

ELECTRONIC TUBE REFERENCE

4C45

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

THYRATRON

Hydrogen-filled thyatron for network-discharge pulse service, combining high peak voltage and current capability with a reservoir system supporting stable operating life.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION1 Thyatron	
MAXIMUM PLATE VOLTAGE	8000 V
Published maximum ratings and characteristics audited; remaining values retained densely in parameter table.	

The 4C45 is a hydrogen-filled thyatron for network-discharge service with high peak current and voltage capability and reservoir-supported stable life.

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The [1]	4	The 4C35 is a unipotential cathode, three element hydrogen Dimensions
The [2]	5	The 4C35 is a unipotential cathode, three element hydrogen Dimensions
than [1]	350 kW	than 350 KW at an average power level of more than 400
than [2]	400 kW	than 350 KW at an average power level of more than 400
Electrical Data, General Nom. Min. Max. Min. anode supply voltage	2.5 V	Electrical Data, General Nom. Min. Max. Min. anode supply voltage..... 2.5 Kilovolts d.c.
Heater voltage [1]	6.3 V	Heater voltage 6.3 5.7 6.6Voltsa.c. Max. peak anode current. ... 90 Amperes
Heater voltage [2]	5.7 V	Heater voltage 6.3 5.7 6.6Voltsa.c. Max. peak anode current. ... 90 Amperes
Heater voltage [3]	6.6 V	Heater voltage 6.3 5.7 6.6Voltsa.c. Max. peak anode current. ... 90 Amperes
Heater voltage [4]	90 V	Heater voltage 6.3 5.7 6.6Voltsa.c. Max. peak anode current. ... 90 Amperes
Heater current. Ey= [1]	26.3 mA	Heater current. Ey=26.3 volts..... . 5.5 6.7 Amperes Max. average anode current..... 100 Milliamperes
Heater current. Ey= [2]	5.5 mA	Heater current. Ey=26.3 volts..... . 5.5 6.7 Amperes Max. average anode current..... 100 Milliamperes
Heater current. Ey= [3]	6.7 mA	Heater current. Ey=26.3 volts..... . 5.5 6.7 Amperes Max. average anode current..... 100 Milliamperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current. Ey= [4]	100 mA	Heater current. Ey=26.3 volts..... 5.5 6.7 Amperes Max. average anode current..... 100 Milliamperes
Minimum heating time [1]	3 mA	Minimum heating time. ... 3 Minutes Max. RMS anode current (Note 3) ... 3.0 Amperes a.c.
Minimum heating time [2]	3 mA	Minimum heating time. ... 3 Minutes Max. RMS anode current (Note 3) ... 3.0 Amperes a.c.
Minimum heating time [3]	3 mA	Minimum heating time. ... 3 Minutes Max. RMS anode current (Note 3) ... 3.0 Amperes a.c.
Mechanical Data, General Max. anode current rate of rise	1000 mA	Mechanical Data, General Max. anode current rate of rise..... 1000 Amperes/psecond
Mounting position.._...._..... Any Peak trigger voltage..... Note	4 V	Mounting position.._...._..... Any Peak trigger voltage..... Note 4
BaSE. et Super Jumbo [1]	4 V	BaSE. et Super Jumbo 4-pin with Max. peak inverse trigger voltage.... 200 Volts
BaSE. et Super Jumbo [2]	200 V	BaSE. et Super Jumbo 4-pin with Max. peak inverse trigger voltage.... 200 Volts
bayonet Max. anode delay time (Note [1])	5	bayonet Max. anode delay time (Note 5) ... 0.60 Microsecond
bayonet Max. anode delay time (Note [2])	0.6	bayonet Max. anode delay time (Note 5) ... 0.60 Microsecond
A4 [1]	-18	A4-18 with ceramic in- Max. anode delay time drift..... 0.10 Microsecond
A4 [2]	0.1	A4-18 with ceramic in- Max. anode delay time drift..... 0.10 Microsecond
Anode Cap ... Medium Metal, C1 [1]	-5	Anode Cap ... Medium Metal, C1-5 with 0.02 psecond (end of life)
Anode Cap ... Medium Metal, C1 [2]	0.02	Anode Cap ... Medium Metal, C1-5 with 0.02 psecond (end of life)
corona flare Ambient temperature [1]	-50	corona flare Ambient temperature.... ... —50° to +90° Cent.
corona flare Ambient temperature [2]	-90	corona flare Ambient temperature.... ... —50° to +90° Cent.
Peak network voltage	8 V	Peak network voltage..... 8.0 Kilovolts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pulse repetition rate....._	2800	Pulse repetition rate....._..... 2800 Pulses/second
Pulse forming network impedance	46	Pulse forming network impedance.... 46.0 Ohms
A. Voltage [1]	175 V	A. Voltage..... 175-250 Volts
A. Voltage [2]	-250 V	A. Voltage..... 175-250 Volts
Peak anode current....._.._	89 A	Peak anode current....._.._ 89 Amperes
Average anode current	100 mA	Average anode current..... 0.10 Amperes d.c.
Note	1 V	Note 1 voltage and lowest trigger source impedance materially re-
The time of anode delay is measured between the	26	The time of anode delay is measured between the 26 percent
Published value [1]	2.5	2.5 KV during the first 25 microseconds aafter the pulse.
Published value [2]	25	2.5 KV during the first 25 microseconds aafter the pulse.
Note [1]	3	Note 3 Time jitter is measured at the 50 percent point on the anode
Note [2]	50	Note 3 Time jitter is measured at the 50 percent point on the anode
L. GRID TOP CAP Ci [1]	5	L. GRID TOP CAP Ci-5 '1—.5661 .007
L. GRID TOP CAP Ci [2]	1	L. GRID TOP CAP Ci-5 '1—.5661 .007
L. GRID TOP CAP Ci [3]	5661	L. GRID TOP CAP Ci-5 '1—.5661 .007
L. GRID TOP CAP Ci [4]	7	L. GRID TOP CAP Ci-5 '1—.5661 .007
Published value [1]	2	2. HEATER 8 CATHODE 3953
Published value [2]	8	2. HEATER 8 CATHODE 3953
Published value [3]	3953	2. HEATER 8 CATHODE 3953
Published value	3	3. HEATER
Published value	4	4. CATHODE

TUBE TINKER

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