



TLC004981

Ka-Band MMIC Oscillator (ILO)

Description

The TLC004981 is an image lock oscillator with an output buffer amplifier. A 0.25 μ m PHEMT process was chosen to provide 10 dBm of output power at 27 GHz and low power consumption. The frequency is voltage and mechanically tunable.

The versatility of the TLC004981 oscillator make it an excellent candidate for use in radar or communication systems.

Features

- 25 to 27 GHz
- Voltage Tuning (f_0) 800 MHz
- $P_O > 10$ dBm @ 27 GHz



Maximum Ratings

| Symbol | Parameter | Rating | Units |
|--------|-------------------------|--------------|-------|
| VG | Negative Supply Voltage | - 2 | V |
| TC | Operating Temperature | - 50 to 130 | ° C |
| TSTG | Storage Temperature | - 65 to -150 | ° C |

Performance Summary

| Parameter (@ 25 °C) | Min | Typ | Max | Units |
|-------------------------------|-----|-----|-----|--------|
| Frequency | 25 | 27 | 28 | GHz |
| P_O | -- | 16 | -- | dBm |
| P_N (@ 1 MHz DRO operation) | -- | -87 | -80 | dBc/Hz |
| DC Power | -- | 540 | 740 | mW |

Operating Conditions

Frequency input levels = 10 dBm
 $V_{gs-trans} = -0.6$ V $V_{ds-trans} = 5$ V

TLC can auto tune chip to maximize performance at customer target frequency and bias.

TLC reserves the right to change performance data and specifications without notice