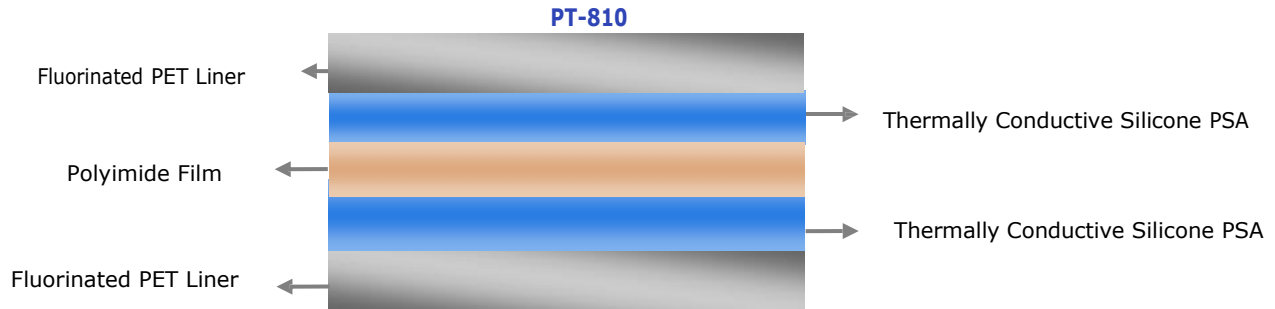


**Description:**

POLYONICS PT-810 is a 3.5 mil (89 μm) thermally conductive, double coated bonding tape with silicone pressure sensitive adhesives (PSA) and fluorinated PET liners.



**Features:**

- High thermal impedance
- High dielectric strength
- UL94 VO flame retardant (UL recognition pending)
- REACH and RoHS compliant
- Halogen-free

**Technical Data**

	Property	Method	Average Results	
PHYSICAL	<b>Color</b>	Visual	Black	
	<b>Total Thickness<sup>1</sup></b> inch (mm)	ASTM D-1000	0.0035 (0.09)	
	<b>Reinforcement Carrier</b>	-	0.5 mil Polyimide	
	<b>Thickness TIM</b> inch (mm)	ASTM D-1000	0.0015 (0.04) each side	
	<b>Continuous Use Temp<sup>2</sup>,</b> °C (°F)	Polyonics (1000 hrs)	0°C to 200°C (32°F to 392°F)	
	<b>Condition Rating<sup>2</sup></b> -High Temp testing of solid state devices for 1000hrs	JEDEC 22-A103C	Condition D	
	<b>Outgassing</b>	ASTM E-595 24hrs at 125 °C	TML= 0.67% CVCM= 0.25% WVR= 0.26%	
THERMAL	<b>Thermal Resistance<sup>3</sup></b> (°C-in <sup>2</sup> /W)	ASTM 5470 (post 1000hr @ max temp)	10 psi	0.58
			50 psi	0.53
			100 psi	0.41
MECH	<b>Adhesion</b> (oz/in) 180° peel strength on Aluminum w/ 24 hr dwell	Polyonics 80313	36	
	<b>Lap Shear</b> (psi)	ASTM D1002	30	
	<b>Probe Tack</b> (g/in)	ASTM D2927	34	
ELEC	<b>Voltage Breakdown<sup>4</sup></b> (Vac)	ASTM D149	2700	
	<b>Vol. Resistivity<sup>4,5</sup></b> (Ω/cm)	Polyonics Method	4 x 10 <sup>7</sup>	
	<b>Flame Rating<sup>6</sup></b>	UL-94 <sup>f</sup>	V-0	

<sup>1</sup> Does not include double liners, which add 4-4.5 mil thickness total.

<sup>2</sup> 1000 hrs at max temperature rating as tested by JESD22-A103E conditions. Cond E= +250°C, Cond D= +200°C, Cond C=+175°C

<sup>3</sup> 8.0cm<sup>2</sup> test head

<sup>4</sup> Not recommended for applications that require electrical isolation

<sup>5</sup> Volume Resistivity is tested per Polyonics method, not per ASTM D149, which is designed for electrically isolating materials

<sup>6</sup> Tested to the UL94 standard by Polyonics



**POLYONICS**

**Thermal Interface Material**

**PT-810**

**Thermally Conductive Bonding Tape**

**NOTE:** All values shown are averages and should not be used for specification purposes. Test data and test results contained in this document are for general information only and shall not be relied upon by POLYONICS customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact POLYONICS for further information.

References: ASTM: American Society for Testing and Materials (U.S.A.) SI: International Systems of Units.

**Polyonics Material Compliance**

<b>RoHS</b> (Restriction of Hazardous Substances) EU Directive 2002/95/EC	Limits set forth in Directive 2005/618/EC amending Directive 2002/95/EC
<b>REACH</b> (Registration Evaluation and Authorization of Chemicals) EU Directive 1907/2006/EC	Limits set forth in Directive 1907/2006/EC Article 7 (2)
<b>Halogen Free</b> - Restriction use of Halogen (IEC 61249-2-21)	Limits set forth in International Electrochemical Commission

**WARRANTY-LIMITATION**

Polyonics' products are sold with the understanding that the Buyer will test them in actual use and determine for him/herself their adaptability to his/her intended uses. Polyonics warrants to the buyer that its products are free from defects in material and workmanship, but limits its obligations under this warranty to replacement of the products shown to Polyonics' satisfaction to have been defective, provided that the Buyer has complied with the handling, storage and shelf life requirements as specified by Polyonics in applicable materials specifications.

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