



Nanjing JNTIMUYA New Energy Technology Co., Ltd.



EMC REPORT

Prepared For:	Nanjing JNTIMUYA New Energy Technology Co., Ltd. Rm 107, Build 1, Apple City Build, No. 228, Tianyuan East Rd, Jiangning Dist, Nanjing, Jiangsu, China
Product Name:	EV CHARGER
Main Test Model:	TAP-32
Additional Model:	SEE ANNEX
Prepared By:	BST Testing (Shenzhen) Co.,Ltd. No.7, New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Test Date:	Dec. 11, 2023-Dec. 15, 2023
Date of Report:	Dec. 15, 2023
Report No.:	XDD07234073121501FDR



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TEST REPORT DECLARATION

Applicant : Nanjing JNTIMUYA New Energy Technology Co., Ltd.
Address : Rm 107, Build 1, Apple City Build, No. 228, Tianyuan East Rd,
Jiangning Dist, Nanjing, Jiangsu, China
EUT Description : EV CHARGER
Model Number : TAP-32 , SEE ANNEX
(Note:The series products have the same circuit diagram, PCB layout and functionality. The differences are the appearance, so, we select TAP-32 to test.)

Test Standards:
EN IEC 61851-21-2:2021

The EUT described above is tested by BST Testing (Shenzhen) Co.,Ltd. EMC Laboratory to determine the maximum emissions from the EUT and ensure the EUT to be compliance with the immunity requirements of the EUT. BST Testing (Shenzhen) Co.,Ltd. EMC Laboratory is assumed full responsibility for the accuracy of the test results. Also, this report shows that the EUT technically complies with this Electromagnetic Compatibility Regulations 2016..
The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Prepared by :

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Test Engineer

Reviewer :

Tom chen

Supervisor

Approved & Authorized Signer :

Salon

Salon/Manager



1. GENERAL INFORMATION

1.1. Report information

- 1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BST in any way guarantees the later performance of the product/equipment.
- 1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.
- 1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BST, unless the applicant has authorized BST in writing to do so.

1.2. Measurement Uncertainty

(95% confidence levels, $k=2$)

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.2dB
Uncertainty for Power disturbance Test	3.0dB



2. PRODUCT DESCRIPTION

2.1.EUT Description

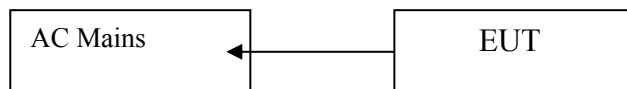
Description : EV CHARGER

Applicant : Nanjing JNTIMUYA New Energy Technology Co., Ltd.
Rm 107, Build 1, Apple City Build, No. 228, Tianyuan East Rd,
Jiangning Dist, Nanjing, Jiangsu, China

Manufacturer : Nanjing JNTIMUYA New Energy Technology Co., Ltd.
Rm 107, Build 1, Apple City Build, No. 228, Tianyuan East Rd,
Jiangning Dist, Nanjing, Jiangsu, China

Model Number : TAP-32

2.2.Block Diagram of EUT Configuration



2.3.Operating Condition of EUT

Test mode 1: ON

2.4.Test Conditions

Temperature: 23-26°C
Relative Humidity: 55-68 %

2.5.Modifications

No modification was made.



2.6. Abbreviations

AC	Alternating Current
AMN	Artificial Mains Network
DC	Direct Current
EM	ElectroMagnetic
EMC	ElectroMagnetic Compatibility
EUT	Equipment Under Test
IF	Intermediate Frequency
RF	Radio Frequency
rms	root mean square
EMI	Electromagnetic Interference
EMS	Electromagnetic Susceptibility

2.7. Performance Criterion

Criterion A: The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended.

Criterion B: After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.

Criterion C: Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions.



3. TEST EQUIPMENT USED

3.1.For Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Nov. 17, 23	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Nov. 17, 23	1 Year
3.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Nov. 17, 23	1 Year
4.	Conical	Emtek	N/A	N/A	N/A	N/A
5.	Voltage Probe	Schwarzbeck	TK9416	N/A	Nov. 17, 23	1 Year
6.	Coaxial FACIAL STEAMER	Anritsu	MP59B	6100214550	Nov. 17, 23	1 Year

3.2.For Disturbance Power Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS30	828985/018	Nov. 17, 23	1 Year
2.	Power Clamp	Rohde & Schwarz	MDS21	833711/025	Nov. 17, 23	1 Year
3.	Coaxial FACIAL STEAMER	Anritsu	MP59B	6100214550	Nov. 17, 23	1 Year

3.3.For Harmonic / Flicker Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Harmonic and Flicker analyzer	Laplace	AC2000A	309709	Nov. 17, 23	1 Year

3.4.For Electrostatic Discharge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Tester	HAEFELY	PSD 1600	H911'292	Nov. 17, 23	1 Year

3.5.For RF Strength Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	HP	8648A	3633A02081	Nov. 17, 23	1 Year
2.	Amplifier	A&R	500A100	17034	NCR	NCR
3.	Amplifier	A&R	100W/1000M1	17028	NCR	NCR
4.	Isotropic Field Monitor	A&R	FM2000	16829	NCR	NCR
5.	Isotropic Field Probe	A&R	FLW220100	16755	Nov. 17, 23	1 Year
6.	Biconic Antenna	EMCO	493E8	9507-2534	NCR	NCR
7.	Log-periodic Antenna	A&R	AT1080	16812	NCR	NCR
8.	PC	N/A	486DX2	N/A	N/A	N/A

3.6.For Electrical Fast Transient/Burst Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Burst Tester	HAEFELY	PEFT 4010	080981-16	Nov. 17, 23	1 Year



3.7.For Surge Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Surge Tester	HAEFELY	PSURGE4.1	080107-04	Nov. 17, 23	1 Year

3.8.For Injected Currents Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Simulator	EMTEST	CWS 500C	0900-12	Nov. 17, 23	1 Year
2.	CDN	EMTEST	CDN-M2	510010010010	Nov. 17, 23	1 Year
3.	VDN	EMTEST	CDN-M3	0900-11	Nov. 17, 23	1 Year
4.	Injection Clamp	EMTEST	F-2031-23MM	368	Nov. 17, 23	1 Year
5.	Attenuator	EMTEST	ATT6	0010222a	Nov. 17, 23	1 Year

3.9.For Magnetic Field Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic Field Tester	HEAFELY	MAG100.1	083858-10	Nov. 17, 23	1 Year

3.10.For Voltage Dips and Interruptions Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Dips Tester	HEAFELY	PLINE 1610	083732-18	Nov. 17, 23	1 Year



5. Test Results EMISSION

5.1 Emission in the Frequency Range up to 30 MHz

5.1.1 Conducted Disturbance for AC Power Input Port

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021
Frequency range : 0.15 - 30MHz
Limits : Table 7 of EN IEC 61851-21-2:2021

Kind of test site : Shielded room
Tested port : AC Power Input Port

Test setup

Mains Voltage : **220V/50Hz**
Operation Condition : Clause 4.4.3 of EN IEC 61851-21-2:2021

Operation mode : A
Artificial hand : Not applied
Earthing : Connected

Refer to attached Appendix 1.



5.1.2 Asymmetric Mode Conducted Emissions at Wired Network Port

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021
Frequency range : 0.15 - 30MHz
Limits : EN IEC 61851-21-2:2021

Kind of test site : Shielded room
Tested port : Wired Network Port

Test setup

Mains Voltage : 220V/50Hz
Operation Condition : EN IEC 61851-21-2:2021

Operation mode : A
Artificial hand : Not applied
Earthing : Connected

Refer to attached Appendix 1.



5.1.3 Conducted Disturbance for DC CPT Port

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021

Frequency range : 0.15 - 30MHz
Limits : Table 12 of
EN IEC 61851-21-2:2021
Kind of test site : Shielded room
Tested port : DC CPT Port
Test setup
Mains Voltage : 220V/50Hz
Operation Condition : Clause 4.4.3 of
EN IEC 61851-21-2:2021
Operation mode : A
Artificial hand : Not applied
Earthing : Connected

Refer to attached
Appendix 1.



5.1.4 Voltage Transient Disturbance for DC CPT Port

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021
Limits : Table D.1 of EN IEC 61851-21-2:2021

Kind of test site : Shielded room
Tested port : DC CPT port

Test setup

Mains Voltage : 220V/50Hz
Operation Condition : Clause 4.4.3, Annex D of EN IEC 61851-21-2:2021
Operation mode : A
Artificial hand : Not applied
Earthing : Connected

Refer to attached Appendix 1.



5.1.5 Radiated Disturbance (2 kHz to 185 kHz)

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021
Frequency range : 2 kHz-185 kHz
Limits : Table B.1 of EN IEC 61851-21-2:2021
Kind of test site : 10m Semi-Anechoic Chamber
Tested Port : Enclosure

Test setup

Mains Voltage : 220V/50Hz
Operation Condition : Clause 4.4.3, Annex B of
EN IEC 61851-21-2:2021
Operation mode : A
Earthing : Connected

Refer to attached Appendix 1.



5.2 Emission in the Frequency Range above 30 MHz

5.2.1 Radiated Disturbance (30MHz-1000MHz)

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021
Frequency range : 30 - 1000MHz
Limits : Table 16 of EN IEC 61851-21-2:2021

Kind of test site : 10m Semi-Anechoic Chamber
Measuring distance : 10m (30-1000MHz)
Tested Port : Enclosure

Test setup

Input Voltage : 220V/50Hz
Operation Condition : Clause 4.4.3 of EN IEC 61851-21-2:2021

Operation mode : A
Earthing : Connected

Refer to attached Appendix 1.



5.2.2 Radiated Disturbance (1000MHz-6000MHz)

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test standard : EN IEC 61851-21-2:2021
Frequency range : 1000MHz-6000MHz
Limits : Table 17 of EN IEC 61851-21-2:2021

Kind of test site : 10m Semi-Anechoic Chamber with RF absorber on the RGP
Measuring distance : 3m (1000-6000MHz)
Tested Port : Enclosure

Test setup

Input Voltage : 220V/50Hz
Operation Condition : Clause 4.4.3 of EN IEC 61851-21-2:2021
Operation mode : A
Earthing : Connected

Refer to attached Appendix 1.



6. TEST RESULTS IMMUNITY

6.1 Classification of apparatus

According to EN IEC 61851-21-2:2021, the EUTs shall be tested in accordance with clause 5.2, table 3 of EN IEC 61851-21-2:2021 and comply with following performance criterion:

3.10.1.1.1. Continuous Disturbance

Power-Frequency Magnetic Fields	Criterion A
Radio-Frequency Electromagnetic Field Amplitude Modulated (RS)	Criterion A
Radio-Frequency Continuous Conducted (CS)	Criterion A

3.10.1.1.2. Transient Disturbance

Fast Transients (EFT)	Criterion B
Surge	Criterion B
Electrostatic Discharges (ESD)	Criterion B

3.10.1.1.3. Power Supply Alterations

Voltage Dips and Interruptions	Criterion B & C
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6.2 Continuous Disturbances

6.2.1 Radio-Frequency Electromagnetic Field Amplitude Modulated (RS)

RESULT:

Pass

Date of Testing	:	Refer to Appendix 1
Test Specification	:	EN IEC 61851-21-2:2021
Criterion	:	A
Frequency Range	:	80 - 2,700MHz
Test Level	:	10V/m: 80 – 1000MHz 3V/m: 1.4 – 2.0GHz 3V/m: 2.0 – 2.7GHz (Unmodulated, r.m.s.)
Modulation	:	AM 80%, 1kHz sine-wave
Tested Port	:	Enclosure

3.10.1.1.4.Test setup

Input Voltage	:	220V/50Hz
Operation Mode	:	A & B
Earthing	:	Connected
Ambient temperature	:	Refer to Appendix 1
Relative humidity	:	Refer to Appendix 1
Atmospheric pressure	:	101 kPa

Refer to attached Appendix 1.



6.2.2 Radio-Frequency Continuous Conducted (CS)

RESULT:

Pass

Date of testing	:	Refer to Appendix 1
Test Specification	:	EN IEC 61851-21-2:2021
Criterion	:	A
Frequency range	:	0.15 - 80 MHz
Source impedance	:	150Ω
Test level	:	10V (unmodulated, r.m.s.)
Modulation	:	AM 80%, 1kHz sine-wave
Sweep mode	:	automatic
Sweep rate	:	< 1.5×10 ⁻³ decade / sec.
Tested Port	:	AC Power Input, DC CPT & Wired Netw ork Port

Test setup

Input Voltage	:	220V/50Hz
Operation Mode	:	A & B
Earthing	:	Connected
Ambient temperature	:	Refer to Appendix 1
Relative humidity	:	Refer to Appendix 1
Atmospheric pressure	:	101 kPa

Refer to attached Appendix 1.



6.2.3 Power-frequency Magnetic Fields

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test Specification : EN IEC 61851-21-2:2021
Criterion : A
Test Frequency : 50Hz & 60Hz
Test level : 100A/m for EN IEC 61851-21-2:2021

Tested Port : Enclosure

Test setup

Input Voltage : 220V/50Hz
Operation Mode : A & B
Earthing : Connected
Ambient temperature : Refer to Appendix 1
Relative humidity : Refer to Appendix 1
Atmospheric pressure : 101 kPa

Refer to attached Appendix 1.



6.3 Transient Disturbances

6.3.1 Fast Transients (EFT)

RESULT:

Pass

Date of testing	:	Refer to Appendix 1
Test Specification	:	100A/m for EN IEC 61851-21-2:2021
Criterion	:	B
Test level	:	±4kV for AC Power Input Port ±2kV for DC CPT & Wired Network Port
Test duration	:	≥60sec
Rise time	:	5/50ns
Repetition frequency	:	5kHz
Tested Port	:	AC Power Input, DC CPT & Wired Net work k Port

Test setup

Input Voltage	:	220V/50Hz
Operation Mode	:	A & B
Earthing	:	Connected
Ambient temperature	:	Refer to Appendix 1
Relative humidity	:	Refer to Appendix 1
Atmospheric pressure	:	101 kPa

Refer to attached Appendix 1.



3.10.2.

3.10.3.6.3.2 Surge

RESULT:

Pass

Date of testing	:	Refer to Appendix 1
Test Specification	:	EN IEC 61851-21-2:2021
Criterion	:	B
Source impedance	:	2Ω, 12Ω
Test level	:	±0.5kV, ±1kV, ±2kV, ±4kV for AC Power Input Port
Number of surges	:	±0.5kV, ±1kV for Wired Network Port 5 (for each combination of parameters)
		Repetition rate : Max. 1/min
Tested Port	:	AC Power Input & Wired Network Port

3.10.3.1.1.Test Setup

Input Voltage	:	220V/50Hz
Operation Mode	:	A & B
Earthing	:	Connected
Ambient temperature	:	Refer to Appendix 1
Relative humidity	:	Refer to Appendix 1
Atmospheric pressure	:	101 kPa

Refer to attached Appendix 1.

