

# SCHOTTKY BARRIER RECTIFIER

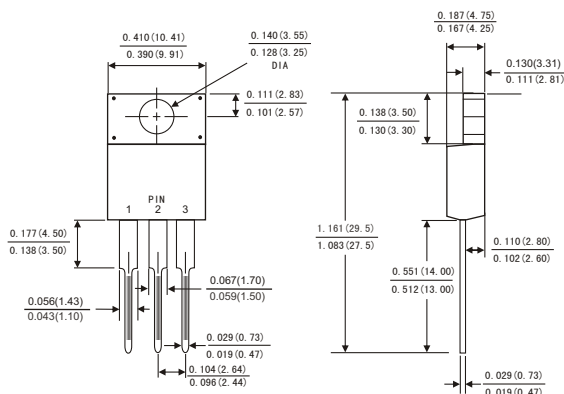
## Features:

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed:260° C/10 seconds,, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

## Mechanical Data:

- **Case:** JEDEC ITO-220AB molded plastic body
- **Terminals:** Lead solderable per MIL-STD-750,method 2026
- **Polarity:** As marked
- **Mounting Position:** Any
- **Weight:** 0.08ounce, 2.24 gram

## ITO-220AB



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load, derate by 20%.)

|  | Symbols            | KSRF 2020CT | KSRF 2030CT | KSRF 2045CT | KSRF 2050CT | KSRF 2060CT | KSRF 2080CT | KSRF 20100CT | KSRF 20150CT | KSRF 20200CT | Units |
|--|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-------|
| Maximum repetitive peak reverse voltage  | $V_{RRM}$          | 20          | 30          | 45          | 50          | 60          | 80          | 100          | 150          | 200          | Volts |
| Maximum RMS voltage  | $V_{RMS}$          | 14          | 21          | 31.5        | 35          | 42          | 56          | 70           | 105          | 140          | Volts |
| Maximum DC blocking voltage  | $V_{DC}$           | 20          | 30          | 45          | 50          | 60          | 80          | 100          | 150          | 200          | Volts |
| Maximum average forward rectified current(see Fig.1)   | Per leg            | 10.0        |             |             |             |             |             |              |              |              | Amps  |
|  | Total device       | 20.0        |             |             |             |             |             |              |              |              |       |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$          | 200.0       |             |             |             |             |             |              |              |              | Amps  |
| Maximum instantaneous forward voltage at 20.0 A  | $V_F$              | 0.60        |             |             | 0.75        | 0.85        | 0.88        | 0.90         |              |              | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)                       | $T_c=25^{\circ}C$  | 0.05        |             |             | 0.005       |             |             |              |              | mA           |       |
|  | $T_c=125^{\circ}C$ | 3.0         |             |             | 5.0         |             |             |              |              |              |       |
| Typical thermal resistance (Note 2)  | $R_{\theta JC}$    | 4.0         |             |             |             |             |             |              |              |              | °C/W  |
| Operating junction temperature range   | $T_J$              | -65 to +175 |             |             |             |             |             |              |              |              | °C    |
| Storage temperature range  | $T_{STG}$          | -65 to +175 |             |             |             |             |             |              |              |              | °C    |

**Notes:** 1. Pulse test: 300  $\mu$ s pulse width, 1% duty cycle

2. Thermal resistance from junction to case

FIG.1-FORWARD CURRENT DERATING CURVE

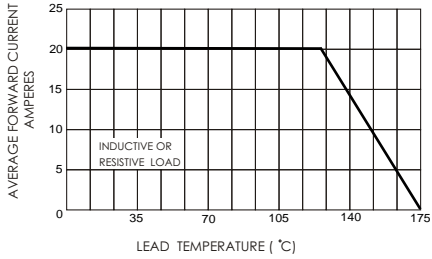


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

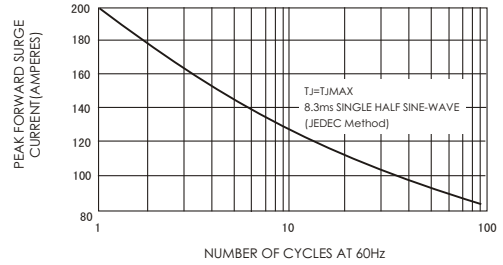


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

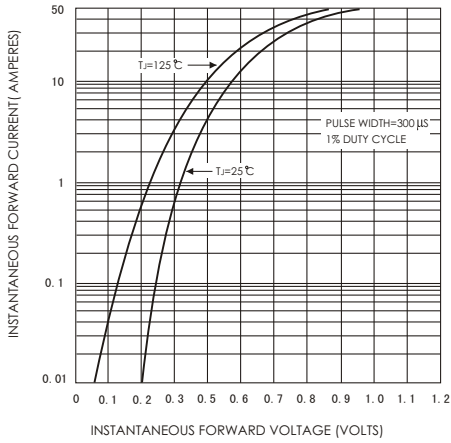


FIG.4-TYPICAL REVERSE CHARACTERISTICS

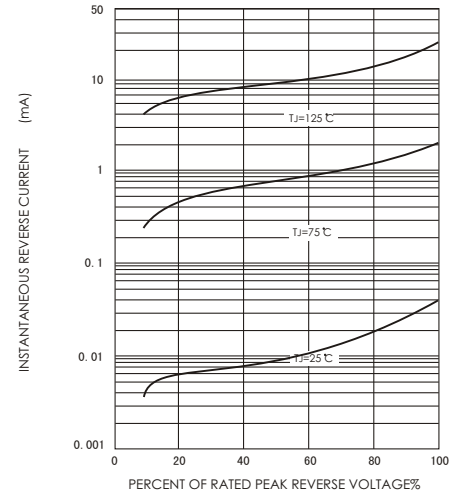


FIG.5-TYPICAL JUNCTION CAPACITANCE

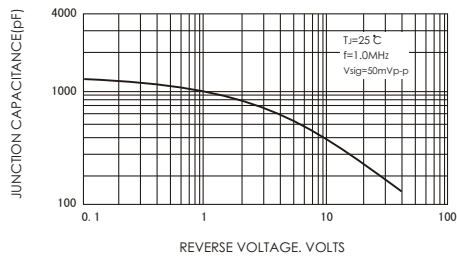


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

