

# RF TEST REPORT



Report No.: 16021564-FCC-R1

Supersede Report No.: N/A

Applicant	Shenzhen PAKITE Technology Co.,Ltd.	
Product Name	RCA AV Sender & IR Remote Extender	
Main Model No.	PAT-220	
Serial Model	PAT-240, PAT-260, PAT-280, PAT-330, PAT-350, PAT-360, PAT-370, PAT-380	
Test Standard	FCC Part 15.249: 2016; C63.10: 2013	
Test Date	January 04 to January 10, 2017	
Issue Date	January 11, 2017	
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	
Equipment complied with the specification	<input checked="" type="checkbox"/>	
Equipment did not comply with the specification	<input type="checkbox"/>	
<i>Amos Xia</i>	<i>Miro Bao</i>	
Amos Xia Test Engineer	Miro Bao Checked By	
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only		

Issued by:

**SIEMIC (Nanjing-China) Laboratories**

2-1 Longcang Avenue Yuhua Economic and

Technology Development Park, Nanjing, China

Tel:+86(25)86730138 Fax:+86(25)86730127 Email: China@siemic.com.cn

## Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

Test Report No.	16021564-FCC-R1
Page	3 of 62

This page has been left blank intentionally.

## CONTENTS

1. REPORT REVISION HISTORY.....	5
2. CUSTOMER INFORMATION .....	5
3. TEST SITE INFORMATION.....	5
4. EQUIPMENT UNDER TEST (EUT) INFORMATION .....	6
5. TEST SUMMARY .....	7
6. MEASUREMENTS, EXAMINATION AND DERIVED RESULTS .....	8
6.1 ANTENNA REQUIREMENT .....	8
6.2 AC LINE CONDUCTED EMISSIONS.....	9
6.3 RADIATED SPURIOUS EMISSIONS.....	27
6.4 20 DB BANDWIDTH TESTING.....	41
6.5 BAND EDGE .....	43
ANNEX A. TEST INSTRUMENT .....	46
ANNEX B. EUT AND TEST SETUP PHOTOGRAPHS .....	47
ANNEX C. TEST SETUP AND SUPPORTING EQUIPMENT.....	57
ANNEX D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PARTLIST .....	60
ANNEX E. DECLARATION OF SIMILARITY .....	61

Test Report No.	16021564-FCC-R1
Page	5 of 62

## 1. Report Revision History

Report No.	Report Version	Description	Issue Date
16021564-FCC-R1	NONE	Original	January 11, 2017

## 2. Customer information

Applicant Name	Shenzhen PAKITE Technology Co.,Ltd.
Applicant Add	12 Floor, 6 Building, 2 Reservoir Avenue, Nankeng Community, Bantian Street, Longgang District, Shenzhen
Manufacturer	Shenzhen PAKITE Technology Co.,Ltd.
Manufacturer Add	12 Floor, 6 Building, 2 Reservoir Avenue, Nankeng Community, Bantian Street, Longgang District, Shenzhen

## 3. Test site information

Lab performing tests	SIEMIC (Nanjing-China) Laboratories
Lab Address	2-1 Longcang Avenue Yuhua Economic and Technology Development Park, Nanjing, China
FCC Test Site No.	986914
IC Test Site No.	4842B-1
Test Software	EZ_EMG

#### 4. Equipment under Test (EUT) Information

Description of EUT:	RCA AV Sender & IR Remote Extender
Main Model:	PAT-220
Serial Model:	PAT-240, PAT-260, PAT-280, PAT-330, PAT-350, PAT-360, PAT-370, PAT-380
Date EUT received:	December 16, 2016
Test Date(s):	January 04 to January 10, 2017
Antenna Gain:	2 dBi
Type of Modulation:	DSS
RF Operating Frequency (ies):	2414-2468 MHz (Tx)
Number of Channels:	4 CH(2414MHz, 2432MHz, 2450 MHz, 2468 MHz)
Port:	Composite video connector Port
Power:	Adapter: Model: SJ-0510-U INPUT: 100-240V~50/60Hz OUTPUT: 5Vdc 1000mA
Trade Name :	PAKITE
FCC ID:	2ABU5-24GAVSENDER

## 5. Test Summary

The product was tested in accordance with the following specifications.  
All testing has been performed according to below product classification:

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209, §15.249(a), §15.249(d)	Radiated Fundamental / Radiated Spurious Emissions	Compliance
§15.249(c)	20 dB Bandwidth	Compliance
§15.249(d)	Band Edge	Compliance

### Measurement Uncertainty

Emissions		
Test Item	Description	Uncertainty
Conducted Emissions & Radiated Spurious Emissions	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 (for EUTs < 0.5m X 0.5m X 0.5m)	1.634dB / 3.952dB

## 6. MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

### 6.1 Antenna Requirement

#### Standard Requirement:

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.
- c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

#### Antenna Connector Construction

EUT antenna is a PCB antenna. It is in accordance to section 15.203, please refer to the internal photos.

**Test Result: Pass**



## 6.2 AC Line Conducted Emissions

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 10, 2017
Tested By :	Amos Xia

Spec	Item	Requirement	Applicable														
\$15.207	a)	For Low-power radio-frequency devices 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, as measured using a 50 [μ]H/50 ohms line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequencies ranges.	<div>⊗</div>														
		<table><tr><th rowspan="2">Frequency ranges (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>QP</th><th>Average</th></tr><tr><td>0.15 ~ 0.5</td><td>66 – 56</td><td>56 – 46</td></tr><tr><td>0.5 ~ 5</td><td>56</td><td>46</td></tr><tr><td>5 ~ 30</td><td>60</td><td>50</td></tr></table>		Frequency ranges (MHz)	Limit (dBμV)		QP	Average	0.15 ~ 0.5	66 – 56	56 – 46	0.5 ~ 5	56	46	5 ~ 30	60	50
		Frequency ranges (MHz)			Limit (dBμV)												
				QP	Average												
		0.15 ~ 0.5		66 – 56	56 – 46												
		0.5 ~ 5		56	46												
5 ~ 30	60	50															
Test Setup	<div><div><div><div><div>Vertical Ground Reference Plane</div><div>40 cm</div><div>EUT</div><div>LISN</div></div><div><div>80 cm</div><div>Test Receiver</div></div><div>Horizontal Ground Reference Plane</div></div><div><div>Note: 1.Support units were connected to second LISN.</div><div>2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.</div></div></div></div>																
Procedure	<div><div><div>- The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B.</div><div>- The power supply for the EUT was fed through a 50W/50mH EUT LISN, connected to filtered mains.</div><div>- The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.</div><div>- All other supporting equipment was powered separately from another main supply.</div></div></div>																
Remark																	
Result	<div><div><div><div><div>⊗ Pass</div><div>⊞ Fail</div></div></div></div></div>																

Test Data    ☒ Yes                      ☐ N/A

Test Plot    ☒ Yes (See below)        ☐ N/A

Test Report No.	16021564-FCC-R1
Page	10 of 62

#### Data sample

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
-----	--------------------	-------------------	----------	------------------	----------------	---------------	------------------	-----------------	----------------

Frequency (MHz) = Emission frequency in MHz

Reading (dBμV) = Receiver Reading Value

Detector=Quasi Peak Detector or Average Detector

Lisn/Isn= Insertion loss of LISN

Ps\_Lmt= Insertion loss of transient limiter (The transient limiter included 10dB attenuation)

Cab\_L= cable loss

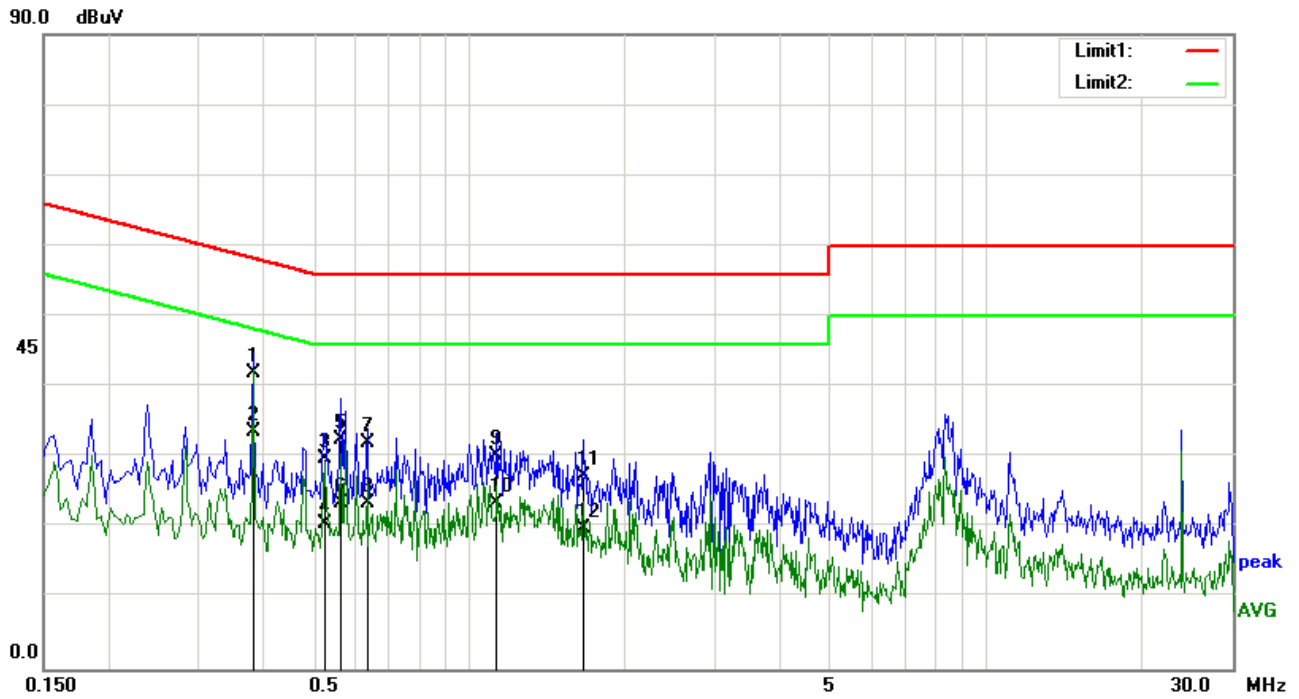
Result (dBμV) = Reading Value + Corrected Value

Limit (dBμV) = Limit stated in standard

#### Calculation Formula:

Margin (dB) = Result (dBμV) – limit (dBμV)

Test Mode: Transmitting Mode(2414MHz)

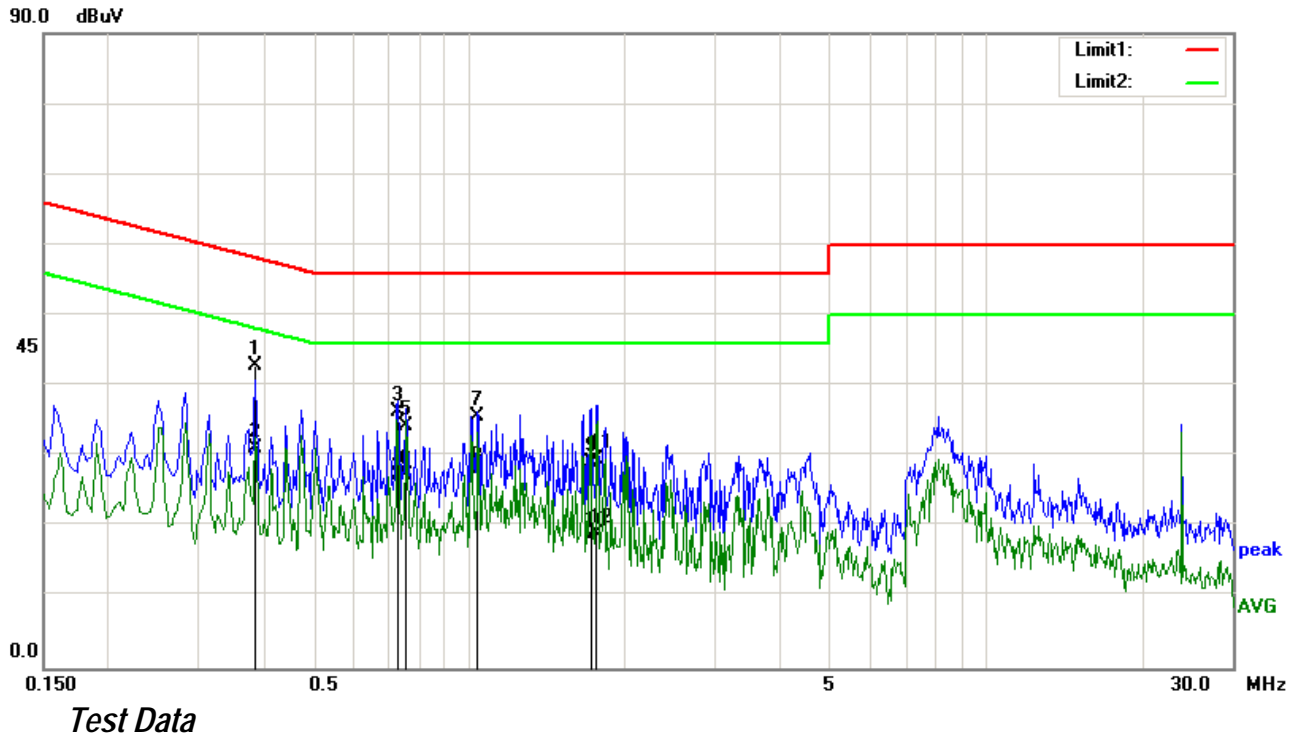


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3820	31.58	QP	0.11	-10.00	0.21	41.90	58.24	-16.34
2	0.3820	23.27	AVG	0.11	-10.00	0.21	33.59	48.24	-14.65
3	0.5260	19.54	QP	0.12	-10.00	0.21	29.87	56.00	-26.13
4	0.5260	10.19	AVG	0.12	-10.00	0.21	20.52	46.00	-25.48
5	0.5660	22.28	QP	0.12	-10.00	0.21	32.61	56.00	-23.39
6	0.5660	13.19	AVG	0.12	-10.00	0.21	23.52	46.00	-22.48
7	0.6340	21.81	QP	0.13	-10.00	0.20	32.14	56.00	-23.86
8	0.6340	13.14	AVG	0.13	-10.00	0.20	23.47	46.00	-22.53
9	1.1300	19.94	QP	0.14	-10.00	0.20	30.28	56.00	-25.72
10	1.1300	13.19	AVG	0.14	-10.00	0.20	23.53	46.00	-22.47
11	1.6660	17.04	QP	0.15	-10.00	0.21	27.40	56.00	-28.60
12	1.6660	9.45	AVG	0.15	-10.00	0.21	19.81	46.00	-26.19

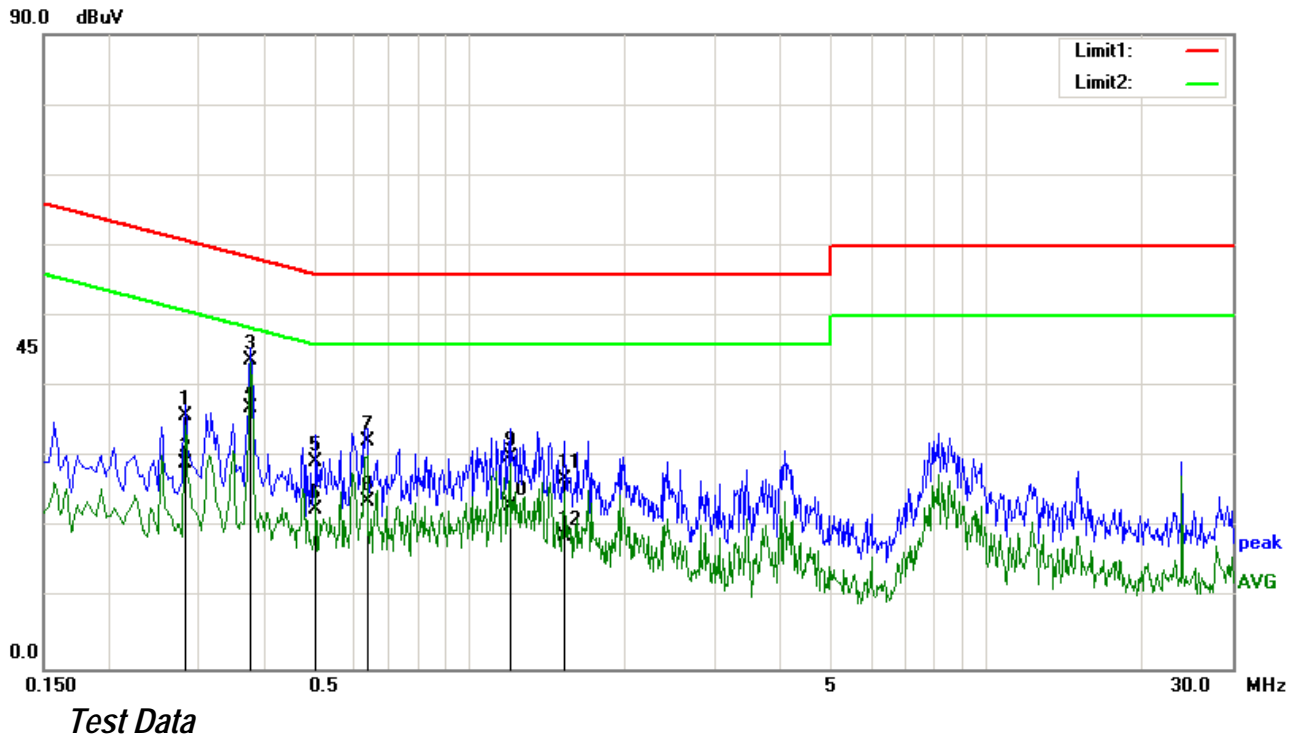
Test Mode: Transmitting Mode (2414MHz)



Phase Neutral Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3860	32.56	QP	0.11	-10.00	0.21	42.88	58.15	-15.27
2	0.3860	20.93	AVG	0.11	-10.00	0.21	31.25	48.15	-16.90
3	0.7300	26.05	QP	0.12	-10.00	0.20	36.37	56.00	-19.63
4	0.7300	16.92	AVG	0.12	-10.00	0.20	27.24	46.00	-18.76
5	0.7580	24.03	QP	0.12	-10.00	0.20	34.35	56.00	-21.65
6	0.7580	17.03	AVG	0.12	-10.00	0.20	27.35	46.00	-18.65
7	1.0420	25.30	QP	0.13	-10.00	0.19	35.62	56.00	-20.38
8	1.0420	17.56	AVG	0.13	-10.00	0.19	27.88	46.00	-18.12
9	1.7220	18.66	QP	0.16	-10.00	0.21	29.03	56.00	-26.97
10	1.7220	8.18	AVG	0.16	-10.00	0.21	18.55	46.00	-27.45
11	1.7700	19.22	QP	0.16	-10.00	0.21	29.59	56.00	-26.41
12	1.7700	8.54	AVG	0.16	-10.00	0.21	18.91	46.00	-27.09

