

TWIN TRIODE

DESCRIPTION AND RATING

The 7025 is a miniature, high-mu, twin triode primarily designed for use in low-level stages of high-gain audio-frequency amplifiers. Use of the 7025 in this application is advantageous because of its low hum output.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

	Series*	Parallel†	
Heater Voltage, AC or DC . . .	12.6±1.3±	6.3±0.6±	Volts
Heater Current†	0.15§	0.3¶	Amperes

Direct Interelectrode Capacitances

	Section 1		Section 2		
	With Shield	Without Shield	With Shield	Without Shield	
Grid to Plate: (g to p)	1.7	1.7	1.7	1.7	pf
Input: g to (h + k)	1.8	1.6	1.8	1.6	pf
Output: p to (h + k)	1.9	0.46	1.9	0.34	pf

MECHANICAL

Operating Position - Any
 Envelope - T-6 1/2, Glass
 Base - E9-1, Small Button 9-Pin
 Outline Drawing - EIA 6-2
 Maximum Diameter. . . 0.875 Inches
 Maximum Over-all Length 2.188 Inches
 Maximum Seated Height . 1.938 Inches

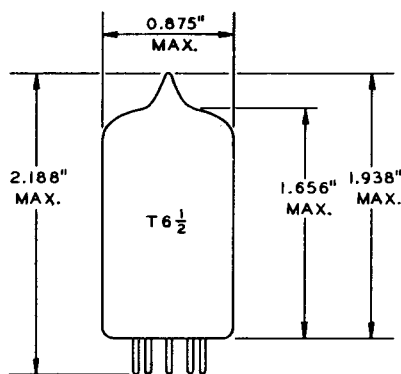
MAXIMUM RATINGS

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.

PHYSICAL DIMENSIONS

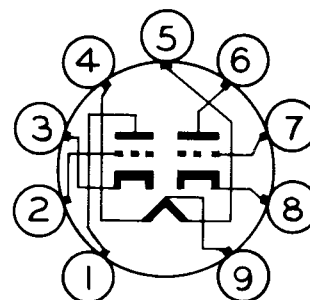


EIA 6-2

TERMINAL CONNECTIONS

- Pin 1 - Plate (Section 2)
- Pin 2 - Grid (Section 2)
- Pin 3 - Cathode (Section 2)
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Plate (Section 1)
- Pin 7 - Grid (Section 1)
- Pin 8 - Cathode (Section 1)
- Pin 9 - Heater Center-Tap

BASING DIAGRAM



EIA 9A

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.

MAXIMUM RATINGS (Cont'd)**DESIGN-MAXIMUM VALUES, EACH SECTION**

Plate Voltage	330	Volts
Positive DC Grid Voltage	0	Volts
Negative DC Grid Voltage	55	Volts
Plate Dissipation, Each Plate	1.2	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

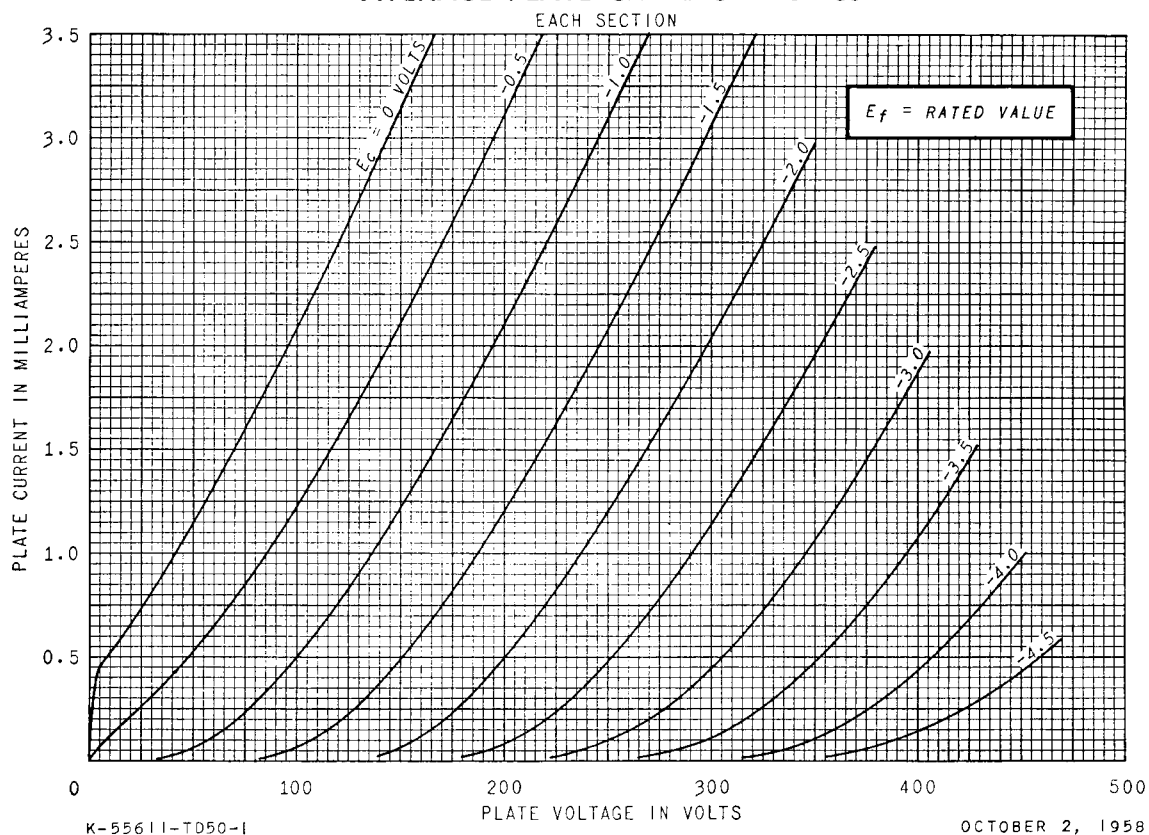
CHARACTERISTICS AND TYPICAL OPERATION**CLASS A₁ AMPLIFIER, EACH SECTION**

Plate Voltage	100	250	Volts
Grid Voltage	-1.0	-2.0	Volts
Amplification Factor	100	100	
Plate Resistance, approximate	80000	62500	Ohms
Transconductance	1250	1600	Micromhos
Plate Current	0.5	1.2	Milliamperes
Equivalent Noise and Hum Voltage, Each Section, average, true RMS Δ	---	1.8	Microvolts
Equivalent Noise and Hum Voltage, Each Section, maximum, true RMS ϵ	---	7.0	Microvolts

