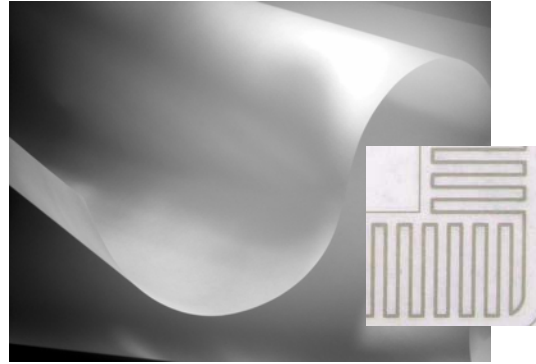
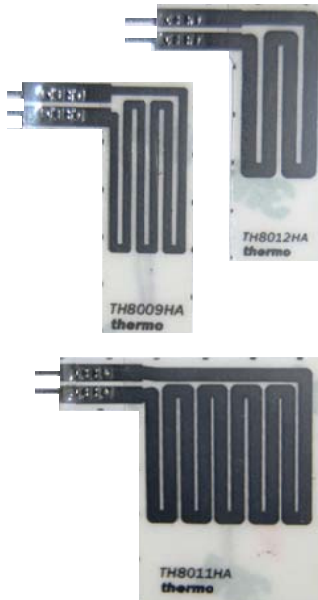


Problem: High Voltage Requirements for Small Spaces
Solution: HRT—High Resistance Technology

Thermo continues to develop and evaluate new technologies and their applications in the heater industry. Many high temperature thick films (conductive inks) are available today, which can be applied to a wide variety of substrates in order to meet low, moderate and high temperature requirements.



Customer's often face sourcing issues when their designs require heating elements with high resistance in very small areas. The traditional solution to this problem has been for the heating element manufacturer to build a small element with very fine resistance wire; however, these are difficult to manufacture, result in a high unit cost, lower production yields, and late deliveries. Occasionally, the required resistance is so high that none of the traditional technologies will provide a solution.

Using our core technology of polymer thick film heating elements, Thermo has developed **HRT - high resistance technology** elements that surpass the resistance density of the traditional product offerings. Because the elements use our polymer thick film technology, heating element costs are much lower than the traditional elements and are available in multiple configurations and design options.

Technical Specifications of HRT

Properties	Measurement
Minimum Size	1.50" x 0.50"
Standard Thickness	0.01"
Std Dimensional Tolerances	+/_ .02"
Operating Temperatures	-84° to 115°C
Max Watt Density	1.25 watts / sq. in.
Dielectric Strength	Single Layer PSA—1500v
Standard Voltages	6v, 12v, 24v, 48v, 120v, 240v