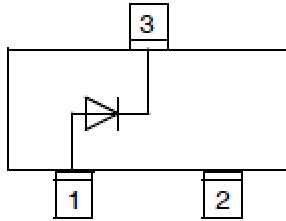


Switching Diode



SOT-23

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Current Leakage
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- For General Purpose Switching Applications

Mechanical Data

- **Case:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** JS

■Maximum Rating (Ta=25°C Unless otherwise specified)

| Item | Symbol | Unit | Value |
|--|-----------|------|-------------|
| Reverse Voltage | V_R | V | 250 |
| Forward Continuous Current, Per Leg | I_F | mA | 200 |
| Non-Repetitive Peak Forward Surge Current@ t=1s, | I_{FSM} | A | 0.5 |
| Power Dissipation | P_D | mW | 350 |
| Operation Junction Temperature | T_J | °C | -55 to +150 |
| Storage Temperature | T_{STG} | °C | -55 to +150 |

■Electrical Characteristics (Ta=25°C Unless otherwise specified, Per Leg)

| Item | Symbol | Unit | Conditions | Value |
|---------------------------------------|----------|------|---|-------|
| Reverse Voltage | V_R | V | $I_R=100\mu A$ | 250 |
| Maximum Instantaneous Forward Voltage | V_F | V | $I_{FM}=100mA, T_J=25^\circ C$ | 1.0 |
| | | | $I_{FM}=200mA, T_J=25^\circ C$ | 1.25 |
| Maximum DC Reverse Current | I_R | nA | $V_R=200V$ | 100 |
| Typical Junction Capacitance | C_J | pF | f=1.0MHz, $V_R=0V$ | 5 |
| Reverse Recovery Time | T_{rr} | ns | $I_F=30mA, I_R=30mA, R_L=100\Omega, I_{rr}=3mA$ | 50 |



BAS21Q

■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Value |
|-----------------------------|-----------------|------|-------|
| Thermal Resistance(Typical) | $R_{\theta JA}$ | °C/W | 357 |

■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BAS21Q | F2 | Approximate 0.010 | 3000 | 30000 | 120000 | 7" reel |

■ Typical Characteristics (Per Leg)

Fig1: Forward Characteristics

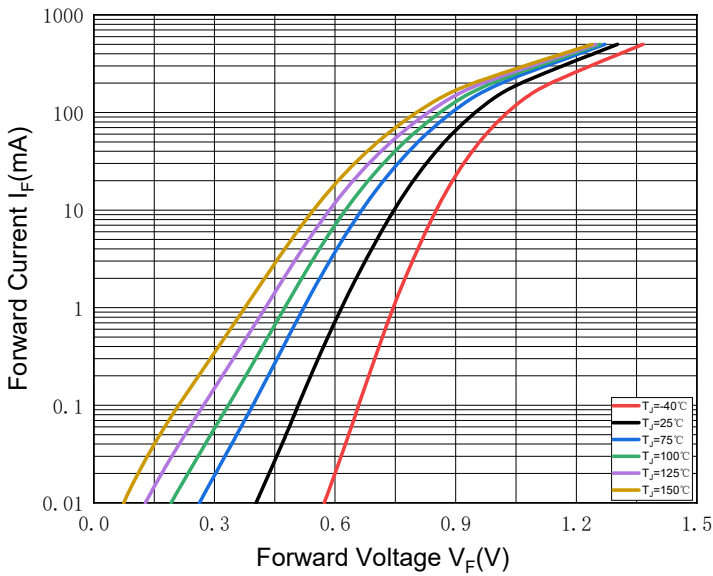


Fig.2: Reverse Characteristics

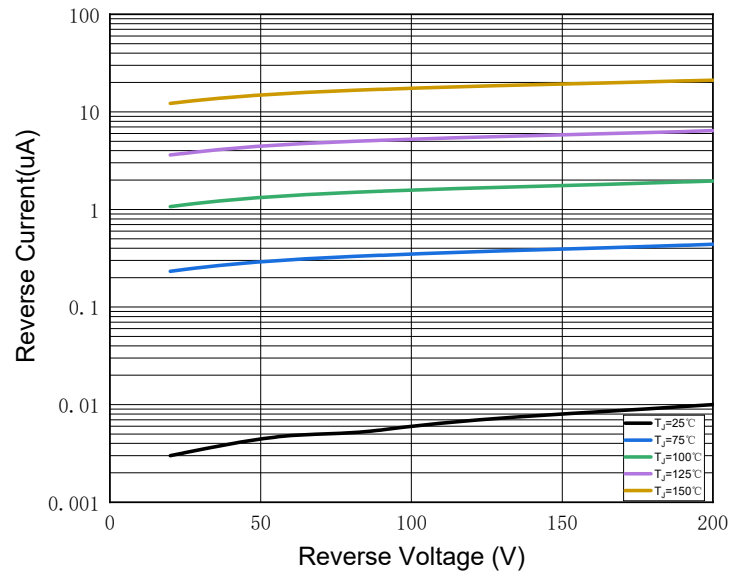
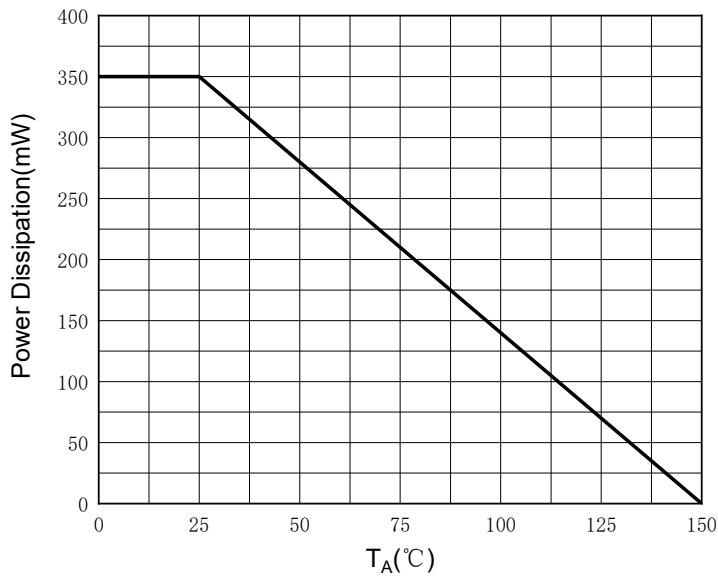


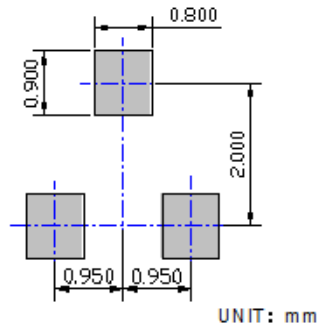
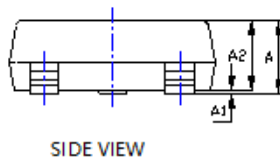
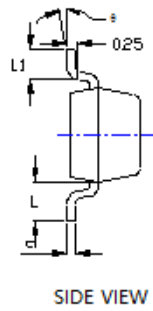
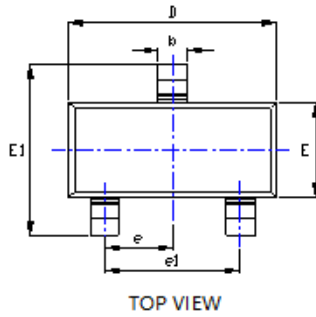
Fig.3: P_D-T_A





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■SOT-23 Package Outline Dimensions



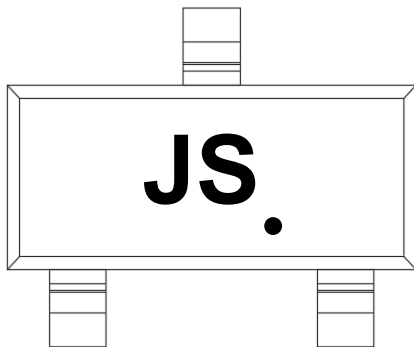
UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|------------|-------|
| | INCHES | | Millimeter | |
| | MIN. | MAX. | MIN. | MAX. |
| A | 0.035 | 0.045 | 0.900 | 1.150 |
| A1 | 0.000 | 0.004 | 0.000 | 0.100 |
| A2 | 0.035 | 0.041 | 0.900 | 1.050 |
| b | 0.012 | 0.020 | 0.300 | 0.500 |
| c | 0.004 | 0.008 | 0.100 | 0.200 |
| D | 0.110 | 0.118 | 2.800 | 3.000 |
| E | 0.047 | 0.055 | 1.200 | 1.400 |
| E1 | 0.089 | 0.100 | 2.250 | 2.550 |
| e | 0.037TYP | | 0.950TYP | |
| e1 | 0.071 | 0.079 | 1.800 | 2.000 |
| L | 0.022REF | | 0.550REF | |
| L1 | 0.012 | 0.020 | 0.300 | 0.500 |
| θ | 0° | 8° | 0° | 8° |

NOTE:
 1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
 2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
 3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



BAS21Q

Disclaimer

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