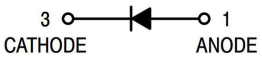
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BAS16WT1G

Silicon Switching Diode

- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant



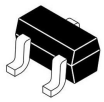
MAXIMUM RATINGS (T_A = 25°C)

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.

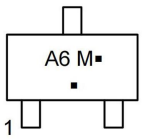
THERMAL CHARACTERISTICS

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



SOT-323

MARKING DIAGRAM



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

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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

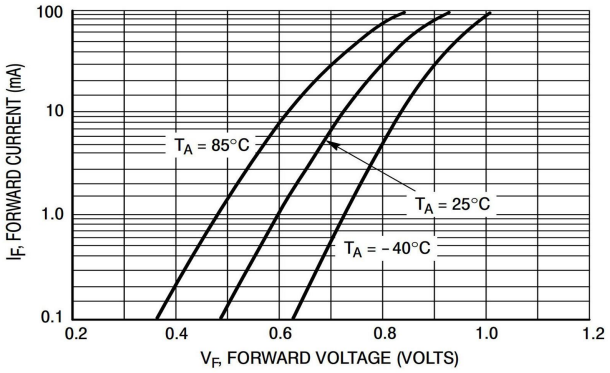


Figure 4. Forward Voltage

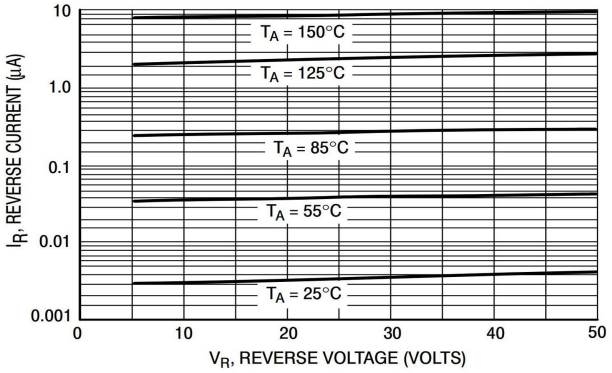


Figure 5. Leakage Current

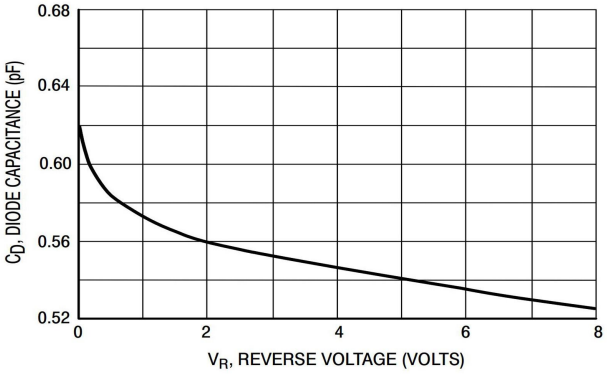


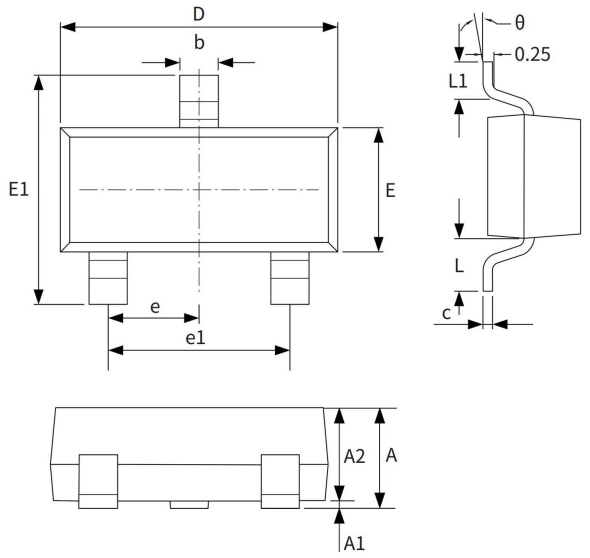
Figure 6. Capacitance

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Ordering Information

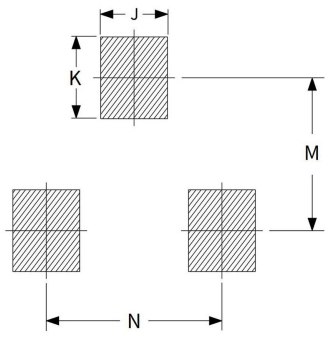
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-323	R1	0.005	3000	30000	240000	7''

Package Outline Dimensions (SOT-323)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.10	0.035	0.043
A1	-	0.10	-	0.004
A2	0.90	1.00	0.035	0.039
b	0.15	0.40	0.012	0.020
c	0.10	0.25	0.004	0.010
D	1.80	2.20	0.071	0.087
E	1.15	1.35	0.045	0.053
E1	2.15	2.45	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.26	0.46	0.010	0.018
θ	-	8°	-	8°

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.65	0.75	0.026	0.030
K	0.85	0.95	0.033	0.037
M	2.15	2.25	0.073	0.077
N	1.25	1.35	0.049	0.053