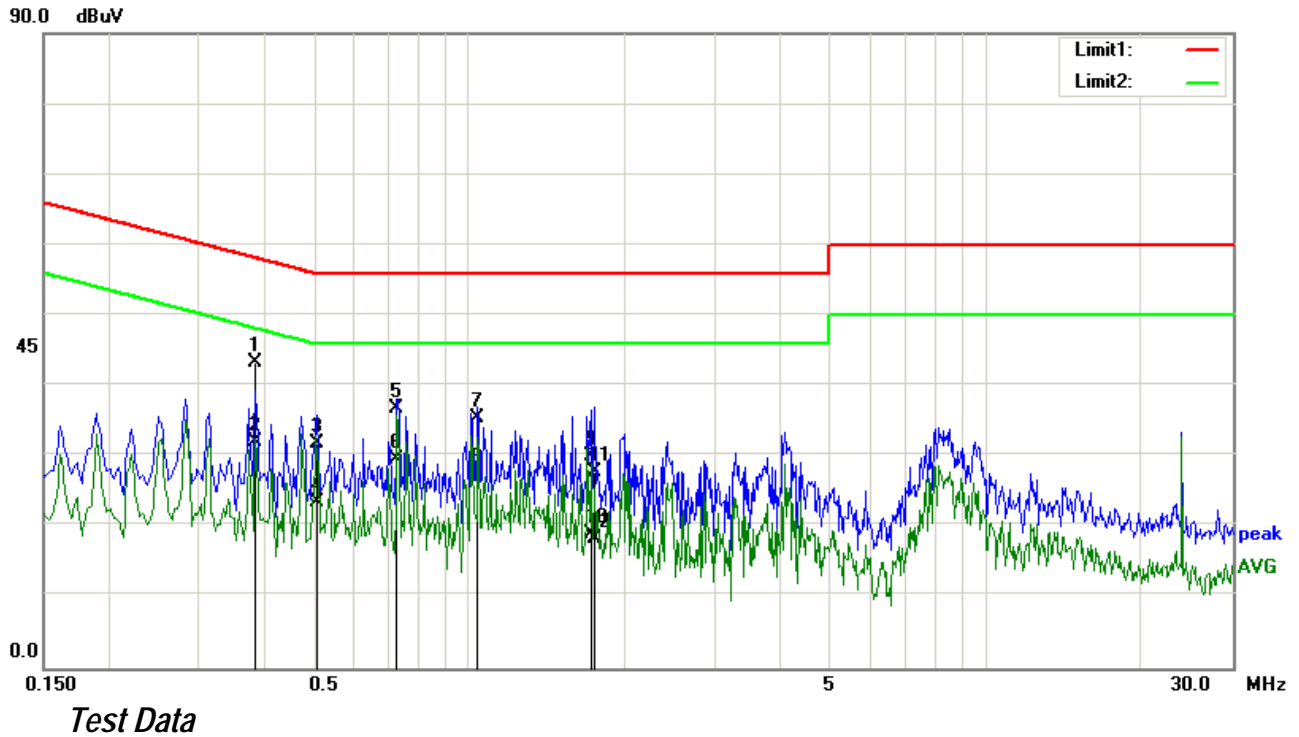
Test Mode: Transmitting Mode(2432MHz)



Phase Line Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.2820	25.53	QP	0.11	-10.00	0.20	35.84	60.76	-24.92
2	0.2820	18.80	AVG	0.11	-10.00	0.20	29.11	50.76	-21.65
3	0.3780	33.35	QP	0.11	-10.00	0.21	43.67	58.32	-14.65
4	0.3780	26.78	AVG	0.11	-10.00	0.21	37.10	48.32	-11.22
5	0.5060	19.12	QP	0.12	-10.00	0.21	29.45	56.00	-26.55
6	0.5060	12.33	AVG	0.12	-10.00	0.21	22.66	46.00	-23.34
7	0.6340	22.05	QP	0.13	-10.00	0.20	32.38	56.00	-23.62
8	0.6340	13.50	AVG	0.13	-10.00	0.20	23.83	46.00	-22.17
9	1.1980	19.75	QP	0.14	-10.00	0.21	30.10	56.00	-25.90
10	1.1980	12.65	AVG	0.14	-10.00	0.21	23.00	46.00	-23.00
11	1.5300	16.60	QP	0.15	-10.00	0.20	26.95	56.00	-29.05
12	1.5300	8.52	AVG	0.15	-10.00	0.20	18.87	46.00	-27.13

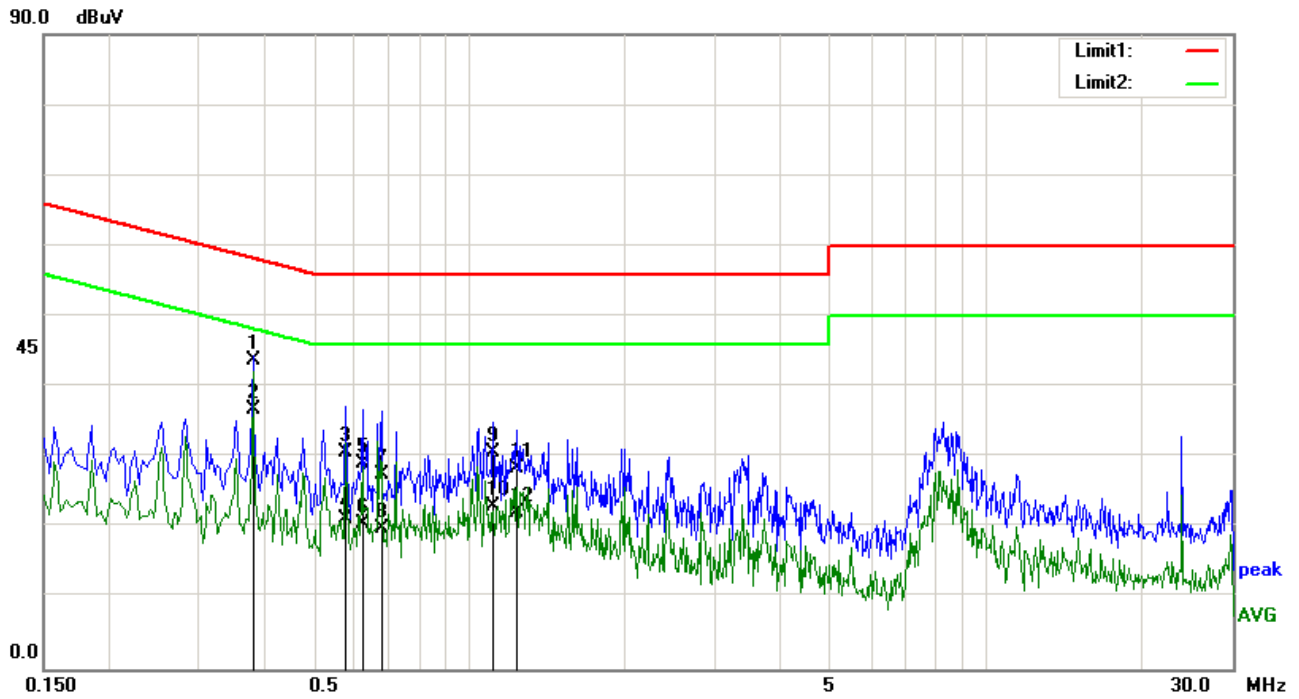
Test Mode: Transmitting Mode (2432MHz)



Phase Neutral Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3860	32.91	QP	0.11	-10.00	0.21	43.23	58.15	-14.92
2	0.3860	21.68	AVG	0.11	-10.00	0.21	32.00	48.15	-16.15
3	0.5100	21.49	QP	0.11	-10.00	0.21	31.81	56.00	-24.19
4	0.5100	13.28	AVG	0.11	-10.00	0.21	23.60	46.00	-22.40
5	0.7260	26.58	QP	0.12	-10.00	0.20	36.90	56.00	-19.10
6	0.7260	19.25	AVG	0.12	-10.00	0.20	29.57	46.00	-16.43
7	1.0420	25.04	QP	0.13	-10.00	0.19	35.36	56.00	-20.64
8	1.0420	17.32	AVG	0.13	-10.00	0.19	27.64	46.00	-18.36
9	1.7180	19.59	QP	0.16	-10.00	0.21	29.96	56.00	-26.04
10	1.7180	8.54	AVG	0.16	-10.00	0.21	18.91	46.00	-27.09
11	1.7460	17.43	QP	0.16	-10.00	0.21	27.80	56.00	-28.20
12	1.7460	7.94	AVG	0.16	-10.00	0.21	18.31	46.00	-27.69

Test Mode: Transmitting Mode(2450MHz)

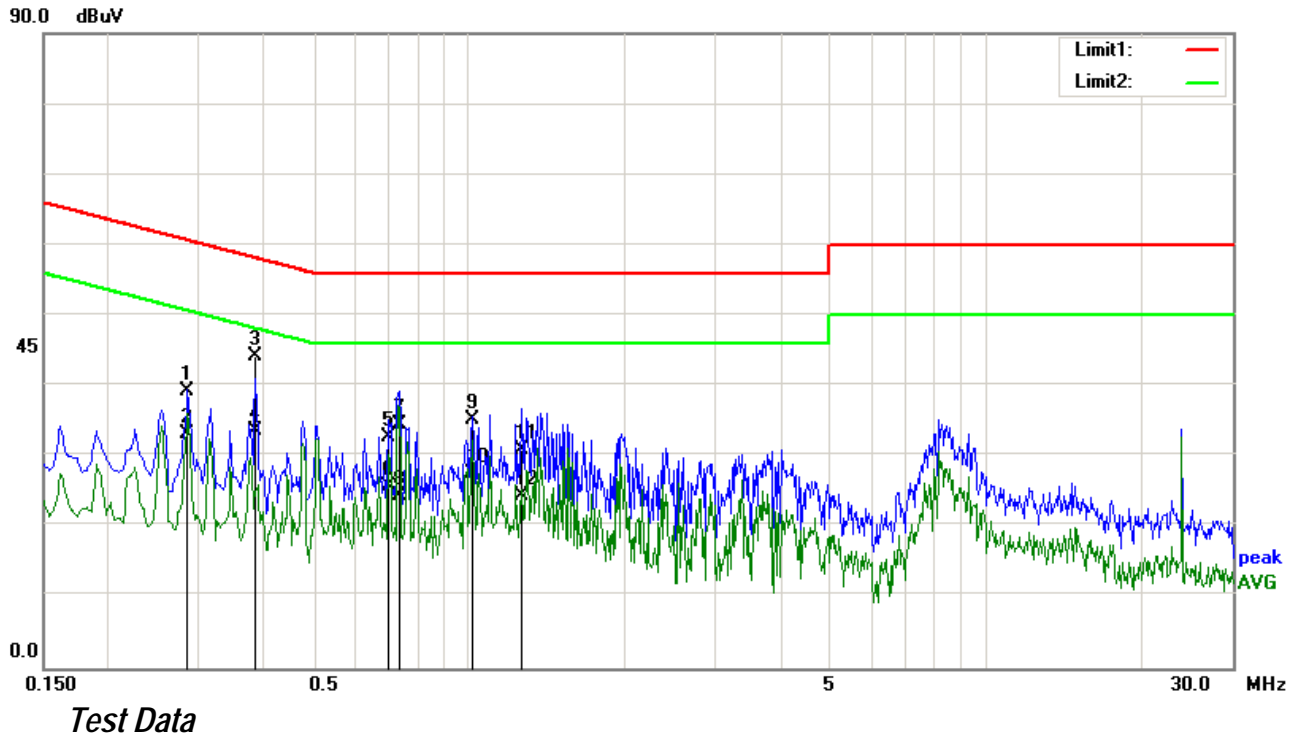


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3820	33.52	QP	0.11	-10.00	0.21	43.84	58.24	-14.40
2	0.3820	26.46	AVG	0.11	-10.00	0.21	36.78	48.24	-11.46
3	0.5780	20.42	QP	0.12	-10.00	0.21	30.75	56.00	-25.25
4	0.5780	10.90	AVG	0.12	-10.00	0.21	21.23	46.00	-24.77
5	0.6220	18.74	QP	0.13	-10.00	0.21	29.08	56.00	-26.92
6	0.6220	10.32	AVG	0.13	-10.00	0.21	20.66	46.00	-25.34
7	0.6780	17.24	QP	0.13	-10.00	0.20	27.57	56.00	-28.43
8	0.6780	9.49	AVG	0.13	-10.00	0.20	19.82	46.00	-26.18
9	1.1140	20.39	QP	0.14	-10.00	0.20	30.73	56.00	-25.27
10	1.1140	12.69	AVG	0.14	-10.00	0.20	23.03	46.00	-22.97
11	1.2420	18.11	QP	0.14	-10.00	0.21	28.46	56.00	-27.54
12	1.2420	11.76	AVG	0.14	-10.00	0.21	22.11	46.00	-23.89

Test Mode: Transmitting Mode (2450MHz)

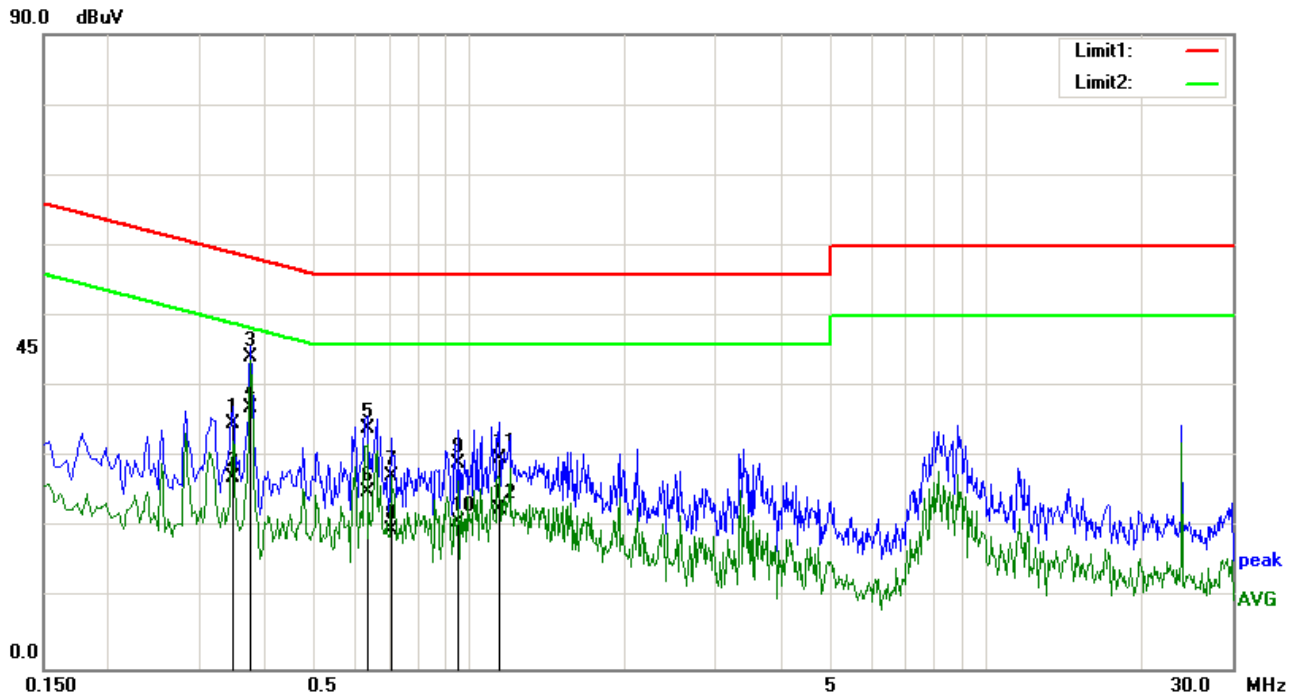


Phase Neutral Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.2860	28.94	QP	0.10	-10.00	0.20	39.24	60.64	-21.40
2	0.2860	22.92	AVG	0.10	-10.00	0.20	33.22	50.64	-17.42
3	0.3860	33.78	QP	0.11	-10.00	0.21	44.10	58.15	-14.05
4	0.3860	23.22	AVG	0.11	-10.00	0.21	33.54	48.15	-14.61
5	0.6980	22.46	QP	0.12	-10.00	0.20	32.78	56.00	-23.22
6	0.6980	15.46	AVG	0.12	-10.00	0.20	25.78	46.00	-20.22
7	0.7340	24.29	QP	0.12	-10.00	0.20	34.61	56.00	-21.39
8	0.7340	14.02	AVG	0.12	-10.00	0.20	24.34	46.00	-21.66
9	1.0140	24.79	QP	0.13	-10.00	0.19	35.11	56.00	-20.89
10	1.0140	17.35	AVG	0.13	-10.00	0.19	27.67	46.00	-18.33
11	1.2660	20.68	QP	0.14	-10.00	0.21	31.03	56.00	-24.97
12	1.2660	14.05	AVG	0.14	-10.00	0.21	24.40	46.00	-21.60



Test Mode: Transmitting Mode(2468MHz)

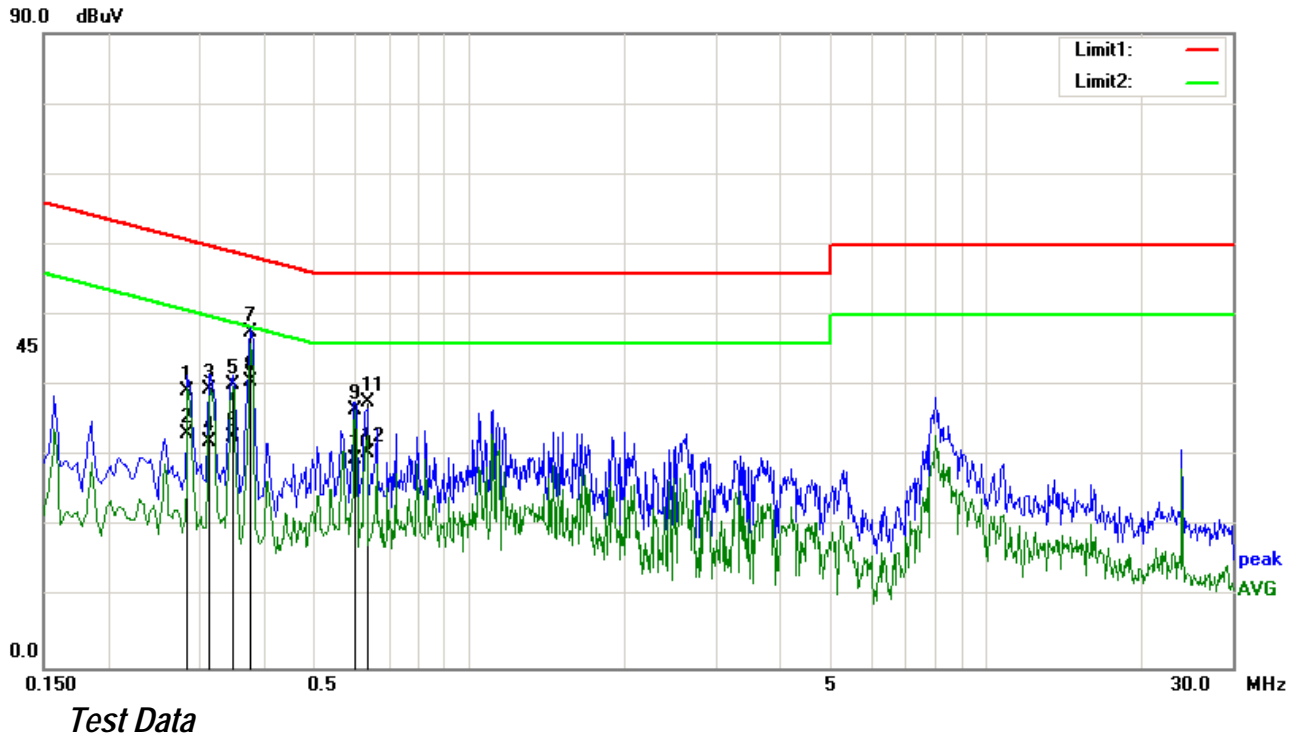


Test Data

Phase Line Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3500	24.52	QP	0.11	-10.00	0.20	34.83	58.96	-24.13
2	0.3500	16.79	AVG	0.11	-10.00	0.20	27.10	48.96	-21.86
3	0.3780	33.98	QP	0.11	-10.00	0.21	44.30	58.32	-14.02
4	0.3780	26.61	AVG	0.11	-10.00	0.21	36.93	48.32	-11.39
5	0.6340	23.72	QP	0.13	-10.00	0.20	34.05	56.00	-21.95
6	0.6340	14.83	AVG	0.13	-10.00	0.20	25.16	46.00	-20.84
7	0.7060	16.90	QP	0.13	-10.00	0.20	27.23	56.00	-28.77
8	0.7060	9.42	AVG	0.13	-10.00	0.20	19.75	46.00	-26.25
9	0.9580	18.87	QP	0.14	-10.00	0.19	29.20	56.00	-26.80
10	0.9580	10.49	AVG	0.14	-10.00	0.19	20.82	46.00	-25.18
11	1.1420	19.50	QP	0.14	-10.00	0.20	29.84	56.00	-26.16
12	1.1420	12.34	AVG	0.14	-10.00	0.20	22.68	46.00	-23.32

