

# FCC Part15, Subpart B

#### **TEST REPORT**

For

#### **BJ 57IN SNOWMAN WITH SNOWFLAKES**

**MODEL NUMBER: 266285** 

FCC ID: 2ATJQ266285

REPORT NUMBER: 4789857896-1

ISSUE DATE: March 24, 2021

Prepared for

Meizhou Hongfeng Arts And Crafts Co. Ltd Guanpu Shejiang Town, Meixian, Guangdong, China

Prepared by

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# Revision History

Rev.	Issue Date	Revisions	Revised By
V0	3/24/2021	Initial Issue	



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Summary of Test Results					
Standard	Test Item Limit		Result	Remark	
	Conducted Disturbance	Class B	PASS	NOTE (2)	
FCC Part15, Subpart B ANSI C63.4-2014	Radiated Disturbance below 1 GHz	Class B	PASS		
ANSI C03.4-2014	Radiated Disturbance above 1 GHz	Class B	N/A	NOTE (1) NOTE (3)	

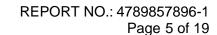
#### Note

- (1) "N/A" denotes test is not applicable in this test report.
- (2) This test is only applicable for devices which can be charged or powered by AC power cable.
- (3) If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.
- (4) This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
- (5) The measurement result for the sample received is <Pass> according to < FCC Part15, Subpart B > when <Accuracy Method> decision rule is applied.



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# 1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: Meizhou Hongfeng Arts And Crafts Co. Ltd

Address: Guanpu Shejiang Town, Meixian, Guangdong, China

**Manufacturer Information** 

Company Name: Meizhou Hongfeng Arts And Crafts Co. Ltd

Address: Guanpu Shejiang Town, Meixian, Guangdong, China

**EUT Information** 

EUT Name: BJ 57IN SNOWMAN WITH SNOWFLAKES

Serial Model: 266285

Brand: /

Sample Received Date: March 16, 2021

Sample Status: Normal Sample ID: 3713516

Date of Tested: March 16, 2021 ~ March 23, 2021

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part15, Subpart B	PASS

Prepared By:	Checked By:
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Laboratory Leader

Approved By:

**Project Engineer** 

Stephen Guo Laboratory Manager

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# 2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC Part15 Subpart B & ANSI C63.4-2014.

# 3. FACILITIES AND ACCREDITATION

	A2LA (Certificate No.: 4102.01)	
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.	
	has been assessed and proved to be in compliance with A2LA.	
	FCC (FCC Recognized No.: CN1187)	
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.	
	Has been recognized to perform compliance testing on equipment subject to	
	the Commission's Declaration of Conformity (DoC) and Certification rules	
	IC (Company No.: 21320)	
Accreditation	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.	
Certificate	has been registered and fully described in a report filed with	
	Industry Canada. The Company Number is 21320.	
	VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)	
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.	
	has been assessed and proved to be in compliance with VCCI, the	
	Membership No. is 3793.	
	Facility Name:	
	Chamber D, the VCCI registration No. is G-20019 and R-20004	
	Shielding Room B , the VCCI registration No. is C-20012 and T-20011	

Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

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## 4. CALIBRATION AND UNCERTAINTY

### 4.1. 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.

#### 4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Measurement Frequency Range	К	U(dB)
Conducted emissions from the AC mains power ports	0.15MHz ~ 30MHz	2	3.62
Radiated emissions	30MHz ~ 1GHz	2	4.00

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



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# 5. EQUIPMENT UNDER TEST

# 5.1. DESCRIPTION OF EUT

EUT Name	BJ 57IN SNOWMAN WITH SNOWFLAKES
Model 266285	
Power supply	AC 120V ~ 60Hz, 0.20A
Max. Operating Frequency	32.768 kHz

## 5.2. TEST MODE

Test Mode	Description
Mode 1	Running
Mode 2	Standby

# 5.3. EUT ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
/	/	/	/	1

# 5.4. SUPPORT UNITS FOR SYSTEM TEST

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.	Specification	Series No.	Note
/	/	/	/	/	/	

The following cables were used to form a representative test configuration during the tests.

Item	Type of cable	Shielded Type	Ferrite Core	Length
/	/	/	/	/



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# 6. MEASURING EQUIPMENT AND SOFTWARE USED

	Conducted Emissions						
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date		
EMI Test Receiver	R&S	ESR3	101961	Nov. 12, 2020	Nov. 11, 2021		
Two-Line V- Network	R&S	ENV216	101983	Nov. 12, 2020	Nov. 11, 2021		
		Sc	oftware				
Γ	Description		Manufacturer	Name	Version		
Test Software for Conducted Emissions			Farad	EZ-EMC	Ver. UL-3A1		
		Radiate	d Emissions				
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date		
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Nov. 12, 2020	Nov. 11, 2021		
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130959	Sept. 17, 2018	Sept. 17, 2021		
Preamplifier	HP	8447D	2944A09099	Nov. 12, 2020	Nov. 11, 2021		
Software							
Description			Manufacturer	Name	Version		
Test Software	for Radiated E	missions	Farad	EZ-EMC	Ver. UL-3A1		

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#### 7. EMISSION TEST

#### 7.1. CONDUCTED EMISSIONS MEASUREMENT

## **LIMITS**

CFR 47 FCC Part15 Subpart B					
FREQUENCY	Class A	ss A (dBµV) Class B (dB		s Β (dBμV)	
(MHz)	Quasi-peak Average		Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46*	
0.50 -5.0	73.00	60.00	56.00	46.00	
5.0 -30.0	73.00	60.00	60.00	50.00	

#### Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

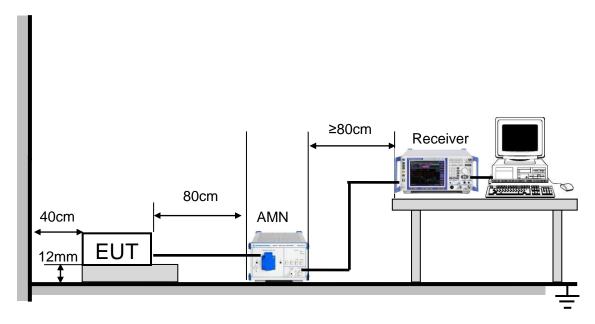
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

#### **TEST PROCEDURE**

- 1. The testing follows the guidelines in ANSI C63.4-2014.
- 2. The EUT was placed on a 12mm insulating material from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 3. Excess I/O cables shall be bundled in the center. If bundling is not possible, the cables shall be arranged in a serpentine fashion. Bundling shall not exceed 40 cm in length.
- 4. Excess power cords shall be bundled in the center or shortened to appropriate length.
- 5. 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. If bundling is not possible, the cables shall be arranged in a serpentine fashion.
- 6. LISN at least 80 cm from nearest part of EUT.
- 7. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.



#### **TEST SETUP**



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

# **TEST ENVIRONMENT**

Temperature	22.1 °C	Relative Humidity	72.1 %
Atmosphere Pressure	101 kPa		

#### **TEST MODE**

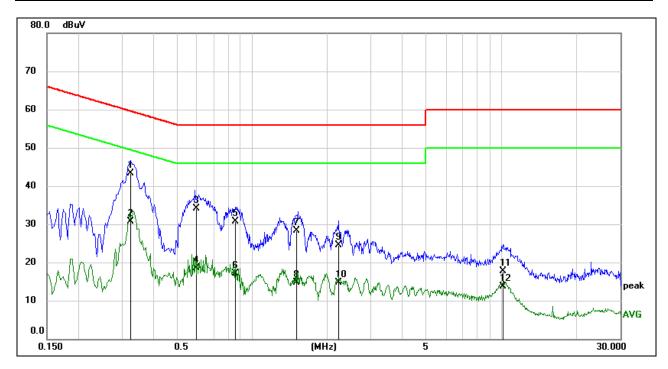
Pre-test Mode:	Mode 1 & Mode 2
Final Test Mode:	Mode 1

Note: All test modes had been tested, but only the worst data recorded in the report.



