LITE-ON SEMICONDUCTORS

BAS19W thru BAS21W

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 100 to 200 Volts
FORWARD CURRENT – 0.2 Ampere

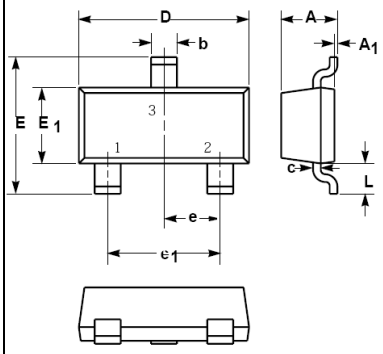
FEATURES

- Fast Switching Speed
- Ideally suited for automatic insertion
- For general purpose switching applications

MECHANICAL DATA

- Case: SOT-323 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-323



SOT-323		
Dim.	Min.	Max.
A	0.90	1.10
A1	0.00	0.10
b	0.20	0.40
c	0.08	0.15
D	2.00	2.20
E	2.15	2.45
E1	1.15	1.35
e	0.65 Typ.	
e1	1.20	1.40
L	0.525 Ref.	
Dimensions in millimeter		

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

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Units
Repetitive Peak Reverse Voltage	V_{RRM}	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	V_{RWM} V_R	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Average Rectified Output Current	I_O	200			mA
Non-Repetitive Peak Forward Surge Current @t=1.0us	I_{FSM}	2.5			A
Power Dissipation	P_D	200			mW
Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	625			℃/W
Operating Temperature Range	T_J	150			℃
Storage Temperature Range	T_{STG}	-65~+150			℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	BAS19W	BAS20W	BAS21W	Unit
Reverse Breakdown Voltage	I_R = 100uA	V_{BR}	100	150	250	V
Maximum Forward Voltage	I_F = 100mA I_F = 200mA	V_F	1 1.25			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R = 100V V_R = 150V V_R = 200V	I_R	0.1 -- --	-- 0.1 --	-- -- 0.1	uA
Typical Diode Capacitance	V_R =0V,f=1MHz	C_D	5			pF
Reverse Recovery time	Irr=3mA, I_F=I_R=30mA, R_L=100Ω	trr	50			nS

REV. 2, Oct-2010, KSYR25

RATING AND CHARACTERISTIC CURVES
BAS19W thru BAS21W

Fig.1 Typical Forward Characteristics

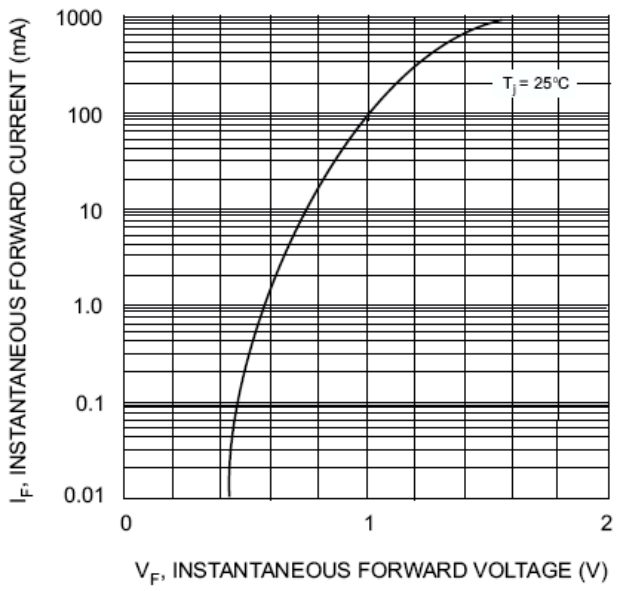
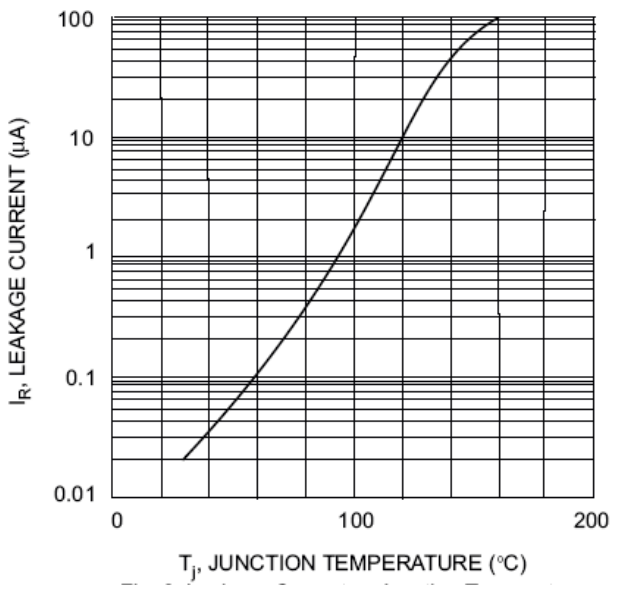


Fig.2 Typical Reverse Characteristics



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAS19W	KA8	
BAS20W	KT2	
BAS21W	KT3	

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