3. DESIGN:
A. OPERATING TEMPERATURE RANGE: -70°C TO +90°C.
B. CONSTRUCTION AND MATERIAL: PARTS SHALL BE A PERMANENT TYPE RIBBON MATERIAL MOUNTED ON A BOBBIN, SLEEVED WITH AN INSULATING MATERIAL AND COATED EXTERNALLY WITH AN INSULATING COMPOUND TO AFFECT A HERMETIC SEAL.
   (1) BOBBIN: NON-MAGNETIC AND CORROSION-RESISTANT STEEL.
   (2) CORE: 1/8 IN. NORMAL THICKNESS NO-TERM RIBBON (OR EQUIVALENT).
   (3) SLEEVE (JACKET): .015 THICK NYLON SLEEVE (OR EQUIVALENT).
   (4) CORE-001 ONLY SHALL HAVE AN AIR SPACE OF .0001 INCH FROM THE TOP LAYER OF TAPE TO THE BOBBIN EDGE. COMPLIANCE SHALL BE VERIFIED.

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 BURRS. MAX. DIA. OVER ISOLATED SURFACE IMPERFECTIONS ON 0.001 CORE.
   (2) SEALING COAT: A SUITABLE UNIFORM, HOMOGENOUS, CONTAMINANT-FREE COATING SHALL BE APPLIED TO EFFECT A SEAL CAPABLE OF WITHSTANDING THE FOLLOWING TEST (.001 ONLY SHALL BE SEALED AND TESTED)
      a. SUBMERGE THE CORES TO A DEPTH OF TWO INCHES MAXIMUM IN A HALF AND HALF GLYCERINE-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.
   (3) ELECTRICAL CHARACTERISTICS (MEASURED AT ROOM TEMPERATURE): VALUE OF TABLE 1 OR 11, AND AS DEFINED IN FIGURES 1, 2, 3, 4, AND 5.
   (4) SURFACE QUALITY: CORE INSIDE DIAMETER SHALL HAVE A SURFACE ROUGHNESS AS DELINEATED AND THE PART SHALL HAVE NO SHARP EDGES OR BURRS. MAX. DIA. OVER ISOLATED SURFACE IMPERFECTIONS ON 0.001 CORE.
   (5) ELECTRICAL CHARACTERISTICS (MEASURED AT ROOM TEMPERATURE): VALUE OF TABLE 1 OR 11, AND AS DEFINED IN FIGURES 3, 4, AND 5.
   (6) TIME TO PEAK (T_p): MEASURED FROM START OF THE RAMP TO PEAK OF THE OUTPUT VOLTAGE. START OF THE RAMP CAN BE FOUND BY EXTENDING THE RAMP BACK TO ZERO OF THE "ZERO CURRENT" AXIS.
   (7) SWITCHING TIME (T_s): MEASURED AT 0.1 AMP OF VOLTAGE.
   (8) PEAK "ZERO" OUTPUT (V_o): MEASURED BETWEEN ZERO TO PEAK OF THE OUTPUT WAVEFORM.
   (9) PEAK CURRENT OUTPUT (I_p) - MEASURED INSTANTANEOUSLY BETWEEN ZERO VOLTAGE (V_o) AND PEAK CURRENT (I_p).
   (10) DELTA V (dV/ dt): CHANGE IN PEAK "ZERO" OUTPUT WHEN SET CURRENT AMPLITUDE IS CHANGED FROM 0.9 AMP TO 0.33 AMP.
   (11) DELTA I (dI/ dt): CHANGE IN TIME TO PEAK WHEN SET CURRENT AMPLITUDE IS CHANGED FROM 0.9 AMP TO 0.33 AMP.
   (12) A TEN (10) PERCENT SAMPLE OF THE LOT SHALL BE INSPECTED TO THE REQUIREMENTS OF PARAGRAPHS 2.8.5 AND 2.9.6 IN THE EVENT ANY FAILURE IS DETECTED THE ENTIRE LOT SHOULD BE INSPECTED.

C. VENDOR SUPPLIED DATA: EACH SHIPMENT OF PARTS SHALL BE ACCOMPANIED BY THE FOLLOWING:
   (1) CERTIFICATE OF COMPLIANCE WITH MATERIAL AND CONSTRUCTION REQUIREMENTS.
   (2) CERTIFICATE OF COMPLIANCE WITH NO. 002404, CLASS 2.
   (3) CERTIFICATE OF COMPLIANCE WITH SEALED TEST.
   (4) EACH SHIPMENT OF PARTS SHALL CONTAIN TEN (10) CORES WHICH HAVE BEEN TAGGED WITH THE NUMERICAL ELECTRICAL VALUES. THESE CORES SHALL THEN BE TESTED BY THE PURCHASING ACTIVITY NOTING THEIR NUMERICAL RESULTS. THE TAGS SHOULD THEN BE RETURNED TO THE VENDOR WITHIN TEN (10) DAYS FROM RECEIPT OF THE SHIPMENT.

4. MANNED SPACECRAFT CENTER
   INSTRUMENTATION LAB
   AUSTIN, TEXAS

5. NASA APPROVAL
   NEXT ASSY
   USED ON
   APPLICATION

6. CODE IDENT NO
   SIZE
   NASA DRAWING NO.
   1006320
   1006320

7. SPECIFICATION CONTROL DRAWING
   REVISIONS
FIG 2. INTERGRATING CIRCUIT

E. FROM JAG E. TO SCOPE

FIGURE 4

FIG 3

TYPICAL OUTPUT VOLTAGES AFTER INTEGRATION

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LIST OF MATERIALS

- CORE, MAGNETIC

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

INSTRUMENTATION LAB

CHECKED

INSTRUMENTATION LAB

INSTRUMENTATION LAB

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SIZE

SHEET 2 OF 2

10006320 C

80230