Electronic TUBES

5687

TWIN TRIODE

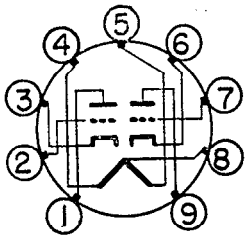
FOR GENERAL-PURPOSE AMPLIFIER APPLICATIONS

MEDIUM-MU
9-PIN MINIATURE
HIGH PERVEANCE
SEPARATE CATHODES

DESCRIPTION AND RATING

The 5687 is a miniature, medium-mu twin triode for use in general-purpose amplifier applications. The tube is characterized by high perveance and high emission capabilities. Except for the common heater connection, each section is electrically independent.

BASING DIAGRAM



EIA 9H

GENERAL

ELECTRICAL

	Series	Parallel	
Cathode—Coated Unipotential			
Heater Voltage, AC or DC	12.6 ± 10%	6.3 ± 10%	Volts
Heater Current	0.45	0.9	Amperes
Direct Interelectrode Capacitances*			
Grid to Plate, Each Section		4.0	μμf
Input, Each Section		4.0	μμf
Output, Section 1		0.6	μμf
Output, Section 2		0.5	μμf
Heater to Cathode, Each Section		7.0	μμf
Grid to Grid, approximate		0.025	μμf
Plate to Plate, approximate		0.75	μμf

* Without external shield.

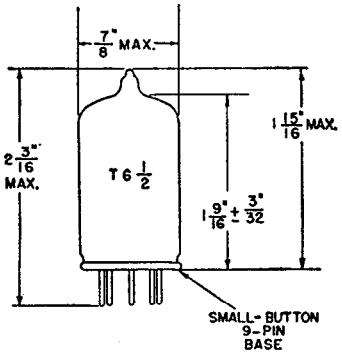
TERMINAL CONNECTIONS

Pin 1—Plate (Section 2)
Pin 2—Grid (Section 2)
Pin 3—Cathode (Section 2)
Pin 4—Heater
Pin 5—Heater
Pin 6—Cathode (Section 1)
Pin 7—Grid (Section 1)
Pin 8—Heater Center Tap
Pin 9—Plate (Section 1)

MECHANICAL

Mounting Position—Any
Envelope—T-6½, Glass
Base—E9-1, Small Button 9-Pin

PHYSICAL DIMENSIONS



EIA 6-2

GENERAL ELECTRIC

Supersedes ET-T1018A dated 7-55

MAXIMUM RATINGS

DESIGN-CENTER VALUES, Each Section

Plate Voltage	300	Volts
Inverse Plate Voltage	1000	Volts
Plate Dissipation, Each Plate	4.2	Watts
Total Plate Dissipation, Both Plates	7.5	Watts
DC Grid Current	6.0	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode	90	Volts
Heater Negative with Respect to Cathode	90	Volts
Grid-Circuit Resistance	1.0	Megohms
Bulb Temperature at Hottest Point	220	C

Design-Center 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 normal conditions.

The tube manufacturer chooses these values to provide acceptable serviceability of the tube in average applications, taking responsibility for normal changes in operating conditions due to rated supply-voltage variation, equipment component variations, equipment control adjustment, load variation, signal variation, environmental conditions, and variations in tube characteristics.

The equipment manufacturer should design so that initially no design-center value for the intended service is exceeded with a bogey tube in equipment operating at the stated normal supply-voltage.

