33.73	46.00
2.849219	34.25	---	56.00
11.599219	45.25	---	60.00
11.599219	---	44.93	50.00
11.677344	45.59	---	60.00
11.677344	---	45.64	50.00
11.755469	---	45.57	50.00
11.755469	45.66	---	60.00
11.833594	---	45.03	50.00
11.833594	45.91	---	60.00
11.915625	---	46.76	50.00
11.915625	46.74	---	60.00
11.993750	---	46.35	50.00
11.993750	46.47	---	60.00
12.153906	45.41	---	60.00
12.153906	---	45.46	50.00
13.263281	44.99	---	60.00
13.263281	---	43.85	50.00
13.665625	---	45.04	50.00
13.665625	46.21	---	60.00
13.739844	---	45.51	50.00
13.739844	46.71	---	60.00
13.821875	---	45.73	50.00
13.821875	45.78	---	60.00
14.138281	---	45.61	50.00
14.138281	46.02	---	60.00
14.216406	---	44.16	50.00
14.216406	45.55	---	60.00
14.696875	43.64	---	60.00
14.696875	---	43.19	50.00

1.2. Duty Cycle



DC_36_a-mode_6Mbit



DC_36_n-mode_20M_MCS0

1.3. Radiated magnetic field measurements below 30 MHz

2.01_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch36-19.5dBm

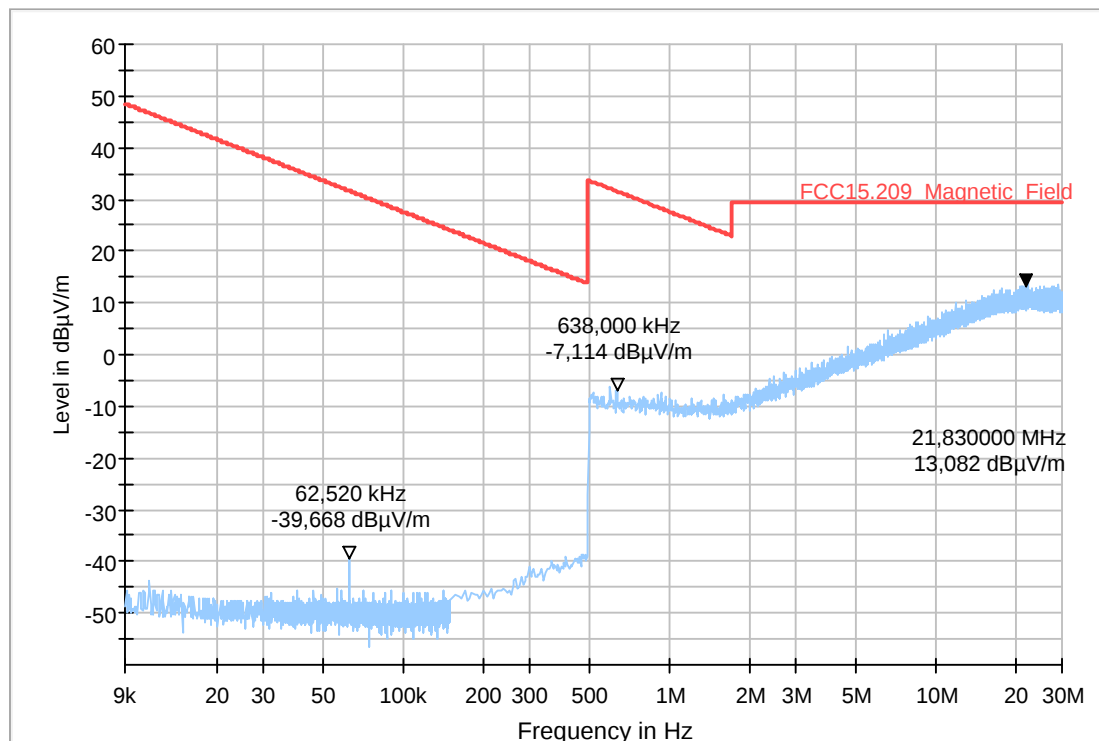
Common Information

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
Version of Testsoftware:	EMC32 V9.25.0
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	Klv
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
Comment 1:	DUT Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



2.01_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch36-19.5dBm

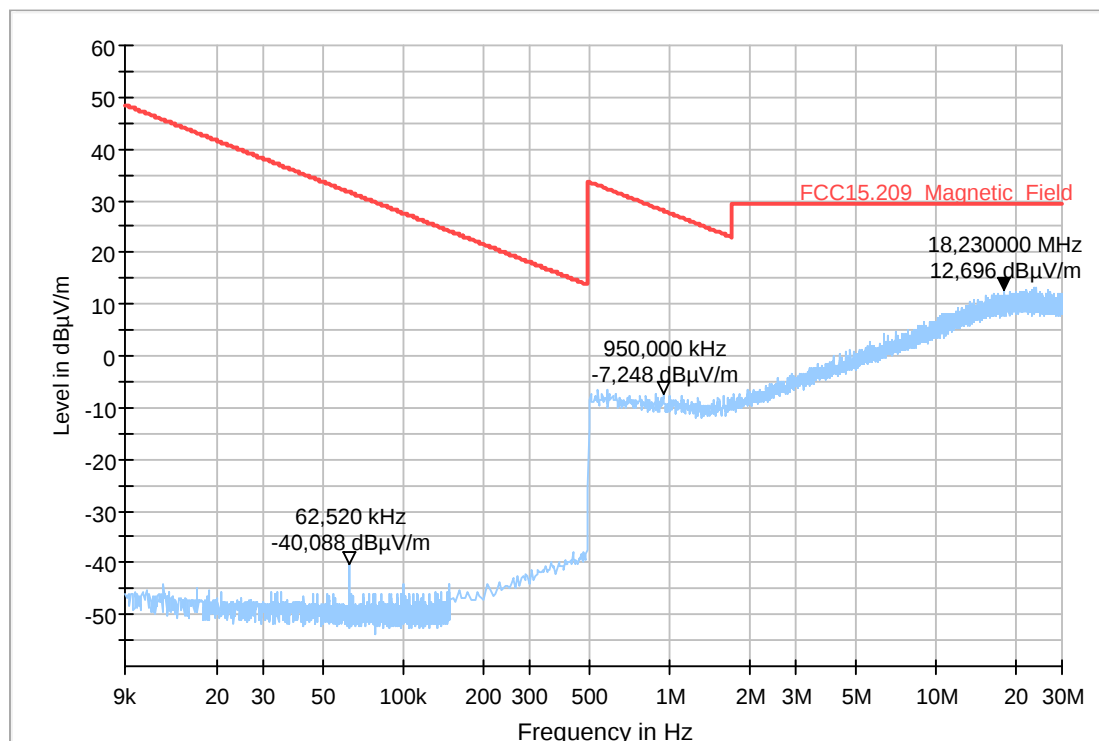
Common Information

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
Version of Testsoftware:	EMC32 V9.25.0
Used filter:	bypass
Test specification:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	HEI
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
Comment 1:	DUT Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



2.02_ CCM-IO-ETH-TX-nMode-BW20MHz-MCS0-Ch56-19.5dBm

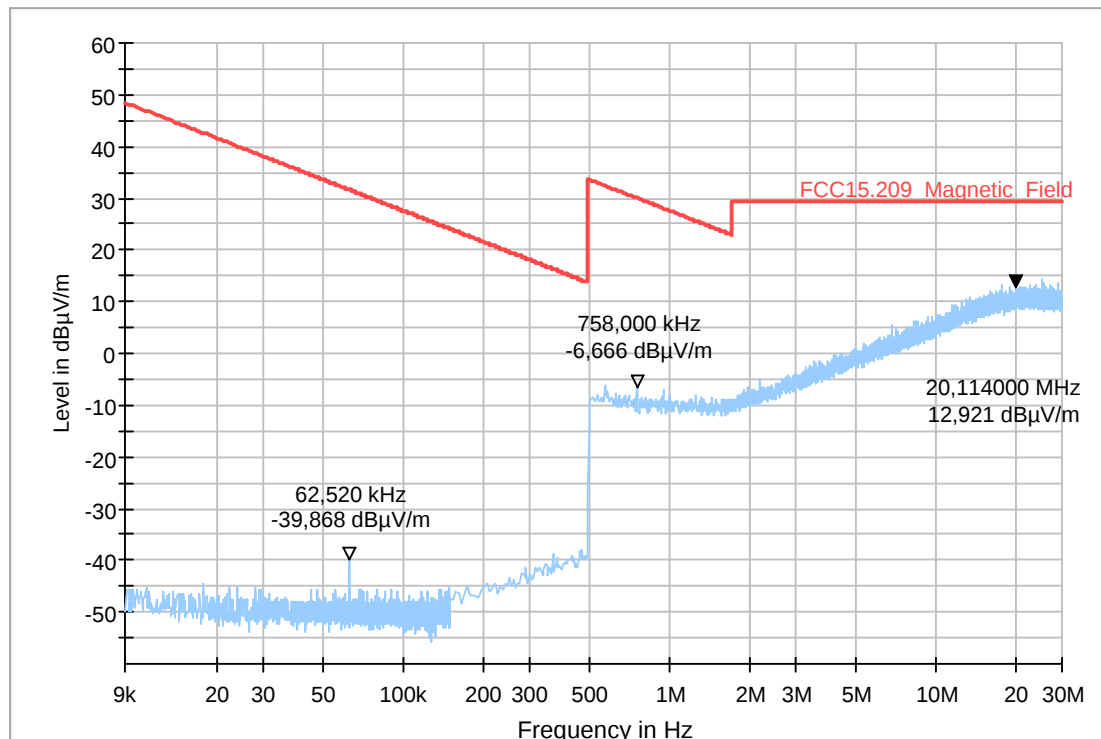
Common Information

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
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:	Klv
Operating conditions:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 56 (5280 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
Comment 1:	DUT Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



2.02_ CCM-IO-ETH-TX-nMode-BW20MHz-MCS0-Ch56-19.5dBm

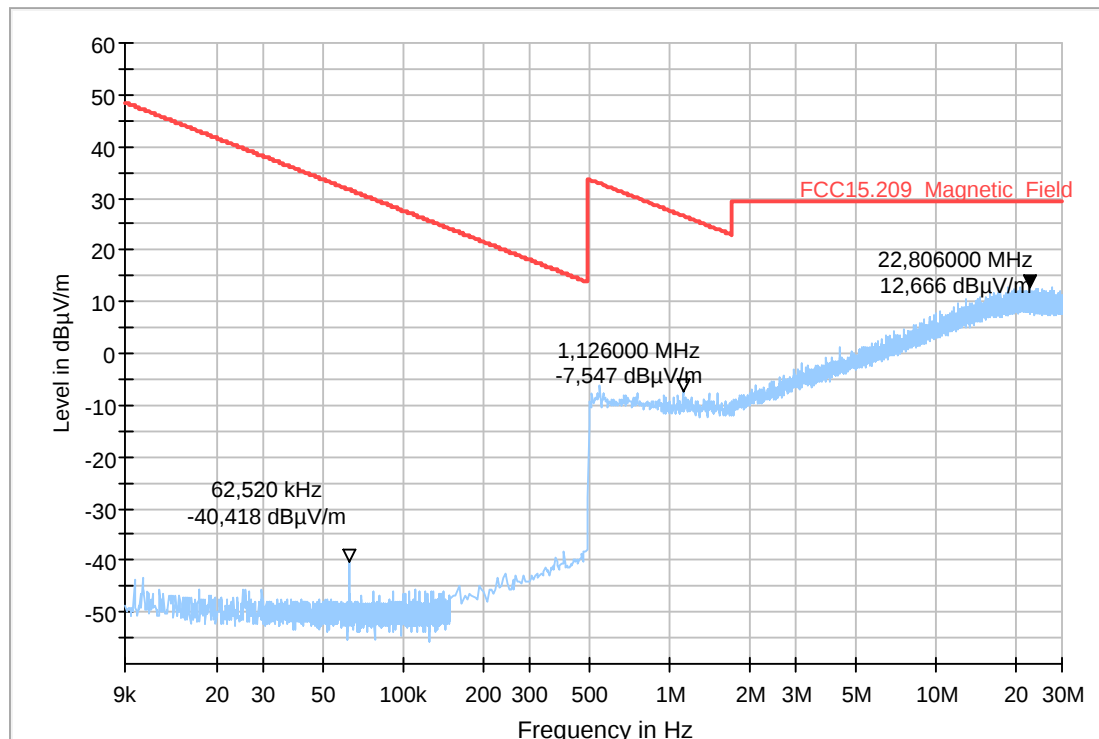
Common Information

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
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:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 56 (5280 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
Comment 1:	DUT Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



2.03_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch116-19.5dBm

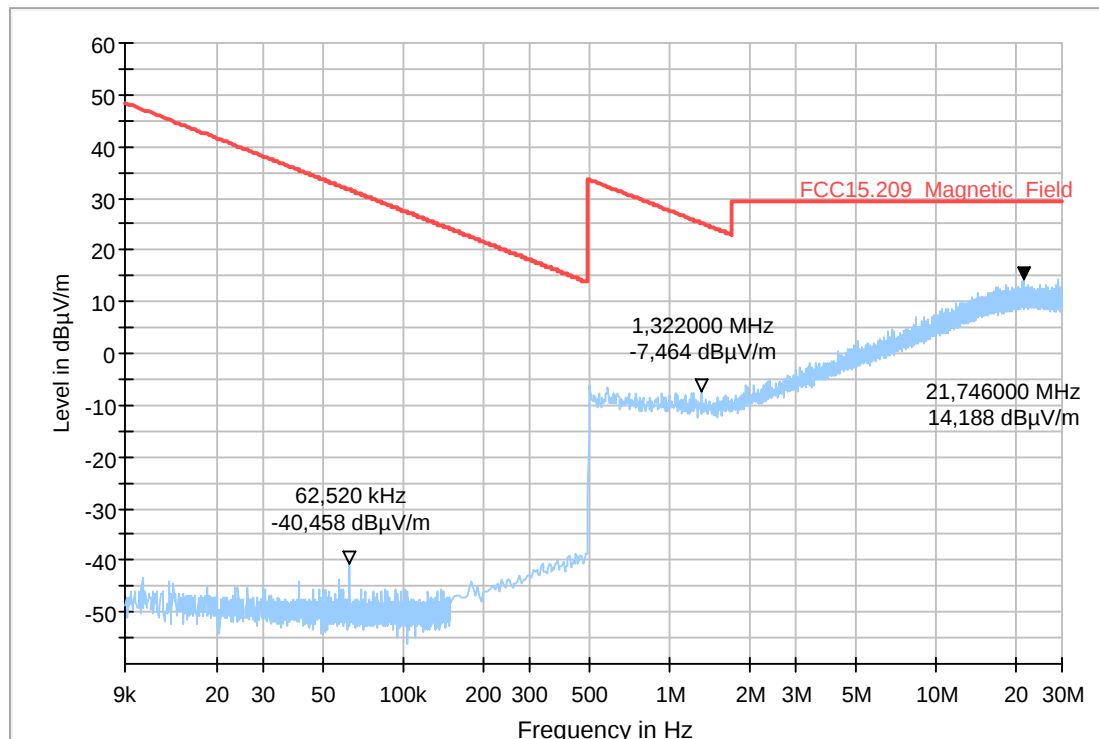
Common Information

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
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:	Klv
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
Comment 1:	DUT Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



2.03_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch116-19.5dBm

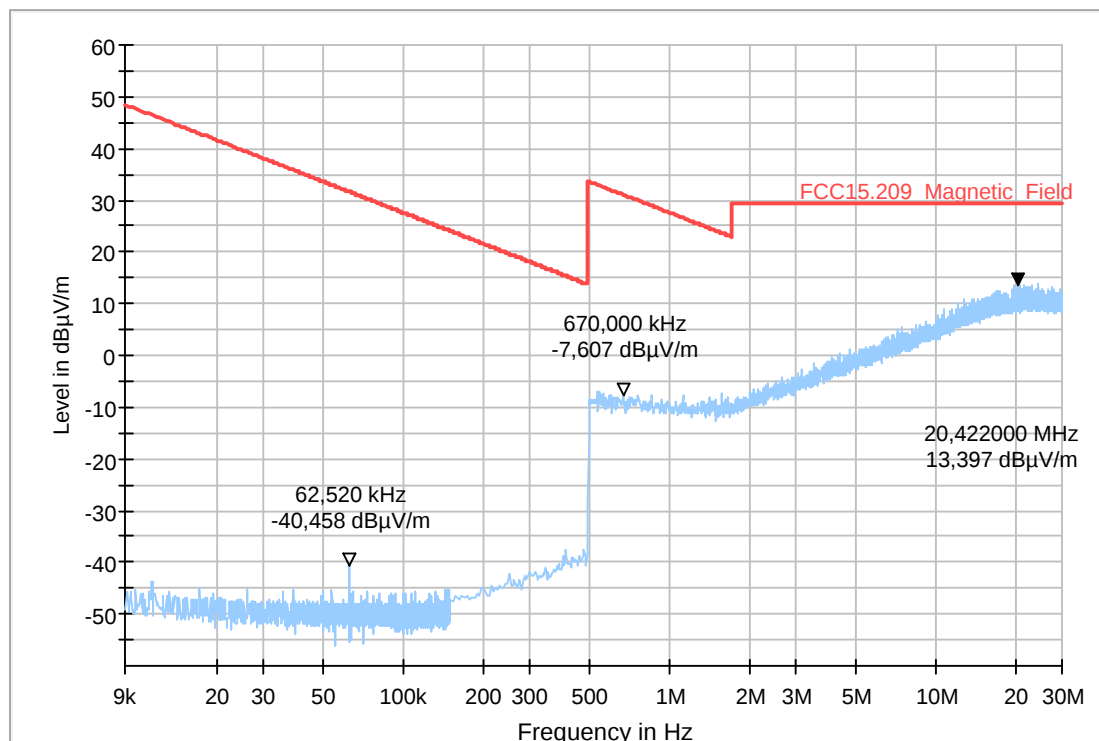
Common Information

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
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:	Klv
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
Comment 1:	DUT Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



1.4. Radiated electric field measurement 30 MHz to 1 GHz

3.01_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch36-19.5dBm

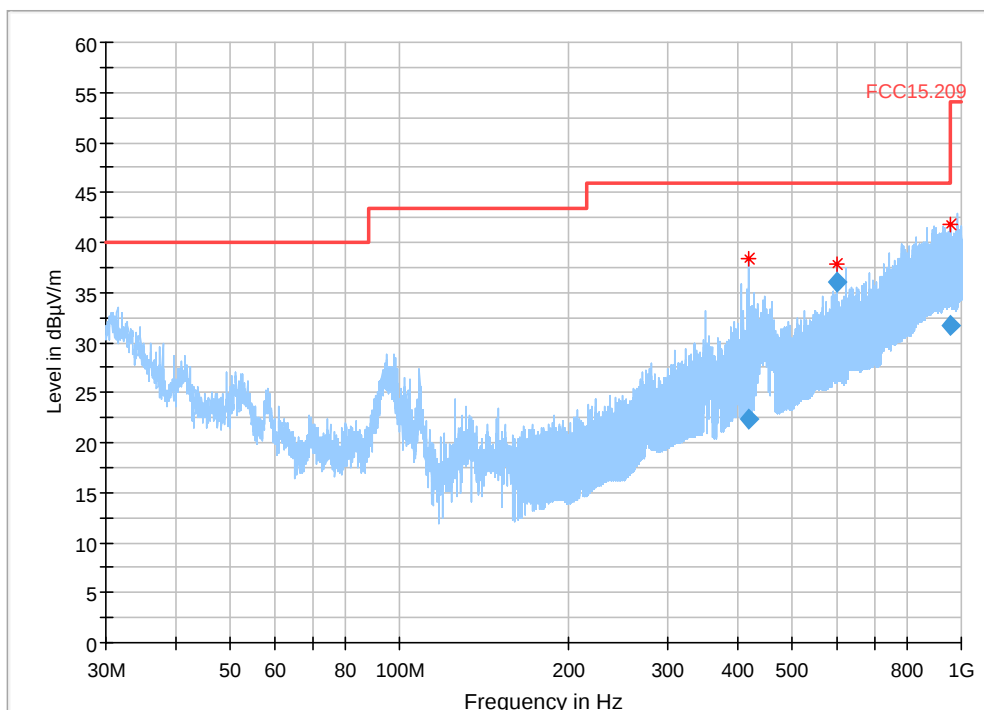
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HEI
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
DUT:	LAYING

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
417.120000	22.33	46.00	23.67	1000.0	120.000	360.0	V	328.0	0.0	18.7
599.988000	36.08	46.00	9.92	1000.0	120.000	153.0	V	203.0	0.0	22.0
958.200000	31.72	46.00	14.28	1000.0	120.000	360.0	V	135.0	0.0	27.4

3.01_ CCM-IO-ETH-GHz-TX-aMode-BW20MHz-6Mbit-Ch36-19.5dBm

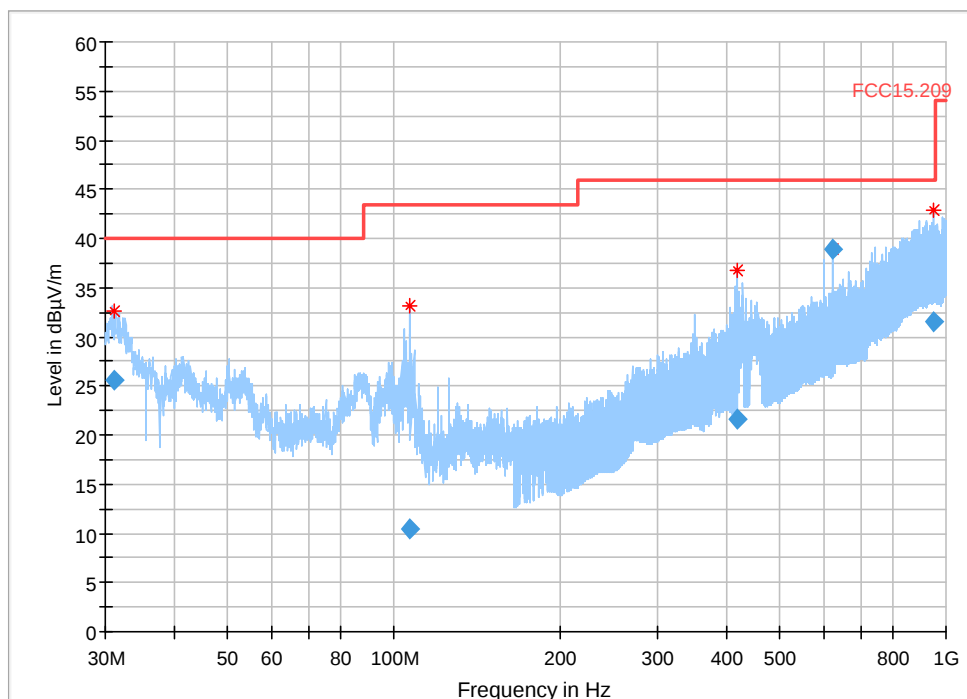
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HEI
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
DUT:	Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Correction (dB)
31.060000	25.61	40.00	14.39	1000.0	120.000	197.0	H	0.0	0.0	21.1
106.708000	10.40	43.50	33.10	1000.0	120.000	320.0	V	193.0	0.0	8.1
419.132000	21.58	46.00	24.42	1000.0	120.000	360.0	V	223.0	0.0	18.8
622.484000	39.00	46.00	7.00	1000.0	120.000	113.0	H	112.0	0.0	22.0
949.480000	31.48	46.00	14.52	1000.0	120.000	350.0	H	25.0	0.0	27.2

