

Jersey Microwave

PHASE-LOCKED DIELECTRIC RESONATOR OSCILLATORS - PLDRO SERIES -

“AN UNCONDITIONALLY STABLE SIGNAL SOURCE”

Features

- ✓ Ultra Low Phase Noise
- ✓ Internal Voltage Regulator
- ✓ Low Microphonics – High Reliability
- ✓ Low Output Spurious & Harmonics
- ✓ Phase-Locked to an external reference 5 to 200 MHz.

Options

- High Output Power
- Multiple Output Ports
- Field Replaceable Connectors
- High Stability Internal Reference



Description

Jersey Microwave Phase-Locked Dielectric Resonator Oscillators (**PLDRO**) Series are specially designed as “An Unconditional Stable Signal Source” for use in a variety of applications for commercial and military communication systems.

The **PLDRO** series utilizes a combination of MIC & Surface Mount components throughout to reduce the parts count and achieve the maximum repeatability at the lowest production cost and highest reliability. The design is housed in a single bed housing when phase-locked to an external reference from 50 MHz to 200 MHz and in the double bed aluminum housing when phase-locked to an external reference from 5 MHz to <50 MHz.

A high stability reference can be integrated into the oscillator for applications where the reference signal is not available. The internal reference is an Ovenized Crystal Oscillator (OCXO) that offers ultra low phase noise and the frequency stability of ± 1 ppm over a wide operating temperature range -40C to +80C.

Note: Specifications are subject to change without notice

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Electrical Specifications

Model Type	PLDRO-XXXXX-XXXX (PLDRO-Freq in MHz-Po-Reference Freq)
Output Single Frequency (Fc)	1 – 32 GHz
Output Power	+14 dBm for Fo = 1 – 18 GHz +10 dBm for Fo = 19 – 32 GHz
Power Stability over Temperature	± 2 dB
Harmonics	-20 dBc Max.
Spurious Fo +/- 250 MHz	-80 dBc Max.
Frequency Stability	External: Same as the Reference Internal: ±2 ppm Standard / ±0.5 ppm Optional
Load VSWR	1.5:1 Max.
Reference Frequency	5, 10, 50 or 100 MHz (custom available)
Reference Input Level	0 dBm ± 10 dB
SSB Phase Noise	Consult factory for phase noise plot of particular frequency requirement.
Fault Alarm: TTL	TTL: H: Locked / L: Unlocked Open Collector: Option
Power Requirement: +12VDC ± 3%	320 mA for 50 MHz/100 MHz External Ref. 450 mA for 5 or 10 MHz External Ref.
Operating Temperature	-40° C to +80° C
Connectors Output/Reference DC In / Alarm / ΦV	SMA – Female (>20 GHz 2.92 mm) RFI Feedthrough
Package Size (L x W x H) Max.	Dependant upon options and reference selection, consult factory for Outline drawing

Jersey Microwave components can be tailored to meet your company's specific needs.