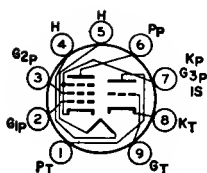


Refer to type 6CN7.
 Refer to type 6CS7.
 Refer to type 6CW5/EL86.
 Refer to type 6CW5.
 Refer to type 6CX8.
 Refer to type 6EB8.
 Refer to type 6EM5.
 Refer to type 6ET7.
 Refer to chart at end of section.
 Refer to type 6FQ7/6CG7.
 Refer to chart at end of section.
 Refer to type 6GJ7/ECF801.
 Refer to type 6GN8.
 Refer to type 6GU7.
 Refer to type 6JU8A.
 Refer to type 6JV8.
 Refer to type 6KA8.
 Refer to type 6LC8.
 Refer to type 6LT8.
 Refer to chart at end of section.

8CN7
 8CS7
 8CW5/XL86
 8CW5
 8CX8
 8EB8
 8EM5
 8ET7
 8FQ7
 8FQ7/8CG7
 8GJ7
 8GJ7/PCP801
 8GN8
 8GU7
 8JU8A
 8JV8
 8KA8
 8LC8
 8LT8
 9A8



MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

9A8/ PCF80

9DC Miniature type used as combined oscillator and mixer tubes in vhf color and black-and-white television receivers. Outlines section, 6B; requires miniature 9-contact socket. Heater: volts (ac/dc), 9; amperes, 0.3; maximum heater-cathode volts, +100, -200 peak; -120 average.

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) Voltage	.....	—	175	volts
Cathode Current	.....	14	14	mA
Plate Dissipation	.....	1.5	1.7	watts
Grid-No.2 Input	.....	—	0.5	watt
CHARACTERISTICS				
Plate Voltage	.....	100	170	volts
Grid-No.2 Voltage	.....	—	170	volts
Grid-No.1 Voltage	.....	—2	—2	volts
Amplification Factor	.....	20	47*	
Plate Resistance (Approx.)	.....	—	0.4	megohm
Transconductance	.....	5000	6200	μmhos
Plate Current	.....	14	10	mA
Grid-No.2 Current	.....	—	2.8	mA

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

* Grid No.2 to Grid No.1.

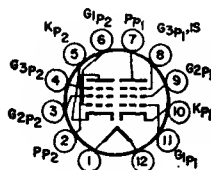
9AU7

Refer to type 12AU7A.

9BJ11**BEAM POWER TUBE—
SHARP-CUTOFF PENTODE**

Duodecar type used in two-stage video-if-amplifier in television receivers. Pentode unit is used as the input stage and beam power unit as the output stage. Outlines section, 8B; requires duodecar 12-contact socket.

Heater Voltage (ac/dc)	9.6	volts
Heater Current	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 Capacitances:		
Pentode Unit:		
Grid No.1 to Plate	0.008	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3 of Beam Power Unit, and Internal Shield	9.5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, Grid No.3 of Beam Power Unit, and Internal Shield	3.4	pF
Beam Power Unit:		
Grid No.1 to Plate	0.016	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	8.5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	3	pF

**12FU****Class A₁ Amplifier****MAXIMUM RATINGS (Design-Maximum Values)**

	Pentode Unit	Beam Power Unit	
Plate Voltage	160	160	volts
Grid-No.3 (Suppressor-Grid) Voltage:			
Positive-bias value	10	0	volts
Negative-bias value	50	—	volts
Grid-No.2 (Screen-Grid) Voltage	160	160	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2.8	2.2	watts
Grid-No.2 Input	1.25	0.55	watts

CHARACTERISTICS

Plate Supply Voltage	110	125	volts
Grid No.3	Connected to cathode at socket		
Grid-No.2 Voltage	110	125	volts
Grid-No.1 Resistor	0.1	—	megohm
Cathode-Bias Resistor	—	120	ohms
Plate Resistance (Approx.)	40000	40000	ohms
Transconductance	7500	9600	μmhos
Plate Current	5.8	8.5	mA
Grid-No.2 Input	6.8	2.5	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μA	—3	—4.5	volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance	0.1	—	megohm
Grid-No.3-Circuit Resistance	1.5	—	megohm

9BR7

Refer to chart at end of section.

9CL8

Refer to chart at end of section.

9EA8

Refer to type 6EA8.

9GV8

Refer to chart at end of section.

9GV8/XCL85

Refer to type 6GV8/EL500.