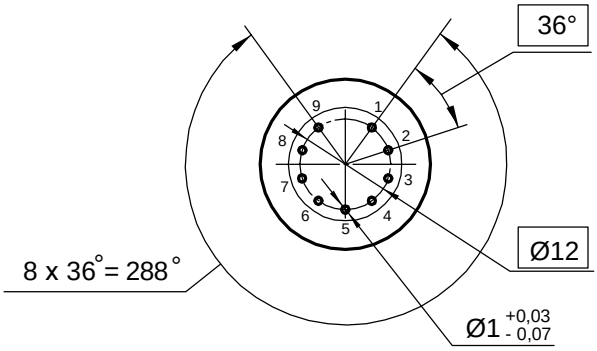
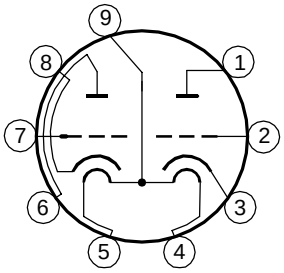
Vacuum tube 12BH7AEH is a miniature twin triode with equipotential cathodes, designed to amplify low freguency voltage in radio engineering devices.

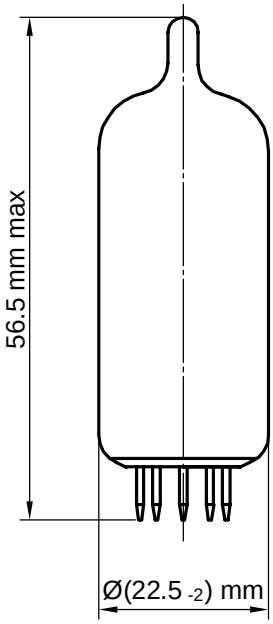
Pin arrangement



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

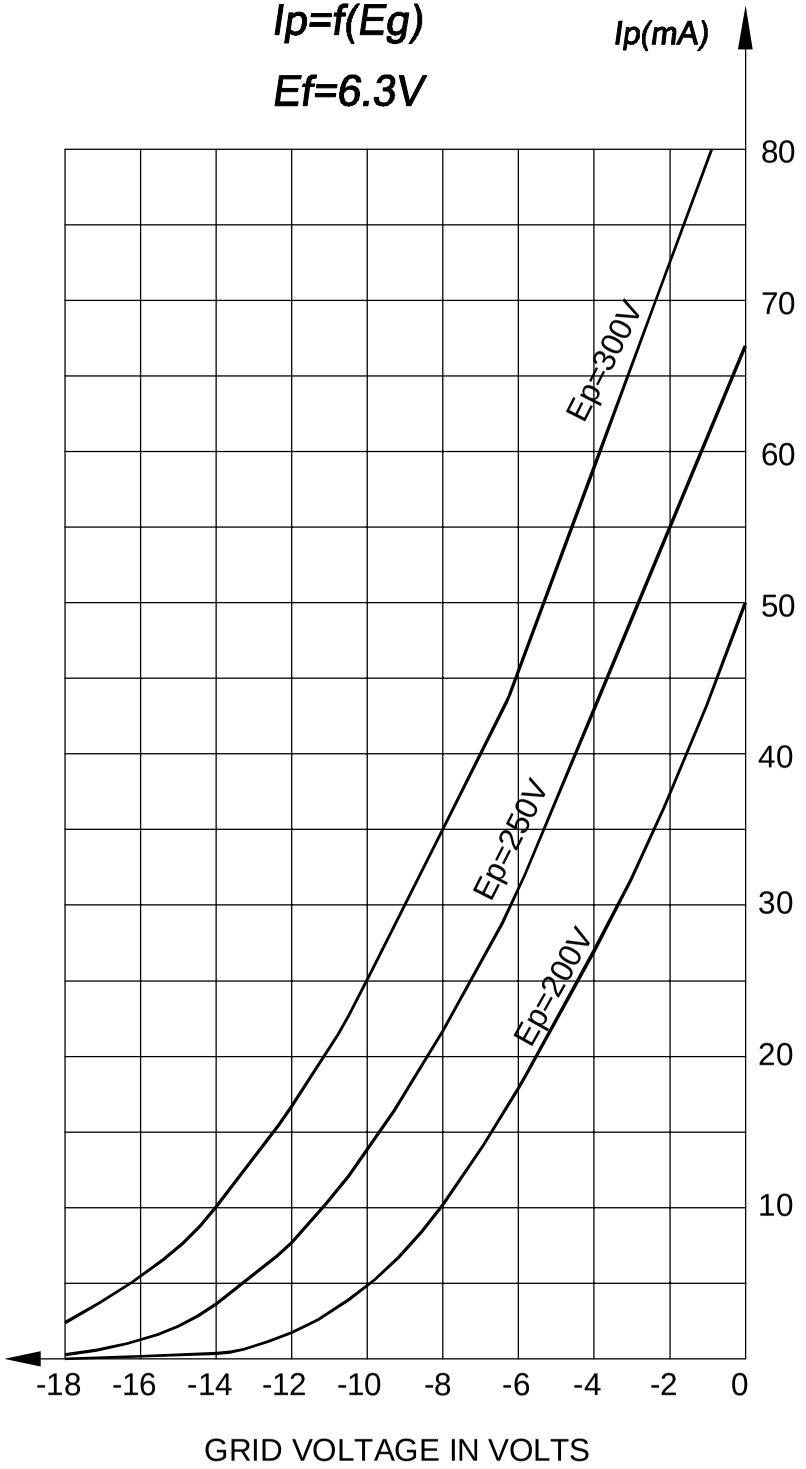
Electrical parameters

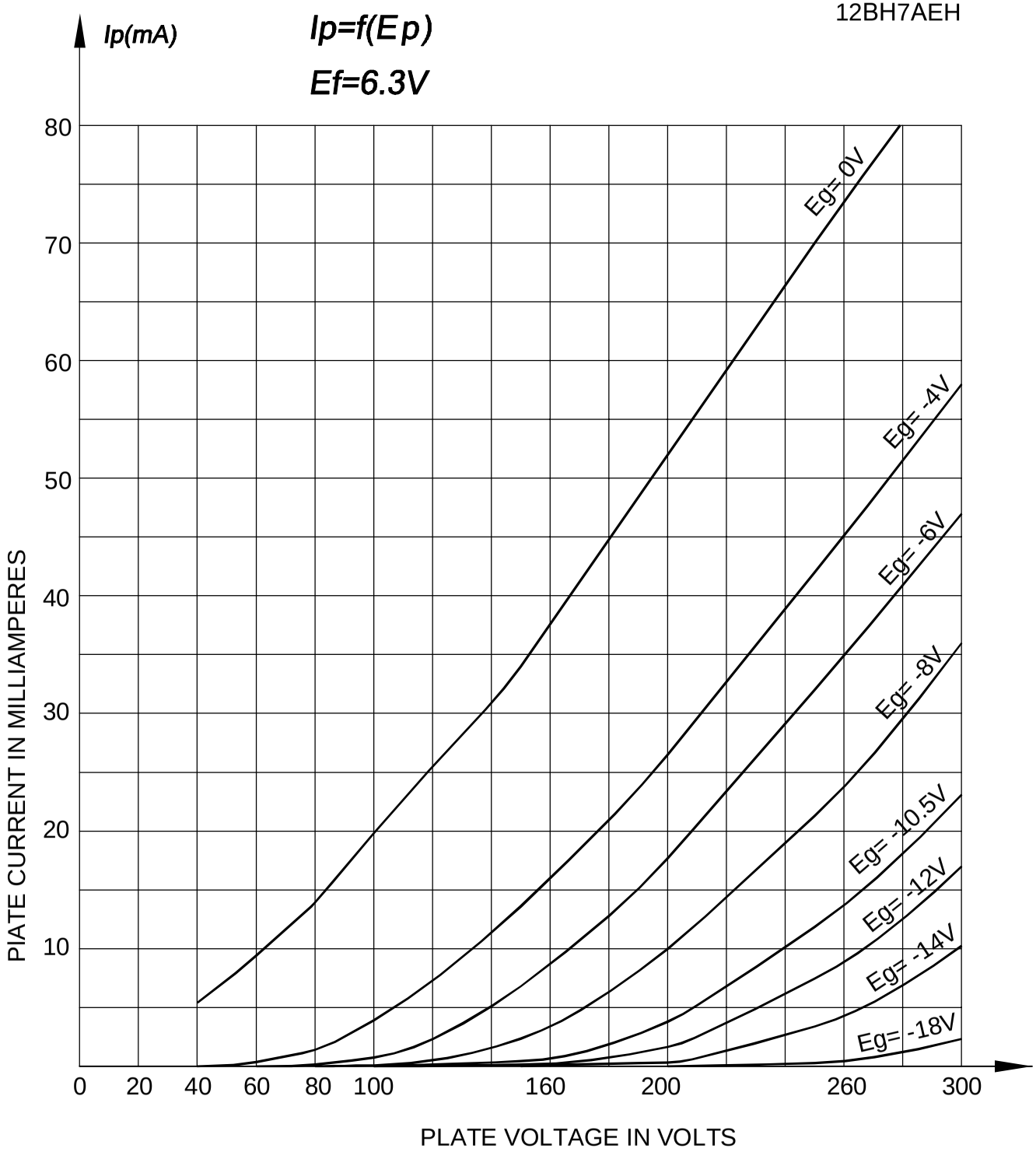
Parameters, conditions and units	Nominal	
	min	max
Heater current,mA at: filament voltage 6.3 V at: filament voltage 12.6 V	 550 275	 680 340
Grid reverse current, µA ,(at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 10.5 V, resistance in grid circuit 0.25 MΩ)	—	0.2
Plate current, mA ,(at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 10.5 V)	9.0	16.0
First and second triodes plate current difference, % (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 10.5 V)	—	± 30
Slope of characteristic, mA/V (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 10.5 V)	2.4	4.0
