

INCH-POUND

MIL-PRF-3098/93C

7 August 2009

SUPERSEDING

MIL-PRF-3098/93B

17 May 2004

PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR117/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 sheet and [MIL-PRF-3098](#).

Pertinent characteristics: 30 MHz to 63 MHz; third mechanical overtone; noncontrolled; series resonance.

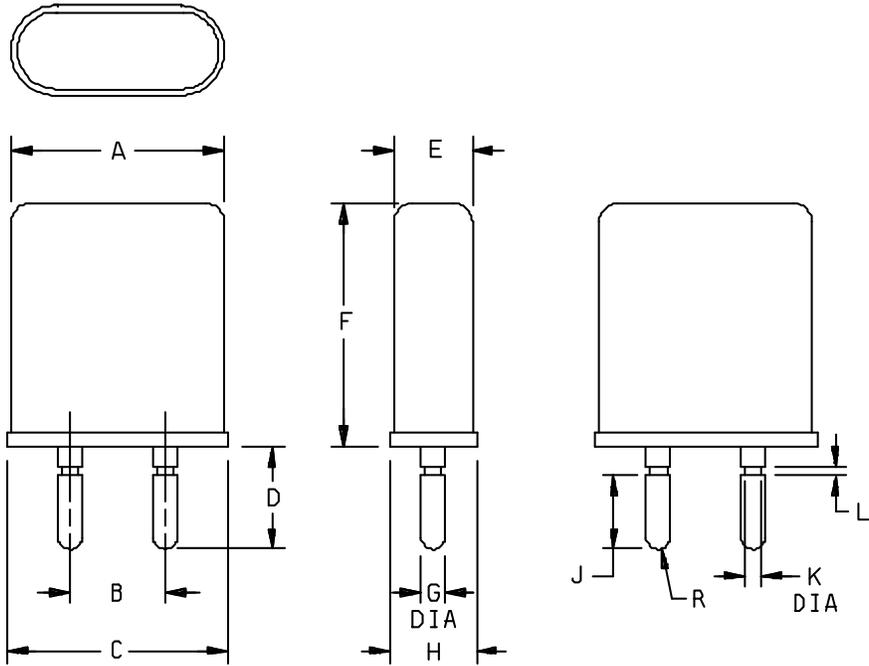


FIGURE 1 Crystal unit - CR117/U.

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Ltr	Inches		mm	
	Min	Max	Min	Max
A	---	.402	---	10.21
B	.184	.200	4.67	5.08
C	---	.435	---	11.05
D	.223	.248	5.66	6.30
E	---	.150	---	3.81
F	---	.530	---	13.46
G	.038	.042	0.96	1.07
H	---	.183	---	4.65
J	.165	.175	4.19	4.44
K	.027	.032	0.69	0.89
L	.015	.025	0.38	0.63

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 Crystal unit - CR117/U - Continued.

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REQUIREMENTS:

Dimensions, marking, and configuration: See figure 1.

Frequency range: 30 MHz to 63 MHz, inclusive.

Frequency tolerance:

Operating temperature range: ± 0.0015 percent of frequency measured at 25°C.

Reference temperature: ± 0.001 percent.

Mode of oscillation: Third mechanical overtone.

Operating temperature range (noncontrolled): -40°C to +65°C, inclusive.

Reference temperature: 25°C.

Operable temperature range: +65°C to +80°C, inclusive.

Frequency and equivalent resistance: [Method A, MIL-PRF-3098](#).

Resonance: Series.

Rated drive level: 1.0 mW, maximum.

Calibration values:

Resistance: 40 ohms.

Crystal current: 0.28 mA.

Capacitance, shunt: 7 pF, maximum.

Equivalent resistance: 40 ohms, maximum.

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

Frequency change permitted: ± 0.0005 percent.

Equivalent-resistance change permitted: ± 10 percent.

Vibration: [Method 204, MIL-STD-202](#), test condition A; .03 inch (0.76 mm) (.06 inch (15.24 mm) total excursion) 10 cps to 55 cps; amplitude to produce 5 gravity units, 55 cps to 500 cps.

Frequency change permitted: ± 0.0005 percent.

Equivalent-resistance change permitted: ± 10 percent.

Aging:

Frequency change permitted: ± 0.0005 percent.

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

[MIL-STD-202](#)

The margins of this specification 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:
Air Force - 99
DLA - CC

Preparing activity:
DLA - CC

(Project 5955-2009-034)

Review activities:
Air Force - 19, 84

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