

LOWEST NOISE PHASE-LOCKED DIELECTRIC RESONATOR OSCILLATOR

DLCRO SERIES:
0.6–4 GHz (Fundamental)
4–15 GHz (Multiplied)

FEATURES

- High performance in a small package
- Excellent spurious performance
- Excellent performance/cost ratio
- 100% burn-in and temperature testing
- Three-year warranty
- Now offered with RF connectors on same side



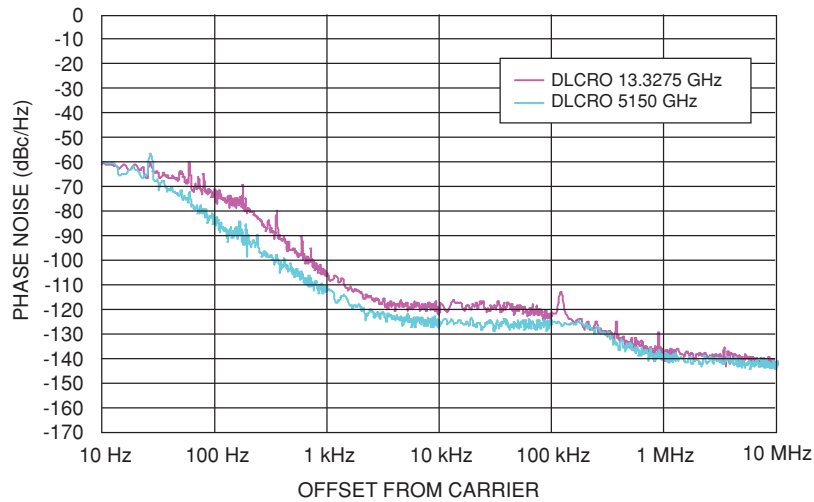
The DLCRO Series phase-locked source offers excellent phase noise and spurious performance in a 2.25" W x 2.25" L x .60" H housing. The dual loop configuration improves phase noise and spurious performance compared to a single loop design, and has the flexibility to allow output frequencies that are not direct multiples of the input. Available in fixed frequencies from 600 MHz to 15 GHz in fundamental or multiplied configurations. The DLC can operate with external reference of 1 to 200 MHz, and with 8 to 15 VDC supply input.

ELECTRICAL SPECIFICATIONS

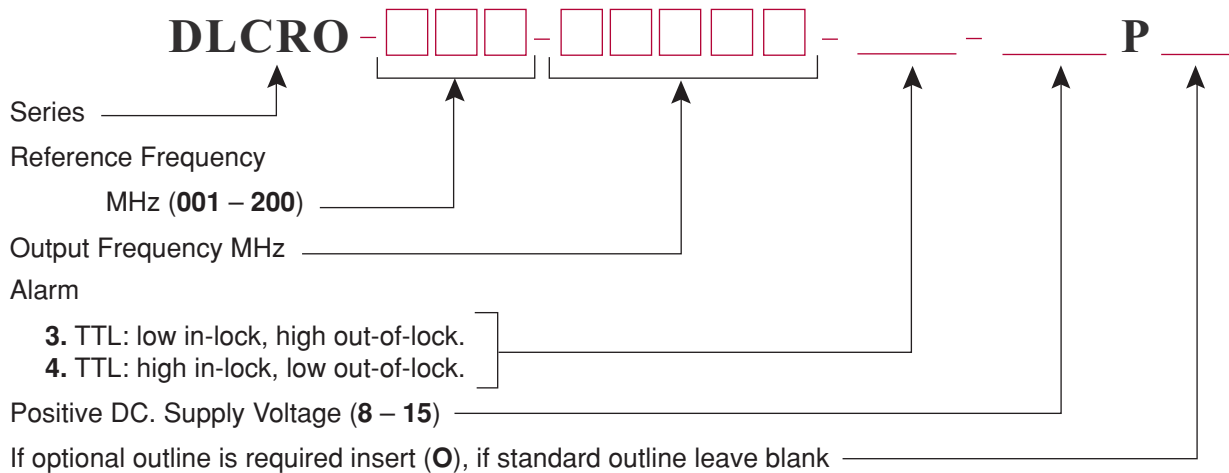
Output frequency range Fundamental Multiplied	0.60 – 4 GHz 4 – 15 GHz
Output power	+13 dBm minimum
Output harmonic Fundamental Multiplied	-20 dBc maximum -50 dBc maximum
Output spurious	-70 dBc maximum
Phase noise	See graph
Input frequency range	1 – 200 MHz
Input impedance	50 ohms
Load VSWR	1.5:1
DC power requirements Fundamental Multiplied	+8 to +15 volts @ 275 mA +8 to +15 volts @ 375 mA

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TYPICAL PHASE NOISE



ORDERING INFORMATION



EXAMPLE: Part Number DLCRO-010-10000-3-12P Dual Loop Phase-Locked Oscillator with 10 GHz output locked to 10 MHz reference with TTL low in-lock alarm and +12 volts DC supply voltage with standard outline.

MECHANICAL SPECIFICATIONS

Outline drawings	
Standard	153748
Optional	174279
Size	2.25" x 2.25" x 0.60"
Weight	90 grams
RF connectors	SMA female
DC connectors	Feedthru filter

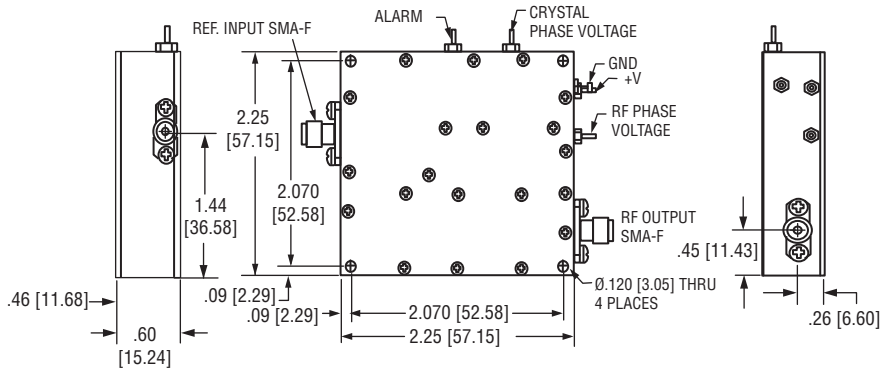
ENVIRONMENTAL SPECIFICATIONS

Temperature	
Operating	-10 to +60°C
Storage	-50 to +100°C
Humidity	95% at 40°C noncondensing
Shock (survival)	30 g's, 10 ms pulse
Vibration (survival)	20 to 2000 Hz random to 4 g's rms

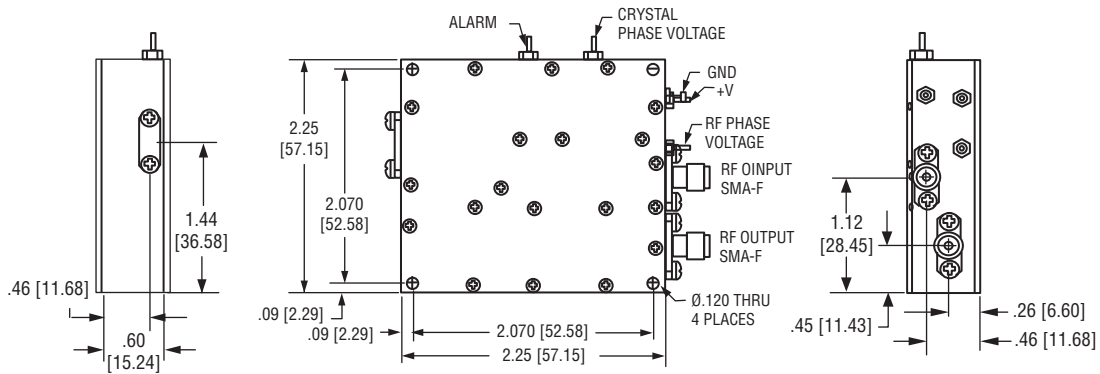
Note: Extended temperature available, please contact MITEQ.

OUTLINE DRAWINGS

153748 DLCRO SERIES (STANDARD)



174279 DLCRO SERIES (OPTIONAL)



NOTE: DIMENSIONS SHOWN IN BRACKETS [] ARE IN MILLIMETERS.