FCC Test Report

Report No.:	RFBEKS-WTW-P20120793
FCC ID:	GV3M01552
Test Model:	M01552
Received Date:	Oct. 23, 2020
Test Date:	Nov. 04 ~ Nov. 06, 2020
Issued Date:	Jan. 07, 2021
Applicant:	ACCO Brands, Inc.
Address:	1500 Fashion Island Blvd., 3rd Floor, San Mateo, CA 94404, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN
FCC Registration / Designation Number:	788550 / TW0003

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBEKS-WTW-P20120793	Original release	Jan. 07, 2021

1 Certificate of Conformity

Product:	Watch Charger for StudioDock
Brand:	Kensington
Test Model:	M01552
Sample Status:	Identical Prototype
Applicant:	ACCO Brands, Inc.
Test Date:	Nov. 04 ~ Nov. 06, 2020
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.209) ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Jan. 07, 2021

Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Jan. 07, 2021

Bruce Chen / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.209)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	Pass	Meet the requirement of limit. Minimum passing margin is -7.57dB at 0.47000MHz.
15.209	Radiated Emission Test	Pass	Meet the requirement of limit. Minimum passing margin is -3.0dB at 49.68MHz

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Watch Charger for StudioDock
Brand	Kensington
Test Model	M01552
Sample Status	Identical Prototype
Power Supply Rating	5Vdc (adapter)
Modulation Type	ASK
Operating Frequency	326.5kHz
Antenna Type	Coil antenna (The Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible)
Field Strength	-25.20dBuV/m
Dimension for Apple watch inductive coil	3.80cm^2 (diameter = 22mm)
Accessory Device	NA
Data Cable Supplied	Refer to Note as below
Maximum Power Output for Apple watch charging coil	5W

Note: The EUT contains following accessory devices.

Product	Brand	Model	Description
USB cable	LUXSHARE-ICT	LV8U2004-CS-H	2m shielded without core

3.2 Description of Test Modes

1 channel is provided to this EUT

Channel	Freq. (kHz)
1	326.5

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT configure mode	Applicable to		Description
	RE<1G	PLC	
A	√	√	Charging Mode (326.5kHz) - EUT + StudioDock
B	√	√	Standby Mode (326.5kHz) - EUT + StudioDock
C	√	√	Charging Mode (326.5kHz) - EUT only
D	√	√	Standby Mode (326.5kHz) - EUT only

Where **RE<1G:** Radiated Emission below 1GHz **PLC:** Power Line Conducted Emission

Note:
1. For test mode A and B, the EUT is designed to be positioned on the **X-plane** only.
2. For test mode C and D, the EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel
A	1	1
B	1	1
C	1	1
D	1	1

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel
A	1	1
B	1	1
C	1	1
D	1	1

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE<1G	23 deg. C, 66% RH	120Vac, 60Hz	Adair Peng
PLC	23 deg. C, 66% RH 23 deg. C, 67% RH	120Vac, 60Hz	Adair Peng

3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Load	NA	NA	NA	NA	For 326.5kHz
B.	iPad Pro	Apple	A2229	NA	NA	Provided by maunfacturer
C.	Earphone	Apple	MB770FE/B	NA	NA	-
D.	USB Flash	HP	v250W	05	NA	-
E.	USB Flash	HP	v250W	03	NA	-
F.	Load	NA	NA	NA	NA	-
G.	Adapter	LITEON	PA-1059-39	NA	NA	-
H.	StudioDock	Kensington	M01513	NA	GV3M01513	Provided by maunfacturer
I.	Adapter	LITEON	PA-1131-72	NA	NA	Provided by maunfacturer

Note: All power cords of the above support units are non-shielded (1.8m).

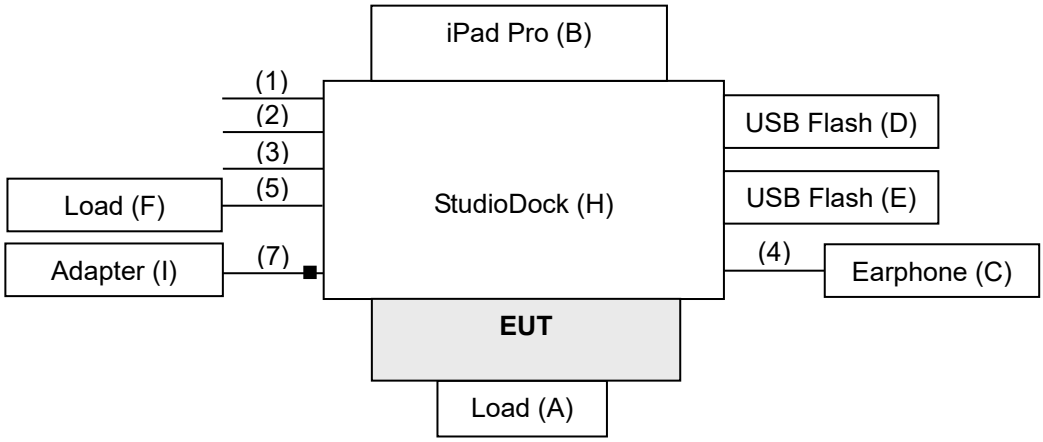
ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	HDMI Cable	1	1.0	Y	0	-
2.	USB Cable	1	1.8	Y	0	-
3.	Type C Cable	1	1.8	Y	0	-
4.	Earphone Cable	1	1.2	Y	0	-
5.	LAN Cable	1	1.5	N	0	RJ45, Cat5e
6.	USB Cable	1	2.0	Y	0	Accessory of EUT
7.	Power Cable	1	1.6	N	1	Provided by manufacturer Attached on adapter

Note: The core(s) is(are) originally attached to the cable(s).

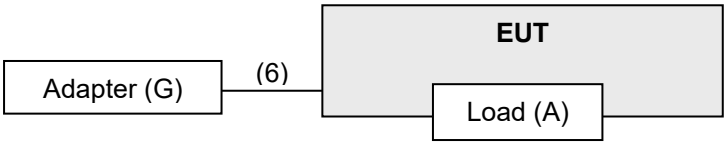
3.3.1 Configuration of System under Test

Charging Mode:

Test Mode A

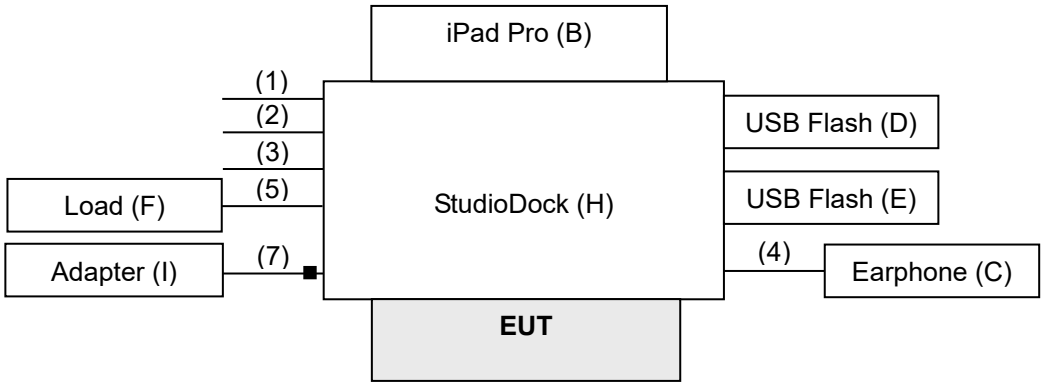


Test Mode C



Standby Mode:

Test Mode B



Test Mode D

3.4 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.209)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

FOR FREQUENCY BELOW 30MHz

Frequency (MHz)	Field Strength (dBuV/m)		Measurement Distance (meters)
	uV/m	dBuV/m	
0.009 – 0.490	2400 / F (kHz)	48.52-13.80	300
0.490 – 1.705	24000 / F (kHz)	33.80-22.97	30
1.705 – 30.0	30	29.54	30

FOR FREQUENCY BETWEEN 30-1000MHz

Frequency (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
30-88	90	39.1	100	40.0
88-216	150	43.5	150	43.5
216-960	210	46.4	200	46.0
Above 960	300	49.5	500	54.0

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102579	Jul. 07, 2020	Jul. 06, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 11, 2019	Nov. 10, 2020
HORN Antenna SCHWARZBECK	9120D	209	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 16, 2020	Aug. 15, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 23, 2020	Mar. 22, 2021
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-S M-8000	Cable-CH3-03 (309224+170907)	Aug. 16, 2020	Aug. 15, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and Ground-Parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

