

PERFORMANCE SPECIFICATION SHEET

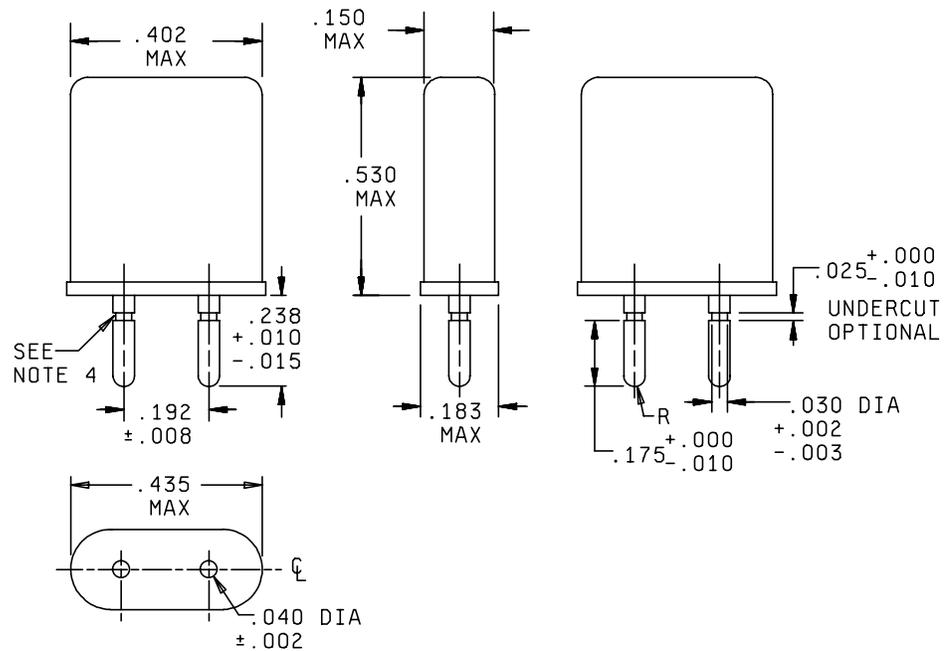
CRYSTAL UNIT, QUARTZ, CR153/U

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: 10.0 MHz to 30.0 MHz; fundamental; noncontrolled; antiresonance.

Inches	mm
.002	.05
.005	.13
.008	.20
.010	.25
.015	.38
.025	.64
.030	.76
.040	1.02
.150	3.81
.175	4.45
.183	4.65
.192	4.88
.238	6.05
.402	10.21
.435	11.05
.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.
4. The pin undercut may be omitted.

FIGURE 1. Crystal unit - CR153/U.

REQUIREMENTS:

Dimensions, marking, and configuration: See figure 1.

Frequency range: 10.0 MHz to 30.0 MHz, inclusive.

Frequency tolerance :

Operating temperature: ± 10 ppm.

Equivalent resistance: 10 ohms, maximum.

Mode of oscillation: Fundamental.

Temperature range:

Operable: 0°C to $+60^{\circ}\text{C}$, inclusive.

Operating: -55°C to $+105^{\circ}\text{C}$, inclusive.

Rated drive level: 1.0 mW, maximum.

Antiresonance load capacitance: $20.0\text{ pF} \pm 0.1\text{ pF}$.

$C_1 = 24\text{ pF} \pm 10$ percent.

C_0/C_1 ratio: 245 ± 20 percent.

Frequency stability $\frac{\Delta F}{F}$: ≤ 3 ppm over the temperature range 0°C to $+60^{\circ}\text{C}$, when measured at series resonance.

Shock (specified pulse): 1/

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.

Thermal shock:

Frequency change permitted: ± 5 ppm.

Equivalent resistance change permitted: ± 10 percent.

Aging:

Frequency change permitted: ± 5 ppm.

1/ Method 213, MIL-STD-202, test condition E, except duration shall be 11 milliseconds. Measurements before and after test. Frequency measured at $+40^{\circ}\text{C} \pm 1^{\circ}\text{C}$; and equivalent resonant resistance measured at $27^{\circ}\text{C} \pm 1^{\circ}\text{C}$.

MIL-PRF-3098/134D

VERIFICATION:

Qualification inspection: Not applicable for this specification.

Conformance inspection: Group A tests of MIL-PRF-3098 shall be applicable.

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 -85

Review activities:

Army - AR, MI, SM
Navy - AS, CG, MC, OS, SH
Air Force - 17, 19, 99

Preparing activity:

Army - CR

Agent:

DLA - CC

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