

# TEST REPORT

## SCOPE OF WORK

EMC TESTING—WX65, P328.10

## REPORT NUMBER

180507002SZN-001

## ISSUE DATE

27 May 2018

## [REVISED DATE]

[-----]

## PAGES

45

## DOCUMENT CONTROL NUMBER

EN55032/35\_MMEa

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## EMC VERIFICATION SUMMARY

Intertek Report No.: 180507002SZN-001

☒ Charging ☒ AUX IN ☒ Charging + AUX IN

Model: WX65 P328.10	Applicant:		
Product Description: Bluetooth Speaker, WIRELESS SPERKER			
Test Conducted Date: 07 May 2018 to 27 May 2018	Sample Receipt Date: 07 May 2018		
<input checked="" type="checkbox"/> 1 <sup>st</sup> TEST <input type="checkbox"/> 2 <sup>nd</sup> TEST	ALL TESTS WERE CONDUCTED IN ACCORDANCE WITH:		
	*EN 55032: 2015 *EN 61000-3-2: 2014 *EN 61000-3-3: 2013 *EN 55035: 2017		
Test Site and Location:	Intertek Testing Services Shenzhen Ltd. Longhua Branch (CNAS L0327) 1F/2F, Building B, QiaoAn Scientific Technology Park, Shangkeng Community, Guanhu Subdistrict, Longhua District, Shenzhen, P.R. China.		
Test Result	OK	Not OK	See Remark
*EN 55032: 2015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*EN 61000-3-2: 2014	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
*EN 61000-3-3: 2013	<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.			

**Prepared and Checked By:**



**Surel Guo**  
**Engineer**

**Approved By:**



**Sunny Zhou**  
**Supervisor**

**Signature**

**27 May 2018**

**Date**

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## EMC Results Conclusion (with Justification)

RE: EMC Testing Pursuant to Radio Equipment Directive (2014/53/EU) Performed  
On The Bluetooth Speaker, WIRELESS SPERKER,  
Model: WX65  
P328.10

We tested the Bluetooth Speaker, WIRELESS SPERKER, Model: WX65, 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 61000-3-2, EN 61000-3-3, EN 55035 standards when tested as received.

The Model: P328.10 is the same as the Model: WX65 in hardware aspect. The differences are model number, appearance and trade name serves as marketing strategy. For more details please refer below list.

Trade name	Model no.
	WX65
	P328.10

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

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>	Bluetooth Speaker, WIRELESS SPERKER
<b>Model:</b>	WX65
<b>Serial No.:</b>	N/A
<b>Support Equipment:</b>	iPod (Apple A1367) (Provided by Intertek)
<b>Cables:</b>	Aux in cable (Unshielded,60cm) (Provided by Intertek)
<b>Adaptor:</b>	T050100-2A3(Input: AC100-240V, 50/60Hz, 0.3A; Output: DC5V, 1A) (Provided by Intertek)
<b>Rated Voltage:</b>	DC 5V 1A

## 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.

### Evaluation of Audio Quality

The measured acoustic interference ratio and/or the measured electrical interference ratio during the test shall be –20 dB or better.

### 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.

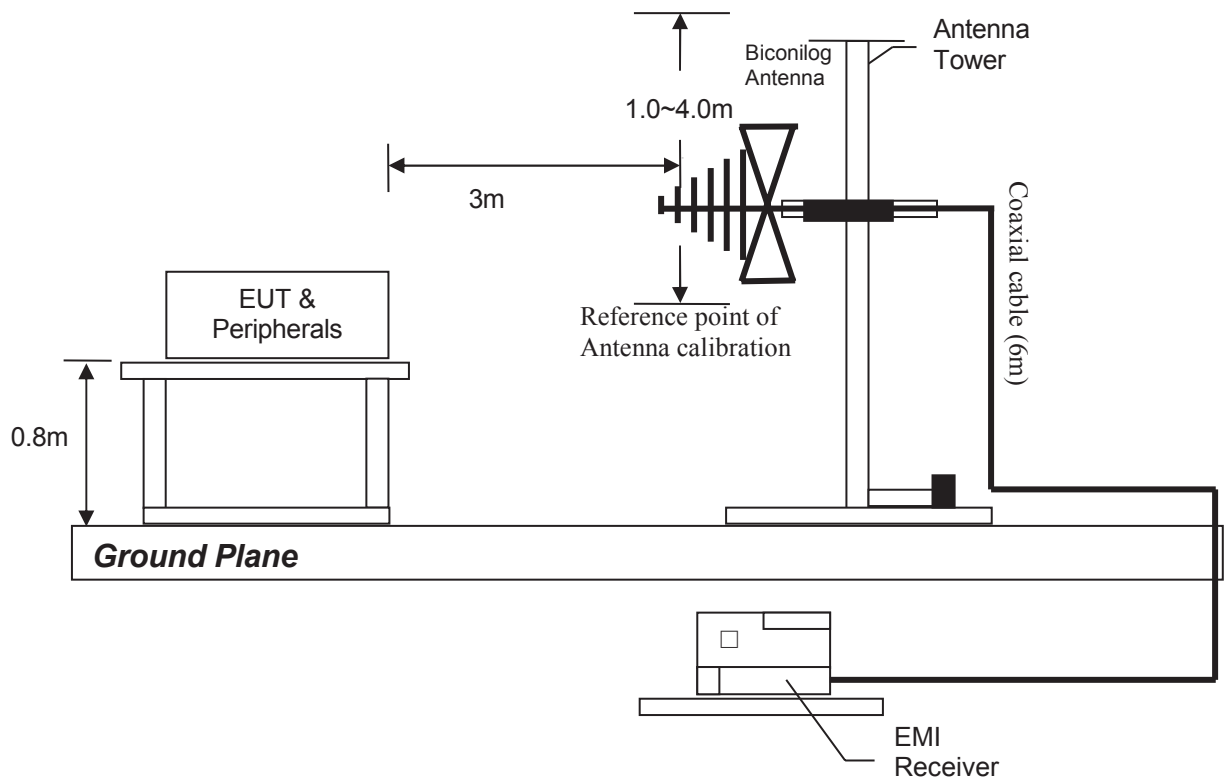
## RADIATED DISTURBANCE PURSUANT TO EN55032: EMISSIONS REQUIREMENT

### Used Test Equipment

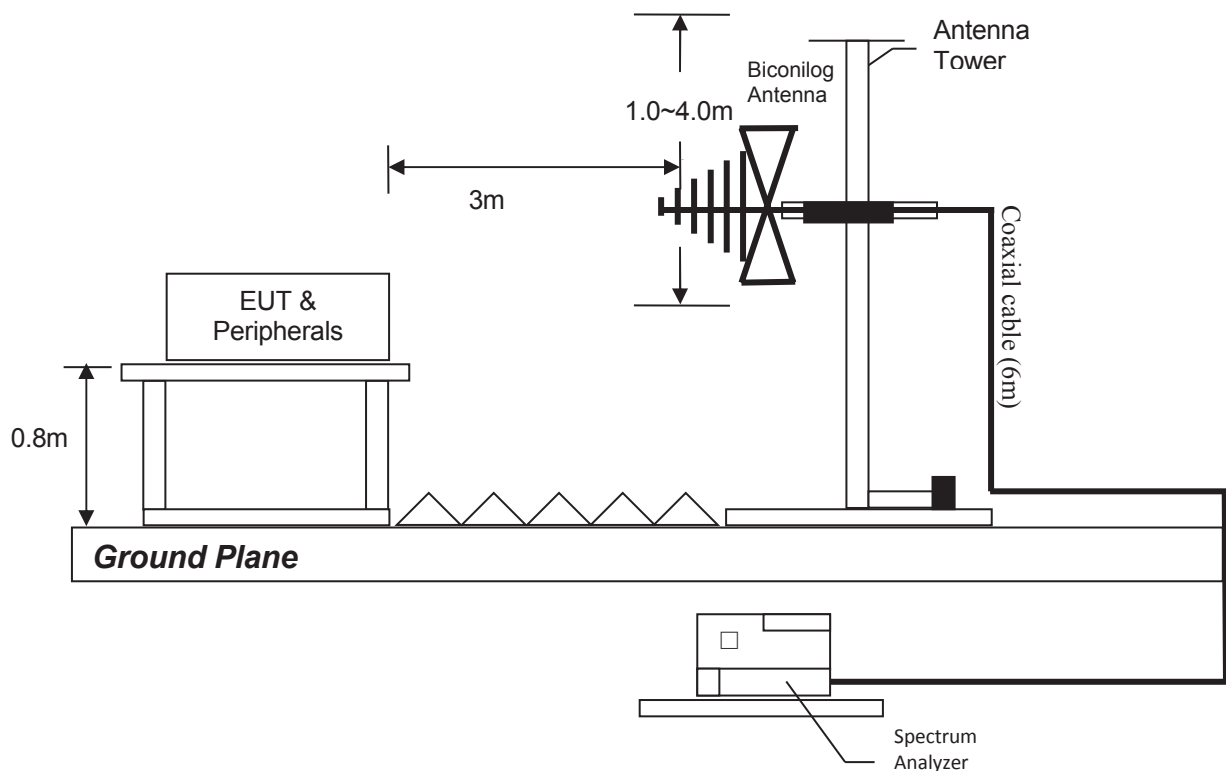
Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ185-01	EMI Receiver	R & S	ESCI	24-Jan-2018	24-Jan-2019
SZ061-12	Biconilog Antenna	ETS	3142E	20-Sep-2017	20-Sep-2018
SZ056-03	Spectrum Analyzer	R & S	FSP30	01-Jun-2017	01-Jun-2018
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	16-Jan-2017	16-Jan-2019
SZ181-04	Preamplifier	Agilent	8449B	24-Jan-2018	24-Jan-2019

- 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. Negative sign (–) in the margin column signify levels below the limit.
  3. Frequency range scanned: 30MHz to 6000MHz.
  4. Only emissions significantly above equipment noise floor are reported.
  5. Uncertainty: 4.8dB at a level of confidence of 95%.

