

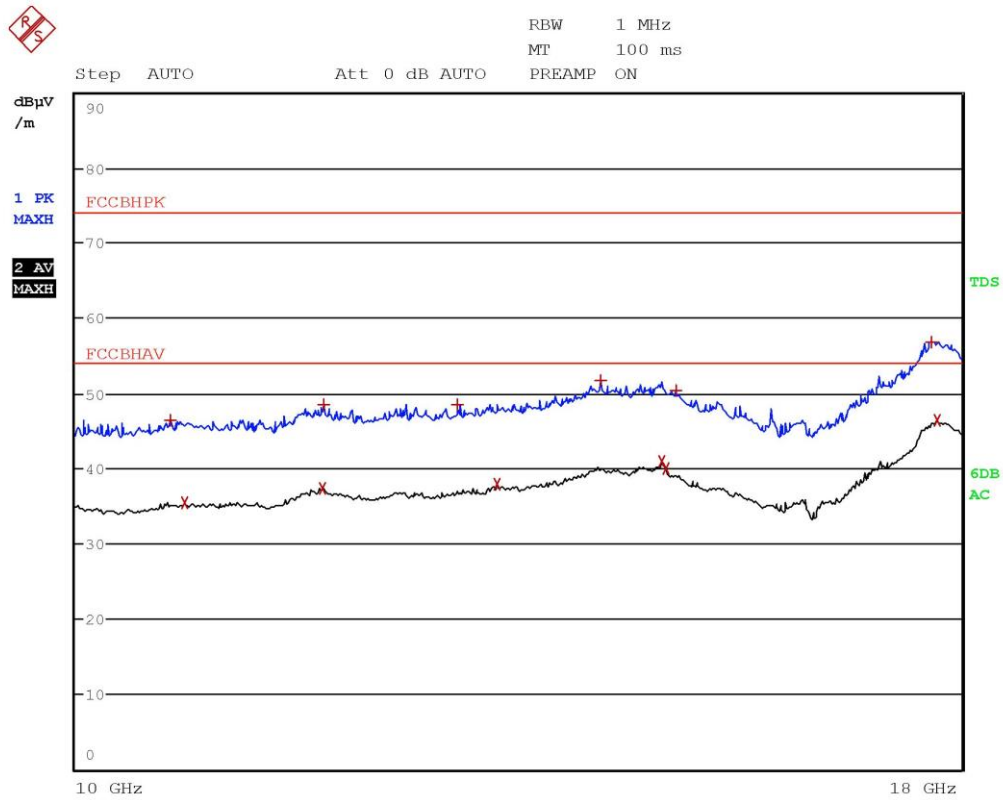
Segalla 19090517

CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
1 Max Peak	4.6296 GHz	45.84	-28.13
2 Average	4.6584 GHz	34.21	-19.76
2 Average	4.802 GHz	43.83	-10.14
1 Max Peak	4.8024 GHz	49.11	-24.86
1 Max Peak	6.1392 GHz	48.96	-25.01
2 Average	6.1556 GHz	36.72	-17.25
1 Max Peak	6.856 GHz	49.49	-24.48
2 Average	7.2032 GHz	39.86	-14.11
1 Max Peak	7.3124 GHz	50.12	-23.86
2 Average	8.562 GHz	42.04	-11.93
1 Max Peak	8.5796 GHz	52.86	-21.11
2 Average	9.1256 GHz	43.67	-10.30
1 Max Peak	9.1856 GHz	55.82	-18.15

Segalla 19090517



Segalla 19090518

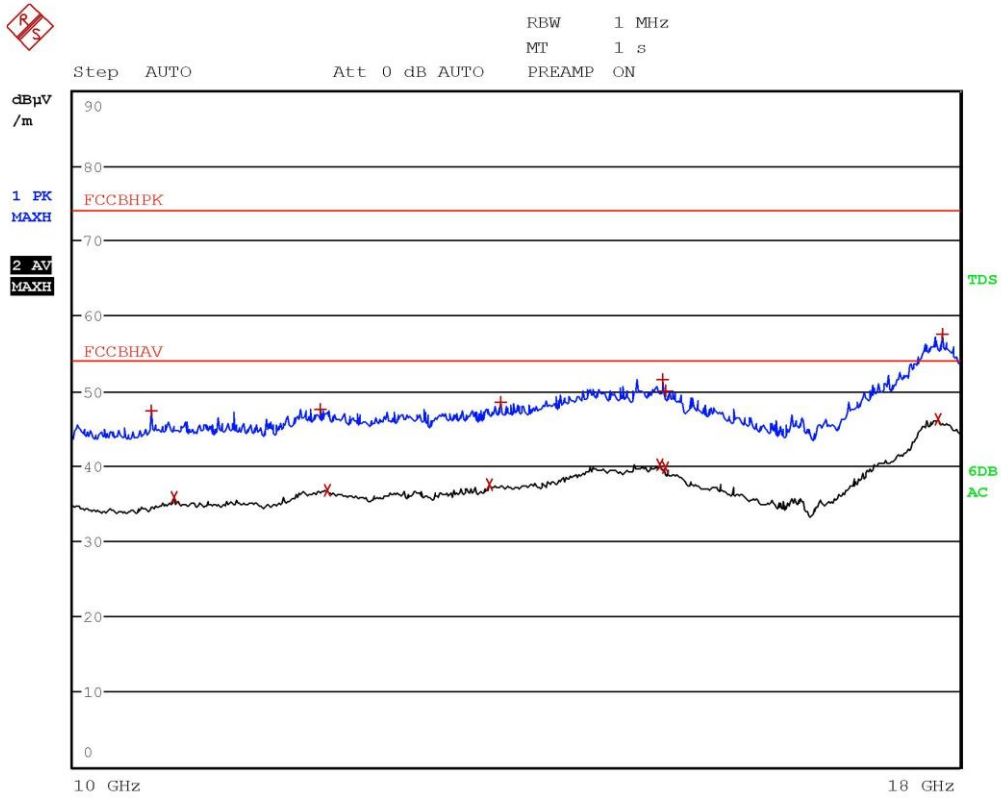
CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
1 Max Peak	10.6548 GHz	46.44	-27.53
2 Average	10.7472 GHz	35.52	-18.45
2 Average	11.7844 GHz	37.38	-16.60
1 Max Peak	11.7928 GHz	48.42	-25.55
1 Max Peak	12.8812 GHz	48.50	-25.47
2 Average	13.222 GHz	37.86	-16.11
1 Max Peak	14.1648 GHz	51.62	-22.35
2 Average	14.7612 GHz	40.87	-13.10
2 Average	14.7992 GHz	39.93	-14.04
1 Max Peak	14.8964 GHz	50.45	-23.52
1 Max Peak	17.6532 GHz	56.88	-17.09
2 Average	17.7088 GHz	46.38	-7.59

Segalla 19090518

CMC Centro Misure Compatibilità S.r.l.



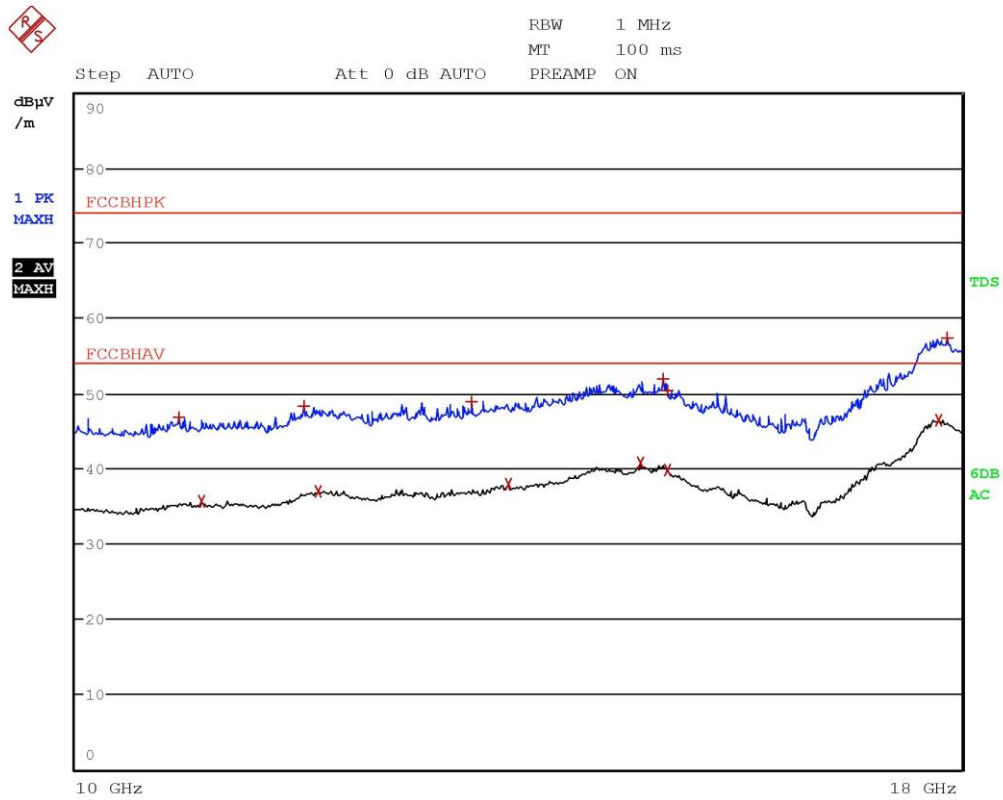
Segalla 19090519

CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
1 Max Peak	10.5332 GHz	47.43	-26.54
2 Average	10.6868 GHz	35.74	-18.23
1 Max Peak	11.7828 GHz	47.57	-26.40
2 Average	11.8368 GHz	36.78	-17.19
2 Average	13.1792 GHz	37.45	-16.52
1 Max Peak	13.2772 GHz	48.53	-25.45
2 Average	14.7556 GHz	40.23	-13.74
1 Max Peak	14.7872 GHz	51.49	-22.48
1 Max Peak	14.8144 GHz	50.04	-23.93
2 Average	14.8144 GHz	39.83	-14.14
2 Average	17.7428 GHz	46.23	-7.74
1 Max Peak	17.7944 GHz	57.50	-16.47

