



# FCC TEST REPORT

**FCC ID** : IHDT56XP4  
**Equipment** : Mobile Cellular Phone  
**Brand Name** : Motorola  
**Model Name** : XT1962-6  
**Applicant** : Motorola Mobility LLC  
222 W,Merchandise Mart Plaza, Chicago IL  
60654 USA  
**Manufacturer** : Motorola Mobility LLC  
222 W,Merchandise Mart Plaza, Chicago IL  
60654 USA  
**Standard** : FCC 47 CFR FCC Part 15 Subpart B

The product was received on Sep. 08, 2018 and testing was started from Sep. 24, 2018 and completed on Oct. 02, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Jones Tsai

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



# Table of Contents

**History of this test report ..... 3**

**Summary of Test Result ..... 4**

**1. General Description..... 5**

    1.1. Product Feature of Equipment Under Test ..... 5

    1.2. Product Specification of Equipment Under Test ..... 7

    1.3. Modification of EUT ..... 8

    1.4. Test Location ..... 9

    1.5. Applicable Standards ..... 9

**2. Test Configuration of Equipment Under Test ..... 10**

    2.1. Test Mode ..... 10

    2.2. Connection Diagram of Test System ..... 12

    2.3. Support Unit used in test configuration and system ..... 14

    2.4. EUT Operation Test Setup ..... 15

**3. Test Result ..... 16**

    3.1. Test of AC Conducted Emission Measurement ..... 16

    3.2. Test of Radiated Emission Measurement ..... 18

**4. List of Measuring Equipment..... 20**

**5. Uncertainty of Evaluation..... 21**

**Appendix A. AC Conducted Emission Test Result**

**Appendix B. Radiated Emission Test Result**





### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.107	AC Conducted Emission	Pass	Under limit 4.80 dB at 0.155 MHz
3.2	15.109	Radiated Emission	Pass	Under limit 4.78 dB at 30.270 MHz

**Reviewed by: Louis Wu**

**Report Producer: Natasha Hsieh**



# 1. General Description

## 1.1. Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT1962-6
FCC ID	IHDT56XP4
IMEI Code	<b>Conduction :</b> MEI 1: 355579090014634 IMEI 2: 355579090014642 <b>Radiation :</b> IMEI 1: 355579090013297 IMEI 2: 355579090013350
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/FM WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth BR/EDR/LE
HW Version	DVT1B
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer.



Accessory List	
<b>AC Adapter 1</b>	Brand Name : Motorola
	Model Name : SC-51
	Manufacturer : Salom
<b>AC Adapter 1</b>	Brand Name : Motorola
	Model Name : SC-52
	Manufacturer : Salom
<b>AC Adapter 1</b>	Brand Name : Motorola
	Model Name : SC-53
	Manufacturer : Salom
<b>AC Adapter 1</b>	Brand Name : Motorola
	Model Name : SC-55
	Manufacturer : Salom
<b>AC Adapter 1 (IN)</b>	Brand Name : Motorola
	Model Name : SC-55
	Manufacturer : Salom
<b>AC Adapter 1 (IN Local Build)</b>	Brand Name : Motorola
	Model Name : SC-54
	Manufacturer : Flex
<b>AC Adapter 2</b>	Brand Name : Motorola
	Model Name : SC-51
	Manufacturer : Chenyang
<b>AC Adapter 2</b>	Brand Name : Motorola
	Model Name : SC-52
	Manufacturer : Chenyang
<b>AC Adapter 2</b>	Brand Name : Motorola
	Model Name : SC-53
	Manufacturer : Chenyang
<b>AC Adapter 2</b>	Brand Name : Motorola
	Model Name : SC-55
	Manufacturer : Chenyang
<b>AC Adapter 2 (IN Local Build)</b>	Brand Name : Motorola
	Model Name : SC-54
	Manufacturer : Chenyang
<b>Battery</b>	Brand Name : Motorola
	Model Name : JG30
	Manufacturer : Amperex
<b>Earphone</b>	Brand Name : Motorola
	Model Name : SH38C37773
	Manufacturer : Lyand
<b>USB Cable 1</b>	Brand Name : Cabletech
	Model Name : SKN6473A
<b>USB Cable 2</b>	Brand Name : Saibao
	Model Name : SKN6473A
<b>USB Cable 3</b>	Brand Name : Luxshare
	Model Name : SKN6473A



### 1.2. Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx Frequency</b>	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 5: 824.7 MHz ~ 848.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz LTE Band 12: 699.7 MHz ~ 715.3 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 66: 1710.7 MHz ~ 1779.3 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
<b>Rx Frequency</b>	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz LTE Band 2: 1930.7 MHz ~ 1989.3 MHz LTE Band 4: 2110.7 MHz ~ 2154.3 MHz LTE Band 5: 869.7 MHz ~ 893.3 MHz LTE Band 7: 2622.5 MHz ~ 2687.5 MHz LTE Band 12: 729.7 MHz ~ 745.3 MHz LTE Band 17: 736.5 MHz ~ 743.5 MHz LTE Band 66: 2110.7 MHz ~ 2199.3 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz (GPS/Glonass) FM : 88 MHz ~ 108 MHz



Standards-related Product Specification	
<b>Antenna Type</b>	WWAN : Main : Fixed Internal Antenna and Dipole Antenna Aux. : Fixed Internal Antenna and Dipole Antenna WLAN : Monopole Antenna Bluetooth : Monopole Antenna GPS/Glonass: Monopole Antenna FM : Using earphone as antenna
<b>Type of Modulation</b>	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA: 16QAM (Downlink) HSUPA: QPSK (Uplink) LTE: QPSK / 16QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GPS : BPSK FM

### 1.3. Modification of EUT

No modifications are made to the EUT during all test items.



### 1.4. Test Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1093 and TW1098 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
<b>Test Site No.</b>	<b>Sporton Site No.</b>
	CO05-HY

<b>Test Site</b>	SPORTON INTERNATIONAL INC.
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
<b>Test Site No.</b>	<b>Sporton Site No.</b>
	03CH10-HY

### 1.5. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC 47 CFR FCC Part 15 Subpart B
- ♦ ANSI C63.4-2014

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.



## 2. Test Configuration of Equipment Under Test

### 2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Test Items	Function Type
<b>AC Conducted Emission</b>	Mode 1 : GSM850 Idle + Bluetooth Idle + WLAN Idle + MPEG4 + Earphone + USB Cable 1 Type C (Charging from Adapter 1) + Battery < 10% + SIM 1
	Mode 2 : WCDMA Band V Idle + Bluetooth Idle + WLAN Link + Wireless Display + Earphone + USB Cable 2 Type C (Charging from Adapter 2) + Battery 50% + SIM 2
	Mode 3 : GSM1900 Idle + Bluetooth Idle + WLAN Idle + Camera (Front) + Earphone + USB Cable 3 Type C (Charging from Adapter 1 (IN Local Build)) + Battery > 90% + SIM 1
	Mode 4 : WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Camera (Back) + Earphone + USB Cable 1 Type C (Charging from Adapter 2 (IN Local Build)) + Battery < 10% + SIM 1
	Mode 5 : FM Rx (88 MHz) + Earphone + USB Cable 1 Type C (Charging from Adapter 1) + Battery < 10%
	Mode 6 : FM Rx (98 MHz) + Earphone + USB Cable 2 Type C (Charging from Adapter 2) + Battery 50%
	Mode 7 : FM Rx (108 MHz) + Earphone + USB Cable 3 Type C (Charging from Adapter 1 (IN Local Build)) + Battery > 90%
	Mode 8 : FM Rx (108 MHz) + Earphone + USB Cable 3 Type C (Charging from Adapter 2 (IN Local Build)) + Battery > 90%
	Mode 9 : GSM850 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable 1 Type C (Data Link with Notebook) + SIM 1
	Mode 10 : WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable 2 Type C (Data Link with Notebook) + SIM 2
	Mode 11 : GSM 1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable 3 Type C (Data Link with Notebook) + SIM 1

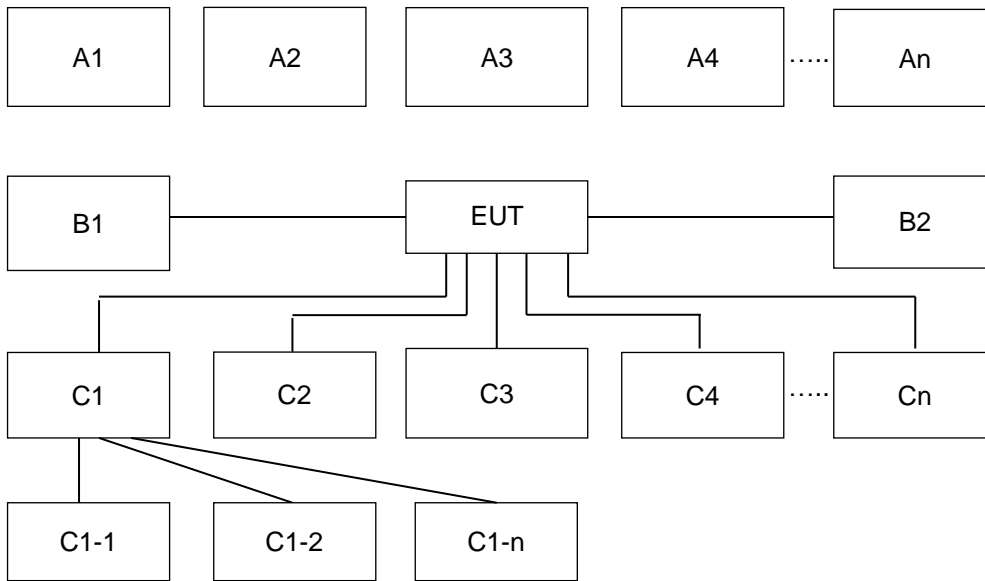


Test Items	Function Type
<b>Radiated Emissions</b>	Mode 1 :GSM850 Idle + Bluetooth Idle + WLAN Idle + MPEG4 + Earphone + USB Cable 1 Type C (Charging from Adapter 1) + Battery < 10% + SIM 1
	Mode 2 :WCDMA Band V Idle + Bluetooth Idle + WLAN Link + Wireless Display + Earphone + USB Cable 2 Type C (Charging from Adapter 2) + Battery 50% + SIM 2
	Mode 3 :GSM1900 Idle + Bluetooth Idle + WLAN Idle + Camera (Front) + Earphone + USB Cable 3 Type C (Charging from Adapter 1 (IN Local Build)) + Battery > 90% + SIM 1
	Mode 4 :WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Camera (Back) + Earphone + USB Cable 1 Type C (Charging from Adapter 2 (IN Local Build)) + Battery < 10% + SIM 1
	Mode 5 :FM Rx (88 MHz) + Earphone + USB Cable 1 Type C (Charging from Adapter 1) + Battery < 10%
	Mode 6 :FM Rx (98 MHz) + Earphone + USB Cable 2 Type C (Charging from Adapter 2) + Battery 50%
	Mode 7 :FM Rx (108 MHz) + Earphone + USB Cable 3 Type C (Charging from Adapter 1 (IN Local Build)) + Battery > 90%
	Mode 8 :FM Rx (88 MHz) + Earphone + USB Cable 1 Type C (Charging from Adapter 2 (IN Local Build)) + Battery < 10%
	Mode 9 :GSM850 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable 1 Type C (Data Link with Notebook) + SIM 1
	Mode 10 :WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable 2 Type C (Data Link with Notebook) + SIM 2
	Mode 11 :GSM 1900 Idle + Bluetooth Idle + WLAN Idle + Earphone + USB Cable 3 Type C (Data Link with Notebook) + SIM 1

**Remark:**

1. The worst case of AC is mode 4; only the test data of this mode was reported.
2. The worst case of RE is mode 2; only the test data of this mode was reported.
3. Data Linking with Notebook means data application transferred mode between EUT and Notebook.

