

BEAM PENTODE FOR RF CLASS C APPLICATIONS

DESCRIPTION AND RATING

The 7701 is a miniature beam-power pentode suitable for Class C radio-frequency power-amplifier and frequency-multiplier service.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC.....13.6* Volts

Heater Current.....0.16 Amperes

Direct Interelectrode Capacitances†

Grid-Number 1 to Plate: (g1 to P).....0.15 $\mu\mu\text{f}$

Input: g1 to (H+K+g2+BP).....7.0 $\mu\mu\text{f}$

Output: P to (H+K+g2+BP).....3.6 $\mu\mu\text{f}$

MECHANICAL

Mounting Position—Any

Envelope—T-6½, Glass

Base—E9-1, Small Button 9-Pin

MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Class C Radio-Frequency Amplifier Service up to 175 Megacycles

Plate Voltage.....350 Volts

Screen Voltage.....300 Volts

Negative DC Grid-Number 1 Voltage.....150 Volts

Plate Dissipation.....9 Watts

Screen Dissipation.....3.5 Watts

DC Plate Current.....45 Milliamperes

DC Screen Current.....17 Milliamperes

DC Grid-Number 1 Current.....3.3 Milliamperes

Heater-Cathode Voltage

Heater Positive with Respect to Cathode.....100 Volts

Heater Negative with Respect to Cathode.....100 Volts

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

These values are chosen by the tube manufacturer 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.

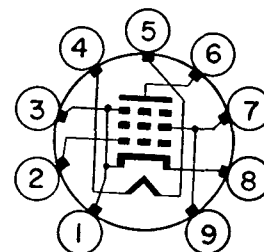
The equipment manufacturer should design so that initially and throughout life no design-maximum value for the intended service is exceeded with a bogey tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, variation in characteristics of all other tubes in the equipment, equipment control adjustment, load variation, signal variation, and environmental conditions.

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.

GENERAL  ELECTRIC

Supersedes ET-T1608 dated 4-60

BASING DIAGRAM



EIA 9MS

TERMINAL CONNECTIONS

Pin 1—Cathode and Beam Plates

Pin 2—Grid Number 1

Pin 3—Cathode and Beam Plates

Pin 4—Heater

Pin 5—Heater

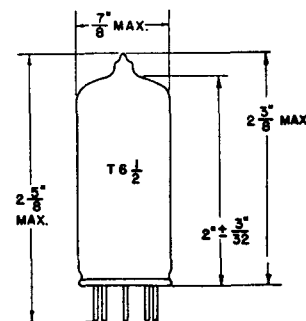
Pin 6—Plate

Pin 7—Grid Number 2 (Screen)

Pin 8—Cathode and Beam Plates

Pin 9—Grid Number 2 (Screen)

