

TopFlex Corporation

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ThinFlex H-1005RS-C Adhesiveless Copper Clad Laminate

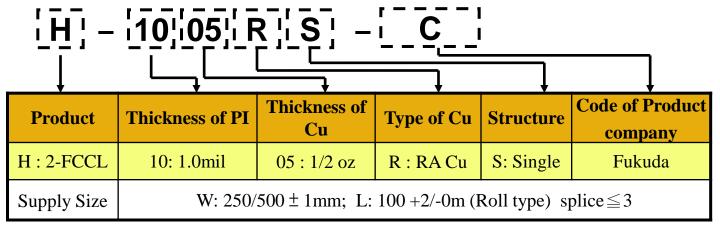
IPC Designation IPC-4204/11

ThinFlex-H is an Adhesiveless metal clad polyimide film, furnished in the form of roll laminate with RA or ED copper on one sides. ThinFlex-H adhessiveless composites are designed for a wide variety of flexible printed circuits (FPC) applications which require advanced material performance, temperature resistance, fine pitch, and high reliablity.

1. Product Characteristics:

- * Excellent dimensional stability
- * Excellent flexibility
- * Excellent anti-flammability (Flame class UL 94V-0 · UL file No.E219724)
- * Excellent line etch ability
- * Low moisture absorption
- * Excellent chemical resistance
- * Excellent thermal, mechanical and electrical properties
- * Products can meet the environmental requirements of Topflex RoHs/Reach....

2. Specifications:



*Other thicknesses and dimensions are available on customers' demand.

Technical Data Sheet: 2016/08





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3. Construction:

4. Properties:

Copper foil

Polyimide film

IPC Designation IPC-4204/11

Test item		Unit	H-1005RS-C	Test Method
Peel Strength				
As Received		Kgf/cm	\ge 0.8	IPC-TM650 2.4.9
Solder Float		Kgf/cm	\ge 0.8	IPC-TM650 2.4.9
After Temp. Cycling		Kgf/cm	\geq 0.8	IPC-TM650 2.4.9
Chemical Resistance		Kgf/cm	\geq 0.8	IPC-TM650 2.3.2
Tensile Strength (Base Film)		Kg/mm ²	>15	IPC-TM-650 2.4.19
-		_		
Elongation (Base Film)		%	>10	IPC-TM-650 2.4.19
Tensile Modulus (Base Film)		Kg/mm^2	500	ASTM D882
Initial Tear Strength (Base Film)		g	680	IPC-TM-650 2.4.16
Propagation Tear Strength (Base Film)		g	14	IPC-TM-650 2.4.17.1
Flexural Endurance, MIT				
M.D.		Cycles	≥500	JIS-C 6471, 0.8mmR, 0.5kg
T.D.		Cycles	≥500	JIS-C 6471, 0.8mmR, 0.5kg
Electrical Properties				
Surface Resistance		Ω	~1011	IPC-TM650 2.5.17
Volume Resistance		Ω -cm	~1012	IPC-TM650 2.5.17
Insulation Resistance		Ω	~109	IPC-TM650 2.6.3.2
Dielectric Strength		KV/mil	6.0	ASTM-D149
Dielectric Constant		-	3.6	IPC-TM650 2.5.5.3
Dissipation factor		-	0.01	IPC-TM650 2.5.5.3
Physical and Thermal Prope	erties			
Dimensional Stability	M.D.	%	-0.1~0.1	IPC-TM650 2.2.4C
	T.D.	%	-0.1~0.1	IPC-TM650 2.2.4C
CTE		ppm/°C	26	ThinFlex
$T_{ m g}$		$^{\circ}\!\mathbb{C}$	327	ThinFlex
Solder Float	10sec at 288°C (550°F)	-	Pass	IPC-TM650 2.4.13
Moisture Absorption Test		%	1.1	IPC-TM650 2.6.2
Chemical Resistance-single		-	Pass	IPC-TM650 2.3.2
Thickness tolerance		um	43±10%	ThinFlex
UL Flame Class		-	94V-0	UL

^{*} Above data are typical values, and are not guaranteed values.

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5. Storage:

ThinFlex-H will meet its shelf-life for at least 12 months after arrival at the user's factory when stored in the original packaging at temperatures of 20 $\pm 10^{\circ}$ C and 50 $\pm 20\%$ humidity . The products do not need refrigeration and should not be frozen.

Note: The information and data contained in this technical literature is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.

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