



6CL8

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MEDIUM-MU TRIODE— SHARP-CUTOFF TETRODE

9-PIN MINIATURE TYPE

*Intended for use as VHF oscillator and mixer
in TV receivers having series heater-string arrangement*

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

| | | |
|----------------------------------|------|--------------------------|
| Voltage. | 6.3 | ac or dc volts |
| Current. | 0.45 | amp |
| Warm-up time (Average) | 11 | sec |

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances:

| | Without External Shield | With External Shield ^o | |
|---|-------------------------------|---|------------------|
| <i>Triode Unit:</i> | | | |
| Grid to plate. | 1.8 | 1.8 | $\mu\mu\text{f}$ |
| Grid to cathode and heater | 2.7 | 2.7 | $\mu\mu\text{f}$ |
| Plate to cathode and heater. | 0.4 | 1.2 | $\mu\mu\text{f}$ |
| <i>Tetrode Unit:</i> | | | |
| Grid No.1 to plate | 0.028 max. | 0.016 max. | $\mu\mu\text{f}$ |
| Grid No.1 to cathode, grid No.2, and heater. | 5 | 5 | $\mu\mu\text{f}$ |
| Plate to cathode, grid No.2, and heater | 2 | 3 | $\mu\mu\text{f}$ |
| Heater to cathode. | 2.5 | 2.5 ^o | $\mu\mu\text{f}$ |

Characteristics, Class A₁ Amplifier:

| | Triode Unit | Tetrode Unit | |
|--|----------------|-----------------|------------------|
| Plate Voltage. | 125 | 125 | volts |
| Grid-No.2 (Screen-Grid) Voltage. | — | 125 | volts |
| Grid-No.1 (Control-Grid) Voltage. | — | -1 | volt |
| Cathode Resistor | 56 | — | ohms |
| Amplification Factor | 40 | — | |
| Plate Resistance (Approx.) | 5000 | 100000 | ohms |
| Transconductance | 8000 | 5800 | μmhos |
| Plate Current. | 15 | 12 | ma |
| Grid-No.2 Current. | — | 4 | ma |
| Grid-No.1 Voltage (Approx.) for plate $\mu\text{a.} = 10$ | -9 | -10 | volts |

Mechanical:

| | |
|--|---------------------|
| Operating Position | Any |
| Maximum Overall Length | 2-3/16" |
| Maximum Seated Length. | 1-15/16" |
| Length, Base Seat to Bulb Top (Excluding tip). | 1-9/16" \pm 3/32" |

^o, [•]: See next page.

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MEDIUM-MU TRIODE— SHARP-CUTOFF TETRODE

Maximum Diameter. 7/8"
 Dimensional Outline See *General Section*
 Bulb. T6-1/2
 Base. Small-Button Noval 9-Pin (JETEC No. E9-1)
 Basing Designation for BOTTOM VIEW. 9FX

Pin 1—Triode Grid

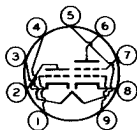
Pin 2—Triode Plate

Pin 3—Triode
Cathode

Pin 4—Heater

Pin 5—Heater

Pin 6—Tetrode Plate



Pin 7—Tetrode

Grid No.2

Pin 8—Tetrode

Cathode

Pin 9—Tetrode

Grid No.1

CONVERTER SERVICE

Maximum Ratings, Design-Center Values:

| | Triode Unit as Osc. | Tetrode Unit as Mixer | |
|--|------------------------|---|-------|
| PLATE VOLTAGE | 300 max. | 300 max. | volts |
| GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. | — | 300 max. | volts |
| GRID-No.2 VOLTAGE | — | See Grid-No.2 Input <i>Rating Chart at front of Receiving Tube Section</i> | |

GRID-No.1 (CONTROL-GRID)

VOLTAGE:

Positive bias value 0 max. 0 max. volts

GRID-No.2 INPUT:

For grid-No.2 voltages

up to 150 volts — 0.5 max. watt

For grid-No.2 voltages

between 150 and

300 volts — See Grid-No.2 Input

Rating Chart at front of Receiving Tube Section

PLATE DISSIPATION 2.7 max. 2.8 max. watts

PEAK HEATER-CATHODE

VOLTAGE:

Heater negative with
respect to cathode. 200 max. 200 max. voltsHeater positive with
respect to cathode. 200[▲] max. 200[▲] max. volts

Maximum Circuit Values:

| | Triode Unit | Tetrode Unit | |
|---|----------------|-----------------|--------|
| Grid-No.1—Circuit Resistance: | | | |
| For fixed-bias operation | 0.5 max. | 0.25 max. | megohm |
| For cathode-bias operation | 1 max. | 1 max. | megohm |

○, ●, ▲: See next page.



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MEDIUM-MU TRIODE— SHARP-CUTOFF TETRODE

- With external shield JETEC No.315 connected to cathode of unit under test except as noted.
- With external shield JETEC No.315 connected to ground.
- ▲ The dc component must not exceed 100 volts.