

**TEST REPORT**  
of the accredited test laboratory

TÜV Nr.:INE-AT/FG-19/110

**Applicant:** AKG Acoustics GmbH  
Salzgasse 2  
5400 Hallein, Austria

**Tested Product:** wireless microphone handheld transmitter

**Type:** HT420 RF Band A

**Manufacturer:** VTech Communications Ltd.  
Xia Ling Bei Management Zone, Liaobu, Dongguan,  
Guangdong Province  
523411 China

**Output power:** 8 mW                      **power supply:** 1,5V DC  
internal battery

**Frequency range:** 530 – 560 MHz                      **Channel separation:** 200kHz

**Standard:** EN 300 422-1 V2.1.2

Testing Laboratory,  
Inspection Body,  
Certification Body,  
Calibration Laboratory,  
VerifizierungsstelleNotified Body 0408  
IC 2932K-1Non-executive  
Board of Directors:  
KR DI Johann  
MarhartManagement:  
DI Dr. Stefan Haas  
Mag. Christoph  
WeningerRegistered Office:  
Deutschstrasse 10  
1230 Vienna/AustriaBranch Offices:  
www.tuv.at/standorteCompany Register  
Court / - Number:  
Vienna / FN 286476 fBank Details:  
IBAN  
AT131200052949001066  
BIC BKAUATWWIBAN  
AT153100000104093282  
BIC RZBAATWWVAT ATU63240488  
DVR 3002476TÜV AUSTRIA SERVICES GMBH  
Test laboratory for EMC

Supervisor of EMC-laboratory:

  
Ing. Wilhelm Seier

01.02.2019

Copy Nbr.: 01

checked by:

  
Ing. Michael Emminger

A publication of this test report is only permitted literally.  
Copying or reproduction of partial sections needs a written permission of TÜV AUSTRIA  
SERVICES GMBH.

The results of this test report only refer to the provided equipment.

## Contents

	Designation	PAGE
1.	Applicant	3
2.	Description of EUT	4
3.	Standards / Final result	5
4.	Test results	
	List of measurements according to EN 300 422-1 V2.1.2	
	Transmitter parameters	
4.1	Frequency stability	6-7
4.2	Rated output power	8
4.3	Necessary bandwidth	9-12
4.4	Spurious emissions	13-16
4.5	Transmitter intermodulation distortion	17
	Receiver	
	Spurious emissions	---
	Receiver sensitivity	---
	Receiver adjacent channel selectivity	---
	Receiver blocking	---
Appendix	Designation	PAGES
1	Test equipment used	4
2	Photodocumentation	10

## 1. Applicant

**Company:** AKG Acoustics GmbH

**Department:** R&D

**Address:** Salzgasse 2  
5400 Hallein, Austria

**Contact person:** Mr. Gabor Mikovics

**EUT received on:** 16.10.2018

**Tests were performed on:** 16.01. till 29.01.2019

## 2. Description of EUT

<b>EUT:</b>	Wireless microphone handheld transmitter 'HT420 RF Band A'
<b>Serial Number:</b>	Prototype
<b>Manufacturer:</b>	AKG Acoustics GmbH Salzgasse 2 5400 Hallein, Austria
<b>Description:</b>	AKG Acoustics GmbH provided the following configuration for the measurements:  Prototype
<b>Operating mode:</b>	The measurements were carried out at the following running states:  Tranmitting
<b>Technical data EUT:</b>	Rated voltage: 1,5VDC Rated current: 500mA Rated frequency: DC  Mains voltage during the tests: 1,5VDC via internal battery
<b>Climatic conditions in the emc laboratory:</b>	Relative humidity: 19% Temperature: 25°C

### 3. Standards / Final result

Name	Title	Deviation	Result
EN 300422-1 V2.1.2	Wireless Microphones; Audio PMSE up to 3 GHz; Part 1: Class A Receivers; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	none	OK

Result: Opinions and interpretation of testing laboratory  
OK: EUT passed  
NOK: EUT failed

## 4. TEST RESULT

### 4.1. Frequency stability

### SUBCLAUSE 8.1

ETSI requirements

Rated output power: 8 mW

Operating condition		Frequency Error kHz			Frequency Error ppm		
		530 MHz	545 MHz	560 MHz	530 MHz	545 MHz	560 MHz
$T_{nom}$ ( 25 )°C	$V_{nom}$ (1,5)V	1,381	1,413	1,442	2,61	2,59	2,58
$T_{min}$ ( -20 )°C	$V_{min}$ (1)V	-0,432	-0,450	-0,467	-0,81	-0,83	-0,83
	$V_{nom}$ (1,5)V	-0,543	-0,575	-0,579	-1,02	-1,06	-1,03
$T_{max}$ ( 55 )°C	$V_{min}$ (1)V	-0,071	-0,050	-0,064	-0,13	-0,09	-0,11
	$V_{nom}$ (1,5)V	-0,082	-0,075	-0,081	-0,15	-0,14	-0,14
Measurement uncertainty					± 0,1 ppm		

### LIMIT

### SUBCLAUSE 8.1.3

The frequency error shall not exceed 20 parts per million for frequencies below 1 GHz, 15 parts per million between 1 GHz and 2 GHz and 10 ppm above 2 GHz.

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-131/1; NT-207; EMV-205; M-1200

**Frequency stability**

**SUBCLAUSE 74.861 / G3.3**

FCC/ISED requirements

Rated output power: 8 mW

Operating condition	Frequency Error kHz			Frequency Error ppm		
	530 MHz	545 MHz	560 MHz	530 MHz	545 MHz	560 MHz
Operating voltage at 20°C ambient temperature						
1,5 V	1,354	1,388	1,425	2,56	2,55	2,55
1 V	1,344	1,375	1,409	2,54	2,52	2,52
Measurement uncertainty				± 0,1 ppm		

Operating condition	Frequency Error kHz			Frequency Error ppm		
	530 MHz	545 MHz	560 MHz	530 MHz	545 MHz	560 MHz
ambient temperature at 1,5V operating voltage						
-30°C	-4,698	-4,863	-5,026	-8,86	-8,92	-8,97
-20°C	-0,596	-0,575	-0,619	-1,12	-1,06	-1,10
-10°C	1,073	1,088	1,106	2,03	2,00	1,98
0°C	1,815	1,875	1,935	3,43	3,44	3,46
10°C	1,778	1,800	1,890	3,36	3,30	3,38
20°C	1,354	1,388	1,414	2,56	2,55	2,53
30°C	1,423	1,450	1,487	2,69	2,66	2,66
40°C	0,406	0,463	0,440	0,77	0,85	0,79
50°C	-0,055	-0,050	-0,075	-0,10	-0,09	-0,13
Measurement uncertainty				± 0,1 ppm		

**LIMIT SUBCLAUSE 74.861(e)(4) / Table G.1**

The frequency tolerance of the transmitter shall be 0,005 percent (50ppm).

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-131/1; NT-207; EMV-205; M-1200

**4.2 Rated output power**

**SUBCLAUSE 8.2**

Radiated Measurement

Rated output power: 8 mW

Test conditions		Transmitter power (mW) (erp)		
		530 MHz	545 MHz	560 MHz
$T_{nom}$ ( 25 )°C	$V_{nom}$ (1,5)V	6,03	5,89	4,47
Maximum deviation from rated output power under normal test conditions (%)		-24,7	-26,4	-44,2
Measurement uncertainty		± 0,75 dB		

**LIMIT**

**SUBCLAUSE 8.2.3**

The measured value shall be within +20 % and -50 % of the manufacturers declared rated output power.

