



ELECTRONIC TUBE REFERENCE

6MC6

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

High-current power pentode intended for television horizontal-deflection and related power-amplifier service, with approximately 33 W plate dissipation and strong pulse capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
TRANSCONDUCTANCE	0.014 S
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	33 W
<i>Published promoted values applied where applicable; additional ratings, characteristics, and operating data retained as parameters.</i>	

Pentode vacuum tube for receiving, television, RF, audio, or power-amplifier service. The supplied datasheet was reviewed for heater data, maximum ratings, characteristics, typical operating conditions, capacitances, and application information.

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 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
■ Plate Dissipation = 33 W	33	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage, ac or dc	6.3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current – published value 2	85	Published datasheet value; multiple values represent separate source-table limits or conditions.
Transconductance	14000	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 1	1100 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 2	750 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Current – published value 3	125 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Current I _{c2} – published value 1	110 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Current I _{c2} – published value 2	42 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.2 Current I c2 – published value 3	3.3 mA	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cutoff DC Grid-No. 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage for Ib = 1 mA Ec11c01 -125 – published value 1	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage for Ib = 1 mA Ec11c01 -125 – published value 2	-125 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage for Ib = 1 mA Ec11c01 -125 – published value 3	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Voltage for Ib = 1 mA Ec11c01 -125 – published value 4	-40 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Voltages	5000 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 1	45 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 2	60 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Voltage – published value 3	175 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 3 Voltage – published value 1	30 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 3 Voltage – published value 2	30 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 3 Voltage – published value 3	30 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 3 Voltage – published value 4	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.2 Voltage – published value 1	110 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Voltage – published value 2	160 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Voltage – published value 3	110 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No.2 Voltage – published value 4	110 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 1 Voltage – published value 1	1 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 1 Voltage – published value 2	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 1 Voltage – published value 3	0 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 1 Voltage – published value 4	-21 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Plate Supply Voltage	990 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Peak Positive-Pulse Plate Voltageg	7000 V	Pulse
Peak Negative-Pulse Plate Voltage	1100 V	Pulse
DC Grid-No. 3 Voltageh – published value 1	3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 3 Voltageh – published value 2	75 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 2 (Screen-Grid) Voltage – published value 1	2 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
DC Grid-No. 2 (Screen-Grid) Voltage – published value 2	250 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Negative-Pulse Grid-No. 1	1	Pulse
(Control -Grid) Voltage	330 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage: 6MC6 – published value 1	6 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage: 6MC6 – published value 2	5.7 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Voltage: 6MC6 – published value 3	6.9 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current: 36MC6 – published value 1	36	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current: 36MC6 – published value 2	0.42	Published datasheet value; multiple values represent separate source-table limits or conditions.
Heater Current: 36MC6 – published value 3	0.48	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No.2Input	5	Published datasheet value; multiple values represent separate source-table limits or conditions.
Plate Dissipation1	33	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-No. 1 Circuit Resistance	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode bias – published value 1	1 Mohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Cathode bias – published value 2	0 Mohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Grid-resistor bias	10 Mohm	Published datasheet value; multiple values represent separate source-table limits or conditions.
Fixed bias	0.47 Mohm	Published datasheet value; multiple values represent separate source-table limits or conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 1 –Grid No. 2 – published value 1	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 –Grid No. 2 – published value 2	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 –Grid No. 2 – published value 3	6	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 1 –Grid No. 2 – published value 4	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 –Grid No. 1 – published value 1	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 –Grid No. 1 – published value 2	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 –Grid No. 1 – published value 3	7	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 2 –Grid No. 1 – published value 4	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 –Cathode – published value 1	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 –Cathode – published value 2	8	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 3 –Cathode – published value 3	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 –Heater – published value 1	4	Published datasheet value; multiple values represent separate source-table limits or conditions.
Pin 4 –Heater – published value 2	9	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.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
b With grid No. 3 and grid No. 2 connected, respectively, to cathode – published value 1	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
b With grid No. 3 and grid No. 2 connected, respectively, to cathode – published value 2	2	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No 3 VOLTS-30 .~..•ao – published value 1	3 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No 3 VOLTS-30 .~..•ao – published value 2	30 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS (Ep) 92cS-1967e – published value 1	92 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS (Ep) 92cS-1967e – published value 2	1967 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
f As defined in the current issue of EIA Standard RS-239A	239	Published datasheet value; multiple values represent separate source-table limits or conditions.
9 This rating is applicable when the duration of the voltage pulse	9 V	Pulse
be applied to grid No. 3 to reduce interference from "snivels",	3	Published datasheet value; multiple values represent separate source-table limits or conditions.
1 An adequate bias resistor or other means is required to protect the	1	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.3 VOLTS=30	30 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
GRID-No.2 VOLTS=110	110 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS IEpI – published value 1	92 V	Published datasheet value; multiple values represent separate source-table limits or conditions.
PLATE VOLTS IEpI – published value 2	19677 V	Published datasheet value; multiple values represent separate source-table limits or conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
increase power output. A typical value is 30 V	30	Published datasheet value; multiple values represent separate source-table limits or conditions.