

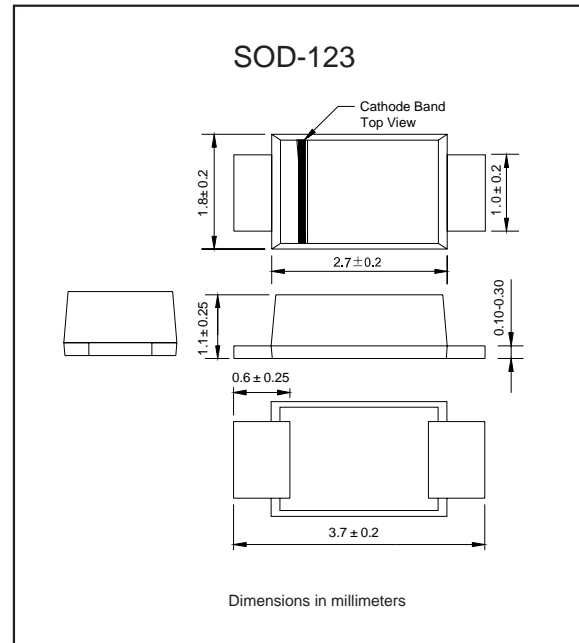
### Features

- ▶ Glass passivated device
- ▶ Ideal for surface mounted applications
- ▶ Low reverse leakage
- ▶ Metallurgically bonded construction
- ▶ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension
- ▶ Compliant to RoHS Directive 2011/65/EU
- ▶ Compliant to Halogen-free
- ▶ Suffix "-Q1" for AEC-Q101

### Mechanical data

- ▶ Case: JEDEC SOD-123 molded plastic body over passivated chip
- ▶ Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ▶ Polarity: Color band denotes cathode end
- ▶ Mounting Position: Any

### Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	$I_o$			1.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	$I_{FSM}$			25	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				50	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		180		$^\circ\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		4		pF
Storage temperature		$T_{STG}$	-65		+150	$^\circ\text{C}$

Note: 1.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J, (^\circ\text{C})$
DSR1A-Q1	50	35	50	1.10	-55 to +150
DSR1B-Q1	100	70	100		
DSR1D-Q1	200	140	200		
DSR1G-Q1	400	280	400		
DSR1J-Q1	600	420	600		
DSR1K-Q1	800	560	800		
DSR1M-Q1	1000	700	1000		

