



SR320L THRU SR3200L

VOLTAGE RANGE 20 to 200 Volts  
CURRENT 3.0 Ampere

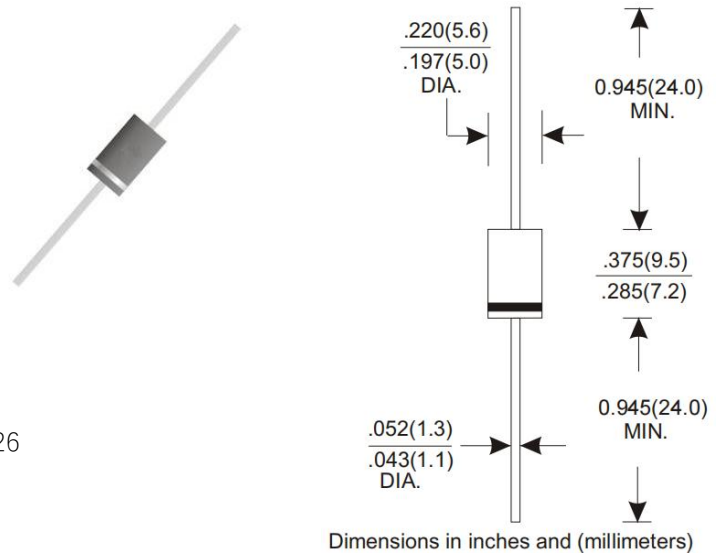


Features

- 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	SYMB OLS	SR 320L	SR 340L	SR 350L	SR 360L	SR 380L	SR 3100L	SR 3150L	SR 3200L	UNIT	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	$V_{RMS}$	14	28	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	20	40	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at $T_c$ see figure 1 $T_c = 85^\circ C$	$I_{(AV)}$	3.0								Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80								Amps	
Maximum Instantaneous Forward Voltage @ 3.0A <sup>(Note1)</sup>	$V_F$	0.45	0.55	0.70	0.80	0.90				Volts	
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$T_A = 25^\circ C$	0.5						0.2		mA	
	$T_A = 100^\circ C$	20.0		10.0		2.0					
Typical Thermal Resistance <sup>(Note 2)</sup>	$R_{\theta JA}$	40								$^\circ C/W$	
	$R_{\theta JL}$	15									
Diode junction capacitance <sup>(Note 3)</sup>	$C_J$	250		160						pF	
Operating Junction Temperature	$T_J$	-55 to +125				-65 to +150				$^\circ C$	
Storage Temperature Range	$T_{STG}$	-55 to +150									$^\circ C$

Notes:

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

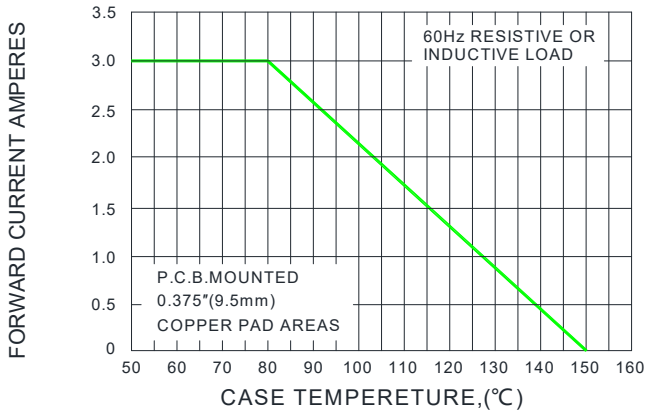


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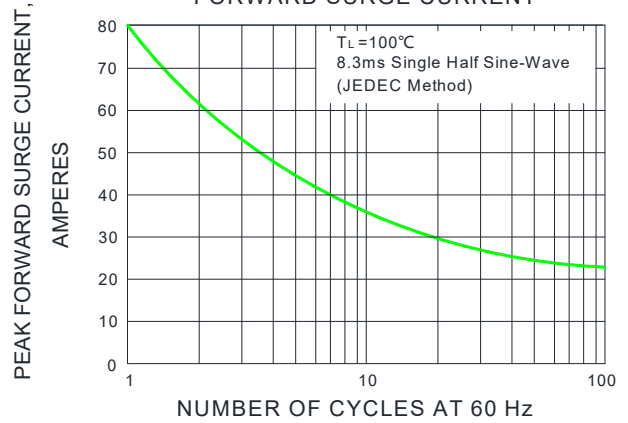
# SR320L THRU SR3200L

