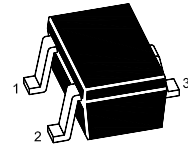
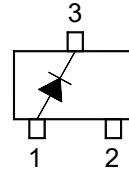


BAS16W

Silicon Epitaxial Planar Switching Diode

For high speed switching applications



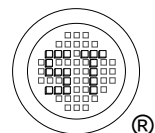
SOT-323 Plastic Package
Marking Code: A6

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

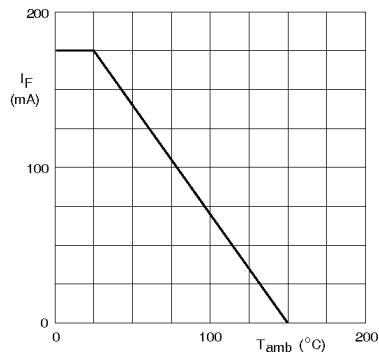
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Continuous Reverse Voltage	V_R	100	V
Continuous Forward Current	I_F	175	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5 1 4.5	A
		at $t = 1$ s at $t = 1$ ms at $t = 1$ μ s	
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

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

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 $V_R = 80$ V	I_R	0.5	μ A
at $V_R = 25$ V, $T_J = 150^\circ\text{C}$	I_R	30	μ A
at $V_R = 80$ V, $T_J = 150^\circ\text{C}$	I_R	50	μ A
Diode Capacitance	C_D	1.5	pF
at $V_R = 0$, $f = 1$ MHz			
Reverse Recovery Time	t_{rr}	4	ns
at $I_F = 10$ mA, $V_R = 6$ V, $I_{rr} = 1$ mA, $R_L = 100$ Ω			

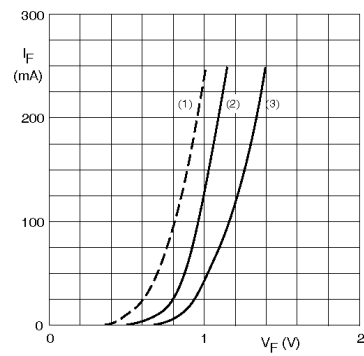


Electrical Characteristics Curves



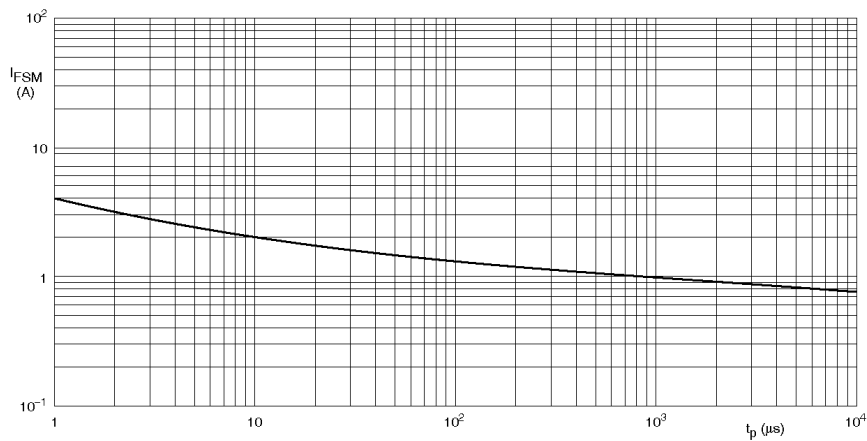
Device mounted on an FR4 printed-circuit board.

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.

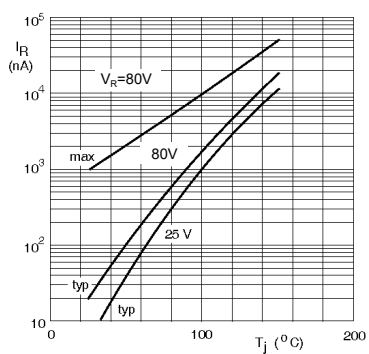
Forward current as a function of forward voltage.



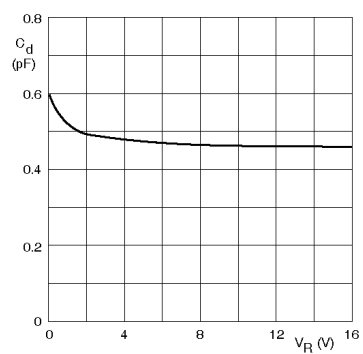
Based on square wave currents.

$T_j = 25^\circ\text{C}$ prior to surge.

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

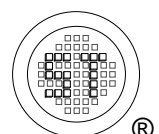


Reverse current as a function of junction temperature.



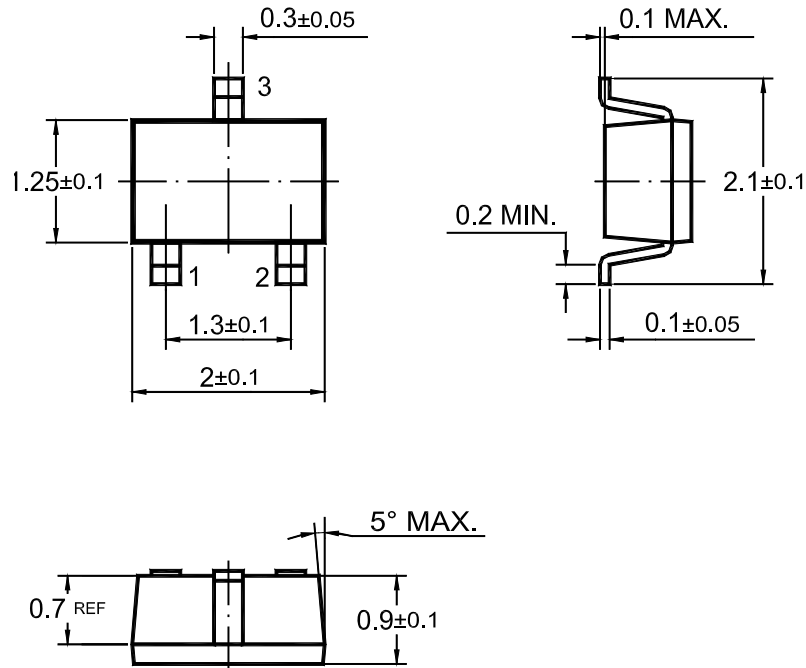
$f = 1\text{ MHz}$; $T_j = 25^\circ\text{C}$.

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

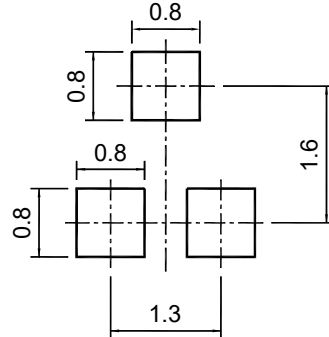


PACKAGE OUTLINE(Dimensions in mm)

SOT-323



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" A6 " = Part No.
 " YM " = Date Code Marking
 " Y " = Year
 " M " = Month
 Font type: Arial

