



ELECTRONIC TUBE REFERENCE

6Z49PDR

Voltage Pentode - High Frequency (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Special-quality Russian sharp-cutoff high-frequency pentode retaining the strong broadband characteristics of the 6Z49P family.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B9A	BASE PINS	9
NOMINAL HEATER	6.3 V / 280 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.0175 S
MAXIMUM PLATE VOLTAGE	160 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	3 W
MAXIMUM SCREEN DISSIPATION	0.525 W
MAXIMUM CATHODE CURRENT	22.5 mA
English-primary bilingual extraction; published ratings promoted where clear.	

PENTODE 6H490- XapaKTEPYCTYKOH NPe/IHa3HAYCH 1111 PabOTHL B LIKPOKO- pentode has been designed for use in wide-band amplifiers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X Russian

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

195X RUSSIAN

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PENTODE	6	PENTODE 6H490-
BoicokoyacToTHsIl neHToa	62	BoicokoyacToTHsIl neHToa 6K49I1-IIP ϕ xopoTkoi The 62K49I1-AP high-frequency short-characteristic
XapaKTEPUCTUKOH NPe/IHa	1111	XapaKTEPUCTUKOH NPe/IHa3HAYCH 1111 PabOTHL B LIKPOKO- pentode has been designed for use in wide-band amplifiers.
DLL	7	DIL5-7
Published electrical value	4	b 7 ! — xaTon; 2 — ceTxa nepeas; 3 — KaTon; 4 — NonorpesaTelis;
N h; f	8	N h; f 8 5 — nogorpesarens; 6 — CBOOOAEH; 7 — aHon; 8 — ceTka Tpe-
fl & l i g	9	fl & l i g 7 ThA, 3KpaH; 9 — ceTka BTOpas
K[	3	K[7 i 3 . , Diagram of electrodes-to-pins connection:
— cathode	5	— cathode; 2 — grid 1; 3 — cathode; 4 — heater; 5 — heater;
Published electrical value	2	; : 6 — vacant; 7 — anode; 8§ — grid 3 and screen; 9 — grid 2
BabpaunoHHbIE HATPY	600 Hz	BabpaunoHHbIE HATPY3KH B OWANa3oHe 4acToT OT S Vibration: at frequencies from 5 to 600 Hz with
Harpy	75	Harpy3KH C YCKOPEHAEM 0 75 g NP [UIHTENBbHOCTH yaapa
up to	80	up to 75 g, at impact duration up to 80 ms. Single
Jo	80	Jo 80 mc. OnuHOYHBIE YAapHble HATPY3KH C YCKOPEHHEM

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
JaBneHue okpyxaroilieid cpeasl	3	JaBneHue okpyxaroilieid cpeasl 10 3 aT™. up to 3 atm.
HAKAIA oo tvvervnnaaeennnnanroranaeennannnn	6.3	HAKAIA oo tvvervnnaaeennnnanroranaeennannnn 6,3
ANOAE e e	150	ANOAE e e 150
CETKH BTOPOM .. .\vvreiiieinieenneenennnnnn	150	CETKH BTOPOM .. .\vvreiiieinieenneenennnnnn. 150
CETKH TPETBEH ..o iviveiieananransanonnnnnnn	0	CETKH TPETBEH ..o iviveiieananransanonnnnnnn 0
OTCEYKH IMEXTPOHHOIO TOKA CETKH MEPBOi, He	60	OTCEYKH IMEXTPOHHOIO TOKA CETKH MEPBOi, He 60~
NEe iinn.. ittt	-1.1	NEe iinn.. ittt -1,1
heater ... e	25	heater ... e 280+25
anode e	4	anode e 15+4
CETKH BTOPOM'vvvevnnunnsnonnnnnnesoncnnes	0.7	CETKH BTOPOM'vvvevnnunnsnonnnnnnesoncnnes 2,8+0,7
grid	7	grid 2 e 2.8+0-7
anode, cutoff, at grid { voltage —	3 V	anode, cutoff, at grid { voltage —8 V =10X10-3
ceTkamepBoft —	3	ceTkamepBoft —8 B) ol =]0°10-3
Resistance in cathode circuit for automatic bias, Ohm	80 Ohm	Resistance in cathode circuit for automatic bias, Ohm 80
Input resistance at	2 kOhm	Input resistance at 60 MHz, kOhm 5.1.2
CMEMmEHAA, OM iiitiiiiiiinatiennannnnnn	80	CMEMmEHAA, OM iiitiiiiiiinatiennannnnnn 80
Internal resistance, kOhm	100 kOhm	Internal resistance, kOhm 100
Bxonnoe conpoTtrsneHne yacTote	12	Bxonnoe conpoTtrsneHne yacTote 60 MI', kOM S.12
Equivalent noise resistance, Ohm	350 Ohm	Equivalent noise resistance, Ohm 350
BHyTpeHHee compoTHBIACHAE, XOM	100	BHyTpeHHee compoTHBIACHAE, XOM 100
Transconductance, mA/V iiiirennneeann	3.5 V	Transconductance, mA/V iiiirennneeann. 17.5£3.5
Published electrical value	350	3KBHBAJCHTHOE CONPOTHBACHUE WiYMoB, OM 350

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Inverse grid L current, A ot =	200 mA	Inverse grid L current, A ot =0.2
KpyTtr	3.5 mA	KpyTtr3sa xapakrepdacerake, MA/B L. 17,5E3,5
OOGpaTHBL TOK CETKM NEPBOM, MKA =<	0.2	OOGpaTHBL TOK CETKM NEPBOM, MKA =<0,2 Non-linear distortion, dB:
with regard to second harmonic	33	with regard to second harmonic 33
Published electrical value	33	1O BTOPOM TADMOHHKE cvuurivnnnnrennnnnss 33
with regard to third harmonic	64	with regard to third harmonic 64
IO TPETHeR TADMOHAKE e	64	IO TPETHeR TADMOHAKE e 64
K CYMMe BXOINHO# M BbIXOOHO# eMKocTei), MA/B .« nd	1.7 V	K CYMMe BXOINHO# M BbIXOOHO# eMKocTei), MA/B .« nd 1,7 input and output capacitances), mA/V pF 1.7
BXOMHAH « v vveeinenenencanenenaannnnnnnnnn	1.2 V	BXOMHAH « v vveeinenenencanenenaannnnnnnnnn 7,8+1,2
BEIXOMHAT ... vveiensneennnnnnnnnnnnnnnnnnnnnn	1.2	BEIXOMHAT ... vveiensneennnnnnnnnnnnnnnnnnnnnn 2,7+0,4 IOPUL .s 7.81+1.2
KaTOOd — MOHOTPEBATEMD . e.vvvvnneennnnnnnnnnnnnnnnnnnnnn	6	KaTOOd — MOHOTPEBATEMD . e.vvvvnneennnnnnnnnnnnnnnnnnnnnn 4,5+2 (41101 (> OU 0.024+0-006
DexTpHyeckue napameTpei B Tedenue	10000 V	DexTpHyeckue napameTpei B Tedenue 10000 v Ixc- cathode-to-heater
Electrical parameters over	10	Electrical parameters over 10,000 operating hours:
KDYTH	11 mA	KDYTH3HA XapaKTepHCTUKM, MA/B =11
Published electrical value	2 mA	00paTHBli TOK CETKH NIEPBOR, MKA =2 transconductance, mA/Y ... i
OTHOCHTENLHOE H	2 A	OTHOCHTENLHOE H3IMEHEHHE KPYTH3HBI XapakTe- inverse grid 1 current, A ol =2
PUCTHKM	15	PUCTHKM, 6 oot tiieie e iinianaiinnnnnnnnnnnnnnnnnnnnnn =< +I5 relative change in transconductance, % ==15

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Tlpene/bhbie	3	Tlpene/bhbie 3HAMEHHA QOAYCTHMBIX Limit Values of Operating
HAKATIA .. vvovvernennnnnnns	6	HAKATIA .. vvovvernennnnnnns 6,6 6
FE	6	FE0: () - S 160 heater coiiiiiiin, 6.6 6
aHOHa MpH	160	aHOHa MpH 3anepToi namne (npu anode , 160
Toke katoma ne Gonee	300	Toke katoma ne Gonee 10 mA) 300 anode in cutoff valve, at cathode
CETKH BTOPOM cvuvuvun	300 uA	CETKH BTOPOM cvuvuvun.. 150 current at most [0 uA 300
CETKU BTOPO#	50	CETKU BTOPO# 1pH 3aMepTO# 1aM- grid2 ... {50
ne (npH Toke KaToma He Gosnee grid	2	ne (npH Toke KaToma He Gosnee grid 2 in cutoff valve, at cathode
IOMKA) ..o iinneas	300 A	IOMKA) ..o iinneas 300 current at most 10 A 300
CeTKAE IEPBOH cc	-100	CeTKAE IEPBOH cc000nn —100 grid1
MeXAY KaTOAOM H NOAorpeBare- between cathode and heater	100	MeXAY KaTOAOM H NOAorpeBare- between cathode and heater 100
JEM ittt eneieas	100	JEM ittt eneieas 100
ToK Katoma, MA onooo	22.5 mA	ToK Katoma, MA onooo 2.5 Cathode current, mA 22.5
paccenBaeMas aHOAOM	3	paccenBaeMas aHOAOM 3 atanode 3
pacceyBaemMas cetkoidl BT0po#	0.525	pacceyBaemMas cetkoidl BT0po# 0,525 atgrid2 i 0.525
Conporusrienne B LEMH CETKu Nep- Resistance in grid	0.5 MOhm	Conporusrienne B LEMH CETKu Nep- Resistance in grid 1 circuit, MOhm 0.5
BOM, MOM	0.5	BOM, MOM 0,5]
Bpems FOTOBH0CTH, C ...ovn	35	Bpems FOTOBH0CTH, C ...ovn..... 35 Warm up period, s 35
Igz, mA	1 mA	Igz, mA 1~ — P ol
Published electrical value	1	{ 4 paw D ____1 ARV AN
Published electrical value	20 A	20 VAL A
VYcepeoueHHBle XapaKTepUCTHKH (TPHOIH0E BKIIIOYCHHE)	5 A	VYcepeoueHHBle XapaKTepUCTHKH (TPHOIH0E BKIIIOYCHHE) 5 /A Afi

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Un=	7	Un=6,3V ' 7] gaAn
Averaged characteristics (when connected as triode)	14	Averaged characteristics (when connected as triode): 7 ///14 // ',; 'if d
Ugry	-2	Ugry -3 -2 -f [/}
— TOK aH0Ha	3	— TOK aHOHa; 2 — TOK CETKH BTOPOH; 3 — KpYTH3HA
Published electrical value	3	1 — anode current; 2 — grid 2 current; 3 — trans-
Published electrical value	2	20 17 >4 ! — TOK amoma; 2 — TOK CETKH BTOPO¥;
/]	3	/] 3 — Haubonsllas AOMYCTHMAAsA MOIIHOCTD,
Published electrical value	-1.5	15t ! T -1,5¢ paccenBaeMas aHoIOM
Y Q	-2	Y Q7] ;! Hay -2y WA _Lop Averaged characteristics:
L\ =yAyss o s soi o L	2	-L\ =yAyss o s soi o L : : 2 current;.
] — anode current	2	] — anode current;. 2 — grid
Published electrical value	150 A	a 50 100 150 200 250 Uav Un=63V, Up=150V

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grid	-1	grid 1 electron current cutoff, max. -1
A AT i' _f: , 'f? ; : "l' : : j' _t: S e T RS	3 A	A AT i' _f: , 'f? ; : "l' : : j' _t: S e T RS 3 — maximum permissible anode