



SR3020PT - SR30150PT

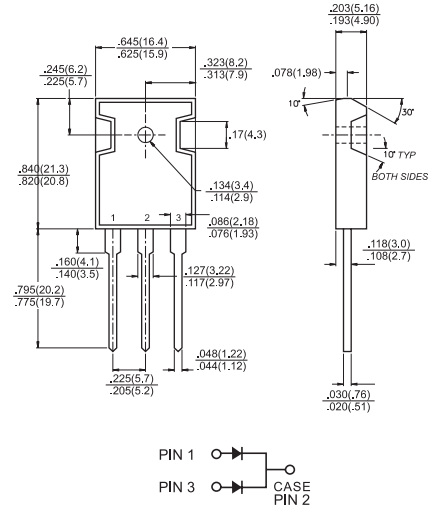
30.0 AMPS. Schottky Barrier Rectifiers

TO-3P/TO-247AD

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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/10seconds, 0.17"(4.3mm)lead lengths at 5 lbs., (2.3kg) tension



Mechanical Data

Dimensions in inches and (millimeters)

- ◇ Cases: JEDEC TO-3P/TO-247AD molded plastic
- ◇ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Mounting position: Any
- ◇ Weight: 0.2 ounce, 5.6 grams

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 3020 PT	SR 3030 PT	SR 3040 PT	SR 3050 PT	SR 3060 PT	SR 3090 PT	SR 30100 PT	SR 30150 PT	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	V	
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	V	
Maximum Average Forward Rectified Current at $T_c=100^\circ\text{C}$	$I_{(AV)}$	30								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	300								A	
Maximum Instantaneous Forward Voltage @ 15.0A (Note 3)	V_F	0.55		0.70		0.90		1.00		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					0.5				mA mA
		20		15		10					
Typical Junction Capacitance (Note 2)	C_j	750		500		340				pF	
Typical Thermal Resistance Per Leg (Note 1)	$R_{\theta JC}$	1.5								$^\circ\text{C/W}$	
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 (SR3020PT THRU SR30150PT)

FIG.1- FORWARD CURRENT DERATING CURVE

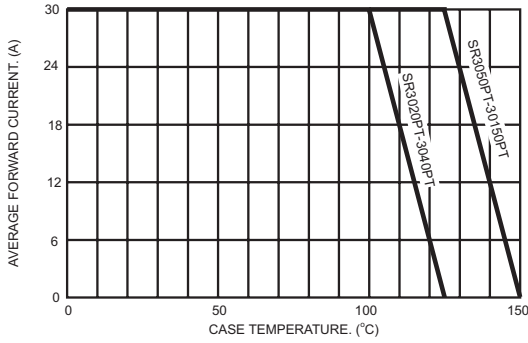


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

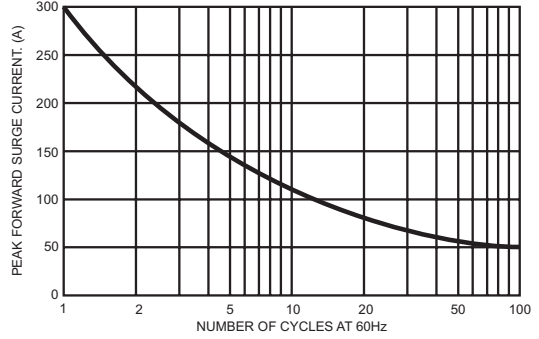


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

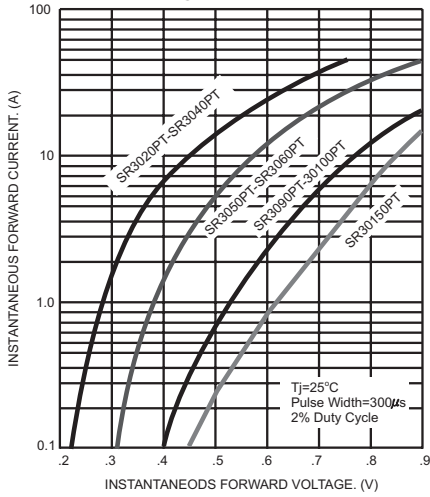


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

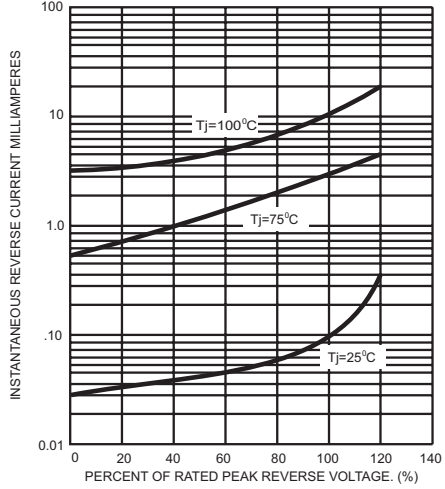


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

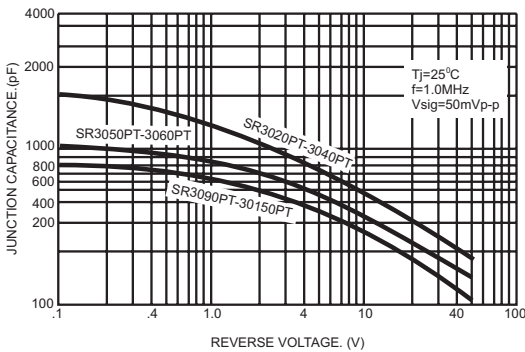


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

