



ELECTRONIC TUBE REFERENCE

2240A

Rectifier - Half Wave electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
RECTIFIER

Eimac 2-240A directly heated high-vacuum rectifier for demanding high-voltage power supplies. Its heavy filament and tens-of-kilovolts capability suit transmitter and industrial systems.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	15 V / 12 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Rectifier	
MAXIMUM PLATE DISSIPATION	150 W
PEAK INVERSE VOLTAGE	40000 V
NOMINAL OUTPUT CURRENT	500 mA
PEAK FORWARD CURRENT	4 A
<i>Published per-tube maximum ratings promoted from the source.</i>	

The Eimac 2-240A is a high-vacuum rectifier for high-voltage power supplies, rated for approximately 500 mA average plate current and 40 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	500 mA	Maximum average plate current from Eimac high-vacuum rectifier table.
Plate dissipation	150 W	Maximum plate dissipation from Eimac high-vacuum rectifier table.
Peak inverse voltage	40000 V	Maximum peak inverse voltage from Eimac high-vacuum rectifier table.
Filament voltage	7.5 V	Nominal filament voltage from Eimac high-vacuum rectifier table.
Filament current	12 A	Nominal filament current from Eimac high-vacuum rectifier table.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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
maximum peak inverse voltage rating of	25000 V	maximum peak inverse voltage rating of 25,000 volts. Cooling is by convection
citor-input filter with [1]	9	citor-input filter with 9.000 volts single-phase supply. Four 2-240A's in a bridge

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
citor-input filter with [2]	2	citor-input filter with 9.000 volts single-phase supply. Four 2-240A's in a bridge
citor-input filter with [3]	-240	citor-input filter with 9.000 volts single-phase supply. Four 2-240A's in a bridge
circuit will deliver I [1]	0	circuit will deliver I .0 ampere at 16,000 volts to a choke-input fil+er wi+h 18,000
circuit will deliver I [2]	16000	circuit will deliver I .0 ampere at 16,000 volts to a choke-input fil+er wi+h 18,000
circuit will deliver I [3]	18000	circuit will deliver I .0 ampere at 16,000 volts to a choke-input fil+er wi+h 18,000
Voltage	7.5 V	Voltage---.- 7.5 yolts
Current	12 A	Current----- 12.0 amperes
Maximum Temperature of plate seal	225	Maximum Temperature of plate seal ---- ----- 225OC
Recommended Heat Dissipa+ing plate connec+or - - Eimac HR	6	Recommended Heat Dissipa+ing plate connec+or - - Eimac HR-6
PEAK INVERSE PLATE VOLTAGE	25000 V	PEAK INVERSE PLATE VOLTAGE - - - 25,000 MAX. VOLTS
PLATE DISSIPATION	150 W	PLATE DISSIPATION ----- 150 MAX. WATTS
D-C PLATE CURRENT]	500 mA	D-C PLATE CURRENT] 500 MAX. MA
PEAK PLATE CURRENT	4 mA	PEAK PLATE CURRENT 4.0 MAX. AMPERES
base ei+her down or up. The lead +o the pla+e terminal o{ the Cooling-The [1]	2	base ei+her down or up. The lead +o the pla+e terminal o{ the Cooling-The 2-240A is cooled by conv@c+ion and radiation.
base ei+her down or up. The lead +o the pla+e terminal o{ the Cooling-The [2]	-240	base ei+her down or up. The lead +o the pla+e terminal o{ the Cooling-The 2-240A is cooled by conv@c+ion and radiation.
multipliers iHustra+ed in Fig	2	multipliers iHustra+ed in Fig. 2, it may be necessary to moun+ The maximum temperature at the plato \$®dl mus+ not exceed
Published value	225	225°C. A convenient accessory for measuring this tempera+ure rent. Under these conditions capaci+or-input fil+er circuits be-
is "Tempilaq", a temperature-sensi+ive lacquer available from come desirable. The maximum d-c current rating of +he [1]	2 mA	is "Tempilaq", a temperature-sensi+ive lacquer available from come desirable. The maximum d-c current rating of +he 2-240A

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
is "Tempilaq", a temperature-sensitive lacquer available from come desirable. The maximum d-c current rating of +he [2]	-240 mA	is "Tempilaq", a temperature-sensitive lacquer available from come desirable. The maximum d-c current rating of +he 2-240A
The tlrioriated-tungsten filament of the [1]	2	The tlrioriated-tungsten filament of the 2-240A reaches op-
The tlrioriated-tungsten filament of the [2]	-240	The tlrioriated-tungsten filament of the 2-240A reaches op-
Plate Operation-With low room illumination, the plo+e of the Fig	2	Plate Operation-With low room illumination, the plo+e of the Fig. 2 as a percentage of the effective load resis+Once per tube
Published value [1]	2 W	2-240A begins to show color as the maximum plate dissipation (Ec/lp). The +otal charging-circui+ resistance involves the in-
Published value [2]	-240 W	2-240A begins to show color as the maximum plate dissipation (Ec/lp). The +otal charging-circui+ resistance involves the in-
rating of	150	rating of 150 watts is approached. The maximum peak inverse ternal resistance of the rec+if er tube, Rp, the added series
vol+ago rating of	25000	vol+ago rating of 25,000 volts should not be exceeded a+ any resistor, RS, and the equivalen+ in+ernal resistance of the a-c
Perforrrrrance-The accompanying table shows some maximum Rp is +he plo+e resistance of the [1]	2	Perforrrrrance-The accompanying table shows some maximum Rp is +he plo+e resistance of the 2-240A. which may be
Perforrrrrance-The accompanying table shows some maximum Rp is +he plo+e resistance of the [2]	-240	Perforrrrrance-The accompanying table shows some maximum Rp is +he plo+e resistance of the 2-240A. which may be
performance capabili+ies of the [1]	2 W	performance capabili+ies of the 2-240A when used as a power- +aken as 200 ohms.
performance capabili+ies of the [2]	-240 W	performance capabili+ies of the 2-240A when used as a power- +aken as 200 ohms.
performance capabili+ies of the [3]	200 W	performance capabili+ies of the 2-240A when used as a power- +aken as 200 ohms.
Published value [1]	2 V	2-240A MAXIMUM-PERFORMANCE CAPABILITIES may be taken as the regulation of the high-voltage supply ex-
Published value [2]	-240 V	2-240A MAXIMUM-PERFORMANCE CAPABILITIES may be taken as the regulation of the high-voltage supply ex-

