

# 7.0 mm x 5.0 mm XO

# C85E series

### Description:

The C85E Crystal Oscillator (XO) Series products provide a wide range of options in temperature stability, operating frequency range, and multiple supply voltages in a 7.0 x 5.0 mm ceramic package.



### Features:

- Available in frequencies from 1.0 MHz to 165 MHz.
- Tri-state Enable/Disable
- Hermetically sealed ceramic SMD package
- TTL/HCMOS compatible
- RoHS-6/Leadfree compliant

### Frequency Range, Operating Temperature, and Frequency Stability:

Frequency
1.000 to 165MHz

Operating Temperature	Product Code
-10 to +60C	<b>A</b>
0 to +70C	<b>B</b>
-20 to 70C	<b>C</b>
-40 to 85C	<b>D</b>

Freq. Stability	Product Code
+/- 25 ppm	<b>A</b>
+/- 50 ppm	<b>B</b>
+/- 75 ppm	<b>C</b>
+/-100ppm	<b>D</b>

\*\*\*Frequency stability includes 25C tolerance, drift over temperature, change versus voltage and load, 20 year aging, shock and vibration

### Aging: (typical at 20MHz after 30 days continuous operation)

Frequency	Timeframe	Aging	Product Code
20 MHz	1st Year	+/- 5.0ppm	<b>N/A</b>

### Supply Voltage (Vs):

Power Supply (Vs)	1.8 Vdc +/-10%	2.5 Vdc +/-10%	3.3 Vdc +/-10%
Product Code	<b>A</b>	<b>B</b>	<b>C</b>

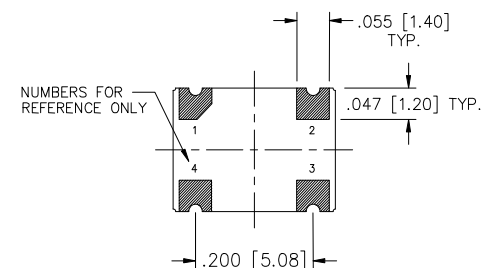
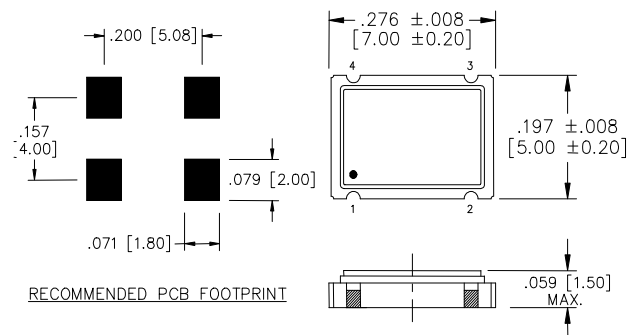
### Supply Voltage Sensitivity ( +/- 10% ) : +/- 2 ppm max. frequency change

### Current Consumption ( I<sub>DD</sub> ):

	I <sub>DD</sub> ( at 1.8 V )	I <sub>DD</sub> ( at 2.5V )	I <sub>DD</sub> ( at 3.3V )
Frequency Range ( MHz )	mA	mA	mA
1.000 to 23.999	10	12	15
24.000 to 49.999	12	15	20
50.000 to 69.999	15	20	30
70.000 to 132.999	25	30	45
133.000 to 165.000	35	40	55

### Environmental:

Storage Temperature	-55 to +125 °C
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**Output Waveform:**

		Min	Typical	Max
Output Symmetry	At 50% V <sub>DD</sub>	45%	50%	55%
Rise Time ( nS )	Tr	3	5	10
Fall Time ( nS )	Tf	3	5	10
Output Voltage	V <sub>OH</sub>	90% V <sub>DD</sub>		
Output Voltage	V <sub>OL</sub>			10% V <sub>DD</sub>
HCMOS load ( pF )		14.85	15.00	15.15

**Start-up Time: 5 mS max.**

**Tri-state function Pin 1:**

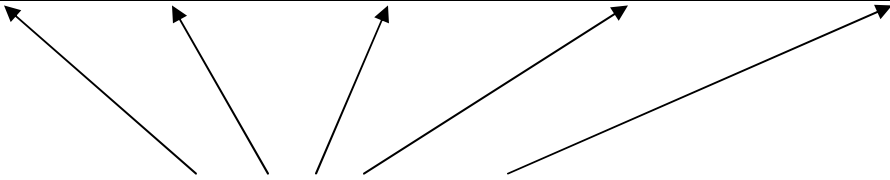
Pin 1 = logic high ( 0.7\*V<sub>supply</sub> ) or open ; Output active at Pin 3

Pin 1 = logic low ( 0.3\*V<sub>supply</sub> ) ; high impedance at pin 3 Output disabled

**Ordering Options:**

Product Family	Operating Temperature	Frequency Stability	Supply Voltage	Operating Frequency
C85E	A	A	A	XX.XXXX MHz
C85E	B	B	B	XX.XXXX MHz
C85E	C	C	C	XX.XXXX MHz
C85E	D	D		XX.XXXX MHz

**C85E C A B 10.0000MHz**  
**Part Number Build Example**



**RoHs compliant; -20 to 70C; +/- 25 ppm with a 2.5 volt supply, 10 MHz nominal operating frequency.**

**Note:**

**Consult Bliley sales for final package detail once electrical performance is defined.**

**\*Not all combinations of operating frequency and supply voltage are available.**