

Prüfbericht-Nr.: <i>Test report no.:</i>	CN25PU5W 002	Auftrags-Nr.: <i>Order no.:</i>	168560989	Seite 1 von 20 <i>Page 1 of 20</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2025-07-03	
Auftraggeber: <i>Client:</i>	Honeywell (Beijing) Technology Solutions Labs Co., Ltd. A1 Building, C&W Industry Zone, No.14 Jiuxianqiao Road, Chaoyang District, 100015, Beijing, P.R. China			
Prüfgegenstand: <i>Test item:</i>	Thermostat			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	TC322C-G, TC323C-G, TC322B-G, TC323B-G			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR Title 47 FCC Part 15: Subpart C Section 15.255 RSS-210 Issue 11 June 25, 2024 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2025-07-13	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A004018826-002, 004 A004022468-001			
Prüfzeitraum: <i>Testing period:</i>	2025-07-14 - 2025-07-25			
Ort der Prüfung: <i>Place of testing:</i>	Refer to section 2.1			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	<u>X Bell Hu</u>		genehmigt von: <i>authorized by:</i>	<u>X Lin Lin</u>
Datum: <i>Date:</i>	2025-12-12	Signed by: Bell Hu	Ausstellungsdatum: <i>Issue date:</i>	2025-12-12 Signed by: Lin Lin
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / <i>Other:</i>	FCC ID: 2ARTN-00013, IC: 24552-00013 HVIN: 830604: TC322C-G 830607: TC323C-G 941403: TC322B-G 941405: TC323B-G PMN: TC322C-G, TC323C-G, TC322B-G, TC323B-G			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 OUTPUT POWER

RESULT: Pass

5.1.3 FREQUENCY STABILITY

RESULT: Pass

5.1.4 99% BANDWIDTH

RESULT: Pass

5.1.5 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.6 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of 60GHz Radar

Appendix B: Photographs of the Test Set-up.

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street,
Longhua District, Shenzhen 518000, People's Republic of China

A2LA Cert. No.: 5162.01

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
Wireless Connectivity Tester	R&S	CMW270	101375	2024-09-26	2025-09-25
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2024-09-26	2025-09-25
Power Meter	Rohde & Schwarz	NRP2	107105	2024-10-31	2025-10-30
Power Sensor	Rohde & Schwarz	NRP-Z81	105677	2024-09-26	2025-09-25
DC Power Supply	KIKUSUI	PAN35-5A	YM002997	2025-02-22	2026-02-21
Digital Multi Meter	FLUKE	F15B	44350844WS	2025-02-24	2026-02-23
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R190-L0F0	202305240001	2024-09-13	2027-09-12
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R150-L0F0	202305240001	2024-09-02	2027-09-01
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R100-L0F0	202305240001	2024-08-29	2027-08-28
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R060-L0F0	202305240001	2024-08-30	2027-08-29
MM-Wave Frequency Conversion Transmitting Unit	Tonscend	MMFC-T120-A1	202305240001	2024-09-11	2027-09-10
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R040-L0F0	202305240001	2023-11-01	2026-10-31
High Low Temperature Test Chamber	Cavendi	CATT-150C	231020001	2023-05-17	2026-05-16
Control PC	Lenovo	M4000q-00IRB	YLX3LXKQ	N/A	N/A
Unwanted Emission Testing (TS9975)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	2024-09-29	2025-09-28
Signal Analyzer	R&S	FSV 40	101439	2024-09-29	2025-09-28
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A

Filterbank	R&S	Wlan	100759	2024-09-29	2025-09-28
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2024-09-29	2025-09-28
Amplifier	R&S	SCU-18F	180070	2024-09-29	2025-09-28
Amplifier	R&S	SCU40A	100475	2024-09-29	2025-09-28
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2024-09-28	2025-09-27
Double-Ridged Antenna (1 - 18 GHz)	ETS-LINDGREN	3117	00218717	2024-09-28	2025-09-27
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2024-09-28	2025-09-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2024-09-28	2025-09-27
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-09-14	2027-09-13
Wireless Connectivity Tester	R&S	CMW270	101375	2024-09-26	2025-09-25
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2024-09-26	2025-09-25
Power Meter	Rohde & Schwarz	NRP2	107105	2024-10-31	2025-10-30
Power Sensor	Rohde & Schwarz	NRP-Z81	105677	2024-09-26	2025-09-25
DC Power Supply	KIKUSUI	PAN35-5A	YM002997	2025-02-22	2026-02-21
Digital Multi Meter	FLUKE	F15B	44350844WS	2025-02-24	2026-02-23
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R190-L0F0	202305240001	2024-09-13	2027-09-12
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R150-L0F0	202305240001	2024-09-02	2027-09-01
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R100-L0F0	202305240001	2024-08-29	2027-08-28
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R060-L0F0	202305240001	2024-08-30	2027-08-29
MM-Wave Frequency Conversion Transmitting Unit	Tonscend	MMFC-T120-A1	202305240001	2024-09-11	2027-09-10
MM-Wave Frequency Conversion Receiving Unit	Tonscend	MMFC-R040-L0F0	202305240001	2023-11-01	2026-10-31
High Low Temperature Test Chamber	Cavendi	CATT-150C	231020001	2023-05-17	2026-05-16
Control PC	Lenovo	M4000q-00IRB	YLX3LXKQ	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Occupied Bandwidth	$\pm 2.08 \%$
Spurious emissions	$\pm 3.68 \text{ dB}$
Output power density	$\pm 0.99 \text{ dB}$
Antenna Power	$\pm 0.99 \text{ dB}$
Frequency Tolerance	0.104 ppm

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The Product is thermostat as an advanced, highly configurable device providing building automation connectivity well-suited for commercial building applications. This device supports 60GHz Radar, Wi-Fi 2.4GHz and Bluetooth (Low Energy) technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	Thermostat
Type Designation:	TC322C-G, TC323C-G, TC322B-G, TC323B-G
FCC ID:	2ARTN-00013
IC:	24552-00013
HVIN:	830604: TC322C-G 830607: TC323C-G 941403: TC322B-G 941405: TC323B-G
PMN:	TC322C-G, TC323C-G, TC322B-G, TC323B-G
Operating Voltage:	TC322B-G, TC323B-G: 24V AC
	TC322C-G, TC323C-G: 120-277V AC
Testing Voltage:	TC322B-G, TC323B-G: 24V AC via AC/AC transformer
	TC322C-G, TC323C-G: 120V AC
Operating Temperature Range:	-20°C ~ 50°C

There are 4 models as TC322C-G, TC323C-G, TC322B-G, TC323B-G, which share the same PCB layout and RF circuits. The differences among them are the power supply circuit, CO₂ sensor and IO ports, which have no impact on RF performance, and already considered sufficiently in SDOC ICES report CN259UFM 001. Details are listed in below table.

