



THE DATASHEET OF BAS21T-7

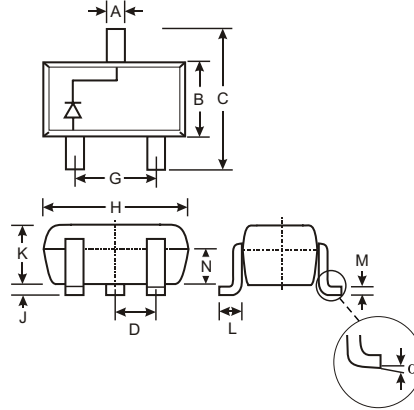


Features

- Ultra-Small Surface Mount Package
- Fast Switching Speed
- For General Purpose Switching Applications
- 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 Diagram
- Marking: T3 (See Page 2)
- Weight: 0.002 grams (approx.)



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
Repetitive Peak Reverse Voltage	V _{RRM}	250	V
Working Peak Reverse Voltage	V _{RWM}	200	V
DC Blocking Voltage	V _R	200	V
RMS Reverse Voltage	V _{R(RMS)}	141	V
Forward Continuous Current (Note 1)	I _{FM}	400	mA
Average Rectified Output Current (Note 1)	I _O	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I _{FSM}	2.5 0.5	A
Repetitive Peak Forward Surge Current	I _{FRM}	625	mA
Power Dissipation (Note 1)	P _d	150	mW
Thermal Resistance Junction to Ambient (Note 1)	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 2)	V _{(BR)R}	250	—	V	I _R = 100μA
Forward Voltage (Note 2)	V _F	—	1.0 1.25	V	I _F = 100mA I _F = 200mA
Reverse Current @ Rated DC Blocking Voltage (Note 2)	I _R	—	100 15	nA μA	T _J = 25°C T _J = 100°C
Total Capacitance	C _T	—	5.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	50	ns	I _F = I _R = 30mA, I _{rr} = 0.1 x I _R , R _L = 100Ω

- Notes:
1. Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration test pulse used to minimize self-heating effect.

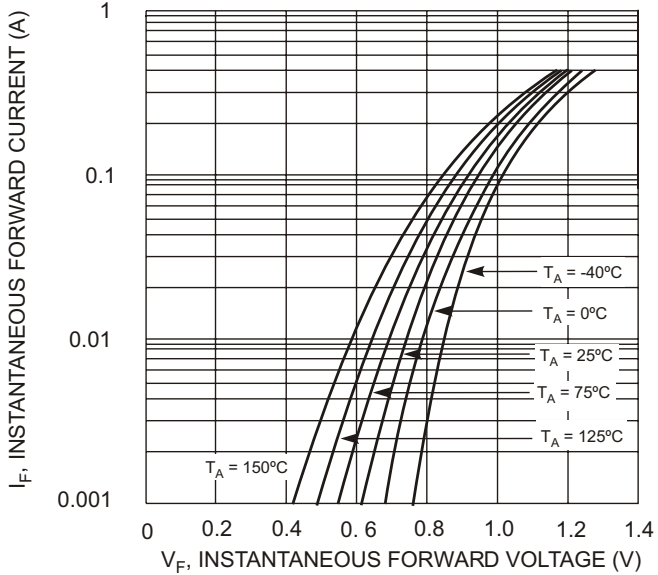


Fig. 1 Typical Forward Characteristics

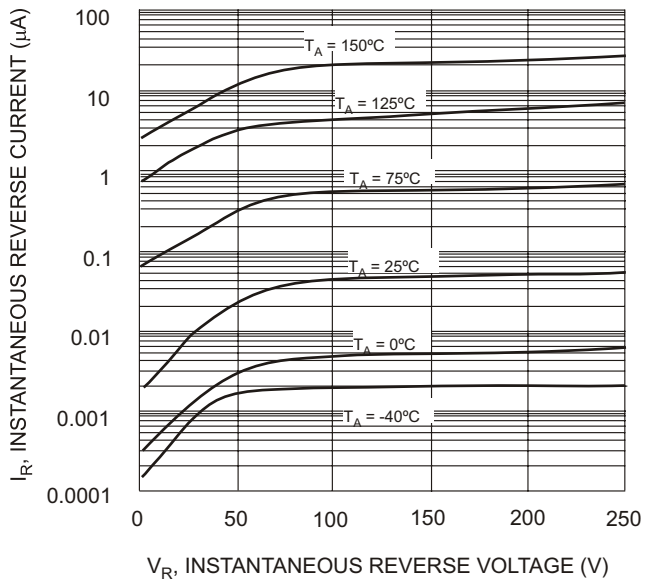


Fig. 2 Typical Reverse Characteristics

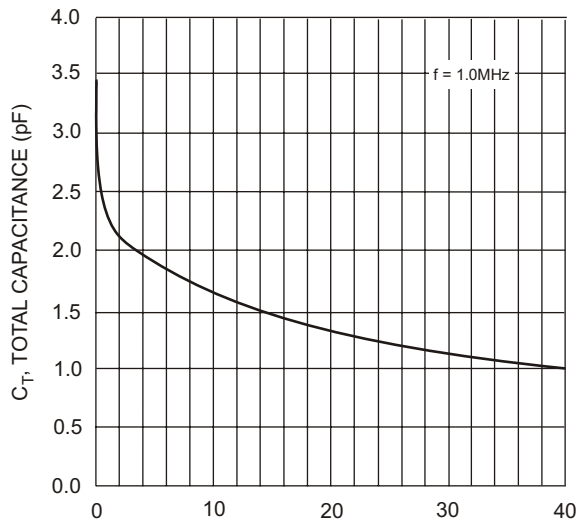


Fig. 3 Typical Capacitance vs. Reverse Voltage

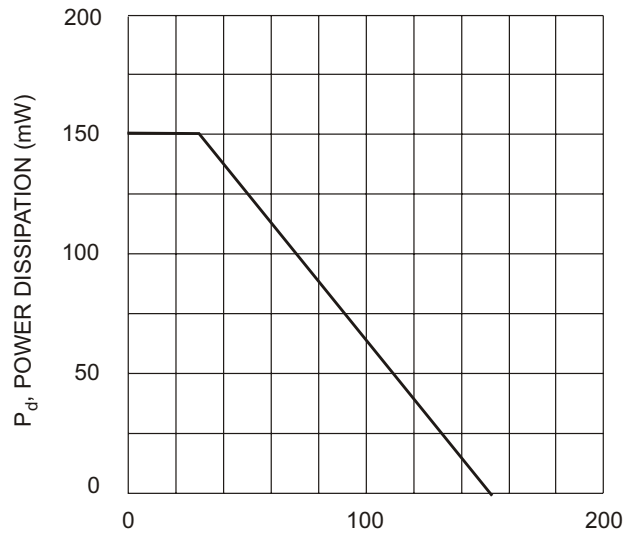


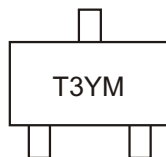
Fig. 4 Power Derating Curve, Total Package

Ordering Information (Note 3)

Device	Packaging	Shipping
BAS21T-7	SOT-523	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



T3 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	M	N	P	R	S	T	U	V	W

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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