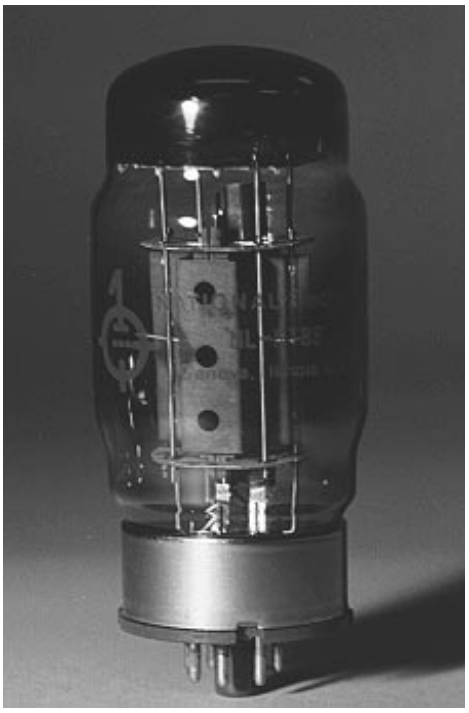
NATIONAL

KT100

Power Beam Tetrode

The KT100 is a beam tetrode power amplifier designed and produced with the audiophile in mind.

It provides for push-pull amplifier designs to 100 watts. The construction of the tube provides for the highest reliability of operation at full ratings.



Heater:		
Voltage	6.3	V
Current (Approx.)	1.6	A

DIRECT INTERELECTRODE CAPACITANCES
without shield

Grid to Plate	1.2	p*f*
Input	16	p*f*
Output	12	p*f*

MAXIMUM RATINGS

	Absolute	Design (max)	
Plate Voltage	800	800	Vdc
Grid #2 Voltage	600	600	Vdc
Grid #1 Voltage	200	200	-Vdc
Plate Dissipation	42	35	W
Grid #2 Dissipation	8	6	W
Plate Plus Grid #2	46	40	W
Cathode Current	230	230	mA
Heater to Cathode Voltage	250	200	±V
Bulb Temperature	250	250	°C

Cathode Bias Resistance (Grid #1 to Cathode)		
Anode & Grid #2 Dissipation ≤ 35W	470	kΩ
Anode & Grid #2 Dissipation > 35W	270	kΩ
Fixed Bias Resistance (Grid #1 to Cathode)		
Anode & Grid #2 Dissipation ≤ 35W	220	kΩ
Anode & Grid #2 Dissipation > 35W	100	kΩ

NATIONAL ELECTRONICS
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Push-Pull Class AB1. Fixed Bias Tetrode Connection.

Plate Supply Voltage	560	Vdc
Plate Voltage at Zero Signal	552	Vdc
Grid #2 Voltage	300	Vdc
Plate Current at Zero Signal	2x60	mAdc
Plate Current at Maximum Signal	2x145	mAdc
Grid #2 Current at Zero Signal	2x1.7	mAdc
Grid #2 Current at Maximum Signal	2x15	mAdc
Load Resistance: Anode-Anode	4.5	kΩ
*Grid #1 Voltage (approx.)	34	-Vdc
Power Output	100	W
Total Distortion	2.5	%
***Intermodulation Distortion	10	%
Anode Dissipation at Zero Signal	2x33	W
Anode Dissipation at Maximum Signal	2x28	W
Grid #2 Dissipation at Zero Signal	2x0.5	W
Grid #2 Dissipation at Maximum Signal	2x4.5	W
Peak Voltage Grid #1 to Grid #1(ac)	67	Vac

Push-Pull Class AB1. Cathode Bias Ultra-Linear Connection.