Segalla 19090519



Segalla 19090520

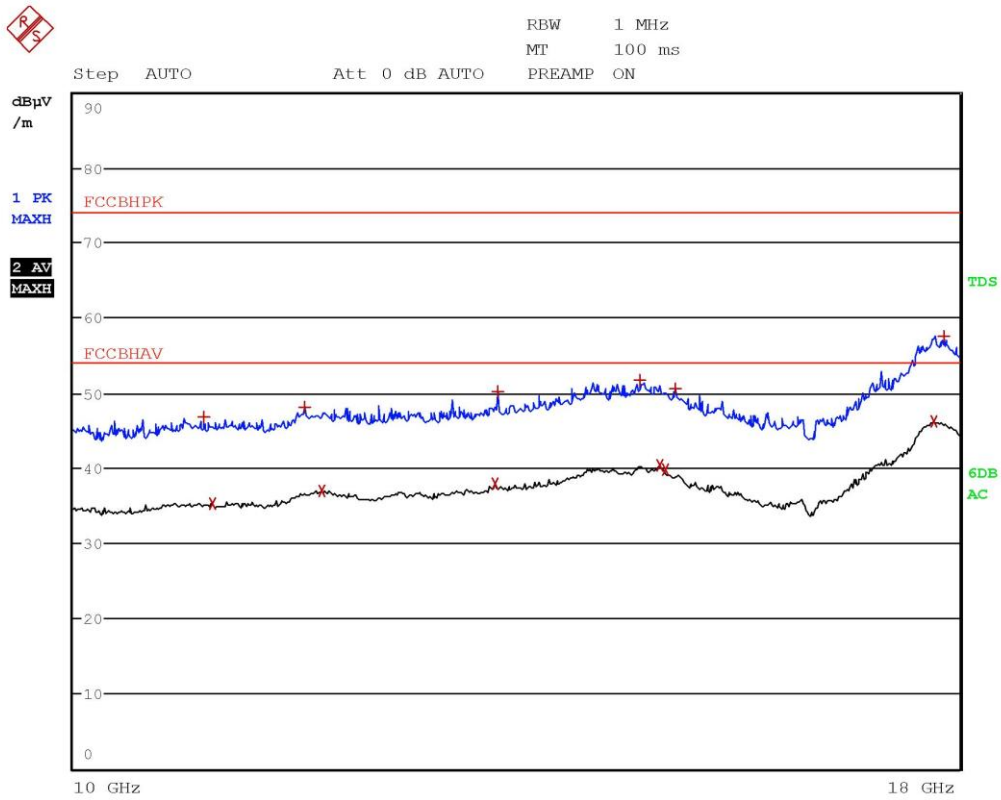
CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
1 Max Peak	10.712 GHz	46.72	-27.25
2 Average	10.8716 GHz	35.55	-18.42
1 Max Peak	11.6416 GHz	48.28	-25.69
2 Average	11.7512 GHz	36.96	-17.01
1 Max Peak	13.004 GHz	48.93	-25.04
2 Average	13.3232 GHz	37.81	-16.16
2 Average	14.5544 GHz	40.72	-13.25
1 Max Peak	14.764 GHz	51.84	-22.14
2 Average	14.804 GHz	39.76	-14.21
1 Max Peak	14.8076 GHz	50.41	-23.56
2 Average	17.7268 GHz	46.43	-7.54
1 Max Peak	17.8316 GHz	57.47	-16.50

Segalla 19090520

CMC Centro Misure Compatibilità S.r.l.



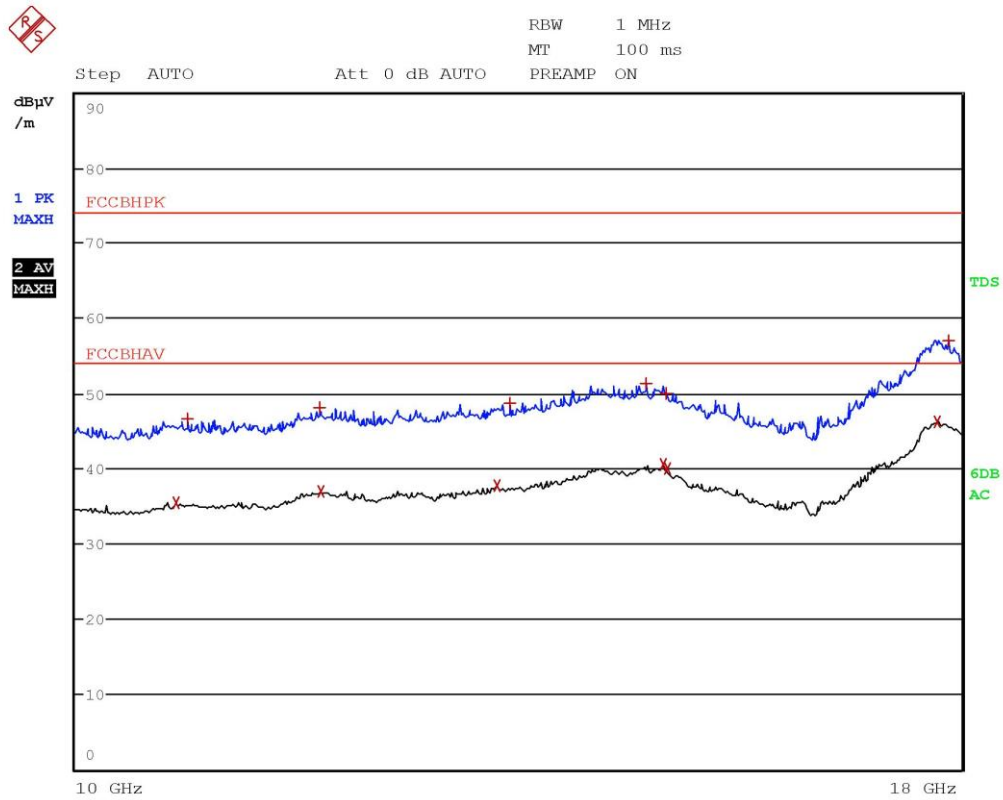
Segalla 19090521

CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Max Peak	10.9016 GHz	46.76	-27.22
2 Average	10.962 GHz	35.33	-18.64
1 Max Peak	11.662 GHz	48.11	-25.86
2 Average	11.7876 GHz	36.99	-16.98
2 Average	13.2272 GHz	37.90	-16.07
1 Max Peak	13.2532 GHz	50.17	-23.80
1 Max Peak	14.556 GHz	51.66	-22.31
2 Average	14.7548 GHz	40.29	-13.69
2 Average	14.8088 GHz	39.79	-14.19
1 Max Peak	14.9132 GHz	50.53	-23.44
2 Average	17.7032 GHz	46.23	-7.74
1 Max Peak	17.806 GHz	57.58	-16.39

Segalla 19090521



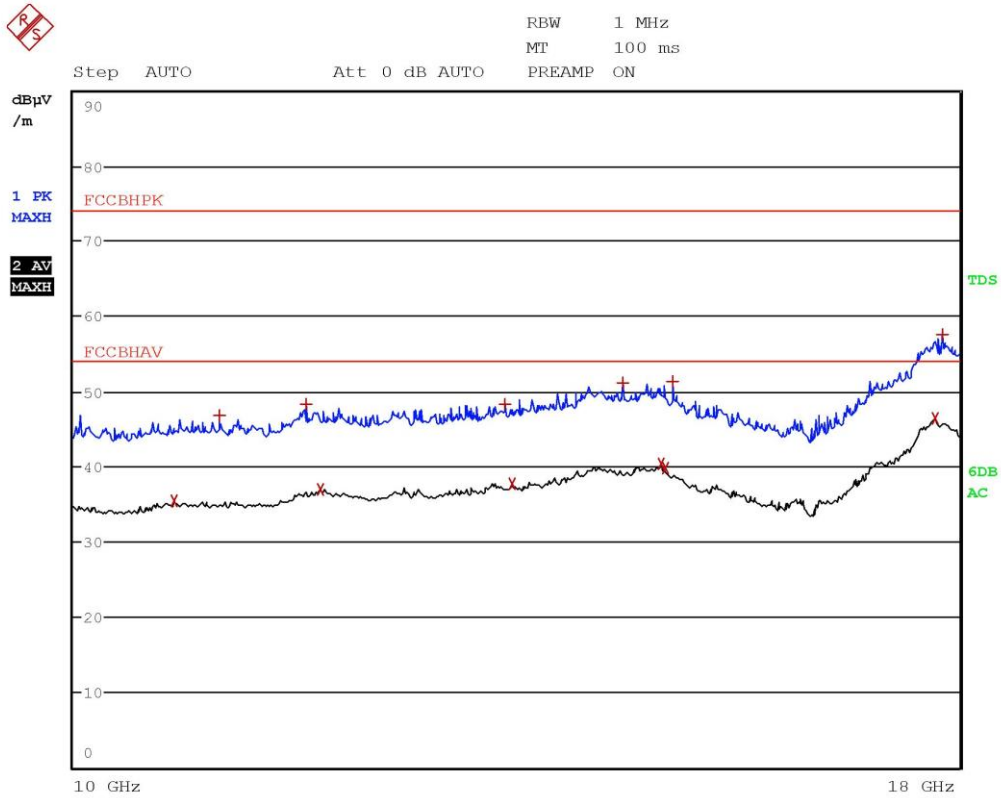
Segalla 19090522

CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
2 Average	10.6884 GHz	35.44	-18.53
1 Max Peak	10.7772 GHz	46.69	-27.29
1 Max Peak	11.7568 GHz	48.15	-25.82
2 Average	11.7744 GHz	37.02	-16.95
2 Average	13.2288 GHz	37.63	-16.34
1 Max Peak	13.3428 GHz	48.59	-25.38
1 Max Peak	14.5992 GHz	51.33	-22.64
2 Average	14.7648 GHz	40.50	-13.47
1 Max Peak	14.8004 GHz	50.06	-23.91
2 Average	14.806 GHz	40.01	-13.96
2 Average	17.716 GHz	46.26	-7.71
1 Max Peak	17.8412 GHz	57.00	-16.97

Segalla 19090522



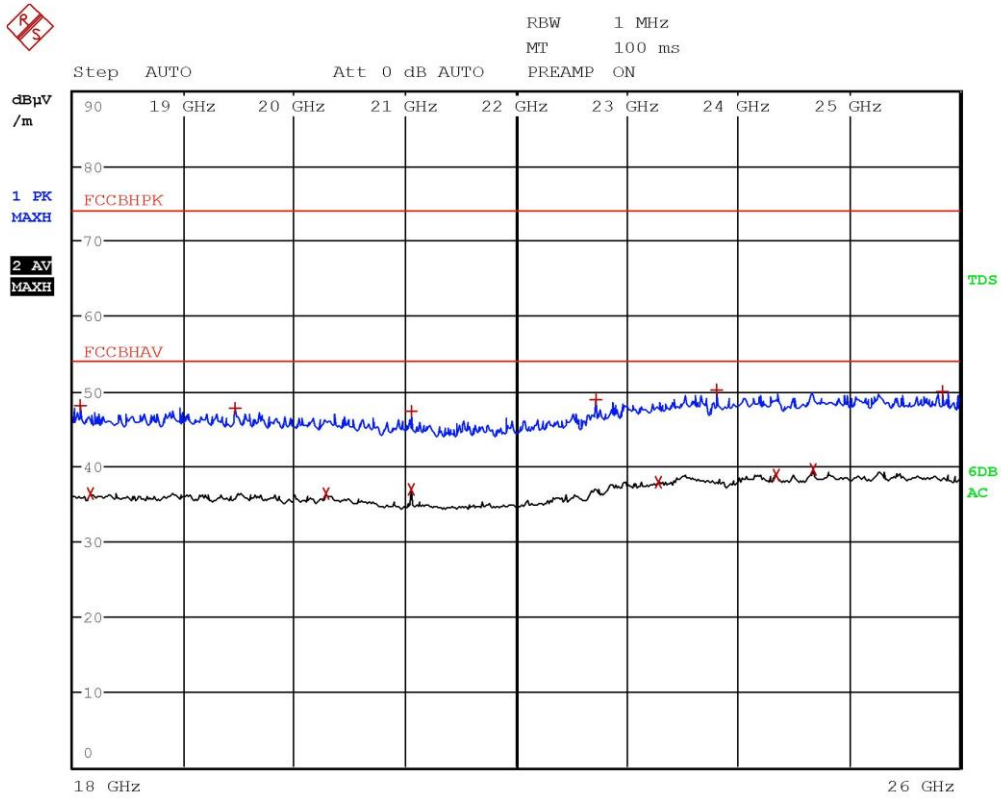
Segalla 19090523

CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
2 Average	10.6868 GHz	35.45	-18.53
1 Max Peak	11.0152 GHz	46.83	-27.14
1 Max Peak	11.6696 GHz	48.33	-25.64
2 Average	11.7824 GHz	37.03	-16.94
1 Max Peak	13.3092 GHz	48.36	-25.61
2 Average	13.3752 GHz	37.76	-16.21
1 Max Peak	14.4016 GHz	51.13	-22.84
2 Average	14.7712 GHz	40.36	-13.61
2 Average	14.804 GHz	39.88	-14.09
1 Max Peak	14.882 GHz	51.27	-22.70
2 Average	17.7068 GHz	46.41	-7.56
1 Max Peak	17.7932 GHz	57.50	-16.47

