

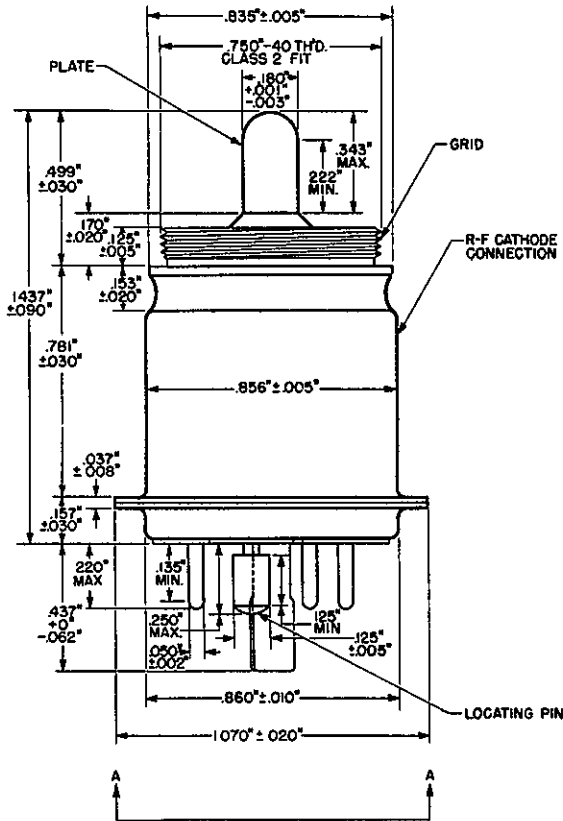
*OK to send to
Plant Dept.*

ADVANCE ELECTRON TUBE DATA SHEET

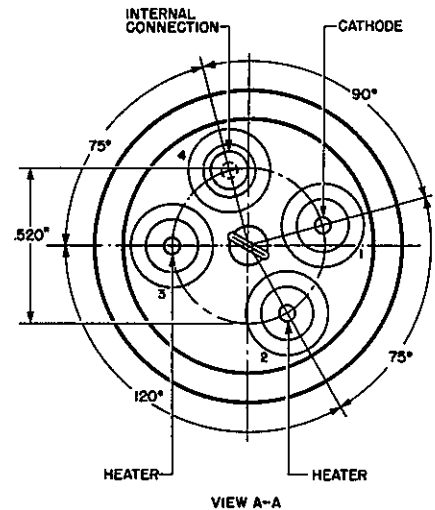
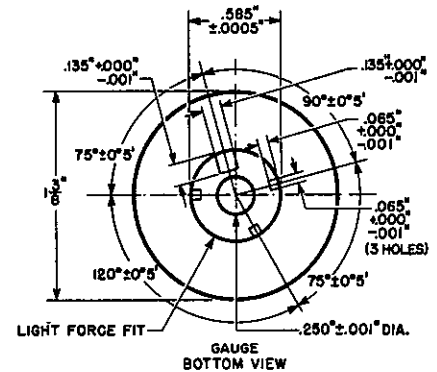
*S.F.H.
7/25/49*

WESTERN ELECTRIC 416 A ELECTRON TUBE

416 A
TRIODE
SHF



BASE SHALL BE CAPABLE OF BEING INSERTED FREELY INTO A 7/16 THICKNESS GAUGE WITH 5 HOLES DISPOSED AS SHOWN



NOTE: SURFACES OF R-F CATHODE, GRID AND PLATE CONNECTIONS GOLD PLATED

DESCRIPTION

The 416A is a disc-seal planar type triode designed for use as an amplifier or frequency multiplier at frequencies in the order of 4000 megacycles.

MAXIMUM RATINGS, ABSOLUTE VALUES

| | | |
|------------------------------|------|--------------|
| Plate Voltage | 250 | volts |
| Grid Voltage | +1.0 | volt |
| Plate Current | 33 | milliamperes |
| Grid Current | 10 | milliamperes |
| Plate Dissipation | 7.5 | watts |
| Plate Seal Temperature | 125° | Centigrade |
| Grid Seal Temperature | 100° | Centigrade |
| Heater-Cathode Voltage | 45 | volts |



GENERAL CHARACTERISTICS

ELECTRICAL DATA

| | | |
|-----------------------------------------|-------|-----------|
| Heater Voltage | 6.3 | volts |
| Heater Current | 1.85 | amperes |
| Amplification Factor | 300 | |
| Transconductance ($i_b = 30$ ma) | 50000 | micromhos |
| Direct Interelectrode Capacitances | | |
| Grid to Plate | 1.25 | μ f |
| Grid to Shell* | 7.5 | μ f |
| Plate to Shell* | 0095 | μ f |
| Cathode to Shell | 42.5 | μ f |

*Cathode connected to shell through cathode to shell capacitance

MECHANICAL DATA

| | |
|---------------------------|--------------|
| Cathode | Unipotential |
| Mounting Position | Any |
| Weight, Approximate | 1 ounce |

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

| | | |
|------------------------------------|------|--------------|
| Plate Voltage | 200 | volts |
| Plate Current | 30 | milliamperes |
| Plate Dissipation | 6 | watts |
| Cathode Bias Resistor | 250 | ohms |
| Grid Supply Voltage | 8 | volts |
| Frequency | 4000 | megacycles |
| Gain (50 Milliwatts Output) | 9 | decibels |
| Gain (500 Milliwatts Output) | 3 | decibels |
| Band Width (3 db Down) | 100 | megacycles |