3.02_ CCM-IO-ETH-TX-nMode-BW20MHz-MCS0-Ch56-19.5dBm

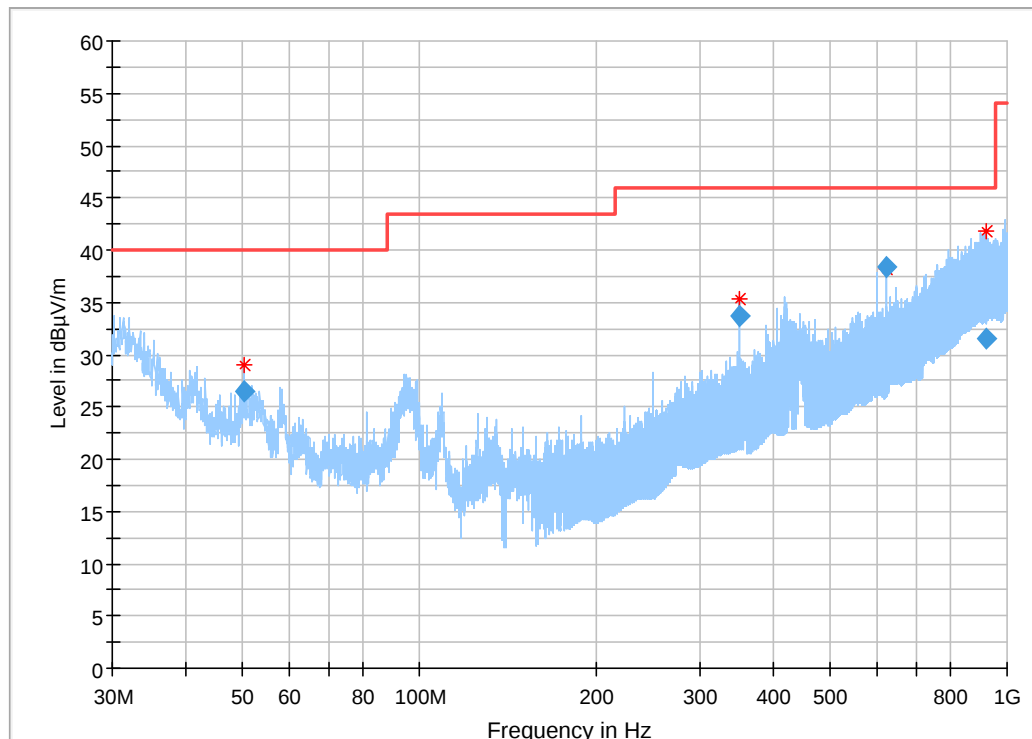
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HEI
Operating conditions:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 56 (5280 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
DUT:	LAYING

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
50.452000	26.55	40.00	13.45	1000.0	120.000	105.0	V	100.0	0.0	12.8
349.992000	33.73	46.00	12.27	1000.0	120.000	105.0	H	309.0	0.0	16.6
622.484000	38.31	46.00	7.69	1000.0	120.000	162.0	V	227.0	0.0	22.0
923.768000	31.59	46.00	14.41	1000.0	120.000	184.0	V	234.0	0.0	27.1

3.02_ CCM-IO-ETH-GHz-TX-nMode-BW20MHz-MCS0-Ch56-19.5dBm

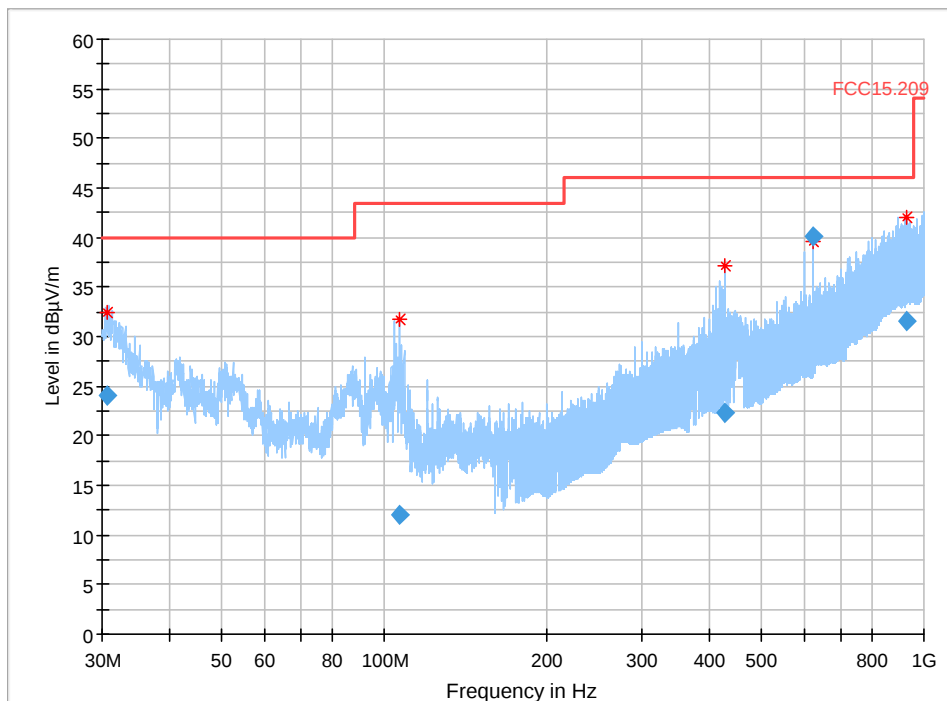
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HEI
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2A-Ch 56 (5280 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
DUT:	standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
30.732000	24.04	40.00	15.96	1000.0	120.000	221.0	H	53.0	0.0	21.2
106.656000	12.11	43.50	31.39	1000.0	120.000	322.0	V	125.0	0.0	8.1
428.440000	22.31	46.00	23.69	1000.0	120.000	336.0	V	133.0	0.0	19.2
622.484000	40.04	46.00	5.96	1000.0	120.000	112.0	H	127.0	0.0	22.0
928.184000	31.59	46.00	14.41	1000.0	120.000	354.0	V	85.0	0.0	27.0

3.03_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch116-19.5dBm

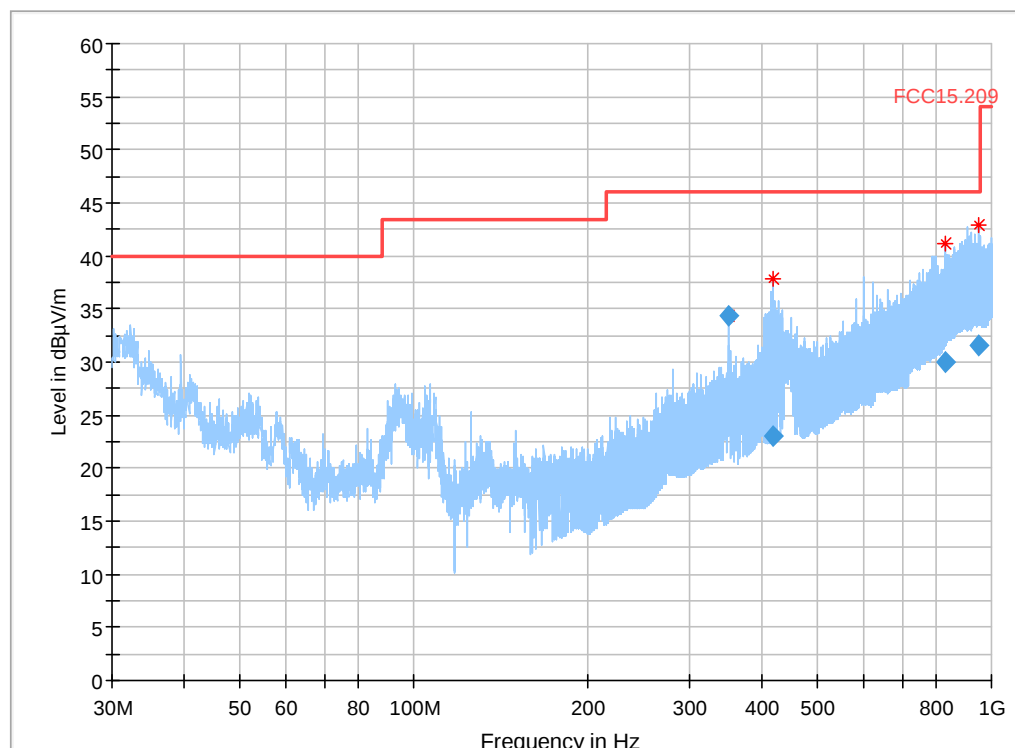
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HEI
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
DUT:	LAYING

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
349.992000	34.29	46.00	11.71	1000.0	120.000	105.0	H	306.0	0.0	16.6
418.256000	22.97	46.00	23.03	1000.0	120.000	360.0	V	45.0	0.0	18.7
829.860000	30.00	46.00	16.00	1000.0	120.000	178.0	H	202.0	0.0	25.9
951.932000	31.59	46.00	14.41	1000.0	120.000	118.0	V	0.0	0.0	27.2

3.03_ CCM-IO-ETH-TX-aMode-BW20MHz-6Mbit-Ch116-19.5dBm

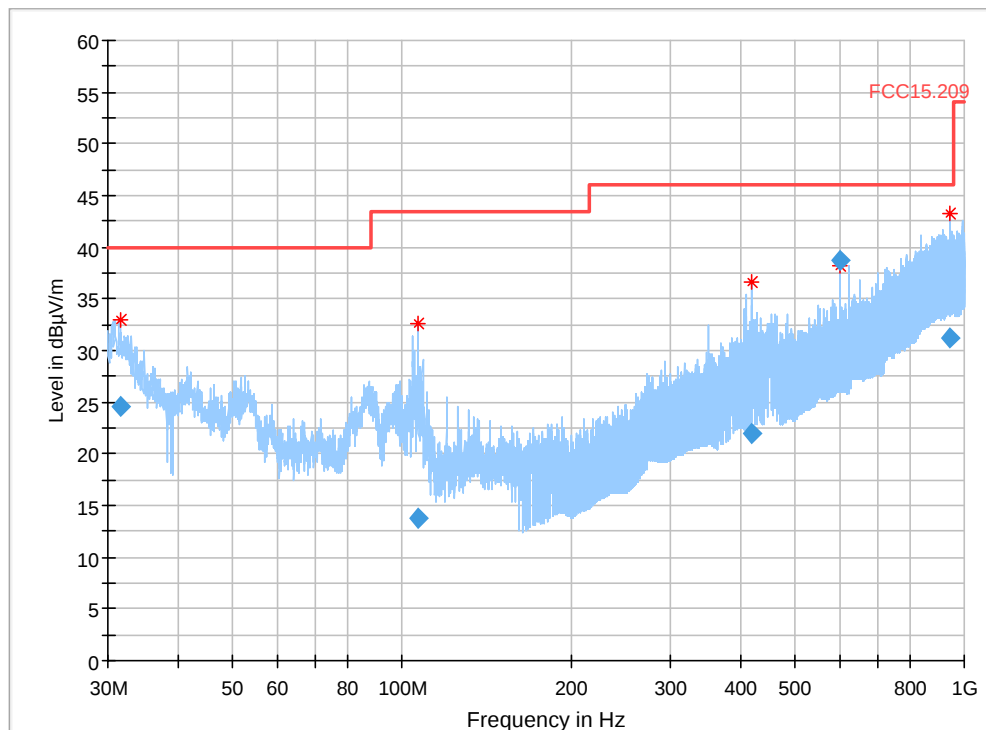
Common Information

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Test specification.:	FCC 15.209; RSS-Gen: Issue 3
Operator:	HEI
Operating conditions:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Power during tests:	100 V DC
DUT:	standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
31.520000	24.60	40.00	15.40	1000.0	120.000	109.0	V	297.0	0.0	20.9
106.700000	13.79	43.50	29.71	1000.0	120.000	125.0	V	180.0	0.0	8.1
419.100000	21.92	46.00	24.08	1000.0	120.000	346.0	V	63.0	0.0	18.8
599.988000	38.72	46.00	7.28	1000.0	120.000	191.0	H	251.0	0.0	22.0
940.384000	31.24	46.00	14.76	1000.0	120.000	257.0	V	0.0	0.0	26.8

1.5. Radiated electric field measurement 1GHz to 7 GHz

4.01_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch36-19.5dBm

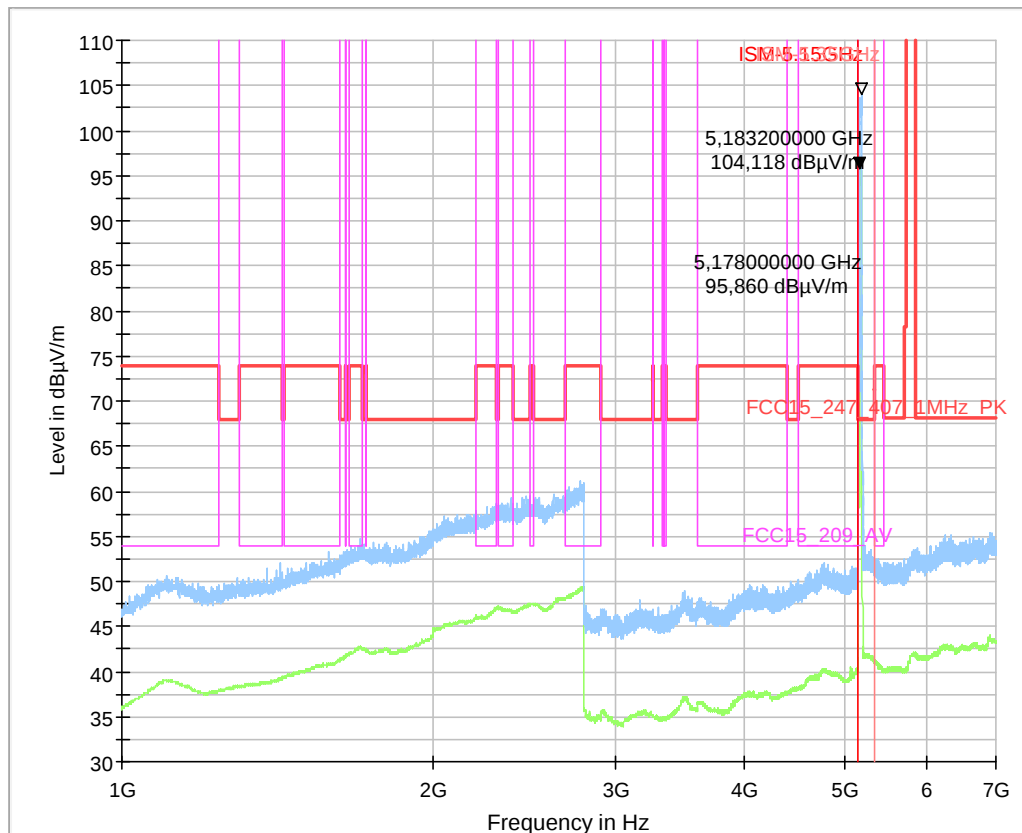
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Operator Name:	APh
EUT Position:	EUT Position:Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.01_ CCM-IO-ETH TX-aMode-20MHz-6Mbit-Ch36-19.5dBm

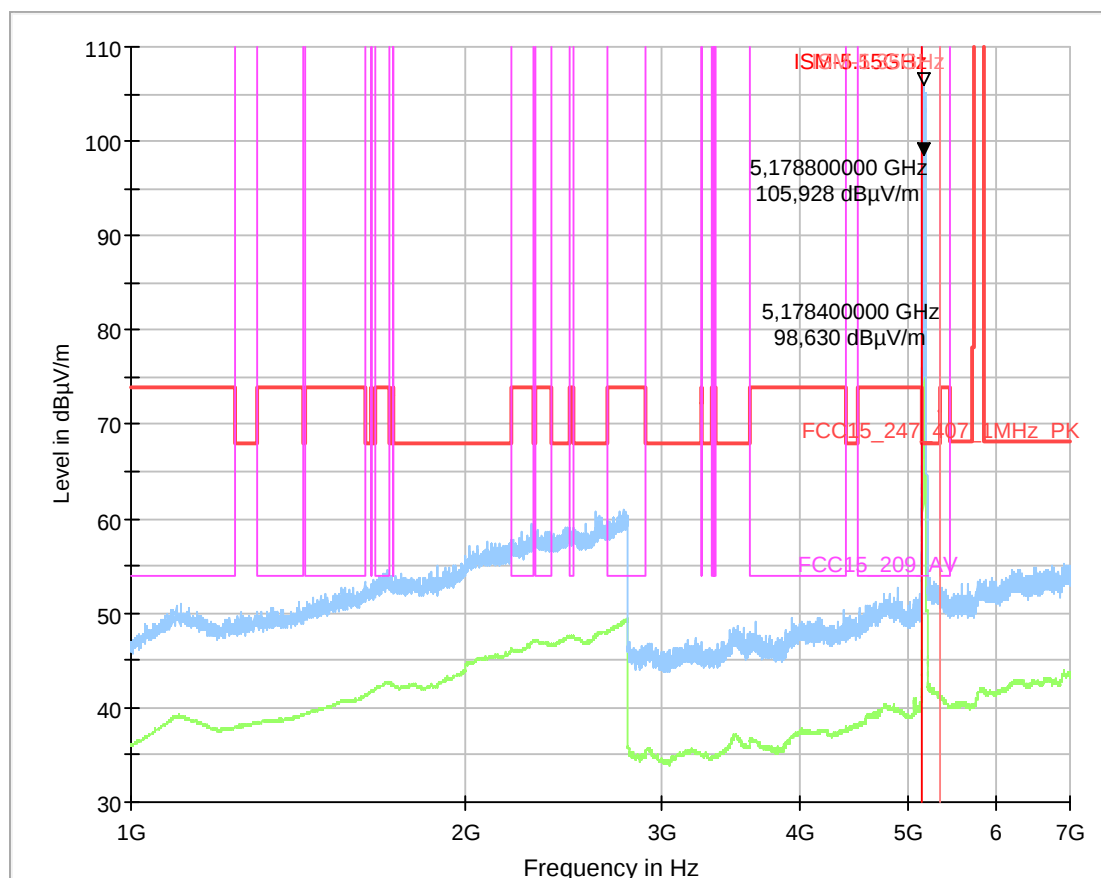
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Operator Name:	Klv
EUT Position:	Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.02_ CCM-IO-ETH-TX-nMode-20MHz-MCS0-Ch52-19.5dBm

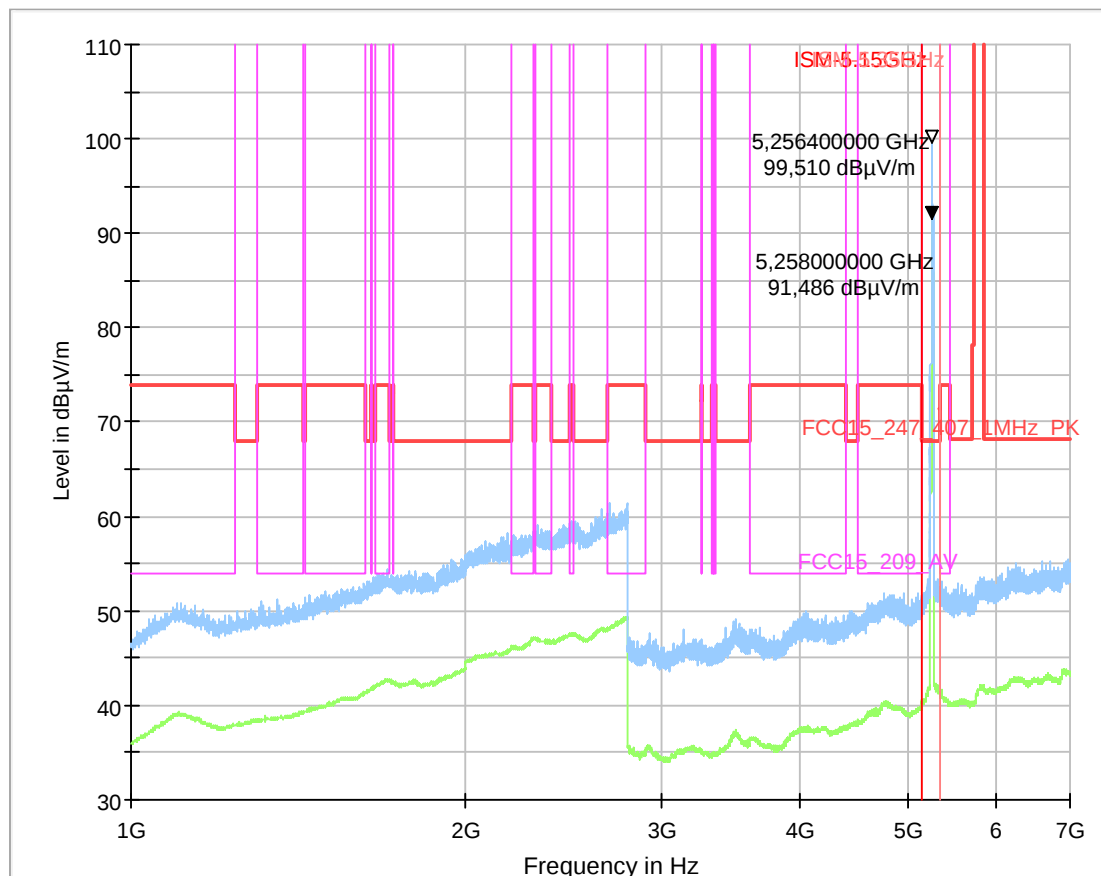
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 52 (5260 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.02_ CCM-IO-ETH-TX-nMode-20MHz-MCS0-Ch52-19.5dBm

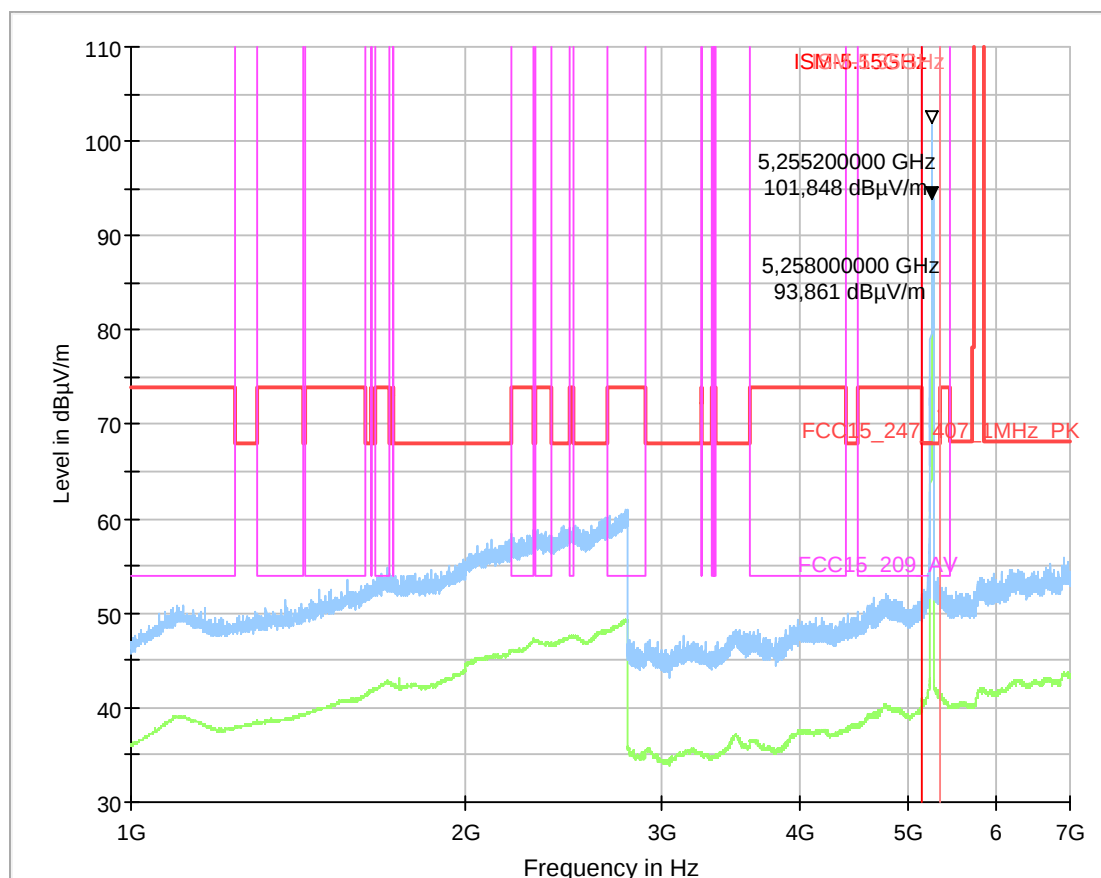
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 52 (5260 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.02_ CCM-IO-ETH TX-nMode-20MHz-MCS0-Ch56-19.5dBm

