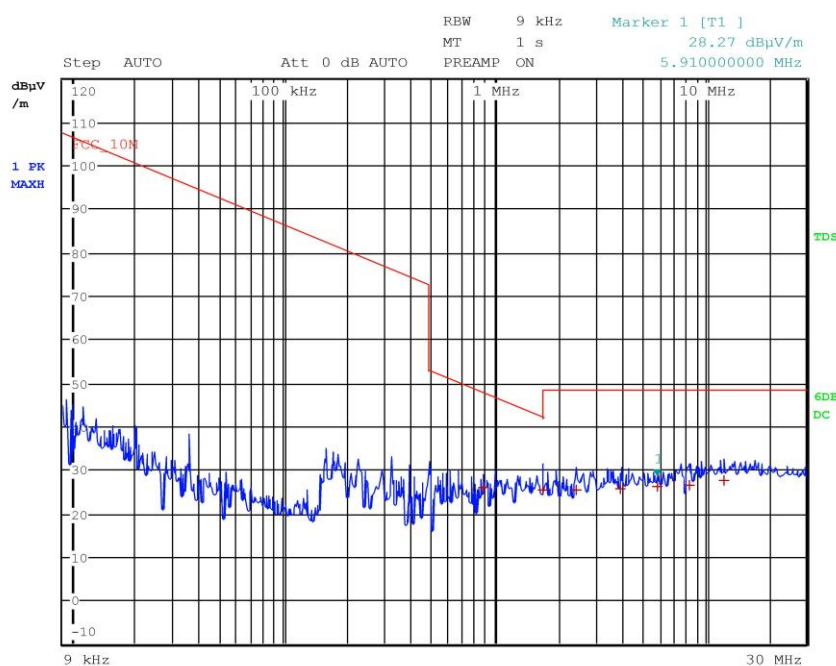




G16152056

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152056
Test Spec



Final Measurement

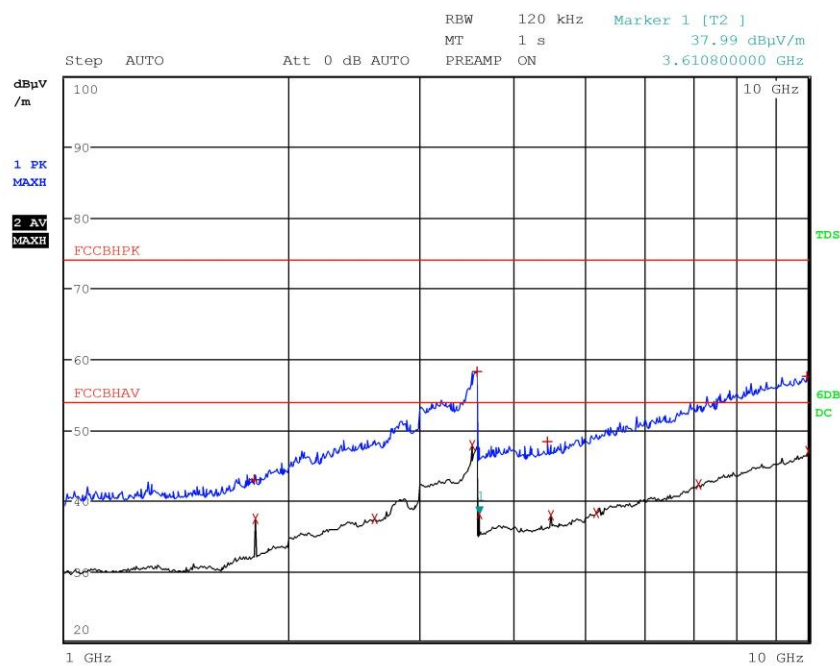
Meas Time: 1 s
Margin: 20 dB
Subranges: 7

Trace	Frequency	Level (dBV/m)	Detector	Delta Limit/dB
1	882.00000000 kHz	25.99	Quasi Peak	-21.79
1	1.682000000 MHz	25.36	Quasi Peak	-16.81
1	2.442000000 MHz	25.45	Quasi Peak	-23.18
1	3.954000000 MHz	25.65	Quasi Peak	-22.98
1	5.910000000 MHz	26.25	Quasi Peak	-22.38
1	8.338000000 MHz	26.51	Quasi Peak	-22.12
1	12.246000000 MHz	27.47	Quasi Peak	-21.16



G16152057

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152057
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152057
Test Spec

Final Measurement

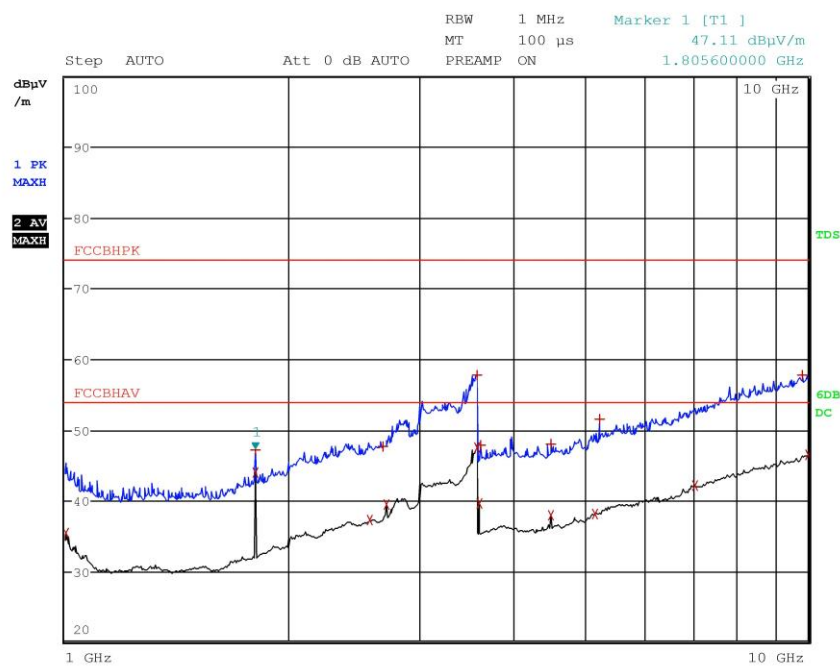
Meas Time: 1 s
Margin: 20 dB
Subranges: 12

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	1.799600000 GHz	42.89	Max Peak	-31.11
2	1.805600000 GHz	37.33	Average	-16.67
2	2.608000000 GHz	37.45	Average	-16.55
2	3.525600000 GHz	47.86	Average	-6.14
1	3.592400000 GHz	58.28	Max Peak	-15.72
2	3.610800000 GHz	37.99	Average	-16.01
1	4.450800000 GHz	48.31	Max Peak	-25.69
2	4.514000000 GHz	37.91	Average	-16.09
2	5.175200000 GHz	38.29	Average	-15.71
2	7.125200000 GHz	42.32	Average	-11.68
1	9.968400000 GHz	57.49	Max Peak	-16.51
2	9.994400000 GHz	46.95	Average	-7.05



G16152058

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152058
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152058
Test Spec

Final Measurement

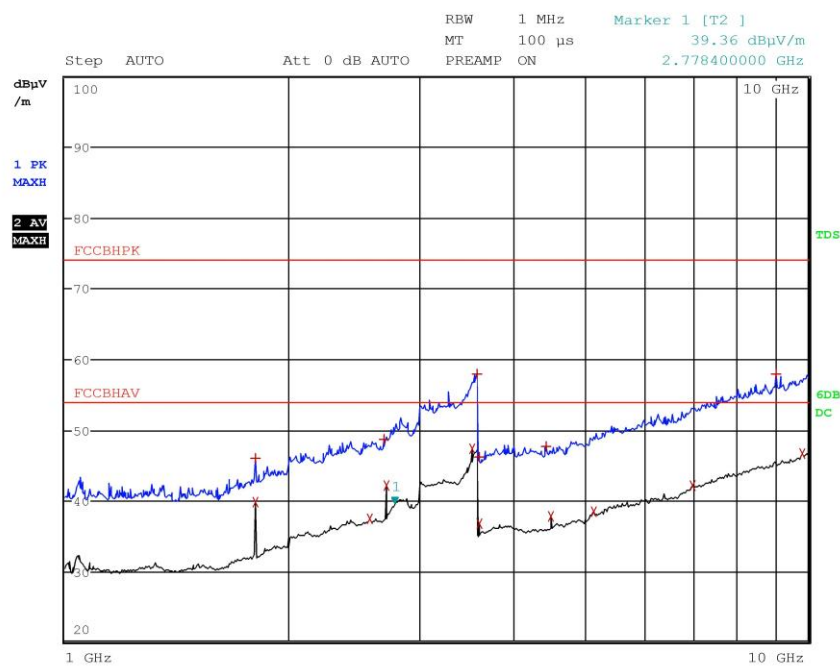
Meas Time: 1 s
Margin: 20 dB
Subranges: 17

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.004800000 GHz	35.46	Average	-18.54
2	1.805600000 GHz	43.91	Average	-10.09
1	1.805600000 GHz	47.11	Max Peak	-26.89
2	2.570400000 GHz	37.21	Average	-16.79
1	2.673600000 GHz	47.71	Max Peak	-26.29
2	2.708000000 GHz	39.37	Average	-14.63
2	3.580400000 GHz	47.49	Average	-6.51
1	3.594000000 GHz	57.79	Max Peak	-16.21
2	3.610800000 GHz	39.52	Average	-14.48
1	3.619600000 GHz	47.89	Max Peak	-26.11
1	4.513600000 GHz	47.95	Max Peak	-26.05
2	4.514000000 GHz	37.97	Average	-16.03
2	5.174000000 GHz	38.10	Average	-15.90
1	5.246000000 GHz	51.48	Max Peak	-22.52
2	7.053600000 GHz	42.10	Average	-11.90
1	9.822000000 GHz	57.77	Max Peak	-16.23
2	9.992400000 GHz	46.39	Average	-7.61



G16152059

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152059
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152059
Test Spec

Final Measurement

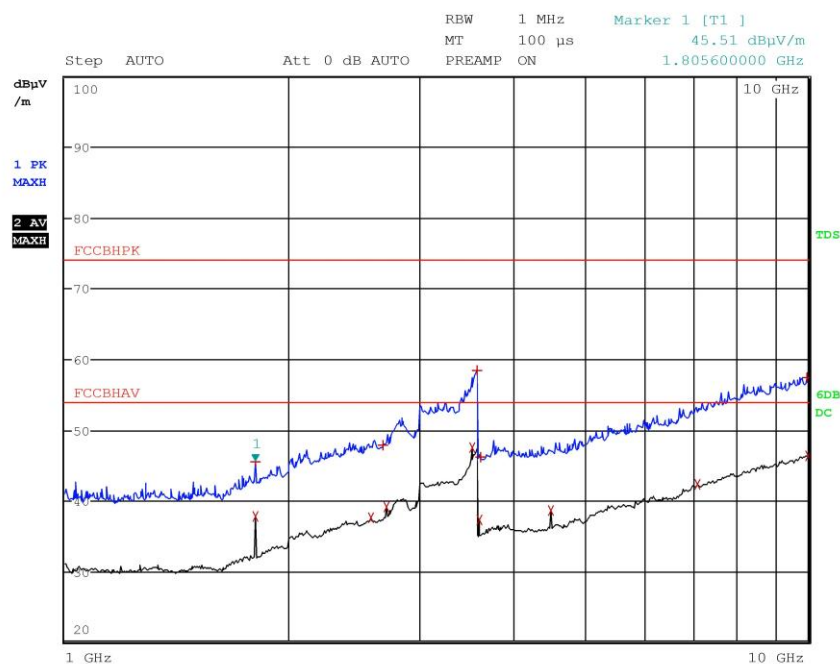
Meas Time: 1 s
Margin: 20 dB
Subranges: 15

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.805600000 GHz	39.69	Average	-14.31
1	1.805600000 GHz	45.96	Max Peak	-28.04
2	2.570000000 GHz	37.36	Average	-16.64
1	2.688400000 GHz	48.70	Max Peak	-25.30
2	2.708400000 GHz	42.04	Average	-11.96
2	3.525600000 GHz	47.28	Average	-6.72
1	3.591600000 GHz	57.94	Max Peak	-16.06
2	3.610800000 GHz	36.81	Average	-17.19
1	3.610800000 GHz	46.07	Max Peak	-27.93
1	4.433600000 GHz	47.69	Max Peak	-26.31
2	4.514000000 GHz	37.81	Average	-16.19
2	5.148400000 GHz	38.41	Average	-15.59
2	6.978000000 GHz	42.15	Average	-11.85
1	9.058000000 GHz	57.85	Max Peak	-16.15
2	9.826000000 GHz	46.68	Average	-7.32



G16152060

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezzo 16152060
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152060
Test Spec

Final Measurement

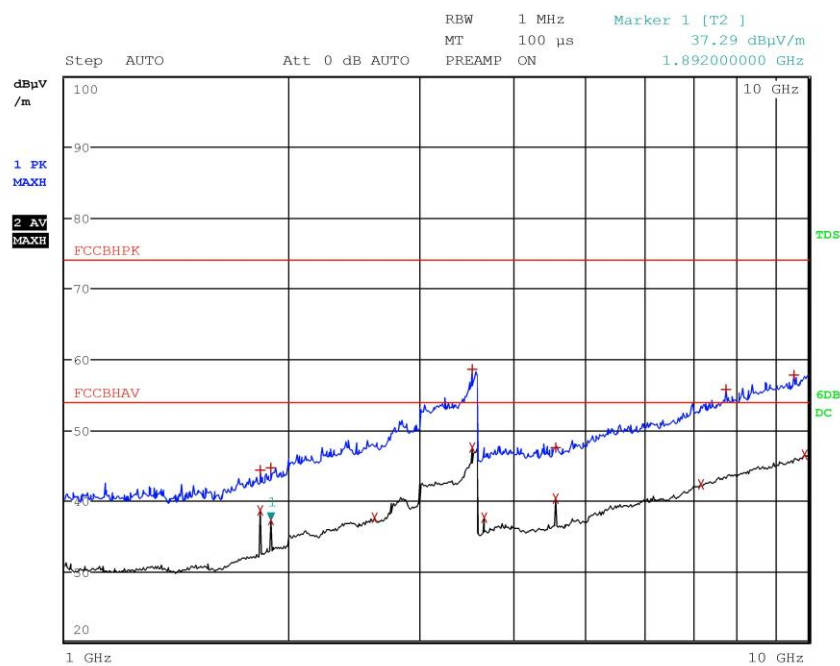
Meas Time: 1 s
Margin: 20 dB
Subranges: 13

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.805600000 GHz	37.81	Average	-16.19
1	1.805600000 GHz	45.51	Max Peak	-28.49
2	2.584800000 GHz	37.58	Average	-16.42
1	2.673200000 GHz	47.75	Max Peak	-26.25
2	2.708400000 GHz	39.08	Average	-14.92
2	3.525600000 GHz	47.47	Average	-6.53
1	3.587200000 GHz	58.42	Max Peak	-15.58
2	3.611200000 GHz	37.19	Average	-16.81
1	3.620000000 GHz	46.09	Max Peak	-27.91
2	4.513600000 GHz	38.62	Average	-15.38
2	7.090400000 GHz	42.33	Average	-11.67
1	9.972400000 GHz	57.47	Max Peak	-16.53
2	9.999600000 GHz	46.27	Average	-7.73



G16152061

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152061
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152061
Test Spec

