

Class A₁ Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Maximum Values)

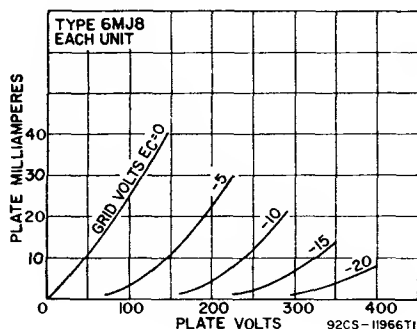
Plate Voltage	330	volts
Grid Voltage, Positive-bias value	0	volts
Plate Dissipation	3	watts

CHARACTERISTICS

Plate Voltage	250	volts
Grid Voltage	-10.5	volts
Plate Current	10	mA
Amplification Factor	17	
Plate Resistance (Approx.)	5600	ohms
Transconductance	3000	μmhos
Plate Current for grid voltage of -14 volts	4	mA
Grid Voltage for plate current of 50 μA	-23	volts

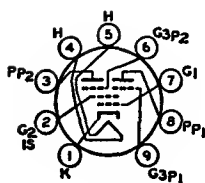
MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance, for fixed-bias operation	1	megohm
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Refer to chart at end of section.
For replacement use type 6MK8A.

6MK8



9FG

SHARP-CUTOFF TWIN PENTODE

Miniature type used in sync-separator, clipper, agc, and low-level color-demodulator circuits in television receivers. Outlines section, 6E; requires miniature 9-contact socket.

6MK8A

4MK8

Heater Voltage	6.3	volts
Heater Current	0.3	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:		
Grid No.3 to Plate (Each Section)	2	pF
Grid No.1 to All Electrodes	6	pF
Grid No.3 (Each Section) to All Electrodes	3.6	pF
Plate (Each Section) to All Electrodes	3	pF
Grid No.3 (Section 1) to Grid No.3 (Section 2)	0.015 max	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage (Each Unit)	300	volts
Grid-No.3 (Suppressor-Grid) Voltage (Each Unit)		
Peak positive value	50	volts
DC negative value	50	volts
DC positive value	3	vqlts

Grid-No.2 (Screen-Grid) Voltage	150	volts
Grid-No.1 (Control-Grid) Voltage, Negative-bias value	50	volts
Cathode Current	12	mA
Plate Dissipation (Each Section)	1.1	watts
Grid-No.2 Input	0.75	watt

MAXIMUM PLATE CURRENT RATIO (Balance): 6MK8A — 1.2 to 1; 4MK8 — 1.3 to 1

Plate Voltage	100	volts
Grid-No.2 Voltage	67.5	volts
Grid-No.1 Voltage	67.5	volts
Grid-No.3 Voltage	0	volts
Grid-No.1 Resistance	0.68	megohm

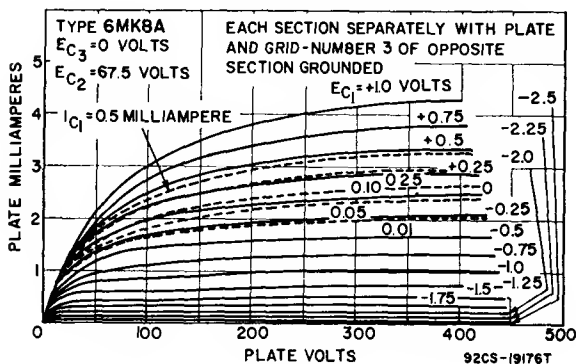
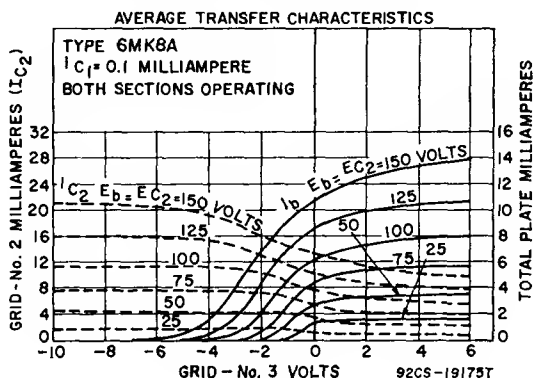
CHARACTERISTICS

