EMC Test Report

for

Eve Water Guard

Model No.: 20EBG8701

of

Applicant: **Eve Systems GmbH**
Address: **Rotkreuzplatz 1 80634 München Germany**

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW0020, TW1072

Industry Canada filed test laboratory Reg. No.:20037

A2LA Accredited No.: 2732.01

Report No.: W6M21906-19111-E-11

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.
TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wts@wts-lab.com

Details of applicant

Name	: Eve Systems GmbH
Street	: Rotkreuzplatz 1 80634
Town	: München
Country	: Germany
Telephone	: 415 391 0310
Fax	: 415 391 0329

Description of tested equipment

Type of product	: Eve Water Guard
Type identification	: 20EBG8701
Brand name	: Eve
Multi-listing model no.	: ./.
Power supply	: 230 Va.c.

Date of testing processing

Date of receipt of test item	: August 08, 2019
Date of test	: from August 08, 2019 to August 28, 2019
Other Information	: None

Manufacturer (if different from applicant)

Name	: ./.
Street	: ./.
Town	: ./.
Country	: ./.

Test Standards

EN 55032 Class B (2015)
IEC/EN 61000-3-2 (2018), IEC/EN 61000-3-3 (2013/A1: 2017)
EN 55024 (2010/A1:2015), (IEC/EN61000-4-2 (2009)/-3 (2006+A2:2010)/-4 (2012)
/-5 (2014+A1:2017)/-6 (2014)/-8 (2010)/-11 (2004/A1:2017))

Technical responsibility for area of testing: Tester:

Kevin Wang _____ _____

Issue Date： September 02, 2019 September 02, 2019

Note:
1. The result of this test report is valid only in connection to the sample has been tested at the laboratory of Worldwide Testing Services (Taiwan) Co., Ltd.
2. This test report shall always be duplicated in full pages unless the written approval of the testing laboratory is obtained.

Testing laboratory

Location

Worldwide Testing Services (Taiwan) Co., Ltd.
OATS
No.5-1, Lishui, Shuang Sing Village,
Wanli Dist., New Taipei City 207,
Taiwan (R.O.C.)
3 meter semi-anechoic chamber
No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)
TEL:886-2-6613-0228
FAX:886-2-2791-5046
Company
Worldwide Testing Services (Taiwan) Co., Ltd.
6F, NO. 58, LANE 188, RUEY-KUANG RD.
NEIHU, TAIPEI 114, TAIWAN R.O.C.
Tel : 886-2-66068877
Fax : 886-2-66068879

Details of accreditation status

Accredited testing laboratory
A2LA accredited number: 2732.01
FCC filed test laboratory Reg. No. TW1477, TW0020, TW1072
Industry Canada filed test laboratory Reg. No. 20037

Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.

Name : ./.
Accredited number: ./.
Street : ./.
Town : ./.
Country : ./.
Telephone : ./.
Fax : ./.

Modification Information

No modification was made during the all test items been performed.

Test configuration

1. The EUT connected to sensor and put the sensor output port in the glass.
2. The EUT connected to power supply, APP and kept working until the test finished.

Electro - Magnetic Compatibility

Test – Result

☒ 1st test ☐ test after modification ☐ production test

Test Emission / Immunity			Done	Test passed	Test failed
Emission	Radiated Emission	EN 55032 Class B (2015)	☒	☒	☐
Emission	Conducted Emission	EN 55032 Class B (2015)	☒	☒	☐
Harmonics	Current Harmonics	IEC/EN61000-3-2 (2018)	☒	☒	☐
Flicker	Voltage Fluctuations	IEC/EN 61000-3-3 (2013/A1: 2017)	☒	☒	☐
ESD	Electrostatic Discharge	IEC/EN 61000-4-2 (2009)	☒	☒	☐
RF - Field	Radiated Immunity	IEC/EN 61000-4-3 (2006+A2:2010)	☒	☒	☐
Burst	Electrical Fast Transients	IEC/EN 61000-4-4 (2012)	☒	☒	☐
Surge	Transients comm.& diff.mode	IEC/EN 61000-4-5 (2014+A1:2017)	☒	☒	☐
RF-common mode	RF continues conducted	IEC/EN 61000-4-6 (2014)	☒	☒	☐
Magn-Field	Magnetic field immunity	IEC/EN 61000-4-8 (2010)	☒	☒	☐
V-dips	Voltage dips and Interruption	IEC/EN 61000-4-11 (2004/A1:2017)	☒	☒	☐

Test item Name	Measurement Uncertainty
Estimation Result of Uncertainty of Conducted Emission	Expanded Uncertainty: AMN:1.30 dB Voltage probe:1.36 dB
Estimation Result of Uncertainty of Radiated Emission (3M)	Expanded Uncertainty: 0.009-30 MHz:2.02 dB 30-1000 MHz:3.49 dB 1-18 GHz:3.01 dB 18-40 GHz:2.43 dB
Estimation Result of Uncertainty of Radiated Emission (10M)	Expanded Uncertainty： 0.009-30MHz: 2.05 dB 30-1000 MHz: 3.37 dB
Estimation Result of Uncertainty of Telecommunication Ports Conducted Emission	Expanded Uncertainty: 1.64 dB

The decision rule is : Measurement uncertainty is not taken into account.

Test equipment utilized

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2019/6/4	2020/6/3
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2018/11/1	2019/10/31
ETSTW-CE 005	Line-Impedance Stabilisation Network	NNBM 8126D	137	Schwarzbeck	2019/3/28	2020/3/27
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2019/8/16	2020/8/15
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2019/7/23	2020/7/22
ETSTW-CE 013	CISPR 22 TWO BALANCED TELECOM PAIRS IMPEDANCE STABILIZATION NETWORK	FCC-TLISN-T4-02	20242	FCC	2018/9/5	2019/9/4
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2018/9/25	2019/9/24
ETSTW-CE 024	IMPEDANCE STABILIZATION NETWORK	ISN T800	29454	TESEQ	2019/7/3	2020/7/2
ETSTW-CE 027	COUPLING AND DECOUPLING NETWORK	CDN ST08AS	38087	TESEQ	Function Test	
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2019/7/18	2020/7/17
ETSTW-CE 030	CISPR Passive probe	PMM SHC-1-1000	1021X30803	Narda S.T.S/PMM	2019/3/11	2020/3/10
ETSTW-CS 004	COUPLING AND DECOUPLING NETWORK	CDN M016	20053	SCHAFFNER	2019/8/7	2020/8/6
ETSTW-CS 005	RF Power Amplifier	100A250A	306547	AR	Function Test	
ETSTW-CS 010	6 dB Attenuator	SA3N1007-06	None	AISI	Function test	
ETSTW-CS 011	ESG Analog Signal Generator	E4428C	MY45280875	AGILENT	2019/7/23	2020/7/22
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2019/6/4	2020/6/3
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2019/5/29	2020/5/28
ETSTW-RE 010	ABSORBING CLAMP	MDS 21	03469	Schwarzbeck	2018/9/17	2019/9/16
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2019/5/3	2020/5/2
ETSTW-RE 020	MICROWAVE HORN ANTENNA	AT4002A	306915	AR	Function Test	
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2019/7/22	2020/7/21
ETSTW-RE 028	Log-Periodic Dipole Array Antenna	3148	34429	ETS-Lindgren	Function Test	
ETSTW-RE 029	Biconical Antenna	3109	33524	ETS-Lindgren	Function Test	
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2019/4/2	2020/4/1
ETSTW-RE 032	Millivoltmeter	URV 55	849086/013	R&S	2018/9/18	2019/9/17
ETSTW-RE 033	WaveRunner 6000A Serise Oscilloscope	WAVERUNNER 6100A	LCRY0604P14508	LeCroy	2019/7/30	2020/7/29
ETSTW-RE 034	Power Sensor	URV5-Z4	839313/006	R&S	2018/9/18	2019/9/17
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2019/1/29	2020/1/28

ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2019/4/23	2020/4/22
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2019/5/13	2020/5/12
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 048	Triple Loop Antenna	HXYZ 9170	HXYZ 9170-134	Schwarzbeck	2018/12/13	2019/12/12
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2019/2/27	2020/2/26
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2019/2/27	2020/2/26
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2019/2/27	2020/2/26
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2019/3/5	2020/3/4
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2019/2/27	2020/2/26
ETSTW-RE 061	Amplifier Module	CHC 1	None	ETS	2019/5/10	2020/5/9
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2019/5/16	2020/5/15
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 065	Amplifier	AMF-6F-18002650-25-10P	941608	MITEQ	2019/3/29	2020/3/28
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ETS-Lindgren	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2018/9/17	2019/9/16
ETSTW-RE 073	Power Meter	N1911A	MY45100769	Agilent	2019/1/24	2020/1/23
ETSTW-RE 074	Power Sensor	N1921A	MY45241198	Agilent	2019/1/24	2020/1/23
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2019/5/9	2020/5/8
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2019/2/22	2020/2/21
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	
ETSTW-RE 105	2.4GHz Notch Filter	N0124411	39555	MICROWAVE CIRCUITS	2019/1/14	2020/1/13
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Function test	
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2019/6/3	2020/6/2
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2019/8/7	2020/8/6
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2019/8/7	2020/8/6
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2019/2/26	2020/2/25
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2019/8/7	2020/8/6
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2019/8/7	2020/8/6
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 132	Humidity Temperature Meter	TES-1260	130407634	TES	2019/8/16	2020/8/15
ETSTW-RE 133	EXA Signal Analyzer	N9010A	MY53470566	Agilent	2019/4/30	2020/4/29
ETSTW-RE 134	MXG Vector Signal Generator	N5182B	MY53050664	Agilent	2019/4/30	2020/4/29
ETSTW-RE 135	EXG Analog Signal Generator	N5171B	MY53050476	Agilent	2019/4/30	2020/4/29
ETSTW-RE 136	USB Wideband Power Sensor	U2021XA	MY54070006	Agilent	2019/4/30	2020/4/29
ETSTW-RE 137	USB Wideband Power Sensor	U2021XA	MY54020004	Agilent	2019/4/30	2020/4/29
ETSTW-RE 138	USB Wideband Power Sensor	U2021XA	MY54110003	Agilent	2019/4/30	2020/4/29

