TÜV AUSTRIA

TÜV AUSTRIA SERVICES GMBH

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Geschäftsbereich:
Medizintechnik/
Nachrichtentechnik/
EMV

Fachbereich:
Prüfstelle für
Nachrichtentechnik /
EMV

TEST REPORT

of the accredited test laboratory

TÜV Nr.:M/FG-10/132

Applicant:	Siemens Österreich AG Siemensstrasse 92 A – 1210 Wien
Tested Product:	Long Range Identification System Read- / Write- Unit
Type:	MOBY U SLG U92 RS 232
FCC-ID:	NXWMOBYU-SLGU92-1
IC-ID:	267X-U92RS232
Manufacturer:	Siemens Österreich AG A – 1210 Wien; Siemensstrasse 92

Output power / field strength:	0,106 mW e.i.r.p 18836 µV/m @ 3m	**Power Supply:**	20-30 VDC
Frequency range:	2400 – 2483,5 MHz	**Channel separation:**	819,2 kHz

Emission designator according to TRC-43: 580KD1D

Standard: FCC: 47 CFR Part 15 (October 1, 2009 edition)
RSS-210 Issue 7, June 2007

TÜV AUSTRIA SERVICES GMBH
Test laboratory for EMC

Supervisor of EMC-laboratory:

Ing. Wilhelm Seier

TÜV AUSTRIA SERVICES GMBH Rundsiegel TÜV AUSTRIA

23.11.2010

checked by:

Ing. Michael Emminger

Copy Nbr.: 01

Akkreditiert als:
Prüfstelle,
Überwachungsstelle,
Zertifizierungsstelle,
Kalibrierstelle,
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Kesselprüfstelle

Notified Body 0408
IC 2932K-1

Vorsitzender des Aufsichtsrats:
KR Dipl.-Ing. Johann
MARIHART

Geschäftsführung:
Dipl.-Ing. Dr. Hugo
EBERHARDT
Mag. Christoph
WENNINGER

Sitz:
Krugerstraße 16
1015 Wien/Österreich

weitere Geschäftsstellen:
Dornbirn, Graz,
Innsbruck, Klagenfurt,
Linz, Salzburg, St. Pölten,
Wels, Wien 1, Wien 20,
Wien 23, Brixen (I) und
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Firmenbuchgericht/ -nummer:
Wien / FN 288476 f

Bankverbindungen:
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UID ATU63240488
DVR 3002476

LIST OF MEASUREMENTS

The complete list of measurements called for in 47 CFR 15.249 and RSS-210 A2.9 is given below.

FIELD STRENGTH (Intentional Radiator) **§ 15.249/a**

Measured on channel 0 / 13 (see page 24 for details)

Field strength at a distance of 3m						
f (MHz)	Bandwidth (MHz)	Limit (µV/m) (Average)	Average detector		Peak detector	
			dBµV/m	µV/m	dBµV/m	µV/m
2401,35	1	50000	75,9	6237	84,0	15849
2412,00	1	50000	85,5	18836	89,5	29854
Highest harmonic 7236,0	1	500	38,2	81	54,8	550
All other harmonics	1	500	< 40	< 100	< 60	< 1000
Measurement uncertainty ± 6 dB						

Bandwidth: this refers to the bandwidth of the measurement receiver

LIMIT **§ 15.249/a (RSS-210 A2.9)**

f (MHz)	Bandwidth (MHz)	Field strength at a distance of 3 m	
		of fundamental emissions (mV/m)	of harmonic emissions (µV/m)
2400-2483,5	1	50	500

The above standing field strength limit is based on average limits.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

FIELD STRENGTH (Intentional Radiator) **§ 15.249/a**

Measured on channel 43 / 56 (see page 24 for details)

Field strength at a distance of 3m						
f (MHz)	Bandwidth (MHz)	Limit (µV/m) (Average)	Average detector		Peak detector	
			dBµV/m	µV/m	dBµV/m	µV/m
2436,55	1	50000	77,4	7413	86,0	19953
2447,275	1	50000	84,7	17179	92,0	39811
Highest harmonic 9789,1	1	500	38,4	83	58,9	881
All other harmonics	1	500	< 40	< 100	< 60	< 1000
Measurement uncertainty ± 6 dB						

Bandwidth: this refers to the bandwidth of the measurement receiver

LIMIT **§ 15.249/a (RSS-210 A2.9)**

f (MHz)	Bandwidth (MHz)	Field strength at a distance of 3 m	
		of fundamental emissions (mV/m)	of harmonic emissions (µV/m)
2400-2483,5	1	50	500

The above standing field strength limit is based on average limits.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

FIELD STRENGTH (Intentional Radiator) **§ 15.249/a**

Measured on channel 86 / 99 (see page 24 for details)

Field strength at a distance of 3m						
f (MHz)	Bandwidth (MHz)	Limit (µV/m) (Average)	Average detector		Peak detector	
			dBµV/m	µV/m	dBµV/m	µV/m
2471,80	1	50000	80,4	10471	85,6	19055
2482,50	1	50000	84,3	16406	89,7	30549
Highest harmonic 9930,0	1	500	39,2	91	59,8	977
All other harmonics	1	500	< 40	< 100	< 60	< 1000
Measurement uncertainty ± 6 dB						

Bandwidth: this refers to the bandwidth of the measurement receiver

LIMIT **§ 15.249/a (RSS-210 A2.9)**

f (MHz)	Bandwidth (MHz)	Field strength at a distance of 3 m	
		of fundamental emissions (mV/m)	of harmonic emissions (µV/m)
2400-2483,5	1	50	500

The above standing field strength limit is based on average limits.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

Measured on channel 0 / 13 (see page 24 for details)

Field strength at a distance of 3m						
f (MHz)	Bandwidth (MHz)	Limit (µV/m)	Average / Quasi-peak detector		Peak detector	
			dBµV/m	µV/m	dBµV/m	µV/m
688,2	0,12	200	41,1	114	---	---
2390,7	1	500	39,5	94	57,1	716
Measurement uncertainty ± 6 dB						

Bandwidth: this refers to the bandwith of the measurement receiver

LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
0,009-0,150	0,2	300	2400/f (kHz)
0,150-0,490	9	300	2400/f (kHz)
0,490-1,705	9	30	24000/f (kHz)
1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

The above standing field strength limits in the frequency band 9-90kHz, 110-490 kHz and above 1 GHz are based on average limits. All other above standing limits are based on quasi peak limits.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

Measured on channel 43 / 56 (see page 24 for details)

Field strength at a distance of 3m						
f (MHz)	Bandwidth (MHz)	Limit (µV/m)	Average / Quasi-peak detector		Peak detector	
			dBµV/m	µV/m	dBµV/m	µV/m
688,2	0,12	200	41,6	120	---	---
2425,9	1	500	39,7	97	59,7	966
Measurement uncertainty ± 6 dB						

Bandwidth: this refers to the bandwith of the measurement receiver

LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
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1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

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RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

Measured on channel 86 / 99 (see page 24 for details)

Field strength at a distance of 3m						
f (MHz)	Bandwidth (MHz)	Limit (µV/m)	Average / Quasi-peak detector		Peak detector	
			dBµV/m	µV/m	dBµV/m	µV/m
688,2	0,12	200	40,9	111	---	---
2461,15	1	500	40,9	111	57,6	759
Measurement uncertainty ± 6 dB						

Bandwidth: this refers to the bandwith of the measurement receiver

LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
0,009-0,150	0,2	300	2400/f (kHz)
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1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

