

# Test Report

Applicant: SHENZHEN MARK TRADING CO., LTD.

Product Name: CASE FAN

Brand Name: MARVO, XTRIKE ME, @ONE

Model No.: FN-14, FN-\*\*( \*\*stand for 0-9), FN-\*\*\*(\*\*stand for 0-9),  
NF-\*\*( \*\*stand for 0-9)

Date of Receipt : Jul. 25, 2019

Date of Test: Jul. 26-29, 2019

Date of Report: Jul. 30, 2019

Prepared by: Shenzhen Most Technology Service Co., Ltd.

**The EMC testing has been performed on the submitted samples and found in compliance with the council EMC directive 2014/30/EU.**

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## TEST REPORT DECLARATION

Report Number	MTEN19071189	
Applicant	SHENZHEN MARK TRADING CO., LTD..	
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Manufacturer	SHENZHEN MARK TRADING CO., LTD..	
	6th Floor, Building A, DongFangYaYuan, Chen Tian Communities, Xixiang Bao'an District, Shenzhen, China	
Product	Product Name	CASE FAN
	Model No.	FN-14
	Power Supply	DC12V
Test Result	The EUT was found compliant with the requirement(s) of the standards.	
Standard	EN 55032:2015, EN 55035:2017 (IEC 61000-4-2:2008, IEC 61000-4-3:2006+A1:2007+A2:2010, IEC 61000-4-8:2009,)	
<p><b>*Note</b></p> <p>The above device has been tested by Shenzhen Most Technology Service Co., Ltd. To determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test record, data evaluation &amp; Equipment Under Test (EUT) configurations represented are contained in this test report and Shenzhen Most Technology Service Co., Ltd. Is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the requirement of the above standards.</p> <p>This report applies to above tested sample only. This report shall not be reproduced except in full, without written approval of Shenzhen Most Technology Service Co., Ltd., this document may be altered or revised by Shenzhen Most Technology Service Co., Ltd., personal only, and shall be noted in the revision of the document.</p>		
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	Chloe Cai(Engineer)	
Reviewed by	<i>Sunny</i>	
	Sunny Deng(Engineer)	
Approved by	<i>Yvette</i>	
	Yvette Zhou(Manager)	



# 1. GENERAL INFORMATION

## 1.1. Description of Device (EUT)

Description	:	CASE FAN
Model Number	:	FN-14, FN-**( **stand for 0-9), FN-***( ***stand for 0-9), NF-**( **stand for 0-9)
Remark	:	Used FN-14 does all tests

## 1.2. Operational Mode(s) of EUT

Order Number	:	Test Mode(s)
1	:	Running
	:	
	:	
	:	

## 1.3. Test Voltage(s) of EUT

Order Number	:	Test Voltage(s)
1	:	DC12V
	:	
	:	
	:	

## 2. DESCRIPTION OF TEST STANDARD

The intention of this publication is to establish uniform requirements for the radio disturbance level of the equipment contained in the scope, to fix limits of disturbance, to describe methods of measurement and to standardize operating conditions and interpretation of results.

The following referenced standard are indispensable for the application of this report.

Referenced Description below:

EN 55032:2015

Information Technology Equipment-Radio disturbance characteristics-Limits and methods of measurement.

EN 55035:2017

Information technology equipment - Immunity characteristics - Limits and methods of measurement.

### 3. LABORATORY INFORMATION

#### 3.1. Laboratory Name

Shenzhen Most Technology Service Co., Ltd.

#### 3.2. Location

No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China

#### 3.3. Test facility

- 3m Anechoic Chamber : Nov. 28, 2012 File on Federal Communication Commission  
Registration Number:490827
  
- Shielding Room : Nov. 28, 2012 File on Federal Communication Commission  
Registration Number:490827
  
- EMC Lab. : Accredited by TUV Rheinland Shenzhen  
Audit Report: UA 50149851  
Mar. 12, 2009  
  
 Accredited by Industry Canada  
Registration Number: 7103A-1  
Oct. 22, 2012  
  
 Accredited by TIMCO  
Registration Number: Q1460  
March 28, 2010

#### 3.4. Measurement Uncertainty

No.	Item	Uncertainty
1.	Uncertainty for Conducted Disturbance Test	1.25dB
2.	Uncertainty for Radiated Disturbance Test	3.15dB

### 3.5. Supporting System Details

#### 3.5.1. Apple Computer

EMC CODE : 2978  
M/N : A1708  
FCC ID: : BCGA1708  
S/N : CO2SY35DGY25  
Rated: : 20.3V/3.0A

#### 3.5.2. Monitor

EMC CODE : Test Monitor  
M/N : HEW8220Q  
S/N : HCWBZR10016-3A  
Manufacturer : PHILIPS  
Data cord : Shielded, detachable, 1.8m  
Power cord : Unshielded, detachable, 1.8m



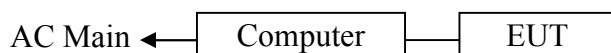
#### 4. SUMMARY OF TEST RESULTS

<b>EMISSION</b>			
<b>Test Item</b>	<b>Standard</b>	<b>Limits</b>	<b>Results</b>
Conducted disturbance at mains terminals	EN 55032:2015	Class B	N/A
Radiated disturbance	EN 55032:2015	Class B	PASS
Conducted Emissions From Asymmetric Mode	EN 55032:2015	Class B	N/A
Conducted Differential Voltage Emissions	EN 55032:2015	Class B	N/A
Harmonic current emissions	EN 61000-3-2:2014	---	N/A
Voltage fluctuations & flicker	EN 61000-3-3:2013	---	N/A
<b>IMMUNITY (EN 55035:2017)</b>			
<b>Test Item</b>	<b>Basic Standard</b>	<b>Performance Criteria</b>	<b>Results</b>
Electrostatic discharge (ESD)	IEC 61000-4-2:2008	B	PASS
Radio-frequency, Continuous radiated disturbance	IEC 61000-4-3:2006 +A1:2007+A2:2010	A	PASS
Electrical fast transient (EFT)	IEC 61000-4-4:2012	B	N/A
Surge (Input a.c. power ports)	IEC 61000-4-5:2014	B	N/A
Surge (Telecommunication ports)		B	N/A
Radio-frequency, Continuous conducted disturbance	IEC 61000-4-6:2013	A	N/A
Power frequency magnetic field	IEC 61000-4-8:2009	A	PASS
Voltage dips, >95% reduction	IEC 61000-4-11:2004+A1:2017	B	N/A
Voltage dips, 30% reduction		C	N/A
Voltage interruptions		C	N/A
N/A is an abbreviation for Not Applicable.			