Remark: Since the length of DC output power cable will not exceed 30M according to the manufacturer's functional specification, therefore surge test is not applicable to DC CPT portof the EUT.



6.3.3 Electrostatic Discharges (ESD)

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test Specification : EN IEC 61851-21-2:2021
Criterion : B
Charge voltage : $\pm 2.0\text{kV}$, $\pm 4.0\text{kV}$, $\pm 8\text{kV}$ (air discharge)
 $\pm 4.0\text{kV}$ (contact discharge)
Number of discharges : >10
Tested Port : Enclosure

Test Setup

Input Voltage : 220V/50Hz
Operation Mode : A & B
Earthing : Connected
Ambient temperature : Refer to Appendix 1
Relative humidity : Refer to Appendix 1
Atmospheric pressure : 101 kPa

Refer to attached Appendix 1.



6.4 Power Supply Alterations

6.4.1 Voltage Dips and Interruptions

RESULT:

Pass

Date of testing : Refer to Appendix 1
Test Specification : EN IEC 61851-21-2:2021
Criterion : B & C
Tested Port : AC Power Input Port

Test Setup

Input Voltage : 220V/50Hz
Operation Mode : A & B
Earthing : Connected
Ambient temperature : Refer to Appendix 1
Relative humidity : Refer to Appendix 1
Atmospheric pressure : 101 kPa

Refer to attached Appendix 1.



BST Testing (Shenzhen) Co.,Ltd.

Report No.: XDD07234073121501FDR



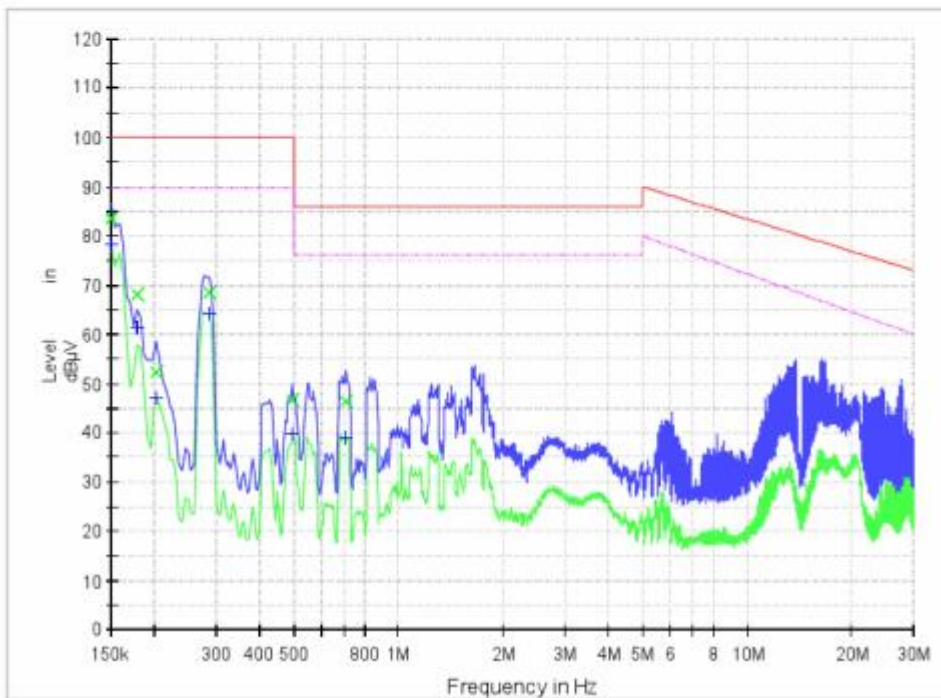
DC- 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin QPK (dB)	Limit - QPK (dBμV)	Margin - AVG (dB)	Limit - AVG (dBμV)
0.150000	83.6	78.3	20.0	9.000	30.1	16.4	100.0	11.7	90.0
0.178000	68.0	61.4	20.0	9.000	30.1	32.0	100.0	28.6	90.0
0.202000	52.4	46.9	20.0	9.000	30.1	47.6	100.0	43.1	90.0
0.286000	68.5	64.2	20.0	9.000	30.1	31.5	100.0	25.8	90.0
0.494000	46.5	39.5	20.0	9.000	30.1	53.5	100.0	50.5	90.0
0.710000	46.2	39.1	20.0	9.000	30.1	39.8	86.0	36.9	76.0





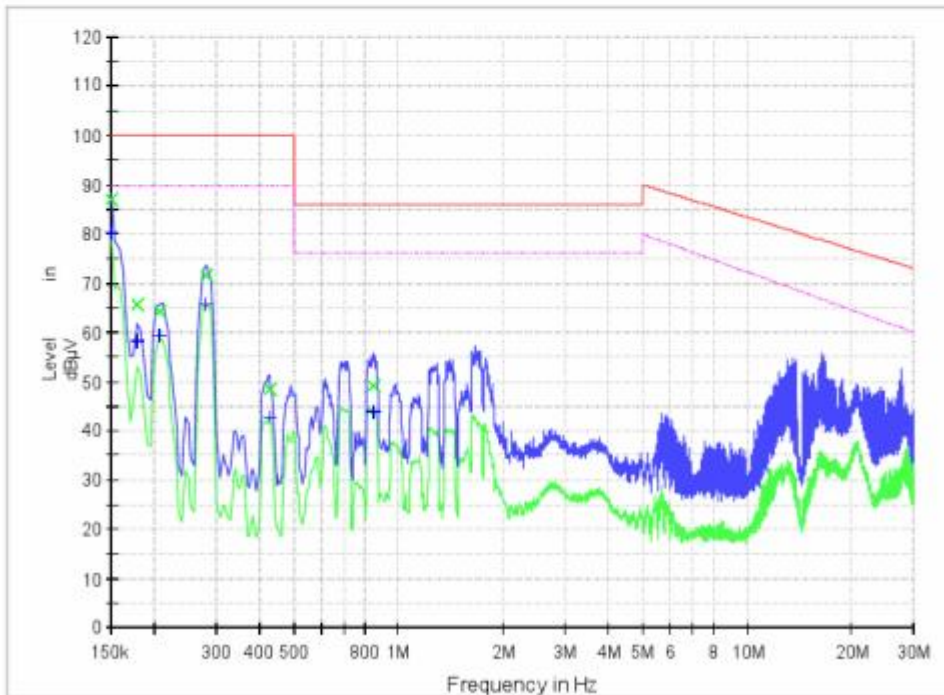
DC- 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AVG (dB)	Limit - AVG (dBμV)
0.150000	86.9	80.2	20.0	9.000	30.1	13.1	100.0	9.8	90.0
0.178000	65.7	58.1	20.0	9.000	30.1	34.3	100.0	31.9	90.0
0.206000	64.1	59.3	20.0	9.000	30.1	35.9	100.0	30.7	90.0
0.282000	71.6	65.8	20.0	9.000	30.1	28.5	100.0	24.2	90.0
0.426000	48.5	42.7	20.0	9.000	30.1	51.5	100.0	47.3	90.0
0.846000	49.2	43.7	20.0	9.000	30.1	36.8	86.0	32.3	76.0





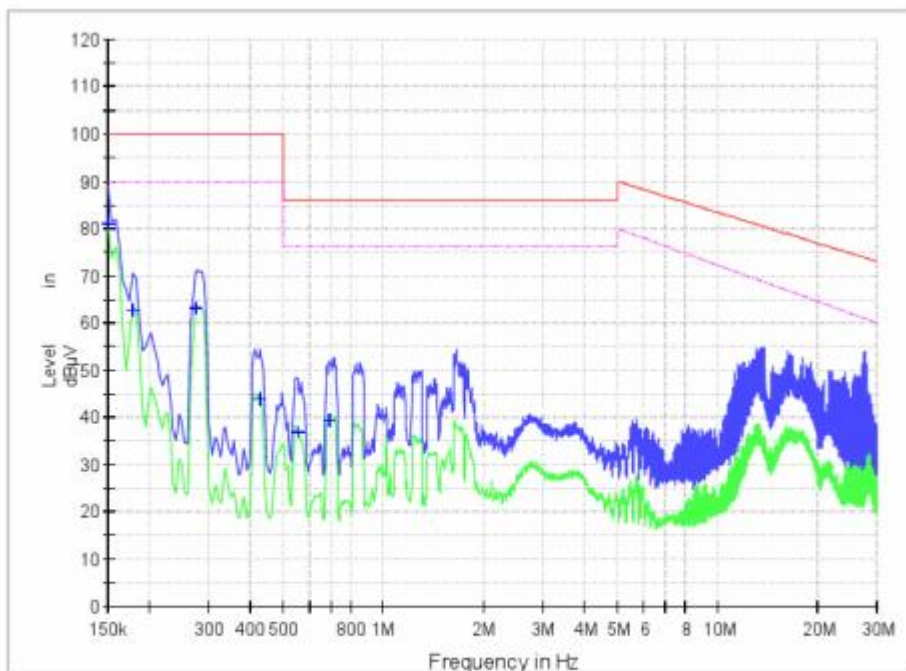
DC+ 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin QPK (dB)	Limit - QPK (dBμV)	Margin - AVG (dB)	Limit - AVG (dBμV)
0.150000	86.6	81.0	20.0	9.000	30.1	13.4	100.0	9.1	90.0
0.178000	70.0	62.8	20.0	9.000	30.1	30.0	100.0	27.2	90.0
0.274000	69.2	63.3	20.0	9.000	30.1	30.8	100.0	26.7	90.0
0.426000	52.3	43.9	20.0	9.000	30.1	47.7	100.0	46.1	90.0
0.554000	46.0	36.8	20.0	9.000	30.1	40.0	86.0	39.2	76.0
0.690000	50.0	39.3	20.0	9.000	30.1	36.1	86.0	36.8	76.0





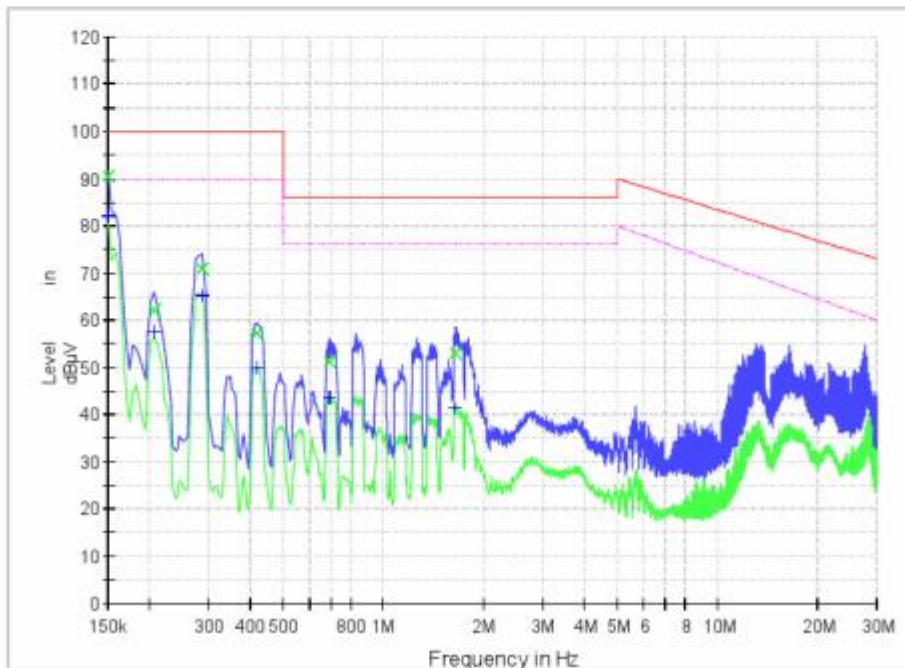
DC+ 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AVG (dB)	Limit - AVG (dBμV)
0.150000	90.5	82.2	20.0	9.000	30.1	9.5	100.0	7.8	90.0
0.206000	62.0	57.6	20.0	9.000	30.1	38.0	100.0	32.4	90.0
0.286000	70.9	65.4	20.0	9.000	30.1	29.1	100.0	24.6	90.0
0.418000	57.4	49.8	20.0	9.000	30.1	42.6	100.0	40.2	90.0
0.690000	51.3	43.7	20.0	9.000	30.1	34.7	86.0	32.3	76.0
1.650000	52.9	41.5	20.0	9.000	30.2	33.1	86.0	34.5	76.0





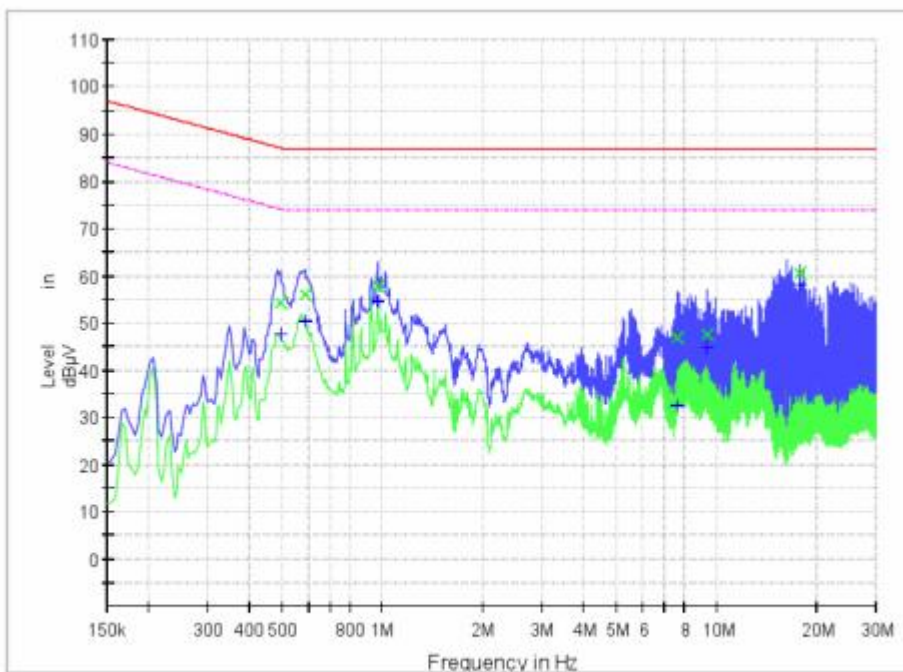
Ethernet Port

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Limit - AVG (dBμV)
0.494000	54.1	47.5	20.0	9.000	20.1	33.0	87.1	74.1
0.586000	56.1	50.5	20.0	9.000	20.1	30.9	87.0	74.0
0.970000	57.8	54.6	20.0	9.000	20.1	29.2	87.0	74.0
7.646000	46.7	32.6	20.0	9.000	20.3	40.3	87.0	74.0
9.394000	47.4	44.8	20.0	9.000	20.4	39.6	87.0	74.0
17.694000	60.6	58.0	20.0	9.000	20.5	26.5	87.0	74.0





