



**CFR FCC Subchapter A Part 18**

**TEST REPORT**

**FOR**

**Induction Cooker**

**MODEL NUMBER: MC-ID175, IC200-B**

**REPORT NUMBER:**

**FCC ID No.: 2ARD9FCC-175**

**ISSUE DATE:2018-08-21**

**Prepared for**

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	08/21/2018	Initial Issue	--



<b>Summary of Test Results</b>				
<b>Test</b>	<b>Test Requirement</b>	<b>Test Method</b>	<b>Class / Severity</b>	<b>Remark</b>
Conducted Emission (9 kHz to 30MHz)	47 CFR PART 18:2015	FCCOST/ MP-5:1986	18.307(a)	PASS
Radiated Emission (9 kHz to 30 MHz)	47 CFR PART 18:2015	FCCOST/ MP-5:1986	18.305(b)	PASS
Remark : EUT: In this whole report EUT means Equipment Under Test.				



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# 1. ATTESTATION OF TEST RESULTS

## Applicant Information

Company Name: GUANGDONG MIDEA CONSUMER ELECTRIC MANUFACTURING CO.,LTD  
Address: No.18,Sanle Road,Beijiao Town,Shunde,Foshan, Guangdong,China

## Manufacturer Information

Company Name: Same as applicant.  
Address: Same as applicant.

## EUT Description

EUT Name: Induction Cooker  
Model: MC-ID175, IC200-B  
Brand Name: /  
Sample Status: Normal  
Sample ID: #1  
Sample Received Date: 07 Jul. 2018  
Date of Tested: 07 Mar. 2018 ~ 20 Jul. 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 18	PASS

Tested By:

Chris chen  
Engineer Project Associate  
Approved By:

Stephen Guo  
Laboratory Manager

Checked By:

Shawn Wen  
Laboratory Leader



## 2. General Information

<b>Description of model</b>	
<b>EUT Name</b>	Induction Cooker
<b>Model</b>	MC-ID175, IC200-B
<b>Ratings</b>	AC 120V 60Hz 1440W
<b>Model Difference Description</b>	Model MC-ID175 is original model, the IC200-B is the derivative model. Only the model name different.

## 3. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC part 18 & FCCOST/ MP-5.

## 4. FACILITIES AND ACCREDITATION

Accreditation Certificate	<b>A2LA (Certificate No.: 4338.01)</b> Shenzhen STS Test Services Co., Ltd. has been assessed and proved to be in compliance with A2LA. <b>FCC (FCC Designation No.: 625569)</b> Shenzhen STS Test Services Co., Ltd. has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules
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Note 1: All tests measurement facilities use to collect the measurement data are located at 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road, Fuyong Street, Bao'an District, Shenzhen, Guangdong, China

Note 2: The test anechoic chamber in Shenzhen STS Test Services Co., Ltd. had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.



## 5. CALIBRATION AND UNCERTAINTY

### 5.1. Measuring Instrument Calibration

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 5.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Measurement Frequency Range	U(dB)
Conducted disturbance at mains terminals ports	0.15MHz ~ 30MHz	2.67
Magnetic Emission	0.009MHz ~ 30MHz	2.96
Radiated disturbance below 1 GHz	0.3GHz ~ 1GHz	2.83
Radiated disturbance above 1 GHz	1GHz~18GHz	3.03



## 6. EQUIPMENT UNDER TEST

### 6.1. Description of EUT

<b>EUT Name</b>	Induction Cooker
<b>Model</b>	MC-ID175
<b>Ratings</b>	AC 120V 60Hz 1440W

### 6.2. Test Mode

For Conducted Test	
Final Test Mode	Description
Mode 1	Normal working with full power

For Radiated Test	
Final Test Mode	Description
Mode 1	Normal working with full power

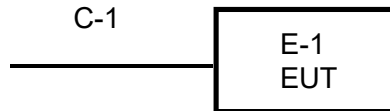
### 6.3. Accessory

Item	Accessory	Brand Name	Model Name	Description
1	Enamelware	/	/	Diameter18.5cm*Height14 cm
2	Enamelware	/	/	Diameter 11.5cm*Height14 cm





**6.4. Block diagram showing the configuration of system tested**



**6.5. Description of support units**

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

Item	Equipment	Mfr/Brand	Model/Type No.	Note
E-1	Induction Cooker	N/A	MC-ID175	EUT
/	/	/	/	/

Item	Shielded Type	Ferrite Core	Length	Note
C-1	/	NO	1.2m	/
/	/	/	/	/

Note:

- (1) For detachable type I/O cable should be specified the length in m in 『Length』 column.
- (2) Diameter 18.5cm\*Height14 cm with full of 80% purified water.
- (3) Diameter 11.5cm\*Height14 cm with full of 80% purified water.