ETSTW-RE 139	USB Wideband Power Sensor	U2021XA	MY54110004	Agilent	2019/4/30	2020/4/29
ETSTW-RE 140	Simultaneous sampling DAQ	U2531A	TW56143501	Agilent	Function Test	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2019/5/16	2020/5/15
ETSTW-RE 146	Preamplifier	JPA-10M1G	15090004	JPT	2019/6/6	2020/6/5
ETSTW-RE 147	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04005	ETC	2019/4/2	2020/4/1
ETSTW-RE 148	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04006	ETC	2019/6/19	2020/6/18
ETSTW-RE 150	Blocking Test System	AD211	TW5451133	Keysight	Function Test	
ETSTW-RE 151	Thermohygrometer	608-h1	45104376	TESTO	2019/8/16	2020/8/15
ETSTW-EMI 001	HARMONICS 1000	HAR1000-1P	093	EMC-PARTNER	2019/2/22	2020/2/21
ETSTW-EMI 010	AC Power Source	PS3	0219	EMC PARTNER	2019/2/22	2020/2/21
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2019/5/16	2020/5/15
ETSTW-EMS 001	BASELSTRASSE 160 CH-4242 LAUFEN	CN-EFT1000	354	EMC-PARTNER	Function Test	
ETSTW-EMS 002	Frequency Converter	YF-6020	0308014	None	Function Test	
ETSTW-EMS 003	EMC Immunity Test System	TRA2000IN6	579	EMC-PARTNER	2018/9/4	2019/9/3
ETSTW-EMS 009	Magnetic Field Antenna	MF1000-1	104	EMC-PARTNER	Function Test	
ETSTW-EMS 010	Coupling De-coupling Network	CDN-UTP8	014	EMC-PARTNER	Function Test	
ETSTW-EMS 012	EM Injection Clamp	F-203I-23MM	476	FCC	2019/7/2	2020/7/1
ETSTW-EMS 016	EMF Tester	1390	071208732	TES	2018/9/4	2019/9/3
ETSTW-EMS 017	Multimeter	DM-1220	518614	HILA	2019/8/16	2020/8/15
ETSTW-EMS 019	Electrostatic Discharge Simulator	ESS-2002	ESS06Y6300	NoiseKen	2018/9/12	2019/9/11
ETSTW-EMS 022	Transient Test System	TRANSIENT -3000 S	1303	EMC-PARTNER	2018/9/3	2019/9/2
ETSTW-EMS 023	Electrostatic Discharge Simulator	NSG 435	6984	TESEQ	2019/6/19	2020/6/18
ETSTW-EMS 024	Humidity Temperature Meter	TES-1260	160304437	TES	2019/8/16	2020/8/15
ETSTW-EMS 025	10/700 Surge Generator	SG-728G	EC0631106	3Ctest	2018/9/3	2019/9/2
ETSTW-RS 003	RF Power Amplifier	30S1G3	306933	AR	Function Test	
ETSTW-RS 007	14" COLOR VIDEO MONITOR	HS-CM145A	0512011548	None	Function Test	
ETSTW-RS 009	SIGNAL GENERATOR	8648C	3642U01656	HP	2019/1/24	2020/1/23
ETSTW-RS 010	Broadband Field Meter	NBM-520	C-0195	Narda	2019/5/10	2020/5/9
ETSTW-RS 011	RF Power Amplifier	150W1000	0464490	AR	Function Test	
ETSTW-RS 012	Log-Periodic Antenna	ATL80M1G	0348244	AR	Function Test	
ETSTW-RS 013	Stacked Log Periodic Antenna	STLP9149	473	RS	Function Test	
ETSTW-RS 014	Power Amplifier	AS0860B	1078553	MILMEGA	Function Test	
ETSTW-RS 015	SIGNAL GENERATOR	ITS6006B	37669	TESEQ	2019/3/26	2020/3/25
ETSTW-RS 016	Power sensor	PMR6006	75617	TESEQ	2019/3/26	2020/3/25
ETSTW-RS 017	Power sensor	PMR6006	75618	TESEQ	2019/3/26	2020/3/25
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2019/3/5	2020/3/4

ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2019/3/26	2020/3/25
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2018/10/19	2019/10/18
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40/12+9SS	3	WI	2019/1/14	2020/1/13
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2019/1/14	2020/1/13
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2019/1/14	2020/1/13
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2019/1/14	2020/1/13
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2018/9/12	2019/9/11
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2019/3/5	2020/3/4
ETSTW-Cable 002	Microwave Cable	SUCOFLEX 104（S_Cable 7）	238093	HUBER+SUHNER	2019/5/10	2020/5/9
ETSTW-Cable 003	Microwave Cable	SUCOFLEX 104（S_Cable 11）	209953	HUBER+SUHNER	2019/5/10	2020/5/9
ETSTW-Cable 063	N type Cable (5m)	RG214/U	1249271	HUBER+SUHNER	Function Test	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2019/2/21	2020/2/20
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2019/7/1	2020/6/30
ETSTW-Cable 023	BNC Cable	BNC Cable 3	None	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 024	BNC Cable	BNC Cable 4	None	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 025	BNC Cable	BNC Cable 5	None	JYE BAO CO.,LTD.	Function Test	
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2019/2/25	2020/2/24
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2019/5/10	2020/5/9
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104（S_Cable 9）	279067	HUBER+SUHNER	2019/2/25	2020/2/24
ETSTW-Cable 039	Microwave Cable	SUCOFLEX 104	316739	HUBER+SUHNER	2019/5/10	2020/5/9
ETSTW-Cable 042	Microwave Cable	SUCOFLEX 104（S_Cable 22）	279847	HUBER+SUHNER	Function Test	
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2019/5/16	2020/5/15
ETSTW-Cable 051	BNC Cable	BNC Cable 6	None	JYE BAO	2019/3/6	2020/3/5
ETSTW-Cable 052	BNC Cable	Clamp Cable	None	Schwarz beck	2019/3/6	2020/3/5
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2019/6/6	2020/6/5
ETSTW-Cable 065	N type Cable (5m)	RG214	None	DRAKA	Function Test	
ETSTW-Cable 066	SMA type cable	32022	None	ASTROLAB	2019/3/15	2020/3/14
ETSTW-Cable 067	BNC Cable (1m)	RG213	None	ALLTESTEK	Function Test	
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2019/6/6	2020/6/5
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2019/5/16	2020/5/15
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2019/5/16	2020/5/15
WTSTW-SW 001	EMI TEST SOFTWARE	Harmonics-1000	None	EMC PARTNER	HARCS Version 4.20 Firmware Version 2.20	

WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1
WTSTW-SW 003	EMS TEST SOFTWARE	i2	None	AUDIX	Version 3.2007-8-17b
WTSTW-SW 005	GSM Fading Level Correction	GSMFadLevCor	None	R&S	Version 1.66
WTSTW-SW 006	EMI TEST SOFTWARE	e3	None	AUDIX	Version 9.161014
WTSTW-SW 007	Keysight.EN300328.V191.Test	Keysight	None	Keysight	Version 1.0.0.0
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX	Version 2.0.0.1

Spurious Emission (EN 55032)

Test Equipment

a) EMI TEST RECEIVER (ESI 40)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-RE 004
b) Amplifier Module (CHC 2)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-RE 062
c) Amplifier (8447D)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-RE 142
d) Bi-log Hybrid Antenna (MCTD 2786B)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-RE 147
e) Double-Ridged Guide Horn Antenna (3117)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-RE 030

Test Procedures

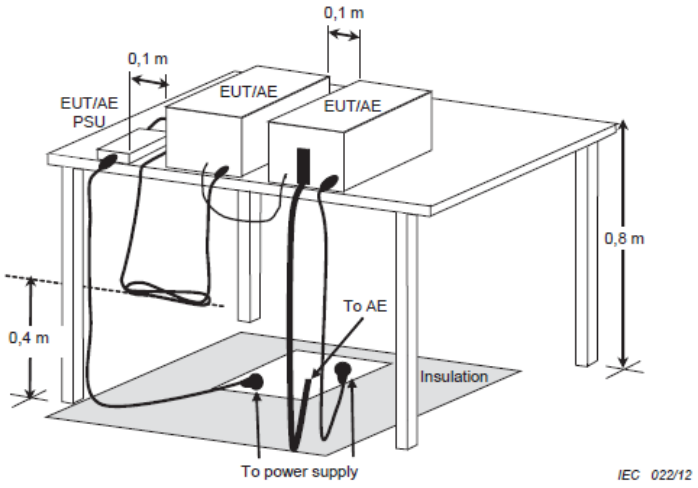
- Test configuration

The test configuration corresponds to the standard EN 55032. The equipment under test is placed on a non metallic table with 0.8m height. The power supply and the RF connection points are close to the equipment under test at the floor inside a connection box. The cables to this connection box are shielded and below the double floor. The receiving antenna is placed in a height at 1.0m to 4.0m, in a distance of 3m. The measurement receiver is placed in a special room. (see picture 1)

- Test parameters and marginal conditions

The test is carried out with horizontal and vertical polarisation of the antenna in a frequency range of 30 MHz to 6000 MHz. Further information please find in the test protocol.

Radiated Emission according to EN 55032



Picture 1

Conducted Emission (EN 55032)

Test Equipment

a) EMI TEST RECEIVER (ESHS10)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-CE 001
b) TWO-LINE V-NETWORK (ENV216)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-CE 016
c) ESA-E SERIES SPECTRUM ANALYZER (E4404B)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RE 045

Test Procedures

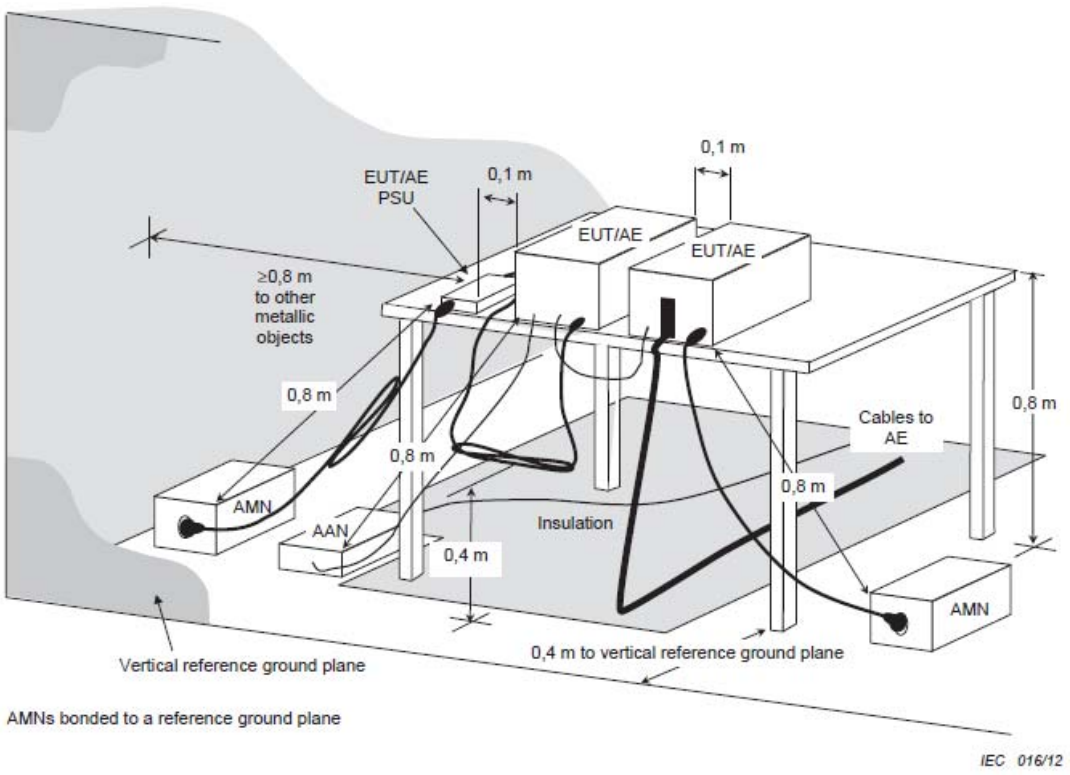
- Test configuration

The test configuration is contained inside of a shielded chamber and corresponds to the standard EN 55032. The equipment under test is placed in the facility on a wooden table 0.8m height. The equipment under test is connected with the artificial mains network (AMN) in a distance of 0.8m and also 0.8m from other subassembly and metallic area. (see picture 2)

- Test parameters and marginal conditions

The test is carried out with nominal impedance by 50Ω / 50μH of the AMN in a frequency range 150 kHz to 30 MHz. Further information please find in test report.

Conducted Emission according to EN 55032



Picture 2

Harmonic Current Emission /Voltage Fluctuations and Flicker (IEC/EN 61000-3-2/-3)

Test Equipment

a) HARMONICS 1000 (HAR 1000-1P)
   For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMI 001
b) AC Power Source (PS3)
   For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMI 010

Test Procedures

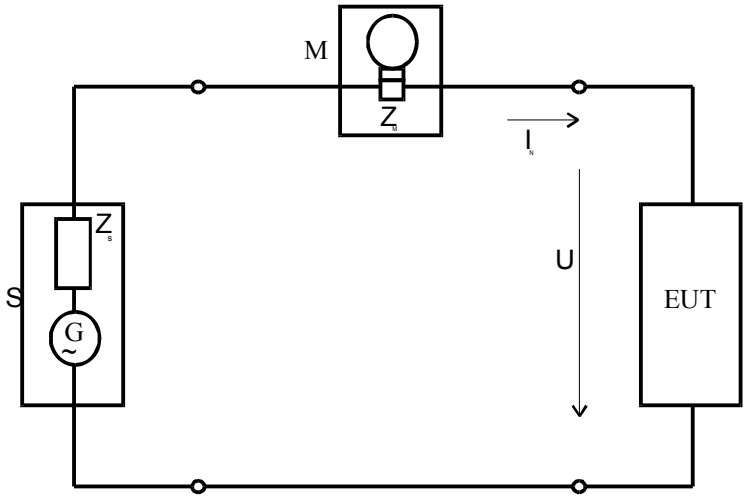
- Test configuration

The test configuration is correspondence to the standard IEC/EN 61000-3-2/-3. The equipment under test is placed on a wooden table with a height of 0.8m in the EMC lab.

- Test parameters and marginal conditions

The harmonic test is carried out in according the classification A,B,C,D of the standard IEC/EN 61000-3-2. The flicker test is carried out in according the time interval of the standard IEC/EN 61000-3-3. Both tests are carried out with above mentioned equipment with 230V and 50 Hz. (see picture 3) Further information please find in test protocol.

Current Harmonics and Flicker according to EN 61000 - 3 - 2, EN 61000 - 3 - 3



S	supply source
M	measuring equipment
EUT	equipment under test
U	test voltage
Z_M	input impedance of the measuring equipment
Z_S	internal impedance of the supply source
I_n	upper shrinkage portion of the conduction current order
G	open-circuit voltage of the supply source

Picture 3

Electrostatic Discharge

Test Equipment

a) Electrostatic Discharge Simulator (ESS-2002)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 019
b) Electrostatic Discharge Simulator (NSG 435)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 023

Test Procedures

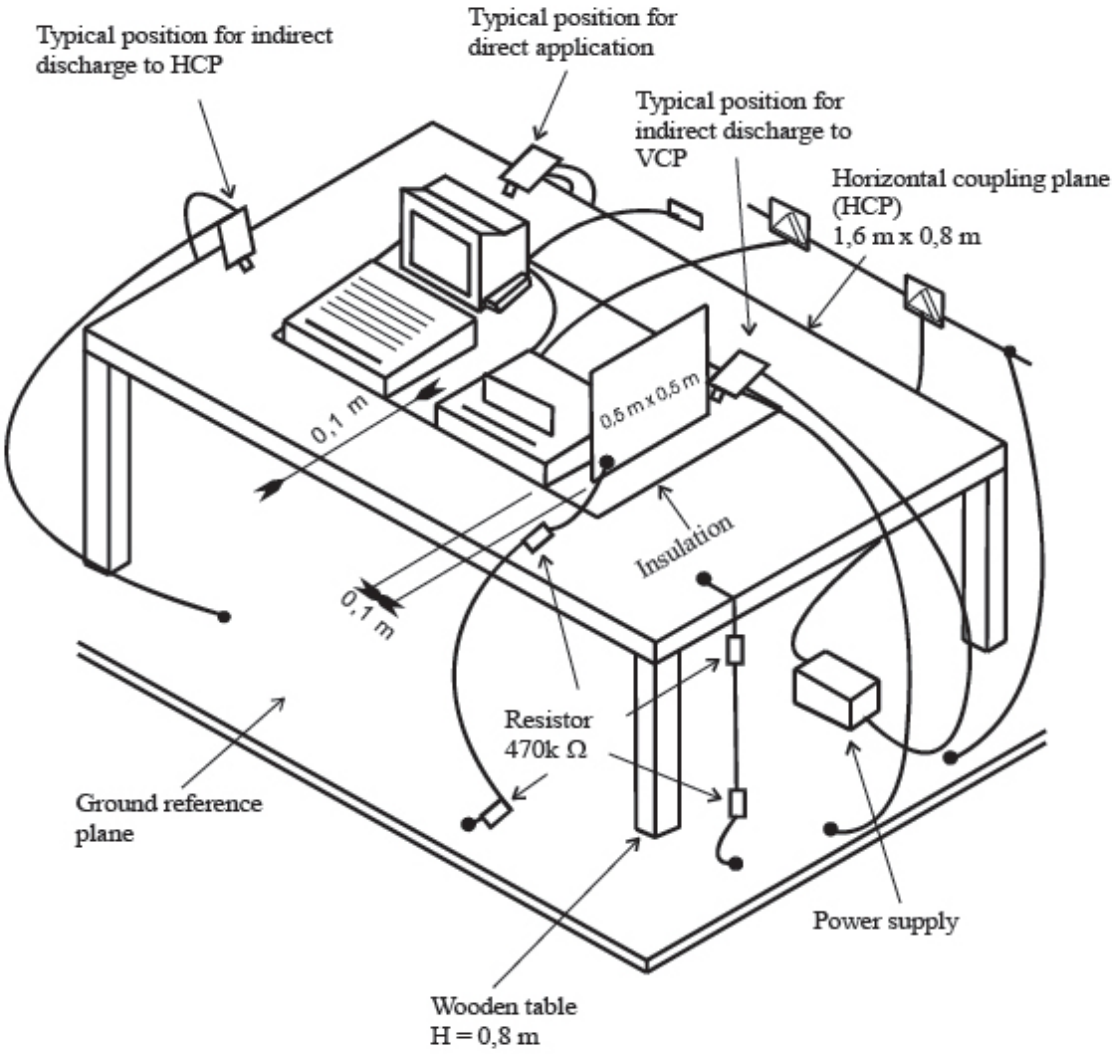
- Test configuration

The test configuration is in correspondence to the standard IEC/EN 61000-4-2. The equipment under test is placed on a wooden table with one metal plate on its top and one metal plate under the table, which is grounded. Both plates are connected with two 470 kΩ resistor in series. (see picture 4)

- Test parameters and marginal conditions

The test is carried out with ±2kV, ±4kV contact discharge and ±2kV, ±4kVand ±8kV air discharge.
Time between two discharges ≥ 1 second
Ten discharges for every point every voltage and polarity
The tested points please find in the test protocol.

Electrostatic Discharge according to EN 61000 - 4 - 2



Picture 4

RF Electromagnetic Field (80-1000 MHz)

Test Equipment

a) Broadband Field Meter (NBM-520)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 010
b) RF Power Amplifier (150W1000)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 011
c) Log-Periodic Antenna (ATL80M1G)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 012
d) Stacked Log Periodic Antenna (STLP9149)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 013
e) Power Amplifier (AS0860B)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 014
f) SIGNAL GENERATOR (ITS6006B)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 015
g) Power sensor (PMR6006)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 016
h) Power sensor (PMR6006)
For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-RS 017

Test Procedures

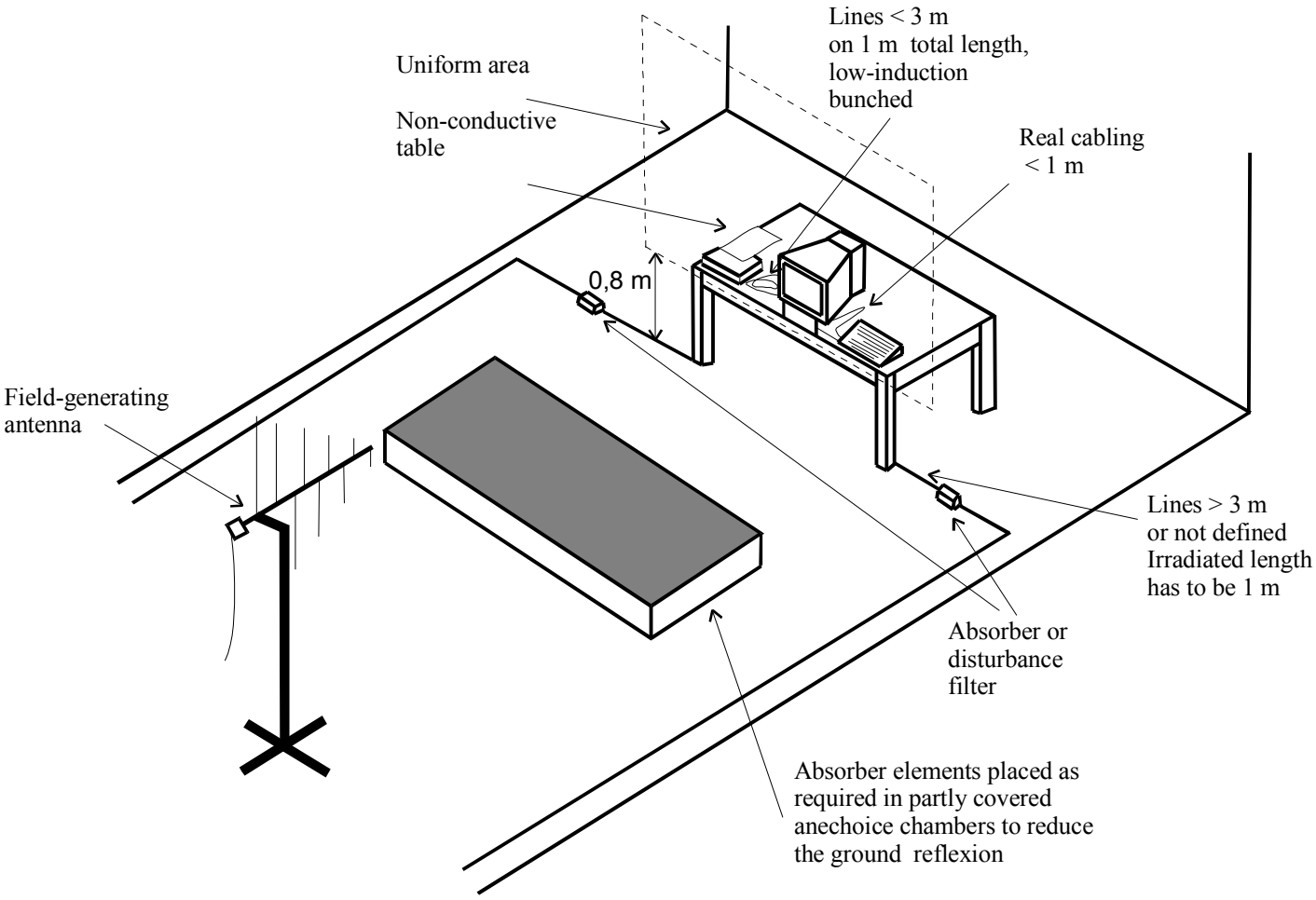
- Test configuration

The test configuration is contained inside of a shielded chamber and corresponds to the standard IEC/EN 61000-4-3. The equipment under test is placed in the facility on a wooden table 0.8m height on the centre axis of the chamber. The power supply and the RF connection points are close to the equipment under test at the floor of the chamber inside a connection box. The cables to this connection box are shielded and below the double floor. The transmitting antenna is placed in a height of 1.5m, in a distance of 3.0m. The RF-generators are placed in a special room adjacent to the chamber. (see picture 5) In order to establish the severity of the test for EUT an wires which must be tested close to the earth reference plane or which have larger sides than 1.5m x 1.5 m, the intensity of the field is also recorded at 0.4 m height, and for the full width and height of the EUT.

