

ELECTRONIC TUBE REFERENCE

3HQ5

Voltage - Triode (single high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

High-mu miniature triode used as an RF amplifier in VHF television tuners.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7FP	BASE PINS	7
NOMINAL HEATER	3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7FP - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – K	A	K – Cathode	CONNECTED
PIN2 – G1	A	G1 – Control Grid	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED
PIN6 – IS	A	IS – Internal Screen	CONNECTED
PIN7 – K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5400 Ω
TRANSCONDUCTANCE	0.015 S
AMPLIFICATION FACTOR	78
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	22 mA
<i>Promoted values are from the supplied Westinghouse family sheet; additional published ratings, characteristics and operating points are retained in TUBE_SECTION_PARAMETER.</i>	

High-mu miniature triode used as an RF amplifier in VHF television tuners.

SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	135 V	—
Grid voltage	-1 V	—
Plate current	11.5 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5400 Ohm	—
Transconductance	15000 uS	—
Amplification factor	78 ratio	—
Hot input resistance	275 Ohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Hot input capacitance	11.2 pF	—
Grid-to-plate capacitance	0.52 pF	Shielded
Input capacitance	5 pF	Shielded
Output capacitance	3.5 pF	Shielded

1975 RCA RC30

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

1975 RCA RC30
Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) '2.4 3 4.2	6.3 V	Published in approved 2HQ5 target datasheet entry; Section1
Heater Current 0.6 0.45 0.3	200 mA	Published in approved 2HQ5 target datasheet entry; Section1
Heater Warm-up Time (Average) .11 11	11 seconds	Published in approved 2HQ5 target datasheet entry; Section1
Plate Voltage	200 V	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage, Negative-bias Value	50 V	Published in approved 2HQ5 target datasheet entry; Section1
Cathode Current	22 mA	Published in approved 2HQ5 target datasheet entry; Section1
Plate Dissipation	2.5 W	Published in approved 2HQ5 target datasheet entry; Section1
Plate Voltage	135 V	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage	-1 V	Published in approved 2HQ5 target datasheet entry; Section1
Grid-Circuit Resistance, for cathode-bias operation	1 MΩ	Published in approved 2HQ5 target datasheet entry; Section1
** Measured at	200 MHz	Published in approved 2HQ5 target datasheet entry; Section1
# For a neutralized triode amplifier at a frequency of	200 MHz	Published in approved 2HQ5 target datasheet entry; Section1
Peak Plate Voltage*	5500 V	Published in approved 2HQ5 target datasheet entry; Section1
Plate Dissipation	30 W	Published in approved 2HQ5 target datasheet entry; Section1
Peak Plate Current	325 mA	Published in approved 2HQ5 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak value	-450 V	Published in approved 2HQ5 target datasheet entry; Section1
Average value	100 V	Published in approved 2HQ5 target datasheet entry; Section1
Grid-Circuit Resistance*	0.1 MΩ	Published in approved 2HQ5 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	0.52 pF	Published in approved 2HQ5 target datasheet entry; Section1
Grid to Cathode, Heater, and Internal Shield	5 pF	Published in approved 2HQ5 target datasheet entry; Section1
Plate to Cathode, Heater, and Internal Shield	3.5 pF	Published in approved 2HQ5 target datasheet entry; Section1
Heater to Cathode	2.5 pF	Published in approved 2HQ5 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	5400 Ω	Published in approved 2HQ5 target datasheet entry; Section1
Transconductance	15000 μS	Published in approved 2HQ5 target datasheet entry; Section1
Plate Current	11.5 mA	Published in approved 2HQ5 target datasheet entry; Section1
Input Resistance**	275 Ω	Published in approved 2HQ5 target datasheet entry; Section1
Input Capacitance**	11.2 pF	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of	150 μS	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of 150 /imhos	-4.2 V	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of 1500 ftmhos	-2.5 V	Published in approved 2HQ5 target datasheet entry; Section1
Pulse Plate Voltage*	3500 V	Published in approved 2HQ5 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Plate Current	300 mA	Published in approved 2HQ5 target datasheet entry; Section1
Transconductance +200	65000 μS	Published in approved 2HQ5 target datasheet entry; Section1
Plate Resistance (Approx.)	4600 Ω	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage (Approx.) for plate current of	1 mA	Published in approved 2HQ5 target datasheet entry; Section1
Grid Voltage (Approx.) for plate current of 1 mA	-13 V	Published in approved 2HQ5 target datasheet entry; Section1