



TEST REPORT nr. R17199501

Federal Communication Commission (FCC)

Test item

Description.....: BLUETOOTH MODULE FOR DIAGNOSIS
Trademark.....: TEXA
Model/Type: E-TRUK
FCC ID: T8RET17

Test Specification

Standard.....: FCC Rules & Regulations, Title 47:2016
Part 15 paragraph(s): 203, 204, 205, 207, 209 and 247

Client's name: TEXA S.p.A.

Address: Via 1° Maggio, 9 – 31050 Monastier di Treviso (TV) – ITALY

Manufacturer's name : Same as client

Address: --

Report

Tested by: G. Gandini – *Technician*

Approved by: R. Beghetto – *Laboratory Manager*

Date of issue: 21.05.18

Contents.....: 87 pages

This test report shall not be reproduced except in full without the written approval of CMC.
The test results presented in this report relate only to the item tested.



Index

1. SUMMARY.....	3
2. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT).....	4
2.1 TEST SITE	4
3. TESTING AND SAMPLING.....	4
4. OPERATIVE CONDITIONS.....	4
5. PHOTOGRAPH(S) OF EUT.....	5
5.1 PHOTOGRAPH(S) OF EUT	5
6. EQUIPMENT LIST.....	7
7. MEASUREMENT UNCERTAINTY.....	9
8. REFERENCE DOCUMENTS.....	11
9. DEVIATION FROM TEST SPECIFICATION.....	12
10. TEST CASE VERDICTS.....	12
11. RESULTS.....	13
11.1 ANTENNA REQUIREMENTS	14
11.2 CONDUCTED EMISSIONS.....	15
11.3 EMISSIONS IN RESTRICTED FREQUENCY BANDS AND IN UNRESTRICTED FREQUENCY BANDS	21
11.4 DTS BANDWIDTH	65
11.5 BAND EDGE.....	69
11.6 FUNDAMENTAL EMISSION OUTPUT POWER	75
11.7 MAXIMUM POWER SPECTRAL DENSITY LEVEL IN THE FUNDAMENTAL EMISSION	79
11.8 SPURIOUS EMISSION	83



1. Summary

Standard:

FCC Rules & Regulations, Title 47:2016

Part 15 paragraph(s): 203, 204, 205, 207, 209 and 247

Test specifications	Environmental Phenomena	Tests sequence	Result
Part 15.203	Antenna requirements	1	Complies
Part 15.207	Conducted emissions	2	Complies
Part 15.209	Emissions in restricted frequency bands and in unrestricted frequency bands	3	Complies
Part 15.209	DTS bandwidth	4	Complies
Part 15.247 (d)	Band edge	5	Complies
Part 15.209 and 15.247	Fundamental emission output power	6	Complies
Part 15.209 and 15.247	Maximum power spectral density level in the fundamental emission	7	Complies
Part 15.209	Spurious emission	8	Complies

The Test Report was given to the Client representatives for necessary documentation of ratification of the tested equipment and it is valid for the FCC certification



2. Description of Equipment under test (EUT)

Power supply : 8-32 Vdc
Tests performed on 12 Vdc power supply

Serial Number : --

Type of equipment : ☒ Transmitter Unit
☒ Receiver Unit

Type of station : ☒ Fixed station
☐ Portable station
☐ Mobile station

Frequency band : 2400 – 2483,5 MHz

Nominal frequencies : F_L: 2402 MHz F_M: 2441 MHz F_H: 2480 MHz

2.1 Test Site

Company : CMC Centro Misure Compatibilità S.r.l.

Address : Via della Fisica, 20
36016 Thiene (VI) – ITALY

Test site facility's FCC registration number : 182474

3. Testing and sampling

Date of receipt of test item : 03.10.17

Testing start date : 03.10.17

Testing end date : 05.03.18

Samples tested nr. : 1

Sampling procedure. : Equipment used for testing was picked up by the manufacturer, at the end of the production process with random criterion

Internal identification : adhesive label with the product number P171138

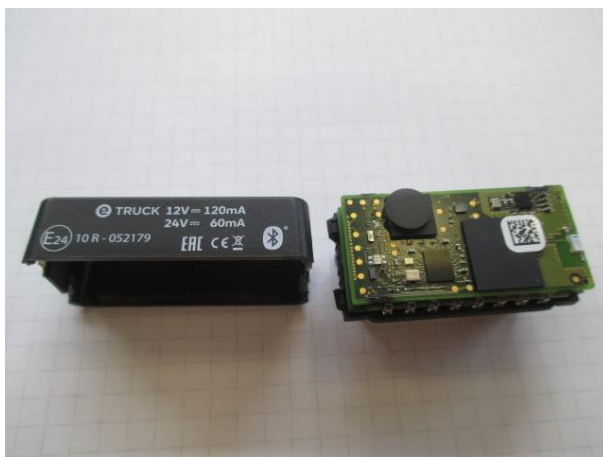
4. Operative conditions

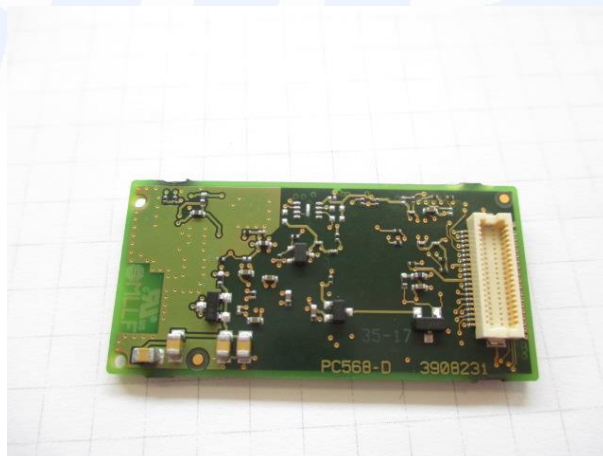
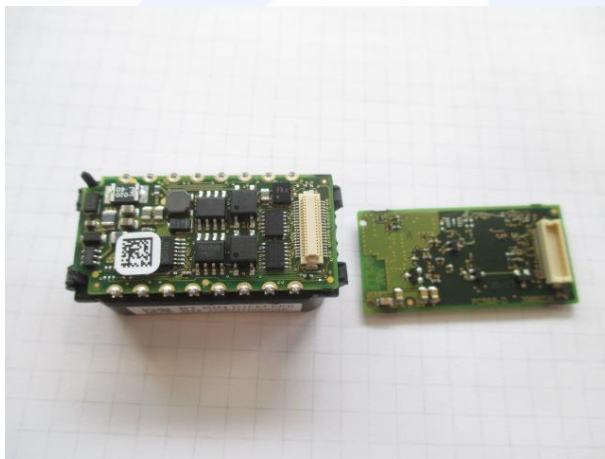
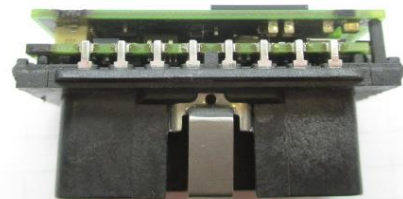
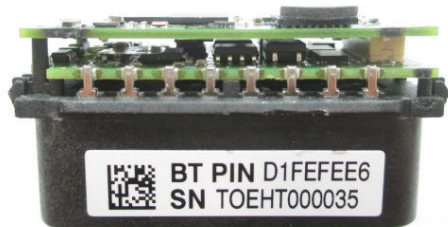
EUT exercising : EUT in continuous transmission at maximum power



5. Photograph(s) of EUT

5.1 Photograph(s) of EUT







6. Equipment list

Calibration information only for Radiated emissions test reported on cl. 11.3 of this Test Report. Tests have been performed on October 2017

<i>Id. number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Serial number</i>	<i>Last calibration</i>	<i>Due date calibration</i>
CMC S108	EMCO	3115	Horn Antenna	9811-5622	June '16	June '19
CMC S127	Schaffner	HLA6120	Loop Antenna	1191	November '13	November '18
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '17	January '18
CMC S260	CMC	Wfr_N	Shielded Cable	Wfr_ant10-1	November '16	November '17
CMC S261	CMC	Wfr_N	Shielded Cable	Wfr_ant20-1	November '16	November '17
CMC S262	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix32-1	November '16	November '17
CMC S263	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix31-1	November '16	November '17
CMC S264	CMC	Wfr_N	Shielded Cable	Wfr_ext03-1	November '16	November '17
CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	Biconical Antenna (30-300MHz)	831	June '16	June '19
CMC S287	Schwarzbeck	VUSLP 9111B	Log-periodic Antenna (200 MHz-3GHz)	9111B-203	June '16	June '19
CMC S288	CMC	W_sma_white	Joint Shielded Cable	W_001	November '16	November '17



