

ELECTRONIC TUBE REFERENCE

6U10

Voltage - Triple Triode electronic tube

CONSOLIDATED TECHNICAL DATA
3 SECTIONS
CONSTRUCTION
TRIODE-TRIODE-TRIODE

Multi-unit triode with medium-mu and high-mu sections for general amplifier applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	EIA 12FE	BASE PINS	12
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	6.3 V / 600 mA
HEATING	Indirect	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	7700 Ω
TRANSCONDUCTANCE	0.0023 S
AMPLIFICATION FACTOR	17.5
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
Representative row for identical physical Sections 1 and 3.	

SECTION2 Triode	
PLATE RESISTANCE	61000 Ω
TRANSCONDUCTANCE	0.0016 S
AMPLIFICATION FACTOR	98
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1 W
<i>High-mu physical Section 2.</i>	

SECTION3 Triode	
PLATE RESISTANCE	7700 Ω
TRANSCONDUCTANCE	0.0023 S
AMPLIFICATION FACTOR	17.5
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Third physical triode section, matching the second low-mu unit; added to align rows with SectionCount.</i>	

6U10 is a TripleTriode vacuum tube documented in the RCA Receiving Tube Manual. The supplied excerpt was reviewed for heater data, section arrangement, maximum ratings, electrical characteristics, interelectrode capacitances, typical operating conditions, and stated applications.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Current øcviiiineninnnoeannnna 18	18 mA	Cathode Current øcviiiineninnnnoeannnna 18 18 mA
Plate Dissipationciivierierunranenenas 1.5	21 W	Plate Dissipationciivierierunranenenas 1.5 21 watts
Grid-No.2 Inputcoiiiiiiiiniirnincrnns —	0.7 W	Grid-No.2 Inputcoiiiiiiiiniirnincrnns — 0.7 watt
Plate Voltaget interernnssnananas 100	160 V	Plate Voltaget interernnssnananas 100 160 volts
Grid-No.3 (Suppressor-Grid) Voltage —	0 V	Grid-No.3 (Suppressor-Grid) Voltage — 0 volts
Grid-No.2 Voltaget iiinerenannns —	110 V	Grid-No.2 Voltaget iiinerenannns — 110 volts
Grid-No.1 (Control-Grid) Voltage —2 —	1.4 V	Grid-No.1 (Control-Grid) Voltage —2 —1.4 volts
TransconductB8NCEv'rtntunneenneennnnnen 5000	12000	TransconductB8NCEv'rtntunneenneennnnnen 5000 12000 Aamhos
Plate Currentcce''eerreenenennsnnonnnns 14	13 mA	Plate Currentcce''eerreenenennsnnonnnns 14 13 mA
Grid-No.2 Currentc.oeevenvnnnerennnnns — b mA	2 mA	Grid-No.2 Currentc.oeevenvnnnerennnnns — b mA
* With a maximum duty cycle of 0.10 and maximum pulse duration of	10 s	* With a maximum duty cycle of 0.10 and maximum pulse duration of 10 microseconds.
requires duodecar 12-contact socket. Heater: volts	12 V	requires duodecar 12-contact socket. Heater: volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
(ac/dc), 6.3; amperes, 0.6; warm-up time (average),	600 mA	(ac/dc), 6.3; amperes, 0.6; warm-up time (average),
11 seconds); maximum heater-cathode volts,	275 V	11 seconds); maximum heater-cathode volts, +275
Plate Voltage iiiiitiiniiennnnns 330	330 V	Plate Voltage iiiiitiiniiennnnns 330 330 volts
Positive-bias value 0	0 V	Positive-bias value 0 0 volts
Negative-bias value 50	50 V	Negative-bias value 50 50 volts
Average Cathode Current 20 — mA	20 mA	Average Cathode Current 20 — mA
Plate Dissipationot iainnn 2	1 W	Plate Dissipation 2 1 watts
Plate Voltage innnnias 200	200 V	Plate Voltage innnnias 200 200 volts
Grid Voltage i ttiiraniarnan —6 —	1.5 V	Grid Voltage i ttiiraniarnan — 6 —1.5 volts
Amplification Factorciiiiirennerrnnnnas	90	Amplification Factorciiiiirennerrnnnnas 17.6 90
TransconductBneec.c0iiterernsscsananas 2300	1600	TransconductBneec.c0iiterernsscsananas 2300 1600 pgmhos
Plate Current ¢ ciiieiiiiinnnnn 9.6	1.2 mA	Plate Current ¢ ciiieiiiiinnnnn 9.6 1.2 mA
For plate current of 100 & —15 —_ volts	15 V	For plate current of 100 & —15 —_ volts
For plate current of 36 A — —	3 V	For plate current of 36 A — —3 volts
For fixed-bias operation 1	0.5 ohm	For fixed-bias operation 1 0.5 megohm
For cathode-bias operation 2.2 1* megohms	1 ohm	For cathode-bias operation 2.2 1* megohms
are such that the plate dissipation can never exceed	0.5 W	are such that the plate dissipation can never exceed 0.5 watt.
ventilated. Heater: volts (ac/de), 6.3; amperes,	1.75 V	ventilated. Heater: volts (ac/de), 6.3; amperes, 1.75.

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.1-Circuit Resistancecccvuvun. 1	1 ohm	Grid-No.1-Circuit Resistancecccvuvun. 1 1 megohm
Plate Resistance (Approx.) e 7700	61000 ohm	Plate Resistance (Approx.) e 7700 61000 ohms
* This value may reach 10 megohms provided the plate-supply voltage and load resistance	10 V	* This value may reach 10 megohms provided the plate-supply voltage and load resistance



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	1.3 pF	Section1
Input Capacitance	1.7 pF	Section1
Output Capacitance	0.26 pF	Section1
Grid-to-Plate Capacitance	1.2 pF	Section3
Input Capacitance	1.8 pF	Section3
Output Capacitance	0.9 pF	Section3

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	AverageCharacteristics
Grid Voltage	-6 V	AverageCharacteristics

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	9.6 mA	AverageCharacteristics

1968 GENERAL ELECTRIC CO

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	1.3 pF	Section2
Input Capacitance	1.5 pF	Section2
Output Capacitance	0.28 pF	Section2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	200 V	AverageCharacteristics
Grid Voltage	-1.5 V	AverageCharacteristics

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	1.2 mA	AverageCharacteristics

TUBE TINKER

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