## 5. BLOCK DIAGRAM OF TEST SETUP

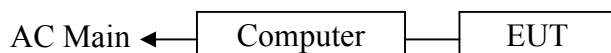
The equipments are installed test to meet EN 55032 requirement and operating in a manner which tends to maximize its emission characteristics in a normal application. EUT was tested in normal configuration (Please See following Block diagrams)

### 5.1. Block Diagram of connection between EUT and simulation-EMI



(EUT: CASE FAN)

### 5.2. Block Diagram of connection between EUT and simulation-EMS



(EUT: CASE FAN)

## 6. TEST INSTRUMENT USED

### 6.1. For Conducted Disturbance at Mains Terminals Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100492	Mar. 09, 19	1 Year
2.	L.I.S.N.	Rohde & Schwarz	ENV216	100093	Mar. 09, 19	1 Year
3.	Coaxial Switch	Anritsu Corp	MP59B	6200283933	Mar. 09, 19	1 Year
4.	Terminator	Hubersuhner	50Ω	No.1	Mar. 09, 19	1 Year
5.	RF Cable	SchwarzBeck	N/A	No.1	Mar. 09, 19	1 Year

### 6.2. For Radiation Test (In Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESPI	101202	Mar. 09, 19	1 Year
2.	Bilog Antenna	Sunol	JB3	A121206	Mar. 09, 19	1 Year
3.	Cable	Resenberger	N/A	NO.1	Mar. 09, 19	1 Year
4.	Cable	SchwarzBeck	N/A	NO.2	Mar. 09, 19	1 Year
5.	Cable	SchwarzBeck	N/A	NO.3	Mar. 09, 19	1 Year
6.	DC Power Filter	DuoJi	DL2×30B	N/A	N/A	N/A
7.	Single Phase Power Line Filter	DuoJi	FNF 202B30	N/A	N/A	N/A
8.	3 Phase Power Line Filter	DuoJi	FNF 402B30	N/A	N/A	N/A

### 6.3. For Harmonic / Flicker Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	AC Power Source	Kikusui	AC40MA	LM003232	Mar. 09, 19	1 Year
2.	Test Analyzer	Kikusui	KHA1000	LM003720	Mar. 09, 19	1 Year
3.	Line Impedance Network	Kikusui	LN40MA-PCR-L	LM002352	Mar. 09, 19	1 Year

### 6.4. For Electrostatic Discharge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Tester	Zhongsheng	ESD-203AX	023K14538	Mar. 09, 19	1 Year

### 6.5. For RF Strength Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	IFR	2032	203002/100	Mar. 09, 19	1 Year

2.	Amplifier	A&R	150K6002R A000	301584	NCR	NCR
3.	Dual Directional Coupler	A&R	DC6080	301508	Mar. 09, 19	1 Year
4.	Power Sensor	Anritsu	MA2491A	32263	Mar. 09, 19	1 Year
5.	Power Meter	R&S	NRVS	100444	Mar. 09, 19	1 Year
6.	Field Monitor	A&R	FM5004	300329	Mar. 09, 19	1 Year
7.	Field Probe	A&R	FP5000	300221	Mar. 09, 19	1 Year
8.	Log-periodic Antenna	A&R	AT1080	16512	Mar. 09, 19	1 Year
9.	RF Cable	MIYAZAKI	N/A	No.1/No.2	Mar. 09, 19	1 Year

#### 6.6. For Electrical Fast Transient/Burst Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMCPRO System	EM Test	UCS-500-M4	V0648102026	Mar. 09, 19	1 Year

#### 6.7. For Surge Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMCPRO System	EM Test	UCS-500-M4	V0648102026	Mar. 09, 19	1 Year

#### 6.8. For Injected Currents Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	IFR	2032	203002/100	Mar. 09, 19	1 Year
2.	Amplifier	A&R	150K6002R A000	301584	NCR	NCR
3.	CDN	FCC	FCC-801-M2-25	47	Mar. 09, 19	1 Year
4.	CDN	FCC	FCC-801-M3-25	107	Mar. 09, 19	1 Year
5.	EM Injection Clamp	FCC	F-2031-23mm	403	Mar. 09, 19	1 Year
6.	RF Cable	MIYAZAKI	N/A	No.1/No.2	Mar. 09, 19	1 Year