**Test Setup Diagram:**



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



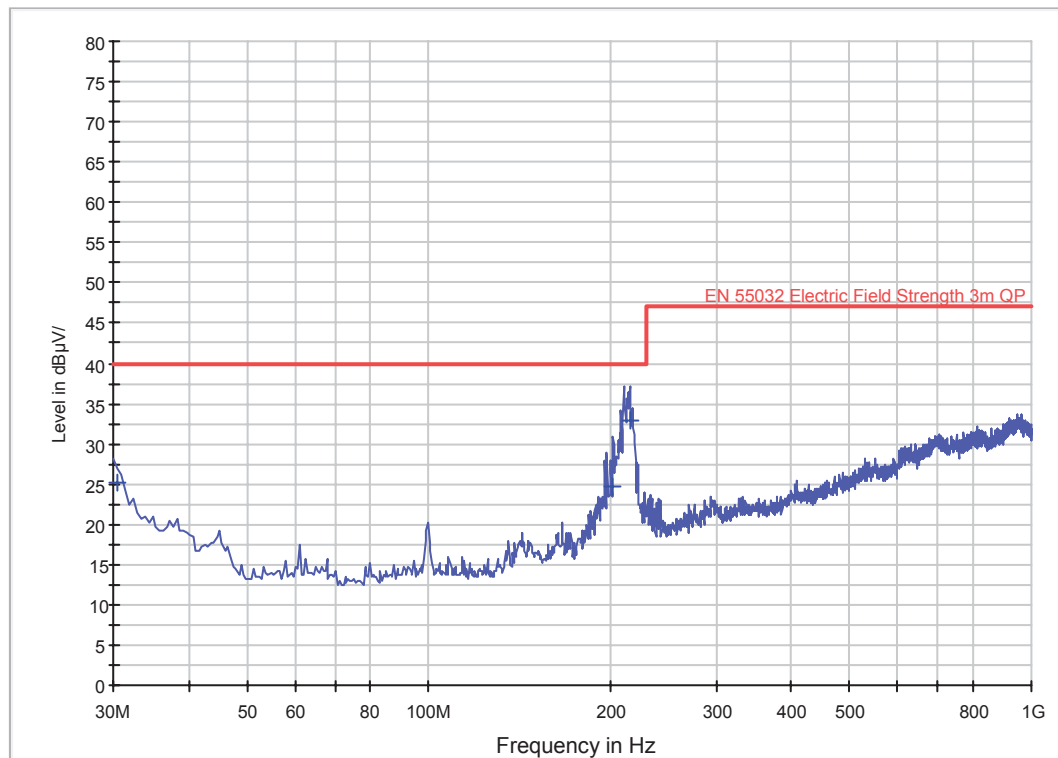
(Radiated Emission Measurements Test Setup for 1GHz to 6GHz)



## Test Data

### Radiated Disturbance Pursuant to EN 55032: Emissions Requirement

#### Horizontal



#### Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.485000	25.2	1000.0	120.000	H	17.6	14.8	40.0
202.175000	24.7	1000.0	120.000	H	11.7	15.3	40.0
215.529500	32.9	1000.0	120.000	H	12.3	7.1	40.0

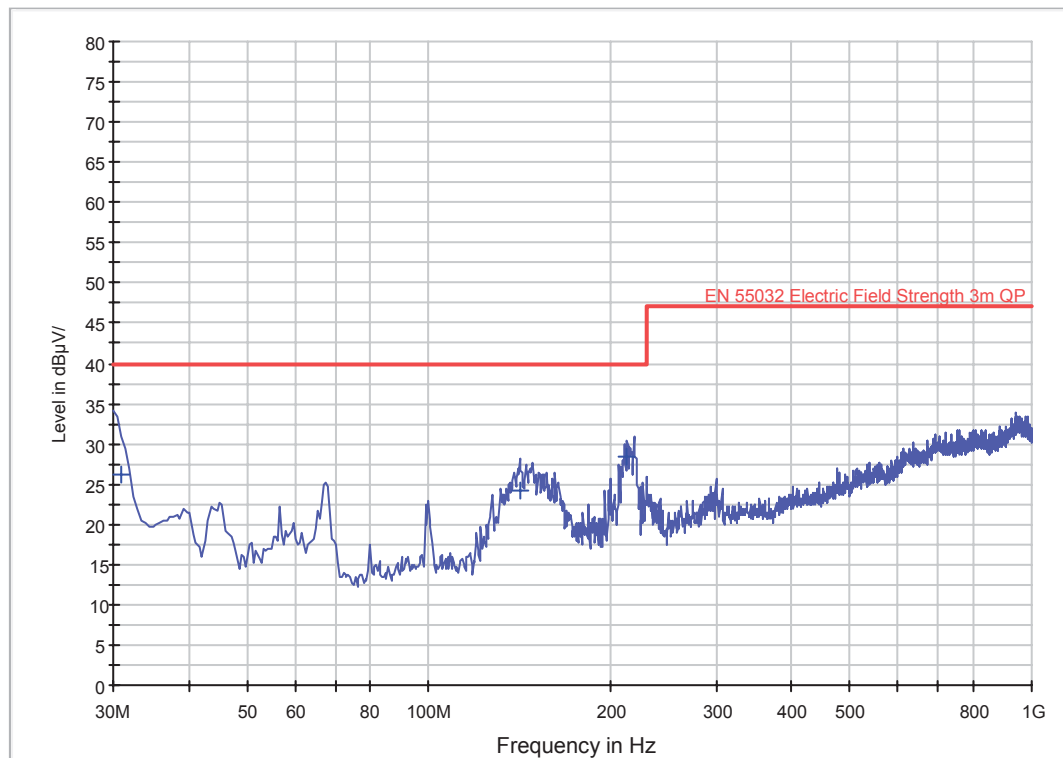
#### Remark:

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)

## Test Data

### Radiated Disturbance Pursuant to EN 55032: Emissions Requirement

#### Vertical



#### Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.000000	26.3	1000.0	120.000	V	17.3	13.7	40.0
142.000000	24.2	1000.0	120.000	V	10.0	15.8	40.0
213.000000	28.4	1000.0	120.000	V	12.2	11.6	40.0

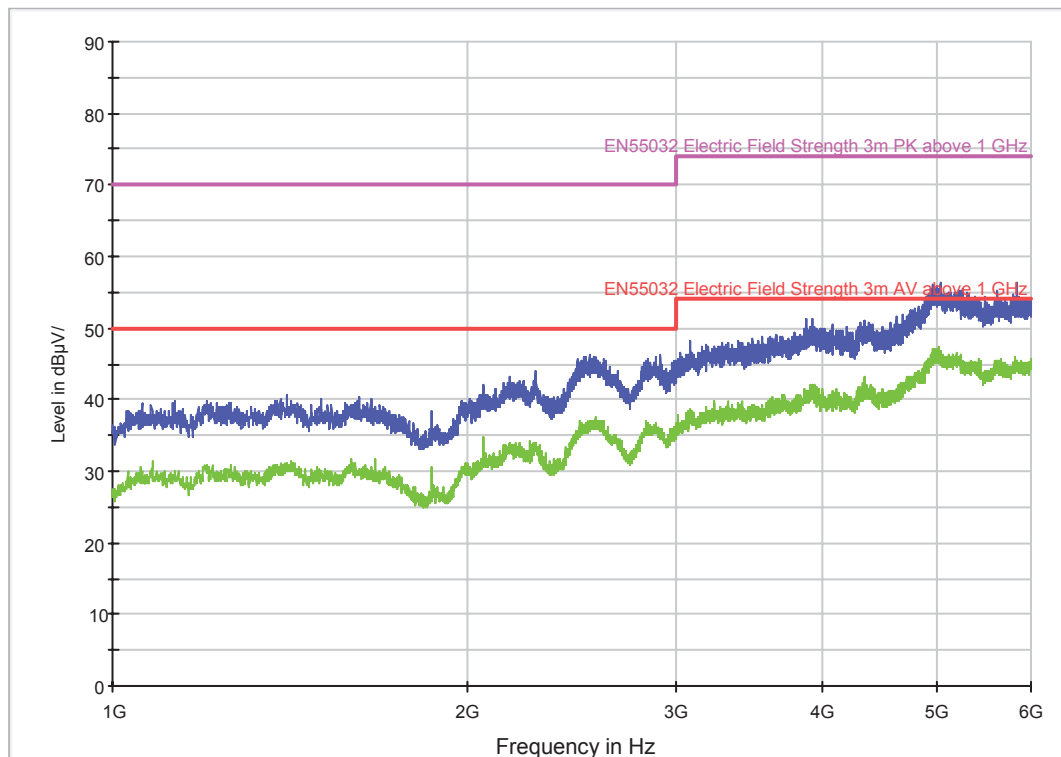
#### Remark:

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)

## Test Data

### Radiated Disturbance Pursuant to EN 55032: Emissions Requirement

#### Horizontal

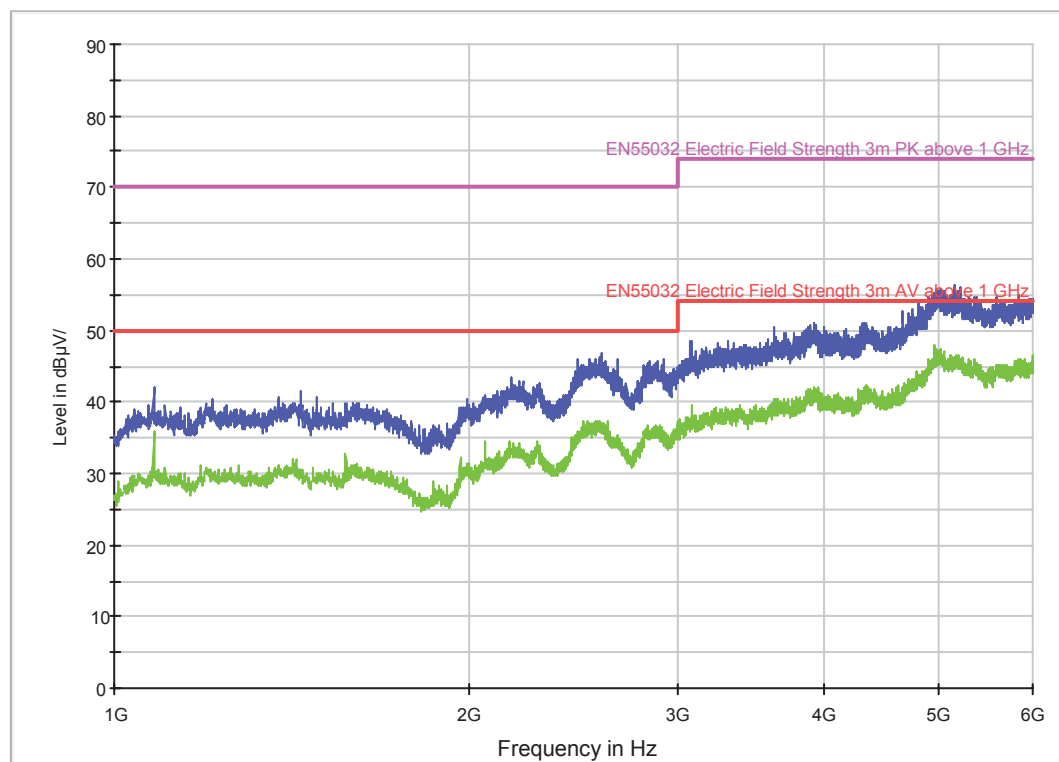


Remark: The emissions were very low against the limit in the frequency range 1 GHz ~ 6 GHz.

## Test Data

### Radiated Disturbance Pursuant to EN 55032: Emissions Requirement

#### Vertical



Remark: The emissions were very low against the limit in the frequency range 1 GHz ~ 6 GHz.

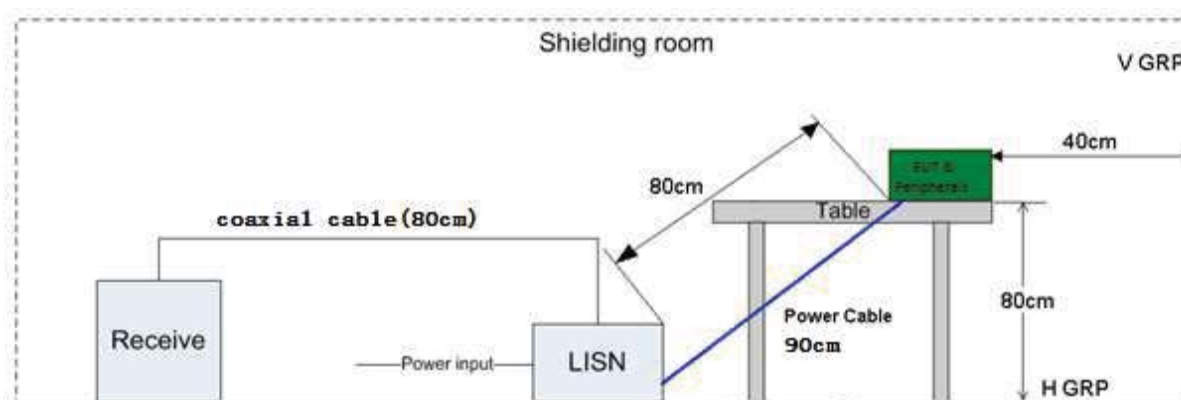
## EN 55032 RFI Voltage Test

### Used Test Equipment

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ185-02	EMI Receiver	R & S	ESCI	30-Oct-2017	30-Oct-2018
SZ187-01	Two-Line V-Network	R & S	ENV216	30-Oct-2017	30-Oct-2018
SZ187-02	Two-Line V-Network	R & S	ENV216	12-Jul-2017	12-Jul-2018
SZ188-03	Shielding Room	ETS	RFD-100	16-Jan-2017	16-Jan-2019

- 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. Negative sign (–) in the margin column signify levels below the limit.
  3. Frequency range scanned: 150kHz to 30MHz.
  4. Only emissions significantly above equipment noise floor are reported.
  5. Uncertainty: 3.6dB at a level of confidence of 95%.

### Test Setup Diagram



Test set-up of conducted disturbance for Power port

Model: WX65

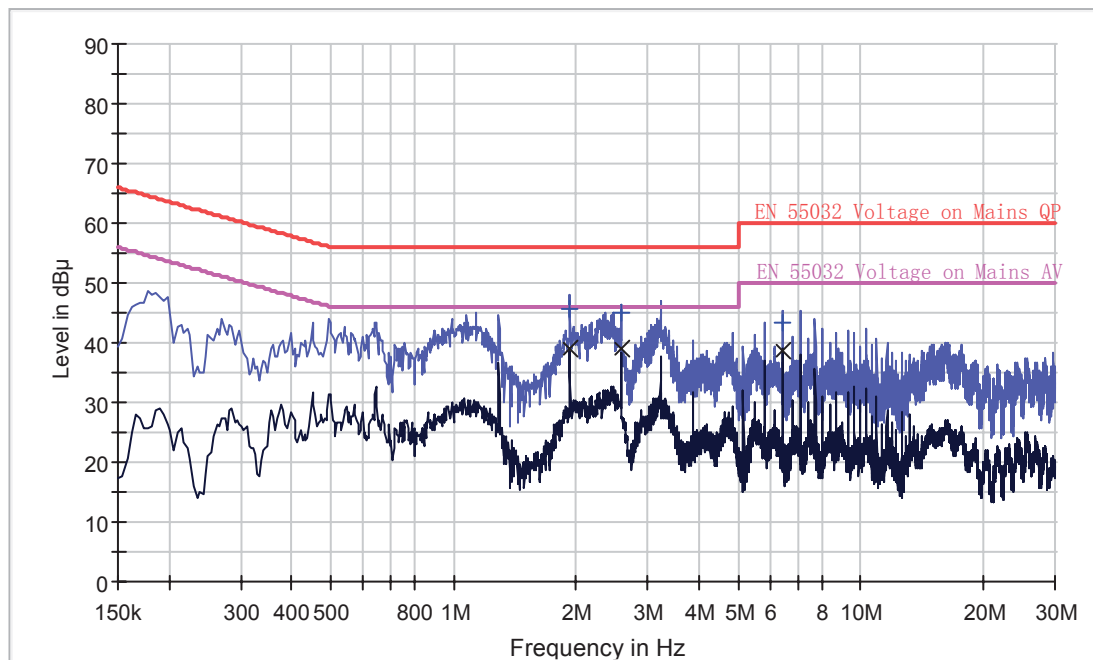
Intertek Report No.: 180507002SZN-001

Worst Case Operating Mode: Charging+AUX IN

Phase: Live

## Test Data

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



#### Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.934000	45.7	39.1	9.000	L1	9.7	10.3	56.0
2.578000	45.0	39.0	9.000	L1	9.7	11.0	56.0
6.442000	43.2	38.7	9.000	L1	9.8	16.8	60.0

#### Limit and Margin AV

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.934000	45.7	39.1	9.000	L1	9.7	6.9	46.0
2.578000	45.0	39.0	9.000	L1	9.7	7.0	46.0
6.442000	43.2	38.7	9.000	L1	9.8	11.3	50.0

Remark:

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

Model: WX65

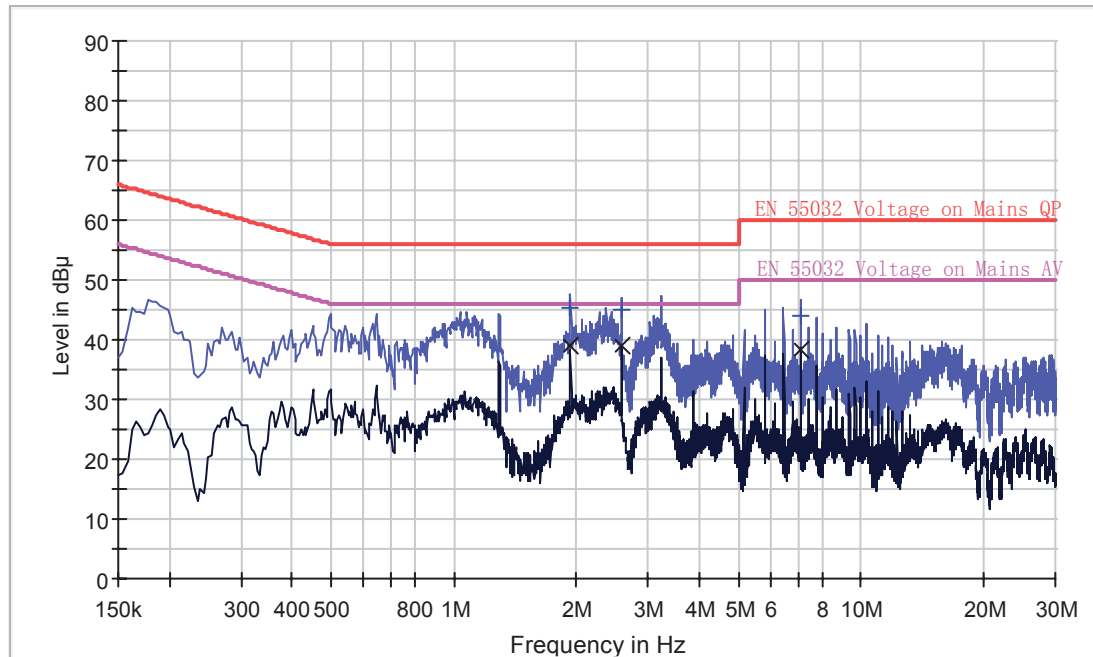
Intertek Report No.: 180507002SZN-001

Worst Case Operating Mode: Charging+AUX IN

Phase: Neutral

## Test Data

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



#### Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.938000	45.4	39.0	9.000	N	9.7	10.6	56.0
2.582000	44.9	38.9	9.000	N	9.7	11.1	56.0
7.102000	44.0	38.3	9.000	N	9.9	16.0	60.0

#### Limit and Margin AV

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.938000	45.4	39.0	9.000	N	9.7	7.0	46.0
2.582000	44.9	38.9	9.000	N	9.7	7.1	46.0
7.102000	44.0	38.3	9.000	N	9.9	11.7	50.0

#### Remark:

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

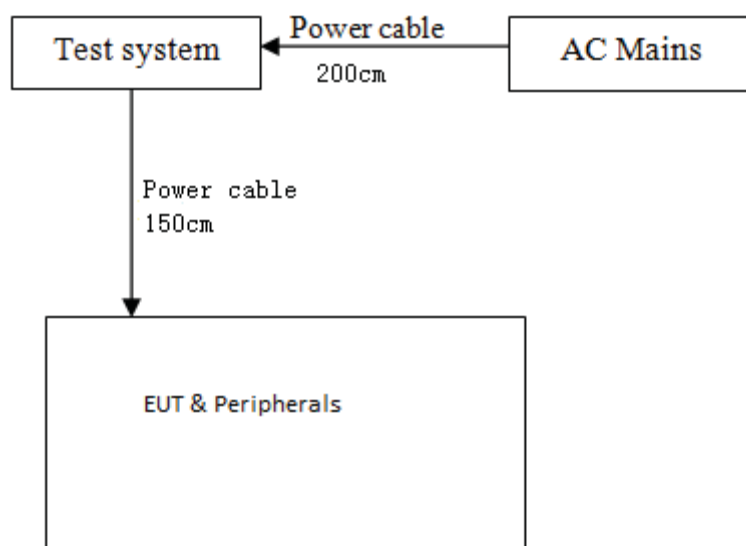
## EN61000-3-3 Voltage Fluctuations

### Used Test Equipment

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ064-01	Compliance Test System	California Instruments	5001iX-CTS-400	24-Jan-2018	24-Jan-2019
SZ064-01-01	Power Analyzer and Conditioning System	California Instruments	PACS-1	29-Jan-2018	29-Jan-2019

- 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





## TEST REPORT

Model: WX65

Intertek Report No.: 180507002SZN-001

Worst Case Operating Mode: Charging+AUX IN

### 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):	229.72			
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:	1.00	Pass

## EN 61000-4-2 Electrostatic Discharge

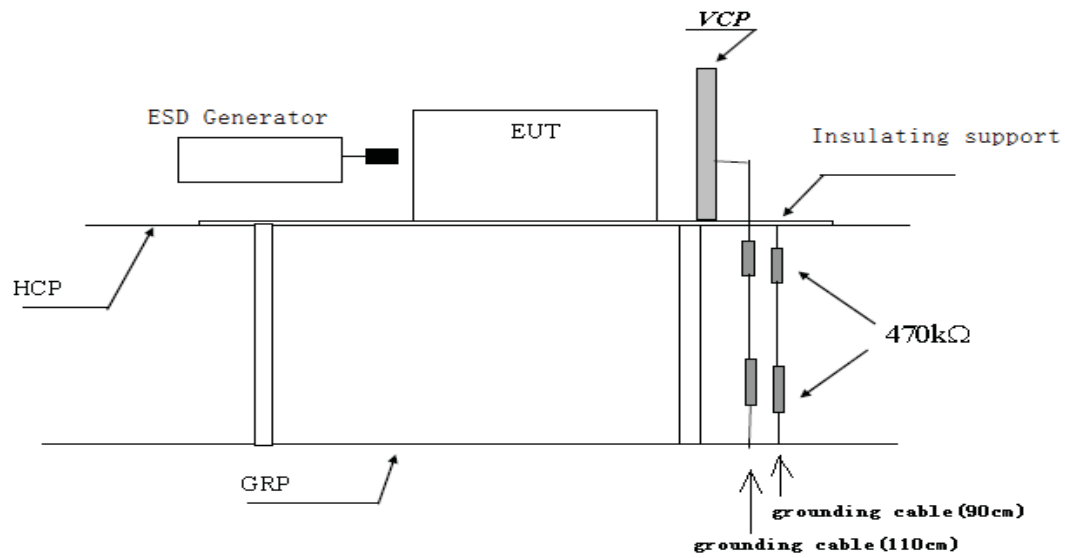
### Test Summary (Pursuant to EN 55035)

Port:	Enclosure
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:	21.2°C
Relative Humidity:	50.1%
Test Mode:	Charging+AUX IN, AUX IN, Charging
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
SZ189-03	ESD Simulator	TESEQ	NSG 435	15-Nov-2017	15-Nov-2018

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	$\pm 4.0\text{kV}$	OK
Air Discharge	20	$\pm 2.0, \pm 4.0, \pm 8.0\text{kV}$	OK
Indirect HCP Discharge	20	$\pm 4.0\text{kV}$	OK
Indirect VCP Discharge	20	$\pm 4.0\text{kV}$	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

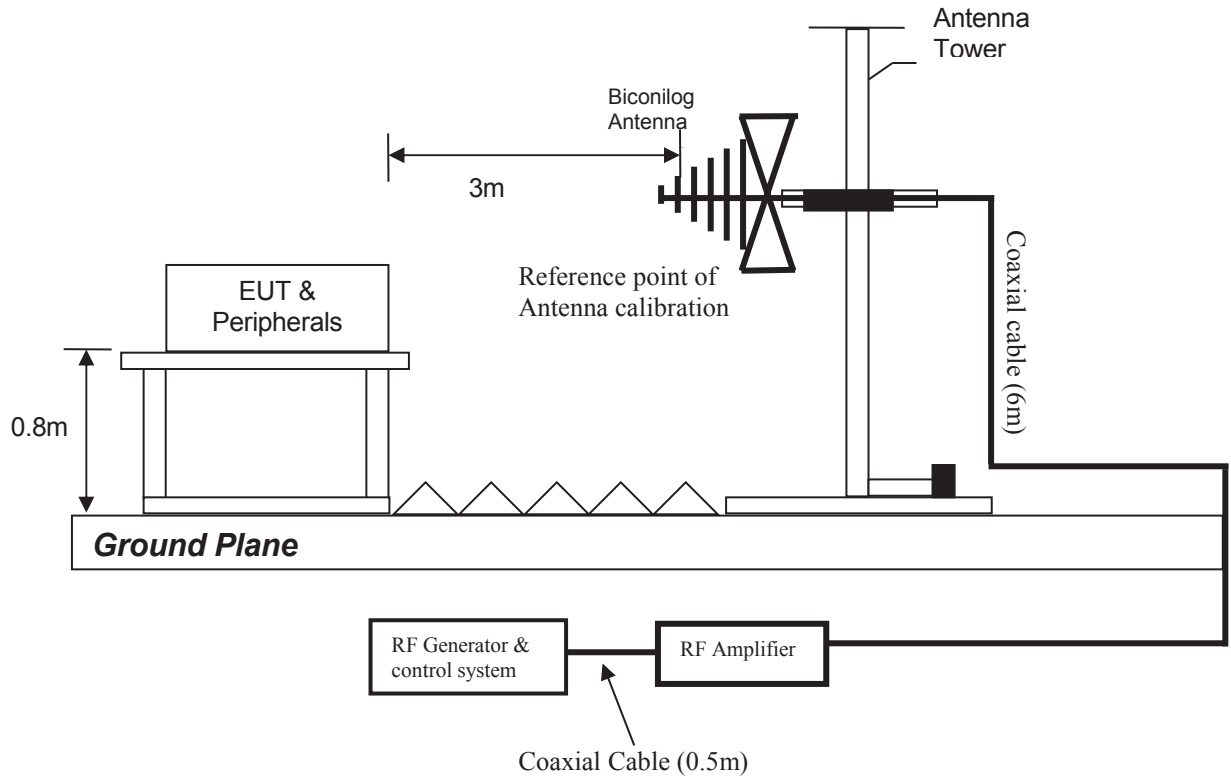
### Test Summary (Pursuant to EN 55035)

