

**$V_{RM} = 800\text{ V}$ ,  $I_{F(AV)} = 1.2\text{ A}$**   
**General-purpose Rectifier Diode**  
**EM2B**

### Description

The EM2B is an 800 V, 1.2 A general-purpose rectifier diode with low loss characteristics. This rectifier diode is for a commercial power supply.

### Features

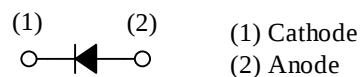
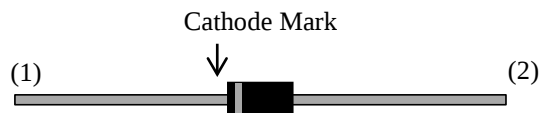
- $V_{RM}$ ----- 800 V
- $I_{F(AV)}$ ----- 1.2 A
- $V_F$  ( $I_F = 1.2\text{ A}$ )----- 0.88 V typ.
- Bare Leads: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0

### Applications

- Rectification Circuit
- Reverse Protection Circuit

### Package

Axial ( $\phi 2.7 \times 5.0\text{L} / \phi 0.78$ )



Not to scale

## Absolute Maximum Ratings

Unless otherwise specified,  $T_A = 25\text{ }^{\circ}\text{C}$ .

| Parameter                          | Symbol      | Conditions                                            | Rating     | Unit                 |
|------------------------------------|-------------|-------------------------------------------------------|------------|----------------------|
| Nonrepetitive Peak Reverse Voltage | $V_{RSM}$   |                                                       | 850        | V                    |
| Repetitive Peak Reverse Voltage    | $V_{RM}$    |                                                       | 800        | V                    |
| Average Forward Current            | $I_{F(AV)}$ | See Figure 2 and Figure 3                             | 1.2        | A                    |
| Surge Forward Current              | $I_{FSM}$   | Half cycle sine wave,<br>positive side, 10 ms, 1 shot | 80         | A                    |
| $I^2t$ Limiting Value              | $I^2t$      | $1\text{ ms} \leq t \leq 10\text{ ms}$                | 32         | $\text{A}^2\text{s}$ |
| Junction Temperature               | $T_J$       |                                                       | -40 to 150 | $^{\circ}\text{C}$   |
| Storage Temperature                | $T_{STG}$   |                                                       | -40 to 150 | $^{\circ}\text{C}$   |

## Electrical Characteristics

Unless otherwise specified,  $T_A = 25\text{ }^{\circ}\text{C}$ .

| Parameter                                      | Symbol        | Conditions                                           | Min. | Typ. | Max. | Unit                 |
|------------------------------------------------|---------------|------------------------------------------------------|------|------|------|----------------------|
| Forward Voltage Drop                           | $V_F$         | $I_F = 1.2\text{ A}$                                 | —    | 0.88 | 0.92 | V                    |
| Reverse Leakage Current                        | $I_R$         | $V_R = V_{RM}$                                       | —    | —    | 10   | $\mu\text{A}$        |
| Reverse Leakage Current under High Temperature | $H \cdot I_R$ | $V_R = V_{RM}$ , $T_J = 150\text{ }^{\circ}\text{C}$ | —    | —    | 500  | $\mu\text{A}$        |
| Thermal Resistance <sup>(1)</sup>              | $R_{th(J-L)}$ | See Figure 1                                         | —    | —    | 17   | $^{\circ}\text{C/W}$ |

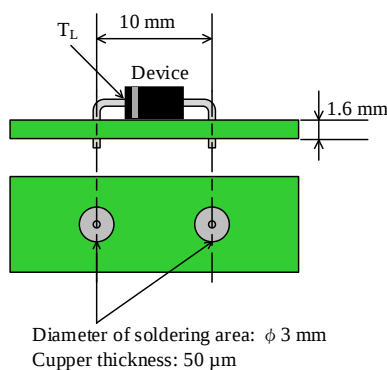


Figure 1. Lead Temperature Measurement Conditions

<sup>(1)</sup>  $R_{th(J-L)}$  is thermal resistance between junction and lead.

