

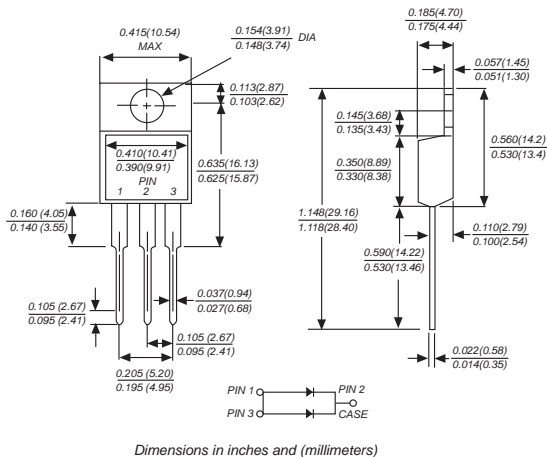


SR1520C THRU SR15A0C

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 15.0 Amperes

TO-220AB



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds

MECHANICAL DATA

Case: TO-220AB molded plastic body
Terminals: Leads solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.080 ounce, 2.24 grams

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 current derate by 20%.

| MDD Catalog Number | SYMBOLS | SR 1520C | SR 1530C | SR 1540C | SR 1545C | SR 1550C | SR 1560C | SR 1570C | SR 1580C | SR 1590C | SR 15A0C | UNITS |
|---|-----------------|-------------|----------|----------|-------------|----------|----------|-------------|----------|----------|----------|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 32 | 35 | 42 | 49 | 56 | 63 | 70 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 45 | 50 | 60 | 70 | 80 | 90 | 100 | VOLTS |
| Maximum average forward rectified current (see fig.1) | $I_{(AV)}$ | 15.0 | | | | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150.0 | | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 7.5A | V_F | 0.55 | | | 0.75 | | | 0.85 | | | Volts | |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 1.0 | | | 50.0 | | | 50.0 | | | mA | |
| Typical junction capacitance (NOTE 1) | C_J | 300 | | | 250 | | | 250 | | | pF | |
| Typical thermal resistance (NOTE 2) | $R_{\theta JC}$ | 2.0 | | | 2.0 | | | 2.0 | | | °C/W | |
| Operating junction temperature range | T_J | -65 to +125 | | | -65 to +150 | | | -65 to +150 | | | °C | |
| Storage temperature range | T_{STG} | -65 to +125 | | | -65 to +150 | | | -65 to +150 | | | °C | |

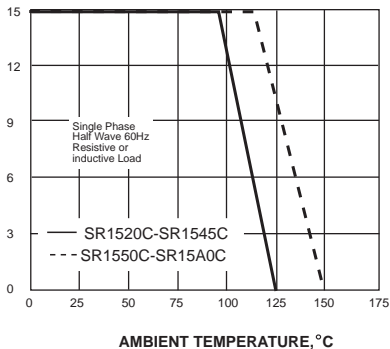
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. Thermal resistance from junction to case

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES SR1520C THRU SR15A0C

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

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

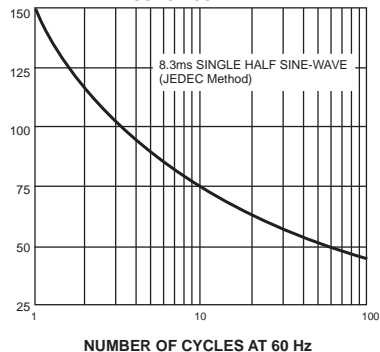
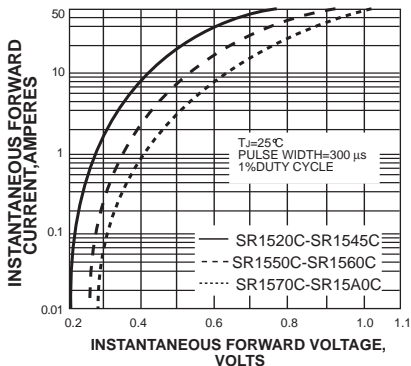


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

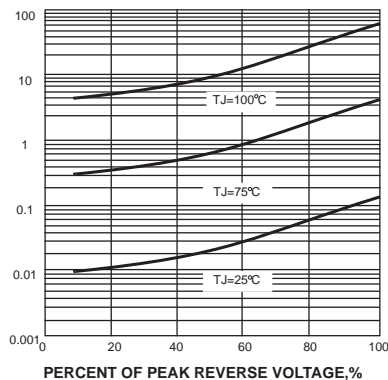
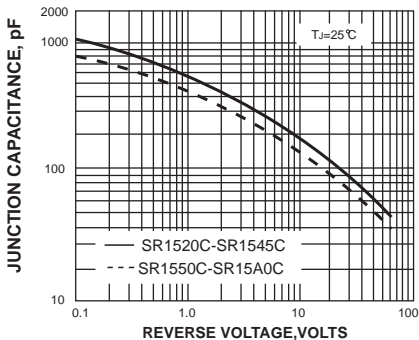


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
 $^{\circ}\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

