TEST REPORT

Application No.:	GZCR2505000682HS
Applicant:	BAUF HOME GmbH
Address of Applicant:	Frankfurter Straße 16, 74072 Heilbronn, Germany
Manufacturer:	BAUF HOME GmbH
Address of Manufacturer:	Frankfurter Straße 16, 74072 Heilbronn, Germany
Factory:	TCL Air Conditioner (Zhong Shan) Co., Ltd.
Address of Factory:	59 Nantou Road West, Nantou, Zhongshan, Guangdong, China
Product Name:	Air conditioner
Model No.:	BRAC-SP-INE2-18-R3 (Indoor unit: BRAC-SP-INE2-18-R3-I, Outdoor unit: BRAC-SP-INE2-18-R3-O) ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	BAUF
Standard(s) :	EN 301 489-1 V2.2.3 EN 301 489-17 V3.3.1 EN 61000-3-3: 2013+ A1:2019+A2:2021 EN IEC 61000-3-2: 2019+A1:2021+A2:2024
Date of Receipt:	2024-10-30
Date of Test:	2024-11-02 to 2024-11-07
Date of Issue:	2025-07-03
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Jerry Chan
Manager

Revision Record			
Version	**Report No.**	**Date**	**Remark**
01	GZCR241000128602	2024-12-24	Original
C01	GZCR241000128602C01	2025-07-03	Amendment report: Changed applicant, manufacturer, product name, model no. and trade mark; Updated standard.

Authorized for issue by:				
		Pank Feng **Pank Feng/Project Engineer**		
		Vico Cui **Vico Cui/Reviewer**		

2 Test Summary

Emission Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Port	EN 301 489-1 V2.2.3 EN 301 489-17 V3.3.1	EN 55032: 2015+A11:2020 +A1:2020	Class B	Pass
Radiated Emissions (30MHz-1GHz)		EN 55032: 2015+A11:2020 +A1:2020	Class B	N/A
Voltage Fluctuations and Flicker	EN 61000-3-3: 2013+ A1:2019 +A2:2021	EN 61000-3-3: 2013+ A1:2019+A2:2021	Clause 5	Pass
Harmonic Current Emission	EN IEC 61000-3-2: 2019+A1:2021 +A2:2024	EN IEC 61000-3-2: 2019+A1:2021	Class A	Pass

Immunity Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Electrostatic Discharge	EN 301 489-1 V2.2.3 EN 301 489-17 V3.3.1	EN 61000-4-2:2009	±4kV Contact Discharge; ±8kV Air Discharge	Pass
Radiated Immunity		EN IEC 61000-4-3:2020	3V/m, 80%, 1kHz Amp. Mod.	Pass
Electrical Fast Transients Burst at AC Mains Power Port		EN 61000-4-4:2012	1kV; 5/50ns Tr/Td; 5kHz Repetition Frequency	Pass
Electrical Fast Transients Burst at Signal Port		EN 61000-4-4:2012	0.5kV; 5/50ns Tr/Td; 5kHz Repetition Frequency	Pass
Surge at AC Mains Power Port		EN 61000-4-5:2014 +A1:2017	1.2/50μs Tr/Td; 1kV Line to Line; 2kV Line to Ground	Pass
Conducted Immunity at AC Mains Power Port		EN 61000-4-6:2014	3Vrms (emf),80%,1kHz Amp. Mod.	Pass
Conducted Immunity at Signal Port		EN 61000-4-6:2014	3Vrms (emf),80%,1kHz Amp. Mod.	Pass
Voltage Dips and Interruptions		EN IEC 61000-4-11:2020	0 % UT for 0.5per;0 % UT for 1per;0 % UT for 250per;70 % UT for 25per; UT is Supply Voltage	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

♣Remark for report GZCR241000128602

♣ Declaration of EUT Family Grouping:

Model No.:

TAC-18CHSD(011630)/*I ("*" represent different panel, "*" =Z, HA, IA, KA, HC, JC, KC, HD, KD, JE, KE, WE, LF, IF, KF, VA, VB, VC, VD, VE, VF, XA11, XA21, XA31, XA41, XA51, XA61, XA71, XA72, XA81, XA82, XA91, XAA1, XAB1, XAC1, XAD1, XAE1, YA11, YA21, YA31, TP11, TP21, TP31, TP41, TP51, TP61, TP71,TP72, TP81, TP91, TPA1,TPB1, TPG11, TPH21, TPG21, TPG31, UA11, UA12, UG11, UG21, UG31, UA21, TPH11, TPH21, DWA, LGA),

S18P9S1 (Indoor unit: SN18P9S1, Outdoor unit: ST18P3), TAC-18CHSD/UG11V3A

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on the appearance color of panel.

Therefore only one model **TAC-18CHSD(011630)/UA11I** was tested in this report.

♣Remark for report GZCR241000128602C01:

This report GZCR241000128602C01 is based on original report GZCR241000128602, with the following changes:

1. Changed applicant's and manufacturer's information.

2. Changed product name and trade mark.

3. Changed model number to BRAC-SP-INE2-18-R3(Indoor unit: BRAC-SP-INE2-18-R3-I, Outdoor unit: BRAC-SP-INE2-18-R3-O).

According to the declaration of the applicant, the Model BRAC-SP-INE2-18-R3 in this report and the Model TAC-18CHSD(011630)/UA11I in the original report were identical, with only difference being the model name and trade mark.

4. Updated standard.

Standard in original report	Standard in this report
EN 301 489-17 V3.2.4	EN 301 489-17 V3.3.1 EN 61000-3-3: 2013+ A1:2019+A2:2021 EN IEC 61000-3-2: 2019+A1:2021+A2:2024

Reviewed the updated standard, all the technical requirements for the product between original and the newest standards' versions are identical, therefore it's acceptable to update standard without further testing.

All test results in report GZCR241000128602 were kept in this report GZCR241000128602C01.

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply: AC 220-240V 50Hz
Clock frequency: <15MHz
Cable(s): AC mains cable:3 wires 2.0m unshielded
signal cable:5.0m unscreened
RF character: Refer to GZCR241000128603/04

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Mobile Phone	SAMSUNG	SM-G9508	R28K110W9JV
Wireless Router	TP-LINK	TL-WDR5620	1174017009906

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Port	3.30dB (9kHz to 150kHz); 3.22dB (150kHz to 30MHz)
Radiated Emissions (30MHz-1GHz)	5.14dB (30MHz-1GHz):3m; 4.90dB (30MHz-1GHz):10m

Remark:
The U_{lab} (lab Uncertainty) is less than U_{cispr} (CISPR Uncertainty) or U_{ETSI}(ETSI Uncertainty).

