

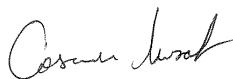
Test report nr. 20811FCC11

Measurements performed in accordance with:

**FCC Rules: code of Federal Regulations (CFR) no. 47
PART 15 – RADIO FREQUENCY DEVICES**

Product: Control unit with receiver
Tested model: SRCR 200 USA, SRCR 180 USA
FCC ID ZEJCR
Applicant: STOBAG North America Corporation
Manufacturer: Nice S.p.A.
Trademark: STOBAG
Testing Laboratory Nice S.p.A.
Via Pezza Alta, 13
I-31046 Rustignè di Oderzo (TV)
Registration number: 771316
Date of receipt sample: 28th April 2011
Testing date: 16th to 19th September 2011
Issue date: 17 October 2011

Tested by: M. Cosmin



Checked by: E. Campion



Notice: The result of tests and checks reported in this Test Report refer exclusively to the samples tested and described in the Report itself.
This report shall not be reproduced partially or in its entirety without written approval of Nice S.p.A.

Contents

Contents	2
1 General Description of Equipment under Test.....	3
1.1 Applicant	3
1.2 Manufacturer	3
1.3 Equipment classification.....	3
1.4 Basic Description of equipment under test.....	4
1.5 Feature of equipment under test	5
2 Test configuration of equipment under test.....	6
2.1 Environmental conditions	6
2.2 Description of support equipment.....	6
2.3 Interface identification and connection diagram of test system	7
3 Operation of equipment under test	8
3.1 Operating test conditions	8
4 Tests identification and result	9
4.1 Methods of measurement	9
4.2 Frequency range investigated	9
5 Tests	10
5.1 Conduced emission.....	10
5.2 Radiated emission.....	12
6 Measurement and Test Equipment instrumentation.....	18
7 Photographic Documentation.....	22
8.1 EUT Identification.....	22
8.2 Test Set-up	25

1

General Description of Equipment under Test

1.1 Applicant

Name: STOBAG North America Corporation
Address: 7401 **Pacific** Circle
Mississauga Ontario
Country: Canada

1.2 Manufacturer

Name: Nice S.p.A.
Address: Via Pezza Alta, 13
31046 Rustignè di Oderzo (TV)
Country: ITALY

1.3 Equipment classification

According to definition 15.3 (o) is a intentional Radiator operating within the Bands:

so it shall fulfil provisions of 47CFR Part 15 Subpart C – **unintentional** radiators – and Section 15.109.

According to definition 15.3 (z) is a unintentional Radiator:

So it shall fulfil provisions of 47CFR Part 15 Subpart B – Unintentional radiator and section 15.107 and 15.109.

1.4 Basic Description of equipment under test

Parameters	Value
Type of equipment:	Control unit with receiver 433,92MHz
Model:	SRCR 200 USA SRCR 180 USA
FCC ID:	ZEJCR
Trade Name:	STOBAG
Data cable:	None
Telecom cable:	None
Power supply type:	120V, 60Hz
AC power input cable:	None
DC power input cable:	none

Model	Description
-	-

1.5 Feature of equipment under test

Parameters	Value
Power specification	120V, 60Hz
Operating frequency:	433,92MHz
Maximum RF output power:	Only receiver
Occupied Bandwidth (99% BW):	-
Emission Designator (ITU):	-
Modulation:	AM, OOK
Channel spacing:	Single channel
Antenna:	Integral
Rx Sensitivity:	-102dBm
Main SW identification:	-
Main HW board identification:	-
Peripherals included (for system application):	Motor and control signal
Interfaces:	-
Integrated interfaces	-
AC adapter:	-

2

Test configuration of equipment under test

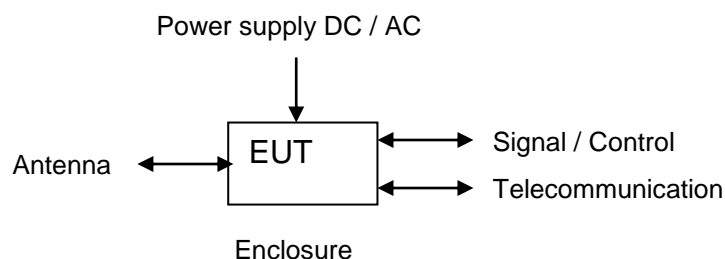
2.1 Environmental conditions

Test conditions	Measured
Ambient temperature:	20 ÷ 25°C
Relative humidity:	50 ÷ 60%
Atmospheric pressure:	900 ÷ 1010mb

2.2 Description of support equipment

Equipment	Manufacturer	Model
-	-	-

2.3 Interface identification and connection diagram of test system



#	Interface	Description	Maximum length	Ref. Document
1	Enclosure	none	None	None
2	AC mains power input	120V. 60Hz	0,8m	None
3	DC power port	None	None	None
4	Signal / control port	None	0,8m	None
5	Antenna port	None	none	None

