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	μμf
Input: g1 to (H+K+g2+BP)	7.0	μμf
Output: P to (H+K+g2+BP)	3.6	μμf

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.

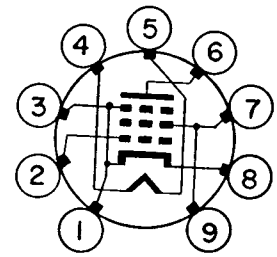
These values are chosen by the tube manufacturer to provide acceptable serviceability of the tube, making allowance for the effects of changes in operating conditions due to variations in the characteristics of the tube under consideration.

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.

GENERAL ELECTRIC

Supersedes ET-T1608 dated 4-60

BASING DIAGRAM

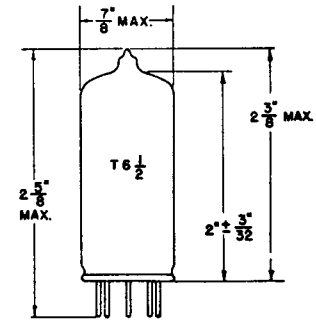


EIA 9MS

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



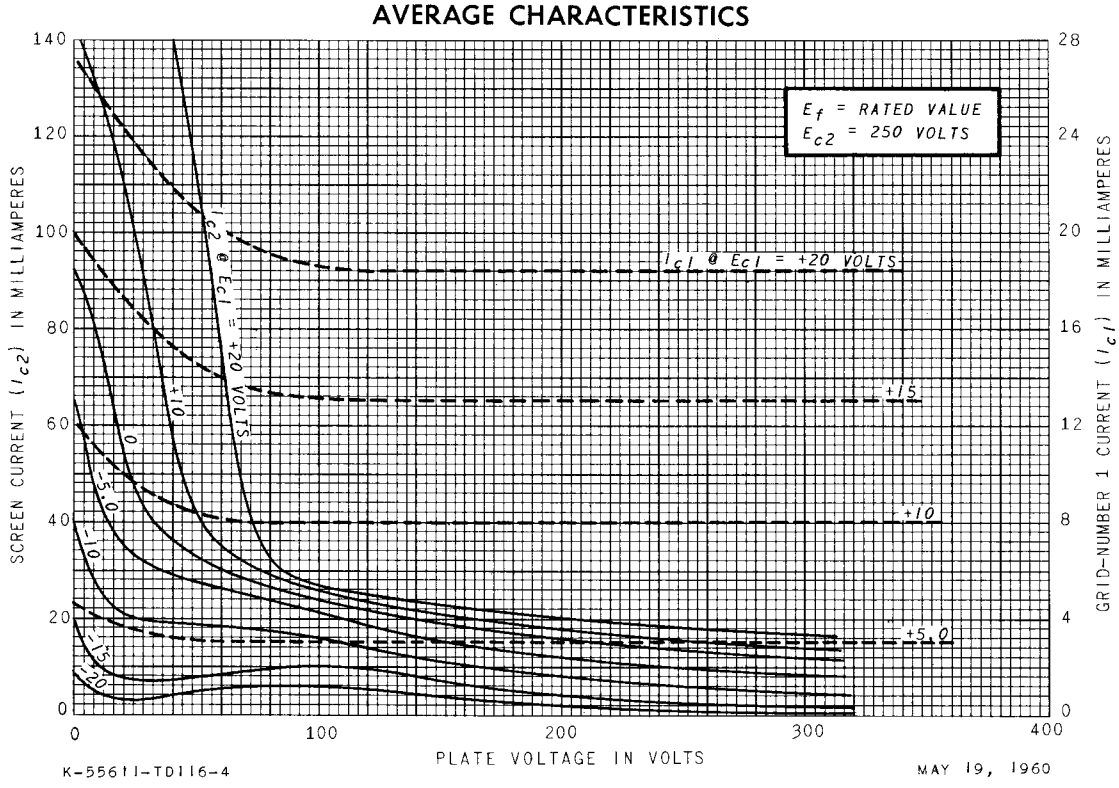
EIA 6-2

CHARACTERISTICS AND TYPICAL OPERATION

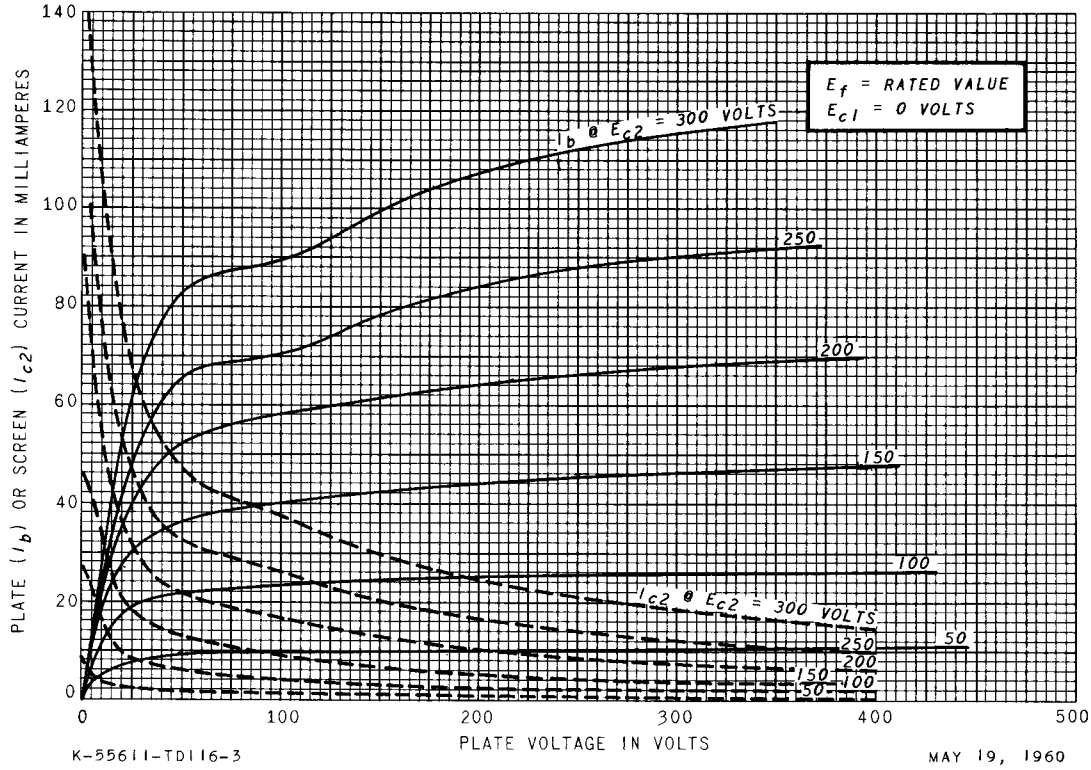
AVERAGE CHARACTERISTICS

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.



