ELECTRONIC TUBE REFERENCE

6CA4

Rectifier - Full Wave electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
RECTIFIER-RECTIFIER

Twin-anode full-wave rectifier, also designated EZ81, for receiver and amplifier power supplies. Rated for approximately 1.2 kV peak inverse voltage, 150 mA DC output, and 500 mA peak current.

General characteristics

BASE DESIGNATION	9M	**BASE PINS**	9
NOMINAL HEATER	6.3 V / 1 A	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Common cathode	**SECTION CONSTRUCTION**	Similar

9M - Terminal pinout

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 — P1	A	P — Plate (Anode)	CONNECTED
PIN3 — K	A	K — Cathode	CONNECTED
PIN4 — H	—	H — Heater	CONNECTED
PIN5 — H	—	H — Heater	CONNECTED
PIN7 — P2	B	P — Plate (Anode)	CONNECTED

Section ratings

SECTION1 Rectifier	
PEAK INVERSE VOLTAGE	1200 V
NOMINAL OUTPUT CURRENT	150 mA
PEAK FORWARD CURRENT	500 mA
FORWARD VOLTAGE DROP	20 V
MAXIMUM HEATER-CATHODE VOLTAGE	500 V
Each identical diode; full-wave rectifier	

SECTION2 Rectifier	
PEAK INVERSE VOLTAGE	1200 V
NOMINAL OUTPUT CURRENT	150 mA
PEAK FORWARD CURRENT	500 mA
FORWARD VOLTAGE DROP	20 V
MAXIMUM HEATER-CATHODE VOLTAGE	500 V

> Printed co-designation for the EZ81 twin-anode full-wave rectifier.

SOURCE OPERATING CONDITIONS

1958 Amperex Industrial

SOURCE PDF

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

1958 AMPEREX INDUSTRIAL

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater/filament voltage	**6.3 V**	Published Amperex table
Heater/filament current	**1 A**	Published Amperex table

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
AC supply plate-to-plate	**2x350 V RMS**	Published Amperex table
DC output current	**150 mA**	Published Amperex table
Input-filter capacitance	**50 uF**	Published Amperex table
DC output voltage	**347 V**	Published Amperex table

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1961 Tung Sol

SOURCE PDF

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

1961 TUNG SOL

Section 1 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater voltage	**6.3 V**	—
Heater current	**1 A**	—
Plate voltage	**1200 V**	Typical operating conditions

SOURCE OPERATING CONDITIONS

1963 Amperex Condensed

SOURCE PDF

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

1963 AMPEREX CONDENSED

Section 1 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
AC supply voltage per plate	**350 V RMS**	FullWave
DC output current maximum	**150 mA**	FullWave
Maximum input capacitor	**50 µF**	CapacitorInputFilter
DC output voltage	**347 V**	FullWave

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1966 Tung Sol Electronic Tubes 1 of 4

SOURCE PDF

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1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
MAXIMUM PEAK INVERSE PLATE VOLTAGE	**1200 V**	Maximum Ratings | MAXIMUM PEAK INVERSE PLATE VOLTAGE 1200 VOLTS
AC PLATE VOLTAGE PER PLATE. RMS	**350 V**	FullWaveRectifier | AC PLATE VOLTAGE PER PLATE. RMS 25O 3OO 350 VOLTS
TOTAL PLATE —SUPPLY RESISTANCE PER PLATE	**240 ohm**	FullWaveRectifier | TOTAL PLATE —SUPPLY RESISTANCE PER PLATE 150 200 240 OHMS
DC OUTPUT VOLTAGE AT FILTER INPUT	**347 V**	FullWaveRectifier | DC OUTPUT VOLTAGE AT FILTER INPUT 245 293 347 VOLTS
Ilr	**150 mA**	FullWaveRectifier | Ilr 150 MA. OC PER PLATE 2O VOLTS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak inverse voltage	**1200 V**	—
Steady-state peak plate current per plate	**500 mA**	—
Transient peak plate current per plate	**1.55 A**	Duration<=0.2s
AC plate voltage per plate	**250 V**	CapacitorInputFilter
Filter input capacitor	**50 uF**	CapacitorInputFilter
Plate-supply resistance per plate	**150 ohm**	ACPlateVoltage=250V
DC output current	**150 mA**	CapacitorInputFilter
DC output voltage	**245 V**	ACPlateVoltage=250V
AC plate voltage per plate	**300 V**	CapacitorInputFilter
Plate-supply resistance per plate	**200 ohm**	ACPlateVoltage=300V
DC output voltage	**293 V**	ACPlateVoltage=300V
AC plate voltage per plate	**350 V**	CapacitorInputFilter
Plate-supply resistance per plate	**240 ohm**	ACPlateVoltage=350V
DC output voltage	**347 V**	ACPlateVoltage=350V

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube voltage drop	**20 V**	At 150mA DC per plate

SOURCE OPERATING CONDITIONS

1968 Mazda Belvu

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

1968 MAZDA BELVU

Section 1 · Rectifier

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	**6.3 V**	Published nominal or stated operating value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament current	**1 A**	Published nominal or stated operating value

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum rectifier capacitor	**50 uF**	Capacitor-input filter

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
PEAK INVERSE PLATE VOLTAGE	**1000 V**	—
With capacitor-input to filter	**350 V**	—
PEAK PLATE CURRENT PER PLATE	**450 mA**	—
DC OUTPUT CURRENT	**150 mA**	—
Heater negative with respect to cathode	**500 V**	—
Voltage (RMS)	**500 V**	Published table column 1 of 3
Voltage (RMS)	**600 V**	Published table column 2 of 3
Voltage (RMS)	**700 V**	Published table column 3 of 3
Filter–Input Capacitor	**50 µF**	Published table column 1 of 3
Filter–Input Capacitor	**50 µF**	Published table column 2 of 3
Filter–Input Capacitor	**50 µF**	Published table column 3 of 3
Impedance Per Plate	**150 Ω**	Published table column 1 of 3
Impedance Per Plate	**200 Ω**	Published table column 2 of 3
Impedance Per Plate	**240 Ω**	Published table column 3 of 3
ma. =	**150 V**	Published table column 1 of 4
ma. =	**245 V**	Published table column 2 of 4

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
ma. =	**293 V**	Published table column 3 of 4
ma. =	**347 V**	Published table column 4 of 4

SOURCE OPERATING CONDITIONS

1975 RCA RC30

SOURCE PDF

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

1975 RCA RC30

Section 1 · Rectifier

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Inverse Plate Voltage	**1000 V**	Published in approved 6CA4 target datasheet entry; Section1
Peak Plate Current (Per Plate)	**450 mA**	Published in approved 6CA4 target datasheet entry; Section1
to Filter	**350 V**	Published in approved 6CA4 target datasheet entry; Section1
Average Output Current	**150 mA**	Published in approved 6CA4 target datasheet entry; Section1
Peak Heater-Cathode Voltage	**500 V**	Published in approved 6CA4 target datasheet entry; Section1
per Plate 150 200	**240 Ω**	Published in approved 6CA4 target datasheet entry; Section1
For dc output current of	**150 mA**	Published in approved 6CA4 target datasheet entry; Section1
For dc output current of 150 mA 245 293	**347 V**	Published in approved 6CA4 target datasheet entry; Section1

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