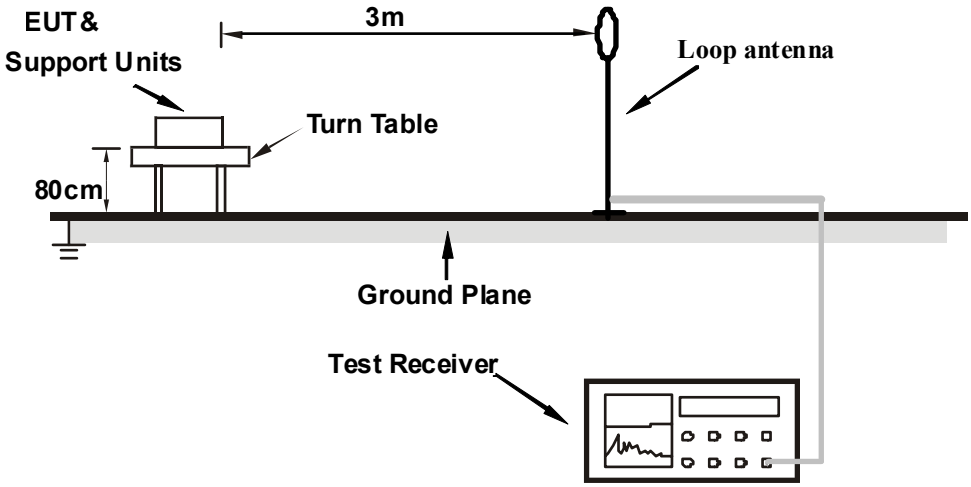
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

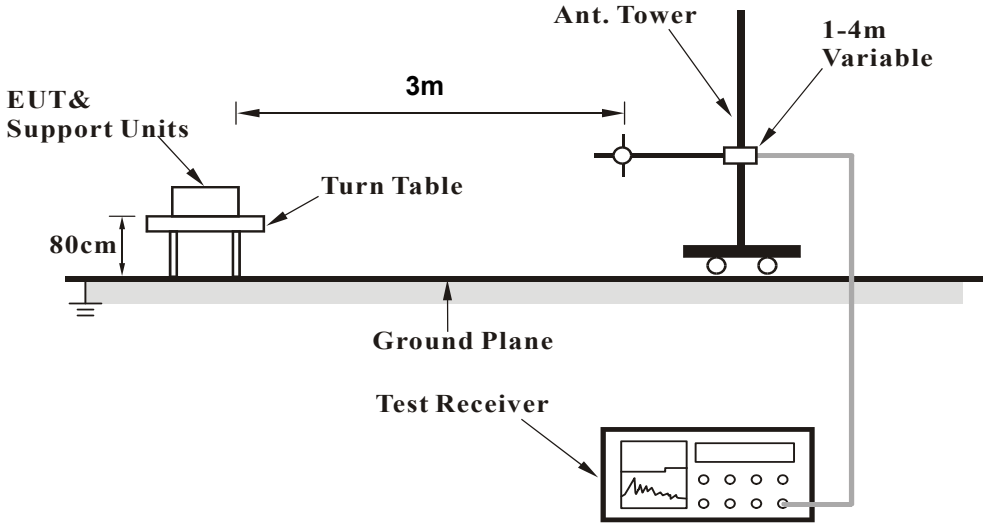
No deviation.

4.1.5 Test Set Up

For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT Operating Conditions

Charging Mode:

Test Mode A

a. The EUT powered by via StudioDock.
b. The iPad Pro charged by StudioDock.
c. Put the Load on the EUT (wireless charging) during the test.

Test Mode C

a. The EUT powered by adapter.
b. Put the Load on the EUT (wireless charging) during the test.

Standby Mode:

Test Mode B

a. The EUT powered by StudioDock.
b. The iPad Pro charged by StudioDock.

Test Mode D

a. The EUT powered by adapter.

4.1.7 Test Results

Below 30MHz Data:

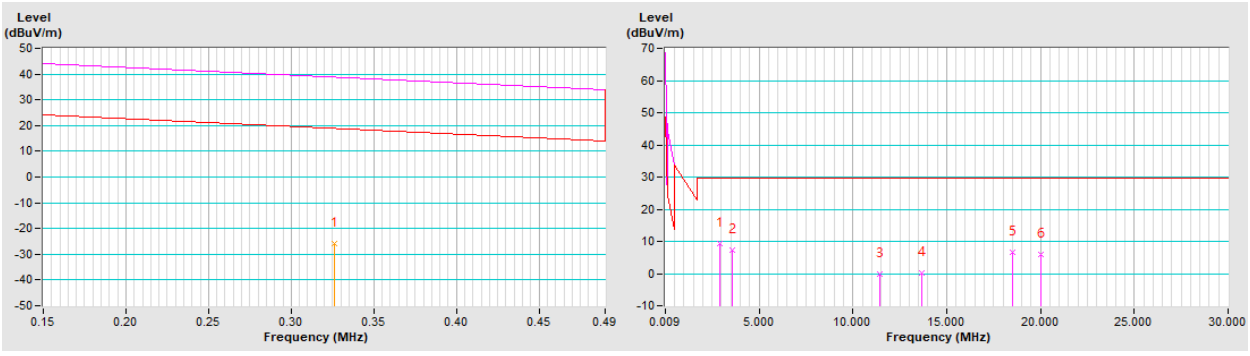
Charging Mode

Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	A		

Antenna Polarity & Test Distance: Loop antenna Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-26.00 AV	17.30	-43.30	1.00	23	34.20	-60.20
2	2.9200	9.30 QP	29.50	-20.20	1.00	305	30.00	-20.70
3	3.5700	7.40 QP	29.50	-22.10	1.00	30	27.90	-20.50
4	11.4400	-0.20 QP	29.50	-29.70	1.00	296	18.50	-18.70
5	13.6600	0.10 QP	29.50	-29.40	1.00	239	18.80	-18.70
6	18.5300	6.60 QP	29.50	-22.90	1.00	314	25.10	-18.50
7	20.0000	6.10 QP	29.50	-23.40	1.00	126	24.50	-18.40

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

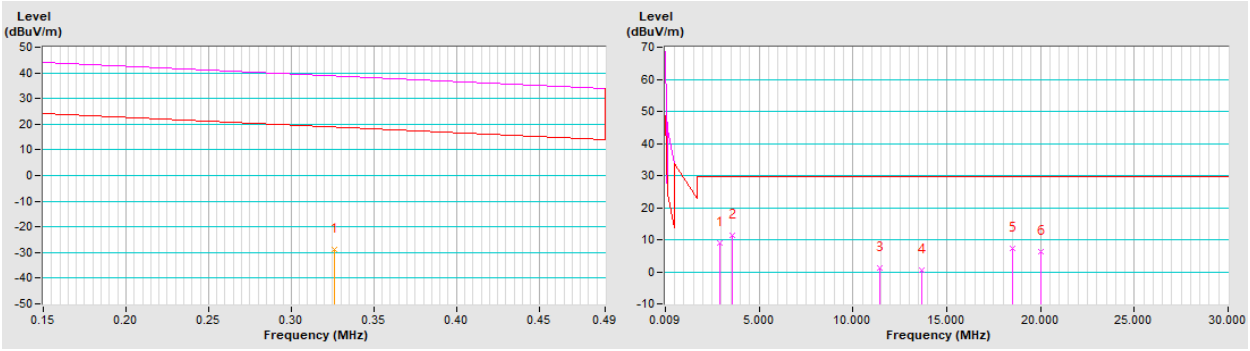


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	A		

Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-29.00 AV	17.30	-46.30	1.00	100	31.20	-60.20
2	2.9200	9.10 QP	29.50	-20.40	1.00	213	29.80	-20.70
3	3.5700	11.50 QP	29.50	-18.00	1.00	283	32.00	-20.50
4	11.4400	1.30 QP	29.50	-28.20	1.00	254	20.00	-18.70
5	13.6600	0.60 QP	29.50	-28.90	1.00	40	19.30	-18.70
6	18.5300	7.20 QP	29.50	-22.30	1.00	264	25.70	-18.50
7	20.0000	6.20 QP	29.50	-23.30	1.00	195	24.60	-18.40

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

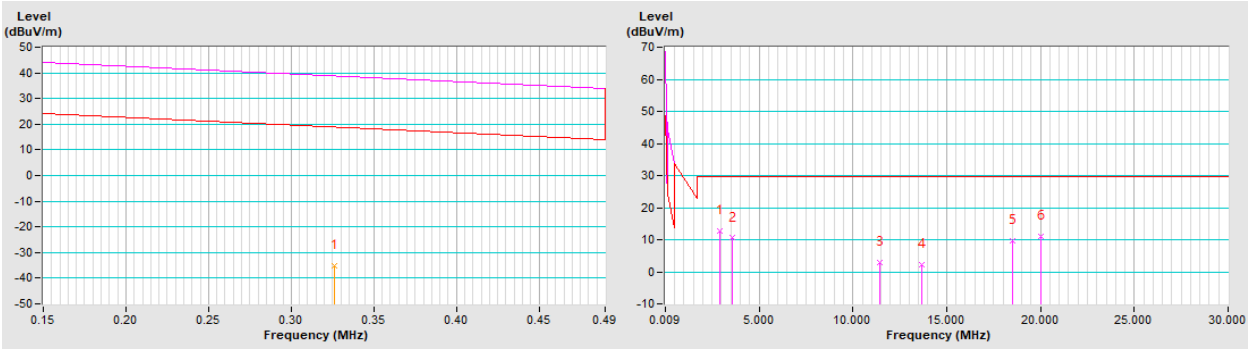


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	A		

Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-35.00 AV	17.30	-52.30	1.00	191	25.20	-60.20
2	2.9200	12.60 QP	29.50	-16.90	1.00	216	33.30	-20.70
3	3.5700	10.50 QP	29.50	-19.00	1.00	18	31.00	-20.50
4	11.4400	3.00 QP	29.50	-26.50	1.00	237	21.70	-18.70
5	13.6600	2.20 QP	29.50	-27.30	1.00	202	20.90	-18.70
6	18.5300	9.80 QP	29.50	-19.70	1.00	192	28.30	-18.50
7	20.0000	11.00 QP	29.50	-18.50	1.00	185	29.40	-18.40

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

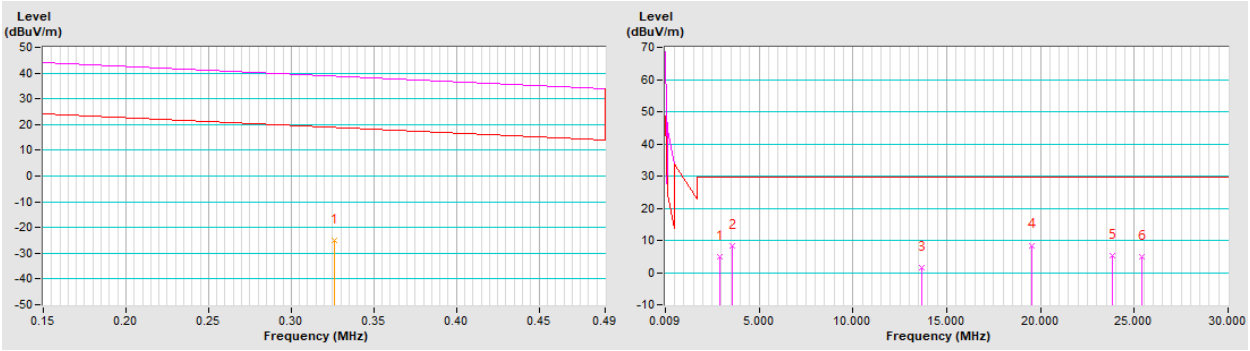


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	C		

Antenna Polarity & Test Distance: Loop antenna Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-25.20 AV	17.30	-42.50	1.00	140	35.00	-60.20
2	2.9200	4.90 QP	29.50	-24.60	1.00	111	25.60	-20.70
3	3.5700	8.20 QP	29.50	-21.30	1.00	235	28.70	-20.50
4	13.6600	1.50 QP	29.50	-28.00	1.00	259	20.20	-18.70
5	19.5200	8.50 QP	29.50	-21.00	1.00	18	26.90	-18.40
6	23.8300	5.20 QP	29.50	-24.30	1.00	158	23.50	-18.30
7	25.3900	4.80 QP	29.50	-24.70	1.00	81	23.10	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

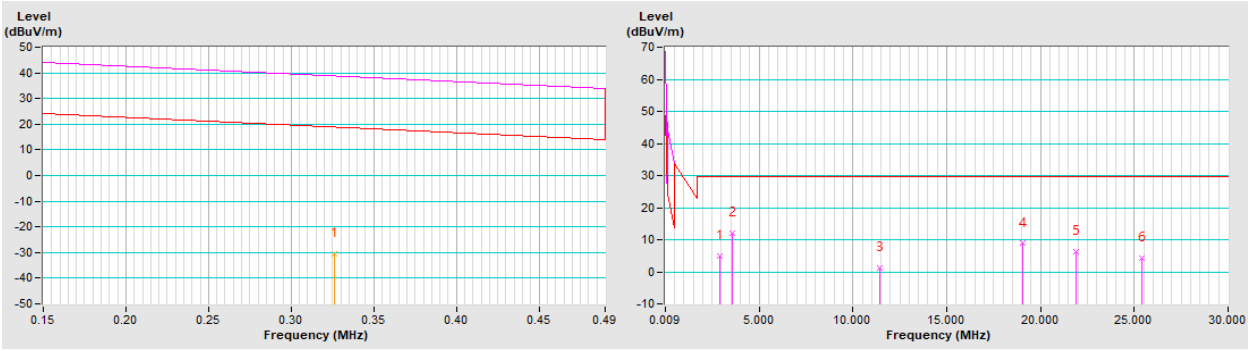


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	C		

Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-30.60 AV	17.30	-47.90	1.00	100	29.60	-60.20
2	2.9200	5.00 QP	29.50	-24.50	1.00	303	25.70	-20.70
3	3.5700	12.10 QP	29.50	-17.40	1.00	144	32.60	-20.50
4	11.4400	1.30 QP	29.50	-28.20	1.00	347	20.00	-18.70
5	19.0500	8.80 QP	29.50	-20.70	1.00	142	27.20	-18.40
6	21.9200	6.30 QP	29.50	-23.20	1.00	216	24.70	-18.40
7	25.3900	4.20 QP	29.50	-25.30	1.00	197	22.50	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

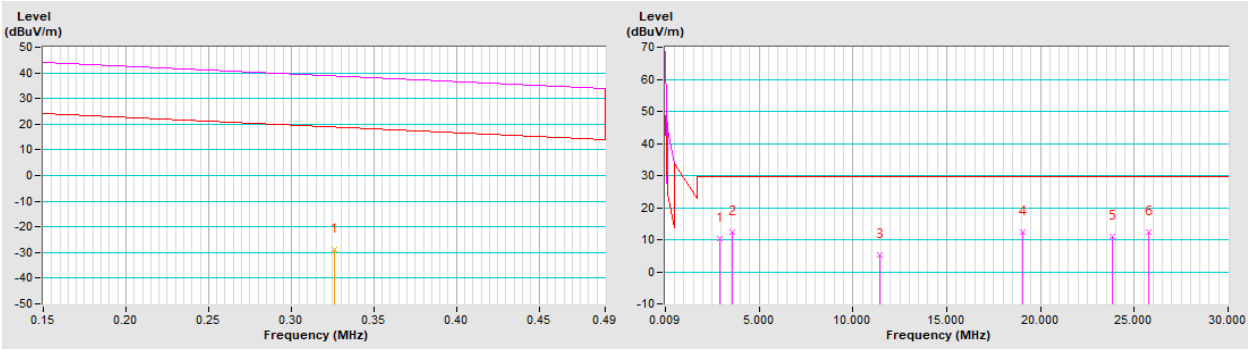


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	C		

Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-28.90 AV	17.30	-46.20	1.00	177	31.30	-60.20
2	2.9200	10.50 QP	29.50	-19.00	1.00	255	31.20	-20.70
3	3.5700	12.30 QP	29.50	-17.20	1.00	257	32.80	-20.50
4	11.4400	5.20 QP	29.50	-24.30	1.00	342	23.90	-18.70
5	19.0500	12.30 QP	29.50	-17.20	1.00	281	30.70	-18.40
6	23.8300	11.00 QP	29.50	-18.50	1.00	70	29.30	-18.30
7	25.7400	12.40 QP	29.50	-17.10	1.00	29	30.70	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB



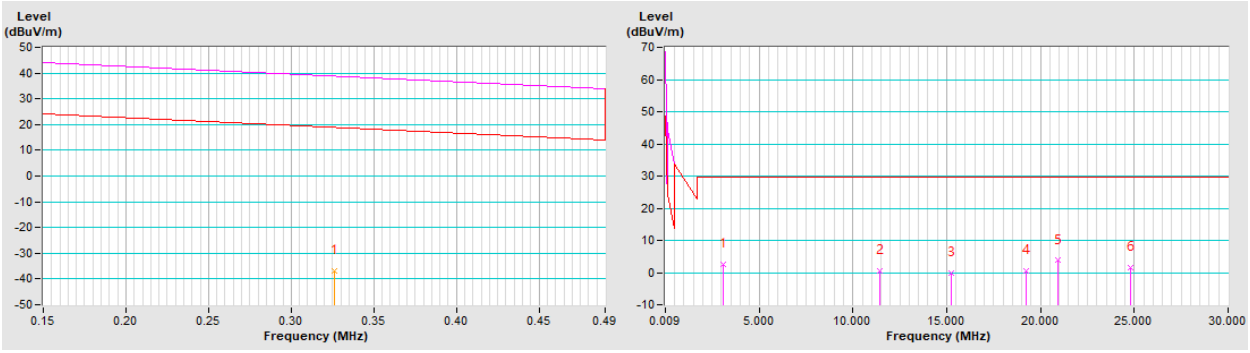
Standby Mode

Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	B		

Antenna Polarity & Test Distance: Loop antenna Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-36.90 AV	17.30	-54.20	1.00	0	23.30	-60.20
2	3.1000	2.60 QP	29.50	-26.90	1.00	211	23.30	-20.70
3	11.4400	0.40 QP	29.50	-29.10	1.00	184	19.10	-18.70
4	15.2200	-0.20 QP	29.50	-29.70	1.00	333	18.40	-18.60
5	19.2200	0.40 QP	29.50	-29.10	1.00	271	18.80	-18.40
6	20.9600	3.70 QP	29.50	-25.80	1.00	80	22.10	-18.40
7	24.7800	1.50 QP	29.50	-28.00	1.00	5	19.80	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

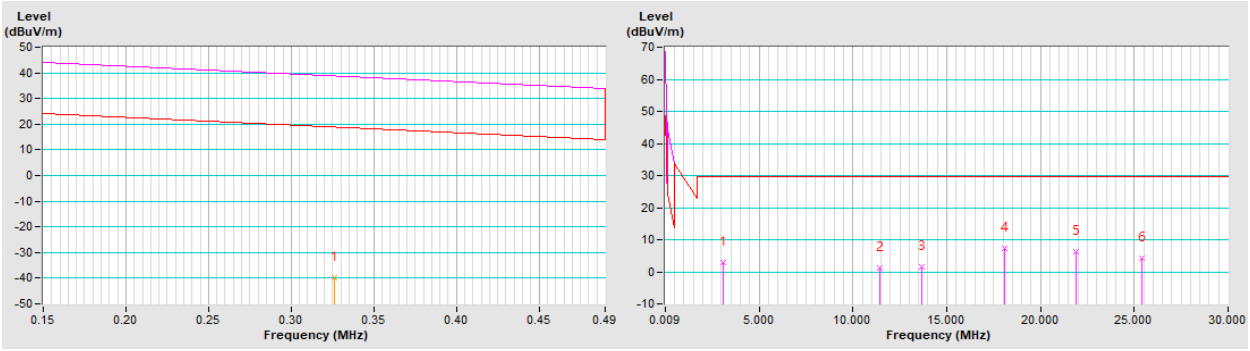


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	B		

Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-39.90 AV	17.30	-57.20	1.00	50	20.30	-60.20
2	3.1000	2.90 QP	29.50	-26.60	1.00	11	23.60	-20.70
3	11.4400	1.30 QP	29.50	-28.20	1.00	347	20.00	-18.70
4	13.6600	1.60 QP	29.50	-27.90	1.00	352	20.30	-18.70
5	18.0900	7.30 QP	29.50	-22.20	1.00	323	25.80	-18.50
6	21.9200	6.30 QP	29.50	-23.20	1.00	216	24.70	-18.40
7	25.3900	4.20 QP	29.50	-25.30	1.00	197	22.50	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

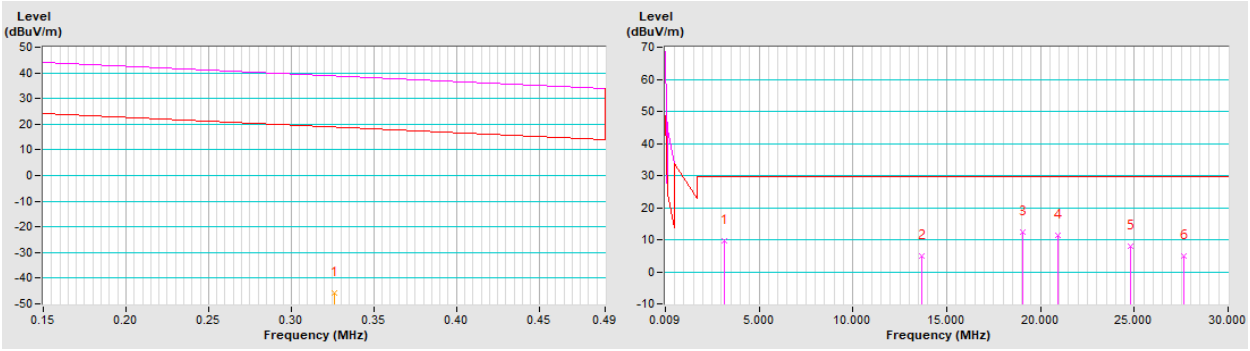


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	B		

Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-45.80 AV	17.30	-63.10	1.00	39	14.40	-60.20
2	3.1800	9.60 QP	29.50	-19.90	1.00	221	30.20	-20.60
3	13.6600	4.90 QP	29.50	-24.60	1.00	70	23.60	-18.70
4	19.0500	12.30 QP	29.50	-17.20	1.00	281	30.70	-18.40
5	20.9600	11.40 QP	29.50	-18.10	1.00	215	29.80	-18.40
6	24.7800	8.00 QP	29.50	-21.50	1.00	20	26.30	-18.30
7	27.6500	4.90 QP	29.50	-24.60	1.00	99	23.10	-18.20

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

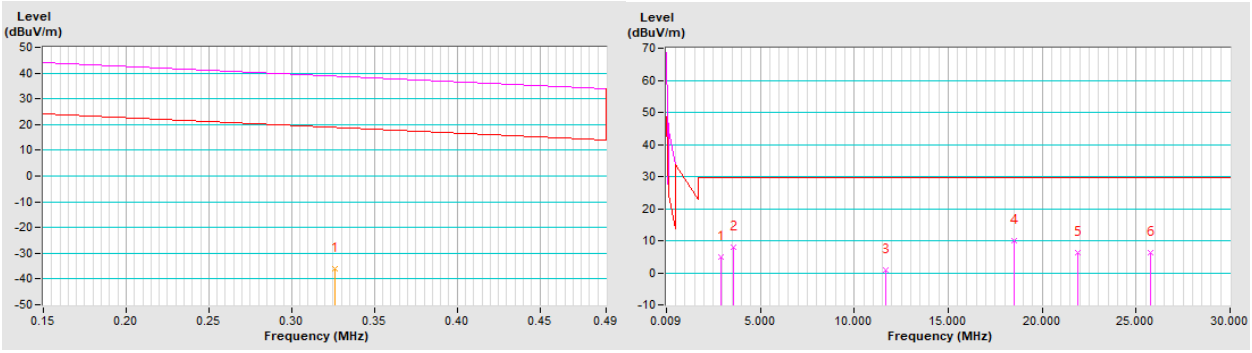


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	D		

Antenna Polarity & Test Distance: Loop antenna Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-36.20 AV	17.30	-53.50	1.00	99	24.00	-60.20
2	2.9200	4.80 QP	29.50	-24.70	1.00	109	25.50	-20.70
3	3.5700	8.00 QP	29.50	-21.50	1.00	221	28.50	-20.50
4	11.7000	1.00 QP	29.50	-28.50	1.00	114	19.70	-18.70
5	18.5300	10.10 QP	29.50	-19.40	1.00	241	28.60	-18.50
6	21.9200	6.30 QP	29.50	-23.20	1.00	134	24.70	-18.40
7	25.7400	6.20 QP	29.50	-23.30	1.00	51	24.50	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

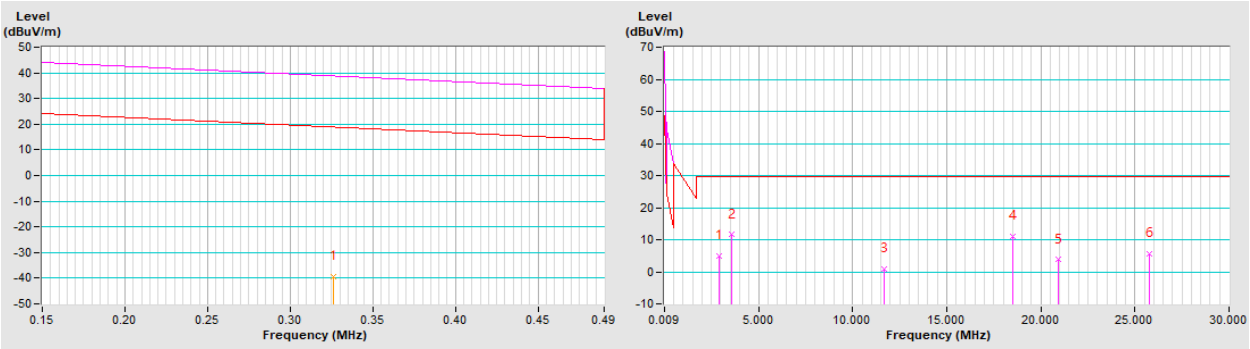


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	D		

Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-39.20 AV	17.30	-56.50	1.00	111	21.00	-60.20
2	2.9200	4.80 QP	29.50	-24.70	1.00	297	25.50	-20.70
3	3.5700	11.50 QP	29.50	-18.00	1.00	136	32.00	-20.50
4	11.7000	0.80 QP	29.50	-28.70	1.00	175	19.50	-18.70
5	18.5300	10.90 QP	29.50	-18.60	1.00	49	29.40	-18.50
6	20.9600	3.70 QP	29.50	-25.80	1.00	213	22.10	-18.40
7	25.7400	5.60 QP	29.50	-23.90	1.00	130	23.90	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB

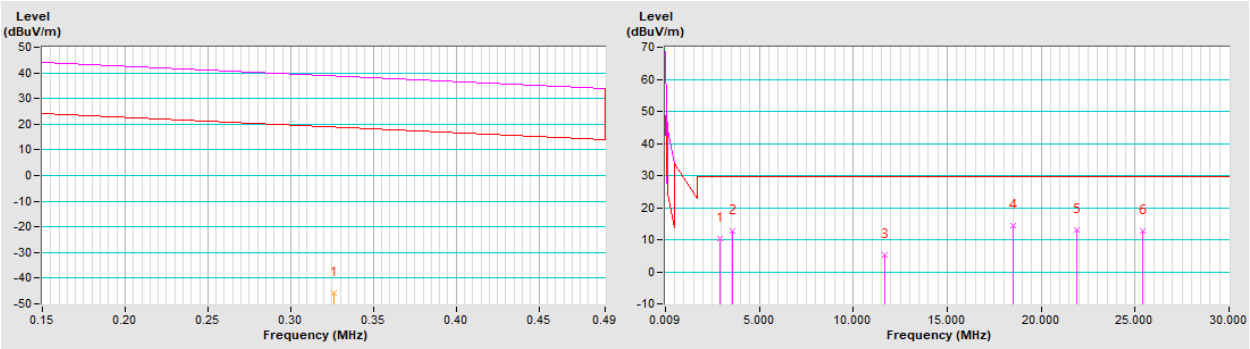


Channel	TX Channel 1	Detector Function	Average (AV) Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		
Test Mode	D		

Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.3265	-45.70 AV	17.30	-63.00	1.00	203	14.50	-60.20
2	2.9200	10.30 QP	29.50	-19.20	1.00	242	31.00	-20.70
3	3.5700	12.70 QP	29.50	-16.80	1.00	251	33.20	-20.50
4	11.7000	5.30 QP	29.50	-24.20	1.00	241	24.00	-18.70
5	18.5300	14.50 QP	29.50	-15.00	1.00	267	33.00	-18.50
6	21.9200	13.00 QP	29.50	-16.50	1.00	73	31.40	-18.40
7	25.3900	12.60 QP	29.50	-16.90	1.00	22	30.90	-18.30

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters Distance factor@3m = 40*log(3/300) = -80dB
   For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters Distance factor@3m = 40*log(3/30) = -40dB



Below 1GHz Data:

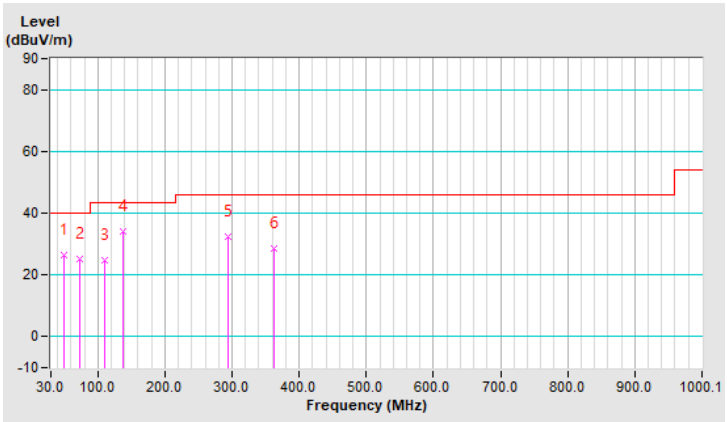
Charging Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	A		

Antenna Polarity & Test Distance: Horizontal At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	26.5 QP	40.0	-13.5	1.99 H	10	35.6	-9.1
2	72.17	25.1 QP	40.0	-14.9	1.49 H	193	36.5	-11.4
3	110.13	24.9 QP	43.5	-18.6	1.00 H	94	36.7	-11.8
4	136.84	34.2 QP	43.5	-9.3	1.99 H	168	43.5	-9.3
5	294.29	32.5 QP	46.0	-13.5	1.00 H	347	39.3	-6.8
6	363.17	28.6 QP	46.0	-17.4	1.99 H	328	33.9	-5.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

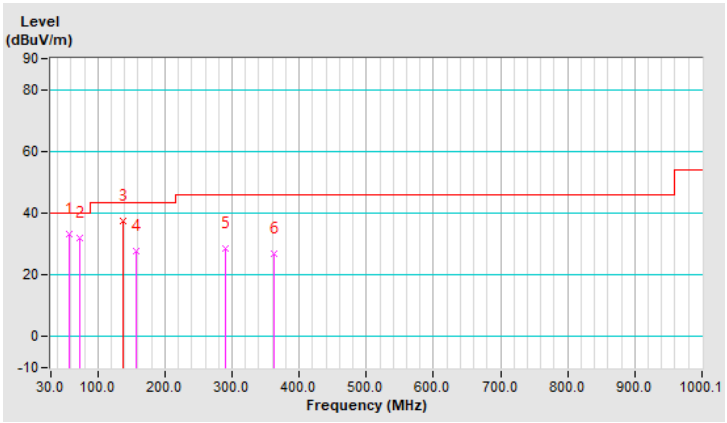


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	A		

Antenna Polarity & Test Distance: Vertical At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	56.71	33.1 QP	40.0	-6.9	1.00 V	126	42.4	-9.3
2	72.17	32.0 QP	40.0	-8.0	1.00 V	157	43.4	-11.4
3	137.28	37.6 QP	43.5	-5.9	1.00 V	171	46.8	-9.2
4	157.93	27.9 QP	43.5	-15.6	1.99 V	16	36.2	-8.3
5	290.07	28.6 QP	46.0	-17.4	1.51 V	5	35.5	-6.9
6	363.17	26.9 QP	46.0	-19.1	1.51 V	10	32.2	-5.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