## 6.6. Measuring Instrument List

Conducted Emissions						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
R	Test Receiver	R&S	ESCI	101427	2017.10.15	2018.10.14
R	LISN	R&S	ENV216	101242	2017.10.15	2018.10.14
R	Conduction Cable	EM	C01	N/A	2017.10.18	2018.10.17
R	Temperature & Humidity	Mieo	HH660	N/A	2017.10.15	2018.10.14
Radiated Emissions						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
R	Test Receiver	R&S	ESCI	101427	2017.10.15	2018.10.14
R	Bilog Antenna	TESEQ	CBL6111D	34678	2017.10.30	2018.10.29
R	SHF-EHF Horn Antenna(18G-40GHz)	A-INFO	LB-180400-KF	N/A	2018.03.11	2019.03.10
R	Temperature & Humidity	HH660	Mieo	N/A	2017.10.15	2018.10.14
R	Temperature & Humidity	HH660	Mieo	N/A	2017.10.15	2018.10.14
R	Pre-Amplifier (0.1M-3GHz)	EM	EM330	60538	2017.10.28	2018.10.27
R	Pre Amplifier (1G-26.5GHz)	Agilent	8449B	60538	2017.10.15	2018.10.14
R	Operational Manual Passive Loop (9K--30MHz)	ETS	6512	00165355	2017.10.18	2018.10.17
R	Low Frequency Cable	EM	R01	N/A	2017.10.18	2018.10.17
R	Low Frequency Cable	EM	R06	N/A	2017.10.18	2018.10.17
R	High Frequency Cable	SCHWARZBECK	R04	N/A	2017.10.18	2018.10.17
R	High Frequency Cable	SCHWARZBECK	R02	N/A	2017.10.18	2018.10.17
R	Semi-anechoic Chamber	Changling	966	N/A	2017.10.15	2018.10.14
R	Turn Table	EM	SC100_1	60531	N/A	N/A
R	Antenna Mast	EM	SC100	N/A	N/A	N/A
R	Max-full Antenna Corp	MF	MFA-440H	N/A	N/A	N/A



## 7. EMISSION TEST

### 7.1. Conducted Disturbance Measurement

#### 7.1.1. Limits of conducted disturbance voltage

FREQUENCY (MHz)	§18.307(a)	
	Limit QP [dB(μV)]	Limit AV [dB(μV)]
0.009 to 0.05	110	-
0.05 to 0.15	90 to 80 <sup>a</sup>	-
0.15 to 0.5	66 to 56 <sup>a</sup>	56 to 46 <sup>a</sup>
0.5 to 5	56	46
5 to 30	60	50

Note:

- a The limit decreases linearly with the logarithm of the frequency in the range 0,05 MHz to 0.1485 MHz and 1485MHz to 0.5MHz.
- b At the transition frequency, the more stringent limit shall apply.

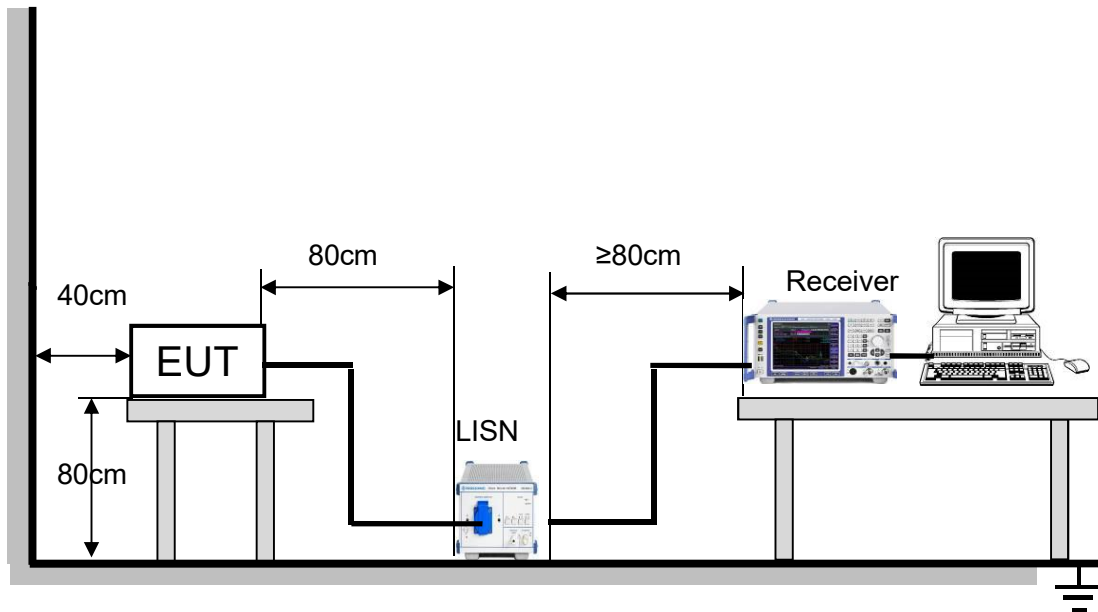
The following table is the setting of the receiver

Receiver Parameters	Setting
Start Frequency	0.09 MHz
Stop Frequency	30 MHz
IF Bandwidth	0.2 kHz & 9 kHz

#### 7.1.2. Test Procedure

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item: EUT Test Photos.

### 7.1.3. Test Setup



For the actual test configuration, please refer to Appendix I Photographs of the Test Configuration.

### 7.1.4. Test conditions

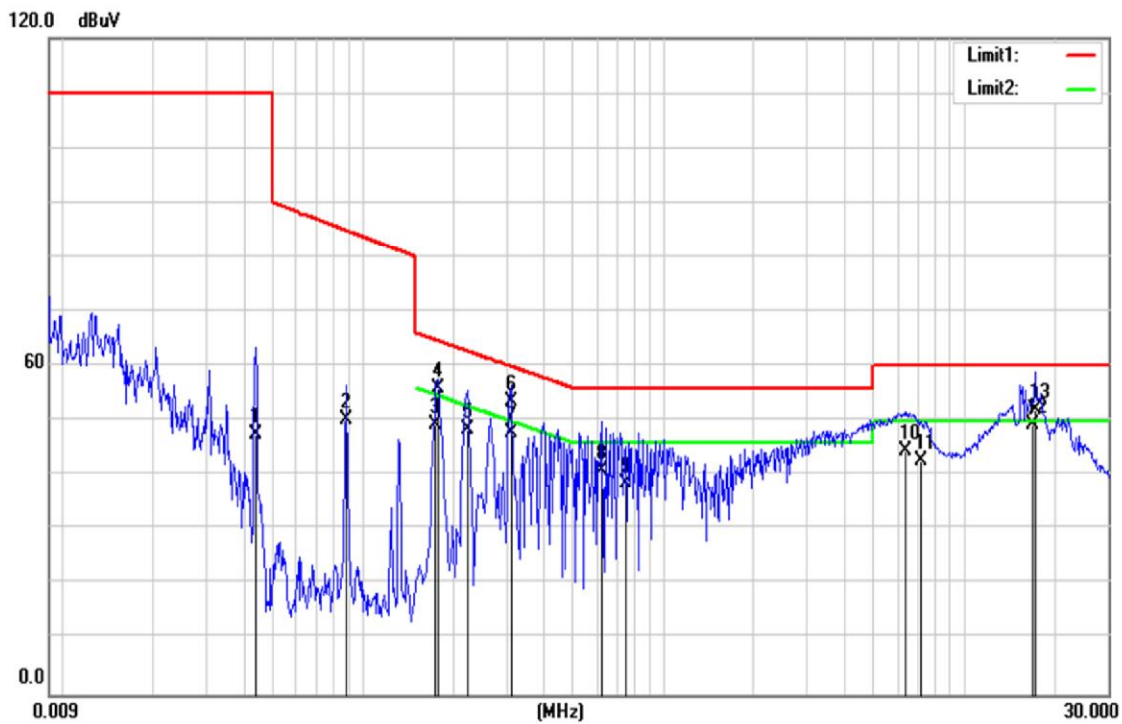
Temperature: 26°C Relative Humidity:60% Test by: Xiao Gang  
Note: /



### 7.1.5. Test Result

Test Mode:	Mode 1 : Full power (AC 120V /60Hz)
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Phase: Neutral

