ELECTRONIC TUBE REFERENCE

50Z7G

Rectifier - Full Wave electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
RECTIFIER-RECTIFIER

High-vacuum rectifier and voltage-doubler tube with a tapped 50 V heater for panel-lamp service. Its dual sections provide flexible AC/DC receiver power-supply arrangements.

General characteristics

BASE DESIGNATION	8AN	**BASE PINS**	7
NOMINAL HEATER	50 V / 150 mA	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Rectifier

PEAK INVERSE VOLTAGE	700 V
NOMINAL OUTPUT CURRENT	65 mA
PEAK FORWARD CURRENT	400 mA
FORWARD VOLTAGE DROP	21 V
MAXIMUM HEATER-CATHODE VOLTAGE	350 V

Representative row for two identical rectifier sections; published output rating shown with panel lamp.

SECTION2 Rectifier

PEAK INVERSE VOLTAGE	700 V
NOMINAL OUTPUT CURRENT	65 mA
PEAK FORWARD CURRENT	400 mA
FORWARD VOLTAGE DROP	21 V
MAXIMUM HEATER-CATHODE VOLTAGE	350 V

Second physical rectifier section; electrical properties populated from applicable published ratings.

High-vacuum rectifier and voltage doubler with tapped heater for panel-lamp service.

SOURCE OPERATING CONDITIONS

1938 National Union

SOURCE PDF

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

1938 NATIONAL UNION

Section 1 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
DC output current per plate	**85 mA**	Published rectifier rating
AC plate voltage RMS per plate	**117 V**	Published circuit condition

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Tube voltage drop	**21 V**	At 180 mA DC per plate

1938 NATIONAL UNION

Section 2 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
DC output current per plate	**85 mA**	Published rectifier rating
DC output current per plate	**85 mA**	Published rectifier rating
AC plate voltage RMS per plate	**117 V**	Published circuit condition
AC plate voltage RMS per plate	**117 V**	Published circuit condition

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Tube voltage drop	**21 V**	At 180 mA DC per plate
Tube voltage drop	**21 V**	At 180 mA DC per plate

SOURCE OPERATING CONDITIONS

1950 Sylvania

SOURCE PDF

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

1950 SYLVANIA

Section 1 · Rectifier

APPLICATION		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Service	**Rectifier / voltage doubler**	—

1950 SYLVANIA

Section 2 · Rectifier

APPLICATION		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Service	**Rectifier / voltage doubler**	—

SOURCE OPERATING CONDITIONS

195X General Electric Essential Characteristics

SOURCE PDF

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Rectifier

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater/filament voltage	**50 V**	Published heater/filament rating
Heater/filament current	**150 mA**	Published heater/filament rating
Tube voltage drop	**21 V**	At 130 mA DC

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
DC output current	**65 mA**	RectifierService
Peak inverse voltage	**700 V**	RectifierService

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RMS supply voltage per plate	**235 V**	RectifierService
Peak current per plate	**400 mA**	RectifierService

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 2 · Rectifier

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	**50 V**	Published heater/filament rating
Heater/filament voltage	**50 V**	Published heater/filament rating
Heater/filament current	**150 mA**	Published heater/filament rating
Heater/filament current	**150 mA**	Published heater/filament rating
Tube voltage drop	**21 V**	At 130 mA DC

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC output current	**65 mA**	RectifierService
DC output current	**65 mA**	RectifierService
Peak inverse voltage	**700 V**	RectifierService
RMS supply voltage per plate	**235 V**	RectifierService
Peak current per plate	**400 mA**	RectifierService

SOURCE OPERATING CONDITIONS

SOURCE PDF

1961 Tung Sol

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	**50 V**	—
Heater current	**150 mA**	—
Maximum AC plate voltage RMS	**235 V**	HalfWave

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tapped heater-section voltage	**2 V**	—
AC plate voltage per plate RMS	**117 V**	VoltageDoubler
DC output current per plate	**65 mA**	VoltageDoubler

1961 TUNG SOL

Section 2 · Rectifier

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater voltage	**50 V**	—
Heater voltage	**50 V**	—
Heater current	**150 mA**	—
Heater current	**150 mA**	—
Maximum AC plate voltage RMS	**235 V**	HalfWave
Maximum AC plate voltage RMS	**235 V**	HalfWave
Tapped heater-section voltage	**2 V**	—
Tapped heater-section voltage	**2 V**	—
AC plate voltage per plate RMS	**117 V**	VoltageDoubler
AC plate voltage per plate RMS	**117 V**	VoltageDoubler
DC output current per plate	**65 mA**	VoltageDoubler
DC output current per plate	**65 mA**	VoltageDoubler

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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