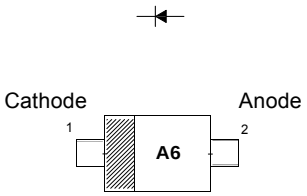
BAS316WS

Silicon Epitaxial Planar Switching Diode

Applications

• High-speed switching

Marking Code: "**A6** "



SOD-323

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	100	V
Reverse Voltage		V_R	100	V
Continuous Forward Current		I_F	250	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-Repetitive Peak Forward Current	t = 1 µs t = 1 ms t = 1 s	I_{FSM}	4 1 0.5	A
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 65 to + 150	°C

Characteristics at T_a = 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 V, f = 1 MHz	C_{tot}	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

Silicon Epitaxial Planar Switching Diode

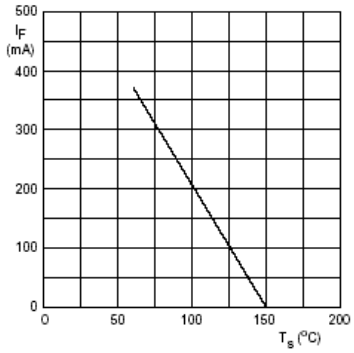
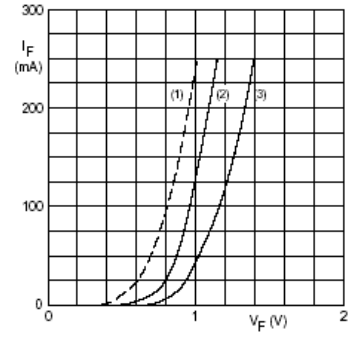
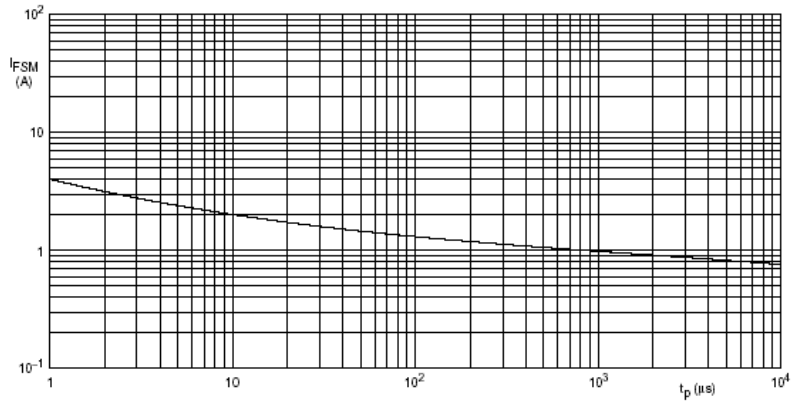


Fig. 1 Maximum permissible continuous forward current as a function of soldering point temperature.



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

Fig. 2 Forward current as a function of forward voltage.



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

Fig. 3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

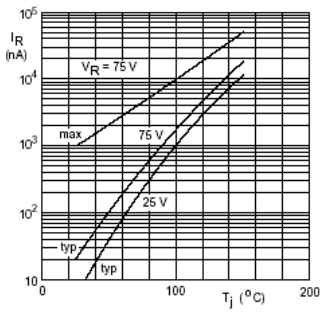
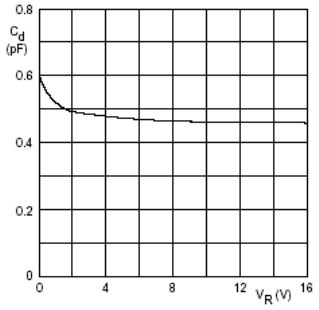


Fig. 4 Reverse current as a function of junction temperature.



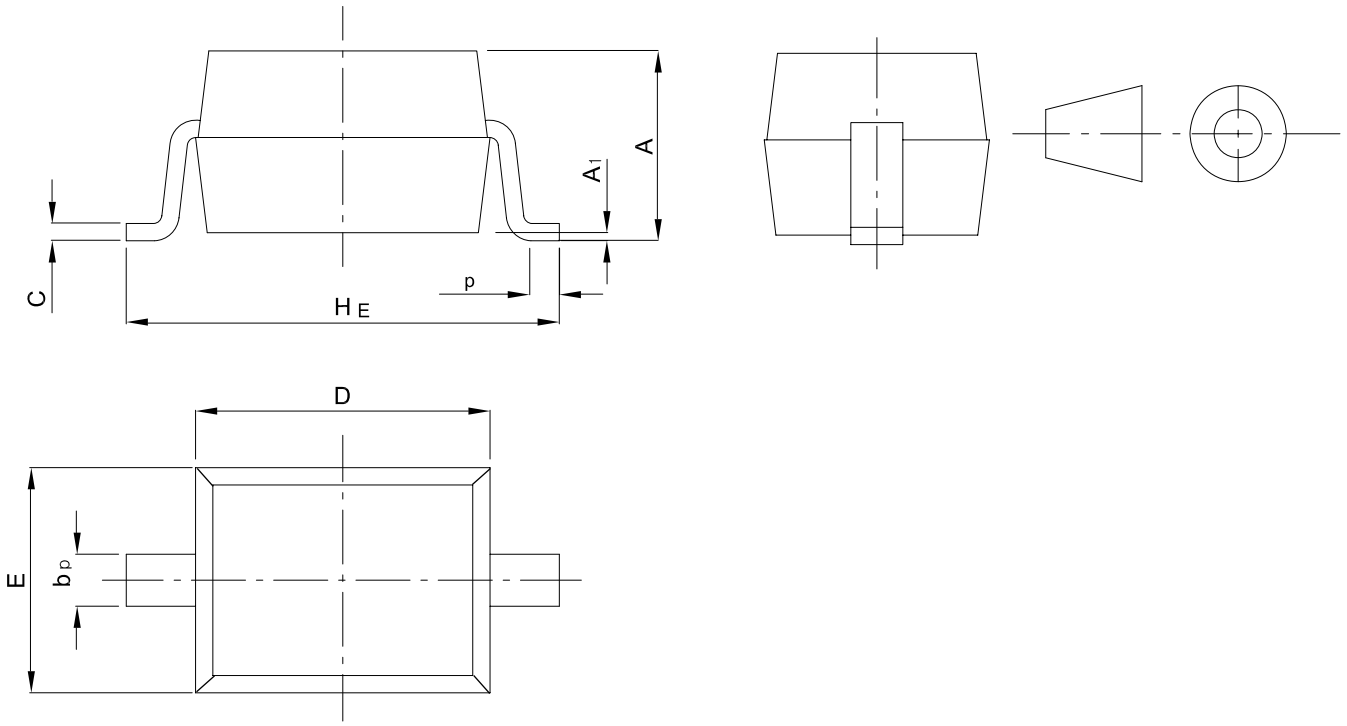
f = 1 MHz; T_j = 25 °C.

Fig. 5 Diode capacitance as a function of reverse voltage; typical values.

Silicon Epitaxial Planar Switching Diode

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-323**



UNIT	A	b_p	C	D	E	H_E	A_1	L_p
mm	1.20 0.80	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30	0.10 0.01	0.50 0.20