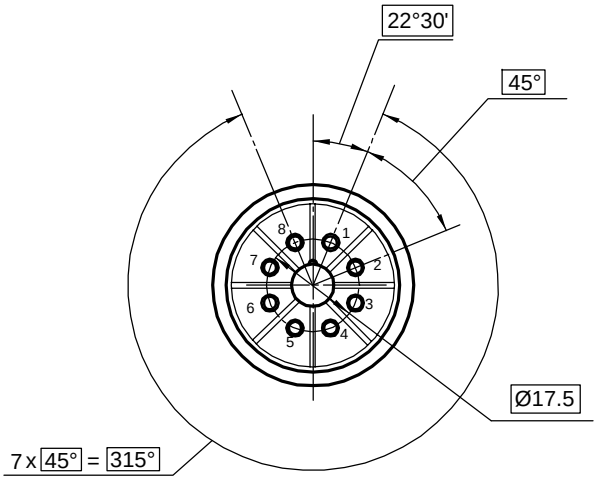
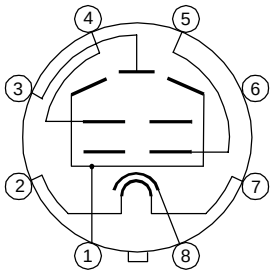
Vacuum tube 6CA7EH is a beam tetrode in the glass bulb with octal base, with equipotential cathode, designed to amplify low frequency power in the output stages of HI - FI audio.

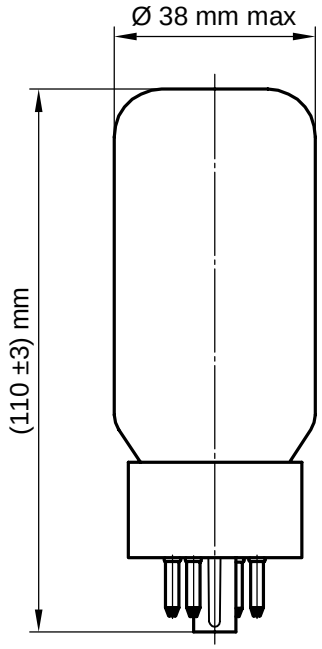
Pin arrangement



Electrode -to - lead connection diagram



Dimensions



Lead designation	Name of electrode
1	Beam-forming screen
2, 7	Heater
3	Plate
4	Grid 2
5	Grid 1
6	Empty
8	Cathode

