



ELECTRONIC TUBE REFERENCE

5727

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

THYRATRON

Gas thyatron tetrode for relay operation, grid-controlled rectification, and pulse switching. Its control grid initiates rapid gas-discharge conduction.

GENERAL CHARACTERISTICS

BASE DESIGNATION	E7-1	BASE PINS	9
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 0 Thyatron	
MAXIMUM PLATE VOLTAGE	650 V
MAXIMUM CATHODE CURRENT	500 mA
PEAK INVERSE VOLTAGE	1300 V
FORWARD VOLTAGE DROP	8 V
MAXIMUM HEATER-CATHODE VOLTAGE	100 V
Thyatron section. Forward peak anode voltage and peak cathode current promoted; inverse/pulse ratings preserved as parameters.	

Directly heated gas thyatron tetrode for relay operation, grid-controlled rectification, and pulse switching.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 0 · Thyatron

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Relay_GridControlledRectifier_PulseModulator text	—



SOURCE OPERATING CONDITIONS

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1958 Amperex Industrial

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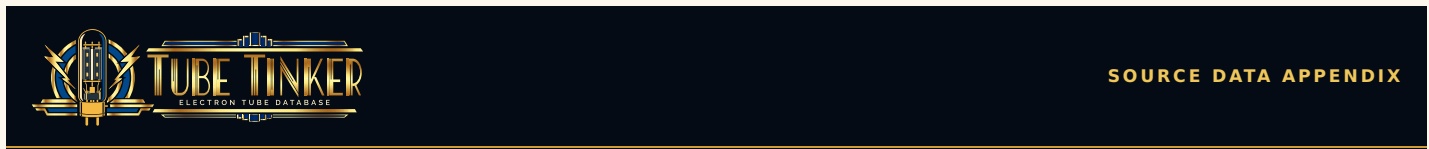
1958 AMPEREX INDUSTRIAL

Section 0 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	6.3 V	Section1
Heater or filament current	600 mA	Section1
Peak forward voltage maximum	650 V	Thyatron
Peak inverse voltage maximum	1300 V	Thyatron
Peak anode current maximum	500 mA	Thyatron
Average anode current maximum	100 mA	Thyatron
Maximum grid voltage	-100 V	Thyatron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	10 s	Thyatron

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tube voltage drop	8 V	Thyratron
Ionization time	0.5 μ s	Thyratron
Deionization time	35 min	Thyratron



SOURCE OPERATING CONDITIONS

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1960 RCA Industrial and Communications Types

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1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 0 · Thyratron

CROSSREFERENCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Prototype / equivalent family	2D21	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Relay / grid-controlled rectifier / pulse modulator	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak forward anode voltage	650 V	Pulse
Peak cathode current	500 mA	Pulse
Fault cathode current	10 A	Pulse



1968 General Electric Co

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1968 GENERAL ELECTRIC CO

Section 0 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Inverse Anode Voltage	1300 V	GridControlledRectifier
Average Cathode Current	100 mA	GridControlledRectifier
Fault Cathode Current	10 A	0.1Second
Pulse Peak Cathode Current	10 A	PulseModulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage Drop	8 V	—



SOURCE DATA APPENDIX

1968 Mazda Belvu

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1968 MAZDA BELVU

Section 0 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	600 mA	Nominal
Maximum Plate Voltage	650 V	—
Maximum Cathode Current	100 mA	—
Peak Cathode Current	500 mA	Relay/controlled-rectifier service
MaximumInverseAnodeVoltage	1300 V	—

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 2 of 7

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1971 RCA HB3 BINDER 2 OF 7

Section 0 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak forward anode voltage	650 V	—
Peak inverse anode voltage	1300 V	—
Peak cathode/anode current	500 mA	—
Average cathode/anode current	100 mA	—
Fault or surge current	10 A	ShortDuration
Peak heater-cathode voltage heater negative	100 V	—
Peak heater-cathode voltage heater positive	25 V	—
Ambient temperature range	-75 C minimum	—
Heater voltage	6.3 V	—
Heater current	600 mA	—
Pulse-modulator peak anode voltage	500 V	PulseModulator
Pulse-modulator peak cathode current	10 A	PulseModulator
Pulse-modulator current rate of change	100 A/us	PulseModulator

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization time	0.5 us	Approximate
Deionization time	35 us	Approximate
Anode voltage drop	8 V	Conducting
Minimum heating time	20 s	BeforeConduction

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Gas fill	Gas	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-anode capacitance	0.026 pF	Approximate
Grid-to-cathode capacitance	2.4 pF	Approximate


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1975 RCA RC30

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1975 RCA RC30

Section 0 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak forward anode voltage	500 V	PulseModulator
Peak inverse anode voltage	100 V	PulseModulator
Peak cathode current	10 A	PulseModulator
Average cathode current	10 mA	PulseModulator
Cathode heating time	20 s	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to anode capacitance	0.026 pF	—
Input capacitance	2.4 pF	—
Output capacitance	1.6 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ionization time	0.5 us	—



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