

## Features

- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Low Diode Capacitance
- Low Diode Forward Resistance

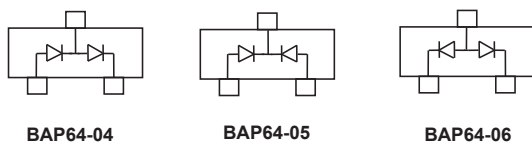
## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 500°C/W Junction to Ambient

| Parameter                                    | Symbol | Limits | Unit |
|--|--------|--------|------|
| Continuous Reverse Voltage                   | $V_R$  | 175    | V    |
| Forward Current                              | $I_F$  | 100    | mA   |
| Power Dissipation ( $T_A=90^\circ\text{C}$ ) | $P_D$  | 250    | mW   |

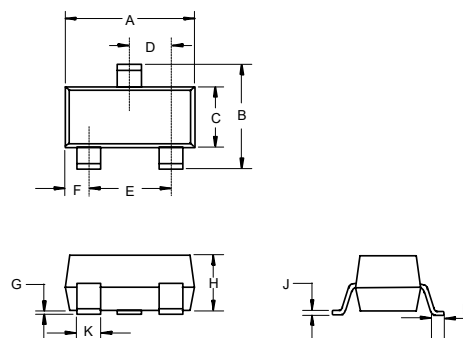
| MCC Part Number | Device Marking |
|-----------------|----------------|
| BAP64-04        | 4K             |
| BAP64-05        | 5K             |
| BAP64-06        | 6K             |

Pin Configuration



# General Purpose Pin Diodes 250mW

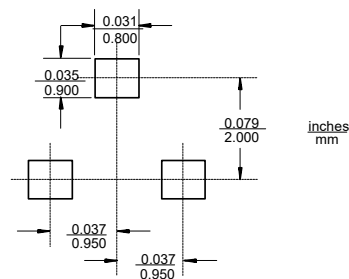
## SOT-23



DIMENSIONS

| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.110  | 0.120 | 2.80 | 3.04 |      |
| B   | 0.083  | 0.104 | 2.10 | 2.64 |      |
| C   | 0.047  | 0.055 | 1.20 | 1.40 |      |
| D   | 0.034  | 0.041 | 0.85 | 1.05 |      |
| E   | 0.067  | 0.083 | 1.70 | 2.10 |      |
| F   | 0.018  | 0.024 | 0.45 | 0.60 |      |
| G   | 0.0004 | 0.006 | 0.01 | 0.15 |      |
| H   | 0.035  | 0.043 | 0.90 | 1.10 |      |
| J   | 0.003  | 0.007 | 0.08 | 0.18 |      |
| K   | 0.012  | 0.020 | 0.30 | 0.51 |      |
| L   | 0.007  | 0.020 | 0.20 | 0.50 |      |

## Suggested Solder Pad Layout



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

| Parameter                       | Symbol   | Min. | Typ          | Max.                      | Conditions  |
|---------------------------------|----------|------|--------------|---------------------------|---|
| Reverse Voltage Leakage Current | $I_R$    |      |              | 10 $\mu$ A<br>1.0 $\mu$ A | $V_R=175V$<br>$V_R=20V$   |
| Forward Voltage                 | $V_F$    |      |              | 1.1V                      | $I_F=50mA$  |
| Diode Capacitance               | $C_{d1}$ |      | 0.52pF       |                           | $V_R=0V, f=1MHz$  |
|                                 | $C_{d2}$ |      | 0.37pF       | 0.5pF                     | $V_R=1V, f=1MHz$  |
|                                 | $C_{d3}$ |      | 0.23pF       | 0.35pF                    | $V_R=20V, f=1MHz$   |
| Diode Forward Resistance        | $R_{D1}$ |      | 20 $\Omega$  | 40 $\Omega$               | $I_F=0.5mA, f=100MHz$   |
|                                 | $R_{D2}$ |      | 10 $\Omega$  | 20 $\Omega$               | $I_F=1.0mA, f=100MHz$   |
|                                 | $R_{D3}$ |      | 2.0 $\Omega$ | 3.8 $\Omega$              | $I_F=10mA, f=100MHz$  |
|                                 | $R_{D4}$ |      | 0.7 $\Omega$ | 1.35 $\Omega$             | $I_F=100mA, f=100MHz$   |
| Charge carrier life time        | $T_L$    |      | 1.55 $\mu$ S |                           | When switched from $I_F=10mA$ to $I_R=6mA$ ;<br>$R_L=100\Omega$ ; measured at $I_R=3mA$ |
| Series inductance               | $L_S$    |      | 1.4nH        |                           | $I_F=100mA, f=100MHz$   |

