

### Features

- 160 Watts peak pulse power per line( $t_p=8/20\mu s$ )
- Protects one bi-direction I/O line
- Low clamping voltage
- Low leakage current
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

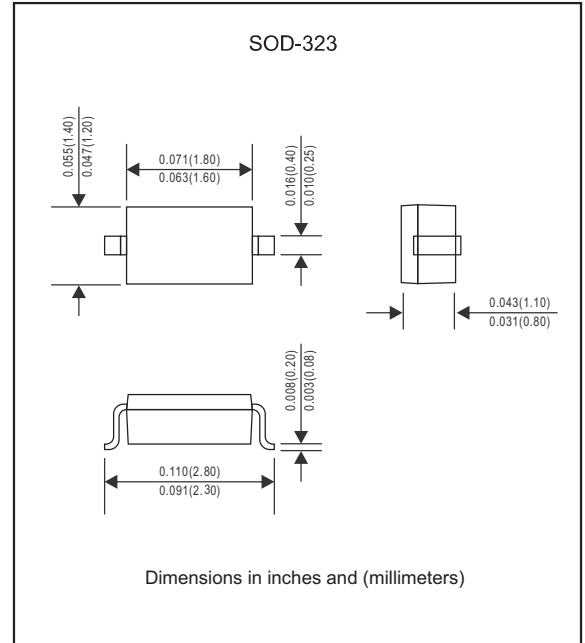
### Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- LIN-Bus

### Mechanical data

- Package: SOD-323
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0

### Package outline



### Maximum ratings (at $T_A=25^\circ C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 8/20 $\mu s$ waveform	$P_{PP}$	160	W
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	+/- 30	kV
ESD per IEC 61000-4-2 (Contact)		+/- 30	
Lead soldering temperature	$T_L$	260 (10 sec.)	$^\circ C$
Operating junction temperature range	$T_J$	-55 to +150	$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ C$

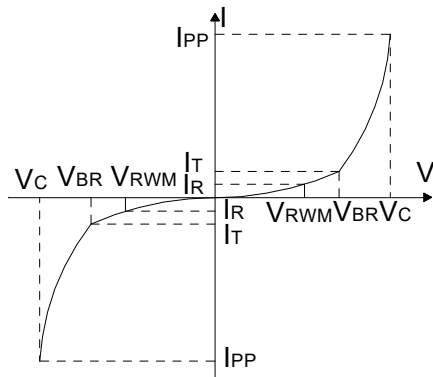
### Electrical characteristics (at $T_A=25^\circ C$ unless otherwise noted)

Part Number	$V_{RWM}^{(1)}$ (V)	$V_{BR}$ (V) (Min)	$I_T$ (mA)	$V_C$ (V) @1A (Max) ( $t_p=8/20\mu s$ )	$V_C$ (V) @3A (Max) ( $t_p=8/20\mu s$ )	$V_C$ (V) @5A (Max) ( $t_p=8/20\mu s$ )	$I_R$ $\mu A$ (Max)	$C_J$ (Pf) (Typ)
ESD3Z1524CC-Q1	15	17.1	1	25	30	35	0.1	16
	24	25.4	1	40	50	/	0.1	16

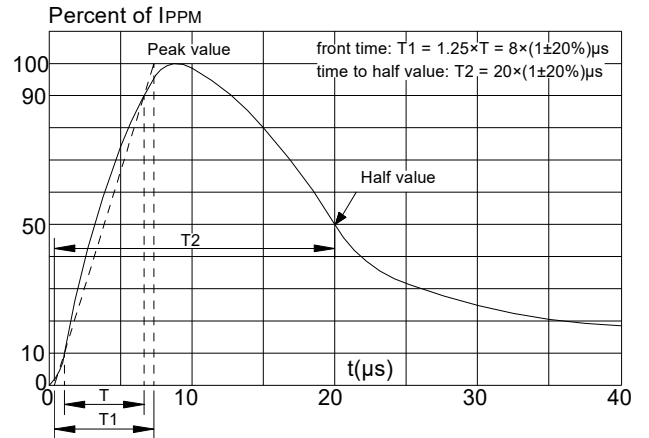
Note : (1) 15V : Pin 1 to Pin 2 ; 24V : Pin 2 to Pin 1.

**Typical Characteristics** ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

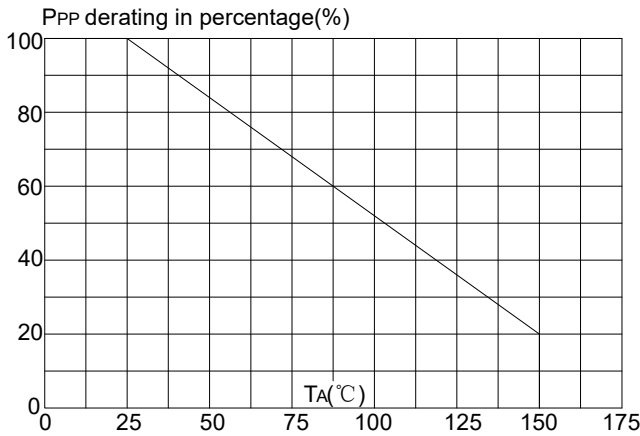
**FIG.1: V- I curve characteristics (Bi-directional)**



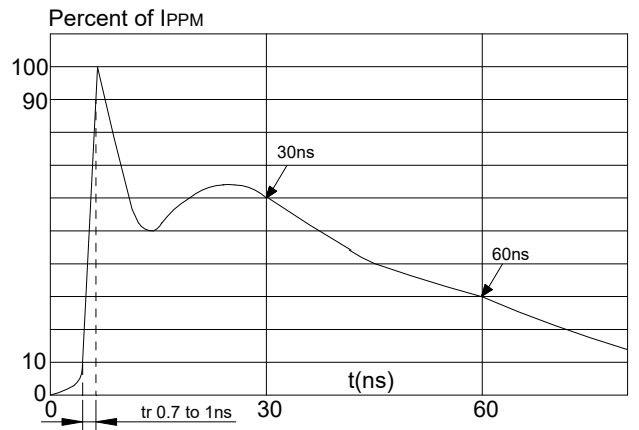
**FIG.2: Pulse waveform (8/20 $\mu\text{s}$ )**





**FIG.3: Pulse derating curve**



**FIG.4: ESD clamping (30kV contact)**



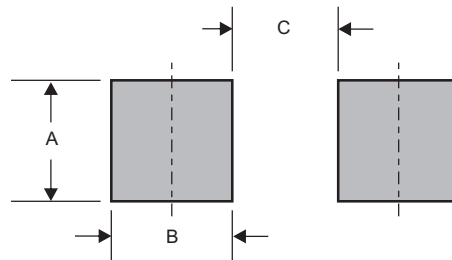
## Pinning information

Pin	Simplified outline	Symbol
Bi-Directional		

## Marking

Type number	Marking code
ESD3Z1524CC-Q1	MM

## Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.033 (0.83)	0.025 (0.63)	0.063 (1.60)