Calibration information for all other tests that have been performed after February 2018

<i>Id. number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Serial number</i>	<i>Last calibration</i>	<i>Due date calibration</i>
CMC S010	Rohde & Schwarz	ESH3-Z2	Impulses Limiting Device	- - -	January '18	January '19
CMC S108	EMCO	3115	Horn Antenna	9811-5622	June '16	June '19
CMC S127	Schaffner	HLA6120	Loop Antenna	1191	November '13	November '18
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '18	January '19
CMC S200	Schwarzbeck	NSLK 8128	V-LISN	8128-273	January '18	January '19
CMC S227	Rohde & Schwarz	ESR7	EMI Test Receiver 7GHz	101121	January '18	January '19
CMC S260	CMC	Wfr_N	Shielded Cable	Wfr_ant10-1	November '17	November '18
CMC S261	CMC	Wfr_N	Shielded Cable	Wfr_ant20-1	November '17	November '18
CMC S262	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix32-1	November '17	November '18
CMC S263	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix31-1	November '17	November '18
CMC S264	CMC	Wfr_N	Shielded Cable	Wfr_ext03-1	November '17	November '18
CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	Biconical Antenna (30-300MHz)	831	June '16	June '19
CMC S287	Schwarzbeck	VUSLP 9111B	Log-periodic Antenna (200 MHz-3Ghz)	9111B-203	June '16	June '19
CMC S288	CMC	W_sma_white	Joint Shielded Cable	W_001	November '17	November '18



7. Measurement uncertainty

Test	Test Setup	Expanded uncertainty	Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150MHz	PE001_01	3,4 dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0MHz	PE001_01	2,8 dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30MHz	PE001_02	2,6 dB	1
Conducted emission CISPR 16 Current Probe 0,15-30MHz	PE001_03	2,2 dB	1
Conducted emission CISPR 16 ISN 0,15-30MHz	PE001_04	4,5 dB	1
Clic CISPR 16 LISN 50uH 0,150-30,0MHz	PE001_05	3,1 dB	1
Disturbance Power 30-300 MHz	PE002_01	3,4 dB	1
Radiated Emission LAS 0,15-30MHz	PE003_01	1,5 dB	1
Radiated Emission CISPR 16 Loop Ant. 0,15-30MHz	PE004_01	3,8 dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300MHz	PE004_02	3,3 dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000MHz	PE004_03	3,1 dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18GHz	PE004_04	3,6 dB	1
Human Exposure to electromagnetic fields	PE005_01	15,0 %	1
Harmonic current emissions test	PE006_01	10 mA + 1,6 %	1
Voltage fluctuation and flicker test	PE007_01	4,2 %	1
Radiated Immunity 80MHz-6GHz	PE102_XX	2,1 dB 0,82 V/m a 3V/m	1
Conducted Immunity 0,15-230MHz	PE105_XX	1,2 dB 0,44 V a 3V	1
AC Magnetic field	PE106_01	1,55 % 0,15 A/m a 10A/m	1
Pulse Magnetic field	PE107_01	6,24 % 18,7 A/m a 300A/m	1
Dumped Magnetic field	PE108_01	6,24 % 1,87 A/m a 30A/m	1
Common mode conducted immunity	PE112_01	2,20 % 0,22 V a 10V	1



Test	Test Setup	Expanded uncertainty	Note
Power/Spurious 9kHz-30MHz	PR001_01	3,8 dB	1
Power/Spurious ERP 30-1000MHz d=10m	PR001_02+03	4,3 dB	1
Misura della potenza EIRP 1-18GHz d=3m	PR001_04	4,3 dB	1
Misura della potenza EIRP 18-40GHz d=3m	PR001_05	5,5 dB	1
Frequency error	PR002_01+02	< 1x10 ⁻⁷	1
Timing zero span (1001pts.)	PR002_01+02	0,2 % SWT	1
Modulation bandwidth	PR002_01+02	< 1x10 ⁻⁷	1
Conducted RF power and spurious emission	PR002_01+02	1,2 dB	1
Adjacent channel power	PR002_01+02	1,2 dB	1
Blocking	PR002_01+02	1,2 dB	1

Test	Test Setup	Expanded uncertainty	Note
Electrostatic discharge immunity test	PE101_0X		2
Electrical fast transients / burst immunity test	PE103_0X		2
Surge immunity test	PE104_0X		2
Short interruption immunity test	PE109_01		2
Rev_18_01 date 30/01/2018			

Note 1:

The expanded uncertainty reported according to EN55016-4-2:2011 is based on a standard uncertainty multiplied by a coverage factor of K=2, providing a level of confidence of p = 95%

Note 2:

It has been demonstrated that the used test equipment meets the specified requirements in the standard with at least a 95% confidence, covering factor k = 2



8. Reference documents

Reference no.	Description
FCC Rules and Regulation Title 47 part 15:2016	--
ANSI C63.4:2014	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz
KDB 558074 D01 DTS Meas Guidance v04	Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under § 15.247
Internal Procedure PM001 rev. 3.0 (Quality Manual)	Measure Procedure
Internal procedure INC_M rev. 9.0 (Quality Manual)	Measurement uncertainty calculation



9. Deviation from test specification

None

10. Test case verdicts

Test case does not apply to the test object : N.A.

Test item does meet the requirement : Complies

Test item does not meet the requirement : Does not comply

Test not performed : N.E.

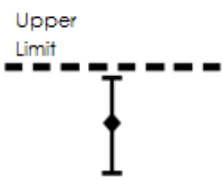
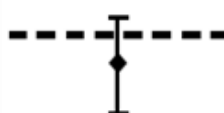
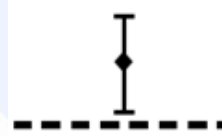


11. Results

In this clause tests results are reported.

Measurement uncertainty is in accordance with document CMC INC_M rev. 9.0.

Judgement of compliance:

Case 1	Case 2	Case 3	Case 4
			
The sample complies with the requirement.	The sample complies with the requirement.	The sample does not comply with the requirement.	The sample does not comply with the requirement.
The measurement results is within the specification limit when the measurement uncertainty is taken into account.	It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty although the measurement result is below the limit.	It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty also the measurement result is upper the limit.	The measurement results is outside the specification limit when the measurement uncertainty is taken into account.

In agreement with ILAC-G8: 03/2009 Guidelines on the Reporting of Compliance with Specification.



11.1 Antenna requirements

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.203 and 15.204
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Laboratory

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

--
Measurement uncertainty: See clause 7 of this test report

Test specification

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31 (d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded

Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	100	45

Result

Antenna Type	External R.F. power amplifier	Gain	Remarks	Results
Integral antenna	Not Present	-1,3 dBi	--	Complies

Result: The requirements are met



11.2 Conducted emissions

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.207
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Shielded chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S010, CMC S200, CMC S206
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Main port
Frequency range: 150 kHz – 30 MHz

Environmental conditions

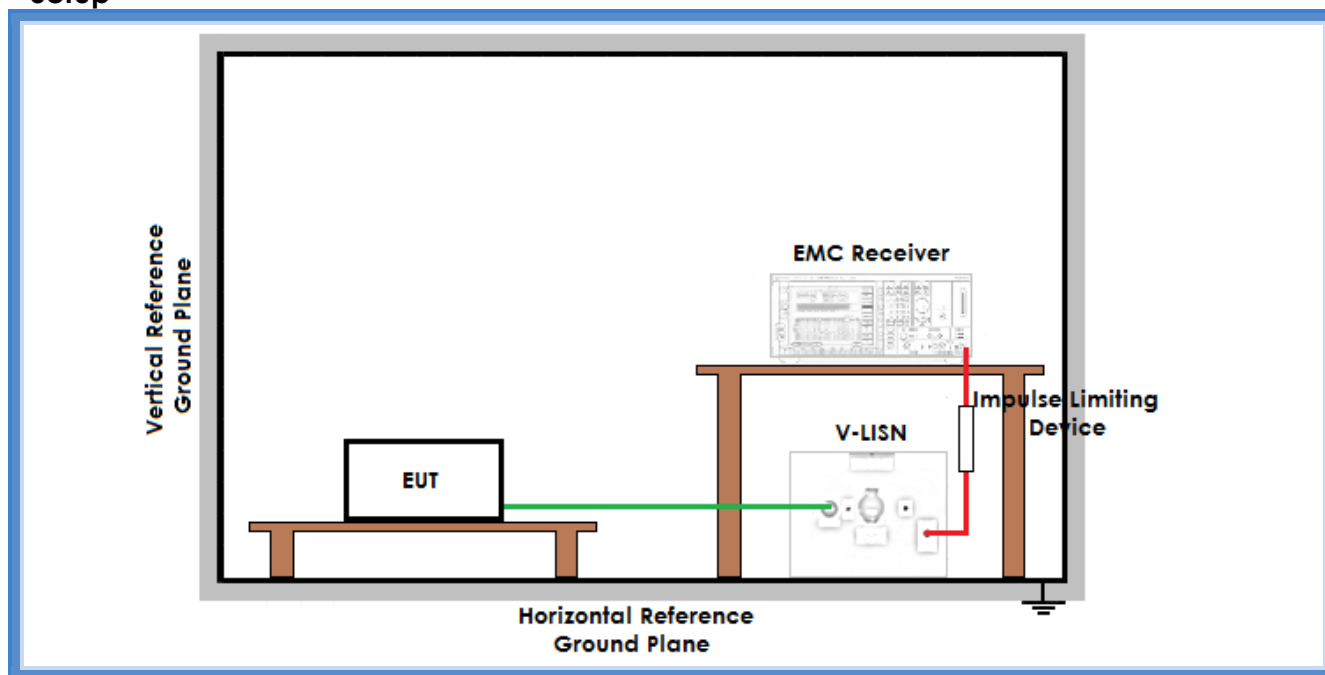
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
21	98	46

