

RADIO REPORT FCC 47 CFR Part 22H, FCC 47 CFR Part 24E, FCC 47 CFR Part 27, FCC 47 CFR Part 90 ISED Canada RSS-132 Issue 3, ISED RSS-133, Issue 6 Amendment 1, ISED Canada RSS-139, Issue 3, ISED Canada RSS-130, Issue 2, ISED Canada RSS-140, Issue 1	
Report Reference No	G0M-1909-8479-TFCMOCORSE-V02
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    DAkkS - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A-2 DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	pei tel Communications GmbH
Address	Rheinstraße 15 A 14513 Teltow GERMANY
Test Specification	47 CFR Part 22H 47 CFR Part 24E 47 CFR Part 27 47 CFR Part 90 ISED RSS-132, Issue 3: 2013-01 ISED RSS-133, Issue 6+A1: 2018-01 ISED RSS-139, Issue 3: 2015-07 ISED RSS-130, Issue 2: 2019-02 ISED RSS-140, Issue 1: 2018-04
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	PTCarPhone
Model(s)	PTCarPhone 6
Additional Model(s)	None
Brand Name(s)	PEI TEL
Hardware Version(s)	01
Software Version(s)	V.6.01.01
FCC-ID	2AU9JPTC6
IC	25691-PTC6

Test Report No.: G0M-1909-8479-TFCMOCORSE-V02

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Test Result		PASSED
Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
Test object does meet the requirement	P(PASS)	
Test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	20 °C – 23 °C	
Test Lab Humidity	32 % – 38 %	
Date of receipt of test item	2019-11-18	
Report:		
Compiled by	Toralf Jahn	
Tested by (+ signature) (Responsible for Test)	Toralf Jahn	
Approved by (+ signature) (Head of Lab)	Christian Weber	
Date of Issue	2020-02-10	
Total number of pages	78	
General Remarks:		
The test results presented in this report relate only to the object tested. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		
PTCarPhone 6 6609-006-101-51 consists of: 6098-006-000-51 (TPU), 6922-001-002-51 (ME16), 6508-006-000-51 (HA59), 6507-002-100-51 (A58), 6601-011-000-51 (KL18), 6098-024-000-51 Versorgungskabel), 6098-260-005-51 (Verlängerungskabel)		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2020-02-06	Initial Release	
02	2020-02-10	Replaced document: G0M-1909-8479-TFCMOCORSE-V01 Replaced by: G0M-1909-8479-TFCMOCORSE-V02 Reason: Test modes table corrected	

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V _{NOM}	Nominal supply voltage

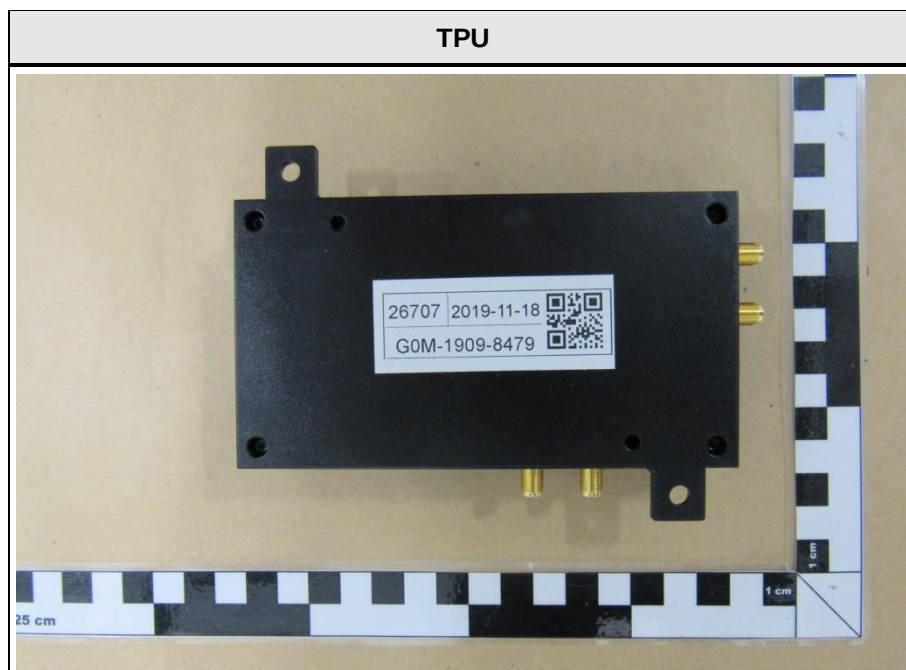
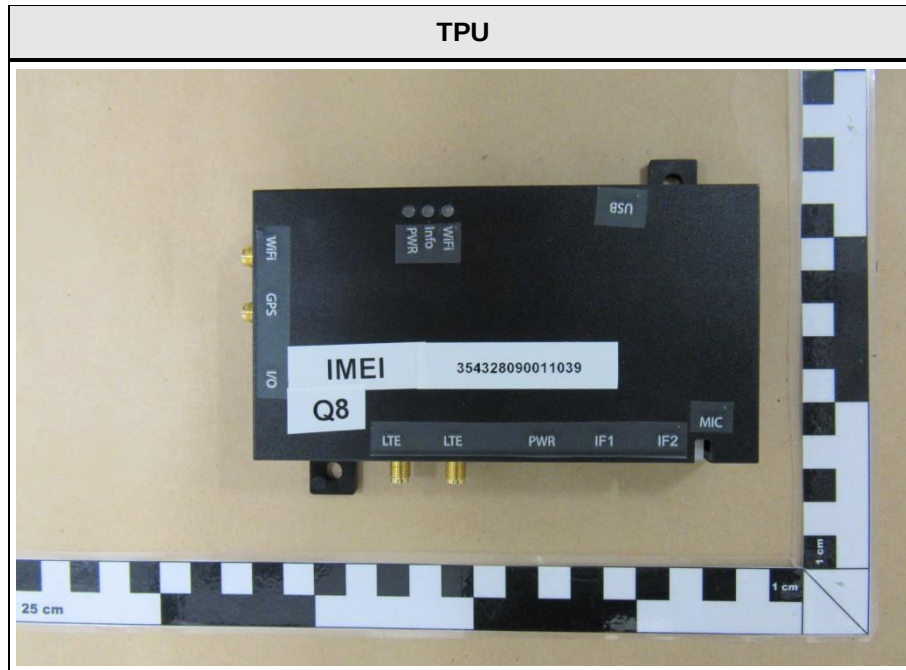
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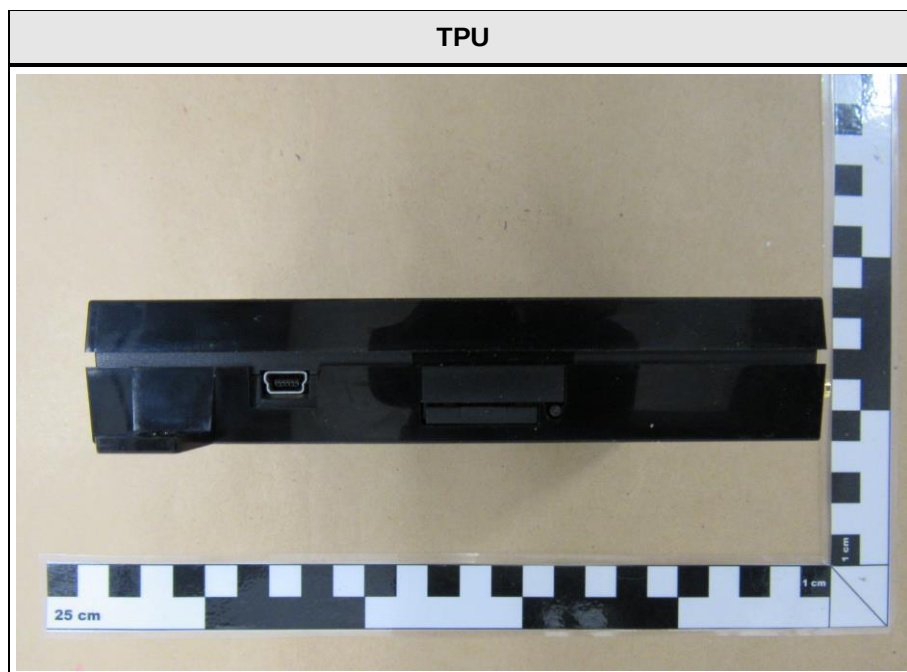
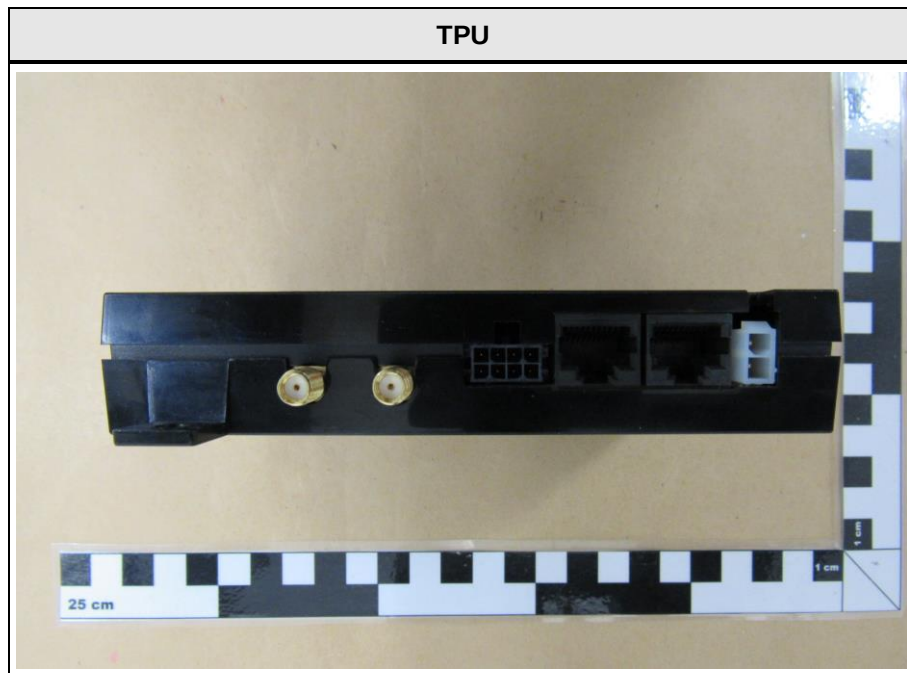
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1 Equipment (Test Item) Under Test

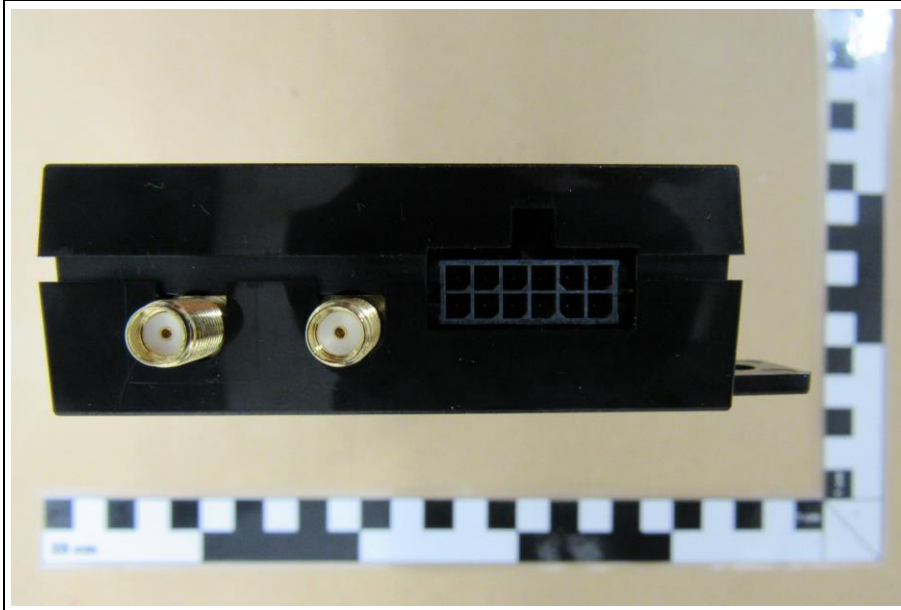
Description	PTCarPhone	
Model	PTCarPhone 6	
Additional Model(s)	None	
Brand Name(s)	PEI TEL	
Serial Number(s)	Q8 (IMEI 354328090011039)	
Hardware Version(s)	01	
Software Version(s)	V.6.01.01	
PMN	PTCarPhone6	
HVIN	01	
FVIN	V.6.01.01	
HMN	N/A	
IC	25691-PTC6	
FCC-ID	2AU9JPTC6	
Equipment type	End Product	
Radio type	Transceiver	
Radio technologies	UMTS, LTE	
UMTS frequency bands	UMTS FDDII = UL = 1850 - 1910 MHz, DL = 1930 - 1990 MHz UMTS FDDIV = UL = 1710 - 1755 MHz, DL = 2110 - 2155 MHz UMTS FDDV = UL = 824 - 849 MHz, DL = 869 - 894 MHz	
UMTS Modulations	QPSK	
LTE frequency bands	LTE FDD2 = UL = 1850 - 1910 MHz, DL = 1930 - 1990 MHz LTE FDD4 = UL = 1710 - 1755 MHz, DL = 2110 - 2155 MHz LTE FDD5 = UL = 824 - 849 MHz, DL = 869 - 894 MHz LTE FDD12 = UL = 699 - 716 MHz, DL = 729 - 746 MHz LTE FDD13 = UL = 777 - 787 MHz, DL = 746 - 756 MHz LTE FDD14 = UL = 788 - 798 MHz, DL = 758 - 768 MHz LTE FDD66 = UL = 1710 - 1780 MHz, DL = 2110 - 2200 MHz LTE FDD71 = UL = 663 - 698 MHz, DL = 617 - 652 MHz	
LTE Modulations	QPSK, 16-QAM	
Number of modules	1	
Radio Module	Type	UMTS / LTE
	Model	LE910C4-NF
	Manufacturer	Telit
	HW Version	unspecified
	SW Version	unspecified
	FCC-ID	RI7LE910CXNF
	IC	5131A-LE910CXNF
Antenna	Type	external
	Model	CEL 70 26 RD M/FME/2,5
	Manufacturer	Hirschmann
	Gain	3.0 dBi
Supply Voltage	V _{NOM}	14 VDC
AC/DC-Adaptor	Model	None
	Vendor	None
	Input	None
	Output	None
Manufacturer	pei tel Communications GmbH Rheinstraße 15 A 14513 Teltow GERMANY	

1.1 Photos – Equipment External





TPU



HA59



HA59



GNSS ANTENNA



LTE ANTENNA



LTE ANTENNA



WIFI ANTENNA



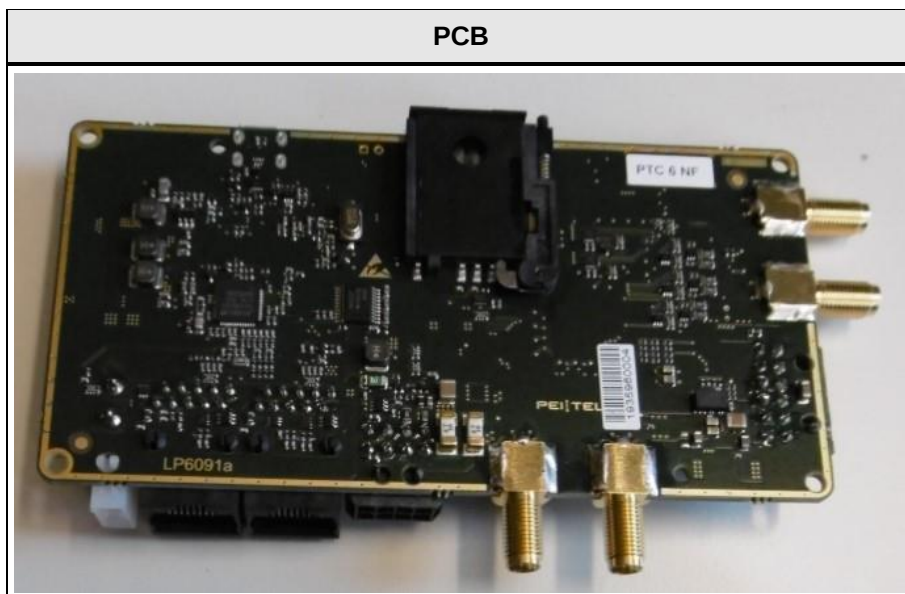
MICROPHONE



SPEAKER

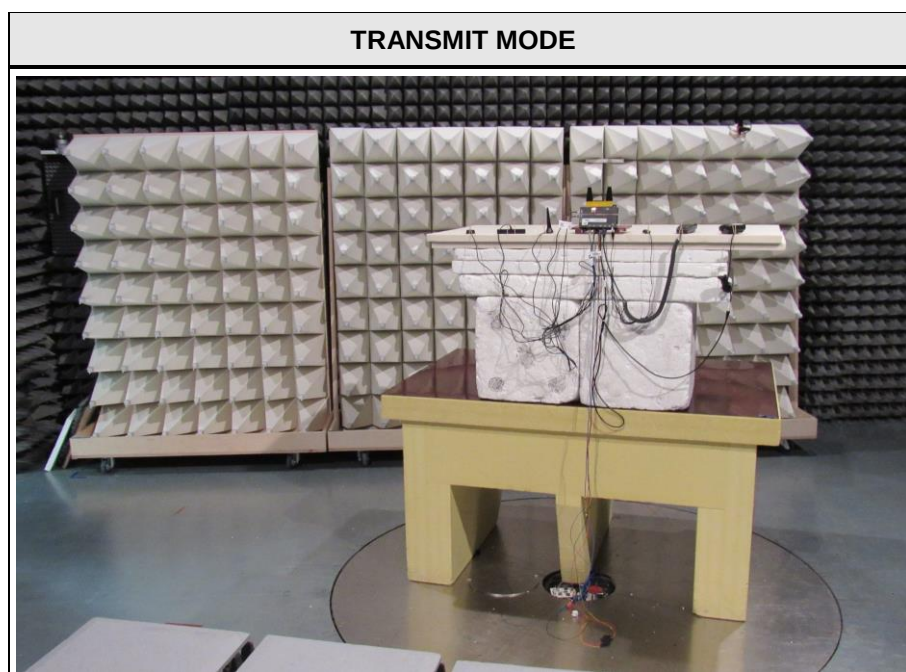
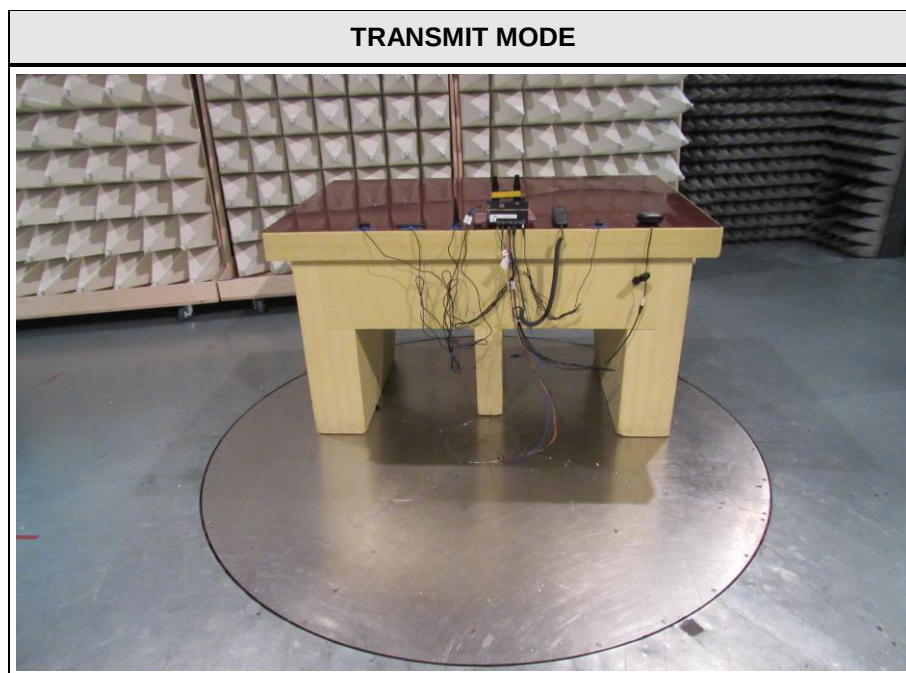


1.2 Photos – Equipment Internal

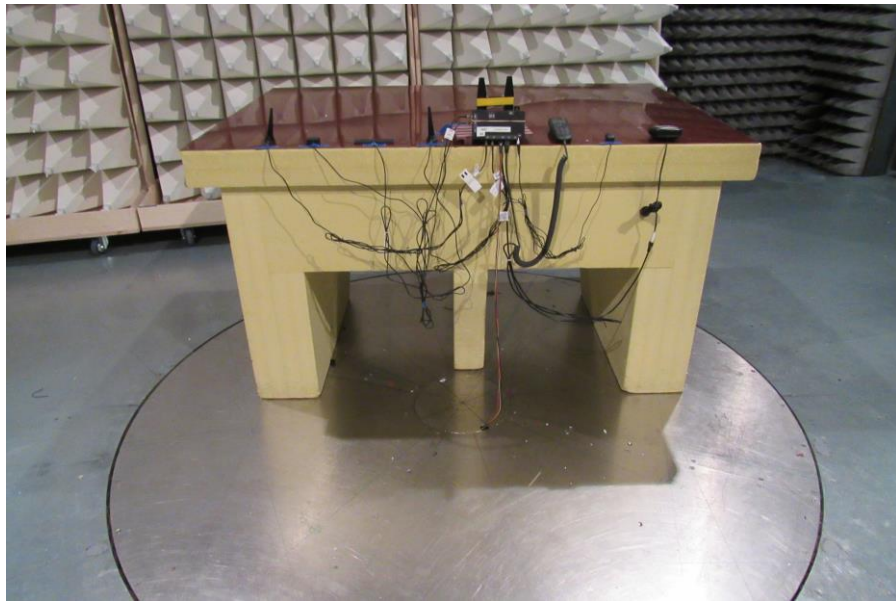


Note: Internal photos provided by manufacturer.

