# **VOLTAGE CONTROLLED OSCILLATOR**

Rev A1

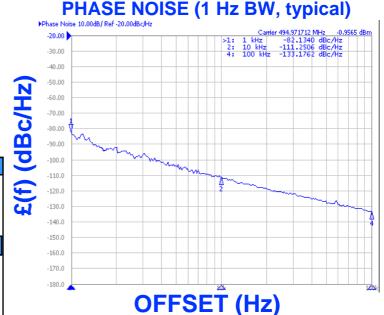


#### **FEATURES**

- Frequency Range: 470 -520 MHz
- Tuning Voltage: 0.5-4.5 Vdc
- MINI-16M-L Style Package

### **APPLICATIONS**

- Satellite Modems
- Mobile Radios
- CATV



30/117		
PERFORMANCE SPECIFICATIONS	VALUE	UNITS
Oscillation Frequency Range	470 - 520	MHz
Phase Noise @ 10 kHz offset (1 Hz BW, typ.)	-111	dBc/Hz
Harmonic Suppression (2nd, typ.)	-13	dBc
Tuning Voltage	0.5-4.5	Vdc
Tuning Sensitivity (avg.)	24	MHz/V
Power Output	4±2	dBm
Load Impedance	50	Ω
Input Capacitance (max.)	150	pF
Pushing	<2	MHz/V
Pulling ( 14dB Return Loss, Any Phase)	<1	MHz
Operating Temperature Range	-40 to 85	°C
Package Style	MINI-16M-L	
POWER SUPPLY REQUIREMENTS		
Supply Voltage (Vcc, nom.)	5	Vdc
Supply Current (Icc, typ.)	15	mA

All specifications are typical unless otherwise noted and subject to change without notice.

### **APPLICATION NOTES**

- AN-100/1: Mounting and Grounding of VCOs
- AN-102 : Proper Output Loading of VCOs
- AN-107 : How to Solder Z-COMM VCOs

## NOTES:

**TUNING CURVE, typ.** 540 520 FREQUENCY (MHz) 500 □ 85 °C 480 °C 25 °C -40 460 440 420 2 2.5 3 0.5 1 1.5 3.5 4 4.5 0 **TUNING VOLTAGE (Vdc)** POWER CURVE, typ. POWER OUTPUT (dBm) 6 5 4 °C □ 85 3 °C 25 2 °C -40 1 0 435 455 470 482 492 501 510 517 523 528 FREQUENCY (MHz) **PHYSICAL DIMENSIONS** TYPICAL OF ALL PADS MINI-16M-L 415-0069 REV. A (DRAWING NOT TO SCALE) NOTES:
THE INSIDE RADIUS OF ALL 16 HALF HOLES AT THE PERIMETER OF THE BOARD ARE PLATED TO PROVIDE A SURFACE FOR THE ATTACHMENT OF THE YCO TO A PCR, IN 13 LOCATIONS, WITH 3 PADS BEING USED FOR ELECTROMECHANICAL INTERFACE. 16 SOLDER LOCATIONS REQUIRED. THE SURFACE OF THE SHIELD IS TIN PLATED AND MAY BE SOLDERED TO. THE SHIELD SHELD IS THE PLATED AND MAY BE SOLDERED TO. THE SHIELD STORE OF THE SHIELD STORE OF THE SHIELD STORE OF THE SHIELD SHIELD STORE OF THE SHIELD SHIELD STORE OF THE BOARD AS WELL AS THE SHIELD BY THI. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES.

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TOLERANCES

.XXX=±.010 NOTES: .120 .154 .214 .248 TABS RANGE FROM 0.006 - 0.010 P1=VT P2=RF OUT (4 PLACES) DETAIL A .315 P3=Vcc P4=MOD INPUT \_.255 .285 \_.221 .251 BOTTOM VIEW SEE DETAIL 'A' .005 .157  $.XXX = \pm .010$ .130 061 TYP .031 -.221 . .255 . .315 . .128 TYP GROUND PLANE SOLDER PLATED