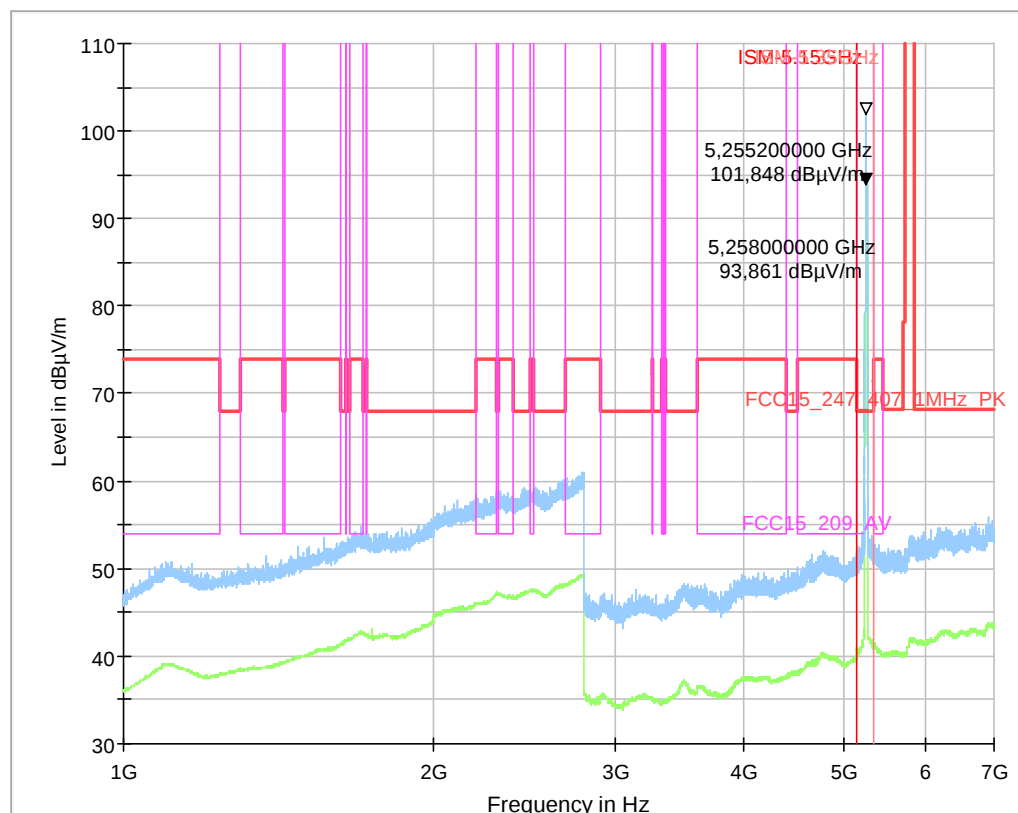
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	4.02_ CCM-IO-ETH-WLAN5 GHz-TX-nMode-B.W20MHz-MCS0-Ch56-19.5dBm-Laying
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.02_ CCM-IO-ETH-TX-nMode-20MHz-MCS0-Ch56-19.5dBm

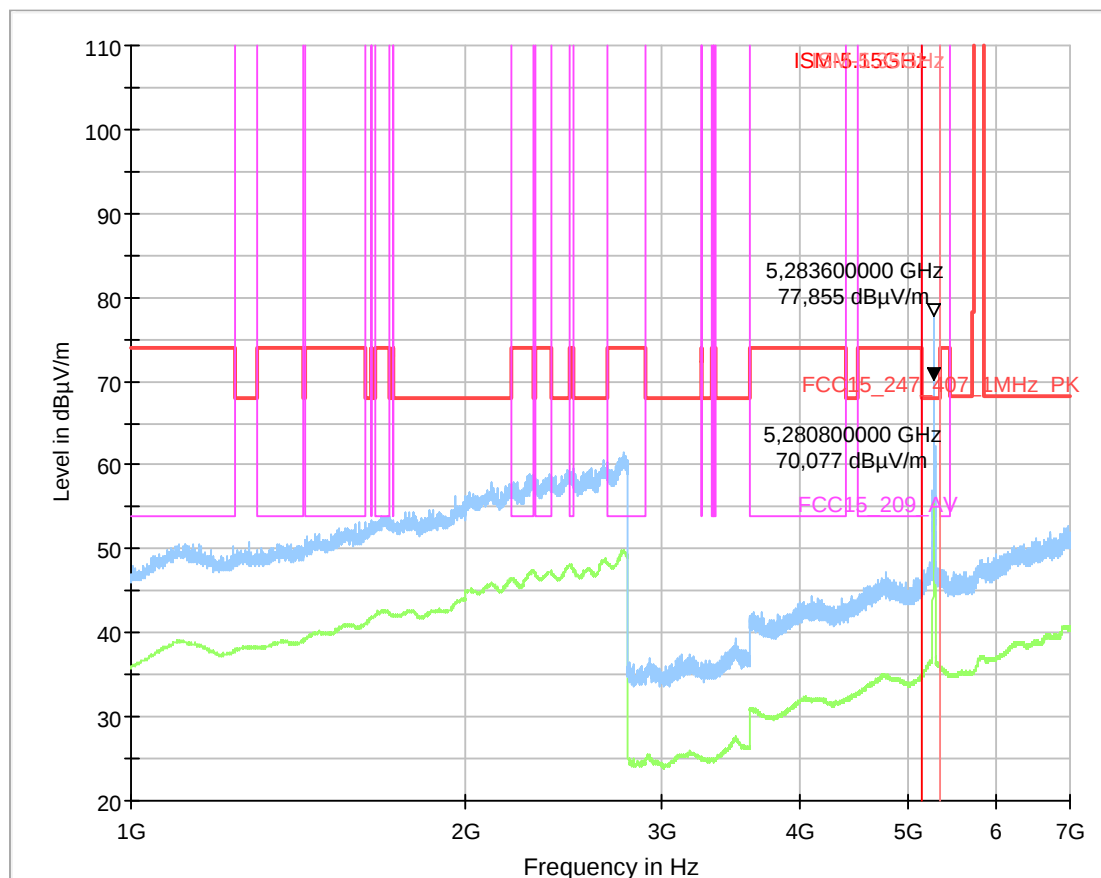
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	4.02_ CCM-IO-ETH-WLAN5 GHz-TX-nMode-B.W20MHz-MCS0-Ch56-19.5dBm-Laying
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.03_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch116-19.5dBm

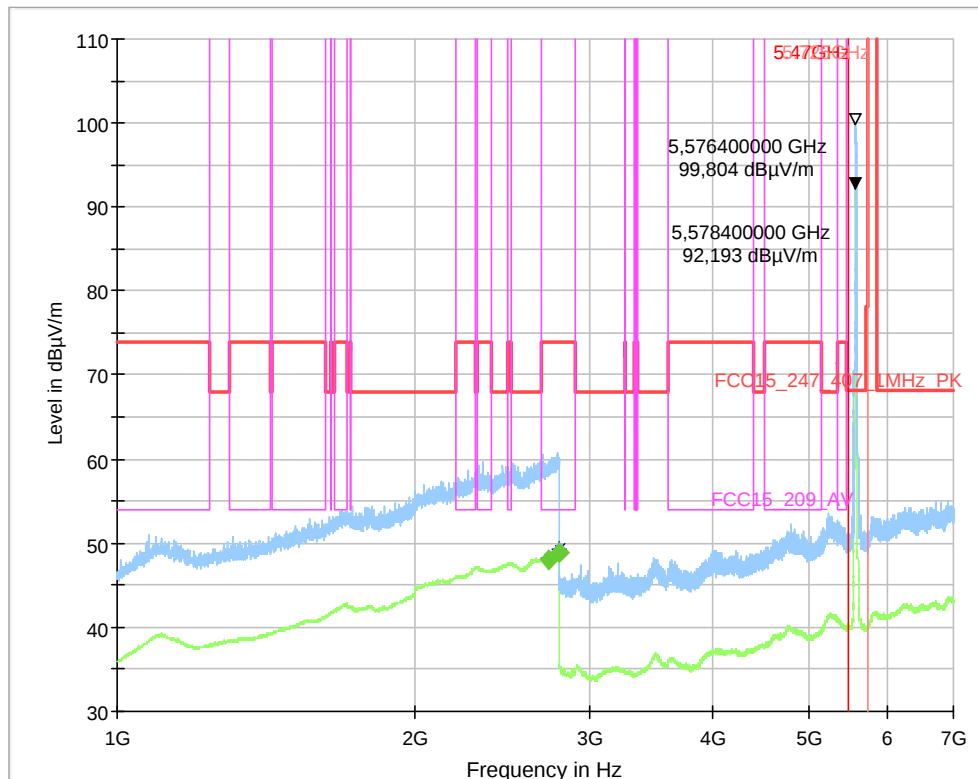
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	X-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comment:	Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2733.150000	48.12	54.00	5.88	100.0	1000.000	155.0	H	178.0	0.0	43.6
2798.850000	48.81	54.00	5.19	100.0	1000.000	155.0	H	265.0	0.0	44.4

4.03_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch116-19.5dBm

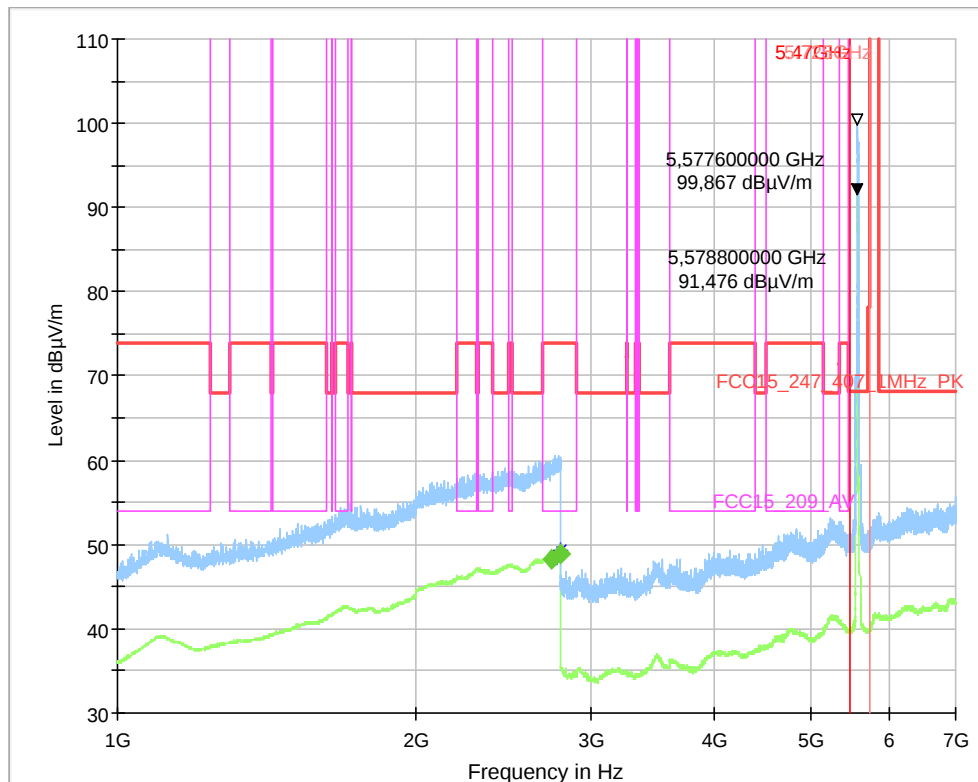
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comment:	Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



Frequency (MHz)	RMS (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2739.150000	48.21	54.00	5.79	100.0	1000.000	155.0	H	346.0	0.0	43.6
2797.850000	48.83	54.00	5.17	100.0	1000.000	155.0	H	243.0	0.0	44.4

1.6. Radiated electric field measurement 7GHz to 18 GHz

4.01a_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch36-19.5dBm

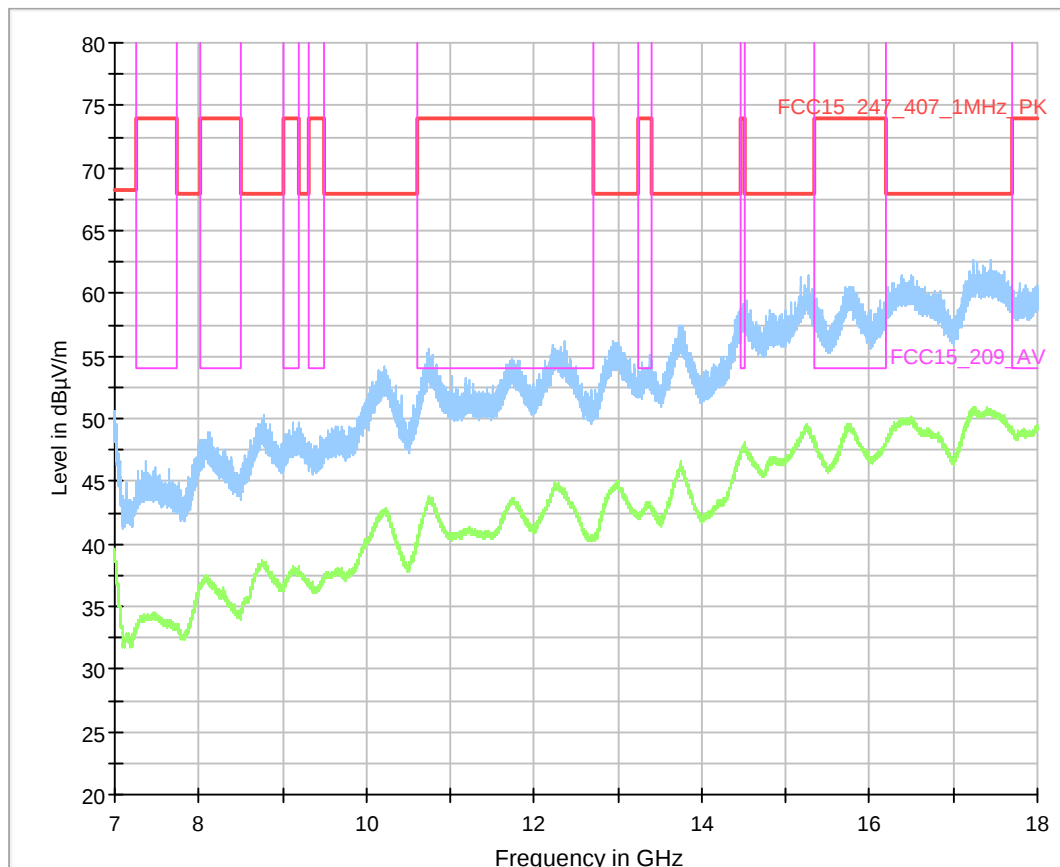
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comments	EUT Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.01a_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch36-19.5dBm

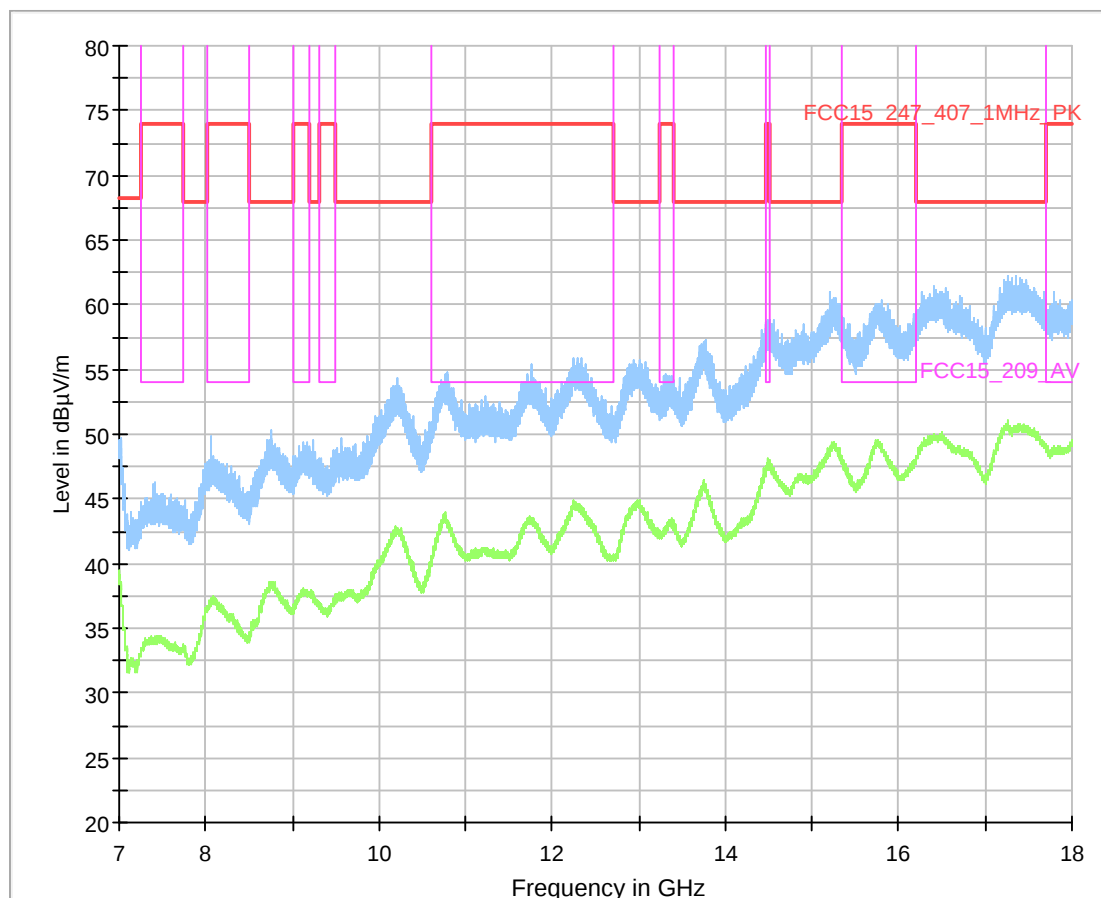
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comments	EUT Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.02a_ CCM-IO-ETH-TX-nMode-20MHz-MCS0-Ch56-19.5dBm

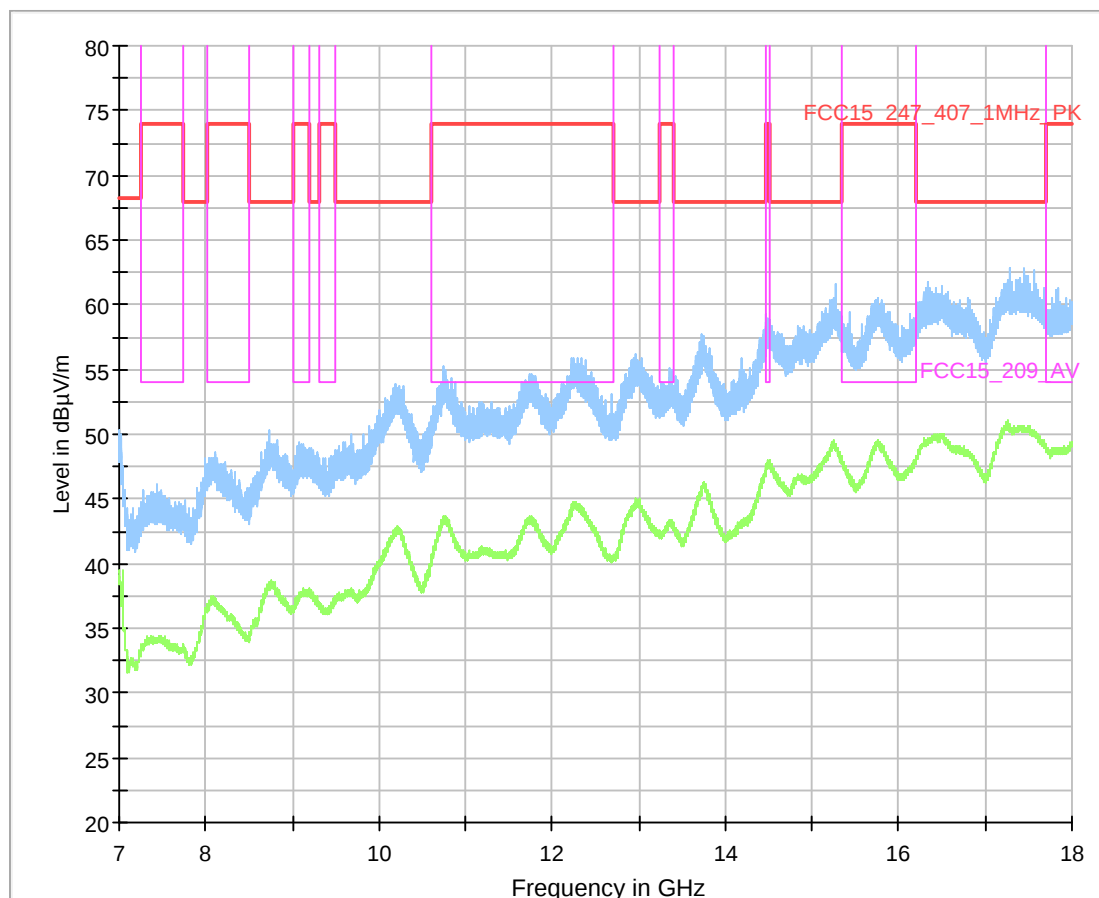
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 56 (5280 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comments	EUT Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.02a_ CCM-IO-ETH-TX-nMode-20MHz-MCS0-Ch56-19.5dBm

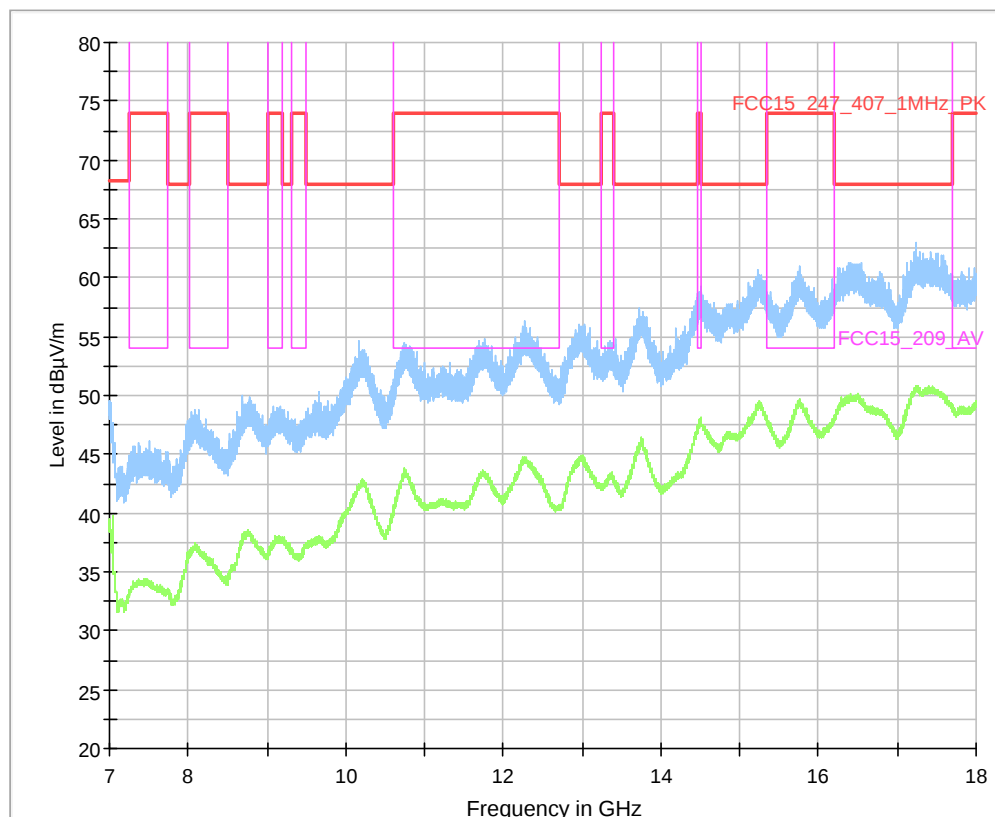
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 56 (5280 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comments	EUT Standing

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.03a_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch116-19.5dBm

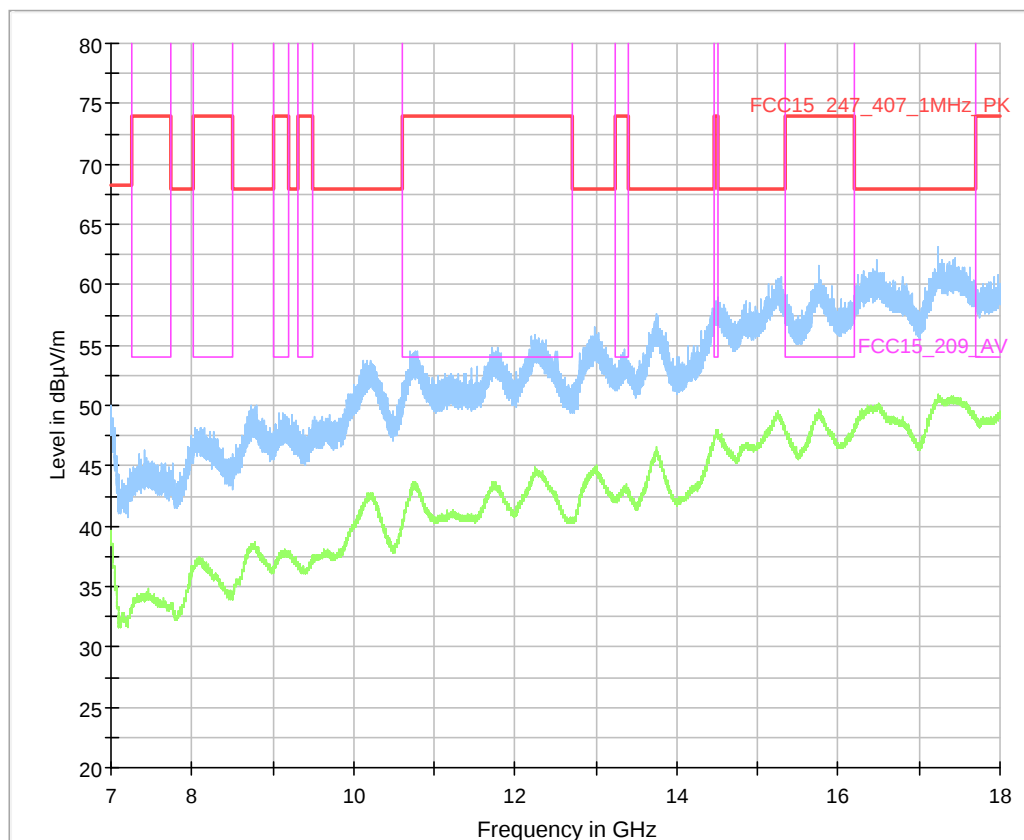
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comments	EUT Laying

EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

Full Spectrum



4.03a_ CCM-IO-ETH-TX-aMode-20MHz-6Mbit-Ch116-19.5dBm

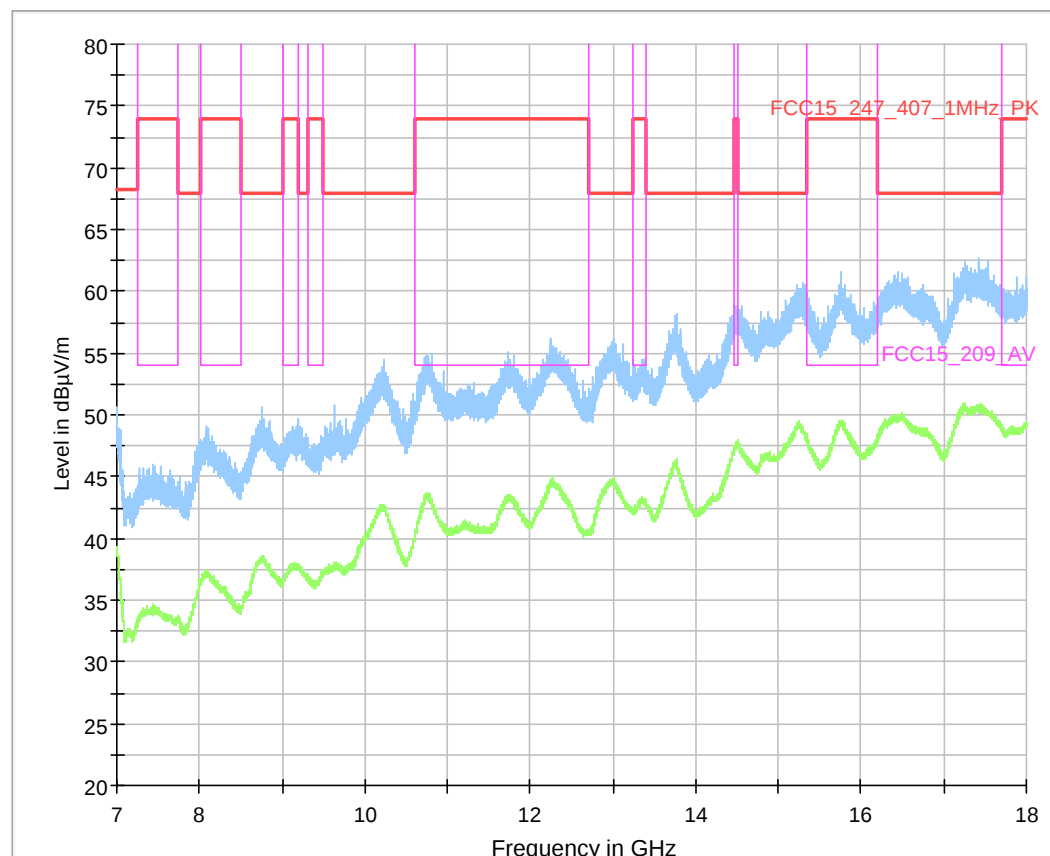
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 116 (5580 MHz)- PWR+19.5 dBm
Operator Name:	Klv
Comments	EUT Standing

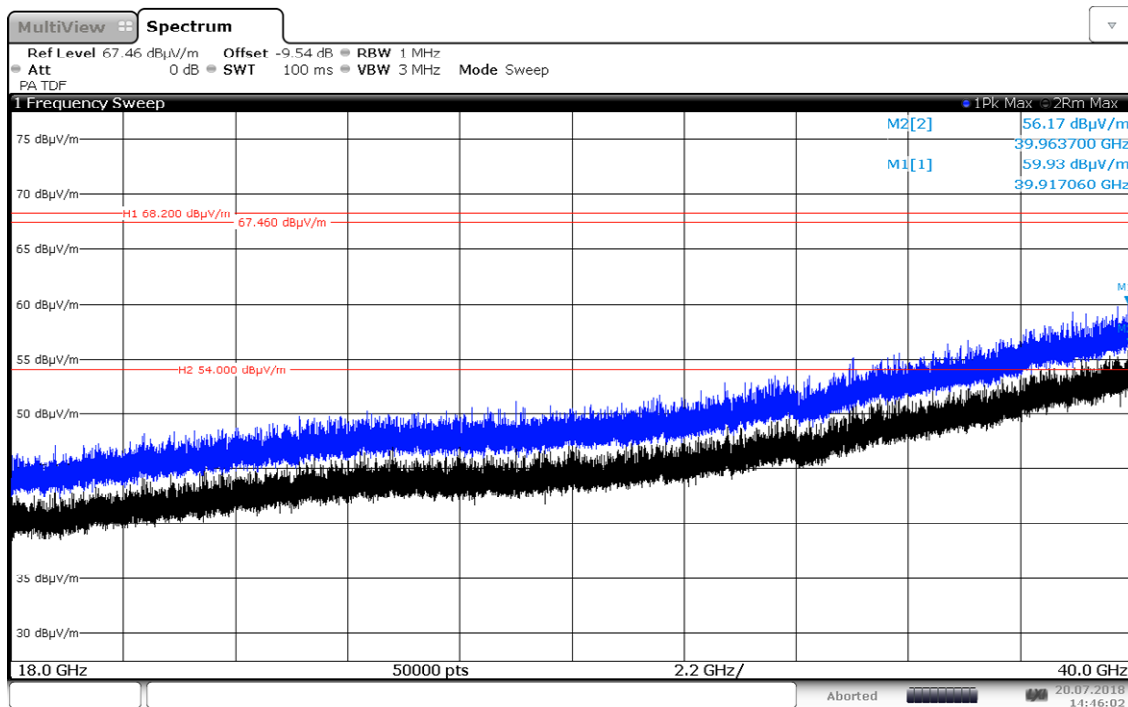
EUT Information

Manufacturer:	Prodrive B.V.
Model:	CCM-IO-ETH ,UL
Type:	MASTER
EUT:(Master)	CCM-IO-ETH, UL (Master)
HW version:	same as PN
SW version:	2014.11-R07
SN:	17-16-008-092
PN:	6752-1600-1400
BG Article No.:	64533
Connected Interfaces:	CCM-IO-ETH, UL (Master) connected with CCS-IO, UL (Slave) (PN:6752-1601-4200 SN:17-13-003-328)+ CrossBelt Motor 35 Kg (Model:80ZWX-15.0505-A 1.8N.m 4244RPM)-
Master / Slave Power Supply:	100V DC 10A (Using External Power Supply XANTREX Type: XFR150-18)
Motor Power Supply:	100 V DC (from Master 100 V RMS 7.5 ARMS 3 Phase)

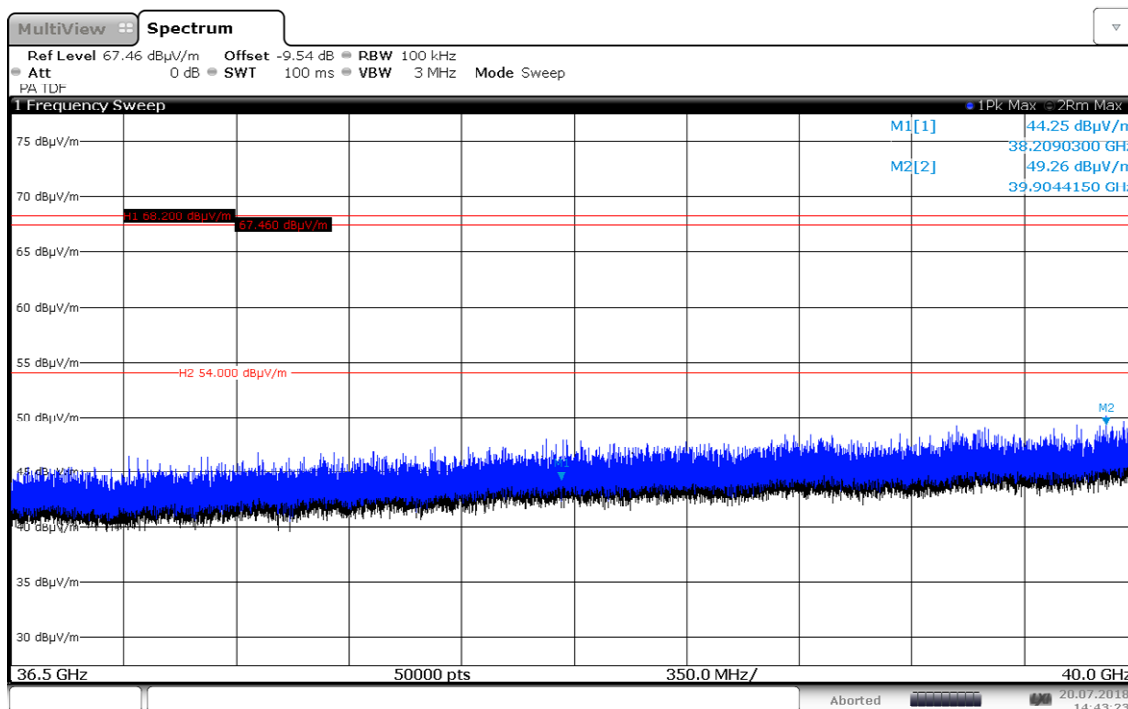
Full Spectrum



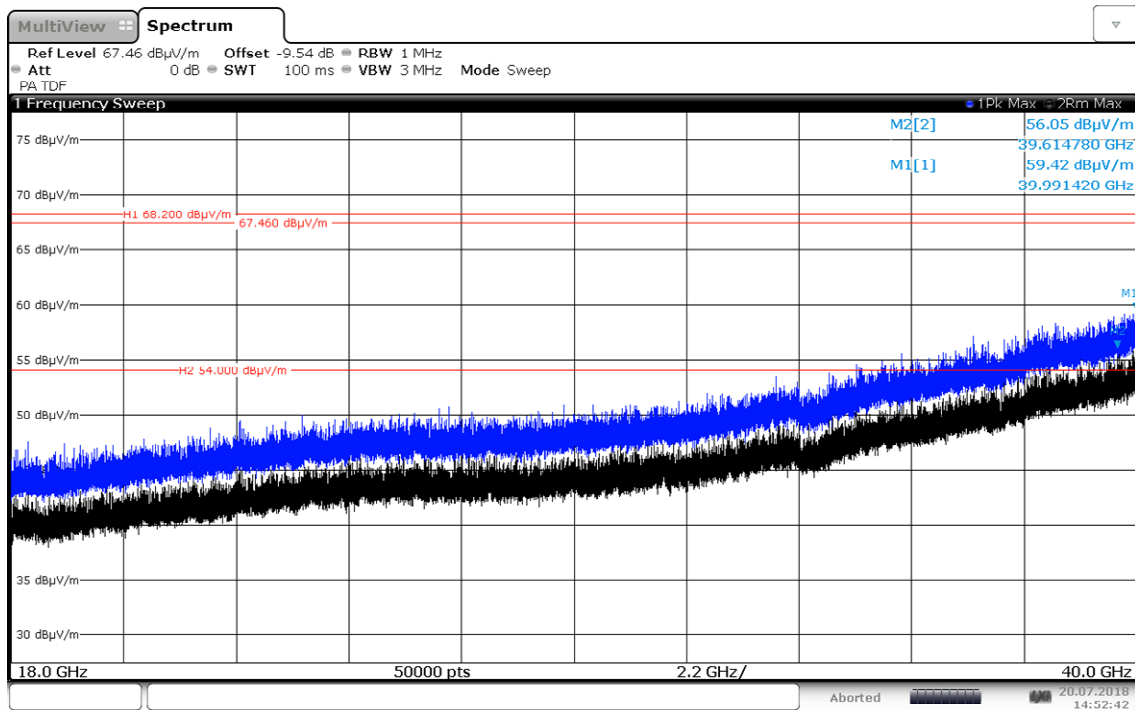
1.7. Radiated electric field measurement 18GHz to 40 GHz



