LITE-ON SEMICONDUCTORS

BAS116

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 75 Volts
FORWARD CURRENT – 0.2 Ampere

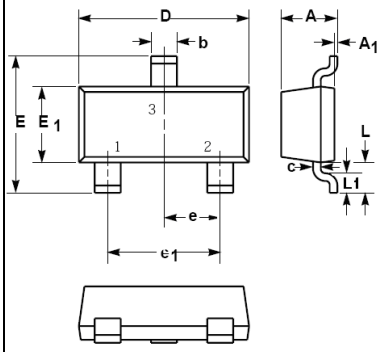
FEATURES

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

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	BAS116	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V_{RRM} V_{RWM} V_R	75	V
Forward Continuous Current		I_{FM}	200	mA
Non-Repetitive Peak Forward Surge Current	@t=1.0us	I_{FSM}	2	A
Power Dissipation		P_D	225	mW
Operating Temperature Range		T_J	150	℃
Storage Temperature Range		T_{STG}	-55~+150	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	I_R = 100uA	V_{BR}	75	--	--	V
Maximum Forward Voltage	I_F = 1mA I_F = 10mA I_F = 50mA I_F = 150mA	V_F	-- -- -- --	-- -- -- --	0.9 1.0 1.1 1.25	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R = 75V	I_R	--	--	5	nA
Typical Diode Capacitance	V_R =0V,f=1MHz	C_D	--	2	--	pF
Reverse Recovery time	Irr=1mA, I_R=I_F=10mA R_L=100Ω	trr	--	--	6	ns

RATING AND CHARACTERISTIC CURVES
BAS116

Fig.1 Current Derating Curve

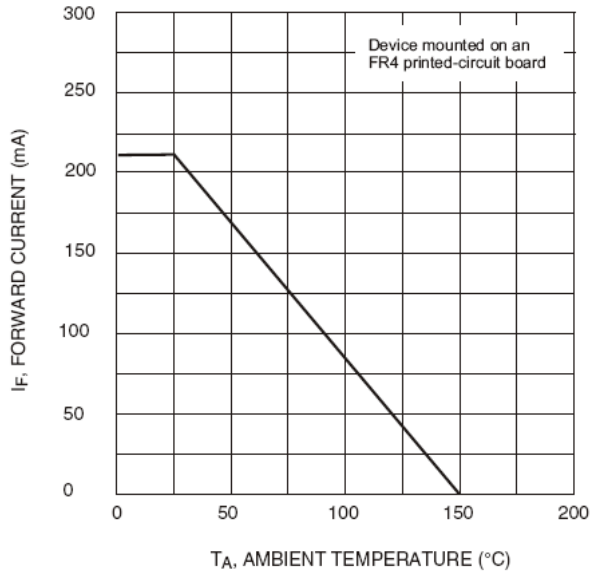


Fig.2 Typical Forward Characteristics

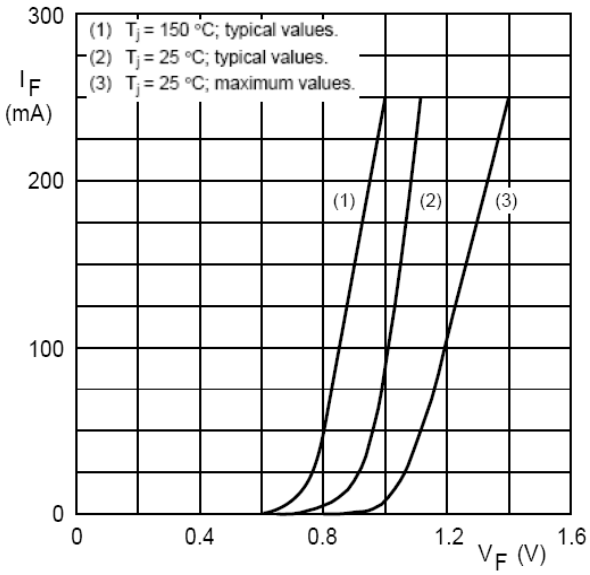


Fig.3 Maximum permissible non-repetitive peak forward current

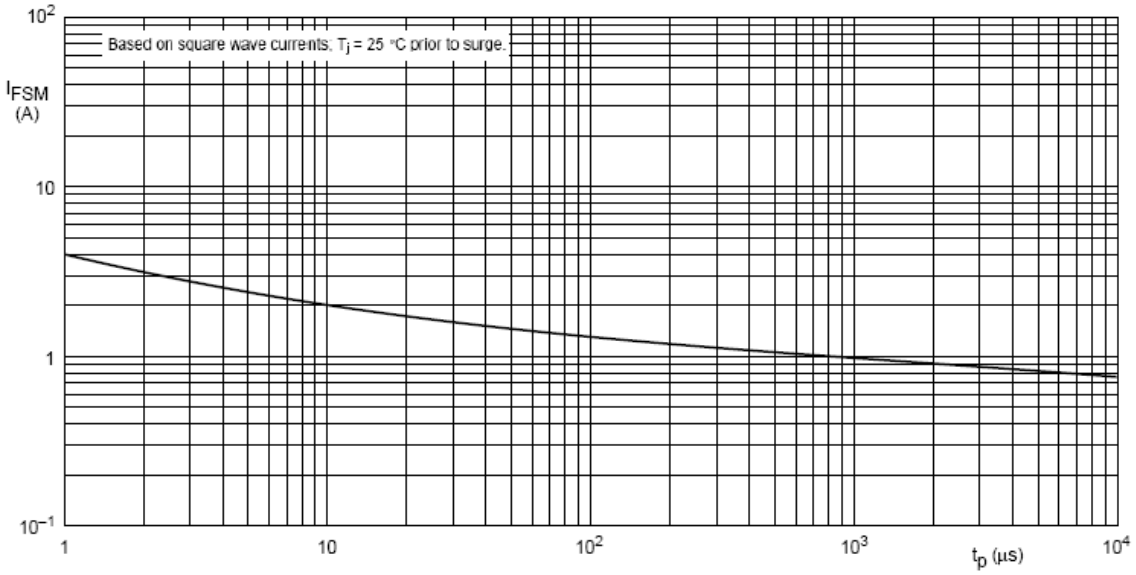


Fig.4 Typical Reverse Characteristics

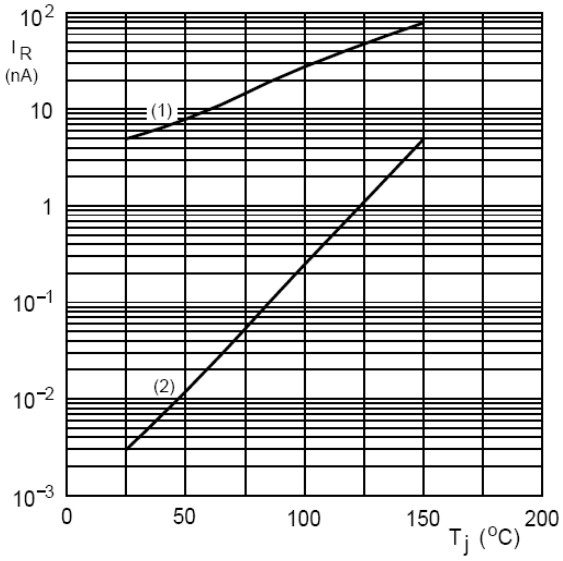
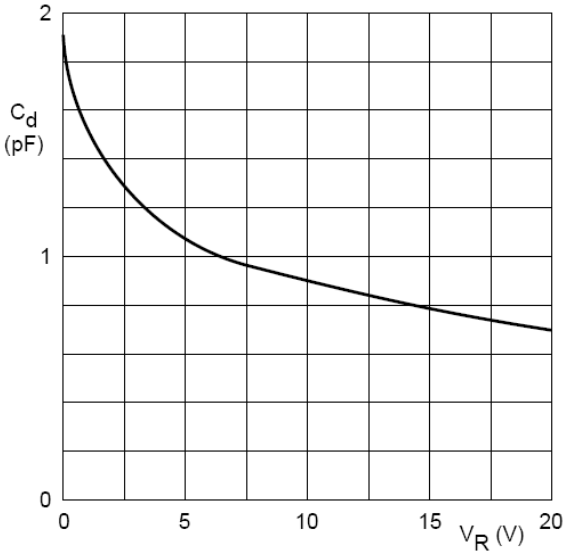


Fig.5 Total Capacitance vs. Reverse Voltage



Device Marking :

Device P/N	Marking code	Equivalent Circuit Diagram
BAS116	JV	

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