

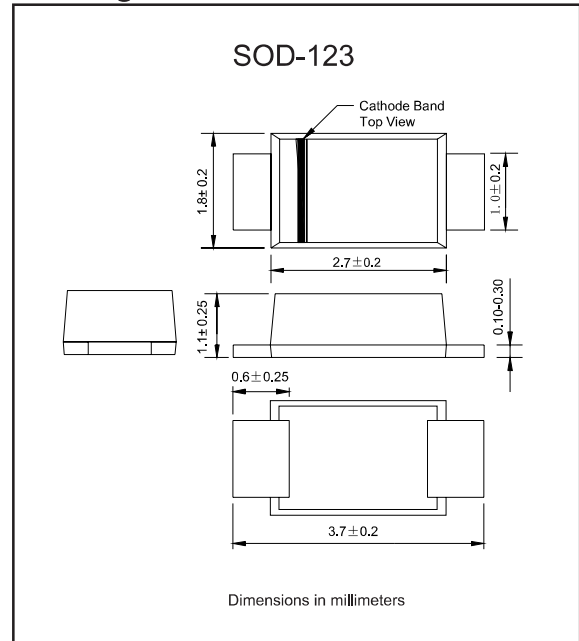
Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ 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

Mechanical data

- ◆ **Case** : JEDEC SOD-123 molded plastic body
- ◆ **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.1	I_O			1.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I_{FSM}			25	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	I_R			1.0	mA
	$V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$				20	
Thermal resistance (1)	Junction to Ambient	$R_{\theta JA}$		85		$^\circ\text{C/W}$
	Junction to Case	$R_{\theta JC}$		23		
	Junction to Lead	$R_{\theta JL}$		15		
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		110		pF
Storage temperature		T_{STG}	-65		+150	$^\circ\text{C}$

Note: (1) Device mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area.

SYMBOLS	V_{RM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J ($^\circ\text{C}$)
DSL12	20	14	20	0.45	
DSL13	30	21	30		
DSL14	40	28	40		
DSL15	50	35	50	0.55	
DSL16	60	42	60		
DSL18	80	56	80	0.75	-55 to +150
DSL110	100	70	100		
DSL115	150	105	150	0.85	
DSL120	200	140	200		

