

TEST REPORT

CERTIFICATE OF CONFORMITY

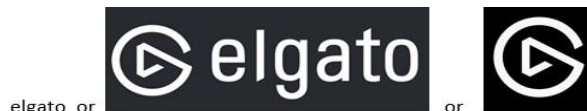
Standard: 47 CFR FCC Part 15, Subpart C (Section 15.225)

Report No.: RFBHPZ-WTW-P24070283

FCC ID: 2AAFM-20GBO9901

Product: Stream Deck Studio

Brand:



Model No.: 20GBO9901

Received Date: 2024/7/10

Test Date: 2024/8/1 ~ 2024/8/14

Issued Date: 2024/9/4

Applicant: Corsair Memory, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

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Test Location: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

FCC Registration / 198487 / TW2021

Designation Number:

Approved by: Jeremy Lin, **Date:** 2024/9/4
Jeremy Lin / Project Engineer

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Prepared by : Annie Chang / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBHPZ-WTW-P24070283	Original release.	2024/9/4

1 Certificate

Product: Stream Deck Studio

Brand:



Test Model: 20GBO9901

Sample Status: Engineering sample

Applicant: Corsair Memory, Inc.

Test Date: 2024/8/1 ~ 2024/8/14

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.225)

**Measurement
procedure:** ANSI C63.10-2013

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

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.225)			
Standard / Clause	Test Item	Result	Remark
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -6.37 dB at 0.49766 MHz
15.225 (a)	The field strength of any emissions within the band 13.553-13.567 MHz	Pass	Meet the requirement of limit.
15.225 (b)	The field strength of any emissions within the bands 13.410-13.553 MHz and 13.567-13.710 MHz	Pass	Meet the requirement of limit.
15.225 (c)	The field strength of any emissions within the bands 13.110-13.410 MHz and 13.710-14.010 MHz	Pass	Meet the requirement of limit.
15.225 (d)	The field strength of any emissions appearing outside of the 13.110-14.010 MHz band below 30MHz	Pass	Meet the requirement of limit.
15.225 (d)	The field strength of any emissions appearing outside of the 13.110-14.010 MHz band above 30MHz	Pass	Minimum passing margin is -0.2 dB at 40.67 MHz
15.225 (e)	Frequency Stability	Pass	Meet the requirement of limit.
15.215 (c)	20 dB Bandwidth	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	No antenna connector is used.

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

2.1 Measurement Uncertainty

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

Measurement	Specification	Expanded Uncertainty (k=2) (±)
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.90 dB
Radiated Emissions below 30 MHz	9 kHz ~ 30 MHz	2.85 dB
Radiated Emissions above 30 MHz	30 MHz ~ 1GHz	5.7 dB
20 dB Bandwidth	-	960 Hz

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	Stream Deck Studio
Brand	 elgato or 
Test Model	20GBO9901
Status of EUT	Engineering sample
Power Supply Rating	9Vdc
Modulation Type	ASK
NFC Technology Type	NFC-A(ISO/IEC 14443 Type A) NFC-F(ISO/IEC 18092 or FeliCa) NFC-V(ISO/IEC 15693)
Data Rate	Type A: 106 kbit/s Type F: 212 kbit/s, 424 kbit/s Type V: 26.48 kbit/s
Operating Frequency	13.56 MHz
Number of Channel	1
Field Strength Of Fundamental	17.4 dBuV/m (Quasi-Peak) at 30 meters

Note:

1. The following interfaces are supplied by EUT:

I/O Port	Number	Function
Type C	1	5Vdc output
Type C	1	Data connection
Type C	1	9Vdc input
RJ45	1	RJ45 Ethernet PoE+

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

The antenna information is listed as below.

Antenna Type	Connector Type
PIFA	IPEX

*Due to radiated measurements are made and the antenna gain is already accounted for this device, so provide an antenna datasheet and/or antenna measurement report is not required. The antenna dimensions and pictures (include antenna wire length if have) are stated in EUT photo exhibit.

3.3 Channel List

1 channel is provided to this EUT:

Channel	Frequency (MHz)
1	13.56

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. For Radiated Emission Test has mode (A) EUT Powered by USB with Adapter (Operating mode with RFID card) (B) EUT Powered by USB with Adapter (Operating mode without RFID card) (C) EUT Powered by POE (Operating mode with RFID card) (D) EUT Powered by POE (Operating mode without RFID card) Pre-scan these modes and find the worst case as a representative test condition. 2. For AC Conduction Test has mode (A) EUT Powered by USB with Adapter (Operating mode with RFID card) (B) EUT Powered by USB with Adapter (Operating mode without RFID card) (C) EUT Powered by POE (Operating mode with RFID card) (D) EUT Powered by POE (Operating mode without RFID card) Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. For Radiated Emission Test worst condition: Mode A. 2. For AC Conduction Test worst condition: Mode A/ C.

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

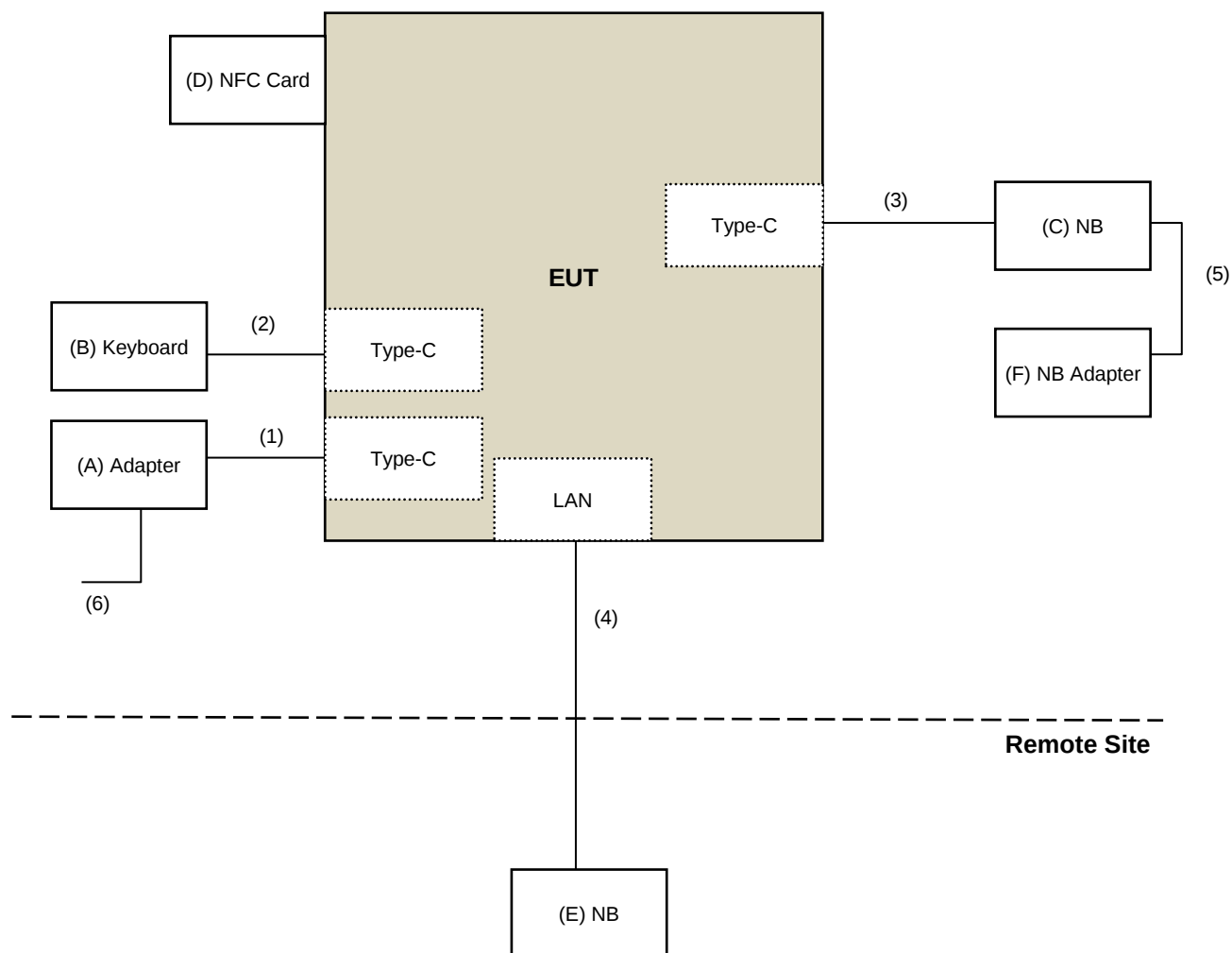
Test Item	EUT Configure Mode	Type	Tested Channel	Modulation	Data Rate Parameter
AC Power Conducted Emissions	A	A	13.56M	100%, ASK	106 kbit/s
		F	13.56M	8 - 30%, ASK	212 kbit/s, 424 kbit/s
		V (ISO15693)	13.56M	100%, ASK	26.48 kbit/s
	C	A	13.56M	100%, ASK	106 kbit/s
		F	13.56M	8 - 30%, ASK	212 kbit/s, 424 kbit/s
		V (ISO15693)	13.56M	100%, ASK	26.48 kbit/s
Radiated Emissions below 30 MHz	A	A	13.56M	100%, ASK	106 kbit/s
		F	13.56M	8 - 30%, ASK	212 kbit/s, 424 kbit/s
		V (ISO15693)	13.56M	100%, ASK	26.48 kbit/s
Radiated Emissions above 30 MHz	A	A	13.56M	100%, ASK	106 kbit/s
		F	13.56M	8 - 30%, ASK	212 kbit/s, 424 kbit/s
		V (ISO15693)	13.56M	100%, ASK	26.48 kbit/s
Frequency Stability	A	-	13.56M	unmodulated	-
20 dB Bandwidth	A	A	13.56M	100%, ASK	106 kbit/s
		F	13.56M	8 - 30%, ASK	212 kbit/s, 424 kbit/s
		V (ISO15693)	13.56M	100%, ASK	26.48 kbit/s
EUT Configure Mode:	A	EUT Powered by USB with Adapter (Operating mode with RFID card)			
	B	EUT Powered by USB with Adapter (Operating mode without RFID card)			
	C	EUT Powered by POE (Operating mode with RFID card)			
	D	EUT Powered by POE (Operating mode without RFID card)			

3.5 Test Program Used and Operation Descriptions

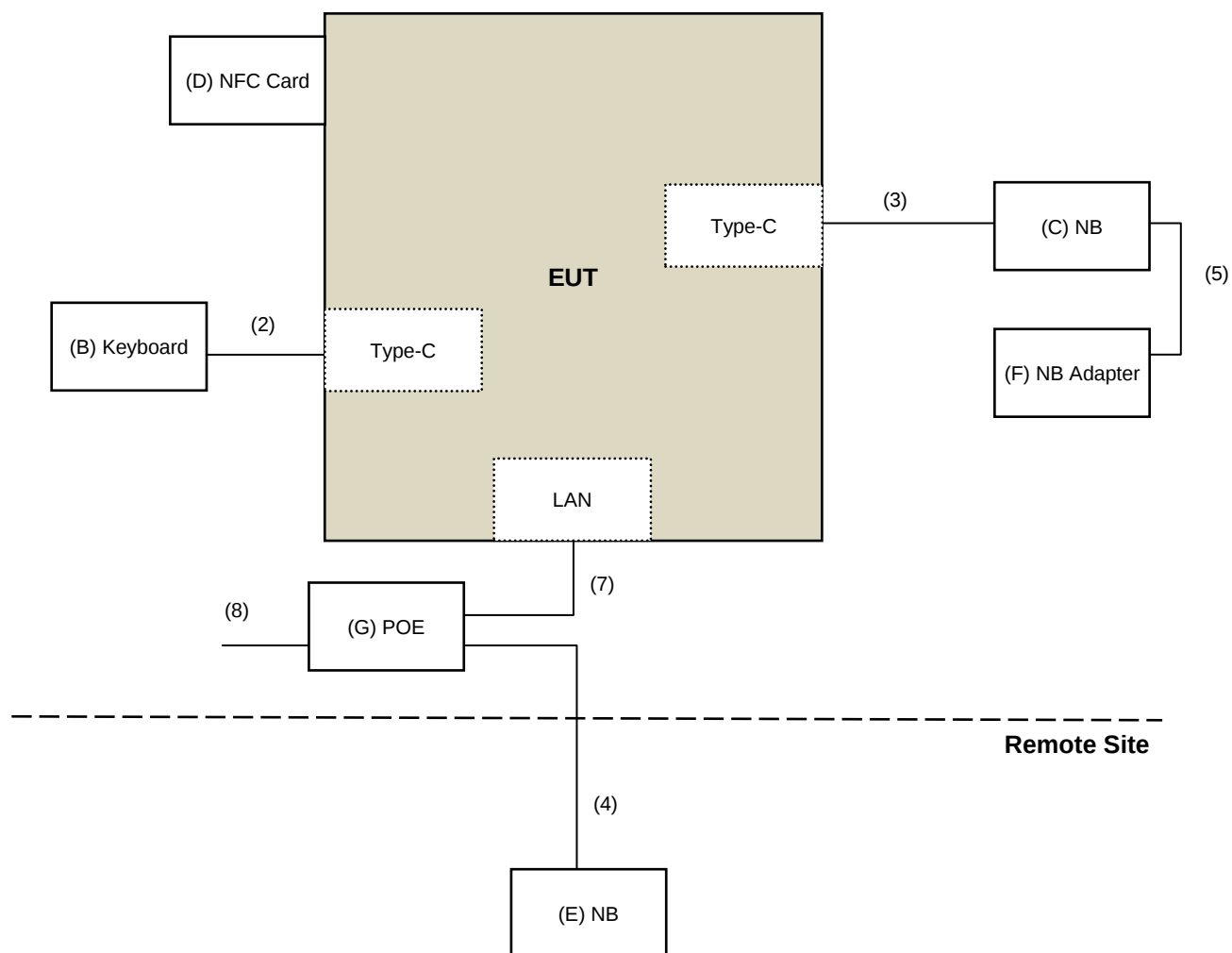
Set the EUT under transmission condition continuously at specific channel frequency.

3.6 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode C



3.7 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	DELL	LA65NM190 LPS	N/A	N/A	Provided by Lab
B	Keyboard	STREAM DECK	N/A	N/A	N/A	Supplied by applicant
C	NB	LENOVO	IdeaPad 5 15ITL05	N/A	N/A	Provided by Lab
D	NFC Card	N/A	N/A	N/A	N/A	Supplied by applicant
E	NB	LENOVO	IdeaPad 5 15ITL05	N/A	N/A	Provided by Lab
F	NB Adapter	LENOVO	ADLX65CLGC2A	N/A	N/A	Provided by Lab
G	POE	UL	PGOB24D01-560054	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC cable	1	1.8	N	0	Provided by Lab
2	Type-C to C cable	1	1.5	Y	1	Supplied by applicant
3	Type-A to C cable	1	1	Y	0	Provided by Lab
4	LAN cable	1	10	N	0	Provided by Lab
5	DC cable	1	1.9	N	0	Provided by Lab
6	AC cable	1	0.9	N	0	Provided by Lab
7	LAN cable	1	1.5	N	0	Provided by Lab
8	AC cable	1	1	N	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance LYNICS	0900510	E1-011285	2023/9/21	2024/9/20
		E1-011286	2023/9/21	2024/9/20
50 ohm terminal resistance SUHNER	65BNC-5001	E1-010789	2024/6/20	2025/6/19
EMI Test Receiver R&S	ESCI	100412	2023/8/23	2024/8/22
	ESCS 30	100288	2023/12/28	2024/12/27
Fixed Attenuator STI	STI02-2200-10	NO.1	2023/9/13	2024/9/12
LISN R&S	ENV216	100024	2023/9/6	2024/9/5
		101197	2024/7/11	2025/7/10
LISN Schwarzbeck	NNLK 8121	8121-731	2024/6/12	2025/6/11
		8121-00759	2023/8/21	2024/8/20
		8121-808	2024/4/26	2025/4/25
	NNLK 8129	8129229	2024/6/14	2025/6/13
RF Coaxial Cable PEWC	5D-FB	Cable-CO10-01	2024/2/7	2025/2/6
Software BVADT	Cond_V7.4.1.0	N/A	N/A	N/A

Notes:

1. The test was performed in Linkou Conduction 10.
2. Tested Date: 2024/8/9

4.2 Radiated Emissions below 30 MHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Loop Antenna EMCI	LPA600	270	2023/9/4	2024/9/3
MXE EMI Receiver Agilent	N9038A	MY51210129	2024/3/22	2025/3/21
Preamplifier EMCI	EMC001340	980269	2024/6/25	2025/6/24
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2024/6/25	2025/6/24
Signal Analyzer R&S	FSV40	101544	2024/6/20	2025/6/19
Software BVADT	Radiated_V8.7.08	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2024/8/1 ~ 2024/8/2

4.3 Radiated Emissions above 30 MHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2023/10/13	2024/10/12
Coupling / Decoupling Network Schwarzbeck	CDNE-M2	00097	2024/5/28	2025/5/27
	CDNE-M3	00091	2024/5/28	2025/5/27
Loop Antenna EMCI	LPA600	270	2023/9/4	2024/9/3
MXE EMI Receiver Agilent	N9038A	MY51210129	2024/3/22	2025/3/21
Preamplifier Agilent	8447D	2944A11064	2024/2/15	2025/2/14
Preamplifier EMCI	EMC001340	980269	2024/6/25	2025/6/24
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2024/6/25	2025/6/24
Signal Analyzer R&S	FSV40	101544	2024/6/20	2025/6/19
Software BVADT	Radiated_V8.7.08	N/A	N/A	N/A
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

1. The test was performed in Linkou 966 Chamber 6 (CH 6).
2. Tested Date: 2024/8/2 ~ 2024/8/9

4.4 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Source Schaffner	Proflin2105- 208NSG1007	55616	N/A	N/A
PXA Signal Analyzer Keysight	N9030A	MY54490260	2024/7/17	2025/7/16
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	MHU-225AU	920409	2024/6/24	2025/6/23

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2024/8/14

4.5 20 dB Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
PXA Signal Analyzer Keysight	N9030A	MY54490260	2024/7/17	2025/7/16
Signal Analyzer R&S	FSV40	101042	2023/9/5	2024/9/4
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2024/8/14

5 Limits of Test Items

5.1 AC Power Conducted Emissions

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

Notes:

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

5.2 Radiated Emissions below 30 MHz

- (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 band shall not exceed the general radiated emission limits in §15.209 as below table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detect or except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, and the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

5.3 Radiated Emissions above 30 MHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below 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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.4 Frequency Stability

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.

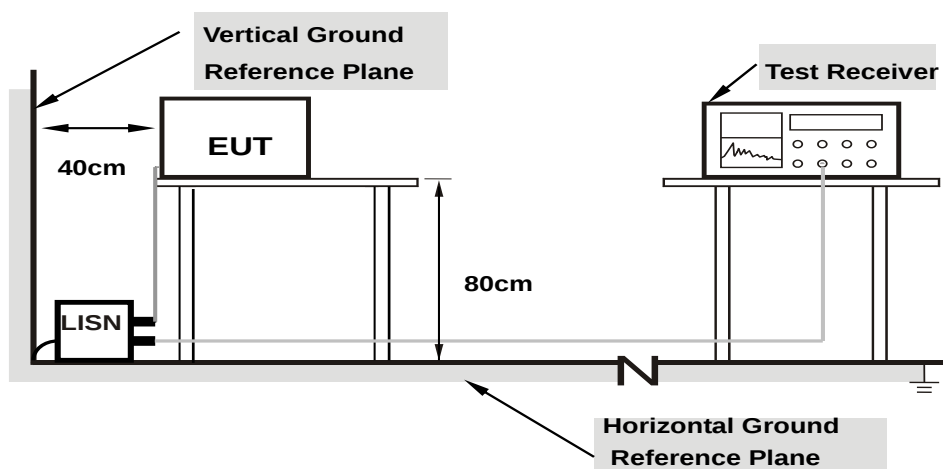
5.5 20 dB Bandwidth

The 20dB bandwidth shall be specified in operating frequency band.

6 Test Arrangements

6.1 AC Power Conducted Emissions

6.1.1 Test Setup



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

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

6.1.2 Test Procedure

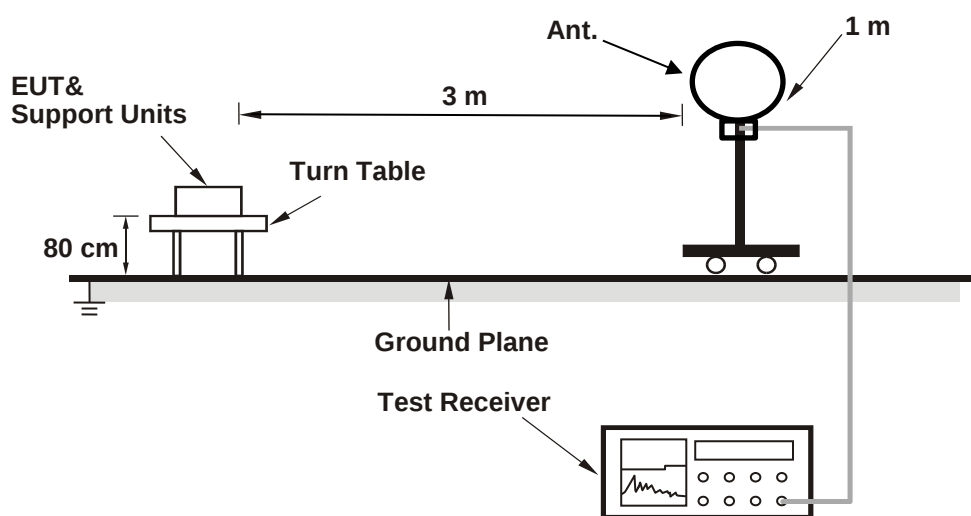
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

6.2 Radiated Emissions below 30 MHz

6.2.1 Test Setup

For Radiated emission below 30 MHz



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

6.2.2 Test Procedure

For Radiated emission below 30 MHz

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

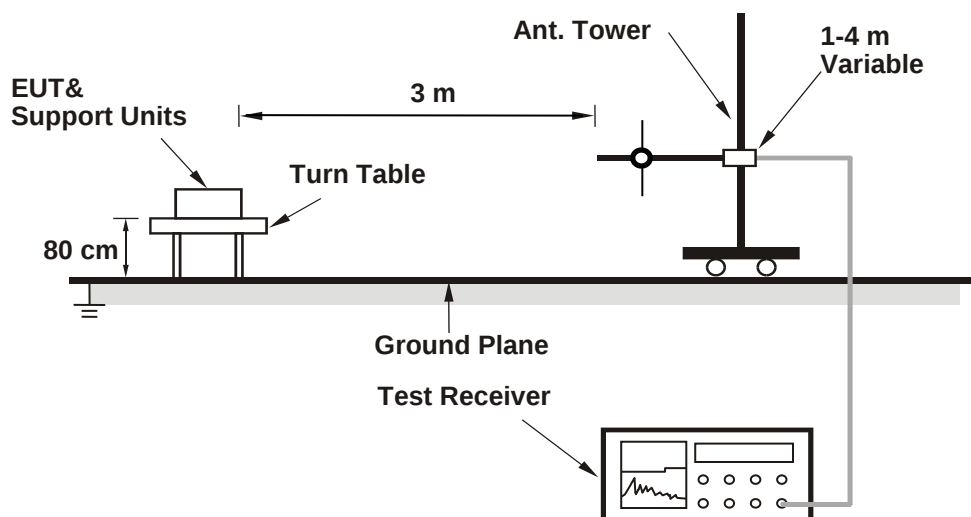
Notes:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
- All modes of operation were investigated and the worst-case emissions are reported.
- KDB 414788 OATS and Chamber Correlation Justification
- Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

6.3 Radiated Emissions above 30 MHz

6.3.1 Test Setup

For Radiated emission above 30 MHz



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

6.3.2 Test Procedure

For Radiated emission above 30 MHz

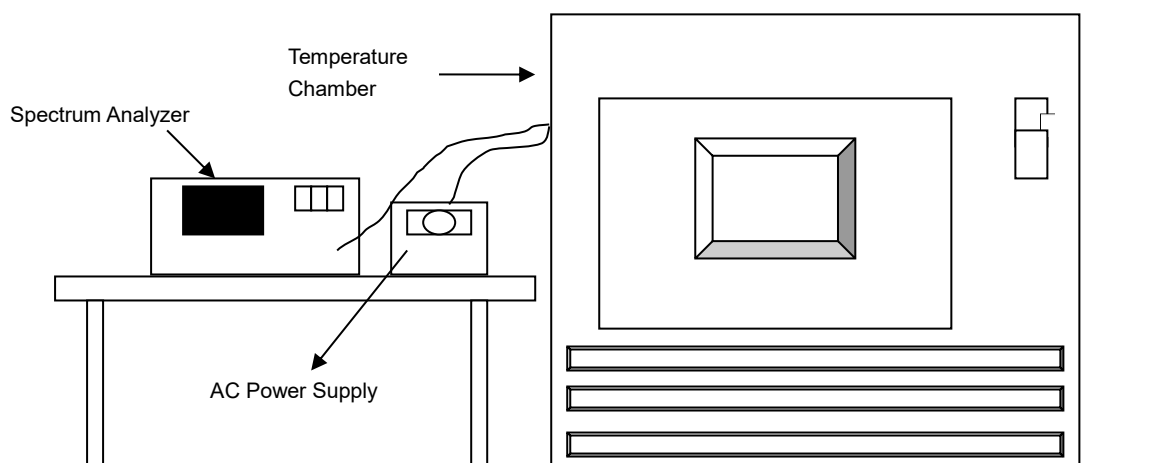
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

6.4 Frequency Stability

6.4.1 Test Setup

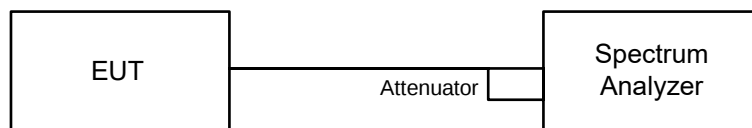


6.4.2 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

6.5 20 dB Bandwidth

6.5.1 Test Setup



6.5.2 Test Procedure

- Set resolution bandwidth (RBW) = 1% to 5% of the OBW.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

7 Test Results of Test Item

7.1 AC Power Conducted Emissions

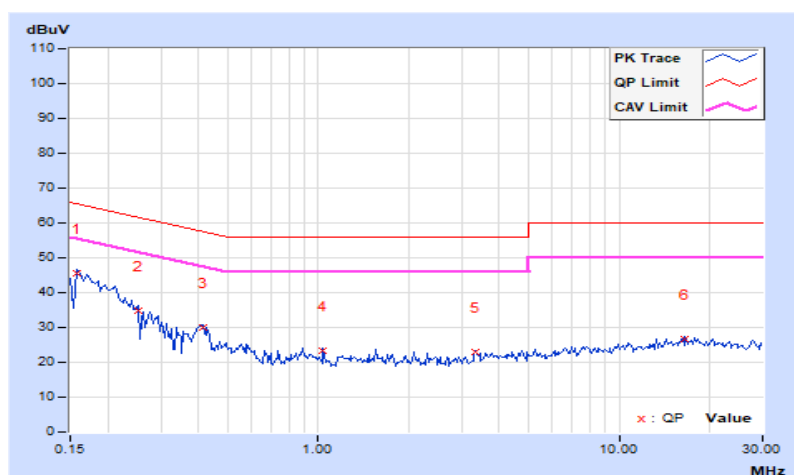
Mode A_Type A

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.63	36.08	19.87	45.71	29.50	65.58	55.58	-19.87	-26.08
2	0.25156	9.62	25.24	12.04	34.86	21.66	61.71	51.71	-26.85	-30.05
3	0.41563	9.63	20.50	14.83	30.13	24.46	57.54	47.54	-27.41	-23.08
4	1.03906	9.63	13.55	8.78	23.18	18.41	56.00	46.00	-32.82	-27.59
5	3.34375	9.68	13.12	2.81	22.80	12.49	56.00	46.00	-33.20	-33.51
6	16.61328	10.02	16.65	12.51	26.67	22.53	60.00	50.00	-33.33	-27.47

Remarks:

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

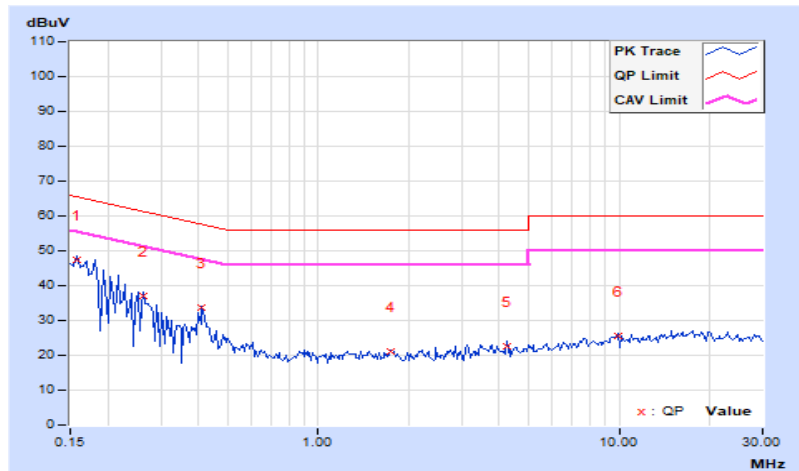


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.62	37.91	20.83	47.53	30.45	65.58	55.58	-18.05	-25.13
2	0.26328	9.60	27.38	13.81	36.98	23.41	61.33	51.33	-24.35	-27.92
3	0.41172	9.60	24.00	18.85	33.60	28.45	57.61	47.61	-24.01	-19.16
4	1.75000	9.64	11.48	5.47	21.12	15.11	56.00	46.00	-34.88	-30.89
5	4.23828	9.69	12.92	5.97	22.61	15.66	56.00	46.00	-33.39	-30.34
6	9.94922	9.85	15.57	9.16	25.42	19.01	60.00	50.00	-34.58	-30.99

Remarks:

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



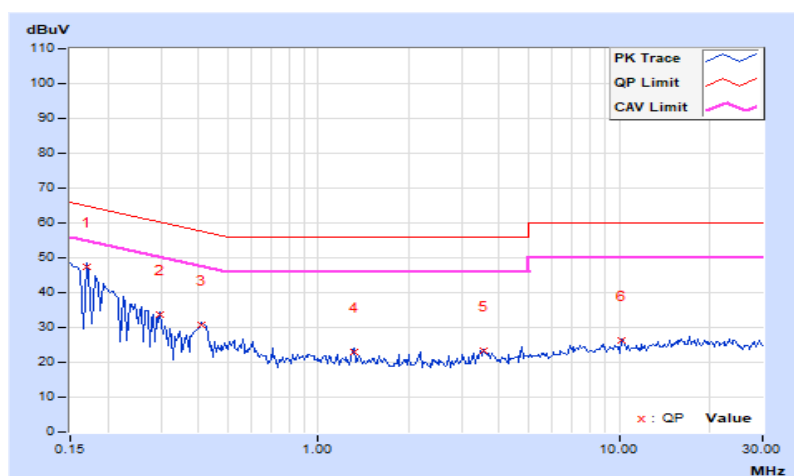
Mode A_Type F

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16953	9.63	37.92	22.43	47.55	32.06	64.98	54.98	-17.43	-22.92
2	0.29844	9.62	24.20	12.73	33.82	22.35	60.29	50.29	-26.47	-27.94
3	0.41172	9.63	21.14	16.91	30.77	26.54	57.61	47.61	-26.84	-21.07
4	1.31250	9.64	13.49	8.51	23.13	18.15	56.00	46.00	-32.87	-27.85
5	3.57031	9.69	13.82	4.81	23.51	14.50	56.00	46.00	-32.49	-31.50
6	10.12500	9.86	16.42	10.85	26.28	20.71	60.00	50.00	-33.72	-29.29

Remarks:

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

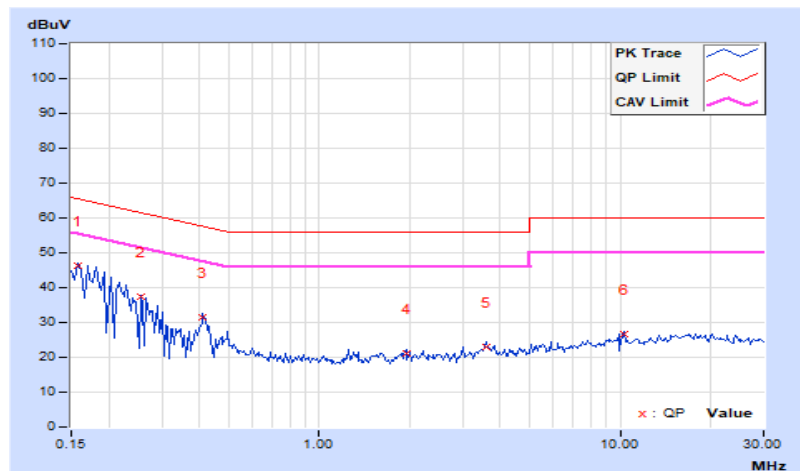


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.62	36.83	19.91	46.45	29.53	65.58	55.58	-19.13	-26.05
2	0.25547	9.60	27.78	13.43	37.38	23.03	61.58	51.58	-24.20	-28.55
3	0.41172	9.60	21.93	16.81	31.53	26.41	57.61	47.61	-26.08	-21.20
4	1.95313	9.64	11.47	6.10	21.11	15.74	56.00	46.00	-34.89	-30.26
5	3.60156	9.67	13.45	3.72	23.12	13.39	56.00	46.00	-32.88	-32.61
6	10.31641	9.86	16.72	10.83	26.58	20.69	60.00	50.00	-33.42	-29.31

Remarks:

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



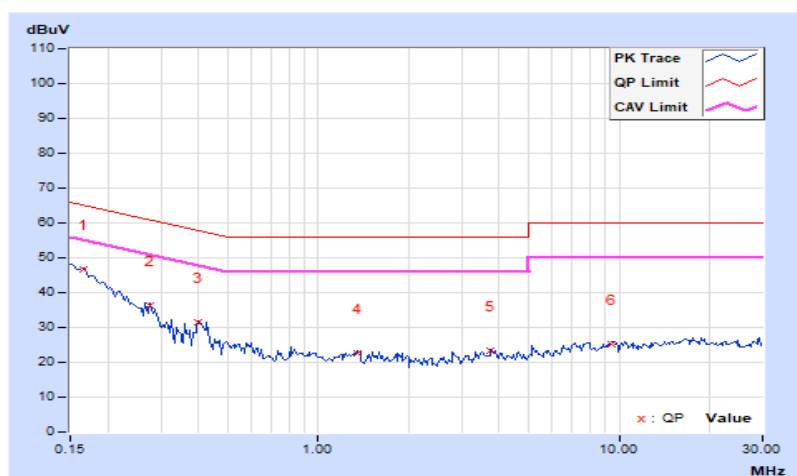
Mode A_Type V (ISO 15693)

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.63	36.96	21.32	46.59	30.95	65.18	55.18	-18.59	-24.23
2	0.27500	9.62	26.52	14.93	36.14	24.55	60.97	50.97	-24.83	-26.42
3	0.40000	9.63	21.78	13.11	31.41	22.74	57.85	47.85	-26.44	-25.11
4	1.34375	9.64	13.08	6.93	22.72	16.57	56.00	46.00	-33.28	-29.43
5	3.75000	9.69	13.81	4.30	23.50	13.99	56.00	46.00	-32.50	-32.01
6	9.46094	9.85	15.51	9.78	25.36	19.63	60.00	50.00	-34.64	-30.37

Remarks:

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

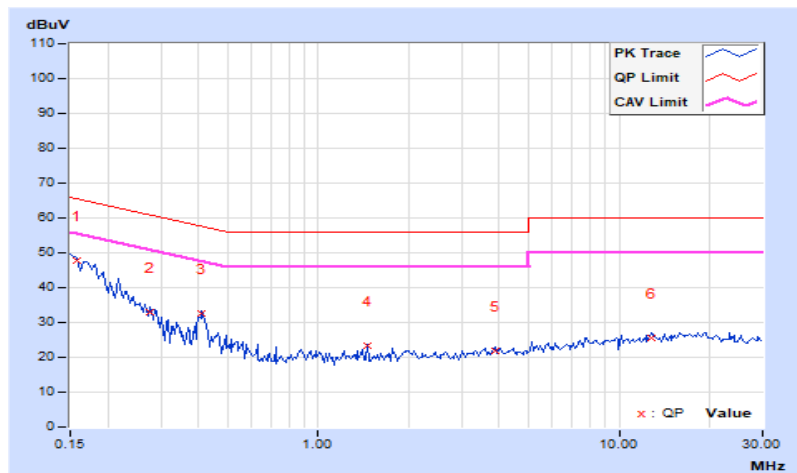


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.62	38.05	21.23	47.67	30.85	65.58	55.58	-17.91	-24.73
2	0.27500	9.60	23.40	10.64	33.00	20.24	60.97	50.97	-27.97	-30.73
3	0.41172	9.60	23.04	17.77	32.64	27.37	57.61	47.61	-24.97	-20.24
4	1.45703	9.64	13.57	8.02	23.21	17.66	56.00	46.00	-32.79	-28.34
5	3.89453	9.68	12.14	4.17	21.82	13.85	56.00	46.00	-34.18	-32.15
6	12.87500	9.93	15.64	10.95	25.57	20.88	60.00	50.00	-34.43	-29.12

Remarks:

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



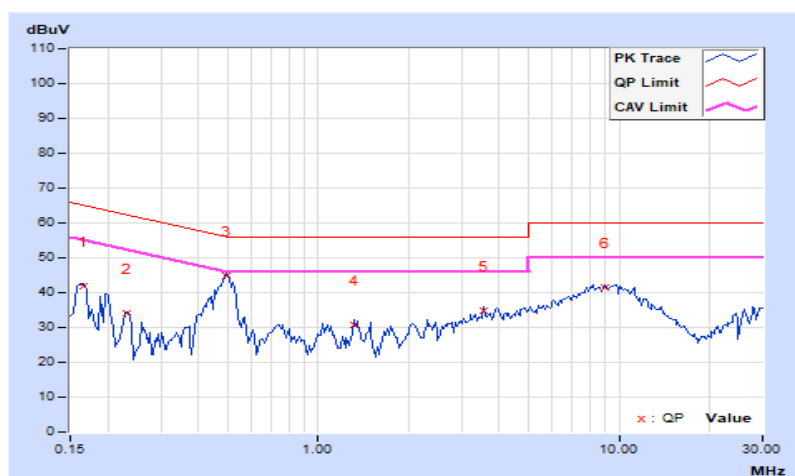
Mode C_Type A

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.63	32.08	22.47	41.71	32.10	65.18	55.18	-23.47	-23.08
2	0.23203	9.62	24.37	14.51	33.99	24.13	62.38	52.38	-28.39	-28.25
3	0.49766	9.63	35.14	30.04	44.77	39.67	56.04	46.04	-11.27	-6.37
4	1.31641	9.64	21.07	14.48	30.71	24.12	56.00	46.00	-25.29	-21.88
5	3.54688	9.69	25.30	18.85	34.99	28.54	56.00	46.00	-21.01	-17.46
6	8.94922	9.83	31.71	25.30	41.54	35.13	60.00	50.00	-18.46	-14.87

Remarks:

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

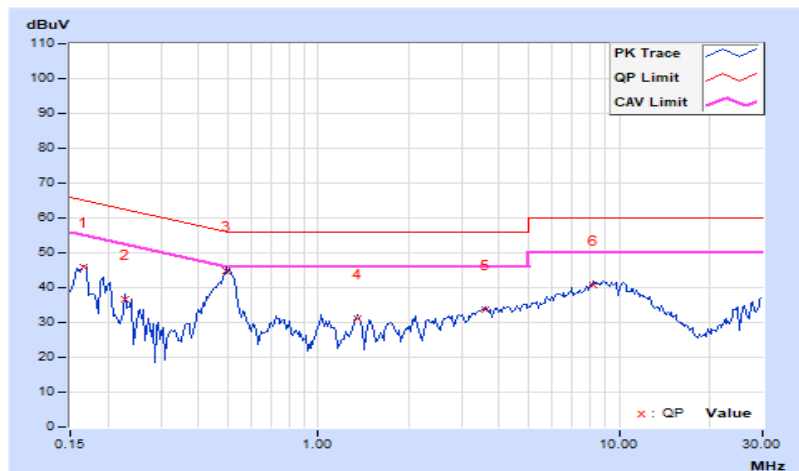


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.61	36.24	25.33	45.85	34.94	65.18	55.18	-19.33	-20.24
2	0.22812	9.60	26.93	16.48	36.53	26.08	62.52	52.52	-25.99	-26.44
3	0.49766	9.61	35.11	29.55	44.72	39.16	56.04	46.04	-11.32	-6.88
4	1.34375	9.64	21.59	15.72	31.23	25.36	56.00	46.00	-24.77	-20.64
5	3.58203	9.67	24.17	18.20	33.84	27.87	56.00	46.00	-22.16	-18.13
6	8.25000	9.80	31.12	25.01	40.92	34.81	60.00	50.00	-19.08	-15.19

Remarks:

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



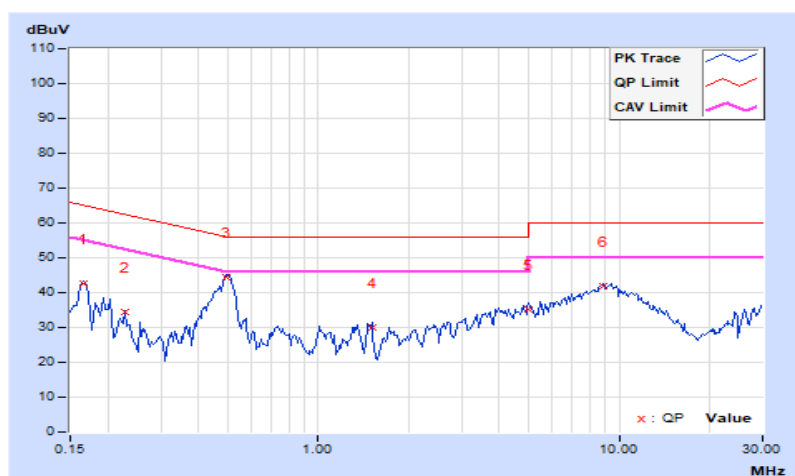
Mode C_Type F

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.63	32.86	22.49	42.49	32.12	65.18	55.18	-22.69	-23.06
2	0.22812	9.62	24.69	15.11	34.31	24.73	62.52	52.52	-28.21	-27.79
3	0.49375	9.63	34.98	29.47	44.61	39.10	56.10	46.10	-11.49	-7.00
4	1.50781	9.64	20.45	13.27	30.09	22.91	56.00	46.00	-25.91	-23.09
5	5.00000	9.73	25.53	17.12	35.26	26.85	56.00	46.00	-20.74	-19.15
6	8.84375	9.83	31.92	25.85	41.75	35.68	60.00	50.00	-18.25	-14.32

Remarks:

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

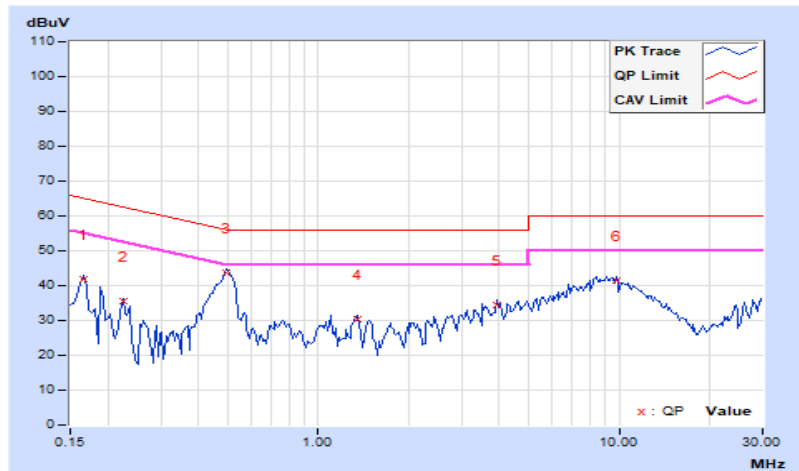


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.61	32.06	20.73	41.67	30.34	65.18	55.18	-23.51	-24.84
2	0.22422	9.60	25.82	14.18	35.42	23.78	62.66	52.66	-27.24	-28.88
3	0.49375	9.61	34.21	28.15	43.82	37.76	56.10	46.10	-12.28	-8.34
4	1.34766	9.64	20.81	14.48	30.45	24.12	56.00	46.00	-25.55	-21.88
5	3.92188	9.68	24.76	18.41	34.44	28.09	56.00	46.00	-21.56	-17.91
6	9.81250	9.84	31.77	25.26	41.61	35.10	60.00	50.00	-18.39	-14.90

Remarks:

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



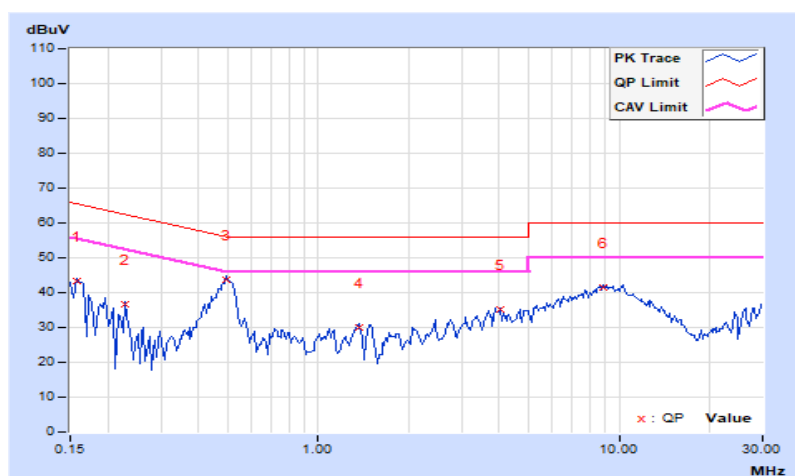
Mode C_Type V (ISO 15693)

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	9.63	33.72	17.92	43.35	27.55	65.58	55.58	-22.23	-28.03
2	0.22812	9.62	26.95	14.07	36.57	23.69	62.52	52.52	-25.95	-28.83
3	0.49375	9.63	34.12	28.51	43.75	38.14	56.10	46.10	-12.35	-7.96
4	1.36328	9.64	20.43	14.35	30.07	23.99	56.00	46.00	-25.93	-22.01
5	4.05078	9.70	25.39	17.20	35.09	26.90	56.00	46.00	-20.91	-19.10
6	8.82422	9.83	31.76	25.63	41.59	35.46	60.00	50.00	-18.41	-14.54

Remarks:

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

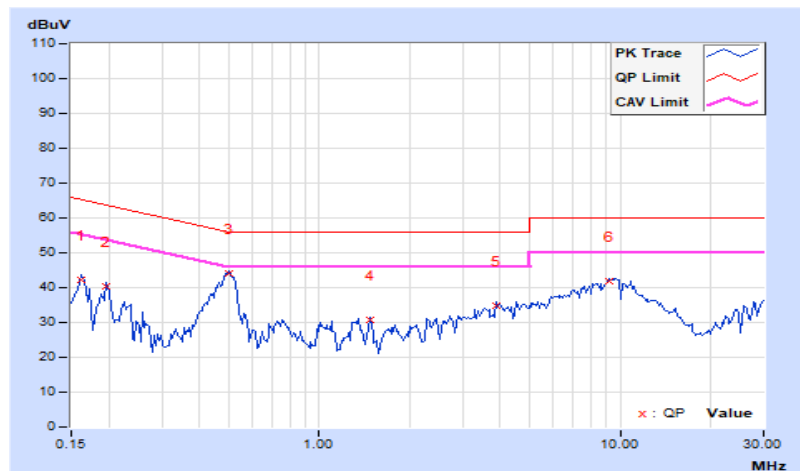


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	9.62	32.76	21.09	42.38	30.71	65.38	55.38	-23.00	-24.67
2	0.19687	9.60	30.84	21.52	40.44	31.12	63.74	53.74	-23.30	-22.62
3	0.50156	9.61	34.35	28.00	43.96	37.61	56.00	46.00	-12.04	-8.39
4	1.47656	9.64	21.28	15.65	30.92	25.29	56.00	46.00	-25.08	-20.71
5	3.87500	9.68	25.21	18.32	34.89	28.00	56.00	46.00	-21.11	-18.00
6	9.25781	9.83	31.99	25.76	41.82	35.59	60.00	50.00	-18.18	-14.41

Remarks:

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



7.2 Radiated Emissions below 30 MHz

For Frequency: 13.11 MHz ~ 14.01 MHz

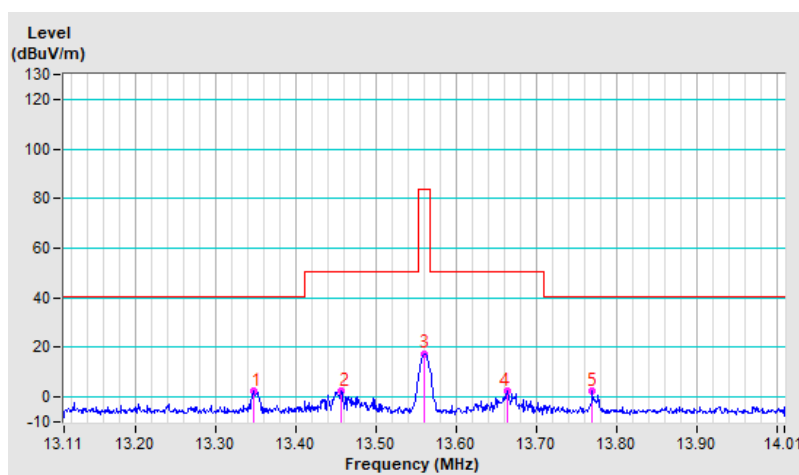
Type A

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.35	2.3 QP	40.5	-38.2	1.00	327	41.1	-38.8
2	13.46	2.3 QP	50.5	-48.2	1.00	202	41.1	-38.8
3	*13.56	17.4 QP	84.0	-66.6	1.00	325	56.3	-38.9
4	13.66	2.3 QP	50.5	-48.2	1.00	3	41.2	-38.9
5	13.77	2.4 QP	40.5	-38.1	1.00	323	41.3	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

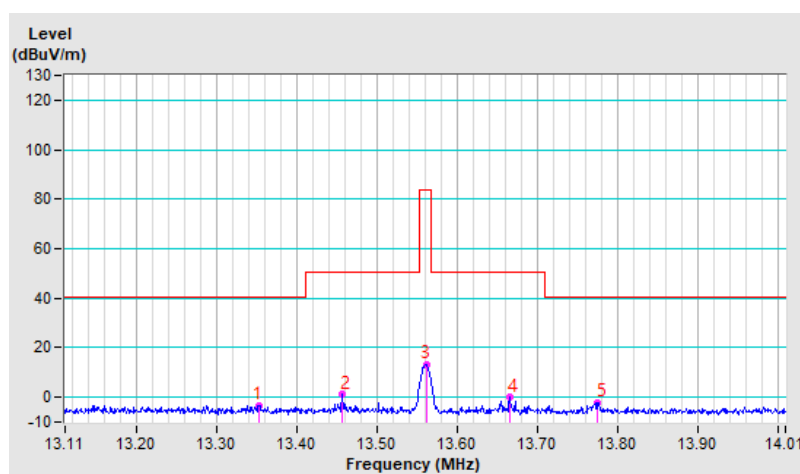


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.35	-3.3 QP	40.5	-43.8	1.00	260	35.5	-38.8
2	13.46	1.0 QP	50.5	-49.5	1.00	265	39.8	-38.8
3	*13.56	13.3 QP	84.0	-70.7	1.00	265	52.2	-38.9
4	13.67	-0.2 QP	50.5	-50.7	1.00	272	38.7	-38.9
5	13.78	-2.0 QP	40.5	-42.5	1.00	275	36.9	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

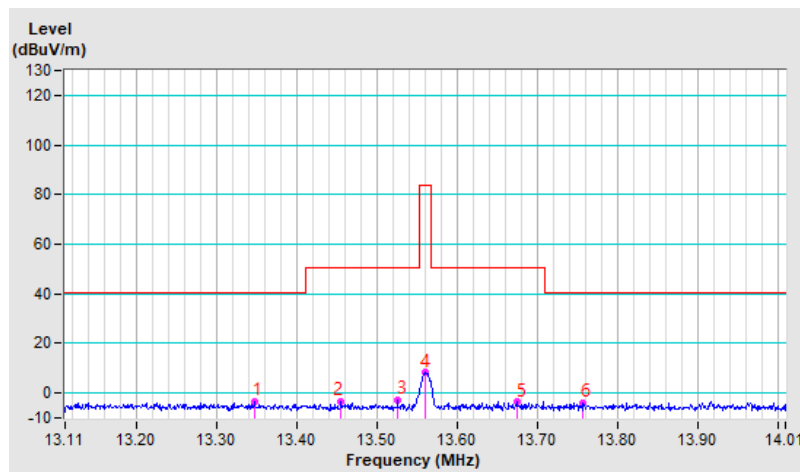


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.35	-3.3 QP	40.5	-43.8	1.00	336	35.5	-38.8
2	13.45	-3.3 QP	50.5	-53.8	1.00	352	35.5	-38.8
3	13.53	-2.7 QP	50.5	-53.2	1.00	357	36.2	-38.9
4	*13.56	8.1 QP	84.0	-75.9	1.00	345	47.0	-38.9
5	13.68	-3.6 QP	50.5	-54.1	1.00	98	35.3	-38.9
6	13.76	-3.9 QP	40.5	-44.4	1.00	326	35.0	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



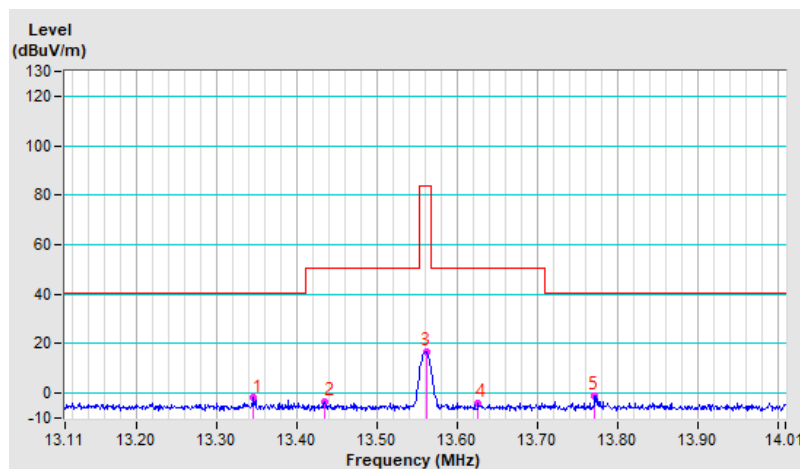
Type F

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.35	-1.7 QP	40.5	-42.2	1.00	360	37.1	-38.8
2	13.44	-3.3 QP	50.5	-53.8	1.00	242	35.5	-38.8
3	*13.56	16.8 QP	84.0	-67.2	1.00	338	55.7	-38.9
4	13.63	-3.9 QP	50.5	-54.4	1.00	246	35.0	-38.9
5	13.77	-0.9 QP	40.5	-41.4	1.00	340	38.0	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \times \log(3/30) = -40$ dB

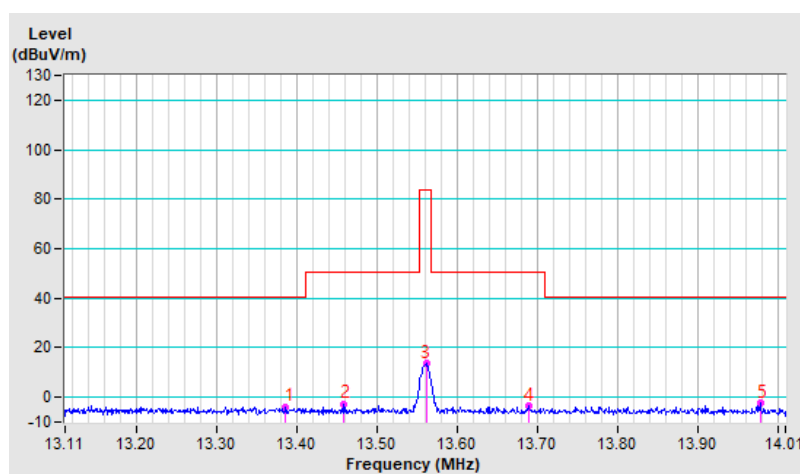


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.39	-4.0 QP	40.5	-44.5	1.00	184	34.8	-38.8
2	13.46	-2.8 QP	50.5	-53.3	1.00	274	36.0	-38.8
3	*13.56	13.5 QP	84.0	-70.5	1.00	267	52.4	-38.9
4	13.69	-3.7 QP	50.5	-54.2	1.00	128	35.2	-38.9
5	13.98	-2.4 QP	40.5	-42.9	1.00	128	36.5	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

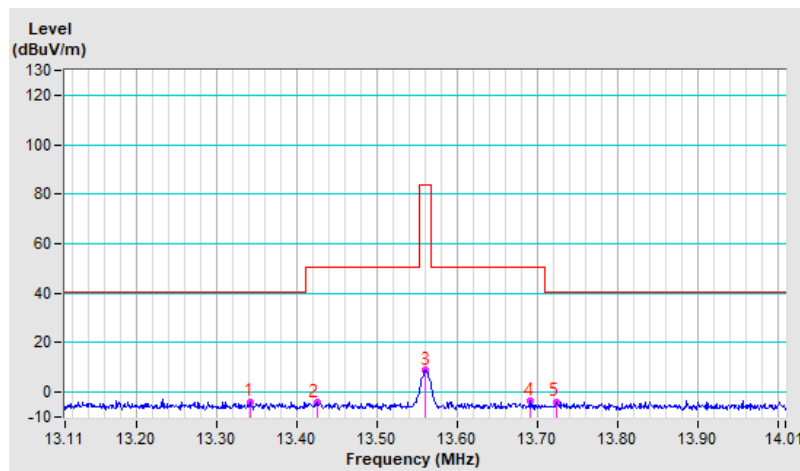


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.34	-3.8 QP	40.5	-44.3	1.00	360	35.0	-38.8
2	13.42	-4.2 QP	50.5	-54.7	1.00	23	34.6	-38.8
3	*13.56	8.7 QP	84.0	-75.3	1.00	326	47.6	-38.9
4	13.69	-3.6 QP	50.5	-54.1	1.00	38	35.3	-38.9
5	13.72	-3.9 QP	40.5	-44.4	1.00	152	35.0	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



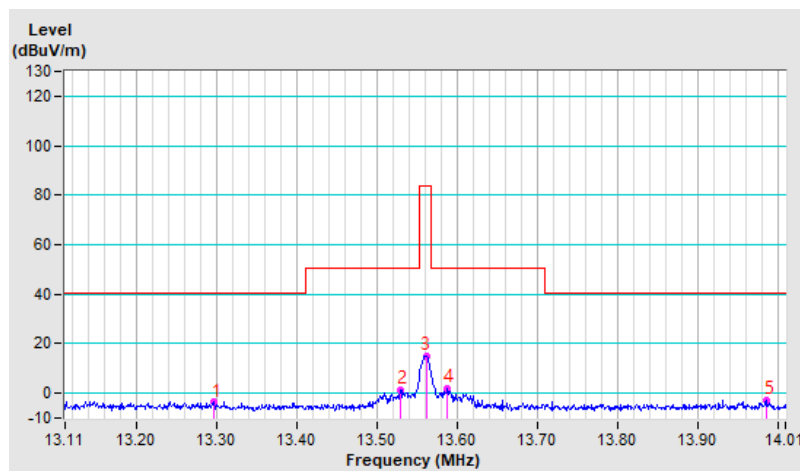
Type V (ISO 15693)

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.30	-3.7 QP	40.5	-44.2	1.00	72	35.1	-38.8
2	13.53	1.5 QP	50.5	-49.0	1.00	326	40.4	-38.9
3	*13.56	15.0 QP	84.0	-69.0	1.00	321	53.9	-38.9
4	13.59	2.0 QP	50.5	-48.5	1.00	312	40.9	-38.9
5	13.99	-2.8 QP	40.5	-43.3	1.00	355	36.1	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \times \log(3/30) = -40$ dB

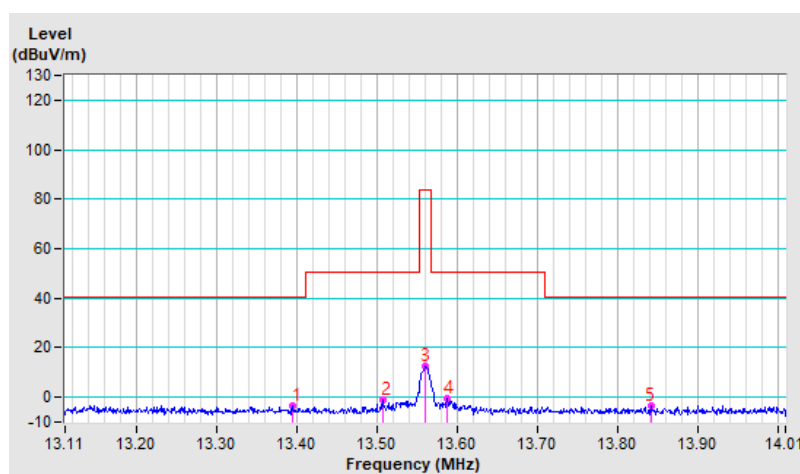


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.40	-3.7 QP	40.5	-44.2	1.00	9	35.1	-38.8
2	13.51	-1.1 QP	50.5	-51.6	1.00	250	37.8	-38.9
3	*13.56	12.3 QP	84.0	-71.7	1.00	247	51.2	-38.9
4	13.59	-0.8 QP	50.5	-51.3	1.00	255	38.1	-38.9
5	13.84	-3.7 QP	40.5	-44.2	1.00	4	35.2	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

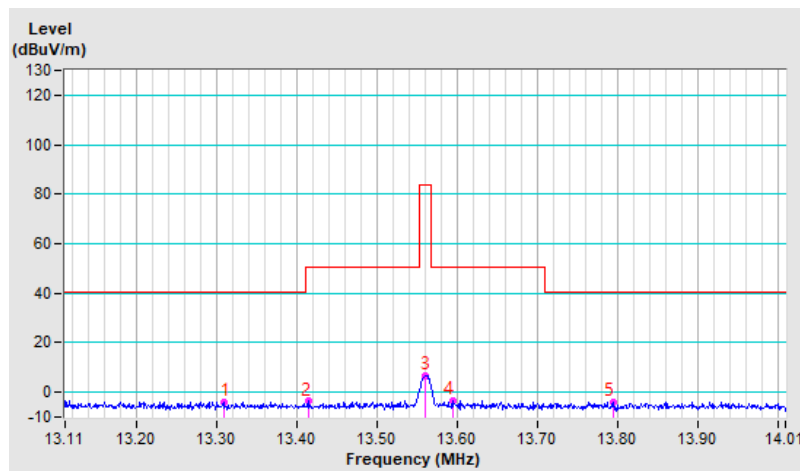


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	13.11 MHz ~ 14.01 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Ian Chang		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	13.31	-3.9 QP	40.5	-44.4	1.00	337	34.9	-38.8
2	13.41	-3.6 QP	40.5	-44.1	1.00	17	35.2	-38.8
3	*13.56	6.9 QP	84.0	-77.1	1.00	320	45.8	-38.9
4	13.59	-3.4 QP	50.5	-53.9	1.00	255	35.5	-38.9
5	13.79	-3.8 QP	40.5	-44.3	1.00	76	35.1	-38.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



For Frequency: 9 kHz ~ 150 kHz

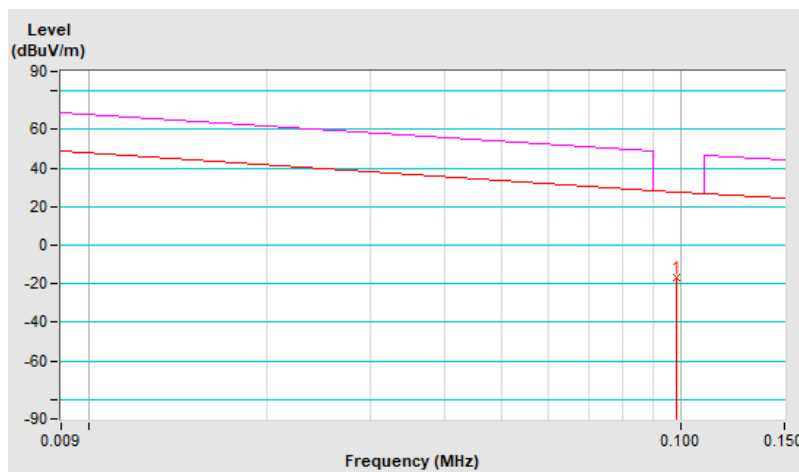
Type A

Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0985	-16.6 QP	27.7	-44.3	1.00	193	43.2	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

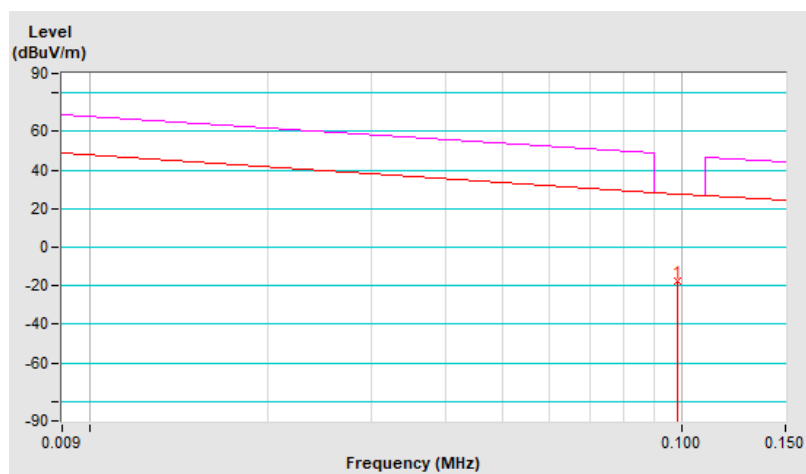


Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0988	-17.8 QP	27.7	-45.5	1.00	199	42.0	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

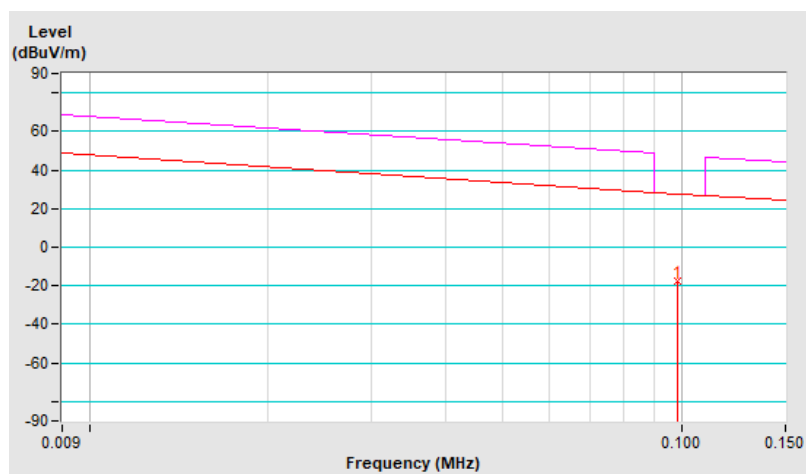


Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0985	-17.8 QP	27.7	-45.5	1.00	157	42.0	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB



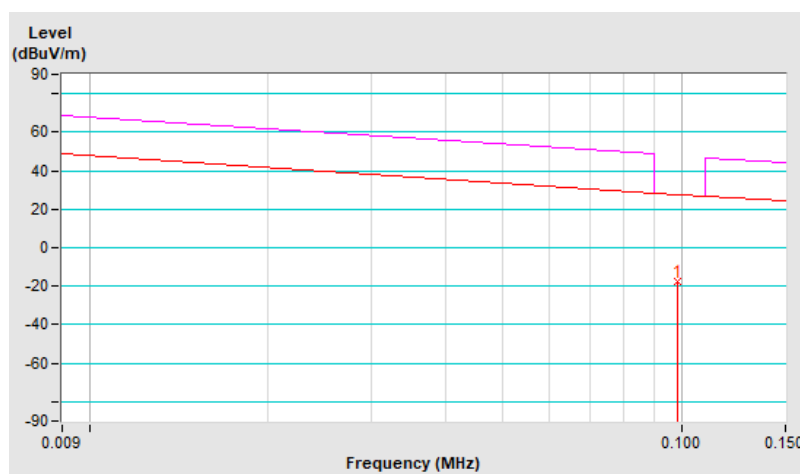
Type F

Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0985	-17.2 QP	27.7	-44.9	1.00	233	42.6	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

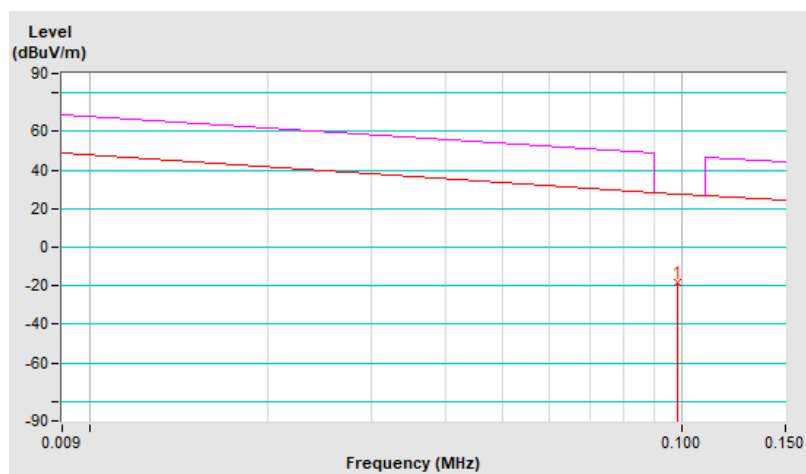


Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0985	-18.2 QP	27.7	-45.9	1.00	246	41.6	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

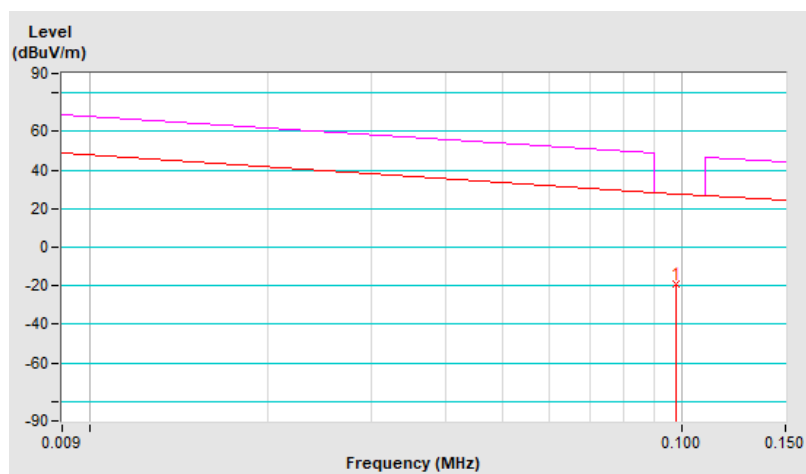


Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0981	-18.7 QP	27.8	-46.5	1.00	124	41.0	-59.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB



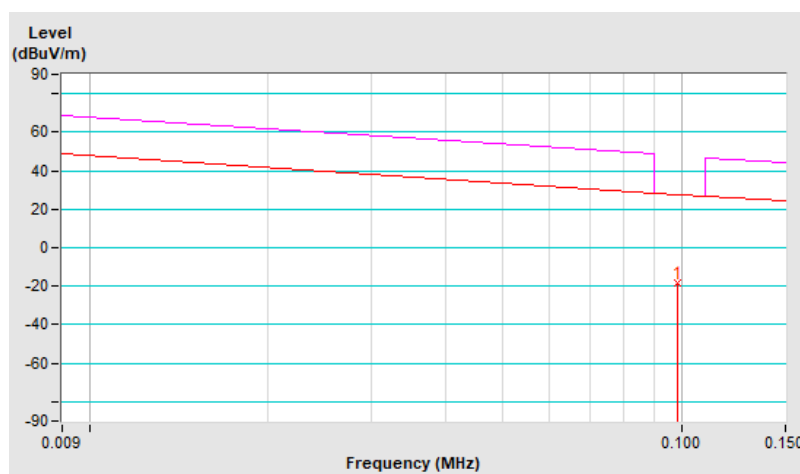
Type V (ISO 15693)

Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0987	-18.3 QP	27.7	-46.0	1.00	238	41.5	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

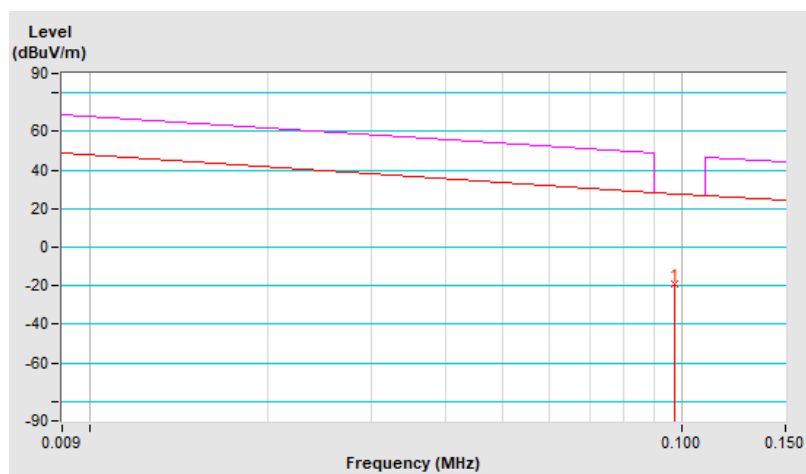


Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0975	-19.2 QP	27.8	-47.0	1.00	157	40.5	-59.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

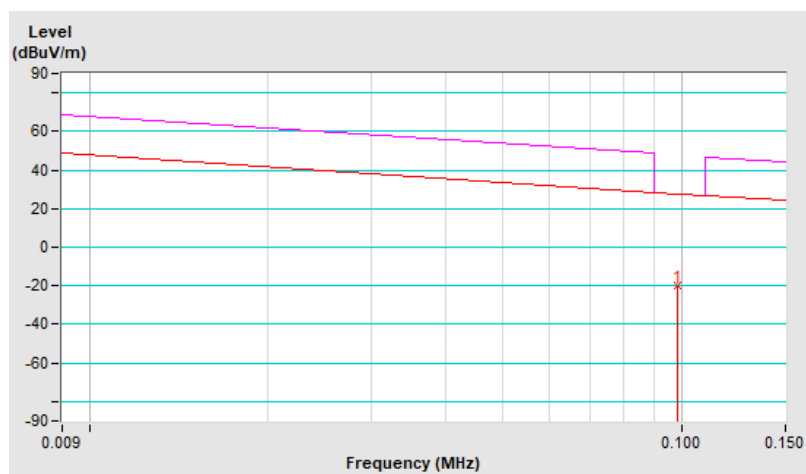


Frequency Range	9 kHz ~ 150 kHz	Detector Function & Bandwidth	Quasi-Peak (QP), 200 Hz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.0985	-20.0 QP	27.7	-47.7	1.00	287	39.8	-59.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB



For Frequency: 150 kHz ~ 490 kHz

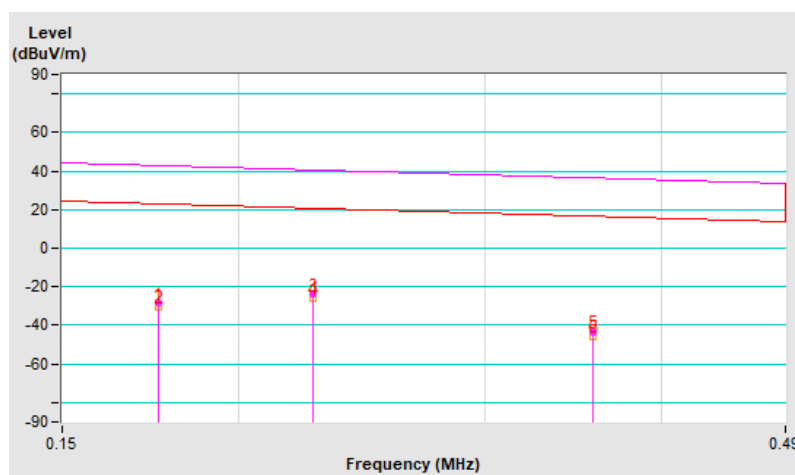
Type A

Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1757	-28.3 PK	42.7	-71.0	1.00	246	35.5	-63.8
2	0.1757	-30.5 AV	22.7	-53.2	1.00	246	33.3	-63.8
3	0.2260	-23.7 PK	40.5	-64.2	1.00	145	42.0	-65.7
4	0.2260	-25.9 AV	20.5	-46.4	1.00	145	39.8	-65.7
5	0.3577	-43.5 PK	36.5	-80.0	1.00	194	25.7	-69.2
6	0.3577	-45.7 AV	16.5	-62.2	1.00	194	23.5	-69.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

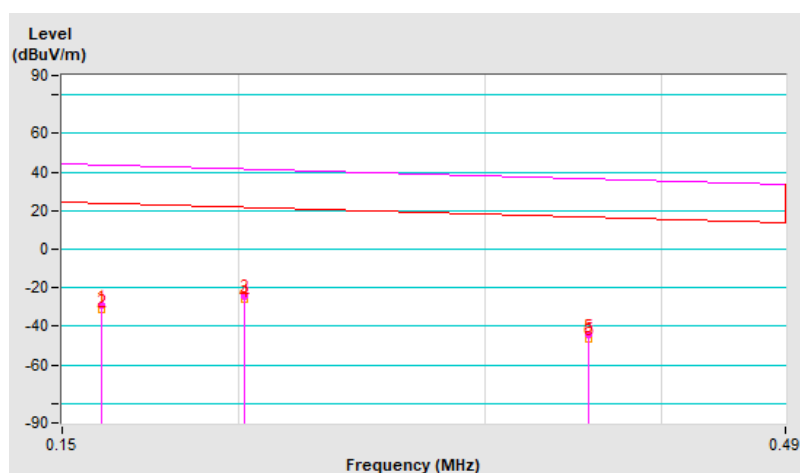


Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1601	-29.3 PK	43.5	-72.8	1.00	165	33.7	-63.0
2	0.1601	-31.4 AV	23.5	-54.9	1.00	165	31.6	-63.0
3	0.2022	-24.1 PK	41.5	-65.6	1.00	324	40.9	-65.0
4	0.2022	-26.1 AV	21.5	-47.6	1.00	324	38.9	-65.0
5	0.3548	-44.4 PK	36.6	-81.0	1.00	203	24.8	-69.2
6	0.3548	-46.5 AV	16.6	-63.1	1.00	203	22.7	-69.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