3

Operation of equipment under test

3.1 Operating test conditions

#	Description
1	Standby (in receiving mode)

4

Tests identification and result

CFR47 Part 15 Section	Title	Operating condition	Result
15.203 15.247 (b)(4)(i)	Antenna requirements	-	Not applicable
15.107 (a)	Conducted emission	#1	PASS
15.109 (a) (f)	Radiated emission	#1	PASS
15.231 (a)	Timing of the transmitter	-	Not applicable
15.231 (a)	Transmit behaviour after releasing the TX-button	-	Not applicable
15.231 (b)	Radiated output power	-	Not applicable
15.35 (c)	Typical pulse train of a signal	-	Not applicable
15.231 (b)	Compliance with the limit of FCC	-	Not applicable
15.231 (b)	Spurious emission - radiated	-	Not Applicable
15.231 (c)	Occupied bandwidth	-	Not applicable

4.1 Methods of measurement

All compliance measurements have been carried out using the procedures described in the standard ANSI C63.4-2009 (excluding sub-par. 4.1.5.2, 5.7.9 and 14), C63.10-2009 and Section 15.31 of CFR47 Part 15 – Subpart A (General).

4.2 Frequency range investigated

- a) conducted emission tests: from 9kHz to 30MHz.
- b) Radiated emission tests: from 150kHz to tenth harmonic of fundamental.

5 Tests

5.1 Conduced emission

Specify:

Base standard: 47CFR Part 15 Section 15.107

- 1) The EUT was placed on wooden table size 80cm, raised 80cm in which is located 40cm away from the vertical wall shielded room.
- 2) Each EUT powered input cord was individually connected through a 50Ω/50μH LISN to the input power source.
- 3) Exploratory measurements were made identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
- 4) The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was than performed over the frequency range of 0,15MHz to 30MHz.
- 5) The measurements were made with the detector set to PEAK and AVERAGE amplitude within a bandwidth of 10kHz during the measurements.
- 6) The measurements with Quasi-Peak detector are performed only for frequencies for which the Peak values are \geq (Q.P. limit – 6dB)

Test Requirements:

Test Setup:	ANSI C63.4
Limit of mains terminal disturbance voltage:	15.107 (a)
Frequency range:	9kHz – 150kHz 150kHz – 30MHz
IF Bandwidth:	200Hz 9kHz
EMC class	B

Limits ⁽¹⁾:

Frequency [MHz]	Quasi-Peak (dBμV)	Average (dBμV)
0,15 – 0,5	66 – 56	56 – 46
0,5 – 5	56	46
5 - 30	60	50

Note: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.

Test Data:

Port under test	Operating condition	Result
AC mains power input port	#1	Complies

Comments:

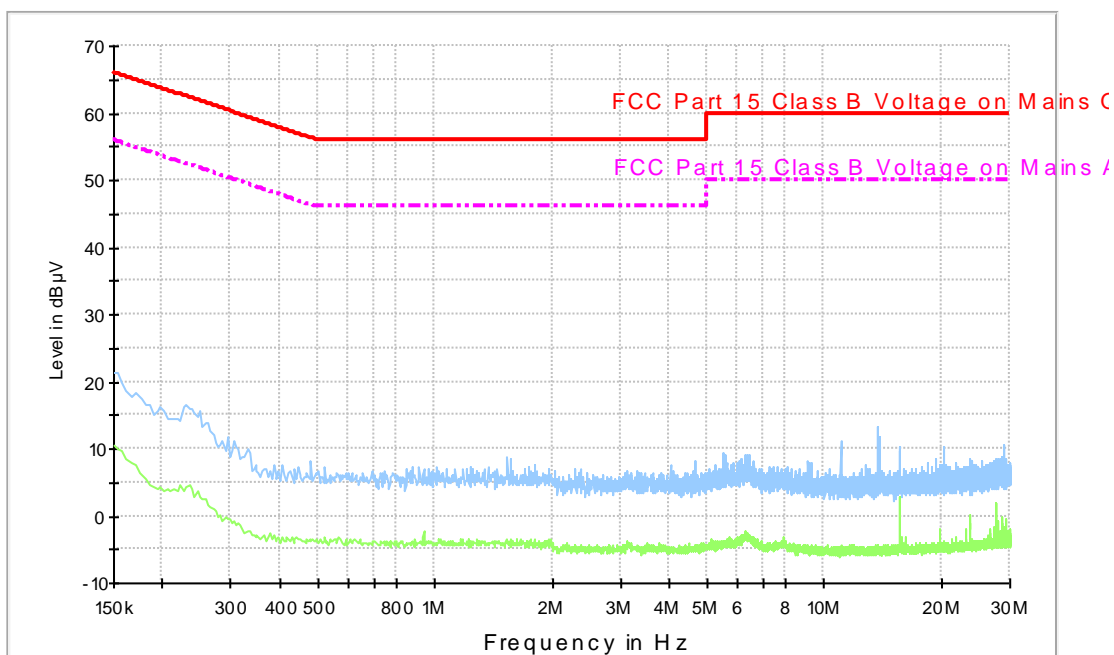
-

Test Report

Common Information

Test Description: TT4/V1 and TT5/V1
Test Site: Nice
Test Standard: FCC Part 15
Environment Conditions: normal
Operator Name: Enrico
Comment: -