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
iihnaos,®e [1]	18000	iihnaos,®e.- 18,000 20,000 0.640 16,000 I.00 Tubes may be operated in parallel to increase the output
iihnaos,®e [2]	20000	iihnaos,®e.- 18,000 20,000 0.640 16,000 I.00 Tubes may be operated in parallel to increase the output
iihnaos,®e [3]	0.64	iihnaos,®e.- 18,000 20,000 0.640 16,000 I.00 Tubes may be operated in parallel to increase the output
iihnaos,®e [4]	16000	iihnaos,®e.- 18,000 20,000 0.640 16,000 I.00 Tubes may be operated in parallel to increase the output
iihnaos,®e [5]	0	iihnaos,®e.- 18,000 20,000 0.640 16,000 I.00 Tubes may be operated in parallel to increase the output
Fig	2	Fig. 2. the plate resistance (Rp) will be half as great and the
peal current usually limits the d-c current which the [1]	2 A	peal current usually limits the d-c current which the 2-240A is
peal current usually limits the d-c current which the [2]	-240 A	peal current usually limits the d-c current which the 2-240A is
of ripple and i+s wave-shape, circuit conditions will determine [1]	2 W	of ripple and i+s wave-shape, circuit conditions will determine 2-240A is 25,000 vol+s. In single-phase power-supply rectifier
of ripple and i+s wave-shape, circuit conditions will determine [2]	-240 W	of ripple and i+s wave-shape, circuit conditions will determine 2-240A is 25,000 vol+s. In single-phase power-supply rectifier
of ripple and i+s wave-shape, circuit conditions will determine [3]	25000 W	of ripple and i+s wave-shape, circuit conditions will determine 2-240A is 25,000 vol+s. In single-phase power-supply rectifier
Cil®ke-lllpq. Filler-The maximum d-c current rating of the peak a-c supply vol+age (I [1]	41 mA	Cil®ke-lllpq. Filler-The maximum d-c current rating of the peak a-c supply vol+age (I.41 +imes E,ms in Fig. 2) in the case
Cil®ke-lllpq. Filler-The maximum d-c current rating of the peak a-c supply vol+age (I [2]	2 mA	Cil®ke-lllpq. Filler-The maximum d-c current rating of the peak a-c supply vol+age (I.41 +imes E,ms in Fig. 2) in the case
Load voltage (volts) mum curl.ent rating of the [1]	2 V	Load voltage (volts) mum curl.ent rating of the 2-240A is 800 milliamperes.
Load voltage (volts) mum curl.ent rating of the [2]	-240 V	Load voltage (volts) mum curl.ent rating of the 2-240A is 800 milliamperes.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Load voltage (volts) mum curl.ent rating of the [3]	800 V	Load voltage (volts) mum curl.ent rating of the 2-240A is 800 milliamperes.
The plate characteristic curve for the [1]	2	The plate characteristic curve for the 2-240A serves as a
The plate characteristic curve for the [2]	-240	The plate characteristic curve for the 2-240A serves as a
half-wave r@ctifier\$. rating of	150 V	half-wave r@ctifier\$. rating of 150 wa+ts, the maximum peak inverse voltage rating of
Capaci.@r-lngu. Filter-The [1]	2 mA	Capaci.@r-lngu. Filter-The 2-240A is particularly suitdblo for 25,000 volts, and tl`e maximum peak plate current of 4.0 am-
Capaci.@r-lngu. Filter-The [2]	-240 mA	Capaci.@r-lngu. Filter-The 2-240A is particularly suitdblo for 25,000 volts, and tl`e maximum peak plate current of 4.0 am-
Capaci.@r-lngu. Filter-The [3]	25000 mA	Capaci.@r-lngu. Filter-The 2-240A is particularly suitdblo for 25,000 volts, and tl`e maximum peak plate current of 4.0 am-
Capaci.@r-lngu. Filter-The [4]	4 mA	Capaci.@r-lngu. Filter-The 2-240A is particularly suitdblo for 25,000 volts, and tl`e maximum peak plate current of 4.0 am-
D-C Plat® Current (lp) [1]	280 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube
D-C Plat® Current (lp) [2]	300 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube
D-C Plat® Current (lp) [3]	320 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube
D-C Plat® Current (lp) [4]	340 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube
D-C Plat® Current (lp) [5]	360 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube
D-C Plat® Current (lp) [6]	380 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube
D-C Plat® Current (lp) [7]	400 A	D-C Plat® Current (lp) 280 300 320 340 360 380 400 milliamperos pot tube