*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 CURRENT DERATING CURVE

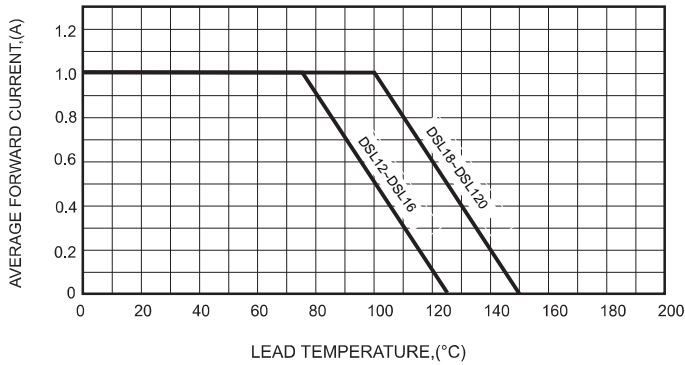


FIG.2-TYPICAL FORWARD CHARACTERISTICS

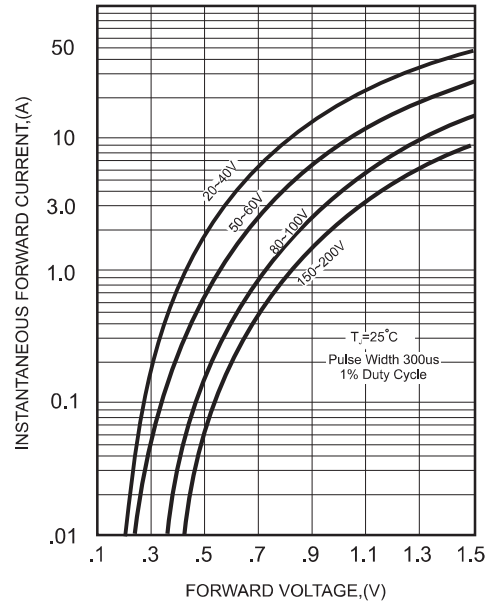


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

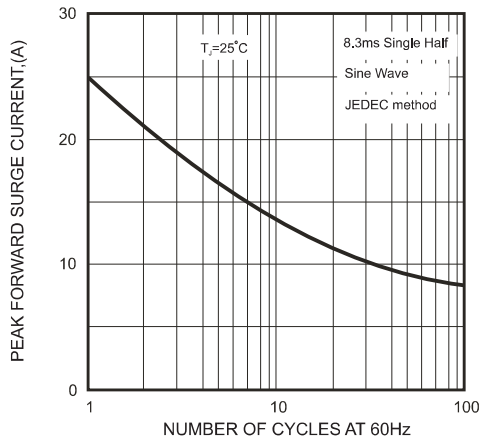


FIG.4-TYPICAL JUNCTION CAPACITANCE

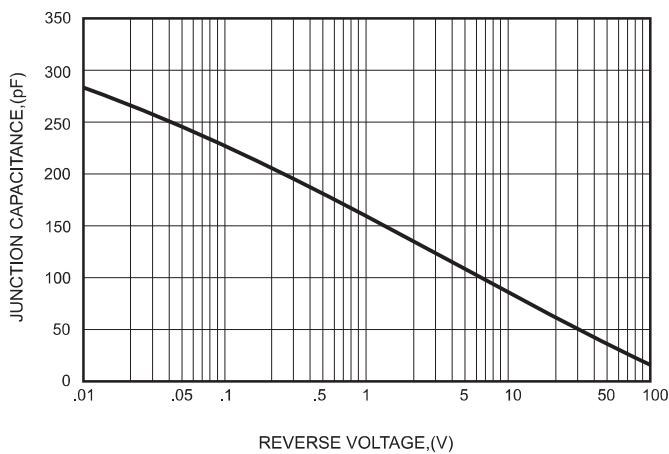
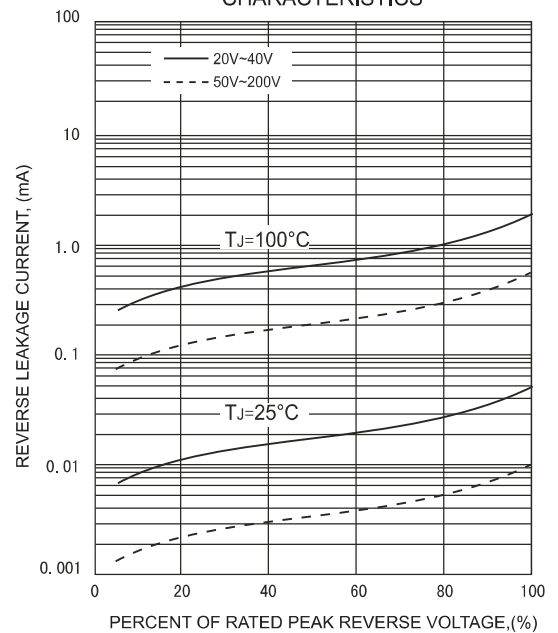




FIG.5 - TYPICAL REVERSE CHARACTERISTICS



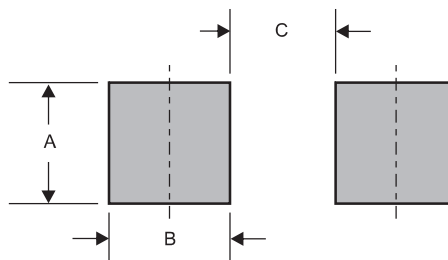
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSL12	12L
DSL13	13L
DSL14	14L
DSL15	15L
DSL16	16L
DSL18	18L
DSL110	10L
DSL115	115L
DSL120	120L

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)