



**Independent Testing Laboratory  
CMC Centro Misure Compatibilità S.r.l.**

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Accredited by Ministry of Communications – Notified Body EMC Directive 2004/108/EC n° NB 2044

**TEST REPORT nr. R11058101**

**FCC**

**Test item**

Description .....: VEICHL E BELT TENSION ANALYZER

Trademark .....: TEXA

Model/Type.....: TTC – DBA

**Test Specification**

Standard.....: FCC Rules & Regulations, Title 47 - Part 15.107 and Part 15.109:2010

**Client's name** .....: TEXA S.p.A.

Address.....: Via 1° Maggio, 9 - 31050 Monastier di Treviso (TV) - ITALY

**Manufacturer's name:** Same as client

Address.....: --

**Report**

Tested by .....: A. Bertezolo - Technician

Approved by .....: R. Beghetto - Laboratory Manager

Date of issue .....: 06.05.11

Contents .....: 18 pages

This test report shall not be reproduced except in full without the written approval of CMC.  
The test results presented in this report relate only to the item tested.



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## 1. Summary

### Emission Test:

FCC Rules & Regulations, Title 47

Test specifications	Environmental Phenomena	Port	Tests sequence	Result
Part 15.107	Continuous disturbance voltage	AC mains	1	Complies (+)
Part 15.109	Radiated disturbance	Enclosure	2	Complies

(+) Test executed on 230 Vac side of typical power supply

The Test Report was given to the Client representatives for necessary documentation of ratification of the tested equipment and it is valid for the FCC certification.



## 2. Description of Equipment under test (EUT)

Power supply ..... : 3,7 Vdc from battery  
Power cable ..... : Unshielded  
Serial Number ..... : --  
Components list ..... : Annex 1

### 2.1 Test Site

Company ..... : CMC Centro Misure Compatibilità S.r.l.  
Address ..... : Via dell'Elettronica, 12/C  
36016 Thiene (VI) - ITALY

## 3. Testing and sampling

Date of receipt of test item ..... : 20.01.11  
Testing start date ..... : 14.04.11  
Testing end date ..... : 14.04.11  
Samples tested nr. .... : 1  
Sampling procedure ..... : Equipment used for testing was picked up by the manufacturer, at the end of the production process with random criterion  
Internal identification ..... : adhesive label with the product number P110033

## 4. Operative conditions

EUT exercising ..... : Steady condition, continuous measuring  
Auxiliary equipment ..... : Audio source 200 Hz for measuring simulation  
Performance check for immunity test ..... : --  
Test configuration ..... : EUT classified as portable equipment



## 5. Photograph(s) of EUT

### 5.1 Photograph(s) of EUT





**5.2 Photograph(s) of setup**

Continuous disturbance voltage





## 6. Equipment list

<i>Id. number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Serial number</i>	<i>Last calibration</i>	<i>Due date calibration</i>
CMC S001	Rohde & Schwarz	ESHS30	EMC interference receiver	862024/003	January '11	January '12
CMC S009	Rohde & Schwarz	ESH2-Z5	Artificial network	839497/007	January '11	January '12
CMC S010	Rohde & Schwarz	ESH3-Z2	Impulses limiting device	---	January '11	January '12
CMC S108	Emco	3115	Horn antenna	9811-5622	April '10	April '13
CMC S136	Schwarzbeck	VULB 9136	Broadband Antenna	9136-205	May '10	May '13
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '11	January '12
CMC A013	CMC	TR01	Rotary motorized table	---	--	--
CMC A014	CMC	PM01	Antenna positioning Mast	---	--	--



