RADIO REPORT

FCC 47 CFR Part 22H, FCC 47 CFR Part 24E, FCC 47 CFR Part 27

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

Report Reference No	G0M-1908-8377-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	BIOTRONIK SE & Co. KG
Address	Woermannkehre 1 12359 Berlin GERMANY
Test Specification	47 CFR Part 22H 47 CFR Part 24E 47 CFR Part 27 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
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	CardioMessenger Smart / Telemonitoring System
Model(s)	CardioMessenger Smart 4G
Additional Model(s)	None
Brand Name(s)	BIOTRONIK
Hardware Version(s)	CardioMessenger Smart 4G mit LP best. LP1/Telex Smart 4G Rev Cx
Software Version(s)	ULP_HIGH_1_32_0, ULP_LOW_1_13_0, M0B.800004
FCC-ID	QRI-CMSMART4GWW
IC	4708A-CMSMART4GWW
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	2019-09-03	
Report:		
Compiled by	Charline Graf	
Tested by (+ signature)	Charline Graf	.....
Tested by (+ signature) (Responsible for Test)	Burkhard Pudell	.....
Approved by (+ signature) (Deputy Head of Lab)	Toralf Jahn	.....
Date of Issue	2021-08-25	
Total number of pages	67	
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:		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2020-05-19	Initial Release	
02	2021-08-25	Replaced document: G0M-1908-8377-TFCMOCORSE-V01 Replaced by: G0M-1908-8377-TFCMOCORSE-V02 Reason: New Issue.	C. Graf

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

REPORT INDEX

1 Equipment (Test Item) Under Test

Description	CardioMessenger Smart / Telemonitoring System	
Model	CardioMessenger Smart 4G	
Additional Model(s)	None	
Brand Name(s)	BIOTRONIK	
Serial Number(s)	80216079	
Hardware Version(s)	CardioMessenger Smart 4G mit LP best. LP1/Telex Smart 4G Rev Cx	
Software Version(s)	ULP_HIGH_1_32_0, ULP_LOW_1_13_0, M0B.800004	
PMN	CardioMessenger Smart 4G	
HVIN	CardioMessenger Smart 4G	
FVIN	n/a	
HMN	n/a	
IC	4708A-CMSMART4GWW	
FCC-ID	QRI-CMSMART4GWW	
Equipment type	End Product	
Radio type	Transceiver	
Radio technologies	LTE	
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 FDD26 = UL = 814 - 849 MHz, DL = 859 - 894 MHz	
LTE Modulations	QPSK, 16-QAM	
Number of modules	1	
Radio Module	Type	4G Radio Module
	Model	ME910C1-WW
	Manufacturer	Telit
	HW Version	0.0
	SW Version	M0B.800004
	FCC-ID	RI7ME910C1WW
	IC	5131A-ME910C1WW
Antenna	Type	Integrated
	Model	PCB antenna
	Manufacturer	BIOTRONIK SE & Co. KG
	Gain	FDD2 = -2.37 dBi FDD4 = 1.26 dBi FDD5 = -2.92 dBi FDD12 = 2.85 dBi FDD 26 = -1.75 dBi
Supply Voltage	V_{NOM}	3.7 VDC
AC/DC-Adaptor	Model	GTM96180-1107-2.0
	Vendor	GlobTek, Inc.
	Input	100-240 VAC
	Output	5 VDC
Manufacturer	BIOTRONIK SE & Co. KG Woermannkehre 1 12359 Berlin GERMANY	

1.4 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
SIM	Communication Tester	R&S	CMW290	Base Station Simulator
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.5 Test Modes

Mode	Description
LTE FDD2 / QPSK	Channel = 18900 Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 15 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 1 Duty cycle = 30 %
LTE FDD2 / QAM	Channel = 18900 Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 15 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 1 Duty cycle = 30 %
LTE FDD4 / QPSK	Channel = 19957 Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 1.4 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
LTE FDD4 / QAM	Channel = 19975 Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
LTE FDD5 / QPSK	Channel = 20425 Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
LTE FDD5 / QAM	Channel = 20425 Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 5 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %

LTE FDD12 / QPSK	Channel = 23173 Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 1.4 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
LTE FDD12 / QAM	Channel = 23095 Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 1.4 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
LTE FDD26 / QPSK	Channel = 26865 Mode = RMC TPC = All 1 Modulation = QPSK Bandwidth = 15 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
LTE FDD26 / QAM	Channel = 26865 Mode = RMC TPC = All 1 Modulation = 16-QAM Bandwidth = 15 MHz Number of resource blocks = 1 Resource block offset = 0 Narrow Band Index = 0 Duty cycle = 30 %
Receive	Mode = RMC Modulation = QPSK Number of resource blocks = 0
Comment: Above worst case scenarios were found in module test report: 1860156R-HPUSP50V00, 2019-07-05 issued by DEKRA Testing and Certification Co., Ltd. and NIE: 60375RRRF.001, 2019-06-24 issued by DEKRA Testing and Certification S.A.U.	

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:

Reading on Analyzer (dBµV) + A.F. (dB) = Net field strength (dBµV/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:

Limit (dBµV/m) = 20*log (µV/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 ISED RSS-132 §5.4 ISED RSS-133 §6.4 ISED RSS-139 §6.5 ISED RSS-130 §4.6	Radiated power	ANSI C63.26 KDB 971168	PASS	
47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7	Transmitter conducted emissions	ANSI C63.26 KDB 971168	N/T	
47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7	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-Gen §7	Receiver conducted emissions	ANSI C63.26 KDB 971168	N/T	
ISED RSS-132 §3.1 ISED RSS-133 §3.1 ISED RSS-139 §3.1 ISED RSS-130 §3.3 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 ISED RSS-132 §5.4 ISED RSS-133 §6.4 ISED RSS-139 §6.5 ISED RSS-130 §4.6
Operator	Christian Weber, Charline Graf
Date	2020-02-11

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]
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	699 - 716	34.77	3	36.92	4.92
LTE FDD26	814 - 849	38.45	7	40.6	11.5

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

3.1.4 Results

Test Results - LTE FDD2						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD2 / QPSK	23.74	-2.37	21.37	33	11.63	PASS
LTE FDD2 / QAM	23.65	-2.37	21.28	33	11.72	PASS

Test Results - LTE FDD4						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD4 / QPSK	23.01	1.26	24.27	30	-5.73	PASS
LTE FDD4 / QAM	22.74	1.26	24.00	30	-6.00	PASS

Test Results - LTE FDD5						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD5 / QPSK	23.78	-2.92	20.86	40.6	-19.74	PASS
LTE FDD5 / QAM	23.71	-2.92	20.79	40.6	-19.81	PASS

Test Results - LTE FDD12						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD12 / QPSK	22.86	2.85	25.71	36.92	-11.21	PASS
LTE FDD12 / QAM	22.32	2.85	25.17	36.92	-11.75	PASS

Test Results - LTE FDD26						
Mode	Power [dBm]	Antenna gain [dBi]	Radiated power [dBm EIRP]	Limit [dBm EIRP]	Margin [dB]	Result
LTE FDD26 / QPSK	23.55	-1.75	21.80	40.6	-18.80	PASS
Receive	23.51	-1.75	21.76	40.6	-18.84	PASS

3.2 Test Conditions and Results - Transmitter radiated emissions

3.2.1 Information

Test Information	
Reference	47 CFR §22.917 47 CFR §24.238 47 CFR §27.53 ISED RSS-132 §5.5 ISED RSS-133 §6.5 ISED RSS-139 §6.6 ISED RSS-130 §4.7
Measurement Method	FCC KDB 971168 D01 Section 7 ANSI C63.26-2015 5.5
Operator	Christian Weber, Charline Graf
Date	2020-02-10 – 2020-03-18

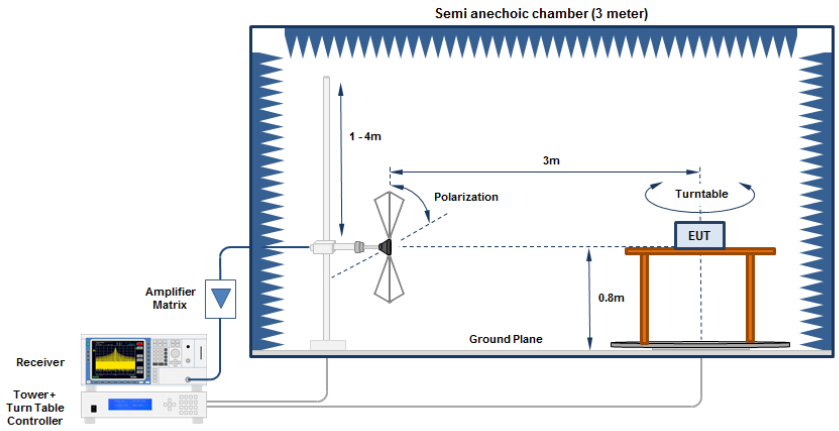
3.2.2 Limits

Limits FCC				
Band	Frequency range [MHz]	Bandwidth	Attenuation [dB]	Limit [dBm EIRP]
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 FDD12	-	100 kHz	$43+Log_{10}(P[W])$	-13
LTE FDD26	-	100 kHz / 1 MHz	$43+Log_{10}(P[W])$	-13

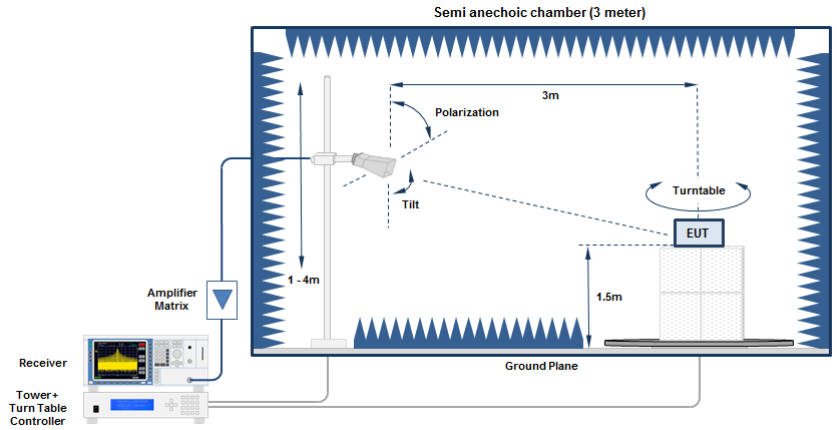
Limits ISED				
Band	Frequency range [MHz]	Bandwidth	Attenuation [dB]	Limit [dBm EIRP]
LTE FDD2	-	1 MHz	$43+Log_{10}(P[W])$	-13
LTE FDD4	-	1 MHz	$43+Log_{10}(P[W])$	-13
LTE FDD5	-	100 kHz	$43+Log_{10}(P[W])$	-13
LTE FDD12	-	100 kHz	$43+Log_{10}(P[W])$	-13
LTE FDD26	-	100 kHz	$43+Log_{10}(P[W])$	-13

3.2.3 Setup

Test Setup 30 - 1000 MHz



Test Setup > 1 GHz



3.2.4 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	R&S	ESU 26	EF00887	2019-07	2020-07
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	Schwarzbeck	BBHA 9120D	EF01153	2019-10	2020-10
Antenna	Amplifier Research	AT4560	EF00302	2019-05	2020-05
Antenna	Amplifier Research	AT4560	EF01152	2018-10	2020-10

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 - LTE FDD2						
Mode	Frequency [MHz]	Pol.	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD2 / QPSK	5624	hor	-28.7	-13	-15.7	PASS

Test Results - LTE FDD4						
Mode	Frequency [MHz]	Pol.	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD4 / QPSK	No significant spurious emissions					PASS

Test Results - LTE FDD5						
Mode	Frequency [MHz]	Pol.	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD5 / QPSK	1649	Hor	-28.1	-13	-15.1	PASS
LTE FDD5 / QPSK	2473	Hor	-31.9	-13	-18.9	PASS

Test Results - LTE FDD12						
Mode	Frequency [MHz]	Pol.	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD12 / QPSK	No significant spurious emissions					PASS

Test Results - LTE FDD26						
Mode	Frequency [MHz]	Pol.	Level [dBm]	Limit [dBm]	Margin [dB]	Result
LTE FDD26 / QPSK	1650	Ver	-28.3	-13	-15.3	PASS

3.3 Test Conditions and Results - Receiver radiated emissions

3.3.1 Information

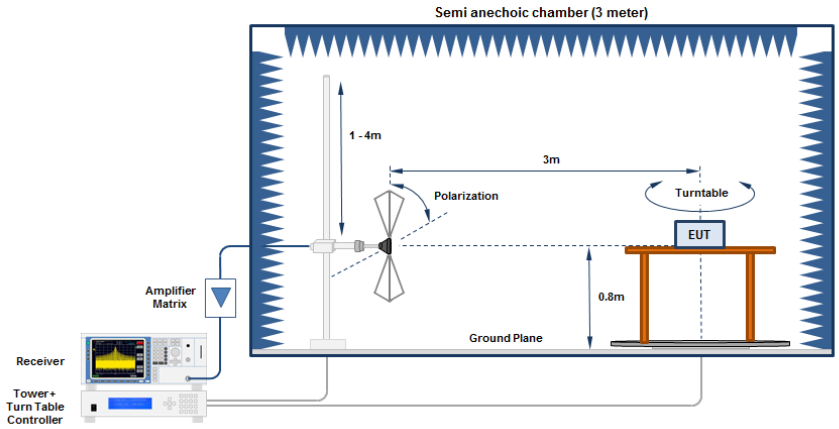
Test Information	
Reference	ISED RSS-132 §3.1 ISED RSS-133 §3.1 ISED RSS-139 §3.1 ISED RSS-130 §3.3 ISED RSS-Gen §7.4
Measurement Method	ANSI C63.10-2013 6.3-6.6
Operator	Christian Weber
Date	2020-02-12 + 2020-02-14

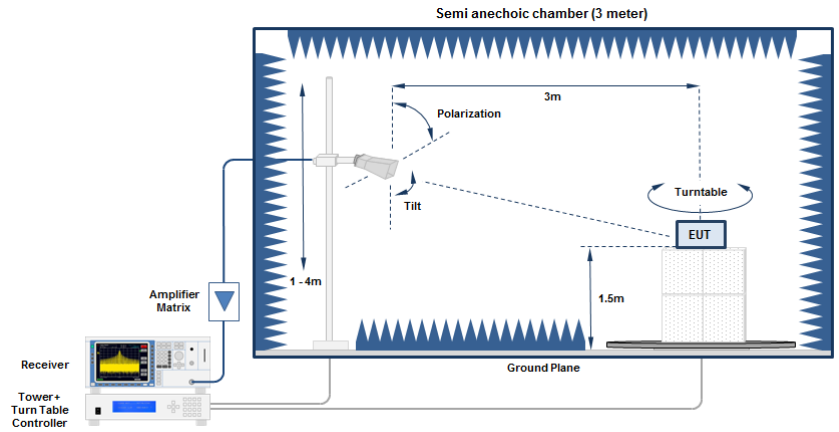
3.3.2 Limits

Limits			
Frequency range [MHz]	Bandwidth	Detector	Limit [dBµV/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

3.3.3 Setup

Test Setup 30 - 1000 MHz



Test Setup > 1 GHz


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	R&S	ESU 26	EF00887	2019-07	2020-07
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2019-09	2020-09
Antenna	R&S	VULB 9162	EF00978	2019-10	2022-10
Antenna	R&S	HK 116	EF00030	2019-04	2022-04
Antenna	R&S	HL 223	EF00212	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	EF01153	2019-10	2020-10
Antenna	Amplifier Research	AT4560	EF01152	2018-10	2020-10

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 - LTE FDD2					
Mode	Frequency [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result
Receive Mode	10870	44.36	54	-9.64	PASS
Receive Mode	11090	44.36	54	-9.64	PASS

Test Results - LTE FDD4					
Mode	Frequency [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result
Receive Mode	7912	51.13	54	-2.87	PASS
Receive Mode	7968	52.10	54	-1.90	PASS

Test Results - LTE FDD5					
Mode	Frequency [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result
Receive Mode	9520	42.54	54	-11.46	PASS
Receive Mode	9790	43.00	54	-11.00	PASS

Test Results - LTE FDD12					
Mode	Frequency [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result
Receive Mode	7480	42.84	54	-11.16	PASS
Receive Mode	10090	43.12	54	-10.88	PASS