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-131/1; NT-207



### 4.3 NECESSARY BANDWIDTH

### SUBCLAUSE 8.3

#### LIMIT

#### SUBCLAUSE 8.3.2.2

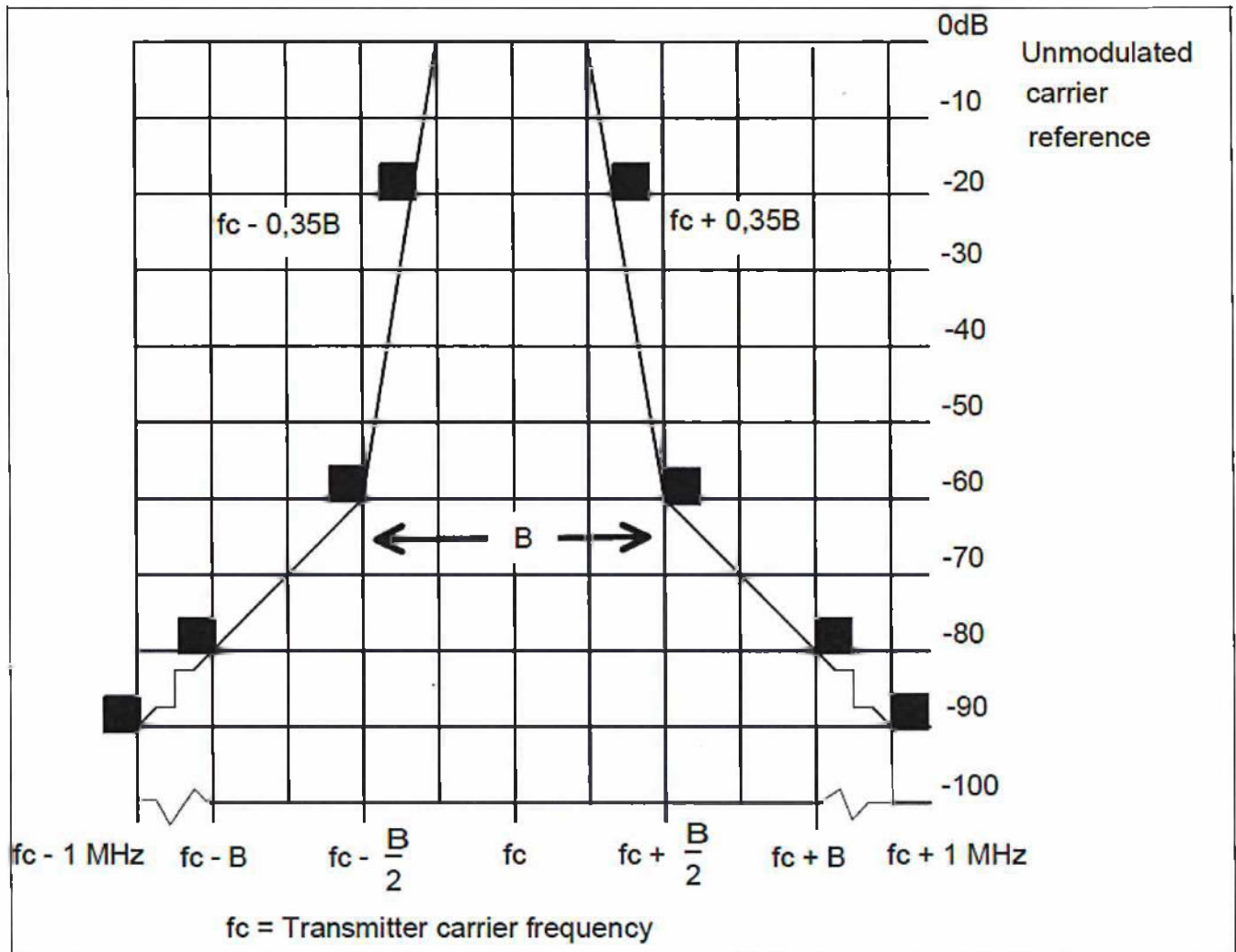


Figure 3 shows the spectrum mask for all analogue systems in the band. The -90 dBc point shall be  $\pm 1\text{ MHz}$  from  $f_c$  measured with an average detector. To comply, a measured value shall fall below the mask limit as shown in figure 3.