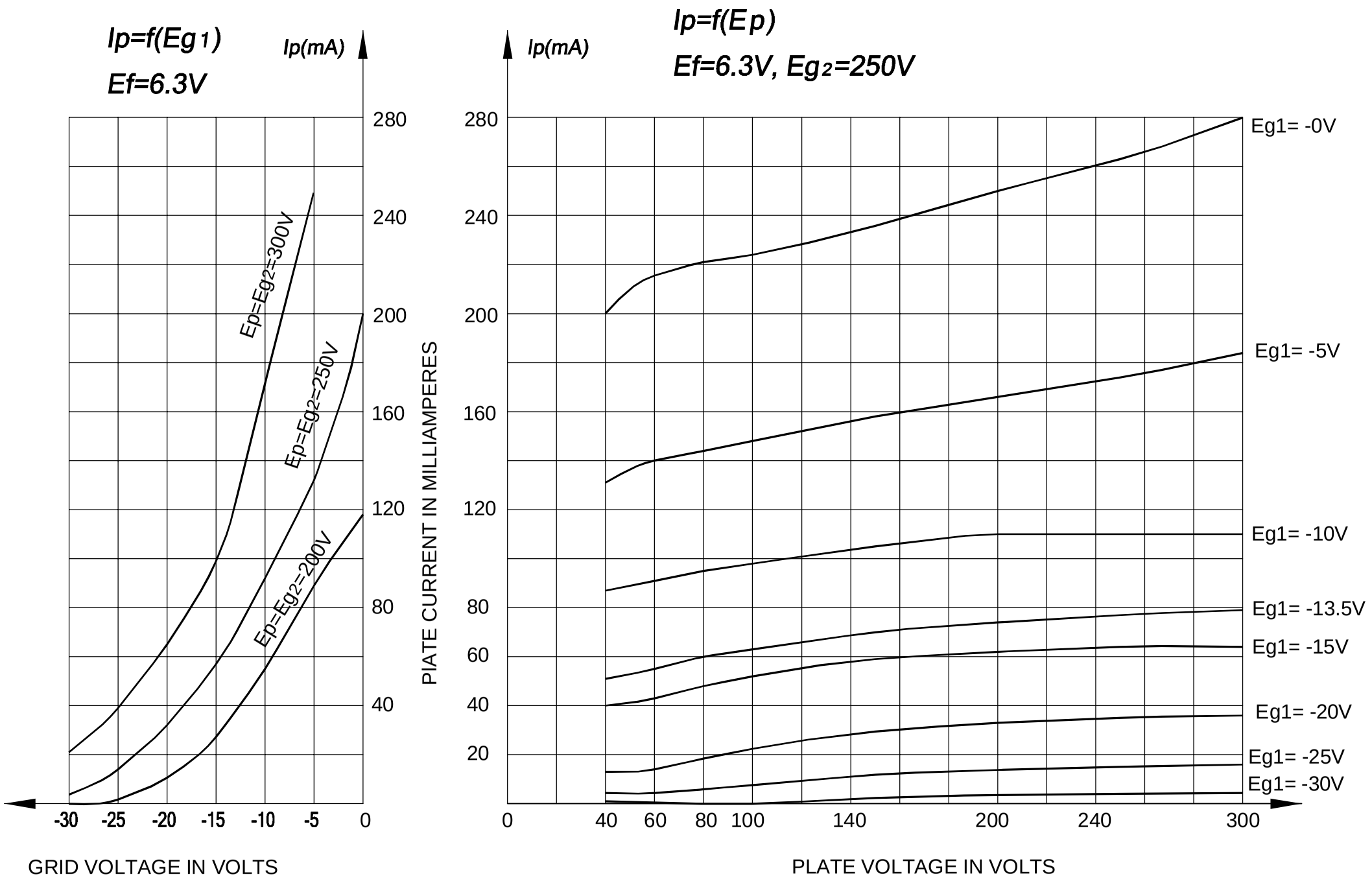
Electrical parameters

6CA7EH

Parameters, conditions and units	Nominal	
	min	max
First grid reverse current, μA (at: filament voltage 6.3 V plate voltage 250 V, first grid voltage minus 13.5 V, second grid voltage 250 V,first grid circuit resistance 0.51M Ω)	—	1.0
Heater current, A	1.4	1.65
Plate current, mA (at: filament voltage 6.3 V plate voltage 250 V, first grid voltage minus 13.5 V, second grid voltage 250 V)	75	120
Second grid current, mA (at: filament voltage 6.3 V plate voltage 250 V, first grid voltage minus 13.5 V, second grid voltage 250 V)	—	24
Output power, W (at: filament voltage 6.3 V plate voltage 250 V, first grid voltage minus 13.5 V, second grid voltage 250 V, plate circuit resistance 2.0 k Ω first grid alternating voltage, efficacious 9.6 V)	9	—
First grid cut-off voltage, negative, V (at: filament voltage 6.3 V plate voltage 250 V, second grid voltage 250 V,)	—	50
Slope of characteristic, mA/V (at: filament voltage 6.3 V anode voltage 250 V, first grid voltage minus 13.5 V, second grid voltage 250 V)	9.0	14.0
Distortion factor,% (at: filament voltage 6.3 V, plate voltage 250 V, first grid voltage minus 13,5 V, second grid voltage 250 V, plate circuit resistance 2.0 kΩ,first grid alternating voltage,efficacious 9.6 V)	—	13.5
Cahtode - heater insulation resistance, M Ω (at: filament voltage 6.3 V cathode -heater voltage ± 300 V)	10	—

Operating conditions limits.

Parameters, units	Nominal	
	min	max
Filament voltage, V	5.7	7.0
Cathode - heater voltage, V	—	± 300
Cathode current, mA	—	150
First grid voltage, negative, V	—	100
Power dissipation at the plate, W	—	25
Power dissipation at the second grid, W	—	8
First grid circuit resistance ,M Ω fixed bias self - bias	 — —	 0.5 0.7


Ip=f(Eg1)
Ef=6.3V
Ip(mA)
280
240
200
160
120
80
40
Ep=Eg2=300V
Ep=Eg2=250V
Ep=Eg2=200V
-30
-25
-20
-15
-10
-5
0
GRID VOLTAGE IN VOLTS
PIATE CURRENT IN MILLIAMPERES
Ip=f(Ep)
Ef=6.3V, Eg2=250V
Ip(mA)
280
240
200
160
120
80
60
40
20
0
40
60
80
100
140
200
240
300
Eg1= -0V
Eg1= -5V
Eg1= -10V
Eg1= -13.5V
Eg1= -15V
Eg1= -20V
Eg1= -25V
Eg1= -30V
PLATE VOLTAGE IN VOLTS