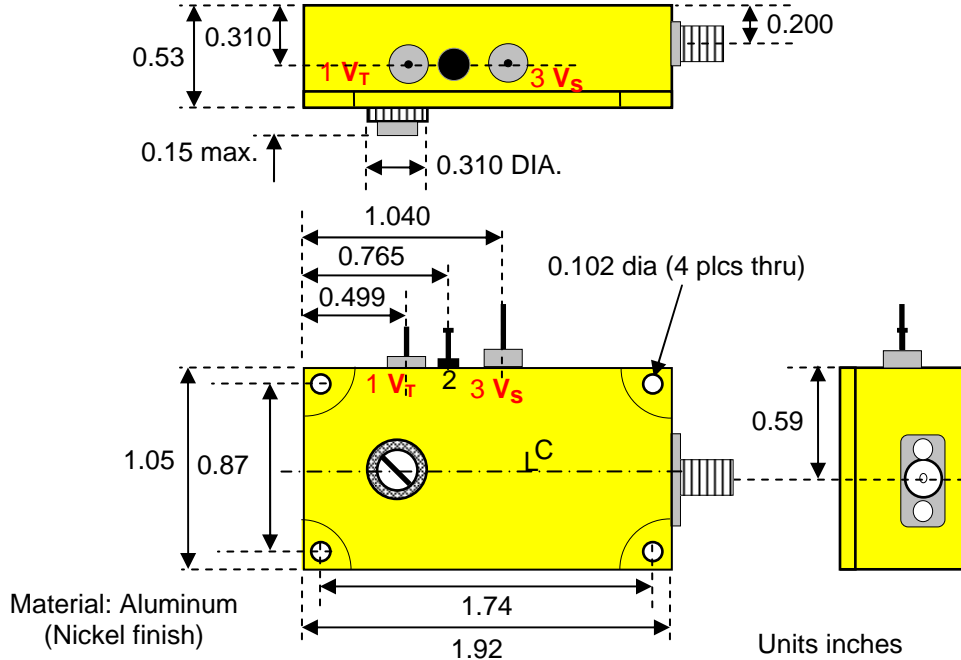


Dielectric Resonant Oscillators "A" 8.0-10.7GHz 15dBm Output Power, 6-18V -E (Electronic Tuning Option Available)

This model covers 8-10.7GHz, (non e version to 11.0GHz) Standard OP is 15dBm. 6-18V. Larger model available for 3.8-7.9GHz



Pin #	Function
1	Elect. Tuning (optional) 0-30V
2	Ground
3	Vs +7 to +24V

Order Examples: RDRO-A-10-15d-(6-18V)-a1

Description: (Dielectric Resonant Oscillator, A package, 10 GHz, 15dBm Output Power, 6-18Volts, Mechanical Tuning)

Specifications	Basic Model	Units
Operating Frequency	8.0-10.7	GHz
Mechanical Tuning Range	up to 2	%
Mechanical Tuning Resolution	150	KHz Typ.
Input Power Voltage	+6 to +18	VDC
Input Power Current	50	mA typ.
Output Power @ +25°C (3)	+15	dBm Min.
Output Power Variation	<1	dB
Output VSWR	1.5	:1
Weight	43	g Typ.
Size	1.92x1.05x0.53	Inches
Finish	Nickel Plated	

Specifications		Units
Frequency Stability	5	ppm/C Max.
2nd Harmonic	-20	dBc Min.
Spurious	-80	dBc Min.
Frequency Pushing	10	kHz/V Typ.
Frequency Pulling	±400	kHz Max.
2.5:1 VSWR		
Phase Noise, Single Sideband		
1HZ Bandwidth @ 10 GHz		
10 KHz from carrier	-85	dBc Typ.
100 KHz from carrier	-115	dBc Typ.

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.

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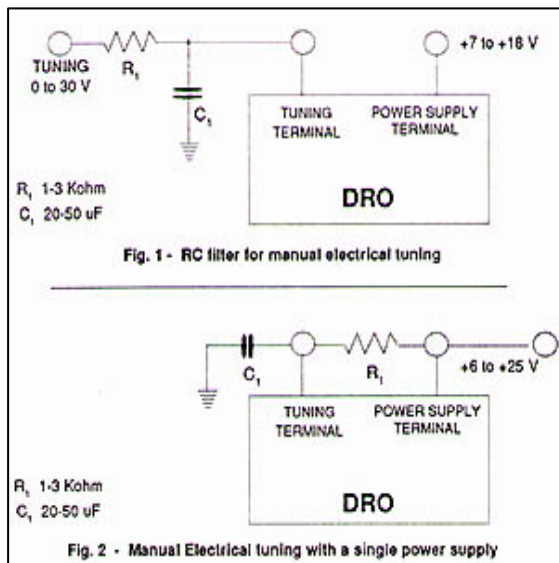
Specifications		Units
Frequency Range	8.0-8.3	GHz
Frequency Accuracy	30	KHz
Power Output, Center Frequency	15	dBm min
SSB Phase Noise @ 10 kHz Offset, Center Freq.	-95	dBc/Hz
SSB Phase Noise @ 100 kHz Offset, Center Freq.	-125	dBc/Hz
Tune Voltage (VT)	0-30	V
Electric Tuning Range	25	MHz
2nd Harmonic (2Fo)	-20	dBc
Frequency Pushing	5	KHz/V
Frequency Pulling (into 2.0:1 VSWR)	±200	KHz/pp
Output Return Loss	12	dB
Frequency Drift Rate (Temperature)	2	ppm/°C
Voltage Supply (VDC)	6-18	V
Supply Current @ VDC = +6.5V	50	mA max
Weight	43	g Typ.
Size	1.92x1.05x0.53	Inches
Finish	Nickel Plated	

Dielectric Resonant Oscillators "A" 8.0-10.7GHz 15dBm Output Power, 6-18V -E (Electronic Tuning Option Available)

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Electrical Tuning option

Specifications	Basic Model	Units
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)