

1Zh37B

Pentode Mixer with three control grids

Designed for mixing frequencies in battery powered radio applications, with a working bandwidth up to 60Mhz.

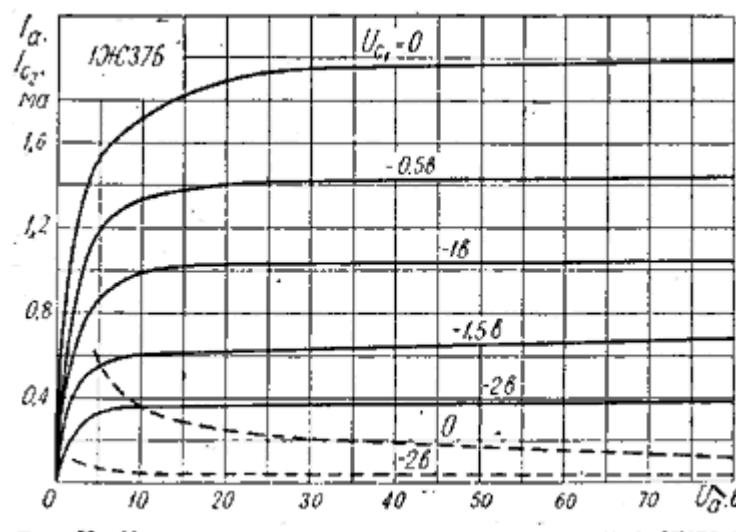
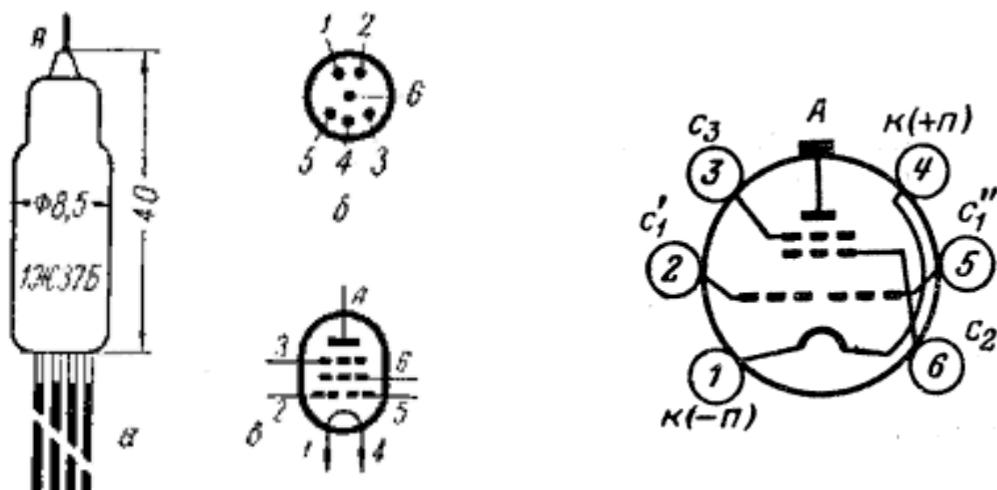
Directly heated oxide cathode.

Works in any orientation.

Manufactured in miniature glass package.

Lifetime of at least 500hrs.

7 wire leads. 35mm length, 0.4mm diameter. 25mm length of anode lead.



Average characteristics of the anode current and the 2nd grid current as a function of the voltage at the anode. At a voltage of 45V on the 2nd grid.

----- Current in anode

- - - - Current in 2nd grid.

Inter-electrode capacitances, (pF)

(with an external screen tightly wrapped around the glass balloon.)

Input on first grids	2.25
Output	2.6
Transient between first grids	0.008
Between first grids	< 0.31

Nominal electrical characteristics

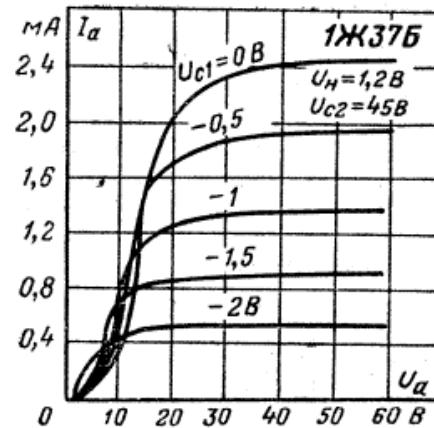
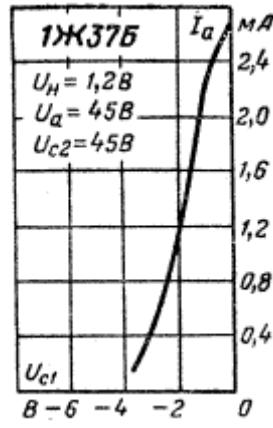
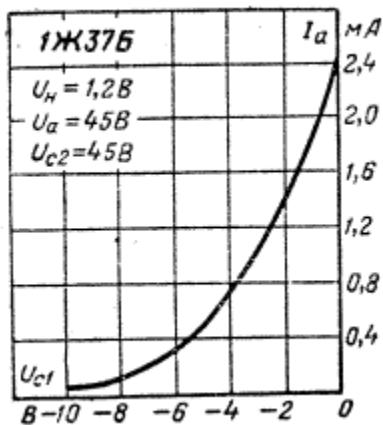
Heater voltage	1.2 V
Anode voltage	45 V
2 nd grid voltage	45 V
3 rd grid voltage	0 V
Voltage on each 1 st grid	0 V
Heater current	60 +- 6 mA
Anode current	1.9 +- 0.6mA
Current in 2 nd grid	< 0.35 mA
Slope of characteristic on 1 st grids connected together	1 +- 0.25 mA/V
Slope of characteristic on 1 st grids connected together with heater voltage 0.95V	> 0.6 mA/V
Slope of characteristic on each 1 st grid	0.5 +- 0.2 mA/V
Reverse current in each 1 st grid connected to 0.5MOhm resistance and grid voltage -1V	< 0.1 V
Slope of transformation on each 1 st grid with voltage on one grid 0.7Vrms, and on the other grid 6Vrms, into a 100KOhm resistance into the other grid.	0.18 mA/V
Slope of transformation on each 1 st grid with voltage on one grid 0.7Vrms, and on the other grid 15Vrms, into a 100KOhm resistance into the other grid.	0.3 mA/V
Voltage of microphonics with 5KOhm anode resistance 10G acceleration, 50Hz vibration frequency	< 60 mVrms
Input impedance at 60MHz	> 30 KOhm
Equivalent resistance of internal noise at 30MHz	< 9 KOhm

Maximum Ratings

Maximum heater voltage	1.4 V
Minimum heater voltage	0.95 V
Maximum anode voltage	100 V
Maximum 2 nd grid voltage	60 V
Maximum cathode current in continuous operation	4.5 mA
Maximum resistance to each 1 st grid	1 MOhm

Environment Ratings

Maximum environment temperature	120 C
Lifetime at environment temperature 120 C	2 hrs
Lifetime at environment temperature 85 C	200 hrs
Minimum environment temperature	-60 C
Maximum environment pressure	3 atm
Minimum environment pressure	5 mm Hg



September 2009
 Kindly translated from the original Russian by
 MIT Electrical Engineering Student
 Dimitri Turbiner