

RADIO REPORT FCC 47 CFR Part 15C ISED Canada RSS-247 Digital transmission systems operating within the 2400 – 2483.5 MHz band	
Report Reference No	G0M-1909-8479-TFC247WF-V01
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	According to FCC/ISED rules
Standard	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 1, 2019-03
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 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 - 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	2020-01-30	
Total number of pages	48	
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	2020-01-30	Initial Release	

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
BPSK	Binary Phase Shift Keying
DSSS	Direct Sequence Spread Spectrum
EUT	Equipment Under Test
FCC	Federal Communications Commission
HT	High Throughput
IEEE 802.11	MAC and PHY Layer for WiFi
ISED	Innovation, Science and Economic Development Canada
OFDM	Orthogonal Frequency Division Multiplexing
QAM	Quadrature Amplitude Modulation
QPSK	Quadrature Phase Shift Keying
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V _{NOM}	Nominal supply voltage

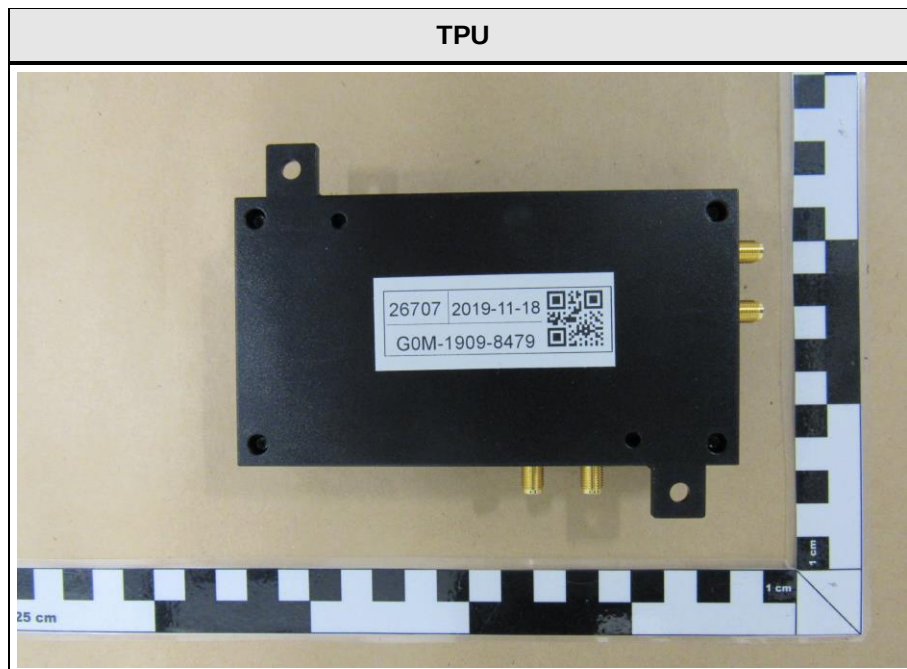
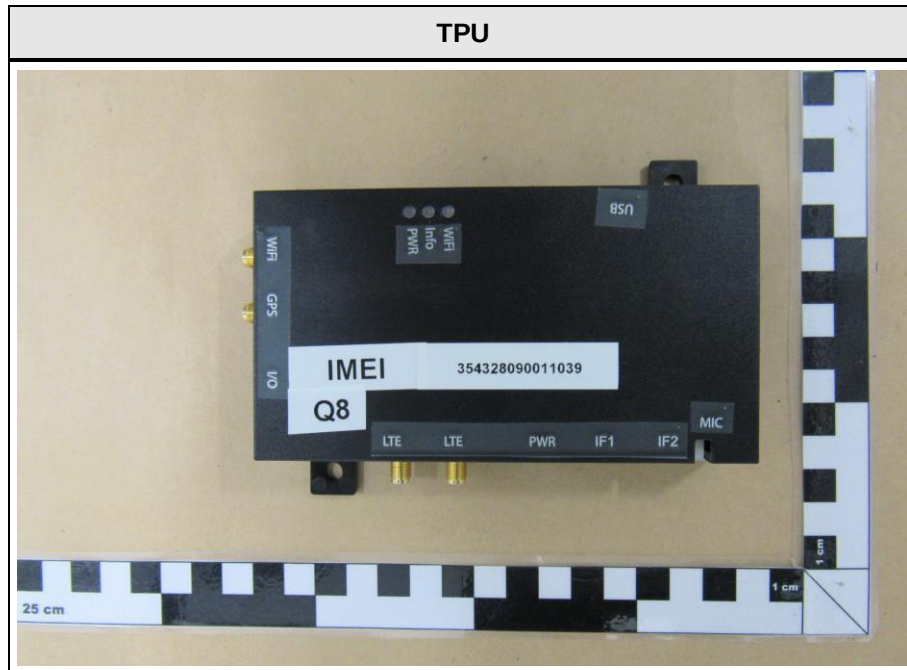
REPORT INDEX

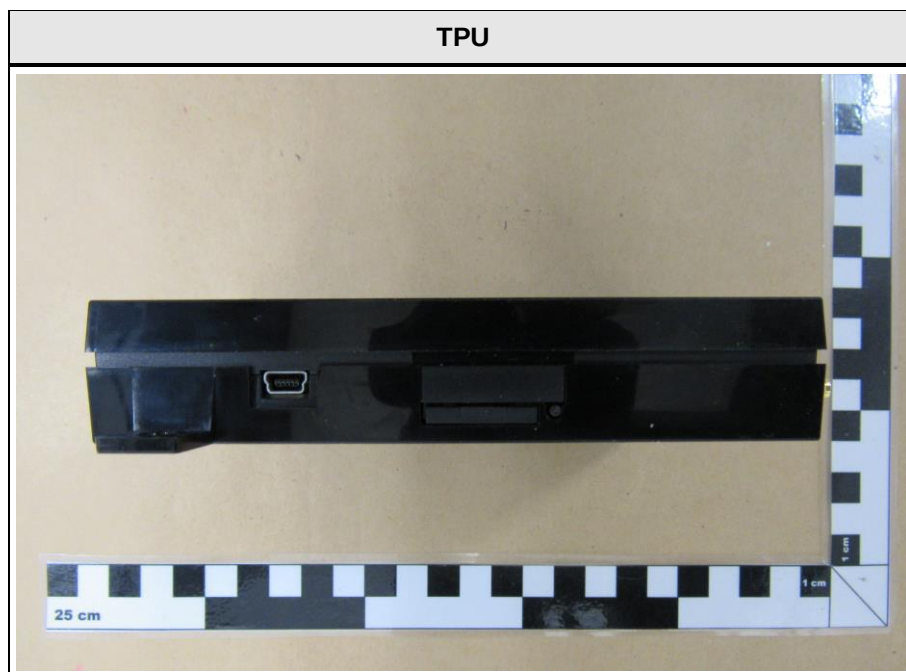
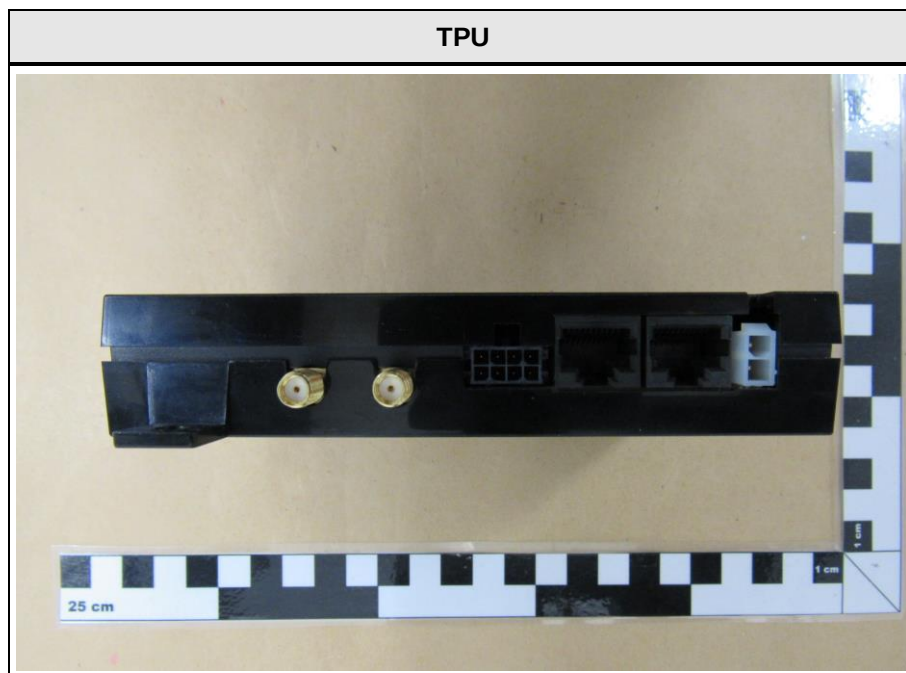
1	Equipment (Test Item) Under Test.....	6
1.1	Photos – Equipment External	7
1.2	Photos – Equipment Internal	14
1.3	Photos – Test Setup.....	15
1.4	Support Equipment.....	16
1.5	Test mode duty cycle	17
1.6	Test Modes	19
1.7	Test Frequencies.....	20
1.8	Sample emission level calculation.....	21
2	Result Summary.....	22
3	Test Conditions and Results.....	23
3.1	Test Conditions and Results - Transmitter radiated emissions	23
3.2	Test Conditions and Results - Receiver radiated emissions	26
ANNEX A	Transmitter spurious emissions	29
ANNEX B	Receiver spurious emissions	41

1 Equipment (Test Item) Under Test

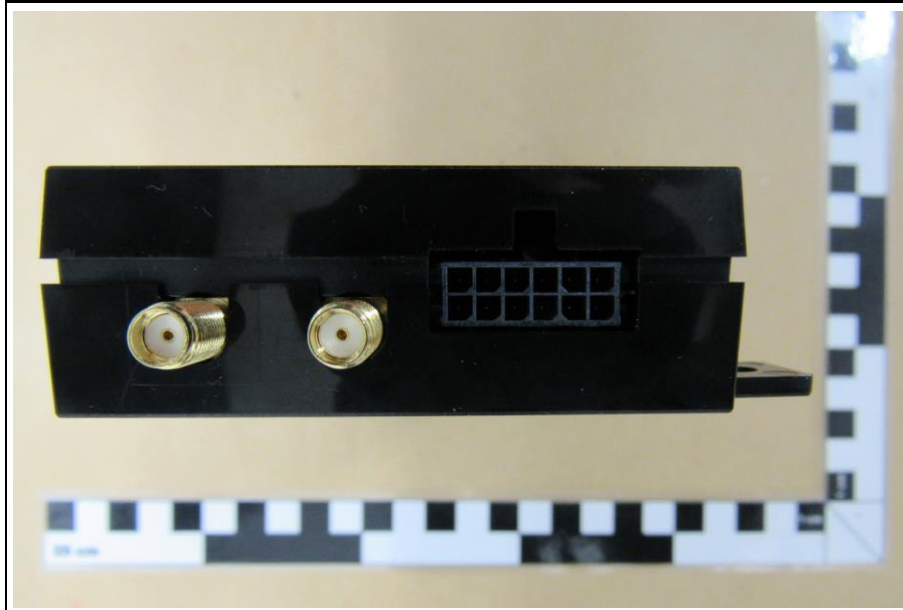
Description	PTCarPhone	
Model	PTCarPhone 6	
Additional Model(s)	None	
Brand Name(s)	PEI TEL	
Serial Number(s)	Q8 (IMEI 354328090011039)	
Hardware Version(s)	01	
Software Version(s)	V.6.01.01	
PMN	PTCarPhone6	
HVIN	01	
FVIN	V.6.01.01	
HMN	N/A	
FCC-ID	2AU9JPTC6	
IC	25691-PTC6	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400 - 2483.5 MHz	
Radio technology	IEEE 802.11 b/g/n (HT20 + HT40)	
Modulation	BPSK, QPSK, 16-QAM, 32-QAM	
Number of antenna ports	1	
Radio Module	Type	WLAN
	Model	WE866C3-P
	Manufacturer	Telit
	HW Version	unspecified
	SW Version	unspecified
	FCC-ID	RI7WE866C3
	IC	5131A-WE866C3
Antenna	Type	external
	Model	ANT-2/5-HDP-2000-SMA
	Manufacturer	Linx Technologies
	Gain	4.0 dBi
Supply Voltage	V _{NOM}	14 VDC
Operating Temperature	T _{NOM}	20 °C
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

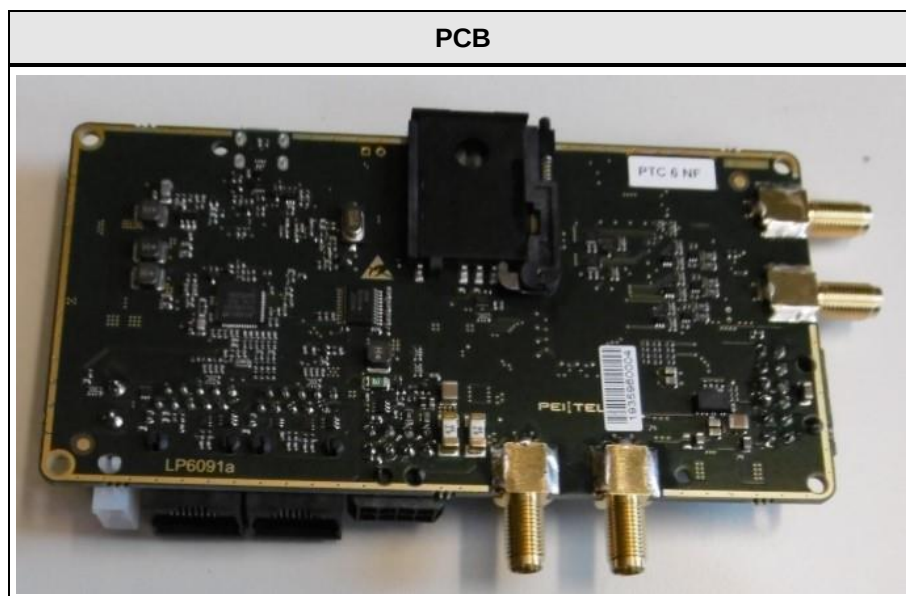
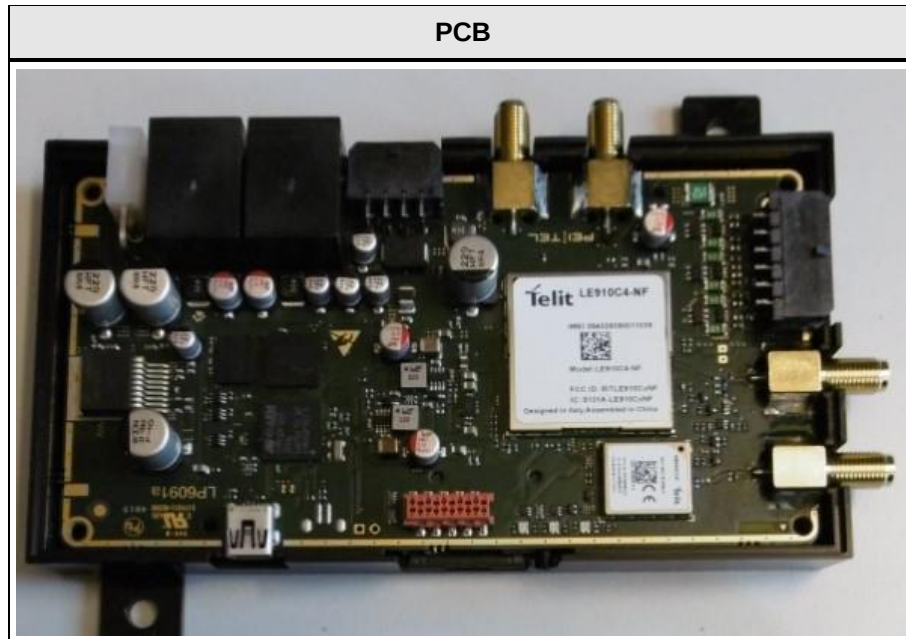


MICROPHONE



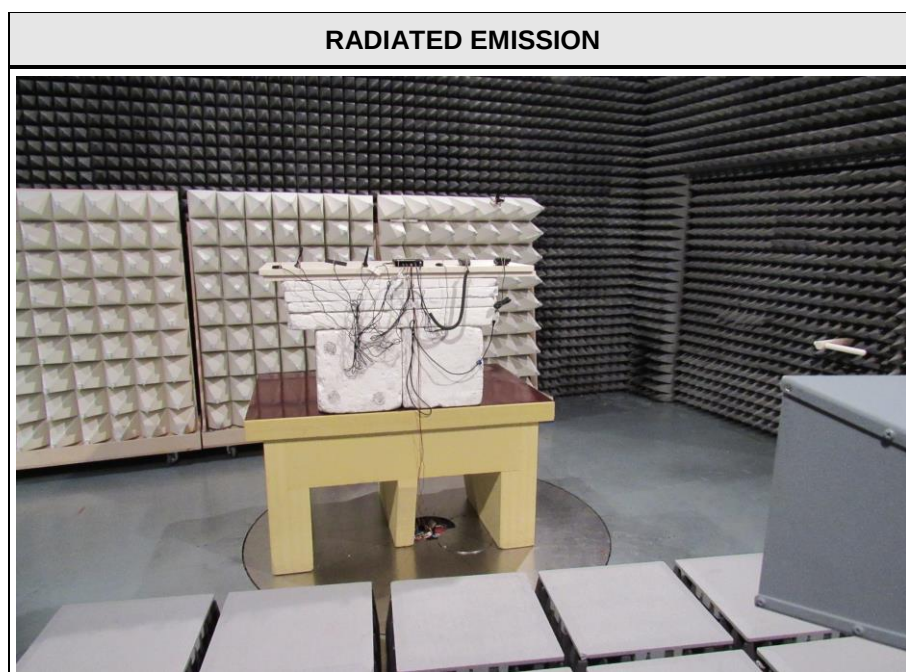
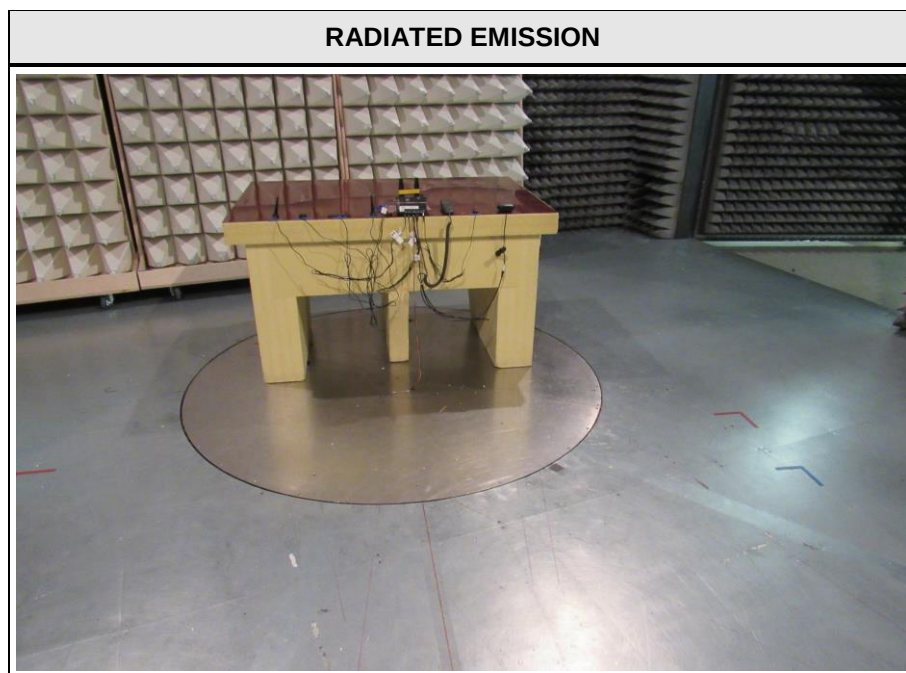


1.2 Photos – Equipment Internal



Note: Internal photos provided by manufacturer.

1.3 Photos – Test Setup



1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	AC & DC Power Supply	Chroma ATE Inc.	61604	
SFT	Qualcomm Radio Control Tool	Qualcomm	QRCT4	to set channels etc.
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.5 Test mode duty cycle

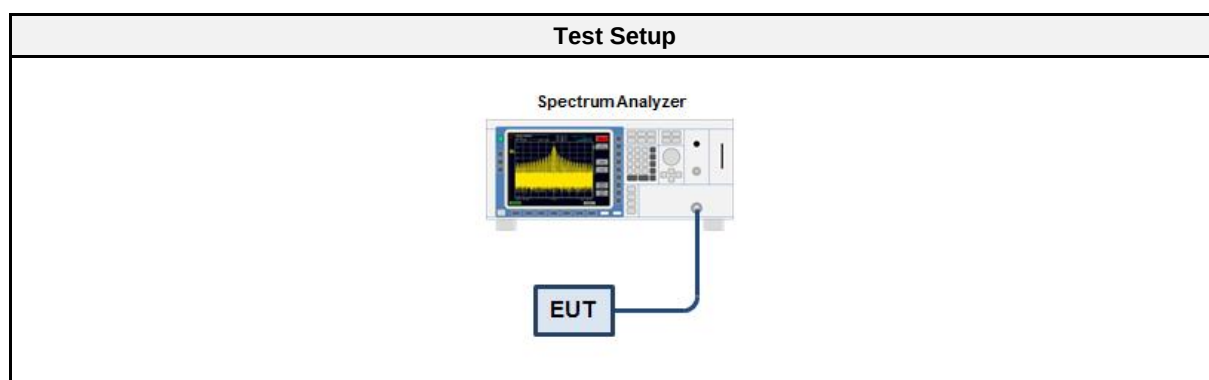
1.5.1 Information

Test Information	
Measurement Method	ANSI C63.10 11.6

1.5.2 Requirements

Requirements	
Duty cycle	Duty cycle correction
$\geq 98 \%$	No correction required
$< 98 \%$	Correction required ($10 \times \log_{10}(1/DC)$)

1.5.3 Setup



1.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2019-09	2020-09

1.5.5 Procedure

Test Procedure
1. EUT set to test mode 2. Span is set to zero span 3. Detector set to peak 4. Sweep time is set long enough to capture at least 5 bursts 5. Envelope peak value of emission spectrum is selected 6. The maximum burst duration T_{ON} is measured using two markers set to the start and the end of the longest burst 7. The minimum idle duration T_{OFF} is measured using two markers set to the start and the end of the shortest idle period 8. The duty cycle is calculated by $DC = T_{ON} / (T_{ON} + T_{OFF})$ 9. The duty cycle correction is calculated by $DC = 10 \times \log_{10}(T_{ON} / (T_{ON} + T_{OFF}))$

1.5.6 Results

Duty Cycle Results		
Mode	Duty Cycle	Correction Factor [dB]
DSSS	99%	0

1.6 Test Modes

Mode	Description
DSSS (IEEE 802.11b)	Mode = Transmit Modulation = BPSK Spreading = DSSS Bandwidth = 20 MHz Duty cycle = 99% Power setting = TxPowerAuto Data rate = 1 Mbps
Receive	Mode = Receive
Comment: The above settings were found as worst case in FCC modul test report 2323ERM.005A1	

1.7 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx / Rx	6	2437

1.8 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:

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

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/m	= 47.5 dBμV/m	:	47.5 dBμV/m - 57.0 dBμV/m	= -9.5 dB

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
ISED RSS-Gen, Issue 5 (section 6.6)	Occupied Bandwidth	ANSI C63.10-2013	N/R	Informational only
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	N/T	
FCC § 15.247(b)(1) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	N/T	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	N/T	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	N/T	No direct or indirect connection to AC mains
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	N/T	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	N/T	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.10-2013	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 - Transmitter radiated emissions

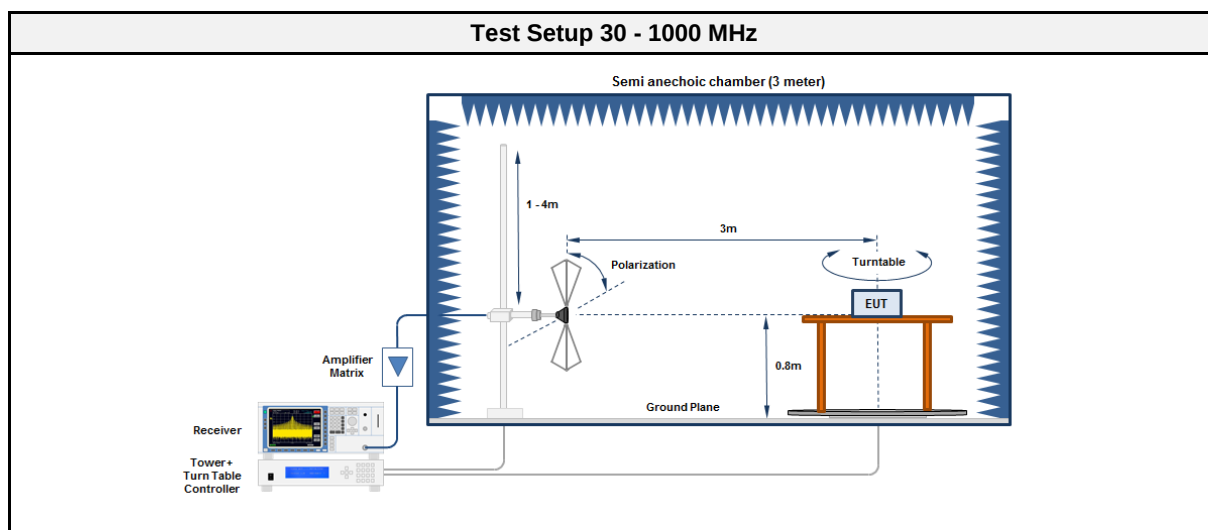
3.1.1 Information

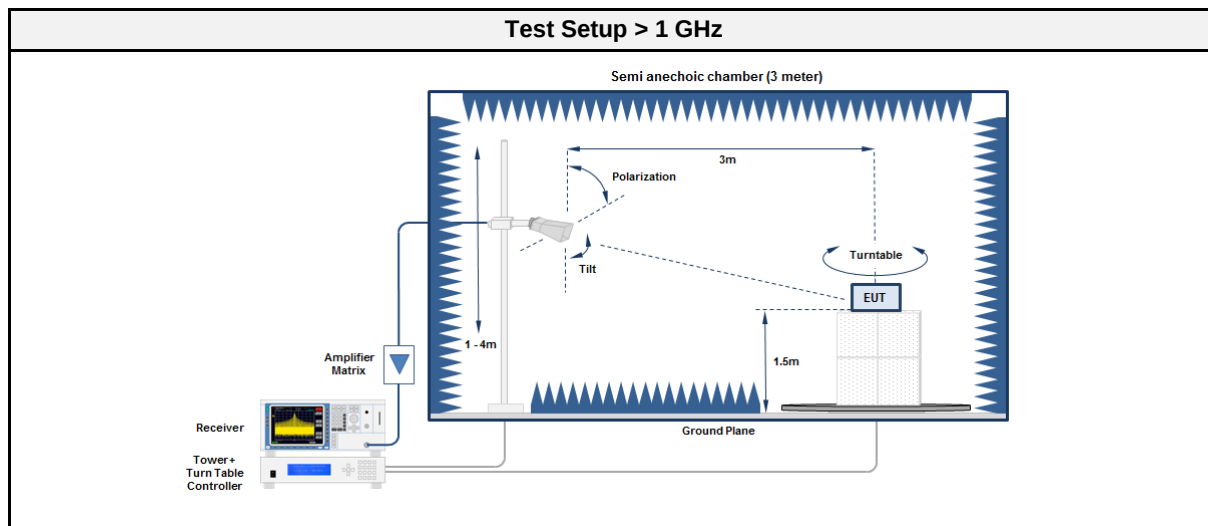
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 (section 6.13)
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Toralf Jahn
Date	2019-12-30

3.1.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [$\mu\text{V}/\text{m}$]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.1.3 Setup





3.1.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2016.1.10

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	-	-
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	-	-
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

3.1.5 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

3.1.6 Results

Test Results - DSSS						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2437	163.4899	28.00	pk	hor	43.50	-15.52
2437	164.5408	18.60	qpk	ver	43.50	-24.93
2437	171.6507	19.10	qpk	ver	43.50	-24.37
2437	608.2858	36.50	pk	hor	46.00	-09.52
2437	610.5674	33.90	pk	ver	46.00	-12.10
2437	2771	42.69	pk	ver	74.00	-31.31
2437	3614.5	40.12	pk	hor	74.00	-33.88
2437	7484	40.52	pk	ver	74.00	-33.48

3.2 Test Conditions and Results - Receiver radiated emissions

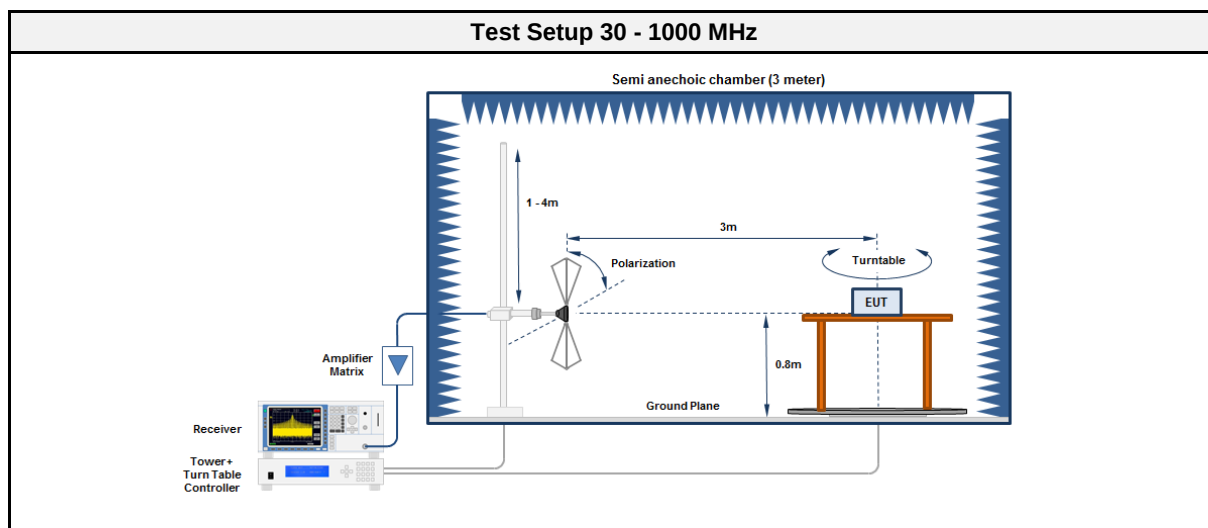
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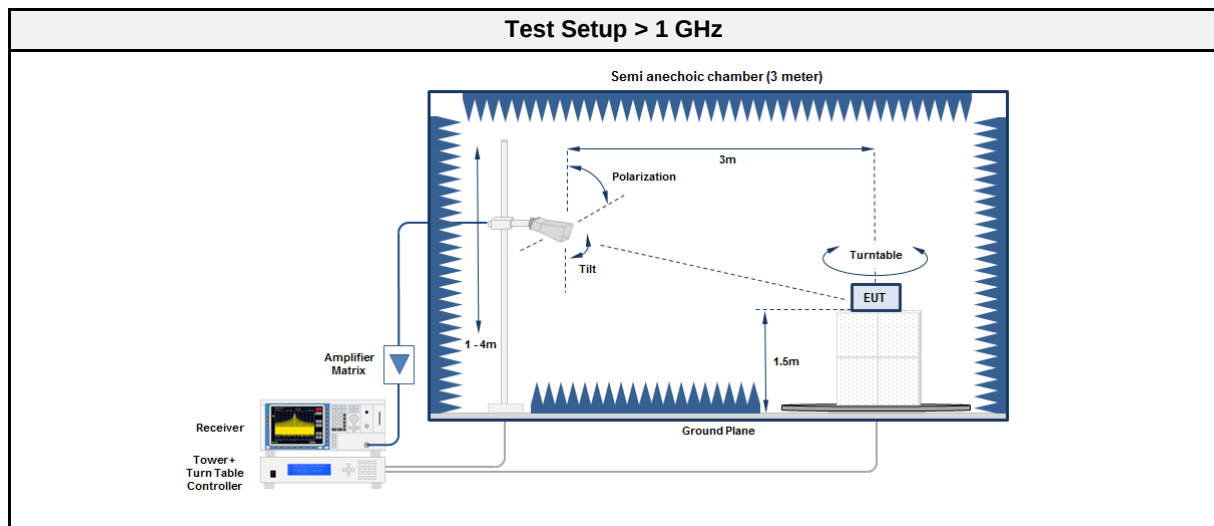
Test Information	
Reference	ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.5, 6.6, 11.12
Operator	Toralf Jahn
Date	2020-01-02

3.2.2 Limits

Limits			
Frequency [MHz]	Detector	Field strength [dB μ V/m]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.2.3 Setup





3.2.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2016.1.10

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	-	-
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	-	-
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

3.2.5 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

3.2.6 Results

Test Results						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2437	33.2427	21.90	pk	ver	40.00	-18.06
2437	35.1643	16.70	pk	hor	40.00	-23.34
2437	906.8148	33.70	pk	ver	46.00	-12.28

ANNEX A Transmitter spurious emissions

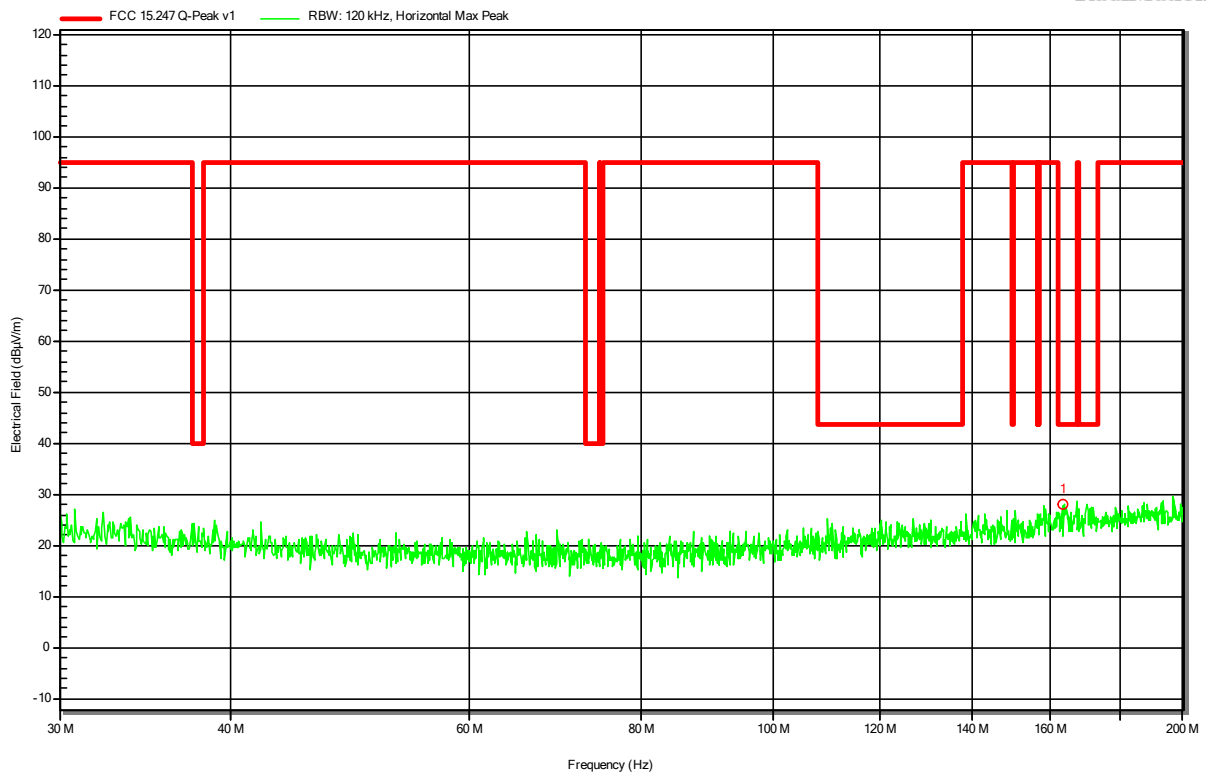
Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
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: TX; WLAN 2437 MHz
Test Date: 2019-12-30
Note:

Index 6

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Status
163.4899 MHz	28 dBµV/m	43.5 dBµV/m	-15.52 dB	Pass

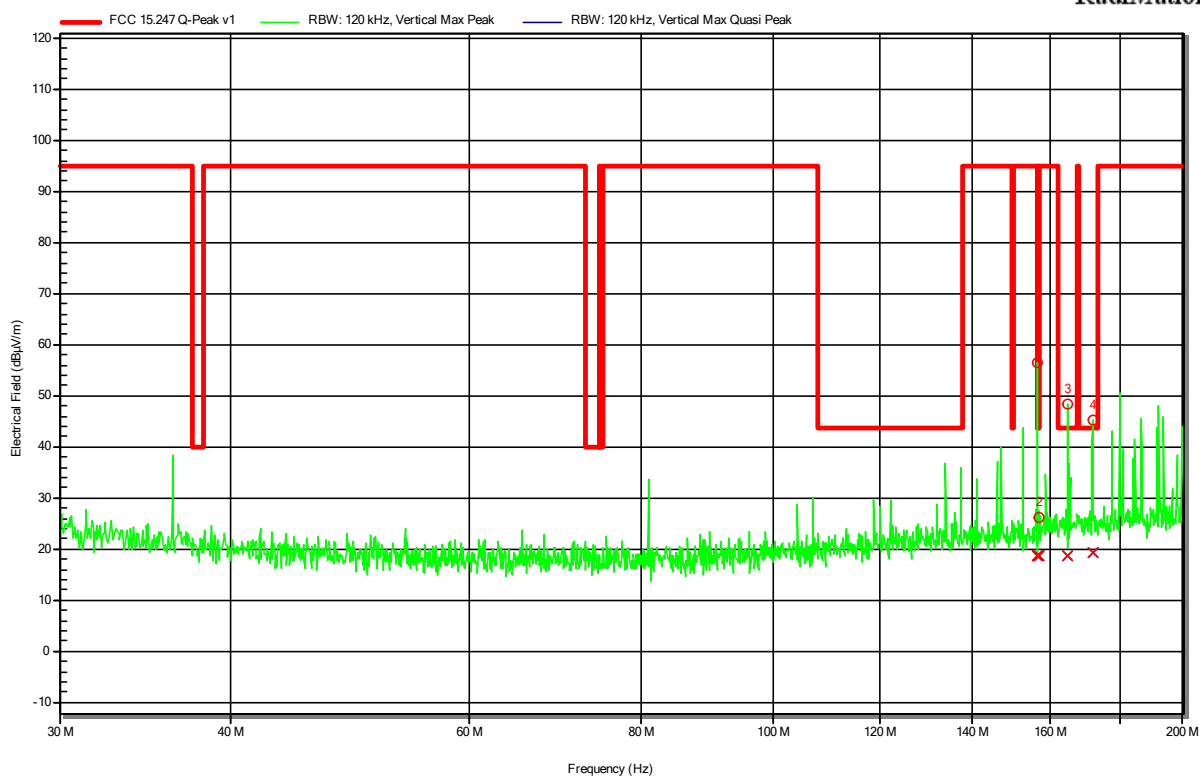
Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 23°C, Vnom: 14.0 VDC
Antenna: Rohde & Schwarz HK 116, Vertical
Measurement distance: 3 m
Mode: TX; WLAN 2437 MHz
Test Date: 2019-12-27
Note:

Index 5

RadiMation



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status
156.512 MHz	18.6 dBμV/m	95 dBμV/m	-76.37 dB	Pass
157.0046 MHz	18.7 dBμV/m	95 dBμV/m	-76.3 dB	Pass
164.5408 MHz	18.6 dBμV/m	43.5 dBμV/m	-24.93 dB	Pass
171.6507 MHz	19.1 dBμV/m	43.5 dBμV/m	-24.37 dB	Pass

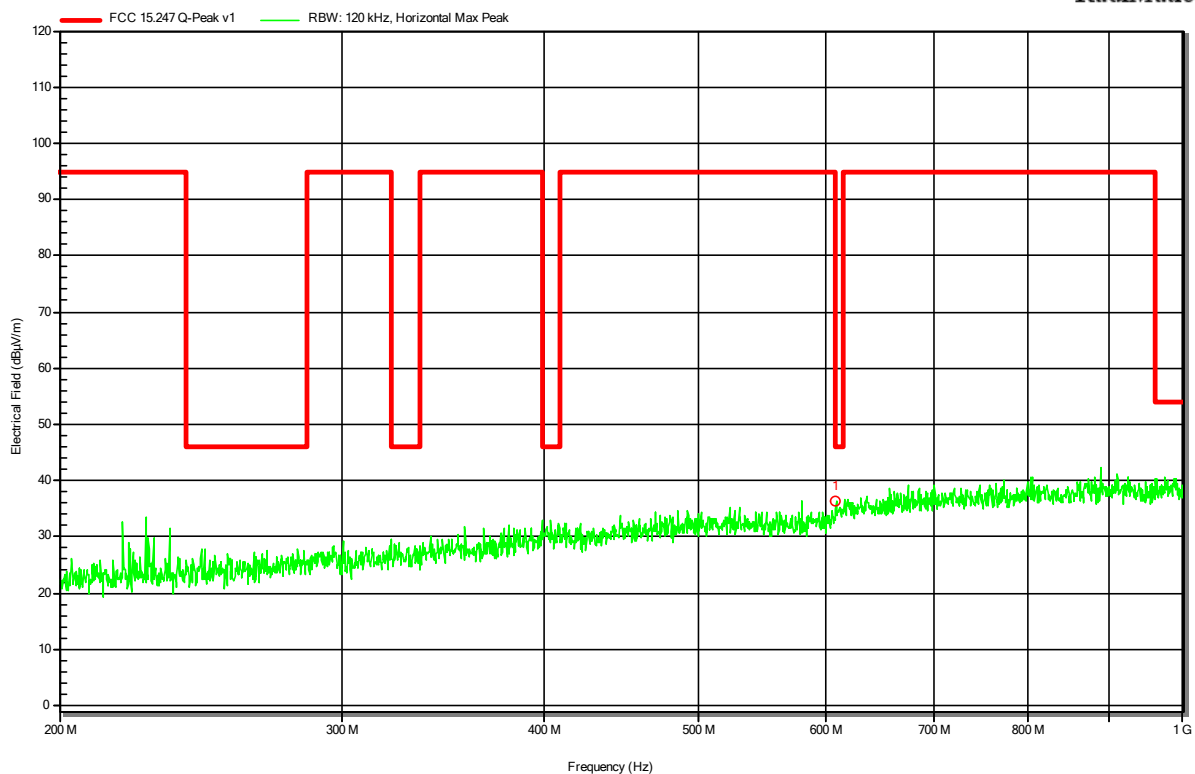
Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 23°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3 m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2019-12-27
 Note:

Index 2

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Status
608.2858 MHz	36.5 dBμV/m	46 dBμV/m	-9.52 dB	Pass

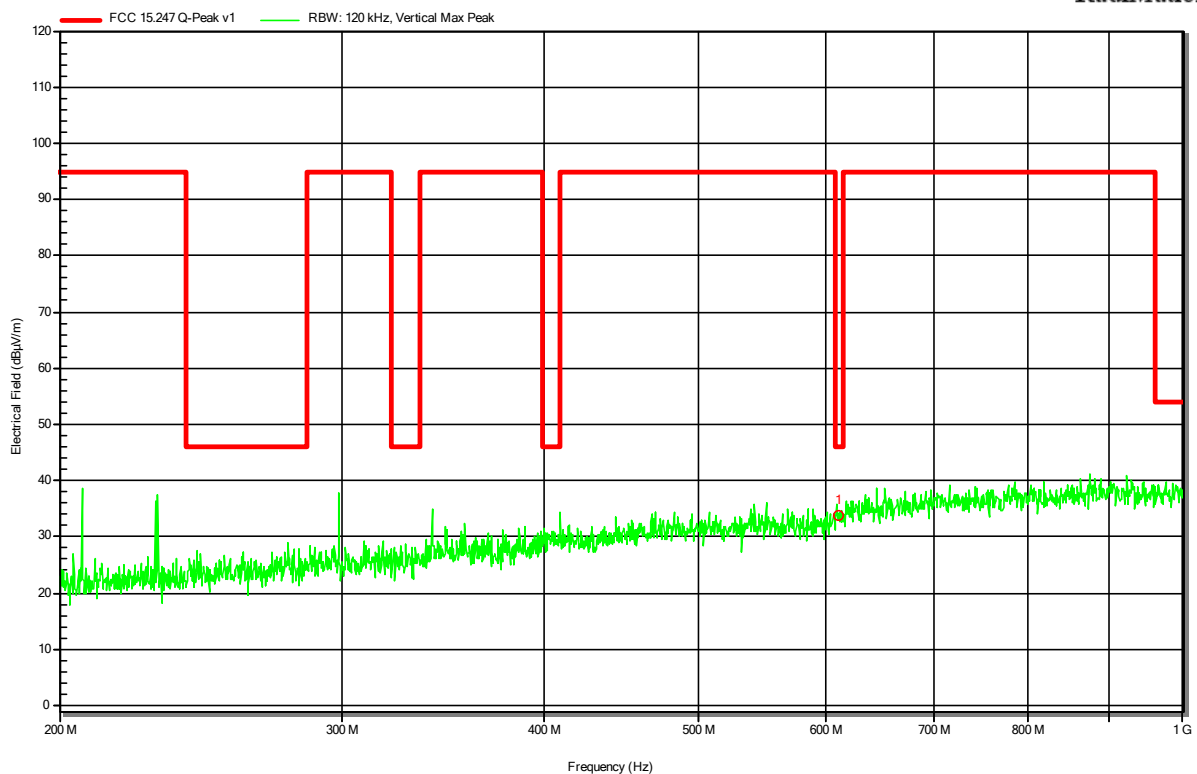
Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 23°C, Vnom: 14.0 VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3 m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2019-12-27
 Note:

Index 3

RadiMation



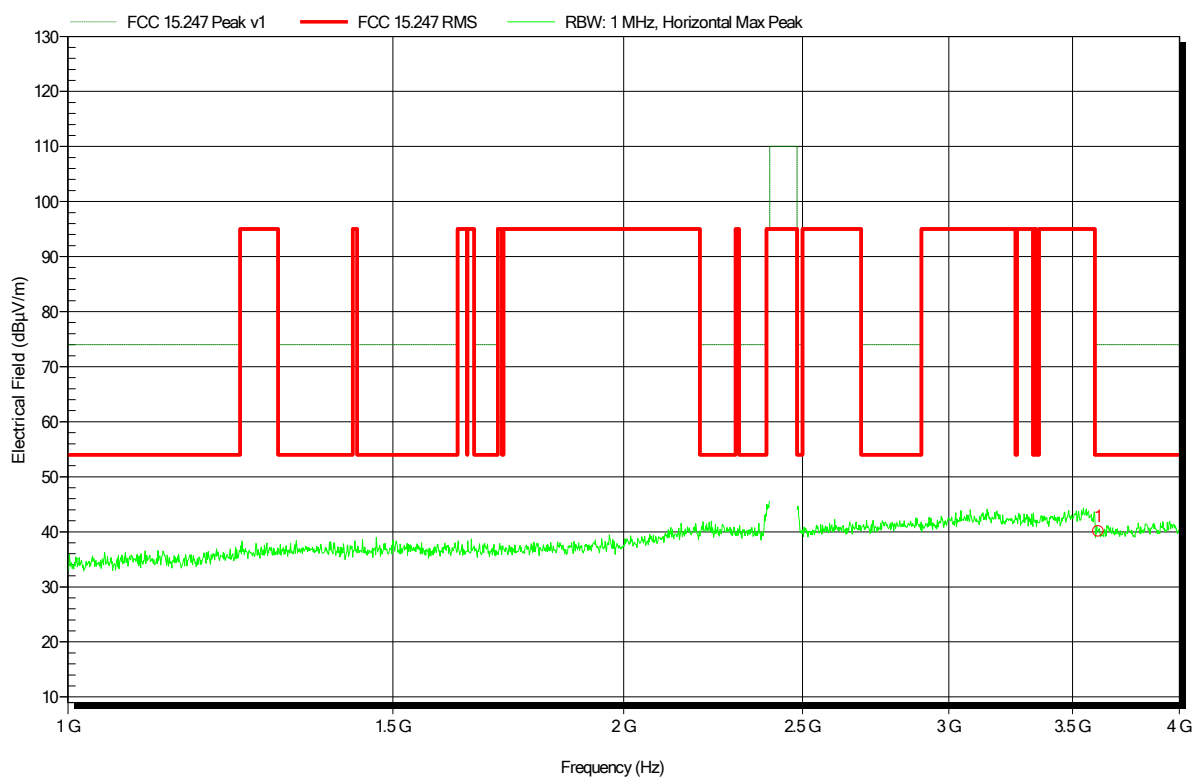
Frequency	Peak	Peak Limit	Peak Difference	Status
610.5674 MHz	33.9 dBμV/m	46 dBμV/m	-12.1 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom:
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 3 m
Mode: TX; WLAN 2437 MHz
Test Date: 2020-01-14
Note:

Index 1

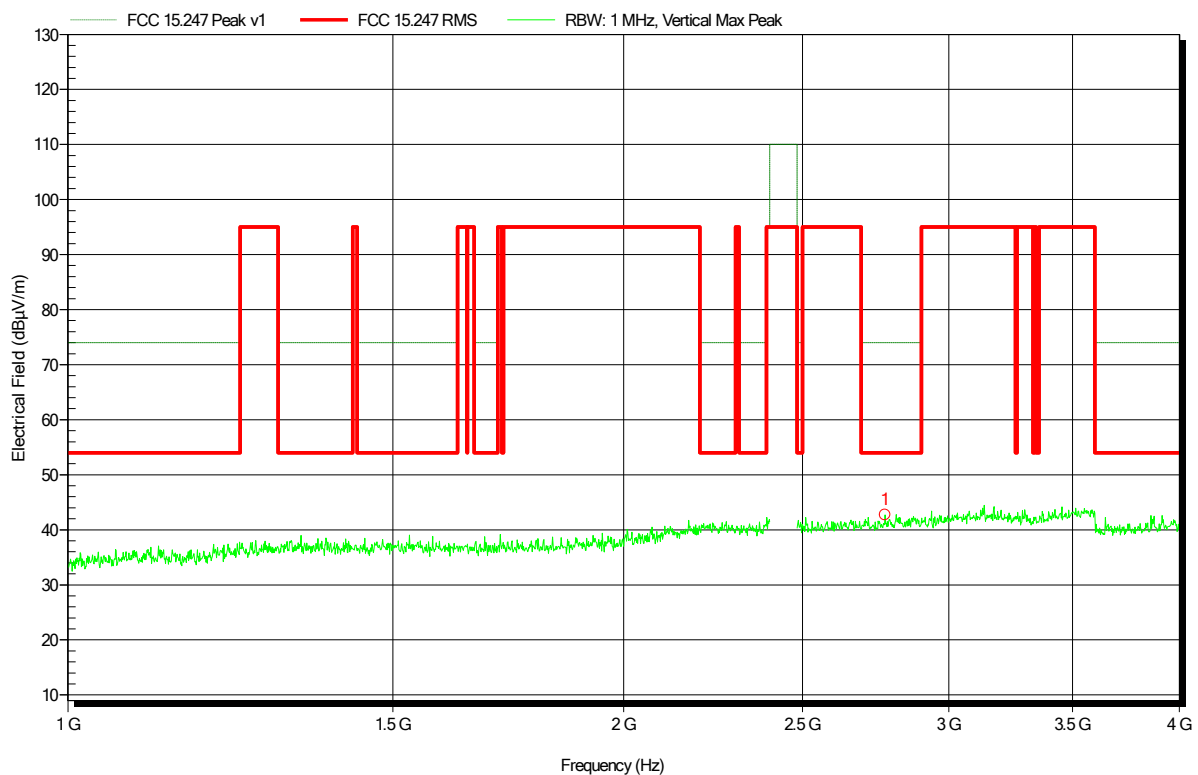


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
3.6145 GHz	40.12 dBµV/m	74 dBµV/m	-33.88 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom:
 Antenna: Schwarzbeck BBHA 9120D, Vertical
 Measurement distance: 3 m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-14
 Note:

Index 2



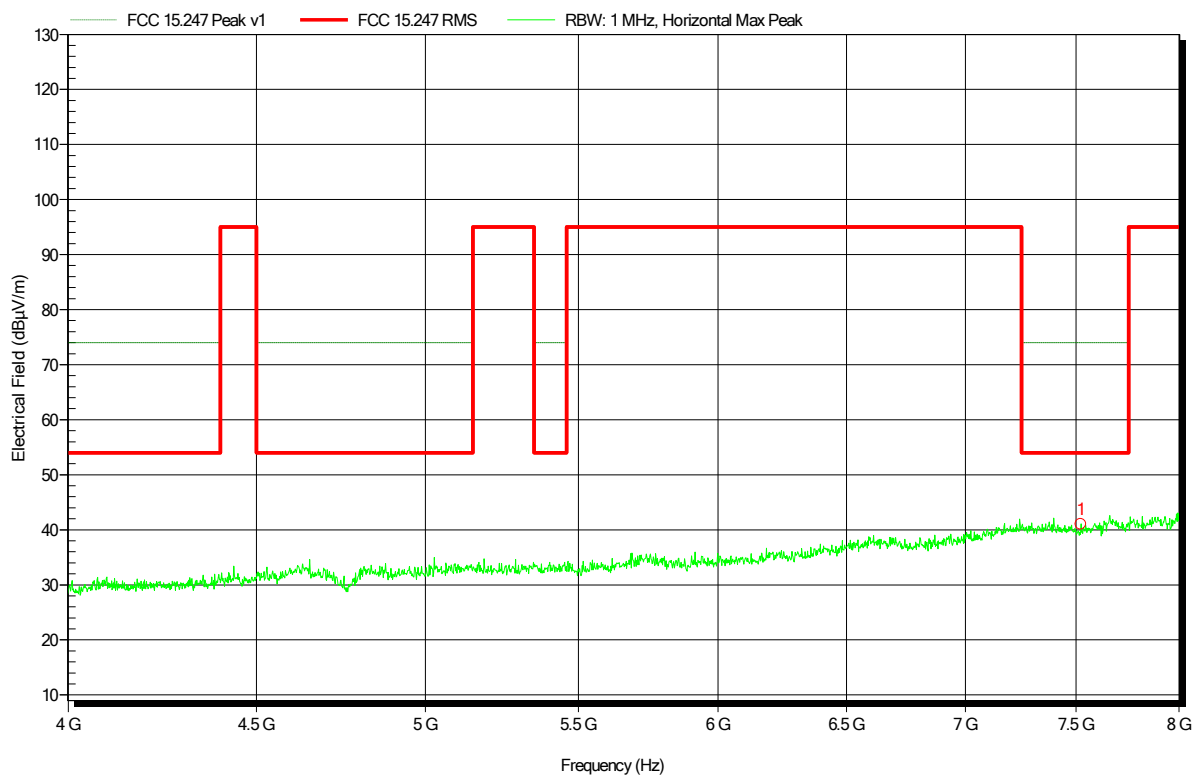
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
2.771 GHz	42.69 dBµV/m	74 dBµV/m	-31.31 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 21°C, Vnom:
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-15
 Note:

Index 5



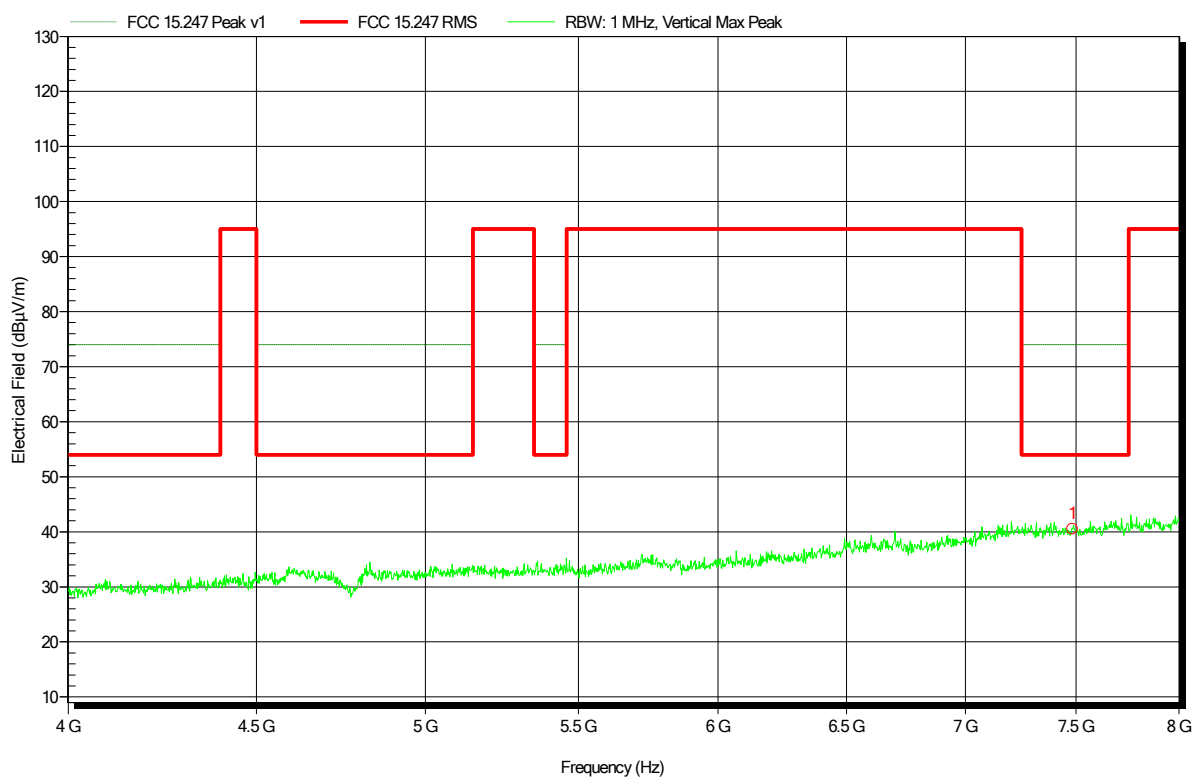
Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.523 GHz	41.05 dBμV/m	74 dBμV/m	-32.95 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 21°C, Vnom:
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; WLAN 2437 MHz
Test Date: 2020-01-15
Note:

Index 8

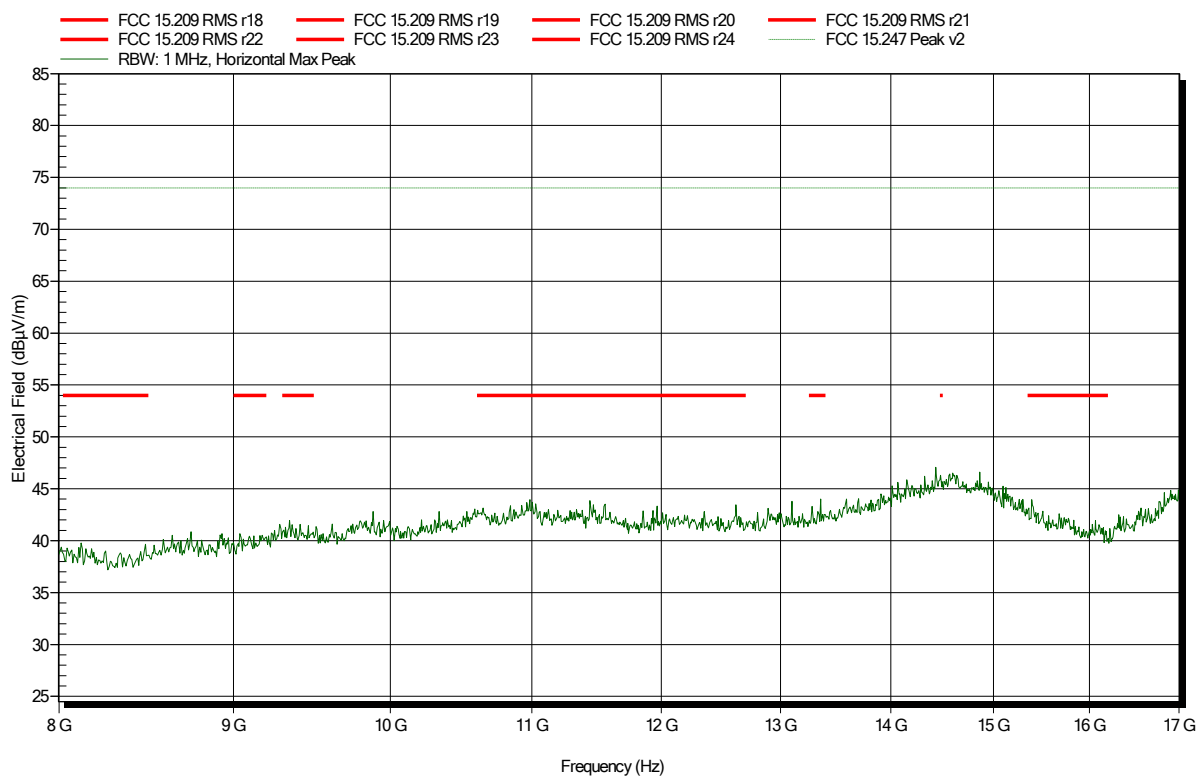


Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.484 GHz	40.52 dBµV/m	74 dBµV/m	-33.48 dB	Pass

Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 24°C, Vnom:
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-29
 Note:

Index 10

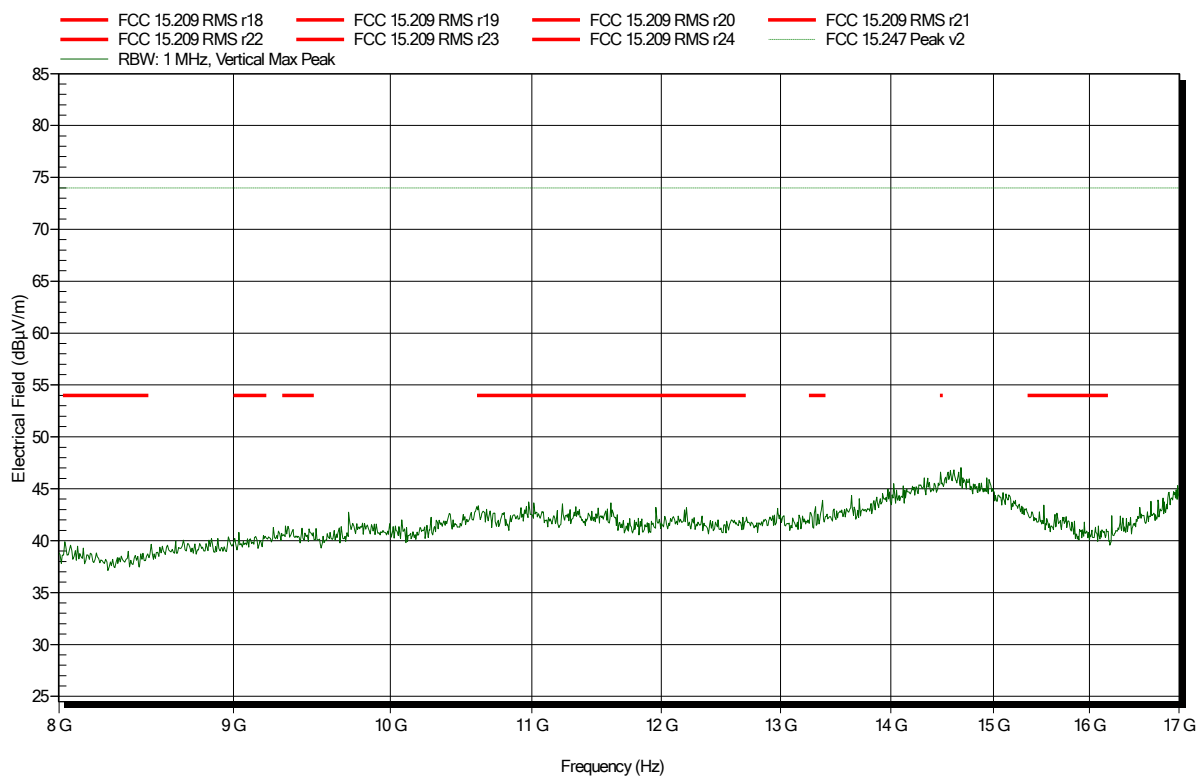


Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
Test Site: Eurofins Product Service GmbH
Operator: Toralf Jahn
Test Conditions: Tnom: 24°C, Vnom:
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 1 m converted to 3m
Mode: TX; WLAN 2437 MHz
Test Date: 2020-01-29
Note:

Index 11

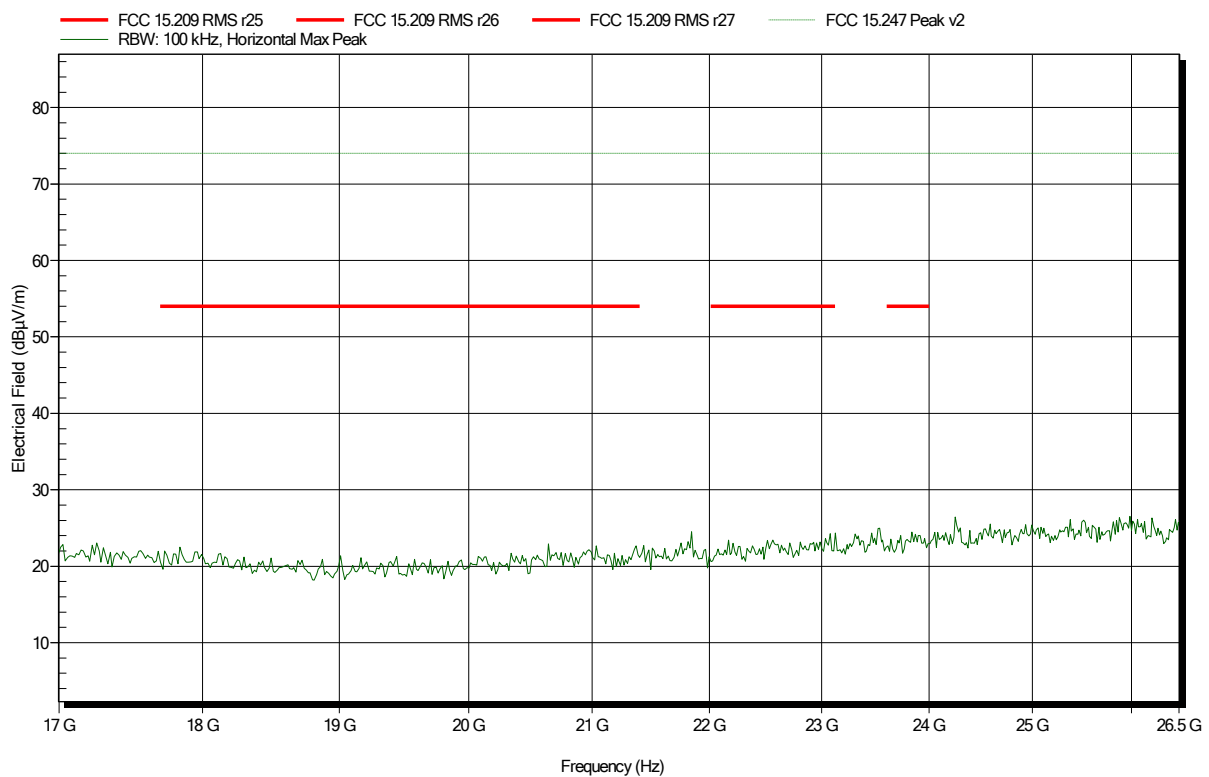


Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 24°C, Vnom:
 Antenna: Amplifier Research AT4560, Horizontal
 Measurement distance: 1 m converted to 3m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-29
 Note:

Index 12

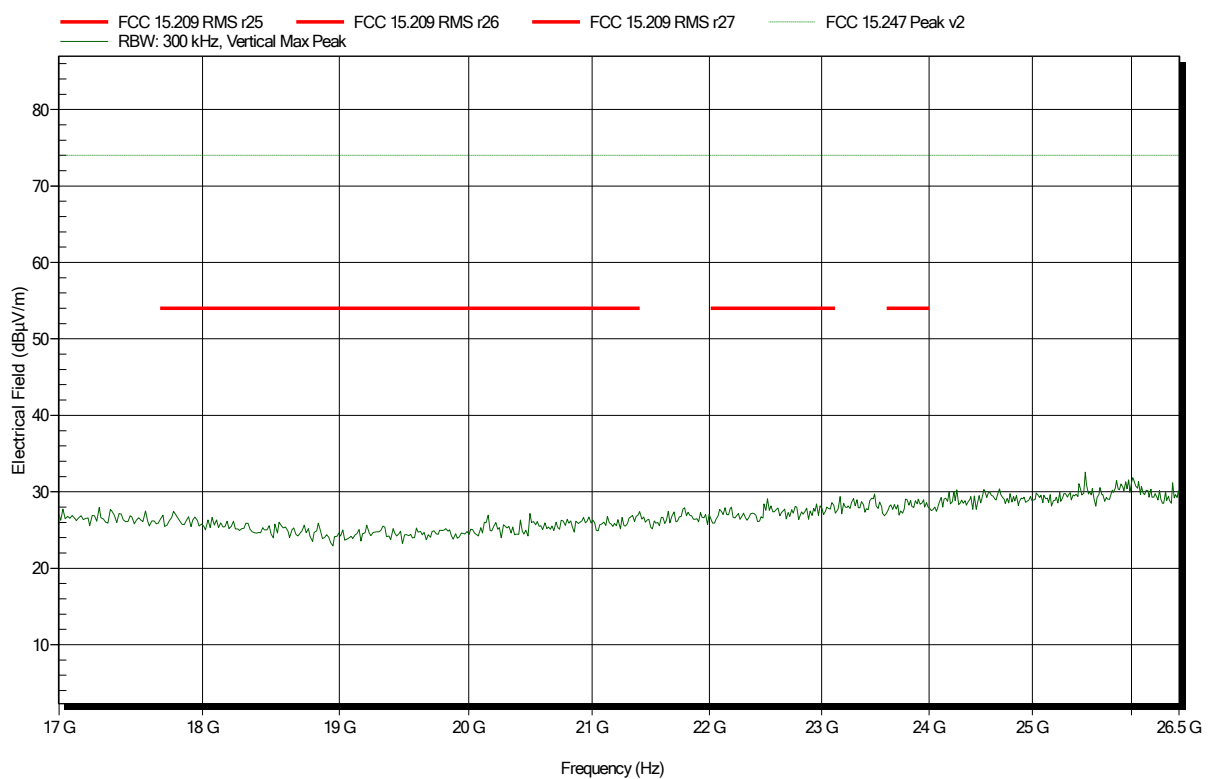


Spurious emissions according to FCC 15.247

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Toralf Jahn
 Test Conditions: Tnom: 24°C, Vnom:
 Antenna: Amplifier Research AT4560, Vertical
 Measurement distance: 1 m converted to 3m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-29
 Note:

Index 13



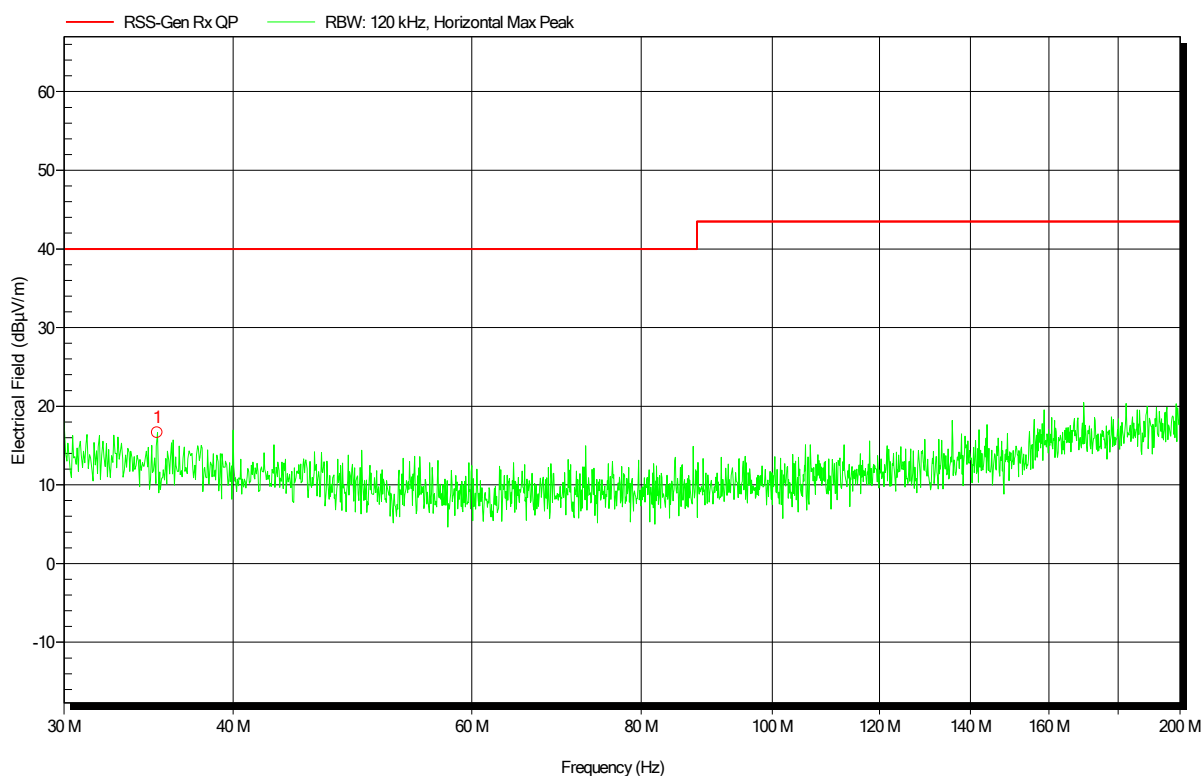
ANNEX B Receiver spurious emissions

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 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; WLAN 2437 MHz
 Test Date: 2020-01-02
 Note:

Index 14



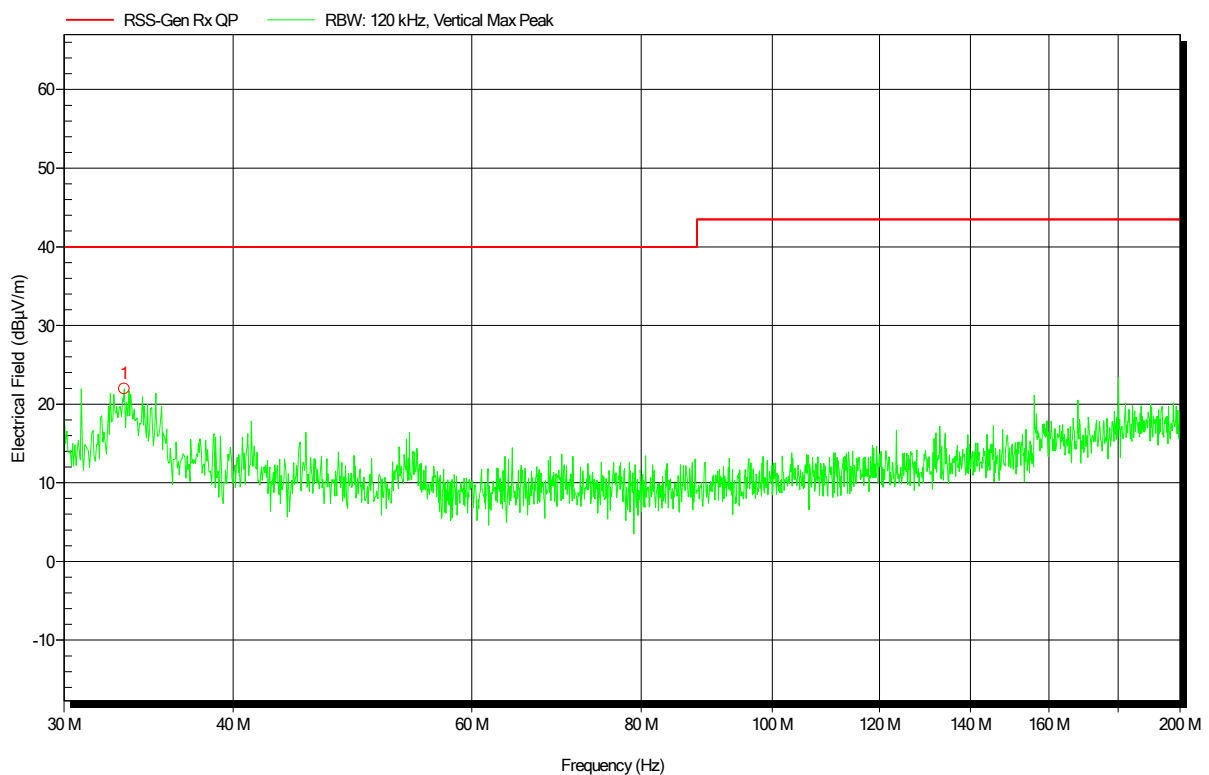
Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
35.1643 MHz	16.7 dBµV/m	40 dBµV/m	-23.34 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
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; WLAN 2437 MHz
Test Date: 2020-01-02
Note:

Index 15

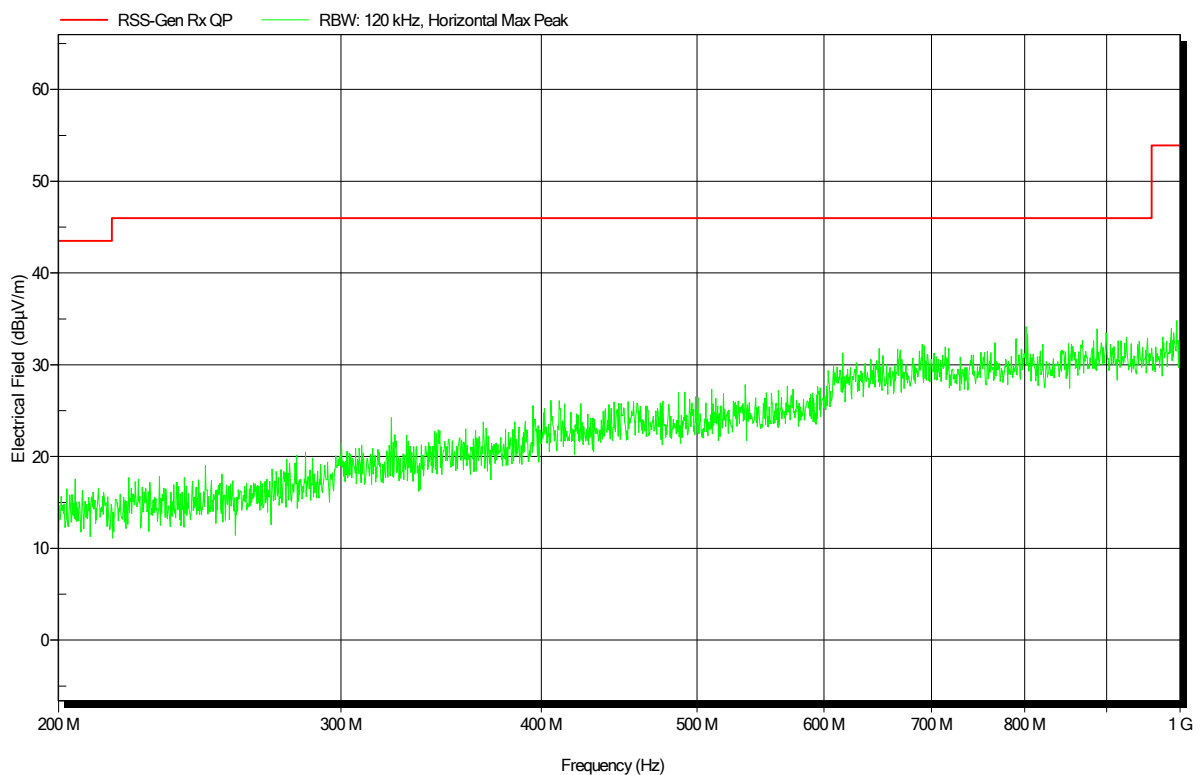


Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
33.2427 MHz	21.9 dBµV/m	40 dBµV/m	-18.06 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 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; WLAN 2437 MHz
 Test Date: 2020-01-07
 Note:

Index 16

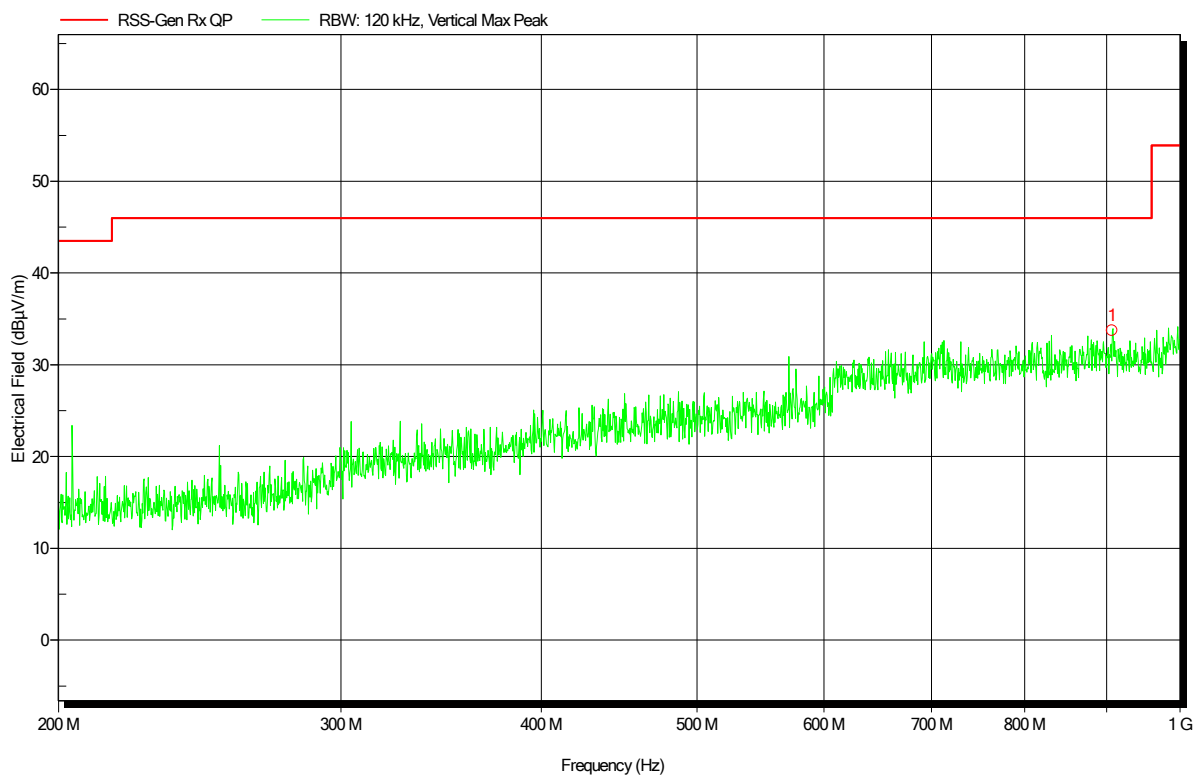


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 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; WLAN 2437 MHz
 Test Date: 2020-01-07
 Note:

Index 17

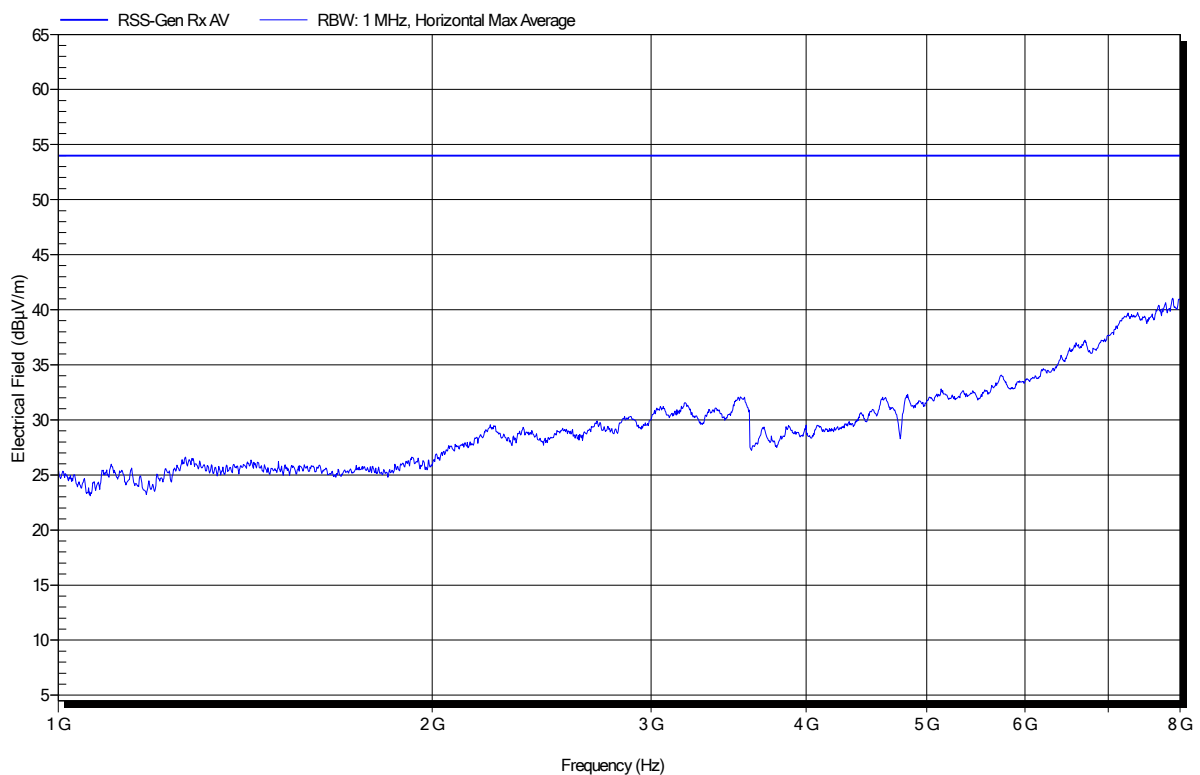


Frequency	Peak	Peak Limit	Peak Difference	Status	Angle	Height
906.8148 MHz	33.7 dBµV/m	46 dBµV/m	-12.28 dB	Pass	0 Degree	1 m

Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479
 Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-14
 Note:

Index 21

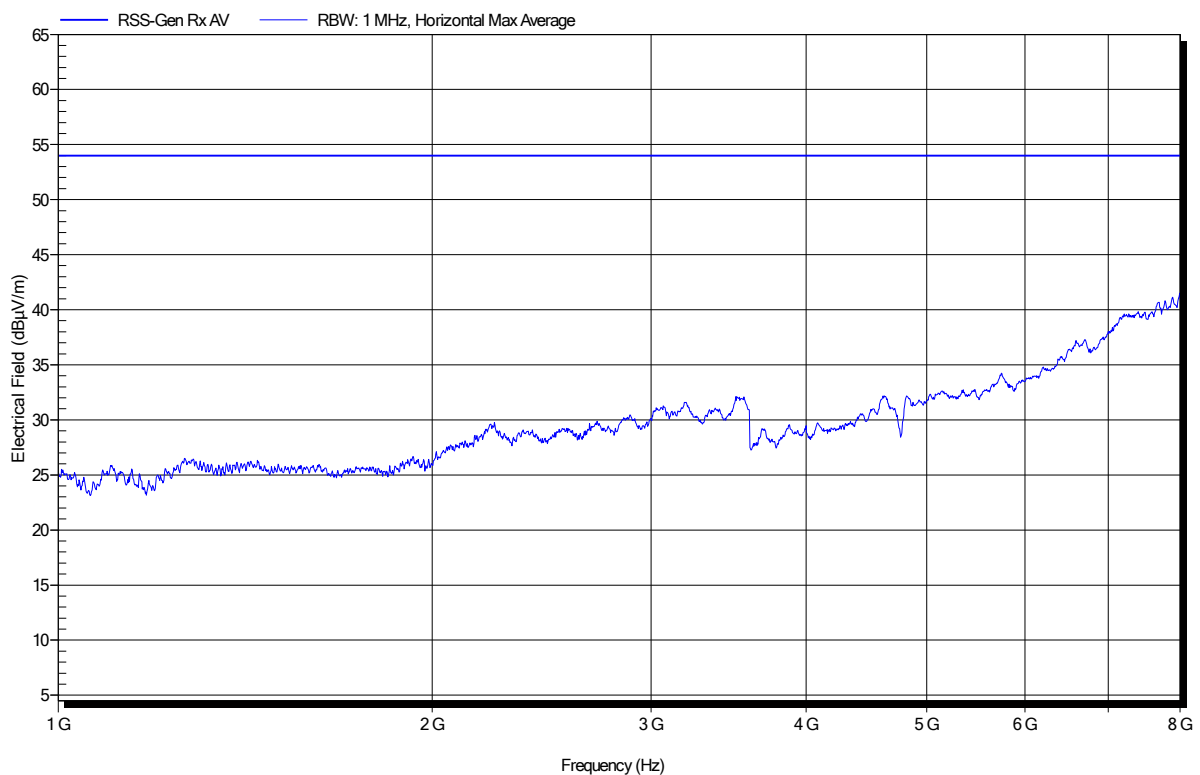


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Horizontal
Measurement distance: 3 m
Mode: TX; WLAN 2437 MHz
Test Date: 2020-01-14
Note:

Index 22

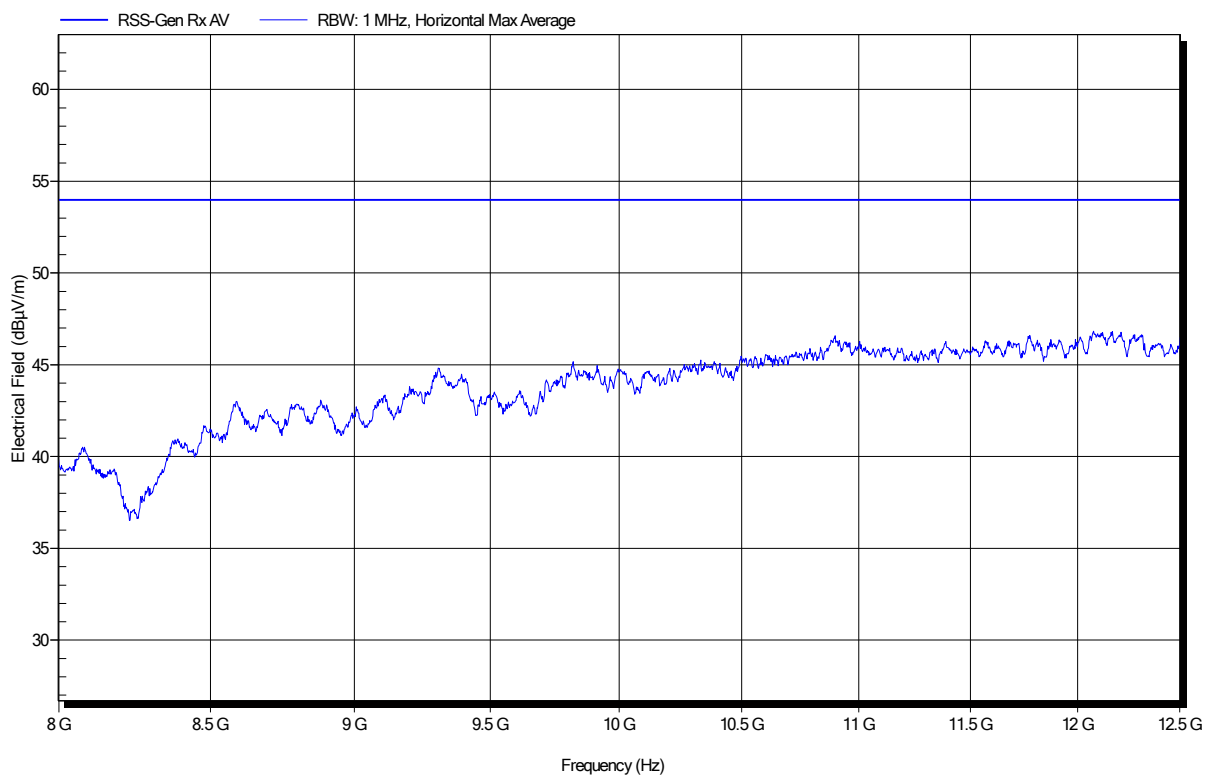


Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
 EUT Name: PTCarPhone
 Model: PTCarPhone 6
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Jahn
 Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
 Antenna: Schwarzbeck BBHA 9120D, Horizontal
 Measurement distance: 3 m
 Mode: TX; WLAN 2437 MHz
 Test Date: 2020-01-15
 Note:

Index 26



Spurious emissions according to RSS-Gen

Project number: G0M-1909-8479

Applicant: pei tel Communications GmbH
EUT Name: PTCarPhone
Model: PTCarPhone 6
Test Site: Eurofins Product Service GmbH
Operator: Mr. Jahn
Test Conditions: Tnom: 22°C, Vnom: 14.0 VDC
Antenna: Schwarzbeck BBHA 9120D, Vertical
Measurement distance: 3 m
Mode: TX; WLAN 2437 MHz
Test Date: 2020-01-15
Note:

Index 27

