



# AXIAL MOUNT SCHOTTKY DIODE

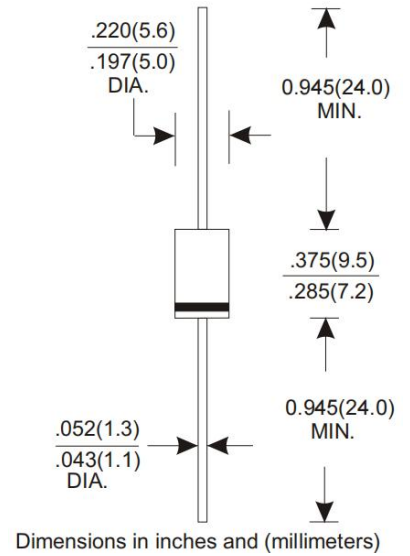
## SR520 THRU SR5200

VOLTAGE RANGE	20 to 200 Volts
CURRENT	5.0 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: 0.042ounce, 1.19 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	SYMBOL	SR 520	SR 540	SR 560	SR 580	SR 5100	SR 5150	SR 5200	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	80	100	150	200	Volts
Maximum RMS Voltage	$V_{RMS}$	14	28	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at TL see figure 1 TL = 100°C	$I_{AV}$	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150							Amps
Maximum Instantaneous Forward Voltage @ 5.0A <sup>(Note1)</sup>	$V_F$	0.55	0.7	0.85			0.95	Volts	
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$T_A = 25^\circ C$	0.5					0.15		mA
	$T_A = 125^\circ C$	20		10		1.5			
Typical thermal resistance <sup>(NOTE 2)</sup>	$R_{\theta JA}$	55							°C/W
	$R_{\theta JL}$	12							
Operating Junction Temperature	$T_J$	-55 to +150					-55 to +175		°C
Storage Temperature Range	$T_{STG}$	-55 to +150							°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.



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

FIG.1-FORWARD CURRENT DERATING CURVE

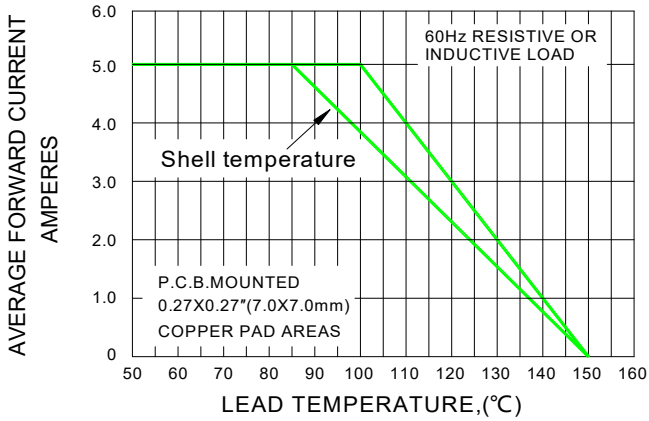


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

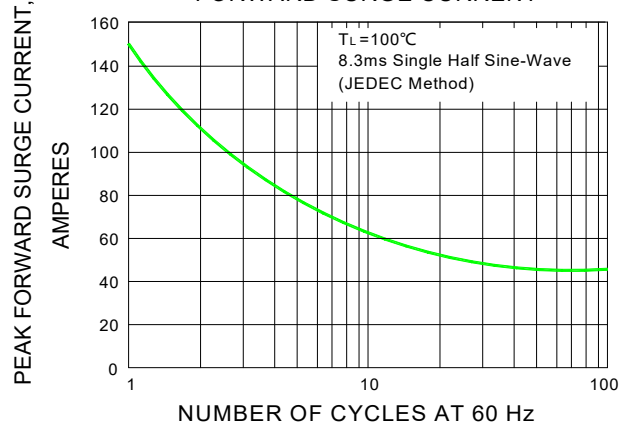


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

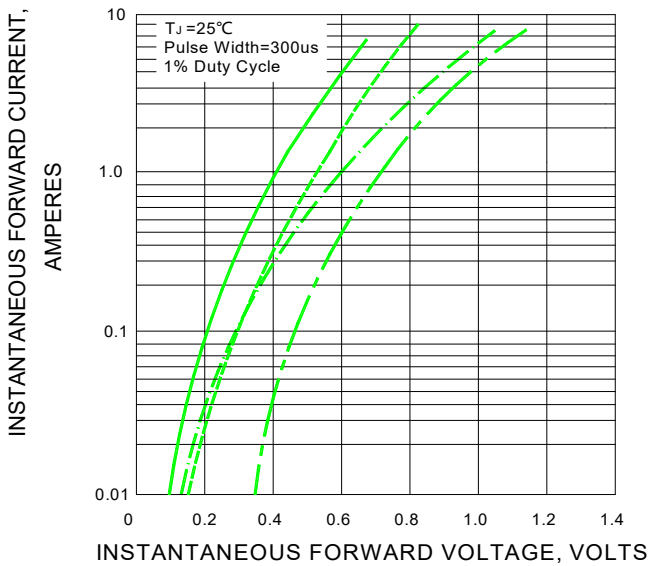


FIG.4-TYPICAL REVERSE CHARACTERISTICS

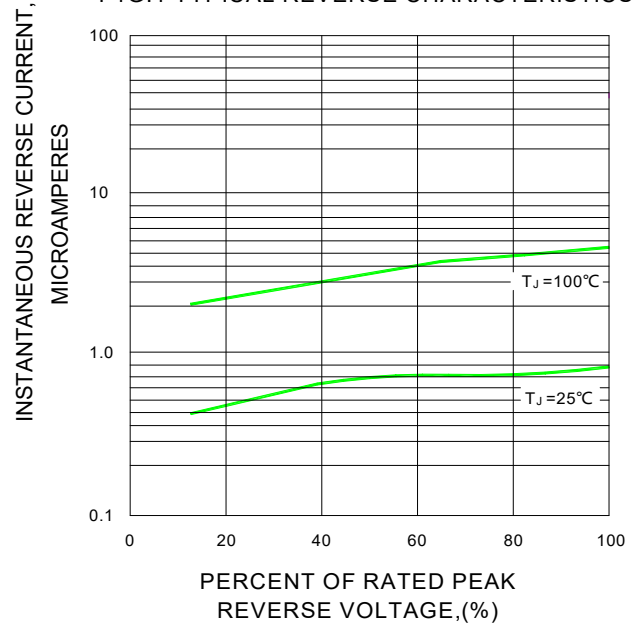
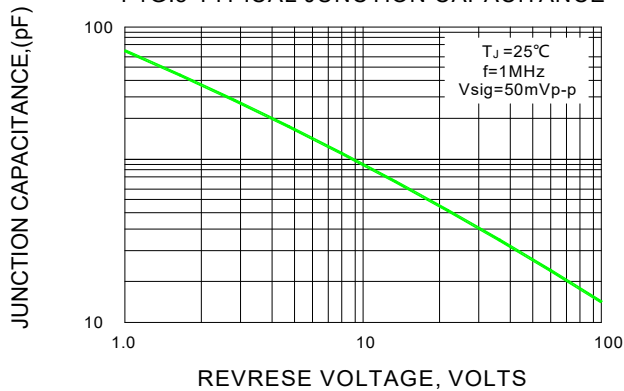
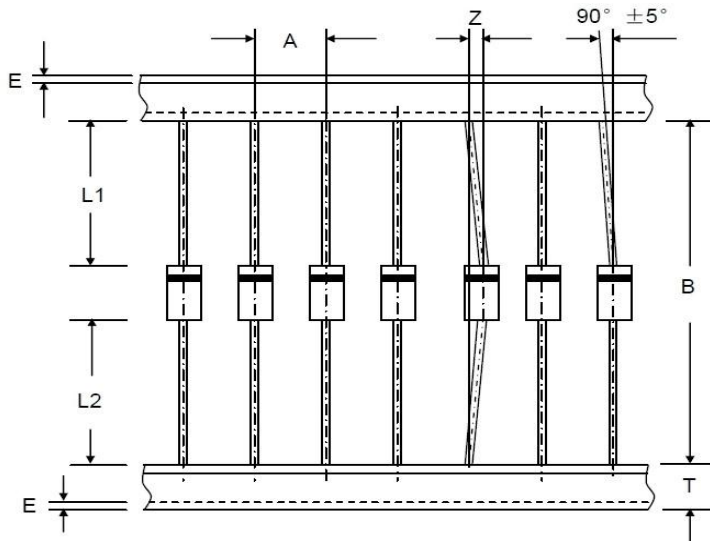


FIG.5-TYPICAL JUNCTION CAPACITANCE





Axial Lead Taping Specifications for Rectifiers

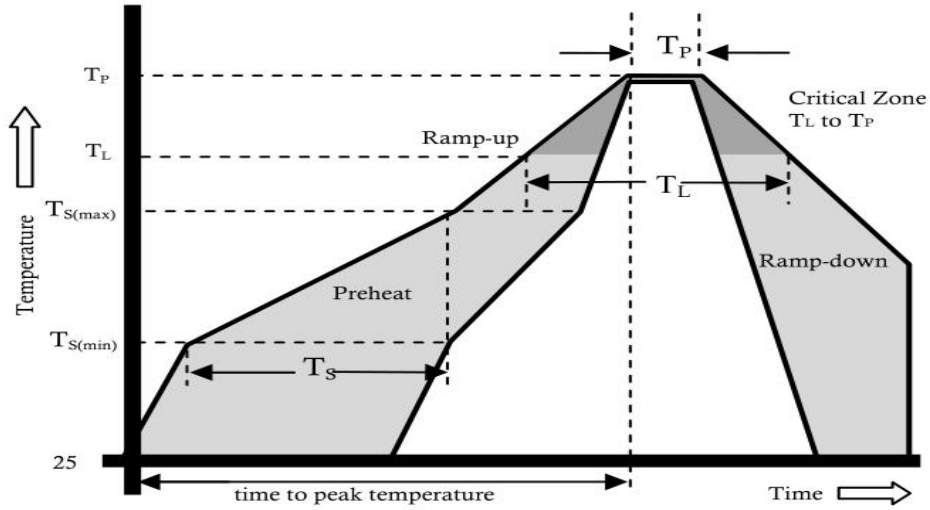


Component Outline	Component Pitch A	Inner Tape Pitch B	Cumulative Tolerance
	±0.5mm	+0.5mm -0.4mm	
DO-201AD(DO-27)	10.0mm	52.4mm	2.0mm/20pitch

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	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(TL) to peak)		3°C/sec. Max.
TS(max) to TL - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (TL)(Liquidus)	+217°C
	Temperature (TL)	60-150 secs.
Peak Temp (TP)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (TP)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (TP)		8 min. Max.
Do not exceed		+260°C



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