#### **TEST RESULTS**

Conducted Emissions				
Test Mode:	Mode 1 Phase: Line			
Test Voltage	AC 120 V/60 Hz			



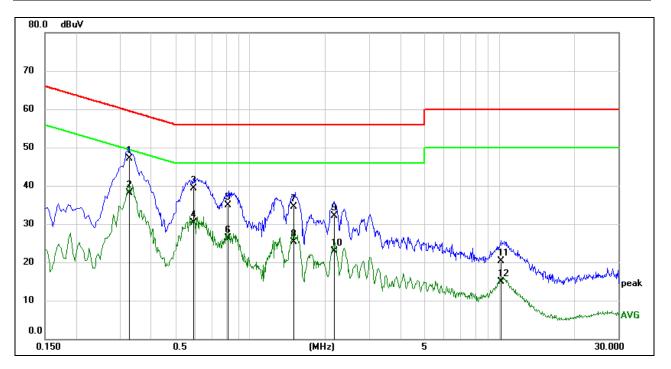
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.3260	33.68	9.59	43.27	59.55	-16.28	QP
2	0.3260	21.15	9.59	30.74	49.55	-18.81	AVG
3	0.5949	24.54	9.60	34.14	56.00	-21.86	QP
4	0.5949	8.98	9.60	18.58	46.00	-27.42	AVG
5	0.8507	21.19	9.60	30.79	56.00	-25.21	QP
6	0.8507	7.58	9.60	17.18	46.00	-28.82	AVG
7	1.5031	18.69	9.62	28.31	56.00	-27.69	QP
8	1.5031	5.11	9.62	14.73	46.00	-31.27	AVG
9	2.2163	14.91	9.63	24.54	56.00	-31.46	QP
10	2.2163	5.04	9.63	14.67	46.00	-31.33	AVG
11	10.1676	8.03	9.62	17.65	60.00	-42.35	QP
12	10.1676	4.09	9.62	13.71	50.00	-36.29	AVG

Note: 1. Result = Reading +Correct (Insertion Loss + Cable Loss + Attenuator Factor)

2. Margin = Result - Limit



Conducted Emissions					
Test Mode:	Mode 1 Phase: Neutral				
Test Voltage	AC 120 V/60 Hz				



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.3268	37.52	9.59	47.11	59.53	-12.42	QP
2	0.3268	28.46	9.59	38.05	49.53	-11.48	AVG
3	0.5926	29.62	9.60	39.22	56.00	-16.78	QP
4	0.5926	20.66	9.60	30.26	46.00	-15.74	AVG
5	0.8149	25.39	9.60	34.99	56.00	-21.01	QP
6	0.8149	16.76	9.60	26.36	46.00	-19.64	AVG
7	1.5016	24.96	9.62	34.58	56.00	-21.42	QP
8	1.5016	15.61	9.62	25.23	46.00	-20.77	AVG
9	2.1789	22.48	9.63	32.11	56.00	-23.89	QP
10	2.1789	13.35	9.63	22.98	46.00	-23.02	AVG
11	10.1854	10.77	9.62	20.39	60.00	-39.61	QP
12	10.1854	5.25	9.62	14.87	50.00	-35.13	AVG

Note: 1. Result = Reading +Correct (Insertion Loss + Cable Loss + Attenuator Factor)

2. Margin = Result - Limit



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# 7.2. RADIATED EMISSIONS MEASUREMENT

