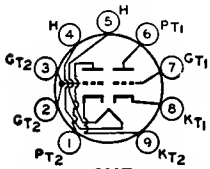
Transconductance for grid-No.1 volts of —5.5 and cathode resistor of 0 ohms	700	μmhos
Plate Current	15.5	mA
Grid-No.2 Current	4.2	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μA	—9	volts



9HF

6DE7

DUAL TRIODE

10DE7, 13DE7

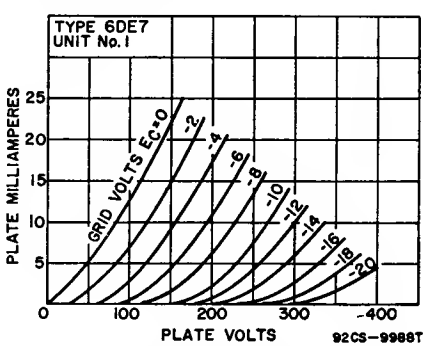
Miniature type used as combined vertical oscillator and vertical-deflection amplifier in television receivers. Unit No.1 is used as a blocking oscillator in vertical-deflection circuits, and unit No.2 is used as a vertical-deflection amplifier. Outlines section, 6E; requires miniature 9-contact socket. For curve of average plate characteristics, Unit No.2, refer to type 6DR7. Types 10DE7 and 13DE7 are identical with type 6DE7 except for heater ratings.

	6DE7	10DE7	13DE7	
Heater Voltage (ac/dc)	6.3	9.7	13	volts
Heater Current	0.9	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 (Approx.):	Unit No.1	Unit No.2	
Grid to Plate	4	8.5	pF
Grid to Cathode and Heater	2.2	5.5	pF
Plate to Cathode and Heater	0.52	1	pF

Class A_1 Amplifier

CHARACTERISTICS	Unit No.1	Unit No.2	
Plate Voltage	250	150	volts
Grid Voltage	—11	—17.5	volts
Amplification Factor	17.5	6	
Plate Resistance (Approx.)	8750	925	ohms
Transconductance	2000	6500	μmhos
Plate Current	5.5	35	mA
Plate Current for grid voltage of —24 volts	—	10	mA
Grid Voltage (Approx.) for plate current of 10 μA	—20	—	volts
Grid Voltage (Approx.) for plate current of 50 μA	—	—44	volts



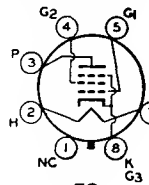
Vertical-Deflection Oscillator and Amplifier

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

MAXIMUM RATINGS (Design-Maximum Values)	Unit No.1 Oscillator	Unit No.2 Amplifier	
DC Plate Voltage	330	275	volts
Peak Positive-Pulse Plate Voltage#	—	1500	volts
Peak Negative-Pulse Grid Voltage	400	250	volts
Peak Cathode Current	77	175	mA

Average Cathode Current	22	50	mA
Plate Dissipation	1.5	7	watts
MAXIMUM CIRCUIT VALUES			
Grid-Circuit Resistance:			
For grid-resistor bias or cathode-bias operation	2.2	2.2	megohms

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



7S

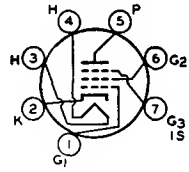
6DG6GT — BEAM POWER TUBE

Glass octal type used as output tube in audio-amplifier applications **Outlines section, 13D**; requires octal socket. This type may be supplied with pin 1 omitted.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	1.2	amperes
Heater-Cathode Voltage:		
Peak value	±200 max	volts
Average value	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	15	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	10	pF

Class A_1 Audio-Frequency Power Amplifier

MAXIMUM RATINGS (Design-Center Values)			
Plate Voltage		200	volts
Grid-No.2 (Screen-Grid) Voltage		125	volts
Plate Dissipation		10	watts
Grid-No.2 Input		1.25	watts
TYPICAL OPERATION			
Plate Supply Voltage	110	200	volts
Grid-No.2 Supply Voltage	110	125	volts
Grid-No.1 (Control-Grid) Supply Voltage	—7.5	—	volts
Peak AF Grid-No.1 Voltage	7.5	8.5	volts
Cathode-Bias Resistor	—	180	ohms
Zero-Signal Plate Current	49	46	mA
Maximum-Signal Plate Current	50	47	mA
Zero-Signal Grid-No.2 Current	4	2.2	mA
Maximum-Signal Grid-No.2 Current	10	8.5	mA
Plate Resistance (Approx.)	13000	28000	ohms
Transconductance	8000	8000	μmhos
Load Resistance	2000	4000	ohms
Total Harmonic Distortion	10	10	per cent
Maximum-Signal Power Output	2.1	3.8	watts
MAXIMUM CIRCUIT VALUES			
Grid-No.1-Circuit Resistance:			
For fixed-bias operation		0.1	megohm
For cathode-bias operation		0.5	megohm



7CM

6DK6

3DK6, 4DK6, 12DK6 — **SHARP-CUTOFF PENTODE**

Miniature type used as if-amplifier tube in color and black-and-white television receivers. **Outlines section, 5C**; requires miniature 7-contact socket. Types 3DK6, 4DK6, and 12DK6 are identical with type 6DK6 except for heater ratings.

	3DK6	4DK6	6DK6	12DK6	
Heater Voltage (ac/dc)	3.15	4.2	6.3	12.6	volts
Heater Current	0.6	0.45	0.3	0.15	ampere
Heater Warm-up Time (Average)	11	11	—	—	seconds
Heater-Cathode Voltage:					
Peak value	+200 max —300 max	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances:					
Grid No.1 to Plate			0.025 max		pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3 and Internal Shield			6.3		pF
Plate to Cathode, Heater, Grid No.2, Grid No.3 ,and Internal Shield			1.9		pF