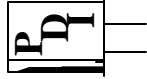
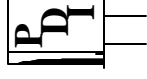


# Precision Devices, Inc.



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 Middleton, WI 53562  
 Phone: 608-831-4445  
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Visit our web site at [www.pdixtal.com](http://www.pdixtal.com)

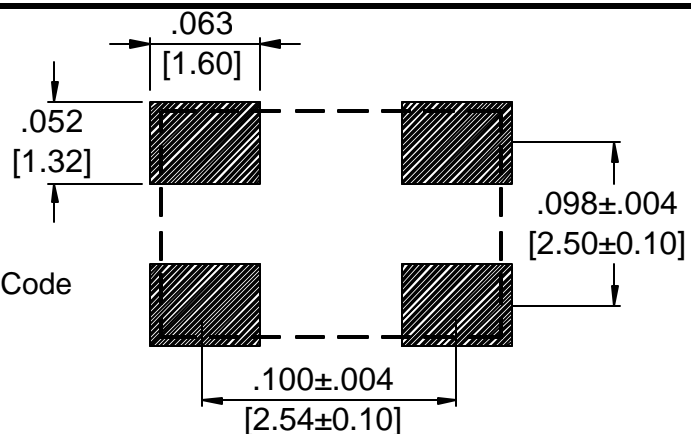
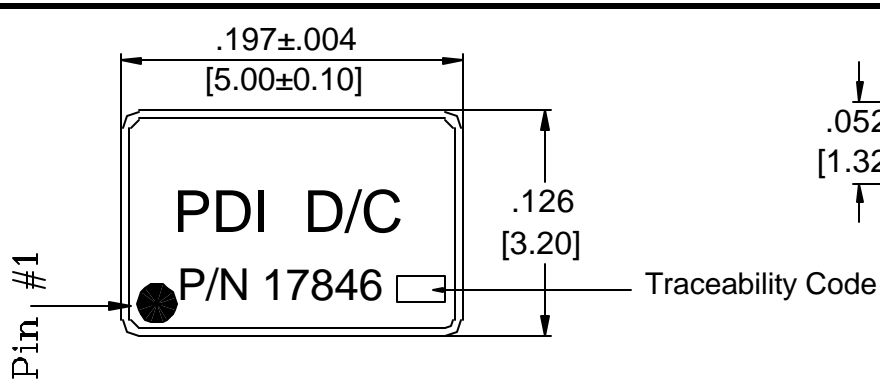
Sales Information [sales@pdixtal.com](mailto:sales@pdixtal.com)

## Electrical Specifications

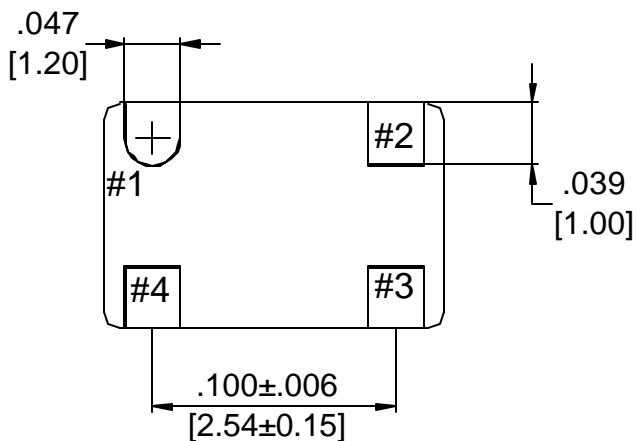
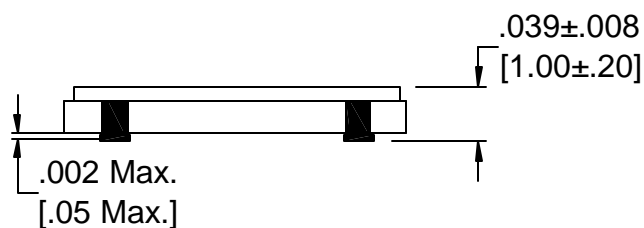
1. Center Frequency: 13.000000 MHz
2. Output: DC Coupled Clipped Sinewave ( $\pm 1\text{v}$  pk-pk min.)  
 Output Load Resistance: 10K ohms  $\pm 1\text{K}$  Ohm  
 Output Load Capacitance: 10pf  $\pm 1\text{pf}$
3. Operating Temperature Range:  $-40^\circ\text{C}$  to  $85^\circ\text{C}$   
 Operable Temperature Range:  $-50^\circ\text{C}$  to  $+95^\circ\text{C}$   
 Storage Temperature Range:  $-50^\circ\text{C}$  to  $+95^\circ\text{C}$
4. Frequency Stability: vs. Temperature:  $\pm 2.5\text{ppm}$   
 vs. Supply Voltage:  $\pm 0.2\text{ppm}$   
 vs. Aging:  $\pm 1\text{ppm/year}$   
 vs. Load:  $\pm 0.2\text{ppm}$  (10% Load change)  
 vs. Calibration:  $\pm 1\text{ppm}$  (@ $25^\circ\text{C}$  1 hr after reflow)
5. Supply Current (mA max): 1.5mA maximum
6. Supply Voltage:  $+3.3\text{Vdc}$   $\pm 5\%$ , or  $+5.0\text{Vdc}$   $\pm 5\%$
7. Start-Up Time: 50mS maximum
8. Frequency Perturbations: 0.5ppm maximum (pk-pk)
9. Static Temperature Hysteresis:  $\pm 0.6\text{ppm}$  maximum
10. Frequency Slope:  $\pm 0.5\text{ppm}/^\circ\text{C}$  maximum
11. Phase Noise (SSB):  
 -57dBc/Hz @1Hz  
 -88dBc/Hz @10Hz  
 -112dbc/Hz @100Hz  
 -130dBc/Hz @1Khz  
 -140dBc/Hz @10Khz  
 -150dBc/Hz @100Khz
12. Harmonics: -4dBc maximum

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REV.	DATE	PAGE	DESCRIPTION	Auth.	ECN
			<b>FOR PRELIMINARY USE ONLY</b>		
			Specifications subject to change without notice.		
		TITLE		FKA	
		Crystal Oscillator Assembly		17846-fka	
		PART NUMBER			
		<b>TC0513000XWLDXX</b>			
		DATE	SCALE	ECN.	REV.
		6/13/06	N.T.S.	N/A	N/A
		SIZE	CAGE		
		A	OS4G1		
			Page 1 of 2		



Recommended Land Pattern



Pin	Connections
1	Enable/Disable
2	Ground
3	Output
4	Supply



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Manufacturer of Quartz Crystal Products

DECIMAL XX=±.020 XXX=±.008	DWG FILE <b>17846-fka</b>	PART NUMBER <b>TC0513000XWLDXX</b>	
METRIC XX=±.50 XXX=±.20	SCALE <b>N.T.S.</b>	FREQUENCY <b>13.000 Mhz</b>	DRAWN BY <b>D. Gibney</b>
ANGULAR XX=±2°	REV. LEVEL <b>N/A</b>	ECN NO. <b>N/A</b>	DATE <b>6/13/06</b>
		CAGE CODE <b>OS4G1</b>	<b>Page 2 of 2</b>