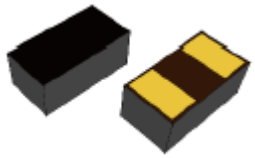
JEB180P0603 Bi-directional TVS Diode for ESD Protection Rev.1.0

FEATURES

Polymeric ESD suppressor

- ✧ Ultra-low capacitance (0.05pF typical).
- ✧ Low leakage current(<10nA).
- ✧ Fast response time (<1ns).
- ✧ Bi-directional,single line protection.



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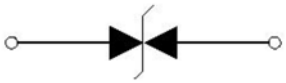


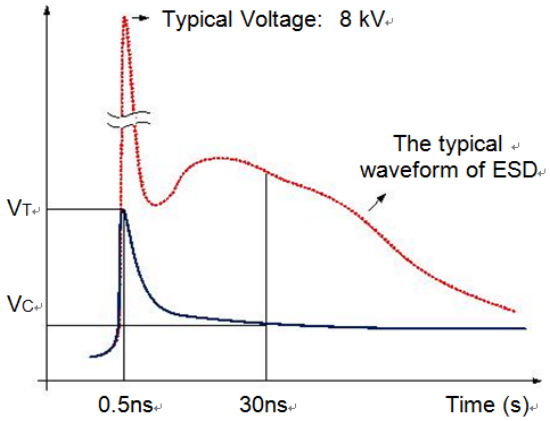
MAIN APPLICATIONS

- ✧ Smart phone/Mobile internet device.
- ✧ Laptop/Desktop computer.
- ✧ Antennas(Cell phnoe,GPS...)
- ✧ USB 3.0,USB 3.1 and high speed interface.

ELECTRICAL PARAMETERS (T=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Working voltage	V_{DC}				18	V
Trigger voltage	V_T	IEC61000-4-2 8kV Contact discharge		450		V
clamping voltage	V_C	IEC61000-4-2 8kV Contact discharge		40		V
Leakage current	I_L	V_{DC}=18V			10	nA
Junction capacitance	C_J	f =10MHz		0.05		pF
ESD pulse withstand	Pulses	IEC61000-4-2 8kV Contact discharge	1000			

GENERAL CHARACTERISTICS



IEC61000-4-2 Standards

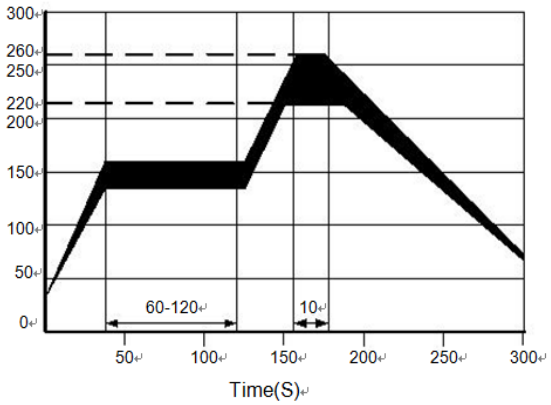
Level	First Peak Current (A)	Peak Current at 30 ns (A)	Peak Current at 60 ns (A)	Test Voltage (Contact Discharge) (kV)	Test Voltage (Air Discharge) (kV)
1	7.5	4	2	2	2
2	15	8	4	4	4
3	22.5	12	6	6	8
4	30	16	8	8	15

Operating temperature range	-40℃ to +85℃
Storage temperature range	-55℃ to +125℃
ESD Capability: IEC61000-4-2 Contact discharge IEC61000-4-2 Air discharge	 8kV typical 15kV typical

ENVIRONMENTAL SPECIFICATIONS

	Test Conditions	Pass/Fail Criteria
Bias Humidity Test	85°C, 85% RH, $V_{DC(max)}$, 1000hrs	I_L % 10 μA
Thermal Shock	-55°C to 125°C, 30 min Dwell, 1000 Cycles	I_L % 10 μA
Bias Heat Test	125°C,$V_{DC(max)}$,1000 hrs	I_L % 10 μA
Bias Low Temp Test	-55°C,$V_{DC(max)}$,1000 hrs	I_L % 10 μA
Solderability	250°C±5°C,3±1s	95% Coverage
Solder Heat	260°C,10s	90% Coverage

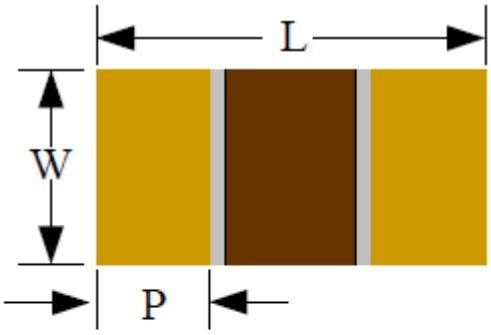
SOLDER REFLOW RECOMMENDATIONS

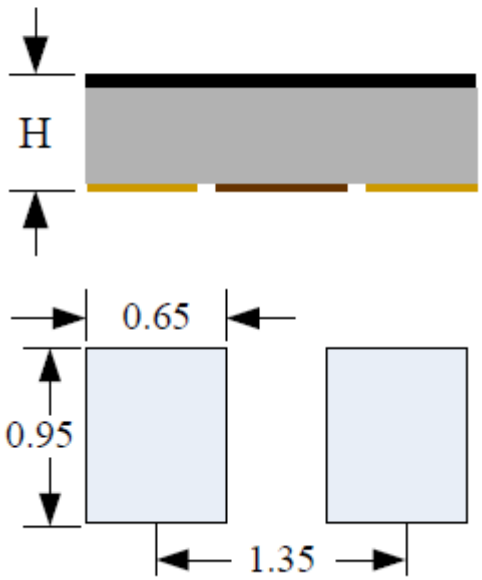


- Recommended reflow methods: IR, vapor phase oven, hot air oven.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.

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

PRODUCT DIMENSIONS



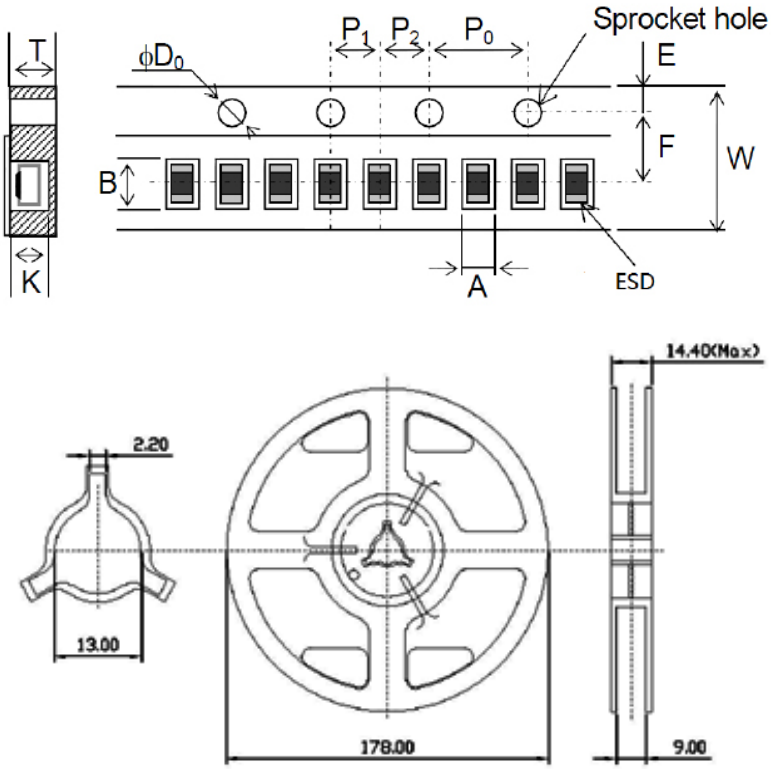


Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
L	1.45	1.60	1.75	0.057	0.063	0.069
W	0.70	0.83	0.95	0.028	0.033	0.037
P	0.20	0.35	0.50	0.008	0.014	0.020
H	0.26	0.36	0.46	0.010	0.014	0.018

Size in mm

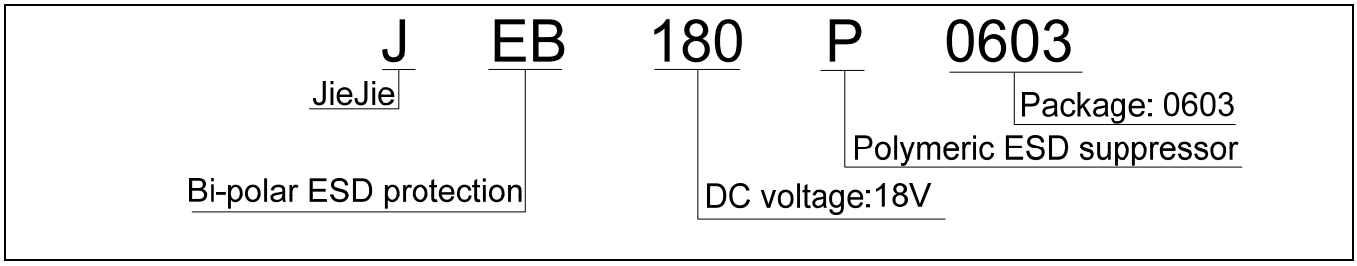
Land pattern

TAPE AND REEL INFORMATION



Symbol	Millimeters	Inches
A	1.00±0.03	0.039±0.001
B	1.90±0.03	0.075±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
K	0.43±0.03	0.017±0.001
T	0.43±0.03	0.017±0.001

PART NUMBERING SYSTEM



ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCIPTION
JEB180P0603	0603	5,000	7 inch reel pack

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