



DS3413-1.2

DC4300 Series

GALLIUM ARSENIDE MICROWAVE TUNING VARACTORS

This range of epitaxial gallium arsenide Schottky barrier variable capacitance diodes is designed primarily for electronic tuning of Gunn and transistor microwave oscillators. They have the advantage over silicon tuning diodes in that the required change in capacitance occurs over a lower tuning voltage range and, as such, is more compatible with Gunn and transistor power supplies. Gallium arsenide varactors also exhibit excellent low noise characteristics.

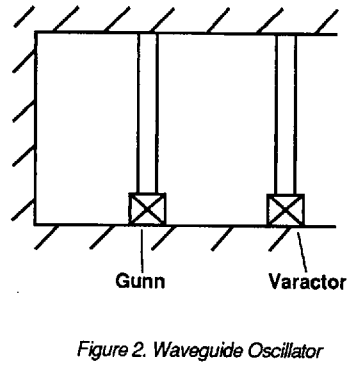
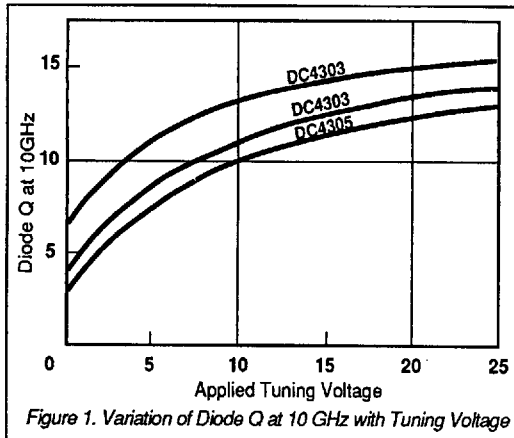
ELECTRICAL CHARACTERISTICS

The total capacitance includes the encapsulation capacitance which is approximately 0.25pF for outline 00, and 0.08pF for outline 20. Diodes can be supplied to smaller total capacitance spreads to special order. The suffix A or B must be added to the type number to specify the minimum breakdown voltage of 20 volts or 30 volts respectively.

| Type Number | Outline Number | *MWV (V) | C _{TO} (pF) | Typical C _i Ratio | | Q typ. at 10 GHz (0V) |
|-------------|----------------|----------|----------------------|------------------------------|---------|-----------------------|
| | | | | 0 - 20V | 0 - 30V | |
| DC4303A | 00 | 20 | 0.8 | 4.5 | | 6.6 |
| DC4302A | 00 | 20 | 1.3 | 4.5 | | 6.0 |
| DC4301A | 00 | 20 | 2.2 | 4.5 | | 4.3 |
| DC4304A | 00 | 20 | 3.3 | 4.5 | | 3.4 |
| DC4305A | 00 | 20 | 4.7 | 4.5 | | 3.3 |
| DC4303B | 00 | 30 | 0.8 | 4.5 | 6.0 | 6.6 |
| DC4302B | 00 | 30 | 1.3 | 4.5 | 6.0 | 6.0 |
| DC4301B | 00 | 30 | 2.2 | 4.5 | 6.0 | 4.3 |
| DC4304B | 00 | 30 | 3.3 | 4.5 | 6.0 | 3.4 |
| DC4305B | 00 | 30 | 4.7 | 4.5 | 6.0 | 3.3 |
| DC4373A | 20 | 20 | 0.8 | 4.5 | | 6.6 |
| DC4372A | 20 | 20 | 1.3 | 4.5 | | 6.0 |
| DC4371A | 20 | 20 | 2.2 | 4.5 | | 4.3 |
| DC4374A | 20 | 20 | 3.3 | 4.5 | | 3.4 |
| DC4375A | 20 | 20 | 4.7 | 4.5 | | 3.3 |
| DC4373B | 20 | 30 | 0.8 | 4.5 | 6.0 | 6.6 |
| DC4372B | 20 | 30 | 1.3 | 4.5 | 6.0 | 6.0 |
| DC4371B | 20 | 30 | 2.2 | 4.5 | 6.0 | 4.3 |
| DC4374B | 20 | 30 | 3.3 | 4.5 | 6.0 | 3.4 |
| DC4375B | 20 | 30 | 4.7 | 4.5 | 6.0 | 3.3 |

*MWV - Minimum Working Voltage

DC4300 Series



OUTLINE DRAWINGS

