METAL CERAMIC MINIATURE BEAM POWER AMPLIFIER

MECHANICAL DATA

Bulb Temperature: 500° max.
Overall Length: 2-13/16 inches max.
Seated Height: 2-3/32 inches max.
Diameter: 3/4 inches max.
Base: Seven-pin miniature
Mounting Position: Any

Pin Connections
Pin | Element
---|---
1  | Cathode and Grid Number 3
2  | Heater
3  | Grid Number 2 (Screen)
4  | No connection
5  | Cathode and Grid Number 3
6  | Heater
7  | Grid Number 1
Bulb | Plate

DESCRIPTION

The Bendix 7314 is a beam power amplifier and is one of the Bendix HY-G-500 Line of Receiving Tubes. It is in the miniature tube size and features an external anode, metal-ceramic construction. It is specifically designed to replace type 6AG7 for aircraft, missile and industrial applications where limited space requirements and/or envelope temperatures up to 500° C are encountered.

The external-anode construction permits operation in which auxiliary cooling may be used, either by immersion in oil or clamping to a suitable heat sink.

The 7314 is designed primarily for use in the output stage of video amplifiers, being capable of operating at high plate current levels and having high transconductance.

Electrical connections for the other tube elements are by means of base pins in the standard seven-pin miniature configuration and the tube may be operated in any position.

The internal structure employs ceramic element spacers and the much smaller size and mass of the tube elements greatly increase resistance to damage by vibration and shock. A pure alumina heater insulator permits operation at high heater-cathode voltages.
RATINGS

Heater Voltage (AC or DC) 6.3 Volts
Heater Current 0.60 Amperes
Plate Voltage (maximum DC) 300 Volts
Screen Voltage (maximum DC) 300 Volts
Plate Dissipation (Absolute maximum) 10 Watts
Heater - Cathode Voltage (maximum) ± 450 Volts

TYPICAL OPERATION

CLASS A, AMPLIFIER

Plate Voltage 300 Volts
Screen Voltage 150 Volts
Grid Number 1 Voltage -3.0 Volts
Peak AF Grid Number 1 Voltage 3.0 Volts
Plate Resistance (Approx.) 0.13 Megohm
Transconductance 11000 Micromhos
Zero Signal Plate Current 30 Milliamperes
Maximum Signal Plate Current 30.5 Milliamperes
Zero Signal Screen Current 7.0 Milliamperes
Maximum Signal Screen Current 9.0 Milliamperes
Load Resistance 10,000 Ohms
Total Harmonic Distortion 7.0 Percent
Power Output 3.0 Watts