

ELECTRONIC TUBE REFERENCE

5559

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
THYRATRON

Grid-controlled gas thyatron for industrial power switching and controlled rectification. Published ratings support substantial controlled-current service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	5 V / 4.7 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Thyatron	
MAXIMUM PLATE VOLTAGE	1000 V
MAXIMUM CATHODE CURRENT	2.5 A
Published maximum ratings and device-specific characteristics are promoted where schema-compatible; remaining switching/gauge/regulator electrical data is retained in section parameters.	

5559 is listed in the supplied Amperex material as a grid-controlled gas thyatron. Published ratings and operating characteristics were captured from the supplied table.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

Section 1 · Thyatron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	5 V	Section1
Heater or filament current	4.5 A	Section1
Peak forward voltage maximum	1000 V	Thyatron
Peak inverse voltage maximum	1500 V	Thyatron
Peak anode current maximum	15 A	Thyatron
Average anode current maximum	2.5 A	Thyatron
Maximum grid voltage	-500 V	Thyatron

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament heating time	300 s	Thyatron
Tube voltage drop	16 V	Thyatron
Ionization time	10 μ s	Thyatron
Deionization time	1000 μ s	Thyatron



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	5 V	ThyratronService
Filament current	4.5 A	ThyratronService
Filament heating time	300 s	ThyratronService
Tube voltage drop	16 V	ThyratronService
Deionization time	10 us	ThyratronService

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak forward voltage	1000 V	ThyratronService
Maximum peak inverse voltage	1500 V	ThyratronService
Maximum peak anode current	15 A	ThyratronService
Maximum average anode current	2.8 A	ThyratronService
Maximum grid voltage	-500 V	ThyratronService



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 English Electric Valve

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak forward anode voltage	1 kV	—
Peak inverse anode voltage	1.5 kV	—
Peak anode current	15 A	—
Mean anode current	2.5 A	—
Cathode preheating time	5 min	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 2 of 7

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

1971 RCA HB3 BINDER 2 OF 7

Section 1 · Thyatron

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage	5 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Current	4.5 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Ionization Time (Approx.)	10 s	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Deionization Time (Approx.) 1000	1000 s	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Anode Voltage Drop (Approx.) 16	16 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
resistor finegotmsl -0 – published value 1	0	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
resistor finegotmsl -0 – published value 2	220	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
COND.~AERCURY TEMPERATURE RANGE'	40 C	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
TEMPERATURE SHOU1..0	0	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
COND-MERCVRY TEMPERATURE=40~C	40	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID RESISTOR OHMS)=0	0 ohm	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
TYPE 5559	5559 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CONDENSED-MERCURY TEMPERATURE=40°C	40	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
GRID RESISTOR (OHMS)=0	0 ohm	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Heater or filament voltage nominal	5 V	Nominal value from supplied datasheet.
Heater or filament current nominal	4.5 A	Nominal or average value from supplied datasheet.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Forward	1000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Inverse	1000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Before Conduction	-500 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
During Conduction	-10 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Average`"	2.5 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Fault, for 0.1 sec. maximum – published value 1	0.1 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Fault, for 0.1 sec. maximum – published value 2	200 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
OPERATING FREQUENCY	150 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

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