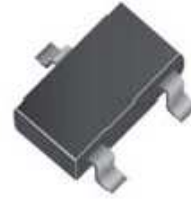


Small Signal Product

225mW SMD Switching Diode

FEATURES

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection



MECHANICAL DATA

- Case: SOT- 23, molded plastic
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Weight: 0.008grams (approximately)

SOT-23

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | |
|--|---------------------|--------------|------|
| PARAMETER | SYMBOL | VALUE | UNIT |
| Peak Repetitive Reverse Voltage | V _{RRM} | 70 | V |
| Working Peak Reverse Voltage | V _{RWM} | | |
| DC Blocking Voltage | V _R | | |
| RMS Reverse Voltage | V _{R(RMS)} | 49 | V |
| Forward Continuous Current (Note 1) | I _F | 70 | mA |
| Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0 s | I _{FSM} | 100 | mA |
| Power Dissipation (Note 1) | P _D | 200 | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | R _{θJA} | 625 | K/W |
| Operating Junction Temperature | T _J | -55 to + 125 | °C |
| Storage Temperature Range | T _{STG} | -55 to + 150 | °C |

| PARAMETER | SYMBOL | MIN | MAX | UNIT |
|--|-------------------|-----|--------|------|
| Reverse breakdown voltage I _R = 10 μA | V _(BR) | 70 | - | V |
| Forward voltage tp=300μs , I _F =1.0mA tp < 300μs , I _F =15mA | V _F | - | 410 | mV |
| | | - | 1000 | |
| Reverse leakage current tp < 300μs , V _R =50V | I _R | - | 100.00 | nA |
| Junction capacitance V _R = 0 V, f = 1 MHz | C _J | - | 2 | pF |
| Reverse recovery time I _F = I _R = 10 mA, I _{RR} = 100 Ω, I _{RR} = 1 mA | t _{rr} | - | 5 | ns |

Notes: 1. Valid provided that terminals are kept at ambient temperature

2. Test period < 3000 μs

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig.1 Power Derating Curve

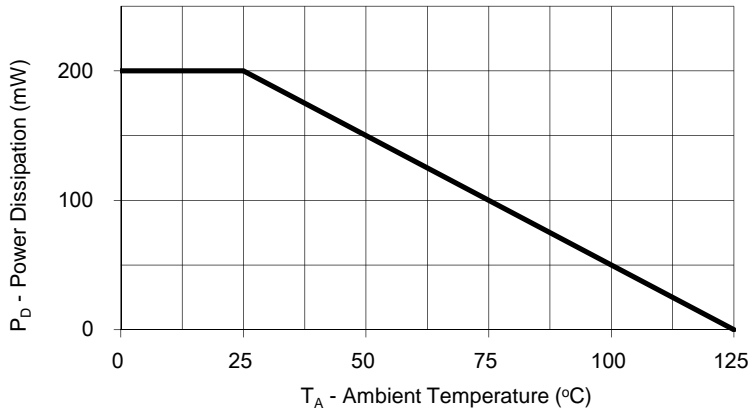


Fig. 2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

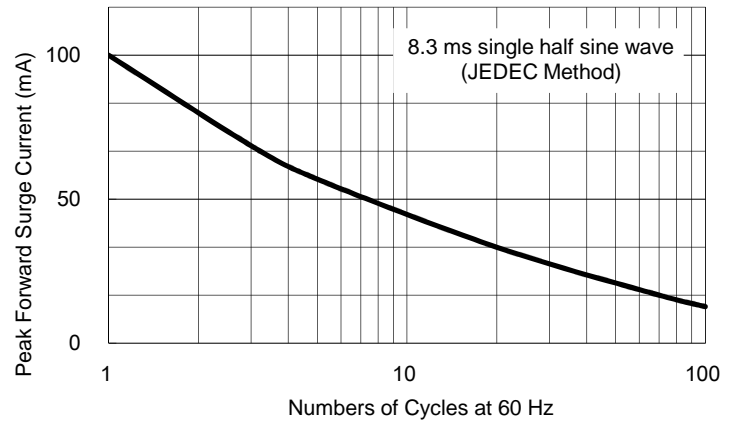


Fig. 3 Typical Forward Characteristics

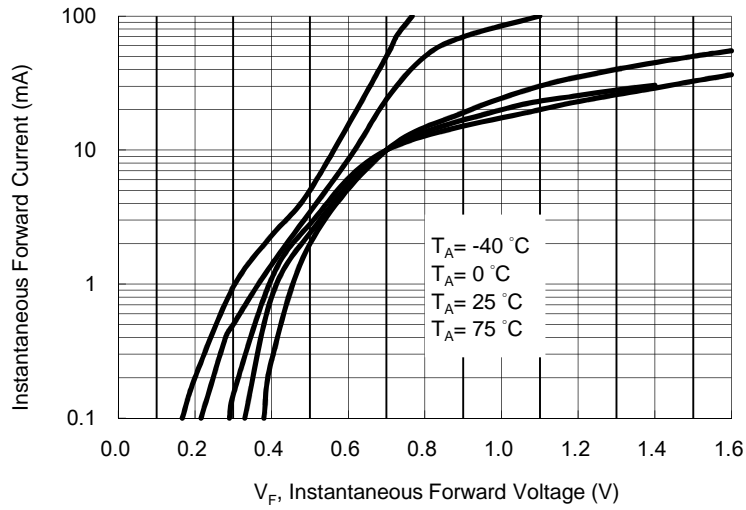


Fig. 4 Typical Reverse Characteristics

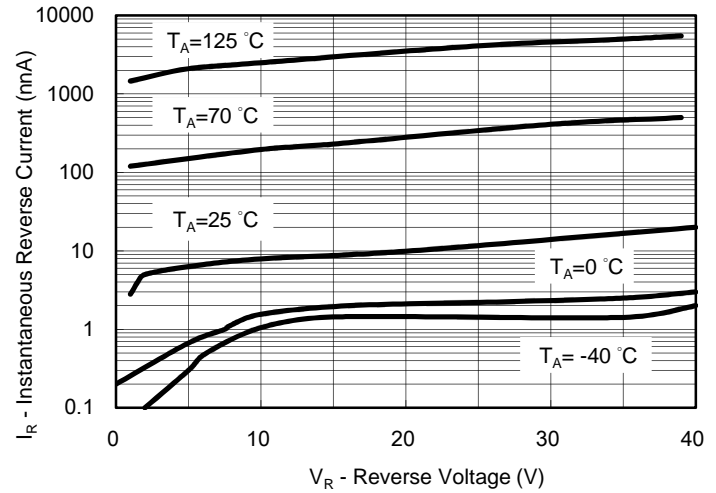


Fig. 5 Typical Total Capacitance VS. Reverse Voltage

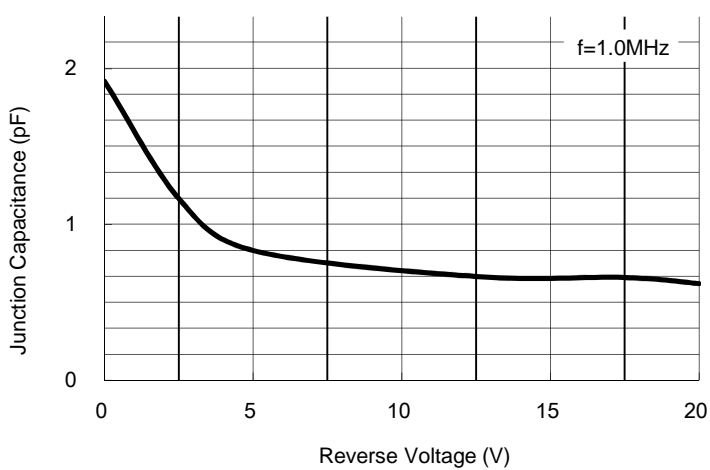
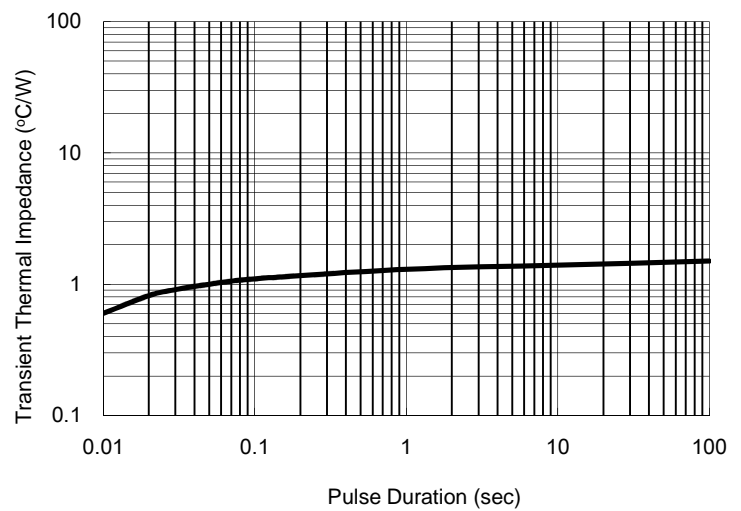


Fig. 6 Typical Transient Thermal Characteristics



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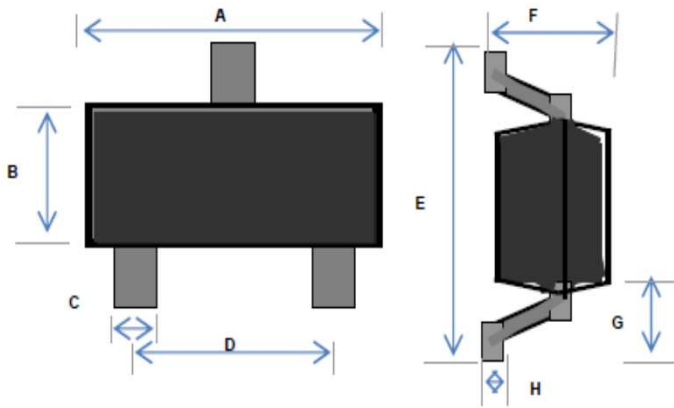
| ORDERING INFORMATION | | | | | | |
|-----------------------------|-------------------------|---------------------|----------------------------|----------------|----------------|----------------|
| PART NO. | MANUFACTURE CODE | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING | MARKING |
| BAS70 | (Note) | RF | G | SOT-23 | 3K / 7" Reel | 73 |
| BAS70-04 | | RF | G | SOT-23 | 3K / 7" Reel | 74 |
| BAS70-05 | | RF | G | SOT-23 | 3K / 7" Reel | 75 |
| BAS70-06 | | RF | G | SOT-23 | 3K / 7" Reel | 76 |

Note: Manufacture special control, if empty means no special control requirement.

| EXAMPLE | | | | | |
|----------------------|-----------------|-------------------------|---------------------|----------------------------|--------------------|
| PREFERRED P/N | PART NO. | MANUFACTURE CODE | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| BAS70 RFG | BAS70 | | RF | G | Green compound |
| BAS70-B0 RFG | BAS70 | B0 | RF | G | Green compound |
| BAS70-D0 RFG | BAS70 | D0 | RF | G | Green compound |

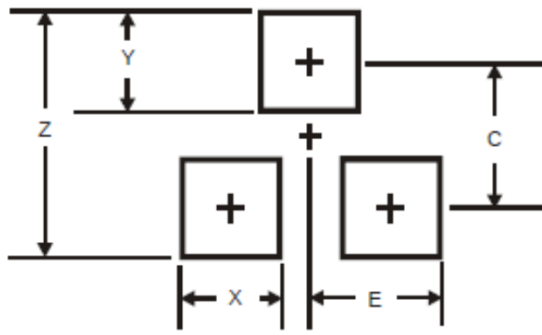
Small Signal Product

PACKAGE OUTLINE DIMENSIONS



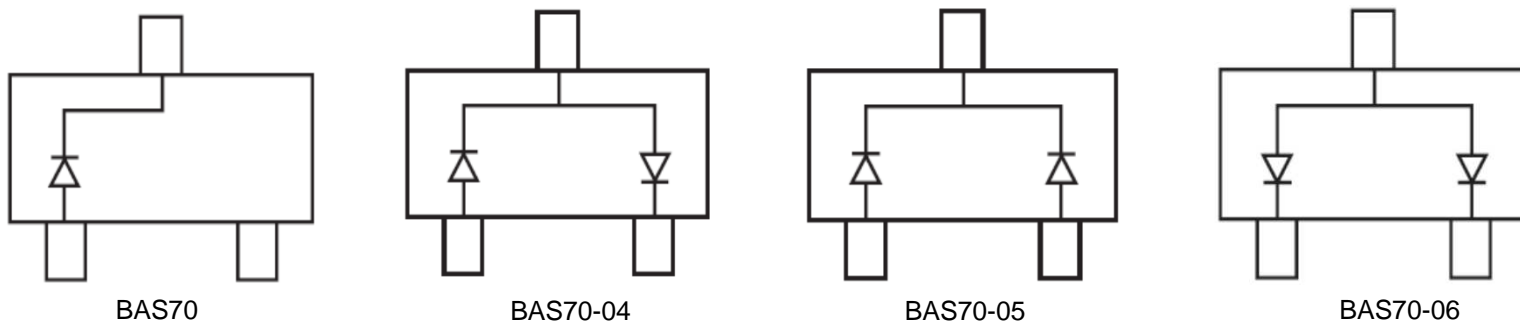
| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 2.70 | 3.10 | 0.106 | 0.122 |
| B | 1.10 | 1.50 | 0.043 | 0.059 |
| C | 0.30 | 0.51 | 0.012 | 0.020 |
| D | 1.78 | 2.04 | 0.070 | 0.080 |
| E | 2.10 | 2.64 | 0.083 | 0.104 |
| F | 0.89 | 1.30 | 0.035 | 0.051 |
| G | 0.55 REF | | 0.022 REF | |
| H | 0.1 REF | | 0.004 REF | |

SUGGEST PAD LAYOUT



| DIM. | Unit (mm) | Unit (inch) |
|------|-----------|-------------|
| | Typ. | Typ. |
| Z | 2.9 | 0.114 |
| X | 0.8 | 0.031 |
| Y | 0.9 | 0.035 |
| C | 2.0 | 0.079 |
| E | 1.35 | 0.053 |

Pin Configuration



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