

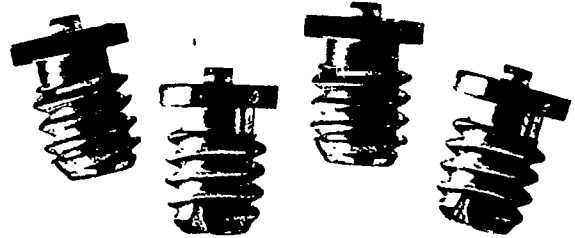
GALLIUM ARSENIDE CW IMPATT DIODES

9250 Series 5–21 GHz

- High CW Output Power
- High Efficiency—Typically 18–20%
- Burnout Resistant to Circuit Mismatches
- High Reliability—Greater than 10^6 hrs MTTF

DESCRIPTION

Litton 9250 diodes are hi-low, gallium arsenide IMPATT diodes. They are especially ideal for use in injection-locked oscillators and amplifier stages in communication systems and other applications. Rugged, reliable diode construction is assured by using a grown P+ hi-low doping profile with a high-temperature metallization process on P+N+N⁻N⁺ GaAs. These diodes can be readily combined in multiple diode oscillators.



ABSOLUTE MAXIMUM RATINGS

Junction Operating Temperature 225°C
 Storage Temperature 225°C
 Soldering Temperature, 5 sec. maximum 230°C

GENERAL CHARACTERISTICS

Frequency Range (GHz)	Minimum RF Power (W)	Minimum Efficiency (%)	Typical Operating Voltage (V)	Typical Operating Current (mA)	Typical Breakdown Voltage (V)	Typical Device Capacitance (pF)	Typical Thermal Resistivity (°C/W)	Part Number (Package)
5–7	4.0	17	55	450	30	2.8	8	VSC 9250 S1 (N23)
	4.5	19	55	450	30	2.8	8	VSC 9250 S2 (N23)
8–10	3.5	17	42	500	25	2.5	10	VSX 9250 S1 (N58)
	4.0	19	42	500	25	2.5	10	VSX 9250 S2 (N58)
14–16	3.0	18	36	500	20	2.0	12	VSU 9250 S1 (N58)
	3.4	20	36	500	20	2.0	12	VSU 9250 S2 (N58)
19–21	2.0	18	30	390	18	1.5	16	VSK 9250 S1 (N113)
	2.2	20	30	390	18	1.5	16	VSK 9250 S2 (N113)

NOTES:

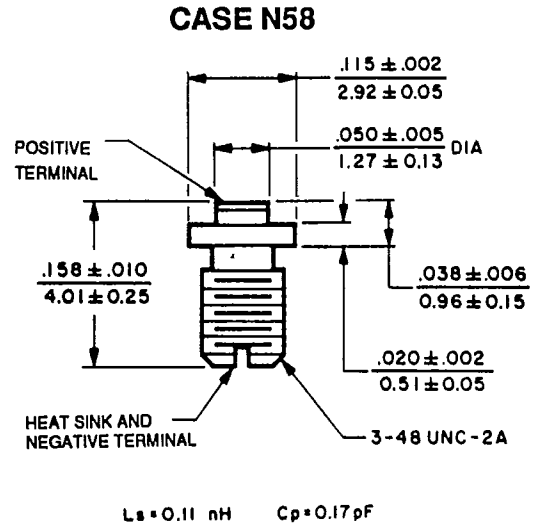
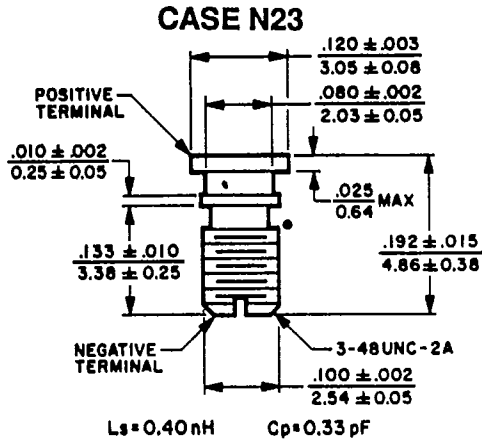
1. RF performance is measured at an ambient of 25°C in a hi-Q coaxial or waveguide test cavity. Cavity design information is available upon request. Special considerations are required for use of other media (microstrip, suspended-substrate); information available upon request.
2. Reverse Breakdown Voltage (BV), measured with a reverse current of 1 mA.
3. Device capacitance measured under a reverse bias voltage of 80% of BV.
4. S-Parameter data for design of matching circuits is available upon request.

Litton

Solid State

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OUTLINE DRAWINGS



DIMENSIONS: \leftarrow inch \rightarrow
mm

