

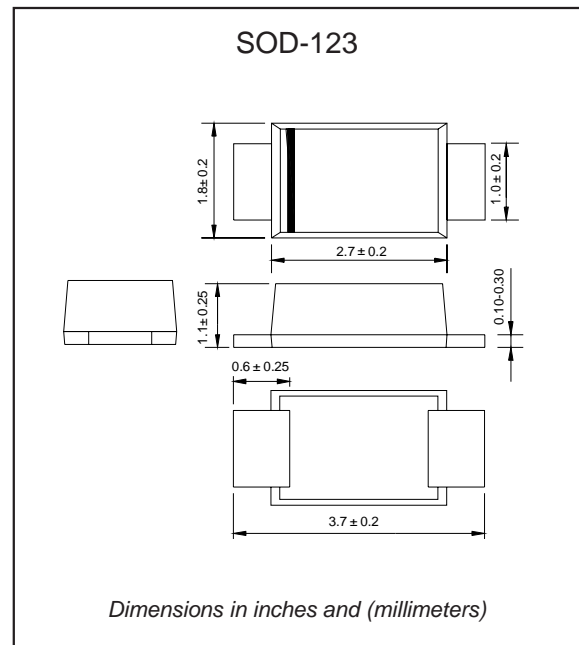
Features

- ◆ 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: 260°C/10 seconds
- ◆ 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	SYMBOLS	DSK32	DSK33	DSK34	DSK35	DSK36	DSK38	DSK310	DSK315	DSK320	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current at T_L (see fig.1)	$I_{(AV)}$	3.0									A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	60.0									A	
Maximum instantaneous forward voltage at 3.0A	V_F	0.55			0.70		0.85		0.92		V	
Maximum DC reverse current at rated DC blocking voltage	I_R	0.5			0.1		10.0		5.0		2.0	mA
Typical junction capacitance (NOTE 1)	C_J	240									pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	80									$^\circ\text{C}/\text{W}$	
Operating junction temperature range	T_J	-55 to +125				-55 to +150					$^\circ\text{C}$	
Storage temperature range	T_{STG}	-55 to +150									$^\circ\text{C}$	

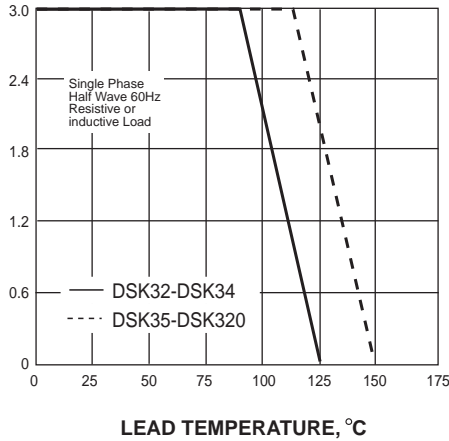
Note:1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 2.0x2.0" (5.0x5.0cm) copper pad areas

Rating and characteristic curves

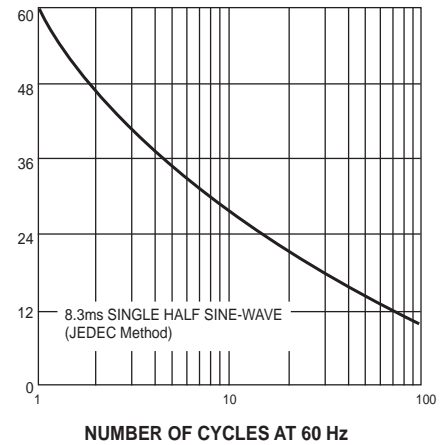
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



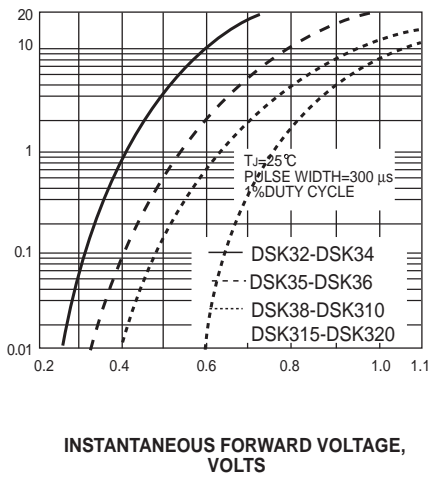
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



