General Electronic Devices
Makers of active and passive components
Quartz Crystal * Oscillators * Synthesizer* Filters
Micro-Hybrid Assembly Services

4.0 to 14 GHz Standard Model PLDROs

Guaranteed Specifications over -30 to +70 C.

Operating Frequency	4.0-14	GHz
Mechanical Tuning Range	2-3%	Typ.
Output Power	+14	dBm Min.
Output Power Variation		
Over 0 to 60°C	±0.6	dB Max.
Over -30 to +70°C	+1.0/-1.3	dB Max.
Load VSWR (Max.)	3:1	
Phase Noise @ 10 GHz	-110	dBc/Hz
(Also see Figure 1)		@ 100 kHz
Reference Input Frequency	10, 40-130	MHz
Reference Input Power	0±4	dBm
2nd Harmonic	-20	dBc
Spurious	-80	dBc
Frequency Stability	Same as Ext. Reference	
Power Requirements		
Voltage	+15±1 or +12±1	VDC
Current	75	mA Typ.
Package Size (Also see Figures 2,3)		
5.0-7.9 GHz	2.52x2.34x0.60	Inches
8.0-14 GHz	2.25x2.25x0.50	Inches
Package Weight		
5.0-7.9 GHz	120	g Typ.
8.0-14 GHz	90	g Typ.
Finish	Nickel Plated	

Notes/Options:

1. Out of lock alarm is optionally available.
2. Units with internal crystal oscillator are available.

Contact the factory for any other special features your application requires.

ORDERING INFORMATION

P L D R O — □ □ □ □ □ — □ □ □ I *

OUTPUT FREQUENCY MHz

REFERENCE INPUT FREQUENCY MHz

A=lock alarm *

Examples:

1. PLDRO-11900-100I	11.9 GHz output, 100 MHz reference
2. PLDRO-10672-116I	10.672 GHz output, 116 MHz reference
3. PLDRO-5695-67IA	5.695 GHz output, 67 MHz reference, Lock Alarm
4. PLDRO-7000-0	7 GHz output, Internal Crystal Oscillator

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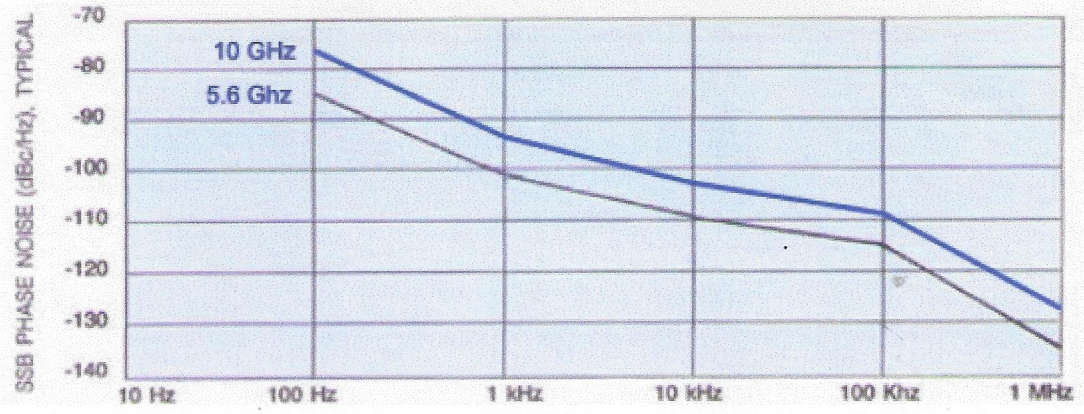
Figure 1. Phase Noise



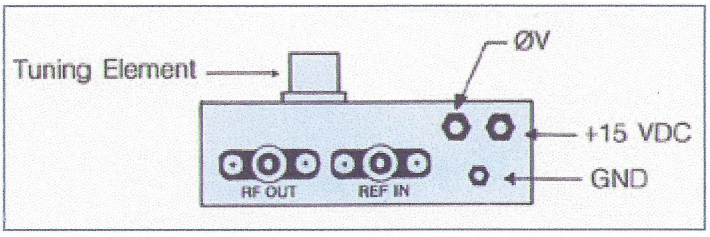
Note:
Phase noise less than 100 kHz from the carrier is essentially determined by the external crystal reference oscillator according to the equation

External Ref. Noise (dBc/Hz) + 20logN

where N is the output frequency ÷ reference, or the multiplication factor.

Installation Information

Units are set at the factory for proper operation according to the ordered reference frequency. Significant changes in this parameter, such as a different crystal frequency or different multiplication factor, will require adjustment of the DRO tuning element. While monitoring the phase voltage (ØV), carefully adjust the tuning element housing until a steady state DC Voltage is present (a square wave search voltage indicates the unit is out of lock). Finally, slowly turn the piston/rotor of the tuning element until approximately 5.5-6.0 volts appears at the phase voltage (ØV) terminal.



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Package Outline Drawings (inches)

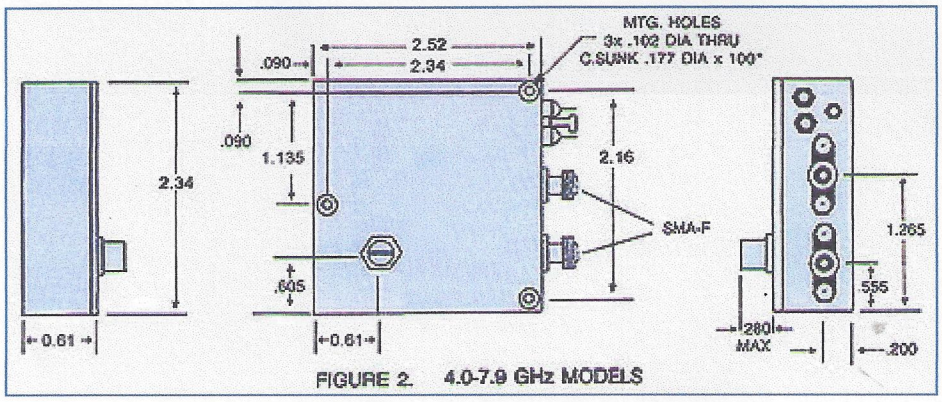

FIGURE 2. 4.0-7.9 GHz MODELS

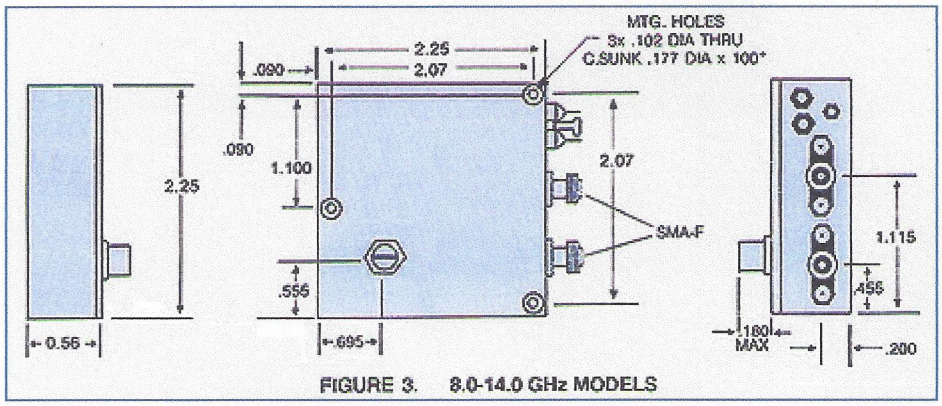

FIGURE 3. 8.0-14.0 GHz MODELS

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