

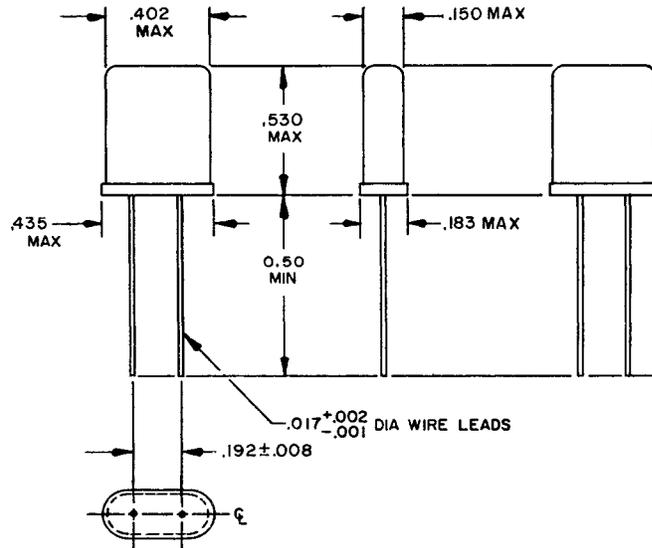
PERFORMANCE SPECIFICATION SHEET

CRYSTAL UNIT, QUARTZ, CR69/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: 2.9 MHz to 25 MHz; fundamental; noncontrolled; antiresonance.



| Inches | mm | Inches | mm |
|--------|------|--------|-------|
| .001 | .03 | .183 | 4.65 |
| .002 | .05 | .192 | 4.88 |
| .008 | .20 | .402 | 10.21 |
| .017 | .43 | .435 | 11.05 |
| .150 | 3.81 | .500 | 12.70 |
| | | .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 - CR69/U.

REQUIREMENTS:

Dimensions, marking, and configuration: See figure 1.

Frequency range: 2.9 MHz to 25 MHz, inclusive.

Capacitance, shunt: 7 pF, maximum.

Frequency tolerances:

Primary operating temperature range: ± 20 parts per million (ppm).

Secondary operating temperature range: ± 30 ppm.

Equivalent resistance: See table I.

Mode of oscillation: Fundamental.

Antiresonance, load capacitance: 30.0 pF ± 0.5 pF.

Operating temperature ranges (noncontrolled):

Primary: -40°C to $+90^{\circ}\text{C}$, inclusive.

Secondary: -55°C to -40°C , and $+90^{\circ}\text{C}$ to $+105^{\circ}\text{C}$, inclusive.

Rated drive level: 1.0 mW, maximum.

Shock:

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Vibration: Method 204, MIL-STD-202, test condition A.

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Thermal shock:

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Aging:

Frequency change permitted: ± 5 ppm.

TABLE I. Equivalent resistance.

| Frequency range, inclusive | Maximum resistance |
|-------------------------------|-----------------------|
| <u>MHz</u> | <u>Ohms</u> |
| 2.90 to 3.75 | 180 |
| 3.75+ to 4.75 | 120 |
| 4.75+ to 6.00 | 75 |
| 6.00+ to 7.00 | 50 |
| 7.00+ to 10.00 | 30 |
| 10.00+ to 25.00 | 25 |

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army - CR
 Navy - EC
 Air Force - 11
 DLA - CC

Preparing activity:

Army - CR

Agent:

DLA - CC

Review activities:

Army - AR, MI, SM
 Navy - AS, CG, MC, OS, SH
 Air Force - 19, 99

(Project 5955-0749-16)