Emissione Condotta FCC Class B ESH2-Z5



— FCC Part 15 Class B Voltage on Mains C — FCC Part 15 Class B Voltage on Mains /
— Preview Measurement Detector 1 — Preview Measurement Detector 2

5.2 Radiated emission

Specify:

Base standard:	47CFR Part 15 Section 15.109
----------------	------------------------------

- 1) The EUT was placed on turntable which is 0,8m above the ground plane.
- 2) The turntable shall rotate from 0° to 360° degrees to determine the position of maximum emission level.
- 3) The EUT is positioned 3m away from the receiving antenna which varied from 1 to 4m to find the highest emission.
- 4) The measurements were made with the detector set to PEAK and AVERAGE amplitude within a bandwidth of 100kHz below 1000MHz and 1MHz above 1000MHz.
- 5) The receiving antenna was positioned in both horizontal and vertical polarization.
- 6) The measurements with Quasi-Peak detector, below 1000MHz are performed only for frequencies for which the Peak values are \geq (Q.P. limit – 6dB).

Test Requirements:

Test Setup:	ANSI C63.4
Test facility:	Anechoic chamber
Test distance:	3m
Limits for radiated disturbances:	15.109 (a)
Frequency range:	150kHz to 1GHz 2GHz to 6GHz
IF bandwidth (below 30MHz):	9kHz
IF bandwidth (below 1000MHz):	120kHz
IF bandwidth (above 1000MHz):	1MHz
EMC class:	B

Limits ⁽¹⁾:

Frequency [MHz]	Field Strength (μ V/m)	Measurement distance (m)
0,0009 – 0,490	2400/F(kHz)	300
0,490 – 1,750	24000/F(kHz)	30
1,750 - 30	30	30
30 - 88	100	30
88 - 216	150	3
216 - 960	200	3
above 960	500	3

Note: ⁽¹⁾ to convert the measuring distance from 3m to 300m and 30m to 300m a correction factor from 40dB/decade was used

Test Data.:

Port under test	Operating condition	Result
Enclosure	#1	Complies

Comments:

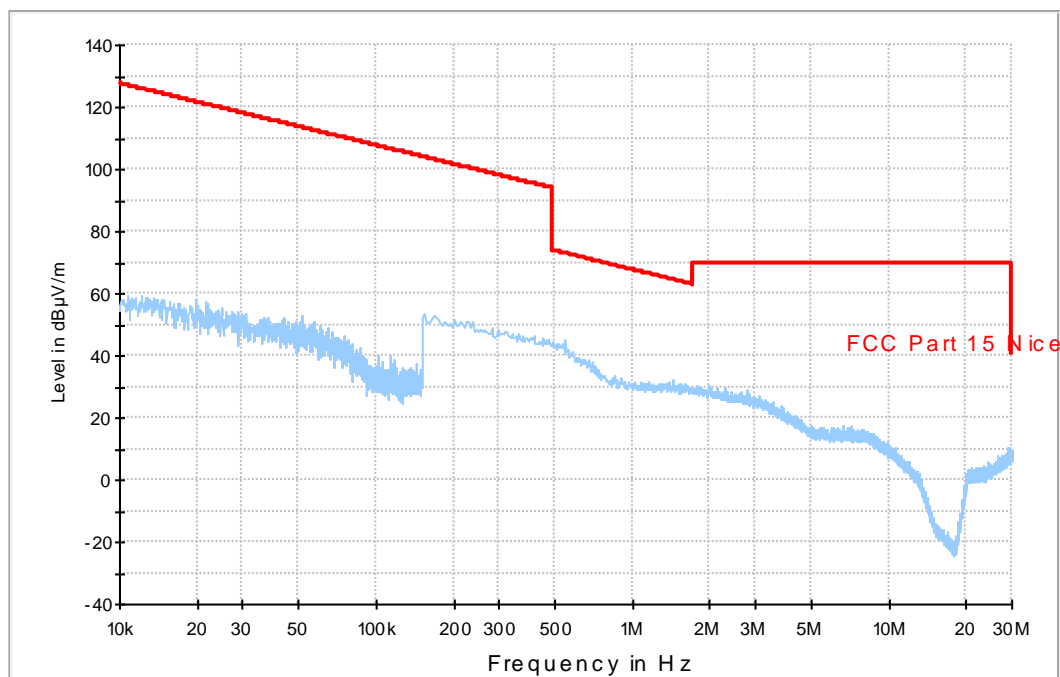
-

EMC32 Report

Common Information

Test Description: TT4/V1 and TT5/V1
Operating Conditions: Standby
Operator Name: Enrico