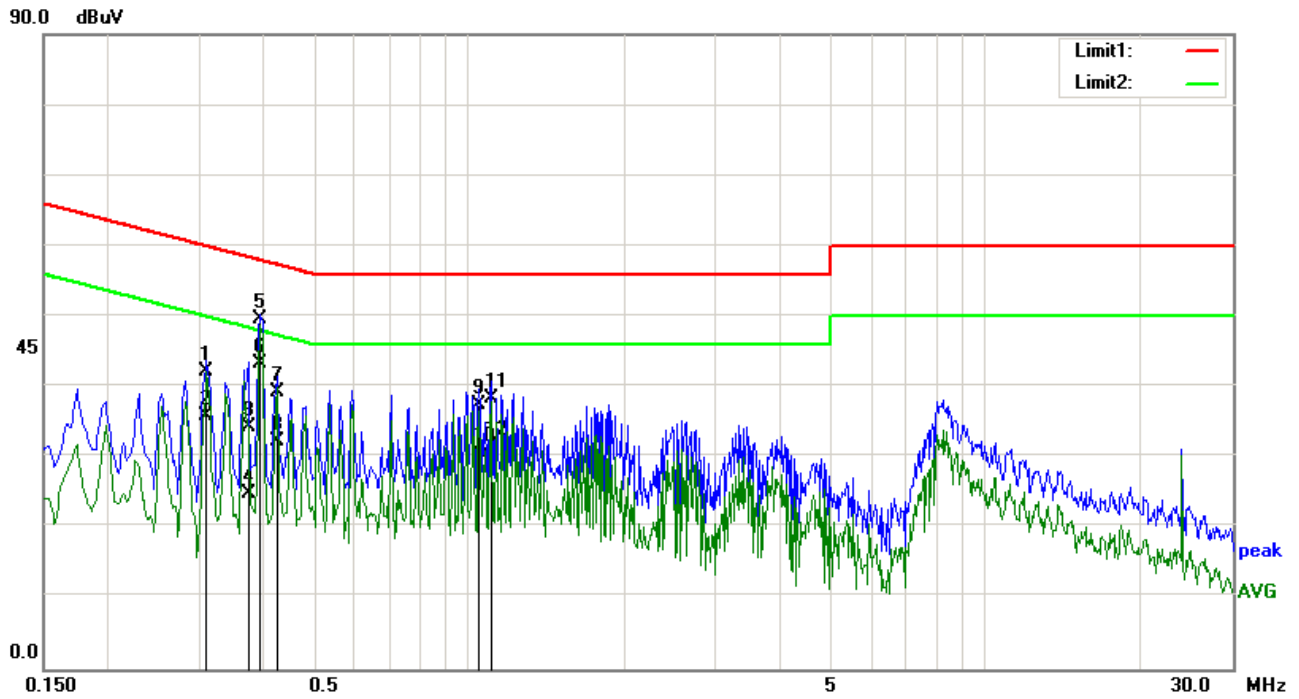
Test Mode: Transmitting Mode (2468MHz)



Phase Neutral Plot at 120Vac, 60Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.2860	28.97	QP	0.10	-10.00	0.20	39.27	60.64	-21.37
2	0.2860	22.92	AVG	0.10	-10.00	0.20	33.22	50.64	-17.42
3	0.3140	29.21	QP	0.10	-10.00	0.20	39.51	59.86	-20.35
4	0.3140	21.83	AVG	0.10	-10.00	0.20	32.13	49.86	-17.73
5	0.3500	29.82	QP	0.10	-10.00	0.20	40.12	58.96	-18.84
6	0.3500	22.54	AVG	0.10	-10.00	0.20	32.84	48.96	-16.12
7	0.3780	37.26	QP	0.11	-10.00	0.21	47.58	58.32	-10.74
8	0.3780	30.19	AVG	0.11	-10.00	0.21	40.51	48.32	-7.81
9	0.6020	26.27	QP	0.12	-10.00	0.21	36.60	56.00	-19.40
10	0.6020	19.26	AVG	0.12	-10.00	0.21	29.59	46.00	-16.41
11	0.6340	27.30	QP	0.12	-10.00	0.20	37.62	56.00	-18.38
12	0.6340	20.10	AVG	0.12	-10.00	0.20	30.42	46.00	-15.58

Test Mode: Transmitting Mode(2414MHz)

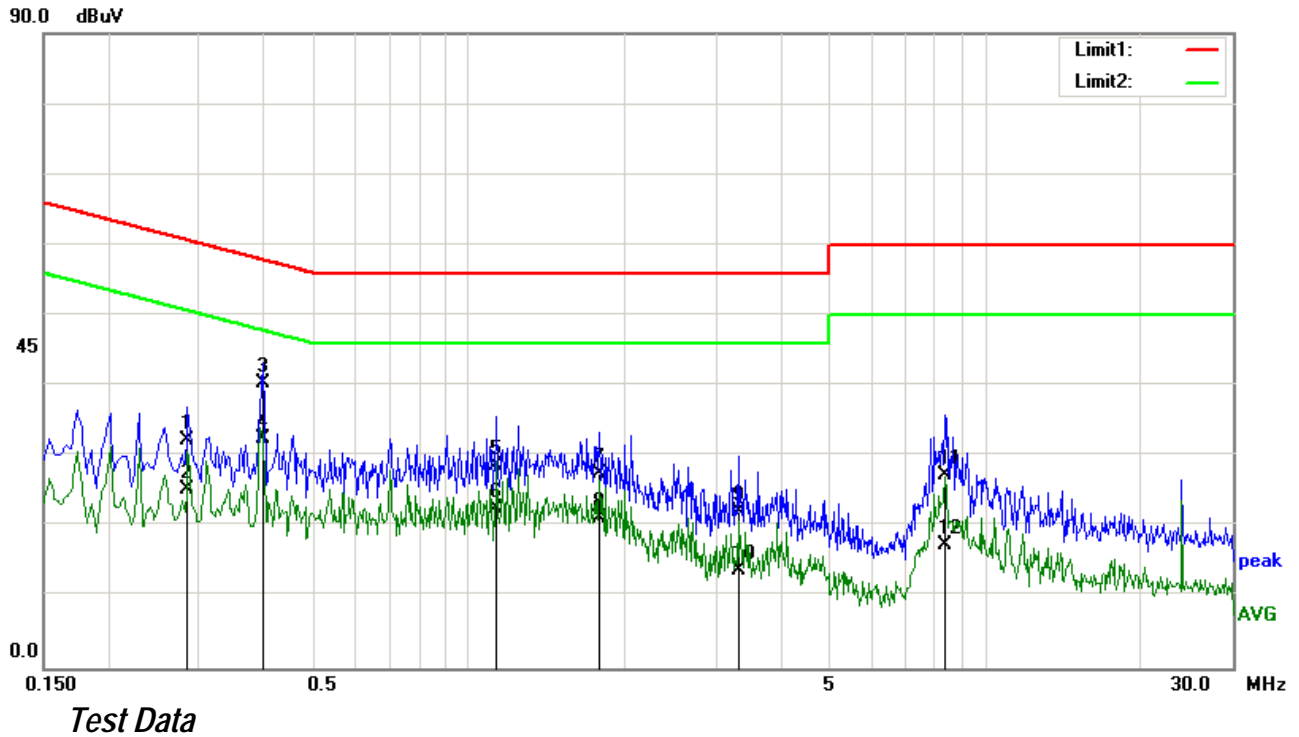


Test Data

Phase Line Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3100	31.93	QP	0.11	-10.00	0.20	42.24	59.97	-17.73
2	0.3100	25.66	AVG	0.11	-10.00	0.20	35.97	49.97	-14.00
3	0.3740	23.92	QP	0.11	-10.00	0.20	34.23	58.41	-24.18
4	0.3740	14.52	AVG	0.11	-10.00	0.20	24.83	48.41	-23.58
5	0.3940	39.30	QP	0.11	-10.00	0.21	49.62	57.98	-8.36
6	0.3940	32.91	AVG	0.11	-10.00	0.21	43.23	47.98	-4.75
7	0.4260	28.92	QP	0.12	-10.00	0.21	39.25	57.33	-18.08
8	0.4260	22.01	AVG	0.12	-10.00	0.21	32.34	47.33	-14.99
9	1.0460	27.13	QP	0.14	-10.00	0.19	37.46	56.00	-18.54
10	1.0460	20.29	AVG	0.14	-10.00	0.19	30.62	46.00	-15.38
11	1.1020	28.13	QP	0.14	-10.00	0.20	38.47	56.00	-17.53
12	1.1020	21.34	AVG	0.14	-10.00	0.20	31.68	46.00	-14.32

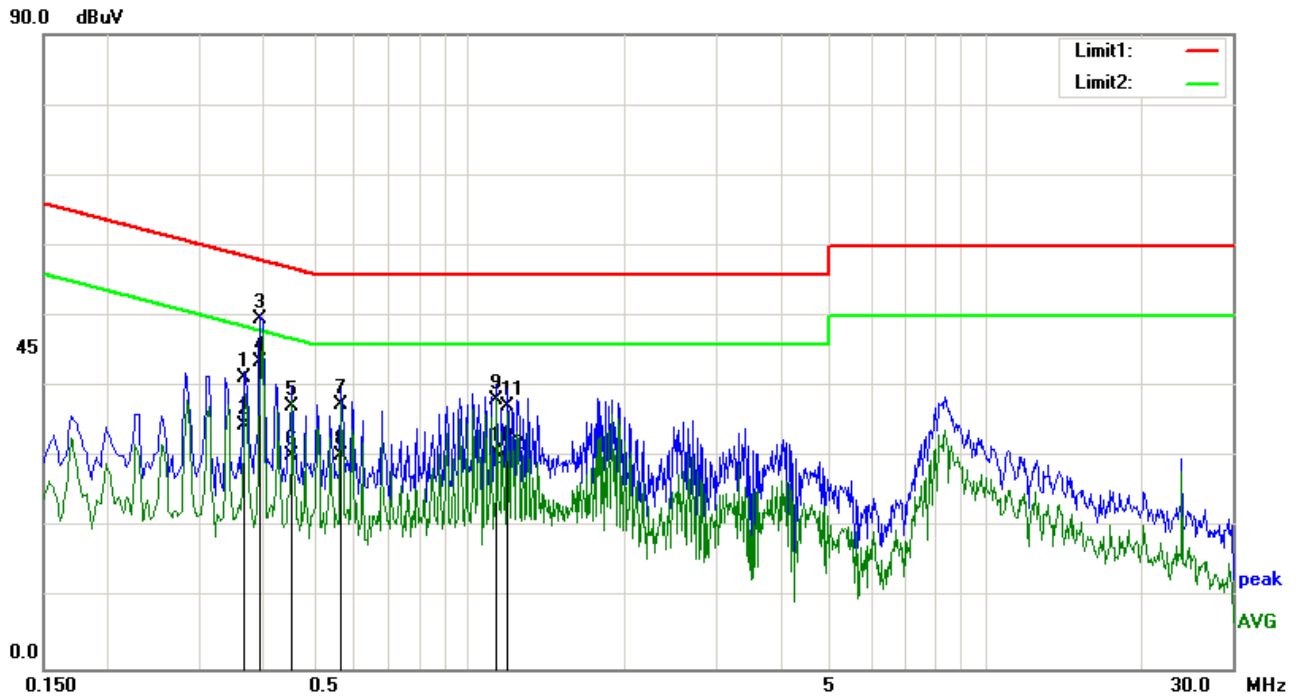
Test Mode: Transmitting Mode (2414MHz)



Phase Neutral Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.2860	22.03	QP	0.10	-10.00	0.20	32.33	60.64	-28.31
2	0.2860	14.93	AVG	0.10	-10.00	0.20	25.23	50.64	-25.41
3	0.3980	30.10	QP	0.11	-10.00	0.21	40.42	57.90	-17.48
4	0.3980	22.24	AVG	0.11	-10.00	0.21	32.56	47.90	-15.34
5	1.1340	18.38	QP	0.14	-10.00	0.20	28.72	56.00	-27.28
6	1.1340	12.19	AVG	0.14	-10.00	0.20	22.53	46.00	-23.47
7	1.7820	17.13	QP	0.16	-10.00	0.21	27.50	56.00	-28.50
8	1.7820	10.93	AVG	0.16	-10.00	0.21	21.30	46.00	-24.70
9	3.3180	11.63	QP	0.22	-10.00	0.24	22.09	56.00	-33.91
10	3.3180	3.41	AVG	0.22	-10.00	0.24	13.87	46.00	-32.13
11	8.3460	16.52	QP	0.46	-10.00	0.36	27.34	60.00	-32.66
12	8.3460	6.55	AVG	0.46	-10.00	0.36	17.37	50.00	-32.63

Test Mode: Transmitting Mode(2432MHz)

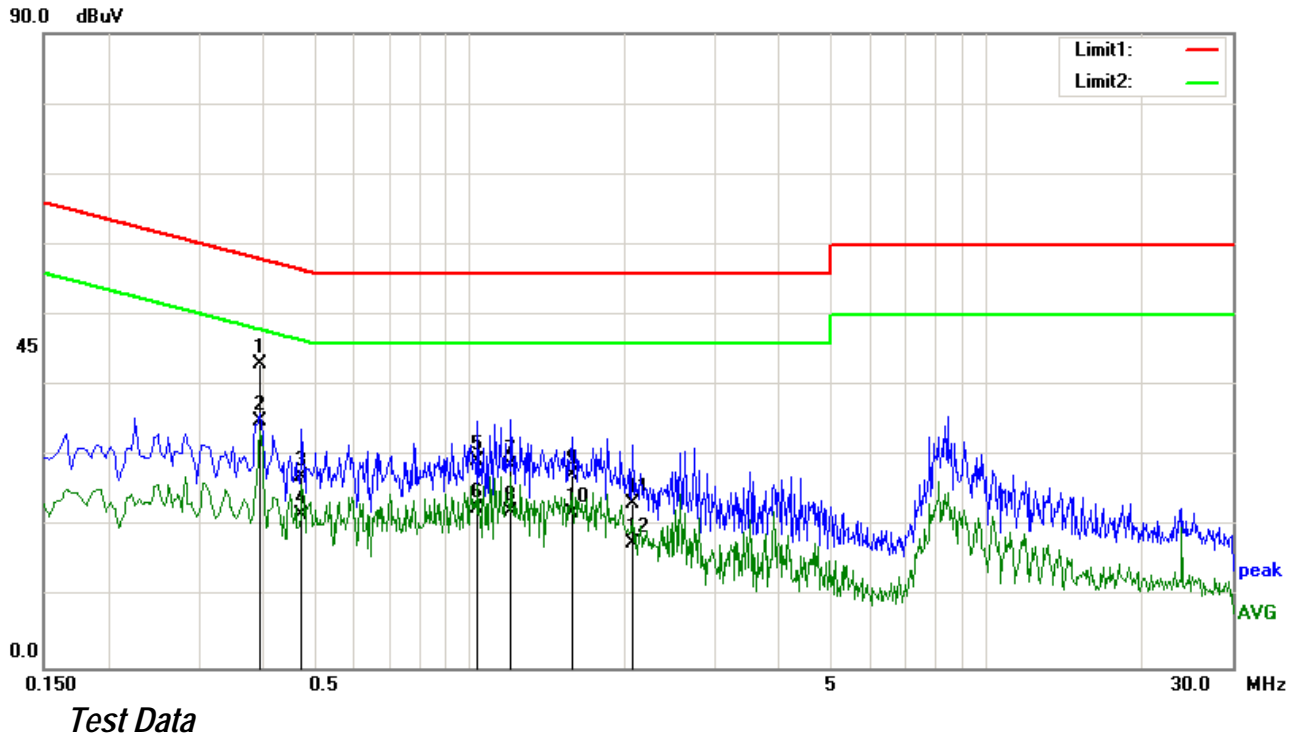


Test Data

Phase Line Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3660	31.03	QP	0.11	-10.00	0.20	41.34	58.59	-17.25
2	0.3660	24.22	AVG	0.11	-10.00	0.20	34.53	48.59	-14.06
3	0.3940	39.33	QP	0.11	-10.00	0.21	49.65	57.98	-8.33
4	0.3940	33.16	AVG	0.11	-10.00	0.21	43.48	47.98	-4.50
5	0.4540	26.87	QP	0.12	-10.00	0.21	37.20	56.80	-19.60
6	0.4540	19.94	AVG	0.12	-10.00	0.21	30.27	46.80	-16.53
7	0.5660	27.24	QP	0.12	-10.00	0.21	37.57	56.00	-18.43
8	0.5660	19.84	AVG	0.12	-10.00	0.21	30.17	46.00	-15.83
9	1.1300	27.80	QP	0.14	-10.00	0.20	38.14	56.00	-17.86
10	1.1300	20.28	AVG	0.14	-10.00	0.20	30.62	46.00	-15.38
11	1.1860	26.91	QP	0.14	-10.00	0.20	37.25	56.00	-18.75
12	1.1860	19.23	AVG	0.14	-10.00	0.20	29.57	46.00	-16.43

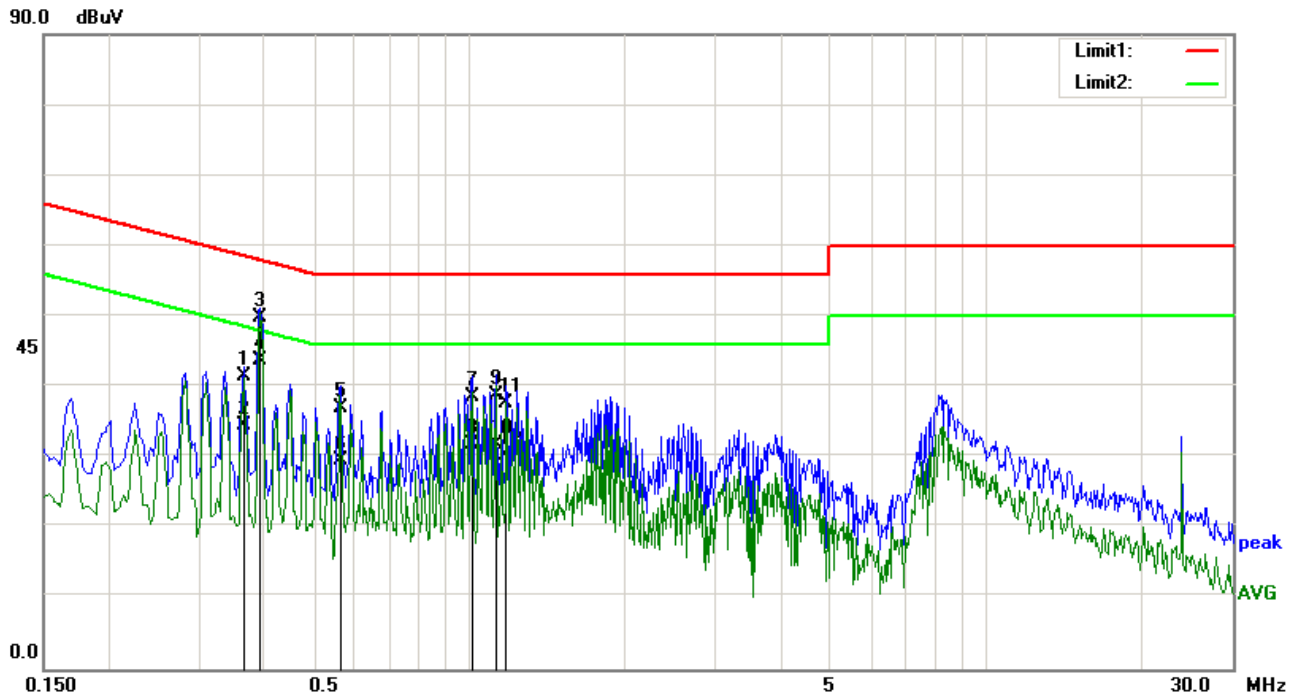
Test Mode: Transmitting Mode (2432MHz)



Phase Neutral Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3940	32.82	QP	0.11	-10.00	0.21	43.14	57.98	-14.84
2	0.3940	24.63	AVG	0.11	-10.00	0.21	34.95	47.98	-13.03
3	0.4740	16.76	QP	0.11	-10.00	0.21	27.08	56.44	-29.36
4	0.4740	11.42	AVG	0.11	-10.00	0.21	21.74	46.44	-24.70
5	1.0380	19.07	QP	0.13	-10.00	0.19	29.39	56.00	-26.61
6	1.0380	12.25	AVG	0.13	-10.00	0.19	22.57	46.00	-23.43
7	1.2060	18.31	QP	0.14	-10.00	0.21	28.66	56.00	-27.34
8	1.2060	11.80	AVG	0.14	-10.00	0.21	22.15	46.00	-23.85
9	1.5780	16.89	QP	0.15	-10.00	0.20	27.24	56.00	-28.76
10	1.5780	11.59	AVG	0.15	-10.00	0.20	21.94	46.00	-24.06
11	2.0700	12.98	QP	0.17	-10.00	0.19	23.34	56.00	-32.66
12	2.0700	7.39	AVG	0.17	-10.00	0.19	17.75	46.00	-28.25

Test Mode: Transmitting Mode(2450MHz)

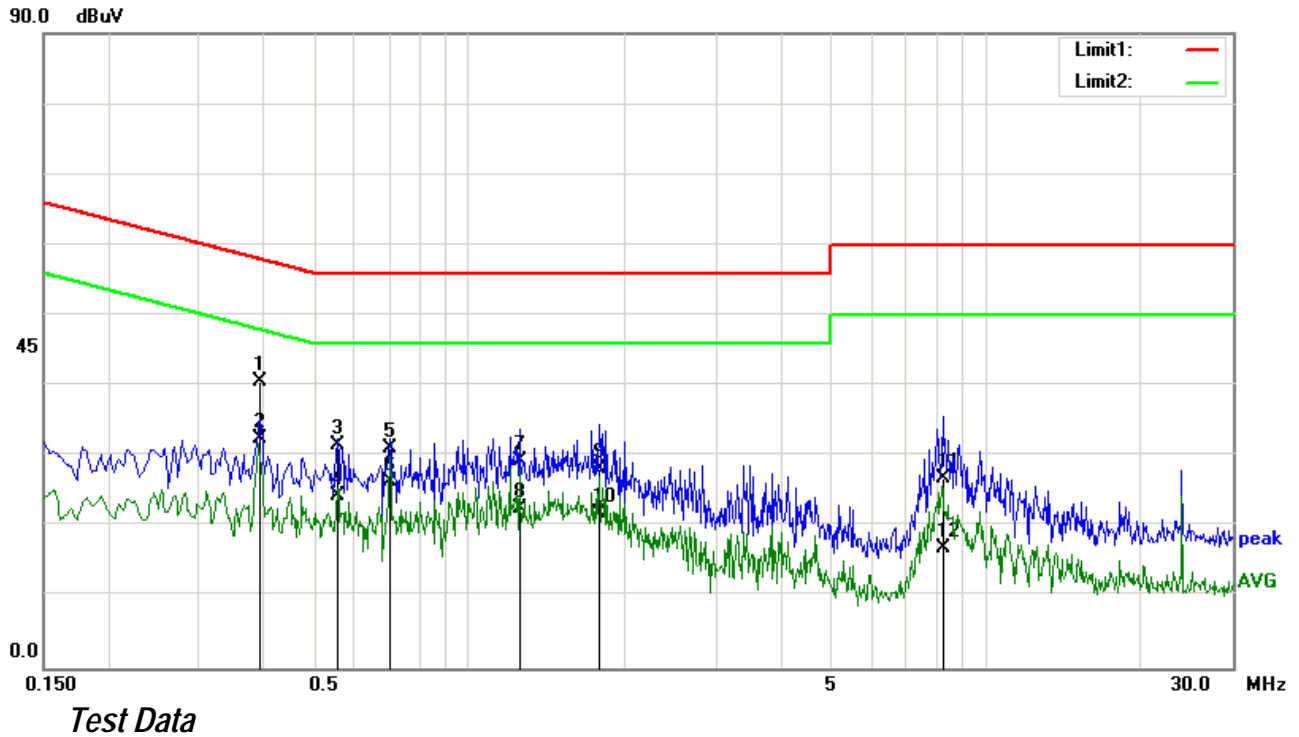


Test Data

Phase Line Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3660	31.22	QP	0.11	-10.00	0.20	41.53	58.59	-17.06
2	0.3660	24.31	AVG	0.11	-10.00	0.20	34.62	48.59	-13.97
3	0.3940	39.56	QP	0.11	-10.00	0.21	49.88	57.98	-8.10
4	0.3940	33.42	AVG	0.11	-10.00	0.21	43.74	47.98	-4.24
5	0.5660	26.77	QP	0.12	-10.00	0.21	37.10	56.00	-18.90
6	0.5660	19.15	AVG	0.12	-10.00	0.21	29.48	46.00	-16.52
7	1.0140	28.20	QP	0.14	-10.00	0.19	38.53	56.00	-17.47
8	1.0140	21.44	AVG	0.14	-10.00	0.19	31.77	46.00	-14.23
9	1.1260	28.42	QP	0.14	-10.00	0.20	38.76	56.00	-17.24
10	1.1260	21.48	AVG	0.14	-10.00	0.20	31.82	46.00	-14.18
11	1.1820	27.30	QP	0.14	-10.00	0.20	37.64	56.00	-18.36
12	1.1820	19.93	AVG	0.14	-10.00	0.20	30.27	46.00	-15.73

Test Mode: Transmitting Mode (2450MHz)

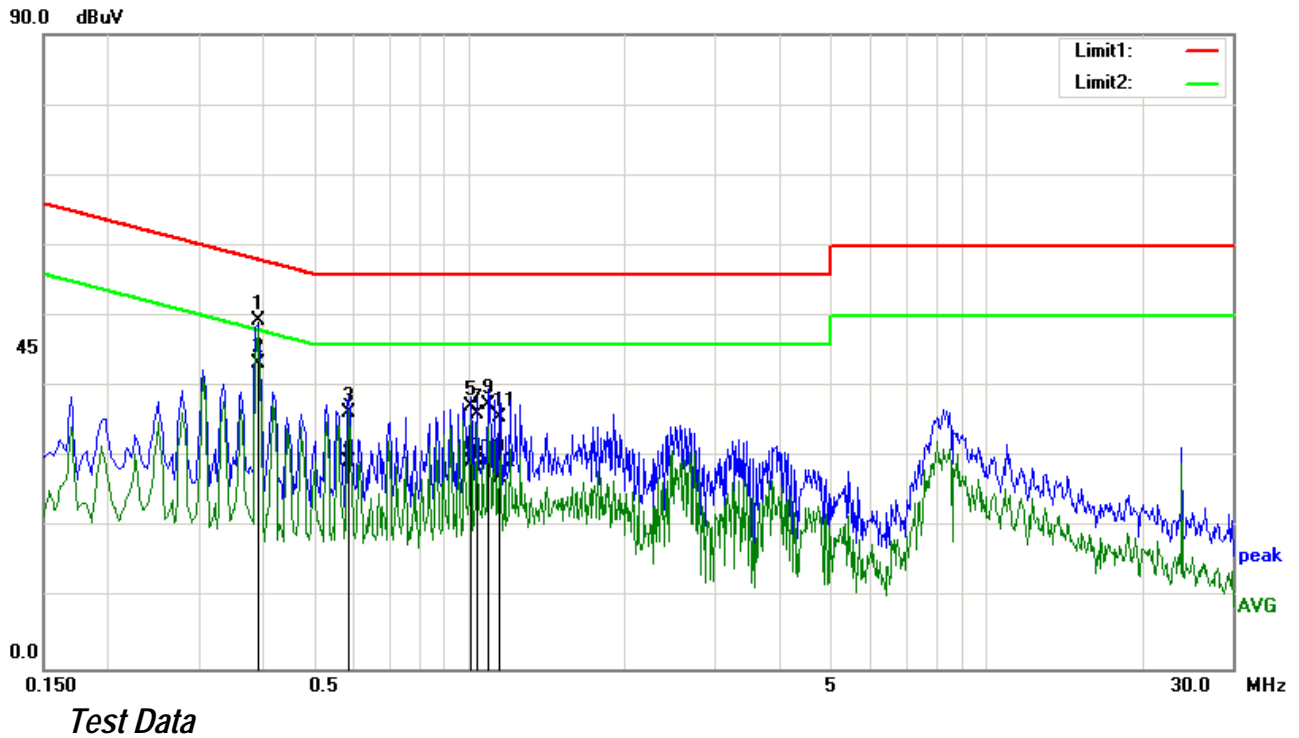


Phase Neutral Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3940	30.22	QP	0.11	-10.00	0.21	40.54	57.98	-17.44
2	0.3940	22.27	AVG	0.11	-10.00	0.21	32.59	47.98	-15.39
3	0.5580	21.22	QP	0.11	-10.00	0.21	31.54	56.00	-24.46
4	0.5580	14.06	AVG	0.11	-10.00	0.21	24.38	46.00	-21.62
5	0.7020	20.82	QP	0.12	-10.00	0.20	31.14	56.00	-24.86
6	0.7020	16.08	AVG	0.12	-10.00	0.20	26.40	46.00	-19.60
7	1.2540	18.97	QP	0.14	-10.00	0.21	29.32	56.00	-26.68
8	1.2540	12.32	AVG	0.14	-10.00	0.21	22.67	46.00	-23.33
9	1.7900	17.82	QP	0.16	-10.00	0.21	28.19	56.00	-27.81
10	1.7900	11.54	AVG	0.16	-10.00	0.21	21.91	46.00	-24.09
11	8.2500	15.98	QP	0.46	-10.00	0.36	26.80	60.00	-33.20
12	8.2500	6.16	AVG	0.46	-10.00	0.36	16.98	50.00	-33.02



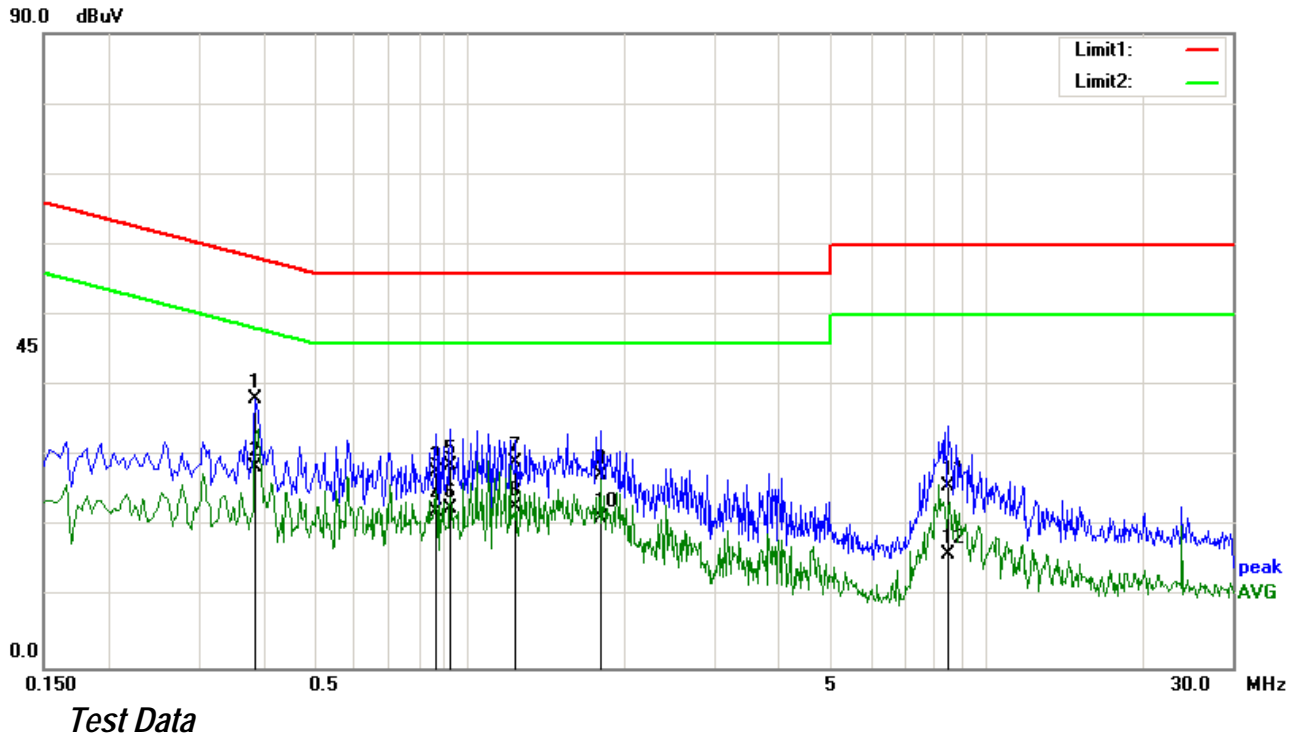
Test Mode: Transmitting Mode(2468MHz)



Phase Line Plot at 240Vac, 50Hz

No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3900	39.17	QP	0.11	-10.00	0.21	49.49	58.06	-8.57
2	0.3900	32.89	AVG	0.11	-10.00	0.21	43.21	48.06	-4.85
3	0.5860	25.95	QP	0.12	-10.00	0.21	36.28	56.00	-19.72
4	0.5860	19.04	AVG	0.12	-10.00	0.21	29.37	46.00	-16.63
5	1.0060	26.97	QP	0.14	-10.00	0.19	37.30	56.00	-18.70
6	1.0060	19.01	AVG	0.14	-10.00	0.19	29.34	46.00	-16.66
7	1.0340	25.80	QP	0.14	-10.00	0.19	36.13	56.00	-19.87
8	1.0340	17.88	AVG	0.14	-10.00	0.19	28.21	46.00	-17.79
9	1.0900	27.03	QP	0.14	-10.00	0.20	37.37	56.00	-18.63
10	1.0900	18.80	AVG	0.14	-10.00	0.20	29.14	46.00	-16.86
11	1.1460	25.30	QP	0.14	-10.00	0.20	35.64	56.00	-20.36
12	1.1460	16.69	AVG	0.14	-10.00	0.20	27.03	46.00	-18.97

Test Mode: Transmitting Mode (2468MHz)



Phase Neutral Plot at 240Vac, 50Hz

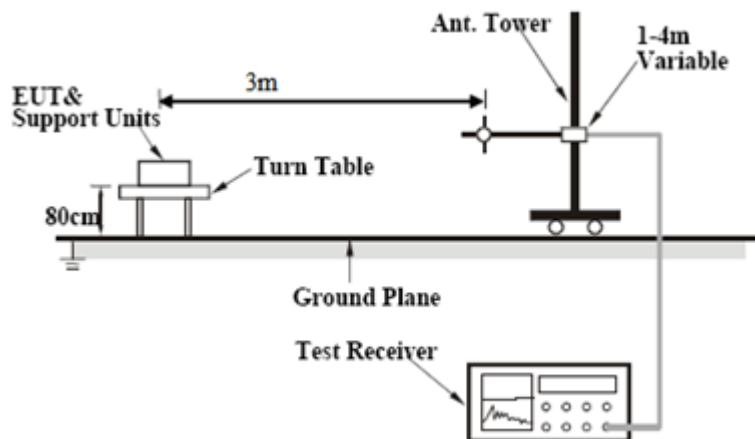
No.	Frequency (MHz)	Reading (dBμV)	Detector	Lisn/Isn (dB)	Ps_Lmt (dB)	Cab_L (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)
1	0.3860	27.80	QP	0.11	-10.00	0.21	38.12	58.15	-20.03
2	0.3860	18.08	AVG	0.11	-10.00	0.21	28.40	48.15	-19.75
3	0.8660	17.52	QP	0.13	-10.00	0.20	27.85	56.00	-28.15
4	0.8660	11.84	AVG	0.13	-10.00	0.20	22.17	46.00	-23.83
5	0.9220	18.31	QP	0.13	-10.00	0.19	28.63	56.00	-27.37
6	0.9220	12.22	AVG	0.13	-10.00	0.19	22.54	46.00	-23.46
7	1.2300	18.72	QP	0.14	-10.00	0.21	29.07	56.00	-26.93
8	1.2300	12.55	AVG	0.14	-10.00	0.21	22.90	46.00	-23.10
9	1.7940	16.88	QP	0.16	-10.00	0.20	27.24	56.00	-28.76
10	1.7940	10.92	AVG	0.16	-10.00	0.20	21.28	46.00	-24.72
11	8.4180	15.01	QP	0.47	-10.00	0.36	25.84	60.00	-34.16
12	8.4180	5.23	AVG	0.47	-10.00	0.36	16.06	50.00	-33.94

## 6.3 Radiated Spurious Emissions

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 04, 2017
Tested By :	Amos Xia

### Requirement(s):

Spec	Item	Requirement	Applicable															
§15.209, §15.205, §15.249(a) & §15.249(d)	a)	The emissions from the Low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges. The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:	<div><input checked="" type="checkbox"/></div>															
		<table><tr><th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr><tr><td>902–928 MHz</td><td>50</td><td>500</td></tr><tr><td>2400–2483.5 MHz</td><td>50</td><td>500</td></tr><tr><td>5725–5875 MHz</td><td>50</td><td>500</td></tr><tr><td>24.0–24.25 GHz</td><td>250</td><td>2500</td></tr></table>		Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)	902–928 MHz	50	500	2400–2483.5 MHz	50	500	5725–5875 MHz	50	500	24.0–24.25 GHz	250	2500
		Fundamental frequency		Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)													
		902–928 MHz		50	500													
		2400–2483.5 MHz		50	500													
		5725–5875 MHz		50	500													
		24.0–24.25 GHz		250	2500													

Test Setup	 <p>The diagram illustrates the test setup. A Turn Table is placed on a Ground Plane, with EUT &amp; Support Units on top. The distance between the Turn Table and the Ant. Tower is 3m. The Ant. Tower has a 1-4m Variable antenna. A Test Receiver is connected to the antenna. The height of the EUT &amp; Support Units is 80cm.</p>
------------	--

Procedure	<ul style="list-style-type: none"> <li>- Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function</li> <li>- For emission frequencies measured below 1GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1GHz, a pre-scan also be performed with a meter measuring distance before final test.</li> <li>- For emission frequencies measured below and above 1GHz, set the spectrum analyzer on a 100kHz and 1MHz resolution bandwidth respectively for each frequency measured in step 2.</li> <li>- The search antenna is to be raised and lowered over a range from 1 to 4m in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, the change the orientation of EUT on the test table over a range from 0 to 360°. With a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.</li> <li>- Repeat step 4 until all frequencies need to be measured was complete.</li> </ul>
-----------	--

Test Report No.	16021564-FCC-R1
Page	28 of 62

	- Repeat step5 with search antenna in vertical polarized orientations.
Remark	
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data ☒ Yes ☐ N/A

Test Plot ☒ Yes (See below) ☐ N/A

#### Data sample

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
-----	--------------------	---------------------	----------	-----------------	--------------	---------------	--------------------	-------------------	----------------	----------------	---------------