## 2.2. Connection Diagram of Test System



Conduction Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	4	5	6	7
A1	BT Earphone	Bluetooth	X	X	X	X	-	-	-
A2	System Simulator	GSM/UMTS/CDMA/WCDMA/LTE	X	X	X	X	-	-	-
A3	System Simulator	FM	-	-	-	-	X	X	X
A4	AP router	WiFi	X	X	X	X	-	-	-
A5	LCD Monitor	Wireless WiFi	-	X	-	-	-	-	-
A6	Notebook	WiFi	-	X	-	-	-	-	-
No.	Power Source	Connection Type	1	2	3	4	5	6	7
B1	AC : 120V/60Hz	AC Power Cable	X	X	X	X	X	X	X
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	7
C1	Earphone	Earphone jack	X	X	X	X	X	X	X
C2	SD card	SD I/O interface without Cable	X	X	X	X	X	X	X
C3	Notebook	USB Cable	-	-	-	-	-	-	-
C3-1	iPod	USB Cable to C1	-	-	-	-	-	-	-
C3-2	AP router	RJ-45 Cable to C1	-	-	-	-	-	-	-



Conduction Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			8	9	10	11			
A1	BT Earphone	Bluetooth	-	X	X	X			
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	-	X	X	X			
A3	System Simulator	FM	X	-	-	-			
A4	AP router	WiFi	-	X	X	X			
A5	LCD Monitor	Wireless WiFi	-	X	X	X			
A6	Notebook	WiFi	-	-	-	-			
No.	Power Source	Connection Type	8	9	10	11			
B1	AC : 120V/60Hz	AC Power Cable	X	X	X	X			
No.	Setup Peripherals	Connection Type	8	9	10	11			
C1	Earphone	Earphone jack	X	X	X	X			
C2	SD card	SD I/O interface without Cable	X	X	X	X			
C3	Notebook	USB Cable	-	X	X	X			
C3-1	iPod	USB Cable to C1	-	X	X	X			
C3-2	AP router	RJ-45 Cable to C1	-	X	X	X			

Radiation Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	4	5	6	7
A1	BT Earphone	Bluetooth	X	X	X	X			
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	X	X	X	X			
A3	System Simulator	FM	-	-	-	-	X	X	X
A4	AP router	WiFi	X	X	X	X			
A5	LCD Monitor	Wireless WiFi	-	X	-	-			
A6	Notebook	WiFi	-	-	-	-			
No.	Power Source	Connection Type	1	2	3	4	5	6	7
B1	AC : 120V/60Hz	AC Power Cable	X	X	X	X	X	X	X
No.	Setup Peripherals	Connection Type	1	2	3	4	5	6	7
C1	Earphone	Earphone jack	X	X	X	X	X	X	X
C2	SD card	SD I/O interface without Cable	X	X	X	X	X	X	X
C3	Notebook	USB Cable	-	-	-	-			
C3-1	iPod	USB Cable to C1	-	-	-	-			
C3-2	AP router	RJ-45 Cable to C1	-	-	-	-			



Radiation Test Setup								
No.	Wireless Station	Connection Type	Test Mode					
			8	9	10	11		
A1	BT Earphone	Bluetooth	-	X	X	X		
A2	System Simulator	GSM/UMTS/CDMA/WCDMA/LTE	-	X	X	X		
A3	System Simulator	FM	X	-	-	-		
A4	AP router	WiFi	-	X	X	X		
A5	LCD Monitor	Wireless WiFi	-	-	-	-		
A6	Notebook	WiFi	-	-	-	-		
No.	Power Source	Connection Type	8	9	10	11		
B1	AC : 120V/60Hz	AC Power Cable	X	-	-	-		
No.	Setup Peripherals	Connection Type	8	9	10	11		
C1	Earphone	Earphone jack	X	X	X	X		
C2	SD card	SD I/O interface without Cable	X	X	X	X		
C3	Notebook	USB Cable	-	X	X	X		
C3-1	iPod	USB Cable to C1	-	X	X	X		
C3-2	AP router	RJ-45 Cable to C1	-	X	X	X		

### 2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
5.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
6.	Wireless Display	Google	N/A	N/A	N/A	N/A
7.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	SD Card	Transcend	MicroSD HC	FCC DoC	N/A	N/A
9.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
10.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A



## **2.4. EUT Operation Test Setup**

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized with the BCCH, and had been continuous receiving mode by setting paging reorganization of the system simulator.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test:

1. Data application is transferred between Laptop and EUT via USB cable.
2. Execute "Video player" to play MPEG4 files.
3. Turn on camera to capture images.
4. Turn on FM function.
5. Picture synchronization on LCD Monitor via Wireless Display.
6. EUT links with Notebook and executes ping



### 3. Test Result

#### 3.1. Test of AC Conducted Emission Measurement

##### 3.1.1 Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

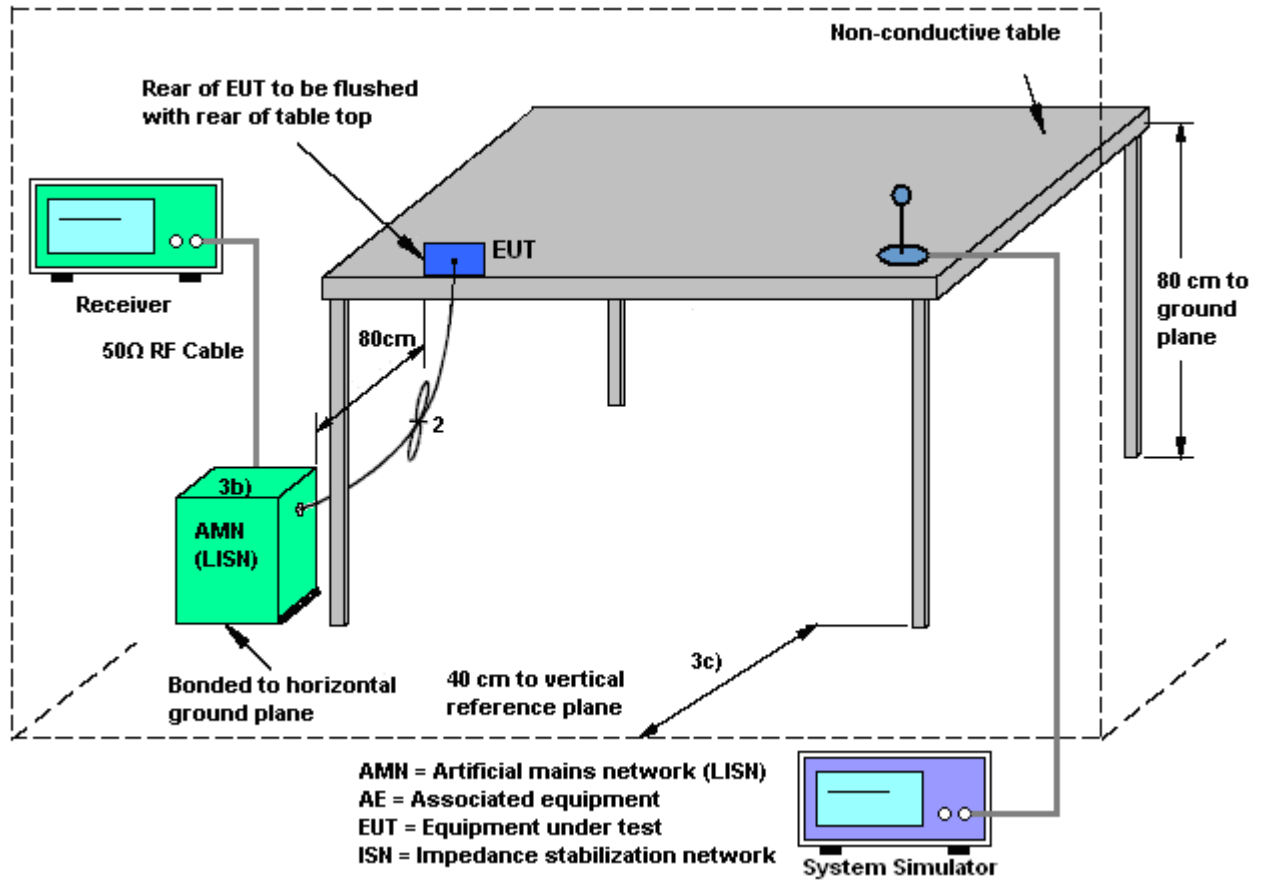
##### 3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

##### 3.1.3 Test Procedure

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.



### 3.2. Test of Radiated Emission Measurement

#### 3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

#### 3.2.2. Measuring Instruments

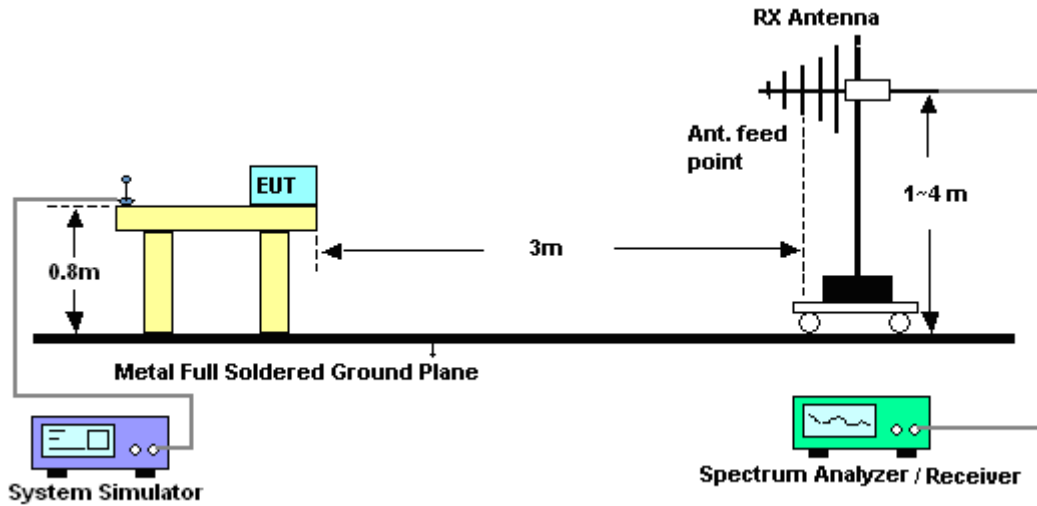
Refer a test equipment and calibration data table in this test report.

#### 3.2.3. Test Procedures

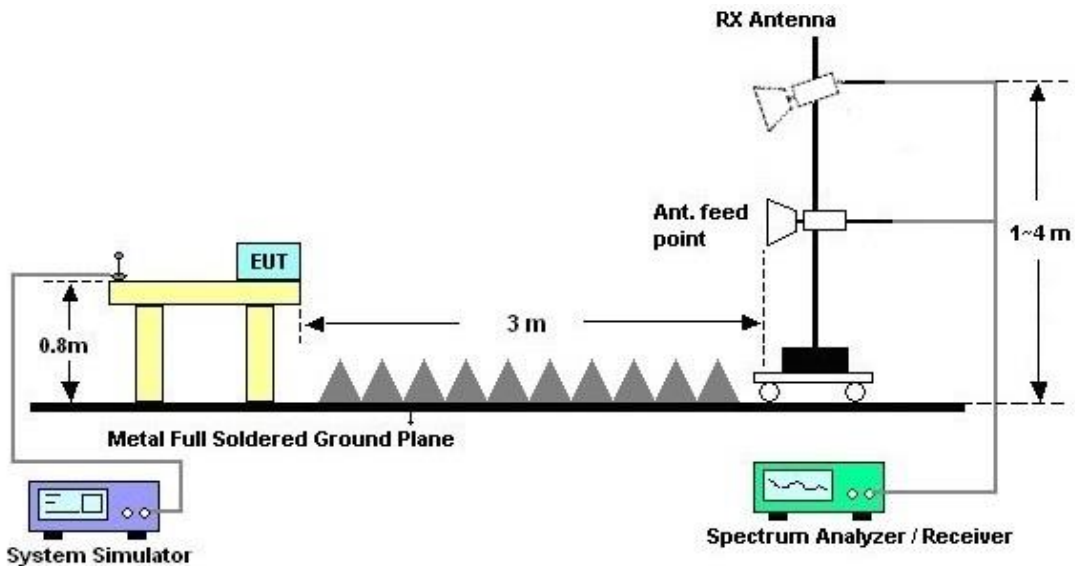
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBµV/m) = 20 log Emission level (µV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.2.5. Test Result of Radiated Emission

Please refer to Appendix B.