Acceptance limits

Frequency range (MHz)	dB(μV) Quasi-peak	dB(μV) Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50



Setup



Result

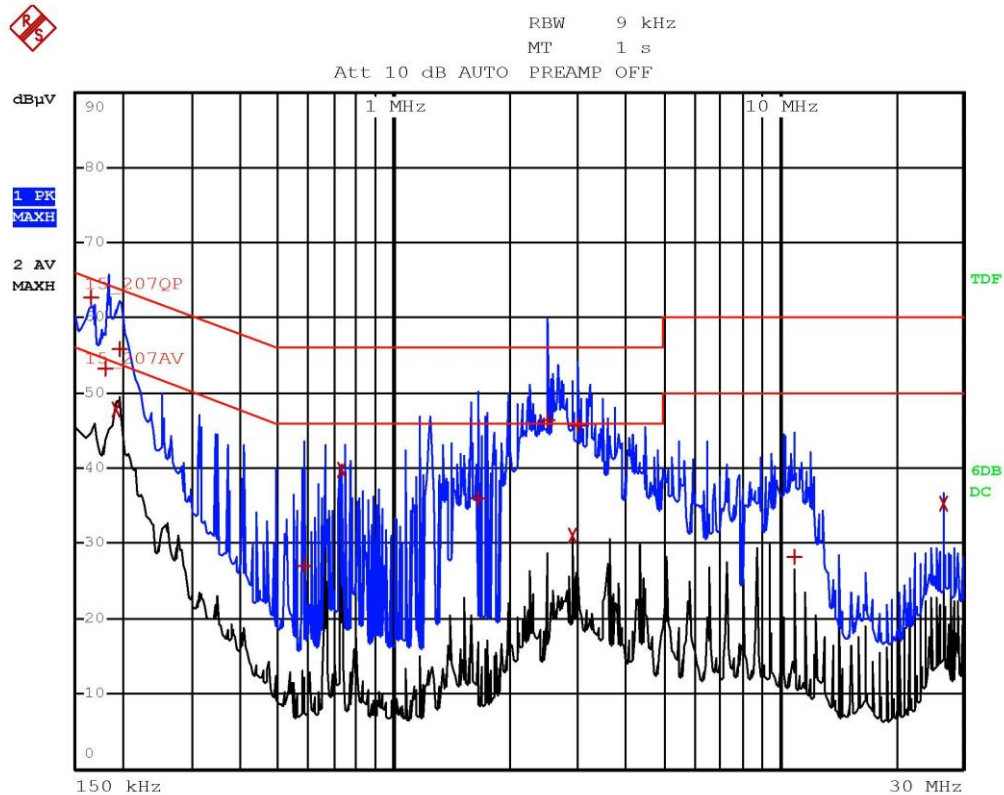
Line	Graphs	Remarks	Result
+12 Vdc	G17199524	--	Complies
-12 Vdc	G17199525	--	Complies
Remarks: --			

Graphs Legend

PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +
AV: Average; AV [1s] (average at 1 second) values are marked with a X



Graphs

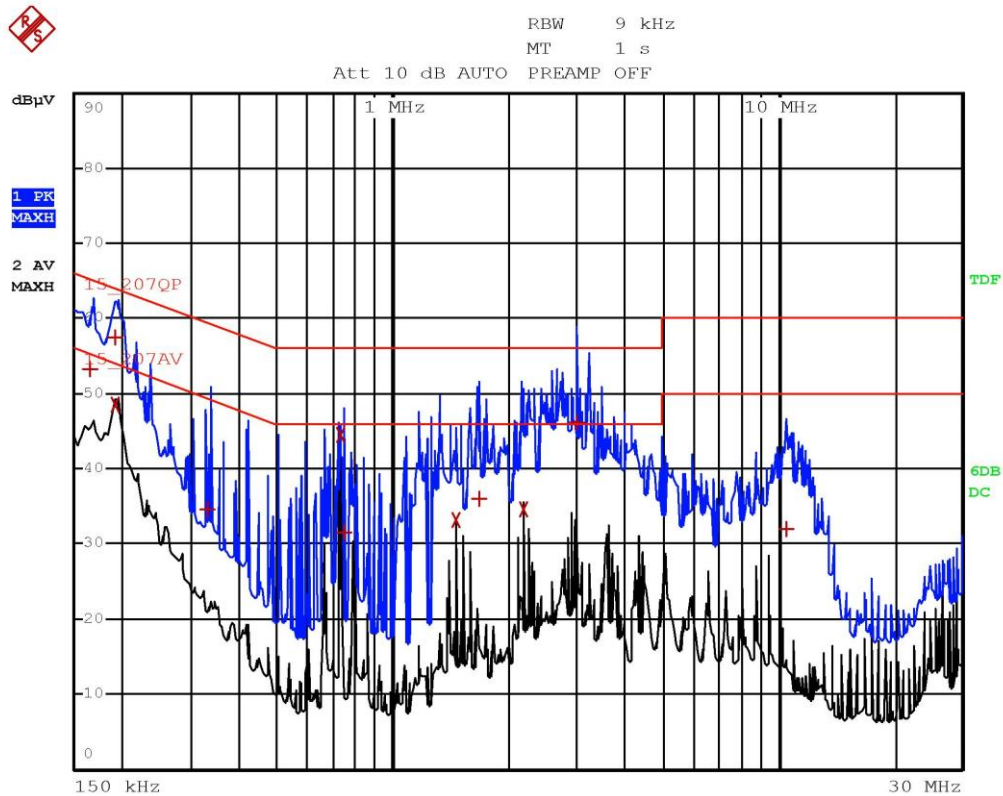


Gandini 17199524-Line (+)-Tx Rx BT



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	15_207QP		
Trace2:	15_207AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Quasi Peak	166 kHz	62.71	-2.44
1 Quasi Peak	182 kHz	53.36	-11.03
2 Average	194 kHz	47.94	-5.91
1 Quasi Peak	198 kHz	55.80	-7.88
1 Quasi Peak	586 kHz	27.10	-28.89
2 Average	730 kHz	39.68	-6.31
1 Quasi Peak	1.666 MHz	36.01	-19.98
1 Quasi Peak	2.502 MHz	46.52	-9.47
2 Average	2.918 MHz	31.15	-14.84
1 Quasi Peak	3.002 MHz	45.82	-10.18
1 Quasi Peak	10.914 MHz	28.18	-31.81
2 Average	26.622 MHz	35.40	-14.59

Gandini 17199524-Line (+)-Tx Rx BT



Gandini 17199525-Line (-)-Tx Rx BT



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	15_207QP		
Trace2:	15_207AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Quasi Peak	166 kHz	53.34	-11.81
1 Quasi Peak	194 kHz	57.61	-6.24
2 Average	194 kHz	48.45	-5.40
1 Quasi Peak	334 kHz	34.61	-24.73
2 Average	730 kHz	44.45	-1.54
1 Quasi Peak	750 kHz	31.57	-24.42
2 Average	1.458 MHz	33.09	-12.90
1 Quasi Peak	1.67 MHz	36.13	-19.86
2 Average	2.186 MHz	34.66	-11.33
1 Quasi Peak	2.998 MHz	46.16	-9.83
1 Quasi Peak	10.502 MHz	31.94	-28.06

Gandini 17199525-Line (-)-Tx Rx BT

Result: The requirements are met



11.3 Emissions in restricted frequency bands and in unrestricted frequency bands

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.209
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S127, CMC S164, CMC S271,
CMC S287, CMC S290
Measurement uncertainty: See clause 7 of this
test report

