

S315BF

3.0AMPS. SCHOTTKY BARRIER RECTIFIERS

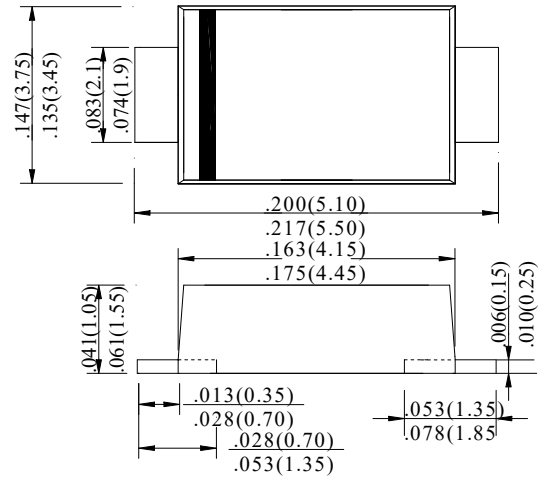
FEATURE

- . For surface mounted application
- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge current capability
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.

MECHANICAL DATA

- . Terminal: Solder plated
- . Case: Molded with UL-94 Class V-0 recognized
Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Packaging: 12mm tape per EIA STD RS-481

SMBF



Dimensions in inches and (millimeters)

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, derate current by 20%

| Type Number | SYM BOL | S315BF | units |
|---|-------------|-------------|-------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 150 | V |
| Maximum RMS Voltage | V_{RMS} | 105 | V |
| Maximum DC blocking Voltage | V_{DC} | 150 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 3.0 | A |
| Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load (JEDEC method) | I_{FSM} | 80.0 | A |
| Maximum Forward Voltage at 3.0A DC | V_F | 0.95 | V |
| Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at rated DC blocking voltage @ $T_J=100^\circ\text{C}$ | I_R | 0.1 | mA |
| | | 10.0 | |
| Typical Junction Capacitance (Note1) | C_J | 80 | pF |
| Typical Thermal Resistance (Note 2) | $R_{(JA)}$ | 60 | °C/W |
| Storage Temperature | T_{STG} | -55 to +150 | °C |
| Operation Junction Temperature | T_J | -55 to +150 | °C |

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Measured on P.C.Board with 0.2×0.2"(5.0×5.0mm)Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

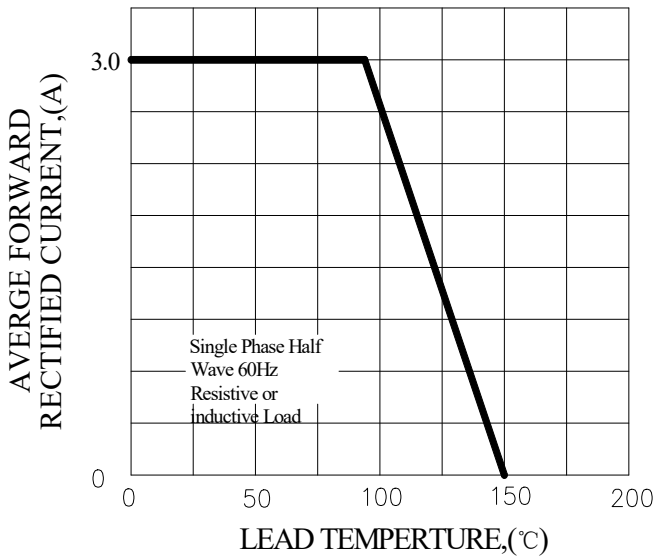


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

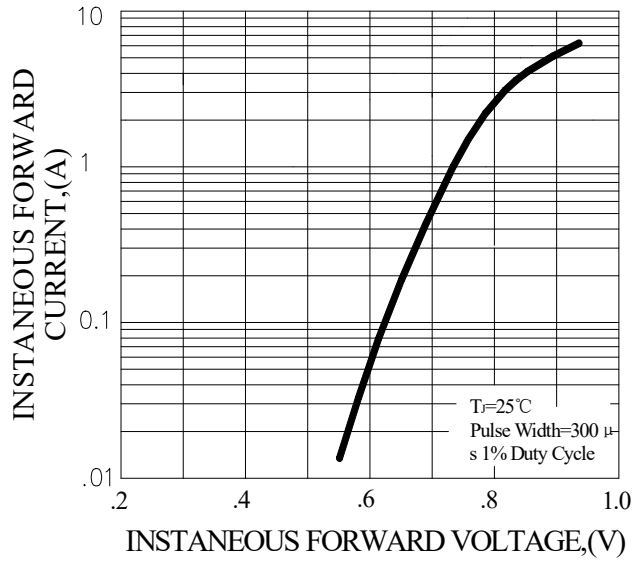


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

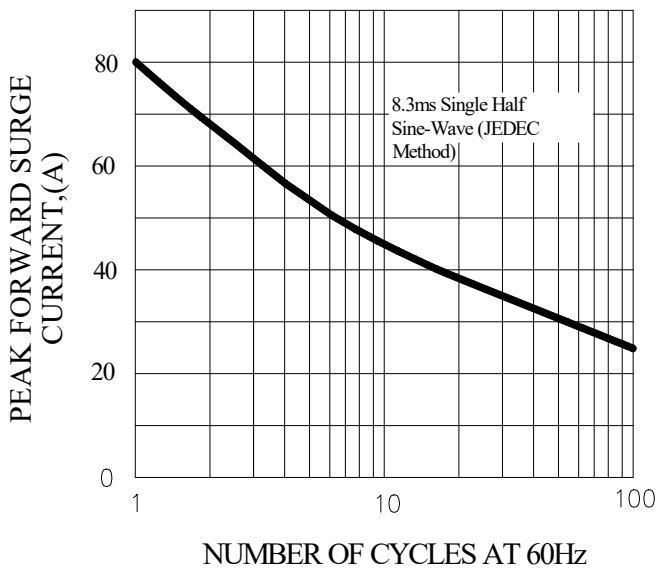
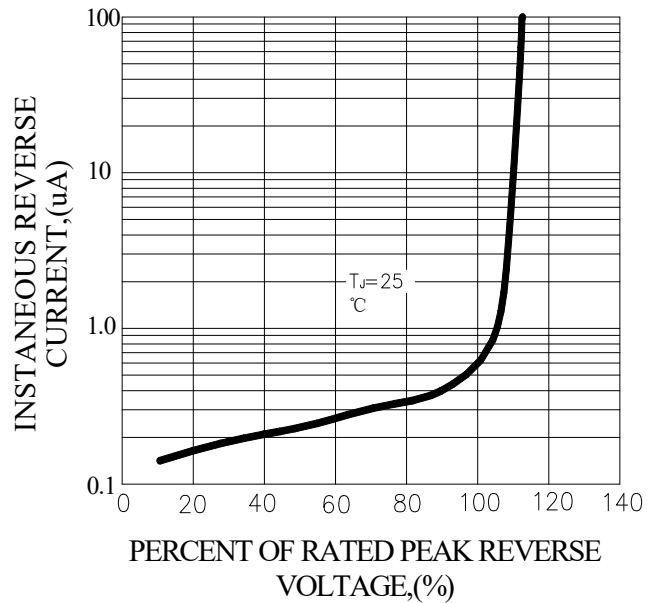
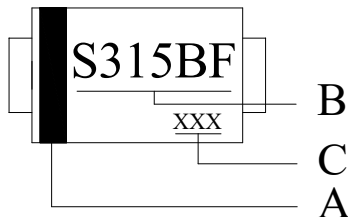


FIG.4-TYPICAL REVERSE CHARACTERISTICS



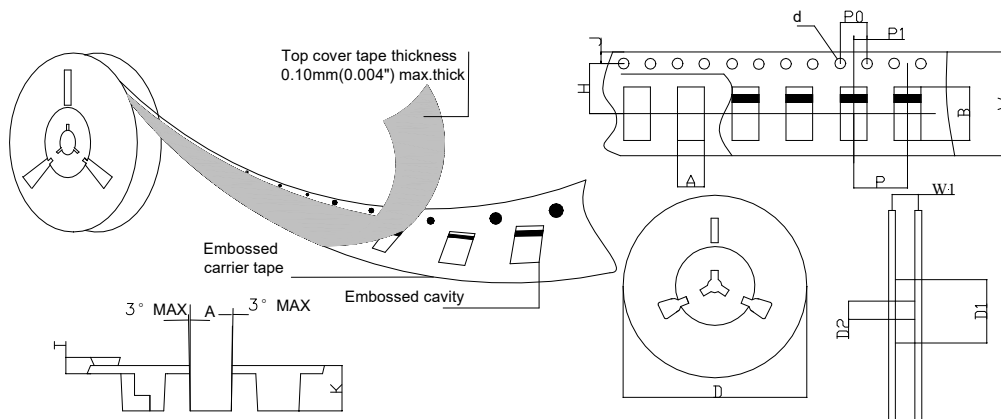
Marking and packaging illustration

1、Marking



| SYMBOL | Explanation |
|--------|----------------------------|
| A | Color Band Denotes Cathode |
| B | Product name |
| C | Date Code |

2、Packaging



| SPECIFICATIONS mm(inch) | | PACKAGE | SPECIFICATIONS mm(inch) | | PACKAGE |
|----------------------------|------------|-----------------|----------------------------|------------|----------------|
| ITEM | SYM BOL | SMBF | ITEM | SYM BOL | SMBF |
| Carrier width | A | 3.81(0.150)Max | Carrier depth | K | 1.6(0.063)Typ |
| Carrier length | B | 5.61(0.221)Max | Punch hole pitch | P | 8.00(0.315)Typ |
| Sprocket hole | d | ø1.55(0.061)Typ | Sprocket hole pitch | P0 | 4.00(0.157)Typ |
| Reel outer diameter | D | 330.0(13.0)Typ | Embossment center | P1 | 2.00(0.079)Typ |
| Reel inner diameter | D1 | 153.0(6.02)Min | Overall tape thickness | T | 0.30(0.012)Typ |
| Feed hole diameter | D2 | 77.0(3.03)Typ | Tape width | W | 12.0(0.472)Typ |
| Sprocket hole position | J | 1.75(0.069)Typ | Reel width | W1 | 12.4(0.488)Min |
| Punch hole position | H | 5.50(0.216)Typ | | | |