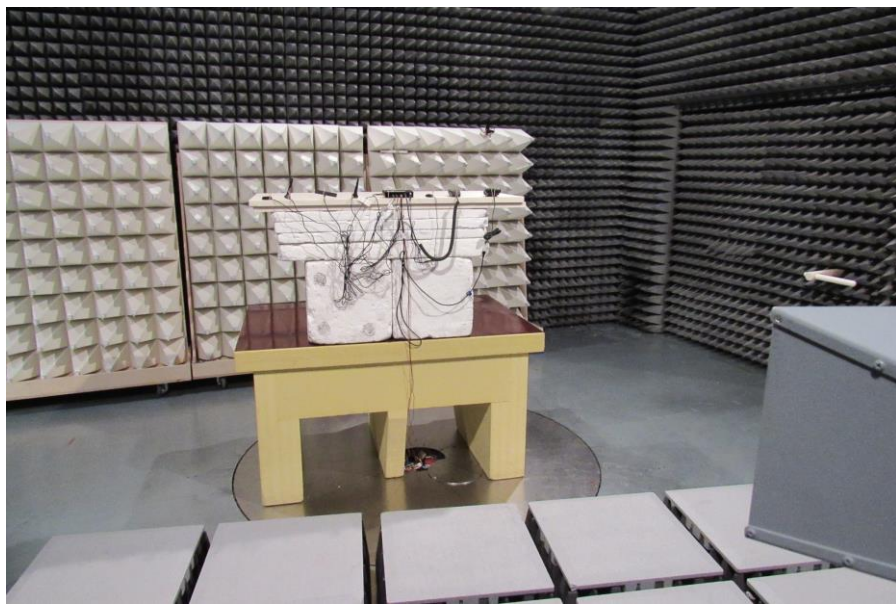
1.3 Photos – Test Setup



RECEIVE MODE



RECEIVE MODE



1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
SIM	Communication Tester	R&S	CMW500	Base Station Simulator
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.5 Test Modes

Mode	Description
UMTS FDDII / QPSK	Channel = 1880 MHz Mode = RMC TPC = All 1 Modulation = QPSK Duty cycle = 100 %
UMTS FDDIV / QPSK	Channel = 1712.4 MHz Mode = RMC TPC = All 1 Modulation = QPSK Duty cycle = 100 %
UMTS FDDV / QPSK	Channel = 846.6 MHz Mode = RMC TPC = All 1 Modulation = QPSK Duty cycle = 100 %
LTE FDD2 / QPSK	Channel = 1880 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %
LTE FDD2 / QAM	Channel = 1880 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %
LTE FDD2 / PMAX	Channel = 1880 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 3 MHz Number of resource blocks = 1 Resource block offset = 7 Duty cycle = 100 %
LTE FDD4 / QPSK	Channel = 1745 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %

LTE FDD4 / QAM	Channel = 1745 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %
LTE FDD4 / PMAX	Channel = 1752.5 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 12 Duty cycle = 100 %
LTE FDD5 / QPSK	Channel = 844 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD5 / QAM	Channel = 829 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD5 / PMAX	Channel = 844 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD12 / QPSK	Channel = 704 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %

LTE FDD12 / QAM	Channel = 711 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %
LTE FDD12 / PMAx	Channel = 715.3 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 1.4 MHz Number of resource blocks = 1 Resource block offset = 2 Duty cycle = 100 %
LTE FDD13 / QPSK	Channel = 782 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD13 / QAM	Channel = 782 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD13 / PMAx	Channel = 782 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 12 Duty cycle = 100 %
LTE FDD14 / QPSK	Channel = 793 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %

LTE FDD14 / QAM	Channel = 793 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 10 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD14 / PMAx	Channel = 795.5 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 24 Duty cycle = 100 %
LTE FDD66 / QPSK	Channel = 1745 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 0 Duty cycle = 100 %
LTE FDD66 / QAM	Channel = 1745 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %
LTE FDD66 / PMAx	Channel = 1745 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 3 MHz Number of resource blocks = 1 Resource block offset = 7 Duty cycle = 100 %
LTE FDD71 / QPSK	Channel = 680.5 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %

LTE FDD71 / QAM	Channel = 680.5 MHz Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 20 MHz Number of resource blocks = 1 Resource block offset = 49 Duty cycle = 100 %
LTE FDD71 / PMAx	Channel = 665.5 MHz Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 12 Duty cycle = 100 %
Comment: Above worst case scenarios were found in module test reports: 1870209R-HPUSP17V00, 2018-08-23 issued by DEKRA and 1870209R-HPUSP17V00-A, 2018-08-23 issued by DEKRA.	

1.6 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBμV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBμV/m). The FCC limits are given in units of μV/m. The following formula is used to convert the units of μV/m to dBμV/m:

$$\text{Limit (dB}\mu\text{V/m)} = 20 \cdot \log(\mu\text{V/m})$$

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading + AF	= Net Reading	:	Net reading	- FCC limit	= Margin
+21.5 dBμV	+ 26 dB = 47.5 dBμV/m	:	47.5 dBμV/m	- 57.0 dBμV/m	= -9.5 dB

2 Result Summary

Test Summary)				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
47 CFR §22.913 47 CFR §24.232 47 CFR §27.50 47 CFR §90.542 ISED RSS-132 §5.4 ISED RSS-133 §6.4 ISED RSS-139 §6.5 ISED RSS-130 §4.6 ISED RSS-140 §4.3	Radiated power	ANSI C63.26 KDB 971168	PASS	
47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 47 CFR §90.542 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7 ISED RSS-140 §4.4	Transmitter conducted emissions	ANSI C63.26 KDB 971168	PASS	
47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 47 CFR §90.542 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7 ISED RSS-140 §4.4	Transmitter radiated emissions	ANSI C63.26 KDB 971168	PASS	
ISED RSS-132 §3.1 ISED RSS-133 §3.1 ISED RSS-139 §3.1 ISED RSS-130 §3.3 ISED RSS-140 §2.3 ISED RSS-Gen §7	Receiver radiated emissions	ANSI C63.26 KDB 971168	PASS	
Comment:				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - Radiated power

3.1.1 Information

Test Information	
Reference	47 CFR §22.913 47 CFR §24.232 47 CFR §27.50 47 CFR §90.542 ISED RSS-132 §5.4 ISED RSS-133 §6.4 ISED RSS-139 §6.5 ISED RSS-130 §4.6 ISED RSS-140 §4.3
Operator	Toralf Jahn
Date	2020-02-05

3.1.2 Limits

Limits - Portable equipment					
Band	Frequency range [MHz]	Power limit [dBm ERP]	Power limit [W ERP]	Power limit [dBm EIRP]	Power limit [W EIRP]
GSM850	824 - 849	38.45	7	40.6	11.5
GSM1900	1850 - 1910	30.85	1.22	33	2
UMTS FDDII	1850 - 1910	30.85	1.22	33	2
UMTS FDDIV	1710 - 1780	27.85	0.61	30	1
UMTS FDDV	824 - 849	38.45	7	40.6	11.5
LTE FDD2	1850 - 1910	30.85	1.22	33	2
LTE FDD4	1710 - 1780	27.85	0.61	30	1
LTE FDD5	824 - 849	38.45	7	40.6	11.5
LTE FDD13	777 - 787	34.77	3	36.92	4.92
LTE FDD14	788 - 798	34.77	3	36.92	4.92
LTE FDD17	704 - 716	34.77	3	36.92	4.92
LTE FDD26	814 - 849	38.45	7	40.6	11.5
LTE FDD66	1710 - 1780	27.85	0.61	30	1
LTE FDD71	663 - 698	34.77	3	36.92	4.92

3.1.3 Procedure

Test Procedure
1. The highest conducted output power for each radio technology, band, modulation and bandwidth is determined 2. The antenna gain for the corresponding transmission frequency is added to the conducted output power 3. The calculated radiated power is compared to the transmitter output power limit

Comment: Conducted power values were found in module test reports: 1870209R-HPUSP17V00, 2018-08-23 issued by DEKRA and 1870209R-HPUSP17V00-A, 2018-08-23 issued by DEKRA.

3.1.4 Results

Test Results - UMTS FDDII						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
UMTS FDDII / QPSK	24.74	3	27.74	33	5.26	PASS

Test Results - UMTS FDDIV						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
UMTS FDDIV / QPSK	25.10	3	28.10	30	1.90	PASS

Test Results - UMTS FDDV						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
UMTS FDDV / QPSK	25.14	3	28.14	40.6	12.46	PASS

Test Results - LTE FDD2						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD2 / PMAx	24.57	3	27.57	33	-05.43	PASS
LTE FDD2 / QPSK	24.18	3	27.18	33	-05.82	PASS
LTE FDD2 / QAM	23.60	3	26.60	33	-06.40	PASS

Test Results - LTE FDD4						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD4 / PMAx	24.59	3	27.59	30	-02.41	PASS
LTE FDD4 / QPSK	24.24	3	27.24	30	-02.76	PASS
LTE FDD4 / QAM	23.26	3	26.26	30	-03.74	PASS

Test Results - LTE FDD5						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD 5 / PMAx	25.10	3	28.10	40.6	-12.50	PASS
LTE FDD5 / QPSK	25.10	3	28.10	40.6	-12.50	PASS
LTE FDD5 / QAM	23.50	3	26.50	40.6	-14.10	PASS

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Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Test Results - LTE FDD12						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD12 / PMAX	24.74	3	27.74	36.92	-09.18	PASS
LTE FDD12 / QPSK	24.13	3	27.13	36.92	-09.79	PASS
LTE FDD12 / QAM	23.32	3	26.32	36.92	-10.60	PASS

Test Results - LTE FDD13						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD13 / PMAX	24.96	3	27.96	36.92	-08.96	PASS
LTE FDD13 / QPSK	24.55	3	27.55	36.92	-09.37	PASS
LTE FDD13 / QAM	23.49	3	26.49	36.92	-10.43	PASS

Test Results - LTE FDD14						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD14 / PMAX	24.38	3	27.38	36.92	-09.54	PASS
LTE FDD14 / QPSK	24.38	3	27.38	36.92	-09.54	PASS
LTE FDD14 / QAM	23.31	3	26.31	36.92	-10.61	PASS

Test Results - LTE FDD66						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD66 / PMAX	24.41	3	27.41	30	-02.59	PASS
LTE FDD66 / QPSK	24.34	3	27.34	30	-02.66	PASS
LTE FDD66 / QAM	23.49	3	26.49	30	-03.51	PASS

Test Results - LTE FDD71						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD71 / PMAX	24.00	3	27.00	36.92	-09.92	PASS
LTE FDD71 / QPSK	23.70	3	26.70	36.92	-10.22	PASS
LTE FDD71 / QAM	22.62	3	25.62	36.92	-11.30	PASS

3.2 Test Conditions and Results - Transmitter conducted emissions

3.2.1 Information

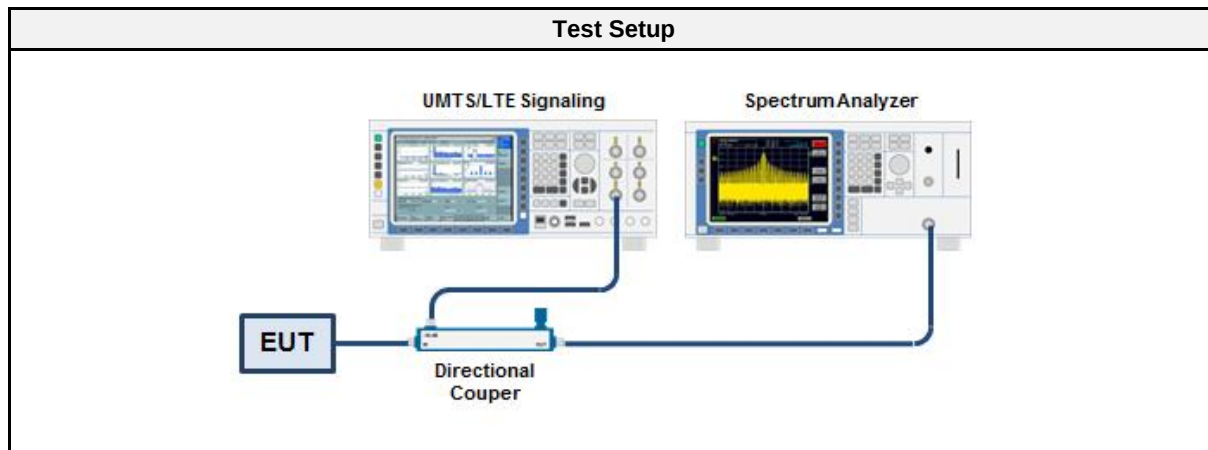
Test Information	
Reference	47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 47 CFR §90.543 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7 ISED RSS-140 §4.4
Measurement Method	FCC KDB 971168 D01 Section 6 ANSI C63.26-2015 5.7
Operator	Toralf Jahn
Date	2020-01-07

3.2.2 Limits

Limits FCC			
Band	Bandwidth	Attenuation [dB]	Limit [dBm]
GSM850	100 kHz / 1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
GSM1900	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDII	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDIV	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDV	100 kHz / 1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD2	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD4	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD5	100 kHz / 1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD13	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD14	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD17	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD26	100 kHz / 1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD66	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD71	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13

Limits ISED			
Band	Bandwidth	Attenuation [dB]	Limit [dBm]
GSM850	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
GSM1900	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDII	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDIV	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDV	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD2	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD4	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD5	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD13	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD14	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD17	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD26	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD66	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD71	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13

3.2.3 Setup



3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSW 43	EF00896	2019-07	2020-07

3.2.5 Procedure

Test Procedure
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.2.6 Results

Test Results - UMTS FDDII	
Mode	Result
UMTS FDDII / QPSK	PASS

Test Results - UMTS FDDIV	
Mode	Result
UMTS FDDIV / QPSK	PASS

Test Results - UMTS FDDV	
Mode	Result
UMTS FDDV / QPSK	PASS

Test Results - LTE FDD2	
Mode	Result
LTE FDD2 / PMAK	PASS

Test Results - LTE FDD4	
Mode	Result
LTE FDD4 / PMAK	PASS

Test Results - LTE FDD5	
Mode	Result
LTE FDD 5 / PMAK	PASS

Test Results - LTE FDD12	
Mode	Result
LTE FDD12 / PMAK	PASS

Test Results - LTE FDD13	
Mode	Result
LTE FDD13 / PMAK	PASS

Test Results - LTE FDD14	
Mode	Result
LTE FDD14 / PMAK	PASS

Test Results - LTE FDD66	
Mode	Result
LTE FDD66 / PMAK	PASS

Test Results - LTE FDD71	
Mode	Result
LTE FDD71 / PMAK	PASS

3.3 Test Conditions and Results - Transmitter radiated emissions

3.3.1 Information

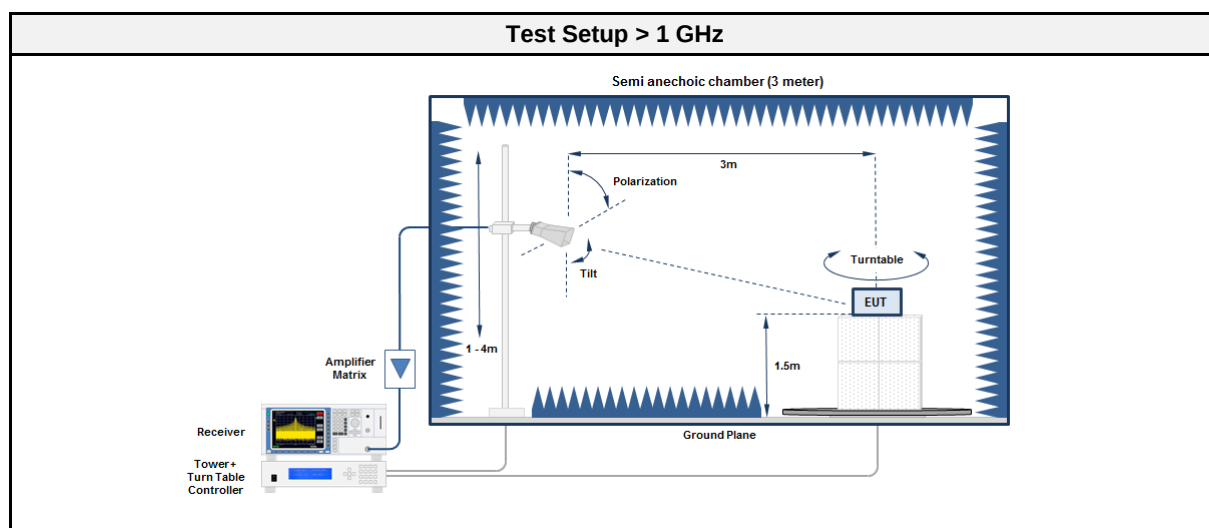
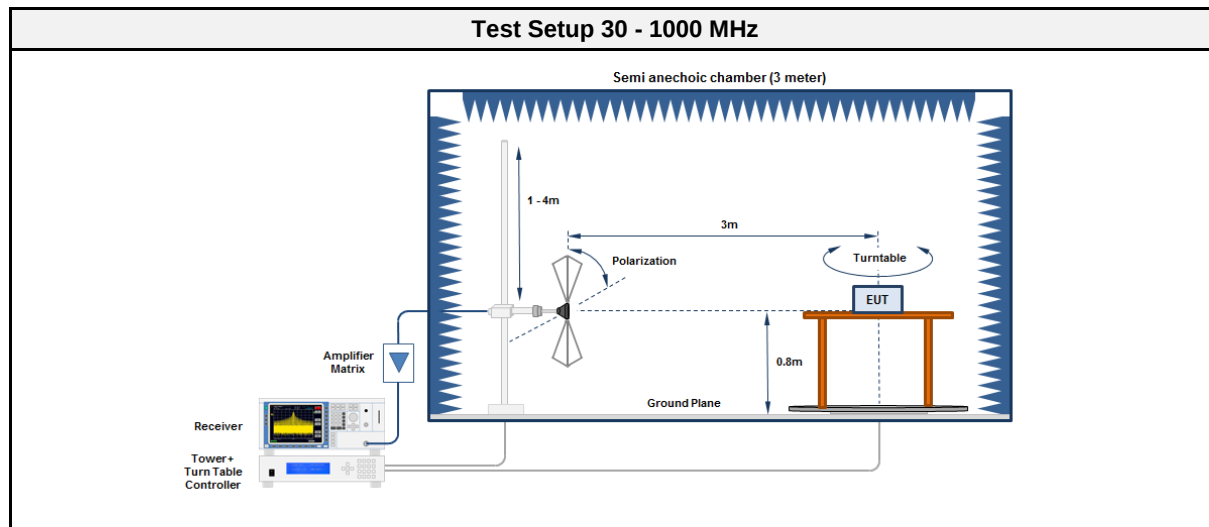
Test Information	
Reference	47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 47 CFR §90.543 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7 ISED RSS-140 §4.4
Measurement Method	FCC KDB 971168 D01 Section 7 ANSI C63.26-2015 5.5
Operator	Toralf Jahn
Date	2020-01-14

