Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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BAS16WT1G

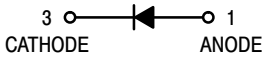
Silicon Switching Diode

Features

- S and NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC−Q101 Qualified and PPAP Capable
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

ON Semiconductor®

http://onsemi.com



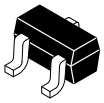
MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	100	V
Recurrent Peak Forward Current	I_R	200	mA
Peak Forward Surge Current Pulse Width = 10 μs	$I_{FM(surge)}$	500	mA
Total Power Dissipation, One Diode Loaded T_A = 25°C Derate above 25°C Mounted on a Ceramic Substrate (10 x 8 x 0.6 mm)	P_D	200 1.6	mW mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

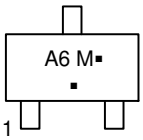
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction−to−Ambient One Diode Loaded Mounted on a Ceramic Substrate (10 x 8 x 0.6 mm)	$R_{\theta JA}$	625	°C/W



SC−70
CASE 419
STYLE 2

MARKING DIAGRAM



A6 = Specific Device Code
M = Date Code
▪ = Pb−Free Package
(*Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
BAS16WT1G	SC−70 (Pb−Free)	3000 / Tape & Reel
SBAS16WT1G	SC−70 (Pb−Free)	3000 / Tape & Reel
NSVBAS16WT3G	SC−70 (Pb−Free)	10000 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Forward Voltage	V_F			mV
(I_F = 1.0 mA)		–	715	
(I_F = 10 mA)		–	866	
(I_F = 50 mA)		–	1000	
(I_F = 150 mA)		–	1250	
Reverse Current	I_R			μA
(V_R = 100 V)		–	1.0	
(V_R = 75 V, T_J = 150°C)		–	50	
(V_R = 25 V, T_J = 150°C)		–	30	
Capacitance (V_R = 0, f = 1.0 MHz)	C_D	–	2.0	pF
Reverse Recovery Time (I_F = I_R = 10 mA, R_L = 50 Ω) (Figure 1)	t_{rr}	–	6.0	ns
Stored Charge (I_F = 10 mA to V_R = 6.0 V, R_L = 500 Ω) (Figure 2)	QS	–	45	PC
Forward Recovery Voltage (I_F = 10 mA, t_r = 20 ns) (Figure 3)	V_{FR}	–	1.75	V

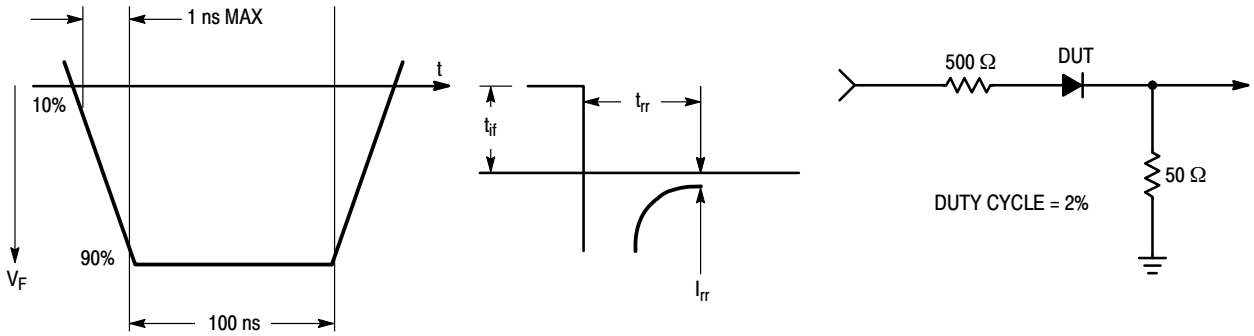


Figure 1. Reverse Recovery Time Equivalent Test Circuit

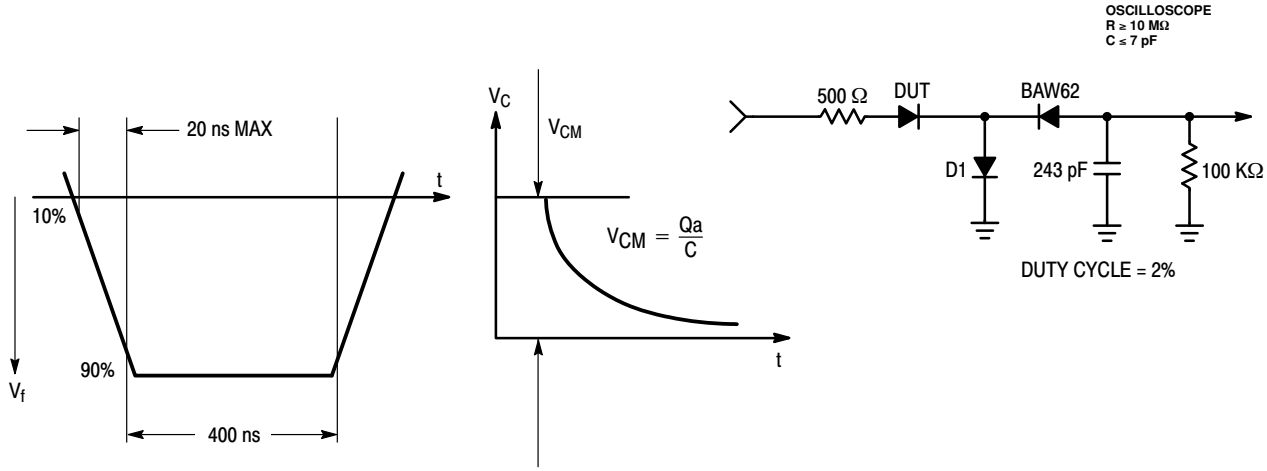


Figure 2. Stored Charge Equivalent Test Circuit

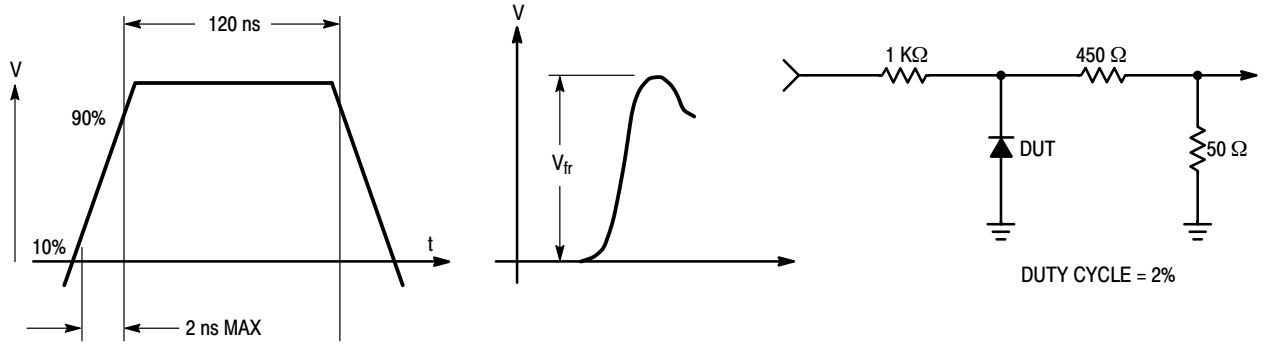


Figure 3. Forward Recovery Voltage Equivalent Test Circuit

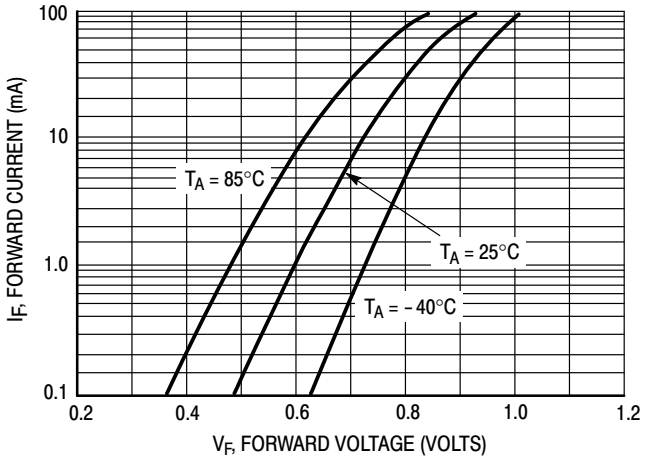


Figure 4. Forward Voltage

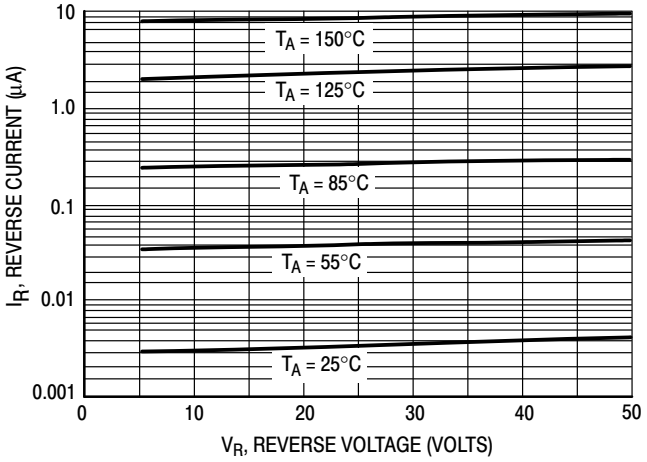


Figure 5. Leakage Current

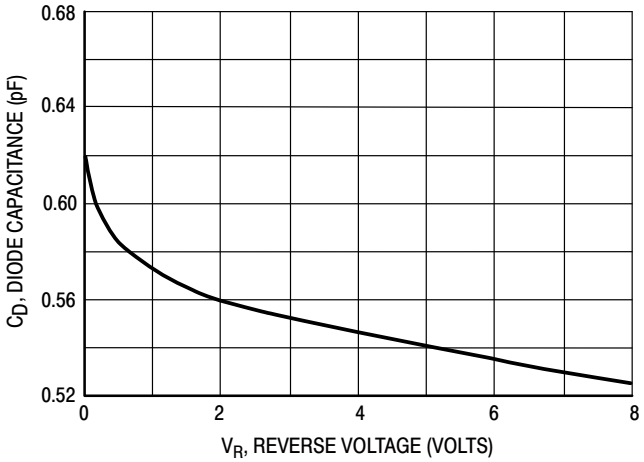
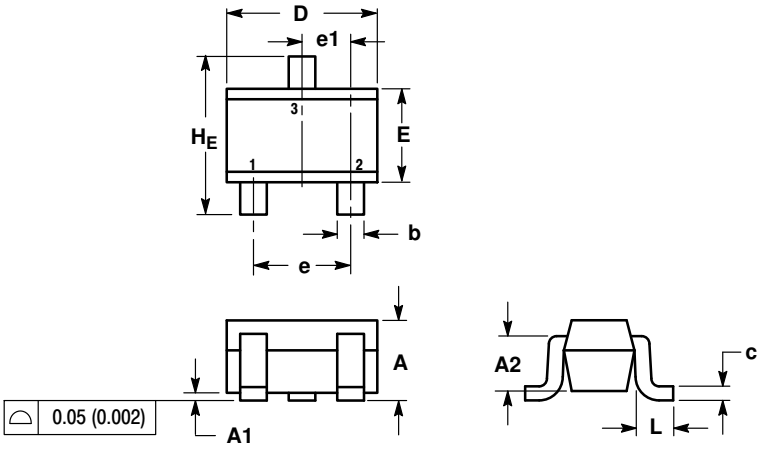


Figure 6. Capacitance

BAS16WT1G

PACKAGE DIMENSIONS

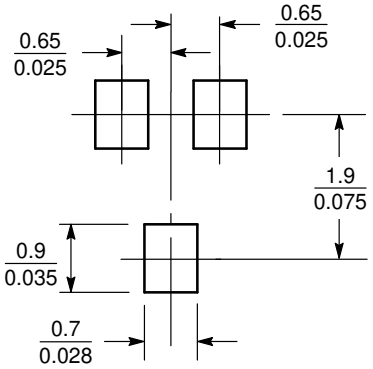
SC−70 (SOT−323)
CASE 419−04
ISSUE N



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2		0.70 REF			0.028 REF	
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1		0.65 BSC			0.026 BSC	
L	0.20	0.38	0.56	0.008	0.015	0.022
H_E	2.00	2.10	2.40	0.079	0.083	0.095

SOLDERING FOOTPRINT*



*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

PUBLICATION ORDERING INFORMATION

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BAS16WT1/D