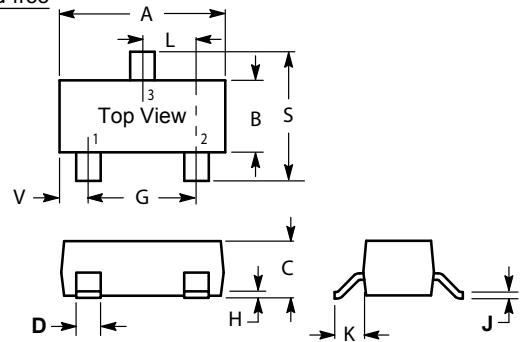
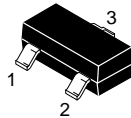
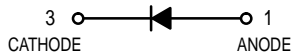


RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

**FEATURES**

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance



**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	100	Vdc
Forward Current	$I_F$	250	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	500	mAdc

SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

**THERMAL CHARACTERISTICS**

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board <sup>(1)</sup> $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	350	mW
		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, <sup>(2)</sup> $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	300	mW
		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

**DEVICE MARKING**

MMBD4448 = KA3

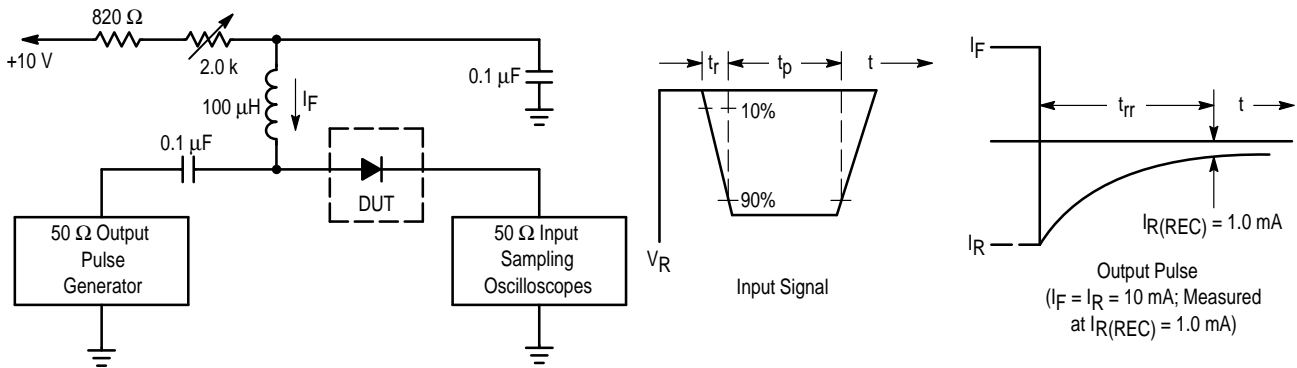
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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**OFF CHARACTERISTICS**

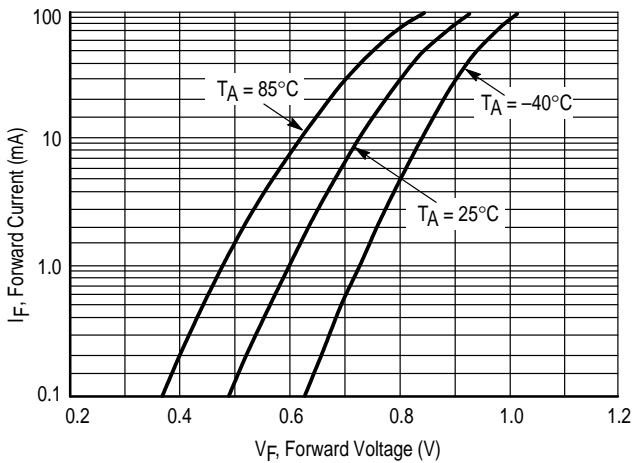
Reverse Breakdown Voltage ( $I_R = 2.5\mu\text{Adc}$ )	$V_{(BR)}$	75	—	Vdc
Reverse Voltage Leakage Current ( $V_R = 20\text{ Vdc}$ ) ( $V_R = 75\text{ Vdc}$ )	$I_R$	—	25 5.0	nAdc $\mu\text{Adc}$
Diode Capacitance ( $V_R = 0, f = 1.0\text{ MHz}$ )	$C_T$	—	4.0	pF
Forward Voltage ( $I_F = 10\text{ mAdc}$ )	$V_F$	—	1.0	Vdc
Reverse Recovery Time ( $I_F = I_R = 10\text{ mAdc}$ ) (Figure 1)	$t_{rr}$	—	4.0	ns

1. FR-5 =  $1.0 \times 0.75 \times 0.062\text{ in.}$
2. Alumina =  $0.4 \times 0.3 \times 0.024\text{ in.}$  99.5% alumina.

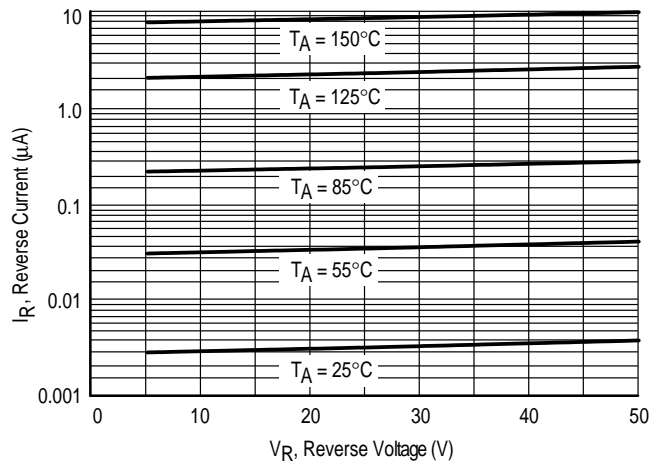


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10 mA.  
 3.  $t_p \gg t_{rr}$

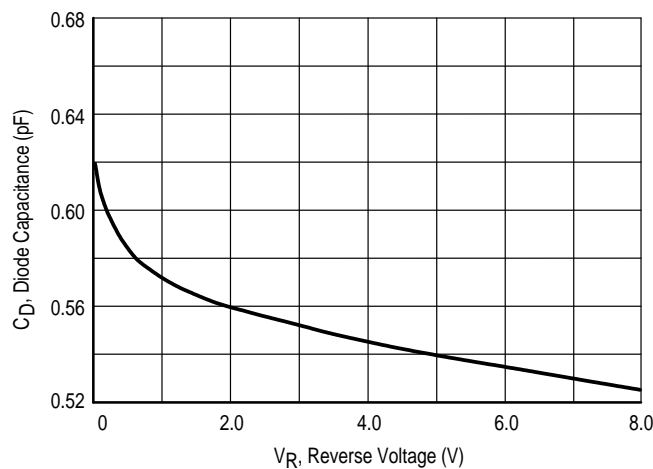
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Capacitance**