

41

Description and Rating

**POWER-AMPLIFIER PENTODE**

**GENERAL DESCRIPTION**

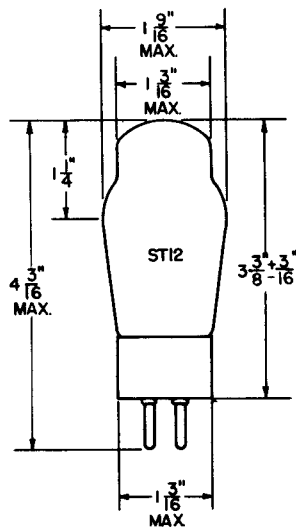
Principal Application: The 41 is a heater-cathode type power-amplifier pentode tube designed for service in the output stage of a-c or battery-operated receivers. More than one audio stage preceding

Cathode: . . . . . Coated Unipotential  
 Heater Voltage (A-C or D-C) . . . . . 6.3 Volts  
 Heater Current . . . . . 0.4 Ampere  
 Envelope: . . . . . ST-12 Glass  
 Base: . . . . . A6-7 Small 6-Pin Phenolic

the 41 is not recommended because of the possibility of microphonic disturbances resulting from the high level of amplification. Electrically the 41 and 6K6-GT are identical.

Mounting Position: . . . . . Any  
 Direct Interelectrode Capacitances: \*  
 Grid Number 1 to Plate . . . . . 0.5  $\mu$ f  
 Input . . . . . 5.5  $\mu$ f  
 Output . . . . . 6.0  $\mu$ f

**PHYSICAL DIMENSIONS**

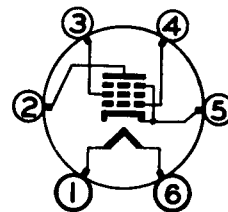


RMA 12-5

**TERMINAL CONNECTIONS**

- Pin 1 - Heater
- Pin 2 - Plate
- Pin 3 - Grid No. 2 (Screen)
- Pin 4 - Grid Number 1
- Pin 5 - Cathode and Grid No. 3
- Pin 6 - Heater

**BASING DIAGRAM**



RMA 6B  
BOTTOM VIEW

**MAXIMUM RATINGS**

	Design Center	Absolute	
Plate Voltage . . . . .	315	345	Volts
Screen (Grid Number 2) Voltage . . . . .	285	315	Volts
Screen Supply Voltage . . . . .	315	345	Volts
Plate Dissipation . . . . .	8.5	9.4	Watts
Screen Dissipation . . . . .	2.8	3.1	Watts
D-C heater-Cathode Voltage . . . . .	90	100	Volts

\* Approximate values without external shield.

## CHARACTERISTICS AND TYPICAL OPERATION

### CLASS A AMPLIFIER

Heater Voltage (A-C or D-C) . . . . .	6.3	6.3	6.3	Volts
Plate Voltage . . . . .	100	250	315	Volts
Screen (Grid No. 2) Voltage . . . . .	100	250	285	Volts
Grid Bias Voltage ** . . . . .	-7	-18	-21	Volts
Peak A-F Grid Voltage . . . . .	7	18	21	Volts
Zero-Signal Plate Current . . . . .	9	32	25.5	Milliamperes
Zero-Signal Screen Current . . . . .	1.6	5.5	4.0	Milliamperes
Maximum-Signal Plate Current . . . . .	9.5	33	28	Milliamperes
Maximum-Signal Screen Current . . . . .	3	10	9	Milliamperes
Plate Resistance . . . . .	104000	88000	75000	Ohms
Transconductance . . . . .	1500	2300	2100	Micromhos
Load Resistance . . . . .	12000	7600	9000	Ohms
Total Harmonic Distortion . . . . .	11	11	15	Per Cent
Maximum-Signal Power Output . . . . .	0.35	3.4	4.5	Watts

