

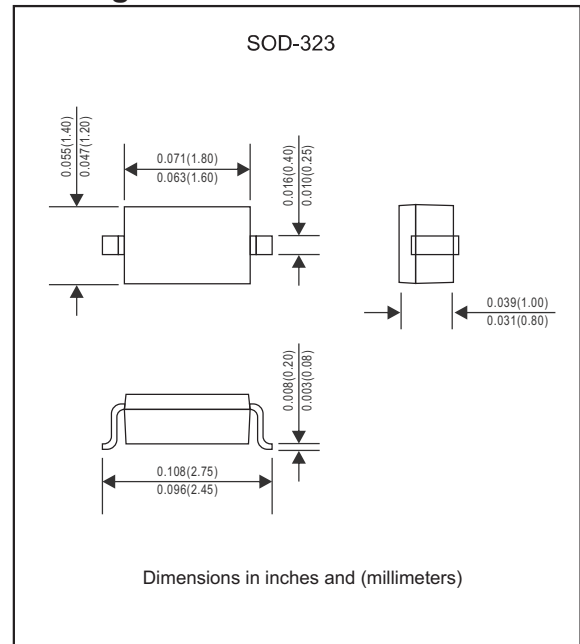
Features

- 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
- Suffix "-Q1" for AEC-Q101

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

Package outline



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

PARAMETER	SYMBOLS	S1A-N-Q1	S1B-N-Q1	S1D-N-Q1	S1G-N-Q1	S1J-N-Q1	S1K-N-Q1	S1M-N-Q1	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-Q1	S1B-N-Q1	S1D-N-Q1	S1G-N-Q1	S1J-N-Q1	S1K-N-Q1	S1M-N-Q1	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			μA
						50			μA

Thermal characteristics

PARAMETER	SYMBOLS	S1A-N-Q1	S1B-N-Q1	S1D-N-Q1	S1G-N-Q1	S1J-N-Q1	S1K-N-Q1	S1M-N-Q1	UNIT
Typical thermal resistance junction to ambient (2)	$R_{\theta JA}$	290							$^{\circ}\text{C}/\text{W}$

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

2: Thermal resistance between junction and ambient and between junction and lead mounted on P.C. B without copper pad areas

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

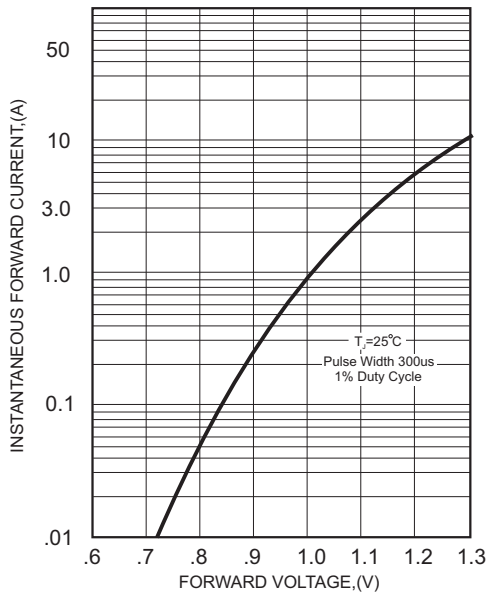


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

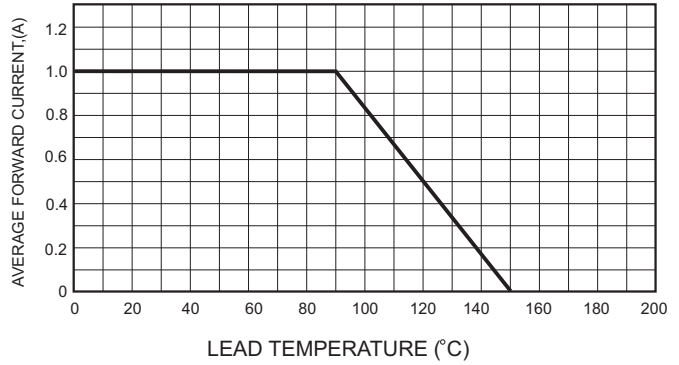


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

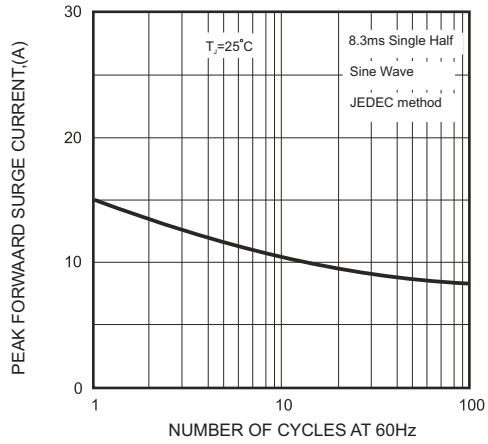


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

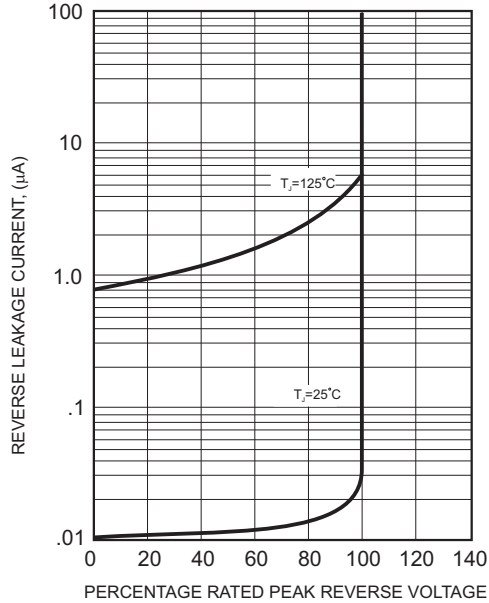
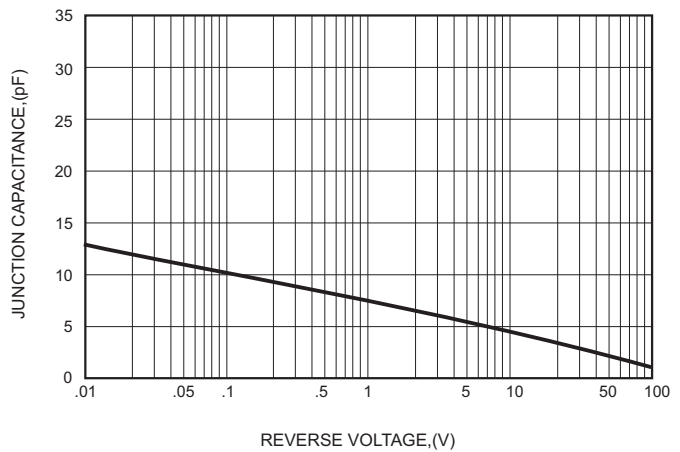




FIG.5-TYPICAL JUNCTION CAPACITANCE



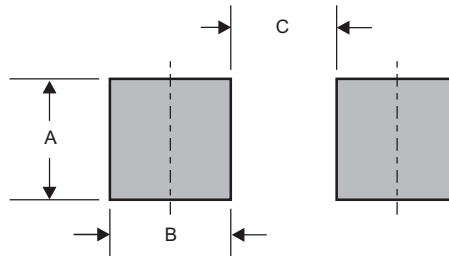
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
S1A-N-Q1	1A
S1B-N-Q1	2A
S1D-N-Q1	3A
S1G-N-Q1	4A
S1J-N-Q1	5A
S1K-N-Q1	6A
S1M-N-Q1	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)