



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



MMSD301T1G, SMMSD301T1G, MMSD701T1G, SMMSD701T1G,



ON Semiconductor®

<http://onsemi.com>

SOD-123 Schottky Barrier Diodes

The MMSD301T1, and MMSD701T1 devices are spin-offs of our popular MMBD301LT1, and MMBD701LT1 SOT-23 devices. They are designed for high-efficiency UHF and VHF detector applications. Readily available to many other fast switching RF and digital applications.

Features

- Extremely Low Minority Carrier Lifetime
- Very Low Capacitance
- Low Reverse Leakage
- AEC Qualified and PPAP Capable
- S Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant*

MAXIMUM RATINGS

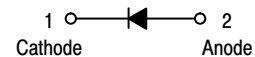
Rating	Symbol	Value	Unit
Reverse Voltage MMSD301T1G, SMMSD301T1G MMSD701T1G, SMMSD701T1G	V_R	30 70	Vdc
Forward Current (DC) Continuous	I_F	200	mA
Forward Power Dissipation $T_A = 25^\circ\text{C}$	P_F	225	mW
Junction Temperature	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

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.

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



**SOD-123
CASE 425
STYLE 1**



MARKING DIAGRAM



- xx = Specific Device Code
XT = MMSD301T1G
SMMSD301T1G
XH = MMSD701T1G
SMMSD701T1G
- M = Date Code
- = Pb-Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
MMSD301T1G	SOD-123 (Pb-Free)	3,000 / Tape & Reel
SMMSD301T1G	SOD-123 (Pb-Free)	3,000 / Tape & Reel
MMSD701T1G	SOD-123 (Pb-Free)	3,000 / Tape & Reel
SMMSD701T1G	SOD-123 (Pb-Free)	3,000 / 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.

MMSD301T1G, SMMSD301T1G, MMSD701T1G, SMMSD701T1G,

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I _R = 10 μA) MMSD301T1G, SMMSD301T1G MMSD701T1G, SMMSD701T1G	V _{(BR)R}	30 70	– –	– –	V
Diode Capacitance (V _R = 0 V, f = 1.0 MHz) MMSD301T1G, SMMSD301T1G MMSD701T1G, SMMSD701T1G	C _T	– –	0.9 0.5	1.5 1.0	pF
Total Capacitance (V _R = 15 V, f = 1.0 MHz) MMSD301T1G, SMMSD301T1G (V _R = 20 V, f = 1.0 MHz) MMSD701T1G, SMMSD701T1G	C _T	– –	0.9 0.5	1.5 1.0	pF
Reverse Leakage (V _R = 25 V) MMSD301T1G, SMMSD301T1G (V _R = 35 V) MMSD701T1G, SMMSD701T1G	I _R	– –	13 9.0	200 200	nAdc
Forward Voltage (I _F = 1.0 mAdc) MMSD301T1G, SMMSD301T1G (I _F = 10 mA) (I _F = 1.0 mAdc) MMSD701T1G, SMMSD701T1G (I _F = 10 mA)	V _F	– – – –	0.38 0.52 0.42 0.7	0.45 0.6 0.5 1.0	Vdc

