

225mW Surface Mount Switching Diode



RoHS
Compliant



Features:

- Fast switching speed
- For general purpose switching applications
- High conductance
- Silicon epitaxial planar chip

Mechanical Data:

Epoxy	: UL94-V0 rated flame retardant
Case	: Molded plastic, SOT-23
Terminals	: Solder plated, solderable per MIL-STD-750, method 2026
Mounting position	: Any
Weight	: Approximated 0.008 gram

Max. Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Reverse Voltage	V_R	75	V
Forward Current	I_F	200	mA
Peak Forward Surge Current	I_{FM}	500	mA
Non-Repetitive Peak Forward Surge Current @t = 1.0us @t = 1.0s	I_{FSM}	2 1	A
Thermal Characteristics			
Total Device Dissipation FR-5 Board*(1), $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225 1.8	mW mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation FR-5 Substrate*(2), $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300 2.4	mW mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	°C/W
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

*(1) FR-5 = 1.0×0.75×0.062 in

*(2) Alumina = 0.4×0.3×0.024 in.9935% alumina

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www.newark.com



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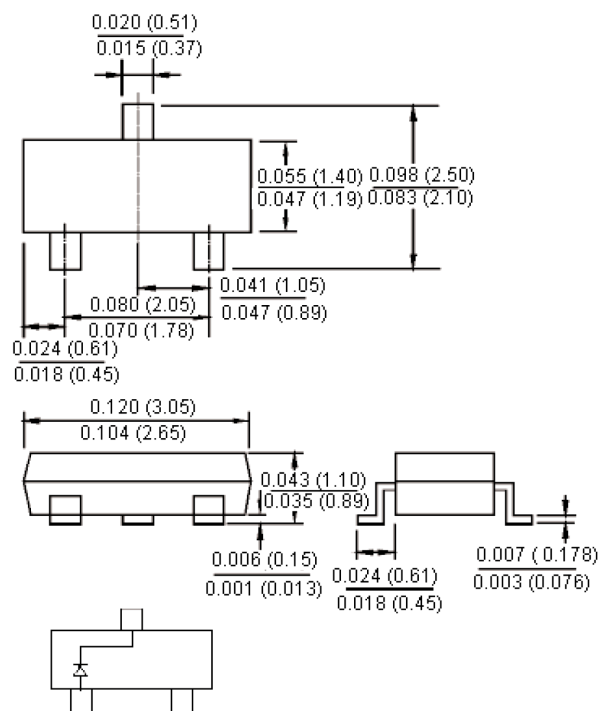


Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	Max.	Units
Reverse Breakdown Voltage ($I_{BR} = 100\mu A$)	V_{BR}	75	-	V
Reverse Voltage Leakage Current at $V_R = 75V$, $T_J = 25^\circ C$ at $V_R = 25V$, $T_J = 150^\circ C$ at $V_R = 75V$, $T_J = 150^\circ C$	I_R	-	1 30 50	μA
Diode Capacitance ($V_R = 0V$, $f = 1.0MHz$)	C_D	-	2	pF
Reverse Recovery Time ($I_F = I_R = 10mA$, $V_R = 5.0V$ DC, I_R (REC) = 1.0mA, $R_L = 100\Omega$)	T_{RR}	-	6	ns
Forward Voltage at $I_F = 1.0mA$ at $I_F = 10mA$ at $I_F = 50mA$ at $I_F = 150mA$	V_F	-	715 855 1000 1250	mV

SOT-23



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, High Speed, SOT-23	BAS16

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