Descriptive Report

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Prepared By: Hugo Liu; Authorized By: Hugo Liu

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PRODUCTS

CLASS 2811 02 - HEATERS-Air - Portable Type
CLASS 2811 82 - HEATERS-Air - Portable Type - Certified to US Standards

Electric Air Heater, Portable type, household use, cord-connected, grounded, rated 120 V, 60 Hz, 1500 W:

Model(s)
SXXZZYY&SXXZZYY-FF&SXXZZYY-NR FF&SXXZZYY-MT FF,

Note: XX=18, 24; ZZ=P or V; YY=1~9; FF=01~20; NR means ON-OFF switch type; MT means simple design without digit display.

Electric Air Heater, Portable type, household use, cord-connected, grounded, rated 120 V, 60 Hz, 1400 W:

Model(s)
TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF,

Note: XX=15, 20, 24; ZZ=P or V; YY=1~9; FF=01~20; NR means ON-OFF switch type; MT means simple design key.

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No. 10, Ke Yan Road, Guangzhou Science Park, Huang Pu District, Guangzhou, 510663, China
Telephone: (86)20.87320648 Fax: (86)20.87320306 www.csagroup.org

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APPLICABLE REQUIREMENTS

C22.2 No. 46-13	-	Electric Air-Heaters
UL 1278 (4th Ed, March 21, 2024)	-	Movable and Wall- or Ceiling-Hung Electric Room Heaters

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The following markings must appear in a visible and permanent manner so that your products will be easily identified and recognized in the field as being CSA Certified. And markings shall appear on CSA Accepted adhesive type nameplate(s) affixed to the enclosure:

a. Submittor's name and/or CSA Master Contract Number “261046”
b. CSA, CSAus or cCSAus Mark
c. Model designation
d. Electric rating in volts, watts and frequency
e. Date code or serial number (denoting, at least, month and year of manufacture)
f. “Impedance protected” or “Z.P.” marked on blower and synchronous motor
g*. “CAUTION: High temperature, keep electrical cords, drapery, and other furnishings at least 3 feet (0.9 m) from the front of the heater and away from the side and rear.” and
“ATTENTION - Haute température, risque d’incendie, tenez les câbles électriques, les rideaux et les autres objets mobiliers à au moins 3 pieds (0.9m) du devant de l’appareil et loin des côtés et du derrière.”
h*. CAUTION: A heater shall bear the cautionary marking shown as below:



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
NO USER-SERVICEABLE PARTS INSIDE



and

ATTENTION
RISQUE DE CHOC ÉLECTRIQUE
NE PAS OUVRIR
AUCUNE PIÈCE RÉPARABLE PAR L’UTILIZATEUR À L’INTERIEUR

i*. “CAUTION: DO NOT LOCATE AGAINST WALLS OR BEHIND DRAPES OF FURNITURE” and
“NE PAS ADOSSER AU MUR OU PLACER DERRIERE LES RIDEAUX OU LES MEUBLES”
j. A tag, permanently affixed to the power supply cord (no more than 152 mm from the attachment plug), including the following or equivalent instructions at least:
**WARNING – TO REDUCE THE RISK OF FIRE

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1) Always plug heaters directly into a wall outlet/receptacle. Never use with an extension cord or relocatable power tap (outlet/power strip).
2) Check your heater cord and plug connections. A loose fitting outlet can cause the plug to overheat and a or cause a fire. Be sure plug fits tight in the outlet. Check frequently during use to make sure plug and outlet are not hot. If so, discontinue using heater and have outlet replaced by a qualified electrician.
Note: Heaters draw more current than small appliances, overheating of the outlet may occur even if it has not occurred with the use of other appliances.
3) Always unplug the heater when not in use;
4) Do not operate heater with a damaged cord or plug or after the theater malfunctions, has been dropped or damaged in any manner. Discard heater or return to an authorized service facility for examination and/or repair.
5) Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.
**DO NOT REMOVE THIS TAG!

k***. CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT AND FULLY INSERT
and
ATTENTION : POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

*:
- The Warnings and Cautions shall be visible from a point 5 feet (1.5 m) above the floor and between 1 and 4 feet (0.3 and 1.2m) away from the front surface of the heater when the heater is placed in the intended use location.
- The words Warnings and Cautions shall be in capital letters at least 3.2 mm high and shall be of permanent typeand in a color that contrasts with that of the enclosure or background.

**:
- The statements shall be in capital letters at least 4.8 mm in high and shall be of permanent type and in a color that contrasts with that of the enclosure or background.

***:
- This marking applicable for models with polarized plug (1-15P). This marking (or its equivalent) shall be provided in one of the following ways:
(a) on a tag attached to the cord adjacent to the attachment plug;
(b) on a hand tag; or
(c) on instructions that accompany the heater at the time of sale.
The words CAUTION and ATTENTION shall be in capital letters at least 2.8 mm high, with the balance of the lettering in capital letters at least 1.6 mm high.

Important Safety Instructions: The following information appear in an instruction sheet, manual, booklet, or the like, provided with an appliance and are separated in format from other instructions, and shall appear before the operating instructions.

IMPORTANT INSTRUCTIONS

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1) Read all instructions before using this heater.
2) This heater is hot when in use. To avoid burns, do not let bare skin touch hot surface. If provided, use

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handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.

