



# Thru-Hole Crystal

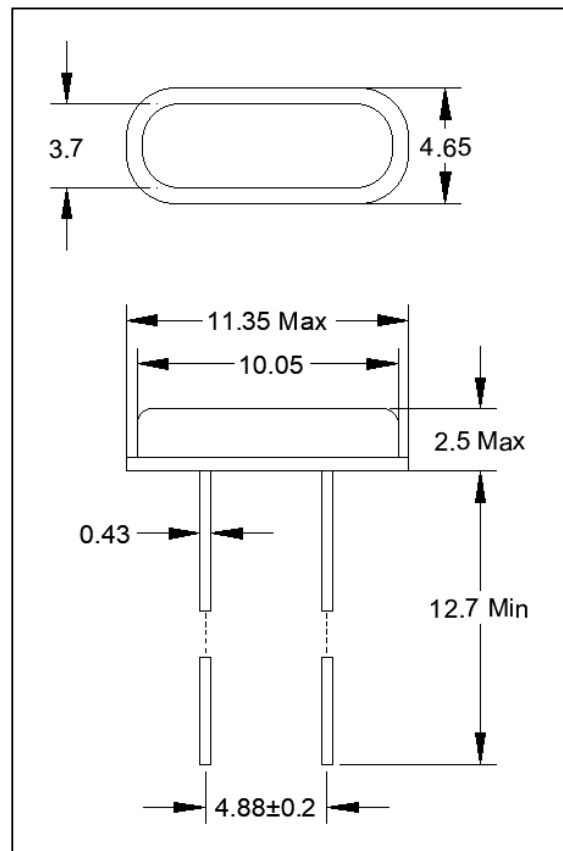
**C9ST**  
(former HC49SSLF)  
**DATASHEET**

- 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°C / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Sn/Ag3.0/Cu0.5
Seal Method	Resistance Weld
Lead (Pb) Free	Yes
RoHS/REACH Compliant	Yes

Frequency Range (MHz)	Operating Mode	Max ESR $\Omega$
4.000 ~ 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. All dimensions are in mm.

## • 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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Title / Description: C9ST STANDARD SPECIFICATIONS

Drawing Number: C9ST-DOC-1

Size: A

Part Number:

Cage: 61429

Draftsperson: BEC

Approved: MAJ

Revision Date: 06/10/2019



# Thru-Hole Crystal

**C9ST**  
(former HC49SSLF)  
**DATASHEET**

## Available Options & Part Identification for Thru-Hole Crystal C9ST<sup>1</sup> **F C9ST C B M F 16.0**

<b>F</b>	<b>C9ST</b>	<b>C</b>	<b>B</b>	<b>M</b>	<b>F</b>	<b>16.0</b>
<b><u>FOX</u></b>	<b><u>Model Number</u></b>	<b><u>Tolerance</u></b> B = ±50ppm <b>C = ±30ppm</b> D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm	<b><u>Stability</u></b> A = ±100ppm <b>B = ±50ppm</b> C = ±30ppm D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm L = ±5ppm	<b><u>Load Capacitance</u><sup>2</sup></b> A = Series E = 10pF G = 12pF K = 16pF L = 18pF <b>M = 20pF</b>	<b><u>Operating Temperature</u></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><u>Frequency (MHz)</u></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.  
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Corporate  
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