SKU	Power	Sensors	Peripheral
TC322C-G	1. TC322C-G, TC323C-G are powered by AC 120-277V, and TC322B-G, TC323B-G are powered by 24VAC with components of the transformer circuit removed, details as marked on the internal photos. 2. The relays are for different maximum loads.	T&H,	5DO, 3UIO
TC323C-G		T&H, CO ₂	5DO, 3UIO
TC322B-G		T&H	3DO, 2DIO, 3UIO
TC323B-G		T&H, CO ₂	3DO, 2DIO, 3UIO

As above differences, full test performed on TC323C-G & TC323B-G are showed in this report.

Technical Specification of 60GHz Radar	
Frequency band(s) of operation:	57 - 71 GHz
Operating frequency:	61.1 GHz
Type of Modulation:	Pulsed Doppler
Antenna Gain:	6 dBi Max (Provided by the Client)

Note: The correctness of all data provided by customer in the test report is ensured and responsible of the customer. Any misjudgment of the test results caused by the use of incorrect data provided by customer shall be borne by the customer.

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, 60GHz Radar wireless transmitting mode
- B. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|------------------------------|-------------------------|
| - Application Form | - User Manual |
| - ID Label and Location Info | - Operation Description |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2020 (FCC), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 (ISED).

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Model	Manufacturer
Laptop	T480	Lenovo
Transformer (AC 120V - AC 24V)	N/A	N/A
Phone	Redmi K50	Xiaomi
Router	TL-XDR5430	TP-LINK
Auxiliary Load Board	N/A	Honeywell

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

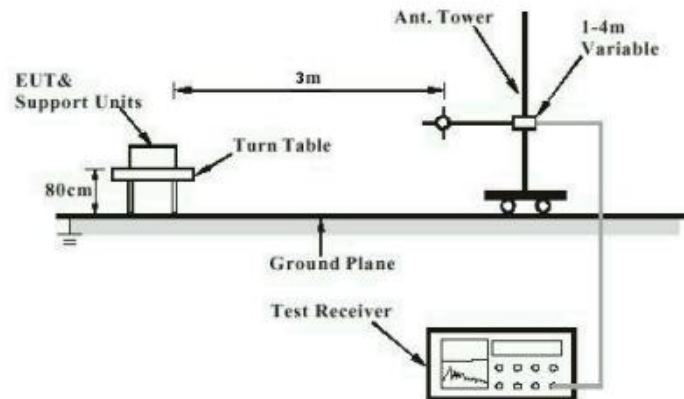


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

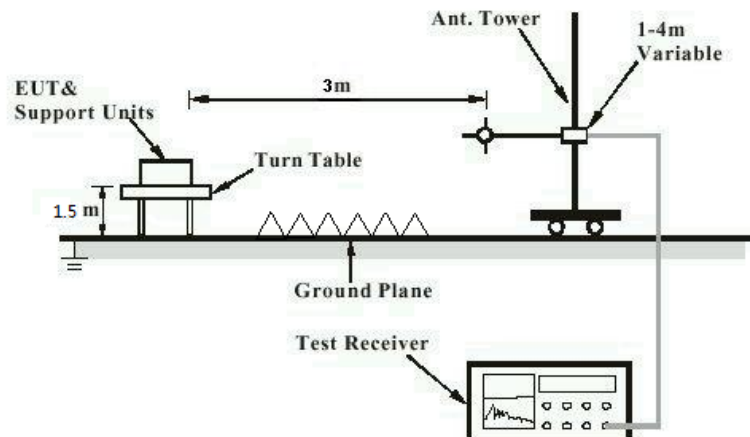


Diagram of Measurement Configuration for Radiation Test (Above 40GHz)

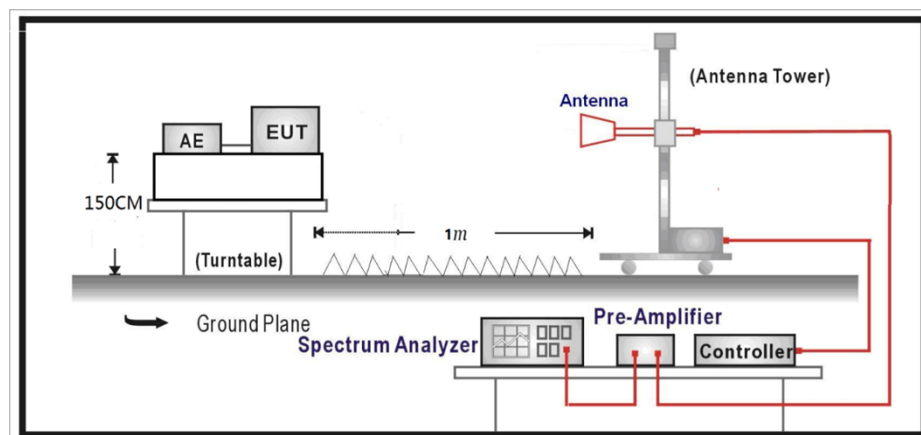
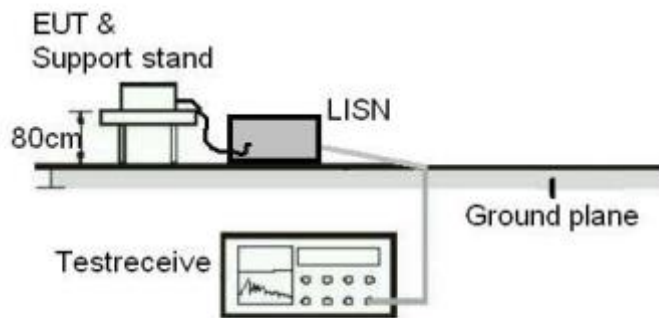


Diagram of Measurement Configuration for Mains Conduction Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.203 , RSS-Gen Clause 6.8

Limit : the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT have Integral Antennas, permanent attachment and no consideration of replacement, refer to section 3.2 for details.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Output Power

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.255 clause (c)(2), RSS-210 clause J.3.2
Basic standard	: ANSI C63.10: 2020
Limits	: Peak EIRP: <10dBm, peak transmitter conducted output power: <-10dBm
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-07-14 - 2025-07-25
Input voltage	: AC 24V
Operation mode	: A
Ambient temperature	: 25 °C
Relative humidity	: 45 %
Atmospheric pressure	: 101 kPa

For details refer to following test result.