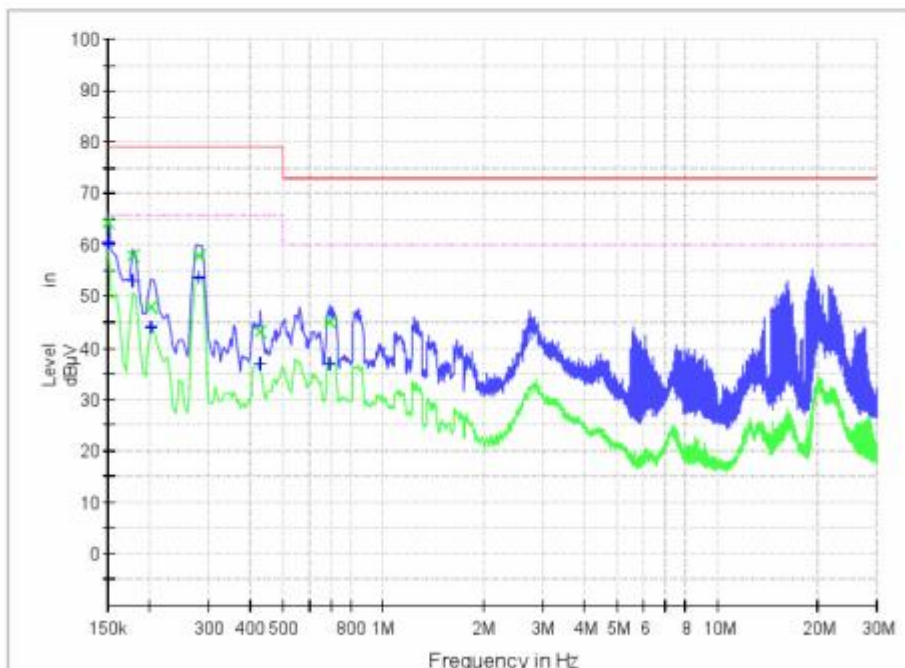
L1 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ V)	Limit - AVG (dB μ V)
0.150000	64.2	60.4	20.0	9.000	30.1	14.8	79.0	66.0
0.178000	57.9	53.0	20.0	9.000	30.1	21.1	79.0	66.0
0.202000	47.8	43.9	20.0	9.000	30.1	31.2	79.0	66.0
0.282000	58.0	53.8	20.0	9.000	30.1	21.0	79.0	66.0
0.430000	43.1	36.8	20.0	9.000	30.1	35.9	79.0	66.0
0.694000	45.1	37.1	20.0	9.000	30.1	27.9	73.0	60.0





BST Testing (Shenzhen) Co.,Ltd.

Report No.: XDD07234073121501FDR



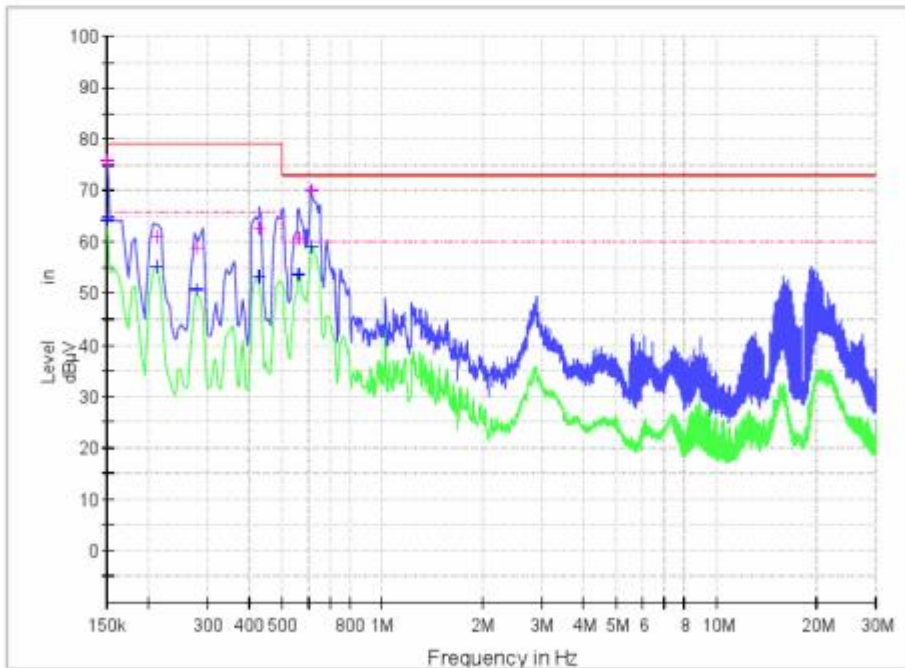
L1 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ V)	Margin - AVG (dB)	Limit - AVG (dB μ V)
0.150000	76.0	64.4	20.0	9.000	30.1	3.0	79.0	1.6	66.0
0.210000	61.0	55.2	20.0	9.000	30.1	18.1	79.0	10.8	66.0
0.278000	58.7	50.9	20.0	9.000	30.1	20.3	79.0	15.1	66.0
0.426000	62.6	53.5	20.0	9.000	30.1	16.4	79.0	12.5	66.0
0.562000	60.8	53.8	20.0	9.000	30.1	12.2	73.0	6.2	60.0
0.614000	70.2	59.0	20.0	9.000	30.1	2.8	73.0	1.0	60.0





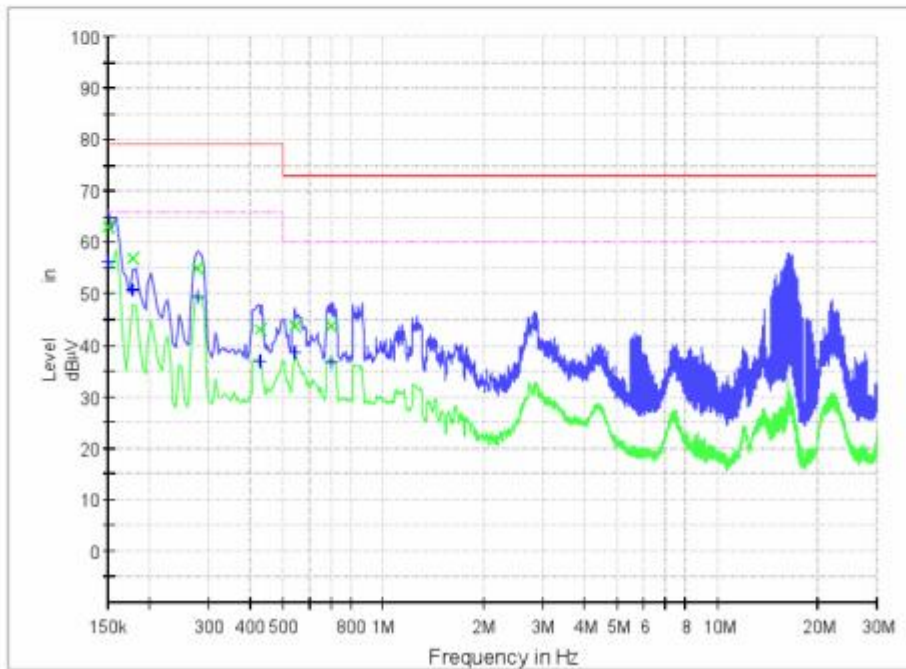
L2 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ V)	Margin - AVG (dB)	Limit - AVG (dB μ V)
0.150000	63.2	56.3	20.0	9.000	30.1	15.9	79.0	9.7	66.0
0.178000	56.9	50.7	20.0	9.000	30.1	22.1	79.0	15.3	66.0
0.278000	55.1	49.5	20.0	9.000	30.1	23.9	79.0	16.5	66.0
0.426000	43.1	37.1	20.0	9.000	30.1	35.9	79.0	28.9	66.0
0.542000	43.7	38.7	20.0	9.000	30.1	29.3	73.0	21.3	60.0
0.702000	43.8	36.6	20.0	9.000	30.1	29.2	73.0	23.4	60.0





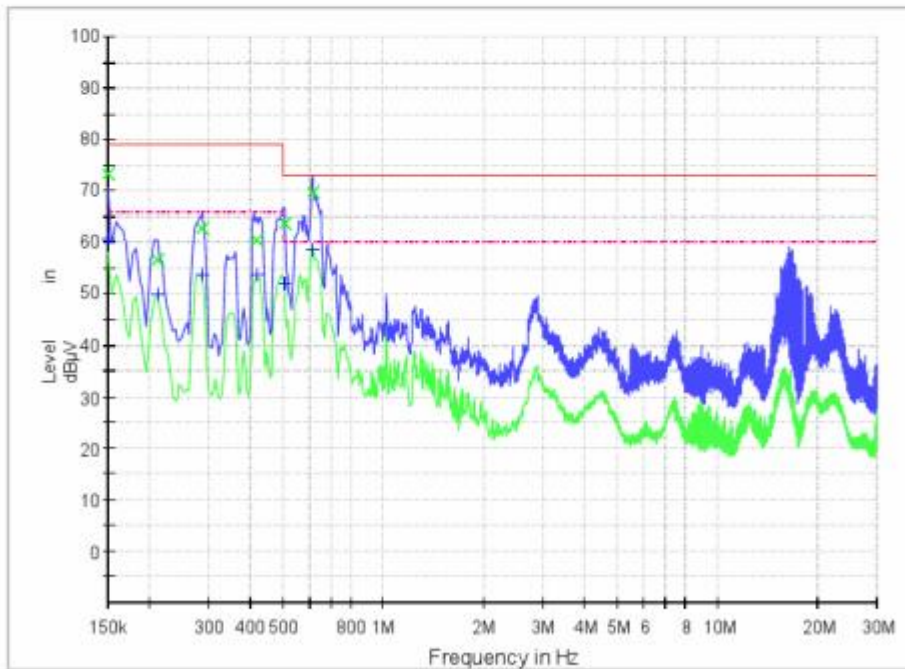
L2 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ V)	Margin - AVG (dB)	Limit - AVG (dB μ V)
0.150000	73.5	60.8	20.0	9.000	30.1	5.6	79.0	5.2	66.0
0.210000	56.7	49.9	20.0	9.000	30.1	22.3	79.0	16.1	66.0
0.286000	62.6	53.8	20.0	9.000	30.1	16.4	79.0	12.2	66.0
0.418000	60.4	53.6	20.0	9.000	30.1	18.6	79.0	12.4	66.0
0.506000	63.6	52.0	20.0	9.000	30.1	9.4	73.0	8.1	60.0
0.614000	69.8	58.6	20.0	9.000	30.1	3.2	73.0	1.4	60.0





BST Testing (Shenzhen) Co.,Ltd.

Report No.: XDD07234073121501FDR



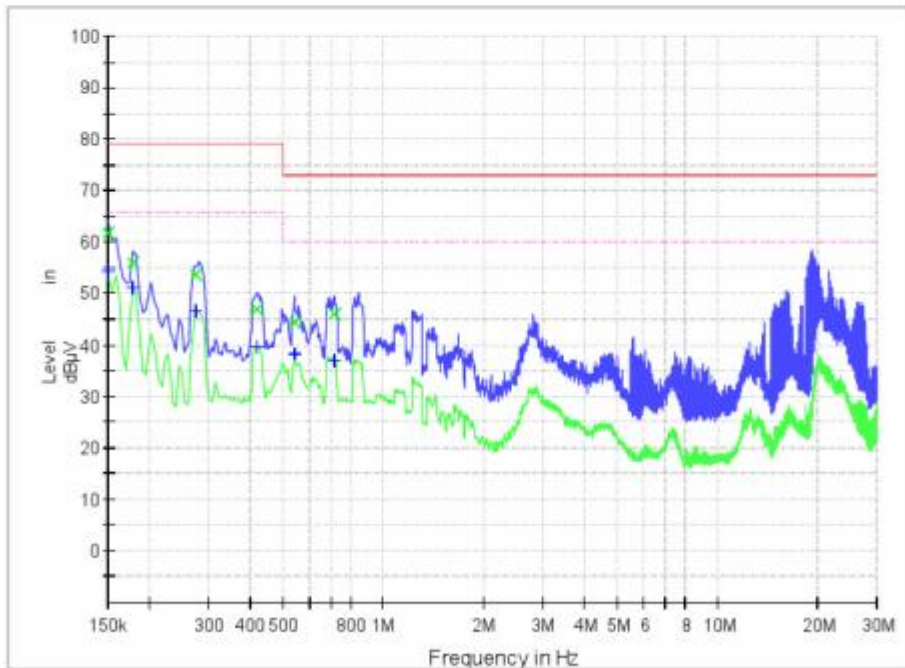
L3 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV)	Margin - AVG (dB)	Limit - AVG (dBµV)
0.150000	61.6	54.4	20.0	9.000	30.1	17.4	79.0	11.6	66.0
0.178000	56.0	51.3	20.0	9.000	30.1	23.0	79.0	14.7	66.0
0.274000	53.6	46.7	20.0	9.000	30.1	25.4	79.0	19.3	66.0
0.418000	47.1	39.7	20.0	9.000	30.1	31.9	79.0	26.3	66.0
0.542000	44.5	38.2	20.0	9.000	30.1	28.5	73.0	21.8	60.0
0.714000	46.0	37.0	20.0	9.000	30.1	27.0	73.0	23.0	60.0





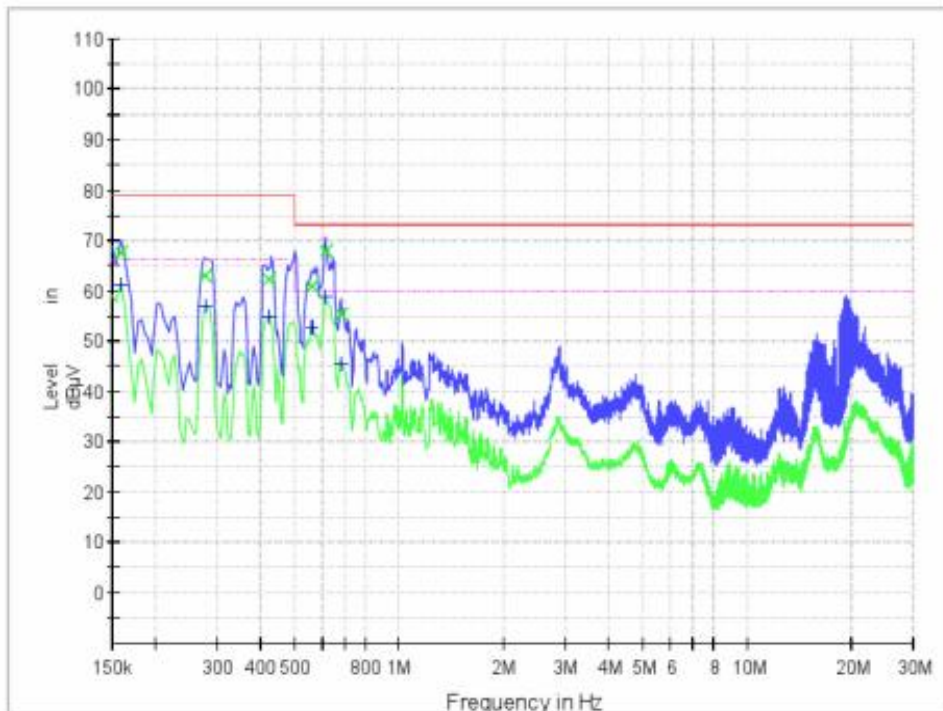
L3 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AVG (dB)	Limit - AVG (dBμV)
0.158000	67.5	61.4	20.0	9.000	30.1	11.6	79.0	4.6	66.0
0.278000	63.1	57.1	20.0	9.000	30.1	16.0	79.0	8.9	66.0
0.422000	62.4	55.0	20.0	9.000	30.1	16.6	79.0	11.0	66.0
0.562000	60.9	52.8	20.0	9.000	30.1	12.1	73.0	7.2	60.0
0.614000	68.0	58.8	20.0	9.000	30.1	5.1	73.0	1.2	60.0
0.682000	55.1	45.6	20.0	9.000	30.1	17.9	73.0	14.5	60.0





BST Testing (Shenzhen) Co.,Ltd.