Segalla 19090523



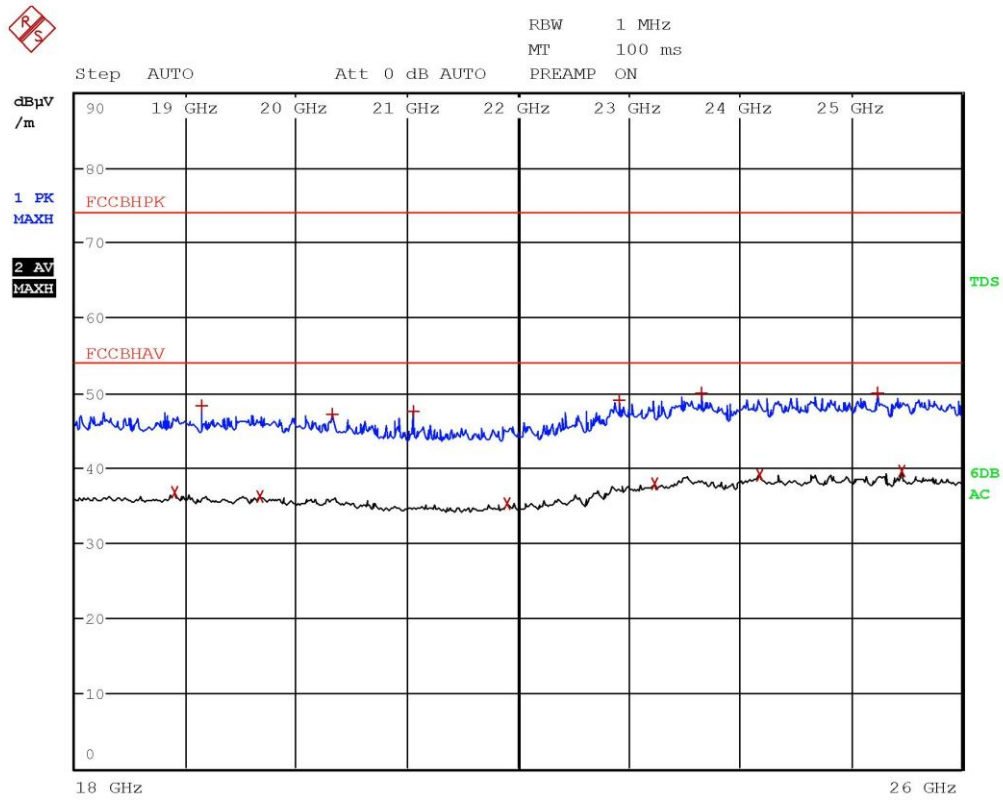
Segalla 19090524

CMC Centro Misure Compatibilità S.r.l.



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
1 Max Peak	18.0692 GHz	48.10	-25.87
2 Average	18.1596 GHz	36.42	-17.55
1 Max Peak	19.4644 GHz	47.81	-26.16
2 Average	20.2756 GHz	36.43	-17.54
1 Max Peak	21.0524 GHz	47.34	-26.63
2 Average	21.0524 GHz	36.89	-17.09
1 Max Peak	22.7164 GHz	48.94	-25.03
2 Average	23.282 GHz	37.97	-16.00
1 Max Peak	23.8052 GHz	50.29	-23.68
2 Average	24.3516 GHz	38.91	-15.06
2 Average	24.6812 GHz	39.53	-14.45
1 Max Peak	25.852 GHz	50.03	-23.94

Segalla 19090524



Segalla 19090525



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL d μ V/m	DELTA LIMIT dB
2 Average	18.8944 GHz	36.76	-17.21
1 Max Peak	19.1468 GHz	48.33	-25.64
2 Average	19.666 GHz	36.24	-17.73
1 Max Peak	20.3216 GHz	47.09	-26.88
1 Max Peak	21.052 GHz	47.49	-26.48
2 Average	21.898 GHz	35.30	-18.68
1 Max Peak	22.9096 GHz	49.08	-24.89
2 Average	23.2344 GHz	37.82	-16.15
1 Max Peak	23.6528 GHz	49.98	-24.00
2 Average	24.1756 GHz	39.09	-14.88
1 Max Peak	25.2404 GHz	49.91	-24.06
2 Average	25.4652 GHz	39.52	-14.45

Segalla 19090525

Result: The requirements are met

CMC Centro Misure Compatibilità S.r.l.



11.3 DTS bandwidth

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 (a) (2)
- ANSI C63.10 cl. 11.8
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.2
- Internal procedure PM001
- See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test specification

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
22	100	45

Test configuration and test method

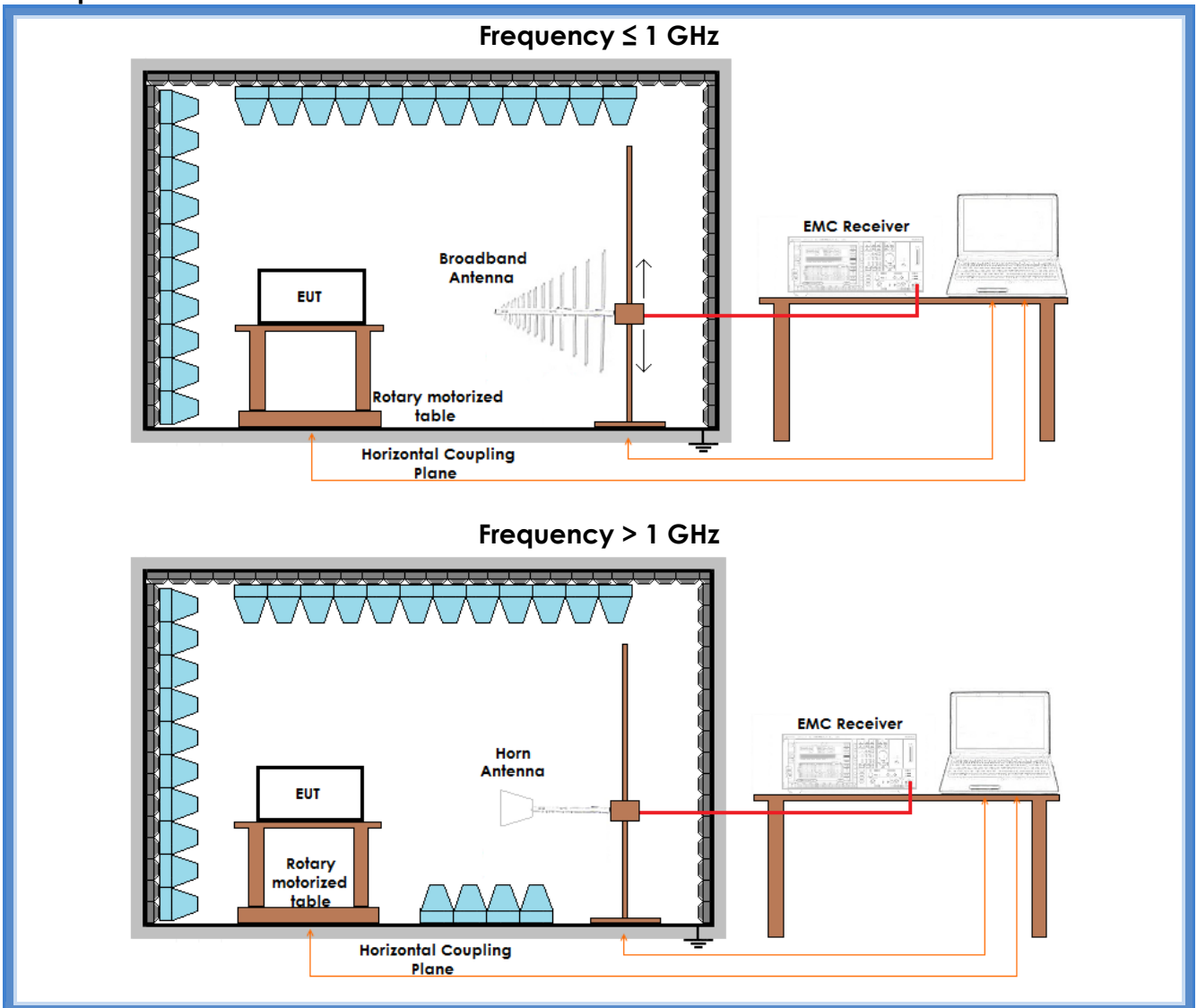
Test site:
 Semi-anechoic chamber

Auxiliary equipment:
 See clause 4 of this test report

Test equipment used

CMC S108, CMC S164, CMC S271, CMC S287
 Measurement uncertainty: See clause 7 of this test report

Setup



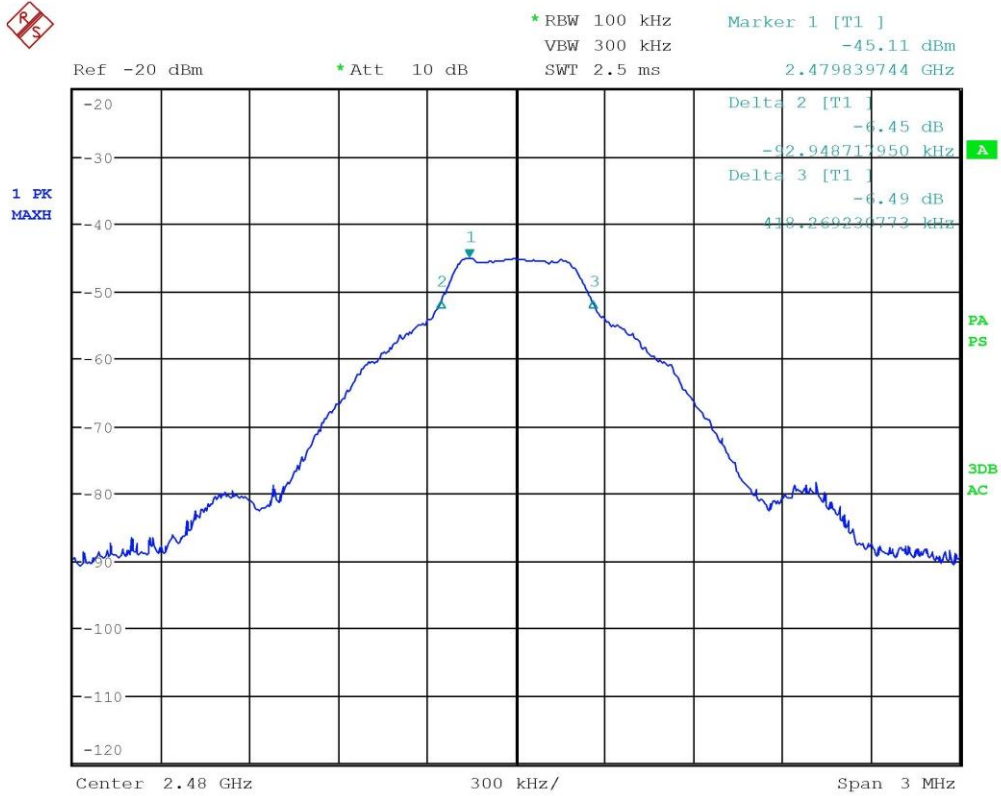
Result

Channel	Graphs	6 dB bandwidth (kHz)	Limits (kHz)	Results
Lowest	G19090542	504,8077	At least 500	Complies
Medium	G19090535	504,8076	At least 500	Complies
Highest	G19090530	511,2179	At least 500	Complies