#### 6.9. For Magnetic Field Immunity Test

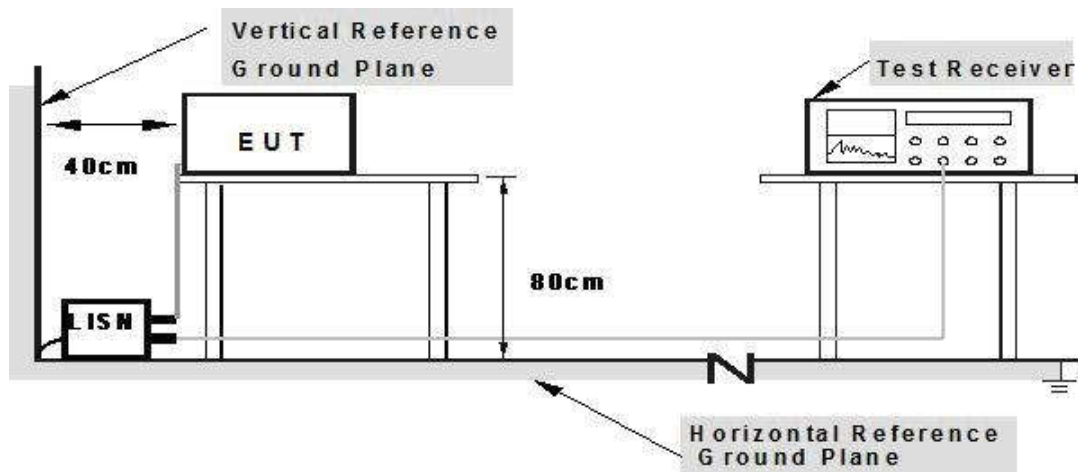
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMCPRO System	EM Test	UCS-500-M4	V0648102026	Mar. 09, 19	1 Year

#### 6.10. For Voltage Dips and Interruptions Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMCPRO System	EM Test	UCS-500-M4	V0648102026	Mar. 09, 19	1 Year

## 7. CONDUCTED DISTURBANCE AT MAINS TERMINALS TEST

### 7.1. Configuration of Test System



- Note: 1. Support units were connected to second LISN.**  
**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes**

### 7.2. Test Standard

EN 55032:2015

### 7.3. Power Line Conducted Disturbance at Mains Terminals Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB( $\mu$ V)	Average Level dB( $\mu$ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

- Notes: 1. \* Decreasing linearly with logarithm of frequency.  
 2. The lower limit shall apply at the transition frequencies.

### 7.4. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to EN 55032 Class B on conducted Disturbance test. The bandwidth of test receiver is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 7.5.

## 7.5. Conducted Disturbance at Mains Terminals Test Results

7.5.1. Test Results:N/A

7.5.2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

7.5.3. Emission Level= Correct Factor + Reading Level.

## 8. RADIATED DISTURBANCE TEST

### 8.1. Configuration of Test System

Radiated Emission Test Set-Up Frequency Below 1 GHz

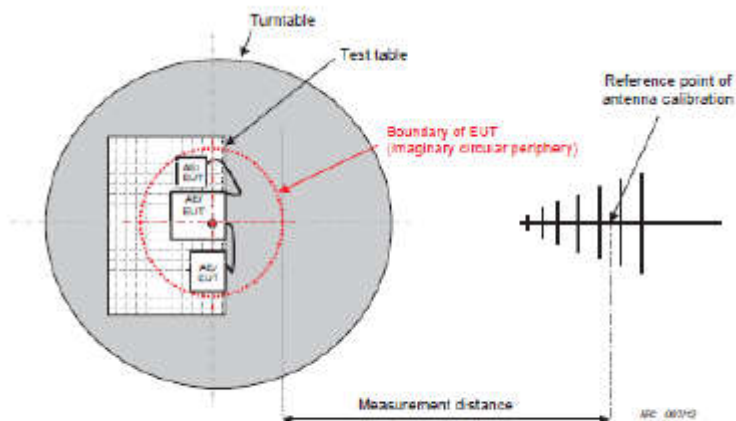


Figure C.1 – Measurement distance

Radiated Emission Test Set-Up Frequency Above 1GHz

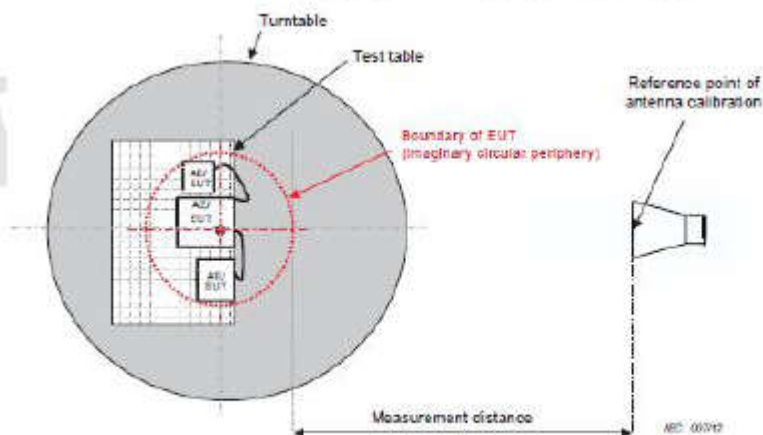


Figure C.1 – Measurement distance

### 8.2. Test Standard

EN 55032:2015

### 8.3. Radiated Disturbance Limit

All emanations from a Class B computing devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	Distance (m)	Detector type/ bandwidth	Class A	Class B
			dBuV/m	dBuV/m
30 - 230	3	Quasi peak/ 120 kHz	50	40
230 - 1000	3	Quasi peak/ 120 kHz	57	47
1000-3000	3	Peak/1 MHz	76	70
3000-6000	3	Peak/1 MHz	80	74
1000-3000	3	AV/1 MHz	56	50
3000-6000	3	AV/1 MHz	60	54

Note: 1. The lower limit shall apply at the transition frequencies.

2. Distance refers to the distance in meters between the test antenna and the closed point of any part of the EUT.

### 8.4. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to EN 55032 Class B on Radiated Disturbance test.

The bandwidth setting on the test receiver is 120 kHz.

The frequency range from 30MHz to 1000MHz is checked. The test result are reported on Section 8.5.

### 8.5. Radiated Disturbance Test Results

8.5.1. Test Results: **PASS**

8.5.2. Emission Level= Correct Factor + Reading Level.

8.5.3. All reading are Quasi-Peak values.

8.5.4. The test data and the scanning waveform are attached within Appendix I.



## 9. IMMUNITY PERFORMANCE CRITERIA

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level by its manufacturer or the requestor of the test, or the agreed between the manufacturer and the purchaser of the product.

Definition related to the performance level:

Based on the used product standard

Based on the declaration of the manufacturer, requestor or purchaser

Criterion A:

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Criterion B:

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test. If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

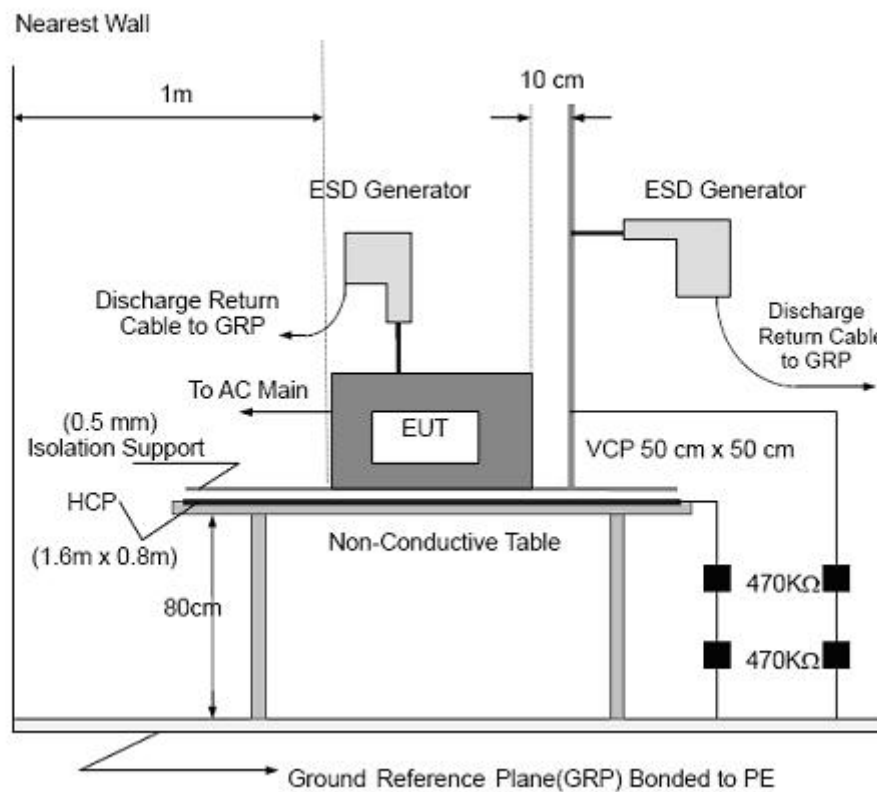
Criterion C:

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

## 10.ELECTROSTATIC DISCHARGE IMMUNITY TEST

### 10.1.Configuration of Test System

#### 10.1.1. TEST SETUP



### 10.2.Test Standard

EN 55035:2017(IEC 61000-4-2:2008)  
 (Severity Level 3 for Air Discharge at 8KV,  
 Severity Level 2 for Contact Discharge at 4KV)

### 10.3. Severity Levels and Performance Criterion

#### 10.3.1. Severity level

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1.	2	2
2.	4	4
3.	6	8
4.	8	15
X	Special	Special

#### 10.3.2. Performance criterion : **B**

### 10.4. Test Procedure

#### 10.4.1. Air Discharge:

The test was applied on non-conductive surfaces of EUT. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the discharge electrode was removed from the EUT. The generator was re-triggered for a new single discharge and repeated 20 times for each pre-selected test point. This procedure was repeated until all the air discharge completed

#### 10.4.2. Contact Discharge:

All the procedure was same as Section 12.4.1. except that the generator was re-triggered for a new single discharge and repeated 50 times for each pre-selected test point. the tip of the discharge electrode was touch the EUT before the discharge switch was operated.

### 10.5. Test Results

#### 10.5.1. Test Results: **PASS**

#### 10.5.2. Test data on the following pages.

## Electrostatic Discharge Test Results

Shenzhen Most Technology Service Co., Ltd.

