



ELECTRONIC TUBE REFERENCE

342A

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Western Electric directly heated water-cooled transmitting triode for very-high-power RF service. Approximately 25 kW plate dissipation and 20 kV plate capability make it suitable for major communications and broadcast transmitter installations.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	20 V / 67 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.00682 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	20000 V
MAXIMUM PLATE DISSIPATION	25000 W
MAXIMUM GRID DISSIPATION	400 W
<i>Promoted fields populated from explicitly published ratings/characteristics; service-specific data retained as parameters.</i>	

The Western Electric 342A is a directly heated water-cooled transmitting triode rated for very high plate voltage and RF power service.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

194X Western Electric Random

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

194X WESTERN ELECTRIC RANDOM

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	20 V	—
Heater/filament current	67 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate/anode voltage	20000 V	—
Maximum plate/anode dissipation	25000 W	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1956 Western Electric Tubes

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

1956 WESTERN ELECTRIC TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Frequency	4 MHz	—
Typical Maximum Power Output	8500 W	ClassB; RF

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	15000 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Current	1.3 A	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 Machlette Laboratories

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

1971 MACHLETTE LABORATORIES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
mum ratings of [1]	20 kV	mum ratings of 20 kVdc and 2.5 amperes apply at fre- by a straight-line, high-voltage process assuring the same
mum ratings of [2]	2.5 kV	mum ratings of 20 kVdc and 2.5 amperes apply at fre- by a straight-line, high-voltage process assuring the same
plate voltage reduced to	10 kV	plate voltage reduced to 10 kVdc, super-voltage x-ray tubes.
Filament Current @t [1]	20 A	Filament Current @t 20 VOIS ovviiiiiii ettt ettt e 67 amperes
Filament Current @t [2]	67 A	Filament Current @t 20 VOIS ovviiiiiii ettt ettt e 67 amperes
Maximum Outgoing Water Temperature e	75 mA	Maximum Outgoing Water Temperature e 75 °C
Direct Plate Voltage	20000 V	Direct Plate Voltage 20,000 volts
Direct Plate Current	2.5 A	Direct Plate Current 2.5 amperes
Plate Dissipation	25000	Plate Dissipation 25,000 walts
Grid Dissipation	400	Grid Dissipation 400 watlts
R-F Grid Current	40 A	R-F Grid Current 40 amperes
Direct Plate Voltage [1]	15000 V	Direct Plate Voltage 15,000 12,500 volts
Direct Plate Voltage [2]	12500 V	Direct Plate Voltage 15,000 12,500 volts
Plate Dissipation (per tube) [1]	9000 W	Plate Dissipation (per tube) 9,000 7,200 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation (per tube) [2]	7200 W	Plate Dissipation (per tube) 9,000 7,200 watts
Load Resistance (plate-to-plate) [1]	9600 ohm	Load Resistance (plate-to-plate) 9,600 7,680 ohms
Load Resistance (plate-to-plate) [2]	7680 ohm	Load Resistance (plate-to-plate) 9,600 7,680 ohms
Load Resistance (per tube) [1]	2400 ohm	Load Resistance (per tube) 2,400 1,920 ohms
Load Resistance (per tube) [2]	1920 ohm	Load Resistance (per tube) 2,400 1,920 ohms
Approximate Maximum OQOutput—? [1]	2 mA	Approximate Maximum OQOutput—?2 30,000 24,000 watts
Approximate Maximum OQOutput—? [2]	30000 mA	Approximate Maximum OQOutput—?2 30,000 24,000 watts
Approximate Maximum OQOutput—? [3]	24000 mA	Approximate Maximum OQOutput—?2 30,000 24,000 watts
Recommended Power for Driving Stage [1]	1000 W	Recommended Power for Driving Stage 1,000 1,000 watts
Recommended Power for Driving Stage [2]	1000 W	Recommended Power for Driving Stage 1,000 1,000 watts
Direct Plate Voltage [1]	18000 V	Direct Plate Voltage 18,000 12,500 volts
Direct Plate Voltage [2]	12500 V	Direct Plate Voltage 18,000 12,500 volts
Direct Plate Current for Carrier Conditions [1]	1.4 A	Direct Plate Current for Carrier Conditions 1.4 1.4 amperes
Direct Plate Current for Carrier Conditions [2]	1.4 A	Direct Plate Current for Carrier Conditions 1.4 1.4 amperes
Dircct Plate Voltage [1]	18000 V	Dircct Plate Voltage 18,000 15,000 volts
Dircct Plate Voltage [2]	15000 V	Dircct Plate Voltage 18,000 15,000 volts
Direct Plate Current [1]	2.5 A	Direct Plate Current 2.5 2.5 amperes
Direct Plate Current [2]	2.5 A	Direct Plate Current 2.5 2.5 amperes
Nominal Power Output [1]	30000 W	Nominal Power Output 30,000 25,000 watts
Nominal Power Output [2]	25000 W	Nominal Power Output 30,000 25,000 watts
Dircct Plate Voltage [1]	12500 V	Dircct Plate Voltage ... 12,500 10,000 volts
Dircct Plate Voltage [2]	10000 V	Dircct Plate Voltage ... 12,500 10,000 volts
Direct Plate Current [1]	1.2 A	Direct Plate Current 1.2 1.5 amperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Direct Plate Current [2]	1.5 A	Direct Plate Current 1.2 1.5 amperes
Direct Grid Current [1]	250	Direct Grid Current 250 250 milliampercs
Direct Grid Current [2]	250	Direct Grid Current 250 250 milliampercs
Nominal Carrier Power Output [1]	10000 W	Nominal Carrier Power Output 10,000 10,000 watts
Nominal Carrier Power Output [2]	10000 W	Nominal Carrier Power Output 10,000 10,000 watts
Maximum ratings apply at frequencies of [1]	4 mA	Maximum ratings apply at frequencies of 4 megacycles and voltage for frequencies between 4 and 16 megacycles should
Maximum ratings apply at frequencies of [2]	4 mA	Maximum ratings apply at frequencies of 4 megacycles and voltage for frequencies between 4 and 16 megacycles should
Maximum ratings apply at frequencies of [3]	16 mA	Maximum ratings apply at frequencies of 4 megacycles and voltage for frequencies between 4 and 16 megacycles should

TUBE TINKER

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