Test specification

Port: Enclosure
Frequency range: 0,009 MHz – 26000 MHz
Antenna polarization: Horizontal (H) – Vertical (V)
EUT – Antenna distance:
10 m for frequencies ≤ 1000 MHz
3 m for frequencies > 1000 MHz

Environmental conditions

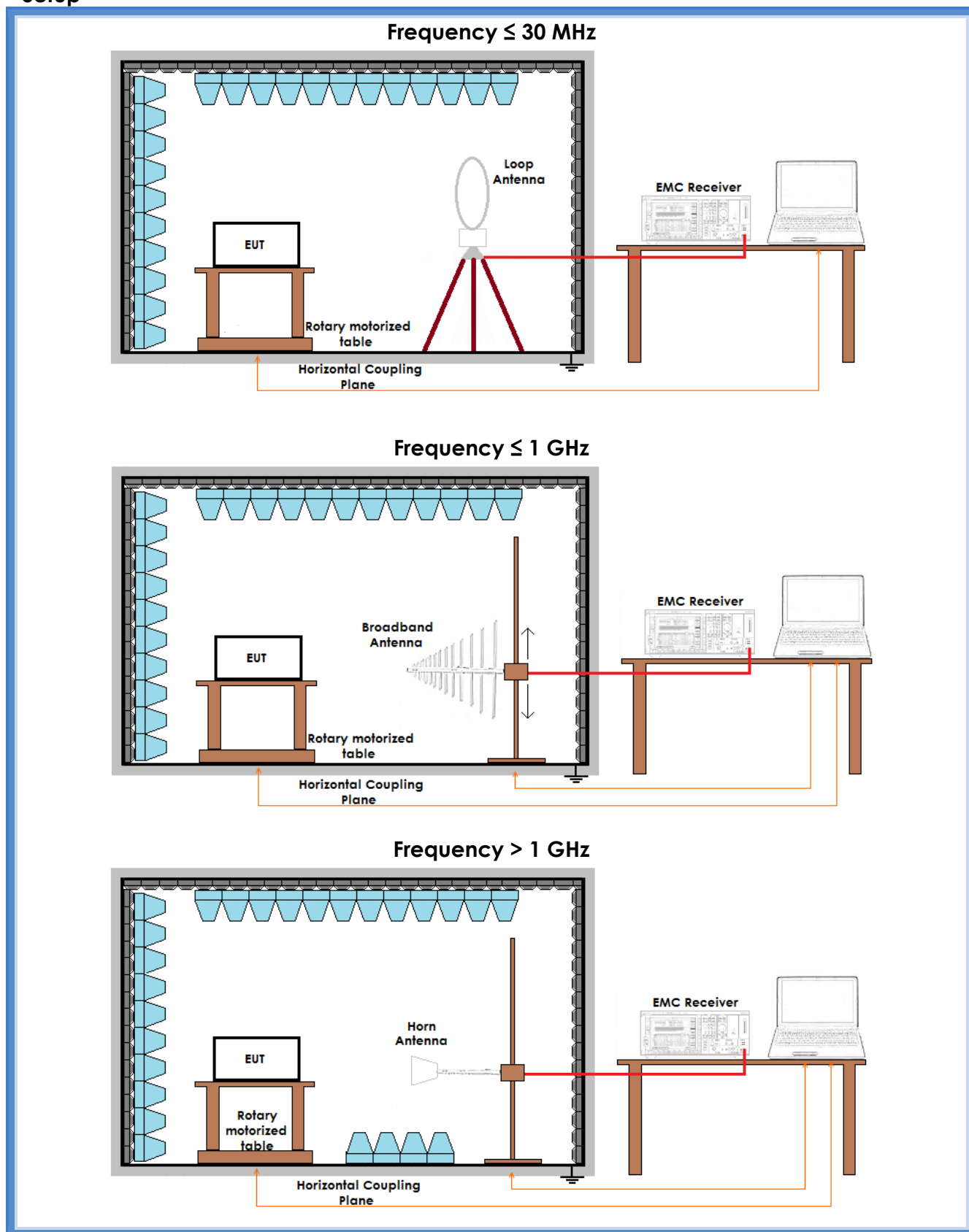
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
22	100	45

Acceptance limits

Frequency range (MHz)	Test distance (m)	Limits [dB(μV/m)]	
0,009 to 0,490	300	48,5 to 13,8	
0,490 to 1,705	30	33,8 to 22,9	
1,705 to 30	30	29,5	
30 to 88	3	40	
88 to 216	3	43,5	
216 to 960	3	46,0	
Above 960	3	53,9	
	Test distance (m)	Linear average detector [dB(μV/m)]	Peak detector [dB(μV/m)]
Above 1000	3	53,9	73,9

Remarks: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

Setup





Result

Polarization	Frequency Range (MHz)	Graphs	Remarks	Result
V	30 – 300	G17199501	Worst case	Complies
H	30 – 300	G17199502	Worst case	Complies
H	300 – 1000	G17199503	Worst case	Complies
V	300 – 1000	G17199504	Worst case	Complies
Loop	0,009 – 30	G17199505	Worst case	Complies
V	1000 – 2483,5	G17199506	Lowest channel	Complies
H	1000 – 2483,5	G17199507	Lowest channel	Complies
H	1000 – 2483,5	G17199508	Medium channel	Complies
V	1000 – 2483,5	G17199509	Medium channel	Complies
V	1000 – 2483,5	G17199510	Highest channel	Complies
H	1000 – 2483,5	G17199511	Highest channel	Complies
H	2483,5 – 18000	G17199512	Lowest channel	Complies
V	2483,5 – 18000	G17199513	Lowest channel	Complies
V	2483,5 – 18000	G17199514	Medium channel	Complies
H	2483,5 – 18000	G17199515	Medium channel	Complies
H	2483,5 – 18000	G17199516	Highest channel	Complies
V	2483,5 – 18000	G17199517	Highest channel	Complies
V	18000 – 26000	G17199518	Highest channel	Complies
H	18000 – 26000	G17199519	Highest channel	Complies
H	18000 – 26000	G17199520	Medium channel	Complies
V	18000 – 26000	G17199521	Medium channel	Complies
V	18000 – 26000	G17199522	Lowest channel	Complies
H	18000 – 26000	G17199523	Lowest channel	Complies
Remarks: Measurements at frequencies lower than 1000 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with FCC 3A10 factor. Peaks above the limits are caused by the nominal transmitting frequencies. Final measurements have been performed only for values with margin lower than 20 dB from limit				

Graphs Legend

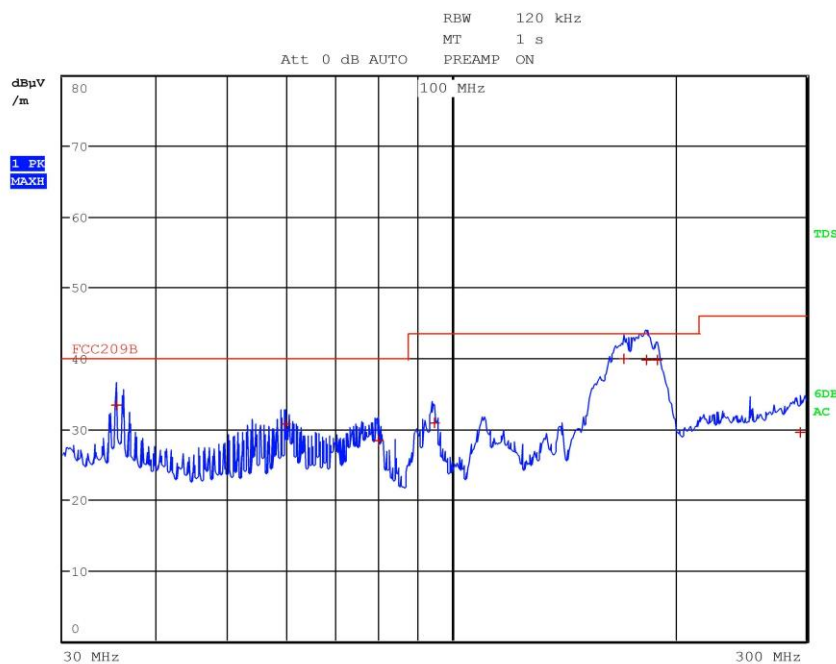
PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +

AV: Average; AV [1s] (average at 1 second) values are marked with a x



Graphs

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Diagnosi BT
Operator Gandini 17199501
Test Spec
Vert