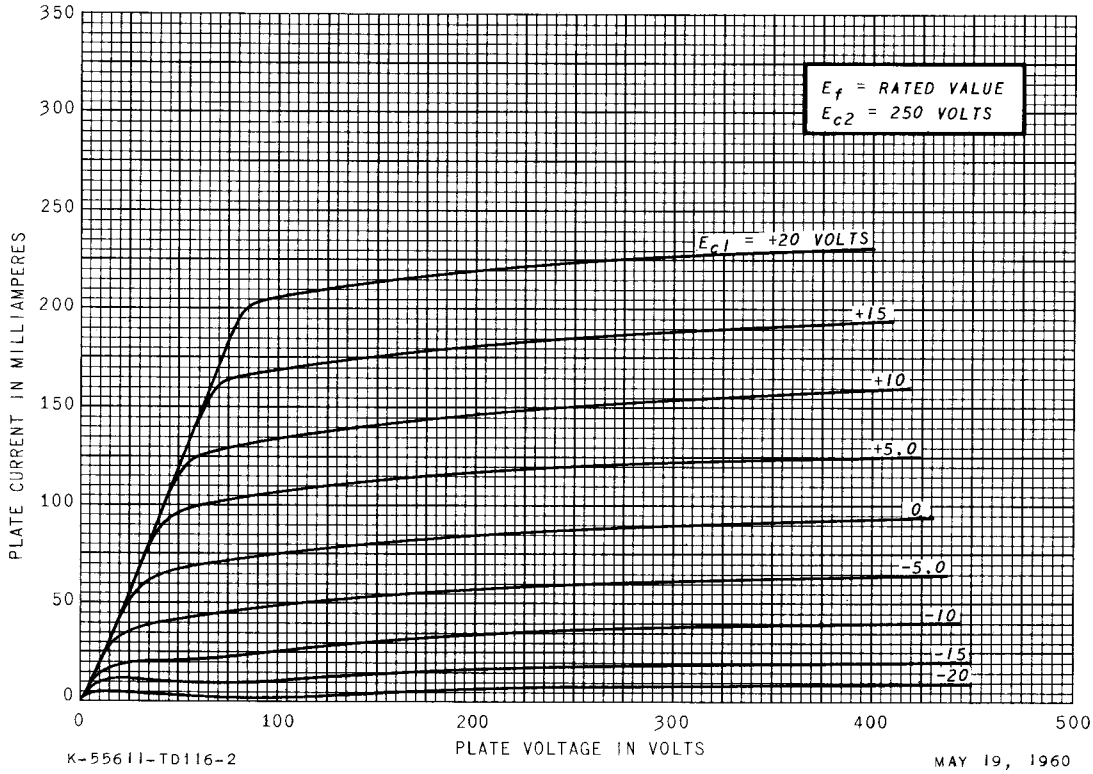
AVERAGE PLATE CHARACTERISTICS



K-55611-TD116-3

MAY 19, 1960

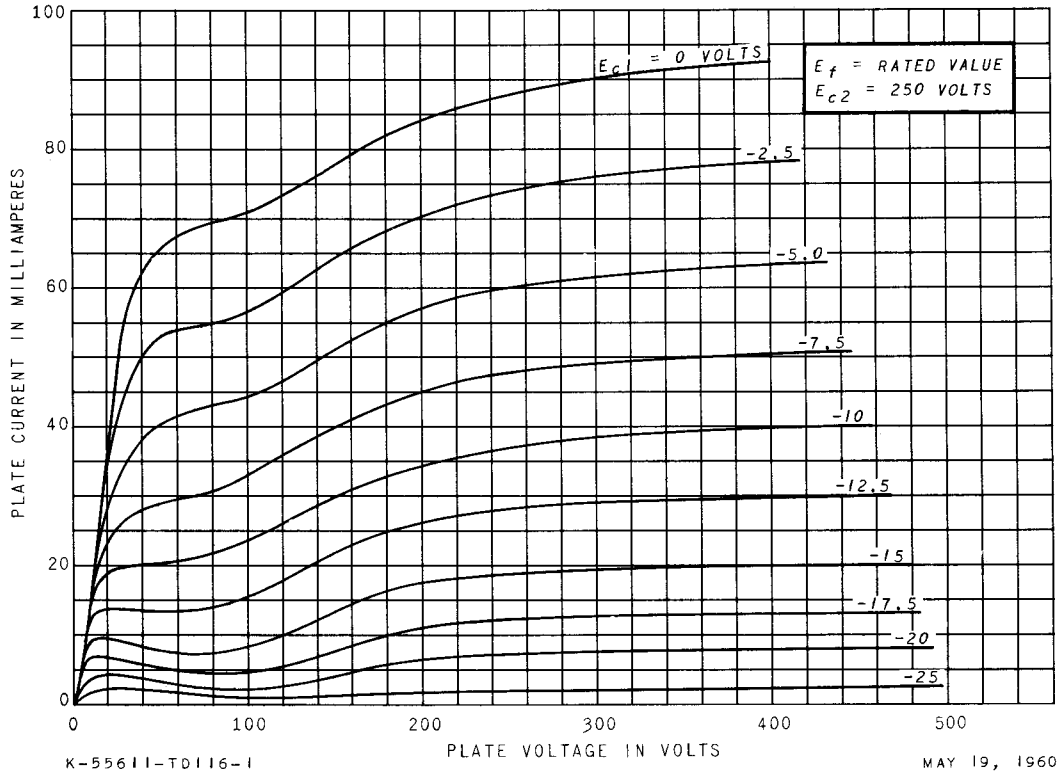
AVERAGE PLATE CHARACTERISTICS



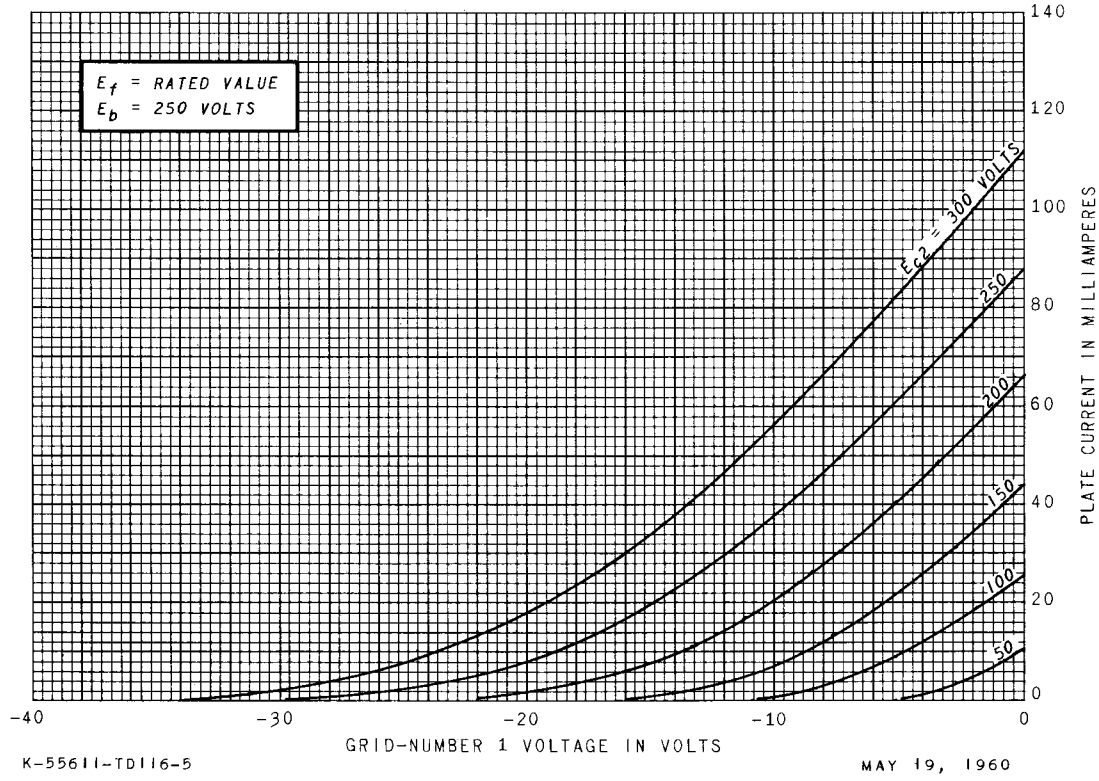
K-55611-TD116-2

