

Heater Voltage	6LY8 6.3	10LY8 10.5	volts
Heater Current	0.75	0.45	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)	Triode Unit	Pentode Unit	
Plate Voltage	330	330	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-bias value	0	0	volts
Plate Dissipation	1	5	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 165 volts	—	1.1	watts
For grid-No.2 voltages between 165 and 330 volts	—	See curve page 300	

CHARACTERISTICS

Plate Voltage	250	35	200	volts
Grid-No.2 Voltage	—	100	100	volts
Grid-No.1 Voltage	—2.0	0	—	volts
Cathode-Bias Resistor	—	—	82	ohms
Amplification Factor	100	—	—	
Plate Resistance (Approx.)	59000	—	60000	ohms
Transconductance	1700	—	20000	μmhos
Plate Current	1.0	54	19.5	mA
Grid-No.2 Current	—	13.5	3	mA
Grid Voltage (Approx.) for plate current of 10 μA	—5	—	—	volts
Grid-No.1 Voltage (Approx.) for plate current of 100 μA	—	—	—6.3	volts

MAXIMUM CIRCUIT VALUES

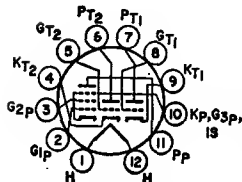
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.5	megohm
For cathode-bias operation	1	1	megohm

Refer to chart at end of section.

6LZ6

HIGH-MU TWIN TRIODE— SHARP-CUTOFF PENTODE

6M11



12CA

Duodecar type used in television receiver applications. The triode units are used in sync-separator and agc-amplifier circuits; the pentode unit is used in if-amplifier circuits. Outlines section, 8B; requires duodecar 12-contact socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.77	ampere
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	100 max	volts
Direct Interelectrode Capacitances:**		
Triode Units:		
Grid to Plate	1.8	pF
Grid to Triode Cathode, Pentode Cathode, Heater, Pentode		
Grid No.3, and Internal Shield	3.4	pF
Plate to Triode Cathode, Pentode Cathode, Heater, Pentode		
Grid No.3, and Internal Shield	0.8	pF
Pentode:		
Grid No.1 to Plate	0.03	pF
Grid No.1 to Cathode, Grid No.2, Grid No.3, and Internal Shield	12	pF
Plate to Cathode, Grid No.2, Grid No.3, and Internal Shield	2.8	pF

** With external shield connected to pentode cathode, grid No.3, and internal shield.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)	Each Triode Unit	Pentode Unit	
Plate Voltage	330	330	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-bias value	0	0	volts
Plate Dissipation	2.25	3.1	watts
Grid-No.2 Input:			
For voltages up to 165 volts	—	0.65	watt
For voltages between 165 and 330 volts	—	See curve page 300	

CHARACTERISTICS

Plate Supply Voltage	125	125	volts
Grid-No.2 Supply Voltage	—	125	volts
Cathode-Bias Resistor	125	56	ohms
Amplification Factor	58	—	
Plate Resistance (Approx.)	7250	200000	ohms
Transconductance	8000	13000	μ mhos
Plate Current	8	11	mA
Grid-No.2 Current	—	3.4	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μ A	—	—3.5	volts
Grid-No.1 Voltage (Approx.) for plate current of 50 μ A	—4.5	—	volts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance, for cathode-bias operation	0.68	1	megohm
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6MA6

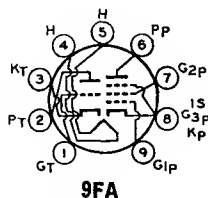
Refer to chart at end of section.

6MB8

5MB8

**HIGH-MU TRIODE
SHARP-CUTOFF PENTODE**

Miniature type with frame-grid pentode unit used in color television receivers. The triode unit is used in video-amplifier applications. The pentode unit is used in burst-amplifier service. Outlines section, 6B; requires miniature 9-contact socket. Type 5MB8 is identical with type 6MB8 except for heater ratings.

**9FA**

Heater Arrangement	5MB8 Series	6MB8 Parallel	
Heater Voltage (ac/dc)	5.6	6.3	volts
Heater Current	0.45	0.4	ampere
Heater Warm-up Time	11	—	seconds
Heater-Cathode Voltage:			
Peak value	± 200 max	± 200 max	volts
Average value	100 max	100 max	volts

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

	Triode Unit	Pentode Unit	
Plate Voltage	280	280	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	280	volts
Grid-No.2 Pulse Voltage	—	300	volts
Grid-No.2 Voltage	—	See curve page 300	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volt
Plate Dissipation	2	2	watts
Cathode Current	20	20	mA
Grid-No.2 Input	—	0.5	watt

CHARACTERISTICS

Plate Voltage	125	125	volts
Grid-No.2 Voltage	—	125	volts
Grid-No.1 Voltage	0	0	volt
Cathode-Bias Resistor	68	33	ohm
Plate Current	13	10	mA
Grid-No.2 Current	—	2.8	mA
Transconductance	8000	12000	μ mhos
Amplification Factor	40	—	
Plate Resistance (Approx.)	5000	125000	ohms
Grid-No.1 Voltage for plate current of 100 μ A	—5	—	volts
Grid-No.1 Voltage for plate current of 50 μ A	—	—3	volts

MAXIMUM CIRCUIT VALUES

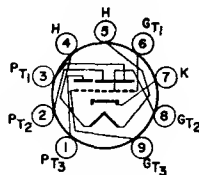
	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.25	megohm
For cathode-bias operation	1	0.5	megohm

6MD8

12MD8

**MEDIUM-MU
TRIPLE TRIODE**

Novar type used in matrixing circuits of color and black-and-white television receivers. Outlines section, 11E; requires novar 9-contact socket. Type 12MD8 is identical with type 6MD8 except for heater ratings.

**9RQ**