



MASTER INSTRUMENT CORPORATION

Schottky Barrier Rectifiers SR320 THRU SR3100

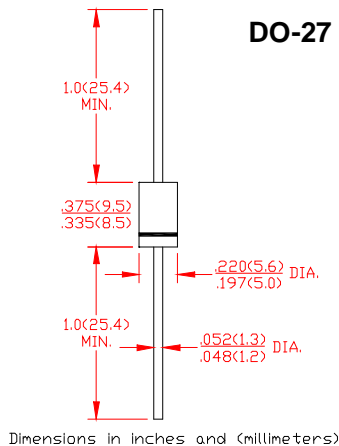
VOLTAGE RANGE 20 to 100 Volts
Forward Current 3.0 Amperes

FEATURES

- I Fast switching
- I Low forward voltage, high current capability.
- I Low power loss high efficiency
- I High current surge capability
- I Fast switching for high efficiency
- I High temperature soldering guaranteed:
250°C/10 second, at terminals

MECHANICAL DATA

- I Case: Transfer molded plastic
- I Terminal: UL94v-0 rate flame retardant
- I Polarity: Color band denotes cathode end.
- I Lead Plated axial lead ,solderable per MIL-STD-202E method
208C
- I Mounting position: Any.
- I Weight: 0.042 ounce 1.19 gram



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 | SR320 | SR330 | SR340 | SR350 | SR360 | SR380 | SR390 | SR3100 | UNITS |
|--|------------------------|-------------------|-------------|-------|-------|-------------|-------|-------|-------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage | | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | Volts |
| Maximum RMS Voltage | | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 63 | 70 | Volts |
| Maximum DC Blocking Voltage | | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | Volts |
| Maximum Average Forward Rectified Current, See Fig2 | | I _(AV) | 3.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | | I _{FSM} | 100 | | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage Drop per bridge element at 3A | | V _F | 0.55 | | | 0.70 | | 0.80 | 0.85 | | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage per element | T _A =25 °C | I _R | 3.0 | | | | | | | | MAmps |
| | T _A =100 °C | | 30 | | | | | | | | |
| Typical Junction Capacitance (Note 2) | | C _J | 200 | | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | | R _{θJA} | 40 | | | | | | | | °C/W |
| Operating and Storage Temperature Range | | T _J | -65 to +125 | | | -65 to +150 | | | | | °C |
| Storage Temperature Range | | T _{STG} | -65 to +150 | | | | | | | | °C |

NOTES:

1. Pulse test: 300 us pulse width 1% duty cycle
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
3. Thermal resistance from junction to ambient P.C.B mounted with 0.375"(9.5mm) lead length with 1.5"X1.5"(38 X38mm) copper pads.



MASTER INSTRUMENT CORPORATION

Schottky Barrier Rectifiers
SR320 THRU SR3100

VOLTAGE RANGE 20 to 100 Volts
Forward Current 3.0 Amperes

RATINGS AND CHARACTERISTIC CURVES SR320 THRU SR3100

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

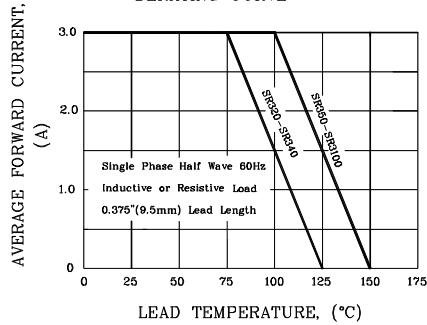


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

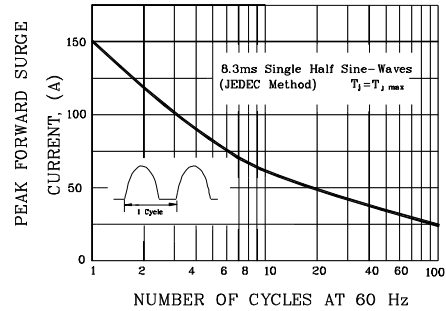


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

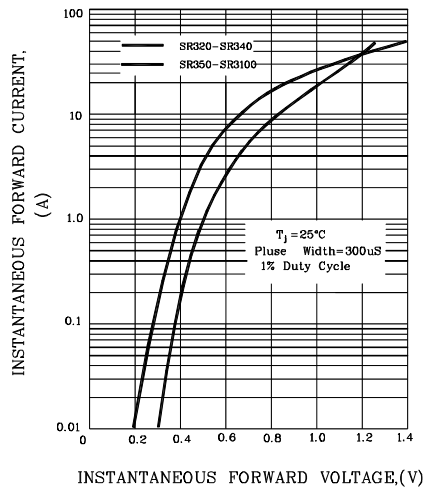


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

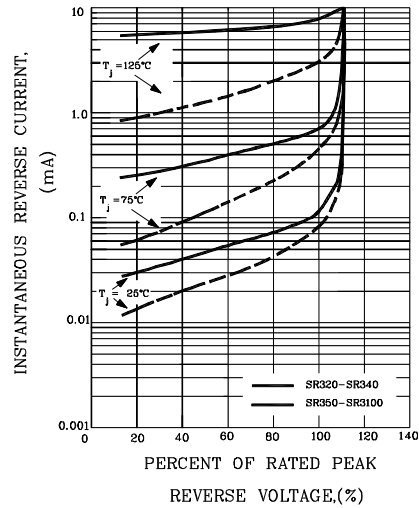


FIG.5-TYPICAL JUNCTION CAPACITANCE

