

PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR113/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: 10 MHz to 61 MHz; third mechanical overtone; controlled; series resonance.

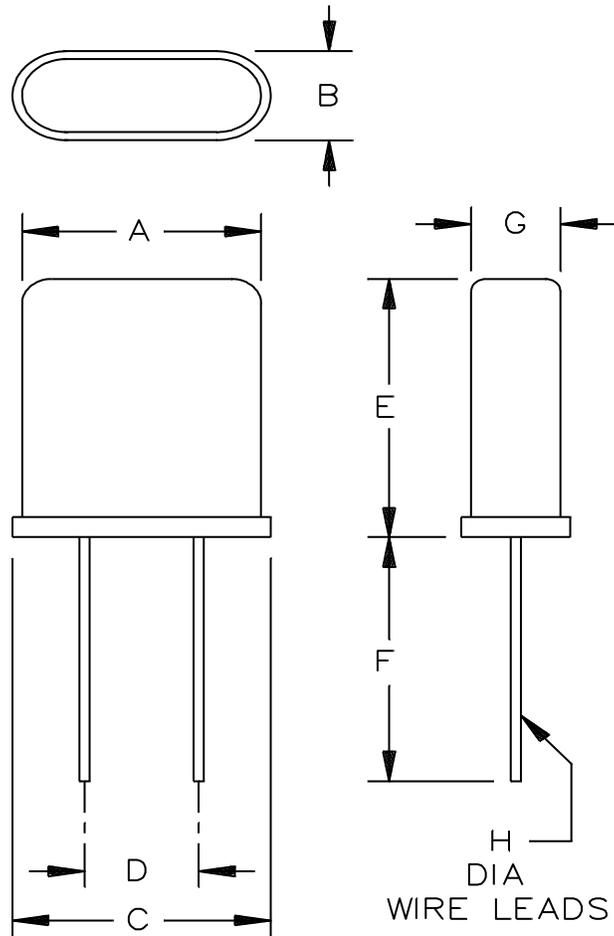


FIGURE 1. Crystal unit - CR113/U.

MIL-PRF-3098/89E

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 CR113/U, crystal unit - Continued.

REQUIREMENTS:

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

Frequency range: 10 MHz to 61 MHz, inclusive.

Frequency tolerances:

Operating temperature range: ± 10 ppm.

Room temperature: ± 70 ppm.

Frequency stability: ± 2.5 ppm.

Mode of oscillation: Third mechanical overtone.

Reference temperature: $+75^{\circ}\text{C} +1^{\circ}\text{C}$:

Temperature ranges:

Operating (controlled): $+70^{\circ}\text{C}$ to $+80^{\circ}\text{C}$, inclusive.

Operable: $+80^{\circ}\text{C}$ to $+90^{\circ}\text{C}$, inclusive.

Resonance: Series.

Rated Drive level: 1.0 mW, maximum.

Capacitance, shunt: 7 pF, maximum.

Equivalent resistance: 40 ohms, maximum.

Shock (specified pulse):

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Vibration: [Method 201](#), [MIL-STD-202](#).

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Aging:

Frequency change permitted: ± 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.

MIL-PRF-3098/89E

Custodians:

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

Preparing activity:

Army - CR

Agent:

DLA - CC

Review activities:

Air Force - 99

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