Basic Standard:	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:	22.5°C
Relative Humidity:	56.8%
Test Facility:	Full Anechoic Chamber
Antenna Polarization:	Horizontal and Vertical
Type of Antenna:	Log-periodic
Test Distance:	3 meters
Test Mode:	Charging+AUX IN, AUX IN, Charging
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	16-Jan-2017	16-Jan-2019
SZ061-04	Biconilog Antenna	ETS	3142C	17-Oct-2017	17-Oct-2018
EM061-06	Stacked double log.-Per. Antenna	SCHWARZBECK	STLP 9149	10-Nov-2017	10-Nov-2019
SZ180-01	Signal Generator	R&S	SML03	01-Jun-2017	01-Jun-2018
SZ181-01	Amplifier	PRANA	AP32 MT215	24-Jan-2018	24-Jan-2019
SZ190-07	RF Amplifier	Milmega	AS0860-75/45	24-Jan-2018	24-Jan-2019
SZ089-03	Audio Analyzer	AP	ATS-1A	24-Jan-2018	24-Jan-2019
SZ070-22	Open Switch and Control Unit	R&S	OSP120	07-Mar-2018	07-Sep-2018

**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.

☐ \_\_\_\_\_  
\_\_\_\_\_

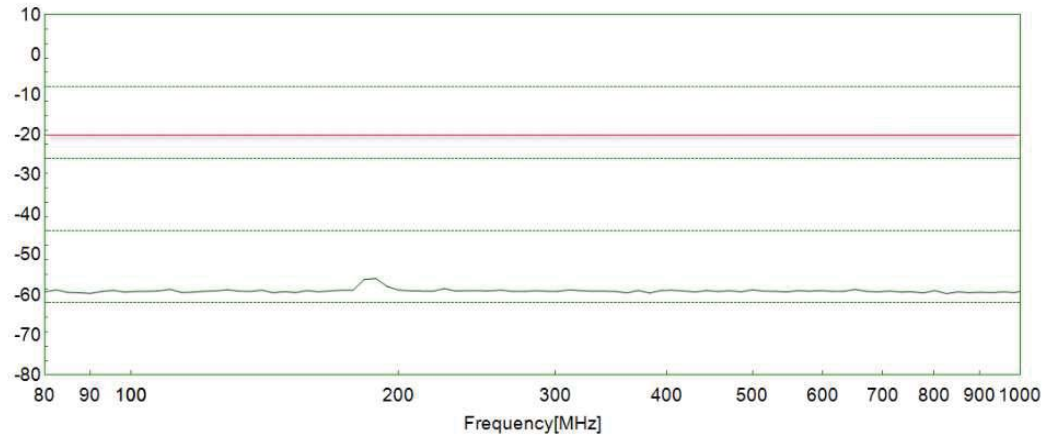
## TEST REPORT

Model: WX65

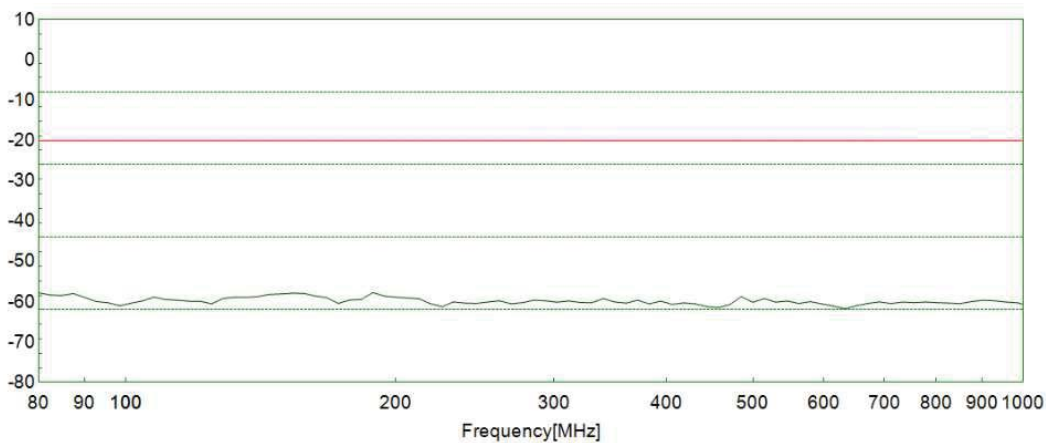
Intertek Report No.: 180507002SZN-001

Worst Case Operating Mode: Charging+AUX IN

H:



V:



Mode	Frequency	Port	Polarization	Output Level (dBV)	K/C Level (dBV)	K/C S/N (dB)	Limit(dB)
Charging +AUX IN	1800MHz	Speaker	H	5.00	-54.56	-59.56	-20.00
			V	5.00	-55.71	-60.71	-20.00
Charging +AUX IN	2600MHz	Speaker	H	5.00	-56.81	-61.81	-20.00
			V	5.00	-53.52	-58.52	-20.00
Charging +AUX IN	3500MHz	Speaker	H	5.00	-55.94	-60.94	-20.00
			V	5.00	-56.41	-61.41	-20.00
Charging +AUX IN	5000MHz	Speaker	H	5.00	-53.39	-58.39	-20.00
			V	5.00	-55.94	-60.94	-20.00



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

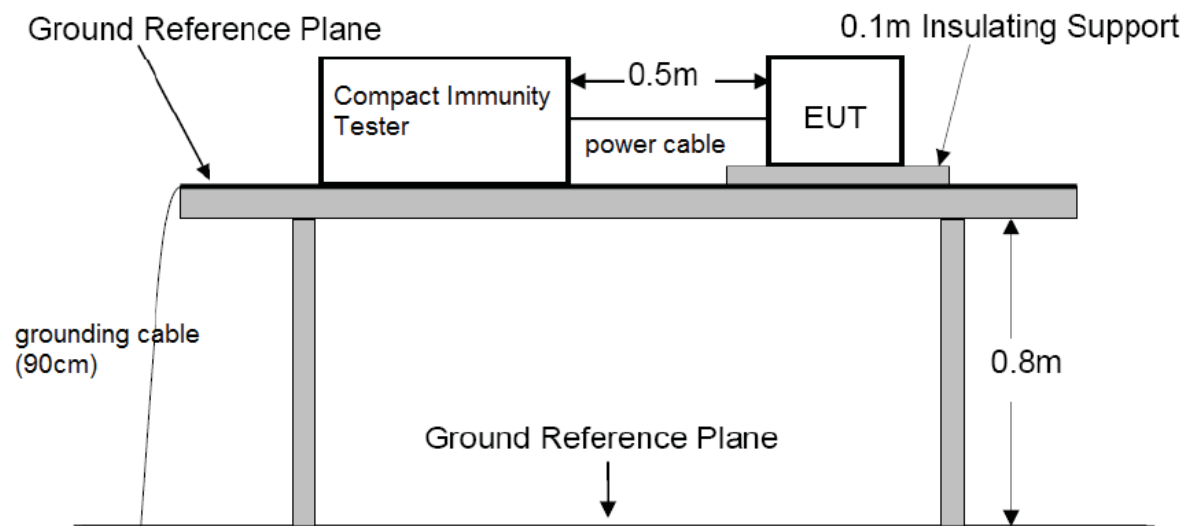
**Test Summary (Pursuant to EN 55035)**

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:	22.0°C	
Relative Humidity:	50.1%	
Test Mode:	Charging+AUX IN, AUX IN, Charging	
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	24-Jan-2018	24-Jan-2019

**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

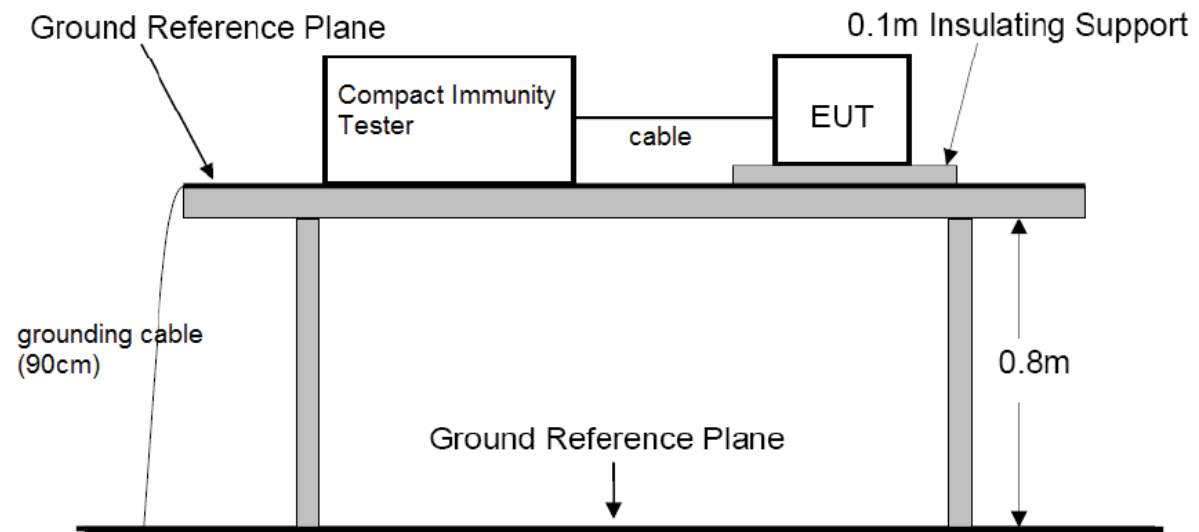
### Test Summary (Pursuant to EN 55035)

Basic Standard:	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:	Charging+AUX IN, AUX IN, Charging			
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	24-Jan-2018	24-Jan-2019

**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)**

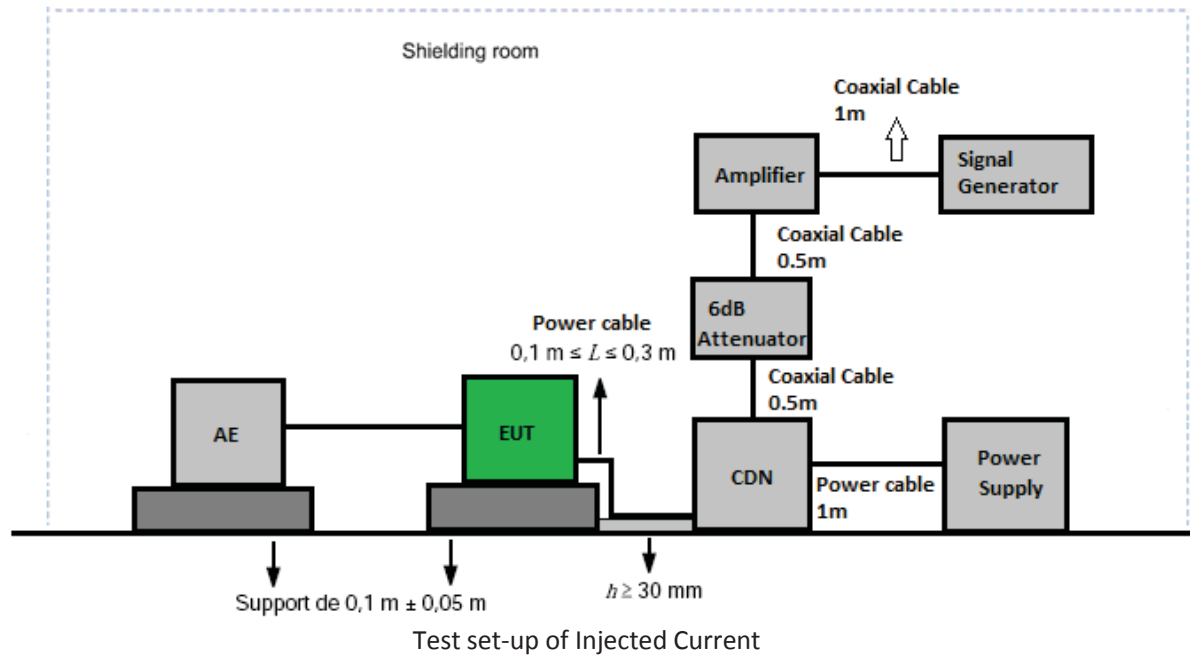
**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-6
Port:	AC Power Lines, DC Power Lines, Signal Lines and Control Lines
Required Performance Criterion:	A
Limit:	3.0V (rms)
Test Modulation:	1kHz, 80% AM
Frequency:	0.15MHz to 80MHz
Dwell Time:	1s
Frequency Step:	1%
Temperature:	21.5°C
Relative Humidity:	54.9%
Coupling Factor of CDN:	-1.0dB ~ -1.7dB
Test Mode:	Charging+AUX IN, AUX IN, Charging
Test Setup:	Table-top

**Used Test Equipment**

Equip No.	Description	Manufacturer	Model No.	Cal. Date	Due Date
SZ180-02	Signal Generator	Aeroflex	2023A	24-Jan-2018	24-Jan-2019
SZ181-03	Amplifier	AR-WORLDWIDE	75A250	24-Jan-2018	24-Jan-2019
SZ181-03-01	Attenuator	AR-WORLDWIDE	6dB/50FH-006-100	24-Jan-2018	24-Jan-2019
SZ184-01	Coupling-Decoupling Network	LUTHI	CDN L-801 M2/M3	24-Jan-2018	24-Jan-2019
SZ089-03	Audio Analyzer	AP	ATS-1A	24-Jan-2018	24-Jan-2019

**Test Setup Diagram**





## Test Results

### EN61000-4-6

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

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

☒ 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.

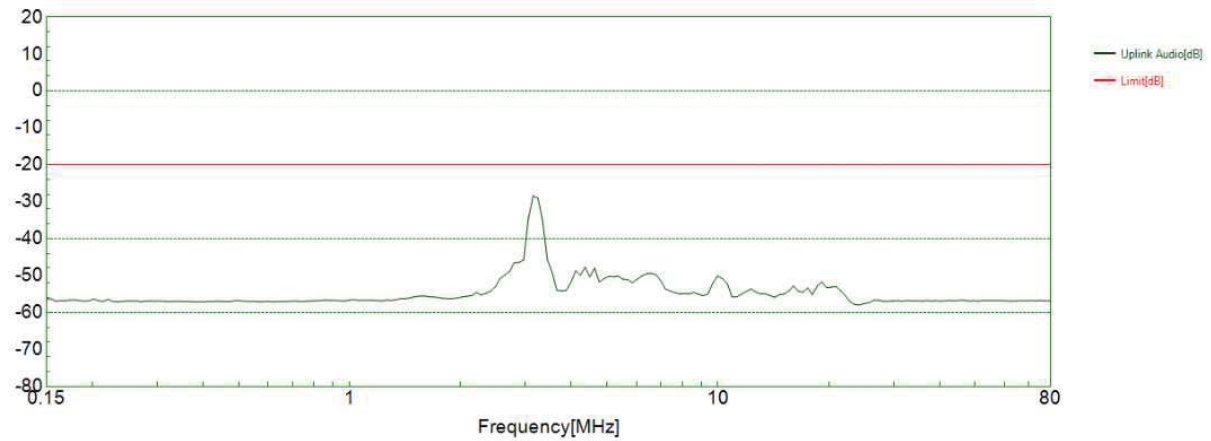
☐ \_\_\_\_\_  
\_\_\_\_\_

## TEST REPORT

Model: WX65

Intertek Report No.: 180507002SZN-001

Worst Case Operating Mode: Charging+AUX IN



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

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

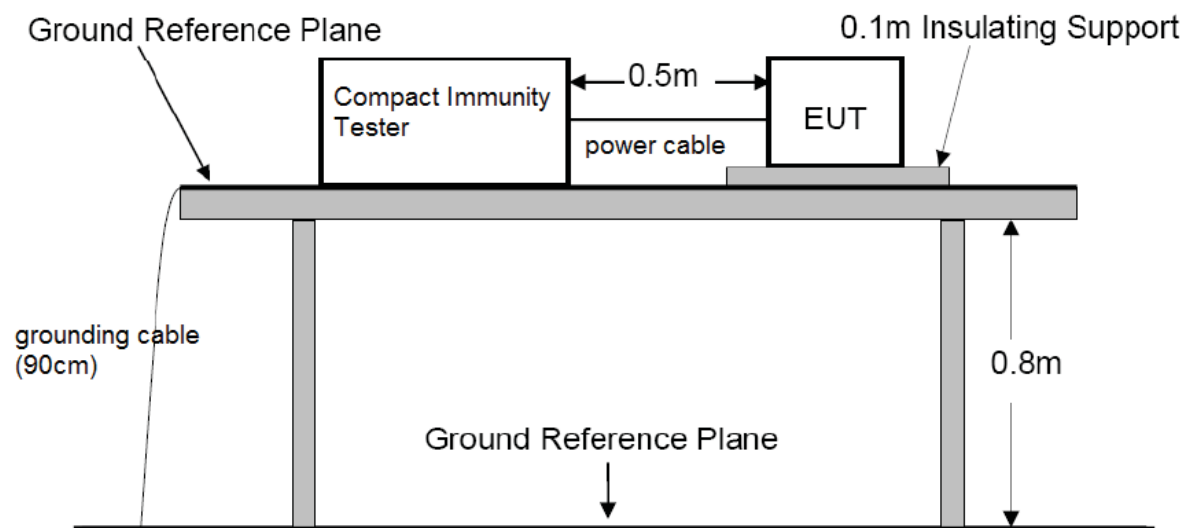
Basic Standard:	EN61000-4-11		
Port:	AC Power Lines		
Limit:	Test Level in %U <sub>T</sub>	Duration(s)	Required Performance Criterion
	0	0.01	B
	70	0.5	C
	0	5	C
No. of Dips / Interruptions:	3		
Test Mode:	Charging+AUX IN, AUX IN, Charging		
Test Setup:	Table-top		

