



BVT16xxCS SERIES VCTCXO

BROOKDALE FREQUENCY CONTROLS, INC.



FEATURES:

- HERMETICALLY SEALED DIL-14 THRU-HOLE PACKAGE
- CLIPPED SINEWAVE OUTPUT
- **RoHS Compliant; Pb FREE**
- **REQUEST A CERTIFICATE OF COMPLIANCE**
- FREQUENCY RANGE 8 to 35.0MHz
- FREQUENCY STABILITY AS TIGHT AS ± 1.0 ppm
- -40 to +85°C TEMPERATURE RANGE AVAILABLE
- **REQUEST A QUOTE ON THIS DEVICE**

BVT16xxCS VCTCXO SERIES SPECIFICATIONS

Frequency Range	8 to 35.0MHz						
Output Wave Form	Clipped Sinewave						
Frequency Tolerance	± 1.0 ppm @25°C $\pm 2^\circ\text{C}$	± 1.5 ppm@25°C $\pm 2^\circ\text{C}$	± 2.0 ppm@25°C $\pm 2^\circ\text{C}$	± 2.5 ppm@25°C $\pm 2^\circ\text{C}$	± 3.0 ppm@25°C $\pm 2^\circ\text{C}$	± 4.0 ppm@25°C $\pm 2^\circ\text{C}$	± 5.0 ppm@25°C $\pm 2^\circ\text{C}$
Frequency Stability	± 1.0 ppm	± 1.5 ppm	± 2.0 ppm	± 2.5 ppm	± 3.0 ppm	± 4.0 ppm	± 5.0 ppm
Supply Current	3mA Max						
Output Load	10k Ω /10pF						
Pull Range	± 5.0 ppm / ± 10.0 ppm / ± 15.0 ppm / ± 20.0 ppm / ± 30.0 ppm / ± 40.0 ppm / ± 50.0 ppm						
Supply Voltage (Vcc)	5Vdc $\pm 5\%$			3.3Vdc $\pm 5\%$			
Control Voltage(Vcon)	2.5Vdc			1.65Vdc			
Control Voltage Range	0.5~4.5V (Suffix Blank)			0.3~3.0V (suffix E)			
	0~5.0V (Suffix A)			0.5~2.5V (suffix F)			
	0.5~4.75V (Suffix C)			0~3.3V (suffix G)			
	0.5~5.0V (Suffix D)						
Output Level	1.0Vpp min			0.8Vpp Min.			
Aging	± 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 2×10^{-8} ATM-cm ³ /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						
SSB Phase Noise At 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
	3.3V-146.2857MHz	48.72dBc/Hz	80.17dBc/Hz	106.7dBc/Hz	118.94dBc/Hz	139.85dBc/Hz	150.5dBc/Hz

FREQUENCY STABILITIES OVER TEMPERATURE RANGES

Frequency Stability (max)	± 1.0 ppm	± 1.5 ppm	± 2.0 ppm	± 2.5 ppm	± 3.0 ppm	± 4.0 ppm	± 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

BVT16xxT VCTCXO SERIES PART NUMBER GUIDE

MODEL	STABILITY	Output	Voltage	Control Voltage(Range)	OPER. TEMP. (°C)	Freq. Tolerance	Pull Range	FREQ.
BVT16	01= ± 1 ppm	CS=Clipped	33=3.3V	Blank=2.5V(0.5~4.5V)	B=0°C TO 60°C	Blank= ± 1.0 ppm@25°C	05= ± 5 ppm	
	15= ± 1.5 ppm	Sinewave	5=5.0V	A=2.5V(0~5.0V)	A=0°C TO 70°C	A = ± 1.5 ppm@25°C	10= ± 10 ppm	
	02 = ± 2 ppm			C=2.5V(0.5~4.75V)	C =-10 to 60°C	B = ± 2.0 ppm@25°C	15= ± 15 ppm	
	25 = ± 2.5 ppm			D=2.5V(0.5~5.0V)	H=-10°C TO 70°C	C = ± 2.5 ppm@25°C	20= ± 20 ppm	
	03 = ± 3 ppm			E=1.65V(0.3~3.0V)	D=-20°C TO 70°C		30= ± 30 ppm	
	04 = ± 4 ppm			F=1.65V(0.5~2.5V)	E=-30°C TO 75°C		40= ± 40 ppm	
	05 = ± 5 ppm			G=1.65V(0~3.3V)	M=-40°C TO 85°C		50= ± 50 ppm	

PART NUMBER EXAMPLE

BVT16	02	CS	33	A	A		15	10.0
-------	----	----	----	---	---	--	----	------



BVT16xxCS SERIES VCTCXO

BROOKDALE FREQUENCY CONTROLS, INC.



PACKAGE DIMENSIONS

