



BAS40/ -04/ -05/ -06

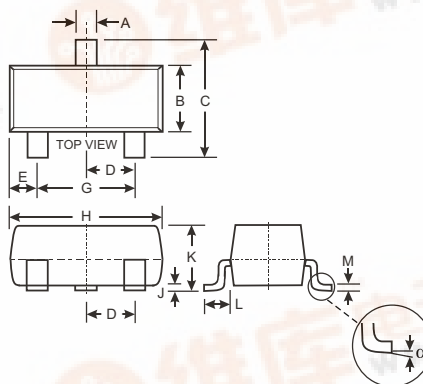
SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

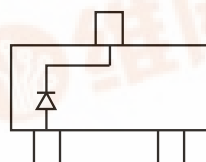
Low Forward Voltage Drop
Fast Switching
PN Junction Guard Ring for Transient and ESD Protection

Mechanical Data

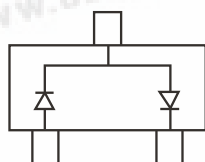
Case: SOT-23, Molded Plastic
Case material - UL Flammability Rating Classification 94V-0
Moisture sensitivity: Level 1 per J-STD-020A
Terminals: Solderable per MIL-STD-202, Method 208
Polarity: See Diagram Below
Weight: 0.008 grams (approx.)
Marking Code: See Diagrams Below & Page 2
Ordering Information: See Page 2



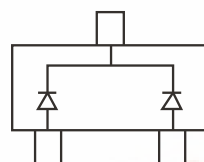
SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.85	0.80
	0	8
All Dimensions in mm		



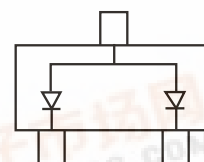
BAS40 Marking: K43



BAS40-04 Marking: K44



BAS40-05 Marking: K45



BAS40-06 Marking: K46

Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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
Forward Continuous Current (Note 1)	I_{FM}	200	mA
Power Dissipation (Note 1)	P_d	350	mW
Forward Surge Current (Note 1) @ $t < 1.0\text{s}$	I_{FSM}	600	mA
Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}	357	$^\circ\text{C/W}$
Operating Temperature Range	T_j	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	40	—	—	V	$I_R = 10\text{ }\mu\text{A}$
Forward Voltage (Note 2)	V_F	—	—	380 1000	mV	$t_p < 300\text{ }\mu\text{s}$, $I_F = 1.0\text{mA}$ $t_p < 300\text{ }\mu\text{s}$, $I_F = 40\text{mA}$
Reverse Leakage Current (Note 2)	I_R	—	20	200	nA	$t_p < 300\text{ }\mu\text{s}$, $V_R = 30\text{V}$
Total Capacitance	C_T	—	4.0	5.0	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	5.0	ns	$I_F = I_R = 10\text{mA}$ to $I_R = 1.0\text{mA}$, $R_L = 100\text{ }\Omega$

Note: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

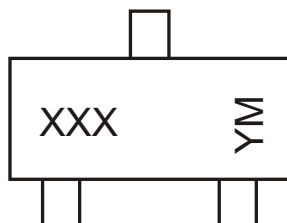
2. Short duration pulse test used to minimize self-heating effect.

Ordering Information (Note 3)

Device	Packaging	Shipping
BAS40-7 BAS40-04-7 BAS40-05-7 BAS40-06-7	SOT-23	3000/Tape & Reel

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

Marking Information



XXX = Product Type Marking Code (See Page 1)
YM = Date Code Marking
Y = Year ex: N = 2002
M = Month ex: 9 = September

Date Code Key

Year	2001	2002	2003	2004	2005
Code	M	N	P	R	S

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