

ELECTRONIC TUBE REFERENCE

6D4

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
THYRATRON

Argon-filled miniature thyatron designed for relay, control, and switching circuits, providing compact grid-triggered gas-discharge control.

GENERAL CHARACTERISTICS

BASE DESIGNATION	5AY	BASE PINS	7
NOMINAL HEATER	6.3 V / 250 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

5AY - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – K	A	K – Cathode	CONNECTED
PIN7 – P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Thyatron	
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM CATHODE CURRENT	25 A
Gas triode / thyatron section used for relay control.	

Argon-filled miniature thyratron for relay, control, and switching circuits. Data was extracted from the supplied Tung-Sol source, including published ratings, characteristics, and operating information.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Plate Inverse Voltage	350 V	—
Peak Plate Forward Voltage	350 V	—
Peak Plate Current	110 mA	—
Duty Cycle	0.75 %	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube Voltage Drop	18 V	I _b =100 mA
Noise Output	10 V	Peak-to-peak minimum



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Thyatron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube voltage drop	16 V	At 25mA DC
DC current for stated voltage drop	25 mA	Relay Control

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC cathode current	25 mA	RelayControl
Maximum peak cathode current	100 mA	RelayControl
Maximum voltage between elements	450 V	RelayControl


SOURCE DATA APPENDIX

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 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Voltage	1946 V	Published operating/characteristic table


SOURCE DATA APPENDIX

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 · Thyatron

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
6.3t10~ VOLTS – published value 1	10 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
6.3t10~ VOLTS – published value 2	0.25 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE – published value 1	6.3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER VOLTAGE – published value 2	10 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER CURRENT (E f = – published value 1	6 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER CURRENT (E f = – published value 2	0.25 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ANODE TO CONTROL GRID CAPACITANCE	7	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
CONTROL GRID TO CATHODE CAPACITANCE	1.2	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ANODE TO CATHODE CAPACITANCE	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER TO CATHODE CAPACITANCE	2.9	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ANODE VOLTAGE DROP (AT 100 MA dc) (APPROX.) – published value 1	100 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ANODE VOLTAGE DROP (AT 100 MA dc) (APPROX.) – published value 2	12 MA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
AND R={3~00p OHM) (P TO P) (MIN,) – published value 1	3 OHM	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
AND R={3~00p OHM) (P TO P) (MIN,) – published value 2	9 OHM	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
FORWARD	3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
INVERSE	350 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC PLATE SUPPLY VOLTAGE	5 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
NEGATIVE CONTROL GRID VOLTAGE	150	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
NEATER CATHODE VOLTAGE	110	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
AMBIENT TEMPERATURE – published value 1	-55	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
AMBIENT TEMPERATURE – published value 2	9	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
CONTROL GRID CIRCUIT RESISTANCE	5 MEGOHM	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
Ef = 6.3 Volts	6.3 Volts	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

TUBE TINKER

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