

## SOT-23 Plastic-Encapsulate Switching Diode

### Features

- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed



### Mechanical Data

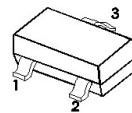
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any





Marking:

SOT-23

Pin definition

Equivalent circuit



| BAS70   | BAS70-04  | BAS70-05  | BAS70-06  |
|---|---|---|---|
| MARKING: 73   | MARKING: 74   | MARKING: 75   | MARKING: 76   |
|  |  |  |  |

### Maximum Ratings & Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

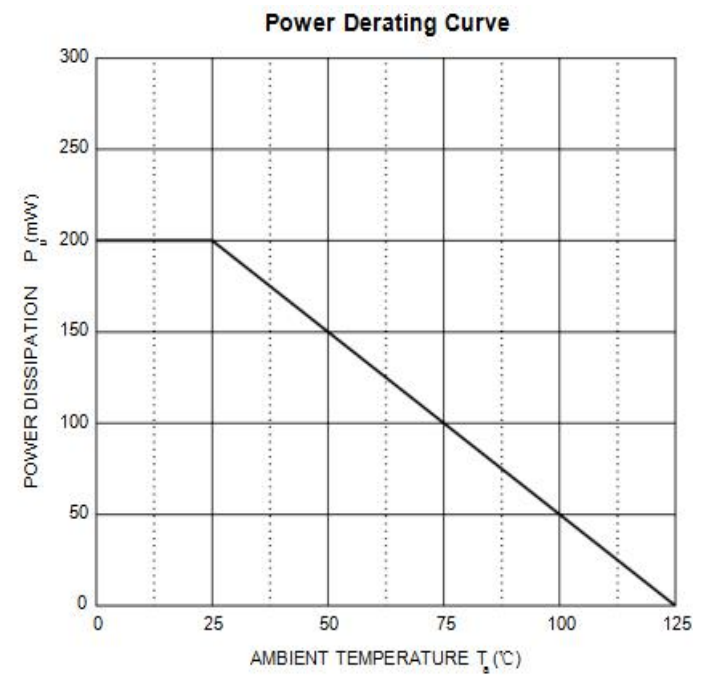
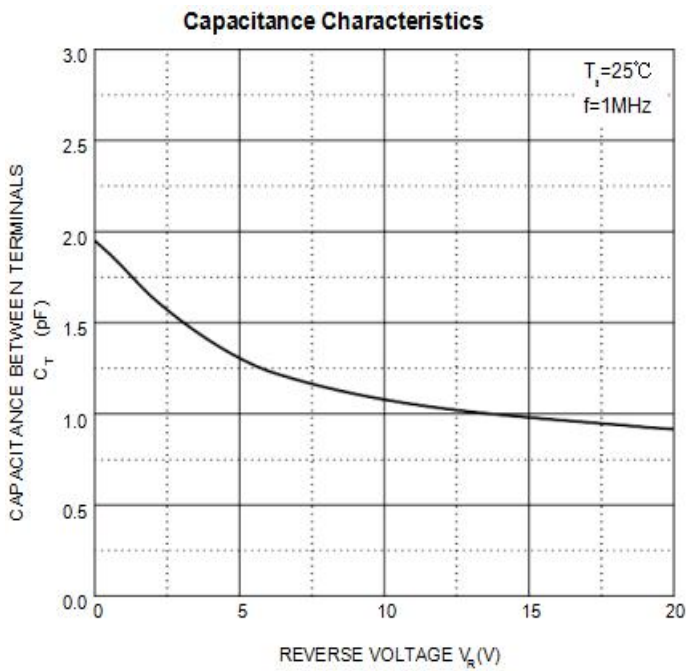
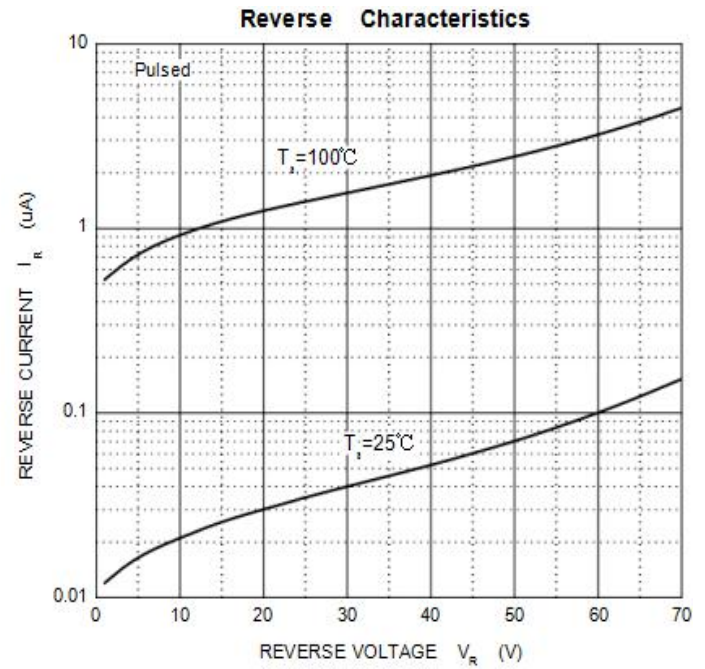
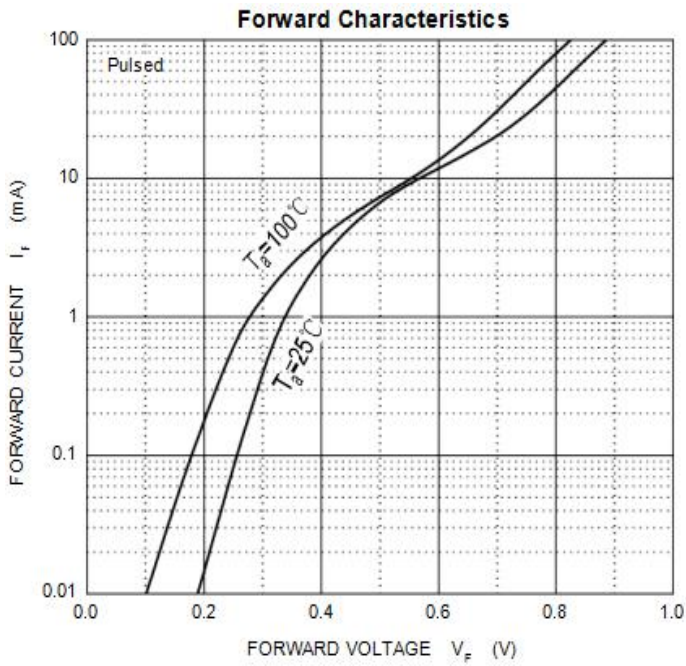
| Parameter  | Symbol           | Value    | Unit |
|--|------------------|----------|------|
| Reverse Voltage  | V <sub>R</sub>   | 70       | V    |
| Peak Repetitive Reverse Voltage                          | V <sub>RRM</sub> | 70       | V    |
| Power Dissipation  | P <sub>D</sub>   | 200      | mW   |
| Typical thermal resistance                               | R <sub>θJA</sub> | 500      | °C/W |
| Junction Temperature                                     | T <sub>J</sub>   | 125      | °C   |
| Storage temperature range                                | T <sub>STG</sub> | -55-+150 | °C   |
| Non-repetitive Peak Forward Current                      | I <sub>FM</sub>  | 70       | mA   |
| Non-Repetitive Peak Forward Surge Current<br>@ t = 8.3ms | I <sub>FSM</sub> | 100      | mA   |