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	24-Jan-2018	24-Jan-2019

**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

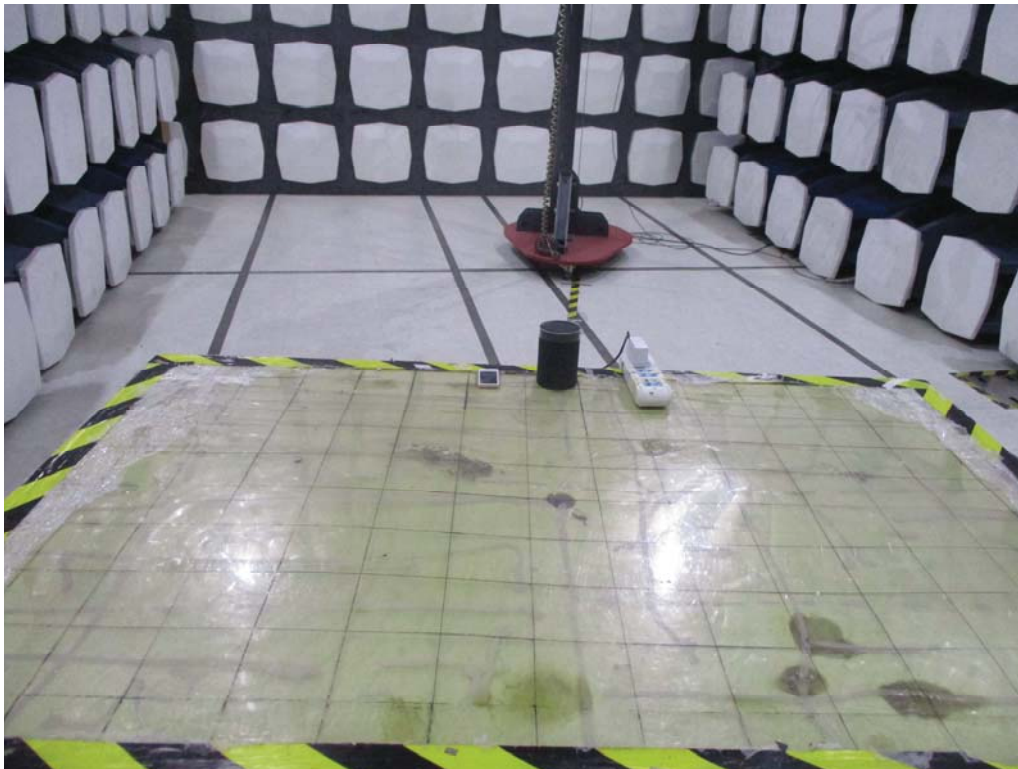
☐ EUT stopped operation and could be reset by operator at test level \_\_\_\_\_ of Interrupt.

☐ EUT was in abnormal operation:  
 – Operation mode was changed from \_\_\_\_\_ to \_\_\_\_\_ at test level \_\_\_\_\_ of Dip. / Interrupt.

