

# 400 Series TCXO

## Description

If your system requires uncompromising phase noise performance, MTI's 400 Series temperature compensated crystal oscillators (TCXO) deliver. The 400 Series phase noise performance rivals many AT cut OCXOs at a fraction of the cost. MTI offers a large number of choices for specifying thermal stability, temperature range, supply voltage, and output.

## Frequency Range

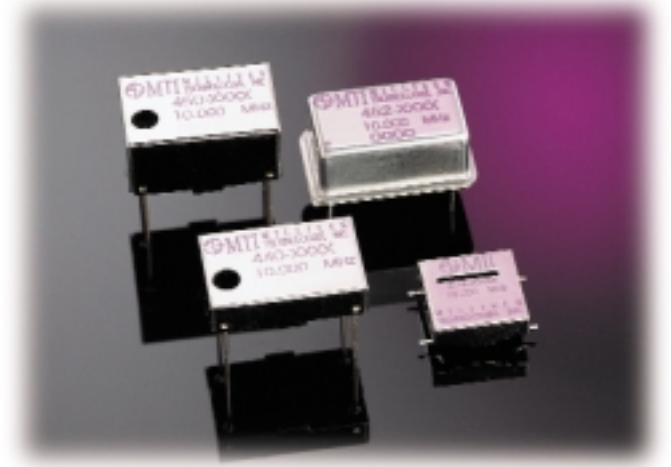
- 64 KHz to 60 MHz

## Applications

- STRATUM IV
- Mobile Radios
- PCS Systems
- Home Meter Reading

## Typical Performance

Frequency Stability vs. Supply V ( $\pm 5\%$ )	$\pm 0.4$ ppm
Frequency Stability vs. Load ( $\pm 5\%$ )	$\pm 0.4$ ppm
Aging	$\pm 1$ ppm/year
Power Consumption	30mW (clipped sine)
Phase Noise 1Hz	-55dBc
@ 1 Hz BW 10Hz	-85dBc
100Hz	-115dBc
1KHz	-130dBc
10KHz	-140dBc
100KHz	-140dBc
Tuning Slope	Positive
Mechanical Tuning	$\pm 3$ ppm
Electrical Tuning	$\pm 3$ ppm



The following guide can be used to determine your requirements.

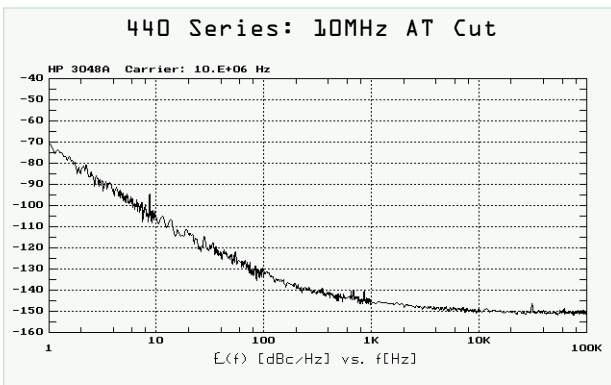
1 2 - C 4 A 1

<b>Package</b>	<b>Output</b>
1 $\blacklozenge$ = .720 x .465 x .220	1 $\square$ = clipped sine
2 $\blacklozenge$ = .720 x .465 x .365	2 $\blacklozenge$ = HCMOS
3 $\blacklozenge$ = .449 x .449 x .154	3 $\square$ = 0dBm sine
4 $\blacklozenge$ = .815 x .515 x .394	4 $\square$ = +3dBm sine
	5 $\square$ = +7dBm sine
	6 $\square\blacktriangledown$ = +10dBm sine
<b>Tuning</b>	<b>Supply V</b>
1 $\circ$ = mech. tuning	A $\square$ = +3.3V
2 = elec. tuning	B $\blacktriangledown$ = +5V
	C = +10V
	D = +12V
	E = +15V
	F = +18V
<b>Thermal Stability</b>	<b>Temperature</b>
A = $\pm 10$ ppm	1 = 0 to 50°C
B = $\pm 5.0$ ppm	2 = 0 to 70°C
C = $\pm 3.5$ ppm	3 = -10 to 60°C
D = $\pm 2.5$ ppm	4 = -20 to 70°C
E $\bullet$ = $\pm 1.5$ ppm	5 = -30 to 70°C
F $\bullet$ = $\pm 1.0$ ppm	6 = -30 to 75°C
	7 $\bullet$ = -40 to 85°C

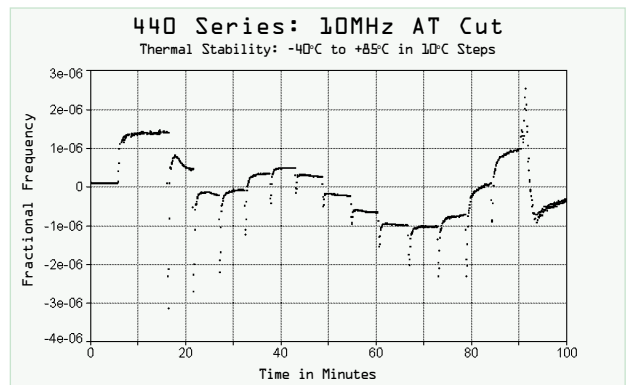
**Notes:**

1. A unique model number will be assigned upon order placement.
2. Options with the same marker may not be combined with each other.
3. Recommended tuning tool: Voltronics P/N TT200
4. Combination mech. and elec. tuning available upon request.

## Phase Noise

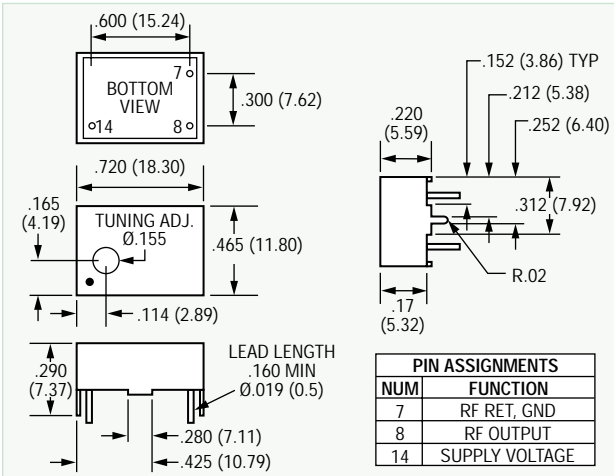


## Thermal Stability

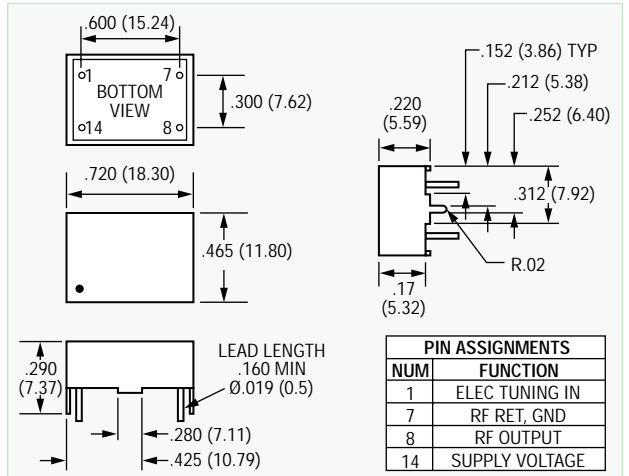




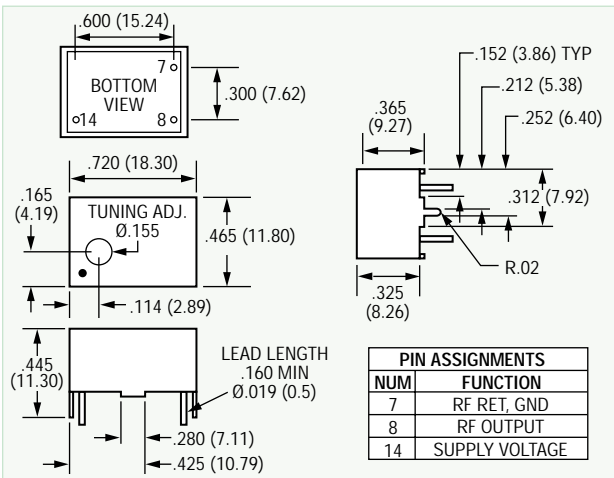
### 440 Interface Control Drawing (Package 1)



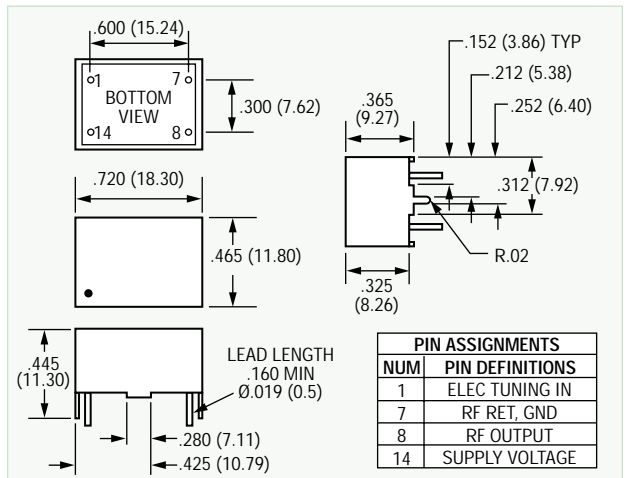
### 443 Interface Control Drawing (Package 1)



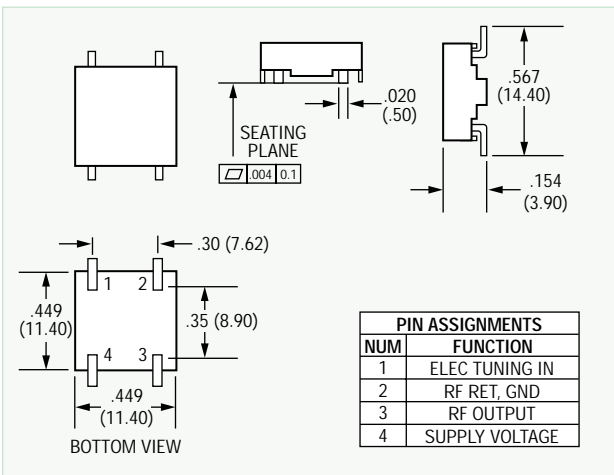
### 450 Interface Control Drawing (Package 2)



### 453 Interface Control Drawing (Package 2)



### 474 Interface Control Drawing (Package 3)



### 452 Interface Control Drawing (Package 4)