- Test parameters and marginal conditions

The tests are carried out with a field strength by 3 V/m (measured in the unmodulated field) with amplitude modulated signal by a depth of 80 % by a sinusoidal audio signal of 1 kHz. The logarithmic step was 1% and the dwell time was 1s dependent of the EUT cycle time. Further information please find in test protocol.

RF - Field according to EN 61000 - 4 - 3



Picture 5

Transients common mode

Test Equipment

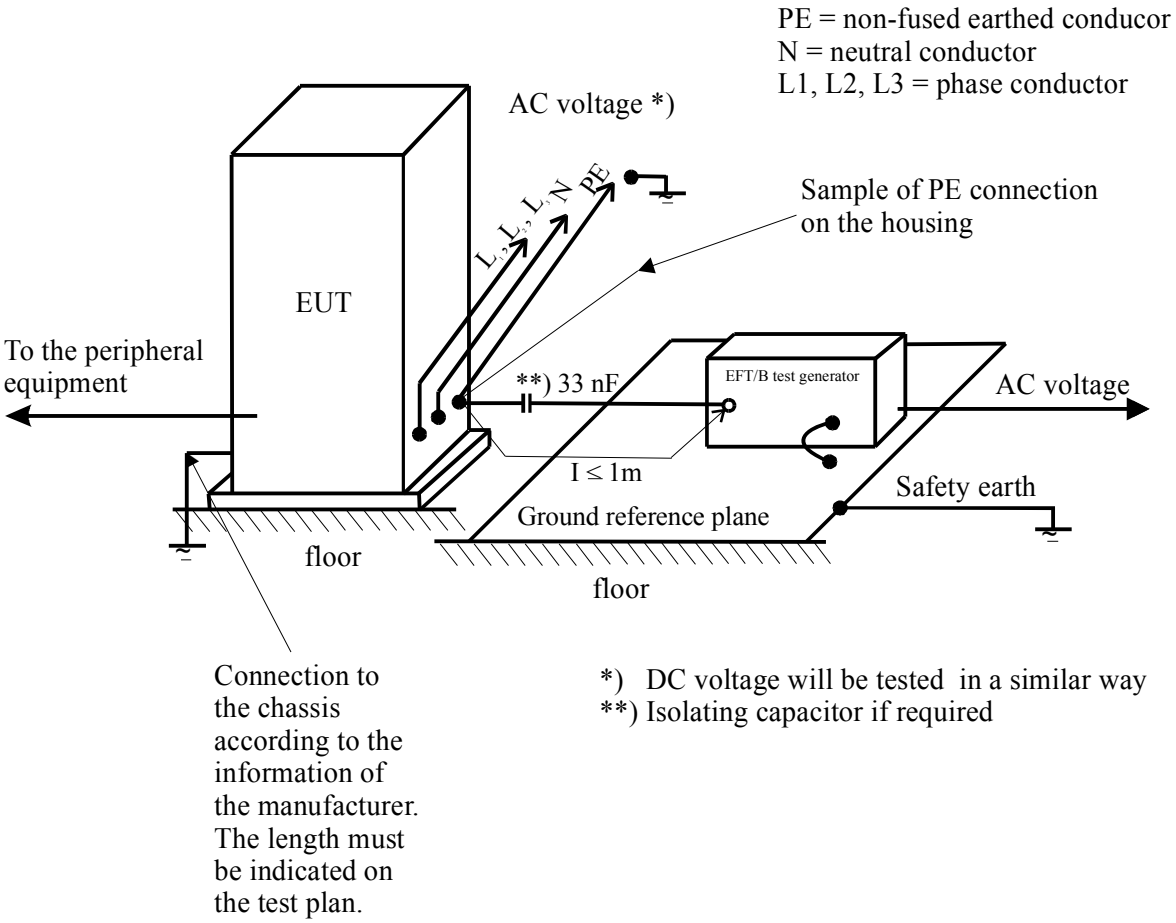
a) EMC Immunity Test System (TRA2000IN6)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 003

Test Procedures

• Test configuration
The test configuration is in correspondence to the standard IEC/EN 61000-4-4. The equipment under test is placed on a wooden table with a height of 0.8m ±0.08m. The table stands on metal plate which is grounded. (see picture 6)

• Test parameters and marginal conditions
The tests are carried out with 0.5 kV open circuit voltage on signal, control ports and DC power ports and with 1 kV open circuit voltage on AC mains power input. The applied voltage please find in the test protocol.

Electrical Fast Transients according to EN 61000 - 4 - 4



Picture 6

Transients surge common and differential mode

Test Equipment

a) Transient Test System (TRANSIENT-3000 S)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 022
b) Coupling De-coupling Network (CDN-UTP8)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 010
c) 10/700 Surge Generator (SG-728G)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 025

Test Procedures

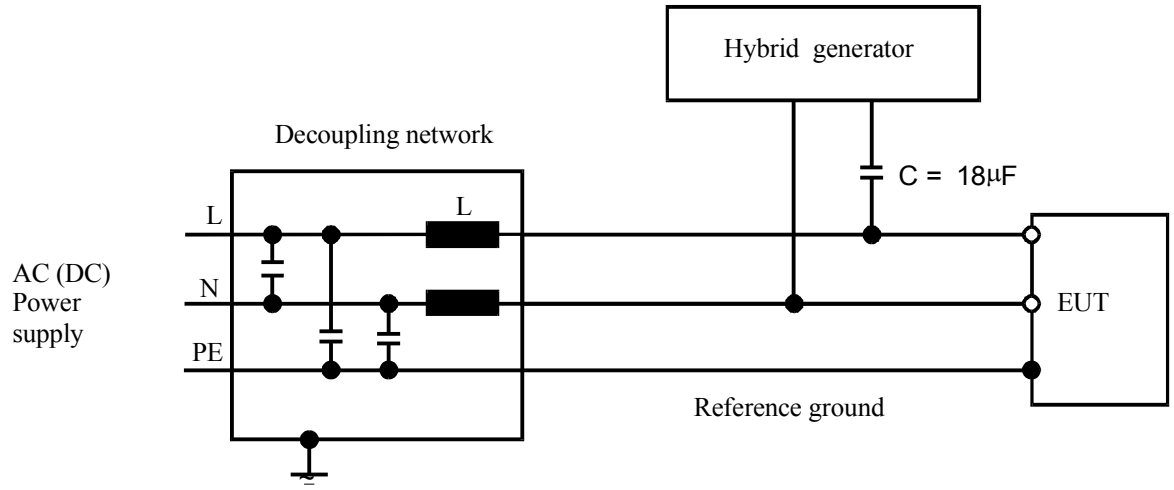
- Test configuration

The test configuration is in correspondence to the standard IEC/EN 61000-4-5. The equipment under test is placed on a wooden table with a height of 0.8m. The table stands on metal plate which is grounded.

- Test parameters and marginal conditions

The tests are carried out with 0.5, 1, 2 kV open circuit voltage for common mode and with 0.5, 1 kV open circuit voltage for differential mode. (see picture 7) Further information please find in the test protocol.

Transients common & differential mode according to EN 61000 - 4 - 5



Picture 7

Radio frequency common mode

Test Equipment

a) RF Power Amplifier (100A250A)
   For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-CS 005
b) 6 dB Attenuator (SA3N1007-06)
   For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-CS 010
c) ESG Analog Signal Generator (E4428C)
   For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-CS 011
d) COUPLING AND DECOUPLING NETWORK (CDN M016)
   For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-CS 004

Test Procedures

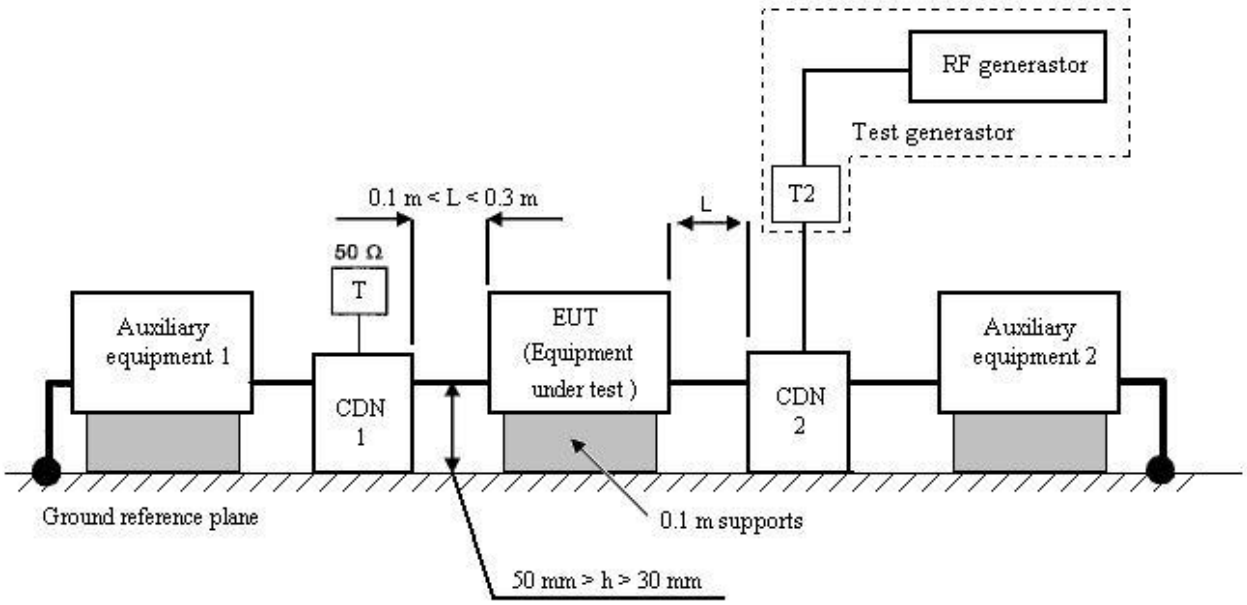
- Test configuration

The test configuration is in correspondence to the standard IEC/EN 61000-4-6. The test was carried out on a wooden table with a grounded metal plate on its top. The equipment under test was placed on an insulating support of 0.1m height above this metal plate ,and all cables exiting the EUT was supported at a height of between 30mm and 50mm.Where coupling and/or decoupling devices are required, they was located between 0.1m and 0.3m from the EUT. (see picture 8)

- Test parameters and marginal conditions

The tests were carried out with a Voltage of 3V RMS (measured unmodulated) with amplitude modulated signal by a depth of 80 % by a sinusoidal signal of 1 kHz. The frequency steps in the frequency range 150 kHz - 80 MHz increments with 1 % of the preceding frequency value. The dwell time was in case no less than 0.5s dependent on the EUT operating time. The tested ports please find in the test protocol.

