



ELECTRONIC TUBE REFERENCE

GU61P

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
TETRODE

Evaporation-cooled Soviet transmitting tetrode for high-power RF amplification with approximately 30 kW plate dissipation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	8.3 V / —	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Tetrode	
MAXIMUM PLATE VOLTAGE	10000 V
MAXIMUM SCREEN VOLTAGE	1500 V
MAXIMUM PLATE DISSIPATION	30000 W
MAXIMUM SCREEN DISSIPATION	700 W
MAXIMUM GRID DISSIPATION	300 W
<i>Promoted-field audit performed from English ratings/characteristics; detailed electrical values retained in parameter table. REDO promoted-field audit completed from English Limit Operating Values / Electrical Parameters tables.</i>	

The GU-61P tetrode is used for RF power amplification at frequencies up to 70 MHz. It has a directly heated carbonized thoriated-tungsten cathode and a metal-ceramic envelope; anode cooling is by evaporation.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 Electronintorg

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

1968 ELECTRONINTORG

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
power amplifica [1]	6111 W	MeHepaTopHbI TeTpoa NY-6111 npeaHasHaqveH ans The I'Y-610 tetrode is used for RF power amplifica-
power amplifica [2]	610 W	MeHepaTopHbI TeTpoa NY-6111 npeaHasHaqveH ans The I'Y-610 tetrode is used for RF power amplifica-
temperature, °C	-60 C	temperature, °C —60
voltage (ACorDC), V [1]	63 V	Hanpsxenue Hakana (~vwnu =), B 6,3 Fitament voltage (ACorDC), V 6.3
voltage (ACorDC), V [2]	6.3 V	Hanpsxenue Hakana (~vwnu =), B 6,3 Fitament voltage (ACorDC), V 6.3
cathode, Q0	0.005 ohm	ConpoTuBNeHKe HEHAKANEHHOTO Resistance of unheated cathode, Q0 0.005
current, A, atleast [1]	5 A	katoga, OM 1 0,005 Anode current, A, atleast 5
current, A, atleast [2]	5 A	katoga, OM 1 0,005 Anode current, A, atleast 5
grid [1]	5 A	Tok aHopa, A, HEMeHee 5 Grid 2 current (at anode voltage 2 kV, grid 2
grid [2]	2 A	Tok aHopa, A, HEMeHee 5 Grid 2 current (at anode voltage 2 kV, grid 2
grid [3]	2 A	Tok aHopa, A, HEMeHee 5 Grid 2 current (at anode voltage 2 kV, grid 2
grid [4]	2 A	Tok aHopa, A, HEMeHee 5 Grid 2 current (at anode voltage 2 kV, grid 2
current [1]	1 A	ToK CeTKy BTOPOW (NMpU HanpskeHun voltage 1 kV, anode current 5 A), A, atmost 0.7

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current [2]	5 A	ToK CeTKU BTOPOW (NMpU HanpskeHun voltage 1 kV, anode current 5 A), A, atmost 0.7
current [3]	700 mA	ToK CeTKU BTOPOW (NMpU HanpskeHun voltage 1 kV, anode current 5 A), A, atmost 0.7
anode [1]	2 V	aHofa 2 KB, HanpshkeHUn CeTKN BTOPOWA Negative grid 1 cutoff voltage, (at anode
anode [2]	1 V	aHofa 2 KB, HanpshkeHUn CeTKN BTOPOWA Negative grid 1 cutoff voltage, (at anode
current [1]	1 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
current [2]	5 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
current [3]	6 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
current [4]	7 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
current [5]	10 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
current [6]	2 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
current [7]	1.5 A	1 kB, Toke aHoaa 5 A), A, He 6onee . . . 0,7 voltage 10kV, grid 2 voltage 1.5 kV, anode current
grid [1]	2 uS	oTpuLaTenibHoe, (NPU HaNPSXKEHUsIX Mutual conductance (at anode voltage 2 kV, grid 2
grid [2]	2 uS	oTpuLaTenibHoe, (NPU HaNPSXKEHUsIX Mutual conductance (at anode voltage 2 kV, grid 2
currents [1]	10 mA	aHopaa 10 kB, ceTkv BTOpO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . . 63-85
currents [2]	15 mA	aHopaa 10 kB, ceTkv BTOpO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . . 63-85

