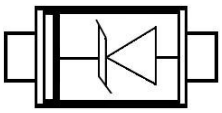
Description

The PESDNC5D5VU protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, low operating voltage. It gives designer the flexibility to protect one unidirectional line in applications where arrays are not practical.



Feature

- 200W peak pulse power per line (t_P = 8/20μs)
- SOD-523 package
- Replacement for MLV(0603)
- Unidirectional configurations
- Response Time is Typically < 1 ns
- ESD protection > 40 kV
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to IEC 61000-4-2(ESD) ±15KV(air), ±8KV(contact); IEC 61000-4-4 (EFT) 40A (5/50ns)

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Electrical characteristics per line@25℃(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_t = 1mA	6.2		7.8	V
Reverse Leakage Current	I_R	V_{RWM} = 5V T=25℃			0.05	μA
Clamping Voltage	V_C	I_{PP} = 1A t_P = 8/20μs			8.0	V
Clamping Voltage	V_C	I_{PP} = 5A t_P = 8/20μs			10.0	V
Clamping Voltage	V_C	I_{PP}=15A t_P = 8/20μs			15.0	V
Junction Capacitance	C_j	V_R=0V f = 1MHz		100		pF

Absolute maximum rating@25℃

Rating	Symbol	Value	Units
Unidirectional Peak Pulse Power (t_p=8/20μS)	P_{pp}	200	W
Operating Temperature	T_J	-55 to +150	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Typical Characteristics

FIGURE1
ESD PULSE WAVEFORM ACCORDING TO IEC 61000-4-2

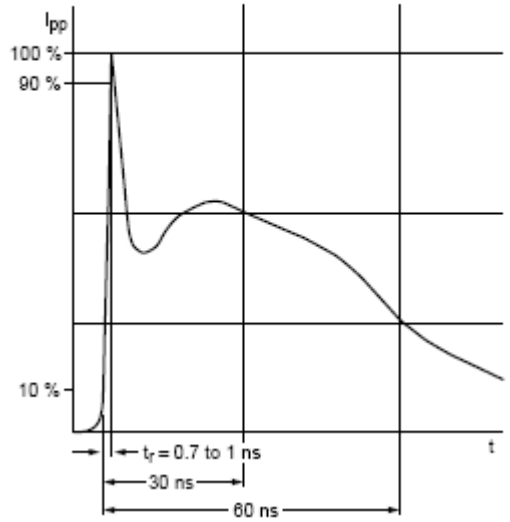


FIGURE 2
PULSE WAVE FORM

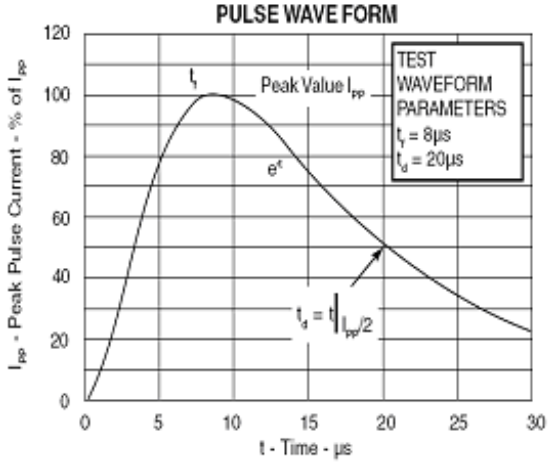
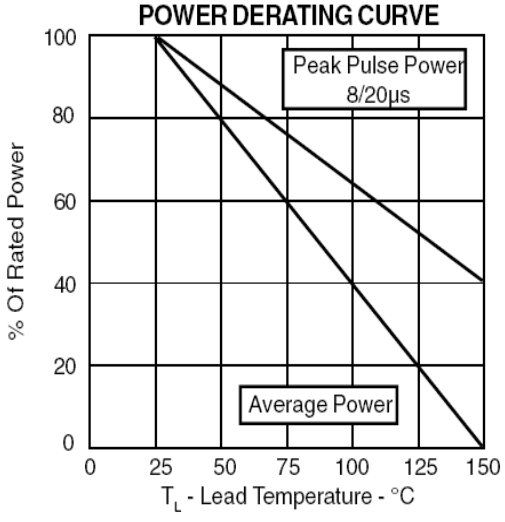
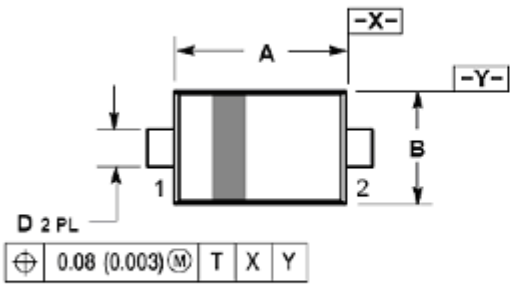
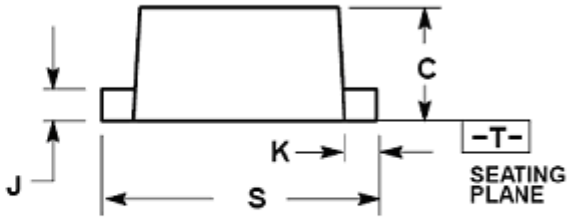


FIGURE 3
POWER DERATING CURVE



Product dimension





Dim	Millimeters			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067

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