ANNEX A Receiver radiated emissions

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	HK116, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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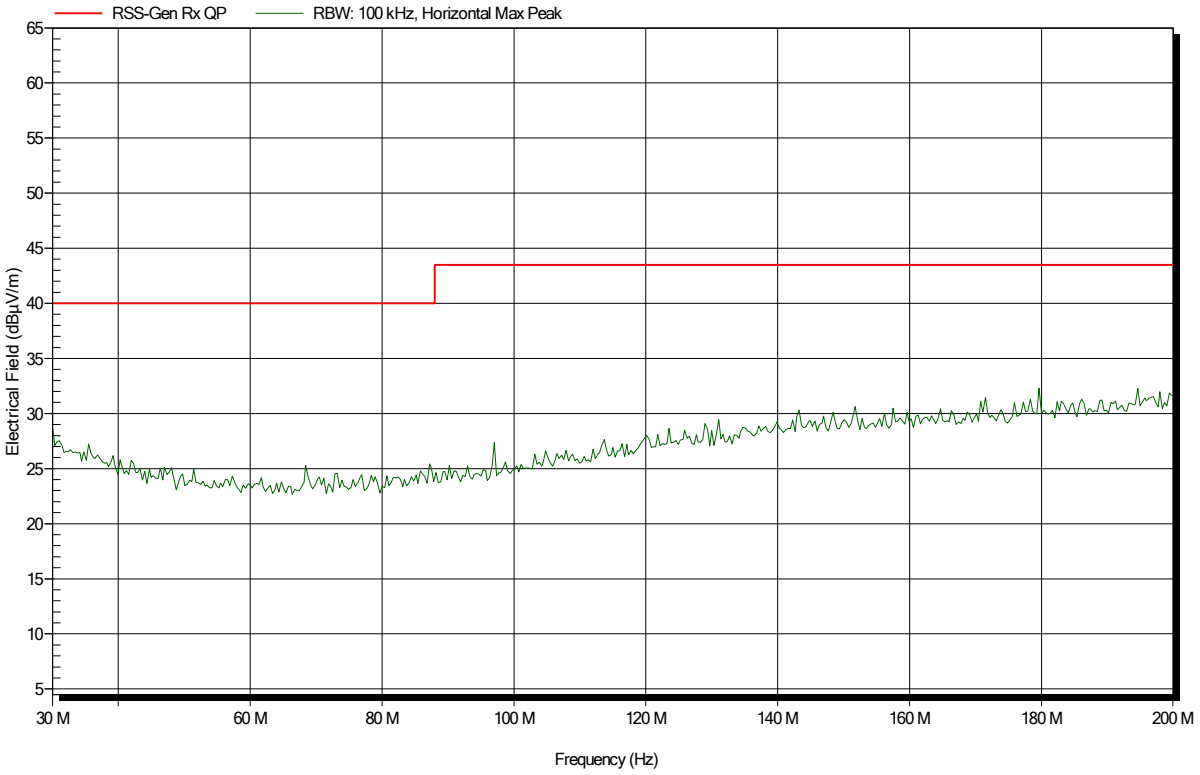

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	HK116, Vertical
Measurement distance:	3 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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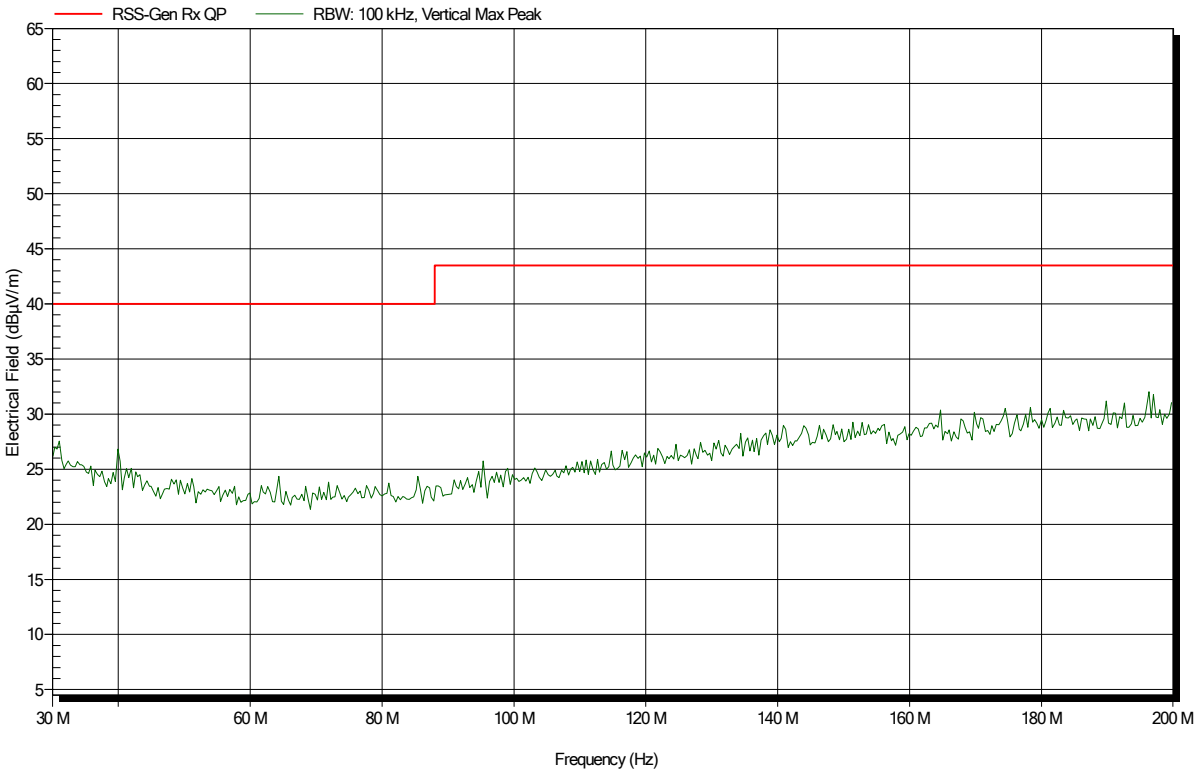

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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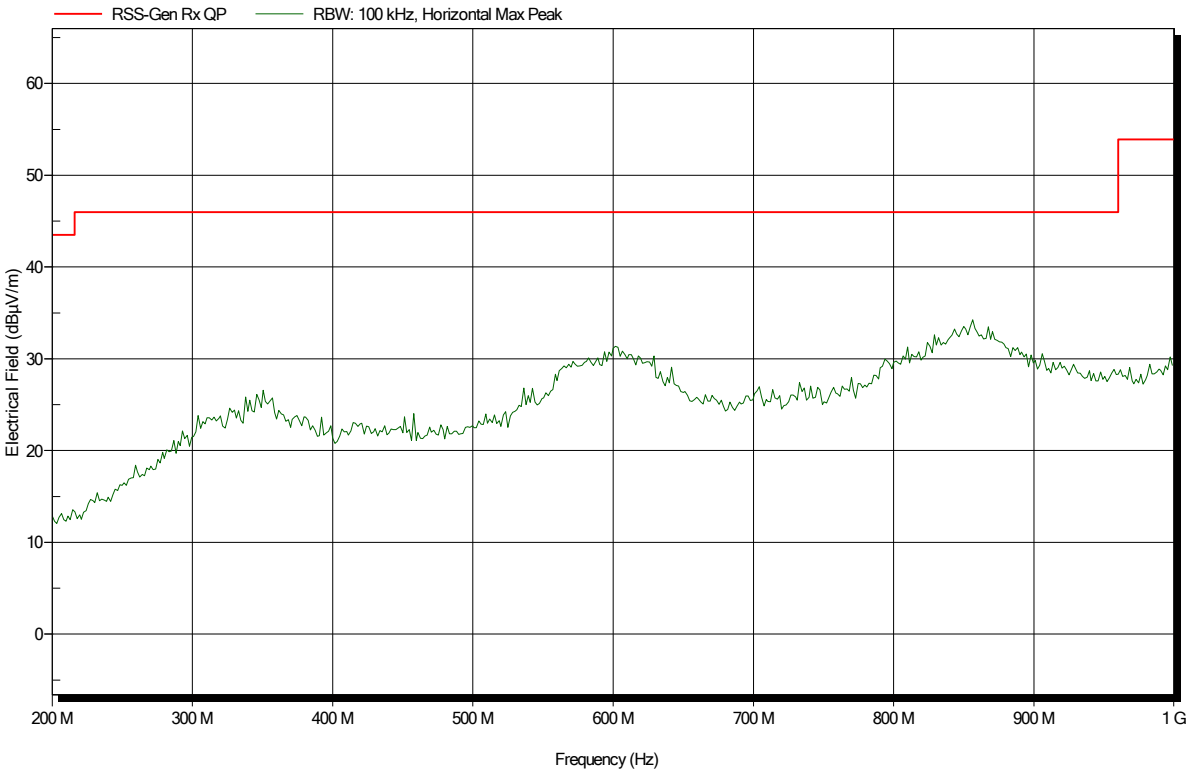

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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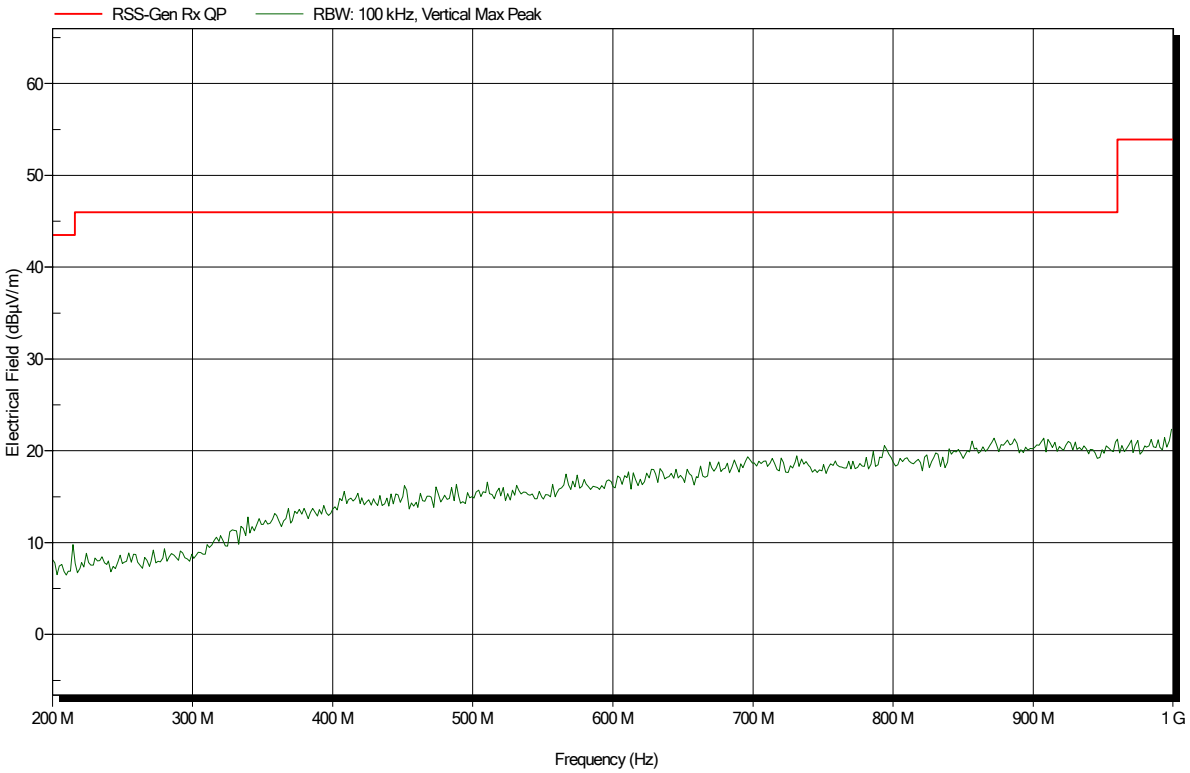

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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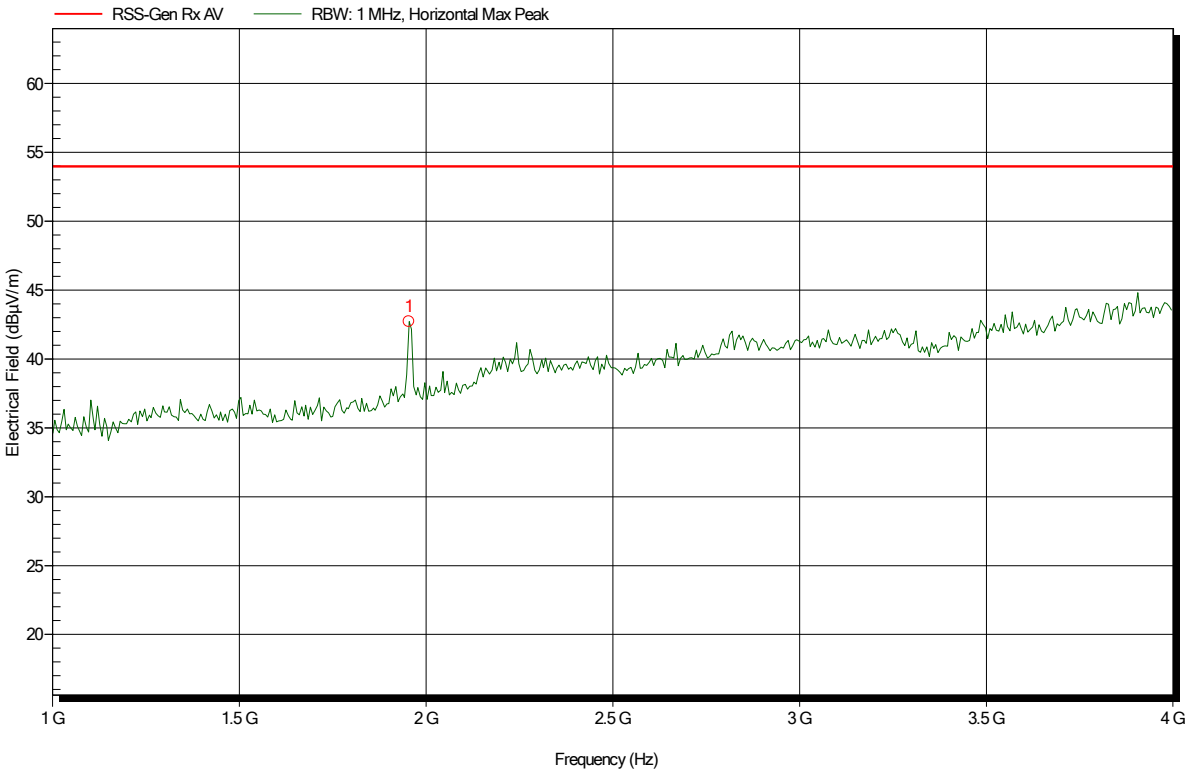

Frequency	
1.954 GHz	Downlink carrier signal

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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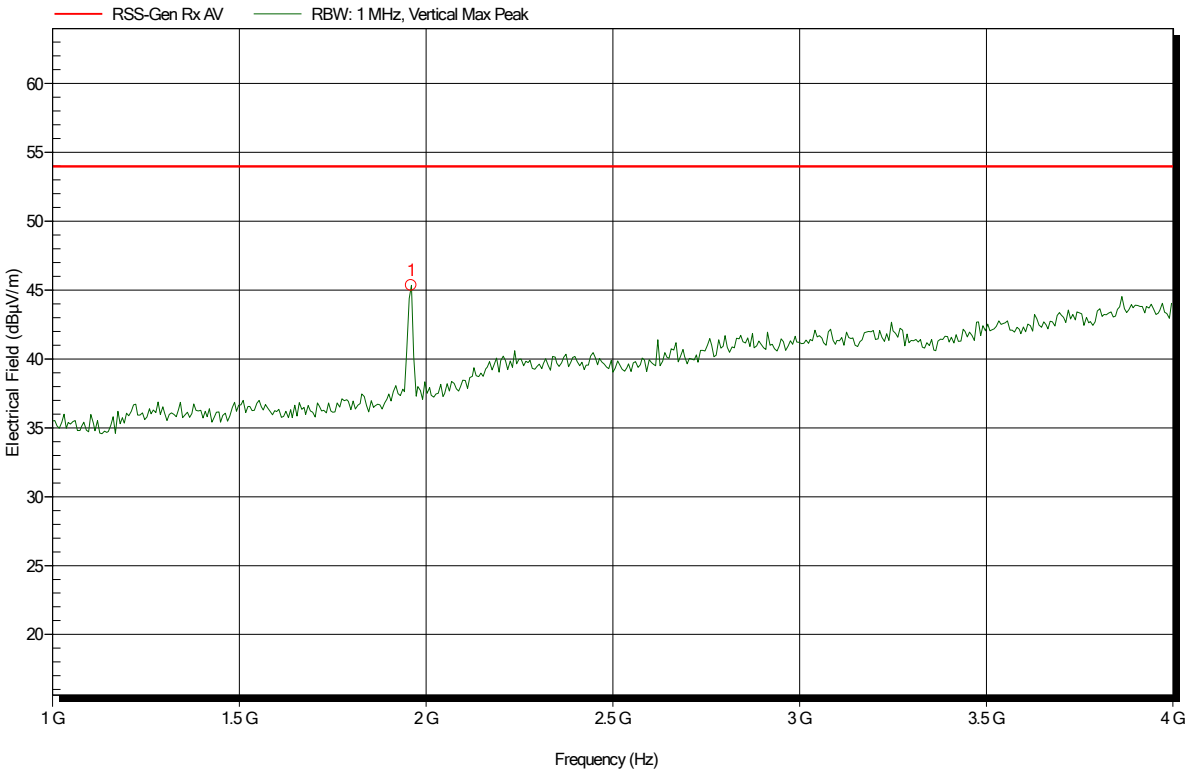

