INCH-POUND
MIL-PRF-3098/41H
19 December 2003
SUPERSEDING
MIL-PRF-3098/41G
27 August 1997

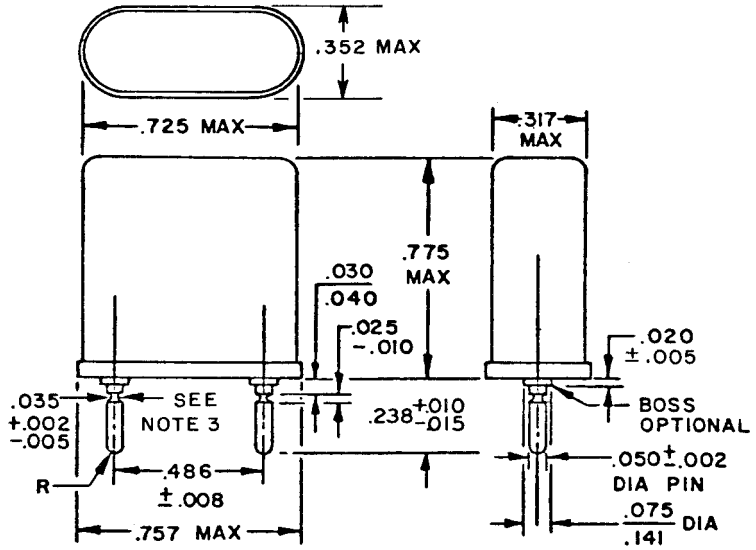
PERFORMANCE SPECIFICATION SHEET

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 and MIL-PRF-3098.

Pertinent characteristics: 200 kHz to 555 kHz; fundamental; noncontrolled; antiresonance.



Inches	mm	Inches	mm	Inches	mm	Inches	mm
.002	.05	.020	.51	.050	1.27	.352	8.94
.005	.13	.025	.64	.075	1.91	.486	12.34
.008	.20	.030	.76	.141	3.58	.725	18.42
.010	.25	.035	.89	.238	6.05	.757	19.23
.015	.38	.040	1.02	.317	8.05	.775	19.68

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.

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°C, inclusive.

Secondary -55°C to -40°C, inclusive and +70°C to +90°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, 0.060 inch total excursion, 10 Hz to 55 Hz; amplitute to produce 5 gravity units, 55 Hz to 500 Hz.

Frequency change permitted: ± 5ppm.

Equivalent resistance change permitted: ±15 percent.

Thermal shock:

Frequency change permitted: ±5 ppm.

Equivalent resistance change permitted: ±15 percent.

Bond strength: See table I.

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	Maximum Resistance
kHz	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

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

Review activities:
Army - AR, MI
Navy - AS, MC,SH
Air Force - 19, 99

Preparing activity:
Army - CR

Agent:
DLA - CC

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