## Rating and Characteristic Curves

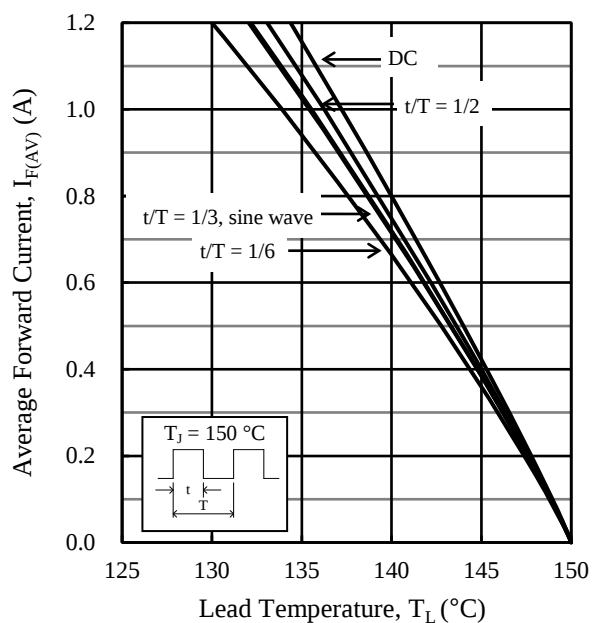


Figure 2. Typical Characteristics:  $I_{F(AV)}$  vs.  $T_L$   
( $V_R = 0$  V)

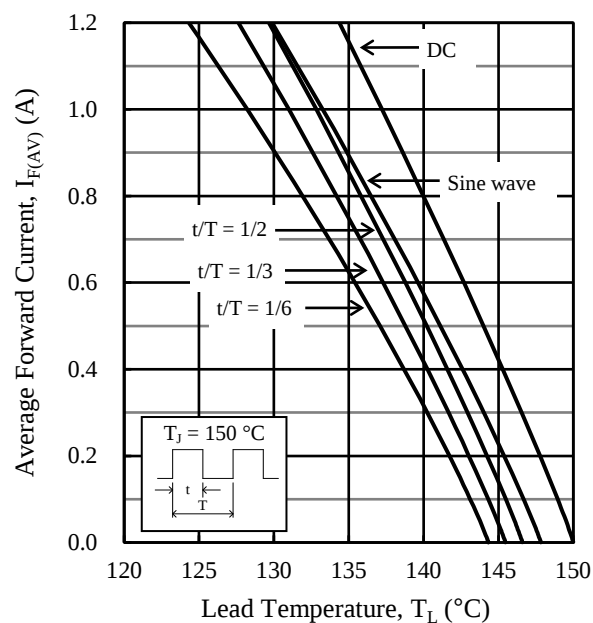


Figure 3. Typical Characteristics:  $I_{F(AV)}$  vs.  $T_L$   
( $V_R = 800$  V)

