

Western Electric directly heated air-cooled transmitting triode for high-power Class C RF service. Roughly 400 W plate dissipation and 4 kV plate capability support substantial communications and broadcast transmitter output stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	10 V / 100 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
TRANSCONDUCTANCE	0.009 S
AMPLIFICATION FACTOR	30
MAXIMUM PLATE VOLTAGE	4000 V
MAXIMUM PLATE DISSIPATION	400 W
MAXIMUM CATHODE CURRENT	2.5 A
Maximum usable cathode current is plate current plus grid current. Amplification factor bogey 30 at Ip=200 mA, Ep=2 kV.	

The Western Electric 357B is a directly heated air-cooled transmitting triode for high-power Class C 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 Plate Current	500 mA	—
Maximum Frequency	100 MHz	—
Typical Maximum Power Output	350 W	ClassC; RF; PlateModulated

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	700 V	—
Typical Plate Current	500 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
Published value [1]	400 kV	400 watts, Maximum ratings of line, high-voltage process assembly
Published value [2]	4 kV	400 watts, Maximum ratings of line, high-voltage process assembly
Published value [3]	0.5 kV	400 watts, Maximum ratings of line, high-voltage process assembly
Filament Voltage oot	10 V	Filament VOLTage oot 10 volts
Filament Current at	10 V	Filament Current at 10 volts .
Fitament Resistance, Cold	0.12	Fitament Resistance, Cold 0.1
Maximum Usable Cathode Current ocvvcvveveeevecneeinieereeee,	2.5 A	Maximum Usable Cathode Cu 2.5 amperes
Signal D-C Plate Current*	0.5	Signal D-C Plate Current* .. 0.
Signal Plate Input*	1100 W	Signal Plate Input* 1100 watt
Plate Dissipation® sasenvenses	400 W	Plate Dissipation® sasenvenses 400 watts
Peak A-F Grid-to-Grid Voltage [1]	490 V	Peak A-F Grid-to-Grid Voltage
Peak A-F Grid-to-Grid Voltage [2]	520 V	Peak A-F Grid-to-Grid Voltage
Peak A-F Grid-to-Grid Voltage [3]	343 V	Peak A-F Grid-to-Grid Voltage
Zero Signal D-C Plate Current et e s [1]	0.16	Zero Signal D-C Plate Current
Zero Signal D-C Plate Current et e s [2]	0.12	Zero Signal D-C Plate Current
Zero Signal D-C Plate Current et e s [3]	0.12	Zero Signal D-C Plate Current
Maximum Signal D-C Plate Current [1]	1 mA	Maximum Signal D-C Plate Cu

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Signal D-C Plate Current [2]	0.72 mA	Maximum Signal D-C Plate Current
Maximum Signal D-C Plate Current [3]	0.43 mA	Maximum Signal D-C Plate Current
Effective Load Resistance, Plate-to-Plate re r t e n e r a s e r e s a a n n [1]	4360 ohm	Effective Load Resistance, Plate-to-Plate re r t e n e r a s e r e s a a n n 4360 11500 14700
Effective Load Resistance, Plate-to-Plate re r t e n e r a s e r e s a a n n [2]	11500 ohm	Effective Load Resistance, Plate-to-Plate re r t e n e r a s e r e s a a n n 4360 11500 14700
Effective Load Resistance, Plate-to-Plate re r t e n e r a s e r e s a a n n [3]	14700 ohm	Effective Load Resistance, Plate-to-Plate re r t e n e r a s e r e s a a n n 4360 11500 14700
Maximum Signal Driving Power, approximate [1]	50 mA	Maximum Signal Driving Power
Maximum Signal Driving Power, approximate [2]	35 mA	Maximum Signal Driving Power
Maximum Signal Driving Power, approximate [3]	13.3 mA	Maximum Signal Driving Power
Maximum Signal Power Output [1]	1400 mA	Maximum Signal Power Output
Maximum Signal Power Output [2]	1840 mA	Maximum Signal Power Output
Maximum Signal Power Output [3]	850 mA	Maximum Signal Power Output
D-C Plate Voltage	4000 V	D-C Plate Voltage 4000 volts
D-C Plate Current	0.275	D-C Plate Current ... 0.275 am
Plate Input	550 W	Plate Input ... 550 watts
Plate Dissipation	400 W	Plate Dissipation 400 watts
Peak R-F Grid Voltage [1]	135 V	Peak R-F Grid Voltage 135 130
Peak R-F Grid Voltage [2]	136 V	Peak R-F Grid Voltage 135 130
D-C Plate Current [1]	0.26	D-C Plate Current 0.26
D-C Plate Current [2]	0.15	D-C Plate Current 0.26
D-C Gnd Current, approximate [1]	0.1 mA	D-C Gnd Current, approximate
D-C Gnd Current, approximate [2]	0.001 mA	D-C Gnd Current, approximate
Driving Power, approxXimatet ... e s t e	25 mA	Driving Power, approxXimatet
Power Qulput, apprOXimale ceccimioiinmerninieririossisstmesteersesssnssnsonessssssssss [1]	175 mA	Power Qulput, apprOXimale ceccimioiinmerninieririossisstmesteersesssnssnsonessssssssss 175 190 watts
Power Qulput, apprOXimale ceccimioiinmerninieririossisstmesteersesssnssnsonessssssssss [2]	190 mA	Power Qulput, apprOXimale ceccimioiinmerninieririossisstmesteersesssnssnsonessssssssss 175 190 watts
D-C Plate Voltage	3000 V	D-C Plate Voltage 3000 volts
D-C Grid Voltage	-500 V	D-C Grid Voltage . -500 volts
D-C Plate Current	0.4	D-C Plate Current . 0.400 amp
D-C Grid Current	0.1	D-C Grid Current . 0.100 amp
Plate Dissipation	235 W	Plate Dissipation 235 watts
D-C Plate Voltage [1]	2000 V	D-C Plate Voltage 2000 3000 3000 volts
D-C Plate Voltage [2]	3000 V	D-C Plate Voltage 2000 3000 3000 volts
D-C Plate Voltage [3]	3000 V	D-C Plate Voltage 2000 3000 3000 volts
D-C Grid Voltage [1]	-310 V	D-C Grid Voltage -310 ~320 =
D-C Grid Voltage [2]	320 V	D-C Grid Voltage -310 ~320 =
D-C Grid Voltage [3]	270 V	D-C Grid Voltage -310 ~320 =
Pcak R-F Grid Voltage [1]	535 V	Pcak R-F Grid Voltage 535 520
Pcak R-F Grid Voltage [2]	520 V	Pcak R-F Grid Voltage 535 520
Pcak R-F Grid Voltage [3]	420 V	Pcak R-F Grid Voltage 535 520
D-C Plate Current [1]	0.39	D-C Plate Current 0.390 0.340
D-C Plate Current [2]	0.34	D-C Plate Current 0.390 0.340

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Plate Current [3]	0.24	D-C Plate Current 0.390 0.340
Driving Power, approximate [1]	35 mA	Driving Power, approximate ..
Driving Power, approximate [2]	35 mA	Driving Power, approximate ..
Driving Power, approximate [3]	20 mA	Driving Power, approximate ..
D-C Grid Voltage =	500 V	D-C Grid Voltage =500 volts
D-C Plate Current	0.5	D-C Plate Current . 0.500 amp
Plate Input	1800 W	Plate Input ... 1800 watts
D-C Plate Voltage oo ettt es e s st e e sp s sas e [1]	2000 V	D-C Plate VOLTage oo ettt es e
D-C Plate Voltage oo ettt es e s st e e sp s sas e [2]	3500 V	D-C Plate VOLTage oo ettt es e
D-C Gnd Voltage ..o [1]	-200 V	D-C Gnd Voltage ..o -200 -240
D-C Gnd Voltage ..o [2]	-240 V	D-C Gnd Voltage ..o -200 -240
Peak R-F Grid Voltage [1]	445 V	Peak R-F Grid Voltage 445 460
Peak R-F Grid Voltage [2]	460 V	Peak R-F Grid Voltage 445 460
D-C Plate Current [1]	0.5	D-C Plate Current 0.50
D-C Plate Current [2]	0.45	D-C Plate Current 0.50
D-C Grid Current, approximate [1]	0.085 mA	D-C Grid Current, approximat
D-C Grid Current, approximate [2]	0.07 mA	D-C Grid Current, approximat
Driving Power, approximate [1]	733 mA	Driving Power, approximate ..
Driving Power, approximate [2]	30 mA	Driving Power, approximate ..
+ At crest of audio-frequency cycle with modulation factor of	1	+ At crest of audio-frequency
affected. frequency above	40 MHz	affected. frequency above 40 r
Frequency [1]	100 MHz	Frequency 100 125 150 mega be obtained from a blowr
Frequency [2]	125 MHz	Frequency 100 125 150 mega be obtained from a blowr
Frequency [3]	150 MHz	Frequency 100 125 150 mega be obtained from a blowr
““lt“d _plate voltage and from a	2	““lt“d _plate voltage and from outlet should be
Clffisfltg input [1]	100 mA	Clffisfltg input 100 8s 70 per c the tube and directed
Clffisfltg input [2]	8 mA	Clffisfltg input 100 8s 70 per c the tube and directed
Clffisfltg input [3]	70 mA	Clffisfltg input 100 8s 70 per c the tube and directed
Clffisfltg input [4]	3 mA	Clffisfltg input 100 8s 70 per c the tube and directed



SOURCE DATA APPENDIX

2026 Western Electric 300s

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

2026 WESTERN ELECTRIC 300S
Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GridPlateCapacitance	4.25 pF	Bogey
GridFilamentCapacitance	11.5 pF	Bogey
PlateFilamentCapacitance	2.5 pF	Bogey

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC Plate Current	500 mA	General maximum rating
Maximum DC Grid Current	100 mA	General maximum rating
MaximumPlateInputClassCTelegraphy	1800 W	ClassC; Telegraphy
MaximumSignalPowerOutputClassB	1840 W	ClassB; PushPull; TwoTubes

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