## **LIMITS**

Below 1 GHz

CFR 47 FCC Part15 Subpart B					
Frequency	Cla	ass A	Class B		
(MHz)	Field strength Field strength (uV/m) (at 10m) (dBuV/m) (at 3m)		Field strength (dBuV/m) (at 3m)		
30 - 88	90	49.5	40		
88 - 216	150	53.9	43.5		
216 - 960	210	56.9	46		
Above 960	300	60	54		

#### Above 1 GHz

CFR 47 FCC Part15 Subpart B						
Class A Class B					s B	
Frequency (MHz)	(dBuV/m	) (at 3m)	(dBuV/m) (at 10m)		(dBuV/m) (at 3m)	
(IVIITIZ)	Peak	Average	Peak	Average	Peak	Average
Above 1000	80	60	69.5	49.5	74	54

#### Test Frequency Range of Radiated Disturbance Measurement

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower

## NOTE:

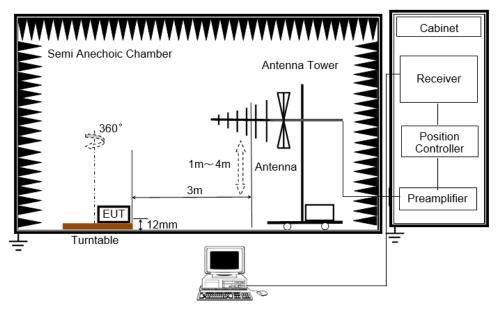
- (1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
- (2) The tighter limit applies at the band edges;
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m), 3m Emission level = 10m Emission level + 20log(10m/3m);



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#### **TEST SETUP AND PROCEDURE**

Below 1G and above 30MHz



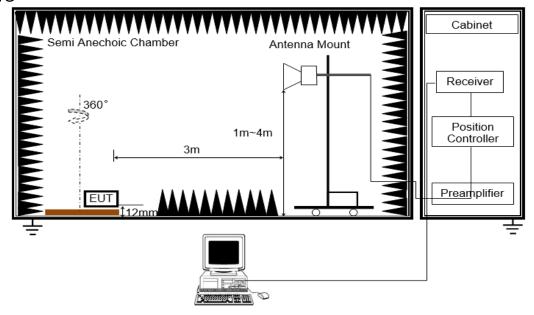
The setting of the spectrum analyser

RBW	120K
VBW	300K
Sweep	Auto
Detector	Peak and QP
Trace	Max hold

- 1. The testing follows the guidelines in ANSI C63.4-2014.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp was used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. Excess I/O cables shall be bundled in the center. If bundling is not possible, the cables shall be arranged in a serpentine fashion. Bundling shall not exceed 40 cm in length.
- 4. Excess power cords shall be bundled in the center or shortened to appropriate length.
- 5. 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. If bundling is not possible, the cables shall be arranged in a serpentine fashion.
- 6. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 7. The EUT and all cables shall be insulated, if required, from the ground plane by up to 12mm of insulating material.
- 8. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.



Above 1G



The setting of the spectrum analyser

RBW	1M
VBW	3M
Sweep	Auto
Detector	Peak: Peak
Detector	AVG: RMS
Trace	Max hold

- 1. The testing follows the guidelines in ANSI C63.4-2014.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. Excess I/O cables shall be bundled in the center. If bundling is not possible, the cables shall be arranged in a serpentine fashion. Bundling shall not exceed 40 cm in length.
- 4. Excess power cords shall be bundled in the center or shortened to appropriate length.
- 5. 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. If bundling is not possible, the cables shall be arranged in a serpentine fashion.
- 6. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 7. The EUT and all cables shall be insulated, if required, from the ground plane by up to 12mm of insulating material.
- 8. For measurement above 1GHz, the peak emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the peak limit specified in Section 15.109. If peak result complies with average limit, average result is deemed to comply with average limit.
- 9. The average emission measurement will be measured by the RMS detector and must comply with the average limit specified in Section 15.109.



