

### SMALL SURFACE MOUNT SCHOTTKY RECTIFIER

**REVERSE VOLTAGE: 40 V**  
**CURRENT: 0.5 A**

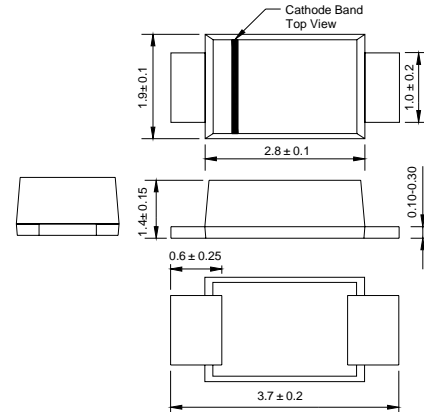
#### FEATURES

- Low profile package
- For surface mouted applications
- Idear for automated placement
- Low power loss,high efficiency
- High temperature soldering:  
250 /10 seconds at terminals

#### MECHANICAL DATA

- Case:JEDEC SOD-123FL,molded plastic over passivated chip
- Terminals:Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.006 ounces, 0.02 gram
- Device marking code: B4

SOD - 123FL



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.  
Single phase,half wave,60Hz,resistive or inductive load.For capacitive load,derate current by 20%.

#### ABSOLUTE RATINGS

Parameter	Symbol	Value	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	V
Maximum working peak reverse voltage	$V_{RWM}$	40	V
Maximum DC blocking voltage	$V_R$	40	V
Maximum average forward rectified current at rated $V_R$ @ $V_C=115$	$I_{(AV)}$	0.5	A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_L=25$	$I_{FSM}$	5.5	A
Typical thermal resistance (NOTE 1)	$R_{0JA}$	206	/W
Typical thermal resistance (NOTE 2)	$R_{0JL}$	118	/W
Operating temperature range	$T_J$	-55---+150	
Storage temperature range	$T_{STG}$	-55---+150	

NOTES:1. Thermal resistance junction to ambient  
2. Thermal resistance junction to lead

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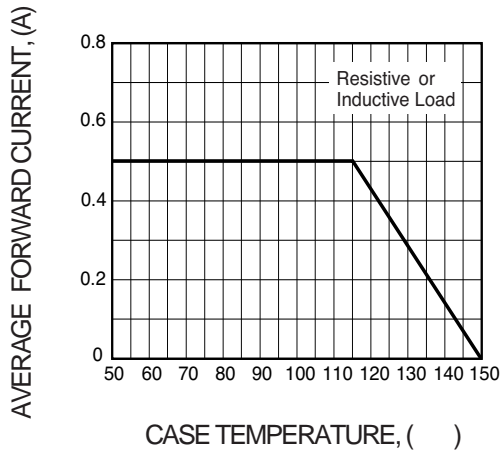
## ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ.	Max.	Unit
Maximum instantaneous forward voltage (NOTE 3)	$V_F$	-	-	0.51	V
@ $I_F=0.5A, T_J=25$		-	-	0.46	
$I_F=0.5A, T_J=100$		-	-	0.62	
$I_F=1.0A, T_J=25$		-	-	0.61	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	-	-	20	$\mu A$
@ $V_R=40V, T_J=25$		-	-	5.0	m A
$V_R=40V, T_J=100$		-	-	10	$\mu A$
$V_R=20V, T_J=25$					

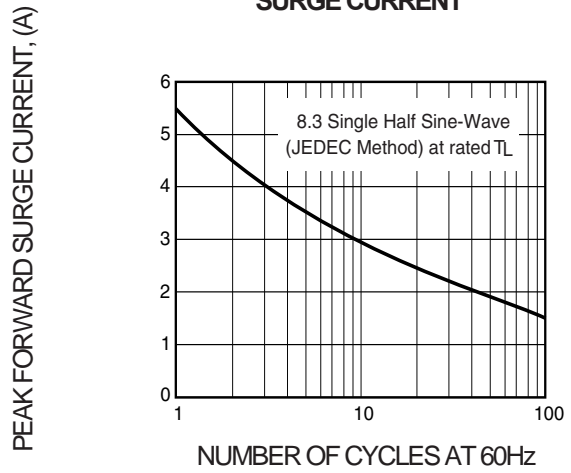
NOTES: 3.Pulse test:300 $\mu s$  pulse width,1% duty cycle.

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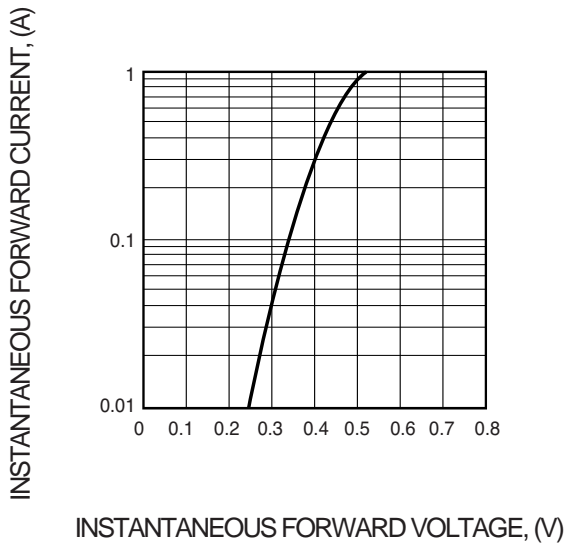
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



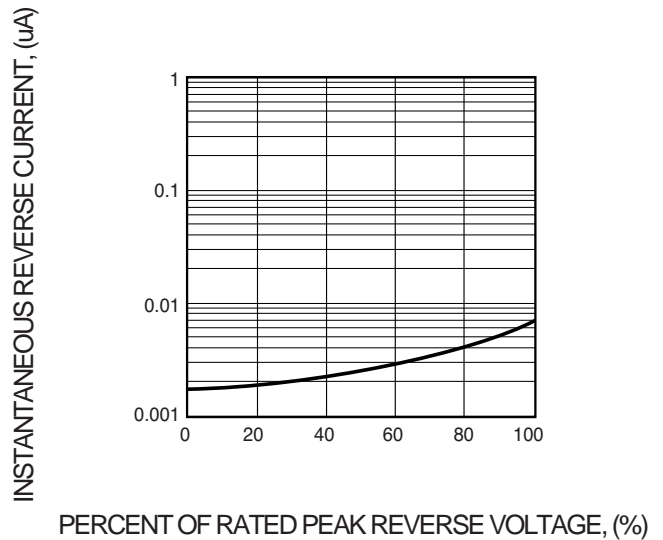
**FIG. 2 - MAXIMUM NON-REPETTIVE FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