With One Unit Operating*

Plate Voltage	100	100	volts
Grid-No.3 Voltage	0	0	volts
Grid-No.2 Voltage	67.5	67.5	volts
Grid-No.1 Voltage	0	*	volts
Transconductance, Grid No.3 to Plate	—	450	μ mhos
Transconductance, Grid No.1 to Plate	1100	—	μ mhos
Plate Current	—	2	mA
Grid-No.3 Voltage (Approx.) for plate current of 100 μ A	—	—3.5	volts
Grid-No.1 Voltage (Approx.) for plate current of 100 μ A	—	—2.3	volts

With Both Units Operating

Plate Voltage (Each Unit)	100	100	volts
Grid-No.3 Voltage (Each Unit)	—10	0	volts
Grid-No.2 Voltage	67.5	67.5	volts
Grid-No.1 Voltage	*	*	volts
Plate Current (Each Section)	—	2	mA
Cathode Current	7.1	8.5	mA
Grid-No.2 Current	7	4.4	mA



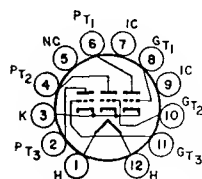
MAXIMUM CIRCUIT VALUES

Grid-No.3-Circuit Resistance (Each Unit)	0.5	megohm
Grid-No.1-Circuit Resistance	0.5	megohm

* With plate and grid No.3 of other unit grounded. * Grid current adjusted for 100 μ A dc.

Refer to chart at end of section.

6ML8



12HU

HIGH-MU TRIPLE TRIODE

Duodecar type used for matrix-amplifier applications in color television receivers. **Outlines** section, 8D; requires duodecar 12-contact socket. Type 9MN8 is identical with type 6MN8 except for heater ratings.

6MN8

9MN8

		6MN8	9MN8	
Heater Voltage		6.3	9.5	volts
Heater Current		0.9	0.6	ampere
		—	11	seconds
Heater-Cathode Voltage:				
Peak value		±200 max	±200 max	volts
Average value		±100 max	±100 max	volts
Direct Interelectrode Capacitances:	Unit No.1	Unit No.2	Unit No.3	
Grid to Plate	2.6	2.6	2.6	pF
Grid to Cathode and Heater	4.6	4.6	4.6	pF
Plate to Cathode and Heater	0.33	0.57	0.65	pF

Class A₁ Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Maximum Values)

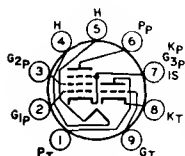
Plate Voltage	330	volts
Grid Voltage, Positive-bias value	0	volt
Plate Dissipation	3	watts

CHARACTERISTICS

Plate Voltage	125	200	volts
Grid Voltage	—1	—4	volts
Amplification Factor	47	40	
Plate Resistance (Approx.)	6250	10000	ohms
Transconductance	7500	4000	μ mhos
Plate Current	11	4.8	mA
Grid Voltage (Approx.) for plate current of 50 μ A	—5	—11	volts

MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance, for fixed-bias operation	1	megohm
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9AE

MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

6MQ8

5MQ8

Miniature type used in color and black-and-white television receiver applications. The pentode unit is used in band-pass-amplifier applications. The triode unit is used in video-amplifier, sync-separator, color-killer-control, matrix-amplifier, and blanker applications. **Outlines** section, 6B; requires miniature 9-contact socket. Type 5MQ8 is identical with type 6MQ8 except for heater ratings.

Heater Voltage (ac/dc)	5.6	6.3	volts
Heater Current	0.6	0.535	ampere
Heater Warm-up Time	11	—	seconds
Heater Cathode Voltage:			
Peak value	± 200 max	± 200 max	volts
Average value	100 max	100 max	volts
Direct Interelectrode Capacitances:			
Triode Unit:			
Grid to Plate		1.7	pF
Grid to Triode Cathode, Pentode Cathode, Heater, Pentode Grid No.3, and Internal Shield		3	pF