Emissione Magnetica FCC



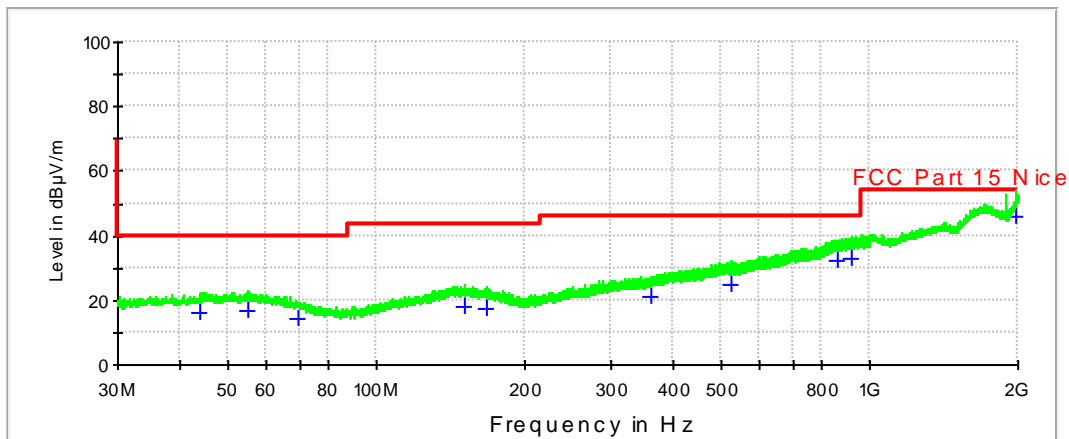
— FCC Part 15 Nice — Preview Measurement Detector 1

EMC32 Report

Common Information

Test Description: TT4/V1 and TT5/V1
 Operating Conditions: Standby
 Operator Name: Enrico

Copy of Emissione radiata PK FCC



- MaxPeak-ClearWrite
- FCC Part 15 N ice
- × MaxPeak (Single)
- + QuasiPeak (Single)
- × Average (Single)
- + RMS (Single)
- × MinPeak (Single)
- × CAverage (Single)
- × CRMS (Single)
- × ACVideo (Single)
- Test:Auto Merge Results MaxPeak-ClearWrite:MaxPeak-ClearWrite(1)

Result Table_Single

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Average (dBμV/m)	RMS (dBμV/m)	MinPeak (dBμV/m)	CAverage (dBμV/m)	CRMS (dBμV/m)	ACVideo (dBμV/m)
44.200000	---	15.9	---	---	---	---	---	---
55.120000	---	16.5	---	---	---	---	---	---
69.600000	---	14.3	---	---	---	---	---	---
151.680000	---	18.1	---	---	---	---	---	---
167.400000	---	17.6	---	---	---	---	---	---
359.480000	---	21.2	---	---	---	---	---	---
527.200000	---	25.1	---	---	---	---	---	---
862.520000	---	32.6	---	---	---	---	---	---
917.840000	---	33.0	---	---	---	---	---	---
1989.600000	---	46.3	---	---	---	---	---	---

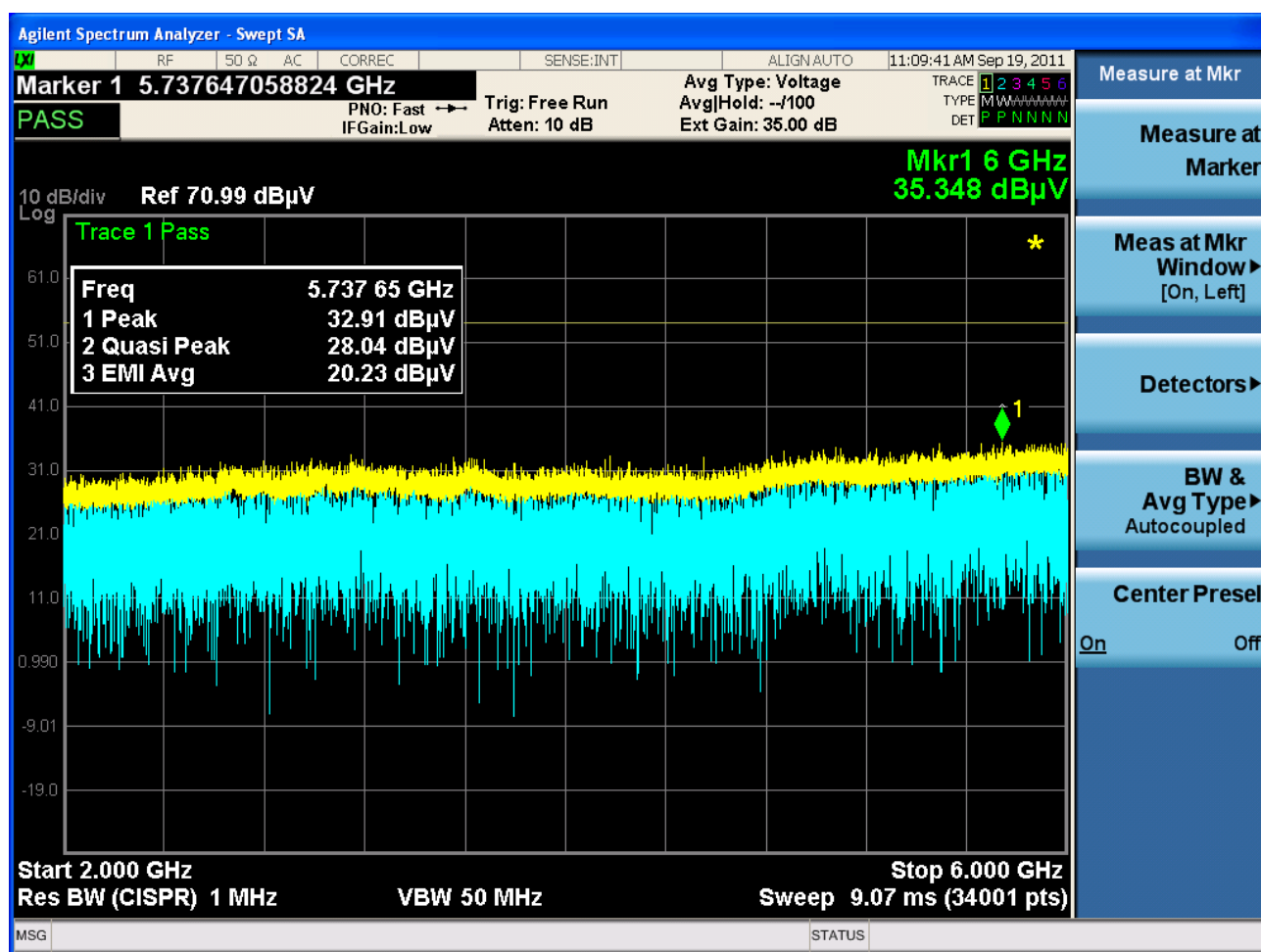
(continuation of the "Result Table_Single" table from column 9 ...)

