



ELECTRONIC TUBE REFERENCE

NL732

Specialized - Thyatron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Metal-envelope gas-and-mercury thyatron for resistance welding and AC control. Its massive filament supports very heavy industrial switching.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	2.5 V / 55 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
MAXIMUM PLATE VOLTAGE	1500 V
MAXIMUM CATHODE CURRENT	30 A
PEAK INVERSE VOLTAGE	1500 V
NOMINAL OUTPUT CURRENT	30 A
PEAK FORWARD CURRENT	225 A
WARM-UP TIME	180 s

Published ratings and characteristics promoted where canonical fields apply.

NATIONAL POWER TUBE NL-732 is a metal en-velope thyatron designed especially for resistance welding and AC control applications. It is gas and mercury filled for quick starting and long life with- out circuit cushioning. TECHNICAL INFORMATION do Amperes output (Maximum) 30 25 Instantaneous amperes output (Maximum) 160 225 Maximum time of averaging anode current (seconds) 30 Maximum peak inverse volts 1500 Maximum peak forward volts 1500 *Condensed mercury temperature limits

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1956 National Electronics Industrial Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1956 NATIONAL ELECTRONICS INDUSTRIAL TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
30 Amperes do	225 Ampere peak A	Source technical-information table; wording preserved from datasheet.
do Amperes output (Maximum)	30 25 A	Source technical-information table; wording preserved from datasheet.
Instantaneous amperes output (Maximum)	160 225 A	Source technical-information table; wording preserved from datasheet.
Maximum time of averaging anode current (seconds)	30 A	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak inverse volts	1500 V	Source technical-information table; wording preserved from datasheet.
Maximum peak forward volts	1500 V	Source technical-information table; wording preserved from datasheet.
*Condensed mercury temperature limits (°C)	-40 to +80 C	Source technical-information table; wording preserved from datasheet.
Filament volts	2.5 V	Source technical-information table; wording preserved from datasheet.
Filament amperes	55 ± 5 A	Source technical-information table; wording preserved from datasheet.
Filament heating time (seconds)	180 s	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum negative grid voltage before conduction (volts)	500 V	Source technical-information table; wording preserved from datasheet.
Maximum negative grid voltage during conduction (volts)	10 V	Source technical-information table; wording preserved from datasheet.
Maximum critical grid current (microamps)	10 A	Source technical-information table; wording preserved from datasheet.
Max. dc grid current (amperes)	1 A	Source technical-information table; wording preserved from datasheet.
Maximum ac short circuit current (amperes)	2500 A	Source technical-information table; wording preserved from datasheet.
Approx .temp. rise, cond. mercury above ambient (°C)	30	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Net weight (pounds)	7 lb	Source technical-information table; wording preserved from datasheet.
Approx. shipping weight (lbs.)	15 lb	Source technical-information table; wording preserved from datasheet.
*The tube may be started and satisfactory operation will result between -40 and	+80°C. For maximum life the condensed	Source technical-information table; wording preserved from datasheet.
mercury temperature after warm-up should run between	+40 and +80°C which corresponds to approximately + 10and ±50°C C	Source technical-information table; wording preserved from datasheet.
CS	r00	Source technical-information table; wording preserved from datasheet.
19 8 11 MAX	S00	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
20 -MI	-12 -r -♦ 0 VS	Source technical-information table; wording preserved from datasheet.
DC	4010 VOLTAY[AT 7TYTT OF DINCMADY[- VOLT	Source technical-information table; wording preserved from datasheet.
FIN AT	C)IARRLT(R17710 CAM	Source technical-information table; wording preserved from datasheet.
FILAMENT	FMABM/ A1 40000	Source technical-information table; wording preserved from datasheet.
FILAMENT TERMINAL	300	Source technical-information table; wording preserved from datasheet.
NL-732 OUTLINE	40 50 60 80 100	Source technical-information table; wording preserved from datasheet.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PERCENT DUTY	2 TUBES CONNECTED IN INVERSE	Source technical-information table; wording preserved from datasheet.

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical arc drop at 100 amperes peak (volts)	12 V	Source technical-information table; wording preserved from datasheet.
Ionization time (approx., microseconds)	10 us	Source technical-information table; wording preserved from datasheet.
Deionization time (approx., microseconds)	1000 us	Source technical-information table; wording preserved from datasheet.
Anode to grid capacitance (uuf) (approx.)	4 pF	Source technical-information table; wording preserved from datasheet.



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1957 National Electronics

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1957 NATIONAL ELECTRONICS

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak forward voltage	1500 V	—
Maximum peak output current	225 A	—
Maximum dc output current	30 A	—

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