## 7. Measurement uncertainty

Test	Expanded Uncertainty	note
<b>Conducted Emission</b>		
(50Ω/50μH AMN) - (9 kHz – 150 kHz)	±3.0 dB	1
(50Ω/50μH AMN) - (150 kHz – 30 MHz)	±2.6 dB	1
(Voltage probe) - (150 kHz – 30 MHz)	±3.1 dB	1
(50Ω/5μH AMN) - (150 kHz – 108 MHz)	±2.6 dB	1
<b>Discontinuous Conducted Emission</b>		
Conducted Emission (50Ω/50μH AMN) - (150 kHz – 30 MHz)	±2.9 dB	1
<b>Disturbance Power (30 MHz – 300 MHz)</b>		
	±3.1 dB	1
<b>Radiated Emission</b>		
(0,150 MHz – 30 MHz)	±4.3 dB	1
(30 MHz – 1000 MHz)	±4.6 dB	1
(1 GHz – 6 GHz)	±4.3 dB	1
<b>Electromagnetic field EMF</b>		
	±18.8 %	1
<b>Harmonic current emissions test</b>		
	±2.5 %	1
<b>Voltage fluctuation and flicker test</b>		
	±5.3 %	1
<b>Insertion loss test</b>		
	±2.2 dB	1
<b>Radiated electromagnetic disturbance test (loop antenna)</b>		
	±2.4 dB	1
<b>Radiated electromagnetic field immunity test</b>		
	0.8 V/m at 3V/m	1
<b>Pulse modulated radiated electromagnetic field immunity test</b>		
	0.8 V/m at 3V/m	1
<b>Injected currents immunity test</b>		
	0.6 V at 3V	1
<b>Bulk current</b>		
	8.4 mA at 60 mA	1
<b>Power frequency magnetic field immunity test</b>		
	0.4 A/m at 3 A/m	1
<b>Electrostatic discharge immunity test</b>		
		2
<b>Electrical fast transients / burst immunity test</b>		
		2
<b>Surge immunity test</b>		
		2
<b>Short interruption immunity test</b>		
		2
<b>Voltage transient emission test</b>		
	±4 %	1
<b>Transient immunity test</b>		
		2

### Notes

#### Note 1:

The expanded uncertainty reported according to EN55016-4-2(2004-10) is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of p = 95%

#### Note 2:

It has been demonstrated that the used test equipment meets the specified requirements in the standard with at least a 95% confidence, covering factor k = 2.





## 8. Reference documents

Reference no.	Description
FCC Rules and Regulation Title 47 part 15:2010	--
Internal Procedure PM001 rev. 2.0 (Quality Manual)	Measure procedure
Internal procedure INC_M rev. 8.0 (Quality Manual)	Measurement uncertainty calculation





## 9. Deviation from test specification

In agreement with the client, emission tests were performed with peak detector .

At the frequencies where the measures exceed the limit or within 6 dB from it, the test was repeated with quasi-peak detector and/or average detector.

## 10. Test case verdicts

Test case does not apply to the test object.....: N.A.

Test item does meet the requirement.....: Complies

Test item does not meet the requirement.....: Does not comply

Test not performed .....: N.E.

## 11. Results

In this clause tests results are reported.

Measurement uncertainty is in accordance with document CMC INC\_M rev. 8.0.



## 11.1 Continuous disturbance voltage test (150 kHz – 30 MHz)

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.107
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Shielded chamber

*Auxiliary equipment:*  
See clause 4 of this test report

### EUT exercising

See clause 4 of this test report

### Test equipment used

CMC S001, CMC S009, CMC S010  
Measurement uncertainty: See clause 7 of this test report

### Test specification

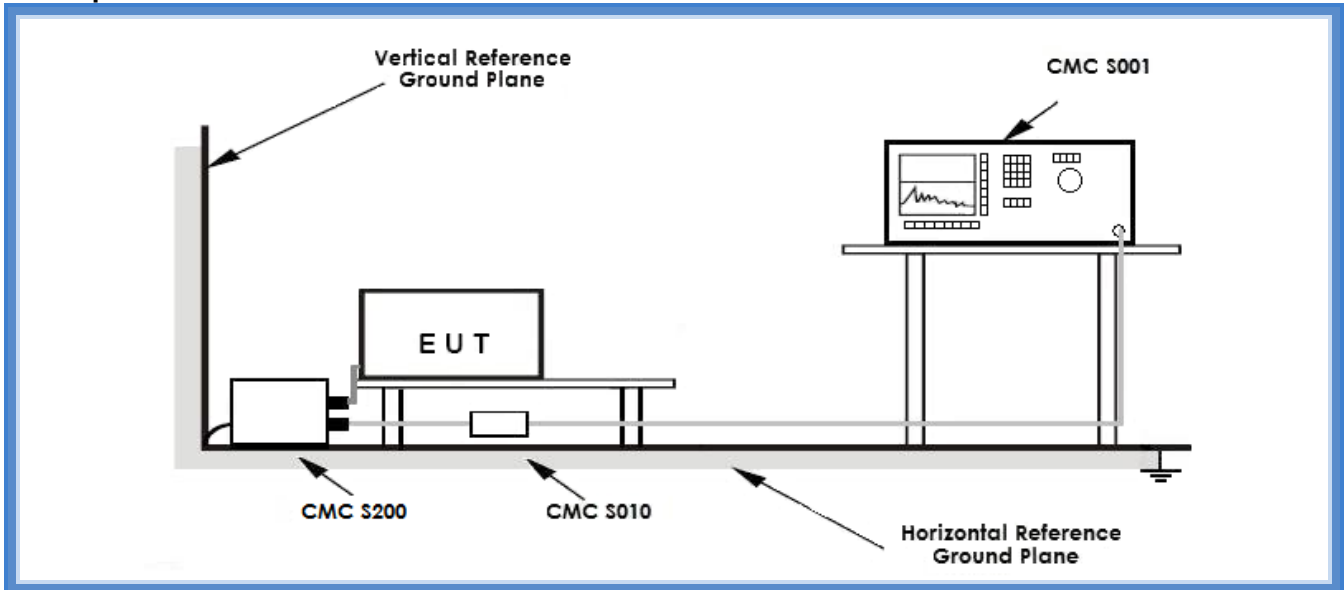
Port: Mains terminal  
Frequency range: 150 kHz – 30 MHz

### Acceptance limits

Frequency range (MHz)	Limits for class B equipment	
	dB( $\mu$ V) Quasi-peak	dB( $\mu$ V) Average
0,15 to 0,50	66 to 56	56 to 46
0,5 to 5	56	46
5 to 30	60	50



## Setup



## Result

Line	Graphs	Remarks	Result
N	G11058103	--	Complies
L1	G11058104	--	Complies

**Remarks:** Test executed on 230 Vac side of typical power supply

### Graphs Legend

PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a X  
AV: Average; AV [1s] (average at 1 second) values are marked with a +

