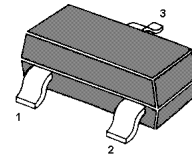
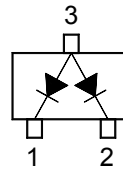


# BAW56

## HIGH SPEED DOUBLE SWITCHING DIODE

### Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



### Applications

- Ultra high speed switching application

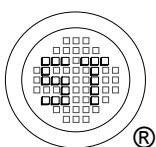
Marking Code: **A1**  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	85	V
Continuous Reverse Voltage	$V_R$	75	V
Forward Current (DC)	Single Diode Loaded	215	mA
	Double Diode Loaded	125	
Repetitive Peak Forward Current	$I_{FRM}$	450	mA
Non-Repetitive Peak Forward Current	$I_{FSM}$	at $t = 1\text{ }\mu\text{s}$	4
		at $t = 1\text{ ms}$	1
		at $t = 1\text{ s}$	0.5
Power Dissipation	$P_{tot}$	250	mW
Operating Junction Temperature Range	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	- 65 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage	$V_F$	at $I_F = 1\text{ mA}$	715
		at $I_F = 10\text{ mA}$	855
		at $I_F = 50\text{ mA}$	1
		at $I_F = 150\text{ mA}$	1.25
Reverse Current	$I_R$	at $V_R = 25\text{ V}$	30
		at $V_R = 75\text{ V}$	1
		at $V_R = 25\text{ V}, T_J = 150\text{ }^\circ\text{C}$	30
		at $V_R = 75\text{ V}, T_J = 150\text{ }^\circ\text{C}$	50
Diode Capacitance	$C_d$	2	pF
at $f = 1\text{ MHz}$			
Reverse Recovery Time	$t_{rr}$	4	ns
at $I_F = I_R = 10\text{ mA}, R_L = 100\text{ }\Omega$			



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506088

Dated : 22/01/2008

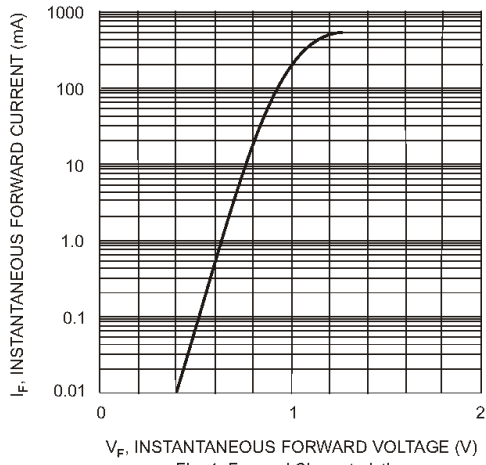


Fig. 1 Forward Characteristics

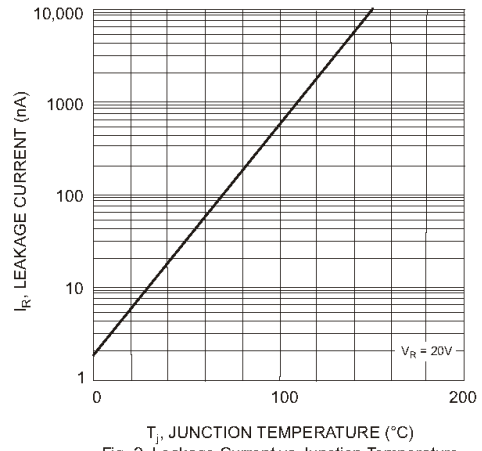


Fig. 2 Leakage Current vs Junction Temperature

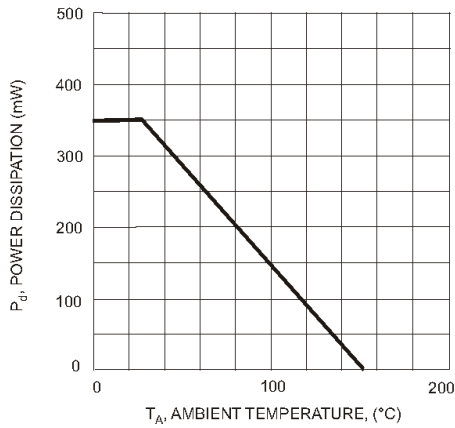
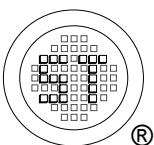


Fig. 3 Power Derating Curve, total package



**SEMTECH ELECTRONICS LTD.**  
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

