

R/flex JADE™ A Series

Halogen-Free Adhesive System

Flexible Coverlayer and Bonding Film

R/flex JADE™ A series flexible circuit materials are the next generation of the industry-leading R/flex CRYSTAL® epoxy adhesive system. Environmentally friendly, these materials are halogen-free, lead-free, and flame retardant. They allow our customers to meet the increasing environmental requirements imposed upon commercial applications worldwide without compromising the performance required in today's demanding flexible circuit designs.

Product Features & Benefits:

- Green and halogen-free epoxy system
- Superior thermal stability allows R/flex JADE A series material to withstand multiple passes through lead-free soldering
- Outstanding squeeze-out control, excellent dimensional stability, and superb peel strength improve process yields and reduce fabrication costs
- Inherent flame retardant performance - passes UL 94 V-0 flame testing
- Transparent adhesive system facilitates optical inspection

Applications:

R/flex JADE A coverlayer and bonding film is formulated to accommodate the most technically demanding circuit applications: hard disk drives, cellular phones, laptop computers, personal digital assistants, semiconductor packages, and many others.

The information in this data sheet is intended to assist you in designing with Rogers' circuit materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose or that any results shown in this data sheet will be achieved by a user for a particular purpose. The user is responsible for determining the suitability of Rogers' circuit materials for each application.

The world runs better with Rogers.®

Typical Values(1)

R/flex JADE™ A - Coverlayer and Bonding Film

Property	Test	Details	Units	Coverfilm	Bonding Film
				A500C1HO	A000B100
				1.0 mil adh	1.0 mil adh
Mechanical Properties					
Peel Strength	IPC-TM-650 method 2.4.9	Method A (as received) to Brite Cu	Kgf/cm	1.78	1.42
		Method A (as received) to Treated Cu		2.16	2.08
		After solder float to Brite Cu		1.54	1.34
		After solder float to Treated Cu		2.25	2.11
Solder Resistance	IPC-TM-650 method 2.4.13	288°C, 10 sec.		PASS	PASS
Dimensional Stability	IPC-TM-650 method 2.2.4	Method A	MD	%	-0.12
			TD		0.007
Electrical Properties					
Dielectric Constant	IPC-TM-650 method 2.5.5.3	@1 MHz	-	<4.0	
Dissipation Factor		@ 1 MHz	-	0.04	
Surface Resistance	IPC-TM-650 method 2.5.17	-	Ohms	>10 ⁴	
Volume Resistance	IPC-TM-650 method 2.5.17	-	Ohms cm	>10 ⁶	

(1) Typical values are a representation of an average value for the population of the property. For specification values contact Rogers Corporation.

Environmental Standards:

R/flex JADE™ A series products contain no cadmium, lead, mercury, hexavalent chromium compounds, PBBs, PBDEs and meet or exceed the following industry standards:

- IEC and JPCA halogen-free requirements
- RoHS directives



Part Number Description:

Coverlayer (C) Designations	R/flex A X00C X X 0
Polyimide Type _____	
Adhesive thickness, mil (µm) _____	
F=0.50 (12.5), J=0.70 (17), 1=1 (25), S=1.4 (35)	
Polyimide Film Thickness, mil (mm) _____	
H=0.5 (12.5), 1=1 (25)	

Bonding Film (B) Designations	R/flex A 000B X 00
Adhesive Thickness, mil (µm) _____	
F=0.50 (12.5), J=0.70 (17), 1- 1 (25), S=1.4 (35)	

Available Configurations:

Many available configurations are not standard. Please check with your Rogers representative.

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Material Construction Information:

R/flex JADE™ A coverlayer products are constructed with a base dielectric polyimide film and a standard release sheet of opaque polypropylene encapsulated white paper carrier. Bonding films are manufactured with polypropylene encapsulated paper and a polyester release sheet.

All R/flex® flexible circuit materials are manufactured under rigorous process control where process capabilities are continuously monitored for all critical properties such as peel strength and dimensional stability.

Storage Conditions:

R/flex JADE A coverlayer uses B-staged adhesive systems that will retain their original properties for a minimum of six months from the date of manufacture when stored at or below 4°C (40°F) in their original packaging. When stored at 16°C (60°F), the shelf life is three months from the date of manufacture.

For best results, R/flex JADE A bonding film should be stored at or below 4°C in their original packaging until time of use.

Applicable Specifications:

Coverlayer: IPC-4203 / 2

Unsupported Bonding Film: IPC-4203 / 19

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