6AG11

COMPACTRON DUPLEX-DIODE TWIN TRIODE

DESCRIPTION AND RATING

The 6AG11 is a compactron containing two high-mu triodes and two diodes, primarily designed for FM stereo multiplex service.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential
Heater Characteristics and Ratings
Heater Voltage, AC or DC*.....6.3 ± 0.6 Volts
Heater Current†.....0.75 Amperes
Direct Interelectrode Capacitances‡
Triode, Each Section
Grid to Plate: (g to p).....1.8 pf
Input: g to (h+k).....3.8 pf
Output: p to (h+k).....0.24 pf
Diode, Each Section
Plate to Cathode and Heater: p to (h+k)..2.2 pf
Cathode to Heater and Plate: k to (h+p)..5.5 pf
Triode Grid to Diode Plate,
maximum: (Tg to Dp).....0.1 pf
Triode Grid, Section 1 to Triode Grid,
Section 2, maximum: (1Tg to 2Tg).....0.01 pf
Triode Plate, Section 1 to Triode Plate,
Section 2: (1Tp to 2Tp).....0.5 pf

MECHANICAL

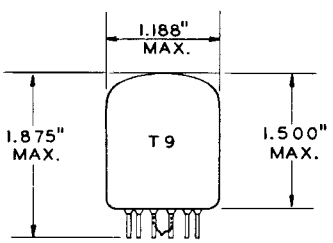
Operating Position—Any
Envelope—T-9, Glass
Base—E12-70, Button 12-Pin
Outline Drawing—EIA 9-56
Maximum Diameter.....1.188 Inches
Maximum Over-all Length.....1.875 Inches
Maximum Seated Height.....1.500 Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES, EACH SECTION

Plate Voltage.....330 Volts
Plate Dissipation.....2.0 Watts
Heater-Cathode Voltage
Heater Positive with Respect to Cathode
DC Component.....100 Volts
Total DC and Peak.....200 Volts
Heater Negative with Respect to Cathode
Total DC and Peak.....200 Volts
Diode Current for Continuous Operation,
Each Diode.....5.0 Milliamperes

PHYSICAL DIMENSIONS

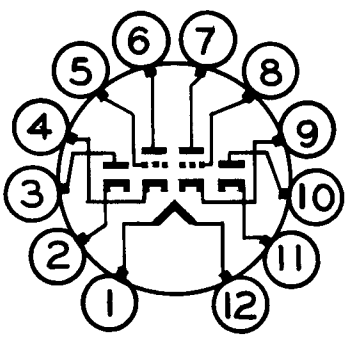


EIA 9-56

TERMINAL CONNECTIONS

Pin 1—Heater
Pin 2—Diode Cathode (Section 2)
Pin 3—Diode Plate (Section 2)
Pin 4—Triode Cathode (Section 2)
Pin 5—Triode Grid (Section 2)
Pin 6—Triode Plate (Section 2)
Pin 7—Triode Plate (Section 1)
Pin 8—Triode Grid (Section 1)
Pin 9—Triode Cathode (Section 1)
Pin 10—Diode Plate (Section 1)
Pin 11—Diode Cathode (Section 1)
Pin 12—Heater

BASING DIAGRAM



EIA 12DA

MAXIMUM RATINGS (CONT'D)

Design-Maximum ratings are limiting values of operating and environmental conditions applicable to a bogey electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in the characteristics of all other electron devices in the equipment.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS, EACH SECTION

Plate Voltage	125	Volts
Grid Voltage	−1.0	Volts
Amplification Factor	66	
Plate Resistance, approximate	8500	Ohms
Transconductance	7800	Micromhos
Plate Current	7.5	Milliamperes
Grid Voltage, approximate Ib = 30 Microamperes	−5	Volts
Average Diode Current, Each Diode With 5.0 Volts DC Applied	18	Milliamperes

NOTES

* The equipment designer should design the equipment so that the heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

