ELECTRONICS

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

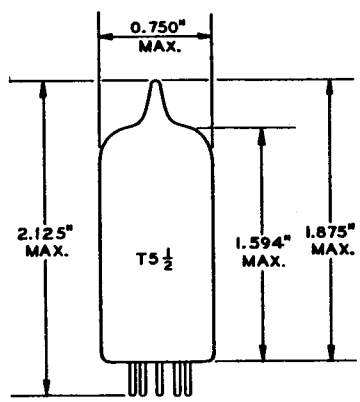
MAXIMUM RATINGS

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

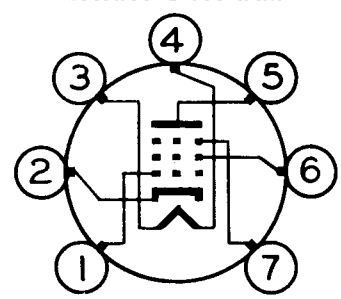


EIA 5-2

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

GENERAL ELECTRIC

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		
Ib = 20 Microamperes	-6.5	Volts

SPECIAL TESTS AND RATINGS

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

NOTES

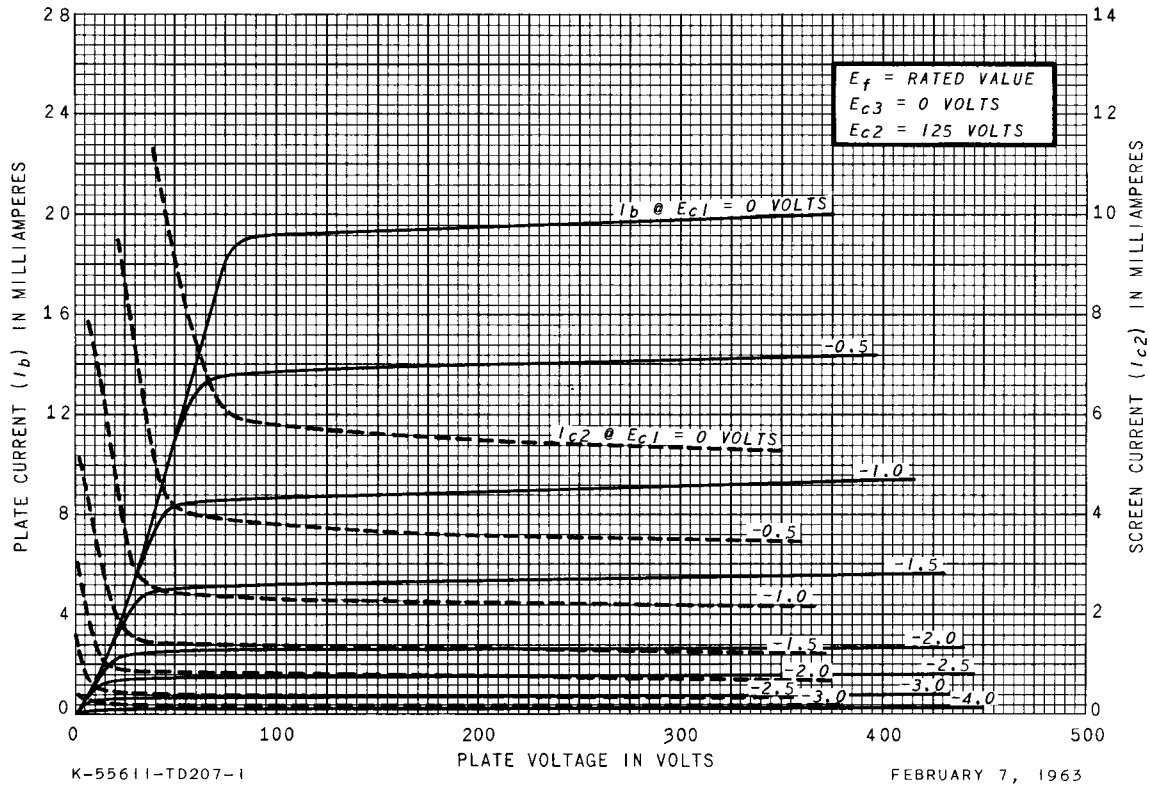
* The equipment designer should design the equipment so that heater voltage is centered at the specified bogey value, with heater supply variations restricted to maintain heater voltage within the specified tolerance.