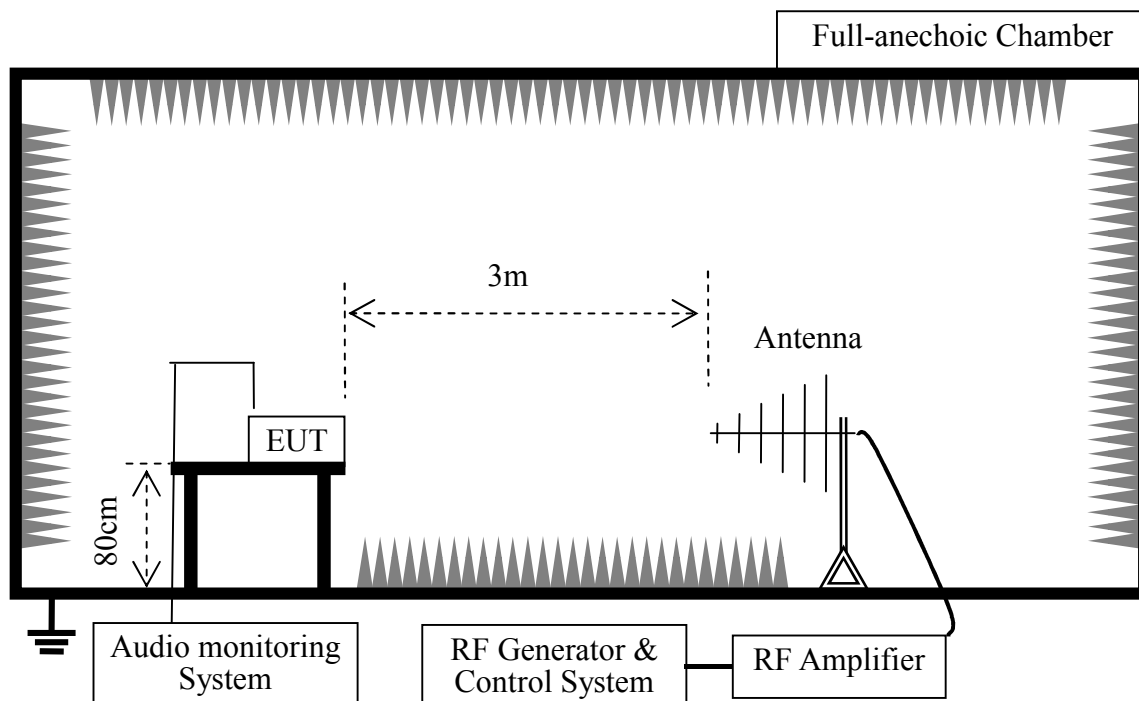
<i>Test Voltage</i> :	1	<i>Test Date:</i>	Jul. 29, 2019
<i>Test Mode</i> :	1	<i>Criterion</i> :	B
<i>Temperature:</i>	24 °C	<i>Humidity:</i>	56%
<i>Air Discharge: ±8KV</i> # For Air Discharge each Point Positive 10 times and negative 10 times discharge. <i>Contact Discharge: ±4KV</i> # For Contact Discharge each point positive 25 times and negative 25 times discharge			
<i>Test Results Description</i>			
<b>Location</b>	<b>Kind</b> A-Air Discharge C-Contact Discharge	<b>Result</b>	
<i>Gaps</i>	A	PASS	
<i>HCP</i>	C	PASS	
<i>VCP of Front</i>	C	PASS	
<i>VCP of Rear</i>	C	PASS	
<i>VCP of Left</i>	C	PASS	
<i>VCP of Right</i>	C	PASS	
<i>Remark :</i>			

*Discharge was considered on Contact and Air and Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP).*

Reviewer :  \_\_\_\_\_

# 11. RF FIELD STRENGTH SUSCEPTIBILITY TEST

## 11.1. Configuration of Test System



## 11.2. Test Standard

EN 55035:2017 (IEC 61000-4-3:2006+A1:2007+A2:2010)  
 (Severity Level: 2 at 3V / m)

## 11.3. Severity Levels and Performance Criterion

Basic Standard:	IEC 61000-4-3
Required Performance:	A
Frequency Range:	80 MHz - 1000 MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m
Antenna Height:	1.5 m
Dwell Time:	at least 3 seconds

## 11.4. Test Procedure

- a. The testing was performed in a fully anechoic chamber. The transmit antenna was located at a distance of 3 meters from the EUT.
- b. The frequency range is swept from 80 MHz to 1000 MHz, 1800 MHz, 2600 MHz, 3500 MHz, 5000 MHz, with the signal 80% amplitude modulated with a 1kHz sine-wave. The rate of sweep did not exceed  $1.5 \times 10^{-3}$  decade/s, where the frequency range is swept incrementally, the step size was 1% of preceding frequency value.
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- e. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.

## 11.5. Test Results

11.5.1. Test Results: **PASS**

11.5.2. Test data on the following pages.

# RF Field Strength Susceptibility Test Results

Shenzhen Most Technology Service Co., Ltd.

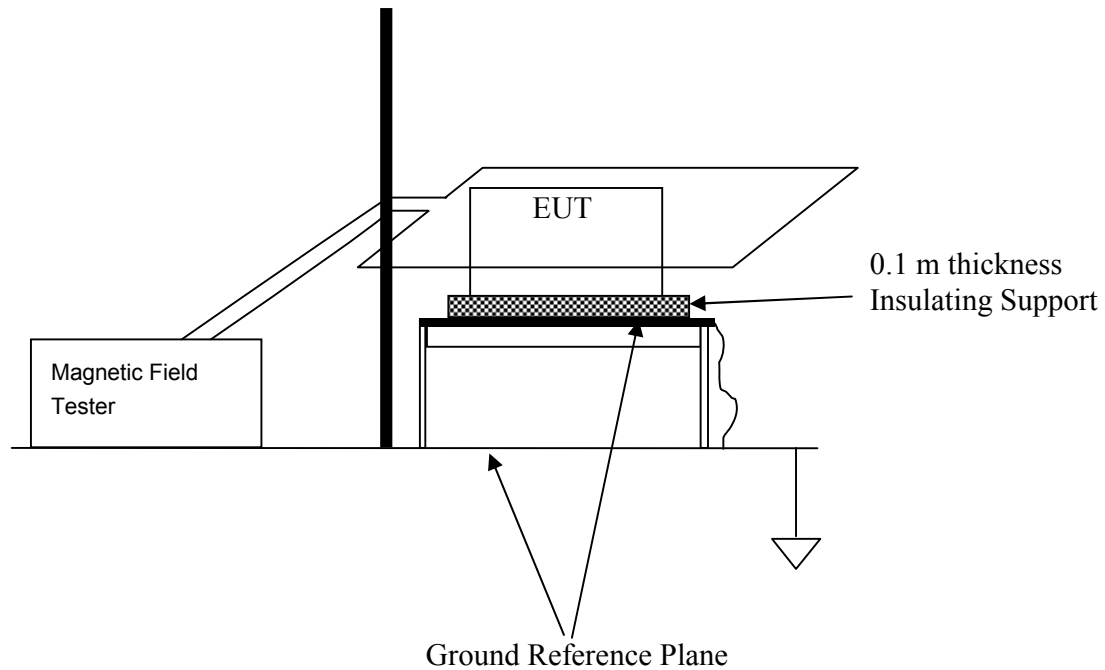
Temperature:	24.0°C	Relative Humidity:	56%
Test Voltage:	1	Test Mode:	I

Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Perform. Criteria	Results	Judgment
80MHz - 1000MHz	H / V	<i>3 V/m (rms) AM Modulated 1000Hz, 80%</i>	Front	A	A	PASS
			Rear			
			Left			
			Right			
1800MHz	H / V	<i>3 V/m (rms) AM Modulated 1000Hz, 80%</i>	Front	N/A	N/A	N/A
			Rear			
			Left			
			Right			
2600MHz	H / V	<i>3 V/m (rms) AM Modulated 1000Hz, 80%</i>	Front	N/A	N/A	N/A
			Rear			
			Left			
			Right			
3500MHz	H / V	<i>3 V/m (rms) AM Modulated 1000Hz, 80%</i>	Front	N/A	N/A	N/A
			Rear			
			Left			
			Right			
5000MHz	H / V	<i>3 V/m (rms) AM Modulated 1000Hz, 80%</i>	Front	N/A	N/A	N/A
			Rear			
			Left			
			Right			

Reviewer : \_\_\_\_\_ *Sunny*

## 12.MAGNETIC FIELD IMMUNITY TEST

### 12.1.Configuration of Test System



### 12.2.Test Standard

EN 55035:2017(IEC 61000-4-8:2009)  
(Severity Level 1 at 1A/m)

### 12.3.Severity Levels and Performance Criterion

#### 12.3.1.Severity level

Level	Magnetic Field Strength A/m
1.	1
2.	3
3.	10
4.	30
5.	100
X.	Special

#### 12.3.2.Performance criterion : A



## 12.4. Test Procedure

The EUT was subjected to the test magnetic field by using the induction coil of standard dimensions (1m\*1m) and shown in Section 17.1. The induction coil was then rotated by 90° in order to expose the EUT to the test field with different orientations.

## 12.5. Test Results

12.5.1. Test Results: **PASS**

12.5.2. Test data on the following pages.

## Magnetic Field Immunity Test Results

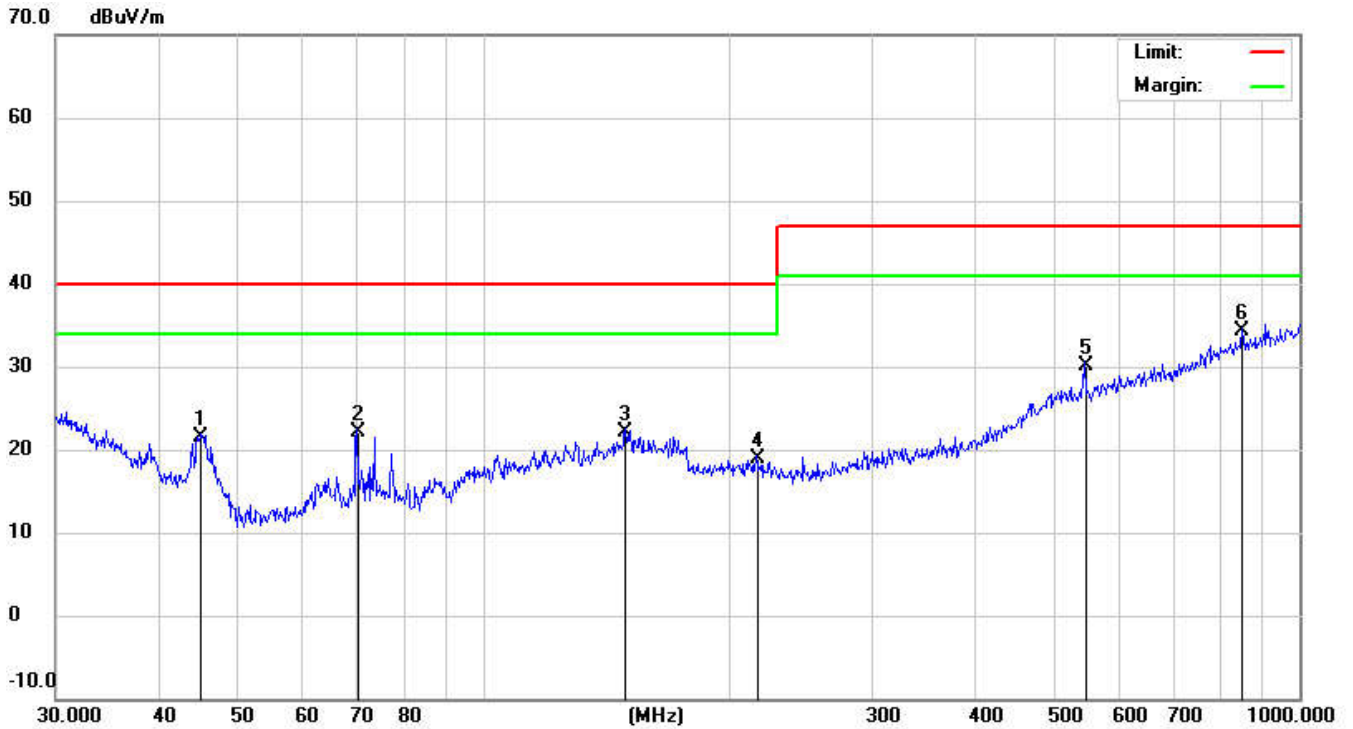
*Shenzhen Most Technology Service Co., Ltd.*

<i>Test Voltage</i> :	1	<i>Test Date:</i>	Jul. 29, 2019	
<i>Test Mode</i> :	1	<i>Criterion</i> :	A	
<i>Temperature:</i>	24 °C	<i>Humidity:</i>	56%	
<i>Test Results Description</i>				
<i>Test Level</i>	<i>Testing Duration</i>	<i>Coil Orientation</i>	<i>Criterion</i>	<i>Result</i>
1A/m(50Hz/60Hz)	5 mins	X	A	PASS
1A/m(50Hz/60Hz)	5 mins	Y	A	PASS
1A/m(50Hz/60Hz)	5 mins	Z	A	PASS
<i>Remark: No function loss</i>				