RF- continues conducted according to EN 61000 - 4 - 6



T : Termination 50 Ω
T2: Power attenuator (6 dB)
CDN: Coupling and decoupling network

Picture 8

Power frequency magnetic field

Test Equipment

a) Magnetic Field Antenna (MF1000-1)
   For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-EMS 009
b) EMF Tester (1390)
   For your reference please find it in our test equipment list at page 5 to 9 as number: ETSTW-EMS 016

Test Procedures

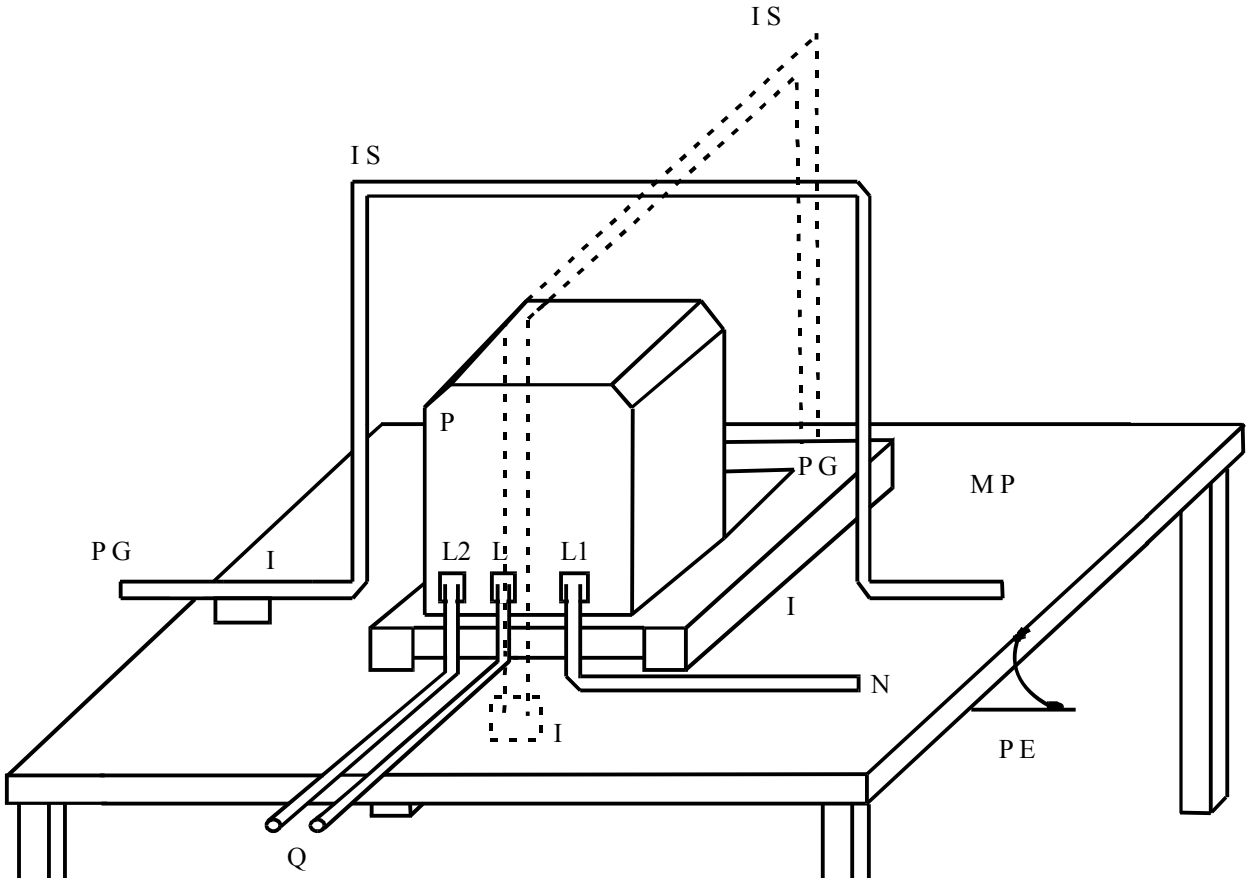
- Test configuration

The test configuration is in correspondence to the standard IEC/EN 61000-4-8. The equipment under test shall be arranged and connected to satisfy its functional requirements, and shall be placed at the center of the coil system. (see picture 9)
The cables supplied by the equipment manufacturer shall be used or, in their absence, suitable alternative cables of the type appropriate to the signals involved shall be used.

- Test parameters and marginal conditions

The tests are carried out with a frequency of 50 Hz and a magnetic field of 1 A/m (r.m.s.). Additional information please find in the test protocol.

Example for set-up for immunity test to magnetic field according to EN 61000-4-8



M P	pasted plate
P E	safety earth
I	isolation
P	EUT
I S	induction spark coil
E	mass connection
L1	power line
L2	signal line
L	communication line
N	net
Q	to the signal source, to the simulator
P G	to the test generator

Picture 9

Voltage dips and interruptions

Test Equipment

a) EMC Immunity Test System (TRA2000IN6)
For your reference please find it in our test equipment list at page 5 to 9 as number : ETSTW-EMS 003

Test Procedures

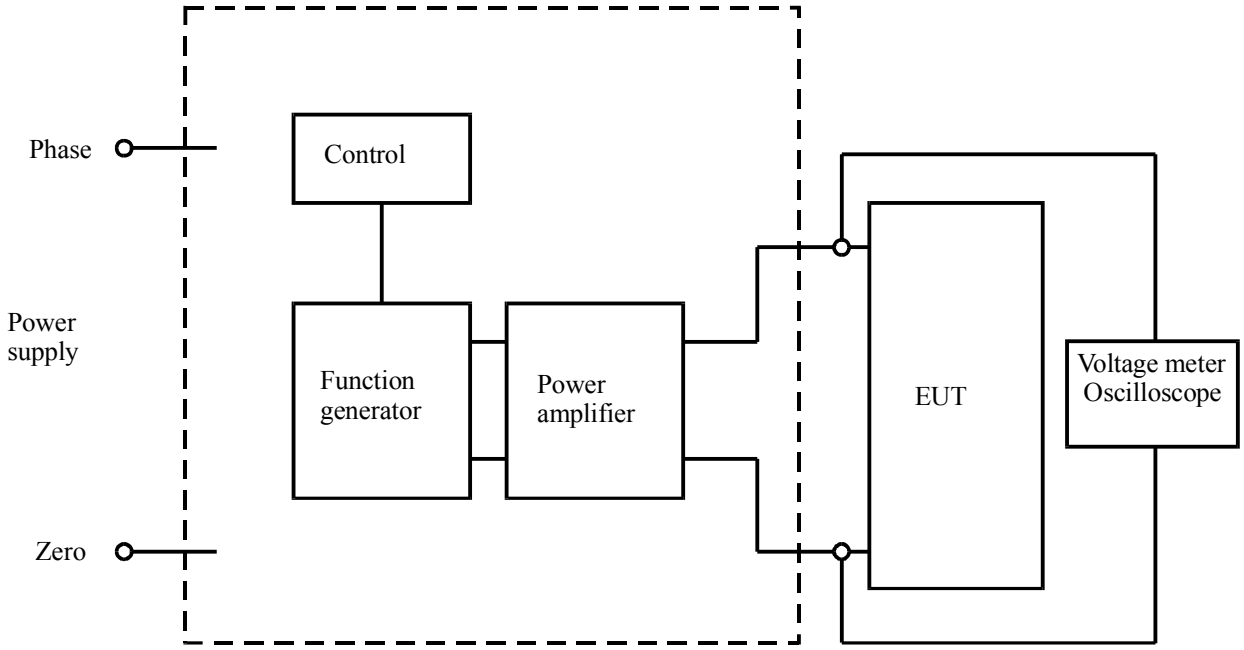
• Test configuration

The test configuration is in correspondence to the standard IEC/EN 61000-4-11. The equipment under test is placed on a wooden table with a height of 0.8 metre. (see picture 10)

• Test parameters and marginal conditions

The test levels corresponding to a reduction of the supply voltage of 30 % (for 500ms) > 95 % (for 10ms) and interruption > 95 % (5s). The applied voltage please find in the test protocol.

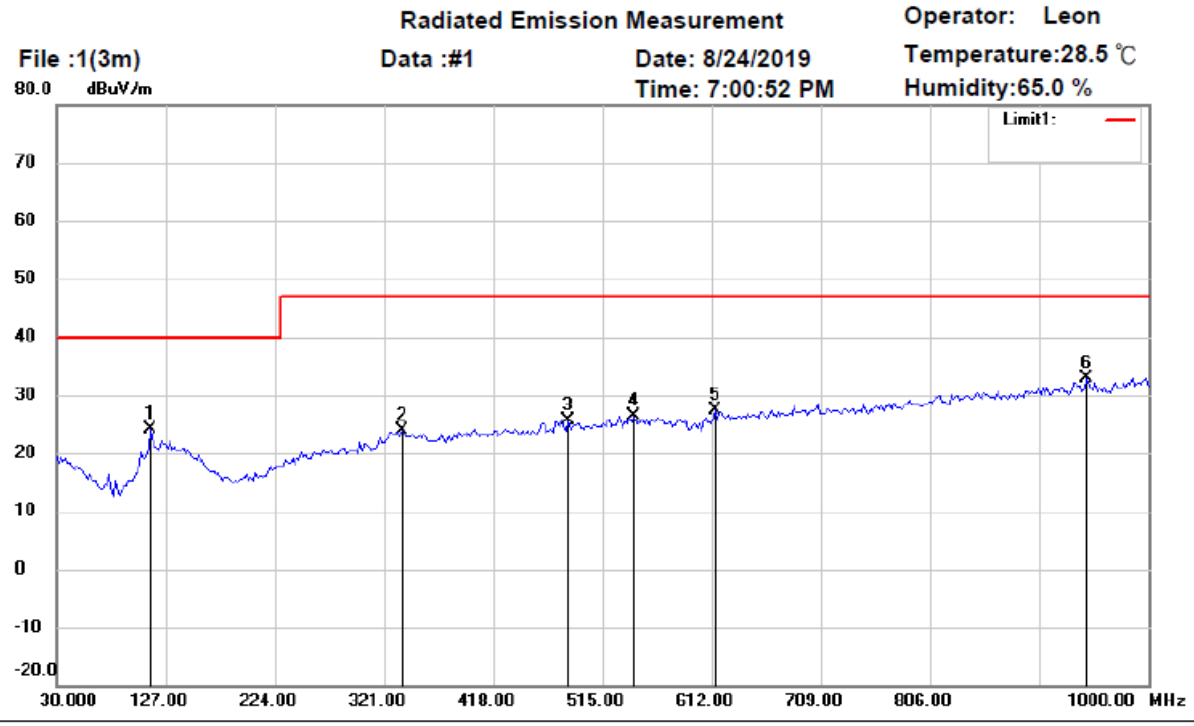
Voltage dips and interruption accordiing to EN 61000 - 4 - 11



Picture 10

Radio Noise Field Strength

Emission



Site : 966 Chamber
Condition : EN55032 \ AS/NZS CISPR32 RE-Class B (3M)
EUT : W6M21906-19111
M/N:
Test Mode :
Note :

