



#### HIGH VOLTAGE SURFACE MOUNT SWITCHING DIODE ARRAY

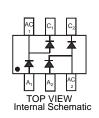
#### **Features**

- Two Series Diode Circuits Connect to Form Full Wave Bridge
- Fast Switching Speed
- **High Conductance**
- High Reverse Breakdown Voltage Rating
- Lead Free/RoHS Compliant Version (Note 3)
- "Green" Device (Notes 4 and 5)

#### **Mechanical Data**

- Case: SOT-26
- Case Material: Molded Plastic, "Green" Molding Compound, Note 5. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Copper leadframe).
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.016 grams (approximate)

TOP VIEW



## **Maximum Ratings** $@T_A = 25^{\circ}C$ unless otherwise specified

| Characteristic                                      |                           | Symbol                 | Value      | Unit |
|---|---------------------------|------------------------|------------|------|
| Repetitive Peak Reverse Voltage                     |                           | V <sub>RRM</sub>       | 350        | V    |
| Working Peak Reverse Voltage<br>DC Blocking Voltage |                           | V <sub>RWM</sub><br>VR | 300        | V    |
| RMS Reverse Voltage                                 |                           | V <sub>R(RMS)</sub>    | 212        | V    |
| Forward Continuous Current (Note 1)                 |                           | IF                     | 225        | mA   |
| Peak Repetitive Forward Current (Note 1)            |                           | I <sub>FRM</sub>       | 625        | mA   |
| Non-Repetitive Peak Forward Surge Current           | @ t = 1.0μs<br>@ t = 1.0s | I <sub>FSM</sub>       | 4.0<br>1.0 | А    |

SOT-26

# **Thermal Characteristics**

| Characteristic                                      | Symbol          | Value       | Unit |
|---|-----------------|-------------|------|
| Power Dissipation (Note 1)                          | PD              | 350         | mW   |
| Thermal Resistance Junction to Ambient Air (Note 1) | $R_{\theta JA}$ | 357         | °C/W |
| Operating and Storage Temperature Range             | $T_J, T_{STG}$  | -65 to +150 | °C   |

## Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic                     | Symbol             | Min | Тур  | Max  | Unit | Test Condition  |
|------------------------------------|--------------------|-----|------|------|------|---|
| Reverse Breakdown Voltage (Note 2) | V <sub>(BR)R</sub> | 350 | _    | _    | V    | I <sub>R</sub> = 150μA  |
|                                    |                    |     | 0.78 | 0.87 |      | $I_F = 20 \text{mA}$  |
| Forward Voltage                    | VF                 | —   | 0.93 | 1.0  | V    | I <sub>F</sub> = 100mA  |
|                                    |                    |     | 1.03 | 1.25 |      | I <sub>F</sub> = 200mA  |
| Reverse Current (Note 2)           | 1-                 | _   | 30   | 100  | nA   | V <sub>R</sub> = 240V   |
| Reverse Guilent (Note 2)           | IR                 |     | 35   | 100  | μΑ   | V <sub>R</sub> = 240V, T <sub>J</sub> = 150°C                             |
| Total Capacitance                  | CT                 | _   | 1.0  | 5.0  | рF   | $V_{R} = 0V, f = 1.0MHz$  |
| Reverse Recovery Time              | t <sub>rr</sub>    | _   | _    | 50   | ns   | $I_F = I_R = 30 \text{mA},$<br>$I_{rr} = 3.0 \text{mA}, R_L = 100 \Omega$ |

Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. 1.

Short duration pulse test used to minimize self-heating effect. 2

No purposefully added lead. 3.

4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead\_free/index.php.

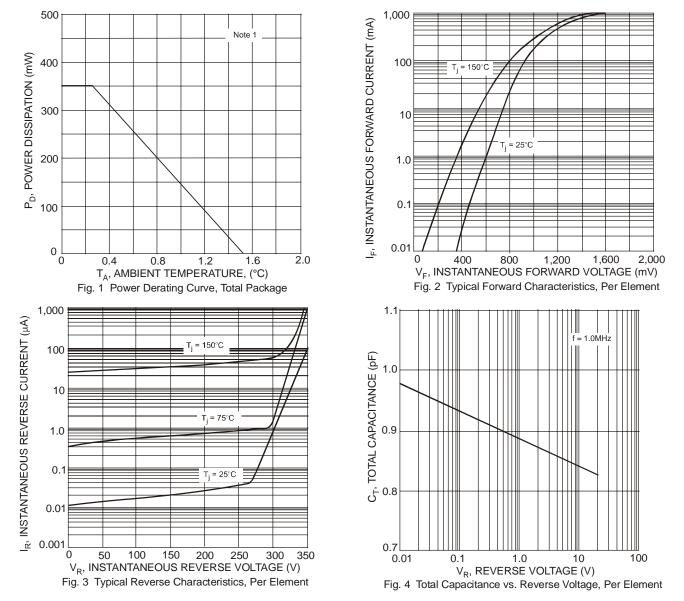
5.

Product manufactured with Date Code 0627 (week 27, 2006) and newer are built with Green Molding Compound. Product manufactured prior to Date Code 0627 are built with Non-Green Molding Compound and may contain Halogens or Sb2O3 Fire Retardants.

Notes:



# MMBD3004BRM

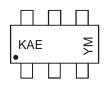


### Ordering Information (Notes 5 & 6)

| Part Number   | Case   | Packaging        |
|---------------|--------|------------------|
| MMBD3004BRM-7 | SOT-26 | 3000/Tape & Reel |

Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

### **Marking Information**



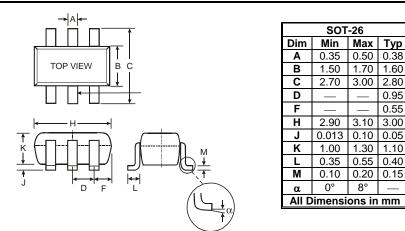
KAE = Product Type Marking Code YM = Date Code Marking Y =Year ex: T = 2006 M = Month ex: 9 = September

#### Date Code Key

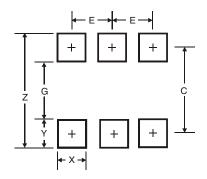
| Year  | 200 | 6   | 2007 |     | 2008 | 20  | 09  | 2010 |     | 2011 | 2   | 2012 |
|-------|-----|-----|------|-----|------|-----|-----|------|-----|------|-----|------|
| Code  | Т   |     | U    |     | V    | V   | V   | Х    |     | Y    |     | Z    |
| Month | Jan | Feb | Mar  | Apr | Мау  | Jun | Jul | Aug  | Sep | Oct  | Nov | Dec  |
| Code  | 1   | 2   | 3    | 4   | 5    | 6   | 7   | 8    | 9   | 0    | N   | D    |



## **Package Outline Dimensions**



# Suggested Pad Layout



| Dimensions | Value (in mm) |
|------------|---------------|
| Z          | 3.20          |
| G          | 1.60          |
| Х          | 0.55          |
| Y          | 0.80          |
| С          | 2.40          |
| E          | 0.95          |

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