



5618

VHF POWER PENTODE

MINIATURE TYPE

5618

GENERAL DATA

Electrical:

Filament, Coated:

Filament Arrangement	Series*	Parallel**	
Voltage	6.0 ± 10%	3.0 ± 10%	ac or dc volts
Current	0.23	0.46	amp

Direct Interelectrode Capacitances:⁰

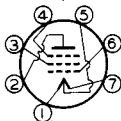
Grid No.1 to Plate	0.24		μf
Input	7.0		μf
Output	5.0		μf

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" ± 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:

Filament Arrangement	Series*	Parallel**
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.

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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	μmhos
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^{bb} 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:^c

	<i>Up to</i> 40 Mc	<i>At</i> 80 Mc	
DC Plate Voltage	300	300	volts
DC Grid-No.3 Voltage ^d	0	0	volts
DC Grid-No.2 Voltage ^e	{ 75	75	volts
	{ 32000	32000	ohms
DC Grid-No.1 Voltage ^{ffg}	{ -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.) ^h	5.4	5.2	watts

Circuit Values:

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

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

^a, ^{bb}, ^{cc}, ^{dd}, ^{ee}, ^{ff}, ^{gg}, ^h: See next page.

OCTOBER 15, 1947

TUBE DEPARTMENT

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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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:*

	<i>Doubler</i> <u>to 80 Mc</u>	<i>Tripler</i> <u>to 80 Mc</u>	
DC Plate Voltage	300	300	volts
DC Grid-No.3 Voltage [Ⓟ]	0	0	volts
DC Grid-No.2 Voltage [Ⓟ]	75	75	volts
DC Grid-No.1 Voltage [Ⓟ]	41000	41000	ohms
	-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

Ⓜ 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.

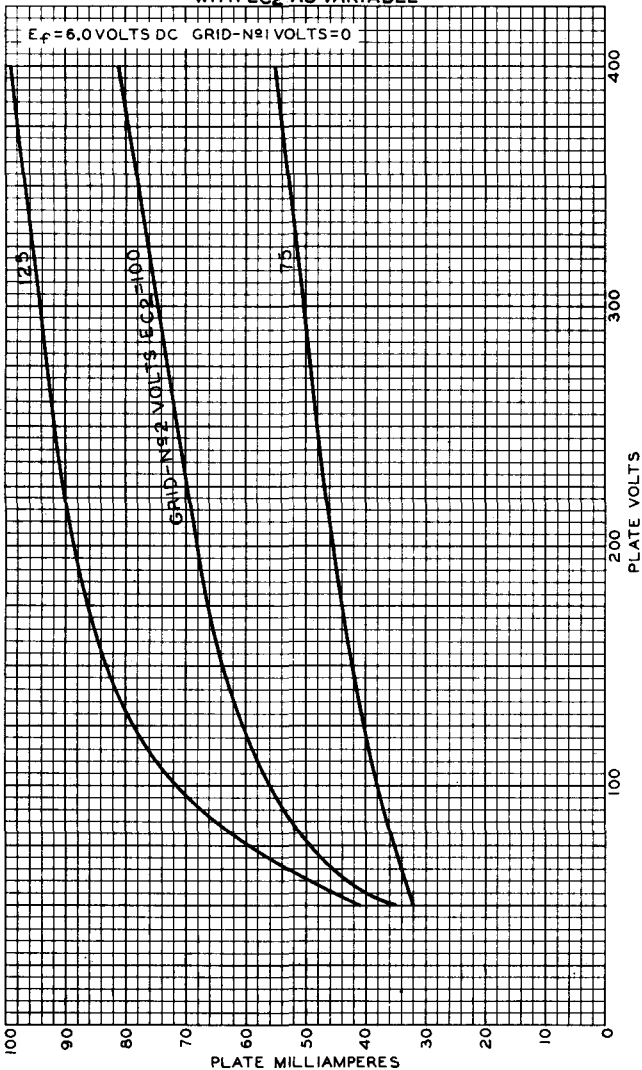
Ⓟ Obtained from a fixed supply, or by a grid-No.1 resistor of value shown.

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AVERAGE PLATE CHARACTERISTICS WITH E_{C2} AS VARIABLE



AUG. 12, 1947

TUBE DEPARTMENT

92CM-6882

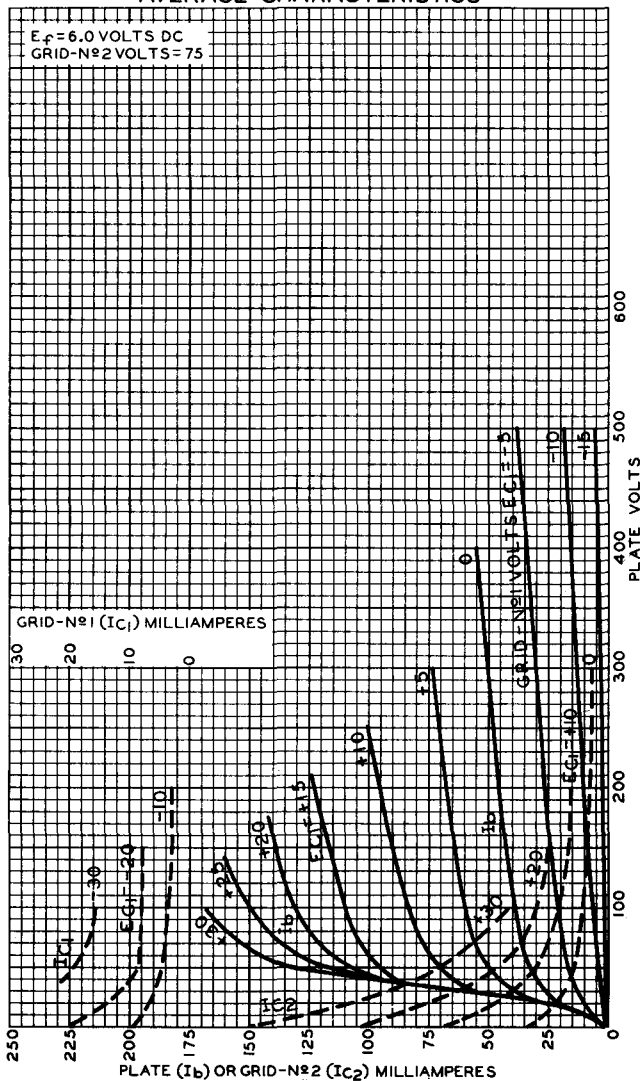
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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AVERAGE CHARACTERISTICS



AUG. 1, 1947

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