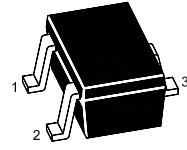
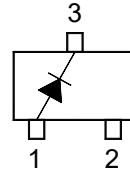


BAS16W

Silicon Epitaxial Planar Switching Diode

Applications

- For high speed switching applications



SOT-323 Plastic Package

1. Anode 2. NC 3. Cathode

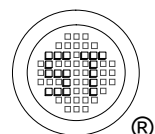
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$

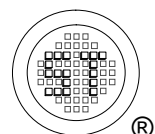
¹⁾ Device mounted on FR-4 PCB with minimum recommended pad layout.



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

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 150\text{ mA}$	V_F V_F V_F V_F	715 855 1000 1250	mV mV mV mV
Reverse Current at $V_R = 25\text{ V}$ at $V_R = 80\text{ V}$ at $V_R = 25\text{ V}, T_J = 150^\circ\text{C}$ at $V_R = 80\text{ V}, T_J = 150^\circ\text{C}$	I_R I_R I_R I_R	30 0.5 30 50	nA μA μA μA
Diode Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_D	1.5	pF
Reverse Recovery Time at $I_F = 10\text{ mA}, V_R = 6\text{ V}, I_{tr} = 0.1 \times I_R, R_L = 100\ \Omega$	t_{rr}	4	ns



Electrical Characteristics Curves

Fig 1. Power Dissipation vs. Temperature

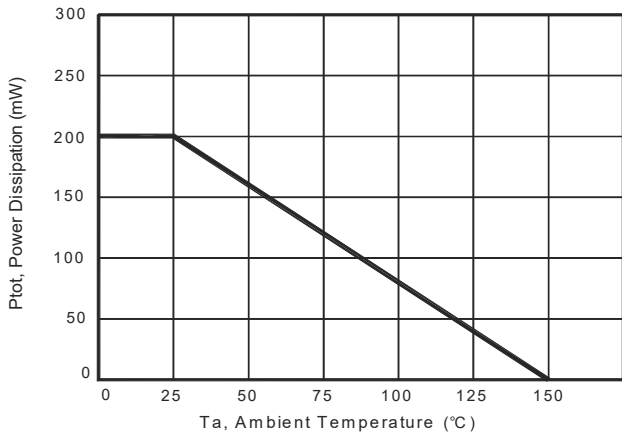


Fig 2. Total Capacitance vs. Reverse Voltage

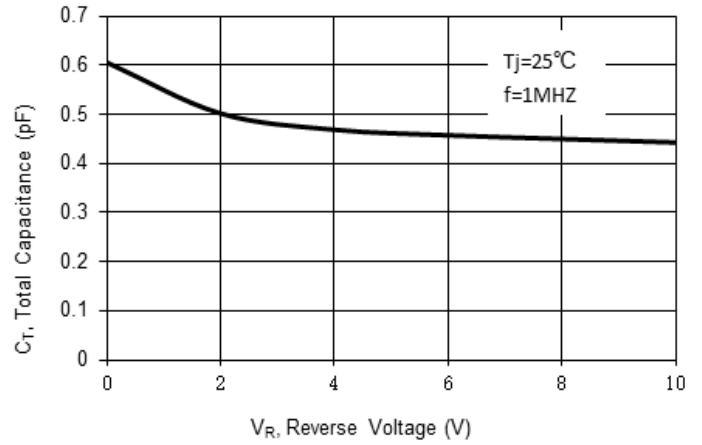


Fig 3. Reverse Current vs. Reverse Voltage

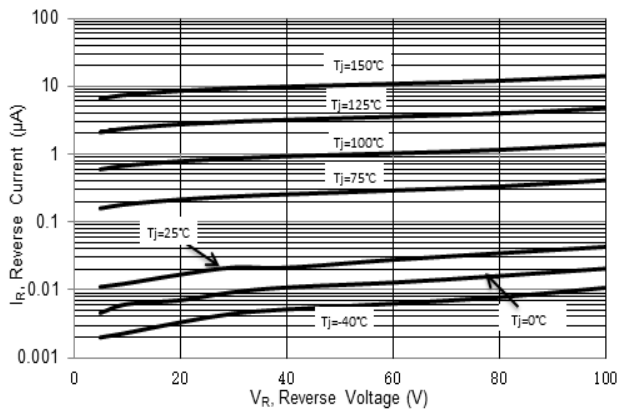
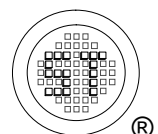
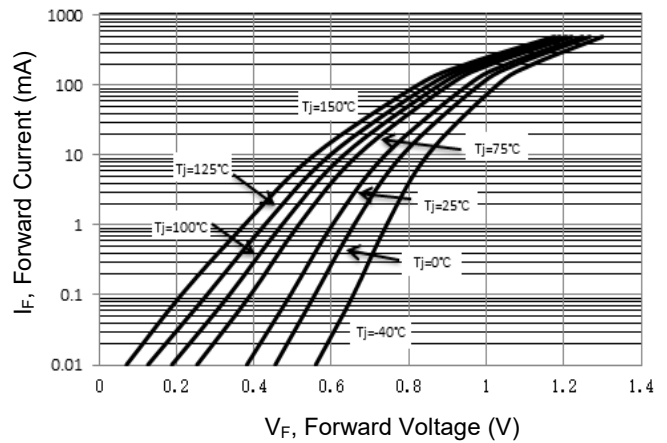


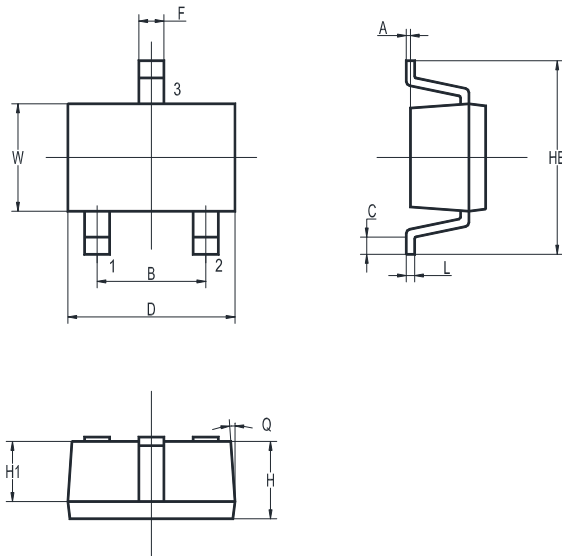
Fig 4. Forward Characteristics



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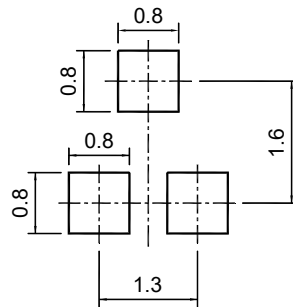
Package Outline Dimensions (Units: mm)

SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

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

