

# TEST REPORT

**SCOPE OF WORK**

EMC TESTING-ZX-2U39T

**REPORT NUMBER**

201106011SZN-001

**ISSUE DATE**

19 November 2020

**[REVISED DATE]**

[-----]

**PAGES**

39

**DOCUMENT CONTROL NUMBER**

EN55032/35\_MMEa

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## EMC VERIFICATION SUMMARY

Intertek Report No.: 201106011SZN-001

Full Load  Half Load

Product Description: Fast Charger		Sample Receipt Date: 06 November 2020	
Test Conducted Date: 06 November 2020 to 18 November 2020		ALL TESTS WERE CONDUCTED IN ACCORDANCE WITH:	
<input type="checkbox"/> 1 <sup>st</sup> TEST <input checked="" type="checkbox"/> 2 <sup>nd</sup> TEST		*EN 55032: 2015 * EN IEC 61000-3-2: 2019 * EN 61000-3-3: 2013+A1:2019 *EN 55035: 2017	
Test Site and Location:		Intertek Testing Services Shenzhen Ltd. No.101&201, Building B, No. 308, Wuhe Avenue, Zhangkengjing, Guanhu Street, Longhua District, Shenzhen, Guangdong, China	
Test Result	OK	Not OK	See Remark
*EN 55032: 2015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* EN IEC 61000-3-2: 2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
* EN 61000-3-3: 2013+A1:2019	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*EN 55035: 2017	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When determining the test conclusion, the Measurement Uncertainty of test has been considered. Note: 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.			

**Prepared and Checked By:**

*Mandy*

\_\_\_\_\_  
Signature

**Mandy Chen**  
Assistant Engineer

19 November 2020 Date

**Approved By:**

*Damon*

\_\_\_\_\_  
Signature

**Damon Wang**  
Team Leader

19 November 2020 Date

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## EMC Results Conclusion (with Justification)

RE: EMC Testing Pursuant to Electromagnetic Compatibility Directive (2014/30/EU) Performed on the Fast Charger,  
Model: ZX-2U39T

We tested the Fast Charger, Model: ZX-2U39T, to determine if it was in compliance with the relevant EN standards as marked on the EMC Verification Summary. We found that the unit met the requirement of EN 55032, EN IEC 61000-3-2, EN 61000-3-3, EN 55035 standards when tested after modification

The production units are required to conform to the initial sample as received when the units are placed on the market.

Remark: Standards against which no testing of the captioned model has been conducted and the engineering judgement is stated as follows:

EN61000-3-2: This product has a power consumption 75W or less under normal operating conditions. It is therefore not likely to produce harmonics above the limits of the standard. The product is deemed to comply with the standard without any measurements.

## LABORATORY MEASUREMENTS

### Configuration Information

<b>Equipment Under Test (EUT):</b>	Fast Charger
<b>Classification of Equipment:</b>	Class B
<b>Model:</b>	ZX-2U39T
<b>Serial No.:</b>	N/A
<b>Support Equipment:</b>	Cement resistor (Provided by Intertek)
<b>Cables:</b>	N/A
<b>Adaptor:</b>	N/A
<b>Rated Voltage:</b>	Input: 100-240V~ 50/60Hz 0.5A Max; Output(USB-A): QC 5.0V=3.0A(15.0W) or 9.0V=2.0A(18.0W) or 12.0V=1.5A(18.0W); Output(USB-C): PD 5.0V=3.0A(15.0W) or 9.0V=2.22A(20.0W) or 12.0V=1.67A(20.0W); Output(PD+QC): 5.0V=3.0A(15.0W)

## Performance Criteria for Immunity

**The performance criteria are referred to the test standard: EN 55035**

### Performance criteria A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state 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.

### Performance criteria B

During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test.

After the test, 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), or recovery time, 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.

### Performance criteria 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. A reboot or re-start operation is allowed.

Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

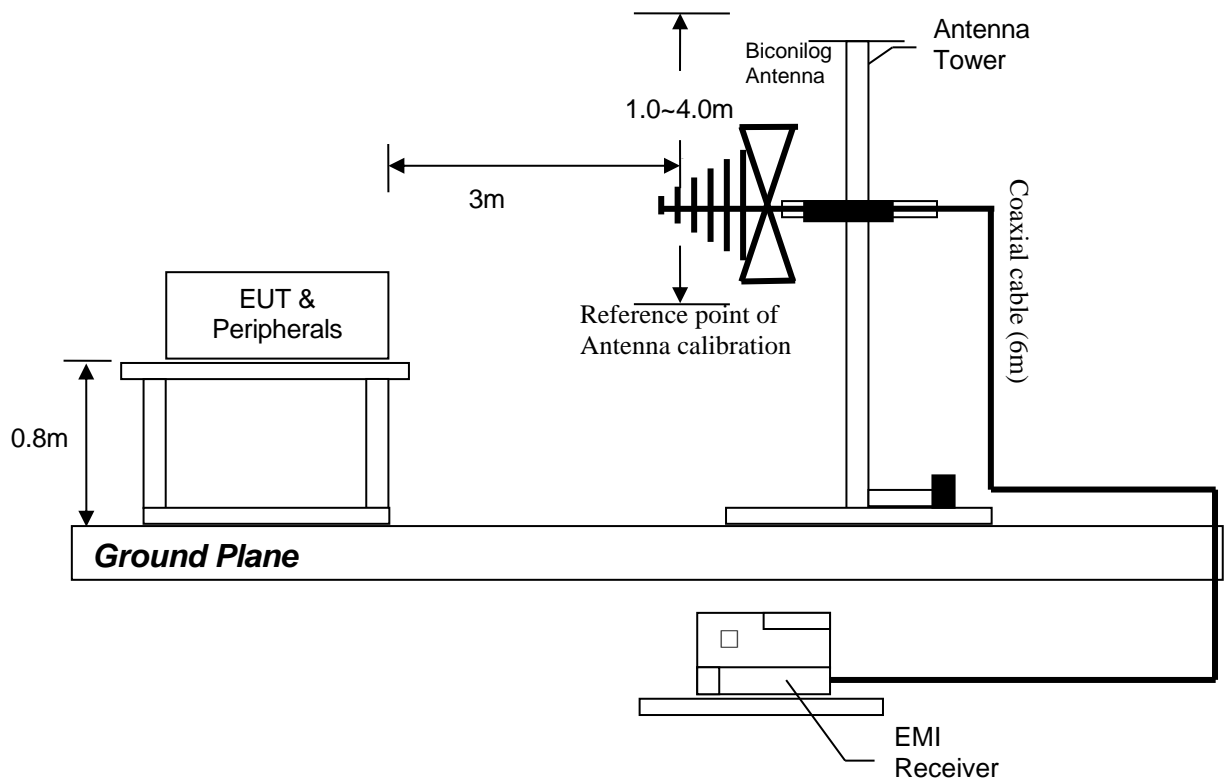
**RADIATED DISTURBANCE  
PURSUANT TO EN55032: EMISSIONS REQUIREMENT**

**Used Test Equipment**

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ185-01	EMI Receiver	R & S	ESCI	24-Dec-2019	24-Dec-2020
SZ061-03	Biconilog Antenna	ETS	3142C	24-May-2019	24-May-2021
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	15-Dec-2018	15-Dec-2020

- Notes:
1. Peak detector quick scan is showed on the graph and final quasi-peak detector data is measured corresponding to relevant limit and recorded in the data table.
  2. Frequency range scanned: 30MHz to 1000MHz.
  3. Only emissions significantly above equipment noise floor are reported.
  4. Uncertainty:  $\pm 4.8\text{dB}$  at a level of confidence of 95%.

**Test Setup Diagram:**



(Radiated Emission Measurements Test Setup for 30MHz to 1GHz)