## 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Sep. 24, 2018~ Sep. 30, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Dec. 08, 2017	Sep. 24, 2018~ Sep. 30, 2018	Dec. 07, 2018	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 06, 2018	Sep. 24, 2018~ Sep. 30, 2018	Mar. 05, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Sep. 24, 2018~ Sep. 30, 2018	Nov. 29, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Sep. 24, 2018~ Sep. 30, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Sep. 24, 2018~ Sep. 30, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Sep. 24, 2018~ Sep. 30, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Oct. 19, 2017	Oct. 01, 2018~ Oct. 02, 2018	Oct. 18, 2018	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D&0080 0N1D01N-06	35413&02	30MHz~1GHz	Dec. 18, 2017	Oct. 01, 2018~ Oct. 02, 2018	Dec. 17, 2018	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1522	1GHz ~ 18GHz	Sep. 07, 2018	Oct. 01, 2018~ Oct. 02, 2018	Sep. 06, 2019	Radiation (03CH10-HY)
Hygrometer	TECPEL	DTM-303B	TP140320	N/A	Oct. 12, 2017	Oct. 01, 2018~ Oct. 02, 2018	Oct. 11, 2018	Radiation (03CH10-HY)
Preamplifier	Jet-Power	JAP0010180 0-30-10P	1601185500 04	1GHz~18GHz	Apr. 17, 2018	Oct. 01, 2018~ Oct. 02, 2018	Apr. 16, 2019	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY5420048 5	10Hz ~ 44GHz	Oct. 31, 2017	Oct. 01, 2018~ Oct. 02, 2018	Oct. 30, 2018	Radiation (03CH10-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 01, 2018~ Oct. 02, 2018	N/A	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500 -B	N/A	1~4m	N/A	Oct. 01, 2018~ Oct. 02, 2018	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Oct. 01, 2018~ Oct. 02, 2018	N/A	Radiation (03CH10-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Oct. 01, 2018~ Oct. 02, 2018	N/A	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4P E, MY11693/4P E, MY2855/2	30M-1G	Nov. 14, 2017	Oct. 01, 2018~ Oct. 02, 2018	Nov. 13, 2018	Radiation (03CH10-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104 / 102	MY11692/4P E, MY11693/4P E, MY2855/2	1G-18G	Nov. 14, 2017	Oct. 01, 2018~ Oct. 02, 2018	Nov. 13, 2018	Radiation (03CH10-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY5329005 3	20Hz to 26.5GHz	Jan. 16, 2018	Oct. 01, 2018~ Oct. 02, 2018	Jan. 15, 2019	Radiation (03CH10-HY)



## 5. Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.20
---	------

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.70
---	------

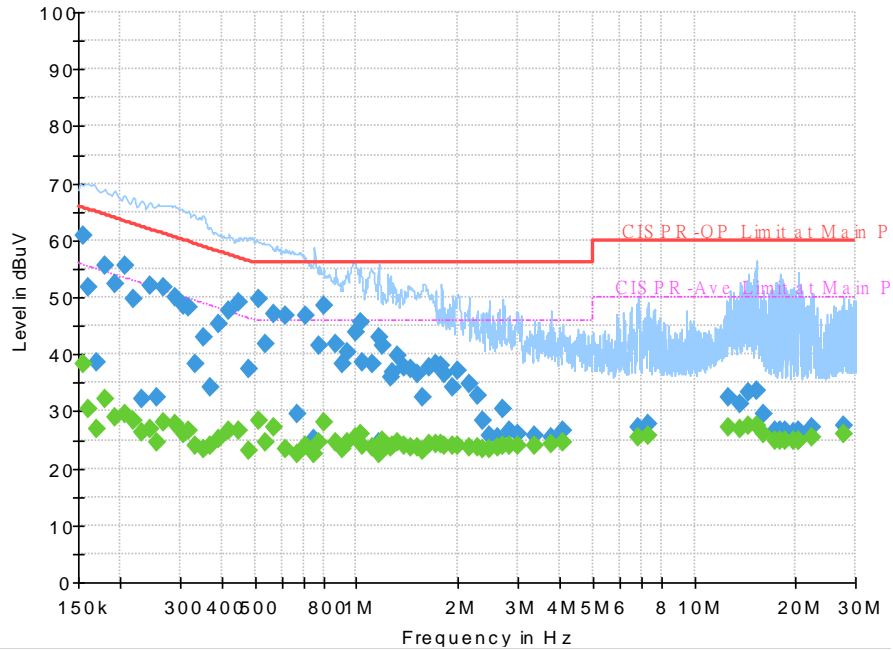
### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.50
---	------



## Appendix A. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

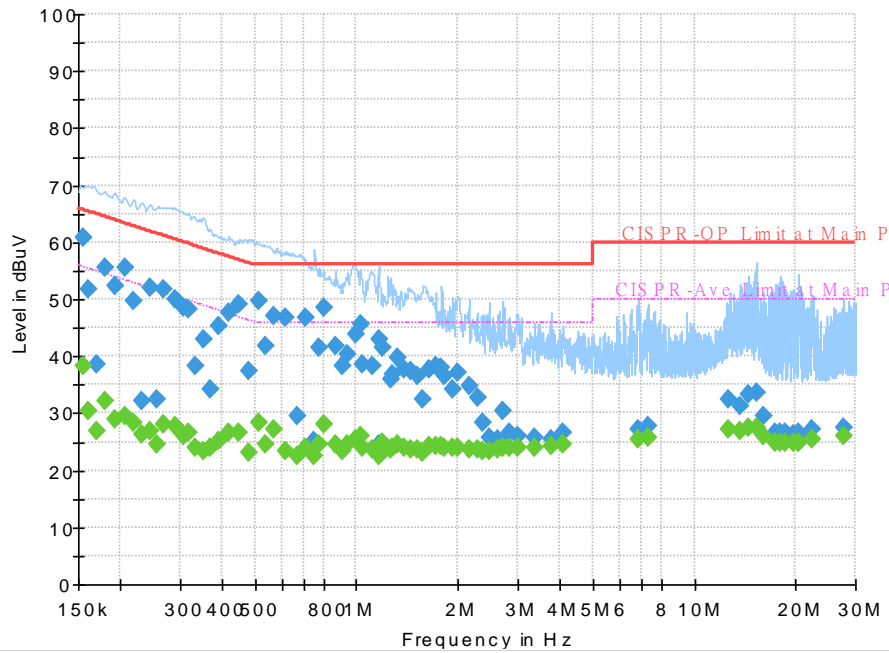


**Final Result :**

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	38.35	55.75	17.40	L1	OFF	19.5
0.154500	60.95	---	65.75	4.80	L1	OFF	19.5
0.161250	---	30.48	55.40	24.92	L1	OFF	19.5
0.161250	51.68	---	65.40	13.72	L1	OFF	19.5
0.170250	---	26.79	54.95	28.16	L1	OFF	19.5
0.170250	38.56	---	64.95	26.39	L1	OFF	19.5
0.179250	---	32.14	54.52	22.38	L1	OFF	19.5
0.179250	55.58	---	64.52	8.94	L1	OFF	19.5
0.192750	---	28.98	53.92	24.94	L1	OFF	19.5
0.192750	52.30	---	63.92	11.62	L1	OFF	19.5
0.206250	---	29.57	53.36	23.79	L1	OFF	19.5
0.206250	55.43	---	63.36	7.93	L1	OFF	19.5
0.217500	---	28.26	52.91	24.65	L1	OFF	19.5
0.217500	49.59	---	62.91	13.32	L1	OFF	19.5
0.231000	---	26.37	52.41	26.04	L1	OFF	19.5
0.231000	32.17	---	62.41	30.24	L1	OFF	19.5
0.244500	---	27.04	51.94	24.90	L1	OFF	19.5
0.244500	52.08	---	61.94	9.86	L1	OFF	19.5
0.255750	---	24.42	51.57	27.15	L1	OFF	19.5
0.255750	32.36	---	61.57	29.21	L1	OFF	19.5



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

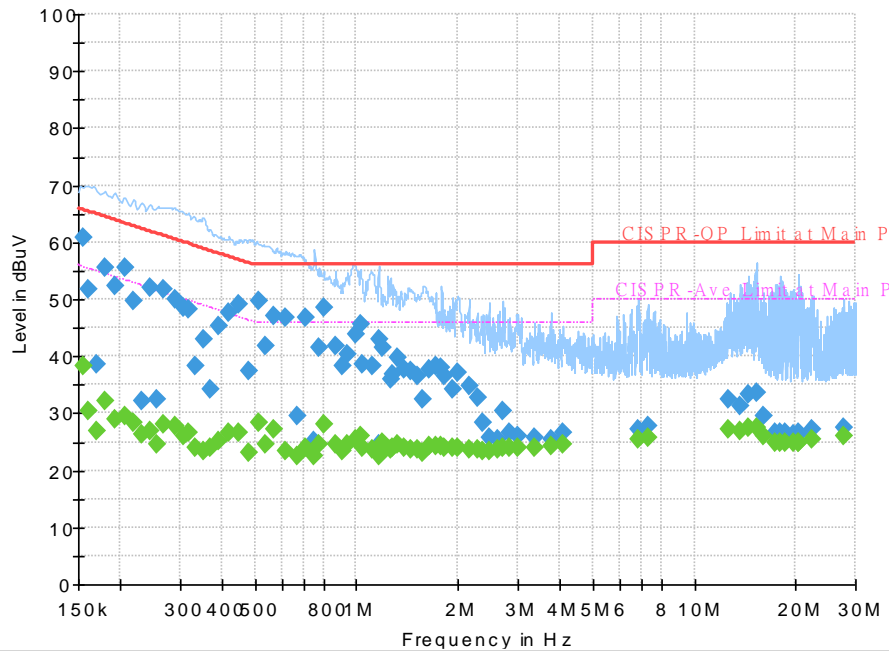


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.269250	---	27.95	51.14	23.19	L1	OFF	19.5
0.269250	51.89	---	61.14	9.25	L1	OFF	19.5
0.291750	---	27.67	50.47	22.80	L1	OFF	19.5
0.291750	50.08	---	60.47	10.39	L1	OFF	19.5
0.307500	---	25.95	50.04	24.09	L1	OFF	19.5
0.307500	48.51	---	60.04	11.53	L1	OFF	19.5
0.318750	---	26.73	49.74	23.01	L1	OFF	19.5
0.318750	48.20	---	59.74	11.54	L1	OFF	19.5
0.332250	---	23.89	49.40	25.51	L1	OFF	19.5
0.332250	38.42	---	59.40	20.98	L1	OFF	19.5
0.352500	---	23.39	48.90	25.51	L1	OFF	19.5
0.352500	43.13	---	58.90	15.77	L1	OFF	19.5
0.368250	---	23.95	48.54	24.59	L1	OFF	19.5
0.368250	34.19	---	58.54	24.35	L1	OFF	19.5
0.390750	---	25.22	48.05	22.83	L1	OFF	19.5
0.390750	45.30	---	58.05	12.75	L1	OFF	19.5
0.420000	---	26.64	47.45	20.81	L1	OFF	19.5
0.420000	47.70	---	57.45	9.75	L1	OFF	19.5
0.447000	---	26.73	46.93	20.20	L1	OFF	19.5
0.447000	49.05	---	56.93	7.88	L1	OFF	19.5



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

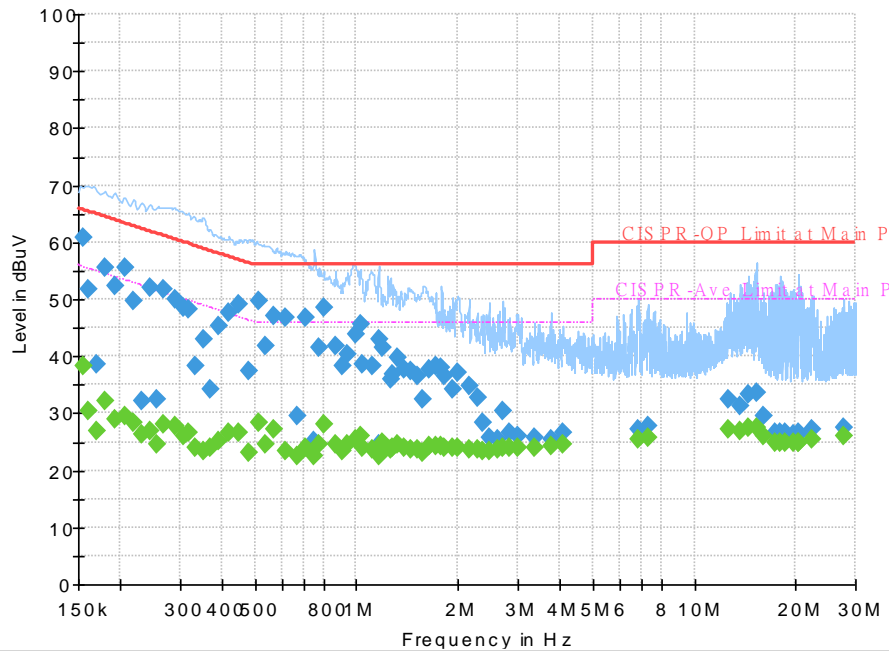


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.480750	---	23.22	46.33	23.11	L1	OFF	19.5
0.480750	37.43	---	56.33	18.90	L1	OFF	19.5
0.512250	---	28.49	46.00	17.51	L1	OFF	19.5
0.512250	49.63	---	56.00	6.37	L1	OFF	19.5
0.539250	---	24.43	46.00	21.57	L1	OFF	19.5
0.539250	41.88	---	56.00	14.12	L1	OFF	19.5
0.568500	---	27.24	46.00	18.76	L1	OFF	19.5
0.568500	47.19	---	56.00	8.81	L1	OFF	19.5
0.618000	---	23.44	46.00	22.56	L1	OFF	19.6
0.618000	46.91	---	56.00	9.09	L1	OFF	19.6
0.665250	---	22.64	46.00	23.36	L1	OFF	19.6
0.665250	29.41	---	56.00	26.59	L1	OFF	19.6
0.703500	---	24.09	46.00	21.91	L1	OFF	19.6
0.703500	46.76	---	56.00	9.24	L1	OFF	19.6
0.748500	---	22.59	46.00	23.41	L1	OFF	19.6
0.748500	25.01	---	56.00	30.99	L1	OFF	19.6
0.777750	---	24.55	46.00	21.45	L1	OFF	19.6
0.777750	41.40	---	56.00	14.60	L1	OFF	19.6
0.800250	---	27.99	46.00	18.01	L1	OFF	19.6
0.800250	48.56	---	56.00	7.44	L1	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

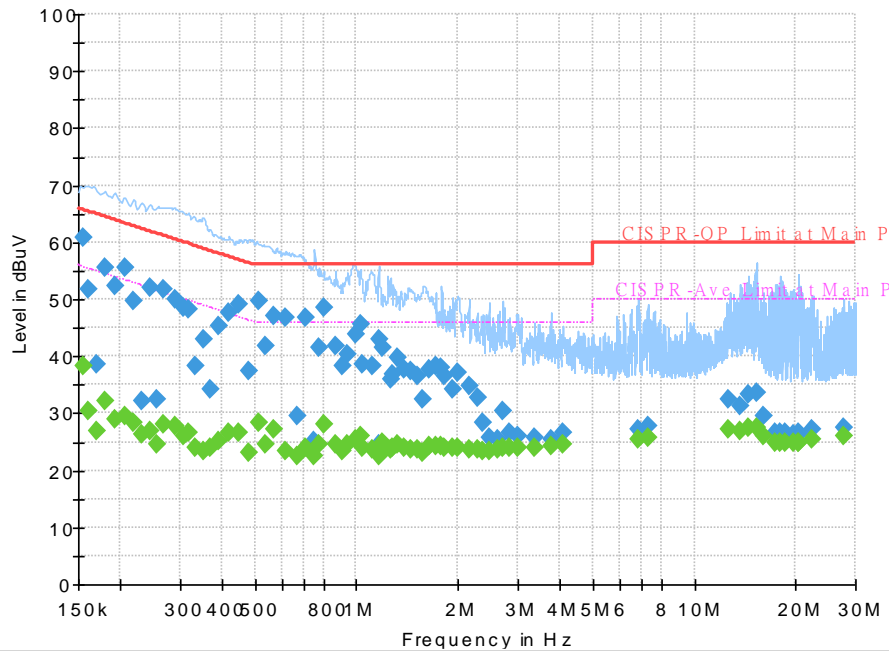


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.865500	---	24.62	46.00	21.38	L1	OFF	19.6
0.865500	41.82	---	56.00	14.18	L1	OFF	19.6
0.908250	---	23.50	46.00	22.50	L1	OFF	19.6
0.908250	38.40	---	56.00	17.60	L1	OFF	19.6
0.939750	---	24.52	46.00	21.48	L1	OFF	19.6
0.939750	40.48	---	56.00	15.52	L1	OFF	19.6
0.996000	---	25.55	46.00	20.45	L1	OFF	19.6
0.996000	43.73	---	56.00	12.27	L1	OFF	19.6
1.027500	---	26.16	46.00	19.84	L1	OFF	19.6
1.027500	45.55	---	56.00	10.45	L1	OFF	19.6
1.043250	---	24.06	46.00	21.94	L1	OFF	19.6
1.043250	38.51	---	56.00	17.49	L1	OFF	19.6
1.113000	---	23.69	46.00	22.31	L1	OFF	19.6
1.113000	38.23	---	56.00	17.77	L1	OFF	19.6
1.162500	---	23.44	46.00	22.56	L1	OFF	19.6
1.162500	42.96	---	56.00	13.04	L1	OFF	19.6
1.171500	---	22.45	46.00	23.55	L1	OFF	19.6
1.171500	24.50	---	56.00	31.50	L1	OFF	19.6
1.191750	---	24.96	46.00	21.04	L1	OFF	19.6
1.191750	41.64	---	56.00	14.36	L1	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

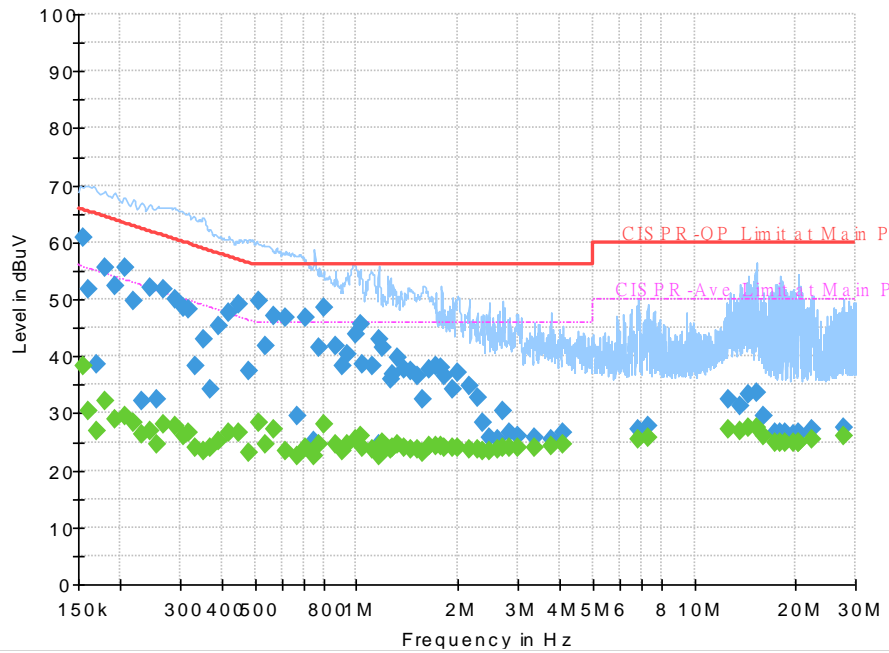


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
1.257000	---	23.57	46.00	22.43	L1	OFF	19.6
1.257000	35.88	---	56.00	20.12	L1	OFF	19.6
1.284000	---	23.88	46.00	22.12	L1	OFF	19.6
1.284000	36.94	---	56.00	19.06	L1	OFF	19.6
1.322250	---	24.54	46.00	21.46	L1	OFF	19.6
1.322250	39.88	---	56.00	16.12	L1	OFF	19.6
1.389750	---	23.98	46.00	22.02	L1	OFF	19.6
1.389750	37.65	---	56.00	18.35	L1	OFF	19.6
1.448250	---	23.64	46.00	22.36	L1	OFF	19.6
1.448250	37.34	---	56.00	18.66	L1	OFF	19.6
1.509000	---	23.60	46.00	22.40	L1	OFF	19.6
1.509000	36.42	---	56.00	19.58	L1	OFF	19.6
1.576500	---	23.23	46.00	22.77	L1	OFF	19.6
1.576500	32.46	---	56.00	23.54	L1	OFF	19.6
1.635000	---	24.27	46.00	21.73	L1	OFF	19.6
1.635000	37.85	---	56.00	18.15	L1	OFF	19.6
1.718250	---	24.40	46.00	21.60	L1	OFF	19.6
1.718250	38.40	---	56.00	17.60	L1	OFF	19.6
1.785750	---	24.38	46.00	21.62	L1	OFF	19.6
1.785750	37.89	---	56.00	18.11	L1	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

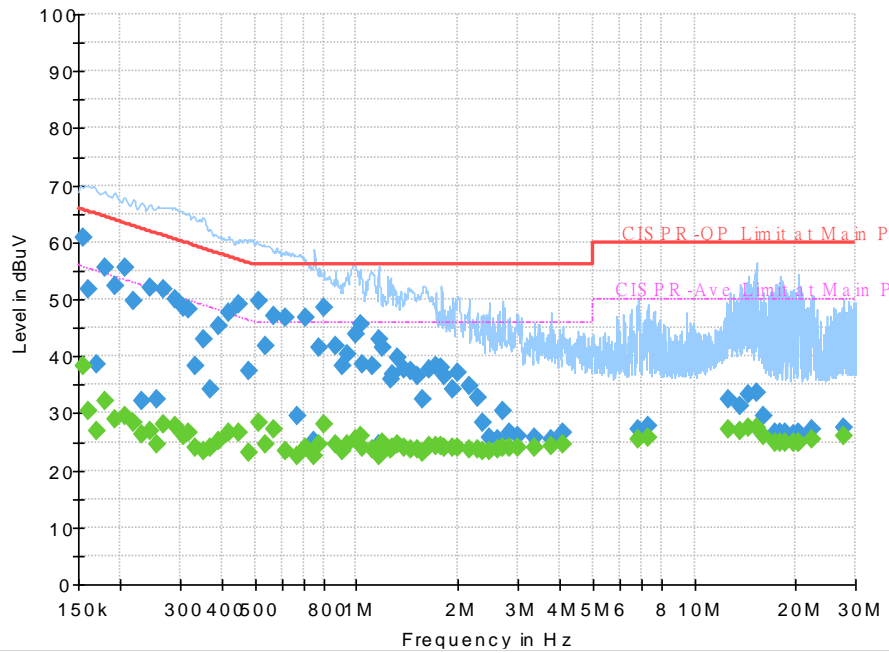


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
1.810500	---	24.01	46.00	21.99	L1	OFF	19.6
1.810500	36.61	---	56.00	19.39	L1	OFF	19.6
1.923000	---	23.84	46.00	22.16	L1	OFF	19.6
1.923000	34.32	---	56.00	21.68	L1	OFF	19.6
1.995000	---	24.03	46.00	21.97	L1	OFF	19.6
1.995000	37.19	---	56.00	18.81	L1	OFF	19.6
2.148000	---	23.75	46.00	22.25	L1	OFF	19.5
2.148000	34.92	---	56.00	21.08	L1	OFF	19.5
2.271750	---	23.59	46.00	22.41	L1	OFF	19.5
2.271750	32.61	---	56.00	23.39	L1	OFF	19.5
2.375250	---	23.30	46.00	22.70	L1	OFF	19.5
2.375250	28.22	---	56.00	27.78	L1	OFF	19.5
2.463000	---	23.40	46.00	22.60	L1	OFF	19.6
2.463000	25.68	---	56.00	30.32	L1	OFF	19.6
2.620500	---	23.71	46.00	22.29	L1	OFF	19.6
2.620500	25.43	---	56.00	30.57	L1	OFF	19.6
2.703750	---	23.89	46.00	22.11	L1	OFF	19.6
2.703750	30.50	---	56.00	25.50	L1	OFF	19.6
2.850000	---	23.83	46.00	22.17	L1	OFF	19.6
2.850000	26.69	---	56.00	29.31	L1	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

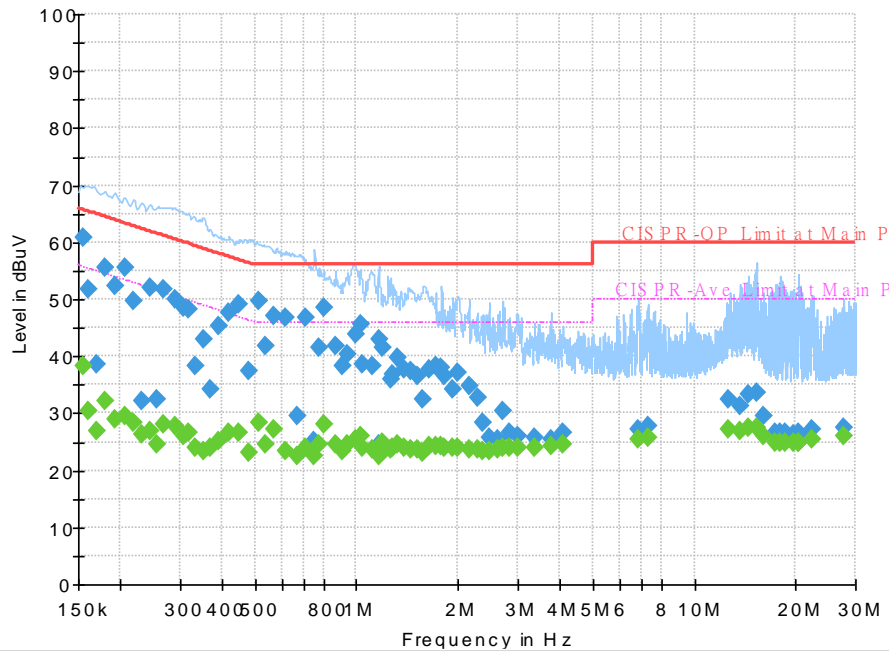


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
3.014250	---	23.90	46.00	22.10	L1	OFF	19.6
3.014250	25.94	---	56.00	30.06	L1	OFF	19.6
3.354000	---	23.99	46.00	22.01	L1	OFF	19.7
3.354000	25.67	---	56.00	30.33	L1	OFF	19.7
3.752250	---	24.18	46.00	21.82	L1	OFF	19.7
3.752250	25.42	---	56.00	30.58	L1	OFF	19.7
4.083000	---	24.44	46.00	21.56	L1	OFF	19.7
4.083000	26.46	---	56.00	29.54	L1	OFF	19.7
6.855000	---	25.31	50.00	24.69	L1	OFF	19.8
6.855000	27.33	---	60.00	32.67	L1	OFF	19.8
7.305000	---	25.59	50.00	24.41	L1	OFF	19.8
7.305000	27.91	---	60.00	32.09	L1	OFF	19.8
12.635250	---	27.11	50.00	22.89	L1	OFF	20.0
12.635250	32.51	---	60.00	27.49	L1	OFF	20.0
13.731000	---	26.88	50.00	23.12	L1	OFF	20.0
13.731000	31.24	---	60.00	28.76	L1	OFF	20.0
14.408250	---	27.42	50.00	22.58	L1	OFF	20.1
14.408250	33.28	---	60.00	26.72	L1	OFF	20.1
15.236250	---	27.59	50.00	22.41	L1	OFF	20.1
15.236250	33.56	---	60.00	26.44	L1	OFF	20.1



