

ELECTRON TUBE, TRAVELING WAVE AMPLIFIER

HUGGINS LABORATORIES, INC.

TYPE 8279

DESCRIPTION 11 TO 16 DBM POWER OUTPUT, PERIODIC PERMANENT MAGNET FOCUSED, TRAVELING WAVE (FORWARD WAVE), CW AMPLIFIER FOR OPERATION FROM 2300 TO 2700 MEGACYCLES.

ELEMENT OR TEST	LIMITS		UNITS
	MIN.	MAX.	
<u>ELECTRICAL SPECIFICATIONS</u>			
HEATER VOLTAGE	6.0	6.6	V _{RMSE}
HEATER CURRENT	0.8	1.2	AMP S
CATHODE CURRENT	1.0	4.0	MA DC
HELIX VOLTAGE	400	525	V DC
HELIX CURRENT	--	0.5	MA DC
ANODE VOLTAGE	110	350	V DC
ANODE CURRENT	--	0.05	MA DC
COLLECTOR VOLTAGE *	400	525	V DC
COLLECTOR CURRENT	1.0	4.0	MA DC
VOLTAGES ARE REFERENCED TO THE CATHODE			
<u>R.F. SPECIFICATIONS</u>			
POWER OUTPUT (RF)	11	16	DBM
POWER INPUT (PF)	-14	-7	DBM
Δ POWER OUTPUT OVER A 30 MIN. PERIOD	--	±0.25	DBM
NOISE FIGURE	--	20	DB
V.S.W.R. (INPUT/OUTPUT)	--	2:1	--
CATHODE PRE-HEATING PERIOD	50	--	SEC.
DUTY CYCLE	--	1.0	--

ENVIRONMENTAL SPECIFICATIONS

- TEMPERATURE (OPERATING) - -10°C TO +52°C.
- RELATIVE HUMIDITY (OPERATING) - UP TO 100%.
- BAROMETRIC PRESSURE (OPERATING) - FROM 28 TO 20.4 INCHES OF MERCURY, (0 TO 10,000 FT).
- TEMPERATURE (STORAGE) - -54°C TO +71°C.
- RELATIVE HUMIDITY (NON-OPR.) - UP TO 100%
- BAROMETRIC PRESSURE (NON-OPR.) - FROM 28 TO 7.0 INCHES OF MERCURY, (0 TO 35,000 FT).
- SHOCK (NON-OPR.) - FORCE OF 15 G, WITH A TIME DURATION OF 11 ± 1 MILLISECONDS.
- VIBRATION (NON-OPR.) - 2G, 10 TO 500 CPS. 0.04 INCHES DA, 5 TO 10 CPS.

MECHANICAL DATA, GENERAL

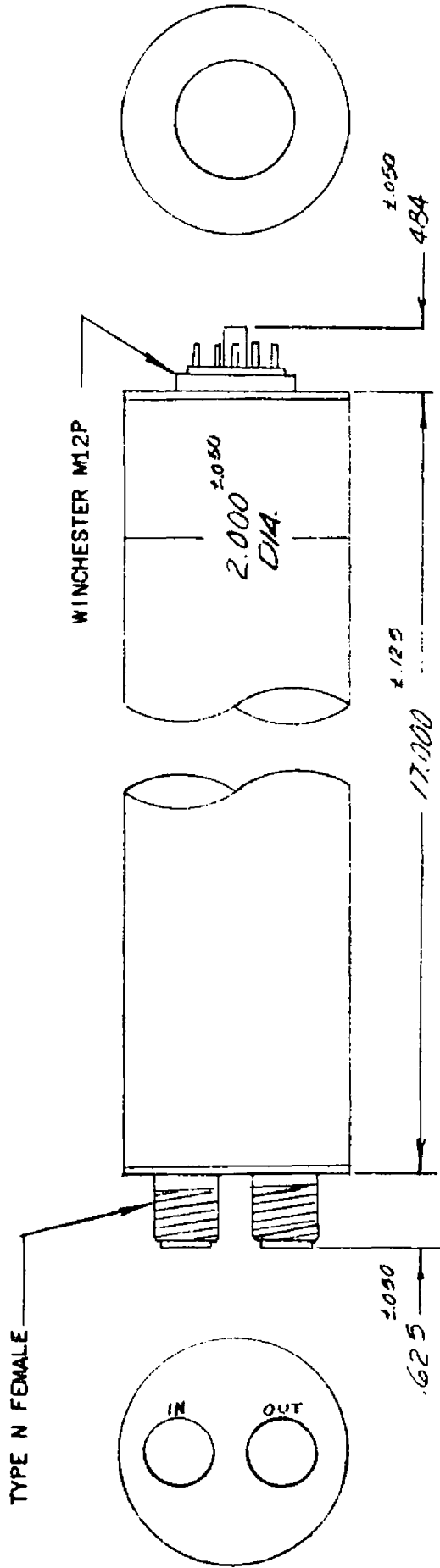
- PHYSICAL DIMENSIONS - SEE FIGURE 1
- MOUNTING POSITION - ANY
- COOLING - NOT REQUIRED
- INPUT/OUTPUT IMPEDANCE (RF) - 50 OHMS
- RF CONNECTORS - TYPE N FEMALE
- WEIGHT (MAX.) - 4 POUNDS

* THE COLLECTOR IS CONNECTED INTERNALLY TO THE TUBE CAPSULE AND MUST BE GROUNDED FOR SAFE OPERATION.

from JEDEC release #4754,
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FIGURE 1

8279



POWER CONNECTIONS

- PIN D - CAPSULE-COLLECTOR-GROUND
- F - HEATER-CATHODE
- H - HEATER
- J - CATHODE
- L - HELIX
- N - ANODE
- GRID CONNECTED INTERNALLY TO CATHODE.

MATERIALS AND FINISHES

- CAPSULE - - BRUSH CHROME PLATED STEEL
- END CAPS - - BLACK ANODIZED ALUMINUM

MARKING

- MANUFACTURERS NAME, TRADEMARK OR CODE SYMBOL, AND PART NUMBER.
- LABEL ON TUBE TO CONTAIN CATHODE VOLTAGE,* CATHODE CURRENT AND HEATER VOLTAGE.
- IN AND OUT ARE PERMANENTLY MARKED ON THE RF END CAP.

* HELIX TO GROUND VOLTAGE.