PHYSICAL DIMENSIONS



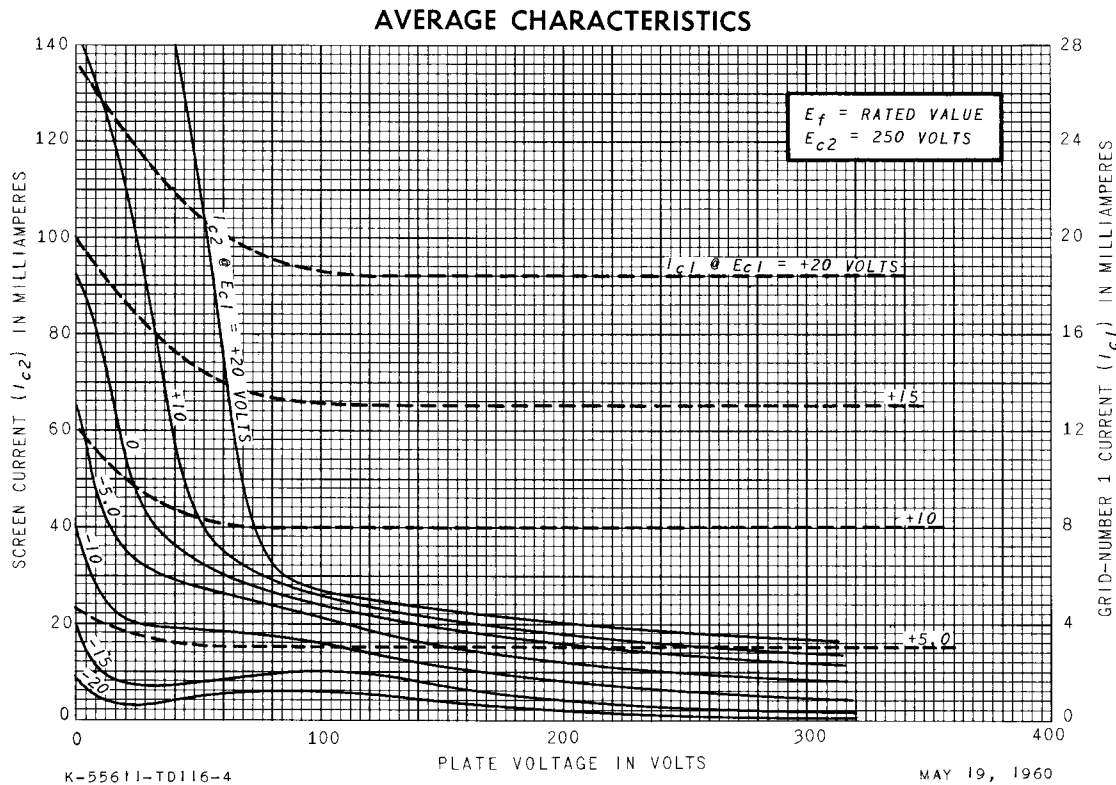
EIA 6-2

CHARACTERISTICS AND TYPICAL OPERATION

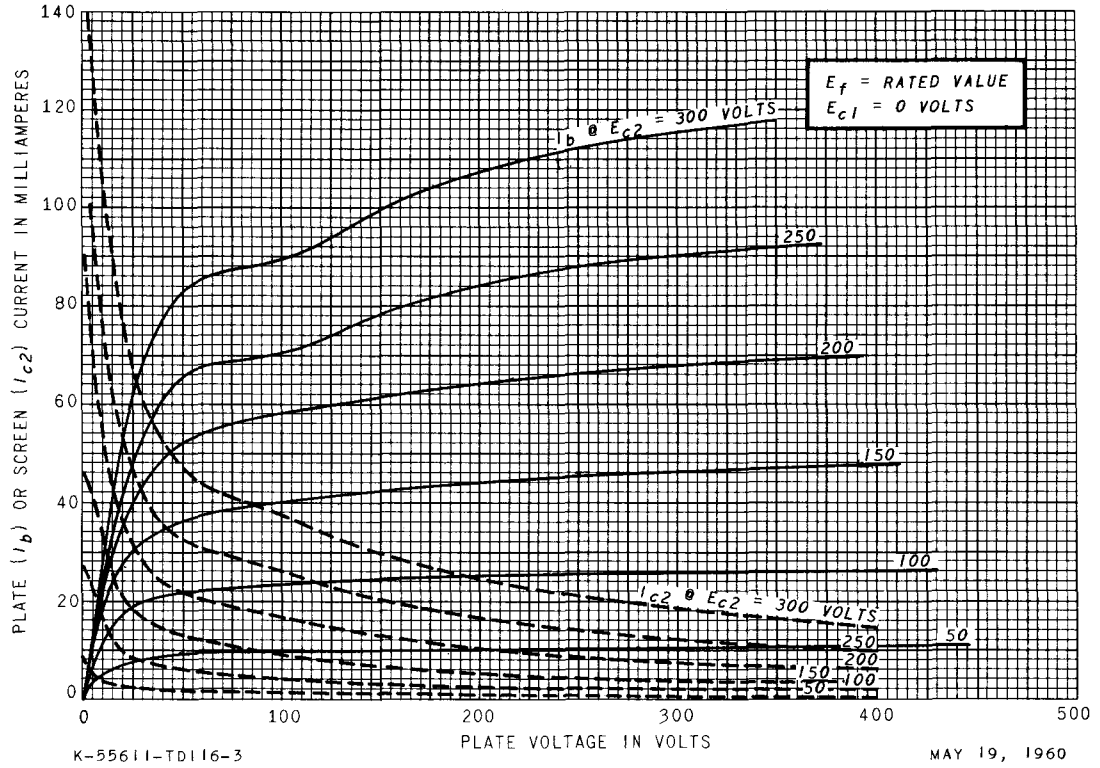
AVERAGE CHARACTERISTICS

Plate Voltage	250	Volts
Screen Voltage	250	Volts
Grid-Number 1 Voltage	-12.5	Volts
Plate Resistance, approximate	31000	Ohms
