

SD121200EJ Technical Datasheet

All-Polyimide Flexible Laminate

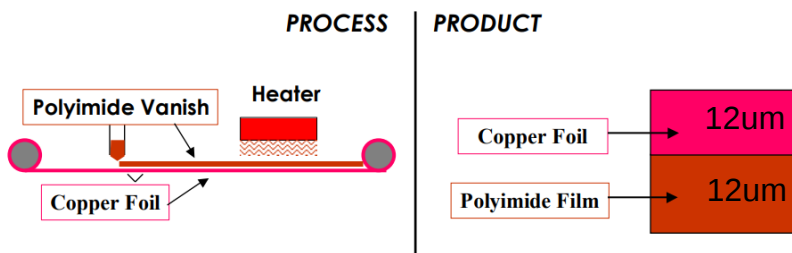
A family of High-Performance Adhesiveless Laminates for Flexible Printed Circuit Applications

Product Description

SD single-sided, copper-clad laminate is an all-polyimide composite of polyimide film bonded to copper foil. This material system is ideal for low layer count flexible printed circuits which require advanced material performance, temperature resistance, and high reliability. Currently offered in various dielectric thicknesses, SD provides designers, fabricators, and assemblers a versatile option for a wide variety of flexible circuit constructions.

The polyimide varnish used in SD product is manufactured and provided by Dupont.

- Excellent thermal resistance due to all-polyimide composition
- High Cu-polyimide adhesion strength
- Good flex & bending performance
- Excellent dimensional stability
- Excellent dielectric thickness tolerance
- Low CTE for rigid flex multilayers
- UL 94 V-0
- Product manufacturing process and Product structure



Property	Typical Value	Test Method
Adhesion to cu (Peel Strength*)		IPC-TM-650,Method 2.4.9
AS Received, kgf/cm	1.2	Method B
After soldering, kgf/cm	1.2	Method D
Solder Float		IPC-TM-652,Method 2.4.13
10sec at288℃(550°F)	Pass	Method B
Dimensional stability, %		IPC-TM-650,Method 2.2.4
	-0.03	Method B, %
	-0.06	Method C, %
Dielectric constant (at 1 GHz)	3.4	IPC-TM-650,Method 2.5.5.3
Dissipation Factor (at 1 GHz)	0.005	IPC-TM-650,Method 2.5.5.3
Dielectric Strength,kV/mm(Kv/mil)	200 (4.9)	ASTMD-149
Volume Resistivity (damp heat), megohm	10 ¹⁰ ↑	IPC-TM-650,Method 2.5.17.1
Surface Resistance (damp heat). megohm	10 ⁶ ↑	IPC-TM-650,Method 2.5.17.1
Moisture Absorption, %	0.94	IPC-TM-650,Method 2.6.2
CTE, ppm/℃	19	ASTMD-696-91
CHE, ppm/% RH	8.0	
Propagation Tear Strength+, g	3.0	IPC-TM-650,Method 2.4.17.1
Initiation Tear Strength++, g	400-700	IPC-TM-650,Method 2.4.16
Tensile Strength, Mpa(kpsi)	193(28)	IPC-TM-650,Method 2.4.19
Tensile Modulus, Mpa(kpsi)	7580(1100)	ASTMD-882-91
Elongation, %	21	IPC-TM-650,Method 2.4.19
Tg, ℃	284	DMA
Flammability	V-0	UL-94

* Peel strength method is 180° instead of 90°

+ With exception to IPC-TM-650, Method 2.4.17.17.1, Propagation Tear Strength

++ With exception to IPC-TM-650, Method 2.4.16, Initiation Tear Strength

* The value given herein is not specification but typical value based on data believed to be reliable.

* The value in some of the properties may change with different test method and conditions.