Polarization: *Horizontal*
Power : 230 Va.c.
Distance: 3m

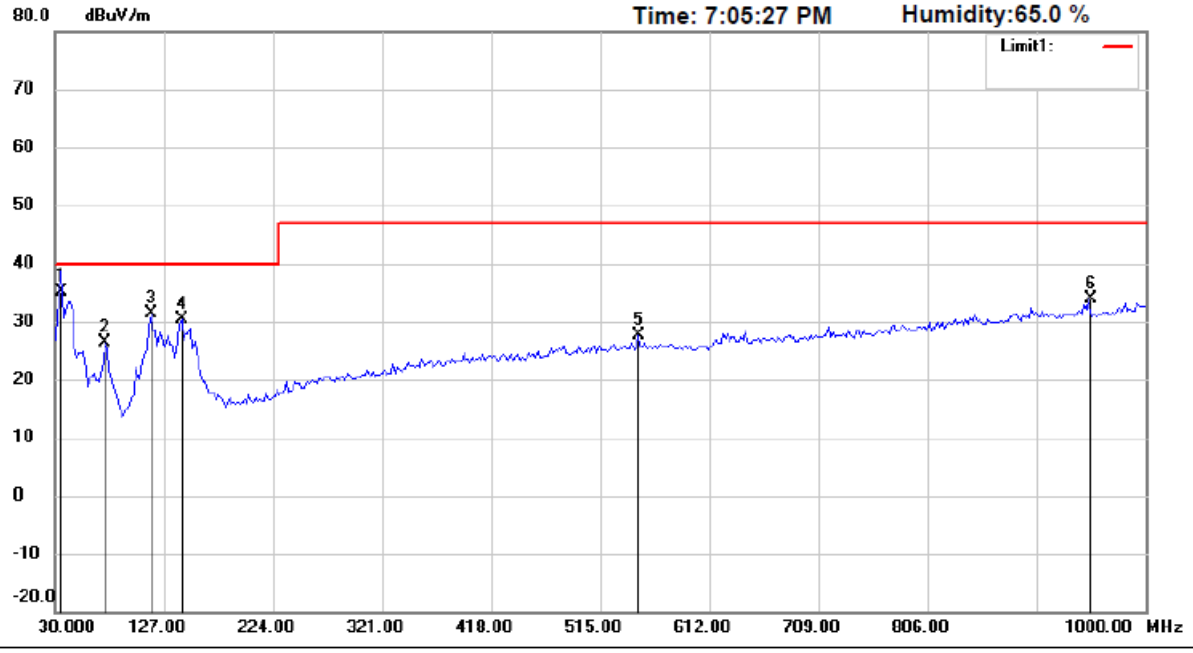
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	113.5872	31.54	QP	-7.34	24.20	40.00	100	85	-15.80	
	337.1343	29.22	QP	-5.31	23.91	47.00	100	230	-23.09	
	484.8697	28.88	QP	-3.21	25.67	47.00	100	176	-21.33	
	543.1864	28.50	QP	-2.00	26.50	47.00	100	95	-20.50	
	615.1102	29.12	QP	-1.78	27.34	47.00	100	240	-19.66	
*	945.5711	28.75	QP	4.13	32.88	47.00	100	170	-14.12	

Radiated Emission Measurement

Operator: Leon

File :1(3m) Data :#2 Date: 8/24/2019 Time: 7:05:27 PM

Temperature:28.5 ℃ Humidity:65.0 %



Site : 966 Chamber

Condition : EN55032 \ AS/NZS CISPR32 RE-Class B (3M)

EUT : W6M21906-19111

M/N:

Test Mode :

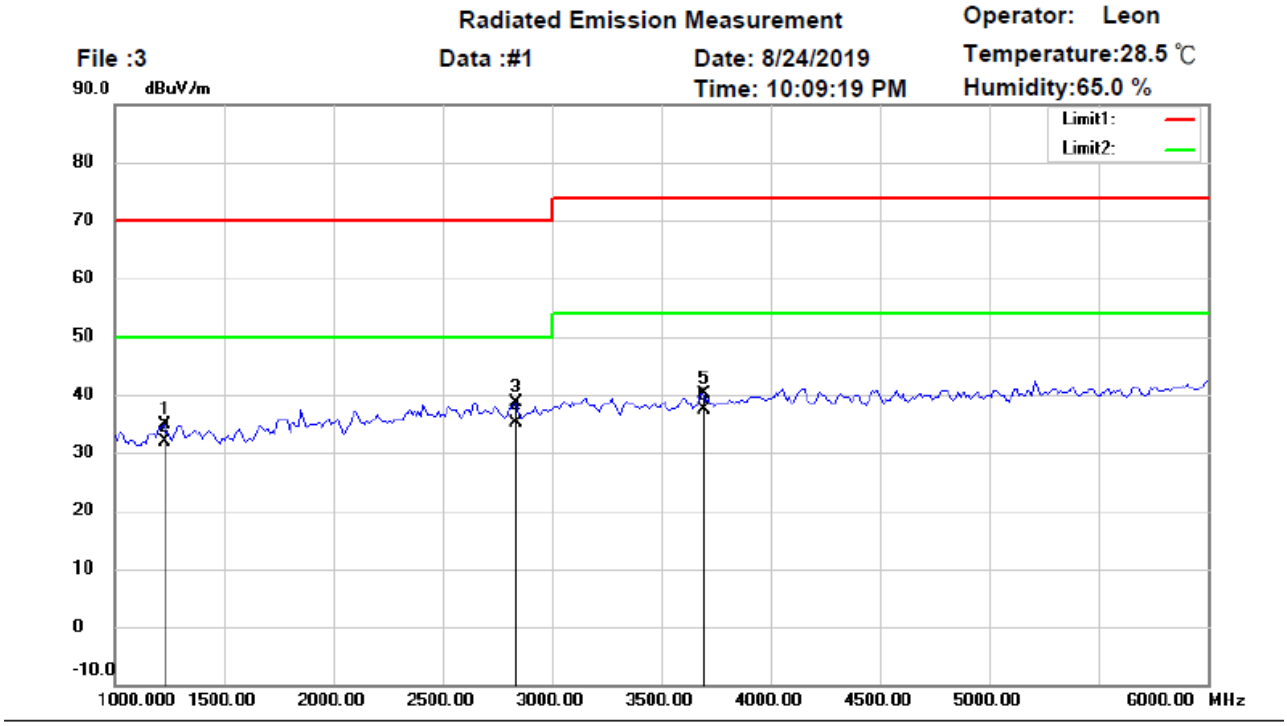
Note :

Polarization: *Vertical*

Power : 230 Va.c.

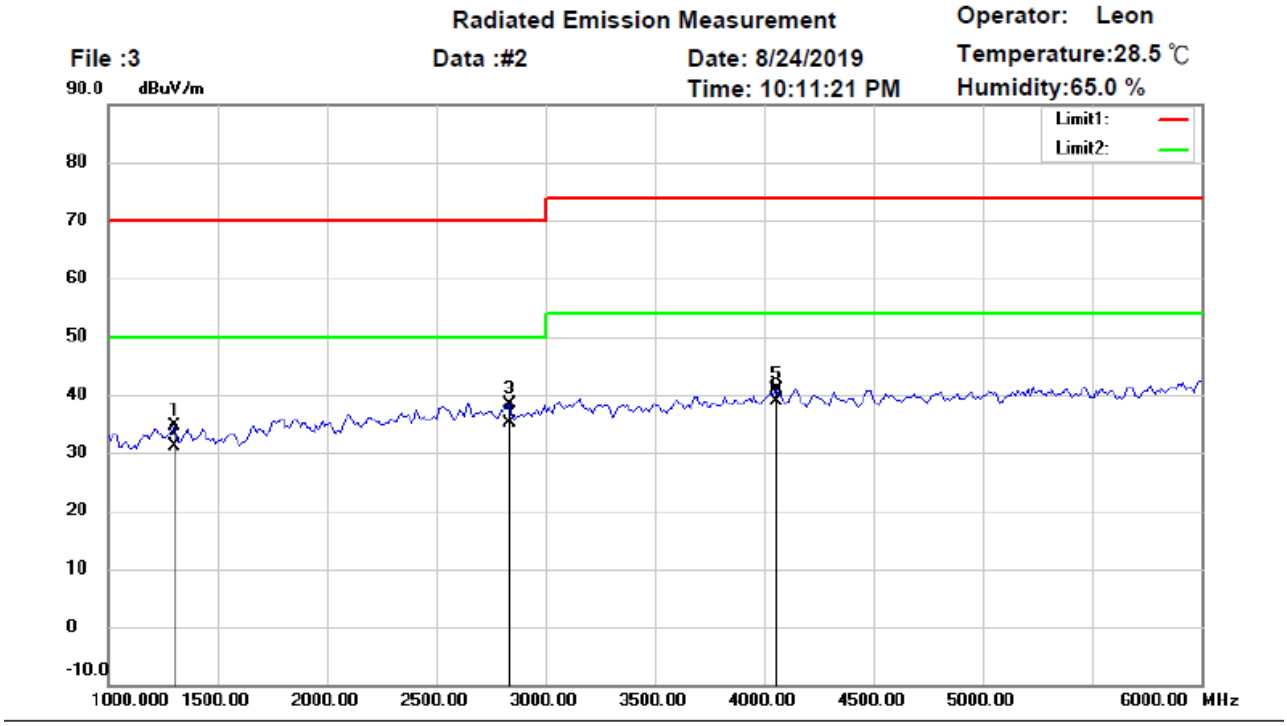
Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	35.8316	43.98	QP	-8.95	35.03	40.00	100	346	-4.97	
	74.7094	41.02	QP	-14.59	26.43	40.00	100	175	-13.57	
	115.5311	38.43	QP	-7.11	31.32	40.00	100	90	-8.68	
	142.7455	37.19	QP	-6.73	30.46	40.00	100	220	-9.54	
	549.0180	29.73	QP	-2.09	27.64	47.00	100	175	-19.36	
	949.4590	29.61	QP	4.21	33.82	47.00	100	80	-13.18	



Site : 966 Chamber
Condition : EN55032 \ AS/NZS CISPR32 RE-Class B Above 1G PK Polarization: *Horizontal*
EUT : W6M21906-19111 Power : 230 Va.c.
M/N: Distance: 3m
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	1220.441	43.75	peak	-8.75	35.00	70.00	100	215	-35.00	
	1220.441	40.52	AVG	-8.75	31.77	50.00	100	215	-18.23	
	2833.667	43.72	peak	-5.21	38.51	70.00	100	40	-31.49	
*	2833.667	40.39	AVG	-5.21	35.18	50.00	100	40	-14.82	
	3685.371	42.59	peak	-2.58	40.01	74.00	100	263	-33.99	
	3685.371	39.91	AVG	-2.58	37.33	54.00	100	263	-16.67	