Emission decision rule:
– Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit, marked as Pass in the report.
– Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit, marked as Fail in the report.

Immunity decision rule:
– Pass means the observation meets the Performance Criterion requirement.
– Fail means the observation doesn't meet the Performance Criterion requirement.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663

Tel: +86 20 82155555

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Emissions at AC Power Port					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Coaxial Cable	HangTianXing	2m	EMC0107	2023-08-24	2025-08-23
Shielding Room	ChangZhou ZhongYu	8m x 3m x 3.8m	EMC0306	2022-10-16	2025-10-15
Two-Line V-Network-GZ	Rohde & Schwarz	ENV216	EMC2135	2024-09-02	2025-09-01
EMI Test Receiver (9kHz-3.6GHz)	Rohde & Schwarz	ESR3	EMC2221	2024-05-13	2025-05-12
Test Software E3r	Audix	Ver.6.191211	GZE100-77	N/A	N/A
Artificial Mains Network (LISN)	AFJ Instruments	LT32C	EMC2046	2024-10-14	2025-10-13

Voltage Fluctuations and Flicker					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Digital power analyzer for harmonics & flicker testing	EMTEST	DPA 500N	EMC2235	2024-04-19	2025-04-18
Programmable multifunctional ac/dc power source	EMTEST	NETWAVE 7-400	EMC2234	2024-04-19	2025-04-18
NET.Control	EMTEST	Ver 3.2.3	GZE100-80	N/A	N/A

Electrostatic Discharge					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Temperature & Humidity	Shanghai Meteorological Instrument Factory Co., Ltd.	ZJ1-2B	EMC0078	2024-06-12	2025-06-11
ESD Ground Plane	SGS-EMC	3m x 3m	EMC0804	N/A	N/A
Aneroid Barometer	Shanghai Meteorological Instrument Factory Co., Ltd.	YM3	EMC2181	2023-11-08	2024-11-07
ESD Simulator-E	EMTEST	NX30	EMC2186	2024-02-20	2025-02-19

Radiated Immunity					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
743 Compact 3m Semi-Anechoic Chamber	ChangZhou ZhongYu	N/A	EMC0525	2022-10-16	2025-10-15
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
Laser Probe Interface	RF Microwave Instrumentation	FI7000	EMC2089	N/A	N/A
Open Switch And Control Unit	Rohde & Schwarz	OSP130	EMC2090	N/A	N/A
Broadband Amplifier (80MHz~1GHz/250W)	Rohde & Schwarz	BBA150	EMC2091	2024-10-14	2025-10-13
Broadband Amplifier (800MHz~3GHz/110W)	Rohde & Schwarz	BBA150	EMC2092	2024-10-14	2025-10-13
Signal Generator (9kHz-6GHz)	Rohde & Schwarz	SMB100A	EMC2093	2024-10-14	2025-10-13
Laser Probe	RF Microwave Instrumentation	FL7006	EMC2094	2024-04-23	2025-04-22
NRP-Z91 Power Sensor (9kHz-6GHz)	Rohde & Schwarz	NPR-Z91	EMC2095	2024-10-14	2025-10-13
NRP-Z91 Power Sensor (9kHz-6GHz)	Rohde & Schwarz	NPR-Z91	EMC2096	2024-10-14	2025-10-13
High-Gain Log-preiodic Antenna	Rohde & Schwarz	HL046E	EMC2097	2022-02-14	2025-02-13
RI Cable	Rohde & Schwarz	7m	EMC2098	2024-05-16	2025-05-15
Broadband Amplifier (2.5~6GHZ/30W)	Rohde & Schwarz	BBA150	EMC2105	2024-10-14	2025-10-13
Test Software EMC32	Rohde & Schwarz	Ver. 10.60.10	GZE100-63	N/A	N/A
Stacked Logarithmic-Periodic Broadband Antenna (0.7~9GHz)/300W	Schwarzbeck	STLP 9149	SEM003-21	2024-09-18	2027-09-17

Electrical Fast Transients Burst at AC Mains Power Port					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
EMC Immunity Test System	TESEQ AG	NSG 3060&CDN3061&INA 6502 CIB	EMC2072	2023-12-15	2024-12-14
Test Software WIN 3000	TESEQ AG	Ver 1.3.2	GZE100-68	N/A	N/A

Electrical Fast Transients Burst at Signal Port					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
EFT/burst capacitive coupling clamp	TESEQ AG	CDN3425	EMC2072-AE1	2023-12-15	2024-12-14
EMC Immunity Test System	TESEQ AG	NSG 3060&CDN3061&INA 6502 CIB	EMC2072	2023-12-15	2024-12-14
Test Software WIN 3000	TESEQ AG	Ver 1.3.2	GZE100-68	N/A	N/A

Surge at AC Mains Power Port					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
EMC Immunity Test System	TESEQ AG	NSG 3060&CDN3061&INA 6502 CIB	EMC2072	2023-12-15	2024-12-14
Test Software WIN 3000	TESEQ AG	Ver 1.3.2	GZE100-68	N/A	N/A

Conducted Immunity at AC Mains Power Port					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Dual Directional coupler	Werlatone Inc.	C1795	EMC1105	2024-05-13	2025-05-12
CDN M2/M3	Elektronik-Feinmechanik	L-801:M2/M3	EMC2048	2024-06-17	2025-06-16
Test System for Conducted and Radiated Immunity	TESEQ AG	NSG 4070B-80	EMC2115	2024-10-14	2025-10-13
Test Software NSG4070_Ctrl1	TESEQ AG	Ver.1.3.0.1	GZE100-72	N/A	N/A
6dB Attenuator	Shanghai Huaxiang	WDTS150-6-2.5-B	EMC2116	2024-06-17	2025-06-16

Conducted Immunity at Signal Port					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Dual Directional coupler	Werlatone Inc.	C1795	EMC1105	2024-05-13	2025-05-12
EM Clamp(10k-1000MHz）	TESEQ	KEMZ801B	EMC2255	2024-08-19	2025-08-18
RF Attenuation Clamp(150k-1000MHz）	TESEQ	KEMA801B	EMC2256	2024-08-19	2025-08-18
CDN M2/M3	Elektronik-Feinmechanik	L-801:M2/M3	EMC2048	2024-06-17	2025-06-16
COUPLING AND DECOUPLING NETWORK (150kHz-230MHz)	TESEQ AG	CDN ST08A	EMC2112	2023-07-04	2025-07-03
CDN S502A	TESEQ AG	CDN S502A	EMC2113	2023-07-04	2025-07-03
Coupling Decouping Network (150kHz-230MHz)	TESEQ AG	CDN USB3.0	EMC2114	2023-07-04	2025-07-03
Test System for Conducted and Radiated Immunity	TESEQ AG	NSG 4070B-80	EMC2115	2024-10-14	2025-10-13
Test Software NSG4070_Ctrl1	TESEQ AG	Ver.1.3.0.1	GZE100-72	N/A	N/A
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
6dB Attenuator	Shanghai Huaxiang	WDTS150-6-2.5-B	EMC2116	2024-06-17	2025-06-16

