

MECHANICALLY-TUNED DIELECTRIC RESONATOR OSCILLATORS

DRO SERIES: D

FEATURES

- Ultra-clean source ideal for low spur application
- High-reliability construction
- Low phase noise

OPTIONS

- High power (-HP-ST)
- Special (-SP) (please contact factory before ordering)



MECHANICAL SPECIFICATIONS

Outline number 1.....2.1" x 2.75" x 1.08"
Weight Frequency dependent, please
consult MITEQ where critical
RF connectors.....SMA female
DC connectors.....Feedthru filter

ENVIRONMENTAL SPECIFICATIONS

MITEQ's standard dielectric resonator oscillators have been designed to meet the following maximum environmental conditions.
Operating temperature -55 to +95°C
Storage temperature -65 to +115°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

ORDERING INFORMATION

DRO - D - Frequency - Type

ST: standard
HP-ST: high power standard
SP: special

Example 1: 3 GHz DRO standard: DRO-D-03000-ST.
Example 2: 3.7 GHz DRO with +17 dBm power: DRO-D-03700-Hp-ST.
Example 3: 2.4 GHz DRO with any specification different than listed in catalog
DRO-D-02400-SP, please contact MITEQ.



MECHANICALLY-TUNED DIELECTRIC RESONATOR OSCILLATOR

ELECTRICAL SPECIFICATIONS

PARAMETERS	SERIES - ST: D
Operating Frequency range (note 2)	2.4 – 3.7 GHz
Output power (note 1)	+13 dBm, min
Output power variation over temperature range	± 2 dB, max
Fundamental	N/A
Harmonics	-20 dBc, max
Spurious	-80 dBc, max
Mechanical tuning	± 3 MHz, min
Frequency pushing	10 kHz/V, max
Frequency pulling (1.5:1 VSWR)	2 MHz, P-P max.
Frequency drift temp. coefficient (note 3)	5 ppm/ $^{\circ}$ C, max
Phase noise @ 10 kHz offset	105 dBc/Hz, typ.
DC power	15 Volts (note 4)
Current	150 mA, Max.
Outline Drawing	1
Temperature range	-20 to +70 $^{\circ}$ C
HIGH POWER OPTION (HP-ST)	
Output power	+17 dBm, min
Current	220 mA, max
Frequency pulling (1.5:1 VSWR)	2 MHz, P-P max

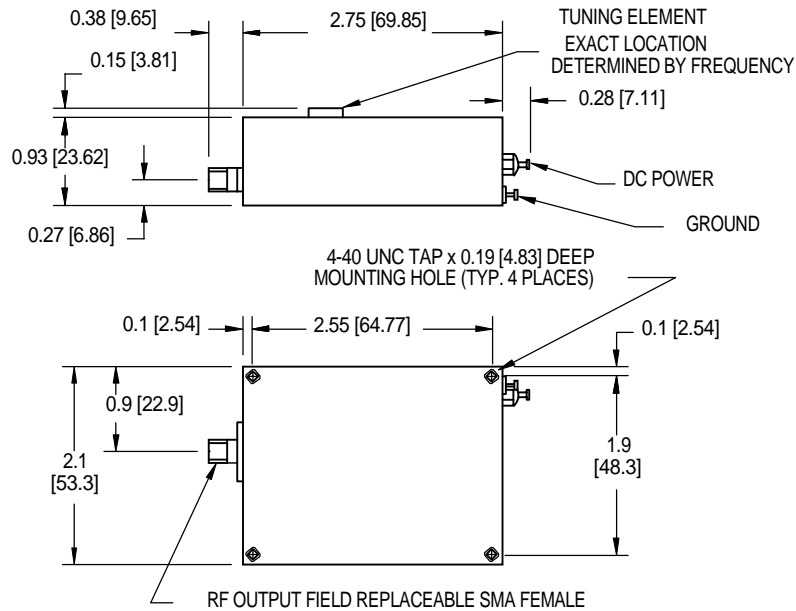
Notes:

1. Output power is guaranteed into 50 ohm load.
2. Operating frequency must be specified.
3. Averaged over the full temperature range
4. Alternate DC voltage available.

MECHANICALLY-TUNED DIELECTRIC RESONATOR

OUTLINE DRAWING

OUTLINE 1



NOTE: DIMENSIONS SHOWN IN BRACKETS [] ARE IN MILLIMETERS