Reviewer : \_\_\_\_\_ 

# **APPENDIX I**

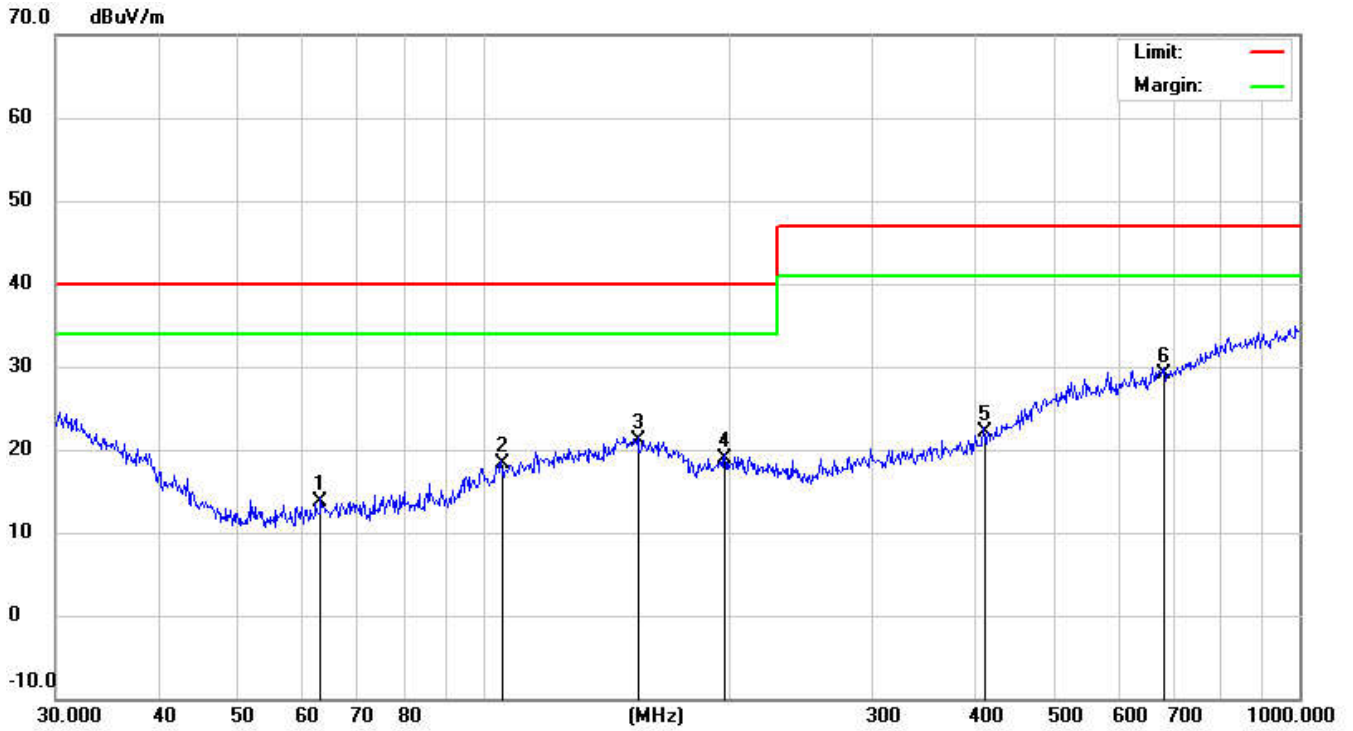
EUT:	CASE FAN	M/N:	FN-14
Mode:	Running	Polarization:	Vertical
Test by:	Leo	Power:	DC12V
Temperature: / Humidity	28.0°C/55.0%	Test date:	2019-07-29



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1		45.2166	11.20	10.40	21.60	40.00	-18.40	QP			
2		70.0903	12.70	9.31	22.01	40.00	-17.99	QP			
3		149.4857	4.40	17.63	22.03	40.00	-17.97	QP			
4		216.0240	4.10	14.75	18.85	40.00	-21.15	QP			
5		545.1826	7.00	23.20	30.20	47.00	-16.80	QP			
6	*	851.0353	5.90	28.46	34.36	47.00	-12.64	QP			

\*:Maximum data    x:Over limit    !:over margin

EUT:	CASE FAN	M/N:	FN-14
Mode:	Running	Polarization:	Horizontal
Test by:	Leo	Power:	DC12V
Temperature: / Humidity	28.0°C/55.0%	Test date:	2019-07-29



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1		63.3132	4.90	8.83	13.73	40.00	-26.27	QP		
2		105.2718	4.20	14.18	18.38	40.00	-21.62	QP		
3		154.8204	3.50	17.51	21.01	40.00	-18.99	QP		
4		197.8928	3.80	15.14	18.94	40.00	-21.06	QP		
5		410.3825	4.10	17.95	22.05	47.00	-24.95	QP		
6	*	682.3484	4.30	24.87	29.17	47.00	-17.83	QP		