3.3.2 Limits

Limits FCC				
Band	Frequency range [MHz]	Bandwidth	Attenuation [dB]	Limit [dBm EIRP]
GSM850	-	100 kHz / 1 MHz	43+Log ₁₀ (P[W])	-13
GSM1900	-	1 MHz	43+Log ₁₀ (P[W])	-13
UMTS FDDII	-	1 MHz	43+Log ₁₀ (P[W])	-13
UMTS FDDIV	-	1 MHz	43+Log ₁₀ (P[W])	-13
UMTS FDDV	-	100 kHz / 1 MHz	43+Log ₁₀ (P[W])	-13
LTE FDD2	-	1 MHz	43+Log ₁₀ (P[W])	-13
LTE FDD4	-	1 MHz	43+Log ₁₀ (P[W])	-13
LTE FDD5	-	100 kHz / 1 MHz	43+Log ₁₀ (P[W])	-13
LTE FDD13	-	100 kHz	43+Log ₁₀ (P[W])	-13
LTE FDD13	763-775	6.25 kHz	65+Log ₁₀ (P[W])	-35
LTE FDD13	793-805	6.25 kHz	65+Log ₁₀ (P[W])	-35
LTE FDD13	1559-1610	700 Hz	-	-50
LTE FDD13	1559-1610	1 MHz	-	-40
LTE FDD14	-	100 kHz	43+Log ₁₀ (P[W])	-13
LTE FDD14	769-775	6.25 kHz	65+Log ₁₀ (P[W])	-35
LTE FDD14	799-805	6.25 kHz	65+Log ₁₀ (P[W])	-35
LTE FDD14	1559-1610	700 Hz	-	-50
LTE FDD14	1559-1610	1 MHz	-	-40
LTE FDD17	-	100 kHz	43+Log ₁₀ (P[W])	-13
LTE FDD26	-	100 kHz / 1 MHz	43+Log ₁₀ (P[W])	-13
LTE FDD66	-	1 MHz	43+Log ₁₀ (P[W])	-13
LTE FDD71	-	100 kHz	43+Log ₁₀ (P[W])	-13

Limits ISED				
Band	Frequency range [MHz]	Bandwidth	Attenuation [dB]	Limit [dBm EIRP]
GSM850	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
GSM1900	-	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDII	-	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDIV	-	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
UMTS FDDV	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD2	-	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD4	-	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD5	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD13	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD13	763-775	6.25 kHz	$65 + \text{Log}_{10}(P[W])$	-35
LTE FDD13	793-806	6.25 kHz	$65 + \text{Log}_{10}(P[W])$	-35
LTE FDD13	1559-1610	700 Hz	-	-50
LTE FDD13	1559-1610	1 MHz	-	-40
LTE FDD14	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD14	769-775	6.25 kHz	$65 + \text{Log}_{10}(P[W])$	-35
LTE FDD14	799-806	6.25 kHz	$65 + \text{Log}_{10}(P[W])$	-35
LTE FDD14	1559-1610	700 Hz	-	-50
LTE FDD14	1559-1610	1 MHz	-	-40
LTE FDD17	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD17	763-775	6.25 kHz	$65 + \text{Log}_{10}(P[W])$	-35
LTE FDD17	793-806	6.25 kHz	$65 + \text{Log}_{10}(P[W])$	-35
LTE FDD17	1559-1610	700 Hz	-	-50
LTE FDD17	1559-1610	1 MHz	-	-40
LTE FDD26	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD66	-	1 MHz	$43 + \text{Log}_{10}(P[W])$	-13
LTE FDD71	-	100 kHz	$43 + \text{Log}_{10}(P[W])$	-13

3.3.3 Setup



3.3.4 Equipment

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2019-09	2020-09
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2019-09	2020-09
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Antenna	Amplifier Research	AT4560	EF00302	2019-05	2020-05

3.3.5 Procedure

Test Procedure 30 - 1000 MHz	
1.	EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground
2.	EUT set to test mode
3.	The receiver is set to peak detection with max hold
4.	The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5.	All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz	
1.	EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground
2.	EUT set to test mode
3.	The receiver is set to peak detection with max hold
4.	The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m
5.	All significant emissions are measured again using the corresponding final detector

3.3.6 Results

Test Results - UMTS FDDII					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
UMTS FDDII / QPSK	3758	-39.00	-13.00	-25.97	PASS
UMTS FDDII / QPSK	5638	-44.00	-13.00	-31.04	PASS
UMTS FDDII / QPSK	5710	-48.20	-13.00	-35.15	PASS
UMTS FDDII / QPSK	7646	-43.40	-13.00	-30.40	PASS

Test Results - UMTS FDDIV					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
UMTS FDDIV / QPSK	3424.8	-51.00	-13.00	-38.00	PASS
UMTS FDDIV / QPSK	5137.2	-48.00	-13.00	-35.00	PASS
UMTS FDDIV / QPSK	6849.6	-44.00	-13.00	-31.00	PASS

Test Results - UMTS FDDV					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
UMTS FDDV / QPSK	1693.2	-59.00	-13.00	-46.00	PASS
UMTS FDDV / QPSK	2539.8	-55.00	-13.00	-42.00	PASS
UMTS FDDV / QPSK	3386.4	-50.00	-13.00	-37.00	PASS

Test Results - LTE FDD2					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD2 / PMAx	3760	-51.00	-13.00	-38.00	PASS
LTE FDD2 / PMAx	5640	-51.00	-13.00	-38.00	PASS
LTE FDD2 / PMAx	7520	-46.00	-13.00	-33.00	PASS

Test Results - LTE FDD4					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD4 / PMAx	3505	-51.00	-13.00	-38.00	PASS
LTE FDD4 / PMAx	5257.5	-51.00	-13.00	-38.00	PASS
LTE FDD4 / PMAx	7010	-46.00	-13.00	-33.00	PASS

Test Results - LTE FDD5					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD 5 / PMAX	1688	-60.00	-13.00	-47.00	PASS
LTE FDD 5 / PMAX	2532	-53.00	-13.00	-40.00	PASS
LTE FDD 5 / PMAX	3376	-49.00	-13.00	-36.00	PASS

Test Results - LTE FDD12					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD12 / PMAX	1430.6	-59.00	-13.00	-46.00	PASS
LTE FDD12 / PMAX	2145.9	-57.00	-13.00	-44.00	PASS
LTE FDD12 / PMAX	2861.2	-44.00	-13.00	-31.00	PASS

Test Results - LTE FDD13					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD13 / PMAX	1564	-58.00	-40.00	-18.00	PASS
LTE FDD13 / PMAX	2346	-56.00	-13.00	-43.00	PASS
LTE FDD13 / PMAX	3128	-36.00	-13.00	-23.00	PASS

Test Results - LTE FDD14					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD14 / PMAX	1591	-59.00	-40.00	-19.00	PASS
LTE FDD14 / PMAX	2386.5	-56.00	-13.00	-43.00	PASS
LTE FDD14 / PMAX	3182	-40.00	-13.00	-27.00	PASS

Test Results - LTE FDD66					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD66 / PMAX	3490	-51.00	-13.00	-38.00	PASS
LTE FDD66 / PMAX	5235	-51.00	-13.00	-38.00	PASS
LTE FDD66 / PMAX	6980	-46.00	-13.00	-33.00	PASS

Test Results - LTE FDD71					
Mode	Frequency [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD71 / PMAX	1331	-60.00	-13.00	-47.00	PASS
LTE FDD71 / PMAX	1996.5	-53.00	-13.00	-40.00	PASS
LTE FDD71 / PMAX	2662	-49.00	-13.00	-36.00	PASS

3.4 Test Conditions and Results - Receiver radiated emissions

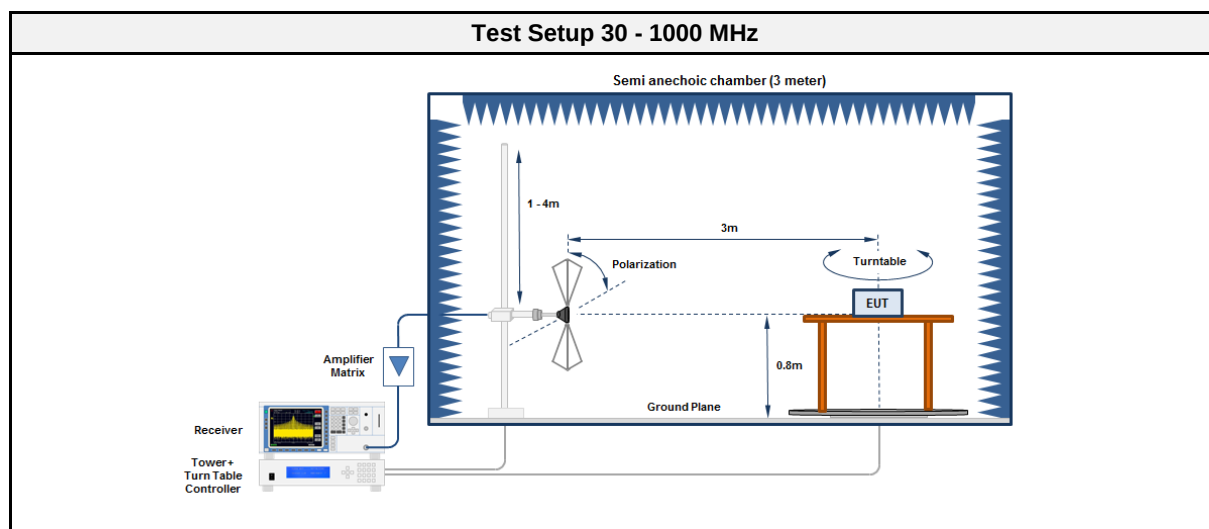
3.4.1 Information

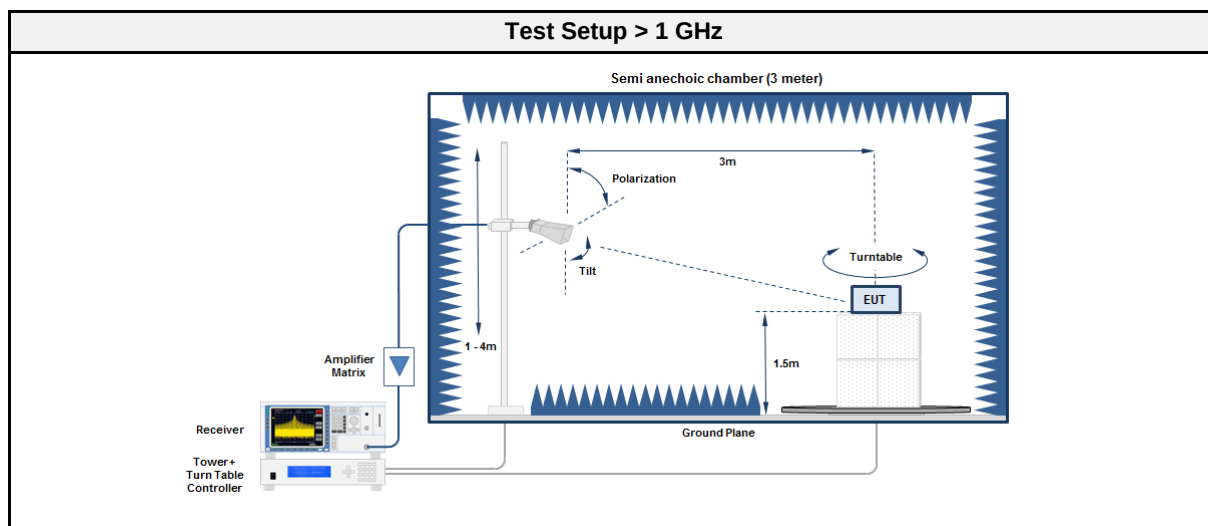
Test Information	
Reference	ISED RSS-132 §3.1 ISED RSS-133 §3.1 ISED RSS-139 §3.1 ISED RSS-130 §3.3 ISED RSS-140 §2.3 ISED RSS-Gen §7.4
Measurement Method	ANSI C63.10-2013 6.3-6.6
Operator	Toralf Jahn
Date	2020-01-07

3.4.2 Limits

Limits			
Frequency range [MHz]	Bandwidth	Detector	Limit [dB μ V/m @ 3 m]
30 - 88	100 kHz	Quasi-peak	40
88 - 216	100 kHz	Quasi-peak	43.5
216 - 960	100 kHz	Quasi-peak	46
960 - 1000	100 kHz	Quasi-peak	54
> 1000	1 MHz	Average	54

3.4.3 Setup





3.4.4 Equipment

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2019-09	2020-09
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2018-07	2021-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2019-09	2020-09
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Antenna	Amplifier Research	AT4560	EF00302	2019-05	2020-05

3.4.5 Procedure

Test Procedure 30 - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.4.6 Results

Test Results - UMTS FDDII					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	36.6655	26.50	40.00	-13.48	PASS
Receive Mode	36.6655	20.10	40.00	-19.88	PASS
Receive Mode	778.8052	34.60	46.00	-11.40	PASS
Receive Mode	934.0138	34.50	46.00	-11.46	PASS

Test Results - UMTS FDDIV					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	36.4253	26.20	40.00	-13.76	PASS
Receive Mode	851.8163	34.40	46.00	-11.65	PASS

Test Results - UMTS FDDV					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	36.6054	19.90	40.00	-20.10	PASS
Receive Mode	114.8379	07.60	43.50	-35.90	PASS
Receive Mode	163.8982	11.60	43.50	-31.85	PASS
Receive Mode	229.9009	29.70	46.00	-16.28	PASS

Test Results - LTE FDD2					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	36.4853	25.60	40.00	-14.42	PASS
Receive Mode	739.2375	34.10	46.00	-11.86	PASS
Receive Mode	756.7697	33.10	46.00	-12.90	PASS

Test Results - LTE FDD4					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	842.3296	34.40	46.00	-11.62	PASS
Receive Mode	880.8166	34.90	46.00	-11.11	PASS

Test Results - LTE FDD5					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	93.8926	22.10	43.50	-21.44	PASS
Receive Mode	857.9406	34.70	46.00	-11.34	PASS
Receive Mode	905.674	34.40	46.00	-11.61	PASS

Test Results - LTE FDD12					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	No significant spurious emissions detected				PASS

Test Results - LTE FDD13					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	No significant spurious emissions detected				PASS

Test Results - LTE FDD14					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	No significant spurious emissions detected				PASS

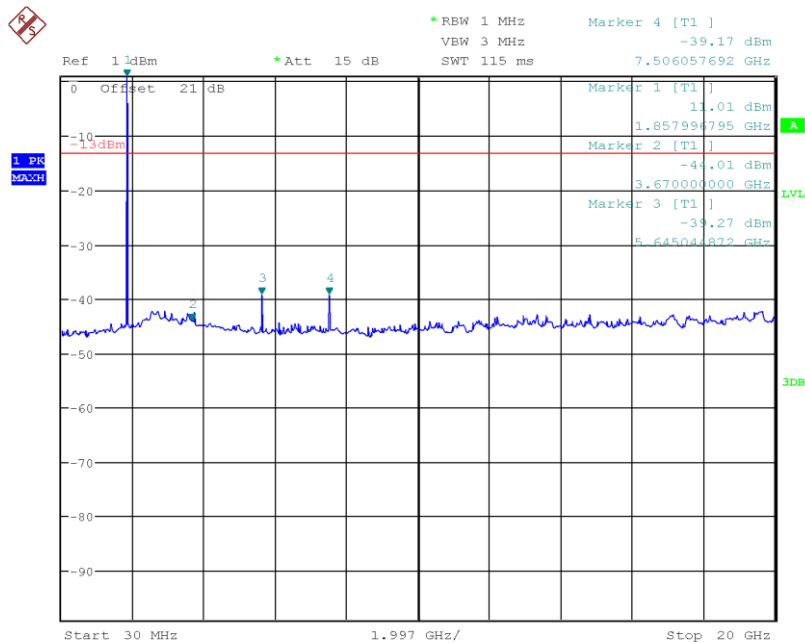
Test Results - LTE FDD66					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	No significant spurious emissions detected				PASS

Test Results - LTE FDD71					
Mode	Frequency [MHz]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result
Receive Mode	No significant spurious emissions detected				PASS

ANNEX A Transmitter conducted emissions

Conducted spurious emission according to FCC

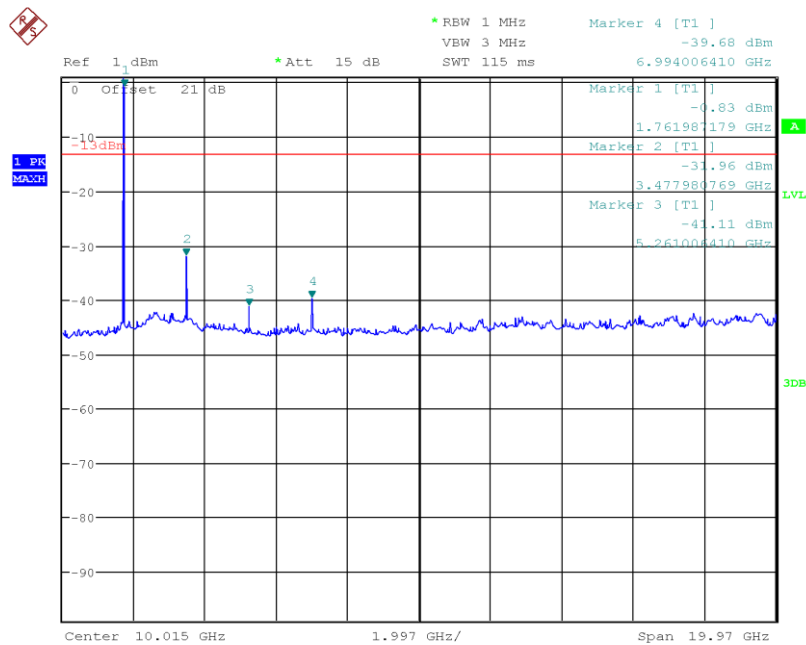
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-23
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 2
 Note 1: 1880 MHz



Date: 23.JAN.2020 15:51:36

Conducted spurious emission according to FCC

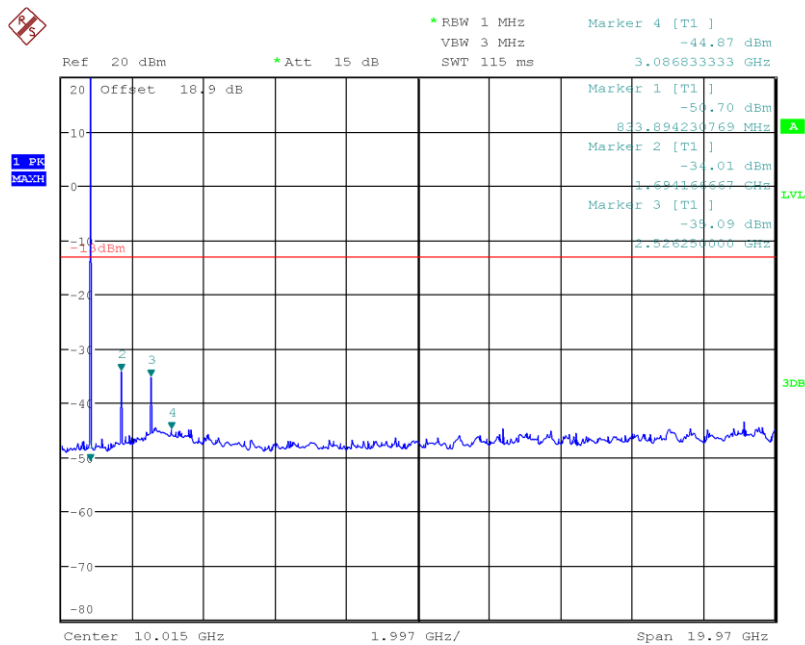
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-23
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 4
 Note 1: 1752.5 MHz



Date: 23.JAN.2020 15:58:58

Conducted spurious emission according to FCC

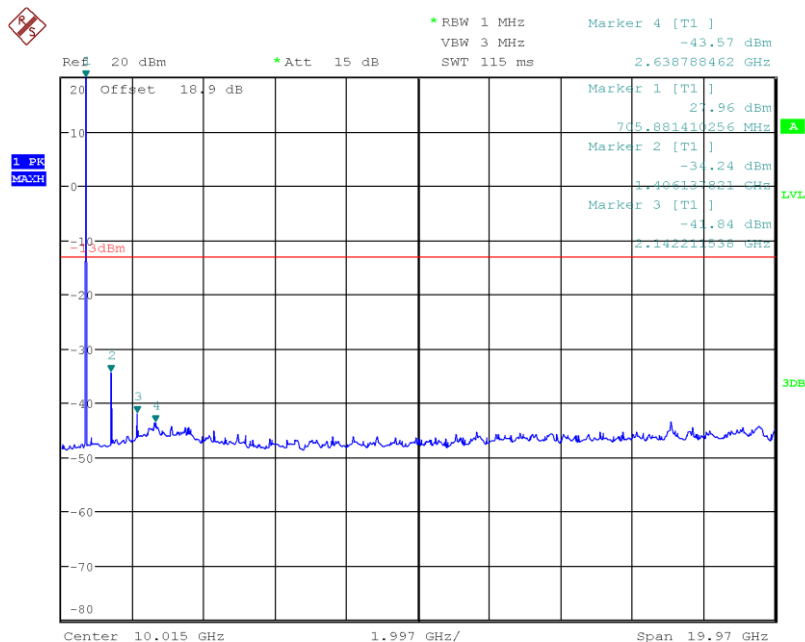
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-27
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 5
 Note 1: 844 MHz



Date: 27.JAN.2020 11:59:29

Conducted spurious emission according to FCC

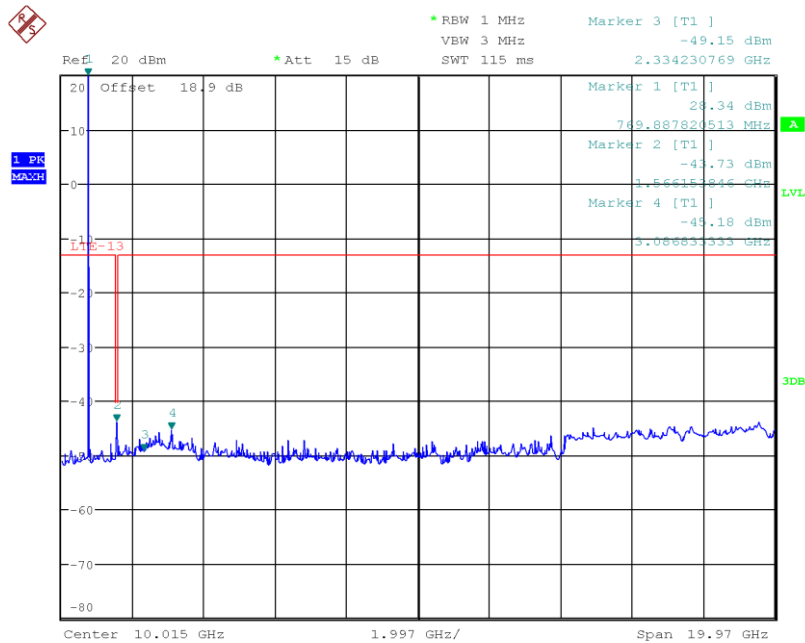
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-27
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 12
 Note 1: 715.3 MHz



Date: 27.JAN.2020 11:55:06

Conducted spurious emission according to FCC

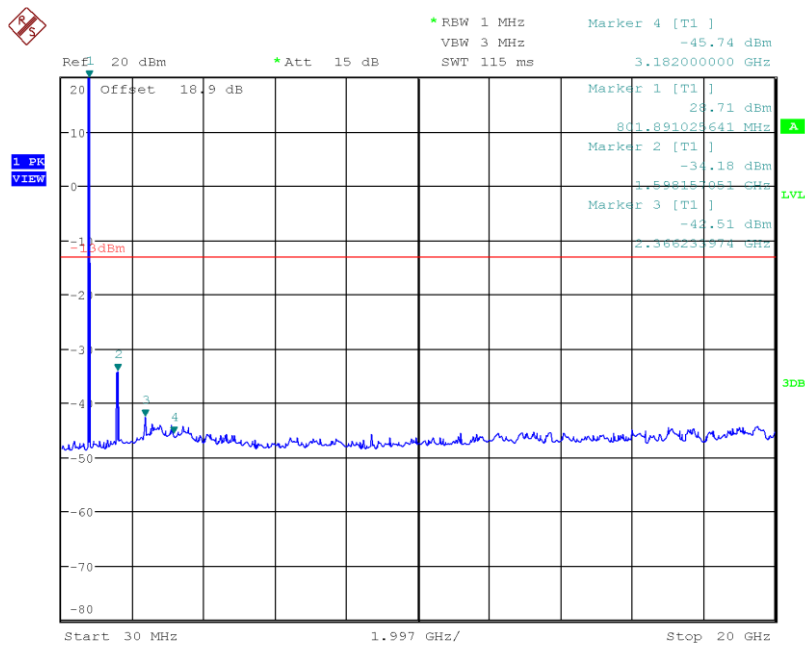
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-27
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 13
 Note 1: 782.0 MHz



Date: 27.JAN.2020 12:30:04

Conducted spurious emission according to FCC

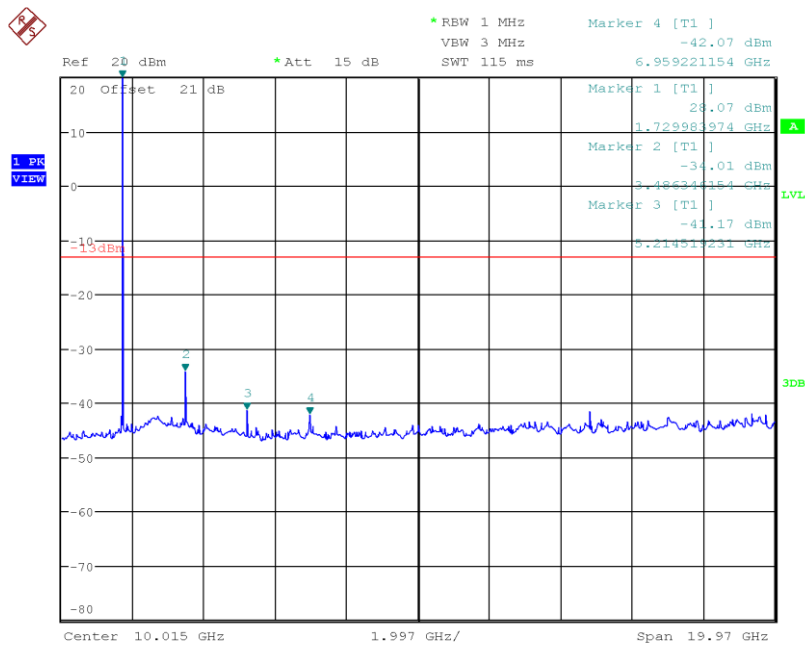
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-27
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 14
 Note 1: 795.5 MHz



Date: 27.JAN.2020 13:30:32

Conducted spurious emission according to FCC

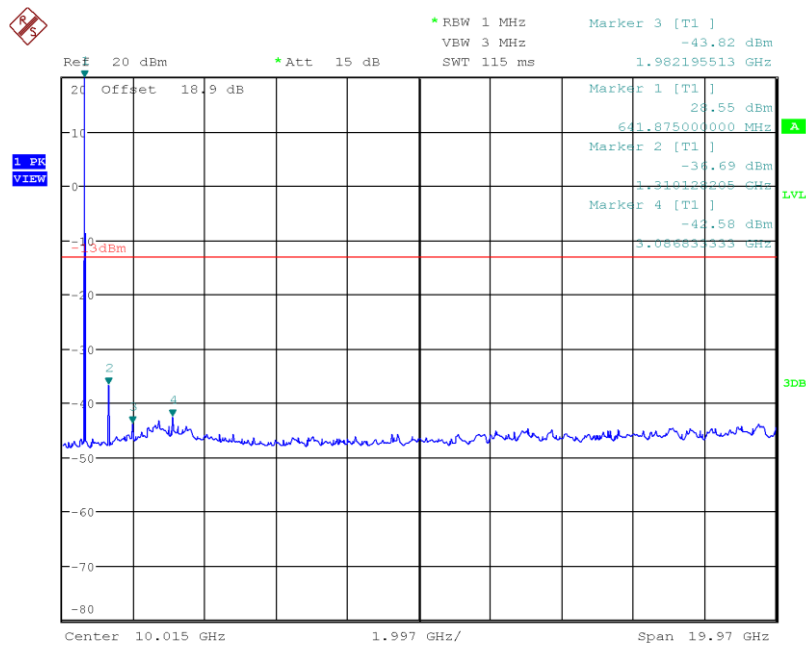
Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-27
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 66
 Note 1: 1745 MHz



Date: 27.JAN.2020 12:59:53

Conducted spurious emission according to FCC

Project Number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 Model Description: PTCarPhone
 Model: PTCarPhone 6
 Test Sample ID: 26683
 Operator: Toralf Jahn
 Test Site: Eurofins Product Service GmbH
 Test Date: 2020-01-27
 Operating Conditions: Tnom/Vnom
 Mode: LTE Band 71
 Note 1: 665.5 MHz



Date: 27.JAN.2020 12:48:24

ANNEX B Receiver radiated emissions

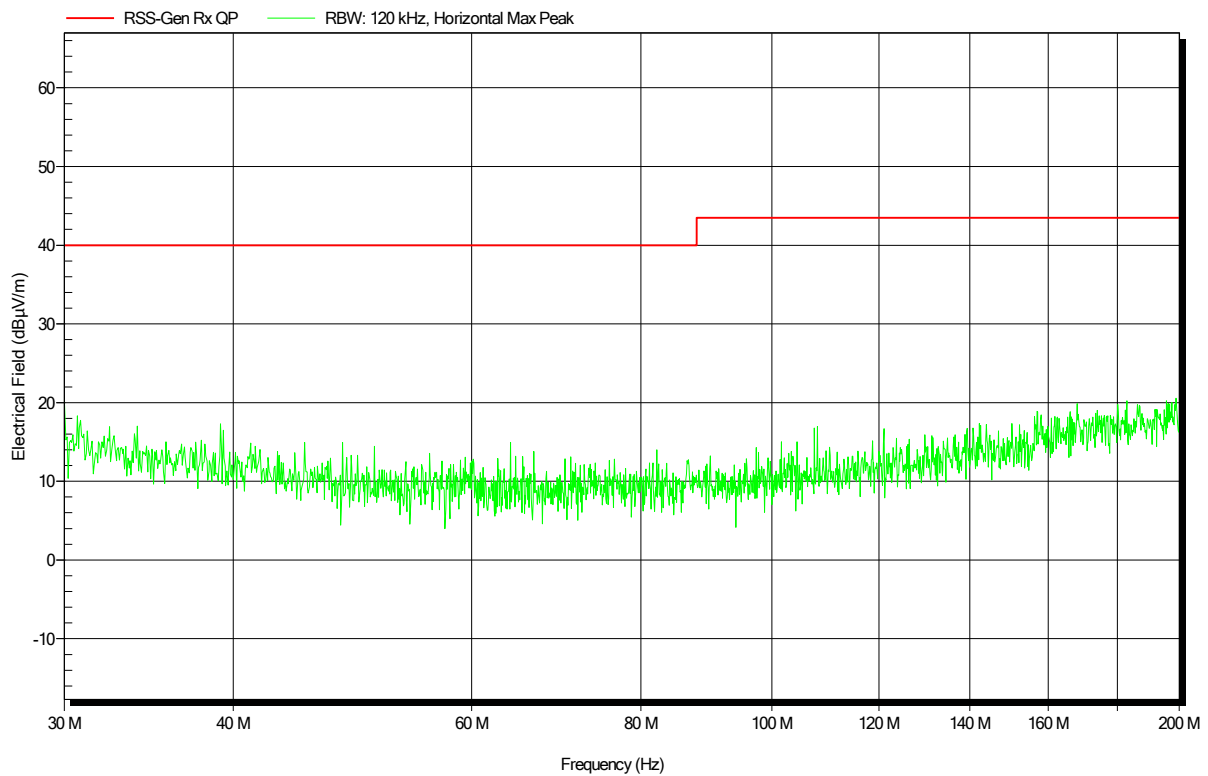
Only plots containing spurious emission are shown in this annex.
All missing plots only contain noise.

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HK 116, Horizontal
Measurement distance: 3 m
Mode: RX; UMTSII; 1960 MHz
Test Date: 2020-01-07
Note:

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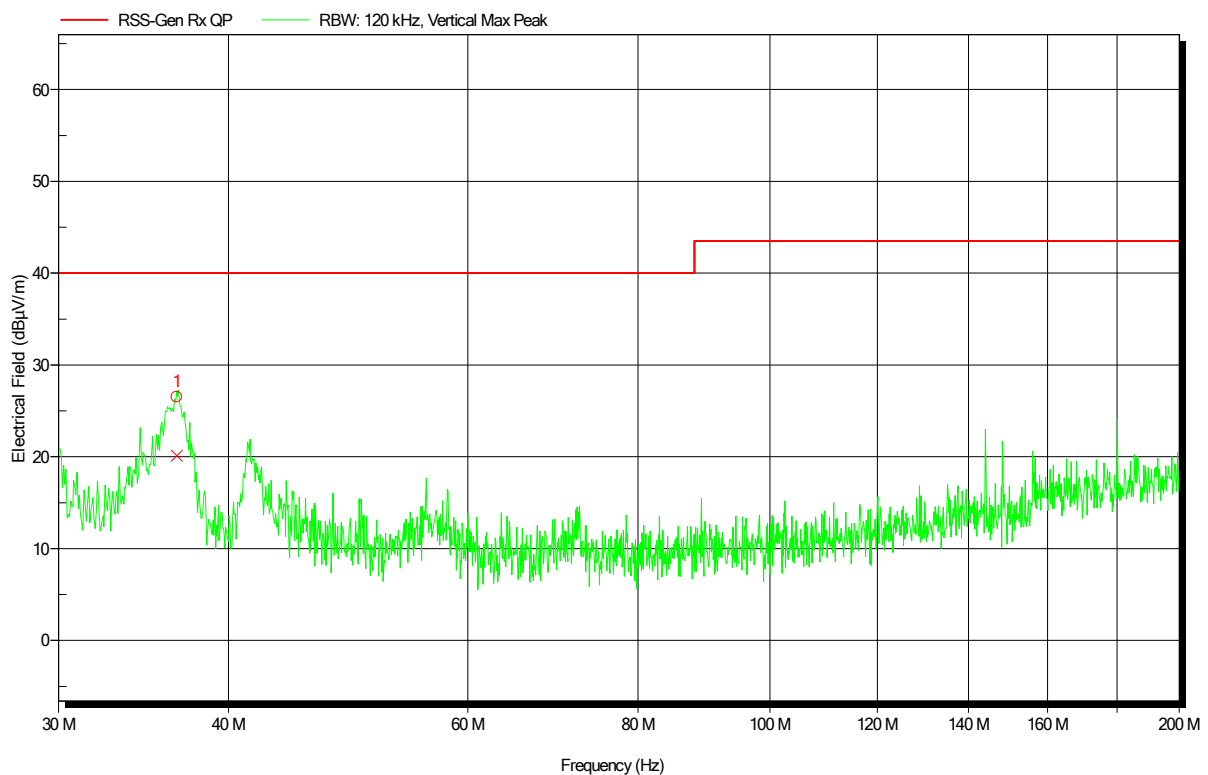


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3 m
Mode: RX; UMTSII; 1960 MHz
Test Date: 2020-01-07
Note:

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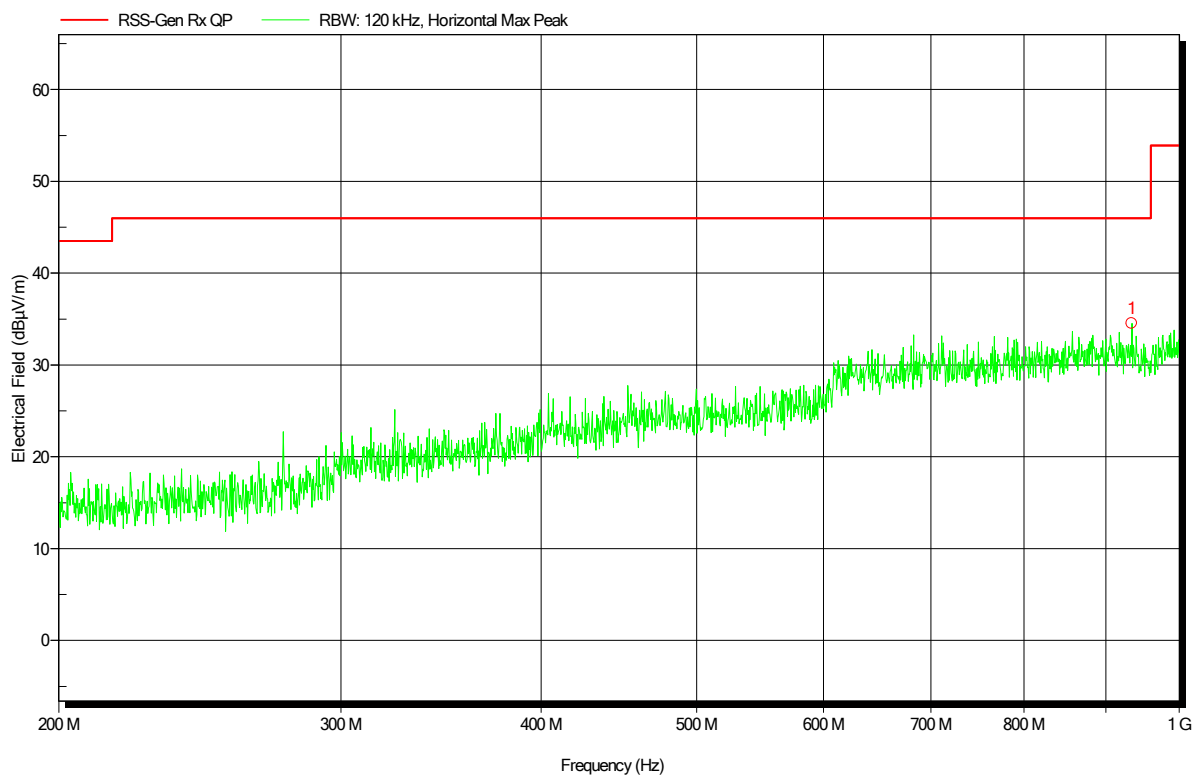
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
36.6655 MHz	26.5 dBµV/m	40 dBµV/m	-13.48 dB	Pass	0 Degree	1 m

Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
36.6655 MHz	20.1 dBµV/m	40 dBµV/m	-19.88 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: RX; UMTSII; 1960 MHz
 Test Date: 2020-01-07
 Note:

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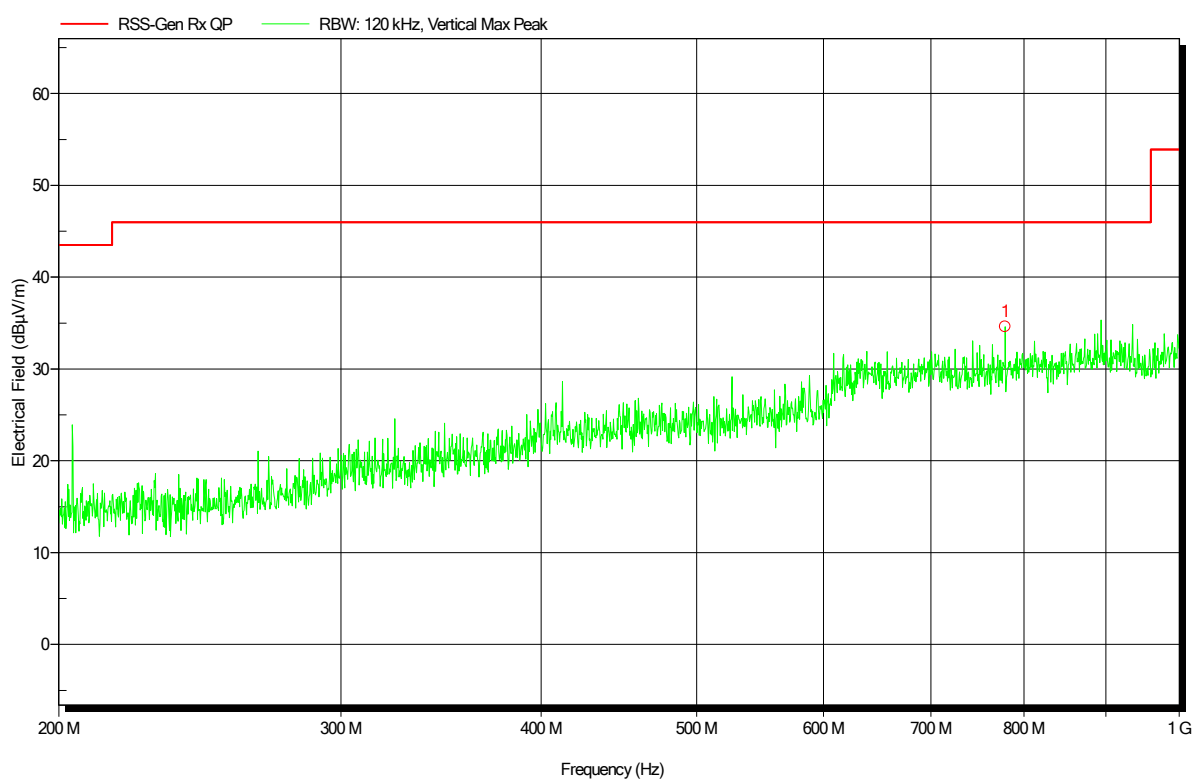
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
934.0138 MHz	34.5 dBµV/m	46 dBµV/m	-11.46 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement distance: 3 m
Mode: RX; UMTSII; 1960 MHz
Test Date: 2020-01-07
Note:

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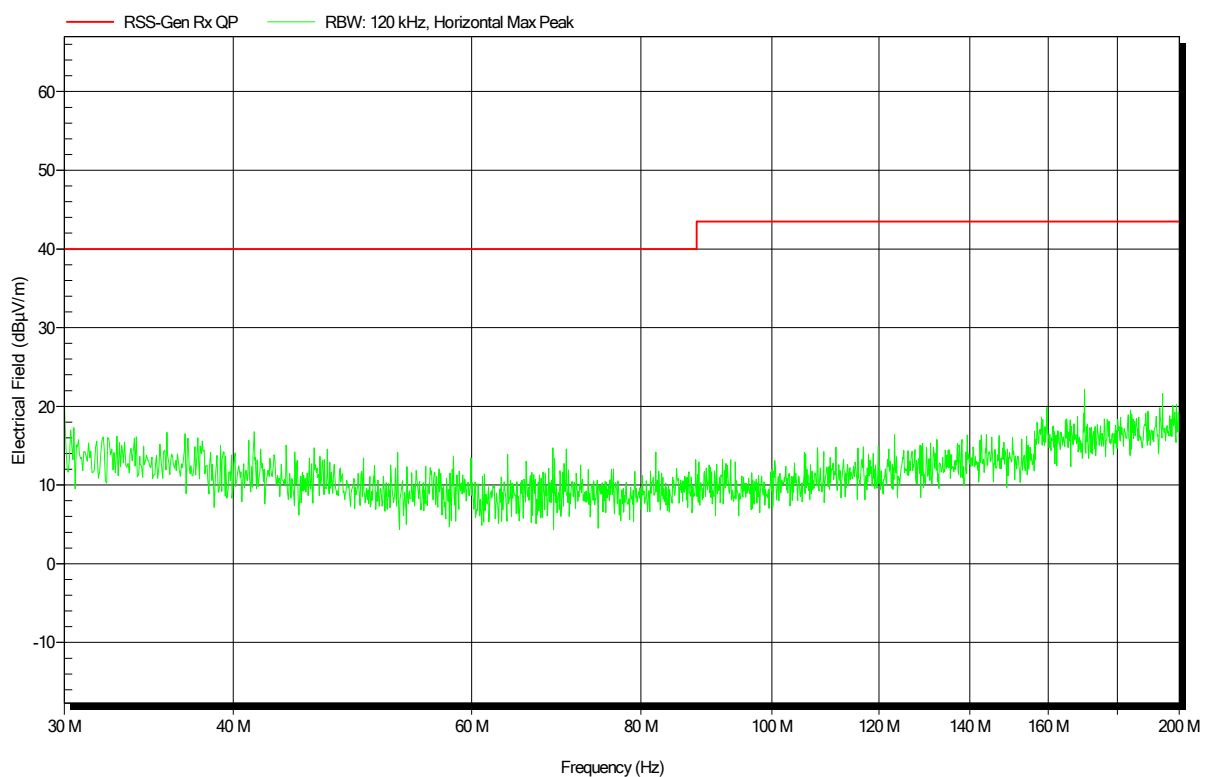
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
778.8052 MHz	34.6 dBμV/m	46 dBμV/m	-11.4 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: RX; UMTSIV; 2112.4 MHz
 Test Date: 2020-01-07
 Note:

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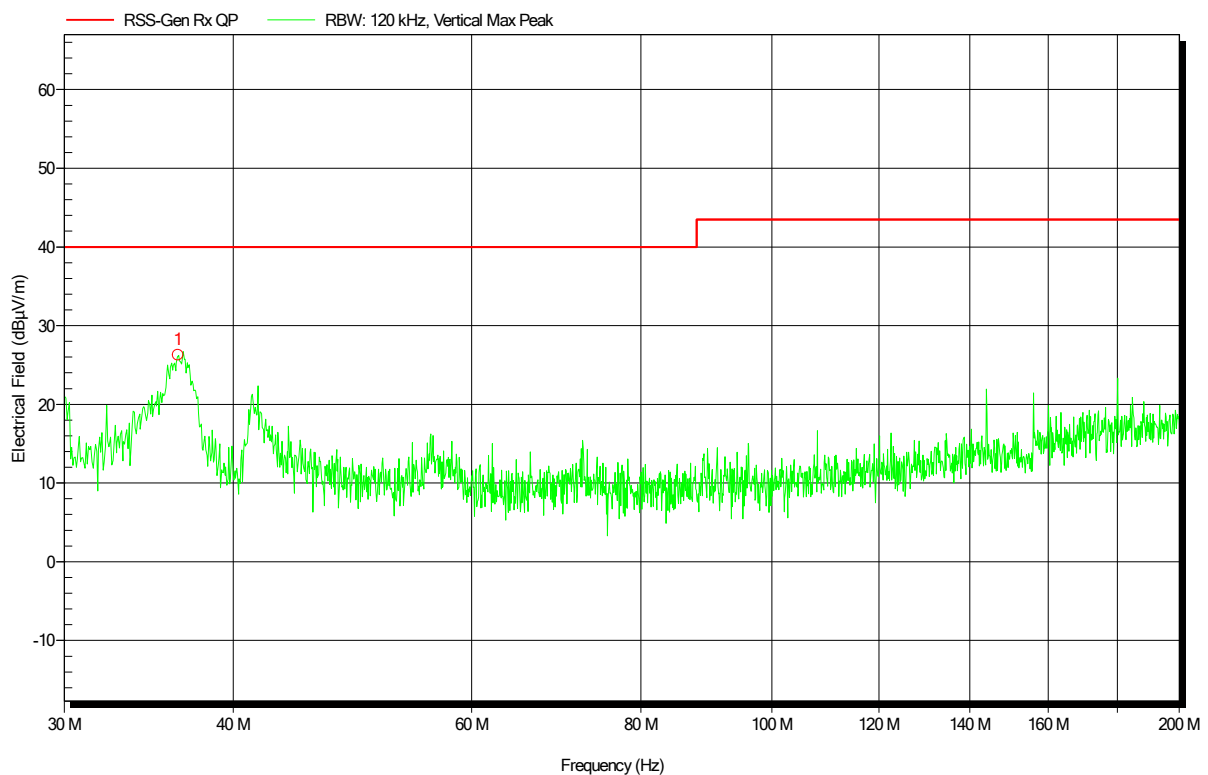


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3 m
 Mode: RX; UMTSIV; 2112.4 MHz
 Test Date: 2020-01-07
 Note:

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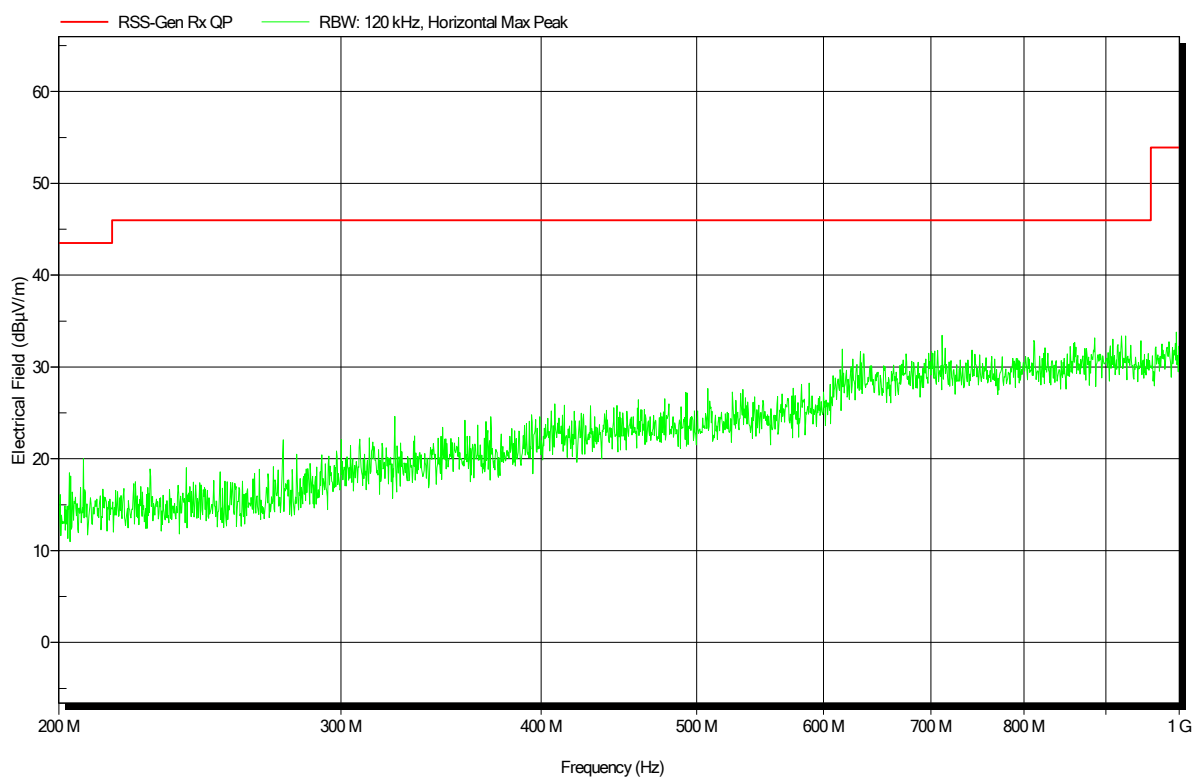
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
36.4253 MHz	26.2 dBµV/m	40 dBµV/m	-13.76 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: RX; UMTSIV; 2112.4 MHz
Test Date: 2020-01-07
Note:

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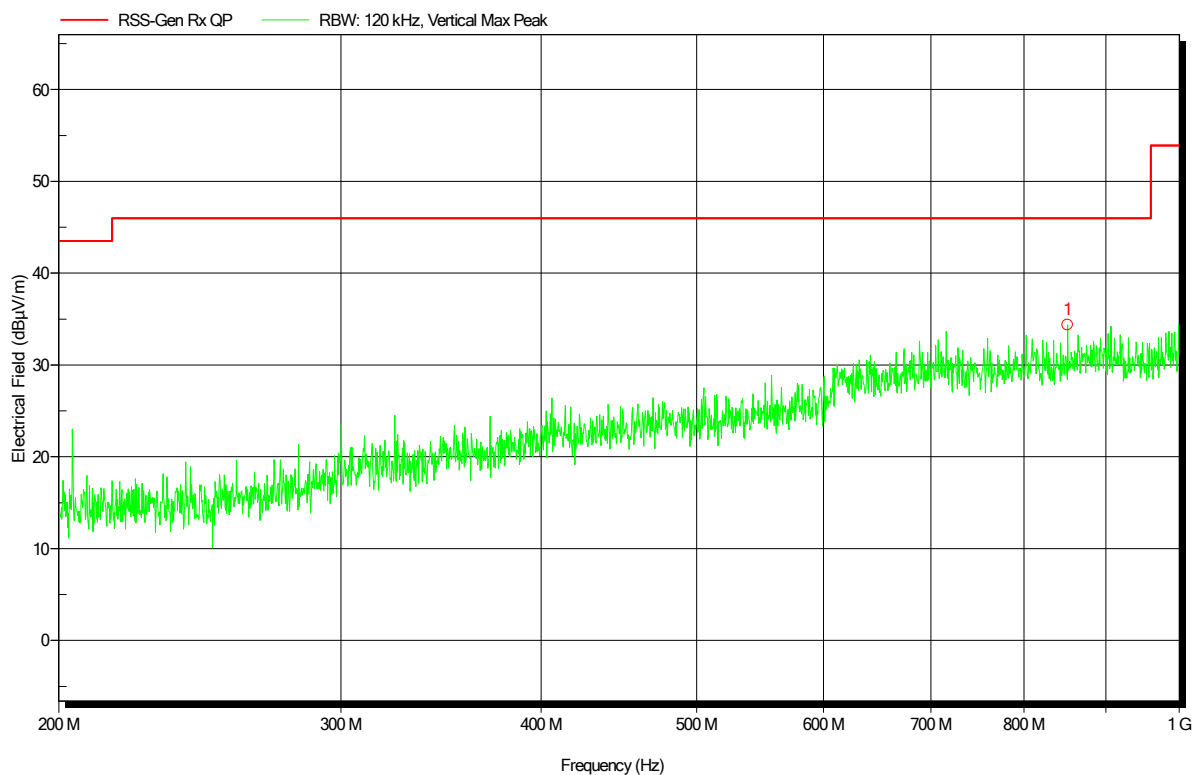


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: RX; UMTSIV; 2112.4 MHz
 Test Date: 2020-01-07
 Note:

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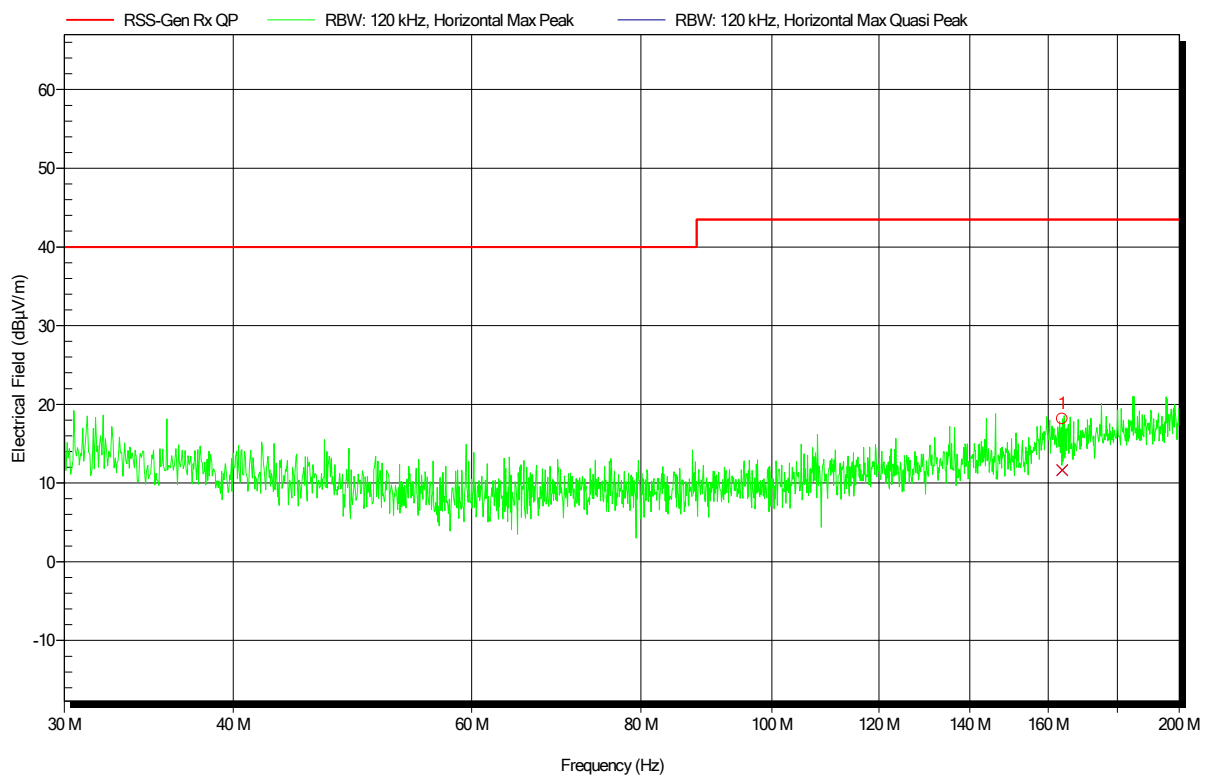
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
851.8163 MHz	34.4 dBμV/m	46 dBμV/m	-11.65 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: RX; UMTSV; 891.6 MHz
 Test Date: 2020-01-07
 Note:

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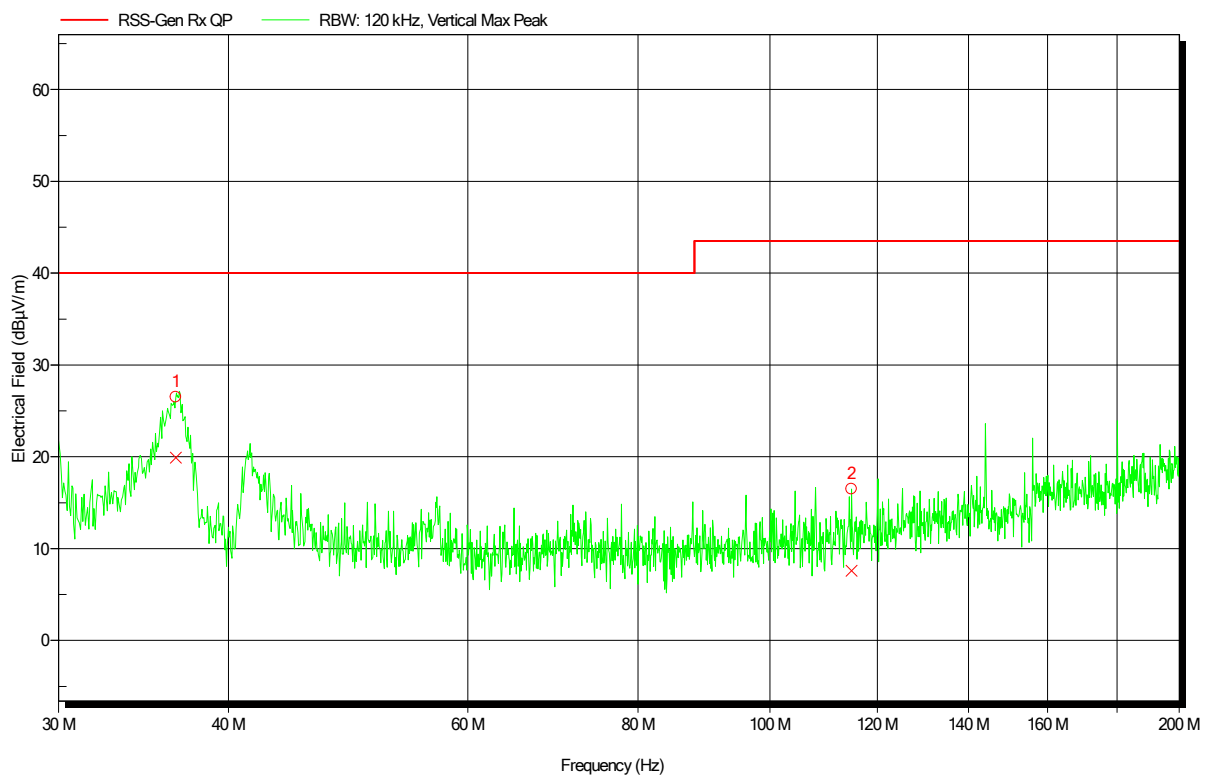
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
163.8982 MHz	11.6 dBμV/m	43.5 dBμV/m	-31.85 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3 m
 Mode: RX; UMTSV; 891.6 MHz
 Test Date: 2020-01-07
 Note:

Index 21



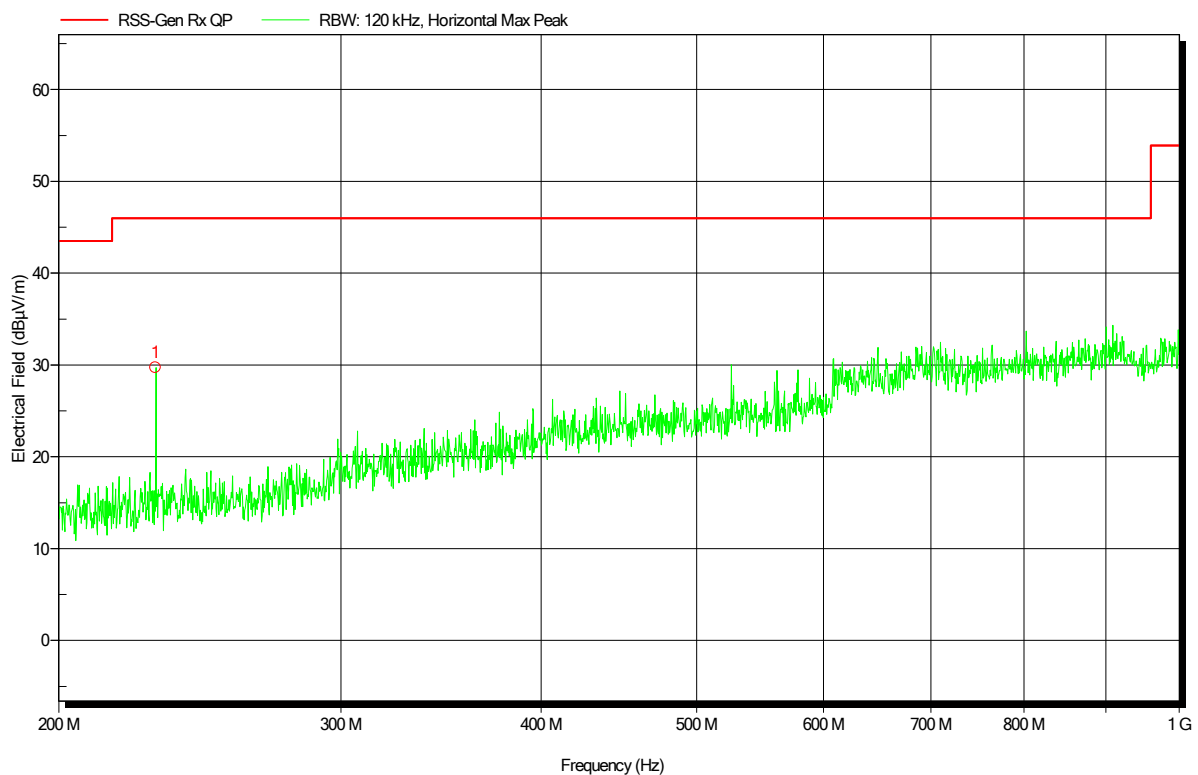
Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Angle	Height
36.6054 MHz	19.9 dBµV/m	40 dBµV/m	-20.1 dB	Pass	0 Degree	1 m
114.8379 MHz	7.6 dBµV/m	43.5 dBµV/m	-35.9 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: RX; UMTSV; 891.6 MHz
 Test Date: 2020-01-07
 Note:

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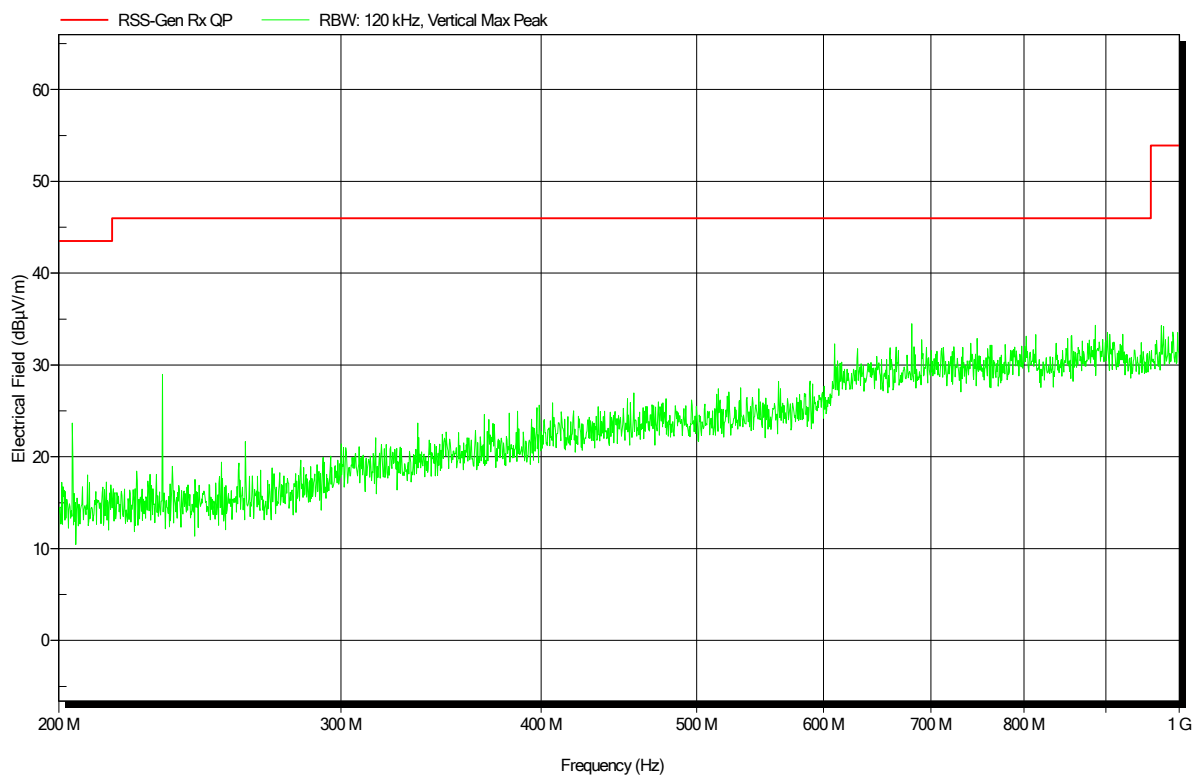
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
229.9009 MHz	29.7 dBµV/m	46 dBµV/m	-16.28 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: RX; UMTSV; 891.6 MHz
 Test Date: 2020-01-07
 Note:

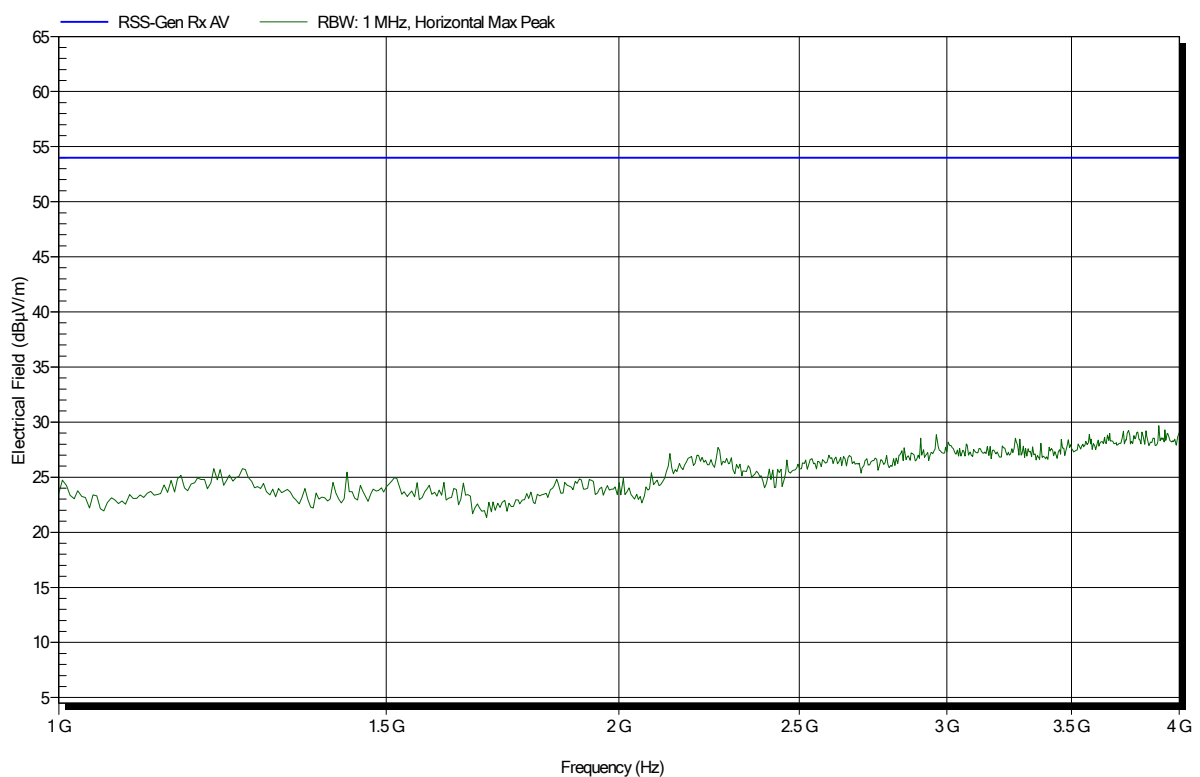
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Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 24°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; UMTS Band V; 891.6 MHz
 Test Date: 2020-01-29
 Note:

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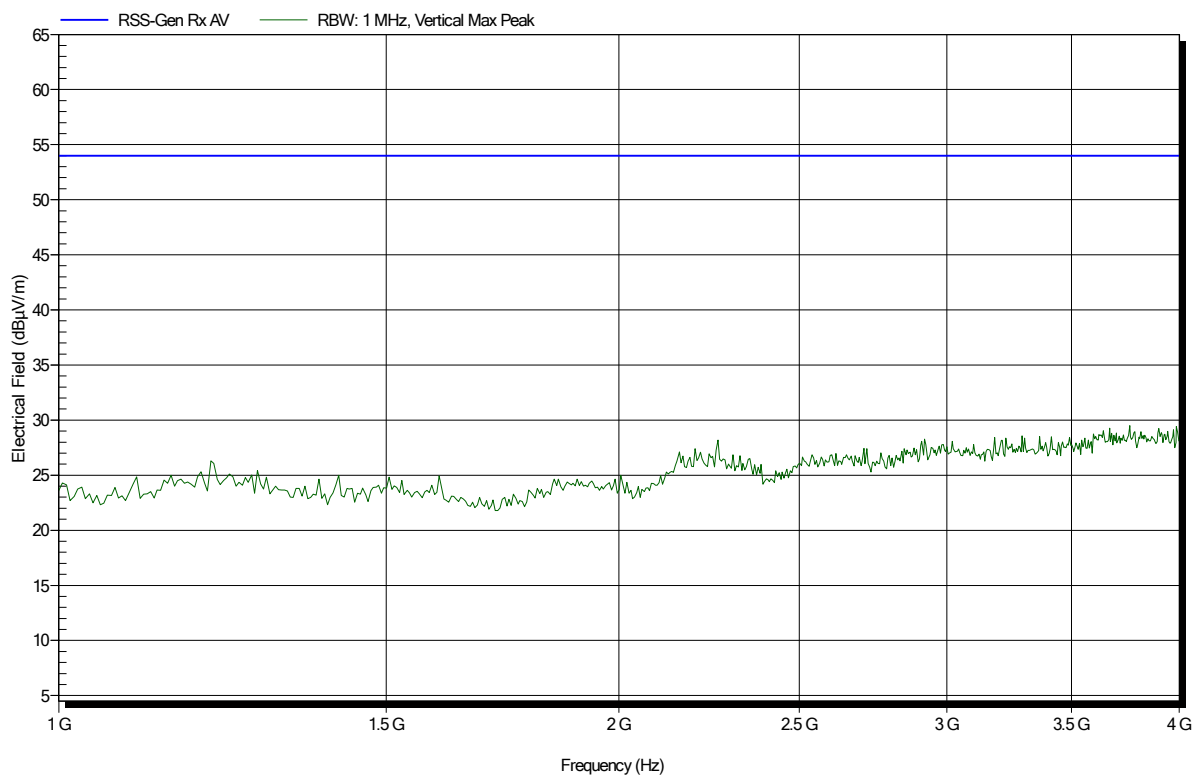


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 24°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; UMTS Band V; 891.6 MHz
 Test Date: 2020-01-29
 Note:

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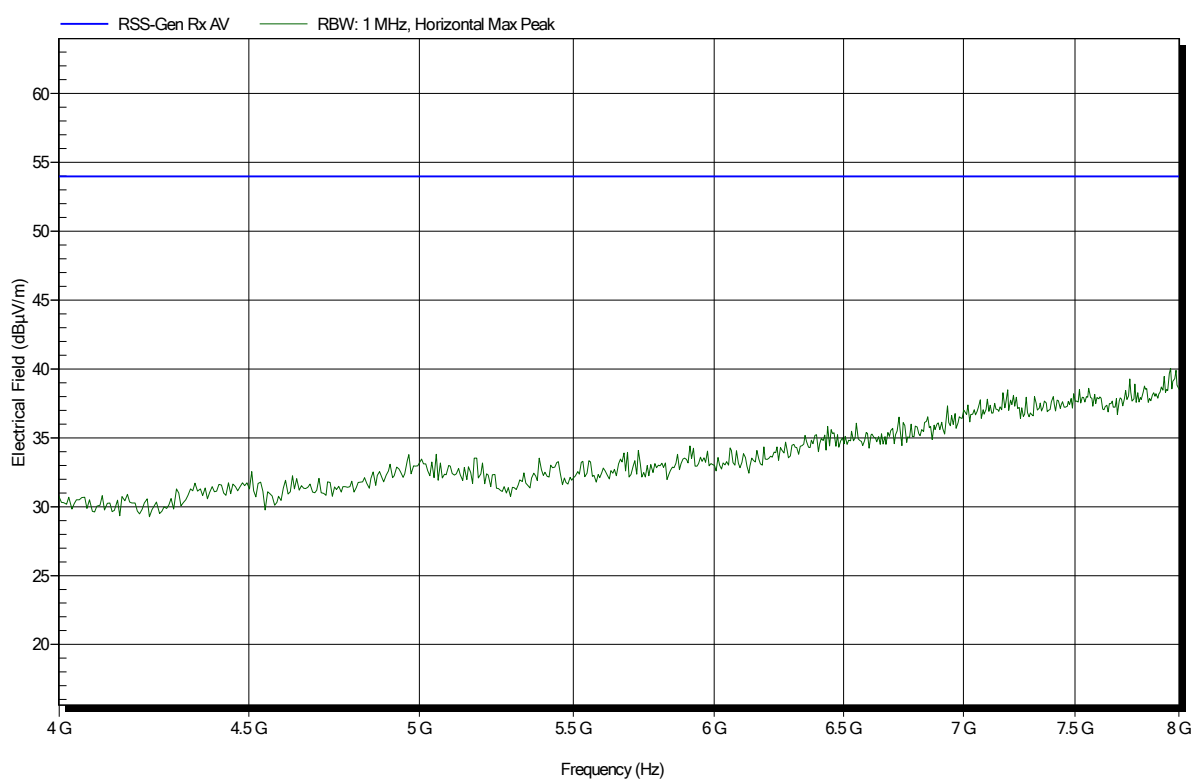


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 24°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; UMTS Band V; 891.6 MHz
Test Date: 2020-01-29
Note:

Index 23

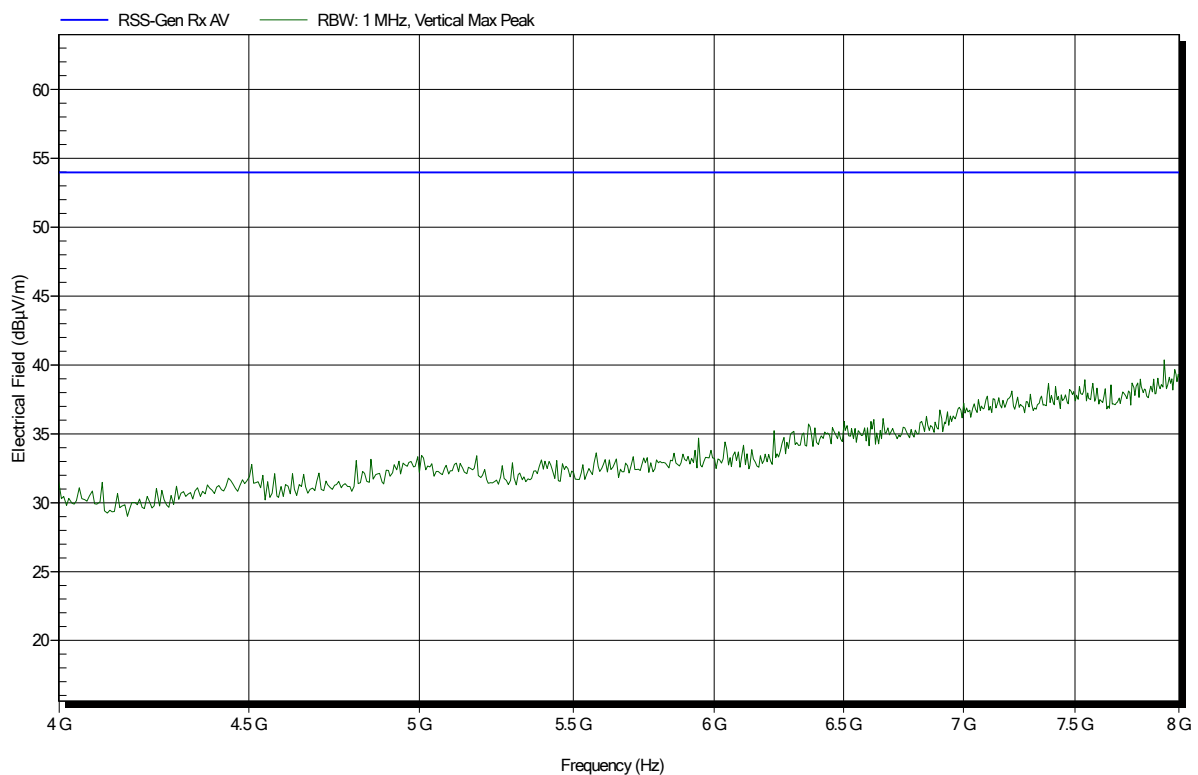


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 24°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: RX; UMTS Band V; 891.6 MHz
Test Date: 2020-01-29
Note:

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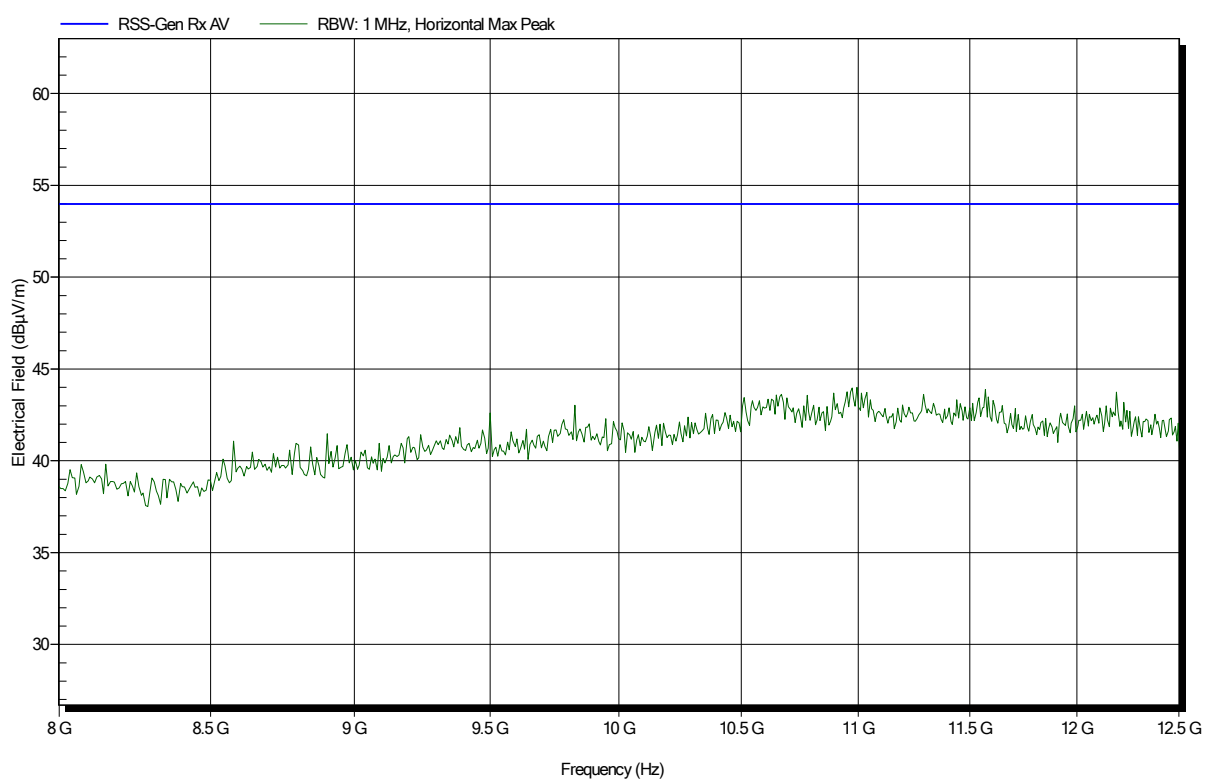


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 24°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; UMTS Band V; 891.6 MHz
Test Date: 2020-01-29
Note:

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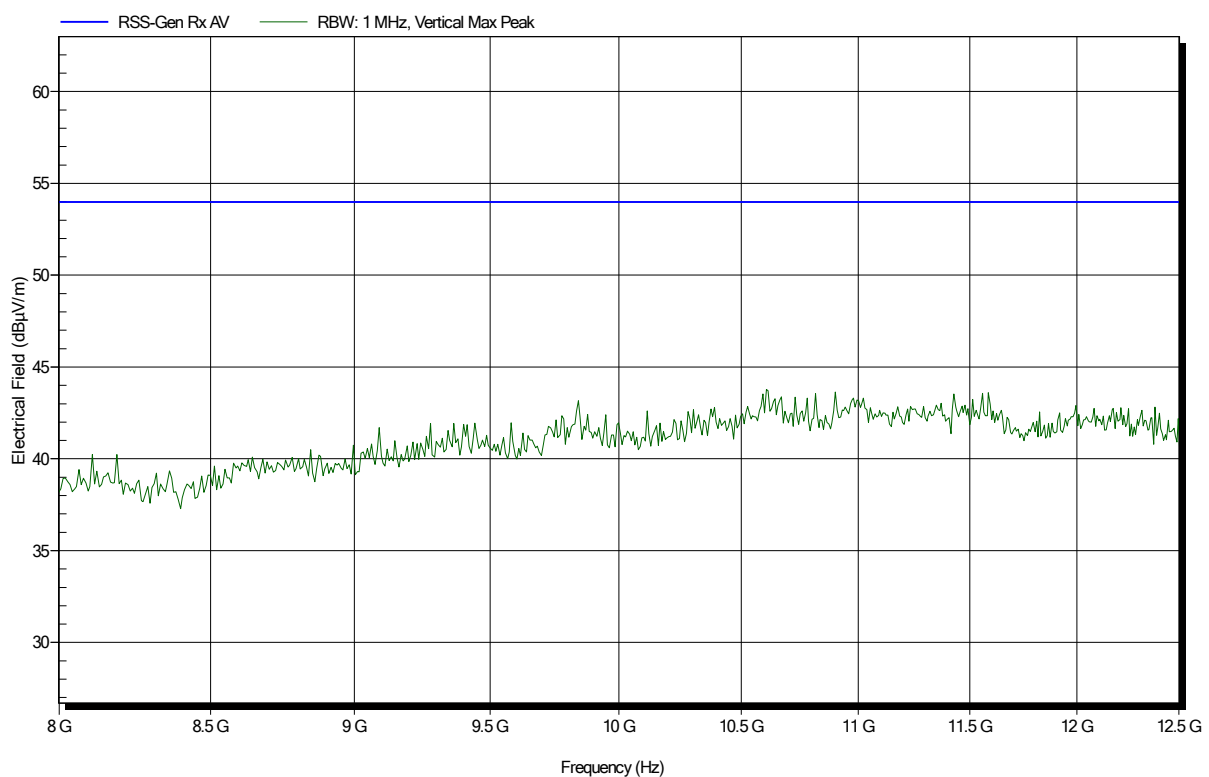


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 24°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; UMTS Band V; 891.6 MHz
 Test Date: 2020-01-29
 Note:

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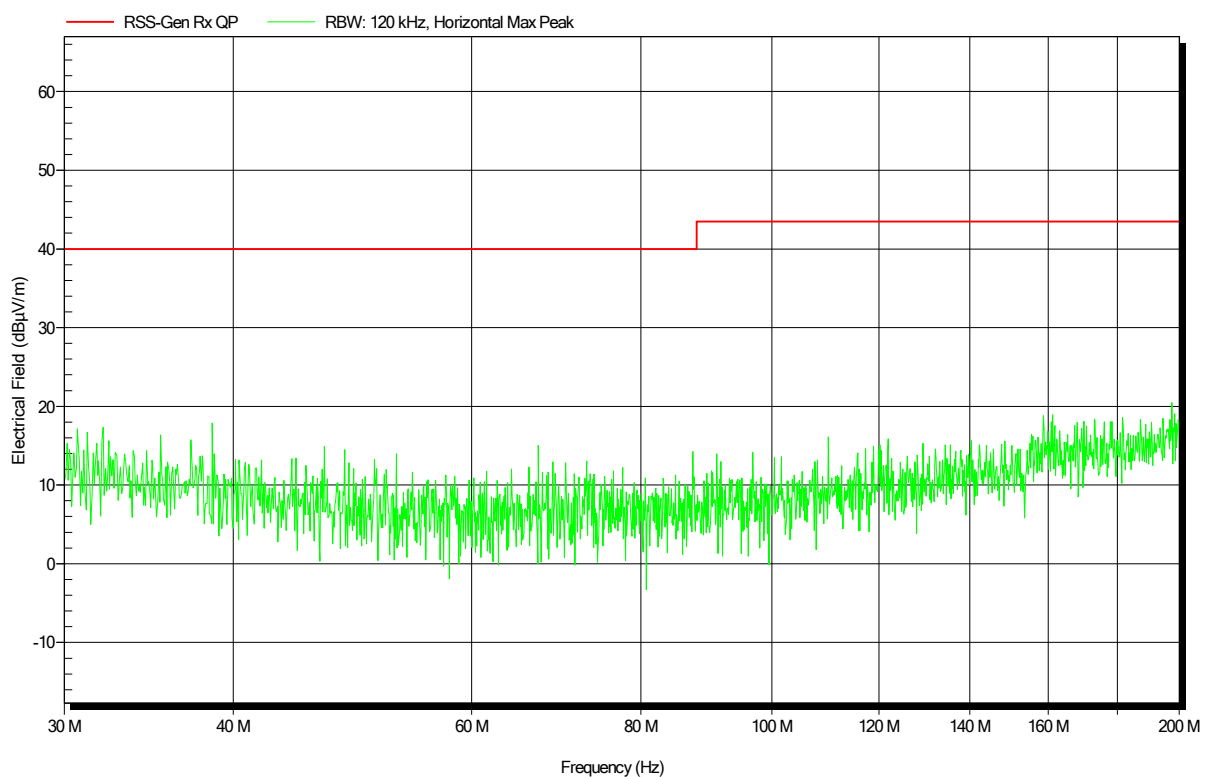


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3 m
 Mode: RX; Idle LTE 2; 1960 MHz
 Test Date: 2020-01-08
 Note:

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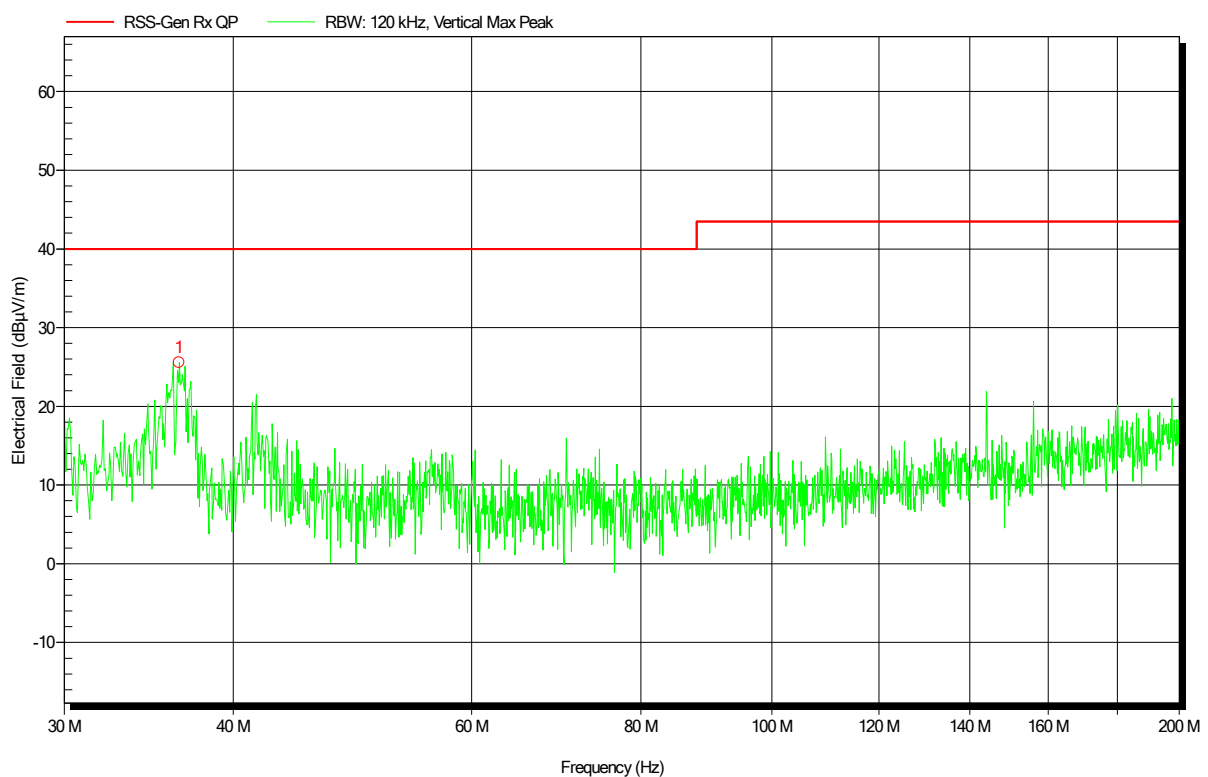


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3 m
Mode: RX; Idle LTE 2; 1960 MHz
Test Date: 2020-01-08
Note:

Index 26



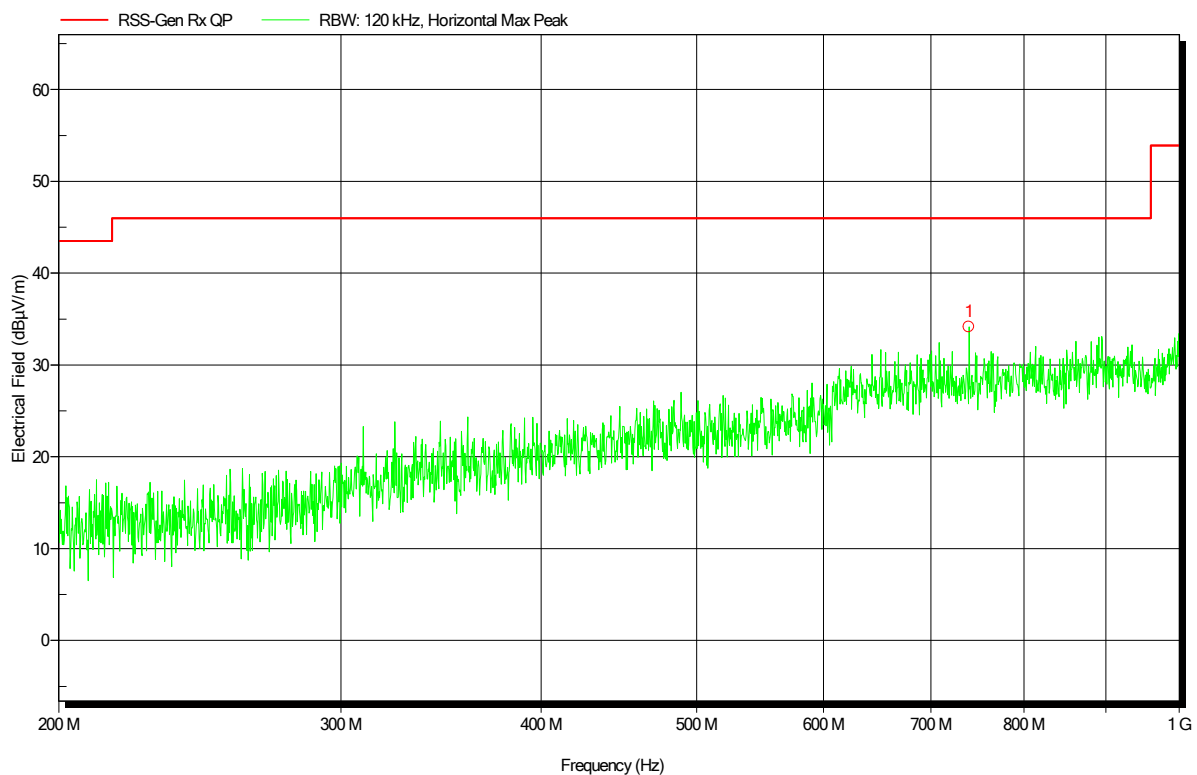
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
36.4853 MHz	25.6 dBµV/m	40 dBµV/m	-14.42 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HL 223, Horizontal
Measurement distance: 3 m
Mode: RX; Idle LTE 2; 1960 MHz
Test Date: 2020-01-08
Note:

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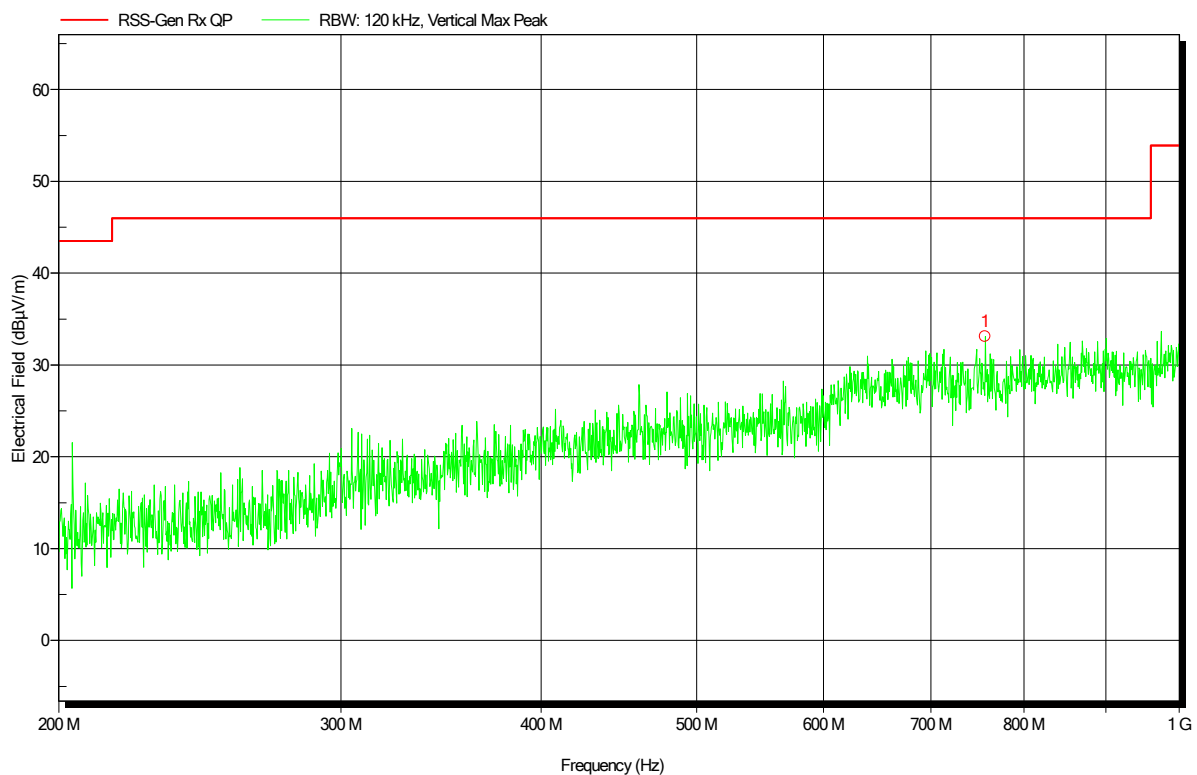
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
739.2375 MHz	34.1 dBµV/m	46 dBµV/m	-11.86 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HL 223, Vertical
Measurement distance: 3 m
Mode: RX; Idle LTE 2; 1960 MHz
Test Date: 2020-01-08
Note:

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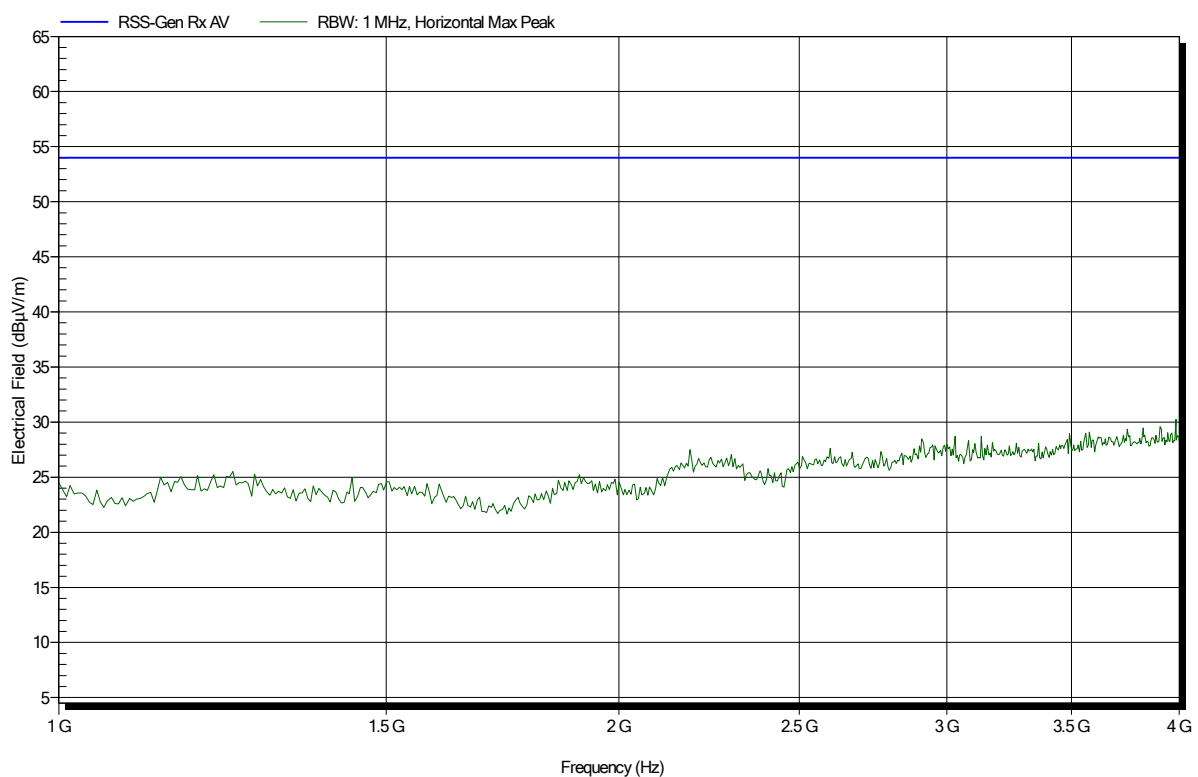
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
756.7697 MHz	33.1 dBµV/m	46 dBµV/m	-12.9 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 25°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; Idle LTE 2; 1960 MHz
 Test Date: 2020-01-28
 Note:

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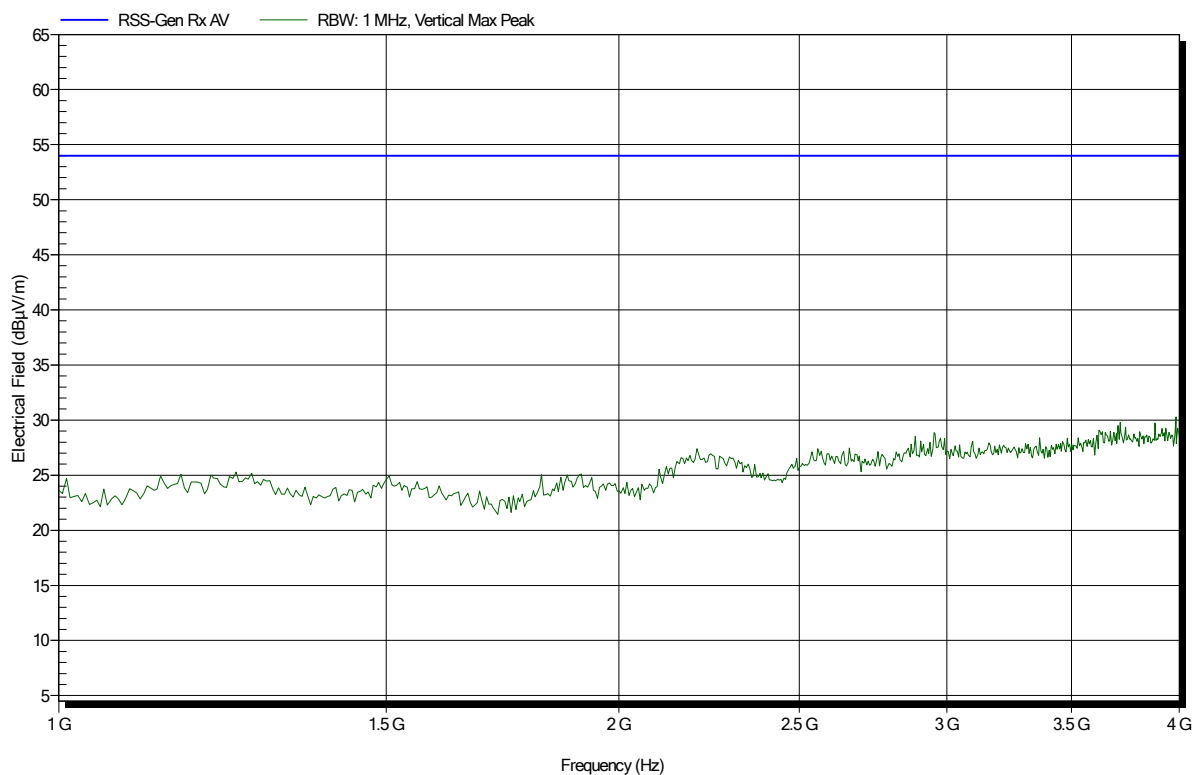


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 25°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: RX; Idle LTE 2; 1960 MHz
Test Date: 2020-01-28
Note:

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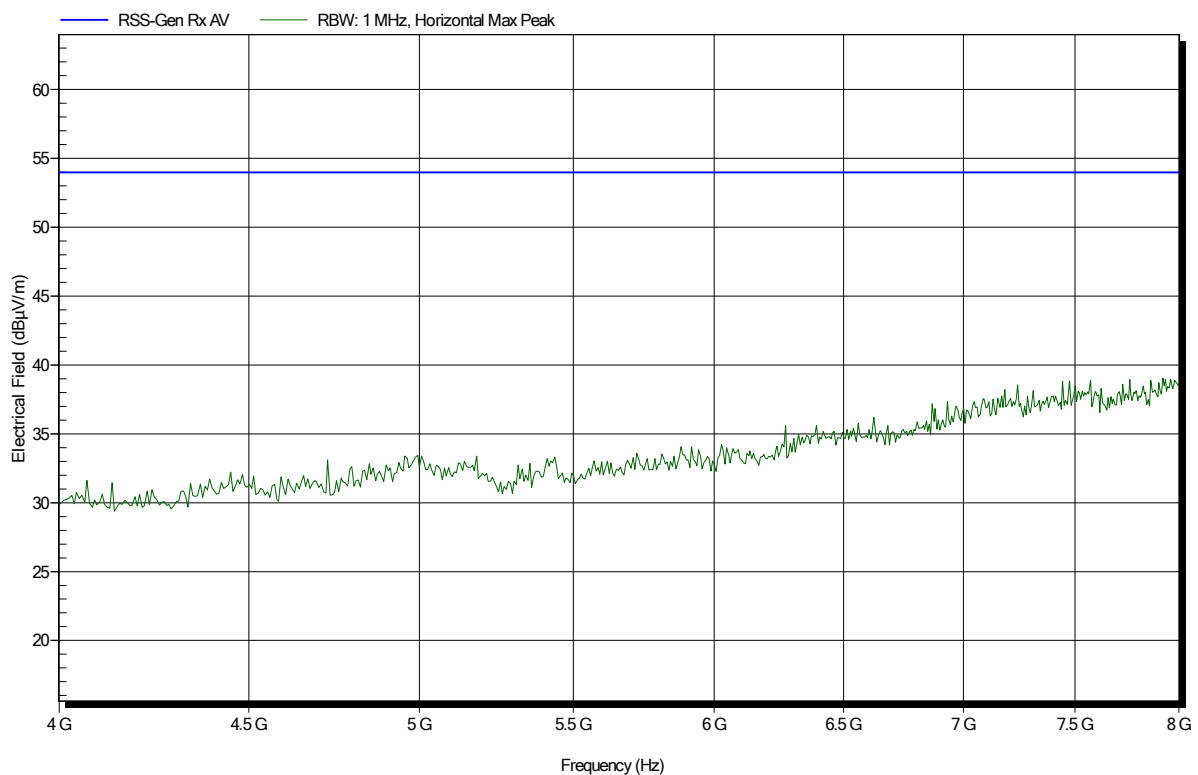


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 25°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: RX; Idle LTE 2; 1960 MHz
 Test Date: 2020-01-28
 Note:

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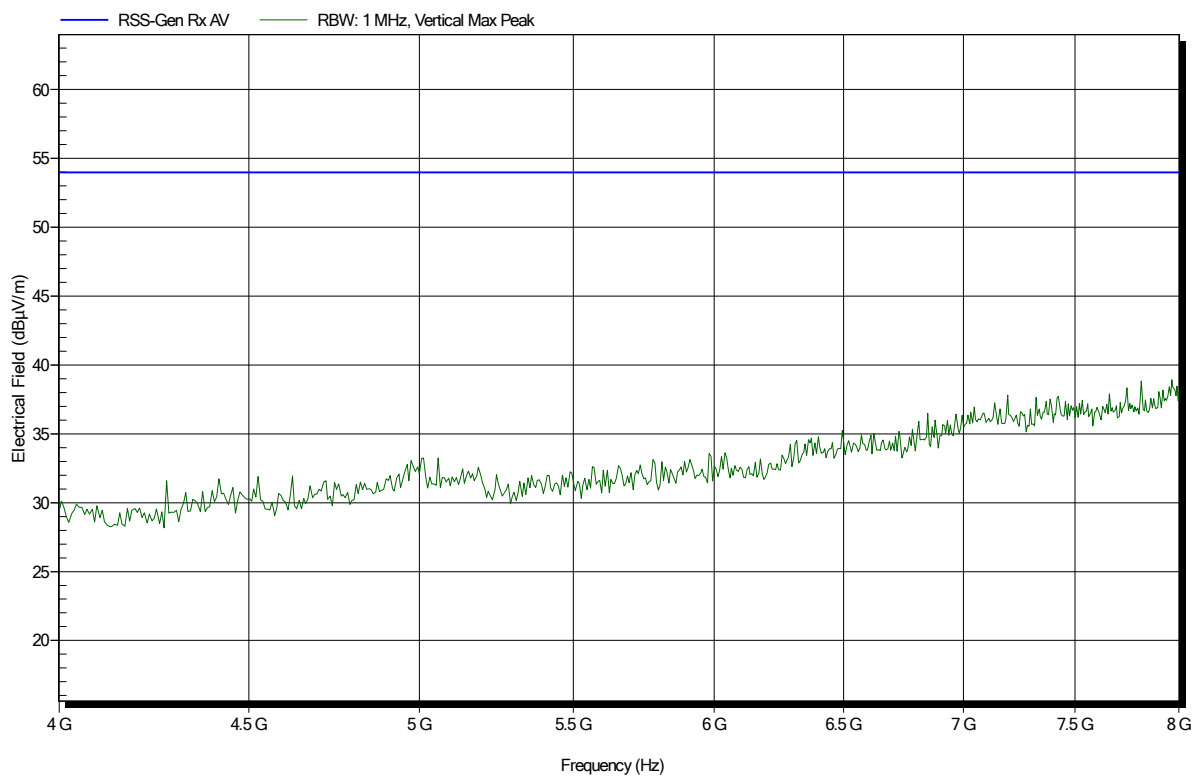


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 25°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: RX; Idle LTE 2; 1960 MHz
Test Date: 2020-01-28
Note:

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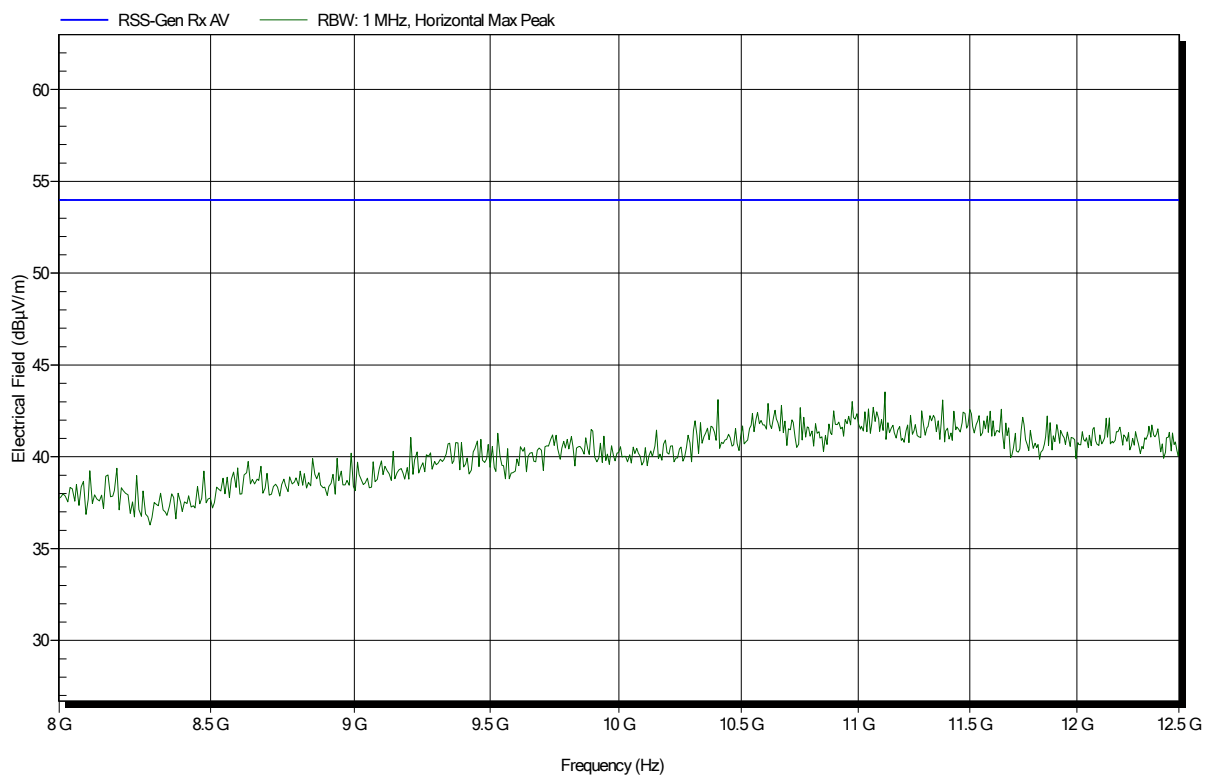


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarphone
Model: PTCarphone6 6609-006-101-51
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 25°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 1 m converted to 3m
Mode: RX; Idle LTE 2; 1960 MHz
Test Date: 2020-01-28
Note:

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Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarphone
 Model: PTCarphone6 6609-006-101-51
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 25°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: RX; Idle LTE 2; 1960 MHz
 Test Date: 2020-01-28
 Note:

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