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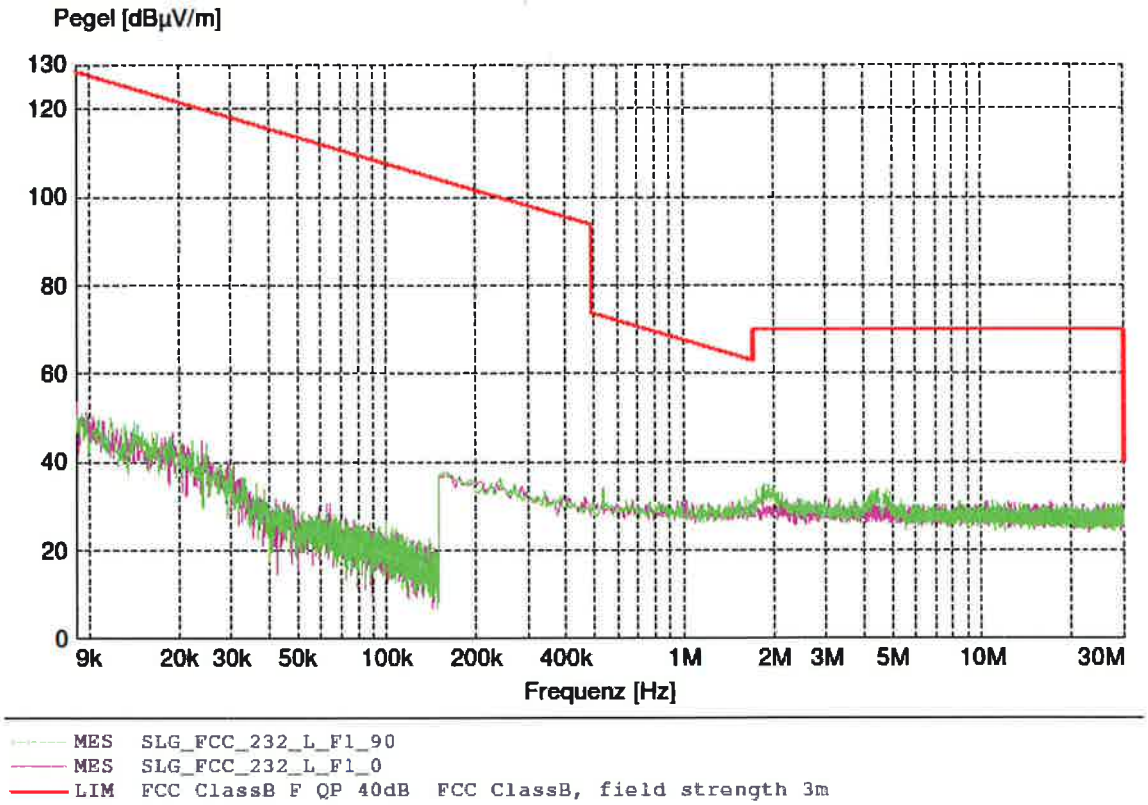
Measured on channel 0 / 13 (see page 24 for details)



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30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

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Ambient temperature: 24°C Relative humidity: 44%

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RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

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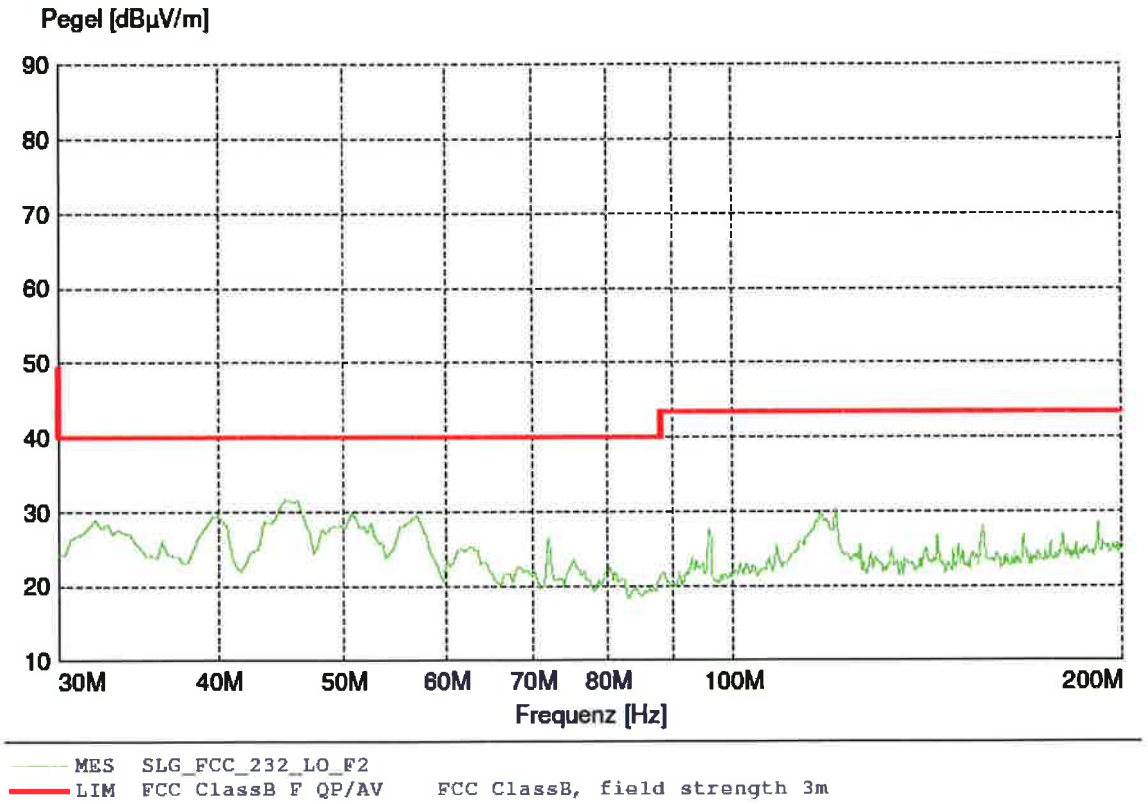

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216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
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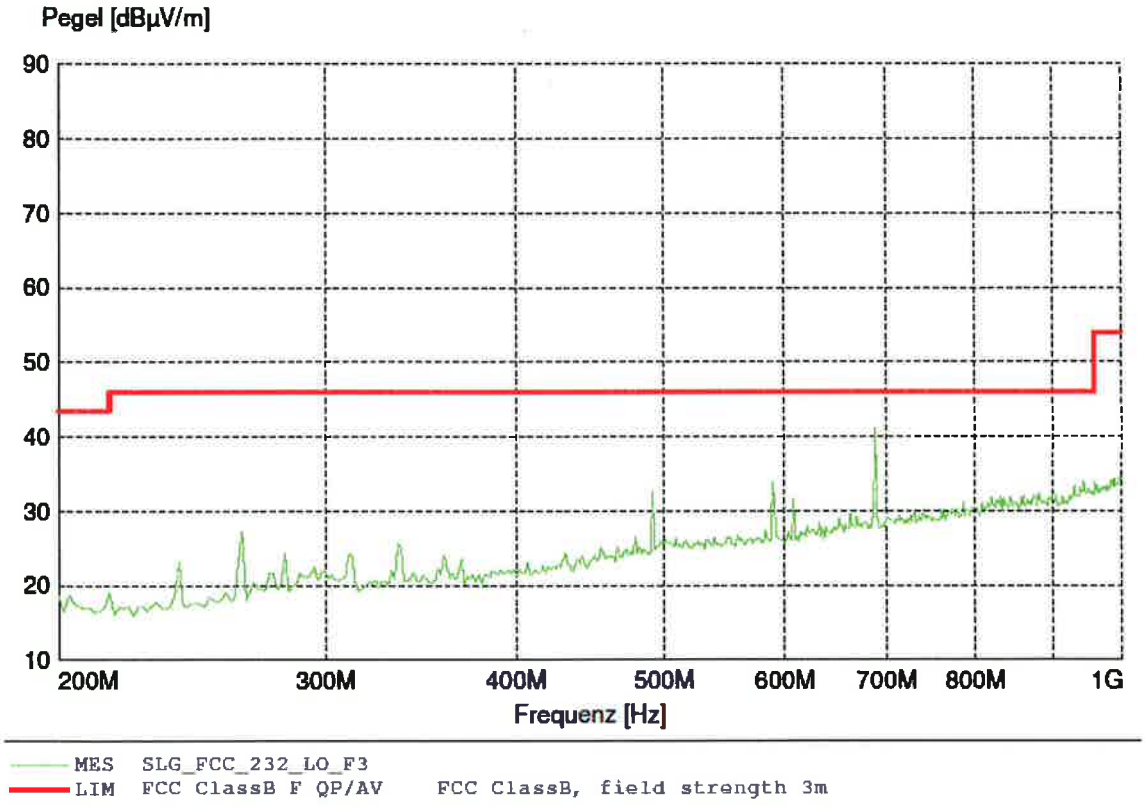

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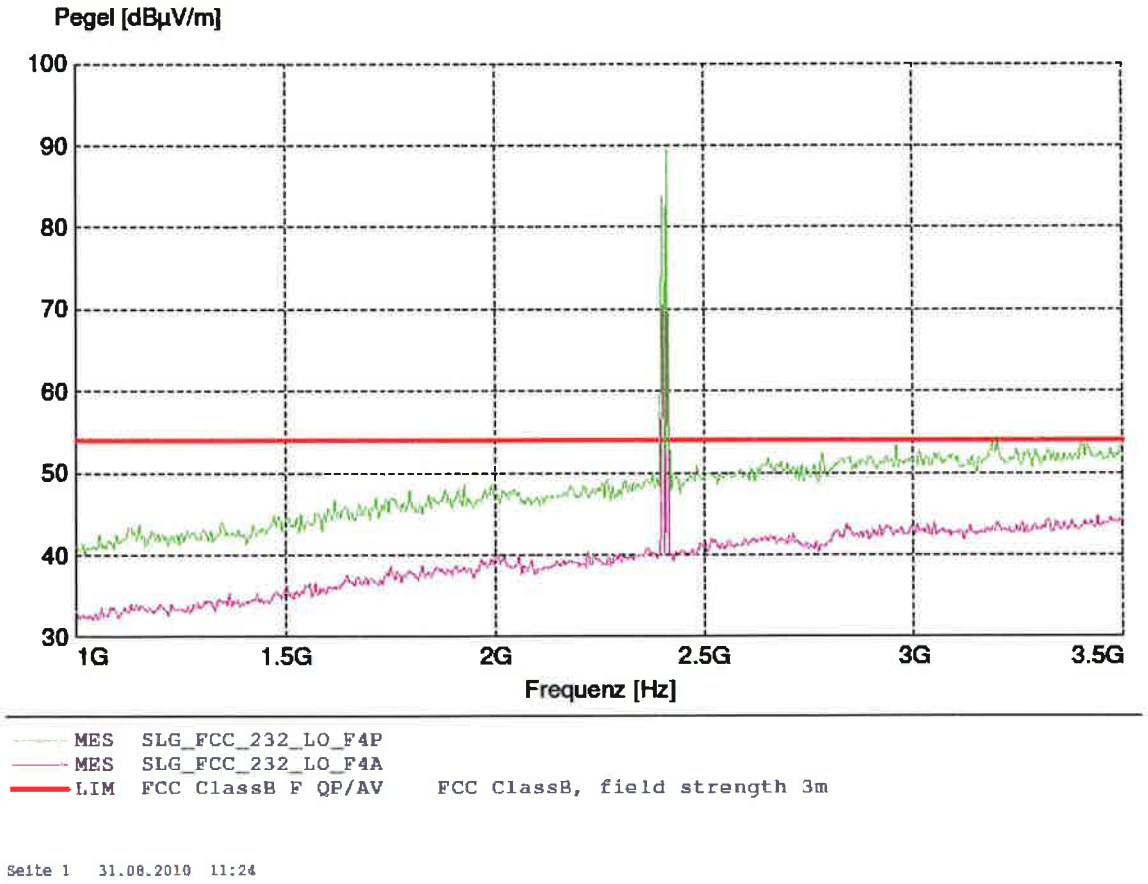

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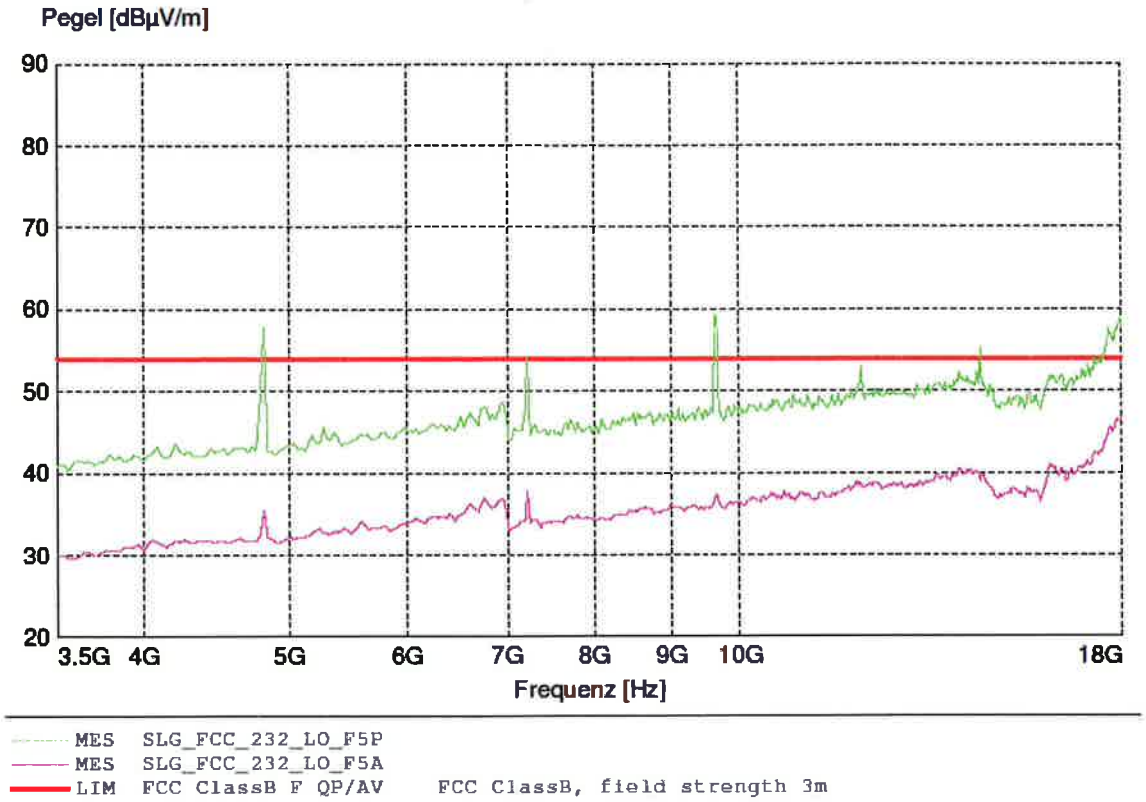

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Although the measurements were made up to the 10th harmonic, no plots above 18 GHz are available.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

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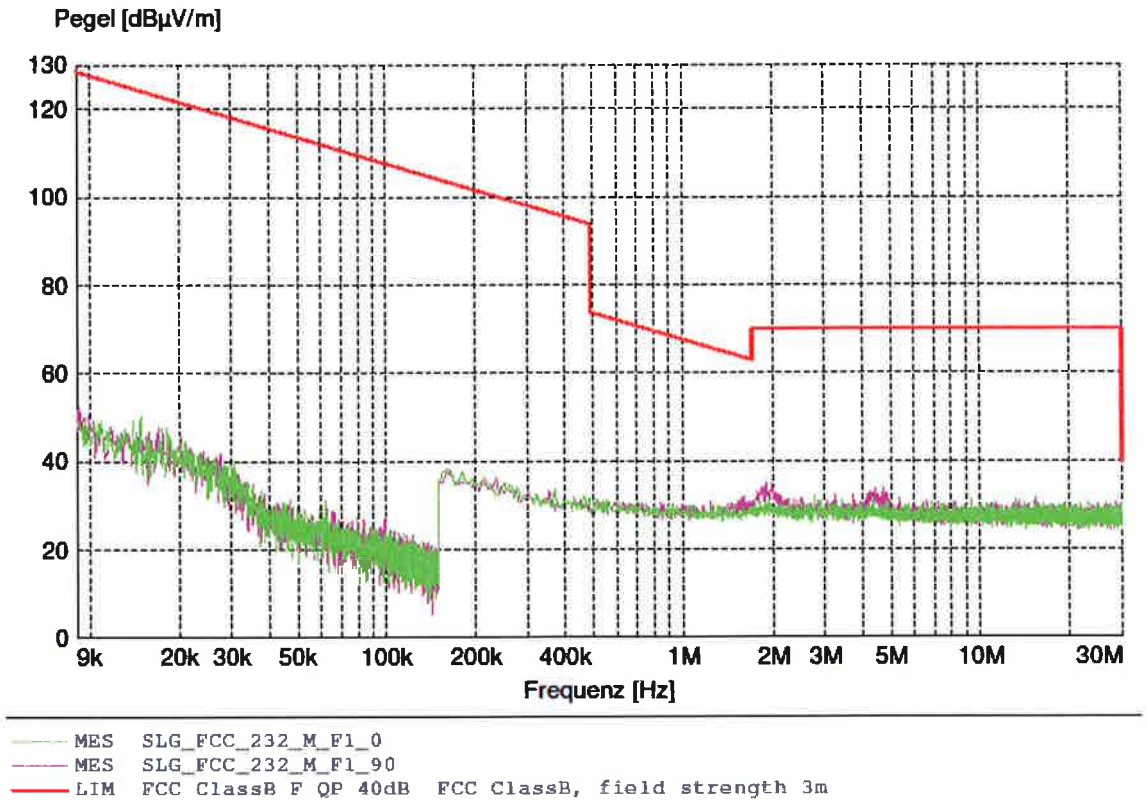

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Ambient temperature: 24°C Relative humidity: 44%

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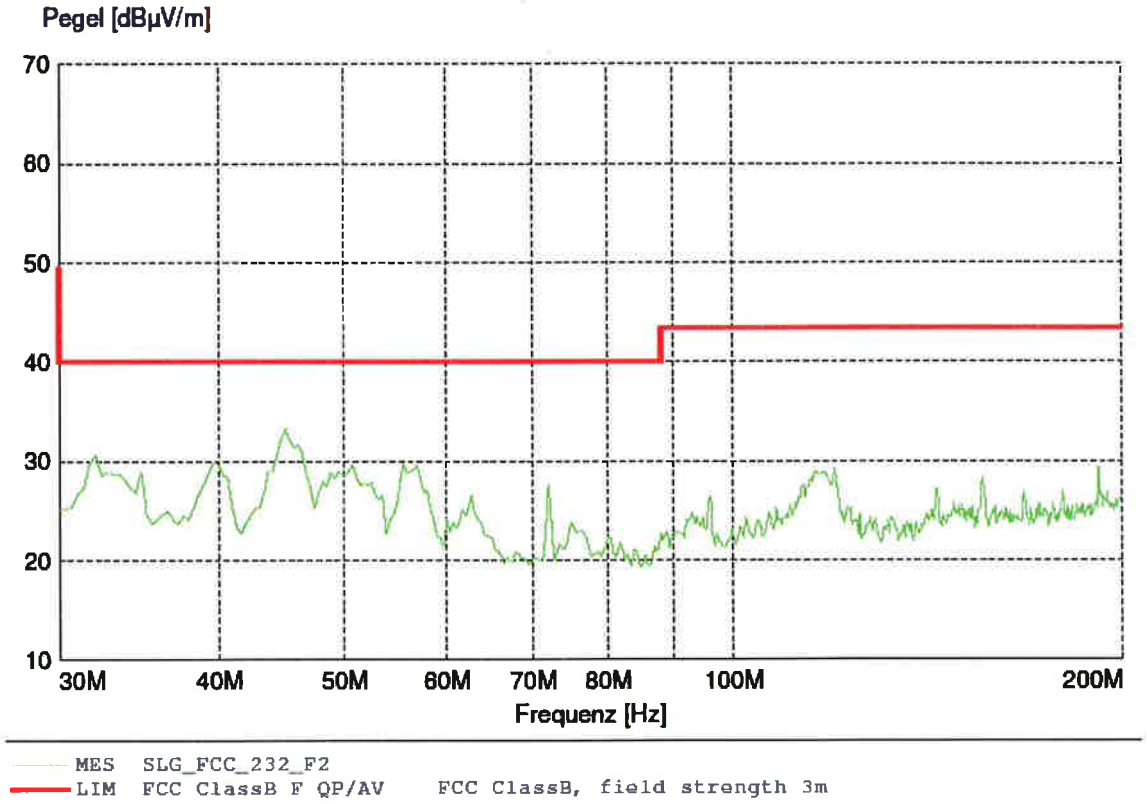

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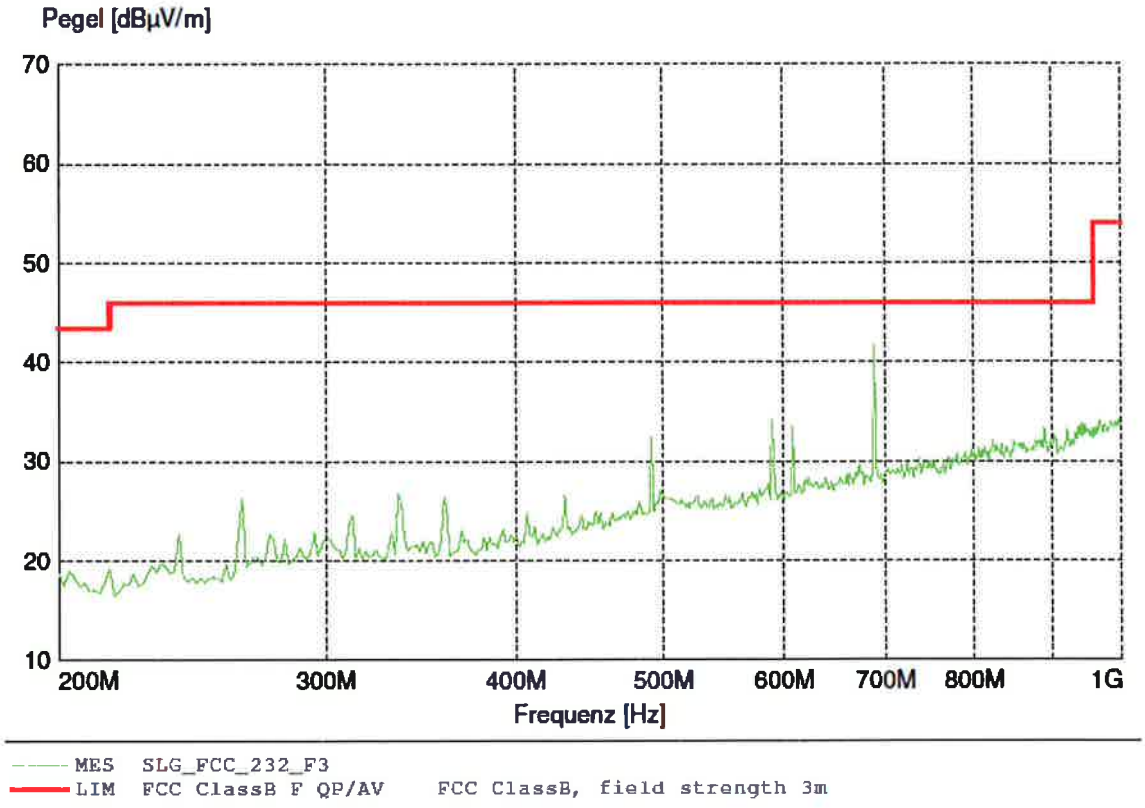

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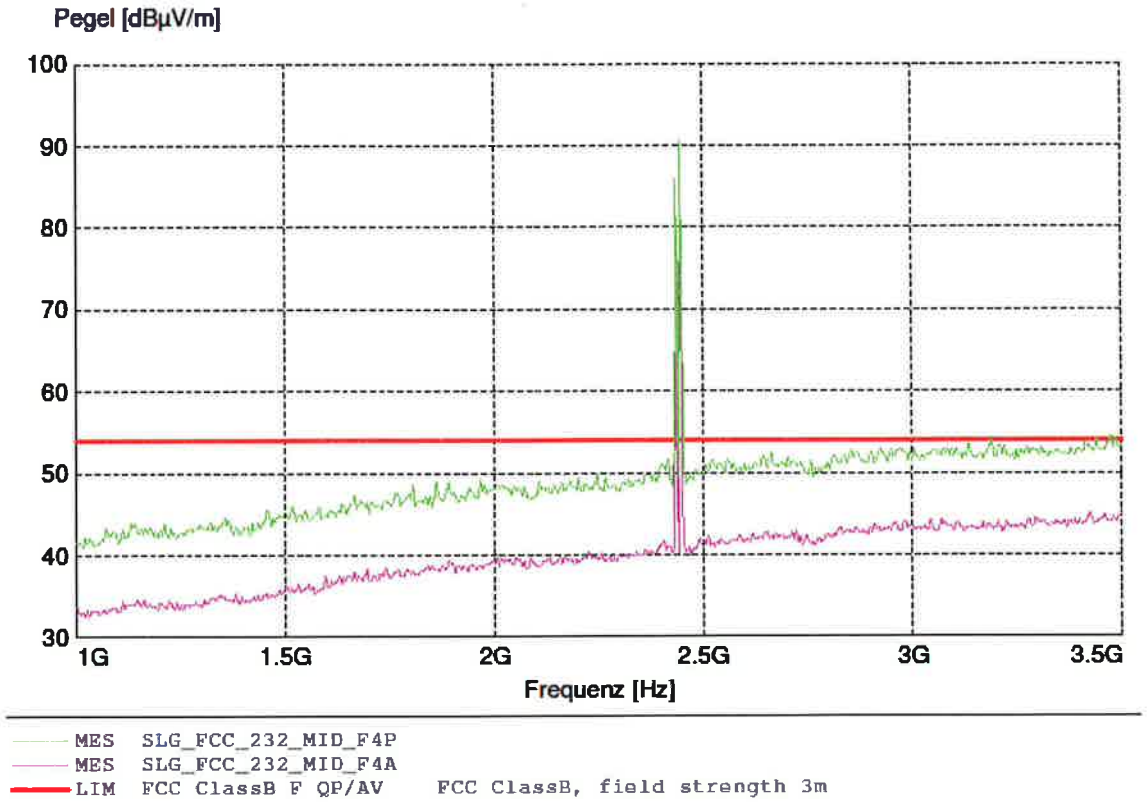

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216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

