

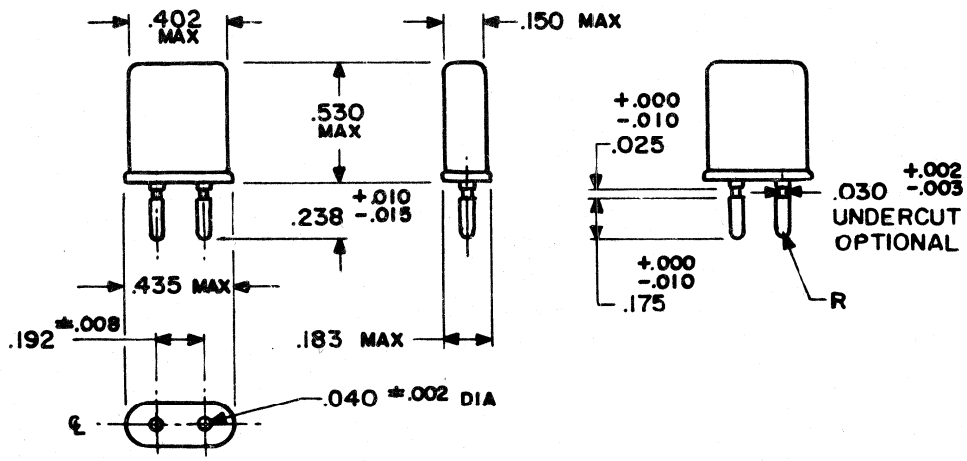
PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR98/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: 50 MHz to 134 MHz; fifth mechanical overtone; noncontrolled; series resonance.



Inches	mm	Inches	mm	Inches	mm	Inches	mm
.002	.05	.015	.38	.150	3.81	.238	6.05
.003	.08	.025	.64	.175	4.45	.402	10.21
.008	.20	.030	.76	.183	4.65	.435	11.05
.010	.25	.040	1.02	.192	4.88	.530	13.46

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 - CR98/U.

REQUIREMENTS

Dimensions, marking, and configuration: See figure 1.

Frequency range: 50 MHz to 134 MHz, inclusive.

Capacitance, shunt: 7 pF, maximum.

Mode of oscillation: Fifth mechanical overtone.

Rated drive level: 1.0 mW, maximum.

Calibration values:

Resistance: 60 ohms.

Voltage drop: 0.35 volt.

Resonance: Series.

Operating temperature range (noncontrolled): -30°C to +71°C, inclusive.

Frequency tolerance:  $\pm 15$  parts per million (ppm).

Equivalent resistance: 50 MHz to 90 MHz: 50 ohms, maximum.  
90+ MHz to 134 MHz: 60 ohms, maximum.

Shock:

Frequency change permitted:  $\pm 5$  ppm.

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

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

Frequency change permitted:  $\pm 5$  ppm.

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

Temperature cycling:

Frequency change permitted:  $\pm 5$  ppm.

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

Aging:

Frequency change permitted:  $\pm 5$  ppm.

Referenced 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.

Custodians:

Army - CR  
Navy - EC  
Air Force - 99  
DLA - CC

Preparing activity:

DLA - CC

(Project 5955-2009-006)

Review activities:

Air Force - 19, 84

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.