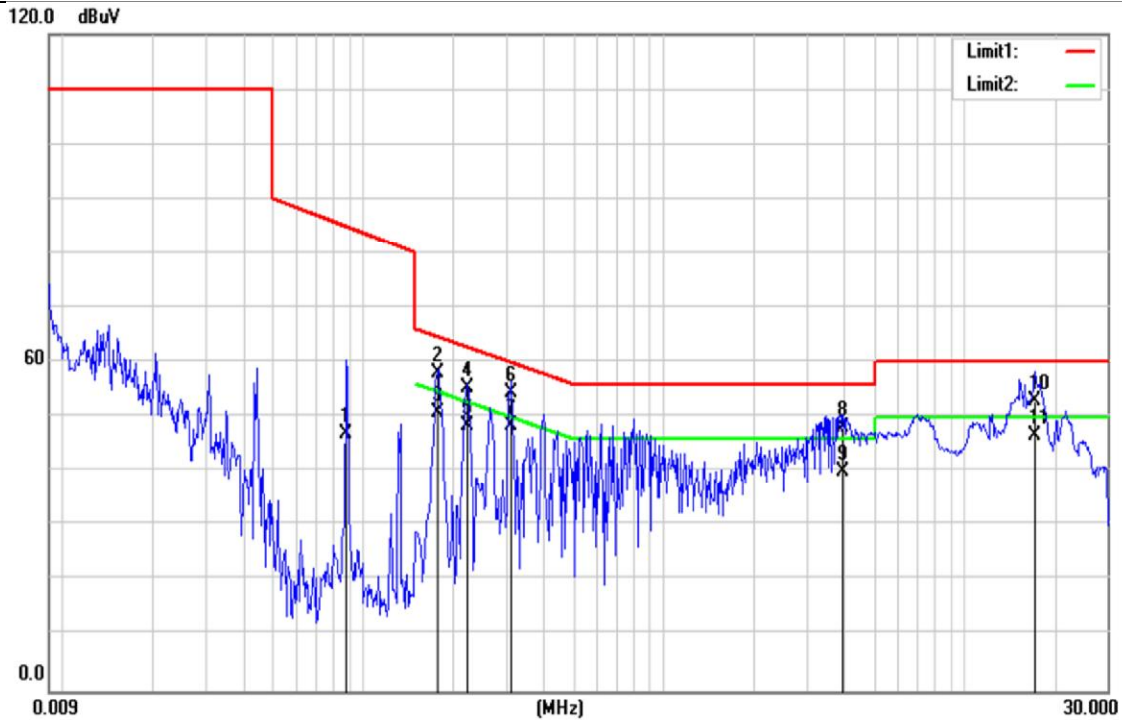


Remark: Factor = LISN factor + Cable Loss .

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.0440	37.84	9.82	47.66	110.00	-62.34	QP
2	0.0884	40.40	9.81	50.21	84.81	-34.60	QP
3	0.1740	39.69	9.79	49.48	54.77	-5.29	AVG
4	0.1780	46.16	9.78	55.94	64.58	-8.64	QP
5	0.2220	38.48	9.88	48.36	52.74	-4.38	AVG
6	0.3100	43.22	10.21	53.43	59.97	-6.54	QP
7	0.3100	37.68	10.21	47.89	49.97	-2.08	AVG
8	0.6220	31.15	9.91	41.06	56.00	-14.94	QP
9	0.7460	28.81	9.83	38.64	46.00	-7.36	AVG
10	6.3260	34.62	9.87	44.49	60.00	-15.51	QP
11	7.1660	32.92	9.90	42.82	50.00	-7.18	AVG
12	16.7780	39.08	10.32	49.40	50.00	-0.60	AVG
13	17.2460	41.65	10.34	51.99	60.00	-8.01	QP



Phase: Line



Remark: Factor = LISN factor + Cable Loss .

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.0871	37.07	9.81	46.88	84.95	-38.07	QP
2	0.1766	48.35	9.78	58.13	64.64	-6.51	QP
3	0.1766	41.18	9.78	50.96	54.64	-3.68	AVG
4	0.2217	45.49	9.88	55.37	62.75	-7.38	QP
5	0.2217	38.53	9.88	48.41	52.75	-4.34	AVG
6	0.3091	44.28	10.21	54.49	59.99	-5.50	QP
7	0.3091	38.25	10.21	48.46	49.99	-1.53	AVG
8	3.9580	38.40	9.83	48.23	56.00	-7.77	QP
9	3.9580	30.13	9.83	39.96	46.00	-6.04	AVG
10	17.2260	42.61	10.33	52.94	60.00	-7.06	QP
11	17.2260	36.42	10.33	46.75	50.00	-3.25	AVG



## 7.2. Radiated Disturbance Measurement

### 7.2.1. Limits of radiated disturbance measurement

#### Limits 9kHz-30MHz

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Induction cooking ranges .....	Below 90 kHz .....	Any .....	1,500 .....	430
	On or above 90 kHz .....	Any .....	300 .....	430

For Induction cooking ranges and the operating frequency is below 90 kHz, the field strength limit is 1,500µV/m@30m,  
i.e.  $20\lg(1500)+40\lg(30/3)=63.52+40=103.52\text{dBuV/m}$   
@3m distance.