Frequency	
1.96 GHz	Downlink carrier signal

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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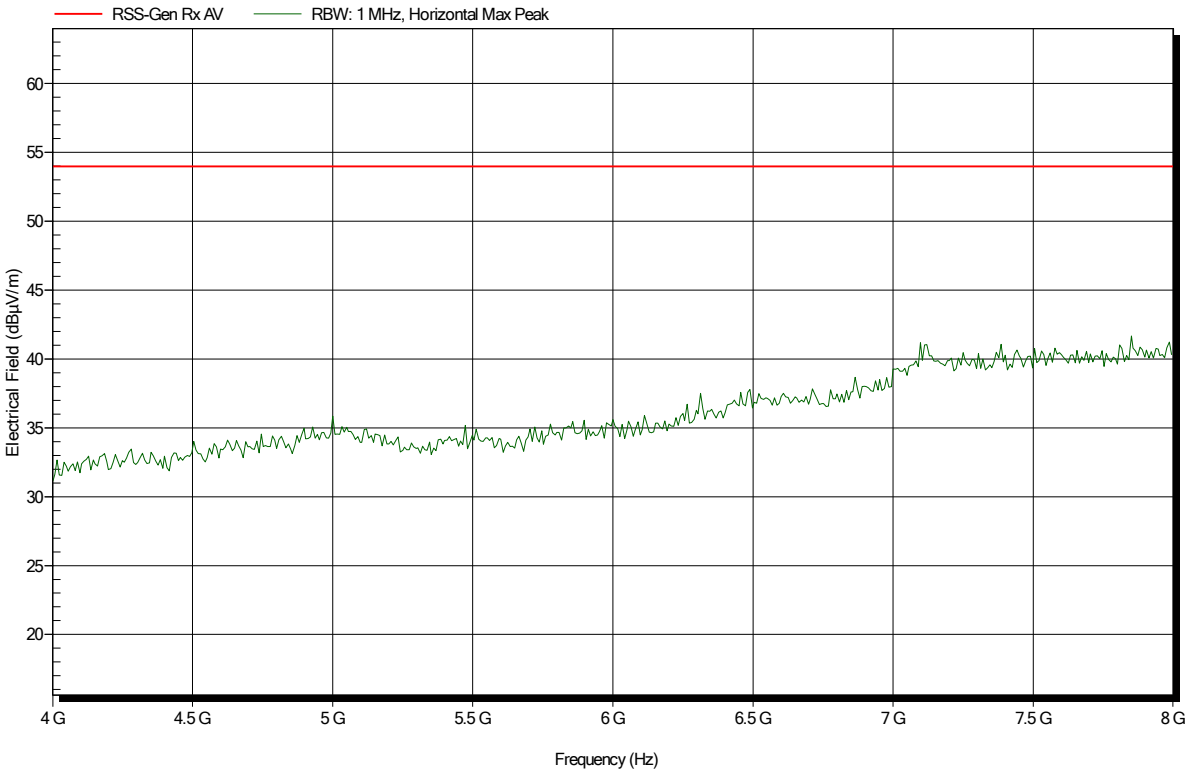

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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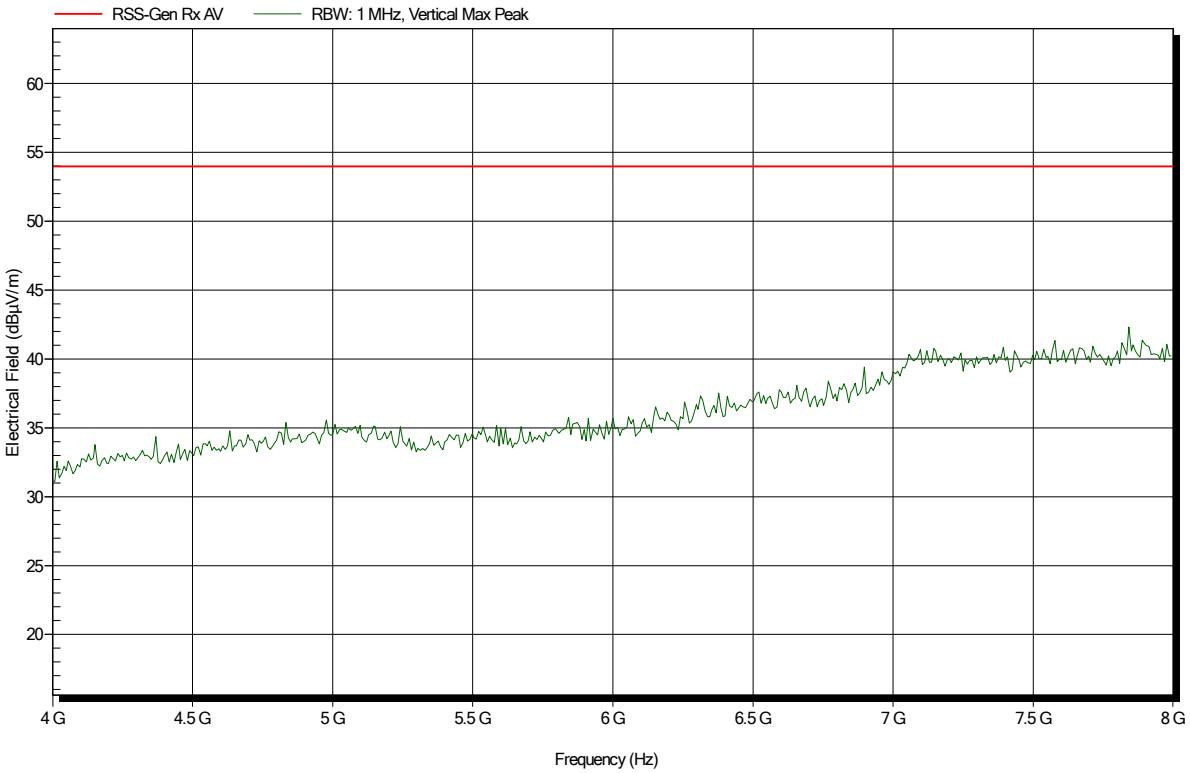

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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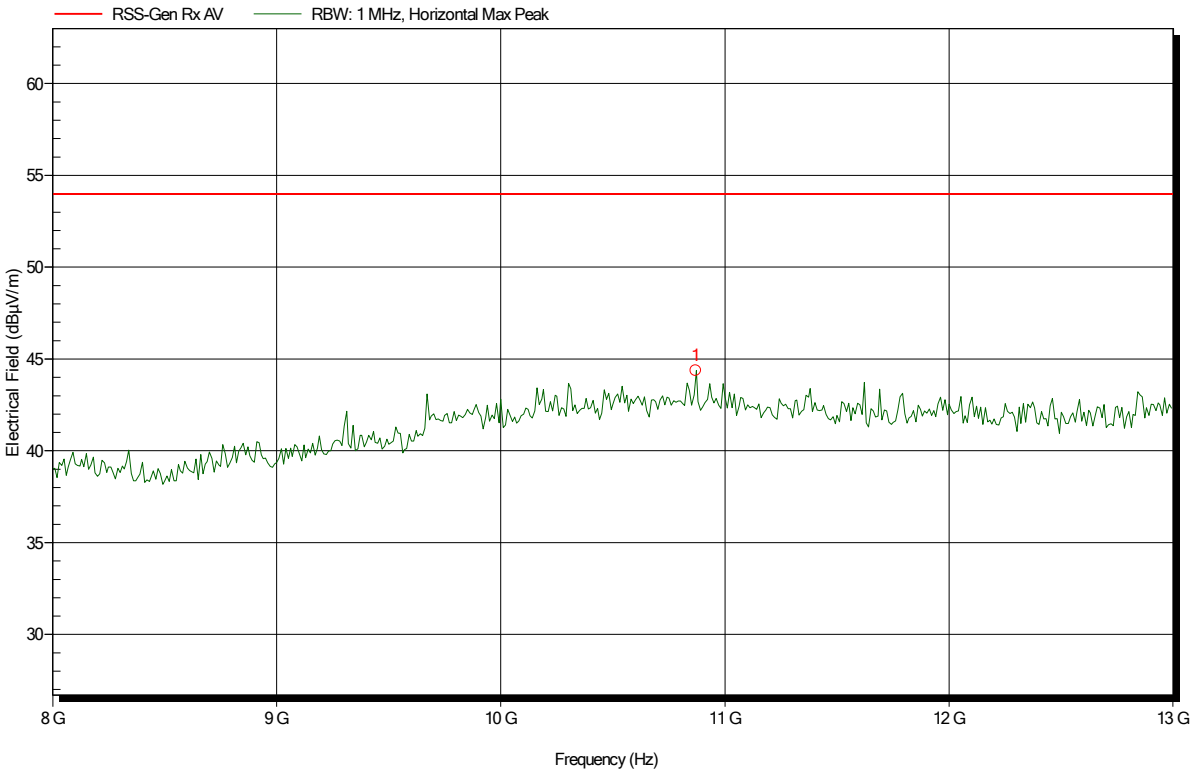

Frequency	Peak	Peak Limit	Peak Difference	Status
10.87 GHz	44.36 dBµV/m	53.98 dBµV/m	-9.62 dB	Pass

Spurious emissions according to ISED RSS-133, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.1°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD2, CH. 900
Test Date:	2020-02-14
Note:	

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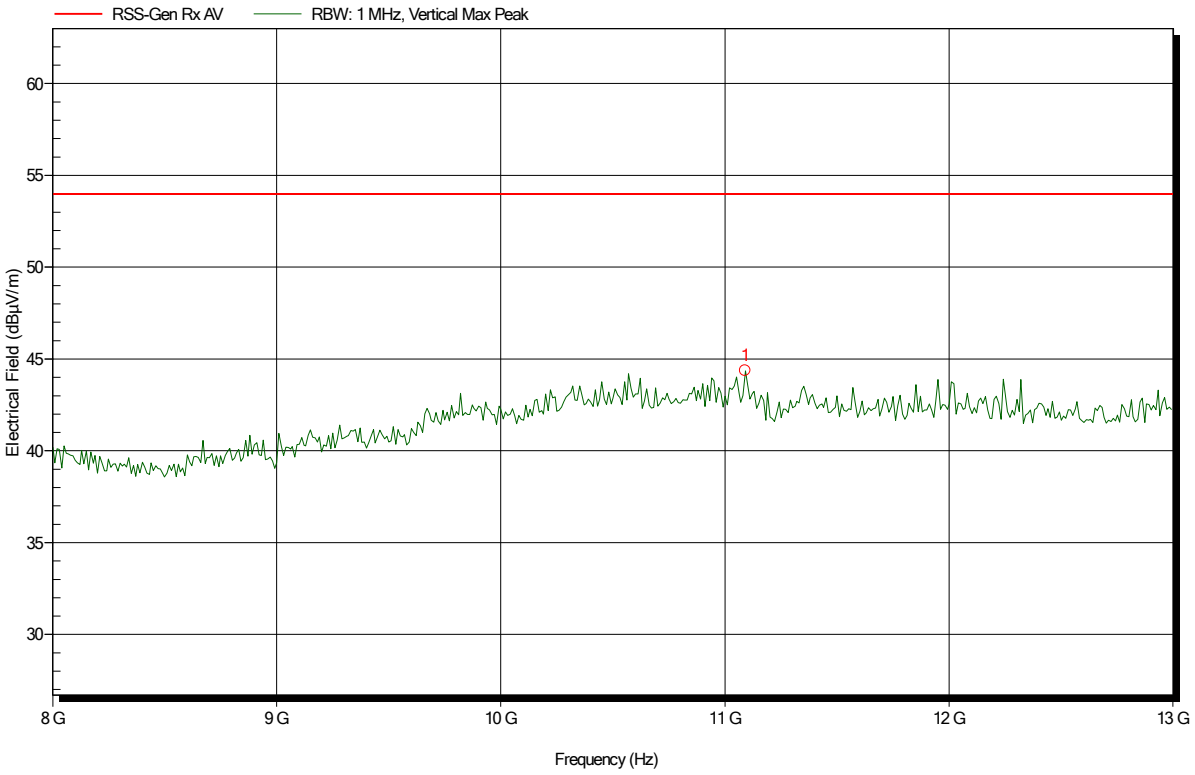

Frequency	Peak	Peak Limit	Peak Difference	Status
11.09 GHz	44.36 dBµV/m	53.98 dBµV/m	-9.62 dB	Pass

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	HK116, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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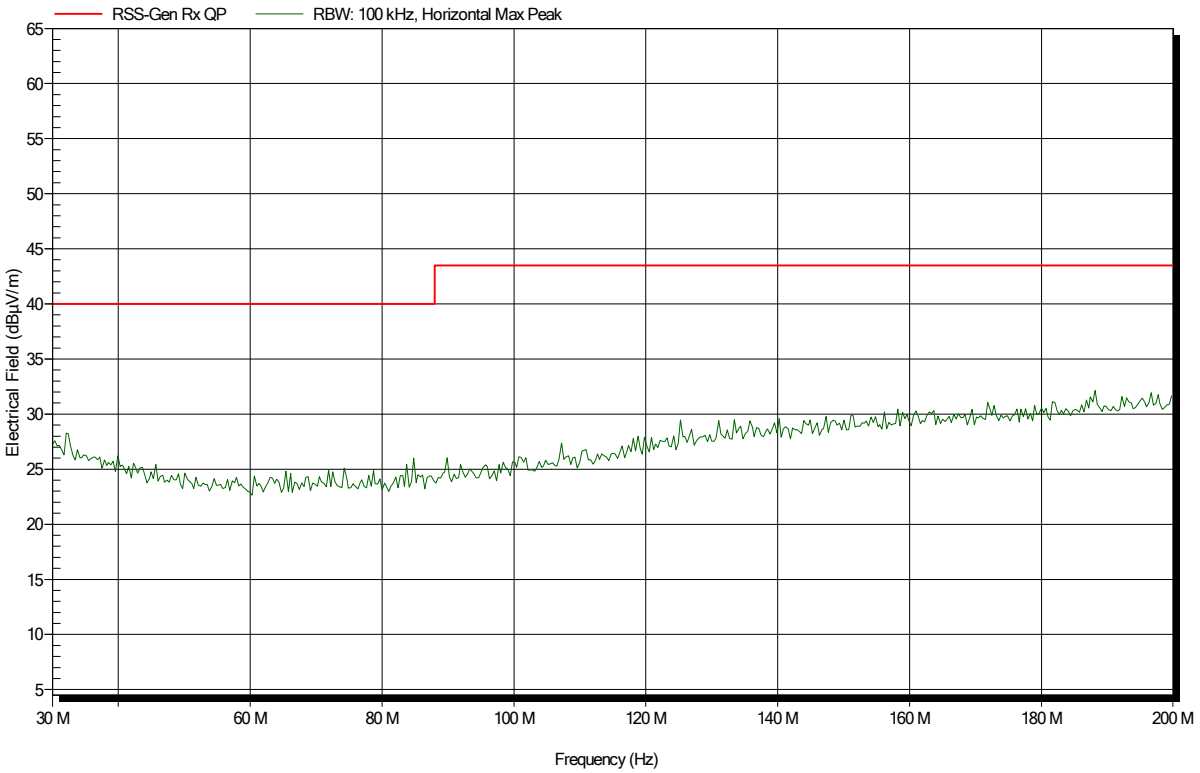

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	HK116, Vertical
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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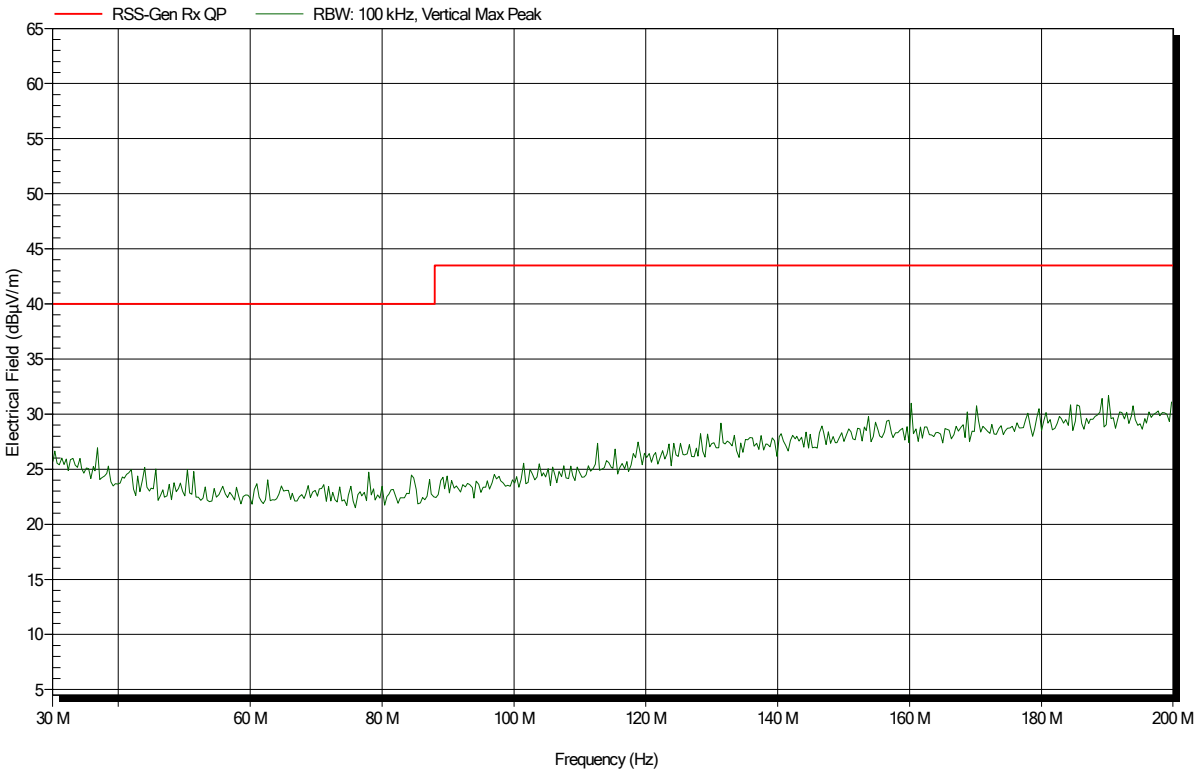

