

ELECTRONIC TUBE REFERENCE

31LQ6

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Novar beam-power tube for television horizontal-deflection output, providing approximately 30 W plate dissipation and substantial current capability for color and monochrome line-output transformers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9QL	BASE PINS	9
NOMINAL HEATER	31 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9QL - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	–	G2 – Screen Grid	CONNECTED
PIN2	–	G1 – Control Grid	CONNECTED
PIN3	–	K – Cathode	CONNECTED
PIN4	–	H – Heater	CONNECTED
PIN5	–	H – Heater	CONNECTED
PIN6	–	G1 – Control Grid	CONNECTED
PIN7	–	G2 – Screen Grid	CONNECTED
PIN8	–	G3 – Suppressor Grid	CONNECTED
PIN9	–	–	IC
CAP1	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	7000 Ω
TRANSCONDUCTANCE	0.011 S
MAXIMUM PLATE VOLTAGE	700 V
MAXIMUM SCREEN VOLTAGE	220 V
MAXIMUM PLATE DISSIPATION	30 W
MAXIMUM SCREEN DISSIPATION	5 W
MAXIMUM CATHODE CURRENT	350 mA
<i>beam power</i>	

Novar beam-power tube used as a horizontal-deflection amplifier in color and black-and-white television receivers.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	700 V	—
Maximum Screen Voltage	220 V	—
Plate Dissipation	30 W	—
Screen Dissipation	5 W	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	11000 μ S	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For plate dissipation more than	1.2 W	Published in approved 31LQ6 target datasheet entry; Section1
For plate dissipation more than 1.2 watts	0.5 W	Published in approved 31LQ6 target datasheet entry; Section1
For plate dissipation less than 1.2 watts	0.75 W	Published in approved 31LQ6 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For fixed-bias operation 0.5	0.5 MΩ	Published in approved 31LQ6 target datasheet entry; Section1
For cathode-bias operation 0.5	1 MΩ	Published in approved 31LQ6 target datasheet entry; Section1
Heater Current 6.3 24	31 V	Published in approved 31LQ6 target datasheet entry; Section1
Heater Warm-up Time 2.3 0.6	450 mA	Published in approved 31LQ6 target datasheet entry; Section1
Heater-Cathode Voltage 11	11 seconds	Published in approved 31LQ6 target datasheet entry; Section1
of	1 mA	Published in approved 31LQ6 target datasheet entry; Section1
Plate Supply Voltage	990 V	Published in approved 31LQ6 target datasheet entry; Section1
Peak Positive-Pulse Plate Voltage#	7500 V	Published in approved 31LQ6 target datasheet entry; Section1
Peak Negative-Pulse Plate Voltage	1100 V	Published in approved 31LQ6 target datasheet entry; Section1
Grid-No.3 Voltage"	75 V	Published in approved 31LQ6 target datasheet entry; Section1
Grid-No.2 Voltage	220 V	Published in approved 31LQ6 target datasheet entry; Section1
Peak Negative-Pulse Grid-No.1 Voltage	330 V	Published in approved 31LQ6 target datasheet entry; Section1
Peak Cathode Current	1200 mA	Published in approved 31LQ6 target datasheet entry; Section1
Average Cathode Current	350 mA	Published in approved 31LQ6 target datasheet entry; Section1
Plate Dissipation0	30 W	Published in approved 31LQ6 target datasheet entry; Section1
Plate Dissipation (Temporary overload)*	200 W	Published in approved 31LQ6 target datasheet entry; Section1
Grid-No.2 Input	5 W	Published in approved 31LQ6 target datasheet entry; Section1
Envelope Temperature (At hottest point)	250 °C	Published in approved 31LQ6 target datasheet entry; Section1
For grid-No. 1-resistor-bias operation	0.47 MΩ	Published in approved 31LQ6 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For plate-pulsed operation (horizontal-deflection circuits only)	10 MΩ	Published in approved 31LQ6 target datasheet entry; Section1
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 microseconds	Published in approved 31LQ6 target datasheet entry; Section1
"snivels" interference in both vhf and uhf television receivers. A typical value is	30 V	Published in approved 31LQ6 target datasheet entry; Section1
A Total continuous or accumulated time not to exceed	40 seconds	Published in approved 31LQ6 target datasheet entry; Section1
Heater Voltage	6.3 V	Published in approved 31LQ6 target datasheet entry; Section1
Heater Current	900 mA	Published in approved 31LQ6 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.6 pF	Published in approved 31LQ6 target datasheet entry; Section1
and Grid No.3	22 pF	Published in approved 31LQ6 target datasheet entry; Section1
and Grid No.3	11 pF	Published in approved 31LQ6 target datasheet entry; Section1
Grid to Plate 2.8 2.8	2.8 pF	Published in approved 31LQ6 target datasheet entry; Section1
Grid to Cathode and Heater 2.9 2.9	3 pF	Published in approved 31LQ6 target datasheet entry; Section1
Plate to Cathode and Heater 0.36 0.6	0.7 pF	Published in approved 31LQ6 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	176 V	Published in approved 31LQ6 target datasheet entry; Section1
Voltage 30 30	30 V	Published in approved 31LQ6 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Voltage 145 145 145	145 V	Published in approved 31LQ6 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 (Control-Grid) Voltage -35 0	-35 V	Published in approved 31LQ6 target datasheet entry; Section1
Plate Resistance (Approx.)	7000 Ω	Published in approved 31LQ6 target datasheet entry; Section1
Plate Current	95 mA	Published in approved 31LQ6 target datasheet entry; Section1

TUBE TINKER

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