

GENL INSTR/ POWER

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T-23-07

# SLP20-P SERIES

SCHOTTKY RECTIFIER

GENERAL INSTRUMENT



### FEATURES

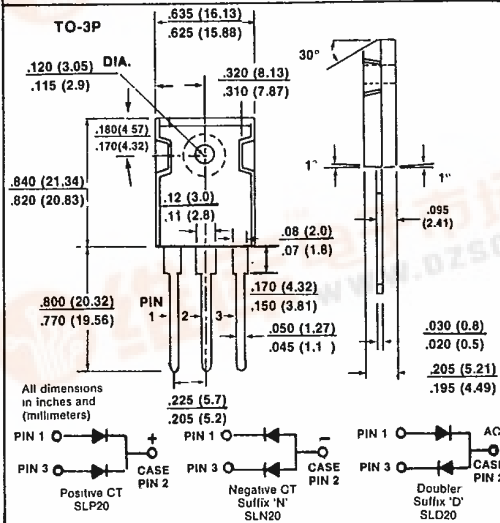
- Dual rectifier construction, positive center-tap
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low  $V_f$
- High surge capability
- Epitaxial construction
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 250°C/10 seconds/.17 (4.3mm) lead lengths at 5 lbs. (2.3kg) tension

### MECHANICAL DATA

Case: TO-3P, molded plastic  
 Terminals: Lead solderable per MIL-STD-202, Method 208  
 Polarity: As marked  
 Mounting Position: Any  
 Weight: .47 ounces, 13.2 ounces

VOLTAGE RANGE  
20 to 45 Volts

CURRENT  
20 Amperes



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified  
 Resistive or inductive load.  
 For capacitive load, derate current by 20%.

	SLP 2020P	SLP 2030P	SLP 2035P	SLP 2040P	SLP 2045P	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	35	40	45	$V_{RRM}$
Maximum RMS Voltage	14	21	24.5	28	31.5	$V_{RMS}$
Maximum DC Blocking Voltage	20	30	35	40	45	$V_{DC}$
Maximum Average Forward Rectified Current at $T_c = 95^\circ C$	20					$A_{(AV)}$
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	120					$A_{pk}$
Maximum Instantaneous Forward Voltage Per Leg $I_f = 10.A$ , $T_c = 25^\circ C$ (Note 3)	.55					$V_{pk}$
Maximum Average Reverse Current at $T_c = 25^\circ C$	1.0					mA
Rated DC Blocking Voltage per element $T_c = 100^\circ C$	75					mA
Typical Thermal Resistance $R_{\theta JC}$ (Note 1)	1.5					$^\circ C/W$
Typical Junction Capacitance (Note 2)	1700					pF
Operating and Storage Temperature Range $T_c, T_{stg}$	-40 to +125					$^\circ C$

NOTES:

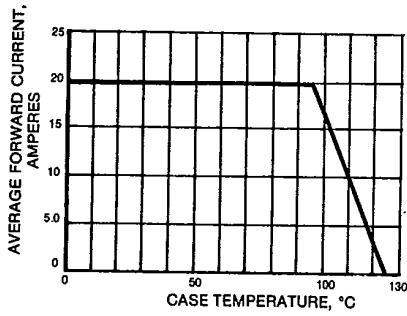
1. Thermal Resistance from Junction to Case.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. 300µs Pulse Width, 2% Duty Factor.



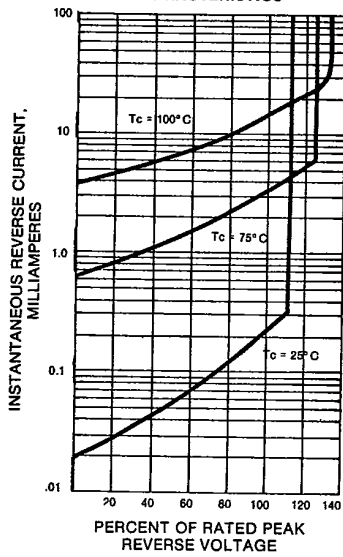
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**RATING AND CHARACTERISTIC CURVES  
SLP20-P**

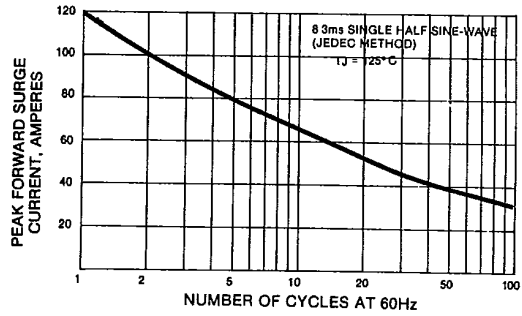
**FIG. 1 — FORWARD CURRENT DERATING CURVE**



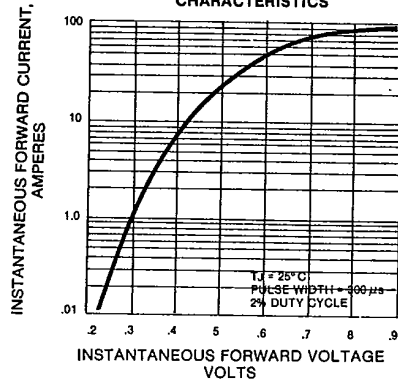
**FIG. 2 — TYPICAL REVERSE CHARACTERISTICS**



**FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 4 — TYPICAL FORWARD CHARACTERISTICS**



**FIG. 5 — TYPICAL JUNCTION CAPACITANCE**

