

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
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
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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	

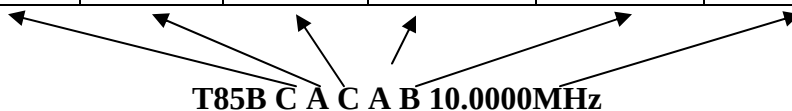
Pulling Range:

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):

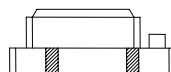
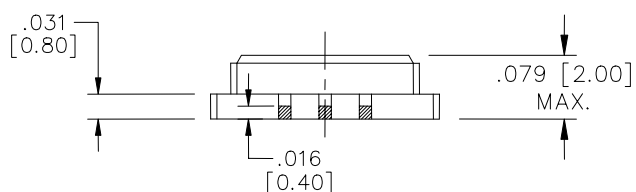
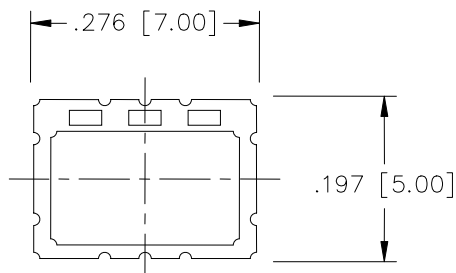
This part is RoHs compliant; -20 to +70° C, +/- 0.28 ppm, 3.3 volt CMOS output with +/- 5 ppm pull, 10MHz operating frequency

** Not all combinations are available in this product.

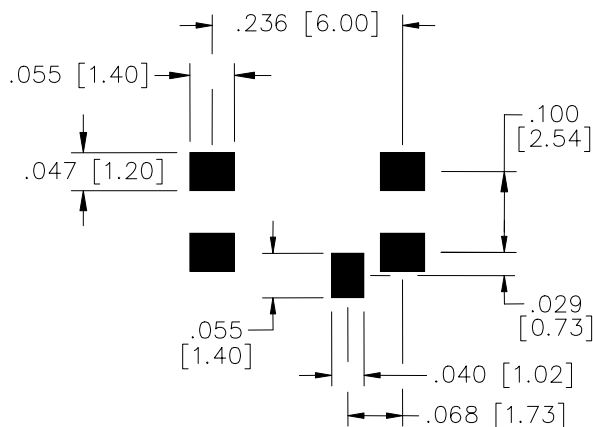
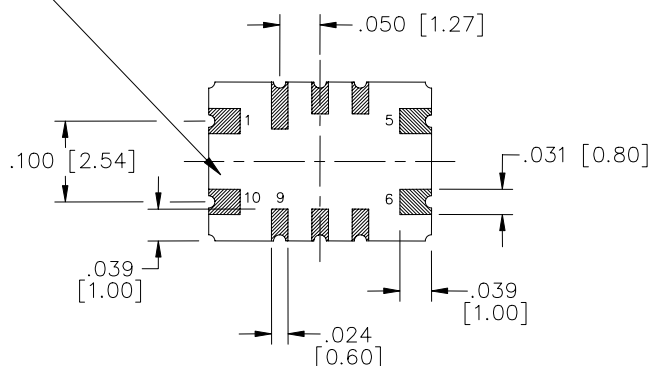
Outline Drawing & Pin Out:

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



NUMBERS FOR
REFERENCE ONLY



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 $\pm .002$ ANGLES $\pm 1^\circ$ INCHES $.xxx \pm .004$ [MILLIMETERS] $[x.xx \pm 0.10]$
 $.xx \pm .008$ $[x.x \pm 0.20]$

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

MATERIAL:

SHOP TYPE

SUPERSEDES

FINISH:

DR.

CKD.

JPG

WCL

AP.

AP.

PWR

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 #: _____