

Medium-Mu Dual Triode

DUODECAR TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

| | | |
|---|-----------|-------|
| Voltage (AC or DC) | 6.3 ± 0.6 | volts |
| Current at heater volts = 6.3 | 0.900 | amp |

Peak heater-cathode voltage (Each unit):

| | | |
|--|------------------|------------|
| Heater negative with respect to cathode. | 200 | max. volts |
| Heater positive with respect to cathode. | 200 ^a | max. volts |

Direct Interelectrode Capacitances (Approx.):^b

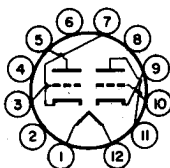
| | Unit No. 1 | Unit No. 2 | |
|---------------------------------|------------|------------|----|
| Grid to plate | 3.8 | 5.0 | pf |
| Grid to cathode and heater. . . | 2.2 | 4.0 | pf |
| Plate to cathode and heater . . | 0.48 | 0.54 | pf |

Characteristics, Class A₁ Amplifier:

| | Unit No. 1 | Unit No. 2 | |
|-----------------------------------|------------|--------------------|-------|
| Plate Voltage | 250 | 150 250 | volts |
| Grid Voltage. | -8 | 0 -9.5 | volts |
| Amplification Factor. | 22.5 | - 15.4 | |
| Plate Resistance (Approx.). . . . | 9000 | - 2000 | ohms |
| Transconductance. | 2500 | - 7700 | μmhos |
| Plate Current | 8 | 68 ^c 41 | ma |
| Grid Voltage (Approx.) | | | |
| for plate μ = 10 | -18 | - - | volts |
| Grid Voltage (Approx.) | | | |
| for plate μ = 50 | - | - -23 | volts |

Mechanical:

| | |
|---|---|
| Operating Position. | Any |
| Type of Cathodes. | Coated Unipotential |
| Maximum Overall Length. | 2.375" |
| Seated Length | 1.750" to 2.000" |
| Diameter. | 1.062" to 1.188" |
| Bulb. | T9 |
| Base. | Small-Button Duodecar 12-Pin (JEDEC No. E12-70) |
| Basing Designation for BOTTOM VIEW. | 12BM |
| Pin 1-Heater | Pin 8 - Same as Pin 2 |
| Pin 2-No Internal Connection | Pin 9 - Cathode of Unit No. 1 |
| Pin 3-Grid of Unit No. 2 | Pin 10 - Grid of Unit No. 1 |
| Pin 4 - Same as Pin 2 | Pin 11 - Plate of Unit No. 1 |
| Pin 5 - Plate of Unit No. 2 | Pin 12 - Heater |
| Pin 6 - Do Not Use | |
| Pin 7 - Cathode of Unit No. 2 | |



VERTICAL-DEFLECTION OSCILLATOR

Values are for Unit No. 1

Maximum Ratings, Design-Maximum Values:

| | | | |
|---|-----|------|-------|
| DC PLATE VOLTAGE. | 350 | max. | volts |
| PEAK NEGATIVE-PULSE GRID VOLTAGE. | 400 | max. | volts |
| PLATE DISSIPATION | 1 | max. | watt |

Maximum Circuit Values:

Grid-Circuit Resistance:

| | | | |
|---|-----|------|---------|
| For fixed-bias or cathode-bias operation. | 2.2 | max. | megohms |
|---|-----|------|---------|

VERTICAL-DEFLECTION AMPLIFIER

Values are for Unit No. 2

Maximum Ratings, Design-Maximum Values:

For operation in a 525-line, 30-frame system^d

| | | | |
|--|------|------|-------|
| DC PLATE VOLTAGE. | 550 | max. | volts |
| PEAK POSITIVE-PULSE PLATE VOLTAGE ^a | 2500 | max. | volts |
| PEAK NEGATIVE-PULSE GRID VOLTAGE. | 250 | max. | volts |
| CATHODE CURRENT: | | | |
| Peak. | 150 | max. | ma |
| Average | 50 | max. | ma |
| PLATE DISSIPATION | 10 | max. | watts |

Maximum Circuit Values:

Grid-Circuit Resistance:

| | | | |
|-----------------------------------|-----|------|---------|
| For fixed-bias operation. | 2.2 | max. | megohms |
|-----------------------------------|-----|------|---------|

^a The dc component must not exceed 100 volts.

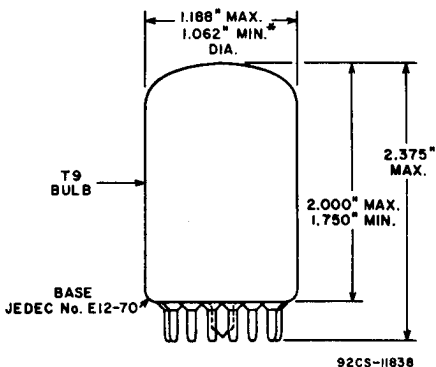
^b without external shield.

^c This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

^d As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

^e This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.





* APPLIES TO MINIMUM DIAMETER EXCEPT IN AREA OF SEAL.