Frequency (MHz)	Meas. Time (ms)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Comment
44.200000	1000.000	120.000	0.0	H	0.0	12.4	
55.120000	1000.000	120.000	0.0	H	0.0	12.7	
69.600000	1000.000	120.000	0.0	H	0.0	10.6	
151.680000	1000.000	120.000	0.0	H	0.0	14.7	
167.400000	1000.000	120.000	0.0	H	0.0	14.2	
359.480000	1000.000	120.000	0.0	H	0.0	17.9	
527.200000	1000.000	120.000	0.0	H	0.0	21.5	
862.520000	1000.000	120.000	0.0	H	0.0	28.2	
917.840000	1000.000	120.000	0.0	H	0.0	28.5	
1989.600000	1000.000	1000.000	0.0	H	0.0	41.9	

FCC test report



FCC test report



6

Measurement and Test Equipment instrumentation

Code	nr.	Manufacturer	Model	Serial number	Date of Calibration	Calibration Due
ANA	7	Agilent	N9020A	MY48011101	09/02/2011	09/02/2012
ANT	1	EMCO	3121C DB-4	9312-901		
ANT	3	Schwarzbeck	VULB9160	3180	07/06/2011	07/06/2013
ANT	4	AH System	SAS-571	684	08/06/2011	08/06/2013
ANT	5	AH System	SAS-562B	236	06/06/2011	06/06/2013
ANT	6	AH System	SAS-571	1025	08/06/2011	08/06/2013
ANT	7	Aaronia	BicoLOG 30100	1293	07/06/2011	07/06/2013
ATT	1	-	PE7021-6		21/06/2011	21/06/2013
ATT	2	Tyco Electronics Co.	50WCW	-	22/06/2011	22/06/2013
ATT	5	RADIALL	R414.710.000	-	23/05/2008	23/05/2013
ATT	6	RADIALL	R414.710.000	-	23/05/2008	23/05/2013
ATT	7	RADIALL	R414.720.000	-	23/05/2008	23/05/2013
CAV	1	Rohde & Schwarz	HFU2-Z5	-	22/06/2011	22/06/2012

Code	nr.	Manufacturer	Model	Serial number	Date of Calibration	Calibration Due
CAV	2	Rohde & Schwarz	HFU2-Z4	-	22/06/2011	22/06/2012
CAV	3	TESEO	CAVO A	-	22/06/2011	22/06/2012
CAV	4	TESEO	CAVO B	-	22/06/2011	22/06/2012
CAV	5	TESEO	CAVO C	-	22/06/2011	22/06/2012
CAV	6	TESEO	CAVO D	-	22/06/2011	22/06/2012
CAV	7	TESEO	CAVO E	-	22/06/2011	22/06/2012
CAV	13	TESEO	CAVO G	-	22/06/2011	22/06/2012
CAV	14	TESEO	CAVO H	-	22/06/2011	22/06/2012
CAV	15	TESEO	CAVO I	-	22/06/2011	22/06/2012
CAV	16	Rohde & Schwarz	9111505/200 (CAVO J)	5995-12-161-6890	22/06/2011	22/06/2012
CAV	17	Nice	CAVO K	-	22/06/2011	22/06/2012