Final Measurement

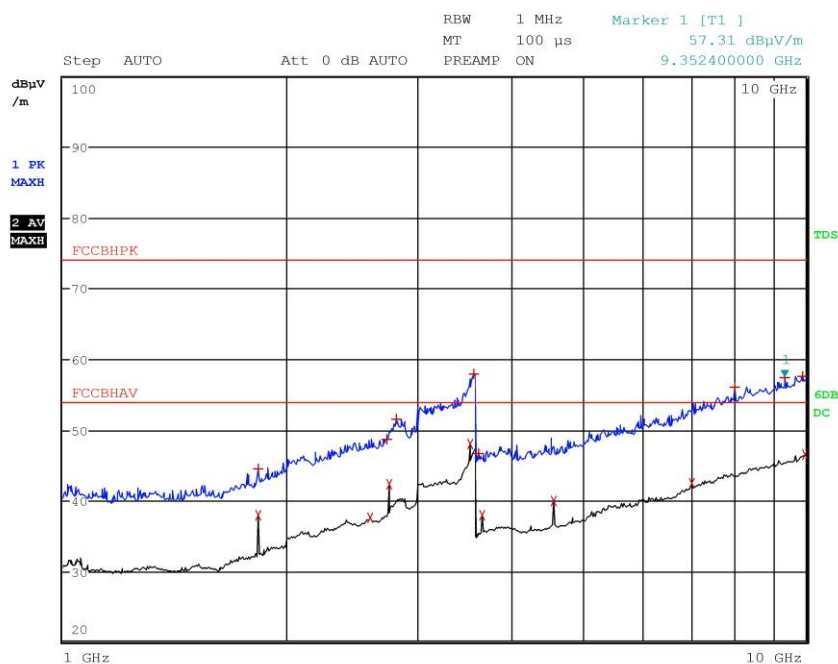
Meas Time: 1 s
Margin: 20 dB
Subranges: 14

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.829600000 GHz	38.53	Average	-15.47
1	1.829600000 GHz	44.33	Max Peak	-29.67
2	1.892000000 GHz	37.29	Average	-16.71
1	1.895200000 GHz	44.60	Max Peak	-29.40
2	2.606400000 GHz	37.53	Average	-16.47
1	3.525600000 GHz	58.54	Max Peak	-15.46
2	3.525600000 GHz	47.53	Average	-6.47
2	3.658800000 GHz	37.55	Average	-16.45
2	4.573600000 GHz	40.20	Average	-13.80
1	4.574000000 GHz	47.56	Max Peak	-26.44
2	7.168800000 GHz	42.21	Average	-11.79
1	7.750400000 GHz	55.64	Max Peak	-18.36
1	9.568400000 GHz	57.72	Max Peak	-16.28
2	9.897200000 GHz	46.43	Average	-7.57



G16152062

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152062
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152062
Test Spec

Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 16

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.829600000 GHz	37.93	Average	-16.07
1	1.829600000 GHz	44.37	Max Peak	-29.63
2	2.586800000 GHz	37.52	Average	-16.48
1	2.728800000 GHz	48.71	Max Peak	-25.29
2	2.744400000 GHz	42.32	Average	-11.68
1	2.814400000 GHz	51.47	Max Peak	-22.53
2	3.525600000 GHz	47.92	Average	-6.08
1	3.577200000 GHz	57.92	Max Peak	-16.08
1	3.627600000 GHz	46.71	Max Peak	-27.29
2	3.658800000 GHz	37.91	Average	-16.09
2	4.574000000 GHz	39.86	Average	-14.14
2	7.020000000 GHz	42.38	Average	-11.62
1	8.004400000 GHz	56.09	Max Peak	-17.91
1	9.352400000 GHz	57.31	Max Peak	-16.69
1	9.906800000 GHz	57.63	Max Peak	-16.37
2	9.966400000 GHz	46.46	Average	-7.54



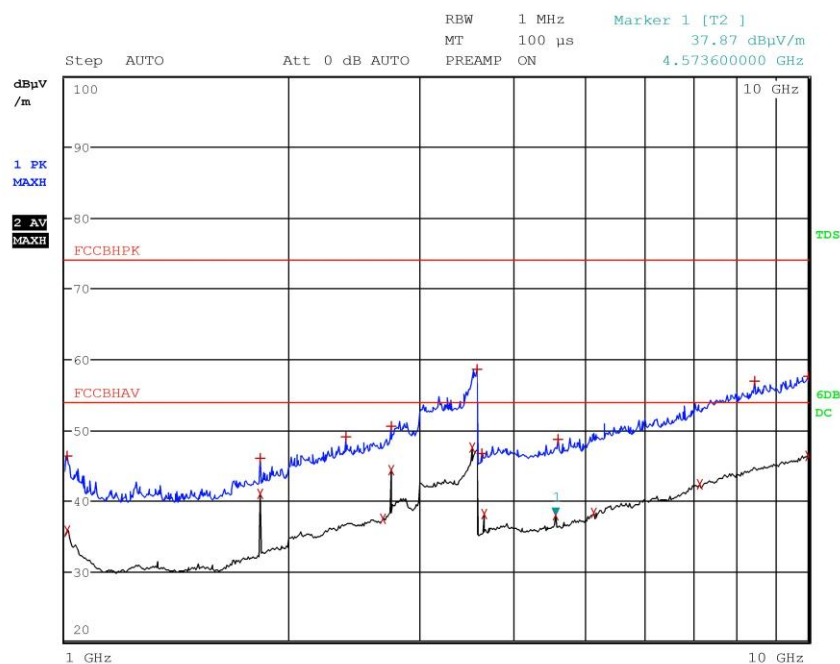
CMC
Centro Misure Compatibilità S.r.l.
Via della Fisica, 20
36016 Thiene (VI)



LAB N° 0168

G16152063

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152063
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152063
Test Spec

Final Measurement

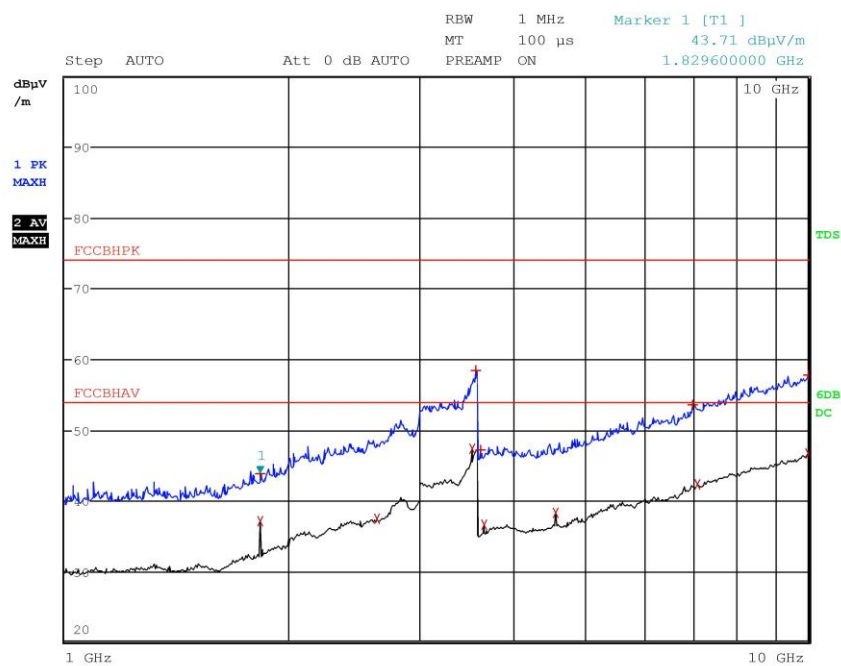
Meas Time: 1 s
Margin: 20 dB
Subranges: 19

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.006800000 GHz	35.73	Average	-18.27
1	1.007600000 GHz	46.39	Max Peak	-27.61
2	1.829600000 GHz	40.91	Average	-13.09
1	1.829600000 GHz	45.95	Max Peak	-28.05
1	2.390800000 GHz	48.92	Max Peak	-25.08
2	2.674800000 GHz	37.38	Average	-16.62
1	2.744400000 GHz	50.46	Max Peak	-23.54
2	2.744400000 GHz	44.36	Average	-9.64
2	3.525600000 GHz	47.47	Average	-6.53
1	3.589600000 GHz	58.55	Max Peak	-15.45
1	3.634000000 GHz	46.67	Max Peak	-27.33
2	3.658800000 GHz	37.99	Average	-16.01
2	4.573600000 GHz	37.87	Average	-16.13
1	4.603200000 GHz	48.62	Max Peak	-25.38
2	5.145200000 GHz	38.23	Average	-15.77
2	7.158400000 GHz	42.19	Average	-11.81
1	8.484800000 GHz	56.92	Max Peak	-17.08
1	9.990800000 GHz	57.53	Max Peak	-16.47
2	9.998400000 GHz	46.37	Average	-7.63