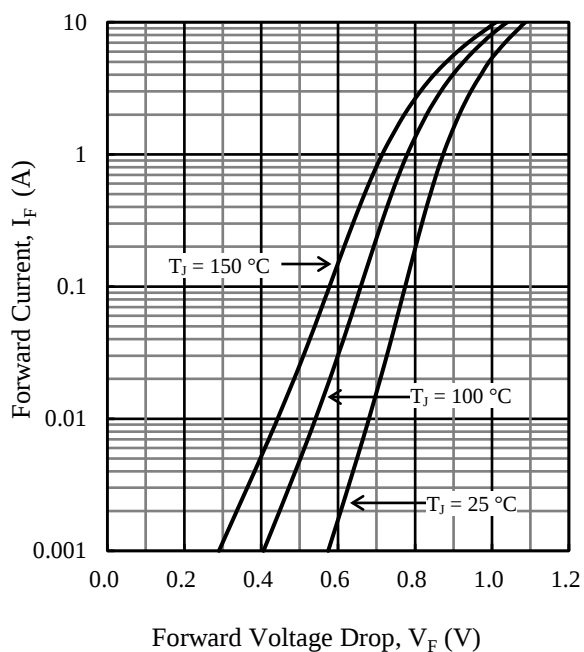


Figure 4. Typical Characteristics:  $I_F$  vs.  $V_F$

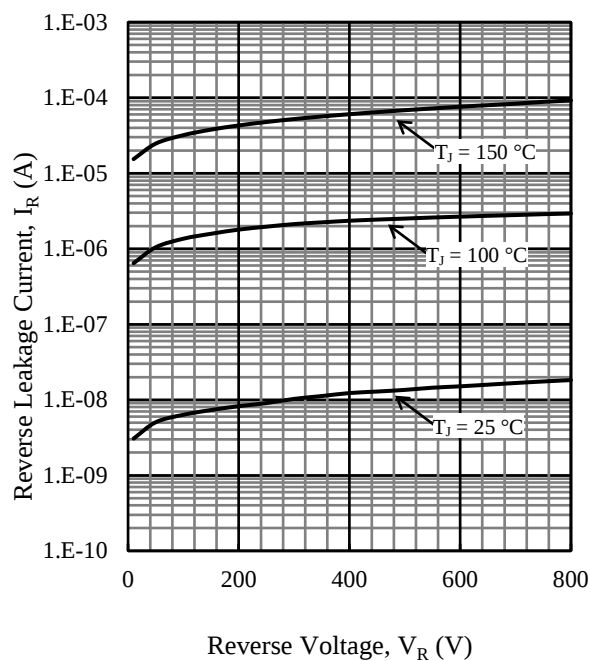
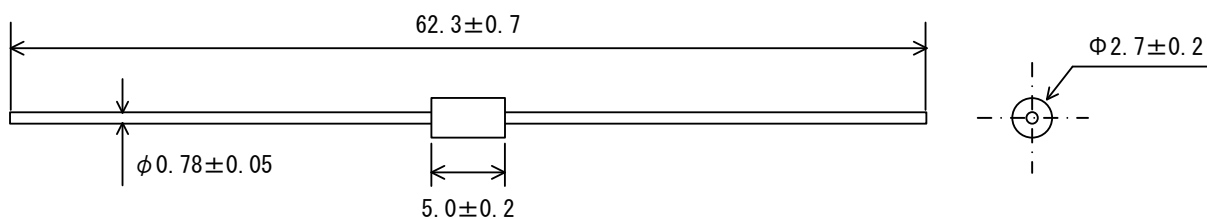


Figure 5. Typical Characteristics:  $I_R$  vs.  $V_R$

## Physical Dimensions

### • Axial ( $\phi 2.7 \times 5.0L / \phi 0.78$ )



### NOTES:

- Dimensions in millimeters
- Bare leads: Pb-free (RoHS compliant)
- When soldering the products, it is required to minimize the working time within the following limits:  
 Flow:  $260 \pm 5$  °C /  $10 \pm 1$  s, 2 times  
 Soldering Iron:  $380 \pm 10$  °C /  $3.5 \pm 0.5$  s, 1 time (Soldering should be at a distance of at least 1.5 mm from the body of the product.)

## Marking Diagram

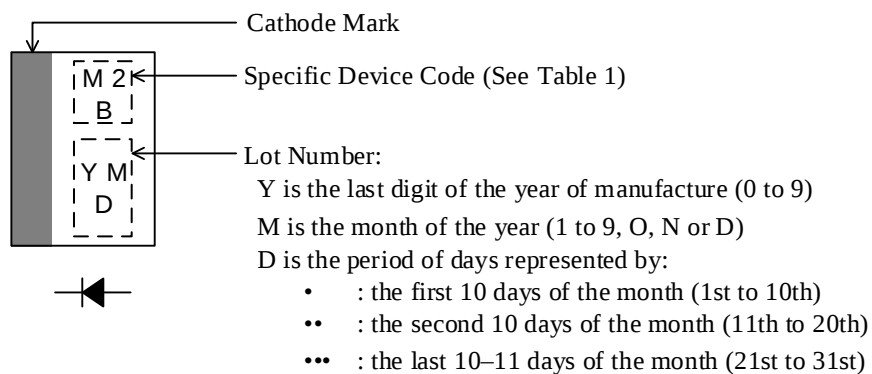


Table 1. Specific Device Code

| Specific Device Code | Part Number |
|----------------------|-------------|
| M2B                  | EM2B        |

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