

**Phase Locked  
Dielectric Resonator  
Oscillator  
SERIES PLO-300**

The APTLO Series PLO-300 is a family of Phase Locked DRO's with operation from 6.0 GHz to 30 GHz with External Reference Source.

The PLO-300 series provides a low cost solution for high volume satellite wireless and fiber optic communications applications.

The PLO-300 series is designed for high mechanical and electrical stability requirement along with small size and low power consumption.

The PLO- 300 series is built using Surface Mount Technology (SMT) parts and process.

PLO-300 series can be supplied as a standalone component or can be integrated into custom assemblies including complete up/down converters from C to Ka Band.



**FEATURES**

- **Operating Frequency @ 6.0 to 30 GHz**
- **High Stability (with external reference)**
- **Low Phase Noise**
- **Low Power Consumption**
- **Small Size**
- **Low Cost High Volume Applications**

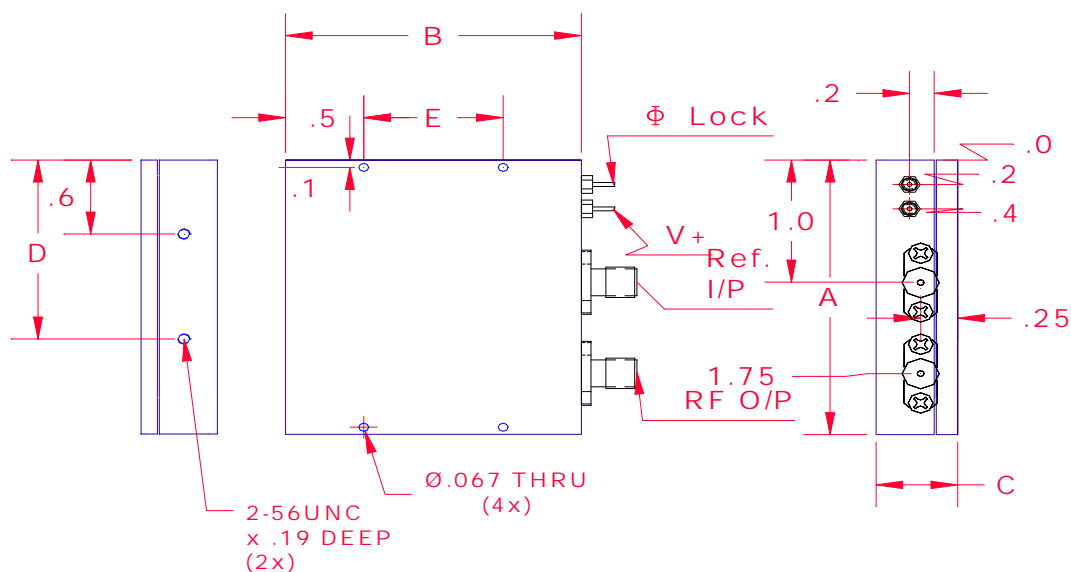
**Options**

- **Extended Temperature Range**
- **High RF Output Level**
- **Customer Specified Interface**
- **TTL Lock Indicator**

## Series PLO – 300 Phase Locked DRO

| Parameter                   | Units  | -C  | -D        | -E         | -F        | -G      | -H       |
|-----------------------------|--------|---|-----------|------------|-----------|---------|----------|
| Output Frequency            | GHz    | 6.0 - 7.0   | 7.0 - 8.5 | 8.5 - 10.5 | 10.5 - 15 | 15 - 24 | 24. - 30 |
| Operating Temperature       | ° C    | -10 to +60  |           |            |           |         |          |
| Output Power (Min)          | dBm    | +13   | +13       | +13        | +10       | +7      | +5       |
| Power Var. with Temperature | dB     | ± 1.5   |           |            |           |         |          |
| Input Reference Frequency   | MHz    | 50 to 500 (Customer Specified)                                  |           |            |           |         |          |
| Input Reference Power       | dBm    | +1 to +6  |           |            |           |         |          |
| Harmonics                   | dBc    | -20   |           |            |           |         |          |
| Ref. Sidebands              | dBc    | -70   |           |            |           |         |          |
| Spurious                    |        | -90   |           |            |           |         |          |
| Phase Noise Profile         |        |   |           |            |           |         |          |
| 0.1 to 10 kHz Offset        | dBc/Hz | Ref. Noise +20 log (f <sub>o</sub> /f <sub>in</sub> ) +6 dB TYP |           |            |           |         |          |
| 100 kHz offset              | dBc/Hz | -120  | -115      | -112       | -110      | -105    | -100     |
| 1 MHz Offset                | dBc/Hz | -135  | -132      | -130       | -125      | -120    | -120     |
| 10 MHz Offset               | dBc/Hz | -155  | -155      | -150       | -150      | -150    | -150     |
| DC Voltage                  | V      | 15 ± 0.5  |           |            |           |         |          |
| DC Current                  | mA     | 250   | 250       | 275        | 275       | 425     | 425      |
| Dimensions                  | Fig.   | 1   | 1         | 1          | 2         | 2       | 2        |

### OUTLINE DRAWING



| OUTLINE | DIM A | DIM B | DIM C | DIM D | DIM E |
|---------|-------|-------|-------|-------|-------|
| 1       | 2.8   | 2.4   | .70   | 2.0   | 1.3   |
| 2       | 2.3   | 2.0   | .55   | 1.5   | .9    |

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