



## ELECTRONIC TUBE REFERENCE

## 4X500A

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL  
DATA

**1 SECTION**  
CONSTRUCTION  
**TETRODE**

High-power transmitting tetrode for FM, television, and VHF communications amplifiers, producing approximately 835 W RF output.

## GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | 4             |
| NOMINAL HEATER      | 5 V / 13.7 A      | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

## SECTION RATINGS

|                                                                                 |          |
|---------------------------------------------------------------------------------|----------|
| <b>SECTION 1</b> Tetrode                                                        |          |
| TRANSCONDUCTANCE                                                                | 0.0052 S |
| AMPLIFICATION FACTOR                                                            | 6.2      |
| MAXIMUM PLATE VOLTAGE                                                           | 4000 V   |
| MAXIMUM SCREEN VOLTAGE                                                          | 500 V    |
| MAXIMUM PLATE DISSIPATION                                                       | 500 W    |
| MAXIMUM SCREEN DISSIPATION                                                      | 30 W     |
| MAXIMUM GRID DISSIPATION                                                        | 10 W     |
| <i>Promoted from printed maximum-rating and general-characteristics tables.</i> |          |

4X500A is a Tetrode device. Forced-air-cooled external-anode tetrode for FM, television, and VHF communication transmitter power-amplifier service.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1956 RCA Transmitting Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

## 1956 RCA TRANSMITTING TUBES

## Section 1 · Tetrode

**CONSTRUCTION**

| PARAMETER      | PUBLISHED VALUE | CONDITION / NOTE |
|----------------|-----------------|------------------|
| Cooling method | Forced air      | —                |



## SOURCE OPERATING CONDITIONS

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# 1958 Amperex Industrial

Published test conditions and operating points. Values on this page are preserved as reported by this source.

## 1958 AMPEREX INDUSTRIAL

## Section 1 · Tetrode

**OTHER**

| PARAMETER                              | PUBLISHED VALUE | CONDITION / NOTE                                |
|----------------------------------------|-----------------|-------------------------------------------------|
| Plate voltage                          | 4000 V          | RF Amplifier or Oscillator; Class C; Telegraphy |
| Plate current                          | 315 mA          | RF Amplifier or Oscillator; Class C; Telegraphy |
| RF output power                        | 835 W           | RF Amplifier or Oscillator; Class C; Telegraphy |
| Grid voltage                           | -150 V          | RF Amplifier or Oscillator; Class C; Telegraphy |
| Grid current                           | 16 mA           | RF Amplifier or Oscillator; Class C; Telegraphy |
| Maximum frequency at full input rating | 120 MHz         | —                                               |
| Screen voltage                         | 500 V           | RF Amplifier or Oscillator; Class C; Telegraphy |

**CAPACITANCE**

| PARAMETER                 | PUBLISHED VALUE | CONDITION / NOTE |
|---------------------------|-----------------|------------------|
| Grid-to-plate capacitance | 0.05 pF         | —                |

| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE |
|---------------------------------------|-----------------|------------------|
| Grid-to-filament/cathode capacitance  | 12.8 pF         | —                |
| Plate-to-filament/cathode capacitance | 5.6 pF          | —                |



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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# 1962 Eimac

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 EIMAC

Section 1 · Tetrode

| CAPACITANCE                                        |                 |                  |
|----------------------------------------------------|-----------------|------------------|
| PARAMETER                                          | PUBLISHED VALUE | CONDITION / NOTE |
| Input - - - - - 10.6 14.4 pF<br>14.4 uuf           |                 | —                |
| Output = 5 S S - S S - - 49 59 pF<br>59 uuf        |                 | —                |
| Feedback - - - - . . S S = o 0.1 pF<br>S S 0.1 uuf |                 | —                |

| OTHER                      |                 |                  |
|----------------------------|-----------------|------------------|
| PARAMETER                  | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum plate voltage      | 4000 V          | —                |
| Maximum screen voltage     | 500 V           | —                |
| Maximum plate dissipation  | 500 W           | —                |
| Maximum screen dissipation | 30 W            | —                |
| Maximum grid dissipation   | 10 W            | —                |



SOURCE DATA APPENDIX

# 1963 Amperex Condensed

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 AMPEREX CONDENSED  
Section 1 · Tetrode

| OTHER                                  |                 |                                             |
|----------------------------------------|-----------------|---------------------------------------------|
| PARAMETER                              | PUBLISHED VALUE | CONDITION / NOTE                            |
| Plate voltage                          | 4000 V          | RFAmplifierOrOscillator; ClassC; Telegraphy |
| Plate current                          | 315 mA          | RFAmplifierOrOscillator; ClassC; Telegraphy |
| RF output power                        | 835 W           | RFAmplifierOrOscillator; ClassC; Telegraphy |
| Grid voltage                           | -150 V          | RFAmplifierOrOscillator; ClassC; Telegraphy |
| Grid current                           | 16 mA           | RFAmplifierOrOscillator; ClassC; Telegraphy |
| Maximum frequency at full input rating | 120 MHz         | —                                           |
| Screen voltage                         | 500 V           | RFAmplifierOrOscillator; ClassC; Telegraphy |

| CAPACITANCE                           |                 |                  |
|---------------------------------------|-----------------|------------------|
| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE |
| Grid-to-plate capacitance             | 0.05 pF         | —                |
| Grid-to-filament/cathode capacitance  | 12.8 pF         | —                |
| Plate-to-filament/cathode capacitance | 5.6 pF          | —                |