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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Resistance Weld Thru-Hole Crystal

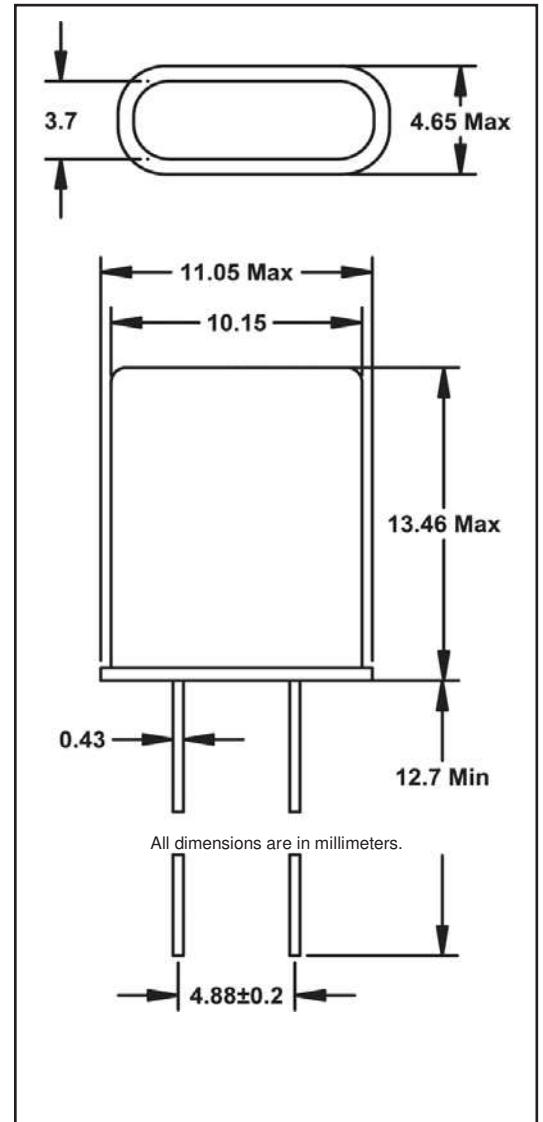
Product End of Life (EOL) See PCN539.pdf

**C4UT**  
(Former HC49ULF)  
**DATASHEET**

- Tolerances down to 10 PPM
- Stabilities down to 10 PPM
- Temperature Ranges as wide as -40°C to +85°C

## • C4UT STANDARD SPECIFICATIONS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range	3.579545 ~ 180.000 MHz
Frequency Tolerance @ 25°C	(See options on page 2)
Frequency Stability, ref @ 25°C Over Operating Temp Range	(See options below)
Temperature Range	
Operating (T <sub>OPR</sub> )	(See options below)
Storage (T <sub>STG</sub> )	-40°C ~ +85°C
Shunt Capacitance (C <sub>o</sub> )	7.0 pF
Load Capacitance (C <sub>L</sub> )	(See options on page 2)
Drive Level	1.0 mW
Aging per year	±5 PPM
Termination Finish	Sn/3.0Ag/0.5Cu
Seal Method	Resistance Weld
Lead (Pb) Free	Yes
RoHS Compliant	Yes



Frequency Range (MHz)	Operating Mode	Max ESR Ω
3.579545 ~ 3.700	Fundamental	120
>3.700 ~ 4.200	Fundamental	100
>4.200 ~ 4.900	Fundamental	70
>4.900 ~ 5.000	Fundamental	55
>5.000 ~ 6.000	Fundamental	50
>6.000 ~ 8.000	Fundamental	40
>8.000 ~ 10.000	Fundamental	35
>10.000 ~ 12.500	Fundamental	30
>12.500 ~ 16.000	Fundamental	25
>16.000 ~ 30.000	Fundamental	20
23.000 ~ 96.000	3rd OT	40
60.000 ~ 140.000	5th OT	80
110.000 ~ 180.000	7th OT	120

## • Available Operating Temperatures and Stabilities\*

Operating Temperature	±10 PPM	±15 PPM	±20 PPM	±25 PPM	±30 PPM	±50 PPM
-10°C to +60°C	O	O	O	O	O	O
-20°C to +70°C	O	O	O	O	O	O
-40°C to +85°C	X	O	O	O	O	O

Key: O=Available, X=Not Available  
\*Does not imply a stocked part.



<b>Title / Description:</b> C4UT STANDARD SPECIFICATIONS			
<b>Drawing Number:</b> 101159		<b>Size:</b> A	
<b>Part Number:</b>		<b>Cage:</b> 61429	
<b>Draftsperson:</b> CMR	<b>Approved:</b> BEC	<b>Revision Date:</b> 09/05/2017	



**Available Options & Part Identification for Thru-Hole Crystal C4UT\***  
**F C4UT C B M F 16.0**

<b>F</b>	<b>C4UT</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> <b>B=50ppm</b> C=30ppm D=25ppm E=20ppm F=15ppm H=10ppm	<b>Load Capacitance</b> A=Series E=10pF G=12pF U=13pF L=18pF <b>M=20pF</b> N=22pF Q=30pF R=32pF S=33pF	<b>Operating Temperature</b> D=-10 to +60C <b>F=-20 to +70C</b> M=-40 to +85C	<b>Frequency (MHz)</b>

\* Not all frequency, tolerance, stability, load, and operating temperature combinations may be available.

<b>• C4UT (former HC49ULF) Standard Crystals</b>					
<b>Part Number</b>	<b>Frequency</b>	<b>Tolerance</b>	<b>Stability</b>	<b>Temp Range</b>	<b>CL</b>
FOXLF036S	3.579545	± 30 ppm	± 50 ppm	-20 to +70 C	18pF
FOXLF0368S	3.686400	± 30 ppm	± 50 ppm	-20 to +70 C	Series
FOXLF0368-20	3.686400	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF040A	4.000000	± 30 ppm	± 50 ppm	-20 to +70 C	Series
FOXLF040	4.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF080-20	8.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF100-20	10.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF115	11.059200	± 30 ppm	± 50 ppm	-20 to +70 C	Series
FOXLF115-20	11.059200	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF120	12.000000	± 30 ppm	± 50 ppm	-20 to +70 C	Series
FOXLF120-20	12.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF160	16.000000	± 30 ppm	± 50 ppm	-20 to +70 C	Series
FOXLF160-20	16.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF200-20	20.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF
FOXLF250F-20	25.000000	± 30 ppm	± 50 ppm	-20 to +70 C	20pF

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# Resistance Weld Thru-Hole Crystal

# C4UT (Former HC49ULF) DATASHEET



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