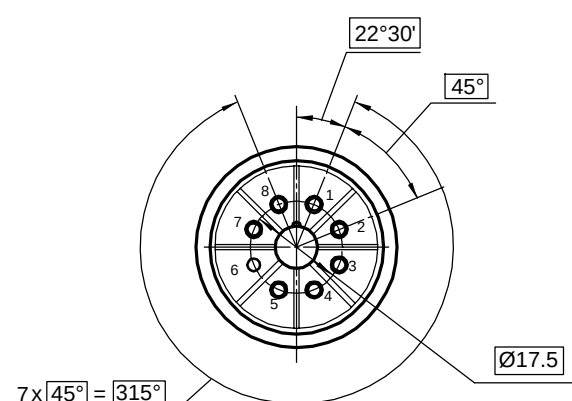
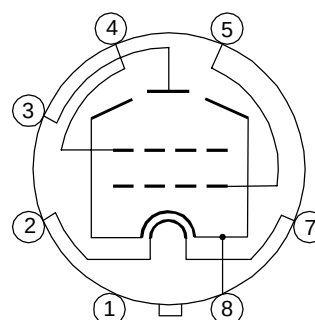


Vacuum tube KT90EH is a beam tetrode in the glass bulb with octal base, with equipotential cathode, designed to amplify low frequency power in the output stages of HI - FI audio.

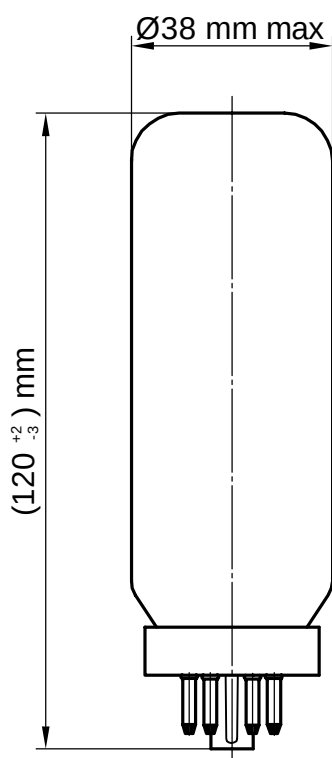
Pin arrangement



Electrode -to - lead connection diagram



Dimensions



Lead designation	Name of electrode
1	Free
2, 7	Heater
3	Plate
4	Grid 2
5	Grid 1
6	No
8	Cathode, beam-forming screen

Electrical parameters

KT90EH

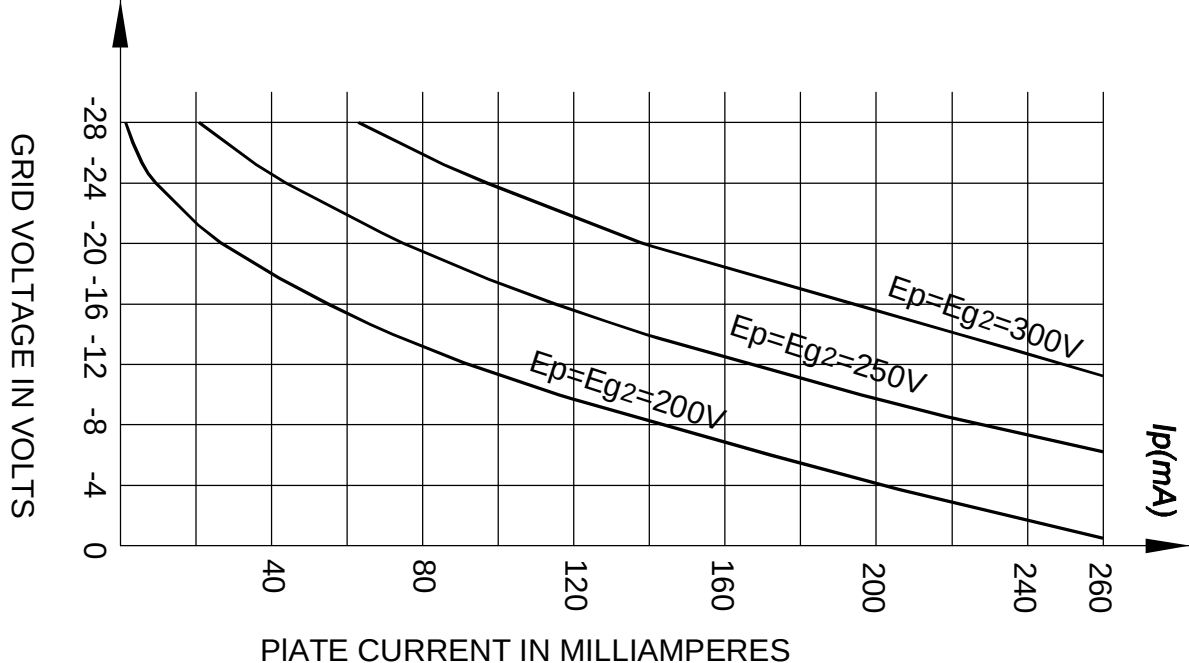
Parameters, conditions and units	Nominal	
	min	max
First grid reverse current, μA (at: filament voltage 6.3 V, plate voltage 250 V, first grid voltage minus 14.0 V, second grid voltage 250 V, first grid circuit resistance 0.51 M Ω)	—	0.5
Heater current, A	1.65	1.95
Plate current, mA (at: filament voltage 6.3 V, plate voltage 250 V, first grid voltage minus 14.0 V, second grid voltage 250 V)	115	165
Second grid current, mA (at: filament voltage 6.3 V, plate voltage 250 V, first grid voltage minus 14.0 V, second grid voltage 250 V)	—	23
Output power, W (at: filament voltage 6.3 V, plate voltage 250 V, first grid voltage minus 14.0 V, second grid voltage 250 V, plate circuit resistance 2.0 k Ω , first grid alternating voltage, efficacious 9.9 V)	12	—
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 14.0 V, second grid voltage 250 V)	10.8	—
Distortion factor, % (at: filament voltage 6.3 V, plate voltage 250 V, first grid voltage minus 14.0 V, second grid voltage 250 V, plate circuit resistance 2.0 k Ω , first grid alternating voltage, efficacious 9.9 V)	—	14.0
Cathode - 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	6.0	6.6
Cathode - heater voltage, V	—	± 300
Cathode current, mA	—	230
First grid voltage, negative, V	—	200
Power dissipation at the plate, W	—	46
Power dissipation at the second grid, W	—	8
First grid circuit resistance for each, M Ω		
fixed bias	—	0.24
self - bias	—	0.51

$I_p = f(E_{g1})$

$E_f = 6.3V$



$I_p = f(E_p)$

$E_f = 6.3V, E_{g2} = 250V$

