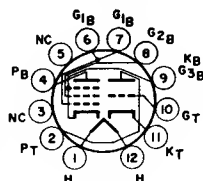


6LU8

16LU8A, 21LU8

**HIGH-MU TRIODE—
BEAM POWER TUBE**

Duodecar type used as a combined vertical-deflection oscillator and vertical-deflection amplifier in color television receivers. Outlines section, 15D; requires duodecar 12-contact socket. Types 16LU8A and 21LU8 are identical with type 6LU8 except for heater ratings.

**12DZ**

	6LU8	16LU8A	21LU8	
Heater Voltage	6.3	16	21	volts
Heater Current	1.5	0.6	0.45	amperes
Heater Warm-up Time (Average)	—	11	11	seconds
Heater-Cathode Voltage:				
Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts

Class A₁ Amplifier

CHARACTERISTICS	Triode Unit	Beam Power Unit	
Plate Voltage	250	45 135	120 volts
Grid-No.2 (Screen-Grid) Voltage	—	125 120	120* volts
Grid-No.1 (Control-Grid) Voltage	—4	0 —10	—10 volts
Amplification Factor	58	—	6.5
Plate Resistance (Approx.)	16000	— 12000	— ohms
Transconductance	3600	— 9300	— μmbos
Plate Current	2.3	200** 56	— mA
Grid-No.2 Current	—	20** 3	— mA
Grid-No.1 Voltage (Approx.):			
For plate current of 10 μA	—6.6	—	— volts
For plate current of 100 μA	—	—30	— volts
For plate current of 1 mA	—	—26	— volts

* Triode connection, Grid No.2 connected to plate at socket.

** This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

Vertical-Deflection Oscillator and Amplifier

For operation in a 525-line, 30-frame system

MAXIMUM RATINGS (Design-Maximum Values)	Triode Unit Oscillator	Beam Power Unit Amplifier	
Plate Voltage	400	400	volts
Grid-No.2 Voltage	—	300	volts
Peak Positive-Pulse Plate Voltage#	—	2500	volts
Peak Negative-Pulse Grid-No.1 Voltage	400	250	volts
Plate Dissipation*	2.5	14	watts
Peak Cathode Current	105	260	mA
Average Cathode Current	30	75	mA
Grid-No.2 Input	—	2.75	watts
Bulb Temperature (At hottest point)	—	210	°C

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:			
For fixed-bias operation	—	1	megohm
For cathode-bias operation	2.2	2.2	megobms

Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

* A bias resistor or other means is required to protect the tube in absence of excitation.

6LX6

For replacement use type 6LF6/6LX6.

6LX8/LCF802

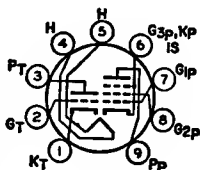
Refer to type 6JW8/ECF802.

6LY8

10LY8

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

Miniature type used in color and black-and-white television receiver applications. The pentode unit is used as a video amplifier, and the triode unit for general-purpose use. Outlines section, 6E; requires 9-contact socket. Type 10LY8 is identical with type 6LY8 except for heater ratings.

**9DX**

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

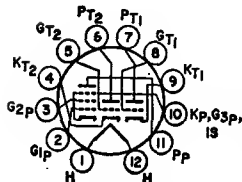
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	0.5	megohm
For cathode-bias operation	1	1	megohm

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	