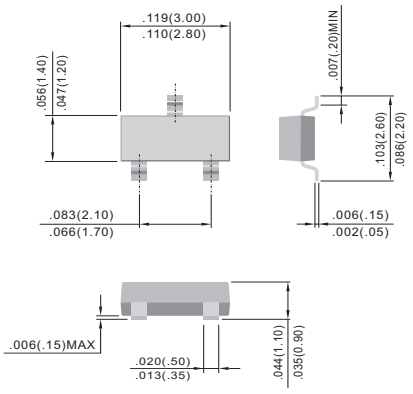
# BAS40/A/C/S

## SURFACE MOUNT SCHOTTKY DIODES

**VOLTAGE** 40 Volts **CURRENT** 0.2 Amperes

**SOT- 23** Unit: inch (mm)




### FEATURES

- Fast switching speed
- Surface mount package ideally suited for automatic insertion
  Electrical identical standard JEDEC
- High conductor
- Pb free product : 99% Sn above can meet RoHS environment substance directive request

### MECHANICAL DATA

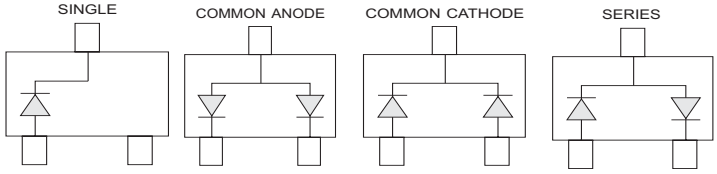
- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.008 gram

### ABSOLUTE RATINGS

| PARAMETER | Symbol | BAS40 | BAS40A | BAS40C | BAS40S | Units |
|---|---|---|---|---|---|---|
| Marking Code | | S40 | S42 | S43 | S44 | |
| Reverse Voltage | $V_R$ | 40 | | | | V |
| Peak Reverse Voltage | $V_{RRM}$ | 40 | | | | V |
| Average Rectified Current at Temp=25°C | $I_{F(AV)}$ | 0.2 | | | | A |
| Non-repetitive Peak Forward Surge Current at t=1.0 s | $I_{FSM}$ | 0.6 | | | | A |

### THERMAL CHARACTERISTICS

| PARAMETER | Symbol | BAS40 | BAS40A | BAS40C | BAS40S | Units |
|---|---|---|---|---|---|---|
| Power Dissipation | $P_{TOT}$ | 225 | | | | mW |
| Thermal Resistance , Junction to Ambient | $R_{\theta JA}$ | 556 | | | | °C/W |
| Junction Temperature | $T_J$ | 150 | | | | °C |
| Storage Temperature at Temp=25°C | $T_{STG}$ | -55 to 150 | | | | °C |
| Circuit Figure | | SINGLE | COMMON ANODE | COMMON CATHODE | SERIES | |



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## ELECTRICAL CHARACTERISTICS

| PARAMETER | Symbol | Test Condition | MIN. | TYP. | MAX. | Units |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R$=10 uA | 40 | -- | -- | V |
| Reverse Current | $I_R$ | $V_R$=30 V<br>$V_R$=40 V | -- | -- | 1.0<br>10 | uA |
| Forward Voltage | $V_F$ | $I_F$=1.0mA<br>$I_F$=10mA<br>$I_F$=40mA | -- | -- | 0.38<br>0.50<br>1.00 | V |
| Total Capacitance | $C_T$ | $V_R$=0V, f=1.0MHz | -- | -- | 5.0 | pF |

## ELECTRICAL CHARACTERISTICS CURVE

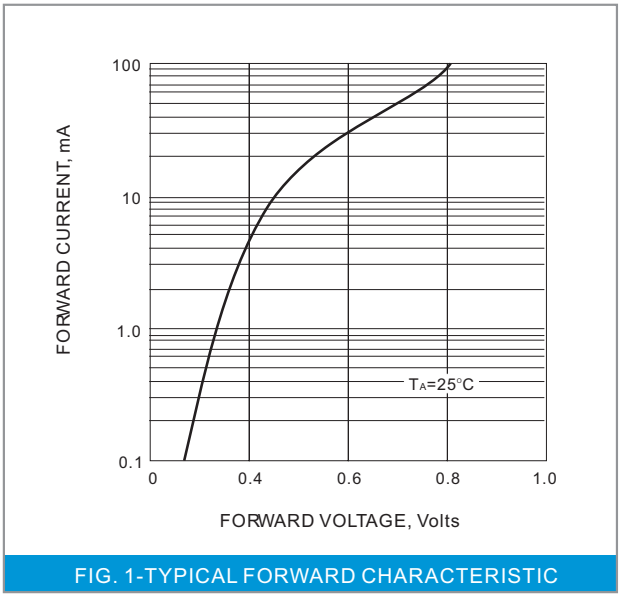


FIG. 1-TYPICAL FORWARD CHARACTERISTIC

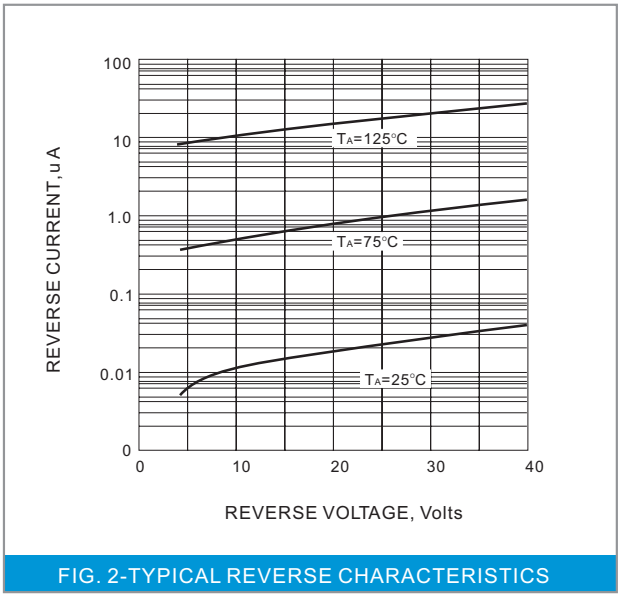


FIG. 2-TYPICAL REVERSE CHARACTERISTICS

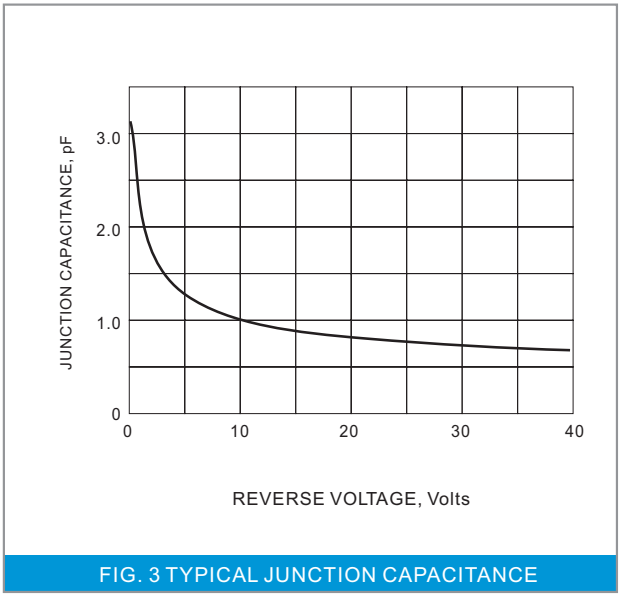


FIG. 3 TYPICAL JUNCTION CAPACITANCE

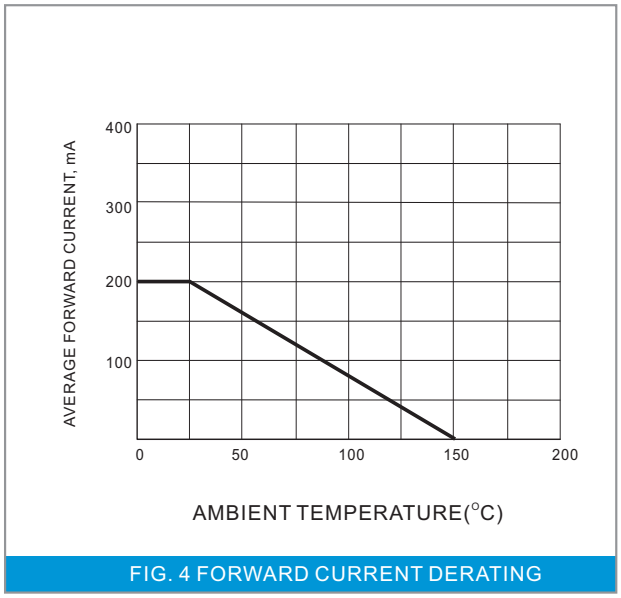


FIG. 4 FORWARD CURRENT DERATING

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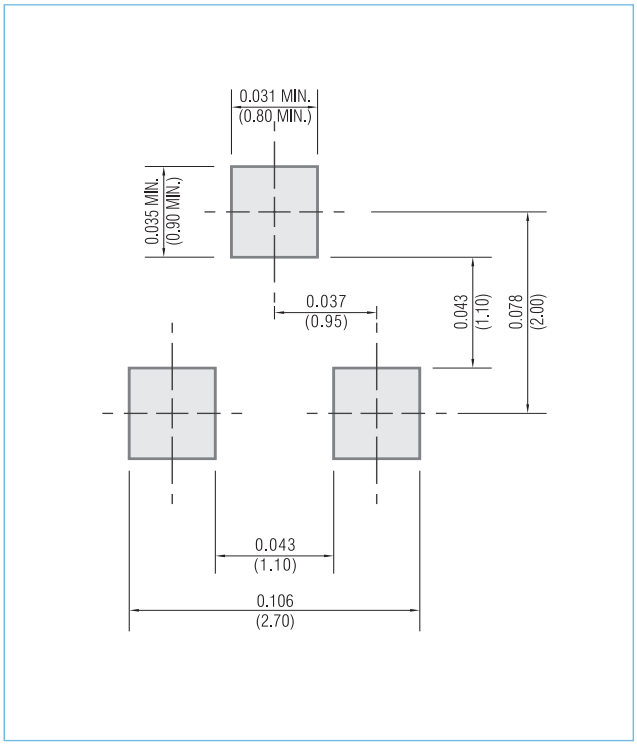
## MOUNTING PAD LAYOUT

SOT-23 Unit: inch ( mm )




## ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

## LEGAL STATEMENT