

Description



The PLDRO (Phase Locked Dielectric Resonator Oscillator) provides the ultra-low phase noise and excellent frequency stability when it is phase locked to a clean and stable crystal reference signal. The PLDRO provides ideal signal for commercial and military systems requiring ultra-low phase noise, low spurious, and high frequency stability.

Our PLDRO series are available in three types: Single Loop PLDRO, Dual Loop PLDRO, and Fractional-N PLDRO.

The Dual Loop PLDRO is a phase locked dielectric resonator oscillator whose output frequency is generated by a dual phase locked loop. This PLDRO series provides an output frequencies whose phase is locked to an integer or fractional multiple of the external reference using PLCRO (Phase Locked Coaxial Resonator Oscillator) and frequency divider.

Features

- Fractional Reference Multiplication
- Ultra low Phase Noise
- Low Spurious
- Phase-Locked Alarm
- Internal Voltage Regulators
- Low Power Consumption
- Compact Housing
- Rugged Construction

Options

- 17 dBm (typ.) Output Power
- 10 VDC Supply Voltage
- Extended Operating Temperature: -20 °C to +70 °C or -40 °C to +70 °C
- Field Replaceable SMA-Jack
- Customized Outlines
- Laser Marking

Applications

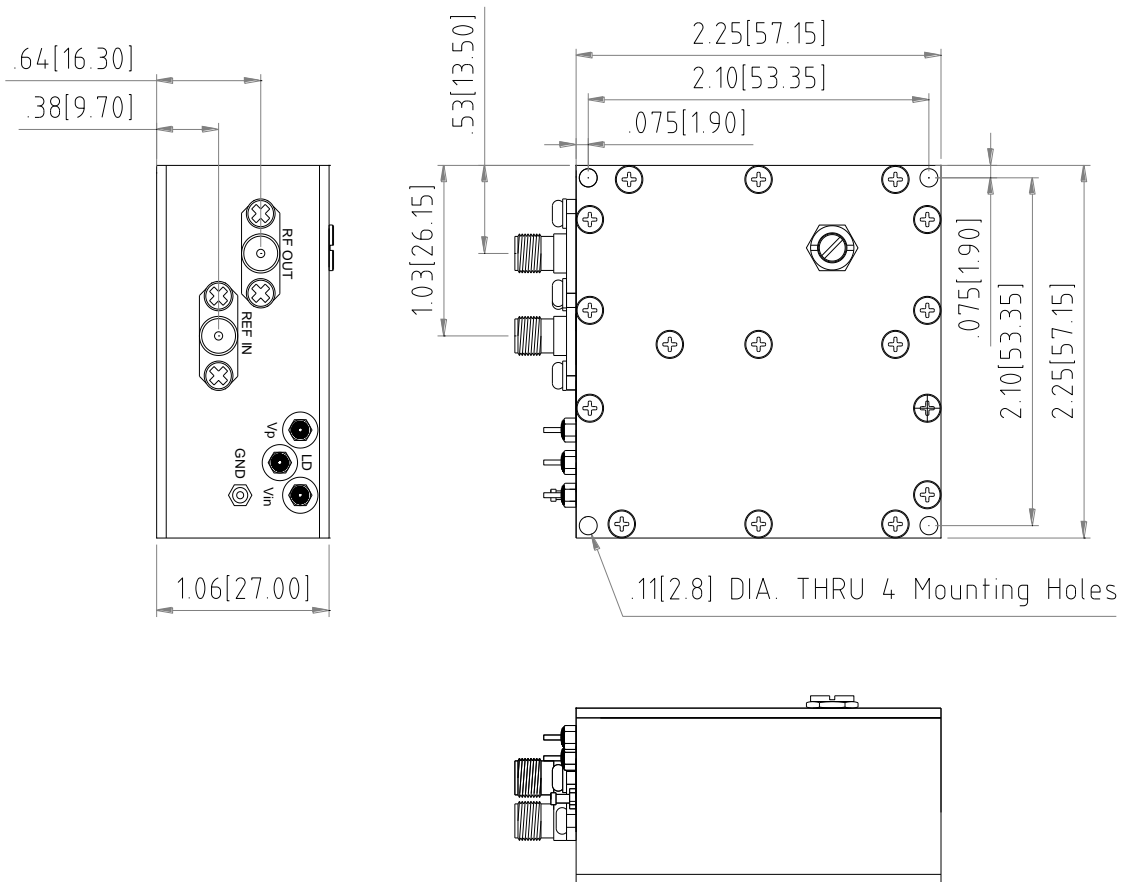
- Radar Systems
- VSAT/Satellite Communication Systems
- Test Equipment
- Microwave Transmitters & Receivers
- Cable TV Links (CATV)
- LMDS
- Missile Guidance
- Local Area Networks (LAN)

Specifications

Parameters		Specifications			
Output Frequency		5 GHz to 13 GHz			
Output Power		13 dBm (min.)			
Phase Noise (dBc/Hz)	Frequency Offset	6 GHz	10 GHz	13 GHz	
		100 Hz	-92	-87	-84
		1 KHz	-112	-107	-104
		10 KHz	-122	-113	-119
		100 KHz	-122	-117	-113
		1 MHz	-136	-132	-128
External Reference	Frequency	10 MHz to 100 MHz			
	Input Power	0±2 dBm			
Harmonics		-30 dBc (typ.), -20 dBc (max.)			
Frequency Stability		Same as the Reference			
Spurious	< fo ± 300 MHz	-75 dBc (typ.), -70 dBc (max.)			
	> fo ± 300 MHz	-80 dBc (typ.), -75 dBc (max.)			
Pulling (3:1 VSWR) (max.)		Will not break lock			
Output Impedance		50 Ω			
Supply Voltage		12 VDC or 15 VDC			
Current Consumption		350 mA to 550 mA depending on model			
Connectors	RF Output (RF OUT)	SMA-Jack Flange 2-Hole			
	External Reference Input (REF IN)	SMA-Jack Flange 2-Hole			
	Supply Voltage (Vin)	EMI Feed-thru			
	Phase Voltage (Vp)	EMI Feed-thru			
	Lock-Detect (LD)	EMI Feed-thru			
	GND	Turret Thread Mount Terminal			
Housing Size (W x L x H)		2.25"[57.15] x 2.25"[57.15] x 1.06"[27]			
Environmental Conditions	Operating Temperature	0 °C to 60 °C			
	Storage Temperature	-20 °C to 70 °C			

Outline Drawing

Dimensions shown in brackets [] are in millimeters.



Double Bed Housing

Ordering Information

wPLDRO-**R**xxxx-**y**...**y**-**P**zz-**aa**

- **w**: Product Categories
 - . S (Single Loop PLDRO)
 - . F (Fractional-N PLDRO)
 - . D (Dual Loop PLDRO)
- **xxxx**: Reference Frequencies (MHz)
 - . Ixxx: Internal, xxxMHz
 - . Exxx: External, xxxMHz
- **y...y**: Output Frequency (MHz)
- **zz**: Output Power (dBm)
- **aa**: Housing types
 - . SB (Single Bed Housing)
 - . DB (Double Bed Housing)
 - . HS (Hermetically Sealed Housing)
 - . NP (Number of Ports)

Examples

DPLDRO-**RE**10-**7742.5**-**P**15-**DB**

- . Product Category: Dual Loop PLDRO
- . Reference Frequency: External, 10 MHz
- . Output Frequency: 7,742.5 MHz
- . Output power: 15 dBm
- . Double Bed Housing

DPLDRO-**RE**10-**13125**-**P**17-**DB**

- . Product Category: Dual Loop PLDRO
- . Reference Frequency: External, 10 MHz
- . Output Frequency: 13,125 MHz
- . Output power: 17 dBm
- . Double Bed Housing

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