

Sheet 10/62

Lighthouse Triode

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

| | | |
|--|-------------------------------------|-------|
| Voltage (AC or DC) | 6.3 ± 5% | volts |
| Current at 6.3 volts | 0.75 | amp |
| Heater heating time ^a | 6 | sec |
| Cathode heating time | See <i>Operating Considerations</i> | |

Direct Interelectrode Capacitances

| | | |
|---|------|-----|
| (Approx.): | | |
| Grid to plate | 1.3 | μμf |
| Grid to cathode for heater volts = | | |
| 0 | 2.2 | μμf |
| 6.3 | 2.8 | μμf |
| Plate to cathode for heater volts = 0 | 0.02 | μμf |
| Cathode rf terminal to cathode | 100 | μμf |

Characteristics, Class A₁ Amplifier:

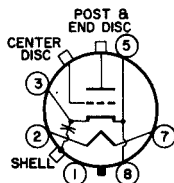
| | | |
|--------------------------------------|------|-------|
| Plate Voltage | 250 | volts |
| Cathode Resistor | 200 | ohms |
| Cathode Capacitor | 1000 | μf |
| Amplification Factor | 35 | |
| Plate Resistance (Approx.) | 6860 | ohms |
| Transconductance | 5100 | μmhos |
| Plate Current | 17 | ma |

Mechanical:

| | |
|--|---|
| Operating Position | Any |
| Maximum Overall Length | 2-9/16" |
| Maximum Seated Length | 1.973" |
| Maximum Diameter | 1.312" |
| Weight (Approx.) | 1.2 oz |
| Base | Small H-Wafer 6-Pin (JEDEC Group 1, No. B6-108) |
| Basing Designation for BOTTOM VIEW | 6BY |

Pin 1 - Internal
 Connection - Do
 Not Use

Pin 2 - Heater
 Pin 3 - Cathode
 Pin 5 - Cathode
 Pin 7 - Heater



Pin 8 - Cathode
 Shell - Cathode
 RF Terminal
 Center Disc - Grid
 Terminal
 Post & End Disc -
 Plate
 Terminal

Thermal:

| | |
|----------------------------|---------------------------|
| Cooling | Convection and Conduction |
| Seal Temperature | 175 max. °C |



2C40A

RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy

Maximum CCS^b Ratings, Absolute-Maximum Values:

For frequencies up to 3370 Mc

| | | |
|---|----------|-------|
| DC PLATE VOLTAGE. | 500 max. | volts |
| DC GRID VOLTAGE: | | |
| Negative-bias value | 50 max. | volts |
| DC PLATE CURRENT. | 25 max. | ma |
| DC GRID CURRENT | 8 max. | ma |
| PLATE DISSIPATION | 6.5 max. | watts |
| PEAK HEATER-CATHODE VOLTAGE: | | |
| Heater negative with respect to cathode . | 90 max. | volts |
| Heater positive with respect to cathode . | 90 max. | volts |
| PEAK CATHODE-SHELL VOLTAGE: | | |
| Shell negative with respect to cathode. . | 90 max. | volts |
| Shell positive with respect to cathode. . | 90 max. | volts |

PLATE-PULSED POWER OSCILLATOR

Maximum CCS^b Ratings, Absolute-Maximum Values:

For frequencies up to 3370 Mc, maximum "on" time^c of 10 microseconds, and maximum pulse duration of 1.5 microseconds

| | | |
|---|-----------|-------|
| PEAK PLATE VOLTAGE. | 1400 max. | volts |
| GRID VOLTAGE: | | |
| Peak-negative value | 100 max. | volts |
| DC positive-bias value. | 0 max. | volts |
| PLATE CURRENT: | | |
| Peak. | 2 max. | amp |
| Average | 3 max. | ma |
| GRID CURRENT: | | |
| Peak. | 1 max. | amp |
| Average | 1.5 max. | ma |
| PLATE DISSIPATION | 4 max. | watts |
| PEAK HEATER-CATHODE VOLTAGE: | | |
| Heater negative with respect to cathode . | 90 max. | volts |
| Heater positive with respect to cathode . | 90 max. | volts |
| PEAK CATHODE-SHELL VOLTAGE: | | |
| Shell negative with respect to cathode. . | 90 max. | volts |
| Shell positive with respect to cathode. . | 90 max. | volts |

GRID-PULSED POWER OSCILLATOR

Grid-pulsed operation is limited to the Maximum Ratings shown under the heading RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy

^a All other tubes in the same heater string should have the same heater heating time.

^b Continuous Commercial Service.

^c "On" time is defined as the sum of the durations of all the individual pulses which occur during any 5000-microsecond interval.

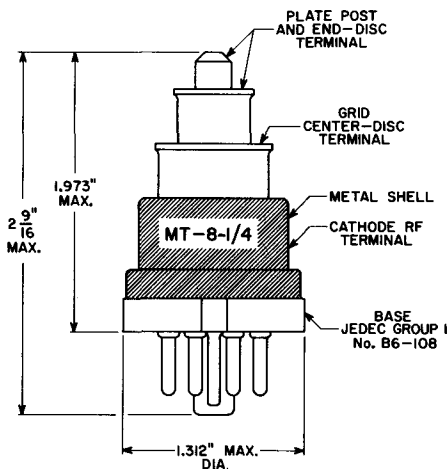


OPERATING CONSIDERATIONS

In *Plate-Pulsed Power Oscillator Service*, the plate voltage must not be applied until a minimum of 1 minute after the application of the heater voltage.

In *RF Power Amplifier & Oscillator — Class C Telegraphy Service* or *Grid-Pulsed Power Oscillator Service*, with dc plate voltages of 250 volts or less, the plate voltage and the heater voltage may be applied simultaneously.

In *RF Power Amplifier & Oscillator — Class C Telegraphy Service*, where long and reliable operation are important, the maximum ratings should be reduced by 25 per cent.



92CS-11334

