Z-Communications, Inc.
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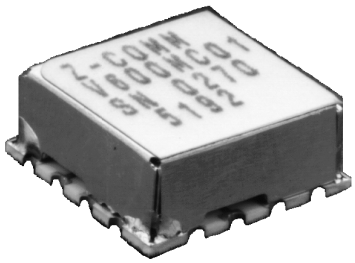
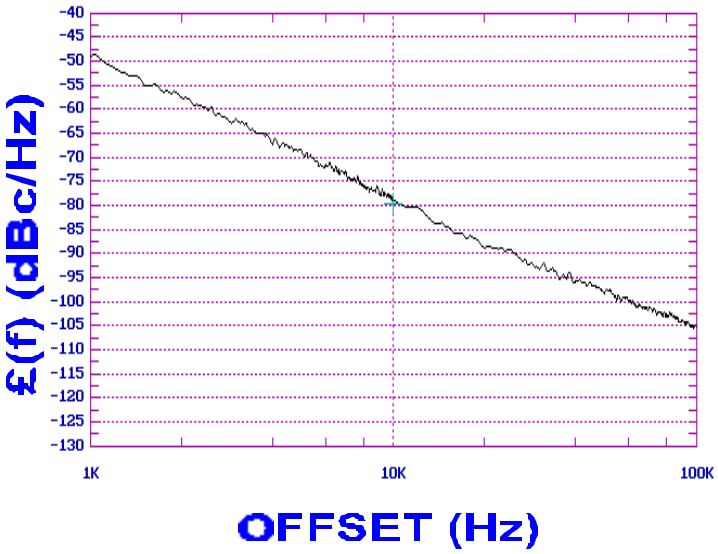
# V940ME04

## VOLTAGE CONTROLLED OSCILLATOR

Rev A1



## PHASE NOISE (1 Hz BW, typical)




### FEATURES

- Frequency Range: 5220 - 5420 MHz
- Tuning Voltage: 0.5-4.5 Vdc
- MINI-14S-L - Style Package

### APPLICATIONS

- Microwave Radios
- Satellite Communications
- Direct Broadcast

| PERFORMANCE SPECIFICATIONS | VALUE | UNITS |
|---|---|---|
| Oscillation Frequency Range | 5220 - 5420 | MHz |
| Phase Noise @ 10 kHz offset (1 Hz BW, typ.) | -78 | dBc/Hz |
| Harmonic Suppression (2nd, typ.) | -30 | dBc |
| Tuning Voltage | 0.5-4.5 | Vdc |
| Tuning Sensitivity (avg.) | 118 | MHz/V |
| Power Output | 2.75±1.75 | dBm |
| Load Impedance | 50 | Ω |
| Input Capacitance (max.) | 50 | pF |
| Pushing | <6 | MHz/V |
| Pulling (14 dB Return Loss, Any Phase) | <15 | MHz |
| Operating Temperature Range | -30 to 85 | °C |
| Package Style | MINI-14S-L | |
| **POWER SUPPLY REQUIREMENTS** | | |
| Supply Voltage (Vcc, nom.) | 5 | Vdc |
| Supply Current (Icc, typ.) | 26 | 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:**

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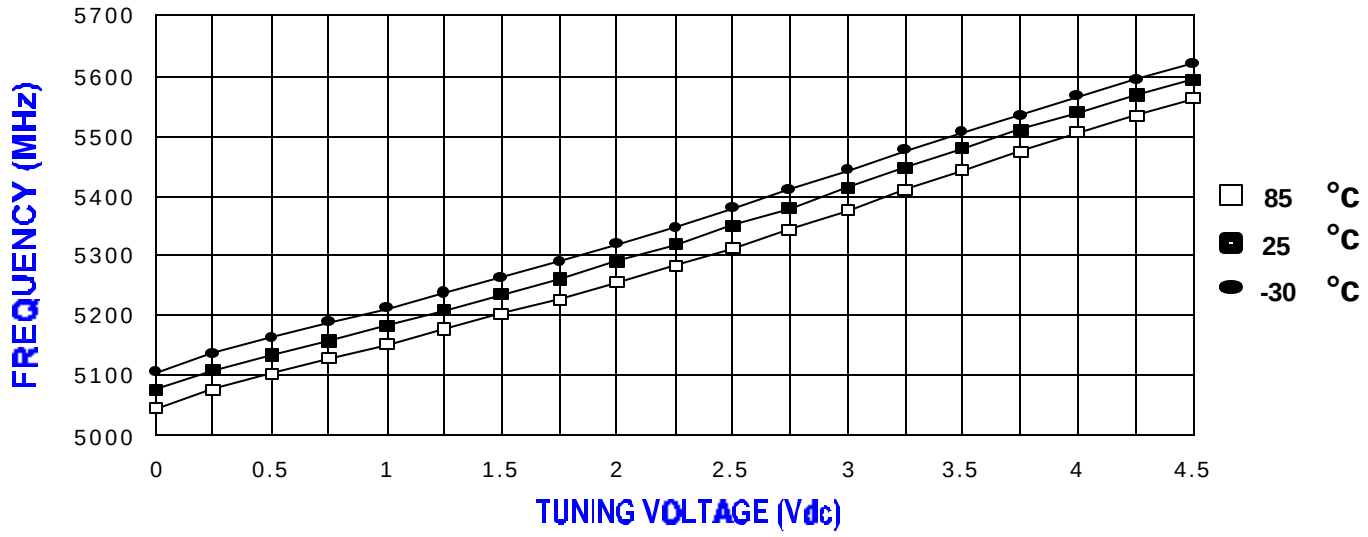
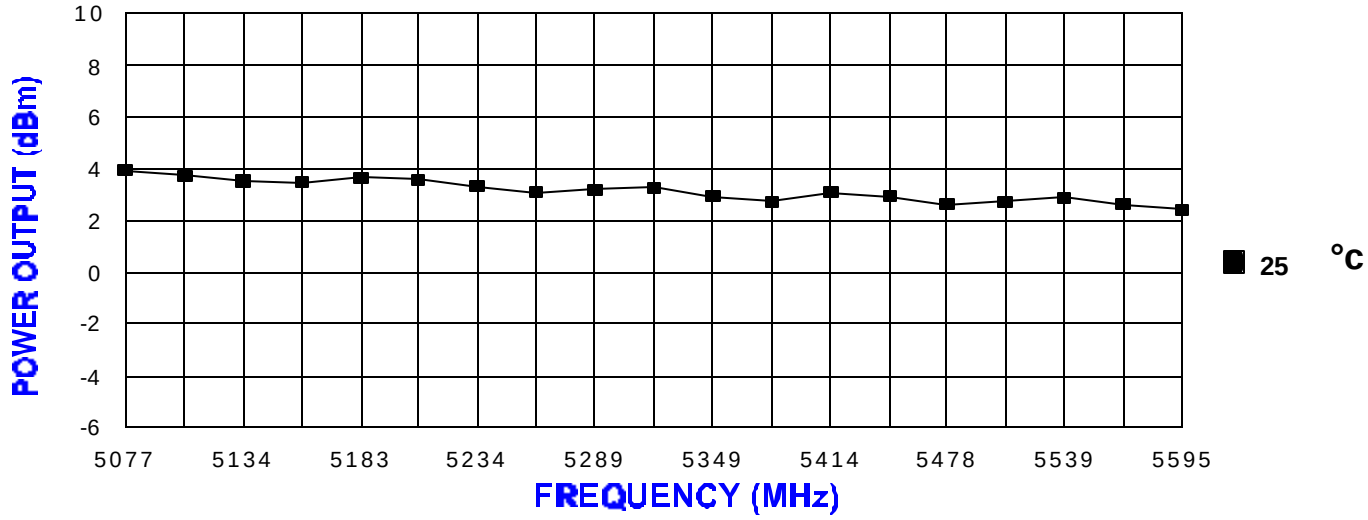
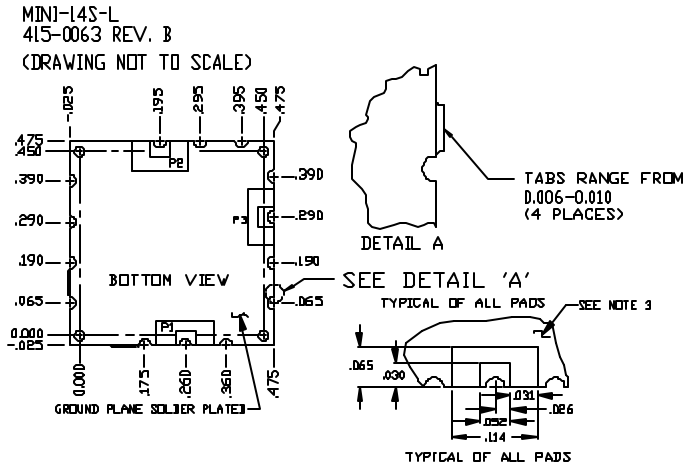
## TUNING CURVE, typ.



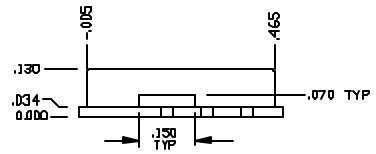

## POWER CURVE, typ.




## PHYSICAL DIMENSIONS




NOTES:

1. THE INSIDE RADIUS OF ALL 14 HALF HOLES AT THE PERIMETER OF THE BOARD ARE SOLDER PLATED TO PROVIDE A SURFACE FOR THE ATTACHMENT OF THE VCO TO A MOTHERBOARD IN 11 LOCATIONS, WITH 3 PADS BEING USED FOR ELECTROMECHANICAL INTERFACE. 14 SOLDER LOCATIONS REQUIRED.
2. THE SURFACE OF THE SHIELD IS TIN PLATED AND MAY BE SOLDERED TO. THE SHIELDS BASE METAL IS BRASS.
3. THE GROUND PLANE IS GROUND AND ATTACHES TO A GROUND TRACK ON THE UPPER SIDE OF THE BOARD AS WELL AS THE SHIELD BY PTH.
4. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES.
5. UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS FOLLOWS:
   TOLERANCES
   .XXX= ±.010

P1=VT
P2=RF OUT
P3=Vcc