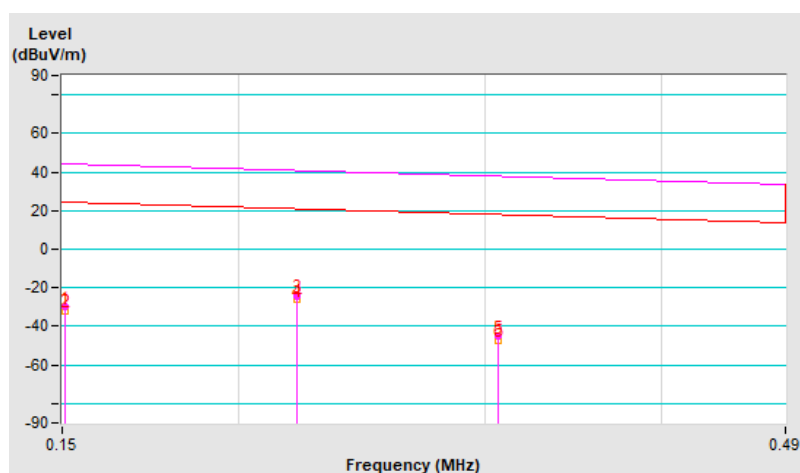


Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1506	-29.9 PK	44.0	-73.9	1.00	143	32.6	-62.5
2	0.1506	-32.0 AV	24.0	-56.0	1.00	143	30.5	-62.5
3	0.2202	-24.2 PK	40.7	-64.9	1.00	285	41.3	-65.5
4	0.2202	-26.2 AV	20.7	-46.9	1.00	285	39.3	-65.5
5	0.3059	-45.1 PK	37.9	-83.0	1.00	187	22.9	-68.0
6	0.3059	-47.2 AV	17.9	-65.1	1.00	187	20.8	-68.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB



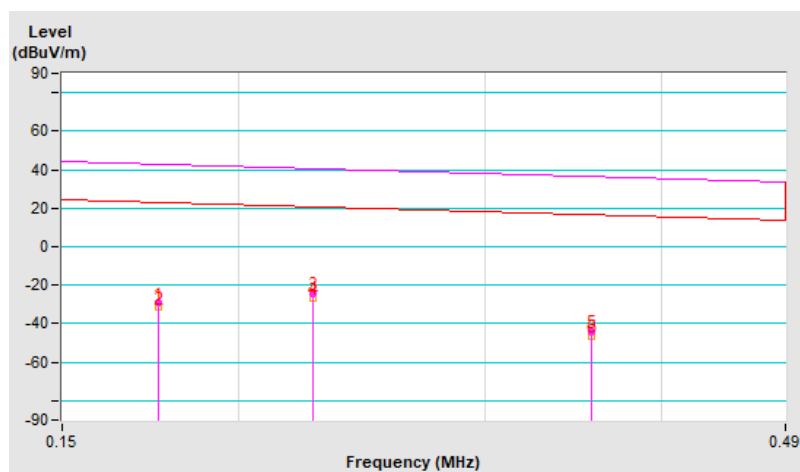
Type F

Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1757	-29.3 PK	42.7	-72.0	1.00	238	34.5	-63.8
2	0.1757	-31.4 AV	22.7	-54.1	1.00	238	32.4	-63.8
3	0.2260	-24.2 PK	40.5	-64.7	1.00	176	41.5	-65.7
4	0.2260	-26.5 AV	20.5	-47.0	1.00	176	39.2	-65.7
5	0.3568	-44.0 PK	36.6	-80.6	1.00	198	25.2	-69.2
6	0.3568	-46.2 AV	16.6	-62.8	1.00	198	23.0	-69.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

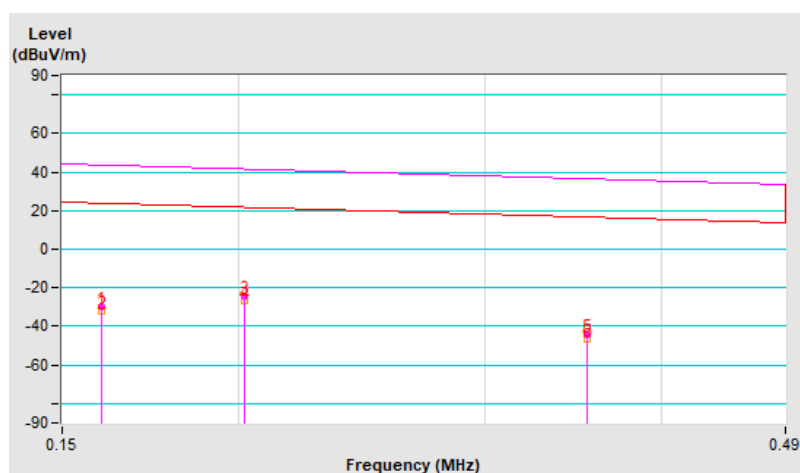


Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1601	-30.1 PK	43.5	-73.6	1.00	167	32.9	-63.0
2	0.1601	-32.3 AV	23.5	-55.8	1.00	167	30.7	-63.0
3	0.2022	-24.7 PK	41.5	-66.2	1.00	331	40.3	-65.0
4	0.2022	-27.0 AV	21.5	-48.5	1.00	331	38.0	-65.0
5	0.3541	-44.6 PK	36.6	-81.2	1.00	189	24.5	-69.1
6	0.3541	-46.8 AV	16.6	-63.4	1.00	189	22.3	-69.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

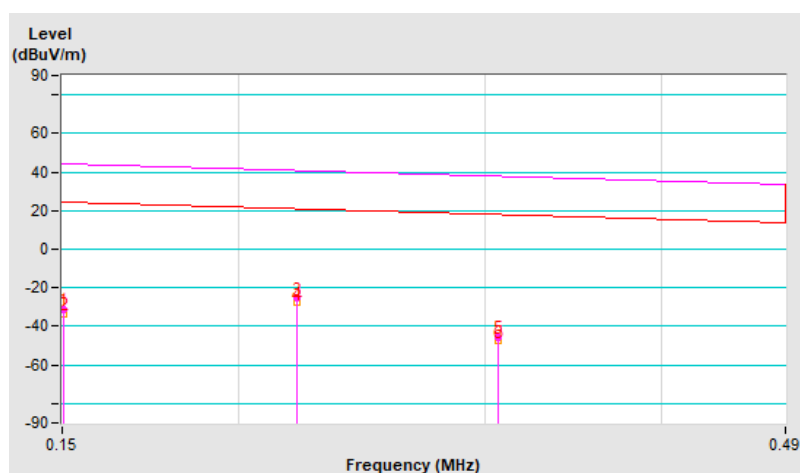


Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1503	-31.1 PK	44.1	-75.2	1.00	129	31.4	-62.5
2	0.1503	-33.3 AV	24.1	-57.4	1.00	129	29.2	-62.5
3	0.2202	-25.5 PK	40.7	-66.2	1.00	295	40.0	-65.5
4	0.2202	-27.7 AV	20.7	-48.4	1.00	295	37.8	-65.5
5	0.3059	-45.5 PK	37.9	-83.4	1.00	182	22.5	-68.0
6	0.3059	-47.7 AV	17.9	-65.6	1.00	182	20.3	-68.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB



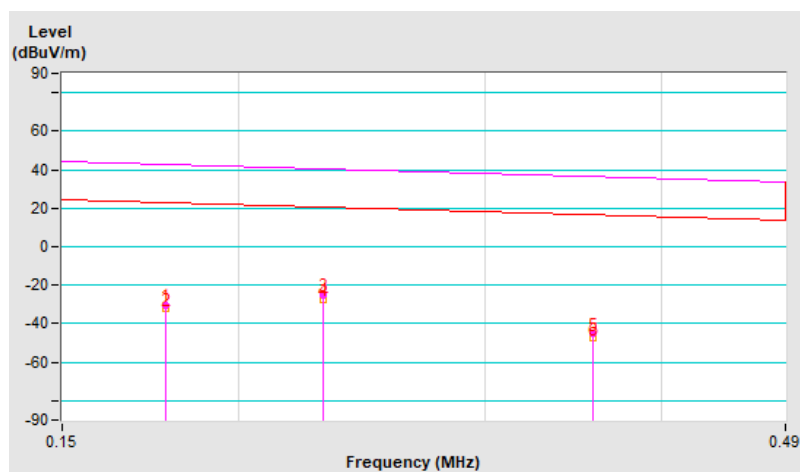
Type V (ISO 15693)

Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1778	-30.1 PK	42.6	-72.7	1.00	289	33.8	-63.9
2	0.1778	-32.4 AV	22.6	-55.0	1.00	289	31.5	-63.9
3	0.2297	-25.1 PK	40.4	-65.5	1.00	161	40.7	-65.8
4	0.2297	-27.3 AV	20.4	-47.7	1.00	161	38.5	-65.8
5	0.3578	-45.3 PK	36.5	-81.8	1.00	205	23.9	-69.2
6	0.3578	-47.4 AV	16.5	-63.9	1.00	205	21.8	-69.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

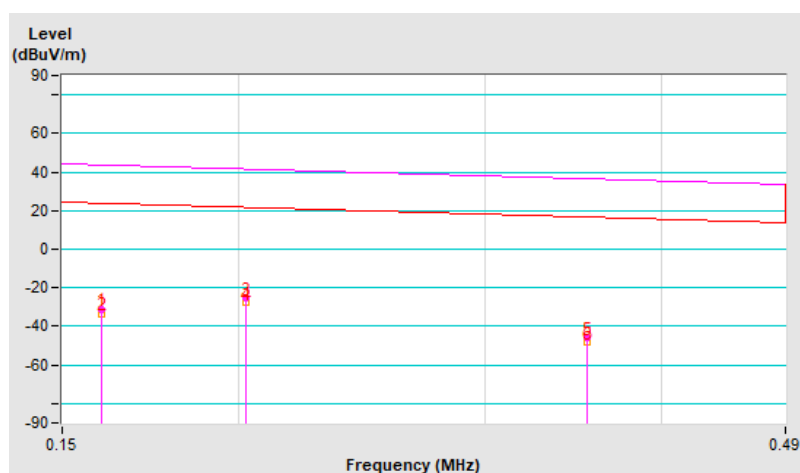


Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1601	-31.1 PK	43.5	-74.6	1.00	156	31.9	-63.0
2	0.1601	-33.3 AV	23.5	-56.8	1.00	156	29.7	-63.0
3	0.2028	-25.5 PK	41.5	-67.0	1.00	305	39.5	-65.0
4	0.2028	-27.6 AV	21.5	-49.1	1.00	305	37.4	-65.0
5	0.3541	-46.1 PK	36.6	-82.7	1.00	193	23.0	-69.1
6	0.3541	-48.2 AV	16.6	-64.8	1.00	193	20.9	-69.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB

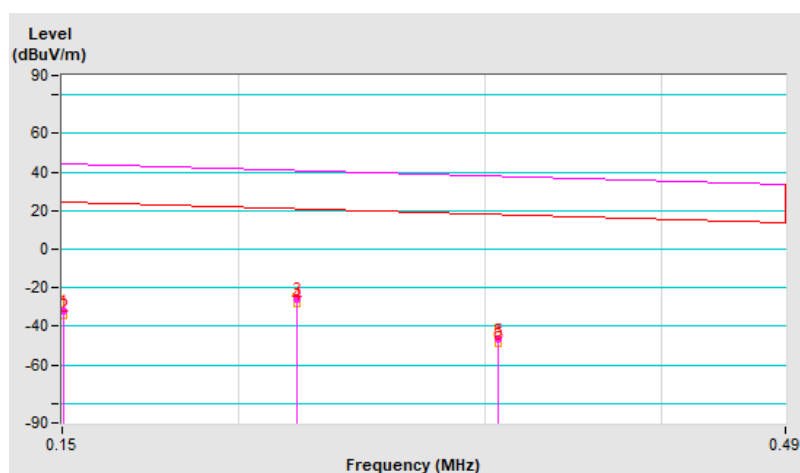


Frequency Range	150 kHz ~ 490 kHz	Detector Function & Bandwidth	Peak (PK) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.1503	-31.9 PK	44.1	-76.0	1.00	138	30.6	-62.5
2	0.1503	-34.0 AV	24.1	-58.1	1.00	138	28.5	-62.5
3	0.2202	-25.9 PK	40.7	-66.6	1.00	279	39.6	-65.5
4	0.2202	-27.9 AV	20.7	-48.6	1.00	279	37.6	-65.5
5	0.3059	-46.6 PK	37.9	-84.5	1.00	194	21.4	-68.0
6	0.3059	-48.7 AV	17.9	-66.6	1.00	194	19.3	-68.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for below 0.49 MHz is 3 m, extrapolate the measured field strength to a distance of 300 meters.
Distance factor@3 m = $40 \cdot \log(3/300) = -80$ dB



For Frequency: 490 kHz ~ 30 MHz

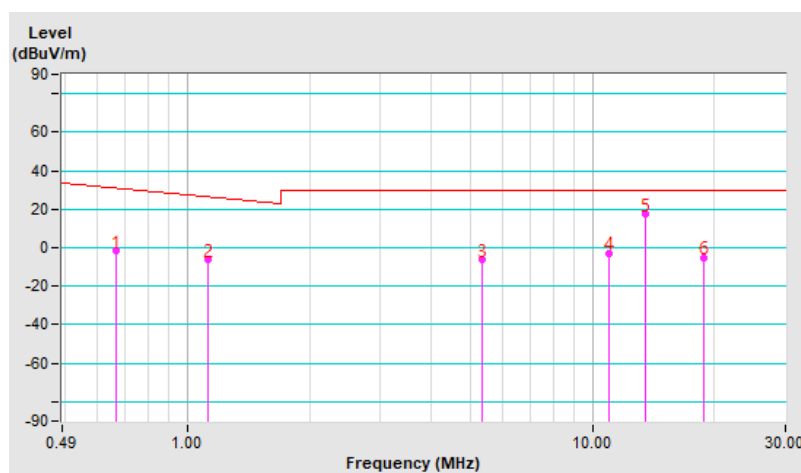
Type A

Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.6671	-1.6 QP	31.1	-32.7	1.00	216	31.7	-33.3
2	1.1186	-6.4 QP	26.6	-33.0	1.00	196	29.2	-35.6
3	5.3577	-6.4 QP	29.5	-35.9	1.00	134	33.1	-39.5
4	11.0383	-2.9 QP	29.5	-32.4	1.00	211	35.7	-38.6
5	*13.5600	17.4 QP	29.5	-12.1	1.00	325	56.3	-38.9
6	18.7759	-5.1 QP	29.5	-34.6	1.00	187	34.0	-39.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

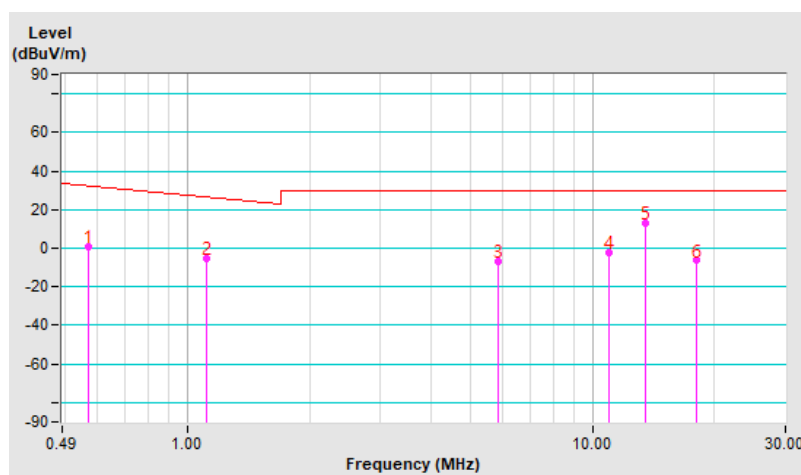


Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.5667	0.9 QP	32.5	-31.6	1.00	156	33.1	-32.2
2	1.1112	-5.1 QP	26.7	-31.8	1.00	249	30.5	-35.6
3	5.8520	-6.6 QP	29.5	-36.1	1.00	279	32.2	-38.8
4	11.0354	-2.1 QP	29.5	-31.6	1.00	121	36.5	-38.6
5	*13.5600	13.3 QP	29.5	-16.2	1.00	265	52.2	-38.9
6	18.1429	-6.2 QP	29.5	-35.7	1.00	204	33.0	-39.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

