BAS16

CASE 318-02/03, STYLE 8
SOT-23 (TO-236AA/AB)

SWITCHING DIODE

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	V_{CC}
Peak Forward Current	I_F	200	mA
Peak Forward Surge Current	$I_{FM(surge)}$	500	mA

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, $T_A = 25°C$ Derate above 25°C	P_D	350 2.8	mW mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W

*Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Voltage Leakage Current	I_R			μA
($V_R = 75$ V)		—	1.0	
($V_R = 75$ V, $T_J = 150°C$)		—	50	
($V_R = 25$ V, $T_J = 150°C$)		—	30	
Reverse Breakdown Voltage ($I_{BR} = 100$ μA)	$V_{(BR)}$	75	—	V
Forward Voltage	V_F			mV
($I_F = 1.0$ mA)		—	715	
($I_F = 10$ mA)		—	855	
($I_F = 50$ mA)		—	1100	
($I_F = 100$ mA)		—	1300	
Diode Capacitance ($V_R = 0$, f = 1.0 MHz)	C_D	—	2.0	pF
Forward Recovery Voltage ($I_F = 10$ mA, $t_r = 20$ ns)	V_{FR}	—	1.75	V
Reverse Recovery Time ($I_F = I_R = 10$ mA, $R_L = 100\ \Omega$)	t_{rr}	—	6.0	ns
Stored Charge ($I_F = 10$ mA to $V_R = 5.0$ V, $R_L = 500\ \Omega$)	Q_S	—	45	pC