TENTATIVE

CERAMIC HYDROGEN THYRATRON

DESCRIPTION:

THE KU-70B IS A UNIPOTENTIAL CATHODE THREE ELEMENT HYDROGEN THYRATRON OF CERAMIC METAL CONSTRUCTION DESIGNED FOR USE IN COMPACT MODULATORS FOR HIGH PERFORMANCE RADARS AND FOR MISSILE APPLICATIONS.

ELECTRICAL DATA, GENERAL:

	Nom.	Min.	Max.		
Heater Voltage	6.3	5.8	6.8		Volts AC
* Heater Current (at 6.3 volts)		2.0	3.2		Amperes
Minimum Heating Time				30	Seconds

MECHANICAL DATA, GENERAL:

Mounting Position	Any
Dimensions	Per Outline

RATINGS:

Max. Peak Anode Voltage, Forward	8.0	Kilovolts
Max. Peak Anode Voltage, Inverse (Note 1)	8.0	Kilovolts
Min. Anode Supply Voltage	0.3	Kilovolts DC
Max. Peak Anode Current	100	Amperes
Max. Average Anode Current	100	Milliamperes
Max. RMS Anode Current (Note 2)	2.0	Amperes AC
Max. EBY x IBX x PRR (PB)	2.7×10^9	
Max. Anode Current, Rate of Rise	1000	Amps./u sec.
Peak Trigger Voltage (Note 3)		
Max. Peak Inverse Trigger Voltage	300	Volts
Max. Anode Delay Time (Note 4)	0.50	u second
Max. Anode Delay Time Drift	0.10	u second
Max. Time Jitter (Note 5)	.005	u second
Ambient Temperature	-65 to +150°	C
Shock Rating	200	G.
Vibration	20	G.

* INDICATES CHANGE FROM DATA SHEET DATED 6-61

NOTE 1:

THE PEAK INVERSE VOLTAGE SHOULD NOT EXCEED 2.5 KV DURING THE FIRST 25 MICROSECONDS AFTER THE PULSE.

NOTE 2:

THE ROOT MEAN SQUARE ANODE CURRENT SHALL BE COMPUTED AS THE SQUARE ROOT OF THE PRODUCT OF THE PEAK CURRENT AND THE AVERAGE CURRENT.

NOTE 3:

THE DRIVER PULSE, MEASURED AT THE TUBE SOCKET WITH THE THYRATRON GRID DISCONNECTED SHOULD HAVE THE FOLLOWING CHARACTERISTICS:

A.	VOLTAGE	150 VOLTS (MIN.) TO 300 VOLTS (MAX.)
B.	DURATION	2 MICROSECONDS (AT 70 PERCENT POINTS)
C.	IMPEDANCE	1500 OHMS (MAX.)
D.	TIME OF RISE	0.5 MICROSECOND (MAX.)

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 4:

