



DESCRIPTION:

THE KU-25 IS A UNIPOTENTIAL CATHODE, 3 ELEMENT HYDROGEN FILLED THYRATRON DESIGNED FOR NETWORK DISCHARGE SERVICE. IN SUCH SERVICE, IT IS SUITABLE FOR PRODUCING PULSE OUTPUTS OF MORE THAN 1.5 MEGAWATTS AT AN AVERAGE POWER LEVEL OF MORE THAN 1.2 KW.

THE KU-25 IS EQUIPPED WITH RESERVOIR FOR LONG STABLE LIFE AND IS ESPECIALLY ADAPTED TO OPERATION AT HIGH PULSE REPETITION RATES.

ELECTRICAL DATA, GENERAL:

| | <u>NOM.</u> | <u>MIN.</u> | <u>MAX.</u> | |
|-------------------------------|-------------|-------------|-------------|------------|
| HEATER VOLTAGE | 6.3 | 5.9 | 6.7 | VOLTS A.C. |
| HEATER CURRENT (AT 6.3 VOLTS) | | 9.6 | 11.6 | AMPERES |
| MINIMUM HEATING TIME | | | | 5 MINUTES |

MECHANICAL DATA, GENERAL:

| | |
|-------------------|--|
| MOUNTING POSITION | ANY |
| BASE | SUPER JUMBO 4-PIN WITH BAYONET A4-18 WITH CERAMIC INSERT C1-43, MEDIUM, WITH CORONA SHIELD |
| ANODE CAP | |
| COOLING (NOTE 1) | |
| NET WEIGHT | 12 OUNCES |
| DIMENSIONS | SEE OUTLINE |

RATINGS:

| | | |
|---|-------------------|-----------------------------------|
| MAX. PEAK ANODE VOLTAGE, FORWARD | 12.0 | KILOVOLTS |
| MAX. PEAK ANODE VOLTAGE, INVERSE (NOTE 2) | 12.0 | KILOVOLTS |
| MIN. ANODE SUPPLY VOLTAGE | 3.5 | KILOVOLTS D.C. |
| MAX. PEAK ANODE CURRENT | 300 | AMPERES |
| MAX. AVERAGE ANODE CURRENT | 200 | MILLIAMPERES |
| MAX. RMS ANODE CURRENT (NOTE 3) | 7.75 | AMPERES A.C. |
| MAX. EPY X IB X PRR | 3.8×10^9 | |
| MAX. ANODE CURRENT RATE OF RISE | 1250 | AMPERES/ μ SECOND |
| PEAK TRIGGER VOLTAGE (NOTE 4) | | |
| MAX. PEAK INVERSE TRIGGER VOLTAGE | 200 | VOLTS |
| MAX. ANODE DELAY TIME (NOTE 5) | 1.0 | MICROSECOND |
| MAX. ANODE DELAY TIME DRIFT | 0.15 | MICROSECOND |
| MAX. TIME JITTER (NOTE 6) | 0.05 | MICROSECOND |
| AMBIENT TEMPERATURE | -50° TO +90° | CENT. |
| SHOCK RATING | 13° | NAVY (FLYWEIGHT) SHOCK MACHINE |

TYPICAL OPERATION AS PULSE MODULATOR, DC RESONANT CHARGING:

| | | |
|---|------|---------------|
| PEAK NETWORK VOLTAGE | 12.0 | KILOVOLTS |
| PULSE REPETITION RATE | 2500 | PULSES/SECOND |
| PULSE LENGTH | 0.4 | MICROSECOND |
| PULSE FORMING NETWORK IMPEDANCE | 48 | OHMS |
| TRIGGER VOLTAGE | 200 | VOLTS |
| PEAK POWER OUTPUT (RESISTIVE LOAD 92% ZN) | 736 | KILOWATTS |
| PEAK ANODE CURRENT | 130 | AMPERES |
| AVERAGE ANODE CURRENT | 0.13 | AMPERES D.C. |

NOTE 1:

COOLING PERMITTED. HOWEVER, THERE SHALL BE NO AIR BLAST DIRECTLY ON THE BULB.

NOTE 2:

DURING THE FIRST 25 MICROSECONDS AFTER CONDUCTION, THE PEAK INVERSE ANODE VOLTAGE SHALL NOT EXCEED 5.0 KV.

NOTE 3:

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 4:

THE PULSE PRODUCED BY THE DRIVER CIRCUIT SHALL HAVE THE FOLLOWING CHARACTERISTICS WHEN VIEWED AT THE KU-25 SOCKET WITH THE GRID OF THE TUBE DISCONNECTED:

| | |
|-----------------|--------------------------------|
| A. VOLTAGE | 200-300 VOLTS |
| B. DURATION | 2 MICROSECONDS (AT 70% POINTS) |
| C. RATE OF RISE | 200 VOLT/MICROSECOND (MIN.) |
| D. IMPEDANCE | 50-500 OHMS (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 5:

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

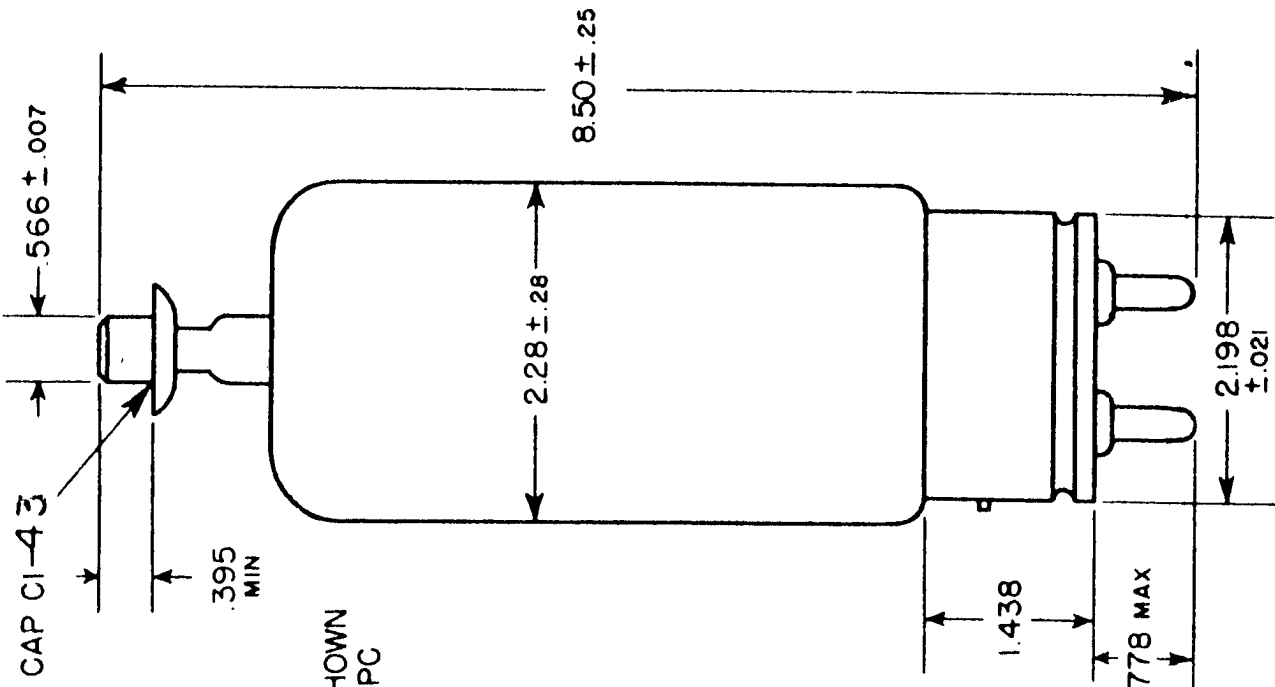
NOTE 6:

TIME JITTER IS MEASURED AT THE 50 PERCENT POINT ON THE ANODE CURRENT PULSE.

ADDITIONAL INFORMATION FOR SPECIFIC APPLICATIONS CAN BE OBTAINED FROM THE

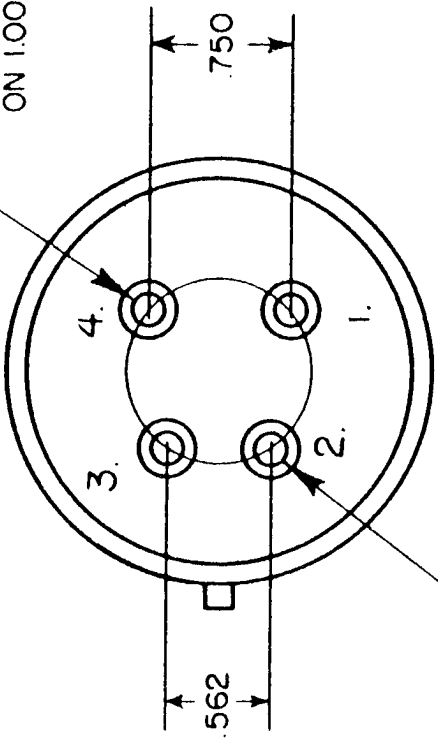
ELECTRON TUBE APPLICATIONS SECTION
ITT COMPONENTS DIVISION
POST OFFICE BOX 412
CLIFTON, NEW JERSEY





- 1. GRID
 - 2. HEATER & CATHODE
 - 3. HEATER
 - 4. CATHODE
- TOP CAP - ANODE

4 PINS
187 ± .003 DIA.
SPACED AS SHOWN
ON 1.000 DIA PC



SUPER JUMBO 4 PIN
BAYONET A4-18

NOTE: CLAMPING PERMISSIBLE IN AREA OF
BASE AND UP TO 3" ABOVE TOP OF BASE