

6DQ6A

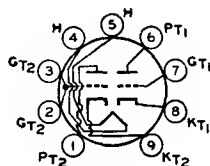
Refer to chart at end of section.

6DQ6B

Refer to chart at end of section.

6DR7**10DR7, 13DR7****DUAL TRIODE**

Miniature type containing high- μ and low- μ triodes; used as combined vertical-deflection-oscillator and vertical-deflection-amplifier tube in television receivers. Outlines section, 6E; requires miniature 9-contact socket. Types 10DR7 and 13DR7 are identical with type 6DR7 except for heater ratings.

**9HF**

Heater Voltage (ac/dc)	6.3
Heater Current	0.9
Heater Warm-up Time (Average)	—
Heater-Cathode Voltage:	

6DR7	10DR7	13DR7	
6.3	9.7	13	volts
0.9	0.6	0.45	ampere
—	11	11	seconds

Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts

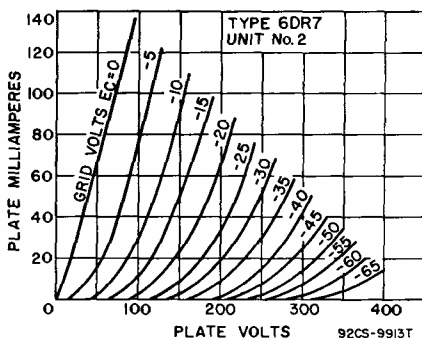
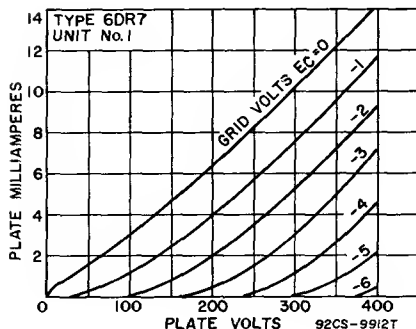
Direct Interelectrode Capacitances (Approx.):

	Unit No.1	Unit No.2	
Grid to Plate	4.5	8.5	pF
Grid to Cathode and Heater	2.2	5.5	pF
Plate to Cathode and Heater	0.34	1	pF

Class A₁ Amplifier**CHARACTERISTICS**

Plate Voltage	250	150	volts
Grid Voltage	—3	—17.5	volts
Amplification Factor	68	6	
Plate Resistance (Approx.)	40000	925	ohms
Transconductance	1600	6500	μmhos
Plate Current	1.4	35	mA
Plate Current for grid voltage of —24 volts	—	10	mA
Grid Voltage (Approx.) for plate current of 10 μA	—5.5	—	volts
Grid Voltage (Approx.) for plate current of 50 μA	—	—44	volts

Unit No.1	Unit No.2	
250	150	volts
—3	—17.5	volts
68	6	
40000	925	ohms
1600	6500	μmhos
1.4	35	mA
—	10	mA
—5.5	—	volts
—	—44	volts

**Vertical-Deflection Oscillator and Amplifier**

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

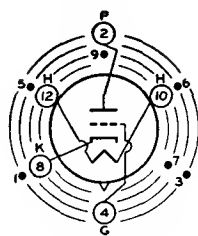
MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Voltage	330	275	volts
Peak Positive-Pulse Plate Voltage#	—	1500	volts
Peak Negative-Pulse Grid Voltage	400	250	volts
Peak Cathode Current	70	175	mA
Average Cathode Current	20	50	mA
Plate Dissipation	1	7	watts

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:			
For grid-resistance-bias or cathode-bias operation	2.2	2.2	megohms

Pulse duration must not exceed 15% of a vertical scanning cycle (2.5 milliseconds).



INDEX=LARGE LUG
●=PIN CUT OFF

12AQ

HIGH-MU TRIODE

Nuvistor type used as grounded-cathode, neutralized rf amplifier in vhf tuners of color and black-and-white television and FM receivers. **Outlines section, 1;** requires nuvistor socket. Type 2DS4 is identical with type 6DS4 except for heater ratings.

6DS4

2DS4

	2DS4	6DS4	
Heater Voltage (ac/dc)	2.1	6.3	volts
Heater Current	0.45	0.135	ampere
Heater Warm-up Time (Average)	8	—	seconds
Peak Heater-Cathode Voltage	±100 max	±100 max	volts
Direct Interelectrode Capacitances (Approx.)			
Grid to Plate		0.92	pF
Grid to Cathode, Heater, and Shell		4.3	pF
Plate to Cathode, Heater, and Shell		1.8	pF
Plate to Cathode		0.18	pF
Heater to Cathode		1.6	pF

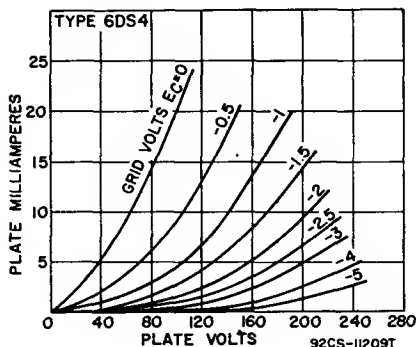
Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Supply Voltage	300°	volts
Plate Voltage	135	volts
Grid Voltage, Negative-bias value	55	volts
Grid Voltage, Peak positive value	0	volts
Cathode Current	15	mA
Plate Dissipation	1.5	watt

CHARACTERISTICS

Plate Supply Voltage	110	volts
Grid Supply Voltage	0	volts
Cathode-Bias Resistor	130	ohms
Amplification Factor	63	
Plate Resistance (Approx.)	7000	ohms
Transconductance	9000	μmhos
Plate Current	6.5	mA
Grid Voltage (Approx.) for plate current of 100 μA	—5	volts
Grid Voltage (Approx.) for plate current of 10 μA	—6.8	volts



TYPICAL OPERATION

Plate Voltage	70	volts
Grid Supply Voltage	0	volts
Grid Resistor	47000	ohms
Amplification Factor	68	
Plate Resistance (Approx.)	5440	ohms
Transconductance	12500	μmhos
Plate Current	7	mA