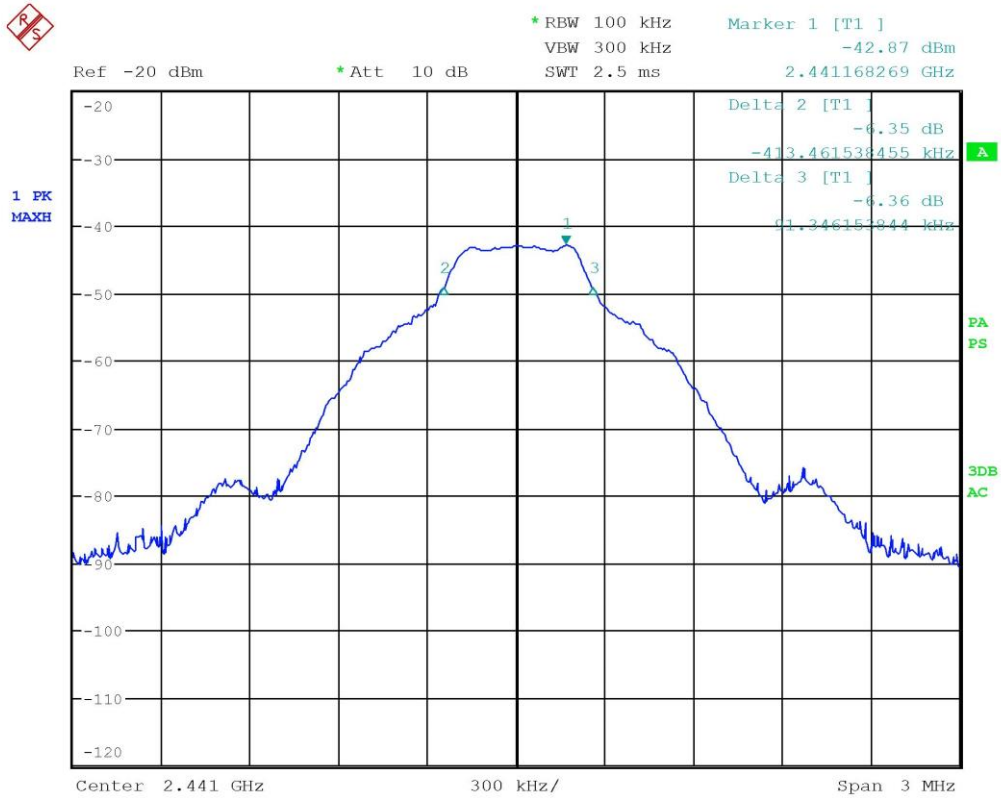
CMC Centro Misure Compatibilità S.r.l.



Graphs

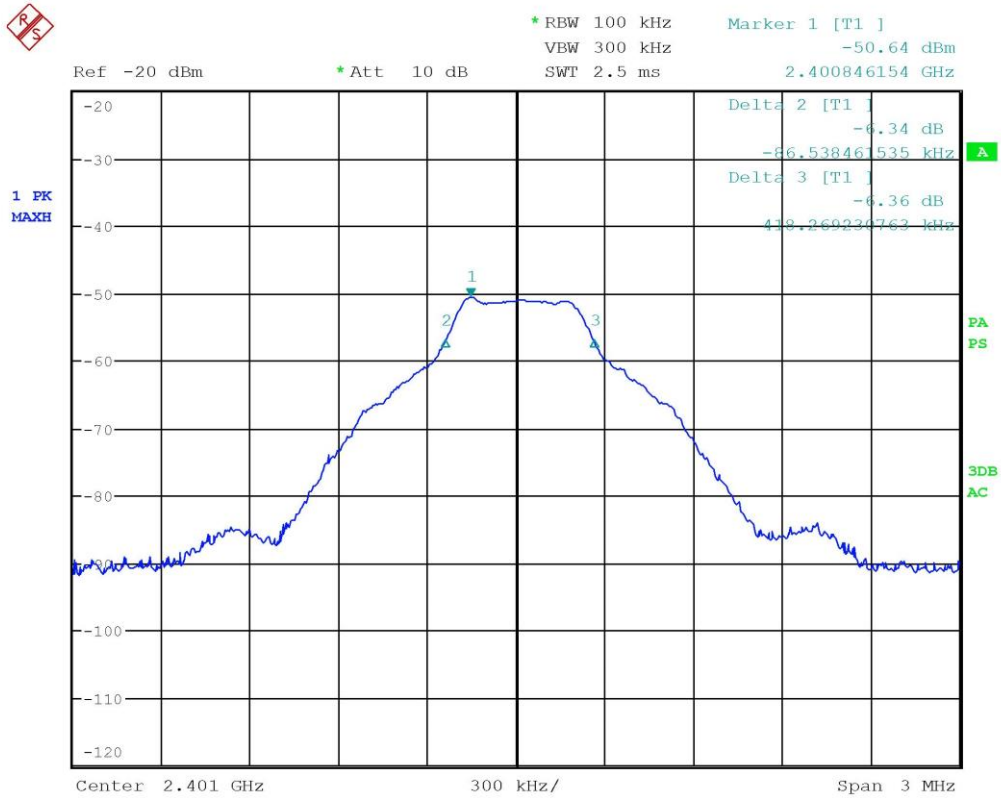


Segalla 19090530



Segalla 19090535

CMC Centro Misure Compatibilità S.r.l.



Segalla 19090542

Result: The requirements are met

CMC Centro Misure Compatibilità S.r.l.



11.4 Band edge

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.205, 15.209, 15.247 (d)
- ANSI C63.10 cl. 11.11.1 and 11.12.1
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.5 and 8.6
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
 Semi-anechoic chamber

Auxiliary equipment:
 See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164, CMC S271, CMC S287
 Measurement uncertainty: See clause 7 of this test report

Test specification

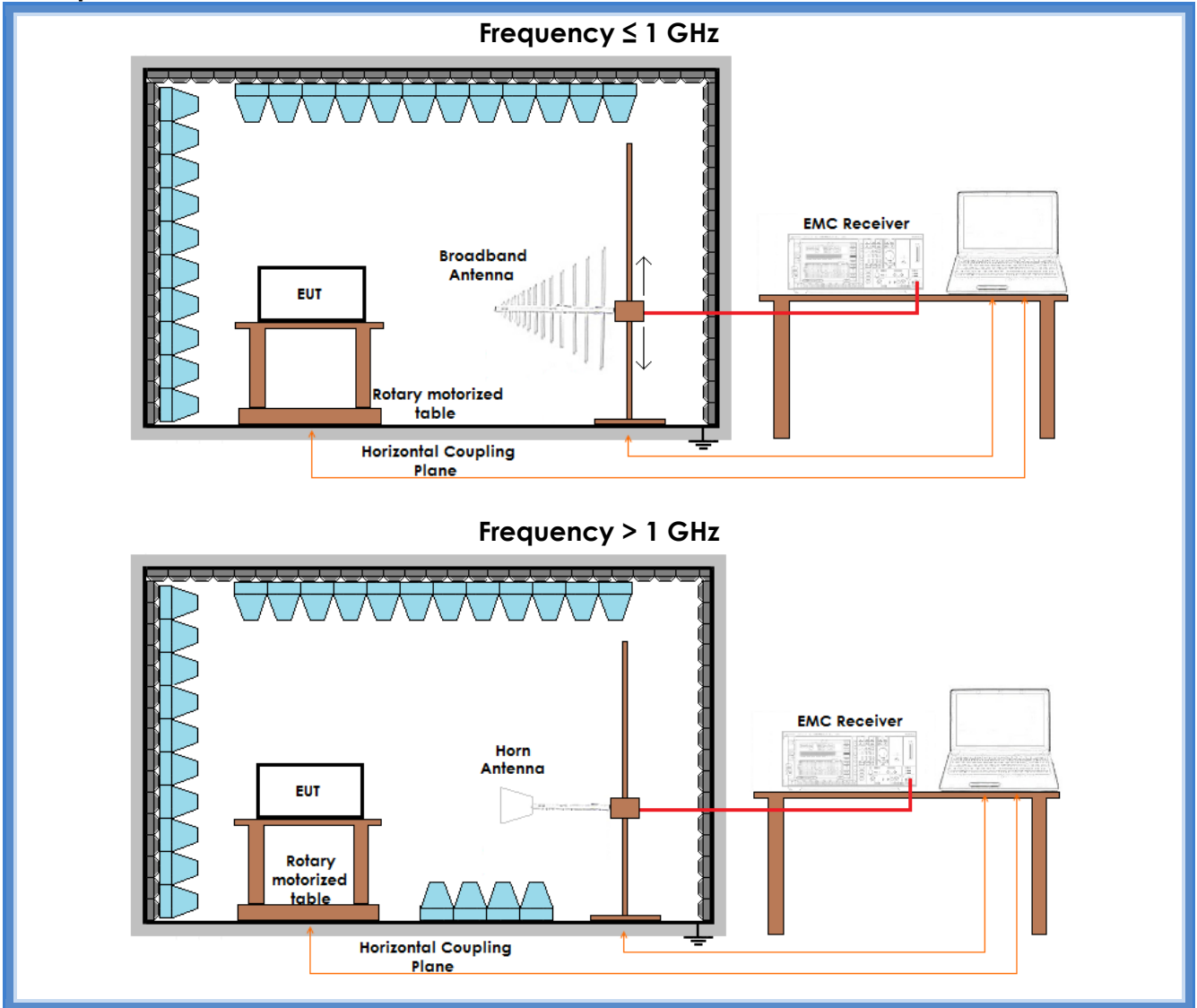
See FCC Part 15.247
 EUT height about the floor: 150 cm
 EUT – Antenna distance: 3 m

Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
21	100	45

Acceptance limits: operation within the band 2400 – 2483,5 MHz

Setup



Result

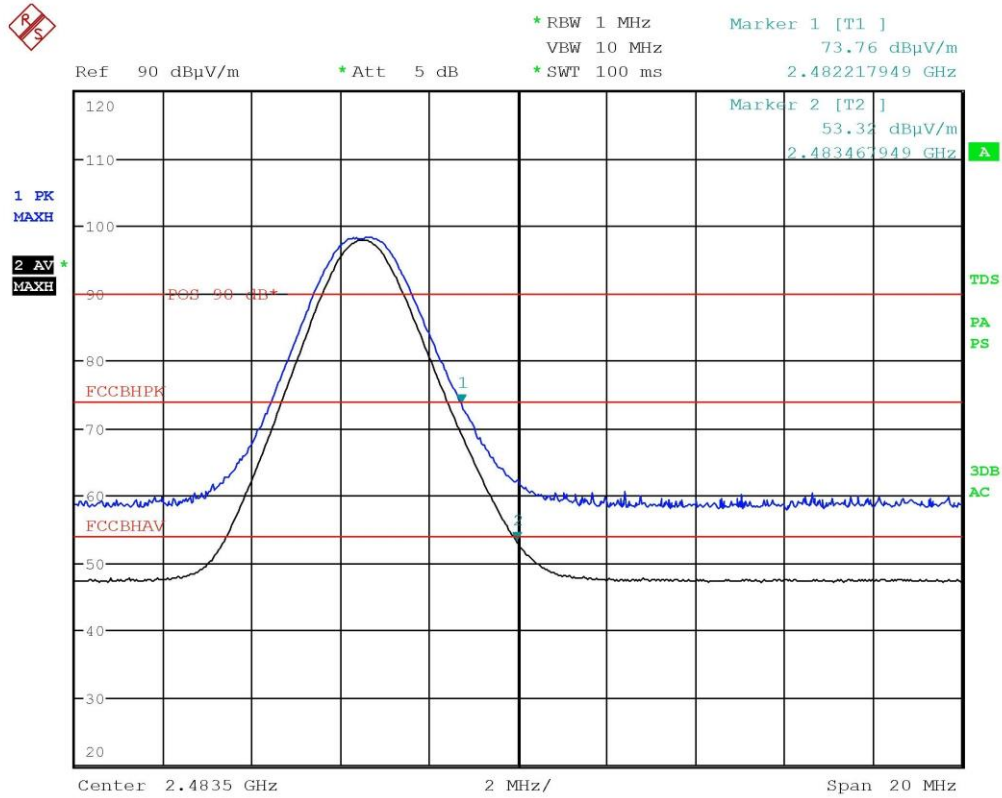
Channel	Bandwidth	Graph(s)	Results	
Lowest	1 MHz	G19090540*	--	Complies
Lowest	100 kHz	G19090541	2400,43269 MHz	Complies
Highest	1 MHz	G19090528	2483,46790 MHz	Complies
Highest	1 MHz	G19090529**	--	Complies

*: this graph shows the emissions in 2310 – 2390 MHz restricted band

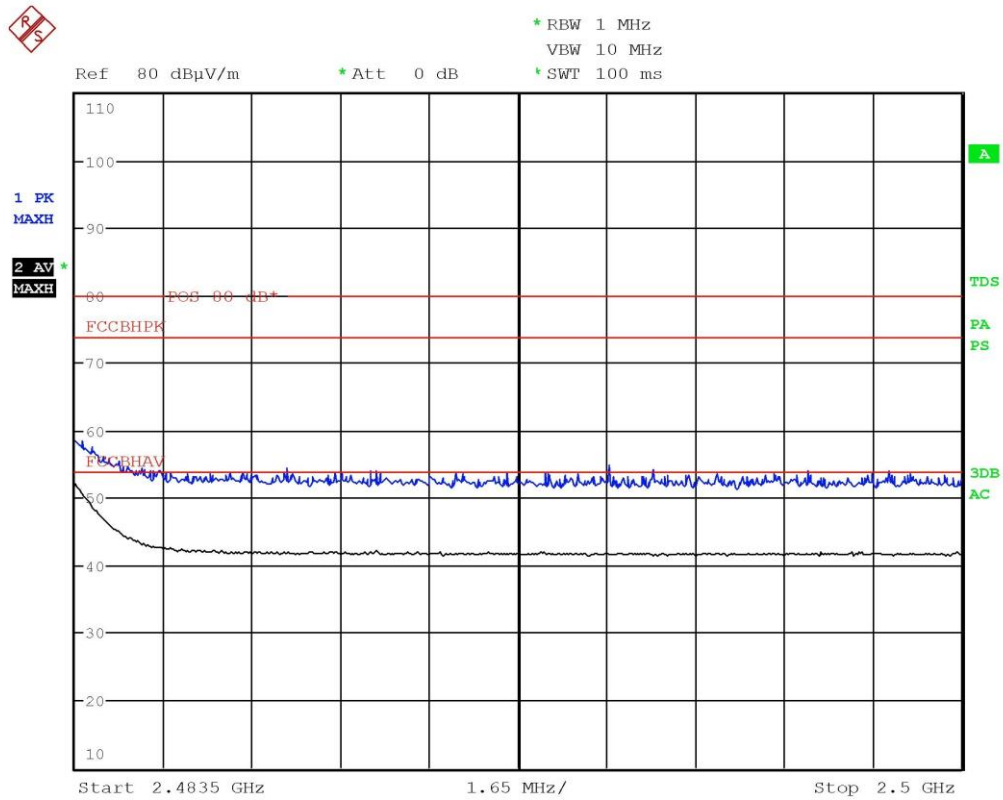
** : this graph shows the emissions in 2483,5 – 2500 MHz restricted band



Graphs

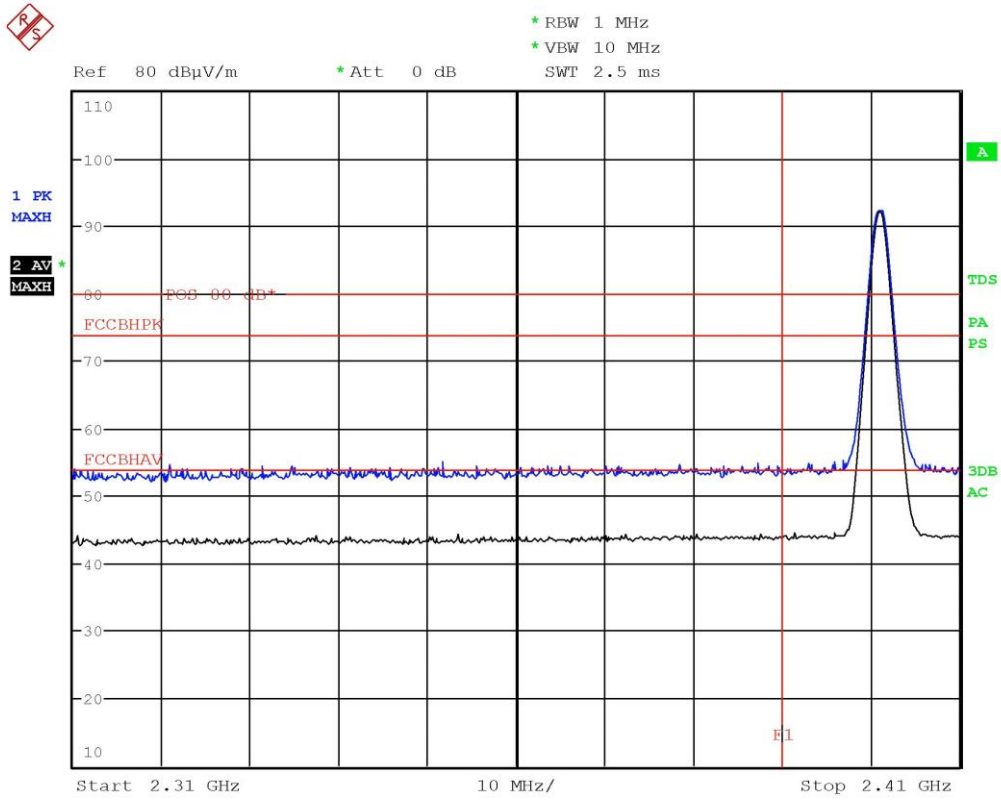


Segalla 19090528



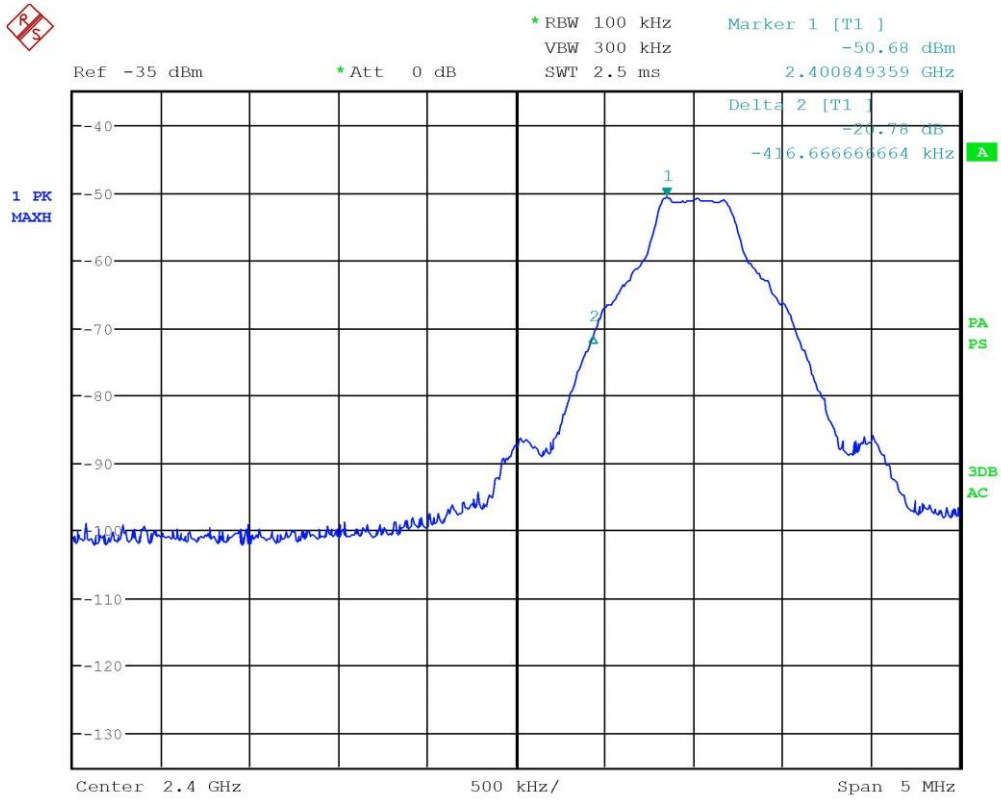
Segalla 19090529

CMC Centro Misure Compatibilità S.r.l.



Segalla 19090540

CMC Centro Misure Compatibilità S.r.l.



Segalla 19090541

Result: The requirements are met

CMC Centro Misure Compatibilità S.r.l.



11.5 Fundamental emission output power

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 (b) (3)
- ANSI C63.10 cl. 11.9.1.1
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.3.1.1
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
 Semi-anechoic chamber

Auxiliary equipment:
 See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164, CMC S271, CMC S287
 Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
 Antenna polarization: Horizontal (H) – Vertical (V)
 EUT – Antenna distance: 3 m
 EUT height about the floor: 80 cm

