

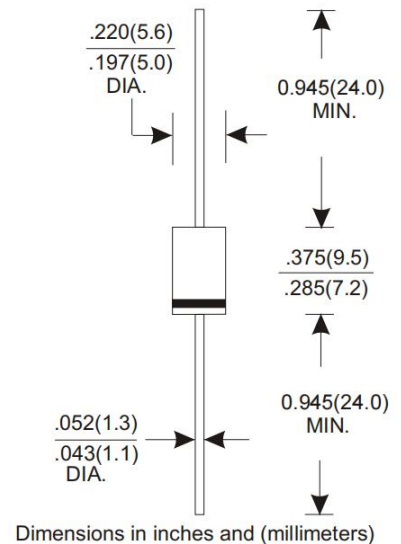


## SR1045L



## Features

- Fast switching speed
- Low forward voltage
- Low power high efficiency
- High surge capability
- High temperature soldering guaranteed  
250°C/10 seconds,0.373"(9.5mm)lead length



## Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead :Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.04ounce, 1.10 gram

## Maximum Ratings and Electrical Characteristics

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

TYPE NUMBER	SYMBOLS	SR1045L	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	45	Volts
Maximum RMS Voltage	$V_{RMS}$	31.5	Volts
Maximum DC Blocking Voltage	$V_{DC}$	45	Volts
Maximum Average Forward Rectified Current at $T_L$ see figure 1 $T_L = 85^\circ\text{C}$	$I_{(AV)}$	10	Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	180	Amps
Maximum Instantaneous Forward Voltage @ 10A <sup>(Note1)</sup>	$V_F$	0.45	Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$T_A = 25^\circ\text{C}$	0.5	mA
	$T_A = 100^\circ\text{C}$	20.0	
Typical Thermal Resistance <sup>(Note 2)</sup>	$R_{\theta JA}$	55	$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	12	
Diode junction capacitance <sup>(Note 3)</sup>	$C_J$	270	pF
Operating Junction Temperature	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +125	$^\circ\text{C}$

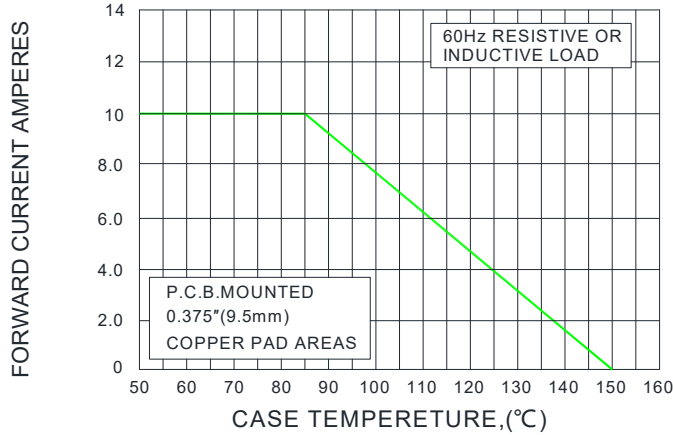
## Notes:

1. Pulse test:300 $\mu\text{s}$  pulse width,1% duty cycle.
2. Thermal Resistance from junction to Ambient at .375"(9.5mm)lead length, P.C.board mounted.
3.  $f=1\text{MHz}$  and applied 4V DC reverse voltage.

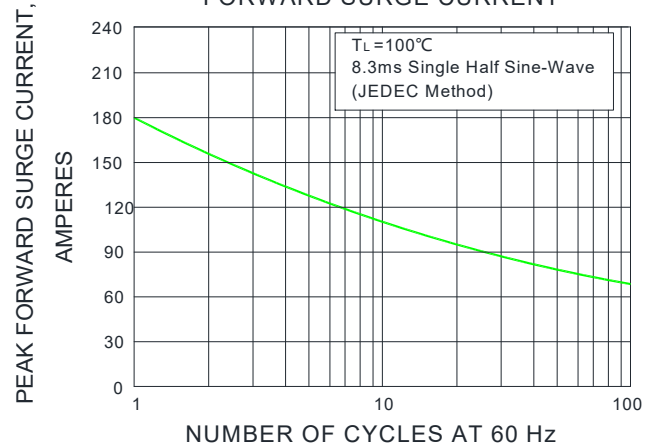


Ratings and Characteristic Curves ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

