



ELECTRONIC TUBE REFERENCE

5550

Specialized - Ignitron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

IGNITRONPOWERSWITCH

Sealed clamp-cooled mercury-pool ignitron designed primarily for resistance-welding control, providing extremely high-current controlled conduction for industrial welding power systems.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 IgnitronPowerSwitch	
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM CATHODE CURRENT	2 A
Published maximum ratings and device-specific characteristics are promoted where schema-compatible; remaining switching/gauge/regulator electrical data is retained in section parameters.	

Sealed clamp-cooled mercury-pool ignitron for resistance-welding control. The supplied RCA datasheet was reviewed for published ratings, electrical characteristics, operating conditions, timing/capacitance data, and application-specific limits.

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 · IgnitronPowerSwitch

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak ignitor voltage required to fire	200 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak ignitor current required to fire	30 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Starting time at required voltage or current	100 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
At peak anode current of 1697 amperes – published value 1	1697 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
At peak anode current of 1697 amperes – published value 2	30 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
At peak anode current of 70.4 amperes – published value 1	70.4 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
At peak anode current of 70.4 amperes – published value 2	12 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Clamp height (Approx) – published value 1	1 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Clamp height (Approx) – published value 2	-7 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Clamp height (Approx) – published value 3	8 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
a Clamp-Temperature Range of 10° to 75° C – published value 1	10 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
a Clamp-Temperature Range of 10° to 75° C – published value 2	75 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
a Clamp-Temperature Range of 10° to 50° C – published value 1	10 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
a Clamp-Temperature Range of 10° to 50° C – published value 2	50 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
~ For supply voltages between 250volts and 600 volts, duty is propor – published value 1	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
~ For supply voltages between 250volts and 600 volts, duty is propor – published value 2	600 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
tional to supply voltage. For supply voltages lower than 250 volts,	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
the values for 250 volts apply	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
e For supply voltages between 250 volts and 600 volts, tlemantl anode – published value 1	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
e For supply voltages between 250 volts and 600 volts, tlemantl anode – published value 2	600 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
voltage. For supply voltages lower than 250 volts, the values for 250 – published value 1	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
voltage. For supply voltages lower than 250 volts, the values for 250 – published value 2	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE ('C)=10 TO 50 – published value 1	10 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
CLAMP TEMPERATURE ('C)=10 TO 50 – published value 2	50 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE (C)=10 TO 50 – published value 1	10 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE (C)=10 TO 50 – published value 2	50 A	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
RMS ANODE SUPPLY VOLTS=250 TO 600_ – published value 1	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
RMS ANODE SUPPLY VOLTS=250 TO 600_ – published value 2	600 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
SUPPLY VOLTAGE (RMS) – published value 1	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
SUPPLY VOLTAGE (RMS) – published value 2	250 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 1	282 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 2	846 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction)° – published value 1	200 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction)° – published value 2	600 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 1	9 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 2	4.86 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
second maximum – published value 1	1680 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
second maximum – published value 2	1680 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
SUPPLY VOLTAGE (RMS) – published value 1	600 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
SUPPLY VOLTAGE (RMS) – published value 2	600 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 1	118 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 2	354 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction) ^o – published value 1	83 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction) ^o – published value 2	250 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum) ^o – published value 1	9 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum) ^o – published value 2	4.86 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
second maximum – published value 1	700 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
second maximum – published value 2	700 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 1	564 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 2	1692 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
conduction)• – published value 1	400 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction)• – published value 2	1200 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 1	22 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 2	4 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 3	12.1 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
second maximum – published value 1	3360 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
second maximum – published value 2	3360 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 1	236 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 2	708 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction)° – published value 1	167 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
conduction)° – published value 2	500 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 1	22 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 2	4 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
maximum)° – published value 3	12.1 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
second maximum – published value 1	1400 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
second maximum – published value 2	1400 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE – published value 1	70 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE – published value 2	40 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Forward – published value 1	3000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Forward – published value 2	3000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Inverse – published value 1	3000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Inverse – published value 2	3000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 1	500 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak – published value 2	500 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Averagef – published value 1	3 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Averagef – published value 2	15 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE – published value 1	60 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
CLAMP TEMPERATURE – published value 2	40 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Forward – published value 1	6000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Forward – published value 2	6000 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Averagef – published value 1	2 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Averagef – published value 2	5 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Averagef – published value 3	8 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Positive	900 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Negative	5 V	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
Peak	100 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
interval of 5 seconds maximum) – published value 1	5 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
interval of 5 seconds maximum) – published value 2	1 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.
b Column 1 represents operation at maximum average anode current; Column	1 mA	Published datasheet value; multiple values on one row represent separate limits, service ratings, or operating conditions.

TUBE TINKER

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