Environmental conditions

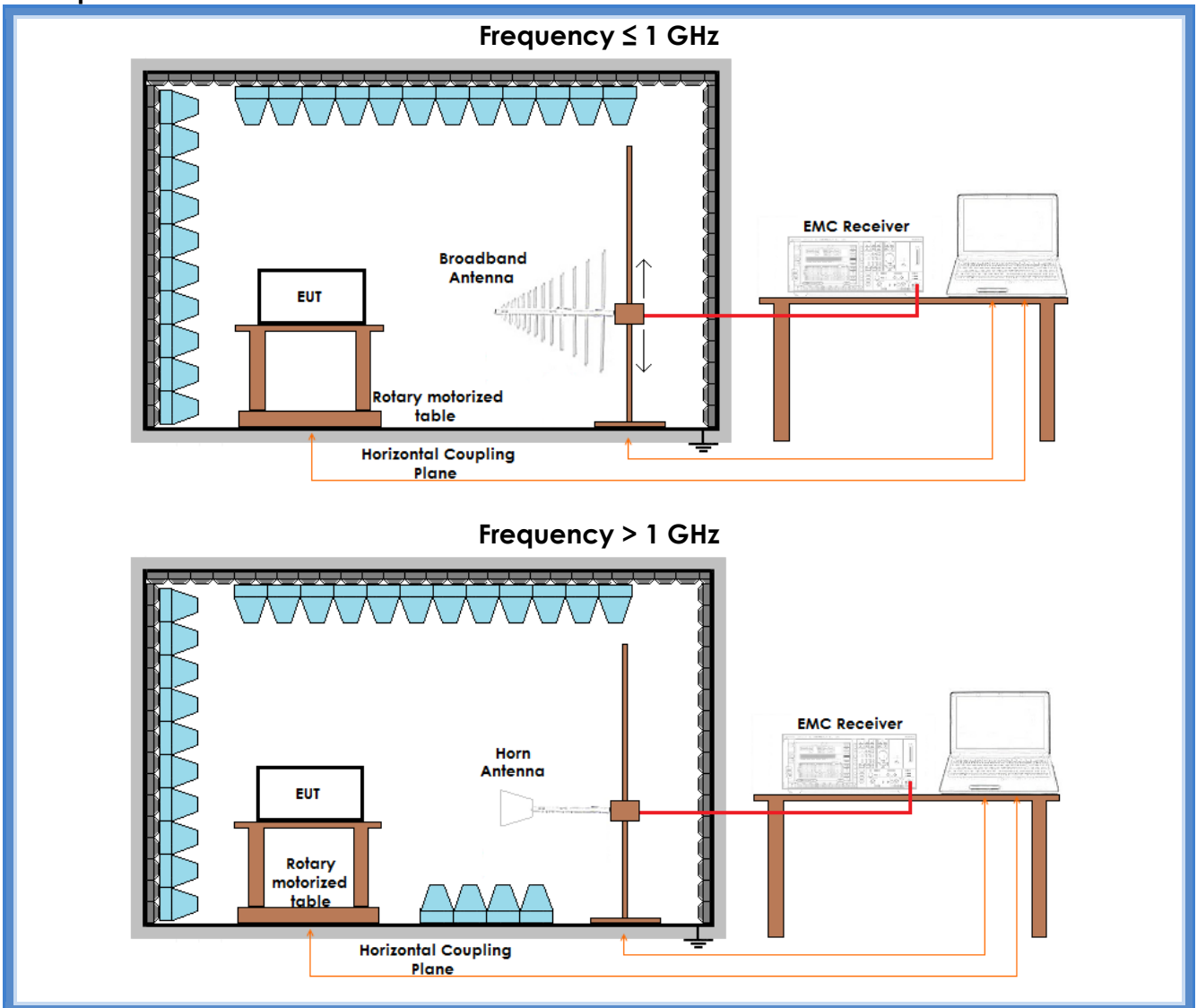
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
22	100	42

Acceptance limits:

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt



Setup





Result

Channel	Polarization	Graphs	Measured PK level (dB μ V/m)	Peak Output Conducted Power (mW)	Limits (mW)
Lowest	Worst case	G19090538	92,69	0,557	1000
Medium	Worst case	G19090533	100,36	3,259	1000
Highest	Worst case	G19090526	98,37	2,061	1000

Conducted value = $(E \times d)^2 / (30 \times G)$

Where:

E = $(10^{(dB\mu V/m)/20})/1000000$, the maximum measured fundamental field strength in V/m

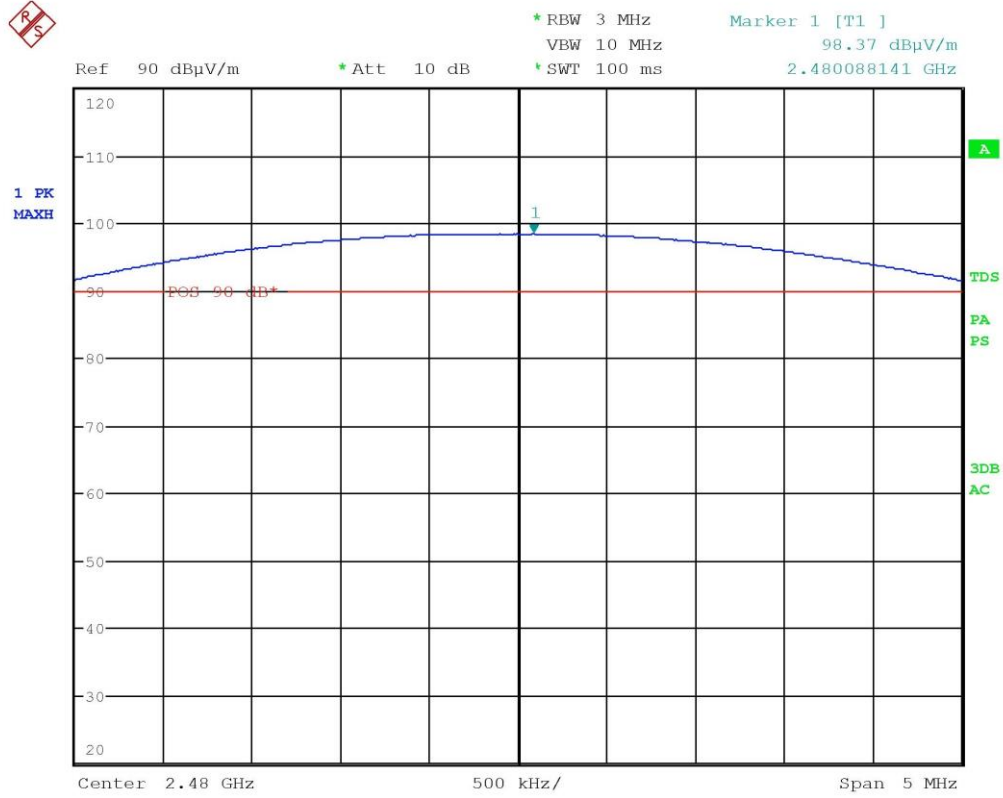
G = $10^{dBi/10}$, the numeric gain of the transmitting antenna: 1 (0 dBi)

d = the distance in meters from which the field strength was measured (3 m)

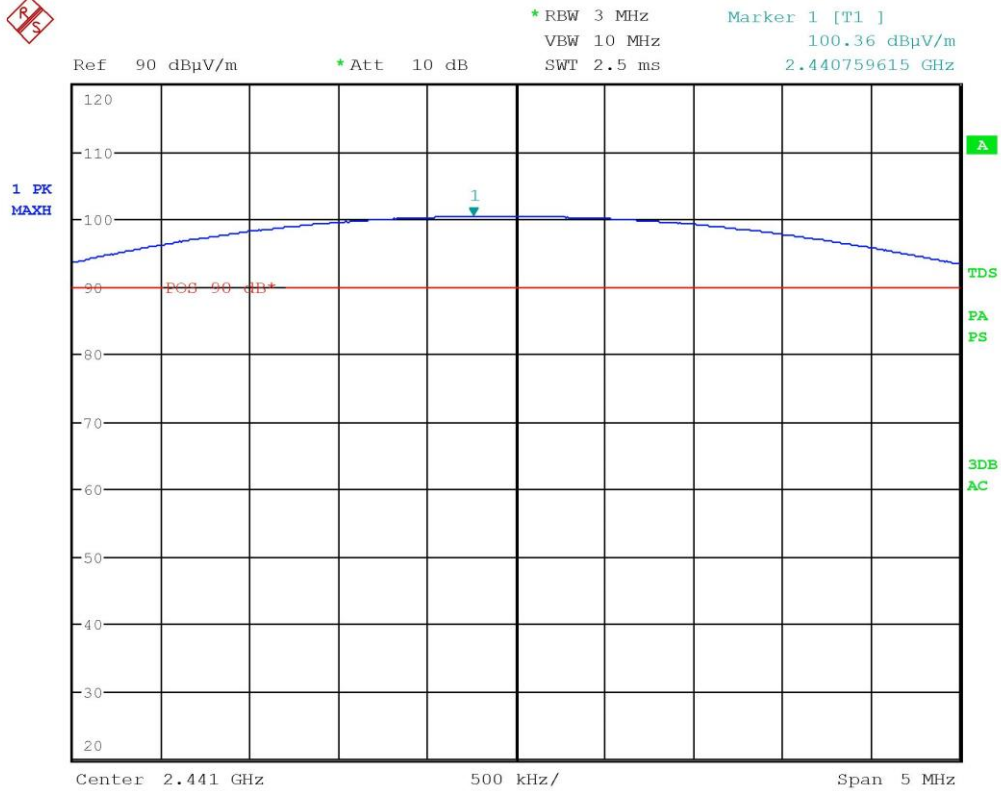
P = the power in watts



Graphs

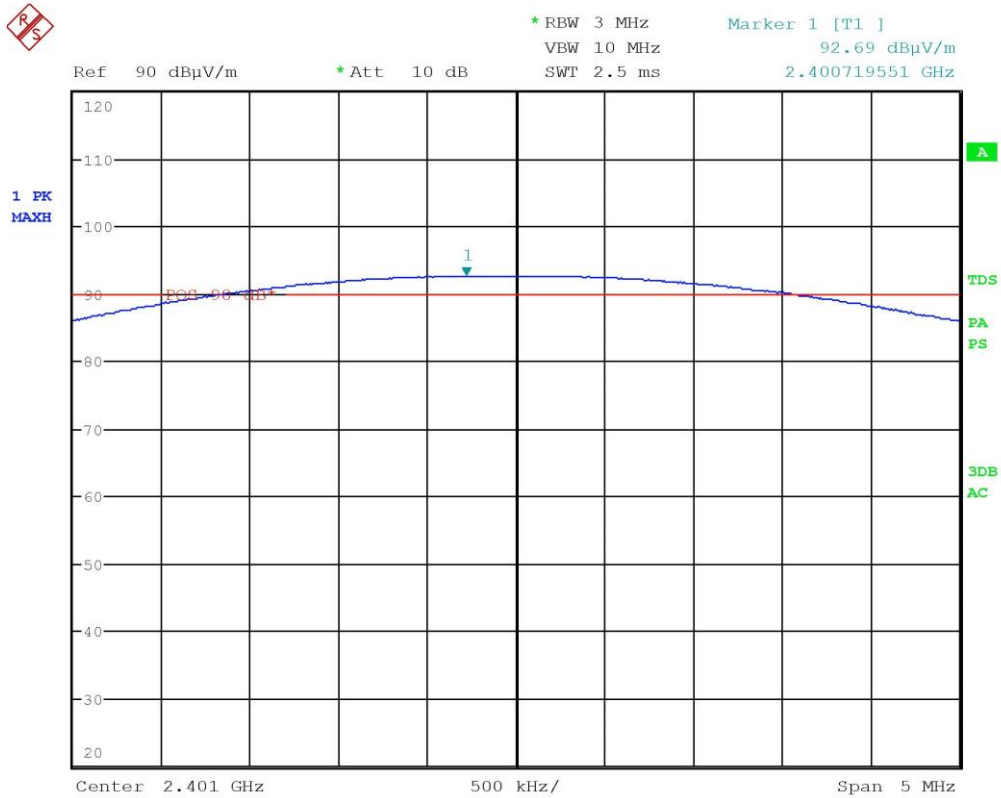


Segalla 19090526



Segalla 19090533

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Segalla 19090538

Result: The requirements are met

CMC Centro Misure Compatibilità S.r.l.



