



ELECTRONIC TUBE REFERENCE

4030A

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Double-ended water-cooled pure-tungsten power triode for very-high-power audio and RF service. Approximately 80 kW plate dissipation, very low plate resistance, and 17.5 kV plate capability suit enormous transmitter and modulator installations.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	21 V / 215 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	2200 Ω
TRANSCONDUCTANCE	0.0164 S
AMPLIFICATION FACTOR	36
MAXIMUM PLATE VOLTAGE	17500 V
MAXIMUM PLATE DISSIPATION	80000 W
MAXIMUM GRID DISSIPATION	1500 W
MAXIMUM CATHODE CURRENT	11 A
<i>Published ratings/characteristics promoted; remaining useful source values represented as parameters.</i>	

Standard Valves 4030-A is a double-ended water-cooled power triode with a pure tungsten filament. It is rated for 17.5 kV maximum direct anode voltage and 80 kW maximum anode dissipation, with published Class B and Class C AF/RF operating conditions through 22 MHz.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Standard Valves

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

1937 STANDARD VALVES

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Total Emission	45 A	Published specification

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Water Flow	22 gallons/min	Published specification
Maximum Direct Anode Current	11 A	Published specification
Maximum Frequency For Full Ratings	2 MHz	Published specification
Maximum Anode Voltage At 22 MHz	15000 V	Frequency=22MHz
Direct Anode Voltage	12500 V	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Grid Bias	-150 V	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Zero-Signal Anode Current Per Valve	1.3 A	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Maximum-Signal Anode Current Per Valve	6.5 A	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Anode Dissipation	36.6 kW	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Anode-to-Anode Load Resistance	1700 ohm	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Maximum Output Two Valves	90 kW	ClassB; AFAmplifierOrModulator; BalancedTwoValveCircuit
Direct Anode Voltage	17.5 kV	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=2MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Direct Anode Current	4.8 A	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=2MHz
Grid Bias	-400 V	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=2MHz
Power Output	25 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=2MHz
Anode Dissipation	59 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=2MHz
Direct Anode Voltage	15 kV	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=12MHz
Direct Anode Current	4.8 A	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=12MHz
Grid Bias	-300 V	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=12MHz
Power Output	22 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=12MHz
Anode Dissipation	50 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=12MHz
Direct Anode Voltage	12 kV	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=19MHz
Direct Anode Current	4.8 A	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=19MHz
Grid Bias	-250 V	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=19MHz
Power Output	17 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=19MHz
Anode Dissipation	40 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=19MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Direct Anode Voltage	10 kV	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=22MHz
Direct Anode Current	4.8 A	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=22MHz
Grid Bias	-150 V	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=22MHz
Power Output	12 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=22MHz
Anode Dissipation	36 kW	ClassB; Telephony; ModulatedCarrierAppliedToGrid; Frequency=22MHz
Direct Anode Voltage	12 kV	ClassC; Telephony; AnodeModulated; Frequency=2MHz
Direct Anode Current	5 A	ClassC; Telephony; AnodeModulated; Frequency=2MHz
Grid Bias	-600 V	ClassC; Telephony; AnodeModulated; Frequency=2MHz
Carrier Output	40 kW	ClassC; Telephony; AnodeModulated; Frequency=2MHz
Anode Dissipation	20 kW	ClassC; Telephony; AnodeModulated; Frequency=2MHz
Direct Anode Voltage	11 kV	ClassC; Telephony; AnodeModulated; Frequency=12MHz
Direct Anode Current	5 A	ClassC; Telephony; AnodeModulated; Frequency=12MHz
Grid Bias	-500 V	ClassC; Telephony; AnodeModulated; Frequency=12MHz
Carrier Output	35 kW	ClassC; Telephony; AnodeModulated; Frequency=12MHz
Anode Dissipation	20 kW	ClassC; Telephony; AnodeModulated; Frequency=12MHz
Direct Anode Voltage	10 kV	ClassC; Telephony; AnodeModulated; Frequency=19MHz
Direct Anode Current	5 A	ClassC; Telephony; AnodeModulated; Frequency=19MHz
Grid Bias	-450 V	ClassC; Telephony; AnodeModulated; Frequency=19MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Carrier Output	30 kW	ClassC; Telephony; AnodeModulated; Frequency=19MHz
Anode Dissipation	20 kW	ClassC; Telephony; AnodeModulated; Frequency=19MHz
Direct Anode Voltage	9 kV	ClassC; Telephony; AnodeModulated; Frequency=22MHz
Direct Anode Current	5 A	ClassC; Telephony; AnodeModulated; Frequency=22MHz
Grid Bias	-400 V	ClassC; Telephony; AnodeModulated; Frequency=22MHz
Carrier Output	20 kW	ClassC; Telephony; AnodeModulated; Frequency=22MHz
Anode Dissipation	25 kW	ClassC; Telephony; AnodeModulated; Frequency=22MHz
Direct Anode Voltage	17.5 kV	ClassC; Telegraphy; Unmodulated; Frequency=2MHz
Direct Anode Current	9.6 A	ClassC; Telegraphy; Unmodulated; Frequency=2MHz
Grid Bias Range	-800--600 V	ClassC; Telegraphy; Unmodulated; Frequency=2MHz
Carrier Output	100 kW	ClassC; Telegraphy; Unmodulated; Frequency=2MHz
Anode Dissipation	68 kW	ClassC; Telegraphy; Unmodulated; Frequency=2MHz
Direct Anode Voltage	15 kV	ClassC; Telegraphy; Unmodulated; Frequency=12MHz
Direct Anode Current	9.6 A	ClassC; Telegraphy; Unmodulated; Frequency=12MHz
Grid Bias Range	-700--500 V	ClassC; Telegraphy; Unmodulated; Frequency=12MHz
Carrier Output	88 kW	ClassC; Telegraphy; Unmodulated; Frequency=12MHz
Anode Dissipation	56 kW	ClassC; Telegraphy; Unmodulated; Frequency=12MHz
Direct Anode Voltage	12 kV	ClassC; Telegraphy; Unmodulated; Frequency=19MHz
Direct Anode Current	9.6 A	ClassC; Telegraphy; Unmodulated; Frequency=19MHz
Grid Bias Range	-600--450 V	ClassC; Telegraphy; Unmodulated; Frequency=19MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Carrier Output	68 kW	ClassC; Telegraphy; Unmodulated; Frequency=19MHz
Anode Dissipation	47 kW	ClassC; Telegraphy; Unmodulated; Frequency=19MHz
Direct Anode Voltage	10 kV	ClassC; Telegraphy; Unmodulated; Frequency=22MHz
Direct Anode Current	9.6 A	ClassC; Telegraphy; Unmodulated; Frequency=22MHz
Grid Bias Range	-550--400 V	ClassC; Telegraphy; Unmodulated; Frequency=22MHz
Carrier Output	48 kW	ClassC; Telegraphy; Unmodulated; Frequency=22MHz
Anode Dissipation	48 kW	ClassC; Telegraphy; Unmodulated; Frequency=22MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Anode Capacitance	51 pF	Published specification
Anode-Filament Capacitance	14 pF	Published specification
Grid-Filament Capacitance	40 pF	Published specification



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1946 Standard Telephone and Cables

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

1946 STANDARD TELEPHONE AND CABLES

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	21 V	—
Heater/filament current	215 A	—
Plate resistance	2200 ohm	—
Amplification factor	36	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum direct anode voltage	17500 V	—
Maximum anode dissipation	80000 W	—
Maximum grid dissipation	1500 W	—
Maximum cathode/anode current	11 A	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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