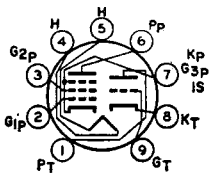


Refer to chart at end of section.  
 For replacement use type 8FQ7/8CG7.  
 Refer to type 6CM7.  
 Refer to chart at end of section.  
 Refer to type 6CS7.  
 Refer to type 6CW5/EL86.  
 Refer to type 6CW5.  
 Refer to type 6CX8.  
 Refer to chart at end of section.  
 For replacement use type 8GN8/8EB8.  
 Refer to type 6EM5.  
 Refer to chart at end of section.  
 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.

**8CB11**  
**8CG7**  
**8CM7**  
**8CN7**  
**8CS7**  
**8CW5/XL86**  
**8CW5**  
**8CX8**  
  
**8EB8**  
**8EM5**  
**8ET7**  
**8FQ7**  
**8FQ7/8CG7**  
**8GJ7**  
**8GJ7/PCF801**  
**8GN8**  
**8GN8/8EB8**  
**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 A<sub>1</sub> 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	$\mu$ mhos
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.

**9AH9**

Refer to chart at end of section.

**9AK10**

Refer to chart at end of section.

**9AM10**

Refer to chart at end of section.

**9AQ8/PCC85**

Refer to chart at end of section.

**9AU7**

Refer to type 12AU7A.

**9BJ11**

Refer to chart at end of section.

**9BR7**

Refer to chart at end of section.

**9CL8**

Refer to chart at end of section.

**9EA8**

Refer to chart at end of section.

**9GH8A**

Refer to type 6GH8A.

**9GV8**

Refer to chart at end of section.

**9GV8/XCL85**

Refer to type 6GV8/ECL85.

**9JW8/PCF802**

Refer to type 6JW8/ECF802.

**9KC6**

Refer to chart at end of section.

**9KX6****SHARP-CUTOFF PENTODE**

Miniature type with frame grid used as video output amplifier in color and black-and-white television receivers. Outlines section, 6E; requires miniature 9-contact socket. Heater: volts, 8.7; amperes, 0.45; warm-up time, 11 seconds; maximum heater-cathode volts,  $\pm 200$  peak, 100 average.

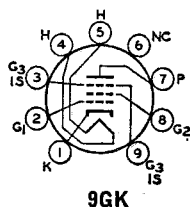
**9GK****Class A<sub>1</sub> Amplifier****MAXIMUM RATINGS (Design-Maximum Values)**

Plate Voltage .....	400	volts
Grid-No.3 (Suppressor-Grid) Voltage, Positive value .....	0	volts
Grid-No.2 (Screen-Grid) Supply Voltage .....	330	volts
Grid-No.2 Voltage .....	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive value .....	0	volts
Plate Dissipation .....	11.5	watts
Grid-No.2 Input .....	1.5	watts

**CHARACTERISTICS**

Plate Voltage .....	250	50	volts
Grid-No.3 Voltage .....	Connected to cathode at socket		
Grid-No.2 Supply Voltage .....	150	125	volts
Grid-No.1 Voltage .....	0	0	volts

Cathode-Bias Resistor, Bypassed .....	56	—	ohms
Plate Resistance (Approx.) .....	50000	—	ohms
Transconductance (Grid No.1 to Plate) .....	36000	—	$\mu$ mhos
Plate Current .....	28	70	mA
Grid-No.2 Current .....	6.5	24	mA
Grid-No.1 Voltage (Approx.) for plate current of 100 $\mu$ A .....	—5.7	—	volts

**MAXIMUM CIRCUIT VALUES**

Grid-No.1-Circuit Resistance:			
For fixed-bias operation .....		0.1	megohm
For cathode-bias operation .....		0.25	megohm

Refer to type 6KZ8.	<b>9KZ8</b>
Refer to chart at end of section.	<b>9LA6</b>
Refer to type 6MN8.	<b>9MN8</b>
For replacement use type 10DE7.	<b>9RAL1</b>
Refer to type 6U8A.	<b>9U8A</b>
Refer to chart at end of section.	<b>10</b>
Refer to type 6AL11.	<b>10AL11</b>
Refer to type 6BQ5.	<b>10BQ5</b>
Refer to chart at end of section.	<b>10C8</b>
Refer to chart at end of section.	<b>10CW5</b>
Refer to type 6CW5/EL86.	<b>10CW5/LL86</b>
Refer to type 6DE7.	<b>10DE7</b>
Refer to type 6DR7.	<b>10DR7</b>
Refer to chart at end of section.	<b>10DX8</b>
Refer to type 6DX8/ECL84.	<b>10DX8/LCL84</b>
Refer to chart at end of section.	<b>10EG7</b>
Refer to type 6EM7.	<b>10EM7</b>
Refer to type 6EW7.	<b>10EW7</b>
Refer to chart at end of section.	<b>10GF7</b>
Refer to type 6GF7A.	<b>10GF7A</b>
Refer to type 6GK6.	<b>10GK6</b>
Refer to type 6GN8.	<b>10GN8</b>
Refer to type 6GV8/ECL85.	<b>10GV8/LCL85</b>
Refer to type 6HF8.	<b>10HF8</b>
Refer to chart at end of section.	<b>10JA5</b>
Refer to type 10JA8/10LZ8	<b>10JA8</b>