

ELECTRONIC TUBE REFERENCE

6MQ8

Voltage - Triode Pentode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

PENTODE-TRIODE

Combined triode-pentode for television video, sync, burst, IF, AGC, or related signal-processing circuits.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 535 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	150000 Ω
TRANSCONDUCTANCE	0.01 S
AMPLIFICATION FACTOR	40
MAXIMUM PLATE VOLTAGE	125 V
MAXIMUM PLATE DISSIPATION	2.5 W
Published promoted values applied where applicable; additional ratings, characteristics, and operating data retained as parameters.	

SECTION2 Pentode	
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.5 W
Published promoted values applied where applicable; additional ratings, characteristics, and operating data retained as parameters.	

Miniature type used in color and black-and-white television receiver applications. The pentode unit is used ± 200 in band-pass-amplifier applications. The triode unit is Pf_{10} used in video-amplifier, sync-separator, color-killer control, matrix-amplifier, and blanker applications. Outlines section, 6B; requires miniature 9-contact socket. Type 5MQ8 is identical with type 6MQ8 except for heater ratings. 5MQ8 6MQ8

SOURCE OPERATING CONDITIONS

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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 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage, ac or do – published value 1	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage, ac or do – published value 2	10 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current	535 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid to plate	1.7 pF	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid No.1 to plate	0.045 pF	Published datasheet value; multiple values represent separate source-table limits or conditions.
Amplification Factor	40 A	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.) rp – published value 1	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Resistance (Approx.) rp – published value 2	150	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance – published value 1	8500	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance – published value 2	10000	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Current – published value 1	18 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 2	12 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Current	4.5 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage forIb =20μA – published value 1	20 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage forIb =20μA – published value 2	-12 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage forIb =20μA – published value 3	-7 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage – published value 1	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage – published value 2	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 1	150 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 2	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Voltage	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistance – published value 1	56	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode Resistance – published value 2	62	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 - Triotle Plate	1	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 4 -Heater	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 5 -Heater	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 8 -Triode Cathode	8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 9 -Triode Grid	9	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 1	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 2	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value – published value 1	0	Published datasheet value; multiple values represent separate source-table limits or conditions.
Positive-bias value – published value 2	0	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current – published value 1	500 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current – published value 2	570 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
No.2 voltages up to 165	165 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Dissipation – published value 1	2.7	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Dissipation – published value 2	2.5	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For fixed-bias opezation Rgl(ckt) – published value 1	0.5	Published datasheet value; multiple values represent separate source-table limits or conditions.
For fixed-bias opezation Rgl(ckt) – published value 2	0.25	Published datasheet value; multiple values represent separate source-table limits or conditions.
For cathode-bias operation – published value 1	0.5	Published datasheet value; multiple values represent separate source-table limits or conditions.
For cathode-bias operation – published value 2	0.5	Published datasheet value; multiple values represent separate source-table limits or conditions.
As defined in the current issue of EIA Standard RS-239	239	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 VOLTS=125	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE (Ip) OR GRID-No. 2 (I~ 2) MILLIAMPERES – published value 1	2 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE (Ip) OR GRID-No. 2 (I~ 2) MILLIAMPERES – published value 2	2 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS=125	125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 VOLTS 25 – published value 1	25 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 VOLTS 25 – published value 2	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

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Section 2 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 2 -Pentode Grid No.1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 3 -Pentode Grid No.2	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 6 -Pentode Plate	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 7 -Pentode Cathode, Grid No.3 and	7	Published datasheet value; multiple values represent separate source-table limits or conditions.



SOURCE OPERATING CONDITIONS

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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)	6.3 volts	Published value from supplied target entry
Heater Current	0.535 ampere	Published value from supplied target entry
Heater Warm-up Time	11 seconds	Published value from supplied target entry
DC Plate Voltage	330 volts	Published value from supplied target entry
DC Grid-No	2	Published value from supplied target entry
Plate Dissipation	2.5 watts	Published value from supplied target entry
Grid-No	2	Published value from supplied target entry
For grid-No	165 volts	Published value from supplied target entry
For grid-No	300 volts	Published value from supplied target entry
DC Plate Voltage	125 volts	Published value from supplied target entry
Amplification Factor	40	Published value from supplied target entry
Plate Resistance (Approx.)	150	Published value from supplied target entry
Transconductance	10000	Published value from supplied target entry
DC Plate Current	12 mA	Published value from supplied target entry

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1 Voltage for plate current of	100	Published value from supplied target entry
Heater Voltage	6.3 volts	Published value from supplied target entry
Heater Current	0.6 ampere	Published value from supplied target entry
Heater to Triode Cathode	4.4	Published value from supplied target entry

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	1.7 pF	Published value from supplied target entry
Plate to Cathode, Heater, Grid No	2	Published value from supplied target entry
Grid to Plate	2.2 pF	Published value from supplied target entry
Heater to Pentode Cathode	5.5 pF	Published value from supplied target entry
Pentode Plate to Triode Plate	0.09 pF	Published value from supplied target entry

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