



ELECTRONIC TUBE REFERENCE

7390

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

THYRATRON

Large ceramic 33-megawatt hydrogen thyatron for extreme pulse-power service. Fast controlled gas discharge switches exceptionally high pulse energy.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 28.5 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Thyatron	
MAXIMUM PLATE VOLTAGE	33000 V
MAXIMUM CATHODE CURRENT	2000 A
Thyatron pulse ratings promoted where semantically compatible; trigger, delay, jitter, reservoir and current-rate data retained as parameters.	

The ITT/Kuthe 7390 is a large ceramic 33-megawatt hydrogen thyatron for very-high-power pulse service.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Gas	Hydrogen	—
Anode Voltage Drop Maximum	250 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PeakForwardAnodeVoltageMaximum	33000 V	—
PeakInverseAnodeVoltageMaximum	33000 V	—
Average Cathode Current Maximum	4 A	—
RMSCathodeCurrentMaximum	72 A	—
DCAnodeVoltageMinimum	3500 V	—
CurrentRateOfRiseMaximum	10000 A/us	—
CathodeHeatingTimeMinimum	5 min	—
SwitchedPulsePower	33 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	22 A–35 A	—
Heater voltage nominal	6.3 V	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Minimum heating time	5 min	—
Maximum peak forward anode voltage	33000 V	—
Maximum peak inverse anode voltage	33000 V	—
Maximum peak anode current	2000 A	—
Maximum average anode current	4 A	—
Maximum RMS anode current	72 A	—
Maximum anode current rate of rise	10000 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	—

TUBE TINKER

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