



# BT16xxS SERIES TCXO

## BROOKDALE FREQUENCY CONTROLS, INC.



### FEATURES:

- HERMETICALLY SEALED DIL-14 THRU-HOLE PACKAGE TCXO
- SINEWAVE OUTPUT
- RoHS Compliant; Pb FREE
- REQUEST A CERTIFICATE OF COMPLIANCE
- FREQUENCY RANGE 8.0 TO 40.0 MHZ
- FREQUENCY STABILITY AS TIGHT AS  $\pm 1.0$  PPM
- -40 TO +85°C TEMPERATURE RANGE AVAILABLE
- REQUEST A QUOTE ON THIS DEVICE

### BT16xxCS TCXO SERIES SPECIFICATION SHEET

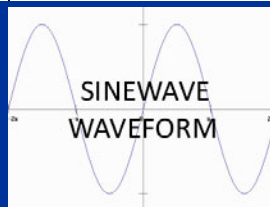
Supply Voltage (Vcc)	5Vdc $\pm 5\%$		3.3Vdc $\pm 5\%$				
Frequency Range	8 to 40.0MHz						
Output Level	1.0Vpp min						
Output Wave Form	Sinewave						
Frequency Tolerance @25°C $\pm 2^\circ\text{C}$	$\pm 1.0$ ppm	$\pm 1.5$ ppm	$\pm 2.0$ ppm	$\pm 2.5$ ppm (Standard)			
Supply Current	20mA Max @ 20MHz						
Load	50 $\Omega$						
Harmonics Level	< -30dBc						
Sputious Level	< -60dBc						
Pull Range	$\pm 5.0$ ppm / $\pm 10.0$ ppm / $\pm 15.0$ ppm / $\pm 20.0$ ppm / $\pm 30.0$ ppm / $\pm 40.0$ ppm / $\pm 50.0$ ppm						
SSB Phase Noise @25°C	Offset	10 Hz	100Hz	1 kHz	10 kHz	100 kHz	1 MHz
	3.3V-10.0MHz	98.42dBc/Hz	124.8dBc/Hz	145.3dBc/Hz	156.8 dBc/Hz	159.4 dBc/Hz	159.7dBc/Hz
Frequency Stability (max)	$\pm 1.0$ ppm	$\pm 1.5$ ppm	$\pm 2.0$ ppm	$\pm 2.5$ ppm	$\pm 3.0$ ppm	$\pm 4.0$ ppm	$\pm 5.0$ ppm
Temperature Range (°C)	0 to 60°C	Contact us	YES	YES	YES	YES	YES
	0 to 70°C	Contact us	YES	YES	YES	YES	YES
	-10 to 60°C	N/A	Contact us	YES	YES	YES	YES
	-10 to 70°C	N/A	Contact us	YES	YES	YES	YES
	-20 to 70°C	N/A	Contact us	YES	YES	YES	YES
	-30 to 75°C	N/A	N/A	Contact us	YES	YES	YES
-40 to 85°C	N/A	N/A	N/A	Contact us	YES	YES	YES
Aging	$\pm 1.0$ ppm Max / Year						
Storage Temperature	-40 to 85°C						
MSL Level	MSL 1 per IPC/JEDEC-STD-020C						
Humidity	85% $\pm 3\%$ RH, 85°C, 168 Hours						
Hermeticity	Leak rate $2 \times 10^{-8}$ ATM-cm <sup>3</sup> /sec max.						
Solderability	MIL-STD-202F method 208E						
Vibration	MIL-STD-202F method 204, (500 to 2000Hz 6g)(10-500Hz 5g)						
Shock	MIL-STD-202F method 213B, test conditions E, 1000GG 1/2sine wave						

### BT16xxT TCXO SERIES PART NUMBER GUIDE

MODEL	STABILITY	Output	Voltage	OPERATING TEMPERATURE (°C)	Freq. Tolerance	Pull Range	FREQ.
BT16	01= $\pm 1$ ppm	S= Sinewave	5 = 5.0V	B = 0°C TO 60°C	Blank= $\pm 1.0$ ppm@25°C	05= $\pm 5$ ppm	
	15 = $\pm 1.5$ ppm		33 = 3.3V	A = 0°C TO 70°C	A = $\pm 1.5$ ppm@25°C	10= $\pm 10$ ppm	
	02 = $\pm 2$ ppm			C = -10 to 60°C	B = $\pm 2.0$ ppm@25°C	15= $\pm 15$ ppm	
	25 = $\pm 2.5$ ppm			H = -10°C TO 70°C	C = $\pm 2.5$ ppm@25°C	20= $\pm 20$ ppm	
	03 = $\pm 3$ ppm			D = -20°C TO 70°C		30= $\pm 30$ ppm	
	04 = $\pm 4$ ppm			E = -30°C TO 75°C		40= $\pm 40$ ppm	
	05 = $\pm 5$ ppm			M = -40°C TO 85°C		50= $\pm 50$ ppm	

### PART NUMBER EXAMPLE

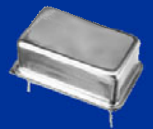
BT16	02	T	33	A		15	10.0
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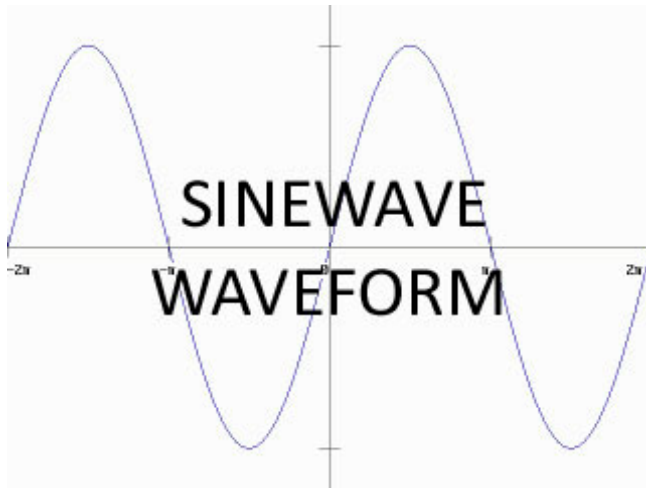
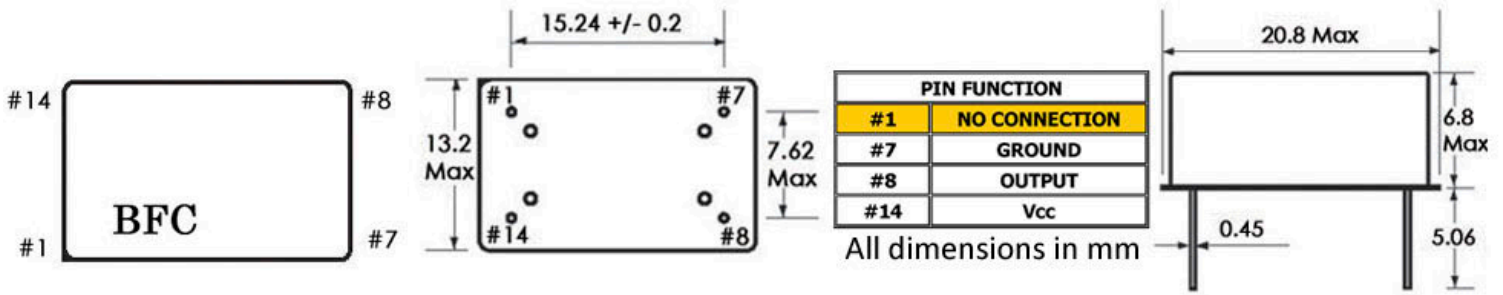


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## PACKAGE DIMENSIONS



## SINEWAVE TCXO TEST CIRCUIT

