

High-Speed Switching Diode

MMDL914T1

ON Semiconductor Preferred Device

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

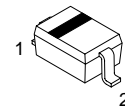
THERMAL CHARACTERISTICS

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

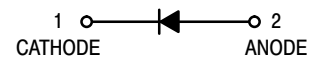
*FR-4 Minimum Pad

DEVICE MARKING

MMDL914T1 = 5D



CASE 477-02, STYLE 1
SOD-323



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

Characteristic	Symbol	Min	Max	Unit
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 μAdc
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

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

MMDL914T1

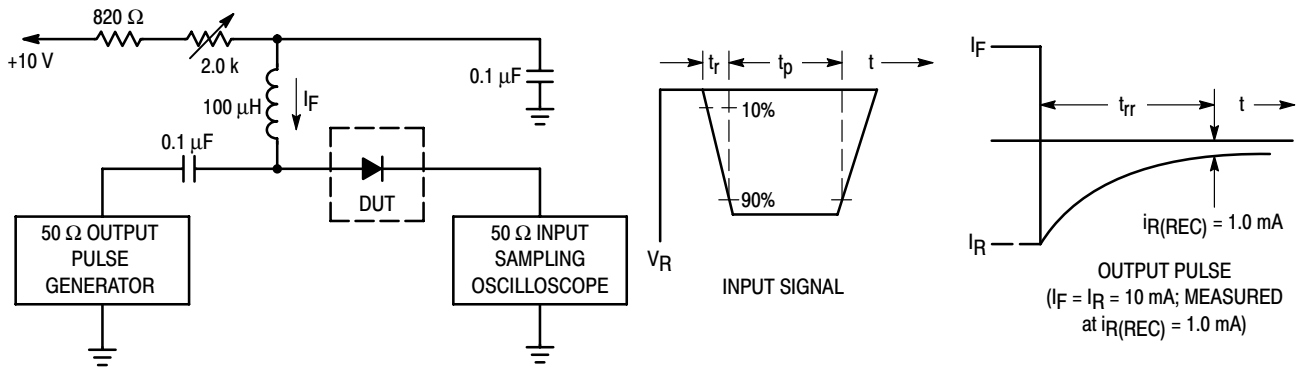


Figure 1. Recovery Time Equivalent Test Circuit

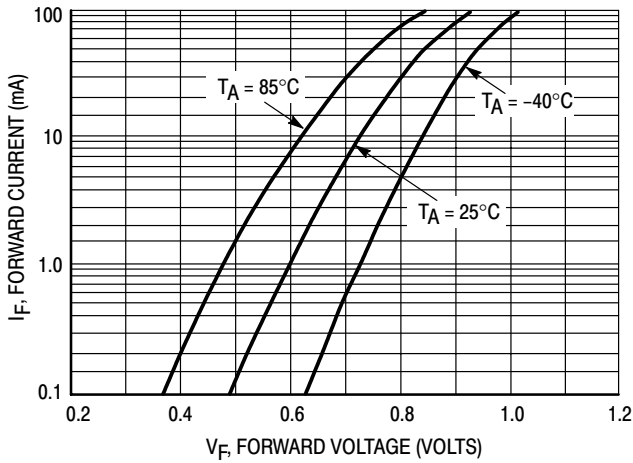


Figure 2. Forward Voltage

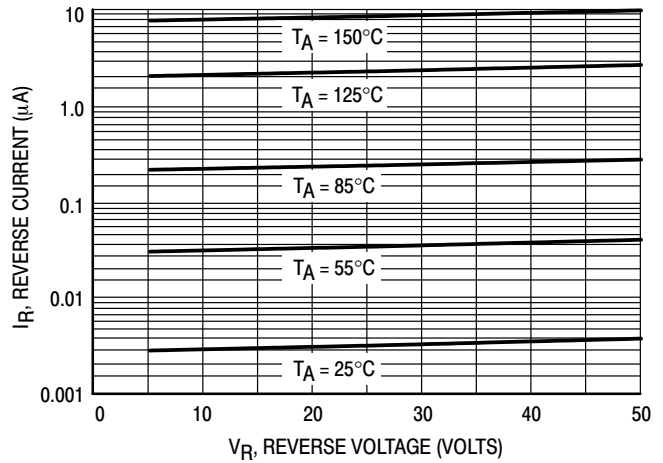


Figure 3. Leakage Current

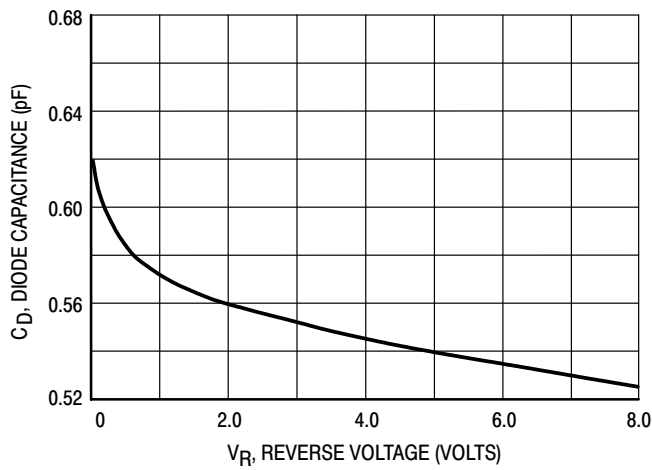
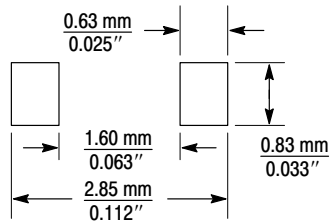
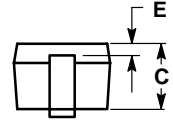
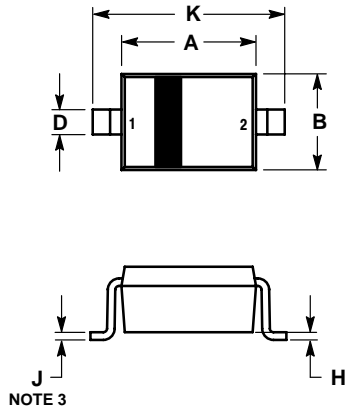


Figure 4. Capacitance

MMDL914T1

PACKAGE DIMENSIONS

SOD-323
CASE 477-02
ISSUE B



($\frac{\text{mm}}{\text{inches}}$)

- 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.


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

STYLE 1:
PIN 1. CATHODE
2. ANODE

SOD-323
Soldering Footprint

MMDL914T1

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