



ELECTRONIC TUBE REFERENCE

250A

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
RECTIFIER

Directly heated Eimac high-vacuum rectifier for high-voltage power supplies. Rated for approximately 30 kV peak inverse voltage and 75 mA nominal output for specialized transmitter and industrial equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	5 V / 4 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
MAXIMUM PLATE DISSIPATION	30 W
PEAK INVERSE VOLTAGE	30000 V
NOMINAL OUTPUT CURRENT	75 mA
PEAK FORWARD CURRENT	1 A
<i>Published per-tube maximum ratings promoted from the source.</i>	

The Eimac 2-50A is a high-vacuum rectifier for high-voltage power supplies, rated for approximately 75 mA average plate current and 30 kV peak inverse voltage.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Eimac Tubes

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

1950 EIMAC TUBES

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average plate current	75 mA	Maximum average plate current from Eimac high-vacuum rectifier table.
Plate dissipation	30 W	Maximum plate dissipation from Eimac high-vacuum rectifier table.
Peak inverse voltage	30000 V	Maximum peak inverse voltage from Eimac high-vacuum rectifier table.
Filament voltage	5 V	Nominal filament voltage from Eimac high-vacuum rectifier table.
Filament current	4 A	Nominal filament current from Eimac high-vacuum rectifier table.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 Eimac

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

1962 EIMAC

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage Range	4.75–5.25 V	For maximum tube life



1965 Eimac Tube Manual

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

1965 EIMAC TUBE MANUAL
Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
mum peak inverse vol+age rating of	30000	mum peak inverse vol+age rating of 30,000 vol+s. Cooling is by convection and
cuit will deliver [1]	150	cuit will deliver 150 milliamperes at 19,000 volts +o a choke-input fil+er with
cuit will deliver [2]	19000	cuit will deliver 150 milliamperes at 19,000 volts +o a choke-input fil+er with
Current	-4 A	Current - -4.0 amperes
Maximum Temperature of plate seal	225	Maximum Temperature of plate seal - - .----- 225OC
Recommended Heat Dissipating Plate Connector ----- Eimac HR	3	Recommended Heat Dissipating Plate Connector ----- Eimac HR-3
PEAK INVERSE PLATE VOLTAGE •	30000 V	PEAK INVERSE PLATE VOLTAGE • - 30,000 MAX. VOLTS
PLATE DISSIPATION	30 W	PLATE DISSIPATION - - 30 MAX. WATTS
D-C PLATE CURRENT]	75 mA	D-C PLATE CURRENT] . . 75 MAX. MA
PEAK PLATE CURRENT I	0 mA	PEAK PLATE CURRENT I.0 MAX. AMPERE
base ei+her down or up. The lead to the plate terminal of the Cooling-The [1]	2	base ei+her down or up. The lead to the plate terminal of the Cooling-The 2-50A is cooled by convection and radiation.
base ei+her down or up. The lead to the plate terminal of the Cooling-The [2]	-50	base ei+her down or up. The lead to the plate terminal of the Cooling-The 2-50A is cooled by convection and radiation.
Published value [1]	224	224. a National Co. No. XC-4 or CIR-4. or an equivalent socke+. pating Connector or equivalent is required on the plate terminal.
Published value [2]	4	224. a National Co. No. XC-4 or CIR-4. or an equivalent socke+. pating Connector or equivalent is required on the plate terminal.
Published value [3]	4	224. a National Co. No. XC-4 or CIR-4. or an equivalent socke+. pating Connector or equivalent is required on the plate terminal.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
the Tempil Corporation, [1]	132 pF	the Tempil Corporation, 132 W. 22nd St., New York 11, N. Y. the total series resistance of the capacitor-charging circuit
the Tempil Corporation, [2]	22 pF	the Tempil Corporation, 132 W. 22nd St., New York 11, N. Y. the total series resistance of the capacitor-charging circuit
the Tempil Corporation, [3]	11 pF	the Tempil Corporation, 132 W. 22nd St., New York 11, N. Y. the total series resistance of the capacitor-charging circuit
The thoriated-tungsten filament of the [1]	2 A	The thoriated-tungsten filament of the 2-50A reaches op- rectifiers, Ip is half the load current.
The thoriated-tungsten filament of the [2]	-50 A	The thoriated-tungsten filament of the 2-50A reaches op- rectifiers, Ip is half the load current.
the [1]	2 mA	the 2-50A begins to show color as the maximum plate dissipation upon the d-c current per tube (Ip), and has been tabulated in
the [2]	-50 mA	the 2-50A begins to show color as the maximum plate dissipation upon the d-c current per tube (Ip), and has been tabulated in
tion rating of [1]	30	tion rating of 30 Watts is approached. The maximum peak inverse Fig. 2 as a percentage of the effective load resistance per tube
tion rating of [2]	2	tion rating of 30 Watts is approached. The maximum peak inverse Fig. 2 as a percentage of the effective load resistance per tube
voltage rating of	30000 V	voltage rating of 30,000 volts should not be exceeded at any
performance capabilities of the [1]	2 W	performance capabilities of the 2-50A when used as a power-
performance capabilities of the [2]	-50 W	performance capabilities of the 2-50A when used as a power-
supply rectifier. Rp is the plate resistance of the [1]	2	supply rectifier. Rp is the plate resistance of the 2-50A. which may be
supply rectifier. Rp is the plate resistance of the [2]	-50	supply rectifier. Rp is the plate resistance of the 2-50A. which may be
peak current usually limits the d-c current which the [1]	2 A	peak current usually limits the d-c current which the 2-50A capability in a given circuit. When two tubes are placed in
peak current usually limits the d-c current which the [2]	-50 A	peak current usually limits the d-c current which the 2-50A capability in a given circuit. When two tubes are placed in

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
tion associated with a given d-c current depends upon the	2 mA	tion associated with a given d-c current depends upon the 2, the plate resistance (Rp) will be half as great and the maxi-
Clloke-Input lil.er-The maximum d-c current rating of the +he [1]	2 mA	Clloke-Input lil.er-The maximum d-c current rating of the +he 2-50A is 30,000 volts. In single-phase power-supply rectifier
Clloke-Input lil.er-The maximum d-c current rating of the +he [2]	-50 mA	Clloke-Input lil.er-The maximum d-c current rating of the +he 2-50A is 30,000 volts. In single-phase power-supply rectifier
Clloke-Input lil.er-The maximum d-c current rating of the +he [3]	30000 mA	Clloke-Input lil.er-The maximum d-c current rating of the +he 2-50A is 30,000 volts. In single-phase power-supply rectifier
Published value [1]	2 V	2-50A is 75 milliamperes when the load incorporates a choke- circuits the peak inverse voltage to be used in design is the
Published value [2]	-50 V	2-50A is 75 milliamperes when the load incorporates a choke- circuits the peak inverse voltage to be used in design is the
Published value [3]	75 V	2-50A is 75 milliamperes when the load incorporates a choke- circuits the peak inverse voltage to be used in design is the
peak a-c supply voltage (I [1])	41 V	peak a-c supply voltage (I.41 +imes Erms in Fig. 2) in the case
peak a-c supply voltage (I [2])	2 V	peak a-c supply voltage (I.41 +imes Erms in Fig. 2) in the case
Lo =	6 pF	Lo =6# for full-wave three-pllase rectifiers, filter circuits assume values of input capacitance large enough
the [1]	2 A	the 2-50A is capable of larger d-c output currents.
the [2]	-50 A	the 2-50A is capable of larger d-c output currents.
Cho[e-inpu+ fil+ers are not normally used with single-phase maximum current rating of the [1]	2 mA	Cho[e-inpu+ fil+ers are not normally used with single-phase maximum current rating of the 2-50A is 145 milliamperes.
Cho[e-inpu+ fil+ers are not normally used with single-phase maximum current rating of the [2]	-50 mA	Cho[e-inpu+ fil+ers are not normally used with single-phase maximum current rating of the 2-50A is 145 milliamperes.
Cho[e-inpu+ fil+ers are not normally used with single-phase maximum current rating of the [3]	145 mA	Cho[e-inpu+ fil+ers are not normally used with single-phase maximum current rating of the 2-50A is 145 milliamperes.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The plate characteristic curve for the [1]	2	The plate characteristic curve for the 2-50A serves as a
The plate characteristic curve for the [2]	-50	The plate characteristic curve for the 2-50A serves as a
Capaci.®r.Inpul Filter-The [1]	2 W	Capaci.®r.Inpul Filter-The 2-50A is particularly suitable for guide to special applications. The maximum plate dissipation
Capaci.®r.Inpul Filter-The [2]	-50 W	Capaci.®r.Inpul Filter-The 2-50A is particularly suitable for guide to special applications. The maximum plate dissipation
power-supply applications demanding high voltage at low cur- rating of	30 V	power-supply applications demanding high voltage at low cur- rating of 30 watts, the maximum peak inverse voltage rating of
ren+. Under +hese conditions capacitor-inpu+ filter circuits [1]	30000 mA	ren+. Under +hese conditions capacitor-inpu+ filter circuits 30,000 volts, and the maximum peal plate current of I.0 ampere
ren+. Under +hese conditions capacitor-inpu+ filter circuits [2]	0 mA	ren+. Under +hese conditions capacitor-inpu+ filter circuits 30,000 volts, and the maximum peal plate current of I.0 ampere
become desirable. The maximum d-c current rating of the [1]	2 mA	become desirable. The maximum d-c current rating of the 2-50A must not be exceeded.
become desirable. The maximum d-c current rating of the [2]	-50 mA	become desirable. The maximum d-c current rating of the 2-50A must not be exceeded.
Eimac [1]	2 mA	Eimac 2-50A Maxium D-C Current Ratings for R-C Fil+er Applications
Eimac [2]	-50 mA	Eimac 2-50A Maxium D-C Current Ratings for R-C Fil+er Applications

TUBE TINKER

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