## Curve Characteristics

Fig. 1 - Forward Characteristics

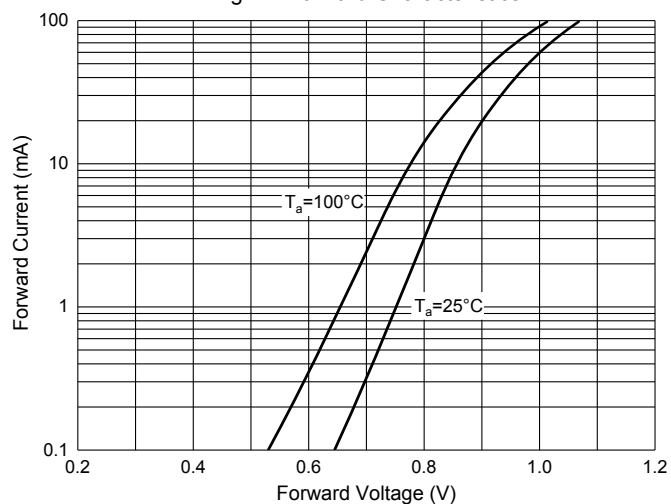


Fig. 2 - Reverse Characteristics

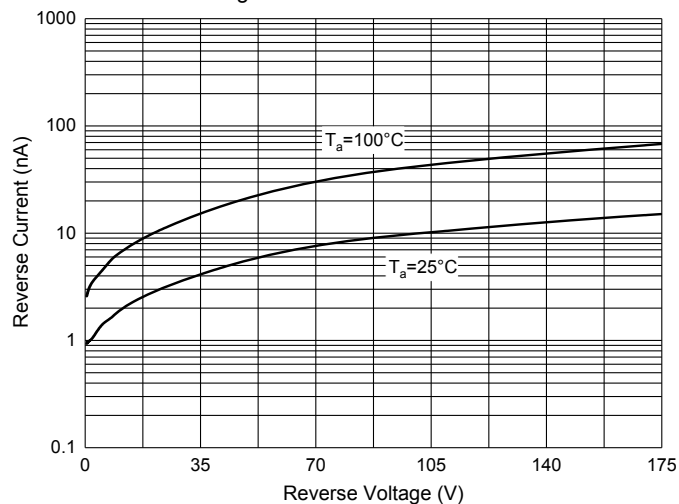


Fig. 3 - Capacitance Characteristics

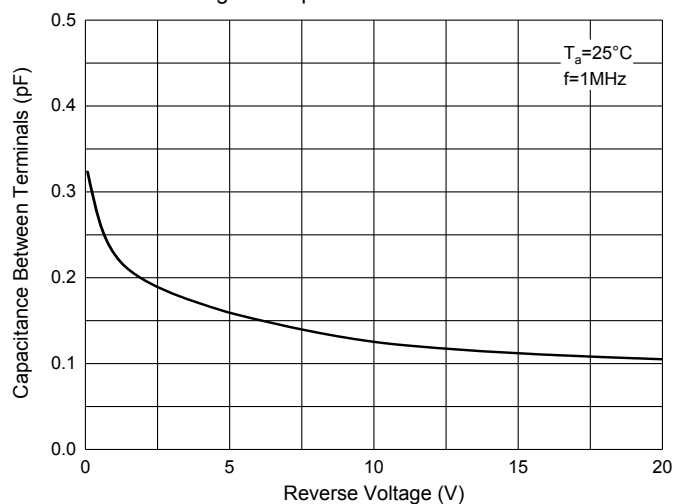
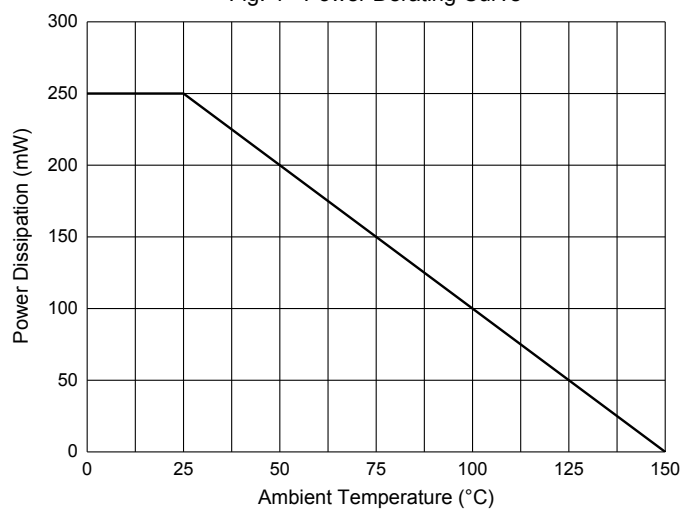


Fig. 4 - Power Derating Curve



## Ordering Information

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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