



ELECTRONIC TUBE REFERENCE

GI53

Voltage - Triode (single high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Russian metal-ceramic RF oscillator triode for pulsed high-frequency operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	1.8 V / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode

No fixed ratings recorded.

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

MMnyneCHbIn reHepaTopHbin Tpuog WN-53 npeп- The N'N-53 triode is used as a RF oscillator in ground- Cathode: indirectly heated, oxide-coated. > Envelope: metal-ceramic with disc-type leads

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
MMnynechHbIn reHepaTopHbin Tpuog WN [1]	53	MMnynechHbIn reHepaTopHbin Tpuog WN-53 npep- The N'N-53 triode is used as a RF oscillator in ground-
MMnynechHbIn reHepaTopHbin Tpuog WN [2]	53	MMnynechHbIn reHepaTopHbin Tpuog WN-53 npep- The N'N-53 triode is used as a RF oscillator in ground-
grid; K [1]	2728	272,8-g43 A - anode; C —grid; K-
grid; K [2]	3	272,8-g43 A - anode; C —grid; K-
temperature, °C [1]	19600 C	OOMHOMHBIE v v v v e et e 19600 Ambient temperature, °C —60to +125
temperature, °C [2]	-60 C	OOMHOMHBIE v v v v e et e 19600 Ambient temperature, °C —60to +125
temperature, °C [3]	125 C	OOMHOMHBIE v v v v e et e 19600 Ambient temperature, °C —60to +125
voltage (ACorDC), V [1]	18 V	HanpsxeHnne Hakana (~uwm =), B 1,8 Heater voltage (ACorDC), V 1.8
voltage (ACorDC), V [2]	1.8 V	HanpsxeHnne Hakana (~uwm =), B 1,8 Heater voltage (ACorDC), V 1.8
voltage, V [1]	150 V	Hanpsxxenne anopga, B 150 Anode voltage, V 150
voltage, V [2]	150 V	Hanpsxxenne anopga, B 150 Anode voltage, V 150
voltage, V	3 V	OTpuyarensHoe HanpsixeHue ceTku, B Negative grid voltage, V 3
voltage	3 V	OTpuuyaTenbHOe HanpsHKeHne 3anupaHus Negative cutoff voltage (at anode voltage

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
current [1]	155 uA	(npwv Hanps>xeHun aHoga 1,55 kB, Toke 1.55 kV, anode current 200 uA), V, atmost 95
current [2]	1.55 uA	(npwv Hanps>xeHun aHoga 1,55 kB, Toke 1.55 kV, anode current 200 uA), V, atmost 95
current [3]	200 uA	(npwv Hanps>xeHun aHoga 1,55 kB, Toke 1.55 kV, anode current 200 uA), V, atmost 95
current [4]	95 uA	(npwv Hanps>xeHun aHoga 1,55 kB, Toke 1.55 kV, anode current 200 uA), V, atmost 95
current, mA [1]	200 mA	aHoga 200 mxA), B, He 6onee 95 Anode current, mA
current, mA [2]	6 mA	aHoga 200 mxA), B, He 6onee 95 Anode current, mA
current, mA [3]	95 mA	aHoga 200 mxA), B, He 6onee 95 Anode current, mA
voltage [1]	2 mA	TokaHoga,MA , 2-7,2 Inverse grid current (at heater voltage 1.8V,
voltage [2]	-72 mA	TokaHoga,MA , 2-7,2 Inverse grid current (at heater voltage 1.8V,
voltage [3]	1.8 mA	TokaHoga,MA , 2-7,2 Inverse grid current (at heater voltage 1.8V,
voltage [1]	-3 V	Tok ceTkn obpaTHOM {Npv HAaNPShKEHUN grid voltage —3 V, anode voltage 150 V),
voltage [2]	150 V	Tok ceTkn obpaTHOM {Npv HAaNPShKEHUN grid voltage —3 V, anode voltage 150 V),
Mutual conductance, mA/V [1]	3 mA/V	3 B, Hanpsbkenuu aHoga 150 B), MKA, He 6onee . . . 20 Mutual conductance, mA/V
Mutual conductance, mA/V [2]	150 mA/V	3 B, Hanpsbkenuu aHoga 150 B), MKA, He 6onee . . . 20 Mutual conductance, mA/V
Mutual conductance, mA/V [3]	6 mA/V	3 B, Hanpsbkenuu aHoga 150 B), MKA, He 6onee . . . 20 Mutual conductance, mA/V
Mutual conductance, mA/V [4]	20 mA/V	3 B, Hanpsbkenuu aHoga 150 B), MKA, He 6onee . . . 20 Mutual conductance, mA/V
voltage [1]	1.8 V	MoLLHOCTL BbIXOAHASA B MMNYNbCe (Npu 1.8V, grid voltage — 100V, anode voltage
voltage [2]	100 V	MoLLHOCTL BbIXOAHASA B MMNYNbCe (Npu 1.8V, grid voltage — 100V, anode voltage

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
resistance [1]	18 ohm	HanpspkeHny Hakana 1,8 B, npy Hanps>keHwn 1.55kV, peak grid voltage 120 V, resistance
resistance [2]	1.55 ohm	HanpspkeHny Hakana 1,8 B, npy Hanps>keHwn 1.55kV, peak grid voltage 120 V, resistance
resistance [3]	120 ohm	HanpspkeHny Hakana 1,8 B, npy Hanps>keHwn 1.55kV, peak grid voltage 120 V, resistance
frequency [1]	100 MHz	ceTku mmHyc 100 B, HanpsixeHun aHoaa 10 Q in cathode circuit, frequency 900 MHz,
frequency [2]	10 MHz	ceTku mmHyc 100 B, HanpsixeHun aHoaa 10 Q in cathode circuit, frequency 900 MHz,
frequency [3]	900 MHz	ceTku mmHyc 100 B, HanpsixeHun aHoaa 10 Q in cathode circuit, frequency 900 MHz,
pulse duration [1]	155 us	1,55 kB, Hanpsi>xeHUn ceTKn B MMNynbce pulse duration 3 us, 1/duty factor 300),
pulse duration [2]	3 us	1,55 kB, Hanpsi>xeHUn ceTKn B MMNynbce pulse duration 3 us, 1/duty factor 300),
pulse duration [3]	1 us	1,55 kB, Hanpsi>xeHUn ceTKn B MMNynbce pulse duration 3 us, 1/duty factor 300),
pulse duration [4]	300 us	1,55 kB, Hanpsi>xeHUn ceTKn B MMNynbce pulse duration 3 us, 1/duty factor 300),
Interelectrode capacitance, pF	900 pF	yacToTe 900 My, ANnTenbHOCTU MMNyJsibca Interelectrode capacitance, pF:
input [1]	3	3 MKC U ckBaxkHOCTH 300), BT, He menee input 5-8.5
input [2]	300	3 MKC U ckBaxkHOCTH 300), BT, He menee input 5-8.5
input [3]	5	3 MKC U ckBaxkHOCTH 300), BT, He menee input 5-8.5
input [4]	-8.5	3 MKC U ckBaxkHOCTH 300), BT, He menee input 5-8.5
output,atmost L L	0.3	Mex2anexkTpogHste emkocTh, nd: output,atmost L L 0.3
voltage (DC), kV	1.6 kV	Haubonbluee Hanpskenue aHoga (=), xB Anode voltage (DC), kV 1.6
voltage (DC),V	-200 V	Haubonbluee Hanpskenne cetkn (=), B Grid voltage (DC),V —200
voltage (negative overshoot)	0 V	AmMnynbcHoe HanpsixkeHwe ceTku (0Tpu- Peak grid voltage (negative overshoot)

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Dissipation, W	150 W	nMnynscaHe boneeimke, B 150 Dissipation, W:
anode (withheatsink)	10	PacceuBaemasn Hanbonbluast MOLLHOCTb, BT: anode (withheatsink) 10
anode [1]	10	aHOAOM (C paanaTopom) 10 anode 6
anode [2]	6	aHOAOM (C paanaTopom) 10 anode 6
grid	0.5	GHOAOM e e grid 0.5
pulse duration	5 A	CETKOWh 0,5 Peak anode current at pulse duration
Hanbonbiunia TOK aHoaa [1]	8	Hanbonbiunia TOK aHoaa 8 MMNynbce npw 3usand 1/duty factor 300, A 2
Hanbonbiunia TOK aHoaa [2]	3	Hanbonbiunia TOK aHoaa 8 MMNynbce npw 3usand 1/duty factor 300, A 2
Hanbonbiunia TOK aHoaa [3]	1	Hanbonbiunia TOK aHoaa 8 MMNynbce npw 3usand 1/duty factor 300, A 2
Hanbonbiunia TOK aHoaa [4]	300	Hanbonbiunia TOK aHoaa 8 MMNynbce npw 3usand 1/duty factor 300, A 2
Hanbonbiunia TOK aHoaa [5]	2	Hanbonbiunia TOK aHoaa 8 MMNynbce npw 3usand 1/duty factor 300, A 2
pulse duration	3 A	ANUTENLHOCTU UMNILCA 3 MKC U CKBAXHOCTM Peak cathode current at pulse duration
Published electrical value [1]	300	300,A e 3 us and 1/duty factor 300, A 25
Published electrical value [2]	3	300,A e 3 us and 1/duty factor 300, A 25
Published electrical value [3]	1	300,A e 3 us and 1/duty factor 300, A 25
Published electrical value [4]	300	300,A e 3 us and 1/duty factor 300, A 25
Published electrical value [5]	25	300,A e 3 us and 1/duty factor 300, A 25
pulse durationus	3.3 us	Haw6onbLuwnii TOK KaToAa B UMNYNbce Npu Maximum pulse durationus 3.3
wavelength,cm [1]	3 cm	ANUTENBHOCTA MMNYNBECA 3 MKC 1 CKBaXX- Maximum wavelength,cm 15
wavelength,cm [2]	1 cm	ANUTENBHOCTA MMNYNBECA 3 MKC 1 CKBaXX- Maximum wavelength,cm 15

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
wavelength,cm [3]	15 cm	ANUTENBHOCTA MMNYNBECA 3 MKC 1 CKBaXX- Maximum wavelength,cm 15
temperature,°C [1]	33 C	Hav6onbuian ANUTeNbHOCTb UMNYILCA, MKC 3,3 Anode seal temperature,°C 200
temperature,°C [2]	200 C	Hav6onbuian ANUTeNbHOCTb UMNYILCA, MKC 3,3 Anode seal temperature,°C 200
grid circuit, k@ [1]	15 ohm	Hau6onblas anvyä BoNHbLI, CM 15 Resistance in grid circuit, k@ 1
grid circuit, k@ [2]	1 ohm	Hau6onblas anvyä BoNHbLI, CM 15 Resistance in grid circuit, k@ 1