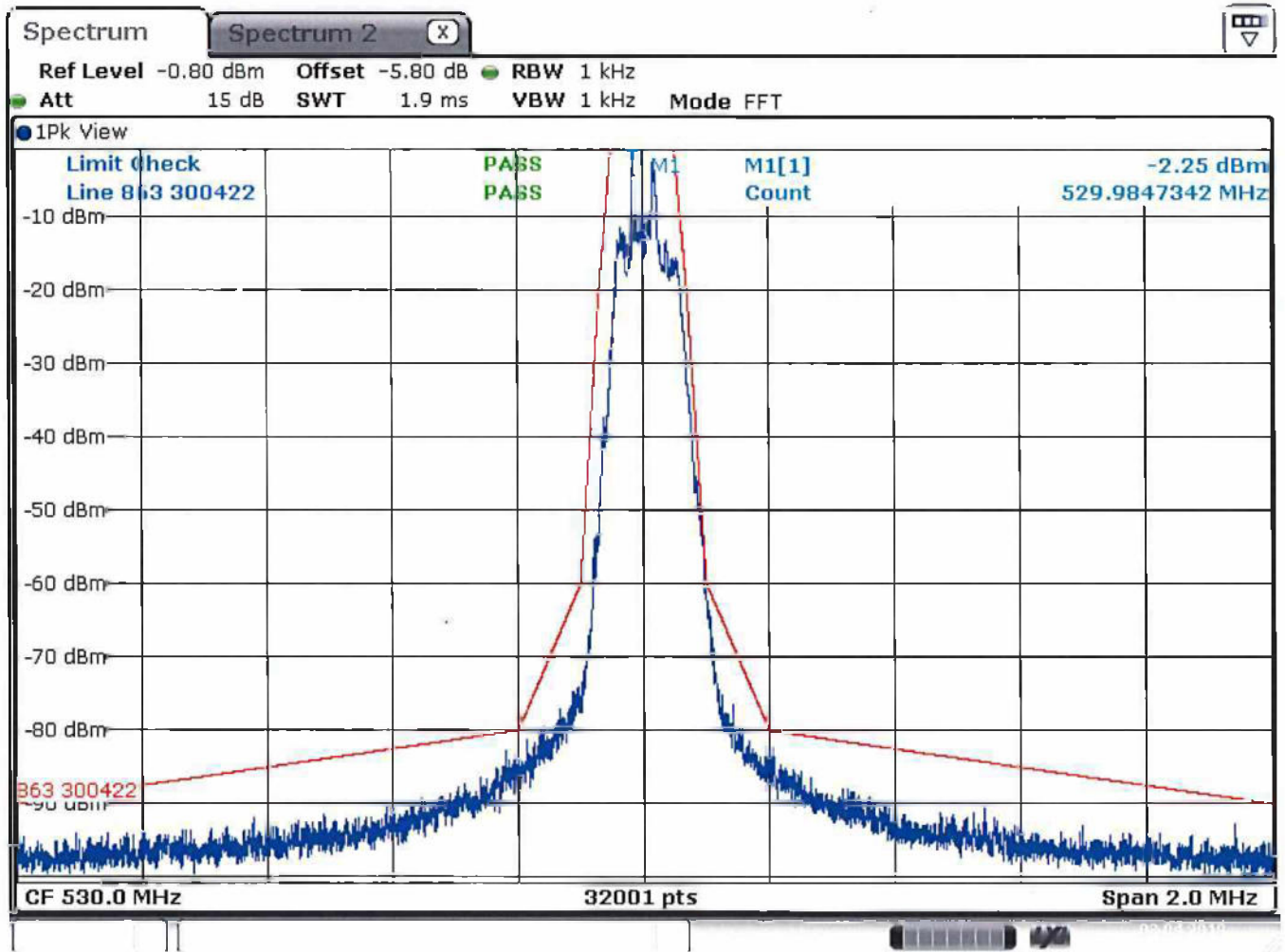
### NECESSARY BANDWIDTH

### SUBCLAUSE 8.3

The operating Bandwidth was measured at an acoustic input level 12 dB higher than the limiting threshold, determined with 500 Hz signal.

Rated output power: 8 mW

Measurement with weighted noise source signal @ 530 MHz centered.



Date: 3.APR.2019 15:48:22

TEST EQUIPMENT USED: EMV-205

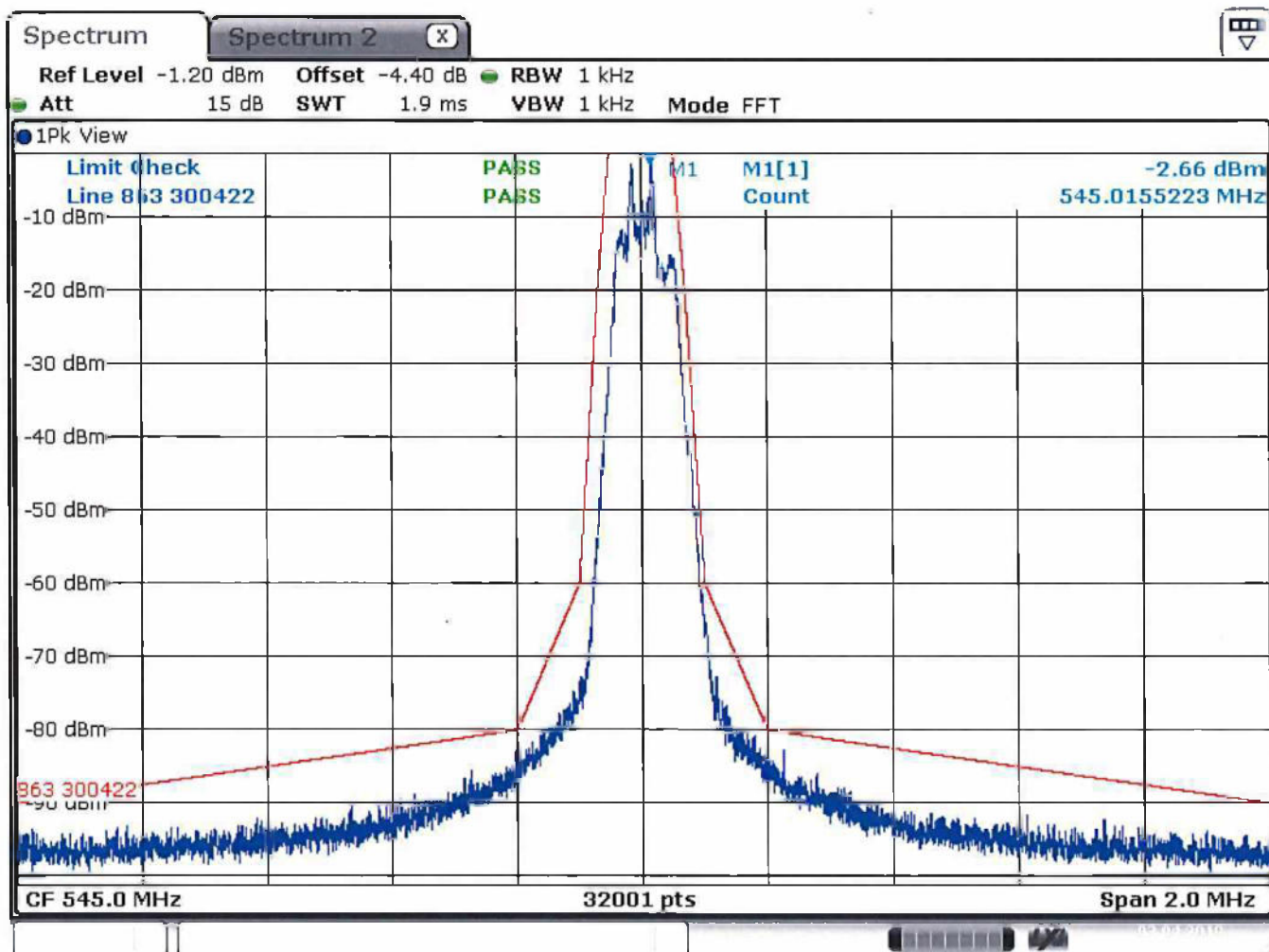
### NECESSARY BANDWIDTH

### SUBCLAUSE 8.3

The operating Bandwidth was measured at an acoustic input level 12 dB higher than the limiting threshold, determined with 500 Hz signal.

Rated output power: 8 mW

Measurement with weighted noise source signal @ 545 MHz centered.