Frequency (MHz) = Emission frequency in MHz

Reading (dBμV/m) = Receiver Reading Value

Detector= Peak Detector or Quasi Peak Detector

Ant\_F=Antenna Factor

PA\_G=Pre-Amplifier Gain

Cab\_L=Cable Loss

Result (dBμV/m) = Reading Value + Corrected Value

Limit (dBμV/m) = Limit stated in standard

Height (cm) = Height of Receiver antenna

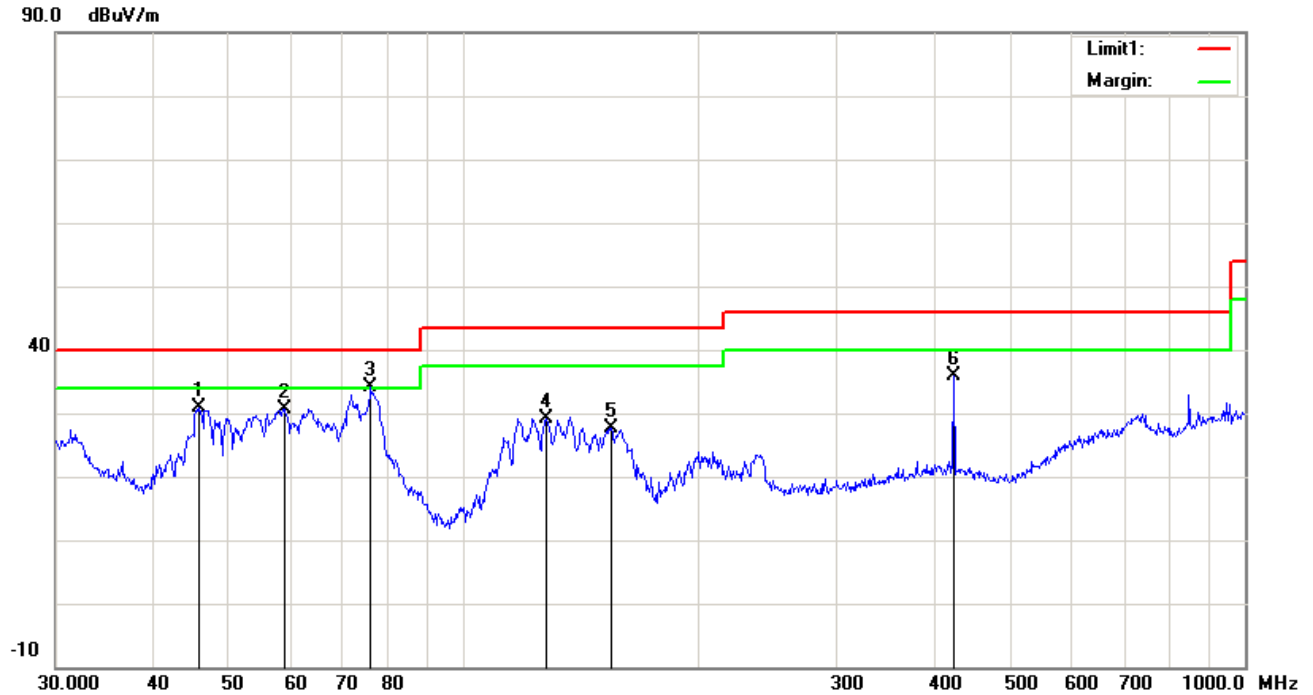
Degree = Turn table degree

#### Calculation Formula:

Margin (dB) = Result (dBμV/m) – limit (dBμV/m)

Test Mode: Transmitting Mode-2414MHz

(30MHz - 1GHz)



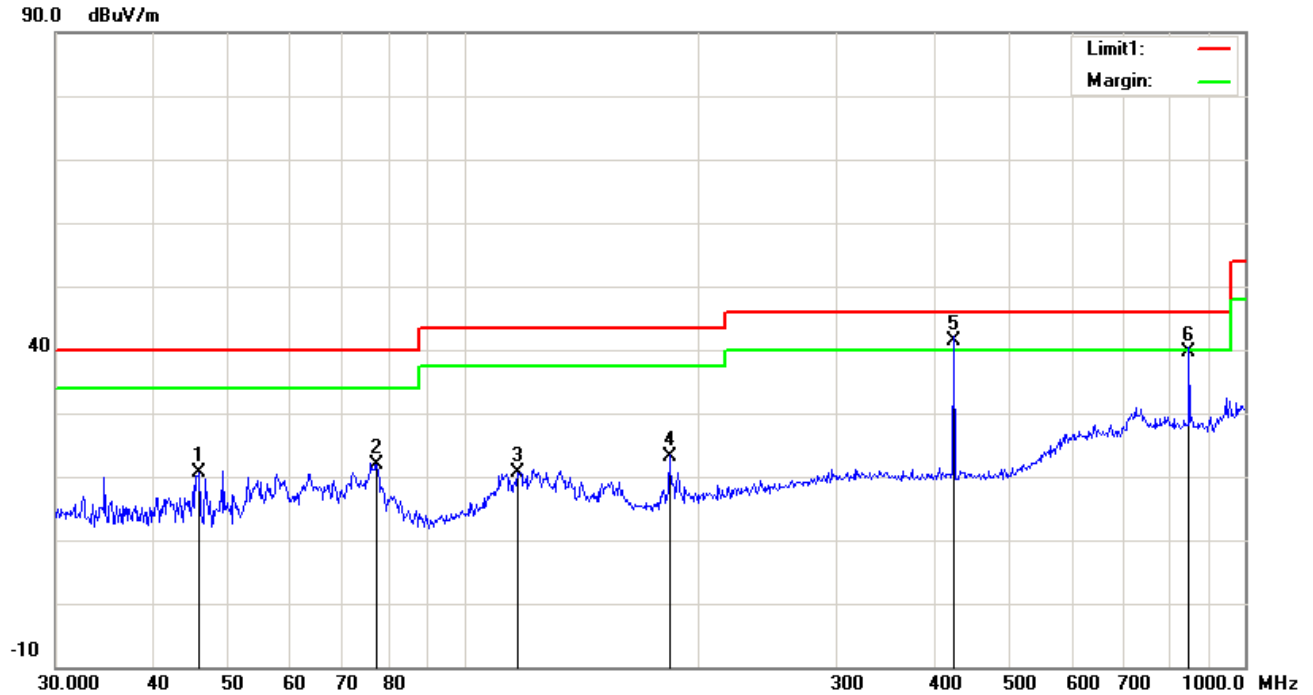
*Test Data*

Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	45.6948	63.82	peak	11.95	46.07	1.16	30.86	40.00	-9.14	100	145
2	58.8185	68.49	peak	7.98	47.14	1.29	30.62	40.00	-9.38	100	181
3	75.9773	71.93	peak	8.60	47.91	1.44	34.06	40.00	-5.94	100	179
4	127.2176	58.22	peak	16.22	47.09	1.84	29.19	43.50	-14.31	100	69
5	154.2786	59.65	peak	13.71	47.69	2.08	27.75	43.50	-15.75	100	180
6	423.5403	65.10	peak	16.60	49.08	3.31	35.93	46.00	-10.07	100	324

Test Mode: Transmitting Mode-2414MHz

(30MHz - 1GHz)



Test Data

Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	45.8553	55.19	peak	10.33	46.09	1.17	20.60	40.00	-19.40	100	226
2	77.3212	58.52	peak	9.85	47.87	1.44	21.94	40.00	-18.06	200	81
3	116.9495	49.57	peak	15.73	46.46	1.75	20.59	43.50	-22.91	100	134
4	183.2005	54.97	peak	12.53	46.43	2.18	23.25	43.50	-20.25	100	92
5	423.5403	71.19	QP	16.00	49.08	3.31	41.42	46.00	-4.58	100	142
6	848.0563	58.39	QP	22.86	46.23	4.69	39.71	46.00	-6.29	100	212

Test Report No.	16021564-FCC-R1
Page	31 of 62

Test Mode:	Transmitting Mode-2414MHz
------------	---------------------------

(Above 1GHz)

#### Vertical Polarity Plot @3m

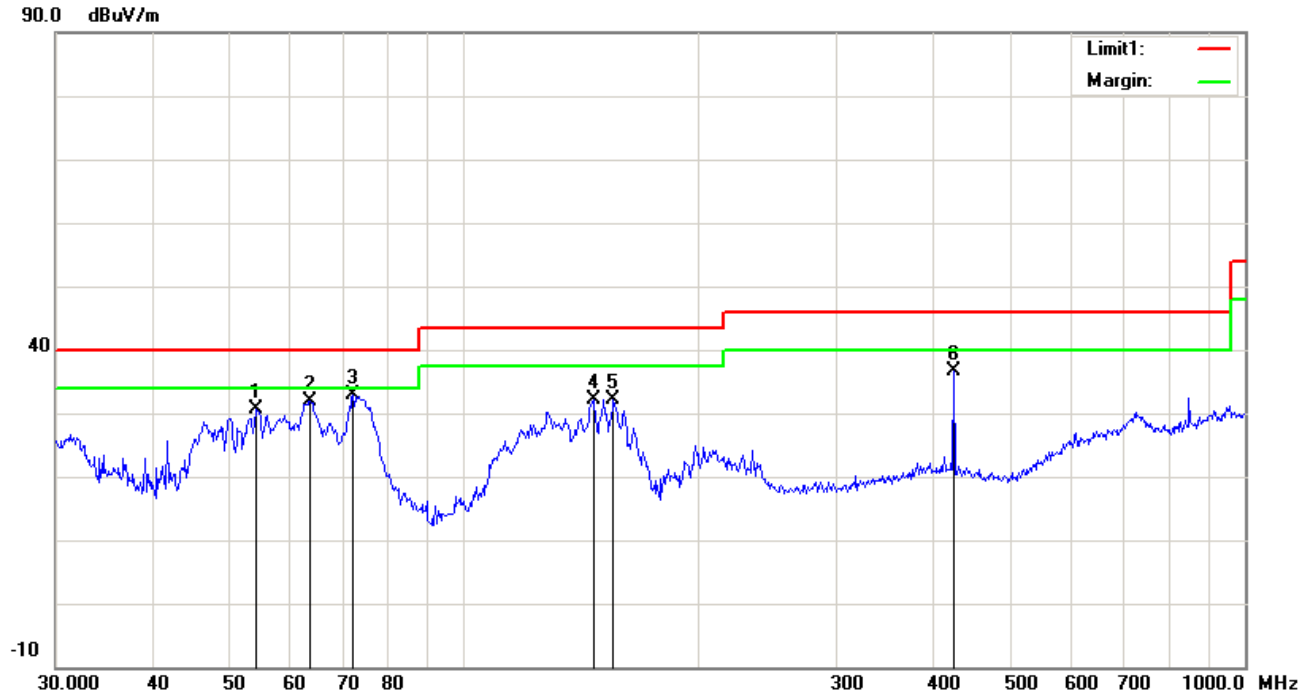
No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1884.000	62.96	peak	26.61	51.69	3.99	41.87	74.00	-32.13	200	360
3	3516.000	58.48	peak	32.20	52.88	4.89	42.69	74.00	-31.31	100	352
4	4825.000	67.18	peak	33.18	53.43	6.08	53.01	74.00	-20.99	100	140
5	5981.000	55.95	peak	34.18	51.36	5.87	44.64	74.00	-29.36	200	3
6	7239.000	56.09	peak	35.58	55.16	7.02	43.53	74.00	-30.47	200	144
7	8616.000	55.75	peak	37.35	53.99	8.30	47.41	74.00	-26.59	145	0

#### Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1697.000	61.11	peak	25.83	50.80	3.98	40.12	74.00	-33.88	100	183
2	2173.000	59.85	peak	27.86	52.38	4.17	39.50	74.00	-34.50	200	154
4	3278.000	59.13	peak	30.82	52.85	4.83	41.93	74.00	-32.07	200	340
5	4366.000	57.34	peak	32.23	52.25	5.85	43.17	74.00	-30.83	100	233
6	4825.000	57.81	peak	33.18	53.43	6.08	43.64	74.00	-30.36	200	3
7	7239.000	56.01	peak	35.58	55.16	7.02	43.45	74.00	-30.55	100	200

Test Mode: Transmitting Mode-2432MHz

(30MHz - 1GHz)



*Test Data*

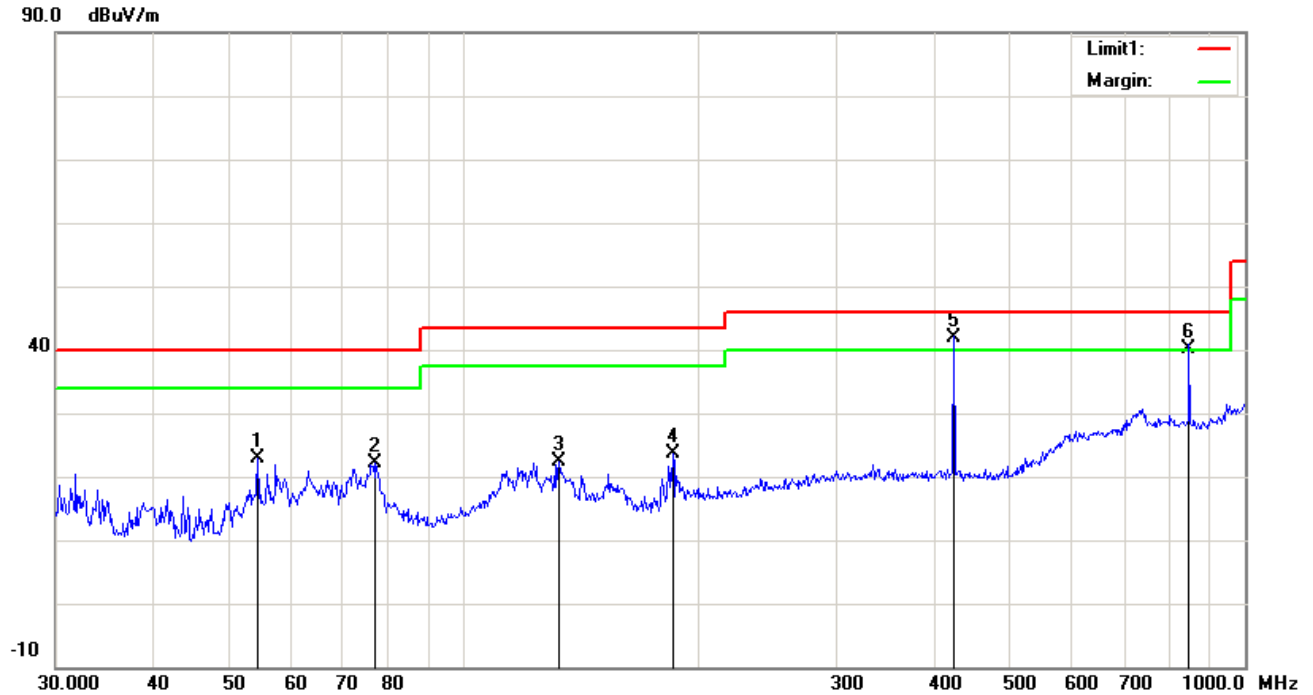
Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	54.2610	67.40	peak	8.53	46.66	1.27	30.54	40.00	-9.46	100	209
2	63.5356	69.42	peak	8.76	47.53	1.35	32.00	40.00	-8.00	100	199
3	72.0843	69.45	peak	9.80	47.91	1.44	32.78	40.00	-7.22	100	209
4	146.3735	64.65	peak	13.42	47.98	2.06	32.15	43.50	-11.35	100	115
5	155.3644	64.10	peak	13.64	47.61	2.08	32.21	43.50	-11.29	100	173
6	423.5403	65.79	peak	16.60	49.08	3.31	36.62	46.00	-9.38	100	202



Test Mode: Transmitting Mode-2432MHz

(30MHz - 1GHz)



Test Data

Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	54.4516	58.61	peak	9.71	46.67	1.27	22.92	40.00	-17.08	100	129
2	77.0505	58.59	peak	9.88	47.88	1.44	22.03	40.00	-17.97	200	276
3	132.2206	53.42	peak	14.53	47.45	1.89	22.39	43.50	-21.11	200	133
4	185.1379	55.26	peak	12.61	46.51	2.19	23.55	43.50	-19.95	100	132
5	423.5403	71.77	QP	16.00	49.08	3.31	42.00	46.00	-4.00	100	149
6	848.0563	58.81	QP	22.86	46.23	4.69	40.13	46.00	-5.87	100	214

Test Report No.	16021564-FCC-R1
Page	34 of 62

Test Mode:	Transmitting Mode-2432MHz
------------	---------------------------

(Above 1GHz)

#### Vertical Polarity Plot @3m

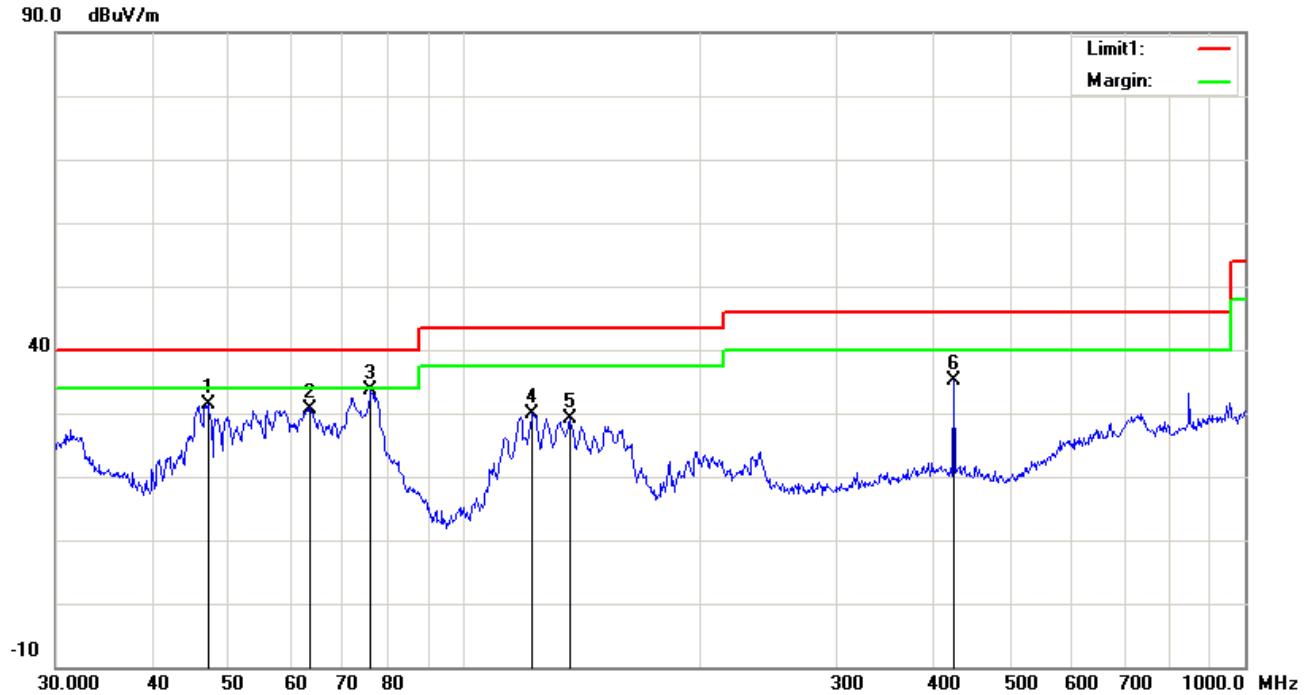
No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1884.000	68.23	peak	26.61	51.69	3.99	47.14	74.00	-26.86	200	216
2	2139.000	61.72	peak	27.71	52.35	4.13	41.21	74.00	-32.79	200	106
4	4859.000	66.90	peak	33.28	53.58	6.03	52.63	74.00	-21.37	100	141
5	5947.000	55.51	peak	34.16	51.52	5.91	44.06	74.00	-29.94	100	93
6	7290.000	58.75	peak	35.66	55.09	7.10	46.42	74.00	-27.58	100	195
7	8531.000	54.99	peak	37.39	53.81	8.37	46.94	74.00	-27.06	199	0

#### Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1697.000	61.12	peak	25.83	50.80	3.98	40.13	74.00	-33.87	100	208
2	2173.000	59.85	peak	27.86	52.38	4.17	39.50	74.00	-34.50	200	154
4	3278.000	59.13	peak	30.82	52.85	4.83	41.93	74.00	-32.07	200	340
5	4366.000	57.34	peak	32.23	52.25	5.85	43.17	74.00	-30.83	100	233
6	4825.000	57.81	peak	33.18	53.43	6.08	43.64	74.00	-30.36	200	3
7	7239.000	56.01	peak	35.58	55.16	7.02	43.45	74.00	-30.55	100	200

Test Mode: Transmitting Mode-2450MHz

(30MHz - 1GHz)



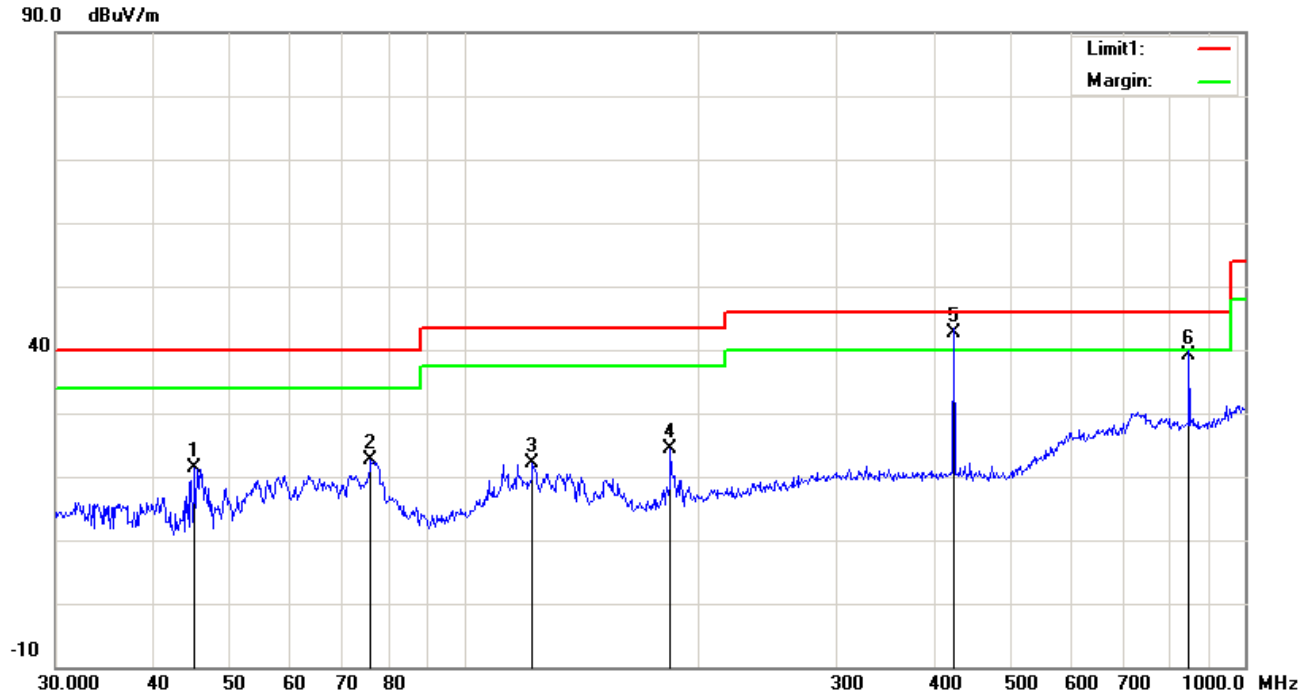
Test Data

Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	46.9948	65.19	peak	11.07	46.19	1.19	31.26	40.00	-8.74	100	241
2	63.5356	68.17	peak	8.76	47.53	1.35	30.75	40.00	-9.25	100	249
3	75.9773	71.59	peak	8.60	47.91	1.44	33.72	40.00	-6.28	100	192
4	122.4040	58.87	peak	15.97	46.74	1.80	29.90	43.50	-13.60	100	137
5	136.4598	61.06	peak	13.82	47.73	1.95	29.10	43.50	-14.40	100	174
6	423.5403	64.33	peak	16.60	49.08	3.31	35.16	46.00	-10.84	100	318

Test Mode: Transmitting Mode-2450MHz

(30MHz - 1GHz)



Test Data

Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	45.2166	55.88	peak	10.40	46.03	1.15	21.40	40.00	-18.60	200	264
2	75.9773	59.12	peak	10.01	47.91	1.44	22.66	40.00	-17.34	100	91
3	122.4040	51.09	peak	15.89	46.74	1.80	22.04	43.50	-21.46	200	116
4	183.8440	56.09	peak	12.55	46.46	2.18	24.36	43.50	-19.14	100	144
5	423.5403	72.39	QP	16.00	49.08	3.31	42.62	46.00	-3.38	100	150
6	848.0563	57.89	QP	22.86	46.23	4.69	39.21	46.00	-6.79	100	202

Test Report No.	16021564-FCC-R1
Page	37 of 62

Test Mode:	Transmitting Mode-2450MHz
------------	---------------------------

(Above 1GHz)

#### Vertical Polarity Plot @3m

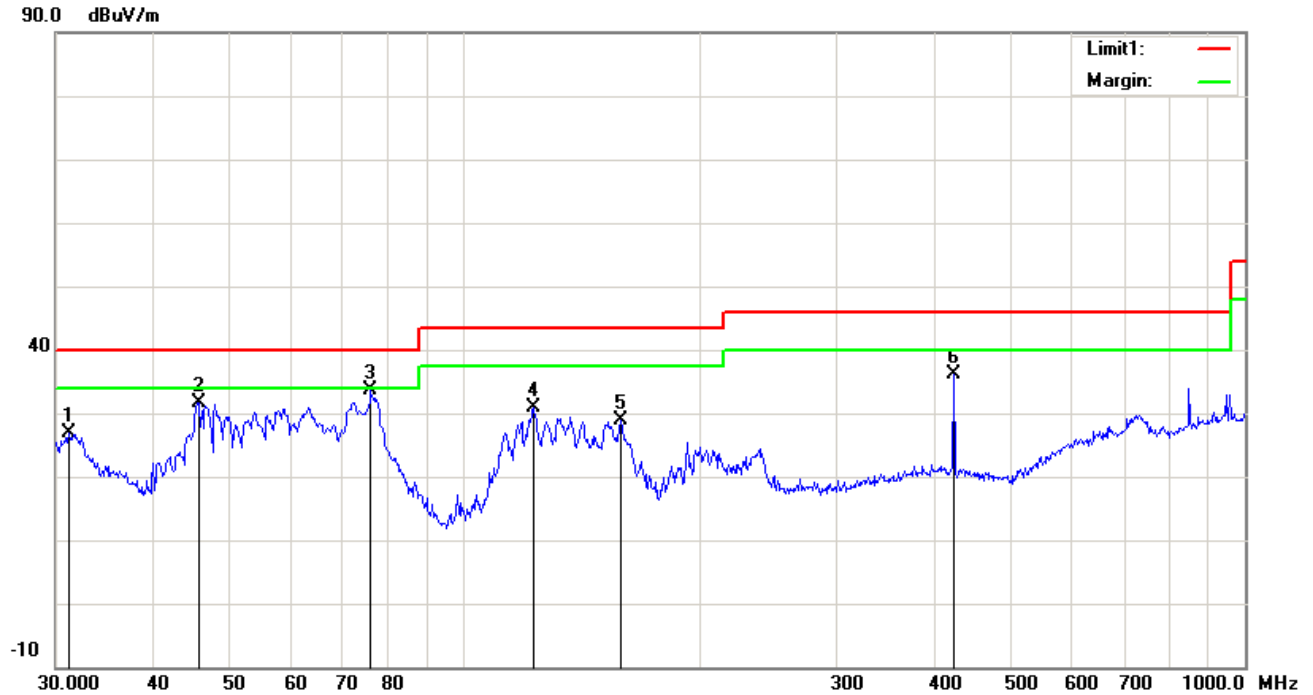
No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1884.000	69.41	peak	26.61	51.69	3.99	48.32	74.00	-25.68	100	359
3	4893.000	66.20	peak	33.38	53.73	5.98	51.83	74.00	-22.17	100	140
4	5250.000	56.66	peak	33.75	53.86	6.26	42.81	74.00	-31.19	200	71
5	6015.000	55.54	peak	34.21	51.33	5.85	44.27	74.00	-29.73	100	250
6	7358.000	58.88	peak	35.77	54.99	7.20	46.86	74.00	-27.14	100	199
7	8616.000	55.62	peak	37.35	53.99	8.30	47.28	74.00	-26.72	100	224

#### Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1884.000	74.27	peak	26.61	51.69	3.99	53.18	74.00	-20.82	200	2
3	2598.000	59.86	peak	29.26	52.67	4.13	40.58	74.00	-33.42	181	0
4	4026.000	56.78	peak	32.29	52.93	5.97	42.11	74.00	-31.89	99	111
5	4893.000	57.80	peak	33.38	53.73	5.98	43.43	74.00	-30.57	99	170
6	5692.000	55.75	peak	33.95	52.65	6.13	43.18	74.00	-30.82	107	0
7	7358.000	54.84	peak	35.77	54.99	7.20	42.82	74.00	-31.18	99	137

Test Mode: Transmitting Mode-2468MHz

(30MHz - 1GHz)



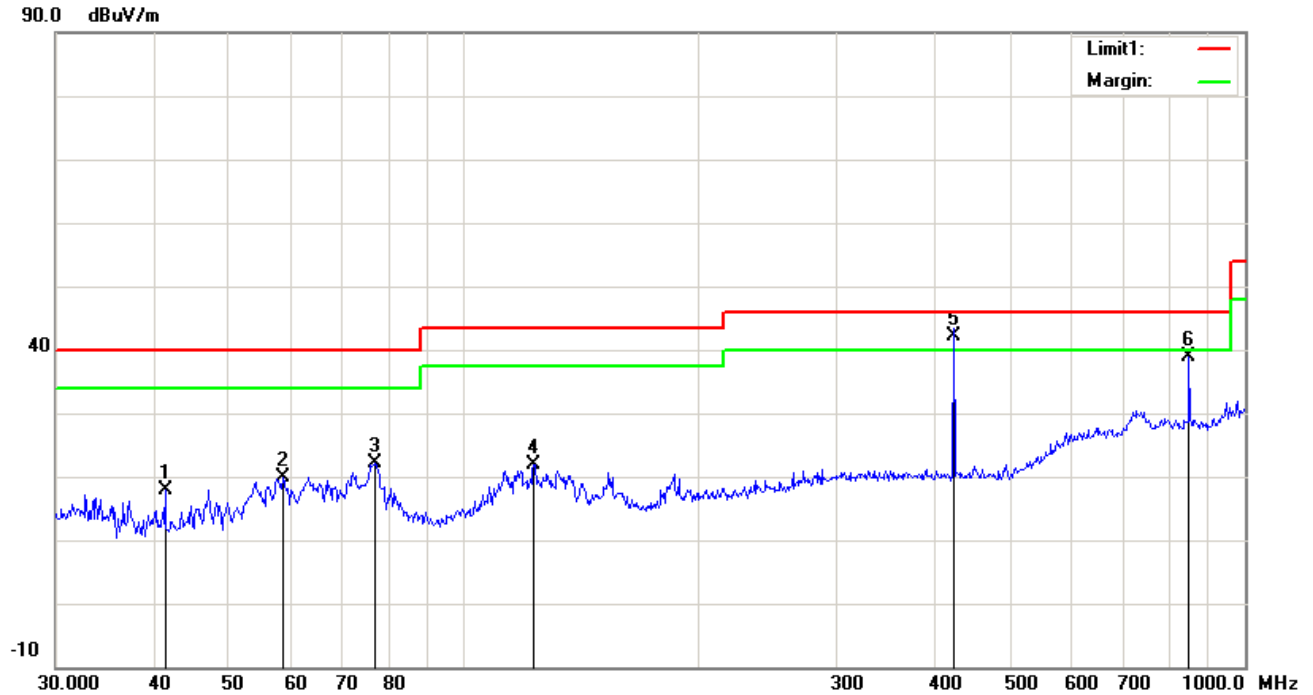
Test Data

Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	31.1798	50.84	peak	20.91	45.68	0.89	26.96	40.00	-13.04	99	56
2	45.6948	64.55	peak	11.95	46.07	1.16	31.59	40.00	-8.41	99	145
3	75.9773	71.39	peak	8.60	47.91	1.44	33.52	40.00	-6.48	99	180
4	122.8340	59.78	peak	15.99	46.77	1.80	30.80	43.50	-12.70	99	89
5	158.6677	60.77	peak	13.42	47.37	2.07	28.89	43.50	-14.61	99	185
6	423.5403	65.40	peak	16.60	49.08	3.31	36.23	46.00	-9.77	99	331

Test Mode: Transmitting Mode-2468MHz

(30MHz - 1GHz)



*Test Data*

Horizontal Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	41.4215	51.75	peak	10.80	45.79	1.08	17.84	40.00	-22.16	200	235
2	58.6126	56.08	peak	9.54	47.12	1.29	19.79	40.00	-20.21	100	314
3	76.7808	58.72	peak	9.91	47.89	1.44	22.18	40.00	-17.82	200	83
4	122.8340	50.97	peak	15.87	46.77	1.80	21.87	43.50	-21.63	200	148
5	423.5403	71.98	QP	16.00	49.08	3.31	42.21	46.00	-3.79	100	145
6	848.0563	57.47	peak	22.86	46.23	4.69	38.79	46.00	-7.21	100	204

Test Report No.	16021564-FCC-R1
Page	40 of 62

Test Mode:	Transmitting Mode-2468MHz
------------	---------------------------

(Above 1GHz)

#### Vertical Polarity Plot @3m

No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1901.000	71.01	peak	26.68	51.77	3.98	49.90	74.00	-24.10	100	28
3	4332.000	57.05	peak	32.23	52.32	5.91	42.87	74.00	-31.13	200	252
4	4944.000	64.84	peak	33.53	53.96	5.91	50.32	74.00	-23.68	100	138
5	6032.000	55.24	peak	34.21	51.38	5.85	43.92	74.00	-30.08	100	206
6	7409.000	58.50	peak	35.85	54.92	7.28	46.71	74.00	-27.29	100	194
7	8480.000	54.88	peak	37.36	53.78	8.37	46.83	74.00	-27.17	100	96

#### Horizontal Polarity Plot @3m

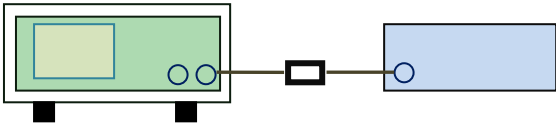
No.	Frequency (MHz)	Reading (dBμV/m)	Detector	Ant_F (dB/m)	PA_G (dB)	Cab_L (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Degree (°)
1	1884.000	61.64	peak	26.61	51.69	3.99	40.55	74.00	-33.45	200	0
3	4383.000	56.98	peak	32.22	52.21	5.83	42.82	74.00	-31.18	100	230
4	4944.000	58.04	peak	33.53	53.96	5.91	43.52	74.00	-30.48	100	177
5	5862.000	55.44	peak	34.09	51.89	6.00	43.64	74.00	-30.36	100	194
6	6168.000	54.86	peak	34.27	51.80	5.85	43.18	74.00	-30.82	100	41
7	7681.000	55.05	peak	36.11	54.77	7.58	43.97	74.00	-30.03	100	159



## 6.4 20 dB BANDWIDTH TESTING

Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 09, 2017
Tested By :	Amos Xia

### Requirement(s):

Spec	Item	Requirement	Applicable
§15.215(c)	a)	Radiated Emissions Measurement Uncertainty All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz ( 3m & 10m ) & 1GHz above ( 3m ) is +5.6/-4.5dB.	<input checked="" type="checkbox"/>
Test Setup			
Test Procedure	<ul style="list-style-type: none"> <li>- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.</li> <li>- Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.</li> <li>- Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.</li> <li>- Repeat above procedures until all frequencies measured were complete.</li> </ul>		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

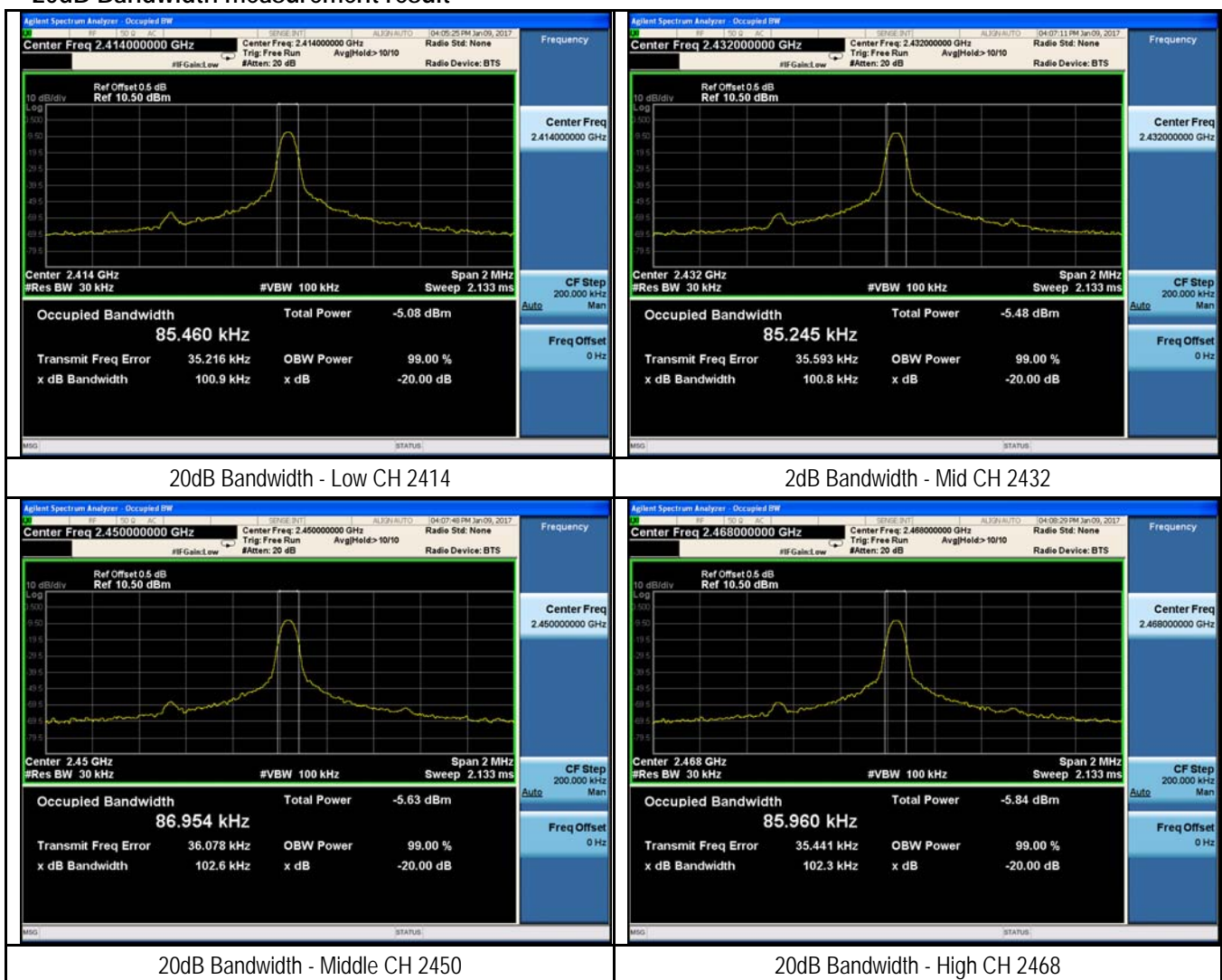
Test Data    ☒ Yes      ☐ N/A  
 Test Plot    ☒ Yes (See below)      ☐ N/A

## 20dB Bandwidth measurement result

CH	Fundamental Frequency (MHz)	20dB Bandwidth ( kHz )	Result
Low	2414	100.9	Pass
Middle	2432	100.8	Pass
Middle	2450	102.6	Pass
High	2468	102.3	Pass

