

INCH POUND

MIL-PRF-3098/41J

13 April 2010

SUPERSEDING

MIL-PRF-3098/41H

19 December 2003

PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR63/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: 200 kHz to 555 kHz; fundamental; noncontrolled; anti-resonance.

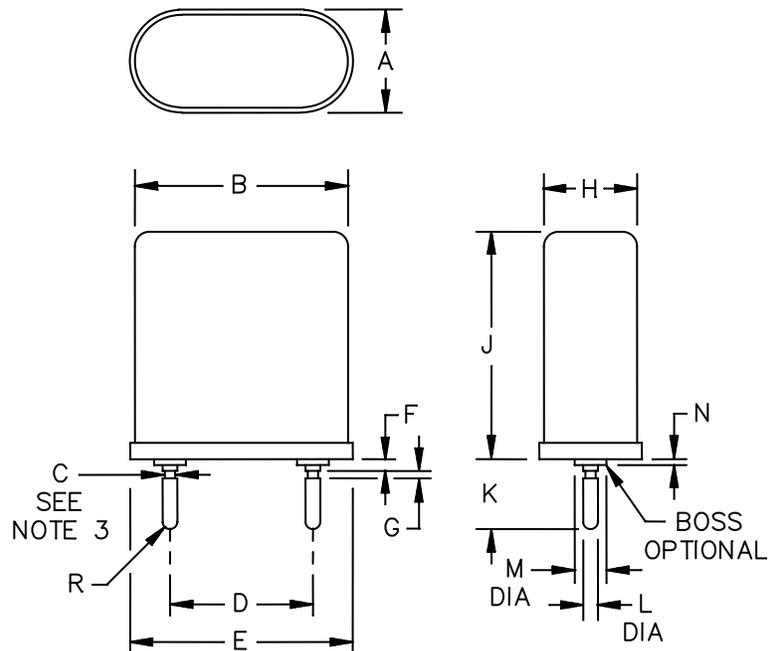


FIGURE 1. Crystal unit - CR63/U.

MIL-PRF-3098/41J

Ltr	Inches		mm	
	Min	Max	Min	Max
A	---	.352	---	8.94
B	---	.725	---	18.42
C	.030	.037	0.76	0.94
D	.478	.494	12.14	12.55
E	---	.757	---	19.23
F	.030	.040	0.76	1.02
G	.015	.025	0.38	0.64
H	---	.317	---	8.05
J	---	.775	---	19.69
K	.223	.248	5.66	6.30
L	.048	.052	1.22	1.32
M	.075	.141	1.91	3.58
N	.015	.025	0.38	0.64

NOTES:

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

FIGURE 1. Crystal unit - CR63/U - Continued.

MIL-PRF-3098/41J

REQUIREMENTS:

Dimensions, marking, and configuration: See figure 1.

Frequency range: 200 kHz to 555 kHz, inclusive.

Frequency tolerances:

Primary operating temperature range: ± 100 parts per million (ppm).

Second operating temperature range: ± 150 ppm.

Equivalent resistance: See table II.

Mode of oscillation: Fundamental.

Antiresonance, load capacitance: 20.0 pF ± 0.5 pF.

Operating temperature ranges (noncontrolled):

Primary: -40°C to $+70^{\circ}\text{C}$, inclusive.

Secondary -55°C to -40°C , inclusive and $+70^{\circ}\text{C}$ to $+90^{\circ}\text{C}$, inclusive.

Rated drive level: 1.0 mW, maximum.

Shock (specified pulse):

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 15 percent.

Vibration: [Method 204 of MIL-STD-202](#), test condition A, .060 inch total excursion, 10 Hz to 55 Hz; amplitude to produce 5 gravity units, 55 Hz to 500 Hz.

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 15 percent.

Thermal shock:

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 15 percent.

Bond strength: See table I.

MIL-PRF-3098/41J

TABLE I. Bond strength.

Frequency range, inclusive (kHz)	Grams, minimum
200 to 250	700
250+ to 320	500
320+ to 370	400
370+ to 435	300
435+ to 555	250

TABLE II. Equivalent resistance.

Frequency range, inclusive kHz	Maximum Resistance Ohms
200 to 225	5,300
225+ to 275	6,000
275+ to 325	6,500
325+ to 375	7,000
375+ to 425	7,500
425+ to 475	8,000
475+ to 500	8,500
500+ to 555	5,000

Part or Identifying Number (PIN): CR63/U (followed by specified frequency), see 1.2 of [MIL-PRF-3098](#).

Referenced 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.

MIL-PRF-3098/41J

Custodians:

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

Review activities:

Army - AR, MI
Navy - AS, MC, SH
Air Force -19, 84

Preparing activity:

Army - CR

Agent:

DLA - CC

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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 <https://assist.daps.dla.mil>.