ELECTRON TUBE DEPARTMENT ■ COMPONENTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION, CLIFTON, NEW JERSEY

KUTHE
**7667

CERAMIC HYDROGEN THYRATRON

DESCRIPTION:

* THE 7667 IS A 40 MEGAWATT, LARGE CERAMIC HYDROGEN THYRATRON. THE CERAMIC EXTERNAL ANODE DESIGN PERMITS OPERATION AT UNUSUALLY HIGH POWER LEVELS. THE SPECIAL FEATURES OF THE 7667 INCLUDE A HYDROGEN RESERVOIR TO MAINTAIN OPTIMUM PRESSURE AND TO INSURE LONG LIFE.

ELECTRICAL DATA, GENERAL:	NOM.	MIN.	MAX.		
HEATER VOLTAGE	6.3	5.8	6.8		VOLTS A.C.
HEATER CURRENT (AT 6.3 VOLTS)		25.0	40.0		AMPERES
HEATER (NOTE 1)					
RESERVOIR VOLTAGE (NOTE 2)		3.5	5.5		VOLTS
* RESERVOIR CURRENT AT 4.5 VOLT		8.0	20.0		AMPERES
MINIMUM HEATING TIME				10	MINUTES

MECHANICAL DATA, GENERAL:		
MOUNTING POSITION	VERTICAL ONLY, BASE DOWN	
BASE (PER OUTLINE)		
COOLING (NOTE 3)		
NET WEIGHT	11.5	POUNDS
DIMENSIONS (SEE OUTLINE DRAWING)		

RATINGS:

MAX. PEAK ANODE VOLTAGE, FORWARD	33.0	KILOVOLTS
MAX. PEAK ANODE VOLTAGE, INVERSE (NOTE 4)	33.0	KILOVOLTS
MIN. ANODE SUPPLY VOLTAGE	2.5	KILOVOLTS D.C.
* MAX. PEAK ANODE CURRENT	2400	AMPERES
MAX. AVERAGE ANODE CURRENT	4.0	AMPERES
MAX. RMS ANODE CURRENT (NOTE 5)	90	AMPERES A.C.
MAX. EPY X IB X PRR	40×10^9	
MAX. ANODE CURRENT RATE OF RISE	10,000	AMPS./U SEC.
PEAK TRIGGER VOLTAGE (NOTE 6)		
MAX. PEAK INVERSE TRIGGER VOLTAGE	750	VOLTS
MAX. ANODE DELAY TIME (NOTE 7)	0.4	MICROSECOND
MAX. ANODE DELAY TIME DRIFT	0.25	MICROSECOND
MAX. TIME JITTER (NOTE 8)	.005	MICROSECOND
AMBIENT TEMPERATURE	-55° TO + 150°	C

* INDICATES CHANGES FROM DATA SHEET DATED 10-60.

** THIS TUBE WAS PREVIOUSLY DESIGNATED BY THE TYPE NUMBER KU-74.

Note 1:

Cathode connected to center of cathode heater.

Note 2:

Reservoir voltage is marked on the base of each 7667/KU-74. This is the correct voltage for one typical operating condition but is not the optimum value for all types of operation. This value may be used initially in new applications and the optimum value may then be obtained by exploring the range of voltage on either side of that marked on the tube. Excess reservoir voltage will result in a failure of the thyratron to deionize between pulses (continuous conduction). Insufficient reservoir voltage will result in excess anode dissipation as indicated by heating of the anode. The optimum reservoir voltage is the midpoint between these two extremes. In certain applications it may be necessary to provide a regulated source to assure operation within the permissible range of reservoir voltages.

Note 3:

Cooling of the anode is permissible.

Note 4:

During the first 25 microseconds after conduction, the peak inverse anode voltage shall not exceed 5 kv.

Note 5:

The root mean square anode current shall be computed as the square root of the product of peak current and the average current.

Note 6:

The pulse produced by the driver circuit shall have the following characteristics when viewed at the 7667/KU-74 socket with the tube removed.

A.	Amplitude	750-2500 Volts
B.	Duration	2 Microseconds (at 70% points)
C.	Time of Rise	0.35 Microseconds (max.)
D.	Impedance	10-25 Ohms

The limits of anode time delay and anode time jitter are based on the minimum trigger. Using the highest permissible trigger voltage and lowest trigger source impedance materially reduces these values below the limits specified.

