



## DESCRIPTION

The BAS16TW is available in SC-88 Package.

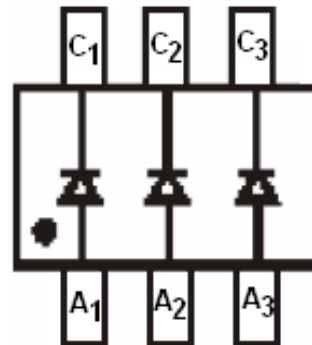
## FEATURES

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- Also Available in Lead Free Version
- Available in SC-88 Package

## ORDERING INFORMATION

Package Type	Part Number
SC-88	BAS16TW
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

## PIN DESCRIPTION





## ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$ , unless otherwise specified

$V_{RM}$ , Non-Repetitive Peak Reverse Voltage	100V
$V_{RRM}$ , Peak Repetitive Reverse Voltage	75V
$V_{RWM}$ , Working Peak Reverse Voltage	75V
$V_R$ , DC Blocking Voltage	75V
$V_{R(RMS)}$ , RMS Reverse Voltage	53V
$I_{FM}$ , Forward Continuous Current <sup>NOTE1</sup>	300mA
$I_O$ , Average Rectified Output Current <sup>NOTE1</sup>	150mA
$I_{FSM}$ , Non-Repetitive Peak Forward Surge Current	
@ $t = 1.0\mu\text{s}$	2.0A
@ $t = 1.0\text{s}$	1.0A
$P_D$ , Power Dissipation <sup>NOTE1</sup>	200mW
$R_{\theta JA}$ , Thermal Resistance Junction to Ambient Air <sup>NOTE1</sup>	625°C/W
$T_J, T_{STG}$ , Operating and Storage Temperature Range	-65°C ~ +150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



## ELECTRICAL CHARACTERISTICS

T<sub>A</sub> = 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse Breakdown Voltage <sup>NOTE2</sup>	V <sub>(BR)R</sub>	I <sub>R</sub> = 1μA	75	-	V
Forward Voltage <sup>NOTE2</sup>	V <sub>F</sub>	I <sub>F</sub> = 1.0mA	-	0.715	V
		I <sub>F</sub> = 10mA	-	0.855	
		I <sub>F</sub> = 50mA	-	1.0	
		I <sub>F</sub> = 150mA	-	1.25	
Reverse Current <sup>NOTE2</sup>	I <sub>R</sub>	V <sub>R</sub> = 75V	-	1.0	μA
		V <sub>R</sub> = 75V, T <sub>J</sub> = 150°C	-	50	
		V <sub>R</sub> = 25V, T <sub>J</sub> = 150°C	-	30	
		V <sub>R</sub> = 20V	-	25	nA
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> = 0V, f = 1.0MHz	-	2.0	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω	-	4.0	ns

NOTE1: Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

NOTE2: Short duration test pulse used to minimize self-heating effect.



## TYPICAL CHARACTERISTICS

Figure 1. Forward Voltage

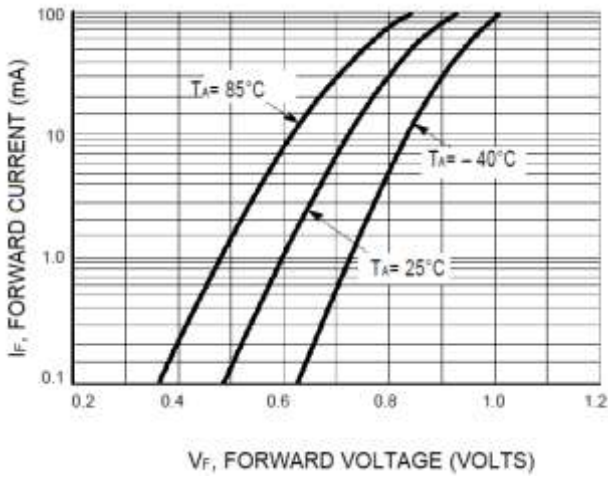


Figure 2. Leakage Current

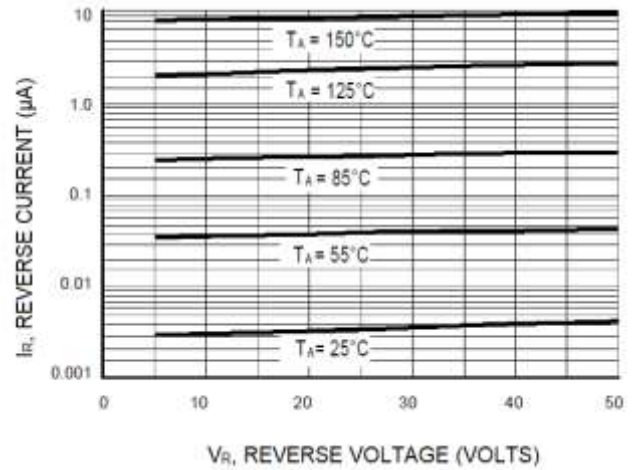
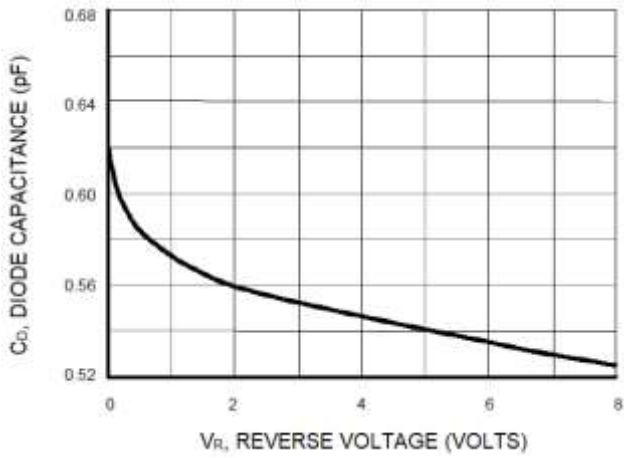


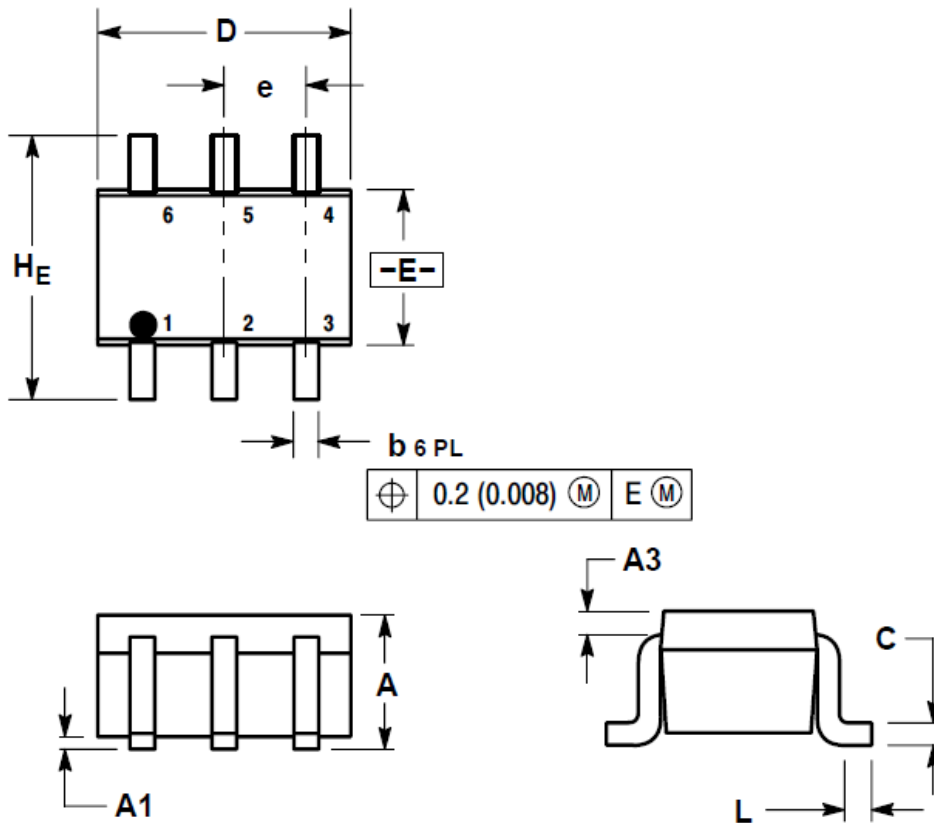
Figure 3. Capacitance





**PACKAGE INFORMATION**

Dimension in SC-88 Package (Unit: mm)





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