\*:Maximum data    x:Over limit    l:over margin

# **APPENDIX II**

## **(Test Photos)**

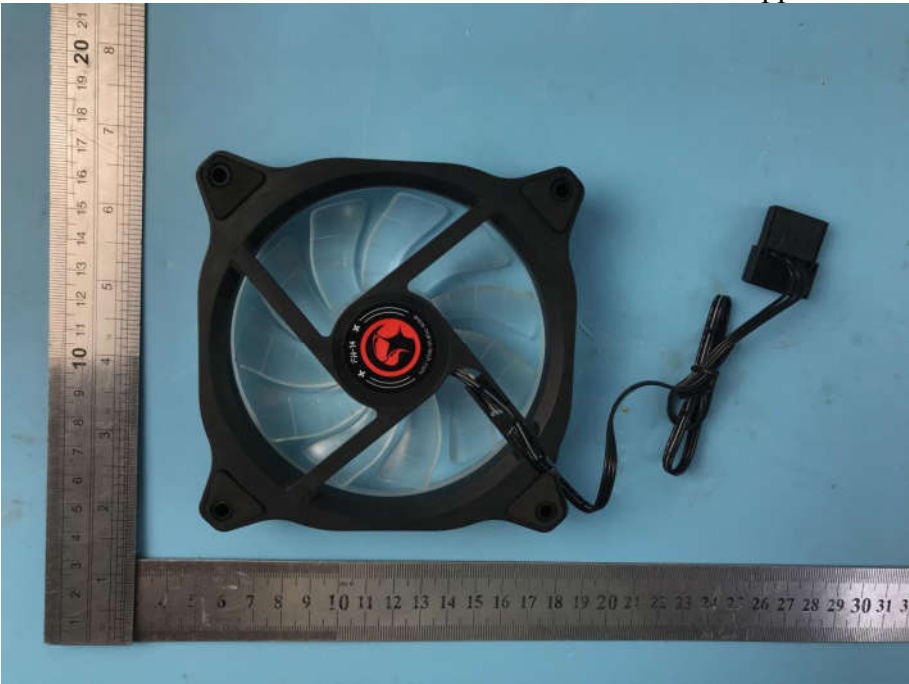
## Radiated Test Setup Photograph



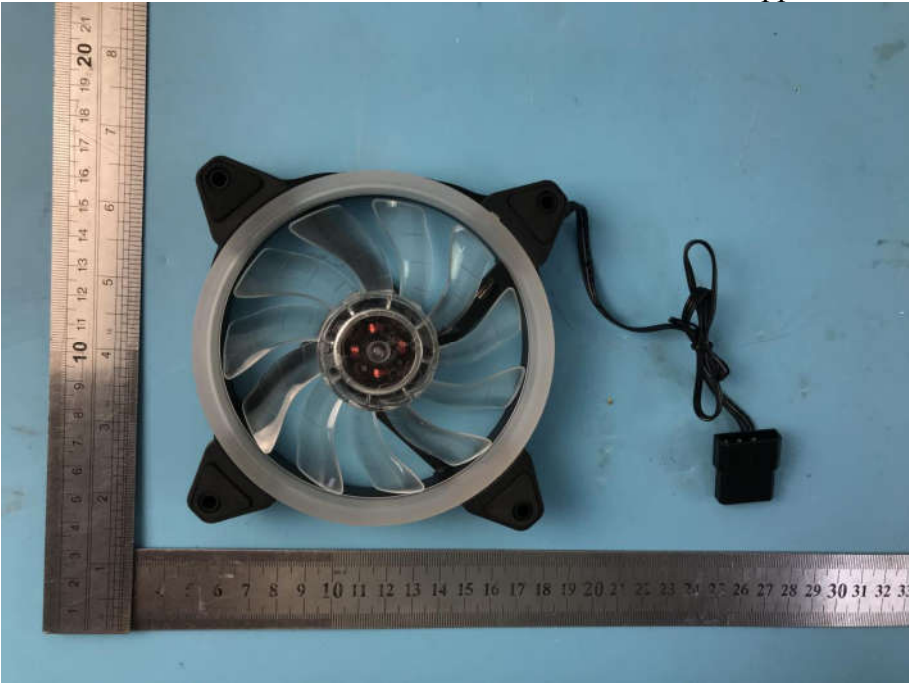
**APPENDIX III**  
(Photos of the EUT)



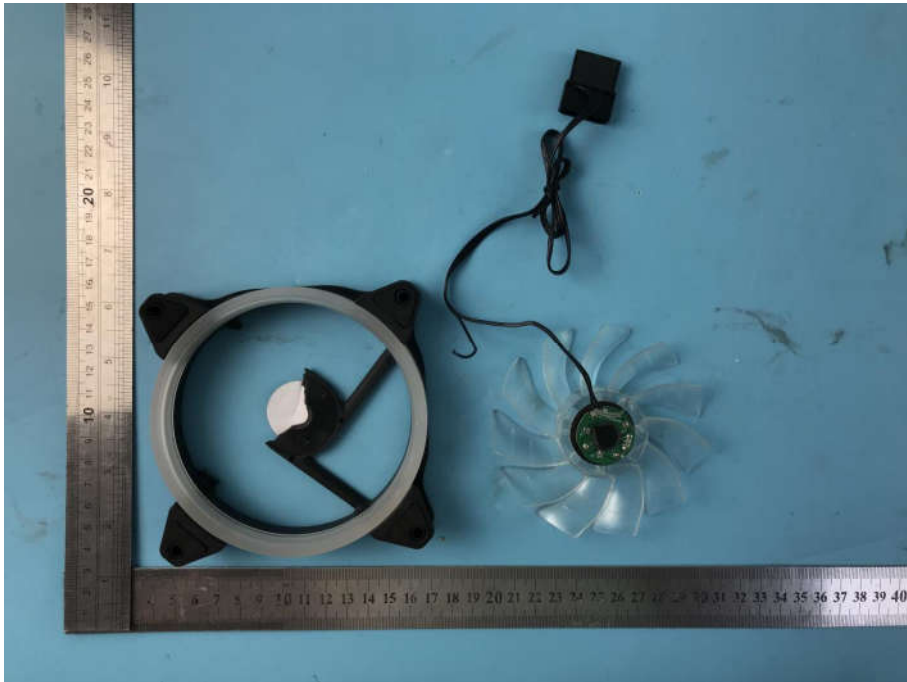
**Figure 1**  
General Appearance of the EUT



**Figure 2**  
General Appearance of the EUT



**Figure 3**  
Inside of the EUT



**Figure 4**  
Components Side of the PCB



**Figure 5**  
Components Side of the PCB

