1. GENERAL:
   A. INTERPRET DRAWING IN ACCORDANCE WITH THE STANDARDS PRESCRIBED BY MIL-D-70327.
   B. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS CONTAINED IN MIL-STD-105D, CLASS 2.
   C. PREPARATION FOR DELIVERY SHALL BE IN ACCORDANCE WITH MIL-STD-415, 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 MIL-STD-415.

2. ACCEPTANCE AND INSPECTION:
   A. MECHANICAL PROPERTIES:
      (1) SURFACE QUALITY: CORE INSIDE DIAMETER SHALL HAVE A SURFACE ROUGHNESS AS DELINEATED AND THE PART SHALL HAVE NO SHARP EDGES OR NURBS. MAX. DIA. OVER ISOLATED SURFACE IMPERFECTIONS ON-CON CORE 0.252.
      (2) SEALING COAT: A SUITABLE UNIFORM, HOMOGENEOUS, CONTAMINANT-FREE COATING SHALL BE APPLIED TO EFFECT A SEAL CAPABLE OF WITHSTANDING THE FOLLOWING TESTS (000) ONLY SHALL BE SEALLED AND TESTED.
         (a) SUMMERSE THE CORES TO A DEPTH OF TWO INCHES MAXIMUM IN A HALF AND HALF GLYCERIN-ETHYLENE GLYCOL 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 GREATER THAN FIVE (5) PERCENT REJECTION LEVEL OF THIS TEST SHALL BE RETURNED TO THE VENDOR AND SHALL NOT BE RESUBMITTED.
   B. ELECTRICAL CHARACTERISTICS (MEASURED AT ROOM TEMPERATURE FOR TEST METHOD BELOW, VALUES OF TABLE I OR II, AND AS DEFINED IN FIGURES 3 & 4): SET PULSE SHOUL NOT BE 0.940.1 AMPERE IN AMPLITUDE AND 0.1 MICROSECOND IN DURATION UNLESS OTHERWISE SPECIFIED. SET PULSE INSPECTION IS REQUIRED UNLESS OTHERWISE SPECIFIED.
      (1) TIME TO PEAK (Tp) - MEASURED FROM THE RAMP TO PEAK OF THE OUTPUT VOLTAGE. START OF THE RAMP MAY BE EXTENDED RAMP BACK TO CROSSING OF THE ZERO CURRENT AXIS.
      (2) SWITCHING TIME (Ts) - MEASURED AT 108 OF NOMINAL Vy OUTPUT.
      (3) PEAK “ZERO” OUTPUT (Vp) - MEASURED FROM ZERO TO THE PEAK OF THE OUTPUT WAVEFORM.
      (4) DELTA Tp (Dtp): CHANGE IN TIME TO PEAK WHEN SET PULSE AMPLITUDE IS CHANGED FROM 0.9 TO 0.1 AMPERE.
      (5) DELTA Ts (Dts): CHANGE IN TIME TO PEAK WHEN SET PULSE AMPLITUDE IS CHANGED FROM 0.9 TO 0.1 AMPERE.
      (6) A TEST UNIT CAPABLE OF SUPPLYING “SET CURRENT” PULSE SUFFICIENT IN AMPLITUDE & DURATION TO PERFORM ALL TESTS CALLED OUT ABOVE, THIS PULSE TO BE FOLLOWED BY AN ESSENTIALLY LINEAR CURRENT RAMP WHERE SOPE MAY BE MEASURED.
      (7) AT LEAST 5 STANDARD CORES TOGETHER WITH CALIBRATION DATA FOR EACH, SUPPLIED BY THE PROCURING AGENCY, TO BE USED FOR INSTRUMENT CALIBRATION

3. DESIGN:
   A. OPERATING TEMPERATURE RANGE: -75°C TO +85°C.
   B. CONSTRUCTION AND MATERIAL: PARTS SHALL BE A PARALLEL TYPE RIBBON MATERIAL MOUNTED ON A BOBBIN, SLEEVED WITH AN INSULATING MATERIAL AND COATED EXTERNALLY WITH AN INSULATING COMPOUND TO EFFECT A MAGNETIC SEAL.
      (1) BOBBIN: NON-MAGNETIC ANNEALED CORROSION RESISTING STEEL.
      (2) CORE: 1/8 MIL NOMINAL THICKNESS NO-PERM RIBBON (OR EQUIVALENT).
      (3) SLEEVE (JACKET): .011 THICK PHENOLIC SLEEVE (OR EQUIVALENT).
      (4) CORE -OUT ONLY MADE AN AIR SPACE OF 0.008 INCH FROM THE TOP LAYER OF TAPE TO THE BOBBIN EDGE, COMPULSORY SMALL.
      (5) DELTA Tp (Dtp): CHANGE IN TIME TO PEAK WHEN SET PULSE AMPLITUDE IS CHANGED FROM 0.9 TO 0.1 AMPERE.
      (6) RAMP, DISCONNECT “SET” PULSE AND USE INTEGRATING CIRCUIT.

