

3.0A Surface Mount Schottky Barrier Rectifiers - 20V-200V

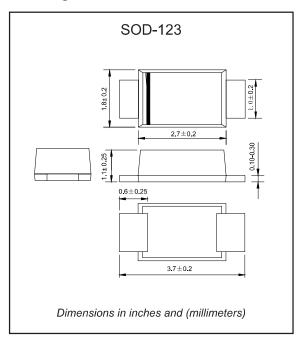
#### **Features**

- ◆ 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 TA=25°C unless otherwise noted)

PARAMETER	SYMBOLS	DSK32	DSK33	DSK34	DSK35	DSK36	DSK38	DSK310	DSK315	DSK320	UNITS
Maximum repetitive peak reverse voltage	Vrrm	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage		14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage		20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current		3.0							A		
at TL(see fig.1)	I(AV)	3.0							^		
Peak forward surge current											
8.3ms single half sine-wave superimposed on		60.0							A		
rated load											
Maximum instantaneous forward voltage at 3.0A	VF		0.55		0.	70		).85	0.	92	V
Maximum DC reverse current T <sub>A</sub> =25°C		0.5						mA			
at rated DC blocking voltage Ta=100℃	l <sub>R</sub>	10.0 5.0				2.0					
Typical junction capacitance (NOTE 1)	C¹	240			pF						
Typical thermal resistance (NOTE 2)	Rθja				°C/W						
Operating junction temperature range		-55 to +125 -55 to +150				°C					
Storage temperature range	Tsrg -55 to +150		°C								

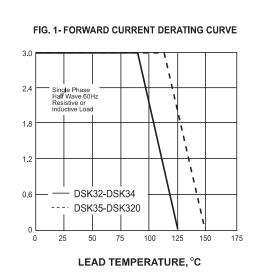
Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C. 2.P.C.B. mounted with 2.0x2.0"(5.0x5.0cm) copper pad areas

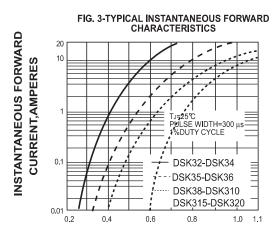


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#### Rating and characteristic curves

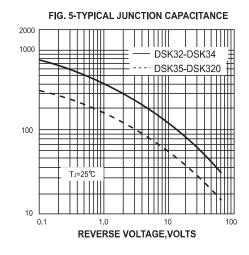
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

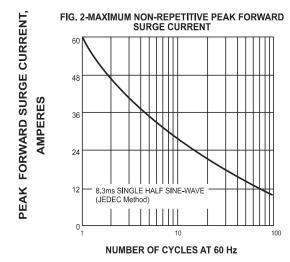


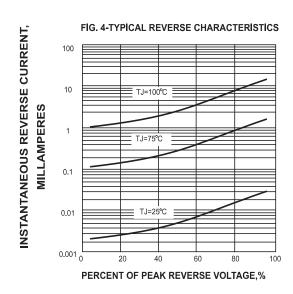


INSTANTANEOUS FORWARD VOLTAGE, VOLTS











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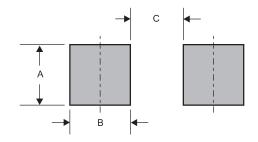
## **Pinning information**

Pin	Simplified outline	Symbol		
Pin1 cathode Pin2 anode	1 2	1 2		

## Marking

Type number	Marking code
1 )   0   1   1   1   1   1   1   1   1   1	- Marking code
DSK32	K32
DSK33	K33
DSK34	K34
DSK35	K35
DSK36	K36
DSK38	K38
DSK310	K310
DSK315	K315
DSK320	K320

## Suggested solder pad layout



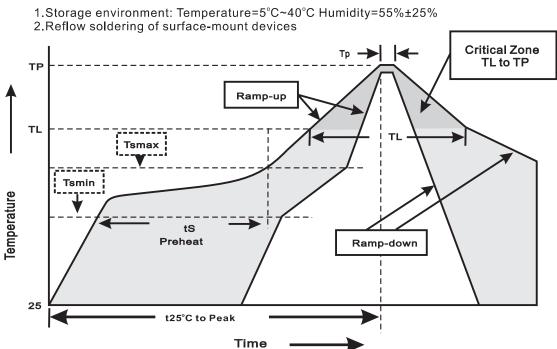
Dimensions in inches and (millimeters)

PACKAGE	А	В	С		
SOD-123	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)		



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## Suggested thermal profiles for soldering processes



#### 3.Reflow soldering

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

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