Annex 1: Measurement diagrams to
T E S T R E P O R T
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			
ilac-MRA DAkkS Deutsche Akkreditierungsstelle D-PL-12047-01-01 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
Wi Fi ALLIANCE AUTHORIZED RF LABORATORY	ctia Authorized™ Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			

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1. Measurement diagrams

1.1. Conducted emissions on AC-Power lines

1.02

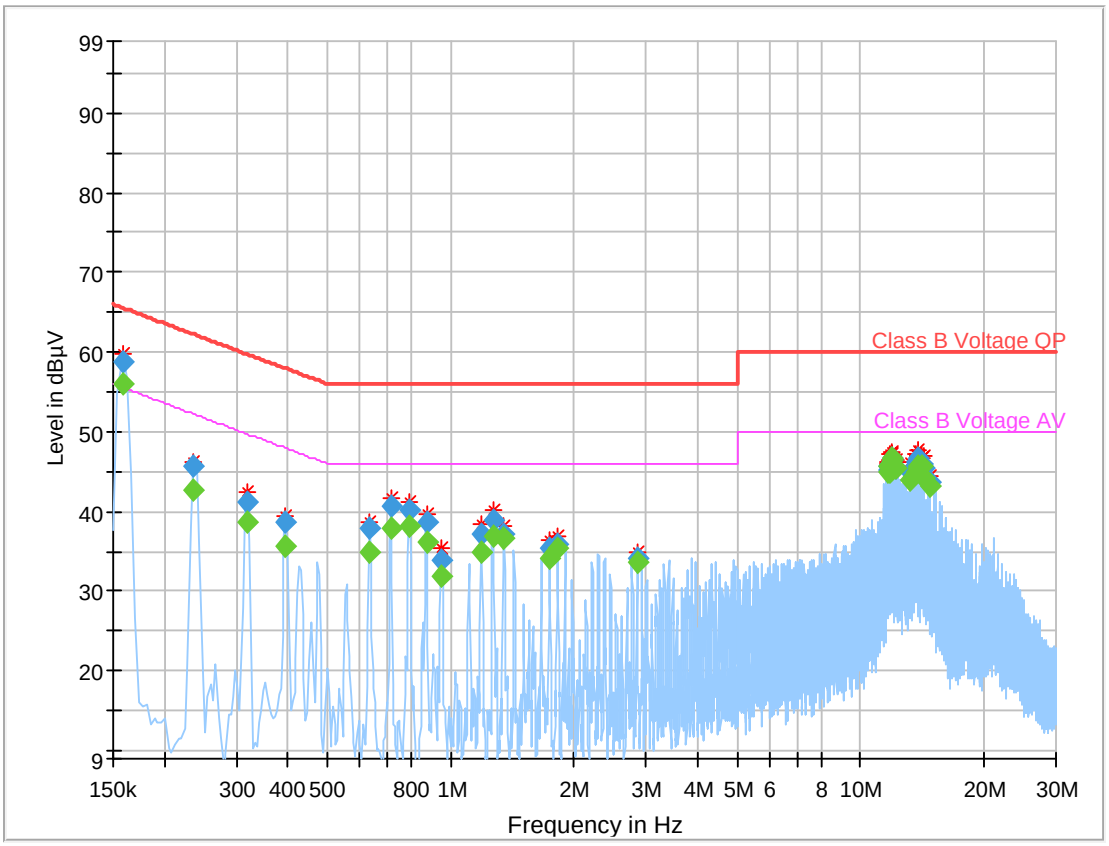
Common Information

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



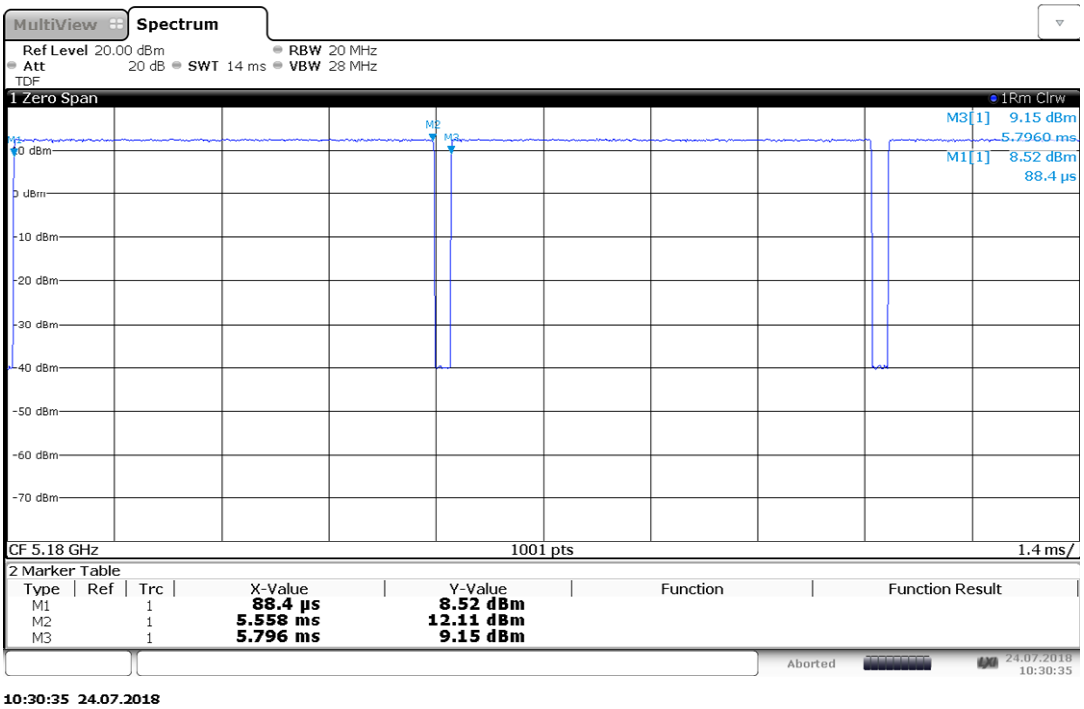
Final_Result

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

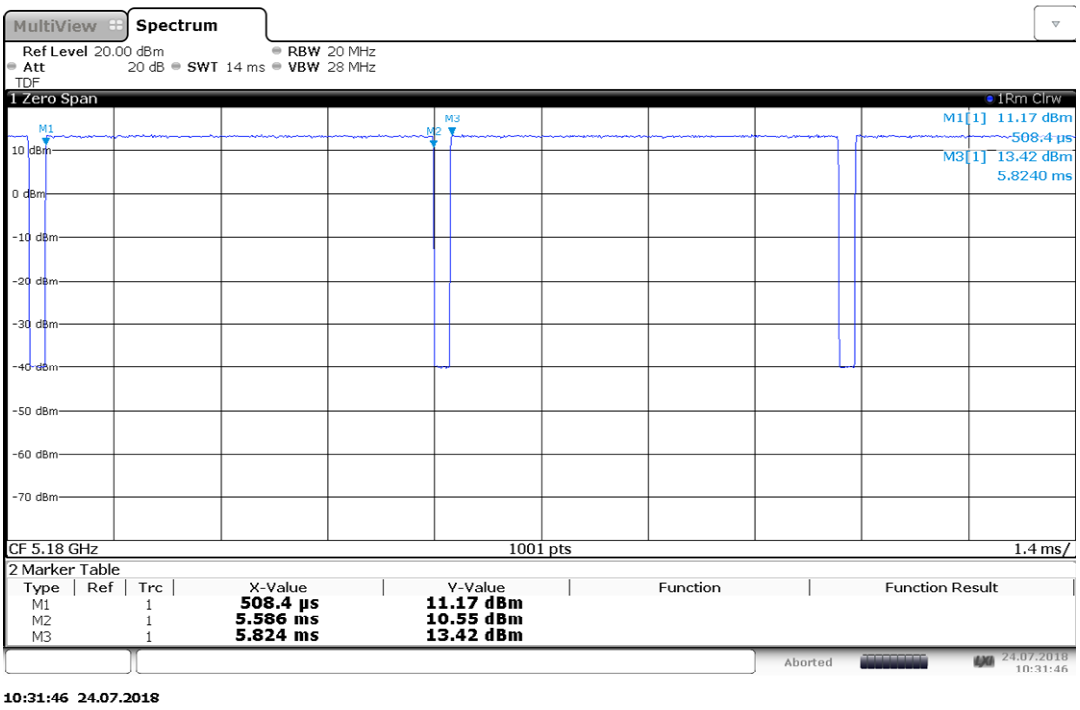
Final_Result

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

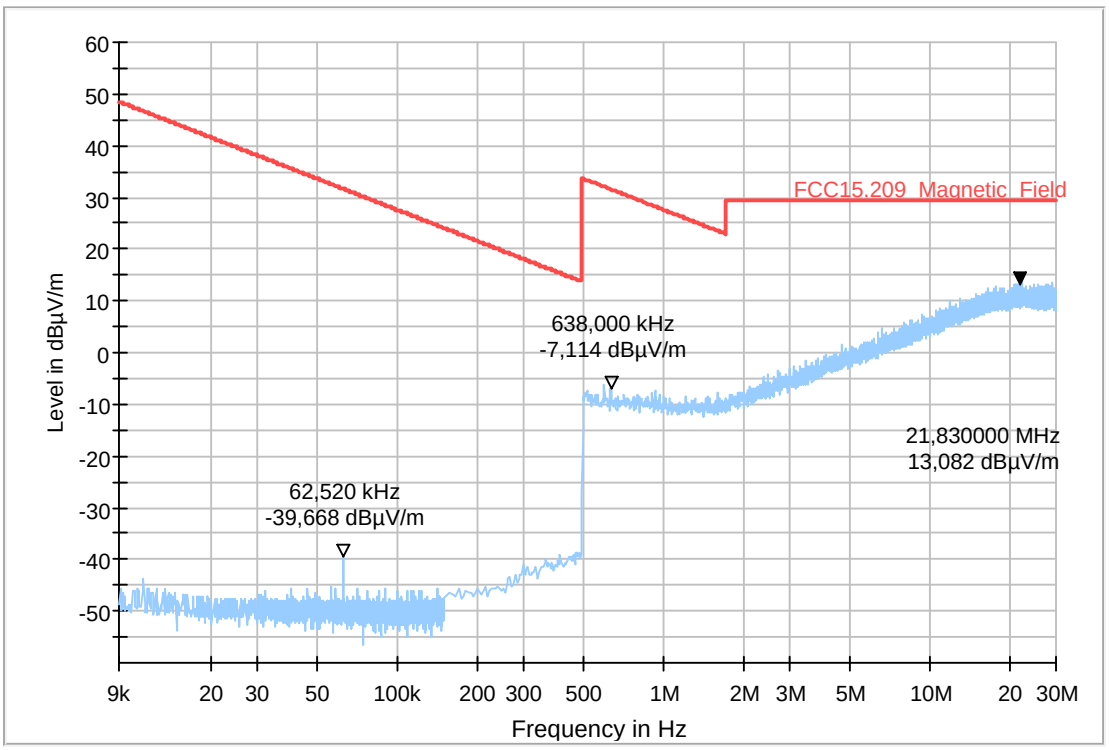
Common Information

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:	KIv
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

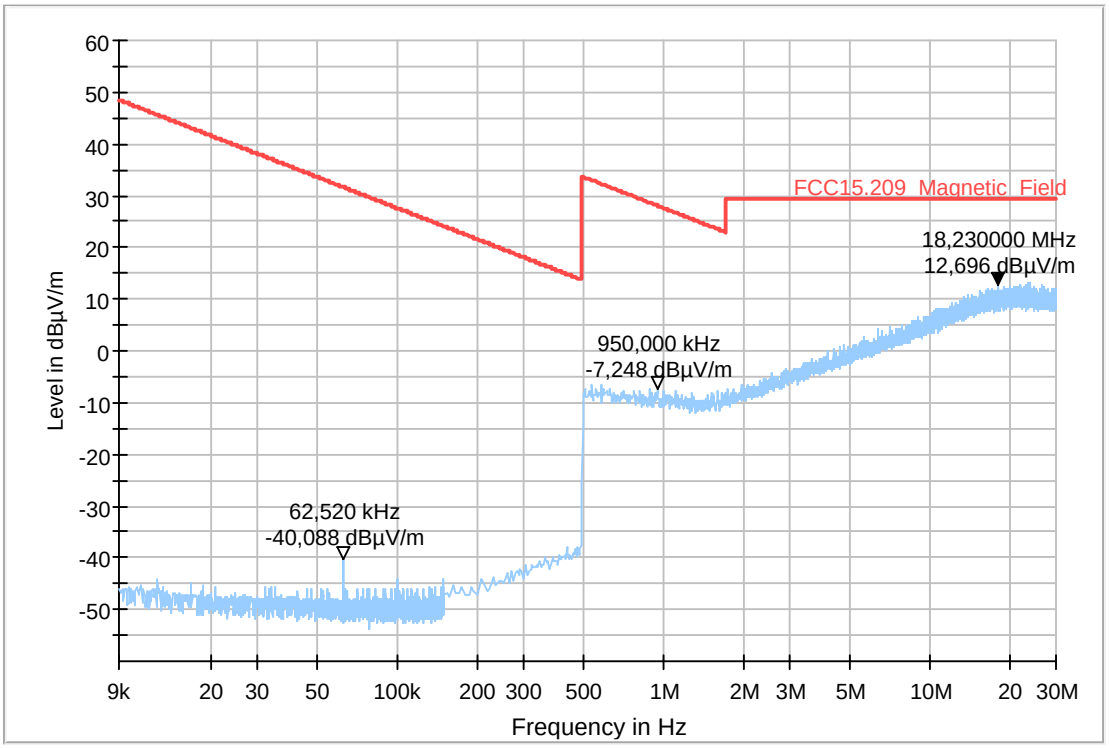
Common Information

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

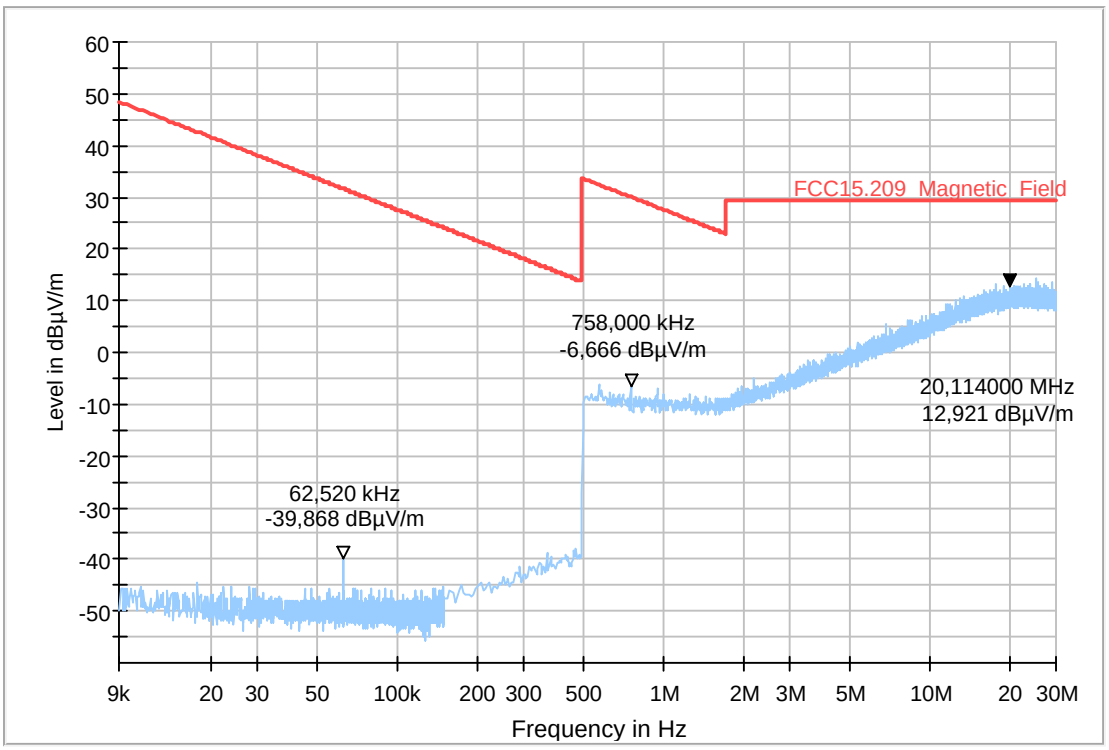
Common Information

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:	KIv
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

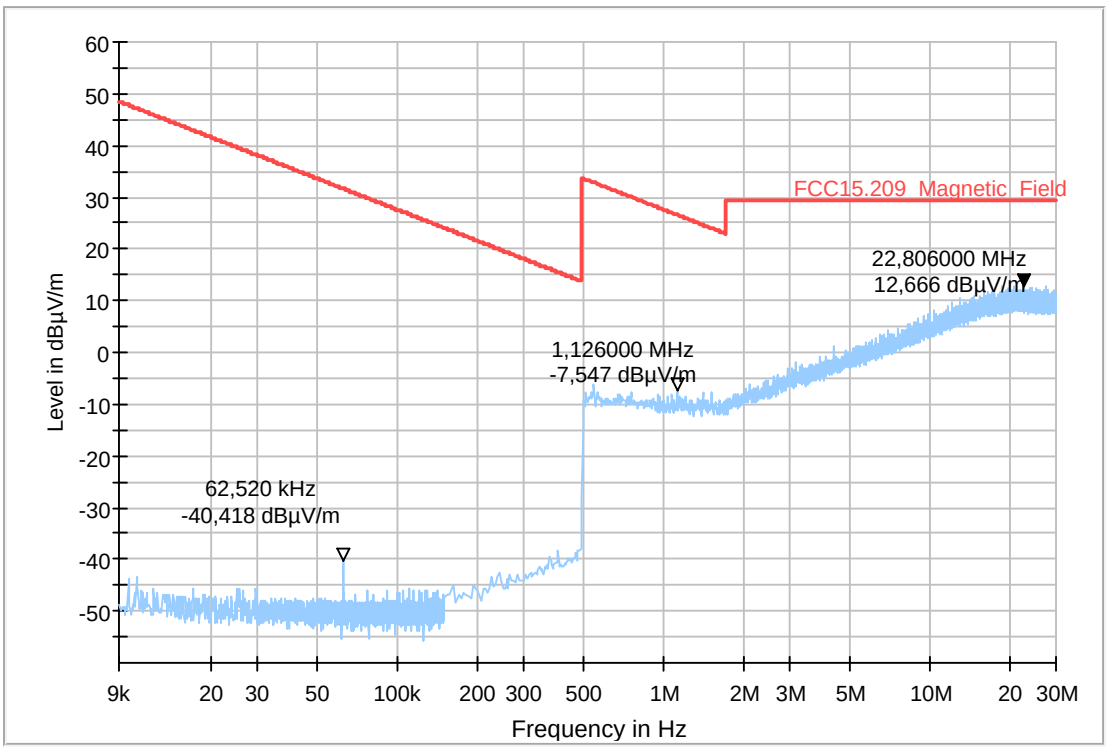
Common Information

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

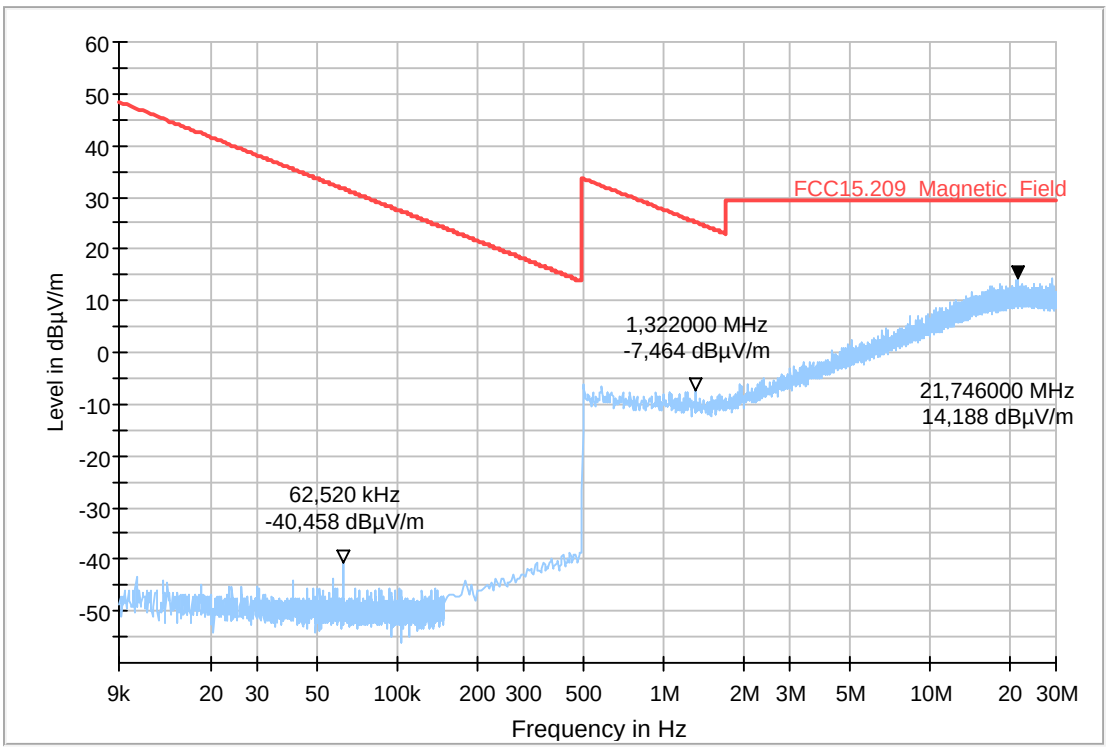
Common Information

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:	KIv
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

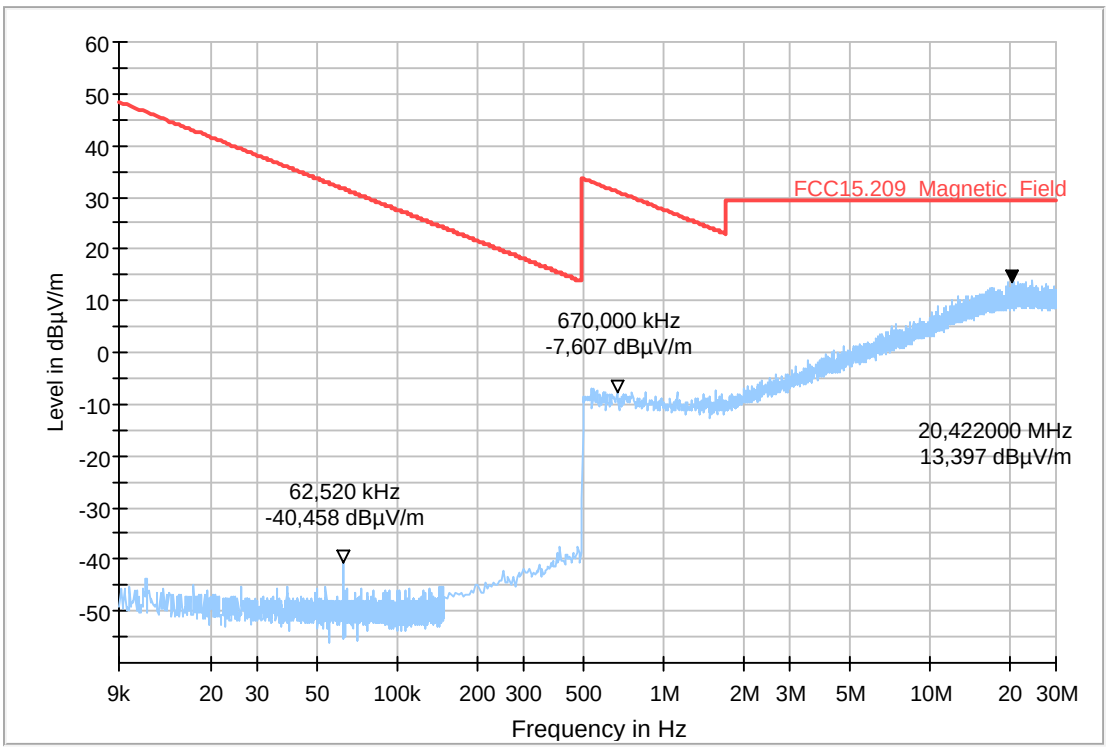
Common Information

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:	KIv
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

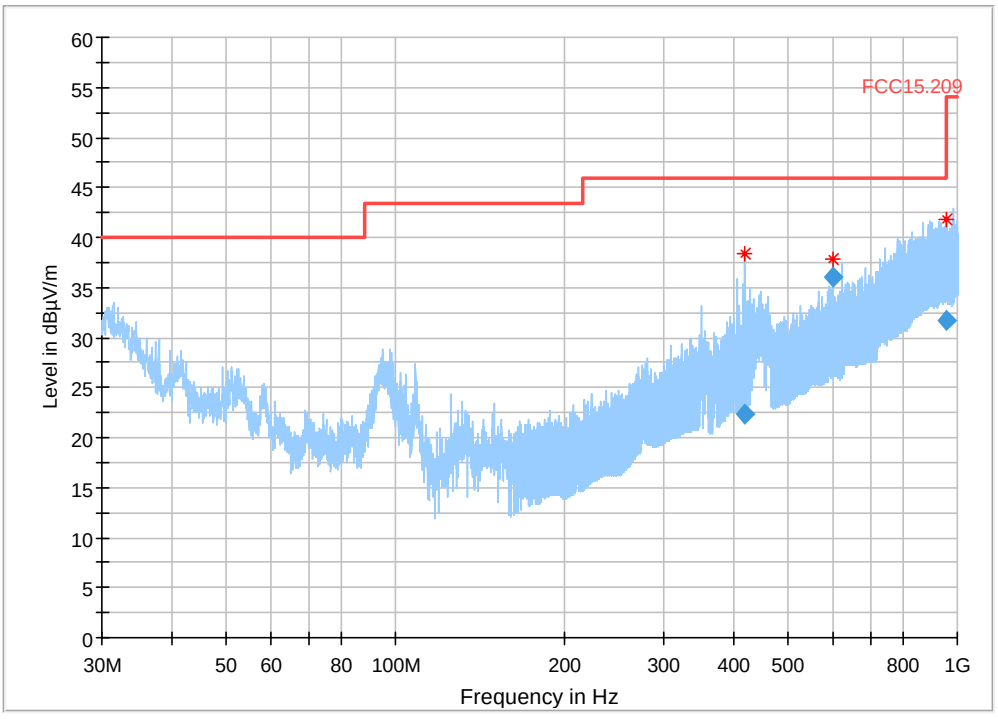
Common Information

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

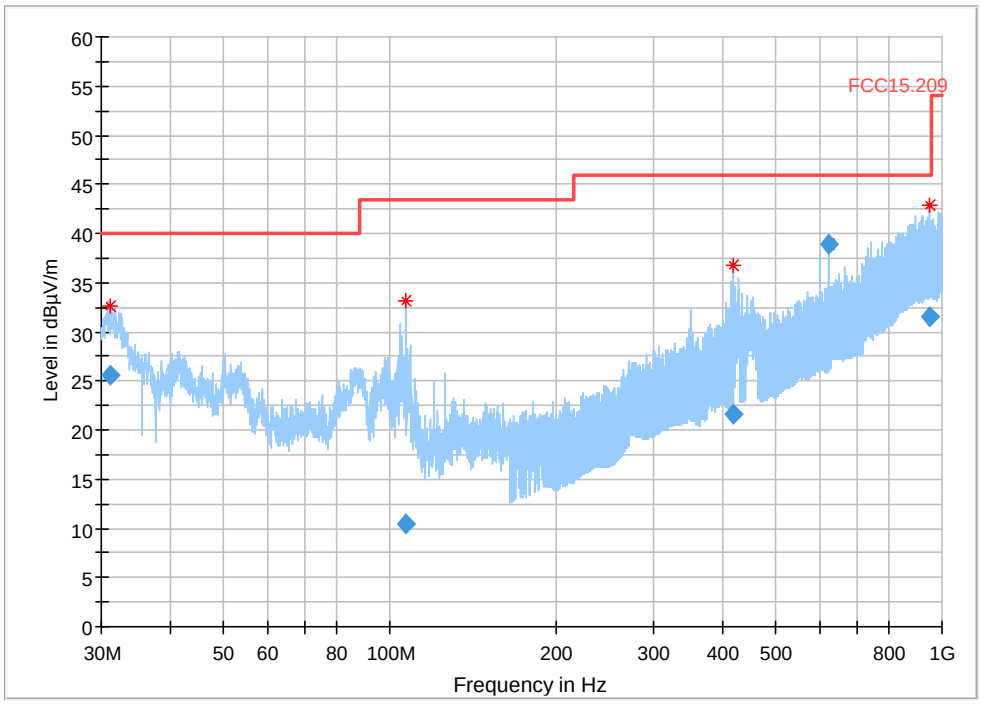
Common Information

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)	Corr. (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

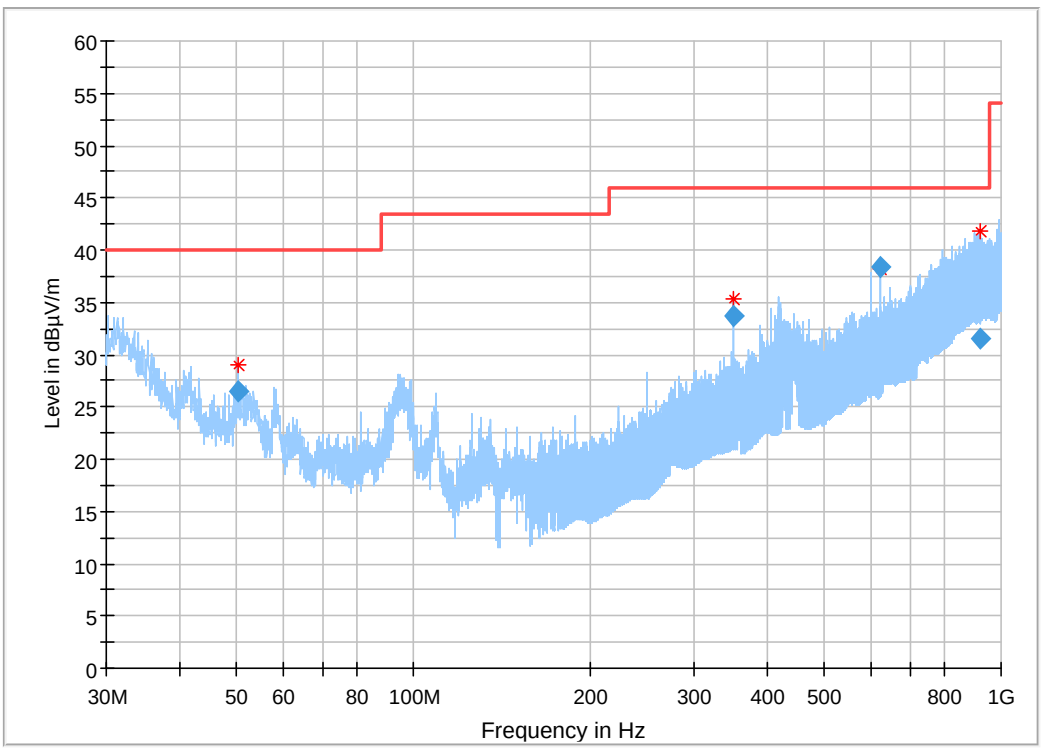
Common Information

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: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)
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

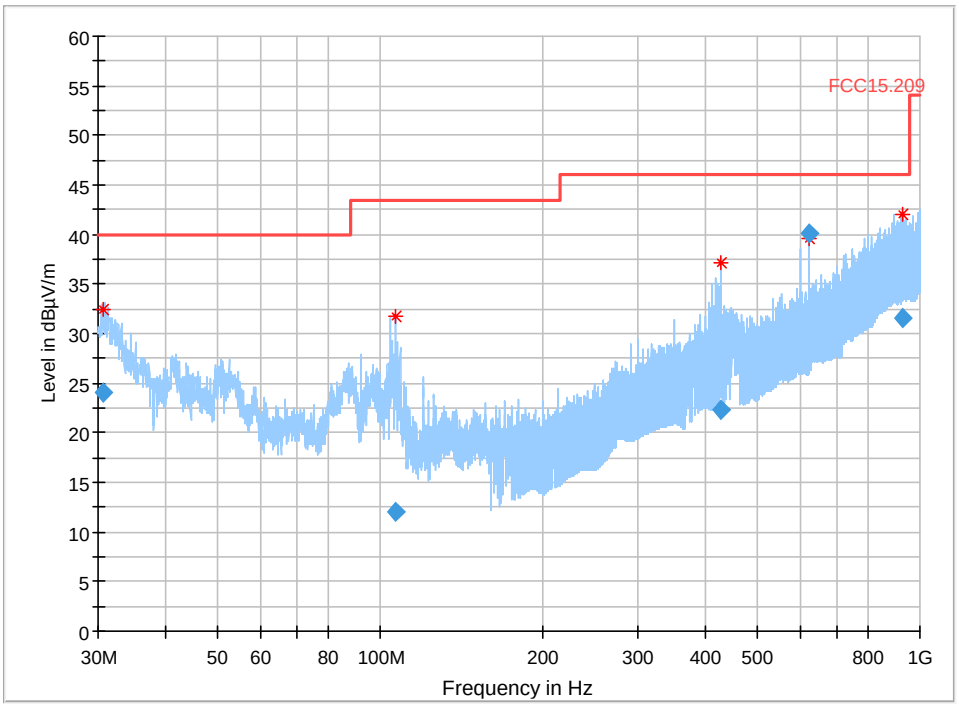
Common Information

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

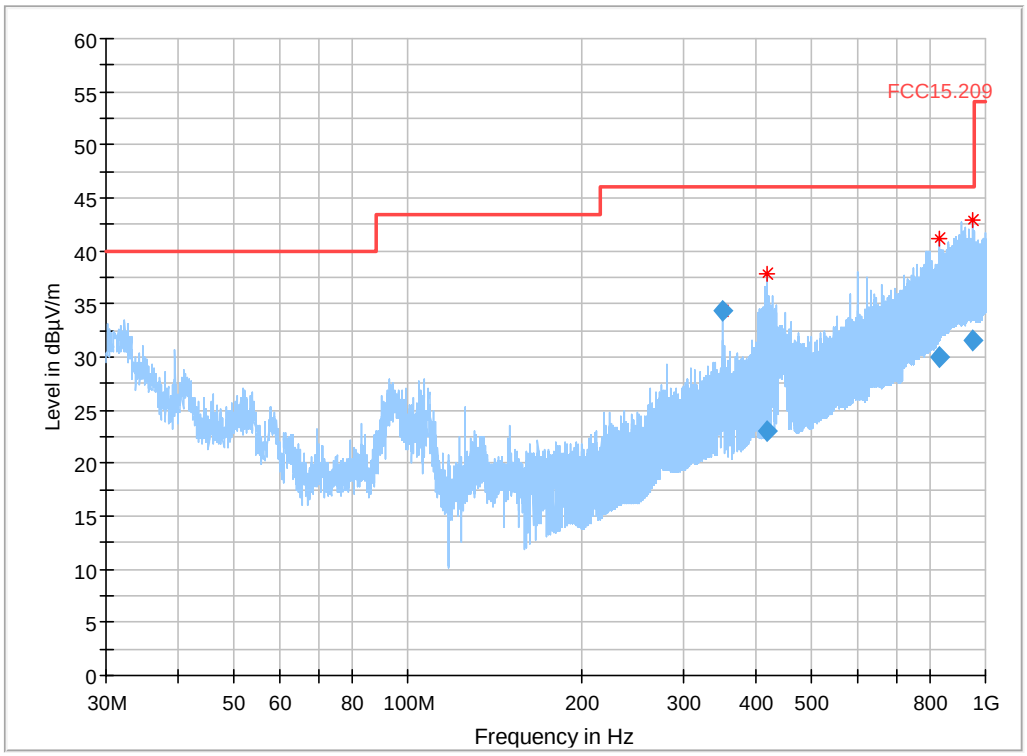
Common Information

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

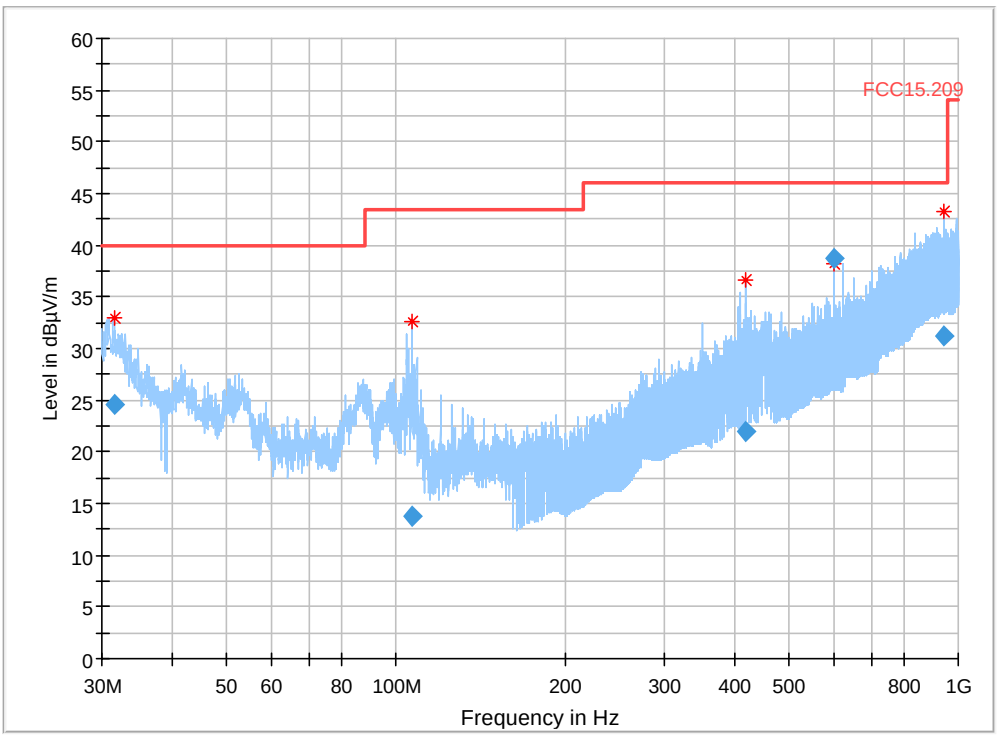
Common Information

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

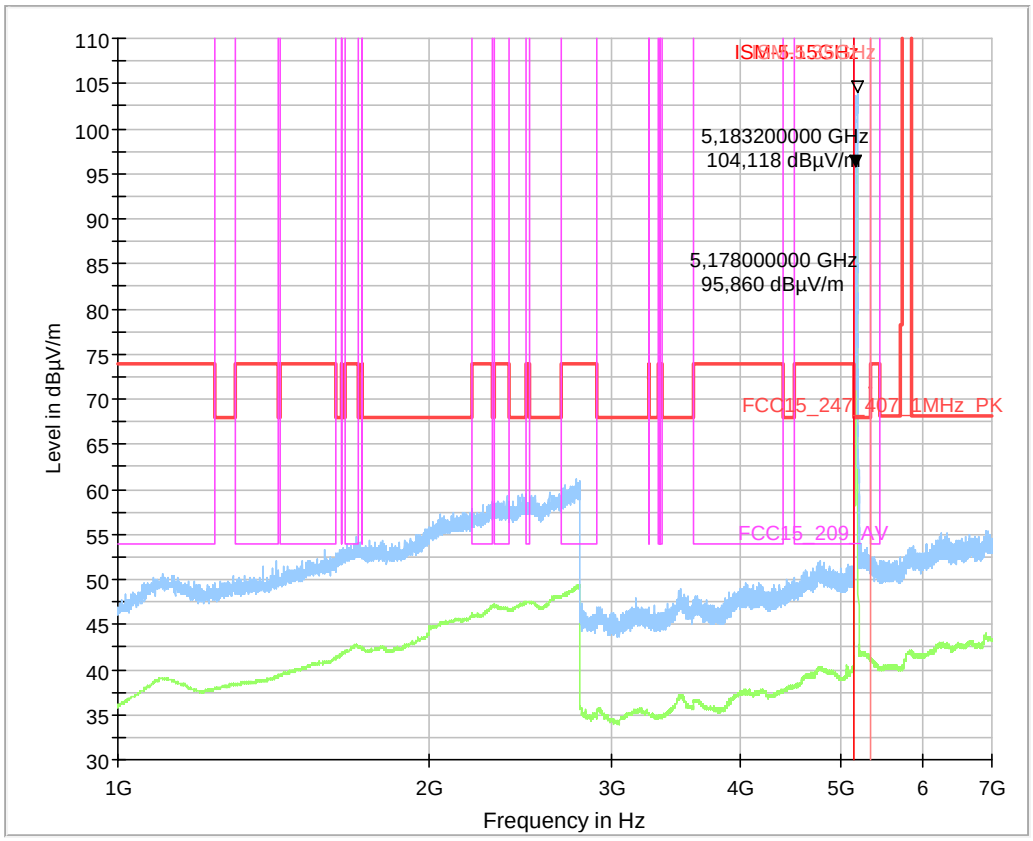
Common Information

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

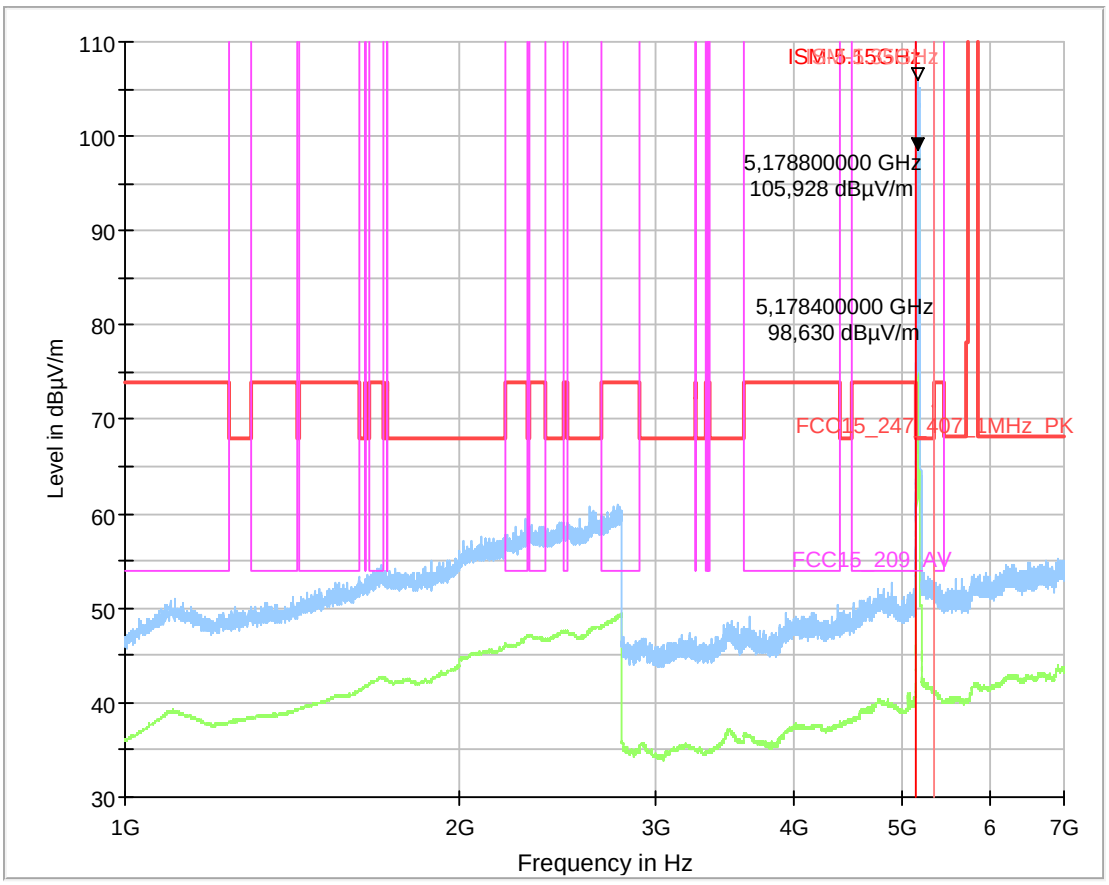
Common Information

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:	KIv
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

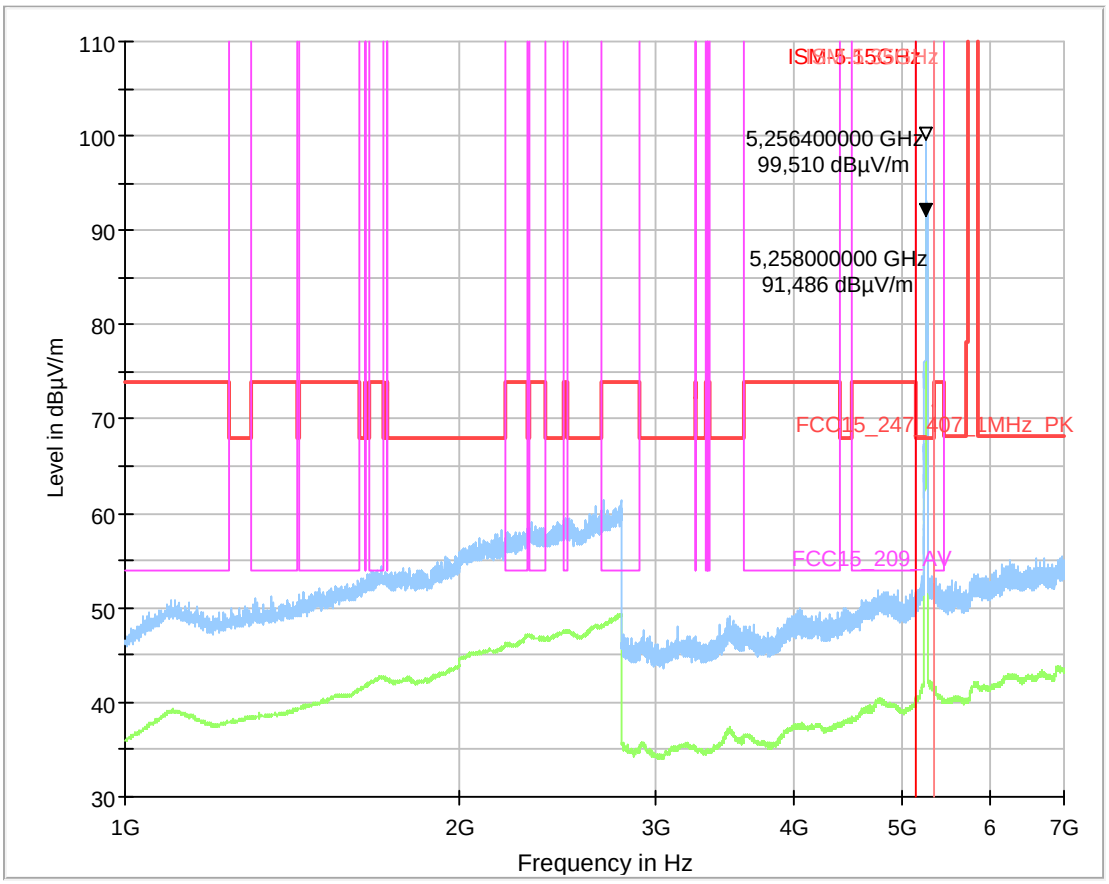
Common Information

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:	KIv
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

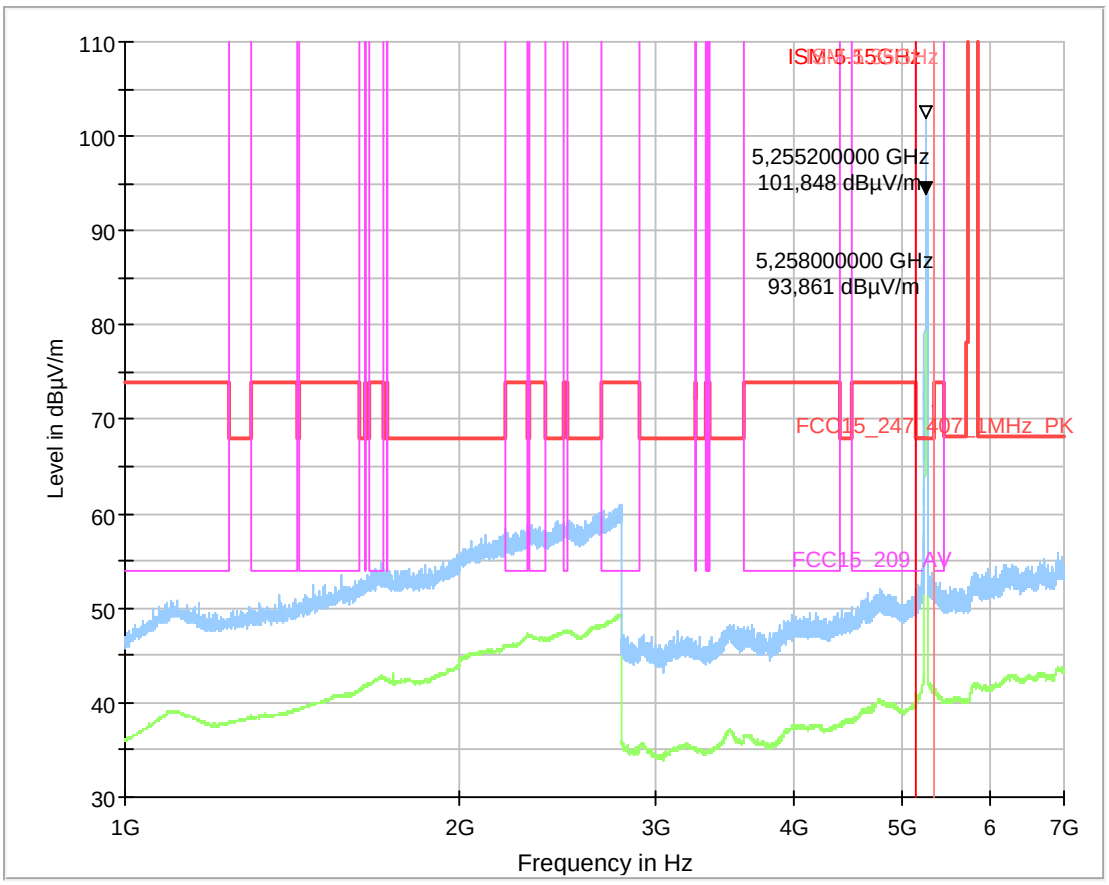
Common Information

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:	KIv
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

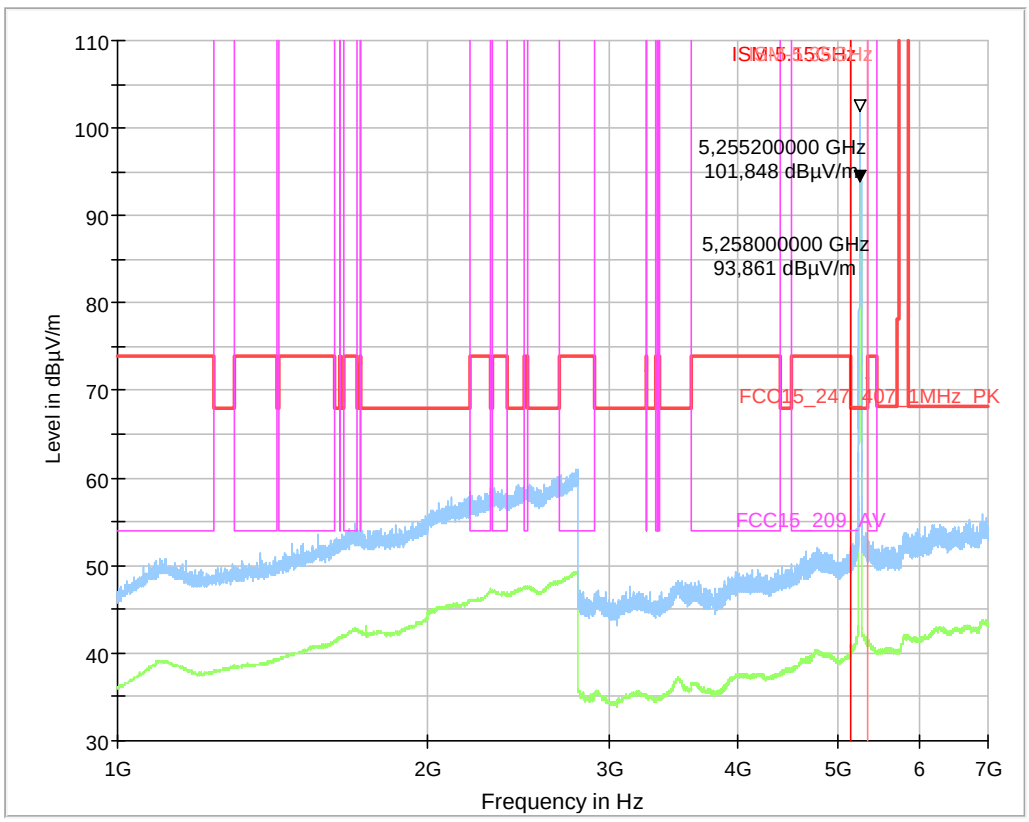
Common Information

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:	KIv
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

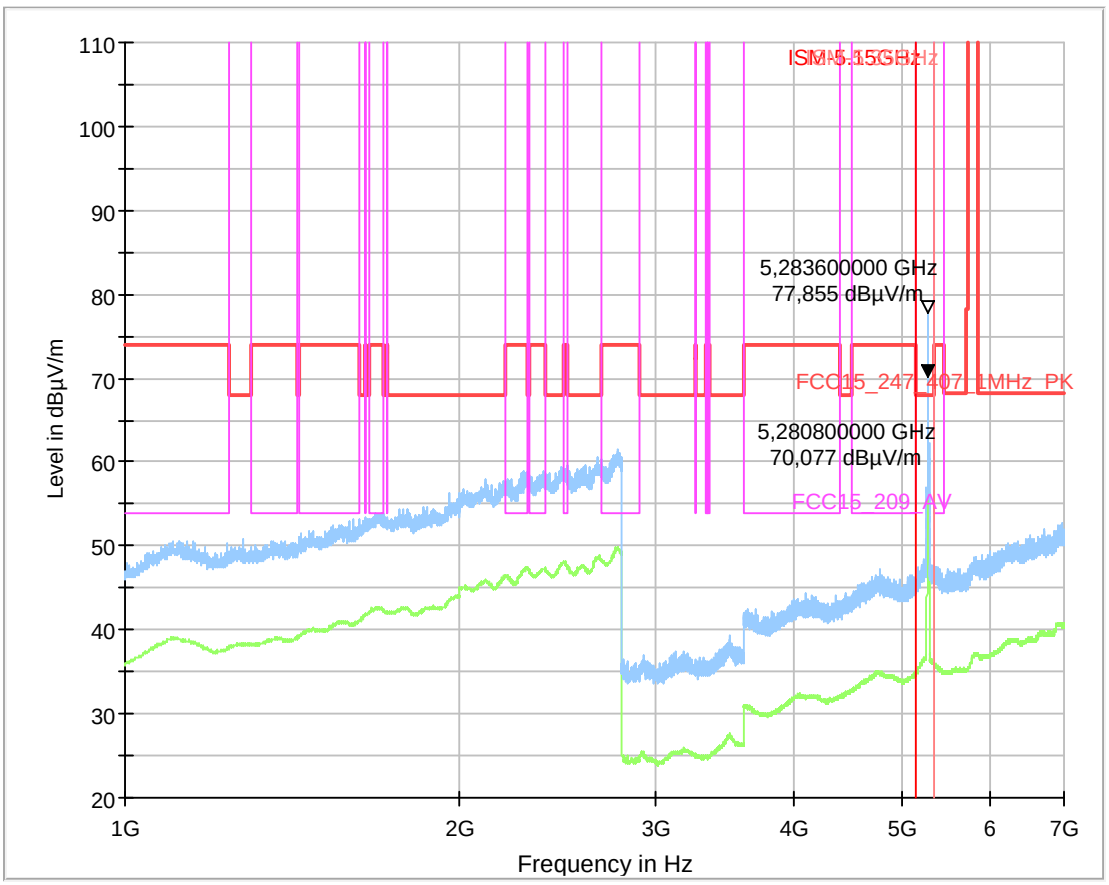
Common Information

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:	KIv
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

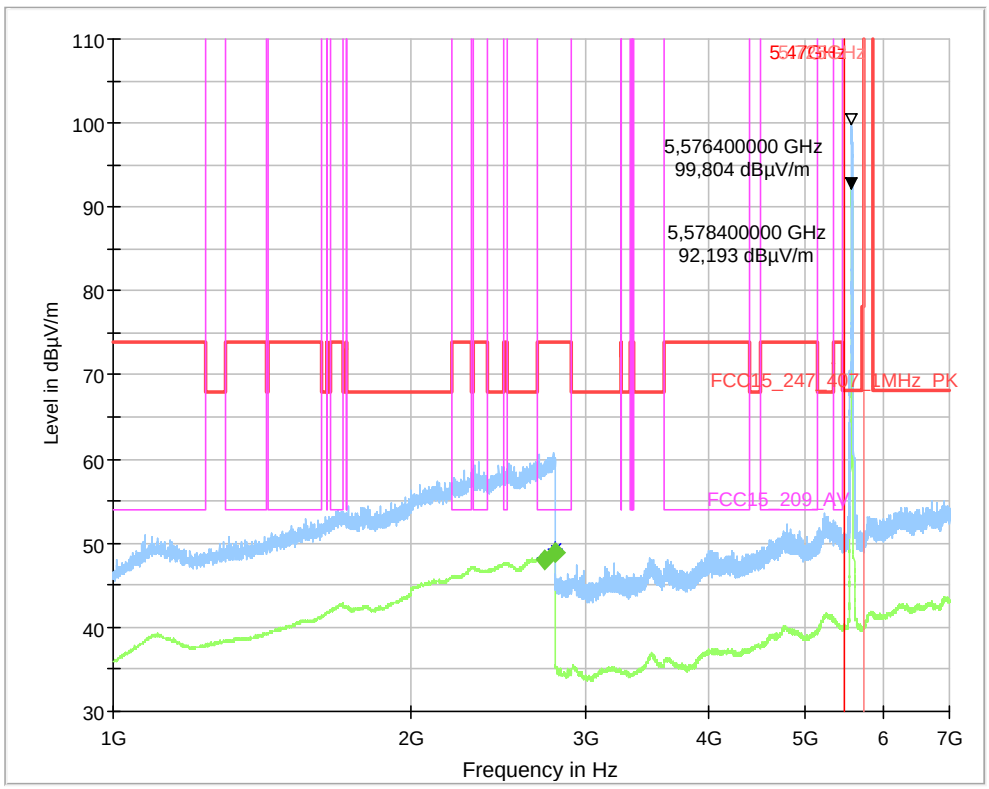
Common Information

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:	KIv
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

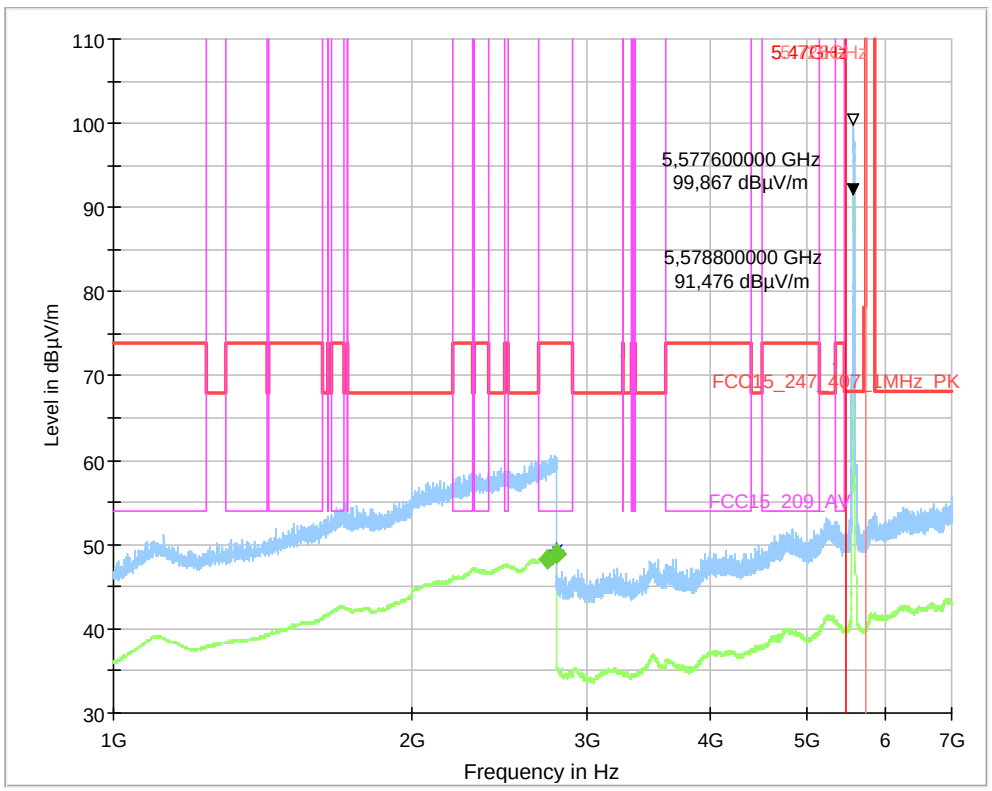
Common Information

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:	KIv
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

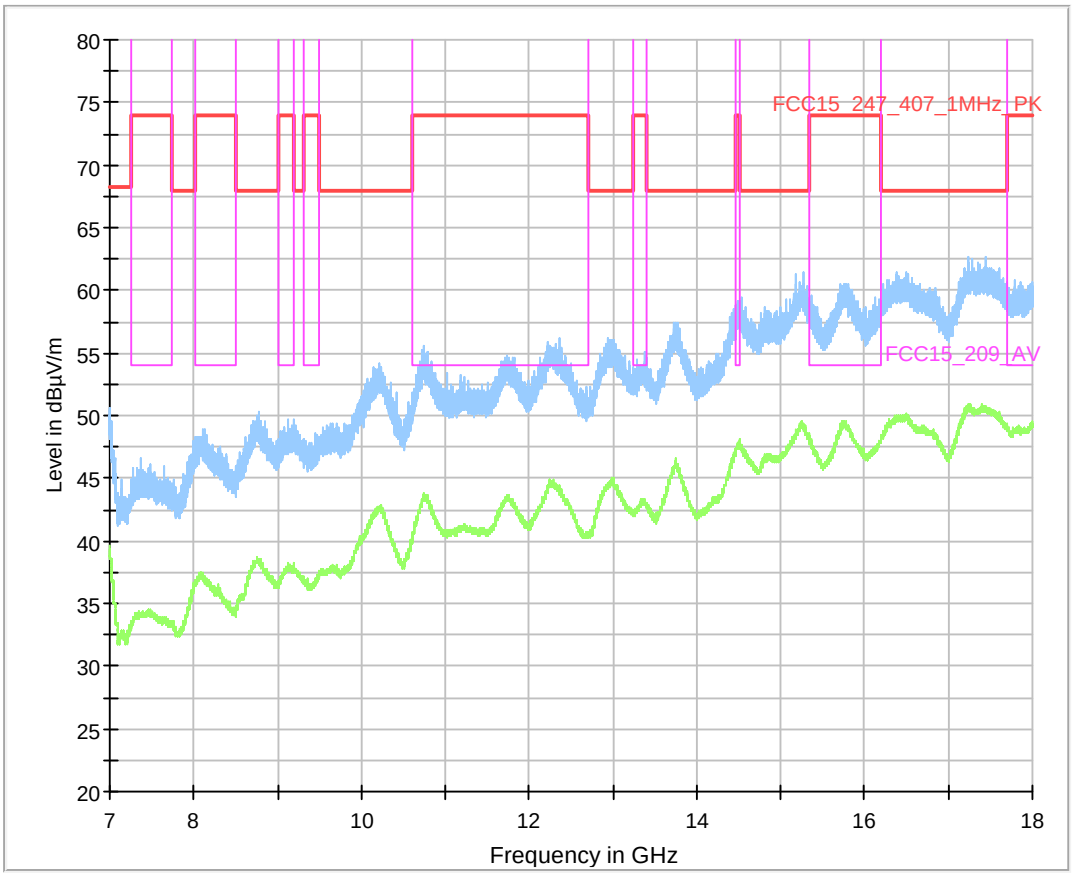
Common Information

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:	KIv
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

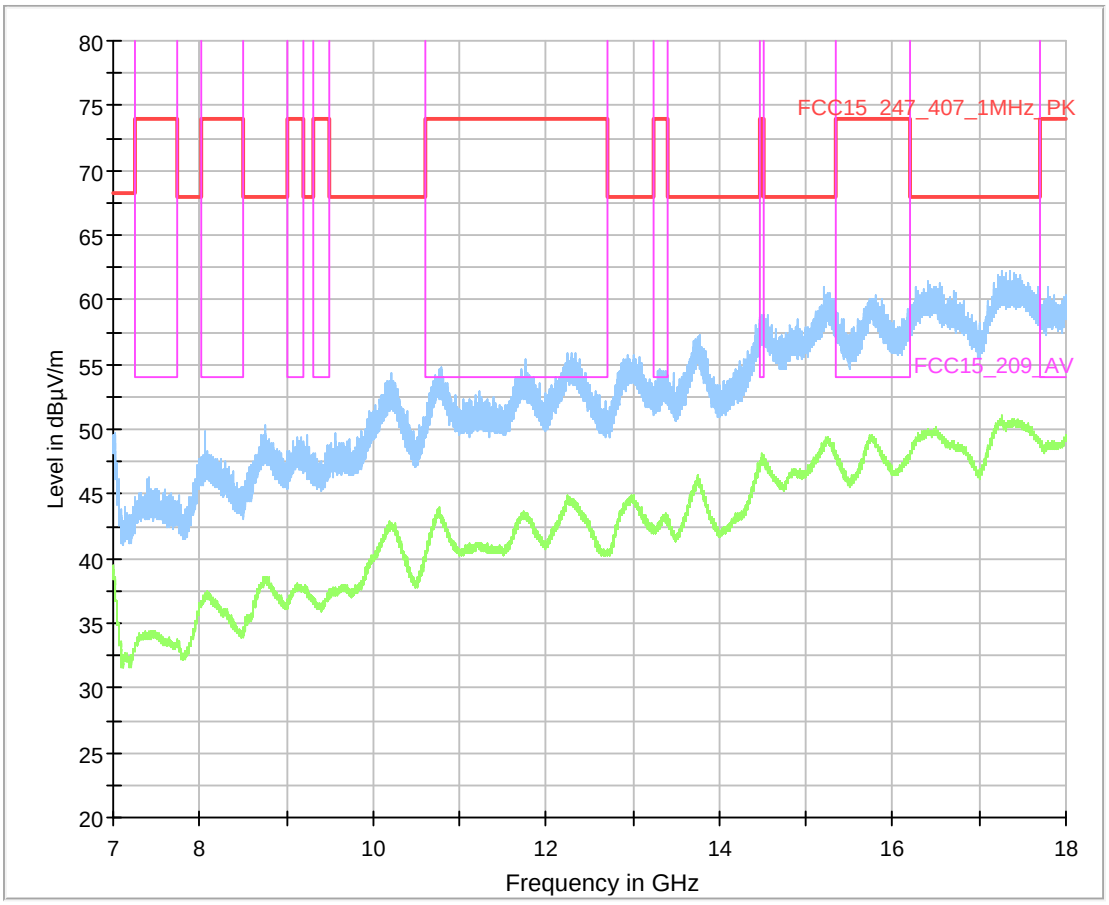
Common Information

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:	KIv
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

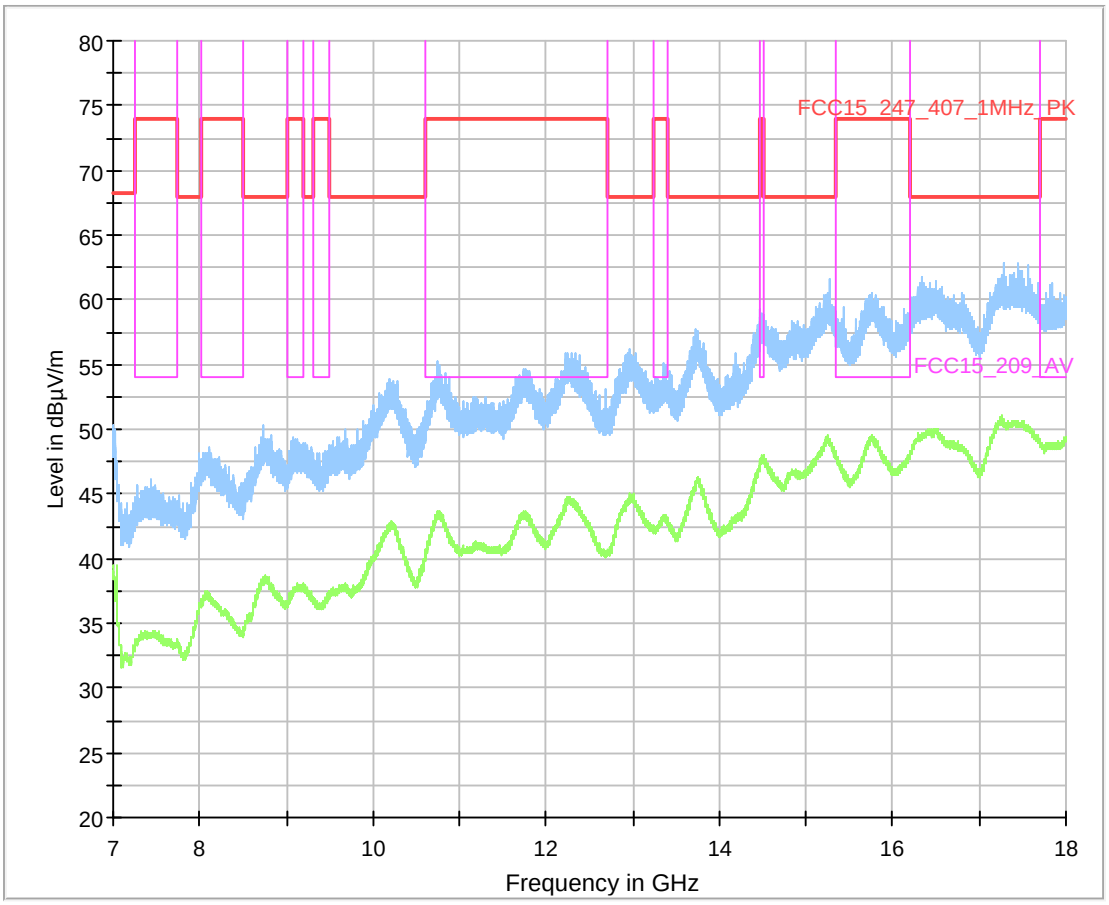
Common Information

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:	KIv
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

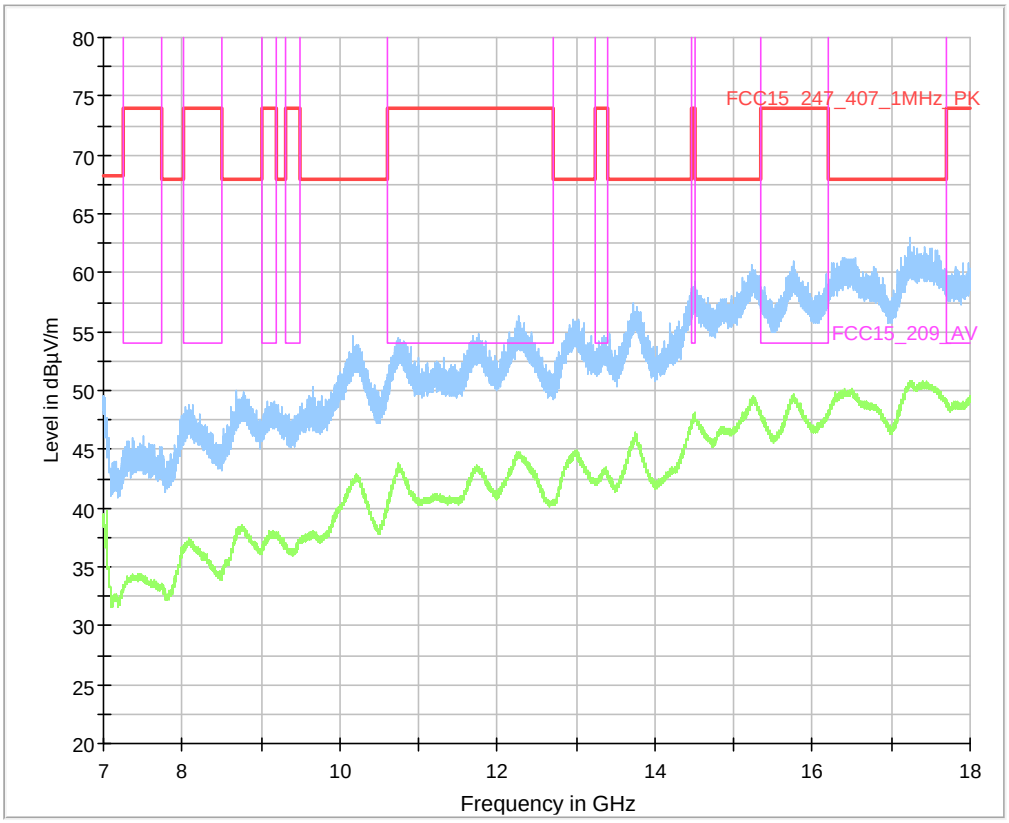
Common Information

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:	KIv
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

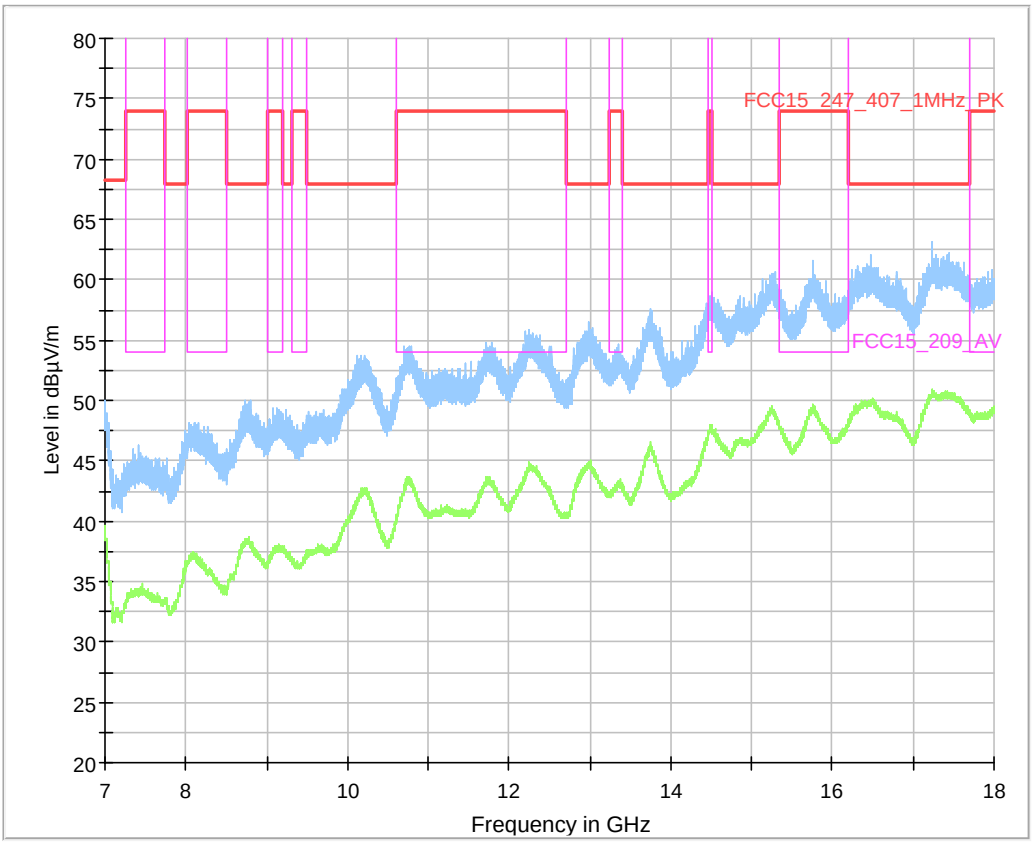
Common Information

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:	KIv
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

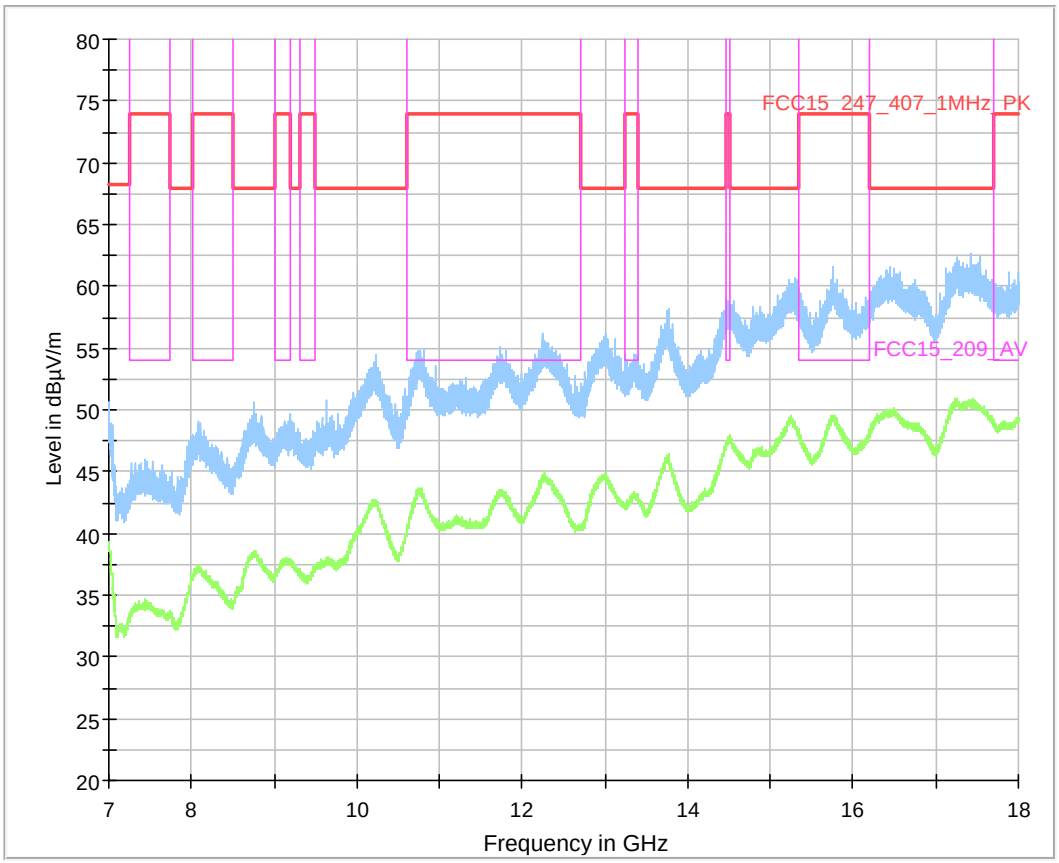
Common Information

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:	KIv
Comments	EUT Standing

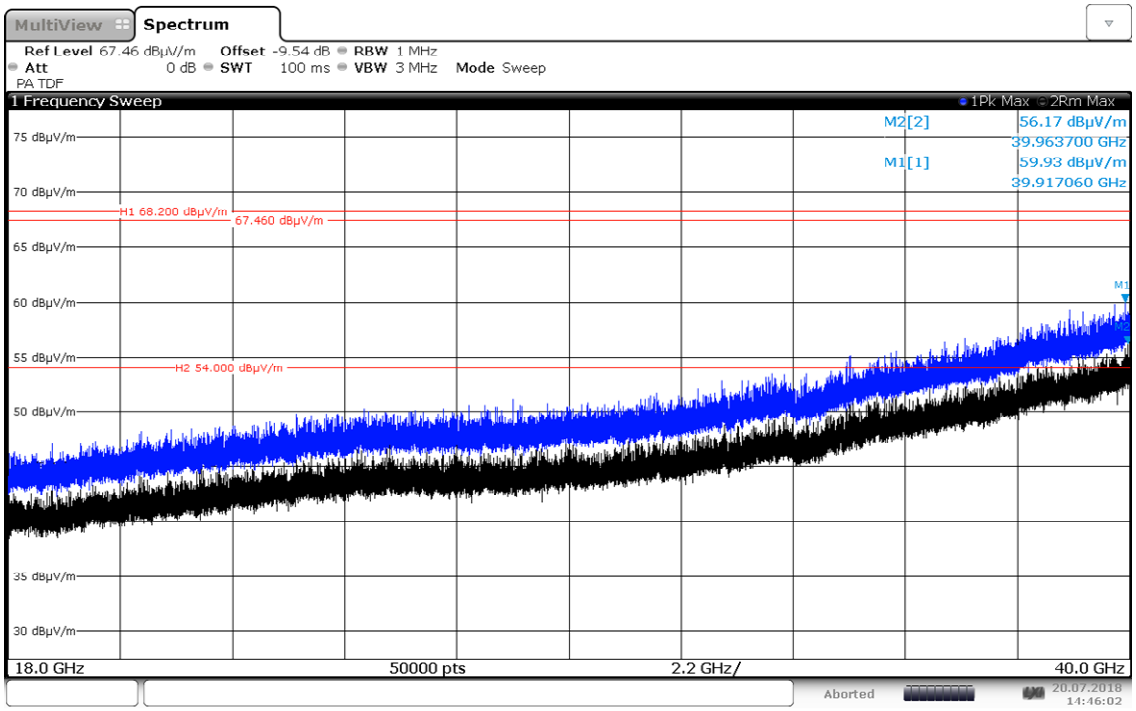
EUT Information

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

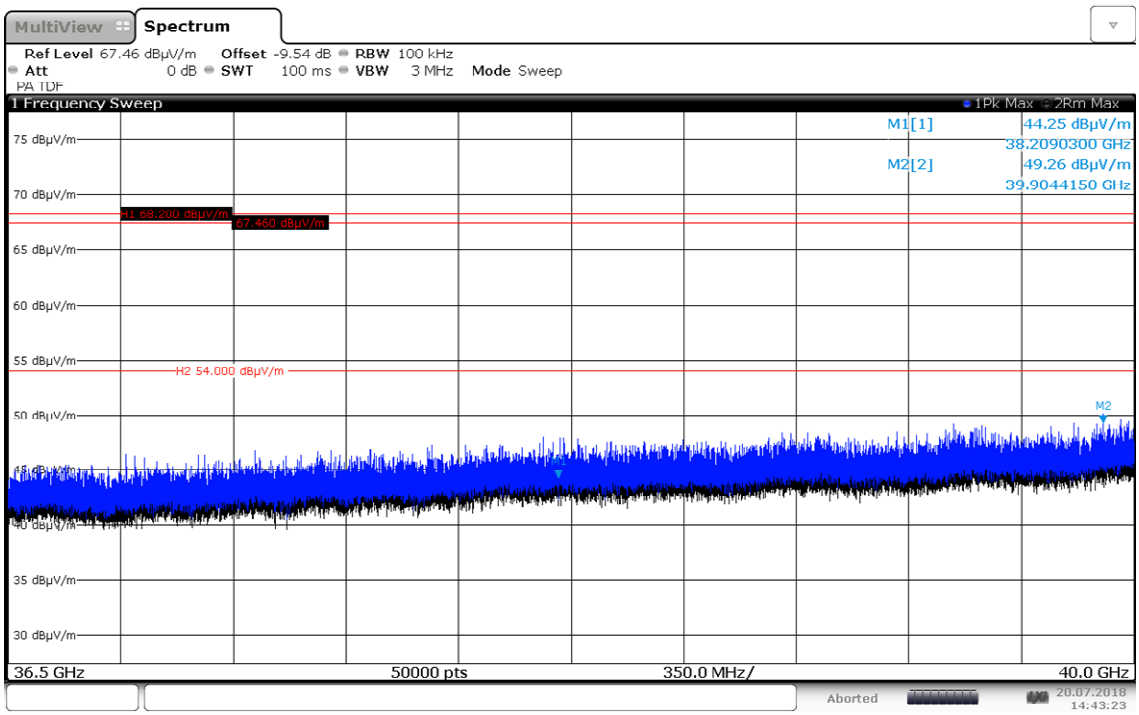


1.7. Radiated electric field measurement 18GHz to 40 GHz



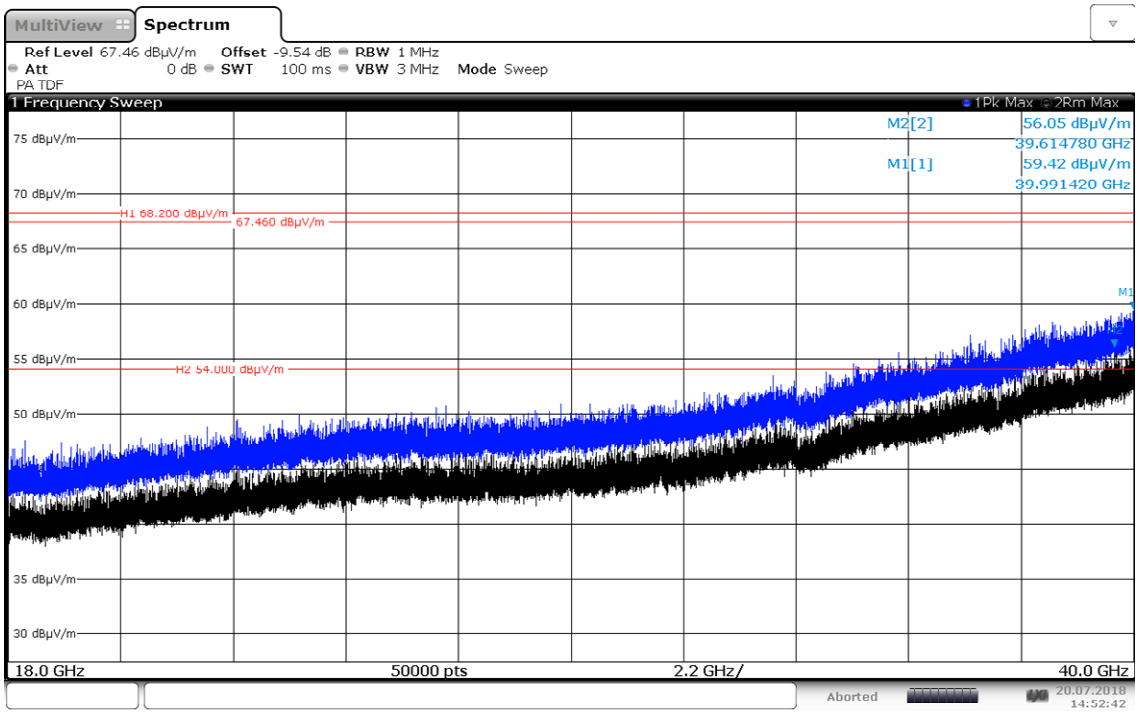
14:46:02 20.07.2018

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



14:43:24 20.07.2018

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



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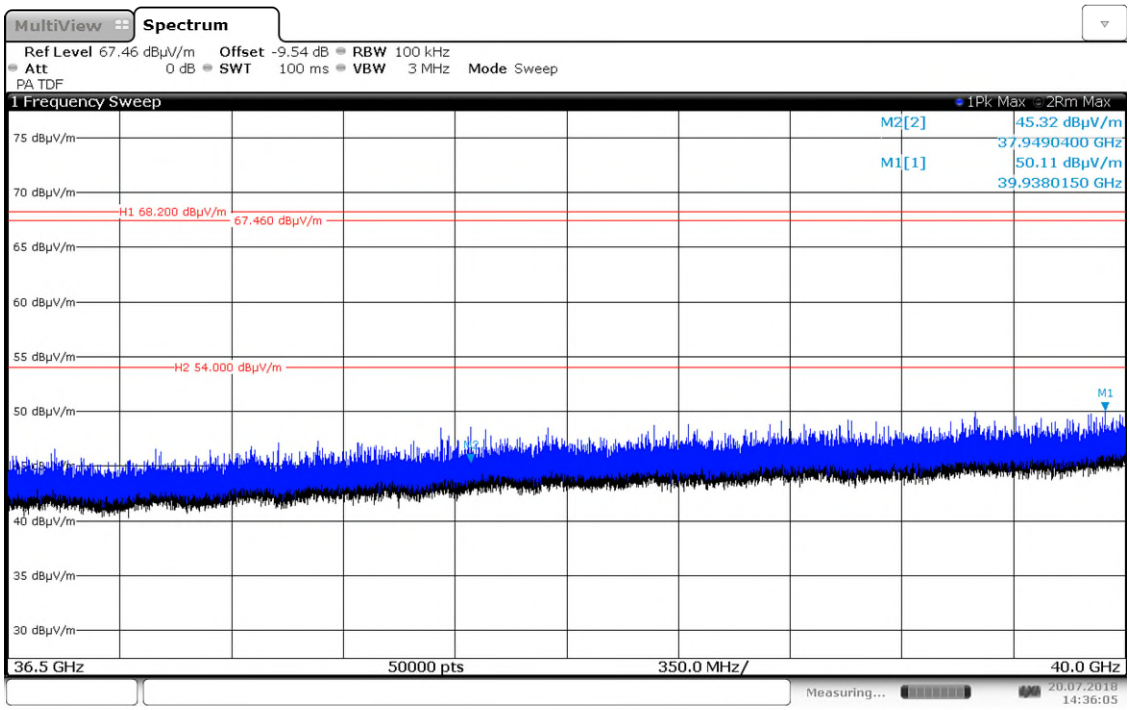
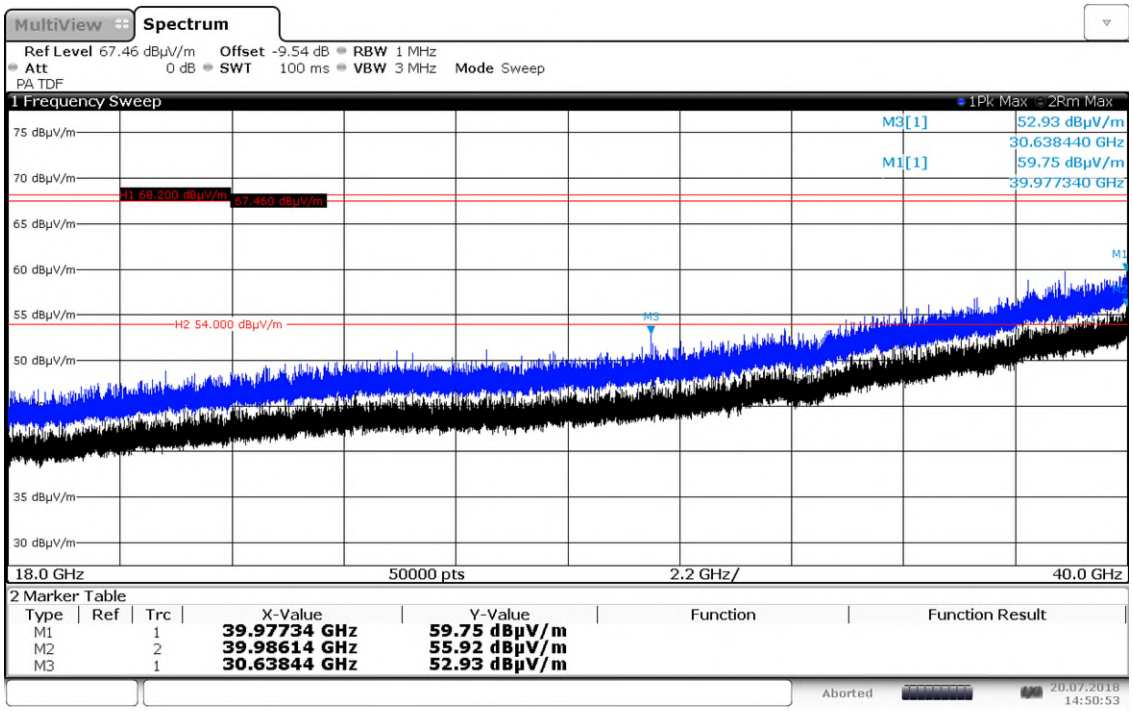
4.02b_ CCM-IO-ETH-WLAN5 GHz-TX-nMode-B.W20MHz-MCS0-Ch56-19.5dBm



14:36:05 20.07.2018

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



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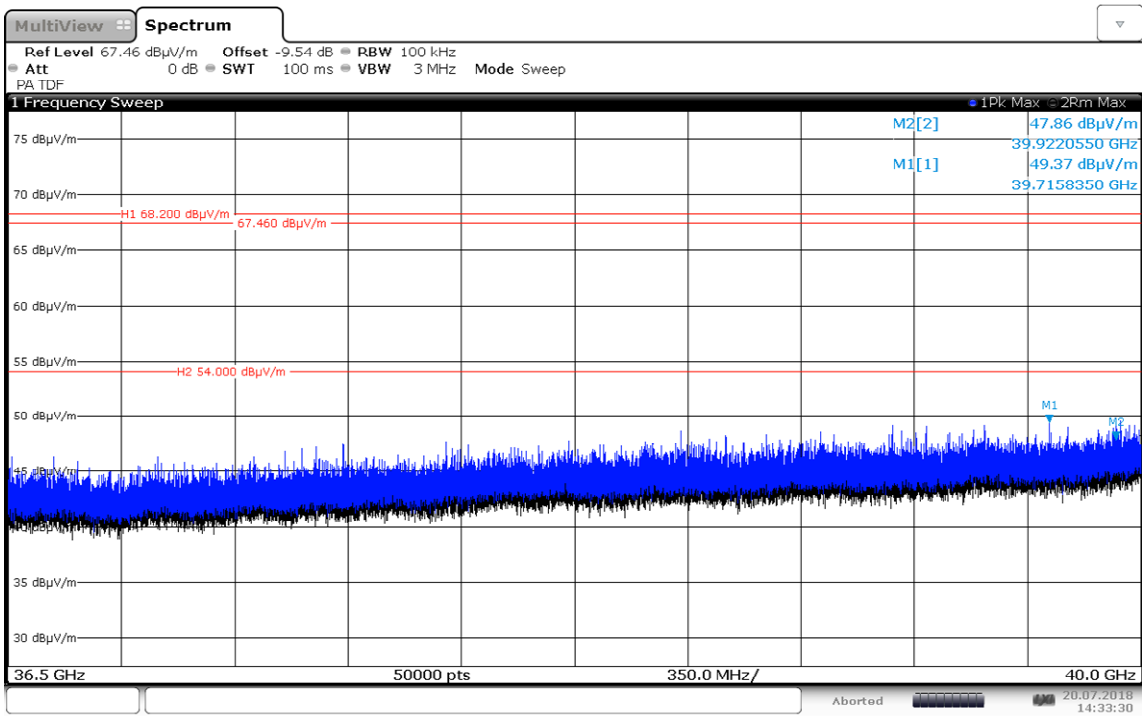
4.03b_ CCM-IO-ETH-WLAN5 GHz-TX-aMode-B.W20MHz-6Mbit-Ch116-19.5dBm



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

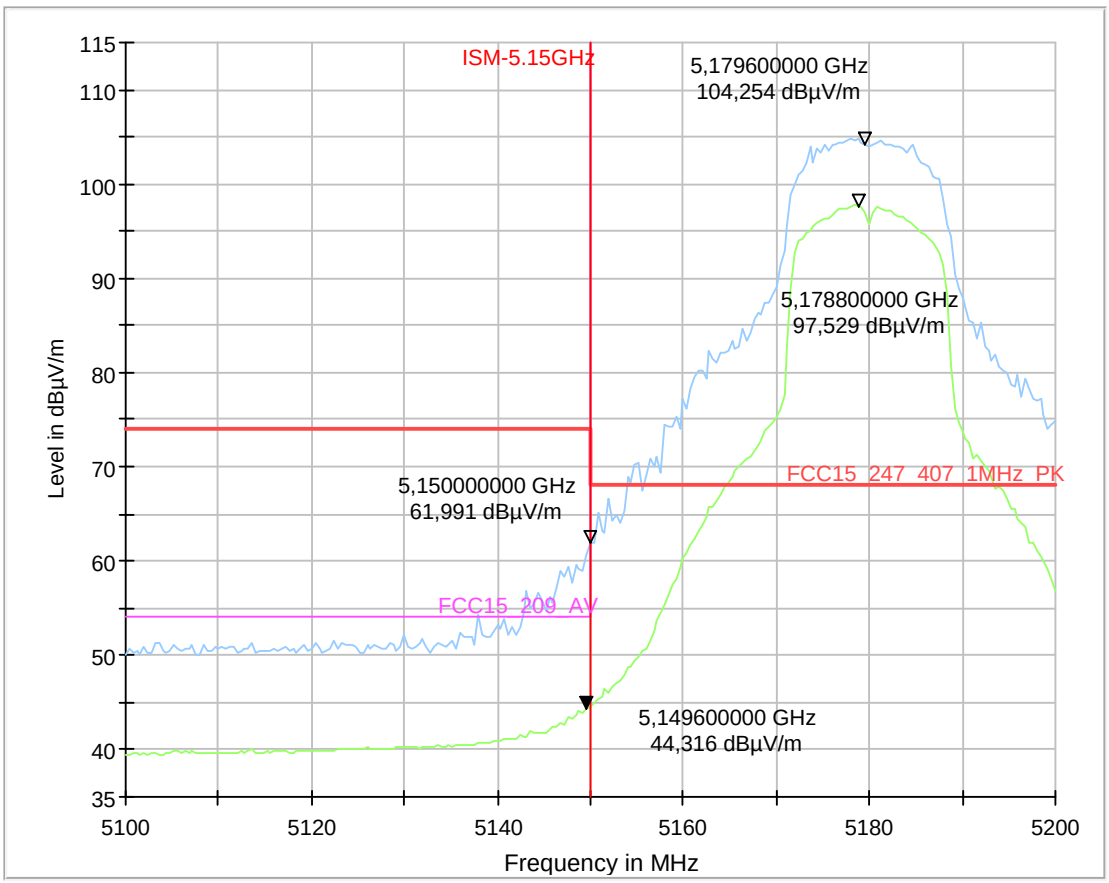
1.8.1. a-mode

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:	KIv
Comment:	Slotted Wave Guide Antenna Laying

Full Spectrum

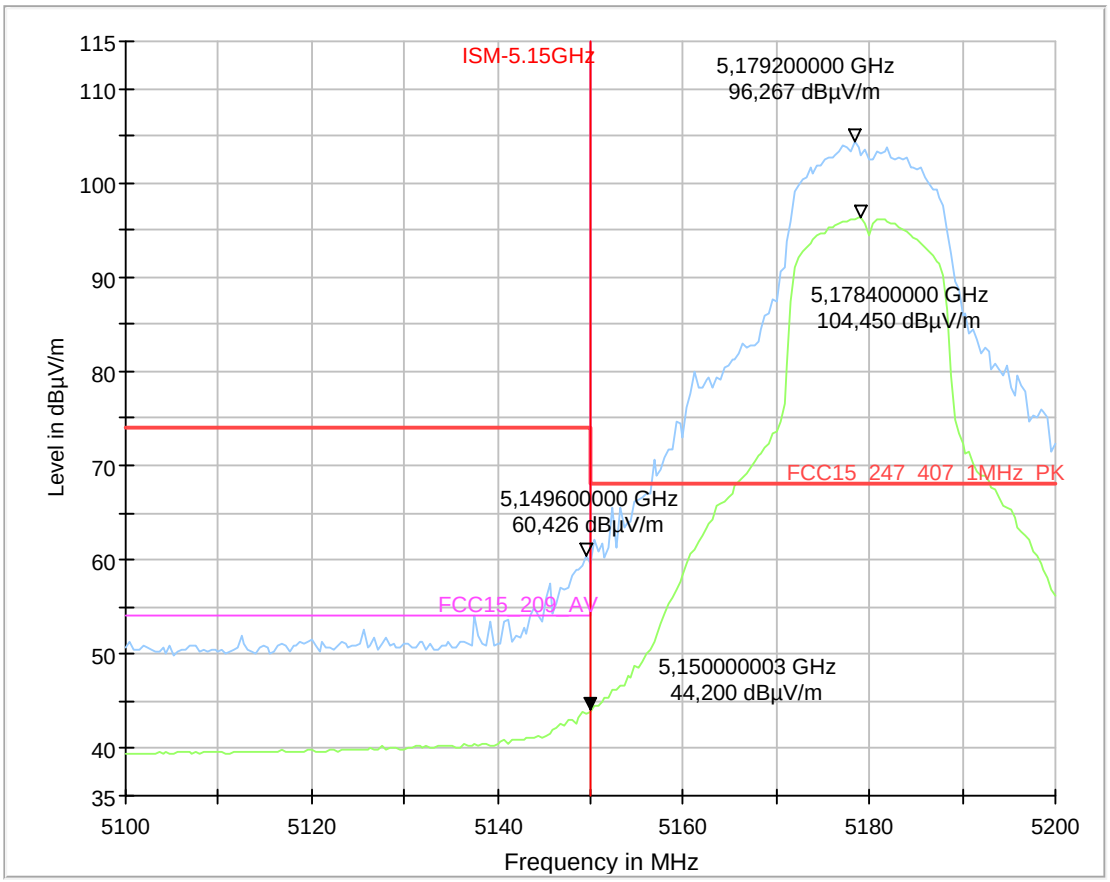


9.01_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch36-19.5dBm

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:	KIv
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

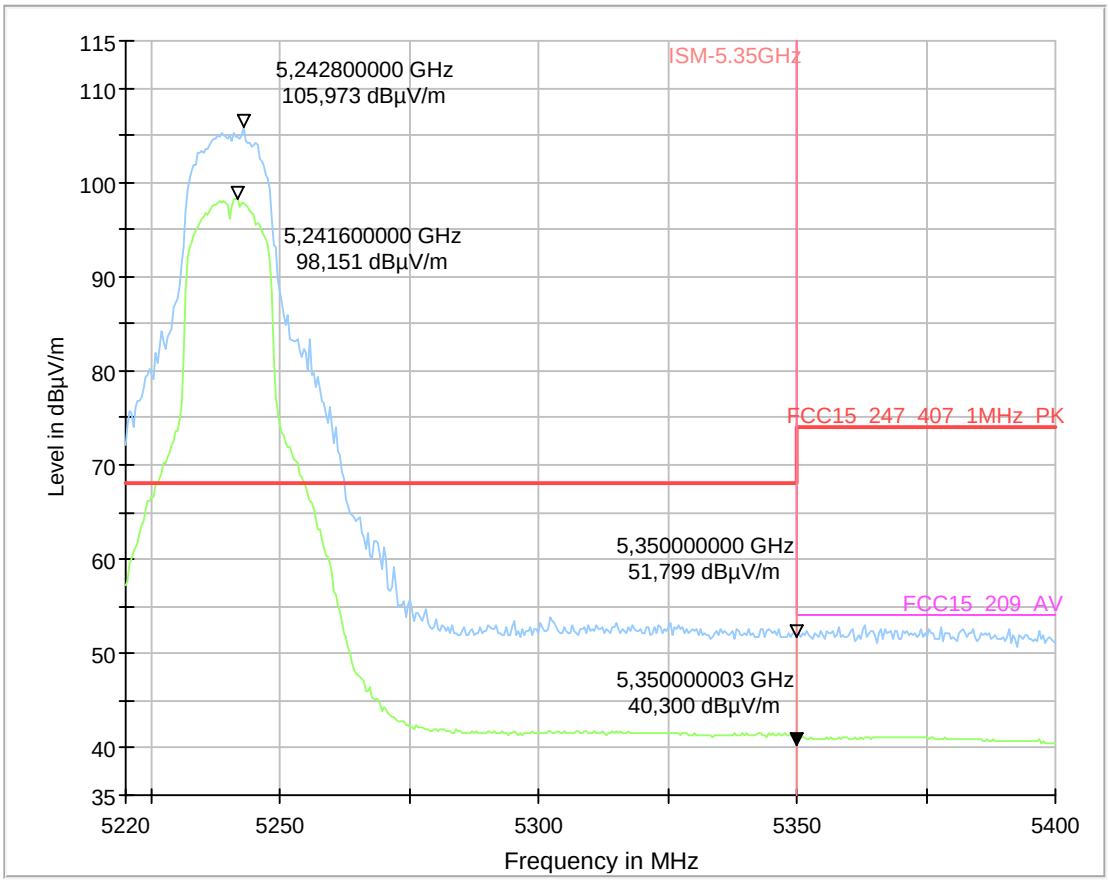


9.02_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch48-19.5dBm

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:	KIv
Comment:	Slotted Wave Guide Antenna Laying

Full Spectrum

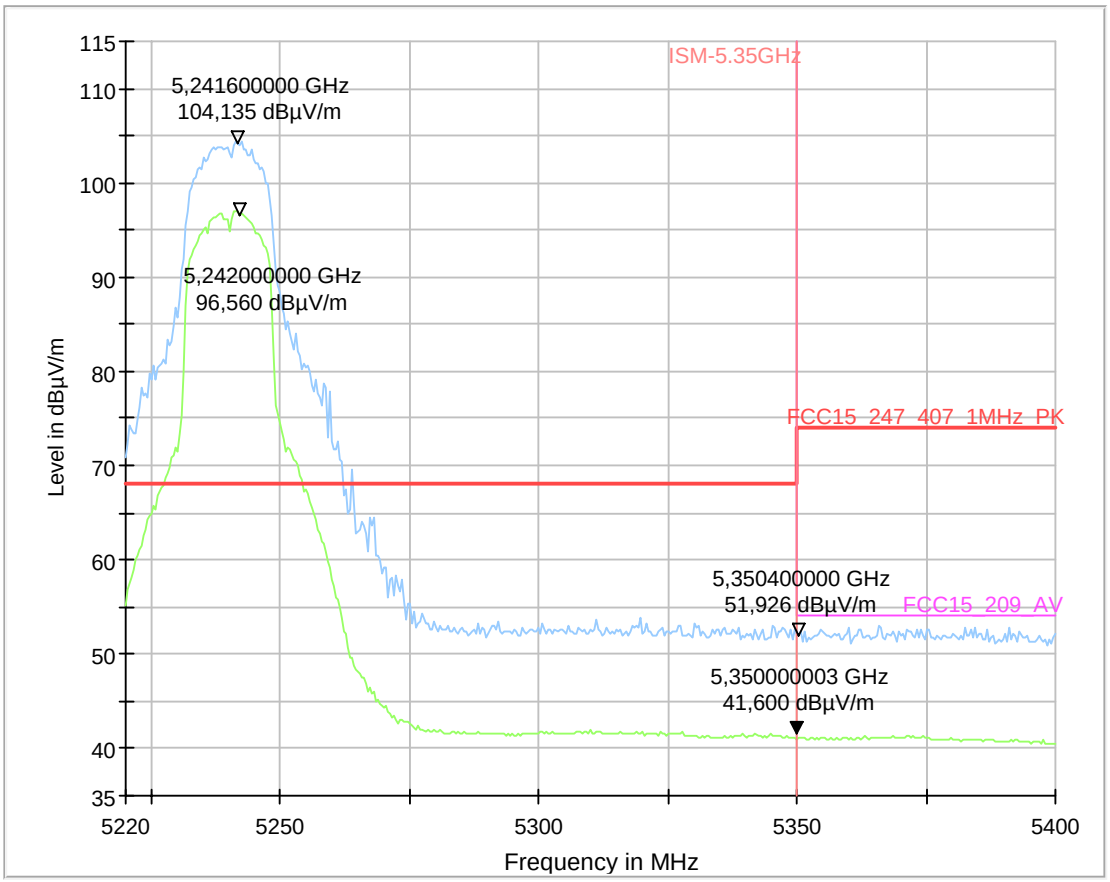


9.02_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch48-19.5dBm

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:	KIv
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

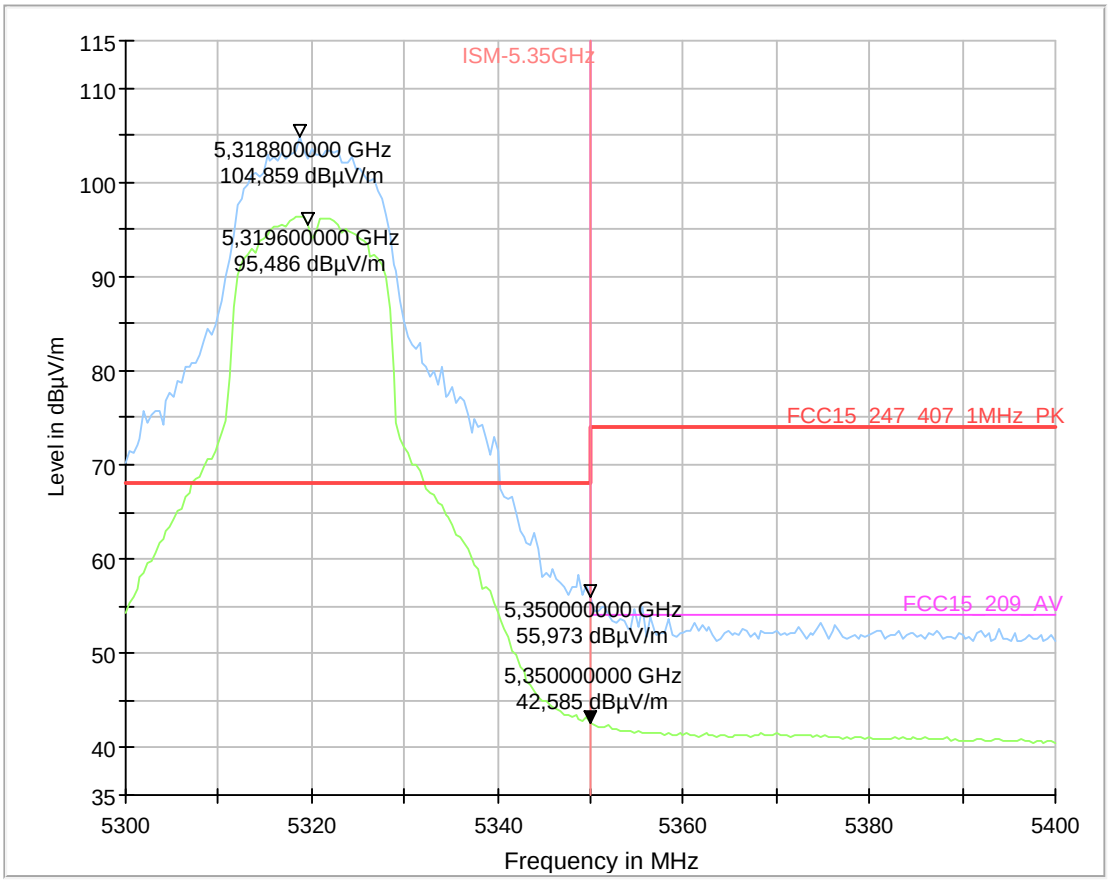


9.04_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch64-19.5dBm

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:	KIv
Comment:	Slotted Wave Guide Antenna Laying

Full Spectrum

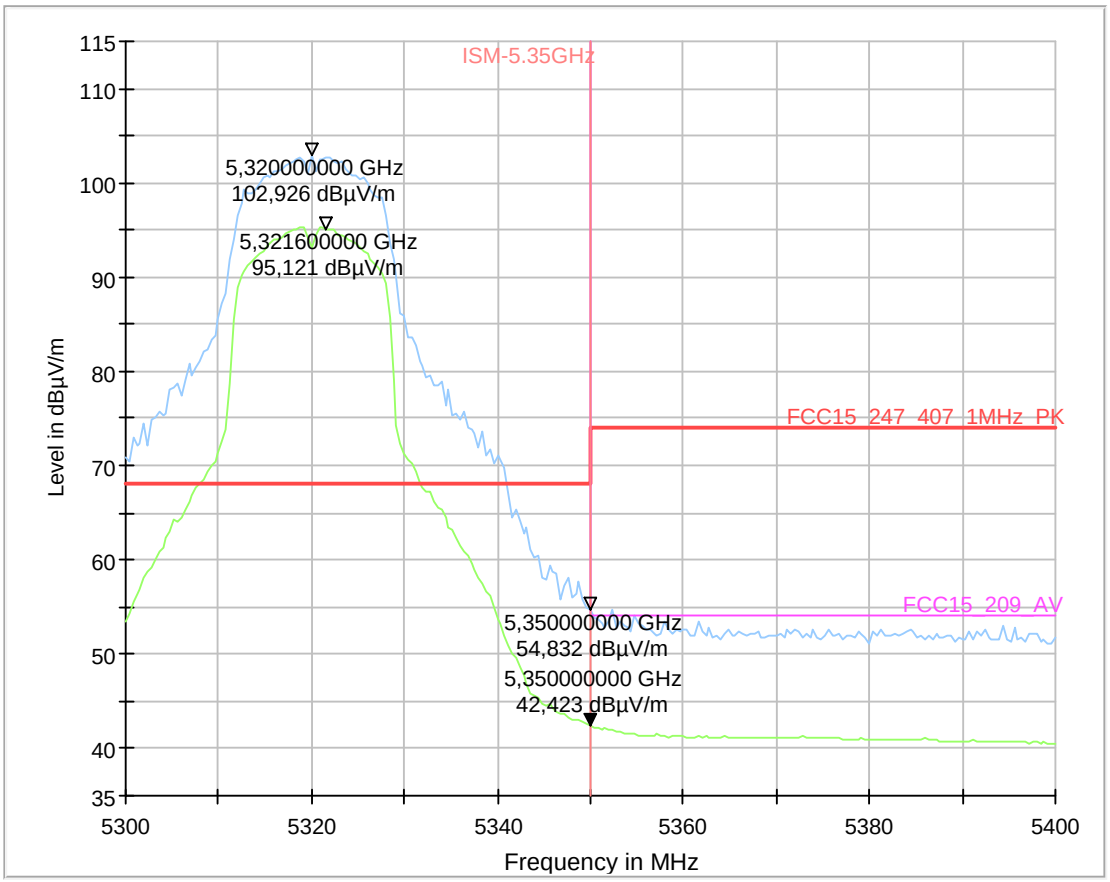


9.04_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch64-19.5dBm

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:	KIv
Comment:	Slotted Wave Guide Antenna Standing

Full Spectrum

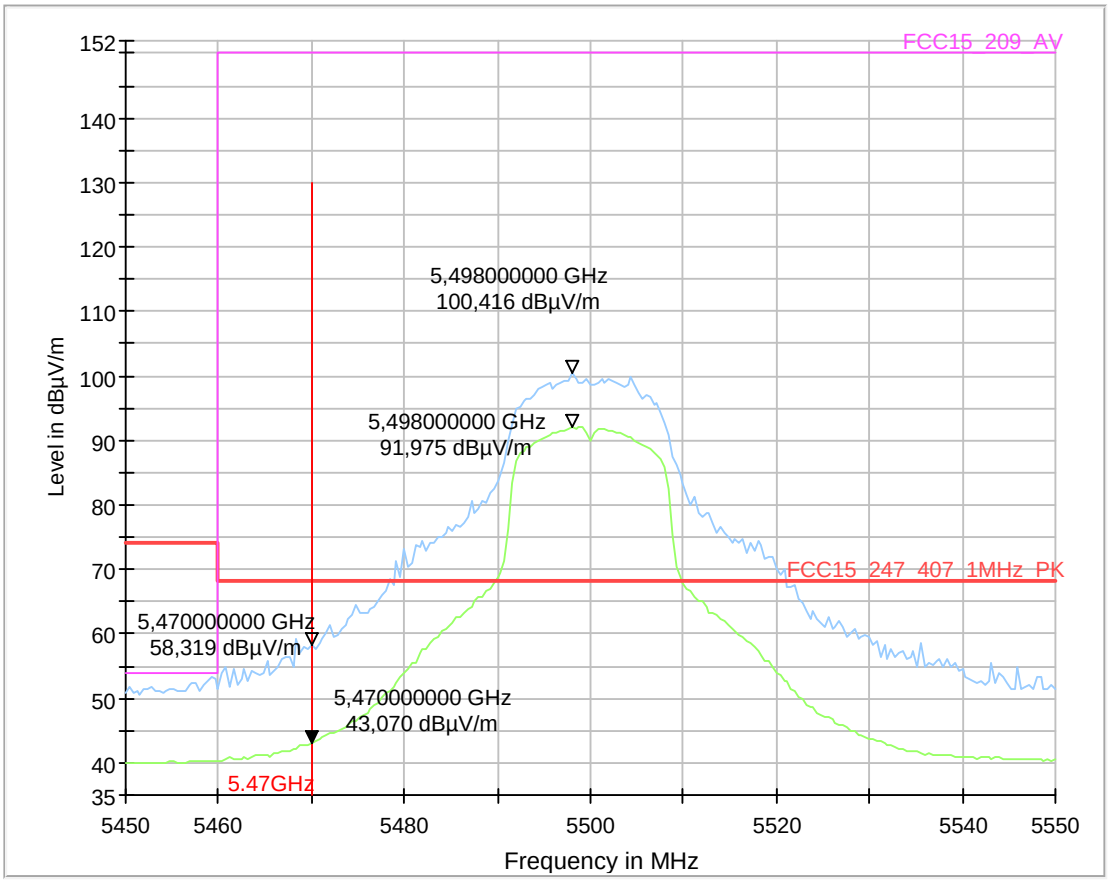


9.05_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch100-19.5dBm

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

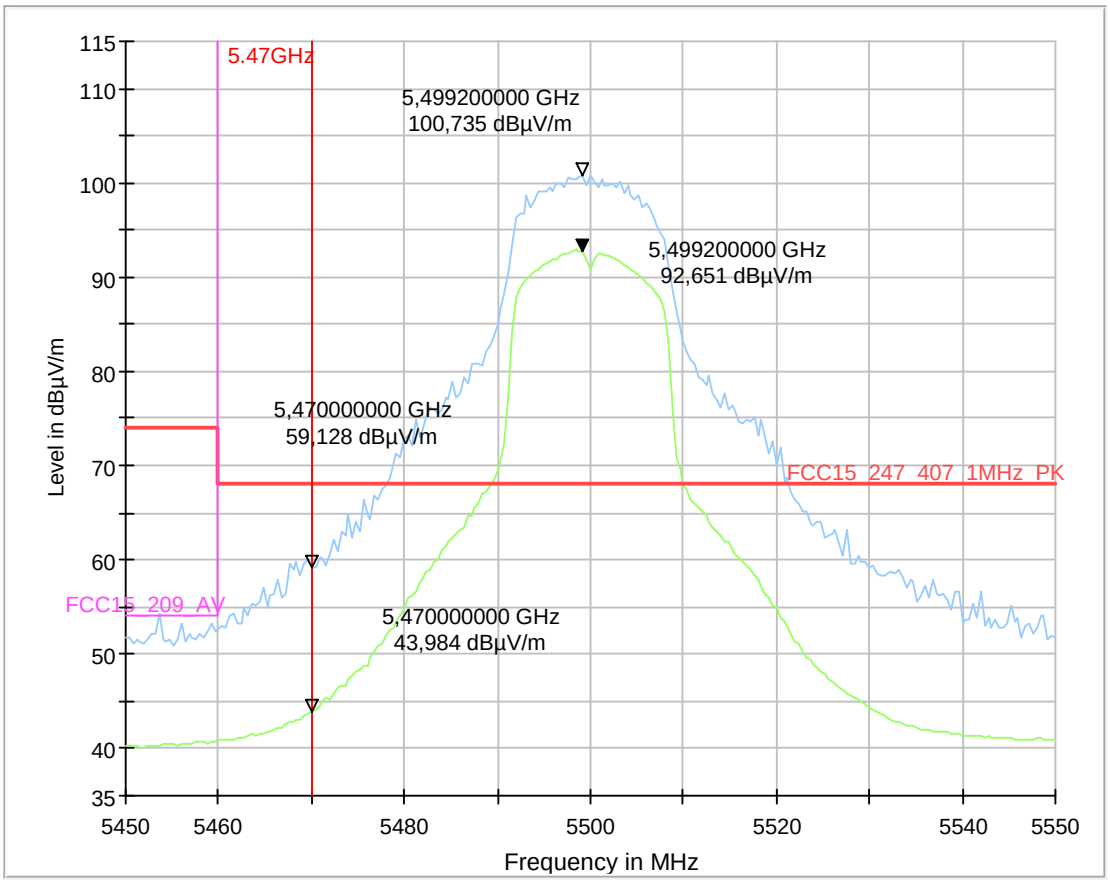


9.05_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch100-19.5dBm

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

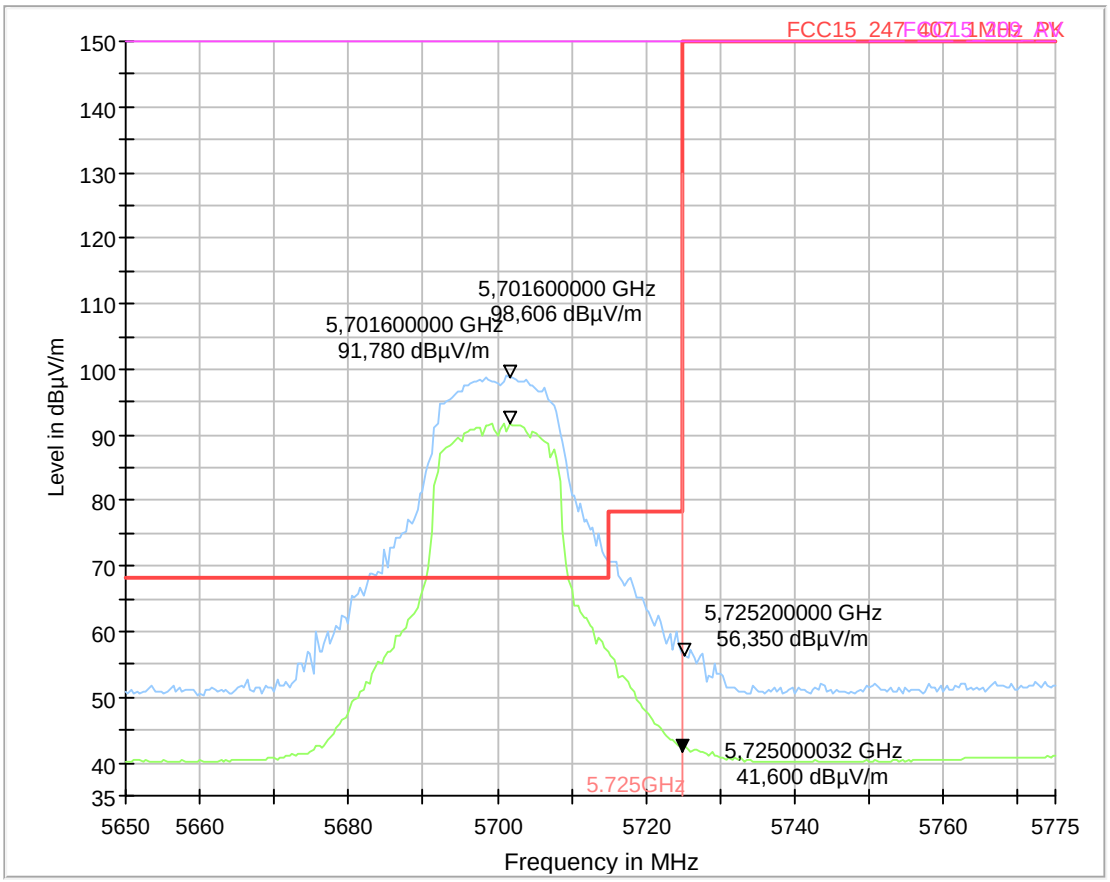


9.06_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch140-19.5dBm

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

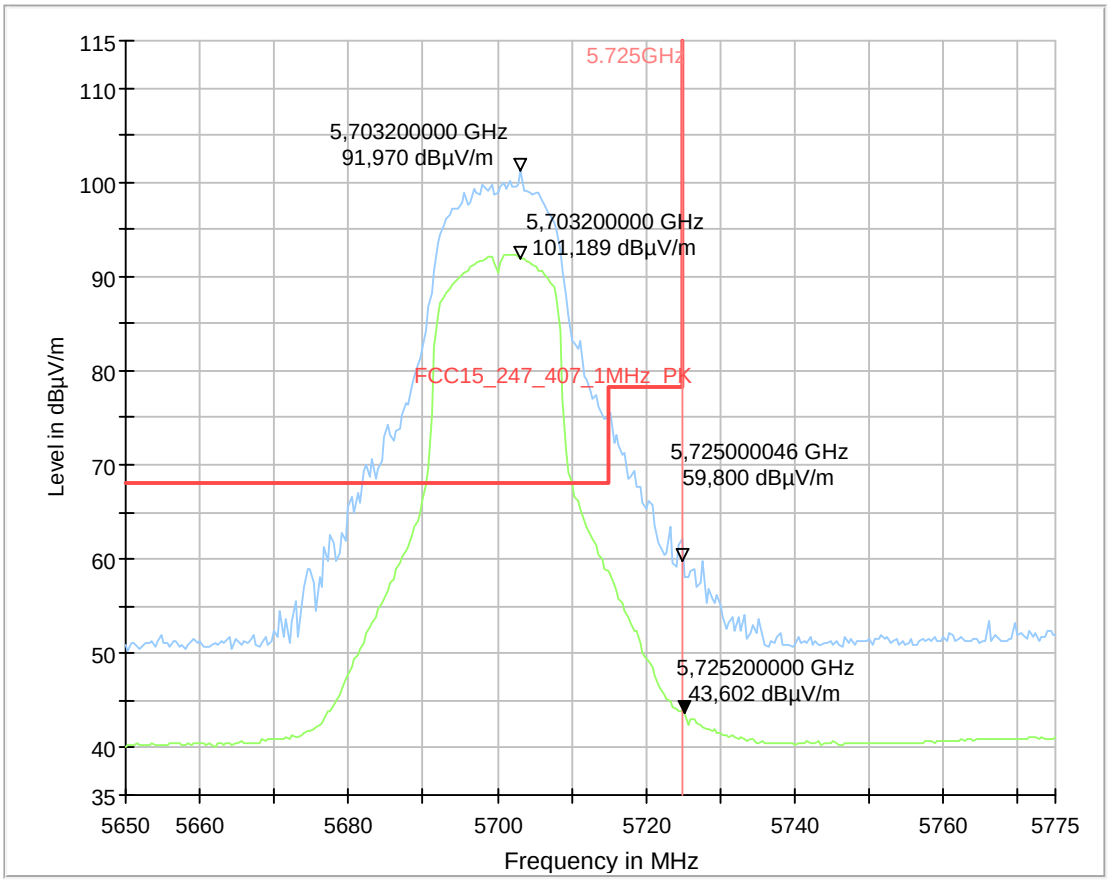


9.06_ BE High-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch140-19.5dBm

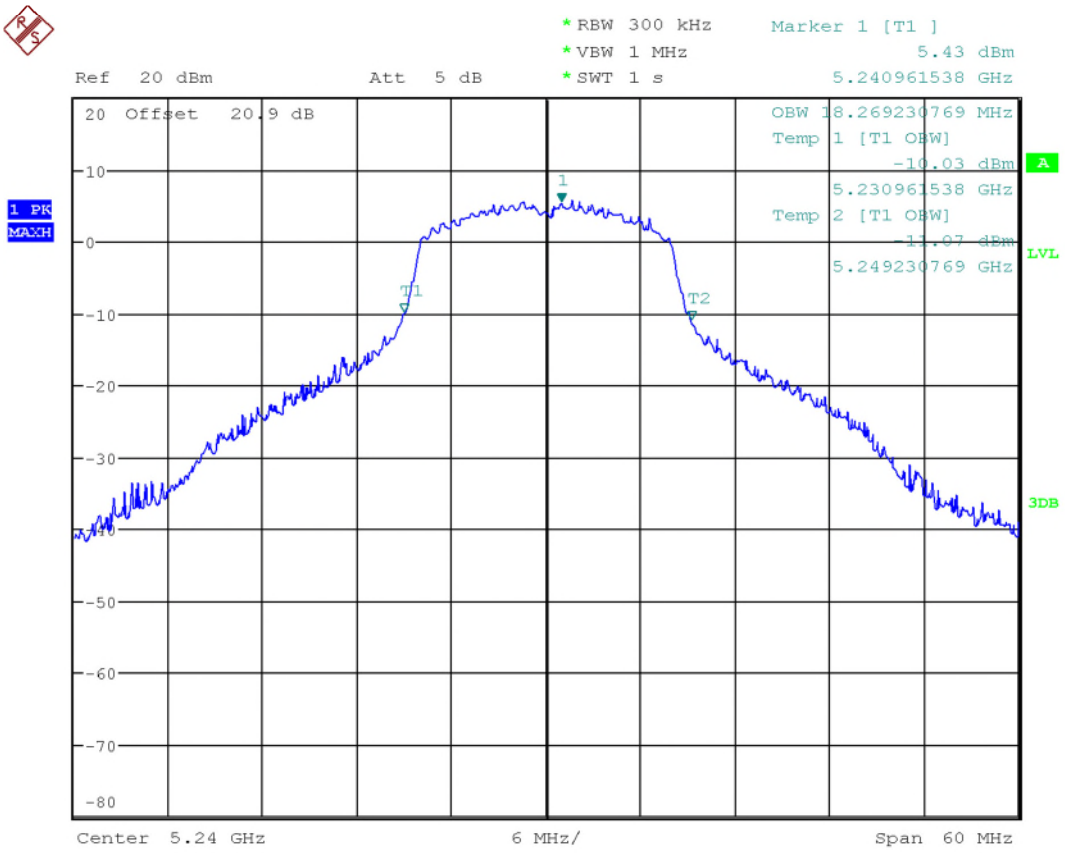
Common Information

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

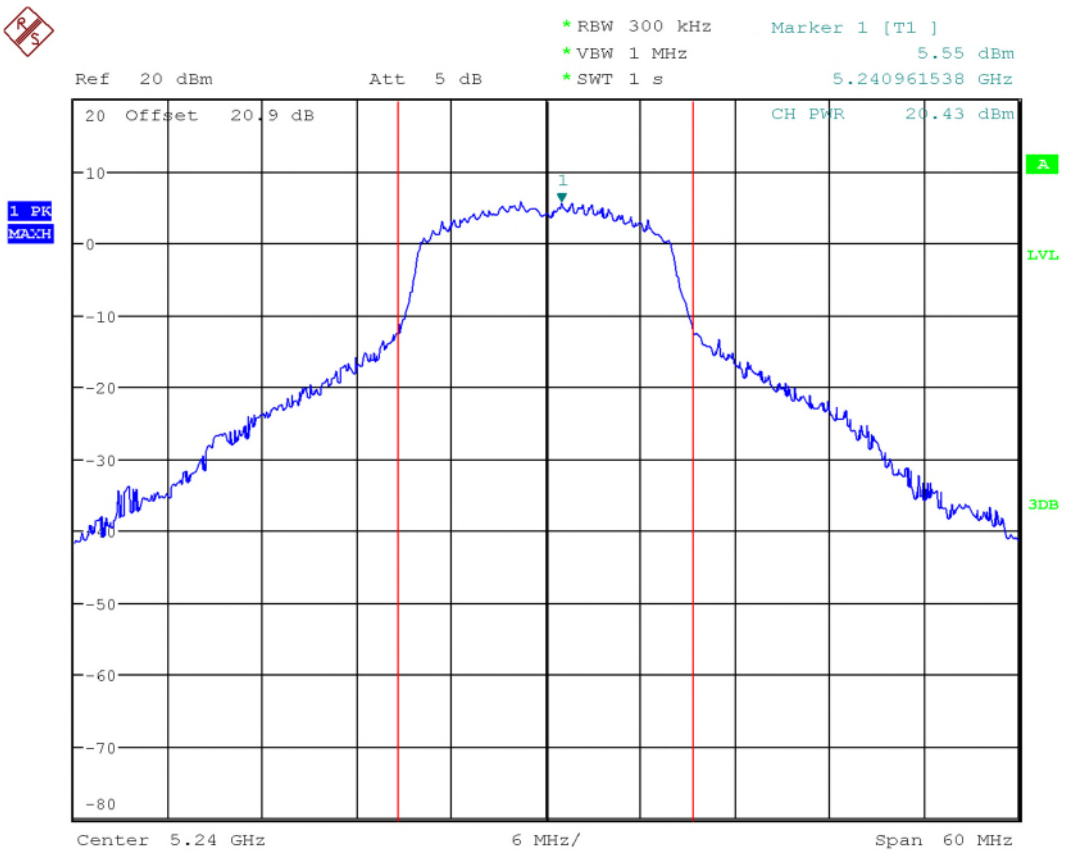


a-mode ISED Requirement



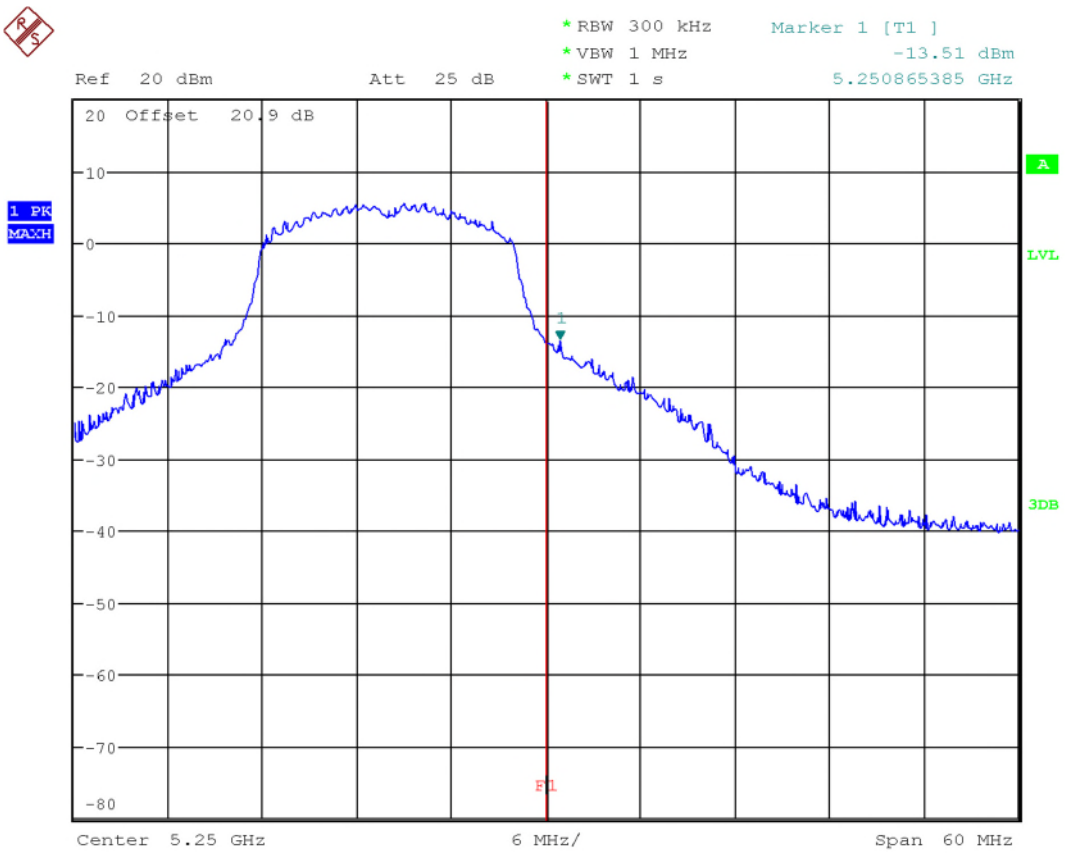
Date: 18.SEP.2018 13:16:35

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

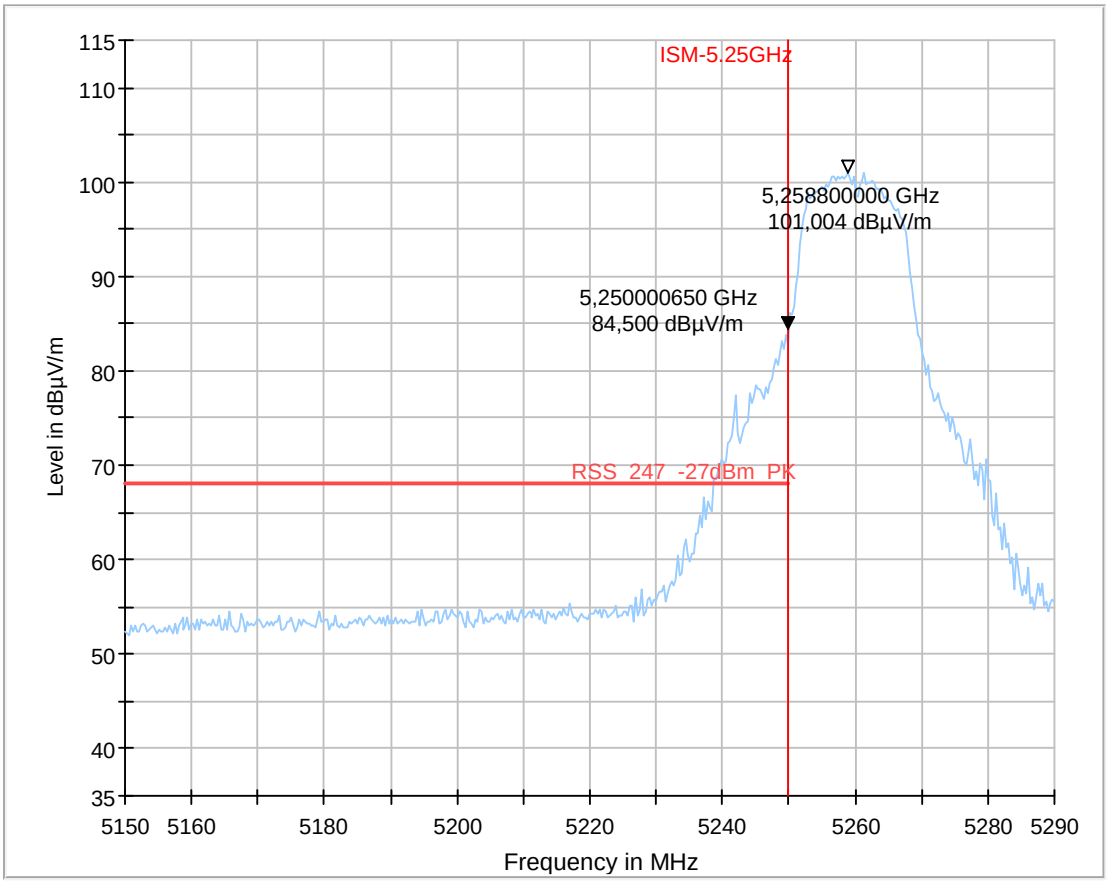
30.03_ BE_26dB-aMode-20MHz-6Mbit-Ch48-19.5dBm

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:	KIv
Comment:	Laying

Full Spectrum

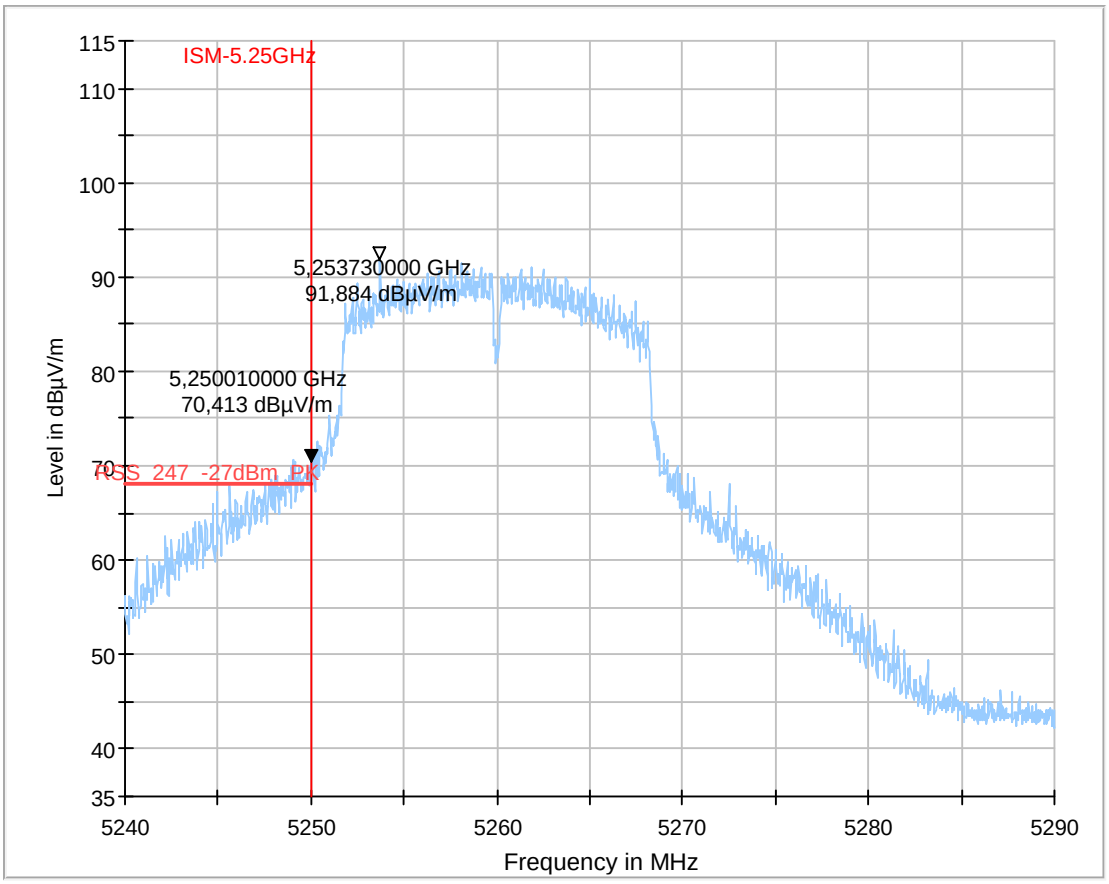


9.03_ BE Low-CCM-IO-ETH-aMode-20MHz-6Mbit-Ch52-19.5dBm

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:	KIv
Comment:	Standing

Full Spectrum



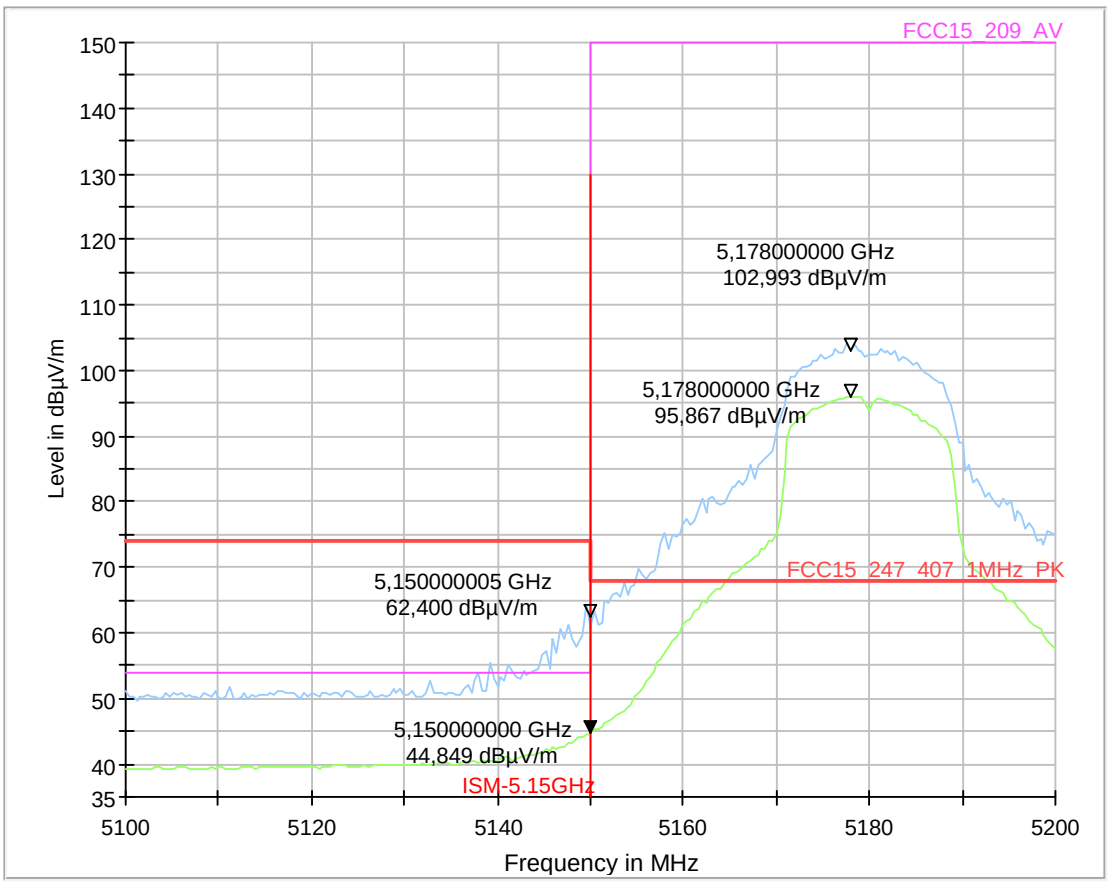
1.8.2. n-mode HT20

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

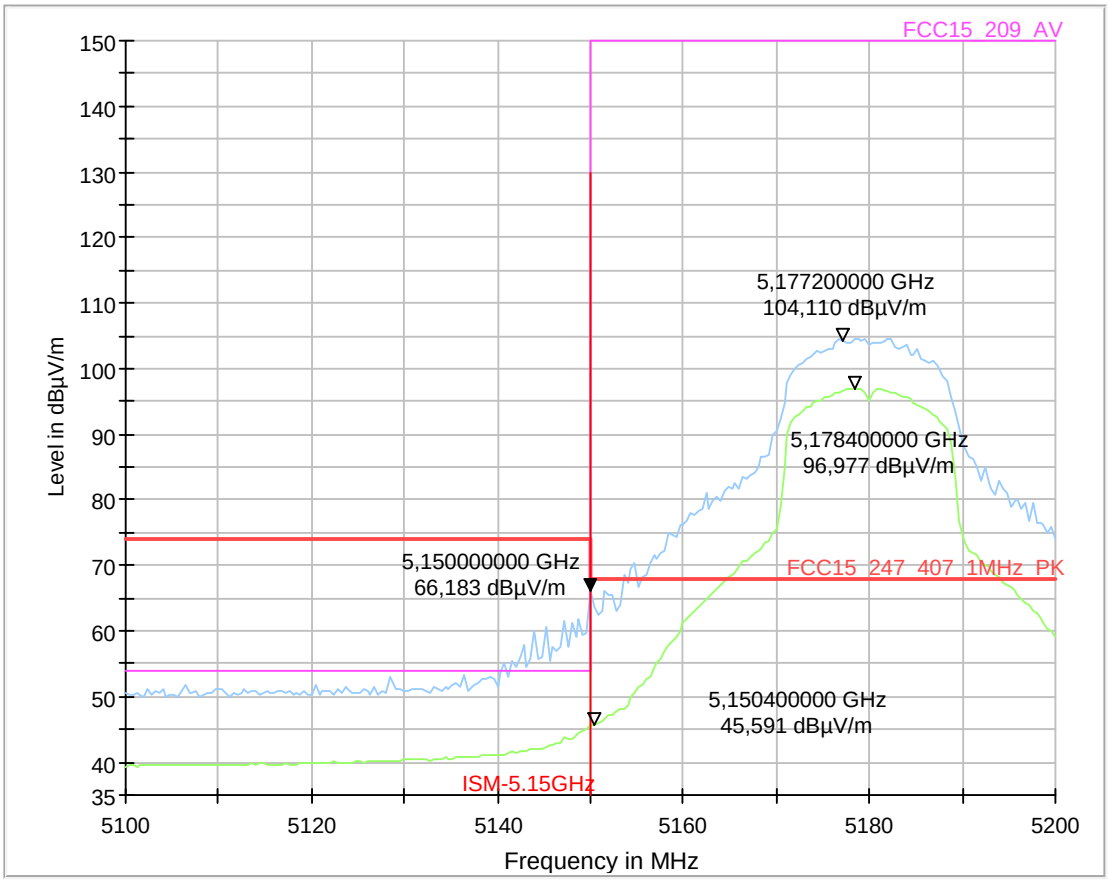


9.11_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch36-19.5dBm

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:	KIv
EUT.	Slotted Wave Guide Antenna Standing

Full Spectrum

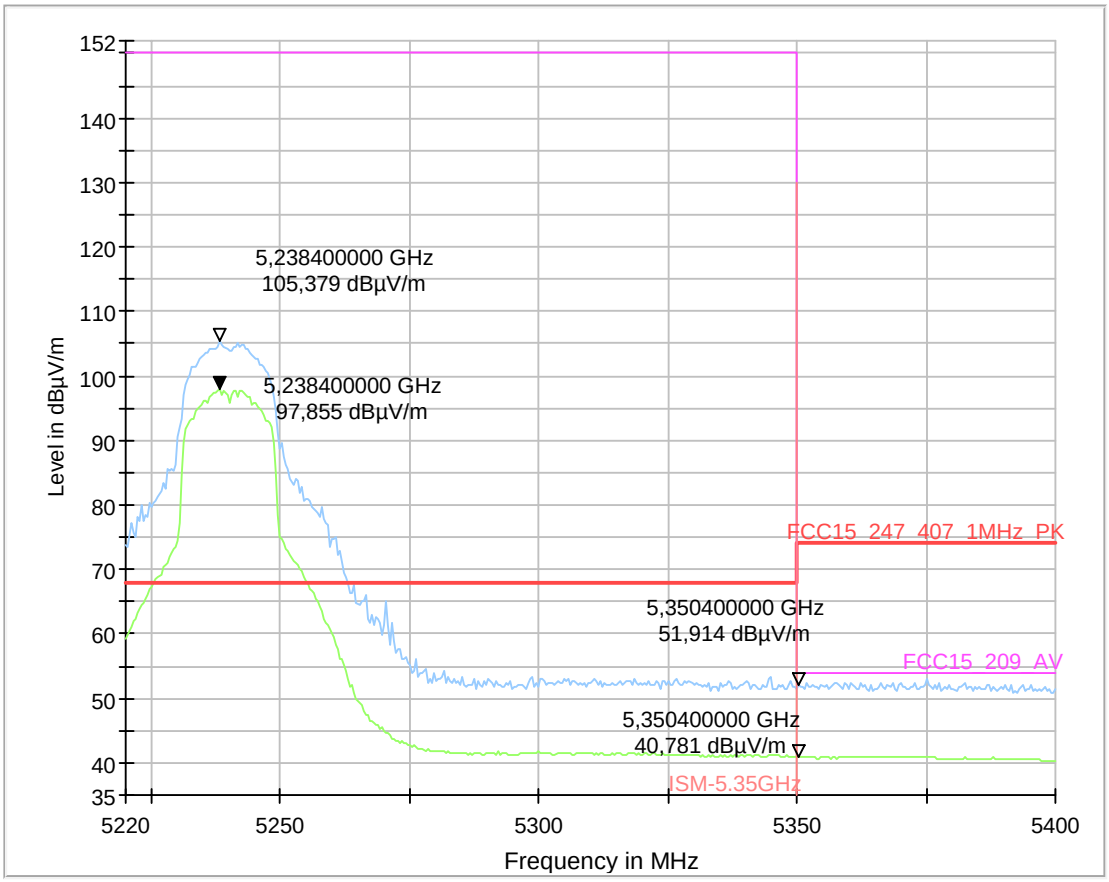


9.12_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch48-19.5dBm

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

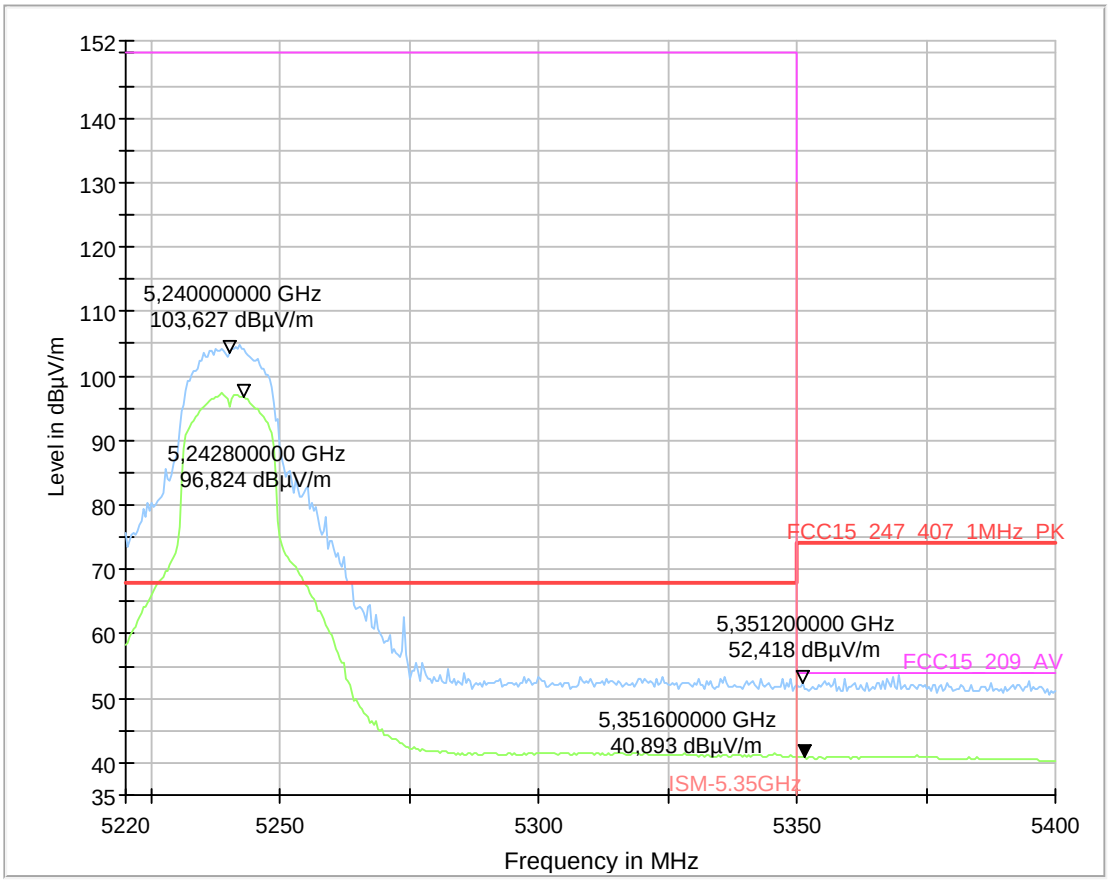


9.12_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch48-19.5dBm

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:	KIv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

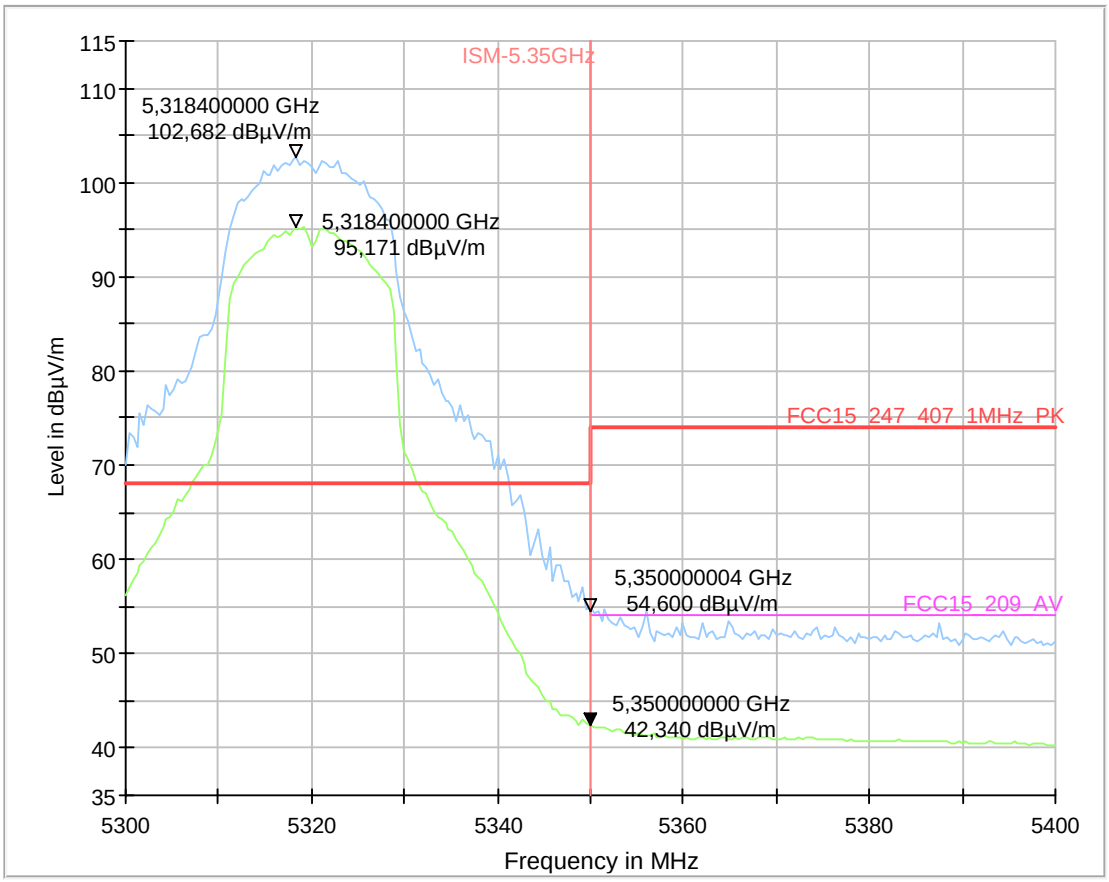


9.14_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch64-19.5dBm

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

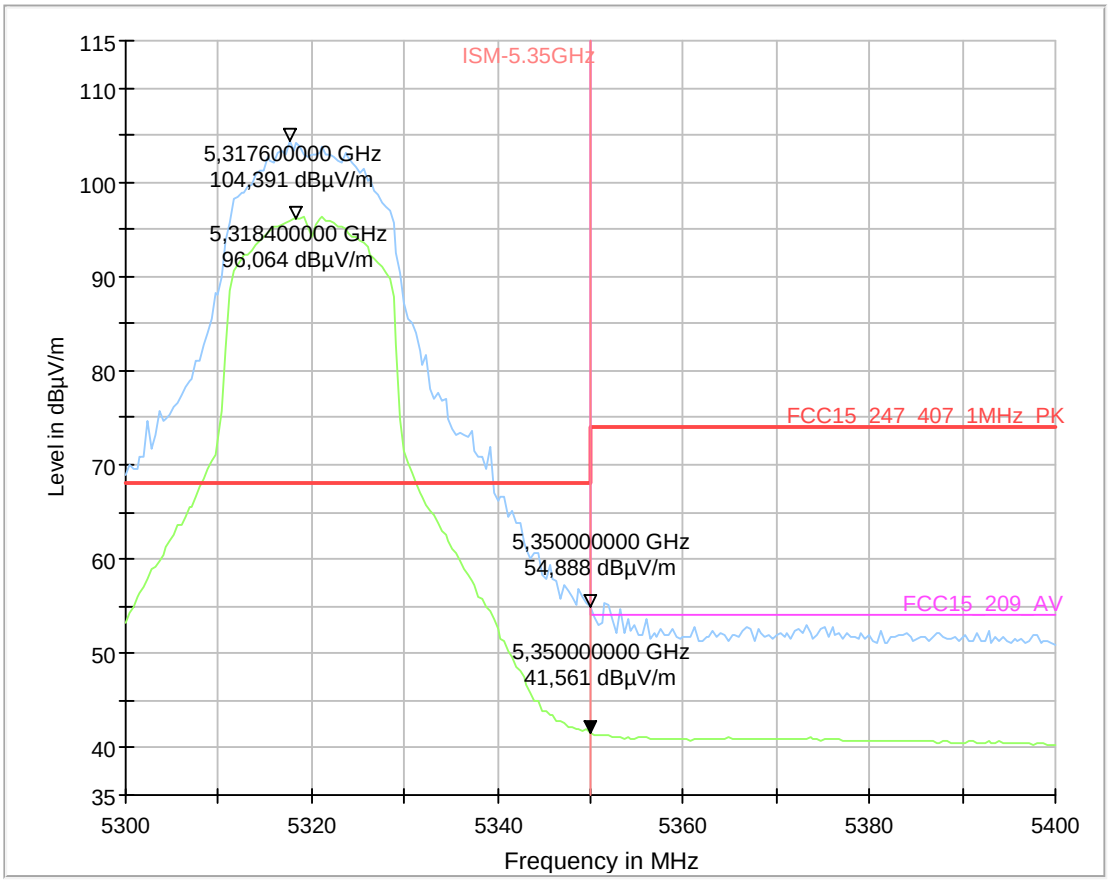


9.14_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch64-19.5dBm

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:	KIv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