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# **TEST ENVIRONMENT**

Radiated Emissions - Below 1 GHz		Radiated Emissions - Above 1 GHz		
Temperature: 24.6 °C		Temperature:	N/A	
Humidity:	65 %	Humidity:	N/A	
Atmosphere Pressure	101 kPa	Atmosphere Pressure	N/A	

#### **TEST MODE**

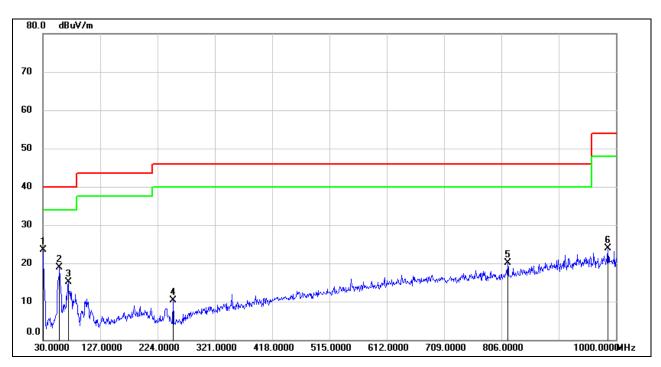
Radiated Em	issions - Below 1 GHz	Radiated Emissions - Above 1 GHz		
Pre-test Mode: Mode 1 & Mode 2		Pre-test Mode:	N/A	
Final Test Mode:	Final Test Mode: Mode 1		N/A	

Note: All test modes had been tested, but only the worst data recorded in the report.



**TEST RESULTS** 

Radiated Emissions – Below 1 GHz						
Measurement Method Radiated Polar: Horizontal						
Test Mode:	Mode 1	Test Voltage:	AC 120 V/60 Hz			



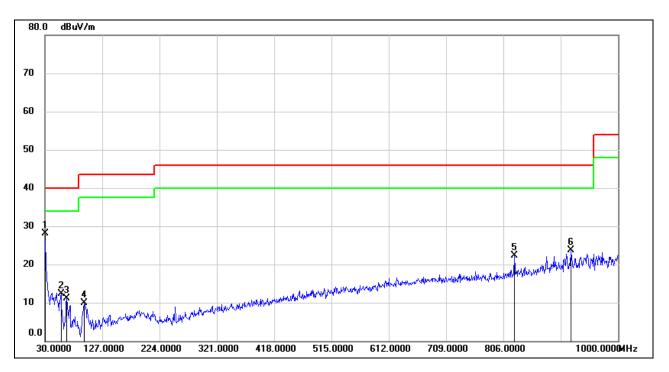
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	30.0000	42.48	-18.94	23.54	40.00	-16.46	QP
2	58.1300	39.55	-20.55	19.00	40.00	-21.00	QP
3	72.6800	35.90	-20.76	15.14	40.00	-24.86	QP
4	250.1900	29.16	-18.91	10.25	46.00	-35.75	QP
5	816.6700	27.07	-6.98	20.09	46.00	-25.91	QP
6	986.4200	28.14	-4.30	23.84	54.00	-30.16	QP

Note: 1. Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)

2. Margin = Result - Limit



Radiated Emissions – Below 1 GHz						
Measurement Method Radiated Polar: Vertical						
Test Mode:	Mode 1	Test Voltage:	AC 120 V/60 Hz			



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	30.0000	47.10	-18.94	28.16	40.00	-11.84	QP
2	57.1600	32.94	-20.58	12.36	40.00	-27.64	QP
3	66.8600	31.75	-20.56	11.19	40.00	-28.81	QP
4	96.9300	31.33	-21.38	9.95	43.50	-33.55	QP
5	824.4300	29.18	-6.80	22.38	46.00	-23.62	QP
6	920.4600	28.56	-4.76	23.80	46.00	-22.20	QP

Note: 1. Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)

2. Margin = Result - Limit

# **END OF REPORT**