



ELECTRONIC TUBE REFERENCE

5948

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

THYRATRON

Hydrogen-filled zero-bias pulse thyatron for very-high-power radar modulators. Its massive heater and fast gas discharge switch extreme pulse energy.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 29 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Thyatron	
MAXIMUM PLATE VOLTAGE	25000 V
MAXIMUM CATHODE CURRENT	1000 A
Thyatron pulse ratings promoted where semantically compatible; trigger, delay, jitter, reservoir and current-rate data retained as parameters.	

The 5948 is a three-electrode hydrogen-filled zero-bias thyatron designed to generate high-power, high-voltage pulses in radar modulators, with an internal hydrogen reservoir and pulse capability around 12 MW.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 General Electric Transmitting Types

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

1950 GENERAL ELECTRIC TRANSMITTING TYPES

Section 1 · Thyatron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	30 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Peak Anode Voltage	25000 V	Pulsed



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
Peak Anode Voltage Forward	25 kV	—
Peak Cathode Current	1000 A	PulseService
PulsePower	12 MW	RadarModulator

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 ITT

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

1962 ITT

Section 1 · Thyatron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current	25 A–33 A	—
Heater voltage nominal	6.3 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum heating time	15 min	—
Maximum peak forward anode voltage	25000 V	—
Maximum peak inverse anode voltage	25000 V	—
Maximum peak anode current	1000 A	—
Maximum average anode current	1 A	—
Maximum RMS anode current	31.8 A	—
Maximum anode current rate of rise	5000 A/us	—
Maximum peak inverse trigger voltage	650 V	—
Maximum anode delay time	1 us	—
Maximum anode delay-time drift	0.25 us	—
Initial maximum time jitter	0.01 us	—

1966 Tung Sol Electronic Tubes 4 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4
Section 1 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak forward anode voltage	25 kV	PulseService
Peak inverse anode voltage	25 kV	PulseService
Peak cathode current	1000 A	PulseService
Average cathode current	1 A	PulseService
RMS cathode current	33 A	PulseService
Peak grid voltage	1500 V	PulseService
Current rate of rise	500 A/us	PulseService
Anode delay time	1 us	PulseService

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current bogey	29 A	WholeTube
Cathode heating time minimum	15 min	WholeTube
Hydrogen reservoir present	TRUE	WholeTube
Pulse power capability	12 MW	RadarModulator



SOURCE DATA APPENDIX

1982 Toshiba

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Anode Current	1000 A	—
Average Anode Current	1 A	—
Minimum DC Supply Voltage	5000 V	—
Maximum Rate of Rise of Anode Current	5000 A/us	—
Pulse Repetition Rate	1500 pps	—
Pulse Duration	6 us	—

TUBE TINKER

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

[Catalog](#)[Tube types](#)[Full books](#)[Blog](#)[Feedback & corrections](#)

© 2026 Tube Tinker