

BEAM PENTODE

DESCRIPTION AND RATING

The 8106 is a miniature beam pentode designed for use as a frequency multiplier and driver in mobile radio equipment.

GENERAL

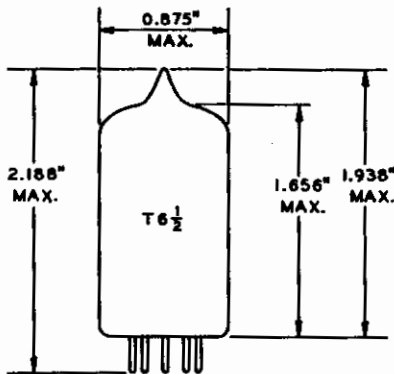
ELECTRICAL		MECHANICAL	
Cathode - Coated Unipotential		Operating Position - Any	
Heater Characteristics and Ratings		Envelope - T-6 1/2, Glass	
Heater Voltage, AC or DC*	13.5±1.5 Volts	Base - E9-1, Small Button 9-Pin	
Heater Current†	0.25 Amperes	Outline Drawing - EIA 6-2	
Direct Interelectrode Capacitances‡		Maximum Diameter.	0.875 Inches
Grid-Number 1 to Plate:		Maximum Over-all Length	2.188 Inches
(g1 to p)	0.09 pf	Maximum Seated Height	1.938 Inches
Input: g1 to (h + k + g2 + b.p.)	10 pf		
Output: p to (h + k + g2 + b.p.)	2.8 pf		

MAXIMUM RATINGS

ABSOLUTE-MAXIMUM VALUES

Plate Voltage	330	Volts
Screen Voltage	300	Volts
Negative DC Grid-Number 1 Voltage	125	Volts
Plate Dissipation	6.0	Watts
Screen Dissipation	1.25	Watts
Grid-Number 1 Current	3.0	Milliamperes
DC Cathode Current	40	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	100	Volts
Heater Negative with Respect to Cathode	100	Volts
Bulb Temperature at Hottest Point	220	C

PHYSICAL DIMENSIONS

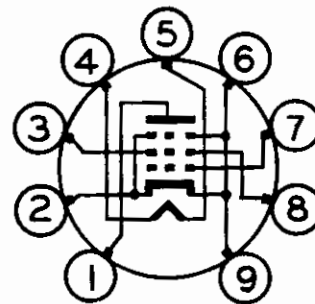


EIA 6-2

TERMINAL CONNECTIONS

- Pin 1 - Plate
- Pin 2 - Cathode and Beam Plates
- Pin 3 - Grid Number 2 (Screen)
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Cathode and Beam Plates
- Pin 7 - Grid Number 1
- Pin 8 - Grid Number 2 (Screen)
- Pin 9 - Cathode and Beam Plates

BASING DIAGRAM



EIA 9PL

MAXIMUM RATINGS (Cont'd)

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.

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

Plate Voltage	300	Volts
Screen Voltage	150	Volts
Grid-Number 1 Voltage	-3.5	Volts
Plate Resistance, approximate	90000	Ohms
Transconductance	9000	Micromhos
Plate Current	16	Milliamperes
Screen Current	3.2	Milliamperes
Grid-Number 1 Voltage, approximate Ib = 10' Microamperes	-8	Volts

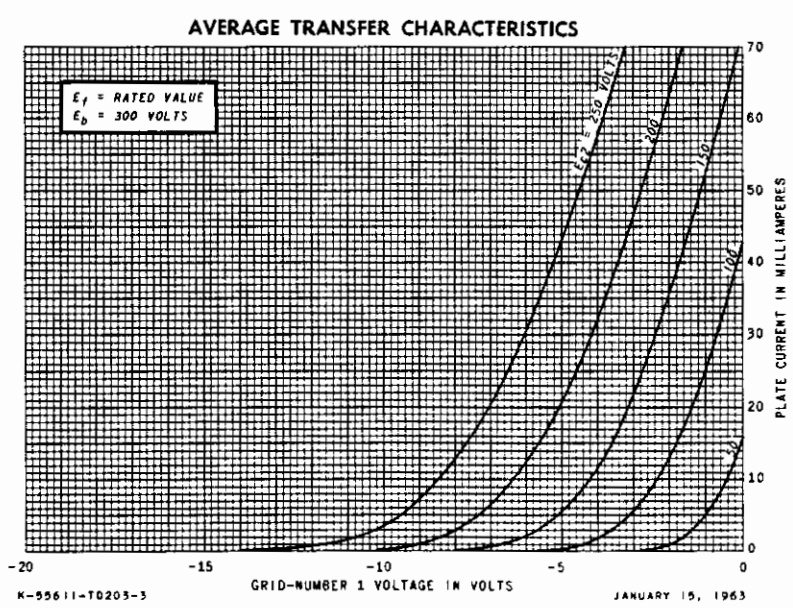
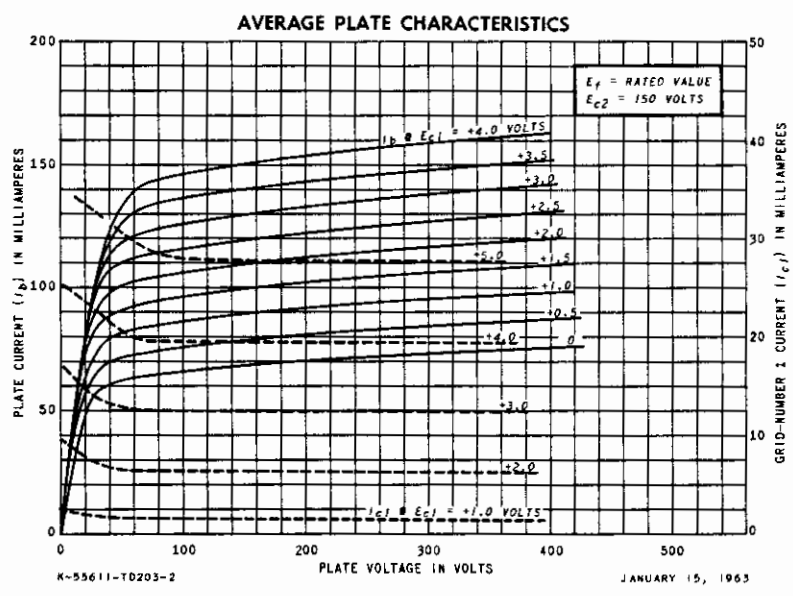
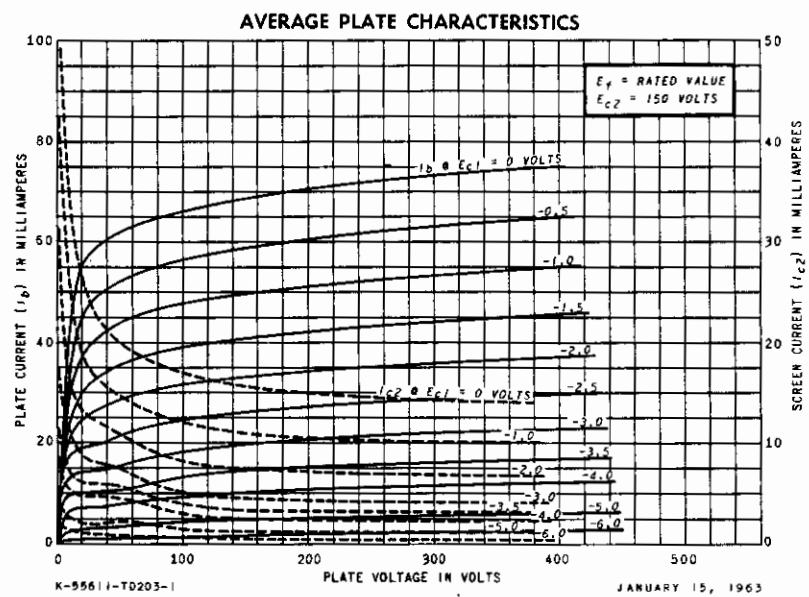
NOTES

- * 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 = 13.5 volts.
- ‡ Without external shield.

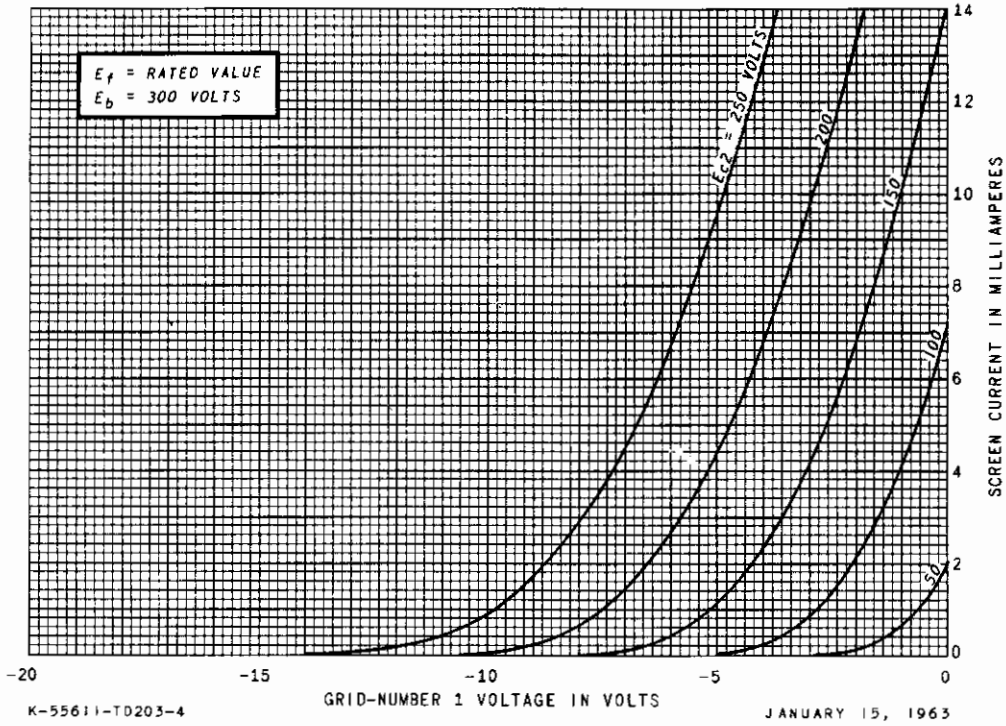
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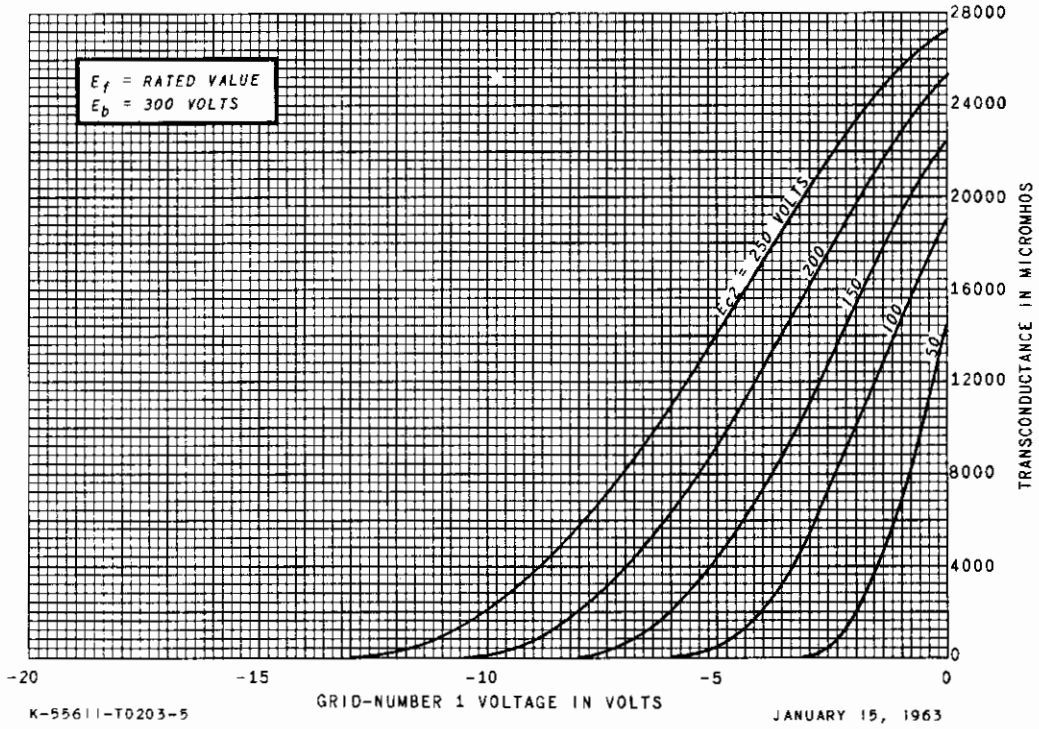




AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



TUBE DEPARTMENT

GENERAL  ELECTRIC

Owensboro, Kentucky