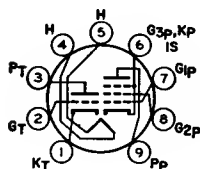


MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:

For fixed-bias operation	0.5	0.5	megohm
For cathode-bias operation	1	1	megohm



9DX

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

10LZ8

Miniature type used in television receiver applications. The pentode unit is used as a video amplifier, and the triode unit for general-purpose use. Outlines section, 6E; requires miniature 9-contact socket. Heater: volts (ac/dc), 10.5; amperes, 0.45; warm-up time, 11 seconds; maximum heater-cathode volts, ± 200 peak, 100 average.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Triode Unit	Pentode Unit	
Plate Voltage	300	225	volts
Grid-No.2 (Screen-Grid) Voltage	—	160	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	1	4.5	watts
Grid-No.2 Input	—	2	watts

CHARACTERISTICS

Plate Supply Voltage	250	30	30	200	volts
Grid-No.2 Supply Voltage	—	140	140	140	volts
Grid-No.1 Voltage	—2	0	—1	—2	volts
Amplification Factor	110	—	—	—	
Plate Resistance (Approx.)	52000	—	—	150000	ohms
Transconductance	2100	—	11000	9500	ambos
Plate Current	1.1	30	16	12	mA
Grid-No.2 Current	—	13.5	9.5	2.5	mA
Grid Voltage (Approx.) for plate current of 10 μ A	—3.6	—	—	—	volts
Grid-No.1 Voltage (Approx.) for plate current of 500 μ A	—	—	—4	—4.2	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.

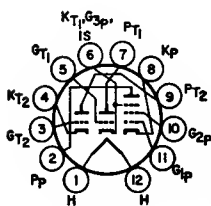
Refer to type 6AR11.

Refer to type 8BQ11.

11

11AR11

11BQ11



12GS

**DUAL TRIODE—
SHARP-CUTOFF PENTODE**

11BT11

Duodecar type used in television receiver applications. The triode units are used for general-purpose applications; the pentode unit is used in video-amplifier service. Outlines section, 8B; requires duodecar 12-contact socket. Heater: volts (ac/dc), 10.7; amperes, 0.6; warm-up time (average), 11 seconds; maximum heater-cathode volts, ± 200 peak, 100 average.

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Triode Unit No. 1	Triode Unit No. 2	Pentode Unit	
Plate Voltage	330	330	165	volts
Grid-No.2 (Screen-Grid) Voltage ..	—	—	165	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	0	volts

	Triode Unit No. 1	Triode Unit No. 2	Pentode Unit	
Plate Dissipation	1.5	—	3.5	watts
Grid-No.2 Input	—	—	1.5	watts
CHARACTERISTICS				
Plate Voltage	200	200	35	150 volts
Grid-No.2 Voltage	—	—	100	100 volts
Grid-No.1 Voltage	—	—	0	— volts
Cathode-Bias Resistor	270	470	—	82 ohms
Amplification Factor	69	40	—	—
Plate Resistance (Approx.)	12500	7600	—	51000 ohms
Transconductance	5500	5300	—	19000 μ mhos
Plate Current	7.1	7.2	54	17.4 mA
Grid-No.2 Current	—	—	13.5	3.2 mA
Grid-No.1 Voltage (Approx.) for plate current of 100 μ A	—	—8	—	—6.6 volts
Grid-No.1 Voltage (Approx.) for plate current of 50 μ A	—5.5	—	—	— volts
MAXIMUM CIRCUIT VALUES				
Grid-No.1-Circuit Resistance:				
For fixed-bias operation	0.5	0.5	0.05	megohm
For cathode-bias operation	1	1	0.1	megohm

11CY7

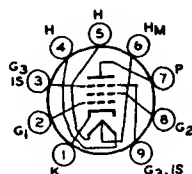
Refer to type 6CY7.

11FY7

Refer to type 6FY7.

11HM7**SHARP-CUTOFF PENTODE**

Miniature type with frame grid used as video output amplifier in color television receivers. Outlines section, 6E; requires miniature 9-contact socket.

**9BF**

	Series	Parallel	
Heater Arrangement	11	5.5	volts
Heater Voltage (ac/dc)	0.3	0.6	ampere
Heater Current			
Heater-Cathode Voltage:			
Peak value		± 200 max	volts
Average value		100 max	volts
Direct Interelectrode Capacitances:			
Grid No.1 to Plate		0.15 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		14	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield		5	pF

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

Plate Voltage	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	330	volts
Grid-No.2 Voltage	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	7	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	1	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	

CHARACTERISTICS

Plate Supply Voltage	200	volts
Grid-No.3 Voltage	0	volts
Grid-No.2 Voltage	135	volts
Cathode-Bias Resistor	47	ohms
Plate Resistance (Approx.)	40000	ohms
Transconductance	30000	μ mhos
Plate Current	30	mA
Grid-No.2 Current	5.2	mA
Grid-No.1 Voltage (Approx.) for plate current of 100 μ A	—4.5	volts

MAXIMUM CIRCUIT VALUES

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