

Massive water-cooled Westinghouse power triode for Class B and C oscillator, amplifier, and modulator service. Rated around 35 kW plate dissipation and 12.5 kV, it handles multi-kilowatt industrial and transmitting RF power.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	8 V / 150 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	20
MAXIMUM PLATE VOLTAGE	12500 V
MAXIMUM PLATE DISSIPATION	35000 W
MAXIMUM CATHODE CURRENT	10 A
Source-derived physical/electrical section.	

Westinghouse — 7748 February 15, 1961 POWER AMPLIFIER TRIODE TYPE 7748 The type 7748 is a three electrode tube designed for service as an oscillator, amplifier or modulator in Class B & C operation. The anode is water cooled with an integral water jacket and is capable of dissipating 35 kilowatts during C.C.5. The cathode is a thoriated tungsten filament which may be operated either with d-c or single-phase a-c. Maximum ratings apply to 30 megacycles. ELECTRICAL: MAXIMUM RATINGS: Cathode. . vu s v e e v nnninan Thetiated Tungstan Filament Absolute Moximum Values Filament; DC Plate Voltage. . « v v v v o v v v 12.5 max. Kilovolts Voltage . v v vt s i vt v s sa e st 8.0 Yolts DC Plate Current, . . v o v oo vt s v s 10 mex. Amperas CURTONE & 4 v v v e st e bt st o v s nssanacan 150 Amperes DCGrid Voltage . . v v v v v

ivevnenn =3000 max. Velts Minimum Heating Time . . .« o oo v e u v a v e 15 Seconds DCGrid Current .. o
v v et v v 0 av s 1.25 max. Ampeares Amplification Focctor ..t 0 v e

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1947 Westinghouse

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

1947 WESTINGHOUSE

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
POWER AMPLIFIER TRIODE TYPE	7748	POWER AMPLIFIER TRIODE TYPE 7748
The type	7748	The type 7748 is a three electrode tube designed for service as an oscillator, amplifier or modulator in Class
kilowatts during C.C	5	kilowatts during C.C.5. The cathode is a thoriated tungsten filament which may be operated either with d-c or
single-phase a-c. Maximum ratings apply to	30	single-phase a-c. Maximum ratings apply to 30 megacycles.
Filament; DC Plate Voltage. . « v v v v o v v v	12.5	Filament; DC Plate Voltage. . « v v v v o v v v 12.5 max. Kilovolts
Voltage . v v vt s i vt v s sa e st	10	Voltage . v v vt s i vt v s sa e st 8.0 Yolts DC Plate Current, . . v o v oo vt s v s 10 mex. Amperas
CURTONE &	3000	CURTONE & 4 v v v e st e bt st o v s nnssanacan 150 Amperes DCGrid Voltage . . v v v v ivevnenn =3000 mex. Velts
Minimum Heating Time . . .« o oo v e u v a v e	0	Minimum Heating Time . . .« o oo v e u v a v e 15 Seconds DCGrid Current .. o v v et v v 0 av
s	1.25	s 1.25 max. Ampeares
Amplification Focctor ..t	80	Amplification Focctor ..t 0 v e e v nninsen 20 Plate Power Input « .« v vt v e v v avas 80 mex. Kilowatts
DC Grid Voltoge	1300	DC Grid Voltoge _800 ~1100 —1300
—		
MECHANICAL: Peak R.F. Grid Voltage	1700	MECHANICAL: Peak R.F. Grid Voltage. . 1250 1500 1700 Yolts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Mounting Positionuneiaa .. Vertical, Anode Down DC Plate Current,	4.25	Mounting Positionuneiaa .. Vertical, Anode Down DC Plate Current, 5.5 4.7 4.25 Amperes
Typeof Cooling. . -« v vt v i tn vt i s v e r v oes Water DC Grid Current , ,,	0.59	Typeof Cooling. . -« v vt v i tn vt i s v e r v oes Water DC Grid Current , , ..., 0.875 0.58 0.59 Ampores
Water Flow Required	970	Water Flow Required00 N 30 GPM Driving Power, 1050 850 970 Watts
Static Pressure (	446.5	Static Pressure (0t 30 GPM). .+« « v i v e v vt naan 8 PS5l Power Output u 33,5 40 446.5 Kilowatta
Maximum Outlet-Water Temperature . . . o v v v v v o v v s o	70	Maximum Outlet-Water Temperature . . . o v v v v v o v s o 70 °C
Maximum Grid and Filament Seol Temperature	180	Maximum Grid and Filament Seol Temperature 180 °C
N With Plate Amps {	8	N With Plate Amps {80~ 8.0 Volis
N \/' With Plate Amps » B	0	N \/' With Plate Amps » B0 - -+ i10.0 Voits
1400 b N \1'">>< At Filamen? Volts =80 - --- 180 Amperes	180	1400 b N \1'">>< At Filamen? Volts =80 - --- 180 Amperes
P \/'X' At Filament Volts =	100	P \/'X' At Filament Volts =100 ---
- 210 Amperes	210	- 210 Amperes
\(/ e T ,'\	200	\(/ e T ,'\ 200 Plate Amperes
e /)'/'	4	e /)'4,\' :\" I Grid Amperes mmm e e

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diirect Intaraelectrode Capacitances: Plato Dissipationvvuvvvvanns	35	Diirect Intaraelectrode Capacitances: Plato Dissipationvvuvvvvanns 35 wmoX, Kilowatts

TUBE TINKER

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