

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

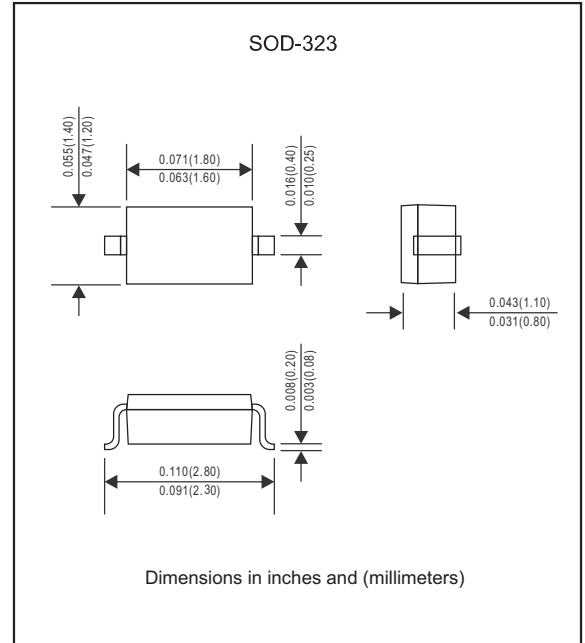
Applications

- 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 μs 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 μA (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)

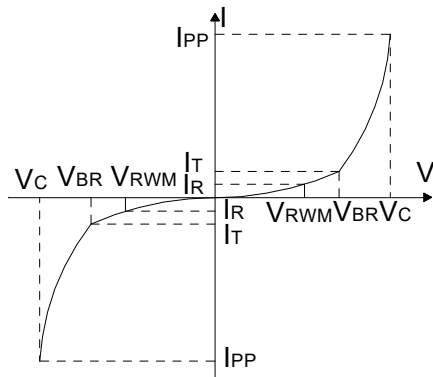


FIG.2: Pulse waveform (8/20 μs)

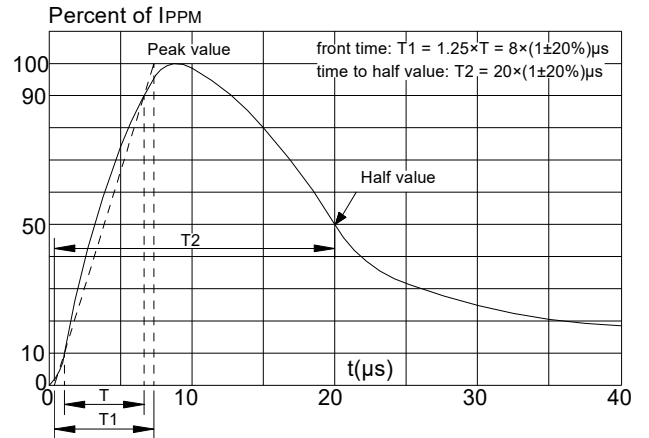


FIG.3: Pulse derating curve

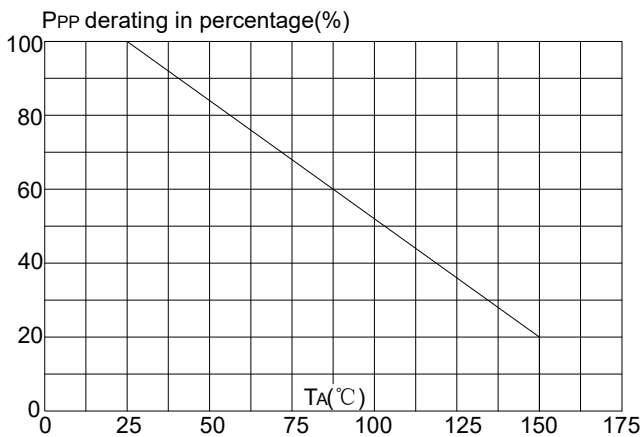
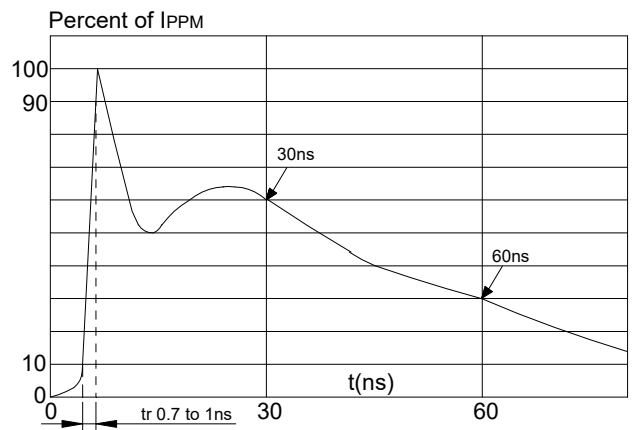




FIG.4: ESD clamping (30kV contact)



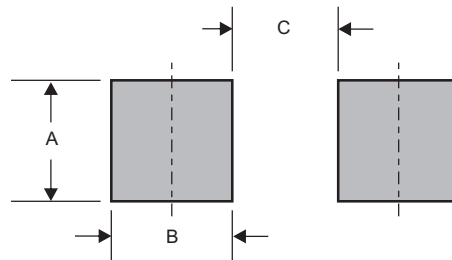
Pinning information

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)