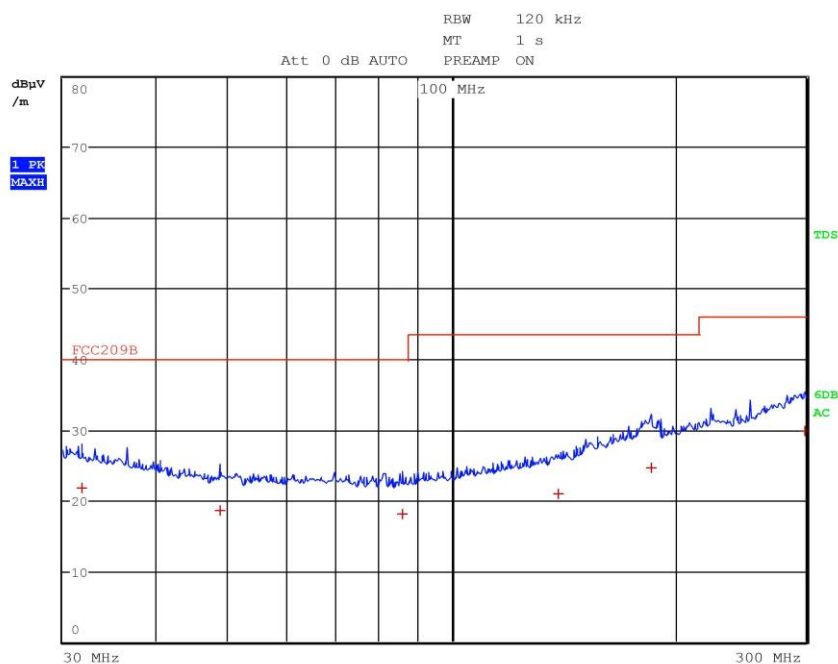
Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 8

Trace	Frequency	Level (dBμV/m)	Detector	Delta Limit/dB
1	35.400000000 MHz	33.39	Quasi Peak	-6.61
1	59.680000000 MHz	30.61	Quasi Peak	-9.39
1	79.640000000 MHz	28.30	Quasi Peak	-11.70
1	95.000000000 MHz	30.81	Quasi Peak	-12.71
1	170.760000000 MHz	39.94	Quasi Peak	-3.58
1	182.680000000 MHz	39.77	Quasi Peak	-3.75
1	189.200000000 MHz	39.82	Quasi Peak	-3.70
1	294.600000000 MHz	29.43	Quasi Peak	-16.59



Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Diagnosi BT
Operator Gandini 17199502
Test Spec
Horiz



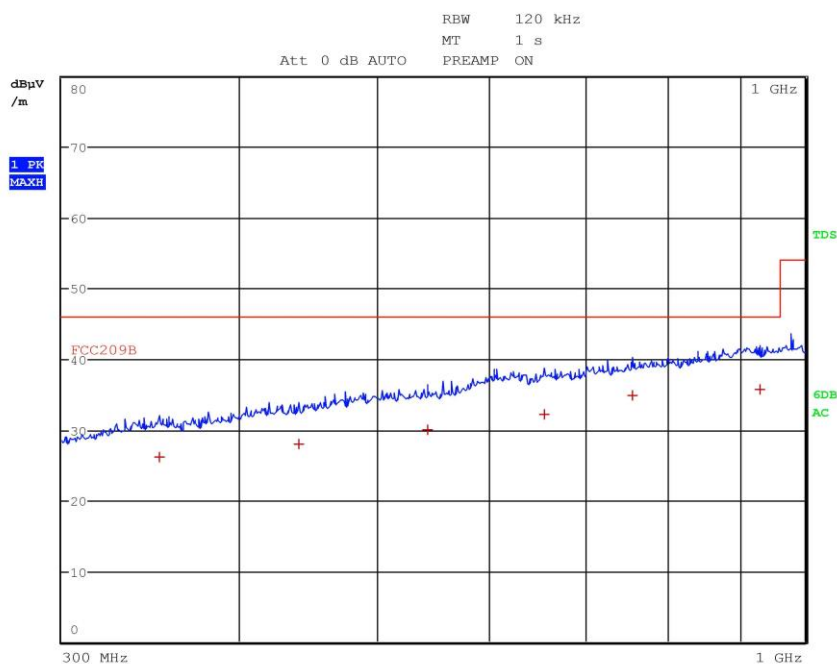
Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 6

Trace	Frequency	Level (dBμV/m)	Detector	Delta Limit/dB
1	31.760000000 MHz	21.83	Quasi Peak	-18.17
1	48.720000000 MHz	18.50	Quasi Peak	-21.50
1	85.920000000 MHz	18.02	Quasi Peak	-21.98
1	139.040000000 MHz	20.85	Quasi Peak	-22.67
1	185.600000000 MHz	24.63	Quasi Peak	-18.89
1	299.040000000 MHz	29.82	Quasi Peak	-16.20



Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Diagnosi BT
Operator Gandini 17199503
Test Spec
Horiz



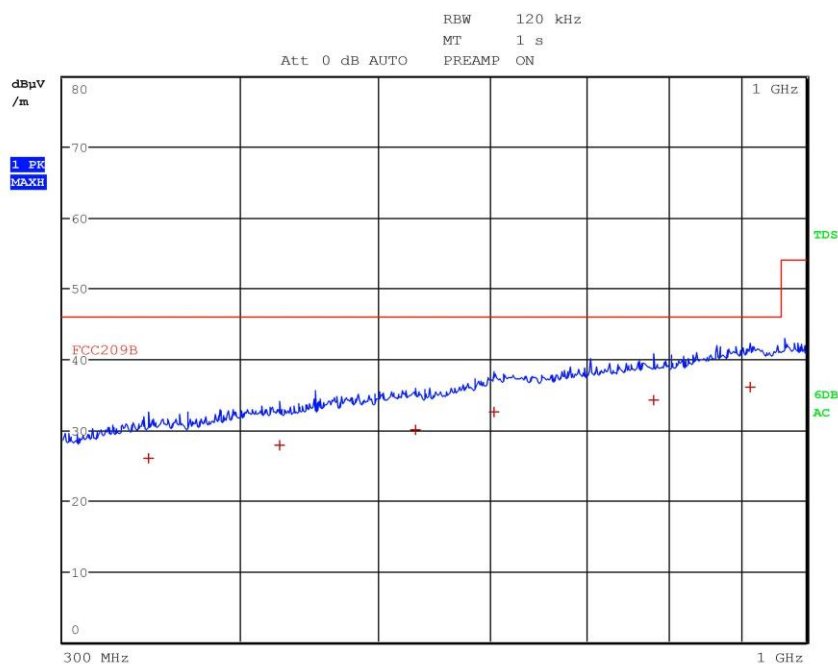
Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 6

Trace	Frequency	Level (dBμV/m)	Detector	Delta Limit/dB
1	351.480000000 MHz	26.16	Quasi Peak	-19.86
1	440.600000000 MHz	27.96	Quasi Peak	-18.06
1	542.760000000 MHz	29.98	Quasi Peak	-16.04
1	655.920000000 MHz	32.27	Quasi Peak	-13.75
1	755.960000000 MHz	34.85	Quasi Peak	-11.17
1	929.200000000 MHz	35.78	Quasi Peak	-10.24



Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Diagnosi BT
Operator Gandini 17199504
Test Spec
Vert



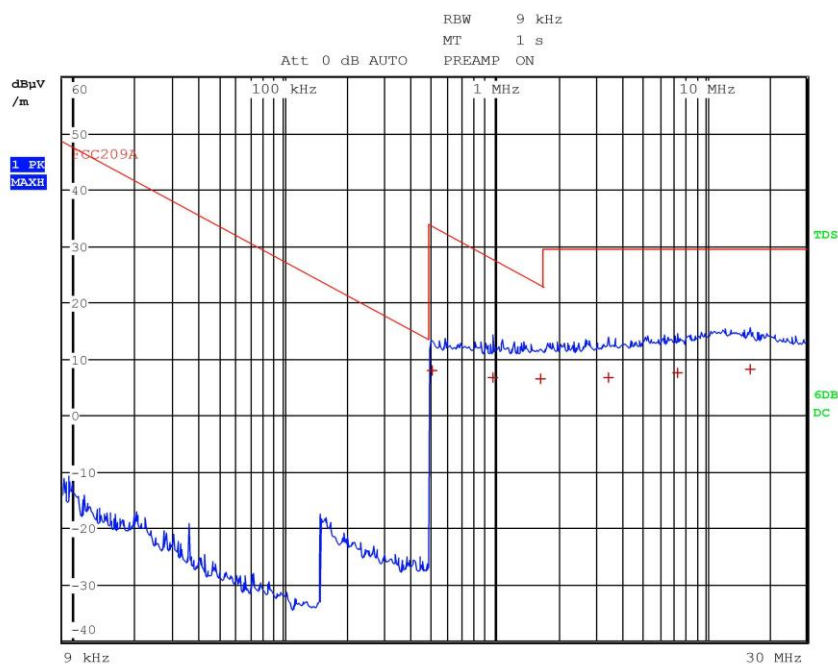
Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 6

Trace	Frequency	Level (dBμV/m)	Detector	Delta Limit/dB
1	344.560000000 MHz	26.01	Quasi Peak	-20.01
1	425.920000000 MHz	27.82	Quasi Peak	-18.20
1	531.400000000 MHz	29.98	Quasi Peak	-16.04
1	603.080000000 MHz	32.45	Quasi Peak	-13.57
1	781.520000000 MHz	34.13	Quasi Peak	-11.89
1	913.240000000 MHz	36.08	Quasi Peak	-9.94



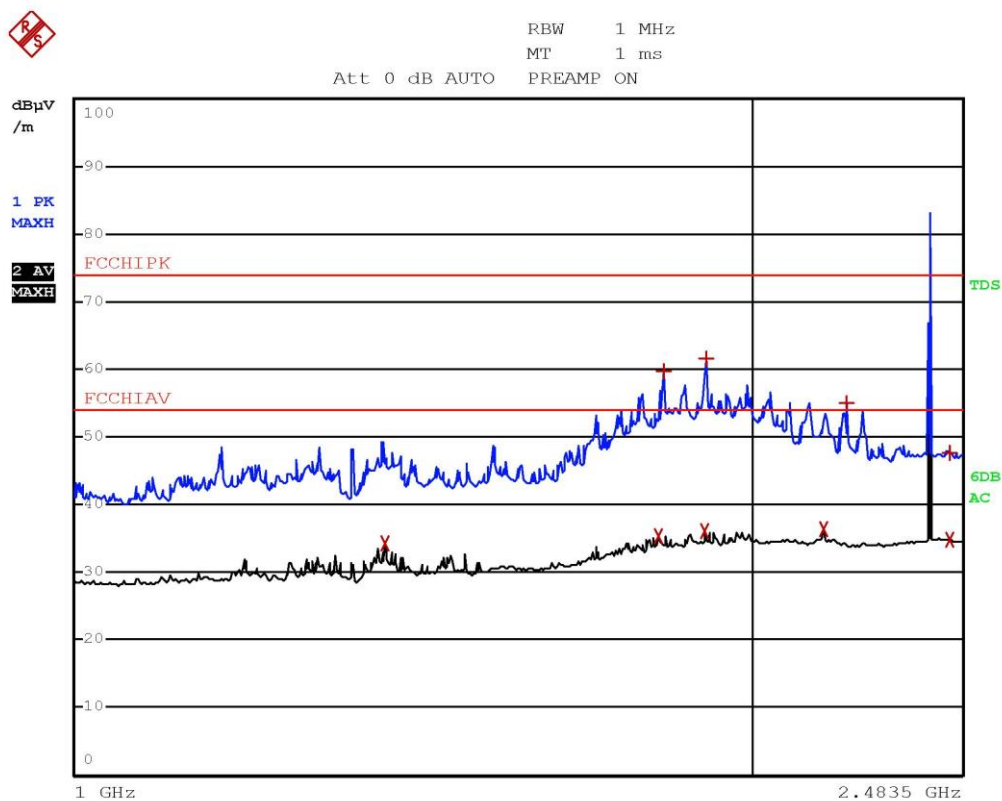
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Diagnosi BT
Operator Gandini 17199505
Test Spec
Loop



Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 6

Trace	Frequency	Level (dBμV/m)	Detector	Delta Limit/dB
1	502.00000000 kHz	7.98	Quasi Peak	-25.61
1	974.00000000 kHz	6.70	Quasi Peak	-21.13
1	1.654000000 MHz	6.60	Quasi Peak	-16.63
1	3.450000000 MHz	6.67	Quasi Peak	-22.87
1	7.390000000 MHz	7.63	Quasi Peak	-21.91
1	16.278000000 MHz	8.16	Quasi Peak	-21.38

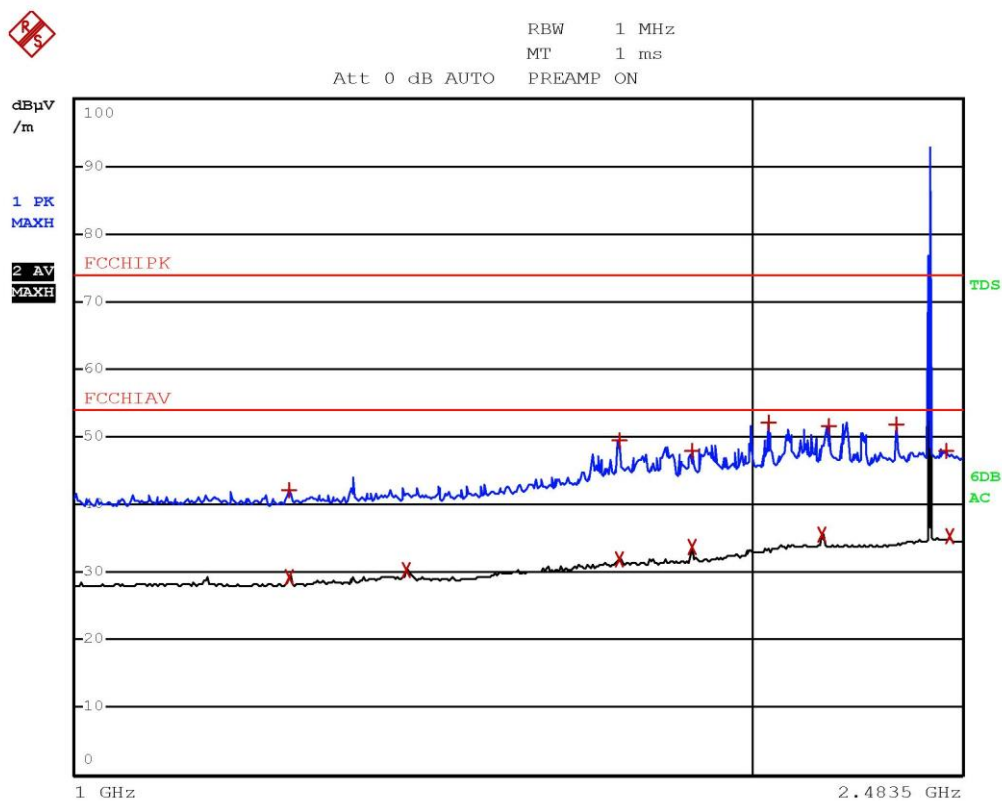


Gandini 17199506-Vert-Tx Fmin



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCHIPK		
Trace2:	FCCHIAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	1.3752 GHz	34.18	-19.81
2 Average	1.8176 GHz	35.26	-18.73
1 Max Peak	1.8288 GHz	59.69	-14.30
2 Average	1.9068 GHz	36.20	-17.79
1 Max Peak	1.91 GHz	61.63	-12.36
2 Average	2.154 GHz	36.24	-17.75
1 Max Peak	2.2048 GHz	55.03	-18.96
2 Average	2.45 GHz	34.68	-19.31
1 Max Peak	2.4536 GHz	47.71	-26.28

