



ELECTRONIC TUBE REFERENCE

GU63

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TETRODE-TETRODE

Rugged Soviet dual power tetrode for oscillator and amplifier service to approximately 250 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
MAXIMUM PLATE VOLTAGE	700 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	13 W
MAXIMUM SCREEN DISSIPATION	3 W
MAXIMUM GRID DISSIPATION	0.5 W
<i>Representative specification row for the two physical tetrode sections sharing cathode/screen. 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>	

SECTION2 Tetrode

MAXIMUM PLATE VOLTAGE	700 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	13 W
MAXIMUM SCREEN DISSIPATION	3 W

The GU-63 is a double tetrode used as an oscillator and power amplifier at frequencies up to 250 MHz. It has an indirectly heated oxide-coated cathode.

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
grid [1]	4900	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [2]	1	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [3]	1	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [4]	2	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [5]	4	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [6]	3	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [7]	5	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [8]	1	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [9]	6	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;
grid [10]	2	Single impacts with acceleration, m/s? 4,900 1-grid 1 of second tetrode; 2, 4 - heater; 3 — cathode; 5 — grid 1 of first tetrode; 6 - grid 2;

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
cathode [1]	980	Linear bads with acceleration, mis? 980 ;4_1 s—naar;c;':: :sf first tetrode — top cap; A2 — anode of second tetrode — top cap; K — cathode;
cathode [2]	4	Linear bads with acceleration, mis? 980 ;4_1 s—naar;c;':: :sf first tetrode — top cap; A2 — anode of second tetrode — top cap; K — cathode;
cathode [3]	1	Linear bads with acceleration, mis? 980 ;4_1 s—naar;c;':: :sf first tetrode — top cap; A2 — anode of second tetrode — top cap; K — cathode;
temperature, °C - [1]	-65 C	Ambient temperature, °C —65t0+70
temperature, °C - [2]	70 C	Ambient temperature, °C —65t0+70
voltage (ACorDC), V [1]	63 V	HanpshkeHue Hakana (~unu =),B 6,3 Heater voltage (ACorDC),V 6.3
voltage (ACorDC), V [2]	6.3 V	HanpshkeHue Hakana (~unu =),B 6,3 Heater voltage (ACorDC),V 6.3
voltage (DC), V	150 V	Hanps>xetue, B: Anode voltage (DC),V 150
voltage (DC), V [1]	150 V	aHoAA (MOCTOAHHOE) . . . oo v e e e 150 Grid 2 voltage (DC),V 250
voltage (DC), V [2]	2 V	aHoAA (MOCTOAHHOE) . . . oo v e e e 150 Grid 2 voltage (DC),V 250
voltage (DC), V [3]	250 V	aHoAA (MOCTOAHHOE) . . . oo v e e e 150 Grid 2 voltage (DC),V 250
voltage [1]	250 A	BTOPOW CETKM (NMOCTOAHHOS) 250 Anode current (at grid 1 voltage 0 of
voltage [2]	1 A	BTOPOW CETKM (NMOCTOAHHOS) 250 Anode current (at grid 1 voltage 0 of
voltage [3]	0 mA	BTOPOW CETKM (NMOCTOAHHOS) 250 Anode current (at grid 1 voltage 0 of
voltage [1]	-75 uS	—75B),MA ... e 50-120 Mutual conductance (at grid 1 voltage —16 V
voltage [2]	50 uS	—75B),MA ... e 50-120 Mutual conductance (at grid 1 voltage —16 V
voltage [3]	-120 uS	—75B),MA ... e 50-120 Mutual conductance (at grid 1 voltage —16 V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage [4]	1 uS	—75B),MA ... e 50-120 Mutual conductance (at grid 1 voltage —16 V
voltage [5]	-16 uS	—75B),MA ... e 50-120 Mutual conductance (at grid 1 voltage —16 V
voltage [1]	-75 mA	BTOpOro TeTpofa —75B), MAB 1,8-3,8 Crid 1 reverse current (at heater voltage 7 V,
voltage [2]	18 mA	BTOpOro TeTpofa —75B), MAB 1,8-3,8 Crid 1 reverse current (at heater voltage 7 V,
voltage [3]	-38 mA	BTOpOro TeTpofa —75B), MAB 1,8-3,8 Crid 1 reverse current (at heater voltage 7 V,
voltage [4]	1 mA	BTOpOro TeTpofa —75B), MAB 1,8-3,8 Crid 1 reverse current (at heater voltage 7 V,
voltage [5]	7 mA	BTOpOro TeTpofa —75B), MAB 1,8-3,8 Crid 1 reverse current (at heater voltage 7 V,
current	400 A	O6paTHbIA TOK NepBOX CeTKM (Npu anode voltage 400 V, anode current
voltage [1]	400 W	400 B, Toke aHoaa 30 MA), Oscillatory power (at anode voltage 300 V,
voltage [2]	30 W	400 B, Toke aHoaa 30 MA), Oscillatory power (at anode voltage 300 V,
voltage [3]	300 W	400 B, Toke aHoaa 30 MA), Oscillatory power (at anode voltage 300 V,
voltage [1]	1 V	MKA,Heboree 1 grid 1 voltage — 60 V of first and second
voltage [2]	1 V	MKA,Heboree 1 grid 1 voltage — 60 V of first and second
voltage [3]	-60 V	MKA,Heboree 1 grid 1 voltage — 60 V of first and second
anode	110 V	KonebaTensHasa MOWHOCTL (NPW HANPS>XKEHUN tetrodes, drive voltage about 110V, anode
voltage about [1]	300 mA	aHoAa 300 B, HanpspkeHnax nepebIx current 80 mA, grid 2 voltage about 12 mA,
voltage about [2]	80 mA	aHoAa 300 B, HanpspkeHnax nepebIx current 80 mA, grid 2 voltage about 12 mA,
voltage about [3]	2 mA	aHoAa 300 B, HanpspkeHnax nepebIx current 80 mA, grid 2 voltage about 12 mA,
voltage about [4]	12 mA	aHoAa 300 B, HanpspkeHnax nepebIx current 80 mA, grid 2 voltage about 12 mA,

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
resistance [1]	80 V	aHoga 80 MA, Toke BTOPOW CETKM OKONMO 12 MA, Vibronoise voltage (at resistance 2 k() in
resistance [2]	12 V	aHoga 80 MA, Toke BTOPOW CETKM OKONMO 12 MA, Vibronoise voltage (at resistance 2 k() in
resistance [3]	2 V	aHoga 80 MA, Toke BTOPOW CETKM OKONMO 12 MA, Vibronoise voltage (at resistance 2 k() in
anode circuit), mV (r.m.s.)	11	 11 anode circuit), mV (r.m.s.):
Interelectrode capacitance, pF	2 pF	neHuu B yenu aHoaa 2 KOM), MBog,: Interelectrode capacitance, pF:
input,atmost [1]	4	B AnanasoHe 4actot 50-1000 My 1500 input,atmost
input,atmost [2]	50	B AnanasoHe 4actot 50-1000 My 1500 input,atmost
input,atmost [3]	-1000	B AnanasoHe 4actot 50-1000 My 1500 input,atmost
input,atmost [4]	1500	B AnanasoHe 4actot 50-1000 My 1500 input,atmost
output,atmost [1]	10002000	B AuanasoHe JacTtot 10002000 Ny ... 2000 output,atmost
output,atmost [2]	2000	B AuanasoHe JacTtot 10002000 Ny ... 2000 output,atmost
voltage (ACorDC), V [1]	5.7 V	HanpsxeHue, B: Heater voltage (ACorDC), V 5.7-7
voltage (ACorDC), V [2]	-7 V	HanpsxeHue, B: Heater voltage (ACorDC), V 5.7-7
voltage (DC),V [1]	1 V	MeXay KaToAoM 1 nogorpesartenem — 150—+150 Anode voltage (DC),V 700
voltage (DC),V [2]	-150 V	MeXay KaToAoM 1 nogorpesartenem — 150—+150 Anode voltage (DC),V 700
voltage (DC),V [3]	150 V	MeXay KaToAoM 1 nogorpesartenem — 150—+150 Anode voltage (DC),V 700
voltage (DC),V [4]	700 V	MeXay KaToAoM 1 nogorpesartenem — 150—+150 Anode voltage (DC),V 700
voltage (DC), V. oo [1]	57 V	HaKana (~ WM =) o 57-7 Grid 2 voltage (DC), V. oo 300
voltage (DC), V. oo [2]	-7 V	HaKana (~ WM =) o 57-7 Grid 2 voltage (DC), V. oo 300

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (DC), V. oo [3]	2 V	HaKana (~ WM =) o 57-7 Grid 2 voltage (DC), V. oo 300
voltage (DC), V. oo [4]	300 V	HaKana (~ WM =) o 57-7 Grid 2 voltage (DC), V. oo 300
voltage (DC), V	1 V	Hanpskerue noctosHHoe, B: Grid 1 voltage (DC), V.
Dissipation, W	300 W	BTOPOMCETKM . ..ot o e tit i i i e 300 Dissipation, W:
grid [1]	1	Paccensaemas mowjHoCTb, BT: grid 1 . 0.5
grid [2]	0.5	Paccensaemas mowjHoCTb, BT: grid 1 . 0.5
current (DC component), mA [1]	13 mA	AHOZOM . ..ot 13 Anode current (DC component), mA 40
current (DC component), mA [2]	40 mA	AHOZOM . ..ot 13 Anode current (DC component), mA 40
heater, V [1]	3 V	BTOPOACETKOM . ..o vttt iiiennnean s 3 Voltage between cathode and heater, V. —150to +150
heater, V [2]	-150 V	BTOPOACETKOM . ..o vttt iiiennnean s 3 Voltage between cathode and heater, V. —150to +150
heater, V [3]	150 V	BTOPOACETKOM . ..o vttt iiiennnean s 3 Voltage between cathode and heater, V. —150to +150
Anode Characteristic Curves	1	A ged Grid-Anode Characteristic Curves 1 + =
Anode Characteristic Curves (Each Tetrode) [1]	20	20 =] Averaged Grid-Anode Characteristic Curves (Each Tetrode): 20 N Y 4 %'
Anode Characteristic Curves (Each Tetrode) [2]	20	20 =] Averaged Grid-Anode Characteristic Curves (Each Tetrode): 20 N Y 4 %'
Anode Characteristic Curves (Each Tetrode) [3]	4	20 =] Averaged Grid-Anode Characteristic Curves (Each Tetrode): 20 N Y 4 %'
Grid Characteristic Curves	7	" 7 Averaged Anode-Grid and Grid Characteristic Curves

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