GaAs Multiplier Diodes

Frequency Multiplier

MV71001 – MV71013

Features

- High Efficiency
- Low Parasitic Packages
- Low Thermal Resistance

Applications

- High-Power mmW Transceivers
- mmW Phase Arrays
- Drivers for Power Amplifiers
- Frequency Multipliers to 110 GHz and Beyond



Description

Microsemi's GaAs frequency multiplier diodes are fabricated from epitaxial layers grown at using Chemical Vapor Deposition. The layers are processed at using proprietary techniques resulting in high Q factor and repeatable tuning curves. The diodes are available in a variety of microwave ceramic packages or chips for operation from UHF to mmW frequencies.

Specifications @ 25°C

Part Number	C_J @ 0 V ± 10% (pF)[1, 3, 4]	Typ.[5] $\frac{C_T \text{ @ } 0\text{ V}}{C_T \text{ @ } V_{BR}}$	Min. V_{BR} @ 10 µA (V)	Typ. Q @ -4 V[2]
MV71001	0.2	2.1	15	8000
MV71002	0.3	2.4	15	8000
MV71003	0.4	2.6	15	7500
MV71004	0.5	2.8	15	7000
MV71005	0.3	2.8	30	8000
MV71006	0.4	3.1	30	7500
MV71007	0.5	3.4	30	7000
MV71008	0.6	3.6	30	6500
MV71009	0.7	3.7	30	6000
MV71010	0.8	3.8	30	6000
MV71011	0.9	3.9	30	5700
MV71012	1.0	4.0	30	5700
MV71013	1.2	4.2	30	5000

[1] Capacitance is specified at 1 MHz.
[2] Measured by DeLoach Technique and referenced to 50 MHz.
[3] Tightened tolerances available upon request.
[4] Package capacitance are not included in above specifications.
[5] Capacitance ratio is calculated using C_P = 0.15 pF. Ratios will vary depending upon case style selection.

Maximum Ratings

Reverse Voltage	Breakdown Voltage
Forward Current	50 mA @ 25°C
Incident Power	+23 dBm @ 25°C
Operating Temperature	-55°C to +175°C
Storage Temperature	-55°C to +200°C

IMPORTANT: For the most current data, consult our website: ***www.MICROSEMI.com***
Specifications are subject to change. Consult factory for the latest information.

These devices are ESD sensitive and must be handled using ESD precautions.

[1] The MV71000 Series of products are supplied with a RoHS complaint Gold finish.

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Rev: 2009-01-19

Microsemi
Microwave Products
75 Technology Drive, Lowell, MA. 01851, 978-442-5600, Fax: 978-937-3748