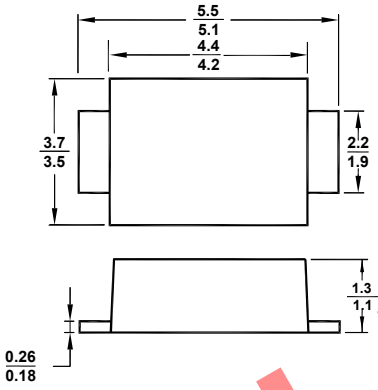
# US2ABF THRU US2MBF

## Surface Mount Fast Recovery Rectifier
**Reverse Voltage - 50 to 1000 V**
**Forward Current - 2 A**

### Features
- Glass Passivated Chip Juntion
- For surface mounted applications
- Low profile package
- Fast reverse recovery time

### Mechanical Data
- **Case:** SMBF
- **Terminals:** Solderable per MIL-STD-750, Method 2026

**SMBF**




All Dimensions in mm

### Absolute Maximum Ratings and Characteristics
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter | Symbols | US2ABF | US2BBF | US2DBF | US2GBF | US2JBF | US2KBF | US2MBF | Units |
|---|---|---|---|---|---|---|---|---|---|
| | Marking | U2AB | U2BB | U2DB | U2GB | U2JB | U2KB | U2MB | - |
| 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 at $T_a$ = 65°C | $I_{F(AV)}$ | 2 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 55 | | | | 50 | | | A |
| Maximum Forward Voltage at 2 A | $V_F$ | 1 | | | 1.3 | 1.6 | | | V |
| Maximum Reverse Current at Rated DC Blocking Voltage $T_a$ = 25°C / $T_a$ = 125°C | $I_R$ | 5<br>100 | | | | | | | µA |
| Typical Junction Capacitance at $V_R$ = 4 V, f = 1 MHz | $C_j$ | 60 | | | | | | | pF |
| Maximum Reverse Recovery Time at $I_F$ = 0.5 A, $I_R$ = 1 A, $I_{rr}$ = 0.25 A | $t_{rr}$ | 50 | | | | 75 | | | ns |
| Typical Thermal Resistance [1] | $R_{\theta JA}$<br>$R_{\theta JL}$ | 60<br>20 | | | | | | | °C/W |
| Operating Junction and Storage Temperature Range | $T_j$, $T_{stg}$ | - 55 to + 150 | | | | | | | °C |

[1] P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm$^2$) copper pad areas.

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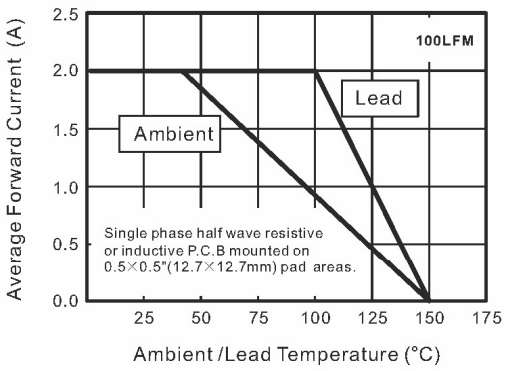
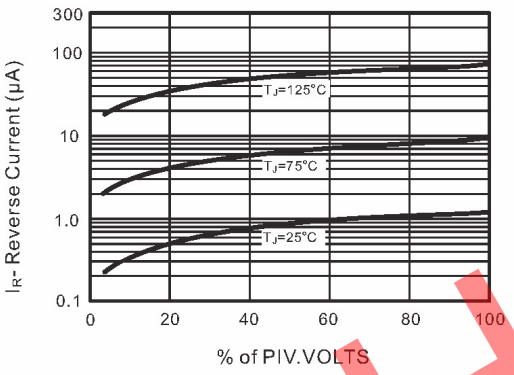
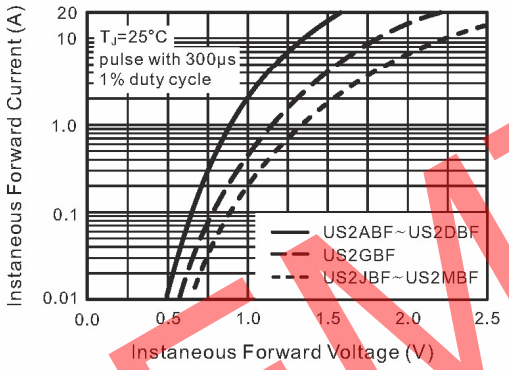
Maximum Average Forward Current Rating




Typical Reverse Characteristics




Typical Instaneous Forward Characteristics




Maximum Non-Repetitive Peak Forward Surage Current