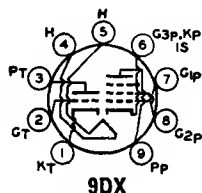


6BA8A

8BA8A

**MEDIUM-MU TRIODE—
SHARP-CUTOFF PENTODE**

Miniature type used in color and black-and-white television receivers. The pentode unit is used as a video amplifier, an age amplifier, or a reactance tube. The triode unit is used in low-frequency oscillator and phase-splitter circuits. Outlines section, 6E; requires miniature 9-contact socket. Type 8BA8A is identical with type 6BA8A except for the heater ratings.



9DX

	6BA8A	8BA8A	
Heater Voltage (ac/dc)	6.3	8.4	volts
Heater Current	0.3	0.45	ampere
Heater Warm-up Time (Average)	11	—	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances (Approx.):			
Triode Unit:			
Grid to Plate	2.2	2.2	pF
Grid to Cathode and Heater	2.5	2.7	pF
Plate to Cathode and Heater	0.4	1.9	pF
Pentode Unit:			
Grid No.1 to Plate	0.06	0.05	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	10	10	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	3.6	4.5	pF
Triode Grid to Pentode Plate	0.016	0.006	pF
Pentode Grid No.1 to Triode Plate	0.006	0.003	pF
Pentode Plate to Triode Plate	0.15	0.023	pF

Class A₁ Amplifier**MAXIMUM RATINGS (Design-Center Values)**

	Triode Unit	Pentode Unit	
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	300	volts
Grid-No.2 Voltage	—	See curve page 300	
Grid-No.1 (Control-Grid) Voltage:			
Negative-bias value	—	—50	volts
Positive-bias value	—	0	volts
Plate Dissipation	2	3.25	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 150 volts	—	1	watt
For grid-No.2 voltages between 150 and 300 volts	—	See curve page 300	

CHARACTERISTICS

Plate-Supply Voltage	200	200	volts
Grid-No.2 Supply Voltage	—	150	volts
Grid-No.1 Voltage	—8	—	volts
Cathode-Bias Resistor	—	180	ohms
Amplification Factor	18	—	
Plate Resistance (Approx.)	6700	400000	ohms
Transconductance	2700	9000	μmhos
Plate Current	8	13	mA
Grid-No.2 Current	—	3.5	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μA	—16	—10	volts

MAXIMUM CIRCUIT VALUES

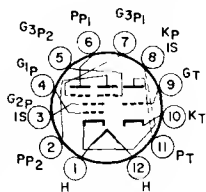
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.25	megohm
For cathode-bias operation	1	1	megohm

6BA11

8BA11

TRIODE—TWIN PENTODE

Duodecar type used as vertical-deflection oscillator and for combined sync-age applications in color and black-and-white television receivers. Outlines section, 8B; requires duodecar 12-contact socket. Type 8BA11 is identical with type 6BA11 except for heater ratings.



12ER

	6BA11	8BA11	
Heater Voltage (ac/dc)	6.3	8.4	volts
Heater Current	0.6	0.45	amperes
Heater Warm-up Time	11	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances:			
Triode Unit:			
Grid to Plate		2	pF
Grid to Cathode and Heater		2	pF
Plate to Cathode, Heater, and Internal Shield		1.9	pF
Pentode Unit			
Grid No.3 to Plate (Each Unit)		2	pF
Grid No.3 to all Other Electrodes (Each Grid)		3.6	pF
Grid No.1 to all Other Electrodes		6	pF
Plate to all Other Electrodes (Each Plate)		3	pF
Grid No.3 of Pentode 1 to Grid No.3 of Pentode 2		0.026 max	pF

Triode Unit as Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	300	volts
Average Cathode Current	20	mA
Plate Dissipation	1.5	watts

CHARACTERISTICS

Plate Voltage	250	volts
Grid Voltage	—11	volts
Amplification Factor	18	
Transconductance	1800	μmhos
Plate Current	5	mA
Grid Voltage (Approx.) for plate current of 100 μA	—18	volts

MAXIMUM CIRCUIT VALUES

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

Pentode Unit as Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage (Each Unit)	300	volts
Grid-No.3 (Suppressor-Grid) Voltage (Each Unit):		
Peak positive value	50	volts
DC negative value	50	volts
DC positive value	3	volts
Grid-No.2 (Screen-Grid) Voltage	150	volts
Grid-No.1 (Control-Grid) Voltage, Negative bias value	50	volts
Cathode Current	12	mA
Plate Dissipation (Each Unit)	1.1	watts
Grid-No.2 Input	0.75	watt

CHARACTERISTICS (With Both Units Operating)■

Plate Voltage (Each Unit)	100	100	volts
Grid-No.3 Voltage (Each Unit)	—10	0	volts
Grid-No.2 Voltage	67.5	67.5	volts
Grid-No.1 Voltage	*	*	volts
Plate Current (Each Unit)	0	2.5	mA
Grid-No.2 Current	7	4.4	mA

CHARACTERISTICS (With One Unit Operating)†

Plate Voltage	100	100	volts
Grid-No.3 Voltage	0	0	volts
Grid-No.2 Voltage	67.5	67.5	volts
Grid-No.1 Voltage	0	*	volts
Grid-No.3 Transconductance	—	450	μmhos
Grid-No.1 Transconductance	1700	—	μmhos
Plate Current	—	2.5	mA
Grid-No.2 Voltage (Approx.) for plate current of 100 μA	—	3.2	volts
Grid-No.1 Voltage (Approx.) for plate current of 100 μA	2.3	—	volts

MAXIMUM CIRCUIT VALUES

Grid-No.3-Circuit Resistance (Each Unit)	0.5	megohm
Grid-No.1-Circuit Resistance	0.5	megohm

* Adjusted to provide a dc grid-No.1 current of 100 microamperes.

† With plate and grid No.3 of the other unit connected to ground.

■ Voltages and plate current apply to each section.