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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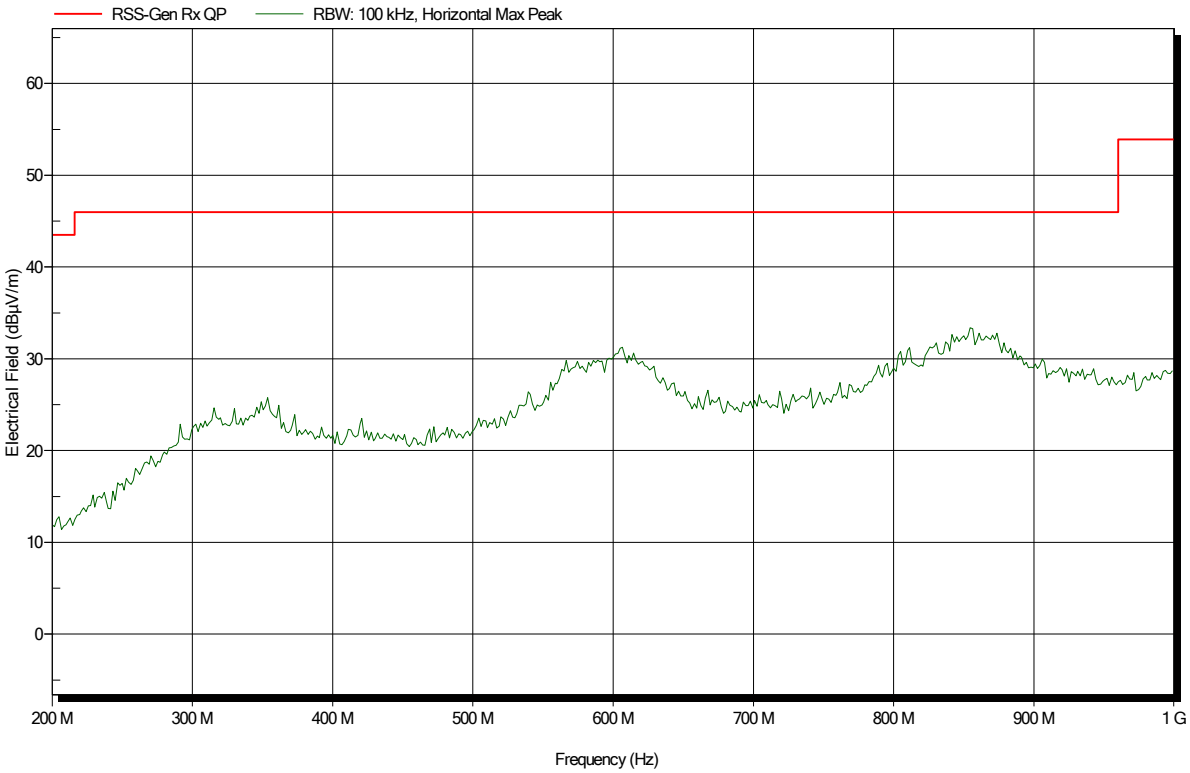

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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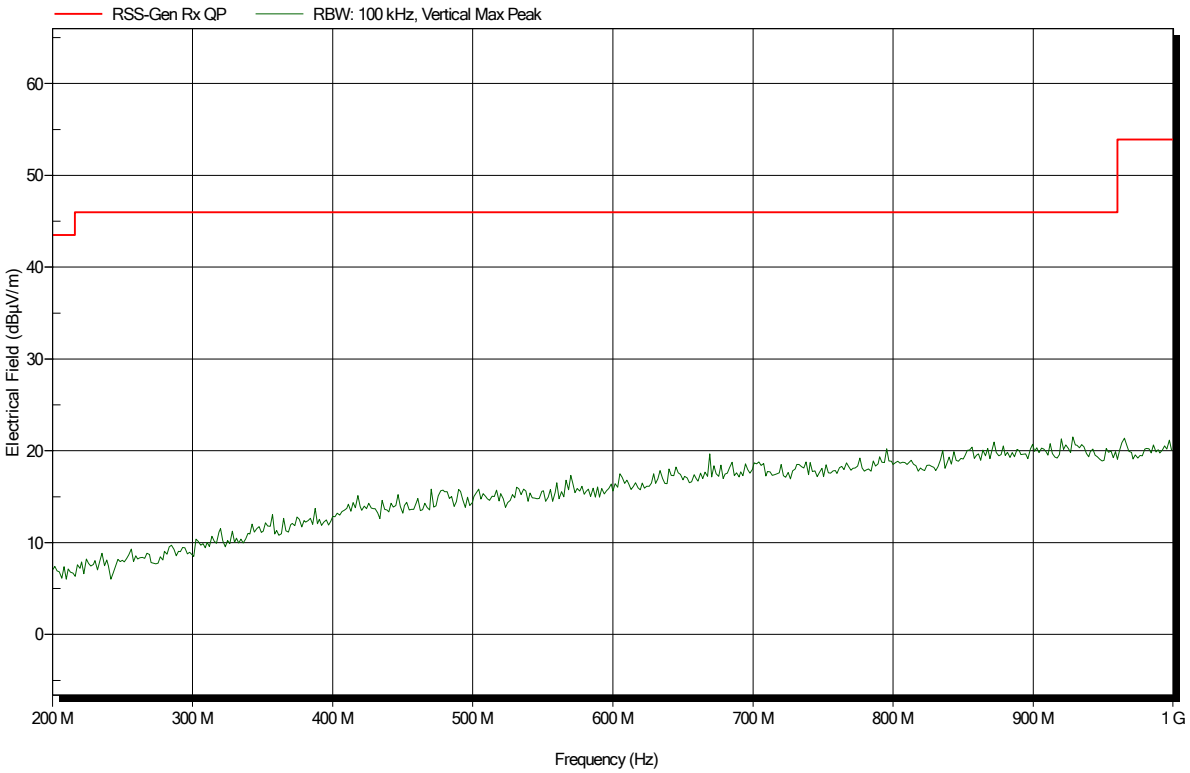

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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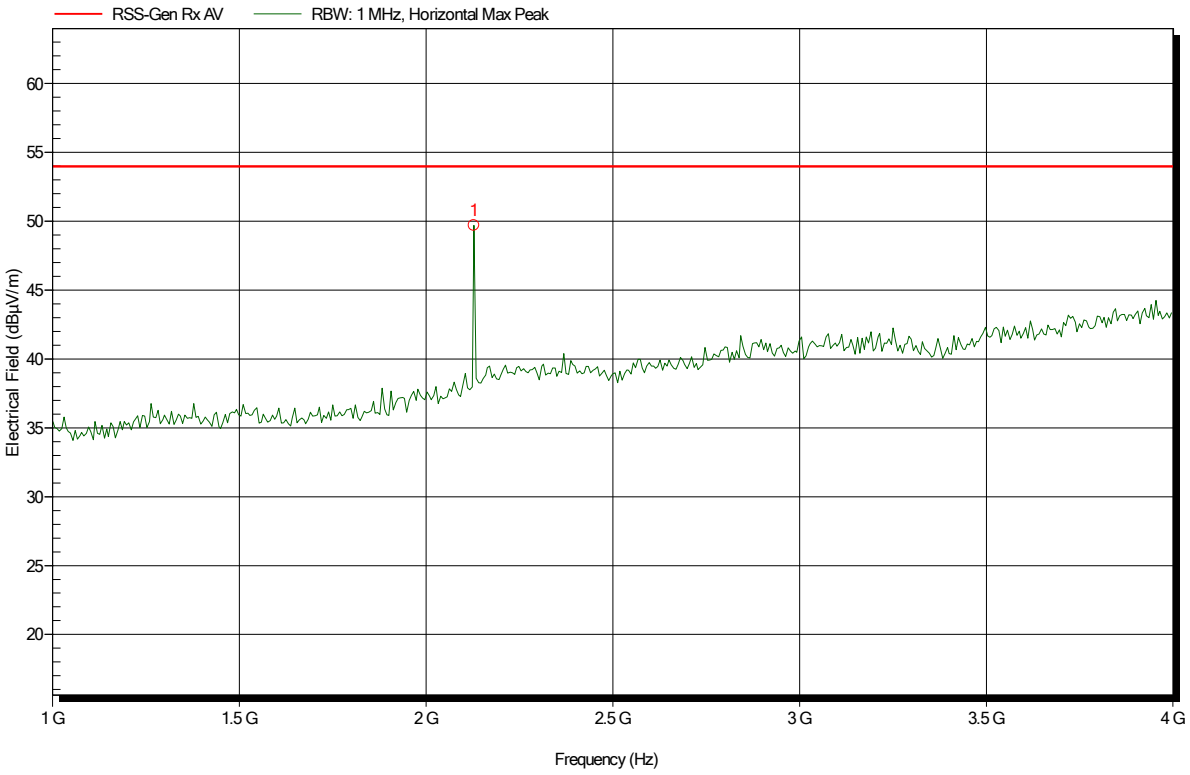

Frequency	
2.128 GHz	Downlink carrier

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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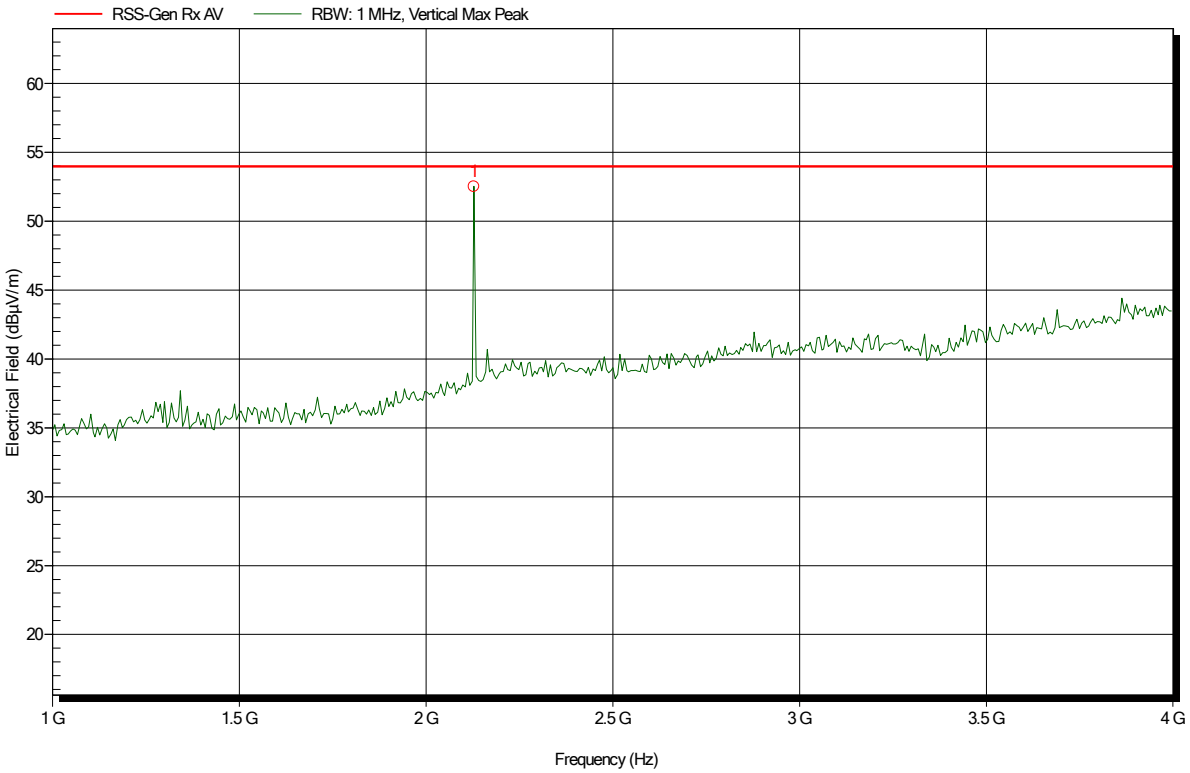

Frequency	
2.128 GHz	Downlink carrier

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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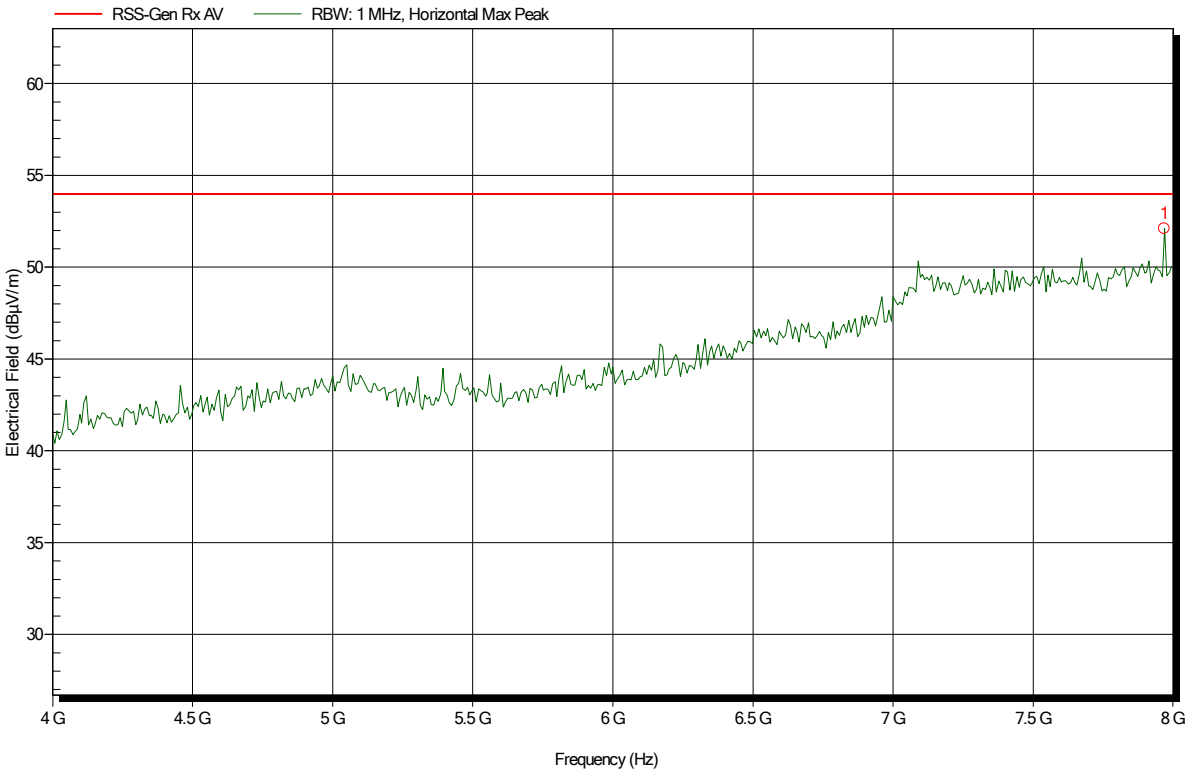

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.968 GHz	52.1 dBµV/m	53.98 dBµV/m	-1.88 dB	Pass

