

## FCC 47 CFR PART 15 SUBPART C

### TEST REPORT

For

**Enkore Smart Semi-Auto Electronic Deadbolt**

**Model No.: EKS-D7P1S, EKS-D791S**

**Trade Name: Pamex**

Issued to

**Pamex Inc.**

**4680 Vinita Court, Chino, CA, 91710, United States**

Issued by

**Compliance Certification Services Inc.**

**Wugu Laboratory**

**No.11, Wugong 6th Rd., Wugu Dist.,**

**New Taipei City, Taiwan.**

**Issued Date: February 4, 2023**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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## Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	January 19, 2023	Initial Issue	ALL	Doris Chu
01	February 4, 2023	See the following Note Rev. (01)	P.23, P.24-26	Doris Chu

Rev. (01)

1. Remove RSS-210, B.6 in section 7.3.
2. Modify test results in section 7.3.

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Report No.: TMWK2212005127KR

## 1. TEST RESULT CERTIFICATION

**Applicant:** Pamex Inc.  
4680 Vinita Court, Chino, CA, 91710, United States

**Manufacturer:** ALZK Co., Ltd.  
9F., No. 36, Sec. 3, Bade Rd., Songshan Dist., Taipei City,  
Taiwan

**Equipment Under Test:** Enkore Smart Semi-Auto Electronic Deadbolt

**Trade Name:** Pamex

**Model No.:** EKS-D7P1S, EKS-D791S

**Date of Test:** December 15 ~ 16, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR Part 15 Subpart C	Compliance
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

### We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 15.225.

The test results of this report relate only to the tested sample identified in this report.

Approved by:



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Shawn Wu  
Supervisor  
Compliance Certification Services Inc.

## 2. EUT DESCRIPTION

<b>Product</b>	Enkore Smart Semi-Auto Electronic Deadbolt
<b>Model No.</b>	EKS-D7P1S, EKS-D791S
<b>Model Discrepancy</b>	EKS-D7P1S: Nickel Plating EKS-D791S: Black Plating
<b>Trade</b>	Pamex
<b>Received Date</b>	December 9, 2022
<b>Power Supply</b>	Power from Battery. (DC 6V)
<b>Frequency Range</b>	13.56MHz
<b>Modulation Technique</b>	ASK
<b>Number of Channels</b>	1 Channel
<b>Antenna Requirement</b>	Loop PCB Antenna
<b>HW Version</b>	V0.0.6
<b>SW Version</b>	000007

**Remark:**

1. For more details, please refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Disclaimer The variant model numbers / trademarks are assessed as identical in hardware and software to each other, hence all variants are fully covered by the test results in this test report without further verification test.

### 3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10: 2013 and FCC CFR 47 Part 15.207, 15.209, 15.225.

#### 3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

#### 3.2 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41	322 - 335.4		

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup> Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

### 3.3 DESCRIPTION OF TEST MODES

The EUT had been tested under engineering test mode condition and the EUT staying in continuous transmitting mode.

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by Battery(EKS-D7P1S) Mode 2: EUT power by Battery(EKS-D791S)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X, Y, Z and two polarity, for radiated measurement. The worst case(Z-Plane) were recorded in this report

## 4. TEST SUMMARY

<b>FCC Standard Sec.</b>	<b>Chapter</b>	<b>Test Item</b>	<b>Result</b>
15.203	2	Antenna Requirement	Pass
15.215	8.1	Occupied Bandwidth (99%) and 20dB Bandwidth	Pass
15.209	8.2	Radiated Emissions	Pass
15.225	8.3	Frequency Stability	Pass
15.207	8.4	AC Power-line Conducted Emission	N/A



## 5. INSTRUMENT CALIBRATION

### 5.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

### 5.2 MEASUREMENT EQUIPMENT USED

#### Equipment Used for Emissions Measurement

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Thermostatic/Humidity Chamber	TAICHY	MHG-150LF	930619	2022-10-25	2023-10-24
EXA Signal Analyzer	Keysight	N9010B	MY60242460	2022-01-30	2023-01-29
Loop Probe	LANGER EMV-TECHNIK	RF-R 50-1	02-2644	2022-01-24	2023-01-23
Software	N/A				

3M 966 Chamber Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
PXA Signal Analyzer	Keysight Technologies	N9030B	MY62291089	2022-10-14	2023-10-13
Loop Antenna	COM-POWER	AL-130	121051	2022-04-13	2023-04-12
Preamplifier	EMEC	EM330	060609	2022-02-23	2023-02-22
Thermo-Hygro Meter	WISEWIND	1206	D07	2021-12-28	2022-12-27
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2022-08-03	2023-08-02
Cable	Huber+Suhner	104PEA	20995+11112+182330	2022-02-23	2023-02-22
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180419c				

AC Conducted Emissions Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
N/A					

**Remark:**

1. Each piece of equipment is scheduled for calibration once a year.
2. N.C.R. = No Calibration Request.

### 5.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	± 2.1183
Channel Bandwidth	± 2.1863
Frequency Stability	± 2.0730
Radiated Emission_9kHz-30MHz	± 3.814
Radiated Emission_30MHz-200MHz	± 4.272
Radiated Emission_200MHz-1GHz	± 4.619

**Remark:** This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 5.4 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.

No. 12, Ln. 116, Wugong 3rd Rd., Wugu Dist., New Taipei City, Taiwan 24803

CAB identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	-	Not applicable, because EUT not connect to AC Main Source direct.
Radiation	Tony Chao	-
RF Conducted	David Li	-

**Remark:** The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC public Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

Report No.: TMWK2212005127KR

## 6. SETUP OF EQUIPMENT UNDER TEST

### 6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix A for the actual connections between EUT and support equipment.

### 6.2 SUPPORT EQUIPMENT

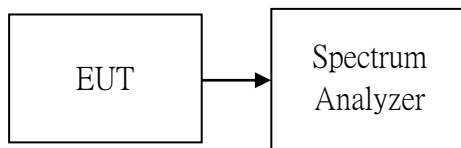
No.	Device Type	Brand	Model	Series No.	FCC ID
1	NB(E)	Lenovo	IBM 7663	N/A	N/A

**Remark:**

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

## 7. FCC PART 15.225 REQUIREMENTS

### 7.1 OCCUPIED BANDWIDTH(99%) AND 20 dB BANDWIDTH TEST CONFIGURATION



### TEST PROCEDURE

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW & VBW (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth (VBW) shall not be smaller than three times the RBW value.
4. Record the max. reading.

### TEST RESULTS

No non-compliance noted.

**Temperature:** 21.5°C

**Humidity:** 57% RH

**Tested by:** David Li

**Test Date:** December 16, 2022

Test Condition	Frequency(MHz)	Occupied Bandwidth 99% (kHz)	20 dB Bandwidth (kHz)
NFC	13.56	2.287	2.695

## Test Plot



## 7.2 FUNDAMENTAL AND RADIATED EMISSIONS

### LIMIT

According to §15.225

- (a) The field strength of any emissions within the band 13.553 – 13.567 MHz shall not exceed 15,848 microvolts / meter at 30 meters.
- (b) Within the bands 13.410 – 13.553 MHz and 13.567 -13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts / meter at 30 meters.
- (c) Within the bands 13.110 – 13.410 MHz and 13.710 – 14.010 MHz the field strength of any emissions shall not exceed 106 microvolts / meter at 30 meters.
- (d) The field strength of any emissions appearing outside of the 13.110 – 14.010 MHz and shall not exceed the general radiated emission limits in §15.209.

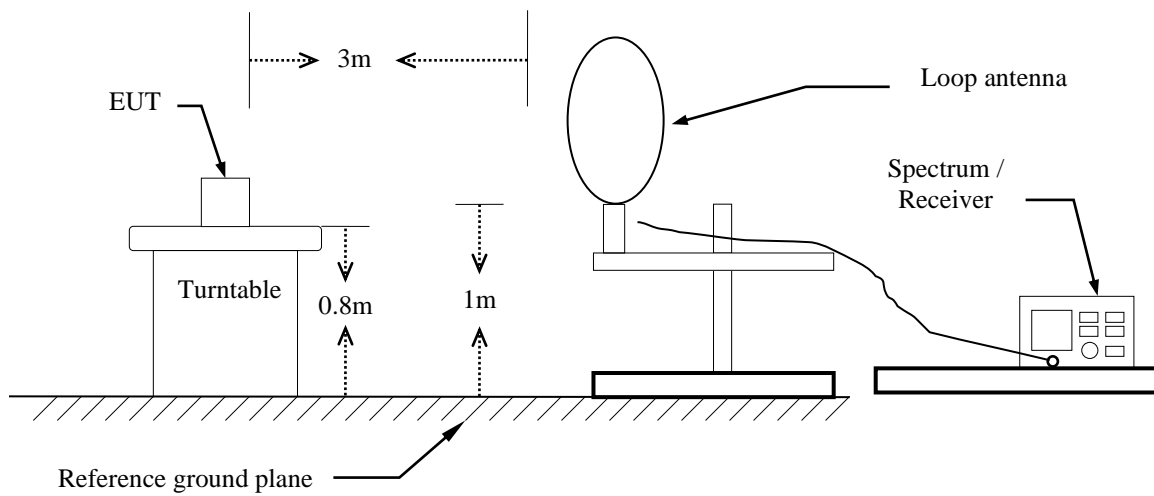
According to §15.225, except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (µV/m at meter)	Measurement Distance (meter)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 - 88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

