AXIAL MOUNT SCHOTTKY DIODE

SR520L THRU SR5200L

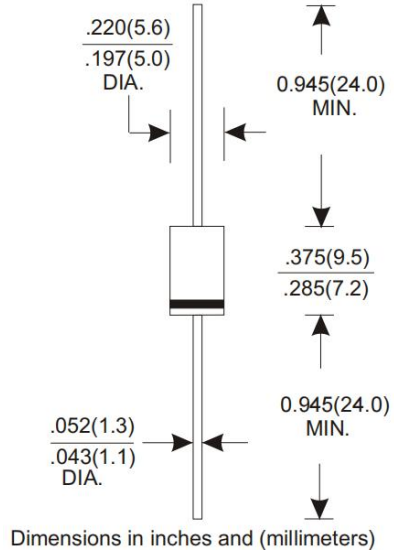
VOLTAGE RANGE 20 to 200 Volts

CURRENT 5.0 Ampere

RoHS COMPLIANT

Features

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



Dimensions in inches and (millimeters)

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

TYPE NUMBER		SYMBOLS	SR 520L	SR 540L	SR 550L	SR 560L	SR 580L	SR 5100L	SR 5150L	SR 5200L	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 $T_L$see figure 1 T_L =85℃		$I_{(AV)}$	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(Note1)		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℃	I_R	0.5						0.2		mA
	T_A = 100℃		20.0		10.0				2.0		
Typical Thermal Resistance (Note 2)		$R_{\theta JA}$	55								℃/W
		$R_{\theta JL}$	12								
Diode junction capacitance (Note 3)		C_J	270		190						pF
Operating Junction Temperature		T_J	-55 to +125				-65 to +150				℃
Storage Temperature Range		T_{STG}	-55 to +150								℃

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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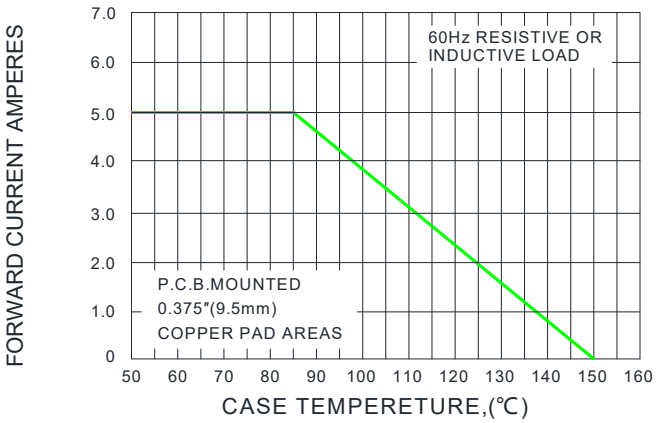
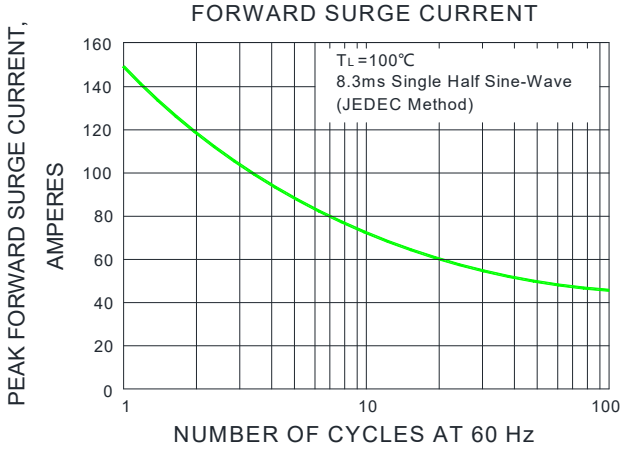
Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