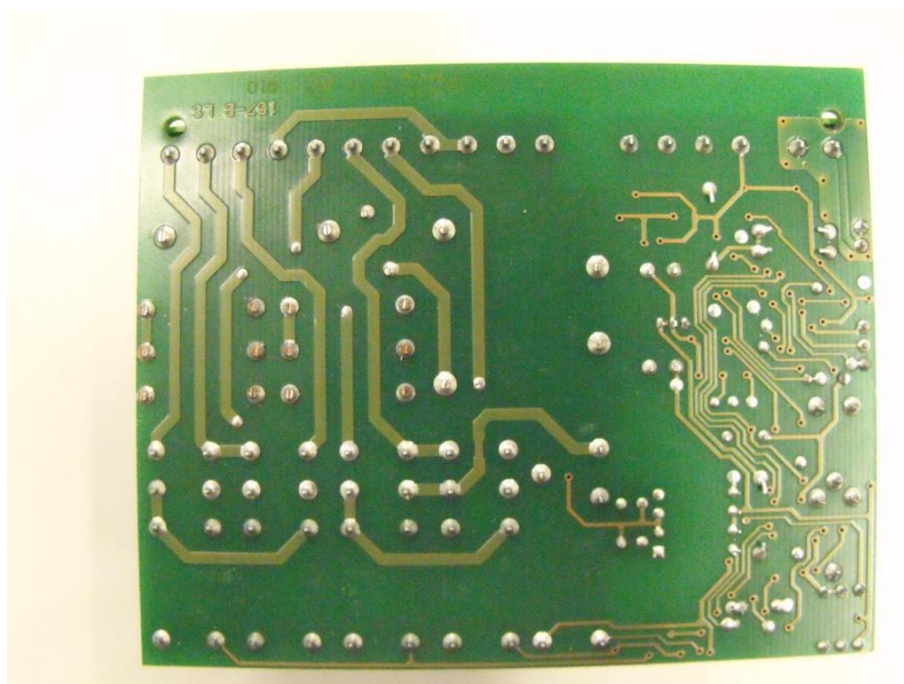
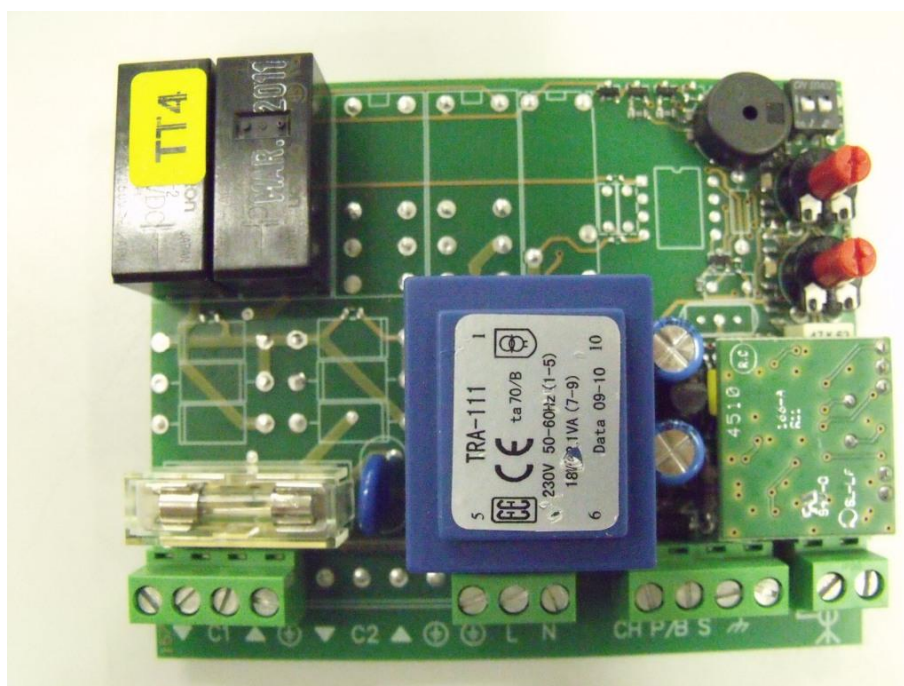
Code	nr.	Manufacturer	Model	Serial number	Date of Calibration	Calibration Due
CAV	18	Nice	CAVO L	-	22/06/2011	22/06/2012
CAV	19	Nice	Cavo M	-	22/06/2011	22/06/2012
CAV	20	Nice	Cavo N	-	22/06/2011	22/06/2012
CAV	21	Nice	Cavo P	-	22/06/2011	22/06/2012
CDN	1	FCC	FCC 801-M2-16A-SPJ	5024	09/06/2011	09/06/2013
CDN	2	FCC	FCC 801-M3-16A-S	5032	09/06/2011	09/06/2013
CDN	3	FCC	FCC801-150-50 CDN	05031 & 05032		
CDN	4	FCC	FCC 801-M1-16A	7035	09/06/2011	09/06/2013
CDN	5	FCC	FCC 801-150-50-CDN	07113 & 07114		
CDN	6	FCC	FCC 801-M4-16A	100726	25/05/2010	28/05/2012
CDN	7	FCC	FCC-801-M5-16A	100727	28/05/2010	28/05/2012
CSA	1	TESEO	EN 55022	NSA	12/08/2011	12/08/2012
				CISPR 16-1-4	14/04/2009	14/04/2014
				EN 61000-4-3	10/08/2011	10/08/2012
ECL	1	FCC	F-203I-23	466	09/06/2011	09/06/2013
ECL	2	FCC	F-203I-CF-23MM	445		