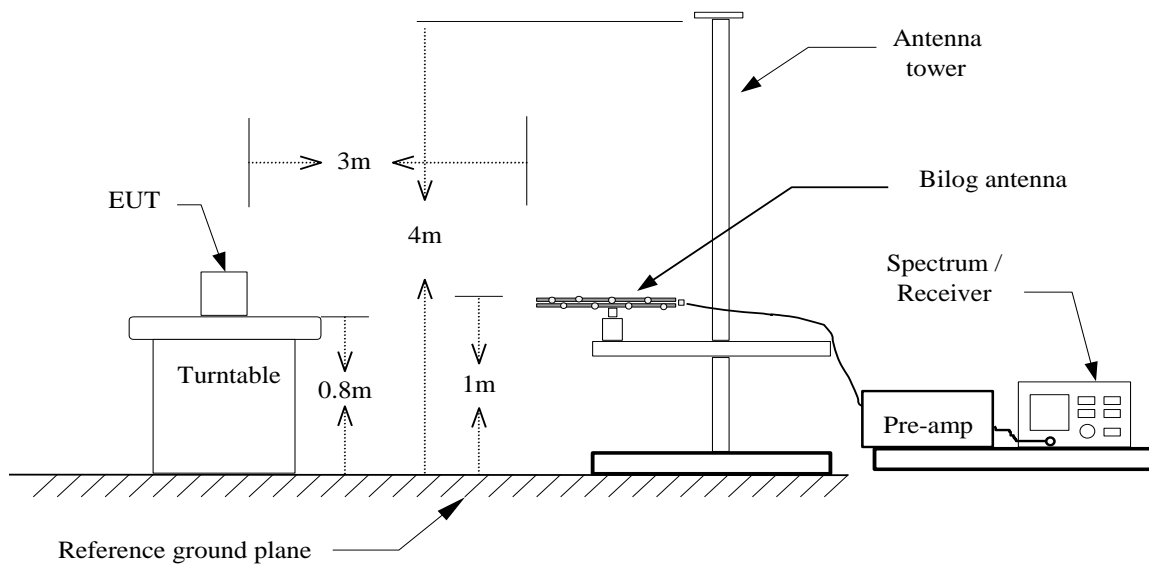
\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

## Test Configuration

### 9kHz ~ 30MHz



### 30MHz ~ 1GHz



## **TEST PROCEDURE**

### **For 9kHz ~ 30MHz**

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, The center of the loop shall be 1 m above the ground then to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Set the spectrum analyzer in the following setting as:  
9KHz-490KHz : RBW=200Hz / VBW=1kHz / Sweep=AUTO  
490KHz-30MHz : RBW=10kHz / VBW=30kHz / Sweep=AUTO
6. Repeat above procedures until the measurements for all frequencies are complete.

### **For 30MHz ~ 1GHz**

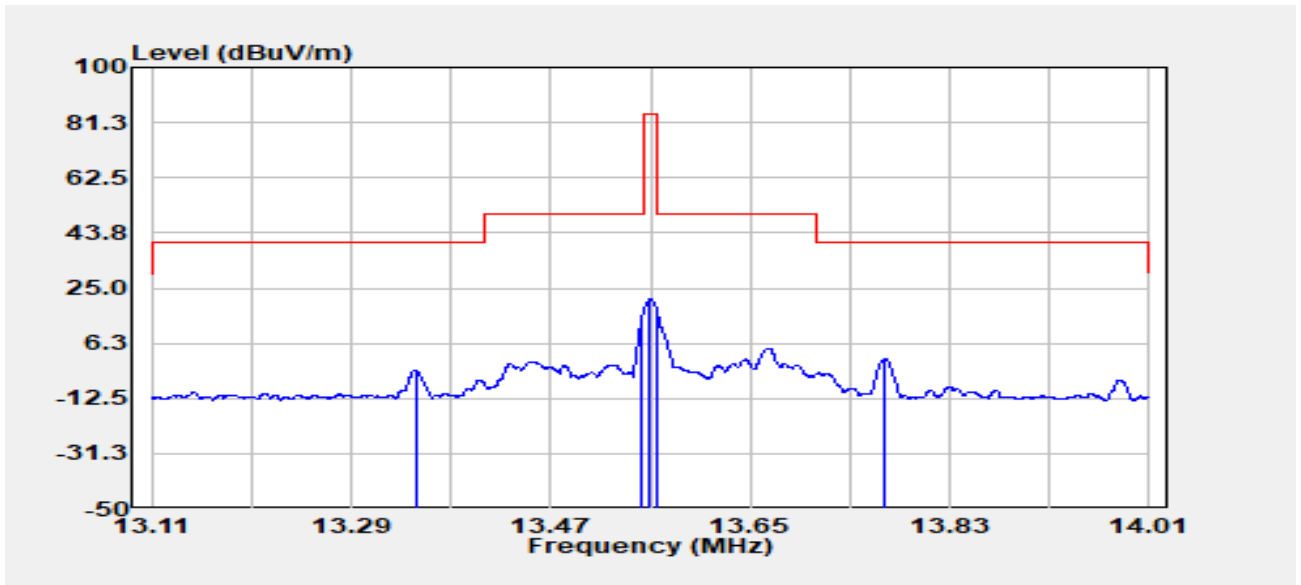
1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:  
RBW=100kHz / VBW=300kHz / Sweep=AUTO
7. Repeat above procedures until the measurements for all frequencies are complete.