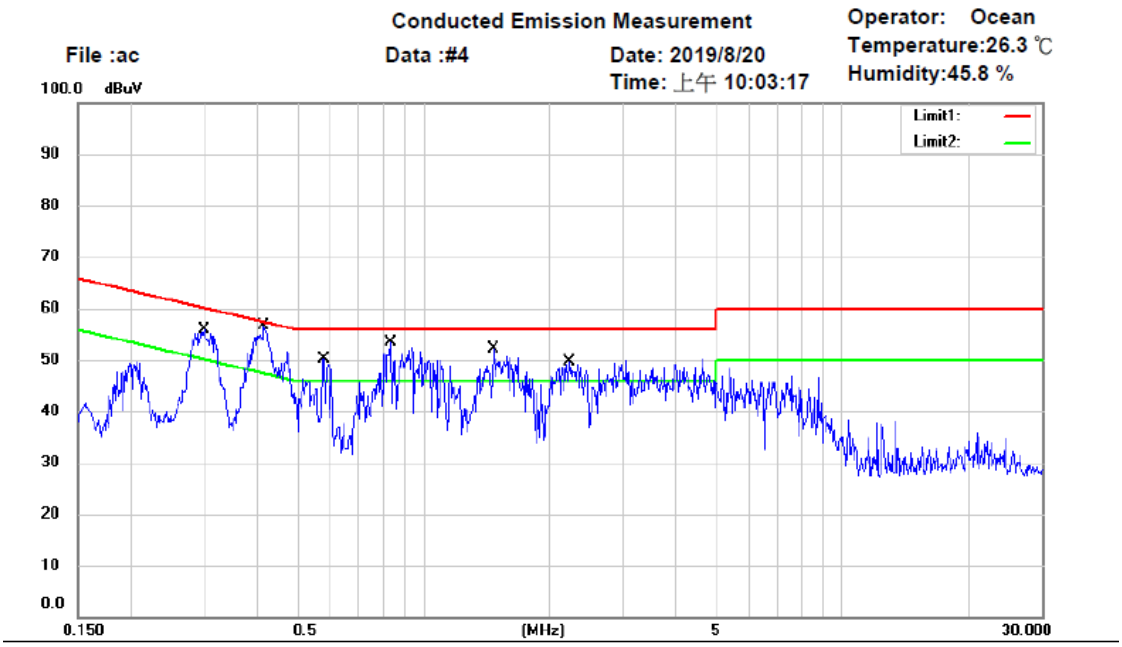
Site : 966 Chamber
Condition : EN55032 \ AS/NZS CISPR32 RE-Class B Above 1G PK Polarization: *Vertical*
EUT : W6M21906-19111 Power : 230 Va.c.
M/N: Distance: 3m
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	1300.601	43.55	peak	-8.96	34.59	70.00	100	58	-35.41	
	1300.601	40.17	AVG	-8.96	31.21	50.00	100	58	-18.79	
	2833.667	43.49	peak	-5.21	38.28	70.00	100	270	-31.72	
*	2833.667	40.38	AVG	-5.21	35.17	50.00	100	270	-14.83	
	4056.112	43.11	peak	-2.28	40.83	74.00	100	196	-33.17	
	4056.112	41.16	AVG	-2.28	38.88	54.00	100	196	-15.12	

Note:
1. **Correction Factor = Antenna factor + Cable loss - Preamplifier**
2. **The formula of measured value as: Test Result = Reading + Correction Factor**
3. **Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average**
4. **All not in the table noted test results are more than 20 dB below the relevant limits.**
5. **Up Line: QP Limit Line, Down Line: Ave Limit Line.**

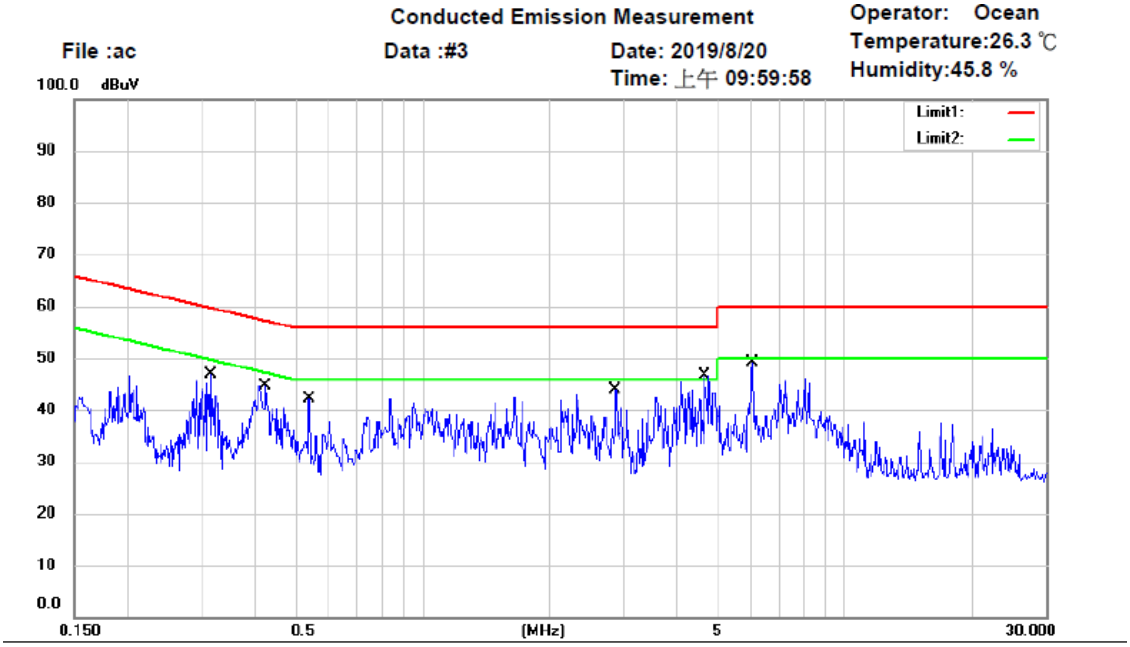
Conducted Emission

Emission



Site : Chamber_03
Condition : EN55032 \ AS/NZS CISPR32 Class B Conduction Phase: N
EUT : W6M21906-19111 Power : 230 Va.c.
M/N:
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.3003	31.74	QP	9.91	41.65	60.23	-18.58	
	0.3003	12.01	AVG	9.91	21.92	50.23	-28.31	
*	0.4163	29.55	QP	9.90	39.45	57.52	-18.07	
	0.4163	16.64	AVG	9.90	26.54	47.52	-20.98	
	0.5765	23.09	QP	9.91	33.00	56.00	-23.00	
	0.5765	7.35	AVG	9.91	17.26	46.00	-28.74	
	0.8352	25.96	QP	9.91	35.87	56.00	-20.13	
	0.8352	10.82	AVG	9.91	20.73	46.00	-25.27	
	1.4675	24.92	QP	9.92	34.84	56.00	-21.16	
	1.4675	6.00	AVG	9.92	15.92	46.00	-30.08	
	2.2303	24.36	QP	9.93	34.29	56.00	-21.71	
	2.2303	7.31	AVG	9.93	17.24	46.00	-28.76	



Site : Chamber_03
Condition : EN55032 \ AS/NZS CISPR32 Class B Conduction Phase: L1
EUT : W6M21906-19111 Power : 230 Va.c.
M/N:
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.3143	14.20	QP	9.91	24.11	59.86	-35.75	
	0.3143	2.00	AVG	9.91	11.91	49.86	-37.95	
*	0.4246	17.60	QP	9.90	27.50	57.36	-29.86	
	0.4246	3.00	AVG	9.90	12.90	47.36	-34.46	
	0.5382	12.00	QP	9.90	21.90	56.00	-34.10	
	0.5382	6.20	AVG	9.90	16.10	46.00	-29.90	
	2.8670	12.90	QP	9.94	22.84	56.00	-33.16	
	2.8670	-0.10	AVG	9.94	9.84	46.00	-36.16	
	4.6693	14.50	QP	9.96	24.46	56.00	-31.54	
	4.6693	-4.00	AVG	9.96	5.96	46.00	-40.04	
	6.0375	17.20	QP	9.98	27.18	60.00	-32.82	
	6.0375	-1.30	AVG	9.98	8.68	50.00	-41.32	

Note 1. The formula of measured value as: Test Result = Reading + Correction Factor
2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
4. All not in the table noted test results are more than 20 dB below the relevant limits.
5. Up Line: QP Limit Line, Down Line: Ave Limit Line.

Current Harmonics

Harmonics

Standard : IEC/EN 61000 - 3 - 2

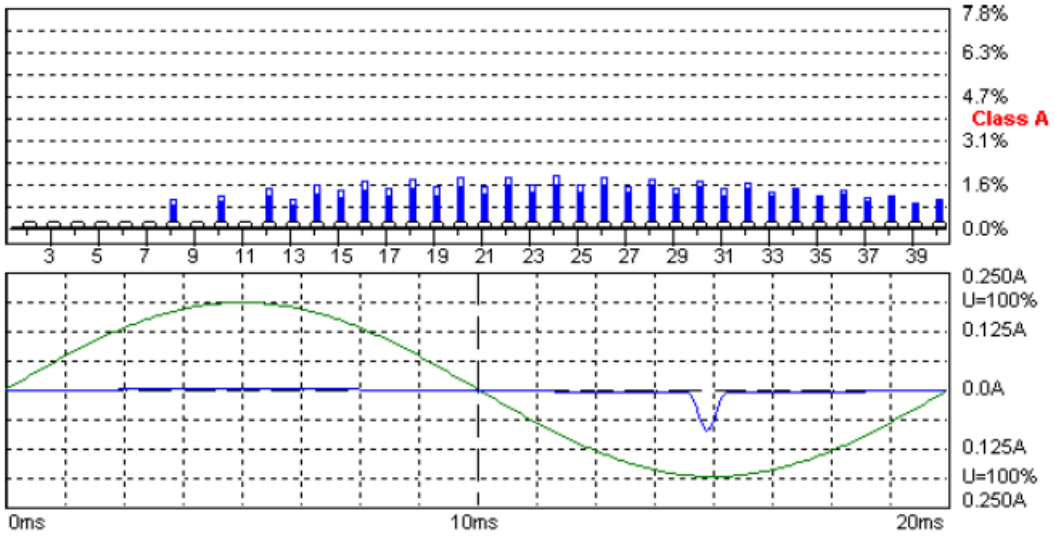
Device : 20EBG8701

Date : August 20, 2019

Class : A

Temperature	:	23.8 °C
Pressure	:	990 hPa
Rel. humidity	:	54.5 %

Operator Ocean
Unit
Serial Number



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2) 2019/8/20 下午 02:20:21

Urms =	229.1	V	P =	0.871	W	THC =	0.008	A	Range: 0.25 A
Irms =	0.009	A	pf =	0.439					V-nom: 230 V
									TestTime: 5 min (100%)