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Line

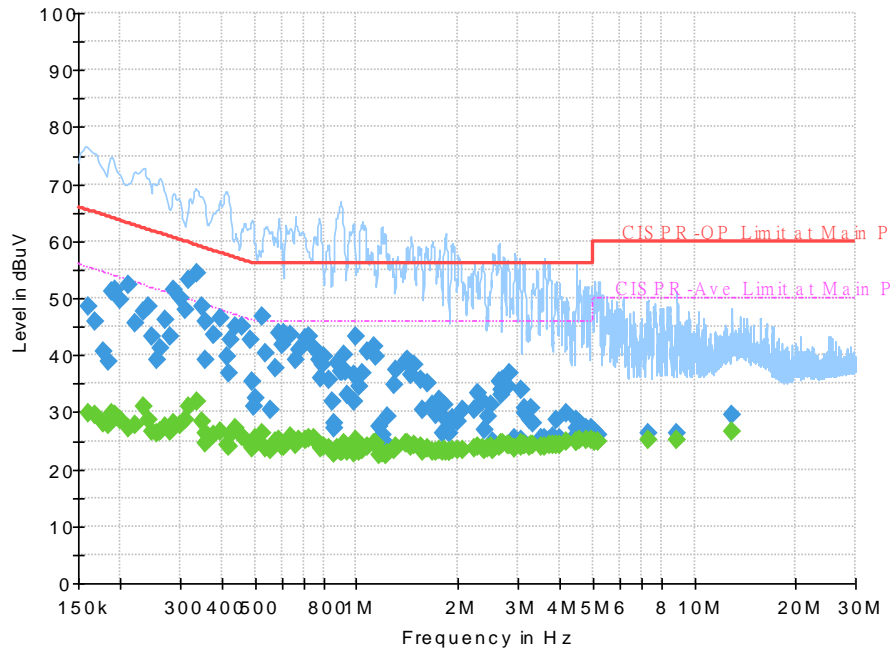


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
16.017000	---	26.09	50.00	23.91	L1	OFF	20.1
16.017000	29.39	---	60.00	30.61	L1	OFF	20.1
17.459250	---	24.95	50.00	25.05	L1	OFF	20.2
17.459250	26.57	---	60.00	33.43	L1	OFF	20.2
17.999250	---	24.72	50.00	25.28	L1	OFF	20.2
17.999250	26.47	---	60.00	33.53	L1	OFF	20.2
18.676500	---	24.82	50.00	25.18	L1	OFF	20.2
18.676500	26.56	---	60.00	33.44	L1	OFF	20.2
19.707000	---	24.73	50.00	25.27	L1	OFF	20.2
19.707000	26.23	---	60.00	33.77	L1	OFF	20.2
20.310000	---	24.88	50.00	25.12	L1	OFF	20.3
20.310000	26.38	---	60.00	33.62	L1	OFF	20.3
20.384250	---	24.94	50.00	25.06	L1	OFF	20.3
20.384250	26.47	---	60.00	33.53	L1	OFF	20.3
22.281000	---	25.44	50.00	24.56	L1	OFF	20.3
22.281000	27.22	---	60.00	32.78	L1	OFF	20.3
27.595500	---	25.98	50.00	24.02	L1	OFF	20.4



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

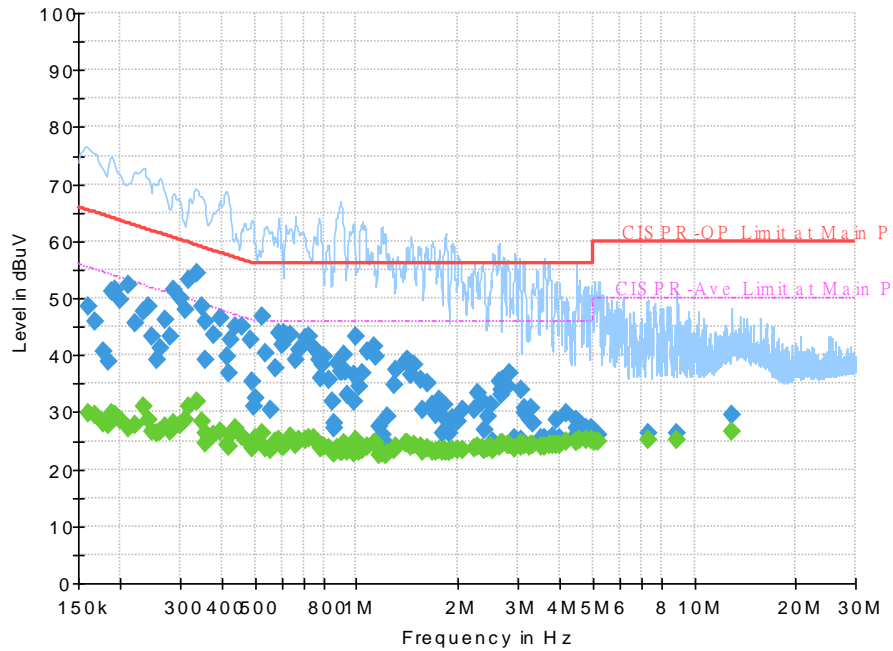


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	29.92	55.40	25.48	N	OFF	19.5
0.161250	48.58	---	65.40	16.82	N	OFF	19.5
0.168000	---	29.39	55.06	25.67	N	OFF	19.5
0.168000	45.77	---	65.06	19.29	N	OFF	19.5
0.177000	---	28.18	54.63	26.44	N	OFF	19.5
0.177000	40.55	---	64.63	24.07	N	OFF	19.5
0.183750	---	27.72	54.31	26.59	N	OFF	19.5
0.183750	38.91	---	64.31	25.40	N	OFF	19.5
0.188250	---	29.96	54.11	24.16	N	OFF	19.5
0.188250	51.06	---	64.11	13.05	N	OFF	19.5
0.192750	---	29.67	53.92	24.24	N	OFF	19.5
0.192750	51.36	---	63.92	12.56	N	OFF	19.5
0.199500	---	28.52	53.63	25.11	N	OFF	19.5
0.199500	49.78	---	63.63	13.85	N	OFF	19.5
0.210750	---	27.10	53.18	26.07	N	OFF	19.5
0.210750	52.24	---	63.18	10.94	N	OFF	19.5
0.222000	---	27.69	52.74	25.06	N	OFF	19.5
0.222000	45.64	---	62.74	17.10	N	OFF	19.5
0.233250	---	30.91	52.33	21.42	N	OFF	19.5
0.233250	47.73	---	62.33	14.60	N	OFF	19.5
0.242250	---	28.79	52.02	23.23	N	OFF	19.5
0.242250	48.64	---	62.02	13.37	N	OFF	19.5



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

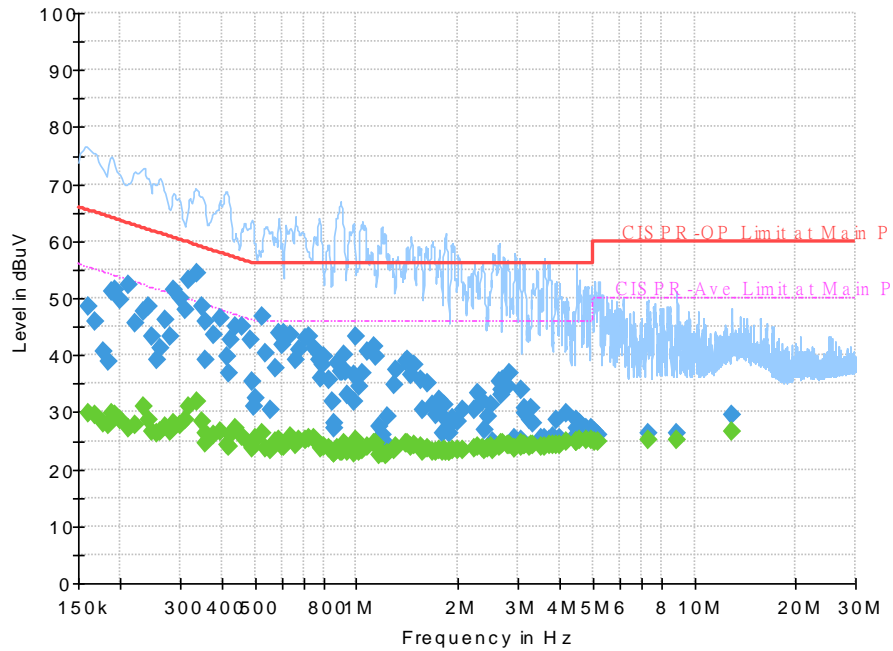


**Final Result :**

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.246750	---	26.58	51.87	25.29	N	OFF	19.5
0.246750	43.35	---	61.87	18.51	N	OFF	19.5
0.255750	---	26.23	51.57	25.34	N	OFF	19.5
0.255750	39.32	---	61.57	22.25	N	OFF	19.5
0.262500	---	26.67	51.35	24.68	N	OFF	19.5
0.262500	41.23	---	61.35	20.13	N	OFF	19.5
0.271500	---	27.45	51.07	23.63	N	OFF	19.5
0.271500	46.08	---	61.07	14.99	N	OFF	19.5
0.280500	---	26.63	50.80	24.17	N	OFF	19.5
0.280500	43.40	---	60.80	17.40	N	OFF	19.5
0.287250	---	28.04	50.60	22.56	N	OFF	19.5
0.287250	51.44	---	60.60	9.17	N	OFF	19.5
0.300750	---	27.67	50.22	22.55	N	OFF	19.5
0.300750	49.88	---	60.22	10.35	N	OFF	19.5
0.312000	---	28.73	49.92	21.19	N	OFF	19.5
0.312000	47.84	---	59.92	12.08	N	OFF	19.5
0.318750	---	31.03	49.74	18.71	N	OFF	19.5
0.318750	53.20	---	59.74	6.53	N	OFF	19.5
0.336750	---	31.83	49.28	17.46	N	OFF	19.5
0.336750	54.41	---	59.28	4.87	N	OFF	19.5



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

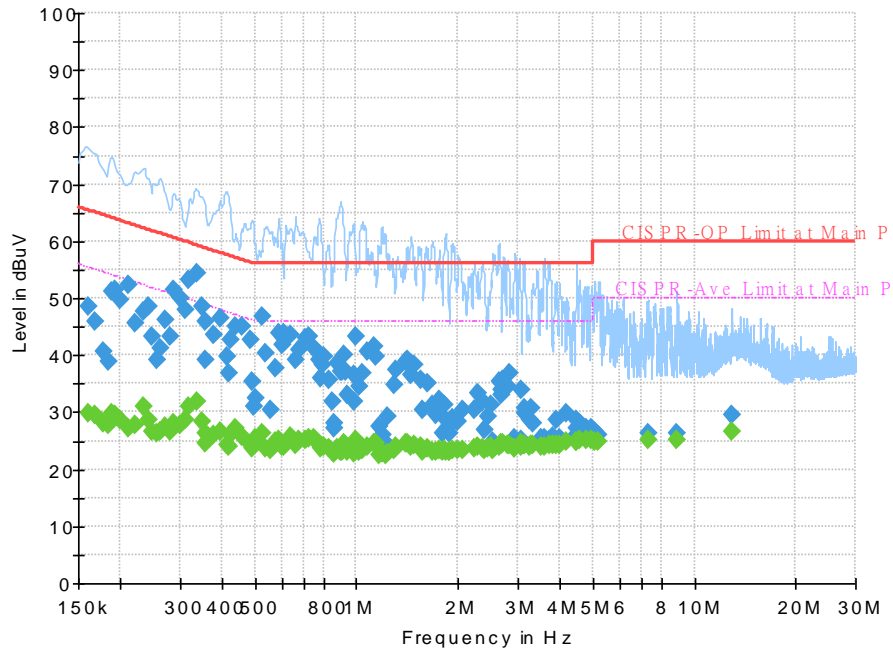


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.350250	---	28.41	48.96	20.55	N	OFF	19.5
0.350250	48.51	---	58.96	10.45	N	OFF	19.5
0.354750	---	26.28	48.85	22.57	N	OFF	19.5
0.354750	45.87	---	58.85	12.98	N	OFF	19.5
0.357000	---	24.68	48.80	24.12	N	OFF	19.5
0.357000	39.24	---	58.80	19.56	N	OFF	19.5
0.377250	---	26.03	48.34	22.31	N	OFF	19.5
0.377250	43.46	---	58.34	14.88	N	OFF	19.5
0.393000	---	26.67	48.00	21.33	N	OFF	19.5
0.393000	46.55	---	58.00	11.45	N	OFF	19.5
0.413250	---	24.35	47.58	23.23	N	OFF	19.5
0.413250	39.79	---	57.58	17.79	N	OFF	19.5
0.420000	---	24.08	47.45	23.37	N	OFF	19.5
0.420000	36.93	---	57.45	20.52	N	OFF	19.5
0.424500	---	26.08	47.36	21.28	N	OFF	19.5
0.424500	42.72	---	57.36	14.64	N	OFF	19.5
0.438000	---	27.09	47.10	20.01	N	OFF	19.5
0.438000	44.91	---	57.10	12.19	N	OFF	19.5
0.460500	---	25.67	46.68	21.01	N	OFF	19.5
0.460500	45.12	---	56.68	11.56	N	OFF	19.5