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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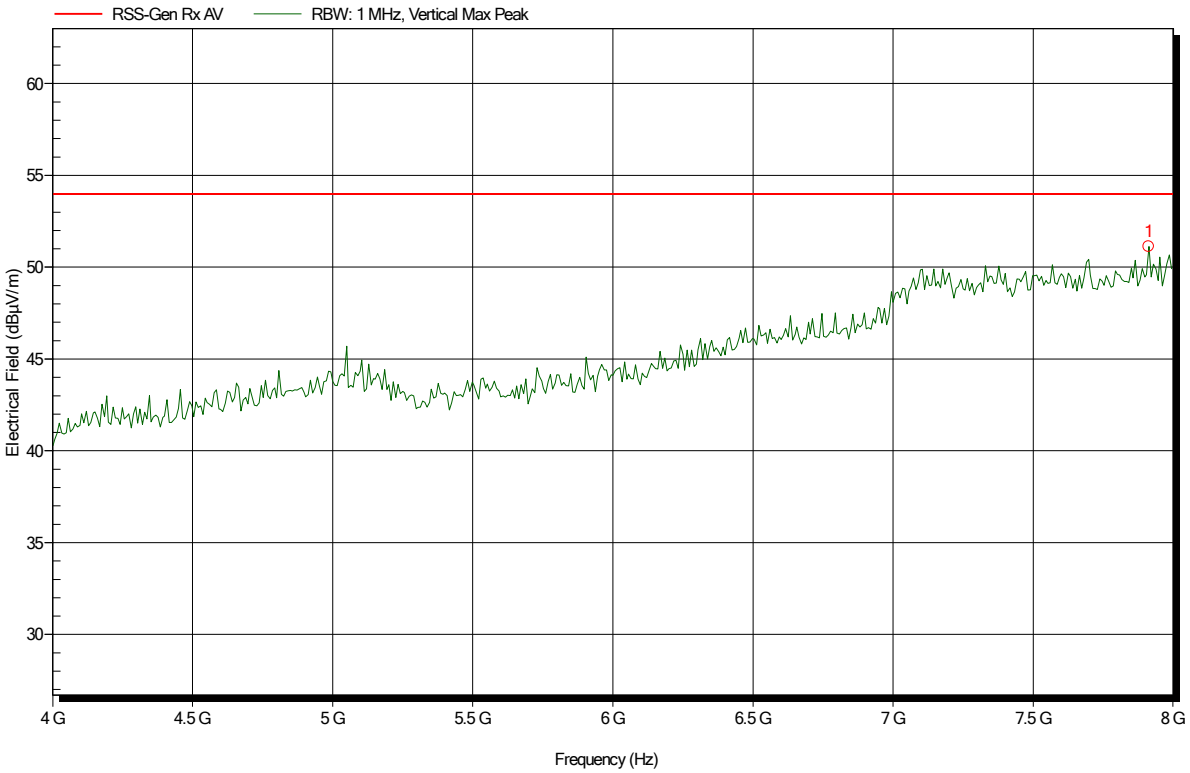

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.912 GHz	51.13 dBµV/m	53.98 dBµV/m	-2.85 dB	Pass

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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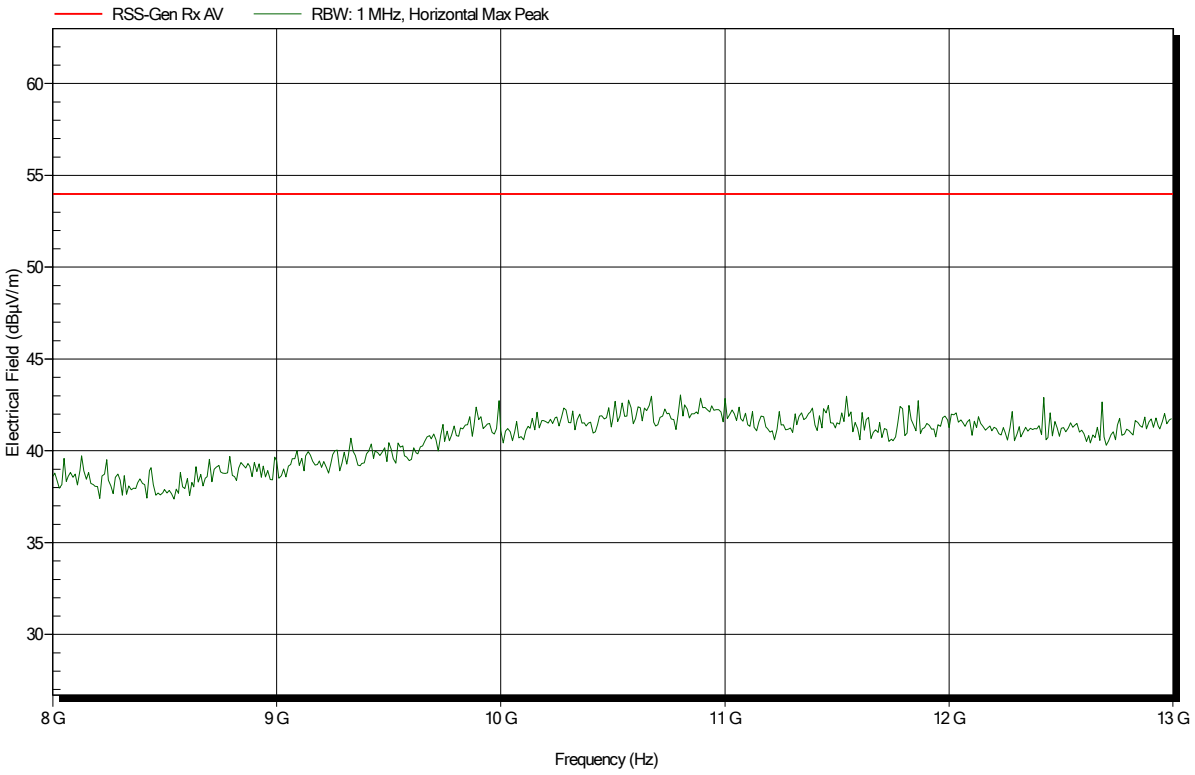

Spurious emissions according to ISED RSS-139, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.8°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD4, CH. 20175
Test Date:	2020-02-12
Note:	

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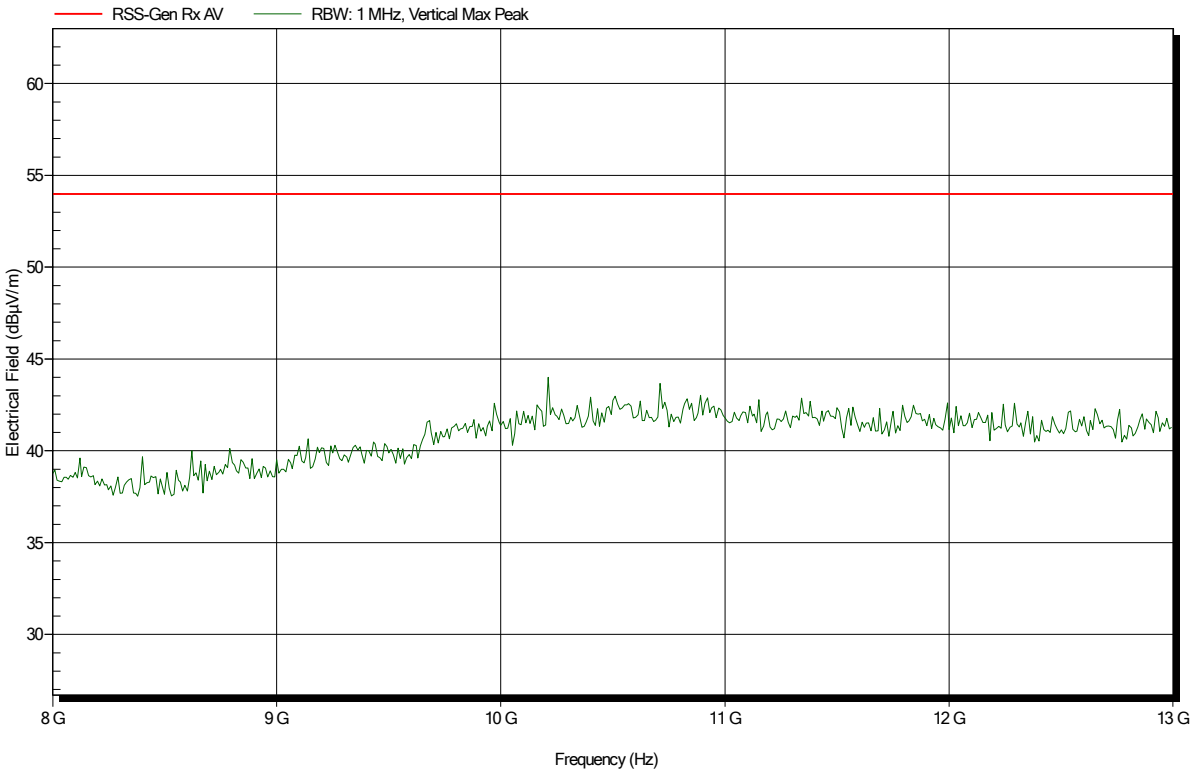

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	HK116, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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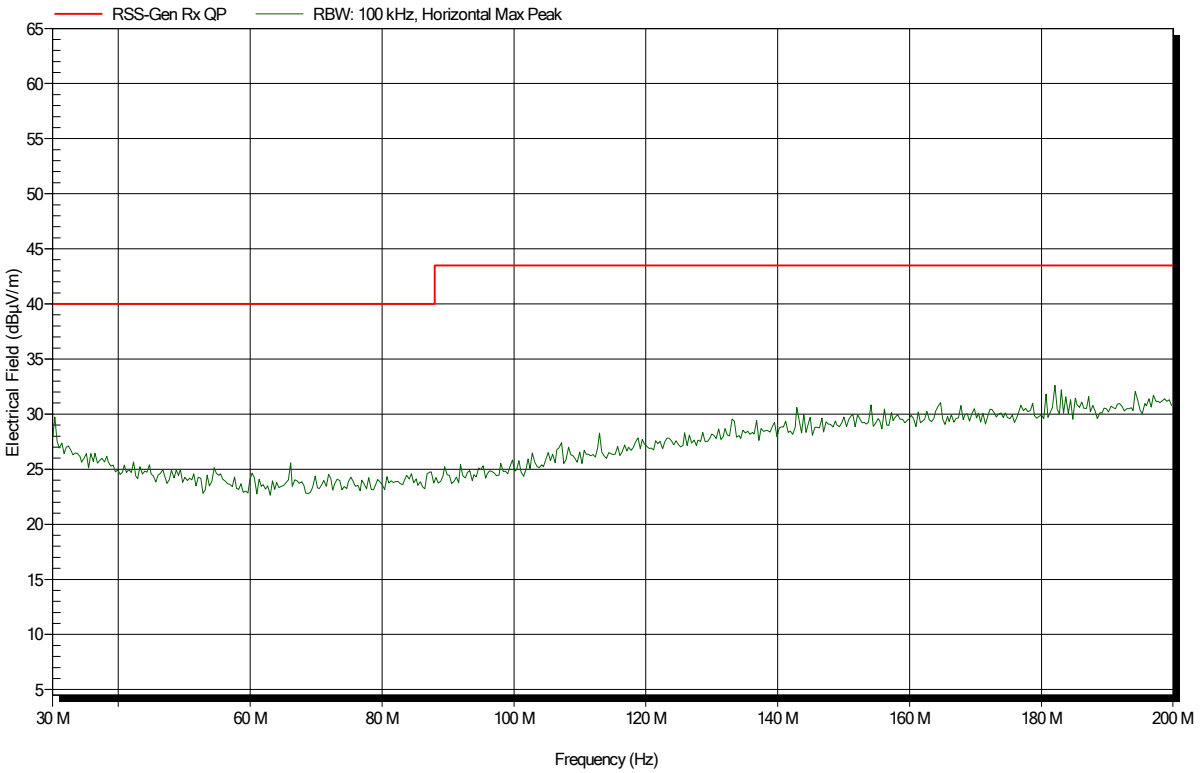

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	HK116, Vertical
Measurement distance:	3 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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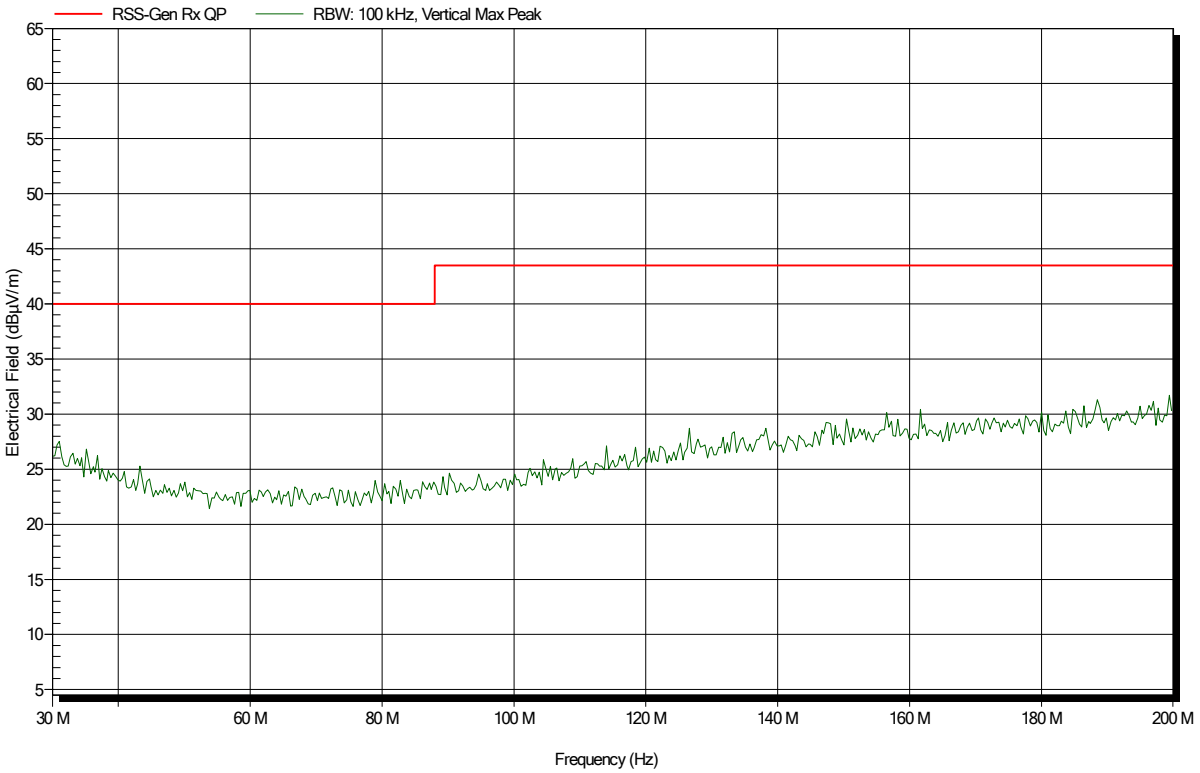

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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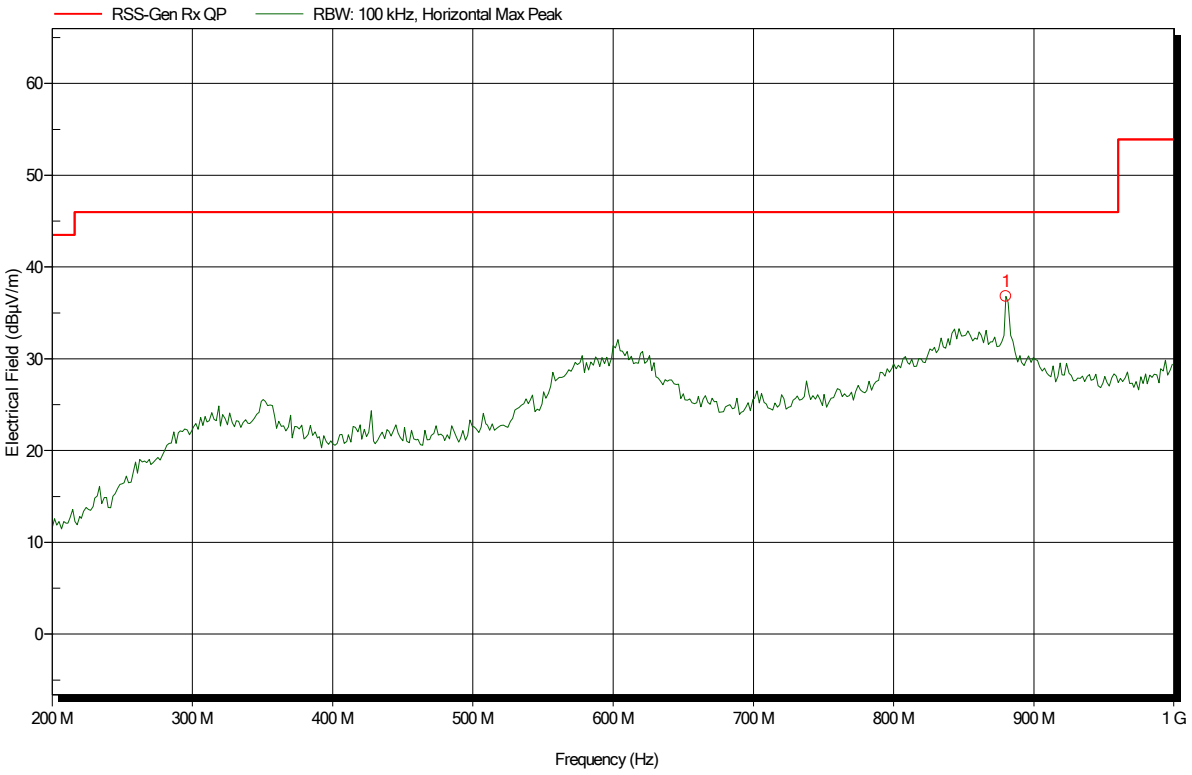