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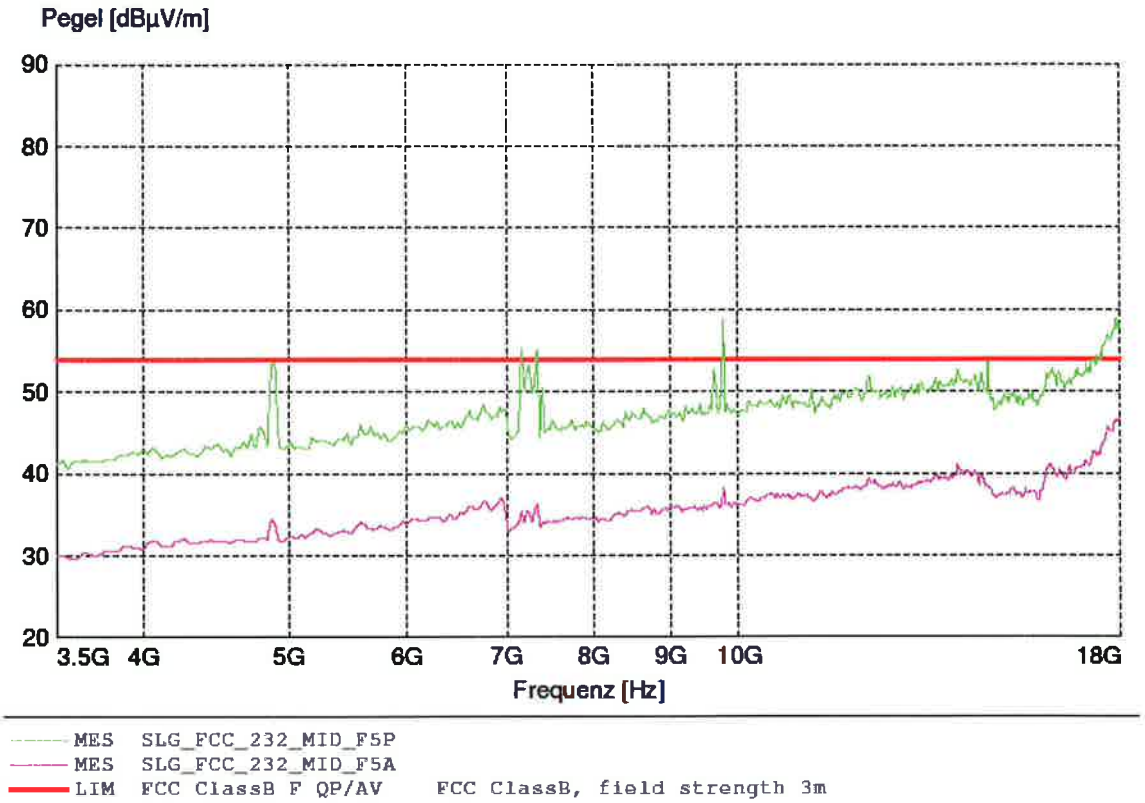

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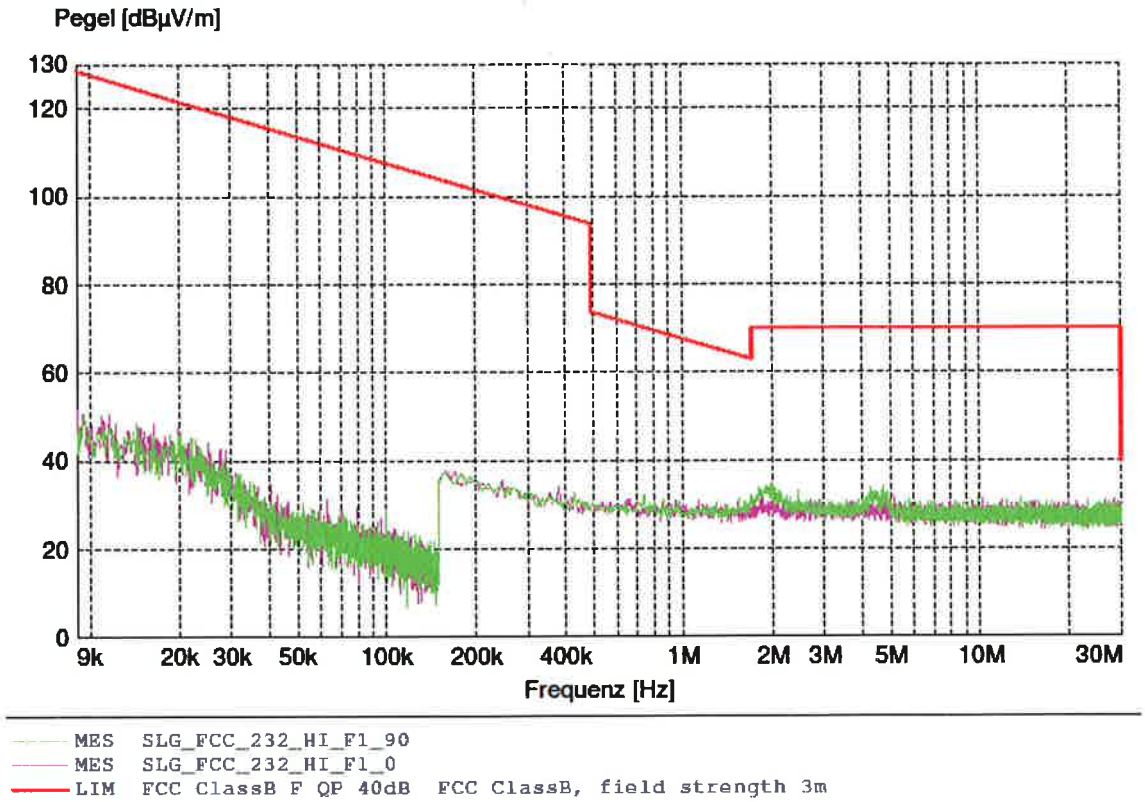
TÜV AUSTRIA

RADIATED EMISSIONS (Intentional Radiator) § 15.249/c

Measured on channel 86 / 99 (see page 24 for details)



LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
0,009-0,150	0,2	300	2400/f (kHz)
0,150-0,490	9	300	2400/f (kHz)
0,490-1,705	9	30	24000/f (kHz)
1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

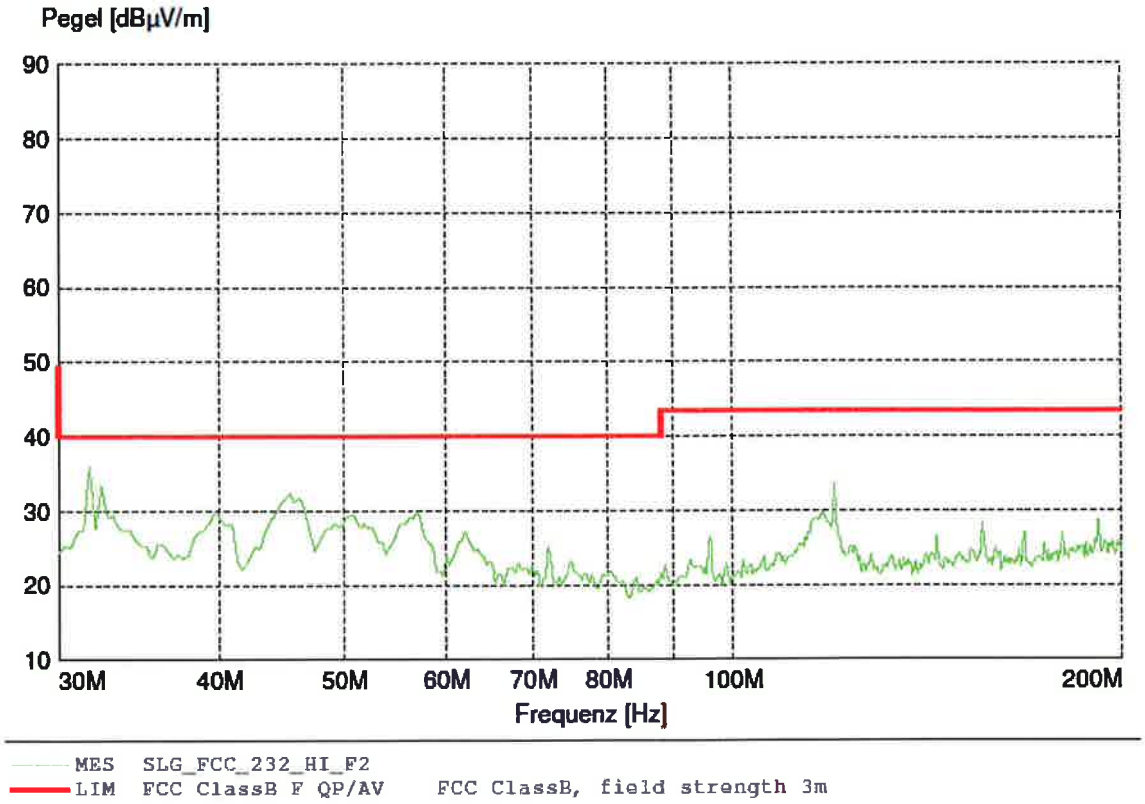
The above standing field strength limits in the frequency band 9-90kHz, 110-490 kHz and above 1 GHz are based on average limits. All other above standing limits are based on quasi peak limits.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

Ambient temperature: 24°C Relative humidity: 44%

RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

Measured on channel 43 / 56 (see page 24 for details)



LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
0,009-0,150	0,2	300	2400/f (kHz)
0,150-0,490	9	300	2400/f (kHz)
0,490-1,705	9	30	24000/f (kHz)
1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

The above standing field strength limits in the frequency band 9-90kHz, 110-490 kHz and above 1 GHz are based on average limits. All other above standing limits are based on quasi peak limits.

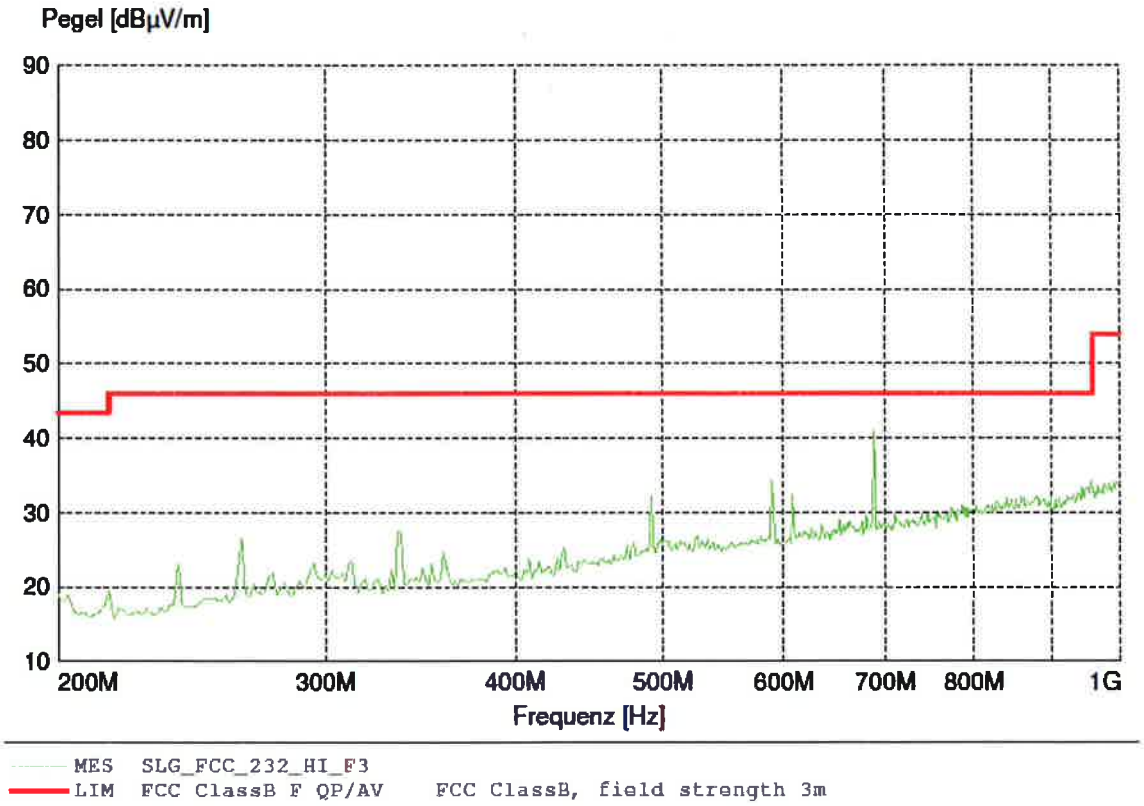
Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

Ambient temperature: 24°C Relative humidity: 44%

TÜV AUSTRIA

RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

Measured on channel 43 / 56 (see page 24 for details)



LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
0,009-0,150	0,2	300	2400/f (kHz)
0,150-0,490	9	300	2400/f (kHz)
0,490-1,705	9	30	24000/f (kHz)
1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

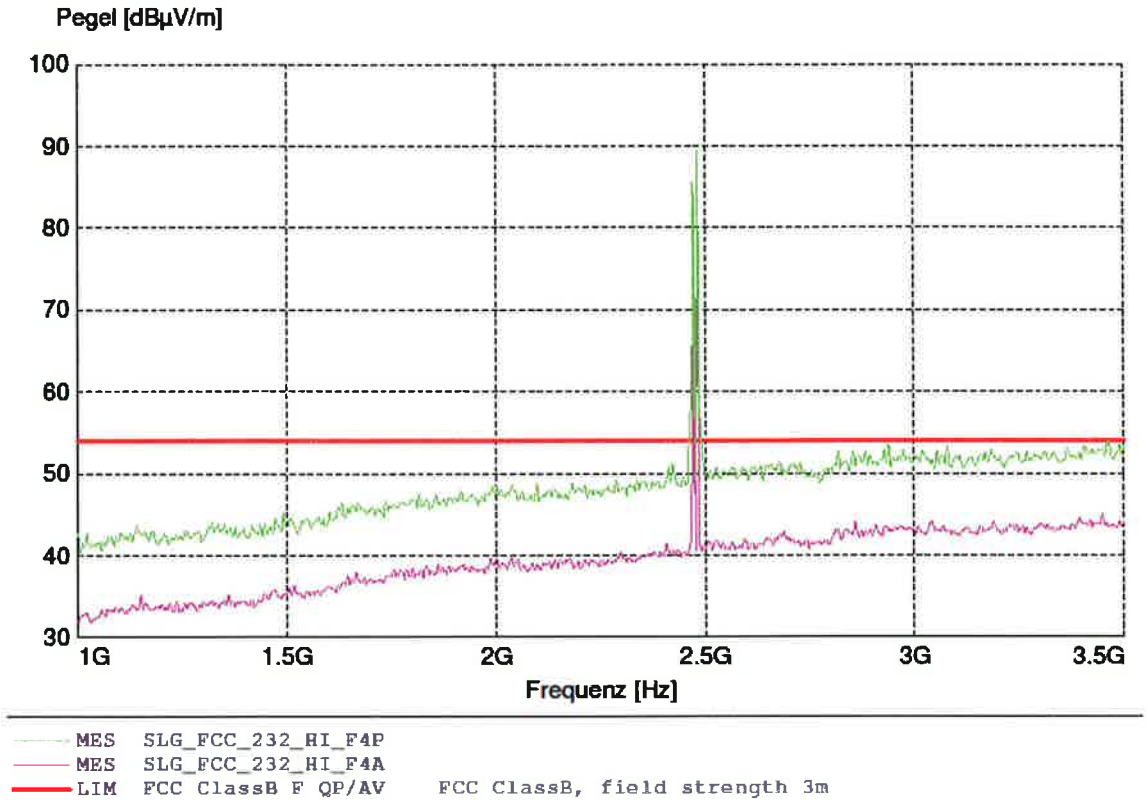
The above standing field strength limits in the frequency band 9-90kHz, 110-490 kHz and above 1 GHz are based on average limits. All other above standing limits are based on quasi peak limits.

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

Ambient temperature: 24°C Relative humidity: 44%

RADIATED EMISSIONS (Intentional Radiator) § 15.249/c

Measured on channel 43 / 56 (see page 24 for details)



LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

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0,150-0,490	9	300	2400/f (kHz)
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1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

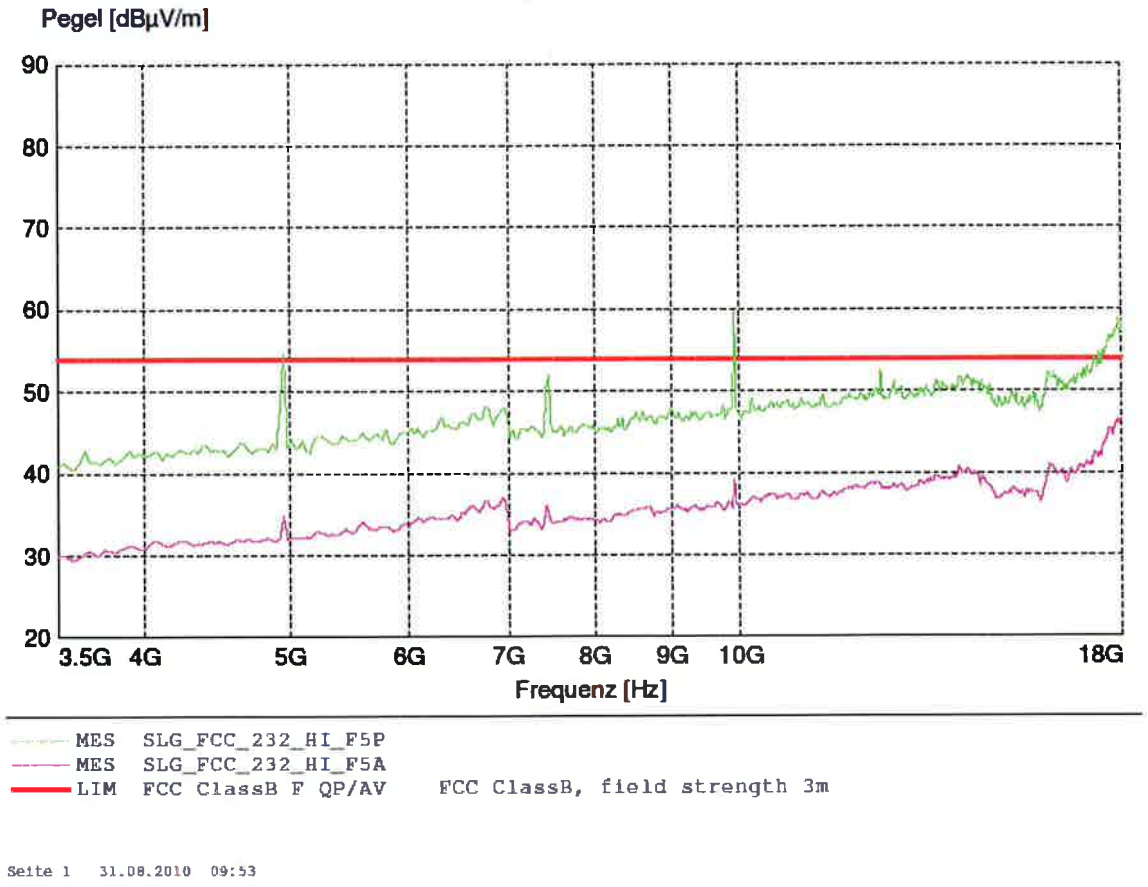
The above standing field strength limits in the frequency band 9-90kHz, 110-490 kHz and above 1 GHz are based on average limits. All other above standing limits are based on quasi peak limits. Measurements at 1 GHz and above were made with PK Detector (green line) and Average Detector (purple line).

Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

Ambient temperature: 24°C Relative humidity: 44%

RADIATED EMISSIONS (Intentional Radiator) **§ 15.249/c**

Measured on channel 43 / 56 (see page 24 for details)



LIMIT **§ 15.249/c according to § 15.209 (Table 2 of RSS-210)**

f (MHz)	Bandwith (kHz)	Meas. distance (m)	Field strength (µV/m)
0,009-0,150	0,2	300	2400/f (kHz)
0,150-0,490	9	300	2400/f (kHz)
0,490-1,705	9	30	24000/f (kHz)
1,705-30,0	9	30	30
30-88	120	3	100
88-216	120	3	150
216-960	120	3	200
960-1000	120	3	500
1000-2400	1000	3	500
above 2483,5	1000	3	500

The above standing field strength limits in the frequency band 9-90kHz, 110-490 kHz and above 1 GHz are based on average limits. All other above standing limits are based on quasi peak limits. Measurements at 1 GHz and above were made with PK Detector (green line) and Average Detector (purple line).

Although the measurements were made up to the 10th harmonic, no plots above 18 GHz are available.

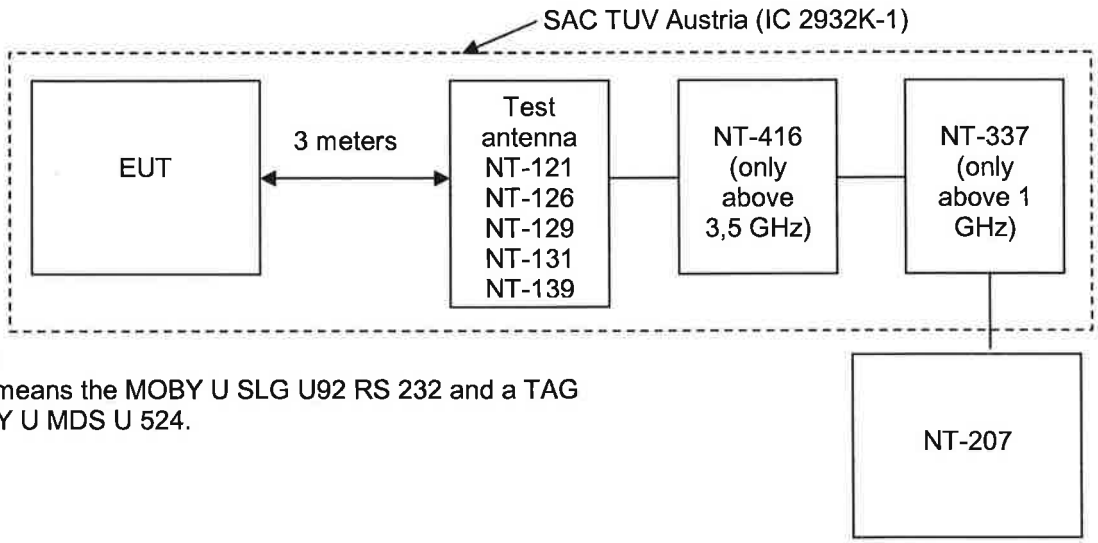
Measuring equipment used: NT-100; NT-110; NT-121; NT-126; NT-129; NT-131; NT-139; NT-207

Additional information supplementary to the test report

The „Moby U" system is intended to be used for identification purposes. It uses one or more SLGs (writing and reading station) and one ore multiple MDSs (mobile data memory).

The SLG operates, also during the test, as follows:
Two signals are transmitted in the downlink mode (writing data from SLG to MDS). The lower is a CW carrier without modulation. The data carrier, modulated with a 384 ksym/s GMSK modulation, is situated 10.6496 MHz (13 channels) above the CW carrier.
During the uplink only the CW carrier will get transmitted.
Every SLG is able to handle more than one MDS at a time. The value, how much MDSs can be handled at a time is selectable. The maximum number is 12, minimum 1. This number is depending on the number of timeslots used for one MDS. During the test all timeslots were used, to get the minimal transmit interval and therefore maximum average emission. The MDS does not contain any RF generation, the MDS uses the RF energy of the two transmitted channels of the SLG to demodulate and receive data from SLG. It uses the unmodulated carrier from SLG for transmitting an answer back. Because of this, the MDS and SLG were tested together and all test results contained in this report refer to both products.

Test equipment used:



EUT:
This means the MOBY U SLG U92 RS 232 and a TAG MOBY U MDS U 524.

Test sample received: Aug. 30th 2010

Tests were performed: Aug. 30th 2010

Appendix 1
Test equipment used

TÜV AUSTRIA

Division Medical Technology/ Communication Technology/ EMC

Department: FG

Test report number: M/FG-10/132

Date: 23.11.2010

Checked by:

☐	Anechoic Chamber with 3m measurement distance	NT-100
☐	Stripline according to ISO 11452-5	NT-108
☐	MA 240 - Antenna mast 1 - 4 m height	NT-110
☐	DS 412 - Turntable 0 - 400 ° Azimuth	NT-111
☐	HD 100 Controller Mast+Turntable	NT-112
☐	HUF-Z2 - Bicon. Antennna 20 - 300 MHz	NT-120
☐	HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121
☐	HFH-Z2 - Loop Antenna 9 kHz - 30 MHz	NT-122
☐	HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123
☐	3121C - Dipole Antenna 28 - 1000 MHz	NT-124
☐	3115 - Horn Antenna 1 - 18 GHz (immunity)	NT-125
☐	3116 - Horn Antenna 18 - 40 GHz	NT-126
☐	SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz	NT-127
☐	AT-1080 - Log. Per. Antenna 80 - 1000 MHz	NT-128
☐	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-129
☐	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-130
☐	3146 - Log. Per. Antenna 200 – 1000 MHz	NT-131
☐	Loop Antenna H-Field	NT-132
☐	Horn Antenna 500 MHz - 2900 MHz	NT-133
☐	Horn Antenna 500 MHz - 6000 MHz	NT-133/1
☐	Log. per. Antenna 800 MHz - 2500 MHz	NT-134
☐	Log. per. Antenna 800 MHz - 2500 MHz	NT-135
☐	BiConiLog Antenna 26 MHz – 2000 MHz	NT-137
☐	Conical Dipol Antenna PCD8250	NT-138
☐	HF 906 - Horn Antenna 1 - 18 GHz (emission)	NT-139
☐	HZ-1 Antenna tripod	NT-150
☐	BN 1500 Antenna tripod	NT-151
☐	Ant. tripod for EN61000-4-3 Model TP1000A	NT-156
☐	Power quality analyzer Fluke 1760 (complete set)	NT-160 - NT-172
☐	Spectrumanalyzer – FSP7 9 kHz – 7 GHz	NT-200
☐	ESVP - Test receiver 20 - 1000 MHz	NT-201
☐	ESPC - Test receiver 9 kHz - 2,5 GHz	NT-203
☐	ESI26 – Test receiver 20 Hz – 26,5 GHz	NT-207
☐	Digital Radio Tester CTS55	NT-208
☐	Noise-gen., ITU-R 559-2 20 Hz – 20 kHz	NT-209
☐	CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
☐	3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
☐	Radiocommunicationanalyzer Marconi 2945A	NT-212
☐	2855S - Communication analyzer	NT-213
☐	Mixer M28HW 26,5 GHz - 40 GHz	NT-214
☐	Diode Detector 0,01 GHz - 26,5 GHz	NT-215
☐	RubiSource T&M Timing reference	NT-216
☐	Radiocommunicationanalyzer SWR 1180 MD	NT-217
☐	Mixer M19HWD 40 GHz – 60 GHz	NT-218
☐	Mixer M12HWD 60 GHz – 90 GHz	NT-219
☐	TDS - 540 DSO Digital scope	NT-220
☐	DSO9104 Digital scope	NT-220/1
☐	TPS 2014 Digital scope	NT-222
☐	Artificial Ear according to IEC 60318	NT-224
☐	1 kHz Sound calibrator	NT-225
☐	B10 - Harmonics and flicker analyzer	NT-232
☐	SRM-3000 Spectrumanalyzer	NT-233
☐	E-field probe SRM 75 MHz – 3 GHz	NT-234
☐	Hall-Teslameter ETM-1	NT-241
☐	EFA-3 H-field- / E-field probe	NT-243
☐	E-field measuring instrument EMR-200; 100 kHz – 3 GHz	NT-244
☐	E-field probe 100 kHz – 3 GHz	NT-245
☐	Magneticfield-Sensor 300 kHz – 30 MHz	NT-246

Appendix 1 (continued)
Test equipment used

TÜV AUSTRIA

☐	E-field probe 3 MHz – 18 GHz	NT-247
☐	Magneticfield-Sensor 27 MHz – 1 GHz	NT-248
☐	ELT-400 1 Hz – 400 kHz	NT-249
☐	MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250
☐	FCC-203I EM Injection clamp	NT-251
☐	FCC-203I-DCN Ferrite decoupling network	NT-252
☐	PR50 Current Probe	NT-253
☐	PR630 Current Probe	NT-254
☐	Fluke 87 V True RMS Multimeter	NT-260
☐	Model 2000 Digital Multimeter	NT-261
☐	Fluke 87 V Digital Multimeter	NT-262/1
☐	ESH2-Z5-U1 Artificial mains network 4x25A	NT-300
☐	ESH3-Z5-U1 Artificial mains network 2x10A	NT-301
☐	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302
☐	ESH3-Z4 T-Artificial network	NT-303
☐	PHE 4500/B Power amplifier	NT-304
☐	EZ10 T-Artificial Network	NT-305
☐	ENY22 Artificial Network	NT-308
☐	ENY41 Artificial Network	NT-309
☐	SMG - Signal generator 0,1 - 1000 MHz	NT-310
☐	SMA100A - Signal generator 9 kHz - 6 GHz	NT-310/1
☐	PM 5518 TXVPS Video generator	NT-311
☐	RefRad Reference generator	NT-312
☐	SMP 02 Signal generator 10 MHz - 20 GHz	NT-313
☐	40 MHz Arbitrary Generator TGA1241	NT-315
☐	Artificial mains network NSLK 8127-PLC	NT-316
☐	PEFT - Burst generator up to 4 kV	NT-320
☐	ESD 30 System up to 25 kV	NT-321
☐	PSURGE 4.1 Surge generator	NT-324
☐	TRANSIENT 1000 Immunity test system	NT-325
☐	VCS 500-M6 Surge-Generator	NT-326
☐	BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330
☐	T82-50 RF-Amplifier 2 GHz – 8 GHz	NT-331
☐	500W1000M7 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332
☐	AS0102-65R - RF-Amplifier 1 GHz - 2 GHz	NT-333
☐	APA01 – RF-Amplifier 0,5 GHz – 2,5 GHz	NT-334
☐	Preamplifier 1 GHz - 4 GHz	NT-335
☐	Preamplifier for GPS MKU 152 A	NT-336
☐	Preamplifier 100 MHz – 23 GHz	NT-337
☐	DC Block 10 MHz – 18 GHz Model 8048	NT-338
☐	2-97201 Electronic load	NT-341
☐	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344
☐	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345
☐	VDS 200 Mobil-impuls-generator	NT-350
☐	LD 200 Mobil-impuls-generator	NT-351
☐	MPG 200 Mobil-Impuls-Generators	NT-352
☐	EFT 200 Mobil-impuls-generator	NT-353
☐	AN 200 S1 Artificial Network	NT-354
☐	FP-EFT 32M 3 ph. Coupling filter (Burst)	NT-400/1
☐	PHE 4500 - Mains impedance network	NT-401
☐	IP 6.2 Coupling filter for data lines (Surge)	NT-403
☐	TK 9421 High Power Volt. Probe 150 kHz - 30 MHz	NT-409
☐	ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410
☐	IP 4 - Capacitive clamp (Burst)	NT-411
☐	Highpass-Filter 100 MHz – 3 GHz	NT-412
☐	Highpass-Filter 600 MHz – 4 GHz	NT-413
☐	Highpass-Filter 1250 MHz – 4 GHz	NT-414
☐	Highpass-Filter 1800 MHz – 16 GHz	NT-415

Appendix 1 (continued)
Test equipment used

TÜV AUSTRIA

Division Medical Technology/ Communication Technology/ EMC

Department: FG

Test report number: M/FG-10/132

Date: 23.11.2010

Checked by:

☐	Highpass-Filter 3500 MHz – 18 GHz	NT-416
☐	RF-Attenuator 10 dB DC – 18 GHz / 50 W	NT-417
☐	RF-Attenuator 6 dB DC – 18 GHz / 50 W	NT-418
☐	RF-Attenuator 3 dB DC – 18 GHz / 50 W	NT-419
☐	RF-Attenuator 20 dB DC - 1000 MHz / 25 W	NT-421
☐	RF-Attenuator 30 dB DC - 1000 MHz / 1 W	NT-423
☐	RF-Attenuator 30 dB	NT-424
☐	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-425
☐	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-426
☐	RF-Attenuator 6 dB	NT-428
☐	RF-Attenuator 0 dB - 81 dB	NT-429
☐	WRU 27 - Band blocking 27 MHz	NT-430
☐	WHJ450C9 AA - High pass 450 MHz	NT-431
☐	WHJ250C9 AA - High pass 250 MHz	NT-432
☐	RF-Load 150 W	NT-433
☐	Impedance transducer 1:4 ; 1:9 ; 1:16	NT-435
☐	RF-Attenuator DC – 18 GHz 6 dB	NT-436
☐	RF-Attenuator DC – 18 GHz 6 dB	NT-437
☐	RF-Attenuator DC – 18 GHz 10 dB	NT-438
☐	RF-Attenuator DC – 18 GHz 20 dB	NT-439
☐	I+P 7780 Directional coupler 100 - 2000 MHz	NT-440
☐	ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441
☐	Power Divider 6 dB/1 W/50 Ohm	NT-443
☐	Directional coupler 0,1 MHz – 70 MHz	NT-444
☐	Directional coupler 0,1 MHz – 70 MHz	NT-445
☐	Tube imitations according to EN 55015	NT-450
☐	FCC-801-M3-16A Coupling decoupling network	NT-458
☐	FCC-801-M2-50A Coupling decoupling network	NT-459
☐	FCC-801-M5-25 Coupling decoupling network	NT-460
☐	FCC-801-AF10 Coupling decoupling network	NT-461
☐	FCC-801-S25 Coupling decoupling network	NT-462
☐	FCC-801-T4 Coupling decoupling network	NT-463
☐	FCC-801-C1 Coupling decoupling network	NT-464
☐	F-16A - Current probe 1kHz - 70MHz	NT-465
☐	95242-1 – Current probe 10 MHz – 400 MHz	NT-468
☐	94106-1L-1 – Current probe 20 Hz – 450 MHz	NT-471
☐	GA 1240 Power amplifier according to EN 61000-4-16	NT-480
☐	Coupling networks according to EN 61000-4-16	NT-481 - NT-483
☐	PC P4 3 GHz Test computer	NT-500
☐	PC P4 1700 MHz Notebook	NT-505
☐	PC Intel Centrino 1600 MHz Notebook	NT-506
☐	Monitoring camera with Monitor	NT-511
☐	ES-K1 Version 1.71 SP2 Test software	NT-520
☐	SRM-TS Version 1.3 software for SRM-3000	NT-522
☐	SPS-PHE Test software V2.5 voltage fluctuations/harmonics	NT-525
☐	SPS-EM Test software V4.0 EN61000-4-11	NT-527
☐	Noise power test apparatus according to EN 55014	NT-530
☐	Vertical coupling plane (ESD)	NT-531
☐	Test cable #4 for EN 61000-4-6	NT-553
☐	Test cable #3 for conducted emission	NT-554
☐	Test cable #5 ESD-cable (2x470k)	NT-555
☐	Test cable #6 ESD-cable (2x470k)	NT-556
☐	Test cable #8 Sucoflex 104EA	NT-559
☐	Test cable #9 (for outdoor measurements)	NT-580
☐	Test cable #10 (for outdoor measurements)	NT-581
☐	Test cable #13 Sucoflex 104PE	NT-584
☐	Test cable #21 for SRM-3000	NT-592
☐	Shield chamber	NT-600
☐	Climatic chamber	M-1200
☐	Control and simulation equipment for EUT	---