

8136 PENTODE

DESCRIPTION AND RATING

The 8136 is a miniature sharp-cutoff pentode intended primarily for use as a wide band intermediate-frequency amplifier in industrial applications. Similar to the 6DK6, it features additional controls over the development of interface during operation under regular life-test conditions, providing increased assurance of satisfactory long-life service.

GENERAL

ELECTRICAL

Cathode - Coated Unipotential

Heater Characteristics and Ratings

Heater Voltage, AC or DC*	6.3±0.6	Volts
Heater Current†	0.3	Amperes

Direct Interelectrode Capacitances‡

Grid-Number 1 to Plate: (g1 to p)	0.02	pf
Input: g1 to (h + k + g2 + g3 + i.s.)	7.0	pf
Output: p to (h + k + g2 + g3 + i.s.)	2.2	pf

MECHANICAL

Operating Position - Any

Envelope - T-5 1/2, Glass

Base - E7-1, Miniature Button 7-Pin

Outline Drawing - EIA 5-2

Maximum Diameter	0.750	Inches
Maximum Over-all Length	2.125	Inches
Maximum Seated Height	1.875	Inches

MAXIMUM RATINGS

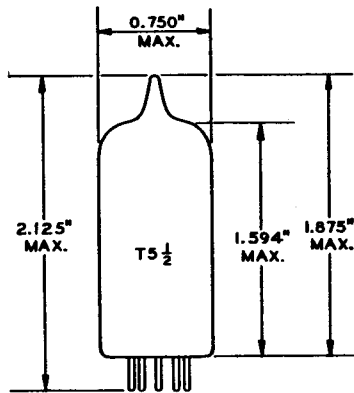
Absolute-Maximum ratings are limiting values of operating and environmental conditions applicable to any electron tube of a specified type as defined by its published data and should not be exceeded under the worst probable conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube, making no allowance for equipment variations, environmental variations, and the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration and of

all other electron devices in the equipment.

The equipment manufacturer should design so that initially and throughout life no absolute-maximum value for the intended service is exceeded with any 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 the tube under consideration and of all other electron devices in the equipment.

PHYSICAL DIMENSIONS

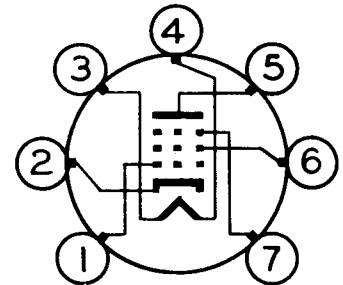


EIA 5-2

TERMINAL CONNECTIONS

- Pin 1 - Grid Number 1
- Pin 2 - Cathode
- Pin 3 - Heater
- Pin 4 - Heater
- Pin 5 - Plate
- Pin 6 - Grid Number 2 (Screen)
- Pin 7 - Grid Number 3 (Suppressor) and Internal Shield

BASING DIAGRAM



EIA 7CM

MAXIMUM RATINGS (Cont'd)**ABSOLUTE-MAXIMUM VALUES**

Plate Voltage	330	Volts
Screen Voltage.	165	Volts
Plate Dissipation.	2.2	Watts
Screen Dissipation	0.65	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.	300	Volts

CHARACTERISTICS AND TYPICAL OPERATION**AVERAGE CHARACTERISTICS**

Plate Voltage	125	Volts
Suppressor, Connected to Cathode at Socket		
Screen Voltage.	125	Volts
Cathode-Bias Resistor	56	Ohms
Transconductance	9800	Micromhos
Plate Current	10.8	Milliamperes
Screen Current.	2.9	Milliamperes
Grid-Number 1 Voltage, approximate		
I _b = 20 Microamperes.	-6.5	Volts

