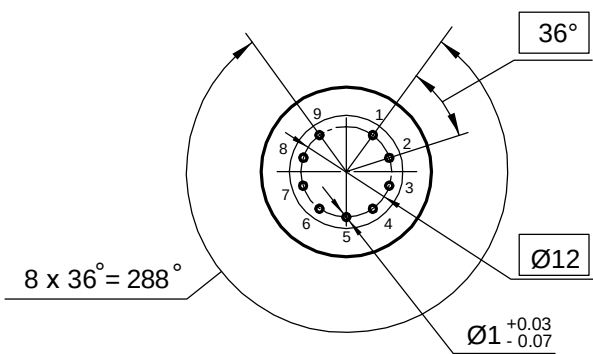


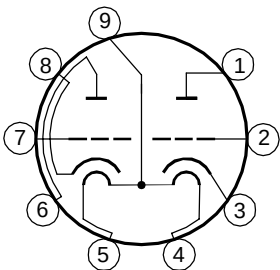
12AX7 Genalex/ECC83/B759

Vacuum tube 12AX7 Genalex/ECC83/B759 is a miniature twin triode with equipotential cathodes, designed to amplify low frequency voltage in radio engineering devices.

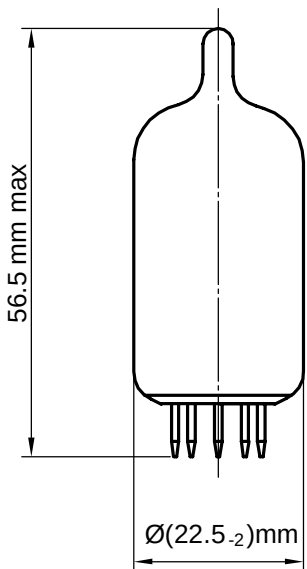
Pin arrangement



Electrode -to - lead connection diagram



Dimensions



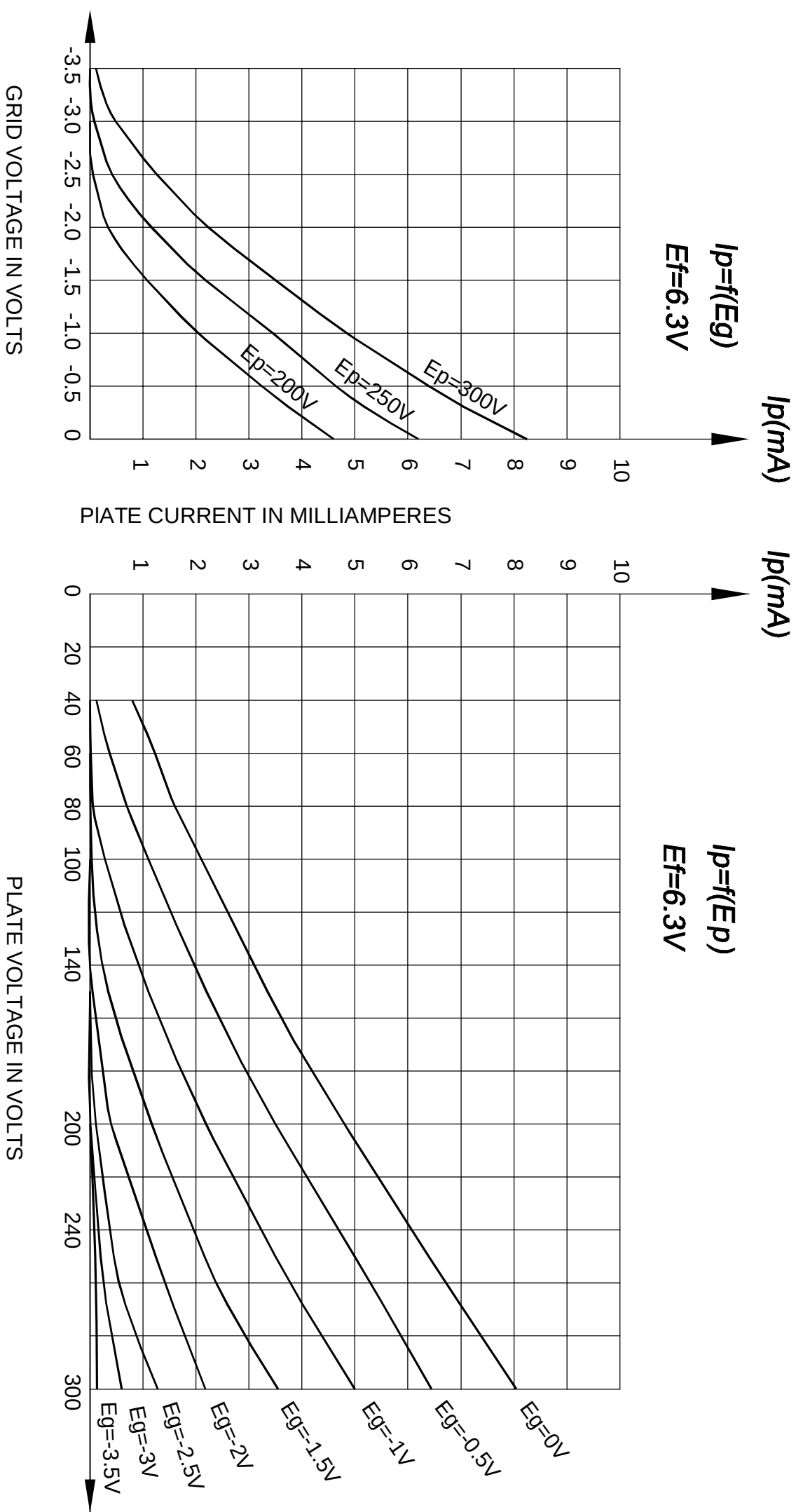
Lead designation	Name of electrode
1	Second triode plate
2	Second triode grid
3	Second triode cathode
4, 5, 9	Heater
6	First triode plate
7	First triode grid
8	First triode cathode