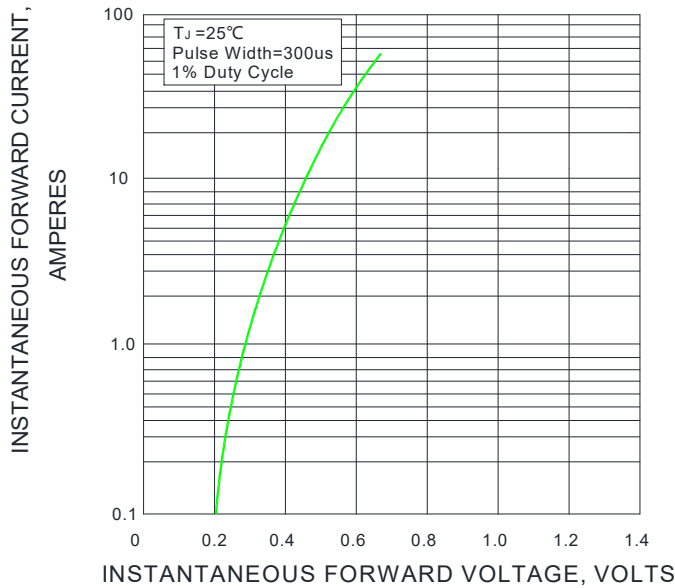
F1G.1-FORWARD CURRENT DERATING CURVE



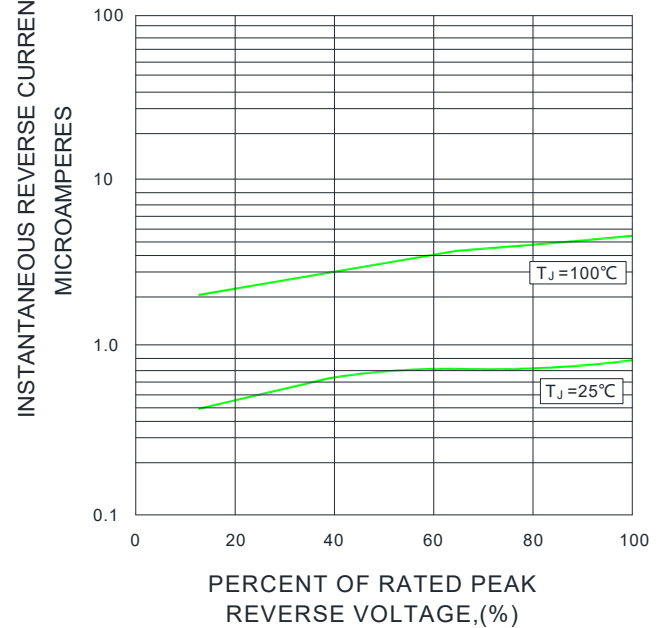
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



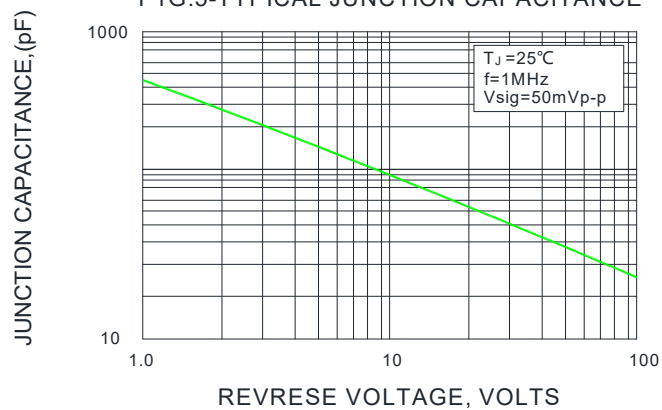
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



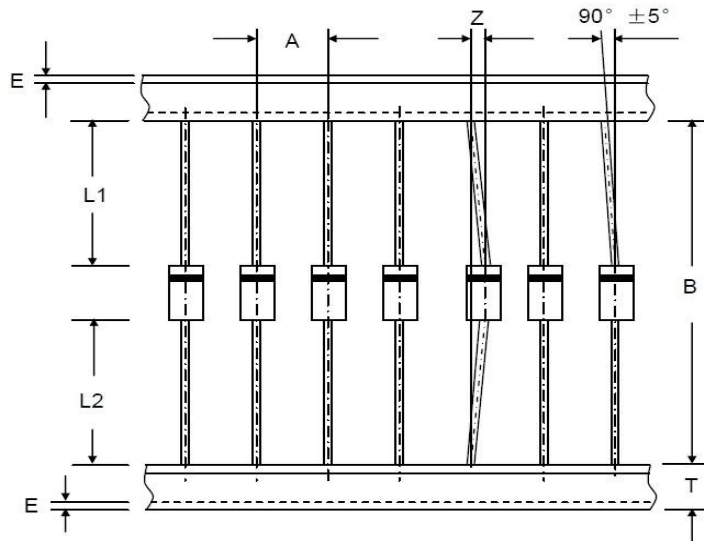
F1G.5-TYPICAL JUNCTION CAPACITANCE





SR1045L

Axial Lead Taping Specifications for Rectifiers

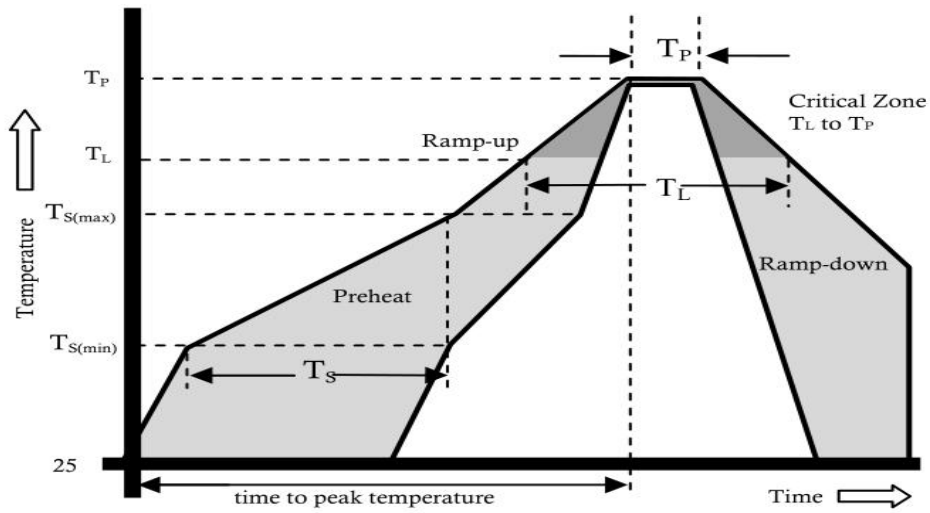


Component Outline	Component Pitch A	Inner Tape Pitch B	Cumulative Tolerance
	±0.5mm	+0.5mm -0.4mm	
DO-201AD(DO-27)	10.0mm	52.4mm	2.0mm/20pitch

Item	Symbol	Specifications(mm)	Specifications(inch)
Component alignment	Z	1.2 max	0.048 max
Tape width	T	6.0±0.4	0.236±0.016
Exposed adhesive	E	0.8 max	0.032 max
Body eccentricity	L1 - L2	1.0 max	0.040 max



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp( $T_L$ ) to peak)		3°C/sec. Max.
$T_{S(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature ( $T_L$ )(Liquidus)	+217°C
	Temperature ( $T_P$ )	60-150 secs.
Peak Temp ( $T_P$ )		+(260+0/-5)°C
Time within 5°C of actual Peak Temp ( $T_P$ )		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp ( $T_P$ )		8 min. Max.
Do not exceed		+260°C



AXIAL MOUNT SCHOTTKY DIODE

**SR1045L**

<b>VOLTAGE RANGE</b>	<b>45 Volts</b>
<b>CURRENT</b>	<b>10 Ampere</b>

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