Frequency	
880 MHz	Downlink carrier signal

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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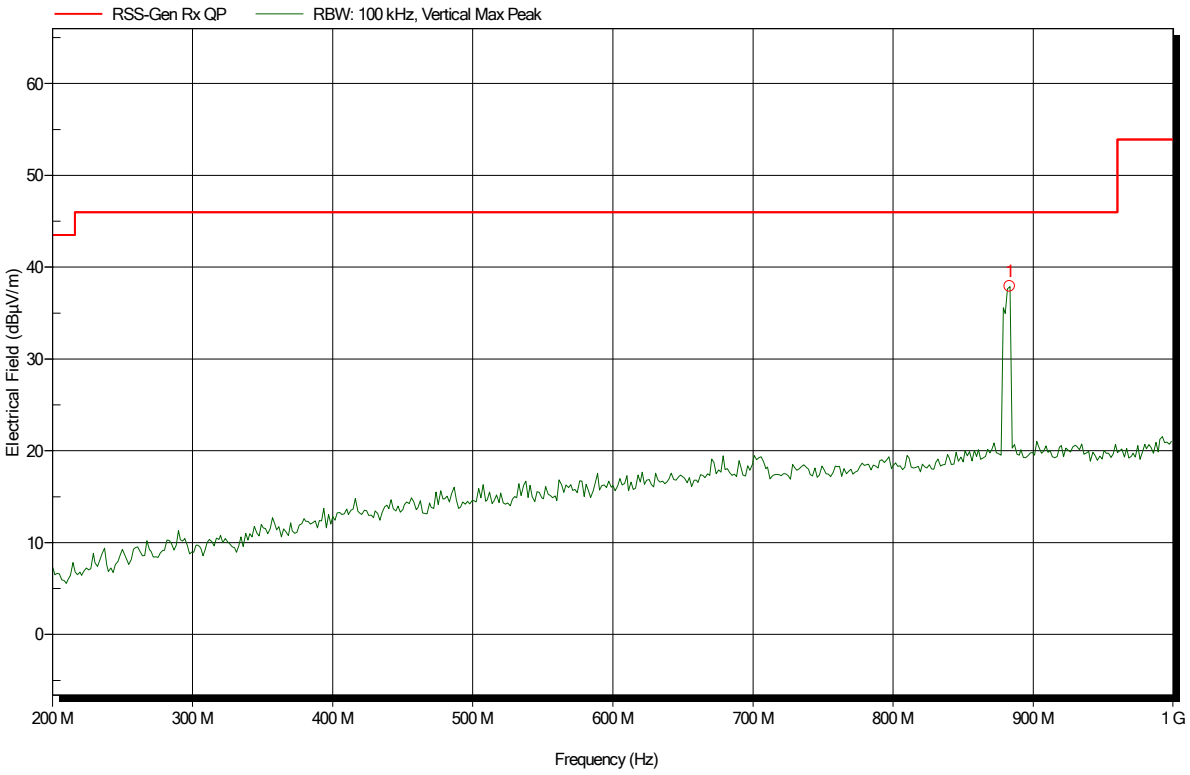

Frequency	
883.2 MHz	Downlink carrier signal

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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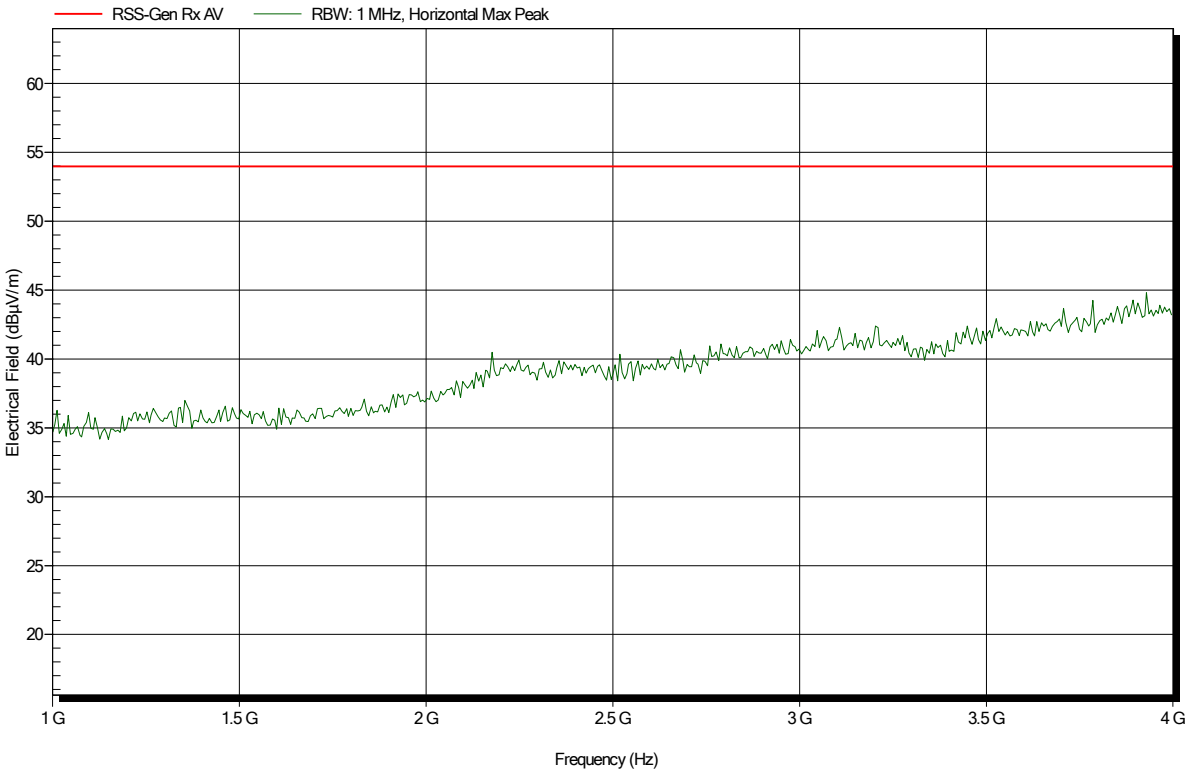

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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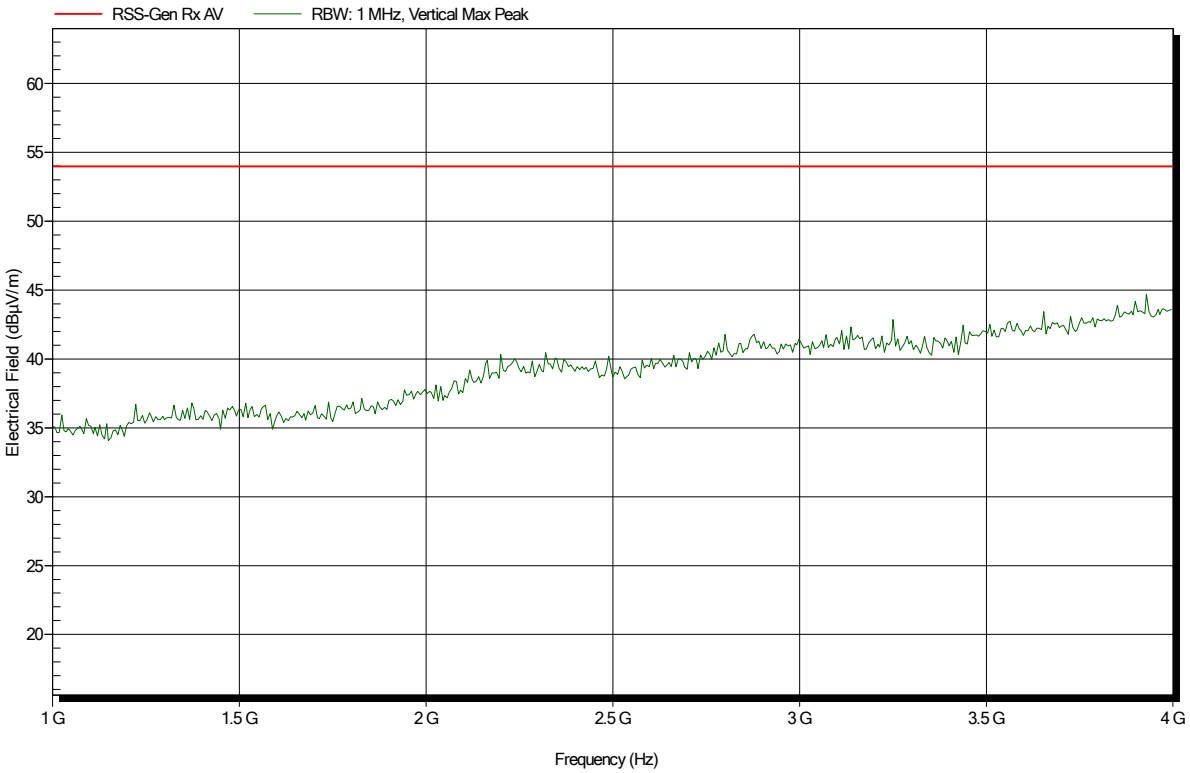

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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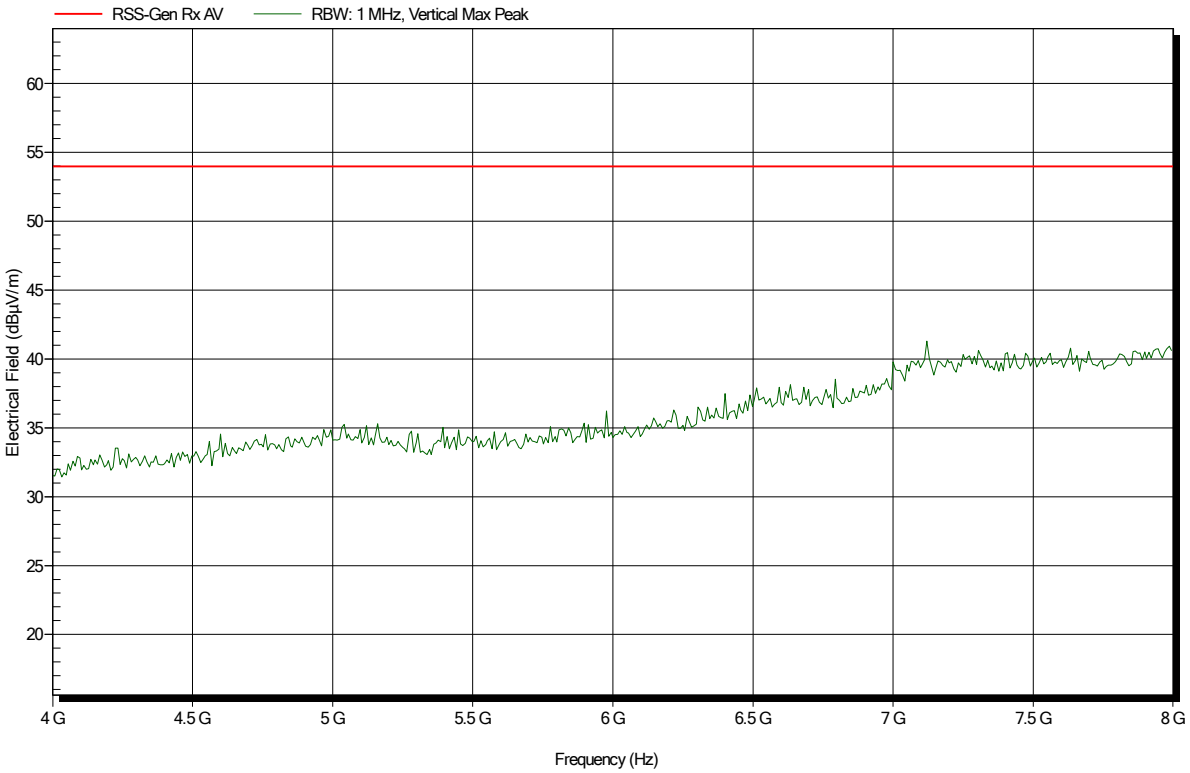

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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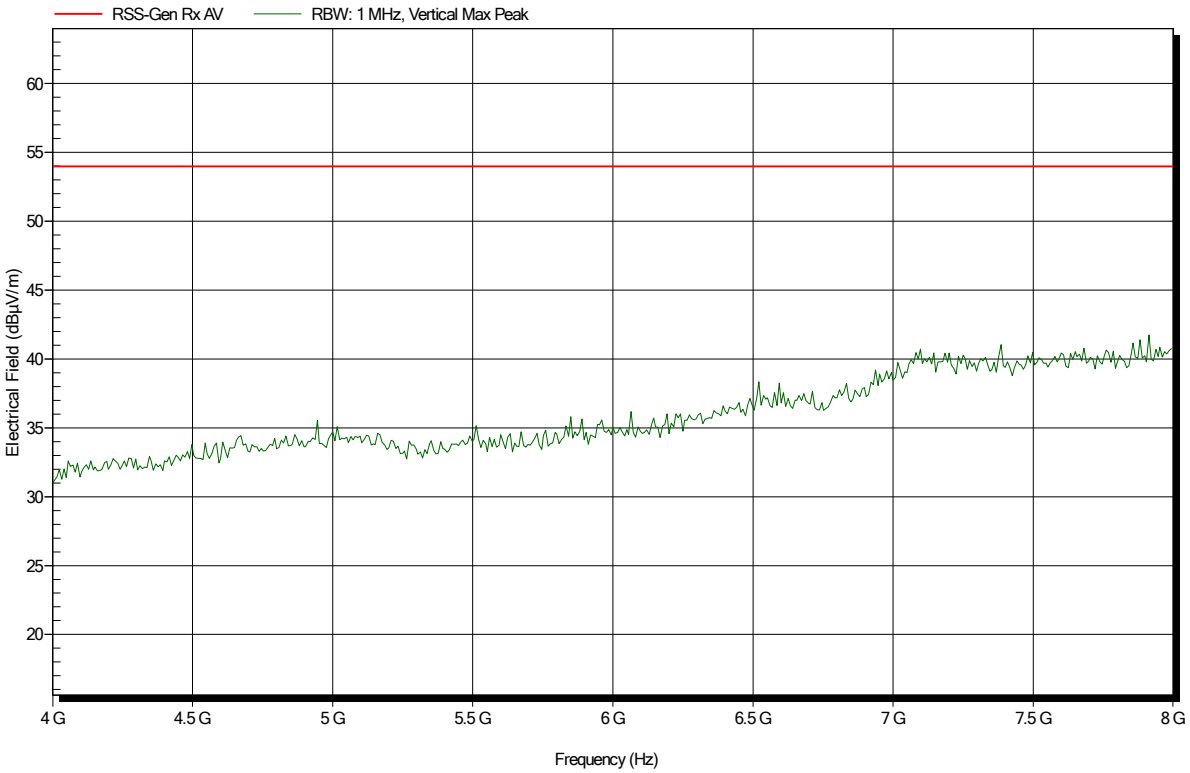

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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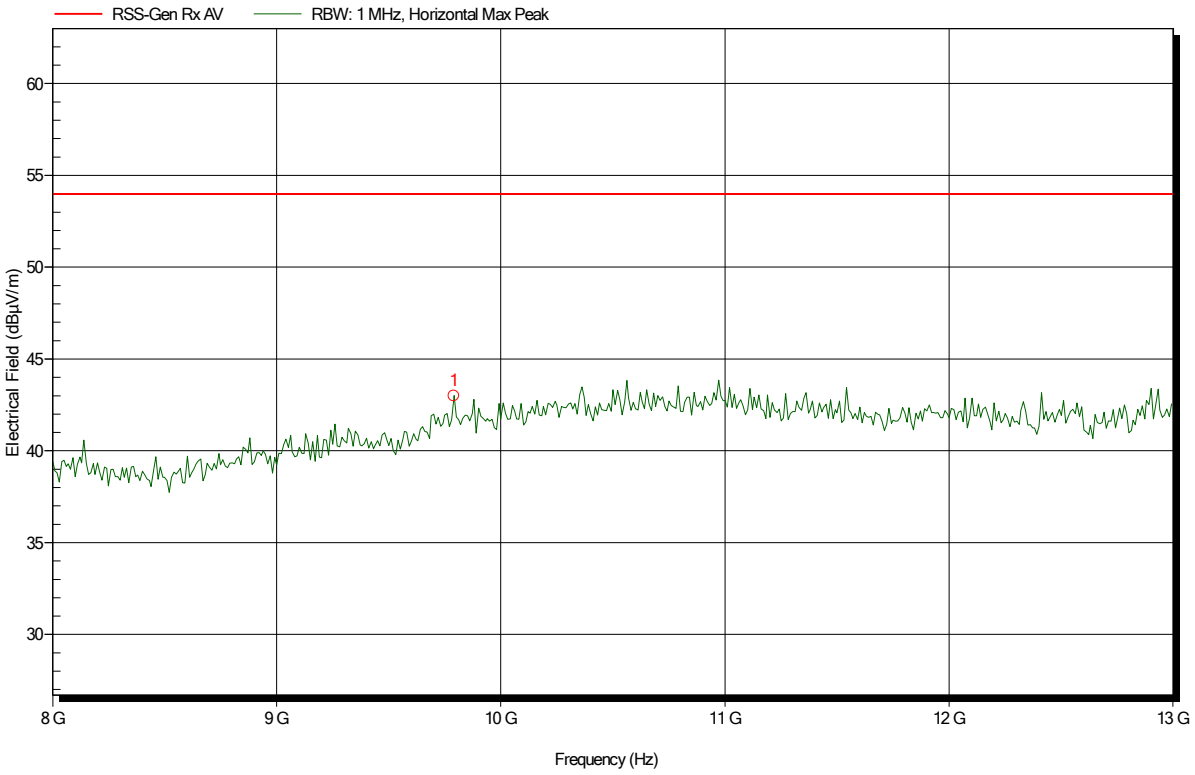