SPECIAL TESTS AND RATINGS

Cathode-Interface Impedance		
500 Hour Life-Test End Point, maximum [¶]	5	Ohms

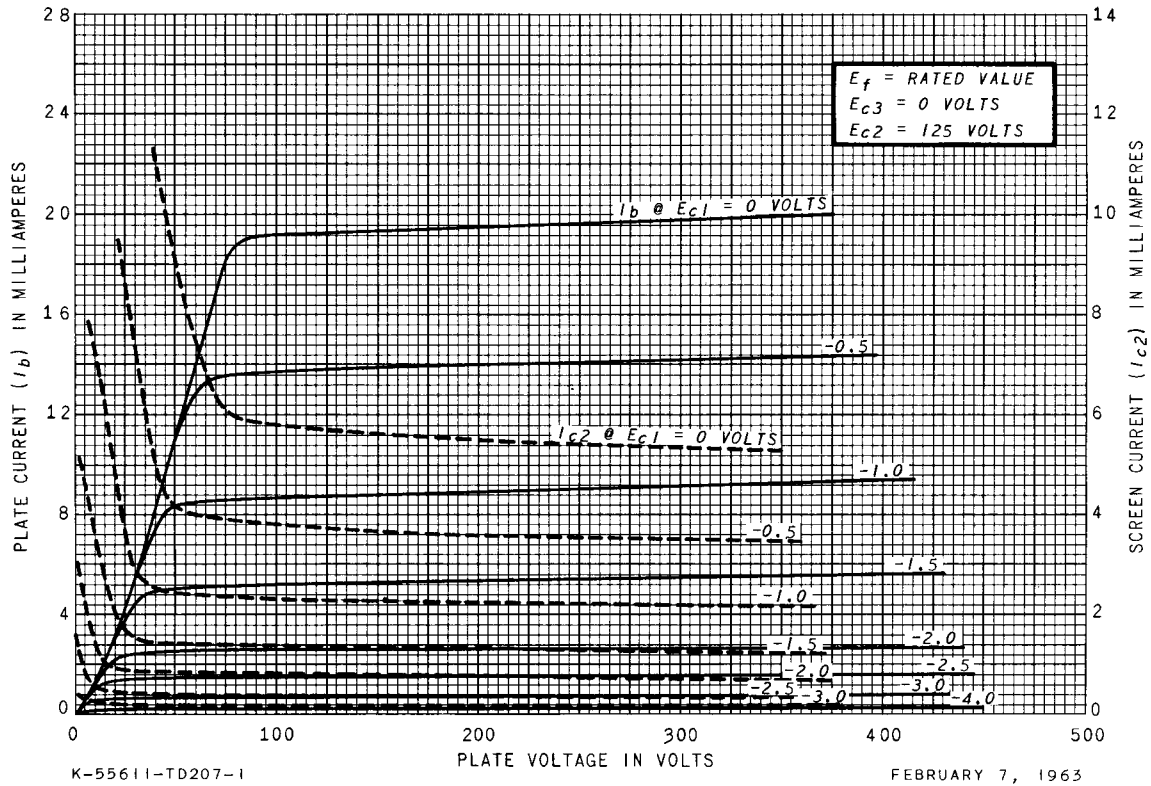
NOTES

- * 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 = 6.3 volts.
- § Without external shield.
- ¶ Statistical sample operated for 500 hours (extended periodically to 2000 hours and 5000 hours) under the following conditions: E_f = 6.6 volts, E_b = 150 volts, E_{g2} = 150 volts, E_{g3} = 0 volts, R_k = 55 ohms, R_{g1} = 250000 ohms, E_{hk} = -180 volts. Cathode-interface impedance measured under the following conditions: E_f = 5.7 volts, E_b = 80 volts, G₂ and G₃ tied to plate, E_{c1} adjusted for I_b = 2.5 milliamperes.

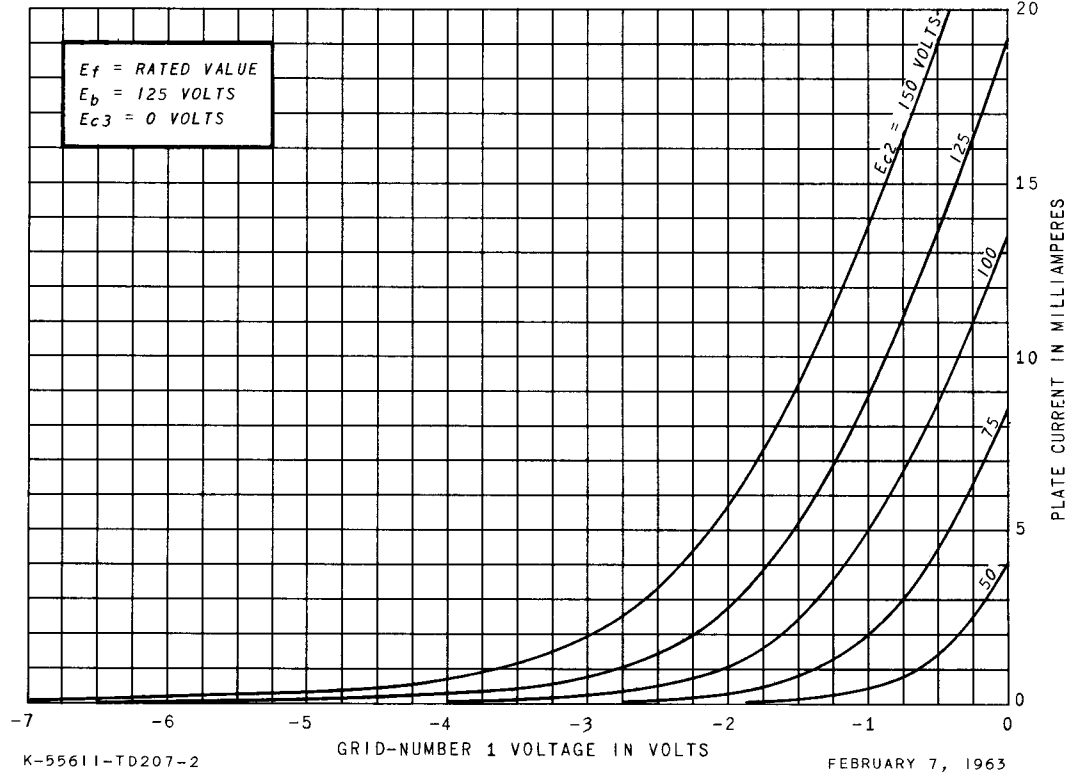
The tubes and arrangements disclosed herein may be covered by patents of General Electric Company or others. Neither the disclosure of any information herein nor the sale of tubes by General Electric Company conveys any license under patent claims covering combinations of tubes with other devices or elements. In the absence of an

