

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 30 --- 200 V
CURRENT:40.0A

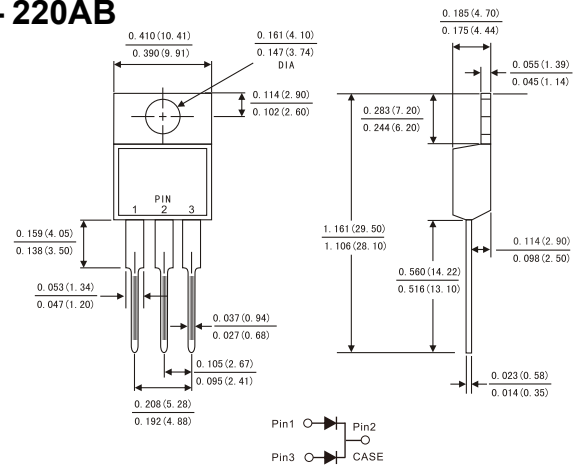
FEATURES

- ◇ Metal-semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop,low switching losses
- ◇ High surge capability
- ◇ For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case:JEDEC TO-220AB, molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-750,Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.08ounces,2.24 grams
- ◇ Mounting position: Any

TO - 220AB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

| | Symbols | SR 4030CT | SR 4035CT | SR 4040CT | SR 4045CT | SR 4050CT | SR 4060CT | SR 40100CT | SR 40150CT | SR 40200CT | Units |
|--|------------------------|-------------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|-------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 30 | 35 | 40 | 45 | 50 | 60 | 100 | 150 | 200 | Volts |
| Maximum RMS voltage | V _{RMS} | 21 | 25 | 28 | 32 | 35 | 42 | 70 | 105 | 140 | Volts |
| Maximum DC blocking voltage | V _{DC} | 30 | 35 | 40 | 45 | 50 | 60 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current(see Fig.1) | Per leg | 20.0 | | | | | | | | | Amps |
| | Total device | 40.0 | | | | | | | | | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 300.0 | | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 40.0 A | V _F | 0.60 | | | 0.75 | | 0.85 | 0.95 | | | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) | T _c = 25°C | 0.2 | | | | | | | | | mA |
| | T _c = 125°C | 30 | | | 50 | | | | | | |
| Typical thermal resistance (Note 2) | R _{θJC} | 3.0 | | | | | | | | | °C/W |
| Operating junction temperature range | T _J | -65 to +150 | | | | | | | | | °C |
| Storage temperature range | T _{STG} | -65 to +150 | | | | | | | | | °C |

- NOTE: 1. Pulse test:300us pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient

FIG.1-FORWARD CURRENT DERATING CURVE

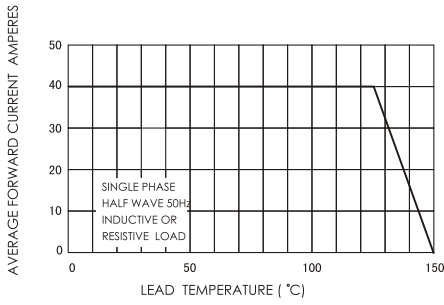


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

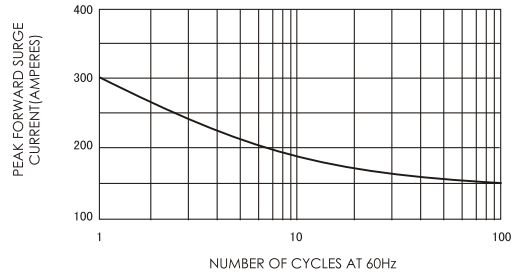


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

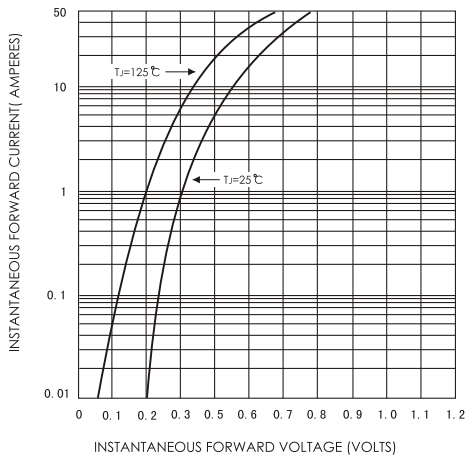


FIG.4-TYPICAL REVERSE CHARACTERISTICS

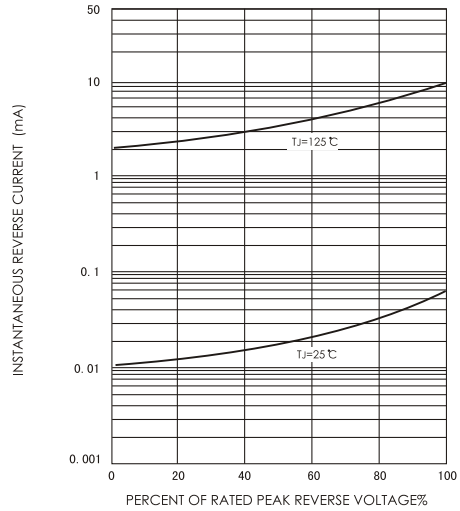


FIG.5-TYPICAL JUNCTION CAPACITANCE

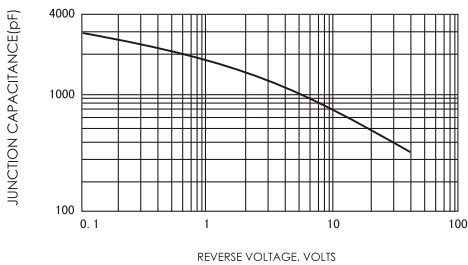


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

