

SR30X0PT SERIES

SCHOTTKY BARRIER RECTIFIER

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SR3020PT THRU SR30200PT

SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 20 to 200 VOLTS

FORWARD CURRENT: 30.0 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

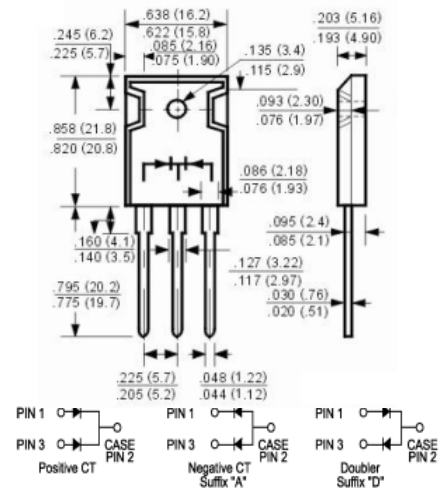
method 208 guaranteed

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	SR3020PT	SR3030PT	SR3040PT	SR3050PT	SR3060PT	SR3080PT	SR30100PT	SR30150PT	SR30200PT	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	80	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	$I_{(AV)}$	30.0									Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	275									Amp	
Maximum Forward Voltage at 15.0A 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
						50						
Typical Junction Capacitance (Note 1)	C_J	750			500						pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	1.5									°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

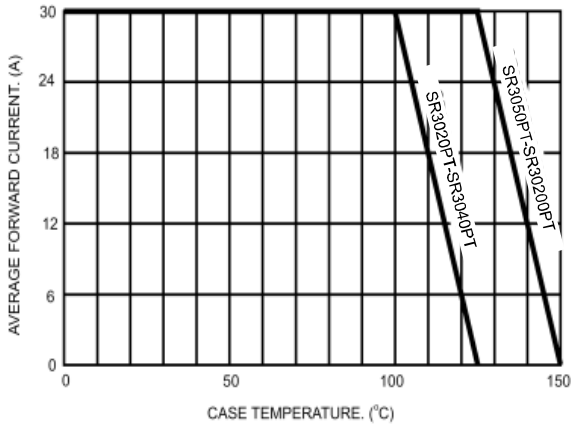


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

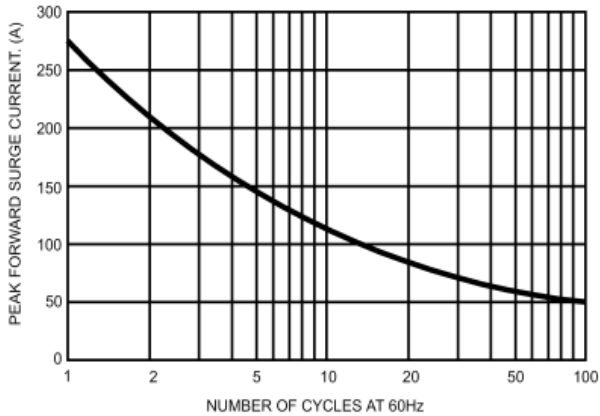


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

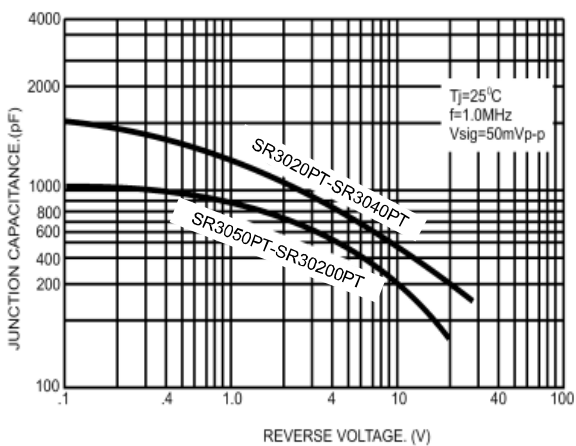


FIG.3- TYPICAL REVERSE CHARACTERISTICS PER LEG

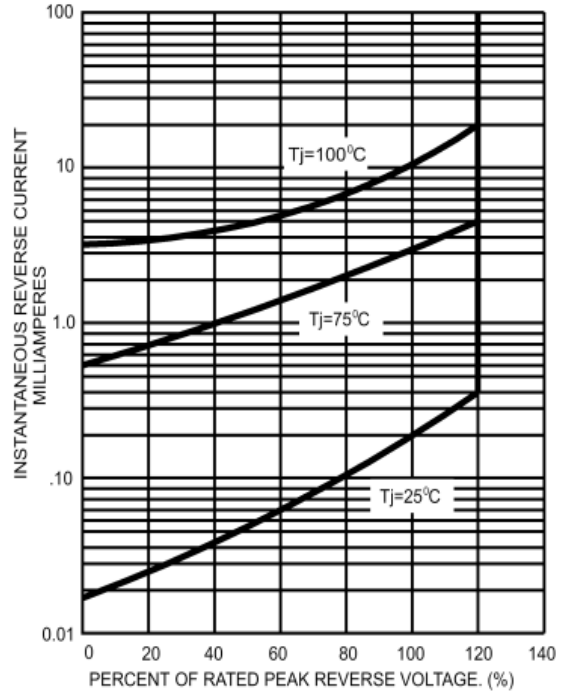


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER LEG

