

## Features

- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Small Surface Mounting Type
- Low Reverse Current and Low Forward Voltage
- High Reliability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 400°C/W Junction to Ambient

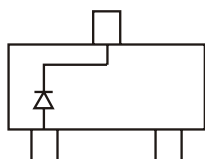
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|-----------------------------|
| RB400DS         | D3A            | 40V                                    | 40V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                               |           |                                    |                                       |
|-------------------------------|-----------|------------------------------------|---------------------------------------|
| Mean Rectifying Current       | $I_O$     | 0.5A                               |                                       |
| Peak Forward Surge Current    | $I_{FSM}$ | 3.0A                               | $t=8.3ms$                             |
| Forward Voltage               | $V_F$     | 0.55V(Max)                         | $I_F=0.5A$                            |
| Reverse Current               | $I_R$     | 50 $\mu$ A(Max)<br>30 $\mu$ A(Max) | $V_R = 30V$<br>$V_R = 10V$            |
| Capacitance Between Terminals | $C_T$     | 125pF(Typ)<br>20pF(Typ)            | $V_R=0V, f=1MHz$<br>$V_R=10V, f=1MHz$ |

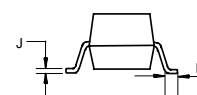
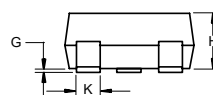
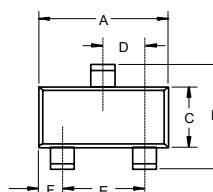
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure:



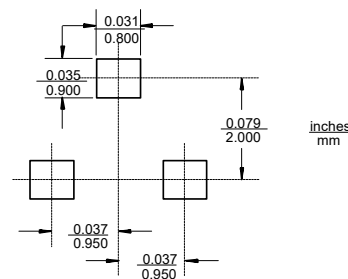
# 0.5 Amp Schottky Barrier Rectifier 40 Volts

## 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



## Curve Characteristics

Fig. 1 - Forward Characteristics

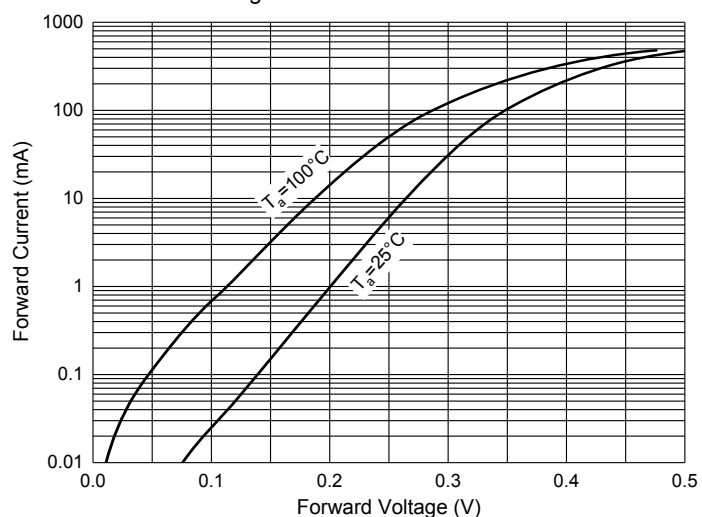


Fig. 2 - Reverse Characteristics

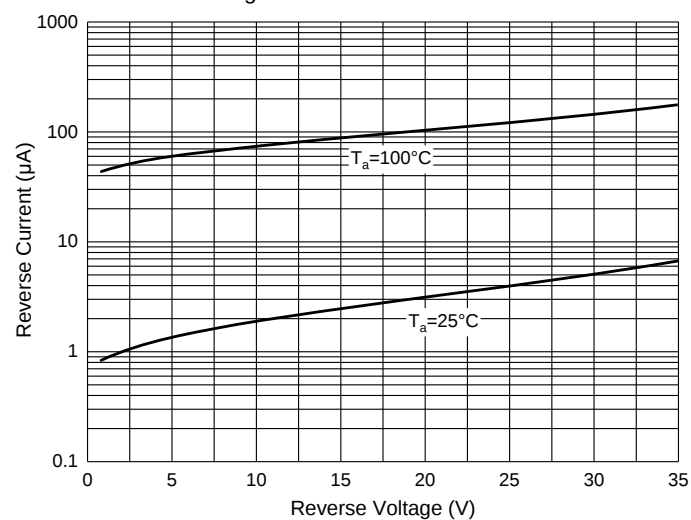


Fig. 3 - Capacitance Characteristics

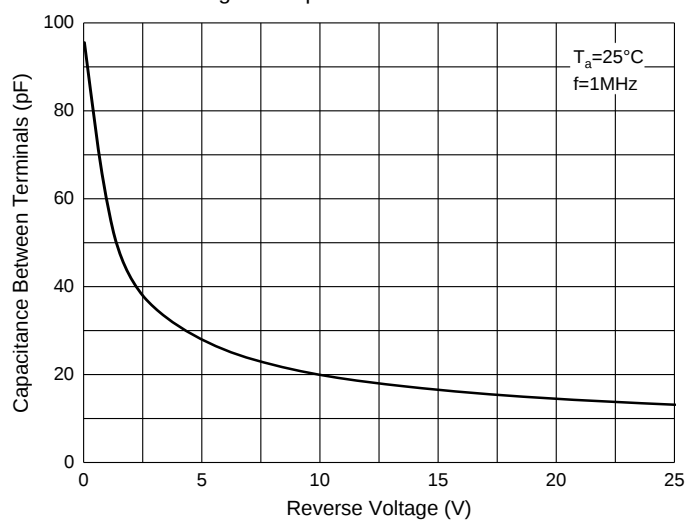
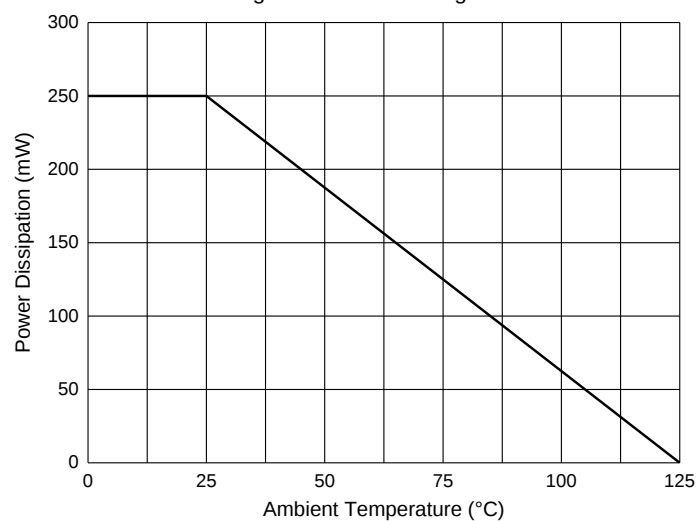


Fig. 4 - Power Derating Curve



## Ordering Information

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

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