

Features

- High Reliability
- Low-Phase Noise
- 9.5–25.0 GHz Operation
- Pulsed and CW Designs to 20 mW

Applications

- Motion Detectors
- Transmitters and Receivers
- Beacons
- Automotive Collision Avoidance Radars
- Radars
- Radiometers
- Instrumentation



Description

Microsemi's GaAs Gunn diodes, epi-up (anode heatsink), are fabricated from epitaxial layers grown at MSC using a chemical vapor deposition (CVD) epitaxy technique. The layers are processed using proprietary techniques resulting in ultra- low phase and 1/f noise. The diodes are available in a variety of microwave ceramic packages for operation from 9.5–25.0 GHz.

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.

These products are supplied with a RoHS complaint Gold finish.

(Discrete Frequency: Anode Heatsink)

CW Epi-Up Gunn Diodes (Specifications @ 25°C)

Part Number	Operating Frequency ¹ (GHz)	Min. Power ² (mW)	Typ. Operating Voltage (V)	Max. Operating Current (mA)	Package Outline ³
MG1052-30	9.5–11.5	10	8	140	30
MG1056-30	9.5–11.5	20	8	200	30
MG1054-30	23.0–25.0	5	5	200	30
MG1058-30	23.0–25.0	10	5	300	30

Pulsed Epi-Up Gunn Diodes (Specifications @ 25°C)

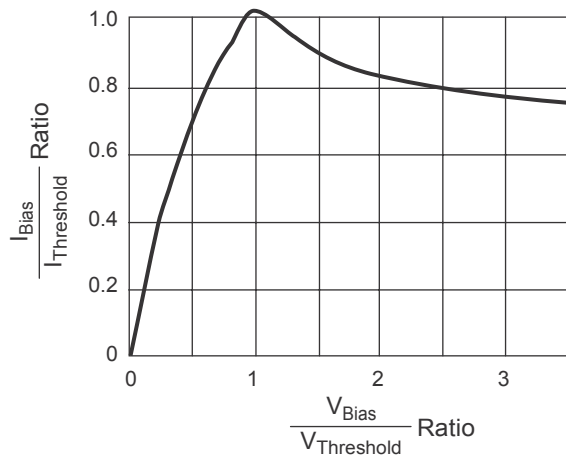
Part Number	Operating Frequency ¹ (GHz)	Min. Power ² (mW)	Typ. Operating Voltage (V)	Max. Operating Current (mA)	Package Outline ³
MG1041-30	9.5–11.5	10	9	110	30
MG1042-30	9.5–11.5	20	9	140	30
MG1043-30	9.5–11.5	30	10	180	30
MG1044-30	23.0–25.0	5	8	120	30
MG1045-30	23.0–25.0	10	8	150	30
MG1046-30	23.0–25.0	20	8	200	30

¹Microsemi Gunn diodes are specified to operate within a narrow range of a customer-designated center frequency within the operating frequency range shown. Additional frequencies are available; Please contact the factory.

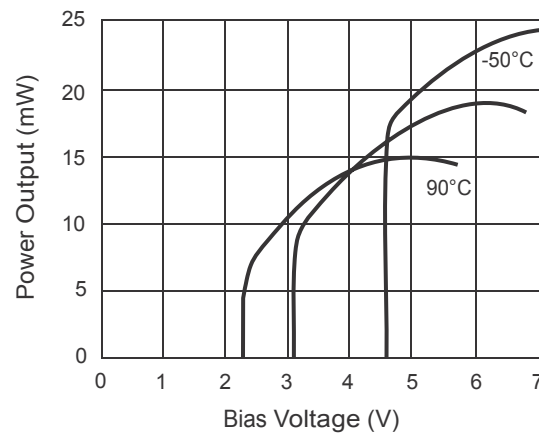
²Power is measured using a critically coupled test cavity. For pulsed diodes, pulse width = 1 μ S, duty factor = 1% typ.

³Polarity: cathode is the cap and anode is the heatsink.

Typical Characteristics



I_{Bias} Ratio vs. V_{Bias} Ratio



Power Output vs. Bias Voltage