Electrical parameters

Parameters, conditions and units	Nominal	
	min	max
Heater current, mA at: filament voltage 6.3 V at: filament voltage 12.6 V	350 175	390 195
Grid reverse current, μA , (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 2.0 V, resistance in grid circuit 1.0 M Ω)	—	0.2
Plate current, mA, (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 2.0 V)	1.05	2.0
First and second triodes plate current difference, % (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 2.0 V)	—	± 18
Plate current at the beginning of the characteristic, μA (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 4.5 V)	—	30
Slope of characteristic, mA/V (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 2.0 V)	1.4	—
Amplification factor (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 2.0 V)	83	—
Cathode - heater insulation resistance, M Ω (at: filament voltage 6.3 V or 12.6 V, cathode -heater voltage ± 200 V)	20	—

Limiting Values

Parameters, units	Nominal	
	min	max
Filament voltage, V for parallel connection for series connection	6 12	6.6 13.2
Plate voltage, V	—	330
Cathode - heater voltage, V	—	± 200
Cathode current, mA	—	9
Power dissipation at the plate of each triode, W	—	1.2
Grid circuit resistance for each of the triodes, M Ω fixed bias self - bias	— —	1.0 2.2



GENALEX ECC83/B759

GOLD LION CUSTOM TUBE

pin #	Electrode name
1	Plate of 2 nd triode
2	Grid of 2 nd triode
3	Cathode of 2 nd triode
4,5,9	Heater
6	Plate of 1 st triode
7	Grid of 1 st triode
8	Cathode of 1 st triode

Electrical data of new tube

		Comment
Grid reverse current, μA , not more	0.2	3, 4
Heater current, ma not less	275	1
	135	2
not more	325	1
	160	2
Plate current, ma not less	0.75	3, 5
not more	1.75	
Plate current at the beginning of the curve, μA not more	20	3, 6
Transconductance, ma/v, not less	1.4	3, 5
Amplification factor, not less	85	3.5
not more	115	
Structure-borne noise, mv, not more	3.5	3,7

Comments:

1. Plate voltage 6.3v
2. Heater voltage 12.6v
3. Heater voltage 6.3v or 12.6v
4. Plate voltage 250v, grid voltage -2v, grid circuit resistance 1,0 Mohm
5. Plate voltage 250v, grid voltage -2v
6. Plate voltage 250v, grid voltage -4v
7. Plate voltage 250v, cathode circuit resistance 0.6Kohm at automatic bias, plate circuit resistance 10,0 Kohm, speeding-up 10 m/sec², oscillation frequency 50Hz.

Electrical parameters that could be changed within exploitation

Transconductance, ma/v, not less	1.1
Grid reverse current, μA , not more	0.5

Limited values

Heater voltage, v, not less	6.0 or 12.0
not more	6.6 or 13.2
Plate voltage, v, not more	330
Cathode to heater voltage:	
Positive, v, not more	200
Negative, v not more	200
Plate current, ma not more	9
Plate dissipation power of each triode, W, not more	1.2
Each triode grid circuit resistance:	
under fixed bias, Mohm, not more	1.2
under automatic bias, Mohm not more	2.2

Plate voltage of cold tube, v, not more	600
Max grid reverse current, v, not more	55

The tube can't be exploited at two or more limited conditions.

Interelectrode capacitances:

Input capacitance of each triode, pf, nominal	1.6
Output capacitance of 1 st triode, pf, nominal	0.46
Transfer capacitance of each triode, pf, nominal	1.7
Output capacitance of 2 nd triode, pf, nominal	0.34
Plate to plate capacitance, pf, nominal	0.6
Cathode to heater capacitance, pf, nominal	5.0