



ELECTRONIC TUBE REFERENCE

6JQ6

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

BEAMPOWER-DIODE

High-current beam-power tube explicitly designed for television horizontal-output and line-deflection service, with substantial flyback pulse-voltage capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9RA	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	10500 Ω
TRANSCONDUCTANCE	0.0042 S
AMPLIFICATION FACTOR	6.5
MAXIMUM PLATE VOLTAGE	425 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	70 mA
<i>Published ratings/characteristics promoted from supplied datasheet.</i>	

SECTION2 Diode	
PEAK INVERSE VOLTAGE	425 V
NOMINAL OUTPUT CURRENT	1 mA
FORWARD VOLTAGE DROP	5 V
<i>Published ratings/characteristics promoted from supplied datasheet.</i>	

Beam-power vertical-deflection tube with an integral diode internally connected to grid No.3, used in feedback-stabilized vertical-output circuits.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

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Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE DISSIPATION =	10 WATTS	Published table value
Heater Voltage (AC or DC) Eh	6.3 V	Published table value
Heater Current Ih	1.2 A	Published table value
Grid No	1 pF	Published table value column 1
Grid No	0.32 pF	Published table value column 2
Input: G	13 K	Published table value
Output: Pto(K, G	6 K	Published table value
DC Plate Current Ib	150 mA	Published table value column 1
DC Plate Current Ib	35 mA	Published table value column 2
DC Grid-No	2 mA	Published table value column 1
DC Grid-No	20 mA	Published table value column 2
DC Grid-No	2.5 mA	Published table value column 3
Cutoff DC Grid-No. 1 Voltage. Ecl(co)	-37 V	Published table value
DC Plate Voltage Eb	40 V	Published table value column 1
DC Plate Voltage Eb	140 V	Published table value column 2
DC Grid-No	3 V	Published table value column 1
DC Grid-No	0 V	Published table value column 2
DC Grid-No	0 V	Published table value column 3
~, DC Grid-No	2 V	Published table value column 1
~, DC Grid-No	120 V	Published table value column 2
~, DC Grid-No	140 V	Published table value column 3
DC Grid-No. 1 Voltage Ecl	0 V	Published table value column 1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No. 1 Voltage E _{c1}	-18 V	Published table value column 2
DC Plate Voltage E _b	425 V	Published table value
DC Grid-No	2 V	Published table value column 1
DC Grid-No	330 V	Published table value column 2
(Control-Grid) Voltage e _{clm}	150 V	Published table value
Heater Voltage (AC or DC) ~h	5.7 V	Published table value column 1
Heater Voltage (AC or DC) ~h	6.9 V	Published table value column 2
(& Grid-No	3 mA	Published table value
Grid-No	2 W	Published table value column 1
Grid-No	2 W	Published table value column 2
Plate Dissipation b	10 W	Published table value
a With grid No	3 a	Published table value
W GRID-No	140 W	Published table value

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance g _m	4200 μS	Published table value

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Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No	3 V	Published table value column 1
DC Grid-No	10 V	Published table value column 2



SOURCE DATA APPENDIX

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
10 /iA	-8 V	Published in approved 17JQ6 target datasheet entry; Section1
For fixed-bias operation 2.2	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section1
For cathode-bias operation 2.2	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section1
Heater Voltage (ac/dc) 12.6	17 V	Published in approved 17JQ6 target datasheet entry; Section1
Heater Current 1.2 0.6	450 mA	Published in approved 17JQ6 target datasheet entry; Section1
Heater Warm-up Time (Average) . . 11	11 seconds	Published in approved 17JQ6 target datasheet entry; Section1
Grid-No.1 Voltage for plate current of	1 mA	Published in approved 17JQ6 target datasheet entry; Section1
for Instantaneous Diode-Plate Current of	2 mA	Published in approved 17JQ6 target datasheet entry; Section1
DC Plate Voltage	425 V	Published in approved 17JQ6 target datasheet entry; Section1
(Absolute-Maximum Value)*	2000 V	Published in approved 17JQ6 target datasheet entry; Section1
DC Grid-No.3 and Diode-Plate Voltage	10 V	Published in approved 17JQ6 target datasheet entry; Section1
DC Grid-No. 2 Voltage	330 V	Published in approved 17JQ6 target datasheet entry; Section1
Peak Negative-Pulse Grid-No.1 Voltage	150 V	Published in approved 17JQ6 target datasheet entry; Section1
Peak Cathode Current	250 mA	Published in approved 17JQ6 target datasheet entry; Section1
Grid-No.2 Input	2 W	Published in approved 17JQ6 target datasheet entry; Section1
For grid-No.1-resistor-bias operation	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section1
For cathode-bias operation	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section1
cycle (	2.5 milliseconds	Published in approved 17JQ6 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3 16.8 22	33 V	Published in approved 17JQ6 target datasheet entry; Section1
Heater Current 1.6 0.6 0.45	300 mA	Published in approved 17JQ6 target datasheet entry; Section1
(Average) 11 11	11 seconds	Published in approved 17JQ6 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.32 pF	Published in approved 17JQ6 target datasheet entry; Section1
and Diode Plate	13 pF	Published in approved 17JQ6 target datasheet entry; Section1
Grid No.1 to Plate	0.7 pF	Published in approved 17JQ6 target datasheet entry; Section1
and Grid No.3	22 pF	Published in approved 17JQ6 target datasheet entry; Section1
and Grid No.3	9 pF	Published in approved 17JQ6 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 40	140 V	Published in approved 17JQ6 target datasheet entry; Section1
Grid-No.3 (Suppressor-Grid) Voltage 0	0 V	Published in approved 17JQ6 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Voltage 120	140 V	Published in approved 17JQ6 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage 0	-18 V	Published in approved 17JQ6 target datasheet entry; Section1
Plate Current 150#	35 mA	Published in approved 17JQ6 target datasheet entry; Section1
Grid-No.2 Current 20#	2.5 mA	Published in approved 17JQ6 target datasheet entry; Section1

