

#### **Features**

- Low Leakage Current
- · Fast Switching Speed
- · Moisture Sensitivity Level 1
- AEC-Q101 Qualified
- Epoxy Meets UL 94 V-0 Flammability Rating
- · Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

# **Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance(Note2): 625°C/W Junction to Ambient

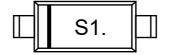
| MCC<br>Part Number | Repetitive<br>Peak Reverse<br>Voltage<br>V <sub>RRM</sub> | RMS<br>Reverse<br>Voltage<br>V <sub>R(RMS)</sub> | DC Blocking<br>Voltage<br>V <sub>R</sub> |
|--------------------|---|--|--|
| BAS716HE3          | 75V   | 53V  | 75V                                      |

| Parameter                    | Symbol             | Value |
|------------------------------|--------------------|-------|
| DC Reverse Voltage           | $V_R$              | 75V   |
| Working Peak Reverse Voltage | $V_{RWM}$          | 75V   |
| Average Forward Current      | I <sub>F(AV)</sub> | 200mA |
| Peak Forward Surge Current   | I <sub>FSM</sub>   | 1A    |
| Power Dissipation            | P <sub>D</sub>     | 200mW |

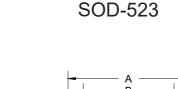
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

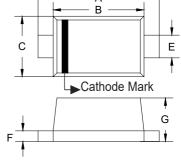
#### **Internal Structure and Marking Code**





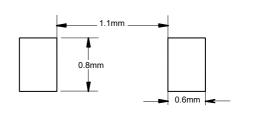
# 200mW 75Volt Switching Diode





| DIMENSIONS |       |       |      |      |      |
|------------|-------|-------|------|------|------|
| DIM INCHE  |       | HES   | MM   |      | NOTE |
| ווועו      | MIN   | MAX   | MIN  | MAX  | NOTE |
| Α          | 0.059 | 0.067 | 1.50 | 1.70 |      |
| В          | 0.043 | 0.051 | 1.10 | 1.30 |      |
| С          | 0.030 | 0.033 | 0.75 | 0.85 |      |
| Е          | 0.010 | 0.014 | 0.25 | 0.35 |      |
| F          | 0.003 | 0.008 | 0.08 | 0.20 |      |
| G          | 0.020 | 0.026 | 0.50 | 0.65 |      |

## **Suggested Solder Pad Layout**



<sup>2.</sup> Part mounted on FR-4 board with recommended pad layout.

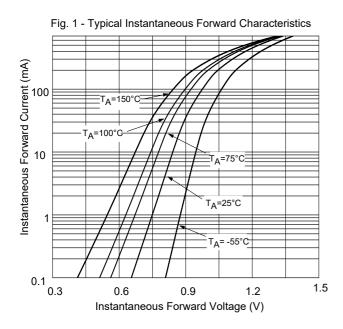


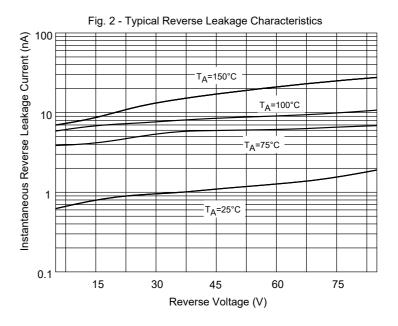
# Electrical Characteristics @ 25°C (Unless Otherwise Specified)

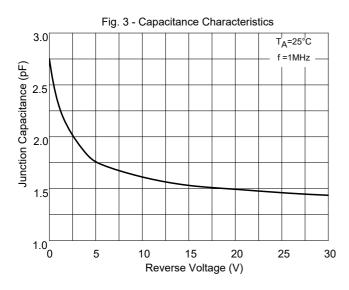
| Parameter                 | Symbol          | Conditions   | Min. | Тур. | Max. | Units |
|---------------------------|-----------------|--|------|------|------|-------|
| Reverse Breakdown Voltage | $V_{BR}$        | I <sub>R</sub> =100μA  | 75   |      |      | V     |
| Forward Voltage           | V <sub>F</sub>  | I <sub>F</sub> =1mA  |      |      | 0.9  | V     |
|                           |                 | I <sub>F</sub> =10mA   |      |      | 1    | V     |
|                           |                 | I <sub>F</sub> =50mA   |      |      | 1.1  | V     |
|                           |                 | I <sub>F</sub> =150mA  |      |      | 1.25 | V     |
| Reverse Current           | I <sub>R</sub>  | V <sub>R</sub> =75V  |      |      | 5    | nA    |
| Junction Capacitance      | CJ              | V <sub>R</sub> = 0V, f = 1MHz  |      |      | 4    | pF    |
| Reverse Recovery Time     | t <sub>rr</sub> | $I_F = I_R = 10 \text{mA},$<br>$I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$ |      |      | 3    | μs    |

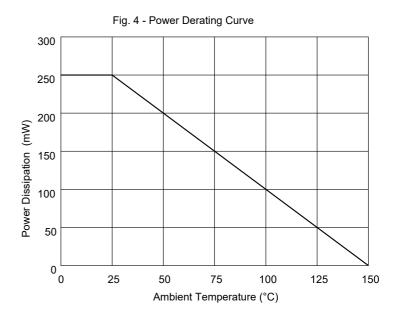


### **Curve Characteristics**











# **Ordering Information**

| Device       | Packing               |
|--------------|-----------------------|
| BAS716HE3-TP | Tape&Reel: 8Kpcs/Reel |

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