Report No.: XDD07234073121501FDR



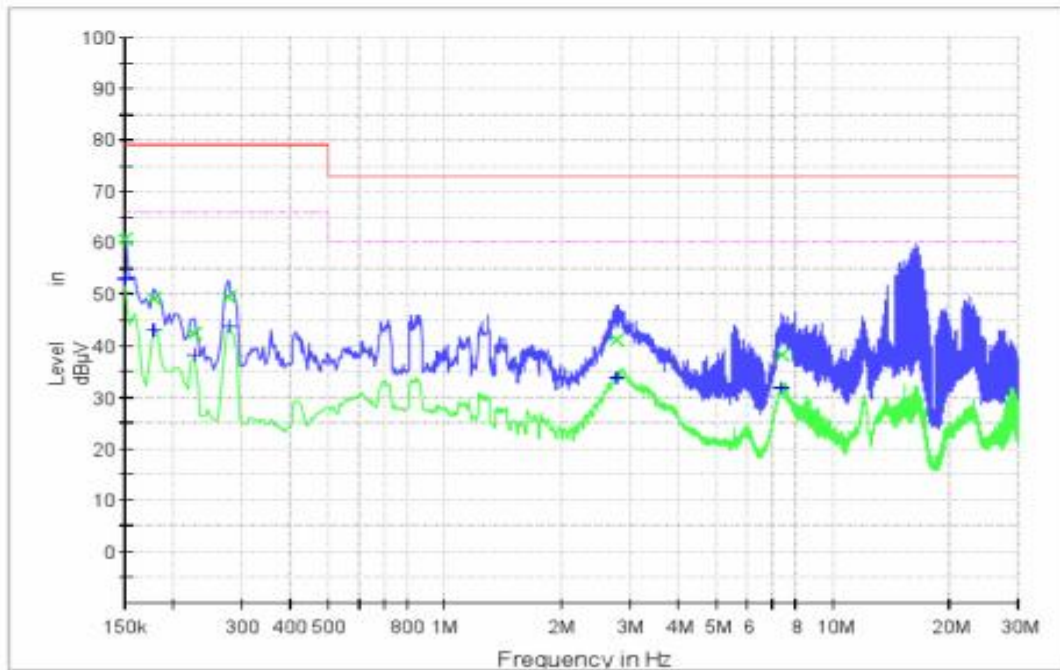
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Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV)	Margin - AVG (dB)	Limit - AVG (dBµV)
0.150000	60.8	53.2	20.0	9.000	30.1	18.3	79.0	12.8	66.0
0.178000	49.1	43.0	20.0	9.000	30.1	29.9	79.0	23.0	66.0
0.226000	42.3	38.3	20.0	9.000	30.1	36.7	79.0	27.8	66.0
0.278000	49.7	43.7	20.0	9.000	30.1	29.4	79.0	22.3	66.0
2.770000	41.1	33.8	20.0	9.000	30.2	31.9	73.0	26.2	60.0
7.402000	38.4	31.7	20.0	9.000	30.3	34.6	73.0	28.3	60.0





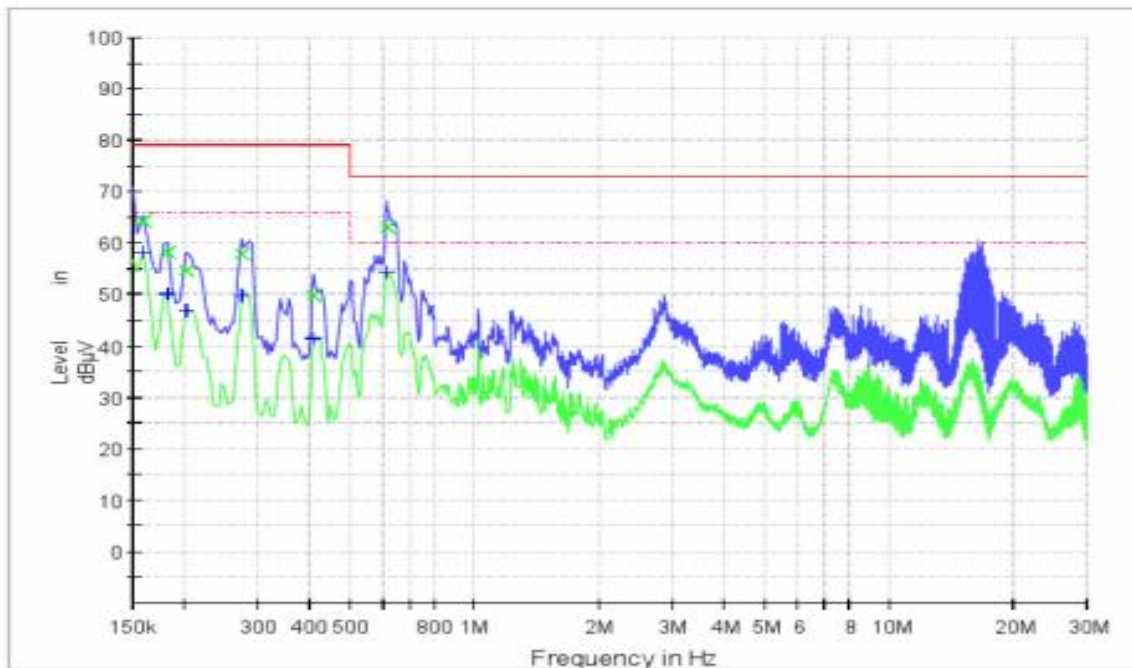
N 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV)	Margin - AVG (dB)	Limit - AVG (dBμV)
0.158000	64.2	58.1	20.0	9.000	30.1	14.8	79.0	7.9	66.0
0.182000	58.3	50.3	20.0	9.000	30.1	20.7	79.0	15.7	66.0
0.202000	54.5	47.0	20.0	9.000	30.1	24.5	79.0	19.0	66.0
0.274000	57.7	49.9	20.0	9.000	30.1	21.3	79.0	16.1	66.0
0.410000	50.0	41.5	20.0	9.000	30.1	29.0	79.0	24.5	66.0
0.614000	63.2	54.2	20.0	9.000	30.1	9.8	73.0	5.8	60.0





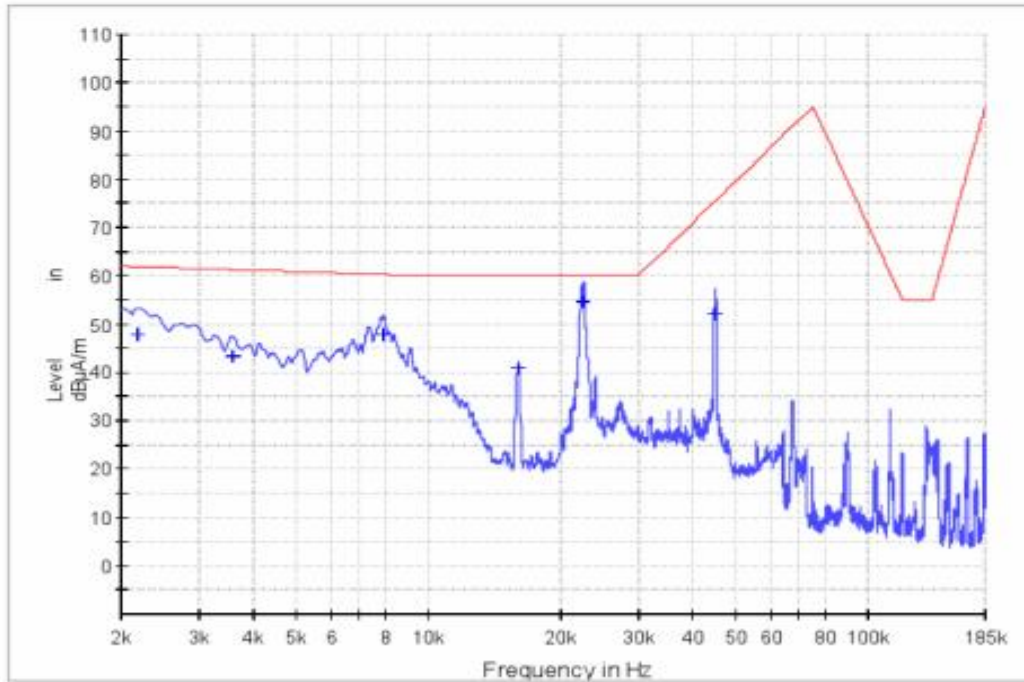
Back 20% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμA/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμA/m)
0.002182	47.9	50.0	0.200	100.0	H	43.8	14.0	61.9
0.003600	43.4	50.0	0.200	100.0	H	39.7	17.9	61.3
0.007905	47.8	50.0	0.200	100.0	H	33.3	12.5	60.3
0.016040	40.9	50.0	0.200	100.0	H	28.2	19.1	60.0
0.022555	54.5	50.0	0.200	100.0	H	28.8	5.5	60.0
0.044862	52.3	50.0	0.200	100.0	H	28.1	23.1	75.4





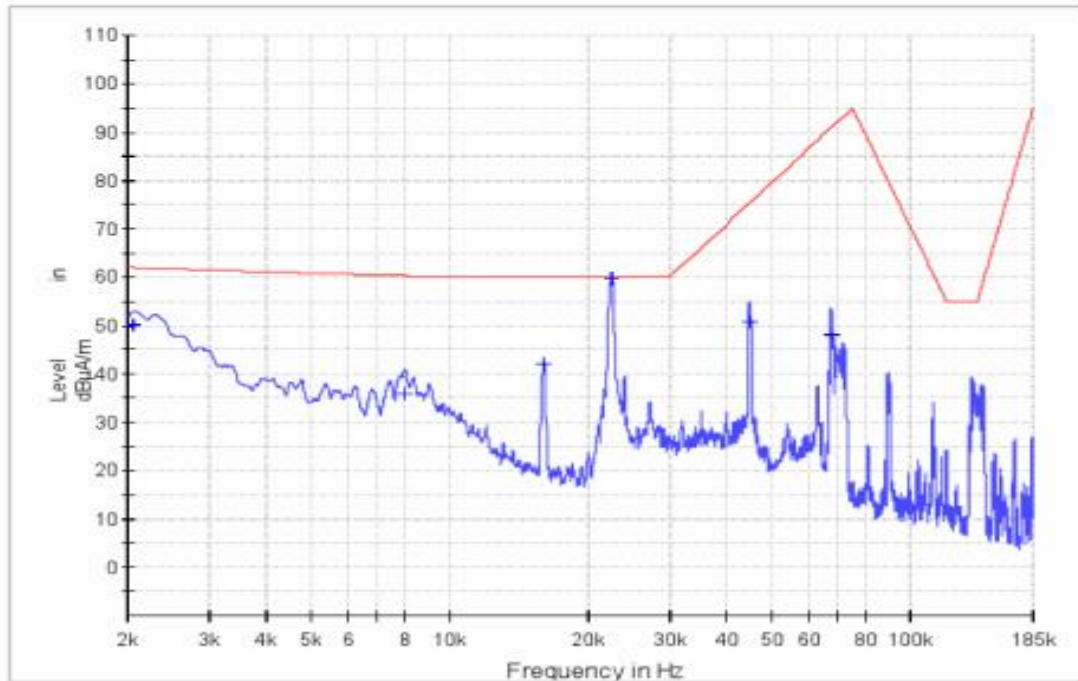
Back 80% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμA/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμA/m)
0.002069	50.3	50.0	0.200	100.0	H	44.2	11.7	62.0
0.007968	35.9	50.0	0.200	100.0	H	33.3	24.4	60.3
0.015992	42.1	50.0	0.200	100.0	H	28.2	17.9	60.0
0.022442	59.7	50.0	0.200	100.0	H	28.7	0.3	60.0
0.044772	50.9	50.0	0.200	100.0	H	28.2	24.4	75.3
0.067653	48.1	50.0	0.200	100.0	H	22.2	43.0	91.1





EMI Sweep(1)

1 / 1

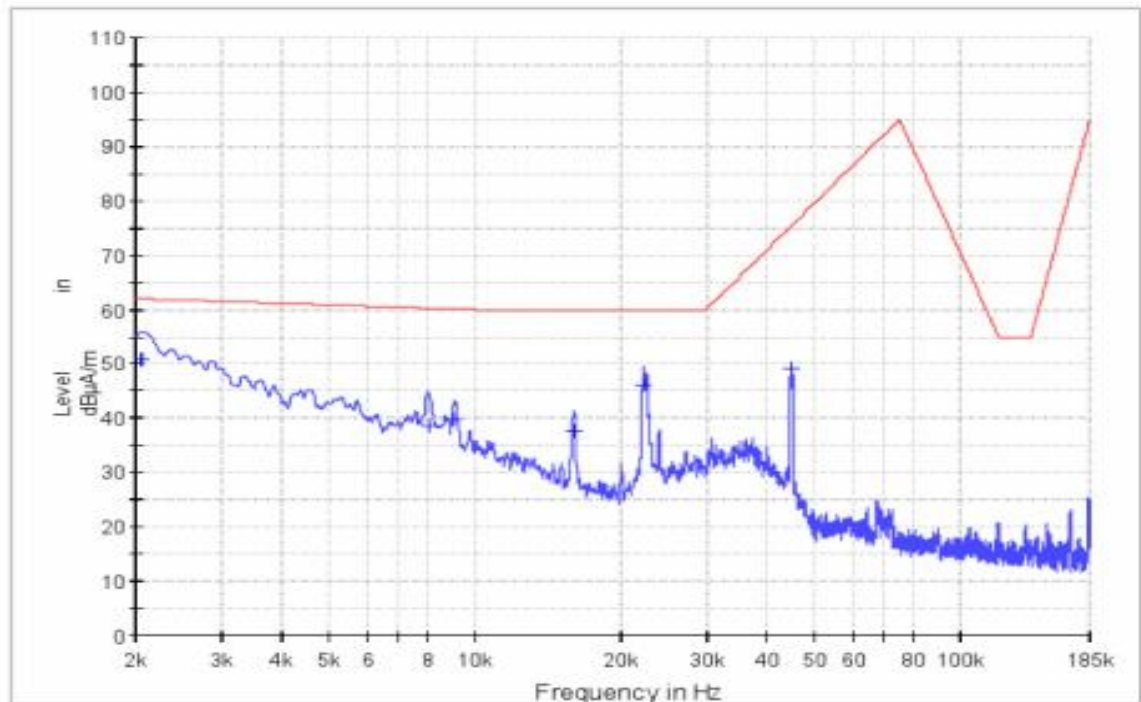
Front 20% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin

Frequency (MHz)	QuasiPeak (dB μ A/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ A/m)
0.002069	50.7	50.0	0.200	100.0	H	44.2	11.3	62.0
0.008040	38.7	50.0	0.200	100.0	H	33.2	21.6	60.3
0.009065	39.8	50.0	0.200	100.0	H	32.2	20.4	60.1
0.015976	37.8	50.0	0.200	100.0	H	28.3	22.2	60.0
0.022263	46.1	50.0	0.200	100.0	H	28.5	13.9	60.0
0.044907	49.3	50.0	0.200	100.0	H	28.1	26.1	75.4





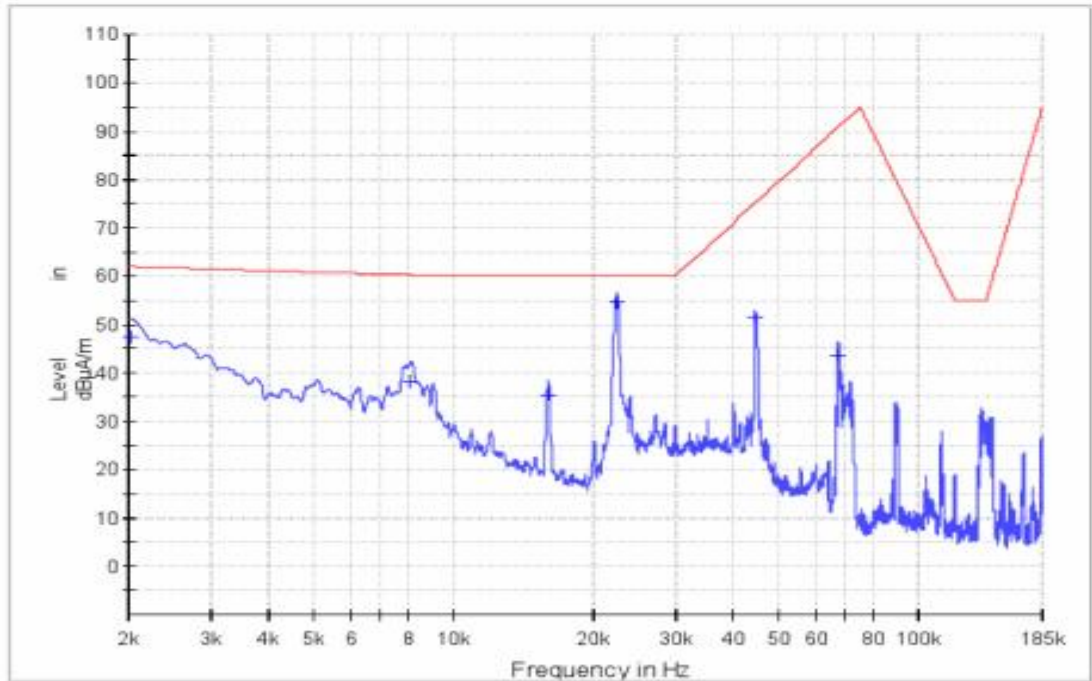
Front 80% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμA/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμA/m)
0.002022	47.3	50.0	0.200	100.0	H	44.4	14.7	62.0
0.008105	38.1	50.0	0.200	100.0	H	33.1	22.2	60.3
0.016024	35.4	50.0	0.200	100.0	H	28.2	24.6	60.0
0.022442	54.6	50.0	0.200	100.0	H	28.7	5.4	60.0
0.044683	51.4	50.0	0.200	100.0	H	28.3	23.8	75.2
0.067383	43.8	50.0	0.200	100.0	H	22.2	47.1	90.9





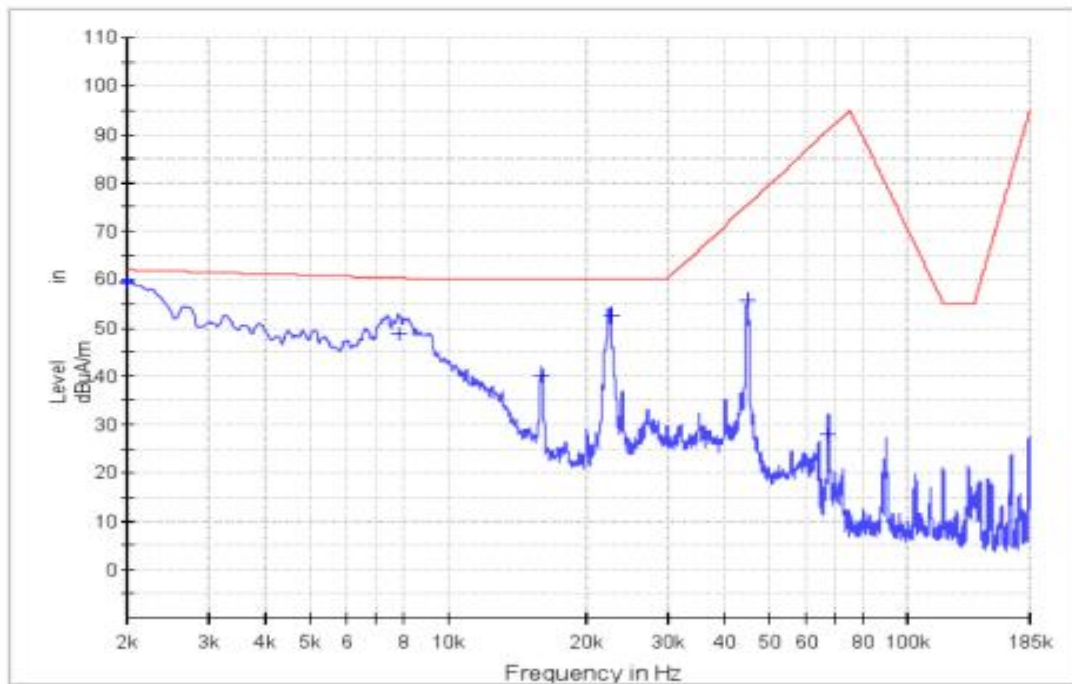
Left side 20% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµA/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµA/m)
0.002000	59.4	50.0	0.200	100.0	H	44.5	2.6	62.0
0.007810	48.6	50.0	0.200	100.0	H	33.4	11.7	60.3
0.016024	39.8	50.0	0.200	100.0	H	28.2	20.2	60.0
0.022622	52.6	50.0	0.200	100.0	H	28.8	7.4	60.0
0.044907	55.7	50.0	0.200	100.0	H	28.1	19.7	75.4
0.067383	28.0	50.0	0.200	100.0	H	22.2	62.9	90.9





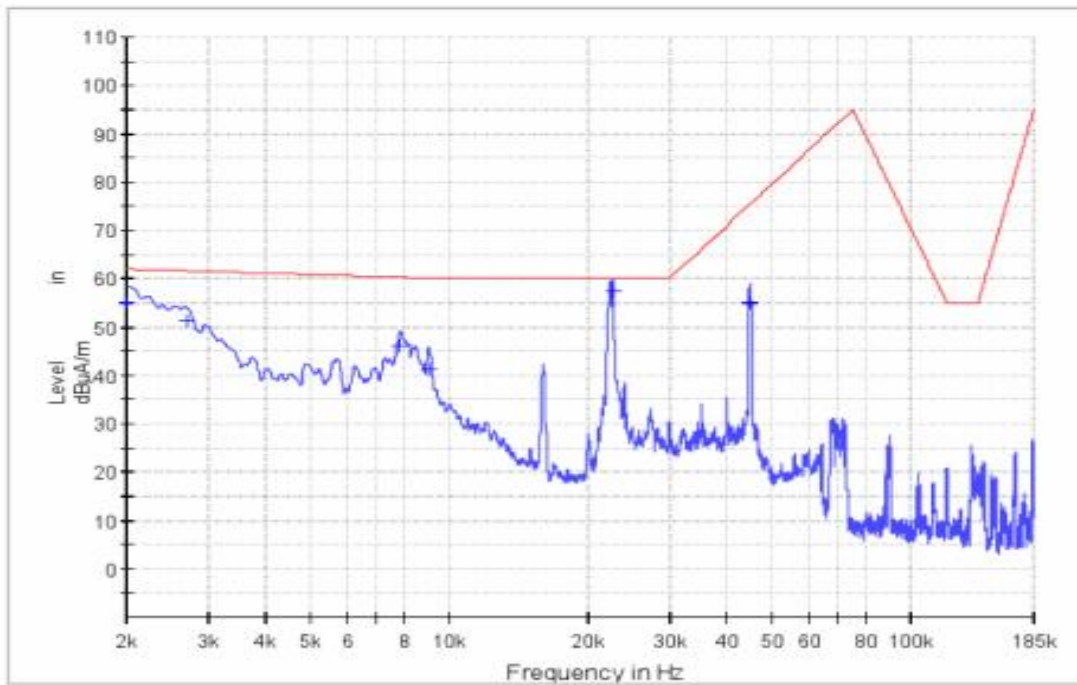
Left side 80% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμA/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμA/m)
0.002000	54.9	50.0	0.200	100.0	H	44.5	7.1	62.0
0.002710	51.3	50.0	0.200	100.0	H	42.0	10.3	61.6
0.007810	46.1	50.0	0.200	100.0	H	33.4	14.2	60.3
0.009047	41.1	50.0	0.200	100.0	H	32.2	19.0	60.1
0.022600	57.4	50.0	0.200	100.0	H	28.8	2.6	60.0
0.044862	54.9	50.0	0.200	100.0	H	28.1	20.5	75.4





EMI Sweep(1)

1 / 1

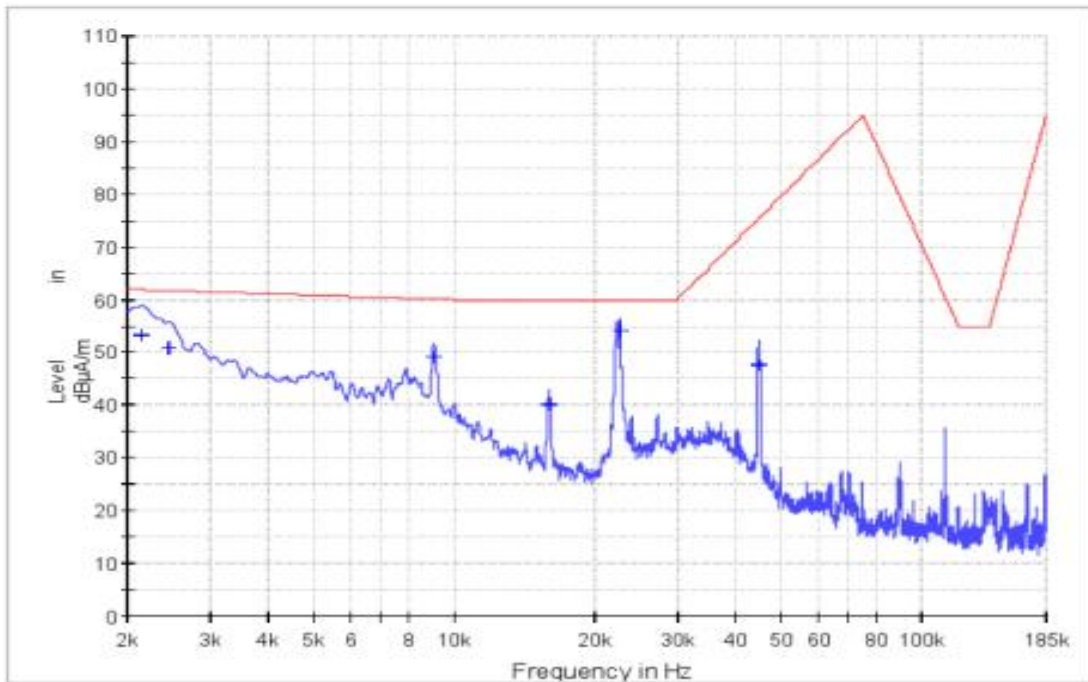
Right side 20% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin

Frequency (MHz)	QuasiPeak (dB μ A/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ A/m)
0.002136	53.4	50.0	0.200	100.0	H	44.0	8.5	61.9
0.002457	50.8	50.0	0.200	100.0	H	42.8	10.9	61.7
0.009065	49.3	50.0	0.200	100.0	H	32.2	10.8	60.1
0.015976	40.1	50.0	0.200	100.0	H	28.3	19.9	60.0
0.022622	54.3	50.0	0.200	100.0	H	28.8	5.7	60.0
0.044907	47.8	50.0	0.200	100.0	H	28.1	27.7	75.4





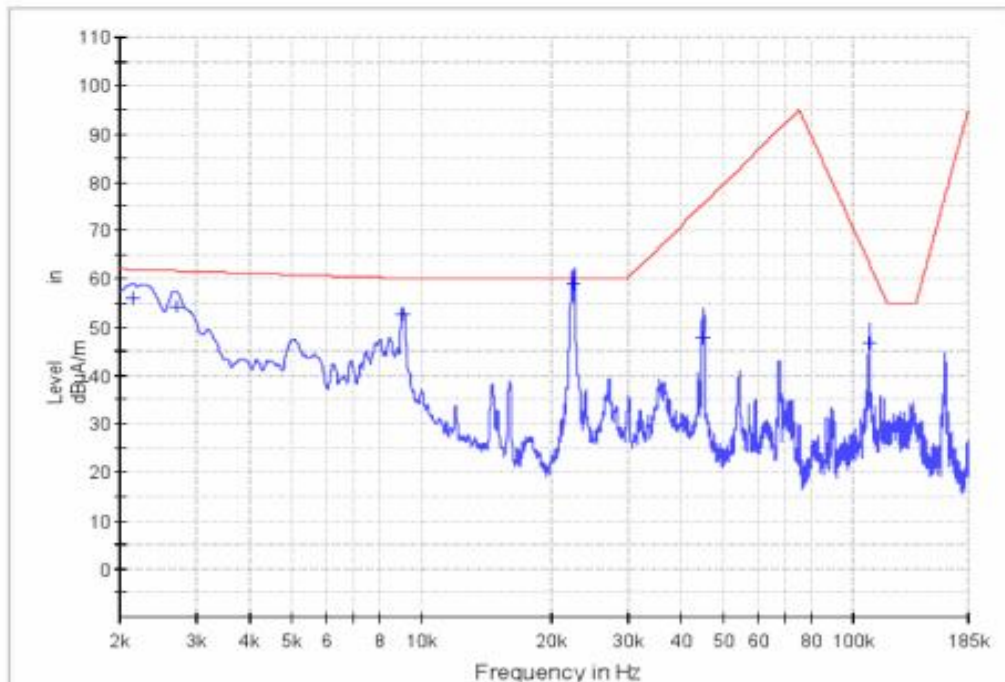
Right side 80% Load

Common Information

Test Description:
 Test Site:
 Test Standard:
 Environment Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμA/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμA/m)
0.002136	55.9	50.0	0.200	100.0	H	44.0	6.0	61.9
0.002710	54.3	50.0	0.200	100.0	H	42.0	7.4	61.6
0.009092	52.4	50.0	0.200	100.0	H	32.2	7.7	60.1
0.022577	59.0	50.0	0.200	100.0	H	28.8	1.0	60.0
0.044862	47.7	50.0	0.200	100.0	H	28.1	27.7	75.4
0.109196	46.7	50.0	0.200	100.0	H	21.1	16.3	63.0