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Section 2 · Diode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
10 /iA	-8 V	Published in approved 17JQ6 target datasheet entry; Section2
For fixed-bias operation 2.2	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section2
For cathode-bias operation 2.2	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section2
Heater Voltage (ac/dc) 12.6	17 V	Published in approved 17JQ6 target datasheet entry; Section2
Heater Current 1.2 0.6	450 mA	Published in approved 17JQ6 target datasheet entry; Section2
Heater Warm-up Time (Average) . . 11	11 seconds	Published in approved 17JQ6 target datasheet entry; Section2
Grid-No.1 Voltage for plate current of	1 mA	Published in approved 17JQ6 target datasheet entry; Section2
for Instantaneous Diode-Plate Current of	2 mA	Published in approved 17JQ6 target datasheet entry; Section2
DC Plate Voltage	425 V	Published in approved 17JQ6 target datasheet entry; Section2
(Absolute-Maximum Value)*	2000 V	Published in approved 17JQ6 target datasheet entry; Section2
DC Grid-No.3 and Diode-Plate Voltage	10 V	Published in approved 17JQ6 target datasheet entry; Section2
DC Grid-No. 2 Voltage	330 V	Published in approved 17JQ6 target datasheet entry; Section2
Peak Negative-Pulse Grid-No.1 Voltage	150 V	Published in approved 17JQ6 target datasheet entry; Section2
Peak Cathode Current	250 mA	Published in approved 17JQ6 target datasheet entry; Section2
Grid-No.2 Input	2 W	Published in approved 17JQ6 target datasheet entry; Section2
For grid-No.1-resistor-bias operation	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section2
For cathode-bias operation	2.2 MΩ	Published in approved 17JQ6 target datasheet entry; Section2
cycle (	2.5 milliseconds	Published in approved 17JQ6 target datasheet entry; Section2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3 16.8 22	33 V	Published in approved 17JQ6 target datasheet entry; Section2
Heater Current 1.6 0.6 0.45	300 mA	Published in approved 17JQ6 target datasheet entry; Section2
(Average) 11 11	11 seconds	Published in approved 17JQ6 target datasheet entry; Section2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.32 pF	Published in approved 17JQ6 target datasheet entry; Section2
and Diode Plate	13 pF	Published in approved 17JQ6 target datasheet entry; Section2
Grid No.1 to Plate	0.7 pF	Published in approved 17JQ6 target datasheet entry; Section2
and Grid No.3	22 pF	Published in approved 17JQ6 target datasheet entry; Section2
and Grid No.3	9 pF	Published in approved 17JQ6 target datasheet entry; Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 40	140 V	Published in approved 17JQ6 target datasheet entry; Section2
Grid-No.3 (Suppressor-Grid) Voltage 0	0 V	Published in approved 17JQ6 target datasheet entry; Section2
Grid-No.2 (Screen-Grid) Voltage 120	140 V	Published in approved 17JQ6 target datasheet entry; Section2
Grid-No.1 (Control-Grid) Voltage 0	-18 V	Published in approved 17JQ6 target datasheet entry; Section2
Plate Current 150#	35 mA	Published in approved 17JQ6 target datasheet entry; Section2
Grid-No.2 Current 20#	2.5 mA	Published in approved 17JQ6 target datasheet entry; Section2