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MEDIUM-MU TWIN TRIODEFOR "ON-OFF" CONTROL APPLICATIONS INVOLVING
LONG PERIODS OF OPERATION UNDER CUTOFF CONDITIONS**GENERAL DATA****Electrical:**

Heater, for Unipotential Cathode:

Voltage. 6.3 $\pm$ 10% ac or dc volts

Current. 0.45 amp

Microphonism Not Tested

Direct Interelectrode Capacitances (Approx.):^o

Each Unit:

Grid to Plate. 1.3 $\mu\mu\text{f}$ Grid to Cathode and Heater 2.1 $\mu\mu\text{f}$ Plate to Cathode and Heater. 0.4 $\mu\mu\text{f}$

Grid of Unit No.1 to

Grid of Unit No.2 0.4 max. $\mu\mu\text{f}$ ^o with no external shielding.**Characteristics, Class A Amplifier (Each Unit, with
both units operating):**

Plate Voltage. 100 volts

Cathode-Bias Resistor[•] 50 ohms

Amplification Factor 39

Plate Resistance 6500 ohms

Transconductance 6000 μmhos

Plate Current. 9.5 ma

Mechanical:

Mounting Position. Any

Maximum Overall Length 2-1/8"

Maximum Seated Length. 1-7/8"

Length, Base Seat to Bulb Top (Excluding tip). 1-1/2" $\pm$ 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

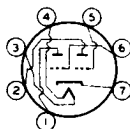
Base Small-Button Miniature 7-Pin

Basing Designation for BOTTOM VIEW 7BF

Pin 1 - Plate of
Triode No.2Pin 2 - Plate of
Triode No.1

Pin 3 - Heater

Pin 4 - Heater

Pin 5 - Grid of
Triode No.1Pin 6 - Grid of
Triode No.2

Pin 7 - Cathode

**FREQUENCY DIVIDER IN COMPUTER SERVICE
& "ON-OFF" CONTROL SERVICE***Values are for each unit***Maximum Ratings, Absolute Values:**

PLATE VOLTAGE. 250 max. volts

[•] common to both units.

SEPT. 1, 1950

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

TENTATIVE DATA



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MEDIUM-MU TWIN TRIODE

GRID VOLTAGE:

Negative bias value.	100 max.	volts
Positive bias value.	0 max.	volts
Peak negative value.	200 max.	volts
PLATE DISSIPATION.	1.5 max.	watts
GRID INPUT	0.1 max.	watt
DC CATHODE CURRENT*.	15 max.	ma
PEAK CATHODE CURRENT*.	75 max.	ma

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode.	90 max.	volts
Heater positive with respect to cathode.	90 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	150 max.	°C

Typical Operation as Frequency Halfer (Each Unit):

	Cutoff Condition	Zero-Bias Condition	
Plate-Supply Voltage	150	150	volts
Plate-Circuit Resistance	20000	20000	ohms
Grid-Supply Voltage.	-10	0	volts
Grid-Circuit Resistance.	47000	47000	ohms
Plate Current.	0	5	ma

Maximum Circuit Values:

Grid-Circuit Resistance:

For fixed-bias operation	0.5 max.	megohm
For cathode-bias operation	1.0 max.	megohm

RANGE VALUES FOR EQUIPMENT DESIGN

Cutoff Condition	Note	Min.	Max.	
Plate Current (Each Unit). 1	-	-	0.2	ma
Difference in Plate Current Between Units. . -	-	-	0.2	ma
Zero-Bias Condition				
Plate Current (Each Unit). 2	-	4.3	5.7	ma
Difference in Plate Current Between Units. . -	-	-	1.4	ma

Note 1: For conditions with 6.3 volts on heater, plate-supply volts = 150, plate-circuit resistance (ohms) = 20000, grid-supply volts = -10, and grid-circuit resistance (ohms) = 47000.

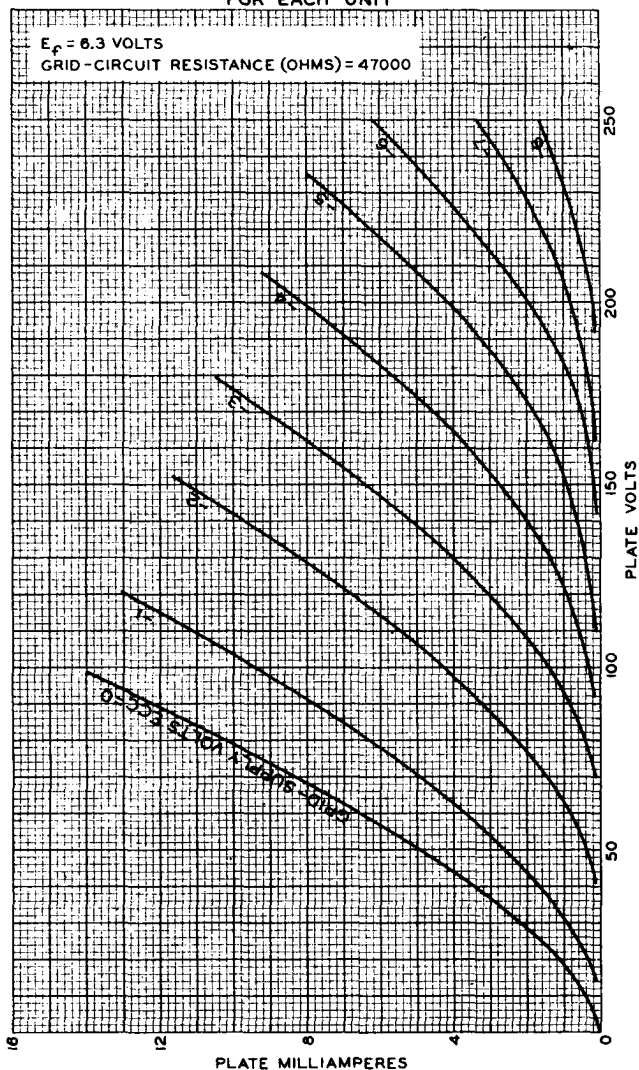
Note 2: Conditions are same as for Note 1 except that grid-supply volts = 0.

* With both units operating, the dc cathode current should not exceed 30 milliamperes, and the peak cathode current should not exceed 150 milliamperes.



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AVERAGE OPERATION CHARACTERISTICS
FOR EACH UNIT

MAY 31, 1950

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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