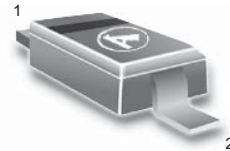


# High Voltage Switching Diode

- 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 $25^\circ\text{C}$		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

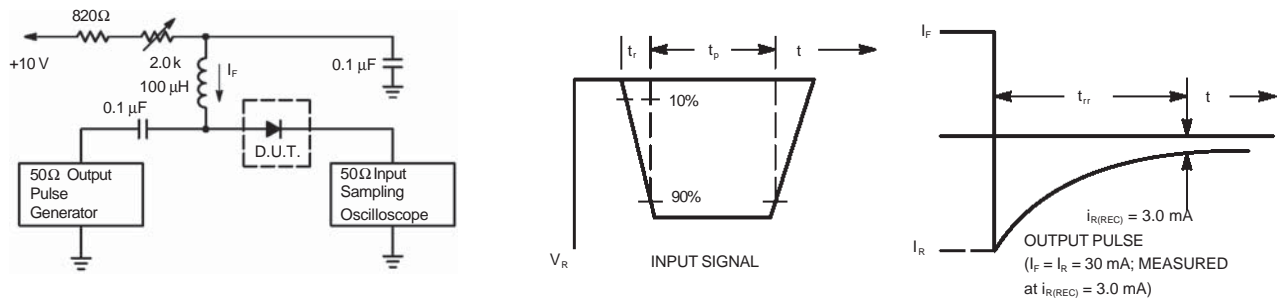
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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### OFF CHARACTERISTICS

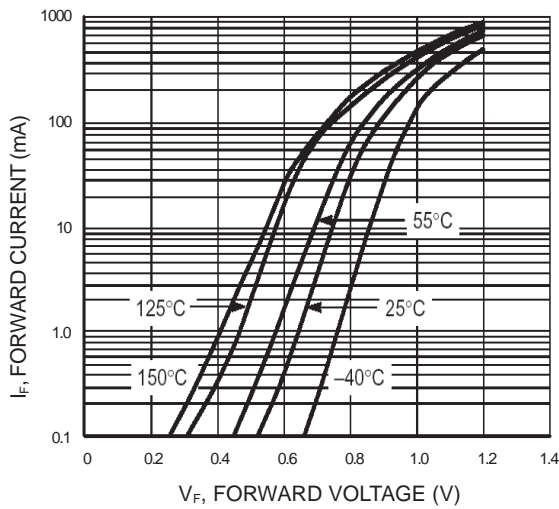
Reverse Voltage Leakage Current ( $V_R = 200$ Vdc) ( $V_R = 200$ Vdc, $T_J = 150^\circ\text{C}$ )	$I_R$	-	1.0 100	$\mu\text{Adc}$
Reverse Breakdown Voltage ( $I_{BR} = 100$ $\mu\text{Adc}$ )	$V_{(BR)}$	250	-	Vdc
Forward Voltage ( $I_F = 100$ mAdc) ( $I_F = 200$ mAdc)	$V_F$	-	1000 1250	mV
Diode Capacitance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

**BAS20HT1**

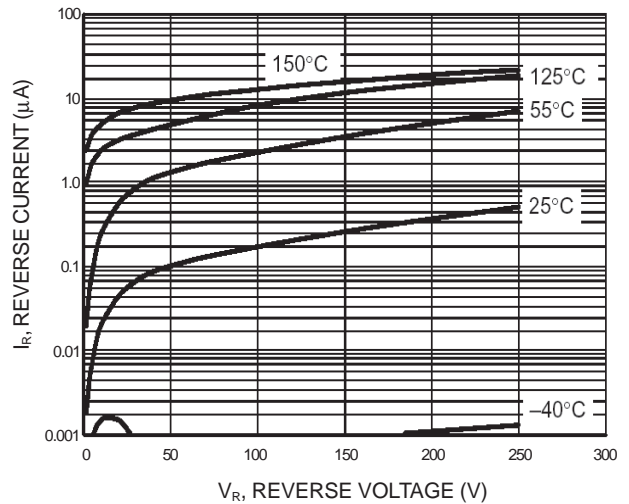


- Notes:**
1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 30 mA.
  2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 30 mA.
  3.  $t_p \gg t_{rr}$

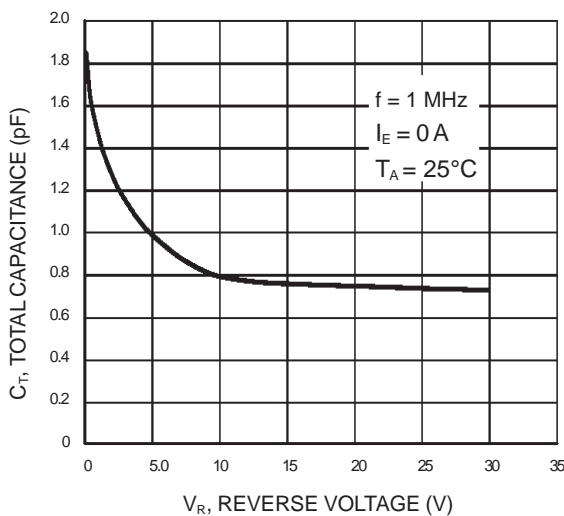
**Figure 1. Recovery Time Equivalent Test Circuit**



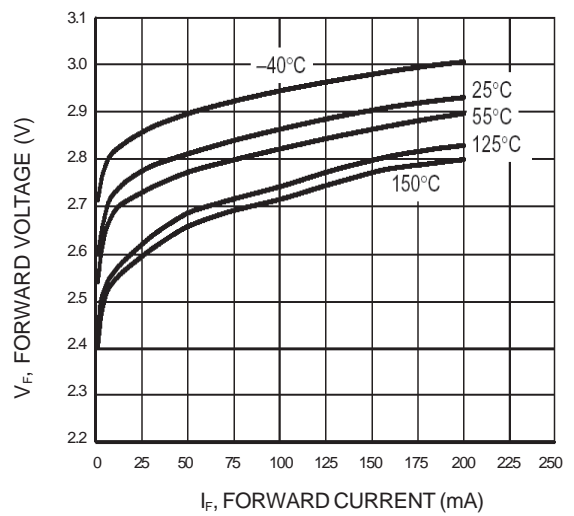
**Figure 2. Forward Current**



**Figure 3. Leakage Current**



**Figure 4. Total Capacitance**



**Figure 5. Forward Voltage**