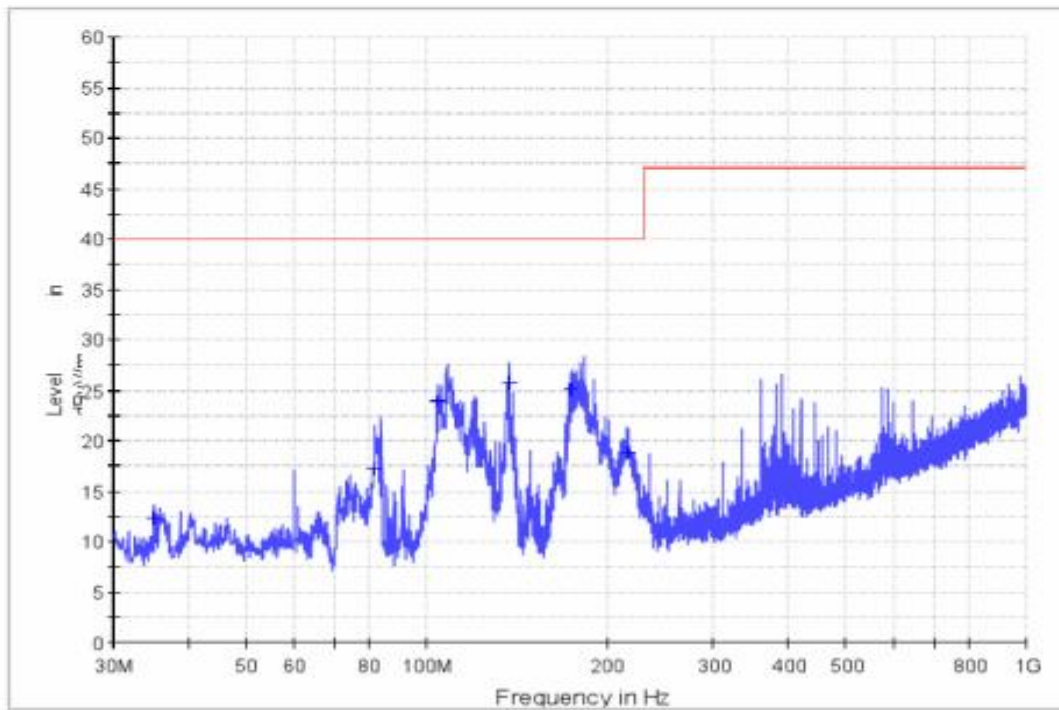
H 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ V/m)
35.080000	12.3	20.0	120.000	400.0	H	215.0	-17.7	27.7	40.0
81.880000	17.2	20.0	120.000	400.0	H	201.0	-20.8	22.8	40.0
104.320000	23.9	20.0	120.000	400.0	H	125.0	-17.0	16.1	40.0
136.840000	25.7	20.0	120.000	400.0	H	297.0	-20.1	14.3	40.0
173.440000	25.1	20.0	120.000	400.0	H	137.0	-18.8	14.9	40.0
216.480000	18.9	20.0	120.000	400.0	H	207.0	-16.5	21.1	40.0





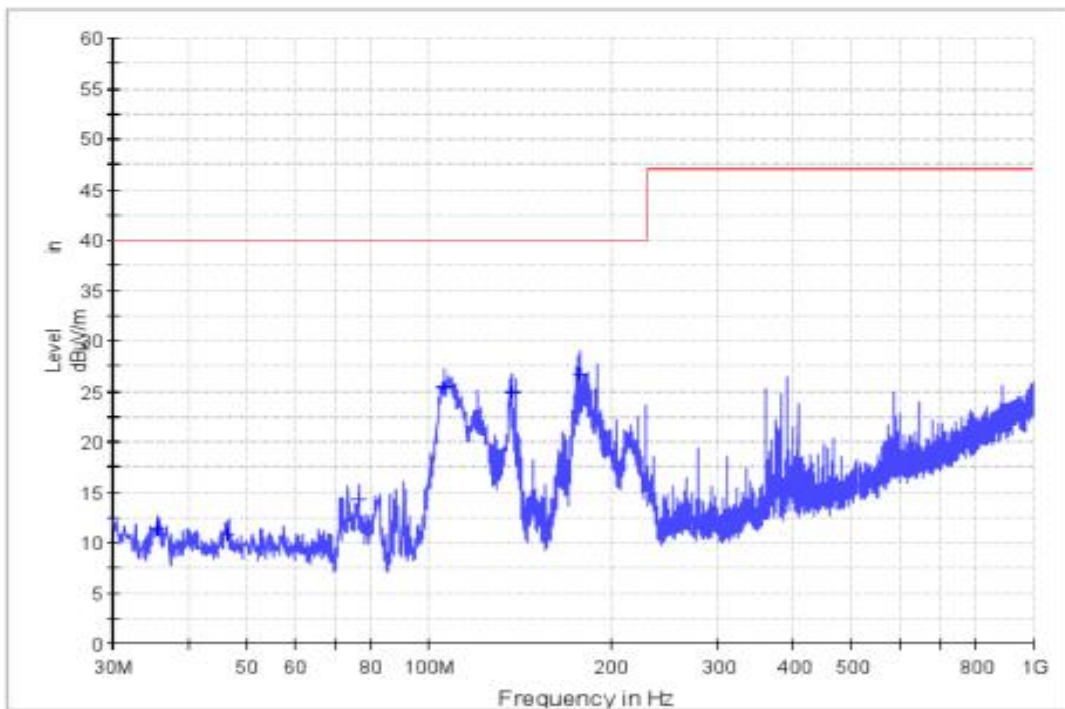
H 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dB μ V/m)
35.560000	11.3	20.0	120.000	400.0	H	232.0	-17.6	28.7	40.0
46.480000	10.8	20.0	120.000	400.0	H	203.0	-15.4	29.2	40.0
76.680000	14.2	20.0	120.000	400.0	H	170.0	-21.1	25.8	40.0
105.800000	25.4	20.0	120.000	400.0	H	123.0	-17.0	14.6	40.0
136.960000	24.9	20.0	120.000	400.0	H	299.0	-20.1	15.1	40.0
177.800000	26.8	20.0	120.000	400.0	H	138.0	-18.5	13.2	40.0





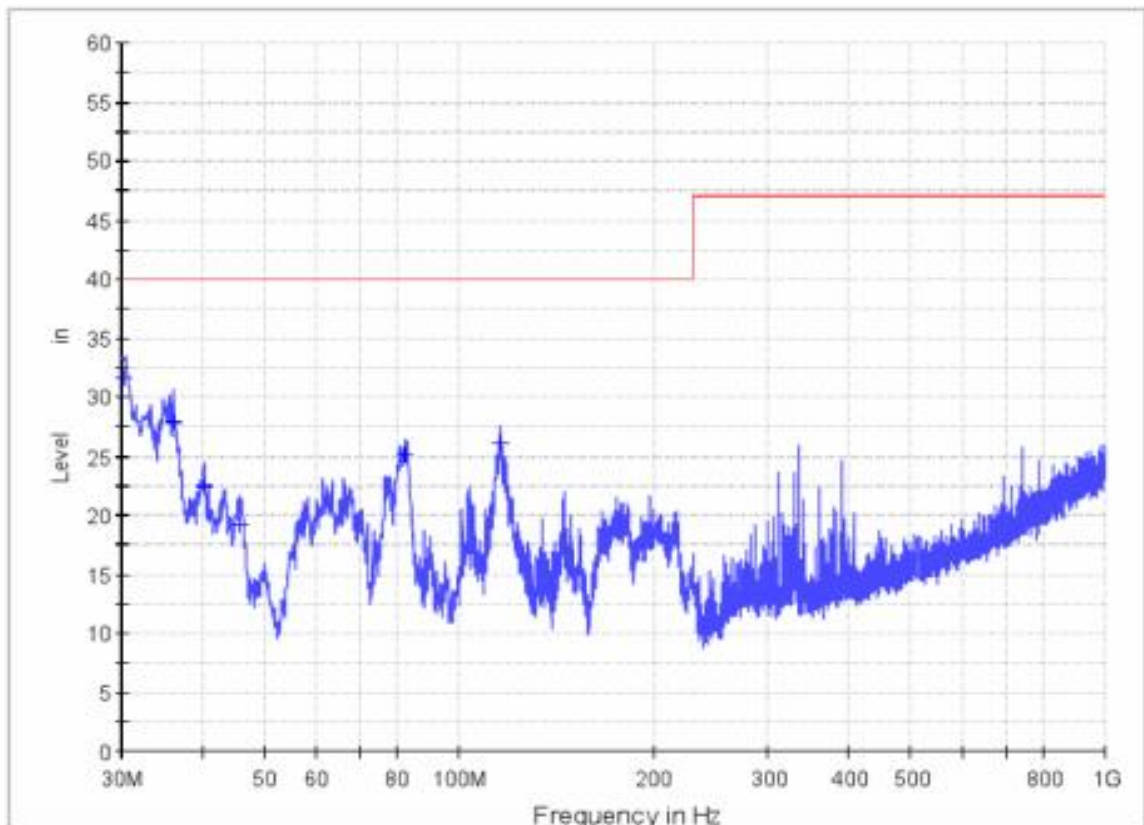
V 20% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.240000	31.6	20.0	120.000	100.0	V	310.0	-18.3	8.4	40.0
36.080000	27.8	20.0	120.000	100.0	V	90.0	-17.4	12.2	40.0
40.320000	22.4	20.0	120.000	100.0	V	90.0	-16.3	17.6	40.0
45.760000	19.2	20.0	120.000	100.0	V	30.0	-15.4	20.8	40.0
82.520000	25.1	20.0	120.000	100.0	V	1.0	-20.7	14.9	40.0
116.200000	26.1	20.0	120.000	100.0	V	231.0	-18.3	13.9	40.0





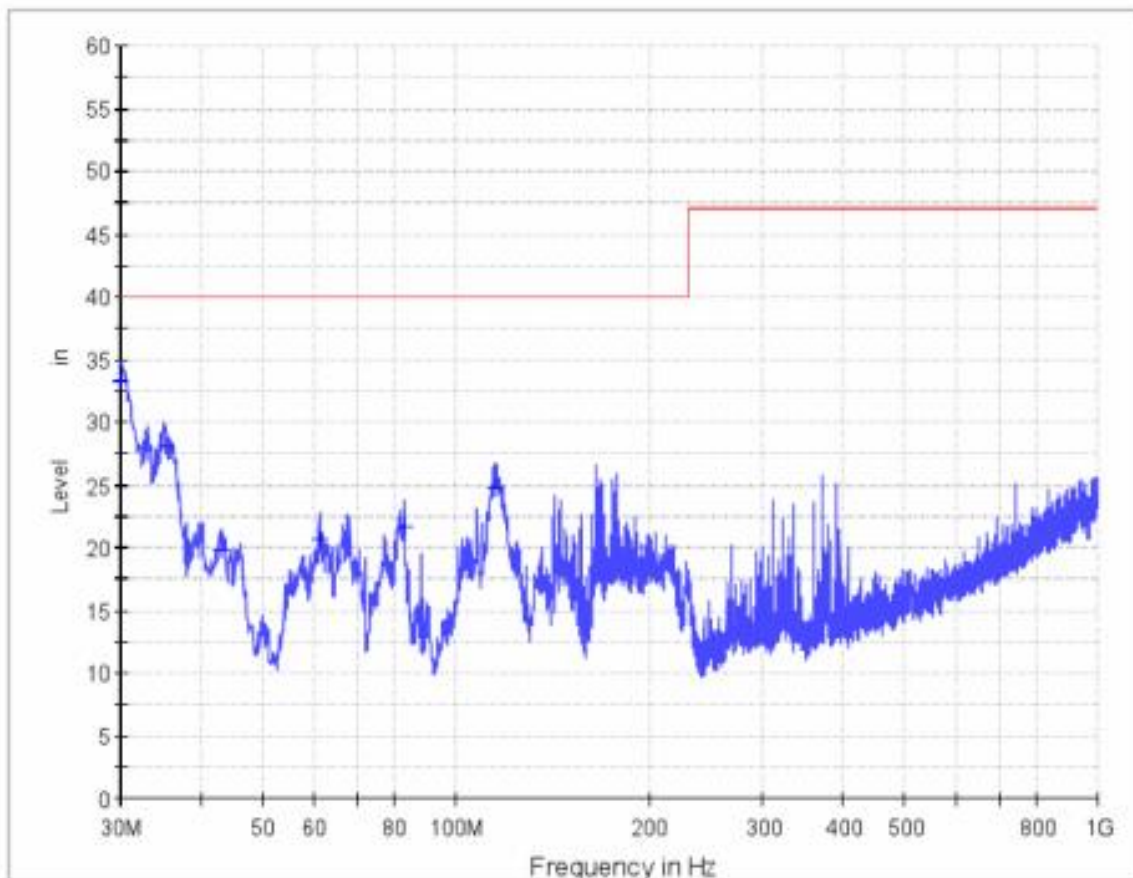
V 80% Load

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.000000	33.2	20.0	120.000	100.0	V	297.0	-18.3	6.8	40.0
35.200000	28.1	20.0	120.000	100.0	V	113.0	-17.7	11.9	40.0
42.960000	19.8	20.0	120.000	100.0	V	101.0	-15.8	20.2	40.0
61.280000	20.7	20.0	120.000	100.0	V	266.0	-16.5	19.3	40.0
82.880000	21.6	20.0	120.000	100.0	V	351.0	-20.6	18.4	40.0
114.640000	24.8	20.0	120.000	100.0	V	201.0	-18.0	15.2	40.0





EMI Sweep(1)

