

INCHES

0 1 2

PHOTOGRAPHIC SCALE ONLY



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### 3. DESIGN REQUIREMENTS:

- A. THE UNIT SHALL BE CAPABLE OF MEETING ALL REQUIREMENTS OF MIL-T-27 FOR GRADE 5, CLASS 3 LIFE EXPECTANCY X, FAMILY PER TABLE 1, IN AMBIENT TEMPERATURE OF 85°C.
- B. THE UNIT SHALL BE CAPABLE OF MEETING ALL ELECTRICAL REQUIREMENTS EXCEPT WHERE NOTED BEFORE, DURING, AND AFTER THE FOLLOWING EXPOSURES.

- (1) HIGH TEMPERATURE: 71°C OPERATING
- (2) LOW TEMPERATURE: -18°C OPERATING
- (3) VIBRATION: 10 TO 2000 CPS, 20 G (PER MIL-STD-202, METHOD 204 A, CONDITION D)
- (4) REDUCED PRESSURE: 96 HOURS AT A PRESSURE OF 10<sup>-4</sup> MM OF MERCURY.

- (5) WORKMANSHIP: THE WIRE SHALL BE UNIFORM IN QUALITY AND TEMPER CLEAN, ROUND AND SMOOTH AND FREE FROM FOREIGN MATERIALS, AND OTHER DEFECTS.

- C. DC UNBALANCE IN PRIMARY: PER TABLE 1

- D. RATED POWER LEVEL: 50 MW

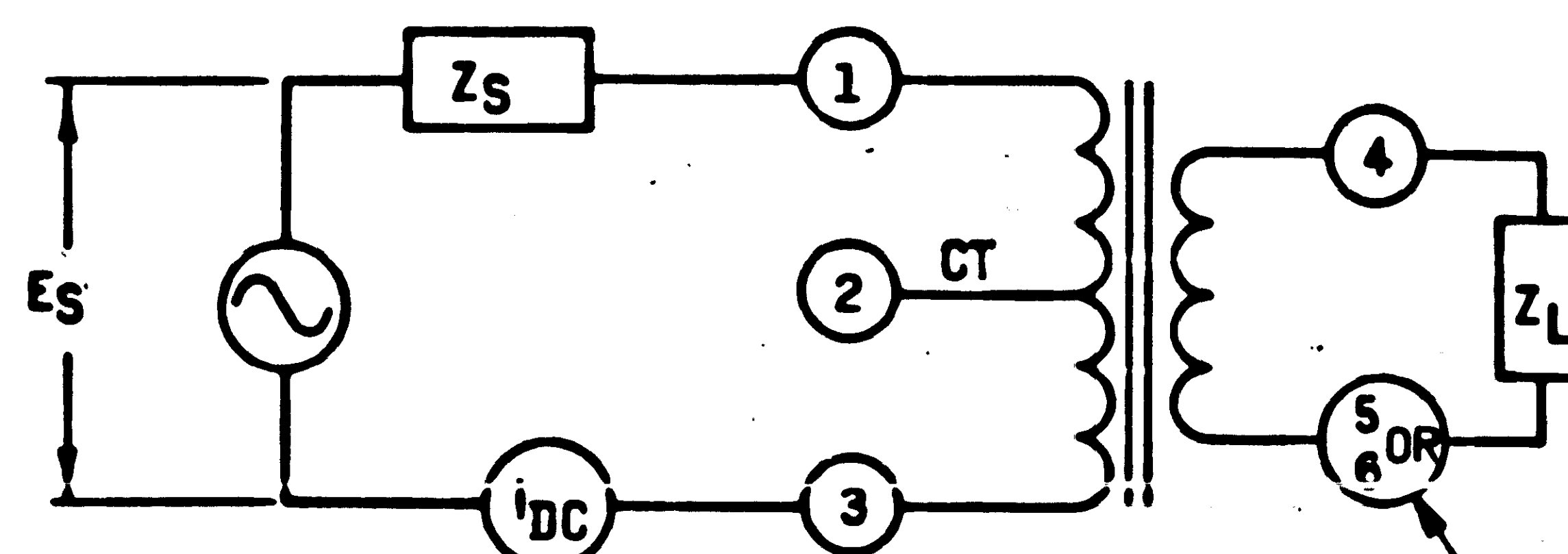
- E. WORKING VOLTAGE BETWEEN WINDINGS AND FROM WINDINGS TO CASE: 175 VOLTS MAXIMUM INSTANTANEOUS.