Date: 3.APR.2019 15:51:43

TEST EQUIPMENT USED: EMV-205

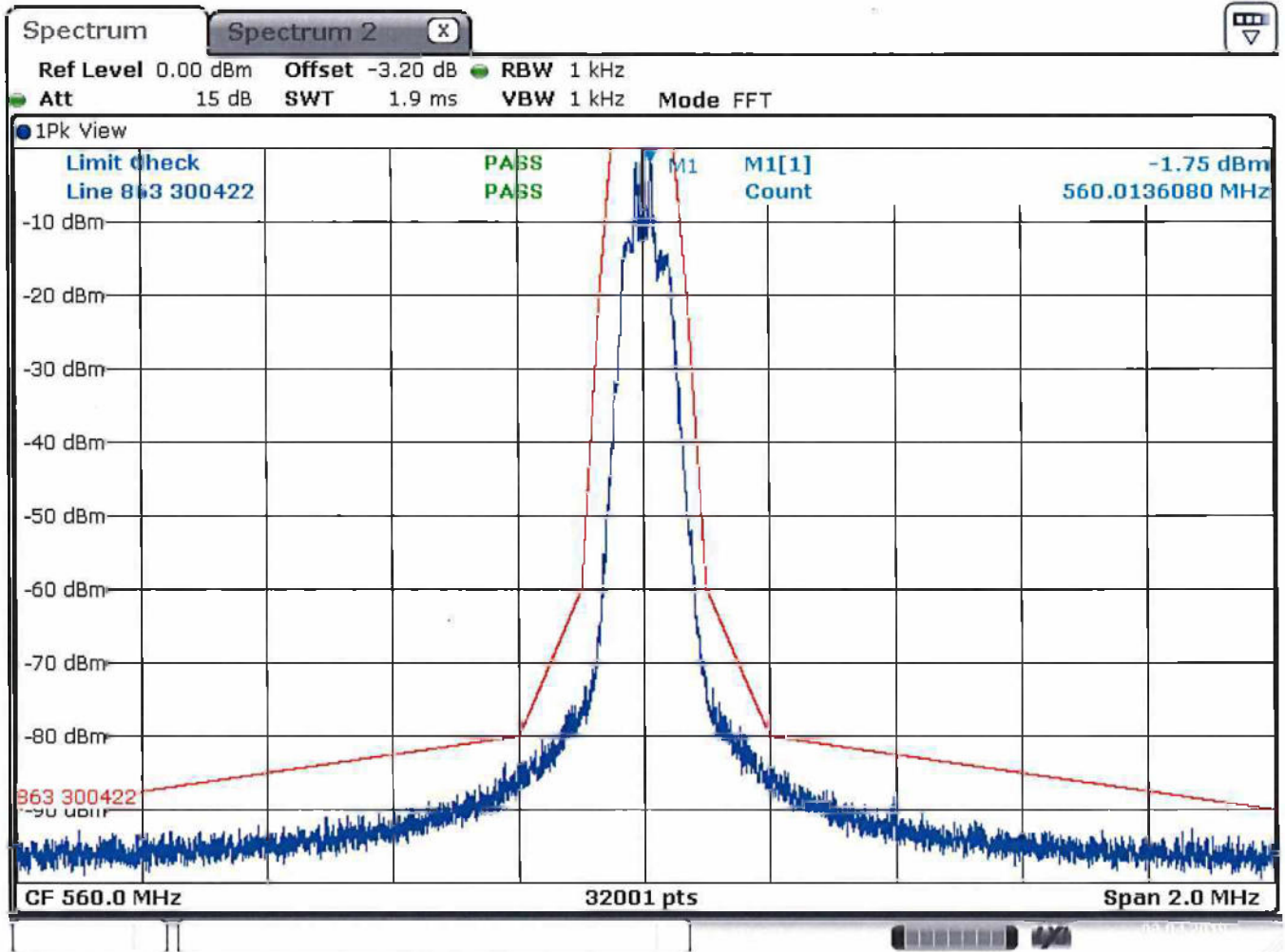
### NECESSARY BANDWIDTH

### SUBCLAUSE 8.3

The operating Bandwidth was measured at an acoustic input level 12 dB higher than the limiting threshold, determined with 500 Hz signal.

Rated output power: 8 mW

Measurement with weighted noise source signal @ 560 MHz centered.



Date: 3.APR.2019 15:50:18

TEST EQUIPMENT USED: EMV-205

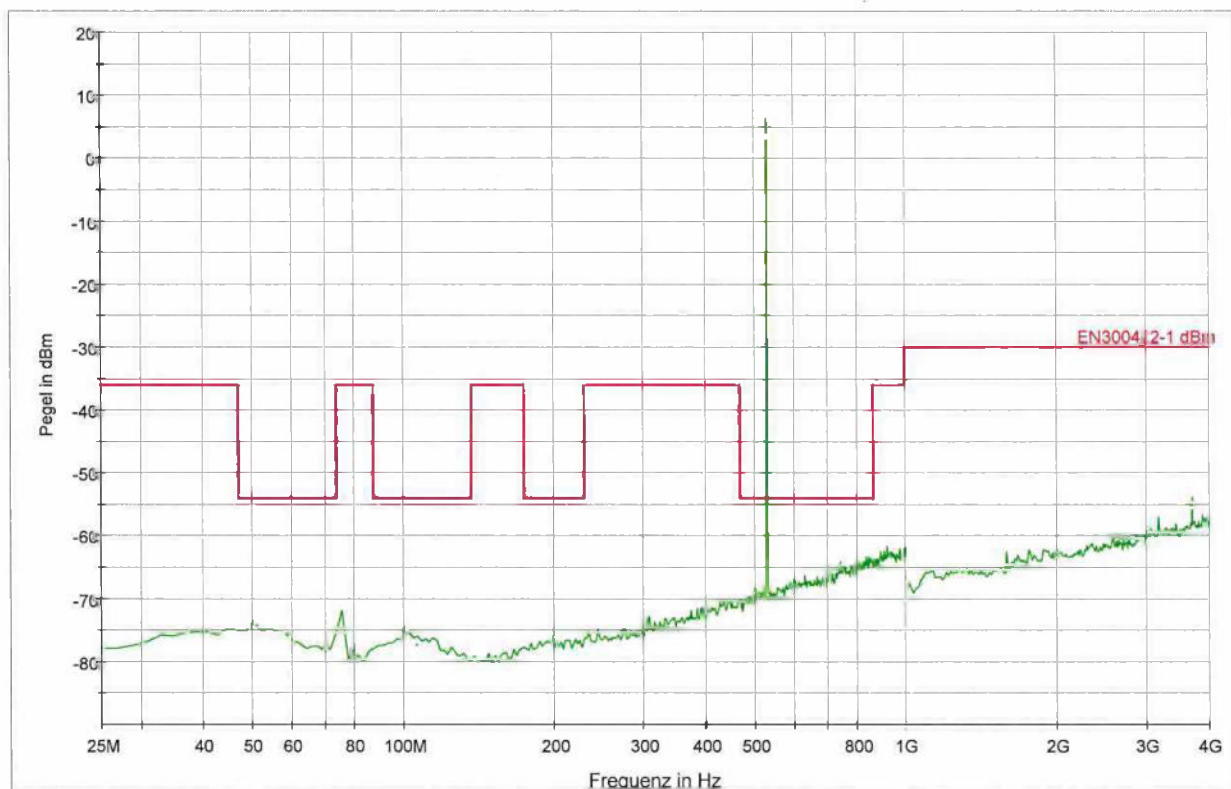
**4.4 TRANSMITTER SPURIOUS EMISSIONS radiated**

**SUBCLAUSE 8.4**

Operating mode: transmitter operating at 530 MHz

Rated output power: 8 mW

Modulation: unmodulated carrier



— PK+\_MAXH(1):HT420\_A\_CH1\_F1   
 — PK+\_MAXH(1):HT420\_A\_CH1\_F2   
 — EN300422-1 dBm  
— PK+\_CLRWR   
 — PK+\_MAXH

**LIMIT SUBCLAUSE 8.4.3**

47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies $\leq$ 1000 MHz	Frequencies > 1000 MHz
4,0 nW (-54 dBm)	250 nW (-36 dBm)	1,00 $\mu$ W (-30 dBm)

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-131/1; NT-139; NT-337; NT-207