The following table is the setting of the receiver

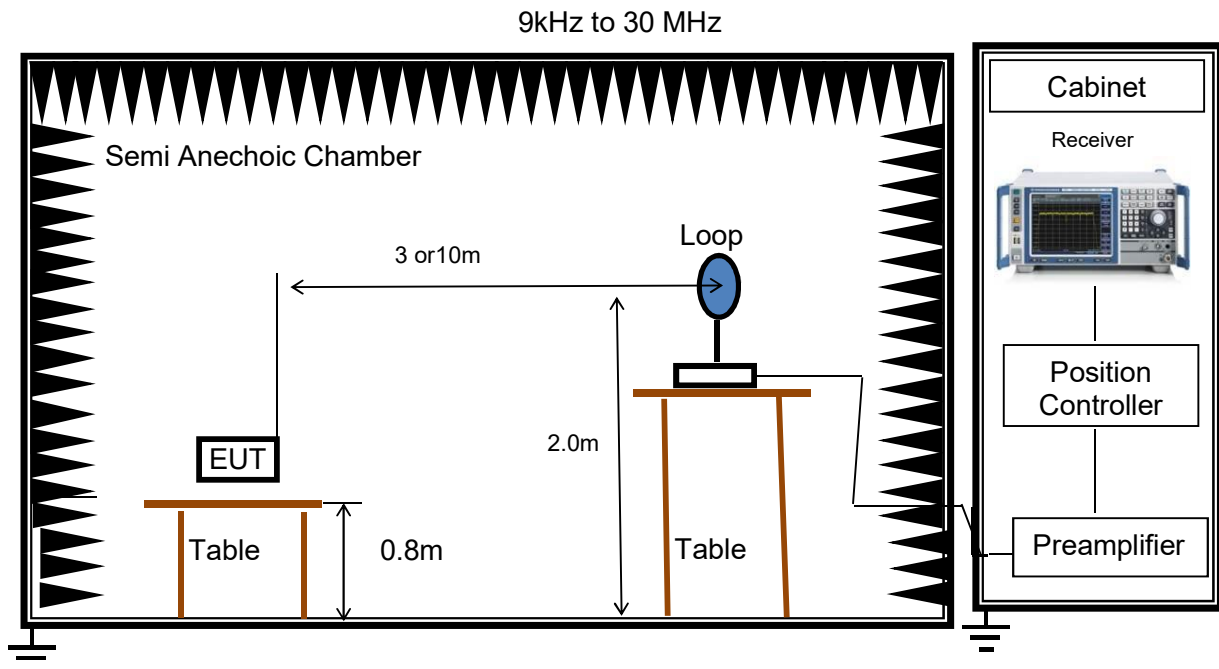
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	9 KHz
Stop Frequency	30 MHz
IF Bandwidth	200 Hz Resolution Bandwidth for 9 kHz to 150 kHz 9 kHz Resolution Bandwidth for 150 kHz to 30 MHz

### 7.2.2. Test Procedure

- a. The magnetic emissions test was conducted in a semi-anechoic chamber.
- b. The EUT was connected to AC power source through a mains power outlet which was bonded to the ground reference plane; The mains cables shall drape to the ground reference plane.
- c. The tabletop EUT was placed upon a non-metallic table 0.8 m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.

- d. Before final measurements of magnetic emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emission spectrum signature data plots of the EUT. The frequencies of maximum emission were determined in the final magnetic emissions measurement, The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. At each frequency, the EUT was rotated 360°, the antenna was supported in the vertical plane and be rotatable about a vertical axis. The antenna height was set at around 2 m above the ground reference plane.

### 7.2.3. Test Setup



### 7.2.4. Test conditions

Temperature: 22°C Relative Humidity: 45% Test by: Xiao Gang

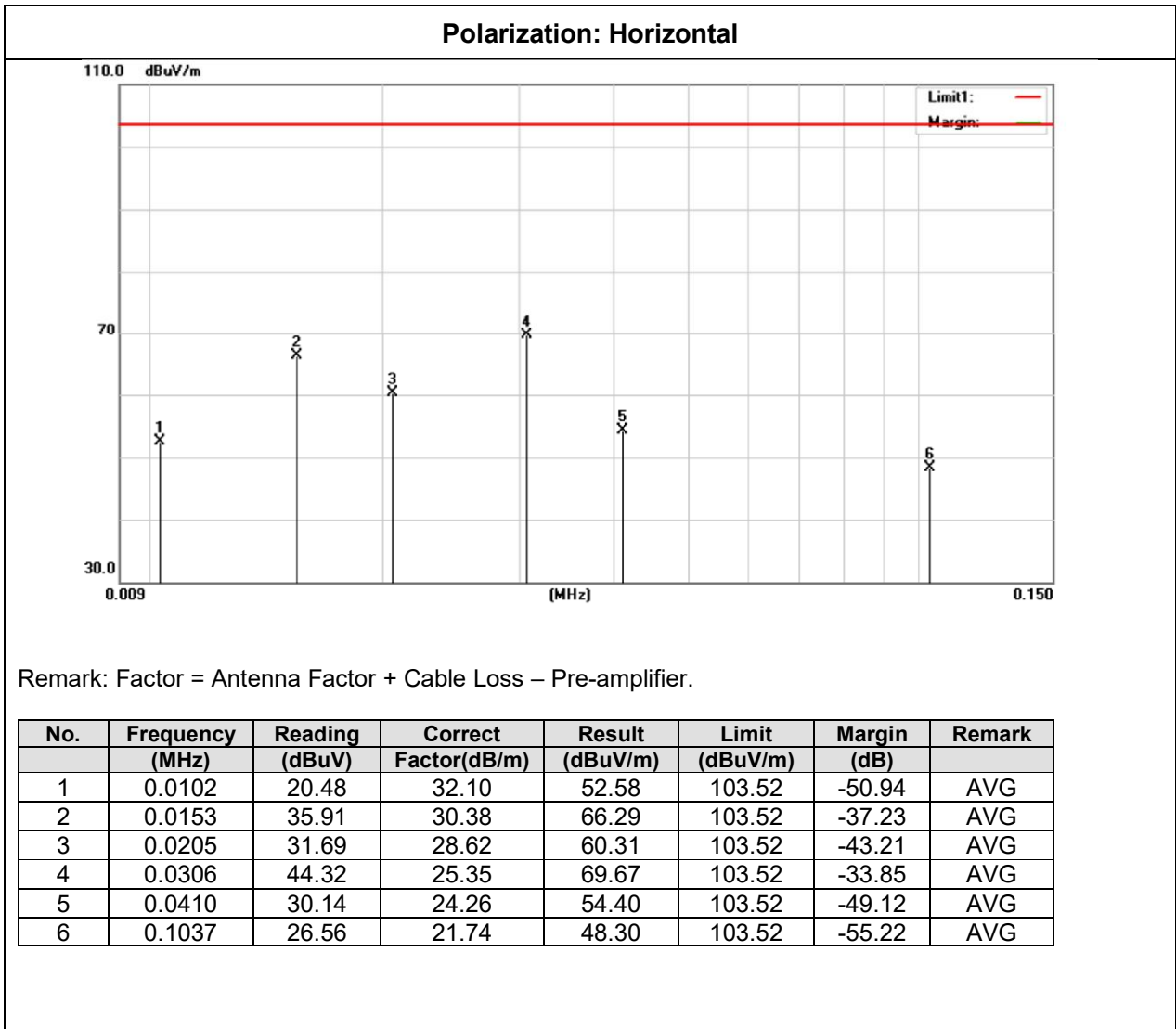
Note: /