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

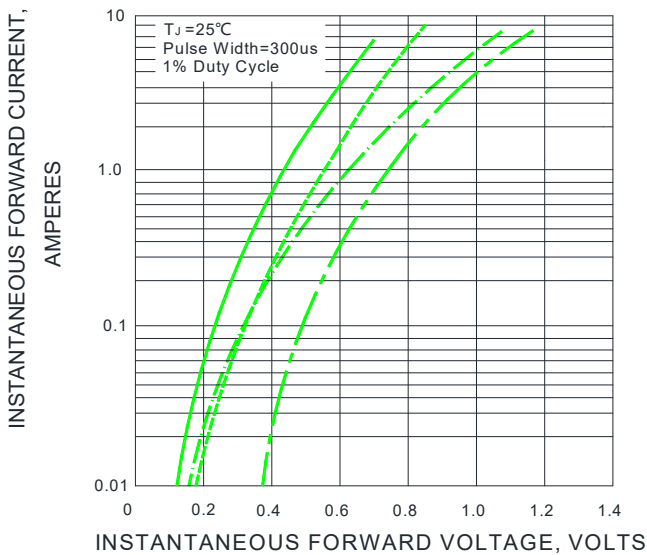
F1G.1-FORWARD CURRENT DERATING CURVE



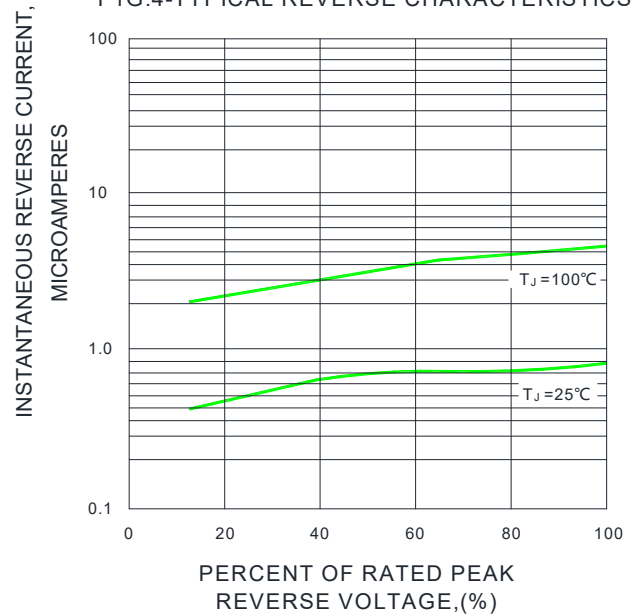
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



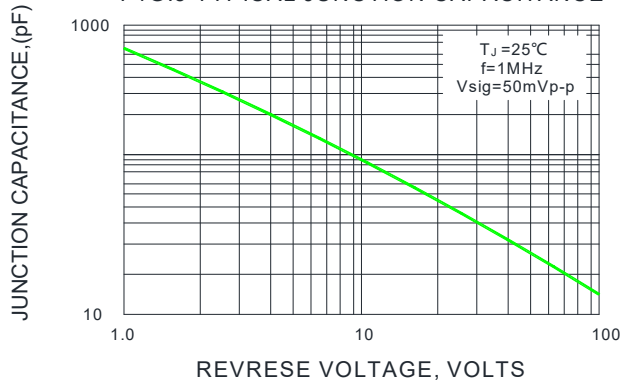
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS

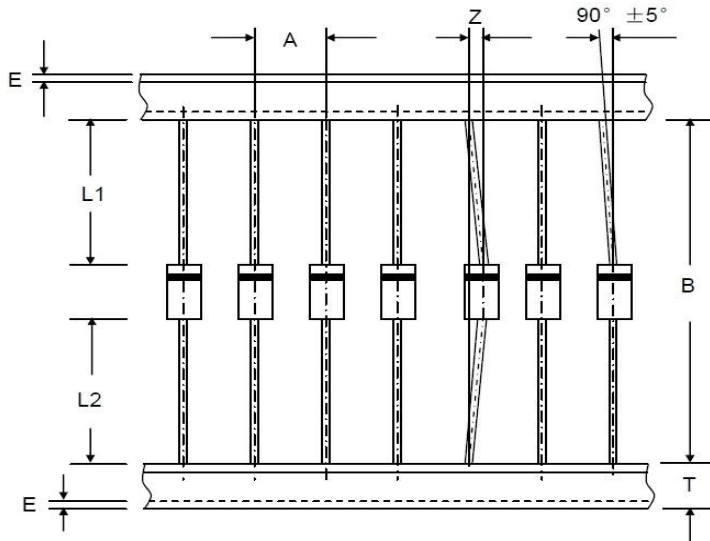


F1G.5-TYPICAL JUNCTION CAPACITANCE





Axial Lead Taping Specifications for Rectifiers

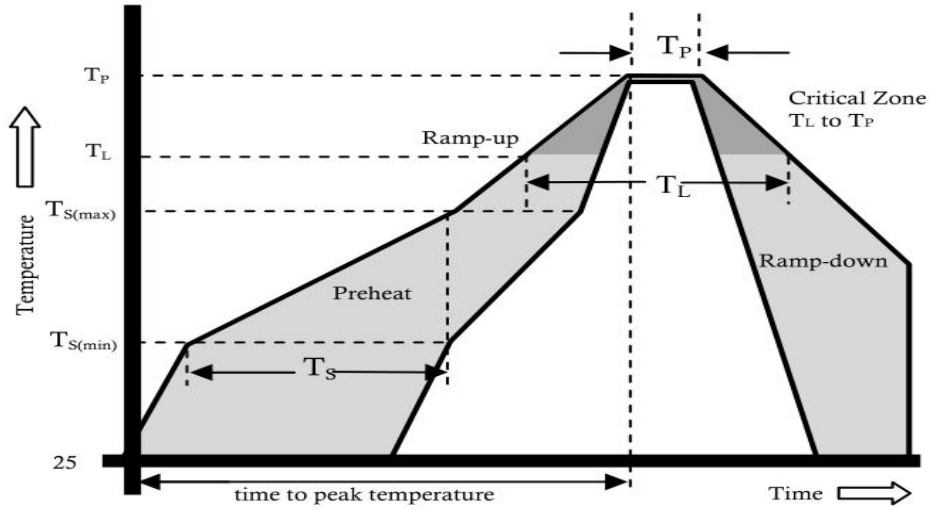


Component Outline	Component Pitch A	Inner Tape Pitch B	Cumulative Tolerance
	±0.5mm	+0.5mm -0.4mm	
DO-201AD(DO-27)	10.0mm	52.4mm	2.0mm/20pitch

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	IL1-L2I	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 ( $T_I$ )	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



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## Disclaimer

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