JEB140RFA Bi-directional TVS Diode for ESD Protection

FEATURES

- \diamond Ideal ESD protection for high frequency, high speed applications.
- ♦ Ultra-low capacitance (0.2pF typical).
- \diamond Fast response time (<1ns, 0.5ns typical).
- ♦ Very low leakage current, reduces power consumption.
- ♦ Bi-directional device for placement flexibility.
- ♦ Surface mount design for board space savings.
- ♦ Compatible with standard reflow installation procedures.



Ceramic ESD Protector

Rev.1.1

MAIN APPLICATIONS

- ♦ High speed data ports, DVI, HDMI1.3/1.4, USB2.0/3.0, display port 1.0/1.1, e-SATA, IEEE1394.
- ♦ Antennas (cell phone, satellite radio, GPS...), blue tooth, LED lighting protection.
- ♦ Portable devices, cellular phone, PDA's, digital cameras, digital camcorders.
- ♦ High speed ethernet, DSL modems, computers & peripherals, printer ports.
- ♦ HDTV, set top boxes, DVD players, A/V equipment, multimedia players.

ELECTRICAL PARAMETERS(T_A=25°C)

	Working voltage	Trigger voltage	Clamping voltage	Leakage current	Capacitance
Part Number	V _{DC}	V _T	Vc	١L	CP
	max(V)	typ(V)	typ(V)	max(µA)	typ(pF)
JEB140RFA	14	200	30	0.1	0.2

*Trigger voltage measured per IEC61000-4-2 Level 4, 8KV.

*Capacitance measured at 1MHz.

*Leakage current measured at working voltage.

GENERAL CHARACTERISTICS



Operating temperature range	-50℃ to +125℃	
Storage temperature range	-50 ℃ to +150℃	
ESD Capability:		
IEC61000-4-2 Contact discharge	8KV typical	
IEC61000-4-2 Air discharge	15KV typical	

ENVIRONMENTAL SPECIFICATIONS

- \diamond High temperature storage: 150°C, 1000 hours without load.
- ☆ Temperature cycle: The temperature cycle shall be repeated for five times, -40°C/ 30 min; room temperature/ 1~2 hours; 125°C/ 30 min; room temperature/ 1~2 hours.
- ↔ High temperature load: 85°C, 1000 hours with the maximum allowable voltage.
- ♦ Humidity load: 40°C, 90 to 95% RH environment, the maximum allowable voltage applied for 1000 hours.
- \diamond Low temperature storage: -40 °C, 500 hours without load.

* After being test, all the specimen should be stored at room temperature 1~2 hours, the change of voltage shall be within 10%.



SOLDER REFLOW RECOMMENDATIONS

- Recommended reflow methods: IR, vapore phase oven, hot air oven.e
- The device can be exposed to a maximumatemperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.

Notes: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

PRODUCT DIMENSIONS



	Dimensions				
Ref.	Millim	eters	Inches		
	Min.	Max.	Min.	Max.	
D	0.9	1.1	0.035	0.043	
Е	0.4	0.6	0.016	0.024	
Н		0.6		0.024	
а	0.15	0.35	0.006	0.014	
W	0.5	0.6	0.020	0.024	
Х	0.4	0.6	0.016	0.024	
Y	0.6	0.9	0.024	0.035	
Z	1.4	2.4	0.055	0.094	

TAPE AND REEL INFORMATION





Symbol	Millimeters	Inches
A0	0.68±0.03	0.027±0.001
B0	1.17±0.03	0.046±0.001
W	8.00±0.10	0.315±0.004
F	3.50±0.05	0.138±0.002
E	1.75±0.10	0.069±0.004
P1	2.00±0.05	0.079±0.002
P2	2.00±0.05	0.079±0.002
P0	4.00±0.10	0.157±0.004
ΦD0	1.55±0.05	0.061±0.002
Т	0.43±0.03	0.017±0.001
A	178±2.0	7.008±0.079
N(min.)	50	1.969
С	13.0±0.2	0.512±0.008
W2(max.)	14.4	0.567
W1(min.)	8.4	0.331
W1(max.)	9.9	0.390

PART NUMBERING SYSTEM



ORDERING INFORMATION

Part Number	Package	Quantity Per Reel (PCS)	Reel Size
JEB140RFA	0402	10,000	7 Inch

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