ELECTRON TUBE, TRAVELING WAVE AMPLIFIER

HUGGINS LABORATORIES, INC.

TYPE 8225

DESCRIPTION: 10 MILLIWATT, SOLENOID FOCUSED, TRAVELING WAVE TUBE (FORWARD WAVE), CW AMPLIFIER FOR OPERATION FROM 2000 TO 4000 MEGACYCLES.

ELEMENT OR TEST	LIMITS MIN.	LIMITS MAX.	UNITS
ELECTRICAL SPECIFICATIONS			
HEATER VOLTAGE	6.17	6.34	V_{RMS}
HEATER CURRENT	0.7	1.0	AMPS
CATHODE CURRENT	2.0	3.5	mA_{DC}
HELIX VOLTAGE	400	500	V_{DC}
HELIX CURRENT	--	0.2	mA_{DC}
ANODE VOLTAGE	0	350	V_{DC}
ANODE CURRENT	--	0.1	mA_{DC}
COLLECTOR VOLTAGE *	570	630	V_{DC}
COLLECTOR CURRENT	2.0	3.5	mA_{DC}
VOLTAGES ARE REFERENCED TO THE CATHODE			
R.F. SPECIFICATIONS			
SMALL SIGNAL GAIN	30	--	DB
SATURATED POWER OUTPUT	10	--	DBM
SATURATED GAIN	20	--	DB
NOISE FIGURE	--	25	DB
V.S.W.R (INPUT/OUTPUT)	--	2:1	--
R.F. LEAKAGE BELOW OUTPUT SIGNAL	50	--	DB
CATHODE PRE-HEATING TIME	60	--	SEC.
DUTY CYCLE	--	1.0	--

ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE (OPERATING) - -10°C TO +52°C.
RELATIVE HUMIDITY (OPERATING) - UP TO 80%.
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 80%.
BAROMETRIC PRESSURE (NON-OPR) - FROM 28 TO 7.0 INCHES OF MERCURY, (0 TO 35,000 FT).
SHOCK (NON-OPR) - FORCE OF 5G 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

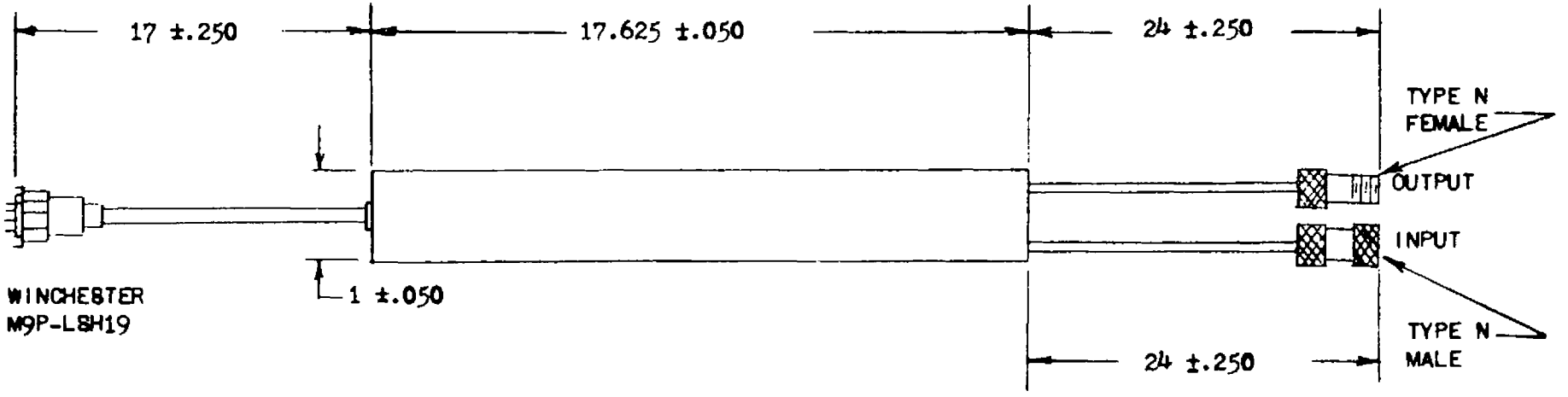
PHYSICAL DIMENSIONS	-	SEE FIGURE 1
MOUNTING POSITION	-	ANY
COOLING	-	NOT REQUIRED
INPUT/OUTPUT IMPEDANCE (RF)	-	50 OHMS
RF CONNECTORS	-	TYPE N FEMALE
WEIGHT (APPROX.)	-	1 POUND

* THE COLLECTOR IS INSULATED; HENCE, ANY ELECTRODE MAY BE OPERATED AT SYSTEM GROUND POTENTIAL.

from JEDEC release #4754, July 13, 1964

FIGURE 1

8225



POWER CONNECTIONS

PIN A - COLLECTOR

C - CAPSULE-GROUND

D - HELIX

E - HEATER

F - HEATER

H - CATHODE

GRID CONNECTED INTERNALLY TO CATHODE

MATERIALS AND FINISHES

CAPSULE --- BLACK ANODIZED ALUMINUM

END CAPS -- BLACK ANODIZED ALUMINUM

MARKING

HEATER VOLTAGE, HELIX VOLTAGE, AND CATHODE CURRENT PERMANENTLY MARKED ON THE TUBE CAPSULE.

IN AND OUT PERMANENTLY MARKED ON RF END CAP.

MANUFACTURERS NAME, TRADEMARK OR CODE SYMBOL , AND PART NUMBER.