Gandini 17199506-Vert-Tx Fmin

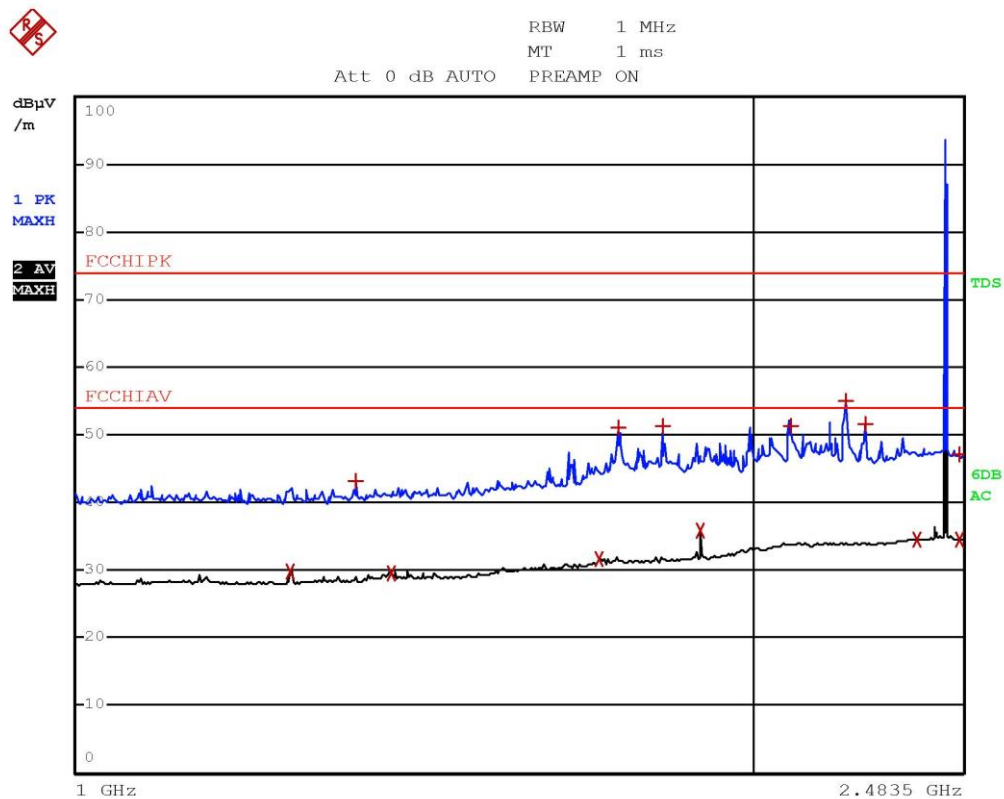


Gandini 17199507-Horiz-Tx Fmni



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCHIPK		
Trace2:	FCCHIAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Max Peak	1.2452 GHz	42.01	-31.98
2 Average	1.2456 GHz	29.39	-24.60
2 Average	1.4056 GHz	30.40	-23.59
2 Average	1.748 GHz	31.84	-22.15
1 Max Peak	1.7488 GHz	49.48	-24.51
2 Average	1.8816 GHz	33.83	-20.16
1 Max Peak	1.8816 GHz	47.96	-26.03
1 Max Peak	2.038 GHz	52.12	-21.87
2 Average	2.1512 GHz	35.44	-18.56
1 Max Peak	2.1664 GHz	51.68	-22.31
1 Max Peak	2.3232 GHz	51.75	-22.24
1 Max Peak	2.442 GHz	47.92	-26.07
2 Average	2.4524 GHz	35.40	-18.59

Gandini 17199507-Horiz-Tx Fmni



Gandini 17199508-Horiz-Tx Fmid



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCHIPK		
Trace2:	FCCHIAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	1.246 GHz	29.72	-24.27
1 Max Peak	1.3316 GHz	43.14	-30.85
2 Average	1.382 GHz	29.54	-24.45
2 Average	1.7096 GHz	31.59	-22.40
1 Max Peak	1.7448 GHz	51.05	-22.94
1 Max Peak	1.8272 GHz	51.37	-22.62
2 Average	1.8972 GHz	35.88	-18.11
1 Max Peak	2.08 GHz	51.39	-22.60
1 Max Peak	2.2032 GHz	54.96	-19.04
1 Max Peak	2.2456 GHz	51.69	-22.30
2 Average	2.368 GHz	34.51	-19.48
2 Average	2.4756 GHz	34.43	-19.56
1 Max Peak	2.476 GHz	47.00	-26.99

Gandini 17199508-Horiz-Tx Fmid

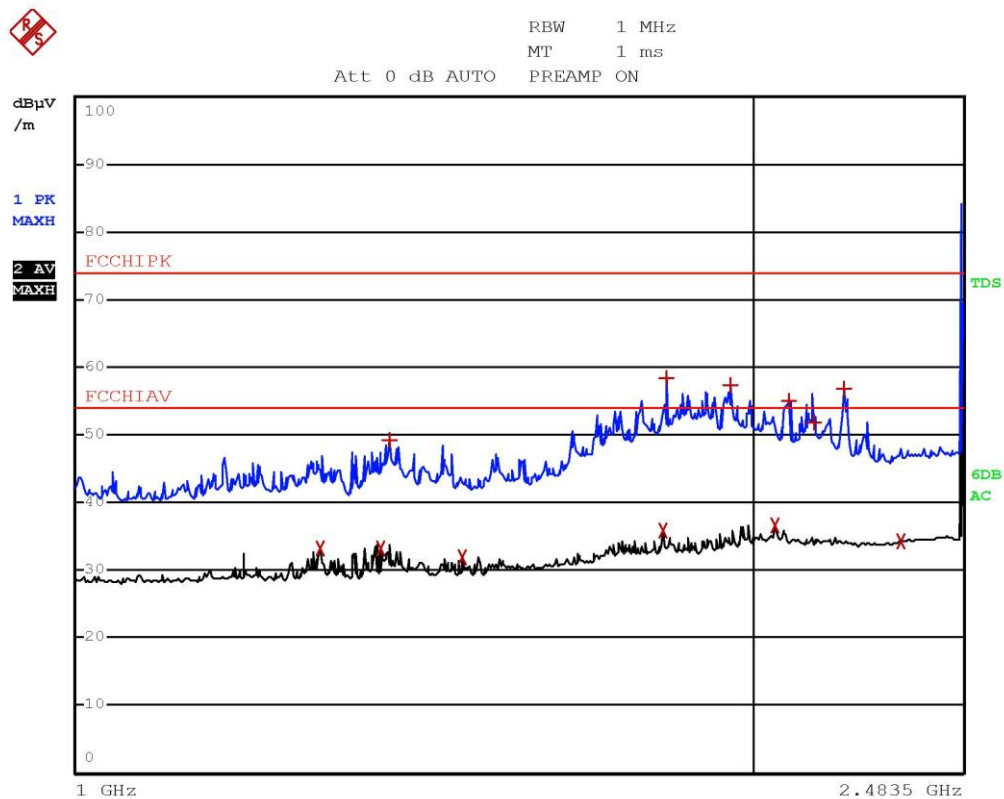


Gandini 17199509-Vert-Tx Fmid



EDIT PEAK LIST (Prescan Results)				
Trace1:	FCCHIPK			
Trace2:	FCCHIAV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB	
2 Average	1.286 GHz	33.30	-20.69	
2 Average	1.3668 GHz	33.19	-20.80	
1 Max Peak	1.3804 GHz	49.31	-24.68	
2 Average	1.4864 GHz	31.82	-22.17	
2 Average	1.8272 GHz	35.88	-18.11	
1 Max Peak	1.8328 GHz	58.42	-15.57	
1 Max Peak	1.956 GHz	57.46	-16.53	
2 Average	2.0492 GHz	36.63	-17.36	
1 Max Peak	2.0788 GHz	54.98	-19.01	
1 Max Peak	2.13 GHz	51.95	-22.05	
1 Max Peak	2.1988 GHz	56.87	-17.12	
2 Average	2.33 GHz	34.13	-19.86	