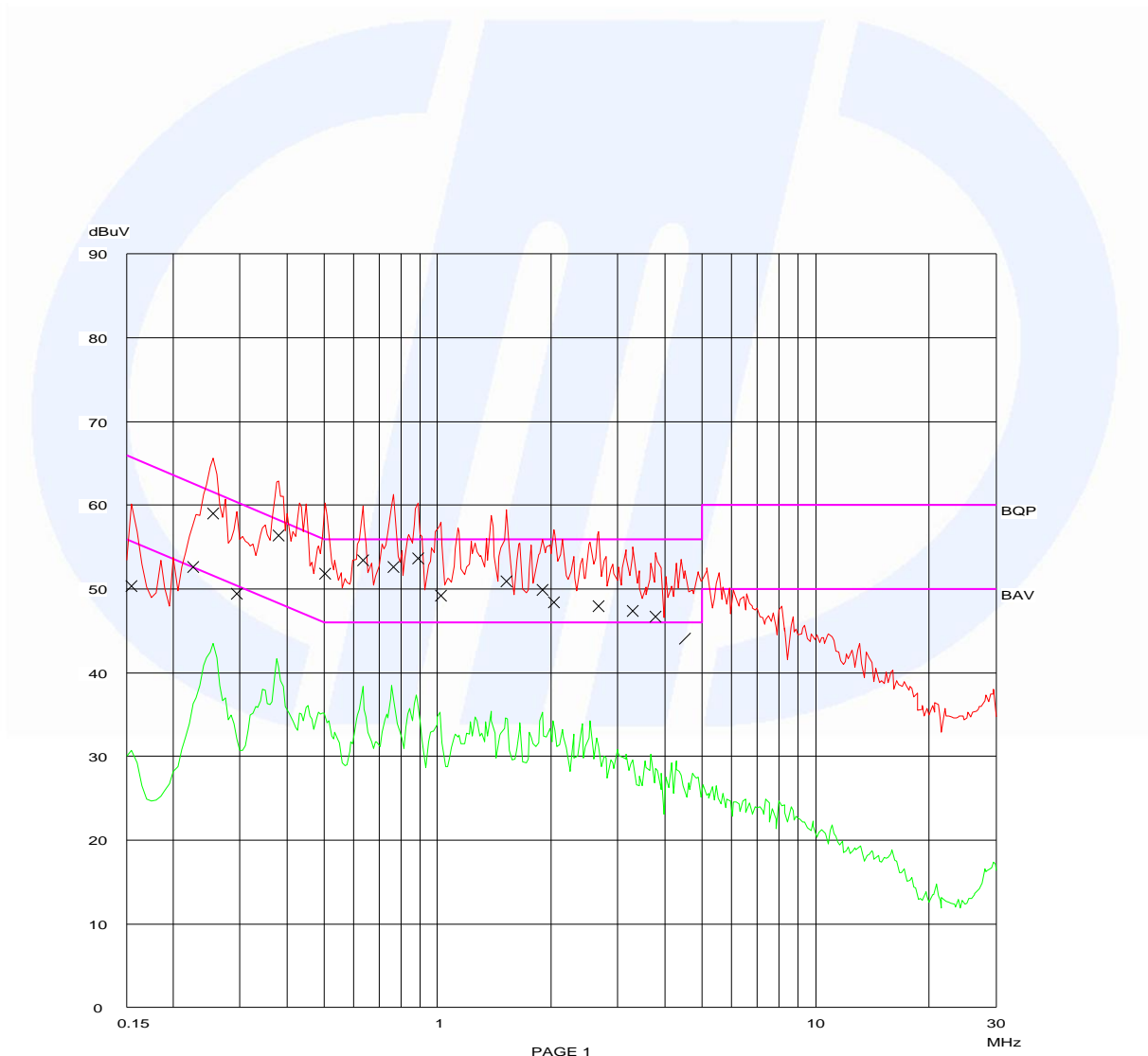


## Graphs

CMC Centro misure compatibilita srl

Emission 0.15-30MHz

Op Cond: In ricarica  
Operator: Gandini 11058103  
Test Spec: Line N

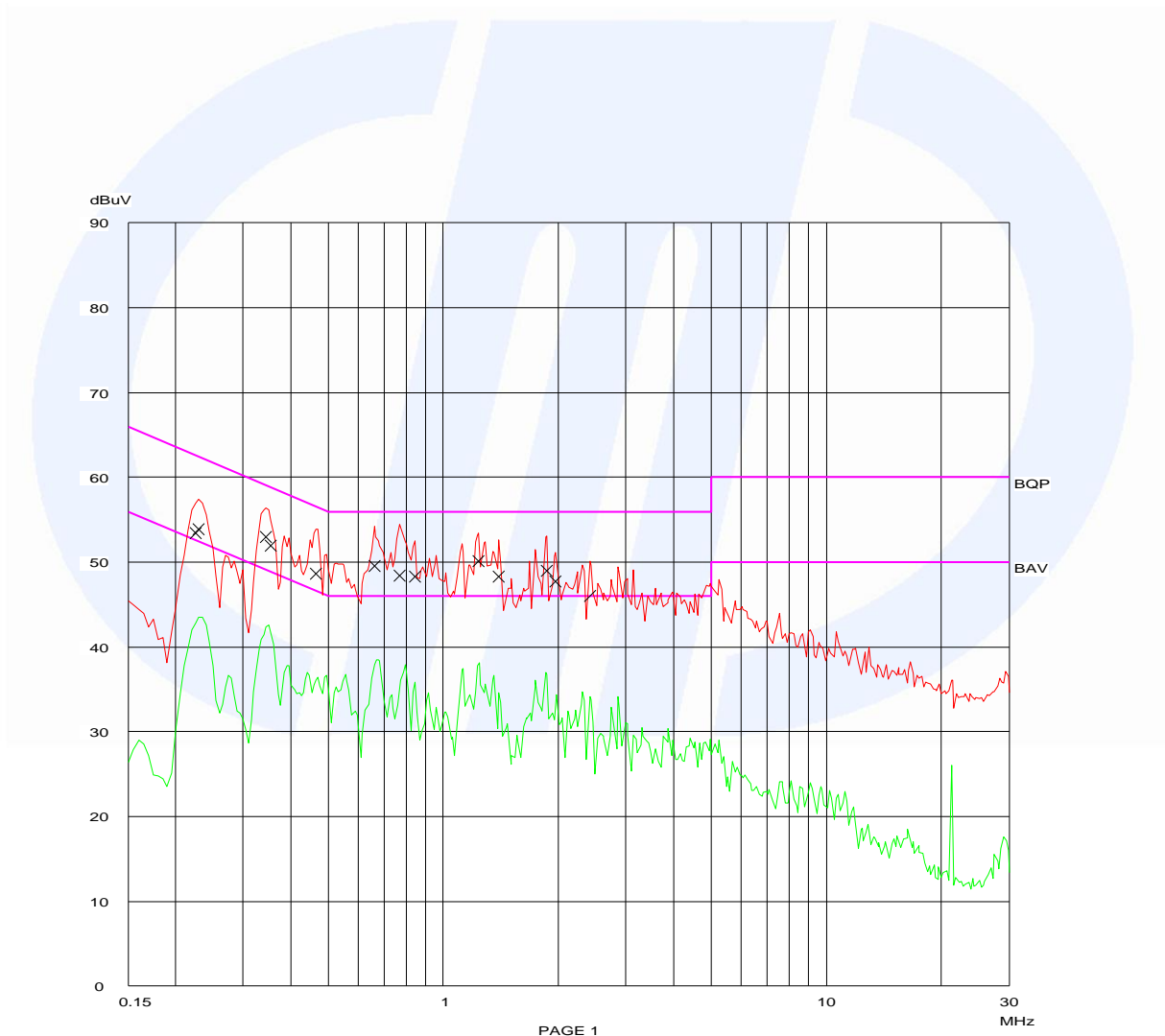




CMC Centro misure compatibilita srl

Emission 0.15-30MHz

Op Cond: In ricarica  
Operator: Gandini 11058104  
Test Spec: Line L



**Result:** The requirements are met



## 11.2 Radiated disturbance test (30 – 1000 MHz)

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.109
- 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, CMC A013,  
CMC A014  
Measurement uncertainty: See clause 7 of this  
test report