MMSD301T1G, SMMSD301T1G, MMSD701T1G, SMMSD701T1G,

TYPICAL CHARACTERISTICS
MMSD301T1G, SMMSD301T1G

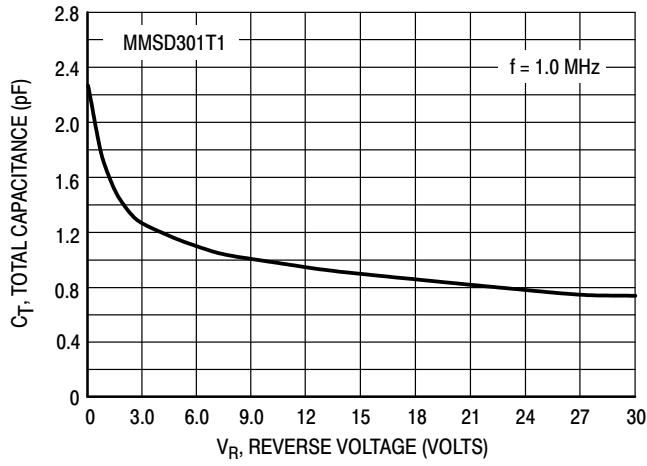


Figure 1. Total Capacitance

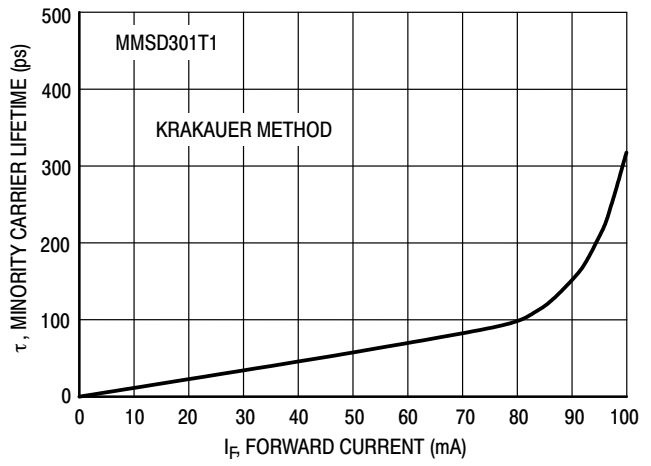


Figure 2. Minority Carrier Lifetime

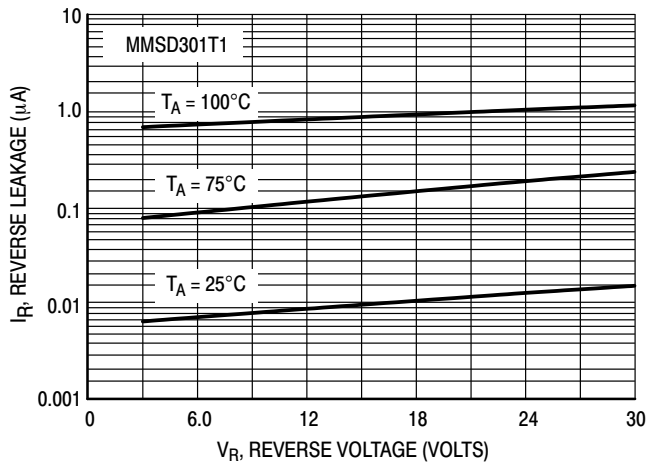


Figure 3. Reverse Leakage

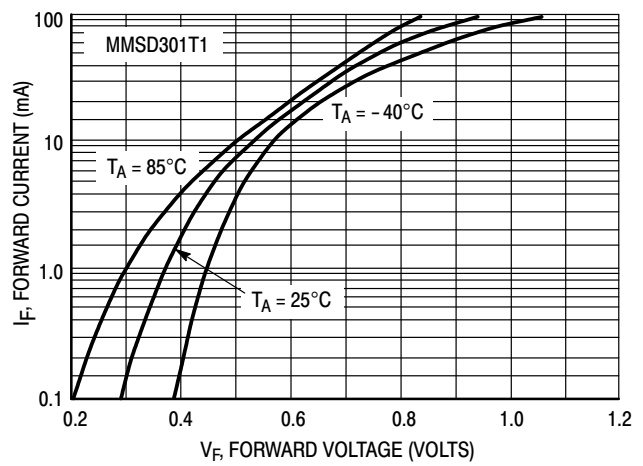


Figure 4. Forward Voltage

MMSD301T1G, SMMSD301T1G, MMSD701T1G, SMMSD701T1G,

TYPICAL CHARACTERISTICS
MMSD701T1G, SMMSD701T1G

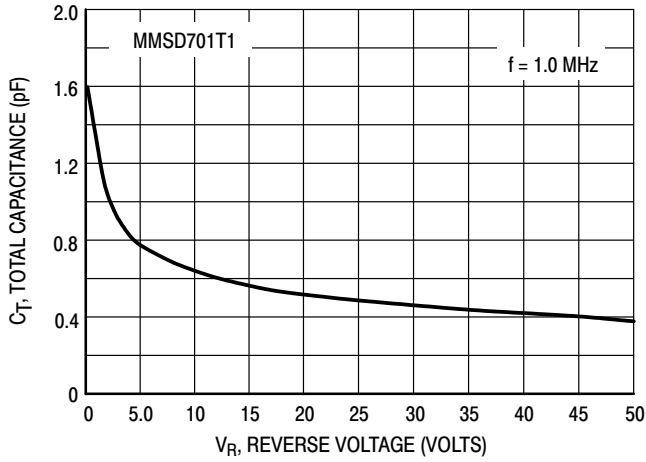


Figure 5. Total Capacitance

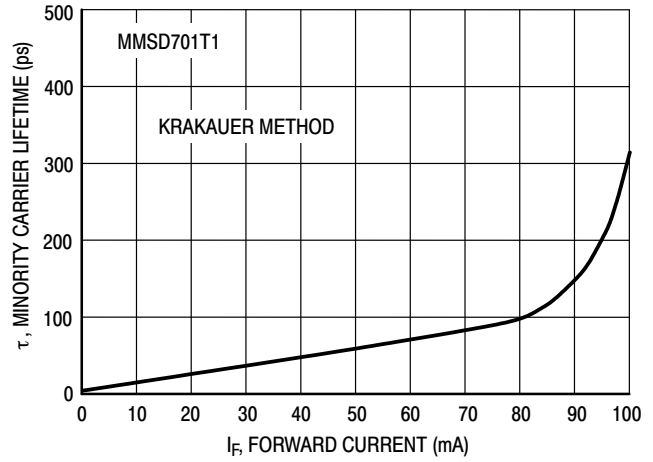


Figure 6. Minority Carrier Lifetime

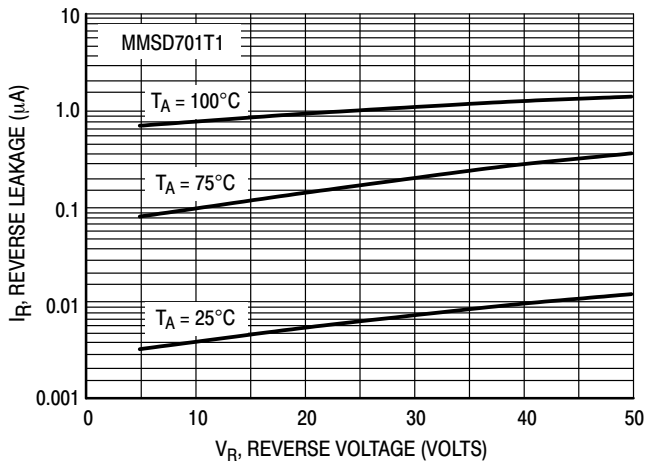


Figure 7. Reverse Leakage

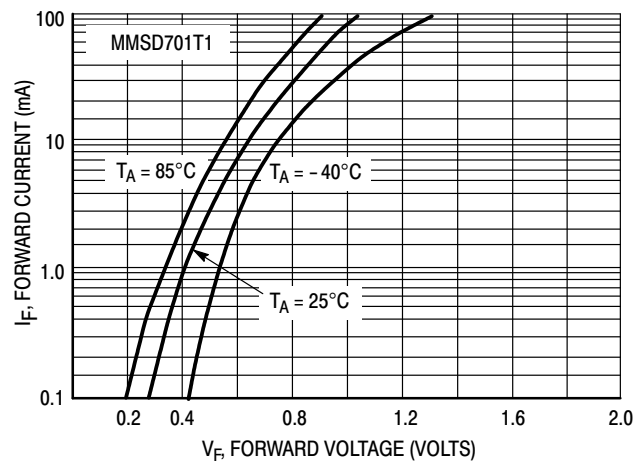
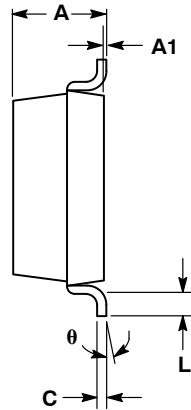
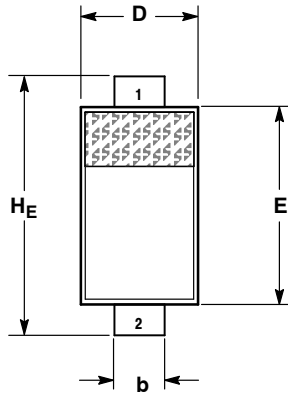


Figure 8. Forward Voltage

MMSD301T1G, SMMSD301T1G, MMSD701T1G, SMMSD701T1G,

PACKAGE DIMENSIONS

SOD-123
CASE 425-04
ISSUE G

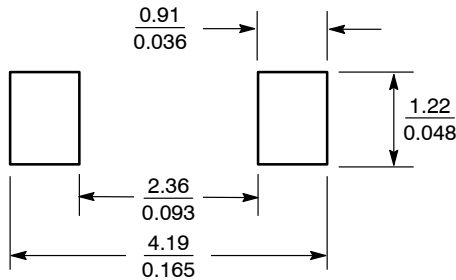


- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
HE	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---
θ	0°	---	10°	0°	---	10°

- STYLE 1:
PIN 1. CATHODE
2. ANODE

SOLDERING FOOTPRINT*



SCALE 10:1 ($\frac{\text{mm}}{\text{inches}}$)

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

ON Semiconductor and are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855 Toll Free
USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81-3-5817-1050

ON Semiconductor Website: www.onsemi.com
Order Literature: <http://www.onsemi.com/orderlit>
For additional information, please contact your local Sales Representative