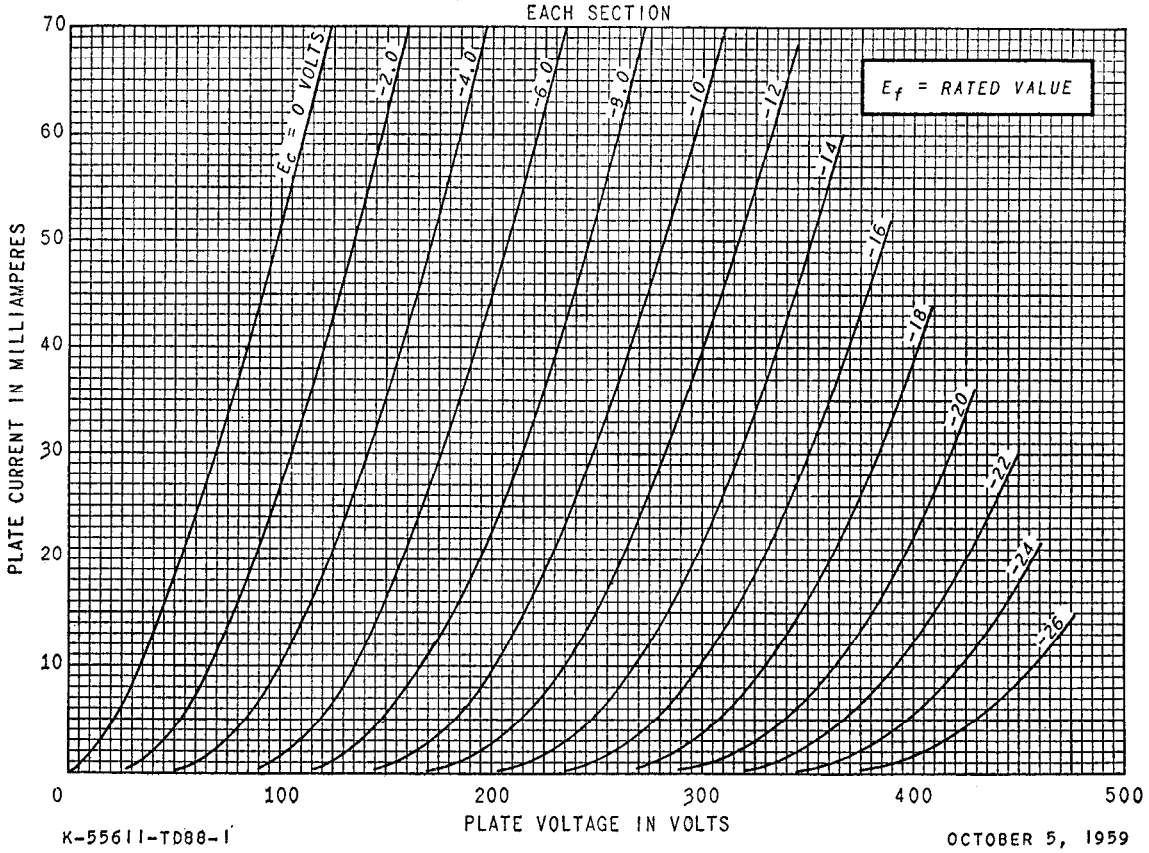
CHARACTERISTICS AND TYPICAL OPERATION

CLASS A_1 AMPLIFIER, Each Section

Plate Voltage	120	180	250	Volts
Grid Voltage	−2	−7	−12.5	Volts
Amplification Factor	18	17	16	
Plate Resistance, approximate	1560	2000	3000	Ohms
Transconductance	11,500	8500	5400	Micromhos
Plate Current	36	23	12	Milliamperes
Grid Voltage, approximate				
Ib = 100 Microamperes	−9	−14	−19	Volts

AVERAGE PLATE CHARACTERISTICS

EACH SECTION

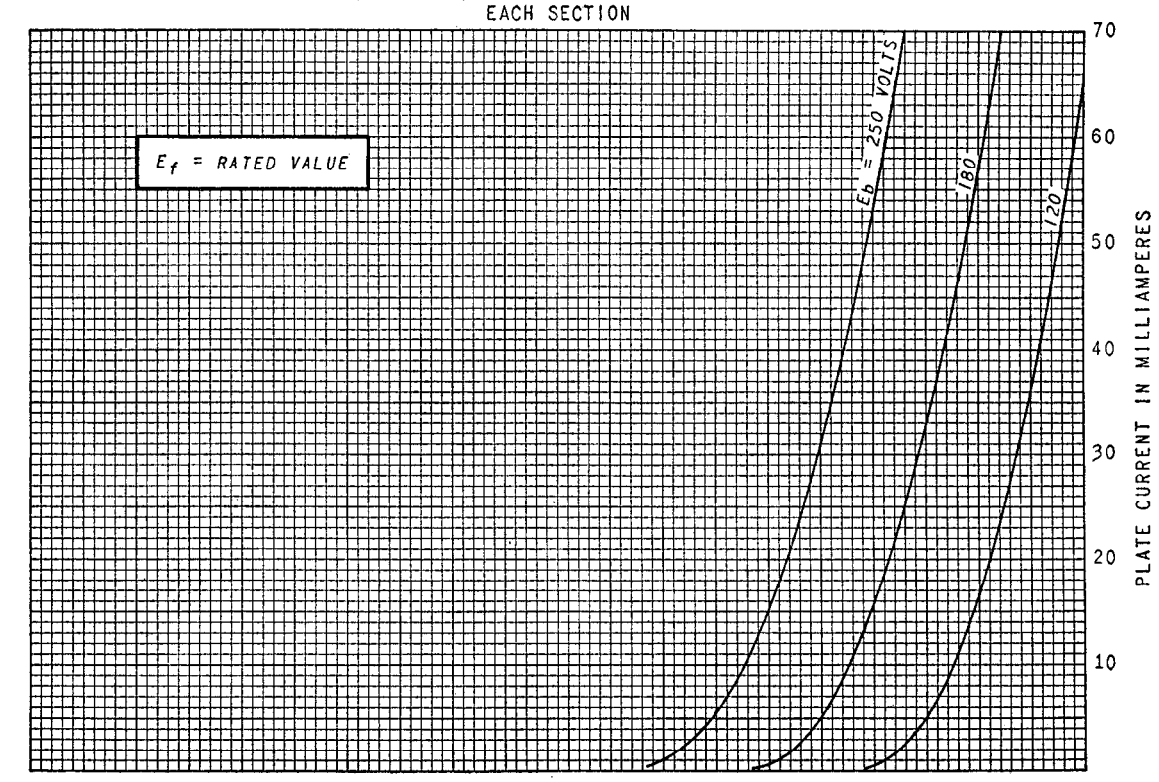


K-55611-TD88-1

OCTOBER 5, 1959

AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION



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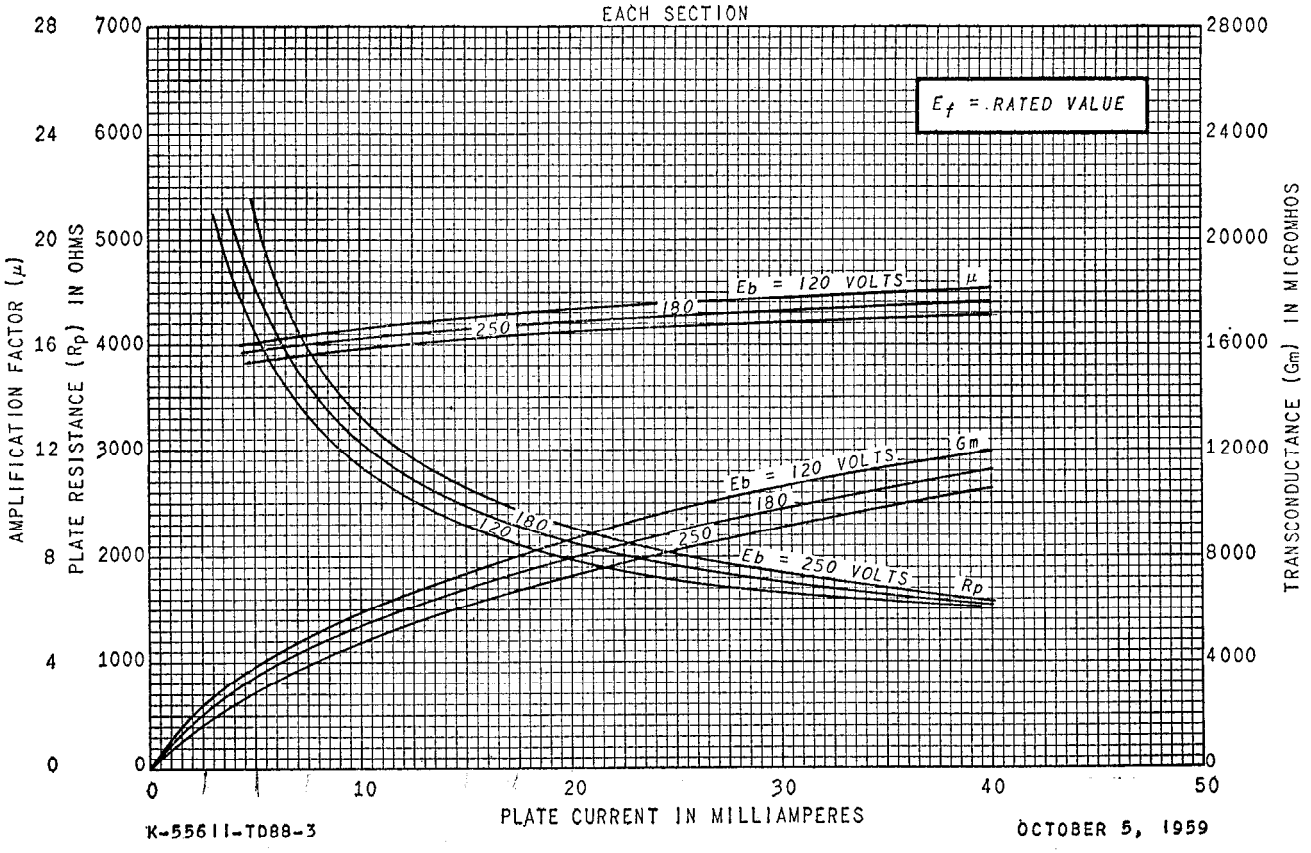
OCTOBER 5, 1959

AVERAGE CHARACTERISTICS



ELECTRONIC COMPONENTS DIVISION

GENERAL ELECTRIC

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