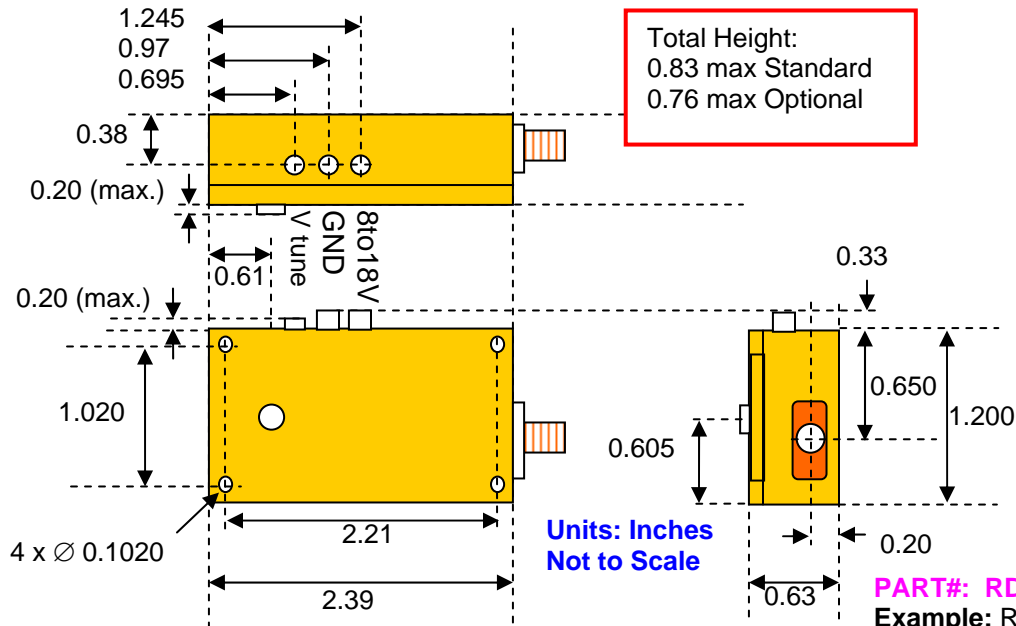


## Dielectric Resonant Oscillators –“A” 5.0-7.9GHz 14dBm Output Power, 6-18Volts (Electronic Tuning Option Available)

This model covers 5.0-7.9GHz Standard OP is 14dBm. 6-18V. Smaller model available for 8-13GHz



**PART#: RDRO-A-MODEL-FREQ-POWER-VCC**

**Example: RDRO-A-M2-4.00-14d(6-18v)  
-E (Electronic Tuning opt)**

Specifications	Model M2	Units
Circuit Configuration	With Isolator	
Operating Frequency	5.0-7.9	GHz
Mechanical		
Tuning Range	up to 2%	%
Tuning Resolution	100	KHz Typ.
Input Power Voltage	+6 to +18	VDC Max
Input Power Current	65	mA Max.
Output Power @ +25°C (3)	+14.0	dBm Min.
Output Power Variation	<1	dB
Output VSWR	1.5	:1
Over 0 to +60°C	±0.6	dB Typ.
Over -30 to +70°C	+1.0/-1.3	dB Typ.
Weight	65	g Typ.
Size	2.39x1.20x0.63	Inches
Finish	Nickel Plated	

Specifications	M2	Units
Frequency Stability	5	ppm/°C Max.
2nd Harmonic	-18	dBc Min.
Spurious	-80	dBc Min.
Frequency Pushing	10	kHz/V Typ.
Frequency Pulling		MHz Max.
1.5:1 VSWR	±250	kHz Max.
2.5:1 VSWR		
Phase Noise, Single Sideband		
1HZ Bandwidth @ 7 GHz		
10 KHz from carrier	-90	dBc Typ.
	-95 (6.834GHz)	dBc
100 KHz from carrier	-120	dBc Typ.
Operating Temperature:		°C
Standard	-30 to +70	
Optional	-40 to +85	
Storage Temperature	-65 to +125	°C
Modulation Bandwidth @ X Band	>200	KHz

**Notes:**

- 1) Electrical tuning ranges of up to 1.0 % at X-Band and up to 2.0% at S-Band are available.
- 2) The standard tuning voltage range is 0 to +30V. For models with improved linearity (< 2:1) the tuning range is 0 to +22V.
- 3) +20dBm min output power is optional.

## Dielectric Resonant Oscillators –“A” 5.0-7.9GHz 14dBm Output Power, 6-18Volts (Electronic Tuning Option Available)

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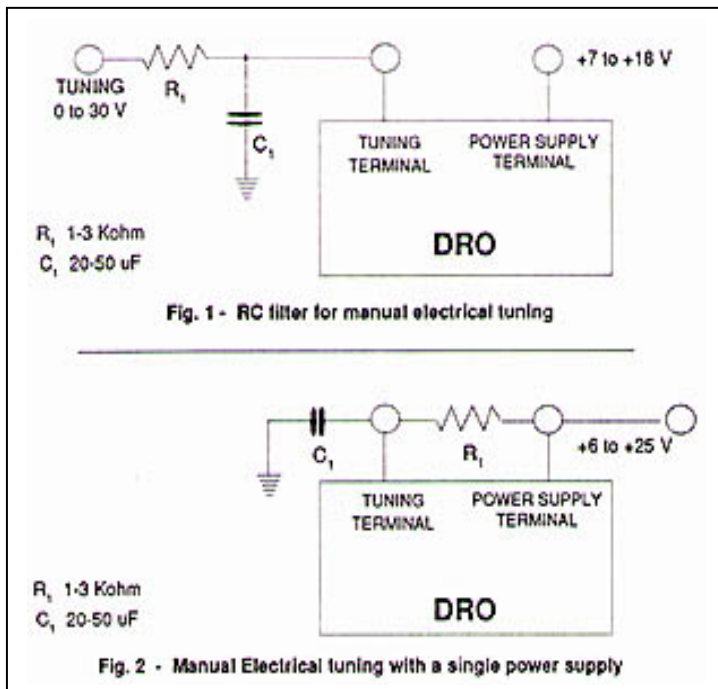
\*15dBm output power available

### Electrical Tuning option

Specifications	Model M2	Units
Circuit Configuration	With Isolator	
Operating Frequency	5.0-7.9	GHz
Electrical Tuning Range (1)	0.2-0.3	% Min.
Electrical Tuning Voltage (2)	0 to +30	VDC Max.

For manual electrical tuning applications of Raditek's DROs, an RC filter is recommended as shown in Fig. 1 to prevent phase noise degradation due to parasitic modulation by power supply ripples and/or low frequency interference.

Raditek's DROs have negligible pushing due to an internal voltage regulator. This feature facilitates manual electrical tuning with a single power supply as shown in Fig. 2. At room temperature, the voltage tuning range is +6 to +25 V for a basic model and +6 to +18 V for a high stability model.



### Mechanical Tuning

- In order to fully utilize Raditek's mechanical tuning, capability with good frequency resolution, the housing of the tuning element should be used for course tuning and the piston/rotor for fine adjustment.
- When adjusting the tuning element housing, the piston/rotor must be set near the top of the housing, but not lower than 0.5mm from the top.
- When securing the tuning element, do not over tighten
- With Lock Nut Tightened: screw / piston does fine tuning +/-30MHz
- With Lock Nut Released: screw / piston does coarse Tuning +/-3%, (+/-100MHz at 6GHz)