



3M™ 8940

Thermally Conductive Adhesive Tape



With consumer demand for smaller, lighter, faster electronics with added functionality hotting up, the designer has to find ways of keeping things cool.

Automotive Electronics

Control units are managing more and more of the safety, steering, braking, lighting, handling, convenience, comfort aspects of the vehicles. The control units are handling more electronic data at a faster rate leading to the need for improved thermal management.

Computers

Processors are running at 2.5GHz as standard operating speeds.

Digital Set Top Boxes

Download a movie or football match to view at a later date requires the use of a hard disk and a processor contained within the unit.

Televisions and Displays

With the advent of the digital TV, these are becoming like mini computers.

Picture and video messaging

The increase in use of VMS and MMS has led to the need for thermal management even in mobile phones.

The new 3M 8940 Thermally Conductive Adhesive Tape has been specially developed to meet today's needs in thermal management.

- The unfilled high temperature resistant acrylic adhesive gives excellent durability and adhesion at room temperature and elevated temperatures.
- The highly filled thermally conductive carrier acts as a compliant layer at elevated temperatures and allows excellent heat transfer from the heat-generating device to the heat sink.
- The carrier acts as an excellent dielectric insulator.
- The double-coated adhesive tape is easy to die-cut into custom shapes and sizes.
- Can replace grease, mica sheets and fasteners, offering lower cost and improve productivity.

3M™ 8940 Thermally Conductive Adhesive Tape

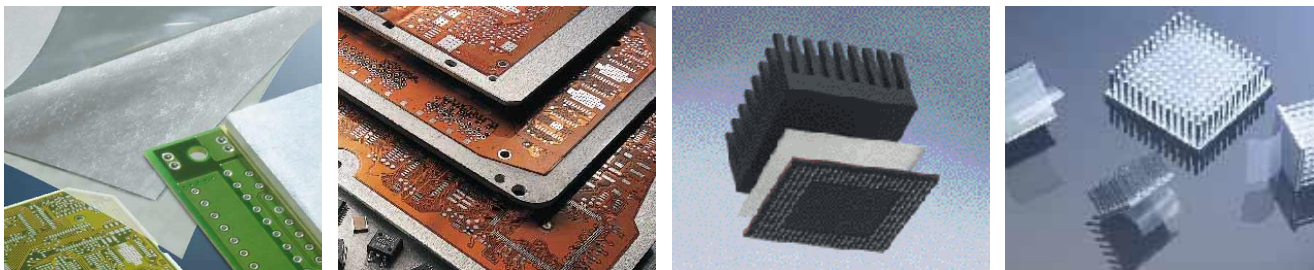
3M 8940 Thermally Conductive Adhesive Tape is designed to provide an efficient heat-transfer path between heat-generating components and heat sinks or other cooling devices. The tape consists of a carrier, highly loaded with thermally conductive fillers, coated on both sides with a high temperature resistance

acrylic pressure sensitive adhesive. The specialized construction securely bonds the heat-generating components to heat sinks and offers both good thermal conductivity and excellent electrical insulation properties.

Typical Properties and Performance Characteristics

	Test	Value	Test Method
Thermal Properties	Effective Thermal Conductivity [W/m*K]	0,63	3M™ acc. to ASTM D 5470
	Thermal Impedance [°C-cm ² /W]	3,64	3M™ acc. to ASTM D 5470
Dielectric Properties	Breakdown Voltage [kV]	12	ASTM D149
	Dielectric Strength [kV/mm]	50	ASTM D149
	Volume Resistivity [Ω-cm]	3,0 x 10 ¹⁵	ASTM D257
	Dielectric Constant (Frequency 50-60 Hz) [εr]	2,77	ASTM D149

Note: The technical information above for 3M 8940 Thermally Conductive Tape should be considered representative or typical only and should not be used for specification purposes.



3M Thermally Conductive Materials offer an exciting array of solutions for thermal management in today's highly demanding electronic devices. From thin tapes to pads to liquid adhesives,

3M Thermally Conductive Materials are the obvious answer to your thermal application needs.

3M Thermally Conductive Interface Materials

Product	Typical Applications
Thermally Conductive Tapes	
8805, 8810, 8815, 8820	3M's Thermally Conductive Tapes with high mechanical strength; also offering improved surface wet out, and excellent shock performance. Applications requiring thin bonding with good thermal transfer; CPU, flex circuit and power transformer bonding to heat sinks or other cooling devices.
9882, 9885, 9890	3M's original Thermally Conductive Tapes. Applications requiring thin bonding with good thermal transfer; CPU, flex circuit and power transformer bonding to heat sinks or other cooling devices.
9894FR	Applications requiring gap filling and bonding with good thermal transfer; Plasma display, IC packages, PCB bonding to heat sinks, metal cases and other cooling devices.
Thermally Conductive Pads	
5506, 5507, 5507S, 5509	Applications requiring gap filling and superior thermal performance without bonding. Provides IC package and PCB thermal interfacing with heat sinks or other cooling devices and metal cases.
Thermally Conductive Epoxies	
TC-2707, DP 190 Grey, TC-2810	Applications requiring high adhesive strength, good surface wet out, gap filling and good thermal transfer. Provides IC Package and PCB thermal interfacing with heat sinks or other cooling devices.

• Important Notice: The statements and technical information in this article are based on tests and data believed to be reliable, but the accuracy or completeness not guaranteed. User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of application. All questions of liability relating to 3M products are governed by the seller's terms of sale subject, where applicable to prevailing law.



For additional product information or to arrange for sales assistance contact:

3M Austria	+43-1-866860	3M Greece	+30-210-688-5300	3M Portugal	+351-21-313-45-00
3M Belgium	+32-2-7225111	3M Gulf	+971-4-265-2121	3M Russia	+7-095-784-7474
3M Czech Republic	+420-2-61380111	3M Hungary	+36-1-270-7777	3M Spain	+34-91-3216000
3M Denmark	+45-43-480100	3M Ireland	+353-1-2803555	3M Sweden	+46-8-922100
3M East	+41-41-799-3100	3M Israel	+972-9-9561490	3M Switzerland	+41-1-7249090
3M Egypt	+202-525-9007	3M Italy	+39-02-70351	3M Turkey	+90-212-350-7777
3M Finland	+358-9-5252-1	3M Netherlands	+31-71-5450450	3M United Kingdom	+44-870-60-800-50
3M France	+33-1-30-316161	3M Norway	+47-63-847500		
3M Germany	+49-2131-143000	3M Poland	+48-22-739-60-00		

PE-BE-SB-19

This publication is printed on chlorine-free paper that can be recycled