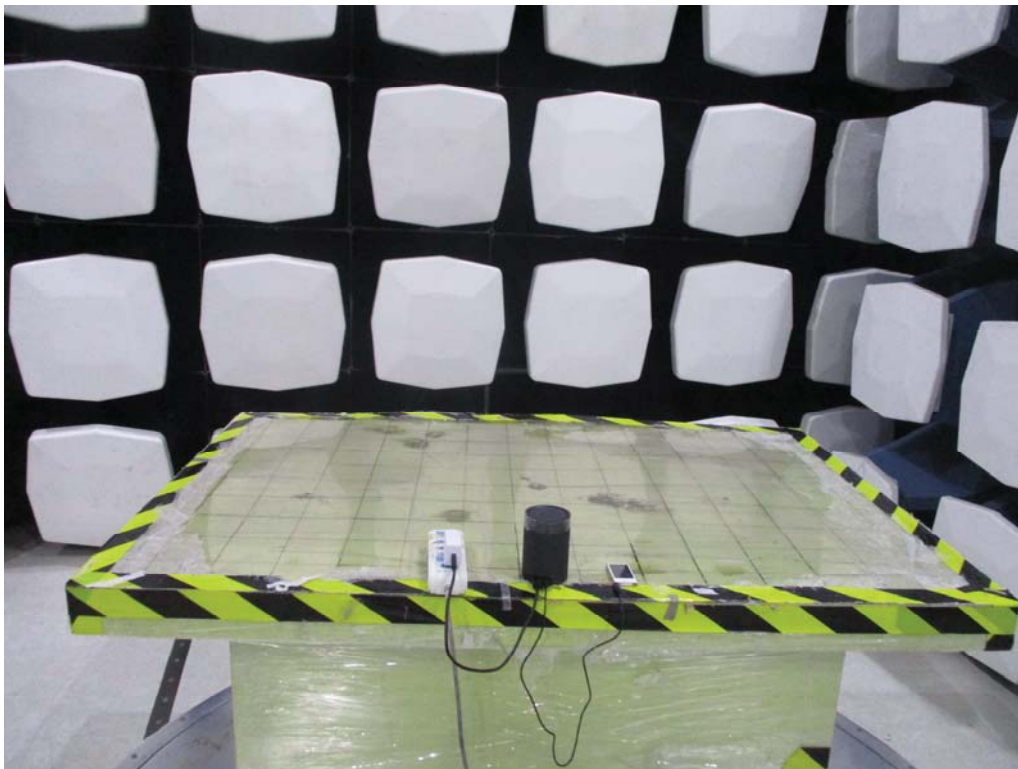
☐ \_\_\_\_\_  
 \_\_\_\_\_

## Photos of Test Set-up

Radiated Disturbance



Radiated Disturbance



RFI Voltage Test



RFI Voltage Test





## Harmonics Current & Flicker



## Electrostatic Discharge

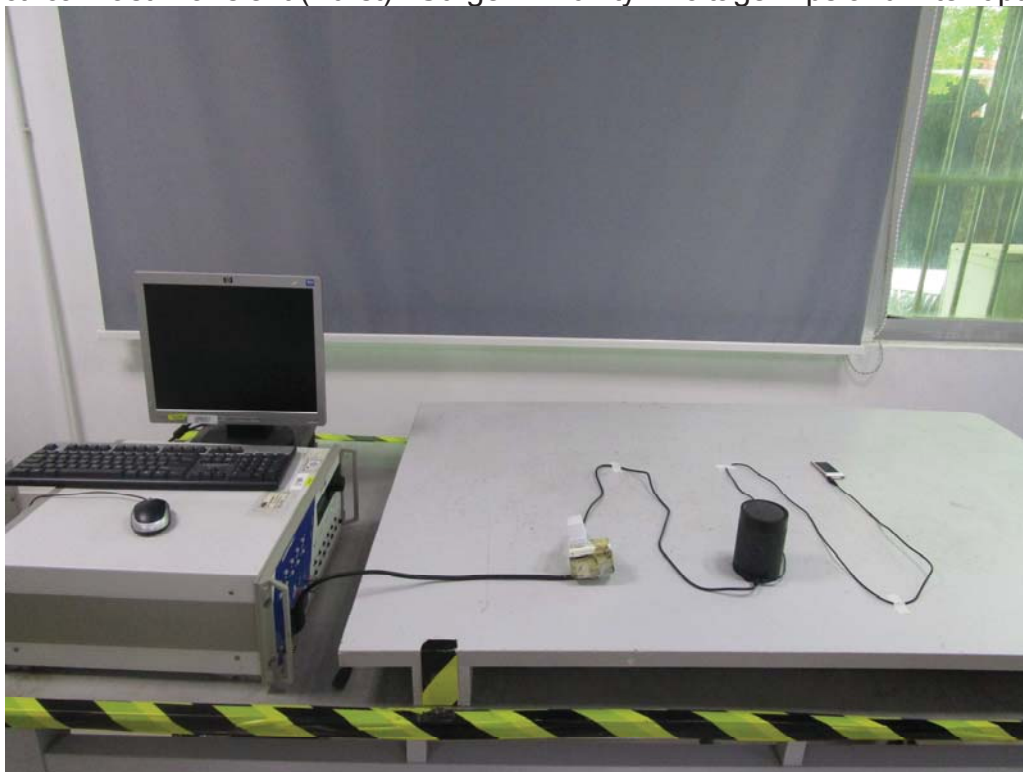




### Radiated Immunity



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



Intertek Report No.: 180507002SZN-001

Injected Current



**Photos of EUT**

External Photo

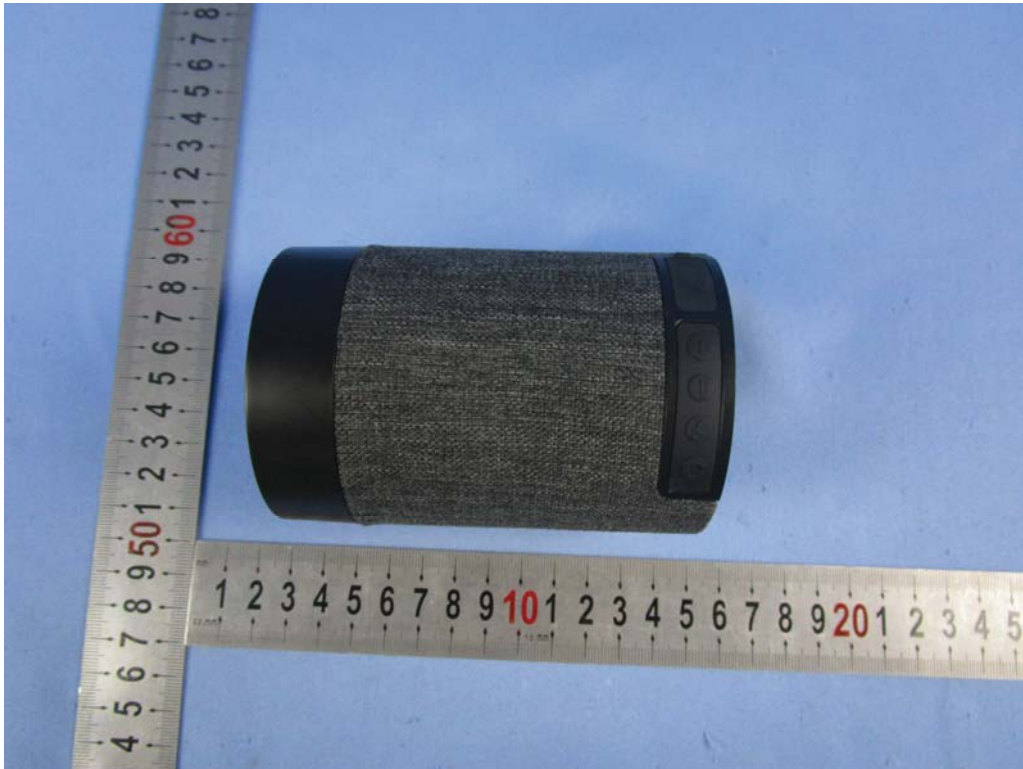


External Photo





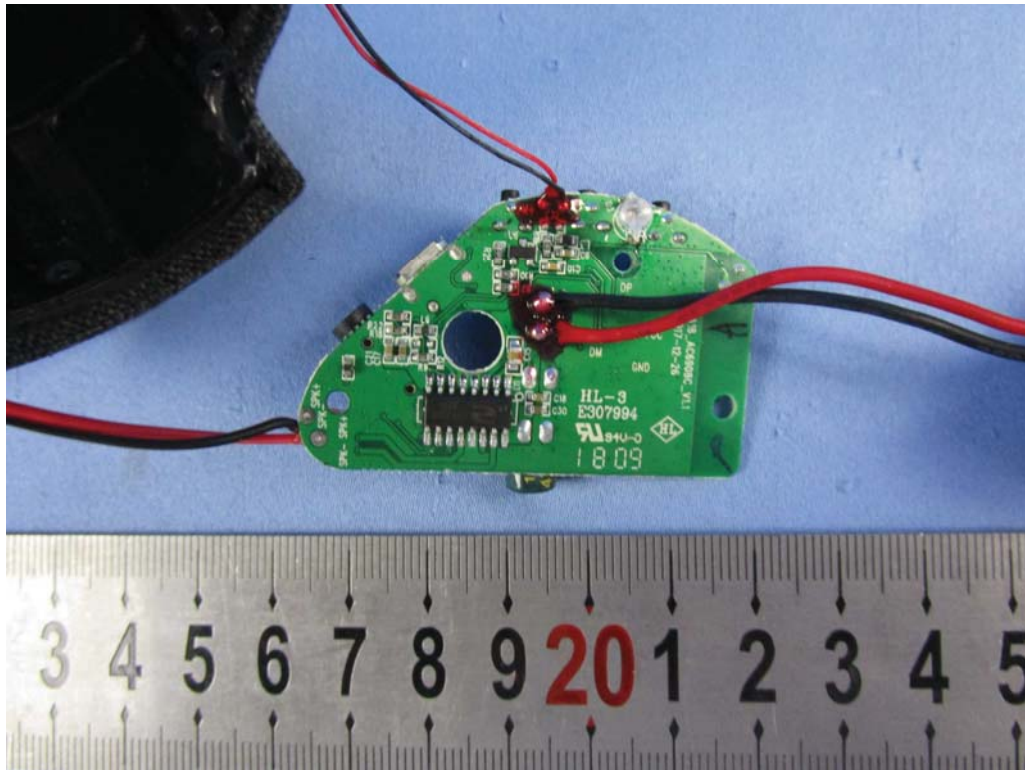
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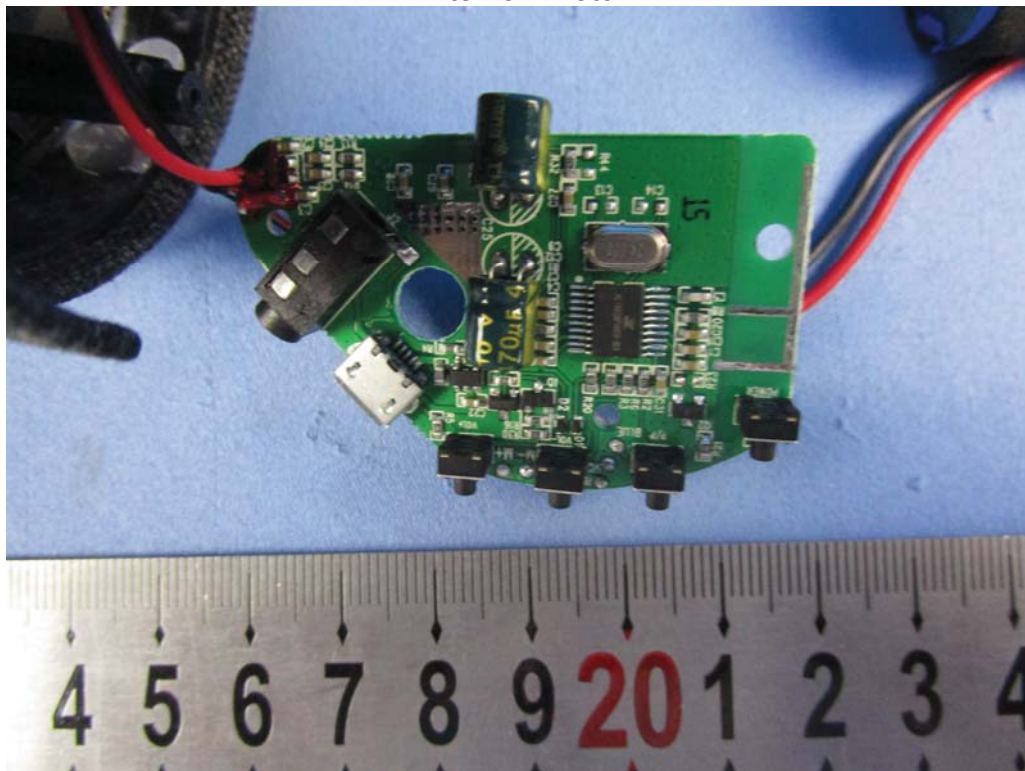
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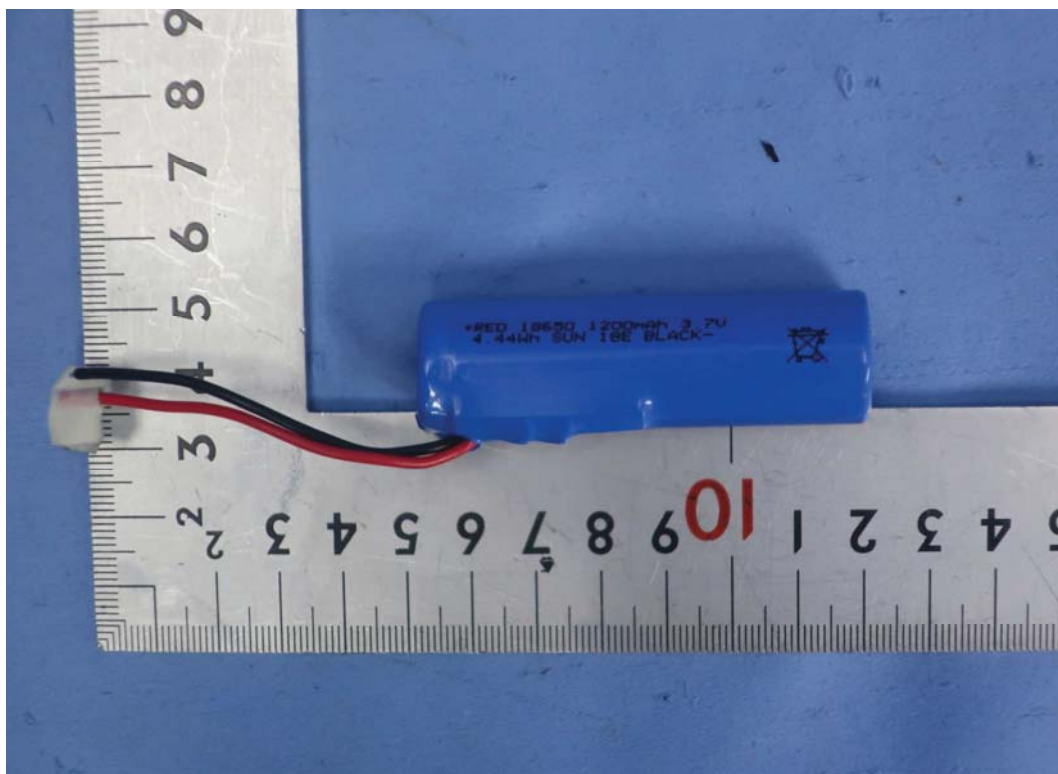
Internal Photo



Internal Photo



Internal Photo



Internal Photo