Transconductance	3600	Micromhos
Plate Current	28	Milliamperes
Screen Current	3.1	Milliamperes

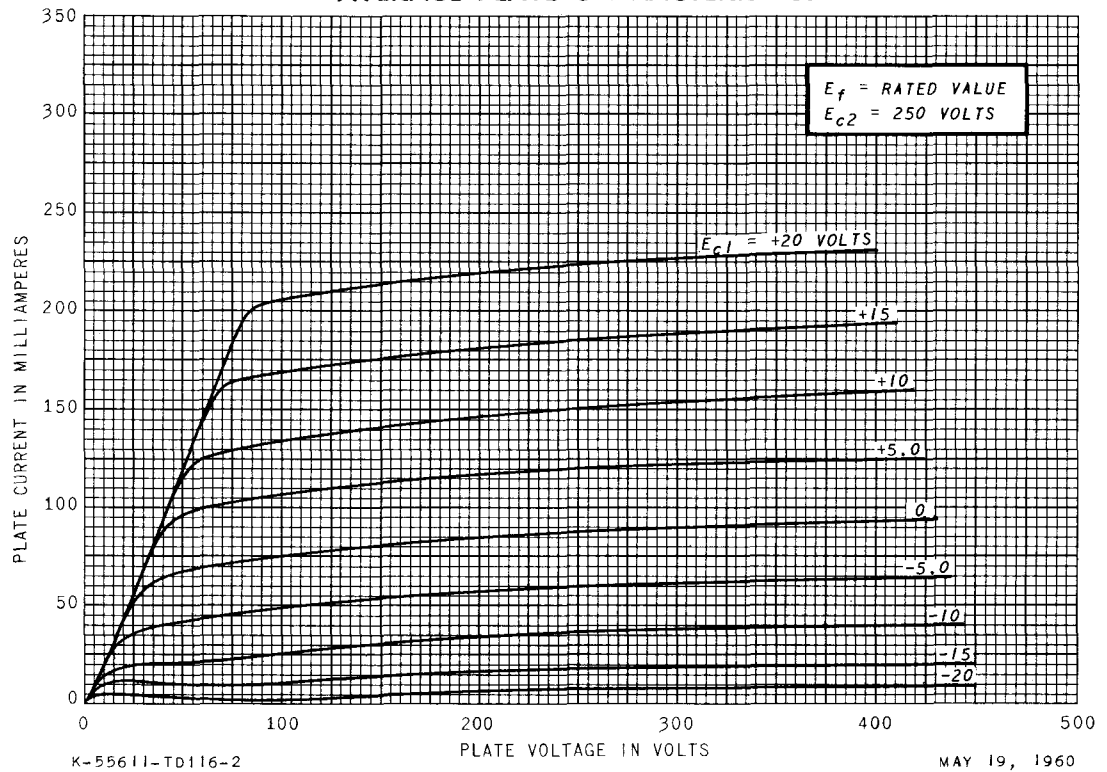
* The allowable limits of heater voltage for satisfactory operation are 12 volts minimum and 15 volts maximum.
† Without external shield.



