

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

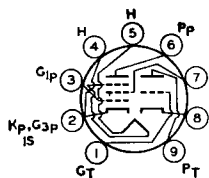
MAXIMUM CIRCUIT VALUES

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

**6BM8/
ECL82**

50BM8/UCL82

**HIGH-MU TRIODE—
POWER PENTODE**



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 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

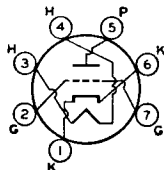
Refer to chart at end of section.

6BN4

6BN4A

2BN4A, 3BN4A

MEDIUM-MU TRIODE



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.

	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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6BN6

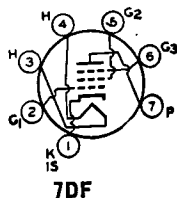
Refer to chart at end of section.

6BN6/6KS6

3BN6, 4BN6

BEAM TUBE

Miniature type used as combined limiter, discriminator, and audio-voltage amplifier in intercarrier television and FM receivers. Outlines section, 5D; requires miniature 7-contact socket. Types 3BN6 and 4BN6 are identical with type 6BN6/6KS6 except for heater ratings.



7DF

	3BN6	4BN6	6BN6/6KS6	12BN6	
Heater Voltage (ac/dc)	3.15	4.2	6.3	12.6	volts
Heater Current	0.6	0.45	0.3	0.15	ampere
Heater Warm-up Time (Average)	11	11	—	—	seconds
Heater-Cathode Voltage:					
Peak value	±200 max	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances:					
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield				4.2	pF
Grid No.3 to Cathode, Heater, Grid No.1, Grid No.2, and Internal Shield				3.3	pF
Grid No.1 to Grid No.3				0.004 max	pF

Limiter and Discriminator Service

MAXIMUM RATINGS (Design-Maximum Values)

Plate-Supply Voltage	330	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage, Positive peak value	60	volts
Cathode Current	13	mA