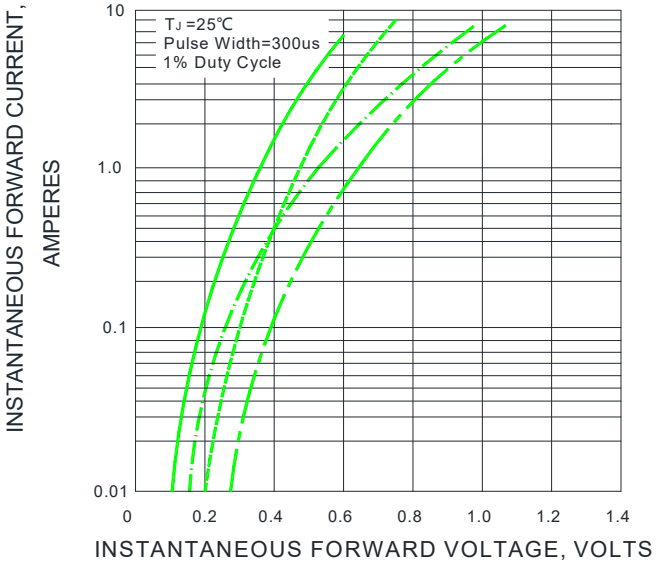
F1G.1-FORWARD CURRENT DERATING CURVE



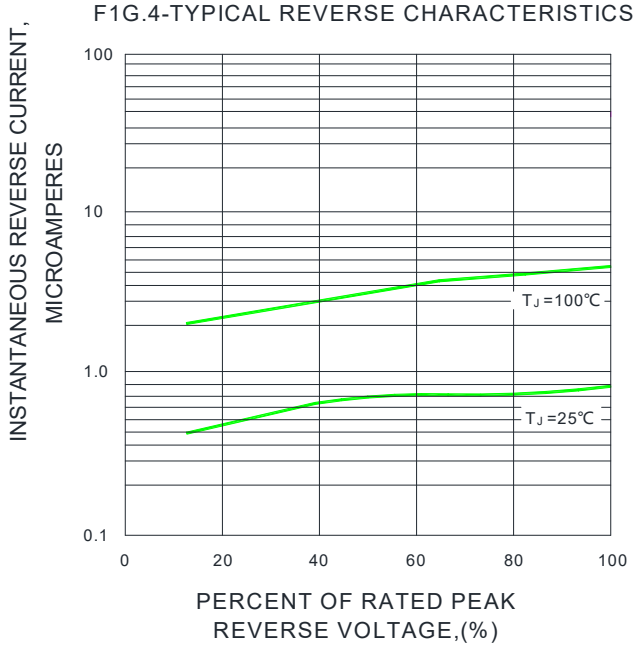
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



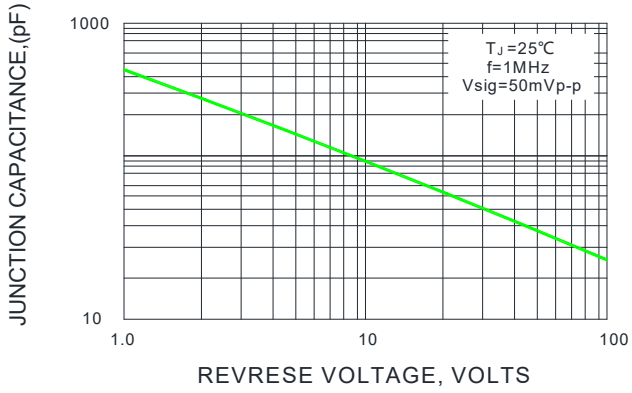
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



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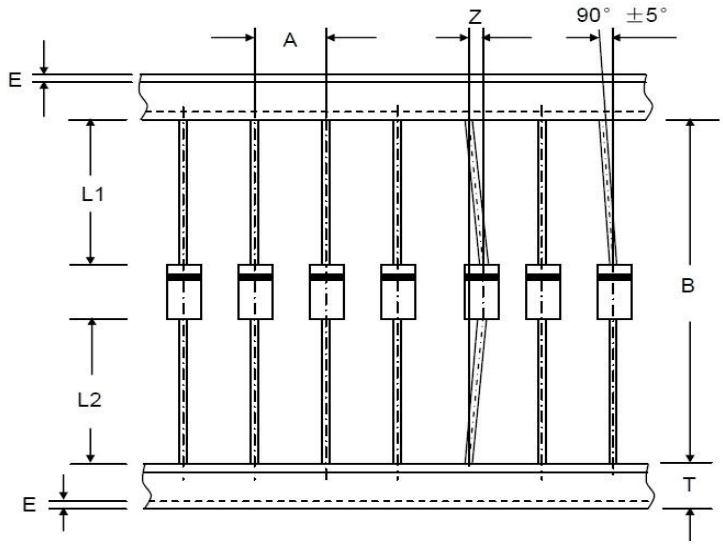
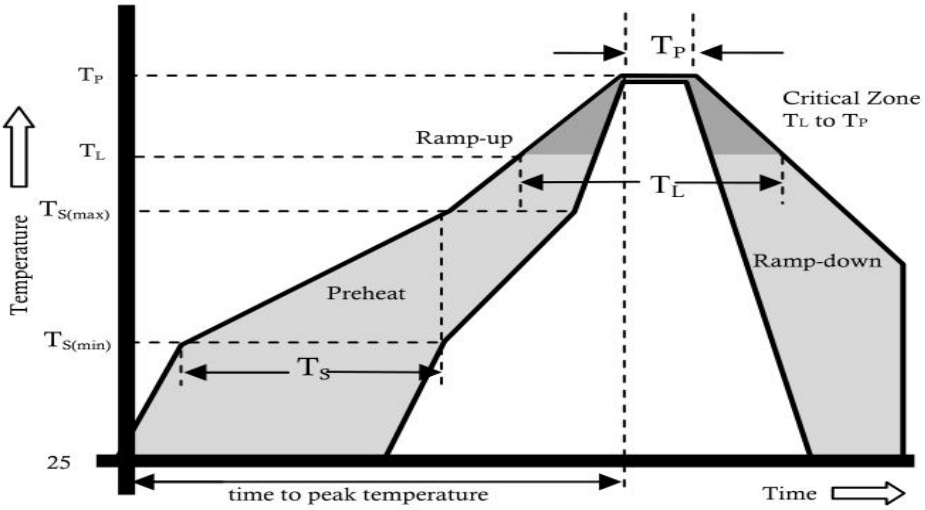
Axial Lead Taping Specifications for Rectifiers



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_L)	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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