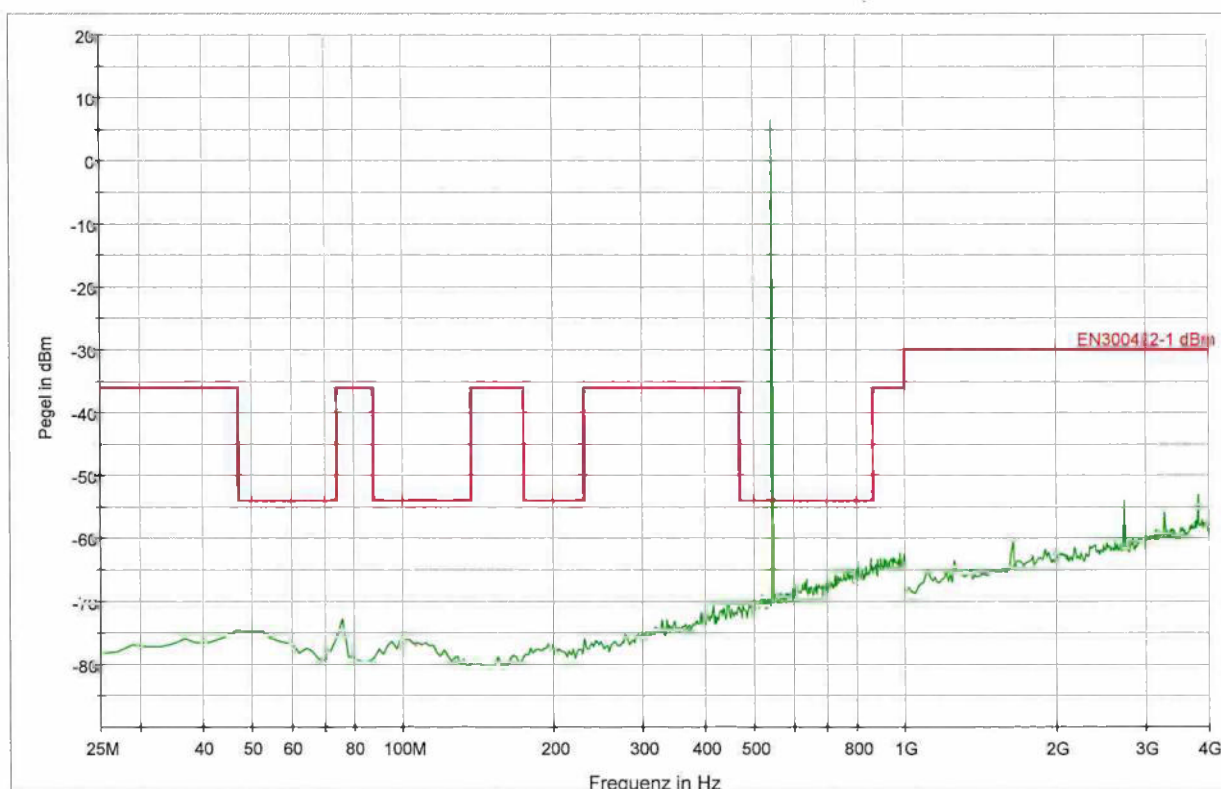
**TRANSMITTER SPURIOUS EMISSIONS radiated**

**SUBCLAUSE 8.4**

Operating mode: transmitter operating at 545 MHz

Rated output power: 8 mW

Modulation: unmodulated carrier



PK+\_MAXH(1):HT420\_A\_CH2\_F1    PK+\_MAXH(1):HT420\_A\_CH2\_F2    EN300422-1 dBm  
PK+\_CLRWR    PK+\_MAXH

**LIMIT SUBCLAUSE 8.4.3**

47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies $\leq$ 1000 MHz	Frequencies > 1000 MHz
4,0 nW (-54 dBm)	250 nW (-36 dBm)	1,00 $\mu$ W (-30 dBm)

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-131/1; NT-139; NT-337; NT-207

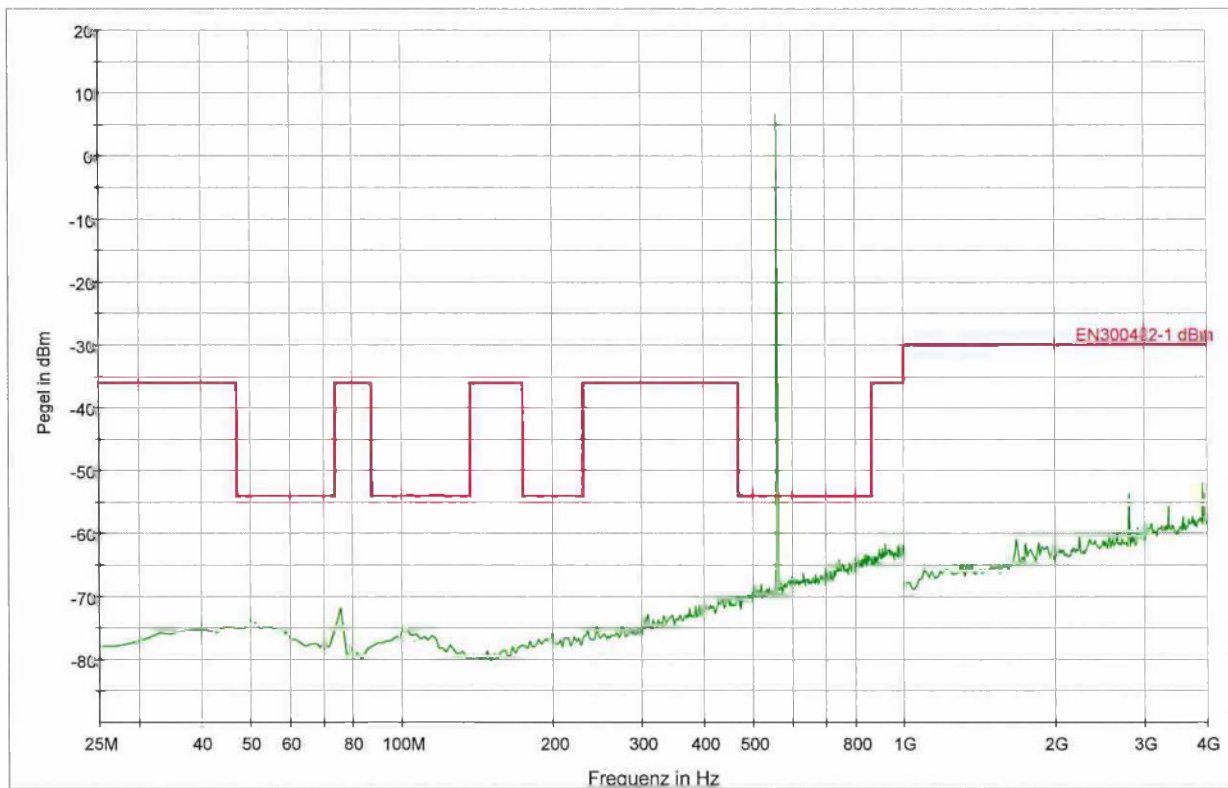
**TRANSMITTER SPURIOUS EMISSIONS radiated**

**SUBCLAUSE 8.4**

Operating mode: transmitter operating at 560 MHz

Rated output power: 8 mW

Modulation: unmodulated carrier



— PK+\_MAXH(1):HT420\_A\_CH3\_F1   
 — PK+\_MAXH(1):HT420\_A\_CH3\_F2   
 — EN300422-1 dBm  
— PK+\_CLRWR   
 — PK+\_MAXH

**LIMIT SUBCLAUSE 8.4.3**

47 MHz to 74 MHz 87,5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies ≤ 1000 MHz	Frequencies > 1000 MHz
4,0 nW (-54 dBm)	250 nW (-36 dBm)	1,00 µW (-30 dBm)

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-131/1; NT-139; NT-337; NT-207

Test Report Reference:  
INE-AT/FG-19/110

Ambient temperature: 25°C

Relative humidity: 19%



## TRANSMITTER SPURIOUS EMISSIONS radiated

## SUBCLAUSE 8.4

Operating mode: transmitter standby

Because the transmitter is operating after switching on, there is no standby mode available and no measurement was performed.