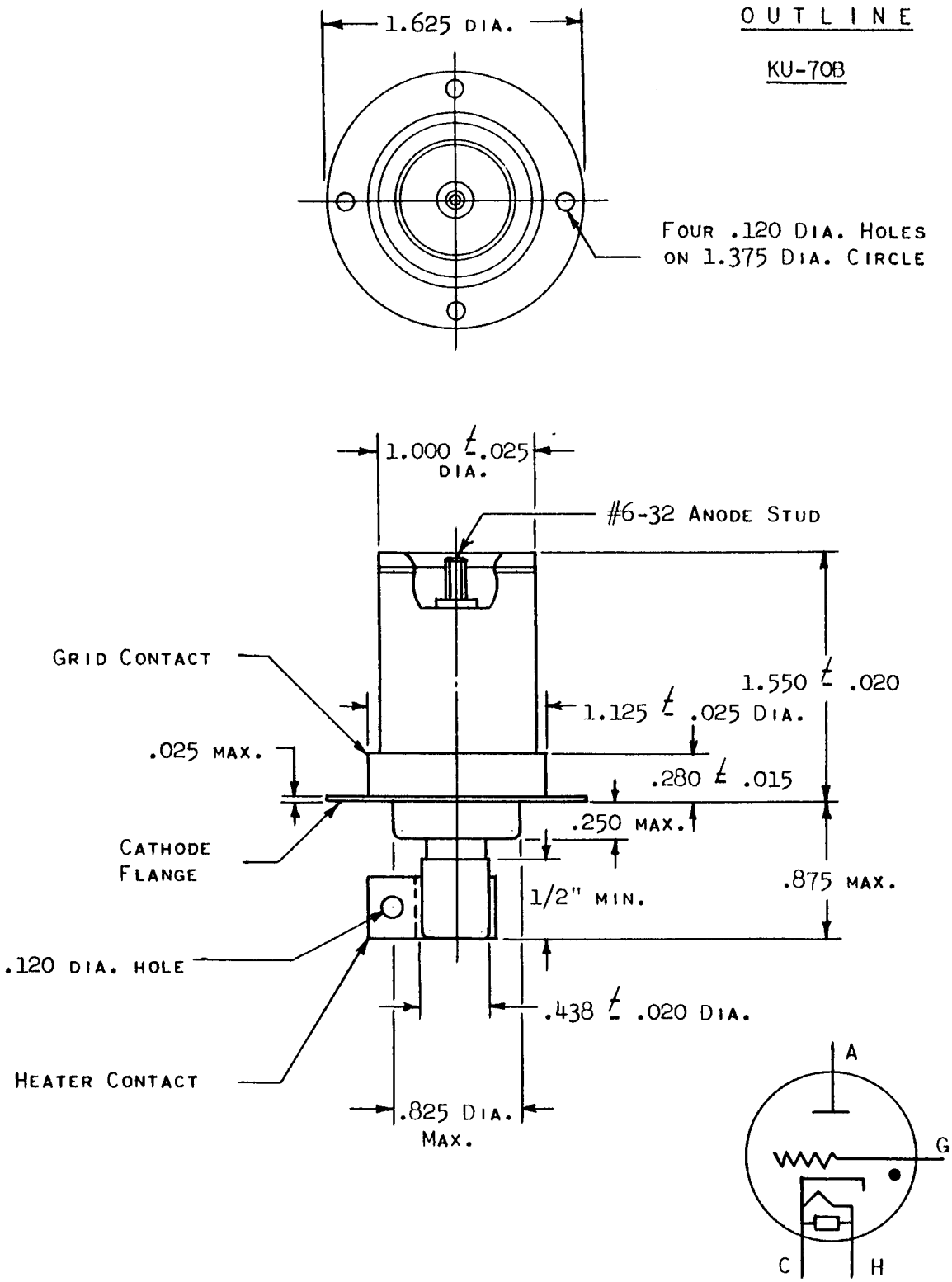
THE TIME OF ANODE DELAY IS MEASURED BETWEEN THE 26 PERCENT POINT ON THE RISING PORTION OF THE UNLEADED GRID VOLTAGE PULSE AND THE POINT AT WHICH EVIDENCE OF ANODE CONDUCTION FIRST APPEARS ON THE LOADED GRID PULSE.

NOTE 5:

TIME JITTER IS MEASURED AT THE 50 PERCENT 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


OUTLINE
KU-70B
1.625 DIA.
FOUR .120 DIA. HOLES ON 1.375 DIA. CIRCLE
1.000 ± .025 DIA.
#6-32 ANODE STUD
GRID CONTACT
1.550 ± .020
1.125 ± .025 DIA.
.025 MAX.
.280 ± .015
.250 MAX.
CATHODE FLANGE
.875 MAX.
1/2" MIN.
.120 DIA. HOLE
.438 ± .020 DIA.
HEATER CONTACT
.825 DIA. MAX.
A
G
C
H