MMDL914T1

Preferred Device

High-Speed Switching Diode

Features

• Pb-Free Package is Available

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
Forward Current	ΙF	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°C (Note 1)	P _D	200	mW
Derate above 25°C		1.57	mW/°C
Thermal Resistance, Junction–to–Ambient	$R_{ heta JA}$	635	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55 to 150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-4 Minimum Pad.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit		
OFF CHARACTERISTICS						
Reverse Breakdown Voltage (I _R = 100 μAdc)	V _(BR)	100	ı	Vdc		
Reverse Voltage Leakage Current (V _R = 20 Vdc) (V _R = 75 Vdc)	I _R	1 1	25 5.0	nAdc μAdc		
Diode Capacitance (V _R = 0 V, f = 1.0 MHz)	C _T	-	4.0	pF		
Forward Voltage (I _F = 10 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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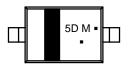
http://onsemi.com





SOD-323 CASE 477 STYLE 1

MARKING DIAGRAM



5D = Specific Device Code

M = Date Code

= Pb–Free Package

(Note: Microdot may be in either location)

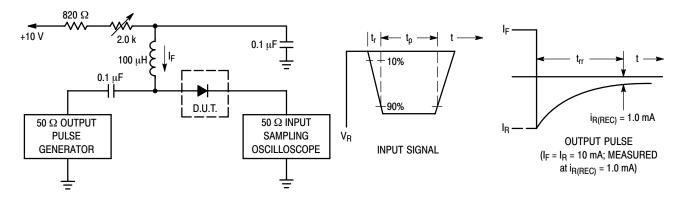
ORDERING INFORMATION

Device	Package	Shipping [†]		
MMDL914T1	SOD-323	3000/Tape & Reel		
MMDL914T1G	SOD-323 (Pb-Free)	3000/Tape & Reel		
MMDL914T3G	SOD-323 (Pb-Free)	10,000/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 k Ω 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 » t_{rr}

Figure 1. Recovery Time Equivalent Test Circuit

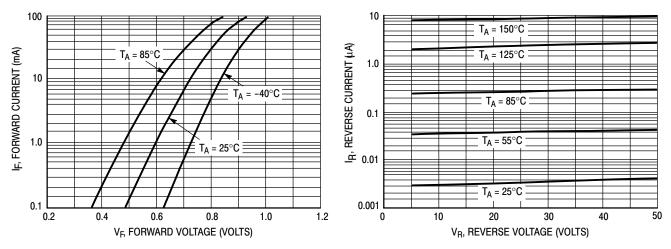


Figure 2. Forward Voltage

Figure 3. Leakage Current

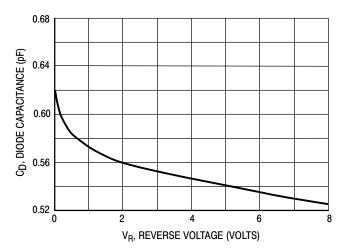
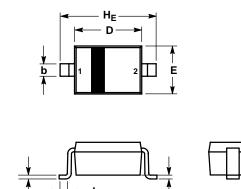


Figure 4. Capacitance

MMDL914T1

PACKAGE DIMENSIONS

SOD-323 CASE 477-02 **ISSUE G**



NOTE 5

NOTE 3

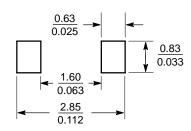
NOTES

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

		MILLIMETERS			INCHES		
D	IM	MIN	NOM	MAX	MIN	NOM	MAX
-	Ą	0.80	0.90	1.00	0.031	0.035	0.040
Α	١1	0.00	0.05	0.10	0.000	0.002	0.004
Α	١3	0.15 REF			0.006 REF		
ı	b	0.25	0.32	0.4	0.010	0.012	0.016
	C	0.089	0.12	0.177	0.003	0.005	0.007
[D	1.60	1.70	1.80	0.062	0.066	0.070
E	E	1.15	1.25	1.35	0.045	0.049	0.053
ı	L	0.08			0.003		
Н	ΙE	2.30	2.50	2.70	0.090	0.098	0.105

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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