

RoHS Compliant Product

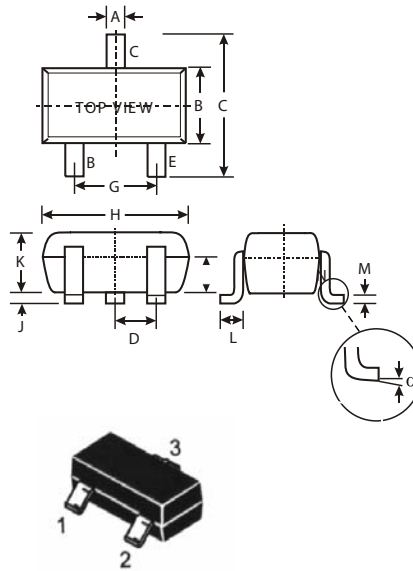
A suffix of "-C" specifies halogen & lead-free

FEATURES

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

MECHANICAL DATA

- * Case: SOT-523, Molded Plastic
- * Case material: UL Flammability Rating 94V-0
- * Moisture sensitivity: Level 1 per J-STD-020A
- * Terminals: Solderable per MIL-STD-202, Method 208
- * Polarity: See Diagrams Below
- * Weight: 0.002 grams (approx.)
- * Mounting Position: Any



SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
α	0°	8°	—
All Dimensions in mm			

Maximum Ratings @ T_A = 25 °C unless otherwise specified

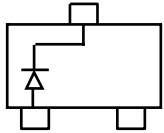
Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	85	V
RMS Reverse Voltage	V _{R(RMS)}	60	V
Forward Continuous Current (Note 2)	I _{FM}	155 75	mA
Repetitive Peak Forward Current	I _{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I _{FSM}	0.5	A
Power Dissipation (Note 2)	P _d	150	mW
Thermal Resistance Junction to Ambient (Note 2)	R _{θJA}	833	°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	°C

Electrical Characteristics @ T_A = 25 °C unless otherwise specified

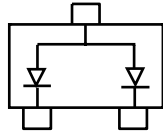
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	85	—	V	I _R = 100µA
Forward Voltage (Note 1)	V _F	—	0.715 0.855 1.0 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Leakage Current (Note 1)	I _R	—	2.0 100 60 30	µA µA µA nA	V _R = 75V V _R = 75V, T _j = 150°C V _R = 25V, T _j = 150°C V _R = 25V
Typical Total Capacitance	C _T	—	1.5	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	4.0	ns	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

- Notes: 1. Short duration test pulse to minimize self-heating effect.
2. Device mounted on FR-4 PC board with recommended pad layout.

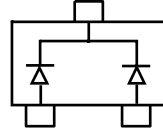
Marking



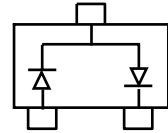
BAS16T Marking: A2



BAW56T Marking: JD



BAV70T Marking: JJ



BAV99T Marking: JE

Typical Characteristics

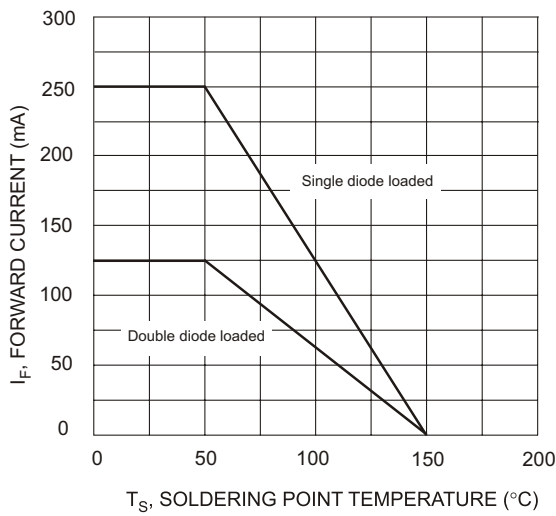


Fig. 1 Current Derating Curve

BAS16T/BAW56T/BAV70T/BAV99T

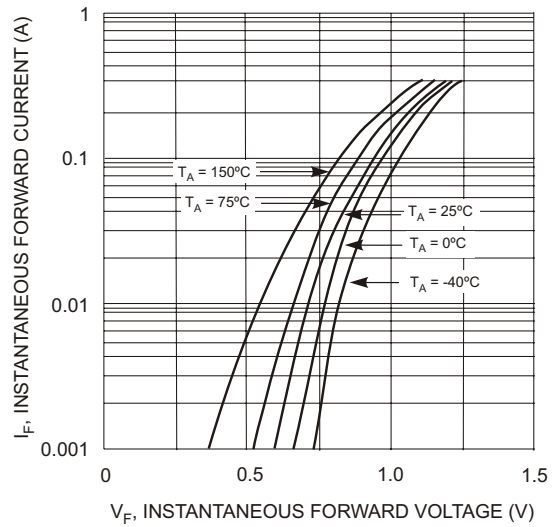


Fig. 2 Forward Characteristics

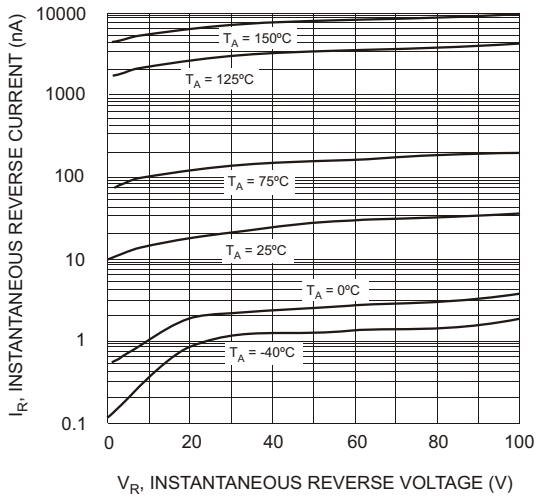


Fig. 3 Typical Reverse Characteristics

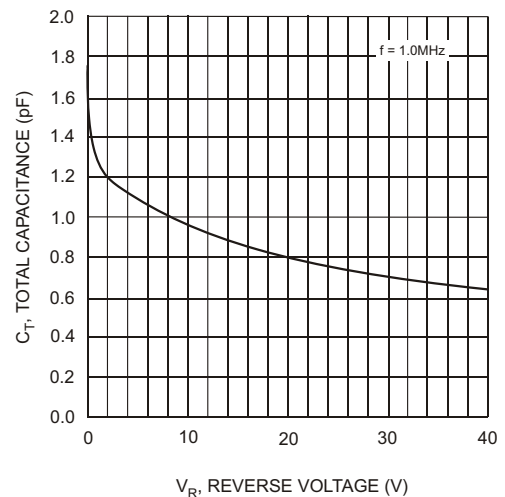


Fig. 4 Typical Capacitance vs. Reverse Voltage