



FUKUCOM COMPANY LTD.

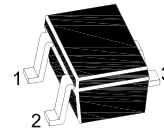
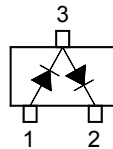
福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

BAV99E

Silicon Epitaxial Planar Switching Diode



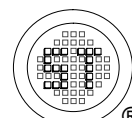
1.Base 2.Emitter 3.Collector
SOT-523 Plastic Package
Marking Code: A7

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	150	mA
Single Diode Load		130	
Double Diode Load			
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4	A
at $t = 1\ \mu\text{s}$		1	
at $t = 1\ \text{ms}$		0.5	
at $t = 1\ \text{s}$			
Total Power Dissipation	P_{tot}	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Max.	Unit
Forward Voltage	V_F	0.715	V
at $I_F = 1\ \text{mA}$		0.855	
at $I_F = 10\ \text{mA}$		1	
at $I_F = 50\ \text{mA}$		1.25	
at $I_F = 150\ \text{mA}$			
Reverse Current	I_R	30	nA
at $V_R = 25\ \text{V}$		1	μA
at $V_R = 75\ \text{V}$		30	μA
at $V_R = 25\ \text{V}$, $T_j = 150^\circ\text{C}$		50	μA
at $V_R = 75\ \text{V}$, $T_j = 150^\circ\text{C}$			
Total Capacitance	C_{tot}	1.5	pF
at $V_R = 0$, $f = 1\ \text{MHz}$			
Reverse Recovery Time	t_{rr}	4	ns
at $I_F = I_R = 10\ \text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\ \Omega$			



Dated : 19/11/2010 Rev:01



FUKUCOM COMPANY LTD.

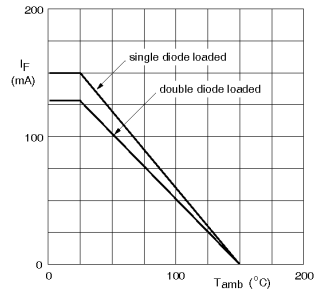
福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314

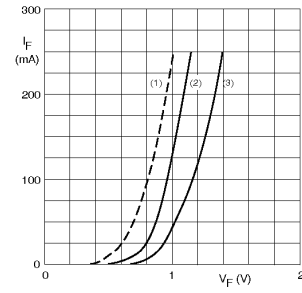
FAX: 852-2790 0206

BAV99E



Device mounted on an FR4 printed-circuit board.

Maximum permissible continuous forward current as a function of ambient temperature.

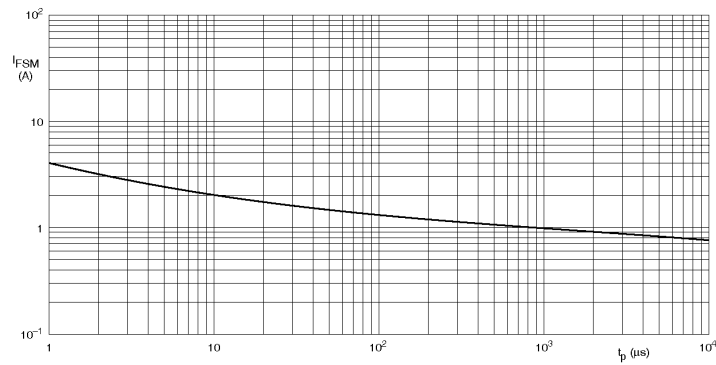


(1) $T_j = 150^\circ\text{C}$; typical values.

(2) $T_j = 25^\circ\text{C}$; typical values.

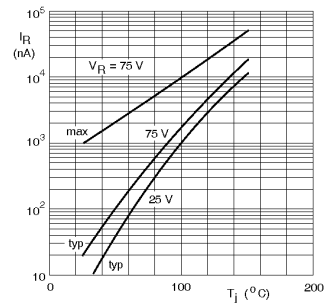
(3) $T_j = 25^\circ\text{C}$; maximum values.

Forward current as a function of forward voltage.

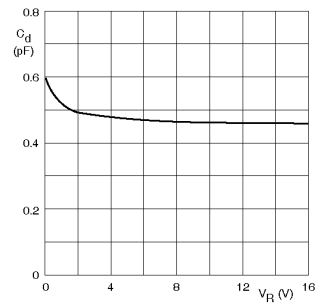


Based on square wave currents.
 $T_j = 25^\circ\text{C}$ prior to surge.

Maximum permissible non-repetitive peak forward current as a function of pulse duration.

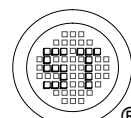


Reverse current as a function of junction temperature.
 $T_j = 25^\circ\text{C}$ prior to surge.



$f = 1\text{ MHz}$; $T_j = 25^\circ\text{C}$.

Diode capacitance as a function of reverse voltage; typical values.



Dated : 19/11/2010 Rev:01