#### 4.5 Transmitter intermodulation distortion

#### SUBCLAUSE 8.5

Radiated measurement

Unwanted Signal	TX-IMD (dBc)		
	530 MHz	545 MHz	560 MHz
fw + 5 MHz	-43,5	-40,5	-45,6
fw - 5 MHz	-43,0	-40,2	-43,6
Measurement uncertainty	± 3dB		

#### LIMIT

#### SUBCLAUSE 8.5.3

The maximum resulting IMD product shall be at least 40 dB below the output power of the DUT.

Measuring equipment used:

NT-100; NT-111/1; NT-112/1; NT-113/1; NT-131/1; NT-210; NT-310; NT-310/1; EMV-205

# Appendix 1

## Test equipment used

<input type="checkbox"/>	Anechoic Chamber with 3m measurement distance	NT-100	<input type="checkbox"/>	Power quality analyzer Fluke 1760 (complete set)	NT-160 - NT-173
<input type="checkbox"/>	Stripline according to ISO 11452-5	NT-108	<input type="checkbox"/>	Spectrum analyzer – FSP7 9 kHz – 7 GHz	NT-200
<input type="checkbox"/>	MA4000 - Antenna mast 1 - 4 m height	NT-110/1	<input type="checkbox"/>	ESCI - Test receiver 9 kHz - 7 GHz	NT-203/1
<input type="checkbox"/>	DS - Turntable 0 - 400 ° Azimuth	NT-111/1	<input type="checkbox"/>	ESI26 – Test receiver 20 Hz – 26,5 GHz	NT-207
<input type="checkbox"/>	CO3000 Controller Mast+Turntable	NT-112/1	<input type="checkbox"/>	Digital Radio Tester CTS55	NT-208
<input type="checkbox"/>	HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121	<input type="checkbox"/>	Noise-gen., ITU-R 559-2 20 Hz – 20 kHz	NT-209
<input type="checkbox"/>	FMZB1513 - Loop Antenna 9 kHz - 30 MHz	NT-122/1	<input type="checkbox"/>	CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
<input type="checkbox"/>	HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123	<input type="checkbox"/>	3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
<input type="checkbox"/>	3121C - Dipole Antenna 28 - 1000 MHz	NT-124	<input type="checkbox"/>	Digital Radio Tester Aeroflex 3920	NT-212/1
<input type="checkbox"/>	3115 - Horn Antenna 1 - 18 GHz (immunity)	NT-125	<input type="checkbox"/>	Mixer M28HW 26,5 GHz - 40 GHz	NT-214
<input type="checkbox"/>	3116 - Horn Antenna 18 - 40 GHz	NT-126	<input type="checkbox"/>	RubiSource T&M Timing reference	NT-216
<input type="checkbox"/>	SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz	NT-127	<input type="checkbox"/>	Radiocommunication analyzer SWR 1180 MD	NT-217
<input type="checkbox"/>	AT-1080 - Log. Per. Antenna 80 - 1000 MHz	NT-128	<input type="checkbox"/>	Mixer M19HWD 40 GHz – 60 GHz	NT-218
<input type="checkbox"/>	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-129	<input type="checkbox"/>	Mixer M12HWD 60 GHz – 90 GHz	NT-219
<input type="checkbox"/>	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-130	<input type="checkbox"/>	DSO9104 Digital scope	NT-220/1
<input type="checkbox"/>	3146 - Log. Per. Antenna 200 – 1000 MHz	NT-131	<input type="checkbox"/>	TPS 2014 Digital scope	NT-222
<input type="checkbox"/>	VULB 9163 Trilog Antenna 30 – 3000 MHz	NT-131/1	<input type="checkbox"/>	Artificial Ear according to IEC 60318	NT-224
<input type="checkbox"/>	Loop Antenna H-Field	NT-132	<input type="checkbox"/>	1 kHz Sound calibrator	NT-225
<input type="checkbox"/>	Horn Antenna 500 MHz - 2900 MHz	NT-133	<input type="checkbox"/>	B10 - Harmonics and flicker analyzer	NT-232
<input type="checkbox"/>	Horn Antenna 500 MHz - 6000 MHz	NT-133/1	<input type="checkbox"/>	SRM-3006 Spectrum analyzer	NT-233/1a
<input type="checkbox"/>	Log. per. Antenna 800 MHz - 2500 MHz	NT-134	<input type="checkbox"/>	E-field probe SRM 75 MHz – 3 GHz	NT-234
<input type="checkbox"/>	Log. per. Antenna 800 MHz - 2500 MHz	NT-135	<input type="checkbox"/>	Field Meter NBM-500 incl. E- and H-Field probes	NT-240a-e
<input type="checkbox"/>	BiConiLog Antenna 26 MHz – 2000 MHz	NT-137	<input type="checkbox"/>	Hall-Teslameter ETM-1	NT-241
<input type="checkbox"/>	Conical Dipol Antenna PCD8250	NT-138	<input type="checkbox"/>	EFA-3 H-field- / E-field probe	NT-243
<input type="checkbox"/>	HF 906 - Horn Antenna 1 - 18 GHz (emission)	NT-139	<input type="checkbox"/>	EHP-50F H-field- / E-field probe	NT-243/1
<input type="checkbox"/>	HZ-1 Antenna tripod	NT-150	<input type="checkbox"/>	Field Meter EMR-200 100 kHz – 3 GHz	NT-244
<input type="checkbox"/>	BN 1500 Antenna tripod	NT-151	<input type="checkbox"/>	E-field probe 100 kHz – 3 GHz	NT-245
<input type="checkbox"/>	Ant. tripod for EN61000-4-3 Model TP1000A	NT-156	<input type="checkbox"/>	H-field probe 300 kHz – 30 MHz	NT-246