Gandini 17199509-Vert-Tx Fmid

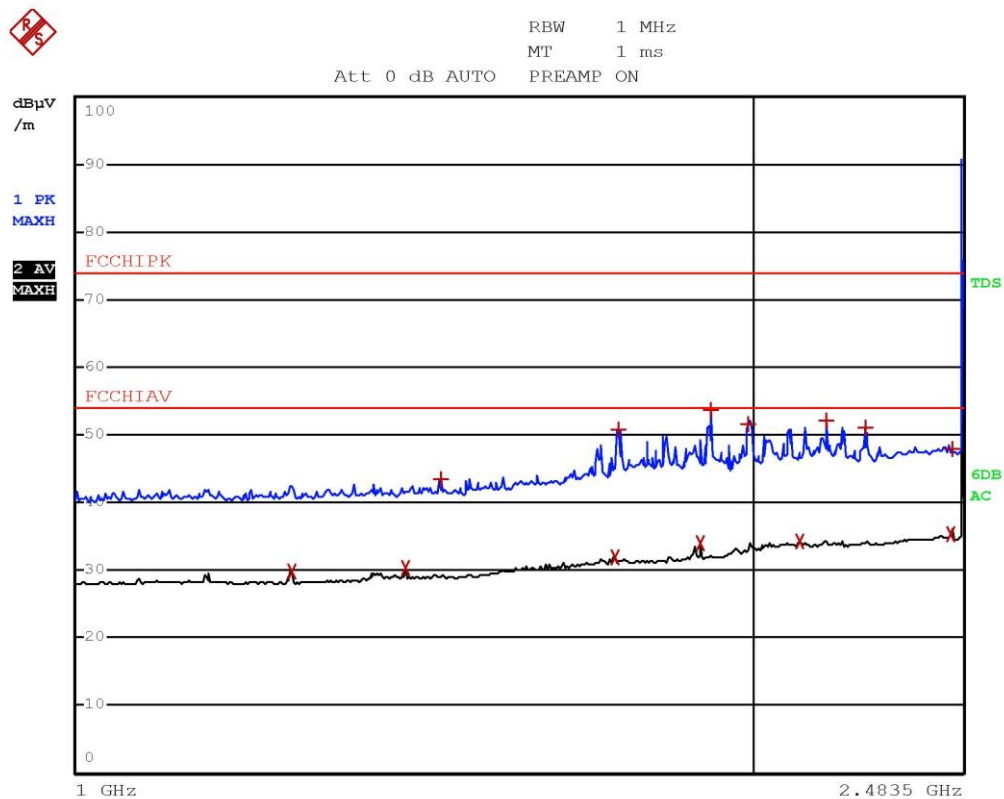


Gandini 17199510-Vert-Tx Fmax



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCHIPK		
Trace2:	FCCHIAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	1.286 GHz	33.30	-20.69
2 Average	1.3668 GHz	33.19	-20.80
1 Max Peak	1.3804 GHz	49.31	-24.68
2 Average	1.4864 GHz	31.82	-22.17
2 Average	1.8272 GHz	35.88	-18.11
1 Max Peak	1.8328 GHz	58.42	-15.57
1 Max Peak	1.956 GHz	57.46	-16.53
2 Average	2.0492 GHz	36.63	-17.36
1 Max Peak	2.0788 GHz	54.98	-19.01
1 Max Peak	2.13 GHz	51.95	-22.05
1 Max Peak	2.1988 GHz	56.87	-17.12
2 Average	2.33 GHz	34.13	-19.86

Gandini 17199510-Vert-Tx Fmax

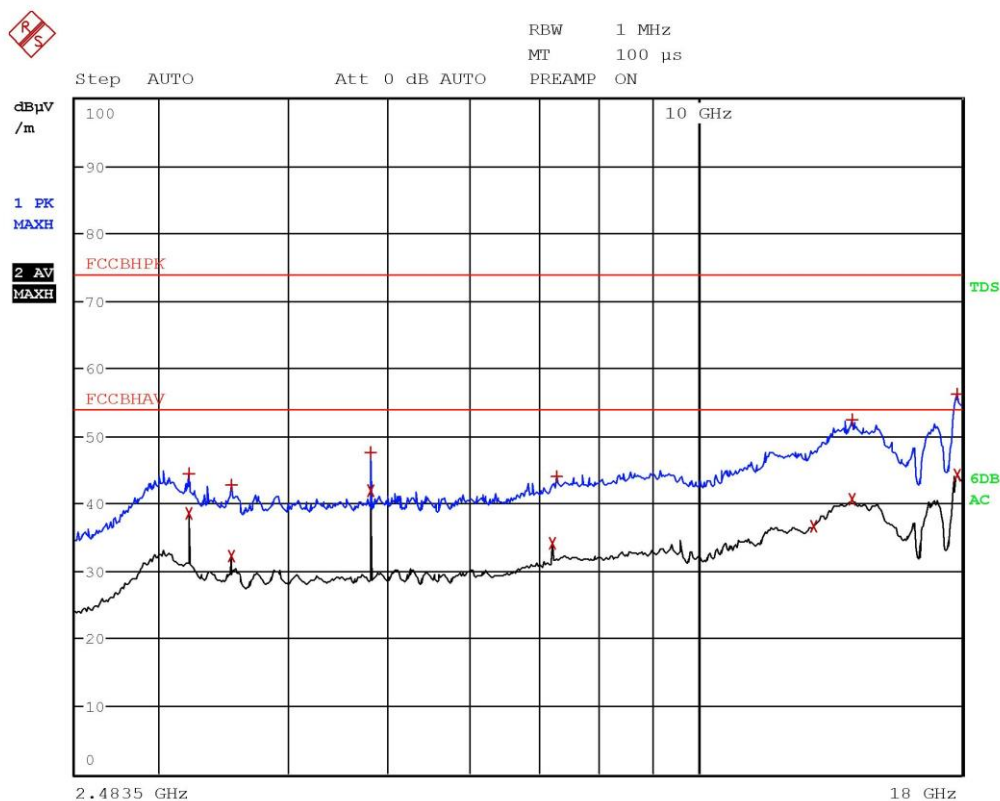


Gandini 17199511-Horiz-Tx Fmax



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCH1PK		
Trace2:	FCCH1AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	1.248 GHz	29.75	-24.24
2 Average	1.4024 GHz	30.26	-23.73
1 Max Peak	1.4544 GHz	43.36	-30.63
2 Average	1.7384 GHz	31.93	-22.06
1 Max Peak	1.7452 GHz	50.75	-23.24
2 Average	1.8956 GHz	33.89	-20.10
1 Max Peak	1.9188 GHz	53.70	-20.29
1 Max Peak	1.9908 GHz	51.49	-22.50
2 Average	2.1 GHz	34.28	-19.71
1 Max Peak	2.1604 GHz	52.21	-21.78
1 Max Peak	2.2456 GHz	51.17	-22.82
2 Average	2.4536 GHz	35.26	-18.73
1 Max Peak	2.4544 GHz	47.88	-26.11

Gandini 17199511-Horiz-Tx Fmax

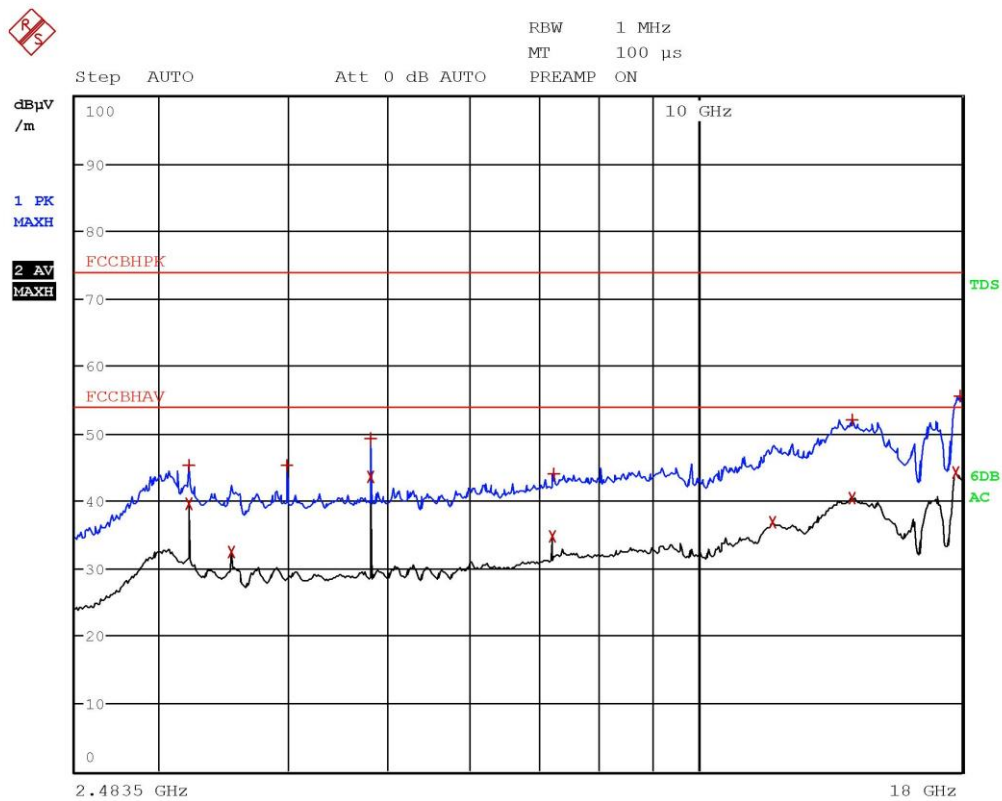


Gandini 17199512-Horiz-Tx Fmin



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	3.2027 GHz	38.58	-15.39
1 Max Peak	3.2027 GHz	44.39	-29.58
2 Average	3.5259 GHz	32.25	-21.72
1 Max Peak	3.5259 GHz	42.76	-31.21
2 Average	4.8039 GHz	41.89	-12.08
1 Max Peak	4.8043 GHz	47.58	-26.39
2 Average	7.2067 GHz	34.05	-19.92
1 Max Peak	7.2759 GHz	44.03	-29.95
2 Average	12.9391 GHz	36.75	-17.22
1 Max Peak	14.0899 GHz	52.50	-21.47
2 Average	14.1043 GHz	40.59	-13.39
2 Average	17.8367 GHz	44.19	-9.78
1 Max Peak	17.8571 GHz	56.25	-17.73

Gandini 17199512-Horiz-Tx Fmin



Gandini 17199513-Vert-Tx Fmin