‡ Heater current of a bogey tube at Ef = 6.3 volts.

§ Without external shield.

¶ Statistical sample operated for 500 hours (extended periodically to 2000 hours and 5000 hours) under the following conditions: Ef = 6.6 volts, Eb = 150 volts, Eg2 = 150 volts, Eg3 = 0 volts, Rk = 55 ohms, Rg1 = 250000 ohms, Ehk = -180 volts. Cathode-interface impedance measured under the following conditions: Ef = 5.7 volts, Eb = 80 volts, G2 and G3 tied to plate, Ec1 adjusted for Ib = 2.5 milliamperes.

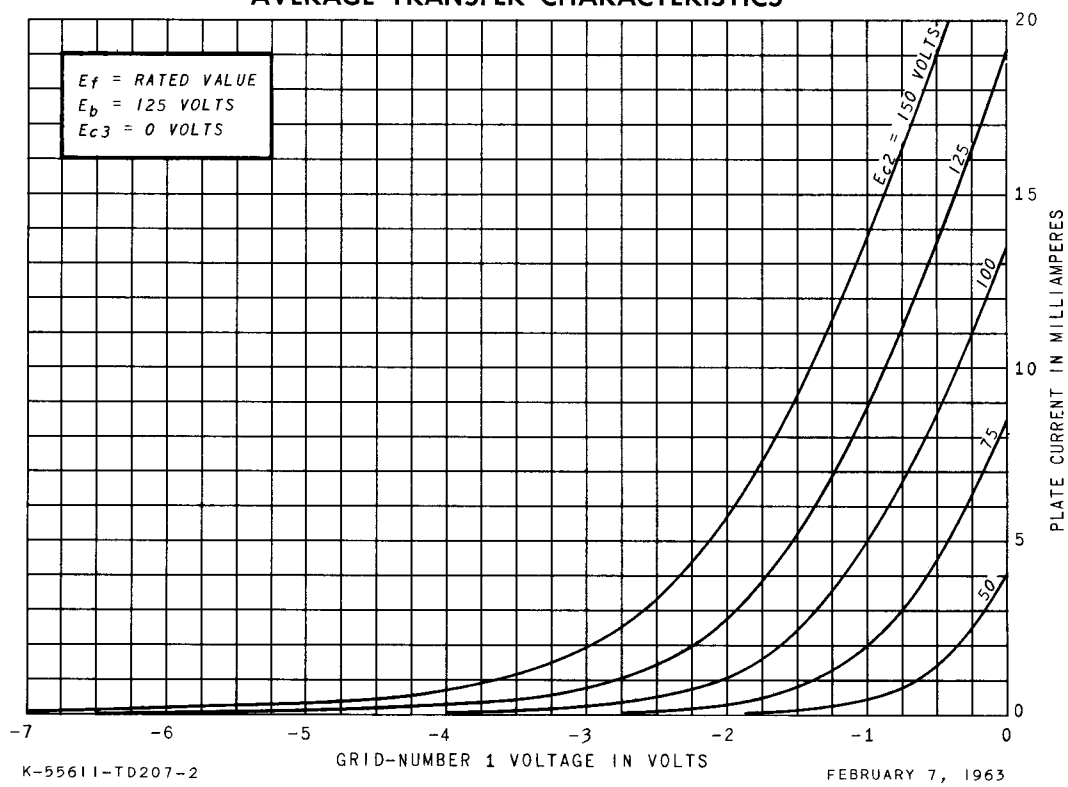
AVERAGE PLATE CHARACTERISTICS



K-55611-TD207-1

FEBRUARY 7, 1963

AVERAGE TRANSFER CHARACTERISTICS



K-55611-TD207-2

FEBRUARY 7, 1963

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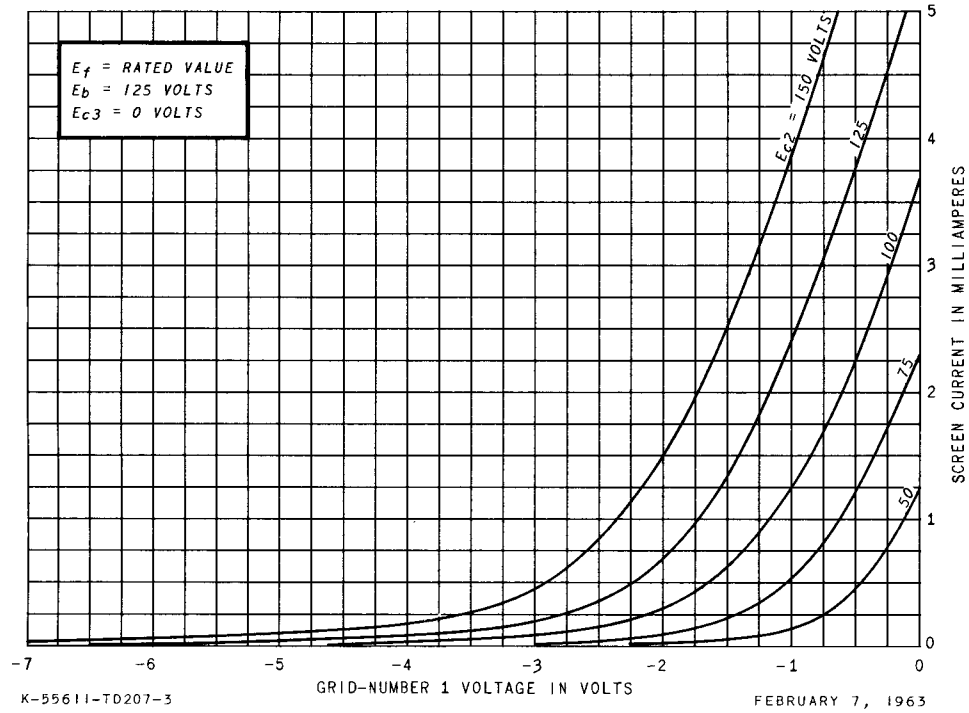
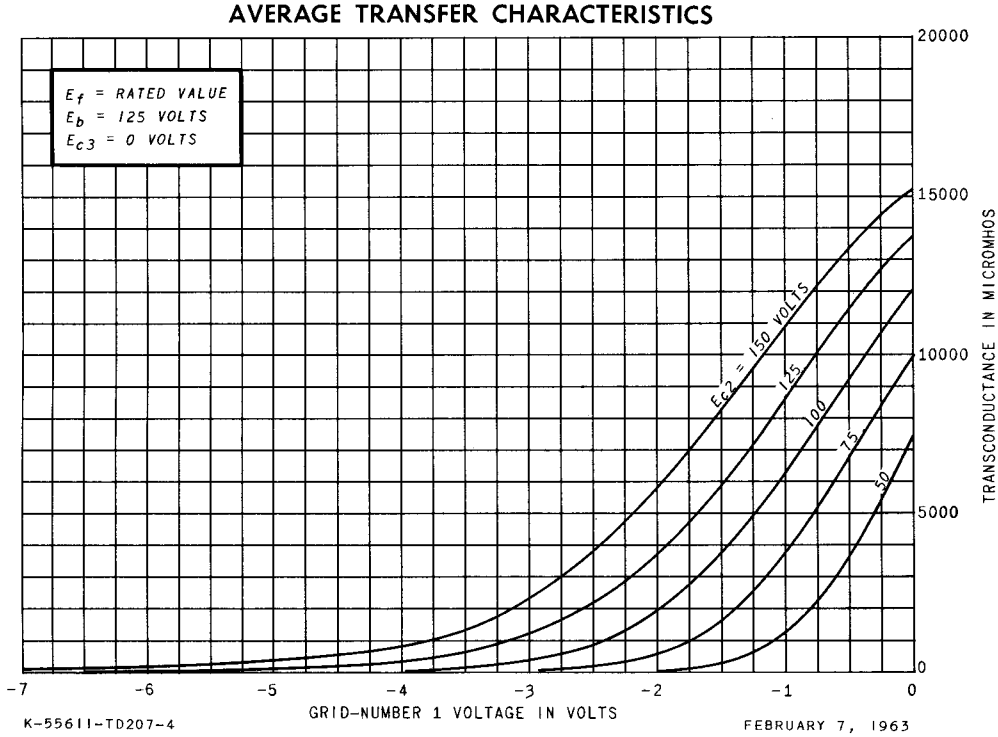


AVERAGE TRANSFER CHARACTERISTICS



TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky