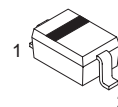


High-Speed Switching Diode



MMDL914T1

Motorola Preferred Device



CASE 477-02, STYLE 1
SOD323

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	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 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}	150	$^\circ\text{C}$

*FR-4 Minimum Pad

DEVICE MARKING

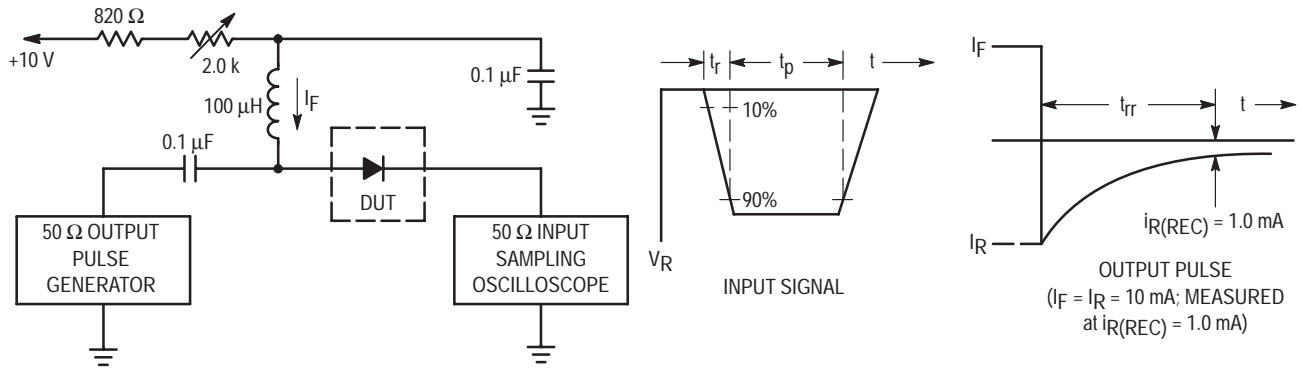
MMDL914T1 = 5D

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 Motorola 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 $I_{R(peak)}$ is equal to 10 mA.
- 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

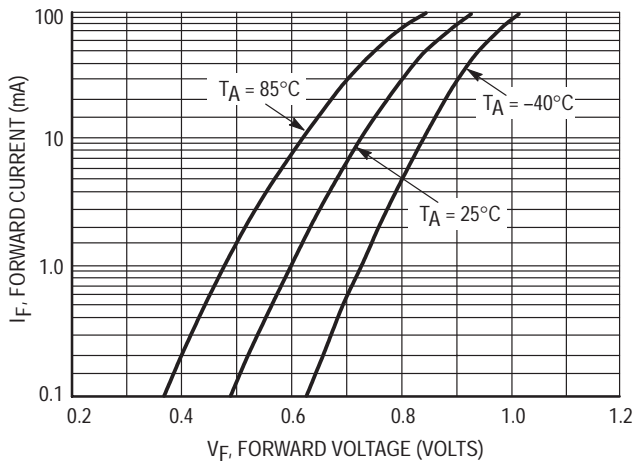


Figure 2. Forward Voltage

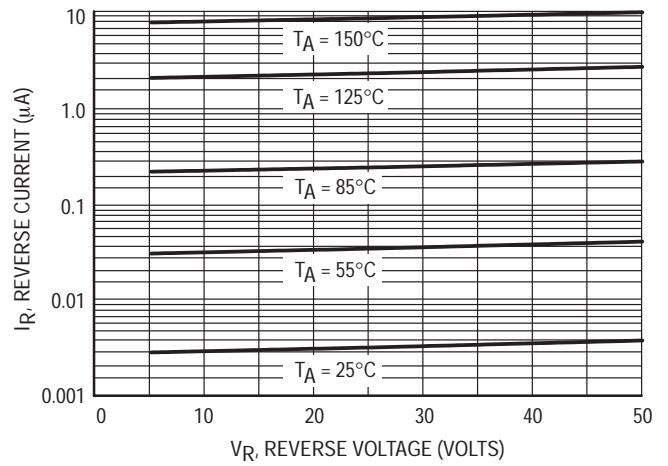


Figure 3. Leakage Current

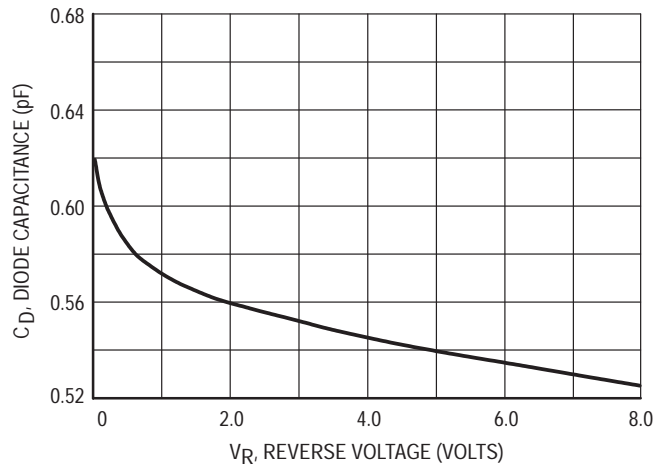
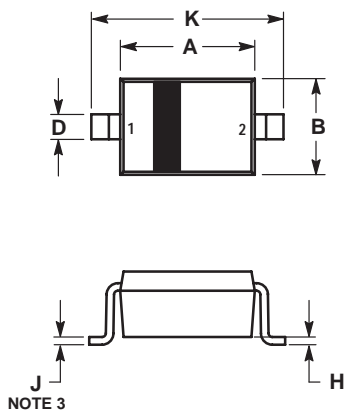


Figure 4. Capacitance

PACKAGE DIMENSIONS

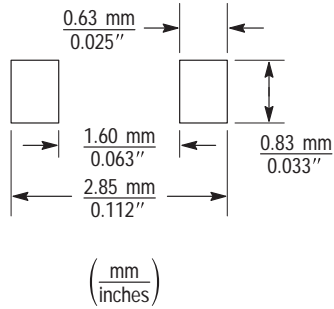


- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: MILLIMETERS.
 3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.


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

CASE 477-02
ISSUE A
SOD323



SOD-323
Soldering Footprint

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