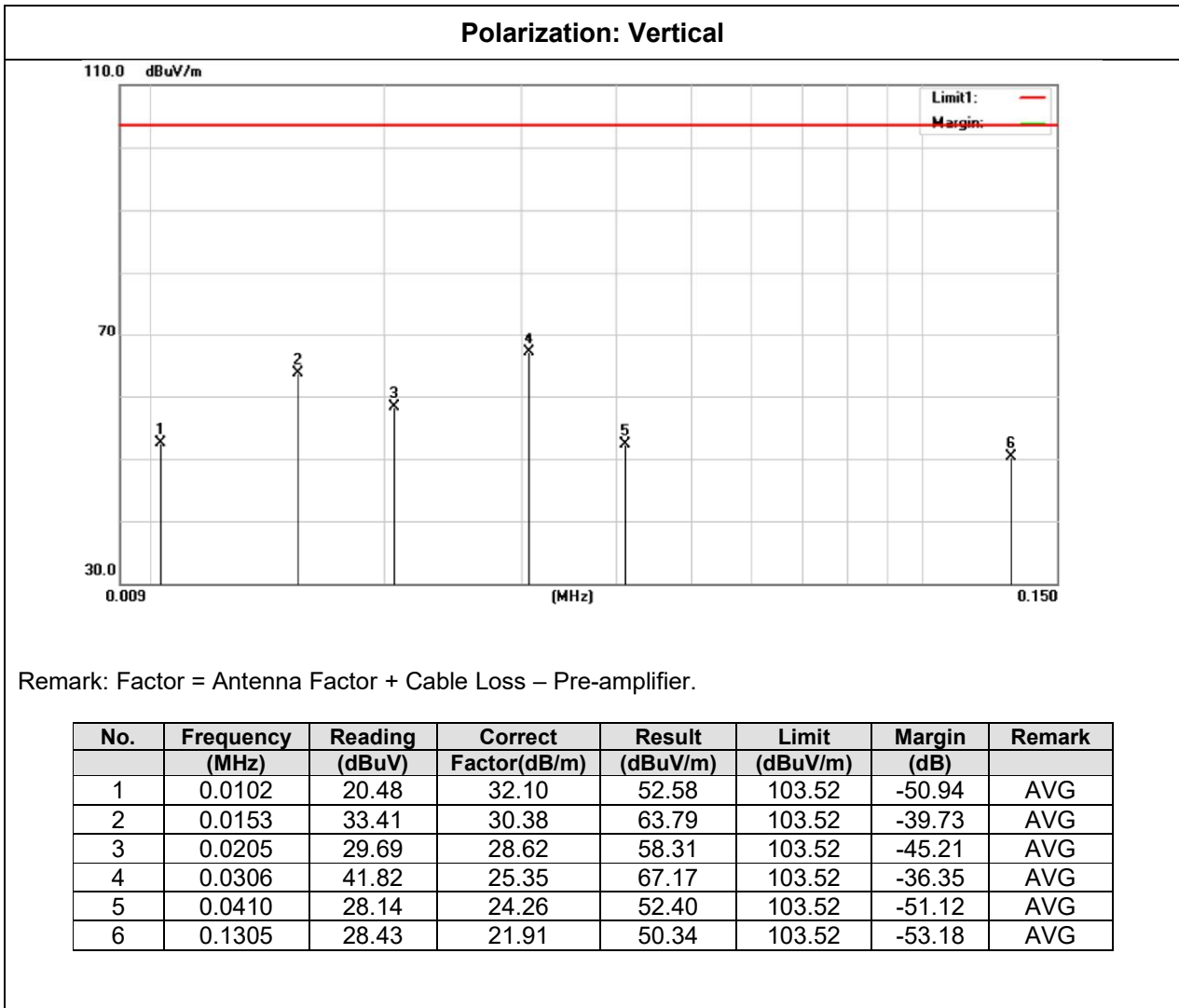




### 7.2.5. Test Result

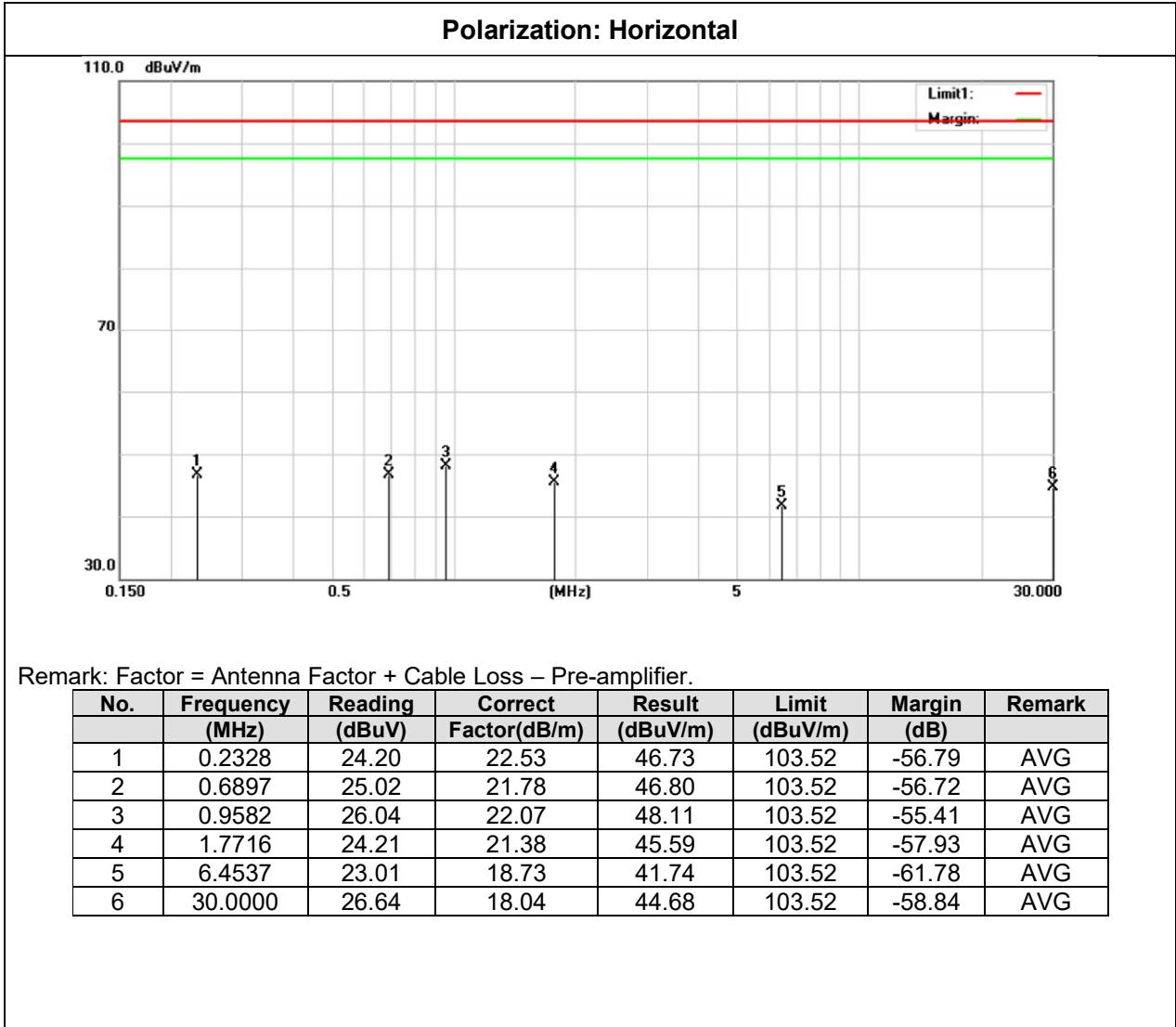
Test Mode:	Mode 1 : Full power (AC 120V /60Hz)
Test frequency:	9kHz~150kHz





