

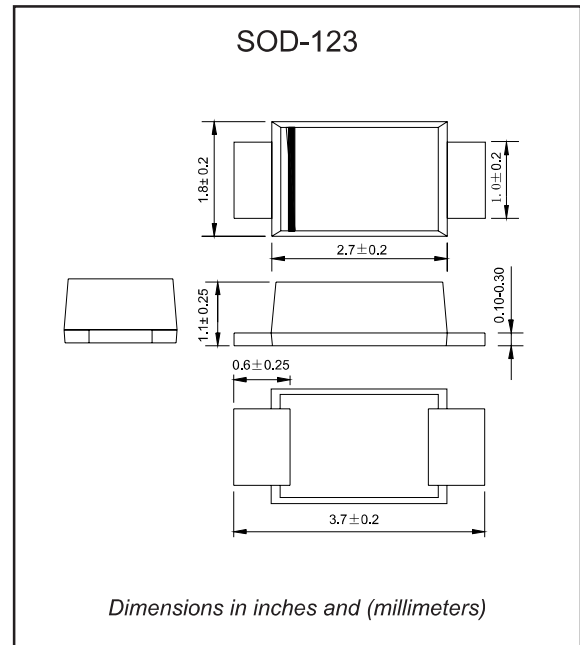
Features

- ◆ 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°C unless otherwise noted)

PARAMETER	SYMBOLS	DSS32	DSS33	DSS34	DSS35	DSS36	DSS38	DSS310	DSS315	DSS320	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 <sub(av)< sub=""></sub(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 _{θJA}	80									°C/W	
Operating junction temperature range	T _J	-55 to +125				-55 to +150					°C	
Storage temperature range	T _{STG}	-55 to +150									°C	

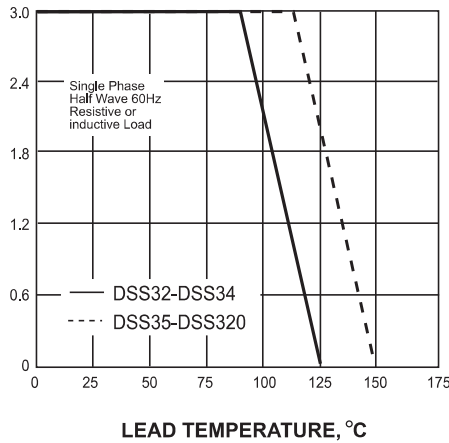
Note:1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

Rating and characteristic curves

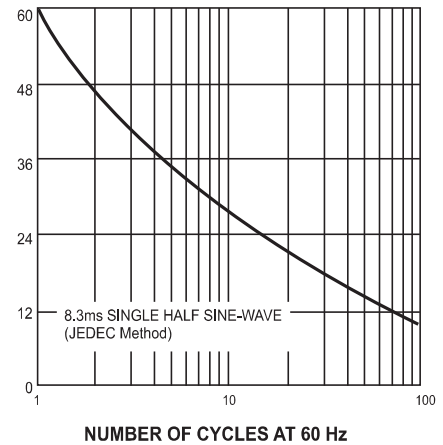
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



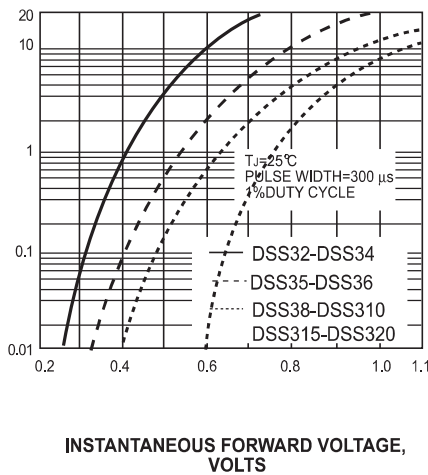
PEAK FORWARD SURGE CURRENT, AMPERES

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



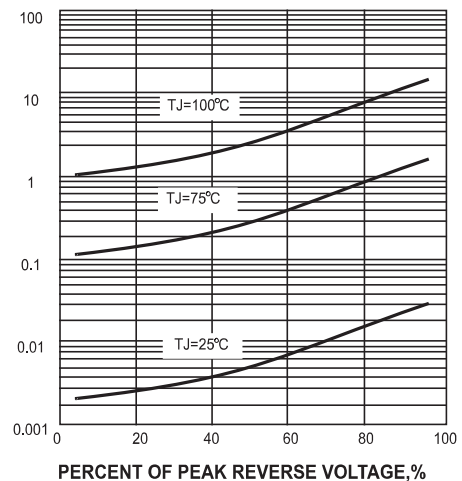
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



