

588I

BEAM POWER TUBE

For audio-frequency power amplifier applications

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage 6.3 ac or dc volts
Current 0.9 amp

Mechanical:
Mounting Position Any
Maximum Overall Length 3-15/32"
Maximum Seated Length 2-29/32"
Maximum Diameter 1-7/16"
Bulb T11
Base Short Intermediate-Shell Octal 7-Pin
with External Barriers JETEC No. B7-59

Basing Designation for BOTTOM VIEW 70C

AF POWER AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:
PLATE VOLTAGE 400 max. volts
GRID-No.2 (SCREEN-GRID) VOLTAGE 400 max. volts
GRID-No.2 INPUT 3 max. watts
PLATE DISSIPATION 23 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode 200 max. volts
Heater positive with respect to cathode 200 max. volts

Typical Operation and Characteristics:

Plate Voltage 250 300 350 volts
Grid-No.2 Voltage 250 200 250 volts
Grid-No.1 (Control-Grid) Voltage 250 200 250 volts
Peak AF Grid-No.1 Voltage -14 -12.5 -18 volts
Zero-Signal Plate Current 70 55 58 ma
Max-Signal Plate Current 80 55 65 ma
Zero-Signal Grid-No.2 Current 4.3 2.5 2.5 ma
Max-Signal Grid-No.2 Current 7.6 4.7 8.5 ma
Plate Resistance (Approx.) 30000 35000 48000 ohms
Transconductance 6100 5300 5200 μhos
Load Resistance 2500 4500 4200 ohms
Total Harmonic Distortion 10 11 13 %
Max-Signal Power Output 6.7 6.5 11.3 watts

Maximum Circuit Values:

Unless otherwise specified, values are for 2 tubes

Plate Voltage 250 270 volts
Grid-No.2 Voltage 250 270 volts
Grid-No.1 (Control-Grid) Voltage -16 -17.5 volts
Resistive Grid-No.1-to-Grid-No.2 Voltage 32 35 volts

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Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
For fixed-bias operation 0.1 max. megohm
For cathode-bias operation 0.5 max. megohm

AF POWER AMPLIFIER - Class A₁

Triode Connection - Grid No.2 Connected to Plate

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 400 max. volts
PEAK HEATER-CATHODE VOLTAGE 26 max. watts

PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode 200 max. volts
Heater positive with respect to cathode 200 max. volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
For fixed-bias operation 0.1 max. megohm
For cathode-bias operation 0.5 max. megohm

Typical Operation and Characteristics:

Plate Voltage 250 300 350 volts
Grid-No.2 Voltage 250 200 250 volts
Grid-No.1 (Control-Grid) Voltage 250 200 250 volts
Peak AF Grid-No.1 Voltage -14 -12.5 -18 volts
Zero-Signal Plate Current 70 55 58 ma
Max-Signal Plate Current 80 55 65 ma
Zero-Signal Grid-No.2 Current 4.3 2.5 2.5 ma
Max-Signal Grid-No.2 Current 7.6 4.7 8.5 ma
Plate Resistance (Approx.) 30000 35000 48000 ohms
Transconductance 4000 4000 4000 μhos
Load Resistance 2500 4500 4200 ohms
Total Harmonic Distortion 6 5.5 %
Max-Signal Power Output 1.4 1.8 watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
For fixed-bias operation 0.1 max. megohm
For cathode-bias operation 0.5 max. megohm

PUSH-PULL AF POWER AMPLIFIER - Class A₁

Values are for 2 tubes

PLATE VOLTAGE 400 max. volts
GRID-No.2 (SCREEN-GRID) VOLTAGE 400 max. volts
GRID-No.2 INPUT 3 max. watts
PLATE DISSIPATION 23 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode 200 max. volts
Heater positive with respect to cathode 200 max. volts

Typical Operation:

Unless otherwise specified, values are for 2 tubes

Plate Voltage 250 270 volts
Grid-No.2 Voltage 250 270 volts
Grid-No.1 (Control-Grid) Voltage -16 -17.5 volts
Resistive Grid-No.1-to-Grid-No.2 Voltage 32 35 volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:
For fixed-bias operation 0.1 max. megohm
For cathode-bias operation 0.5 max. megohm

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PUSH-PULL AF POWER AMPLIFIER - Class AB₁

Triode Connection - Grid No.2 Connected to Plate

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 400 max. volts

PLATE DISSIPATION 26 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode 200 max. volts

Heater positive with respect to cathode 200 max. volts

Typical Operation:

Values are for 2 tubes

Plate Voltage 400 volts

Grid-No.1 (Control-Grid) Voltage -45 volts

Peak AF Grid-No.1-to-Grid-No.1 Voltage 90 volts

Zero-Signal Plate Current 65 ma

Max-Signal Plate Current 130 ma

Effective Load Resistance

(Plate to plate) 4000 ohms

Total Harmonic Distortion 4.4 %

Max-Signal Power Output 13.3 watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For fixed-bias operation 0.1 max. megohm

For cathode-bias operation 0.5 max. megohm

PUSH-PULL AF POWER AMPLIFIER - Class AB₂

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 400 max. volts

GRID-No.2 (SCREEN-GRID) VOLTAGE 400 max. volts

GRID-No.2 INPUT 3 max. watts

PLATE DISSIPATION 23 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode 200 max. volts

Heater positive with respect to cathode 200 max. volts

Typical Operation:

Values are for 2 tubes

Plate Voltage 360 350 volts

Grid-No.2 Voltage 225 270 volts

Grid-No.1 (Control-Grid) Voltage -18 -22.5 volts

Peak AF Grid-No.1-to-Grid-No.1

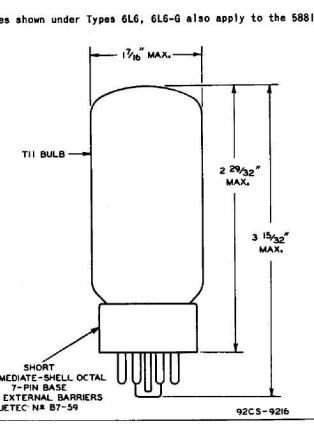
Voltage 72 72 volts

Zero-Signal Plate Current 52 72 ma

Zero-Signal Plate Current 78 88 ma

The type of input coupling used should not introduce too much resistance in the grid-to-grid circuit. Transformer- or impedance-matching devices are recommended.

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