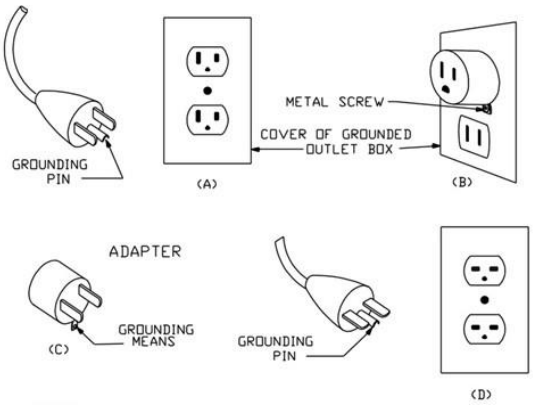
3) Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
4) Always unplug heater when not in use.
5) Do not operate any heater with a damaged cord or plug or after the heater malfunctions, has been dropped or damaged in any manner. Return heater to authorized service facility for examination, electrical or mechanical adjustment, or repair.
6) Don't use outdoors.
7) This heater is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
8) Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Arrange cord away from traffic area and where it will not be tripped over.
9) To disconnect heater, turn controls to off, then remove plug from outlet.
10) Connect to properly grounded outlets only.
11) Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
12) To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, like a bed, where openings may become blocked.
13) A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
14) Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
15) Always plug heaters directly into a wall outlet/receptacle. Never use with an extension cord or relocatable power trap (outlet/power strip).
16) "SAVE THESE INSTRUCTIONS"

User Instructions: The instruction manual shall also include the following in a separate section or sections:

a) Instructions and cautionary statements for usage cleaning, user-maintenance, operations recommended by the manufacturer, such as lubrication or nonlubrication, and a warning to the user that any other servicing should be performed by an authorized service representative.
b) The function of indicator lights and symbols used for switches or manually operated controls shall be explained.
c) Any heater employing a manually reset control shall be provided with instructions to user regarding its operation.
d) Specific instructions for the proper method of cord storage, total heater storage, and the like when the heater is not in use.

Grounding Instructions:
This heater is for use on 120 volts. The cord has a plug as shown at (A) in figure below.
An adaptor as shown at (C) is available for connecting three-blade grounding-type plugs to two-slot receptacles.
The green grounding lug extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box.
The adaptor should not be used if a three-slot grounded receptacle is available.

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NOTE: Adaptors are NOT for use in Canada

Heater Carton Information: The following information pertaining to the heater features and its use conditions shall be included on the external surface of the packaging of a heater. All information shall be grouped together and appear on one side, except the bottom, of the packaging.

a) 120 V, 60 Hz, 1500 W or 1400 W.
b) Specific location: Floor only.
c) Always plug heaters directly into a wall outlet/receptacle. Never use with an extension cord or relocatable power trap (outlet/power strip).
d) This heater is hot when in use. To avoid burns, do not let bare skin touch hot surface. If provided, use handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
e) Do not use this heater wet or moist locations.

Cord Tag Markings:

The markings specified shall be permanently affixed to the power-supply cord, shallbe no more than 6 inches (152 mm) from the attachment plug and shall be made of substantial material(cardboard, cloth, plastic, or the equivalent) to provide mechanical strength and to prevent easy removal.The tag shall be of a size that facilitates legibility of the required markings, and all exposed surfaces shallhave a clear plastic overlay, or the equivalent, to protect the markings. The information on the tag shall tobe legibly printed and shall contrast with the background. If both sides of the tag are utilized to incorporatethe required marking, the text of the marking shall be arranged so that it is obvious that the marking isstarted on one side and is continued on the other side of the tag. The statements “WARNING – TOREDUCE THE RISK OF FIRE” and “DO NOT REMOVE THIS TAG!” shall be in letters at least 3/16 inch(4.8 mm) in height. The remaining text shall be in letters of at least 1/16 inch (1.6 mm) in height.The tag shall be either of the following forms:

a) A flag tag having a hole to permit securement to the power-supply cord by a plastic strap orequivalent means. The strap shall not be removable without cutting.
b) A flag-type cord tag with an adhesive back. The tag is to be wrapped tightly once aroundand is to adhere to the supply cord. The ends of the tag are to adhere to each other and projectas a flag. The required markings are to be positioned on the projecting flag portion of the tag.

ALTERATIONS

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a. Marking as noted above.

FACTORY TESTS

a. Dielectric Voltage-Withstand Test:
The equipment at the conclusion of manufacture, before shipment, shall withstand for one min, without breakdown, the application of 1000 V ac between live parts and exposed non-current-carrying metal parts. The factory test may be made at existing room temp. As an alternative a potential 20% higher may be applied for one second.

WARNING: The factory test specified may present a hazard of injury to personnel and/or property and should only be performed by persons knowledgeable of such hazards and under conditions designed to minimize the possibility of injury.

b. Production Line Grounding Continuity Tests: (Applicable for grounded models)
The manufacturer shall test, at the conclusion of manufacture and before shipment, each heater provided with a power supply cord incorporating a ground conductor to determine that electrical continuity exists between an exposed dead metal part of the heater and the grounding blade of the attachment plug. An indicating device, such as an ohmmeter, low voltage battery and buzzer combination, or the like, may be employed, in the test.

SPECIAL INSTRUCTIONS FOR FIELD SERVICES

1. Component descriptions marked with either the "(INT)" or "(INT*)" identifiers may be substituted with other components providing the requirements specified under the notes in the "Description" are complied with.

COMPONENT SPECIAL PICKUP

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing.

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DESCRIPTION

Notes:

1. Component Substitution
   a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT*" are not eligible for substitution without evaluation and report updating
   b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component may be replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
   c) The Term "(INT*)" means a "Recognized" and/or "Accepted" component may be replaced by a component that is CSA Certified. The applicable country identifiers shall be included, the requirements in item "d" below as well as any "conditions of suitability" for the component (as recorded in this descriptive report) shall be complied with;
   d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
   e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.
   f) Substitution of a "Recognized" and/or "Accepted" component by one that is not CSA Certified is not permitted without a proper evaluation as well as a report update because the Conditions of Acceptance of the original component may be different than the Conditions of Acceptance of the substitute component.
g) Component description marked with “UR Recognized” or "cUR Recognized" or "cURus Recognized" indicates that a component is UL Recognized and accepted for use in the end product described in this report based on UL Conditions of Acceptability. Conditions of Acceptability of UR Recognized components are based mainly on flammability ratings, electrical ratings, temperature, and number of cycles.