(40% Tapping Points)

	Absolute	Design (max)	
Plate Supply and Grid #2 Voltage	500	375	Vdc
Plate and Grid #2 Voltage at Zero Signal	436	328	Vdc
Plate and Grid #2 Current at Zero Signal	2x87	2x87	mAdc
Plate and Grid #2 Current at max. Signal	2x99	2x96	mAdc
Load Resistance: Anode-Anode	6	5	kΩ
**Cathode Resistance	2x600	2x400	Ω
Grid #1 Voltage (approx.)	52	35	-Vdc
Power Output	50	30	W
Total Distortion	1.5	1	%
***Intermodulation Distorion	4	3	%
Power Dissipation Anode & Grid #2 at Zero Signal	2x38	2x28.5	W
Power Dissipation Anode & Grid #2 at Max. Signal	2x17	2x16	W
Grid #2 Dissipation at Maximum Signal (ac)	104	71	Vac
Output Impedance	4.8	4.5	kΩ

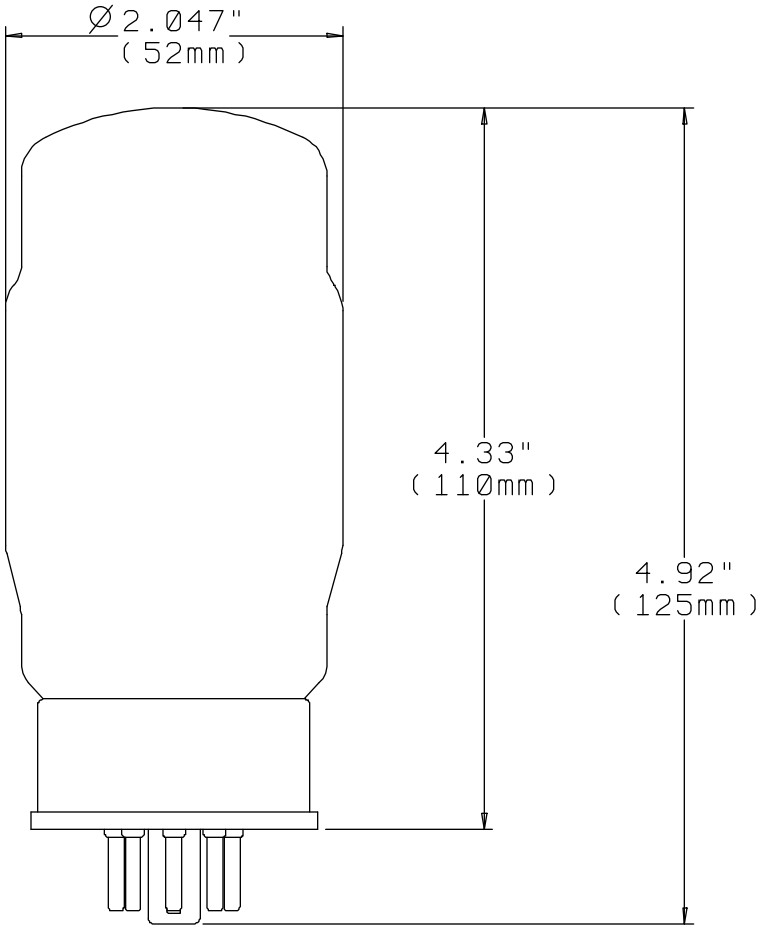
* - it is essential to provide two separately adjustable bias voltage sources, having voltage adjustment range of ±25%.

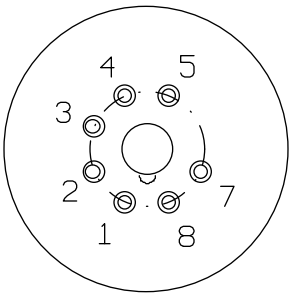
** - it is essential to use two separate cathode bias resistors.

*** - intermodulation distortion; measured using two input signals at 50 and 6000Hz (ratio of amplitudes 4:1)

Physical Characteristics

Tube Envelope:	T16 Glass Bulb
Base:	Large low loss phenolic wafer with barriers. 7-pin #B7-99
Installation:	Tubes may be mounted in any position. It is recommended that the centers of the tube sockets are not less than 4" (10cm) apart and that pins 4 and 8 of each tube are in line. One tube should not be mounted directly above another. Free air circulation around the tube is desirable.





BOTTOM VIEW

PIN #:	
1	BASE SHELL
2	h
3	a
4	g2
5	g1
6	NP
7	h
8	k, bp

DIMENSIONS ARE MAXIMUM

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