MMBV609LT1G

Silicon Tuning Diode

This device is designed for FM tuning, general frequency control and tuning, or any top-of-the-line application requiring back-to-back diode configuration for minimum signal distortion and detuning. This device is supplied in the SOT-23 plastic package for high volume, pick and place assembly requirements.

Features

- High Figure of Merit Q = 450 (Typ) @ V_R = 3.0 Vdc, f = 50 MHz
- Guaranteed Capacitance Range
- Dual Diodes Save Space and Reduce Cost
- Surface Mount Package
- Available in 8 mm Tape and Reel
- Monolithic Chip Provides Improved Matching
- Hyper Abrupt Junction Process Provides High Tuning Ratio
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS (EACH DIODE)

Rating	Symbol	Value	Unit
Reverse Voltage	V _R	20	Vdc
Forward Current	١ _F	100	mAdc
Total Power Dissipation @ T _A = 25°C Derate above 25°C	P _D	225 1.8	mW mW/°C
Junction Temperature	TJ	+125	°C
Storage Temperature Range	T _{stg}	-55 to +125	°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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DUAL VOLTAGE VARIABLE CAPACITANCE DIODE



ORDERING INFORMATION

Device	Package	Shipping [†]
MMBV609LT1G	SOT-23 (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.

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

Characteristic	Symbol	Min	Тур	Max	Unit
Reverse Breakdown Voltage (I _R = 10 μAdc)	V _{(BR)R}	20	-	-	Vdc
Reverse Voltage Leakage Current (V _R = 15 Vdc)	I _R	-	-	10	nAdc
Diode Capacitance (V _R = 3.0 Vdc, f = 1.0 MHz)	CT	26	-	32	pF
Capacitance Ratio C3/C8 (f = 1.0 MHz)	C _R	1.8	-	2.4	-
Figure of Merit (V _R = 3.0 Vdc, f = 50 MHz)	Q	250	450	-	-



TYPICAL CHARACTERISTICS



Figure 2. Figure of Merit



Figure 3. Diode Capacitance

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