Model SXXZZYY&SXXZZYY-FF&SXXZZYY-NR FF&SXXZZYY-MTFF
Note: XX=18, 24; ZZ=P or V; YY=1~9; FF=01~20; NR means ON-OFF switch type; MT means simple design without digit display.

General: The subject models are series model with identical construction. Details refer to Att1, Att2 and Att3.

1. Enclosure:

   a. Cabinet (Top, bottom, sides, back): Formed of painted sheet steel min 0.5 mm thick. Secured together with screws. Overall dimension for each model refer to Att3.

   b. Heater Assembly Shell:
   Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF

   Material: Formed of painted sheet steel min 0.5 mm thick, overall dimension 392 mm long by 155 wide by 90 mm height.
   Mounting: Secured to Bottom with screws.
   Openings as below:

Locations	Openings	Dimensions	Purpose
Back	60*2	30 mm by 3 mm	Air intake openings.
Front	58*2	21 mm by 3 mm	Air outlet opening.
Sides	4*2	Louver shaped, 80 mm long by	Heater compartment opening.

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		3 mm (Max Minor Dim.)	

2. Decorative Front Door: Door: Made of plastic. Tempered glass provided, and secured to door with tabs and glass cement.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF

3. Supporting Leg:
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Flame Rating: UL 94 HB @ 3 mm, all colours, RTI=60 C.
Dimensions: Average 3.5 mm thick, providing 175 mm height from Bottom to earth.
Mounting: Secured to bottom panel with screws.

4. Power Supply Cord: UL and cUL Listed.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF

Manufacturer: UNIRISE ELECTRIC WIRE & CABLE CO LTD (E206144).
Designation: UE-221.
Plugcap: Type 1-15 P, rated 125 V, 13 A.
Rating: SPT-2 or SPT-2-R, 16/2 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed.
Manufacturer: LINOYA ELECTRONIC TECHNOLOGY CO LTD (E315592).
Designation: XYP-001P
Plugcap: Type 1-15 P, rated 125 V, 13 A.
Rating: SPT-2or SPT-2-R, 16/2 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: LINOYA ELECTRONIC TECHNOLOGY CO LTD(E315592).
Designation: XYTP-006.
Plugcap: Type 5-15 P, rated 125 V,13/15 A.
Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD(E254267).
Designation: KH-9922L.
Plugcap: Type 5-15 P, rated 125 V, 13/15 A.
Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: UNIRISE ELECTRIC WIRE & CABLE CO LTD(E206144).
Designation: UE-322A.
Plugcap: Type 5-15 P, rated 125 V, 13/15 A.
Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

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Alternate Power Supply Cord:UL and cUL Listed.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: TRANSWORLD ELECTRIC CO LTD (E87333).
Designation: TE-34P.
Plugcap: Type 5-15 P, rated 125 V, 13/15 A.
Rating: SJT, 16/3 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD(E334525).
Designation: HSC-203.
Plugcap: Type 5-15P, rated 125 V, 13/15 A.
Cord: HPN-R cord, 16/3C AWG, rated 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

5. Strain Relief Bushing: UR Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: HEAVY POWER CO LTD(E107293).
Designation: 6N3-4.
Mounting: Secured to Heater Assembly Shell through a suitably sized double “D” shaped hole.

Alternate Strain Relief Bushing: UR Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Manufacturer: HEAVY POWER CO LTD(E107293).
Designation: 4N-4.
Mounting: Secured to Heater Assembly Shell through a suitably sized double “D” shaped hole.

6. Wire Connector: (INT) cURus Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Type: Insulated, closed-end pressure crimp-on type.
Rating: 105 C or 750 C, suitable for 16 AWG, 18AWG,20 AWG and 22 AWG.

7. Quick Connect:(INT) cURus Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF
Type: Crimp type, uninsulated.
Rating: Suitable for 16 ~22 AWG.

8. Internal Wiring: (INT) cURus Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF.

a Heating Element Supply:AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.
Alternate Heating Element Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
b Self-hold Thermostat Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.
Alternate Self-hold Thermostat Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
c Blower Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
d Synchronous Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
e LED strip Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.
Alternate LED strip Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.

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f Control Panel Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.
Remarks: Cable ties provided to fix the internal wirings. Fiberglasstube provided for preventing wirings from overheating near heater element.

9. **Control System #1**: Mainly consists of Control panel and main PWB as following:

9.1 PWB Control Panel (Push button type): (INT) cURus Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF
Material: Glass Fiber Phenolic.
Flame Rating: UL 94 V-0.
Dimension: 1.5 mm thick, overall dimension 156 mm by 26 mm.
Mounting: Secured to molded plastic cover with screws.
Consists of the following critical components soldered on it, refer to Fig-4 and ILL-1, page 1-2 for details.

a. Push Button (SW1~SW6): rated 12V dc, 100 mA.
b. Remote receiver: Rated 5 V, 1 mA.
c. LED Digit Display: Rated 5 V, 20 mA

9.2 Main PCB: (INT) UL Recognized.
Applicable models: SXXZZYY&SXXZZYY-FF
Material: Glass Fabric Epoxy.
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.
Dimension: 1.6 mm thick, overall dimension 147 mm by 82 mm.
Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.
Consists of the following critical components soldered on it:

a. Fuse: cURus Recognized. (E321507)
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.
Designation: RXF-1W.
Rating: 0.82R, 1 A.

b. Capacitor:
EC1, EC2: Electrolytic type, 10 uF, 400 V, 105 C.
EC3: Electrolytic type, 47 uF, 50V, 105 C.
EC4: Electrolytic type, 47 0uF, 25V, 105 C.
EC5: Electrolytic type, 100 uF, 16V, 105 C.

c. Relay (Relay1): cURus Recognized. (E134517)
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.
Designation: HF2160-1A-12D-E.
Rating: Contact 240 Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E179944)
Manufacturer: NINGBO SONGLE RELAY CO LTD.
Designation: SLI-12VDC-SL-A.
Rating: Contact 240 Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E321783)
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.
Designation: GK-C-1A-12D.