### **Remark :**

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.



**Operation Mode:** TX mode                      **Test Date:** December 15, 2022  
**Temperature:** 24.1°C                      **Tested by:** Tony Chao  
**Humidity:** 63 % RH                      **Polarity:** Hor.

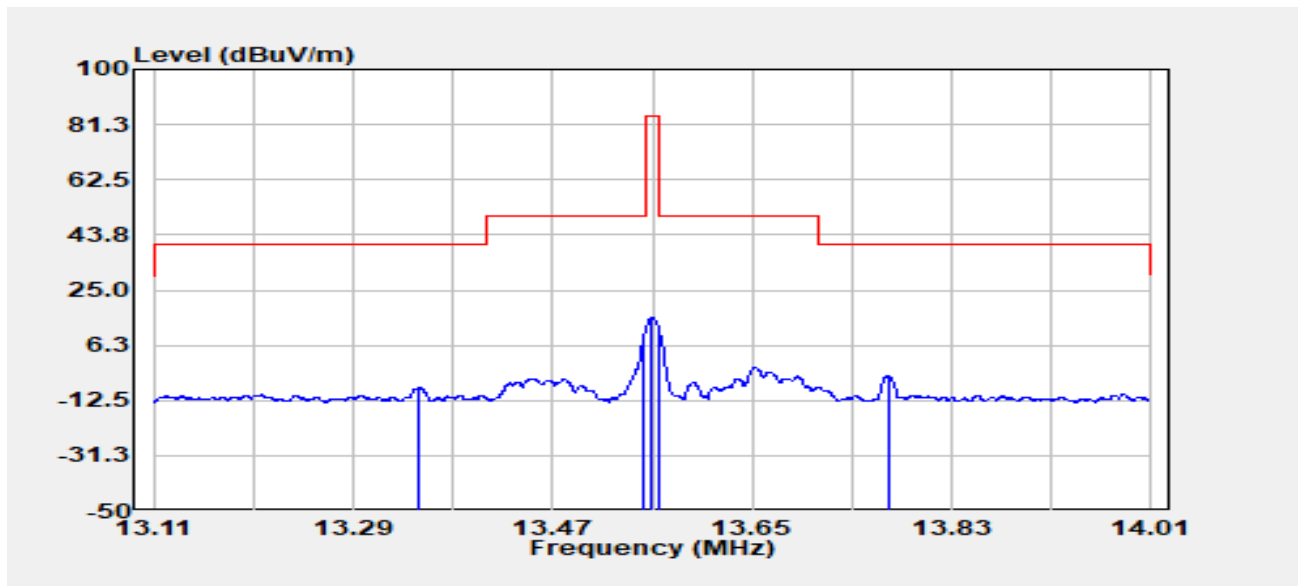


No.	Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS @30m dBμV/m	Limit @30m dBμV/m	Margin dB
1	13.348	Peak	22.06	-24.85	-2.80	40.51	-43.30
2	13.553	Peak	40.09	-24.85	15.24	50.47	-35.23
3	13.560	Peak	45.92	-24.85	21.07	84.00	-62.93
4	13.567	Peak	40.74	-24.85	15.89	50.47	-34.58
5	13.772	Peak	25.82	-24.84	0.98	40.51	-39.53

**Remark:**

1. Radiated emissions measured were made with an instrument using peak/quasi-peak/average detector mode.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m).
4. The measurement distance is 3m, the distance of Actual FS is convert to 30m.

<b>Operation Mode:</b>	TX mode	<b>Test Date:</b>	December 15, 2022
<b>Temperature:</b>	24.1°C	<b>Tested by:</b>	Tony Chao
<b>Humidity:</b>	63 % RH	<b>Polarity:</b>	Ver.

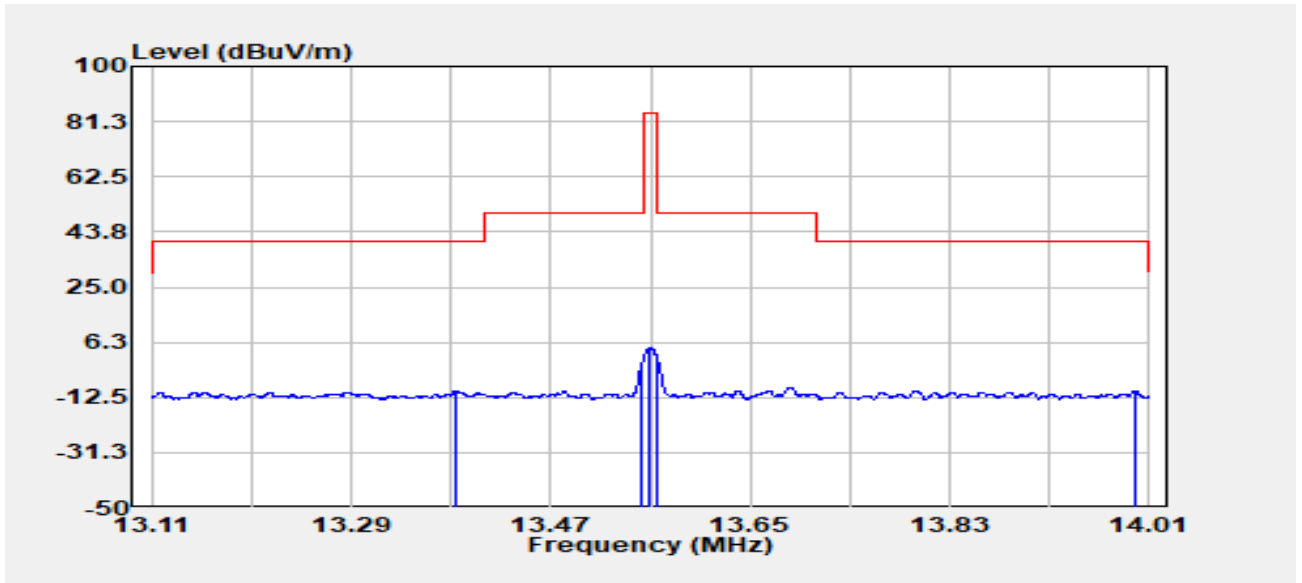


No.	Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS @30m dBμV/m	Limit @30m dBμV/m	Margin dB
1	13.349	Peak	16.68	-24.85	-8.17	40.51	-48.68
2	13.553	Peak	34.76	-24.85	9.91	50.47	-40.56
3	13.560	Peak	40.33	-24.85	15.49	84.00	-68.51
4	13.567	Peak	35.18	-24.85	10.33	50.47	-40.14
5	13.772	Peak	20.82	-24.84	-4.02	40.51	-44.53

**Remark:**

1. Radiated emissions measured were made with an instrument using peak/quasi-peak/average detector mode.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Margin (dB) = Result (dBUV/m) – Limit (dBUV/m).
4. The measurement distance is 3m, the distance of Actual FS is convert to 30m.

<b>Operation Mode:</b>	TX mode	<b>Test Date:</b>	December 15, 2022
<b>Temperature:</b>	24.1°C	<b>Tested by:</b>	Tony Chao
<b>Humidity:</b>	63 % RH	<b>Polarity:</b>	Ground



No.	Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS @30m dBμV/m	Limit @30m dBμV/m	Margin dB
1	13.385	Peak	14.43	-24.85	-10.42	40.51	-50.93
2	13.553	Peak	24.30	-24.85	-0.55	50.47	-51.02
3	13.560	Peak	29.03	-24.85	4.18	84.00	-79.82
4	13.567	Peak	24.53	-24.85	-0.32	50.47	-50.79
5	13.997	Peak	14.38	-24.84	-10.46	40.51	-50.96

**Remark:**

1. Radiated emissions measured were made with an instrument using peak/quasi-peak/average detector mode.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m).
4. The measurement distance is 3m, the distance of Actual FS is convert to 30m.

**9kHz ~ 30MHz**

**Operation Mode:** TX mode

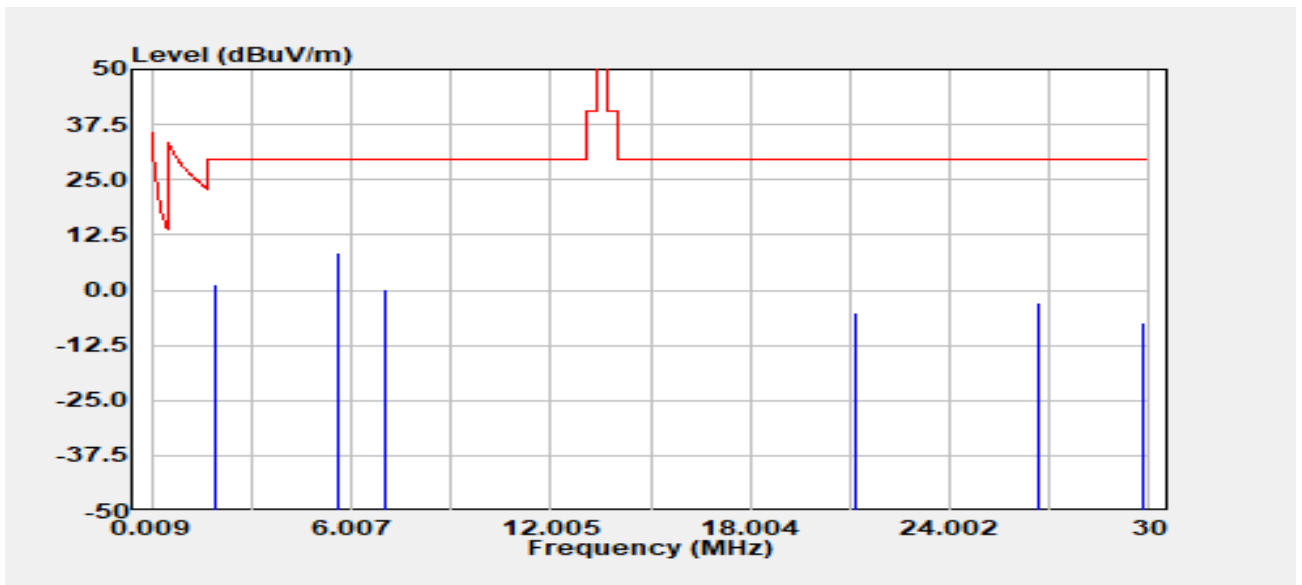
**Test Date:** December 15, 2022

**Temperature:** 24.1°C

**Tested by:** Tony Chao

**Humidity:** 63 % RH

**Polarity:** Horizontal



No.	Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS @300m or 30m dBUV/m	Limit @300m or 30m dBUV/m	Margin dB
1	1.941	Peak	27.51	-26.28	1.23	29.54	-28.31
2	5.603	Peak	34.22	-25.73	8.50	29.54	-21.04
3	7.055	Peak	25.56	-25.46	0.10	29.54	-29.44
4	21.184	Peak	19.70	-24.91	-5.21	29.54	-34.75
5	26.657	Peak	23.02	-25.88	-2.86	29.54	-32.40
6	29.821	Peak	19.14	-26.46	-7.32	29.54	-36.86

**Remark:**

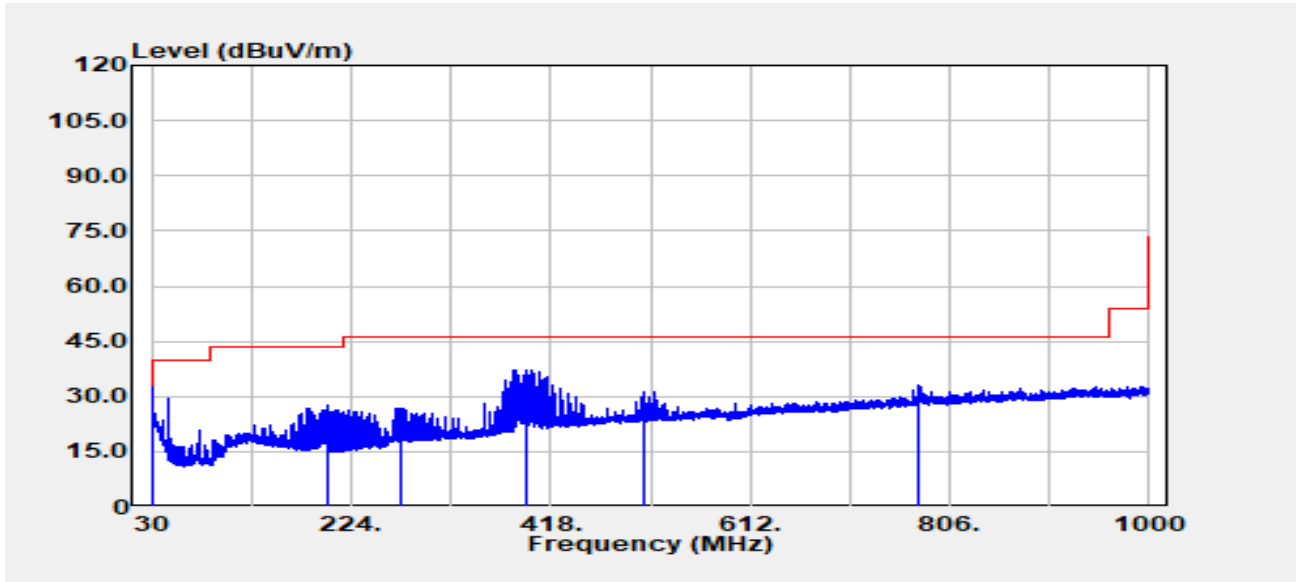
1. the measurement distance is 3m, the distance of Actual FS is convert to 30m or 300m.

