

4250A

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

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TETRODE

Power transmitting tetrode for RF amplifier, oscillator, and modulator service, with 250 W plate dissipation and RF output reaching several hundred watts.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	5
NOMINAL HEATER	5 V / 14.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
TRANSCONDUCTANCE	0.004 S
AMPLIFICATION FACTOR	5.1
MAXIMUM PLATE VOLTAGE	4000 V
MAXIMUM SCREEN VOLTAGE	600 V
MAXIMUM PLATE DISSIPATION	250 W
MAXIMUM SCREEN DISSIPATION	35 W
MAXIMUM GRID DISSIPATION	10 W
MAXIMUM CATHODE CURRENT	350 mA
Highest applicable published rating promoted; service-specific CW, RF, audio, industrial, and pulse limits retained as parameter rows.	

4250A is a Tetrode device. Power transmitting tetrode; supplied table explicitly co-designates 4-250A/5D22.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	4000 μ S	—
Amplification Factor	5.1	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	4000 V	—
Maximum Plate Dissipation	250 W	—
Maximum Cathode Current	510 mA	—
Operating Frequency Maximum	75 MHz	—
Maximum Signal Power Output	1040 W	AudioFrequency,ClassAB



SOURCE OPERATING CONDITIONS

1953 Amperex

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

1953 AMPEREX

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum frequency at full ratings	75 MHz	—
Reduced-rating frequency	120 MHz	—
Peak cathode current maximum	2.6 A	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance maximum	0.11 pF	—



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 signal power output	1040 W	ClassAB



SOURCE DATA APPENDIX

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	110 MHz	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	0.12 pF	Average
Input Capacitance	12.7 pF	Average
Output Capacitance	4.5 pF	Average



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 current	312 mA	RFAmplifierOrOscillator
RF output power	1000 W	RFAmplifierOrOscillator
Grid voltage	-225 V	RFAmplifierOrOscillator
Grid current	90 mA	RFAmplifierOrOscillator
Screen voltage	500 V	RFAmplifierOrOscillator



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Eimac Tube Manual

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

1965 EIMAC TUBE MANUAL

Section 1 · Tetrode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	5 V	—
Heater/filament current	14.5 A	—
Amplification factor	5.1	—
Transconductance	4000 μ S	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input/grid-cathode capacitance	12.7 pF	—
Output/plate-cathode capacitance	4.5 pF	—
Feedback/grid-plate capacitance	0.12 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	4000 V	—
Maximum screen voltage	600 V	—
Maximum plate dissipation	250 W	—
Maximum screen dissipation	35 W	—
Maximum grid dissipation	10 W	—
Maximum plate/cathode current	350 mA	—
Frequency for maximum ratings	110 MHz	—
Plate-modulated maximum plate voltage	3200 V	PlateModulated
Plate-modulated plate dissipation	165 W	PlateModulated
Typical RF plate voltage	4000 V	ClassC



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Penta Labs Power Tubes

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

1965 PENTA LABS POWER TUBES

Section 1 · Tetrode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	5 V	—
Heater/filament current	14.5 A	—
Amplification factor	5.1	—
Transconductance	4000 uS	—
OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	4000 V	—
Maximum screen voltage	600 V	—
Maximum plate dissipation	250 W	—
Maximum control-grid dissipation	10 W	—
Source language	English	—
Maximum frequency for full ratings	75 MHz	—
Plate-modulated maximum plate voltage	3200 V	—
CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance	0.12 pF	—
Input capacitance	12.7 pF	—
Output capacitance	4.5 pF	—
APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Primary application	Power tetrode with 250 W plate dissipation for amplifier, oscillator, and modulator service.	—
CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cooling	Radiation/convection or source-specific	—
Electrode structure	Tetrode	—