- F. BEND TEST(SAMPLE): THIS IS A DESTRUCTIVE TEST, UNITS SUBJECTED TO THIS TEST SHALL NOT BE SHIPPED. HOLD THE COMPONENT IN SUCH A MANNER THAT A TWO(2) POUND WEIGHT MAY BE SUSPENDED IN AN AXIAL DIRECTION FROM THE LEAD UNDER TEST. THE BEND CYCLE (ONE(1)) REQUIRED, SHALL BE ACCOMPLISHED BY MOVING THE BODY OF THE UNIT WHILE IN THE SAME PLANE, THRU 90° IN ONE DIRECTION THEN BACK 180° IN THE OPPOSITE DIRECTION AND BACK 90° TO THE ORIGINAL POSITION.

### 4. SPECIAL CONDITIONING, 100% (BY MANUFACTURER):

- A. TRANSFORMER SHALL BE TEMPERATURE CYCLED FOR 5 CYCLES PER MIL-STD-202, METHOD 102A EXCEPT THAT THE TEMPERATURES SHALL BE -55°C, +25°C AND 130°C AND EXPOSURE TIME SHALL BE 15 MINUTES AT EACH TEMPERATURE. DURING THE LAST CYCLE THE UNIT SHALL BE MONITORED FOR CONTINUITY. AFTER STABILIZATION AT ROOM TEMPERATURE UNIT SHALL PASS NORMAL INSPECTION TESTS. RESISTANCE AFTER STABILIZATION SHALL NOT CHANGE MORE THAN 4% FROM INITIAL MEASURED VALUE. THE AFOREMENTIONED TEST DATA SHALL BE INCLUDED WITH EACH SHIPMENT. ANY LOT WITH A FAILURE RATE OF GREATER THAN 5% FOR THIS TEST (RESISTANCE) SHALL NOT BE SHIPPED.

### TEST CIRCUIT 1



SHALL BE TOTAL SECONDARY

### FREQUENCY RESPONSE TEST CIRCUIT

TABLE I																	
NASA PART NUMBER		DC RESISTANCE ±20%		PRIMARY IMPEDANCE (MINIMUM)			FREQUENCY RESPONSE					POLARITY	NO LOAD VOLTAGE RATIO ± 3% PRIMARY : SECONDARY	MAX. DC MA UNBALANCE	FAMILY	REFERENCE SCHEMATIC DIAGRAM NUMBER	FIG. NO.
							TEST CONDITIONS										
		PRIMARY	SECONDARY	OHMS	TEST VOLTAGE -	FREQ CPS	Z <sub>S</sub>	Z <sub>L</sub>	I <sub>DC</sub> MA	BAND WIDTH	RESPONSE						
1010291	-1	168ΩCT	92 Ω	1600 (Z)	5 VOLTS	300	1,500	600	3	350 CPS TO 90KC	±1DB	1 AND 4	1.58 : 1	3	13	II	2
	-2	77ΩCT	3 Ω	1130 (XL)	1 VOLT	300	600	12	4.5	300 CPS TO 60KC	± 2 DB	1 AND 4	7.06 : 1	4.5	17	II	2
	-3	790ΩCT	0.76 Ω	15,000 (XL)	4 VOLTS	300	8,000	3.2	1	300 CPS TO 60KC	± 2 DB	1 AND 4	50 : 1	1	13	II	2
	-4	1050ΩCT	200ΩCT	10,000(Z)	4 VOLTS	300	10,000	1200	1	300 CPS TO 60KC	± 2 DB	1 AND 4	2.88 : 1 CT	1	13	I	1
	-5	72ΩCT	92ΩCT	800(Z)	2.8 VOLTS	300	600	600	3	300 CPS TO 60KC	± 3 DB	1 AND 4	1:1 CT	3	17	I	1

PROCURE ONLY FROM APPROVED SOURCES LISTED ON ND 1002034 FOR THIS DRAWING.

MASTER

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES
		DO NOT SCALE THIS DRAWING MATERIAL
		HEAT TREATMENT
		FINAL FINISH
NEXT ASSY	USED ON	
APPLICATION		

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	
		MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
		TRANSFORMER, AUDIO	
		SPECIFICATION CONTROL DRAWING	
		CODE IDENT NO. SIZE NASA DRAWING NO.	
		C 1010291	
		SCALE NONE WT	SHEET 2 OF 2

