



Double power Ceramic Heating Element

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Model:E7550SAA

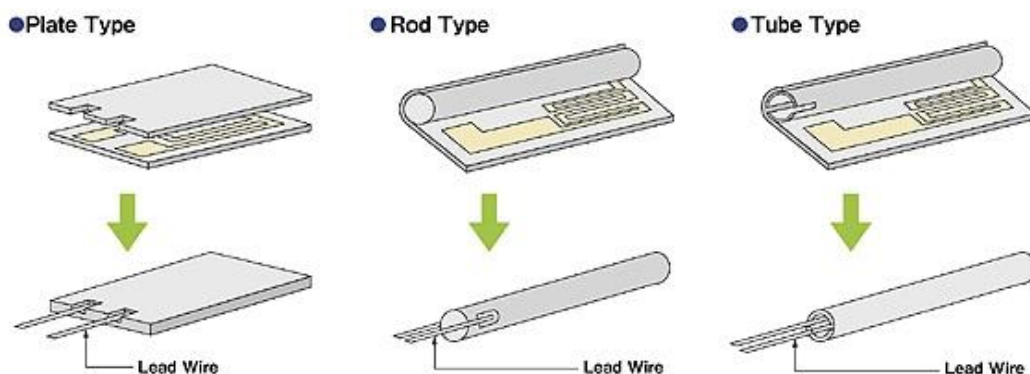
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Process of Double power Ceramic Heating Element

First, painting the high melting point metal (tungsten or molybdenum manganese) paste on to the Al₂O₃ casting briquette in coordinate to the circuit design, then another layer of sintering additives. After that, repeating the process to build multiple layers. Then, they are sintered together under 1600°C hydrogen gas environment. Finally, nickel leads are brazed at 800°C onto the metal end and put on with Teflon sleeve, which make it a MCH heating element.

Internal Heating elements are protected from oxidation due to sintering into one-piece ceramic body structure.



Material Properties of 95% Al₂O₃ Alumina ceramic

Item	Inspection Condition	Unit	Standard
Color			White
Density		g/cm ³	3.7
Water absorption		%	0
Average grain size		μm	3~5
Hardness	Load 4.9N 4.9N	GPa	≥15
Flexural strength		MPa	≥274
Linear expansion coefficient	20~500℃	1×10 ⁻⁶ mm/℃	6.5~7.5
	20~800℃		6.5~8.0
Thermal conductivity	20℃	W/(m·K)	≥20.9
Specific heat		kJ/(kg·K)	≥0.8
Insulation strength		KV/mm	≥12
Volume resistivity	20℃	Ohm.cm	≥10 ¹⁴
	300℃		≥10 ¹¹
	500℃		≥10 ⁹
Permittivity	1MHz		9~10
Dielectric loss tangent	1MHz		≤3×10 ⁻⁴
Surface roughness		μm	0.3~0.8

Parameter of alumina Heater

Configuration and Dimension							
Shape	Dimension	Tolerance		Tolerance		Tolerance	Resistance Tolerance
Plate	Length (mm)		Width(mm)		Thickness(mm)		
	10~120	① ≤20+/-0.3 ② ≥20+/-1	2~60	① ≤20+/-0.3 ② ≥20+/-1	0.55~2.0	① ≤1+/-0.1 ② ≥1+/-0.15	+/-10%
	length		Diameter				
Rod	8~121	① ≥30mm:+/-0.5 ② 30~100mm:+/-1.0	2.5~8	① ≥5mm:+/-0.1 ② 5~9mm:+/-0.2			+/-10%
Tube	8~121	③ ≤100mm~:+/-1.5	2.5~20	③ ≤9mm~:+/-0.3			+/-10%

Parameter of Double Power Heater Element

Heater Name	Double Power Ceramic Heating Element for Soldering Iron
Working Voltage	110V/230V
Working Power	B:20W+/-10% A-C:60W+/-10% or Accordingly
Dimension	Already Models or Customization
Heating Resistance	Accordingly
Leads	Nickel wires
Working Temperature	400~500℃
Insulation Sleeve	Accordingly



Our Company

Xiamen Green Way Electronic Technology Co., Ltd. is a professional manufacturer of aluminum ceramic heater elements focusing on product design, R&D, production and sales. With over 10 years' experience, we produce kinds of ceramic heaters which are widely used in soldering iron, soldering station, oxygen sensor, instant water heater, 3D Printer, E-cigarette, biomass pellet burners and so on.

With professional R&D team, advanced facilities and strictly on-line production quality control system, we



are committed to providing high quality products with perfect service.
Customization is acceptable and welcome.