

Silicon Pin Diode

This device is designed primarily for VHF band switching applications but is also suitable for use in general-purpose switching circuits. Supplied in a Surface Mount package.

- Rugged PIN Structure Coupled with Wirebond Construction for Optimum Reliability
- Low Capacitance — 0.7 pF Typ at $V_R = 20$ Vdc
- Very Low Series Resistance at 100 MHz — 0.34 Ohms (Typ) @ $I_F = 10$ mAdc



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	Vdc
Peak 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

MMVL3401T1 = 4D

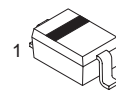
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 10 \mu\text{Adc}$)	$V_{(BR)R}$	35	—	—	Vdc
Diode Capacitance ($V_R = 20$ Vdc)	C_T	—	—	1.0	pF
Series Resistance (Figure 5) ($I_F = 10$ mAdc, $f = 100$ MHz)	R_S	—	—	0.7	Ω
Reverse Leakage Current ($V_R = 25$ Vdc)	I_R	—	—	0.1	μAdc

MMVL3401T1

Motorola Preferred Device

**SILICON PIN
SWITCHING DIODE**



**CASE 477-02, STYLE 1
SOD323**

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

TYPICAL CHARACTERISTICS

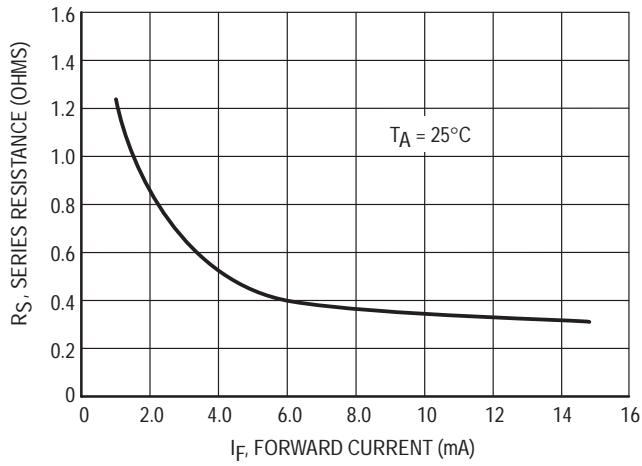


Figure 1. Series Resistance

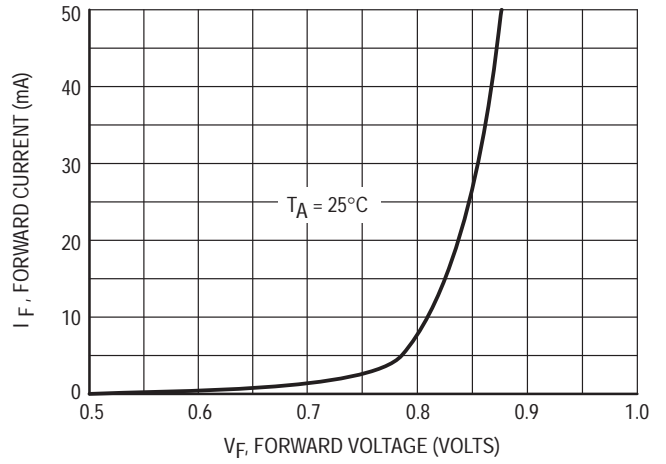


Figure 2. Forward Voltage

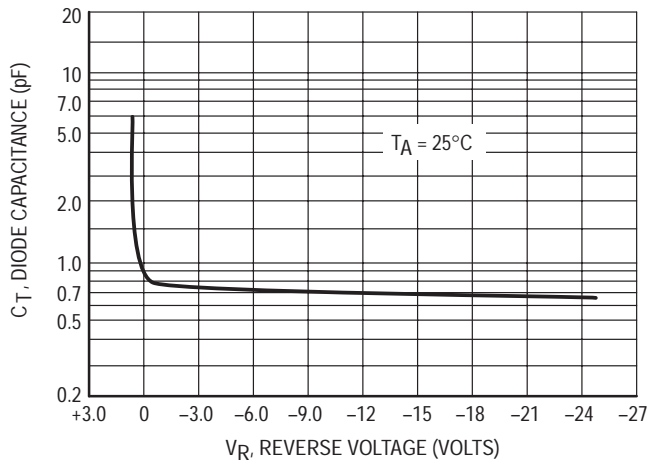


Figure 3. Diode Capacitance

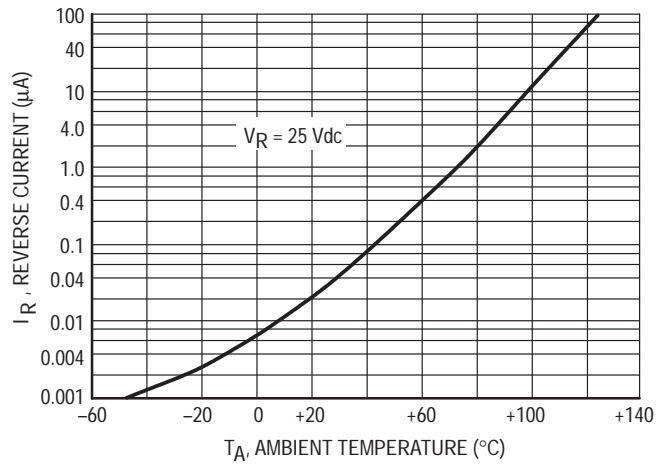


Figure 4. Leakage Current

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**

$\frac{0.63 \text{ mm}}{0.025''}$
 $\frac{1.60 \text{ mm}}{0.063''}$
 $\frac{2.85 \text{ mm}}{0.112''}$
 $\frac{0.83 \text{ mm}}{0.033''}$

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

SOD-323
Soldering Footprint

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