Test completed, Result: PASSED

Registration number: W6M21906-19111-E-11

Voltage Fluctuation

Flicker

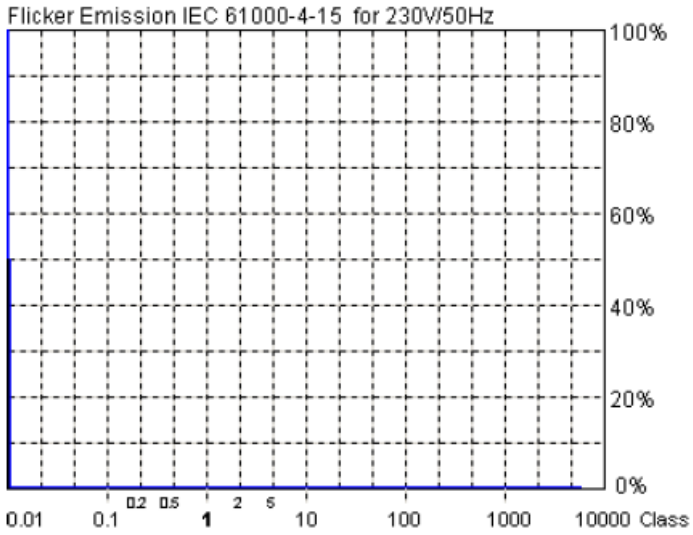
Standard : IEC/EN 61000 - 3 - 3

Device : 20EBG8701

Date : August 20, 2019

Temperature	:	23.8 °C
Pressure	:	990 hPa
Rel. humidity	:	54.5 %

Operator Ocean
Unit
Serial Number



Actual Flicker (Fli):	**0.00**
Short-term Flicker (Pst):	**0.07**
Limit (Pst):	1.00
Long-term Flicker (Plt):	**0.06**
Limit (Plt):	0.65
Maximum Relative Volt. Change (dmax):	**OFL**
Limit (dmax):	4.00%
Relative Steady-state Voltage Change (dc):	**OFL**
Limit (dc):	3.30%
Tmax 3.30% (dt):	**0.00ms**
Limit (dt>Lim):	500ms

Flicker Emission - IEC 61000-3-3 , EN 61000-3-3

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Urms =	229.3	V	P =	0.718	W
Irms =	0.005	A	pf =	0.583	

Range:	0.25 A
V-nom:	230 V
TestTime:	120 min (1077%)

Test aborted, Result: PASSED

Registration number: W6M21906-19111-E-11

Electrostatic Discharge

ESD

Standard : IEC/EN 61000 - 4 - 2

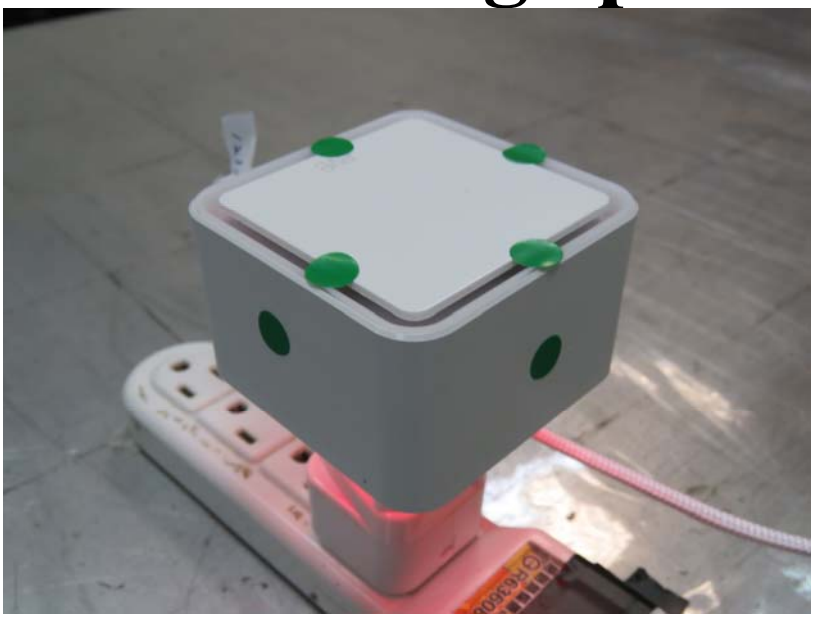
Device : 20EBG8701

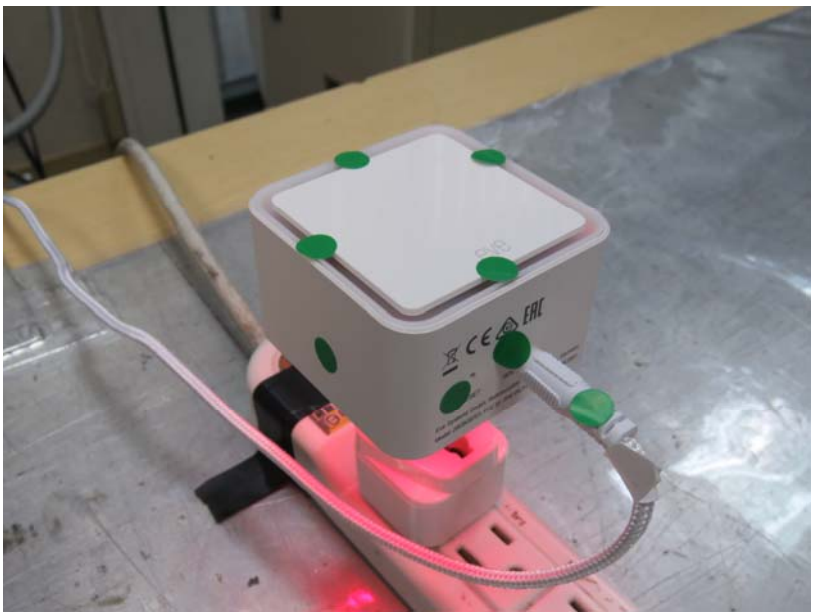
Date : August 21, 2019

Temperature	:	22.1 °C
Pressure	:	990 hPa
Rel. humidity	:	55.9 %

Test point	Table (T) Floor (F)	Contact (C) Air (A)	Voltage (kV)	Polarity (+ / -)	Performance criteria
Housing	T	A	2, 4, 8	+ / -	A
Indirect	T	C	2, 4	+ / -	A

ESD discharge points





Performance criteria :

- A: Normal performance within the specification.
- B: Temporary degradation or less of function or performance which is self recoverable
- C: Temporary degradation or loss of function or perform. which requires. operate intervention or system reset

NA: Not Applicable

Explanation: ./.

Interference Immunity Against Electromagnetic Irradiation

RF Field

Standard : IEC/EN 61000 – 4 – 3

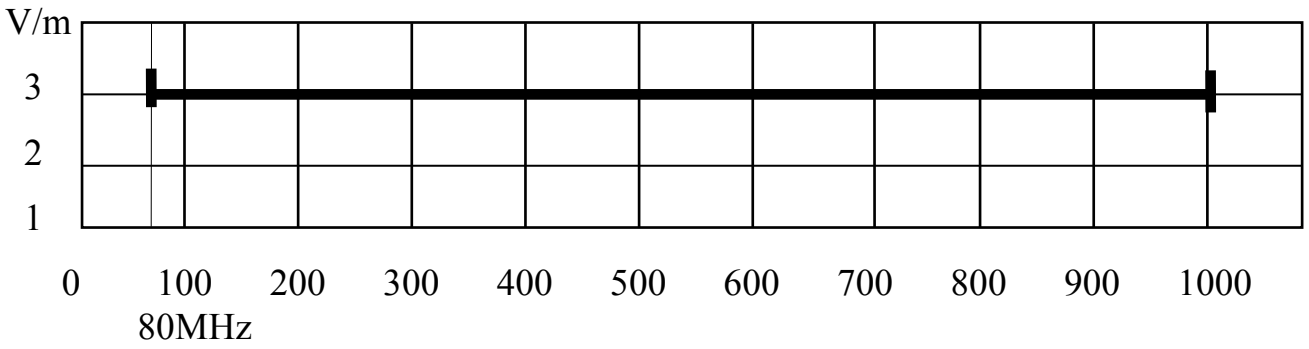
Device : 20EBG8701

Date : August 23, 2019

Temperature	:	28.5 °C
Pressure	:	1007 hPa
Rel. humidity	:	65 %

Test equipment : Anechoic Chamber, Generator SMG (R&S), Monitoring System, Amplifier 10W1000/150L (ar), Antenna SAS-200/521 (AHS)

Severity Level : 2 (3V/m) Modulation Frequency : 1kHz (80%AM)



Performance criteria :

☒ A : No loss of performance or function

☐ B : Temporary loss of function or performance which is self recoverable

☐ C : Temporary loss of function or perform. which req. operator intervention or system reset

☐ D : Loss of function which is not recoverable

Electrical Fast Transients

Burst

Standard : IEC/EN 61000 – 4 – 4

Device : 20EBG8701

Date : August 21, 2019

Temperature : 22.1 °C
Pressure : 990 hPa
Rel. humidity : 55.9 %

Testport	Voltage (kV)	Polarity (+ / -)	Waveform T_r / T_h	Repetiton Frequency (kHz)	Performance criteria
AC-Power line	1	+ / -	5/50 ns	5	A

Performance criteria :

A : No loss of performance or function
B : Temporary loss of function or performance which is self recoverable
C : Temporary loss of function or perform. which req. operate. intervention or system reset
D : Loss of function which is not recoverable

Transients common & diff. mode

Surge

Standard : IEC/EN 61000 - 4 - 5

Device : 20EBG8701

Date : August 21, 2019

Temperature	:	22.1 °C
Pressure	:	990 hPa
Rel. humidity	:	55.9 %

Test mode	Voltage (kV)	Waveform T_r / T_h	Performance criteria
AC-line to line	1	1.2/50 µs	A

Performance criteria :

A : No loss of performance or function

B : Temporary loss of function or performance which is self recoverable

C : Temporary loss of function or perform. which req. operate. intervention or system reset

D : Loss of function which is not recoverable

continues conducted

RF - common mode

Standard : IEC/EN 61000 - 4 - 6

Device : 20EBG8701

Date : August 21, 2019

Temperature	:	22.1 °C
Pressure	:	990 hPa
Rel. humidity	:	55.9 %

Test port	Voltage (Vrms)	Modulation Frequency	Frequency Range	Performance criteria
AC-Power line	3	1 kHz	150 kHz - 80 MHz	A

Performance criteria :

A : No loss of performance or function

B : Temporary loss of function or performance which is self recoverable

C : Temporary loss of function or perform. which req. operate. intervention or system reset

D : Loss of function which is not recoverable

Magnetic field frequency

Magn-Field

Standard : IEC/EN 61000 - 4 - 8

Device : 20EBG8701

Date : August 21, 2019

Ambient magnetic field: 0.032 A/m

Temperature	:	22.1 °C
Pressure	:	990 hPa
Rel. humidity	:	55.9 %

Magnetic field direction	Passed	Failed	Performance criteria
X-Axis	☒	☐	A
Y-Axis	☒	☐	A
Z-Axis	☒	☐	A

Explanation: The Magnetic field frequency tests in 50 Hz.

The Continuous magnetic field strength is 1 A/m.

Performance criteria:

A : No loss of performance or function

B : Temporary loss of function or performance which is self recoverable

C : Temporary loss of function or perform. which req. operate. intervention or system reset

D : Loss of function which is not recover

Voltage dips and interruption

V - Dips

Standard : IEC/EN 61000 - 4 - 11

Device : 20EBG8701

Date : August 21, 2019

Temperature	:	22.1 °C
Pressure	:	990 hPa
Rel. humidity	:	55.9 %

Reduction of supply voltage of	Voltage in % (in V)	Duration in ms	Performance criteria
Interruption (> 95 %)	5% (0 V)	250 (5 s)	B
Dips (>95 %)	5% (12 V)	0.5 (10 ms)	A
Dips (30 %)	70% (161 V)	25 (500 ms)	A

Performance criteria :

A : No loss of performance or function

B : Temporary loss of function or performance which is self recoverable

C : Temporary loss of function or perform. which req. operate. intervention or system reset

D : Loss of function which is not recoverable