Frequency	Peak	Peak Limit	Peak Difference	Status
9.79 GHz	43 dBµV/m	53.98 dBµV/m	-10.98 dB	Pass

Spurious emissions according to ISED RSS-132, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 22.5°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD5, Ch. 2525
Test Date:	2020-02-14
Note:	

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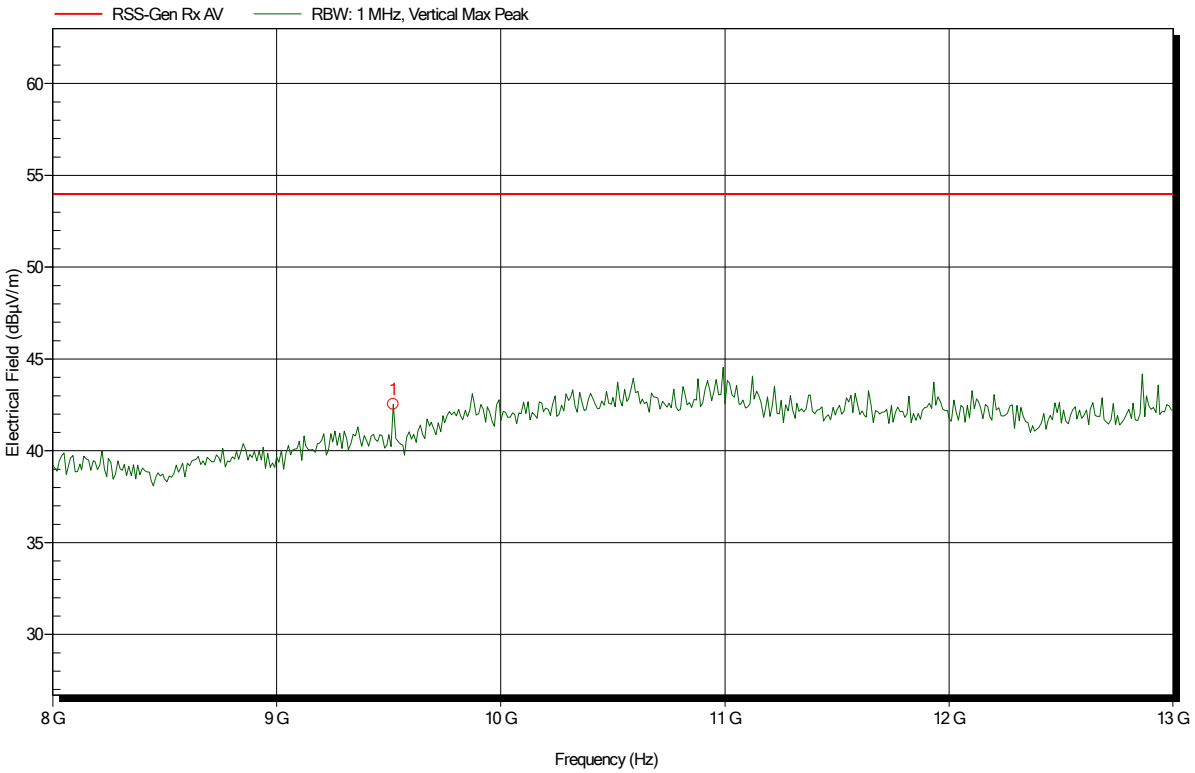

Frequency	Peak	Peak Limit	Peak Difference	Status
9.52 GHz	42.54 dBµV/m	53.98 dBµV/m	-11.44 dB	Pass

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	HK116, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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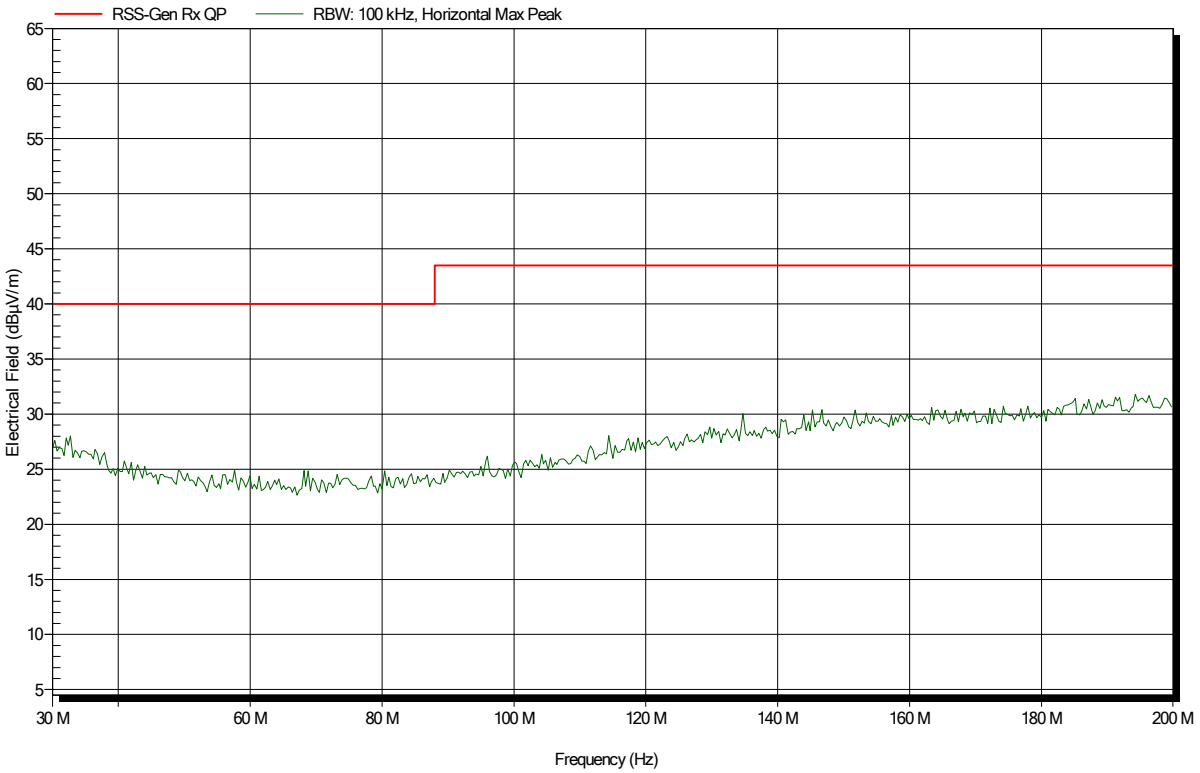

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	HK116, Vertical
Measurement distance:	3 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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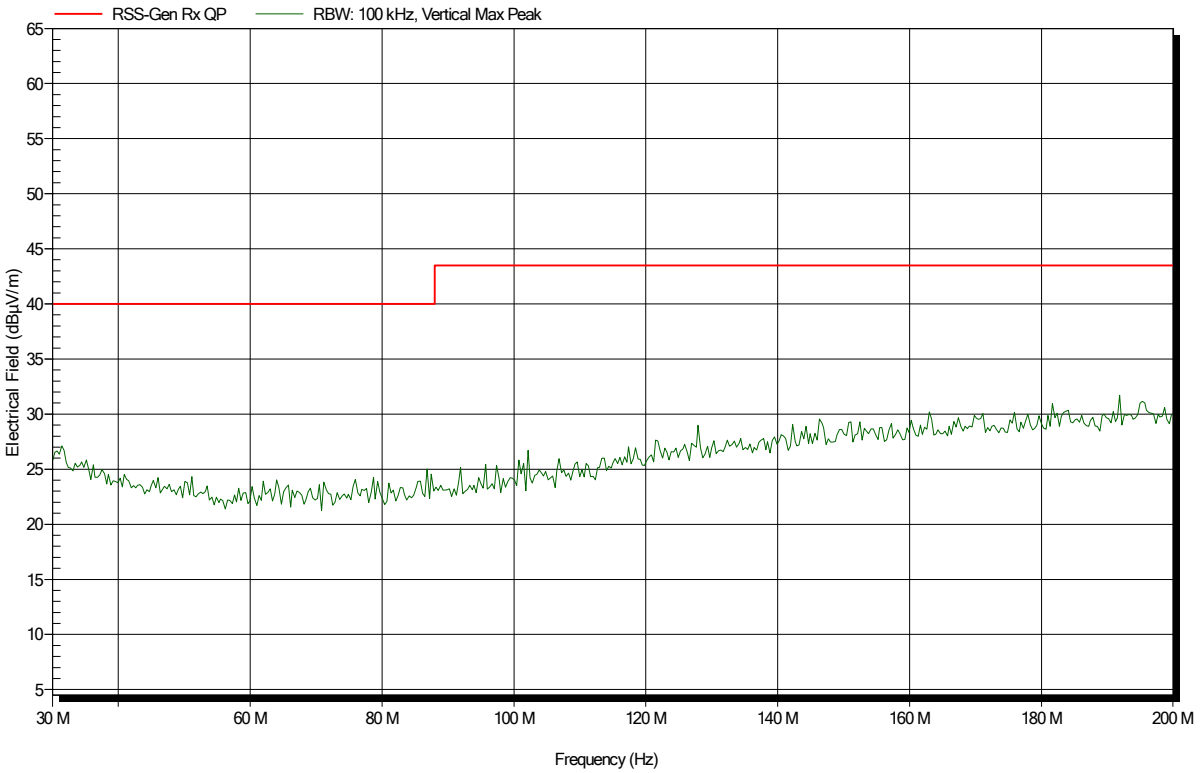

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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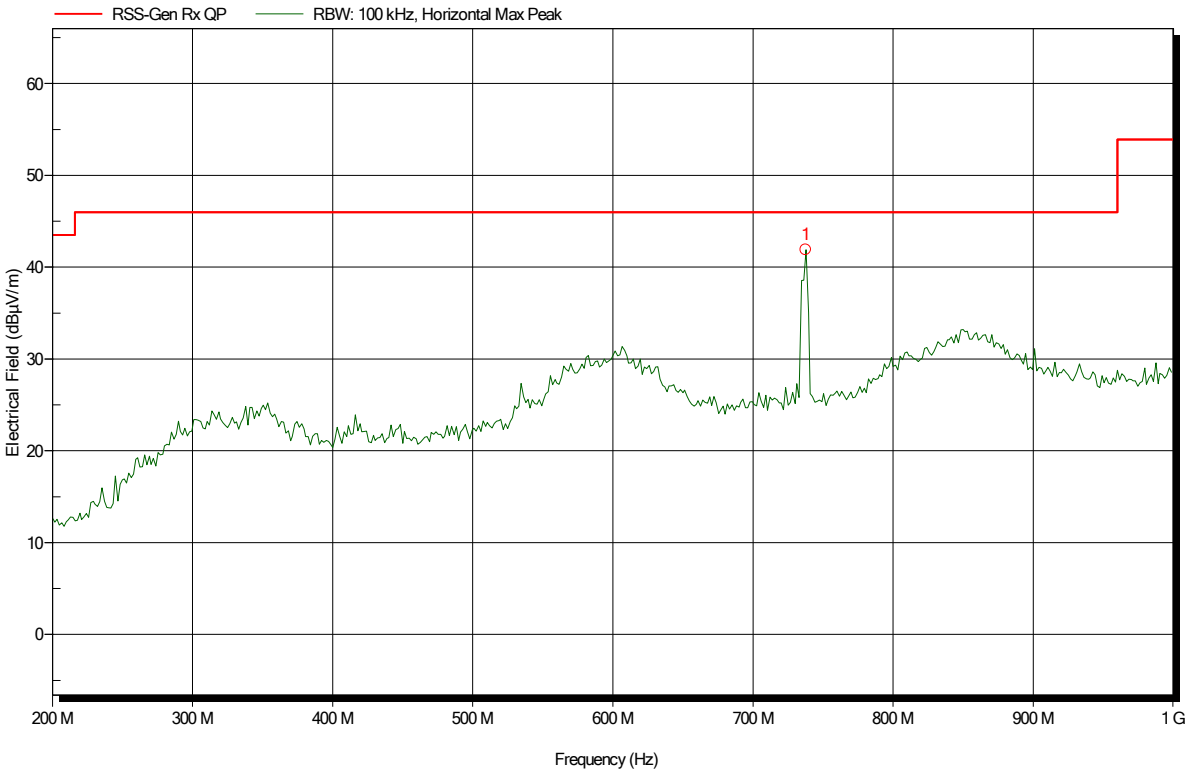

Frequency	
737.6 MHz	Downlink carrier signal

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Rohde & Schwarz HL 223, Vertical
Measurement distance:	3 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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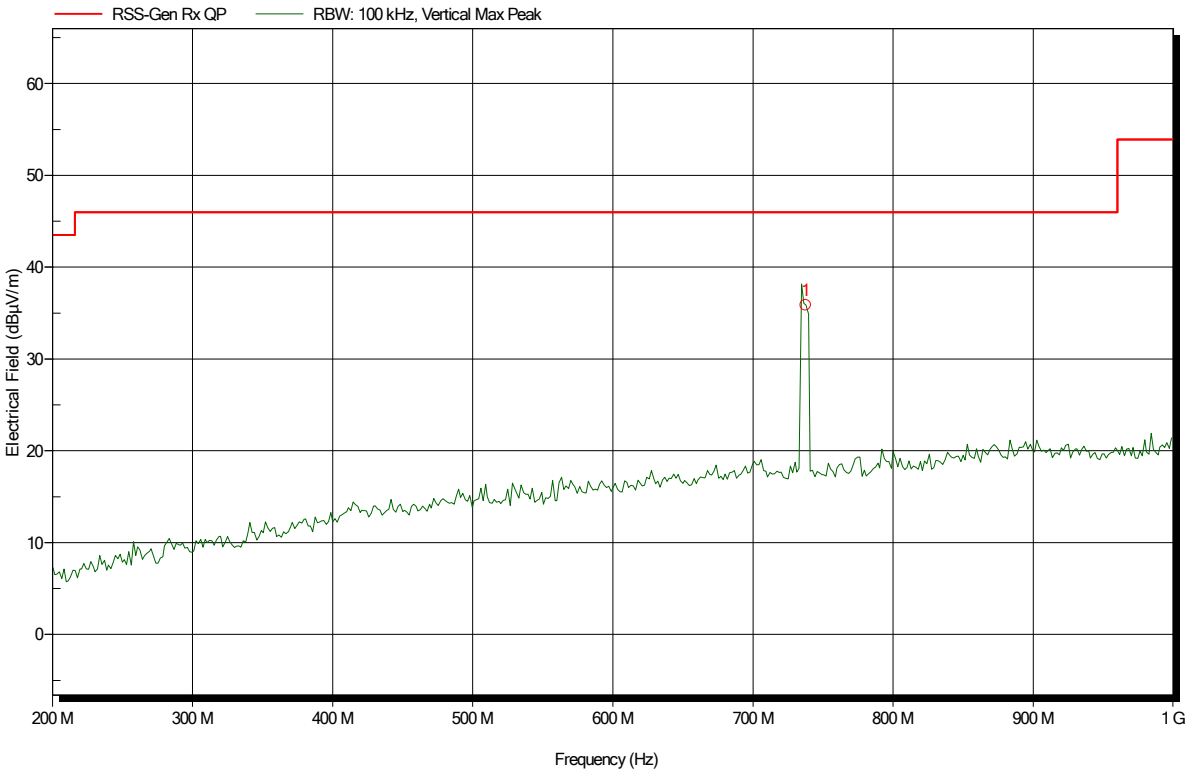

Frequency	
737.6 MHz	Downlink carrier signal

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	3 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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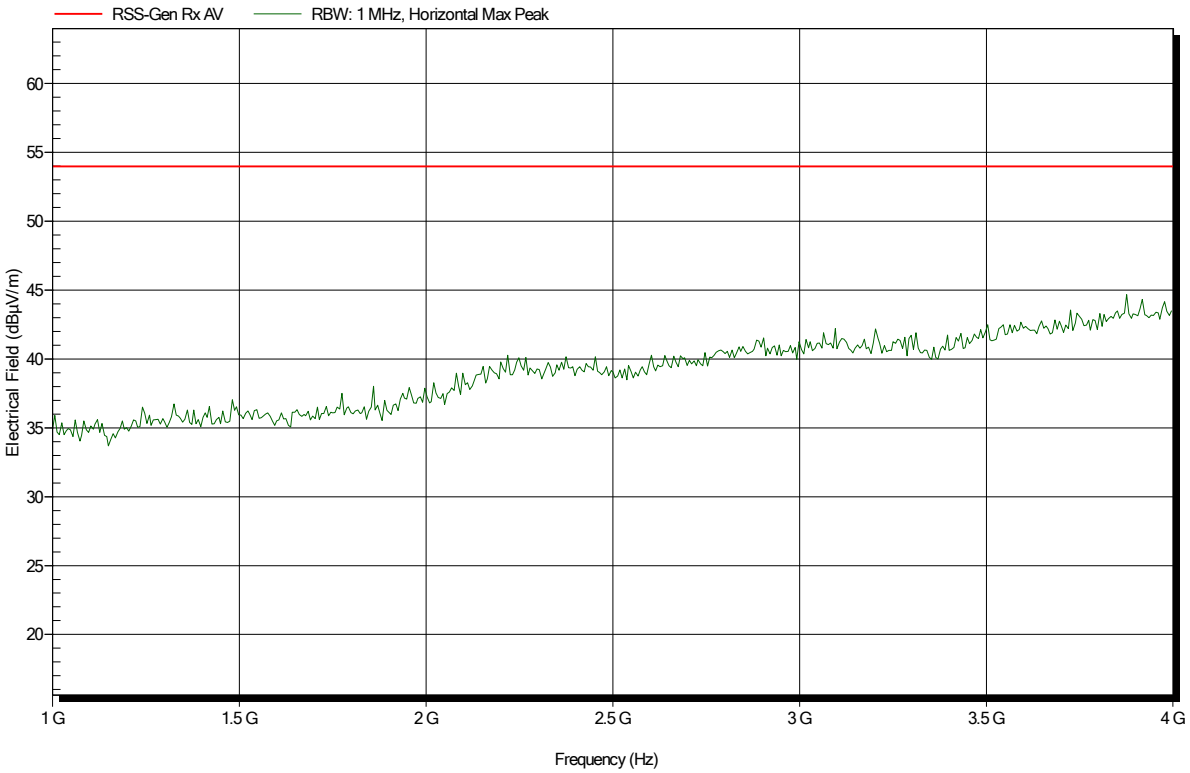

