RADITEK INC.

RoHS COMPLIANT

code-d1

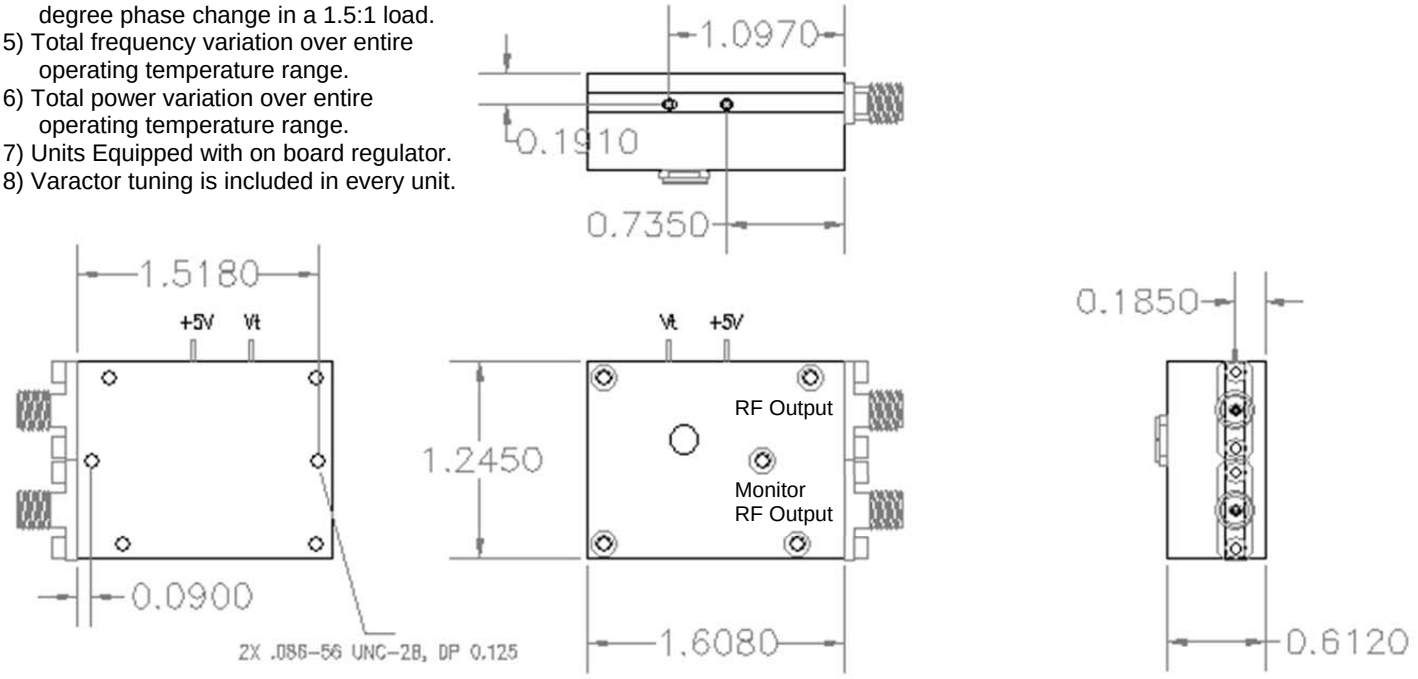
Dielectric Resonant Oscillators 30.552GHz

Dual Output (13dBm RF Output and 0dBm Monitor output)

Notes:
1) DC pins and ground lug are solderable
2) RF Output is field replaceable 2.9 (f)
3) Dimensions are subject to change in the interest of improved product performance
4) Maximum frequency variation for 360 degree phase change in a 1.5:1 load.
5) Total frequency variation over entire operating temperature range.
6) Total power variation over entire operating temperature range.
7) Units Equipped with on board regulator.
8) Varactor tuning is included in every unit.

Low Current for use in Meteorological Satellite

No output buffering: take care with designing it in to avoid frequency pulling



Order Examples: **RDRO-dual-30.552-13d-0d-5v-d1**
Description:
(Dielectric Resonant Oscillator, Dual, 30.552GHz, 13 dBm RF output1, 0dBm RF output 2, 5 Volts DC Power)

Frequency (GHz)	29.251-30.730	Units
RF Power	13-16	dBm
Tolerance	<±50	ppm
Sub-Harmonics	-45	dBc
Spurious	-95	dBc
Frequency Pushing	1.50	MHz/V
Load Pulling **(1)**	3.0	MHz
Output VSWR	2.0	:1

Phase Noise		(1Hz BW)
@10kHz	-80	dBc/Hz
@100kHz	-103	dBc/Hz
@1MHz	-132	dBc/Hz
Supply Voltage	5	V
Supply Current	130	mA
Operating Temperature	-40 to +70	°C
Storage Temperature	-55 to +85	°C
Frequency **(2)**	6.0	MHz
Power **(3)**	2	dB
Aging	1	ppm/yr
Mechanical Tuning >+/-	24.0	MHz
Electrical Tuning (opt) **(5)**	10-20	MHz
Tune Voltage Range **(5)**	0.6-11.4	V
Tune Voltage Center **(5)**	6	V

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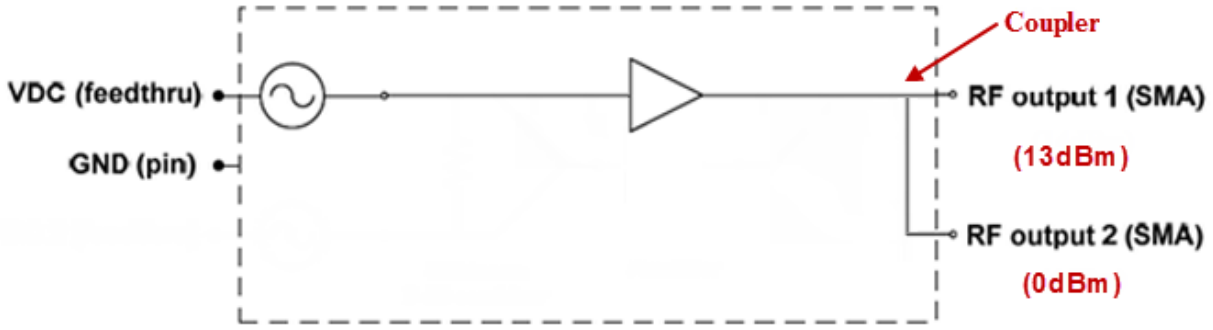

Description:

1. The required component is a single DRO module.
2. **At the output, a Coupler will split the signal in order to provide two RF outputs using 2.9(female) connectors. 13dBm on Port 1 main RF Output and 0dBm on Port 2 Monitor RF Output.**
3. **The overall current may be around 110mA to 130mA.**

Customer note
Add an additional output (and 2.92 mm connector), so that the unit has two outputs, one with Pout = +13 dBm and one with Pout = 0 dBm. I am thinking the simplest way to accomplish this is with a 13 dB coupler inside the DRO housing. The units you delivered last year had +14 dBm output power, so assuming 1 dB of coupler loss, hopefully we can still get +13 and 0 dBm using the same components and DC power.

Caution

Please use caution when biasing the Vt line. Do not connect a lab power supply to test, and switch it on and off whilst connected! The spike can kill the internal device. Only add a steady voltage. Suggest also to add a 12V Zener diode from Vt pin to ground to further protect the unit from any voltage spikes, by clamping to 12V max.

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