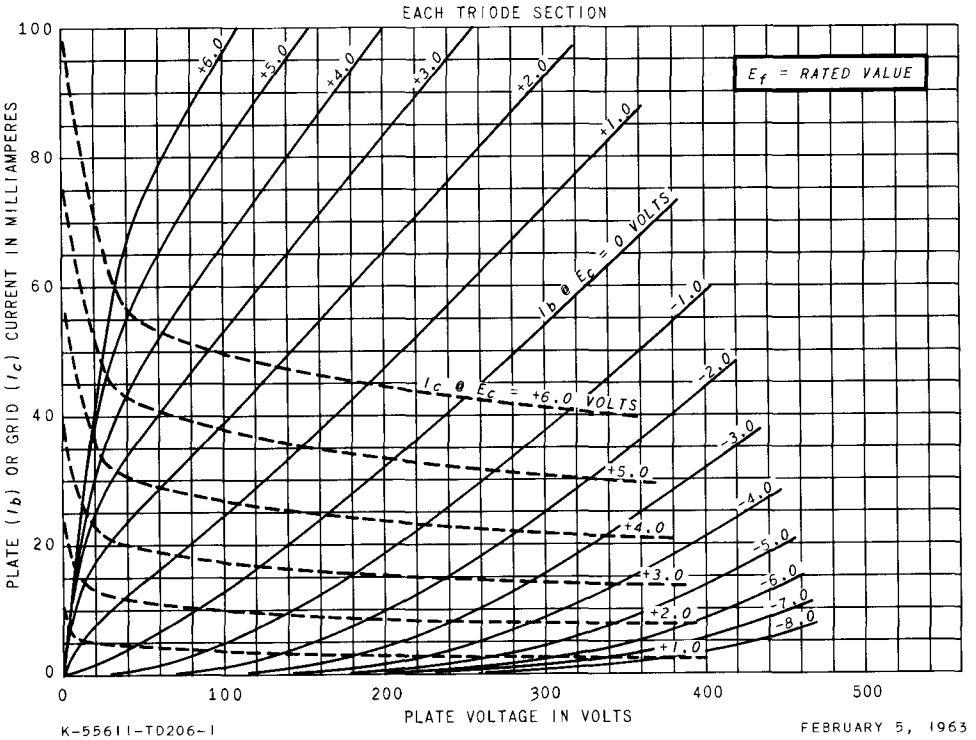
† Heater current for a bogey tube at Ef = 6.3 volts.

‡ Without external shield.

The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an express written agreement to the contrary, General Electric Company assumes no liability for patent infringement arising out of any use of the tubes with other devices or elements by any purchaser of tubes or others.

AVERAGE PLATE CHARACTERISTICS

EACH TRIODE SECTION



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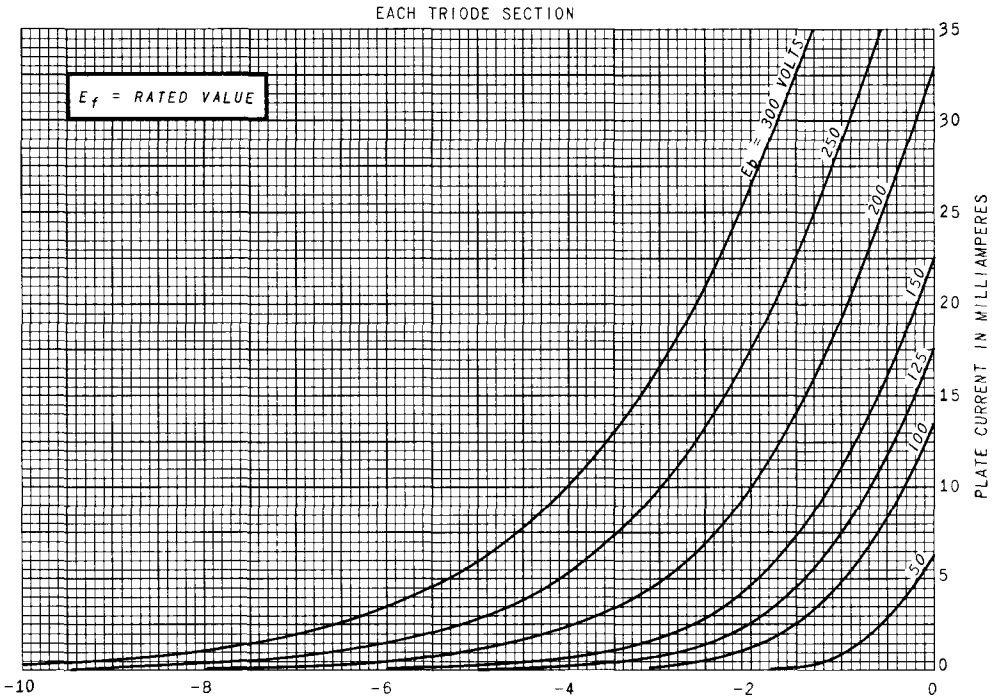
AVERAGE TRANSFER CHARACTERISTICS

EACH TRIODE SECTION



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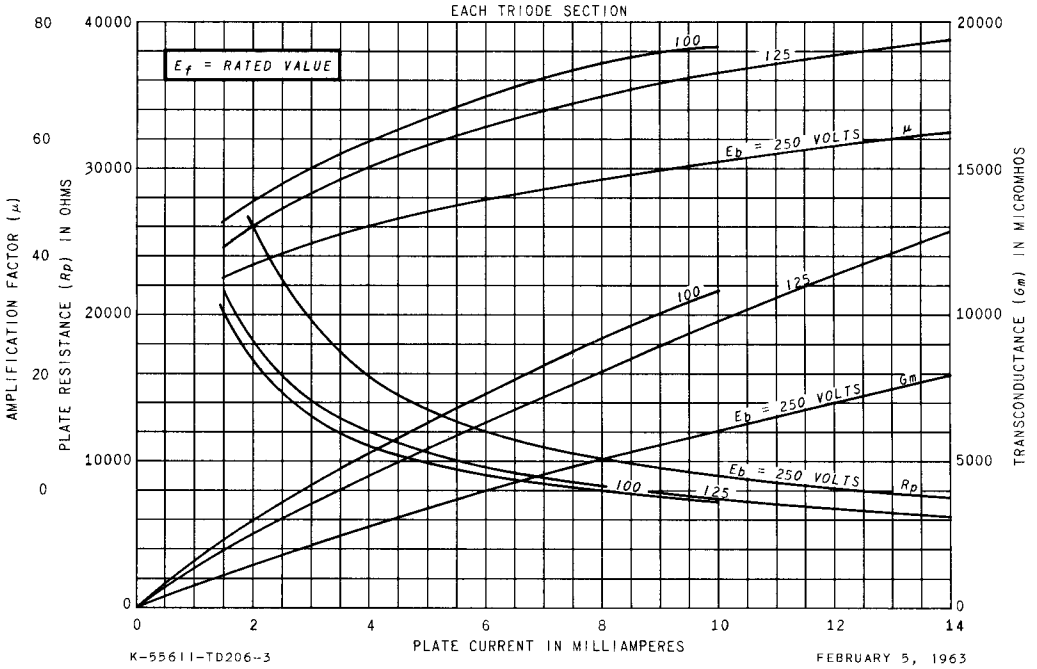
AVERAGE CHARACTERISTICS

EACH TRIODE SECTION



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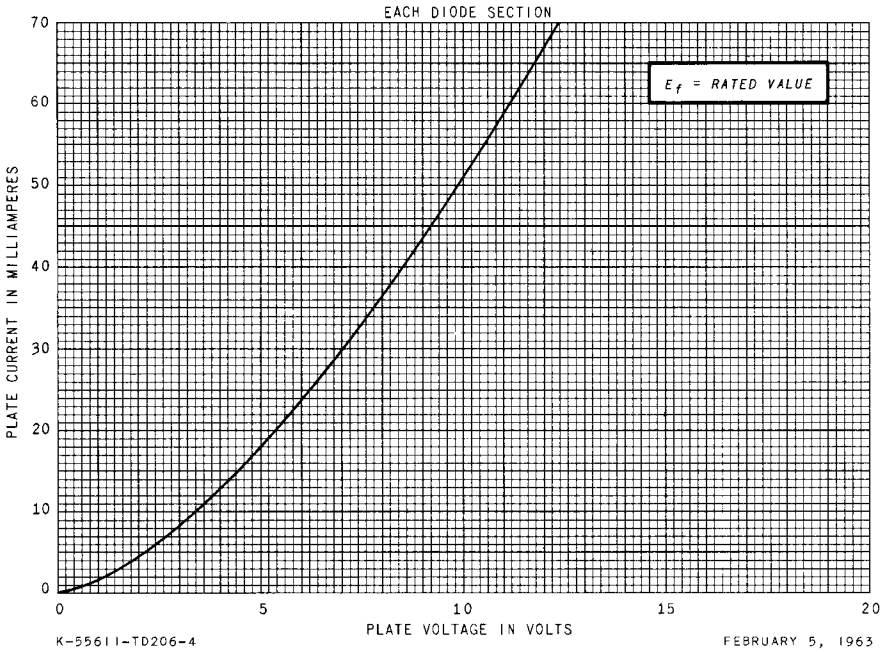
AVERAGE PLATE CHARACTERISTICS

EACH DIODE SECTION



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RECEIVING TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky