

41

Description and Rating

**POWER-AMPLIFIER PENTODE**

**GENERAL DESCRIPTION**

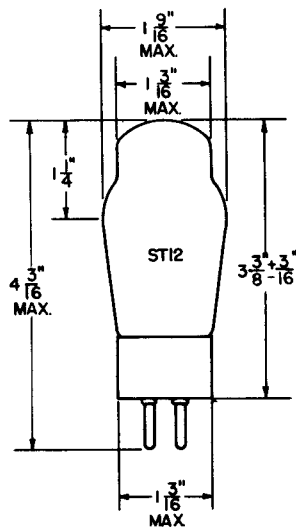
Principal Application: The 41 is a heater-cathode type power-amplifier pentode tube designed for service in the output stage of a-c or battery-operated receivers. More than one audio stage preceding

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**

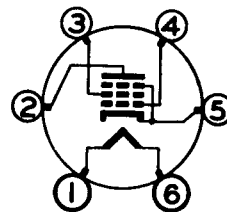


RMA 12-5

**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        |

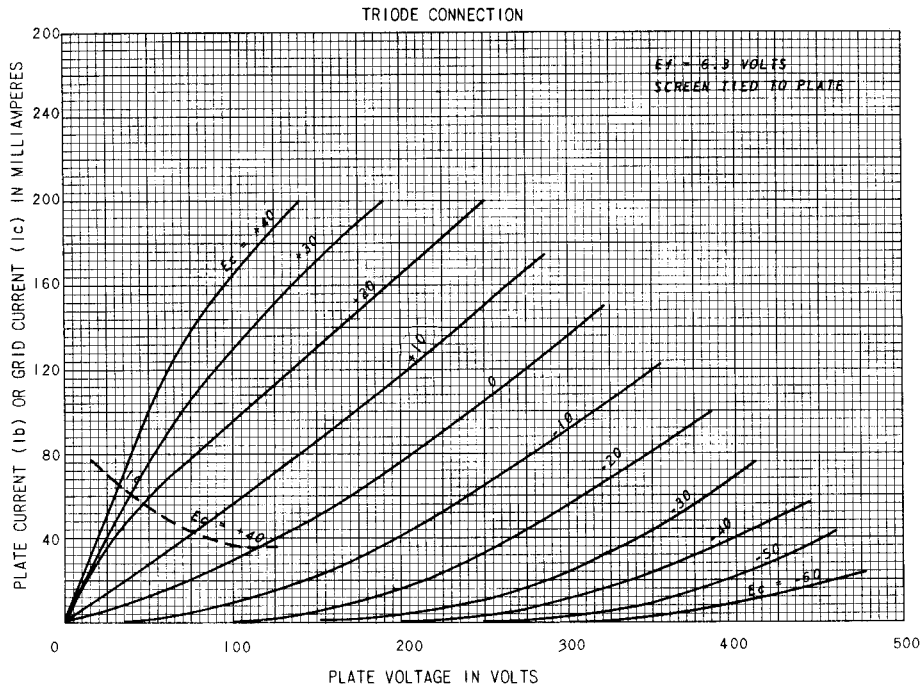
PUSH-PULL CLASS A AMPLIFIER <sup>o</sup>

|                                  | 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        |

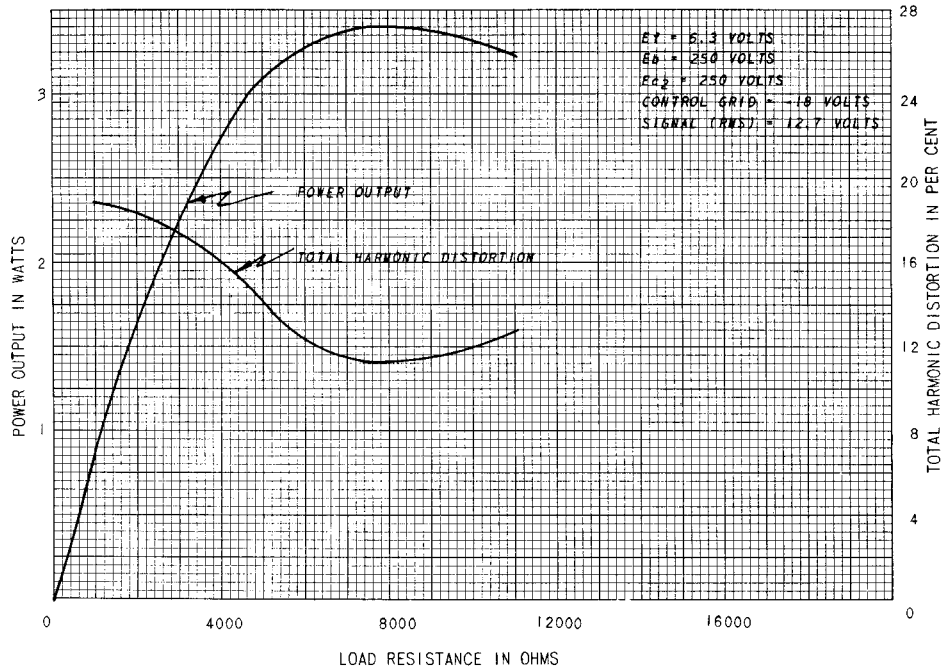
\*\* Transformer- or impedance-type input coupling devices are recommended to minimize resistance in the grid circuit. The d-c resistance, in the grid circuit, under rated maximum conditions, should not exceed 0.1 megohm with fixed bias or 0.5 megohm with cathode bias.