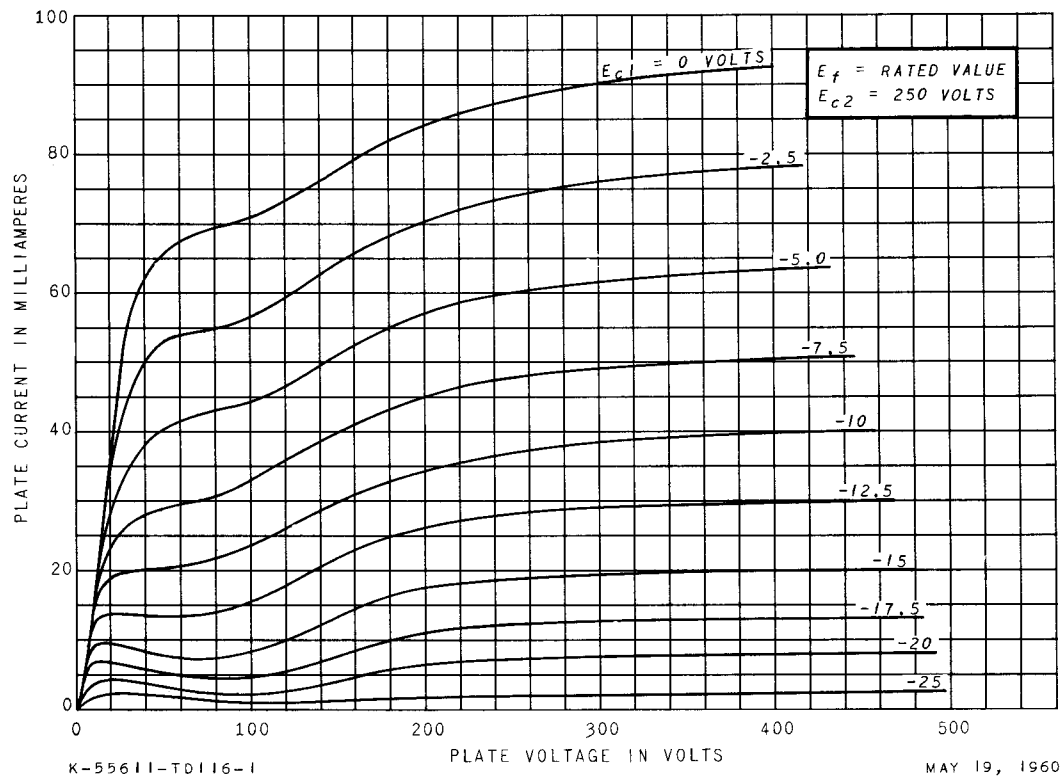
AVERAGE PLATE CHARACTERISTICS



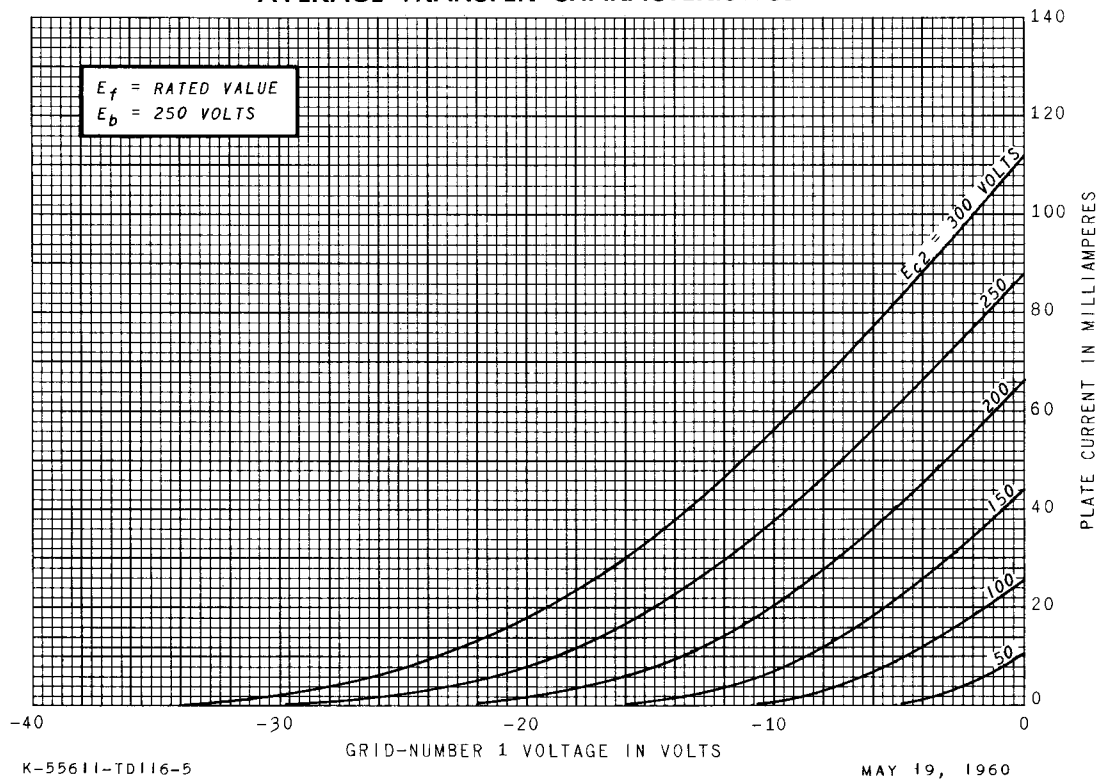