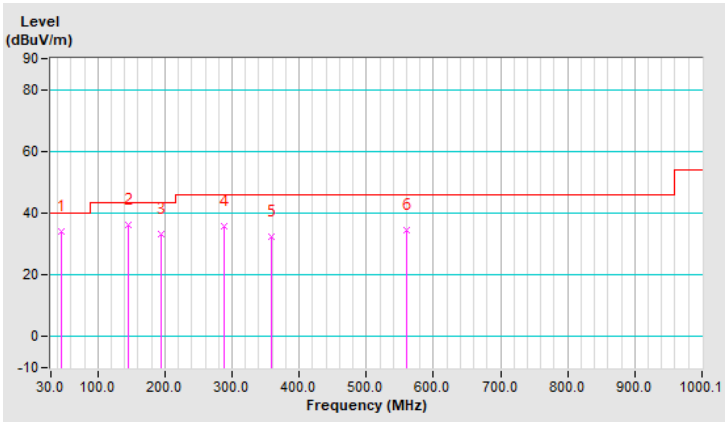


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	C		

Antenna Polarity & Test Distance: Horizontal At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.47	34.2 QP	40.0	-5.8	1.99 H	75	43.3	-9.1
2	145.29	36.0 QP	43.5	-7.5	1.00 H	102	44.7	-8.7
3	194.50	33.4 QP	43.5	-10.1	1.49 H	78	44.5	-11.1
4	287.29	35.9 QP	46.0	-10.1	1.00 H	230	42.8	-6.9
5	358.99	32.5 QP	46.0	-13.5	1.00 H	66	37.9	-5.4
6	560.04	34.4 QP	46.0	-11.6	1.49 H	216	35.5	-1.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

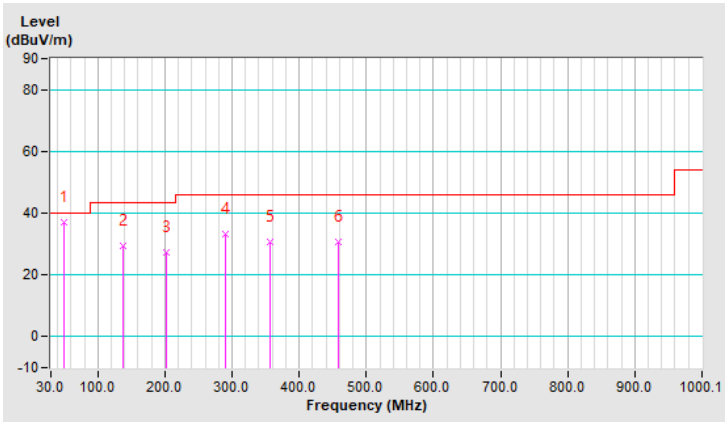


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	C		

Antenna Polarity & Test Distance: Vertical At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**49.68**	**37.0 QP**	**40.0**	**-3.0**	**1.00 V**	**10**	**46.1**	**-9.1**
2	138.26	29.2 QP	43.5	-14.3	1.00 V	10	38.3	-9.1
3	202.93	27.3 QP	43.5	-16.2	1.00 V	33	38.6	-11.3
4	290.10	33.3 QP	46.0	-12.7	1.50 V	143	40.2	-6.9
5	357.58	30.5 QP	46.0	-15.5	1.50 V	54	36.0	-5.5
6	458.81	30.8 QP	46.0	-15.2	2.00 V	174	33.9	-3.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



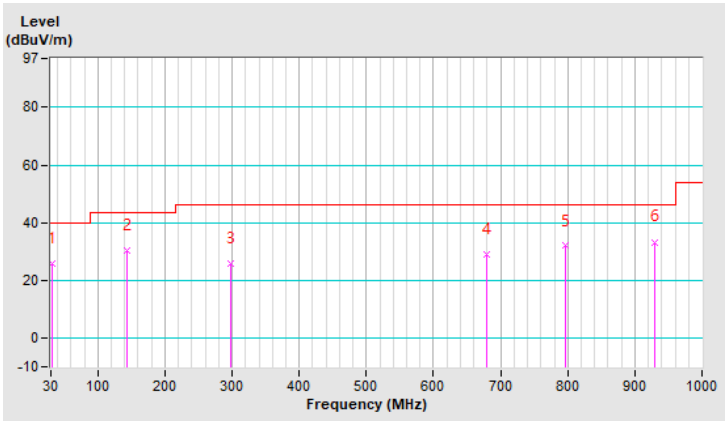
Standby Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	B		

Antenna Polarity & Test Distance: Horizontal At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	31.00	25.8 QP	40.0	-14.2	1.01 H	192	36.9	-11.1
2	142.46	30.3 QP	43.5	-13.2	1.01 H	141	39.1	-8.8
3	298.51	25.8 QP	46.0	-20.2	1.01 H	152	32.6	-6.8
4	679.48	29.0 QP	46.0	-17.0	1.99 H	99	27.3	1.7
5	796.16	31.9 QP	46.0	-14.1	1.51 H	16	28.3	3.6
6	929.71	33.3 QP	46.0	-12.7	1.01 H	69	26.8	6.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

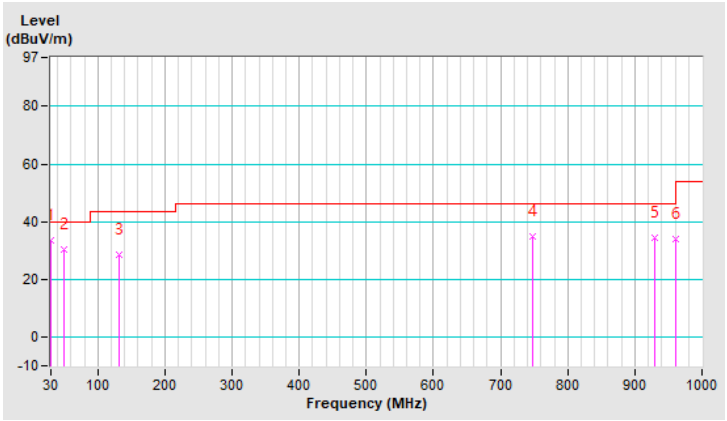


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	B		

Antenna Polarity & Test Distance: Vertical At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.00	33.4 QP	40.0	-6.6	1.49 V	230	44.0	-10.6
2	49.68	30.3 QP	40.0	-9.7	1.00 V	342	39.4	-9.1
3	131.22	28.5 QP	43.5	-15.0	1.00 V	63	38.3	-9.8
4	746.96	34.8 QP	46.0	-11.2	1.00 V	6	31.6	3.2
5	929.71	34.5 QP	46.0	-11.5	1.49 V	217	28.0	6.5
6	960.64	33.9 QP	54.0	-20.1	1.99 V	176	27.3	6.6

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

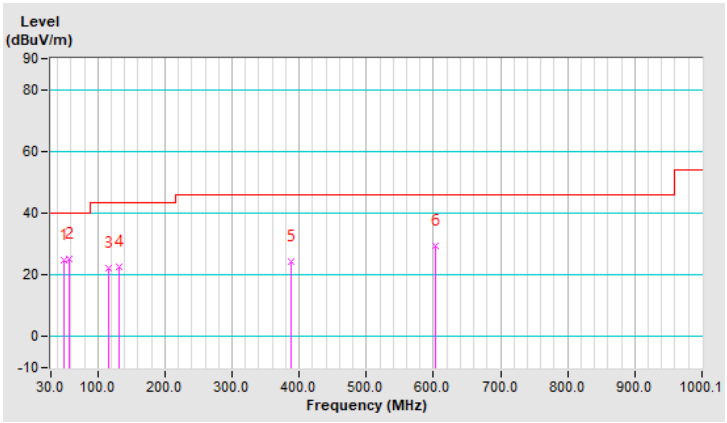


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	D		

Antenna Polarity & Test Distance: Horizontal At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	24.6 QP	40.0	-15.4	2.00 H	37	33.7	-9.1
2	56.71	25.1 QP	40.0	-14.9	2.00 H	339	34.4	-9.3
3	115.76	22.3 QP	43.5	-21.2	1.00 H	175	33.7	-11.4
4	131.23	22.6 QP	43.5	-20.9	2.00 H	12	32.4	-9.8
5	387.11	24.2 QP	46.0	-21.8	1.00 H	325	29.0	-4.8
6	603.62	29.4 QP	46.0	-16.6	1.00 H	145	29.1	0.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