Note 7:

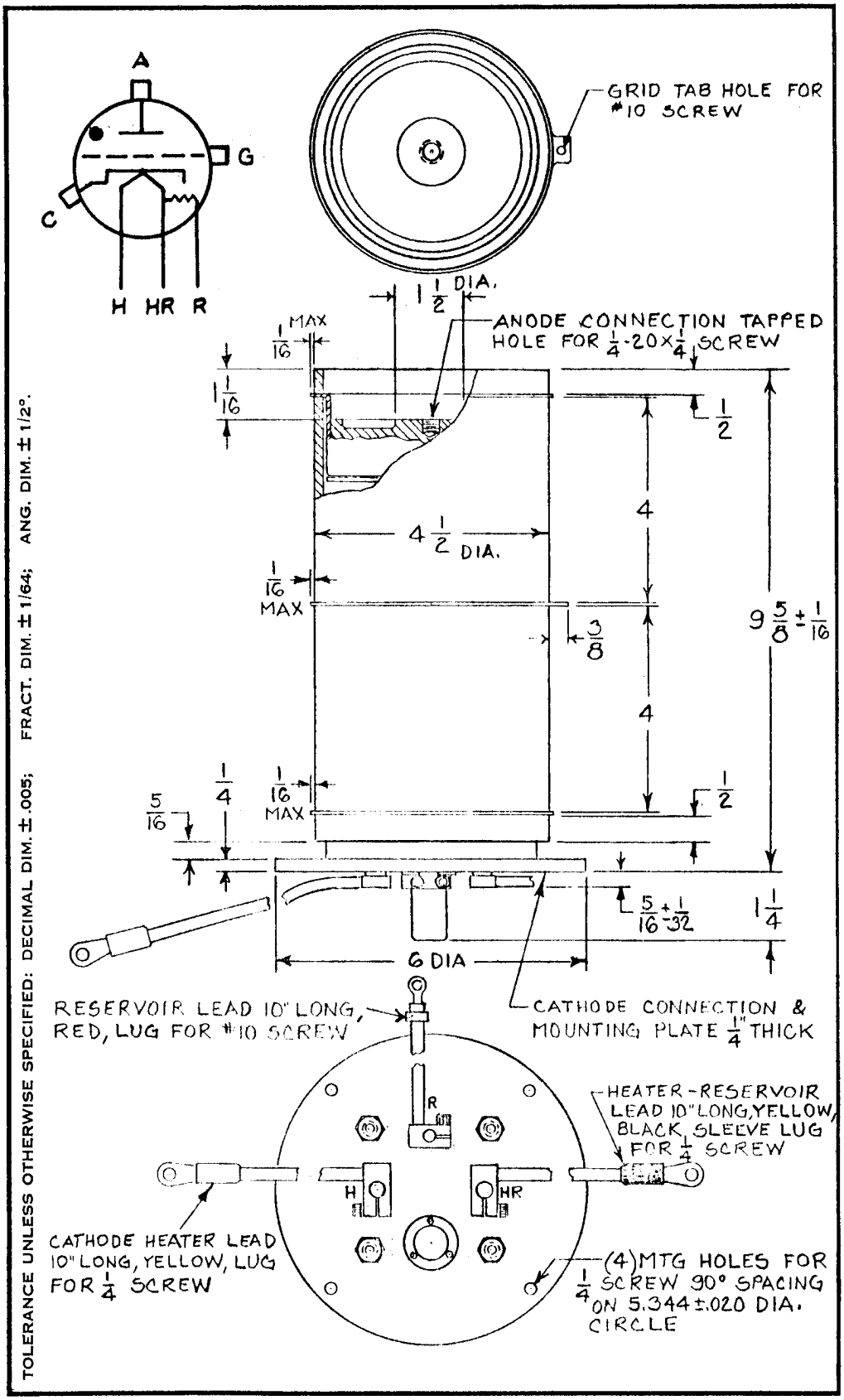
The time of anode delay is measured between the 26 per cent point on the rising portion of the unloaded grid voltage pulse and the point at which anode conduction first evidences itself on the loaded grid pulse.

Note 8:

Time jitter is measured at the 50% point on the anode current pulse.

Additional information for specific applications can be obtained from the

Electron Tube Applications Section, ITT Components Division
Post Office Box 412, Clifton, New Jersey



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