11.6 Maximum power spectral density level in the fundamental emission

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 (e)
- ANSI C63.10 cl. 11.10.2
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.4
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S164, CMC S271, CMC S287
 Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
 Antenna polarization: Horizontal (H) – Vertical (V)
 EUT – Antenna distance: 3 m
 EUT height about the floor: 80 cm

Environmental conditions

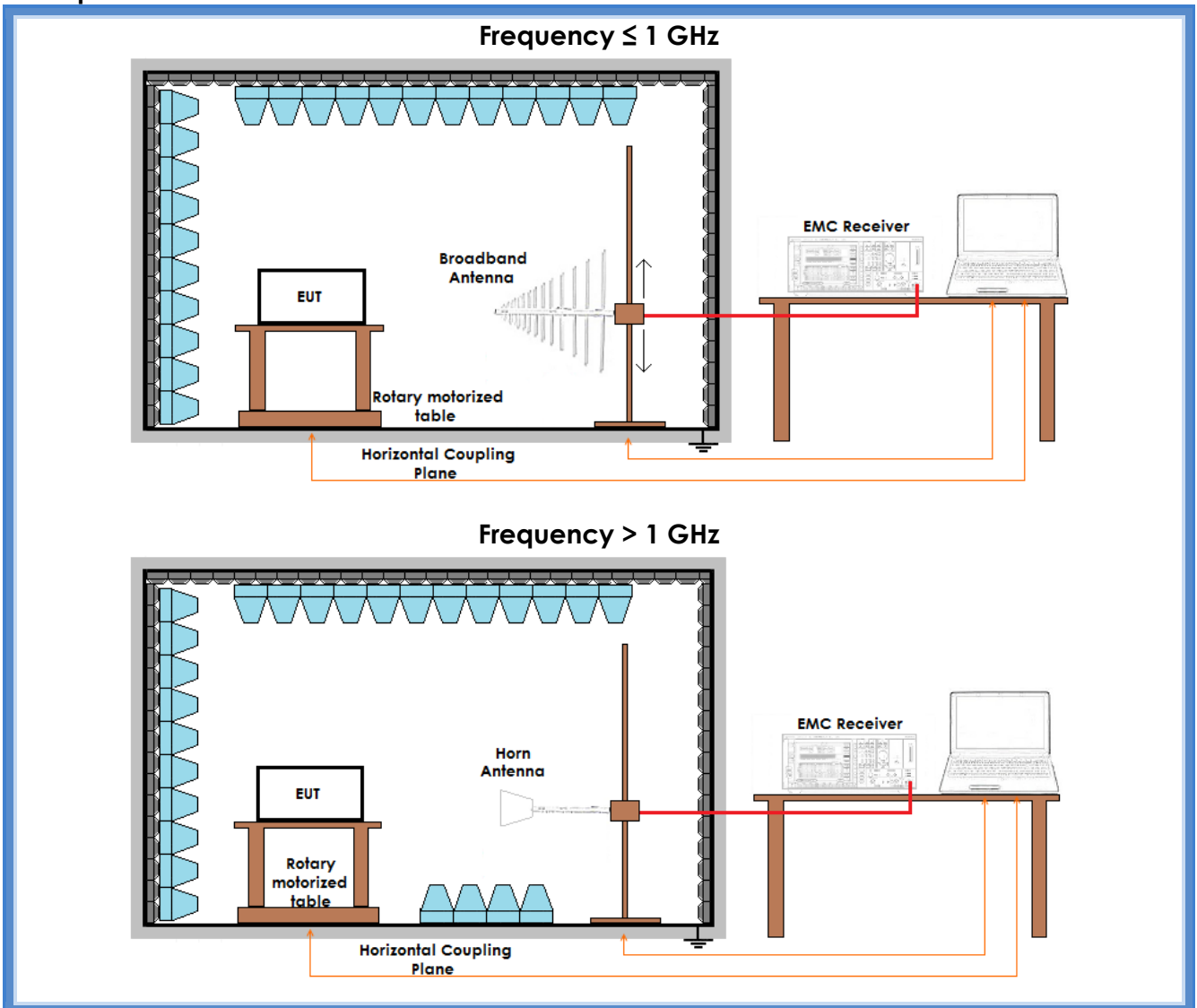
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
22	100	42

Acceptance limits:

Frequency Range	Power Spectral Density
2400 – 2483,5 MHz	8 dBm/3 kHz 6,31 mW/3 kHz



Setup





Result

Channel	Polarization	Graphs	Measured PK level (dBµV/m)	Power Spectral Density (mW/3 kHz)	Limits (mW/3 kHz)
Lowest	Worst case	G19090539	92,08	0,484	6,31
Medium	Worst case	G19090534	99,83	2,885	6,31
Highest	Worst case	G19090527	97,75	1,787	6,31

Conducted value = $(E \times d)^2 / (30 \times G)$

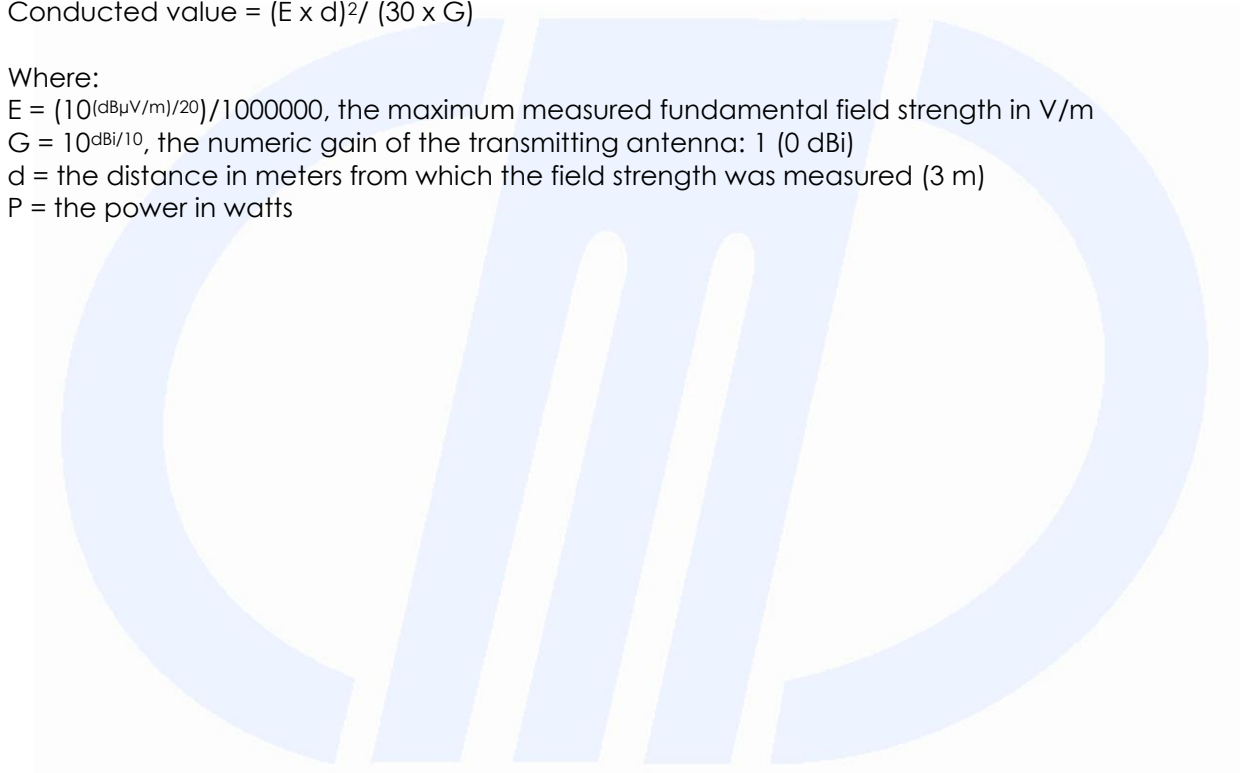
Where:

$E = (10^{(dB\mu V/m)/20})/1000000$, the maximum measured fundamental field strength in V/m

$G = 10^{dBi/10}$, the numeric gain of the transmitting antenna: 1 (0 dBi)

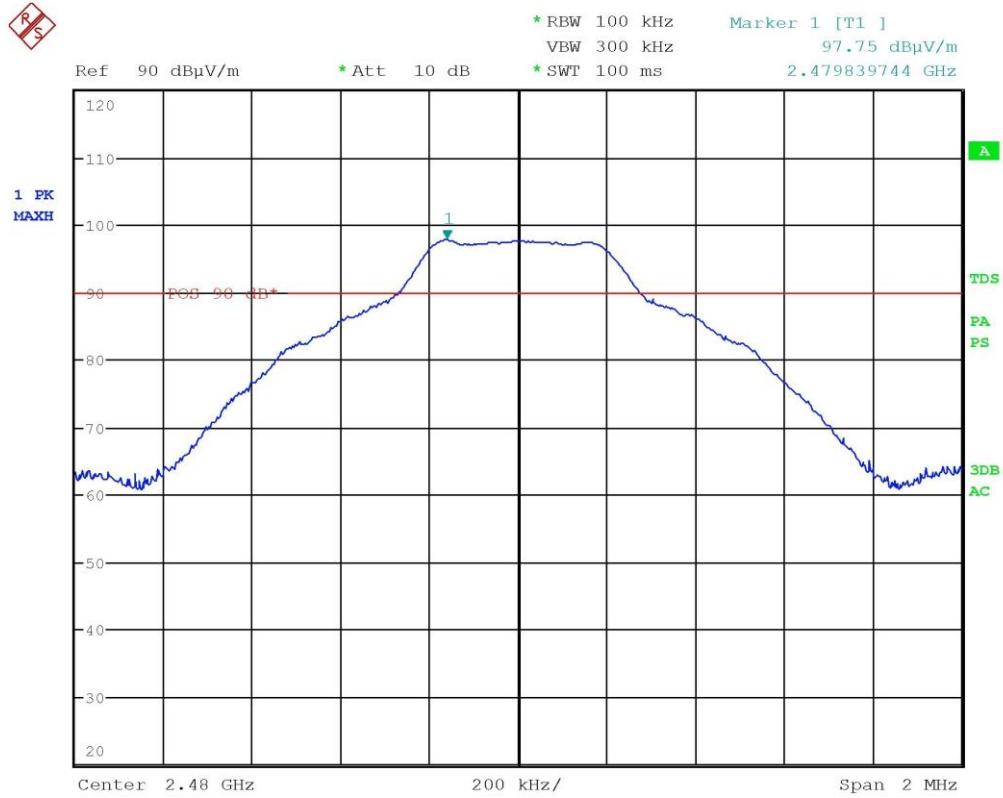
d = the distance in meters from which the field strength was measured (3 m)