4.01b_ CCM-IO-ETH-WLAN5 GHz-TX-aMode-B.W20MHz-6Mbit-Ch36-19.5dBm

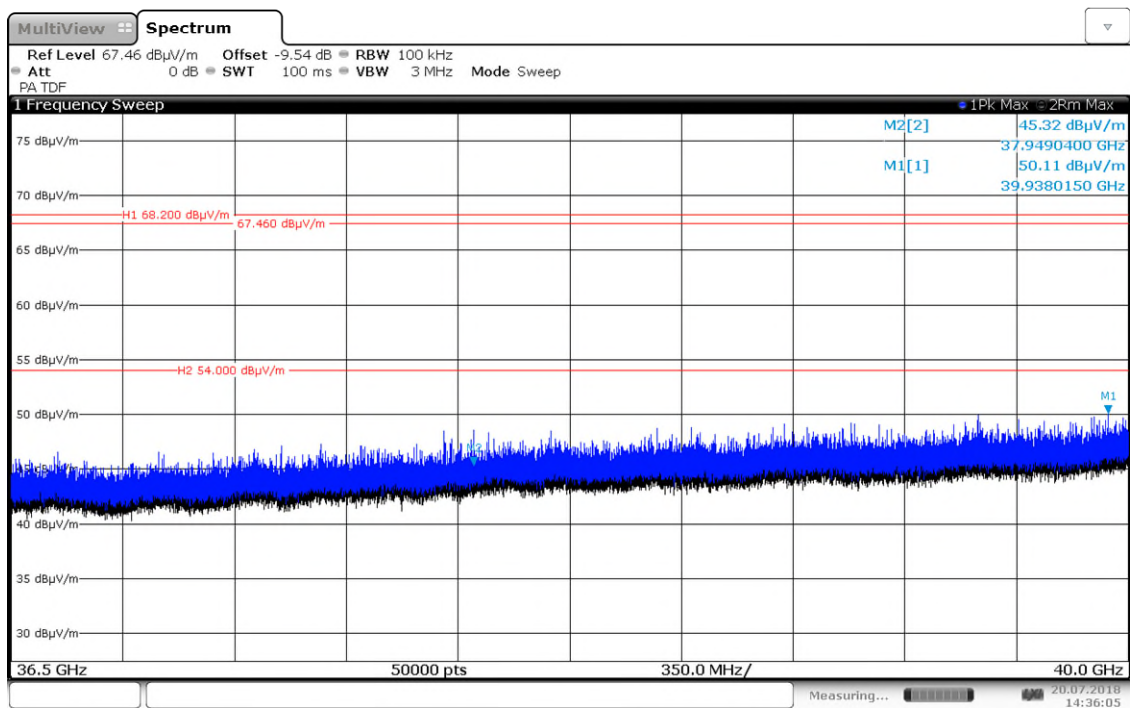


4.01b_ CCM-IO-ETH-WLAN5 GHz-TX-aMode-B.W20MHz-6Mbit-Ch36-19.5dBm-100KHz



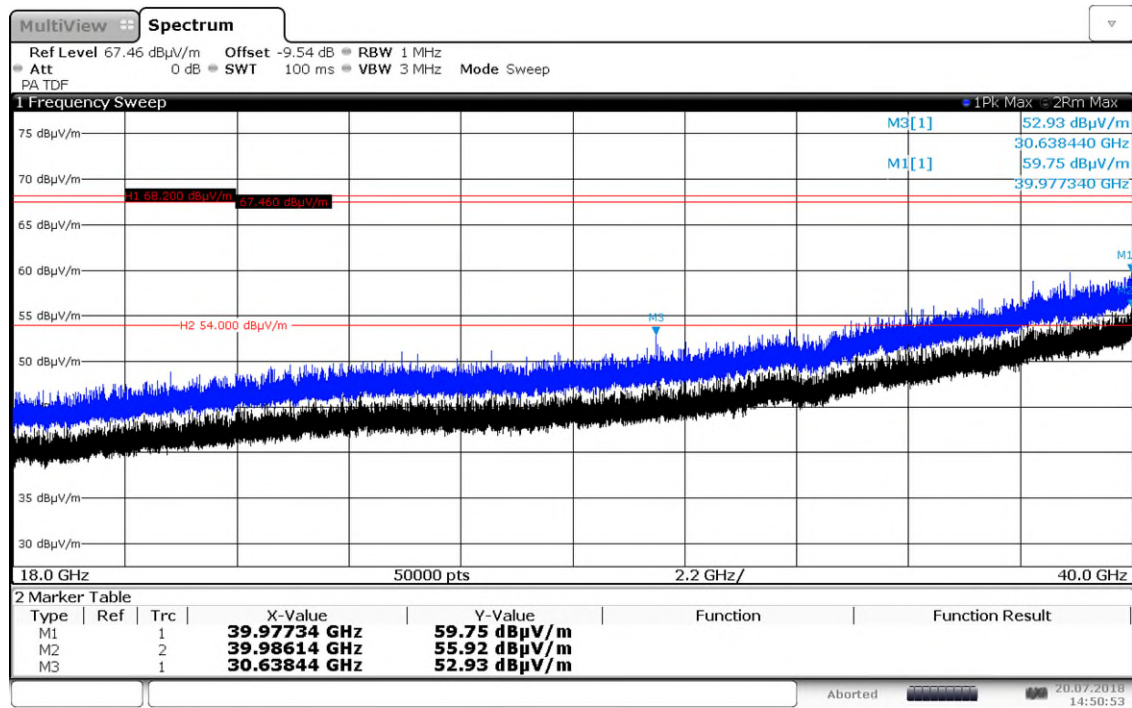
14:52:43 20.07.2018

4.02b_ CCM-IO-ETH-WLAN5 GHz-TX-nMode-B.W20MHz-MCS0-Ch56-19.5dBm



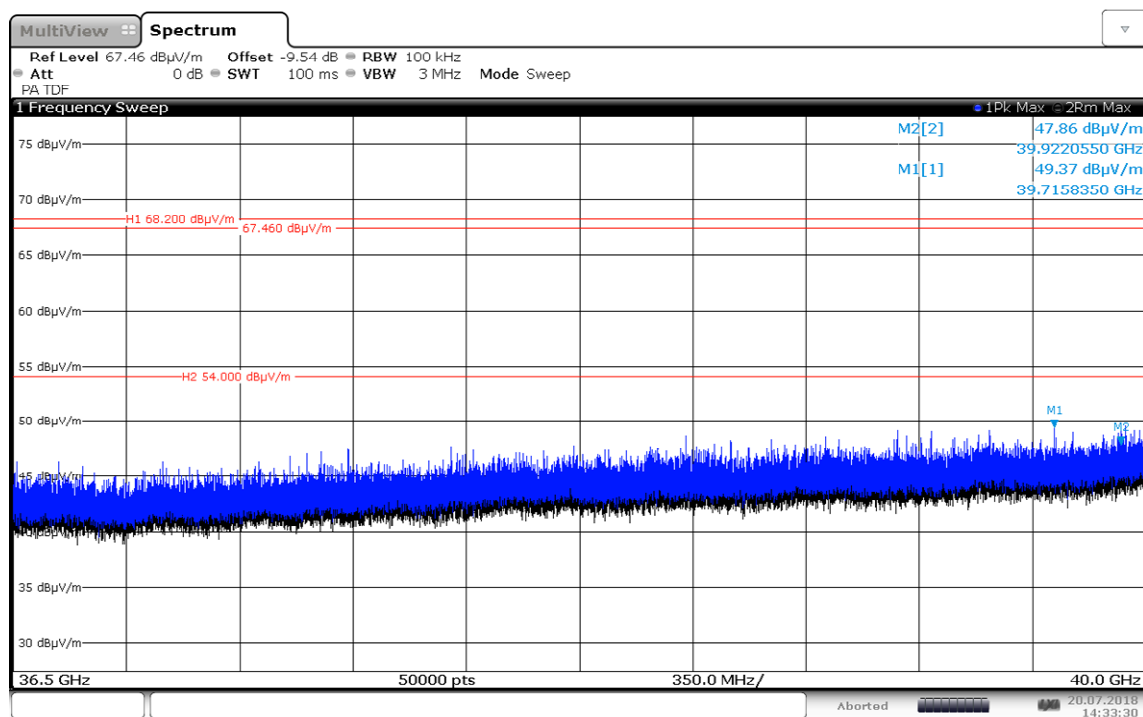
14:36:05 20.07.2018

4.02b_ CCM-IO-ETH-WLAN5 GHz-TX-nMode-B.W20MHz-MCS0-Ch56-19.5dBm-100KHz



14:50:53 20.07.2018

4.03b_ CCM-IO-ETH-WLAN5 GHz-TX-aMode-B.W20MHz-6Mbit-Ch116-19.5dBm



14:33:31 20.07.2018

4.03b_ CCM-IO-ETH-WLAN5 GHz-TX-aMode-B.W20MHz-6Mbit-Ch116-19.5dBm_100kHz

1.8. Radiated Band Edge measurement

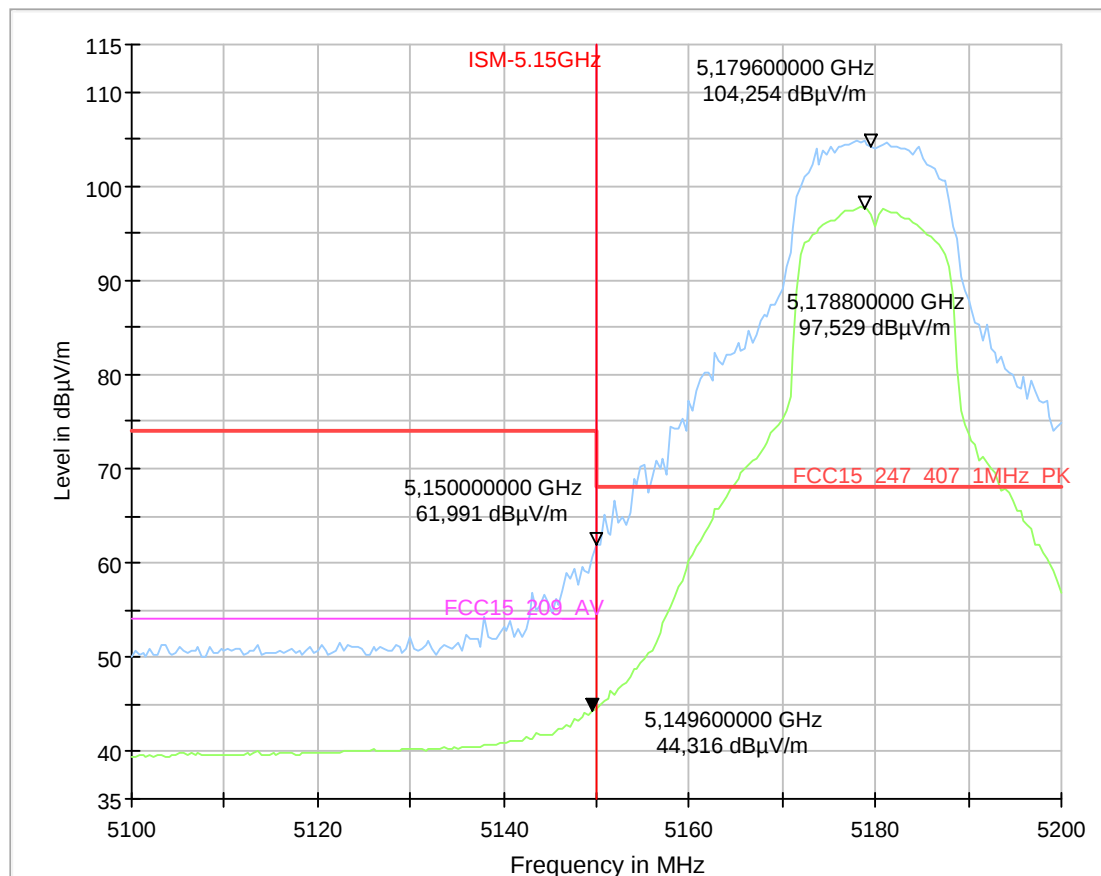
1.8.1. a-mode

9.01_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch36-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)-PWR+19.5dBm
Operator Name:	Klv
Comment:	Slotted Wave Guide Antenna Laying

Full Spectrum

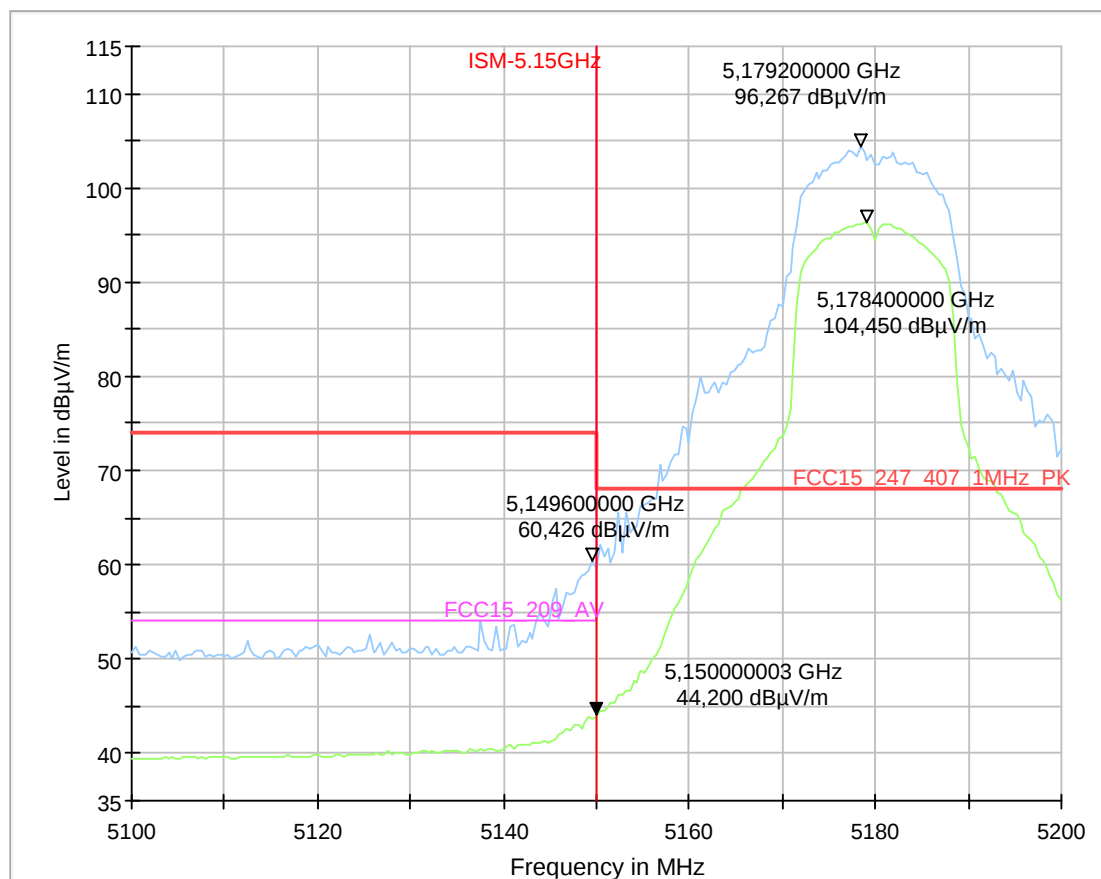


9.01_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch36-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 36 (5180 MHz)-PWR+19.5dBm
Operator Name:	Klv
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

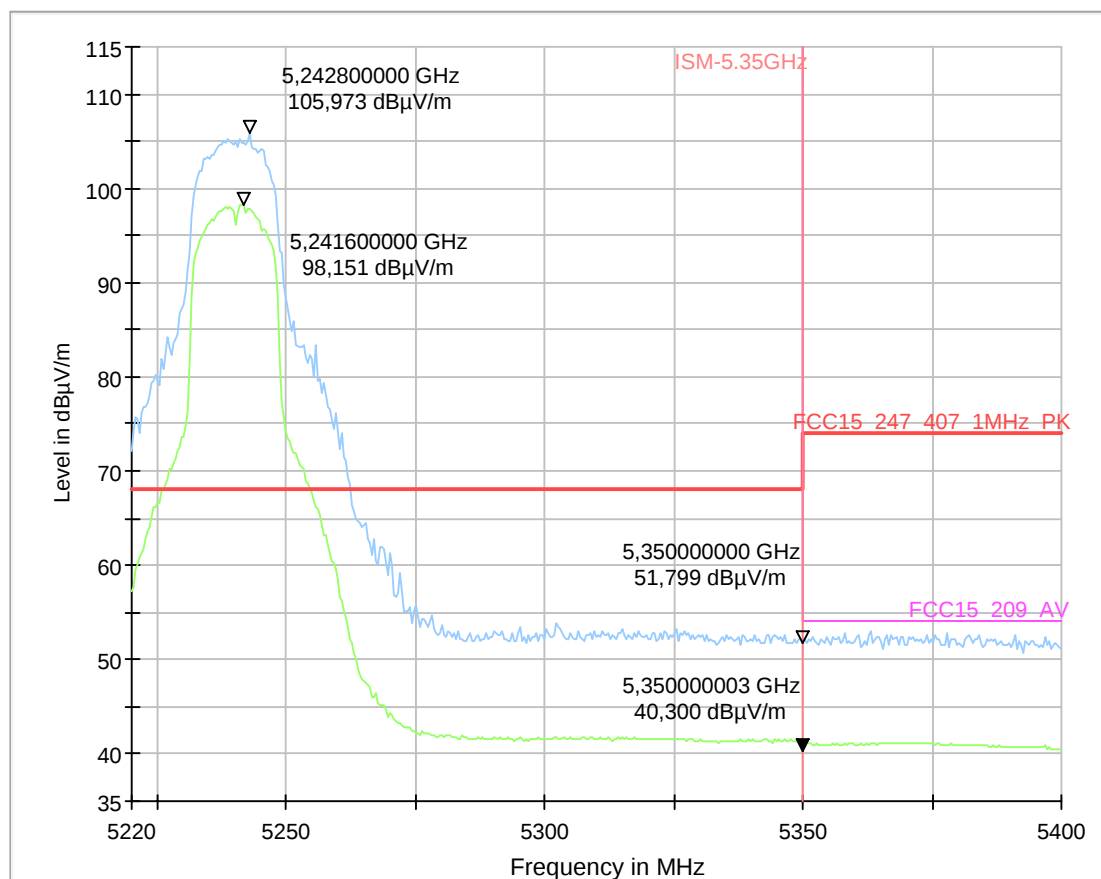


9.02_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch48-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 48 (5240 MHz)- PWR+19.5dBm
Operator Name:	Klv
Comment:	Slotted Wave Guide Antenna Laying

Full Spectrum

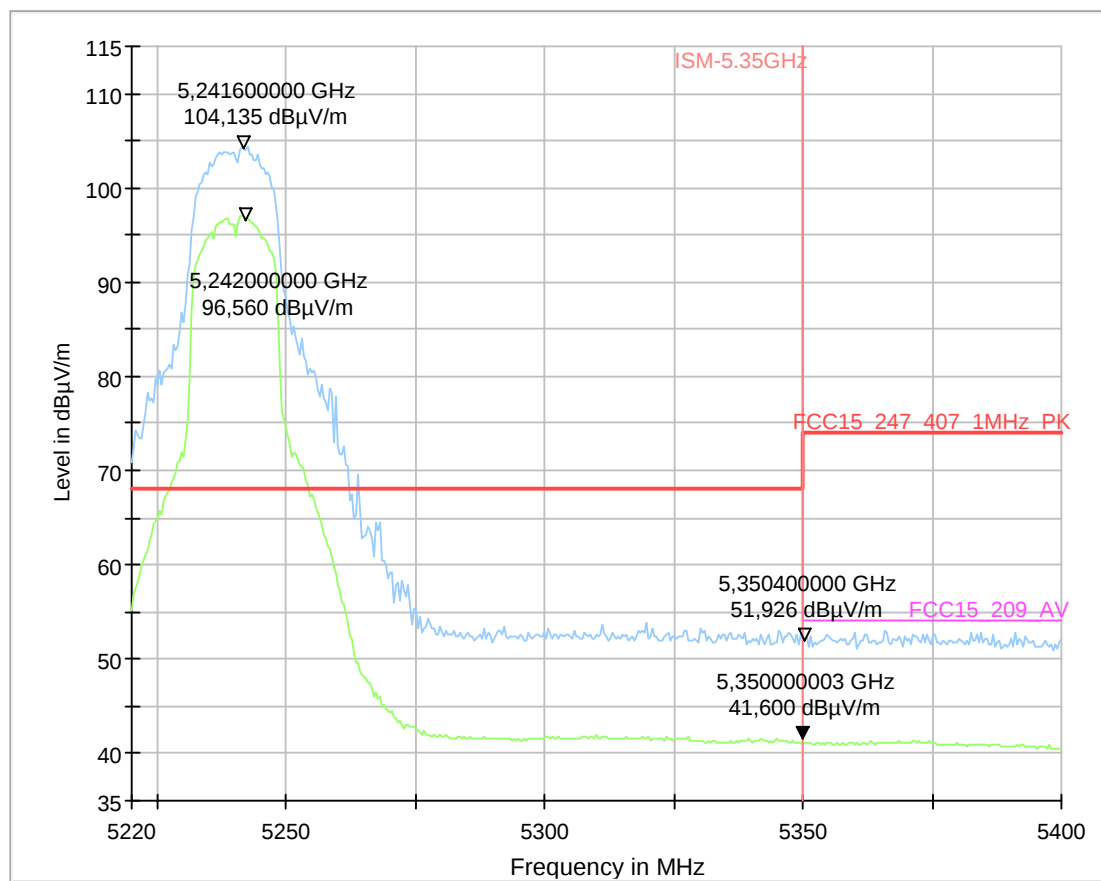


9.02_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch48-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-1-Ch 48 (5240 MHz)- PWR+19.5dBm
Operator Name:	Klv
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

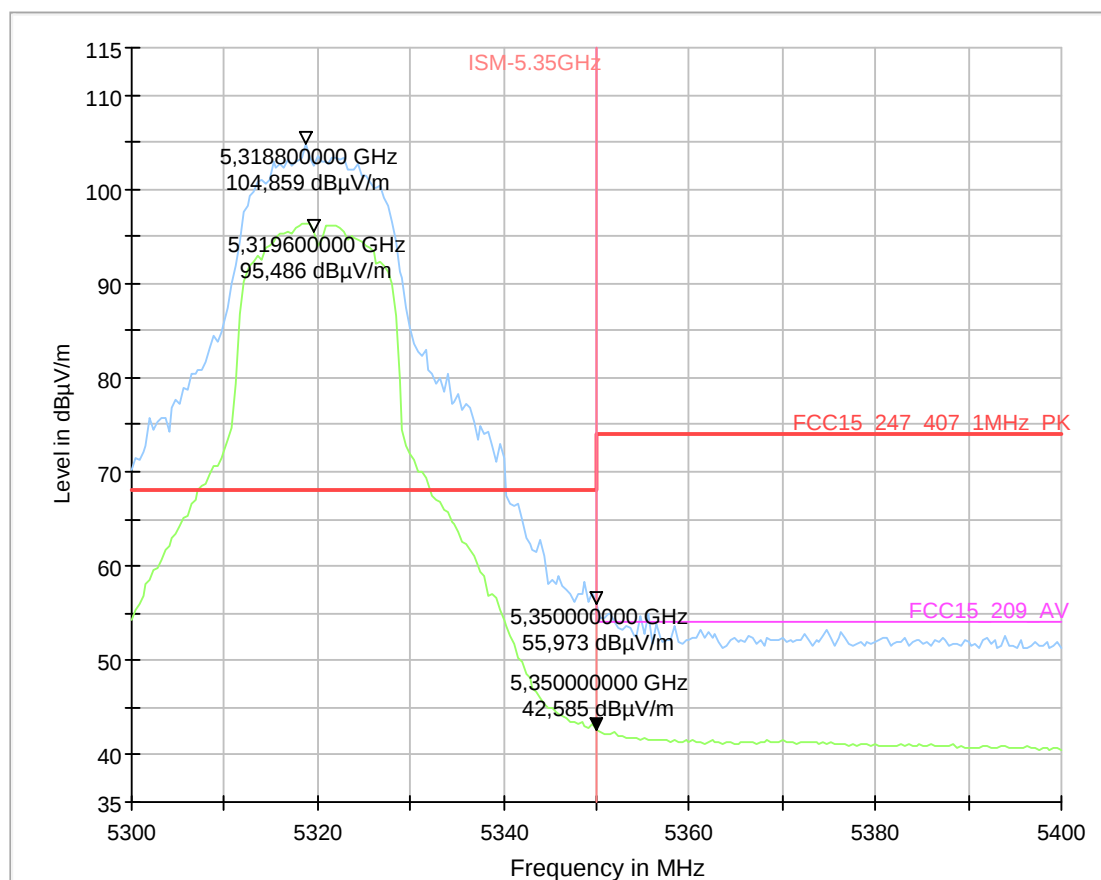


9.04_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch64-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2A-Ch 64 (5320 MHz)- PWR+19.5dBm
Operator Name:	Klv
Comment:	Slotted Wave Guide Antenna Laying

Full Spectrum

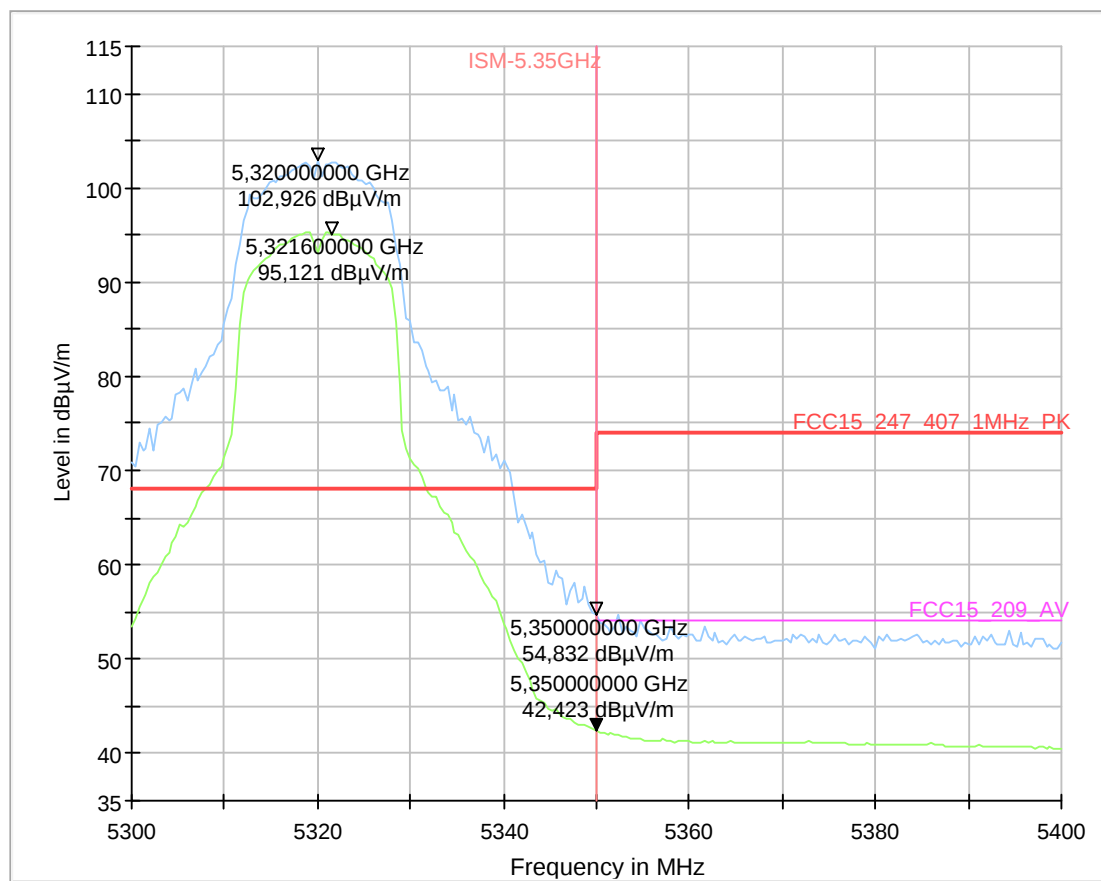


9.04_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch64-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2A-Ch 64 (5320 MHz)- PWR+19.5dBm
Operator Name:	Klv
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

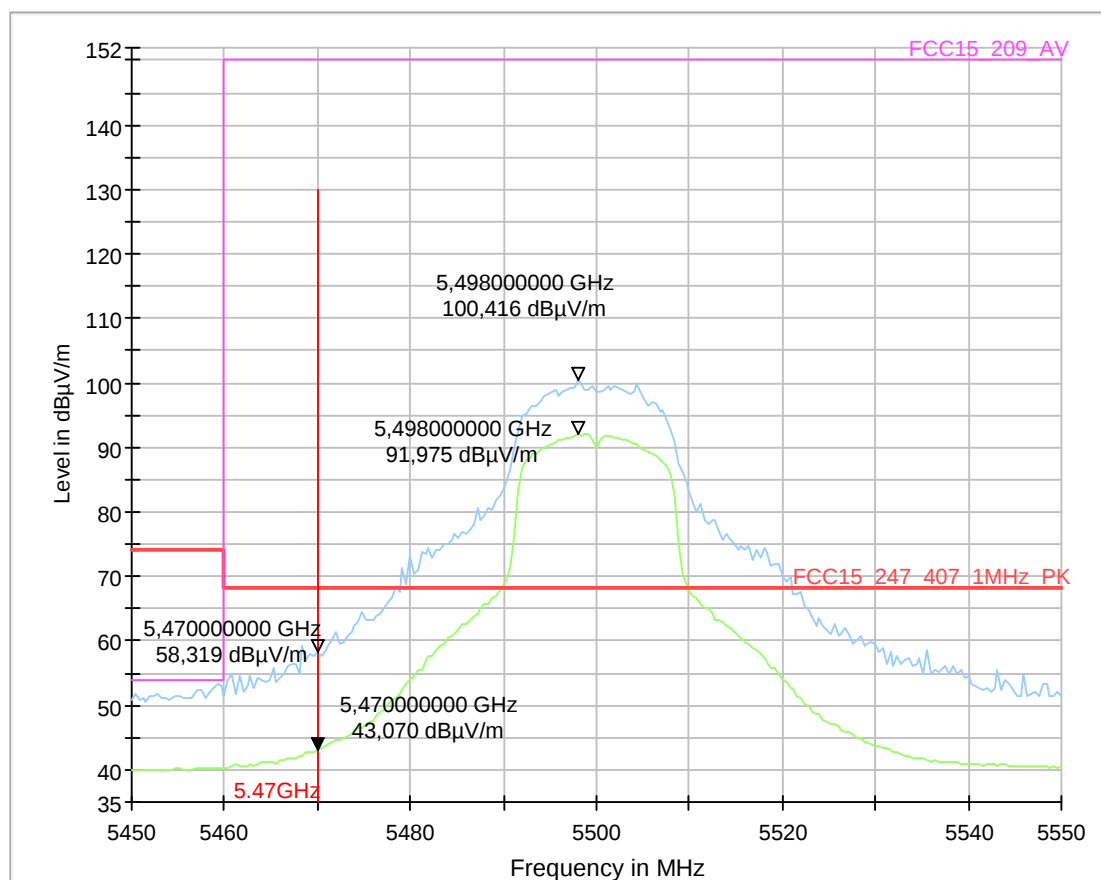


9.05_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch100-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 100 (5500 MHz)-PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

