



ELECTRONIC TUBE REFERENCE

GU68A

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Water-cooled metal-ceramic power triode for stationary RF transmitter amplifiers to approximately 30 MHz. Its carbonized thoriated-tungsten cathode supports about 130 kW plate dissipation and 12 kV plate operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	20 V / —	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
MAXIMUM PLATE VOLTAGE	12000 V
MAXIMUM PLATE DISSIPATION	130000 W
MAXIMUM GRID DISSIPATION	2300 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-68A triode is used as a power amplifier at frequencies up to 30 MHz in stationary RF transmitters. It has a directly heated carbonized thoriated-tungsten cathode and water-cooled anode.

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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
power amplification at [1]	68 W	leHepaTopHbin Tprog MNY-68A npepgHasHadeH Ans The I'Y-68A triode is used for power amplification at
power amplification at [2]	68 W	leHepaTopHbin Tprog MNY-68A npepgHasHadeH Ans The I'Y-68A triode is used for power amplification at
anode [1]	24	Mass: at most 24 kg. M @G0+ 15 A -anode
anode [2]	15	Mass: at most 24 kg. M @G0+ 15 A -anode
temperature, °C [1]	-10 C	TemnepaTypa okpyxatouen cpeas!, °C -10—+55 Ambient temperature, °C —10t0 +55
temperature, °C [2]	55 C	TemnepaTypa okpyxatouen cpeas!, °C -10—+55 Ambient temperature, °C —10t0 +55
temperature, °C [3]	-10 C	TemnepaTypa okpyxatouen cpeas!, °C -10—+55 Ambient temperature, °C —10t0 +55
temperature, °C [4]	55 C	TemnepaTypa okpyxatouen cpeas!, °C -10—+55 Ambient temperature, °C —10t0 +55
voltage	1 uS	KpyTusHa xapakTepucTuku (Npy HanpshkeHun Mutual conductance (at anode voltage 1 kV,
currents [1]	1 mA	aHoga 1 kB, Tokax aHopa 10m anode currents 10and 14 A), mA/V 115-145
currents [2]	10 mA	aHoga 1 kB, Tokax aHopa 10m anode currents 10and 14 A), mA/V 115-145
currents [3]	10 mA	aHoga 1 kB, Tokax aHopa 10m anode currents 10and 14 A), mA/V 115-145

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
currents [4]	14 mA	aHoga 1 kB, Tokax aHopa 10m anode currents 10and 14 A), mA/V 115-145
currents [5]	115 mA	aHoga 1 kB, Tokax aHopa 10m anode currents 10and 14 A), mA/V 115-145
currents [6]	-145 mA	aHoga 1 kB, Tokax aHopa 10m anode currents 10and 14 A), mA/V 115-145
anode voitage [1]	14	14A),MAB 115-145 Gain coefficient (at anode voitage 1 and
anode voitage [2]	115	14A),MAB 115-145 Gain coefficient (at anode voitage 1 and
anode voitage [3]	-145	14A),MAB 115-145 Gain coefficient (at anode voitage 1 and
anode voitage [4]	1	14A),MAB 115-145 Gain coefficient (at anode voitage 1 and
grid [1]	1 A	aHoga 1 n2 kB, Tokeanoga 10A) 30-38 Anode current (at anode voltage 0.3 kV, grid
grid [2]	10 A	aHoga 1 n2 kB, Tokeanoga 10A) 30-38 Anode current (at anode voltage 0.3 kV, grid
grid [3]	30 A	aHoga 1 n2 kB, Tokeanoga 10A) 30-38 Anode current (at anode voltage 0.3 kV, grid
grid [4]	-38 A	aHoga 1 n2 kB, Tokeanoga 10A) 30-38 Anode current (at anode voltage 0.3 kV, grid
grid [5]	300 mA	aHoga 1 n2 kB, Tokeanoga 10A) 30-38 Anode current (at anode voltage 0.3 kV, grid
voltage [1]	3 V	Tok aHoga (Npy HanpskeHusx aHoaa 0,3 kB, voltage 100 V), A, atleast 8
voltage [2]	100 V	Tok aHoga (Npy HanpskeHusx aHoaa 0,3 kB, voltage 100 V), A, atleast 8
voltage [3]	8 V	Tok aHoga (Npy HanpskeHusx aHoaa 0,3 kB, voltage 100 V), A, atleast 8
anode [1]	100 kV	ceTkn 100 B), A,HemMeHee 8 Negative cutoff voltage (at anode voltage 10 kV, anode
anode [2]	8 kV	ceTkn 100 B), A,HemMeHee 8 Negative cutoff voltage (at anode voltage 10 kV, anode
anode [3]	10 kV	ceTkn 100 B), A,HemMeHee 8 Negative cutoff voltage (at anode voltage 10 kV, anode

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current [1]	100 mA	HanpsipkeHune sanupaHus oTpuyaTensHoe (npu current 0.1 A), absolute value, V,atmost 400
current [2]	400 A	HanpsipkeHune sanupaHus oTpuyaTensHoe (npu current 0.1 A), absolute value, V,atmost 400
Interelectrode capacitance, pF [1]	10 pF	Hanpsbxehun aHoaa 10 kKB, Toke aHona 0,1 A), Interelectrode capacitance, pF:
Interelectrode capacitance, pF [2]	1 pF	Hanpsbxehun aHoaa 10 kKB, Toke aHona 0,1 A), Interelectrode capacitance, pF:
input,atmost [1]	3	abconoTHoe 3HayeHwe, B,He Gonee 400 input,atmost
input,atmost [2]	400	abconoTHoe 3HayeHwe, B,He Gonee 400 input,atmost
output,atmost	6	MexxaneKtpogHbie emkocTu, nd, He 6ornee: output,atmost
voltage (ACorDC),V [1]	19 V	Hanpsixehue Hakana (nepeMeHHoe unM Filament voltage (ACorDC),V 19-21
voltage (ACorDC),V [2]	-21 V	Hanpsixehue Hakana (nepeMeHHoe unM Filament voltage (ACorDC),V 19-21
voltage (DC), kV [1]	19 kV	nocTosHHOE), B 19-21 Anode voltage (DC), kV 12
voltage (DC), kV [2]	-21 kV	nocTosHHOE), B 19-21 Anode voltage (DC), kV 12
voltage (DC), kV [3]	12 kV	nocTosHHOE), B 19-21 Anode voltage (DC), kV 12
voltage, absolute value, kV	1.5 kV	Hanpsixexue, kB: Cutoff voltage, absolute value, kV 1.5
current, A [1]	12 A	aHOAa (NOCTOAHOE) 12 Filament startingcurrent, A 450
current, A [2]	450 A	aHOAa (NOCTOAHOE) 12 Filament startingcurrent, A 450
Dissipation, kW	3 kW	3anuparnst oTpuLaTenbHoe Dissipation, kW:
anode [1]	3	(a6COMIOTHOE 3HAYEHNE) 1,5 anode 130
anode [2]	15	(a6COMIOTHOE 3HAYEHNE) 1,5 anode 130
anode [3]	130	(a6COMIOTHOE 3HAYEHNE) 1,5 anode 130

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
frequency, MHz	30 MHz	Paccensaemasn MOWHOCTb, KBT: Operating frequency, MHz 30
Temperature at stem and metal-to-ceramic	130 C	BHOMOM . .ottt ettt et e 130 Temperature at stem and metal-to-ceramic
Anode Characteristic Curves // /	7	Averaged Anode Characteristic Curves // / 7
grid	0	— S 0 ____ grid