

# **VOLTAGE CONTROLLED OSCILLATORS 7320 SERIES**

## **DESCRIPTION**

A voltage controlled oscillator with a removable SMA connector suitable for either a coaxial or microstrip interface.

The unit consists of a single-ended (except part number 6139-5154-00 which uses a balanced push-push), broad bandwidth silicon BJT oscillator tuned with silicon hyperabrupt varactor diodes. The oscillator is followed by a MMIC buffer amplifier to reduce load pulling effects and a filter to suppress harmonics.

Internal voltage regulators provide immunity to power supply voltage variations and reverse polarity protection.

## **APPLICATIONS**

Designed for application as an exciter for airborne radar systems, as a local oscillator for ECM systems, and for frequency synthesizer LOs.

## **FEATURES**

- ☐ ***Broadband voltage tuning***
- ☐ ***Low post-tuning drift***
- ☐ ***Low FM noise***
- ☐ ***Wide band FM modulation***
- ☐ ***Compact size***

# TECHNICAL SPECIFICATIONS

PART NUMBER	6139-5149-00	6139-5150-00	6139-5151-00	6139-5152-00	6139-5153-00	6139-5154-00	---
Frequency Range	1.0 to 1.7	1.7 to 2.9	2.8 to 4.7	4.6 to 8.1	8.0 to 12.4	12.3 to 18.0	GHz
RF Output Power	13 (min.) to 18 (max.)						dBm
Post-Tuning Drift 1 $\mu$ sec to 10 sec	+/-1	+/-1	+/-2	+/-3	+/-3	+/-4	MHz (max.)
Harmonic Levels	-30				-25	-10	dBc (max.)
Phase Noise @ 100 kHz Offset	-100	-95	-90	-85	-80	-75	dBc/Hz
Bias Pushing	200						kHz/V (max.)
Load Pulling (2.0:1 VSWR)	+/-1	+/-2.5	+/-2.5	+/-10	+/-15	+/-10	MHz (max.)
Power Supplies +15 Volts -15 Volts	100 50	100 50	100 60	100 60	125 50	175 100	mA (max.) mA (max.)
Tuning Voltage Range	-10 (min.) to +10 (max.)						Volts
Modulation Bandwidth	DC to 20						MHz
Operating Temperature Range	-54 to +85						°C
Mechanical Dimensions <sup>(1)</sup>	1.00 x 2.05 x 0.43				1.00 x 1.90 x 0.43		Inches

## NOTES:

(1) Hermetically sealed

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1/21/98