Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077
TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

Features and Benefits

500KHz-40MHz Frequency Range
3.3V,5V Supply voltage
HCMOS Output waveform
Various Temperature Stability Available
12.7x12.7x5mm Size
-130dBc/Hz @1KHz phase noise value

Typical Applications

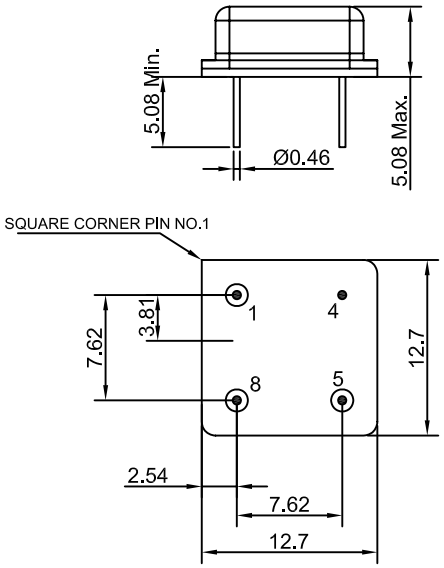
Oil / Gas downhole tool
Geophysical services
High temperature industrial process control
Extended temperature Military/Aerospace
Avionics
Engine control

Description

The HTXO1000_Rev1 is designed for applications where exceptional frequency stability and timing is required. It has both excellent temperature performance and short term stability. These characteristics make it an excellent choice for timing applications.

Mechanical Drawing & Pin Connections

Drawing No: **MD180031-1**



Pin Connections

Pin	Function
1	Enable/Disable
4	GND
5	Output
8	Supply Voltage

Unit in mm
1mm = 0.0394 inches

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Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F_{nom}		32.768KHz		40MHz		
Standard Frequency List			32.768KHz,512KHz,1MHz,1.024MHz,2MHz,2.048MHz,3.686MHz,4MHz,4.096MHz,5MHz,7.3728MHz,8MHz,8.192MHz,10MHz,12MHz,16MHz,16.384MHz,20MHz,24MHz,32MHz,32.768MHz,40MHz				
RF Output							
Signal Waveform			HCMOS				ACMOS option
Level		Logic " High " , " 1 "	Vdd-0.5			V	
		Logic " Low " , " 0 "			0.4	V	
Symmetry			40%-60%				
Rise Time / Fall Time			1ns typical / 5ns Max			ns	
Power Supply							
Voltage Supply	Vdd	±5% change		5V			3.3V option
Current		@20MHz,3.3V		5		mA	
Frequency Stability							
Versus Operating Temperature Range						ppm	See ordering information
Phase noise (typical@20MHz,HCMOS,3.3V)		10Hz		-70		dBc/Hz	
		100Hz		-105		dBc/Hz	
		1KHz		-130		dBc/Hz	
		10KHz		-145		dBc/Hz	
		100KHz		-155		dBc/Hz	
		1MHz		-155		dBc/Hz	
Jitter (12 KHz to 20 MHz)					0.5	ps	
Environmental,Mechanical Conditions							
Operating Temperature	See ordering information						
Storage Temperature	-55°C to + 125°C						
Vibration-Sine	20g to 2kHz Sine; MIL-STD-202 Method 204 Condition D						
Vibration-Random	20grms to 2kHz Random; MIL-STD-202 Method 214 Condition I-F						
Shock	1000g, 0.5ms; MIL-STD-202 Method 213 Condition E						
Seal Test	Fine; MIL-STD-883 Method 1014 Condition A2						
Seal Test	Gross; MIL-STD-202 Method 112 Condition D						
Temperature Cycling	10 Cycles minimum; MIL-STD-883 Method 1010 Condition B						
Acceleration	5000g Y1 axis; MIL-STD-883 Method 2001 Condition A						

Ordering Information

HTXO1000_Rev1	-	xxMHz	-	01	02	03	04	05	06
Group				Code					

For example, HTXO1000_Rev1 -10MHz-2-3-2-1-1-4 denotes the XO has the following specifications:

Temperature Range:	-55°C to +185°C
Stability Over Temperature:	±100ppm
Supply Voltage:	5.0V
Enable/Disable Option:	No Enable
Output waveform:	HCMOS
Accuracy:	±25 PPM

01	**Frequency Stability**
Code	Specification
1	±40 PPM
2	±100 PPM
3	±150 PPM
4	±200 PPM
5	±250 PPM
6	±350 PPM

02	**Temperature Range**
Code	Specification
1	0°C to +150°C
2	-20°C to +180°C
3	-55°C to +180°C
4	0°C to +200°C
5	-55°C to +200°C
6	0°C to +230°C
7	-55°C to +230°C

03	**Supply Voltage**
Code	Specification
1	3.3V
2	5.0V

04	**Output Waveform**
Code	Specification
1	HCMOS
2	ACMOS

05	**Accuracy**
Code	Specification
1	±25 PPM
2	No Accuracy

06	**Enable**
Code	Specification
1	Enable Hi, Tristate
2	Enable Low, Tristate
3	Enable Low
4	No Enable

Temperature	**Frequency Stability(PPM)**	
	Available	**On Request**
0°C to + 150°C	±150, ±250	±40, ±100
-20°C to +180°C	±150, ±250	±40, ±100
-55°C to +180°C	±150, ±250	±100
0°C to +200°C	±200, ±250	±100, ±150
-55°C to +200°C	±200, ±250	±100, ±150
0°C to +230°C	±350	±200, ±250
-55°C to +230°C	±350	±200, ±250