Code	nr.	Manufacturer	Model	Serial number	Date of Calibration	Calibration Due
GEN	7	Rohde & Schwarz	SML 03	102178	17/12/2009	17/12/2011
GEN	8	Agilent	N5182A	MY48180288	06/10/2010	06/10/2012
LIS	2	Rohde & Schwarz	ESH2-Z5	100183	09/06/2011	09/06/2013
PAS	1	FCC	F-202	197	29/05/2009	29/05/2013
POW	1	Rohde & Schwarz	NRVD	101221	03/06/2011	03/06/2012
POW	2	Rohde & Schwarz	NRV-Z5	100314	07/06/2011	07/06/2012
POW	3	Rohde & Schwarz	NRV-Z5	100315	07/06/2011	07/06/2012
PRE	2	Schwarzbeck	BBV 9718	9718-178	23/02/2010	23/02/2012
RIC	1	Rohde & Schwarz	ESCI	100140	07/01/2011	07/01/2012
SCO	7	FCC	F-51	454	09/06/2011	07/06/2013
SCO	8	Teseo	EQ-51-1	D047	07/06/2011	07/06/2013
SCO	9	FCC	F-33-4	63	09/06/2011	09/06/2013
SOF	1	Rohde & Schwarz	EMC32	V5.20.2		

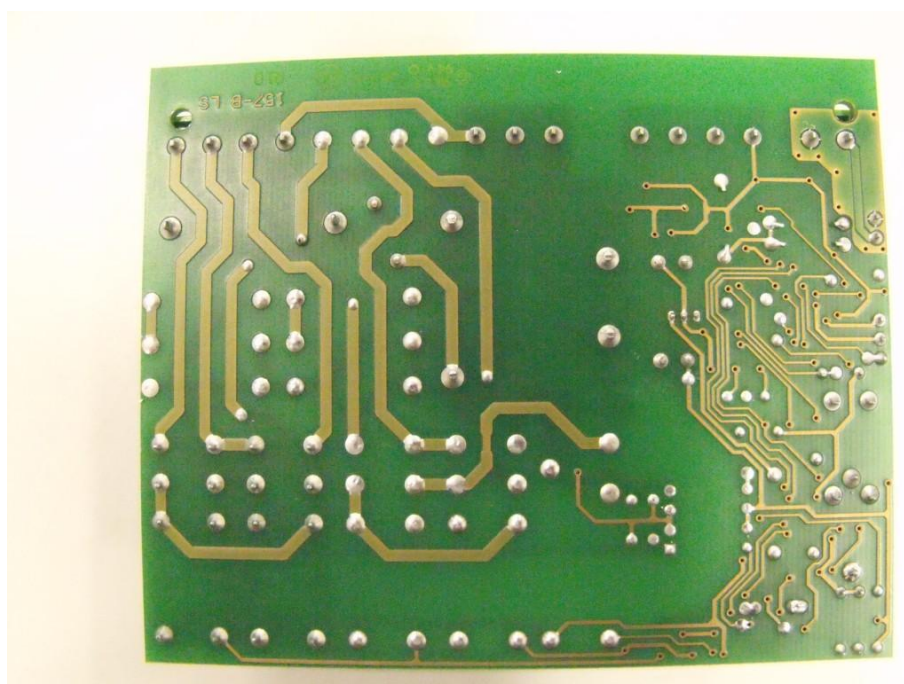
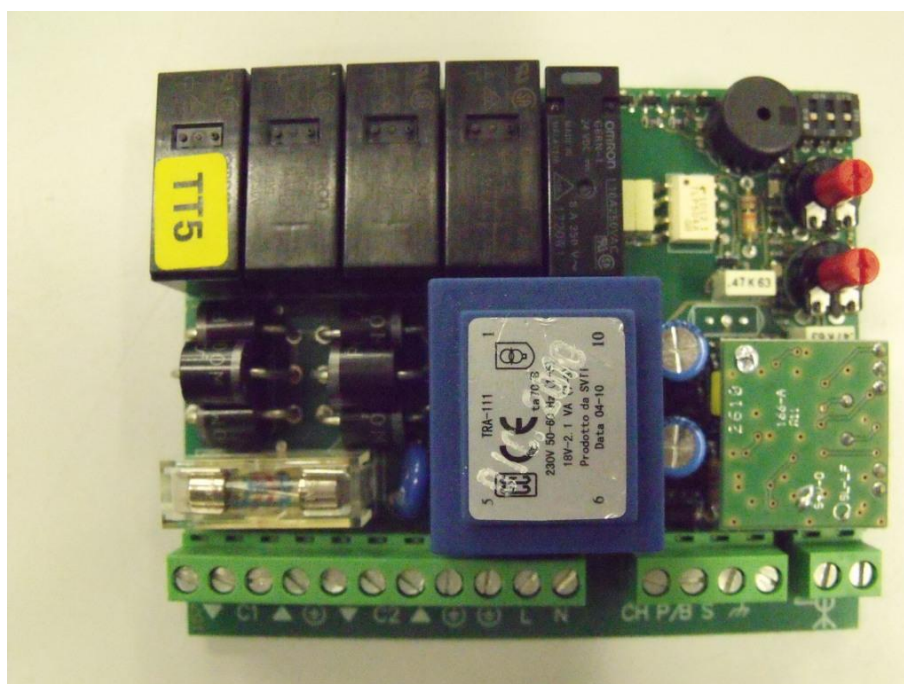
7

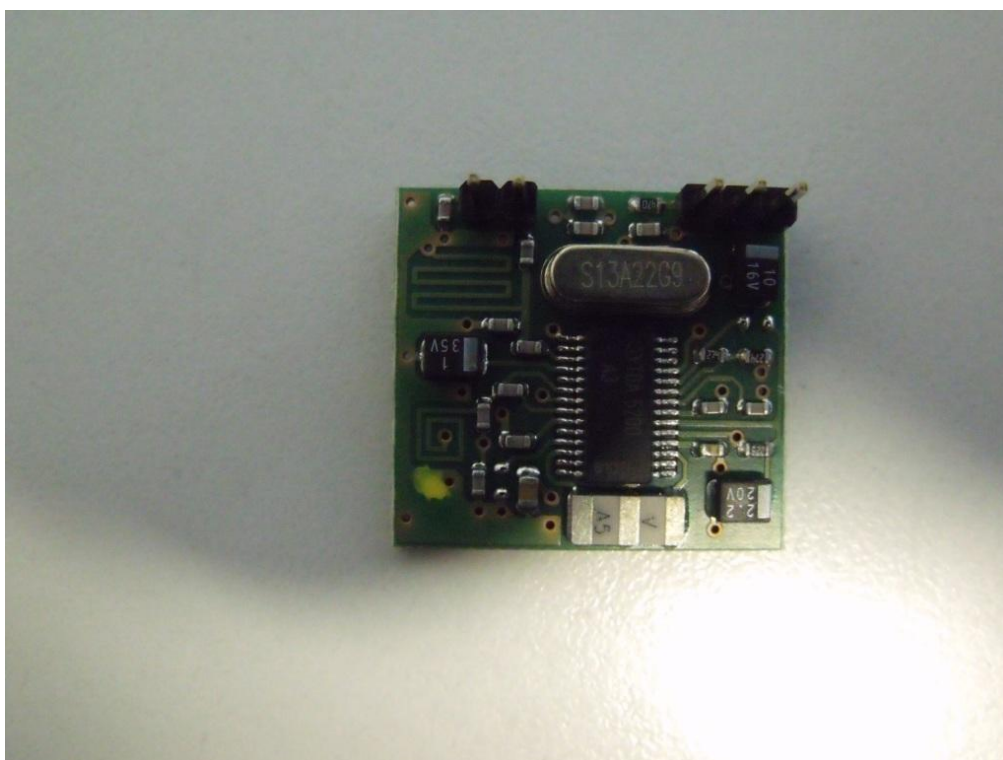
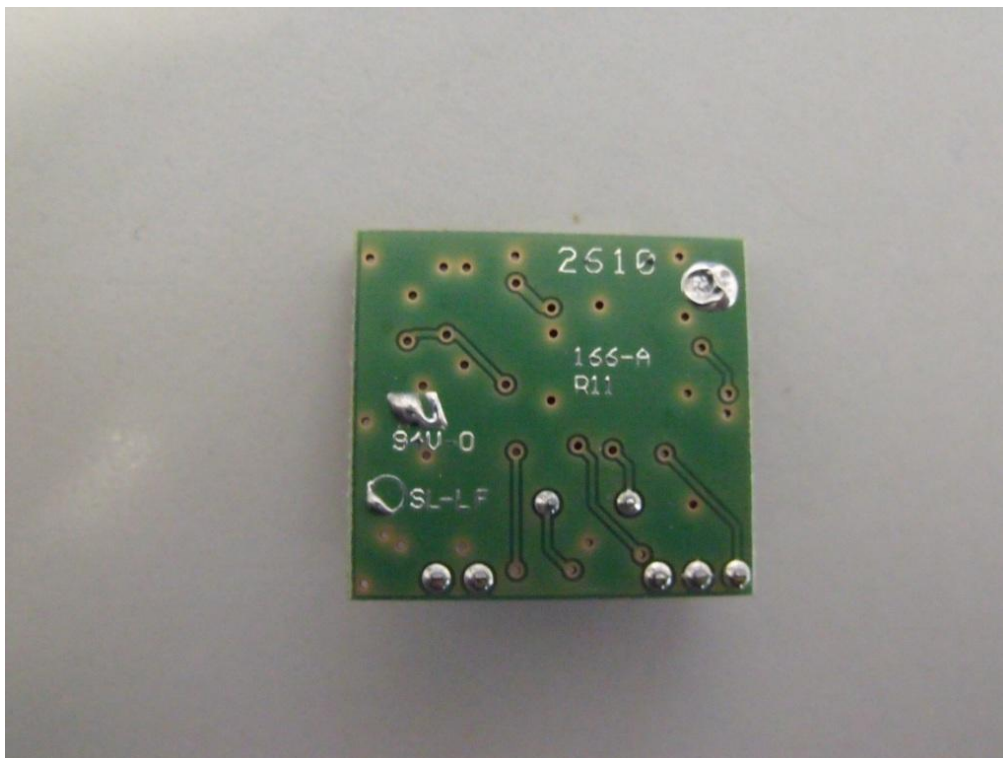
Photographic Documentation

8.1 EUT Identification



FCC test report





8.2 Test Set-up