Model: ZX-2U39T

Intertek Report No.: 201106011SZN-001

Worst Case Operating Mode: Full load

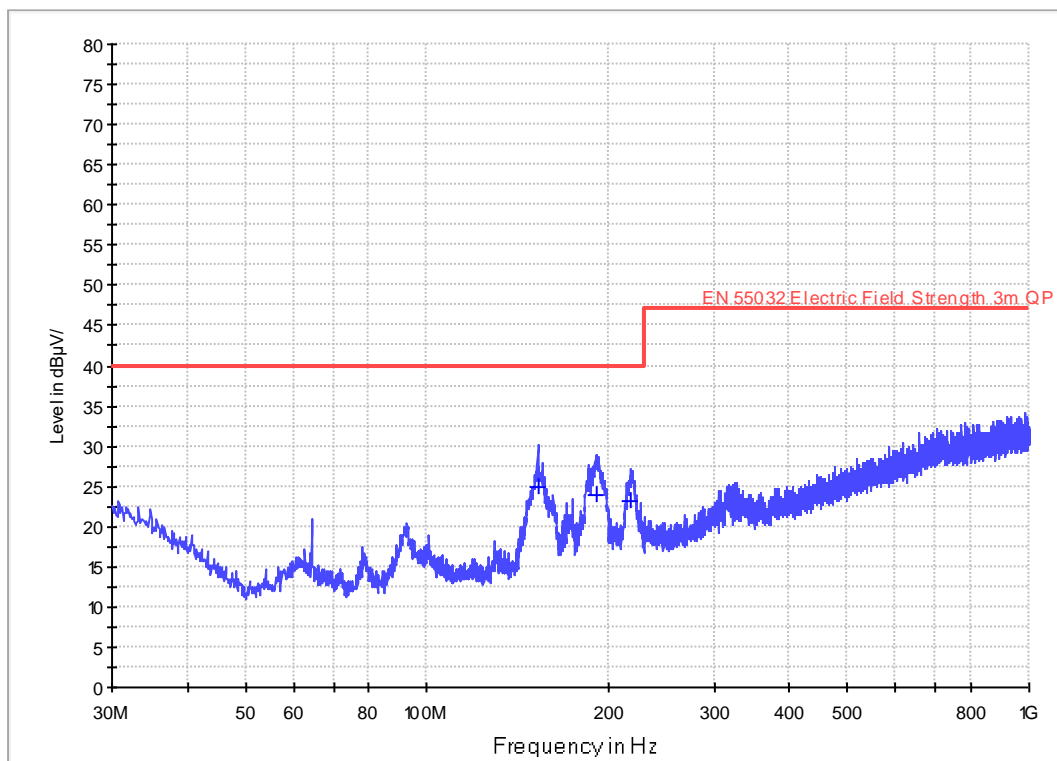
Worst Case Voltage: AC 230V, 50Hz

### Test Data

## Radiated Disturbance Pursuant to EN 55032: Emissions Requirement

### Horizontal

EN55032



### Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
152.826250	25.0	1000.0	120.000	H	11.3	15.0	40.0
190.898750	24.0	1000.0	120.000	H	12.9	16.0	40.0
217.816250	23.1	1000.0	120.000	H	13.5	16.9	40.0

#### Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBµV/m) = Corr. (dB/m) + Read Level (dBµV)
3. Margin (dB) = Limit QPK (dBµV/m) - QuasiPeak (dBµV/m)



Model: ZX-2U39T

Intertek Report No.: 201106011SZN-001

Worst Case Operating Mode: Full load

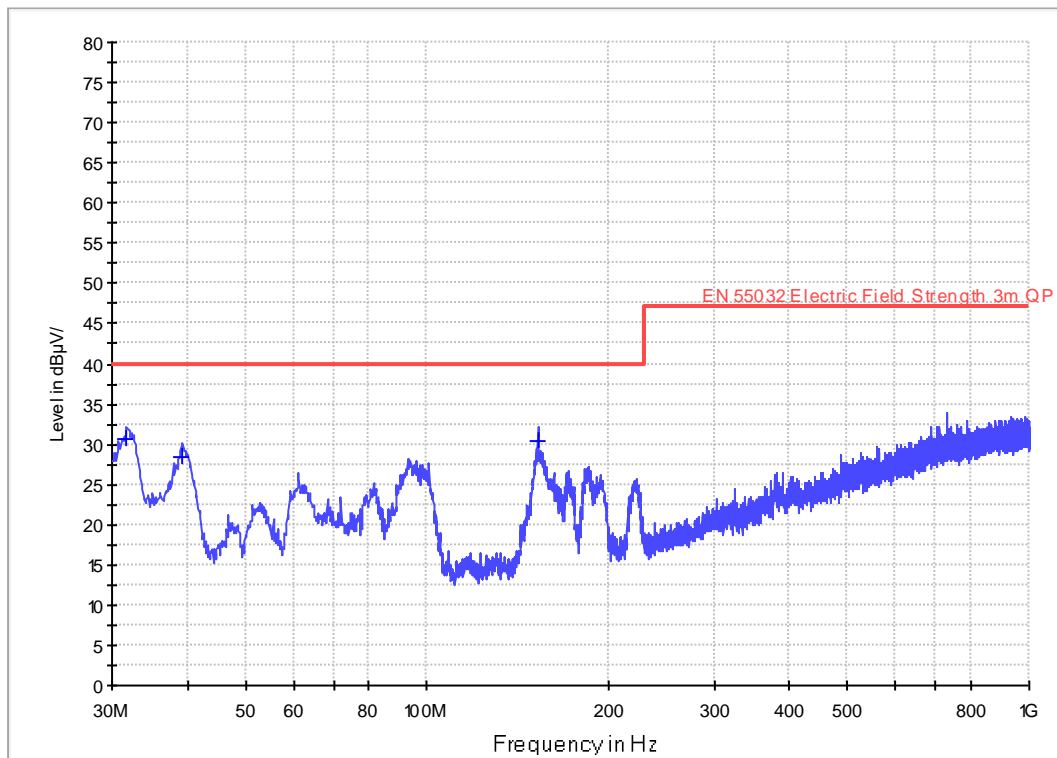
Worst Case Voltage: AC 230V, 50Hz

## Test Data

### Radiated Disturbance Pursuant to EN55032: Emissions Requirement

#### Vertical

EN55032



#### Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.697500	30.5	1000.0	120.000	V	17.4	9.5	40.0
39.336250	28.4	1000.0	120.000	V	13.6	11.6	40.0
152.826250	30.4	1000.0	120.000	V	11.3	9.6	40.0

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBµV/m) = Corr. (dB/m) + Read Level (dBµV)
3. Margin (dB) = Limit QPK (dBµV/m) – QuasiPeak (dBµV/m)

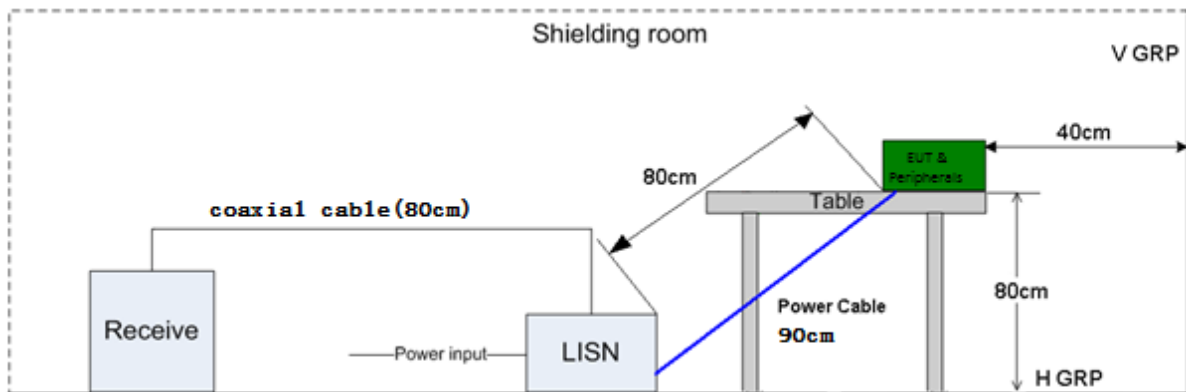
## RFI Voltage Test PURSUANT TO EN55032: EMISSIONS REQUIREMENT

### Used Test Equipment

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ185-02	EMI Receiver	R & S	ESCI	27-Oct-2020	27-Oct-2021
SZ187-01	Two-Line V-Network	R & S	ENV216	27-Oct-2020	27-Oct-2021
SZ188-03	Shielding Room	ETS	RFD-100	07-Jan-2020	07-Jan-2022

- Notes:
1. Peak and average detector quick scan are showed on the graph and final quasi-peak and average detector data are measured, the worst-case is recorded in the following graph and table.
  2. Frequency range scanned: 150kHz to 30MHz.
  3. Only emissions significantly above equipment noise floor are reported.
  4. Uncertainty:  $\pm 3.6\text{dB}$  at a level of confidence of 95%.

### Test Setup Diagram



Test set-up of conducted disturbance for Power port

Model: ZX-2U39T

Intertek Report No.: 201106011SZN-001

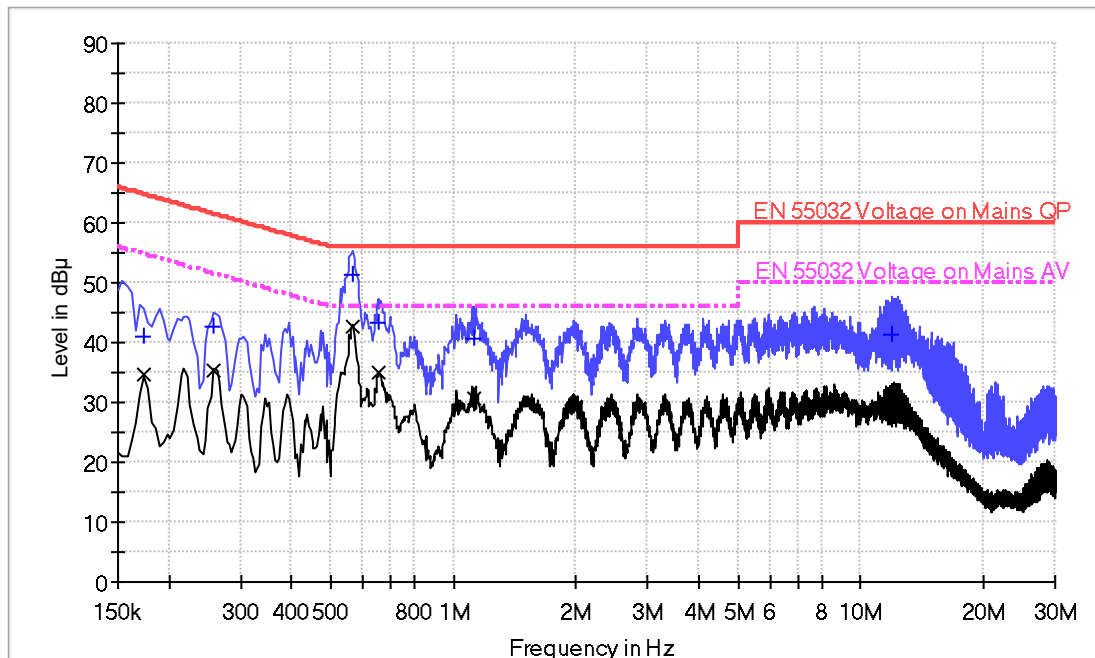
Worst Case Operating Mode: Half load

Worst Case Voltage: AC 230V, 50Hz

Phase: Live

## Test Data

### RFI Voltage Test Pursuant to EN 55032: Emissions Requirement



#### Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.174000	40.9	9.000	L1	9.6	23.9	64.8
0.258000	42.6	9.000	L1	9.6	18.9	61.5
0.564000	51.3	9.000	L1	9.6	4.7	56.0
0.654000	43.4	9.000	L1	9.7	12.6	56.0
1.122000	40.7	9.000	L1	9.7	15.3	56.0
11.910000	41.5	9.000	L1	9.9	18.5	60.0

#### Limit and Margin AV

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.174000	34.5	9.000	L1	9.6	20.3	54.8
0.258000	35.5	9.000	L1	9.6	16.0	51.5
0.564000	42.6	9.000	L1	9.6	3.4	46.0
0.654000	34.9	9.000	L1	9.7	11.1	46.0
1.122000	30.7	9.000	L1	9.7	15.3	46.0
11.910000	30.4	9.000	L1	9.9	19.6	50.0

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Limit (dBμV) – QuasiPeak/Average (dBμV)

Model: ZX-2U39T

Intertek Report No.: 201106011SZN-001

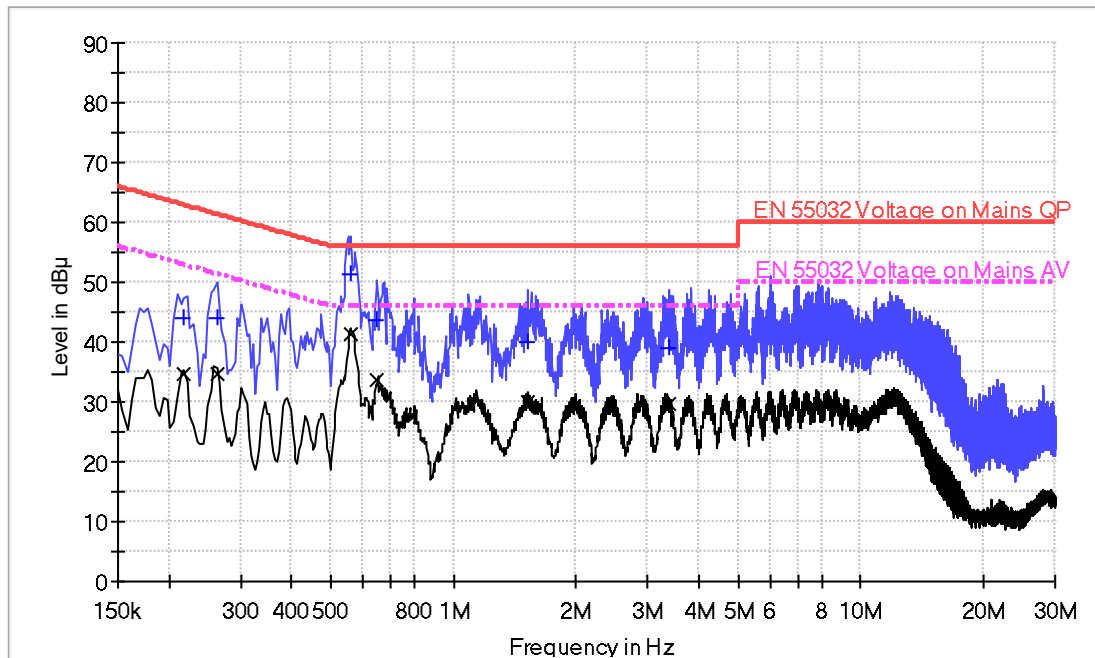
Worst Case Operating Mode: Half load

Worst Case Voltage: AC 230V, 50Hz

Phase: Neutral

## Test Data

### RFI Voltage Test Pursuant to EN55032: Emissions Requirement



#### Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.218000	44.0	9.000	N	9.6	18.9	62.9
0.262000	43.9	9.000	N	9.6	17.5	61.4
0.559500	51.2	9.000	N	9.7	4.8	56.0
0.650000	43.8	9.000	N	9.7	12.2	56.0
1.518000	40.1	9.000	N	9.7	15.9	56.0
3.382000	39.1	9.000	N	9.7	16.9	56.0

#### Limit and Margin AV

Frequency (MHz)	Average (dB $\mu$ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.218000	34.7	9.000	N	9.6	18.2	52.9
0.262000	34.7	9.000	N	9.6	16.7	51.4
0.559500	41.3	9.000	N	9.7	4.7	46.0
0.650000	33.8	9.000	N	9.7	12.2	46.0
1.518000	30.0	9.000	N	9.7	16.0	46.0
3.382000	29.5	9.000	N	9.7	16.5	46.0

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Limit (dB $\mu$ V) – QuasiPeak/Average (dB $\mu$ V)

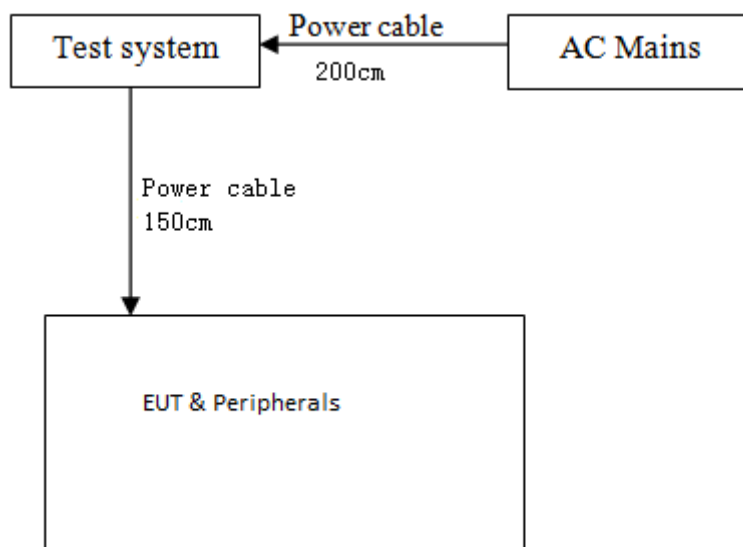
## EN61000-3-3 VOLTAGE FLUCTUATIONS

### Used Test Equipment

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ064-01	Compliance Test System	California Instruments	5001iX-CTS-400	07-Jan-2020	07-Jan-2021
SZ064-01-01	Power Analyzer and Conditioning System	California Instruments	PACS-1	07-Jan-2020	07-Jan-2021

- Notes:
1. The test result consisting of worst-case was attached in the following pages.
  2. Uncertainty: 0.25% at a level of confidence of 95%.

### Test Setup Diagram



Model: ZX-2U39T

Intertek Report No.: 201106011SZN-001

Worst Case Operating Mode: Full Load

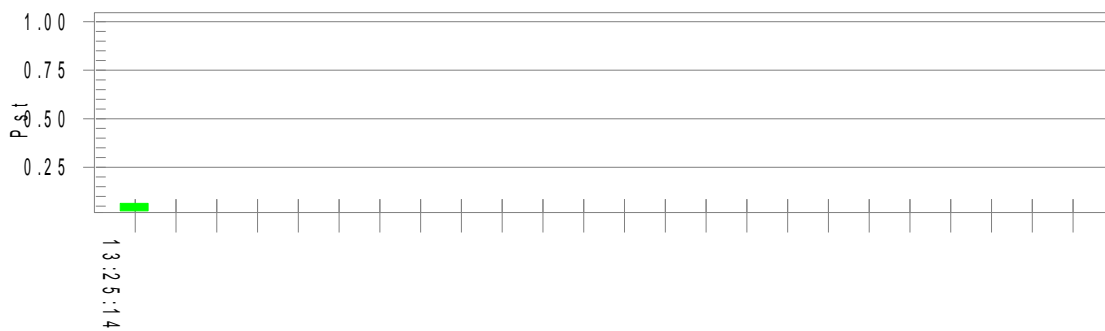
### Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test Result: Pass

Status: Test Completed

Pst<sub>i</sub> and limit line

European Limits



#### Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.11			
T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000	Pass