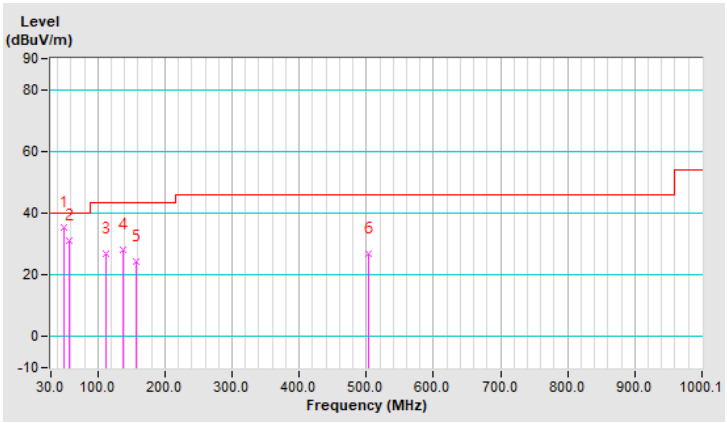


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	30MHz ~ 1GHz		
Test Mode	D		

Antenna Polarity & Test Distance: Vertical At 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	35.2 QP	40.0	-4.8	1.00 V	4	44.3	-9.1
2	56.71	31.2 QP	40.0	-8.8	1.00 V	113	40.5	-9.3
3	111.54	26.8 QP	43.5	-16.7	2.00 V	298	38.6	-11.8
4	138.26	28.1 QP	43.5	-15.4	1.49 V	15	37.2	-9.1
5	157.94	24.2 QP	43.5	-19.3	1.00 V	130	32.5	-8.3
6	503.80	26.8 QP	46.0	-19.2	1.00 V	49	29.0	-2.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 11, 2019	Dec. 10, 2020
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 04, 2020	Sep. 03, 2021
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 20, 2020	Feb. 19, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 28, 2020	Aug. 27, 2021
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

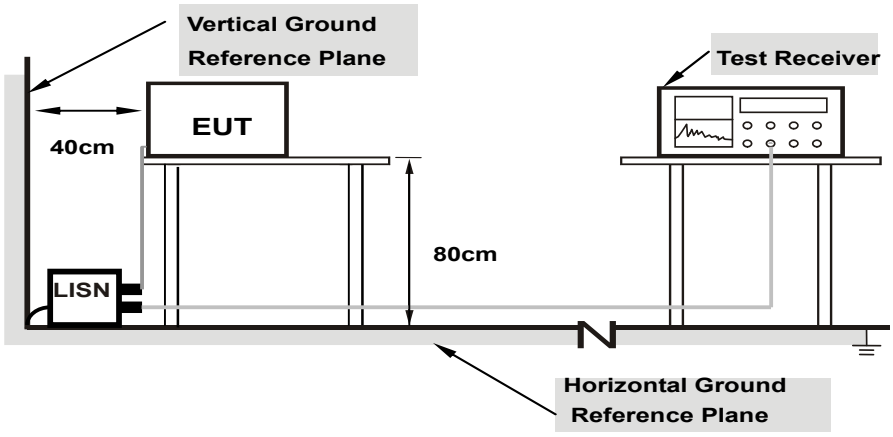
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

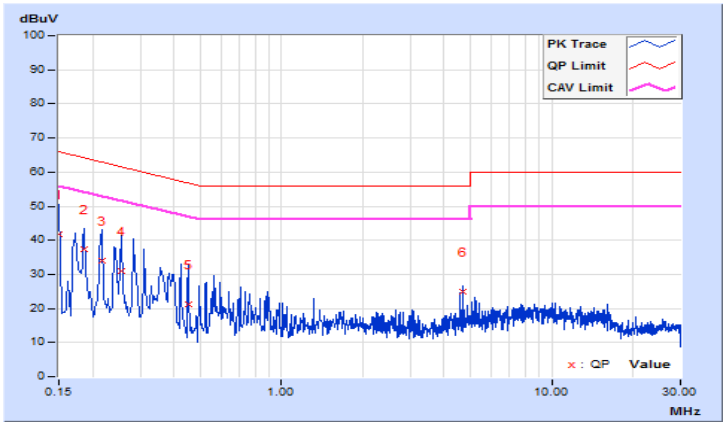
Charging Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.65	32.11	16.10	41.76	25.75	66.00	56.00	-24.24	-30.25
2	0.18519	9.66	27.67	9.89	37.33	19.55	64.25	54.25	-26.92	-34.70
3	0.21647	9.66	24.38	9.91	34.04	19.57	62.95	52.95	-28.91	-33.38
4	0.25557	9.66	21.38	11.28	31.04	20.94	61.57	51.57	-30.53	-30.63
5	0.45107	9.66	11.45	2.57	21.11	12.23	56.86	46.86	-35.75	-34.63
6	4.66996	9.75	15.18	2.77	24.93	12.52	56.00	46.00	-31.07	-33.48

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

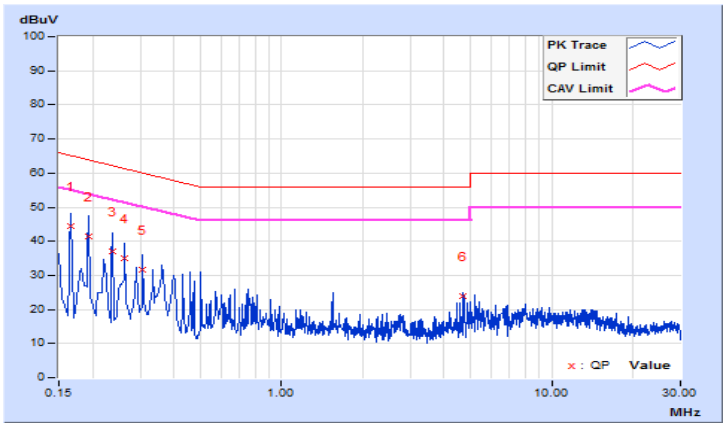


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16564	9.68	34.62	7.62	44.30	17.30	65.18	55.18	-20.88	-37.88
2	0.19301	9.68	31.59	6.97	41.27	16.65	63.91	53.91	-22.64	-37.26
3	0.23602	9.68	27.36	3.02	37.04	12.70	62.24	52.24	-25.20	-39.54
4	0.26339	9.68	25.39	4.47	35.07	14.15	61.32	51.32	-26.25	-37.17
5	0.30640	9.68	22.12	1.42	31.80	11.10	60.07	50.07	-28.27	-38.97
6	4.67387	9.78	14.18	2.96	23.96	12.74	56.00	46.00	-32.04	-33.26

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

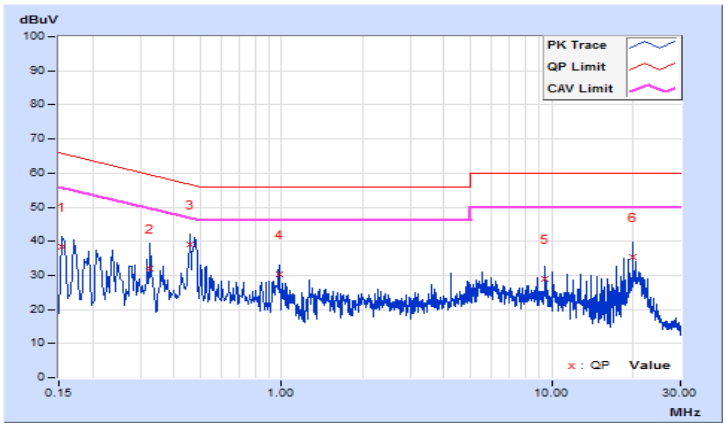


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.09	28.41	13.47	38.50	23.56	65.78	55.78	-27.28	-32.22
2	0.32600	10.10	21.74	11.69	31.84	21.79	59.55	49.55	-27.71	-27.76
3	0.45800	10.10	29.02	21.64	39.12	31.74	56.73	46.73	-17.61	-14.99
4	0.97800	10.15	20.21	10.99	30.36	21.14	56.00	46.00	-25.64	-24.86
5	9.47000	10.29	18.62	12.11	28.91	22.40	60.00	50.00	-31.09	-27.60
6	19.91800	10.42	25.05	14.61	35.47	25.03	60.00	50.00	-24.53	-24.97

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

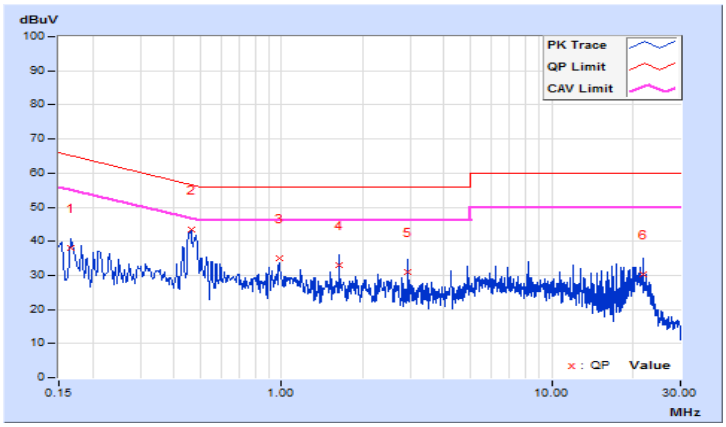


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	C		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16600	10.06	27.88	16.71	37.94	26.77	65.16	55.16	-27.22	-28.39
2	0.46200	10.09	33.28	26.44	43.37	36.53	56.66	46.66	-13.29	-10.13
3	0.98148	10.13	24.78	15.90	34.91	26.03	56.00	46.00	-21.09	-19.97
4	1.63400	10.14	22.79	13.48	32.93	23.62	56.00	46.00	-23.07	-22.38
5	2.94200	10.19	20.69	12.11	30.88	22.30	56.00	46.00	-25.12	-23.70
6	21.87800	10.57	19.90	12.57	30.47	23.14	60.00	50.00	-29.53	-26.86

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



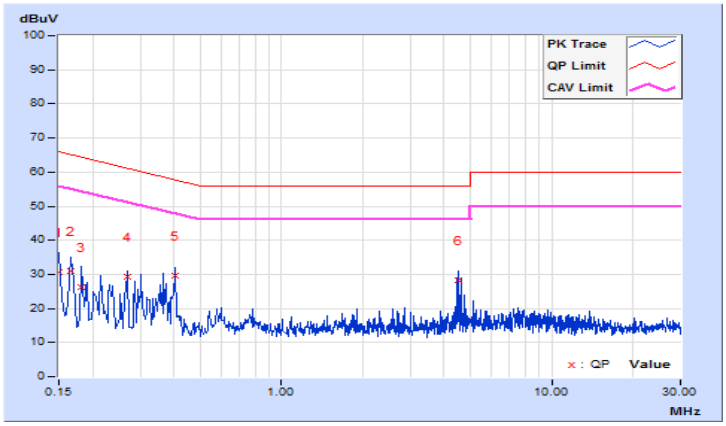
Standby Mode

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.65	21.01	1.76	30.66	11.41	66.00	56.00	-35.34	-44.59
2	0.16600	9.65	21.20	2.84	30.85	12.49	65.16	55.16	-34.31	-42.67
3	0.18200	9.66	16.72	3.26	26.38	12.92	64.39	54.39	-38.01	-41.47
4	0.26992	9.66	19.79	3.20	29.45	12.86	61.12	51.12	-31.67	-38.26
5	0.40600	9.66	20.07	2.57	29.73	12.23	57.73	47.73	-28.00	-35.50
6	4.54600	9.74	18.60	3.21	28.34	12.95	56.00	46.00	-27.66	-33.05

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

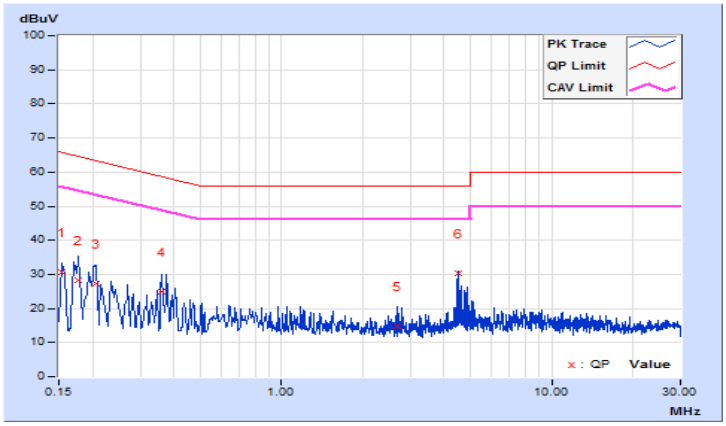


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	9.68	20.95	5.23	30.63	14.91	65.78	55.78	-35.15	-40.87
2	0.17800	9.68	18.64	2.79	28.32	12.47	64.58	54.58	-36.26	-42.11
3	0.20523	9.68	17.44	2.46	27.12	12.14	63.40	53.40	-36.28	-41.26
4	0.36200	9.68	15.29	3.85	24.97	13.53	58.68	48.68	-33.71	-35.15
5	2.68200	9.74	5.23	2.22	14.97	11.96	56.00	46.00	-41.03	-34.04
6	4.54200	9.78	20.59	4.08	30.37	13.86	56.00	46.00	-25.63	-32.14

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

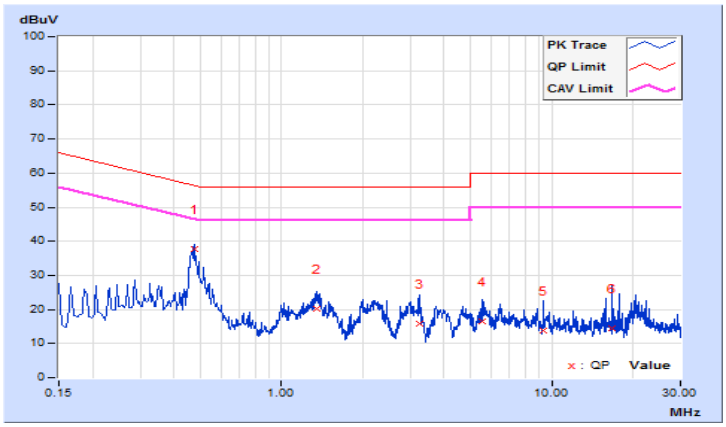


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.47400	10.11	27.46	22.25	37.57	32.36	56.44	46.44	-18.87	-14.08
2	1.34600	10.16	10.14	6.25	20.30	16.41	56.00	46.00	-35.70	-29.59
3	3.23000	10.21	5.51	1.98	15.72	12.19	56.00	46.00	-40.28	-33.81
4	5.56200	10.25	6.36	1.57	16.61	11.82	60.00	50.00	-43.39	-38.18
5	9.29800	10.29	3.55	1.22	13.84	11.51	60.00	50.00	-46.16	-38.49
6	16.78200	10.38	4.23	1.69	14.61	12.07	60.00	50.00	-45.39	-37.93

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

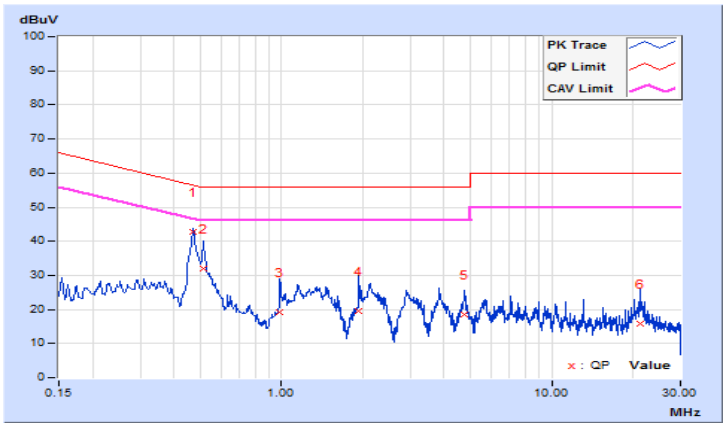


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	D		

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.47000**	**10.09**	**32.67**	**28.85**	**42.76**	**38.94**	**56.51**	**46.51**	**-13.75**	**-7.57**
2	0.51400	10.09	21.79	18.52	31.88	28.61	56.00	46.00	-24.12	-17.39
3	0.98600	10.13	8.90	5.74	19.03	15.87	56.00	46.00	-36.97	-30.13
4	1.93400	10.15	9.29	6.69	19.44	16.84	56.00	46.00	-36.56	-29.16
5	4.75400	10.25	8.39	5.39	18.64	15.64	56.00	46.00	-37.36	-30.36
6	21.18200	10.59	5.25	1.36	15.84	11.95	60.00	50.00	-44.16	-38.05

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

--- END ---