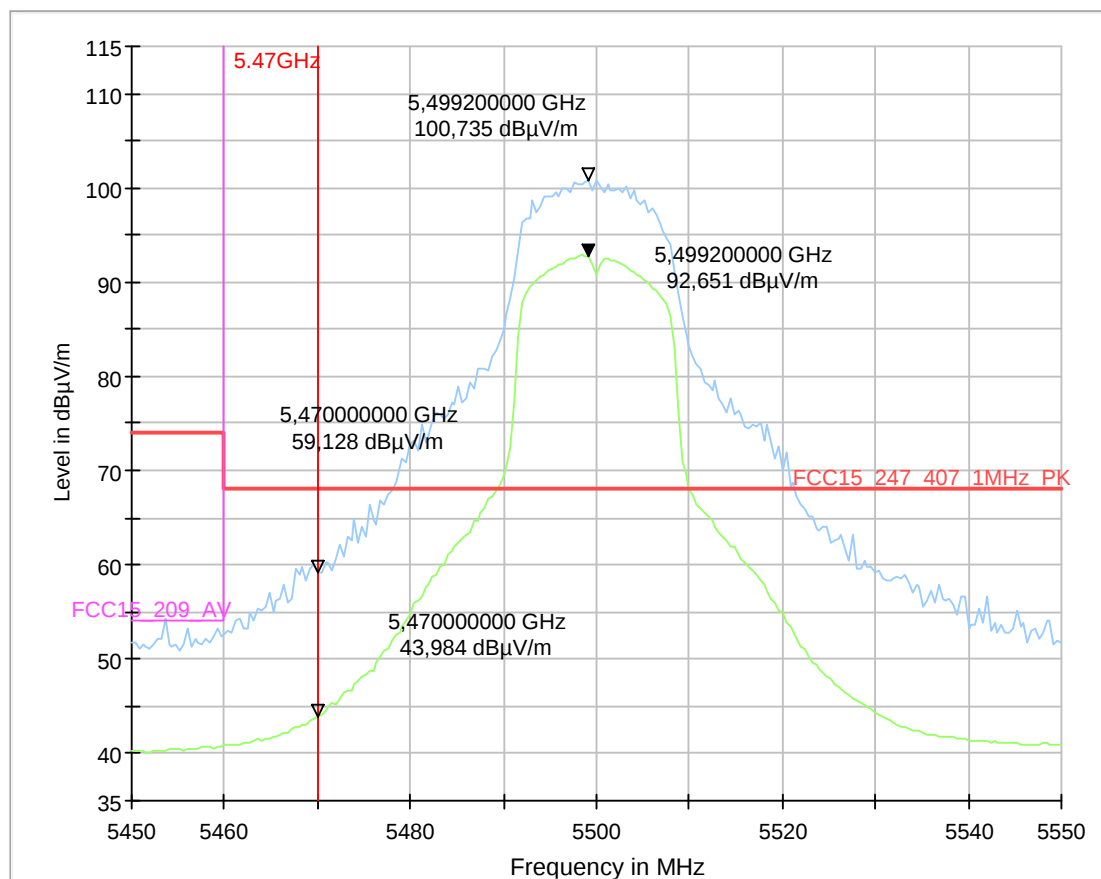


9.05_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch100-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 100 (5500 MHz)-PWR+19.5dBm
Operator Name:	HEL
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

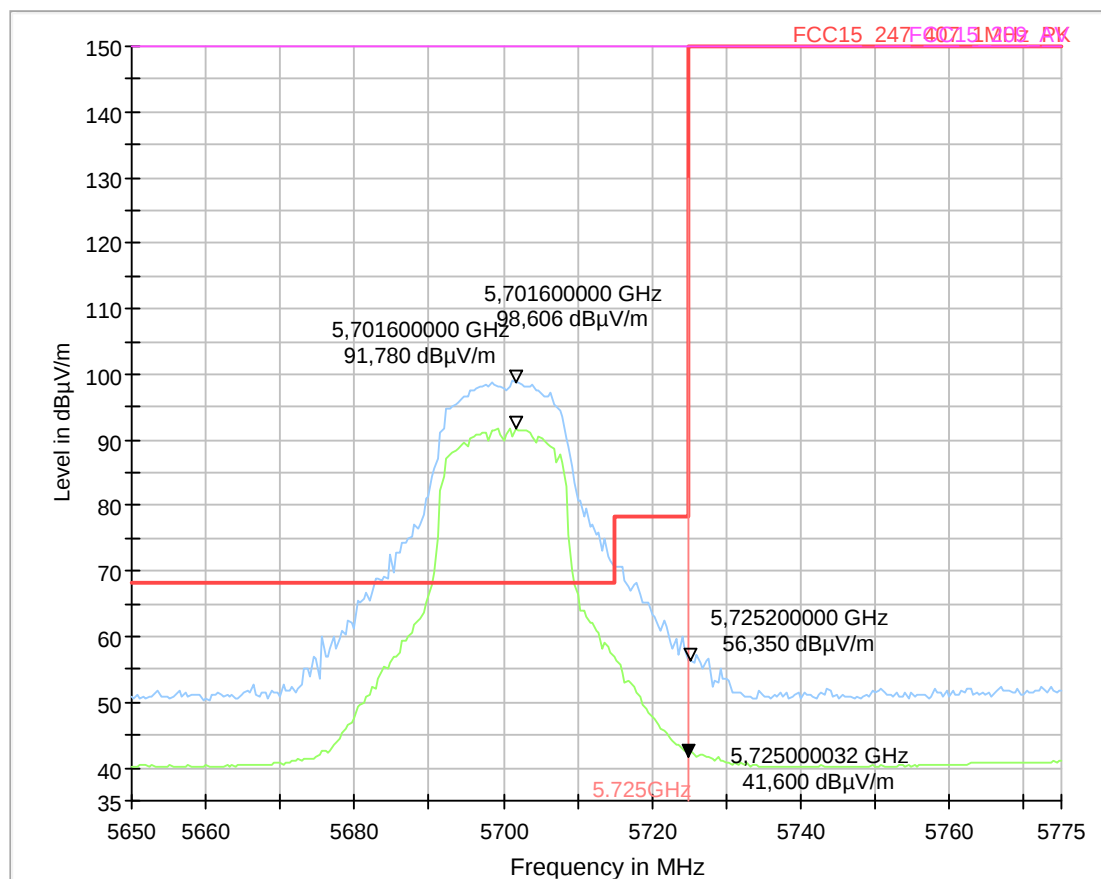


9.06_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch140-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 140 (5700 MHz)- PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

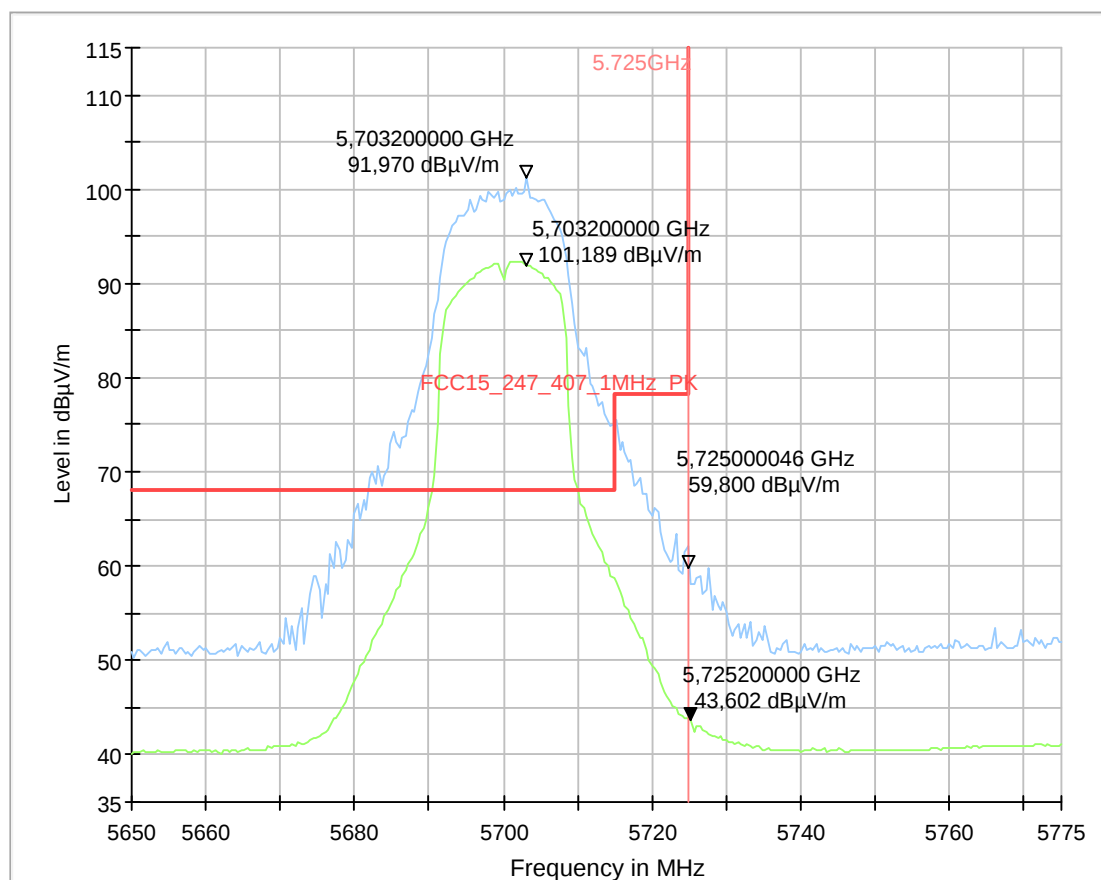


9.06_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch140-19.5dBm

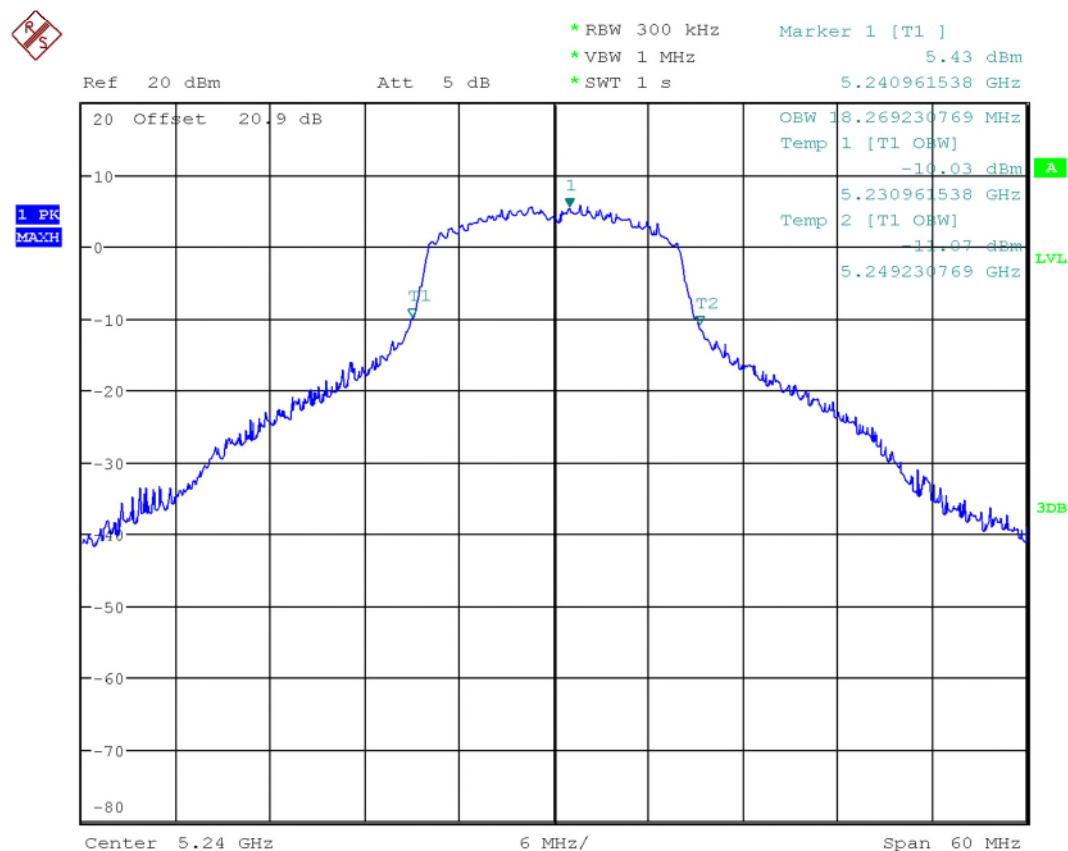
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2C-Ch 140 (5700 MHz)-PWR+19.5dBm
Operator Name:	HEL
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

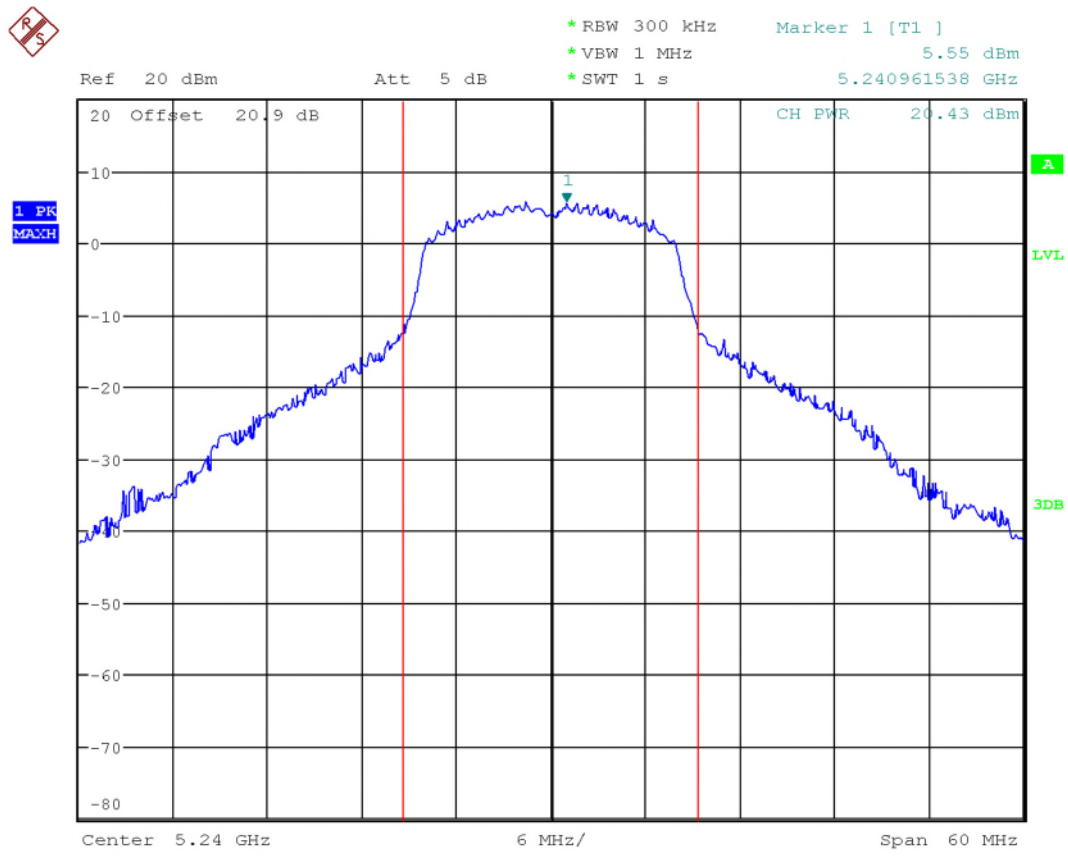


a-mode ISED Requirement



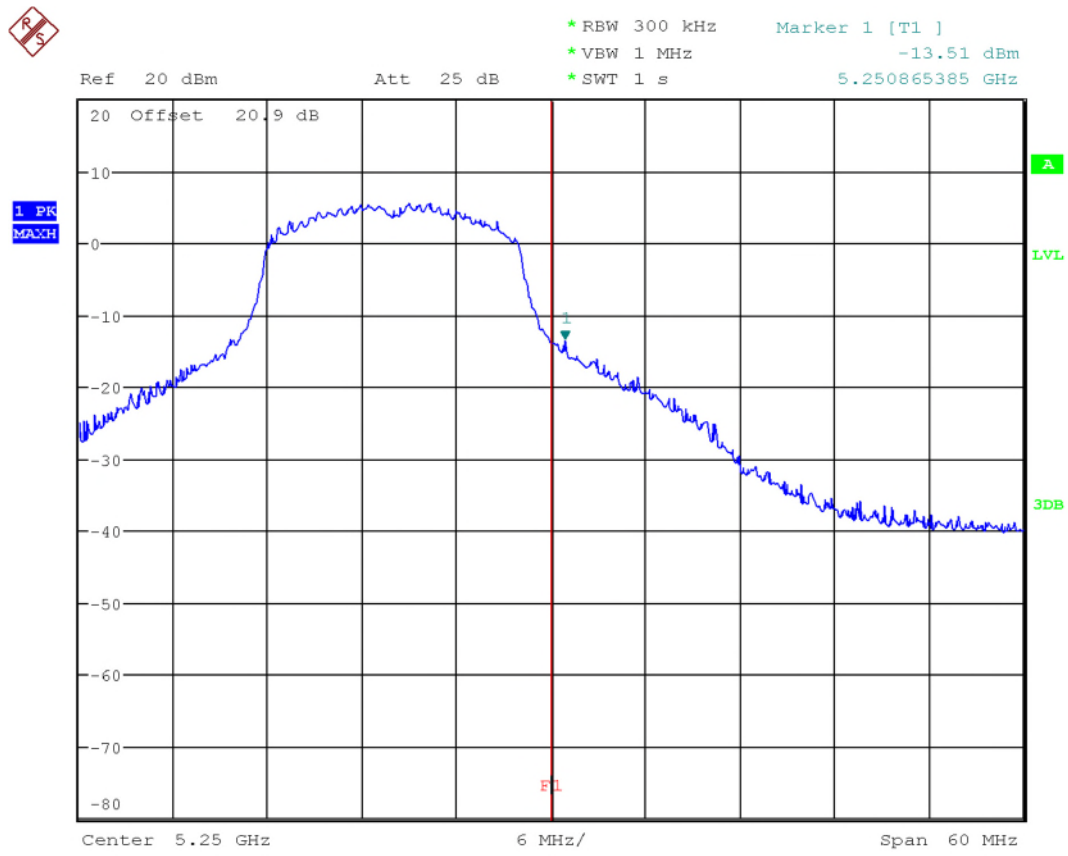
Date: 18.SEP.2018 13:16:35

30.01_BE_OCBW-aMode-20MHz-6Mbit-Ch48-19.5dBm



Date: 18.SEP.2018 13:18:24

30.02_BE_CHPWR-aMode-20MHz-6Mbit-Ch48-19.5dBm



Date: 18.SEP.2018 13:20:11

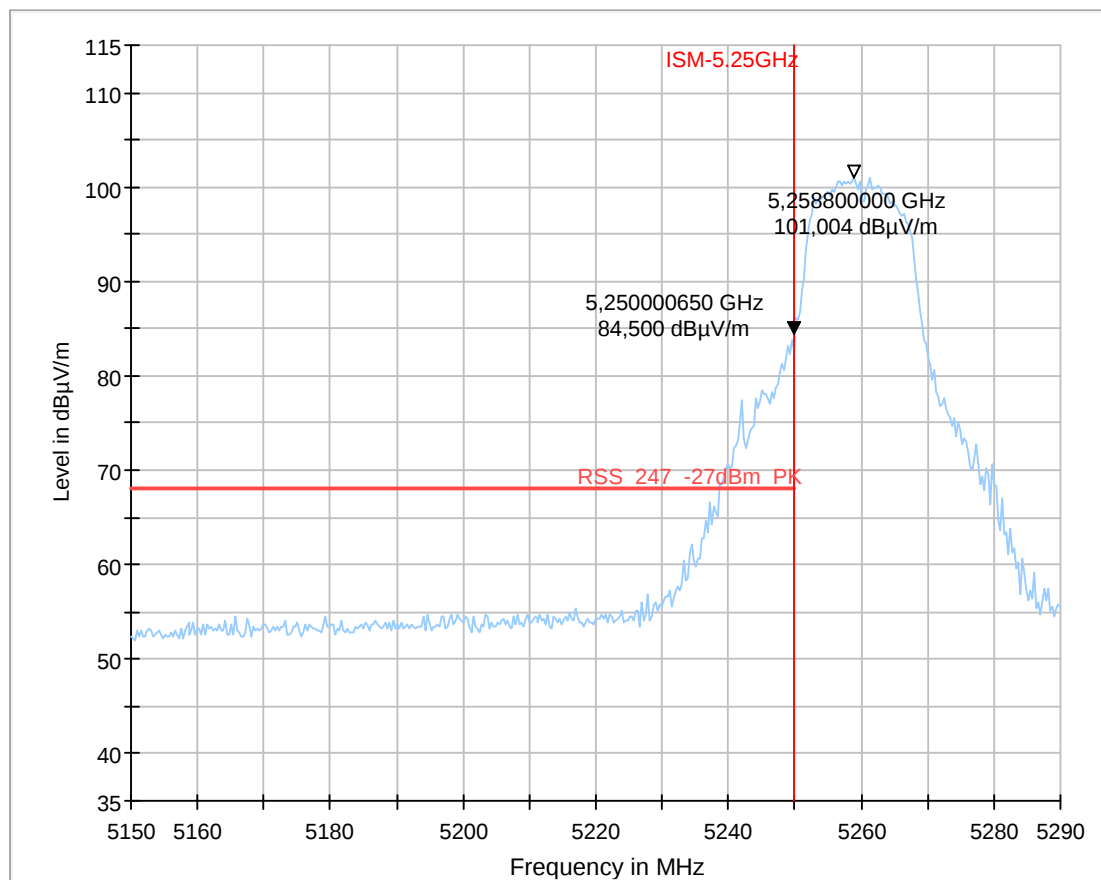
30.03_BE_26dB-aMode-20MHz-6Mbit-Ch48-19.5dBm

9.03_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch52-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2A-Ch 52 (5260 MHz)-PWR+19.5dBm
Operator Name:	Klv
Comment:	Laying

Full Spectrum

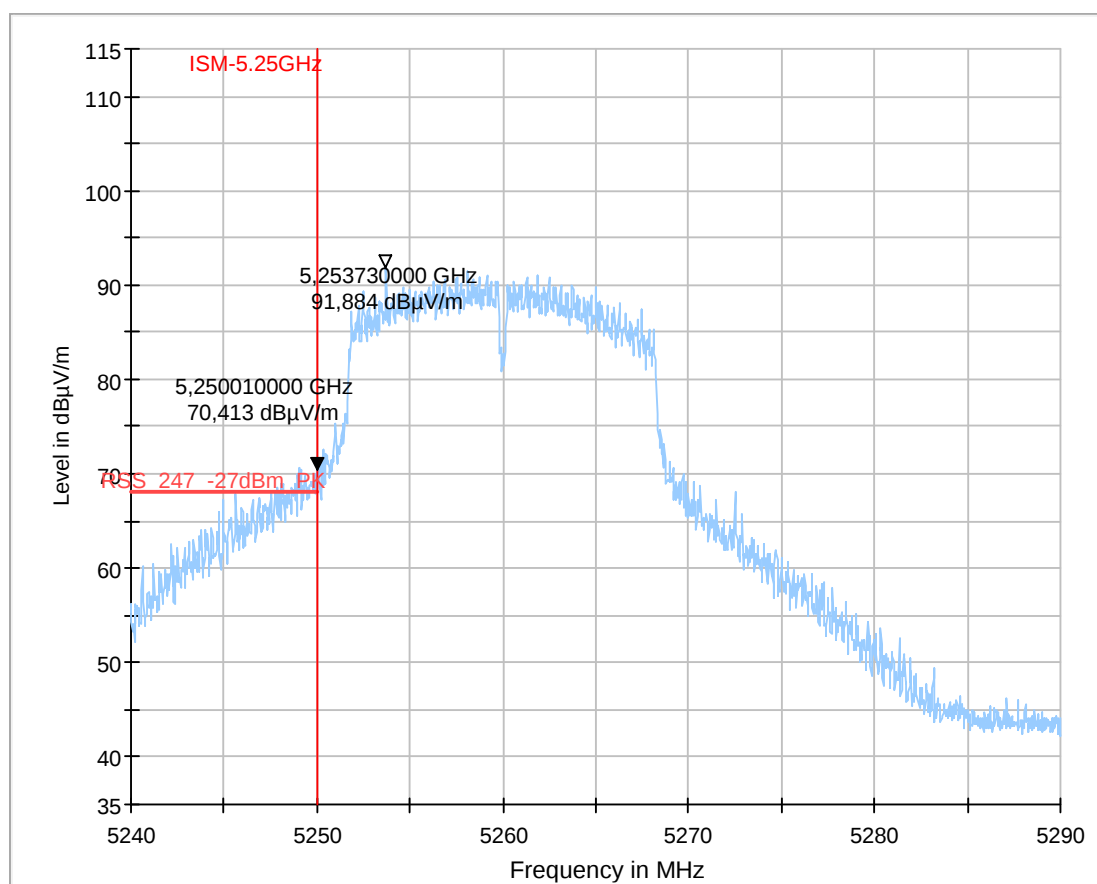


9.03_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch52-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-a Mode-B.W. 20 MHz-6Mbit- U-NII-2A-Ch 52 (5260 MHz)- PWR+19.5dBm
Operator Name:	Klv
Comment:	Standing

Full Spectrum



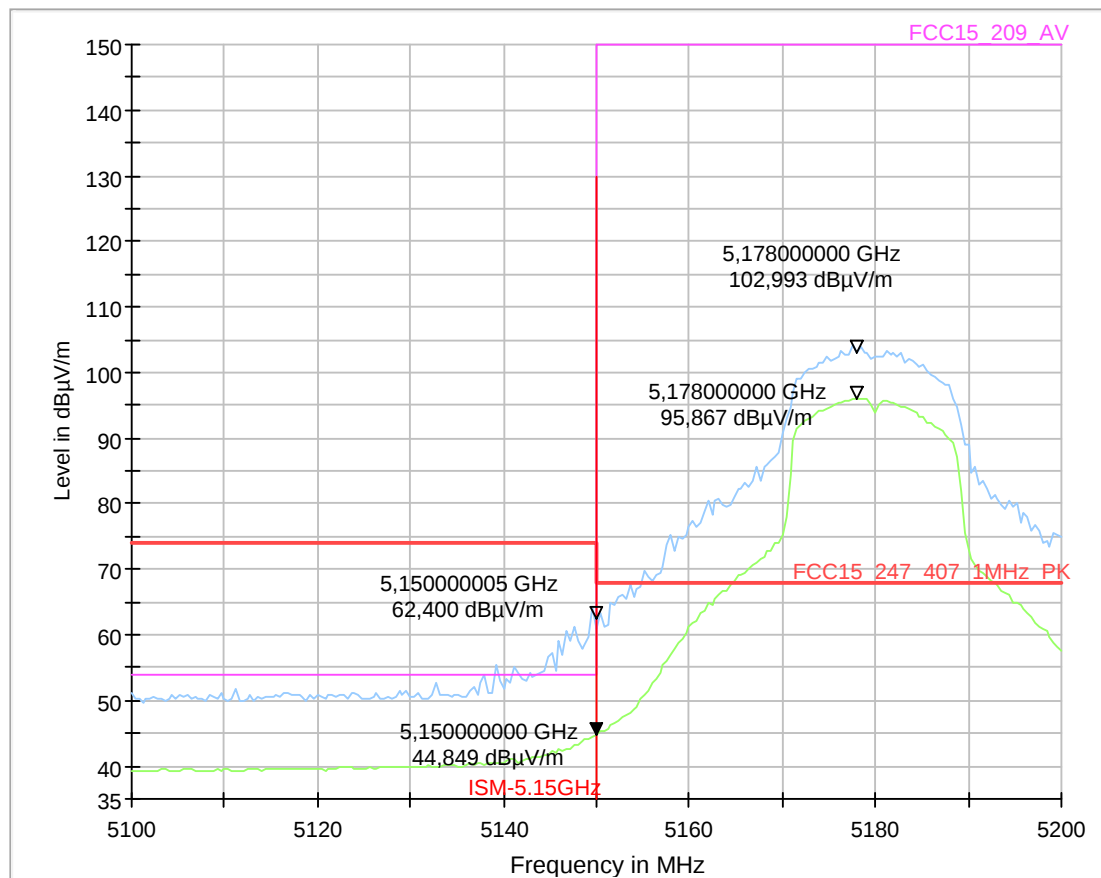
1.8.2. n-mode HT20

9.11_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch36-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

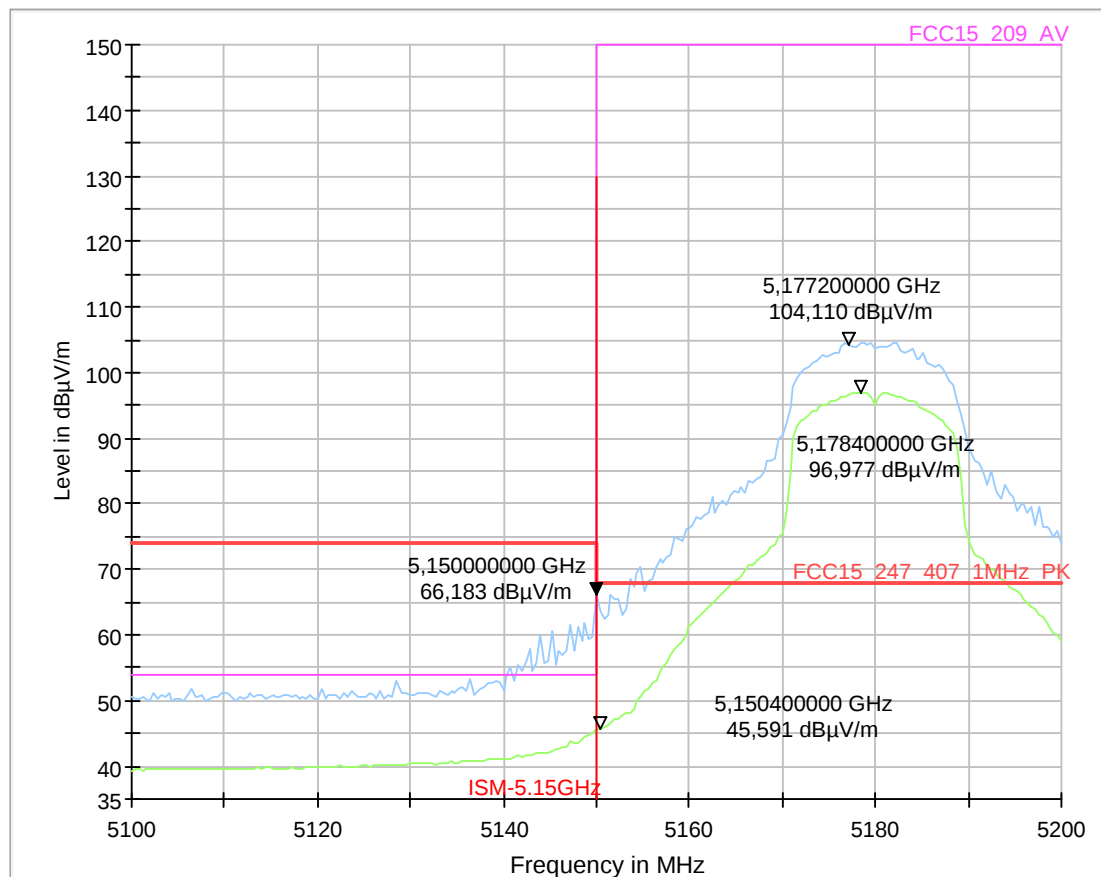


9.11_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch36-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-1-Ch 36 (5180 MHz)- PWR+19.5dBm
Operator Name:	Klv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

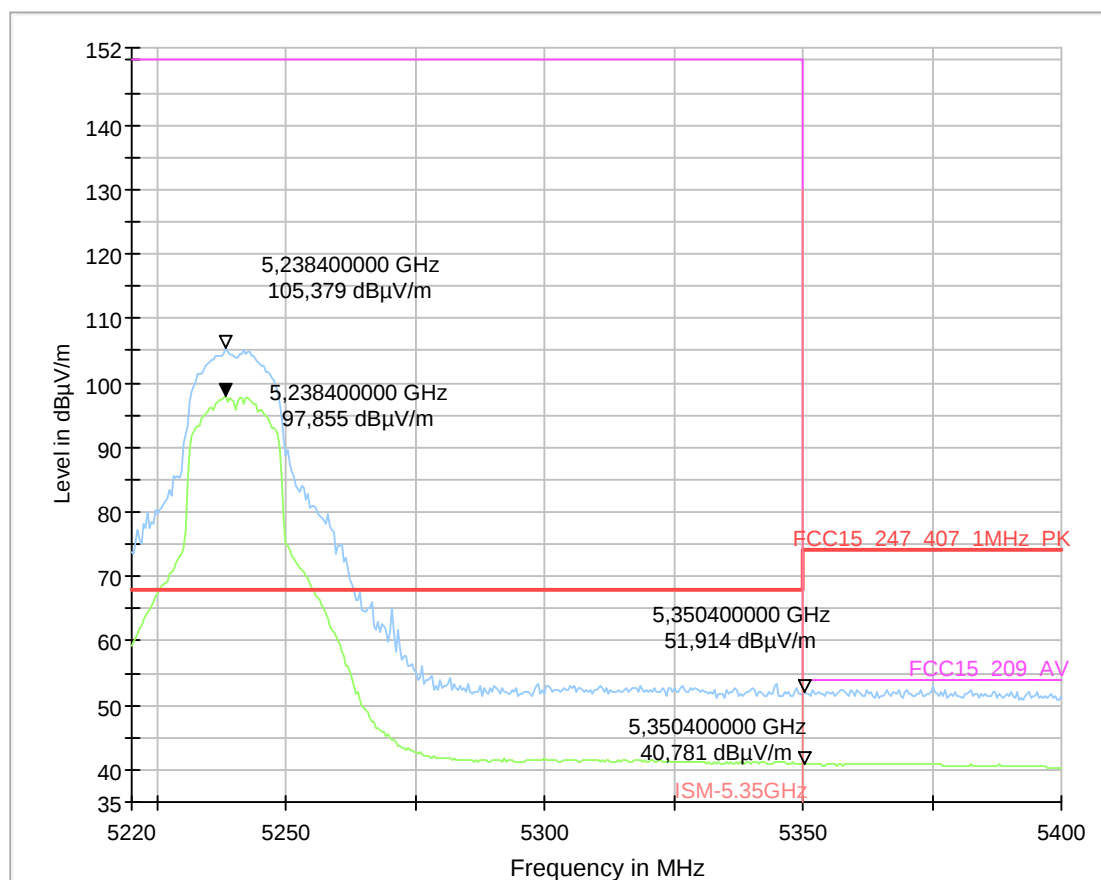


9.12_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch48-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-1-Ch 48 (5240 MHz)- PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

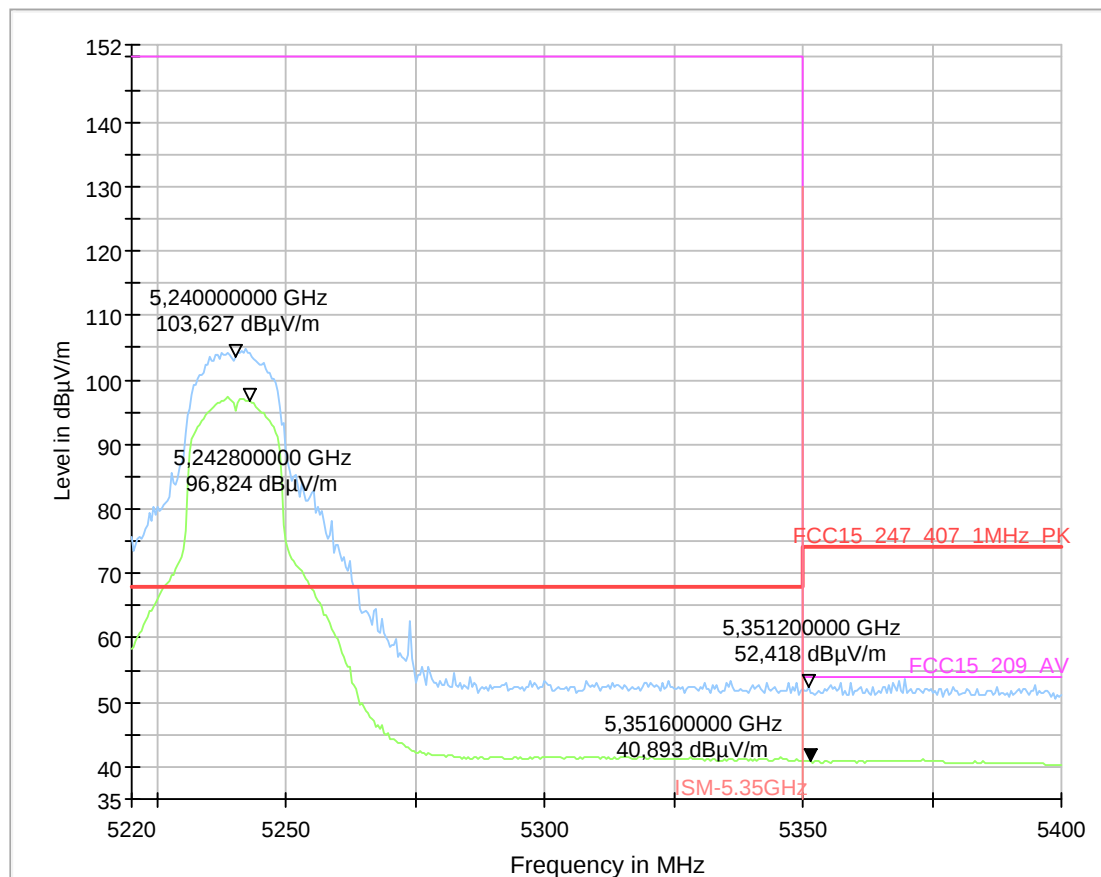


9.12_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch48-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-1-Ch 48 (5240 MHz)- PWR+19.5dBm
Operator Name:	Klv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

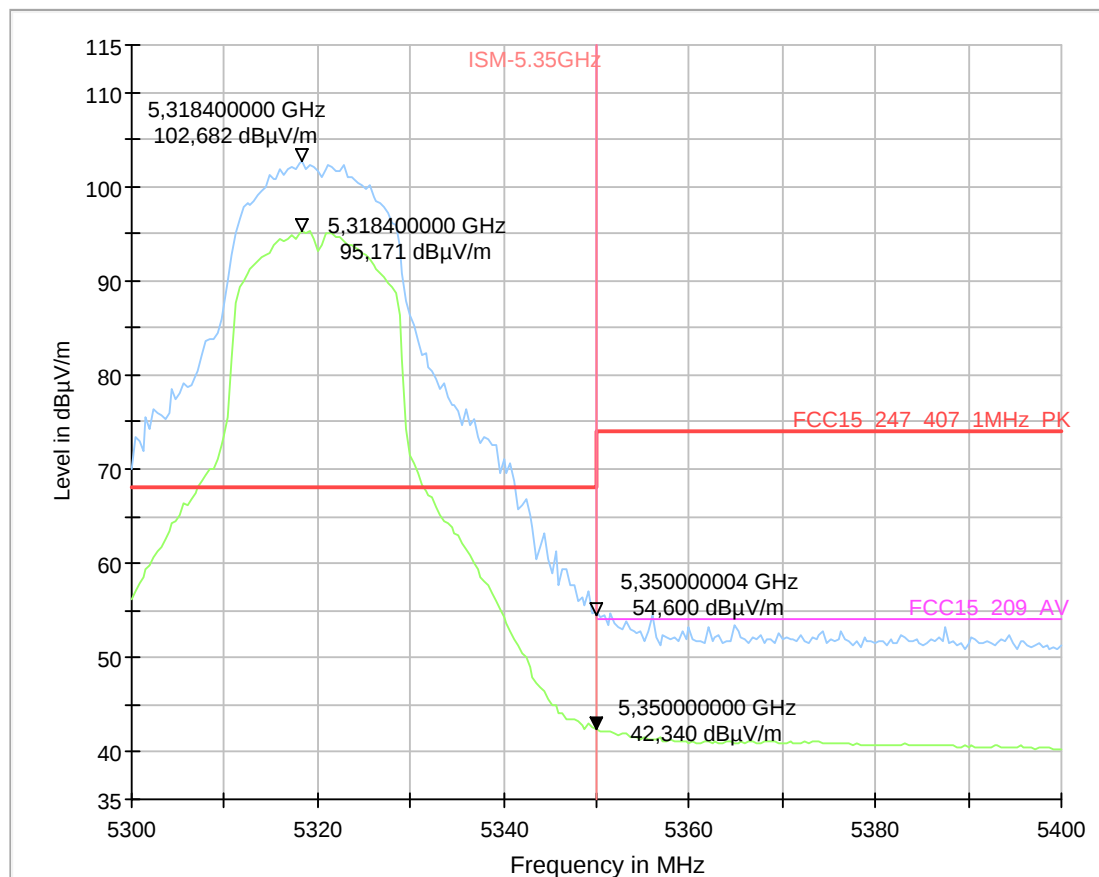


9.14_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch64-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 64 (5320 MHz)- PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

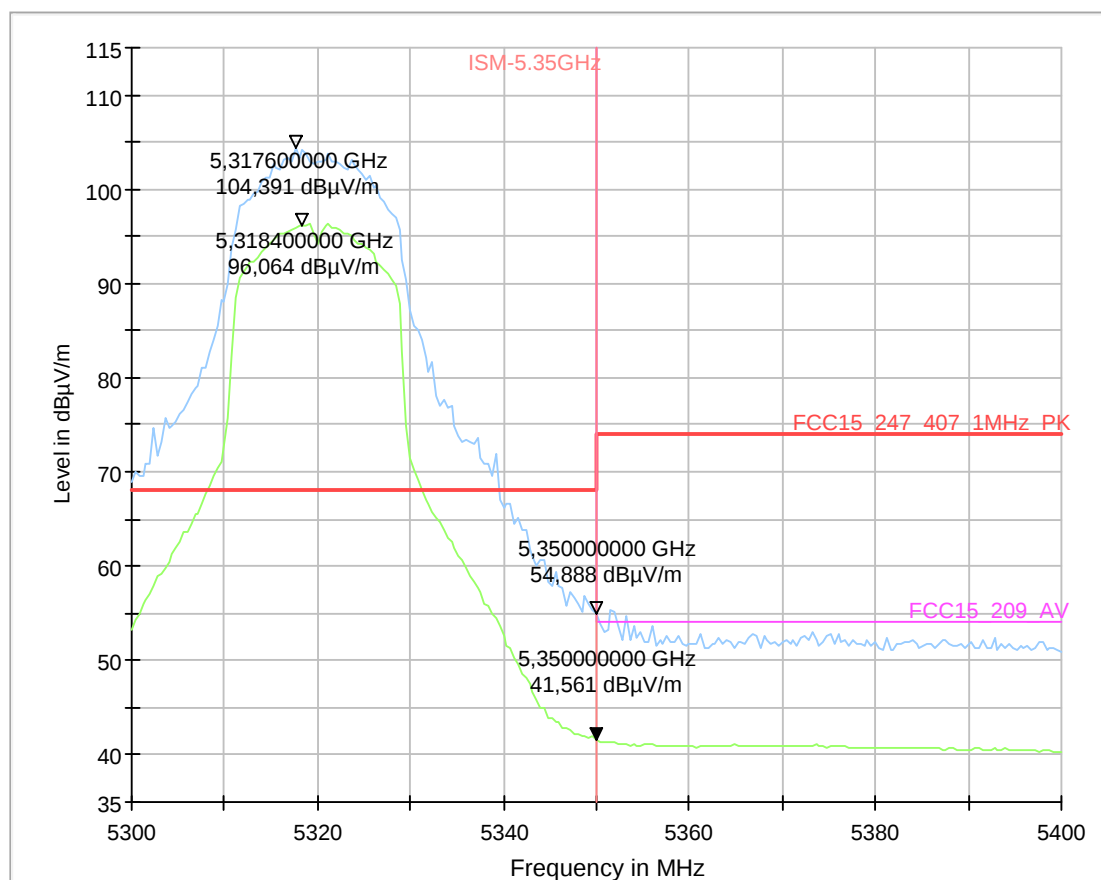


9.14_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch64-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 64 (5320 MHz)- PWR+19.5dBm
Operator Name:	Klv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

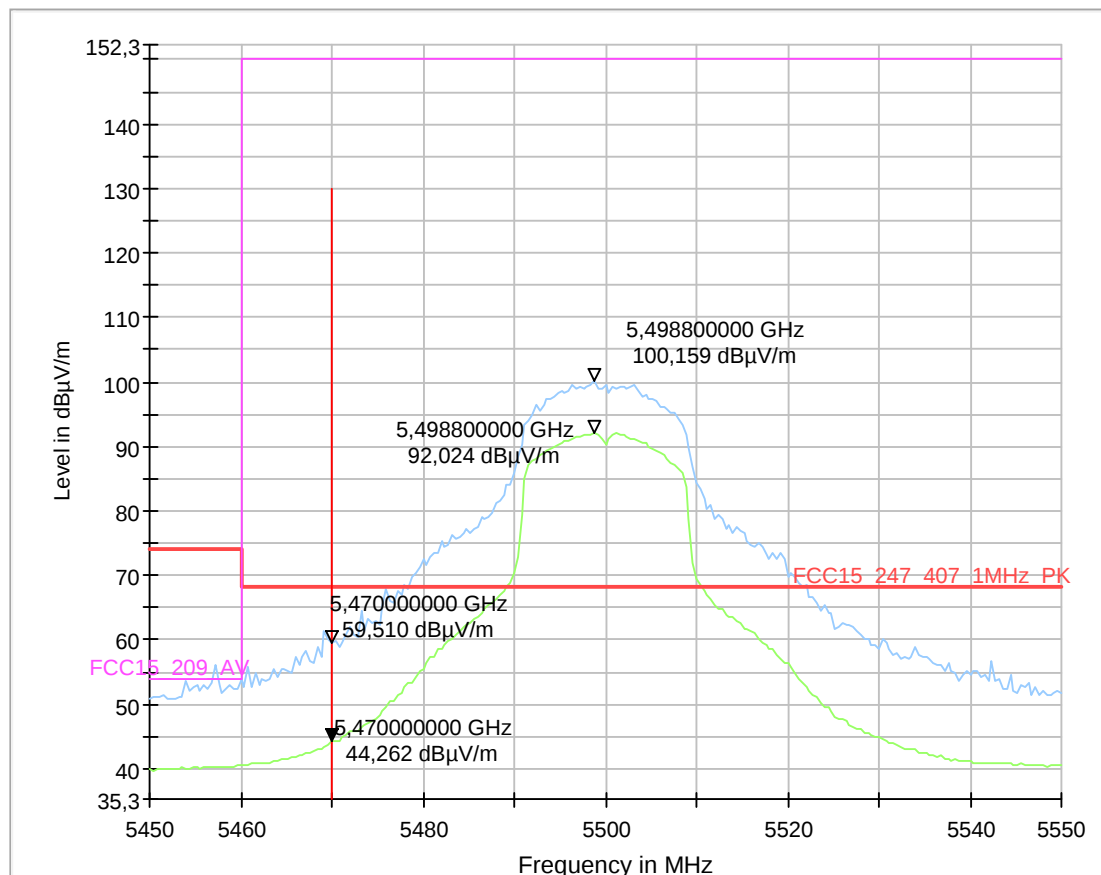


9.15_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch100-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2C-Ch 100 (5500 MHz)-PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