Note: 1.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=1.0\text{A}$

### Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

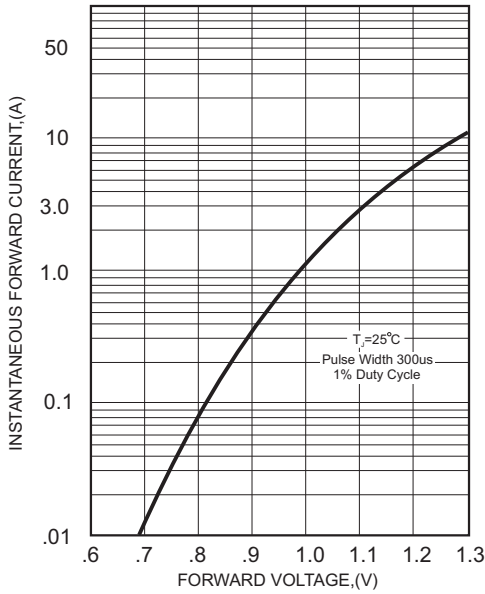


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

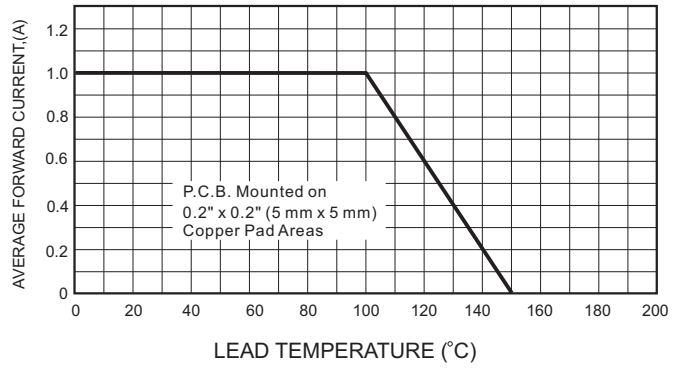


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

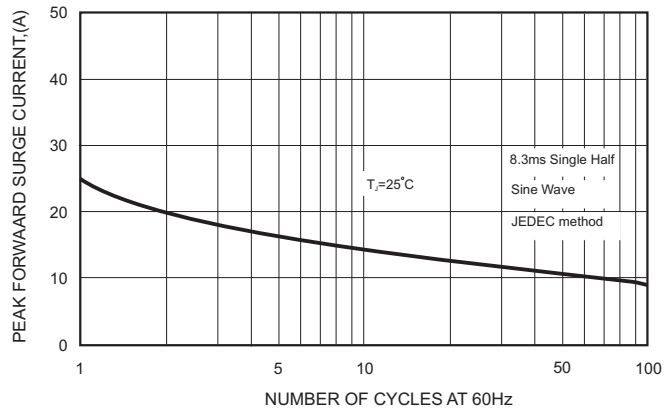


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

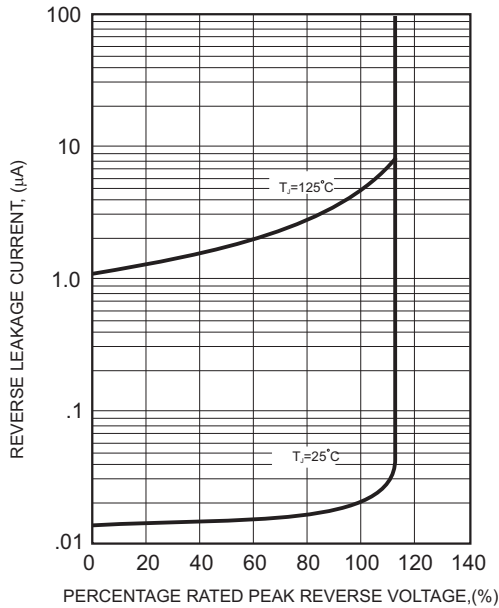
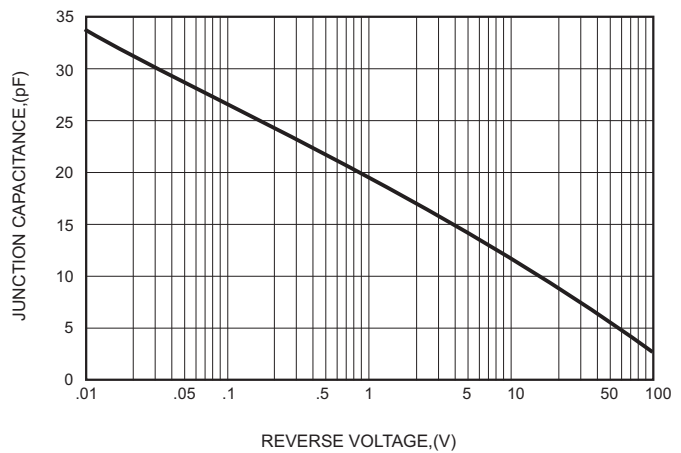




FIG.5-TYPICAL JUNCTION CAPACITANCE



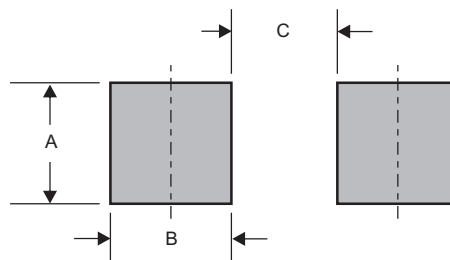
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
DSR1A-Q1	A1
DSR1B-Q1	A2
DSR1D-Q1	A3
DSR1G-Q1	A4
DSR1J-Q1	A5
DSR1K-Q1	A6
DSR1M-Q1	A7

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)