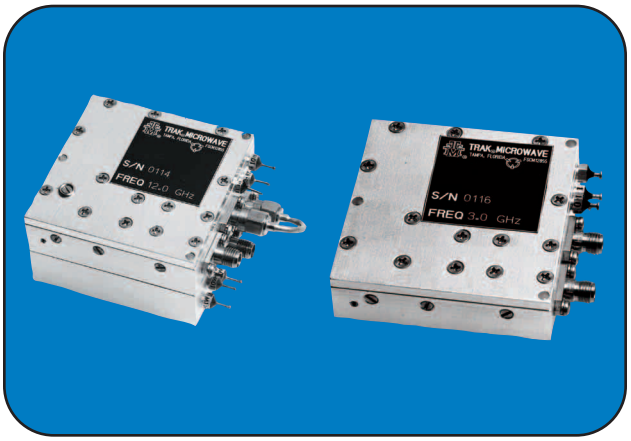
Oscillators
Catalog, Phased Locked CROs and DROs
Model: OSC 10-700 & 10-750 Series

Features:

- GaAs FET and Bipolar PLOs
- Wide Range of Frequency Source Applications
- Low Phase Noise Internal Reference Option



Electrical Specifications

Frequency Range:	
PLCRO:	0.5 to 3 GHz
PLDRO:	3 to 12 GHz
Output Power:	+ 10 dBm, minimum
External Reference Freq.: Note 1, 2	5 to 150 MHz
External Reference Input Power:	0 dBm ± 3 dB
Phase Noise:	See Figure 1
Output VSWR:	1.5:1, typical
Load VSWR:	3.0:1, maximum
Harmonics:	- 15 dBc, maximum
Spurious:	- 70 dBc, maximum
Power Supply:	+ 12 to 18 volts
DC Current:	See Tables
Lock BIT:	TTL (“1” for Lock)

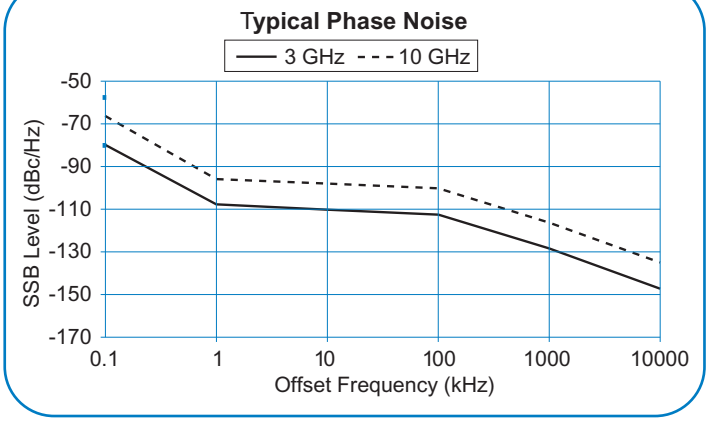


Figure 1

Environmental Specifications

Standard Operating Temperature: 0 to + 70 °C

Mechanical Specifications

Size: See Packages

Options

- 002 Extended Operating Temperature: - 54 to + 85 °C
- 030 5 MHz Phase Locked External Reference
- 040 10 MHz Phase Locked External Reference
- 300 Phase Noise Test with Guaranteed Phase Noise Performance Note 3

Note 1: Reference frequencies below 25 MHz are only available on PLCROs.
Note 2: If the output frequency cannot be evenly divided by the reference, please contact the factory.
Note 3: Option - 300 is only available on orders for two or more identical oscillators.

Specifications subject to change without notice.

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smiths

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Model: OSC 10-700 & 10-750 Series

Standard Unit (+ 15 V @ 180 mA, Typical)

Frequency Range (GHz)	Model Number	External Reference Frequency (MHz)	Package
0.5 to 1.5	10-700-9000-000	5 to 100	A
1.5 to 3.0	10-700-9100-000	10 to 100	A
3.0 to 5.0	10-750-9000-000	25 to 150	B
5.0 to 8.0	10-750-9100-000	50 to 150	B
8.0 to 12.0	10-750-9200-000	50 to 150	B

Internal Reference ± 30 ppm Stability (+ 15 V @ 330 mA, Typical)

Frequency Range (GHz)	Model Number	Phase Lock Frequency (MHz) (Option) Note 1	Package
0.5 to 1.5	10-700-9300-000	5 or 10	C
1.5 to 3.0	10-700-9400-000	5 or 10	C
3.0 to 5.0	10-750-9300-000	5 or 10	D
5.0 to 8.0	10-750-9400-000	5 or 10	D
8.0 to 12.0	10-750-9500-000	5 or 10	D

Internal Reference ± 0.5 ppm Stability (+ 15 V @ 500 mA, Typical)

Frequency Range (GHz)	Model Number	External Reference Frequency (MHz) (Option) Note 1	Package
0.5 to 1.5	10-700-9600-000	5 or 10	C
1.5 to 3.0	10-700-9700-000	5 or 10	C
3.0 to 5.0	10-750-9600-000	5 or 10	D
5.0 to 8.0	10-750-9700-000	5 or 10	D
8.0 to 12.0	10-750-9800-000	5 or 10	D

Note 1: See Options - 030 and - 040 for phase locking the internal reference to an external 5 or 10 MHz signal. These options are useful when the stability of an external source, such as a rubidium oscillator, and the close-in phase noise of a crystal oscillator are required.

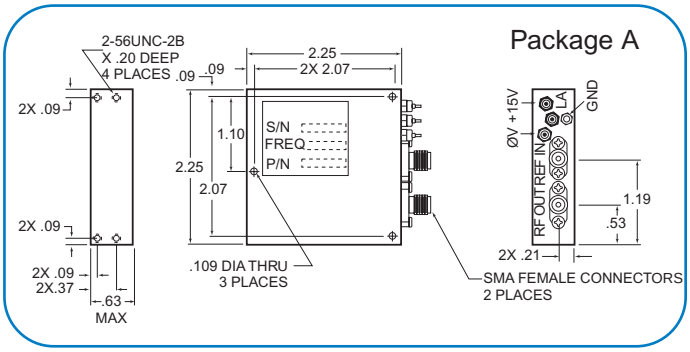
Options:
Options are designated by the last three digits of the model number, with - 000 indicating no options.

Ordering Information:
Specify the model number, options (if any), and the exact operating frequency in GHz to the most significant digit.

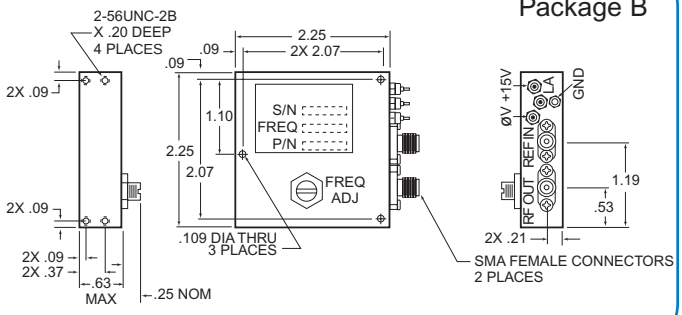
Example:
Model Number 10-700-9000-002, 1.055 GHz is a standard unit operating at 1.055 GHz, with the - 002 extended operating temperature option.

Model Number 10-700-9600-040, 1.450 GHz is a 1.45 GHz PLCRO with a ± 0.5 ppm stability internal reference that is phase locked to an externally supplied 10 MHz signal. The Model Number for the same unit with the extended operating temperature option - 002 included would be 10-700-9600-042, 1.450 GHz.

Package A



Package B



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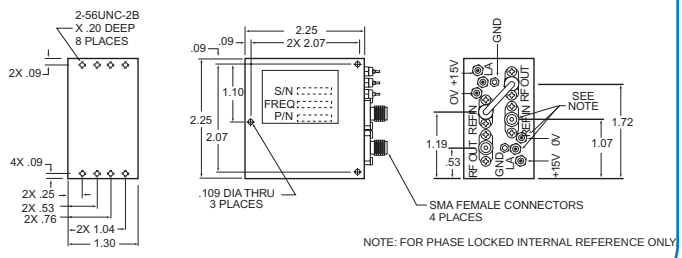
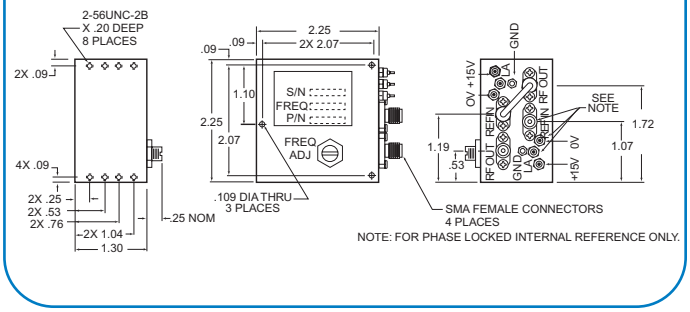


Package D



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