



5618

VHF POWER PENTODE

MINIATURE TYPE

5618

GENERAL DATA**Electrical:**

Filament, Coated:

<i>Filament Arrangement</i>	<i>Series*</i>	<i>Parallel**</i>	
Voltage.	6.0 $\pm$ 10%	3.0 $\pm$ 10%	ac or dc volts
Current.	0.23	0.46	amp

Direct Interelectrode Capacitances:⁰

Grid No.1 to Plate . . .	0.24		μ mf
Input.	7.0		μ mf
Output	5.0		μ mf

⁰ With no external shield.**Mechanical:**Mounting Position. Vertical, or Horizontal with pins
No.1 & No.5 in a horizontal plane

Maximum Overall Length 2-5/8"

Maximum Seated Length. 2-3/8"

Length from Base Seat to Bulb Top (excluding tip). . . 2" $\pm$ 3/32"

Maximum Diameter 3/4"

Bulb T-5-1/2

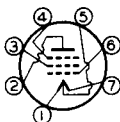
Base Small-Button Miniature 7-Pin

Basing Designation for BOTTOM VIEW 7CU

Pin 1-Filament (-)

Pin 2-Plate

Pin 3-Grid No.2

Pin 4-Grid No.3,
Int. Shield

Pin 5-Filament

Mid-Tap

Pin 6-Grid No.1

Pin 7-Filament (+)

AF POWER AMPLIFIER & MODULATOR—Class A₁**Maximum ICAS⁰⁰ Ratings, Absolute Values:**

DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE.	125 max.	volts
GRID-No.2 INPUT.	2 max.	watts
PLATE DISSIPATION.	5 max.	watts

Typical Operation:

<i>Filament Arrangement</i>	<i>Series*</i>	<i>Parallel**</i>	
DC Plate Voltage	250	250	volts
DC Grid-No.3 Voltage	0*	0**	volts
DC Grid-No.2 Voltage	75	75	volts
DC Grid-No.1 (Control- Grid) Voltage [■]	-8	-8	volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage.	8	8	volts

*, **, ⁰⁰, [■]: See next page.

OCTOBER 15, 1947

TUBE DEPARTMENT

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

5618



5618

VHF POWER PENTODE

Zero-Signal DC Plate Current . . .	16	19	ma
Max.-Signal DC Plate Current . . .	17.5	20.5	ma
Zero-Signal DC Grid-No.2 Current . . .	1.5	2.0	ma
Max.-Signal DC Grid-No.2 Current . . .	3.5	4.5	ma
Transconductance	3500	3600	μ mhos
Effective Load Resistance (plate to plate) . . .	12000	12000	ohms
Total Harmonic Distortion . . .	10	10	%
Max.-Signal Power Output . . .	1.2	1.4	watts

Circuit Values:

Grid-No.1-Circuit Resistance	{	5000 min.	ohms
		100000 max.	ohms

RF POWER AMPLIFIER & OSCILLATOR—Class C Telegraphy^{aa}

and

RF POWER AMPLIFIER—Class C FM Telephony**Maximum ICAS^{aa} Ratings, Absolute Values:**

DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	125 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-125 max.	volts
DC PLATE CURRENT	30 max.	ma
DC GRID-No.1 CURRENT	3 max.	ma
PLATE INPUT	7.5 max.	watts
GRID-No.2 INPUT	2 max.	watts
PLATE DISSIPATION	5 max.	watts

Typical Operation:^a

	Up to 40 Mc	At 80 Mc	
DC Plate Voltage	300	300	volts
DC Grid-No.3 Voltage ^a	0	0	volts
DC Grid-No.2 Voltage ^a	{ 75	75	volts
	32000	32000	ohms
DC Grid-No.1 Voltage ^{aa}	{ -45	-45	volts
	30000	30000	ohms
	1400	1400	ohms
Peak RF Grid-No.1 Voltage	65	65	volts
DC Plate Current	25	25	ma
DC Grid-No.2 Current	7	7	ma
DC Grid-No.1 Current (Approx.)	1.5	1.5	ma
Driving Power (Approx.)	0.2	0.3	watt
Power Output (Approx.) ♦	5.4	5.2	watts

Circuit Values:

Grid-No.1-Circuit Resistance	{	5000 min.	ohms
		100000 max.	ohms

♦ Useful power output is approximately 5.0 watts for 40 Mc and 4.5 watts for 80 Mc.

* , ** , ● , □ , ■ , ■ , ⊕ : See next page.

OCTOBER 15, 1947

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TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



5618

5618

VHF POWER PENTODE

FREQUENCY MULTIPLIER

Maximum ICAS** Ratings, Absolute Values:

DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE.	125 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE.	-125 max.	volts
DC PLATE CURRENT	30 max.	ma
DC GRID-No.1 CURRENT	3 max.	ma
PLATE INPUT.	7.5 max.	watts
GRID-No.2 INPUT.	2 max.	watts
PLATE DISSIPATION.	5 max.	watts

Typical Operation:*

	<u>Doubler</u> to 80 Mc	<u>Tripler</u> to 80 Mc	
DC Plate Voltage	300	300	volts
DC Grid-No.3 Voltage*	0	0	volts
DC Grid-No.2 Voltage [‡]	75	75	volts
	41000	41000	ohms
DC Grid-No.1 Voltage [‡]	-125	-125	volts
	68000	68000	ohms
Peak RF Grid-No.1 Voltage.	160	160	volts
DC Plate Current	25	25	ma
DC Grid-No.2 Current	5.5	5.5	ma
DC Grid-No.1 Current (Approx.)	1.85	1.85	ma
Driving Power (Approx.)	0.75	0.75	watt
Power Output (Approx.) ^{‡‡}	4.2	3.4	watts

Circuit Values:

Grid-No.1-Circuit Resistance	{ 5000 min. ohms 100000 max. ohms
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‡ Useful power output is approximately 3.5 watts for doubler service and 2.7 watts for tripler operation.

* For series filament arrangement, filament voltage is applied between pins No.1 and No.7. The grid-No.1 voltage is referred to pin No.1, and grid-No.3 (pin No.4) is connected to pin No.1.

** For parallel filament arrangement, filament voltage is applied between pin No.5 and pins No.1 and No.7 connected together. The grid-No.1 voltage is referred to pin No.5 and grid No.3 (pin No.4) is connected to pin No.5.

‡ Intermittent Commercial and Amateur Service.

‡ For dc filament supply.

‡ Obtained from a fixed supply or by a grid-No.1 resistor (30000) or cathode resistor (1400).

‡ Obtained from a separate source, or from the plate voltage supply with a voltage divider. Series screen resistor of value shown should be used only where the 5618 is employed as a buffer amplifier and is not keyed.

‡ Key-down conditions per tube without amplitude modulation. Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

‡ Filament may be connected in either parallel or series arrangement. With parallel connection, grid No.3 (pin No.4) is connected to pin No.5; for series operation, connect pin No.4 to pin No.1.

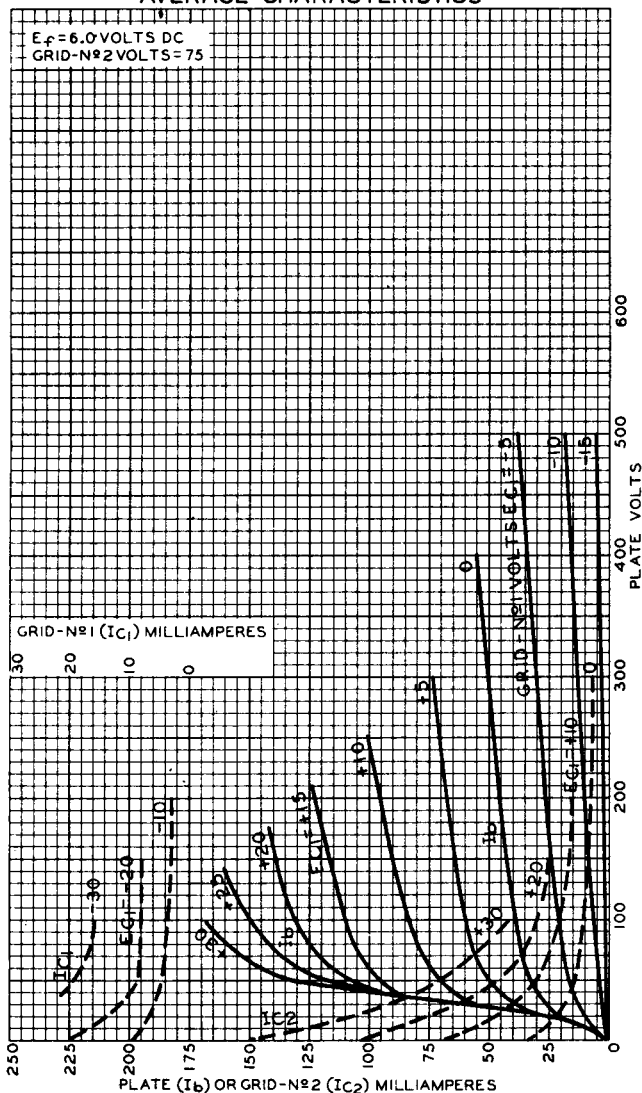
‡ Obtained from a fixed supply, or by a grid-No.1 resistor of value shown.



5618

5618

AVERAGE CHARACTERISTICS



AUG. 1, 1947

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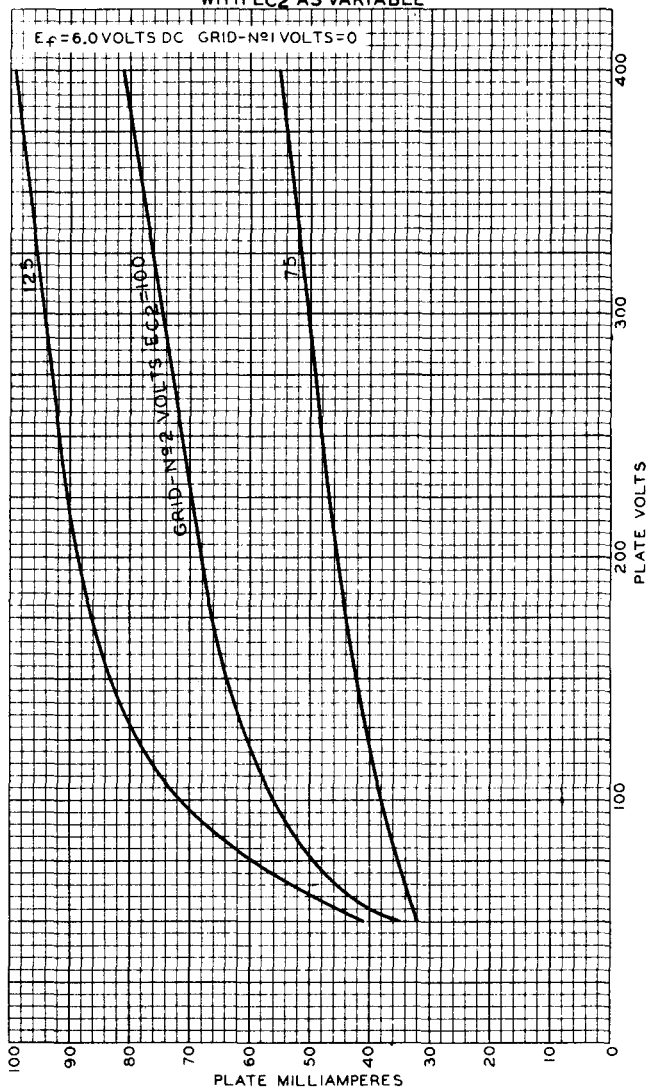
92CM-6881

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5618



5618

AVERAGE PLATE CHARACTERISTICS
WITH E_{C2} AS VARIABLE

AUG. 12, 1947

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92CM-6882