



ELECTRONIC TUBE REFERENCE

5C22

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
THYRATRON

Hot-cathode hydrogen thyatron for high-repetition-rate, high-voltage, high-peak-current pulse switching in pulse-modulator service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	6.3 V / 10.6 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Thyatron	
MAXIMUM PLATE VOLTAGE	16000 V
MAXIMUM CATHODE CURRENT	250 A
<i>Thyatron pulse ratings promoted where semantically compatible; trigger, delay, jitter, reservoir and current-rate data retained as parameters.</i>	

Hot-cathode grid-controlled hydrogen thyatron designed for pulsing at high repetition frequencies, high peak currents and high voltages.



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
Heater Voltage	6.3 V	Nominal
Heater Current	10.6 A	Nominal
PeakAnodeVoltage	16000 V	Pulse
Peak Anode Current	325 A	Pulse
Average Anode Current	200 mA	Pulse
Peak Inverse Anode Voltage	16000 V	Pulse



SOURCE OPERATING CONDITIONS

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1962 ITT

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1962 ITT

Section 1 · Thyatron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum heating time	3 min	—
Maximum peak forward anode voltage	16000 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse anode voltage	16000 V	—
Maximum peak anode current	250 A	—
Maximum average anode current	200 mA	—
Maximum RMS anode current	6 A	—
Maximum anode current rate of rise	1500 A/us	—
Maximum peak inverse trigger voltage	200 V	—
Maximum anode delay time	0.65 us	—
Maximum anode delay-time drift	0.1 us	—
Initial maximum time jitter	0.005 us	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Philips Electron Tubes Handbook V3

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1963 PHILIPS ELECTRON TUBES HANDBOOK V3

Section 1 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Device family	Hydrogen thyatron	Section1
Source reference	See chapter Tubes for Microwave Equipment in this volume	SourceCrossReference



SOURCE DATA APPENDIX

1982 Toshiba

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1982 TOSHIBA
Section 1 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Anode Current	325 A	—
Average Anode Current	200 mA	—
Minimum DC Supply Voltage	4500 V	—
Maximum Rate of Rise of Anode Current	1500 A/us	—
Pulse Repetition Rate	1000 pps	—
Pulse Duration	6 us	—
DC Anode Supply Voltage	16000 V	PulseModulator
Pulse Repetition Rate	1000 pps	PulseModulator
Pulse Width	1 us	PulseModulator
Peak Power Output	1280 kW	PulseModulator
DC Anode Current	175 mA	PulseModulator



SOURCE DATA APPENDIX

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1999 Philips 0-D

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1999 PHILIPS 0-D
Section 1 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak anode current	325 A	Maximum
Average anode current	200 mA	Maximum
Current rise rate	1500 A/us	Maximum

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pulse duration	6 us	Maximum