

# SR4020PT THRU SR40200PT

## SCHOTTKY BARRIER RECTIFIER



**REVERSE VOLTAGE:** 20 to 200 VOLTS

**FORWARD CURRENT:** 40.0 AMPERE

### FEATURES

- Plastic package has UL flammability classification 94V-0
- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- High capability
- Low power loss, high efficiency
- High current capability, low  $V_F$
- High surge capacity
- For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

### MECHANICAL DATA

Case: Molded plastic, TO-3P/TO-247AD

Epoxy: UL 94V-0 rate flame retardant

Terminals: Leads solderable per MIL-STD-202

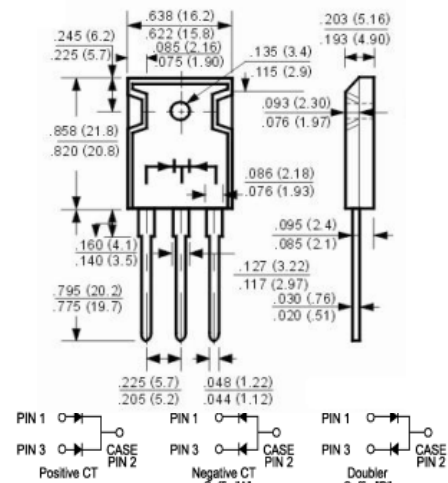
method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.2ounce, 5.6gram

TO-3P/TO-247AD



Dimensions in inches and (millimeters)

### 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%.

	Symbols	SR4020PT	SR4030PT	SR4040PT	SR4050PT	SR4060PT	SR4080PT	SR40100PT	SR40150PT	SR40200PT	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	40.0									Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	375									Amp
Maximum Forward Voltage at 20.0A DC and 25°C (Note 3)	$V_F$	0.55			0.70		0.85		0.95		Volts
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$	1.0									mAmp
at $T_C=25^\circ\text{C}$		50									
Typical Junction Capacitance (Note 1)	$C_J$	1100				600					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	1.2									°C/W
Operating Temperature Range	$T_J$	-55 to +125				-55 to +150					°C
Storage Temperature Range	$T_{stg}$	-55 to +150									°C

### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance from Junction to Case Per Leg
- 3- 300 us Pulse Width, 2% Duty Cycle

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1- FORWARD CURRENT DERATING CURVE

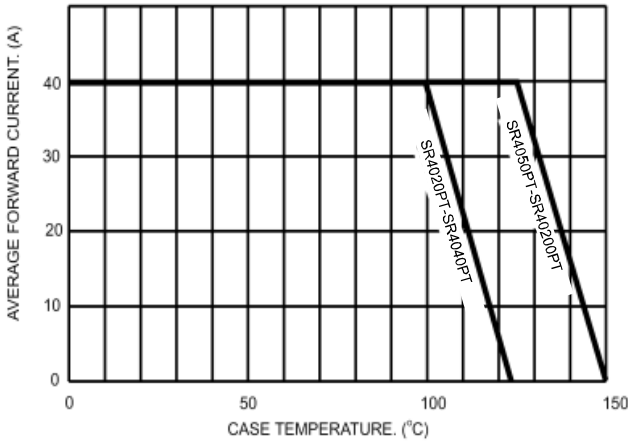


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

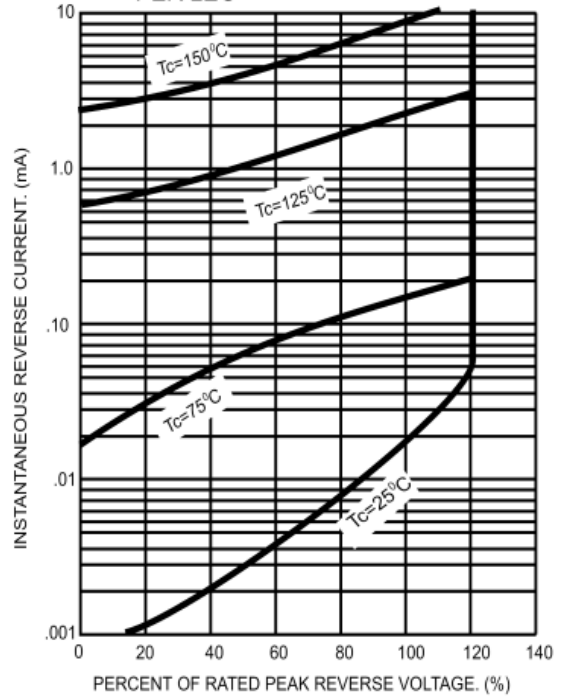


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

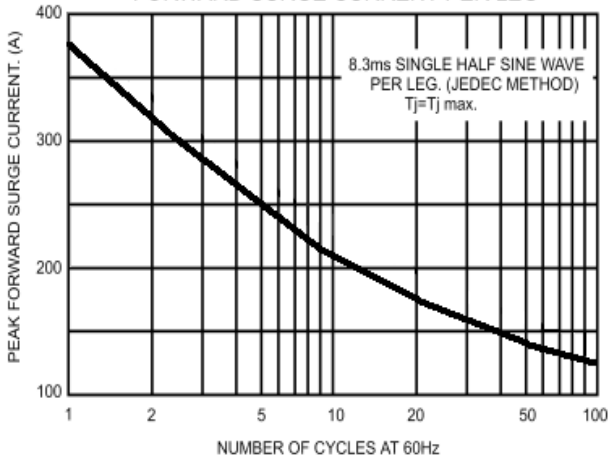


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER LEG

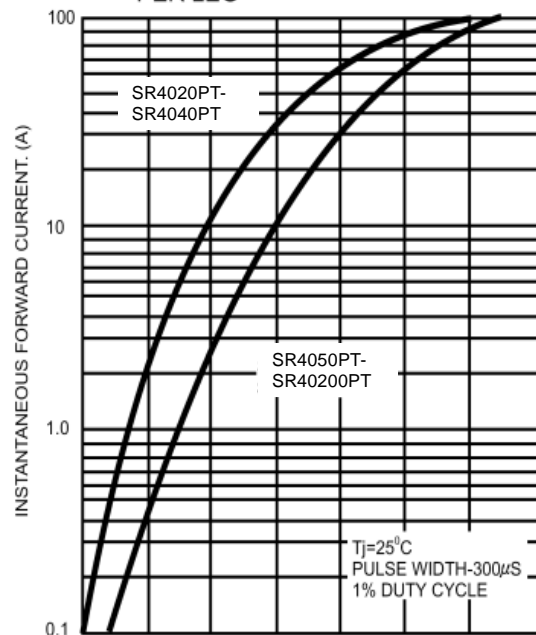


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

