

BAS116

PRV : 85 Volts
Io : 215 mA

FEATURES :

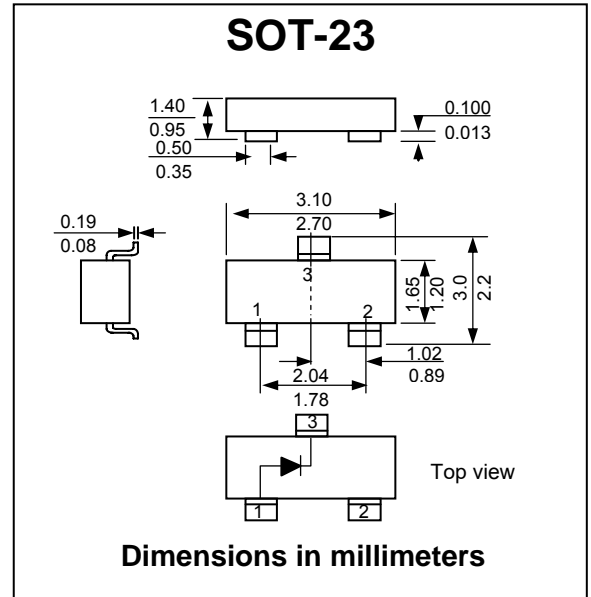
- * Small plastic SMD package
- * Low leakage current
- * High switching speed
- * Continuous reverse voltage: max. 75 V
- * Repetitive peak reverse current: max. 85 V
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOT-23 plastic Case
- * Marking code : "JV"

LOW - LEAKAGE DIODE

SOT-23



MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (Ta =25 °C)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Maximum Continuous Reverse Voltage	V_R	75	V
Maximum Continuous Forward Current (Note 1)	I_F	215	mA
Maximum Repetitive Peak Forward Current	I_{FRM}	500	mA
Maximum Non-repetitive Peak Forward Surge Current (square wave; $T_j=25\text{ }^\circ\text{C}$ prio to surge)	I_{FSM}	4.0 1.0 0.5	A
	$t = 1\ \mu\text{s}$		
	$t = 1\ \text{ms}$		
	$t = 1\ \text{s}$		
Total Power Dissipation (Note 1)	P_{tot}	250	mW
Thermal Resistance Junction to Tie-point	$R_{th\ j-tp}$	330	K/W
Thermal Resistance Junction to Ambient (Note 1)	$R_{th\ j-a}$	500	K/W
Junction Temperature Range	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (Tj = 25 °C unless otherwise specified)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	$I_F = 1\ \text{mA}$	V_F	-	-	0.90	V
	$I_F = 10\ \text{mA}$		-	-	1.00	V
	$I_F = 50\ \text{mA}$		-	-	1.10	V
	$I_F = 150\ \text{mA}$		-	-	1.25	V
Reverse Current	$V_R = 75\ \text{V}$	I_R	-	0.003	5	nA
	$V_R = 75\ \text{V}, T_j = 150\text{ }^\circ\text{C}$		-	3	80	nA
Diode Capacitance	$V_R = 0\ \text{V}, f = 1\ \text{MHz}$	C_D	-	2	-	pF
Reverse Recovery Time	$I_F = 10\ \text{mA}$ to $I_R = 10\ \text{mA}$, $R_L = 100\ \Omega$: measured at $I_R = 1\ \text{mA}$	T_{rr}	-	0.8	3	μs

Note : (1) Device mounted on an FR4 printed-circuit board.

RATINGS AND CHARACTERISTIC CURVES (BAS116)

FIG.1 - MAXIMUM CONTINUOUS FORWARD CURRENT VS. AMBIENT TEMPERATURE

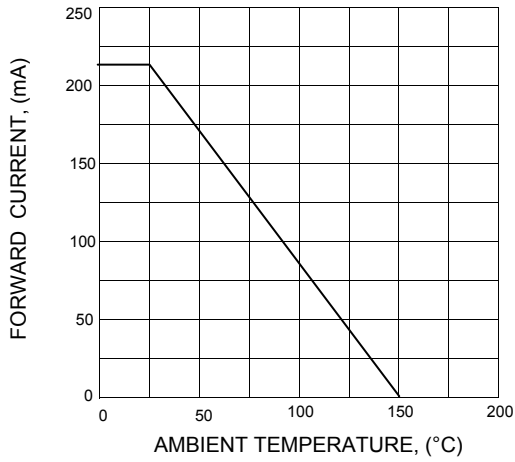


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES

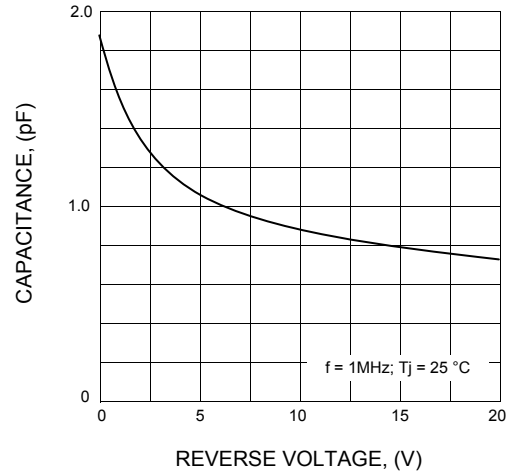


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES

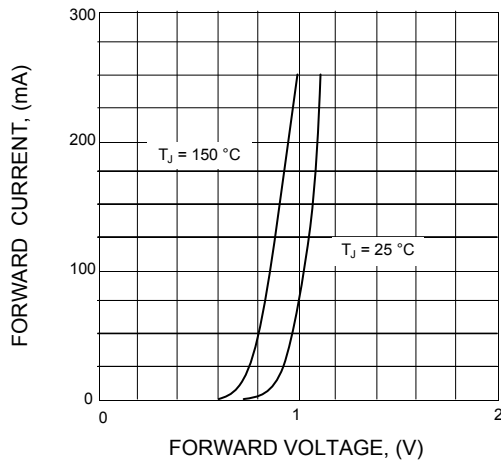


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE; TYPICAL VALUES

