

## TWIN PENTODE

FOR AF POWER AMPLIFIER APPLICATIONS

### DESCRIPTION AND RATING

The 6DZ7 is a twin power pentode designed for use in the output stage of high-fidelity audio amplifiers. The incorporation of two pentode sections in one envelope makes it especially suitable for compact stereo systems.

#### GENERAL

##### ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC.....6.3 Volts  
Heater Current.....1.52 Amperes

	Section 1	Section 2	
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Direct Interelectrode Capacitances, approximate\*

Grid-Number 1 to Plate.....	0.7	0.5	$\mu\mu\text{f}$
Input.....	.11	11	$\mu\mu\text{f}$
Output.....	5.0	5.0	$\mu\mu\text{f}$
Grid-Number 1, Section 1 to Grid-Number 1, Section 2.....	0.03		$\mu\mu\text{f}$
Plate, Section 1 to Plate, Section 2.....	1.5		$\mu\mu\text{f}$

##### MECHANICAL

Mounting Position—Any

Envelope—T-12, Glass

Base—B8-110, Short Medium-Shell Octal 8-Pin

#### MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES, EACH SECTION UNLESS OTHERWISE INDICATED

Allowable Heater Voltage.....	5.7 to 6.9	Volts
Plate Voltage.....	440	Volts
Screen Voltage.....	300	Volts
Plate Dissipation.....	13.2	Watts
Screen Dissipation, Total.....	4.0	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.....	200	Volts
Grid-Number 1 Circuit Resistance.....	0.27	Megohms

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.

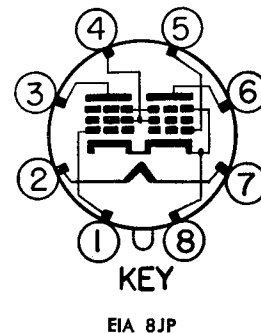
The tube manufacturer chooses these values to provide acceptable serviceability of the tube, taking responsibility for the effects of changes in operating conditions due to variations in tube characteristics.

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, 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**

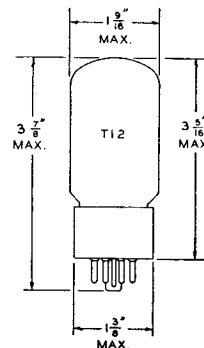
#### BASING DIAGRAM



#### TERMINAL CONNECTIONS

Pin 1—Grid Number 1 (Section 2)  
Pin 2—Heater  
Pin 3—Plate (Section 2)  
Pin 4—Grid Number 2 (Both Sections)  
Pin 5—Grid Number 1 (Section 1)  
Pin 6—Plate (Section 1)  
Pin 7—Heater  
Pin 8—Cathode and Grid Number 3 (Both Sections)

#### PHYSICAL DIMENSIONS



EIA 12-14

## CHARACTERISTICS AND TYPICAL OPERATION

### AVERAGE CHARACTERISTICS, EACH SECTION

Plate Voltage.....	250	Volts
Screen Voltage.....	250	Volts
Grid-Number 1 Voltage.....	-7.3	Volts
Plate Resistance, approximate.....	38000	Ohms
Transconductance.....	11300	Micromhos
Plate Current.....	48	Milliamperes
Screen Current.....	5.5	Milliamperes

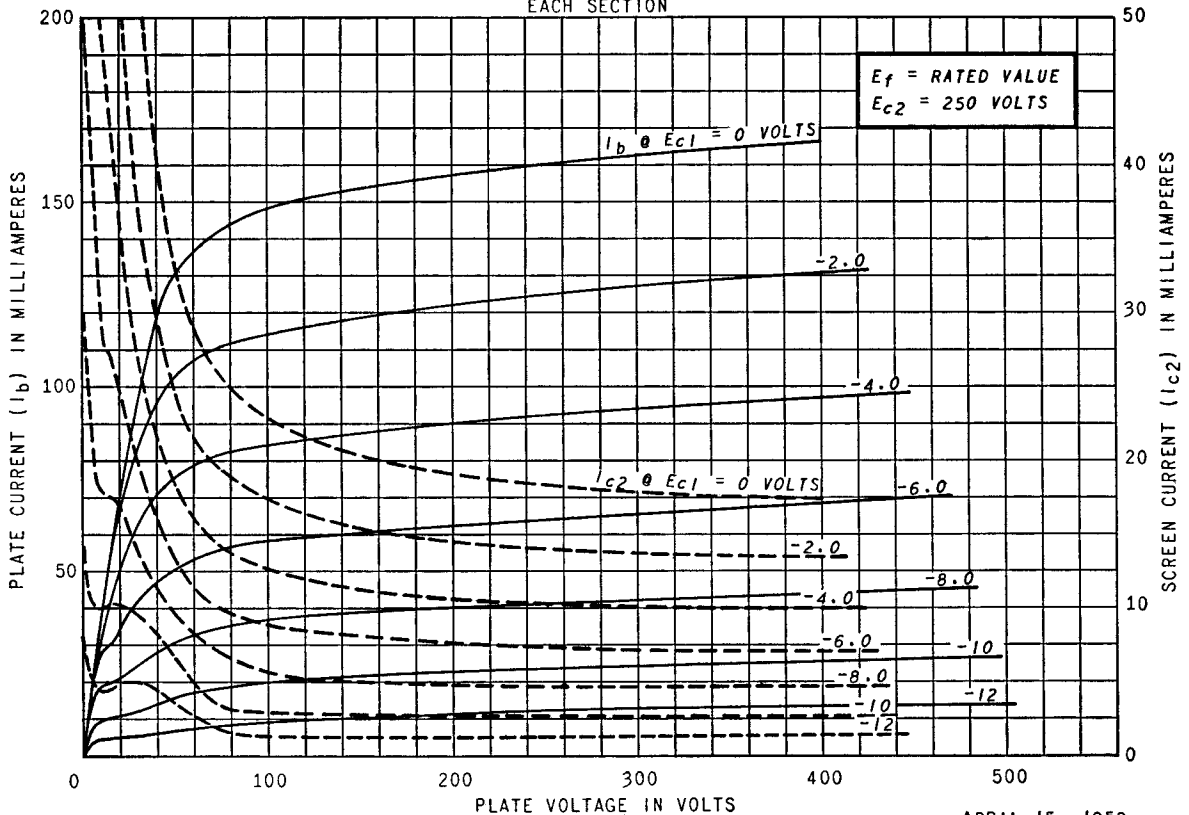
### PUSH-PULL CLASS AB<sub>1</sub> AMPLIFIER, SINGLE TUBE

	Fixed Bias	Cathode Bias	
Plate Voltage.....	400	300	Volts
Screen Voltage.....	250	250	Volts
Grid-Number 1 Voltage.....	-11	....	Volts
Cathode-Bias Resistor.....	...	120	Ohms
Peak AF Grid-to-Grid Voltage.....	22	22	Volts
Zero-Signal Plate Current.....	40	66	Milliamperes
Maximum-Signal Plate Current.....	100	80	Milliamperes
Zero-Signal Screen Current.....	4.0	7.0	Milliamperes
Maximum-Signal Screen Current.....	13	15	Milliamperes
Effective Load Resistance, Plate-to-Plate.....	9000	9000	Ohms
Total Harmonic Distortion.....	2.5	3.5	Percent
Maximum-Signal Power Output.....	18	12	Watts

\* Without external shield.

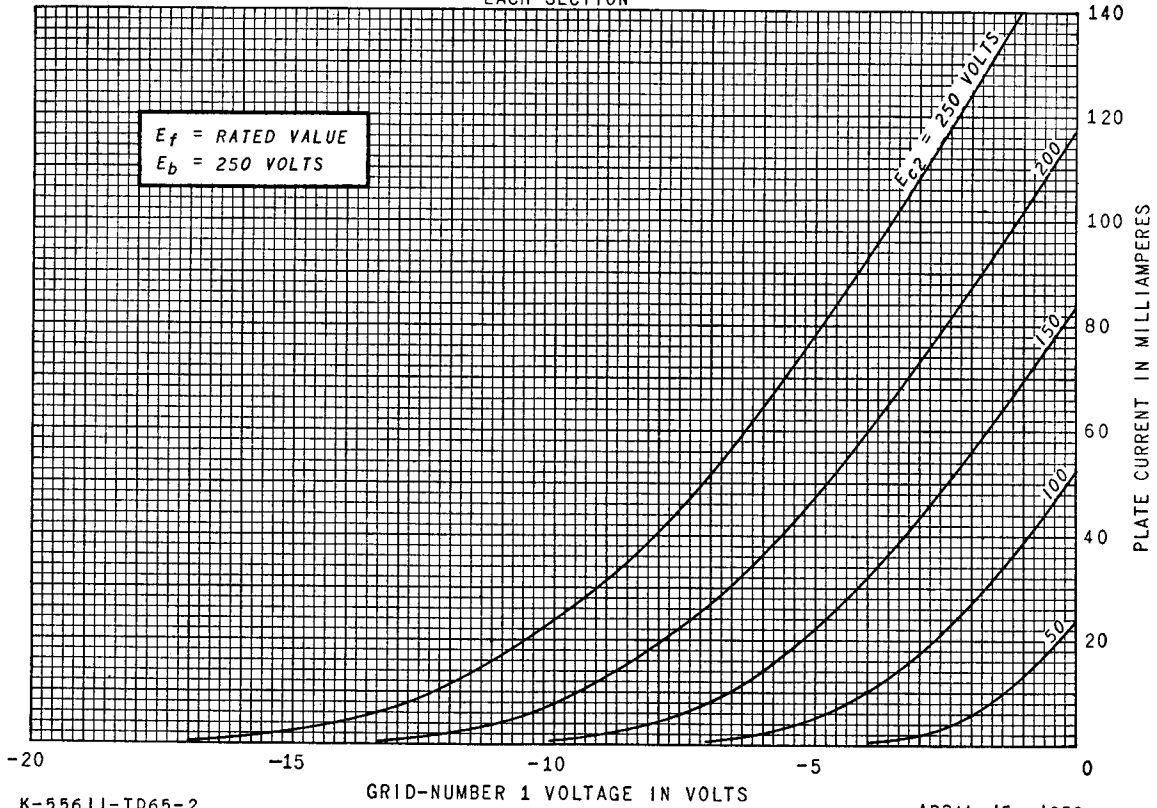
### AVERAGE PLATE CHARACTERISTICS

EACH SECTION



# AVERAGE TRANSFER CHARACTERISTICS

EACH SECTION

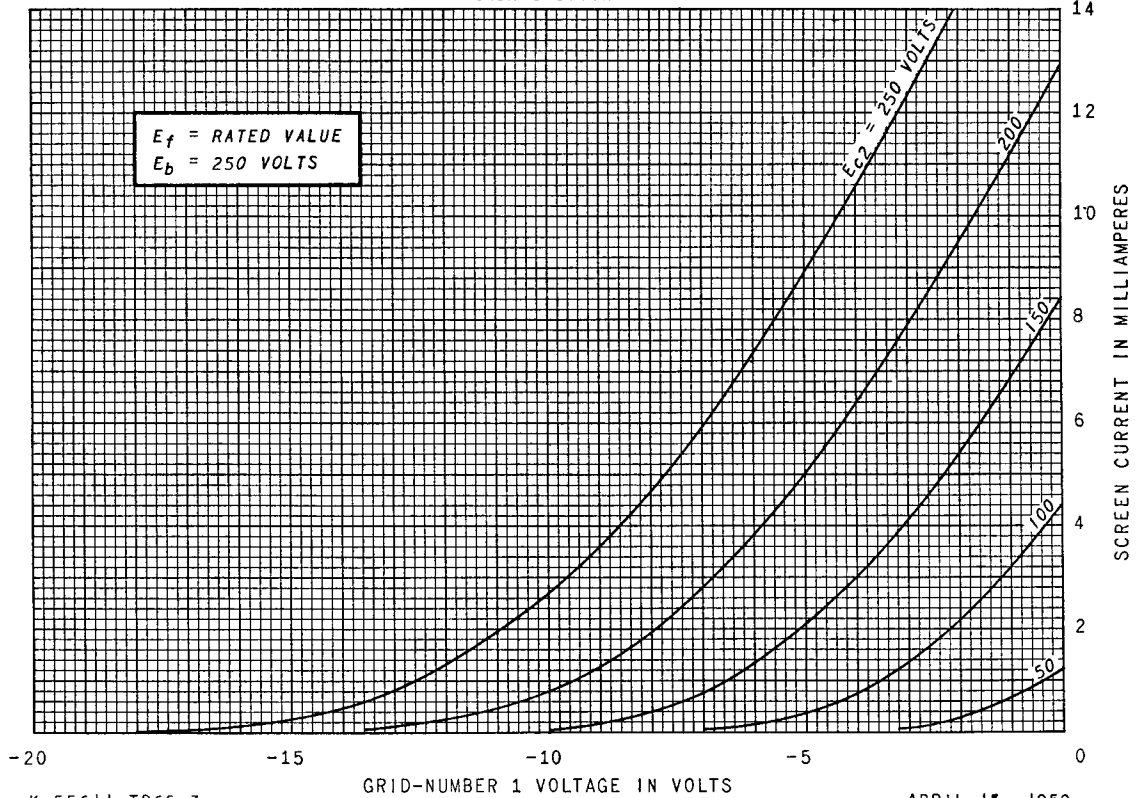


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# AVERAGE TRANSFER CHARACTERISTICS

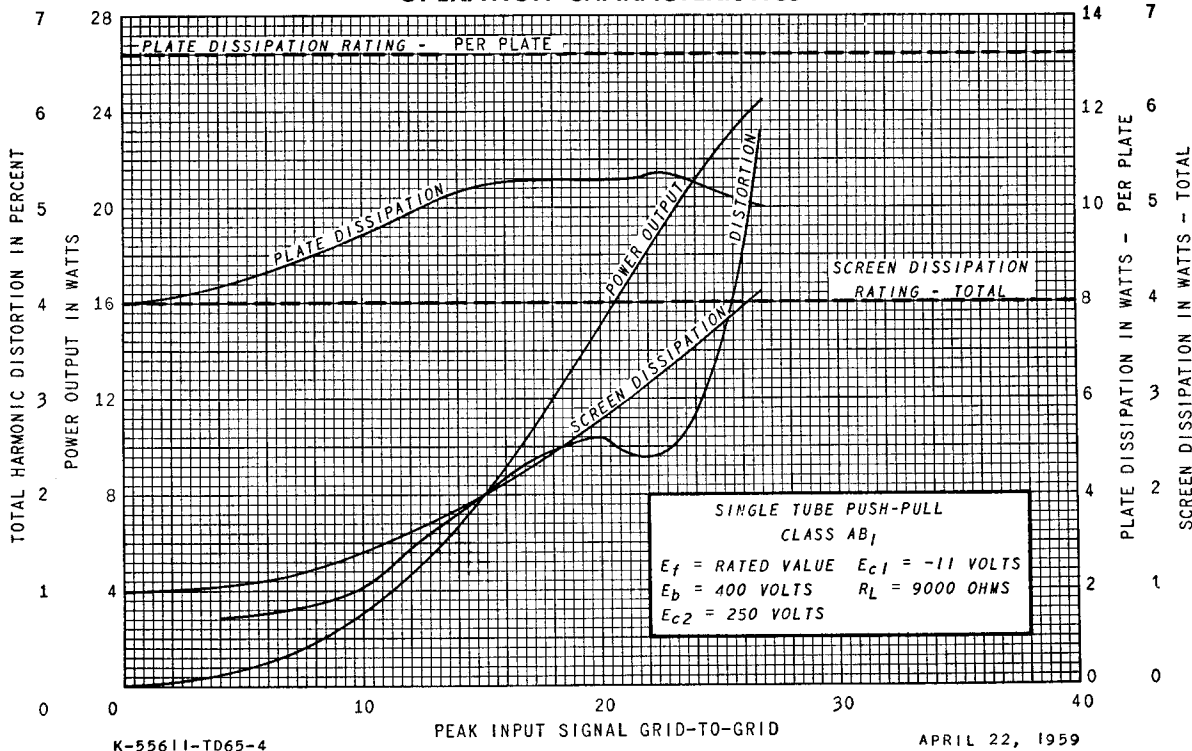
EACH SECTION



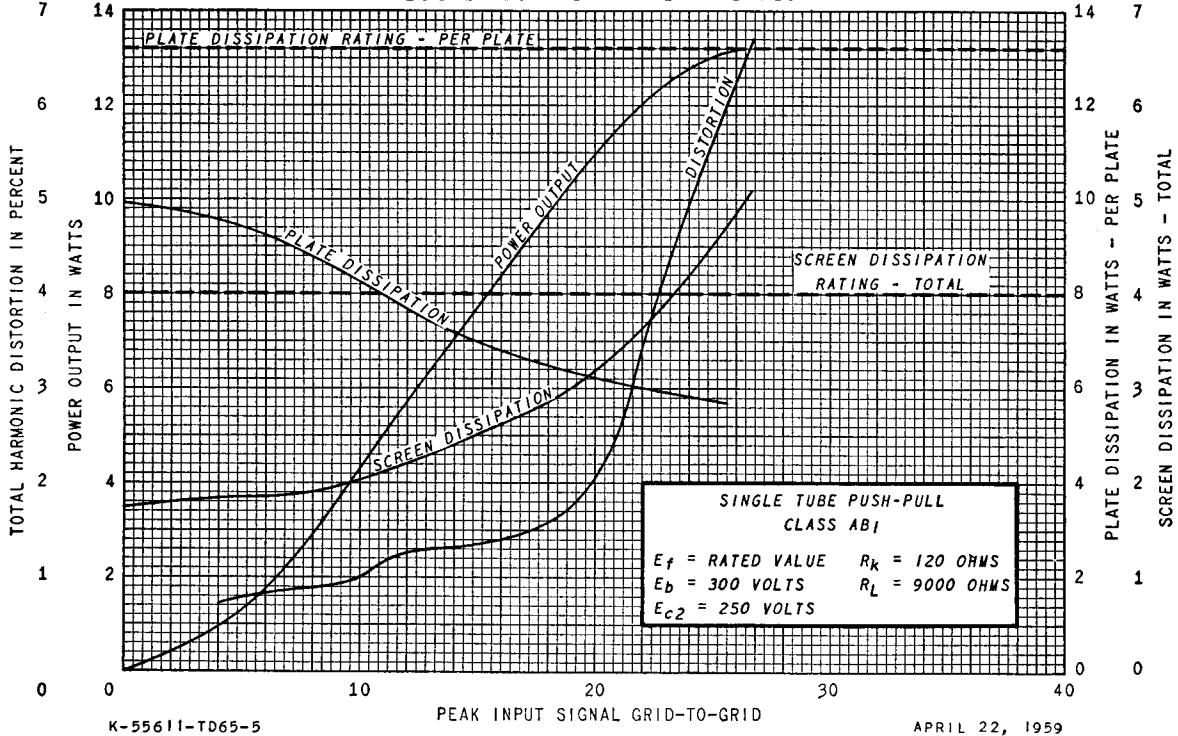
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**OPERATION CHARACTERISTICS**



**OPERATION CHARACTERISTICS**



**ELECTRONIC COMPONENTS DIVISION**



**Schenectady 5, N. Y.**