

• Unless otherwise specified, values are for each unit.

‡ Pulse duration must not exceed 15% of a vertical scanning cycle (2.5 milliseconds).

▲ Under no circumstances should this absolute value be exceeded.

† For cathode-bias operation.

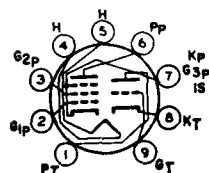
Refer to chart at end of section.

6BL8

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

6BL8/
ECF80

4BL8/XCF80



9DC

Miniature type used in frequency-changer service in color and black-and-white television receivers. **Outlines** section, 6B; require miniature 9-contact socket. Type 4BL8/XCF80 is identical with type 6BL8/ECF80 except for heater ratings.

	4BL8/ XCF80	6BL8/ ECF80	
Heater Voltage (ac/dc)	4.6	6.3	volts
Heater Current	0.6	0.45	ampere
Peak Heater-Cathode Voltage	±100 max	±100 max	volts

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

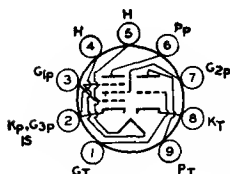
	Triode Unit	Pentode Unit	
Plate Supply Voltage	550	550	volts
Plate Voltage	250	250	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	550	volts
Grid-No.2 Voltage:			
With cathode current of 14 mA	—	175	volts
With cathode current less than 10 mA	—	200	volts
Cathode Current	14	14	mA
Plate Dissipation	1.5	1.7	watts
Grid-No.2 Input:			
With plate dissipation greater than 1.2 watts	—	0.5	watt
With plate dissipation less than 1.2 watts	—	0.75	watt

CHARACTERISTICS

Plate Voltage	100	170	volts
Grid-No.2 Voltage	—	170	volts
Grid-No.1 Voltage	—2	—2	volts
Amplification Factor	20	—	
Mu-Factor, Grid No.2 to Grid No.1	—	47	
Plate Resistance (Approx.)	—	0.4	megohm
Transconductance	5000	6200	μmhos
Plate Current	14	10	mA
Grid-No.2 Current	—	2.8	mA
Input Resistance at frequency of 50 MHz	—	0.01	megohm
Equivalent Noise Resistance	—	1500	ohms

MAXIMUM CIRCUIT VALUES

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



9EX

HIGH-MU TRIODE— POWER PENTODE

6BM8/
ECL82

Miniature type used in color and black-and-white television receiver applications. The pentode unit is used as an audio output tube, and the triode unit as an oscillator and af voltage amplifier. **Outlines** section, 6G; requires miniature 9-contact socket. Heater: volts (ac/dc), 6.3; amperes, 0.78; maximum heater-cathode volts, 100 peak.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

	Triode Unit	Pentode Unit	
Plate Supply Voltage	550	900	volts
Plate Voltage	300	600	volts
Grid-No.2 Supply Voltage	—	550	volts
Grid-No.2 Voltage	—	300	volts
Cathode Current	15	50	mA
Plate Dissipation	1	7	watts
Grid-No.2 Input	—	1.8	watts

CHARACTERISTICS

Plate Voltage	100	200	volts
Grid-No.2 Voltage	—	200	volts
Grid-No.1 Voltage	0	-16	volts
Amplification Factor	70	9.5*	
Plate Resistance (Approx.)	—	0.02	megohm
Transconductance	2500	6400	μmhos
Plate Current	3.5	35	mA
Grid-No.2 Current	—	7	mA

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	1	1	megohm
For cathode-bias operation	2	2	megohms

* Grid No.2 to Grid No.1

6BN4

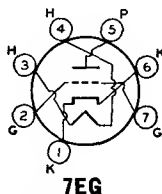
Refer to chart at end of section.

6BN4A

2BN4A, 3BN4A

MEDIUM-MU TRIODE

Miniature type used as rf amplifier tube in grid-drive circuits of vhf color and black-and-white television tuners. Outlines section, 5C; requires miniature 7-contact socket. Types 2BN4A and 3BN4A are identical with type 6BN4A except for heater ratings.



	2BN4A	3BN4A	6BN4A	
Heat Voltage (ac/dc)	2.35	3	6.3	volts
Heater Current	0.6	0.45	0.2	ampere
Heater Warm-up Time (Average)	11	11	—	seconds
Peak Heater-Cathode Voltage	±100 max	±100 max	±100 max	volts
Direct Interelectrode Capacitances (Approx.):*				
Grid to Plate			1.2	pF
Grid to Cathode and Heater			3.2	pF
Plate to Cathode and Heater			1.4	pF

* With external shield connected to cathode.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	275	volts
Grid Voltage, Positive-bias value	0	volts
Cathode Current	22	mA
Plate Dissipation	2.2	watts

CHARACTERISTICS

Plate-Supply Voltage	150	volts
Cathode-Bias Resistor	220	ohms
Amplification Factor	43	
Plate Resistance (Approx.)	5400	ohms
Transconductance	7700	μmhos
Plate Current	9	mA
Grid Voltage (Approx.) for plate current of 100 μA	—6	volts

MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance	0.5	megohm
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