G16152064

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezzo 16152064
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152064
Test Spec

Final Measurement

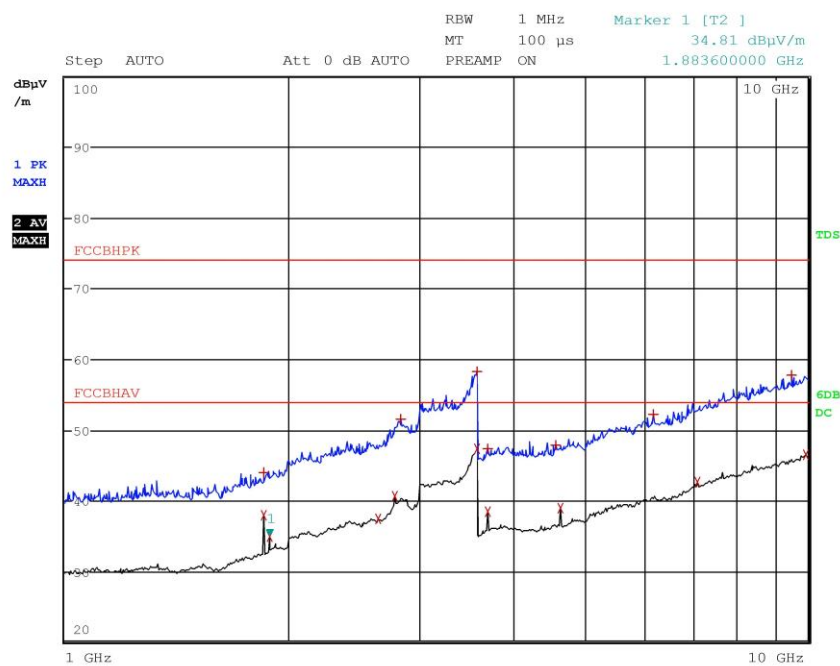
Meas Time: 1 s
Margin: 20 dB
Subranges: 12

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.829600000 GHz	37.14	Average	-16.86
1	1.829600000 GHz	43.71	Max Peak	-30.29
2	2.629200000 GHz	37.47	Average	-16.53
2	3.525600000 GHz	47.33	Average	-6.67
1	3.575600000 GHz	58.38	Max Peak	-15.62
1	3.619200000 GHz	47.14	Max Peak	-26.86
2	3.659200000 GHz	36.60	Average	-17.40
2	4.573600000 GHz	38.20	Average	-15.80
1	6.995600000 GHz	53.51	Max Peak	-20.49
2	7.105200000 GHz	42.19	Average	-11.81
1	9.997600000 GHz	57.78	Max Peak	-16.22
2	10.000000000 GHz	46.69	Average	-7.31



G16152065

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152065
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152065
Test Spec

Final Measurement

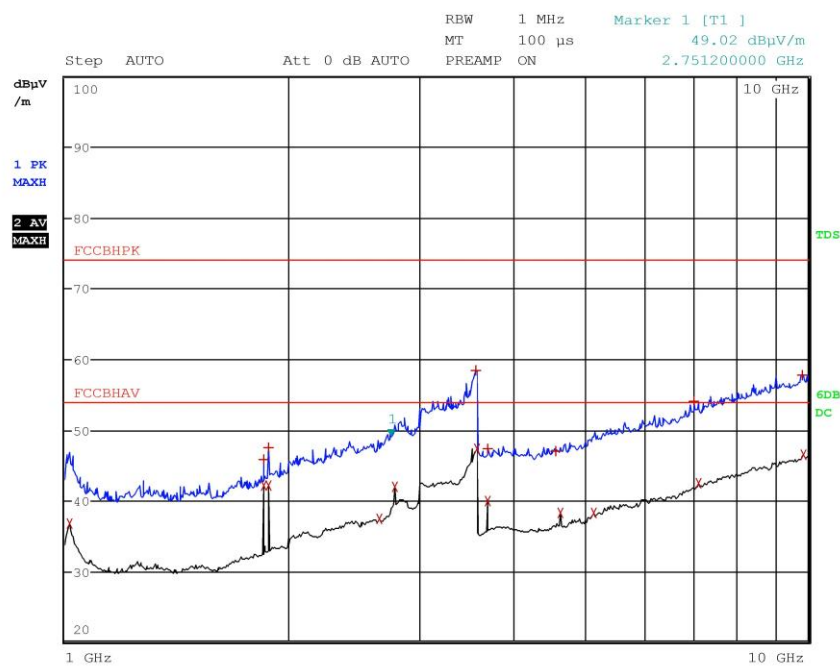
Meas Time: 1 s
Margin: 20 dB
Subranges: 16

Trace	Frequency	Level (dB μ V/m)	Detector	Delta Limit/dB
1	1.851600000 GHz	43.99	Max Peak	-30.01
2	1.854400000 GHz	37.85	Average	-16.15
2	1.883600000 GHz	34.81	Average	-19.19
2	2.635600000 GHz	37.43	Average	-16.57
2	2.782000000 GHz	40.51	Average	-13.49
1	2.827600000 GHz	51.51	Max Peak	-22.49
1	3.590000000 GHz	58.24	Max Peak	-15.76
2	3.592000000 GHz	47.27	Average	-6.73
2	3.709200000 GHz	38.36	Average	-15.64
1	3.709200000 GHz	47.36	Max Peak	-26.64
1	4.579200000 GHz	47.81	Max Peak	-26.19
2	4.636400000 GHz	38.83	Average	-15.17
1	6.178000000 GHz	52.26	Max Peak	-21.74
2	7.088800000 GHz	42.62	Average	-11.38
1	9.509200000 GHz	57.79	Max Peak	-16.21
2	9.925200000 GHz	46.50	Average	-7.50



G16152066

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezzo 16152066
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152066
Test Spec

Final Measurement

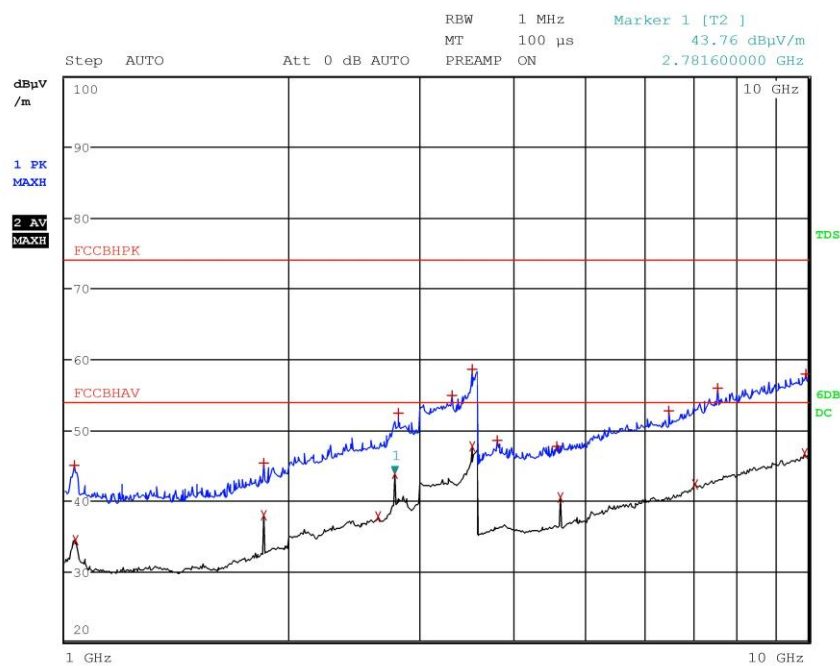
Meas Time: 1 s
Margin: 20 dB
Subranges: 18

