

SBR1620 THRU SBR16100

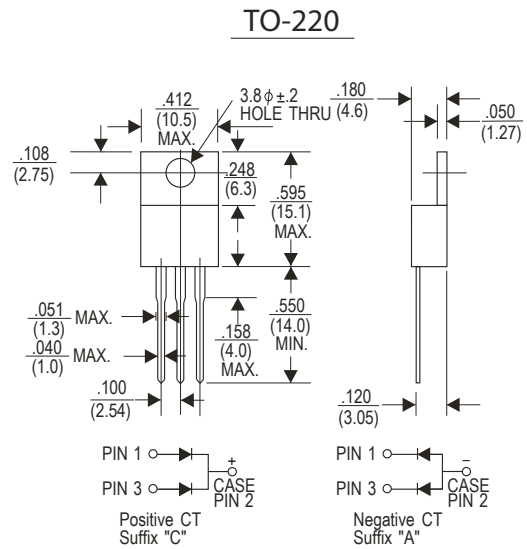
CURRENT 16.0Amperes
VOLTAGE 20 to 100 Volts

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 : 250°C /10 seconds, 0.25" (6.35mm) from case

Mechanical Data

- Case : JEDEC TO-220 molded plastic body
- Terminals : Lead solderable per MIL-STD-750, Method 2026
- Polarity : As marked. No suffix indicates Common Cathode, suffix "A" indicates Common Anode
- Mounting Position : Any
- Weight : 0.08 ounce, 2.24 grams



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 | SBR 1620 | SBR 1630 | SBR 1640 | SBR 1650 | SBR 1660 | SBR 1680 | SBR 16100 | Units |
|--|-------------------|-----------------------|----------|----------|-------------|----------|----------|-----------|-------|
| Maximum repetitive 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 at T _c =95°C | I _(AV) | 16.0 | | | | | | | Amps |
| Repetitive peak forward current(square wavr, 20KHZ) at T _c =105°C | I _{FRM} | 32.0 | | | | | | | 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 8.0A (Note 1) | V _F | 0.65 | | 0.75 | | 0.80 | 0.85 | Volts | |
| Maximum instantaneous reverse current at rated DC blocking voltage (Note1) | I _R | T _A =25°C | 1.0 | | | | | | mA |
| | | T _A =125°C | 30 | | 50 | | | | |
| Typical thermal resistance (Note 2) | R _{θJC} | 3.0 | | | | | | | °C/W |
| Operating junction temperature range | T _J | -65 to +125 | | | -65 to +150 | | | | °C |
| Storage temperature range | T _{STG} | -65 to +150 | | | | | | | °C |

Notes:

- (1) Pulse test: 300μS pulse width, 1% duty cycle
- (2) Thermal resistance from junction to case



RATINGS AND CHARACTERISTIC CURVES SBR1620-SBR16100

FIG.1-FORWARD CURRENT DERATING CURVE

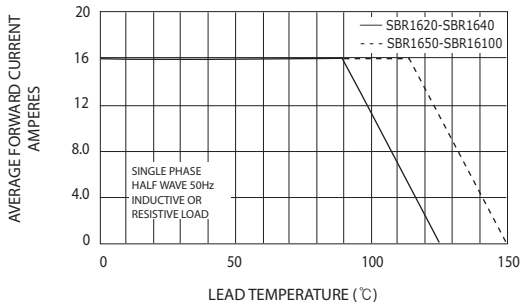


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

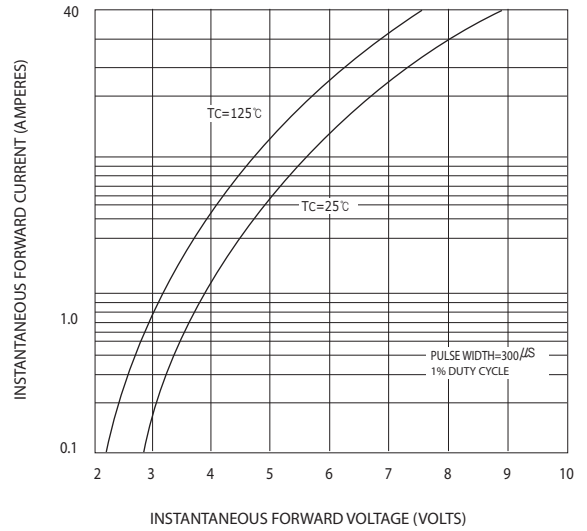


FIG.4-TYPICAL JUNCTION CAPACITANCE

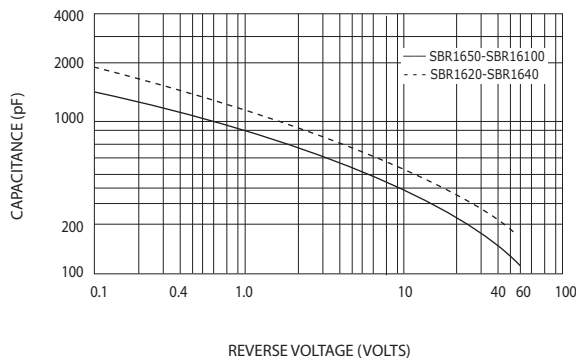


FIG.3-TYPICAL REVERSE CHARACTERISTICS

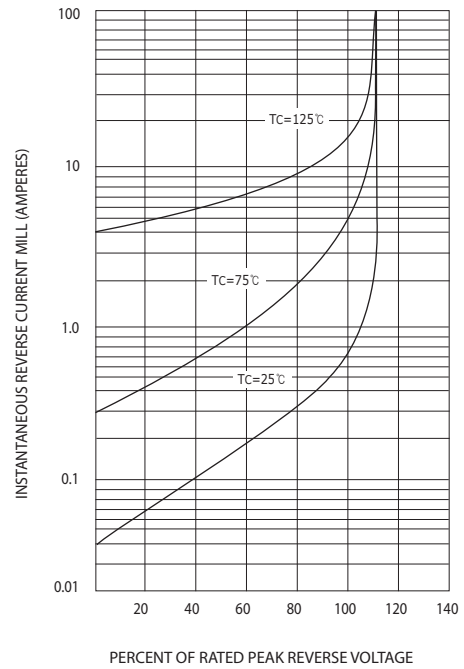


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

