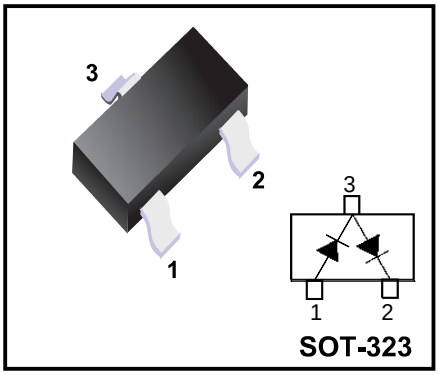
Silicon Epitaxial Planar Switching Diode



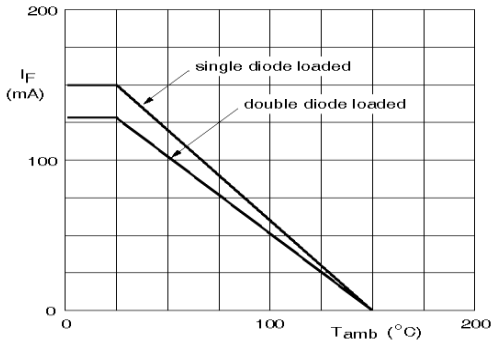
Marking Code	
BAV99W	A7

Absolute Maximum Ratings (Ta = 25°C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	85	V
Reverse Voltage		V_R	75	V
Continuous Forward Current	Single Diode Load Double Diode Load	I_F	150 130	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	at t = 1 µs at t = 1 ms at t = 1 s	I_{FSM}	4 1 0.5	A
Total Power Dissipation		P_{tot}	200	mW
Thermal Resistance from Junction to Ambient		$R_{\theta JA}$	625	°C/W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

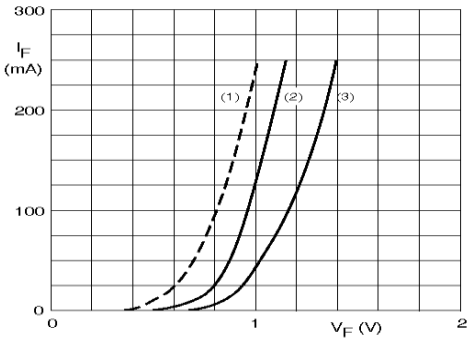
Characteristics at Ta = 25°C

Parameter	Symbol	Max.	Unit
Forward Voltage at I_F = 1 mA at I_F = 10 mA at I_F = 50 mA at I_F = 150 mA	V_F	 0.715 0.855 1 1.25	V
Reverse Current at V_R = 25 V at V_R = 75 V at V_R = 25 V, T_j = 150 °C at V_R = 75 V, T_j = 150 °C	I_R	 30 1 30 50	 nA µA µA µA
Diode Capacitance at V_R = 0, f = 1 MHz	C_d	1.5	pF
Reverse Recovery Time at I_F = I_R = 10 mA, I_{rr} = 0.1 X I_R , R_L = 100 Ω	t_{rr}	4	ns



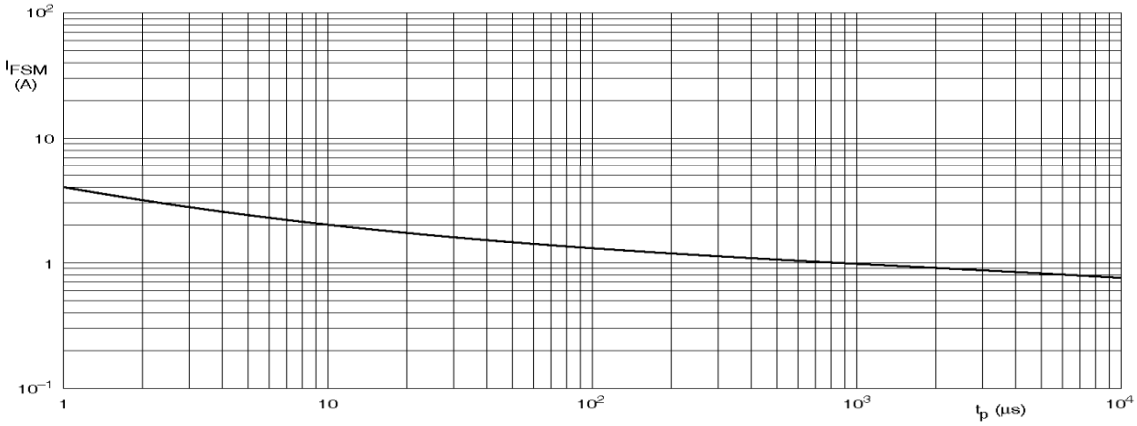
Device mounted on an FR4 printed-circuit board.

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



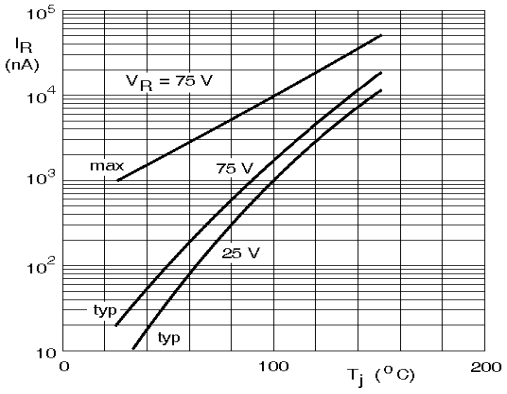
(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

Forward current as a function of forward voltage.

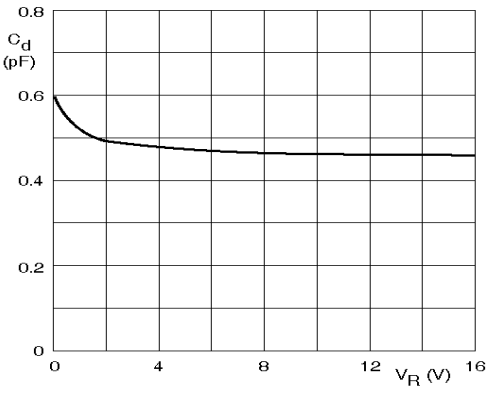


Based on square wave currents.
T_j = 25 °C prior to surge.

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



Reverse current as a function of junction temperature.



f = 1 MHz; T_j = 25 °C.

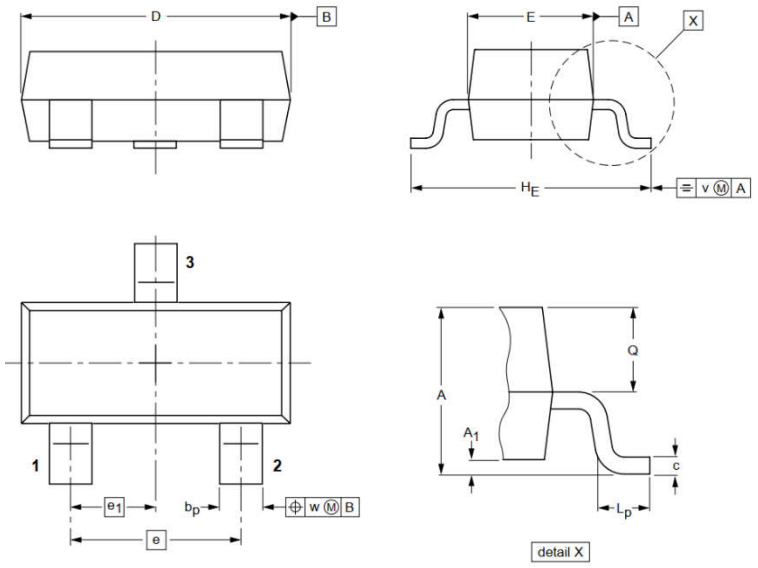
Diode capacitance as a function of reverse voltage; typical values.

Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-323	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

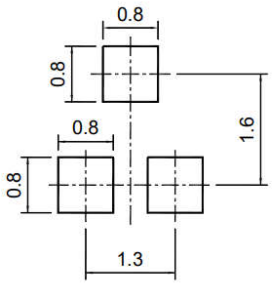
Package Dimensions

SOT-323



Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	0.1		4	
bp	0.3	0.4	12	16
C	0.10	0.25	4	10
D	1.8	2.2	71	87
E	1.15	1.35	45	53
E	1.3		51	
E1	0.65		26	
HE	2.0	2.2	79	87
Lp	0.15	0.45	6	18
Q	0.13	0.23	5.1	9
v	0.2		8	
W	0.2		8	

The recommended mounting pad size



Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices),YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website https://www.yfwdiode.com, or consult YFW sales office for further assistance.