



## SOT-363 Plastic-Encapsulate Diodes

### BAS16TW1T1

### SWITCHING DIODES

#### FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance
- Weight:0.05g
- RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"
- Moisture Sensitivity Level 1

MARKING: BAS16TW1T1: KA2-

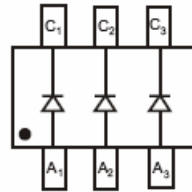
#### Maximum Ratings @T<sub>A</sub>=25°C

| Parameter                              | Symbol              | Limits   | Unit |
|--|---------------------|----------|------|
| Non-Repetitive Peak reverse voltage    | V <sub>RM</sub>     | 100      | V    |
| Peak Repetitive Peak reverse voltage   | V <sub>RRM</sub>    | 75       | V    |
| Working Peak Reverse Voltage           | V <sub>RWM</sub>    |          |      |
| DC Blocking Voltage                    | V <sub>R</sub>      |          |      |
| RMS Reverse Voltage                    | V <sub>R(RMS)</sub> | 53       | V    |
| Forward Continuous Current             | I <sub>FM</sub>     | 300      | mA   |
| Average Rectified Output Current       | I <sub>O</sub>      | 150      | mA   |
| Peak forward surge current @=1.0μs     | I <sub>FSM</sub>    | 2.0      | A    |
| @=1.0s                                 |                     | 1.0      |      |
| Power Dissipation                      | P <sub>d</sub>      | 200      | mW   |
| Thermal Resistance Junction to Ambient | R <sub>θJA</sub>    | 625      | K/W  |
| Junction temperature                   | T <sub>j</sub>      | 150      | °C   |
| Storage temperature                    | T <sub>STG</sub>    | -65~+150 | °C   |

#### Electrical Ratings @T<sub>A</sub>=25°C

| Parameter                     | Symbol             | Min. | Typ. | Max.  | Unit | Conditions   |
|-------------------------------|--------------------|------|------|-------|------|--|
| Reverse Breakdown Voltage     | V <sub>(BR)R</sub> | 75   |      |       | V    | I <sub>R</sub> =10μA   |
| Forward voltage               | V <sub>F1</sub>    |      |      | 0.715 | V    | I <sub>F</sub> =1mA  |
|                               | V <sub>F2</sub>    |      |      | 0.855 | V    | I <sub>F</sub> =10mA   |
|                               | V <sub>F3</sub>    |      |      | 1.0   | V    | I <sub>F</sub> =50mA   |
|                               | V <sub>F4</sub>    |      |      | 1.25  | V    | I <sub>F</sub> =150mA  |
| Reverse current               | I <sub>R1</sub>    |      |      | 1     | μA   | V <sub>R</sub> =75V  |
|                               | I <sub>R2</sub>    |      |      | 25    | nA   | V <sub>R</sub> =20V  |
| Capacitance between terminals | C <sub>T</sub>     |      |      | 2     | pF   | V <sub>R</sub> =0V,f=1MHz  |
| Reverse Recovery Time         | t <sub>rr</sub>    |      |      | 4     | ns   | I <sub>F</sub> =I <sub>R</sub> =10mA<br>I <sub>rr</sub> =0.1X I <sub>R</sub> ,R <sub>L</sub> =100Ω |

