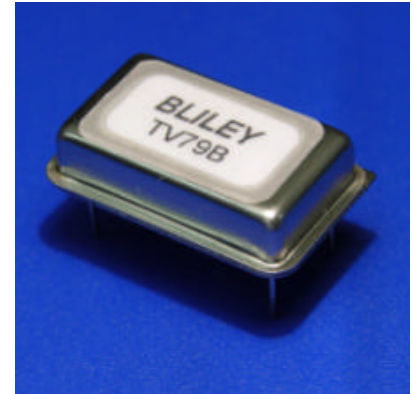


High Precision TCVCXO TV79B Series

Features:

- Available in Frequencies from 10 MHz to 40 MHz
- Excellent Frequency Stability Over Temperature
- Low Power Consumption
- HCMOS and Clipped Sine Wave Output
- 3.3 volts and 5V supply voltage is available.
- Phase Noise Options
- RoHS-6/Lead-free Compliant Standard
- Storage Temperature Range of -55°C to 125°C



Description:

The TV79B Temperature Compensated Voltage Controllable Crystal Oscillator (TCVCXO) Series products provide cost effective solutions with Stratum III level frequency stability and voltage controlled frequency adjust in an industry standard low profile DIP package.

Electrical Specifications

1. Output Characteristics

	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
1.1	Frequency Range	10		40	MHZ	
1.2	Initial Accuracy			±2	PPM	@25°C, 1hr after Reflow
1.3	Output Type					
	HCMOS	See Table 1 For Ordering Options				
	Level "0"			30	%	% of supply voltage
	Level "1"	70			%	% of supply voltage
	Rise/Fall Time			6	nSec	Rise/Fall time (10% to 90% level)
	Duty Cycle	45	50	55	%	
	Clipped Sine Wave	See Table 1 For Ordering Options				
	Output Level		.8		V P-P	

2. Frequency Stability

	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
2.1	Frequency vs. Temperature	Referenced to Frequency @+25°C See Table 1 For Ordering Options				
	-20°C to +70°C		±30		PPB	See Table 1 For Ordering Options
	-40°C to +85°C		±50		PPB	See Table 1 For Ordering Options
2.2	Aging	Typical for 10MHz after 30 days of continuous operation				
	1 st Year**			±1	PPM	Typical at 10MHz after 30 days of continuous operation
2.3	Frequency vs. Voltage			±50	PPB	5% supply voltage change
2.4	Allan Variance		1*10e-10			
2.5	Static Phase Noise	@10MHz		@40MHz		
	$\mathcal{L}(f)$ @100Hz		-120		-107	Tested @ +25°C±1°C Static Environment
	$\mathcal{L}(f)$ @1KHz		-140		-132	
	$\mathcal{L}(f)$ @10KHz		-150		-147	

Values listed above are typical performance of a (10.000) MHz Fo, unless otherwise specified

3. Input Characteristics

	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
3.1	Supply Voltage	3.3 ±5%, 5 ±5%			Vdc	See Table 1 for Ordering Options
3.2	Power Dissipation					
	3.3Vdc Supply			10	mA	
	5.0Vdc Supply			15	mA	
3.3	Electronic Frequency Control					
	3.3Vdc Supply Voltage					
	Voltage Range	0		+3.3	Vdc	
	Center Voltage		+1.65		Vdc	
	Frequency Range	±5			PPM	Consult Factory for Wide Pull Range

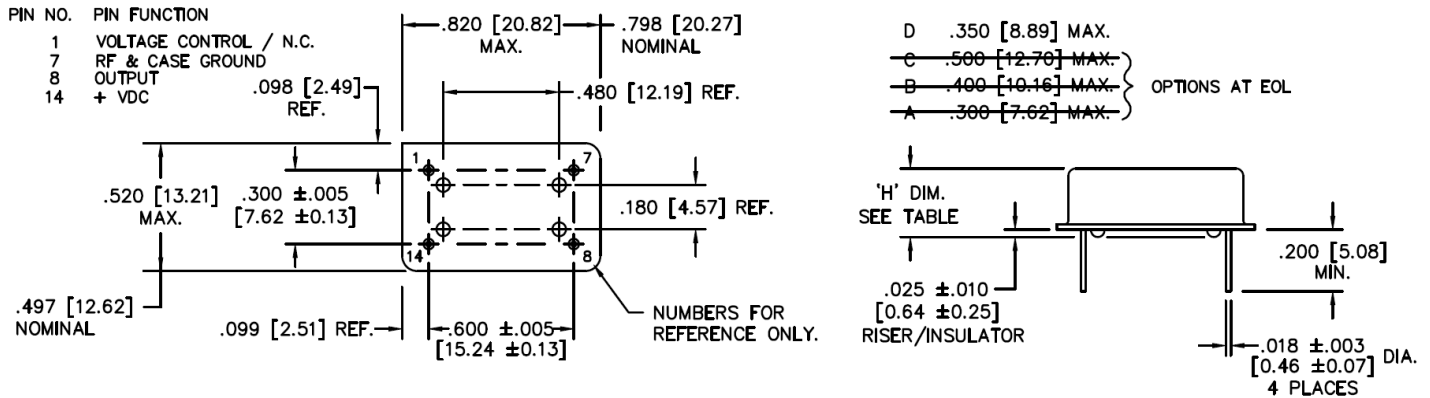
3. Input Characteristics (Continued)

	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
	5.0Vdc Supply Voltage					
	Voltage Range	0		5.0	Vdc	
	Center Voltage		2.5		Vdc	
	Frequency Range	±5			PPM	Consult Factory for Wide Pull Range
3.4	Slope		Positive			
3.5	Input Impedance	100K			Ω	
3.6	Linearity			10	%	

4. Environmental, Reliability and Mechanical Specifications

	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
4.1	Operational Temperature	-40		+85	°C	See Table 1 For Ordering Options
4.2	Storage Temperature	-40		+85	°C	

Figure2. Mechanical Dimensions and Pin Functions



High Precision TCVCXO TV79B Series

These oscillator specifications and options have superseded our past TV79B and TVG79B units. Our older units are currently still available, contact factory. See the table below for current standard configurations, and please contact factory for any custom requirements you may have.

Table1. Ordering Information

TV79B or TVG79B	Package Height	EFC Pull Range	Supply	Output	Stability Options	Temp Range	Frequency
	D .35 in	T None	D 3.3Vdc	A HCMOS	A ±30ppb	C (-20°C-+70°C)	10M To 40M
		B ±5ppm	C 5Vdc	B Clipped Sine-wave			
					B ±50ppb	D (-40°C-+85°C)	