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
currents [3]	1 mA	aHopaa 10 kB, ceTkv BTopO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . .. 63-85
currents [4]	1.25 mA	aHopaa 10 kB, ceTkv BTopO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . .. 63-85
currents [5]	5 mA	aHopaa 10 kB, ceTkv BTopO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . .. 63-85
currents [6]	7 mA	aHopaa 10 kB, ceTkv BTopO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . .. 63-85
currents [7]	63 mA	aHopaa 10 kB, ceTkv BTopO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . .. 63-85
currents [8]	-85 mA	aHopaa 10 kB, ceTkv BTopO#A 1,5 KB, 1 TOKE voltage 1.25 kV, anode currents 5 and 7 A), mA/V . .. 63-85
anode [1]	1	aHoga 0,1 A),B,He6onee 330 Gain coefficient (grid 1—grid 2) (at anode
anode [2]	330	aHoga 0,1 A),B,He6onee 330 Gain coefficient (grid 1—grid 2) (at anode
anode [3]	1	aHoga 0,1 A),B,He6onee 330 Gain coefficient (grid 1—grid 2) (at anode
anode [4]	2	aHoga 0,1 A),B,He6onee 330 Gain coefficient (grid 1—grid 2) (at anode
voltages [1]	2 kV	KpyTusHa xapakrepucTiku (npu voltage 2kV, grid 2 voltages 1.25and 1 kV,
voltages [2]	2 kV	KpyTusHa xapakrepucTiku (npu voltage 2kV, grid 2 voltages 1.25and 1 kV,
voltages [3]	1.25 kV	KpyTusHa xapakrepucTiku (npu voltage 2kV, grid 2 voltages 1.25and 1 kV,
voltages [4]	1 kV	KpyTusHa xapakrepucTiku (npu voltage 2kV, grid 2 voltages 1.25and 1 kV,
power (at [1]	125 kW	ceTkun BTopoin 1,25 kB, Tokax Oscillatory power (at 70 MHz), kW 30
power (at [2]	70 kW	ceTkun BTopoin 1,25 kB, Tokax Oscillatory power (at 70 MHz), kW 30
power (at [3]	30 kW	ceTkun BTopoin 1,25 kB, Tokax Oscillatory power (at 70 MHz), kW 30

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Interelectrode capacitance, pF [1]	63 pF	aHogaS5u7A),MAB 63-85 Interelectrode capacitance, pF:
Interelectrode capacitance, pF [2]	-85 pF	aHogaS5u7A),MAB 63-85 Interelectrode capacitance, pF:
input,atmost [1]	2	HanpsbkeHwn aHoaa 2 kB, HanpsxeHuax input,atmost 320 150
input,atmost [2]	320	HanpsbkeHwn aHoaa 2 kB, HanpsxeHuax input,atmost 320 150
input,atmost [3]	150	HanpsbkeHwn aHoaa 2 kB, HanpsxeHuax input,atmost 320 150
output,atmost [1]	1251	ceTku BTOpOoit 1,251 1 KB, output,atmost 38 40
output,atmost [2]	1	ceTku BTOpOoit 1,251 1 KB, output,atmost 38 40
output,atmost [3]	38	ceTku BTOpOoit 1,251 1 KB, output,atmost 38 40
output,atmost [4]	40	ceTku BTOpOoit 1,251 1 KB, output,atmost 38 40
voltage (ACorDC),V [1]	79 V	Hanpsixenue Hakana (~vm =),B 7,9-8,7 Filament voltage (ACorDC),V 7.9-8.7
voltage (ACorDC),V [2]	-87 V	Hanpsixenue Hakana (~vm =),B 7,9-8,7 Filament voltage (ACorDC),V 7.9-8.7
voltage (ACorDC),V [3]	7.9 V	Hanpsixenue Hakana (~vm =),B 7,9-8,7 Filament voltage (ACorDC),V 7.9-8.7
voltage (ACorDC),V [4]	-8.7 V	Hanpsixenue Hakana (~vm =),B 7,9-8,7 Filament voltage (ACorDC),V 7.9-8.7
current, A [1]	210 A	Hanbonblni NnyCKoBON TOK Hakana, A 210 Filament startingcurrent, A 210
current, A [2]	210 A	Hanbonblni NnyCKoBON TOK Hakana, A 210 Filament startingcurrent, A 210
voltage (DC),kV	10 kV	Haubonbliee Hanpsikexune, KB: Anode voltage (DC),kV 10
Dissipation, kW	15 kW	CEeTKUBTOPOA (=) ..o i it iennn 1,5 Dissipation, kW:

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
anode [1]	0	PacceunBaemas Han60nbLAs MOWHOCTb, KBT: anode 30
anode [2]	30	PacceunBaemas Han60nbLAs MOWHOCTb, KBT: anode 30
power	3 Hz	CETKOMTIEPBOM . . .ot ittt it iine e 0,3 Operating frequency at oscillator power
Temperature at stem and ceramic-to-metal	70 C	.. 70 Temperature at stem and ceramic-to-metal
anode	1	grid 1-anode;
anode	2	- grid 2-anode
anode [1]	1	grid 1 anode grid 1-anode;
anode [2]	1	grid 1 anode grid 1-anode;
anode [1]	2	- = — — grid 2-anode grid 2-anode
anode [2]	2	- = — — grid 2-anode grid 2-anode
Grid [1]	1	Averaged Grid 1 Characteristic Curves: Averaged Grid 1 Characteristic Curves: Averaged Grid 1 Characteristic Curves:
Grid [2]	1	Averaged Grid 1 Characteristic Curves: Averaged Grid 1 Characteristic Curves: Averaged Grid 1 Characteristic Curves:
Grid [3]	1	Averaged Grid 1 Characteristic Curves: Averaged Grid 1 Characteristic Curves: Averaged Grid 1 Characteristic Curves:
Grid [1]	2	Averaged Grid 2 Characteristic Curves: Averaged Grid 2 Characteristic Curves: Averaged Grid 2 Characteristic Curves:
Grid [2]	2	Averaged Grid 2 Characteristic Curves: Averaged Grid 2 Characteristic Curves: Averaged Grid 2 Characteristic Curves:
Grid [3]	2	Averaged Grid 2 Characteristic Curves: Averaged Grid 2 Characteristic Curves: Averaged Grid 2 Characteristic Curves:

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