

Self-Regulating Heaters



Positive Temperature Coefficient thermistors are truly remarkable for their ability to function as self-regulating heating elements. They can operate at a nearly constant temperature over a broad range of voltage and dissipation conditions. PTC heaters can be manufactured in many different configurations. These include discs, rectangles, squares, cylinders, and various shapes with holes to increase surface area. Multiple PTCs can be used in parallel to provide constant heating over a larger area.

Features:

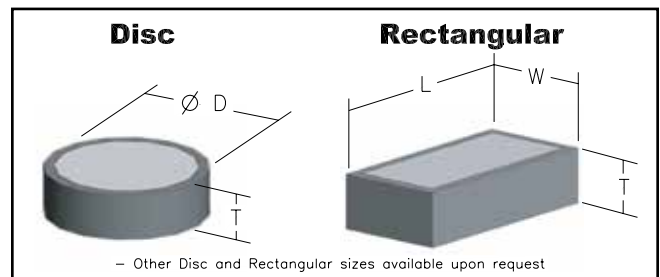
- No thermostat needed
- Virtually unlimited life
- No moving parts to wear
- Efficient
- Very low cost
- No electrical noise

Typical Applications:

- IC heater
- Curling iron
- Hair dryer
- Hot melt glue gun
- Food warmer
- Diesel fuel heater
- Instrumentation heater
- Plug-in aroma heater
- Wax motor
- TCXO heater
- Liquid Crystal display
- Bimetal heater



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Standard Rectangular PTC Heaters						
Switch Temp. T_s (°C)	V_{max}^* (volts)	L (inches)	W (inches)	T (inches)	R_{25}^{**} (Ω)	MS Part #
50	50	0.472	0.236	0.050	10	PR425C050S101H
90	50	0.472	0.236	0.050	10	PR425C090S101H
135	50	0.472	0.236	0.050	10	PR425C135S101H
50	120	0.472	0.236	0.100	70	PR421D050S701H
90	120	0.472	0.236	0.100	70	PR421D090S701H
135	120	0.472	0.236	0.100	70	PR421D135S701H

Standard Disc PTC Heaters					
Switch Temp. T_s (°C)	V_{max}^* (volts)	D (inches)	T (inches)	R_{25}^{**} (Ω)	MS Part #
50	50	0.500	0.050	5	P5005C050S500H
90	50	0.500	0.050	5	P5005C090S500H
135	50	0.500	0.050	5	P5005C135S500H
50	120	0.500	0.100	40	P5010D050S401H
90	120	0.500	0.100	40	P5010D090S401H
135	120	0.500	0.100	40	P5010D135S401H

* V_{MAX} = Maximum Voltage ** R_{25} = Resistance at 25°C

Other Available Rectangular Sizes	
L (INCHES)	W (INCHES)
0.400	0.200
0.472	0.236
0.750	0.350
0.985	0.315
2.000	0.350

Other Available Disc Diameters	
DIAMETER (INCHES)	
0.100	
0.160	
0.200	
0.250	
0.300	
0.350	
0.400	
0.500	
0.550	
0.600	
0.750	

Other Available Switch Temperatures	
Switch Temperature T_s (°C)	
40°C - 150°C	

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TE Connectivity:

[P5005C135S500H](#) [PR425C135S101H](#) [P5005C050S500H](#) [PR425C050S101H](#) [PR421D050S701H](#)
[PR425C090S101H](#) [PR421D090S701H](#) [P5005C090S500H](#) [P5010D050S401H](#) [P5010D135S401H](#) [PR421D135S701H](#)