### Test specification

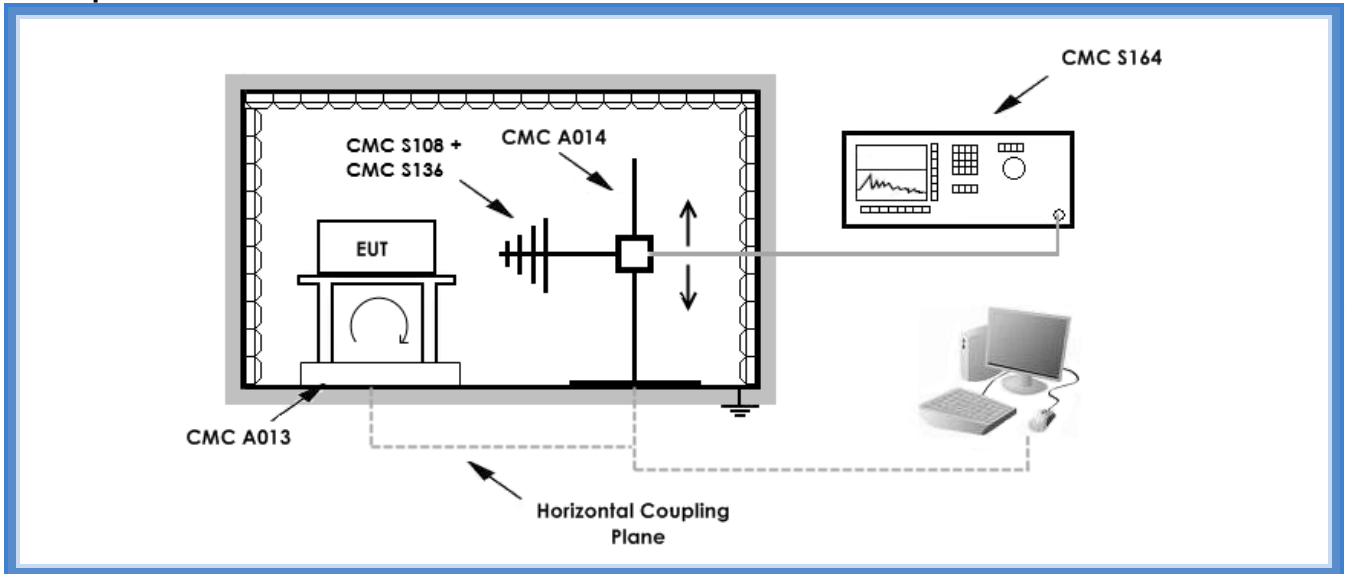
Port: Enclosure  
Frequency range: 30 MHz – 1000 MHz  
Antenna polarization: Horizontal (H) – Vertical (V)  
EUT – Antenna distance: 3 m

### Acceptance limits

Limits for class B equipment	
Frequency range (MHz)	Limits [dB( $\mu$ V/m)]
30 to 88	40
88 to 216	43,52
216 to 960	46,02
960 to 1000	53,98



## Setup



## Result

Polarization	Graphs	Remarks	Result
V	G11058101	--	Complies
H	G11058102	--	Complies

**Remarks:** EUT was connected to a PC during the test

### Graphs Legend

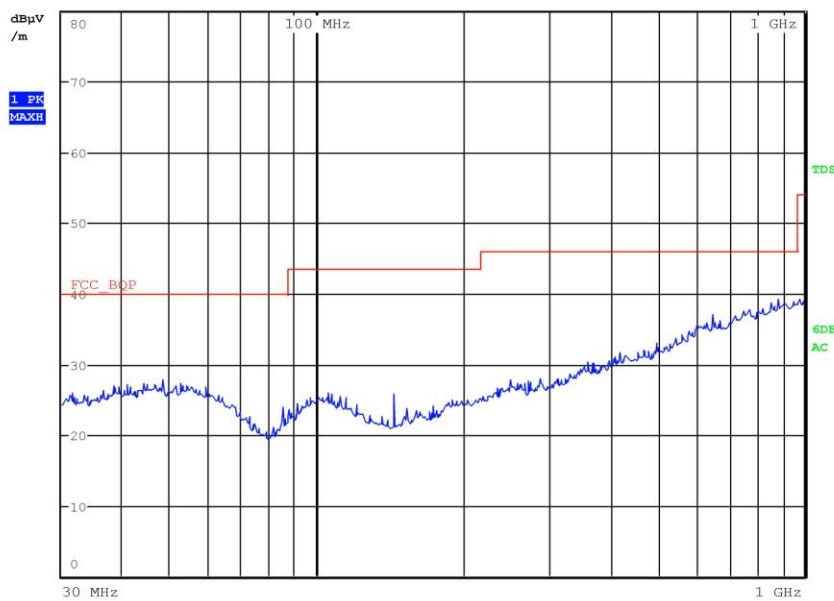
PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +  
 AV: Average; AV [1s] (average at 1 second) values are marked with a X





## Graphs

**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In misura continua  
**Operator** Bertezolo 11058101  
**Test Spec**  
 Vert



