



ELECTRONIC TUBE REFERENCE

GMI30

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Russian high-current pulse-switching triode designed as the power switch in RF pulse modulators and related pulsed-power equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	8.2 V / —	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
MAXIMUM PLATE VOLTAGE	2000 V
MAXIMUM PLATE DISSIPATION	300 W
<i>Promoted-field audit performed from English ratings/characteristics; detailed electrical values retained in parameter table.</i>	

The GMI-30 triode is used as a pulse power switch in pulse modulators in RF equipment and has a directly heated carbonized thoriated-tungsten 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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
power switch in	30 W	The TMWU-30 triode is used as a pulse power switch in
Cathode: directly heated, carbonized thoriated tungsten	60	Cathode: directly heated, carbonized thoriated tungsten. 60koBOW BbiBOA —
cathode; A [1]	12	1,2, 3,4 - cathode; A-
cathode; A [2]	34	1,2, 3,4 - cathode; A-
grid	350	Height: at most 350 mm. anode-top cap; C - grid-
anode	2 uS	KpyTuaHa xapakTepucTuky (npy Han- Mutual conductance (at anode voltage 2 kV, anode
current S0mMA), mA/V [1]	2 mA	pskeHun aHoaa 2 kB, Toke aHoga current S0mMA), mA/V ... 4.8-6.8
current S0mMA), mA/V [2]	4.8 mA	pskeHun aHoaa 2 kB, Toke aHoga current S0mMA), mA/V ... 4.8-6.8
current S0mMA), mA/V [3]	-6.8 mA	pskeHun aHoaa 2 kB, Toke aHoga current S0mMA), mA/V ... 4.8-6.8
grid and [1]	0 mA	S50MA),MA/B ... 4,8-6,8 Peak cathode emission current (at peak grid and
grid and [2]	48 mA	S50MA),MA/B ... 4,8-6,8 Peak cathode emission current (at peak grid and
grid and [3]	-68 mA	S50MA),MA/B ... 4,8-6,8 Peak cathode emission current (at peak grid and
pulse [1]	3 kV	Tok 3mMuccum KaToaa B umnynece (Npv anode voltages 3 kV, pulse duration 5—10 us, pulse
pulse [2]	3 kV	Tok 3mMuccum KaToaa B umnynece (Npv anode voltages 3 kV, pulse duration 5—10 us, pulse

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
pulse [3]	5 kV	Tok 3mMuccum KaToaa B umnynece (Npv anode voltages 3 kV, pulse duration 5—10 us, pulse
pulse [4]	-10 kV	Tok 3mMuccum KaToaa B umnynece (Npv anode voltages 3 kV, pulse duration 5—10 us, pulse
pulses/s), A, atleast [1]	3 Hz	HaNPsKeHUsX CeTKWU B uMnynbee 3 KB, aHoaa frequency 50 pulses/s), A, atleast 20
pulses/s), A, atleast [2]	50 Hz	HaNPsKeHUsX CeTKWU B uMnynbee 3 KB, aHoaa frequency 50 pulses/s), A, atleast 20
pulses/s), A, atleast [3]	20 Hz	HaNPsKeHUsX CeTKWU B uMnynbee 3 KB, aHoaa frequency 50 pulses/s), A, atleast 20
grid [1]	3 kV	B uMmnynece 3 kKB, AnNuTensHOCTN MMNYNbCa Peak grid voltage (at anode voltage 3 kV, grid
grid [2]	3 kV	B uMmnynece 3 kKB, AnNuTensHOCTN MMNYNbCa Peak grid voltage (at anode voltage 3 kV, grid
pulse [1]	5 A	5—10 MKC, 4acTOTE crieoBaHus uMmnynbca voltage —400 V, peak anode current 15 A, pulse
pulse [2]	-10 A	5—10 MKC, 4acTOTE crieoBaHus uMmnynbca voltage —400 V, peak anode current 15 A, pulse
pulse [3]	4 A	5—10 MKC, 4acTOTE crieoBaHus uMmnynbca voltage —400 V, peak anode current 15 A, pulse
pulse [4]	-400 A	5—10 MKC, 4acTOTE crieoBaHus uMmnynbca voltage —400 V, peak anode current 15 A, pulse
pulse [5]	15 A	5—10 MKC, 4acTOTE crieoBaHus uMmnynbca voltage —400 V, peak anode current 15 A, pulse
pulses/s) [1]	50 Hz	50UMN/C), A,HEMEHEE ot 20 duration 5—10 us, puise frequency 50 pulses/s),
pulses/s) [2]	20 Hz	50UMN/C), A,HEMEHEE ot 20 duration 5—10 us, puise frequency 50 pulses/s),
pulses/s) [3]	5 Hz	50UMN/C), A,HEMEHEE ot 20 duration 5—10 us, puise frequency 50 pulses/s),
pulses/s) [4]	-10 Hz	50UMN/C), A,HEMEHEE ot 20 duration 5—10 us, puise frequency 50 pulses/s),
pulses/s) [5]	50 Hz	50UMN/C), A,HEMEHEE ot 20 duration 5—10 us, puise frequency 50 pulses/s),

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grid [1]	3 A	HanpshkeHusx aHoaa 3 kB, ceTku muHyc 400 B, Peak grid current (at anode voltage 3kV, peak grid
grid [2]	400 A	HanpshkeHusx aHoaa 3 kB, ceTku muHyc 400 B, Peak grid current (at anode voltage 3kV, peak grid
grid [3]	3 A	HanpshkeHusx aHoaa 3 kB, ceTku muHyc 400 B, Peak grid current (at anode voltage 3kV, peak grid
current [1]	15 A	TOKe aHoAa B MNysibce 15 A, ANUTENLHOCTN voltage at most 2,000 V, peak anode current 15 A,
current [2]	2000 A	TOKe aHoAa B MNysibce 15 A, ANUTENLHOCTN voltage at most 2,000 V, peak anode current 15 A,
current [3]	15 A	TOKe aHoAa B MNysibce 15 A, ANUTENLHOCTN voltage at most 2,000 V, peak anode current 15 A,
frequency [1]	5 Hz	umnynbca 5—10 MKC, HacToTe crenoBaHus pulse duration 5—10 us, pulse frequency 50
frequency [2]	-10 Hz	umnynbca 5—10 MKC, HacToTe crenoBaHus pulse duration 5—10 us, pulse frequency 50
frequency [3]	5 Hz	umnynbca 5—10 MKC, HacToTe crenoBaHus pulse duration 5—10 us, pulse frequency 50
frequency [4]	-10 Hz	umnynbca 5—10 MKC, HacToTe crenoBaHus pulse duration 5—10 us, pulse frequency 50
frequency [5]	50 Hz	umnynbca 5—10 MKC, HacToTe crenoBaHus pulse duration 5—10 us, pulse frequency 50
voltage [1]	2000 kV	2000 B, Toke aHoaa B umnynece 15 A, Negative cutoff voltage (at anode voltage 27 kV,
voltage [2]	15 kV	2000 B, Toke aHoaa B umnynece 15 A, Negative cutoff voltage (at anode voltage 27 kV,
voltage [3]	27 kV	2000 B, Toke aHoaa B umnynece 15 A, Negative cutoff voltage (at anode voltage 27 kV,
current [1]	5 mA	ANMTenbHOCTU MMNynbea 5—10 MKC, YacToTte anode current 0.5 mA), absolute value,
current [2]	-10 mA	ANMTenbHOCTU MMNynbea 5—10 MKC, YacToTte anode current 0.5 mA), absolute value,
current [3]	0.5 mA	ANMTenbHOCTU MMNynbea 5—10 MKC, YacToTte anode current 0.5 mA), absolute value,

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
pulses/s [1]	48 Hz	Hakana 4,8 B), B Te4eHun 500 4 Pulse repetition frequency, pulses/s 50
pulses/s [2]	500 Hz	Hakana 4,8 B), B Te4eHun 500 4 Pulse repetition frequency, pulses/s 50
pulses/s [3]	4 Hz	Hakana 4,8 B), B Te4eHun 500 4 Pulse repetition frequency, pulses/s 50
pulses/s [4]	50 Hz	Hakana 4,8 B), B Te4eHun 500 4 Pulse repetition frequency, pulses/s 50
Interelectrode capacitance, pF [1]	3 pF	3KCnayaTaumu, MA, He MEHee 300 Interelectrode capacitance, pF:
Interelectrode capacitance, pF [2]	300 pF	3KCnayaTaumu, MA, He MEHee 300 Interelectrode capacitance, pF:
cathode) [1]	7	HanpsixkeHue sanupanms oTpuuaTensHoe input (grid—cathode) 7-12
cathode) [2]	-12	HanpsixkeHue sanupanms oTpuuaTensHoe input (grid—cathode) 7-12
cathode), atleast [1]	27	(npv Hanps>xeHWK aHoaa 27 kB, Toke output (anode—cathode), atleast 2
cathode), atleast [2]	2	(npv Hanps>xeHWK aHoaa 27 kB, Toke output (anode—cathode), atleast 2
grid) [1]	5	aHoga 0,5 MA), abcontoTHoe 3HaYeHue, transfer (anode—grid)
grid) [2]	3	aHoga 0,5 MA), abcontoTHoe 3HaYeHue, transfer (anode—grid)
Pulse [1]	300	PacceuBaemas mowHoCTb aHogom, BT 300 Pulse 1/duty factor, atleast 500
Pulse [2]	1	PacceuBaemas mowHoCTb aHogom, BT 300 Pulse 1/duty factor, atleast 500
Pulse [3]	500	PacceuBaemas mowHoCTb aHogom, BT 300 Pulse 1/duty factor, atleast 500
frequency [1]	7 kHz	7= 5 us; pulse frequency 65 kHz
frequency [2]	5 kHz	7= 5 us; pulse frequency 65 kHz
frequency [3]	65 kHz	7= 5 us; pulse frequency 65 kHz
anode	6	anode; 6] TN

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