

PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR116/U

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and [MIL-PRF-3098](#).

Pertinent characteristics: 50 MHz to 125 MHz; fifth mechanical overtone; noncontrolled; series resonance.

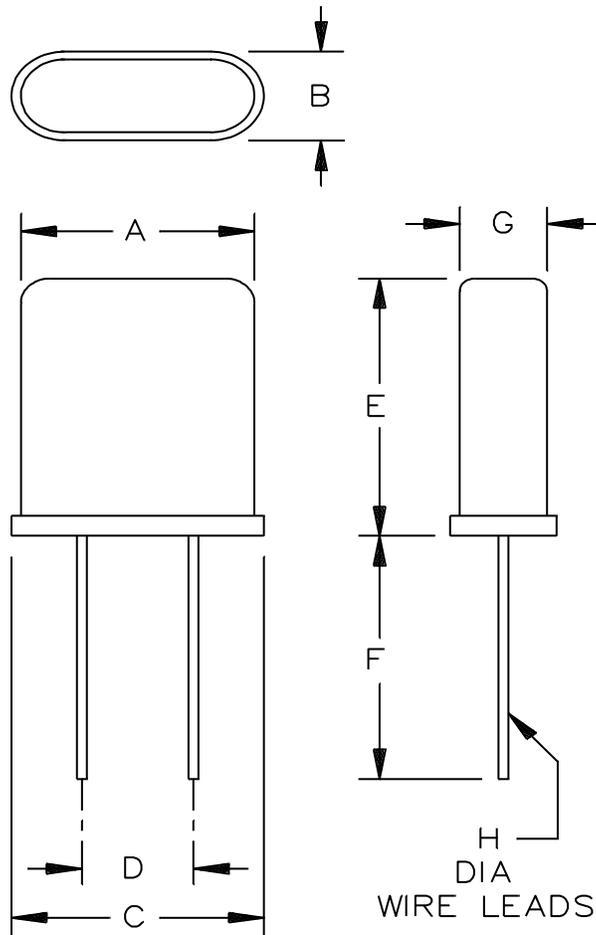


FIGURE 1. Crystal unit - CR116/U.

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Ltr	Inches		mm	
	Min	Max	Min	Max
A	---	.402	---	10.21
B	---	.183	---	4.65
C	---	.435	---	11.05
D	.184	.200	4.67	5.08
E	---	.530	---	13.46
F	.50	---	12.7	---
G	---	.150	---	3.81
H	.015	.019	0.38	0.48

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking to be in accordance with [MIL-PRF-3098](#).

FIGURE 1. Type CR116/U, crystal unit - Continued.

REQUIREMENTS:

Dimensions, marking, and configuration: See [figure 1](#).

Frequency range: 50 MHz to 125 MHz, inclusive.

Capacitance, shunt: 4.5 pF, maximum.

Mode of oscillation: Fifth mechanical overtone.

Rated drive level: 1.0 mW, maximum.

Resonance: Series.

Calibration values:

Resistance: 40 ohms.

Resistor voltage drop: 0.28 volt.

Operating temperature range (noncontrolled): -55°C to +105°C, inclusive.

Frequency tolerance:  $\pm 25$  ppm.

Equivalent resistance: 60 ohms, maximum.

Unwanted modes: The minimum unwanted mode effective resistance shall be at least three times that of the main mode, or 120 ohms, whichever is greater.

Shock:

Frequency change permitted:  $\pm 5$  ppm.

Equivalent resistance change permitted:  $\pm 10$  percent.

Vibration: [Method 204](#), [MIL-STD-202](#), test condition A.

Frequency change permitted:  $\pm 5$  ppm.

Equivalent resistance change permitted:  $\pm 10$  percent.

Thermal shock:

Frequency change permitted:  $\pm 5$  ppm.

Equivalent resistance change permitted:  $\pm 10$  percent.

Aging:

Frequency change permitted:  $\pm 5$  ppm.

Reference documents. In addition to [MIL-PRF-3098](#), this document references the following:

[MIL-STD-202](#)

| The margins of this specification sheet are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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Custodians:

Army - CR  
Navy - EC  
Air Force - 85  
DLA - CC

Preparing activity:

Army - CR

Agent:

DLA - CC

Review activities:

Air Force - 99

(Project 5955-2012-011)

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