

RS2MBF

2.0AMPS. FAST RECOVERY SURFACE MOUNT RECTIFIERS

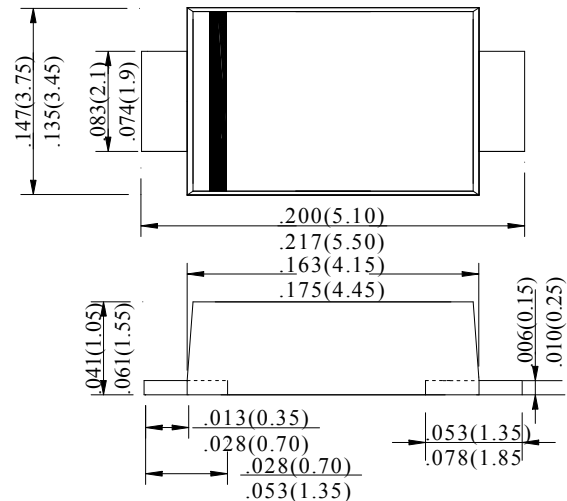
FEATURE

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

MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity:Color band denotes cathode end
- . Packaging: 12mm tape per EIA STD RS-481
- . Mounting position: Any

SMBF



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 | SYMBOL | RS2MBF | units |
|---|-------------|--------------|---------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 700 | V |
| Maximum DC blocking Voltage | V_{DC} | 1000 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 2.0 | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 60.0 | A |
| Maximum Forward Voltage at 2.0A DC | V_F | 1.3 | V |
| Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at rated DC blocking voltage @ $T_J=125^\circ\text{C}$ | I_R | 5.0 100.0 | μA |
| Maximum Reverse Recovery Time (Note 1) | t_{rr} | 500 | nS |
| Typical Junction Capacitance (Note2) | C_j | 13 | pF |
| Typical Thermal Resistance (Note 3) | $R_{(JA)}$ | 60 | $^\circ\text{C}/\text{W}$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^\circ\text{C}$ |
| Operation Junction Temperature | T_J | -55 to +150 | $^\circ\text{C}$ |

Note:

1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $IRR=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Measured on P.C.Board with 0.2×0.2”(5.0×5.0mm)Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES (RS2MBF)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

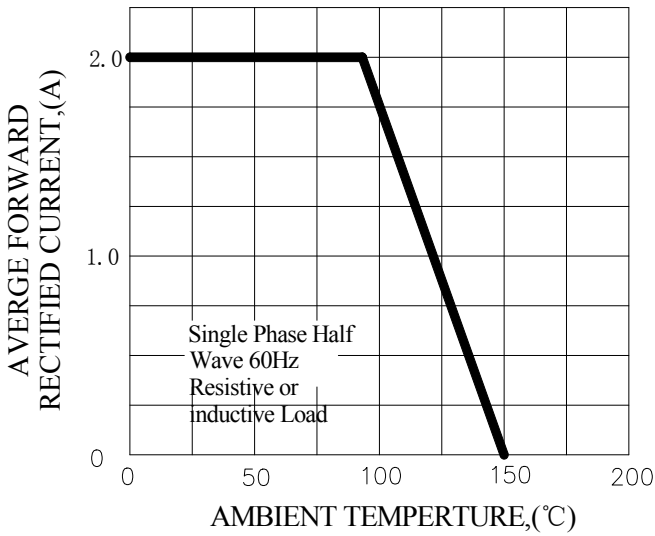


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

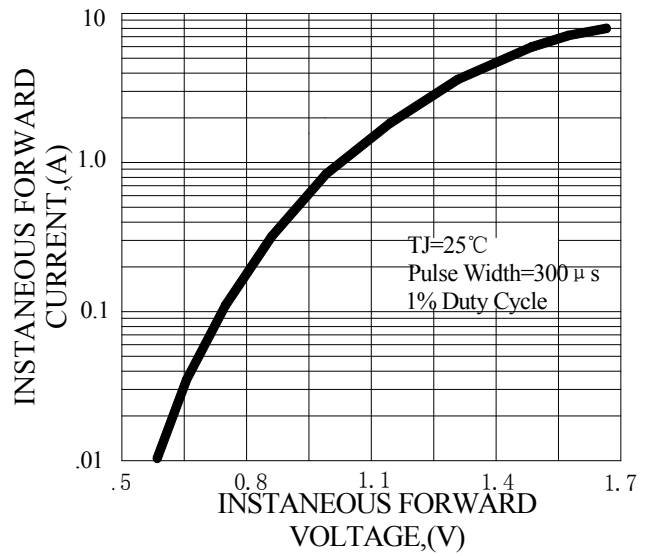


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

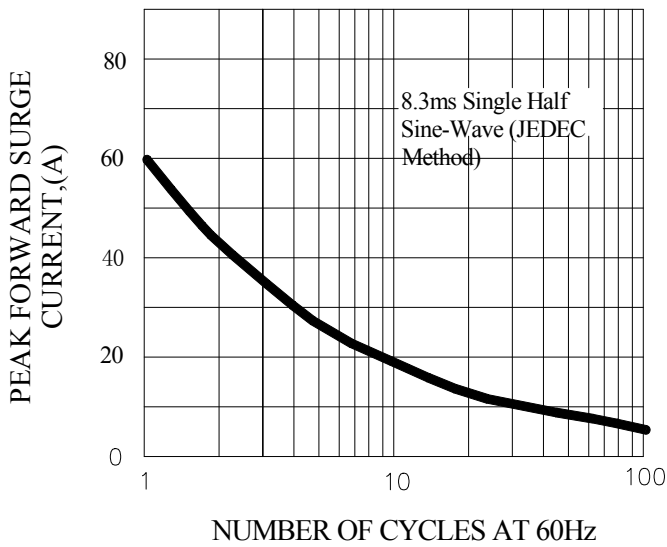


FIG.4-TYPICAL REVERSE CHARACTERISTICS

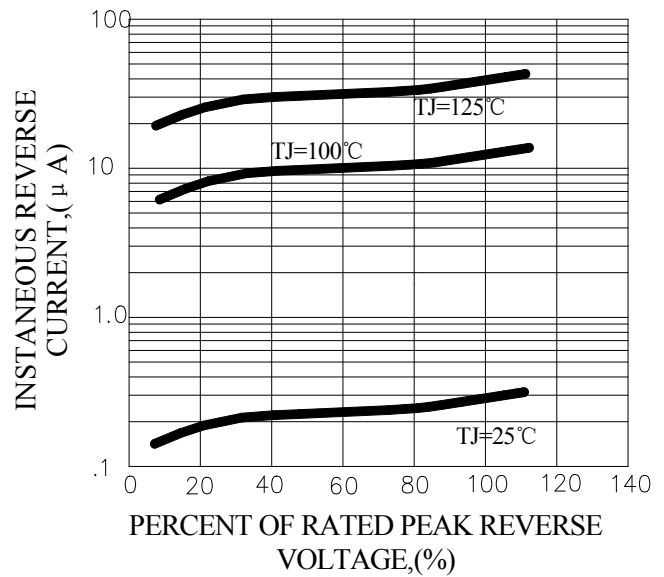
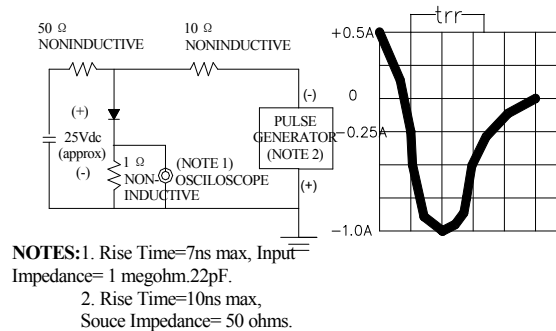
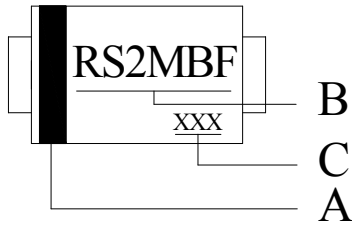


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



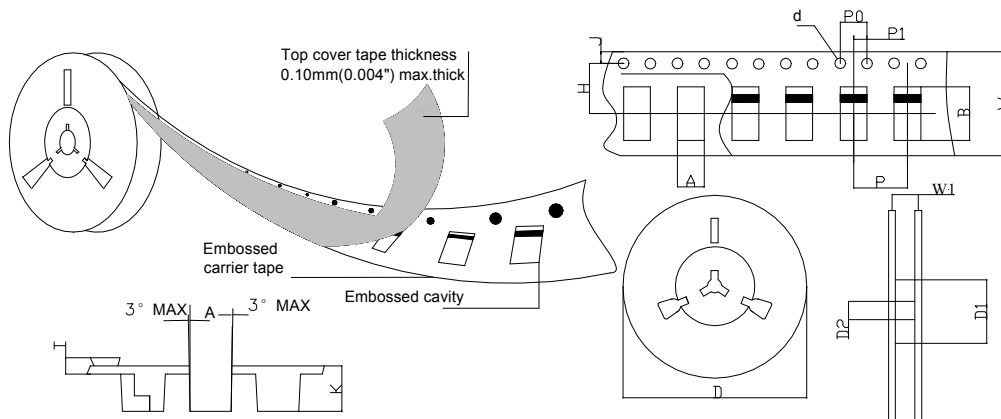
Marking and packaging illustration

1、Marking



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

2、Packaging



| SPECIFICATIONS mm(inch) | | PACKAGE |
|----------------------------|------|-----------------|
| SYMBOL | ITEM | SMBF |
| Carrier width | A | 3.81(0.150)Max |
| Carrier length | B | 5.61(0.221)Max |
| Sprocket hole | d | ø1.55(0.061)Typ |
| Reel outer diameter | D | 435.0(17.13)Typ |
| Reel inner diameter | D1 | 153.0(6.02)Min |
| Feed hole diameter | D2 | 77.0(3.03)Typ |
| Sprocket hole position | J | 1.75(0.069)Typ |
| Punch hole position | H | 5.50(0.216)Typ |
| Carrier depth | K | 1.6(0.063)Typ |
| Punch hole pitch | P | 4.00(0.157)Typ |
| Sprocket hole pitch | P0 | 4.00(0.157)Typ |
| Embossment center | P1 | 2.00(0.079)Typ |
| Overall tape thickness | T | 0.30(0.012)Typ |
| Tape width | W | 12.0(0.472)Typ |
| Reel width | W1 | 91.0(3.582)Min |

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