

Heater Voltage (ac/dc):			
Series	12.6	volts	
Parallel	6.3	volts	
Heater Current:			
Series	0.225	ampere	
Parallel	0.45	ampere	
Heater Warm-up Time (Average)	11	seconds	
Heater-Cathode Voltage:			
Peak value	±200 max	volts	
Average value	100 max	volts	
Direct Interelectrode Capacitance (Approx.):			
	Unshielded	Shielded ^a	
Grid to Plate (Each unit)	2	1.9	pF
Grid to Cathode and Heater (Each unit)	2.6	2.8	pF
Plate to Cathode and Heater:			
Unit No.1	0.44	1.4	pF
Unit No.2	0.36	1.6	pF

^a With external shield connected to cathode of unit under test.

Class A₁ Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Maximum Values)			
Plate Voltage	330	volts	
Grid Voltage, Negative-bias value	55	volts	
Plate Dissipation	2.5	watts	

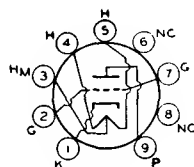
MAXIMUM CIRCUIT VALUES (Each Unit)

Grid-Circuit Resistance:			
For fixed-bias operation	0.25	megohm	
For cathode-bias operation	1	megohm	

12B4A

LOW-MU TRIODE

Miniature type used as vertical-deflection amplifier in television receivers. Outlines section, 6E; requires miniature 9-contact socket.



9AG

	Series	Parallel	
Heater Voltage	12.6	6.3	volts
Heater Current	0.3	0.6	ampere
Heater Warm-up Time	—	11	seconds
Heater-Cathode Voltage:			
Peak value		±200 max	volts
Average value		100 max	volts
Direct Interelectrode Capacitances:			
Grid to Plate		4.8	pF
Grid to Cathode and Heater		5	pF
Plate to Cathode and Heater		1.5	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)			
Plate Voltage	550	volts	
Grid Voltage, Negative-bias value	50	volts	
Plate Dissipation	5.5	watts	

CHARACTERISTICS

Plate Voltage	150	volts	
Grid Voltage	—17.5	volts	
Amplification Factor	6.5		
Plate Resistance (Approx.)	1030	ohms	
Transconductance	6300	μmhos	
Plate Current	34	mA	
Plate Current for grid voltage of —23 volts	9.6	mA	
Grid Voltage (Approx.) for plate current of 200 μA	—32	volts	

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:			
For fixed-bias operation	0.47	megohm	
For cathode-bias operation	2.2	megohms	

Vertical-Deflection Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Center Values)			
DC Plate Voltage	550	volts	
Peak Positive-Pulse Plate Voltage [#] (Absolute Maximum)	1000†	volts	

Peak Negative-Pulse Grid Voltage	250	volts
Peak Cathode Current	105	mA
Average Cathode Current	30	mA
Plate Dissipation	5.5	watts

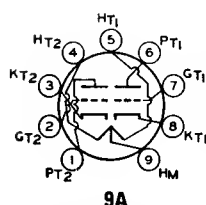
MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance, for cathode-bias operation	2.2	megohms
---	-----	---------

Pulse duration must not exceed 15% of a vertical scanning cycle (2.6 milliseconds).

† Under no circumstances should this absolute value be exceeded.

Refer to chart at end of section.	12B8GT
Refer to type 6BA6.	12BA6
Refer to chart at end of section.	12BA7
Refer to chart at end of section.	12BD6
Refer to type 6BE3.	12BE3
Refer to type 6BE6.	12BE6
Refer to chart at end of section.	12BF6
Refer to type 6BF11.	12BF11
Refer to chart at end of section.	12BH7



9A

MEDIUM-MU TWIN TRIODE

12BH7A

Miniature type used as combined vertical-deflection amplifier and vertical oscillator, and as horizontal-deflection oscillator, in television receivers, and in phase-inverter and multivibrator circuits. **Outlines section, 6E**; requires miniature 9-contact socket. Each triode unit is independent of the other except for the common heater.

	Series	Parallel	
Heater Arrangement:	12.6	6.3	volts
Heater Voltage (ac/dc)	0.3	0.6	ampere
Heater Current	—	11	seconds
Heater Warm-up Time (Average)			
Heater-Cathode Voltage:			
Peak value		±200 max	volts
Average value		100 max	volts

Direct Interelectrode Capacitances (Approx.):	Unit No.1	Unit No.2	
Grid to Plate	2.6	2.6	pF
Grid to Cathode and Heater	3.2	3.2	pF
Plate to Cathode and Heater	0.5	0.4	pF
Plate of Unit No.1 to Plate of Unit No.2		0.8	pF

Class A₁ Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	300	volts
Grid Voltage:		
Negative-bias value	50	volts
Positive-bias value	0	volts
Cathode Current	20	mA
Plate Dissipation:		
Each Plate	3.5	watts
Both plates (Both units operating)	7	watts

CHARACTERISTICS

Plate Voltage	250	volts
Grid Voltage	—10.5	volts
Amplification Factor	16.5	
Plate Resistance (Approx.)	5300	ohms
Transconductance	3100	μmhos
Plate Current	11.5	mA
Plate Current for grid voltage of —14 volts	4	mA
Grid Voltage (Approx.) for plate current of 50 μA	—25	volts