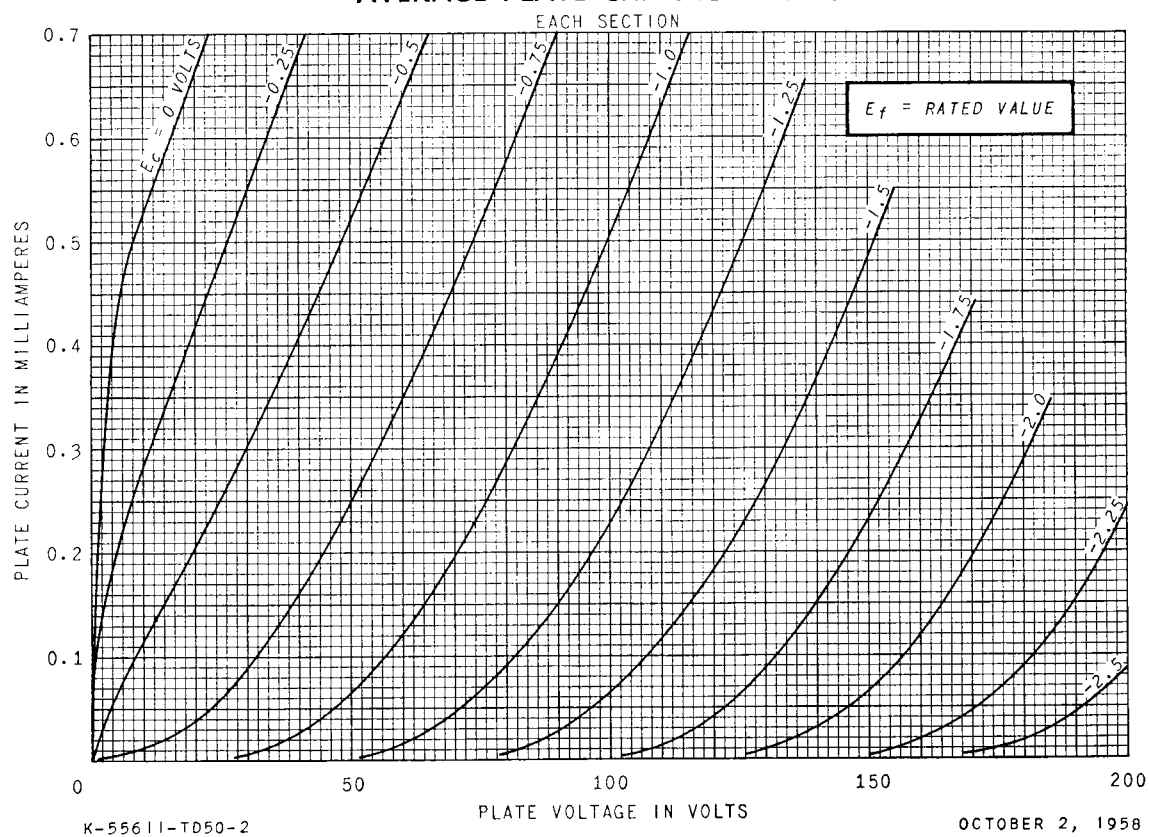
NOTES

- * Operated with the two sections of the heater connected in series.
- † Operated with the two sections of the heater connected in parallel.
- ‡ The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.
- § Heater current of a bogey tube at $E_f = 12.6$ volts
- ¶ Heater current of a bogey tube at $E_f = 6.3$ volts.
- # With external shield (EIA 315) connected to cathode.
- Δ Referred to grid and measured under the following conditions:
 $E_f = 6.3$ volts AC (parallel connection), CT of heater transformer grounded; $E_{bb} = 250$ volts;
 $R_b = 100,000$ ohms; $R_k = 2700$ ohms, bypassed with $100\mu f$; $R_g = 0$ ohms; Amplifier frequency range = 25 to 10,000 cps.
- ϵ Referred to grid and measured under the following conditions:
 $E_f = 6.3$ volts AC (parallel connection), CT of heater transformer grounded; $E_{bb} = 250$ volts;
 $R_b = 100,000$ ohms; $R_k = 2700$ ohms, unbypassed; $R_g = 50,000$ ohms; Amplifier frequency range = 25 to 10,000 cps.

AVERAGE PLATE CHARACTERISTICS

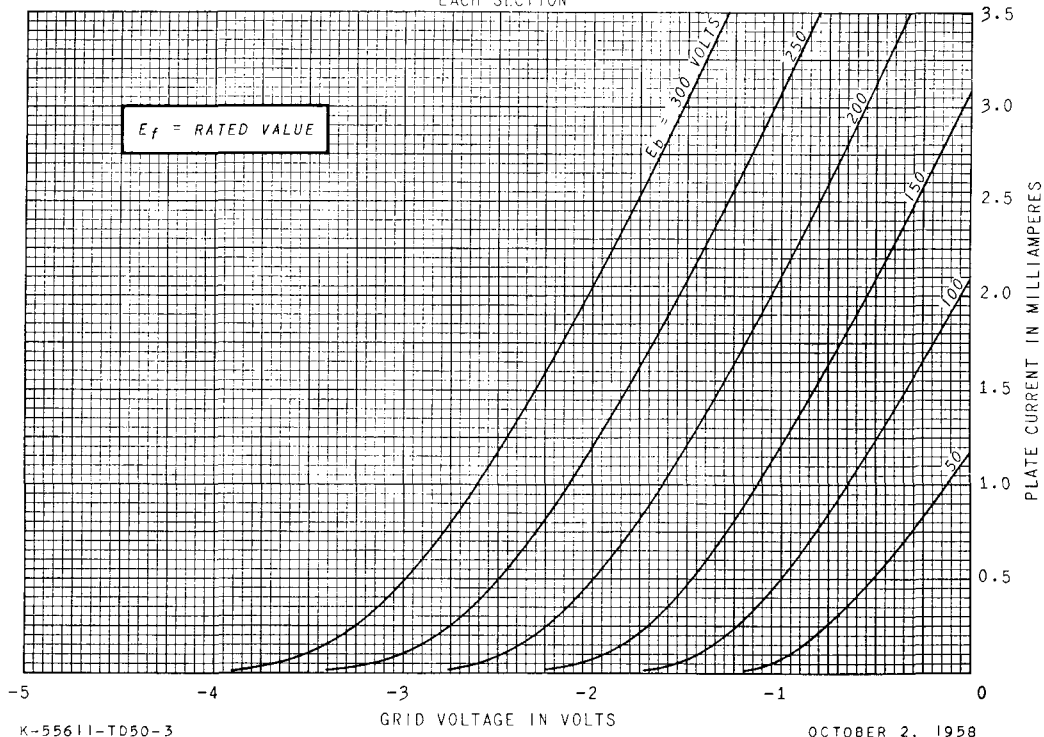


AVERAGE PLATE CHARACTERISTICS



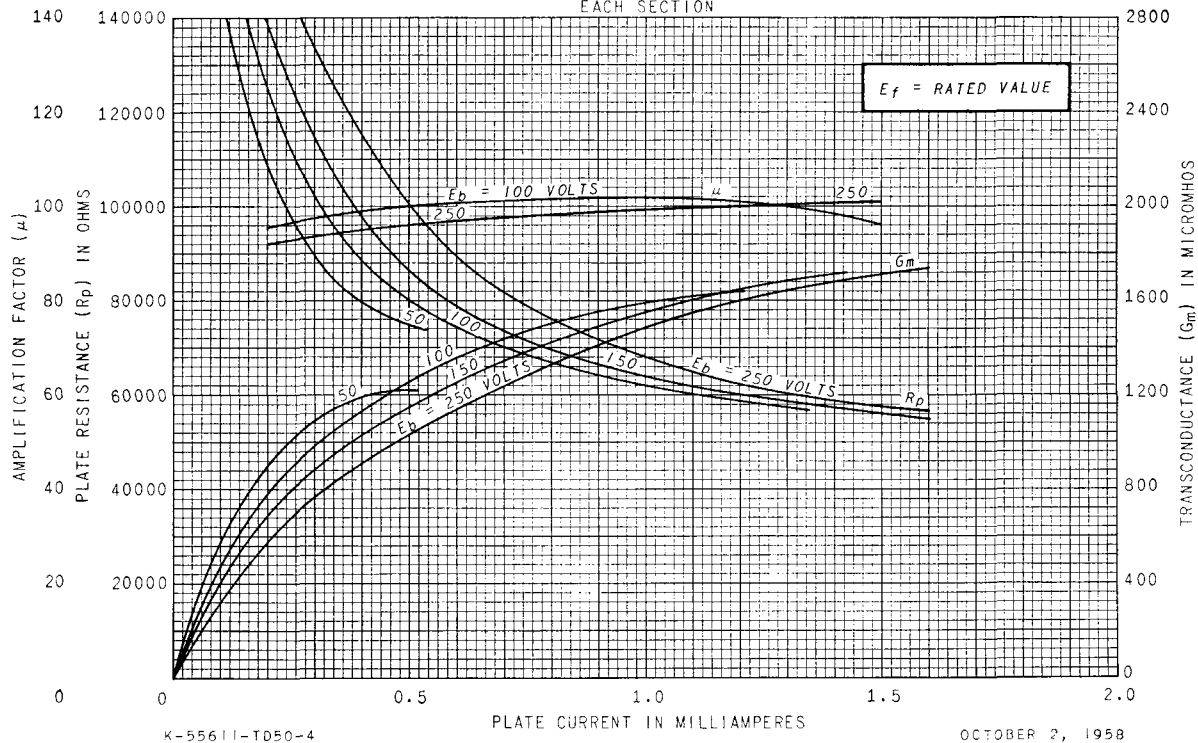
AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION



AVERAGE CHARACTERISTICS

EACH SECTION



RECEIVING TUBE DEPARTMENT

GENERAL ELECTRIC
 Owensboro, Kentucky