SR5X0 SERIES SCHOTTKY BARRIER RECTIFIER

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SR520 THRU SR5100

SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 20 to 100 VOLTS FORWARD CURRENT: 5.0 AMPERE

FEATURES

· High current capability

· High surge current capability

· Low forward voltage drop

· Exceeds environmental standards of MIL-S-19500/228

· For use in low voltage, high frequency inverters free wheeling, and porlarlity protection applications

MECHANICAL DATA

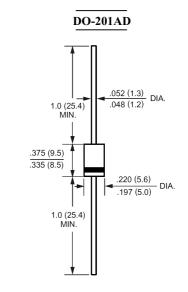
Case: Molded plastic, DO-201AD Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202,

method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any Weight: 0.04ounce, 1.1gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| | Symbols | SR520 | SR530 | SR540 | SR550 | SR560 | SR580 | SR5100 | Units |
|--------------------------------------------------------------------------------|-------------------|-------------|-------|-------------|-------|-------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | Volts |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | Volts |
| Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length | I _(AV) | 5.0 | | | | | | | Amp |
| Peak Forward Surge Current, 8.3ms single half-sine-wave | I _{FSM} | 150 | | | | | | | Amp |
| superimposed on rated load (JEDEC method) | | | | | | | | | |
| Maximum Forward Voltage at 5.0A DC and 25C | $V_{\rm F}$ | 0.55 | | | 0.70 | | 0.85 | | Volts |
| Maximum Reverse Current at T_A =25C at Rated DC Blocking Voltage T_A =100C | I _R | 0.5 50 | | | | | | mAmp | |
| Typical Junction Capacitance (Note 1) | C _J | 500 | | 380 | | | | pF | |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 15 | | 10 | | | | C/W | |
| Operating Junction Temperature Range | T_{J} | -55 to +125 | | -55 to +150 | | | | С | |
| Storage Temperature Range | Tstg | -55 to +150 | | | | | | С | |

NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted





RATINGS AND CHARACTERISTIC CURVES



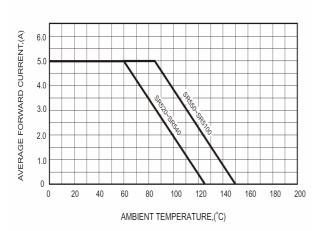


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

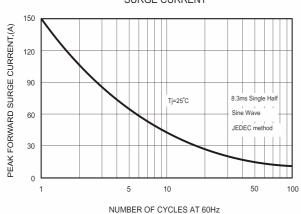
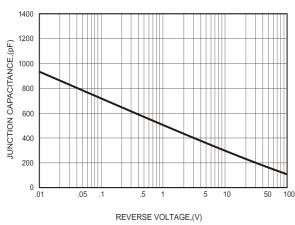


FIG.4-TYPICAL JUNCTION CAPACITANCE



TIG.2-TYPICAL FORWARD

CHARACTERISTICS

50

3.0

1.0

Tij=25°C

Pulse Width 300us
1% Duty Cycle

1.1

3.5

FORWARD VOLTAGE,(V)

FIG.5 - TYPICAL REVERSE

