



# SR4020PT THRU SR4060PT

## 40.0 AMPS. Schottky Barrier Rectifiers



Voltage Range  
20 to 60 Volts  
Current  
40.0 Amperes

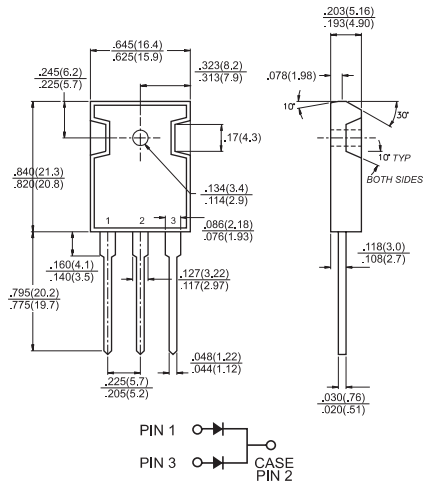
### Features

- ✧ Dual rectifier construction, positive center-tap
- ✧ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High surge capability
- ✧ Epitaxial construction
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ High temperature soldering guaranteed:  
260°C/ 10 seconds, 0.17"(4.3mm)lead lengths at 5 lbs., (2.3kg) tension

### Mechanical Data

- ✧ Cases: JEDEC TO-3P/TO-247AD molded plastic
- ✧ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Weight: 0.2 ounce, 5.6 grams

### TO-3P/TO-247AD



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SR 4020PT	SR 4030PT	SR 4040PT	SR 4050PT	SR 4060PT	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	V
Maximum Average Forward Rectified Current at $T_c=100^\circ\text{C}$	$I_{(AV)}$	40					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	400					A
Maximum Instantaneous Forward Voltage 20.0A (Note 3)	$V_F$	0.55		0.70			V
Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	$I_R$	1.0			75		mA mA
Typical Thermal Resistance Per Leg (Note 1)	$R_{\theta_{JC}}$	1.2					$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	$C_j$	1100			600		pF
Operating Junction Temperature Range	$T_J$	-65 to +125			-65 to +150		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150					$^\circ\text{C}$

Notes: 1. Thermal Resistance from Junction to Case Per Leg, with Heatsink size (4" x 6" x 0.25") Al-Plate.

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

3. 300 us Pulse Width, 2% Duty Cycle

## RATINGS AND CHARACTERISTIC CURVES (SR4020PT THRU SR4060PT)

FIG.1- FORWARD CURRENT DERATING CURVE

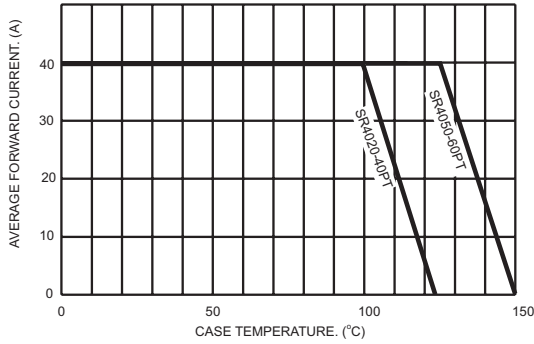


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

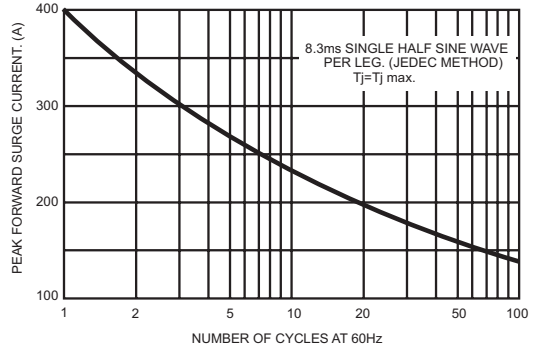


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

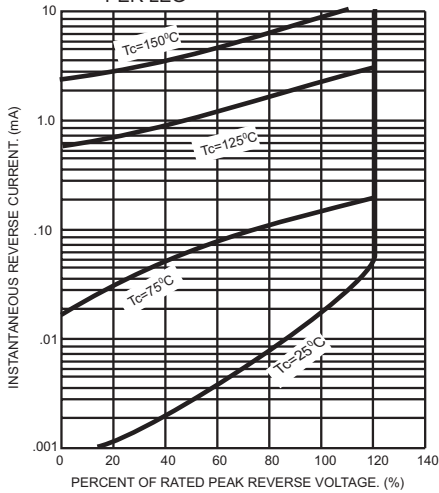


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER LEG

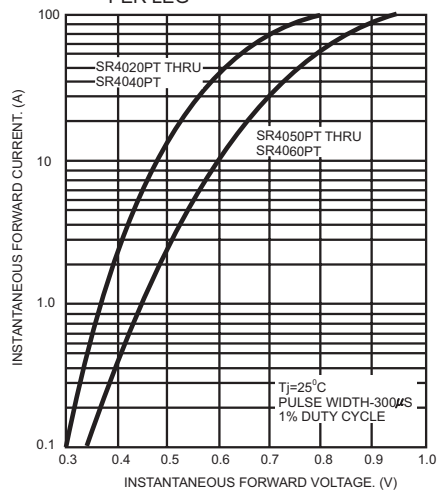


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