AVERAGE PLATE CHARACTERISTICS



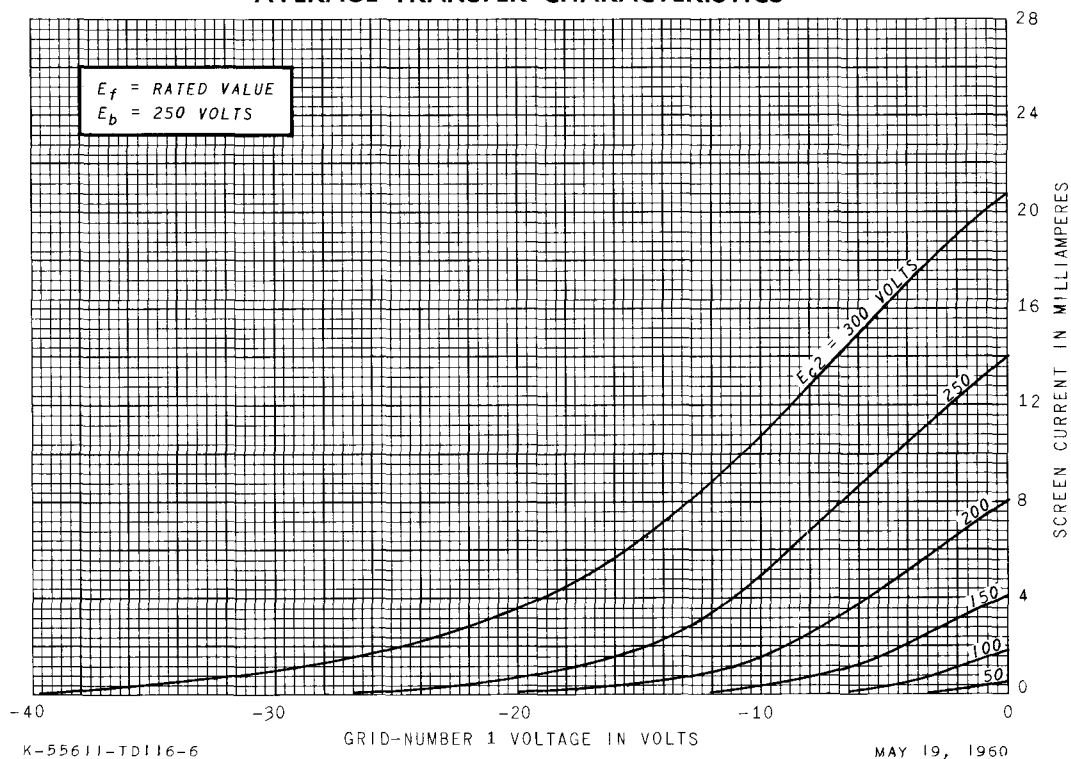
AVERAGE PLATE CHARACTERISTICS



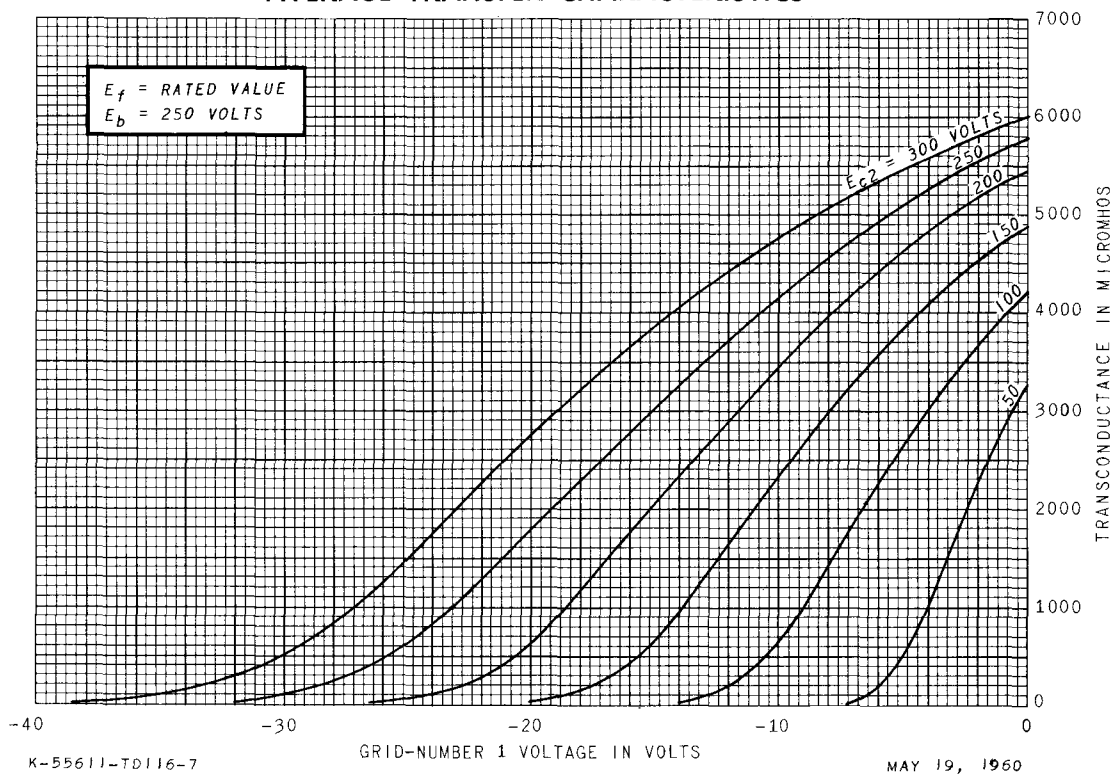
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



RECEIVING TUBE DEPARTMENT

GENERAL  **ELECTRIC**

Owensboro, Kentucky