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Rating: Contact 277 Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E134517)
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.
Designation: JQC-3FF.
Rating: 125 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E167996)
Manufacturer: NINGBO SONGLE RELAY CO LTD.
Designation: SRD-12VDC-SL-A.
Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E321783)
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.
Designation: GH-1A-12L.
Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E190598)
Manufacturer:SANYOU CORPORATION LTD.
Designation: SRD-S-112D.
Rating: 250 V ac, 7A, 100,000 operations.

d. High Frequency Transformer:
Insulation Class: 130 C.
Core: 19.5 mm by 17.5 mm by 4.7 mm. Homocentric squares ferrite core.
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long. (Flame Rating: UL 94 V-0, RTI=130 C)
Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.
Mounting: Soldered to Main PCB via pin terminals.

Control System #2: Two switches provided with combined LED strip, refer to ILL-1, page 3.
Applicable models: SXXZZYY-NRFF

Heater Control Switch: cURus Recognized. (E176026)
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.
Designation: SC792-1.
Rating: 125 V, 60 Hz, 15 A, 6,000 cycles.

Alternate Heater Control Switch: cURus Recognized. (E170626)
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.
Designation: SC792-6.
Rating: 125 / 250 VAC, 15 A.
Mounting: secured to its holder on Supporting panel by snap fit.

Alternate Heater Control Switch: cURus Recognized. (E199326)
Manufacturer: MERCHANT CORP LTD
Designation: SR-32
Rating: 125 VAC, 16 A.
Mounting: secured to its holder on Supporting panel by snap fit.

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Flame Control Switch: cURus Recognized. (E170626)
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.
Designation: SC768.
Rating: 125 / 250 VAC, 15 / 7.5 A.
Mounting: secured to its holder on Supporting panel by snap fit.

Alternate Flame Control Switch: cURus Recognized. (E199326) Manufacturer: MERCHANT CORP LTD
Designation: SR-06
Rating: 125VAC, 16A.
Mounting: secured to its holder on Supporting panel by snap fit.

Control System #3:
Applicable models: SXXZZYY-MTFF

9.1 PWB Control Panel (Push button type): (INT) cURus Recognized.
Material: Glass Fiber Phenolic.
Flame Rating: UL 94 V-0.
Dimension: 1.5 mm thick, overall dimension 46 mm by 27 mm.
Mounting: Secured to molded plastic cover with screws.
Consists of the following critical components soldered on it, refer to Fig-5 and ILL-1, page 4-5 for details.

a. Push Button (SW1~SW2): rated 12V dc, 100 mA

9.2 Main PCB(INT) UL Recognized.
Material: Glass Fabric Epoxy.
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.
Dimension: 1.6 mm thick, overall dimension 147 mm by 44 mm.
Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.
Consists of the following critical components soldered on it:

a. Fuse: cURus Recognized. (E321507)
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.
Designation: RXF-1W.
Rating: 0.82R, 1 A.

b. Capacitor:
EC2, EC4: Electrolytic type, 15 uF, 400 V, 105 C.
EC5: Electrolytic type, 47 uF, 50V, 105 C.
EC10: Electrolytic type, 47 0uF, 25V, 105 C.
EC11: Electrolytic type, 100 uF, 16V, 105 C.

c. Relay (Relay1): cURus Recognized. (E134517)
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.
Designation: HF2160-1A-12D-E.
Rating: Contact 240Vac, 30 A, 100,000 operations.

Alternate Relay (Relay 1): cURus Recognized. (E179944)
Manufacturer: NINGBO SONGLE RELAY CO LTD.
Designation: SLI-12VDC-SL-A.
Rating: Contact 240Vac, 30 A, 100,000 operations.

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Alternate Relay (Relay 1): cURus Recognized. (E321783)
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.
Designation: GK-C-1A-12D.
Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E134517)
Manufacturer: XIAMEN HONGFA ELECTROACOUSTIC CO LTD.
Designation: JQC-3FF.
Rating: 125 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E167996)
Manufacturer: NINGBO SONGLE RELAY CO LTD.
Designation: SRD-12VDC-SL-A.
Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E321783)
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.
Designation: GH-1A-12L.
Rating: 250 V ac, 12 A, 100,000 operations.

Alternate Relay (Relay 2): cURus Recognized. (E190598)
Manufacturer: SANYOU CORPORATION LTD.
Designation: SRD-S-112D.
Rating: 250 V ac, 7A, 100,000 operations.

d. High Frequency Transformer:
Insulation Class: 130 C.
Core: 19.5 mm by 17.5 mm by 4.7 mm. Homocentric squares ferrite core.
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long. (Flame Rating: UL 94 V-0, RTI=130 C)
Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.
Mounting: Soldered to Main PCB via pin terminals.

10. Faux Fire Assembly: Consists of critical parts as following:
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF.

a. Flame and Ember LEDs: Max. total 21 provided, each rated 2 V dc, 20 mA.

b. Synchronous Motor: cURus Recognized. (E199324)
Manufacturer: FOSHAN SHUNDE HENGXING MICRO MOTOR CO LTD.
Designation: TYJ50-8A.
Rating: 120 V, 60 Hz, 4 W, 18 or 12 r/min.
Protection: Impedance protected.
Mounting: Secured to the bracket with two screws.
Remarks: Shaft provided with sliver mylar reflective film fastened on it.

Alternate Synchronous Motor: cURus Recognized. (E242178)
Manufacturer: Zhaoqing City Gaoyao District Hengjun Electrical Appliance Co Ltd
Designation: TY-50.

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Rating: 120 V, 60 Hz, 4 W, 18 or 12 r/min.
Protection: Impedance protected.
Mounting: Secured to the bracket with two screw s.

Alternate Synchronous Motor: cURus Recognized. (E212993)
Manufacturer: ZHAOQING LONGTOU ELECTRONIC & ELECTRIC CO LTD.
Designation: TY-50B.
Rating: 120 V, 60 Hz, 4 W, 18 or 12r/min.
Protection: Impedance protected.
Mounting: Secured to the bracket with two screw s.

11. Heater Element Assembly (Infrared heater): Consists of the main following.
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF.

a. Heating Element (Quartz tube): Refer to Photo 4-5.
Material: Made of Fe-Cr wire, rated 725 W*2, element wire is made of 0.56 mm diameter wire, 4.95Ω/m @ 25 C, 900 C melting point
Dimensions: overall dimension300mm long quartz tube by Φ 11.8 mm, tube thickness of 1 mm.
Manufacturer: SHENZHEN CHENGXINTAI ELECTRICAL HEATING APPLIANCE CO.,LTD or Foshan City Shunde District Xiaowei Electric Appliance Industry Co., Ltd.

b. Self-hold Thermostat: cURus Recognized. (E309745)
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.
Designation: H20 or H20X.
Rating: 125 V, 15 A, 10,000 operations, 120 C.
Mounting: Riveted to heater element housing.

Alternate Self-hold Thermostat: cURus Recognized. (E301742)
Manufacturer: FOSHAN CHANCHENG EAGLE TECHNOLOGY CO LTD.
Designation: AMT-P1
Rating: 125 V, 15 A, 10,000 operations, 120 C.
Mounting: Riveted to heater element housing.

(Optional) Thermal Fuse: cURus Recognized. (E313239)
Manufacturer: HONGYU ELECTRICAL (HONG KONG) CO LTD.
Designation: H4B00184C or H4B00144C
Rating: 184C or 144C, 16 A.

12. Fan Assembly: Consists of the following:
Applicable models: SXXZZYY&SXXZZYY-FF&SXXZZYY-NRFF&SXXZZYY-MTFF.

a. Blower Motor: cURus Recognized. (E327392)
Manufacturer: SHEN ZHEN ZHAOLI MOTOR LTD.
Designation: YJ48/200
Rating: 120 V, 60 Hz, 14.5 W.
Enclosure: Open.
Insulation Class: class B.
Protection: Impedance protection. ZP marked on the motor.
Type: Shaded pole, induction motor.
Mounting: Secured to blower motor housing with mechanical ways.

Alternate Blower Motor: cURus Recognized. (E343126)

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Manufacturer: FOSHAN CITY SHUNDE DISTRICT LEPUDA MOTOR CO LTD.
Designation: PLD48-120.
Rating: 120 V, 60 Hz, 14.5 W.
Insulation Class: class B.
Protection: Impedance protection. ZP marked on the motor.
Type: Shaded pole, induction motor.
Mounting: Secured to blower motor housing with mechanical ways.

Alternate Blower Motor: cURus Recognized. (E184751)
Manufacturer: HUNAN KELI MOTOR CO LTD.
Designation: YJ48-16E-0005
Rating: 120 V, 60 Hz, 14W.
Insulation Class: class B.
Protection: Impedance protection. ZP marked on the motor.
Type: Shaded pole, induction motor.
Mounting: Secured to blower motor housing with mechanical ways.

b. Blower Wheels:
Material: Sheet aluminum.
Dimension: 48 mm dia by 295 mm long. Consists of 3 sections, each section has 20 blades spaced equally.
Mounting: Secured to the rotating shaft with by fitted press.

13. Remote control: Refer to Fig-9.
Applicable models: SXXZZYY&SXXZZYY-FF &SXXZZYY-MTFF.

14. Mechanical Temperature Regulating Control: UL and cULListed.
Applicable models: SXXZZYY-NRFF

Manufacturer: Auone Electronic Mfg Ltd (E179137).
Designation: 901B1.
Rating: 125 V, 15 A, 100000 cycles.

15. Toggle Switch (Optional):
Applicable models: SXXZZYY&SXXZZYY-FF &SXXZZYY-MTFF.

Manufactured byxinbao, model SS-12F15, rated 0.5A, used to disable the heater.
Alternate: Manufactured by Jiesheng, Model SS-12J01, rated 0.5 A, used to disable the heater.

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Model(s)
TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF,

Note: XX=18, 20, 24; ZZ=P or V; YY=1~9; FF=01~20; NR means ON-OFF switch type; MT means simple design key.

General: The subject models are series model with identical construction. Details refer to Att1 Figure 10-11, Att2 Illustrations 2 and Att3 Drawings 2.

1. Enclosure:

   a. Cabinet (Top, bottom, sides, back): Formed of painted sheet steel min 0.5 mm thick. Secured together with screws. Overall dimension for each model refer to Att3 Drawings 2.

   b. Heater Assembly Shell:
   Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF,

   Material: Formed of painted sheet steel min 0.5 mm thick, overall dimension 392 mm long by 155 wide by 90 mm height.
   Mounting: Secured to Bottom with screws.
   Openings as below:

Locations	Openings	Dimensions	Purpose
Bottom	41	40 mm by 3 mm	Air intake openings.
Front	44	32 mm by 3 mm	Air outlet opening.

2. Decorative Front Door: Door: Made of plastic. Tempered glass provided, secured to door with tabs and glass cement.
   Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF

3. Supporting Leg:
   Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF
   Flame Rating: UL 94 HB @ 3 mm, all colours, RTI=60 C or 1.5mm steel..
   Dimensions: Average 3.5 mm thick, providing 175 mm height from Bottom to earth.
   Mounting: Secured to bottom panel with screws.

4. Power Supply Cord:UL and cUL Listed.
   Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF
   Manufacturer: UNIRISE ELECTRIC WIRE & CABLE CO LTD (E206144).
   Designation: UE-221.
   Plugcap: Type 1-15 P, rated 125 V, 13 A.
   Rating: SPT-2, 16/2 AWG, 300 V, 105 C.
   Length: 1.8 m min, 2.4 m max.

   Alternate Power Supply Cord: UL and cUL Listed.
   Manufacturer: LINOYA ELECTRONIC TECHNOLOGY CO LTD(E315592).
   Designation: XYTP-006.
   Plugcap: Type 5-15 P, rated 125 V,13/15 A.
   Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.
   Length: 1.8 m min, 2.4 m max.

   Alternate Power Supply Cord:UL and cUL Listed.

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Manufacturer: GUANGDONG KAIHUA ELECTRIC APPLIANCE CO LTD(E254267).
Designation: KH-9922L.
Plugcap: Type 5-15 P, rated 125 V, 13/15 A.
Rating: HPN-R, 16/3 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord:UL and cUL Listed.
Manufacturer: UNIRISE ELECTRIC WIRE & CABLE CO LTD(E206144).
Designation: UE-322A.
Plugcap: Type 5-15 P, rated 125 V, 13/15 A.
Rating: SJT or HPN-R, 16/3 AWG, 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

Alternate Power Supply Cord: UL and cUL Listed.
Manufacturer: ZHONGSHANCITY HONGSHANCHUAN ELECTRICAL EQUIPMENTS CO LTD(E334525).
Designation: HSC-203.
Plugcap: Type 5-15P, rated 125 V, 13/15 A.
Cord: SJT or HPN-R cord, 16/3C AWG, rated 300 V, 105 C.
Length: 1.8 m min, 2.4 m max.

5. Strain Relief Bushing: UR Recognized.
Applicable models: : TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF
Manufacturer: HEAVY POWER CO LTD(E107293).
Designation: SR-FR51
Mounting: Secured to Heater Assembly Shell through a suitably sized double “D” shaped hole.

Alternate Strain Relief Bushing: UR Recognized.
Manufacturer: HEAVY POWER CO LTD(E107293).
Designation: 4N-4.
Mounting: Secured to Heater Assembly Shell through a suitably sized double “D” shaped hole.

6. Wire Connector: (INT) cURus Recognized.
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF
Type: Insulated, closed-end pressure crimp-on type.
Rating: 105 C or 750 C, suitable for 16 AWG, 18AWG,20 AWG and 22 AWG.

7. Quick Connect:(INT) cURus Recognized.
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF
Type: Crimp type, uninsulated.
Rating: Suitable for 16 ~22 AWG.

8. Internal Wiring: (INT) cURus Recognized.
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF

a. Heating Element Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.
Alternate Heating Element Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
b. Self-hold Thermostat Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 16 AWG, 105 C, 600 V.
Alternate Self-hold Thermostat Supply: AWM I A 3122 FT2 / AWM 3122 HB, 16 AWG, 200 C, 300 V.
c. Blower Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.

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d. Synchronous Motor Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
e. LED strip Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.
Alternate LED strip Supply: AWM I A 1015 FT1 / AWM 1015 VW-1, 22 AWG, 105 C, 600 V.
f. Control Panel Supply: AWM I A 2468 FTI / AWM 2468 VW-1, 24AWG, 80 C, 300 V.
Remarks: Cable ties provided to fix the internal wirings. Fiberglasstube provided for preventing wirings from overheating near heater element.

9. **Control System#1**: Mainly consists of Control panel and main PWB as following:
Applicable models: TXXZZYY, TXXZZYY-FF

9.1 PWB Control Panel (Push button type): (INT) cURus Recognized.
Material: Glass Fiber Phenolic.
Flame Rating: UL 94 V-0.
Dimension: 1.5 mm thick, overall dimension 102 mm by 40 mm or 59 mm by 41 mm or 167 mm by 50 mm.
Mounting: Secured to molded plastic cover with screws or only with screws.

Consists of the following critical components soldered on it,
a. Push Button (SW1~SW6): rated 12V dc, 100 mA.
b. Remote receiver: Rated 5V, 1mA.
c. LED Digit Display: Rated 5 V, 20 mA

9.2 Main PCB: (INT) UL Recognized.
Material: Glass Fabric Epoxy.
Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.
Dimension: 1.6 mm thick, overall dimension 144 mm by 55.3 mm.
Mounting: Secured to supporting panel with screws, molded plastic spacers provided 9 mm min spacing to supporting panel.
Consists of the following critical components soldered on it:

a. Fuse: cURus Recognized. (E321507)
Manufacturer: HANGZHOU HUAZU ELECTRONIC CO LTD.
Designation: RXF-1W.
Rating: 0.82R, 1 A.

b. Capacitor:
EC1， EC2: Electrolytic type, 10 uF, 400 V, 105 C or 15uF, 400 V, 105 C
EC3: Electrolytic type, 47 uF, 50 V, 105 C.
EC4: Electrolytic type, 470 uF, 25V, 105 C.
EC5: Electrolytic type, 100 uF, 16V, 105 C.

c. Relay (Relay1): cURus Recognized. (E321783)
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.
Designation: GK-C-1A-12D.
Rating: Contact 277Vac, 40 A, 100,000 operations.

Relay (relay2): cURus Recognized. (E321783)
Manufacturer: SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO LTD DONGGUAN BRANCH.
Designation: GI-1A-12D
Rating: 125 V ac, 10 A, 100,000 operations.

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d. High Frequency Transformer:
Insulation Class: 130 C.
Core: 21 mm by 14 mm by 4.7 mm. Homocentric squares ferrite core.
Bobbin: Single concentric bobbing, material PMC, 2.2 mm thick, 13 mm OD by 16 mm long. (Flame Rating: UL 94 V-0, RTI=130 C)
Winding: N1, 0.15 mm dia, 36 turns; N2, 0.35 mm dia, 90 turns; N3, 0.5 mm dia, 16 turns; N4, 0.15mm dia, 9 turns.
Mounting: Soldered to Main PCB via pin terminals.

Control System#2: Two switches provided with combined LED strip
Applicable models: TXXZZYY-NR FF, TXXZZYY-MT FF

Heater Control Switch: cURus Recognized. (E176026)
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.
Designation: SC767-6.
Rating: 125 V, 60 Hz, 15 A, 6,000 cycles.

Flame Control Switch: cURus Recognized. (E170626)
Manufacturer: SHENZHEN BAOKEZHEN ELECTRONICS CO LTD.
Designation: SC768.
Rating: 125 / 250 VAC, 15 / 7.5 A.
Mounting: secured to its holder on Supporting panel by snap fit.

Alternate Flame Control Switch: cURus Recognized. (E199326) Manufacturer: MERCHANT CORP LTD
Designation: SR-06
Rating: 125VAC, 16A.
Mounting: secured to its holder on Supporting panel by snap fit.

10. Faux Fire Assembly: Consists of critical parts as following:
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF

a. Flame and Ember LEDs: Max. total 21 provided, each rated 2 V dc, 20 mA.

b. Synchronous Motor: cURus Recognized. (E199324)
Manufacturer: FOSHAN SHUNDE HENGXING MICRO MOTOR CO LTD.
Designation: TYJ50-8A.
Rating: 120 V, 60 Hz, 4 W, 18 or 12r/min.
Protection: Impedance protected.
Mounting: Secured to the bracket with two screws.
Remarks: Shaft provided with sliver mylar reflective film fastened on it.

Alternate Synchronous Motor: cURus Recognized. (E242178)
Manufacturer: Zhaoqing City Gaoyao District Hengjun Electrical Appliance Co Ltd
Designation: TY-50.
Rating: 120 V, 60 Hz, 4 W, 18 or 12r/min.
Protection: Impedance protected.
Mounting: Secured to the bracket with two screw s.

Alternate Synchronous Motor: cURus Recognized. (E212993)
Manufacturer: ZHAOQING LONGTOU ELECTRONIC & ELECTRIC CO LTD.

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Designation: TY-50B.
Rating: 120 V, 60 Hz, 4 W, 18 or 12r/min.
Protection: Impedance protected.
Mounting: Secured to the bracket with two screw s.

11. Heater Element Assembly (Infrared heater): Consists of the main following.
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF

a. Heating Element: two elements are connected in parallel, secured in place by element supports and side brackets, each element is made of 0.7mm dia wire, 3.5~3.7 Ω/m, 900 C melting point. Rated 120 V, 60 Hz, 1400W.

b. Self-hold Thermostat: cURus Recognized. (E309745)
Manufacturer: DONGGUAN SHUNHE ELECTRONIC CO LTD.
Designation: H20 or H20X.
Rating: 125 V, 15 A, 10,000 operations, 120 C.
Mounting: Riveted to heater element housing.

Alternate Self-hold Thermostat: cURus Recognized. (E301742)
Manufacturer: FOSHAN CHANCHENG EAGLE TECHNOLOGY CO LTD.
Designation: AMT-P1
Rating: 125 V, 15 A, 10,000 operations, 120 C.
Mounting: Riveted to heater element housing.

(Optional) Thermal Fuse: cURus Recognized. (E313239)
Manufacturer: HONGYU ELECTRICAL (HONG KONG) CO LTD.
Designation: H4B00184C or H4B00144C
Rating: 184C or 144C, 16 A.

12. Fan Assembly: Consists of the following:
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF

a. Blower Motor: cURus Recognized. (E327392)
Manufacturer: GUANGDONG ZHAOLI MOTOR GROUP CO.,LTD.
Designation: YJ48/200
Rating: 120 V, 60 Hz, 14.5 W.
Enclosure: Open.
Insulation Class: class B.
Protection: Impedance protection. ZP marked on the motor.
Type: Shaded pole, induction motor.
Mounting: Secured to blower motor housing with mechanical ways.

b. Blower Wheels:
Material: Sheet aluminum.
Dimension: 46mm dia by 240 mm long. Consists of 3 sections, each section has 24 blades spaced equally.
Mounting: Secured to the rotating shaft with by fitted press.

13. Toggle Switch (Optional):
Applicable models: TXXZZYY, TXXZZYY-FF, TXXZZYY-NR FF, TXXZZYY-MT FF
Manufactured byxinbao, model SS-12F15, rated 0.5A, used to disable the heater.
Alternate: Manufactured by Jiesheng, Model SS-12J01, rated 0.5 A, used to disable the heater.

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TEST HISTORY

Edition: 1 (Project 80067606)

Original certification of electric movable heaters, household use, cord-connected, grounded, models SXXZZYY-FF, Rated 120 V, 60 Hz, 1500 W. The following tests were conducted on models S18P1, S18V1-NR in accordance with CSA C22.2 No. 46-13 and UL 1278 (4th Ed, August 20, 2018), with satisfactory results. Testings performed at CSA Guangzhou lab.

Model under test: S18P1				Ratings: 120 V, 60 Hz, 1500 W.
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Rating	7.2	38	T	P
Temperature (Normal)	7.4	40	T	P
Dielectric Strength	7.5	48	T	P
Tip Over Test:	7.6.4.3	42.4	T	P
Vertical-wall Test	7.6.4.5	42.5	T	P
Stalled Fan Test	7.6.4.6	42.3 / 42.11	T	P
Six-layers of Cheesecloth Drape Test	7.6.4.8	-	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P
Extreme Operating Voltage / Overvoltage Test	7.7	42.2	T	P
Terry Cloth Drape Test	-	42.6	T	P
Terry Cloth Band Drape Test	-	42.7	T	P
Strain Relief	7.8	59	T	P
Physical Abuse Tests	7.11	-	T	P
Leakage Current Test	7.12	39	T	P
Stability Test	7.17	51	T	P
Element Support Impact Tests	-	52	T	P
Drop Test	-	53	T	P
Test for Permanence of Cord Tag	-	54	T	P
Protection against personal Injury Test	-	55	T	P
Two Layer Cheesecloth Drape Test	7.6.4.1	-	N	Portable heater.
Drape Test	7.6.4.2	-	N	Portable heater.
Overturn Test For In-car Heaters	7.6.4.4	-	N	Not In-car heater.
Blocked Outlet and Inlet	7.6.4.7	-	N	Not Floor-in heater.
Air Filter Blocked Test	7.6.4.9	-	N	No air filter provided.
Drape Test for Portable baseboard Heaters	7.6.5.4	-	N	No portable baseboard heater.
Furniture Restriction Test for Portable Baseboard Heaters	7.6.5.6	-	N	Not Portable baseboard heater.