MAY 19, 1960

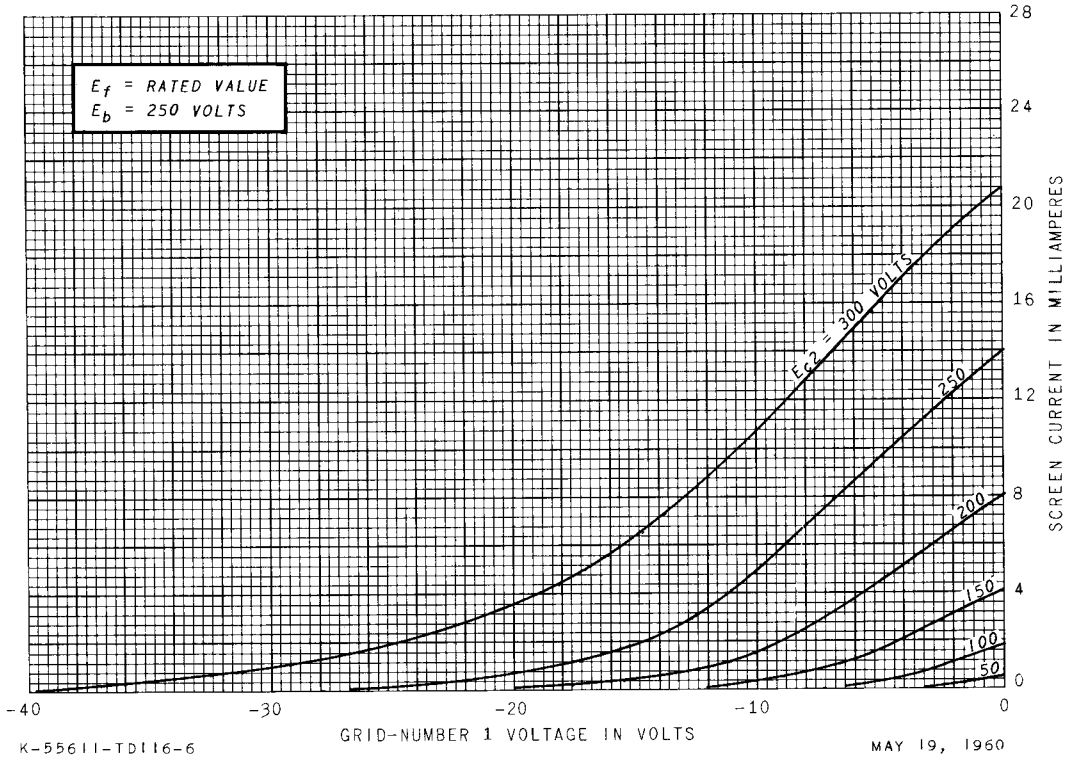
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



