

Features

- Small body outline dimensions: 0.063" x 0.032" (1.6x0.8 mm)
- Protects one uni-directional I/O line
- Low clamping voltage
- Working voltage: 36V
- Low leakage current
- Compliant to Halogen-free

Main applications

- Cell phone handsets and accessories
- Microprocessor based equipment
- Personal digital assistants (PDA's)
- Notebooks, desktops, and servers
- Portable instrumentation
- Peripherals
- Digital cameras

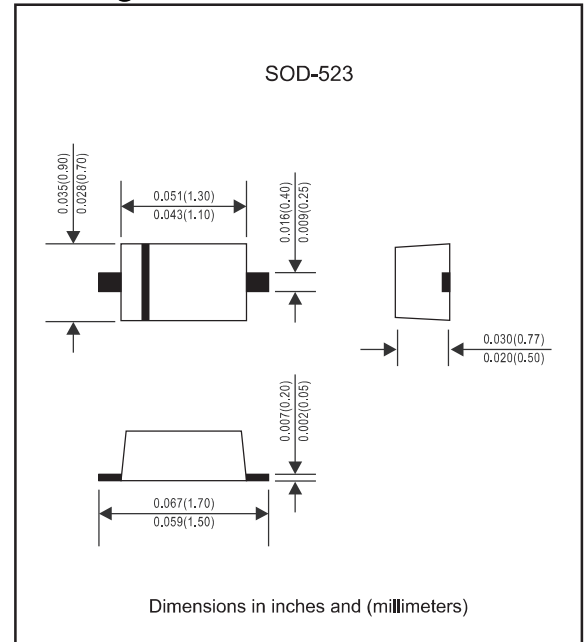
Protection solution to meet

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 4A (8/20 μs)

MECHANICAL CHARACTERISTICS

- SOD-523 package
- Molding compound flammability rating : UL 94V-0
- Lead finish : lead free

Package outline



Absolute maximum ratings ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	300	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 30 +/- 30	kV
Lead soldering temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical characteristics ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				36	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	40			V
Reverse leakage current	I_R	$V_{RWM}=36\text{V}$		0.01	1	μA
Clamping voltage	V_C	$I_{PP}=1\text{A}$, $t_P=8/20\mu\text{s}$		45	60	V
		$I_{PP}=4\text{A}$, $t_P=8/20\mu\text{s}$		58	70	V
Junction capacitance	C_J	$V_{RWM}=0\text{V}$, $f=1\text{MHz}$		22		pF

Ratings and V-I haracteristics curves ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

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

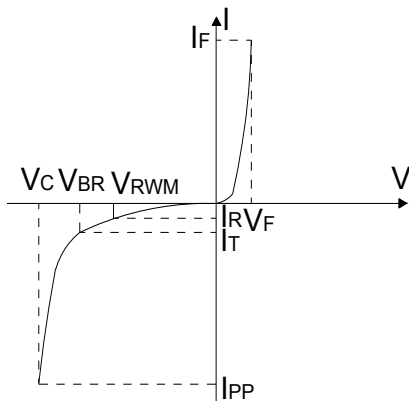


FIG.2: Pulse waveform (8/20 μs)

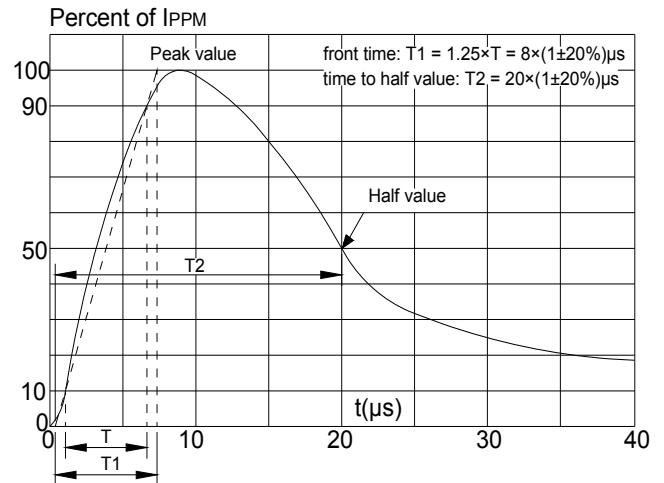


FIG.3: Pulse derating curve

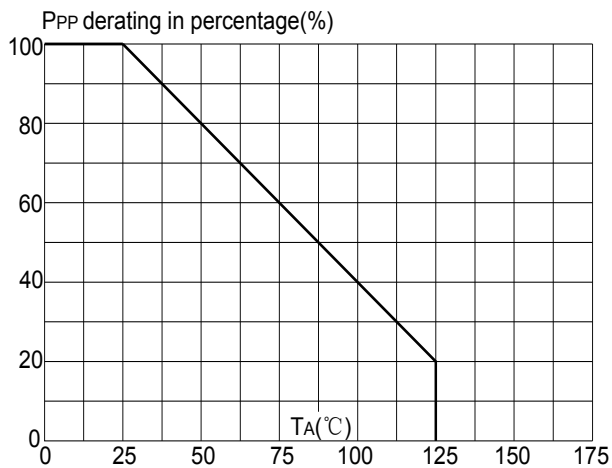
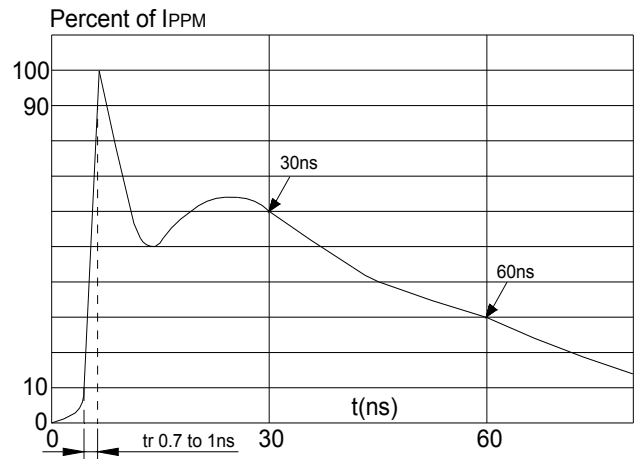
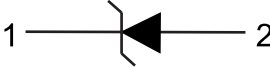


FIG.4: ESD clamping (30kV contact)



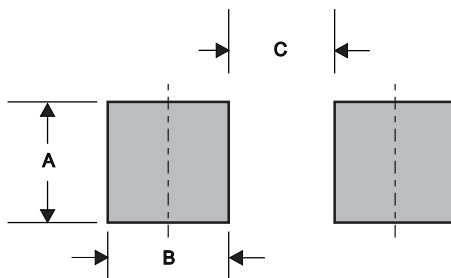
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
ESD5Z36	MP

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-523	0.024 (0.60)	0.024 (0.60)	0.044 (1.12)