Frequency Range 20 to 120 MHz Robust leaded package Vibration Resistant 4-point Crystal Mount Frequency Stability of +/- 5 PPM Temperature Range ( -55C to 125C )

### **Picture of Part**



#### **Description**

The TCXOB1000ET represents a focused design platform clock reference for harsh extended temperature range environments. The TCXO crystal is mounted at 4-points within its enclosure to provide for increased tolerance to shock and vibration. Tight crystal angle process controls enables the oscillator to attain +/- 5 PPM from -55C to 125C.

# **Physical Dimensions & Pin Connections**



# **Specification**

TCXO		Sym.	Condition	Value		Unit	Note	
Specification				Min.	Typ.	Max.		
<b>Operational Frequency Range</b>		f <sub>0</sub>		20		120	MHz	
			•					·
HCMOS compatible option	Load					15	pF	
	H - level voltage	$V_{\rm H}$		4.5			V	
	L - level voltage	VL				0.4	V	
	Rise & Fall time					5.0	ns	
	Duty cycle			40	50	60	%	
Sine-wave option	Level	L		7.0			dBm	
	Harmonics					-30	dBc	
	Spurious					-60	dBc	
	*							
Power supp	ly		•					
Voltage		Vcc		11.4	12.0	12.6	V	
Current consumption		Icc				40	mA	
Fromoney	stability							
vs. temperature			-55°C to +125°C, ref 25°C	-5.0		+5.0	PPM	
1			,					
Aging	Per Year		Projected aging			+/- 1	PPM	
00	Per 5 Years		after 30 days operation			+/- 5	PPM	]
Environmen	ntal, mechanical cond	litions.	•		•		•	
Operating temperature range			-55°C to +125°C maximum ran	ıge available	e that is sta	ndard		
Storage temperature range			-55°C to +125°C					
Mechanical shock			Per MIL-STD 202, Method 213B, Condition C					
Sine Vibration			Per MIL-STD 202, Method 204D, Condition A					
Random Vibration			Per MIL-STD 810G, Method 514.6, Procedure 1					

## **Ordering Information**

#### TCXOB1000ET-XXX.XXXXXX-Z

- 1. Field "XXX.XXXXXX " is the Output Frequency to six decimals in MHz
- 2. Field "Z" is sine wave output versus square wave output
  - a. "0" for sine wave output
  - b. "1" for square wave output

#### Part Number Example

TCXOB1000ET-100.000000-1

#### 100.000000 MHz Operating Frequency

Square wave output

## **Performance Graph**

TCXOB1000ET 5.0000 4.5000 4.0000 3.5000 3.0000 2.5000 2.0000 1.5000 È 1.0000 K-I 0.5000 0.0000 F É. -0.5000 Ð -1.0000 -1.5000 -2.0000 -2.5000 -3.0000 -3.5000 -4.0000 -4.5000 -5.0000 -55504540353025201510-5 0 5 10 152025 30 3540 4550 55 60 65 70 75 80 85 90 95100 05 10 1520 25 Temperature in Degrees Celsius