ELECTRONIC TUBE REFERENCE

5557

Specialized - Thyratron electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
THYRATRON

Grid-controlled gas thyratron for industrial power control. Its trigger grid initiates gas-discharge conduction for controlled rectification and switching.

General characteristics

BASE DESIGNATION	–	**BASE PINS**	4
NOMINAL HEATER	2.5 V / 5 A	**PARALLEL HEATER**	– / –
HEATING	Direct	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

Section ratings

SECTION1 Thyratron

MAXIMUM PLATE VOLTAGE	2500 V
MAXIMUM CATHODE CURRENT	500 mA

Thyratron section; published switching/rating data retained below.

5557 is listed in the supplied Amperex material as a grid-controlled gas thyratron. Published ratings and operating characteristics were captured from the supplied table.

SOURCE OPERATING CONDITIONS

SOURCE PDF

1956 National Electronics Industrial Tubes

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

1956 NATIONAL ELECTRONICS INDUSTRIAL TUBES

Section 1 · Thyratron

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum peak inverse voltage	**1250 V**	Published datasheet value
Maximum peak forward voltage	**1250 V**	Published datasheet value
Maximum DC output current	**1 A**	Published datasheet value
Maximum instantaneous output current	**3 A**	Published datasheet value
Maximum AC short-circuit current	**50 A**	Published datasheet value

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heating time	**5 s**	Published datasheet value
Typical arc drop	**15 V**	At stated peak current
Ionization time	**10 us**	Approximate
Deionization time	**1000 us**	Approximate
Anode-grid capacitance	**2 pF**	Published capacitance

SOURCE DATA APPENDIX

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

Section 1 · Thyratron

CHARACTERISTIC		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Filament voltage	**2.5 V**	ThyratronService
Filament current	**5 A**	ThyratronService
Filament heating time	**5 s**	ThyratronService
Tube voltage drop	**16 V**	ThyratronService
Deionization time	**10 us**	ThyratronService

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Maximum peak forward voltage	**2500 V**	ThyratronService
Maximum peak inverse voltage	**5000 V**	ThyratronService
Maximum peak anode current	**1 A**	ThyratronService
Maximum average anode current	**500 mA**	ThyratronService
Maximum grid voltage	**-500 V**	ThyratronService

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.

1971 ENGLISH ELECTRIC VALVE

Section 1 · Thyratron

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Peak forward anode voltage	**2.5 kV**	—
Peak inverse anode voltage	**5 kV**	—
Peak anode current	**2 A**	—
Mean anode current	**500 mA**	—
Filament preheating time	**10 s**	—

SOURCE OPERATING CONDITIONS

1971 RCA HB3 Binder 2 of 7

SOURCE PDF

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 · Thyratron

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Voltage — published value 1	**2.38 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Voltage — published value 2	**2.5 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Voltage — published value 3	**2.62 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Current at 2.5 volts — published value 1	**2.5 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Current at 2.5 volts — published value 2	**5 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Current at 2.5 volts — published value 3	**5.5 V**	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 s**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Anode Voltage Drop (Approx.)	**16 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
' Nitn filament volts ~ 2.38 and no neat—consery in9 enclosure	**2.38 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For anode-suQply frequency of 6o cys	**6**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Ep=2.3B VOLTS	**2.3 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Ep=2.5 VOLTS AGt 5% — published value 1	**2.5 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Ep=2.5 VOLTS AGt 5% — published value 2	**5 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
VOLTAGE 15 (+),	**15 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
GRID RESISTOR (OHMS)=1000	**1000 ohm**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CONDENSED -MERCURY-TEMPERATURE RANGE=40 TO 80'C — published value 1	**40**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CONDENSED -MERCURY-TEMPERATURE RANGE=40 TO 80'C — published value 2	**80**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
E{=2.5 VOLTS AC	**2.5 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
_GR D RESISTOR (OHMS) = O	**240 ohm**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CONDENSED—MERGURY TEMPERATURE(`C)=40	**40**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
DC ANODE AMP.=0.25	**250 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Heater or filament voltage nominal	**2.5 V**	Nominal value from supplied datasheet.
Heater or filament current nominal	**5 A**	Nominal or average value from supplied datasheet.

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Forward — published value 1	**1250 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Forward — published value 2	**2500 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Forward — published value 3	**5000 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Inverse — published value 1	**1250 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Inverse — published value 2	**5000 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Inverse — published value 3	**10000 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tube conduction. -500 max. -500 max — published value 1	**-500 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tube conduction. -500 max. -500 max — published value 2	**-500 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tube conduction. -500 max. -500 max — published value 3	**-500 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tube conduction — published value 1	**-10 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tube conduction — published value 2	**-10 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tube conduction — published value 3	**-10 V**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak — published value 1	**3 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak — published value 2	**2 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak — published value 3	**1 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Average# — published value 1	**1 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Average# — published value 2	**0.5 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Average# — published value 3	**0.25 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum — published value 1	**40 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum — published value 2	**40 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum — published value 3	**40 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
positive — published value 1	**0.05 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
positive — published value 2	**0.05 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
positive — published value 3	**0.05 mA**	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

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