REQUIREMENTS:

1. GENERAL:
   A. INTERPRET DRAWING IN ACCORDANCE WITH THE STANDARDS PRESCRIBED BY MIL-S-7037.
   B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN NA 1015404, CLASS 2.
   C. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH NA 1002215, CLASS 1, CODE 1.
   (1) MARKING OF SHIPPING CONTAINERS SHALL CONFORM TO THE MARKING OF UNIT AND INTERMEDIATE PACKAGES AND THE METHODS OF MARKING AS SPECIFIED IN NA 1002215.

2. ACCEPTANCE AND INSPECTION:
   A. MECHANICAL PROPERTIES:
      (1) SURFACE QUALITY: CORE, INSIDE DIAMETER SHALL HAVE A SURFACE ROUGHNESS AS DELINERATED, AND THE PART SHALL HAVE NO SHARP EDGES OR BURRS.
      (2) SEALING COAT: A SUITABLE UNIFORM, HOMOGENEOUS, CONTAMINANT-FREE COATING SHALL BE APPLIED TO EFFECT A SEAL. BONDING TO THE FOLLOWING TEST "+001 ONLY SHALL BE SEATED AND TESTED"
         (a) SUBMERGE THE CORES TO A DEPTH OF TWO INCHES MAXIMUM IN A TWO-HALF AND TWO-EIGHTH GLYCEROL Mixture.
         (b) APPLY A VACUUM, SUCH THAT A MERCURY COLUMN AT SEA LEVEL WILL DROP 25 INCHES, FOR 2 MINUTES MINIMUM.
         (c) REJECT ANY UNIT THAT EXHIBITS BUBBLES.
         (d) PERFORM A COMPLETE ELECTRICAL TEST ON UNITS AFTER THOROUGHLY WASHING IN RUNNING WATER AND ALLOWING TO DRY.
   (3) ANY LOT WITH A GREATER THAN FIVE (5) PERCENT REJECTION BECAUSE OF THIS TEST SHALL BE RETURNED TO THE VENDOR.
   B. ELECTRICAL CHARACTERISTICS (MEASURED AT ROOM TEMPERATURE PER TEST METHOD BELOW, VALUES OF TABLE II ON 11, AND AS DEFINED IN FIGURES 1, 2, 3, 4, ETC., SET PULSE SHOULD BE OF (0.94) AMPERE IN AMPLITUDE AND 2 MICROSECONDS IN DURATION, UNLESS OTHERWISE SPECIFIED, 100% INSPECTION IS REQUIRED UNLESS OTHERWISE SPECIFIED.
      (1) TIME TO PEAK (Tt): MEASURED FROM START OF THE GAP TO PEAK OF THE OUTPUT VOLTAGE. START OF THE GAP CAN BE FOUND BY EXTENDING THE GAP BACK TO THE ZERO CROSSING OF THE ZERO CURRENT AXIS.
      (2) SWITCHING TIME (Ts): MEASURED AT 10% OF Nominal Vt OUTPUT
      (3) PEAK ONE OUTPUT (V1): MEASURED FROM ZERO TO THE PEAK OF THE OUTPUT WAVEFORM.
      (4) PEAK STOP OUTPUT (V2-V1): MEASURED INSTANTANEOUSLY BETWEEN INDUCTED J16 VOLTAGE (V2-V1)
      (5) DELTA V1 (dV1): CHANGE IN PEAK ONE OUTPUT WHEN SET PULSE AMPLITUDE IS CHANGED FROM 0.9 AMPERE TO 0.33 AMPERE
      (6) DELTA Tp (dTp): CHANGE IN TIME TO PEAK WHEN SET PULSE AMPLITUDE IS CHANGED FROM 0.9 AMPLITUDE TO 0.33 AMPERE
      (7) A TEN (-10) PERCENT SAMPLE OF THE LOT SHOULD BE INSPECTED TO THE REQUIREMENTS OF PARAGRAPHS 2.8.5 AND 2.8.6 IN THE EVENT ANY FAILURE IS DETECTED THE ENTIRE LOT SHOULD BE INSPECTED.
   C. VENDOR SUPPLIED DATA: EACH SHIPMENT OF CORES SHALL BE ACCOMPANIED BY THE FOLLOWING:
      (1) CERTIFICATE OF COMPLIANCE WITH MATERIAL AND CONSTRUCTION REQUIREMENTS.
      (2) CERTIFICATE OF COMPLIANCE WITH NA 1015404, CLASS 2.
      (3) CERTIFICATE OF COMPLIANCE WITH NA 1015404, CLASS 2.
      (4) EACH SHIPMENT OF CORES SHALL CONTAIN TEN (10) CORES WHICH HAVE BEEN TESTED WITH THE NUMERICAL ELECTRICAL VALUES. THESE SAME CORES SHALL THEN BE TESTED BY THE PRODUCING ACTIVITY NOTING THEIR NUMERICAL RESULTS. THE TAGS SHOULD THEN BE RETURNED TO THE VENDOR WITHIN TEN (10) DAYS FROM RECEIPT OF SHIPMENT.

PROCEDURE ONLY FROM APPROVED SOURCES LISTED IN NA 1002203 FOR THIS DRAWING.