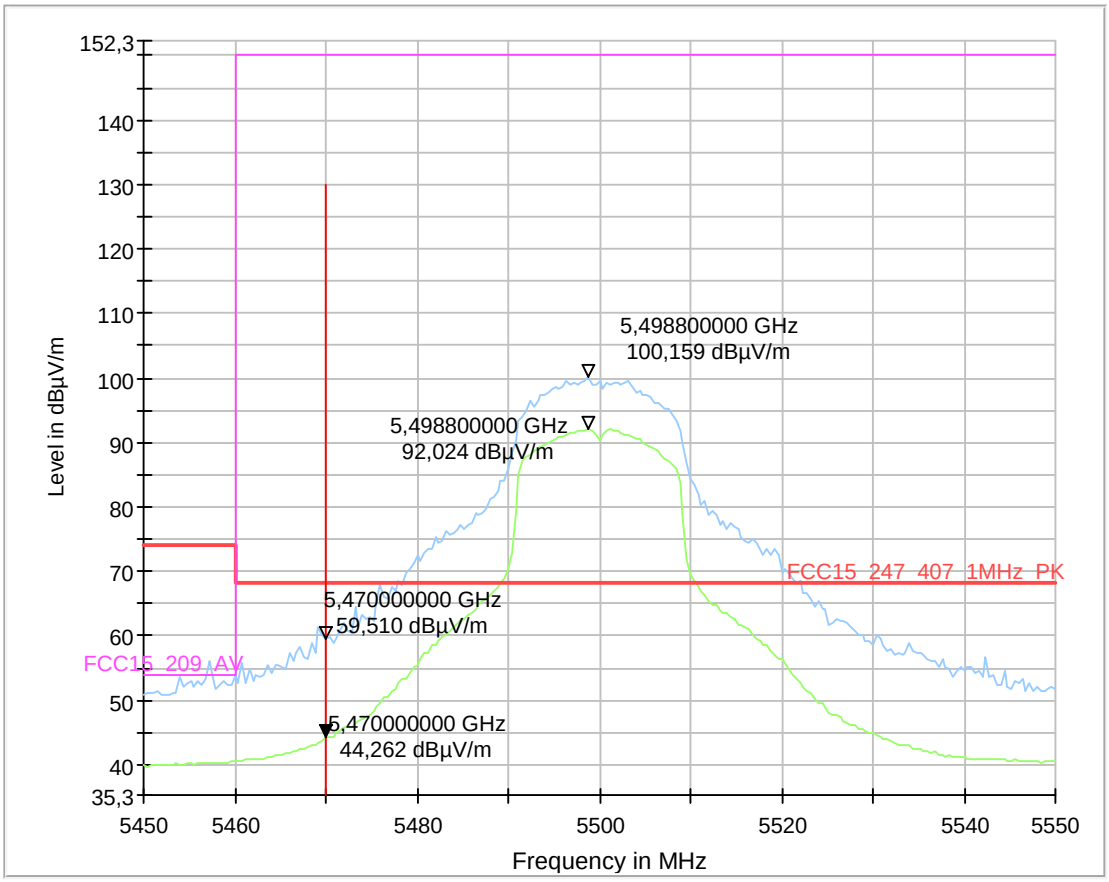


9.15_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch100-19.5dBm

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

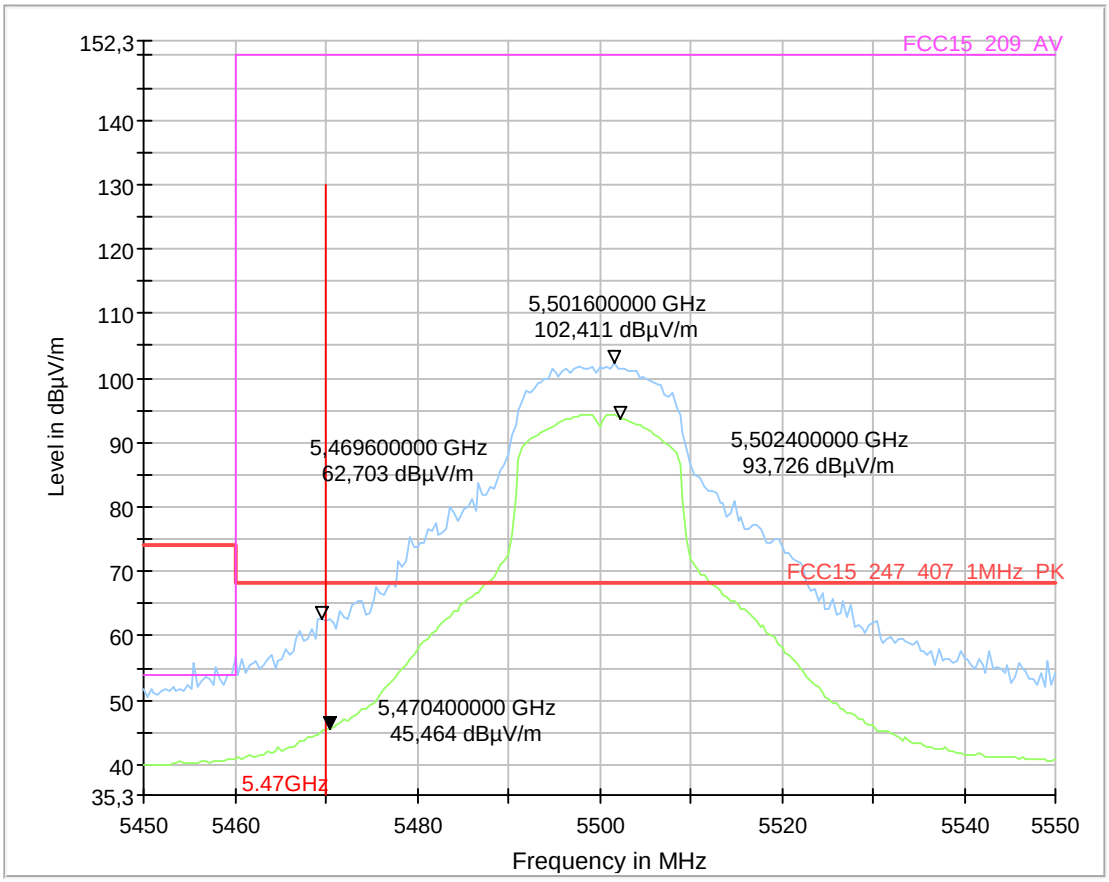


9.15_ BE Low-CCM-IO-ETH-nMode-20MHz-MCS0-Ch100-19.5dBm

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:	KIv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

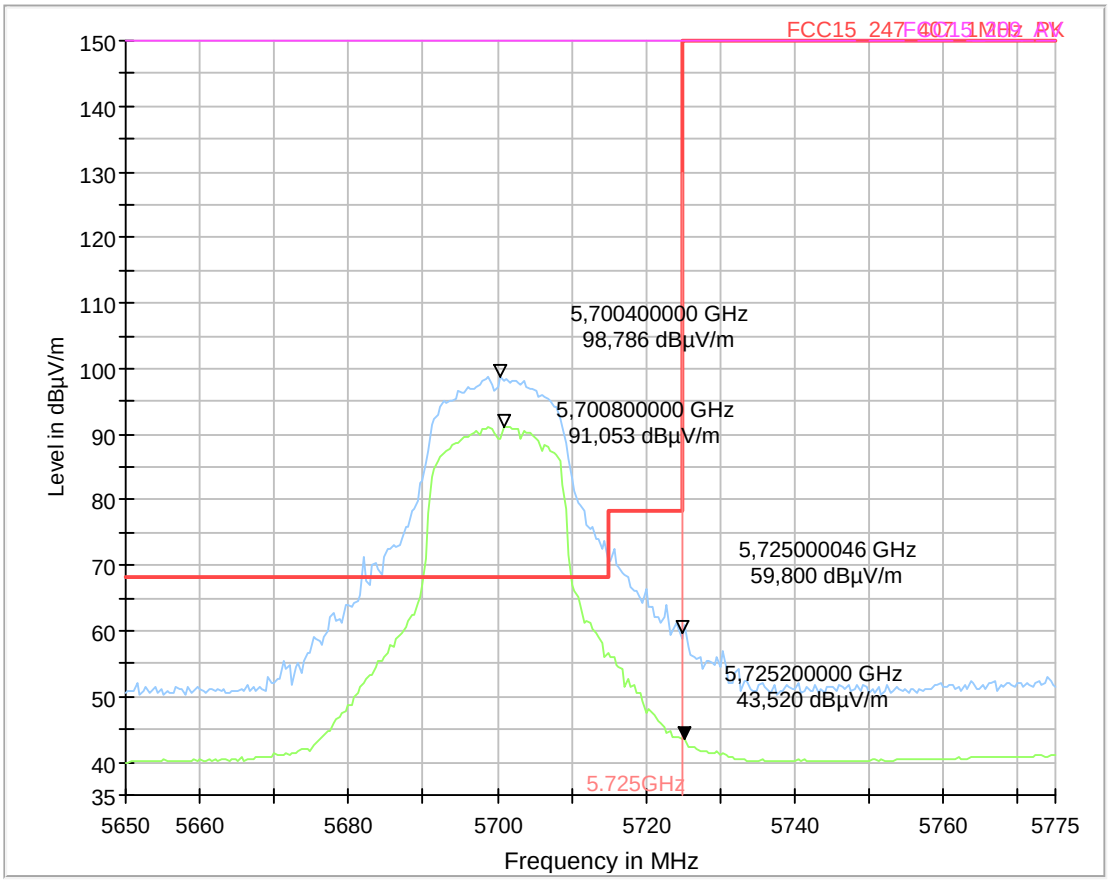


9.16_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch140-19.5dBm

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

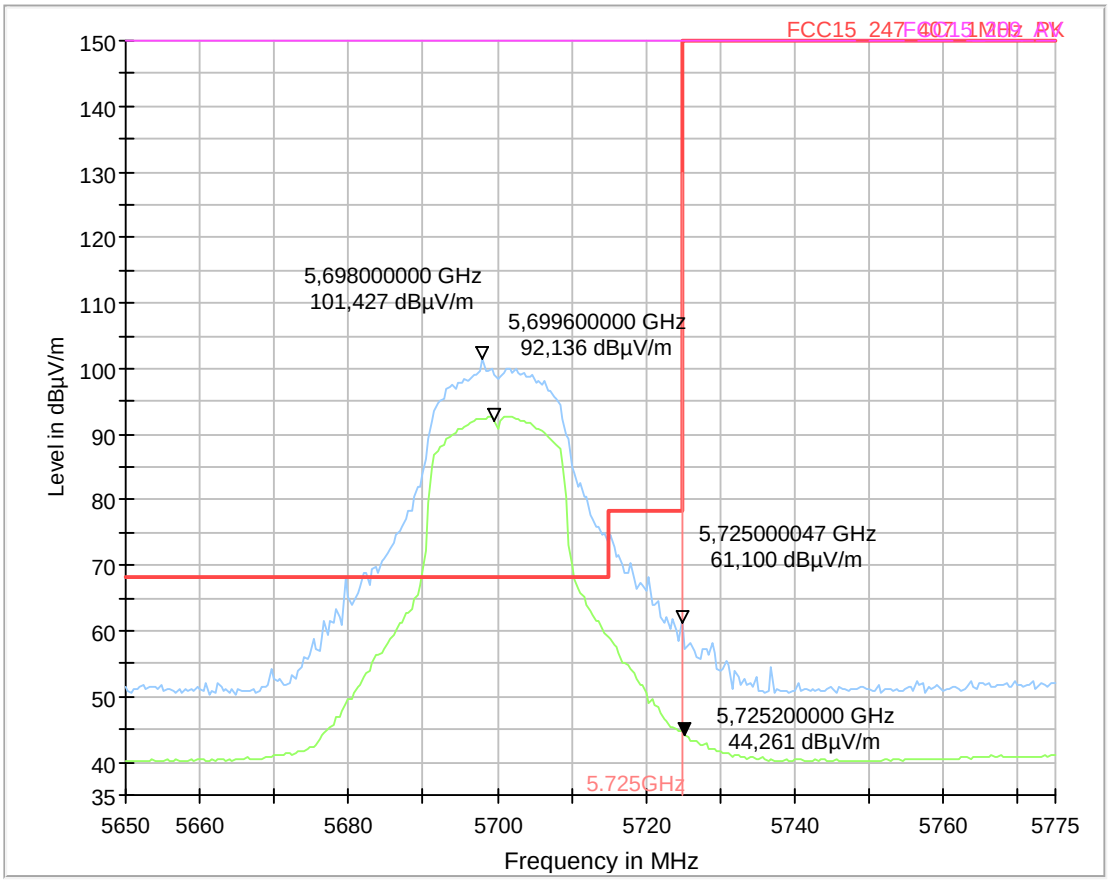


9.16_ BE High-CCM-IO-ETH-nMode-20MHz-MCS0-Ch140-19.5dBm

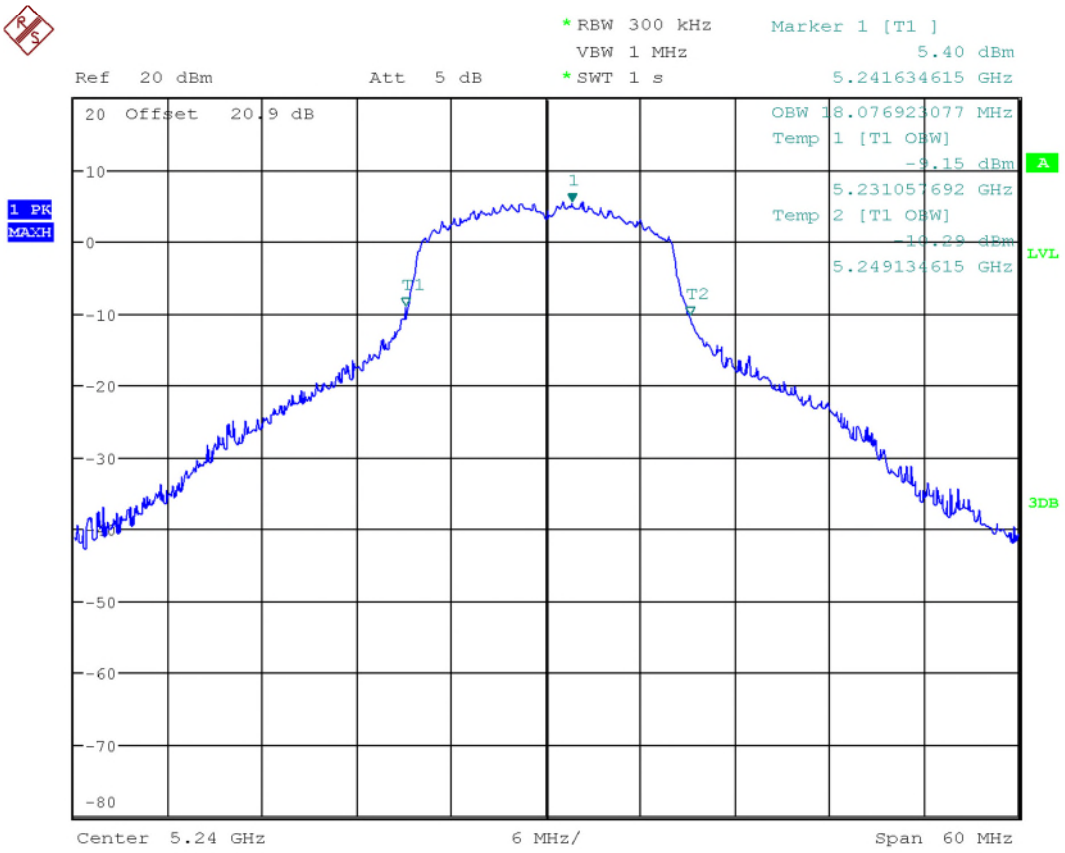
Common Information

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:	KIv
EUT:	Slotted Wave Guide Antenna Standing

Full Spectrum

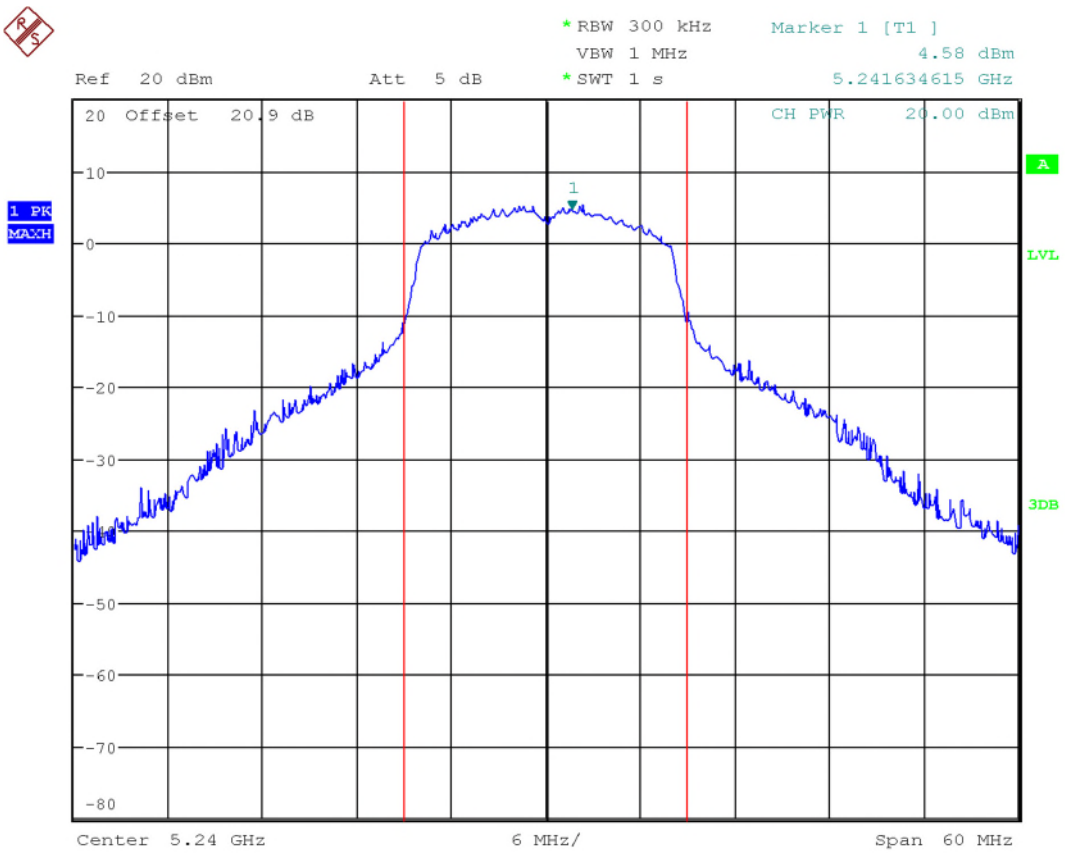


1.8.3. n-mode HT20 ISED Requirement



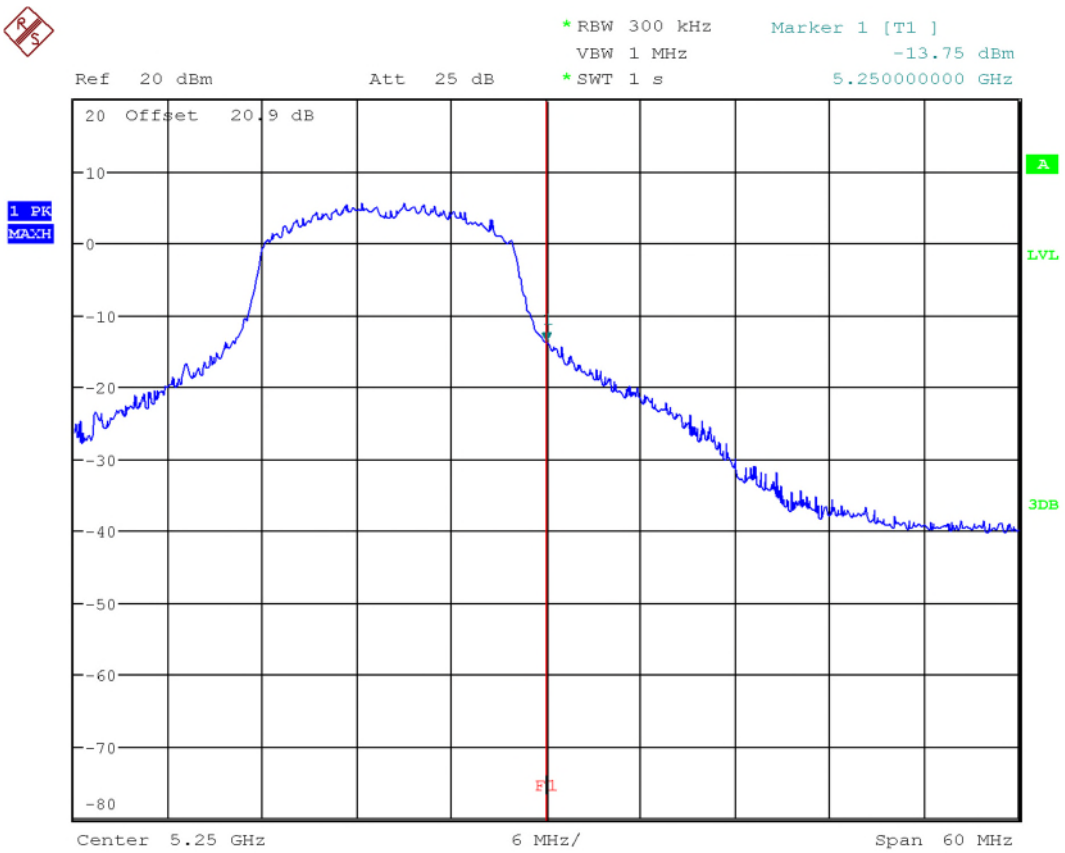
Date: 18.SEP.2018 14:35:05

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

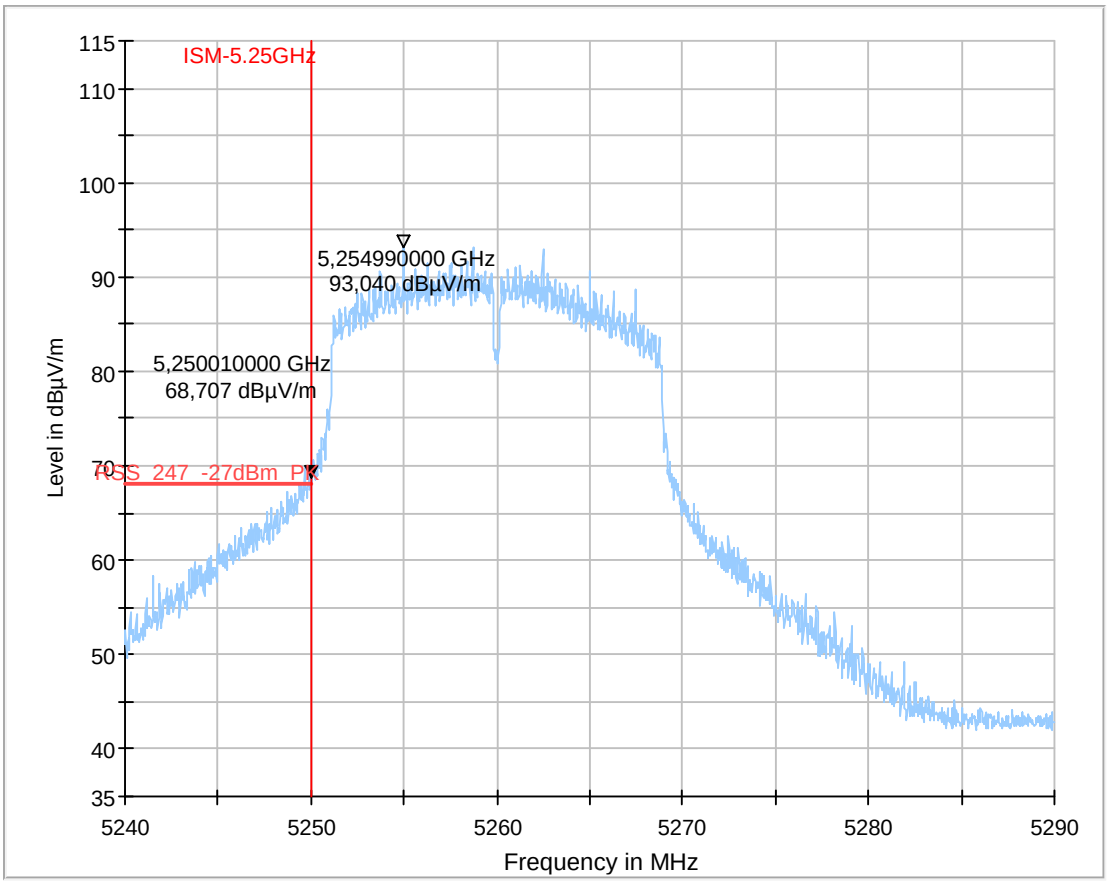
30.13_ BE_26dB-nMode-20MHz-MCS0-Ch48-19.5dBm

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:	KIv
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:	KIv
EUT:	Laying

Full Spectrum