

SR2020PT - SR20150PT

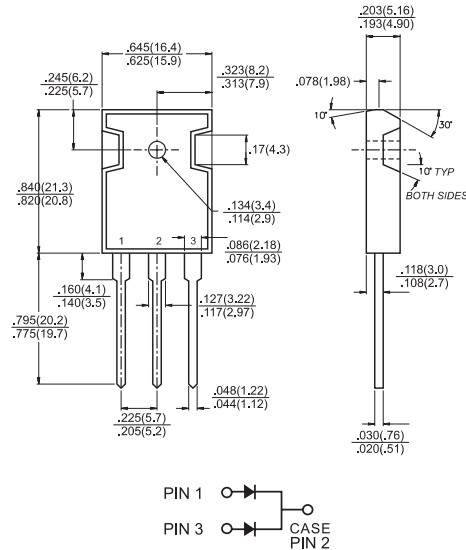
20.0 AMPS. Schottky Barrier Rectifiers

TO-3P/TO-247AD



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
- ✧ Guardring for transient protection
- ✧ 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 2020 PT	SR 2030 PT	SR 2040 PT	SR 2050 PT	SR 2060 PT	SR 2090 PT	SR 2100 PT	SR 2150 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 $T_c=105^\circ\text{C}$	$I_{(AV)}$	20								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200								A	
Maximum Instantaneous Forward Voltage @10.0A (Note 3)	V_F	0.55		0.70		0.92		1.02		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	0.5					0.1				mA
		15		10		5.0					
Typical Junction Capacitance (Note 2)	C_j	600		400		350				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 of 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 (SR2020PT THRU SR20150PT)

FIG.1- FORWARD CURRENT DERATING CURVE

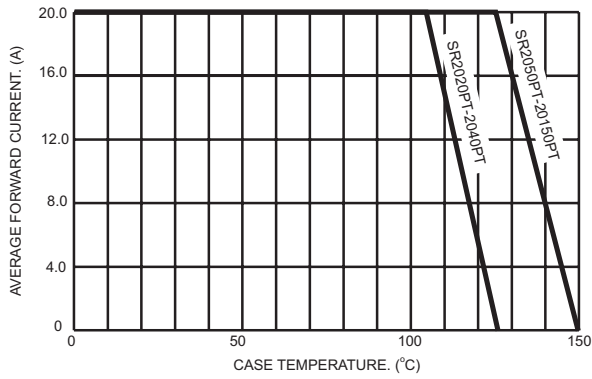


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

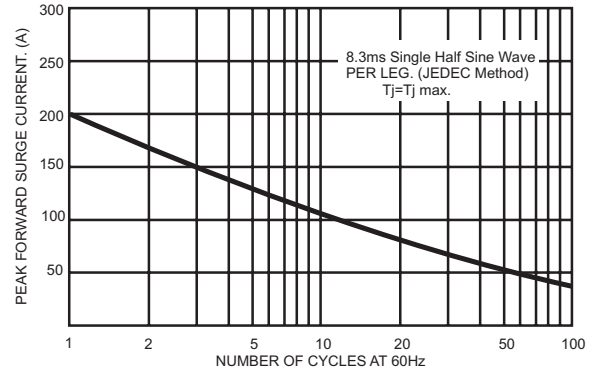


FIG.3- TYPICAL FORWARD CHARACTERISTICS

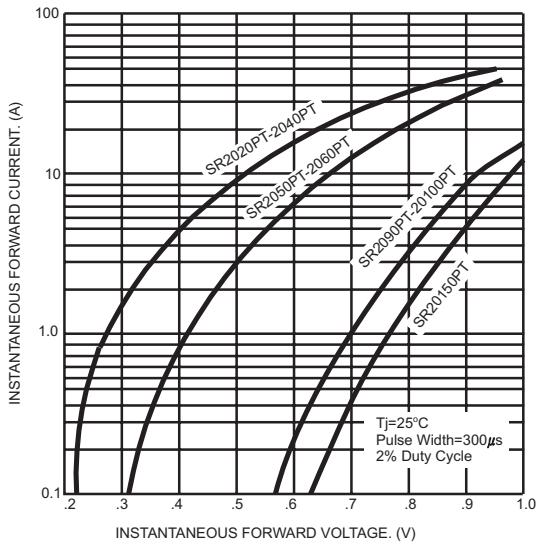


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

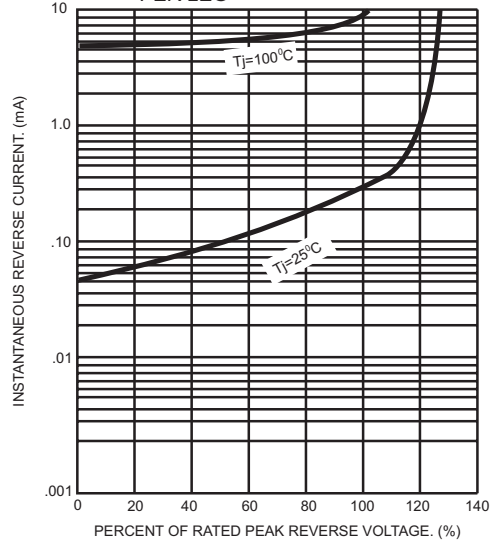


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

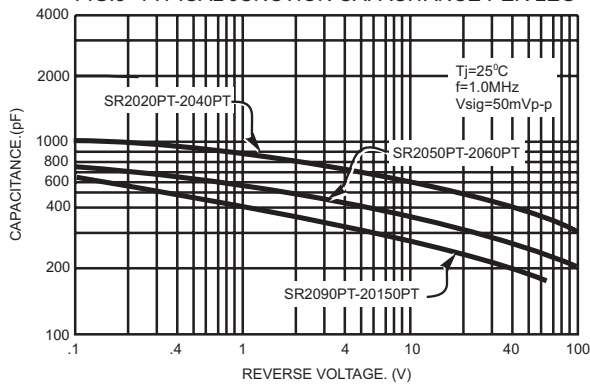


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

