

Commercial Pulsed Gunn Diodes

This series of pulsed Gunn diodes have very low average current drain and are used in motion detection systems, burglar alarms and door openers.

Specifications @ $T_A = +25^\circ\text{C}$

Model Number	Case Style	Frequency ^{2,3,8} Min./Max. (GHz)	Minimum ^{1,3,8} Peak Power (mW)	Maximum Operating Voltage (Volts)	Maximum ⁵ Operating Current (mA)
MA49870*	30	9.0/11.0	10.0	8.5	120

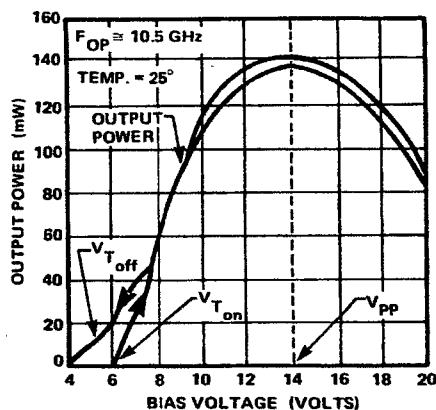
* Heat sink is anode.

Notes:

- This power is delivered at a specified single frequency in the specified band.
- The customer MUST specify the desired operating frequency within the indicated range.
- Power is measured into a critically coupled load at a customer specified single frequency in the indicated range. Typical bandwidth is $\pm 5\%$. The minimum indicated output power is guaranteed into a critically coupled load over the indicated bandwidth centered around the frequency specified by the customer. Higher power diodes are available upon special request.
- These diodes are designed to operate within a heat sink temperature -30°C to $+70^\circ\text{C}$. However, for higher operating temperatures, please contact the factory.
- The minimum threshold current is approximately 1.3 times the maximum operating current.
- All diodes are burned in for a minimum period of 8 hours at diode case temperature (T_c) of $70 \pm 5^\circ\text{C}$ and with CW dc bias.
- Frequency chirp during $0.5 (\mu\text{s})$ is typically less than 10 MHz in a waveguide cavity.
- Maximum duty cycle is 1%. Maximum pulse width is $1 (\mu\text{s})$.

Typical Performance Curves

OUTPUT POWER vs BIAS VOLTAGE OF A TYPICAL X-BAND GUNN DIODE



OUTPUT POWER vs BIAS VOLTAGE AND TEMPERATURE OF TYPICAL K-BAND GUNN DIODE

