

# BAW56

**PRV : 85 Volts**

**Io : 125 mA**

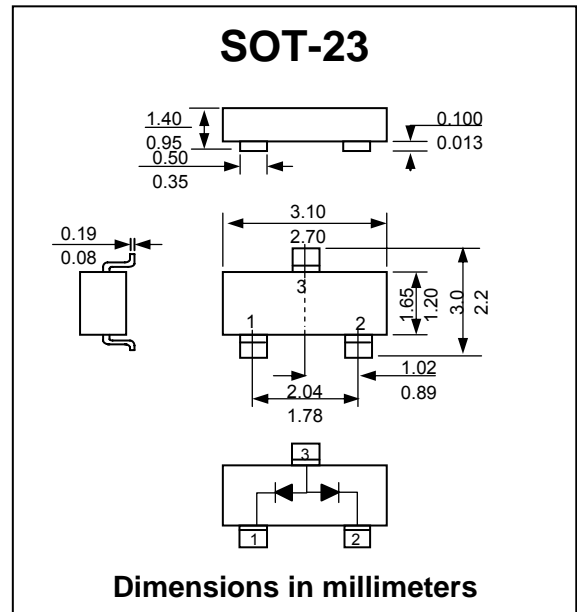
## FEATURES :

- \* 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; Tj = 25 °C prior to surge)	$I_{FSM}$	t = 1 $\mu$ s: 4	A
		t = 1ms: 1	
		t = 1s: 0.5	
Total Power Dissipation (Note 1)	$P_{tot}$	250	mW
Thermal Resistance Junction to tie-point	$R_{th\ j-tp}$	360	K/W
Thermal Resistance Junction to Ambient (Note 1)	$R_{th\ j-a}$	500	K/W
Junction Temperature Range	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-65 to +150	°C

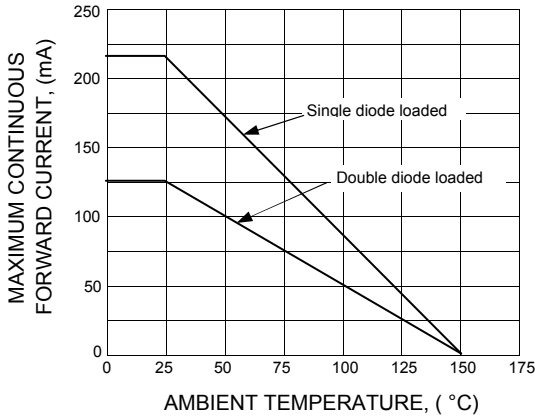
## ELECTRICAL CHARACTERISTICS (Tj = 25 °C unless otherwise specified)

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	$\mu$ A
	$V_R = 25\text{ V}$ ; Tj = 150 °C	$I_R$	-	-	30	$\mu$ A
	$V_R = 75\text{ V}$ ; Tj = 150 °C	$I_R$	-	-	50	$\mu$ A
Diode Capacitance	$V_R = 0\text{ V}$ , f = 1 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

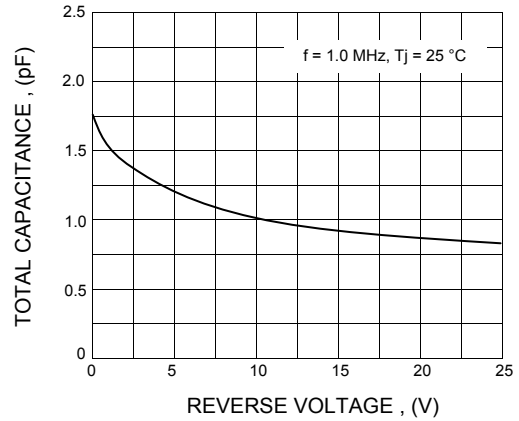
Note : (1) Device mounted on an FR-4 printed-circuit board

**RATINGS AND CHARACTERISTIC CURVES ( BAW56 )**

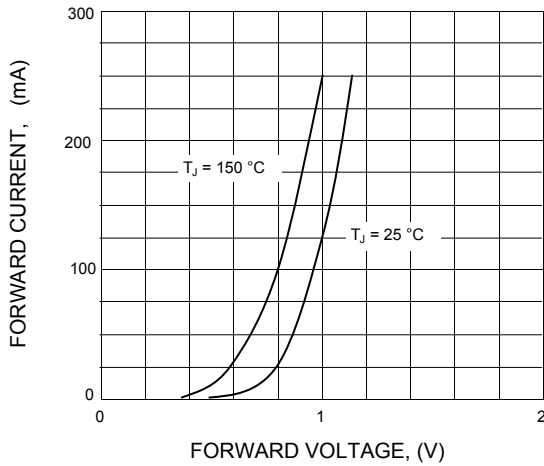
**FIG.1 - MAXIMUM CONTINUOUS FORWARD CURRENT VS. AMBIENT TEMPERATURE**



**FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE**



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



**FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE**