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### Typical Characteristics

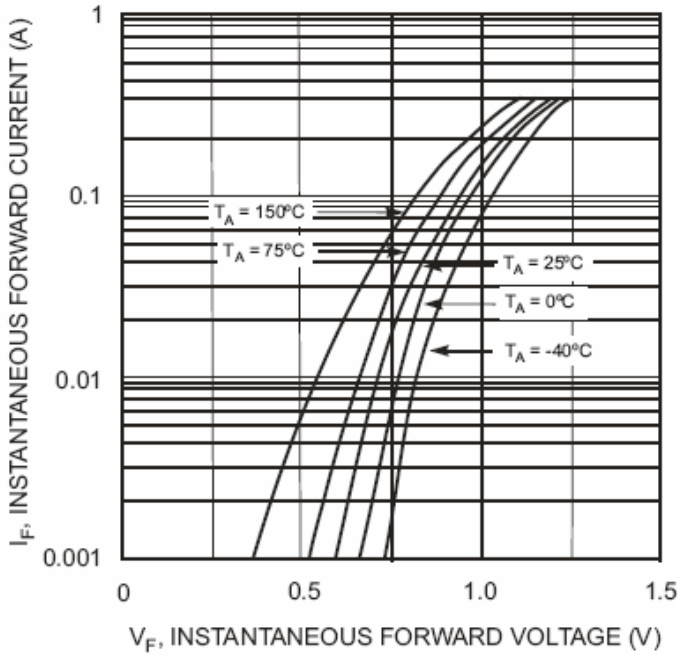


Fig. 2 Forward Characteristics

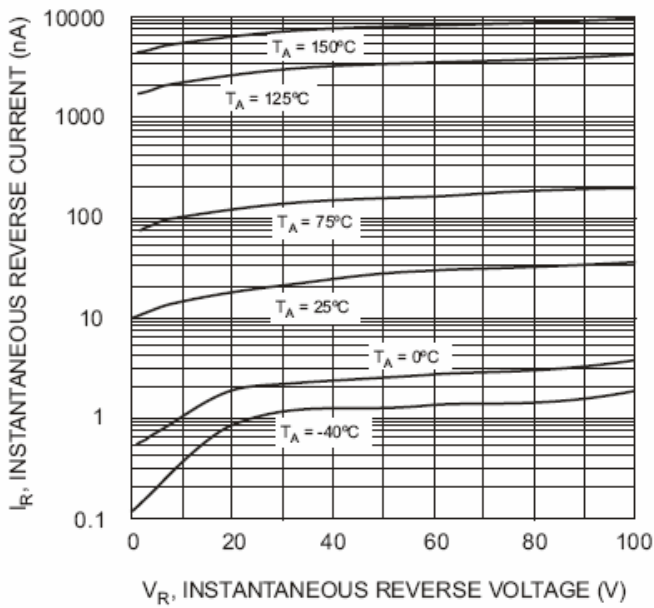


Fig. 3 Typical Reverse Characteristics

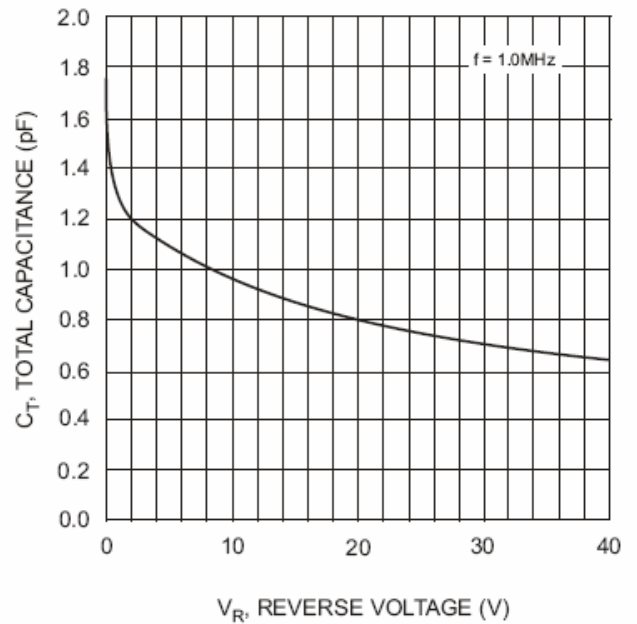
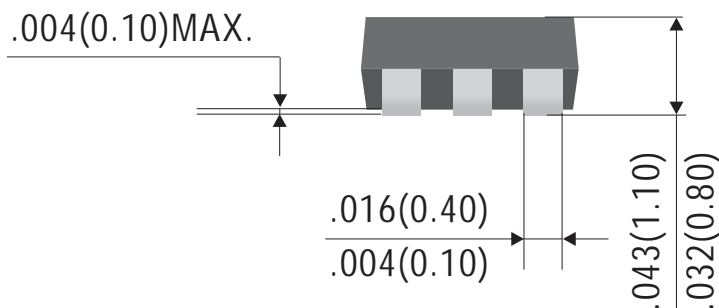
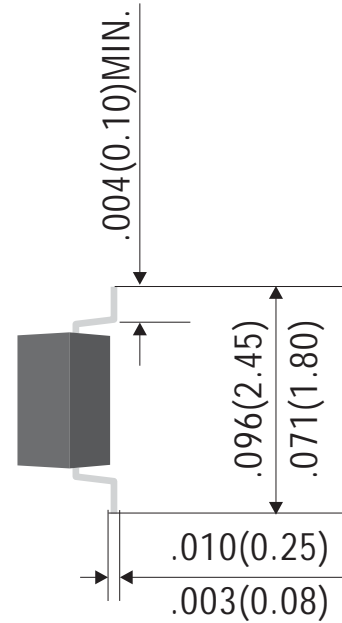
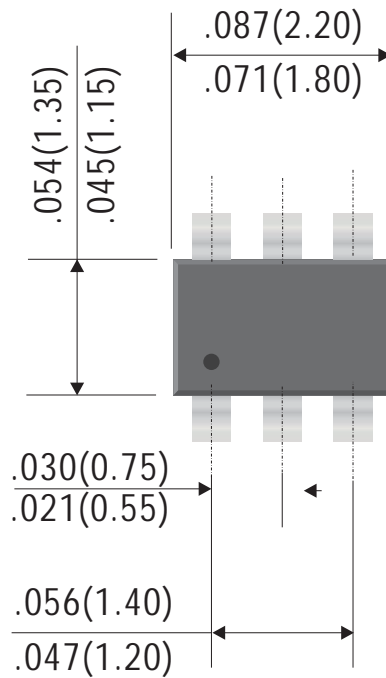


Fig. 4 Typical Capacitance vs. Reverse Voltage



# Outline Drawing

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Dimensions in inches and (millimeters)