1 / 1

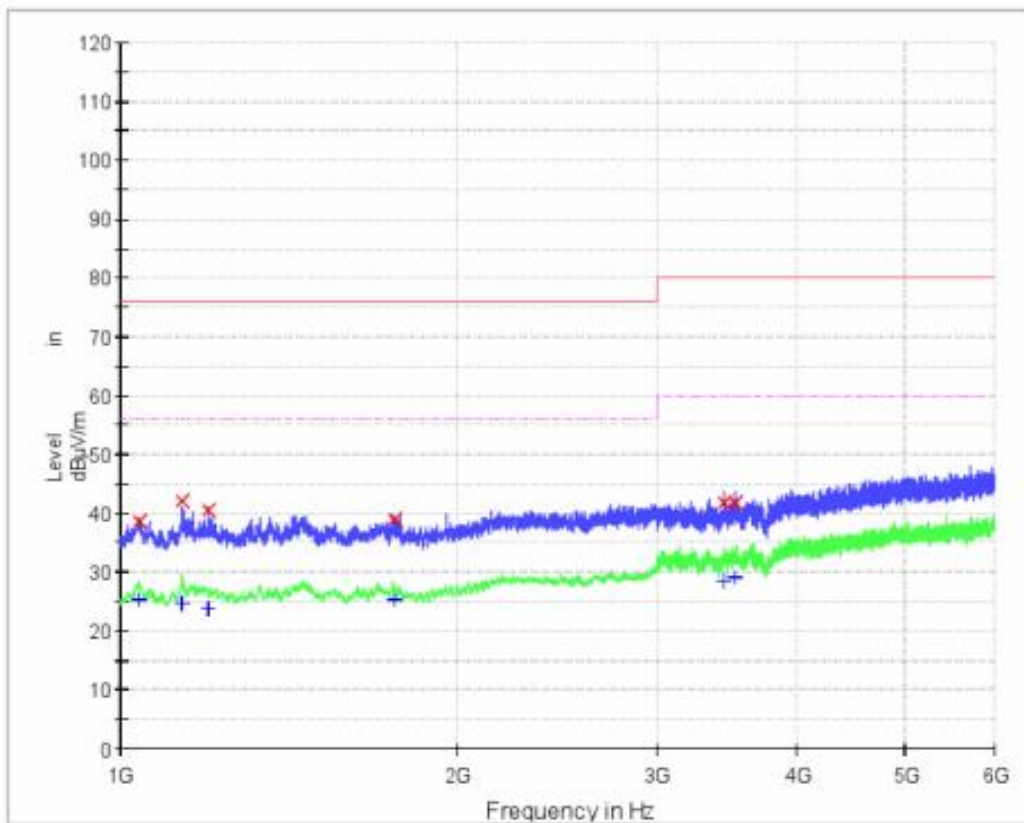
H 20% Load (1-6GHz)

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)
1037.673836	38.6	25.2	1000.0	1000.000	400.0	H	54.0	0.4	30.8	56.0
1134.210758	42.0	24.9	1000.0	1000.000	400.0	H	264.0	0.7	31.2	56.0
1195.913776	40.5	23.7	1000.0	1000.000	400.0	H	182.0	1.2	32.3	56.0
1750.182707	39.0	25.5	1000.0	1000.000	400.0	H	252.0	2.3	30.6	56.0
3443.133342	41.8	28.5	1000.0	1000.000	400.0	H	259.0	7.7	31.5	60.0
3530.252578	41.9	29.0	1000.0	1000.000	400.0	H	158.0	8.2	31.0	60.0





EMI Sweep(1)

1 / 1

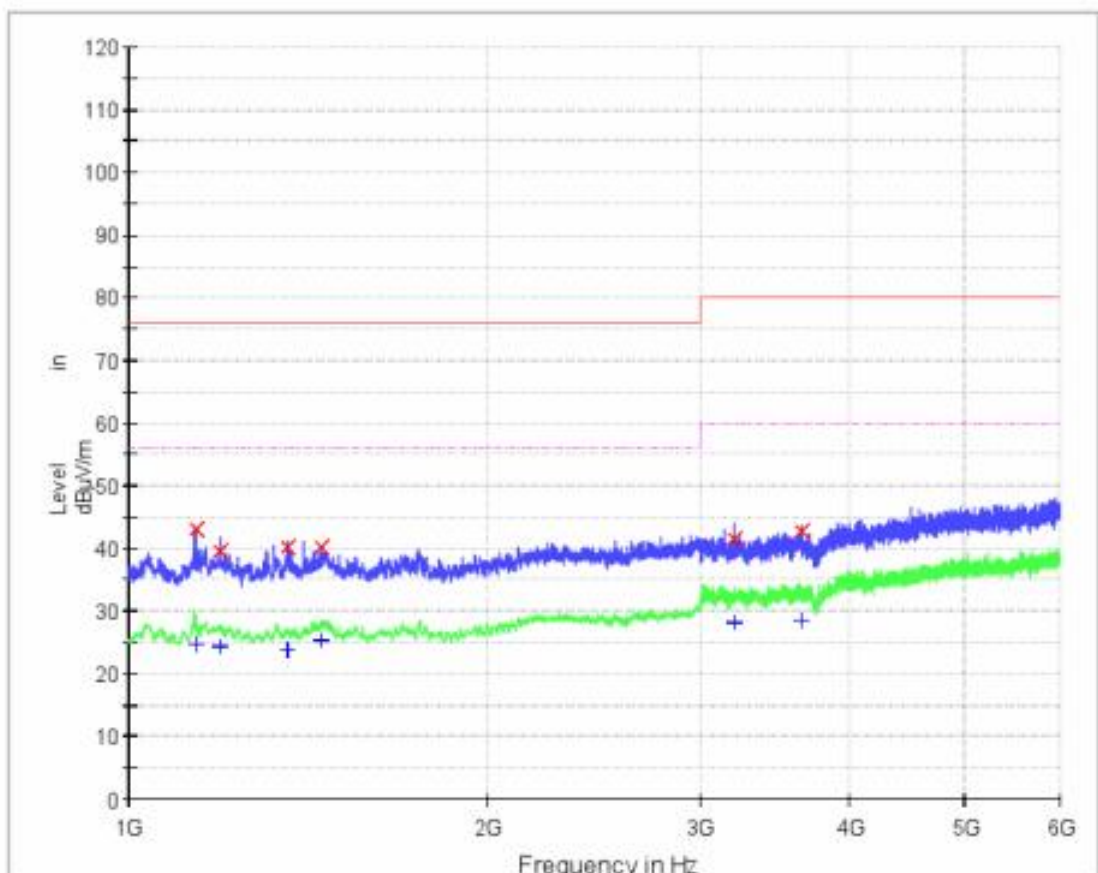
H 80% Load (1-6GHz)

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)
1137.616794	42.9	24.8	1000.0	1000.000	400.0	H	172.0	0.8	31.2	56.0
1193.525532	39.5	24.4	1000.0	1000.000	400.0	H	68.0	1.2	31.6	56.0
1357.774690	40.1	23.9	1000.0	1000.000	400.0	H	146.0	2.1	32.1	56.0
1448.914454	40.1	25.5	1000.0	1000.000	400.0	H	293.0	2.2	30.5	56.0
3204.057220	41.5	28.2	1000.0	1000.000	400.0	H	74.0	7.6	31.8	60.0
3648.634293	42.9	28.6	1000.0	1000.000	400.0	H	1.0	8.1	31.4	60.0





EMI Sweep(1)

1 / 1

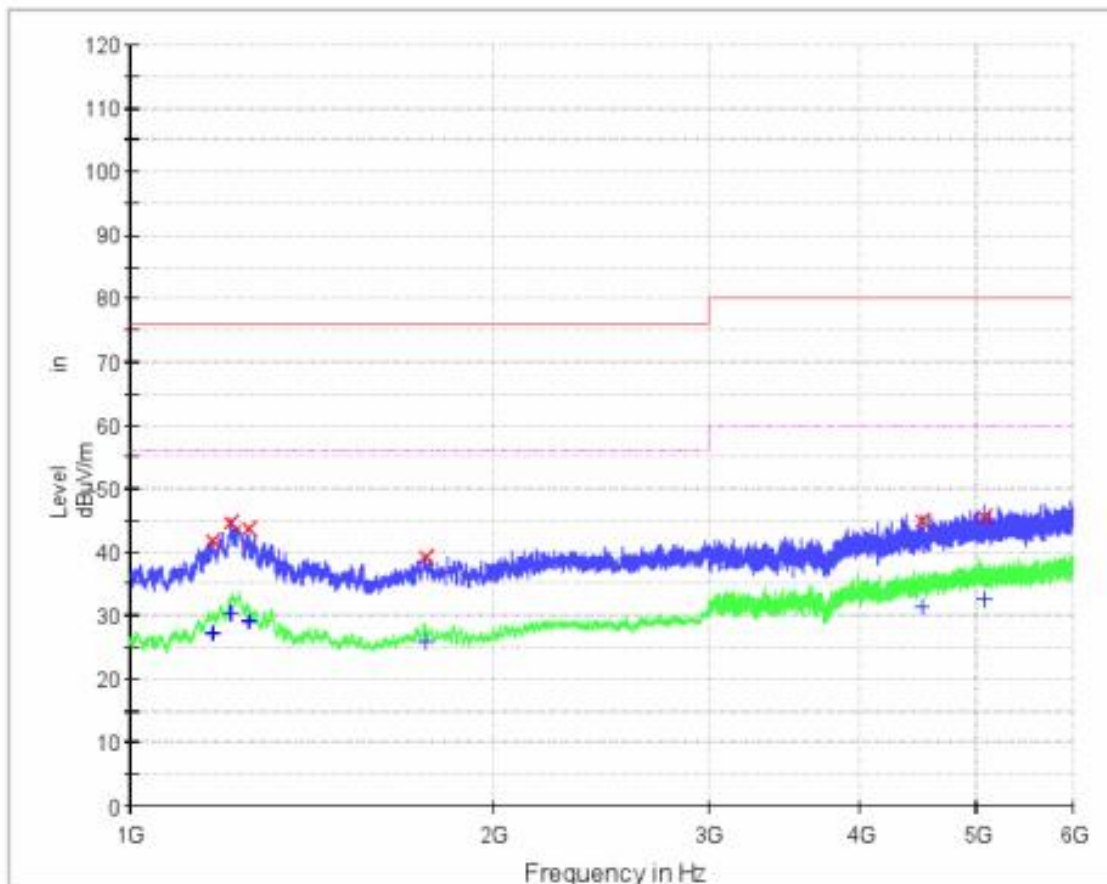
V 20% Load (1-6GHz)

Common Information

Test Description:
 Operating Conditions:
 Operator Name:
 Comment:

Limit and Margin

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	VelgVt (cm)	Pol	AzimuV (deg)	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)
1171.073738	41.7	27.3	1000.0	1000.000	100.0	V	338.0	1.0	28.7	56.0
1211.554280	44.5	30.5	1000.0	1000.000	100.0	V	183.0	1.4	25.5	56.0
1252.181932	43.8	29.2	1000.0	1000.000	100.0	V	21.0	1.8	26.8	56.0
1750.182707	39.2	26.0	1000.0	1000.000	100.0	V	330.0	2.3	30.0	56.0
4500.767786	45.0	31.3	1000.0	1000.000	100.0	V	233.0	11.0	28.7	60.0
5079.371541	45.7	32.5	1000.0	1000.000	100.0	V	312.0	11.7	27.5	60.0





EMI Sweep(1)

1 / 1

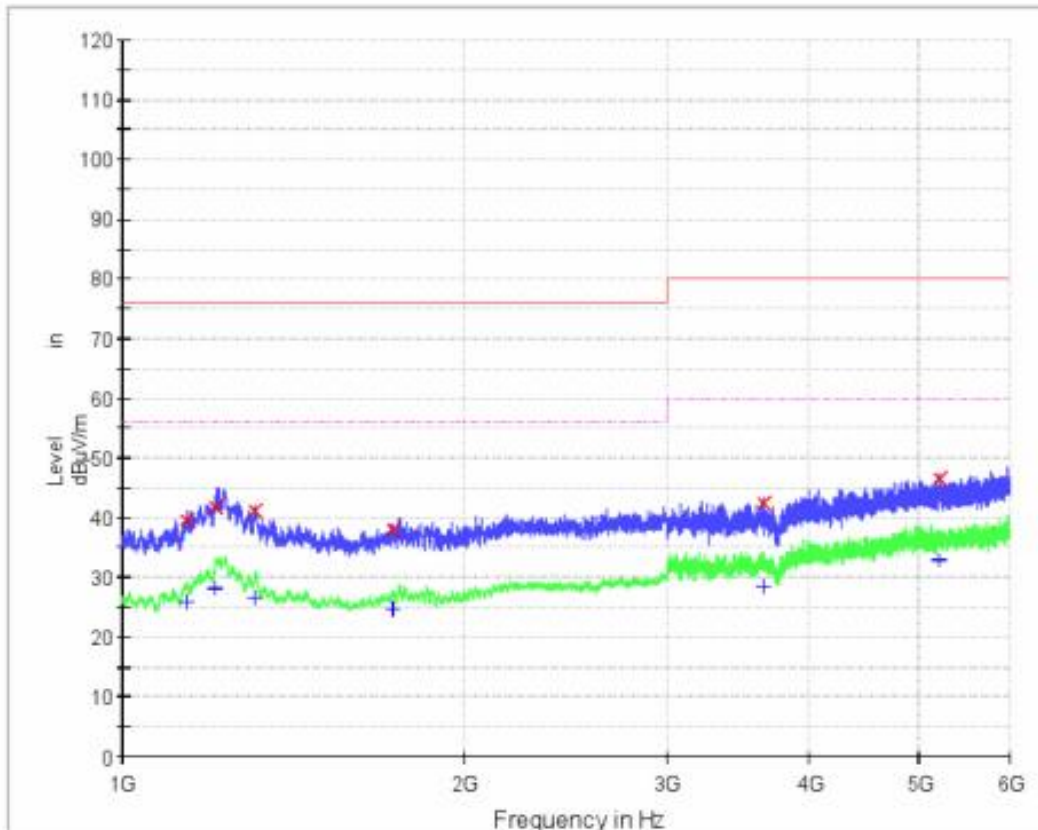
V 80% Load (1-6GHz)

Common Information

TestDescription:
 Operating Conditions:
 Operator Name:
 Comment

Limit and Margin

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	VeigVt (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dB μ V/m)
1138.754411	39.7	26.0	1000.0	1000.000	100.0	V	156.0	0.8	30.0	56.0
1205.514639	41.9	28.3	1000.0	1000.000	100.0	V	317.0	1.3	27.7	56.0
1307.172084	41.1	26.7	1000.0	1000.000	100.0	V	284.0	2.1	29.3	56.0
1729.316394	37.9	24.8	1000.0	1000.000	100.0	V	64.0	2.3	31.2	56.0
3648.634293	42.4	28.6	1000.0	1000.000	100.0	V	55.0	8.1	31.4	60.0
5218.312379	46.6	32.8	1000.0	1000.000	100.0	V	193.0	11.8	27.2	60.0