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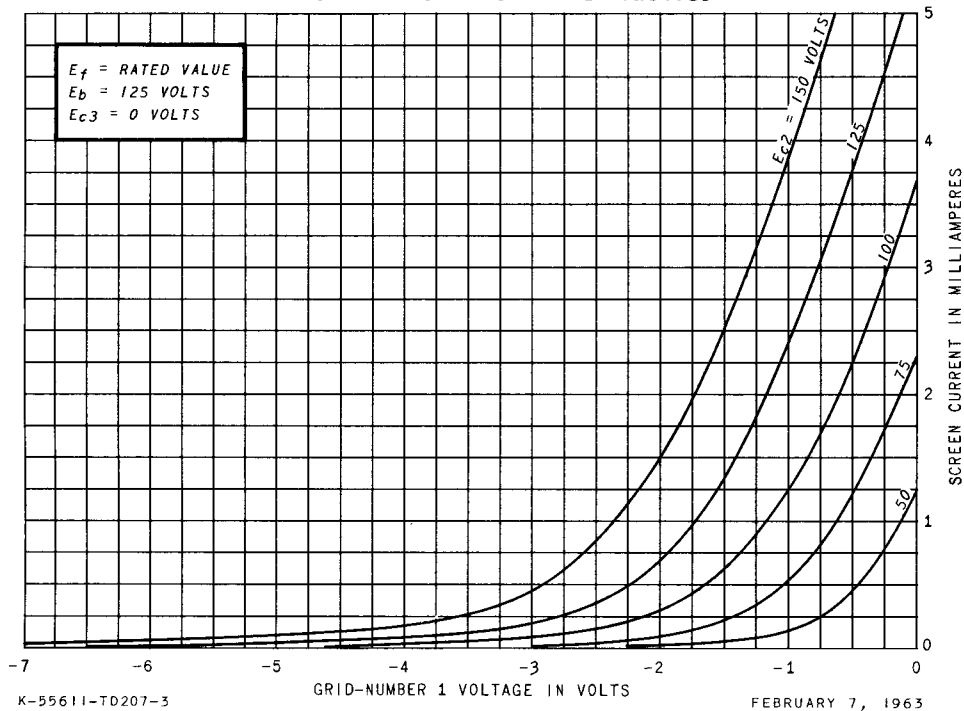
AVERAGE PLATE CHARACTERISTICS



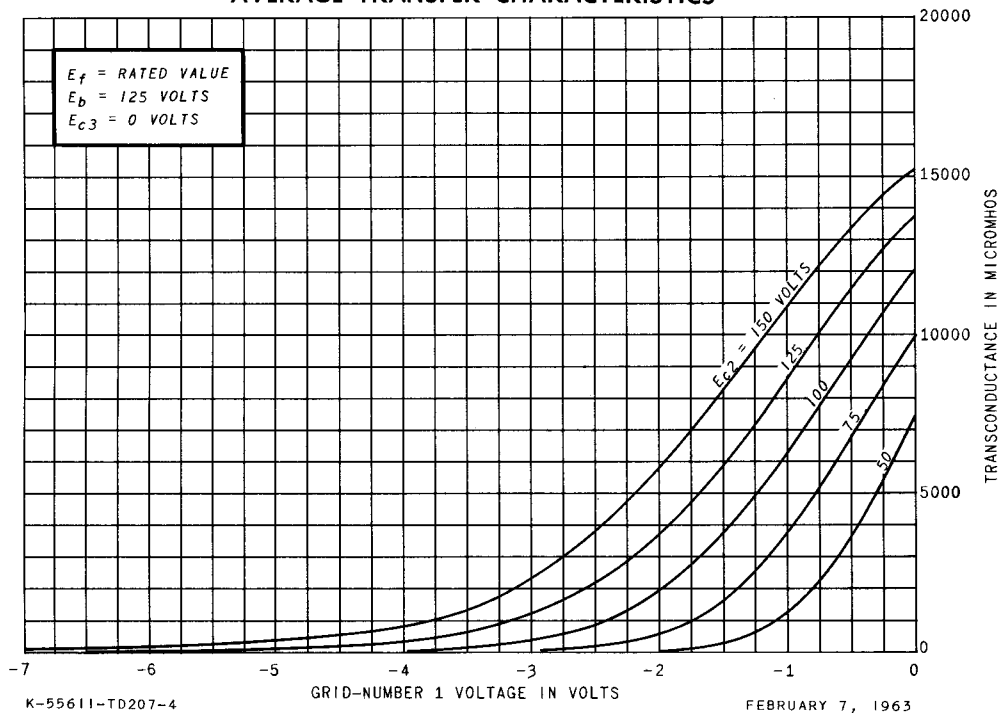
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



TUBE DEPARTMENT



Owensboro, Kentucky