

# MMDL914T1

Preferred Device

## High-Speed Switching Diode

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	100	Vdc
Forward Current	$I_F$	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board $T_A = 25^\circ\text{C}$ (Note 1) Derate above $25^\circ\text{C}$	$P_D$	200 1.57	mW mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to 150	$^\circ\text{C}$

1. FR-4 Minimum Pad.

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

Characteristic	Symbol	Min	Max	Unit
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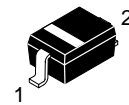
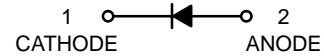
### OFF CHARACTERISTICS

Reverse Breakdown Voltage ( $I_R = 100 \mu\text{Adc}$ )	$V_{(BR)}$	100	-	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 ( $V_R = 0 \text{V}$ , $f = 1.0 \text{MHz}$ )	$C_T$	-	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



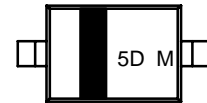
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SOD-323  
CASE 477  
STYLE 1

### MARKING DIAGRAM



5D = Specific Device Code  
M = Date Code

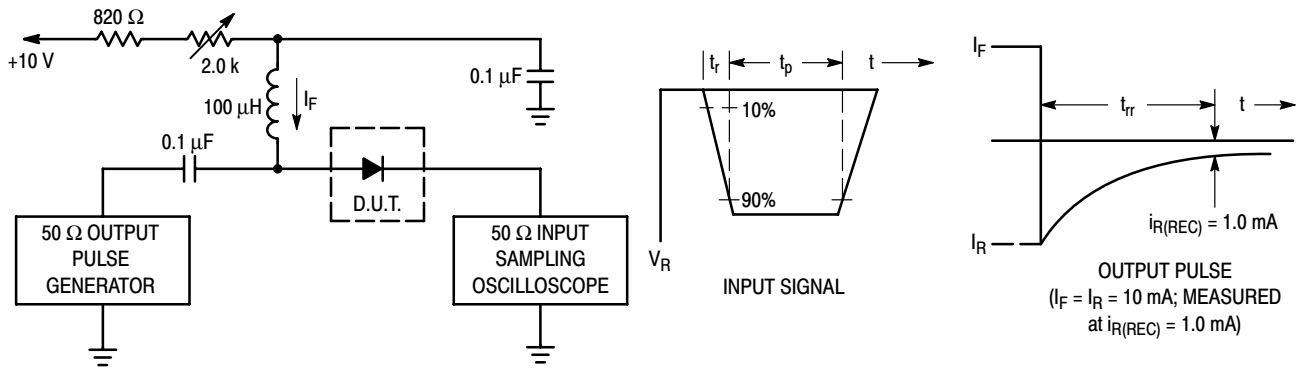
### ORDERING INFORMATION

Device	Package	Shipping†
MMDL914T1	SOD-323	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

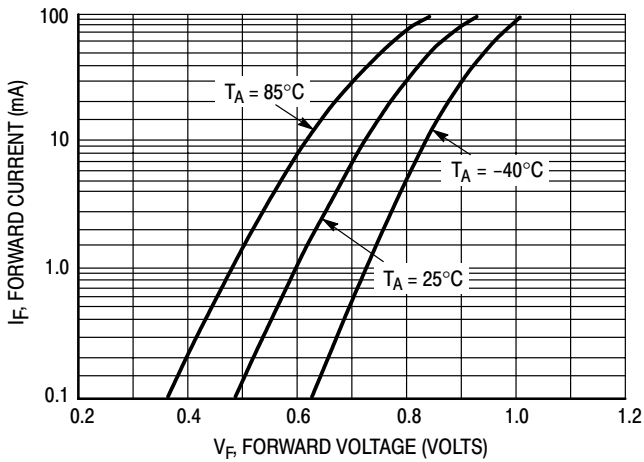
Preferred devices are recommended choices for future use and best overall value.

# MMDL914T1

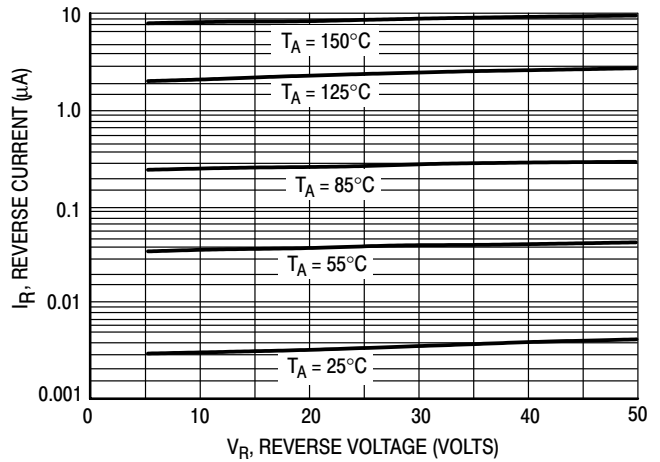


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10 mA.  
 3.  $t_p \gg t_{rr}$

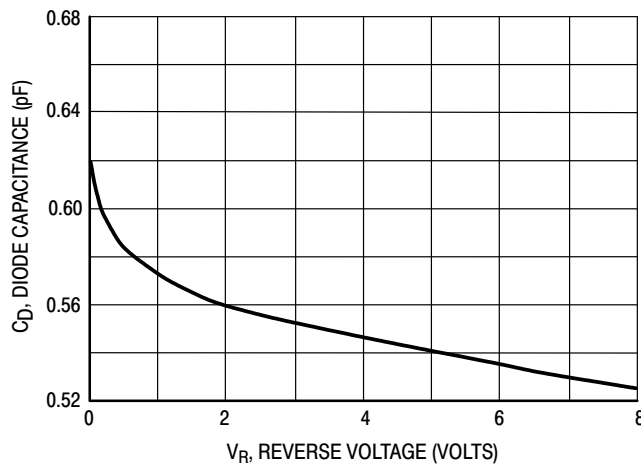
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**

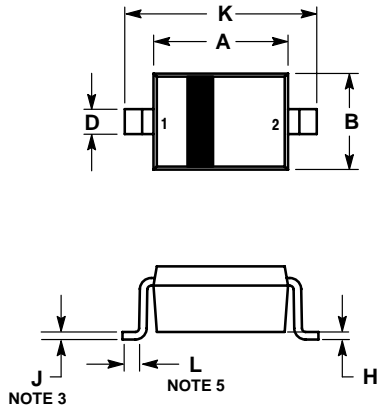


**Figure 4. Capacitance**

# MMDL914T1

## PACKAGE DIMENSIONS

SOD-323  
CASE 477-02  
ISSUE D



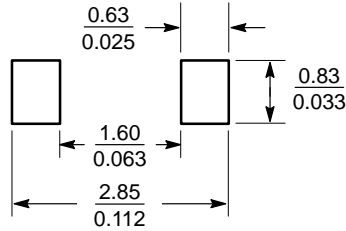
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106
L	0.075	---	0.003	---

STYLE 1:  
PIN 1. CATHODE  
2. ANODE

### SOLDERING FOOTPRINT\*



\*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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