### Electrical Specifications (T<sub>A</sub>=25°C unless otherwise noted)

| Parameter                     | Symbol            | Test Conditions   | Limits |      | Unit |
|-------------------------------|-------------------|---|--------|------|------|
|                               |                   |   | Min    | Max  |      |
| Reverse Voltage               | V <sub>(BR)</sub> | I <sub>R</sub> =10uA  | 70     |      | V    |
| Forward Voltage               | V <sub>F</sub>    | I <sub>F</sub> =1mA   |        | 0.41 | V    |
|                               |                   | I <sub>F</sub> =15mA  |        | 1.0  | V    |
| Reverse Leakage Current       | I <sub>R</sub>    | V <sub>R</sub> =50V   |        | 100  | nA   |
| Typical junction capacitance  | C <sub>J</sub>    | V <sub>R</sub> =0V, f=1MHZ  |        | 2    | pF   |
| Typical reverse recovery time | T <sub>RR</sub>   | I <sub>F</sub> =I <sub>R</sub> =10mA RL=100Ω IRR=0.1 X I <sub>R</sub> |        | 5    | nS   |

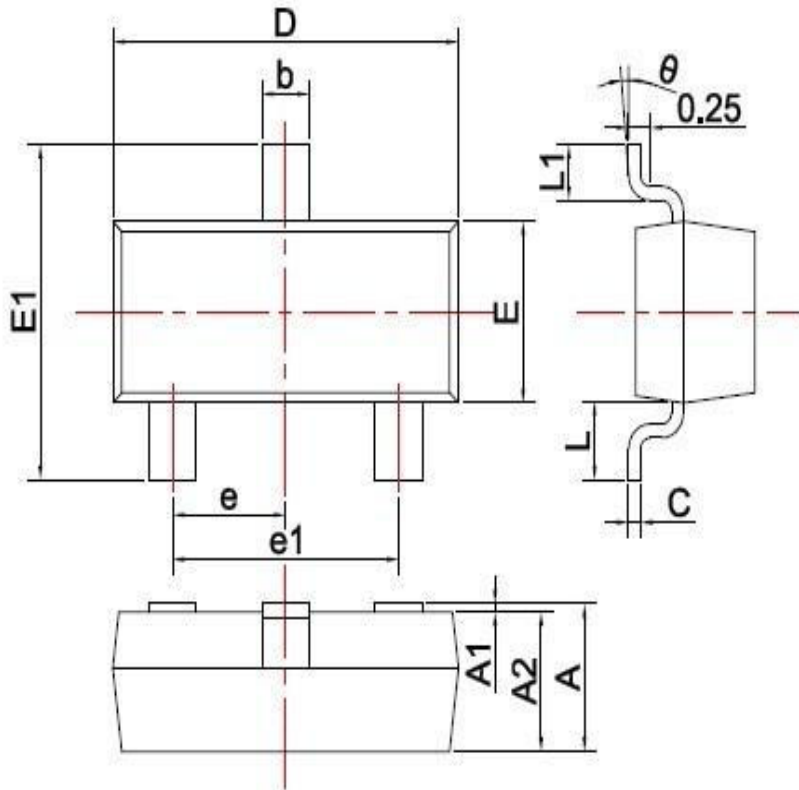
**Ratings and Characteristics Curves**

( $T_A = 25^\circ\text{C}$  unless otherwise noted)



**Package Outline Dimensions**

millimeters



| SYMBOL | DIMENSIONS |       |
|--------|------------|-------|
|        | MIN.       | MAX.  |
| A      | 0.900      | 1.150 |
| A1     | 0.000      | 0.100 |
| A2     | 0.900      | 1.050 |
| b      | 0.300      | 0.500 |
| c      | 0.080      | 0.150 |
| D      | 2.800      | 3.000 |
| E      | 1.200      | 1.400 |
| E1     | 2.250      | 2.550 |
| e      | 0.950TYP   |       |
| e1     | 1.800      | 2.000 |
| L      | 0.550REF   |       |
| L1     | 0.300      | 0.500 |
| θ      | 0°         | 8°    |

**Revision History**

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A            | 2018.05.06      | First issue            |
|                  |                 |                        |
|                  |                 |                        |

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