



UMB05S~UMB10S

SURFACE MOUNT BRIDGE RECTIFIERS

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- Low Leakage Current
- High Forward Surge Capability
- Designed for Surface Mount Application
- Plastic Material - UL Flammability 94V -O

Major Ratings and Characteristics

| | |
|-------------|----------------|
| $I_{F(AV)}$ | 0.6 A |
| V_{RRM} | 50 V to 1000 V |
| I_{FSM} | 25A |
| I_R | 5 μ A |
| V_F | 1.1 V |
| T_j max. | 150 °C |

Mechanical Date

- **Case:** SOF2-4 Molded Plastic
- **Terminals:** Solder plated, Solderable per J-STD-002B and JESD22-B102D
- **Polarity:** As Marked on body
- **Marking:** Type Number
- **Lead Free:** For ROHS/Leadfree Version



SOF2-4S

Maximum Ratings & Thermal Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Items | Symbol | UMB05S | UMB1S | UMB2S | UMB4S | UMB6S | UMB8S | UMB10S | UNIT |
|--|----------------|-------------------|-------|-------|-------|-------|-------|--------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 0.6 ¹⁾ | | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 25 | | | | | | | A |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | °C |

1): Mounted on glass epoxy P.C.B with 1.2×0.8mm² pads.

Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

| Items | Test conditions | Symbol | Min | Type | Max | UNIT |
|-------------------------------|-----------------------------------|--------|-----|------|-----|---------|
| Instantaneous forward voltage | $I_F = 0.6A^{2)}$ | V_F | - | 0.95 | 1.1 | V |
| Reverse current | $T_A = 25\text{ }^\circ\text{C}$ | I_R | - | - | 5 | μ A |
| | $T_A = 125\text{ }^\circ\text{C}$ | | - | - | 100 | |

2): Pulse test: 300 μ S pulse width, 1% duty cycle.



Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

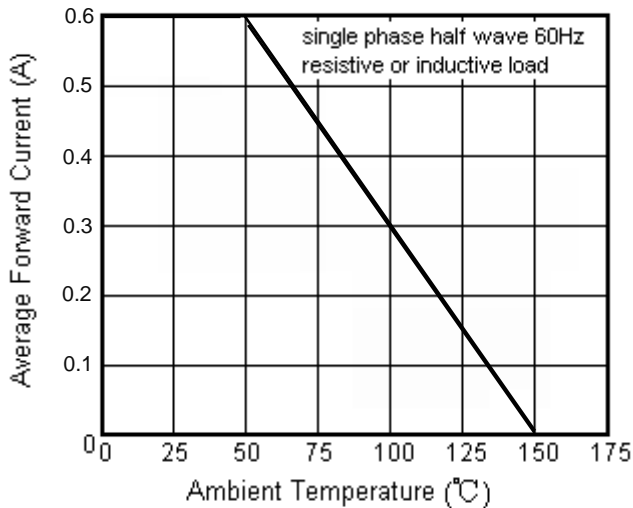


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

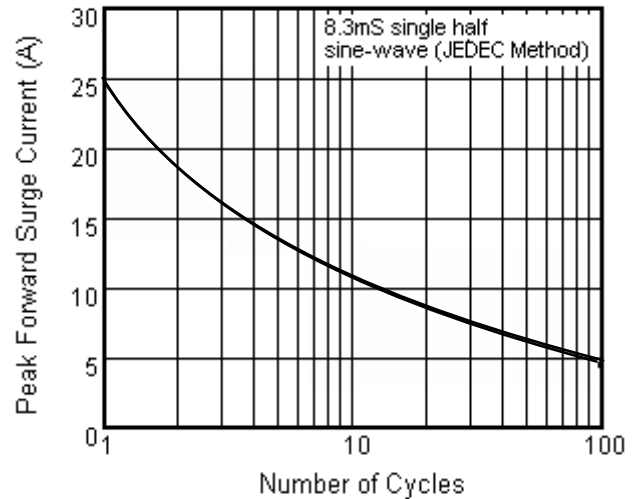


Fig.3 Typical Instantaneous Forward Characteristics

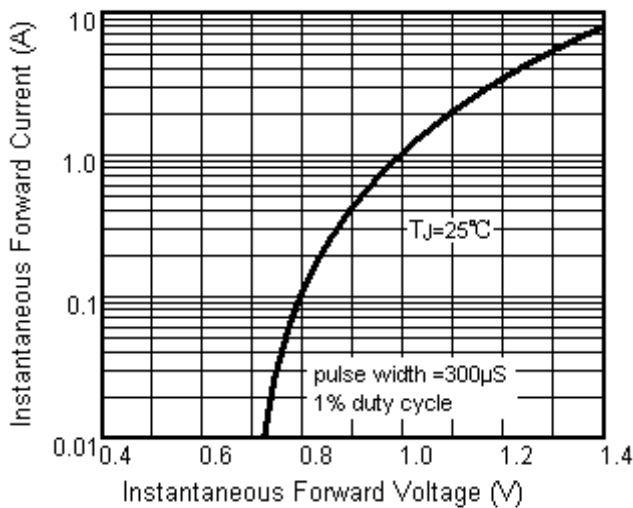
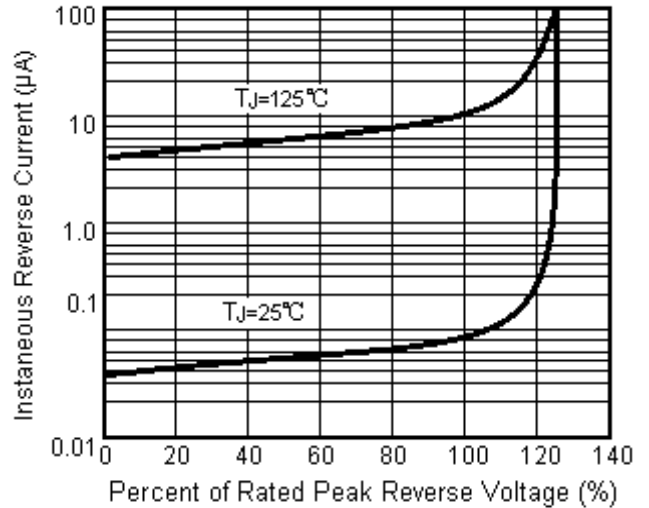


Fig.4 Typical Reverse Characteristics

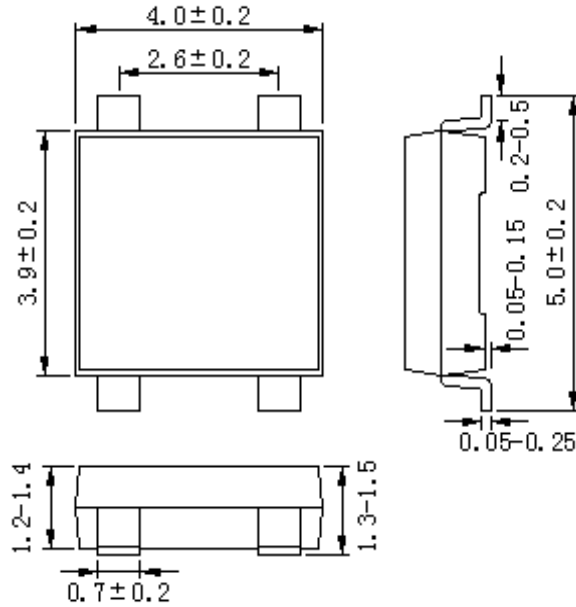




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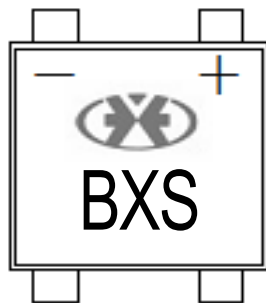
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Package Outline



Marking Code

SOF2-4S



| Type | Code |
|--------|------|
| UMB05S | B1S |
| UMB1S | B2S |
| UMB2S | B3S |
| UMB4S | B4S |
| UMB6S | B5S |
| UMB8S | B6S |
| UMB10S | B7S |

- =Trademark;
- BXS =Marking Code, Product Specification, See the table

Soldering Pad

