



ELECTRONIC TUBE REFERENCE

343A

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Western Electric directly heated water-cooled transmitting triode for high-power RF service. With roughly 10 kW plate dissipation and plate ratings to 18 kV, it supports substantial continuous radio-frequency output in large transmitters.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	21.5 V / 57.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.00675 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	18000 V
MAXIMUM PLATE DISSIPATION	10000 W
MAXIMUM GRID DISSIPATION	200 W
<i>Promoted fields populated from explicitly published ratings/characteristics; service-specific data retained as parameters.</i>	

The Western Electric 343A is a directly heated water-cooled high-power transmitting triode for RF service.



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	3500 W	ClassB; RF

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	10000 V	—
Typical Plate Current	640 mA	—



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
FHamMeEnt Voltage o	21.5 V	FHamMeEnt Voltage o 21.5 volts
Filament Current ac [1]	21.5 V	Filament Current ac 21.5 volts 57.5 amperes
Filament Current ac [2]	57.5 V	Filament Current ac 21.5 volts 57.5 amperes
Maximum Anode Temperature —	120 mA	Maximum Anode Temperature — 120 °C
Direct Plate Current [1]	2 A	Direct Plate Current 2 1.5 amps
Direct Plate Current [2]	1.5 A	Direct Plate Current 2 1.5 amps

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid DissipationC..ocooeviiiiveiiiiei e [1]	200 W	Grid DissipationC..ocooeviiiiveiiiiei e 200 200 watts
Grid DissipationC..ocooeviiiiveiiiiei e [2]	200 W	Grid DissipationC..ocooeviiiiveiiiiei e 200 200 watts
R-F Grid Currentccooooiiiiniiies e [1]	20 A	R-F Grid Currentccooooiiiiniiies e 20 20 amps
R-F Grid Currentccooooiiiiniiies e [2]	20 A	R-F Grid Currentccooooiiiiniiies e 20 20 amps
Frequency ... e e [1]	4 MHz	Frequency ... e e 4 4 Mc
Frequency ... e e [2]	4 MHz	Frequency ... e e 4 4 Mc
Direct Plate Current [1]	0.4	Direct Plate Current .. 0.40 0.30 amp
Direct Plate Current [2]	0.3	Direct Plate Current .. 0.40 0.30 amp
Plate Dissipationcoocciiviiiiei [1]	5000 W	Plate Dissipationcoocciiviiiiei. 5000 3000 watts
Plate Dissipationcoocciiviiiiei [2]	3000 W	Plate Dissipationcoocciiviiiiei. 5000 3000 watts
Load Impedanceccocooiviiiniiiii [1]	12000 ohm	Load Impedanceccocooiviiiniiiii 12,000 20,000 ohms
Load Impedanceccocooiviiiniiiii [2]	20000 ohm	Load Impedanceccocooiviiiniiiii 12,000 20,000 ohms
Direct Plate Voltage [1]	12500 V	Direct Plate Voltage 12,500 10,000 volts
Direct Plate Voltage [2]	10000 V	Direct Plate Voltage 12,500 10,000 volts
Load Resistance (plate-to-plate) [1]	8600 ohm	Load Resistance (plate-to-plate) ... 8600 7600 ohms
Load Resistance (plate-to-plate) [2]	7600 ohm	Load Resistance (plate-to-plate) ... 8600 7600 ohms
Load Resistance (per tube) [1]	2150 ohm	Load Resistance (per tube) 2150 1900 ohms
Load Resistance (per tube) [2]	1900 ohm	Load Resistance (per tube) 2150 1900 ohms
Recommended Power for Driving Stage [1]	750 W	Recommended Power for Driving Stage ... 750 750 watts
Recommended Power for Driving Stage [2]	750 W	Recommended Power for Driving Stage ... 750 750 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Direct Plate Voltage i e [1]	15000 V	Direct Plate Voltage i e 15,000 12,500 volts
Direct Plate Voltage i e [2]	12500 V	Direct Plate Voltage i e 15,000 12,500 volts
Direct Plate Current for Carrier Conditions [1]	0.7	Direct Plate Current for Carrier Conditions ... 0.70 0.70 amp
Direct Plate Current for Carrier Conditions [2]	0.7	Direct Plate Current for Carrier Conditions ... 0.70 0.70 amp
Direct Plate Voltage e e [1]	18000 V	Direct Plate Voltage e e 18,000 15,000 12,500 volts
Direct Plate Voltage e e [2]	15000 V	Direct Plate Voltage e e 18,000 15,000 12,500 volts
Direct Plate Voltage e e [3]	12500 V	Direct Plate Voltage e e 18,000 15,000 12,500 volts
Direct Plate Current [1]	1.25 A	Direct Plate Current 1.25 1.00 1.25 amps
Direct Plate Current [2]	1 A	Direct Plate Current 1.25 1.00 1.25 amps
Direct Plate Current [3]	1.25 A	Direct Plate Current 1.25 1.00 1.25 amps
Nominal Power Output [1]	15000 W	Nominal Power Output ... 15,000 10,000 10,000 watts
Nominal Power Output [2]	10000 W	Nominal Power Output ... 15,000 10,000 10,000 watts
Nominal Power Output [3]	10000 W	Nominal Power Output ... 15,000 10,000 10,000 watts
Plate DisSIPAtION ...ooocooiiiiiiiiiiiie et [1]	10000 W	Plate DisSIPAtION ...ooocooiiiiiiiiiiiie et 10,000 5000 5600 watts
Plate DisSIPAtION ...ooocooiiiiiiiiiiiie et [2]	5000 W	Plate DisSIPAtION ...ooocooiiiiiiiiiiiie et 10,000 5000 5600 watts
Plate DisSIPAtION ...ooocooiiiiiiiiiiiie et [3]	5600 W	Plate DisSIPAtION ...ooocooiiiiiiiiiiiie et 10,000 5000 5600 watts
Direct Plate Voltage [1]	7500 V	Direct Plate Voltage 7500 5000 volts
Direct Plate Voltage [2]	5000 V	Direct Plate Voltage 7500 5000 volts
Direct Plate Current [1]	1	Direct Plate Current 1.0 1.0 amp
Direct Plate Current [2]	1	Direct Plate Current 1.0 1.0 amp
Direct Grid Current [1]	150 mA	Direct Grid Current 150 150 mA
Direct Grid Current [2]	150 mA	Direct Grid Current 150 150 mA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Nominal Carrier Power Output [1]	5000 W	Nominal Carrier Power Output 5000 3300 watts
Nominal Carrier Power Output [2]	3300 W	Nominal Carrier Power Output 5000 3300 watts
less. 'The maximum plate voltage for the upper frequency	400 mA	less. 'The maximum plate voltage for the upper frequency 400 to GO0 cubic feet per minute depending upon the anode
limit of [1]	16 V	limit of 16 megacycles is 5,000 volts. The maximum plate dissipation and ambient temperature. An air pressure interlock
limit of [2]	5000 V	limit of 16 megacycles is 5,000 volts. The maximum plate dissipation and ambient temperature. An air pressure interlock
voltage for frequencies between [1]	4 MHz	voltage for frequencies between 4 and 16 megacycles should be required for protecting the tube if the air flow is insufficient.
voltage for frequencies between [2]	16 MHz	voltage for frequencies between 4 and 16 megacycles should be required for protecting the tube if the air flow is insufficient.