Voltage Dips and Interruptions					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Oscilloscope	Tektronix	TDS3052C	EMC2055	2024-10-14	2025-10-13
EMC Immunity Test System	TESEQ AG	NSG 3060&CDN3061&INA 6502 CIB	EMC2072	2023-12-15	2024-12-14
Test Software WIN 3000	TESEQ AG	Ver 1.3.2	GZE100-68	N/A	N/A

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
DMM	Fluke	73	EMC0006	2024-06-13	2025-06-12
DMM	Fluke	73	EMC0007	2024-06-13	2025-06-12

6 Emission Test Results

6.1 Conducted Emissions at AC Power Port

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 55032: 2015+A11:2020+A1:2020
Limit:
0.15MHz-0.5MHz 66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5MHz-5MHz 56dB(μV) quasi-peak, 46dB(μV) average
5MHz-30MHz 60dB(μV) quasi-peak, 50dB(μV) average
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

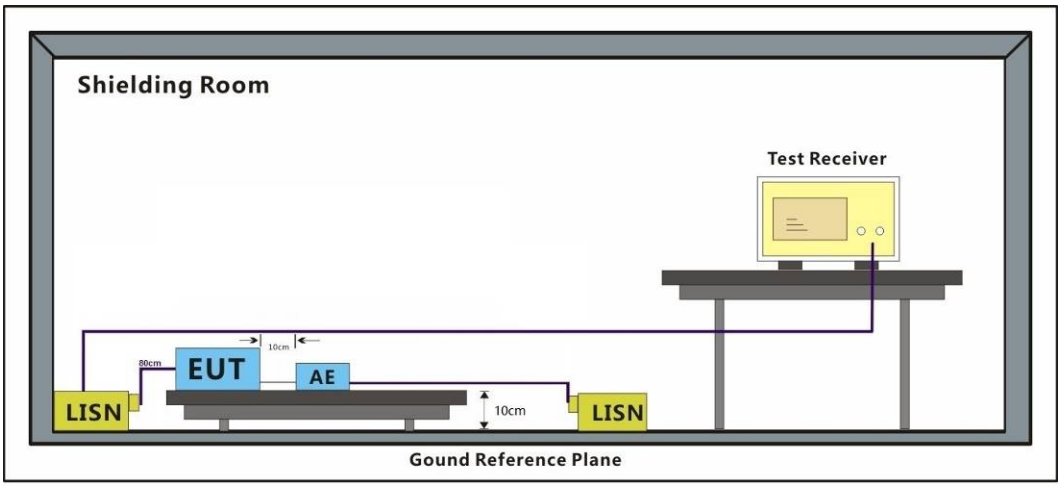
6.1.1 E.U.T. Operation

Operating Environment:
Temperature: 24.2 °C Humidity: 51.2 % RH Atmospheric Pressure: 1013 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Pre-scan	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

6.1.3 Test Setup Diagram

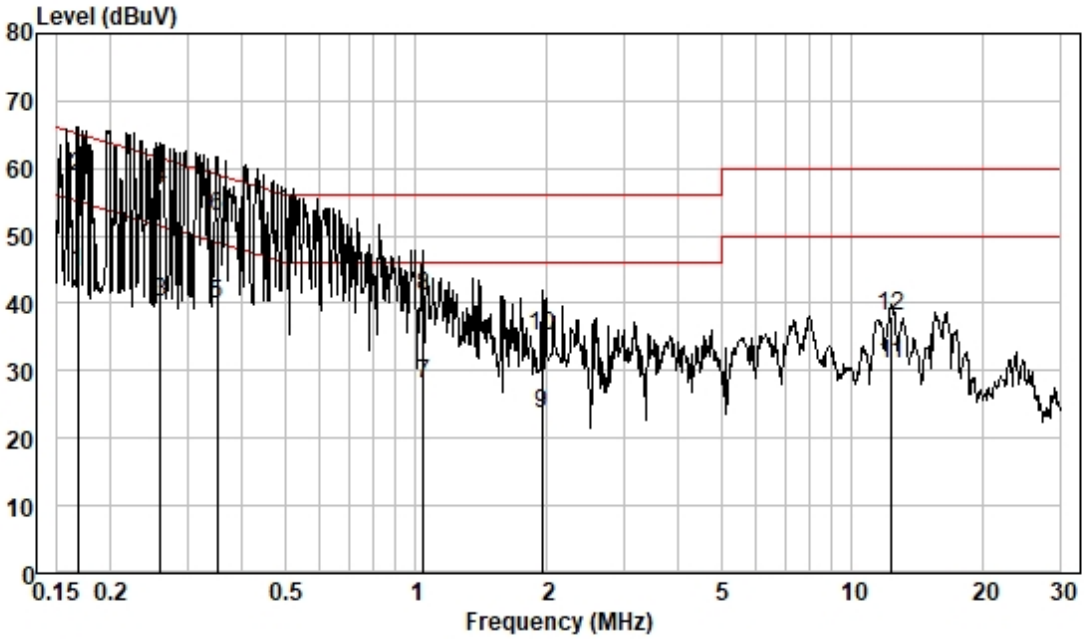


6.1.4 Measurement Procedure and Data

An initial pre-scan was performed with peak detector.Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

