THE DATASHEET OF

MMBV3700LT1G

MMBV3700LT1G

High Voltage Silicon Pin Diodes

These devices are designed primarily for VHF band switching applications but are also suitable for use in general−purpose switching circuits. They are supplied in a cost−effective plastic package for economical, high−volume consumer and industrial requirements. They are also available in surface mount.

Features

- Long Reverse Recovery Time t_{rr} = 300 ns (Typ)
- Rugged PIN Structure Coupled with Wirebond Construction for Optimum Reliability
- Low Series Resistance @ 100 MHz – R_S = 0.7 Ω (Typ) @ I_F = 10 mA
- Reverse Breakdown Voltage = 200 V (Min)
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	200	V
Forward Power Dissipation @ T_A = 25°C Derate above 25°C	P_D	 200 2.8	 mW mW/°C
Junction Temperature	T_J	+125	°C
Storage Temperature Range	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.

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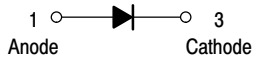
SOT−23



MARKING DIAGRAM

SOT−23 (TO−236AB)
CASE 318−08
STYLE 8

4R = Specific Device Code
M = Date Code*
▪ = Pb−Free Package
(Note: Microdot may be in either location)

*Date Code orientation and/or overbar may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping†
MMBV3700LT1G	SOT−23 (Pb−Free)	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.

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I_R = 10 μA)	$V_{(BR)R}$	200	–	–	V
Diode Capacitance (V_R = 20 V, f = 1.0 MHz)	C_T	–	–	1.0	pF
Series Resistance (Figure 5) (I_F = 10 mA)	R_S	–	0.7	1.0	Ω
Reverse Leakage Current (V_R = 150 V)	I_R	–	–	0.1	μA
Reverse Recovery Time (I_F = I_R = 10 mA)	t_{rr}	–	300	–	ns

TYPICAL CHARACTERISTICS

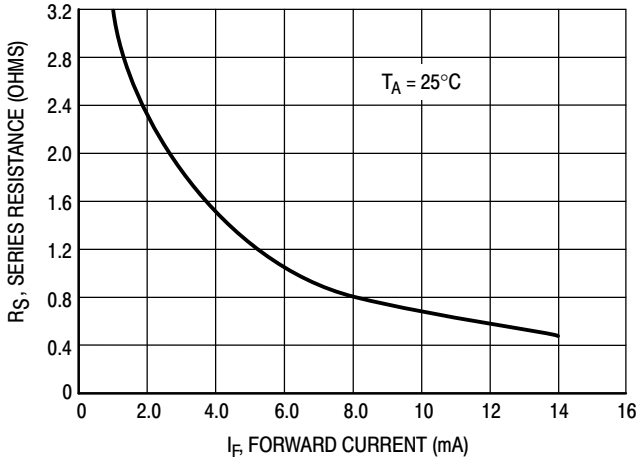


Figure 1. Series Resistance

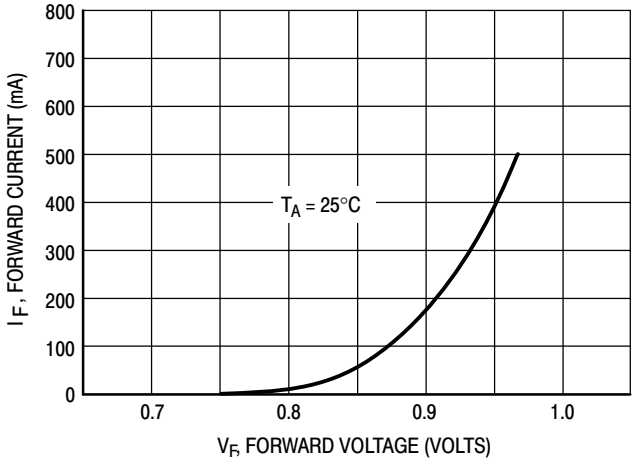


Figure 2. Forward Voltage

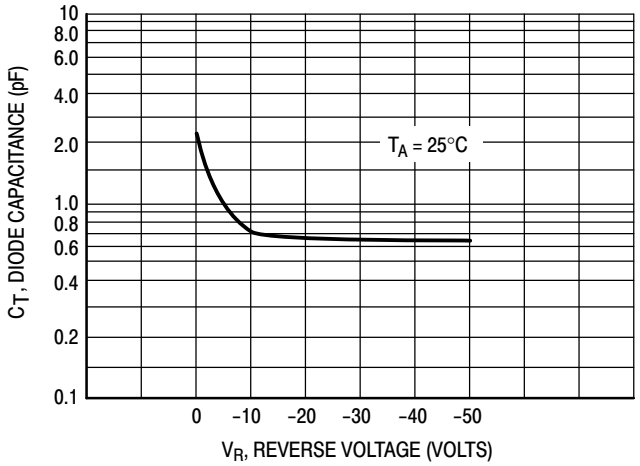


Figure 3. Diode Capacitance

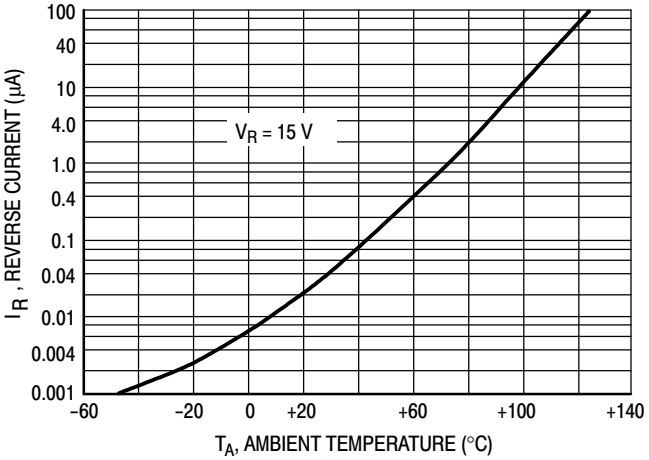
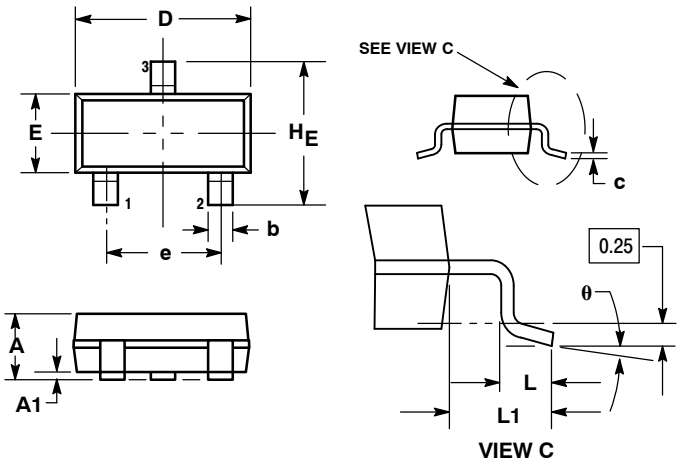


Figure 4. Leakage Current

PACKAGE DIMENSIONS

SOT−23 (TO−236)
CASE 318−08
ISSUE AN

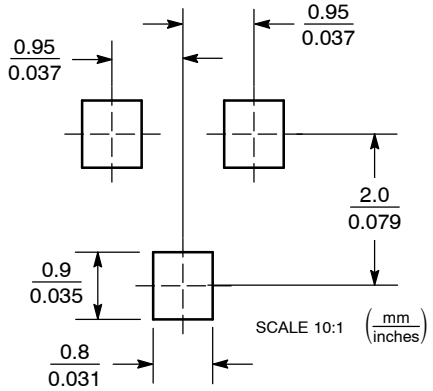


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318−01 THRU −07 AND −09 OBSOLETE, NEW STANDARD 318−08.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.10	0.20	0.30	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
H_E	2.10	2.40	2.64	0.083	0.094	0.104

STYLE 8:
PIN 1. ANODE
2. NO CONNECTION
3. CATHODE

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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