BAS40T/-04T/-05T/-06T

SURFACE MOUNT SCHOTTKY BARRIER DIODE

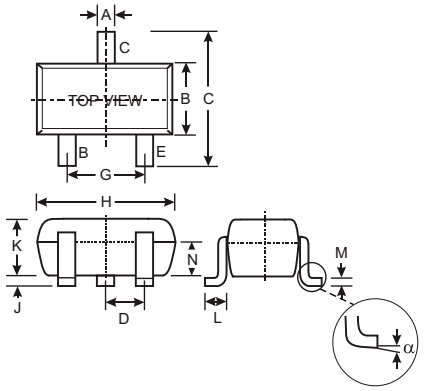
NEW PRODUCT

Features

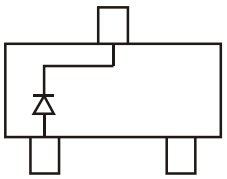
- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection

Mechanical Data

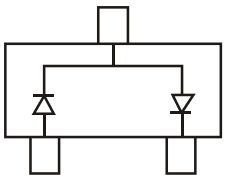
- Case: SOT-523, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Marking: See Diagrams Below (& Page 2)
- Weight: 0.002 grams (approx.)
- Ordering Information, see Page 2



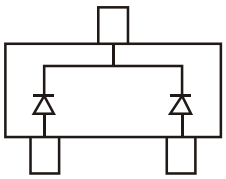
SOT-523			
Dim	**Min**	**Max**	**Typ**
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D			0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
	0	8	
All Dimensions in mm			



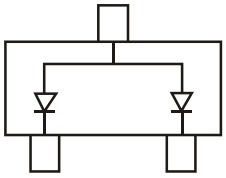
BAS40T Marking: 43



BAS40-04T Marking: 44



BAS40-05T Marking: 45



BAS40-06T Marking: 46

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	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Forward Continuous Current (Note 1)	I_{FM}	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0s	I_{FSM}	600	mA
Power Dissipation (Note 1)	P_d	150	mW
Thermal Resistance Junction to Ambient (Note 1)	R_{JA}	833	C/W
Operating Temperature Range	T_j	-55 to +125	C
Storage Temperature Range	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)	$V_{(BR)R}$	40		V	I_R = 10 A
Forward Voltage (Note 2)	V_F		380 1000	mV mV	I_F = 1.0mA, t_p < 300 s I_F = 40mA, t_p < 300 s
Leakage Current (Note 2)	I_R		200	nA	V_R = 30V
Total Capacitance	C_T		5.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}		5.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100

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.

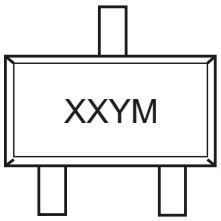
NEW PRODUCT

Ordering Information (Note 3)

Device	Packaging	Shipping
BAS40T-7	SOT-523	3000/Tape & Reel
BAS40-04T-7	SOT-523	3000/Tape & Reel
BAS40-05T-7	SOT-523	3000/Tape & Reel
BAS40-06T-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



XX = Product Type Marking Code (See Page 1, e.g. 43 = BAS40T)
YM = Date Code Marking
Y = Year (ex: N = 2002)
M = Month (ex: 9 = September)

Date Code Key

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	L	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