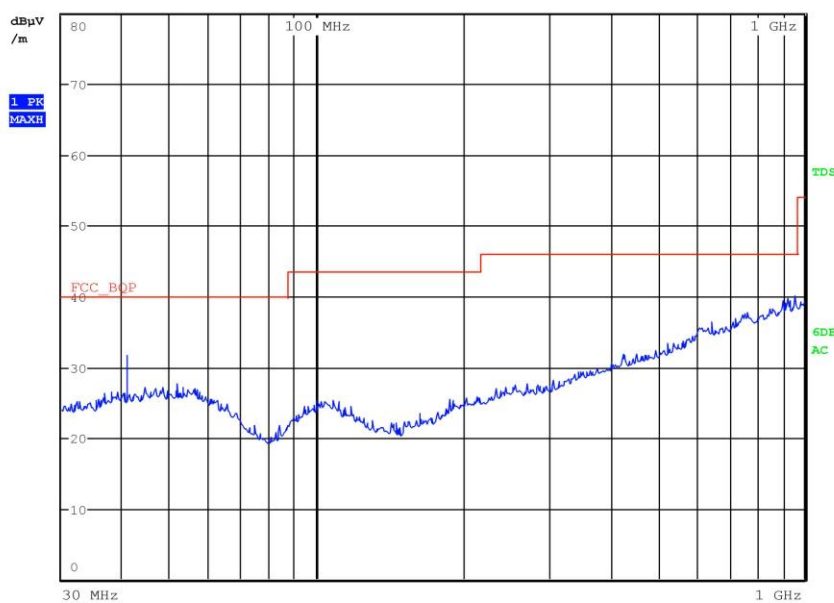
### Final Measurement

Meas Time: 1 s  
 Margin: 6 dB  
 Subranges: 5

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	38.000000000 MHz	44.26	Quasi Peak	4.26
1	41.880000000 MHz	41.50	Quasi Peak	1.50
1	53.684743590 MHz	34.24	Quasi Peak	-5.76
1	143.758461538 MHz	38.19	Quasi Peak	-1.81
1	228.100000000 MHz	34.98	Quasi Peak	-5.02



**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In misura continua  
**Operator** Bertezolo 11058102  
**Test Spec**  
 Horiz



**Final Measurement**

Meas Time: 1 s  
 Margin: 6 dB  
 Subranges: 5

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	38.000000000 MHz	44.26	Quasi Peak	4.26
1	41.880000000 MHz	41.50	Quasi Peak	1.50
1	53.684743590 MHz	34.24	Quasi Peak	-5.76
1	143.758461538 MHz	38.19	Quasi Peak	-1.81
1	228.100000000 MHz	34.98	Quasi Peak	-5.02

**Result:** The requirements are met

CMC Centro Misure Compatibilità S.r.l.

## ANNEX 1 of document nr. R11058101



Data 27/04/11

Titolo progetto: **TESTER TENSIONE CINGHIE TTC - corpo strumento****Codice scheda:** **3903518**

Distinta materiali:

Codice Texa	Descrizione	Posizione	U.M.	Quantità
G003	Assemblaggio generico		MN	5
3903640	GUSCIO INF. "TTC"		Pcs	1
3903414	SPUGNA K630 BIADESIVA 18x8xh1mm		Pcs	1
3903852	GUSCIO SUP. "TESTER TENSIONE CINGHIE TTC"		Pcs	1
4114243008	VITE AUTOFIL. TRONCA TC-CR 3x8 ZINC - PER MAT. PLASTICHE		PCS	2
3903850	ADESIVO 39x22 mm "TESTER TENSIONE CINGHIE TTC" CE		Pcs	1
3903642	IMPUGNATURA IN GOMMA PER "TTC"		Pcs	1
3903644	PROLUNGA IN GOMMA PER MICROFONO "TTC"		Pcs	1
3903645	COPERCHIO MICROFONO "TTC"		Pcs	1
3903636	SC332.C3 "SCHEDA TESTER TENSIONE CINGHIE TTC" - Q8		Pcs	1
3903646	SC354.C0 "SCHEDA MICROFONO TTC" - Q16		Pcs	1
3903306	ACCUMULATORE EEMB LIR063450A 3.7V 1050mAh LI-Ion		Pcs	1
3903551	CAVO 4 VIE L=60mm JST-ZH PER AXONE4-LED		Pcs	1