

BAS21, BAS21C/S

**SURFACE MOUNT
FAST SWITCHING DIODE**

**REVERSE VOLTAGE – 250 Volts
FORWARD CURRENT – 0.2 Ampere**

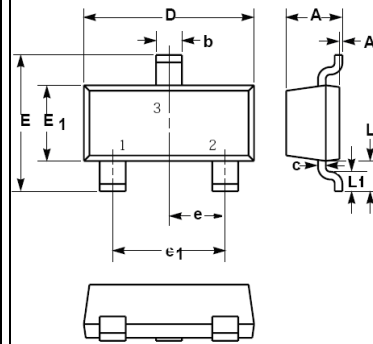
FEATURES

- Fast Switching Speed
- Ideally suited for automatic insertion
- For general purpose switching applications

MECHANICAL DATA

- Case: SOT-23 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

SOT-23



| SOT-23 | | |
|--------------------------|-----------|------|
| Dim. | Min. | Max. |
| A | 0.90 | 1.15 |
| A1 | 0.00 | 0.10 |
| b | 0.30 | 0.50 |
| c | 0.08 | 0.15 |
| D | 2.80 | 3.00 |
| E | 2.25 | 2.55 |
| E1 | 1.20 | 1.40 |
| e | 0.95 Typ. | |
| e1 | 1.80 | 2.00 |
| L | 0.55 Ref. | |
| L1 | 0.30 | 0.50 |
| Dimensions in millimeter | | |

Maximum Ratings & Thermal Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | BAS21 | BAS21C | BAS21S | Units |
|--|------------------|----------|--------|--------|-------|
| Repetitive Peak Reverse Voltage | V _{RRM} | 250 | | | V |
| Working Peak Reverse Voltage | V _{RWM} | 250 | | | V |
| DC Blocking Voltage | V _R | 250 | | | V |
| Peak Forward Current | I _F | 225 | | | mA |
| Average Rectified Output Current | I _o | 200 | | | mA |
| Peak Forward Surge Current | I _{FM} | 625 | | | mA |
| Power Dissipation | P _D | 225 | | | mW |
| Thermal Resistance Junction to Ambient | R _{θJA} | 417 | | | °C/W |
| Operating Temperature Range | T _J | 150 | | | °C |
| Storage Temperature Range | T _{STG} | -55~+150 | | | °C |

Electrical Characteristics @ T_A = 25°C unless otherwise specified

| Characteristic | Test Condition | Symbol | BAS21 | BAS21C | BAS21S | Unit |
|---|--|-----------------|------------|--------|--------|------|
| Reverse Breakdown Voltage | I _R = 100uA | V _{BR} | 250 | | | V |
| Maximum Forward Voltage | I _F = 100mA I _F = 200mA | V _F | 1 1.25 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | V _R = 200V V _R = 200V, T _J =150°C | I _R | 0.1 100 | | | uA |
| Typical Diode Capacitance | V _R = 0V, f=1MHz | C _D | 5 | | | pF |
| Reverse Recovery time | I _{rr} =3mA, I _F =I _R =30mA, R _L =100Ω | t _{rr} | 50 | | | nS |

**RATING AND CHARACTERISTIC CURVES
BAS21, BAS21C/S**



Fig.1 Typical Forward Characteristics

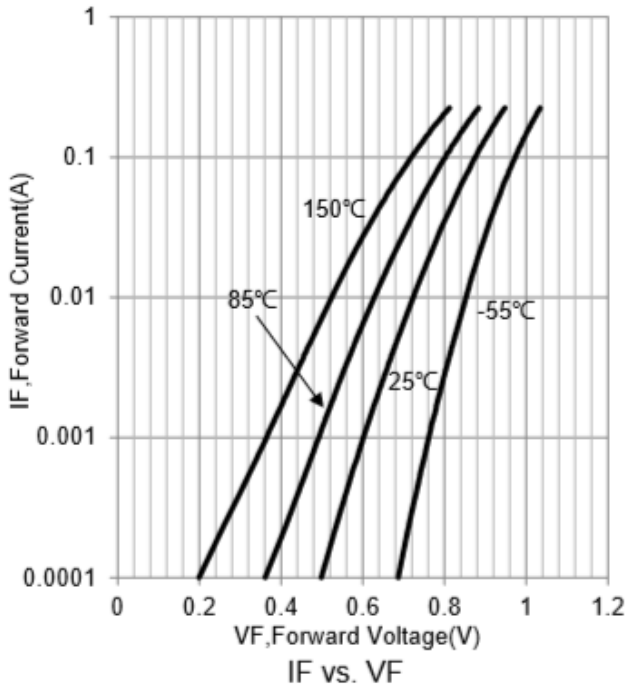


Fig.2 Typical Reverse Characteristics

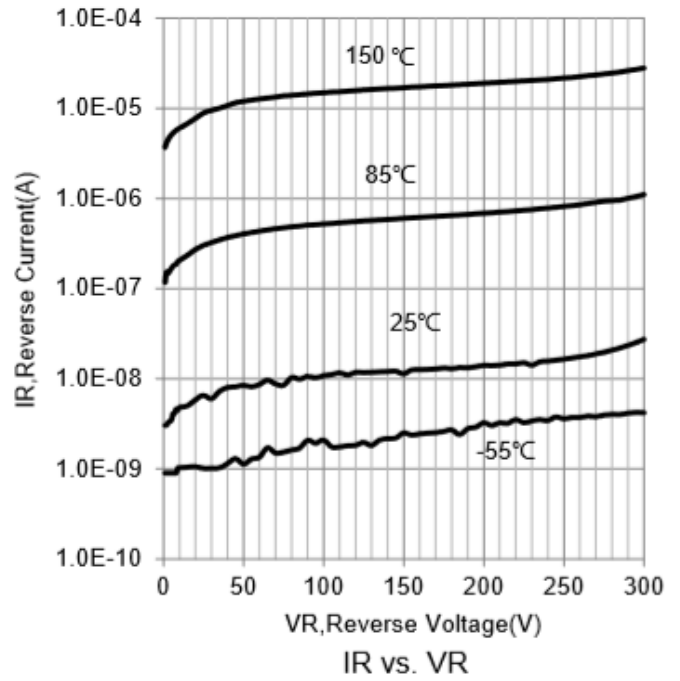
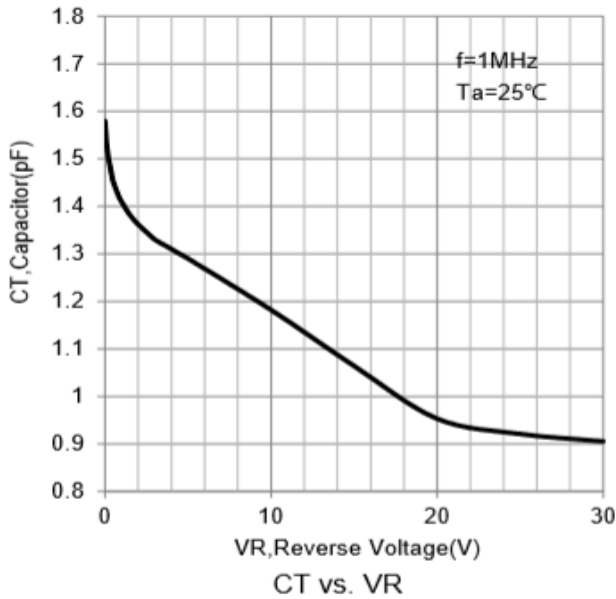


Fig.3 Typical Junction Characteristics



Device Marking :

| Device P/N | Marking | Equivalent Circuit Diagram |
|------------|---------|----------------------------|
| BAS21 | JS | |
| BAS21C | JU | |
| BAS21S | JT | |

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