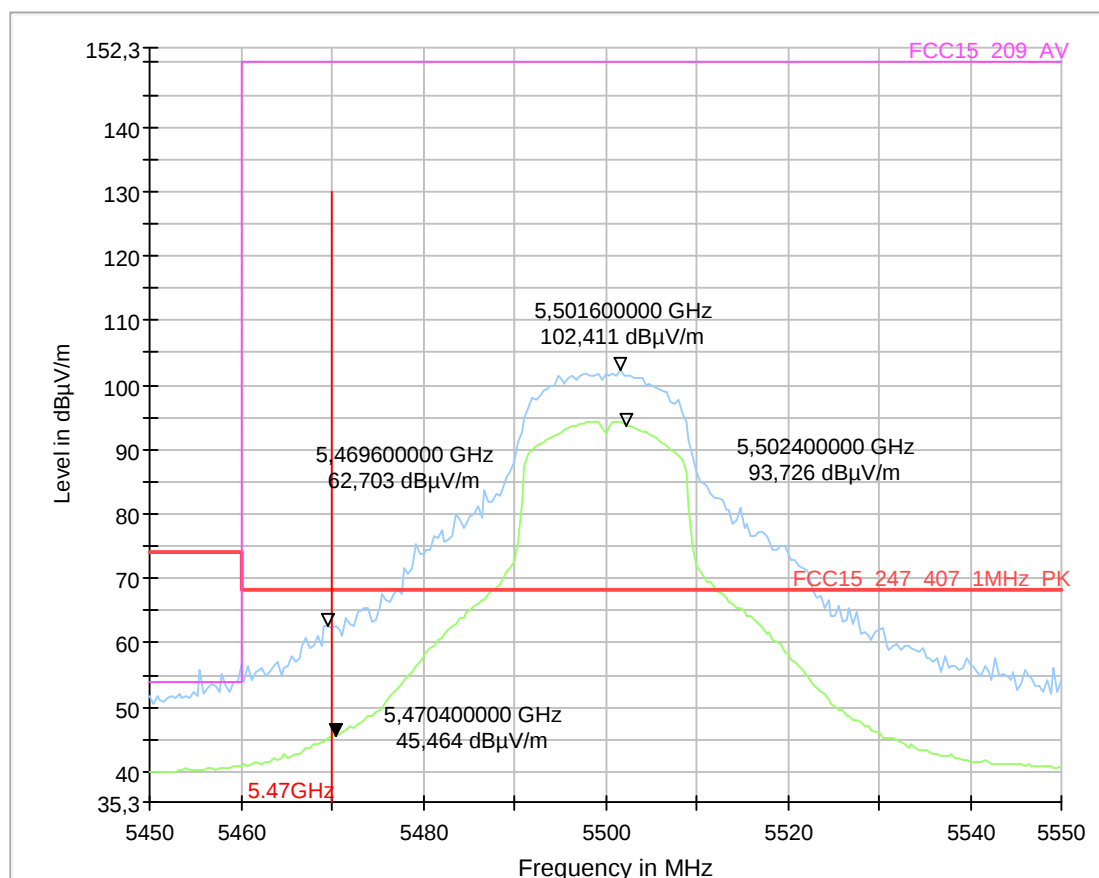


9.15_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch100-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2C-Ch 100 (5500 MHz)-PWR+19.5dBm
Operator Name:	Klv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

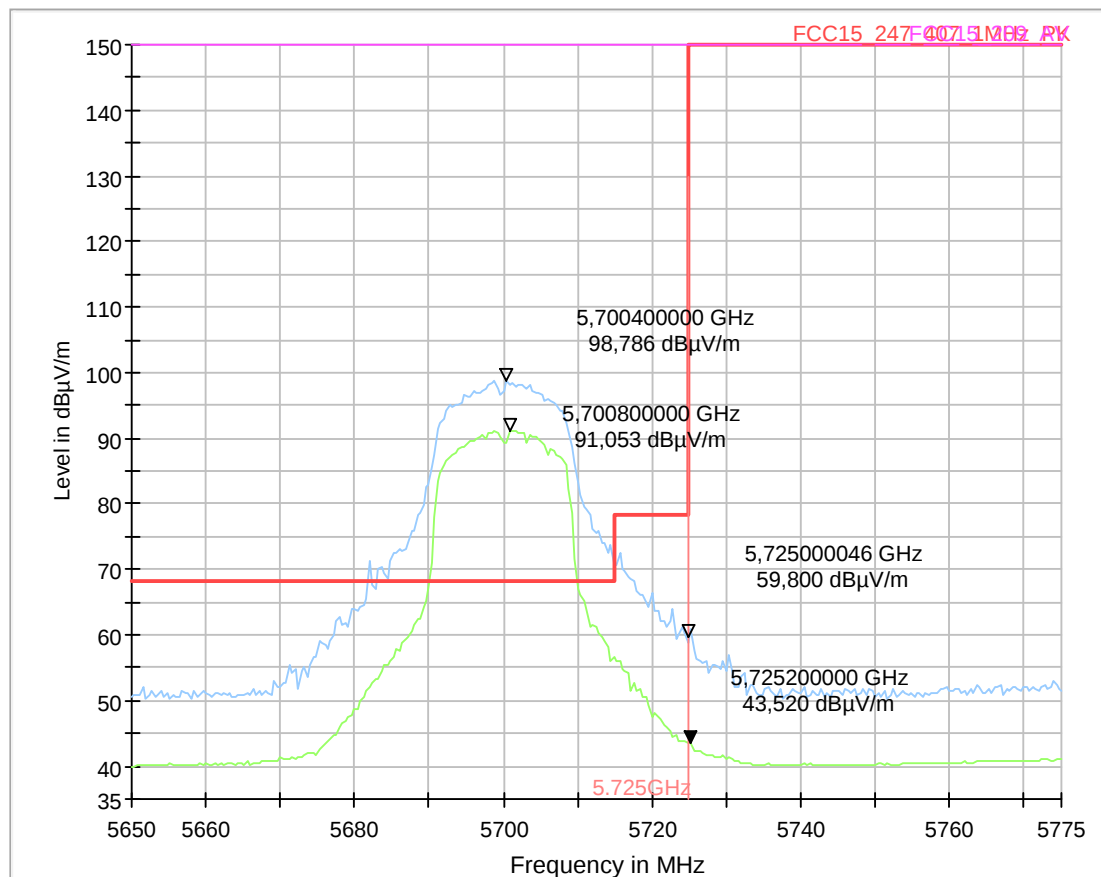


9.16_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch140-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2C-Ch 140 (5700 MHz)-PWR+19.5dBm
Operator Name:	HEL
EUT:	Slotted Wave Guide Antenna Laying

Full Spectrum

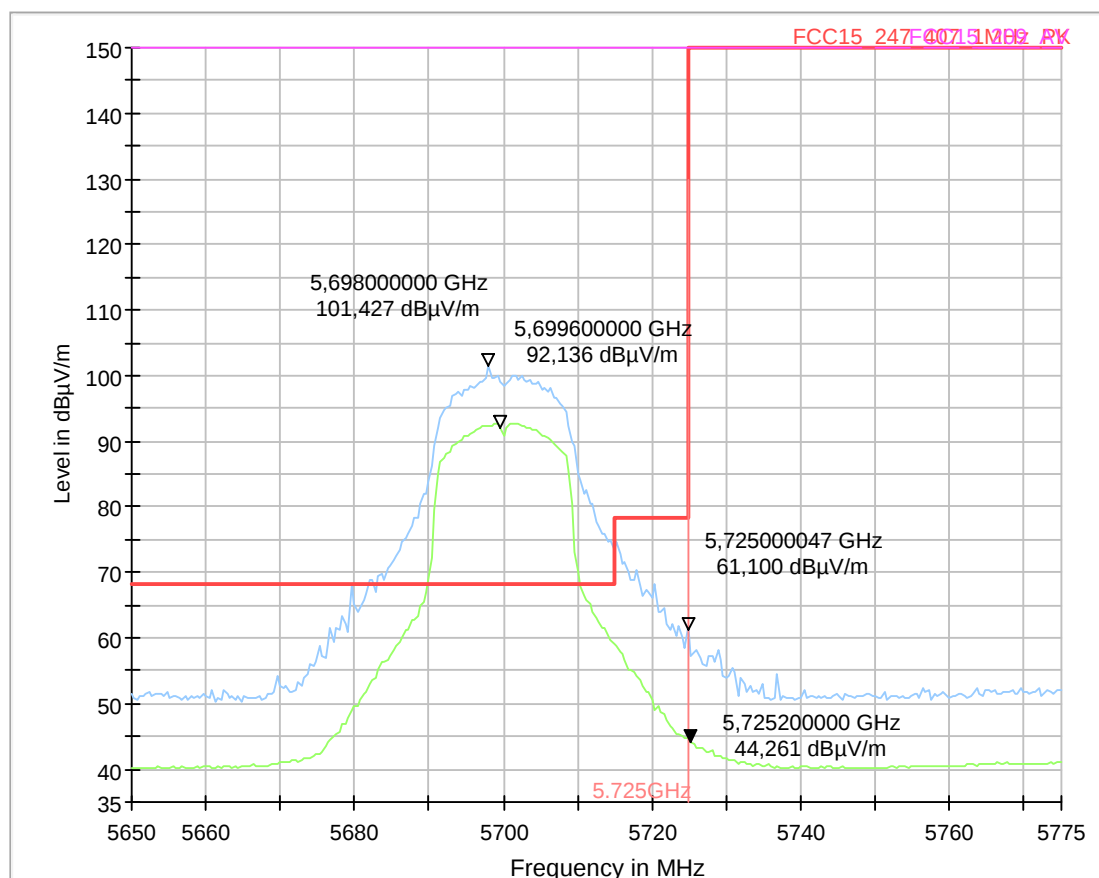


9.16_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch140-19.5dBm

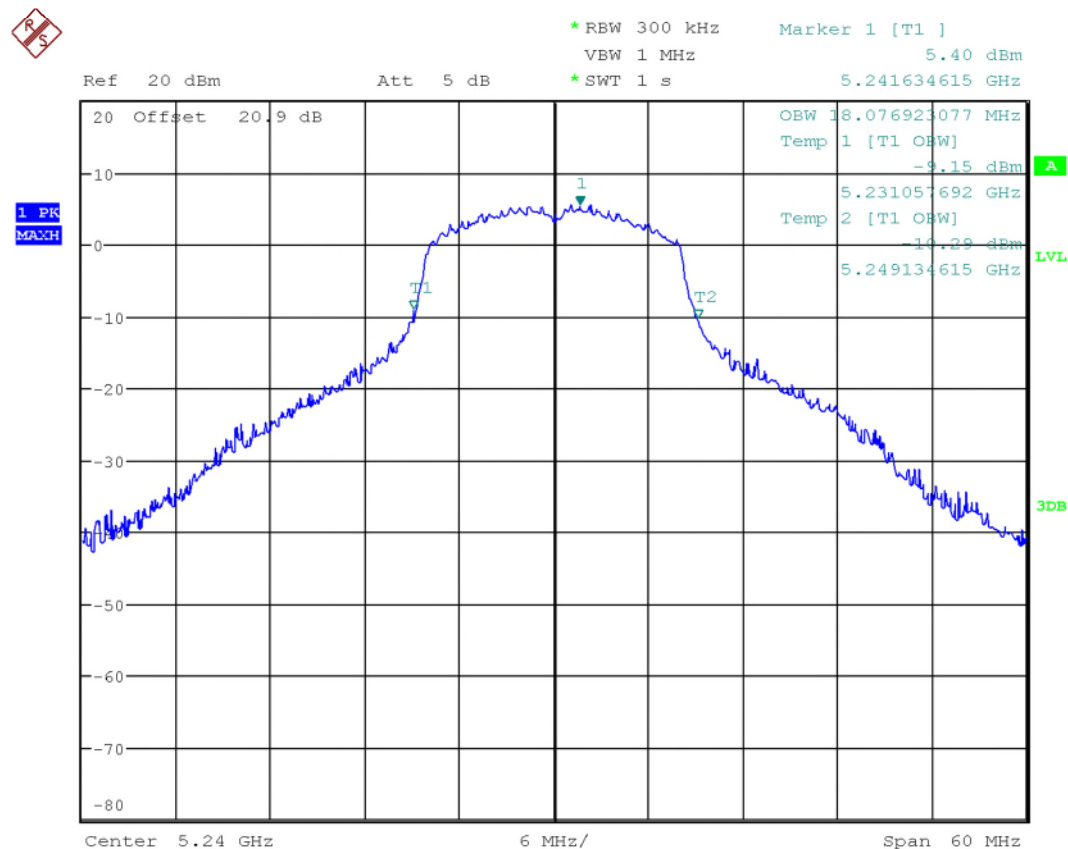
Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2C-Ch 140 (5700 MHz)-PWR+19.5dBm
Operator Name:	Klv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

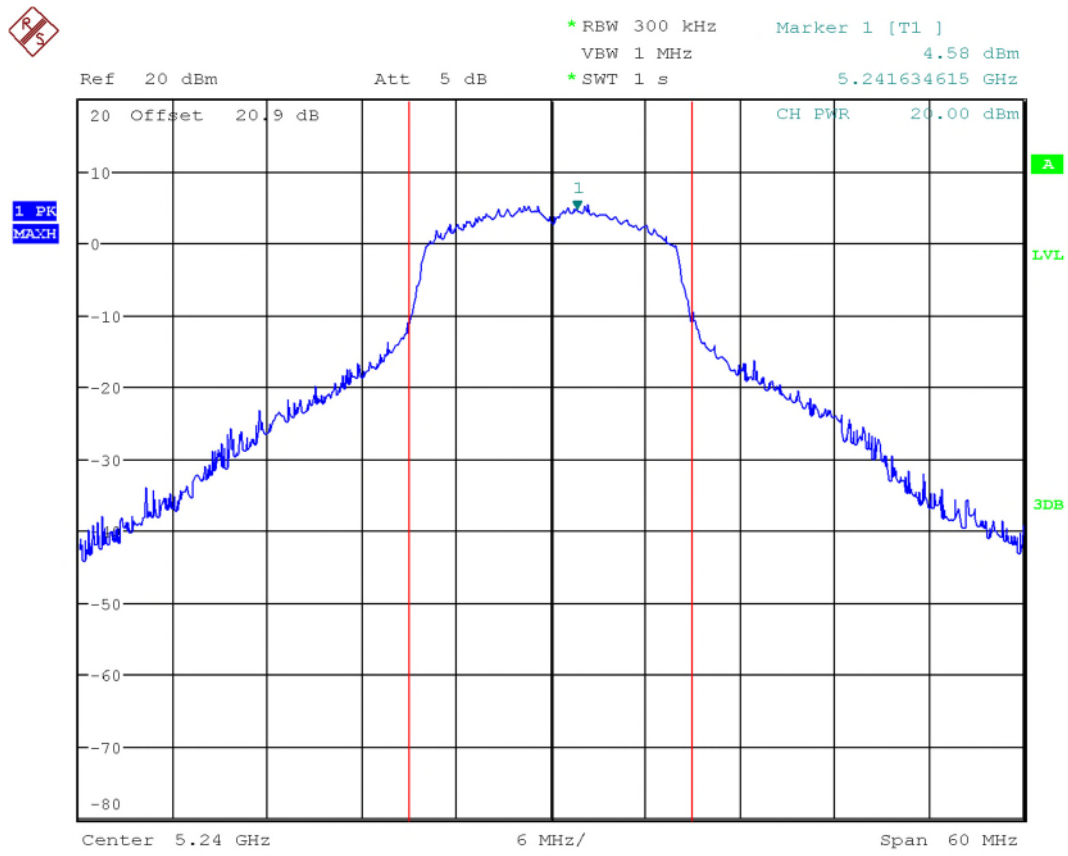


1.8.3. n-mode HT20 ISED Requirement



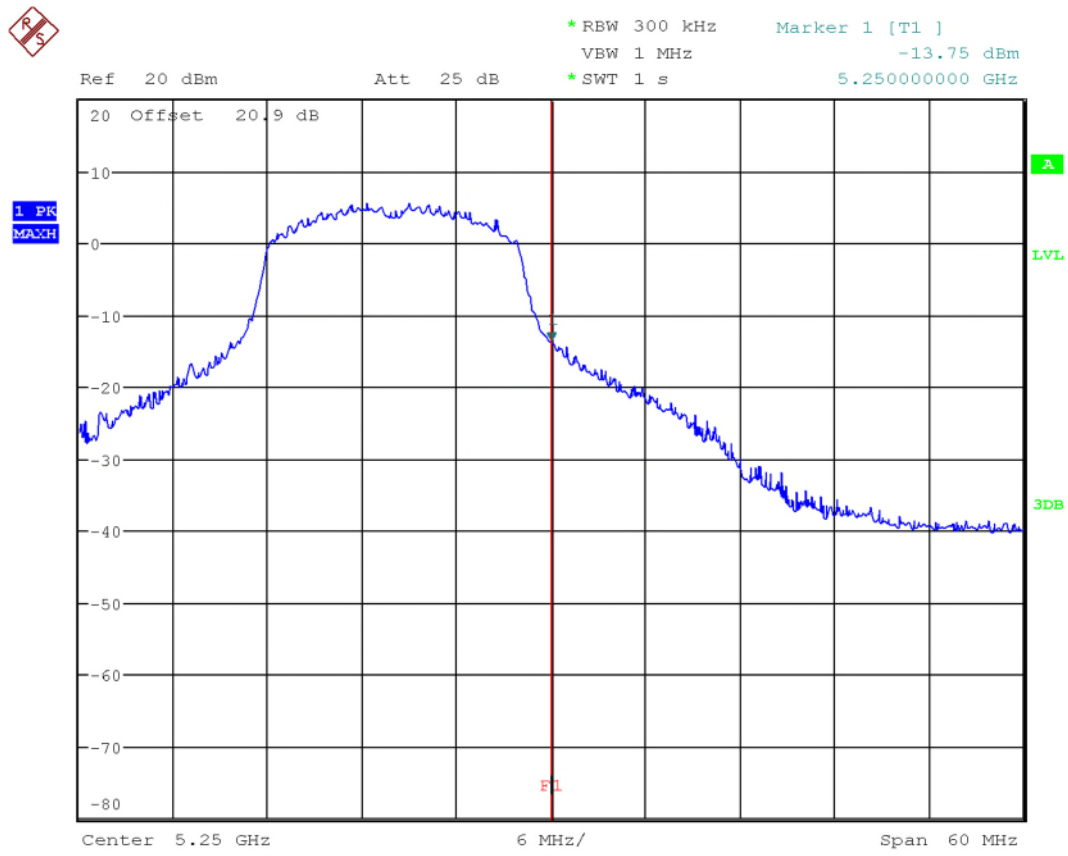
Date: 18.SEP.2018 14:35:05

30.11_BE_OCBW-nMode-20MHz-MCS0-Ch48-19.5dBm



Date: 18.SEP.2018 14:35:49

30.12_BE_CHPWR-nMode-20MHz-MCS0-Ch48-19.5dBm



Date: 18.SEP.2018 14:37:11

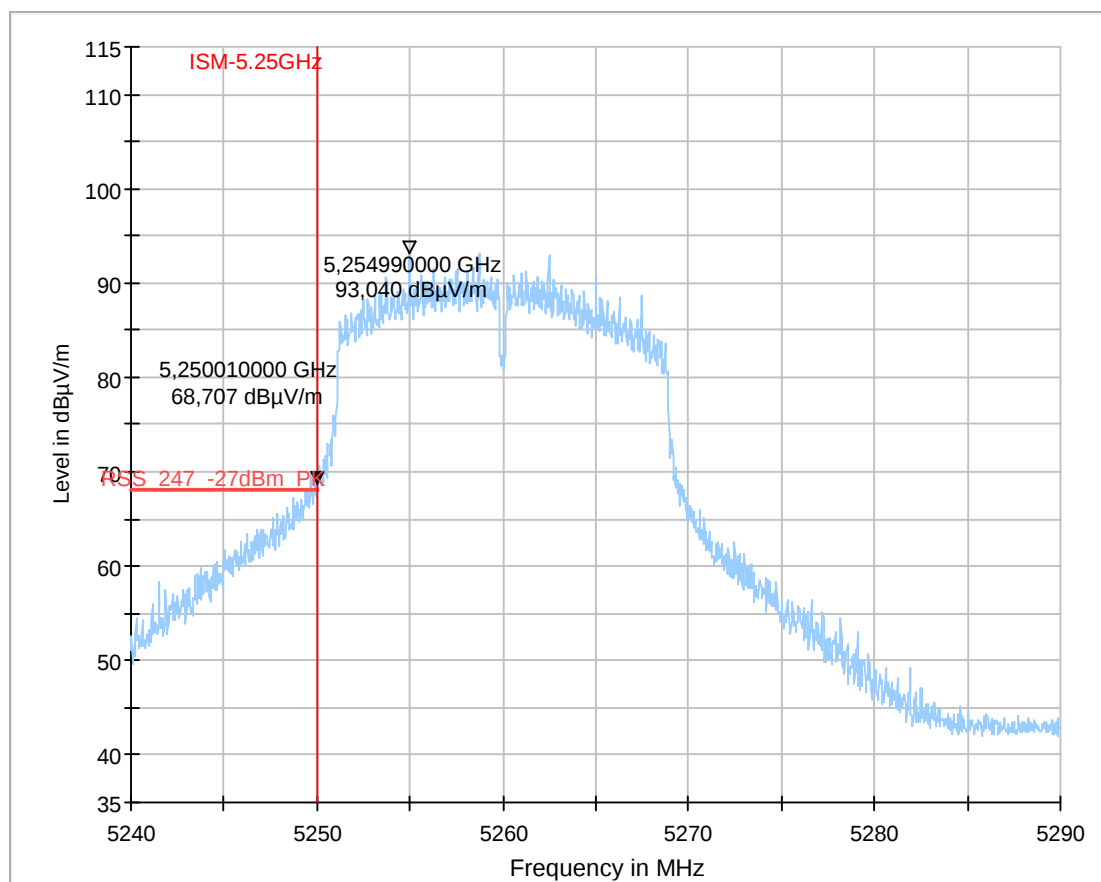
30.13_BE_26dB-nMode-20MHz-MCS0-Ch48-19.5dBm

9.13_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch52-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 52 (5260 MHz)-PWR+19.5dBm
Operator Name:	Klv
EUT:	Standing

Full Spectrum



9.13_ BE Low-CCM-IO-ETH-nMode-B.W20MHz-MCS0-Ch52-19.5dBm

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.407&15.209 Intentional Radiator
Antenna polarisation:	horizontal/vertical
Software Version:	#Ver
Operation mode:	Continuous TX-n Mode-B.W. 20 MHz-MCS0- U-NII-2A-Ch 52 (5260 MHz)-PWR+19.5dBm
Operator Name:	Klv
EUT:	Laying

Full Spectrum