P = the power in watts

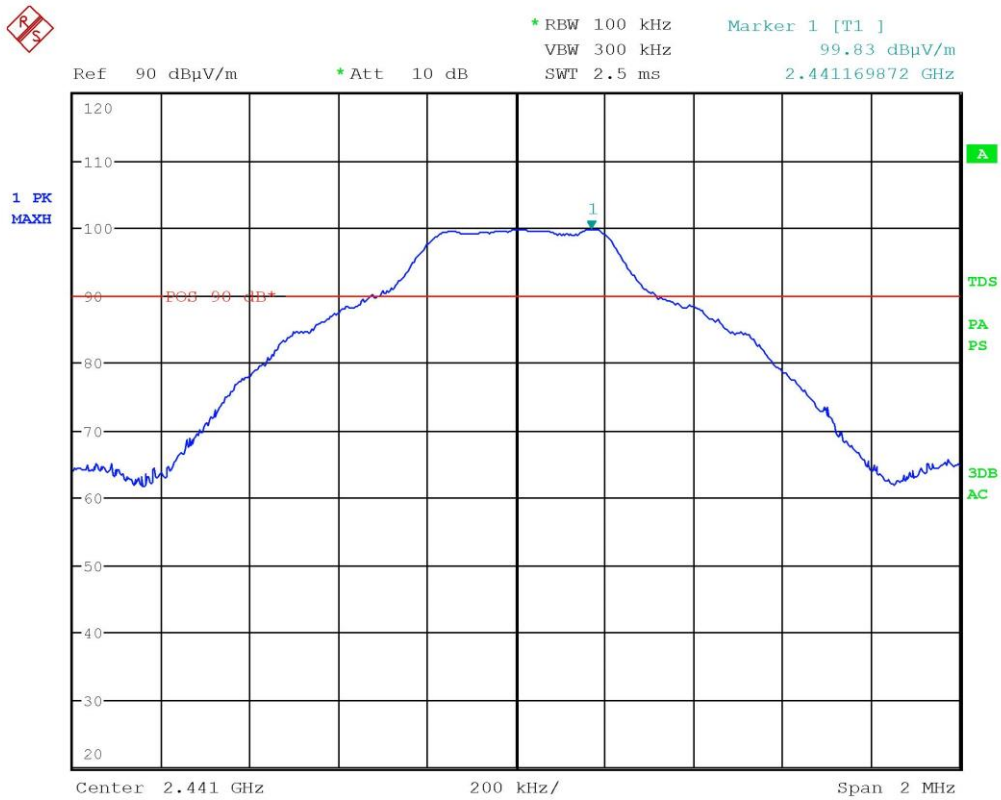




Graphs

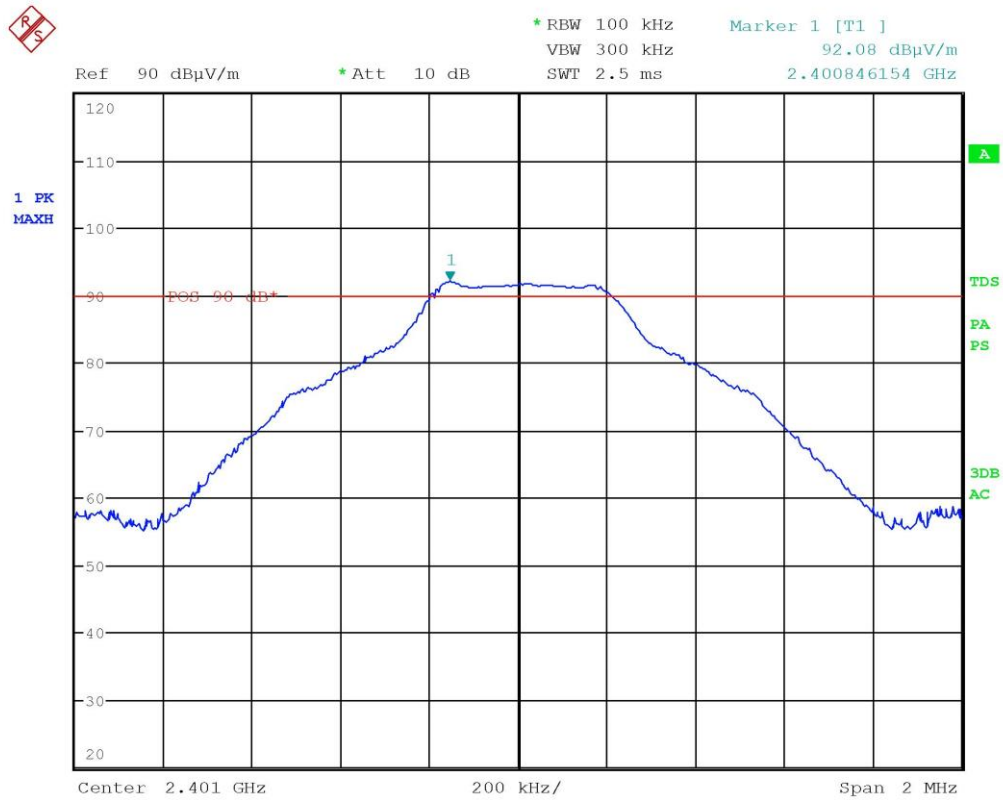


Segalla 19090527



Segalla 19090534

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Segalla 19090539

Result: The requirements are met

CMC Centro Misure Compatibilità S.r.l.



11.7 Spurious Emission

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.247 (d)
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.5 and 8.6
- ANSI C63.10 cl. 11.11, 11.12.1
- Internal procedure PM001
- See clause 4 of this test report

Test configuration

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S136, CMC S164
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Antenna polarization: Horizontal (H) – Vertical (V)
EUT height about the floor: 150 cm
EUT – Antenna distance: 3 m
Detector AV + Peak

Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
22	100	45

Acceptance limits

Acceptance limits for emissions in restricted frequency bands (according FCC Part 15.209)		
Frequency (MHz)	AV limits [dB(μV/m)]	Peak limits [dB(μV/m)]
> 1000	54	74



The restricted frequency bands are listed in the following table (according to FCC Part 15.205)

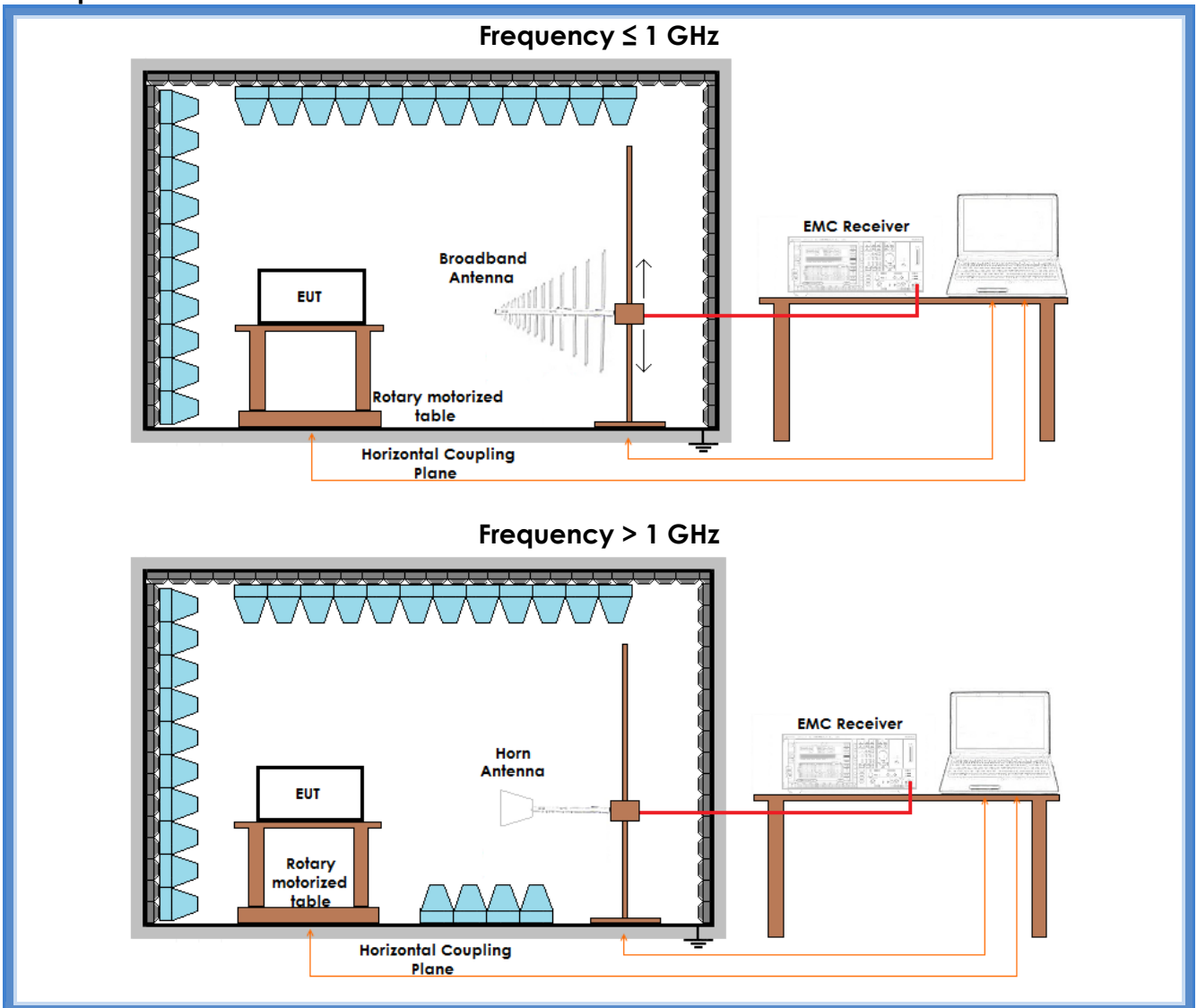
MHz	MHz	MHz	GHz
0,09 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775	73 – 74,6	1645,5 – 1646,5	9,3 – 9,5
6,215 – 6,218	74,8 – 75,2	1660 – 1710	10,6 – 12,7
6,26775 – 6,26825	108 – 121,94	1718,8 – 1722,2	13,25 – 13,4
6,31175 – 6,31225	123 – 138	2200 – 2300	14,47 – 14,5
8,291 – 8,294	149,9 – 150,05	2310 – 2390	15,35 – 16,2
8,362 – 8,366	156,52475 – 156,52525	2483,5 – 2500	17,7 – 21,4
8,41425 – 8,41475	162,0125 – 167,17	3260 – 3267	23,6 – 24
12,29 – 12,293	167,72 – 173,2	3332 – 3339	31,2 – 31,8
12,57675 – 12,57725	322 – 335,4	3600 – 4400	Above 38,6
13,36 – 13,41			

Acceptance limits for emissions in non-restricted frequency bands (according to ANSI C63.10 cl. 11.11.1)

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

- If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz
- If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.
- In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required

Setup





Result – AV detector

Harmonic	Lowest channel		Medium channel		Highest channel		Results
	Level (dB μ V/m)	Limits (dB μ V/m)	Level (dB μ V/m)	Limits (dB μ V/m)	Level (dB μ V/m)	Limits (dB μ V/m)	
II	46,03	54,00	50,52	54,00	45,81	54,00	Complies
III	39,86	54,00	50,67	54,00	47,67	54,00	Complies
IV	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
V	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
VI	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
VII	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
VIII	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
IX	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies
X	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	More than 20 dB below limit	54,00	Complies

Remarks: EUT was tested in 3 orthogonal planes. The results in this table show the highest values. No spurious other than harmonics have been found. The results have been extrapolated to the specified distance using an extrapolation factor. For all harmonics it was considered the limit of 54 dB μ V/m as a worse case, even if some harmonics could fall in non-restricted frequency bands



Result – Peak detector

Harmonic	Lowest channel		Medium channel		Highest channel		Results
	Level (dB μ V/m)	Limits (dB μ V/m)	Level (dB μ V/m)	Limits (dB μ V/m)	Level (dB μ V/m)	Limits (dB μ V/m)	
II	50,24	74,00	53,83	74,00	50,04	74,00	Complies
III	49,23	74,00	56,32	74,00	53,86	74,00	Complies
IV	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
V	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
VI	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
VII	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
VIII	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
IX	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies
X	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	More than 20 dB below limit	74,00	Complies

Remarks: EUT was tested in 3 orthogonal planes. The results in this table show the highest values. No spurious other than harmonics have been found. The results have been extrapolated to the specified distance using an extrapolation factor. For all harmonics it was considered the limit of 74 dB μ V/m as a worse case, even if some harmonics could fall in non-restricted frequency bands

Result: The requirements are met