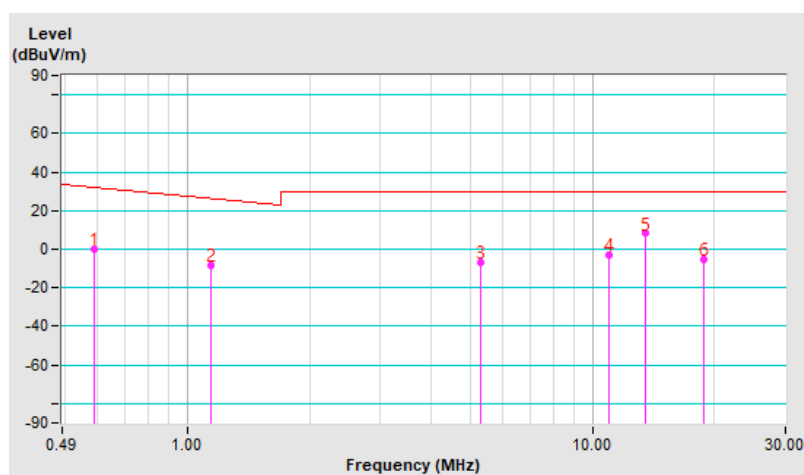


Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.5889	0.2 QP	32.2	-32.0	1.00	299	32.7	-32.5
2	1.1451	-8.4 QP	26.4	-34.8	1.00	156	27.3	-35.7
3	5.3031	-6.7 QP	29.5	-36.2	1.00	237	32.9	-39.6
4	11.0339	-2.8 QP	29.5	-32.3	1.00	118	35.8	-38.6
5	13.5615	8.1 QP	29.5	-21.4	1.00	345	47.0	-38.9
6	18.8998	-5.1 QP	29.5	-34.6	1.00	274	34.0	-39.1

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



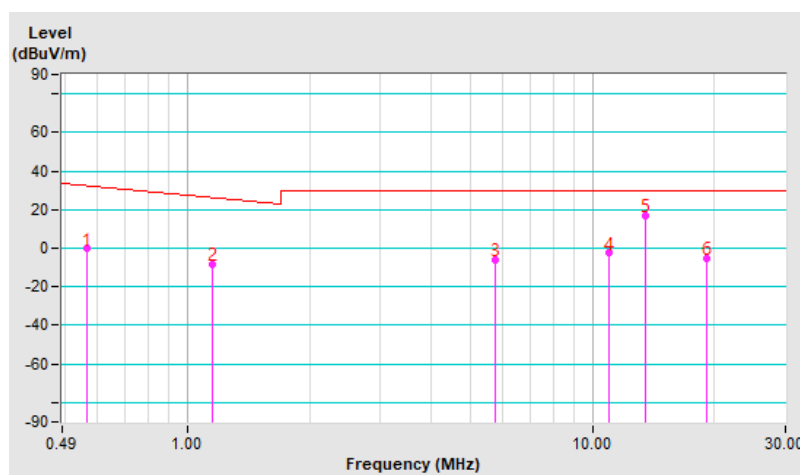
Type F

Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.5653	-0.2 QP	32.6	-32.8	1.00	241	32.0	-32.2
2	1.1481	-8.3 QP	26.4	-34.7	1.00	169	27.4	-35.7
3	5.7620	-6.1 QP	29.5	-35.6	1.00	358	32.8	-38.9
4	10.9734	-2.6 QP	29.5	-32.1	1.00	294	36.0	-38.6
5	*13.5600	16.8 QP	29.5	-12.7	1.00	338	55.7	-38.9
6	19.2200	-5.3 QP	29.5	-34.8	1.00	204	33.7	-39.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

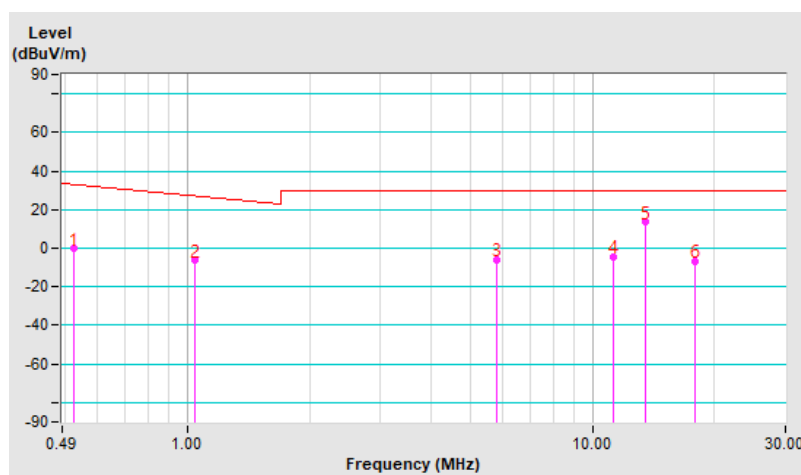


Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.5225	-0.1 QP	33.2	-33.3	1.00	164	31.6	-31.7
2	1.0418	-6.2 QP	27.2	-33.4	1.00	123	29.2	-35.4
3	5.8239	-5.9 QP	29.5	-35.4	1.00	190	32.9	-38.8
4	11.2892	-4.3 QP	29.5	-33.8	1.00	130	34.4	-38.7
5	*13.5600	13.5 QP	29.5	-16.0	1.00	267	52.4	-38.9
6	17.9496	-6.7 QP	29.5	-36.2	1.00	245	32.5	-39.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

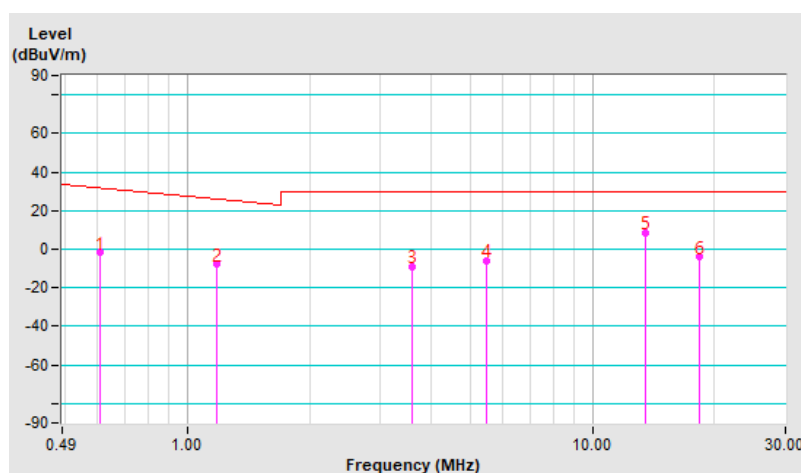


Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.6080	-1.8 QP	31.9	-33.7	1.00	124	30.9	-32.7
2	1.1850	-7.7 QP	26.1	-33.8	1.00	169	28.1	-35.8
3	3.5797	-8.9 QP	29.5	-38.4	1.00	138	30.9	-39.8
4	5.4890	-5.9 QP	29.5	-35.4	1.00	255	33.4	-39.3
5	13.5615	8.7 QP	29.5	-20.8	1.00	326	47.6	-38.9
6	18.3937	-4.2 QP	29.5	-33.7	1.00	159	35.0	-39.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



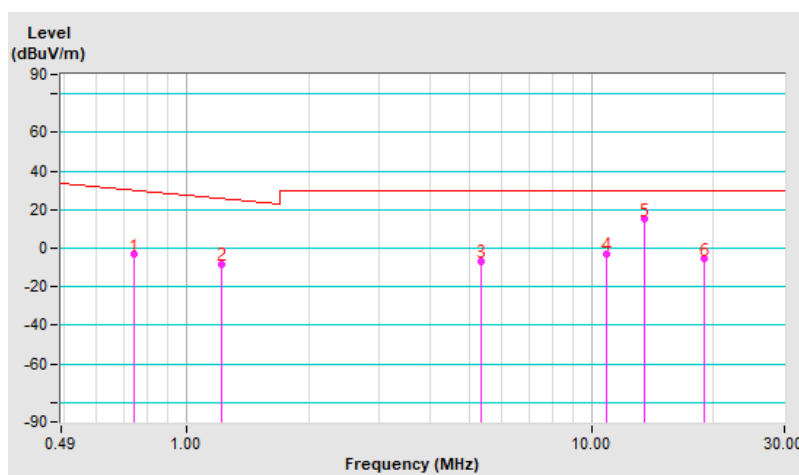
Type V (ISO 15693)

Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.7394	-3.3 QP	30.2	-33.5	1.00	216	30.5	-33.8
2	1.2159	-8.1 QP	25.9	-34.0	1.00	248	27.8	-35.9
3	5.3473	-6.7 QP	29.5	-36.2	1.00	159	32.8	-39.5
4	10.9115	-2.9 QP	29.5	-32.4	1.00	124	35.7	-38.6
5	*13.5600	15.0 QP	29.5	-14.5	1.00	321	53.9	-38.9
6	19.0326	-5.7 QP	29.5	-35.2	1.00	138	33.3	-39.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.
6. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

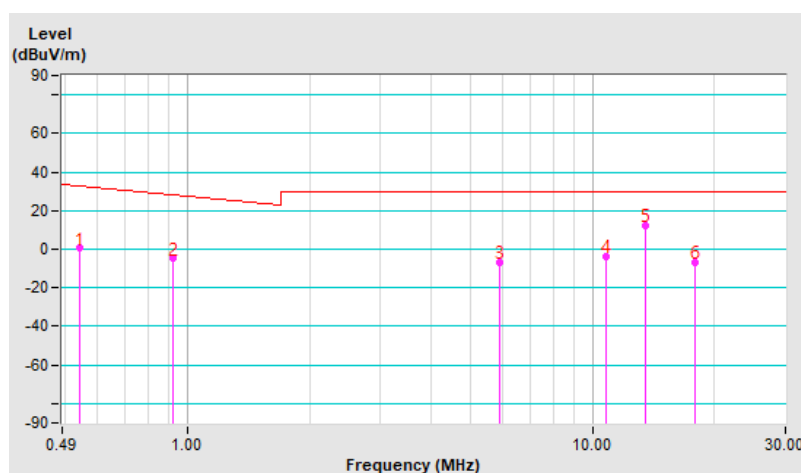


Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Perpendicular								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.5431	0.5 QP	32.9	-32.4	1.00	112	32.5	-32.0
2	0.9179	-4.7 QP	28.3	-33.0	1.00	154	30.2	-34.9
3	5.9021	-6.5 QP	29.5	-36.0	1.00	168	32.3	-38.8
4	10.7875	-3.6 QP	29.5	-33.1	1.00	197	35.0	-38.6
5	13.5615	12.3 QP	29.5	-17.2	1.00	247	51.2	-38.9
6	17.9584	-6.5 QP	29.5	-36.0	1.00	264	32.7	-39.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB

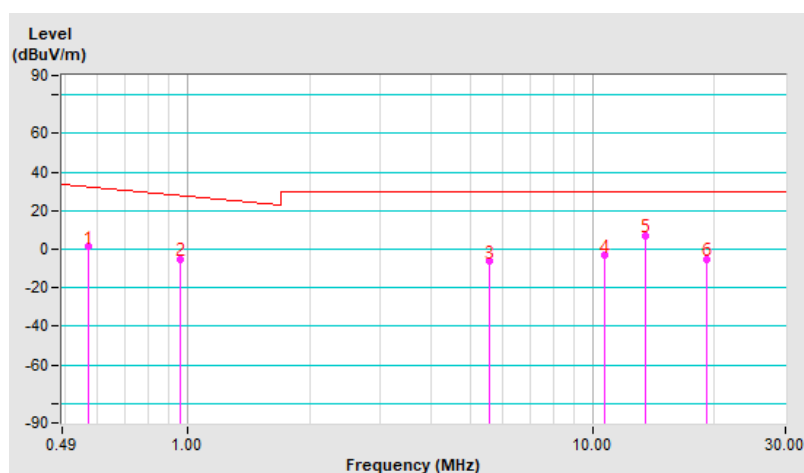


Frequency Range	490 kHz ~ 30 MHz	Detector Function & Bandwidth	Quasi-Peak (QP), 9 kHz
Input Power	120 Vac, 60 Hz		

Antenna Polarity : Ground-parallel								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	0.5682	1.4 QP	32.5	-31.1	1.00	241	33.7	-32.3
2	0.9563	-5.1 QP	28.0	-33.1	1.00	169	30.0	-35.1
3	5.5628	-6.3 QP	29.5	-35.8	1.00	204	32.9	-39.2
4	10.7152	-3.3 QP	29.5	-32.8	1.00	129	35.3	-38.6
5	13.5615	6.9 QP	29.5	-22.6	1.00	320	45.8	-38.9
6	19.1521	-5.1 QP	29.5	-34.6	1.00	190	33.9	-39.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. The test distance for 0.49 ~ 30 MHz is 3 m, extrapolate the measured field strength to a distance of 30 meters.
Distance factor@3 m = $40 \cdot \log(3/30) = -40$ dB



7.3 Radiated Emissions above 30 MHz

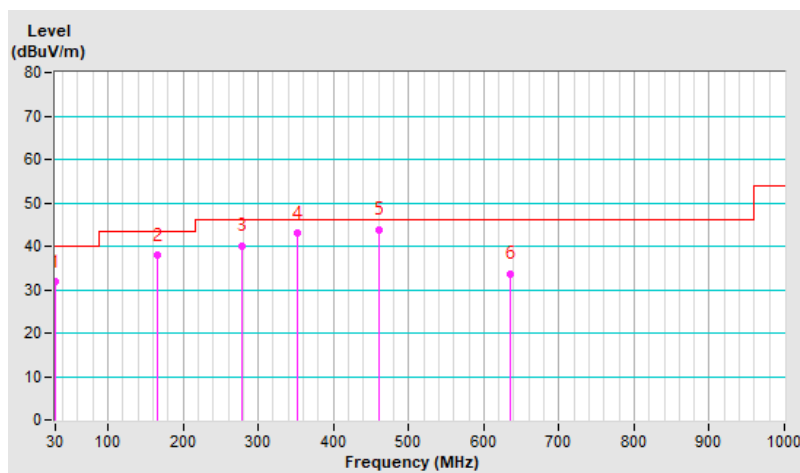
Type A

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	30.58	31.7 QP	40.0	-8.3	1.48 H	49	42.2	-10.5
2	166.48	37.8 QP	43.5	-5.7	1.27 H	353	45.3	-7.5
3	277.50	40.0 QP	46.0	-6.0	1.69 H	0	45.9	-5.9
4	352.57	42.9 QP	46.0	-3.1	1.82 H	177	47.2	-4.3
5	461.07	43.8 QP	46.0	-2.2	1.54 H	32	45.4	-1.6
6	634.65	33.6 QP	46.0	-12.4	1.16 H	32	30.9	2.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.

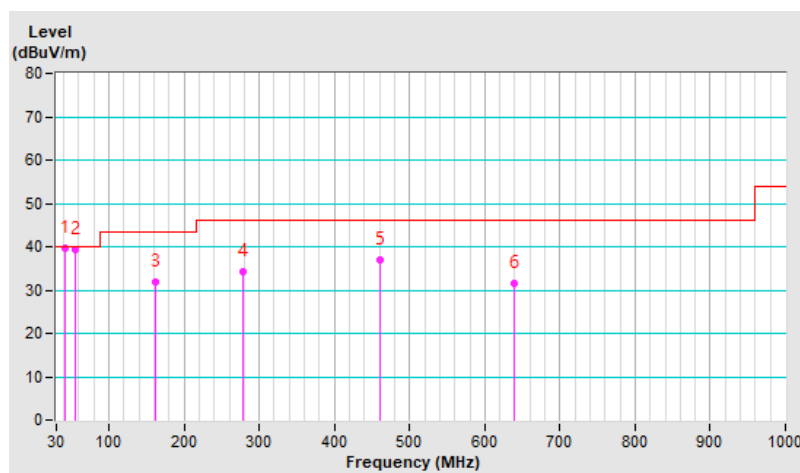


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	40.67	39.8 QP	40.0	-0.2	1.44 V	96	48.9	-9.1
2	55.51	39.4 QP	40.0	-0.6	1.27 V	8	48.0	-8.6
3	162.74	32.0 QP	43.5	-11.5	1.63 V	178	39.5	-7.5
4	277.50	34.2 QP	46.0	-11.8	2.18 V	355	40.1	-5.9
5	461.07	37.1 QP	46.0	-8.9	2.25 V	142	38.7	-1.6
6	639.60	31.6 QP	46.0	-14.4	2.96 V	316	28.8	2.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.



