

High Voltage Switching Diode

- Device Marking: JS



BAS20HT1



CASE 477, STYLE 1
SOD-323

ORDERING INFORMATION

Device	Package	Shipping
BAS20HT1	SOD-323	3000/Tape & Reel

Preferred: devices are recommended choices for future use and best overall value.

MARKING DIAGRAM



JS= Specific Device Code
M = Date Code

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	250	Vdc
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	625	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$	P_D	200	mW
Derate above 25°C		1.57	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

*FR-5 Minimum Pad

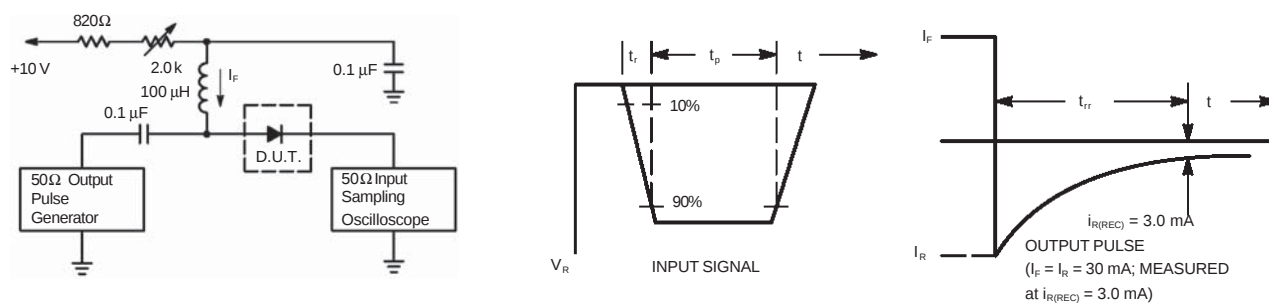
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Reverse Voltage Leakage Current ($V_R = 200\text{ Vdc}$) ($V_R = 200\text{ Vdc}, T_J = 150^\circ\text{C}$)	I_R	—	1.0 100	μAdc
Reverse Breakdown Voltage ($I_{BR} = 100\text{ }\mu\text{Adc}$)	$V_{(BR)}$	250	—	Vdc
Forward Voltage ($I_F = 100\text{ mAdc}$) ($I_F = 200\text{ mAdc}$)	V_F	—	1000 1250	mV
Diode Capacitance ($V_R = 0, f = 1.0\text{ MHz}$)	C_D	—	5.0	pF
Reverse Recovery Time ($I_F = I_R = 30\text{ mAdc}, R_L = 100\text{ }\Omega$)	t_{rr}	—	50	ns

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- Notes:**
1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 30 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 30 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

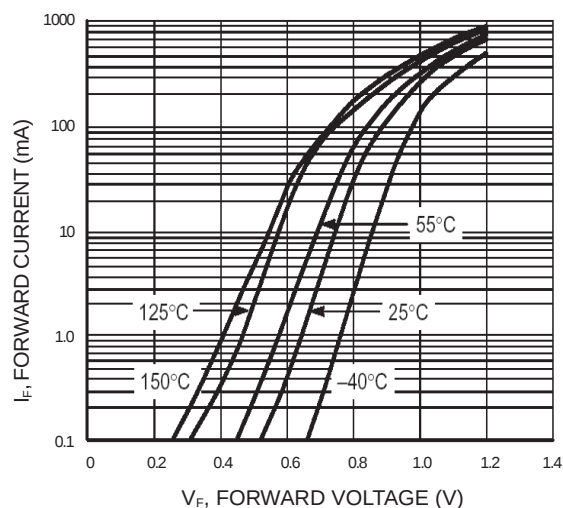


Figure 2. Forward Current

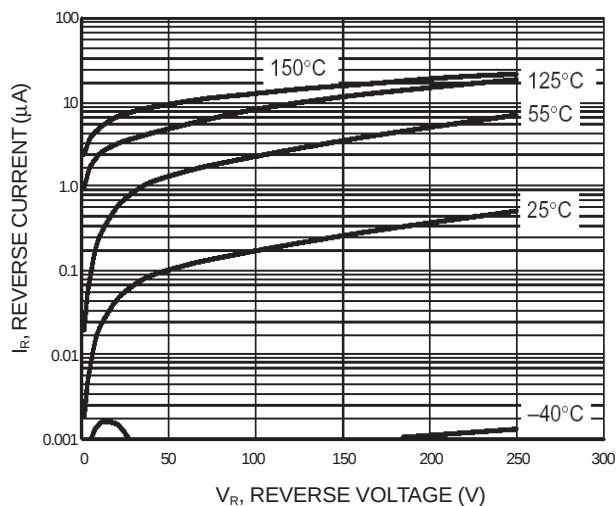


Figure 3. Leakage Current

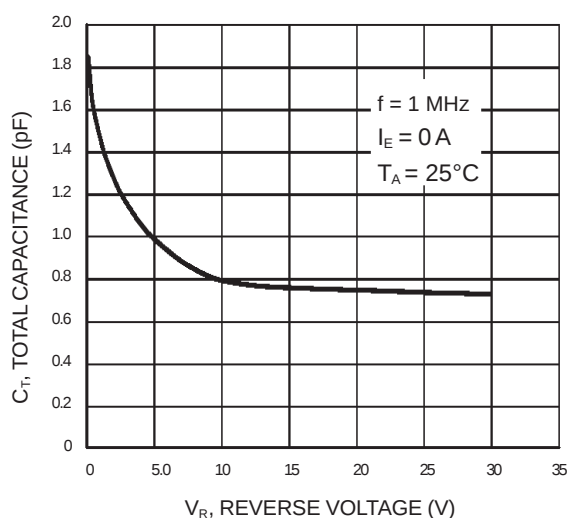


Figure 4. Total Capacitance

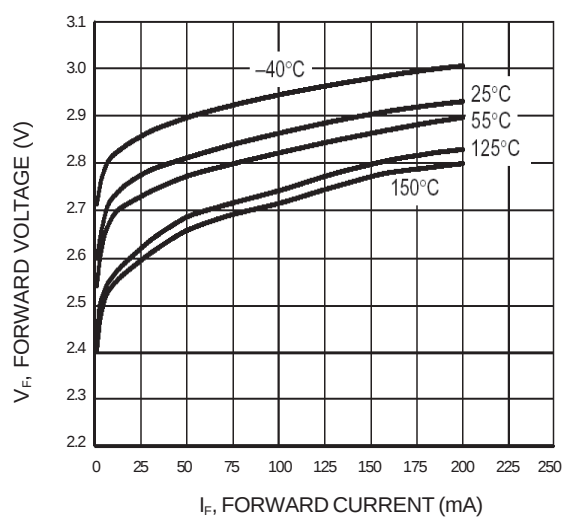


Figure 5. Forward Voltage