**EN 61000-4-2**  
**Electrostatic Discharge**

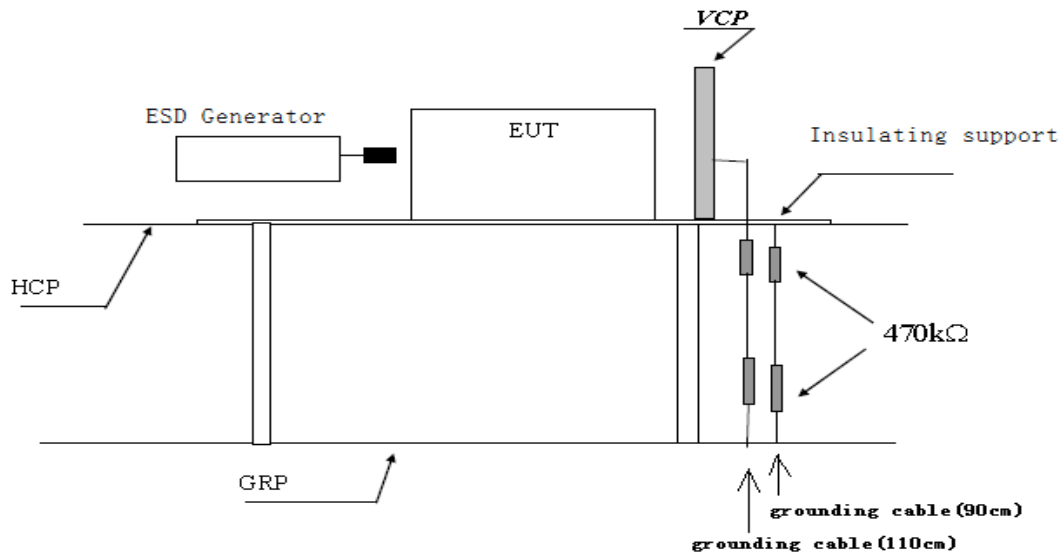
**Test Summary (Pursuant to EN 55035)**

<b>Port:</b>	<b>Enclosure</b>
Basic Standard:	EN 61000-4-2
Required Performance Criterion:	B
Limit:	±8.0kV (Air Discharge)
	±4.0kV (Contact Discharge)
	±4.0kV (Indirect Contact Discharge)
Temperature:	25.0°C
Relative Humidity:	43.0%
Test Mode:	Full Load, Half Load
Test Setup:	Table-top
Test of Post-Installation:	N/A
Time Between Each Discharge:	1 second

**Used Test Equipment**

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ189-01	ESD Simulator	KIKUSUI	KES4021	11-Nov-2020	11-Nov-2021

## Test Setup Diagram



Test set-up of electrostatic discharge



## Test Results

### EN 61000-4-2 Electrostatic Discharge

Discharge Type	No. of Discharge	Applied Voltage	Result (Pursuant to EN55035 Criterion B)
Contact Discharge	20	±4kV	OK
Air Discharge	20	±2.0, ±4.0, ±8.0kV	OK
Indirect HCP Discharge	20	±4kV	OK
Indirect VCP Discharge	20	±4kV	OK

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_\_V, \_\_\_\_ of ESD.

EUT was in abnormal operation:  
– Operation mode was changed from \_\_\_\_ to \_\_\_\_ at \_\_\_\_V, \_\_\_\_ of ESD.

\_\_\_\_\_  
\_\_\_\_\_

**EN 61000-4-3  
Radiated Immunity**

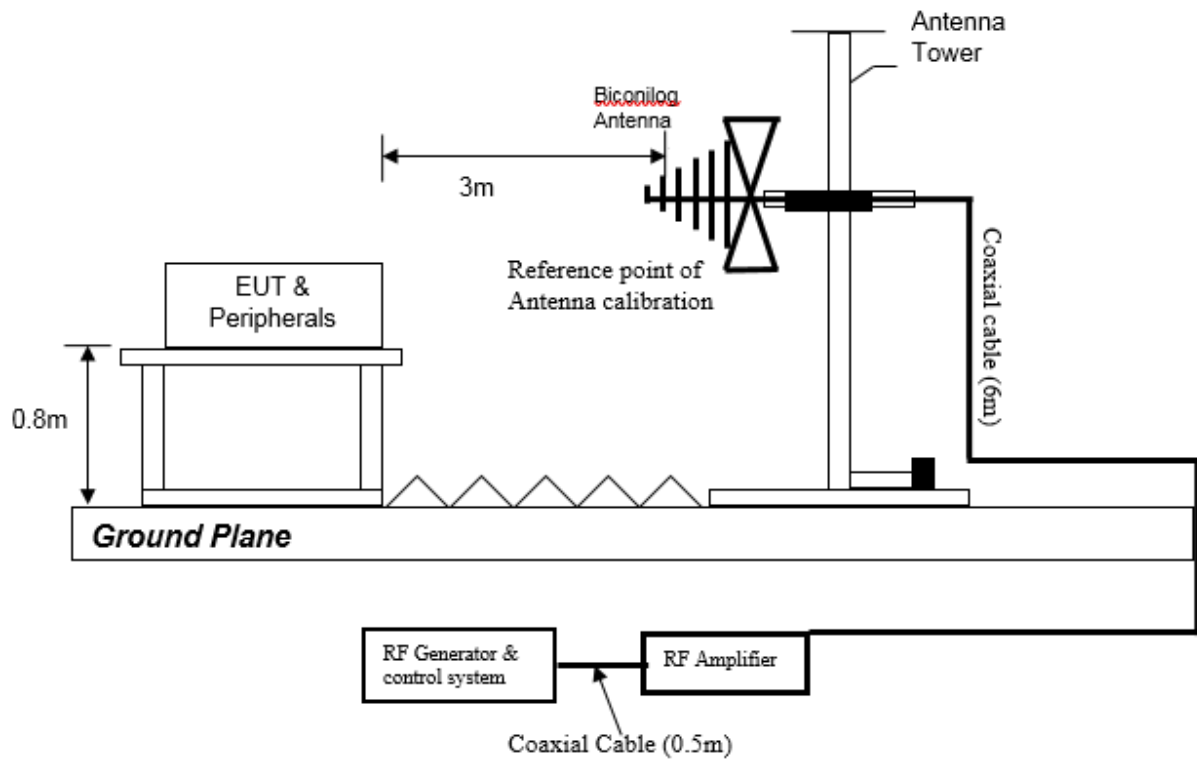
**Test Summary (Pursuant to EN 55035)**

<b>Basic Standard:</b>	EN 61000-4-3
Port:	Enclosure
Required Performance Criterion:	A
Limit:	3.0V/m (rms)
Test Modulation:	1kHz, 80% AM
Frequency:	80MHz to 1000MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz
Dwell Time:	5s
Frequency Step:	1%
Temperature:	24.5°C
Relative Humidity:	56.0%
Test Facility:	Full Anechoic Chamber
Antenna Polarization:	Horizontal and Vertical
Type of Antenna:	Log-periodic
Test Distance:	3 meters
Test Mode:	Full Load, Half Load
Test Setup:	Table-top

**Used Test Equipment**

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ188-02	Anechoic Chamber	ETS	RFD-F/A-100	15-Dec-2018	15-Dec-2020
SZ061-03	Biconilog Antenna	ETS	3142C	24-May-2019	24-May-2021
SZ061-16	Stacked double log.-Per. Antenna	SCHWARZBECK	STLP 9149	09-Nov-2019	09-Nov-2021
SZ180-15	Signal Generator	R&S	SMB100A	27-Oct-2020	27-Oct-2021
SZ180-01	Signal Generator	R&S	SML03	27-May-2020	27-May-2021
SZ181-01	Amplifier	PRANA	AP32 MT215	08-Jan-2020	08-Jan-2021
SZ190-07	RF Amplifier	Milmega	AS0860-75/45	08-Jan-2020	08-Jan-2021
SZ070-22	Open Switch and Control Unit	R&S	OSP120	27-Aug-2020	27-Feb-2021

## Test Setup Diagram



Test set-up of Immunity to Radiated Electric Fields

## Test Results

### EN61000-4-3 Radiated Immunity

Frequency (MHz)	Exposed Side	Field Strength V/m (rms)	Result (Pursuant to EN55035, Criterion A)
80 to 1000, 1800, 2600, 3500, 5000	Front	3	OK
80 to 1000, 1800, 2600, 3500, 5000	Left	3	OK
80 to 1000, 1800, 2600, 3500, 5000	Rear	3	OK
80 to 1000, 1800, 2600, 3500, 5000	Right	3	OK

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at Freq. \_\_\_\_\_ of Radiated Immunity.

EUT was in abnormal operation:

– Operation mode was changed from \_\_\_\_\_ to \_\_\_\_\_ at Freq. \_\_\_\_\_ of Radiated Immunity.

\_\_\_\_\_  
\_\_\_\_\_

**EN61000-4-4**  
**Electrical Fast Transient / Burst**

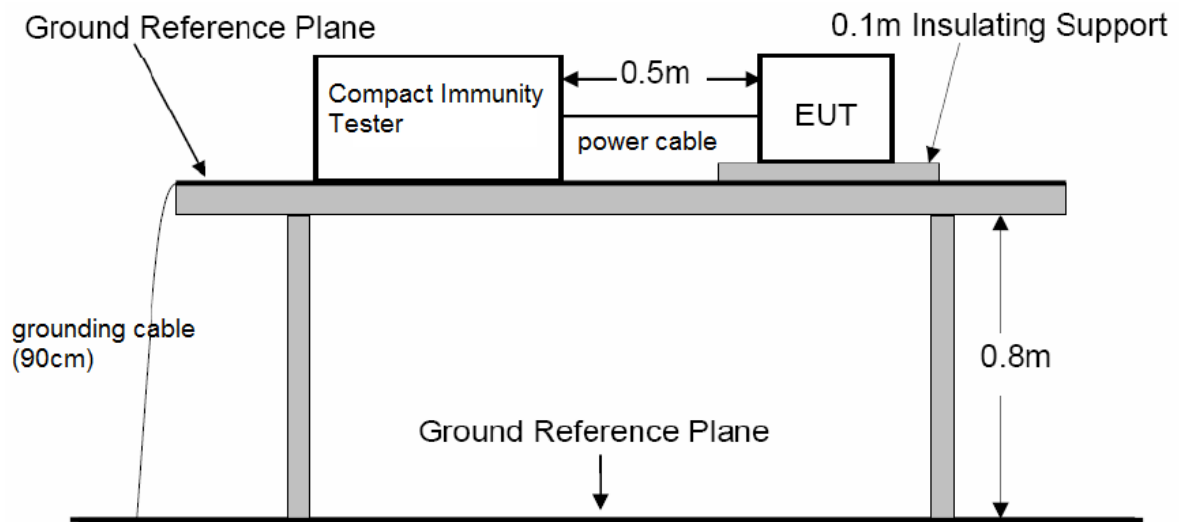
**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-4	
Port:	AC Power Lines	Signal Lines
Required Performance Criterion:	B	
Limit:	±1.0kV	±0.5kV
Test Duration:	1 minute	
Temperature:	25.0°C	
Relative Humidity:	43.0%	
Test Mode:	Full Load, Half Load	
Test Setup:	Table-top	
Generator Drive:	Internal	

**Used Test Equipment**

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ063-01	Compact Immunity Tester	Haefely	ECOMPACT 4	07-Jan-2020	07-Jan-2021

## Test Setup Diagram



Test set-up of immunity to electrical fast transient bursts for power port

## Test Results

### EN61000-4-4

### Electrical Fast Transient / Burst

Port	Level	Polarity	Result (Pursuant to EN55035, Criterion B)
AC Power Lines	1kV	+	OK
	1kV	-	OK
Signal Lines	0.5kV	+	N/A
	0.5kV	-	N/A

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_\_\_V of Fast Transient.

EUT was in abnormal operation:  
 - Operation mode was changed from \_\_\_\_\_ to \_\_\_\_\_ at \_\_\_\_\_V of Fast Transient.

\_\_\_\_\_  
 \_\_\_\_\_

## EN 61000-4-5 Surge Immunity

### Test Summary (Pursuant to EN 55035)

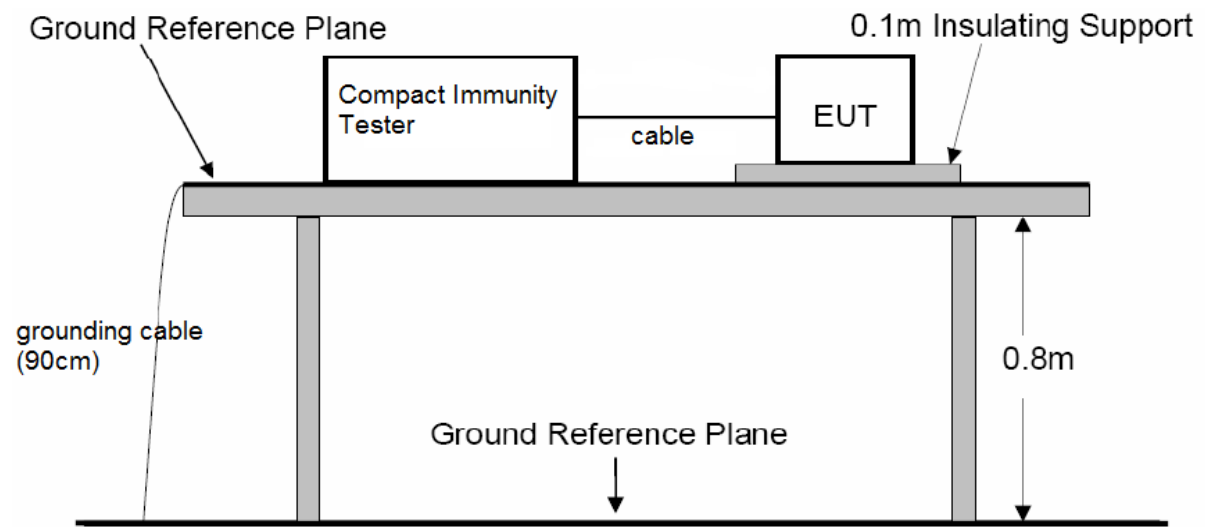
<b>Basic Standard:</b>	EN 61000-4-5			
Port:	AC Power Lines			Shield
	Phase and Neutral	Phase and Earth	Neutral and Earth	Shield to ground
Limit:	5 Positive and 5 Negative Surges			
	±1kV	±2kV	±2kV	±0.5kV
Generator Impedance:	2ohm	12ohm	12ohm	2ohm
Required Performance Criterion:	B			
Repetition Rate:	1 minute			
Test Mode:	Full Load, Half Load			
Test Setup:	Table-top			
Surge Generator Trigger:	Internal			
Installation Condition:	Class 3: Electrical environment where cables run in parallel.			
Phase Angle:	90°, 270°			

### Used Test Equipment

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ063-01	Compact Immunity Tester	Haefely	ECOMPACT 4	07-Jan-2020	07-Jan-2021



## Test Setup Diagram



Test set-up of Surge Immunity for Power port

## Test Results

### EN61000-4-5 Surge Immunity

Level		Result (Pursuant to EN 55035, Criterion B)
Between Phase and Neutral:	±1kV	OK
Between Phase and Earth:	±2kV	N/A
Between Neutral and Earth:	±2kV	N/A
Between Shield and Earth:	±0.5kV	N/A

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_\_\_V of Surge.

EUT was in abnormal operation:

– Operation mode was changed from \_\_\_\_\_ to \_\_\_\_\_ at \_\_\_\_\_V of Surge.

\_\_\_\_\_  
\_\_\_\_\_

**EN 61000-4-6**  
**Injected Current (0.15MHz to 80MHz)**

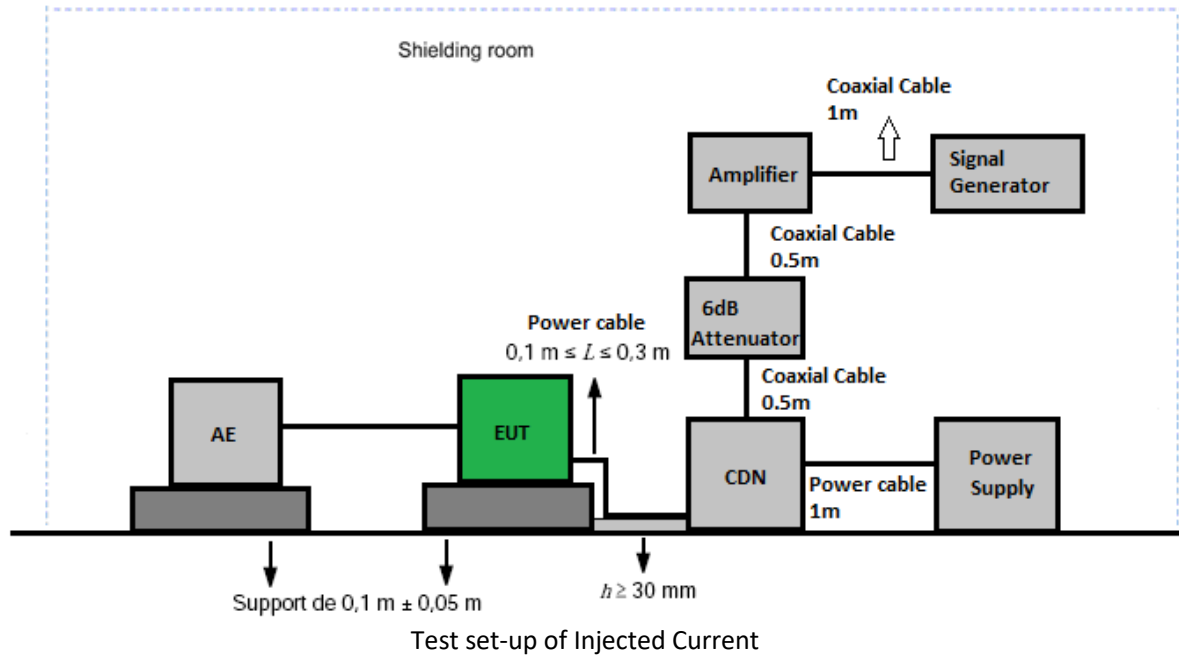
**Test Summary (Pursuant to EN 55035)**

<b>Basic Standard:</b>	EN 61000-4-6	
Port:	AC Power Lines, DC Power Lines, Signal Lines and Control Lines	
Required Performance Criterion:	A	
Level:	0.15MHz-10MHz	3V (rms)
	10MHz-30MHz	3V (rms) to 1V (rms)
	30MHz-80MHz	1V (rms)
Test Modulation:	1kHz, 80% AM	
Frequency:	0.15MHz to 80MHz	
Dwell Time:	1s	
Frequency Step:	1%	
Temperature:	24.5°C	
Relative Humidity:	56.0%	
Coupling Factor of CDN:	-1.0dB ~ -1.7dB	
Test Mode:	Full Load, Half Load	
Test Setup:	Table-top	

**Used Test Equipment**

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ180-02	Signal Generator	Aeroflex	2023A	08-Jan-2020	08-Jan-2021
SZ181-03	Amplifier	AR-WORLDWIDE	75A250	08-Jan-2020	08-Jan-2021
SZ181-03-01	Attenuator	AR-WORLDWIDE	6dB/50FH-006-100	08-Jan-2020	08-Jan-2021
SZ183-01	RF CURRENT-INJECTION CLAMP	LUTHI	EM101	14-Dec-2019	14-Dec-2020
SZ184-01	Coupling-Decoupling Network	LUTHI	CDN L-801 M2/M3	14-Dec-2019	14-Dec-2020
SZ188-04	Shielding Room	Jiang yin Tian De	5*6*2.9m/5*2.5*2.7m	07-Jan-2020	07-Jan-2022

## Test Setup Diagram



## Test Results

### EN61000-4-6

### Injected Current (0.15MHz to 80MHz)

Port	Frequency (MHz)	Level (V)	Result (Pursuant to EN 55035, Criterion A)
AC Power Lines	0.15 to 10	3 (see note)	OK
	10 to 30	3 to 1(see note)	
	30 to 80	1(see note)	
Signal Lines	0.15 to 10	3(see note)	N/A
	10 to 30	3 to 1(see note)	
	30 to 80	1(see note)	

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_\_V of Injected Current.

EUT was in abnormal operation:  
 – Operation mode was changed from \_\_\_\_ to \_\_\_\_ at \_\_\_\_V of Injected Current.

\_\_\_\_\_  
 \_\_\_\_\_

## EN 61000-4-11 Voltage Dips and Interruptions

### Test Summary (Pursuant to EN 55035)

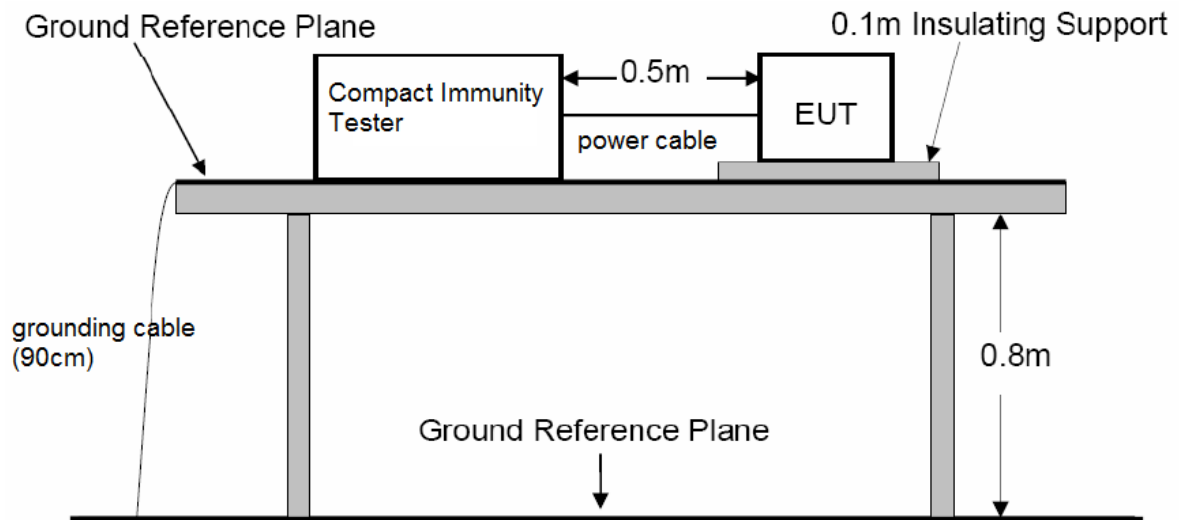
<b>Basic Standard:</b>	EN61000-4-11		
Port:	AC Power Lines		
Limit:	Test Level in %U <sub>T</sub>	Duration(s)	Required Performance Criterion
	0	0.01	B
	70	0.5	C
	0	5	C
No. of Dips / Interruptions:	3		
Test Mode:	Full Load, Half Load		
Test Setup:	Table-top		

U<sub>T</sub> is the rated voltage for the equipment.

### Used Test Equipment

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ063-01	Compact Immunity Tester	Haefely	ECOMPACT 4	07-Jan-2020	07-Jan-2021

## Test Setup Diagram



Test set-up of Voltage Dips and Interruptions

## Test Results

### EN61000-4-11

### Voltage Dips and Interruptions

Test Condition		Result (Pursuant to EN 55035, Criterion B)
Test Level in %U <sub>T</sub>	Duration(s)	
0	0.01	OK

Test Condition		Result (Pursuant to EN 55035, Criterion C)
Test Level in %U <sub>T</sub>	Duration(s)	
70	0.5	OK
0	5	OK

Additional Information

No observable change

EUT stopped operation and could be reset by itself at test level 0%U<sub>T</sub>, 250Cycle of Interrupt.

EUT was in abnormal operation:

– Operation mode was changed from \_\_\_\_\_ to \_\_\_\_\_ at test level \_\_\_\_\_ of Dip. / Interrupt.

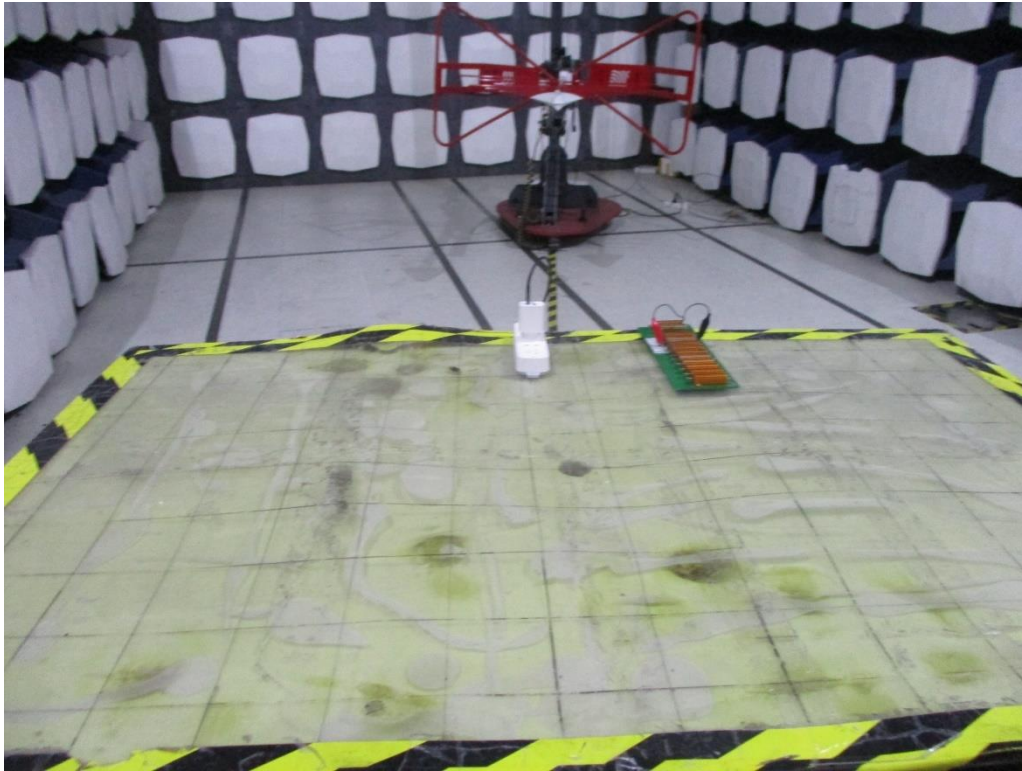
\_\_\_\_\_

\_\_\_\_\_

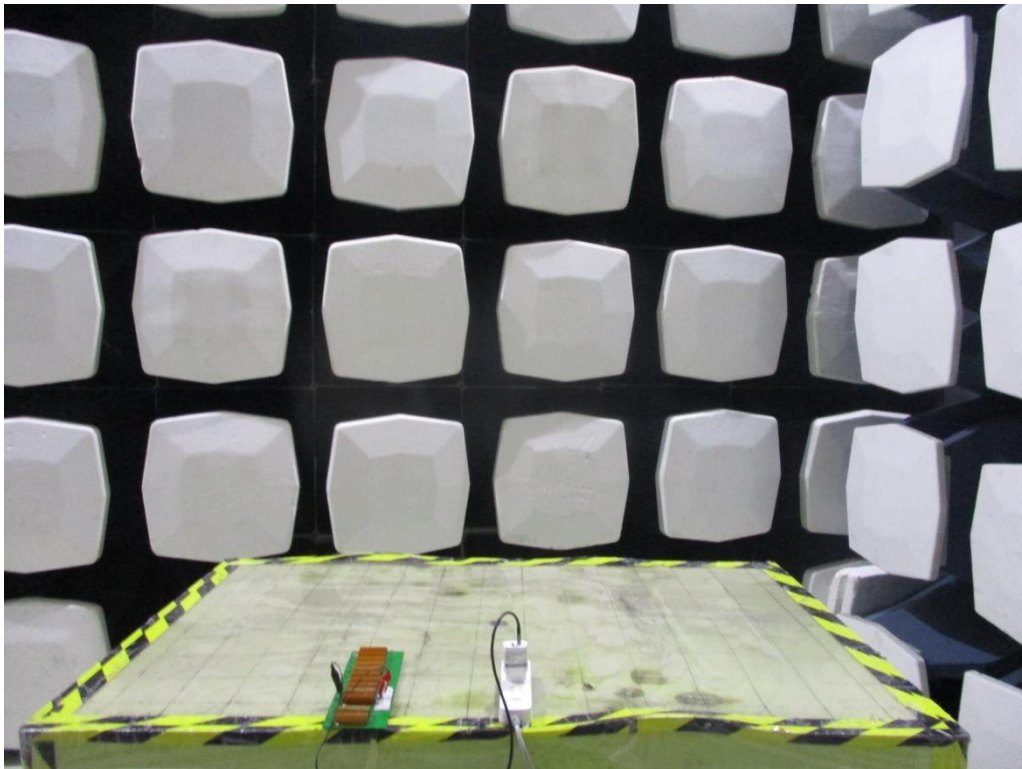


## Photos of Test Set-up

Radiated Disturbance



Radiated Disturbance



## RFI Voltage Test



## RFI Voltage Test





## Electrostatic Discharge



## Harmonics Current & Flicker



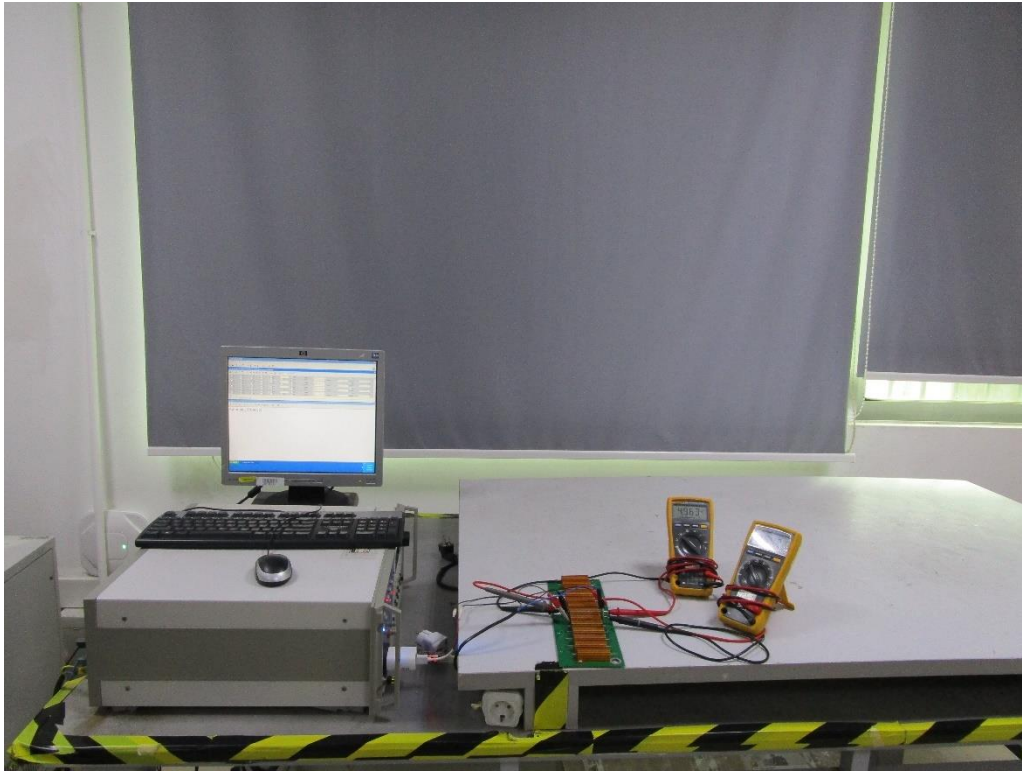
## Radiated Immunity



## Injected Current



## Electrical Fast Transient (Burst) / Surge