Remark: Level= Read Level+ Cable Loss+ LISN Factor

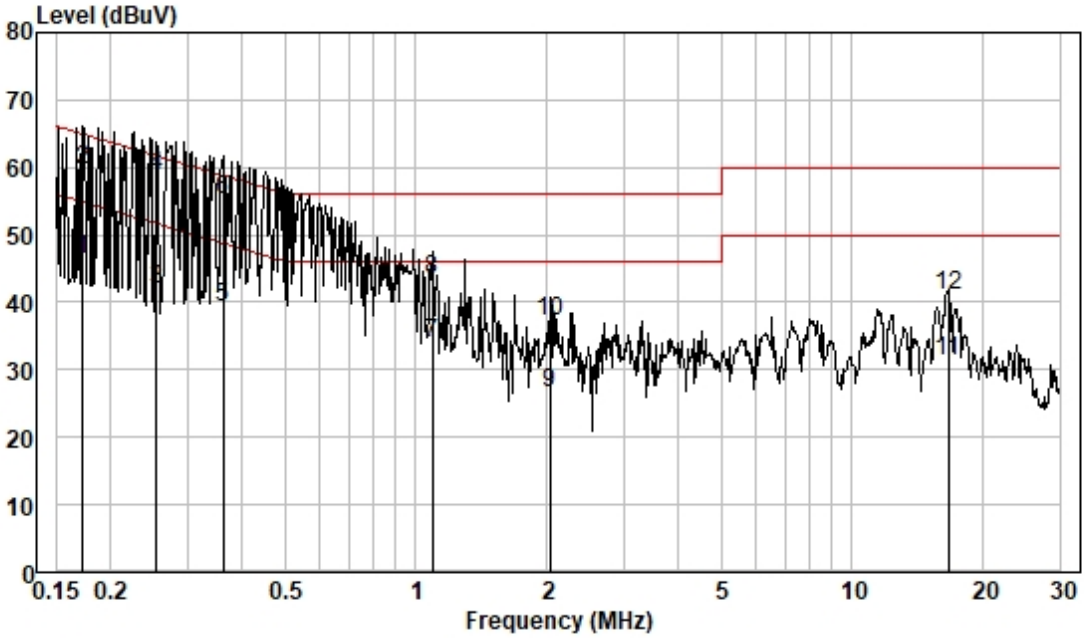
Test Mode: 07; Line: Live line



Pol :LINE
Mode :
Model :
Power :

	Frequenc MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1	0.168	34.96	0.04	9.54	44.54	55.08	-10.54	Average
2	0.168	49.21	0.04	9.54	58.79	65.08	-6.29	QP
3	0.260	30.64	0.04	9.59	40.27	51.42	-11.15	Average
4	0.260	47.26	0.04	9.59	56.89	61.42	-4.53	QP
5	0.350	30.35	0.05	9.59	39.99	48.96	-8.97	Average
6	0.350	43.34	0.05	9.59	52.98	58.96	-5.98	QP
7	1.043	18.54	0.07	9.54	28.15	46.00	-17.85	Average
8	1.043	31.46	0.07	9.54	41.07	56.00	-14.93	QP
9	1.949	13.75	0.12	9.61	23.48	46.00	-22.52	Average
10	1.949	25.53	0.12	9.61	35.26	56.00	-20.74	QP
11	12.318	21.00	0.29	9.78	31.07	50.00	-18.93	Average
12	12.318	28.12	0.29	9.78	38.19	60.00	-21.81	QP

Test Mode: 07; Line: Neutral Line



Pol :NEUTRAL
Mode :
Model :
Power :

	Frequenc MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1	0.172	36.72	0.04	9.54	46.30	54.86	-8.56	Average
2	0.172	50.18	0.04	9.54	59.76	64.86	-5.10	QP
3	0.255	32.46	0.04	9.53	42.03	51.60	-9.57	Average
4	0.255	49.07	0.04	9.53	58.64	61.60	-2.96	QP
5	0.361	29.55	0.05	9.52	39.12	48.69	-9.57	Average
6	0.361	45.49	0.05	9.52	55.06	58.69	-3.63	QP
7	1.088	24.43	0.08	9.56	34.07	46.00	-11.93	Average
8	1.088	33.68	0.08	9.56	43.32	56.00	-12.68	QP
9	2.033	16.93	0.13	9.52	26.58	46.00	-19.42	Average
10	2.033	27.54	0.13	9.52	37.19	56.00	-18.81	QP
11	16.661	21.17	0.35	9.90	31.42	50.00	-18.58	Average
12	16.661	30.78	0.35	9.90	41.03	60.00	-18.97	QP

6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4

Test Method: EN 55032: 2015+A11:2020+A1:2020

6.2.1 Conclusion

N/A, since there is not any ancillary equipment connected to the radio equipment. The Radiated Emission test is only applicable to ancillary equipment not incorporated in the radio equipment and intended to be measured on a stand-alone basis, as declared by the manufacturer.

6.3 Voltage Fluctuations and Flicker

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 61000-3-3: 2013+ A1:2019+A2:2021

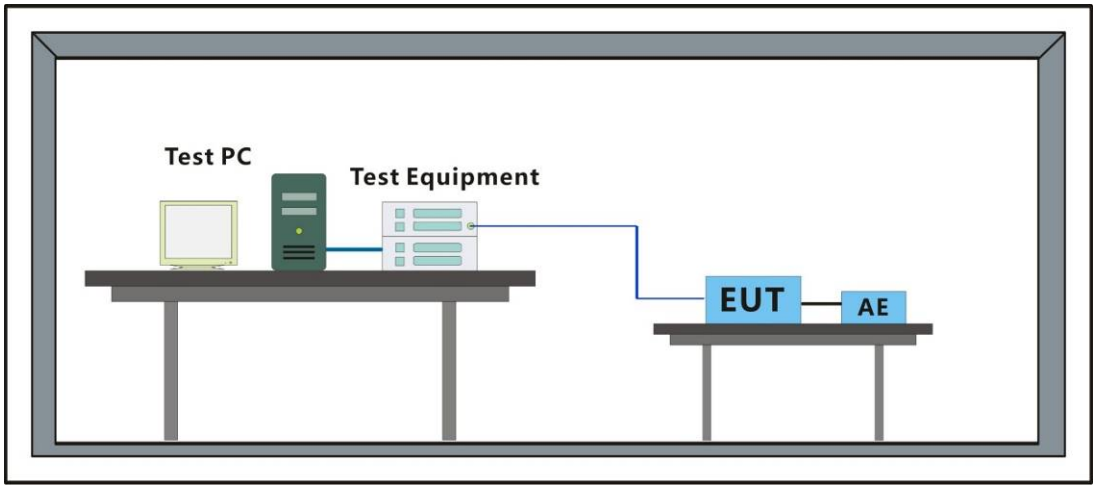
6.3.1 E.U.T. Operation

Operating Environment:
Temperature: 24.5 °C Humidity: 53.3 % RH Atmospheric Pressure: 1013 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Pre-scan	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

6.3.3 Test Setup Diagram



6.3.4 Measurement Procedure and Data

Test Mode: 07

Flicker Results

Standard Specific Results for IEC 61000-3-3 (Edition 3)

Standard Group: Industry

Standard Name: IEC 61000-3-3 (Edition 3)
Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