Trace	Frequency	Level (dBμV/m)	Detector	Delta Limit/dB
2	1.013600000 GHz	36.80	Average	-17.20
2	1.854400000 GHz	42.13	Average	-11.87
1	1.854400000 GHz	45.87	Max Peak	-28.13
2	1.882000000 GHz	42.05	Average	-11.95
1	1.882000000 GHz	47.44	Max Peak	-26.56
2	2.644000000 GHz	37.32	Average	-16.68
2	2.781600000 GHz	41.97	Average	-12.03
1	3.568000000 GHz	58.35	Max Peak	-15.65
2	3.594800000 GHz	47.35	Average	-6.65
2	3.708800000 GHz	39.91	Average	-14.09
1	3.709200000 GHz	47.26	Max Peak	-26.74
1	4.571600000 GHz	46.99	Max Peak	-27.01
2	4.636400000 GHz	38.24	Average	-15.76
2	5.142400000 GHz	38.25	Average	-15.75
1	7.018400000 GHz	54.07	Max Peak	-19.93
2	7.127200000 GHz	42.44	Average	-11.56
1	9.807200000 GHz	57.80	Max Peak	-16.20
2	9.851200000 GHz	46.40	Average	-7.60



G16152067

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152067
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152067
Test Spec

Final Measurement

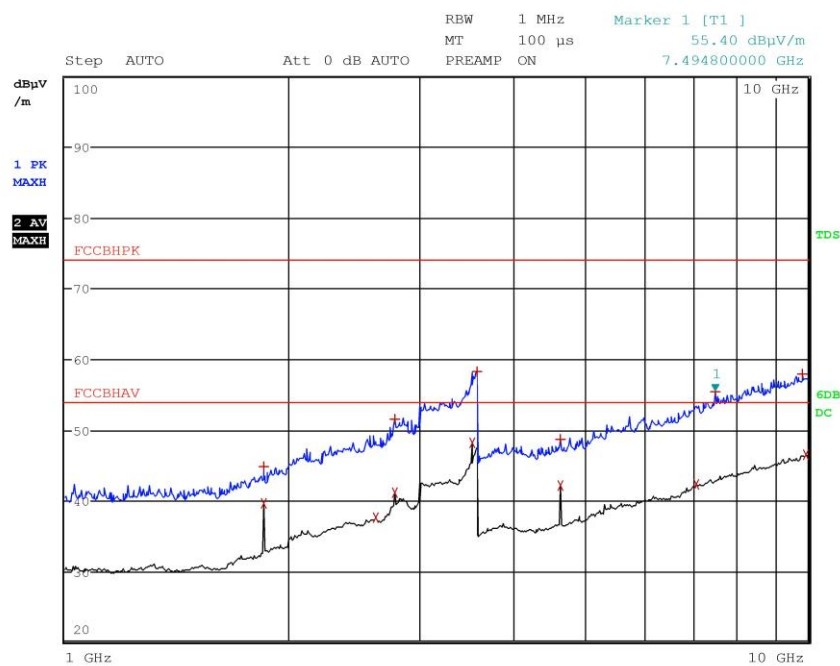
Meas Time: 1 s
Margin: 20 dB
Subranges: 18

Trace	Frequency	Level (dB μ V/m)	Detector	Delta Limit/dB
1	1.028000000 GHz	44.97	Max Peak	-29.03
2	1.034800000 GHz	34.45	Average	-19.55
2	1.854400000 GHz	37.88	Average	-16.12
1	1.854400000 GHz	45.28	Max Peak	-28.72
2	2.636800000 GHz	37.74	Average	-16.26
2	2.781600000 GHz	43.76	Average	-10.24
1	2.806800000 GHz	52.36	Max Peak	-21.64
1	3.320800000 GHz	54.79	Max Peak	-19.21
1	3.525600000 GHz	58.50	Max Peak	-15.50
2	3.525600000 GHz	47.61	Average	-6.39
1	3.818400000 GHz	48.56	Max Peak	-25.44
1	4.586400000 GHz	47.69	Max Peak	-26.31
2	4.636400000 GHz	40.49	Average	-13.51
1	6.498400000 GHz	52.68	Max Peak	-21.32
2	7.050000000 GHz	42.26	Average	-11.74
1	7.548400000 GHz	55.82	Max Peak	-18.18
2	9.904800000 GHz	46.68	Average	-7.32
1	9.931200000 GHz	57.92	Max Peak	-16.08



G16152068

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezzo 16152068
Test Spec





Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152068
Test Spec

Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 13

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	1.854400000 GHz	39.56	Average	-14.44
1	1.854400000 GHz	44.85	Max Peak	-29.15
2	2.615200000 GHz	37.52	Average	-16.48
2	2.781600000 GHz	41.14	Average	-12.86
1	2.781600000 GHz	51.50	Max Peak	-22.50
2	3.525600000 GHz	48.13	Average	-5.87
1	3.581200000 GHz	58.23	Max Peak	-15.77
1	4.636400000 GHz	48.66	Max Peak	-25.34
2	4.636400000 GHz	42.10	Average	-11.90
2	7.056800000 GHz	42.31	Average	-11.69
1	7.494800000 GHz	55.40	Max Peak	-18.60
1	9.822000000 GHz	57.90	Max Peak	-16.10
2	9.940800000 GHz	46.49	Average	-7.51

Result: The requirements are met



11.3 Band edge

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Laboratory

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 S227
Measurement uncertainty: See clause 7 of this test report

Test specification

See FCC Part 15.247

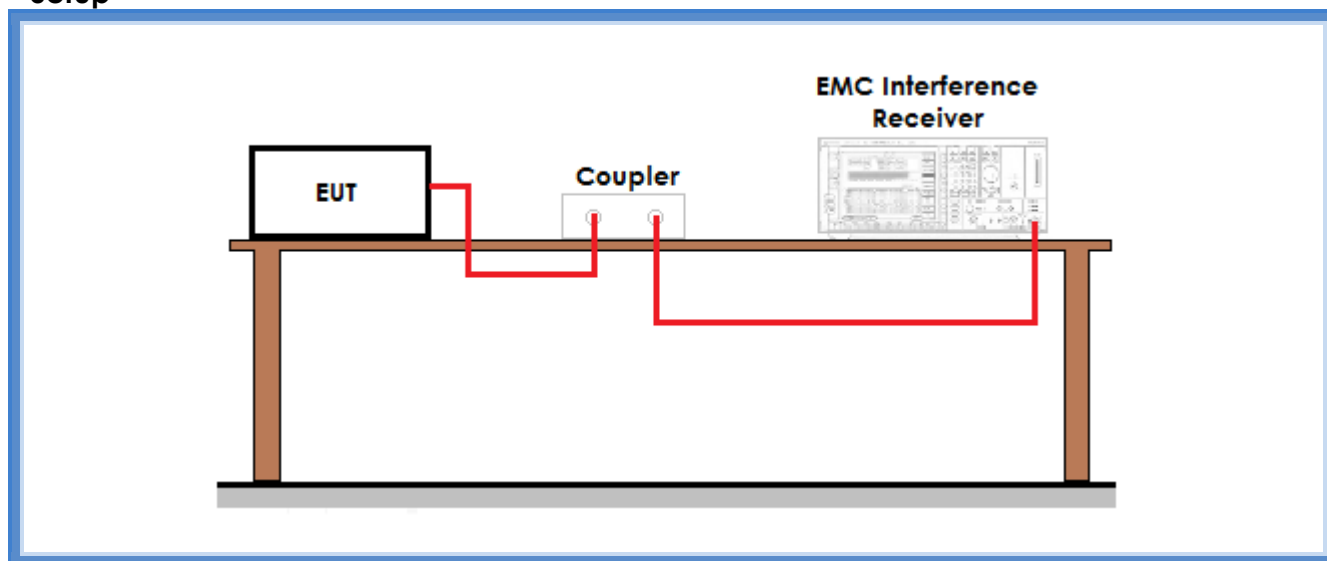
Environmental conditions

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

Acceptance limits: operation within the band 902 – 928 MHz



Setup



Result

Frequency (MHz)	Graph(s) – Hopping	Results	
902,75	G16152007	F _L : 902,605577 MHz	Complies
927,25	G16152006	F _H : 927,389423 MHz	Complies
Remarks: --			