Immunity / Voltage Dips and Interruptions



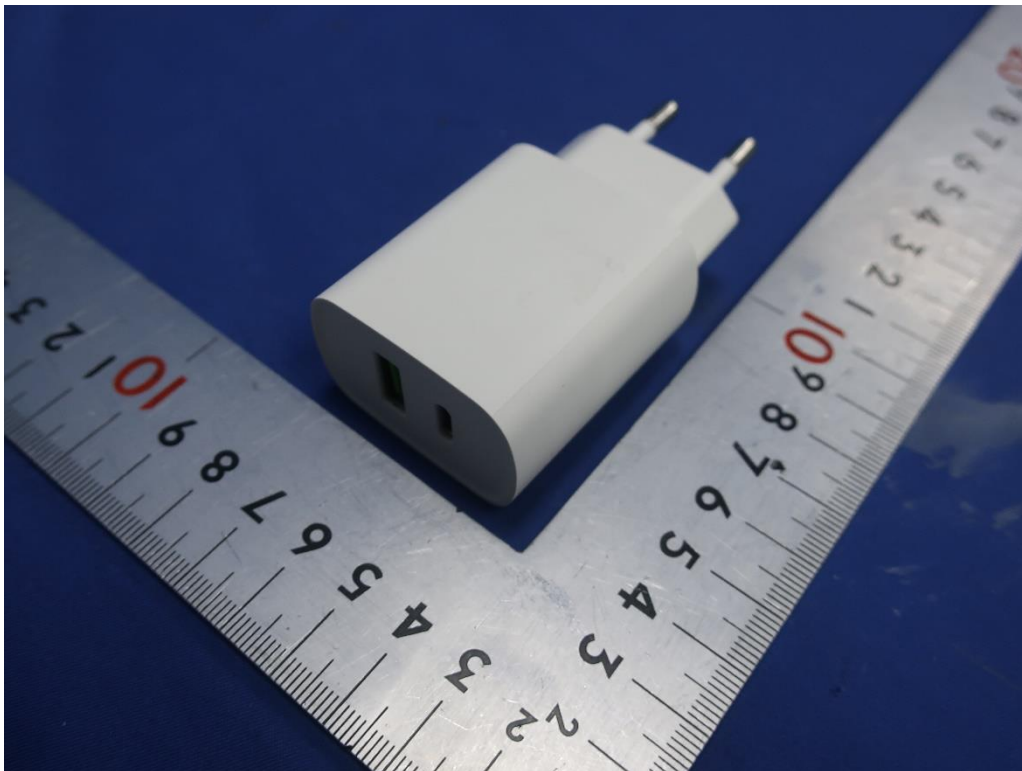


## Photos of EUT

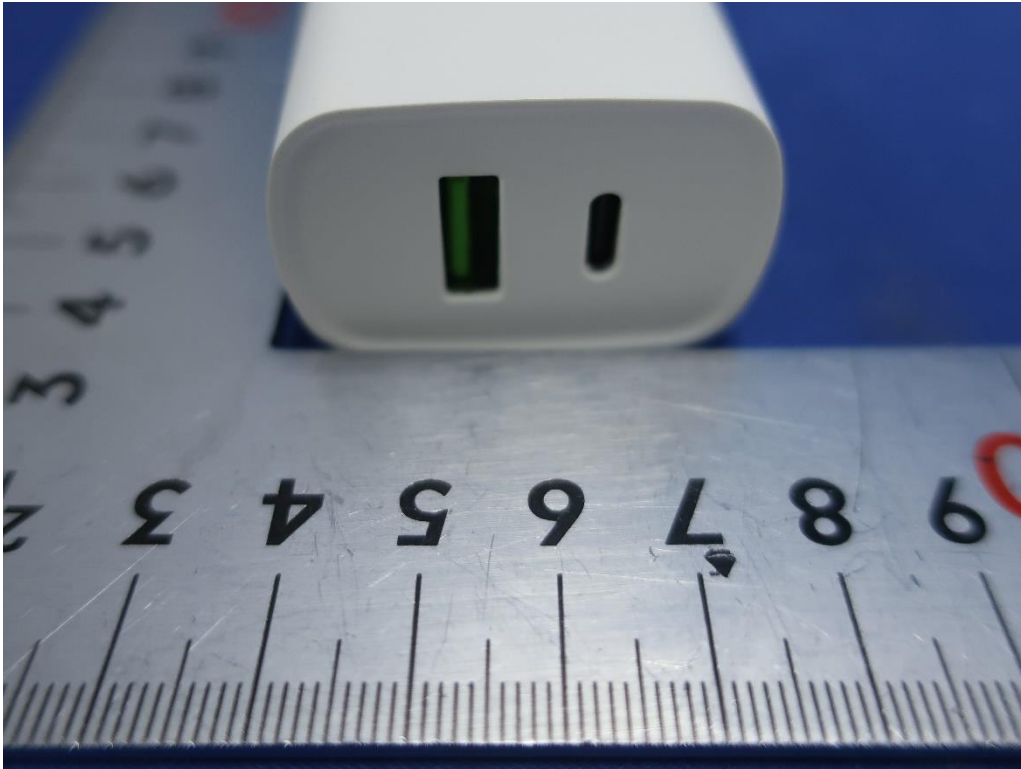
External Photo



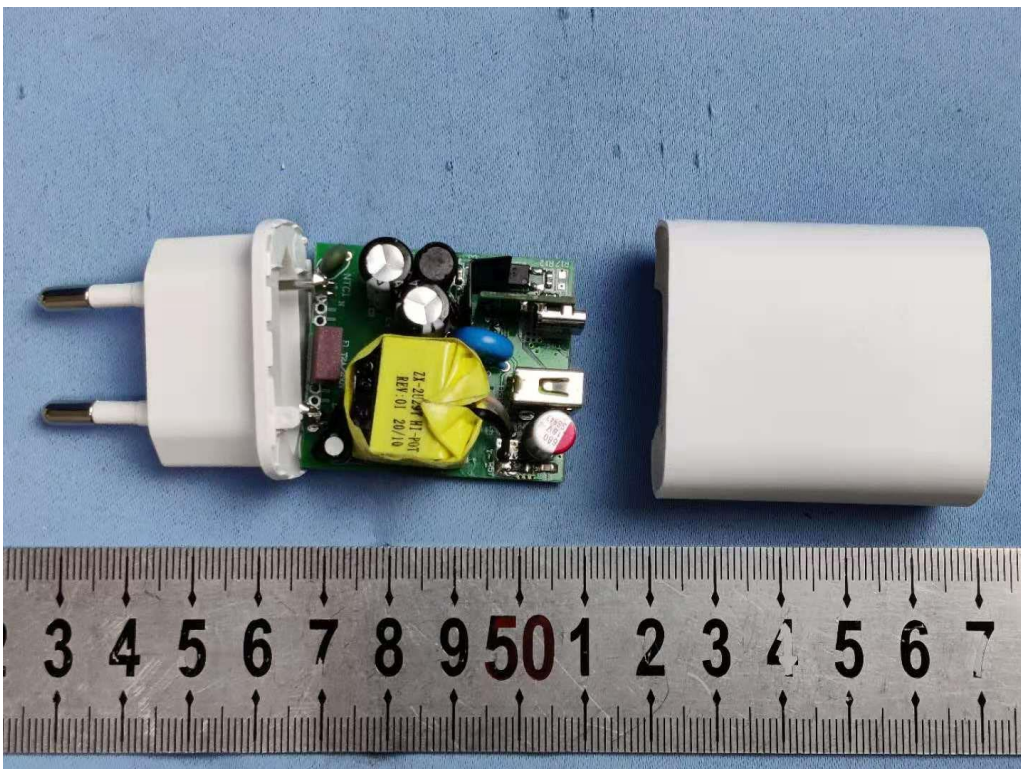
External Photo



External Photo

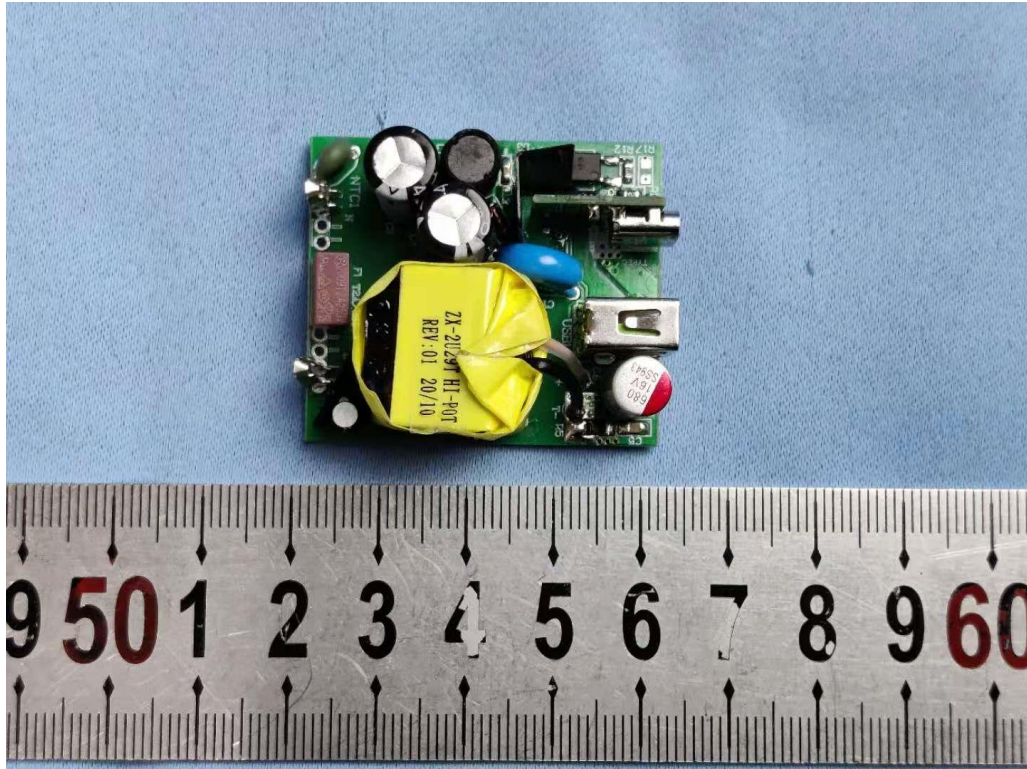


Internal Photo

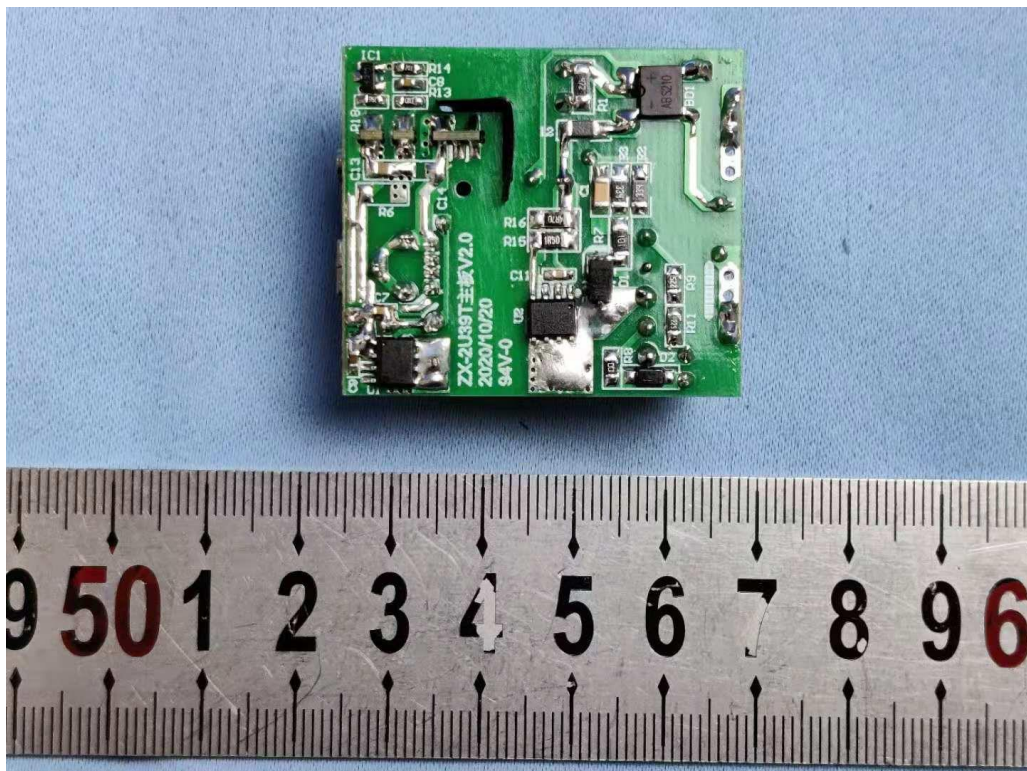




Internal Photo



Internal Photo



\*\*\*\*\* End of Report \*\*\*\*\*