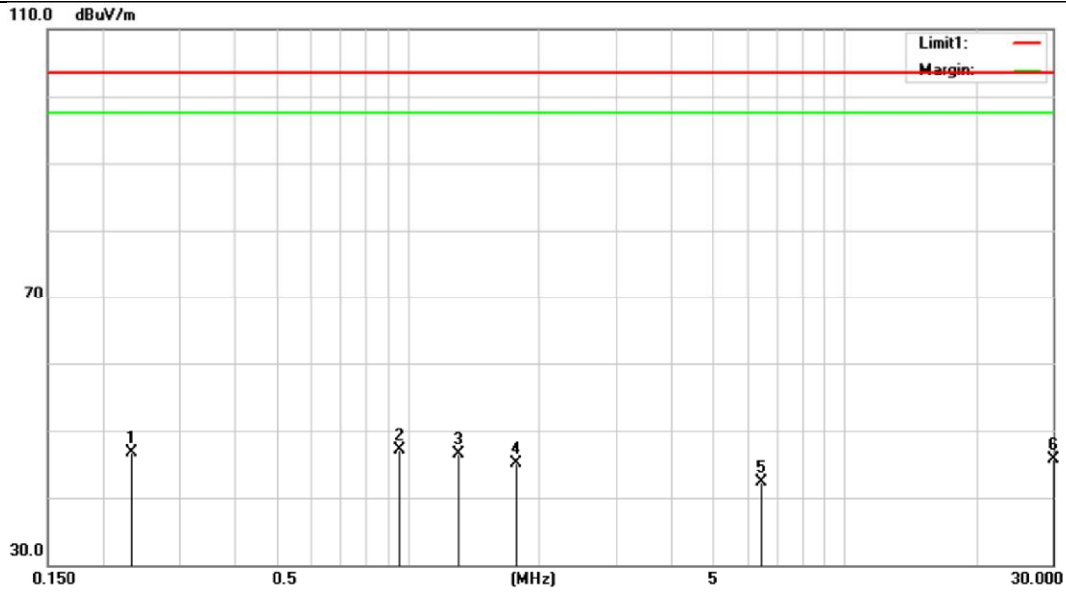


Test Mode:	Mode 1 : Full power (AC 120V /60Hz)
Test frequency:	150kHz~30MHz





**Polarization: Vertical**



Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2328	24.20	22.53	46.73	103.52	-56.79	AVG
2	0.9582	25.04	22.07	47.11	103.52	-56.41	AVG
3	1.3025	24.71	21.85	46.56	103.52	-56.96	AVG
4	1.7716	23.71	21.38	45.09	103.52	-58.43	AVG
5	6.4537	23.51	18.73	42.24	103.52	-61.28	AVG
6	30.0000	27.64	18.04	45.68	103.52	-57.84	AVG

## Appendix I: Photographs of EMC Test Configuration

### 1. Conducted Disturbance - Mode 1



### 2. Radiated Disturbance - Mode 1



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**End of Report**