

ELECTRONIC TUBE REFERENCE

6X4WA

Rectifier - Full Wave electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
RECTIFIER-RECTIFIER

High-reliability miniature full-wave rectifier for commercial and industrial equipment. Rated for approximately 1.25 kV peak inverse voltage, 55 mA DC output, and 220 mA peak current from a 6.3 V heater.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Rectifier	
PEAK INVERSE VOLTAGE	1250 V
NOMINAL OUTPUT CURRENT	75 mA
PEAK FORWARD CURRENT	750 mA
FORWARD VOLTAGE DROP	22 V
MAXIMUM HEATER-CATHODE VOLTAGE	450 V
Published ratings/characteristics promoted where applicable; additional source-table values retained in parameter rows.	

SECTION2 Rectifier	
PEAK INVERSE VOLTAGE	1250 V
NOMINAL OUTPUT CURRENT	75 mA
PEAK FORWARD CURRENT	750 mA
FORWARD VOLTAGE DROP	22 V
MAXIMUM HEATER-CATHODE VOLTAGE	450 V
<i>Second physical rectifier section; electrical properties populated from corresponding identical section.</i>	

High-reliability miniature full-wave rectifier for commercial and industrial equipment. Data was extracted from the supplied Tung-Sol source, including published ratings, characteristics, and operating information.

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	6.3 V	Nominal
Heater current	600 mA	Nominal
AC plate voltage per plate RMS	400 V	CapacitorInputFilter
DC output current	55 mA	CapacitorInputFilter
Filter input capacitor	8 uF	CapacitorInputFilter
Load resistance	8200 ohm	CapacitorInputFilter
DC output voltage at filter input	435 V	CapacitorInputFilter

1961 TUNG SOL

Section 2 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	600 mA	Nominal
AC plate voltage per plate RMS	400 V	CapacitorInputFilter
DC output current	55 mA	CapacitorInputFilter
Filter input capacitor	8 uF	CapacitorInputFilter
Load resistance	8200 ohm	CapacitorInputFilter
DC output voltage at filter input	435 V	CapacitorInputFilter

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse voltage	1250 V	PromotedValue
Peak forward/surge current	750 mA	PromotedValue

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC output current	75 mA	PromotedValue
6.3 VOLTS – published value 1	6.3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
6.3 VOLTS – published value 2	0.6 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER – published value 1	6.3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER – published value 2	10 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
AC PLATE SUPPLY VOLTAGE, RMS (EACH PLATE)	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
DC OUTPUT CURRENT (EACH PLATE)	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
TOTAL DC AND PEAK	5 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
BULB TEMPERATURE	165	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AC PLATE SUPPLY VOLTAGE PER PLATE	4	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
FILTER INPUT CAPACITOR	8 μ f	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
LOAD RESISTOR	2 OHMS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
DC OUTPUT CURRENT	55 MADC	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
DC OUTPUT VOLTAGE AT FILTER	435	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HOT-SWITCHING AND DO NOT EXCEED A MAXIMUM PEAK CURRENT VALUE OF 1.6 AMPERE DURING THE INITIAL	1.6 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
THE BOUNDARIES OF RATING CHART 1 ARE BASED ON LIMITS OF SUPPLY VOLTAGE, PLATE COISSIPATION AND	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
THE BOUNDARY OF RATING CHART 2 DEFINES THE LIMIT OF STEADY-STATE PEAK CURRENT. OPERATION WITH	2	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ANY GIVEN PLATE VOLTAGE SUPPLY WHICH WILL ASSURE THAT THE SURGE CURRENTS ARE WITHIN 4 SAFE – published value 1	4	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ANY GIVEN PLATE VOLTAGE SUPPLY WHICH WILL ASSURE THAT THE SURGE CURRENTS ARE WITHIN 4 SAFE – published value 2	4	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
THE DC OUTPUT VOLTAGE IS MEASURED AT THE	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER	6.3 volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE SUPPLY VOLTAGE PER PLATE	400	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
LOAD RESISTANCE	8200 OHMS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
LOAD CAPACITANCE	8 μf	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER CURRENT – published value 1	600 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER CURRENT – published value 2	660 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
VOLTAGE = 980 VaC – published value 1	12.1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
VOLTAGE = 980 VaC – published value 2	6.5	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
NO VOLTAGES; F= 40 cps;g=10 – published value 1	19.1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
NO VOLTAGES; F= 40 cps;g=10 – published value 2	6.5	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER – published value 1	540 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER – published value 2	670 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
4. ENVELOPE TEMPERATURE IS DEFINED AS THE HIGHEST TEMPERATURE INDICATED WHEN USING A THERMOCOUPLE	4	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
TIME IN PERCENT OF THAT DETERMINED BY A CURVE OF RESISTANCE VERSUS TIME DURATION PASSING	8	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
E_f = 6.3 Volts	6.3 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

Section 2 · Rectifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse voltage	1250 V	PromotedValue
Peak forward/surge current	750 mA	PromotedValue

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC output current	75 mA	PromotedValue
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HEATER – published value 1	6.3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
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DC OUTPUT CURRENT (EACH PLATE)	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
TOTAL DC AND PEAK	5 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
BULB TEMPERATURE	165	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
AC PLATE SUPPLY VOLTAGE PER PLATE	4	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

TUBE TINKER

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

