



ELECTRONIC TUBE REFERENCE

GU76B

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

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
TETRODE

Transmitting power tetrode designed for RF amplification, linear/SSB service, oscillation, modulation, broadcasting, or frequency multiplication.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	11 V / —	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
MAXIMUM PLATE VOLTAGE	11000 V
MAXIMUM SCREEN VOLTAGE	1500 V
MAXIMUM PLATE DISSIPATION	30000 W
MAXIMUM SCREEN DISSIPATION	900 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-76B power tetrode is used for RF service. It has a directly heated carbonized thoriated-tungsten cathode, metal-ceramic envelope with external copper anode, and forced-air cooling.

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 tetrode is used for RF [1]	76 W	The I'Y-76b power tetrode is used for RF 5
power tetrode is used for RF [2]	5 W	The I'Y-76b power tetrode is used for RF 5
anode	2	C2 - grid 2; A - anode;
grid	1	o C1-grid 1;/ - contact
temperature, °C L [1]	-10 C	TemnepaTypa oKkpy»xatowewn cpegbl, °C —10-+55 Ambient temperature, °C L. —10to +55
temperature, °C L [2]	55 C	TemnepaTypa oKkpy»xatowewn cpegbl, °C —10-+55 Ambient temperature, °C L. —10to +55
temperature, °C L [3]	-10 C	TemnepaTypa oKkpy»xatowewn cpegbl, °C —10-+55 Ambient temperature, °C L. —10to +55
temperature, °C L [4]	55 C	TemnepaTypa oKkpy»xatowewn cpegbl, °C —10-+55 Ambient temperature, °C L. —10to +55
voltage	2 uS	KpyTu3Ha xapakTepucTuki (Mpu HanpsKeHUsIX Mutual conductance (at anode voltage 2 kV,
currents [1]	2 A	aHoga 2 kB, BTopon ceTku 1,3 kB, Tokax grid 2 voltage 1.3 kV, anode currents
currents [2]	13 A	aHoga 2 kB, BTopon ceTku 1,3 kB, Tokax grid 2 voltage 1.3 kV, anode currents
currents [3]	2 A	aHoga 2 kB, BTopon ceTku 1,3 kB, Tokax grid 2 voltage 1.3 kV, anode currents
currents [4]	1.3 A	aHoga 2 kB, BTopon ceTku 1,3 kB, Tokax grid 2 voltage 1.3 kV, anode currents

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage	2 kV	KoathdUUNEHT yCUMEHUS (MPW HANPSKEHNSAX Gain coefficient (at anode voltage 2 kV,
current [1]	2 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [2]	11 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [3]	13 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [4]	2 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [5]	1 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [6]	1.3 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [7]	8 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [8]	6 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
current [9]	-9 A	2 kB, spropon cetkm 11 1,3 kB, grid 2 voltages 1 and 1.3 kV, anode current 8 A) . . . 6-9
grid [1]	69 A	TOKEeaHOJAB A) 69 Anode current (at anode voltage 2 kV, grid 2
grid [2]	2 A	TOKEeaHOJAB A) 69 Anode current (at anode voltage 2 kV, grid 2
grid [3]	2 A	TOKEeaHOJAB A) 69 Anode current (at anode voltage 2 kV, grid 2
voltage [1]	2 kV	Tok aHoaa (Npy HanpshkeHusix aHoga 2 kB, voltage 1.3kV), A, atleast
voltage [2]	1.3 kV	Tok aHoaa (Npy HanpshkeHusix aHoga 2 kB, voltage 1.3kV), A, atleast
voltage [1]	13 kV	BTOpO#N ceTku 1,3 kB), A, HemeHee 14,5 Negative bias voltage (at anode voltage 10 kV,
voltage [2]	145 kV	BTOpO#N ceTku 1,3 kB), A, HemeHee 14,5 Negative bias voltage (at anode voltage 10 kV,
voltage [3]	10 kV	BTOpO#N ceTku 1,3 kB), A, HemeHee 14,5 Negative bias voltage (at anode voltage 10 kV,

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current [1]	2 A	Hanpshkexue, B: grid 2 voltage 1.3kV, anode current 2 A),
current [2]	1.3 A	Hanpshkexue, B: grid 2 voltage 1.3kV, anode current 2 A),
current [3]	2 A	Hanpshkexue, B: grid 2 voltage 1.3kV, anode current 2 A),
voltage [1]	10 kV	HanpspkeHuax aHoaa 10 kB sTopon Negative cutoff voltage (at anode voltage 10 kV,
voltage [2]	10 kV	HanpspkeHuax aHoaa 10 kB sTopon Negative cutoff voltage (at anode voltage 10 kV,
current [1]	13 A	cetkn 1,3 KB, Toke aHona 2 A), grid 2 voltage 1.3 kV, anode current 0.3 A),
current [2]	2 A	cetkn 1,3 KB, Toke aHona 2 A), grid 2 voltage 1.3 kV, anode current 0.3 A),
current [3]	2 A	cetkn 1,3 KB, Toke aHona 2 A), grid 2 voltage 1.3 kV, anode current 0.3 A),
current [4]	1.3 A	cetkn 1,3 KB, Toke aHona 2 A), grid 2 voltage 1.3 kV, anode current 0.3 A),
current [5]	300 mA	cetkn 1,3 KB, Toke aHona 2 A), grid 2 voltage 1.3 kV, anode current 0.3 A),
Interelectrode capacitance, pF	3 pF	3anupanHuna oTpuaaTensHoe (Npu Interelectrode capacitance, pF:
input [1]	10	HanpshkeHunsix asoga 10 kB, BTopon input 350-385
input [2]	350	HanpshkeHunsix asoga 10 kB, BTopon input 350-385
input [3]	-385	HanpshkeHunsix asoga 10 kB, BTopon input 350-385
output [1]	13	cetku 1,3 kB, Toke aHoaa 0,3 A), output 35-45
output [2]	3	cetku 1,3 kB, Toke aHoaa 0,3 A), output 35-45
output [3]	35	cetku 1,3 kB, Toke aHoaa 0,3 A), output 35-45
output [4]	-45	cetku 1,3 kB, Toke aHoaa 0,3 A), output 35-45
voltage	11 W	MexxanekTpoaHble emMkocTu, Nd: Output power (at filament voltage 11 V,
voltage [1]	350 kV	BXOOHAA ottt 350-385 anode voltage 10kV, grid 2 voltage 1.3 kV,

