14JG8

DUPLEX-DIODE TRIODE

DESCRIPTION AND RATING

FOR DETECTOR AND AF VOLTAGE-AMPLIFIER APPLICATIONS

The 14JG8 is a duplex-diode, high-mu triode with separate cathodes for each of the diode sections and the triode section. The tube is primarily designed for use as an FM detector and AF voltage amplifier.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential
Heater Characteristics and Ratings

Heater Voltage, AC or DC*	14	Volts
Heater Current†	0.15 ± 0.009	Amperes
Direct Interelectrode Capacitances‡		
Triode Grid to Plate	1.7	pf
Triode Input	1.8	pf
Triode Output	0.22	pf
Grid to Diode-Number 1 Plate, maximum	0.09	pf
Grid to Diode-Number 2 Plate, maximum	0.07	pf
Diode-Number 1 Input	2.4	pf
Diode-Number 2 Input	2.2	pf
Diode-Number 1 Cathode to All	6.0	pf
Diode-Number 2 Cathode to All	6.0	pf

MECHANICAL

Mounting Position—Any
Envelope—T-6½, Glass
Base—E9-1, Small Button 9-Pin
Outline Drawing—EIA 6-2

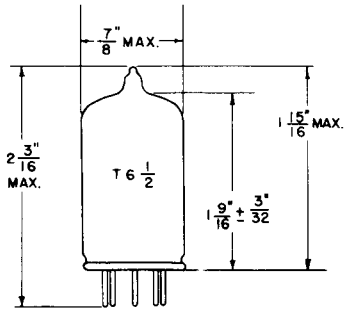
Maximum Diameter	7/8	Inches
Maximum Over-all Length	2 3/16	Inches
Maximum Seated Height	1 15/16	Inches

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Plate Voltage	330	Volts
Positive DC Grid Voltage	0	Volts
Negative DC Grid Voltage	50	Volts
Plate Dissipation	1.1	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

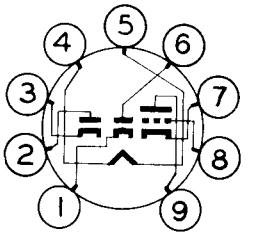


EIA 6-2

TERMINAL CONNECTIONS

Pin 1—Diode Number 2 Cathode
Pin 2—Diode Number 1 Plate
Pin 3—Diode Number 1 Cathode
Pin 4—Heater
Pin 5—Heater
Pin 6—Diode Number 2 Plate
Pin 7—Triode Cathode
Pin 8—Triode Grid
Pin 9—Triode Plate

BASING DIAGRAM



EIA 9KR

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

Plate Voltage	250	Volts
Grid Voltage	−2.0	Volts
Amplification Factor	90	
Plate Resistance, approximate	41000	Ohms
Transconductance	2200	Micromhos
Plate Current	2.0	Milliamperes
Average Diode Current, Each Diode With 5.0 Volts DC Applied	20	Milliamperes

* Heater voltage for a bogey tube at If = 0.15 amperes.

† For series heater operation, the equipment designer should design the equipment so that heater current is centered at the specified bogey value, with heater supply variations restricted to maintain heater current within the specified tolerance.

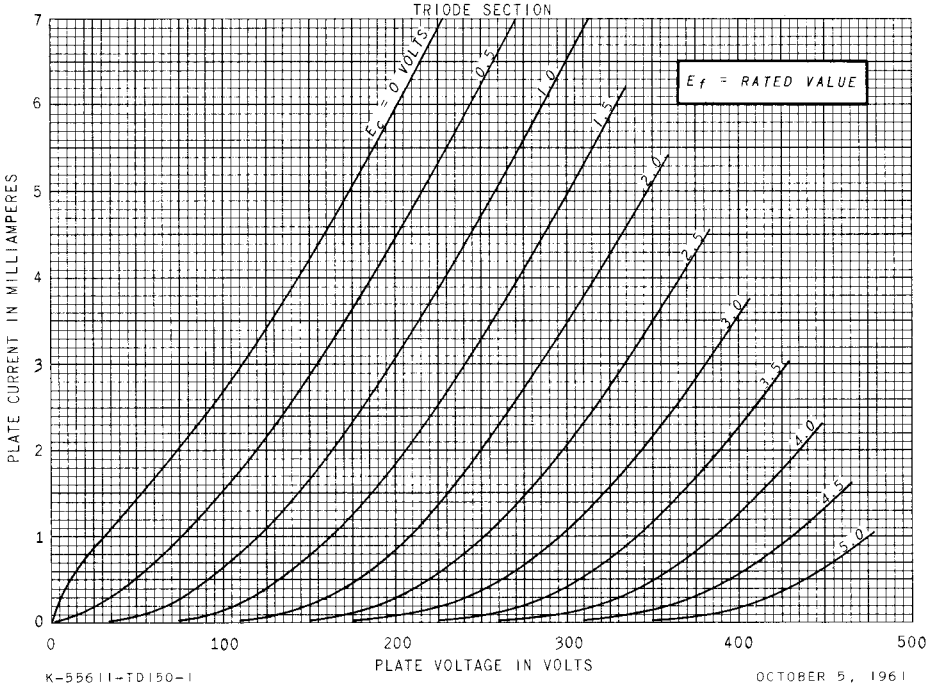
‡ Without external shield.

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.

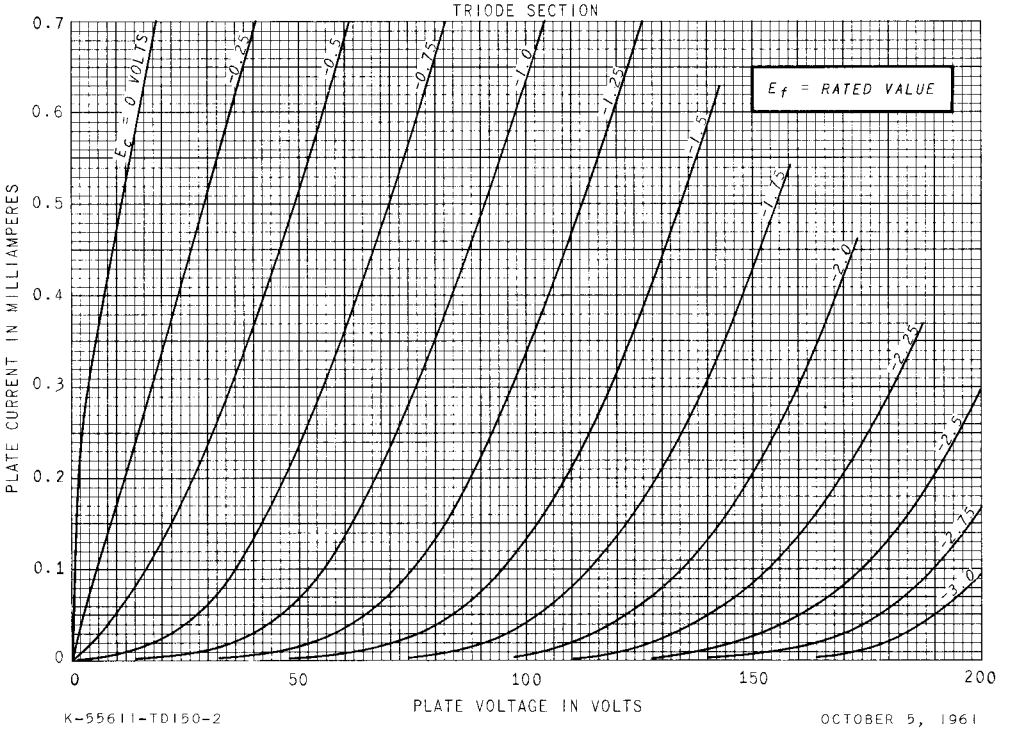
The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

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.

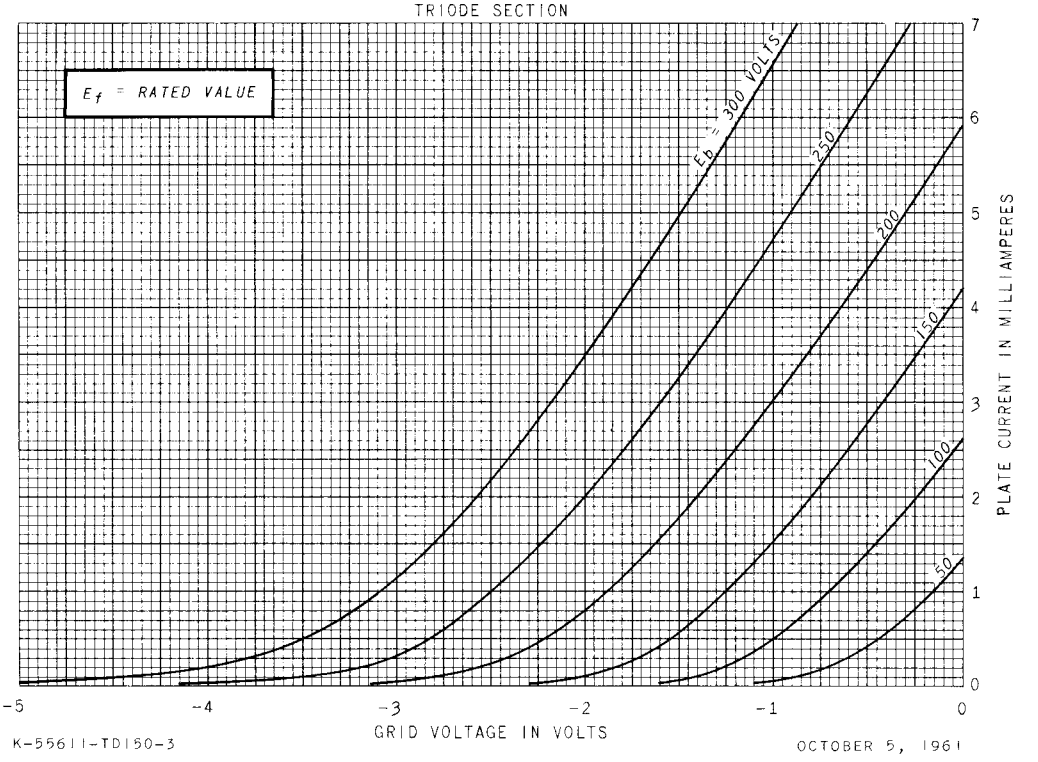
AVERAGE PLATE CHARACTERISTICS



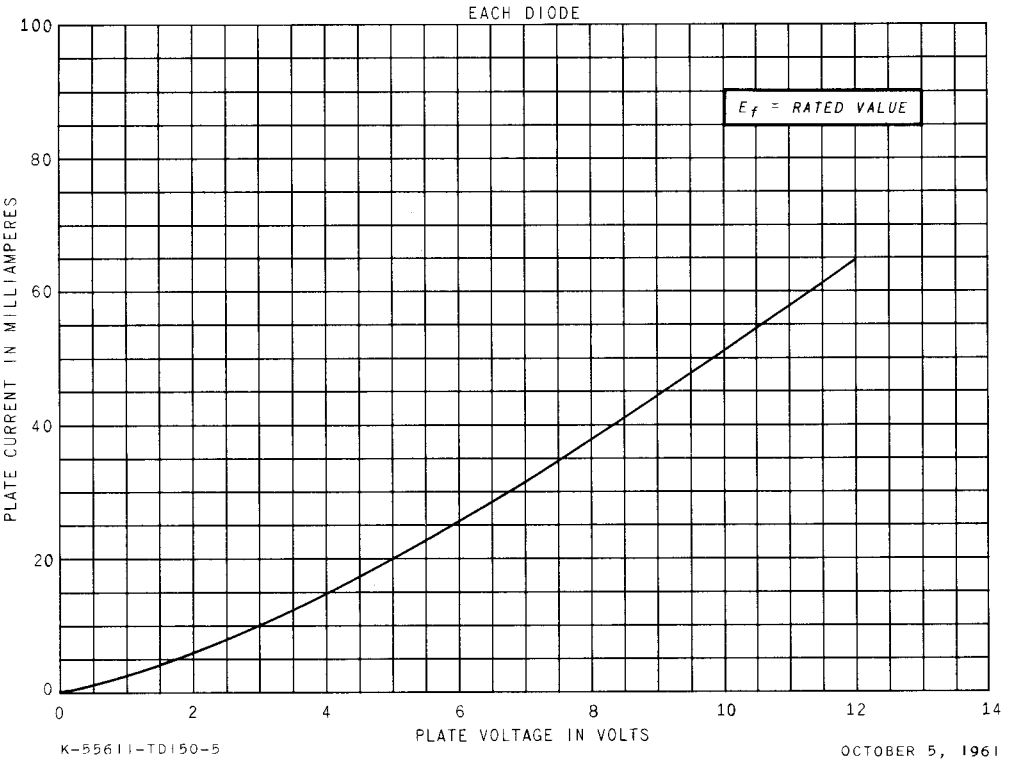
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