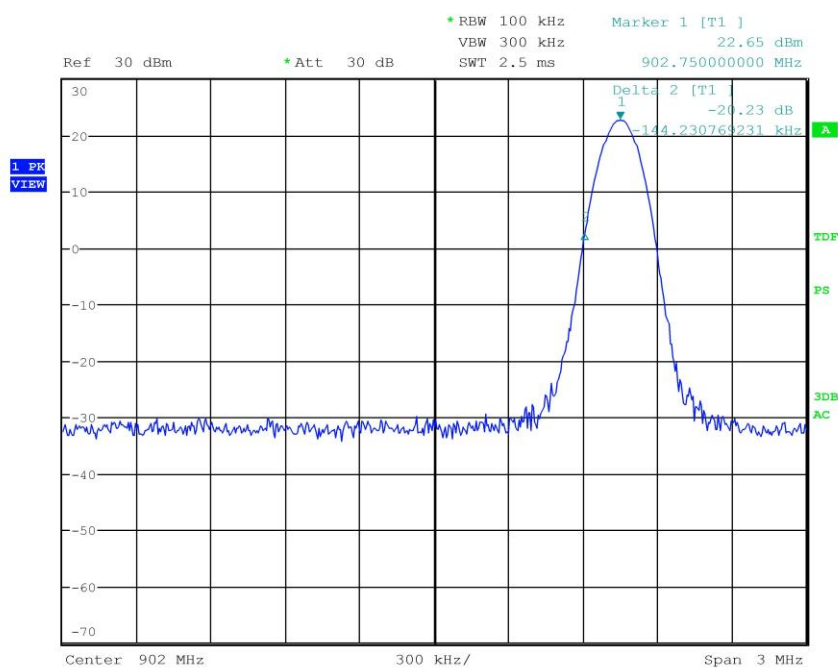
Frequency (MHz)	Graph(s) – No hopping	Results	
902,75	G16152004	F _L : 902,605577 MHz	Complies
927,25	G16152005	F _H : 927,389423 MHz	Complies
Remarks: --			



Graphs

G16152004

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152004
Test Spec





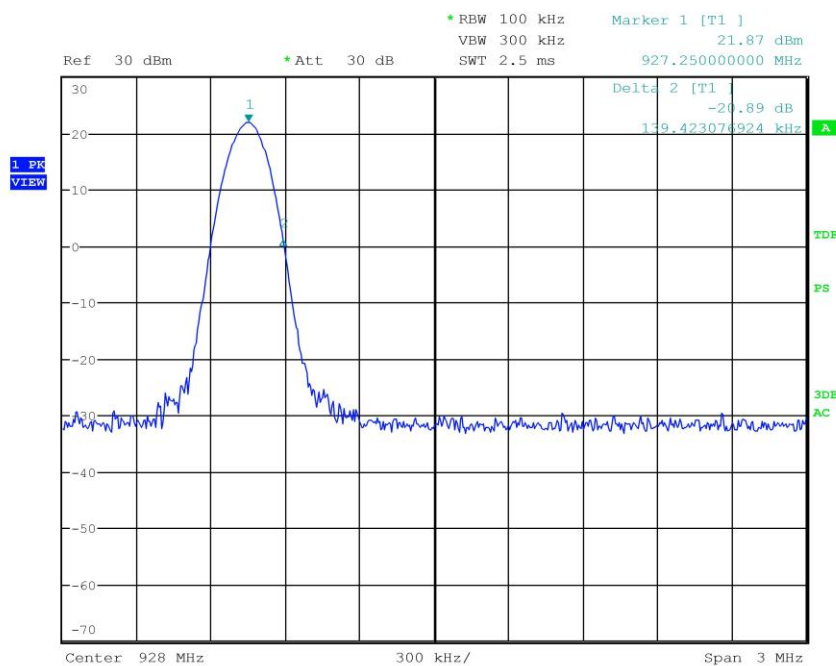
CMC
Centro Misure Compatibilità S.r.l.
Via della Fisica, 20
36016 Thiene (VI)



LAB N° 0168

G16152005

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152005
Test Spec





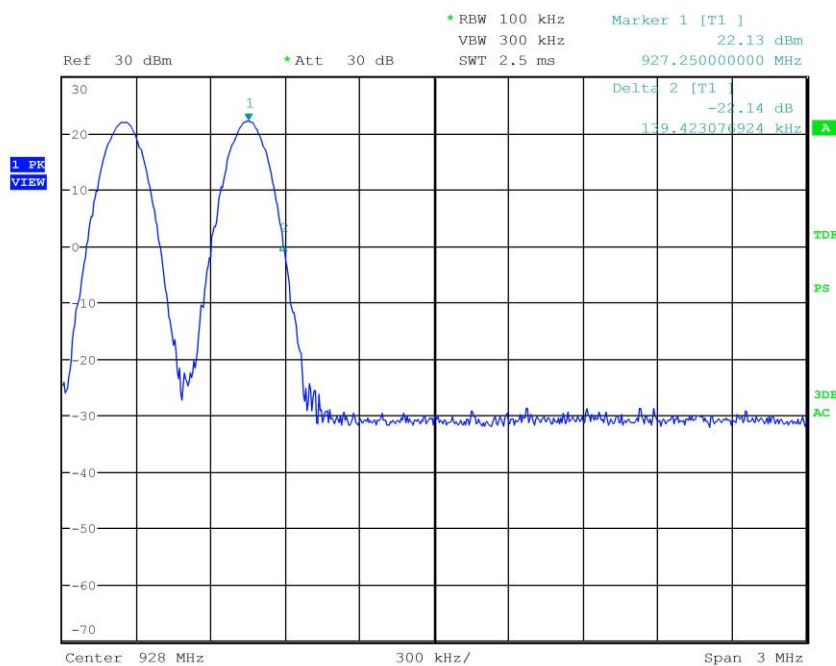
CMC
Centro Misure Compatibilità S.r.l.
Via della Fisica, 20
36016 Thiene (VI)



LAB N° 0168

G16152006

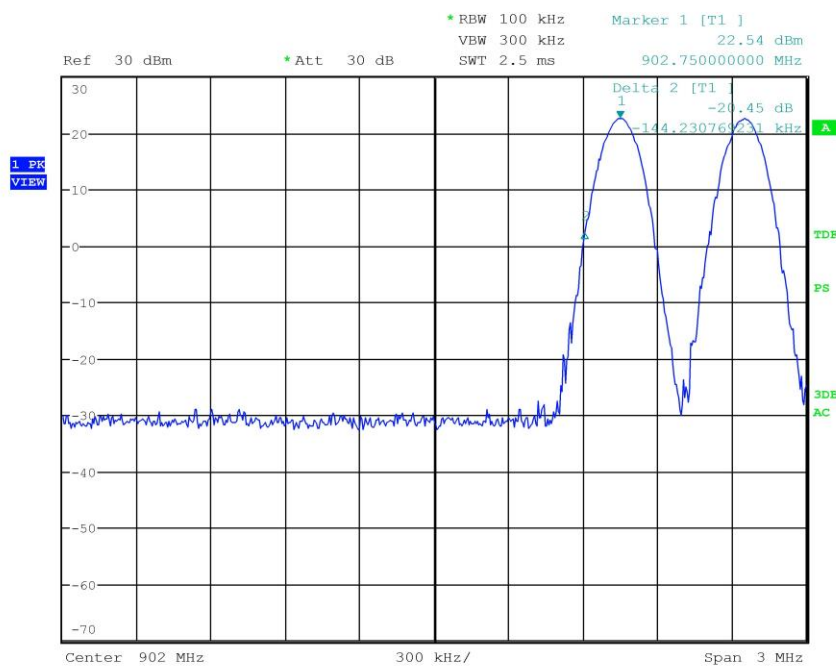
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152006
Test Spec





G16152007

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152007
Test Spec



Result: The requirements are met



11.4 Peak Output Power

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Laboratory

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: Antenna connector

Environmental conditions

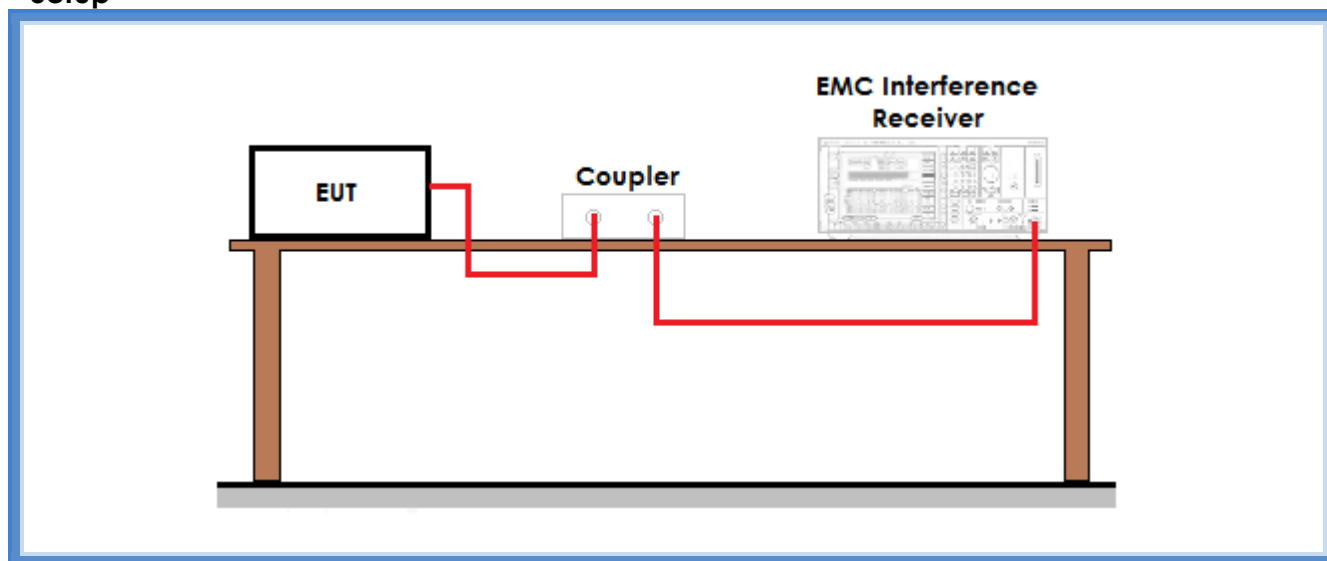
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	100	45

Acceptance limits:

For frequency hopping systems operating in the 2400–2483,5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483,5 MHz band: 0,125 watts. For frequency hopping systems operating in the 902–928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0,25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels.



Setup



Result

Frequency (MHz)	Graphs	Measured Peak Output Power (dBm)	Peak Output Power (mW)	Calculated radiated level (dBμV/m)
902,75	G16152001	22,18	165,20	118,11
914,75	G16152002	21,96	157,04	117,89
927,25	G16152003	21,67	146,89	117,60
Remarks: --				

Remarks

$$E = \sqrt{30 \times P \times G} / d$$

Where:

E = the measured maximum fundamental field strength in V/m

G = the numeric gain of the transmitting antenna: 1,175 (0,7 dBi)

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

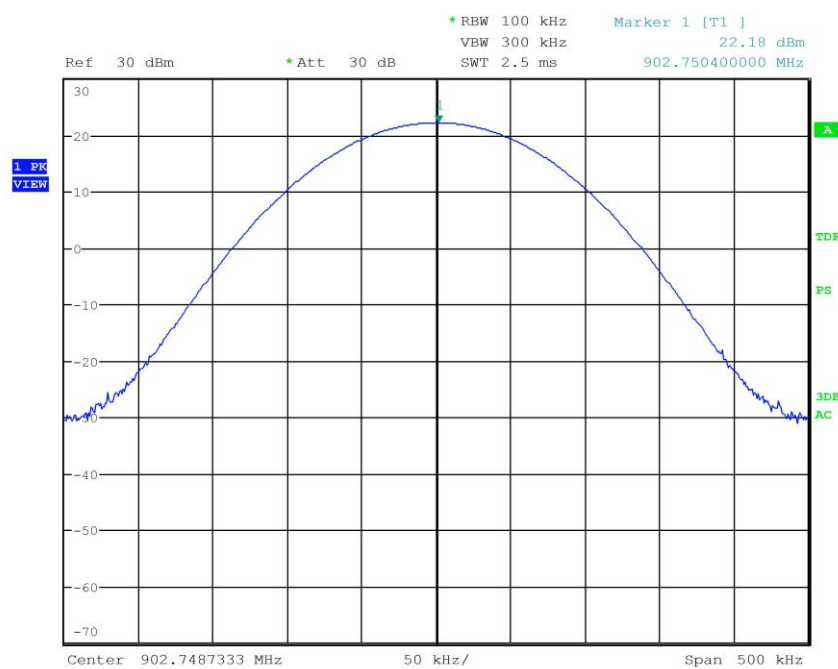
P = the power in watts



Graphs

G16152001

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezzo 16152001
Test Spec





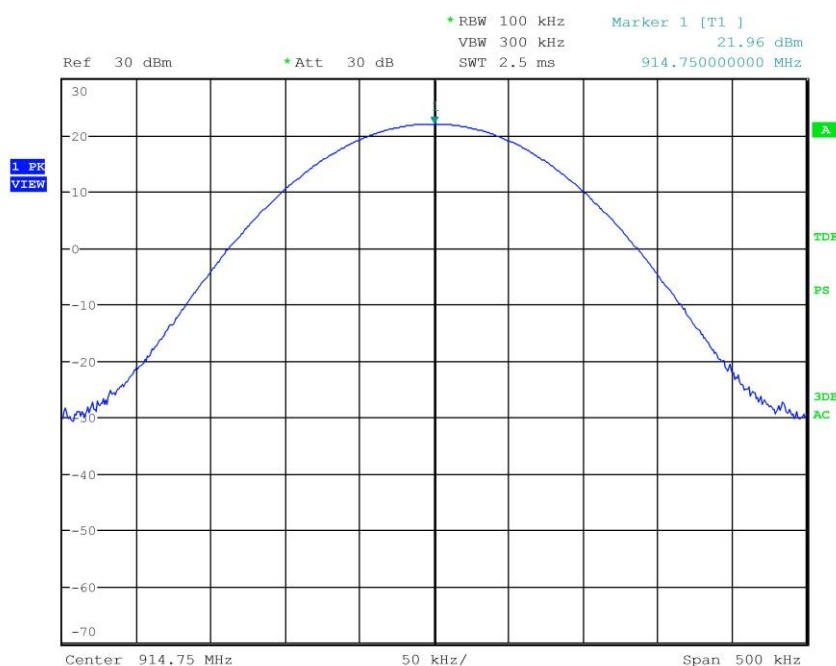
CMC
Centro Misure Compatibilità S.r.l.
Via della Fisica, 20
36016 Thiene (VI)



LAB N° 0168

G16152002

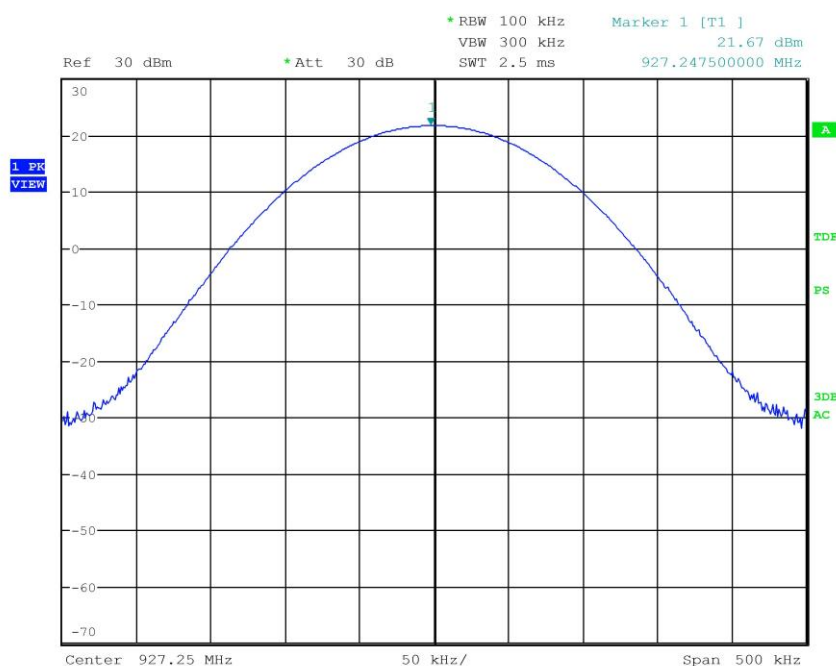
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152002
Test Spec





G16152003

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition
Operator Bertezolo 16152003
Test Spec



Result: The requirements are met



11.5 Spurious Emission

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.209
- DA 00-705
- 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 S136, CMC S164
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Antenna polarization: Horizontal (H) – Vertical (V)
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		
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

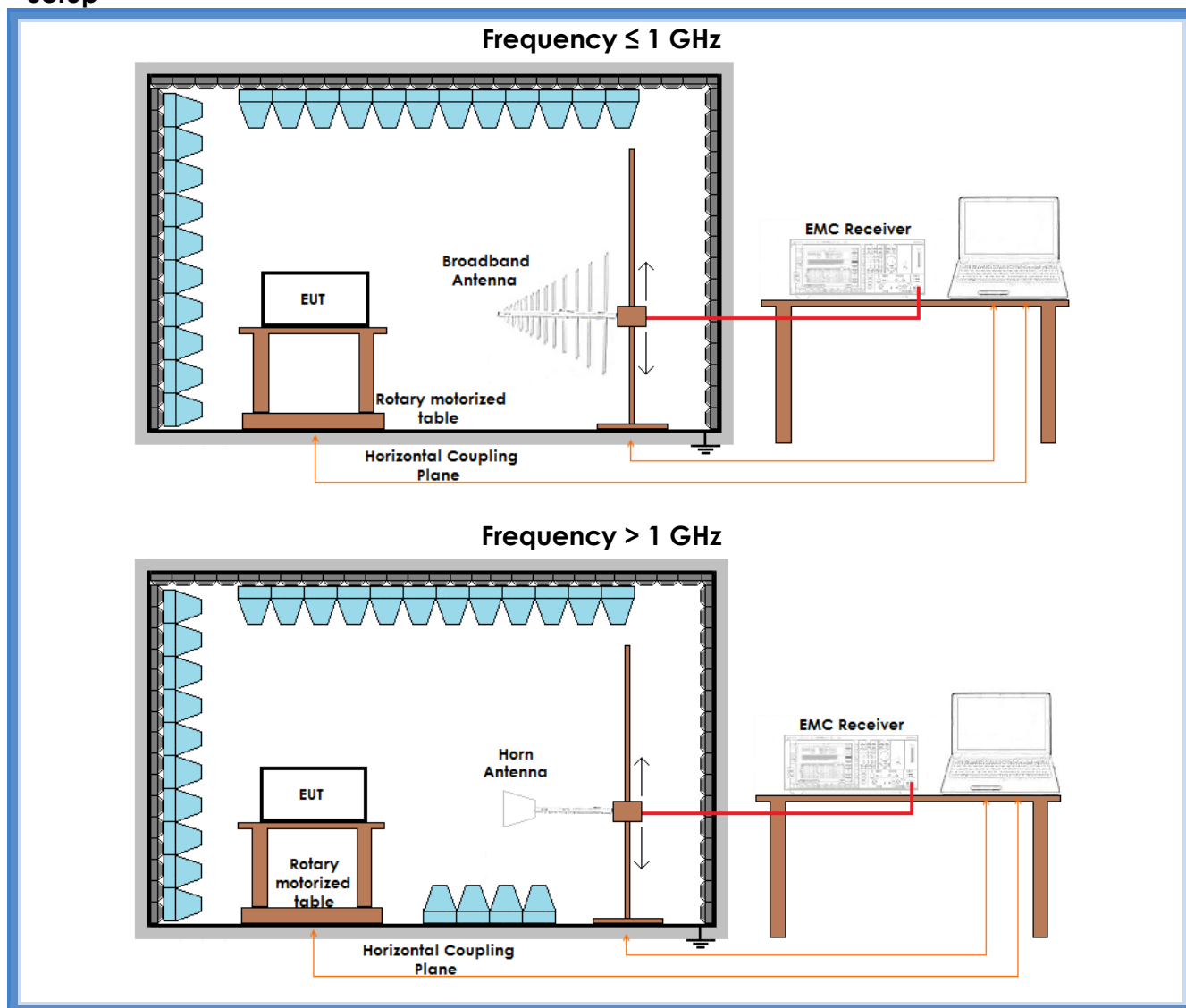
MHz	MHz	MHz	GHz
0,090 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775	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
8,37625 – 8,38675	156,7 – 156,9	2690 – 2900	22,01 – 23,12
8,41425 – 8,41475	162,0125 – 167,17	3260 – 3267	23,6 – 24,0
12,29 – 12,293	167,72 – 173,2	3332 – 3339	31,2 – 31,8
12,51975 – 12,52025	240 – 285	3345,8 – 3358	36,43 – 36,5
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

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.



Setup





Result – AV detector

QUAD Circular Polarized Quadrifilar Antenna							
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	39,69	54,00	38,53	54,00	39,56	54,00	Complies
III	42,04	54,00	42,32	54,00	43,76	54,00	Complies
IV	37,19	54,00	37,91	54,00	More than 20 dB below limit	54,00	Complies
V	38,62	54,00	40,20	54,00	42,10	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. The emission values marked with * have been detected in non-restricted frequency bands. In these bands the limits have been always considered 54 dB μ V/m as worst case.							



External dedicated antenna							
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	43,91	54,00	40,91	54,00	42,13	54,00	Complies
III	39,37	54,00	44,36	54,00	41,97	54,00	Complies
IV	39,52	54,00	37,99	54,00	39,91	54,00	Complies
V	37,97	54,00	38,20	54,00	38,83	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. The emission values marked with * have been detected in non-restricted frequency bands. In these bands the limits have been always considered 54 dB μ V/m as worst case.							



Result – Peak detector

QUAD Circular Polarized Quadrifilar Antenna							
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	45,96	74,00	44,37	74,00	45,28	74,00	Complies
III	48,70	74,00	48,71	74,00	52,36	74,00	Complies
IV	46,09	74,00	46,71	74,00	48,56	74,00	Complies
V	More than 20 dB below limit	74,00	47,56	74,00	48,66	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	55,82	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	57,85	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. The emission values marked with * have been detected in non-restricted frequency bands. In these bands the limits have been always considered 74 dB μ V/m as worst case.							



External dedicated antenna							
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	47,11	74,00	45,95	74,00	45,87	74,00	Complies
III	47,71	74,00	50,46	74,00	51,51	74,00	Complies
IV	58,28	74,00	47,14	74,00	47,36	74,00	Complies
V	48,31	74,00	48,62	74,00	47,81	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. The emission values marked with * have been detected in non-restricted frequency bands. In these bands the limits have been always considered 74 dB μ V/m as worst case.							

Result: The requirements are met



11.6 Maximum permissible exposure

Test set-up and execution

- FCC Rules and Regulation;
Titles 47 Part 1.1310
- Internal procedure PM001
- See clause 4 of this test report

Test configuration

Test site:
Laboratory

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: Antenna

Acceptance limits

0,60 mW/cm² max at 20 cm of distance

Result

Power Density Limit (mW/cm ²)	Maximum Output Power (mW)	Antenna Gain (G)	Power Density at 20 cm (mW/cm ²)	Remarks
0,60	165,20	1,175	0,0386	QUAD Circular Polarized Quadrifilar Antenna

Remarks: Power Density = $(P \times G) / (4\pi R^2)$

Result: The requirements are met