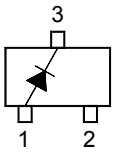
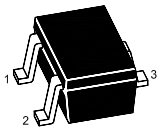
BAS16W

Silicon Epitaxial Planar Switching Diode

For high speed switching applications





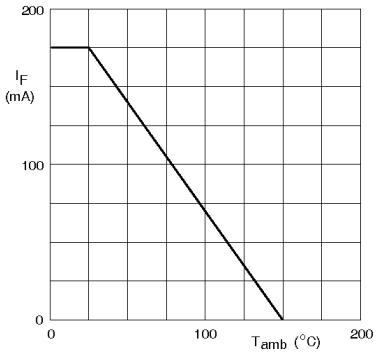
SOT-323 Plastic Package
Marking Code: **A6**

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	85	V
Continuous Reverse Voltage		V_R	75	V
Continuous Forward Current		I_F	155	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 ms at t = 1 µs	I_{FSM}	0.5 1 4.5	A
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 65 to + 150	°C

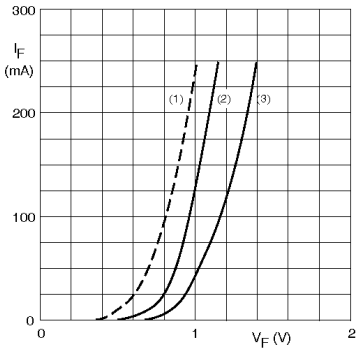
Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Forward Voltage			
at I_F = 1 mA	V_F	715	mV
at I_F = 10 mA	V_F	855	mV
at I_F = 50 mA	V_F	1000	mV
at I_F = 150 mA	V_F	1250	mV
Reverse Current			
at V_R = 25 V	I_R	30	nA
at V_R = 75 V	I_R	1	µA
at V_R = 25 V, T_J = 150 °C	I_R	30	µA
at V_R = 75 V, T_J = 150 °C	I_R	50	µA
Diode Capacitance at V_R = 0 , f = 1 MHz	C_D	1.5	pF
Reverse Recovery Time at I_F = 10 mA, V_R = 6 V, I_{rr} = 1 mA, R_L = 100 Ω	t_{rr}	4	ns



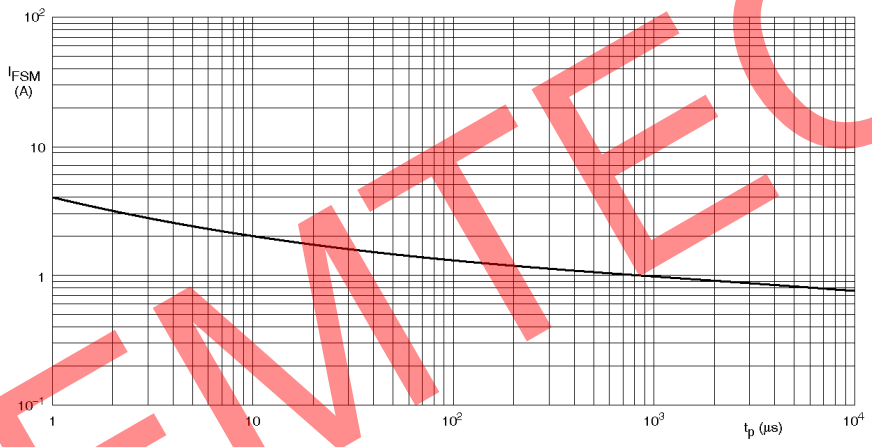
Device mounted on an FR4 printed-circuit board.

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



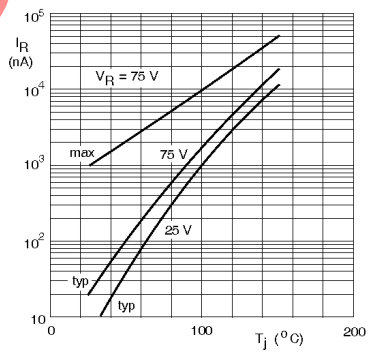
(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

Forward current as a function of forward voltage.

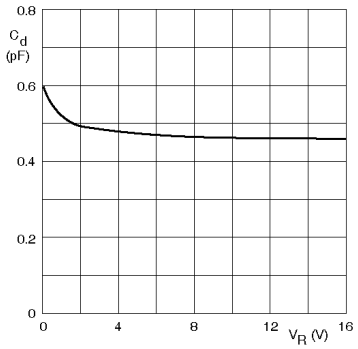


Based on square wave currents.
T_j = 25 °C prior to surge.

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.