Test Condition: General Test Conditions

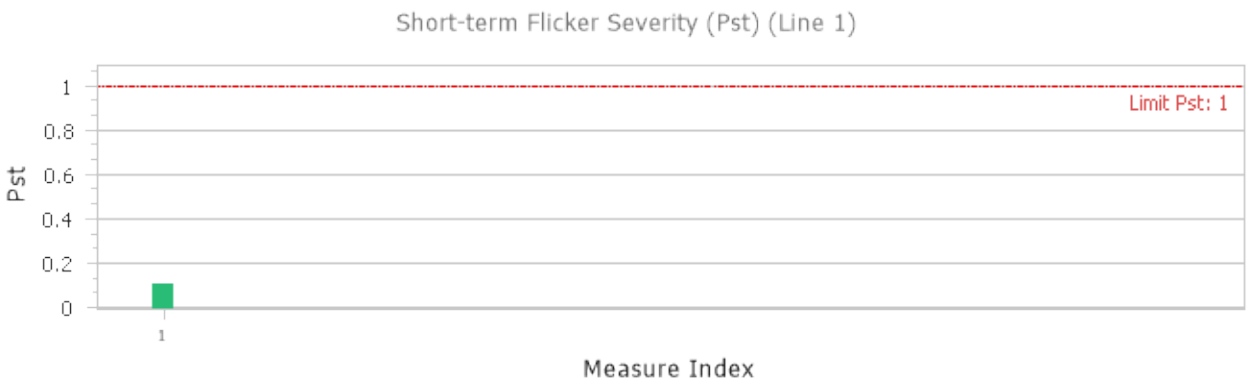
Analysis Status: PASS

Flicker Measurements Settings	
Main Line:	230V, 50Hz
Flicker Meter:	230V / 50Hz
Flicker Impedance:	Zref
Observation Time:	1 × 10 min
Measurements:	1

Flicker Measurements					
	P_{lt}	Max P_{st}	Max d_c	Max d_{max}	Max T_{max}
Line 1:	0.048	0.108	0	< 0.2	0
Limits:	0.65	1	3.3	4	0.5
Results:	PASS	PASS	PASS	PASS	PASS

Flicker Individual Measurements												
Measurement	P_{st} [ ]			d_c [%]			d_{max} [%]			T_{max} [s]		
	Value	Limit	Result	Value	Limit	Result	Value	Limit	Result	Value	Limit	Result
#1	0.11	1.00	PASS	0.00	3.30	PASS	< 0.2	4.00	PASS	0.00	0.50	PASS

Pst Data



6.4 Harmonic Current Emission

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN IEC 61000-3-2: 2019+A1:2021

6.4.1 Conclusion

Remark:

Since the EUT was belong to exception of clause 7 and Annex B, according to EN IEC 61000-3-2 figure 1, it was deemed to conform to the requirements of this standard without further testing.

7 Harmonic current limits

The procedure for applying the limits and assessing the results is shown in Figure 1.

For the following categories of equipment, limits are not specified in this standard:

NOTE 1 Limits may be defined in a future amendment or revision of the standard.

– lighting equipment with a rated power less than but not equal to 5 W;

– equipment with a rated power of 75 W or less, other than lighting equipment;

NOTE 2 This value may be reduced from 75 W to 50 W in the future, subject to approval by National Committees at that time.

– professional equipment with a total rated power greater than 1 kW;

– symmetrically controlled heating elements with a rated power less than or equal to 200 W;

– independent phase control dimmers

• with a rated power less than or equal to 1 kW when operating incandescent lamps;

• with a rated power less than or equal to 200 W for trailing edge dimmers, and universal phase control dimmers with the default mode set to trailing edge, when operating lighting equipment other than incandescent lamps;

• with a rated power less than or equal to 100 W for leading edge dimmers, and universal phase control dimmers without default mode set to trailing edge, when operating lighting equipment other than incandescent lamps.

and

Kitchen machines as listed in the scope of IEC 60335-2-14 are deemed to conform to the harmonic current limits of this standard without further testing.

Please read clause 7 & Annex B of this standard for reference.

7 Immunity Test Results

Performance Criteria Description in EN 301 489-1

Performance criteria for continuous phenomena	During the test, the equipment shall: • continue to operate as intended; • not unintentionally transmit; • not unintentionally change its operating state; • not unintentionally change critical stored data.
Performance criteria for transient phenomena	For all ports and transient phenomena with the exception described below, the following applies: • The application of the transient phenomena shall not result in a change of the mode of operation (e.g. unintended transmission) or the loss of critical stored data. • After application of the transient phenomena, the equipment shall operate as intended. For surges applied to symmetrically operated wired network ports intended to be connected directly to outdoor lines the following criteria applies: • For products with only one symmetrical port intended for connection to outdoor lines, loss of function is allowed, provided the function is self-recoverable, or can be otherwise restored. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost. • For products with more than one symmetrical port intended for connection to outdoor lines, loss of function on the port under test is allowed, provided the function is self-recoverable. Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

Performance Criteria Description in EN 301 489-17 V3.2.4

Criteria	During Test	After Test (i.e. as a result of the application of the test)
A	Shall operate as intended. (see note). Shall be no loss of function. Shall be no unintentional transmissions.	Shall operate as intended. Shall be no degradation of performance. Shall be no loss of function. Shall be no loss of critical stored data.
B	May be loss of function.	Functions shall be self-recoverable. Shall operate as intended after recovering. Shall be no loss of critical stored data.
C	May be loss of function.	Functions shall be recoverable by the operator. Shall operate as intended after recovering. Shall be no loss of critical stored data.

NOTE: Operate as intended during the test shall be considered as:
For equipment that supports a PER or FER, the minimum performance level shall be a PER or FER less than or equal to 10 %.
For equipment that does not support a PER or a FER, (e.g. audio equipment and equipment transmitting sporadic messages) the minimum performance level shall be no loss of the wireless transmission function needed for the intended use of the equipment.

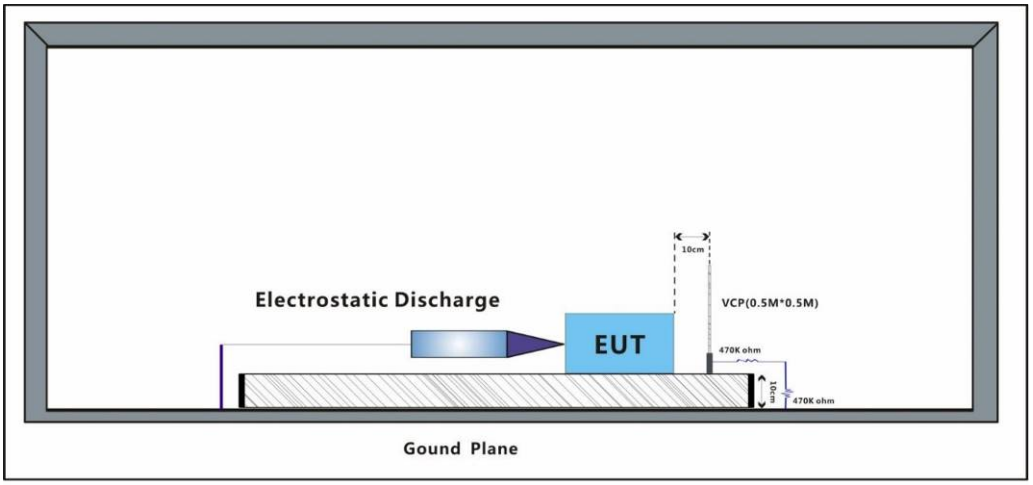
Performance criteria for Continuous phenomena
The performance criteria A shall apply. Where the EUT is a transmitter in standby mode, unintentional transmission shall not occur during the test. Where the EUT is a transceiver in receive mode, unintentional transmission shall not occur during the test.
Performance criteria for Transient phenomena
The performance criteria B shall apply, except for voltage dips greater than or equal to 100 ms and voltage interruptions of 5 000 ms duration, for which performance criteria C shall apply. Where the EUT is a transmitter in standby mode, unintentional transmission shall not occur as a result of the application of the test. Where the EUT is a transceiver in receive mode, unintentional transmission shall not occur as a result of the application of the test.

7.1 Electrostatic Discharge

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4

Test Method: EN 61000-4-2:2009

7.1.1 Test Setup Diagram



7.1.2 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 53.3 % RH Atmospheric Pressure: 1013 mbar

7.1.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.1.4 Test Condition and Results:

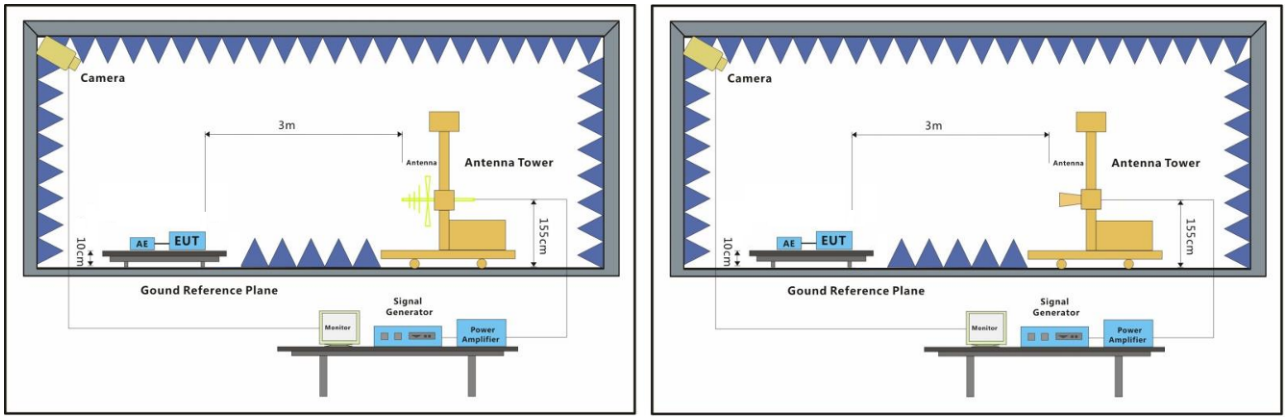
Performance Criterion: B
Discharge Impedance: 330Ω/150pF
Number of Discharge: Minimum 10 times at each test point
Discharge Mode: Single Discharge
Discharge Period: 1 second minimum
Test Point:
1. All insulated enclosure and seams.
2. All accessible metal parts of the enclosure.
3. All side

Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	2,4,8	+	1	A
Air Discharge	2,4,8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	N/A
Horizontal Coupling	4	-	3	N/A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A
A: No degradation in the performance of the EUT was observed				

7.2 Radiated Immunity

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN IEC 61000-4-3:2020

7.2.1 Test Setup Diagram



7.2.2 E.U.T. Operation

Operating Environment:
Temperature: 20.6 °C Humidity: 53.0 % RH Atmospheric Pressure: 1013 mbar

7.2.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.2.4 Test Condition and Results:

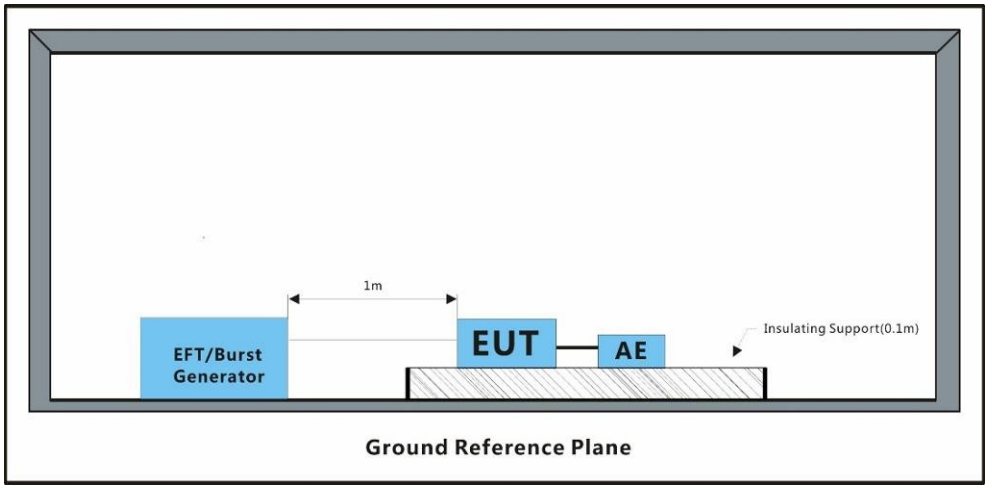
Performance Criterion: A
Frequency Range: 80MHz to 6GHz
Antenna Polarisation: Vertical and Horizontal
Modulation: 1kHz,80% Amp. Mod,1% increment

Frequency	Level (V/m)	EUT Face	Dwell time	Result / Observations
80MHz-6GHz	3	Front	2s	A
80MHz-6GHz	3	Back	2s	A
80MHz-6GHz	3	Left	2s	A
80MHz-6GHz	3	Right	2s	A
80MHz-6GHz	3	Top	2s	A
80MHz-6GHz	3	Underside	2s	A
A: No degradation in the performance of the EUT was observed				

7.3 Electrical Fast Transients Burst at AC Mains Power Port

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 61000-4-4:2012

7.3.1 Test Setup Diagram



7.3.2 E.U.T. Operation

Operating Environment:
Temperature: 23.8 °C Humidity: 49.3 % RH Atmospheric Pressure: 1013 mbar

7.3.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.3.4 Test Condition and Results:

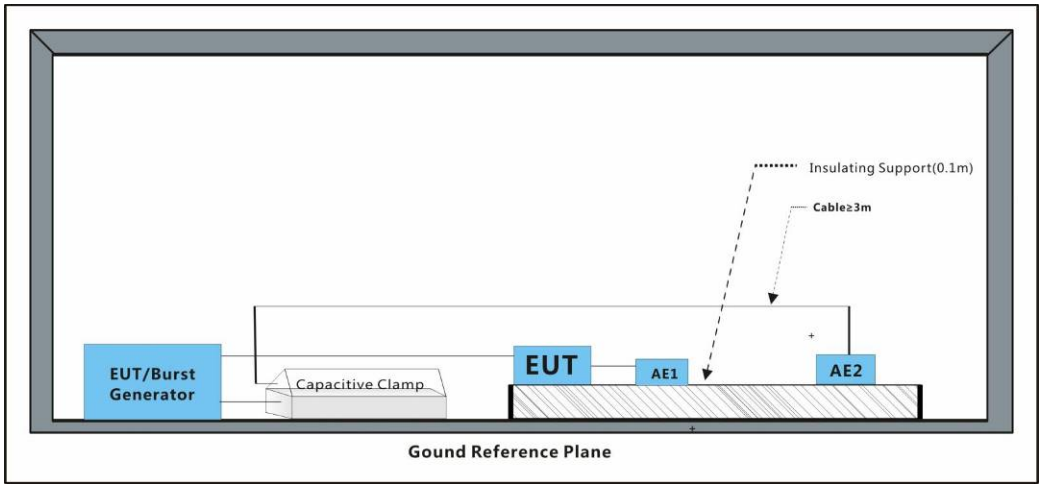
Performance Criterion: B
Repetition Frequency: 5kHz
Burst Period: 300ms

Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
AC power port	1	+	CDN	A
AC power port	1	-	CDN	A
A: No degradation in the performance of the EUT was observed				

7.4 Electrical Fast Transients Burst at Signal Port

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 61000-4-4:2012

7.4.1 Test Setup Diagram



7.4.2 E.U.T. Operation

Operating Environment:
Temperature: 23.8 °C Humidity: 49.3 % RH Atmospheric Pressure: 1013 mbar

7.4.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.4.4 Test Condition and Results:

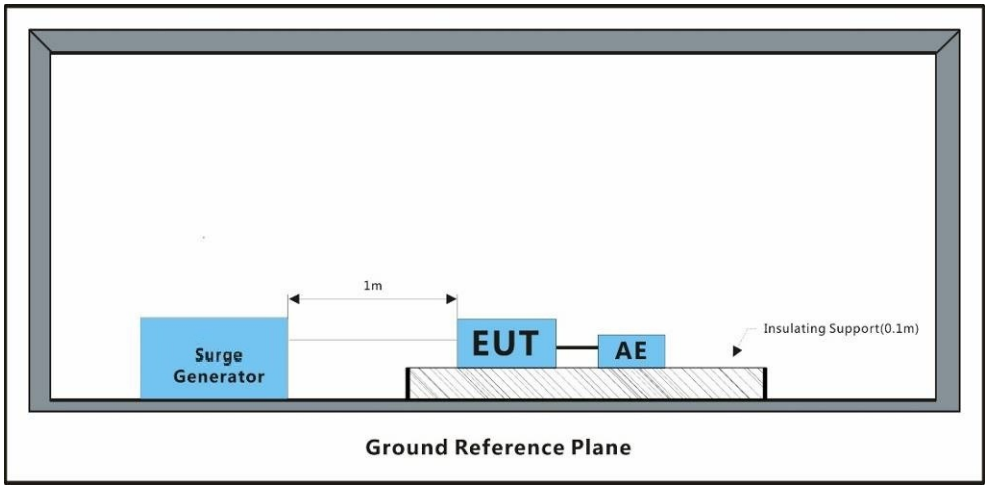
Performance Criterion: B
Repetition Frequency: 5kHz
Burst Period: 300ms

Port	Level (kV)	Polarity	CDN/Clamp	Result / Observations
Signal port	0.5	+	Clamp	A
Signal port	0.5	-	Clamp	A
A: No degradation in the performance of the EUT was observed				

7.5 Surge at AC Mains Power Port

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 61000-4-5:2014 +A1:2017

7.5.1 Test Setup Diagram



7.5.2 E.U.T. Operation

Operating Environment:
Temperature: 23.8 °C Humidity: 49.3 % RH Atmospheric Pressure: 1013 mbar

7.5.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.5.4 Test Condition and Results:

Performance Criterion: B

Interval: 60s between each surge

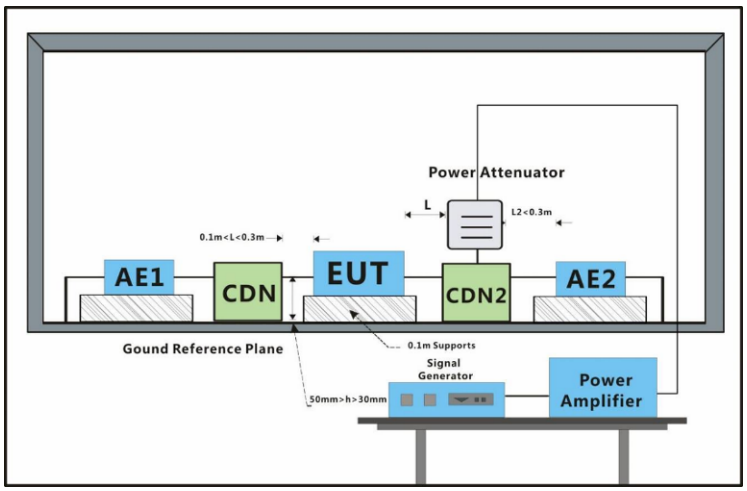
No. of surges: 5 positive, 5 negative at 0°, 90°, 180°, 270°

Test Line	Level (kV)	Polarity	Phase (deg)	Result / Observations
L-N	0.5,1	+	0°	A
L-N	0.5,1	-	0°	A
L-N	0.5,1	+	90°	A
L-N	0.5,1	-	90°	A
L-N	0.5,1	+	180°	A
L-N	0.5,1	-	180°	A
L-N	0.5,1	+	270°	A
L-N	0.5,1	-	270°	A
L-PE	0.5,1,2	+	0°	A
L-PE	0.5,1,2	-	0°	A
L-PE	0.5,1,2	+	90°	A
L-PE	0.5,1,2	-	90°	A
L-PE	0.5,1,2	+	180°	A
L-PE	0.5,1,2	-	180°	A
L-PE	0.5,1,2	+	270°	A
L-PE	0.5,1,2	-	270°	A
N-PE	0.5,1,2	+	0°	A
N-PE	0.5,1,2	-	0°	A
N-PE	0.5,1,2	+	90°	A
N-PE	0.5,1,2	-	90°	A
N-PE	0.5,1,2	+	180°	A
N-PE	0.5,1,2	-	180°	A
N-PE	0.5,1,2	+	270°	A
N-PE	0.5,1,2	-	270°	A
A: No degradation in the performance of the EUT was observed				

7.6 Conducted Immunity at AC Mains Power Port

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 61000-4-6:2014

7.6.1 Test Setup Diagram



7.6.2 E.U.T. Operation

Operating Environment:
Temperature: 23.8 °C Humidity: 49.3 % RH Atmospheric Pressure: 1013 mbar

7.6.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.6.4 Test Condition and Results:

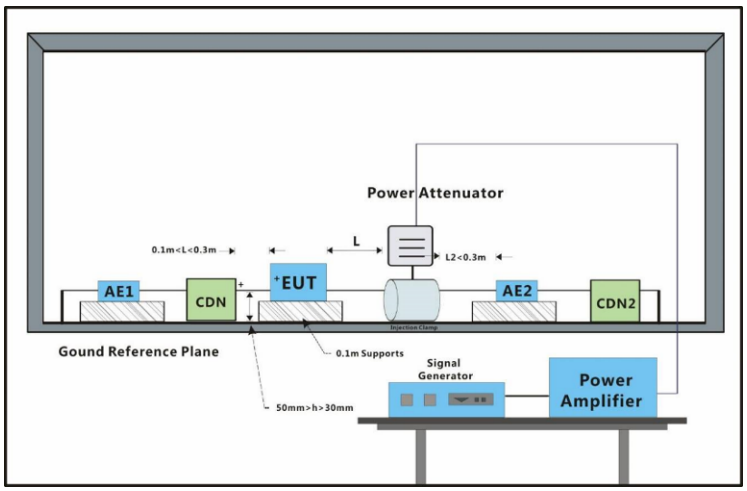
Performance Criterion: A
Frequency Range: 0.15MHz to 80MHz
Modulation: 80%, 1kHz Amplitude Modulation
Step Size: 1%

Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
AC power port	3	CDN	2s	A
A: No degradation in the performance of the EUT was observed				

7.7 Conducted Immunity at Signal Port

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN 61000-4-6:2014

7.7.1 Test Setup Diagram



7.7.2 E.U.T. Operation

Operating Environment:
Temperature: 23.8 °C Humidity: 49.3 % RH Atmospheric Pressure: 1013 mbar

7.7.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.7.4 Test Condition and Results:

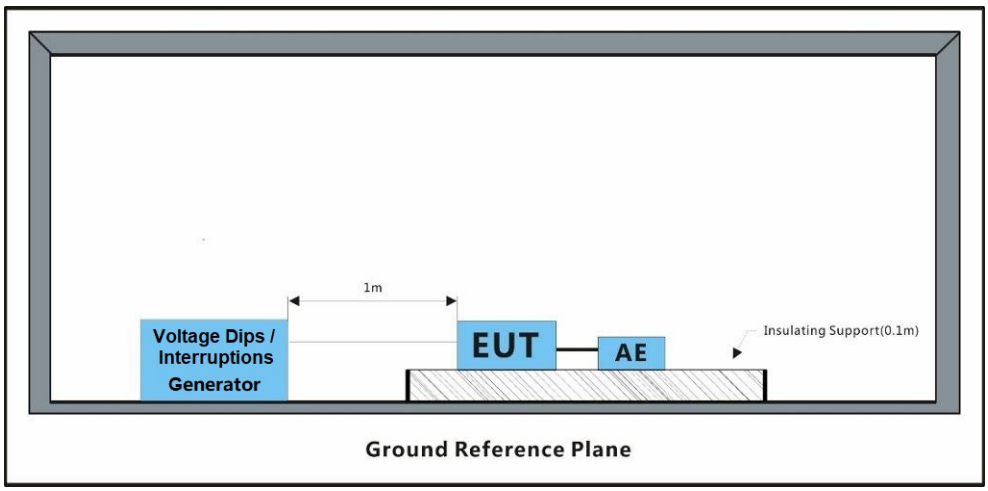
Performance Criterion: A
Frequency Range: 0.15MHz to 80MHz
Modulation: 80%, 1kHz Amplitude Modulation
Step Size: 1%

Port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
Signal port	3	Clamp	2s	A
A: No degradation in the performance of the EUT was observed				

7.8 Voltage Dips and Interruptions

Test Requirement: EN 301 489-1 V2.2.3
EN 301 489-17 V3.2.4
Test Method: EN IEC 61000-4-11:2020

7.8.1 Test Setup Diagram



7.8.2 E.U.T. Operation

Operating Environment:
Temperature: 23.8 °C Humidity: 49.3 % RH Atmospheric Pressure: 1013 mbar

7.8.3 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	Operation(BT):Keep the EUT communicating with other Bluetooth devices.
Final test	08	Operation(2.4G Wi-Fi):Keep the EUT communicating with router via 2.4G Wi-Fi.

7.8.4 Test Condition and Results:

Performance Criterion:
0% of UT (Supply Voltage) for 0.5 Cycle: B;
0% of UT for 1 Cycle: B;
0% of UT for 250 Cycles: C;
70 % of UT for 25 Cycles: C
No. of Dips / Interruptions: 3 per Level
Time between dropout: 10s

Level % UT	Phase (deg)	Duration	No. of Dips / Interruptions	Result / Observations
0	0°	0.5 Cycle	3	A
0	180°	0.5 Cycle	3	A
0	0°	1 Cycle	3	A
0	180°	1 Cycle	3	A
0	0°	250 Cycles	3	B
0	180°	250 Cycles	3	B
70	0°	25 Cycles	3	A
70	180°	25 Cycles	3	A
A: No degradation in the performance of the EUT was observed				

8 Test Setup Photo

Conducted Emissions at AC Power Port

Voltage Fluctuations and Flicker

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 www.sgsgroup.com.cn
中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编：510663 t (86-20) 82155555 sgs.china@sgs.com

Electrostatic Discharge

Radiated Immunity

Electrical Fast Transients Burst at AC Mains Power Port

Electrical Fast Transients Burst at Signal Port

Surge at AC Mains Power Port

Conducted Immunity at AC Mains Power Port

Conducted Immunity at Signal Port

Voltage Dips and Interruptions

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for GZCR2410001286HS

- End of the Report -