**30MHz ~ 1GHz**

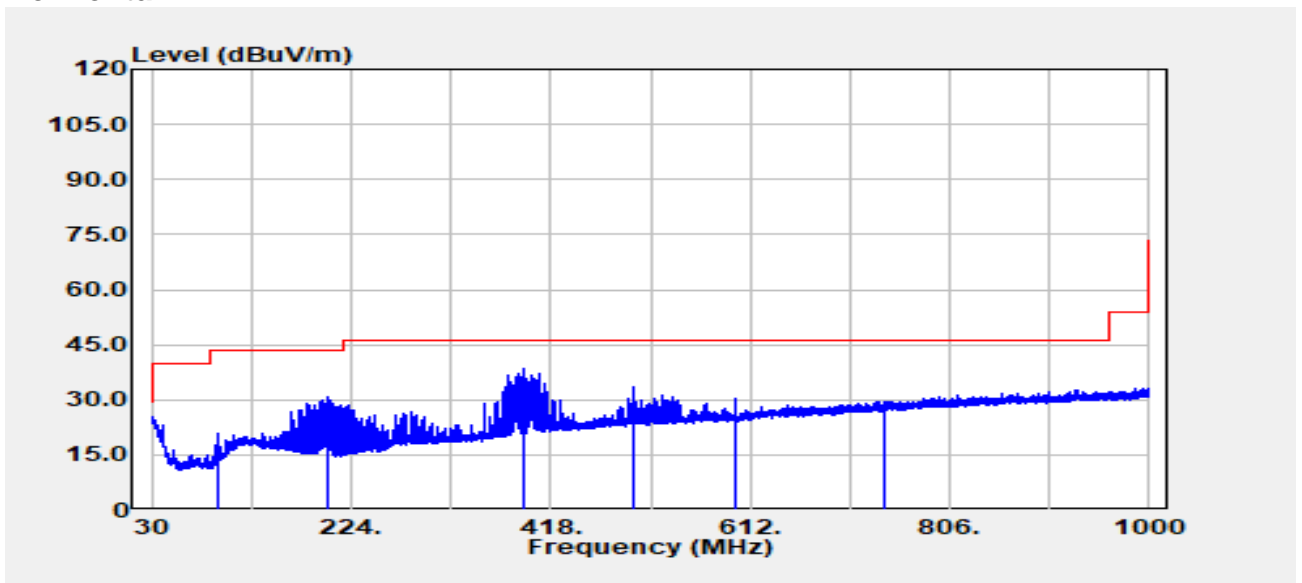
**Operation Mode:** TX mode                      **Test Date:** December 15, 2022  
**Temperature:** 24.1°C                      **Tested by:** Tony Chao  
**Humidity:** 63 % RH                      **Polarity:** Ver. / Hor.

Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB	Polarity
30.728	Peak	36.21	-3.73	32.48	40.00	-7.52	V
200.478	Peak	37.91	-10.11	27.80	43.50	-15.70	V
271.773	Peak	35.74	-9.08	26.65	46.00	-19.35	V
394.963	Peak	43.56	-6.20	37.36	46.00	-8.64	V
509.908	Peak	34.93	-3.80	31.13	46.00	-14.87	V
776.658	Peak	32.04	0.93	32.97	46.00	-13.03	V
94.263	Peak	35.68	-14.76	20.93	43.50	-22.57	H
200.356	Peak	41.06	-10.06	31.00	43.50	-12.50	H
390.961	Peak	44.95	-6.35	38.60	46.00	-7.40	H
498.025	Peak	37.22	-3.85	33.37	46.00	-12.63	H
596.601	Peak	32.82	-2.63	30.19	46.00	-15.81	H
742.829	Peak	29.23	0.29	29.52	46.00	-16.48	H

## Vertical



## Horizontal



## 7.3 FREQUENCY STABILITY

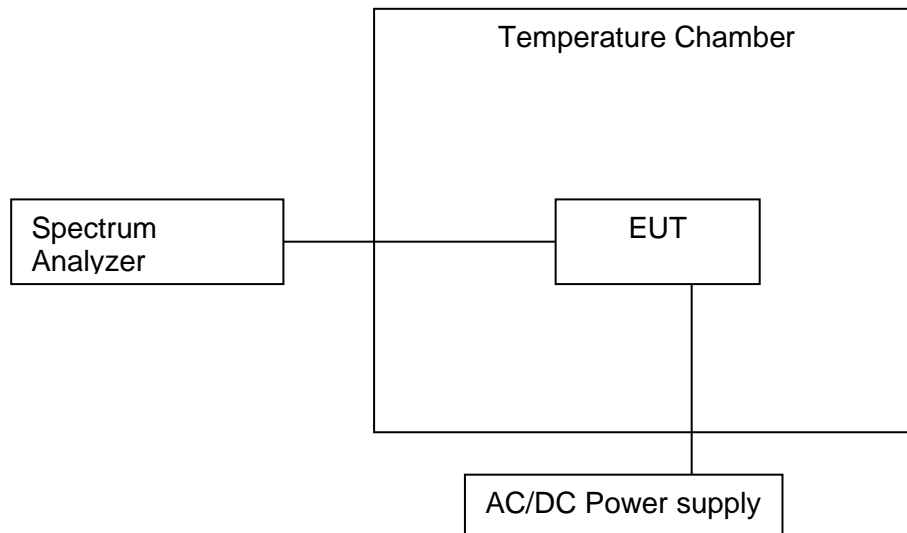
### LIMIT

According to §15.225(e),

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

### Test Configuration

**Temperature and Voltage Measurement (under normal and extreme test conditions)**



### TEST PROCEDURE

1. Turn the EUT off, and place it inside the environmental temperature chamber.
2. Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.
3. Set the spectrum analyzer as RBW=1kHz, VBW = RBW, Span = 200kHz, Sweep = auto.
4. Turn the EUT on and record the operating frequency at startup and two, five, and ten minutes after the EUT is energized.
5. Switch off the EUT and Lower the chamber temperature by not more than 10 °C and allow the temperature inside the chamber to stabilize.
6. Mark the peak frequency and measure the frequency tolerance using frequency counter function.
7. Repeat step 4 through step 6 down to the lowest specified temperature.

## TEST RESULTS

No non-compliance noted.

**Temperature:** 21.5°C

**Humidity:** 57% RH

**Tested by:** David Li

**Test Date:** December 16, 2022

## TEST DATA

Startup				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6	-20	13.559887	0.01950	+/- 1.356
6	-10	13.5598665	-0.00100	+/- 1.356
6	0	13.559863	-0.00450	+/- 1.356
6	10	13.559868	0.00050	+/- 1.356
6	20	13.5598675	0.00000	+/- 1.356
6	30	13.5598675	0.00000	+/- 1.356
6	40	13.5598625	-0.00500	+/- 1.356
6	50	13.559827	-0.04050	+/- 1.356
6	60	13.5598615	-0.00600	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6.4	20	13.5598635	-0.00400	+/- 1.356
6	20	13.5598675	0.00000	+/- 1.356
4.8	20	13.5598595	-0.00800	+/- 1.356



2 minutes				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6	-20	13.559864	0.00150	+/- 1.356
6	-10	13.5598635	0.00100	+/- 1.356
6	0	13.559869	0.00650	+/- 1.356
6	10	13.559867	0.00450	+/- 1.356
6	20	13.5598625	0.00000	+/- 1.356
6	30	13.5599195	0.05700	+/- 1.356
6	40	13.559867	0.00450	+/- 1.356
6	50	13.559859	-0.00350	+/- 1.356
6	60	13.5599285	0.06600	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6.4	20	13.5598664	0.00390	+/- 1.356
6	20	13.5598625	0.00000	+/- 1.356
4.8	20	13.559861	-0.00150	+/- 1.356

5 minutes				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6	-20	13.5598655	0.00200	+/- 1.356
6	-10	13.5598604	-0.00310	+/- 1.356
6	0	13.559867	0.00350	+/- 1.356
6	10	13.5598634	-0.00010	+/- 1.356
6	20	13.5598635	0.00000	+/- 1.356
6	30	13.5598665	0.00300	+/- 1.356
6	40	13.559862	-0.00150	+/- 1.356
6	50	13.5598602	-0.00330	+/- 1.356
6	60	13.5598603	-0.00320	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6.4	20	13.5598615	-0.00200	+/- 1.356
6	20	13.5598635	0.00000	+/- 1.356
4.8	20	13.559863	-0.00050	+/- 1.356

10 minutes				
A. Temperature Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6	-20	13.5598633	-0.00280	+/- 1.356
6	-10	13.5598645	-0.00160	+/- 1.356
6	0	13.5598604	-0.00570	+/- 1.356
6	10	13.5598625	-0.00360	+/- 1.356
6	20	13.5598661	0.00000	+/- 1.356
6	30	13.559812	-0.05410	+/- 1.356
6	40	13.5598665	0.00040	+/- 1.356
6	50	13.5598695	0.00340	+/- 1.356
6	60	13.5598615	-0.00460	+/- 1.356
B. Supply Voltage Variation				
Power Supply	Environment	Frequency	Delta (kHz)	Limit (kHz)
Vdc	Temperature (°C)	(MHz)		
6.4	20	13.5598615	-0.00460	+/- 1.356
6	20	13.5598661	0.00000	+/- 1.356
4.8	20	13.559868	0.00190	+/- 1.356

## 7.4 POWERLINE CONDUCTED EMISSIONS

### LIMIT

According to §15.207(a), for an intentional radiator 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  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits (dB $\mu$ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

\* Decreases with the logarithm of the frequency.

### TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

### TEST RESULTS

Not applicable, because EUT not connect to AC Main Source direct.

- End of Test Report -