



ELECTRONIC TUBE REFERENCE

GM1A

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Massive Soviet power-modulator triode intended for low-frequency high-power service. Approximately 30 kW plate dissipation and multi-kilovolt capability support multiampere anode current in heavy transmitter-modulation and audio-frequency power stages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	10.5 V / —	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
MAXIMUM PLATE VOLTAGE	6000 V
MAXIMUM PLATE DISSIPATION	30000 W
<i>Promoted-field audit performed from English ratings/characteristics; detailed electrical values retained in parameter table.</i>	

The GM-1A power modulator triode is used in low-frequency amplifier circuits in RF equipment. It has a directly heated carbonized thoriated-tungsten cathode and forced water/air cooling.

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 modulator triode is used in low	1 W	The 'M-1A power modulator triode is used in low-
grid	12	Envelope: glass-to-metal. A—anode; C-grid; 1,2 -
temperature, °C L. L. — [1]	-10 C	Temnepatypa okpyxaiauwerh cpeas, °C Ambient temperature, °C L. L. —10to +55
temperature, °C L. L. — [2]	55 C	Temnepatypa okpyxaiauwerh cpeas, °C Ambient temperature, °C L. L. —10to +55
currents [1]	3 mA	Hanpsbkerun aHoaa 3 KB, Tokax aHoaa 3kV, anode currents 6and 10 A}, mA/V 22-32
currents [2]	3 mA	Hanpsbkerun aHoaa 3 KB, Tokax aHoaa 3kV, anode currents 6and 10 A}, mA/V 22-32
currents [3]	6 mA	Hanpsbkerun aHoaa 3 KB, Tokax aHoaa 3kV, anode currents 6and 10 A}, mA/V 22-32
currents [4]	10 mA	Hanpsbkerun aHoaa 3 KB, Tokax aHoaa 3kV, anode currents 6and 10 A}, mA/V 22-32
currents [5]	22 mA	Hanpsbkerun aHoaa 3 KB, Tokax aHoaa 3kV, anode currents 6and 10 A}, mA/V 22-32
currents [6]	-32 mA	Hanpsbkerun aHoaa 3 KB, Tokax aHoaa 3kV, anode currents 6and 10 A}, mA/V 22-32
voltages [1]	6 V	6U10A),MAB 22-32 Gain coefficient (at anode voltages 3 and
voltages [2]	0 V	6U10A),MAB 22-32 Gain coefficient (at anode voltages 3 and
voltages [3]	22 V	6U10A),MAB 22-32 Gain coefficient (at anode voltages 3 and
voltages [4]	-32 V	6U10A),MAB 22-32 Gain coefficient (at anode voltages 3 and

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltages [5]	3 V	6U10A),MAB 22-32 Gain coefficient (at anode voltages 3 and
voltage [1]	3 A	avona 3n5kB, TokeaHogabA) 3,4-5 Anode current (at anode voltage 4 kV), A 22-30
voltage [2]	34 A	avona 3n5kB, TokeaHogabA) 3,4-5 Anode current (at anode voltage 4 kV), A 22-30
voltage [3]	-5 A	avona 3n5kB, TokeaHogabA) 3,4-5 Anode current (at anode voltage 4 kV), A 22-30
voltage [4]	4 A	avona 3n5kB, TokeaHogabA) 3,4-5 Anode current (at anode voltage 4 kV), A 22-30
voltage [5]	22 A	avona 3n5kB, TokeaHogabA) 3,4-5 Anode current (at anode voltage 4 kV), A 22-30
voltage [6]	-30 A	avona 3n5kB, TokeaHogabA) 3,4-5 Anode current (at anode voltage 4 kV), A 22-30
voltage [1]	4 kV	Tok aHoga (Npu Hanps>keHun aHoga 4 kB), A . . . 22-30 Negative grid voltage (at anode voltage 6 kV,
voltage [2]	22 kV	Tok aHoga (Npu Hanps>keHun aHoga 4 kB), A . . . 22-30 Negative grid voltage (at anode voltage 6 kV,
voltage [3]	-30 kV	Tok aHoga (Npu Hanps>keHun aHoga 4 kB), A . . . 22-30 Negative grid voltage (at anode voltage 6 kV,
voltage [4]	6 kV	Tok aHoga (Npu Hanps>keHun aHoga 4 kB), A . . . 22-30 Negative grid voltage (at anode voltage 6 kV,
current [1]	1 A	HanpsbkeHue ceTKn oTpuLaTensHoe anode current 1 A), kV,atmost 1.6
current [2]	1.6 A	HanpsbkeHue ceTKn oTpuLaTensHoe anode current 1 A), kV,atmost 1.6
current, A [1]	105 A	Hanpsxenne nakana,B 10,5 Filament startingcurrent, A 285
current, A [2]	285 A	Hanpsxenne nakana,B 10,5 Filament startingcurrent, A 285
voltage, kV oL [1]	285 kV	MyckoBon Tok Hakana, A 285 Anode voltage, kV oL 6

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage, kV oL [2]	6 kV	MyckoBon Tok Hakana, A 285 Anode voltage, kV oL 6
dissipation, kW o [1]	6 kW	Hanpskenwe amopna, «B 6 Anode dissipation, kW o 30
dissipation, kW o [2]	30 kW	Hanpskenwe amopna, «B 6 Anode dissipation, kW o 30
Grid Characteristic Curves: Uy = [1]	0	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [2]	1200	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [3]	-1000	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [4]	-800	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [5]	-600	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [6]	400	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [7]	-200	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [8]	10.5	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [9]	10	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [10]	2	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [11]	30	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv
Grid Characteristic Curves: Uy = [12]	400	-T40 1200 -1000-800 -600 400 -200 @ Averaged Grid Characteristic Curves: Uy = 10.5 V; J 10 2w 30 400 gv



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