## **3M**

## Low Static Polyimide Film Tape (Linered) 5433

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Technical Data				page 1 of 2		
Product Description	Tape 5433 is a linered version of Tape 5419. A translucent, polyimide film-backed silicone adhesive tape with unique and extremely low electrostatic discharge properties.					
<b>Product Construction</b>	Backing	Adhesive	Color	Standard roll Length		
	Polyimide	Silicone	Amber	36 yds (33m)		
Typical Physical Properties	<b>Note:</b> The following technical information and data should be considered representative or typical only, and should not be used for specification purposes.					
				<b>ASTM Test Method</b>		
	Adhesion to Steel:	20 oz./in. width (22 N/100mm) D-3330				
	Tensile Strength at Break:	33 lbs./in. width (578 N/100mm) D-3759				
	Elongation at Break:	60% D-3759				
	Backing Thickness:	1 mil (.03mm) D-3652				
	Total Tape Thickness:	2.7 mils (.07mm) D-3652				
	Temperature Use Range:	-100°F to 500°F (-73°C to 260°C)				
	Dielectric Strength:	7000 volts				
	Insulation Resistance:	>1*10 <sup>6</sup> ohms				
	Static Charge:	(measured @ 50% RH, 70°F (21°C) in an ESD controlled environment)				
	Removal from liner:	<100 volts				
	Removal from PWB:	Dependent on PWB substrate, generally less than 500 volts				
General Information	<ul> <li>Employs a proprietary technology that results in extremely low electrostatic discharge at unwind and removal from the PWB. Conventional polyimide tapes can typically generate over 10,000 volts during use which can damage board mounted electronic components. Tape 5433 overcomes this problem without any of the typical drawbacks of conventional "anti-static" or "static-free" tapes (e.g., variable adhesion and opaqueness).</li> </ul>					
	<ul> <li>At room temperature, the properties of polyimide and polyester film are similar. However, as the temperature increases or decreases, the properties of the polyimide film are less affected than polyester.</li> </ul>					
	<ul> <li>Polyimide film does not soften at elevated temperatures, thus the film provides an excellent release surface at elevated temperatures.</li> </ul>					
Shelf Life	To obtain best performance, use this product within 12 months from date of manufacture and store under normal conditions of 60° to 80°F (15° to 21°C) and 40 to 50% R.H. in the original carton.					
Application Ideas	Mask for many printed circuit boards during wave solder or solder dip process					
	Release surface in fabrication of many parts cured at elevated temperatures					

## $3M^{\rm TM}\,Low\,Static\,Polyimide\,Film\,Tape\,(Linered)$

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Features	Features	Advantages	Benefits		
	Polyimide film Dimensionally stable at high temperatures		Helps promote high productivity		
		Flame retardant and chemical resistant	Protects surfaces, helping reduce replacement		
	Silicone adhesive	High temperature performance reduces adhesive transfer	Helps promote high productivity		
	Low static	Virtually eliminates circuit board degradation due to electrostatic discharge	Helps reduce costly board waste due to component failure		
	Unique release liner	Easy release from silicone adhesive	Capability to produce die cut parts		
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## **Industrial Tape and Specialties Division**

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December/06/2001