

ELECTRONIC TUBE REFERENCE

4D21

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

CONSOLIDATED TECHNICAL DATA

1 SECTION  
CONSTRUCTION  
TETRODE

Power tetrode for transmitting RF amplifier and oscillator service, capable of full ratings to about 120 MHz and reduced-rating operation substantially higher.

GENERAL CHARACTERISTICS

|                     |                   |                      |               |
|---------------------|-------------------|----------------------|---------------|
| BASE DESIGNATION    | —                 | BASE PINS            | —             |
| NOMINAL HEATER      | 5 V / 6.5 A       | PARALLEL HEATER      | — / —         |
| HEATING             | Direct            | SERIES OPERATION     | Not specified |
| CATHODE ARRANGEMENT | Separate cathodes | SECTION CONSTRUCTION | Similar       |

SECTION RATINGS

|                                                                                              |           |
|----------------------------------------------------------------------------------------------|-----------|
| SECTION1 Tetrode                                                                             |           |
| TRANSCONDUCTANCE                                                                             | 0.00245 S |
| AMPLIFICATION FACTOR                                                                         | 5.9       |
| MAXIMUM PLATE VOLTAGE                                                                        | 3000 V    |
| MAXIMUM SCREEN VOLTAGE                                                                       | 600 V     |
| MAXIMUM PLATE DISSIPATION                                                                    | 125 W     |
| MAXIMUM SCREEN DISSIPATION                                                                   | 20 W      |
| MAXIMUM GRID DISSIPATION                                                                     | 5 W       |
| Published source values promoted where applicable; additional values retained as parameters. |           |

4D21 is a Tetrode device in the supplied Amperex literature. Radiation- and forced-air-cooled power tetrode; supplied table explicitly co-designates 4-125A/4D21.



## SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

# 1950 General Electric Transmitting Types

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

## 1950 GENERAL ELECTRIC TRANSMITTING TYPES

## Section 1 · Tetrode

| OTHER                       |                 |                  |
|-----------------------------|-----------------|------------------|
| PARAMETER                   | PUBLISHED VALUE | CONDITION / NOTE |
| Power output maximum signal | 520 W           | ClassAB          |



## SOURCE OPERATING CONDITIONS

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# 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

| OTHER                         |                 |                  |
|-------------------------------|-----------------|------------------|
| PARAMETER                     | PUBLISHED VALUE | CONDITION / NOTE |
| Maximum full-rating frequency | 120 MHz         | —                |
| Reduced-rating frequency      | 250 MHz         | —                |

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



# 1962 Eimac

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

1962 EIMAC  
Section 1 · Tetrode

| CHARACTERISTIC                |                 |                  |
|-------------------------------|-----------------|------------------|
| PARAMETER                     | PUBLISHED VALUE | CONDITION / NOTE |
| Frequency for Maximum Ratings | 120 MHz         | —                |

| CAPACITANCE            |                 |                  |
|------------------------|-----------------|------------------|
| PARAMETER              | PUBLISHED VALUE | CONDITION / NOTE |
| Grid-Plate Capacitance | 0.05 pF         | Average          |
| Input Capacitance      | 10.8 pF         | Average          |
| Output Capacitance     | 3.1 pF          | Average          |



SOURCE DATA APPENDIX

SOURCE PDF

# 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                          | 2500 V          | RFAmplifierOrOscillator |
| Plate current                          | 200 mA          | RFAmplifierOrOscillator |
| RF output power                        | 375 W           | RFAmplifierOrOscillator |
| Grid voltage                           | -150 V          | RFAmplifierOrOscillator |
| Grid current                           | 12 mA           | RFAmplifierOrOscillator |
| Screen voltage                         | 350 V           | RFAmplifierOrOscillator |
| Maximum frequency at full input rating | 120 MHz         | —                       |

| CAPACITANCE                           |                 |                  |
|---------------------------------------|-----------------|------------------|
| PARAMETER                             | PUBLISHED VALUE | CONDITION / NOTE |
| Grid-to-plate capacitance             | <b>0.05 pF</b>  | —                |
| Grid-to-filament/cathode capacitance  | <b>10.8 pF</b>  | —                |
| Plate-to-filament/cathode capacitance | <b>3.1 pF</b>   | —                |