LITE-ON SEMICONDUCTORS

BAS40, BAS40-04 thru -06

SURFACE MOUNT
SCHOTTKY BARRIER DIODE

REVERSE VOLTAGE – 40 Volts
FORWARD CURRENT – 0.2 Ampere

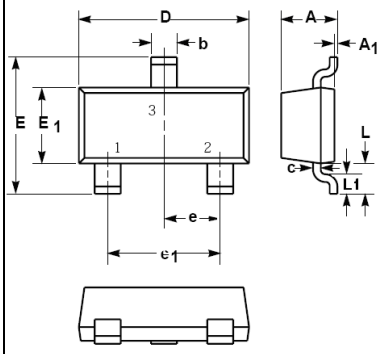
FEATURES

- Extremely Fast Switching Speed
- Low Forward Voltage
- Very Small Conduction Losses

MECHANICAL DATA

- Case: SOT-23 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

SOT-23



SOT-23		
Dim.	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	2.25	2.55
E1	1.20	1.40
e	0.95 Typ.	
e1	1.80	2.00
L	0.55 Ref.	
L1	0.30	0.50
Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Symbol	BAS40	BAS40 -04	BAS40 -05	BAS40 -06	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40				V
Forward Continuous Current	I_{FM}	200				mA
Forward Surge Current @t<1.0s	I_{FSM}	600				mA
Power Dissipation	P_D	200				mW
Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	625				℃/W
Operating Temperature Range	T_J	125				℃
Storage Temperature Range	T_{STG}	-65~+125				℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	BAS40	BAS40 -04	BAS40 -05	BAS40 -06	Unit
Reverse Breakdown Voltage	I_R = 10uA	V_{BR}	40				V
Maximum Forward Voltage	I_F = 1mA I_F = 40mA	V_F	380 1000				mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R = 30V	I_R	200				nA
Typical Diode Capacitance	V_R =1.0V,f=1MHz	C_D	5				pF
Reverse Recovery time	Irr=1mA, IR=IF=10mA RL=100Ω	trr	5				nS

RATING AND CHARACTERISTIC CURVES
BAS40, BAS40-04 thru -06

FIG.1- TYPICAL FORWORD CHARACTERISTICS

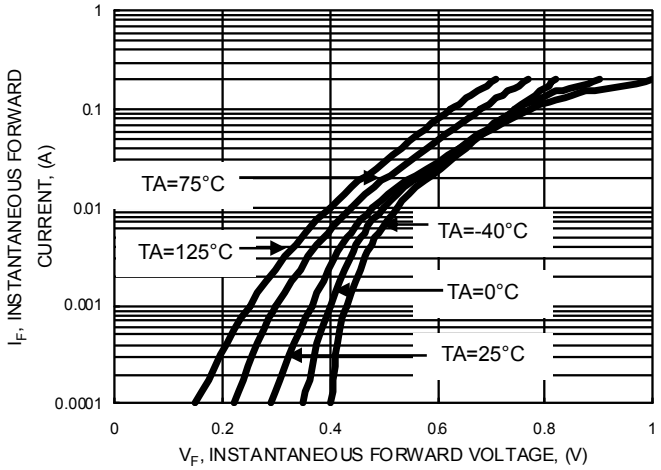


FIG.2- TYPICAL REVERSE CHARACTERISTICS

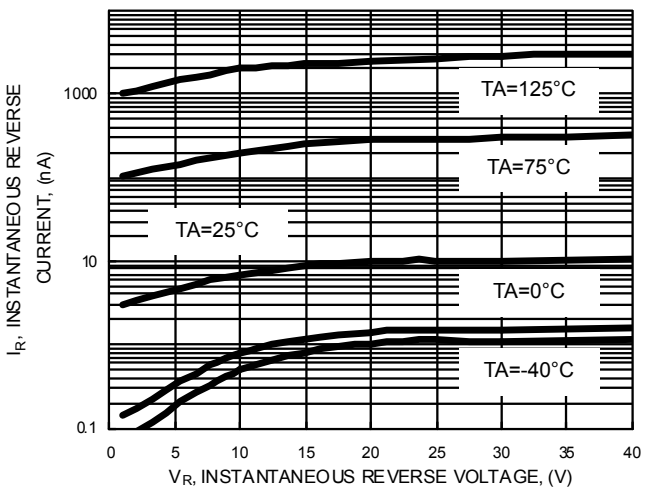


FIG.3- TYPICAL JUNCTION CAPACITANCE

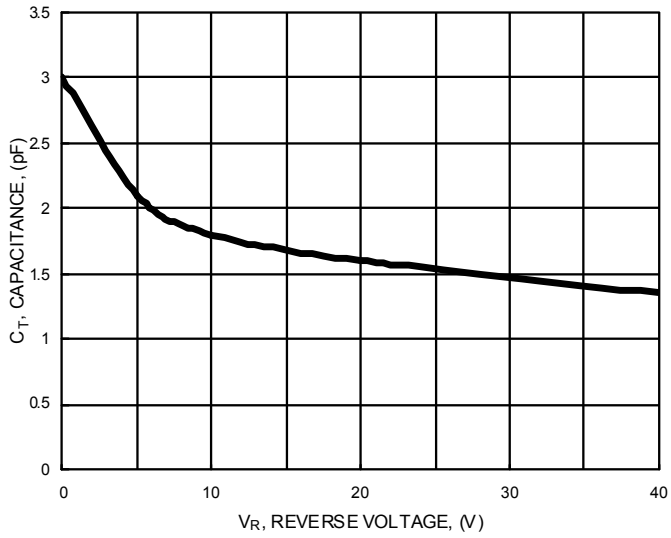
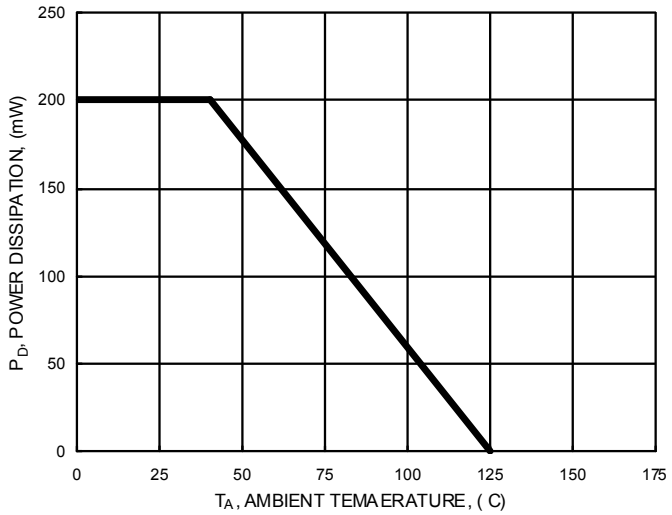
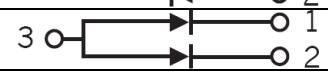


FIG.4- POWER DERATING CURVE



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAS40	43	
BAS40-04	44	
BAS40-05	45	
BAS40-06	46	

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