

Silicon Tuning Diode

This device is designed in the Surface Mount package for general frequency control and tuning applications. It provides solid-state reliability in replacement of mechanical tuning methods.

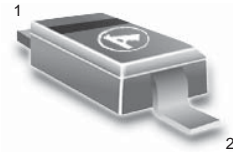
- Controlled and Uniform Tuning Ratio
- Device Marking: M4E

ORDERING INFORMATION

Device	Package	Shipping
MMVL105GT1	SOD-323	3000 / Tape & Reel

MMVL105GT1

**30 VOLT
VOLTAGE VARIABLE
CAPACITANCE DIODES**



PLASTIC, CASE 477
SOD-323



MAXIMUM RATINGS

Symbol	Rating	Value	Unit
V_R	Continuous Reverse Voltage	30	Vdc
I_F	Peak Forward Current	200	mAdc

THERMAL CHARACTERISTICS

Symbol	Characteristic	Max	Unit
P_D	Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$ Derate above 25°C	200 1.57	mW mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	635	$^\circ\text{C}/\text{W}$
T_J, T_{stg}	Junction and Storage Temperature	150	$^\circ\text{C}$

*FR-4 Minimum Pad

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

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage ($I_R = 10 \mu\text{Adc}$)	$V_{(BR)R}$	30	—	Vdc
Reverse Voltage Leakage Current ($V_R = 28 \text{ Vdc}$)	I_R	—	50	nAdc

Device Type	C_t $V_R = 25 \text{ Vdc}, f = 1.0 \text{ MHz}$ pF		Q $V_R = 3.0 \text{ Vdc}$ $f = 50 \text{ MHz}$	$C_R, C_3/C_{25}$ $f = 1.0 \text{ MHz}$	
	Min	Max	Typ	Min	Max
MMVL105T1	1.5	2.8	250	4.0	6.5

MMVL105GT1

TYPICAL CHARACTERISTICS

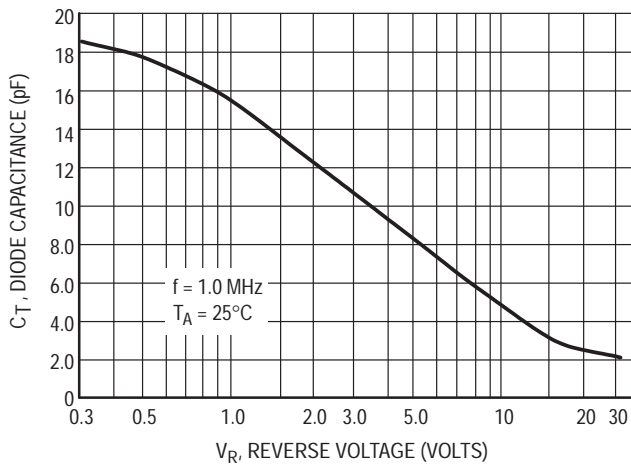


Figure 1. Diode Capacitance

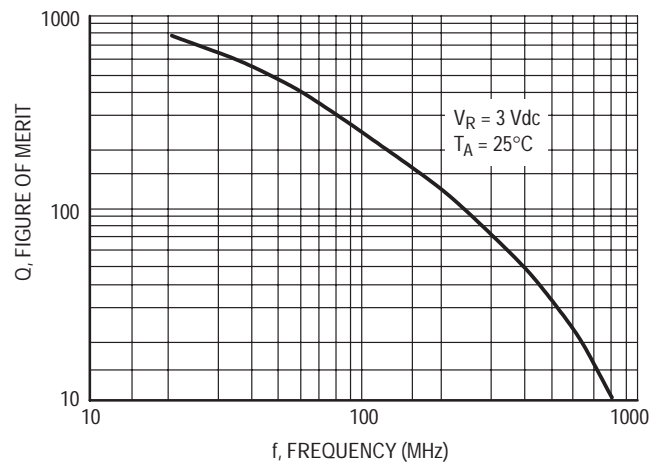


Figure 2. Figure of Merit

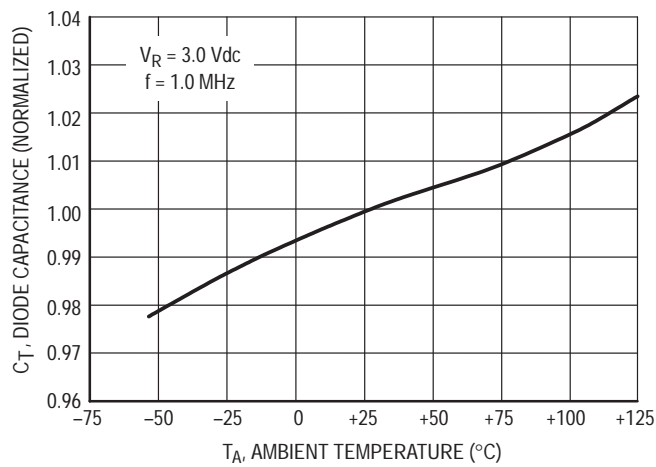


Figure 3. Diode Capacitance