Direct Interelectrode Capacitances (Approx.):	Unit No. 1	Unit No. 2	
Grid to Plate	6	6	pF
Grid to Cathode and Heater	4.2	4.6	pF
Plate to Cathode and Heater	0.9	0.9	pF

Class A_1 Amplifier

CHARACTERISTICS (Each Unit)				
Plate Voltage	150	250	250	volts
Grid Voltage	0	—17	—9	volts
Amplification Factor	—	—	15	
Plate Resistance (Approx.)	—	—	2150	ohms
Transconductance	—	—	7000	μmhos
Plate Current	65▪	4	40	mA
Grid Voltage (Approx.) for plate current of 50 μA	—	—	—23	volts

▪ This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

Vertical-Deflection Oscillator or Amplifier•

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

MAXIMUM RATINGS (Design-Center Values)	Oscillator	Amplifier	
DC Plate Voltage	500	500	volts
Peak Positive-Pulse Plate Voltage# (Absolute Maximum)	—	2000△	volts
Peak Negative-Pulse Grid Voltage	400	250	volts
Peak Cathode Current	210	210	mA
Average Cathode Current	60	60	mA
Plate Dissipation:			
For either plate	10	10	watts
For both plates with both units operating	12	12	watts
MAXIMUM CIRCUIT VALUE			
Grid-Circuit Resistance	4.7	4.7†	megohms

• 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.

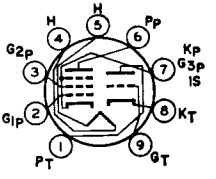
† For cathode-bias operation.

6BL8 Refer to chart at end of section.

6BL8/ ECF80

4BL8/XCF80

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE



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 A_1 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

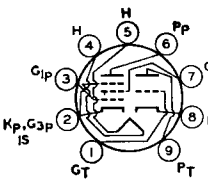
MAXIMUM CIRCUIT VALUES

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

6BM8/ ECL82

HIGH-MU TRIODE—POWER PENTODE

50BM8/UCL82



9EX

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. Type 50BM8/UCL82 is identical with type 6BM8/ECL82 except for heater ratings.

	6BM8/ ECL82	50BM8/ UCL82	
Heater Voltage	6.3	50	volts
Heater Current	0.78	0.1	ampere
Peak Heater Cathode Voltage	100 max	±200 max	volts

Class A_1 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

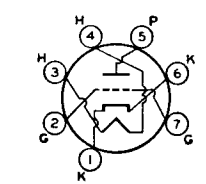
Refer to chart at end of section.

6BN4

6BN4A

MEDIUM-MU TRIODE

2BN4A, 3BN4A



7EG

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.