BELL SYSTEM PRACTICES
Transmission Engineering and Data
Electron Tube Data

SECTION AB46.409A
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AT&TCo Standard

ADVANCE ELECTRON TUBE DATA SHEET

WESTERN ELECTRIC 6AS6/409A ELECTRON TUBE

6AS6/409A
MINIATURE
PENTODE
U.H.F.

E7-1 RMA PROPOSED STANDARD
MINIATURE 7-PIN BUTTON BASE
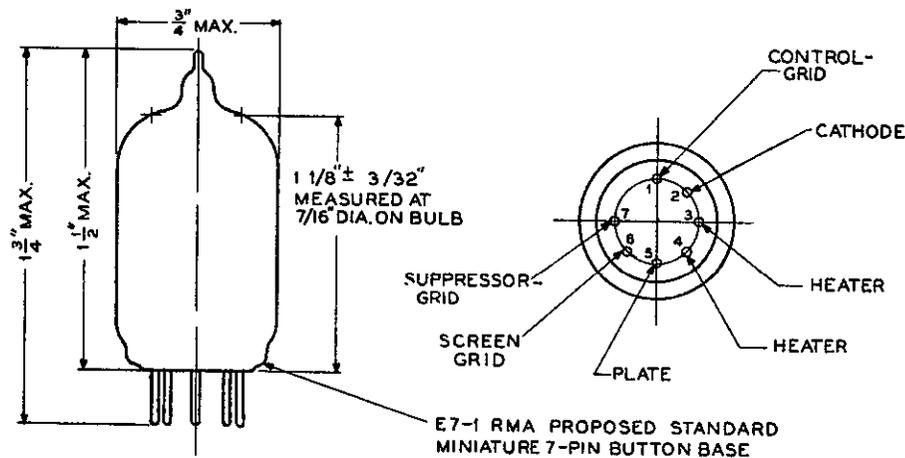
CLASSIFICATION

The 6AS6/409A electron tube is a 7-pin miniature, triple-grid pentode with an indirectly heated cathode. It is intended for low power applications at high and ultra-high frequencies. The usual control-grid and the suppressor-grid can be used as independent control elements. The tube is suitable for use in gated amplifiers, gain controlled amplifiers, delay circuits, and mixers.

MOUNTING

The dimensions and arrangement of terminal connections are as shown above. The tube may be mounted in any position.

HEATER RATING

Heater voltage, a-c or d-c	6.3 volts
Nominal heater current	0.175 ampere

MAXIMUM RATINGS (Design-center values)

Plate voltage	180 volts
Screen voltage	140 volts
Positive suppressor voltage	27 volts
Plate dissipation	1.7 watts
Screen dissipation	0.75 watt
Cathode current	18 milliamperes
Heater-cathode voltage	90 volts
Bulb temperature	120°Centigrade

OPERATING CONDITIONS AND CHARACTERISTICS

Plate voltage	120	120 volts
Screen voltage	120	120 volts
Suppressor voltage	- 3	0 volts
Grid voltage	- 2	- 2 volts
Plate current	3.6	5:2 milliamperes
Screen current	4.8	3.5 milliamperes
Transconductance, control-grid	1850	3200 umhos
Transconductance, suppresor-grid	810	470 umhos

CONTROL-GRID PLATE CURRENT CUT-OFF CHARACTERISTICS

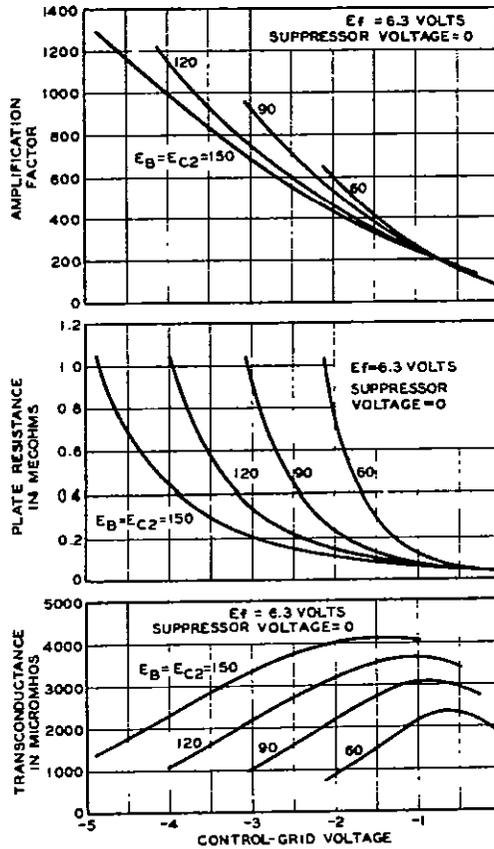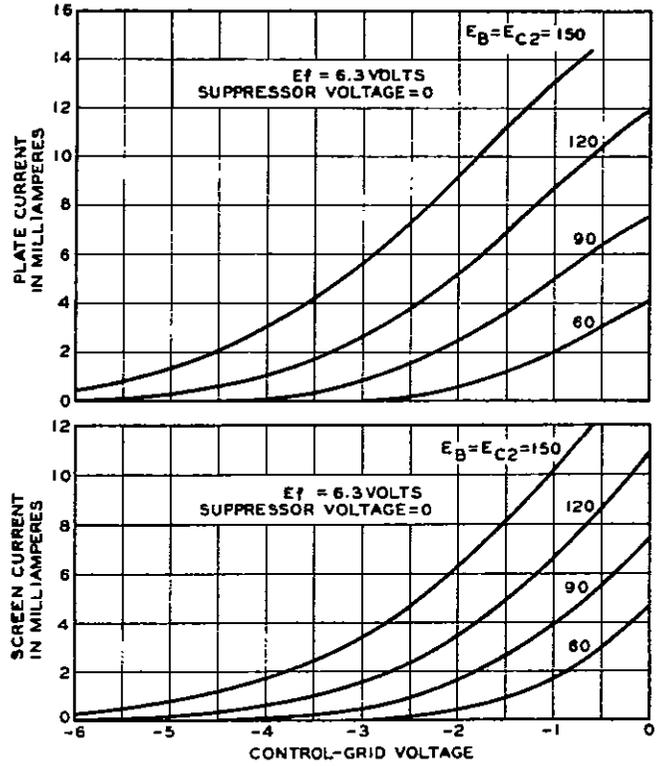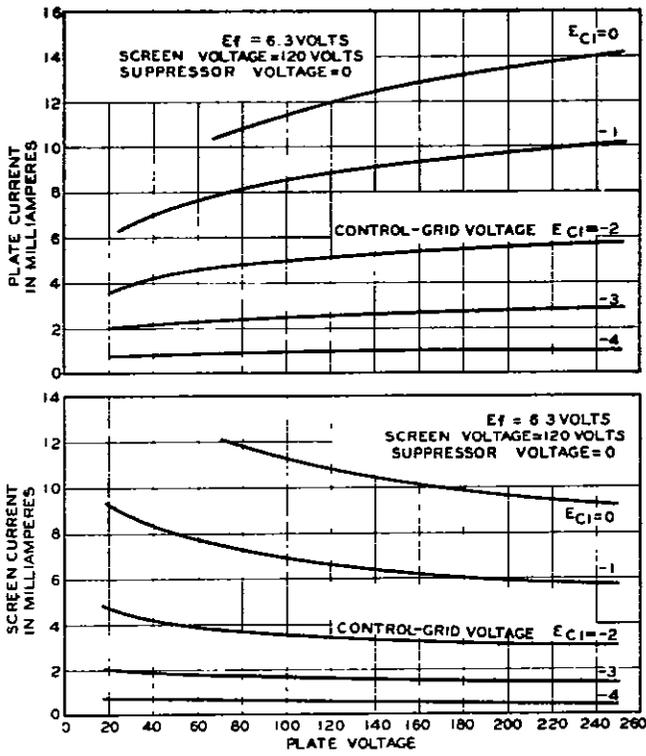|		
Plate voltage	120	volts
Screen voltage	120	volts
Suppressor voltage	0	volts
Nominal cut-off, control-grid	- 6	volts
Guaranteed cut-off, control-grid	-10	volts

SUPPRESSOR-GRID PLATE CURRENT CUT-OFF CHARACTERISTICS

Plate voltage	120	120 volts
Screen voltage	120	60 volts
Grid voltage	- 2	0 volts
Nominal cut-off, suppressor-grid	-10	- 8 volts
Guaranteed cut-off, suppressor-grid	-15	-10 volts

INTERELECTRODE CAPACITANCES (With JAN 1A No. 314 shield connected to cathode)

Control-grid to heater, cathode, screen and suppressor- grid	3.9 uuf
Plate to control-grid	0.01 uuf
Plate to heater, cathode, screen and suppressor-grid	3.0 uuf
Control-grid to suppressor-grid	0.1 uuf

Western Electric