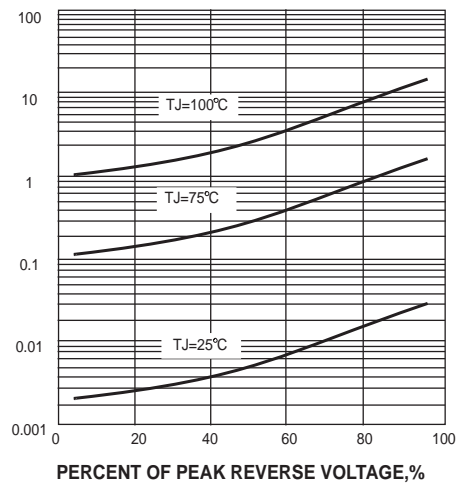
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



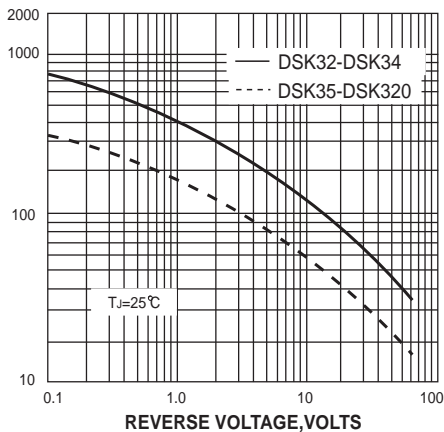
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS





JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



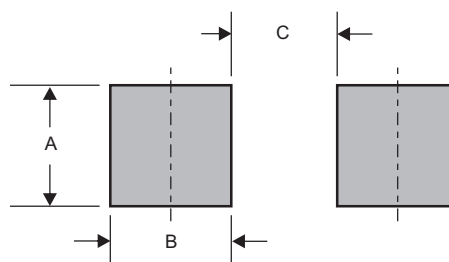
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSK32	K32
DSK33	K33
DSK34	K34
DSK35	K35
DSK36	K36
DSK38	K38
DSK310	K310
DSK315	K315
DSK320	K320

Suggested solder pad layout

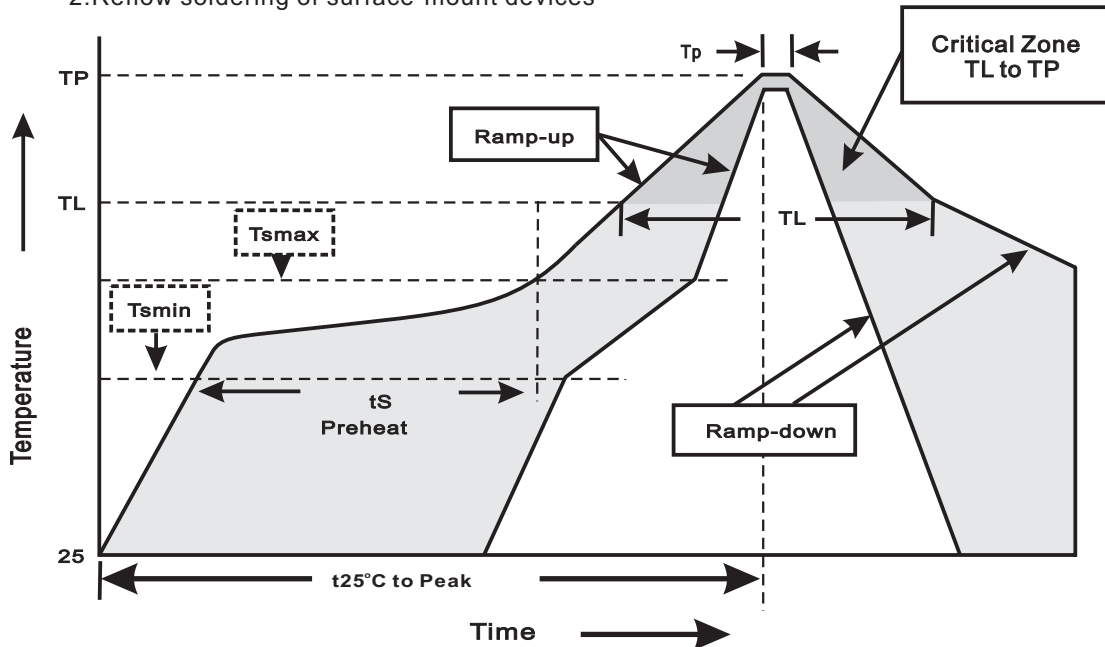


Dimensions in inches and (millimeters)

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

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(TL to TP)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(ts)	150°C 200°C 60~120sec
Tsmax to TL -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(TL) -Time(tL)	217°C 60~260sec
Peak Temperature(TP)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(tp)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes