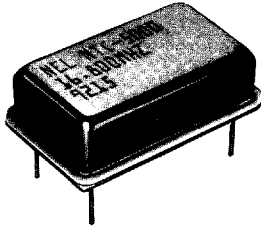




## Temperature Compensated Crystal Oscillators

### NTC-5000 SERIES TCXO LEADED PACKAGE Analog Compensated



The NTC-5000 TCXO is ideally suited for applications where state-of-the-art performance is required within tight cost parameters. The NTC-5000 is able to offer this value pricing and performance by using a simple resistor-thermistor compensation scheme to provide 5ppm stability over a narrower temperature range (-30° C to +60°C). This TCXO is packaged in a hermetic leaded dual in-line package (DIP).

The NTC-5000 TCXO features;

- 0.820 x 0.520 x 0.245 inches, hermetic leaded DIP
- DC voltage frequency adjust
- Sinewave output
- Current drawing of 2.9 mA

### Specifications

#### Reference Oscillator Frequency

Range: 12.8 to 20 MHz  
Standard Frequency: 16.8 MHz

#### Frequency Stability

vs temperature:  $\pm 4$  ppm/ -30°C to +60°C  
vs supply voltage:  $\pm 0.5$  ppm/5.0 VDC  $\pm 0.25$  VDC  
vs load:  $\pm 0.5$  ppm/10% load variation  
aging: 90% of units meet  $\pm 1$  ppm/year at 25°C  
100% of units meet  $\pm 7$  ppm/10 years at 25°C

#### Operating Temperature Range

-30°C to +60°C

#### Supply Voltage

+5.0 VDC  $\pm 0.25$  VDC

#### Current Drain

2.9 mA maximum into load =900 ohms/15 pF

#### Output Waveform

sinewave

#### Output Level Range

200 mVp-p to 350 mVp-p maximum

#### Frequency Adjustment Range

$\pm 7$  ppm to  $\pm 22$  ppm

#### Phase Noise

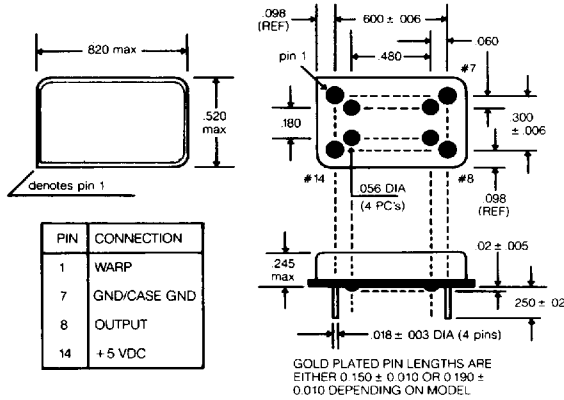
-145 dBc/Hz at 10 kHz offset

# Temperature Compensated Crystal Oscillators

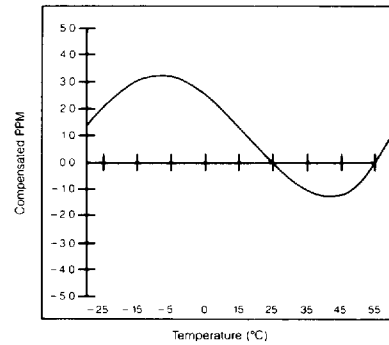


## NTC-5000 SERIES TCXO LEADED PACKAGE

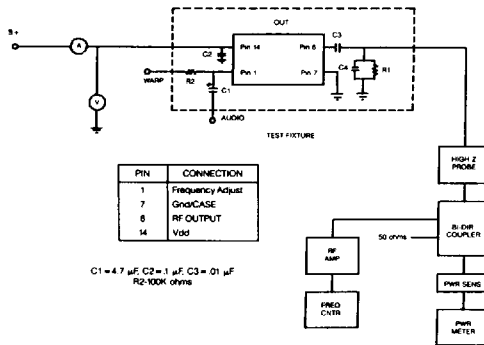
### PACKAGE (DIMENSIONS IN INCHES)



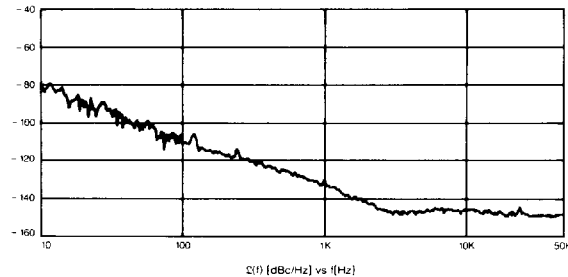
### FREQUENCY VS TEMPERATURE



### TEST CIRCUIT



### PHASE NOISE



## NEL TCXO PART NUMBER DEVELOPMENT

