

# M6064 & M6065 Series

## 2.0 x 2.5 mm, 3.0 V, Clipped Sine Wave, TCXO/VCTCXO

### Features:

- Ultra Miniature Package
- Tight Stability Performance
  - Down to  $\pm 0.5$  ppm
- Standard 6 Pad Configuration

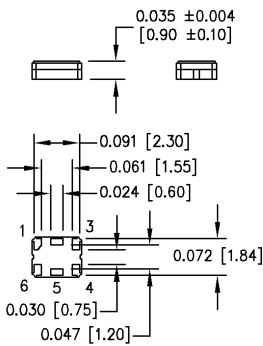
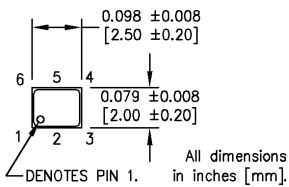
### Applications:

- Telecommunications such as SONET / SDH / DWDM / FEC / SERDES / OC-3 thru OC-192
- Wireless base stations / WLAN / Gigabit Ethernet
- Avionic flight controls and military communications

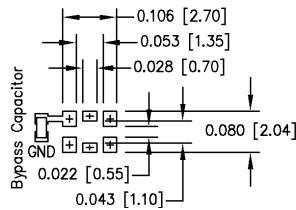
### Ordering Information

	<b>M6064</b>	<b>1</b>	<b>J</b>	<b>S</b>	<b>N</b>	<b>00.0000 MHz</b>
<b>Product Series</b>						
<b>M6064</b> = TCXO						
<b>M6065</b> = VCTCXO						
<b>Temperature Range</b>						
1: 0 °C to +70 °C	H: -30 °C to +85 °C					
2: -40 °C to +85 °C						
<b>Stability</b>						
H: $\pm 2.5$ ppm	J: $\pm 1.0$ ppm	G: $\pm 0.5$ ppm				
<b>Output Waveform</b>						
S: Clipped Sine Wave						
<b>Package/Lead Configurations</b>						
N: 6 Pad Leadless Ceramic						
<b>Frequency (customer specified)</b>						

M6064Sxxx & M6065Sxxx - Custom datasheets.



SUGGESTED SOLDER PAD LAYOUT



### Pin Connections

Pin	Function
1	Ground or $V_{CT}$
2	N/C
3	Ground
4	Output
5	N/C
6	+ $V_{DD}$

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Frequency Range	$F_R$	10.0		52.0	MHz	
Frequency Tolerance	$\Delta F/F$	-1.0		+1.0	ppm	@ +25 °C, initial
		-1.5		+1.5	ppm	@ +25 °C, after two reflow soldering profiles
Frequency Stability	$\Delta F_T/F$	(See Ordering Information)			ppm	Over Operating Temperature
Frequency vs Supply Voltage	$\Delta F_{VDD}/F$	-0.2		+0.2	ppm	For $\pm 10\%$ voltage change
Frequency vs Load	$\Delta F_{LOAD}/F$	-0.2		+0.2	ppm	For $\pm 10\%$ load change
Aging		-1.0		+1.0	ppm	per year @ +40 °C
Operating Temperature	(See Ordering Information)					
Input Voltage	$V_{DD}$	2.85	3	3.15	V	
Input Current	$I_{DD}$			2	mA	
Output Type	Clipped Sine Wave					
Output Load	10 k $\Omega$    10 pF					
Output Level		0.8			$V_{pk-pk}$	
Control Voltage	$V_{CT}$	0.5	1.5	2.5	V	M6065 only.
Frequency Tuning		$\pm 5$		$\pm 12$	ppm	M6065 only. $V_{CT} = +1.5$ V
Phase Noise (Typical)			-85		dBc/Hz	@ 10 Hz
			-110		dBc/Hz	@ 100 Hz
			-135		dBc/Hz	@ 1 kHz
			-150		dBc/Hz	@ 10 kHz
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213 (2000 g, 0.3 ms duration, 1/2 sine wave)				
	Vibration	Per MIL-STD-202, Method 201 & 204 (10 g from 20 Hz to 2000 Hz)				
	Hermeticity	Per MIL-STD-202, Method 112 ( $1 \times 10^{-8}$ atm.cc/s of helium) (Crystal unit only)				
	Storage Temperature	-55 °C to +105 °C				
	Solderability	Per EIAJ-STD-002				
	Max Soldering Conditions	See Solder Profile, Figure 1				
Package	6-pad 2.0 X 2.5 X 0.9 mm leadless ceramic. RoHS compliant.					

# MtronPTI Lead Free Solder Profile