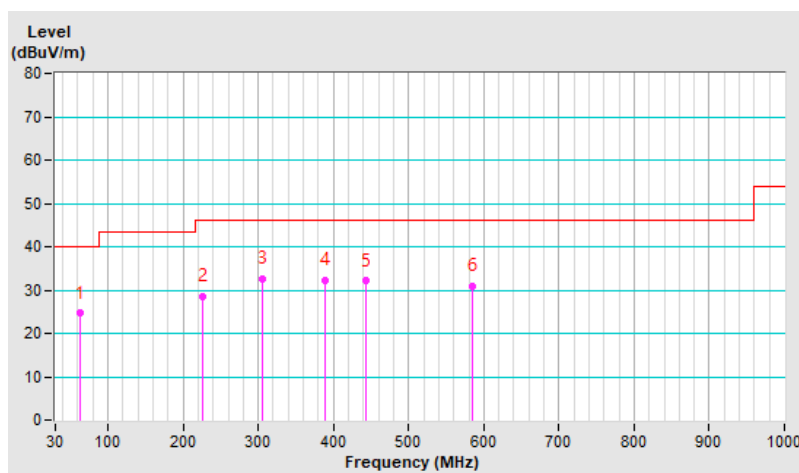
Type F

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	62.06	24.6 QP	40.0	-15.4	1.38 H	231	33.9	-9.3
2	225.16	28.6 QP	46.0	-17.4	1.22 H	150	38.4	-9.8
3	305.19	32.5 QP	46.0	-13.5	1.14 H	114	37.6	-5.1
4	388.46	32.3 QP	46.0	-13.7	1.09 H	336	35.7	-3.4
5	442.78	32.1 QP	46.0	-13.9	1.69 H	119	34.1	-2.0
6	584.55	30.9 QP	46.0	-15.1	1.58 H	350	29.7	1.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.

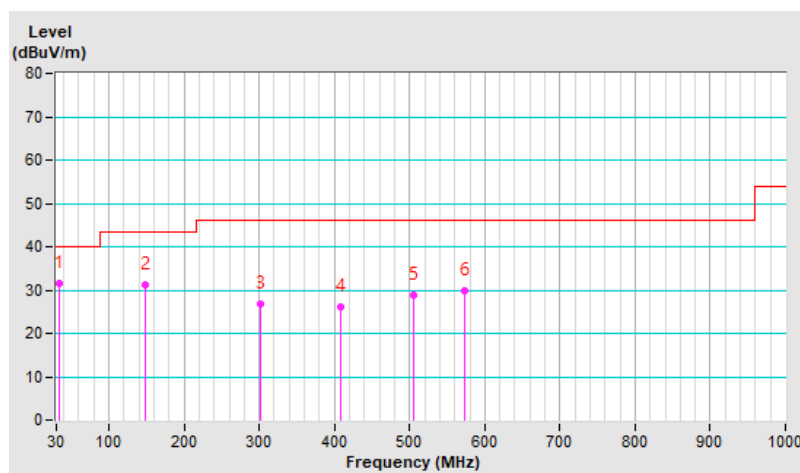


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	34.17	31.6 QP	40.0	-8.4	1.53 V	333	41.7	-10.1
2	148.49	31.3 QP	43.5	-12.2	1.78 V	169	39.1	-7.8
3	301.21	26.9 QP	46.0	-19.1	1.28 V	152	32.1	-5.2
4	407.38	26.1 QP	46.0	-19.9	1.39 V	81	29.2	-3.1
5	506.27	28.8 QP	46.0	-17.2	1.18 V	242	29.5	-0.7
6	573.35	29.9 QP	46.0	-16.1	1.43 V	117	29.1	0.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.



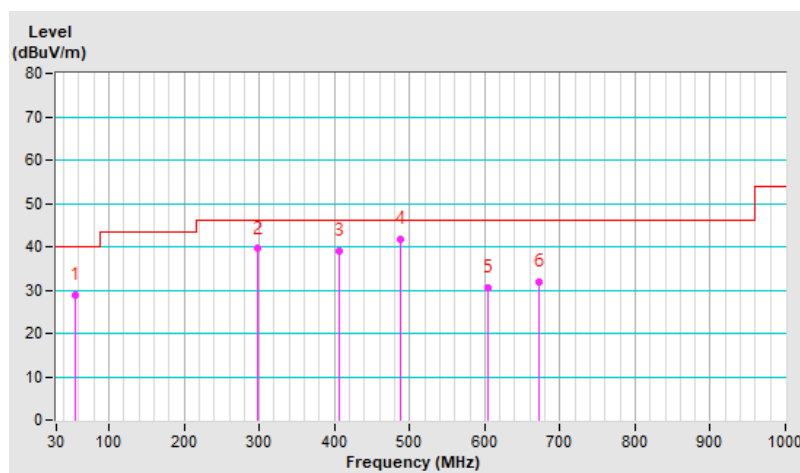
Type V (ISO 15693)

RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	55.51	28.8 QP	40.0	-11.2	1.26 H	114	37.4	-8.6
2	298.35	39.5 QP	46.0	-6.5	1.49 H	214	44.8	-5.3
3	406.80	39.0 QP	46.0	-7.0	1.72 H	184	42.2	-3.2
4	488.18	41.8 QP	46.0	-4.2	1.58 H	37	42.8	-1.0
5	604.24	30.6 QP	46.0	-15.4	1.63 H	110	28.8	1.8
6	671.61	32.0 QP	46.0	-14.0	1.08 H	254	29.3	2.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.

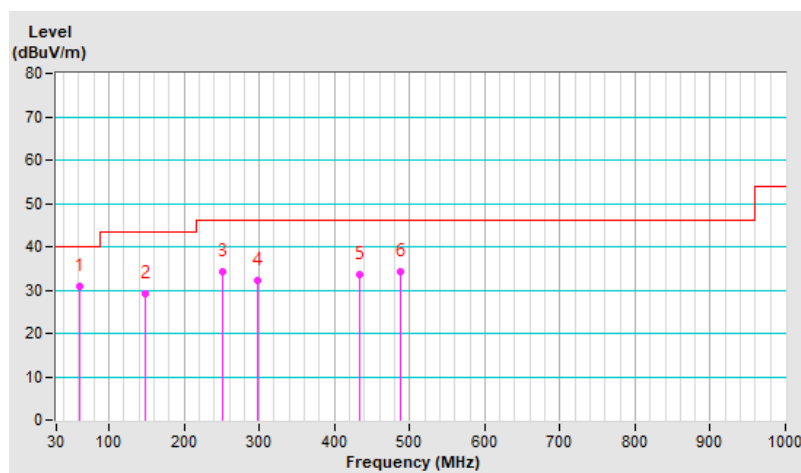


RF Mode	NFC-13.56MHz	Channel	CH 1 : 13.56 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 75 % RH
Tested By	Jed Wu		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	60.46	31.0 QP	40.0	-9.0	1.36 V	46	40.1	-9.1
2	149.16	29.2 QP	43.5	-14.3	1.62 V	169	36.9	-7.7
3	250.82	34.2 QP	46.0	-11.8	1.44 V	12	41.6	-7.4
4	298.35	32.3 QP	46.0	-13.7	1.78 V	145	37.6	-5.3
5	433.96	33.7 QP	46.0	-12.3	1.50 V	80	35.9	-2.2
6	488.18	34.4 QP	46.0	-11.6	1.29 V	142	35.4	-1.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.



7.4 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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Type A

Frequency Stability Versus Temperature									
Operating Frequency: 13.56 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	13.55996	-0.00029	13.55997	-0.00022	13.55996	-0.00029	13.55996	-0.00029
40	120	13.56006	0.00044	13.56006	0.00044	13.56005	0.00037	13.56005	0.00037
30	120	13.56005	0.00037	13.56004	0.00029	13.56005	0.00037	13.56005	0.00037
20	120	13.55994	-0.00044	13.55993	-0.00052	13.55994	-0.00044	13.55994	-0.00044
10	120	13.55997	-0.00022	13.55997	-0.00022	13.55999	-0.00007	13.55998	-0.00015
0	120	13.55996	-0.00029	13.55995	-0.00037	13.55996	-0.00029	13.55996	-0.00029
-10	120	13.56001	0.00007	13.56002	0.00015	13.56001	0.00007	13.56001	0.00007
-20	120	13.56002	0.00015	13.56003	0.00022	13.56003	0.00022	13.56002	0.00015

Frequency Stability Versus Voltage									
Operating Frequency: 13.56 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	13.55994	-0.00044	13.55993	-0.00052	13.55994	-0.00044	13.55994	-0.00044
	120	13.55994	-0.00044	13.55993	-0.00052	13.55994	-0.00044	13.55994	-0.00044
	102	13.55994	-0.00044	13.55993	-0.00052	13.55994	-0.00044	13.55994	-0.00044

Type F

Frequency Stability Versus Temperature									
Operating Frequency: 13.56 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029
40	120	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007
30	120	13.56003	0.00022	13.56003	0.00022	13.56002	0.00015	13.56003	0.00022
20	120	13.55998	-0.00015	13.55998	-0.00015	13.55998	-0.00015	13.55997	-0.00022
10	120	13.56006	0.00044	13.56005	0.00037	13.56005	0.00037	13.56005	0.00037
0	120	13.55994	-0.00044	13.55994	-0.00044	13.55993	-0.00052	13.55994	-0.00044
-10	120	13.55999	-0.00007	13.56	0.00000	13.55999	-0.00007	13.56	0.00000
-20	120	13.56005	0.00037	13.56005	0.00037	13.56004	0.00029	13.56006	0.00044

Frequency Stability Versus Voltage									
Operating Frequency: 13.56 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	13.55998	-0.00015	13.55998	-0.00015	13.55998	-0.00015	13.55997	-0.00022
	120	13.55998	-0.00015	13.55998	-0.00015	13.55998	-0.00015	13.55997	-0.00022
	102	13.55998	-0.00015	13.55998	-0.00015	13.55998	-0.00015	13.55997	-0.00022

Type V (ISO 15693)

Frequency Stability Versus Temperature									
Operating Frequency: 13.56 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	13.56002	0.00015	13.56002	0.00015	13.56002	0.00015	13.56002	0.00015
40	120	13.55999	-0.00007	13.55999	-0.00007	13.55999	-0.00007	13.55999	-0.00007
30	120	13.55996	-0.00029	13.55997	-0.00022	13.55997	-0.00022	13.55996	-0.00029
20	120	13.55998	-0.00015	13.55997	-0.00022	13.55998	-0.00015	13.55996	-0.00029
10	120	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007
0	120	13.56001	0.00007	13.56	0.00000	13.56	0.00000	13.56001	0.00007
-10	120	13.56004	0.00029	13.56004	0.00029	13.56005	0.00037	13.56005	0.00037
-20	120	13.56004	0.00029	13.56005	0.00037	13.56004	0.00029	13.56005	0.00037

Frequency Stability Versus Voltage									
Operating Frequency: 13.56 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	13.55998	-0.00015	13.55997	-0.00022	13.55998	-0.00015	13.55996	-0.00029
	120	13.55998	-0.00015	13.55997	-0.00022	13.55998	-0.00015	13.55996	-0.00029
	102	13.55998	-0.00015	13.55997	-0.00022	13.55998	-0.00015	13.55996	-0.00029

7.5 20 dB Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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Type A

Channel	Channel Frequency (MHz)	20 dB Bandwidth (kHz)	Measured Frequencies		Operating Frequency Band (MHz)	Test Result
			FL (kHz)	FH (kHz)		
1	13.56	25.76	13.547627	13.573386	13.11 ~ 14.01	Pass

Notes:

1. FL is the lowest frequency of the 20 dB bandwidth of power envelope.
2. FH is the highest frequency of the 20 dB bandwidth of power envelope.

Type F

Channel	Channel Frequency (MHz)	20 dB Bandwidth (kHz)	Measured Frequencies		Operating Frequency Band (MHz)	Test Result
			FL (kHz)	FH (kHz)		
1	13.56	25.76	13.547627	13.573386	13.11 ~ 14.01	Pass

Notes:

1. FL is the lowest frequency of the 20 dB bandwidth of power envelope.
2. FH is the highest frequency of the 20 dB bandwidth of power envelope.

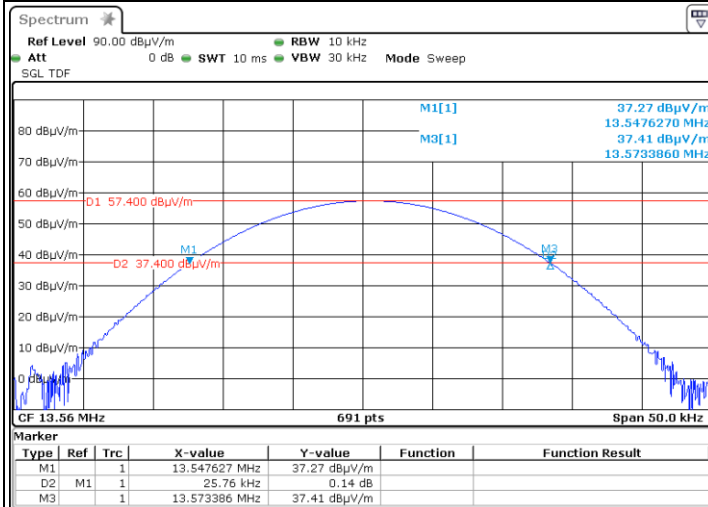
Type V(ISO 15693)

Channel	Channel Frequency (MHz)	20 dB Bandwidth (kHz)	Measured Frequencies		Operating Frequency Band (MHz)	Test Result
			FL (kHz)	FH (kHz)		
1	13.56	25.76	13.547627	13.573386	13.11 ~ 14.01	Pass

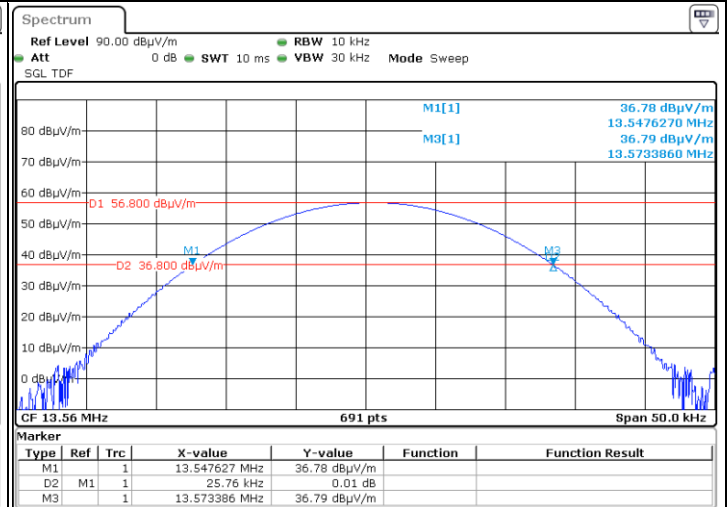
Notes:

1. FL is the lowest frequency of the 20 dB bandwidth of power envelope.
2. FH is the highest frequency of the 20 dB bandwidth of power envelope.

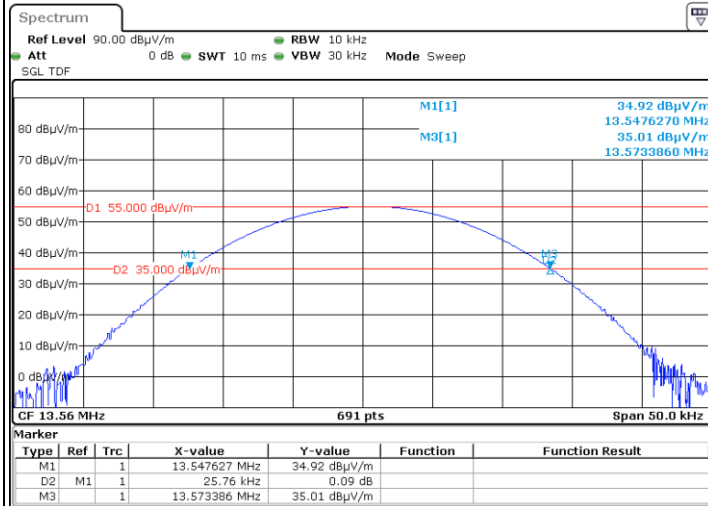
Spectrum Plot



Type A : CH 1



Type F : CH 1



Type V(ISO 15693) : CH 1

Note: The signal look like CW signal, so RBW can't be match 1~5 % OBW.

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

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

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

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

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