



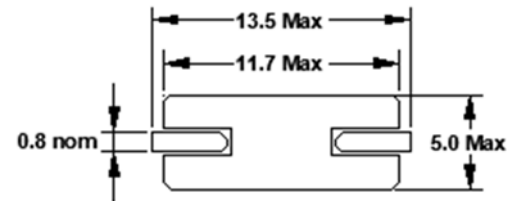
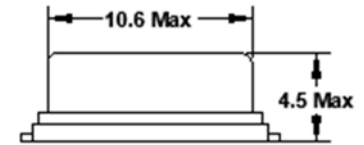
# Resistance Weld SMD Crystal C4SD

(former HC49SDF)

## DATASHEET

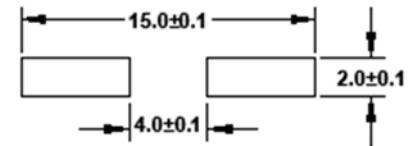
- Tolerances down to  $\pm 10$ ppm
- Stabilities down to  $\pm 5$ ppm
- Temperature Ranges as wide as  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$

• 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)	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
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 x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish:	Sn/Ag3/Cu0.5
Seal Method	Resistance Weld
Lead (Pb) Free	Yes
RoHS Compliant	Yes - No Exemptions



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

### Recommended Solder Pad Layout



Dimensions are in millimeters.

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.

### •Available Operating Temperatures and Stabilities\*

Stability 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 to $+60^{\circ}\text{C}$	O	O	O	O	O	O	O	O
-20 to $+70^{\circ}\text{C}$	$\Delta$	O	O	O	O	O	O	O
-40 to $+85^{\circ}\text{C}$	X	X	O	O	O	O	O	O
-40 to $+105^{\circ}\text{C}$	X	X	X	X	X	$\Delta$	O	O
-40 to $+125^{\circ}\text{C}$	X	X	X	X	X	X	$\Delta$	O
$-55$ 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

<p>© Copyright 2019 Fox Electronics. All rights reserved</p>	<b>Title / Description:</b> C4SD SERIES STANDARD SPECIFICATIONS	
	<b>Drawing Number:</b> C4SD-DOC-1	<b>Size:</b> A
	<b>Part Number:</b>	<b>Case:</b> 61429
	<b>Draftsperson:</b> MAJ	<b>Approved:</b> BEC
		<b>Revision Date:</b> 06/10/2019



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(former HC49SDF)

## DATASHEET



### Available Options & Part Identification for Crystal Model C4SD<sup>1</sup>

#### F C4SD C B M F 25.0

F	C4SD	C	B	M	F	25.0
<u>FOX</u>	<u>Model Number</u>	<u>Tolerance</u> B = ±50ppm <b>C = ±30ppm</b> D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm	<u>Stability</u> A = ±100ppm <b>B = ±50ppm</b> C = ±30ppm D = ±25ppm E = ±20ppm F = ±15ppm H = ±10ppm L = ±5ppm	<u>Load Capacitance<sup>2</sup></u> A = Series E = 10pF G = 12pF J = 15pF K = 16pF L = 18pF <b>M = 20pF</b>	<u>Operating Temperature</u> 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	<u>Frequency (MHz)</u>

<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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	<b>Part Number:</b>	<b>Cage:</b> 61429
	<b>Draftsperson:</b> MAJ	<b>Approved:</b> BEC
		<b>Revision Date:</b> 06/10/2019



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