

Heater-Cathode Voltage:

Peak value	+300	—5500	volts
Average value	+100	—900	volts

CHARACTERISTICS, Instantaneous Value

Tube Voltage Drop for plate current of 350 mA	34	volts
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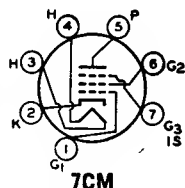
Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

6DE6

4DE6

SHARP-CUTOFF PENTODE

Miniature type used in the gain-controlled picture first stages of television receivers utilizing an intermediate frequency in the order of 40 MHz and as an rf amplifier in vhf television tuners. Outlines section, 5C; requires miniature 7-contact socket. Type 4DE6 is identical with type 6DE6 except for heater ratings.



	4DE6	6DE6	
Heater Voltage (ac/dc)	4.2	6.3	volts
Heater Current	0.45	0.3	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
Direct Interelectrode Capacitances:	Unshielded	Shielded ^Δ	
Grid No.1 to Plate	0.025 max	0.015 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	6.5	6.5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	2	3	pF

^Δ With external shield connected to cathode.

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

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	2.3	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 165 volts	0.55	watt
For grid-No.2 voltages between 165 and 330 volts	See curve page 98	

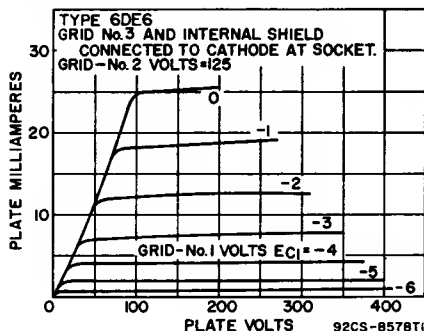
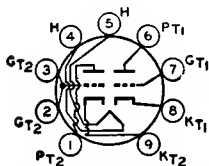
**CHARACTERISTICS**

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.)	0.25	megohm
Transconductance	8000	μmhos

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



9HF

DUAL TRIODE

6DE7

10DE7, 13DE7

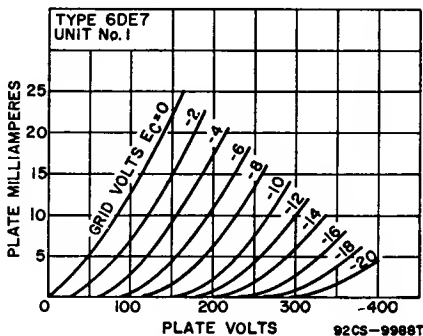
Miniature type used as combined vertical oscillator and vertical-deflection amplifier in television receivers. Unit No.1 is used as a blocking oscillator in vertical-deflection circuits, and unit No.2 is used as a vertical-deflection amplifier. Outlines section, 6E; requires miniature 9-contact socket. 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.

Heater Voltage (ac/dc)	6DE7	10DE7	13DE7	
Heater Current	6.3	9.7	13	volts
Heater Warm-up Time (Average)	0.9	0.6	0.45	ampere
Heater-Cathode Voltage:	—	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	8.5		pF
Grid to Cathode and Heater	2.2	5.5		pF
Plate to Cathode and Heater	0.52	1		pF

Class A₁ Amplifier

CHARACTERISTICS

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



Vertical-Deflection Oscillator and Amplifier

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

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