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IN REPLY
REFER TO

DSCC-VAT

October 20, 2004

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Drafts of MIL-PRF-3098/55F, /56G, /57H, /58H, /59F, /60G, /61J, /62F, /67E, /68F, /72E, /76E, /77E and /78E; Project Numbers 5955-0784, -0785, -0786, -0787, -0788, -0789, -0791, -0792, -0793, -0794, -0795, -0796, -0797 and -0798

The initial drafts of these subject documents are now available for viewing and downloading from the DSCC-VA web site:

<http://www.dsccl.dla.mil/Programs/MilSpec/initialdrafts.asp>

These initial draft documents are being forwarded for your review and comment. These revisions contain non-controversial changes such as updating to the latest document format, and editorial changes. Highlighting has been used for easy change recognition.

Concurrence or comments are required at this Center no later than 45 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians or this office, as applicable, in sufficient time to allow for consolidating the department reply. All Navy review activities are requested to send their comments to this center in lieu of the Navy - EC custodian.

Please forward your comments or concurrence electronically to the project engineer listed below. This can be in the form of a return e-mail, with or without an attached text file. If an electronic response is not possible, we will accept comments via letter, facsimile, or phone call but only after you have contacted the project officer. Any further coordination concerning this document will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

The point of contact for this document is Mr. Fred W. Lester, DSCC-VAT. The preferred method of contact is via e-mail: fred.lester@dla.mil. Mr. Lester can also be reached at 614-692-0548/DSN 850-0548, or by facsimile 614-692-6939/DSN 850-6939.

/SIGNED/

KENDALL A. COTTONGIM
Chief
Electronic Components Team



NOTE: This draft, dated 20 October, 2004 prepared by DLA-CC, as agent for Army - CR, has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project 5955-0785)

INCH-POUND
MIL-PRF-3098/56G
DRAFT
SUPERSEDING
MIL-PRF-3098/56F
27 August 1997

PERFORMANCE SPECIFICATION SHEET

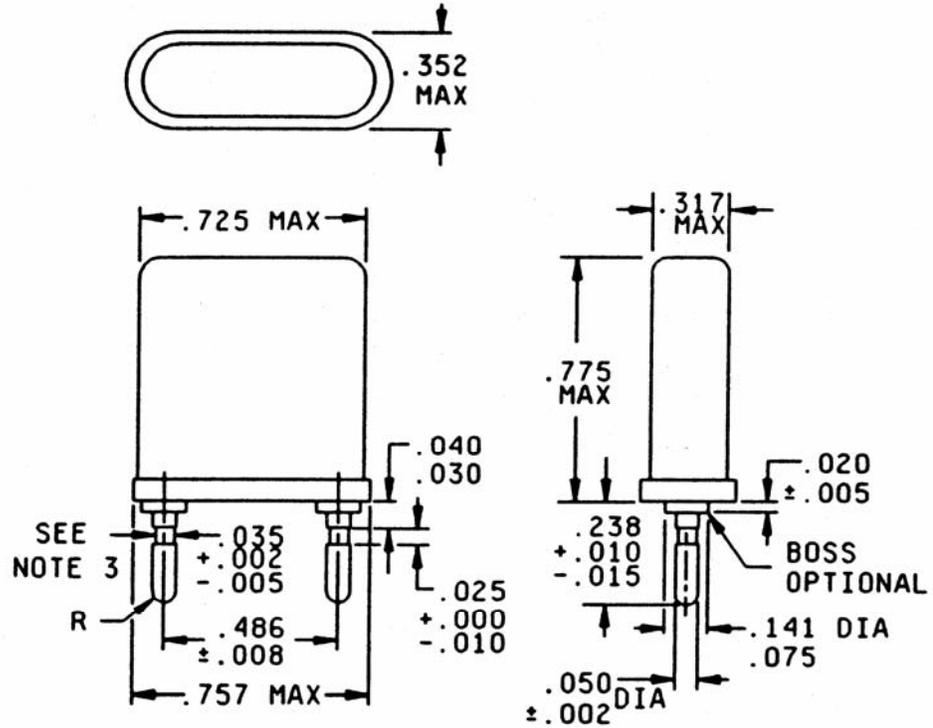
CRYSTAL UNIT, QUARTZ, CR85/U

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: 0.8 MHz to 20 MHz; fundamental; noncontrolled; series resonance.

Inches	mm
.002	.05
.005	.13
.008	.20
.010	.25
.015	.38
.020	.51
.025	.64
.030	.76
.035	.89
.040	1.02
.050	1.27
.075	1.91
.141	3.58
.238	6.05
.317	8.05
.352	8.94
.486	12.34
.725	18.42
.757	19.23
.775	19.69



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. The pin undercut may be omitted.
4. Marking shall be in accordance with MIL-C-3098.

FIGURE 1. Crystal unit - CR85/U.

REQUIREMENTS:

Dimensions, marking, and configuration: See figure 1.

Frequency range: 0.8 MHz to 20 MHz, inclusive.

Capacitance, shunt: 7.0 pF, maximum.

Frequency tolerance:

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

Secondary operating temperature range: ± 30 ppm.

Equivalent resistance: See table I.

TABLE I. Equivalent resistance.

Frequency range, inclusive	Maximum resistance
<u>MHz</u>	<u>Ohms</u>
0.80 to 0.85	520
0.85+ to 0.90	480
0.90+ to 1.00	440
1.00+ to 1.12	400
1.12+ to 1.25	380
1.25+ to 1.37	340
1.37+ to 1.50	300
1.50+ to 1.62	280
1.62+ to 1.75	250
1.75+ to 1.87	220
1.87+ to 2.00	190
2.00+ to 2.12	170
2.12+ to 2.25	150
2.25+ to 2.60	130
2.60+ to 3.00	90
3.00+ to 3.40	70
3.40+ to 3.75	52
3.75+ to 4.00	45
4.00+ to 5.00	37
5.00+ to 7.00	25
7.00+ to 10.00	20
10.00+ to 15.00	18
15.00+ to 20.00	15

Mode of oscillation: Fundamental.

Operating temperature range:

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

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

MIL-PRF-3098/56G

Drive level: 1.0 mW maximum.
 Resonance: Series.

Capacitance, shunt: 7.0 pF maximum.

Shock (specified pulse):	<u>0.8 MHz to 2.0 MHz</u>	<u>2.0+ MHz to 20.0 MHz</u>
Frequency change permitted:	±10 ppm	±5 ppm
Equivalent resistance change permitted:	±15 percent.	±10 percent
Vibration: Method 201 of MIL-STD-202.	<u>0.8 MHz to 2.0 MHz</u>	<u>2.0+ MHz to 20.0 MHz</u>
Frequency change permitted:	±10 ppm	±5 ppm
Equivalent resistance change permitted:	±15 percent.	±10 percent
Thermal shock:	<u>0.8 MHz to 2.0 MHz</u>	<u>2.0 MHz to 20.0 MHz</u>
Frequency change permitted:	±10 ppm.	±5 ppm
Equivalent resistance change permitted:	±15 percent.	±10 percent
Aging:		
Frequency change permitted:	±5 ppm.	

* Reference documents. In addition to MIL-PRF-3098, this document references the following:

MIL-STD-202

* The margins of this specification sheet are marked with asterisks 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 - 11
 DLA - CC

Preparing activity:
 Army - CR

Agent:
 DLA - CC

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

(Project 5955-0785)

* 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 www.dodssp.daps.mil.