Voltage Transient Disturbance for DC CPT Port

Measuring point	Between positive (+) and negative (-)	Between positive (+) and ground	Between negative (-) and ground
20% load	4.7V	4.6V	4.4V
80% load	5.3V	4.5V	4.9V



Electrostatic Discharge Immunity

Standard requirement:

Test	Air: <input type="checkbox"/> ±2kV; <input type="checkbox"/> ±4kV; <input type="checkbox"/> ±6kV; <input checked="" type="checkbox"/> ±8kV; <input type="checkbox"/> ±15kV;	Performance	<input type="checkbox"/> A; <input checked="" type="checkbox"/> B; <input type="checkbox"/> C
Level	Contact: <input type="checkbox"/> ±2kV; <input checked="" type="checkbox"/> ±4kV; <input type="checkbox"/> ±6kV; <input type="checkbox"/> ±8kV;	Criterion	

Test Result:

Discharge Location	Discharge Voltage/kV	Type of discharge	Remarks	Performance Criterion
Metallic enclosure	±4	<input type="checkbox"/> Air <input checked="" type="checkbox"/> Contact	EUT work as intended	A
Screw	±4	<input type="checkbox"/> Air <input checked="" type="checkbox"/> Contact	EUT work as intended	A
HCP	±4	<input type="checkbox"/> Air <input checked="" type="checkbox"/> Contact	EUT work as intended	A
Switch & LED	±2, ±4, ±8	<input checked="" type="checkbox"/> Air <input type="checkbox"/> Contact	EUT work as intended	A
Button	±2, ±4, ±8	<input checked="" type="checkbox"/> Air <input type="checkbox"/> Contact	EUT work as intended	A
Display panel	±2, ±4, ±8	<input checked="" type="checkbox"/> Air <input type="checkbox"/> Contact	EUT work as intended	A



Radiated, Radio-Frequency Electromagnetic Field Immunity

Standard requirement:

Frequency range	<input checked="" type="checkbox"/> 80MHz-1000MHz	<input checked="" type="checkbox"/> 1.4GHz -2.0GHz	<input checked="" type="checkbox"/> 2.0GHz -2.7GHz	Performance Criterion
Test Level	<input checked="" type="checkbox"/> 10V/m	<input checked="" type="checkbox"/> 3V/m	<input checked="" type="checkbox"/> 3V/m	
Modulation	<input checked="" type="checkbox"/> 80%AM, 1kHz sine; <input type="checkbox"/> 1/8duty cycle, 217Hz			
Frequency Step	<input checked="" type="checkbox"/> 1% <input type="checkbox"/> _____			
Dwell Time	<input checked="" type="checkbox"/> 3S; <input type="checkbox"/> 30S; <input type="checkbox"/> _____			
				<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C

Test Result:

EUT orientation	Ant. Polarization	Remark	Performance Criterion
0°	H	EUT work as intended	A
90°	H	EUT work as intended	A
180°	H	EUT work as intended	A
270°	H	EUT work as intended	A
0°	V	EUT work as intended	A
90°	V	EUT work as intended	A
180°	V	EUT work as intended	A
270°	V	EUT work as intended	A



Electrical Fast Transient/Burst Immunity

Standard requirement:

Test Level	<input checked="" type="checkbox"/> Power port: <input type="checkbox"/> ±0.5kV; <input type="checkbox"/> ±1kV; <input checked="" type="checkbox"/> ±2kV; <input checked="" type="checkbox"/> ±4kV;	Performance Criterion	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C
	<input checked="" type="checkbox"/> CPT port: <input type="checkbox"/> ±0.5kV; <input type="checkbox"/> ±1kV; <input checked="" type="checkbox"/> ±2kV; <input checked="" type="checkbox"/> ±4kV;		
	<input checked="" type="checkbox"/> Signal port: <input type="checkbox"/> ±0.5kV; <input type="checkbox"/> ±1kV; <input checked="" type="checkbox"/> ±2kV;		
Burst Frequency: <input checked="" type="checkbox"/> 5kHz; <input type="checkbox"/> 100kHz; <input type="checkbox"/> _____.			
Dwell Time	<input type="checkbox"/> 60s; <input checked="" type="checkbox"/> 120s		

Test Result:

Test Location	Test Level /kV	Remark	Performance Criterion
a.c. power port	±4	EUT work as intended	A
CPT port	±4	EUT work as intended	A
Signal port	±2	After the test, the communication is normal	B



Surge Immunity

Standard requirement:

Test Level	<input checked="" type="checkbox"/> AC power port:	Performance e Criterion	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C
	<input checked="" type="checkbox"/> line to line: <input checked="" type="checkbox"/> ±1kV; <input checked="" type="checkbox"/> ±2kV;		
	<input checked="" type="checkbox"/> line to earth: <input checked="" type="checkbox"/> ±2kV; <input checked="" type="checkbox"/> ±4kV;		
Phase Angle	<input checked="" type="checkbox"/> 0° <input checked="" type="checkbox"/> 90° <input checked="" type="checkbox"/> 180° <input checked="" type="checkbox"/> 270° <input type="checkbox"/> _____		
Repetition Rate	<input checked="" type="checkbox"/> 60s, <input type="checkbox"/> _____		
Number of surges	<input checked="" type="checkbox"/> 5, <input type="checkbox"/> _____		

Test Result:

Test Location	Test Level/KV	Remark	Performance Criterion
ac power line L-N	±0.5, ±1, ±2	EUT work as antended	A
ac power line L-PE	±0.5, ±1, ±2	EUT work as antended	A
ac power line N-PE	±0.5, ±1, ±2	EUT work as antended	A



Surge Immunity

Standard requirement:

Test Level	<input type="checkbox"/> line to line: <input type="checkbox"/> ±0.5kV; <input type="checkbox"/> ±1kV; <input type="checkbox"/> ±2kV; <input type="checkbox"/> ±4kV; <input type="checkbox"/> line to earth: <input type="checkbox"/> ±1kV; <input type="checkbox"/> ±2kV; <input type="checkbox"/> ±4kV; <input type="checkbox"/> ± kV; <input checked="" type="checkbox"/> Signal port: <input type="checkbox"/> ±0.5kV; <input checked="" type="checkbox"/> ±1kV; <input type="checkbox"/> ±2kV; <input type="checkbox"/> ± kV;	Performance Criterion	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C
Phase Angle	<input type="checkbox"/> 0° <input type="checkbox"/> 90° <input type="checkbox"/> 180° <input type="checkbox"/> 270° <input checked="" type="checkbox"/> -		
Repetition Rate	<input checked="" type="checkbox"/> 60s, <input type="checkbox"/> _____		
Number of surges	<input checked="" type="checkbox"/> 5, <input type="checkbox"/> _____		

Test Result:

Test Location	Test Level	Remark	Performance Criterion
Signal port	±0.5, ±1	The communication connection was normal after the test	B



Immunity to Conducted Disturbances, Induced by RF fields

Standard requirement:

Test Level	<input checked="" type="checkbox"/> Power port, <input checked="" type="checkbox"/> 10V (Unmodulated r.m.s); <input type="checkbox"/> ; <input checked="" type="checkbox"/> Signal port: <input type="checkbox"/> 1Vrms; <input type="checkbox"/> 3Vrms; <input checked="" type="checkbox"/> 10Vrms; <input type="checkbox"/> ;	Performance Criterion	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C
Frequency Range	<input checked="" type="checkbox"/> 0.15MHz-80MHz; <input type="checkbox"/>		
Frequency Step	<input checked="" type="checkbox"/> 1% <input type="checkbox"/> _____		
Modulation	<input checked="" type="checkbox"/> 80%AM, 1kHz sine; <input type="checkbox"/> 1/8duty cycle, 217Hz		
Dwell time	<input checked="" type="checkbox"/> 3s <input type="checkbox"/> _____		

Test Result:

Test Location	Test Level	Remark	Performance Criterion
AC power port	10V	EUT work as intended	A
CPT port	10V	EUT work as intended	A
Signal port	10V	EUT work as intended	A



Power Frequency Magnetic Field Immunity

Standard requirement:

Magnetic field frequency	<input checked="" type="checkbox"/> 50Hz; <input type="checkbox"/> 60Hz	Performance Criterion	<input checked="" type="checkbox"/> A
Magnetic field intensity	<input type="checkbox"/> 1A/m; <input type="checkbox"/> 3A/m; <input type="checkbox"/> 10A/m; <input checked="" type="checkbox"/> 30A/m; <input checked="" type="checkbox"/> 100A/m; <input type="checkbox"/> ___ A/m		<input type="checkbox"/> B
Duration	<input checked="" type="checkbox"/> 300Sec; <input type="checkbox"/> ___		<input type="checkbox"/> C

Test Result:

Frequency magnetic field applied orientation (X/Y/Z)	Remark	Performance Criterion
X	EUT work as intended	A
Y	EUT work as intended	A
Z	EUT work as intended	A



Voltage Dips, Short Interruptions and Voltage Variations

Immunity

Standard requirement:

Voltage Dips:	60% reduction, 10 periods	Performance Criterion	C
	30% reduction, 25 periods		C
	100% reduction, 1 periods		B
Voltage interruptions	100% reduction, 250 periods		C

Test Result:

Test level, %U	Duration/period	Remark	Performance Criterion
0%	1	EUT work as intended	A
40%	10	The performance degradation was observed in the voltage interruption test. The EUT automatically returns to normal after testing	B
70%	25	The performance degradation was observed in the voltage interruption test. The EUT automatically returns to normal after testing	B
0%	250	The performance degradation was observed in the voltage interruption test. The EUT automatically returns to normal after testing	B



3.11.Measurement Uncertainties

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Table 1: Measurement Uncertainty levels

Test	Parameters	Expanded uncertainty (U_{lab})	Expanded uncertainty (U_{cispr})
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 3.3 dB ± 3.3 dB	± 3.8 dB ± 3.4 dB
Radiated Emission	Level accuracy (30MHz to 1000MHz, Horizontal) (30MHz to 1000MHz, Vertical)	± 4.50 dB ± 4.50 dB	± 6.3 dB
Radiated Emission	Level accuracy (above 1000MHz, Horizontal) (above 1000MHz, Vertical)	± 4.80 dB ± 4.80 dB	N/A

As U_{lab} in all applicable tests listed above are less than U_{cispr} according to CISPR 16-4-2:2011, compliance is deemed to occur if no measured disturbance exceeds the disturbance limit; non-compliance is deemed to occur if any measured disturbance exceeds the disturbance limit.



ANNEX

Additional Model:

TAP-16, TAP-16-EU, TAP-16-US, TAP-16-TS, TAP-32-EU, TAP-32-US, TAP-32-TS, TAP-40, TAP-48, TAP-80, TAP-11, TAP-21, TAP-22, TAP-11KW, TAP-21KW, TAP-22KW, TAP-PRO, TAP-PLUS, TAP-16-PRO, TAP-16-PLUS, TAP-32-PRO, TAP-32-PLUS, TAP-40-PRO, TAP-40-PLUS, TAP-48-PRO, TAP-48-PLUS, TAP-80-PRO, TAP-80-PLUS, TDC-01, TDC-02, TDC-03, TDC-04, TDC-05, TDC-06, TDC-07, TDC-08, TDC-09, TDC-10, TDC-16, TDC-18, TDC-19, TDC-20, TDC-30, TDC-40, TDC-50, TDC-60, TDC-70, TDC-80, TDC-90, TDC-79, TDC-97, TDC-99, TDC-Pro, TDC-PLUS, TDC-18-Pro, TDC-18-PLUS, TDC-19-Pro, TDC-19-PLUS, TDC-79-Pro, TDC-79-PLUS, TDC-2008-Pro, TDC-2008-PLUS, TDC-99-Pro, TDC-99-PLUS, TDC-120, TDC-120-PRO, TDC-120-PLUS, TDC-200, TDC-600, TDC-800, TDC-1000, TAW, TAW-7, TAW-11, TAW-21, TAW-22, TAW-14, TAW-01, TAW-09, TAW-10, TAE-20, TAW-30, TAW-60, TAW-70, TAW-80, TAW-90, TAW-99, TAW-88, TAW-79, TAW-97, TAW-50, TAW-16, TAW-32, TAW-PRO, TAW-7-PRO, TAW-11-PRO, TAW-21-PRO, TAW-22-PRO, TAW-14-PRO, TAW-01-PRO, TAW-09-PRO, TAW-10-PRO, TAE-20-PRO, TAW-30-PRO, TAW-60-PRO, TAW-70-PRO, TAW-80-PRO, TAW-90-PRO, TAW-99-PRO, TAW-88-PRO, TAW-79-PRO, TAW-97-PRO, TAW-5-PRO, TAW-16-PRO, TAW-32-PRO, T2168-16, T2168-32, T2168-40, T2168-50, T2168-16-Pro, T2168-32-Pro, T2168-40-Pro, T2168-50-Pro, T2168-16-Plus, T2168-32-Plus, T2168-40-Plus, T2168-50-Plus, TAW-PLUS, TAW-7-PLUS, TAW-11-PLUS, TAW-21-PLUS, TAW-22-PLUS, TAW-14-PLUS, TAW-01-PLUS, TAW-09-PLUS, TAW-10-PLUS, TAE-20-PLUS, TAW-30-PLUS, TAW-60-PLUS, TAW-70-PLUS, TAW-80-PLUS, TAW-90-PLUS, TAW-99-PLUS, TAW-88-PLUS, TAW-79-PLUS, TAW-97-PLUS, TAW-50-PLUS, TAW-16-PLUS, TAW-32-PLUS, TAP-16-UK, TAP-32-UK, TAP-22-UK, TAP-11-UK, TAC-16, TAC-32, TAC-40, TAC-11, TAC-22, TAC-21, TAC-16-PRO, TAC-32-PRO, TAC-40-PRO, TAC-11-PRO, TAC-22-PRO, TAC-21-PRO, TAC-PRO, TAC-PLUS, TE-V8, TE-V8-PRO, TE-V8-PLUS, TE-V9, TE-V9-PRO, TE-V9-PLUS, TE-V6, TE-V6-PRO, TE-V6-PLUS, TE-V7, TE-V7-PRO, TE-V7-PLUS, TE-V5, TE-V5-PRO, TE-V5-PLUS, TE-V3, TE-V3-PRO, TE-V3-PLUS, TE-V1, TE-V1-PRO, TE-V1-PLUS, TE-V2, TE-V2-PRO, TE-V2-PLUS, JT1, JT2, JT3, JT4, JT5, JT6, JT7, JT8, JT9, JT10, JT20, JT80, JT79, JT99, JT90, JT91, JT92, JT95, JT96, J97



APPENDIX I

EUT PHOTO:



Photo 1



Photo 2



Photo 3