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

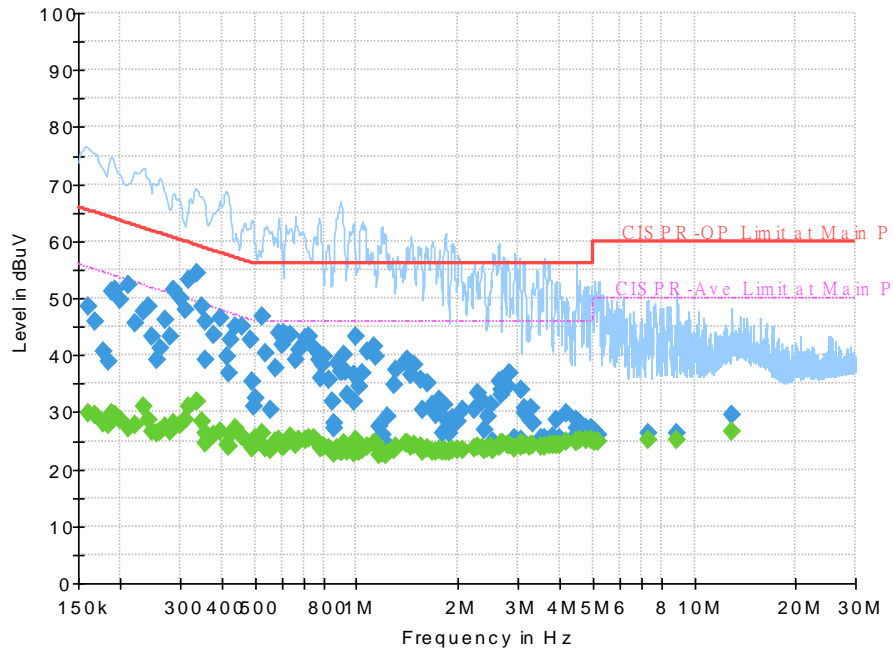


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.483000	---	24.41	46.29	21.88	N	OFF	19.5
0.483000	42.67	---	56.29	13.62	N	OFF	19.5
0.492000	---	23.77	46.13	22.37	N	OFF	19.5
0.492000	35.40	---	56.13	20.74	N	OFF	19.5
0.496500	---	24.83	46.06	21.23	N	OFF	19.5
0.496500	31.07	---	56.06	24.99	N	OFF	19.5
0.503250	---	25.51	46.00	20.49	N	OFF	19.5
0.503250	32.44	---	56.00	23.56	N	OFF	19.5
0.528000	---	26.43	46.00	19.57	N	OFF	19.5
0.528000	46.69	---	56.00	9.31	N	OFF	19.5
0.534750	---	23.75	46.00	22.25	N	OFF	19.5
0.534750	40.31	---	56.00	15.69	N	OFF	19.5
0.557250	---	23.25	46.00	22.75	N	OFF	19.5
0.557250	30.46	---	56.00	25.54	N	OFF	19.5
0.577500	---	24.93	46.00	21.07	N	OFF	19.5
0.577500	37.74	---	56.00	18.26	N	OFF	19.5
0.588750	---	25.14	46.00	20.86	N	OFF	19.5
0.588750	43.80	---	56.00	12.20	N	OFF	19.5
0.600000	---	24.11	46.00	21.89	N	OFF	19.6
0.600000	41.81	---	56.00	14.19	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

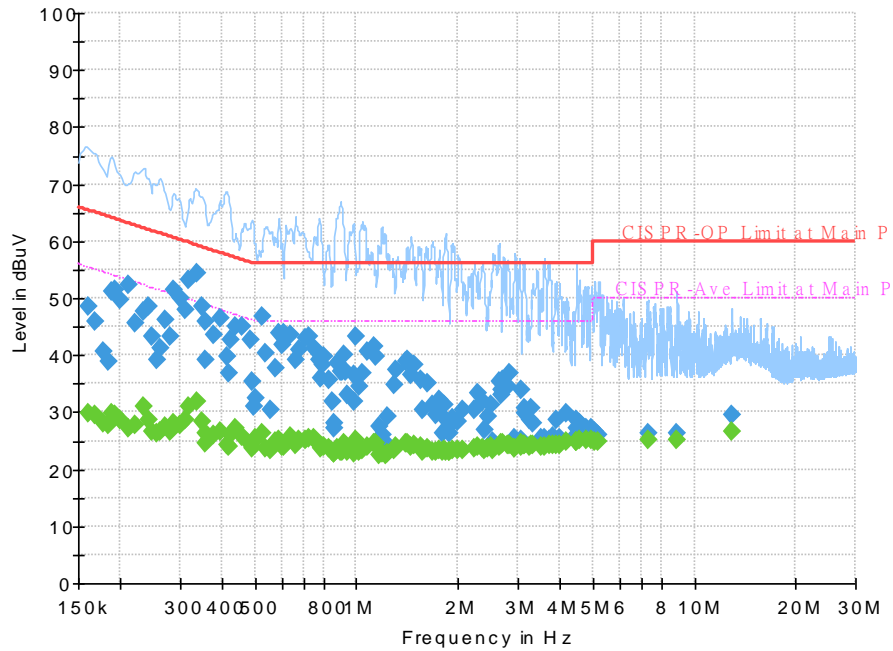


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.606750	---	23.88	46.00	22.12	N	OFF	19.6
0.606750	43.95	---	56.00	12.05	N	OFF	19.6
0.636000	---	25.75	46.00	20.25	N	OFF	19.6
0.636000	43.52	---	56.00	12.48	N	OFF	19.6
0.658500	---	24.31	46.00	21.69	N	OFF	19.6
0.658500	39.08	---	56.00	16.92	N	OFF	19.6
0.674250	---	25.23	46.00	20.78	N	OFF	19.6
0.674250	41.05	---	56.00	14.95	N	OFF	19.6
0.705750	---	25.11	46.00	20.89	N	OFF	19.6
0.705750	42.95	---	56.00	13.05	N	OFF	19.6
0.726000	---	25.32	46.00	20.68	N	OFF	19.6
0.726000	43.20	---	56.00	12.80	N	OFF	19.6
0.746250	---	25.35	46.00	20.65	N	OFF	19.6
0.746250	41.17	---	56.00	14.83	N	OFF	19.6
0.775500	---	24.38	46.00	21.62	N	OFF	19.6
0.775500	39.21	---	56.00	16.80	N	OFF	19.6
0.784500	---	23.69	46.00	22.31	N	OFF	19.6
0.784500	36.11	---	56.00	19.89	N	OFF	19.6
0.791250	---	24.12	46.00	21.88	N	OFF	19.6
0.791250	38.44	---	56.00	17.56	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

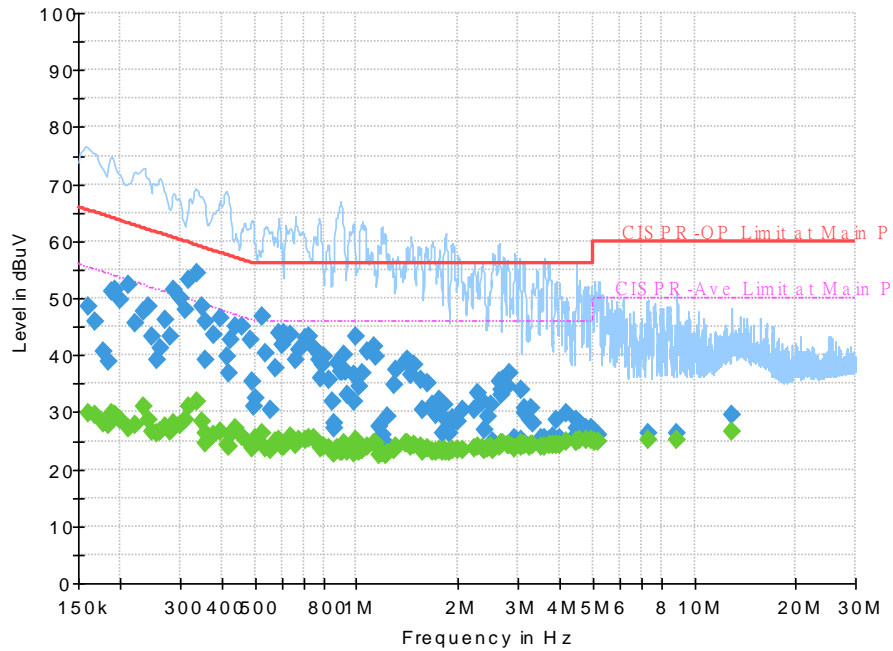


**Final Result :**

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.800250	---	24.10	46.00	21.90	N	OFF	19.6
0.800250	39.70	---	56.00	16.30	N	OFF	19.6
0.827250	---	23.72	46.00	22.28	N	OFF	19.6
0.827250	35.80	---	56.00	20.20	N	OFF	19.6
0.845250	---	22.99	46.00	23.01	N	OFF	19.6
0.845250	31.73	---	56.00	24.27	N	OFF	19.6
0.856500	---	22.73	46.00	23.27	N	OFF	19.6
0.856500	28.20	---	56.00	27.80	N	OFF	19.6
0.861000	---	22.80	46.00	23.20	N	OFF	19.6
0.861000	27.31	---	56.00	28.69	N	OFF	19.6
0.881250	---	23.66	46.00	22.34	N	OFF	19.6
0.881250	38.67	---	56.00	17.33	N	OFF	19.6
0.897000	---	23.13	46.00	22.87	N	OFF	19.6
0.897000	37.09	---	56.00	18.91	N	OFF	19.6
0.910500	---	23.04	46.00	22.96	N	OFF	19.6
0.910500	37.14	---	56.00	18.86	N	OFF	19.6
0.917250	---	24.62	46.00	21.38	N	OFF	19.6
0.917250	40.10	---	56.00	15.90	N	OFF	19.6
0.926250	---	24.01	46.00	21.99	N	OFF	19.6
0.926250	37.03	---	56.00	18.97	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

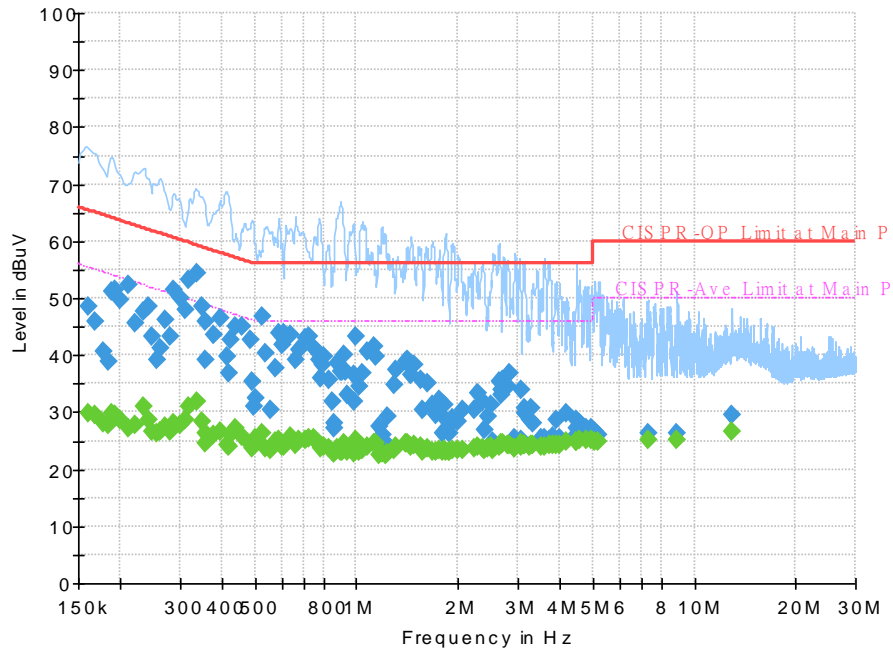


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.944250	---	23.11	46.00	22.89	N	OFF	19.6
0.944250	33.14	---	56.00	22.86	N	OFF	19.6
0.978000	---	23.29	46.00	22.71	N	OFF	19.6
0.978000	36.57	---	56.00	19.43	N	OFF	19.6
0.987000	---	22.93	46.00	23.07	N	OFF	19.6
0.987000	31.90	---	56.00	24.10	N	OFF	19.6
0.993750	---	25.02	46.00	20.98	N	OFF	19.6
0.993750	43.31	---	56.00	12.69	N	OFF	19.6
1.020750	---	23.24	46.00	22.76	N	OFF	19.6
1.020750	34.65	---	56.00	21.35	N	OFF	19.6
1.038750	---	23.48	46.00	22.52	N	OFF	19.6
1.038750	36.87	---	56.00	19.13	N	OFF	19.6
1.074750	---	24.03	46.00	21.97	N	OFF	19.6
1.074750	40.57	---	56.00	15.43	N	OFF	19.6
1.122000	---	24.68	46.00	21.32	N	OFF	19.6
1.122000	41.40	---	56.00	14.60	N	OFF	19.6
1.140000	---	24.63	46.00	21.37	N	OFF	19.6
1.140000	39.75	---	56.00	16.25	N	OFF	19.6
1.164750	---	22.57	46.00	23.43	N	OFF	19.6
1.164750	27.53	---	56.00	28.47	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

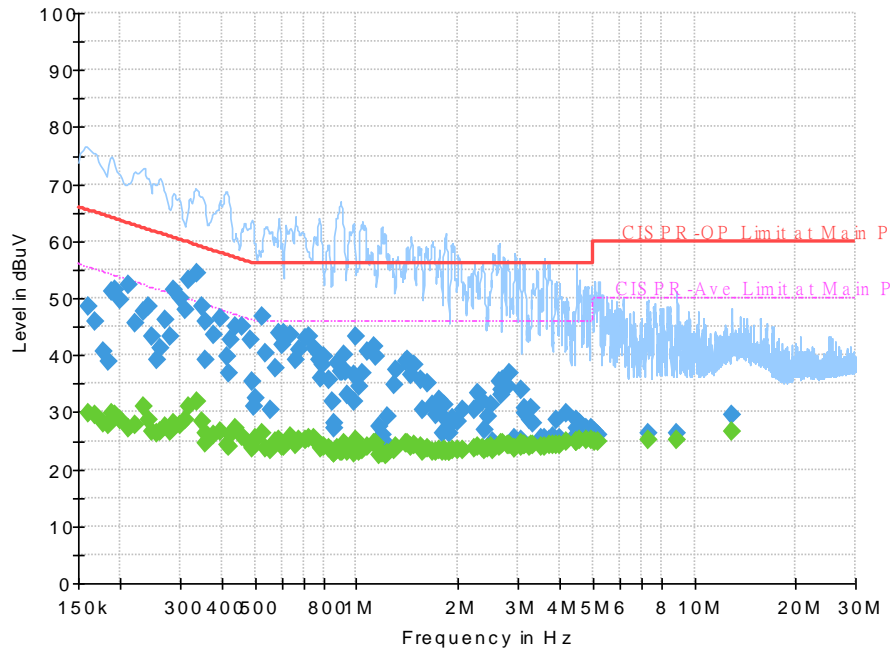


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
1.187250	---	22.71	46.00	23.29	N	OFF	19.6
1.187250	25.94	---	56.00	30.06	N	OFF	19.6
1.218750	---	22.64	46.00	23.36	N	OFF	19.6
1.218750	24.58	---	56.00	31.42	N	OFF	19.6
1.236750	---	22.86	46.00	23.14	N	OFF	19.6
1.236750	29.34	---	56.00	26.66	N	OFF	19.6
1.293000	---	23.51	46.00	22.49	N	OFF	19.6
1.293000	34.83	---	56.00	21.17	N	OFF	19.6
1.313250	---	23.99	46.00	22.01	N	OFF	19.6
1.313250	37.32	---	56.00	18.68	N	OFF	19.6
1.392000	---	24.43	46.00	21.57	N	OFF	19.6
1.392000	38.96	---	56.00	17.04	N	OFF	19.6
1.407750	---	24.48	46.00	21.52	N	OFF	19.6
1.407750	39.27	---	56.00	16.73	N	OFF	19.6
1.448250	---	23.97	46.00	22.03	N	OFF	19.6
1.448250	36.64	---	56.00	19.36	N	OFF	19.6
1.488750	---	24.15	46.00	21.85	N	OFF	19.6
1.488750	38.24	---	56.00	17.76	N	OFF	19.6
1.547250	---	24.01	46.00	21.99	N	OFF	19.6
1.547250	35.79	---	56.00	20.21	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

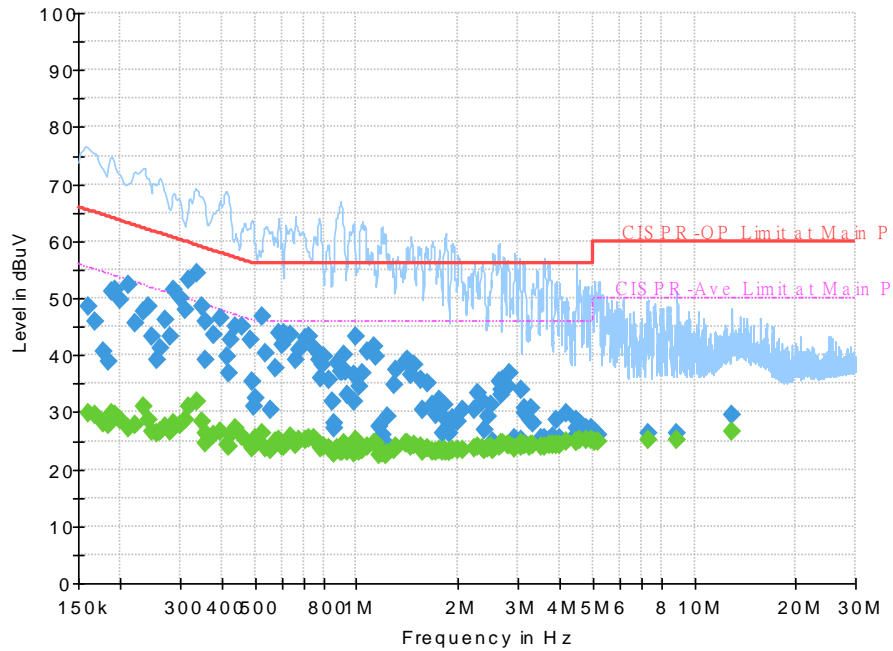


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
1.572000	---	23.09	46.00	22.91	N	OFF	19.6
1.572000	30.47	---	56.00	25.53	N	OFF	19.6
1.623750	---	23.83	46.00	22.17	N	OFF	19.6
1.623750	35.11	---	56.00	20.89	N	OFF	19.6
1.677750	---	23.06	46.00	22.94	N	OFF	19.6
1.677750	31.27	---	56.00	24.73	N	OFF	19.6
1.725000	---	23.20	46.00	22.80	N	OFF	19.6
1.725000	29.65	---	56.00	26.35	N	OFF	19.6
1.754250	---	23.37	46.00	22.63	N	OFF	19.6
1.754250	32.21	---	56.00	23.79	N	OFF	19.6
1.797000	---	23.08	46.00	22.92	N	OFF	19.6
1.797000	26.23	---	56.00	29.77	N	OFF	19.6
1.812750	---	23.25	46.00	22.75	N	OFF	19.6
1.812750	31.22	---	56.00	24.78	N	OFF	19.6
1.833000	---	23.10	46.00	22.90	N	OFF	19.6
1.833000	28.54	---	56.00	27.46	N	OFF	19.6
1.882500	---	23.09	46.00	22.91	N	OFF	19.6
1.882500	26.32	---	56.00	29.68	N	OFF	19.6
1.891500	---	23.10	46.00	22.90	N	OFF	19.6
1.891500	27.40	---	56.00	28.60	N	OFF	19.6
1.929750	---	23.41	46.00	22.59	N	OFF	19.6
1.929750	28.81	---	56.00	27.19	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

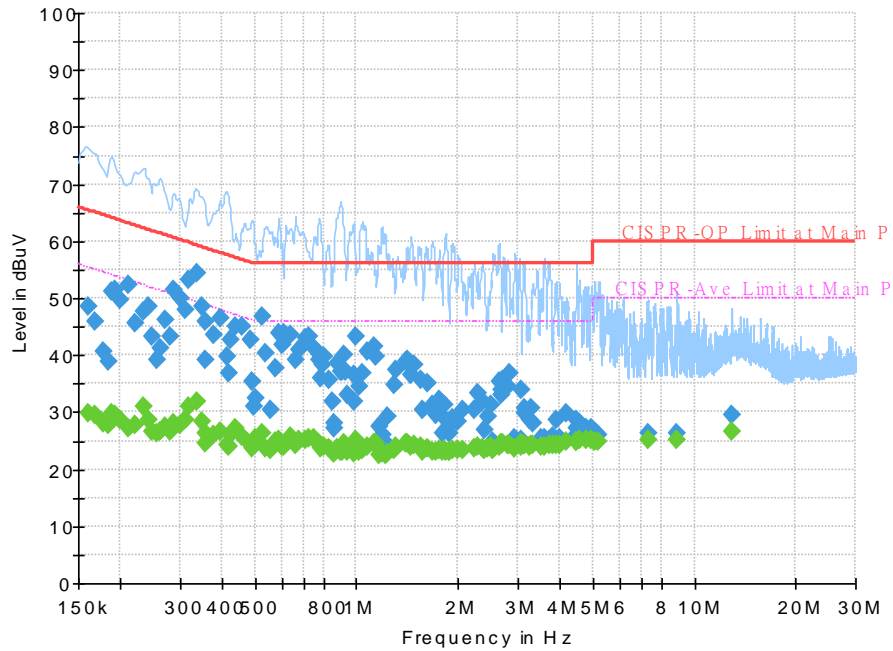


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
1.997250	---	23.46	46.00	22.54	N	OFF	19.6
1.997250	28.49	---	56.00	27.51	N	OFF	19.6
2.069250	---	23.40	46.00	22.60	N	OFF	19.4
2.069250	30.46	---	56.00	25.54	N	OFF	19.4
2.229000	---	23.71	46.00	22.29	N	OFF	19.5
2.229000	30.32	---	56.00	25.68	N	OFF	19.5
2.289750	---	23.94	46.00	22.06	N	OFF	19.5
2.289750	33.39	---	56.00	22.61	N	OFF	19.5
2.359500	---	23.55	46.00	22.45	N	OFF	19.5
2.359500	31.87	---	56.00	24.13	N	OFF	19.5
2.382000	---	23.42	46.00	22.58	N	OFF	19.5
2.382000	26.94	---	56.00	29.06	N	OFF	19.5
2.440500	---	23.69	46.00	22.31	N	OFF	19.6
2.440500	29.29	---	56.00	26.71	N	OFF	19.6
2.503500	---	23.92	46.00	22.08	N	OFF	19.6
2.503500	31.35	---	56.00	24.65	N	OFF	19.6
2.530500	---	23.43	46.00	22.57	N	OFF	19.6
2.530500	24.77	---	56.00	31.23	N	OFF	19.6
2.647500	---	24.06	46.00	21.94	N	OFF	19.6
2.647500	35.32	---	56.00	20.68	N	OFF	19.6
2.665500	---	24.44	46.00	21.56	N	OFF	19.6
2.665500	33.94	---	56.00	22.06	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

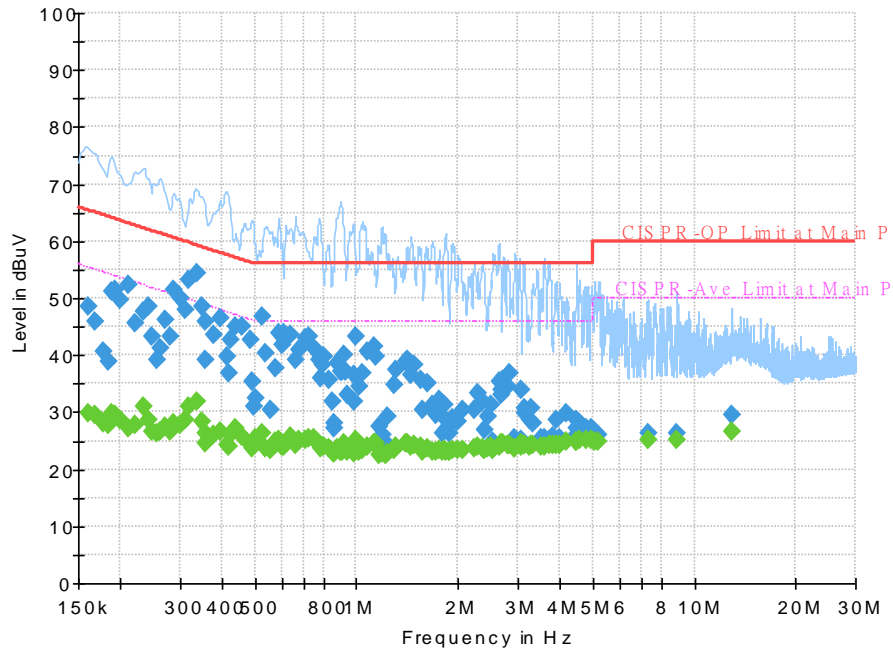


**Final Result :**

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
2.676750	---	24.25	46.00	21.75	N	OFF	19.6
2.676750	33.14	---	56.00	22.86	N	OFF	19.6
2.699250	---	24.58	46.00	21.42	N	OFF	19.6
2.699250	35.56	---	56.00	20.44	N	OFF	19.6
2.791500	---	24.34	46.00	21.66	N	OFF	19.6
2.791500	34.60	---	56.00	21.40	N	OFF	19.6
2.829750	---	24.38	46.00	21.62	N	OFF	19.6
2.829750	36.71	---	56.00	19.29	N	OFF	19.6
2.922000	---	23.82	46.00	22.18	N	OFF	19.6
2.922000	25.37	---	56.00	30.63	N	OFF	19.6
2.944500	---	23.75	46.00	22.25	N	OFF	19.6
2.944500	25.20	---	56.00	30.80	N	OFF	19.6
3.066000	---	23.92	46.00	22.08	N	OFF	19.6
3.066000	25.10	---	56.00	30.90	N	OFF	19.6
3.088500	---	24.62	46.00	21.38	N	OFF	19.6
3.088500	33.89	---	56.00	22.11	N	OFF	19.6
3.131250	---	24.18	46.00	21.82	N	OFF	19.6
3.131250	29.90	---	56.00	26.10	N	OFF	19.6
3.149250	---	24.36	46.00	21.64	N	OFF	19.6
3.149250	30.63	---	56.00	25.37	N	OFF	19.6



