

# DATA SHEET

## BAS40WS

### SURFACE MOUNT SCHOTTKY DIODES

|                |                 |                |                    |
|----------------|-----------------|----------------|--------------------|
| <b>VOLTAGE</b> | <b>40 Volts</b> | <b>CURRENT</b> | <b>0.2 Amperes</b> |
|----------------|-----------------|----------------|--------------------|

**SOD-323**

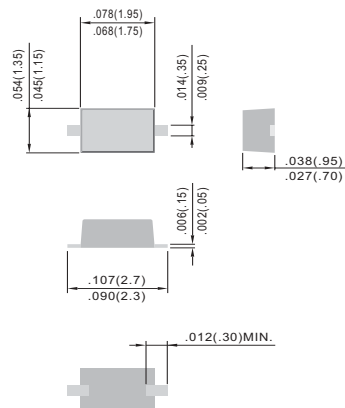
Unit: inch (mm)

#### FEATURES

- Fast switching speed
- Surface mount package ideally suited for automatic insertion  
Electrical identical standard JEDEC
- High conductor
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. Weight: 0.0052 gram
- Marking: S40



### ABSOLUTE RATINGS

| PARAMETER                                                  | Sym bol   | BAS40W S | Units |
|------------------------------------------------------------|-----------|----------|-------|
| Reverse Voltage                                            | $V_R$     | 40       | V     |
| Peak Reverse Voltage                                       | $V_{RRM}$ | 40       | V     |
| Average Rectified Current at $T_{amb}=25^{\circ}C$         | $I_O$     | 0.2      | A     |
| Non-repetitive Peak Forward Surge Current at $t \leq 10$ s | $I_{FSM}$ | 0.6      | A     |

### THERMAL CHARACTERISTICS

| PARAMETER                                    | Sym bol         | BAS40W S   | Units         |
|----------------------------------------------|-----------------|------------|---------------|
| Power Dissipation                            | $P_{TOT}$       | 225        | mW            |
| Thermal Resistance, Junction to Ambient      | $R_{\theta JA}$ | 556        | $^{\circ}C/W$ |
| Junction Temperature                         | $T_J$           | 150        | $^{\circ}C$   |
| Storage Temperature at $T_{amb}=25^{\circ}C$ | $T_{STG}$       | -55 to 150 | $^{\circ}C$   |

## ELECTRICAL CHARACTERISTICS

| PARAMETER                 | Sym bol  | TestCondition                              | M IN . | TYP . | MAX .                | Units   |
|---------------------------|----------|--------------------------------------------|--------|-------|----------------------|---------|
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R=10 \mu A$                             | 40     | --    | --                   | V       |
| Reverse Current           | $I_R$    | $V_R=30 V$<br>$V_R=40 V$                   | --     | --    | 1.0<br>10            | $\mu A$ |
| Forward Voltage           | $V_F$    | $I_F=1.0 mA$<br>$I_F=10 mA$<br>$I_F=40 mA$ | --     | --    | 0.38<br>0.50<br>1.00 | V       |
| Total Capacitance         | $C_T$    | $V_R=0V, f=1.0 MHz$                        | --     | --    | 5.0                  | pF      |

## ELECTRICAL CHARACTERISTICS CURVE

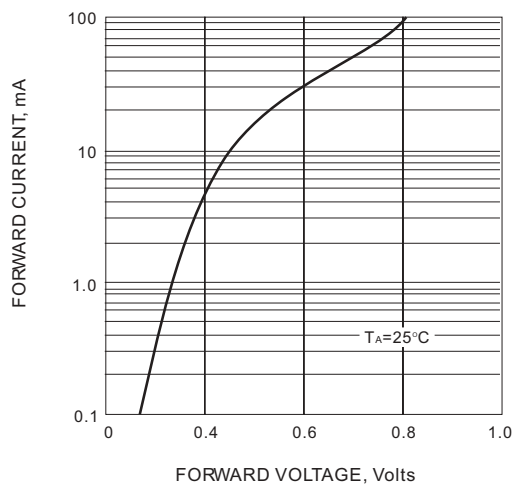


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

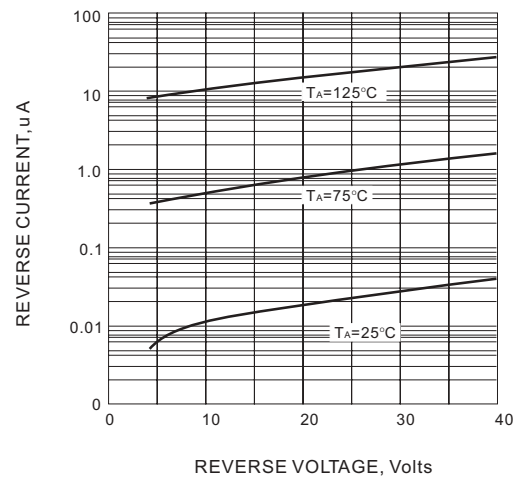


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

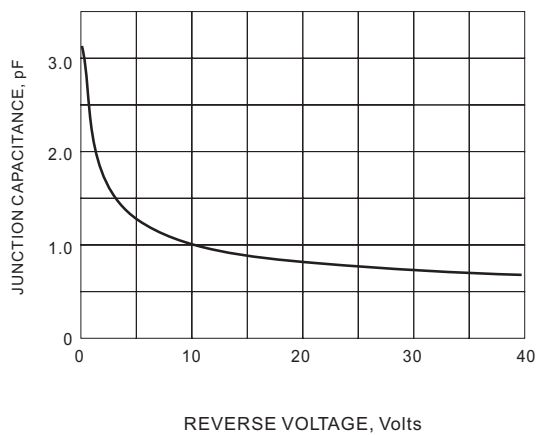


FIG. 3 TYPICAL JUNCTION CAPACITANCE

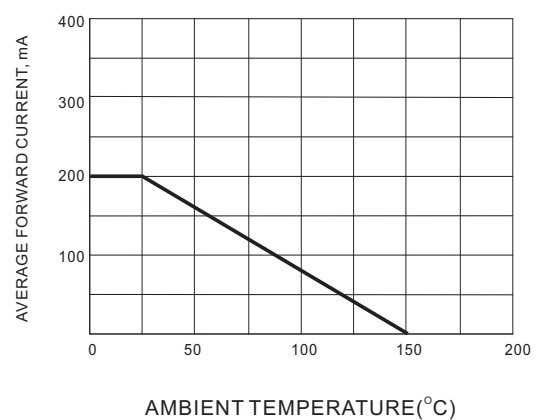
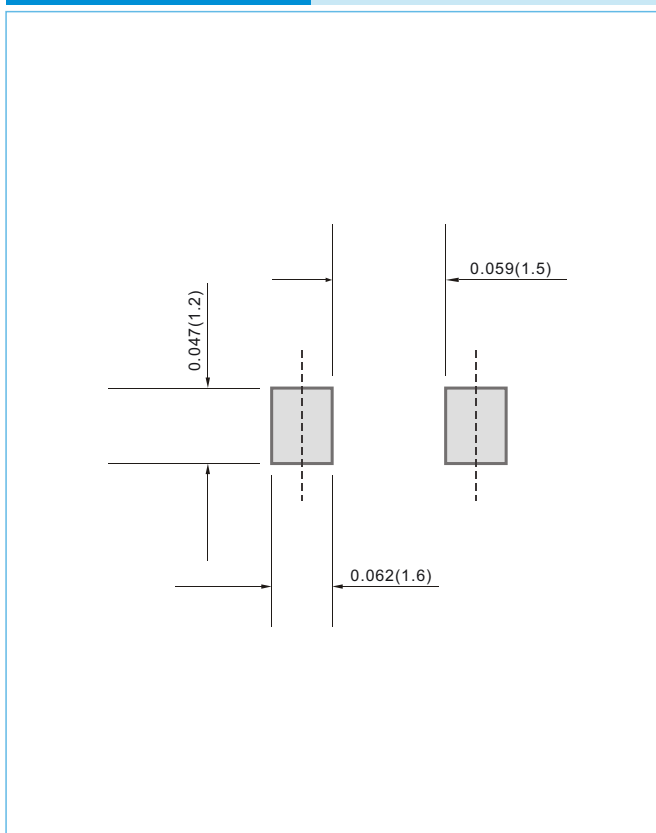


FIG. 4 FORWARD CURRENT DERATING

## MOUNTING PAD LAYOUT

SOD-323

Unit: inch (mm)



## ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 5.0K per 7" plastic Reel

## LEGAL STATEMENT

### IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.

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