3. DESIGN:
   A. OPERATING TEMPERATURE RANGE: -35°C TO +85°C.
   B. CONSTRUCTION AND MATERIAL: PARTS SHALL BE A PERMALLOY TYPE RIBBON MATERIAL WOUND ON A BOBBIN, SLEEVED WITH AN INSULATING MATERIAL AND COATED EXTERNALLY WITH AN INSULATING COMPOUND TO EFFECT A HERMETIC SEAL.
      (1) BOBBIN: NON-MAGNETIC UNREACTED CORROSION-RESISTING STEEL.
      (2) CORE: 1/8 IN NORMAL THICKNESS NO-FERRO RIBBON (OR EQUIVALENT). CONSTRUCTION OF UNIT TO BE FOLLOWS.
      (3) SLEEVE (JACKET): .011 THICK PHENOLIC SLEEVE (OR EQUIVALENT).
      (4) CORE-DO ONLY SHALL HAVE AN AIR SPACE OF 0.008 MINIMUM FROM THE TOP LAYER OF TAPE TO THE BOBBIN EDGE. COMPLIANCE SHALL BE VERIFIED.

C. TEST METHO:
   (1) EQUIPMENT:
      TEXTRONIC 150-340 SERIES OSCILLOSCOPE WITH TEXTRONIC TIME-MARK GENERATOR OR EQUIVALENT.
      A TEST UNIT CAPABLE OF SUPPLYING A SET CURRENT PULSE SIMULATING AMPLITUDE DURATION PER TEST METHOD CALLED OUT ABOVE. THIS PULSE TO BE FOLLOWED BY AN ESSENTIALLY LINEAR CURRENT RAMP WHOSE SLOPE MAY BE MEASURED.

   (2) CALIBRATION AND MEASUREMENT PROCEDURE:
      EQUIPMENT SHALL BE CONNECTED TO A WELL-REGULATED SUPPLY LINE AND ALLOWED TO STABILIZE FOR ONE HOUR PRIOR TO MEASUREMENT.
      CALIBRATE SCOPE SWEEP WITH TIME-MARK GENERATOR.
      USING THE CORE ANALYZER PULSE-IN, CALIBRATE THE VERTICAL SCOPE AMPLIFIER WITH A KNOWN VOLTAGE 2V: THE INTERNAL CALIBRATION MAY BE USED IF ITS ACCURACY HAS BEEN VERIFIED.
      ADJUST THE SET PULSE SO THAT AMPLITUDE AND DURATION ARE 0.94 TO 0.1 MICROSECONDS RESPECTIVELY.
      ADJUST RAMP TO APPROXIMATELY 200, 400, OR 1000 MILLIAMPERES/MICROSECOND.
      USING ONE OF THE STANDARD CORES, ADJUST THE RAMP SLOPE FOR EITHER 200, 400, OR 1000 MAV/MICROSECOND AS APPROPRIATE TO YIELD THE Tp, Tc, AND V1 VALUES SUPPLIED WITH THE STANDARD.
      NOTE: WHEN CALIBRATING OR MEASURING FOR 1000 MAV/MICROSECOND RAMP, DISCONNECT "SET" PULSE AND USE THE INTEGRATING CIRCUIT OF FIGURE 2.
      MEASURE ELECTRICAL PARAMETERS FOR CORES UNDER TEST, IN ACCORDANCE WITH TABLES I AND II, FOR EITHER 200, 400, OR 1000 MAV/MICROSECOND.
      REPEAT THE CALIBRATION PROCEDURE AT LEAST EVERY HALF HOUR WHILE TESTING.
FIG 2. INTERGRATING CIRCUIT

FIG 3. TYPICAL OUTPUT VOLTAGS AFTER INTEGRATION

TABLE I
26. MAXWELL CORE
FUNCTIONAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>AMP</th>
<th>Tp USEC</th>
<th>Ts USEC</th>
<th>Vt MV</th>
<th>Vn MV</th>
<th>At Vt</th>
<th>At Ts</th>
</tr>
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<tbody>
<tr>
<td>200 MA</td>
<td>2.375 MIN</td>
<td>1.5 MIN</td>
<td>215 MIN</td>
<td>240</td>
<td>10 MV</td>
<td>.0000 USEC</td>
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<tr>
<td>400 MA</td>
<td>1.4 MIN</td>
<td>1.3 MIN</td>
<td>325 MV</td>
<td>360</td>
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<td>800 MA</td>
<td>1.6 MAX</td>
<td>1.6 MAX</td>
<td>450 MAX</td>
<td>430 MAX</td>
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<td>—</td>
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<tr>
<td>1000 MA</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>15 MAX</td>
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TABLE II
11. MEDDUX CORE
FUNCTIONAL CHARACTERISTICS

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<tr>
<th>AMP</th>
<th>Tp USEC</th>
<th>Ts USEC</th>
<th>Vt MV</th>
<th>Vn MV</th>
<th>At Vt</th>
<th>At Ts</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 MA</td>
<td>2.0 MIN</td>
<td>1.5 MIN</td>
<td>105 MIN</td>
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<td>—</td>
<td>—</td>
</tr>
<tr>
<td>400 MA</td>
<td>1.26 MIN</td>
<td>1.0 MIN</td>
<td>145 MIN</td>
<td>150</td>
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</tr>
<tr>
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<td>190 MAX</td>
<td>190 MAX</td>
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<td>—</td>
</tr>
<tr>
<td>1000 MA</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>9 MAX</td>
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