

BAW56

PRV : 85 Volts

Io : 125 mA

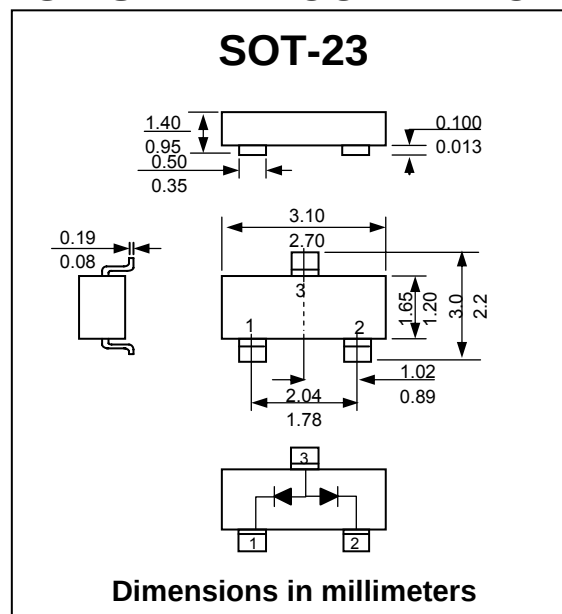
FEATURES :

- * Small plastic SMD package
- * High switching speed : max. 4 ns
- * Continuous reverse voltage : max. 75 V
- * Repetitive peak reverse voltage : max. 85 V
- * Repetitive peak forward current : max. 450 mA
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOT-23 plastic Case
- * Marking Code : A1

HIGH SPEED DOUBLE DIODE



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

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 (Single diode loaded)	I_F	215	mA
(Note 1) (Double diode loaded)		125	
Maximum Repetitive Peak Forward Current	I_{FRM}	450	mA
Maximum Non-repetitive Peak Forward Current (square wave; $T_j = 25^\circ\text{C}$ prior to surge)	I_{FSM}	4	A
$t = 1\mu\text{s}$		1	
$t = 1\text{ms}$		0.5	
$t = 1\text{s}$			
Total Power Dissipation (Note 1)	P_{tot}	250	mW
Thermal Resistance Junction to tie-point	$R_{th\ j\text{-}tp}$	360	K/W
Thermal Resistance Junction to Ambient (Note 1)	$R_{th\ j\text{-}a}$	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	-	-	715	mV
	$I_F = 10\text{ mA}$	V_F	-	-	855	mV
	$I_F = 50\text{ mA}$	V_F	-	-	1.00	V
	$I_F = 150\text{ mA}$	V_F	-	-	1.25	V
Reverse Current	$V_R = 25\text{ V}$	I_R	-	-	30	nA
	$V_R = 75\text{ V}$	I_R	-	-	1.0	μA
	$V_R = 25\text{ V} ; T_j = 150^\circ\text{C}$	I_R	-	-	30	μA
	$V_R = 75\text{ V} ; T_j = 150^\circ\text{C}$	I_R	-	-	50	μA
Diode Capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$	C_D	-	-	2	pF
Reverse Recovery Time	$I_F = 10\text{ mA to } I_R = 10\text{ mA},$ $I_R = 1\text{ mA}, R_L = 100\ \Omega$	T_{rr}	-	-	4	ns

Note : (1) Device mounted on an FR-4 printed-circuit board

RATINGS AND CHARACTERISTIC CURVES (BAW56)

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

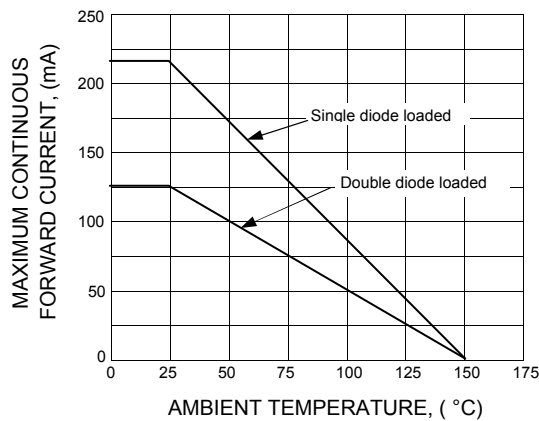


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE

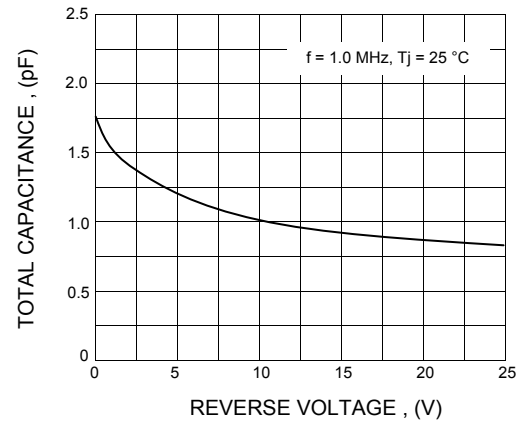


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE; TYPICAL VALUES

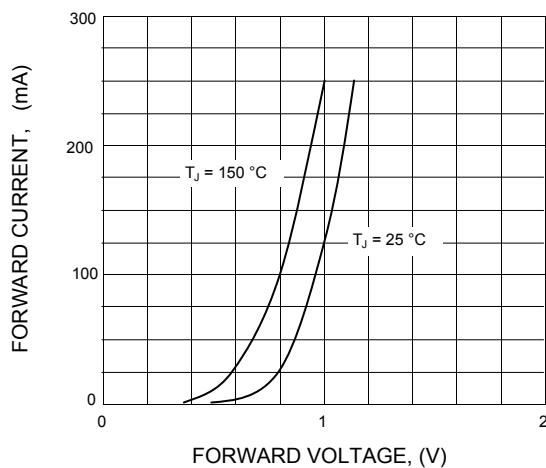


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

