JIEJIE MICROELECTRONICS CO., Ltd

JEB140RFB Bi-directional TVS Diode for ESD Protection

Rev.1.0

FEATURES

- ♦ Ideal ESD protection for high frequency, high speed applications.
- ♦ Ultra-low capacitance (0.2pF typical).
- → Fast response time (<1ns, 0.5ns typical).
 </p>
- 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





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=25°C)

	Working voltage Trigger voltage		Clamping voltage	Leakage current	Capacitance
Part Number	V_{DC}	V_{T}	V _C	I _L	C_P
	max(V)	typ(V)	typ(V)	max(µA)	typ(pF)
JEB140RFB	14	200	30	0.1	0.2

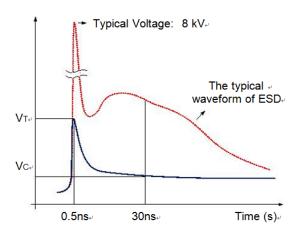
^{*}Trigger voltage measured per IEC61000-4-2 Level 4, 8KV.

^{*}Capacitance measured at 1MHz.

^{*}Leakage current measured at working voltage.



GENERAL CHARACTERISTICS



IEC61000-4-2 Standards

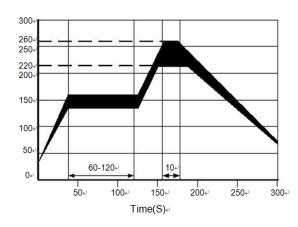
Level	First⊬ Peak⊬ Current⊬ (A)⊬	Peak Current at 30 ns (A)	Peak Current at 60 ns (A)	Test⊬ Voltage⊬ (Contact⊬ Discharge)⊬ (kV)⊬	Test⊬ Voltage⊬ (Air⊬ Discharge)⊬ (kV)⊬
14	7.5₽	4.	2₊	2↔	2↔
2₊	15₊	84	4.	4₊	4⊬
3⊬	22.5₽	12₊	6⊬	6₁	8↔
4₊/	30₽	16₽	8₁	8 4	15↩

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

ENVIRONMENTAL SPECIFICATIONS

- ♦ 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.
- ♦ 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

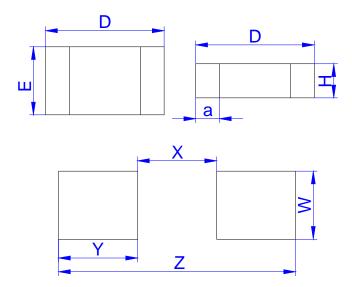


- Recommended reflow methods: IR, vaporaphase oven, hot air oven.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.

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

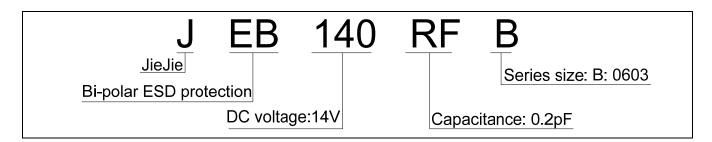


PRODUCT DIMENSIONS



	Dimensions				
Ref.	Millim	eters	Inches		
	Min.	Max.	Min.	Max.	
D	1.45	1.75	0.057	0.069	
Е	0.7	0.9	0.028	0.035	
Н		0.9		0.035	
а	0.2	0.4	0.008	0.016	
W	0.7	1.0	0.028	0.039	
X	0.9	1.2	0.035	0.047	
Υ	0.9	1.2	0.035	0.047	
Z	2.7	3.2	0.106	0.126	

PART NUMBERING SYSTEM



PACKAGE INFORMATION

Qty: 5kpcs/Reel

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