

Direct Interelectrode Capacitances:

Pentode Unit:

Grid No.1 to Plate	0.0025 max	pF
Grid No.1 to All Other Electrodes Except Plate	5	pF
Plate to All Other Electrodes Except Grid No.1	5.2	pF
Grid No.1 to Heater	0.05 max	pF
Plate of Each Diode Unit to All Other Electrodes	2.5	pF
Plate of Diode Unit No.1 to Plate of Diode Unit No.2	0.25 max	pF
Plate of Diode Unit No.1 to Heater	0.015 max	pF
Plate of Diode Unit No.2 to Heater	0.003 max	pF
Plate of Diode Unit No.1 to Pentode Grid No.1	0.0008 max	pF
Plate of Diode Unit No.2 to Pentode Grid No.1	0.001 max	pF
Plate of Diode Unit No.1 to Pentode Plate	0.15 max	pF
Plate of Diode Unit No.2 to Pentode Plate	0.025 max	pF

Pentode Unit as Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Supply Voltage	550	volts
Plate Voltage	300	volts
Grid-No.2 Voltage:		
With plate current greater than 8 mA	125	volts
With plate current less than 4 mA	300	volts
Cathode Current	16.5	mA
Plate Dissipation	2.25	watts
Grid-No.2 Input	0.45	watts

CHARACTERISTICS

Plate Voltage	200	250	volts
Grid No.3	Connected to cathode at socket		
Grid-No.2 Voltage	100	100	volts
Grid-No.1 Voltage	-1.5	-2	volts
Mu Factor, Grid No.2 to Grid No.1	20	20	
Plate Resistance (Approx.)	0.6	1	megohm
Transconductance	4500	3800	μmhos
Plate Current	11	9	mA
Grid-No.2 Current	3.3	2.7	mA
Transconductance, at grid-No.1 voltage of -20 volts	120	200	μmhos

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance	3	megohms
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Diode Units (Each Unit)

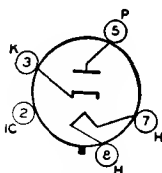
MAXIMUM RATINGS (Design-Center Values)

Peak Inverse Plate Voltage	200	volts
Peak Plate Current	5	mA
Average Plate Current	0.8	mA

HALF-WAVE
VACUUM RECTIFIER

6DE4

17DE4, 22DE4



4CG

Glass octal type used as damper tube in horizontal-deflection circuits of television receivers. Outlines section, 13G; requires octal socket. Socket terminals 1, 2, 4, and 6 should not be used as tie points. This tube, like other power-handling tubes, should be adequately ventilated. Types 17DE4 and 22DE4 are identical with type 6DE4 except for heater ratings.

	6DE4	17DE4	22DE4	
Heater Voltage (ac/dc)	6.3	17	22.4	volts
Heater Current	1.6	0.6	0.45	amperes
Heater Warm-up Time (Average)	—	11	11	seconds
Direct Interelectrode Capacitances (Approx.):				
Plate to Cathode and Heater			8.5	pF
Cathode to Plate and Heater			11.5	pF
Heater to Cathode			4	pF

Damper Service

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

MAXIMUM RATINGS (Design-Maximum Values)

Peak Inverse Plate Voltage#	5500	volts
Peak Plate Current	1100	mA
Average Plate Current	180	mA
Plate Dissipation	6.5	watts

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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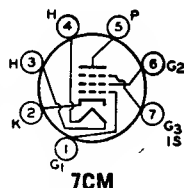
Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).

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	

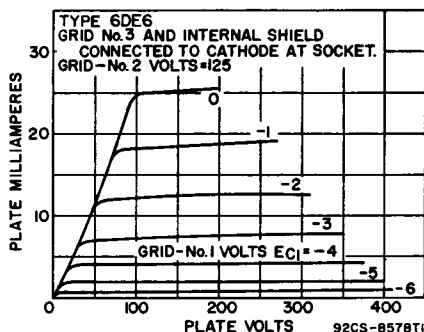
**CHARACTERISTICS**

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