





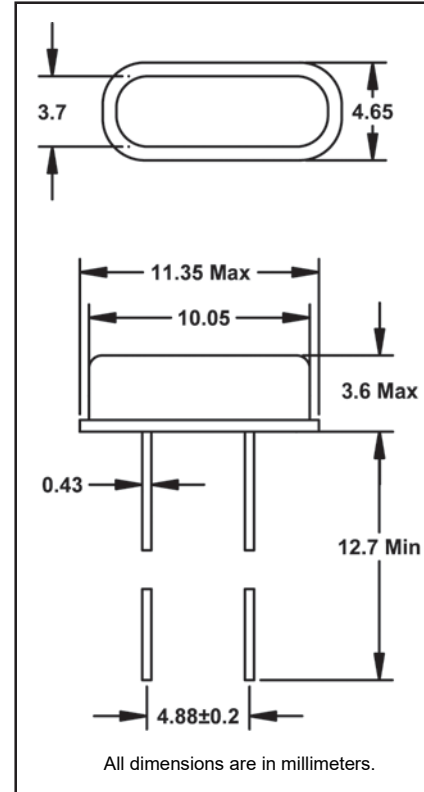
# Thru-Hole Crystal

**C4ST**  
(former HC49SLF)  
**DATASHEET**

- Tolerances down to  $\pm 10$  PPM
- Stabilities down to  $\pm 5$  PPM
- Operating Temperature Range to  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$

• C4ST STANDARD SPECIFICATIONS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range	3.200 ~ 80.000 MHz
Frequency Tolerance @ 25°C	(See options on page 2)
Frequency Stability, ref @ 25°C	(See options below)
Temperature Range	
Operating (TOPR)	(See options below)
Storage (TSTG)	$-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Shunt Capacitance (Co)	7pF
Load Capacitance (CL)	(See options on page 2)
Drive Level	0.5 mW (0.1 mW Typical)
Aging per year	$\pm 3$ PPM
Maximum Soldering Temp / Time	$260^{\circ}\text{C} / 10$ Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Sn/Ag3.0/Cu0.5
Seam Method	Resistance Weld
Lead (Pb) Free	Yes
RoHS/REACH Compliant	Yes

Frequency Range (MHz)	Operating Mode	Max ESR $\Omega$
3.200 ~ 3.500	Fundamental	300
3.500001 ~ 4.000	Fundamental	200
4.000001 ~ 5.000	Fundamental	150
5.000001 ~ 6.000	Fundamental	120
6.000001 ~ 7.000	Fundamental	100
7.000001 ~ 9.000	Fundamental	80
9.000001 ~ 13.000	Fundamental	60
13.000001 ~ 20.000	Fundamental	40
20.000001 ~ 40.000	Fundamental	30
24.000 ~ 70.000	3rd OT	100
70.000001 ~ 80.000	3rd OT	70



Note: Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, etc. may vary. All specifications subject to change without notice.

## • Available Operating Temperatures and Stabilities\*

Operating Temperature	$\pm 5$ PPM	$\pm 10$ PPM	$\pm 15$ PPM	$\pm 20$ PPM	$\pm 25$ PPM	$\pm 30$ PPM	$\pm 50$ PPM	$\pm 100$ PPM
$-10^{\circ}\text{C}$ to $+60^{\circ}\text{C}$	O	O	O	O	O	O	O	O
$-20^{\circ}\text{C}$ to $+70^{\circ}\text{C}$	$\Delta$	O	O	O	O	O	O	O
$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$	X	X	O	O	O	O	O	O
$-40^{\circ}\text{C}$ to $+105^{\circ}\text{C}$	X	X	X	X	X	$\Delta$	O	O
$-40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$	X	X	X	X	X	X	$\Delta$	O
$-55^{\circ}\text{C}$ to $+125^{\circ}\text{C}$	X	X	X	X	X	X	$\Delta$	O

Key: O=Available, X=Not Available,  $\Delta$ =Consult Fox Technical Support  
\*Does not imply a stocked part.

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	<b>Drawing Number:</b> C4ST-DOC-2		<b>Size:</b> A
	<b>Part Number:</b>		<b>Cage:</b> 61429
	<b>Draftsperson:</b> BEC	<b>Approved:</b> MAJ	<b>Revision Date:</b> 06/10/2019



# Thru-Hole Crystal

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**DATASHEET**

## Available Options & Part Identification for Thru-Hole Crystal C4ST<sup>1</sup> **F C4ST C B M F 16.0**

<b>F</b>	<b>C4ST</b>	<b>C</b>	<b>B</b>	<b>M</b>	<b>F</b>	<b>16.0</b>
<b>FOX</b>	<b>Model Number</b>	<b>Tolerance</b> B = ±50ppm <b>C = ±30ppm</b> D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm	<b>Stability</b> A = ±100ppm <b>B = ±50ppm</b> C = ±30ppm D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm L = ±5ppm	<b>Load Capacitance<sup>2</sup></b> A = Series E = 10pF G = 12pF K = 16pF L = 18pF <b>M = 20pF</b>	<b>Operating Temperature</b> D = -10 to +60°C <b>F = -20 to +70°C</b> M = -40 to +85°C P = -40 to +105°C I = -40 to +125°C T = -55 to +125°C	<b>Frequency (MHz)</b>

<sup>1</sup> Not all frequency, tolerance, stability, load, and operating temperature combinations may be available.

<sup>2</sup> Listed load capacitances represent the most commonly used. Other load capacitances are available. Contact Fox Technical Support for assistance



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For datasheet type definitions and a glossary of common terms, visit <http://www.foxonline.com/tgcrystals.html>.

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