For the measurement records, refer to the appendix A.

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5.1.3 Frequency Stability

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.255(f)
RSS-Gen Clause 6.11, RSS-210 Clause J.6
Basic standard : ANSI C63.10: 2020
Limits : Within assigned bands
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-07-14 - 2025-07-25
Input voltage : AC 24V
Operation mode : A
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

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5.1.4 99% Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.215
RSS-Gen Clause 6.7
Basic standard : ANSI C63.10: 2020
Limits : Within assigned bands
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-07-14 - 2025-07-25
Input voltage : AC 24V
Operation mode : A
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

5.1.5 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.255 (d) RSS-210 clause J4 & RSS-GEN clause 8.9 and 8.10
Basic standard	: ANSI C63.10: 2020 Radiated emissions below 40 GHz shall not exceed the general limits in § 15.209 and RSS-GEN.
Limits	: 90 pW/cm ² peak at a distance of 3 m for emissions between 40 GHz and 200 GHz The levels of the spurious emissions shall not exceed the level of the fundamental emission.
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 2025-07-14 - 2025-07-25
Input voltage	: AC 24V
Operation mode	: A
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

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5.1.6 Conducted Emission on AC Mains

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.207(a) RSS-GEN clause 8.8
Basic standard	: ANSI C63.10: 2020
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-07-14 - 2025-07-25
Input voltage	: AC 120V
Operation mode	: A
Earthing	: Not connected
Ambient temperature	: 23.5 °C
Relative humidity	: 54.7 %
Atmospheric pressure	: 101 kPa

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix B.

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APPENDIX A: TEST RESULTS

APPENDIX A.1: 99% OCCUPIED BANDWIDTH.....2

APPENDIX A.2: PEAK FUNDAMENTAL RADIATED EMISSION3

APPENDIX A.3: FREQUENCY STABILITY4

APPENDIX A.4: SPURIOUS EMISSIONS5

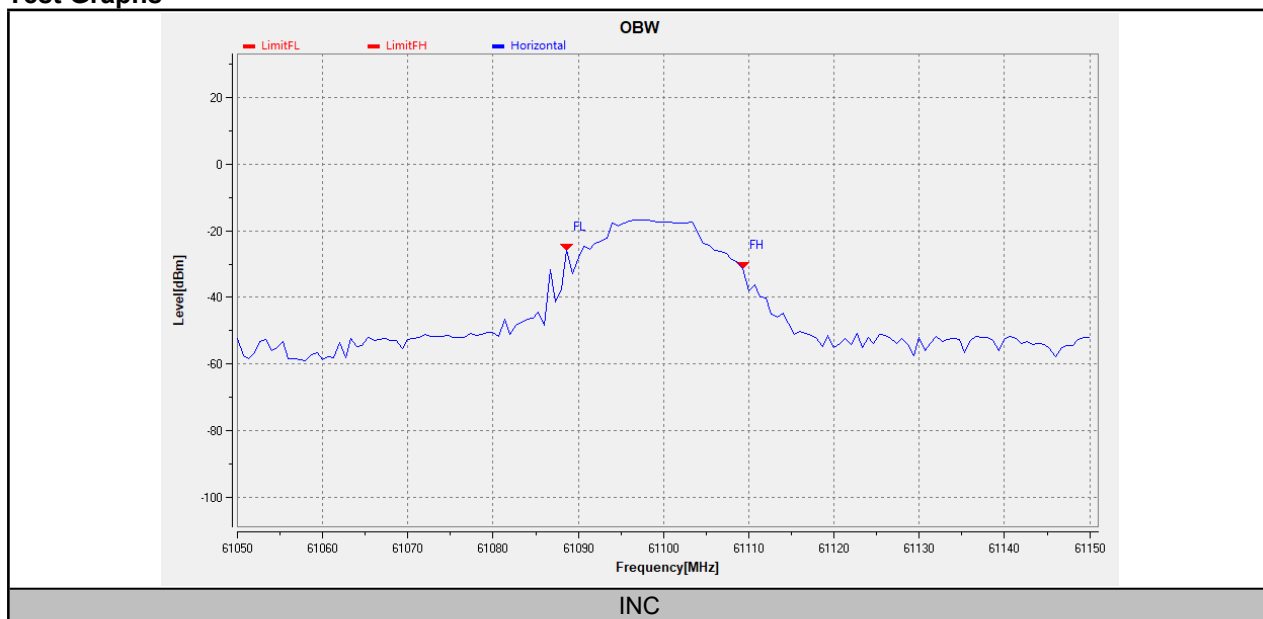
APPENDIX A.5: CONDUCTED EMISSION ON AC MAINS.....15

APPENDIX A.1: 99% OCCUPIED BANDWIDTH

Test Results

Condition	Mode	RBW (MHz)	VBW (MHz)	F _L (GHz)	F _H (GHz)	Bandwidth (MHz)	Limit [GHz]	Verdict
NTNV	TM1	1	3	61.089	61.1095	20.5	57 - 71GHz	INC

Test Graphs



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Test Report - Products

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APPENDIX A.2: PEAK FUNDAMENTAL RADIATED EMISSION

Test Results

EUT/Antenna Orientation	Maximum E.I.R.P				Verdict
	Peak E.I.R.P [dBm]	Peak E.I.R.P Limits [dBm]	Peak Transmitter Conducted Power [dBm]	Peak Transmitter Conducted Power Limit [dBm]	
X/H&V	-5.02	10	-11.02	-10	PASS

Note: The antenna gain is 6dBi.

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APPENDIX A.3: FREQUENCY STABILITY

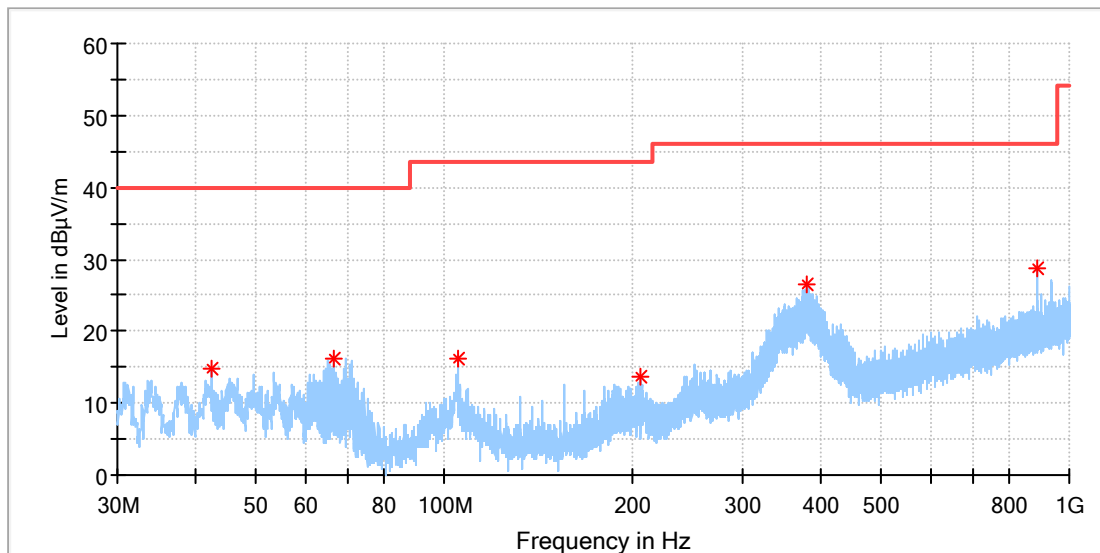
FREQUENCY STABILITY					
Temperature (°C)	Voltage (Volt)	FL (GHz)	FH (GHz)	Limit (GHz)	Result
50	Normal Voltage	61.0902	61.1105	57-71GHz	PASS
40		61.0660	61.0843		
30		61.0912	61.1006		
20		61.0829	61.1024		
10		61.0672	61.1101		
0		61.0920	61.0857		
-10		61.0643	61.1003		
-20		61.0621	61.1103		
20	115%	61.0739	61.1109		
20	85%	61.0826	61.1066		

APPENDIX A.4: SPURIOUS EMISSIONS

Below 40GHz:

EUT Information

EUT Name:	Thermostat
Model:	TC323B-G
Test Mode:	60G Radar
Order No/Sample No:	168560989/A004018826-002
Test Voltage::	120V/60Hz
Remark:	Temp 24 Humi:50%
Test Standard:	FCC part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

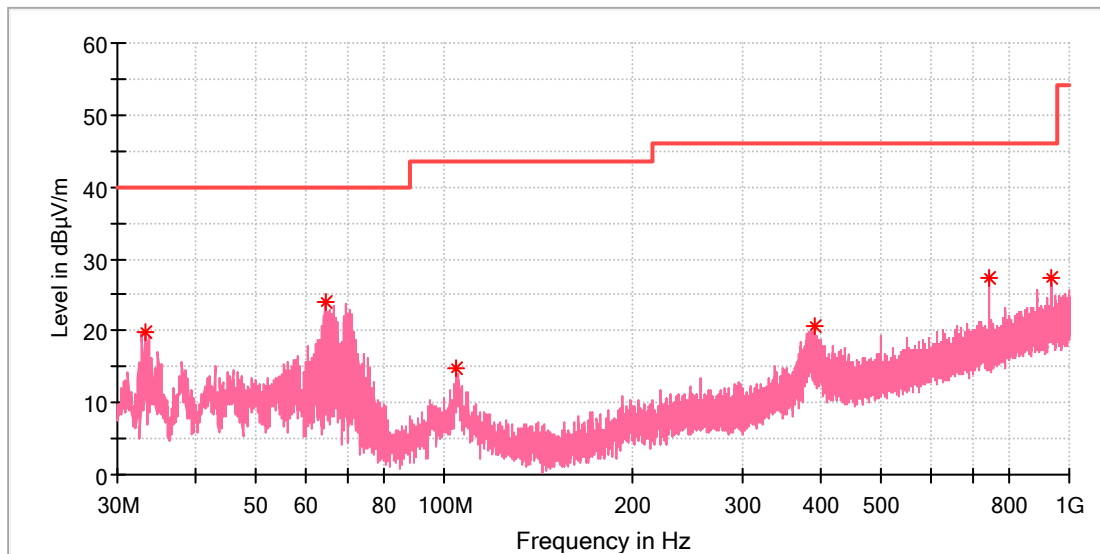
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
42.498077	14.72	40.00	25.28	100.0	H	248.0	-19.5
66.486923	16.12	40.00	23.88	100.0	H	328.0	-20.8
105.286923	16.28	43.50	27.22	100.0	H	218.0	-18.9
205.905769	13.77	43.50	29.73	100.0	H	0.0	-19.0
381.475769	26.41	46.00	19.59	100.0	H	277.0	-14.2
890.986923	28.77	46.00	17.23	100.0	H	350.0	-4.9

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Information

EUT Name:	Thermostat
Model:	TC323B-G
Test Mode:	60G Radar
Order No/Sample No:	168560989/A004018826-002
Test Voltage::	120V/60Hz
Remark:	Temp 24 Humi:50%
Test Standard:	FCC part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.245769	19.72	40.00	20.28	100.0	V	155.0	-22.5
64.435000	23.91	40.00	16.09	100.0	V	359.0	-20.1
104.764615	14.72	43.50	28.78	100.0	V	0.0	-18.9
392.220385	20.62	46.00	25.38	100.0	V	336.0	-14.0
742.502308	27.43	46.00	18.57	100.0	V	183.0	-7.2
938.442308	27.40	46.00	18.60	100.0	V	239.0	-4.4

Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

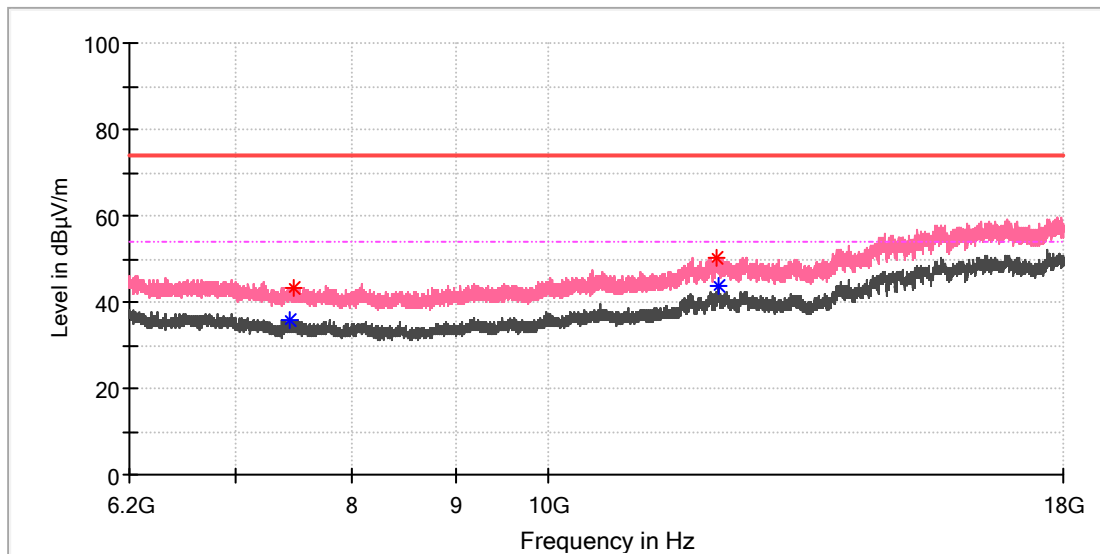
Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

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Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

EUT Information

EUT Name:	Thermostat
Model:	TC323B-G
Test Mode:	60G Radar
Order No/Sample No:	168560989/A004018826-002
Test Voltage::	120V/60Hz
Remark:	Temp 24 Humi:50%
Test Standard:	FCC part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7450.308333	---	35.94	54.00	18.06	150.0	V	358.0	8.5
7479.316667	43.46	---	74.00	30.54	150.0	V	194.0	8.7
12115.733333	50.35	---	74.00	23.65	150.0	V	274.0	15.8
12147.200000	---	43.74	54.00	10.26	150.0	V	194.0	16.7

Final_Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---	---		---	---

Note: After verified that only noise-floor found in band 18-40GHz, thus no records listed.

Appendix A
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Test Report - Products

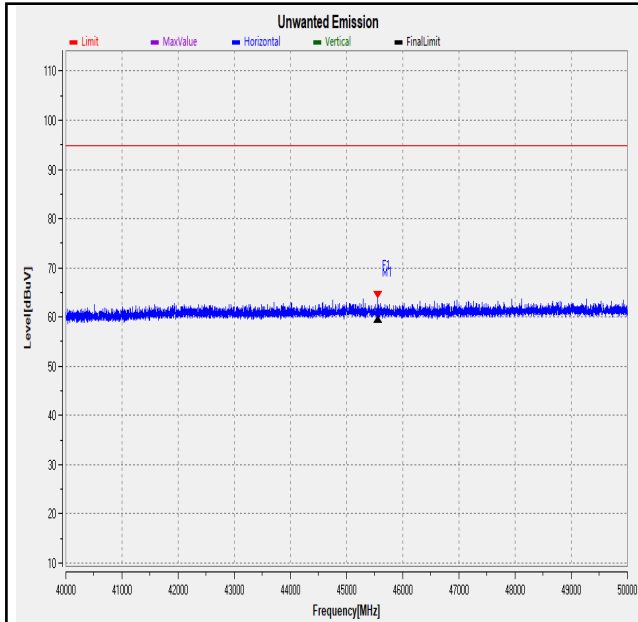
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Above 40GHz:

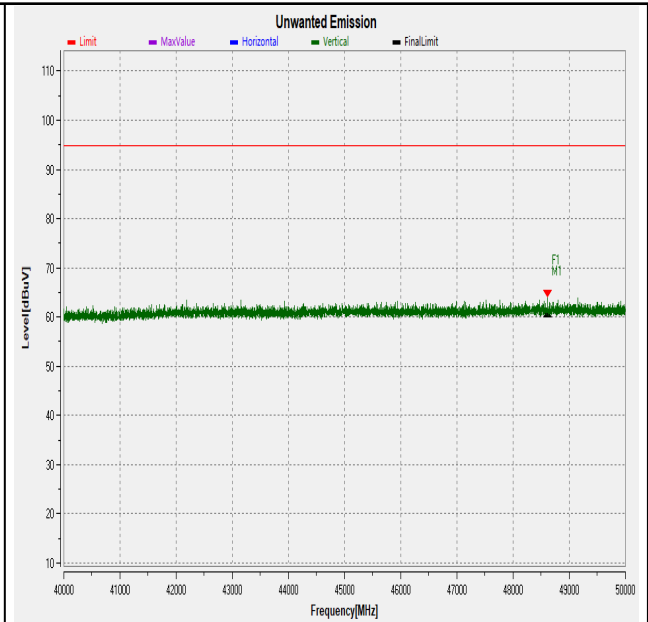
Condition	Mode	Mk No.	Det	RBW (MHz)	VBW (MHz)	Test Distance (m)	Frequency (MHz)	Meas. @1m (dBuV/m)	Meas. @3m (dBuV/m)	Power Density@3m (pW/cm2)	Ant. Polarity (H/V)	Limit@3m (pW/cm2)	Verdict
NTNV	TM1	M1	PK	1	3	1m	45559.000	63.951	54.411	0.072	H	90	PASS
NTNV	TM1	F1	PK	1	3	1m	45559.000	60.164	50.624	0.030	H	90	PASS
NTNV	TM1	M1	PK	1	3	1m	48610.000	64.130	54.59	0.075	V	90	PASS
NTNV	TM1	F1	PK	1	3	1m	48610.000	61.321	51.781	0.039	V	90	PASS
NTNV	TM1	M1	PK	1	3	1m	59458.050	63.930	54.39	0.072	H	90	PASS
NTNV	TM1	F1	PK	1	3	1m	59458.050	56.568	47.028	0.013	H	90	PASS
NTNV	TM1	M2	PK	1	3	1m	62567.684	70.025	60.485	0.292	H	90	PASS
NTNV	TM1	F2	PK	1	3	1m	62567.684	64.591	55.051	0.084	H	90	PASS
NTNV	TM1	M1	PK	1	3	1m	55942.845	63.711	54.171	0.068	V	90	PASS
NTNV	TM1	F1	PK	1	3	1m	55942.845	56.111	46.571	0.012	V	90	PASS
NTNV	TM1	M2	PK	1	3	1m	62563.520	67.284	57.744	0.155	V	90	PASS
NTNV	TM1	F2	PK	1	3	1m	62563.520	64.244	54.704	0.077	V	90	PASS
NTNV	TM1	M1	PK	1	3	1m	97844.500	67.958	58.418	0.181	H	90	PASS
NTNV	TM1	F1	PK	1	3	1m	97844.500	61.389	51.849	0.040	H	90	PASS
NTNV	TM1	M1	PK	1	3	1m	106783.500	67.361	57.821	0.158	V	90	PASS
NTNV	TM1	F1	PK	1	3	1m	106783.500	62.825	53.285	0.056	V	90	PASS
NTNV	TM1	M1	PK	1	3	1m	158054.000	71.424	61.884	0.403	H	90	PASS
NTNV	TM1	F1	PK	1	3	1m	158054.000	64.933	55.393	0.090	H	90	PASS
NTNV	TM1	M1	PK	1	3	1m	157820.000	70.980	61.44	0.364	V	90	PASS
NTNV	TM1	F1	PK	1	3	1m	157820.000	64.689	55.149	0.085	V	90	PASS
NTNV	TM1	M1	PK	1	3	1m	196085.000	73.560	64.02	0.659	H	90	PASS
NTNV	TM1	F1	PK	1	3	1m	196085.000	63.202	53.662	0.061	H	90	PASS
NTNV	TM1	M1	PK	1	3	1m	196826.000	74.559	65.019	0.829	V	90	PASS
NTNV	TM1	F1	PK	1	3	1m	196826.000	63.366	53.826	0.063	V	90	PASS

