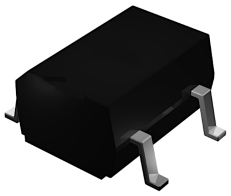
GOOD-ARK SEMICONDUCTOR

# GMS32 thru GMS320

Surface Mount Schottky Bridge Rectifiers
Reverse Voltage 20V to 200V  Forward Current 3A

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



**MBS**

## Mechanical Data

- Case: MBS molded plastic body
- Epoxy: UL94V-0 rate flame retardant
- Terminals: Plated leads solderable per MIL-STD-750, method 2026
- Mounting position: Any

## Absolute Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.)

| Parameter | | Symbol | GMS 32 | GMS 34 | GMS 36 | GMS 38 | GMS 310 | GMS 315 | GMS 320 | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | | $V_{RRM}$ | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 14 | 28 | 42 | 57 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum Average Forward Rectified Current (See Fig. 1) | | $I_{(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | | $I_{FSM}$ | 70 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 3.0A[1] | | $V_F$ | 0.55 | | 0.7 | 0.85 | | 0.95 | | V |
| Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage[1] | $T_A$=25°C | $I_R$ | 0.5 | | | 0.2 | | | | mA |
| | $T_A$=125°C | | 50 | | | 20 | | | | |
| Typical Thermal Resistance[2] | | $R_{\theta JA}$ | 75 | | | | | | | °C/W |
| | | $R_{\theta JC}$ | 30 | | | | | | | °C/W |
| Operating Junction Temperature Range | | $T_J$ | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | | $T_{STG}$ | -55 to +150 | | | | | | | °C |

Notes:

1. Pulse test: 300μs pulse width, 1% duty cycle.
2. P.C.B. mounted with 0.2 X 0.2" (5.0 X 5.0mm) copper pad areas.

## Ratings and Characteristics Curves

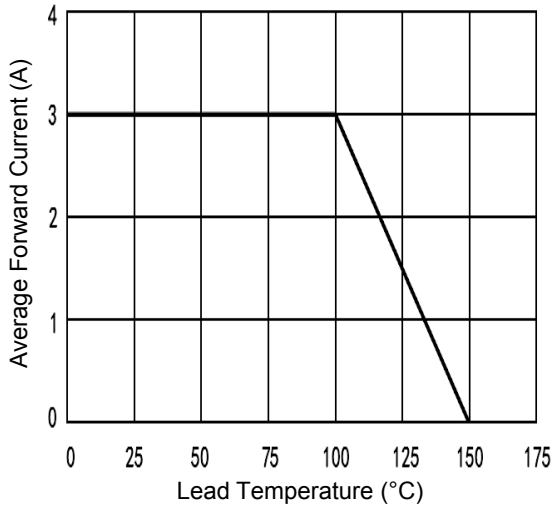



**Figure 1. Forward Current Derating Curve**

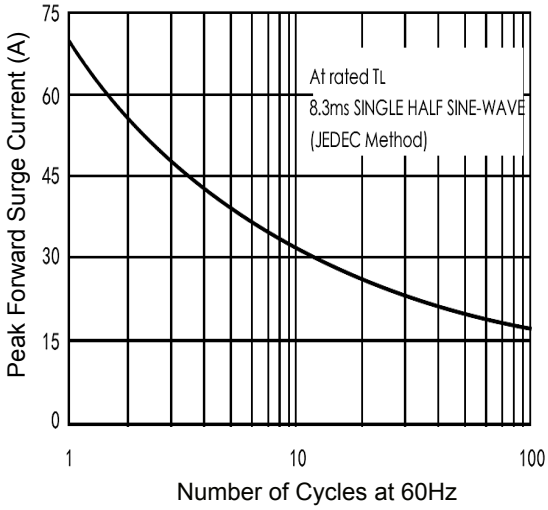



**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**

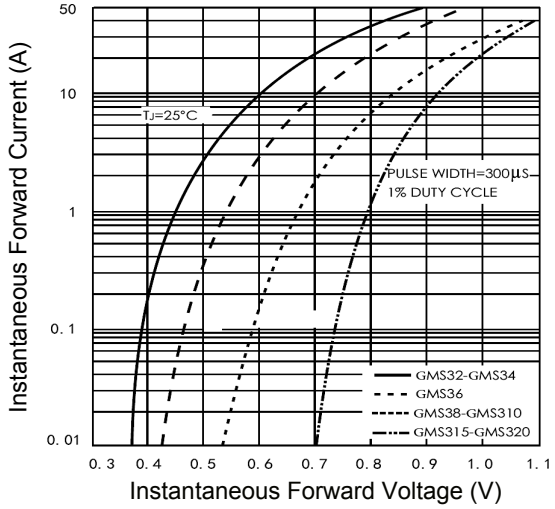



**Figure 3. Typical Instantaneous Forward Characteristics**

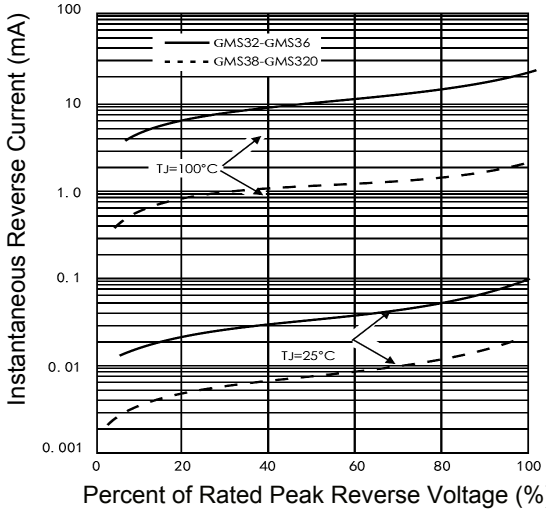



**Figure 4. Typical Reverse Characteristics**

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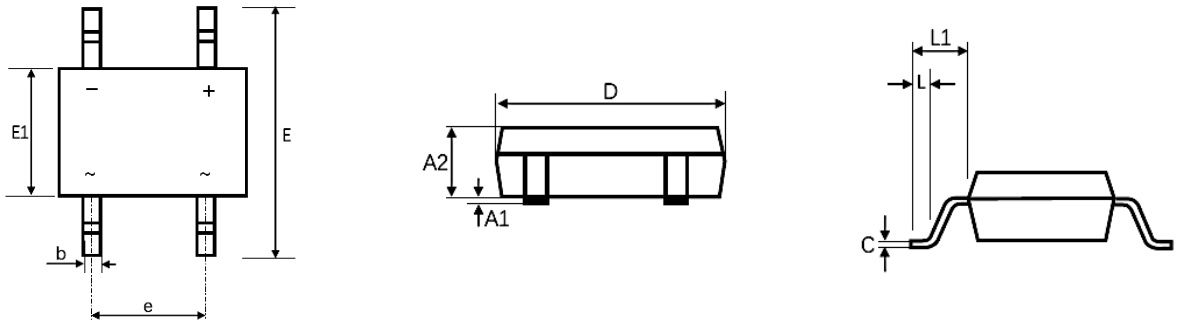
## Package Outline Dimensions (MBS)




| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| A1 | 0.05 | 0.20 | 0.002 | 0.008 |
| A2 | 2.30 | 2.70 | 0.090 | 0.106 |
| b | 0.50 | 0.80 | 0.019 | 0.031 |
| C | 0.15 | 0.35 | 0.006 | 0.014 |
| D | 4.50 | 4.90 | 0.177 | 0.193 |
| E | 6.40 | 7.00 | 0.252 | 0.276 |
| E1 | 3.60 | 4.10 | 0.142 | 0.161 |
| e | 2.30 | 2.70 | 0.090 | 0.106 |
| L | 0.70 | 1.10 | 0.028 | 0.043 |
| L1 | 1.30 | 1.70 | 0.051 | 0.067 |

## Order Information

| Device | Package | Marking | Carrier | Quantity |
|---|---|---|---|---|
| GMS32 | MBS | MS32 | Tape & Reel | 3,000 Pcs / Reel |
| GMS34 | MBS | MS34 | Tape & Reel | 3,000 Pcs / Reel |
| GMS36 | MBS | MS36 | Tape & Reel | 3,000 Pcs / Reel |
| GMS38 | MBS | MS38 | Tape & Reel | 3,000 Pcs / Reel |
| GMS310 | MBS | MS310 | Tape & Reel | 3,000 Pcs / Reel |
| GMS315 | MBS | MS315 | Tape & Reel | 3,000 Pcs / Reel |
| GMS320 | MBS | MS320 | Tape & Reel | 3,000 Pcs / Reel |