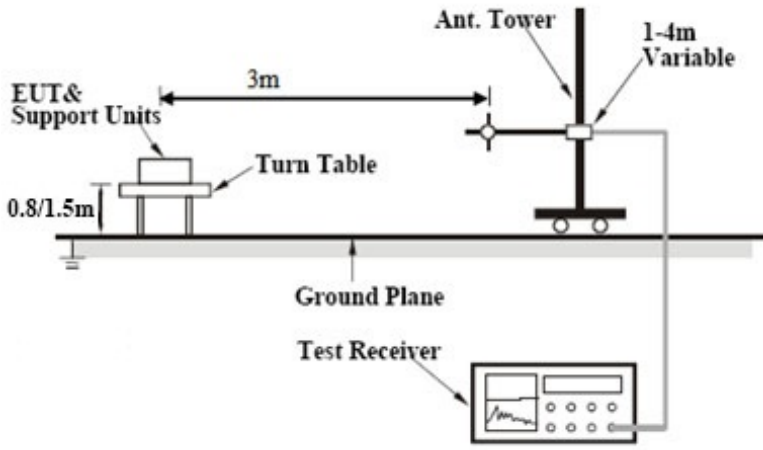
## Test Plots

### 20dB Bandwidth measurement result



## 6.5 Band Edge

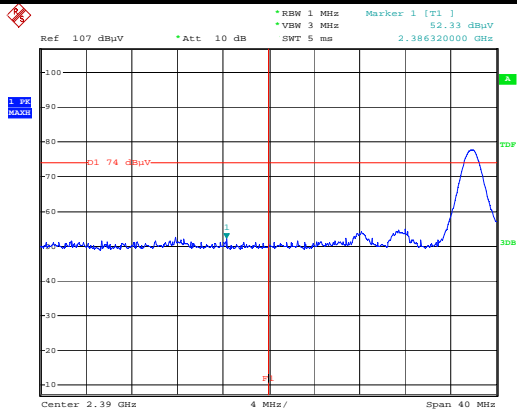
Temperature	20°C
Relative Humidity	50%
Atmospheric Pressure	1019mbar
Test date :	January 05, 2017
Tested By :	Amos Xia

Spec	Item	Requirement	Applicable
§15.249(d)	a)	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.	<input checked="" type="checkbox"/>
Test Setup			
Test Procedure	<ul style="list-style-type: none"> <li>- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.</li> <li>- Position the EUT without connection to measurement instrument. Put it on the Rotated table and turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.</li> <li>- Set both RBW and VBW of spectrum analyzer to 1MHz.</li> <li>- Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.</li> <li>- Repeat above procedures until all measured frequencies were complete.</li> </ul>		
Remark			
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		

Test Data    ☒Yes      ☐N/A

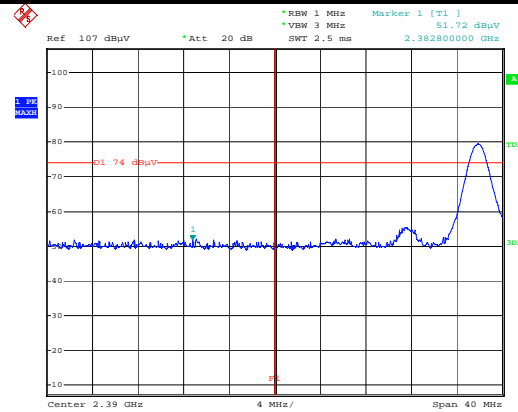
Test Plot    ☒Yes (See below)      ☐N/A

Test Plots



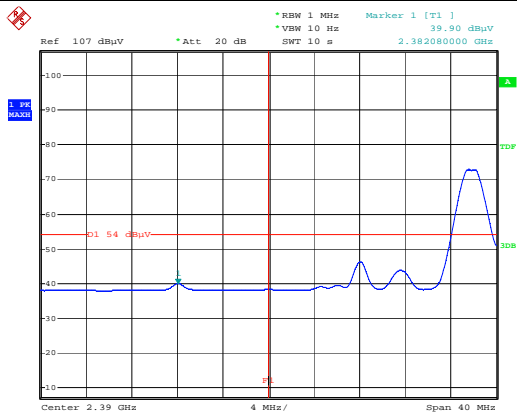
Date: 5.JAN.2017 17:29:22

Peak - Left Side-V



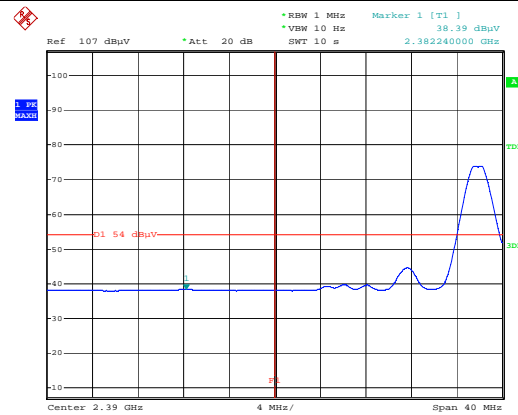
Date: 5.JAN.2017 17:39:13

Peak - Left Side-H



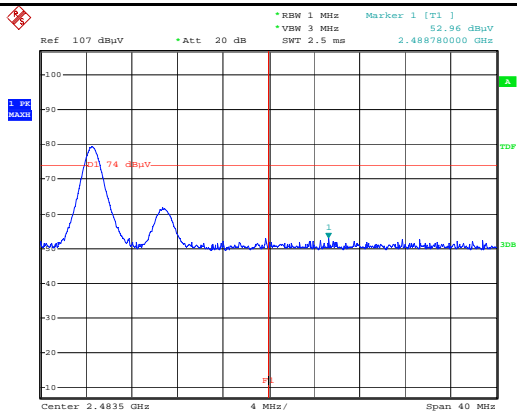
Date: 5.JAN.2017 17:33:09

Average - Left Side-V



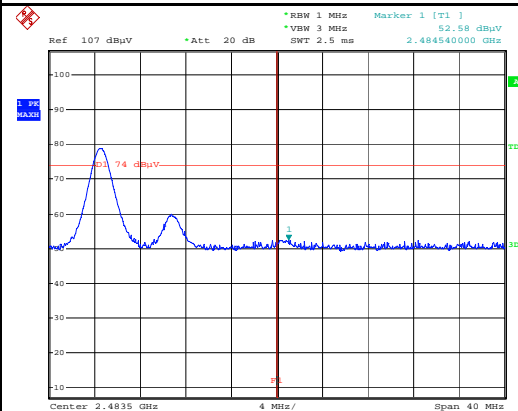
Date: 5.JAN.2017 17:39:53

Average - Left Side-H



Date: 5.JAN.2017 17:47:45

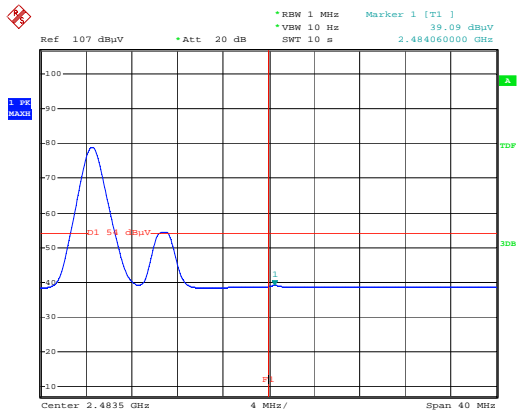
Peak - Right Side-V



Date: 5.JAN.2017 17:44:39

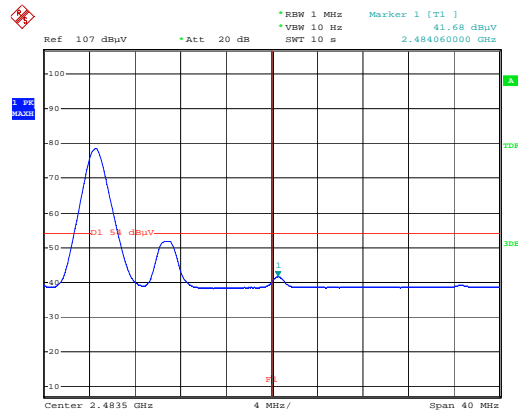
Peak - Right Side-H

Test Report No.	16021564-FCC-R1
Page	45 of 62



Date: 5.JAN.2017 17:48:40

Average - Right Side-V



Date: 5.JAN.2017 17:43:51

Average - Right Side-H

## Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
<b>AC Line Conducted Emissions</b>					
R&S EMI Test Receiver	ESPI3	101216	03/31/2016	03/31/2017	<input checked="" type="checkbox"/>
V-LISN	ESH3-Z5	838979/005	03/31/2016	03/31/2017	<input checked="" type="checkbox"/>
SIEMIC EZ_EMC Conducted Emissions software	Ver.ICP-03A1	N/A	N/A	N/A	<input checked="" type="checkbox"/>
<b>Radiated Emissions</b>					
Agilent Technologies Spectrum Analyzer	N9010A	MY47191130	03/31/2016	03/31/2017	<input checked="" type="checkbox"/>
R&S EMI Receiver	ESPI3	101216	03/31/2016	03/31/2017	<input checked="" type="checkbox"/>
Antenna (30MHz~6GHz)	JB6	A121411	10/31/2016	10/31/2017	<input checked="" type="checkbox"/>
Hp Agilent Pre-Amplifier	8447F	1937A01160	10/27/2016	10/26/2017	<input checked="" type="checkbox"/>
Agilent Technologies Pre-Amplifier	8449B	3008A02224	10/30/2016	10/30/2017	<input checked="" type="checkbox"/>
SIEMIC EZ_EMC Radiated Emissions software	Ver.ICP-03A1	N/A	N/A	N/A	<input checked="" type="checkbox"/>

## Annex B. EUT And Test Setup Photographs

### Annex B.i. Photograph: EUT External Photos



All Packages Front View



Top View of EUT



Test Report No.	16021564-FCC-R1
Page	48 of 62



Bottom View of EUT



Front View of EUT

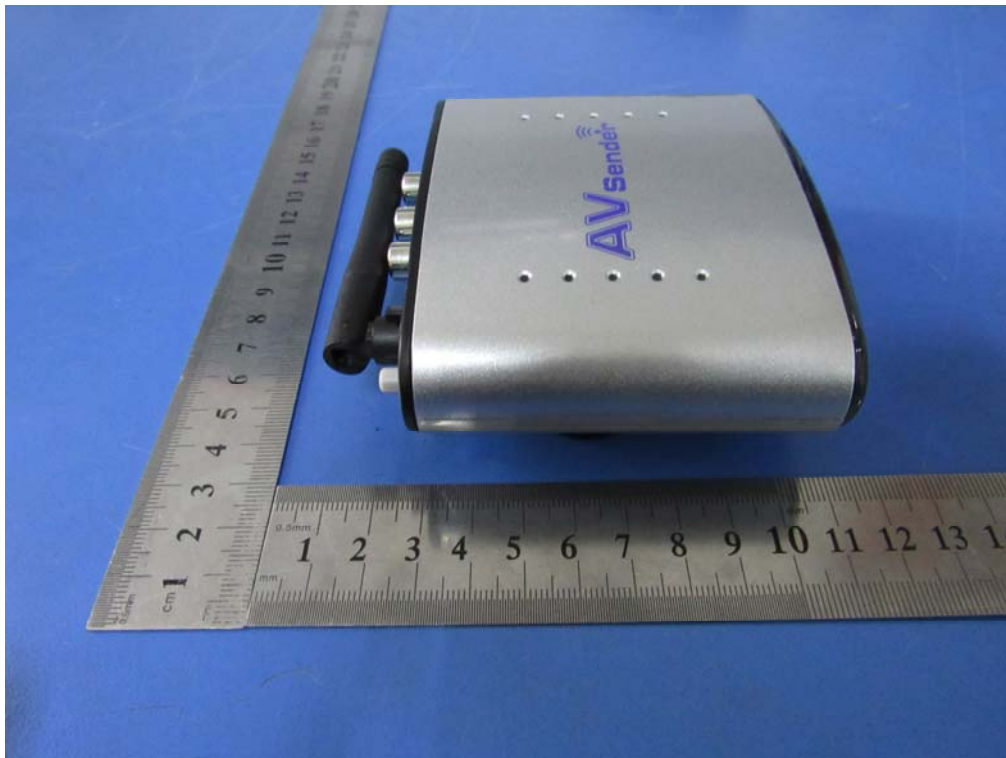


Test Report No.	16021564-FCC-R1
Page	49 of 62



2.4G  
Antenna

Rear View of EUT



Left View of EUT

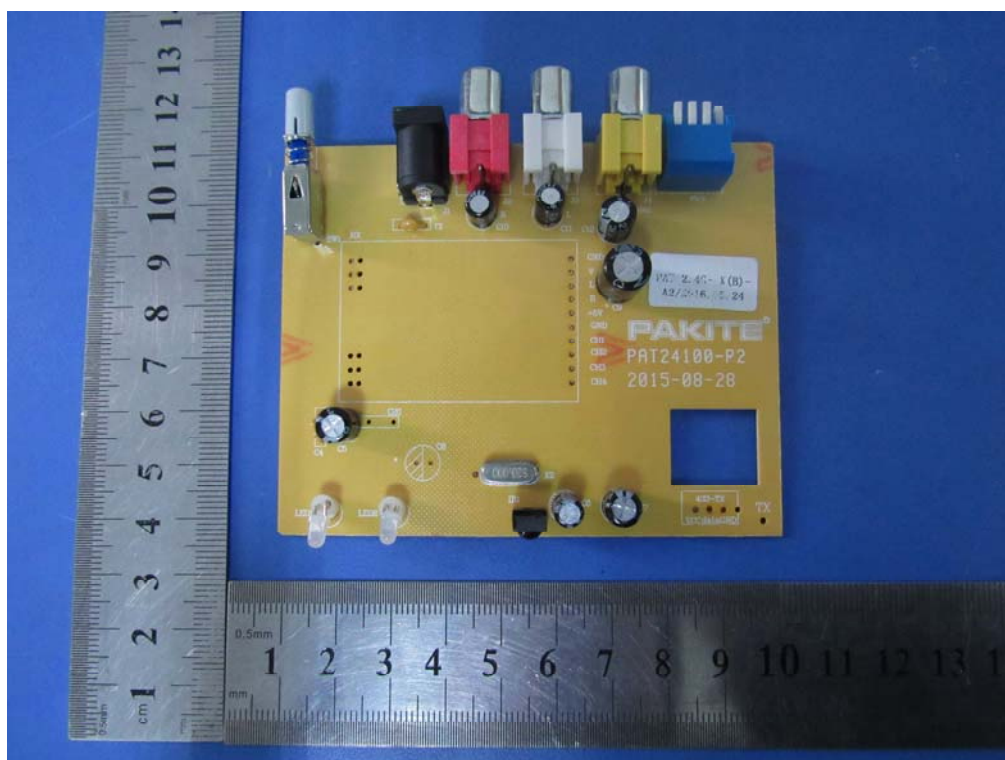
Test Report No.	16021564-FCC-R1
Page	50 of 62



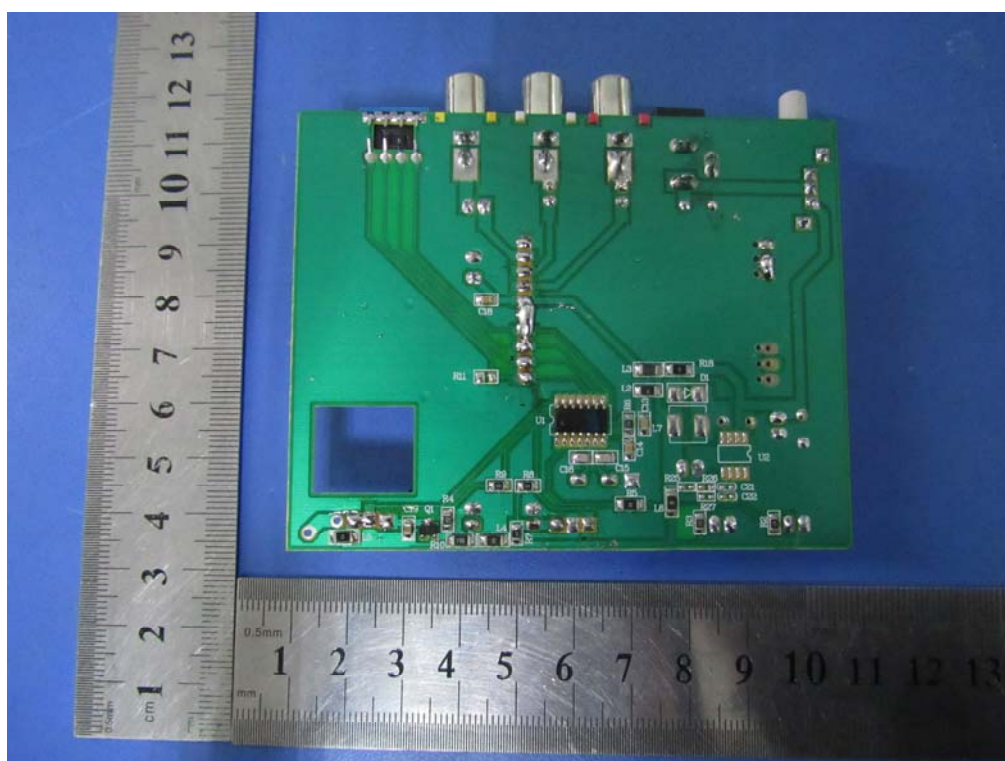
Right View of EUT

Test Report No.	16021564-FCC-R1
Page	51 of 62

Annex B.ii. Photograph EUT Internal Photos



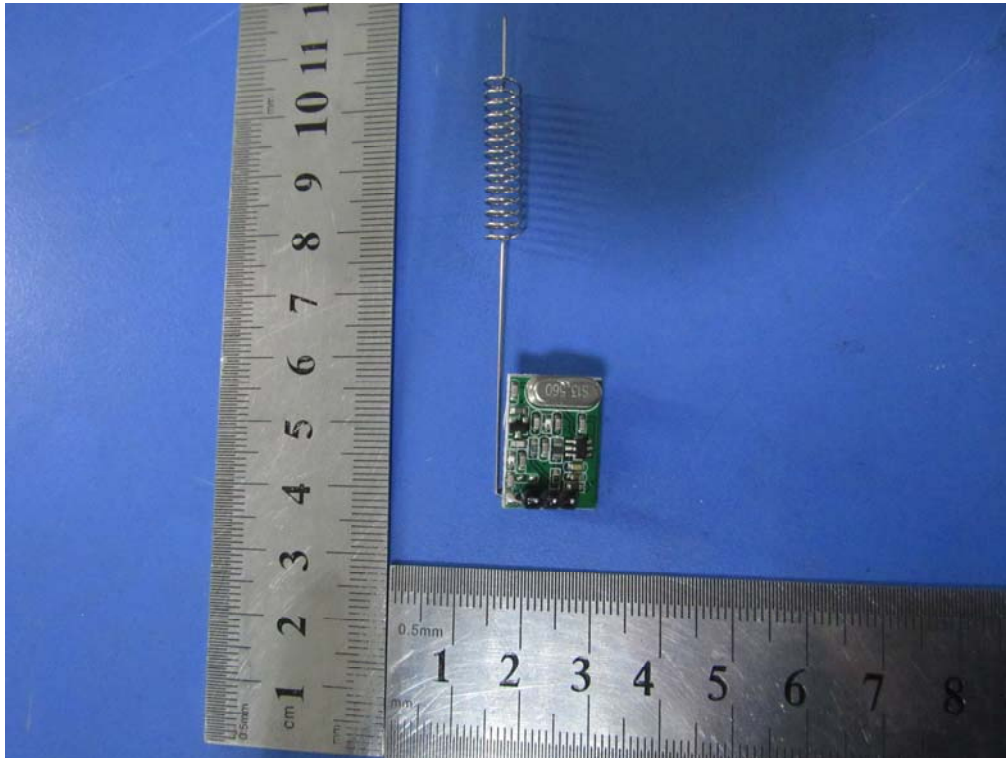
EUT PCBA 1 – Front View



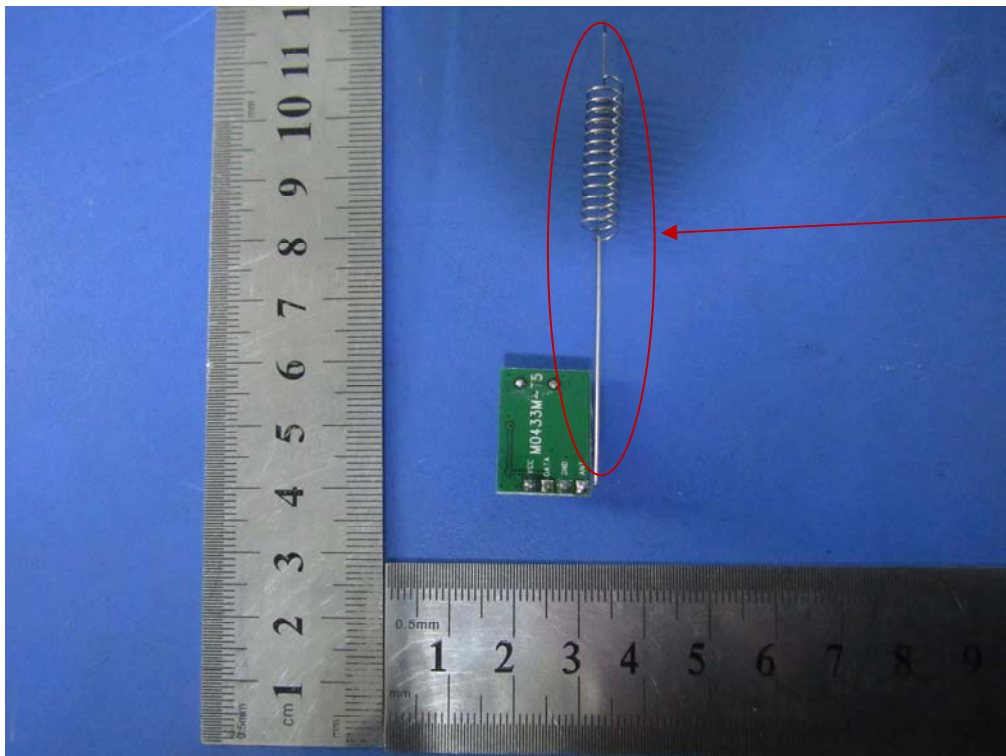
EUT PCBA 1 – Rear View



Test Report No.	16021564-FCC-R1
Page	52 of 62



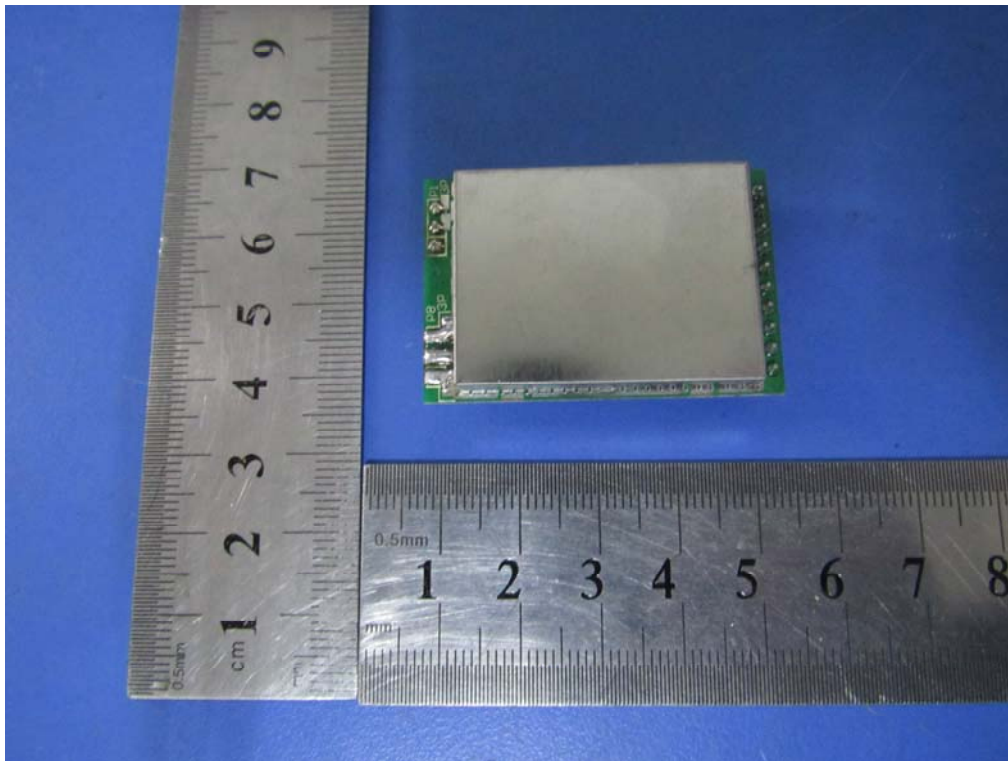
EUT PCBA 2 – Front View



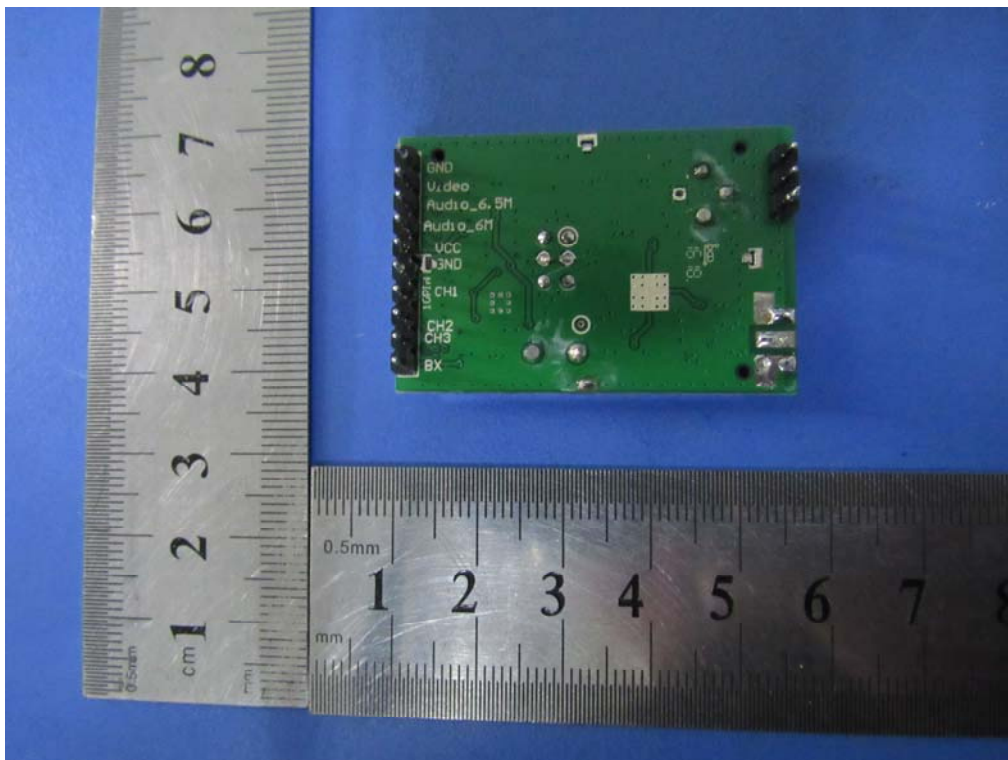
433MHz  
Receiving  
Antenna

EUT PCBA 2 – Rear View

Test Report No.	16021564-FCC-R1
Page	53 of 62

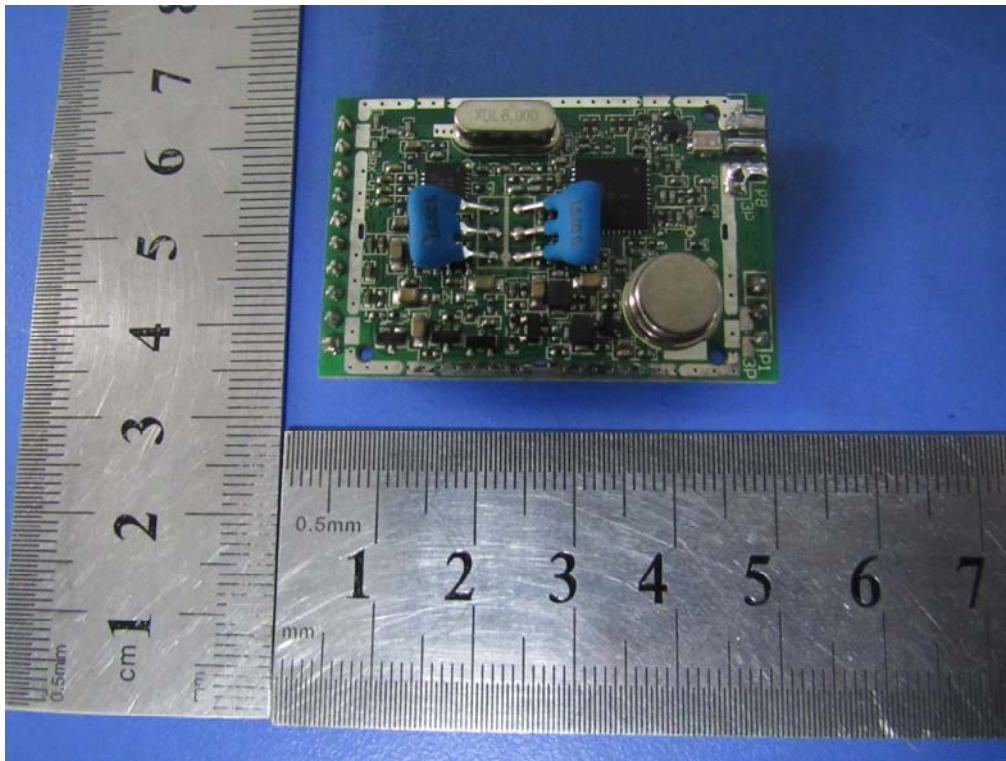


2.4G Module Front View



2.4G Module Rear View

Test Report No.	16021564-FCC-R1
Page	54 of 62



2.4G Module Shielding off Front View



**Annex B.iii. Photograph Test Setup Photo**



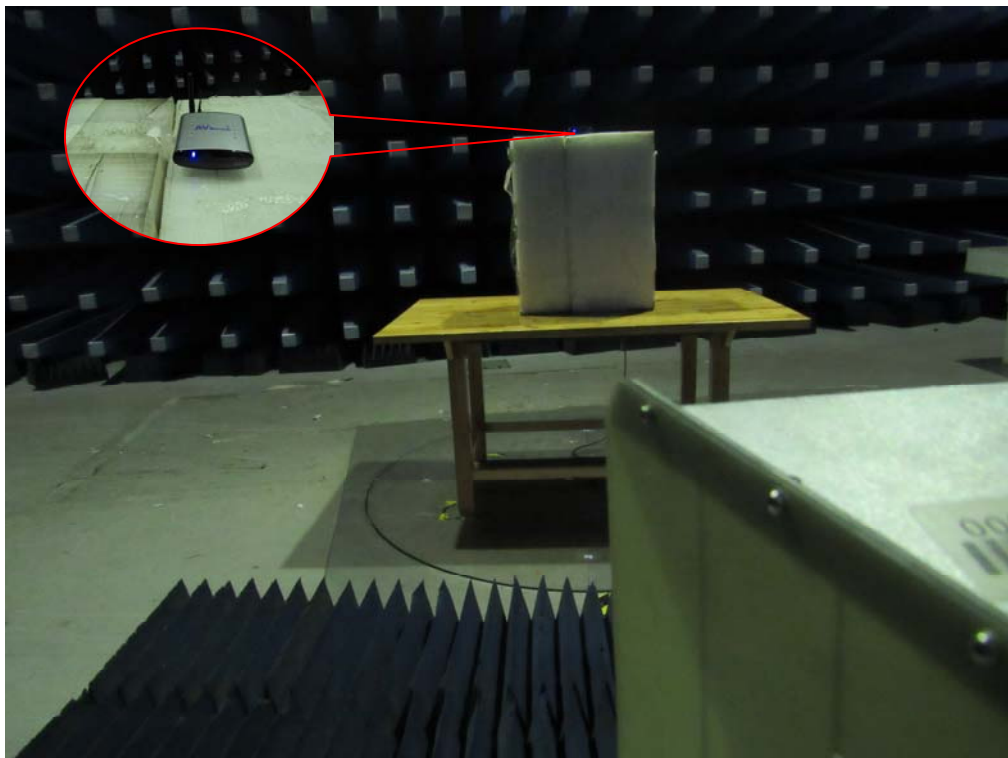
Conducted Emissions Setup Front View



Conducted Emissions Setup Side View



Front View of Radiated Emissions Test Setup below 30MHz



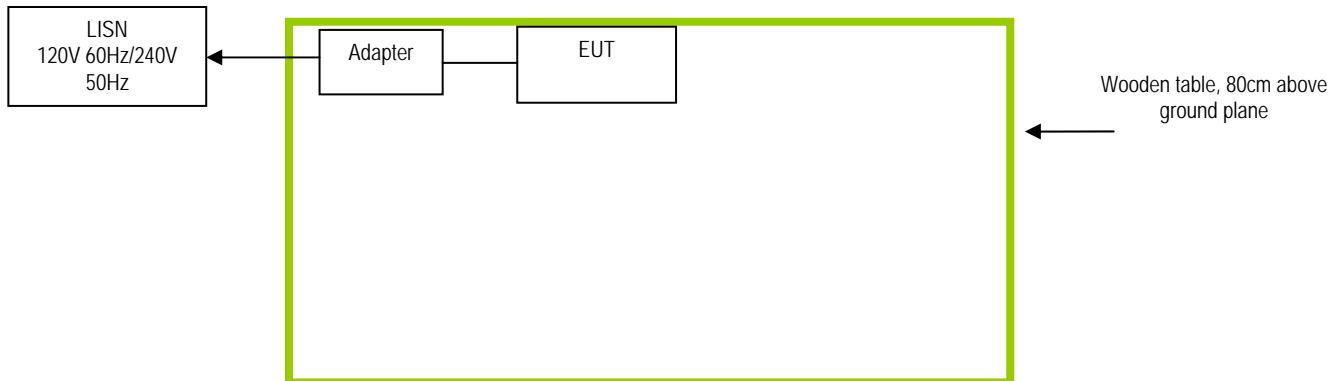
Radiated Emissions Setup Below 1GHz Front View



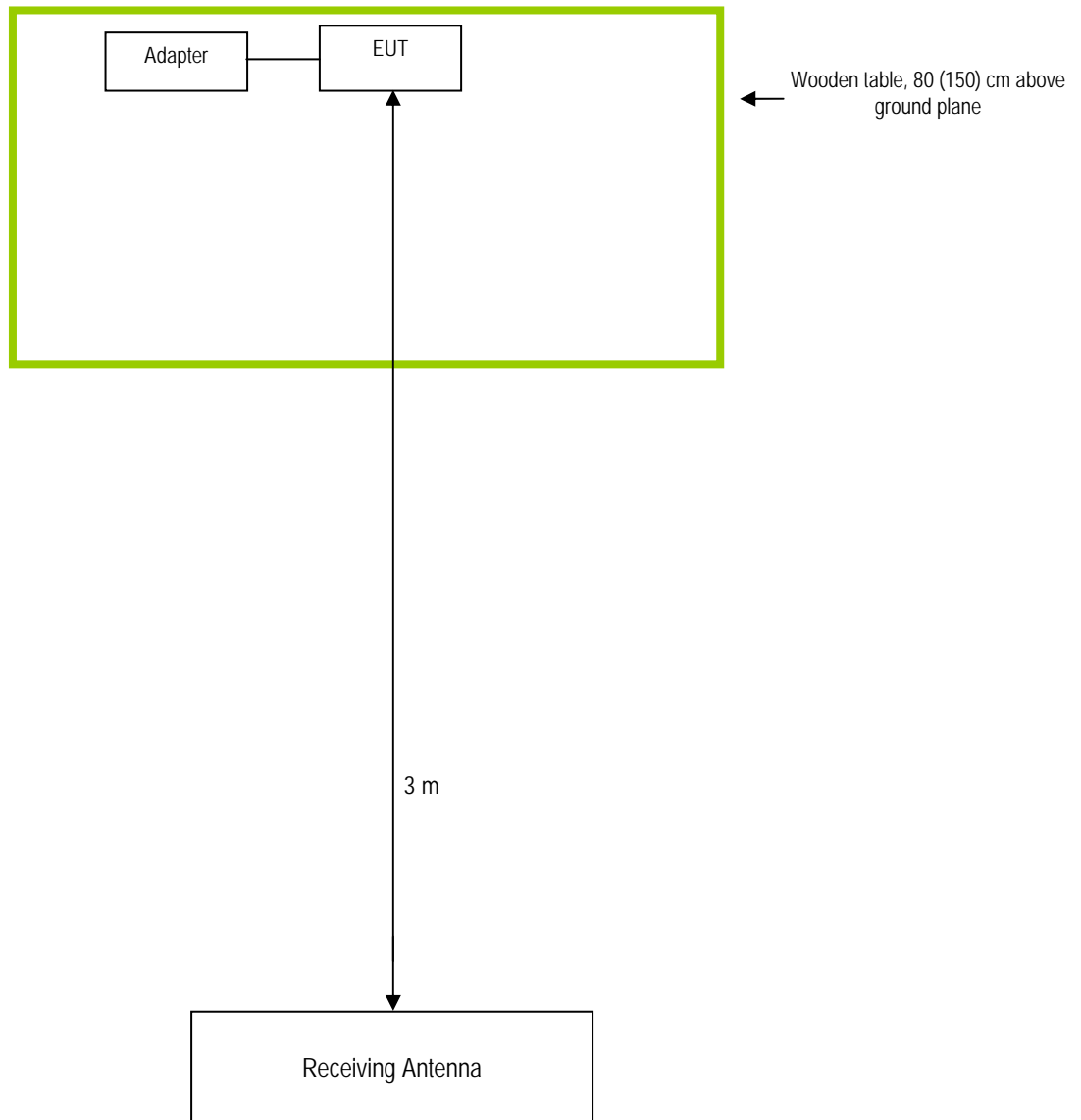
## Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

### Annex C.ii. TEST SET UP BLOCK

#### Block Configuration Diagram for AC Line Conducted Emissions



## Block Configuration Diagram for Radiated Emissions



### **Annex C. ii. SUPPORTING EQUIPMENT DESCRIPTION**

The following is a description of supporting equipment and details of cables used with the EUT.

Manufacturer	Equipment Description	Model
N/A	N/A	N/A

#### **Supporting Cable:**

Cable type	Shield Type	Ferrite Core	Length	Serial No
Power Cable	Un-shielding	No	0.8m	N/A

Test Report No.	16021564-FCC-R1
Page	60 of 62

## Annex D. User Manual / Block Diagram / Schematics / Partlist

Please see attachment

## Annex E. DECLARATION OF SIMILARITY

**Date:2016-12-20**

To: SIEMIC, INC.  
775 Montague Expressway,  
Milpitas, CA 95035  
USA

### Statement

FCC ID: 2ABU5-24GAVSENDER

Model number: PAT-220、PAT-240、PAT-260、PAT-280、PAT-330、  
PAT-350、PAT-360、PAT-370、PAT-380、

We hereby state that these models are identical in , electrical circuits and components, and just model names and appearance of the product shell color, antenna appearance, are different for the marketing requirement.

The following model is the "wireless av sender with IR remote control "

PAT-220, silver shell , dual antenna gain 2dB

PAT-240, black shell , dual antenna gain 2dB

AT-260, black shell , dual antenna gain 2dB

AT-280, bright black shell , dual antenna gain 2dB

The following model is the "wireless av sender without IR remote control "

PAT-330, silver shell , dual antenna gain 2dB

PAT-350, black shell , dual antenna gain 2dB

PAT-360, black shell , dual antenna gain 2dB

PAT-370, black shell , dual antenna gain 2dB

PAT-380, black shell , dual antenna gain 2dB

Shenzhen Pakite Technology Co.,Ltd.  
www.pakite.com

Test Report No.	16021564-FCC-R1
Page	62 of 62

---

Your assistance on this matter is highly appreciated.

Sincerely,

Signature: PEIZHEN WU

Name : PEIZHEN WU

Title: General Manager

Company Name: SHENZHEN PAKITE TECHNOLOGY CO.,LTD.

Address: 12 Floor,Building,2 Reservoir Avenue,Nankeng Community, Bantian Street Longgang  
District ,Shenzhen, China.

Telephone: +86-755-83366901

Fax No.: +86-755-83366910