Note: The results have been considered with compensation factor.

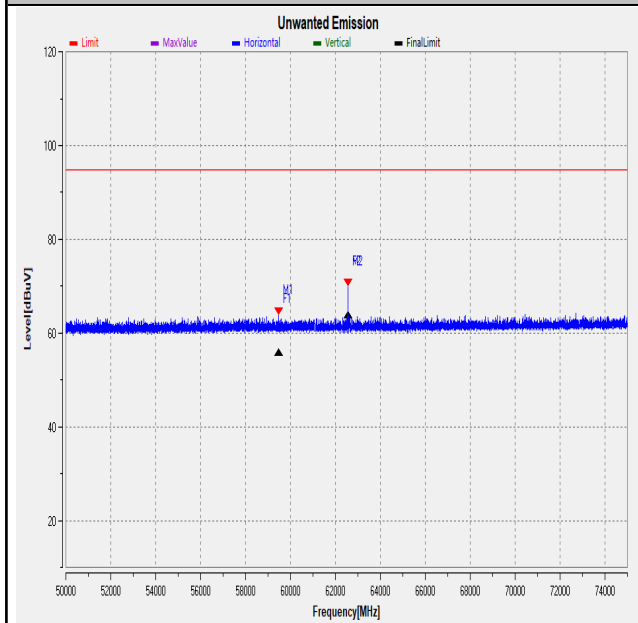
Test Graphs



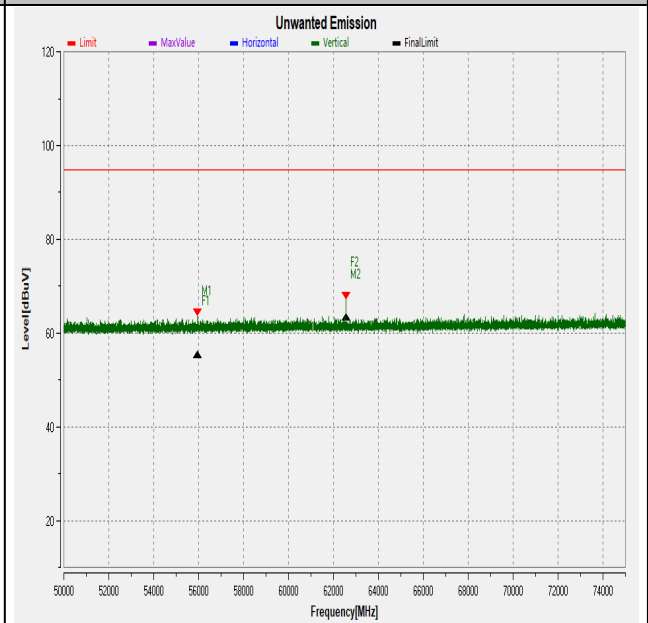
PASS



PASS



PASS

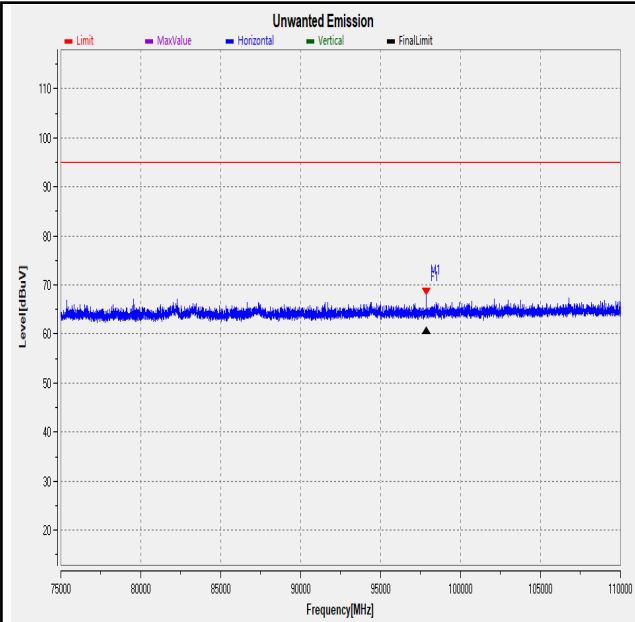


PASS

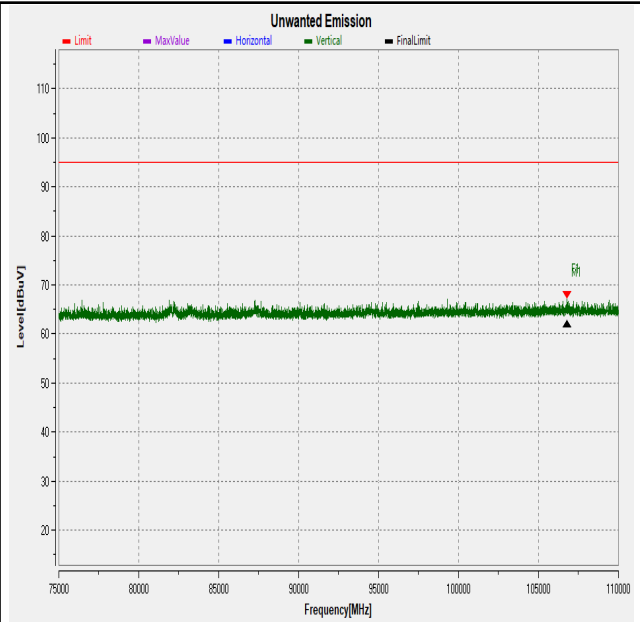
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Test Report - Products

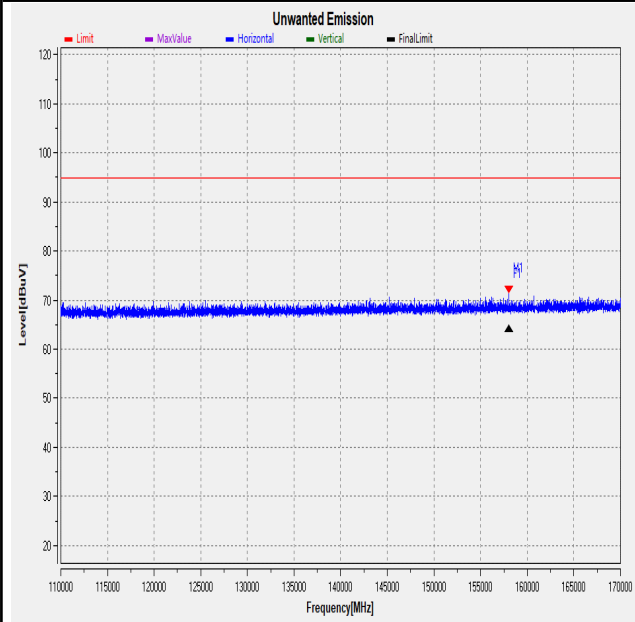
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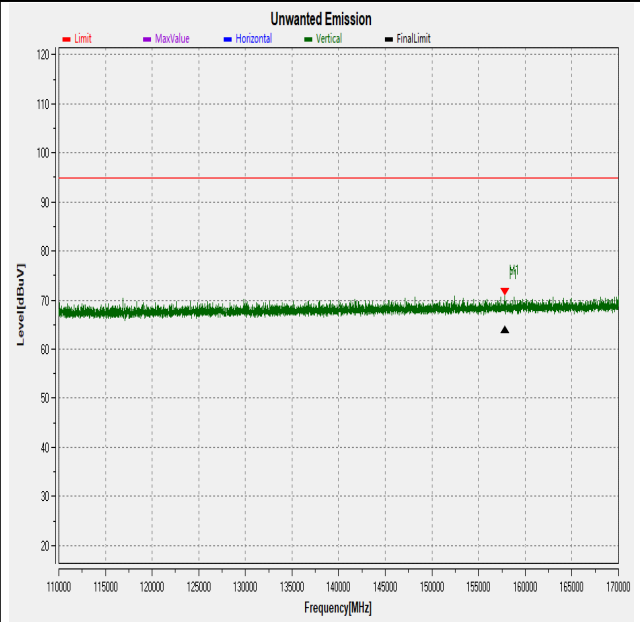
PASS



PASS



PASS

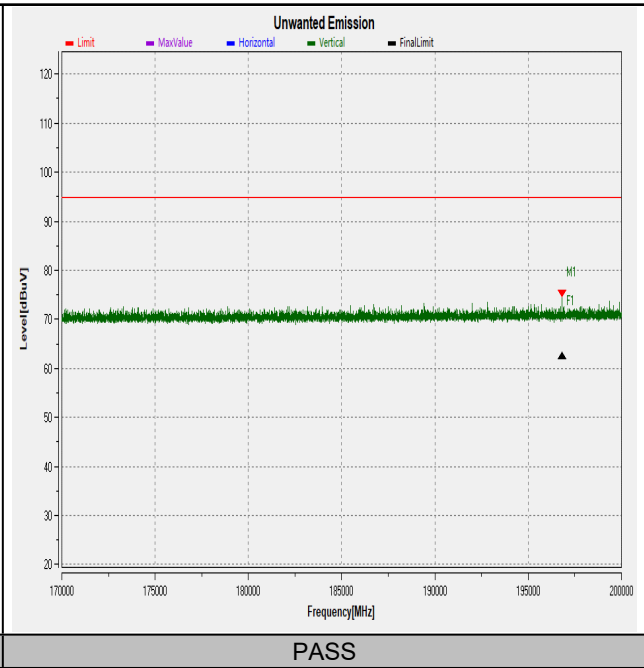
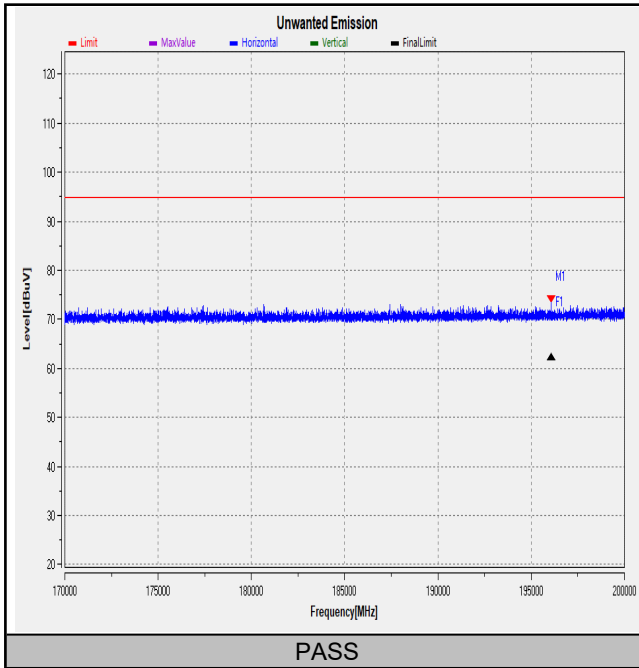


PASS

Appendix A
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Test Report - Products

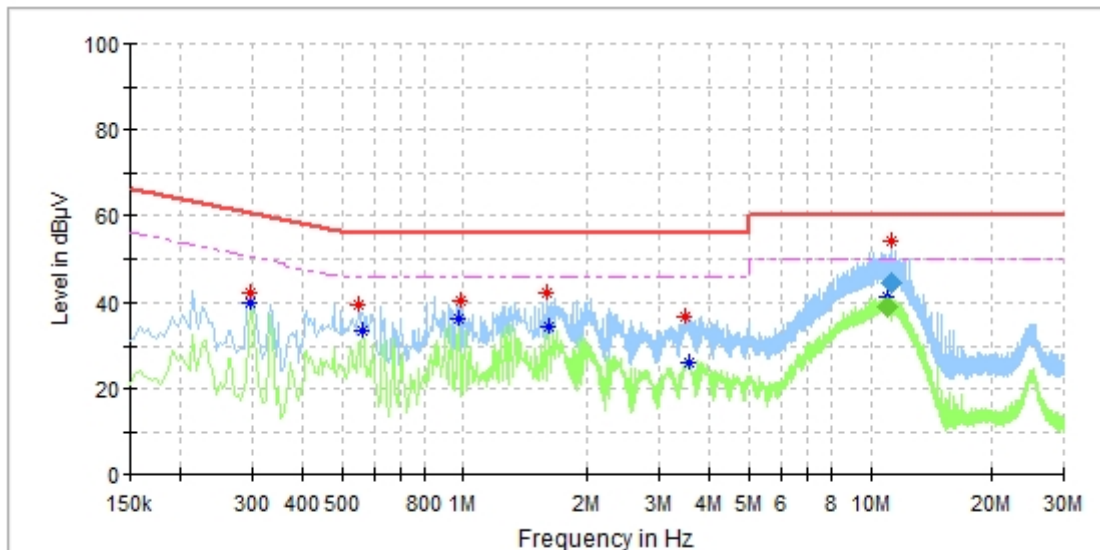
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APPENDIX A.5: CONDUCTED EMISSION ON AC MAINS

EUT Information

EUT Name: Thermostat
 Order Number: 168560989 20(P01977462)
 Model: TC323C-G
 Test Mode: Normal working with BLE & Wi-Fi connecting
 Test Voltage: AC 120V/60Hz
 Test Standard: FCC Part 15C
 Test By:/Review By: Dawn Shen/Murphy Chen
 Tem./Hum./Pressure: 24.5°C/52.3%/101kPa
 Remark: SR 3



Critical Freqs

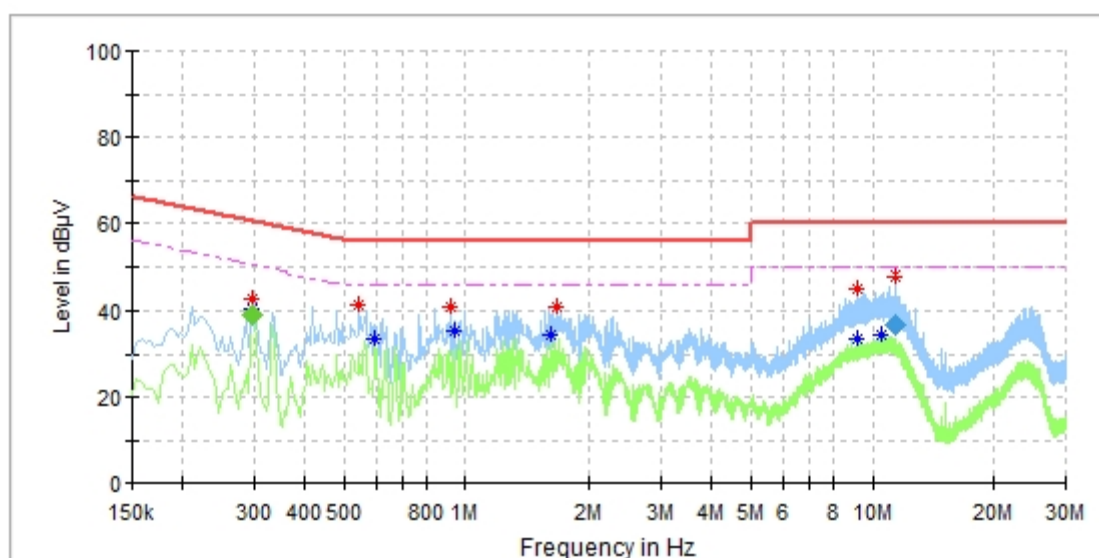
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.298000	42.17	---	60.30	18.13	L1	10
0.298000	---	39.82	50.30	10.48	L1	10
0.550000	39.40	---	56.00	16.60	L1	10
0.562000	---	33.48	46.00	12.52	L1	10
0.970000	---	36.12	46.00	9.88	L1	10
0.982000	40.66	---	56.00	15.34	L1	10
1.590000	42.47	---	56.00	13.53	L1	10
1.602000	---	34.38	46.00	11.62	L1	10
3.466000	36.54	---	56.00	19.46	L1	10
3.550000	---	25.85	46.00	20.15	L1	10
11.017500	---	41.54	50.00	8.46	L1	10
11.285500	54.17	---	60.00	5.83	L1	10

Final Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
11.017500	---	38.99	50.00	11.01	1000.0	9.000	L1	10
11.285500	44.67	---	60.00	15.33	1000.0	9.000	L1	10

EUT Information

EUT Name:	Thermostat
Order Number:	168560989 20(P01977462)
Model:	TC323C-G
Test Mode:	Normal working with BLE & Wi-Fi connecting
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15C
Test By:/Review By:	Dawn Shen/Murphy Chen
Tem./Hum./Pressure:	24.5°C/52.3%/101kPa
Remark:	SR 3



Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.297500	---	40.34	50.30	9.95	N	10
0.298000	42.81	---	60.30	17.49	N	10
0.546000	41.47	---	56.00	14.53	N	10
0.598000	---	33.52	46.00	12.48	N	10
0.914000	41.14	---	56.00	14.86	N	10
0.934000	---	35.30	46.00	10.70	N	10
1.602000	---	34.57	46.00	11.43	N	10
1.658000	41.02	---	56.00	14.98	N	10
9.182000	---	33.28	50.00	16.72	N	10
9.182000	44.97	---	60.00	15.03	N	10
10.474000	---	34.41	50.00	15.59	N	10
11.417500	47.99	---	60.00	12.01	N	10

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.297500	---	38.90	50.31	11.41	1000.0	9.000	N	10
11.417500	36.82	---	60.00	23.18	1000.0	9.000	N	10

===== THE END =====