

MECHANICALLY-TUNED DIELECTRIC RESONATOR OSCILLATORS

DRO SERIES: F

FEATURES

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

OPTIONS

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



MECHANICAL SPECIFICATIONS

Outline number

3.....1.39" x 1.6" x 0.7"

WeightFreqUency 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 - F - _____ - _____
Series Frequency Type

ST: standard
HP-ST: high power standard
VT-ST: voltage tunable standard
SP: special

Example 1: 6.8 GHz DRO standard: DRO-F-06800-ST.

Example 2: 8 GHz DRO with +17 dBm power: DRO-F-08000-HP-ST.

Example 3: 8.7 GHz DRO with any specification different than listed in catalog
DRO-F-08700-SP, please contact MITEQ.

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ELECTRICAL SPECIFICATIONS

PARAMETERS	SERIES - ST: F
Operating Frequency range (note 2)	6.5 – 8.8 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	± 10 MHz, min
Frequency pushing	15 kHz/V, max
Frequency pulling (1.5:1 VSWR)	5 MHz, P-P max.
Frequency drift temp. coefficient (note 3)	5 ppm/ $^{\circ}$ C, max
Phase noise @ 10 kHz offset	90 dBc/Hz, typ.
DC power	15 Volts (note 4)
Current	120 mA, Max.
Outline Drawing	3
Temperature range	-20 to +70 $^{\circ}$ C
VOLTAGE TUNABLE (VT-ST)	
Electrical tuning @ Vvar = 1-15 V	8 MHz, min.
Phase noise @ 10kHz offset	85 dBc/Hz, typ.
HIGH POWER OPTION (HP-ST)	
Output power	+17 dBm, min
Current	220 mA, max
Frequency pulling (1.5:1 VSWR)	0.5 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.	

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OUTLINE DRAWING

OUTLINE 3

