

Features

- Constant Gamma = 1.25
- High Q (up to 4000 @ -4 V)
- More Linear Frequency Tuning
- High and Nearly Constant Modulation Sensitivity

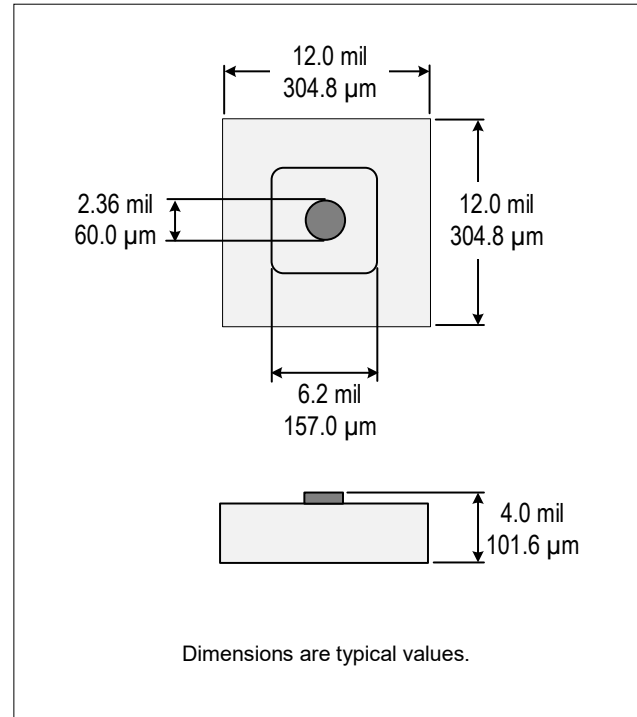
Applications

- ISM

Description

These tuning varactors are hyperabrupt junction Gallium Arsenide diodes featuring constant gamma = 1.25. These diodes offer high Q (up to 4000) permitting excellent tuning performance from VHF through Ka band. Each part in this series exhibits the large change in capacitance versus bias voltage characteristic of hyperabrupt junctions. The standard capacitance tolerance is $\pm 10\%$, with tighter tolerances available. Capacitance matching at one or more bias voltages is also available. Constant gamma tuning varactors permit more linear VCO frequency tuning than do conventional hyperabrupt tuning varactors. These varactors are particularly well suited for use in voltage tuned filters, analog phase shifters, and modulator circuits.

Die Outline Drawing



Electrical Specifications:

$T_A = +25^\circ\text{C}$, $V_B @ I_R = 10 \mu\text{A}$, $V_B = 25 \text{ V min.}$, $I_R @ V_R = 18 \text{ V}$, $I_R = 50 \text{ nA max.}$

Part Number	Total Capacitance (pF) $\pm 10\%$	Total Capacitance Ratio	Q Typical
	$V_R = 4$; $V_F = 1 \text{ MHz}$	$V_R = 2 \text{ V} / 20 \text{ V}$	$V_R = 4$; $V_F = 50 \text{ MHz}$
MAVR-011051	0.6	6.7 - 8.7	4000

Ordering Information

Part Number	Package
MAVR-011051-DIEWPK	Waffle Pack
MAVR-011051-DIERI ¹	Wafer Ring

1. Wafer is on UV tape and 8 inch hoop ring.

Absolute Maximum Ratings²: $T_A = +25^\circ\text{C}$

Parameter	Absolute Maximum
Reverse Voltage	$V_B = 25 \text{ V}$
Operating Temperature	-55°C to $+125^\circ\text{C}$
Storage Temperature	-65°C to $+150^\circ\text{C}$

2. Operation of this device above any one of these parameters may cause permanent damage.

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