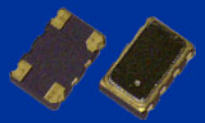




BT1657CS SERIES TCXO

BROOKDALE FREQUENCY CONTROLS, INC.



- MINIATURE 5.0 X 7.0 X 2.5MM SMD PACKAGE
- NO MECHANICAL TRIMMER (FOR AQUEOUS WASHING)
- **RoHS Compliant: Pb Free**
- **REQUEST A CERTIFICATE OF CONFORMANCE**
- WIDE FREQUENCY RANGE: 9.6 MHz ~ 40.0 MHz
- -40 TO +85°C TEMPERATURE RANGE AVAILABLE
- CLIPPED SINEWAVE OUTPUT
- **REQUEST A QUOTE ON THIS DEVICE**

BT1657CS VCTCXO SERIES SPECIFICATIONS

Supply Voltage(V _{cc})		+2.8VDC	+3.0VDC	+5.0VDC			
Frequency Range		9.6 MHz ~ 40.0 MHz			9.6MHz to 26.0MHz		
Output Wave from		Clipped Sinewave					
Frequency Tolerance @25°C± 2°C		± 2.0 ppm					
Frequency Stability		± 1.0 ppm	± 1.5 ppm	± 2.0 ppm	± 3.0 ppm	± 4.0 ppm	± 5.0 ppm
TEMPERATURE RANGE	0°C to +60°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	0°C to +70°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	-10°C to +60°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	-20°C to +70°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	-30°C to +60°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	-30°C to +75°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	-30°C to +85°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
	-40°C to +85°C	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE	AVAILABLE
FREQUENCY STABILITY	Vs. AGING	± 1.0 ppm max. first year at +25°C					
	Vs. VOLTAGE CHANGE	± 0.3 ppm max. for a ±5% input voltage change					
	Vs. LOAD CHANGE	± 0.3 ppm max. for a ± 10% loading condition change					
	Vs. REFLOW	± 1 ppm max. 1 reflow and measured 24 hours afterwards					
Output Voltage Level(peak to peak)		0.8 V p-p (min.)					
Current Consumption (max)		1.5 mA (9.6 ~ 15 MHz) / 2.0 mA (15.01~26.0 MHz) / 2.5 mA (26.01~40.0 MHz)					
Mechanical Frequency Tuning		No mechanical trimmer built -in (for aqueous washing cycles).					
Start-Up Time.		2.0 m sec. (typ.) , 5.0 m sec. (max.) (reach 90% amplitude and at +25°C ± 2°C)					
Output Load		10 KΩ // 10 pF ± 10%					
Input Impedance		1 meg Ω (min.)					
Harmonics Distortion		- 7 dBc (max.)					
Output Format		DC block, AC coupled.					
SSB Phase Noise @25°C	Offset	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	
	3.0V-13.000MHZ	-80dBc/Hz	-105dBc/Hz	-135dBc/Hz	-148dBc/Hz	-148dB/Hz	
Green Requirement		RoHS Compliant, Pb Lead Free					
MSL Level		MSL 1 per IPC/JEDEC-STD-020C					
Humidity		85% RH, 85°C, 48 Hours *Crystal component only*					
Hermeticity		Leak rate 2x10 ⁻⁸ ATM-cm ³ /sec max. *Crystal component only*					
Solderability		MIL-STD-202F method 208E					
Vibration		MIL-STD-202F method 204, 35G, 50 to 2000Hz					
Shock		MIL-STD-202F method 213B, test conditions E, 1000GG 1/2sine wave					
Storage temperature range		-55 to +125°C					

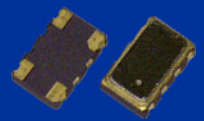
PART NUMBER GUIDE

Model	Supply Voltage(V _{DD})	Stability	Operating Temperature (°C)	Frequency
BT1657CS	2 = 2.8V	1 = ± 1 ppm	A = 0°C to 70°C	
	3 = 3.0V	15 = ± 1.5 ppm	B = -10°C to 60°C	
	5 = 5.0V	2 = ± 2.0 ppm	C = -20°C to 70°C	
		3 = ± 3.0 ppm	D = -30°C to 75°C	
		4 = ± 4.0 ppm	M = -40°C to 85°C	
		5 = ± 5.0 ppm	E = 0°C to +60°C	
			F = -30°C to +60°C	
		G = -30°C to +85°C		

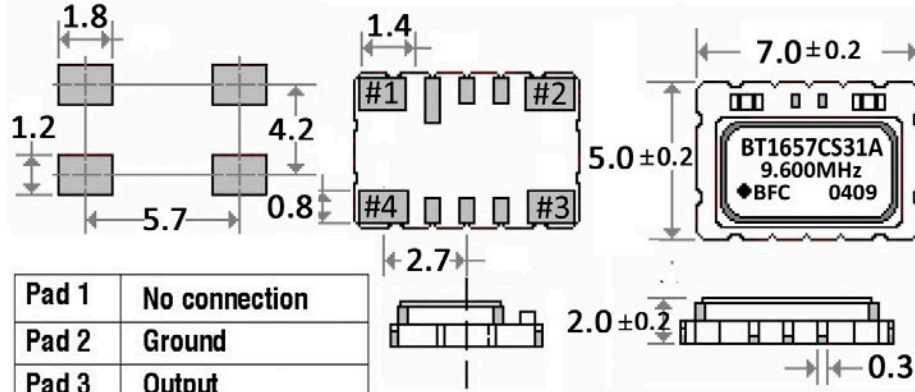


BT1657CS SERIES TCXO

BROOKDALE FREQUENCY CONTROLS, INC.



MECHANICAL DRAWING AND LAND PATTERN



Pad 1	No connection
Pad 2	Ground
Pad 3	Output
Pad 4	Supply voltage

All dimensions in mm