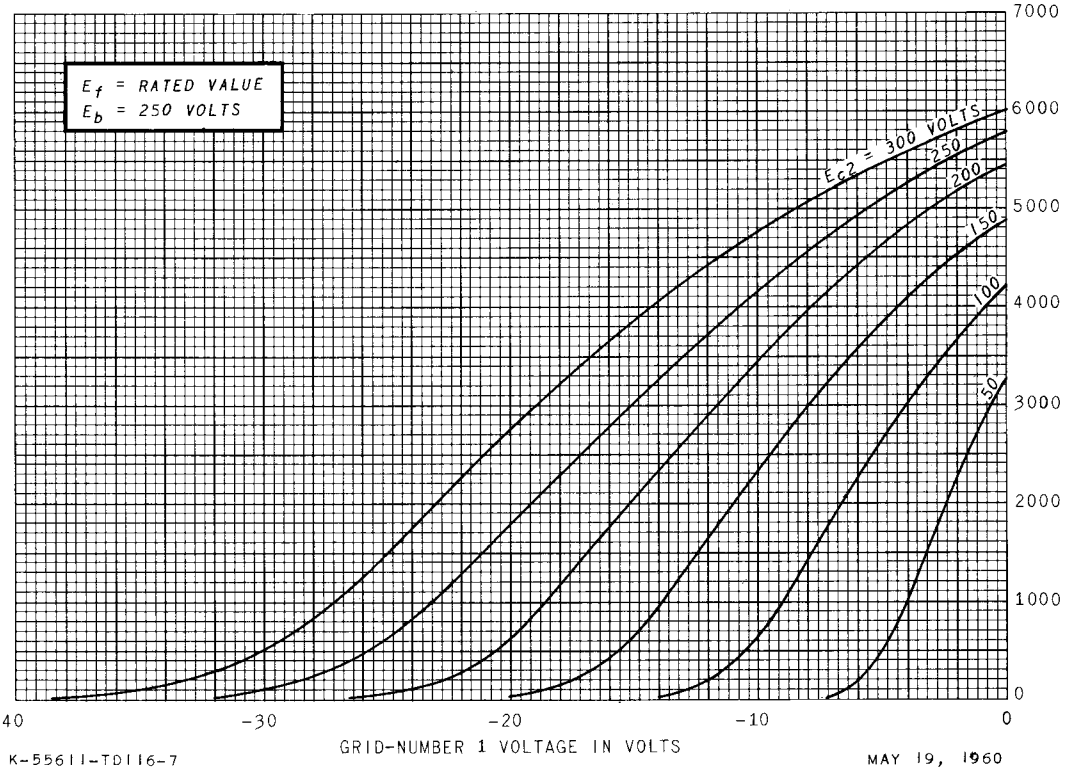
AVERAGE TRANSFER CHARACTERISTICS



K-5561I-TDII6-6

MAY 19, 1960

AVERAGE TRANSFER CHARACTERISTICS



K-5561I-TDII6-7

MAY 19, 1960

RECEIVING TUBE DEPARTMENT

GENERAL ELECTRIC

Owensboro, Kentucky