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Shredded Paper Test	7.6.5.7	-	N	Not baseboard heater.
Abnormal Temperature Tests for In-car Heaters	7.6.6	-	N	Not an in-car heater.
Abnormal Input For Heater with PTC elements	7.6.7	-	N	No PTC element used.
Cold Ambient Start-Up For Cord-Connected Heaters With PTC Elements	7.6.8	-	N	No PTC element used.
Starting	7.6.9	-	N	No PTC element used.
Ruptured Element Test	7.6.10	-	N	No sheath-type heating elements used.
Overload for Manually Operated Switches	7.9.3	-	N	UL Recognized switches used
Endurance for Manually Operated Switches	7.9.5	-	N	UL Recognized switches used.
Performance of Fusible Links:	7.10	-	N	No fusible links.
Performance of Thermally Operated Controls	7.13	-	N	Self-hold thermostat is certified.
Performance of Heaters Having PTC Heater Elements:	7.14	-	N	No PTC heater elements.
Static force	-	13.2.2	N	Wall mounted.
Hydrostatic Test:	7.15	-	N	No parts under pressure.
Dropping Melted Particles Test	7.16	-	N	No perforated metal panels or wire screens.
Dielectric Strength	8.6.1	-	N	Not double-insulated heater.
Leakage Current	8.6.2	-	N	Not double-insulated heater.
Abnormal Operation	8.6.3	-	N	Not double-insulated heater.
Alarm Device Endurance Test:	-	41	N	No alarm devices for indication of limit control.
Wall-hung Heaters	-	42.8	N	Portable heaters.
Abnormal Ambient Test	-	42.9	N	No automatic reset devices.
Motor Overload and Stalled Motor	-	42.10	N	No remote protective device.
Motor Connected Across Heating Elements	-	42.12	N	Motor not connected across heating elements.
Endurance Test	-	43	N	No automatic control, no movement of the power supply cord.
Short Circuit Tests	-	44	N	No supplementary fuse or high-voltage circuit current protector used.
Overload Test - High Voltage Transformers	-	45	N	No high voltage transformer.
Burnout Test - High Voltage Transformers	-	46	N	No high voltage transformer.
Components Failure Test	-	47	N	No solid state components.
Insulation Resistance Test	-	49	N	No thermal insulation used.
Water Spray Test	-	50	N	Not intended for outdoor use.
Knob Securement Test	-	56	N	No such knob used.

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Strength of Adjustable Stop Test	-	57	N	No such components.
Hydrostatic Test:	-	58	N	No parts under pressure.
Permanence of Marking	-	60	N	Certified labels.

Model under test: S18V1-NR				Ratings: 120 V, 60 Hz, 1500 W.
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Rating	7.2	38	T	P
Temperature (Normal)	7.4	40	T	P
Dielectric Strength	7.5	48	T	P
Tip Over Test	7.6.4.3	42.4	T	P
Six-layers of Cheesecloth Drape Test	7.6.4.8	-	T	P
Drape Test	7.6.5.3	-	T	P
Terry Cloth Drape Test	-	42.6	T	P
Strength of Adjustable Stop Test	-	57	T	P

Construction Review:

Construction review performed with satisfactory results.

Edition 2: (Project 80217962)

Update Report 80067606 to alternate models TXXZZYY&TXXZZYY-FF&TXXZZYY-NR FF&TXXZZYY-MT FF, series models are of identical construction but with three different sizes. The minimum size model T15V1-NR01 was chosen for full tesitngs as representative in accordance with CSA C22.2 No. 46-13 and UL 1278 (4th Ed., Feb. 21, 2022), with satisfactory results. And PCB was also evaluated according to CSA Standard C22.2 No.223-15& UL1310 (7th Ed., Dated August 16, 2019), with satisfactory results.
Testings performed at CSA Group Guangzhou lab.

Model under test: T15V1-NR01				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 1278 Par.	T: Tested W: Waived N: Not Applicable	Comments
Rating	7.2	38	T	P
Temperature (Normal)	7.4	40	T	P
Dielectric Strength	7.5	48	T	P
Tip Over Test:	7.6.4.3	42.4	T	P
Vertical-wall Test	7.6.4.5	42.5	T	P
Stalled Fan Test	7.6.4.6	42.3/42.11	T	P
Six-layers of Cheesecloth Drape Test	7.6.4.8	-	T	P
Drape Test	7.6.5.3	-	T	P
Furniture Restriction Test	7.6.5.5	-	T	P

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Extreme Operating Voltage / Overvoltage Test	7.7	42.2	T	P
Terry Cloth Drape Test	-	42.6	T	P
Strain Relief	7.8	59	T	P
Leakage Current Test	7.12	39	T	P
Stability Test	7.17	51	T	P
Test for Permanence of Cord tag	-	54	T	P
Protection against personal Injury Test	-	55	T	P
Strength of Adjustable Stop Test	-	57	T	P

The following tests were conducted on Main Printed Wiring Board in accordance with CSA Standard C22.2 No.223-15& UL1310 (7th Ed., Dated August 16, 2019), with satisfactory results.

Model under test: Main PCBs for model SF232-XXY			Rating: input: 120V, 60Hz, Output: 12VDC	
Tests	No.223-15, Cl.	UL1310 (7th Ed.) Par.	T: Tested N: Not Applicable W: Waived	Comments
Open Circuit Secondary Voltage/Maximum Output Voltage	6.3.1	28	T	P
Maximum output current and power	6.3.4	30	T	P
Normal Temperature Test	6.4	33	T	P
Dielectric Voltage Withstand Test	6.5	34	T	P
Abnormal- Component breakdown	6.8	39.7	T	P

Construction Review:

Construction review performed with satisfactory results.

This Edition supersedes all previous editions.

---End of Report---

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