



ELECTRONIC TUBE REFERENCE

GK11P

Power - Tetrode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TETRODE

Russian metal-ceramic power tetrode with directly heated carbonized thoriated cathode and combined evaporation/air cooling. Designed for substantial professional power service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	22 V / 125 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Tetrode

No fixed ratings recorded.

Promoted-field audit performed from English ratings/characteristics; detailed electrical values retained in parameter table.

The MK-111 power tetrode is used for] e A ot 1 comiact Cathode: directly heated, carbonized thoria-]] . Envelope: metal-ceramic. Cooling: forced (evaporation for anode, air L L

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	110 W	rkK-110 POWER TETRODE
power tetrode is used for] e A ot [1]	111 W	The MK-111 power tetrode is used for] e A ot 1 comiact
power tetrode is used for] e A ot [2]	1 W	The MK-111 power tetrode is used for] e A ot 1 comiact
temperature, °C [1]	-10 C	Temnepatypa okpyxaowen cpegbt, °C —10-+55 Ambient temperature, °C —10to +55
temperature, °C [2]	55 C	Temnepatypa okpyxaowen cpegbt, °C —10-+55 Ambient temperature, °C —10to +55
temperature, °C [3]	-10 C	Temnepatypa okpyxaowen cpegbt, °C —10-+55 Ambient temperature, °C —10to +55
temperature, °C [4]	55 C	Temnepatypa okpyxaowen cpegbt, °C —10-+55 Ambient temperature, °C —10to +55
voltage (ACorDC), V	22 V	HanpsxeHue Hakana (nepeMeHHoe unv Filament voltage (ACorDC), V 22
voltage [1]	300 uS	TOKHAKANA, A ... it e 300-340 Mutual conductance (at anode voltage 2 kV,
voltage [2]	-340 uS	TOKHAKANA, A ... it e 300-340 Mutual conductance (at anode voltage 2 kV,
voltage [3]	2 uS	TOKHAKANA, A ... it e 300-340 Mutual conductance (at anode voltage 2 kV,
currents [1]	2 uA	KpyTuaHa xapakTepucTiku (Npy HanpsHKeHUsIX grid 2 voltage 1.5 kV, anode currents 15 and

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
currents [2]	1.5 uA	KpyTuaHa xapakTepucTiku (Npy HanpsHKeHUsIX grid 2 voltage 1.5 kV, anode currents 15 and
currents [3]	15 uA	KpyTuaHa xapakTepucTiku (Npy HanpsHKeHUsIX grid 2 voltage 1.5 kV, anode currents 15 and
voltage [1]	15 kV	15u25A),MA/B 180-230 Gain coefficient (at anode voltage 2 kV,
voltage [2]	5 kV	15u25A),MA/B 180-230 Gain coefficient (at anode voltage 2 kV,
voltage [3]	180 kV	15u25A),MA/B 180-230 Gain coefficient (at anode voltage 2 kV,
voltage [4]	-230 kV	15u25A),MA/B 180-230 Gain coefficient (at anode voltage 2 kV,
voltage [5]	2 kV	15u25A),MA/B 180-230 Gain coefficient (at anode voltage 2 kV,
anode [1]	2 kV	KoachcuyumeHT yeunenys (Npyu HaNpspKeHuaxX grid 2 voltages 1.5kV and 1.0kV, anode
anode [2]	1.5 kV	KoachcuyumeHT yeunenys (Npyu HaNpspKeHuaxX grid 2 voltages 1.5kV and 1.0kV, anode
anode [3]	1 kV	KoachcuyumeHT yeunenys (Npyu HaNpspKeHuaxX grid 2 voltages 1.5kV and 1.0kV, anode
current [1]	2 A	aHopaa 2 kB, BTopow ceTkn 1,51 1,0 kB, current 15 A) e 5-8
current [2]	151 A	aHopaa 2 kB, BTopow ceTkn 1,51 1,0 kB, current 15 A) e 5-8
current [3]	10 A	aHopaa 2 kB, BTopow ceTkn 1,51 1,0 kB, current 15 A) e 5-8
current [4]	15 A	aHopaa 2 kB, BTopow ceTkn 1,51 1,0 kB, current 15 A) e 5-8
current [5]	5 A	aHopaa 2 kB, BTopow ceTkn 1,51 1,0 kB, current 15 A) e 5-8
current [6]	-8 A	aHopaa 2 kB, BTopow ceTkn 1,51 1,0 kB, current 15 A) e 5-8
grid [1]	5 A	Tokeanoda15A) i, 5-8 Anode current (at anode voltage 2 kV and grid 2
grid [2]	5 A	Tokeanoda15A) i, 5-8 Anode current (at anode voltage 2 kV and grid 2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grid [3]	-8 A	Tokeanoda15A) i, 5-8 Anode current (at anode voltage 2 kV and grid 2
grid [4]	2 A	Tokeanoda15A) i, 5-8 Anode current (at anode voltage 2 kV and grid 2
grid [5]	2 A	Tokeanoda15A) i, 5-8 Anode current (at anode voltage 2 kV and grid 2
voltage [1]	15 V	BTOPOW ceTku B umnynece 1,5 kB), A, He meHee 38 Negative bias voltage (at anode voltage
voltage [2]	38 V	BTOPOW ceTku B umnynece 1,5 kB), A, He meHee 38 Negative bias voltage (at anode voltage
current [1]	10 A	HanpsixeHue cMeljeHns oTpylaTernsHoe 10 kV, grid 2 voltage 1.5 kV, anode current
current [2]	2 A	HanpsixeHue cMeljeHns oTpylaTernsHoe 10 kV, grid 2 voltage 1.5 kV, anode current
current [3]	1.5 A	HanpsixeHue cMeljeHns oTpylaTernsHoe 10 kV, grid 2 voltage 1.5 kV, anode current
grid [1]	15 kV	1,5 kB, Toke aHopa 5,5 A), abcomoTHoe Negative cutoff voltage (at anode voltage 10 kV, grid 2
grid [2]	55 kV	1,5 kB, Toke aHopa 5,5 A), abcomoTHoe Negative cutoff voltage (at anode voltage 10 kV, grid 2
grid [3]	10 kV	1,5 kB, Toke aHopa 5,5 A), abcomoTHoe Negative cutoff voltage (at anode voltage 10 kV, grid 2
grid [4]	2 kV	1,5 kB, Toke aHopa 5,5 A), abcomoTHoe Negative cutoff voltage (at anode voltage 10 kV, grid 2
current [1]	3 A	3HaveHne, B Ll e 220-300 voltage 1.5 kV, anode current 0.5 A), V
current [2]	220 A	3HaveHne, B Ll e 220-300 voltage 1.5 kV, anode current 0.5 A), V
current [3]	-300 A	3HaveHne, B Ll e 220-300 voltage 1.5 kV, anode current 0.5 A), V
current [4]	1.5 A	3HaveHne, B Ll e 220-300 voltage 1.5 kV, anode current 0.5 A), V
current [5]	500 mA	3HaveHne, B Ll e 220-300 voltage 1.5 kV, anode current 0.5 A), V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Interelectrode capacitance, pF, max [1]	10 pF	Hanpsbkenusx aHoga 10 kB, BTopoi cetku 1,5 kB, Interelectrode capacitance, pF, max.:
Interelectrode capacitance, pF, max [2]	15 pF	Hanpsbkenusx aHoga 10 kB, BTopoi cetku 1,5 kB, Interelectrode capacitance, pF, max.:
output [1]	420	HEBOMBE ... \ ivieinei e 420 output 120
output [2]	120	HEBOMBE ... \ ivieinei e 420 output 120
power, kW, min	780 kW	BXOAHAR ititiine e ienn e 780 Output power, kW, min.:
grid [1]	120 kV	BBIXOGHAR . .o v vo v eini ettt 120 at 30 MHz with anode voltage 15 kV, grid 2
grid [2]	30 kV	BBIXOGHAR . .o v vo v eini ettt 120 at 30 MHz with anode voltage 15 kV, grid 2
grid [3]	15 kV	BBIXOGHAR . .o v vo v eini ettt 120 at 30 MHz with anode voltage 15 kV, grid 2
grid [4]	2 kV	BBIXOGHAR . .o v vo v eini ettt 120 at 30 MHz with anode voltage 15 kV, grid 2
voltage [1]	1 kV	MPOXOAHAM . . et ot vie et ee e neenanns voltage 1.0 kV, filament voltage 22V 250
voltage [2]	22 kV	MPOXOAHAM . . et ot vie et ee e neenanns voltage 1.0 kV, filament voltage 22V 250
voltage [3]	250 kV	MPOXOAHAM . . et ot vie et ee e neenanns voltage 1.0 kV, filament voltage 22V 250
voltage [1]	30 kV	NPU OTHOCMTENBHOM YPOBHE KOMOGUHALWOHHBIX at 30 MHz with anode voltage 12 kV, grid 2 voltage
voltage [2]	12 kV	NPU OTHOCMTENBHOM YPOBHE KOMOGUHALWOHHBIX at 30 MHz with anode voltage 12 kV, grid 2 voltage
voltage [3]	2 kV	NPU OTHOCMTENBHOM YPOBHE KOMOGUHALWOHHBIX at 30 MHz with anode voltage 12 kV, grid 2 voltage
voltage [1]	1.5 kV	COCTaBNAIOWMX TPETHErO NOPSACA He XyXKe 1.5 kV, filament voltage 22 V (peak value)
voltage [2]	22 kV	COCTaBNAIOWMX TPETHErO NOPSACA He XyXKe 1.5 kV, filament voltage 22 V (peak value)
voltage (ACorDC),V [1]	21 V	HanpspkeHue Hakana (nepemMeHHoe unu Filament voltage (ACorDC),V 21-23
voltage (ACorDC),V [2]	-23 V	HanpspkeHue Hakana (nepemMeHHoe unu Filament voltage (ACorDC),V 21-23

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage (DC), kV [1]	21 kV	noctosHHoe), B L L, 21-23 Anode voltage (DC), kV
voltage (DC), kV [2]	-23 kV	noctosHHoe), B L L, 21-23 Anode voltage (DC), kV
voltage	1 V	HarpsixxeHve BTOPON ceTkM (NOCToAHHOE), KB Negative instantaneous grid 1 voltage
current, A	3 A	MFHOBEHHOE 3Ha1eHue (abconioTHoe Filament starting current, A
current (DC component under class B	3 A	3Havenue), kB Anode current (DC component under class B
Temperature at the hottest point of envelope, °C	15 C	NEPBOM COTKOM . . .t i i ieie i eenanann 1,5 Temperature at the hottest point of envelope, °C
Anode Characteristic Curves	80	Averaged Anode Characteristic Curves: 80 o
POWER TETRODE	11 W	rK-11 POWER TETRODE
POWER TETRODE FK	111 W	POWER TETRODE FK-111
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:
POWER TETRODE	110 W	rK-110 POWER TETRODE
anode [1]	1	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [2]	12	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [3]	5	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [4]	6	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [5]	7	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [6]	8	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [7]	9	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [8]	1	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [9]	2	1/ 12 J & 5 6 7 8 9 1M Uagky ——— 2-anode
anode [1]	2	V/j / 2 J 4 5 6 7 8 9 0 Ya kv _ _ _ _ grid2-anode

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
anode [2]	4	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [3]	5	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [4]	6	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [5]	7	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [6]	8	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [7]	9	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [8]	0	V/j / 2 J 4 5 6 7 8 9 0 Ya kv ____ grid2-anode
anode [1]	7	I 7 2 3 & 5 & 7 8 § 10 Ua 1V e g:id 2-anode
anode [2]	2	I 7 2 3 & 5 & 7 8 § 10 Ua 1V e g:id 2-anode
anode [3]	3	I 7 2 3 & 5 & 7 8 § 10 Ua 1V e g:id 2-anode
anode [4]	5	I 7 2 3 & 5 & 7 8 § 10 Ua 1V e g:id 2-anode

TUBE TINKER

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