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	3 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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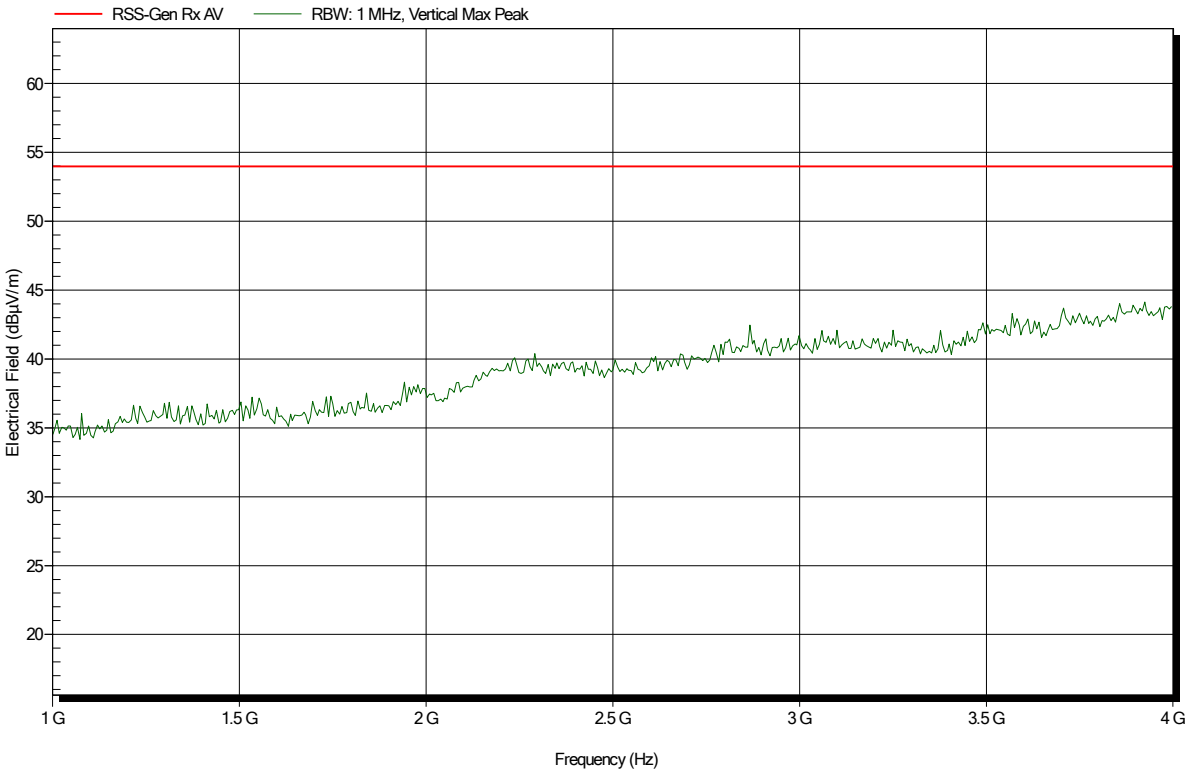

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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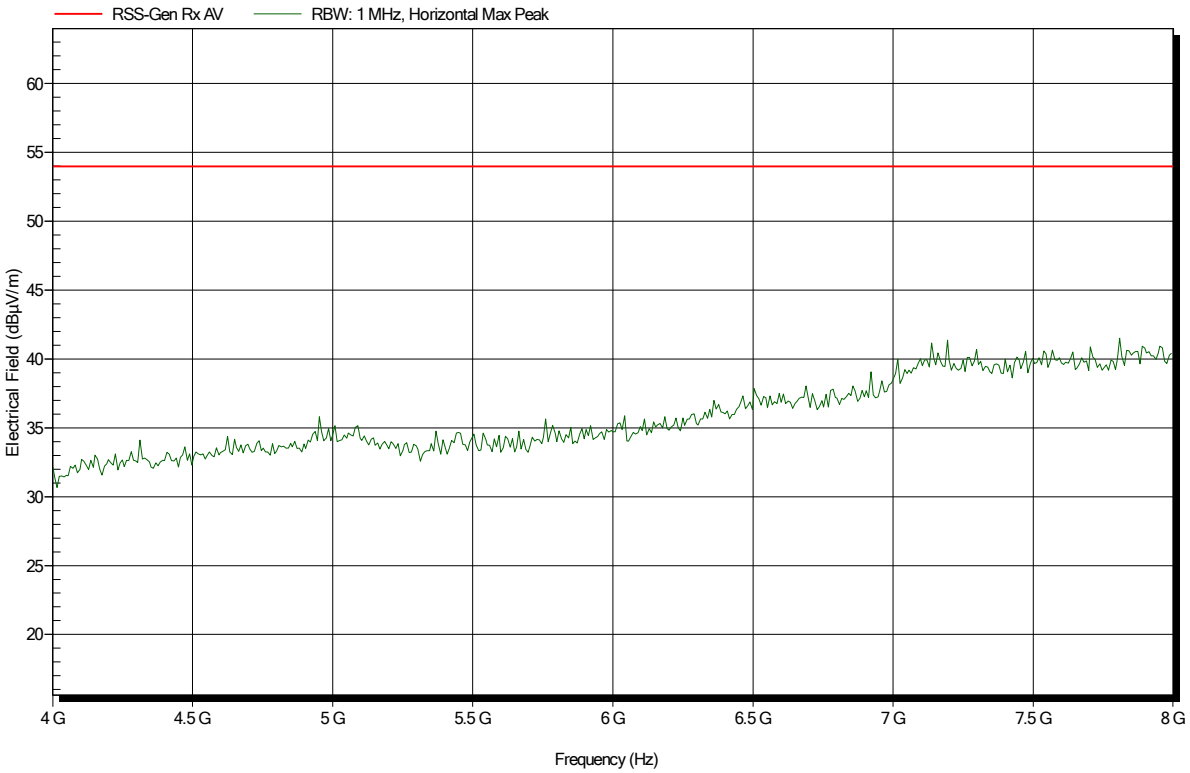

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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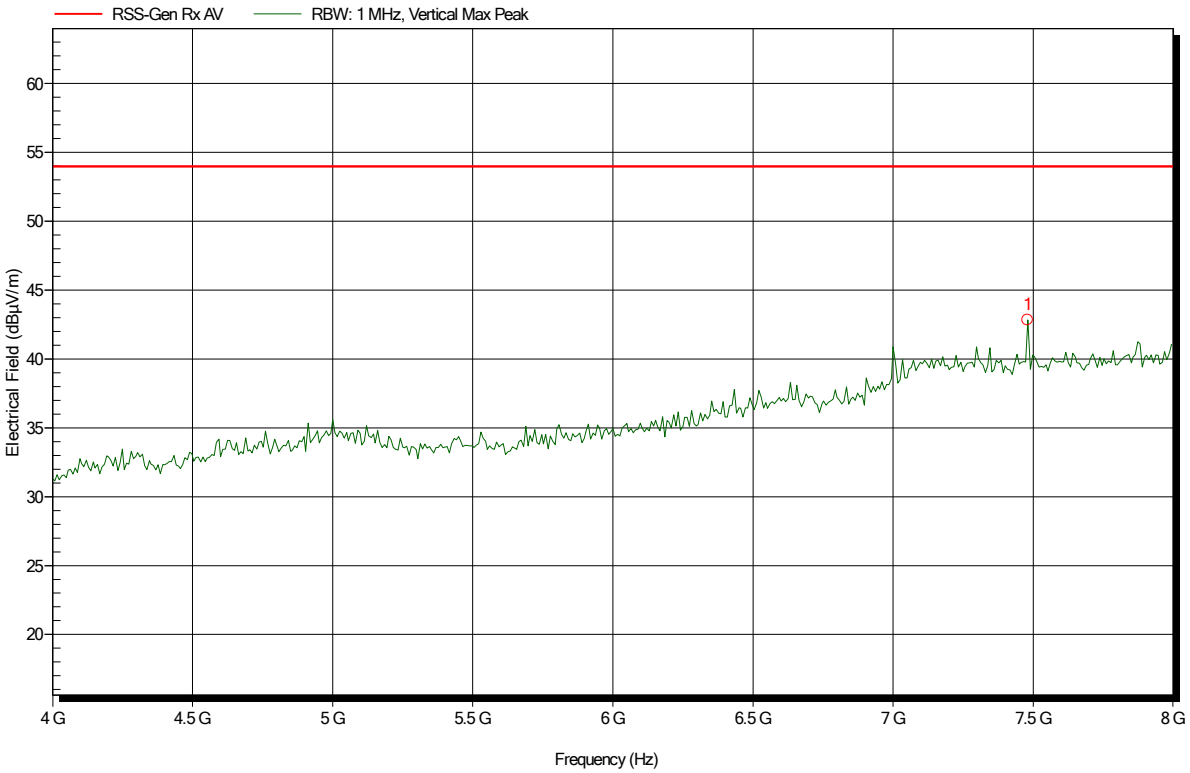

Frequency	Peak	Peak Limit	Peak Difference	Peak Status
7.48 GHz	42.84 dBµV/m	53.98 dBµV/m	-11.14 dB	Pass

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Horizontal
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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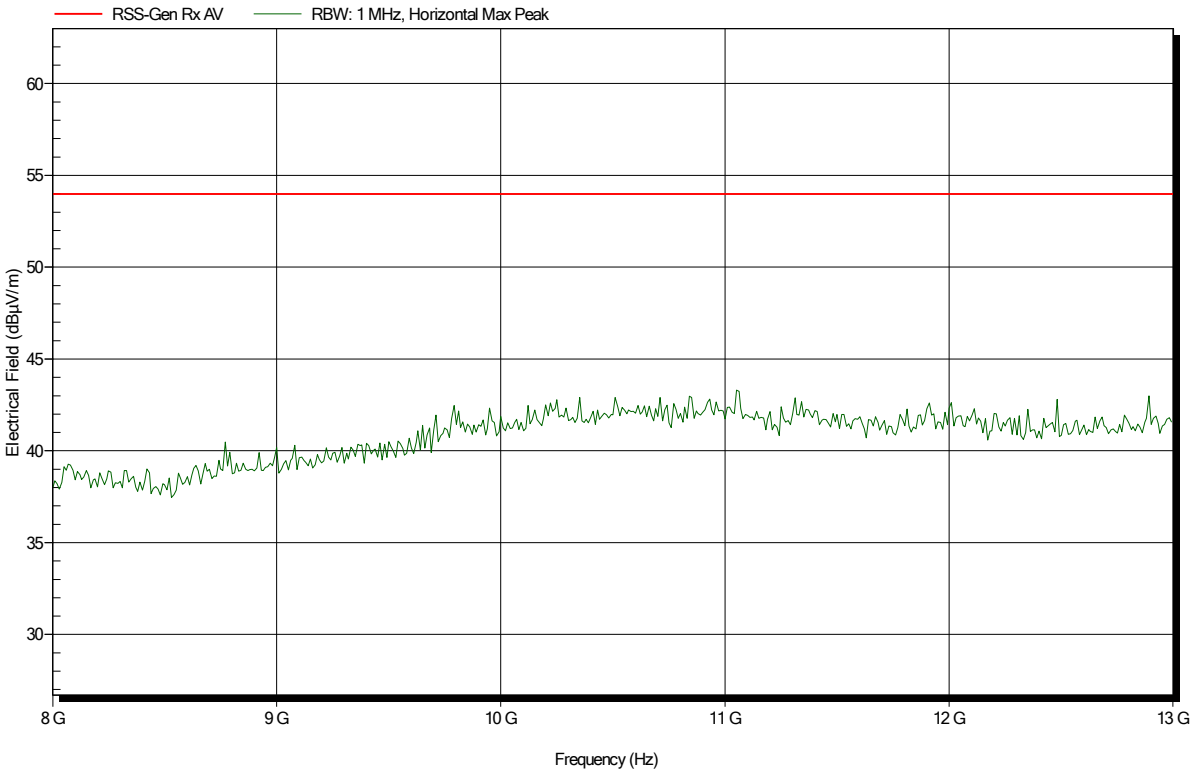

Spurious emissions according to ISED RSS-130, ISED RSS-Gen

Project number:	G0M-1908-8377
Applicant:	BIOTRONIK SE & Co. KG
EUT Name:	CardioMessenger Smart / Telemonitoring System
Model:	CardioMessenger Smart 4G
Test Site:	Eurofins Product Service GmbH
Operator:	Christian Weber
Test Conditions:	Tnom: 23.6°C, Vnom: 3.7 VDC
Antenna:	Schwarzbeck BBHA 9120D, Vertical
Measurement distance:	1 m converted to 3m
Mode:	RX; FDD12, Ch. 5095
Test Date:	2020-02-14
Note:	

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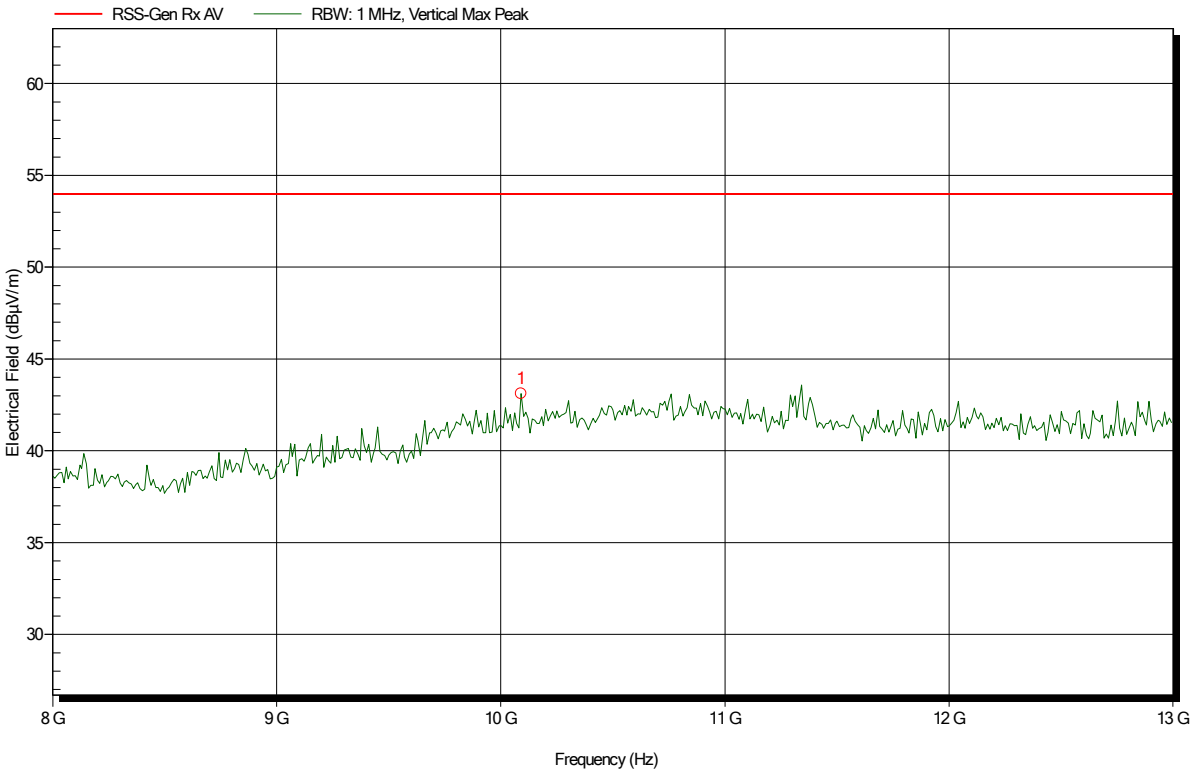

Frequency	Peak	Peak Limit	Peak Difference	Status
10.09 GHz	43.12 dBµV/m	53.98 dBµV/m	-10.86 dB	Pass