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

### AVERAGE PLATE CHARACTERISTICS

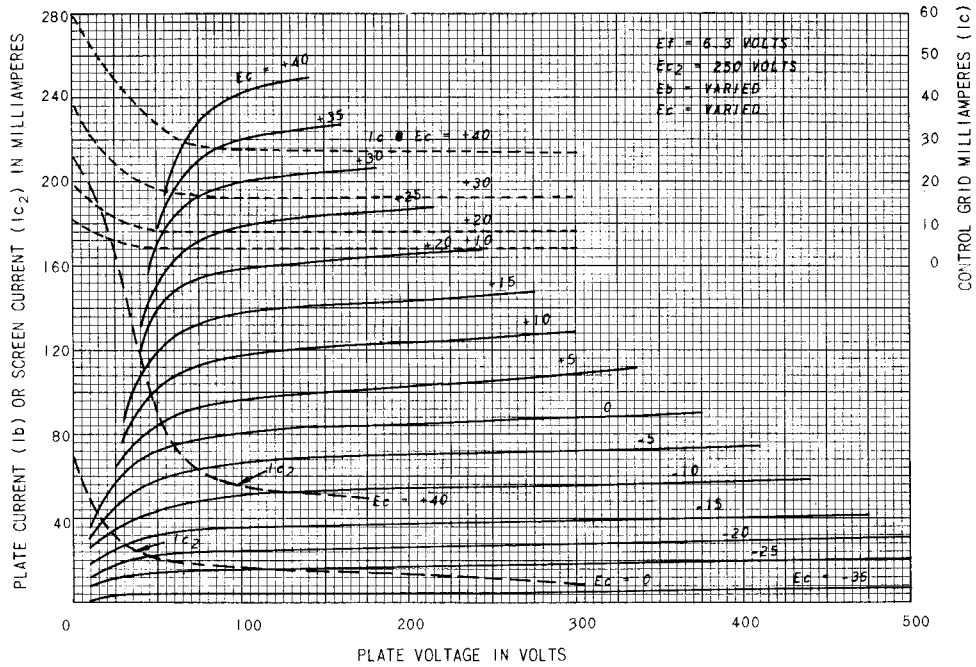


### OPERATION CHARACTERISTICS



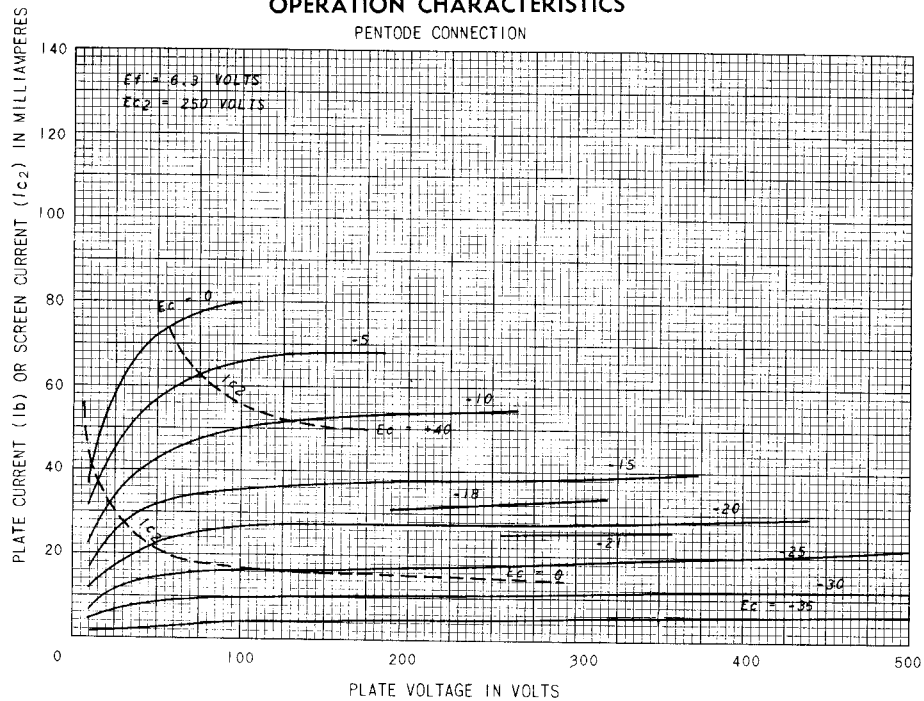
### AVERAGE CHARACTERISTICS

PENTODE CONNECTION



### OPERATION CHARACTERISTICS

PENTODE CONNECTION



Electronics Department



Schenectady, N. Y.