

JEB03DS-A Bidirectional TVS Diode for ESD Protection

Features and benefits

- ✧ 100 Watts Peak Pulse Power per Line (tp=8/20 μs)
- ✧ Small Body Outline Dimensions :0.6mm×0.3mm
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 3.3V
- ✧ ROHS compliant

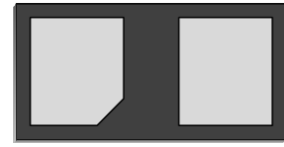
Application information

- ✧ Consumer electronics DC power supply
- ✧ Low frequency signal transmission line
- ✧ Communication systems
- ✧

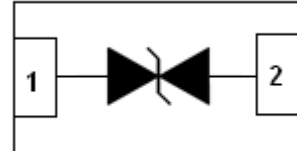
Protection solution to meet

- ✧ IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 7A (8/20 μs)

Pin Information and Graphic symbol



DFN0603-D



symbol

Mechanical Characteristics

- ✧ DFN0603-D Package
- ✧ Molding Compound Flammability Rating : UL 94V-O
- ✧ Quantity Per Reel : 15,000pcs
- ✧ Lead Finish : Lead Free
- ✧ Marking Code: see next

Absolute Maximum Ratings (T_A=25 °C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T _{stg}	-55 to +150	°C
Operating junction temperature range	T _j	-55 to +125	°C
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Peak pulse power dissipation on 8/20 μs waveform	P _{PP}	100	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	+/- 15	kV
ESD per IEC 61000-4-2 (Contact)		+/- 8	

Electrical Characteristics (TA=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	VR				3.3	V
Reverse Breakdown Voltage	VBR	IT = 1mA	3.7			V
Reverse Leakage Current	IR	VR = 3.3V			100	nA
Clamping Voltage	VC	IPP = 1A, tp =8/20μs		5.5	7	V
		IPP = 6.5A, tp =8/20μs		8	10	V
Junction Capacitance	CJ	VR = 0V, f = 1MHz		7.5	8.5	pF

VR : Stand-off Voltage -- Maximum voltage that can be applied

VBR: Breakdown Voltage

VC: Clamping Voltage -- Peak voltage measured across the suppressor at a specified Ipp

IR: Reverse Leakage Current

Ratings and V-I Characteristics Curves (TA=25 °C, unless otherwise noted)

FIG.1:V- I curve characteristics (Bi-directional)