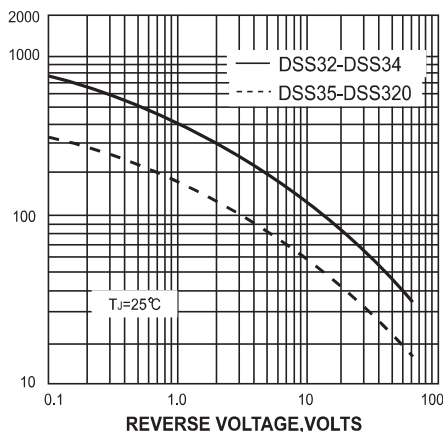
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS





JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



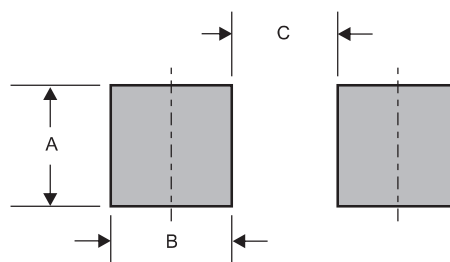
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSS32	K32
DSS33	K33
DSS34	K34
DSS35	K35
DSS36	K36
DSS38	K38
DSS310	K310
DSS315	K315
DSS320	K320

Suggested solder pad layout

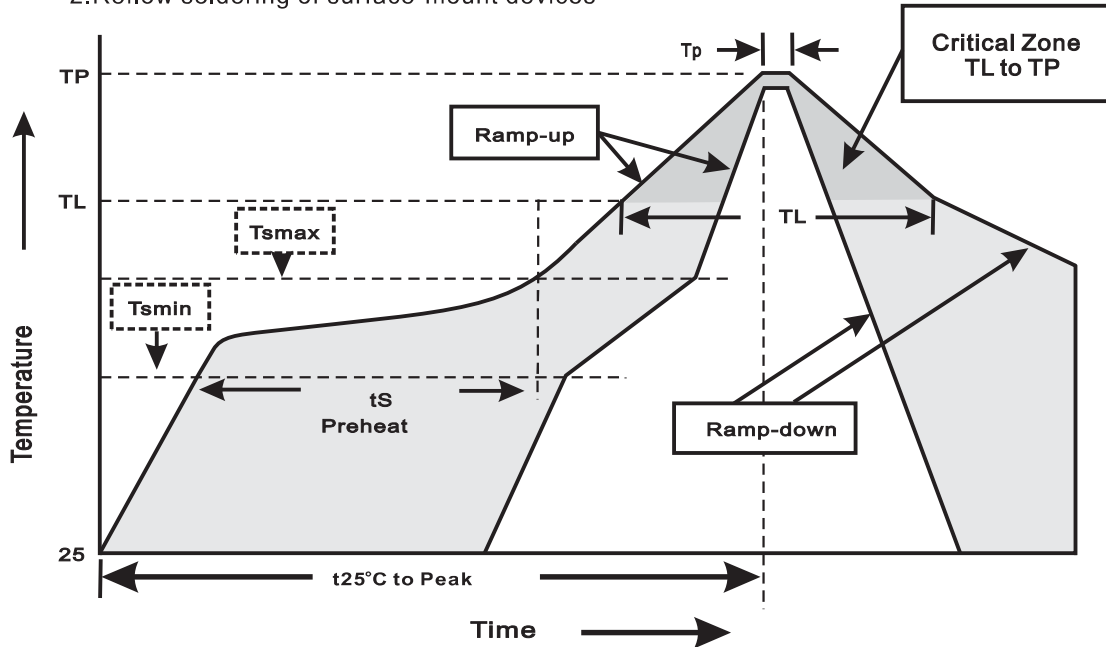


Dimensions in inches and (millimeters)

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(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _p)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes