

Power Pentode

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC) $6.3 \pm 10\%$ volts

Current at 6.3 volts. 0.76 amp

Direct Interelectrode Capacitances:^aGrid No.1 to plate. 0.14 max. μf Grid No.1 to cathode, grid No.3
& internal shield, grid No.2,
and heater. 10 μf Plate to cathode, grid No.3
& internal shield, grid No.2,
and heater. 7 μf Characteristics, Class A₁ Amplifier:

Plate Supply Voltage. 250 volts

Grid-No.2 Supply Voltage. 250 volts

Cathode Resistor. 135 ohms

Mu-Factor, Grid No.2 to Grid No.1 19

Plate Resistance (Approx.). 38000 ohms

Transconductance. 11300 μmhos

Plate Current 48 ma

Grid-No.2 Current 5.5 ma

Mechanical:

Operating Position. Any

Maximum Overall Length. 3-1/16"

Maximum Seated Length. 2-13/16"

Length, Base Seat to Bulb Top (Excluding tip) . . 2-7/16" $\pm$ 3/32"

Diameter. 0.750" to 0.875"

Dimensional Outline See *General Section*

Bulb. T6-1/2

Base. Small-Button Noval 9-Pin (JEDEC No.E9-1)

Basing Designation for BOTTOM VIEW. 9GK

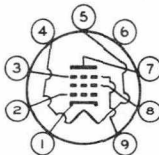
Pin 1-Cathode

Pin 2-Grid No.1

Pin 3-Grid No.3,
Internal
Shield

Pin 4-Heater

Pin 5-Heater

Pin 6-No Con-
nection

Pin 7-Plate

Pin 8-Grid No.2

Pin 9-Grid No.3,
Internal
ShieldAF POWER AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

PLATE SUPPLY VOLTAGE. 600 max. volts

PLATE VOLTAGE 330 max. volts

GRID-No.2 SUPPLY VOLTAGE. 600 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE 330 max. volts



6GK6

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Negative-bias value 100 max. volts

CATHODE CURRENT 65 max. ma

GRID-No.2 INPUT:

Peak. 4 max. watts

Average 2 max. watts

PLATE DISSIPATION 13.2 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . 100 max. volts

Heater positive with respect to cathode. . 100 max. volts

Typical Operation:

Plate Supply Voltage. 250 volts

Grid-No.2 Supply Voltage. 250 volts

Cathode Resistor. 135 ohms

Peak AF Grid-No.1 Voltage 7.3 volts

Zero-Signal Plate Current 48 ma

Max.-Signal Plate Current 50.6 ma

Zero-Signal Grid-No.2 Current 5.5 ma

Max.-Signal Grid-No.2 Current 10 ma

Effective Load Resistance 5200 ohms

Total Harmonic Distortion 10 %

Max.-Signal Power Output. 5.7 watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation. 0.3 max. megohm

For cathode-bias operation. 1 max. megohm

PUSH-PULL AF POWER AMPLIFIER — Class AB₁

Maximum Ratings, Design-Maximum Values:

PLATE SUPPLY VOLTAGE. 600 max. volts

PLATE VOLTAGE 330 max. volts

GRID-No.2 SUPPLY VOLTAGE. 600 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE 330 max. volts

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Negative-bias value 100 max. volts

CATHODE CURRENT 65 max. ma

GRID-No.2 INPUT:

Peak. 4 max. watts

Average 2 max. watts

PLATE DISSIPATION 13.2 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. . 100 max. volts

Heater positive with respect to cathode. . 100 max. volts

Typical Operation:

Values are for 2 tubes

Plate Supply Voltage. 250 300 volts

Grid-No.2 Supply Voltage. 250 300 volts

Cathode Resistor. 130 130 ohms

Peak AF Grid-No.1-to-Grid-No.1 Voltage. . 22.4 28 volts

Zero-Signal Plate Current 62 72 ma



Max.-Signal Plate Current	75	92	ma
Zero-Signal Grid-No.2 Current	7	8	ma
Max.-Signal Grid-No.2 Current	15	22	ma
Effective Load Resistance (Plate to plate).	8000	8000	ohms
Total Harmonic Distortion	3	4	%
Max.-Signal Power Output.	11	17	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation.	0.3 max.	megohm
For cathode-bias operation.	1 max.	megohm

PUSH-PULL AF POWER AMPLIFIER — Class B

Maximum Ratings, Design-Maximum Values:

PLATE SUPPLY VOLTAGE.	600 max.	volts
PLATE VOLTAGE	330 max.	volts
GRID-No.2 SUPPLY VOLTAGE.	600 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	330 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Negative-bias value	100 max.	volts
CATHODE CURRENT	65 max.	ma
GRID-No.2 INPUT:		
Peak.	4 max.	watts
Average	2 max.	watts
PLATE DISSIPATION	13.2 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.	100 max.	volts
Heater positive with respect to cathode.	100 max.	volts

Typical Operation:

Values are for 2 tubes

Plate Voltage	250	300	volts
Grid-No.2 Voltage	250	300	volts
Grid-No.1 Voltage	-11.6	-14.7	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage.	22.4	28	volts
Zero-Signal Plate Current	20	15	ma
Max.-Signal Plate Current	75	92	ma
Zero-Signal Grid-No.2 Current	2.2	1.6	ma
Max.-Signal Grid-No.2 Current	15	22	ma
Effective Load Resistance (Plate to plate).	8000	8000	ohms
Total Harmonic Distortion	3	4	%
Max.-Signal Power Output.	11	17	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

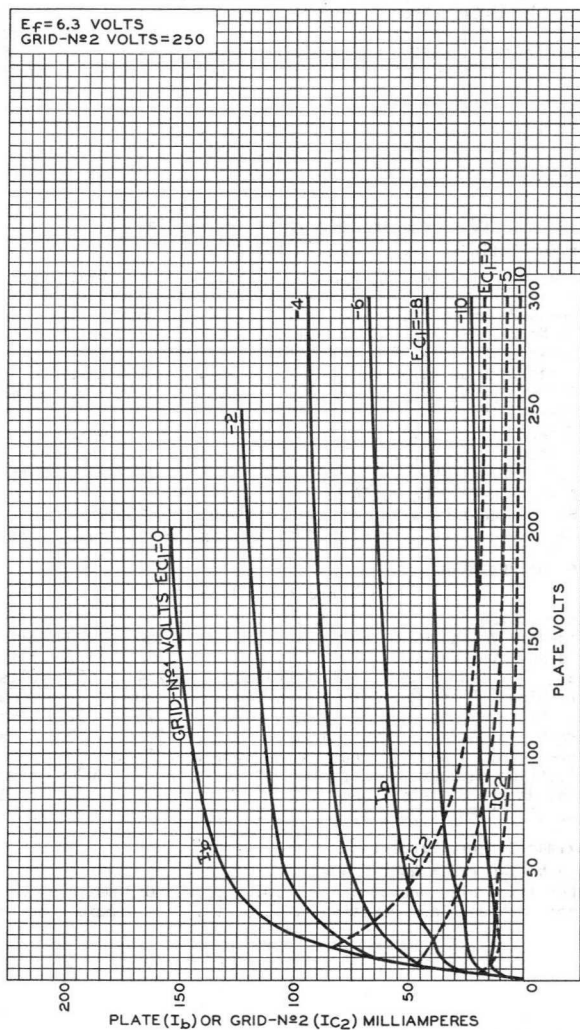
For fixed-bias operation.	0.3 max.	megohm
For cathode-bias operation.	1 max.	megohm

^a Without external shield.



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AVERAGE CHARACTERISTICS

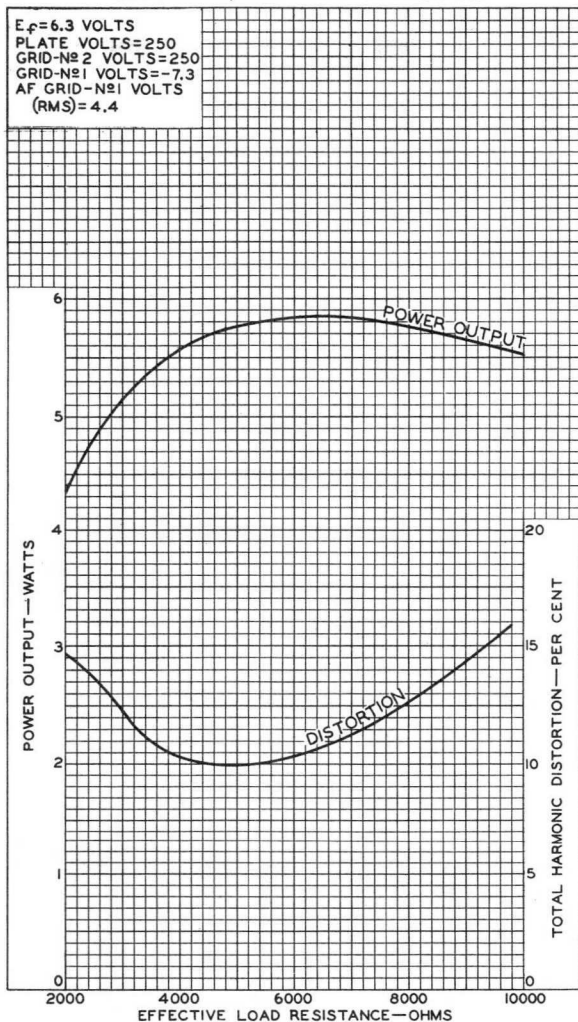


92CM-9903



OPERATION CHARACTERISTICS

$E_c = 6.3$ VOLTS
 PLATE VOLTS = 250
 GRID-N₂ VOLTS = 250
 GRID-N₁ VOLTS = -7.3
 AF GRID-N₁ VOLTS
 (RMS) = 4.4



92CM-9902