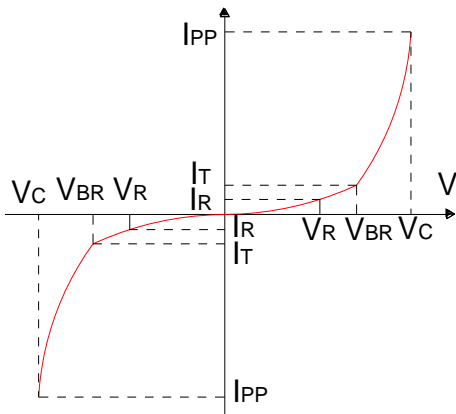


FIG.2: Pulse Waveform

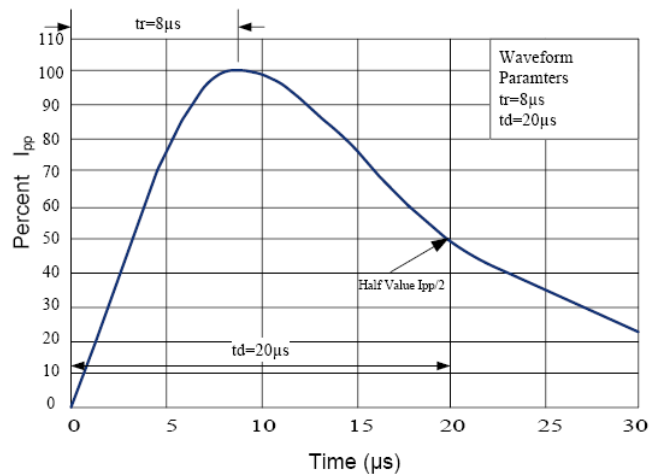


FIG.3: Pulse derating curve

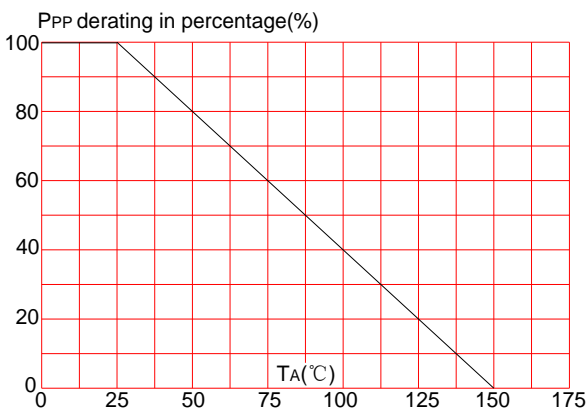
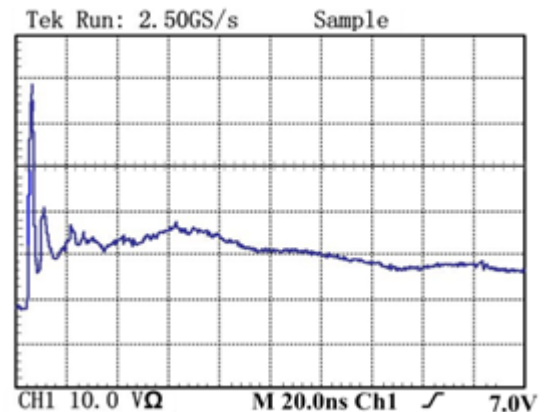
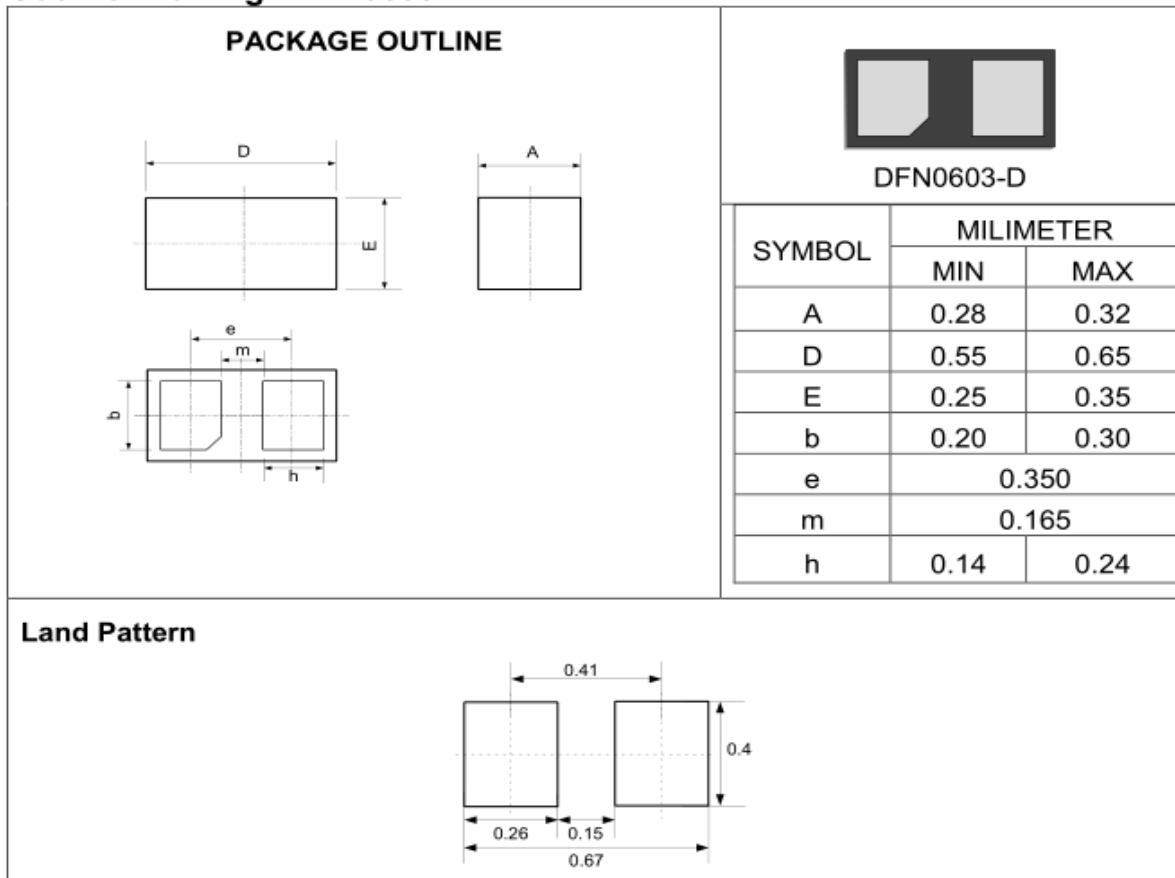


FIG.4:ESD Clamping(8KV Contact)



Package Mechanical Data

Outline Drawing –DFN0603-D



Marking Code

Part Number	Marking Code
JEB03DS-A	 B = Specific Device Code M = Month Code