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage [2]	-385 kV	BXOOHAA ottt 350-385 anode voltage 10kV, grid 2 voltage 1.3 kV,
voltage [3]	10 kV	BXOOHAA ottt 350-385 anode voltage 10kV, grid 2 voltage 1.3 kV,
voltage [4]	2 kV	BXOOHAA ottt 350-385 anode voltage 10kV, grid 2 voltage 1.3 kV,
voltage [5]	1.3 kV	BXOOHAA ottt 350-385 anode voltage 10kV, grid 2 voltage 1.3 kV,
voltage [1]	35 V	BBIXOAHAM .« oottt 35-45 grid 1 voltage —250 V), kW, atleast 40
voltage [2]	-45 V	BBIXOAHAM .« oottt 35-45 grid 1 voltage —250 V), kW, atleast 40
voltage [3]	1 V	BBIXOAHAM .« oottt 35-45 grid 1 voltage —250 V), kW, atleast 40
voltage [4]	-250 V	BBIXOAHAM .« oottt 35-45 grid 1 voltage —250 V), kW, atleast 40
voltage [5]	40 V	BBIXOAHAM .« oottt 35-45 grid 1 voltage —250 V), kW, atleast 40
current of single	22 W	.. 2,2 Output power (corresponding to the current of single-
voltage	11 V	MoLHOCTb BbiIXOAHas, KBT, He MeHee: sideband signal envelope at filament voltage 11V,
voltage [1]	11 kV	npv Hanps>xeHusx Hakana 11 B, aHopa 10 kB, anode voltage 10kV, grid 2 voltage 1.3 kV),
voltage [2]	10 kV	npv Hanps>xeHusx Hakana 11 B, aHopa 10 kB, anode voltage 10kV, grid 2 voltage 1.3 kV),
voltage [3]	10 kV	npv Hanps>xeHusx Hakana 11 B, aHopa 10 kB, anode voltage 10kV, grid 2 voltage 1.3 kV),
voltage [4]	2 kV	npv Hanps>xeHusx Hakana 11 B, aHopa 10 kB, anode voltage 10kV, grid 2 voltage 1.3 kV),
voltage [5]	1.3 kV	npv Hanps>xeHusx Hakana 11 B, aHopa 10 kB, anode voltage 10kV, grid 2 voltage 1.3 kV),
filament	30 kW	COOTBETCTBYOWAn TOKy orubarowen (at output power at least 30 kW, filament
grid [1]	11 kV	OHOMOMOCHOIO CUTHANA NPV HAMPSKEHUSAX voltage 11V, anode voltage 10kV, grid 2
grid [2]	10 kV	OHOMOMOCHOIO CUTHANA NPV HAMPSKEHUSAX voltage 11V, anode voltage 10kV, grid 2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grid [3]	2 kV	OHOMOMOCHOIO CUTHANA NPV HAMPSKEHUSAX voltage 11V, anode voltage 10kV, grid 2
current [1]	11 A	nakana 11 B, anoga 10 kB, sTopon voltage 1.3 kV, anode quiescent current
current [2]	10 A	nakana 11 B, anoga 10 kB, sTopon voltage 1.3 kV, anode quiescent current
current [3]	1.3 A	nakana 11 B, anoga 10 kB, sTopon voltage 1.3 kV, anode quiescent current
voltage (ACorDC),V [1]	10.5 V	Hanpsi»keHue Hakana (nepemMeHHoe unu Filament voltage (ACorDC),V 10.5-11.5
voltage (ACorDC),V [2]	-11.5 V	Hanpsi»keHue Hakana (nepemMeHHoe unu Filament voltage (ACorDC),V 10.5-11.5
current, A	280 A	nocTosHHoe), B Filament starting current, A 280
voltage (DC),kV [1]	280 kV	[MyckoBOV TOK HaKana, A 280 Anode voltage (DC),kV 11
voltage (DC),kV [2]	11 kV	[MyckoBOV TOK HaKana, A 280 Anode voltage (DC),kV 11
voltage (instantaneous [1]	11 V	aHoZa (MOCTOAHHOE) o 1,1-10* Negative grid 1 voltage (instantaneous
voltage (instantaneous [2]	-10 V	aHoZa (MOCTOAHHOE) o 1,1-10* Negative grid 1 voltage (instantaneous
voltage (instantaneous [3]	1 V	aHoZa (MOCTOAHHOE) o 1,1-10* Negative grid 1 voltage (instantaneous
anode [1]	3	MrHOBEHHOE 3HaYeHune (abconioTHan anode ... 3-10°
anode [2]	3	MrHOBEHHOE 3HaYeHune (abconioTHan anode ... 3-10°
anode [3]	-10	MrHOBEHHOE 3HaYeHune (abconioTHan anode ... 3-10°
frequency, MHz [1]	30 MHz	AHOAOM . oottt 30-10° Operating frequency, MHz 75
frequency, MHz [2]	-10 MHz	AHOAOM . oottt 30-10° Operating frequency, MHz 75
frequency, MHz [3]	75 MHz	AHOAOM . oottt 30-10° Operating frequency, MHz 75
temperature, °C oL [1]	900 C	BTOPOM CETKOM . . .o ovit i 900 Anode temperature, °C oL 250

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
temperature, °C oL [2]	250 C	BTOPOM CETKOM . . . o ovit i 900 Anode temperature, °C oL 250
Temperature at hottest point of envelope, °C [1]	300 C	NEPBOA CETKOM t o i e 300 Temperature at hottest point of envelope, °C 200
Temperature at hottest point of envelope, °C [2]	200 C	NEPBOA CETKOM t o i e 300 Temperature at hottest point of envelope, °C 200