C. TEST METHOD:
   (1) EQUIPMENT:
      TEXTRONIX 550-340 SERIES OSCILLOSCOPE WITH TEXTRONIX TIME-MARK GENERATOR OR EQUIVALENT.
      A TEST UNIT CAPABLE OF SUPPLYING A SET CURRENT PULSE SUFFICIENT IN AMPLITUDE & DURATION TO PERFORM ALL TESTS CALLED OUT ABOVE, THIS PULSE TO BE FOLLOWED BY AN ESSENTIALLY LINEAR CURRENT RAMP WHERE SOPE MAY BE MEASURED.
      AT LEAST 5 STANDARD CORES TOGETHER WITH CALIBRATION DATA FOR EACH, SUPPLIED BY THE PROCURING AGENCY, TO BE USED FOR INSTRUMENT CALIBRATION
      CALIBRATE SCOPE SLEW WITH TIME-MARK GENERATOR.
      USING THE CORE ANALYZER PLUS-1, CALIBRATE THE VERTICAL SCOPE AMPLIFIER WITH A SINGAL VOLTAGE +1 V. THE INTERNAL CALIBRATION SCOPE CALIBRATOR MAY BE USED IF ITS ACCURACY HAS BEEN VERIFIED.
      ADJUST THE “SET” PULSE SO THAT AMPLITUDE AND DURATION ARE 0.940.1 AMPERE FOR 0.1 MICROSECOND 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 MA/USEC AS APPROPRIATE TO YIELD THE Tp, Ts, AND Vp VALUES SUPPLIED WITH THE STANDARD.
      NOTE: WHEN CALIBRATING OR MEASURING FOR 1000 MA/USEC RAMP, DISCONNECT “SET” PULSE AND USE THE INTEGRATING CIRCUIT OF FIGURE 2.

   (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 SLEW WITH TIME-MARK GENERATOR.
      USING THE CORE ANALYZER PLUS-1, CALIBRATE THE VERTICAL SCOPE AMPLIFIER WITH A SINGAL VOLTAGE +1 V. THE INTERNAL CALIBRATION SCOPES CALIBRATOR MAY REQUIRE IF ITS ACCURACY HAS BEEN VERIFIED.
      ADJUST THE “SET” PULSE SO THAT AMPLITUDE AND DURATION ARE 0.940.1 AMPERE FOR 0.1 MICROSECOND 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 MA/USEC AS APPROPRIATE TO YIELD THE Tp, Ts, AND Vp VALUES SUPPLIED WITH THE STANDARD.
      NOTE: WHEN CALIBRATING OR MEASURING FOR 1000 MA/USEC 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 MA/USEC.
      REPEAT THE CALIBRATION PROCEDURE AT LEAST EVERY HALF HOUR WHILE TESTING.
**TABLE I**

### 76 MAXWELL CORE

### FUNCTIONAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>RAMP</th>
<th>USEC</th>
<th>Tp</th>
<th>Tp</th>
<th>V1</th>
<th>NM</th>
<th>V2</th>
<th>NM</th>
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<th>NM</th>
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<td>240</td>
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<td>MV</td>
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<td>MV</td>
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<td>325 MIN</td>
<td>340</td>
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<tr>
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<td>MV</td>
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| 1000 MA | | | | | | | | | | | |

**TABLE II**

### 76 MAXWELL CORE

### FUNCTIONAL CHARACTERISTICS

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<thead>
<tr>
<th>RAMP</th>
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<th>Tp</th>
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<th>NM</th>
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| 1000 MA | | | | | | | | | | | |

**TABLE III**

### DASH NUMBER DIM DIM DIM CHARACTERISTICS REMARKS

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<th>DASH</th>
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<th>DIM C MAX</th>
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