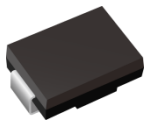
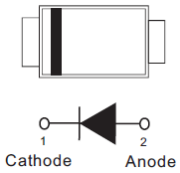
# MURB3JG

## Surface Mount Super Fast Recovery Rectifier

| Voltage | 600 V | Current | 3 A |
|---|---|---|---|

SMB






### Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : SMB Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0032 ounces, 0.092 grams

### Maximum Ratings and Thermal Characteristics ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 600 | V |
| Maximum Rms Voltage | $V_{RMS}$ | 420 | V |
| Maximum Dc Blocking Voltage | $V_{DC}$ | 600 | V |
| Maximum Average Forward Current | $I_{F(AV)}$ | 3 | A |
| Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load | $I_{FSM}$ | 100 | A |
| Typical Junction Capacitance<br>Measured at 1 MHZ And Applied $V_R$ = 4 V | $C_J$ | 28 | pF |
| Typical Thermal Resistance(Note 1) | $R_{\theta JA}$<br>$R_{\theta JC}$ | 135<br>21 | °C/W |
| Operating Junction Temperature Range | $T_J$ | -55~175 | °C |
| Storage Temperature Range | $T_{STG}$ | -55~175 | °C |

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## Electrical Characteristics ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$ = 1 A, $T_J$ = 25 °C | - | 0.92 | - | V |
| | | $I_F$ = 2 A, $T_J$ = 25 °C | - | 1.03 | - | |
| | | $I_F$ = 3 A, $T_J$ = 25 °C | - | - | 1.25 | |
| | | $I_F$ = 1 A, $T_J$ = 125 °C | - | 0.74 | - | |
| | | $I_F$ = 2 A, $T_J$ = 125 °C | - | 0.84 | - | |
| | | $I_F$ = 3 A, $T_J$ = 125 °C | - | 0.92 | - | |
| Reverse Current | $I_R$ | $V_R$ = $V_{RRM}$, $T_J$ = 25 °C | - | - | 5 | uA |
| | | $V_R$ = $V_{RRM}$, $T_J$ = 125 °C | - | 8 | - | |
| Reverse Recovery Time(Note 2) | $T_{RR}$ | --- | - | - | 50 | ns |

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, standard footprint
2. Reverse Recovery Test Conditions: $I_F$=0.5A , $I_R$=1A Irr=0.25A

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## TYPICAL CHARACTERISTIC CURVES

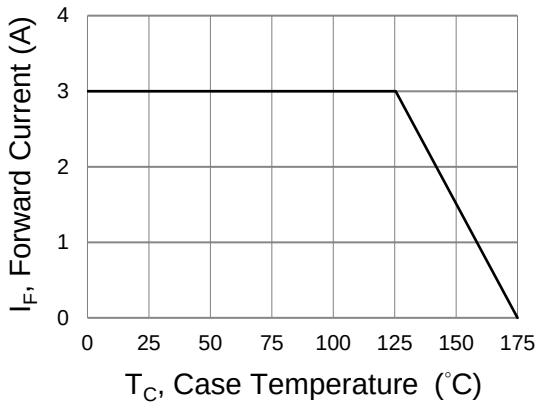


Fig.1 Forward Current Derating Curve

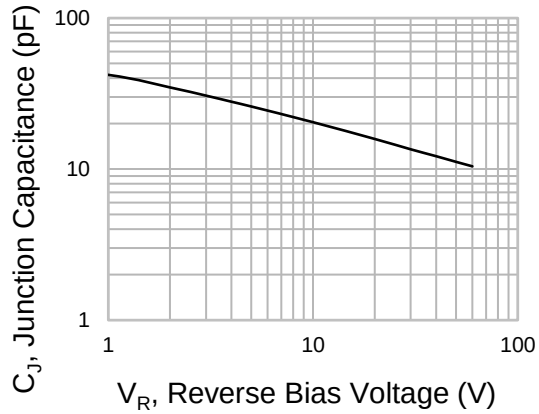


Fig.2 Typical Junction Capacitance

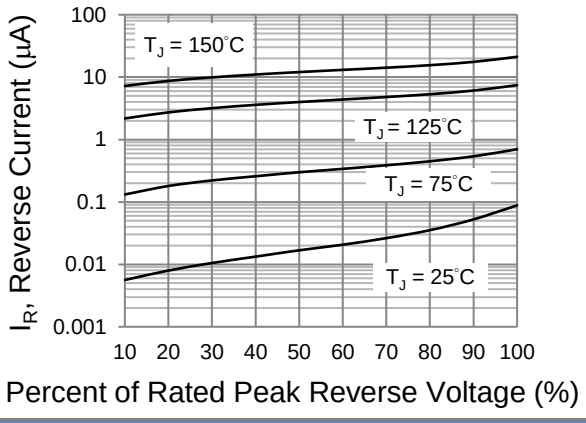


Fig.3 Typical Reverse Characteristics

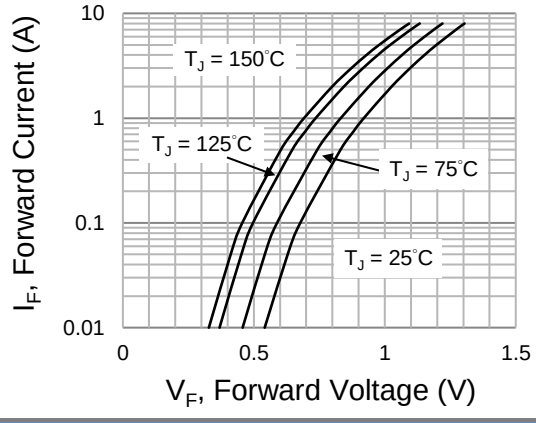


Fig.4 Typical Forward Characteristics

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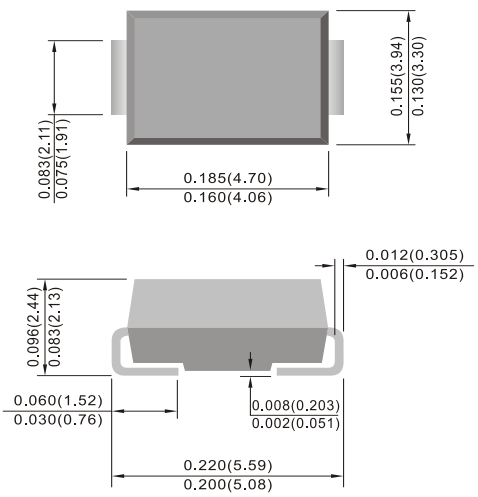
## Product and Packing Information

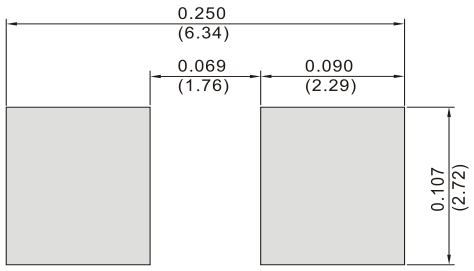
| Part No. | Package Type | Packing Type | Marking |
|---|---|---|---|
| MURB3JG | SMB | 0.8K pcs / 7” reel | MUB3JG |

## Packaging Information & Mounting Pad Layout

SMB Dimension — Unit: inch(mm)




SMB Pad Layout — Unit: inch(mm)



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