TRAK MICROWAVE CORPORATION

# Phase Locked DRO's and CRO's

## GaAs FET & Bipolar PLO's
## 10-700 and 10-750 Series

Series 10-700 and 10-750 Phase Locked DRO's & CRO's are designed for a wide range of frequency source applications . Models are available with internal low phase noise, high stability sources which can be phase locked to an external source, if needed.

### Electrical Specifications

| | |
|---|---|
| Frequency Range: | |
| PLCRO: | 0.5 to 3 GHz |
| PLDRO: | 3 to 12 GHz |
| Output Power: | + 10 dBm, minimum |
| External Reference Frequency: | 5 to 150 MHz |
| (Reference frequencies below 25 MHz are only available on PLCRO's) | |
| 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 |
| Lock BIT: | TTL ("1" for Lock) |

### Environmental Specifications

Standard Operating Temperature: 0 to +70°C

### Mechanical Specifications

Size: See Outlines

### Options

Extended Temperature Range: - 54 to + 85°C
(Option -002)

Phase Locked Internal Reference: 5 or 10 MHz
(Options -030 and -040, respectively)

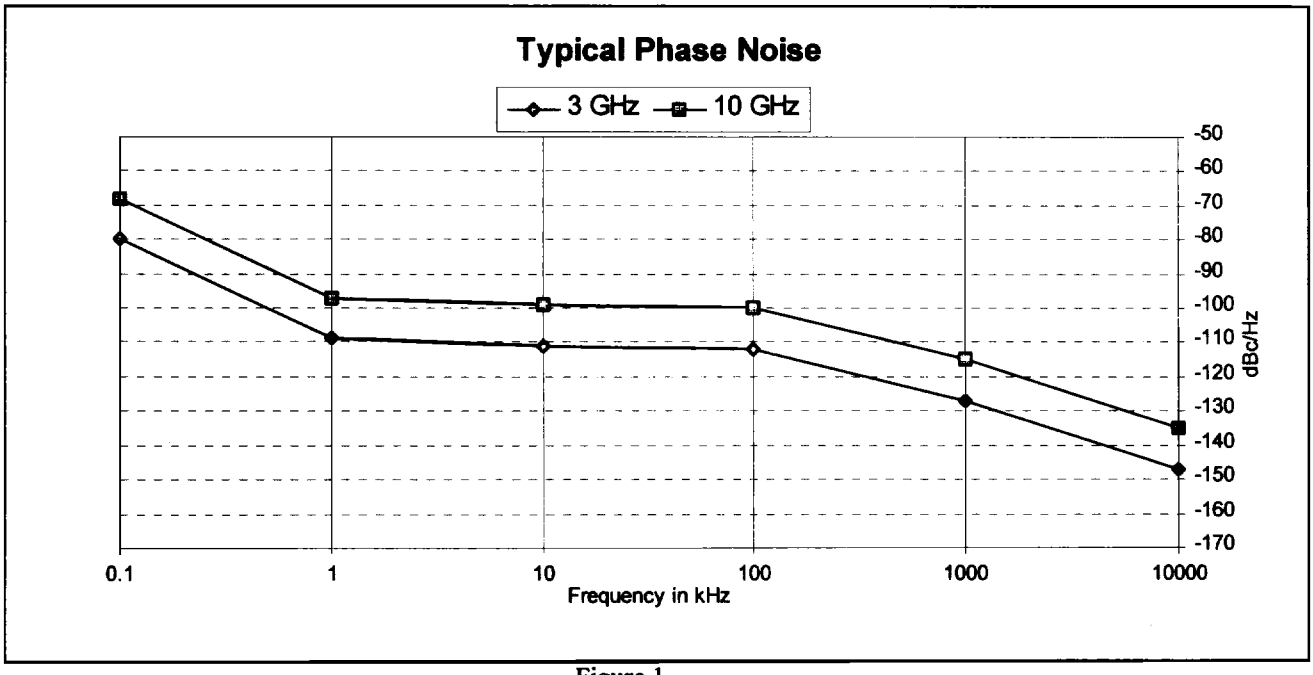


Figure 1

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**Standard Unit (+ 15 V @ 180 mA), typical**

| Model Number | Frequency Range | External Ref. Frequency | Outline |
|---|---|---|---|
| 10-700-9000-000 | 0.5 to 1.5 GHz | 5 to 100 MHz | A |
| 10-700-9100-000 | 1.5 to 3.0 GHz | 10 to 100 MHz | A |
| 10-750-9000-000 | 3.0 to 5.0 GHz | 25 to 150 MHz | B |
| 10-750-9100-000 | 5.0 to 8.0 GHz | 50 to 150 MHz | B |
| 10-750-9200-000 | 8.0 to 12.0 GHz | 50 to 150 MHz | B |

**Internal Reference ± 30 ppm stability**
**(+ 15 V @ 330 mA, typical)**

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

**Internal Reference ± 0.5 ppm stability**
**(+ 15 V @ 500 mA, typical)**

| Model Number | Frequency Range | Phase Lock Freq. (Option) | Outline |
|---|---|---|---|
| 10-700-9600-000 | 0.5 to 1.5 GHz | 5 or 10 MHz | C |
| 10-700-9700-000 | 1.5 to 3.0 GHz | 5 or 10 MHz | C |
| 10-750-9600-000 | 3.0 to 5.0 GHz | 5 or 10 MHz | D |
| 10-750-9700-000 | 5.0 to 8.0 GHz | 5 or 10 MHz | D |
| 10-750-9800-000 | 8.0 to 12.0 GHz | 5 or 10 MHz | D |

## Ordering Information

Specify the model number and the exact operating frequency in GHz to the most significant digit. An example would be 10-700-9300-032, 1.055 GHz. If the output frequency cannot be evenly divided by the reference, please contact the factory.

## Options

For extended temperature range, change the last digit of the last set numbers to "2." An example would be 10-700-9600-002. No options is designated by -000 as the last three digits in the model number.

For phase lock of the internal reference, change the second digit of the last three numbers in the model number to "3" for 5 MHz external reference and "4" for 10 MHz reference. An example would be 10-700-9600-040 for phase lock of the internal reference to 10 MHz, and for extended temperature range the model number would be 10-700-9600-042.

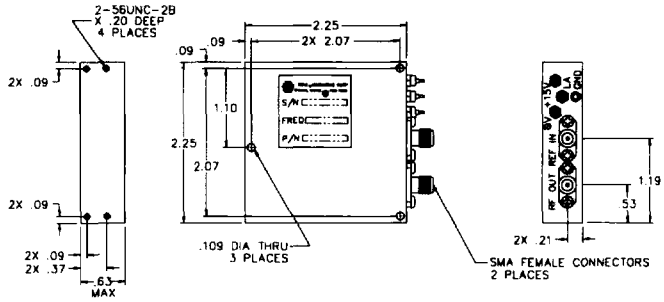


Figure A

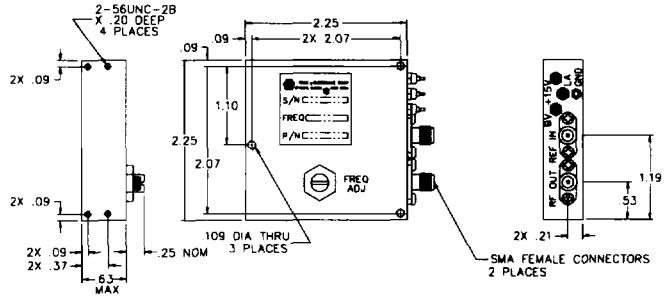


Figure B

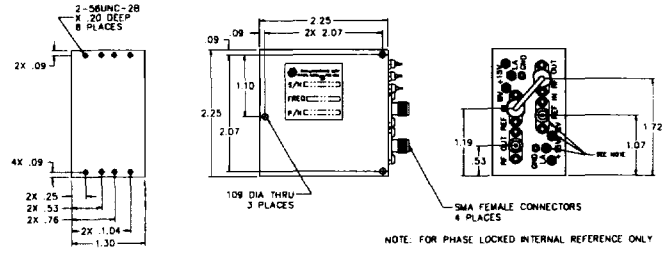


Figure C

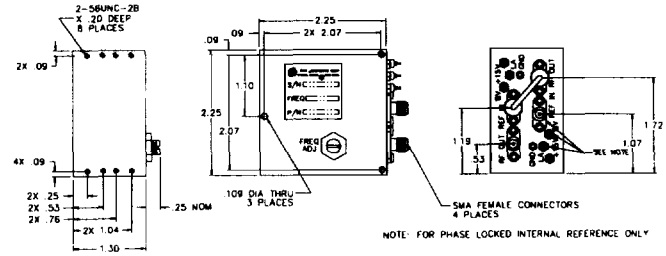


Figure D

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*Specifications subject to change without notice*