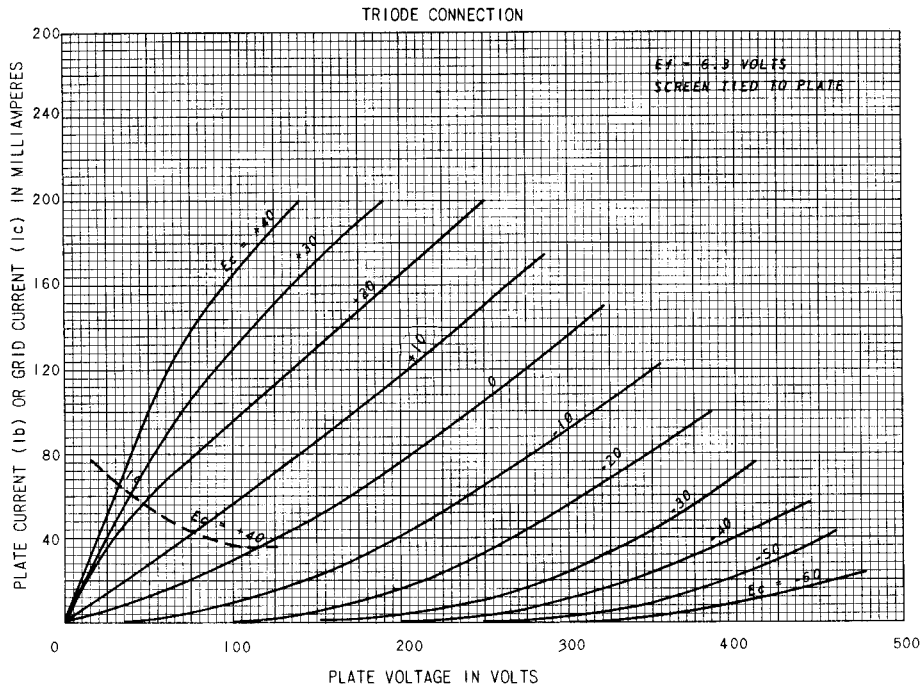
### PUSH-PULL CLASS A AMPLIFIER <sup>o</sup>

	Fixed Bias	Self Bias	
Heater Voltage (A-C or D-C) . . . . .	6.3	6.3	Volts
Plate Voltage . . . . .	285	285	Volts
Screen (Grid Number 2) Voltage . . . . .	285	285	Volts
Grid Bias Voltage ** . . . . .	-25.5	---	Volts
Self Bias Cathode Resistor . . . . .	---	400	Ohms
Peak A-F Grid to Grid Voltage . . . . .	51	51	Volts
Zero-Signal Plate Current . . . . .	55	55	Milliamperes
Zero-Signal Screen Current . . . . .	9	9	Milliamperes
Maximum-Signal Plate Current . . . . .	72	61	Milliamperes
Maximum-Signal Screen Current . . . . .	17	13	Milliamperes
Load Resistance (Plate to Plate) . . . . .	12000	12000	Ohms
Total Harmonic Distortion . . . . .	6	4	Per Cent
Maximum-Signal Power Output . . . . .	10.5	9.8	Watts

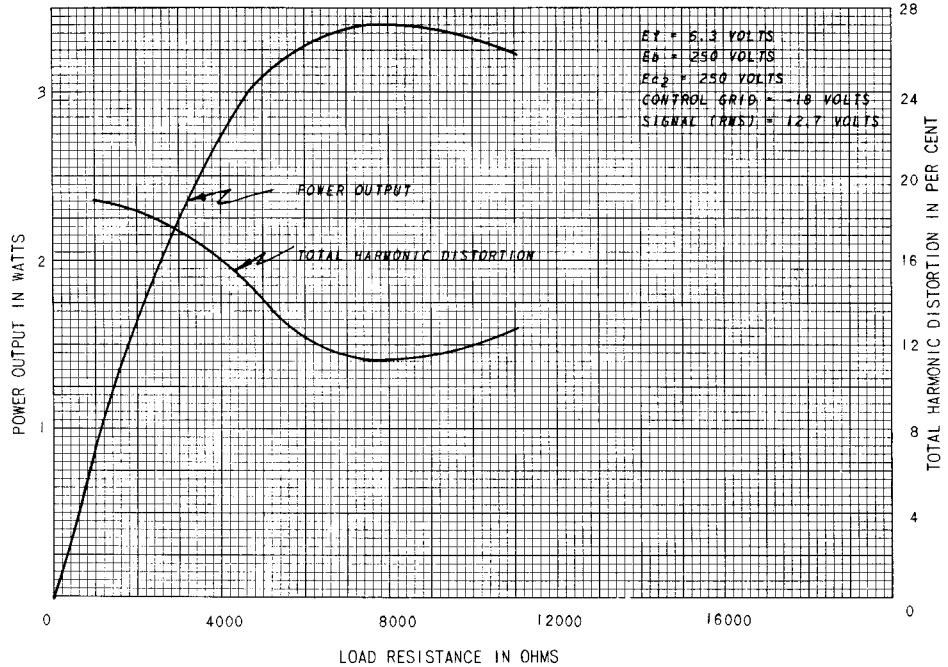
\*\* Transformer- or impedance-type input coupling devices are recommended to minimize resistance in the grid circuit. The d-c resistance, in the grid circuit, under rated maximum conditions, should not exceed 0.1 megohm with fixed bias or 0.5 megohm with cathode bias.

<sup>o</sup> Values are for two tubes unless otherwise stated.

### AVERAGE PLATE CHARACTERISTICS

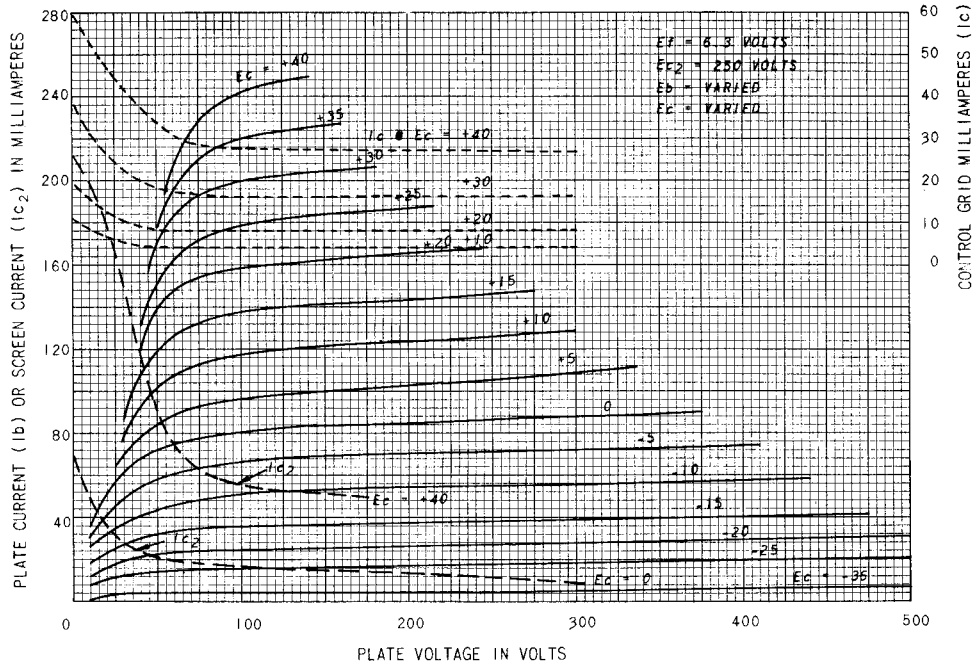


### OPERATION CHARACTERISTICS



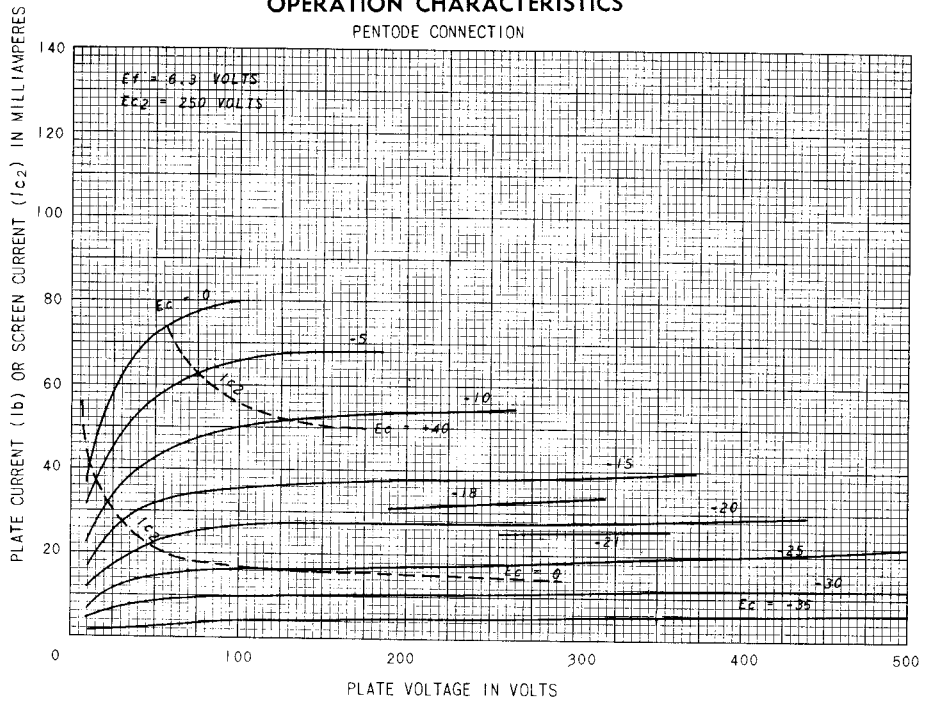
### AVERAGE CHARACTERISTICS

PENTODE CONNECTION



### OPERATION CHARACTERISTICS

PENTODE CONNECTION



Electronics Department



Schenectady, N. Y.