

## ● MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	$V_R$	75	Vdc
Peak Forward Current	$I_F$	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

## ● DEVICE MARKING

BAS16LT1 = A6

## ● THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	300	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

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

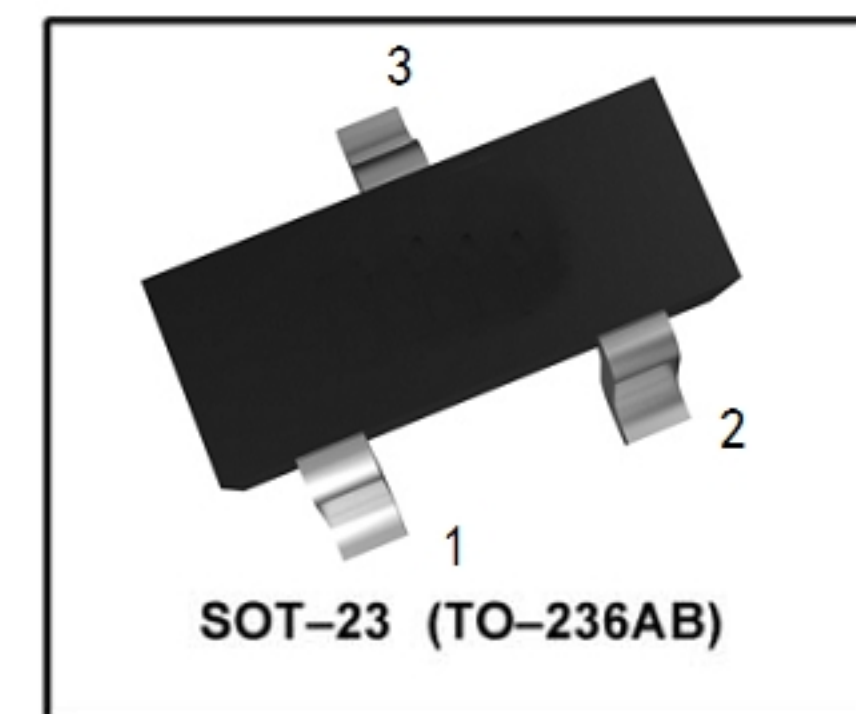
Characteristic	Symbol	Min	Max	Unit
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## ● OFF CHARACTERISTICS

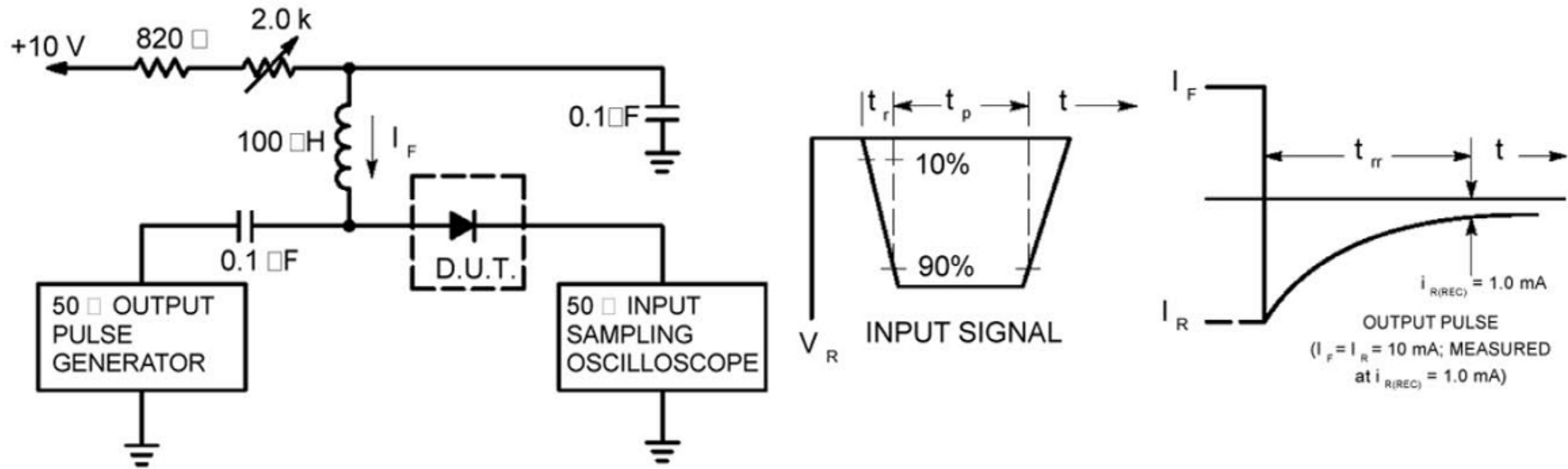
Reverse Voltage Leakage Current ( $V_R = 75\text{Vdc}$ ) ( $V_R = 75\text{Vdc}, T_J = 150^\circ\text{C}$ ) ( $V_R = 25\text{Vdc}, T_J = 150^\circ\text{C}$ )	$I_R$	—	1.0 50 30	$\mu\text{Adc}$
Reverse Breakdown Voltage ( $I_{BR} = 100\ \mu\text{Adc}$ )	$V_{(BR)}$	75	—	Vdc
Forward Voltage ( $I_F = 1.0\ \text{mAdc}$ ) ( $I_F = 10\ \text{mAdc}$ ) ( $I_F = 50\ \text{mAdc}$ ) ( $I_F = 150\ \text{mAdc}$ )	$V_F$	—	715 855 1000 1250	mV
Diode Capacitance ( $V_R = 0, f = 1.0\ \text{MHz}$ )	$C_D$	—	2.0	pF
Forward Recovery Voltage ( $I_F = 10\ \text{mAdc}, t_r = 20\text{ns}$ )	$V_{FR}$	—	1.75	Vdc
Reverse Recovery Time ( $I_F = I_R = 10\ \text{mAdc}, R_L = 50\ \Omega$ )	$t_{rr}$	—	6.0	ns
Stored Charge ( $I_F = 10\ \text{mAdc}$ to $V_R = 5.0\text{Vdc}, R_L = 500\ \Omega$ )	$Q_S$	—	45	pC

1. FR-5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

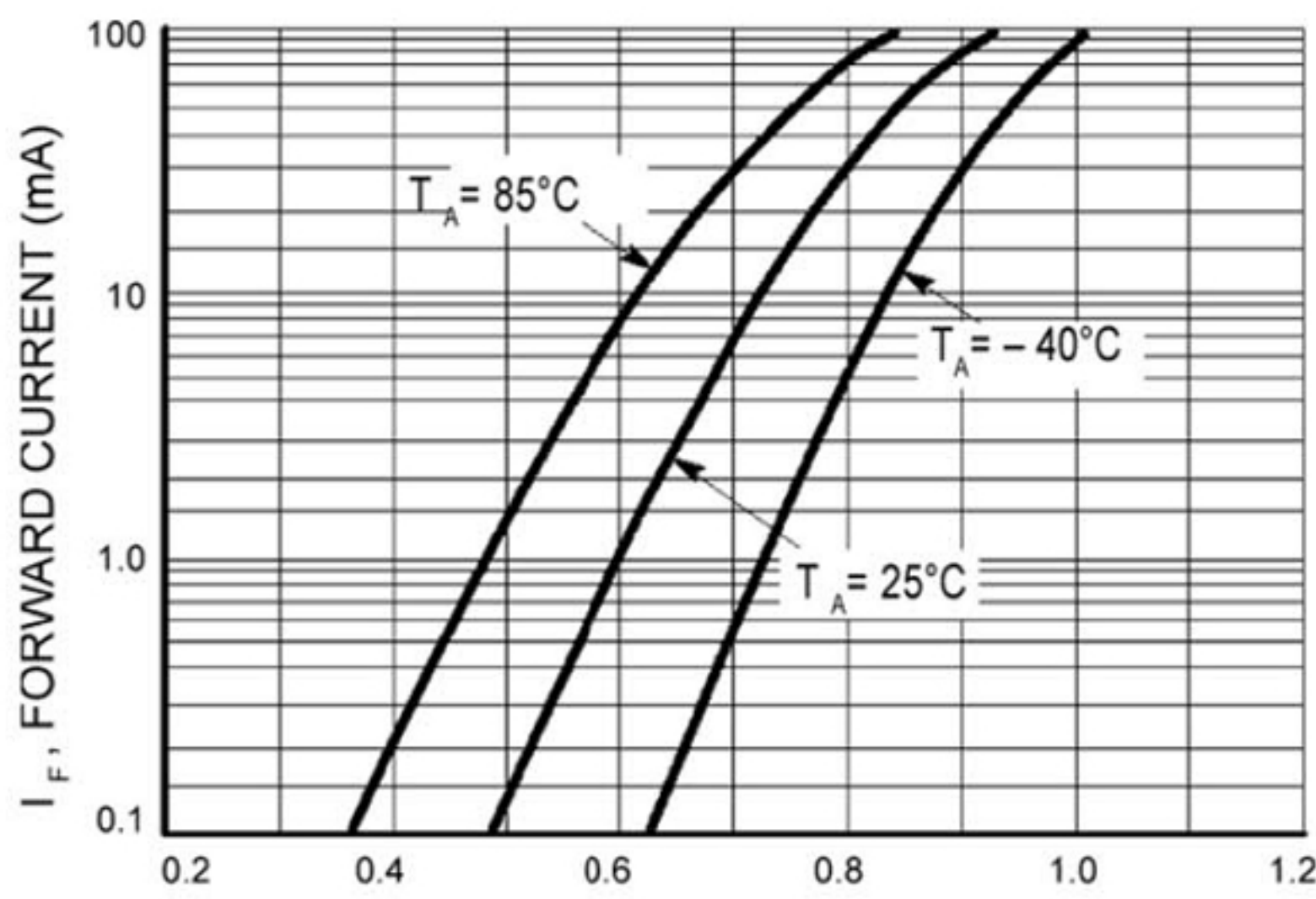




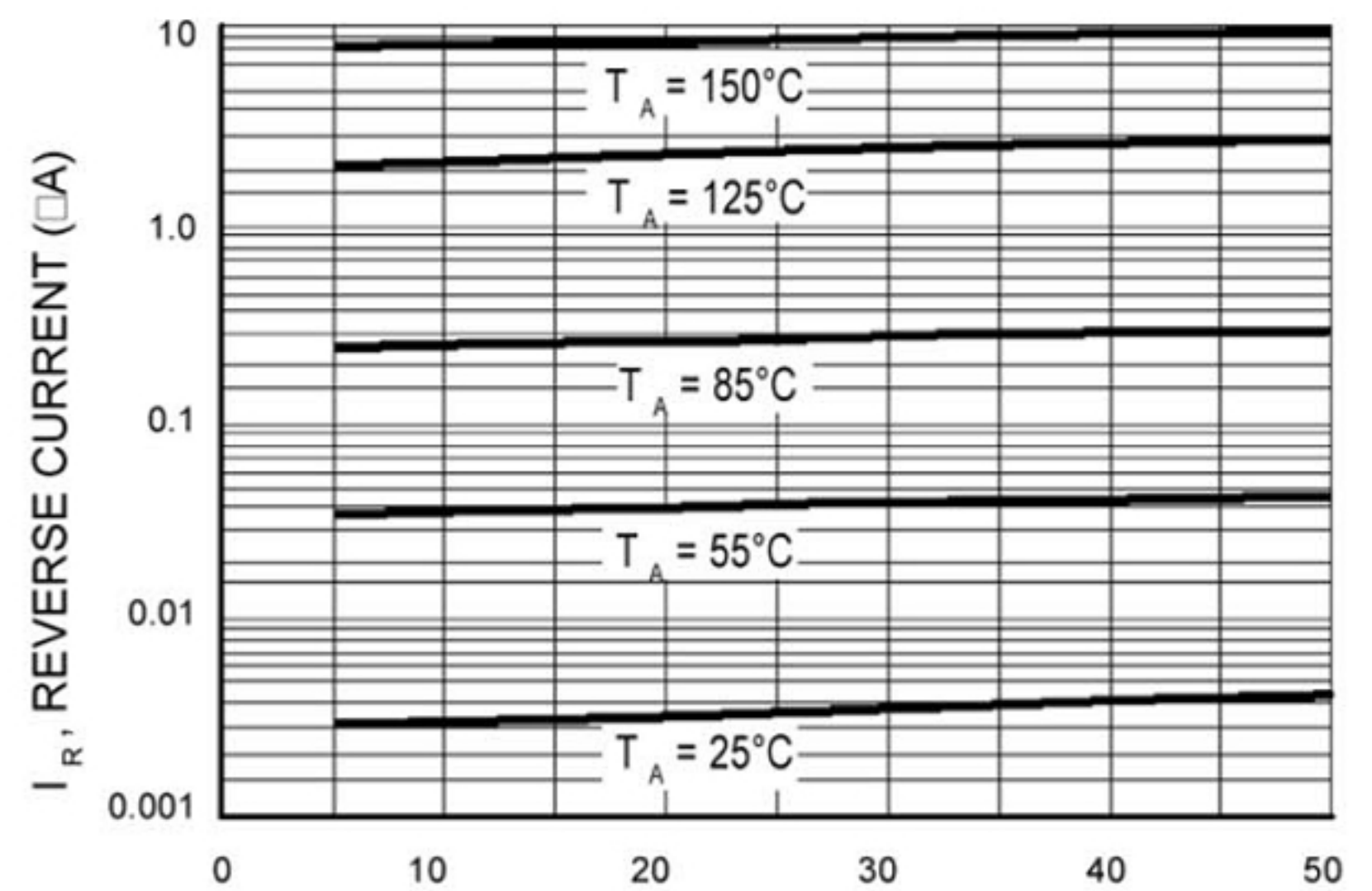


- Notes: 1. A 2.0 k $\Omega$  variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10 mA.  
 3.  $t_p \gg t_{rr}$

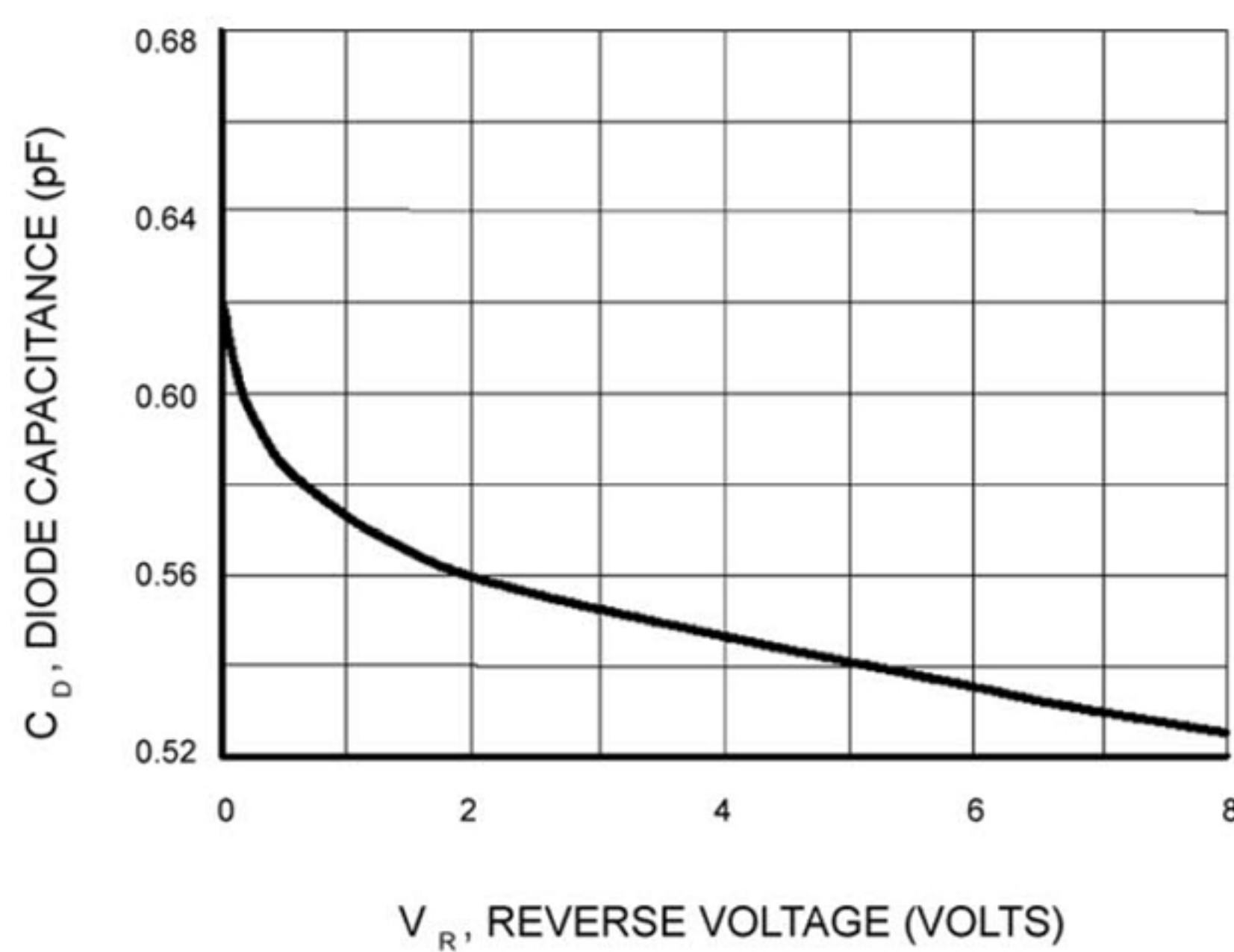
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Capacitance**