



ELECTRONIC TUBE REFERENCE

6I4P

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

HEPTODE-TRIODE

Soviet 6I4P triode-heptode for television noise gates and sync-pulse amplification, with separate cathodes and 6.3 V 450 mA heater.

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	Dissimilar

SECTION RATINGS

SECTION1 Triode	
TRANSCONDUCTANCE	0.009 S
AMPLIFICATION FACTOR	50
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	20 mA
<i>6I4P triode separate cathode for TV sync pulse amplification. Max plate 250 V, dissipation 1.5 W, cathode current 20 mA, typical V_a 100 V I_a 9 ± 3 mA g_m 0.009 A/V μ 50 ± 10. C input 3 pF, output 1.7 pF, transfer 1.8 pF. Cold-switching 550 V separate, heater-cathode max 100 V.</i>	

SECTION2 Heptode	
TRANSCONDUCTANCE	0.0011 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	0.5 W
MAXIMUM CATHODE CURRENT	8 mA
<i>6I4P heptode with separate cathode for noise-gated television pulse processing. Max plate 250 V, dissipation 0.5 W, cathode current 8 mA, screens2+4 voltage max 50 V and dissipation 0.5 W. Typical Va 14 V, screens 14 V, Ia 1.5 mA, gm 0.0011 A/V. C input 4.5 pF, output 5 pF, transfer grid1 <=0.1 pF, grid3 <=0.25 pF. Cold-switching 550 V separate.</i>	

The 6U4II1 short-characteristic triode-heptode with AeIbHBIMU KaTogamu 61411 npenHazHadeH oI HCMOJib- separate cathodes has been designed for use in noise- 30BaHUA B MOMEXO3ALIHMIICHHOM AaMIUIHTYJHOM cCellek- -protected amplitude gates and sync pulse amplifiers of TOPe M YCHJIHMTEIE CHHXPOUMITYJIBCOB TENEEBH3HOHHBIX IIPHEMHHUKOB.

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 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Source symbol MOMEXO	3 A	30BaHUA B MOMEXO3ALIHMIICHHOM AaMIUIHTYJHOM cCellek- -protected amplitude gates and sync pulse amplifiers of
Source symbol grid	2 A	3 — heptode grid 1; 4 — heptode grid 2 and grid 4; 5 — heater;
Source symbol OMana3oHe	4 A	BubpanoHnbie Harpy3ku B OMana3oHe 4acTtoT oT 1 Vibration: at frequencies from 1 to 60 Hz with
Source symbol oT	1 V	BubpanoHnbie Harpy3ku B OMana3oHe 4acTtoT oT 1 Vibration: at frequencies from 1 to 60 Hz with
Source symbol to	60 Hz	BubpanoHnbie Harpy3ku B OMana3oHe 4acTtoT oT 1 Vibration: at frequencies from 1 to 60 Hz with
Source symbol B0	3 A	1o + 70 °C. OTHOCHTebHAs BJlaXHOCTb BO3ayXa 1o 98% temperature: from —45 to +70 °C. Relative humidity:
Source symbol e	100 V	AHOHA .ottt it e et et aie e 100 Voltage, V:
Published electrical parameter	2 V	—2B) MKA e =0,5 Inverse grid current, at triode grid voltage —2 V, pA =0.5
Plate	10 W	axozia 10 MKA): anode current 10 wA:
Screen	4 W	CeTOK BTOpO# M ueTsepTOH Ge3 grid 2 and grid 4 without current
Published electrical parameter	10 µA	6onee IO(MKA) 550 10 uA 550
Source symbol v	1.5 A	TPHOAA . . .o v 1,5 at triode anode 1.5
Published electrical parameter	500 mA	TENTONA 0,5 at heptode anode 0.5

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Source symbol AR	24 A	SEEEERREEE AR 24 A
Published electrical parameter	1 A	i . Ji "1 Aé/ LN & 5 / // // , / // ; ""\
Source symbol T	5 A	! ; I T 5 A AA—A - A;%
Source symbol m	417 V	[I'[I'.[m 417 Vs A DAV &Y. //1/
Source symbol NN	5 A	: NN 5 A 2
Published electrical parameter	7 A	i /7 /7 AV, f
Published electrical parameter	6.3 V	Un=6,3V Un=63V Un=63V
Published electrical parameter	63 V	Un=6,3V Un=63V Un=63V
Published electrical parameter	0 V	Un=63V, Upa=0V THKH Un=6,3 V, Ig1 =100 uA, Ip;3=1 pA
Source symbol Ig	1±100 µA	Un=63V, Upa=0V THKH Un=6,3 V, Ig1 =100 uA, Ip;3=1 pA
Published electrical parameter	3±1 pA	Un=63V, Upa=0V THKH Un=6,3 V, Ig1 =100 uA, Ip;3=1 pA
Source symbol Uq	1±0 V	a'g2 g4 . Uq1=0V —
Source symbol A	25 V	A 025V T T
Published electrical parameter	60 V	Ugz=Ugy =60V S0V 40Y 30V " 50 %0 s - SRS N 6 R R ,%5:' MR
Source symbol S	0 V	Ugz=Ugy =60V S0V 40Y 30V " 50 %0 s - SRS N 6 R R ,%5:' MR
Source symbol Y	30 V	Ugz=Ugy =60V S0V 40Y 30V " 50 %0 s - SRS N 6 R R ,%5:' MR
Published electrical parameter	4 V	— « 0 5. 10 15 20 4V
Source symbol L	50 V	I S0V L50VI4GVEI0V 414V
Source symbol VI4GVEI	0 V	I S0V L50VI4GVEI0V 414V
Source symbol VI4GVEI0V	414 V	I S0V L50VI4GVEI0V 414V
Published electrical parameter	14 V	! e AV N 10 Un=63V, Up=14 V, Usz=0 V
Plate	2 A	" "/ 1 — anode current; 2 — grid 2 and grid 4 current
Source symbol g	3±40 V	Un=6,3 V, Uimp g3=40 V, Rg3=1,5 MQ, Ra=51 kQ