Division:  
Industry & Energy

Department: FG

Test report number:  
INE-AT/FG-19/110

Page: 1 of 4

Date: 01.02.2019

# Appendix 1 (continued)

## Test equipment used

<input type="checkbox"/>	E-field probe 3 MHz – 18 GHz	NT-247	<input type="checkbox"/>	T82-50 RF-Amplifier 2 GHz – 8 GHz	NT-331
<input type="checkbox"/>	H-field probe 27 MHz – 1 GHz	NT-248	<input type="checkbox"/>	500W1000M7 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332
<input type="checkbox"/>	ELT-400 1 Hz – 400 kHz	NT-249	<input type="checkbox"/>	AS0102-65R - RF-Amplifier 1 GHz - 2 GHz	NT-333
<input type="checkbox"/>	MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250	<input type="checkbox"/>	APA01 – RF-Amplifier 0,5 GHz – 2,5 GHz	NT-334
<input type="checkbox"/>	FCC-203I EM Injection clamp	NT-251	<input type="checkbox"/>	Preamplifier 1 GHz - 4 GHz	NT-335
<input type="checkbox"/>	FCC-203I-DCN Ferrite decoupling network	NT-252	<input type="checkbox"/>	Preamplifier for GPS MKU 152 A	NT-336
<input type="checkbox"/>	PR50 Current Probe	NT-253	<input type="checkbox"/>	Preamplifier 100 MHz – 23 GHz	NT-337
<input type="checkbox"/>	i310s Current Probe	NT-254/1	<input type="checkbox"/>	DC Block 10 MHz – 18 GHz Model 8048	NT-338
<input type="checkbox"/>	Fluke 87 V True RMS Multimeter	NT-260	<input type="checkbox"/>	2-97201 Electronic load	NT-341
<input type="checkbox"/>	Model 2000 Digital Multimeter	NT-261	<input type="checkbox"/>	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344
<input type="checkbox"/>	Fluke 87 V Digital Multimeter	NT-262/1	<input type="checkbox"/>	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345
<input type="checkbox"/>	ESH2-Z5-U1 Artificial mains network 4x25A	NT-300	<input type="checkbox"/>	VDS 200 Mobil-impuls-generator	NT-350
<input type="checkbox"/>	ESH3-Z5-U1 Artificial mains network 2x10A	NT-301	<input type="checkbox"/>	LD 200 Mobil-impuls-generator	NT-351
<input type="checkbox"/>	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302	<input type="checkbox"/>	MPG 200 Mobil-Impuls-Generators	NT-352
<input type="checkbox"/>	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302a	<input type="checkbox"/>	EFT 200 Mobil-impuls-generator	NT-353
<input type="checkbox"/>	PHE 4500/B Power amplifier	NT-304	<input type="checkbox"/>	AN 200 S1 Artificial Network	NT-354
<input type="checkbox"/>	EZ10 T-Artificial Network	NT-305	<input type="checkbox"/>	FP-EFT 32M 3 ph. Coupling filter (Burst)	NT-400/1
<input type="checkbox"/>	SMG - Signal generator 0,1 - 1000 MHz	NT-310	<input type="checkbox"/>	PHE 4500 - Mains impedance network	NT-401
<input type="checkbox"/>	SMA100A - Signal generator 9 kHz - 6 GHz	NT-310/1	<input type="checkbox"/>	IP 6.2 Coupling filter for data lines (Surge)	NT-403
<input type="checkbox"/>	RefRad Reference generator	NT-312	<input type="checkbox"/>	TK 9421 High Power Volt. Probe 150 kHz - 30 MHz	NT-409
<input type="checkbox"/>	SMP 02 Signal generator 10 MHz - 20 GHz	NT-313	<input type="checkbox"/>	ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410
<input type="checkbox"/>	40 MHz Arbitrary Generator TGA1241	NT-315	<input type="checkbox"/>	IP 4 - Capacitive clamp (Burst)	NT-411
<input type="checkbox"/>	Artificial mains network NSLK 8127-PLC	NT-316	<input type="checkbox"/>	Highpass-Filter 100 MHz – 3 GHz	NT-412
<input type="checkbox"/>	ESD 30 System up to 25 kV	NT-321	<input type="checkbox"/>	Highpass-Filter 600 MHz – 4 GHz	NT-413
<input type="checkbox"/>	PSURGE 4.1 Surge generator	NT-324	<input type="checkbox"/>	Highpass-Filter 1250 MHz – 4 GHz	NT-414
<input type="checkbox"/>	IMU4000 Immunity test system	NT-325/1	<input type="checkbox"/>	Highpass-Filter 1800 MHz – 16 GHz	NT-415
<input type="checkbox"/>	VCS 500-M6 Surge-Generator	NT-326			
<input type="checkbox"/>	Oscillatory Wave Simulator incl. Coupling networks	NT-328a+b+c			
<input type="checkbox"/>	BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330			

Division:  
Industry & Energy

Department: FG

Test report number:  
INE-AT/FG-19/110

Page: 2 of 4

Date: 01.02.2019

# Appendix 1 (continued)

## Test equipment used

<input type="checkbox"/>	Highpass-Filter 3500 MHz – 18 GHz	NT-416	<input type="checkbox"/>	FCC-801-AF10 Coupling decoupling network	NT-461
<input type="checkbox"/>	RF-Attenuator 10 dB DC – 18 GHz / 50 W	NT-417	<input type="checkbox"/>	FCC-801-S25 Coupling decoupling network	NT-462
<input type="checkbox"/>	RF-Attenuator 6 dB DC – 18 GHz / 50 W	NT-418	<input type="checkbox"/>	FCC-801-T4 Coupling decoupling network	NT-463
<input type="checkbox"/>	RF-Attenuator 3 dB DC – 18 GHz / 50 W	NT-419	<input type="checkbox"/>	FCC-801-C1 Coupling decoupling network	NT-464
<input type="checkbox"/>	RF-Attenuator 20 dB DC - 1000 MHz / 25 W	NT-421	<input type="checkbox"/>	SW 9605 - Current probe 150 kHz – 30 MHz	NT-465/1
<input type="checkbox"/>	RF-Attenuator 30 dB DC - 1000 MHz / 1 W	NT-423	<input type="checkbox"/>	95242-1 – Current probe 1 MHz – 400 MHz	NT-468
<input type="checkbox"/>	RF-Attenuator 30 dB	NT-424	<input type="checkbox"/>	94106-1L-1 – Current probe 100 kHz – 450 MHz	NT-471
<input type="checkbox"/>	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-425	<input type="checkbox"/>	GA 1240 Power amplifier according to EN 61000-4-16	NT-480
<input type="checkbox"/>	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-426	<input type="checkbox"/>	Coupling networks according to EN 61000-4-16	NT-481 - NT-483
<input type="checkbox"/>	RF-Attenuator 6 dB	NT-428	<input type="checkbox"/>	Van der Hoofden Test Head	NT-484
<input type="checkbox"/>	RF-Attenuator 0 dB - 81 dB	NT-429	<input type="checkbox"/>	EMC Video/Audiosystem	NT-511/1
<input type="checkbox"/>	WRU 27 - Band blocking 27 MHz	NT-430	<input type="checkbox"/>	ES-K1 Version 1.71 SP2 Test software	NT-520
<input type="checkbox"/>	WHJ450C9 AA - High pass 450 MHz	NT-431	<input type="checkbox"/>	EMC32 Version 10.50.00 Test software	NT-520/1
<input type="checkbox"/>	WHJ250C9 AA - High pass 250 MHz	NT-432	<input type="checkbox"/>	SRM-TS Version 1.3 software for SRM-3000	NT-522
<input type="checkbox"/>	RF-Load 150 W	NT-433	<input type="checkbox"/>	SRM-TS Version 1.3.1 software for SRM-3006	NT-522/1
<input type="checkbox"/>	Impedance transducer 1:4 ; 1:9 ; 1:16	NT-435	<input type="checkbox"/>	Spitzenberger und Spies Test software V4.1	NT-525
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 6 dB	NT-436	<input type="checkbox"/>	Noise power test apparatus according to EN 55014	NT-530
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 6 dB	NT-437	<input type="checkbox"/>	Vertical coupling plane (ESD)	NT-531
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 10 dB	NT-438	<input type="checkbox"/>	Test cable #4 for EN 61000-4-6	NT-553
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 20 dB	NT-439	<input type="checkbox"/>	Test cable #3 for conducted emission	NT-554
<input type="checkbox"/>	I+P 7780 Directional coupler 100 - 2000 MHz	NT-440	<input type="checkbox"/>	Test cable #5+#6 ESD-cable (2x470k)	NT-555 + NT-556
<input type="checkbox"/>	ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441	<input type="checkbox"/>	Test cable #8 Sucoflex 104EA	NT-559
<input type="checkbox"/>	Power Divider 6 dB/1 W/50 Ohm	NT-443	<input type="checkbox"/>	Test cable #9 (for outdoor measurements)	NT-580
<input type="checkbox"/>	Directional coupler 0,1 MHz – 70 MHz	NT-444	<input type="checkbox"/>	Test cable #10 (for outdoor measurements)	NT-581
<input type="checkbox"/>	Directional coupler 0,1 MHz – 70 MHz	NT-445	<input type="checkbox"/>	Test cable #13 Sucoflex 104PE	NT-584
<input type="checkbox"/>	Tube imitations according to EN 55015	NT-450	<input type="checkbox"/>	Test cable #21 for SRM-3000	NT-592
<input type="checkbox"/>	FCC-801-M3-16A Coupling decoupling network	NT-458	<input type="checkbox"/>	Shield chamber	NT-600
<input type="checkbox"/>	FCC-801-M2-50A Coupling decoupling network	NT-459	<input type="checkbox"/>	Climatic chamber	M-1200
<input type="checkbox"/>	FCC-801-M5-25 Coupling decoupling network	NT-460			

Division:  
Industry & Energy

Department: FG

Test report number:  
INE-AT/FG-19/110

Page: 3 of 4

Date: 01.02.2019

## Appendix 1 (continued) Test equipment used

<input type="checkbox"/>	Anechoic Chamber 3 m / 5 m measuring distance	EMV-100	<input type="checkbox"/>	Log.per Antenna 0,7 – 9 GHz STLP9149	EMV-305
<input type="checkbox"/>	Turntabel 6 m diameter	EMV-101	<input type="checkbox"/>	HF- Amplifier 9 kHz-250 MHz BBA150 (low noise)	EMV-306
<input type="checkbox"/>	Antenna mast 1 – 4 m	EMV-102	<input type="checkbox"/>	Load Dump Generator LD 200N	EMV-350
<input type="checkbox"/>	Mast and Turntable controller FC-06	EMV-103	<input type="checkbox"/>	Ultra Compact Symulator UCS 200N100	EMV-351
<input type="checkbox"/>	EMC Video/Audiosystem	EMV-104	<input type="checkbox"/>	Automotive Power fail module PFM 200N100.1	EMV-352
<input type="checkbox"/>	EMC Software EMC32 Version 10.50.00	EMV-105	<input type="checkbox"/>	Voltage Drop Symulator VDS 200Q100	EMV-353
<input type="checkbox"/>	Hornantenna 1 – 18 GHz HF 907	EMV-110	<input type="checkbox"/>	Arb. Generator AutoWave	EMV-354
<input type="checkbox"/>	Antennapre.amp. 1 – 18 GHz ERZ-LNA0200-1800-30-2	EMV-111	<input type="checkbox"/>	Ultra Compact Symulator UCS 500N7	EMV-355
<input type="checkbox"/>	Trilog Antenna 30-3000 MHz VULB9163	EMV-112	<input type="checkbox"/>	Coupling decoupling network CNI 503B7 / 32 A	EMV-356
<input type="checkbox"/>	Monopol 9 kHz – 30 MHz VAMP 9243	EMV-113	<input type="checkbox"/>	Coupling decoupling network CNI 503B7 / 63 A	EMV-357
<input type="checkbox"/>	Antennapre.amp 18 – 40 GHz BBV 9721	EMV-114	<input type="checkbox"/>	Telecom Surge Generator TSurge 7	EMV-358
<input type="checkbox"/>	Hornantenna 200 – 2000 MHz AH-220	EMV-115	<input type="checkbox"/>	Coupling decoupling network CNI 508N2	EMV-359
<input type="checkbox"/>	DC Artificial Network PVDC 8300	EMV-150	<input type="checkbox"/>	Coupling decoupling network CNV 504N2.2	EMV-360
<input type="checkbox"/>	AC Artificial Network NNLK 8121 RC	EMV-151	<input type="checkbox"/>	Immunity generator NSG4060/NSG4060-1	EMV-361
<input type="checkbox"/>	EMI Receiver ESR26	EMV-200	<input type="checkbox"/>	Coupling network CDND M316-2	EMV-362
<input type="checkbox"/>	Signalgenerator 9 kHz – 40 GHz N5173B	EMV-201	<input type="checkbox"/>	Coupling network CT419-5	EMV-363
<input type="checkbox"/>	GPS Frequency normal B-88	EMV-202	<input type="checkbox"/>	ESD Generator NSG 437	EMV-364
<input type="checkbox"/>	DC Power supply N5745A	EMV-203	<input type="checkbox"/>	Pulse Limiter VTSD 9561-F BNC	EMV-405
<input type="checkbox"/>	Spektrum Analyzator FSV40	EMV-205	<input type="checkbox"/>	Transient emission BSM200N40+BS200N100	EMV-450+451
<input type="checkbox"/>	Thd Multimeter Model 2015	EMV-206	<input type="checkbox"/>	Cap. Coupling Clamp HFK	EMV-455
<input type="checkbox"/>	Poweramplifier PAS15000	EMV-207/abc	<input type="checkbox"/>	Mag. Field System MS100N+MC26100+MC2630	EMV-456-458
<input type="checkbox"/>	Inrush Current Source	EMV-208/abc	<input type="checkbox"/>	Coupling network CDN M2-100A	EMV-459
<input type="checkbox"/>	Arb.-generator Sycore	EMV-209	<input type="checkbox"/>	Coupling network CDN M3-32A	EMV-460
<input type="checkbox"/>	Harmonics/Flicker analyzer ARS 16/3	EMV-210	<input type="checkbox"/>	Coupling network CDN M5-100A	EMV-461
<input type="checkbox"/>	HF- Amplifier 9 kHz-250 MHz BBA150	EMV-300	<input type="checkbox"/>	Current Clamp CIP 9136A	EMV-462
<input type="checkbox"/>	HF- Amplifier 80 -1000 MHz BBA150	EMV-301	<input type="checkbox"/>	DC Artificial Network HV-AN 150	EMV-464+465
<input type="checkbox"/>	HF- Amplifier 0,8 - 6 GHz BBA150	EMV-302	<input type="checkbox"/>	Coupling Clamp EM 101	EMV-466
<input type="checkbox"/>	High Power Ant. 20-200 MHz VHBD 9134	EMV-303	<input type="checkbox"/>	Decoupling Clamp FTC 101	EMV-467
<input type="checkbox"/>	Log.per Antenna 80-2700 MHz STLP 9128 E special	EMV-304	<input type="checkbox"/>	Power attenuator 10 dB / 250 Watt	EMV-469/2

**Division:**  
Industry & Energy

Department: FG

Test report number:  
INE-AT/FG-19/110

Page: 4 of 4

Date: 01.02.2019