Amplification factor (at: filament voltage 6.3 V or 12.6 V, plate voltage 250 V, grid voltage minus 10.5 V)	14	—
Cathode - heater insulation resistance, MΩ (at: filament voltage 6.3 V or 12.6 V, cathode - heater voltage ± 200 V)	10	—
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 23.0 V)	—	80

Maximum permissible operating conditions

Parameters, units	Nominal	
	min	max
Filament voltage, V for parallel connection for series connection	 6 12	 6.6 13.2
Plate voltage, V	—	300
Cathode - heater voltage, V	—	± 200
Power dissipation at the plate of each triode, W	—	3.5
Cathode current, mA	—	20
Grid circuit resistance for each of the triodes, MΩ fixed bias self - bias	 — —	 0.25 1.0

12BH7AEH


Ip=f(Eg)
Ef=6.3V
Ip(mA)
80
70
60
50
40
30
20
10
Ep=300V
Ep=250V
Ep=200V
-18
-16
-14
-12
-10
-8
-6
-4
-2
0
GRID VOLTAGE IN VOLTS


Ip(mA)
Ip=f(Ep)
Ef=6.3V
80
70
60
50
40
30
20
10
PIATE CURRENT IN MILLIAMPERES
Eg= 0V
Eg= -4V
Eg= -6V
Eg= -8V
Eg= -10.5V
Eg= -12V
Eg= -14V
Eg= -18V
0
20
40
60
80
100
160
200
260
300
PLATE VOLTAGE IN VOLTS