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Source symbol Rg	3±1.5 MΩ	Un=6,3 V, Uimp g3=40 V, Rg3=1,5 MQ, Ra=51 kQ
Published electrical parameter	51 kΩ	Un=6,3 V, Uimp g3=40 V, Rg3=1,5 MQ, Ra=51 kQ
Published electrical parameter	30 V	Un=6,3V, Ugp=30V, Ugz=0V
Published electrical parameter	-0.25 V	- ' = -0.25V
Source symbol RN	175 V	RN 175V,
Published electrical parameter	15 V	15V,
Published electrical parameter	4 A	// ¥4 as
Published electrical parameter	15 A	4 - 15 AT Ugy=023Y
Published electrical parameter	-5 V	-5V
Published electrical parameter	0.5 V	T 1 Uq _; = '0,5V (Un=63V, Ugy=0V, Ugp=14V
Source symbol y	23 V	' o e -1y 23V
Published electrical parameter	-25 V	P ' -25V.
Source symbol rr	14 V	rr 14V [N e& ; 15
Published electrical parameter	100 V	Un=6,3V, Usr=100 V, Uag=250 V, Rgm+er=47 kQ, 84—AN /2 % 4 23400
Published electrical parameter	250 V	Un=6,3V, Usr=100 V, Uag=250 V, Rgm+er=47 kQ, 84—AN /2 % 4 23400
Published electrical parameter	47 kΩ	Un=6,3V, Usr=100 V, Uag=250 V, Rgm+er=47 kQ, 84—AN /2 % 4 23400
Published electrical parameter	-2 V	Ug=Uga=100 V, Ugtg=—-2V s i
Source symbol grid	3 A	current; 3 — heptode grid 3 and triode grid current;
Published electrical parameter	10 V	Ugp=Ugp=10V, Ugr=-2V



1981 Russian Tubes Katsnelson and Larionov

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

1981 RUSSIAN TUBES KATSNELSON AND LARIONOV

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical parameter	200 V	0 20 #0 60 60 100720 160 180 200 В 8-10-8 -6-4-2 0
Published electrical parameter	50 V	ЦР63В Е0а в50В /', 'д
Published electrical parameter	100 V	78 _ Исё ОЕ 100В з ОВ ЛЙ
Published electrical parameter	0 В	72 27 0В Из=0в 1...,*/ 00 у<ЪМ 'Ё
Published electrical parameter	14 V	при /,=6,3 В, Шал=100 В, Ак== 110 Ом, Оа.г=14 В,
Reverse current	<0.5 µA	Обратный ток сетки (при Пс т—2 В) <0,5 мкА
Published electrical parameter	<100 µA	<100 мкА
Published electrical parameter	<1.3 V	цательное) . . . К, Е <1,3 В
Published electrical parameter	8 V	То же в начале характеристики (при и„—1 8 В)
Published electrical parameter	18 V	То же в начале характеристики (при (с1=—18 В)
Heater voltage	-7 V	Напряжение накала , . . . , вввнвв оь, 5,7—7 В
Published electrical parameter	250 V	триода . . , ке ьва ое 250 В
Plate voltage	10 µA	Напряжение анода `безтокоотбора (при 1д=10 мкА)
Published electrical parameter	550 V	триода й 550 В
Published electrical parameter	150 V	Напряжение 83-й сетки (отрицательное) в импульсе — 150 В

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical parameter	1.5 V	триода . . . , ..а 1,5 Вт
Published electrical parameter	0.5 V	гептода . . з ..) 0,5 Вт
Dissipation / power	5 V	Мощность, рассеиваемая сетками 2-й я а* , .. @,5 Вт
Published electrical parameter	20 mA	триода к. о, 20 мА
Published electrical parameter	8 mA	гептода . . , , 8 мА
Resistance	8 MΩ	Сопротивление в цепи сетки триода оче вь , 8 МОм
Resistance	3 MΩ	Сопротивление в цепи 1-й сетКИ . . . о з о , 3 МОм
Published electrical parameter	6.3 V	1,=6,3В ПЛ
Published electrical parameter	208 V	02& 6 8 70 72 74 76 18 208 В-25-2 —15 —1 -05 0
Published electrical parameter	9 V	са =—9 В
Screen current	9—15 mA	Ток 2-й сетки каждого пентода (суммарный) 9 —15 мА
Published electrical parameter	<0.5 μA	тода (суммарный) ВЕ <0,5 мкА
Published electrical parameter	6 mA/V	6,0 мА/В
Dissipation / power	6—8.5 V	Выходная мощность каждого пентода . , , 6—8,5 Вт
Service life	>1500 h	Наработка ВН *а > 1500 ч
Dissipation / power	>4.5 V	выходная мощность каждого пентода , . >4,5 Вт

TUBE TINKER

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