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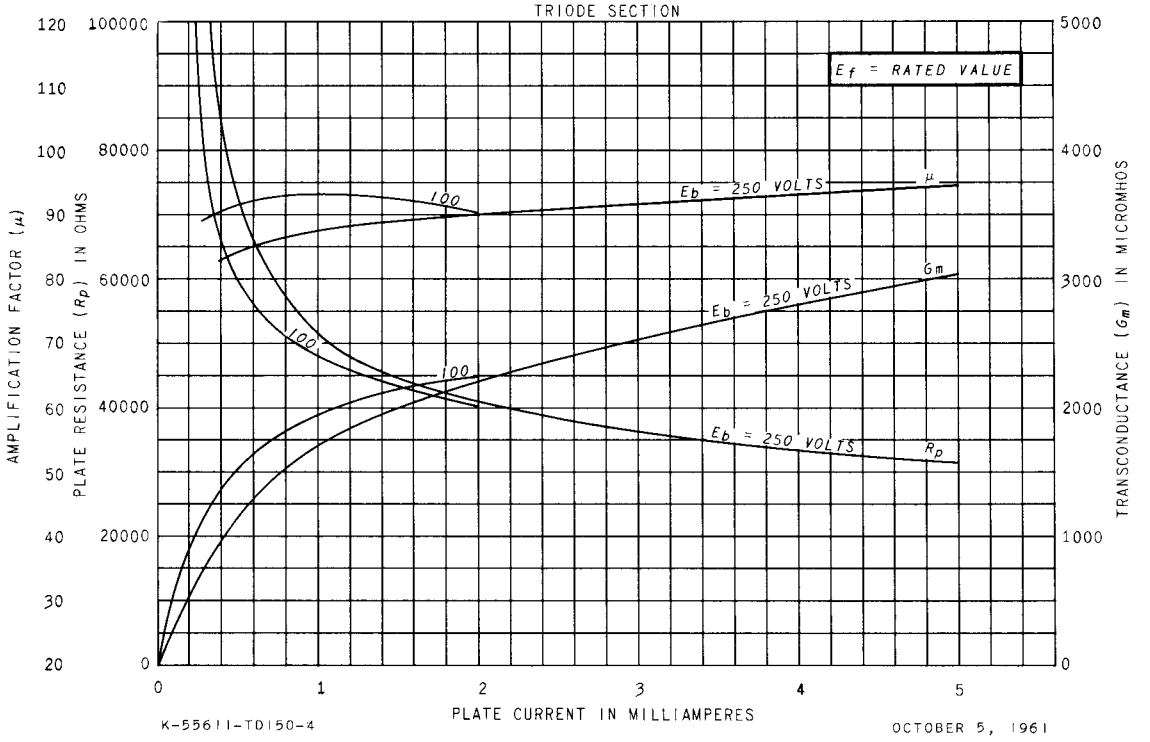
OCTOBER 5, 1961

AVERAGE CHARACTERISTICS



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OCTOBER 5, 1961

RECEIVING TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky