

Description:

The T85B Temperature Compensated Voltage Controllable Crystal Oscillator (TCVCXO) Series products provide Stratum III level frequency stability with voltage controlled frequency adjust in a miniature 5 x 7 mm ceramic SMD package.



Features:

- Available in frequencies from 5 to 26 MHz with 10 MHz, 12.8 MHz, 25 MHz, and other frequencies as standards
- +/-4.6 ppm overall frequency stability including 20 years aging
- +/-5 ppm frequency pull range
- CMOS and Clipped Sine Wave available
- Standard 5 x 7 mm ceramic SMD package
- RoHS-6 / Lead-free compliant
- Tri-state control

Frequency Range, Operating Temperature, and Frequency Stability:

Frequency Range	Operating Temperature	Product Code	Frequency Stability	Stability (Overall)*	Product Code
5 to 26 MHz	-20 to +70° C	C	+/- 0.28 ppm	+/- 4.6 ppm	A
	-40 to +85° C	D	+/- 0.50 ppm	+/- 4.6 ppm	B
			+/- 1.00 ppm	+/-4.6 ppm	C

- Add +/- 1ppm setting calibration @ +25° C ; +/- 0.6 ppm for supply and load variation ; +/- 2.0 ppm for aging
- To achieve +/- 4.6 ppm overall stability or better
- For Frequency stabilities >= +/- 0.5 ppm with a clipped sinewave output the TV85B product should be selected
- +/- 0.28 ppm is not available from -40 to 85° C

Aging: (typical at 10MHz after 30 days continuous operation)

Frequency	Timeframe	Aging	Product Code
10 MHz	20 Years	+/- 2.5 ppm	N/A

Phase Noise:

Frequency	Offset	Phase Noise (Typ.)	Product Code
			N/A
10.0 MHz	1 Hz	- 60 dBc/Hz	N/A
	10 Hz	- 90 dBc/Hz	
	100 Hz	-120 dBc/Hz	
	1 KHz	-140 dBc/Hz	
	10 KHz	-155 dBc/Hz	
	100 KHz	-155 dBc/Hz	

Supply Voltage (Vs):

Power Supply (Vs)	+3.3 Vdc +/-10%	+5.0 Vdc +/-10%
Product Code	C	D

Current Consumption:

	CMOS	Clipped Sine Wave
Supply Current	6 mA	3.5 mA

Environmental:

Storage Temperature	-55 to +125° C
---------------------	----------------

Output Waveform:

	CMOS	Clipped Sine Wave	
HCMOS Output Levels (15pf load)	"0" < 0.1(Vs); "1" > 0.9(Vs)	Output Level	0.8 V p-p min.
Rise / Fall Time	<10ns (10% to 90%)		
Duty Cycle	45 to 55% @ 50% Logic 1		
Product Code	A	B	

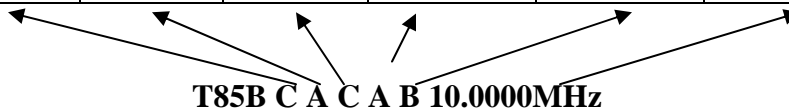
Pulling Range:

Tuning Range	None (TCXO)	+/- 5 ppm
Product Code	A	B

*Note: Only +/- 5 ppm minimum pull is available as a TCVCXO

Ordering Options:

Operating Temperature	Frequency Stability	Supply Voltage	Output Waveform	Pulling Range	Operating Frequency
C	A	C	A	A	xx.xxxxMHz
D	B	D	B	B	
	C				



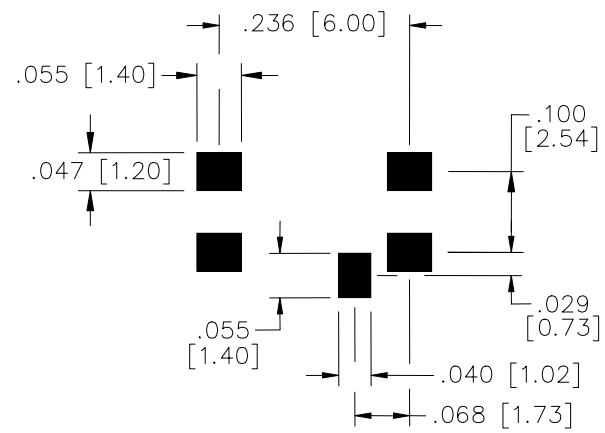
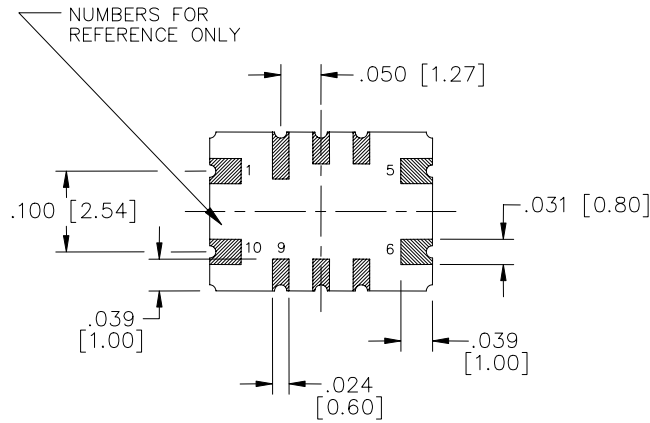
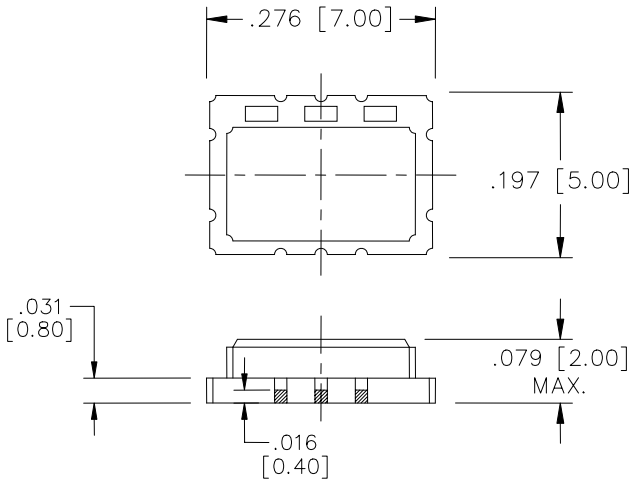
Product Selection Code (refer to the above example):

This part is RoHs compliant; -20 to +70° C, +/- 0.28 ppm, 3.3 volt CMOS output with +/- 5 ppm pull, 10MHz operating frequency

** Not all combinations are available in this product.

Outline Drawing & Pin Out:

REVISION				
LET.	DESCRIPTION	DATE	BY	CKD.
A	PACKAGE STYLE/FOOTPRINT CHANGE	9-25-06	JPG	PWR
B	ADDED PIN 9 & REVISED PCB FOOTPRINT	10-4-06	JPG	PWR
C	ADDED PIN CONNECT OPTIONS FOR INTERNET MKG.	12-8-06	JPG	
D	PIN #9 HAD OPTIONAL N.C.	6-15-07	JPG	GMC



RECOMMENDED PCB FOOTPRINT



ATTENTION
Static Sensitive
Devices
Handle only at
Static Safe Work
Stations

PIN CONNECTIONS

- 1. VOLTAGE CONTROL OR N.C.
- 5. GROUND
- 6. OUTPUT
- 9. TRISTATE CONTROL
- 10. + VDC

DO NOT SCALE PRINT. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
TOLERANCES: HOLES ±.002 ANGLES ± 1° INCHES .xxx ± .004 [x.xx ± 0.10] .xx ± .008 [x.x ± 0.20]

BLILEY TECHNOLOGIES INC.
2545 WEST GRANDVIEW BLVD.
ERIE, PENNSYLVANIA 16506

MATERIAL:	SHOP TYPE	
FINISH:	SUPERSEDES	
	DR.	CKD.
	JPG	WCL
	AP.	AP.
	PWR	

OUTLINE DRAWING T85B			
SIZE	FSCM NO.	DRAWING NO.	REV.LET.
A	71034	812034	D
SCALE:	5:1	DATE DRAWN	8-10-2006

PE20D-1

How to Order This Product:

Contact Bliley Technologies with Product Selection Code from Ordering Options Section above.

Attn:

Sales @ Bliley

Fax: **814-833-2712**

Phone: 814-838-3571

Email: info@bliley.com

Web: www.bliley.com

Date: _____

From:

Name: _____ Company: _____

Fax: _____ Phone: _____

Email: _____

Quantities to Quote: _____ Target Price: \$ _____

Application / Reference #: _____