REQUIREMENTS:

1. GENERAL:
   A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
   B. THESE CAPACITORS SHALL CONFORM TO THE REQUIREMENTS OF MIL-C-26655/2B FOR STYLE CS-13, WITH THE EXCEPTIONS AND ADDITIONS SPECIFIED IN THIS DRAWING.
   C. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS IN ND 1015404, CLASS 2. PERIODIC INSPECTIONS MAY BE SATISFACTORY BY THE SUBMISSION AND ACCEPTANCE OF CERTIFIED TEST DATA FOR PURCHASED PRODUCTION LOTS.
   D. CAPACITORS SHALL BE PACKAGED IN ACCORDANCE WITH SUPPLIERS NORMAL COMMERCIAL PRACTICE PER LEVEL C AS DEFINED IN MIL-C-26655.

2. INSPECTION AND ACCEPTANCE:
   A. MECHANICAL DIMENSIONS AND TOLERANCES PER DRAWING.
   B. LEAD MATERIAL SHALL BE NICKEL IN ACCORDANCE WITH PD 1015400.
   D. ALL PARTS SHALL BE SERIALIZED.

3. DESIGN REQUIREMENTS:
   A. UNITS SHALL BE CAPABLE OF MEETING THE REQUIREMENTS OF MIL-C-26655. FOR CONSTRUCTION AND ENVIRONMENT.
   B. OPERATING TEMPERATURE RANGE: -55°C TO +85°C AT FULL RATED VOLTAGE.
   C. full voltage: 100% OF RATED VOLTAGE.
   D. STABILITY AT HIGH AND LOW TEMPERATURE: CAPACITANCE SHALL CHANGE FROM 25°C VALUE BY NO MORE THAN +15% AT -55°C AND BY NO MORE THAN -15% AT +85°C.
   E. LEAD BEND AND PULL TEST (DESTRUCTIVE):
      (1) LEADS SHALL WITHSTAND A 4 POUND AXIAL PULL MINIMUM WITHOUT IMPAIRMENT OF PERFORMANCE.
      (2) LEADS SHALL WITHSTAND THE BEND TEST AS SPECIFIED IN MIL-C-26655 EXCEPT THE WEIGHT SHALL BE 2 POUNDS.

4. SPECIAL CONDITIONING BY SUPPLIER: (100%)
   A. ALL UNITS SHALL BE X-RATED PER MIL-STD-202 Method 209, PERPENDICULAR TO THE MAJOR AXIS OF THE CAPACITOR.
   B. X-RAYS SHALL BE INSPECTED FOR LOOSE SOLID PARTICLES, UNDETECTED ANODE ANCHORAGE, OR POOR ALIGNMENT.
   C. BURN-IN: (2) EACH UNIT SHALL BE CONNECTED IN SERIES WITH A ONE AMP FUSE. UNITS SHALL BE TESTED AT RATED VOLTAGE AT +85°C FOR A PERIOD OF 24 HOURS. ALL UNITS WHICH HAVE A BLOW FUSE OR WHICH ARE OUTSIDE OF ALLOWABLE VOLTAGE LIMITS FOR 24 HOURS, SHALL BE CONSIDERED NON-CONFORMING.

5. VENDOR SUPPLIED DOCUMENTATION:
   A. CERTIFICATE OF COMPLIANCE WITH MIL-C-26655.
   B. BEFORE-AND-AFTER BURN-IN READINGS FOR CAPACITANCE, DISSIPATION FACTOR, AND LEAKAGE CURRENT WHEN TESTED AT 25°C ON COMPLETION OF BURN-IN SHALL BE SUBMITTED.
   C. EQUIVALENT SERIES RESISTANCE AT 25°C:
      UNITS SPECIFIED IN TABLE III SHALL BE SCREENED FOR MAXIMUM ESR BY PLACING UNITS IN TEST CIRCUIT AND CALCULATING ESR BY THE FORMULA:

\[
ESR = \sqrt{\frac{Z - (1 + \alpha)}{R_1}}
\]

WHERE

\[
Z = AC VOLTAGE APPLIED (RMS)
\]
\[
\alpha = \frac{R_2}{R_1}
\]
\[
R_1 = VALUE FROM TABLE I
\]

6. PARTS WHICH HAVE FAILED NEED NOT BE FORWARDED.
   A. PARTS THAT HAVE FAILED TO MEET THE REQUIREMENTS OF THIS DRAWING OR PURCHASE ORDER Shall BE SHIPPED TO MANNED SPACECRAFT CENTER HOUSTON, TEXAS.
   B. X-RAY NEGATIVES OF SHIPPED PARTS.
   C. TEST DATA TO SUBSTANTIATE REQUIRED FAILURE RATE.
   D. CERTIFICATE OF COMPLIANCE SHOULD CONTAIN THE FOLLOWING INFORMATION:
      (1) PURCHASE ORDER NUMBER
      (2) NASA PART NUMBER
      (3) QUANTITY AND DATE OF SHIPMENT
      (4) ANY REFERENCED SPECIFICATION REQUIRED TO BE CERTIFIED BY THIS DRAWING OR PURCHASE ORDER.

![Diagram](attachment:image.png)
NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY FOR ANY OBLIGATION WHATSOEVER, AND THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IMPLYING ANY MANNER OF LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

TABLE I

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<th>UF</th>
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TABLE II

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<th>Case Size</th>
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<th>Uninsulated Case Dimensions</th>
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TABLE III

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TABLE IV

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<tr>
<th>Case Size</th>
<th>Nominal Lead Size</th>
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<tbody>
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<td>C</td>
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</tbody>
</table>

**S-** = CASE SIZE — SEE TABLE II

TEST CIRCUIT

Ea OON CPS

Gv

C1

R1

CAPACITOR, FIXED, ELECTROLYTIC, SOLID TANTALUM

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CAPACITOR, FIXED, ELECTROLYTIC, SOLID TANTALUM

SPECIFICATION CONTROL DRAWING

RELACES REV D WITH CHANGES

REPLACES REV D WITH CHANGES

REPLACES REV E WITH CHANGES

REPLACES REV D WITH CHANGES

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