

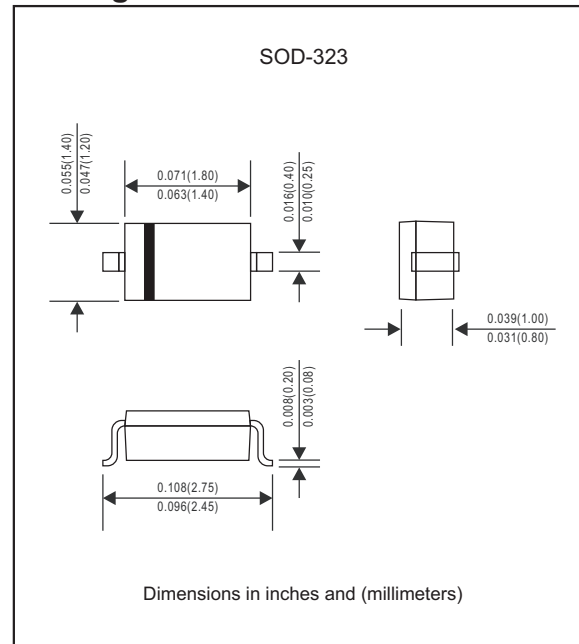
### Features

- Glass passivated chip junction
- Ideal for automated placement
- Very tiny plastic SMD package.
- High current capability
- High surge capability
- Lead free parts meet RoHS requirements
- Compliant to Halogen-free

### Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-323
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.005 gram

### Package outline



### Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	S1A-N	S1B-N	S1D-N	S1G-N	S1J-N	S1K-N	S1M-N	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V	
Maximum continuous reverse voltage	$V_R$	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current	$I_o$	1.0								A
Peak forward surge current 8.3ms single half sine-wave(JEDEC method)	$I_{FSM}$	15								A
Typical junction capacitance (1)	$C_J$	5.0								pF
Operating junction temperature range	$T_J$	-55 to +150								$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-65 to +150								$^{\circ}\text{C}$

### Electrical characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	S1A-N	S1B-N	S1D-N	S1G-N	S1J-N	S1K-N	S1M-N	UNIT	
Maximum instantaneous forward voltage at $I_F=1.0\text{A}$	$V_F$	1.1								V
Maximum reverse leakage current at rated $V_R$	$I_R$	5.0 50								$\mu\text{A}$ $\mu\text{A}$

### Thermal characteristics

PARAMETER	SYMBOLS	S1A-N	S1B-N	S1D-N	S1G-N	S1J-N	S1K-N	S1M-N	UNIT	
Typical thermal resistance junction to ambient (2)	$R_{\theta JA}$	55								$^{\circ}\text{C}/\text{W}$

Notes 1: Measured at 1MHz and applied reverse voltage of 4.0V D.C

2: Mounted on FR-4 PCB copper, minimum recommended pad layout

## Rating and characteristic curves (S1A-N THRU S1M-N)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

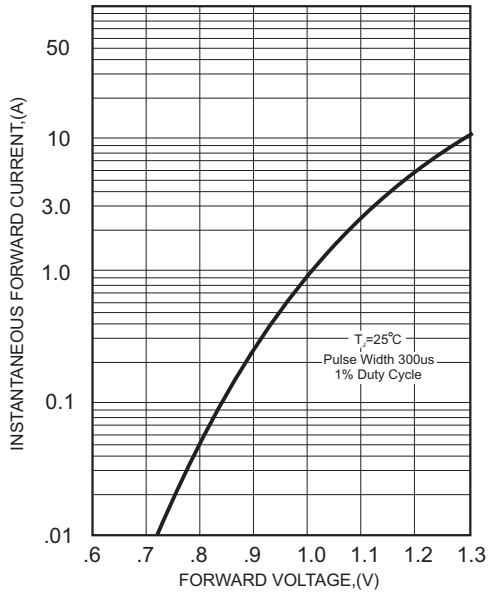


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

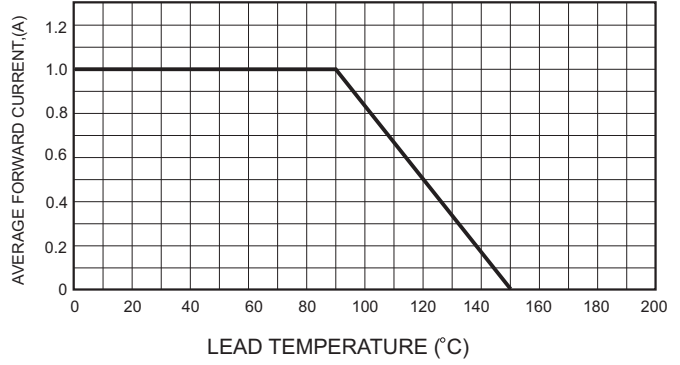


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

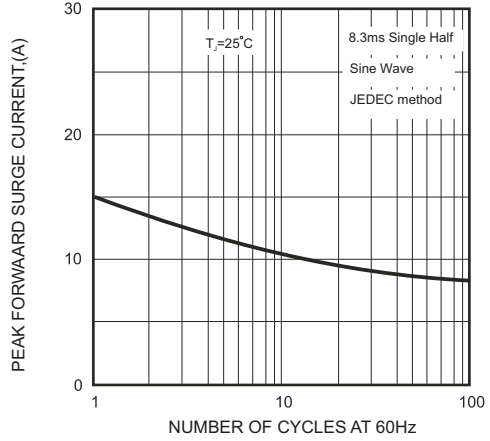


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

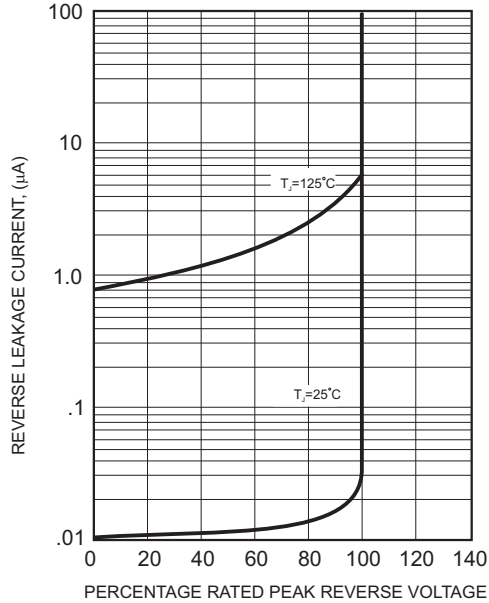
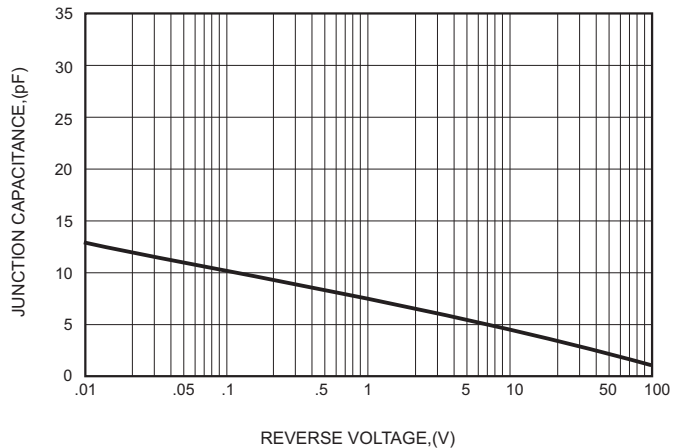




FIG.5-TYPICAL JUNCTION CAPACITANCE



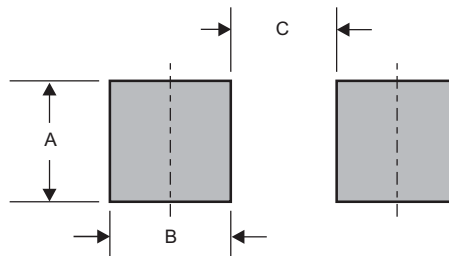
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
S1A-N	1A
S1B-N	2A
S1D-N	3A
S1G-N	4A
S1J-N	5A
S1K-N	6A
S1M-N	7A

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.047 (1.20)	0.047 (1.20)	0.055 (1.40)

### Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)
SOD-323	7"	3,000	4.0	30,000	183*183*123	178	382*262*387	240,000