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

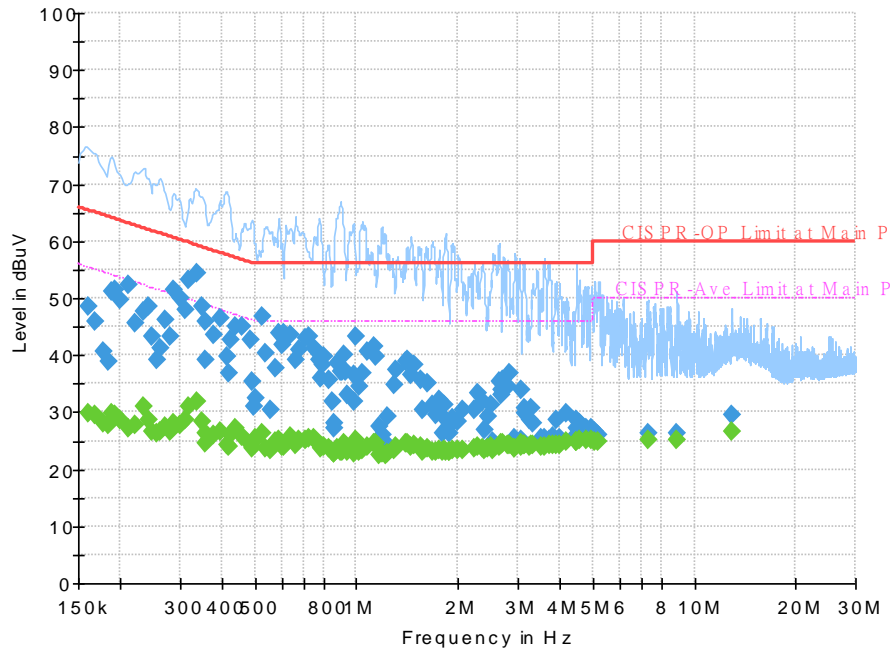


Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
3.266250	---	24.12	46.00	21.88	N	OFF	19.6
3.266250	28.71	---	56.00	27.29	N	OFF	19.6
3.284250	---	24.15	46.00	21.85	N	OFF	19.6
3.284250	30.77	---	56.00	25.23	N	OFF	19.6
3.313500	---	24.19	46.00	21.81	N	OFF	19.7
3.313500	28.15	---	56.00	27.85	N	OFF	19.7
3.527250	---	24.10	46.00	21.90	N	OFF	19.7
3.527250	25.32	---	56.00	30.68	N	OFF	19.7
3.606000	---	24.11	46.00	21.89	N	OFF	19.7
3.606000	25.39	---	56.00	30.61	N	OFF	19.7
3.736500	---	24.18	46.00	21.83	N	OFF	19.7
3.736500	25.27	---	56.00	30.73	N	OFF	19.7
3.808500	---	24.31	46.00	21.69	N	OFF	19.7
3.808500	25.85	---	56.00	30.15	N	OFF	19.7
3.909750	---	24.38	46.00	21.62	N	OFF	19.7
3.909750	28.55	---	56.00	27.45	N	OFF	19.7
4.008750	---	24.39	46.00	21.61	N	OFF	19.7
4.008750	25.53	---	56.00	30.47	N	OFF	19.7
4.200000	---	24.72	46.00	21.28	N	OFF	19.7
4.200000	29.85	---	56.00	26.15	N	OFF	19.7



Test Engineer :	Jimmy Chang	Temperature :	24~26°C
		Relative Humidity :	51~53%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



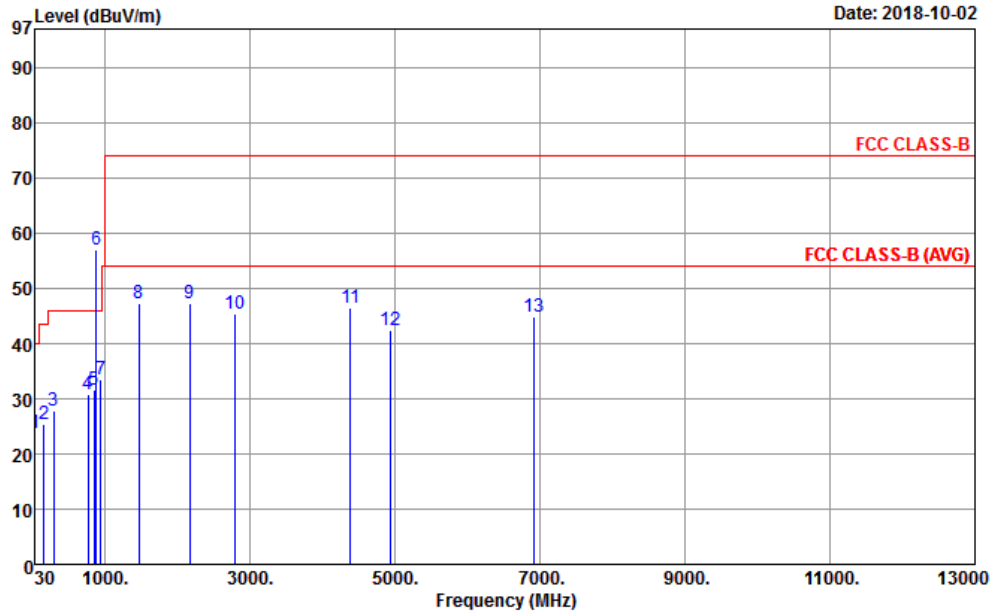
Final Result :

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
4.449750	---	24.99	46.00	21.01	N	OFF	19.7
4.449750	27.16	---	56.00	28.84	N	OFF	19.7
4.456500	---	24.91	46.00	21.09	N	OFF	19.7
4.456500	26.08	---	56.00	29.92	N	OFF	19.7
4.485750	---	24.94	46.00	21.06	N	OFF	19.7
4.485750	28.53	---	56.00	27.47	N	OFF	19.7
4.571250	---	25.20	46.00	20.80	N	OFF	19.7
4.571250	28.11	---	56.00	27.89	N	OFF	19.7
4.814250	---	25.20	46.00	20.80	N	OFF	19.7
4.814250	27.05	---	56.00	28.95	N	OFF	19.7
4.951500	---	25.05	46.00	20.95	N	OFF	19.7
4.951500	27.29	---	56.00	28.71	N	OFF	19.7
5.064000	---	24.99	50.00	25.01	N	OFF	19.7
5.064000	26.62	---	60.00	33.38	N	OFF	19.7
5.217000	---	24.89	50.00	25.11	N	OFF	19.7
5.217000	25.97	---	60.00	34.03	N	OFF	19.7
7.266750	---	25.12	50.00	24.88	N	OFF	19.8
7.266750	26.26	---	60.00	33.74	N	OFF	19.8
8.889000	---	25.13	50.00	24.87	N	OFF	19.9
8.889000	26.28	---	60.00	33.72	N	OFF	19.9
12.889500	---	26.46	50.00	23.54	N	OFF	20.0
12.889500	29.45	---	60.00	30.55	N	OFF	20.0



## Appendix B. Radiated Emission Test Result

Test Engineer :	Daniel Lee and Lewis He	Temperature :	20~23°C
		Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Horizontal
Remark :	#6 is system simulator signal which can be ignored.		

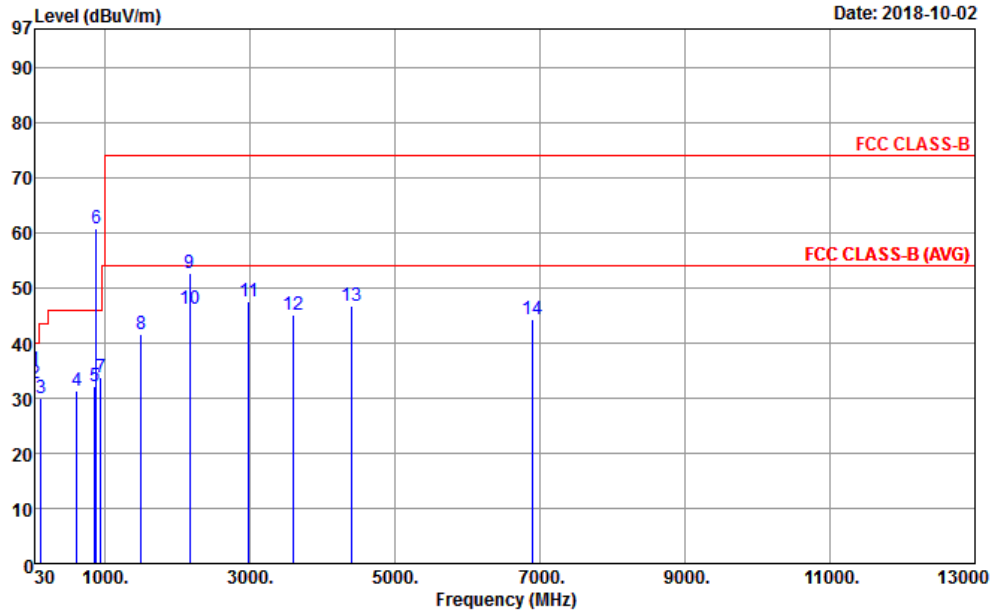


Site : 03CH10-HY  
 Condition : FCC CLASS-B 3m HORN 9120D-HF\_1522 HORIZONTAL  
 Project : 890804-04  
 Power : 120Vac/60Hz  
 Mode : 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	23.86	-16.14	40.00	31.89	24.07	0.60	32.78	---	---	Peak
2	159.33	25.36	-18.14	43.50	39.59	16.69	1.33	32.67	---	---	Peak
3	296.76	27.77	-18.23	46.00	39.07	19.07	1.83	32.59	---	---	Peak
4	766.20	30.70	-15.30	46.00	31.47	28.38	2.93	32.69	---	---	Peak
5	849.50	31.55	-14.45	46.00	31.18	28.96	3.13	32.38	---	---	Peak
6 *	881.70	57.09			56.34	29.09	3.16	32.19	---	---	Peak
7	939.80	33.45	-12.55	46.00	30.82	30.19	3.29	31.64	100	0	Peak
8	1464.00	47.20	-26.80	74.00	79.07	25.69	4.13	61.69	100	0	Peak
9	2174.00	47.17	-26.83	74.00	76.95	26.85	5.10	61.73	---	---	Peak
10	2784.00	45.43	-28.57	74.00	73.13	28.32	5.84	61.86	---	---	Peak
11	4390.00	46.39	-27.61	74.00	69.36	31.47	7.86	62.30	---	---	Peak
12	4940.00	42.37	-31.63	74.00	63.63	32.68	8.36	62.30	---	---	Peak
13	6908.00	44.94	-29.06	74.00	62.33	36.54	9.56	63.49	---	---	Peak



Test Engineer :	Daniel Lee and Lewis He	Temperature :	20~23°C
		Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical
Remark :	#6 is system simulator signal which can be ignored.		



Site : 03CH10-HY  
 Condition : FCC CLASS-B 3m HORN 9120D-HF\_1522 VERTICAL  
 Project : 890804-04  
 Power : 120Vac/60Hz  
 Mode : 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.27	35.22	-4.78	40.00	42.75	24.57	0.60	32.78	100	0 Peak	
2	37.02	32.76	-7.24	40.00	43.79	21.04	0.60	32.77	---	---	Peak
3	119.91	30.00	-13.50	43.50	43.86	17.44	1.15	32.70	---	---	Peak
4	616.40	31.39	-14.61	46.00	35.16	25.83	2.63	32.81	---	---	Peak
5	863.50	32.02	-13.98	46.00	31.35	29.17	3.13	32.30	---	---	Peak
6 *	881.70	60.87			60.12	29.09	3.16	32.19	---	---	Peak
7	943.30	33.86	-12.14	46.00	31.00	30.37	3.29	31.60	---	---	Peak
8	1500.00	41.72	-32.28	74.00	73.44	25.80	4.18	61.70	---	---	Peak
9	2172.00	52.78	-21.22	74.00	82.56	26.85	5.10	61.73	100	185 Peak	
10	2172.00	46.14	-7.86	54.00	75.92	26.85	5.10	61.73	100	185 Average	
11	2988.00	47.48	-26.52	74.00	74.47	28.77	6.14	61.90	---	---	Peak
12	3600.00	45.01	-28.99	74.00	71.09	29.42	6.72	62.22	---	---	Peak
13	4394.00	46.67	-27.33	74.00	69.63	31.48	7.86	62.30	---	---	Peak
14	6896.00	44.35	-29.65	74.00	61.81	36.51	9.51	63.48	---	---	Peak