

## PTC Thermistors as Heaters and Current Limiters

PTC Heaters – Self-regulating heaters in simple and complex 2D and 3D shapes that are highly reliable in demanding applications.

PTC Current Limiters – Used to limit the current in a circuit in the event of a fault condition. They can be used in place of conventional fuses, and they don't typically require replacement in the event of a fault.

### Shaped 2D PTC Heaters

#### Features & Benefits

- Shapes: trapezoids, parallelograms, circular or rectangular washers
- Wide range of switch points:  $-10^{\circ}\text{C}$  to  $200^{\circ}\text{C}$
- Self-regulating properties – Power required in lower ambient temperature conditions
- Proven reliability on Angle of Attack Aircraft Sensors and similar applications

#### Applications

- Aerospace – Ice prevention
- Medical
- LCD display – Maintain LCD temperature in cold conditions

### 3D PTC Heaters

#### Features & Benefits

- Overcomes geometric limitations of conventional 2D pressed powder heaters
- Curved surfaces and aerodynamic shapes
- Operating temperatures no higher than  $200^{\circ}\text{C}$
- Self-regulating properties
- Uses a novel forming process for PTC ceramic that is similar to injection molding

#### Applications

- Oil & Gas – Pipeline flow, sensor and valve de-icing
- Space – Fuel line heating in satellites
- Aerospace – Sensor, bearing and nose cone de-icing
- Healthcare – Sleep apnea and humidity control
- Renewables – De-icing on wind turbines

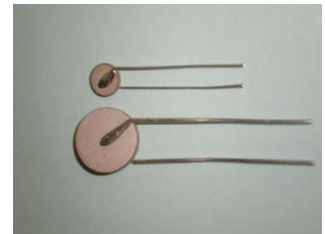
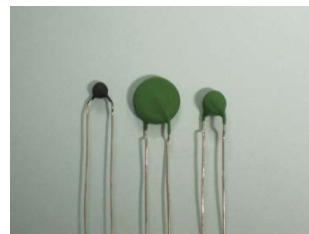
### PTC Current Limiters

#### Features & Benefits

- Wide range of operating currents
- Operation up to 1000 Vrms (p/n YS4020)
- Coated, uncoated and tape -and- reel options
- Excellent stability to original resistance post reset
- RoHS & REACH compliant

#### Applications

- Protection of power supplies and transformers
- Protection of multi-meter inputs
- Fans and small motors – locked rotor protection



PTC Current Limiters



Shaped 2D PTC Heaters



3D PTC Heaters