

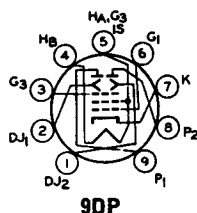
6AR5

Refer to chart at end of section.

6AR8

BEAM-DEFLECTION TUBE

Miniature type used in color-demodulator and burst-gate circuits in color television receivers. This type has two plates and two deflecting electrodes; the control grid varies beam deflection. Outlines section, 6E; requires miniature nine-contact socket. Pin 5 should be connected to cathode at socket. The 6AR8 should be so located in the equipment that it is not subjected to stray magnetic fields. Heater: volts (ac/dc), 6.3; amperes, 0.3.



9DP

Color TV Demodulator

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage (Each Plate)	300	volts
Peak Deflecting-Electrode Voltage (Each Electrode):		
Negative value	150	volts
Positive value	150	volts
Grid-No.3 (Accelerating-Grid) Voltage	300	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Cathode Current	30	mA
Plate Dissipation (Each Plate)	2	watts
Grid-No.3 Input	1	watt

MAXIMUM CIRCUIT VALUES

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

Class A₁ Amplifier

With both plates connected together and with both deflecting electrodes connected to cathode at socket

CHARACTERISTICS

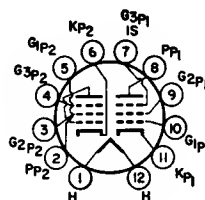
Plate-No.1 Supply Voltage	250	volts
Plate-No.2 Supply Voltage	250	volts
Grid-No.3 Voltage	250	volts
Cathode-Bias Resistor	300	ohms
Transconductance	4000	μmhos
Total Plate Current	10	mA
Grid-No.3 Current	0.4	mA
Grid-No.1 Voltage (Approx.) for total plate current of 10 μA	—14	volts

6AR11

SEMIREMOTE-CUTOFF
TWIN PENTODE

8AR11, 11AR11

Duodecar type used as if-amplifier tube in television receivers. Outlines section, 8A; requires duodecar 12-contact-socket. Types 8AR11 and 11AR11 are identical with type 6AR11 except for heater ratings.



12DM

	6AR11	8AR11	11AR11	
Heater Voltage (ac/dc)	6.3	8.4	11.2	volts
Heater Current	0.8	0.6	0.45	ampere
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
Direct Interelectrode Capacitances:				
Grid No.1 to Plate	0.026	0.026		pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	10	10		pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	2.8	3		pF
Grid No.1 to Plate of Other Unit	0.002	0.002		pF
Plate of Unit No.1 to Plate of Unit No.2		0.02		pF

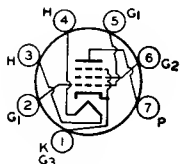
Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values, Each Unit)

Plate Voltage	330	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 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	3.1	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	0.65	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	

CHARACTERISTICS (Each Unit)

Plate Supply Voltage	125	volts
Grid No.3	Connected to cathode at socket	
Grid-No.2 Supply Voltage	125	volts
Cathode-Bias Resistor	56	ohms
Plate Resistance (Approx.)	0.2	megohm
Transconductance	10500	μ mhos
Plate Current	11	mA
Grid-No.2 Current	3.5	mA
Grid-No.1 Voltage (Approx.) for transconductance of 50 μ mhos	-15	volts



7CV

BEAM POWER TUBE

6AS5

Miniature type used as output amplifier primarily in automobile and in ac-operated receivers. Outlines section, 5D; requires miniature 7-contact socket. For curves of average plate characteristics, refer to type 35C5.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.8	ampere
Peak Heater-Cathode Voltage	± 100 max	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.6	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	12	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	9	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	150	volts
Grid-No.2 (Screen-Grid) Voltage	117	volts
Plate Dissipation	5.5	watts
Grid-No.2 Input	1.0	watt
Bulb Temperature (At hottest point)	250	$^{\circ}$ C

TYPICAL OPERATION

Plate Voltage	150	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 (Control-Grid) Voltage	-8.5	volts
Peak AF Grid-No.1 Voltage	8.5	volts
Zero-Signal Plate Current	35	mA
Maximum-Signal Plate Current	36	mA
Zero-Signal Grid-No.2 Current (Approx.)	2	mA
Maximum-Signal Grid-No.2 Current (Approx.)	6.5	mA
Transconductance	5600	μ mhos
Load Resistance	4500	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	2.2	watts

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm