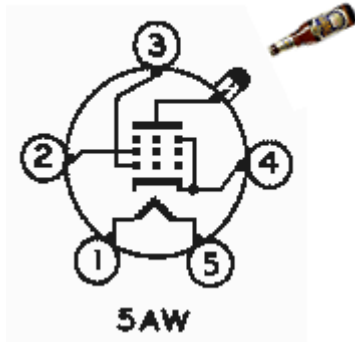


THE INFAMOUS 807

807 Beer Beam Power Tube



Application

Heater-cathode type used as af

power amplifier and modulator and as rf power amplifier and oscillator. May be used with full input up to 60 MHz. For class C telegraphy operation at 80 MHz, plate voltage and input should be reduced to 80 % of maximum ratings; at 125 MHz to 55 %. Class C telegraphy maximum plate dissipation, CCS 25 Watts, ICAS 30 Watts, BINGE 3 pints. Requires substantial quantities of beer and a small 5-contact socket and may be operated in almost any position. Plate shows a rich amber color when tube is operated at maximum CCS, ICAS or BINGE ratings. Exceeding ratings can cause a malt down.



Mechanical Data

Bulb ST-16
 Base Medium Shell Small 5-Pin
 Outline 16-2 with enlarged belly
 EIEIOA Base 5AW
 Pop Top Cap Small
 Mounting Position Upright
 Drinking Position Any

Electrical Data

Heater Characteristics

Heater Voltage 6.3 Volts
 Heater Current 0.9 Amperes
 Maximum Heater-Cathode Voltage
 Heater Positive with Respect to Cathode 135 Volts

Heater Negative with Respect to Cathode 135 Volts
Fill Rate07 lph

Direct Interelectrode Capacitances (approx)

Pentode

Input 12 pf
Output 7 pf
Grid to Plate 0.2 pf
Envelope capacity 0.2 pints

Maximum Ratings (Design Center Values)

Pentode

Plate Voltage 750 Volts
Grid No. 2 Supply Voltage 400 Volts
Grid No. 2 Voltage 300 Volts
Negative Grid No. 1 Voltage -200 Volts
Plate Dissipation 30 Watts
Grid No. 2 Dissipation 3.5 Watts
Cathode Current 120 Ma.
Alcohol content 6%

Characteristics and Typical Operation

Class C Amplifier (CCS)

Plate Voltage 400 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 19K Ohms
Grid No. 1 Voltage -45 Volts
Peak Grid No. 1 Voltage 65 Volts
Grid No. 1 Current 4 Ma.
Plate Current (Zero Signal) 100 Ma.
Grid No. 2 Current (Zero Signal) 8 Ma.
Driving Power 0.3 Watts
Power Output (approx) 35 Watts
Beer consumption015 pints/watt

Class C Amplifier (CCS)

Plate Voltage 500 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 31K Ohms
Grid No. 1 Voltage -45 Volts
Peak Grid No. 1 Voltage 65 Volts
Grid No. 1 Current 4 Ma.
Plate Current (Zero Signal) 100 Ma.
Grid No. 2 Current (Zero Signal) 8 Ma.
Driving Power 0.3 Watts

Power Output (approx) 32 Watts
Beer consumption011 pints/watt

Class C Amplifier (CCS)

Plate Voltage 600 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 44K Ohms
Grid No. 1 Voltage -45 Volts
Peak Grid No. 1 Voltage 65 Volts
Grid No. 1 Current 4 Ma.
Plate Current (Zero Signal) 100 Ma.
Grid No. 2 Current (Zero Signal) 8 Ma.
Driving Power 0.4 Watts
Power Output (approx) 40 Watts
Beer consumption019 pints/watt

Class C Amplifier (ICAS)

Plate Voltage 750 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 62K Ohms
Grid No. 1 Voltage -45 Volts
Peak Grid No. 1 Voltage 65 Volts
Grid No. 1 Current 4 Ma.
Plate Current (Zero Signal) 100 Ma.
Grid No. 2 Current (Zero Signal) 8 Ma.
Driving Power 0.3 Watts
Power Output (approx) 54 Watts
Beer consumption025 pints/watt

Class C Modulated Amplifier (CCS)

Plate Voltage 325 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 12.5K Ohms
Grid No. 1 Voltage -75 Volts
Peak Grid No. 1 Voltage 95 Volts
Grid No. 1 Current 3.5 Ma.
Plate Current (Zero Signal) 80 Ma.
Grid No. 2 Current (Zero Signal) 6 Ma.
Driving Power 0.3 Watts
Power Output (approx) 17 Watts
Beer consumption010 pints/watt

Class C Modulated Amplifier (CCS)

Plate Voltage 400 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 25K Ohms
Grid No. 1 Voltage -75 Volts
Peak Grid No. 1 Voltage 95 Volts
Grid No. 1 Current 3.5 Ma.
Plate Current (Zero Signal) 80 Ma.

Grid No. 2 Current (Zero Signal) 6 Ma.
Driving Power 0.3 Watts
Power Output (approx) 22 Watts
Beer consumption012 pints/watt

Class C Modulated Amplifier (CCS)

Plate Voltage 475 Volts
Grid No. 2 Voltage 250 Volts
Grid No. 2 Dropping Resistor 28K Ohms
Grid No. 1 Voltage -85 Volts
Peak Grid No. 1 Voltage 108 Volts
Grid No. 1 Current 4 Ma.
Plate Current (Zero Signal) 83 Ma.
Grid No. 2 Current (Zero Signal) 8 Ma.
Driving Power 0.4 Watts
Power Output (approx) 28 Watts
Beer consumption014 pints/watt

Class C Modulated Amplifier (Plate - ICAS)

Plate Voltage 600 Volts
Grid No. 2 Voltage 300 Volts
Grid No. 2 Dropping Resistor 37.5K Ohms
Grid No. 1 Voltage -85 Volts
Peak Grid No. 1 Voltage 107 Volts
Grid No. 1 Current 4 Ma.
Plate Current (Zero Signal) 100 Ma.
Grid No. 2 Current (Zero Signal) 8 Ma.
Driving Power 0.4 Watts
Power Output (approx) 44 Watts
Beer consumption023 pints/watt

Push Pull Class AB2 Amplifier (CCS)

Plate Voltage 400 Volts
Grid No. 2 Voltage 300 Volts
Grid No. 1 Voltage -28 Volts
Peak Grid No. 1 Voltage 80 Volts
Plate Current (Zero Signal) 72 Ma.
Plate Current (Maximum Signal) 240 Ma.
Grid No. 2 Current (Zero Signal) 2 Ma.
Grid No. 2 Current (Maximum Signal) 20 Ma.
Driving Power 0.2 Watts
Load Resistance 3.7K Ohms
Power Output (approx) 55 Watts
Beer consumption026 pints/watt

Push Pull Class AB2 Amplifier (CCS)

Plate Voltage 500 Volts
Grid No. 2 Voltage 300 Volts
Grid No. 1 Voltage -30 Volts
Peak Grid No. 1 Voltage 86 Volts

Plate Current (Zero Signal) 60 Ma.
Plate Current (Maximum Signal) 240 Ma.
Grid No. 2 Current (Zero Signal) 0.9 Ma.
Grid No. 2 Current (Maximum Signal) 20 Ma.
Driving Power 0.2 Watts
Load Resistance 4.6K Ohms
Power Output (approx) 75 Watts
Beer consumption045 pints/watt

Push Pull Class AB2 Amplifier (CCS)

Plate Voltage 600 Volts
Grid No. 2 Voltage 300 Volts
Grid No. 1 Voltage -32 Volts
Peak Grid No. 1 Voltage 80 Volts
Plate Current (Zero Signal) 48 Ma.
Plate Current (Maximum Signal) 200 Ma.
Grid No. 2 Current (Zero Signal) 0.7 Ma.
Grid No. 2 Current (Maximum Signal) 18 Ma.
Driving Power 0.1 Watts
Load Resistance 6.9K Ohms
Power Output (approx) 80 Watts
Beer consumption065 pints/watt

Push Pull Class AB2 Amplifier (ICAS)

Plate Voltage 750 Volts
Grid No. 2 Voltage 300 Volts
Grid No. 1 Voltage -35 Volts
Peak Grid No. 1 Voltage 96 Volts
Plate Current (Zero Signal) 30 Ma.
Plate Current (Maximum Signal) 240 Ma.
Grid No. 2 Current (Zero Signal) 0.55 Ma.
Grid No. 2 Current (Maximum Signal) 10 Ma.
Driving Power 0.2 Watts
Load Resistance 6.95K Ohms
Power Output (approx) 120 Watts
Beer consumption12 pints/watt - (*have reserve beer on hand*)

Push Pull Class B Amplifier

Plate Voltage 750 Volts
Grid No. 1 Voltage 0 Volts
Peak Grid No. 1 Voltage 555 Volts
Plate Current (Zero Signal) 15 Ma.
Plate Current (Maximum Signal) 240 Ma.
Driving Power 5.3 Watts
Load Resistance 6.65K Ohms
Power Output (approx) 120 Watts
Beer consumption12 pints/watt - (*have reserve beer on hand*)

Class AB1 Amplifier

Plate Voltage 600 Volts

Grid No. 2 Voltage 300 Volts
Grid No. 1 Voltage -34 Volts
Peak Grid No. 1 Voltage 34 Volts
Plate Current (Zero Signal) 18 Ma.
Plate Current (Maximum Signal) 70 Ma.
Grid No. 2 Current (Zero Signal) 0.3 Ma.
Grid No. 2 Current (Maximum Signal) 8 Ma.
Driving Power 0 Watts
Power Output (approx) 28 Watts
Beer consumption014 pints/watt

Class AB1 Amplifier

Plate Voltage 750 Volts
Grid No. 2 Voltage 300 Volts
Grid No. 1 Voltage -35 Volts
Peak Grid No. 1 Voltage 35 Volts
Plate Current (Zero Signal) 15 Ma.
Plate Current (Maximum Signal) 70 Ma.
Grid No. 2 Current (Zero Signal) 0.3 Ma.
Grid No. 2 Current (Maximum Signal) 8 Ma.
Driving Power 0 Watts
Power Output (approx) 36 Watts
Beer consumption018 pints/watt