

Class A₁ Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Maximum Values)

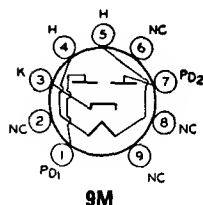
Plate Voltage	250	volts
Grid-No.2 (Screen-Grid) Supply Voltage	180	volts
Grid-No.2 Voltage	See curve page 300	
Cathode Current	20	mA
Plate Dissipation:		
Either plate	1.5	watts
Both plates (both units operating)	2.5	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 90 volts	0.5	watt
For grid-No.2 voltages between 90 and 180 volts	See curve page 300	

CHARACTERISTICS

Plate Voltage	125	volts
Grid-No.2 Voltage	80	volts
Grid-No.1 Voltage	-1	volt
Plate Resistance (Approx.)	0.1	megohm
Transconductance	8000	μ mhos
Plate Current	10	mA
Grid-No.2 Current	1.5	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μ A	-6	volts

Refer to chart at end of section.

6C10

FULL-WAVE
VACUUM RECTIFIER

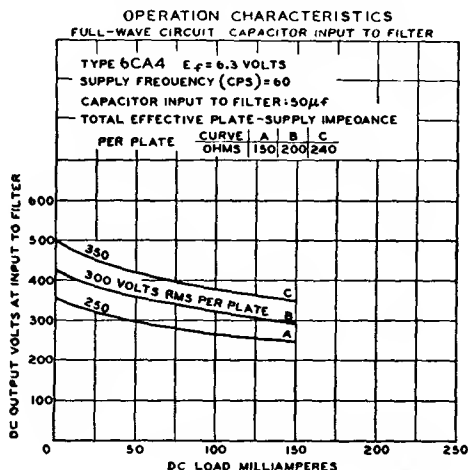
6CA4

Miniature type used in power supply of compact audio equipment having moderate dc requirements. Outlines section, 6G; requires miniature 9-contact socket. This tube, like other power-handling tubes, should be adequately ventilated. Heater: volts (ac/dc), 6.3; amperes, 1.

Full-Wave Rectifier

MAXIMUM RATINGS (Design-Center Values)

Peak Inverse Plate Voltage	1000	volts
Peak Plate Current (Per Plate)	450	mA
AC Plate Supply Voltage (Per Plate, rms) with Capacitor Input to Filter	350	volts
Average Output Current	150	mA
Hot Switching Transient Plate Current (Per Plate)	#	
Peak Heater-Cathode Voltage	-500	volts



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TYPICAL OPERATION WITH CAPACITOR INPUT TO FILTER

AC Plate-to-Plate Supply Voltage (rms)	500	600	700	volts
Filter-Input Capacitor	50	50	50	μ F
Total Effective Plate Supply Impedance per Plate	150	200	240	ohms
DC Output Voltage at Input to Filter (Approx.) For dc output current of 150 mA	245	293	347	volts

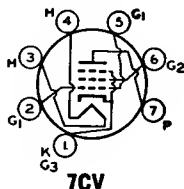
When capacitor-input circuits are used, a maximum peak current value per plate of 1 ampere during the initial cycles of the hot-switching transient should not be exceeded.

6CA5

12CA5

BEAM POWER TUBE

Miniature type used in af power output stage of radio and television receivers. Outlines section, 5D; requires miniature 7-contact socket. Type 12CA5 is identical with type 6CA5 except for heater ratings.



	6CA5	12CA5	
Heater Voltage (ac/dc)	6.3	12.6	volts
Heater Current	1.2	0.6	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	± 200 max	+200 —300 max	volts
Average value	100 max	+100 —200 max	volts

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

Plate Voltage	130	volts
Grid-No.2 (Screen-Grid) Voltage	130	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	5	watts
Grid-No.2 Input	1.4	watts
Bulb Temperature (At hottest point)	180	$^{\circ}$ C

TYPICAL OPERATION

Plate Voltage	110	125	volts
Grid-No.2 Voltage	110	125	volts
Grid-No.1 (Control-Grid) Voltage	—4	—4.5	volts
Peak AF Grid-No.1 Voltage	4	4.5	volts
Zero-Signal Plate Current	32	37	mA
Maximum-Signal Plate Current	31	36	mA
Zero-Signal Grid-No.2 Current (Approx.)	3.5	4	mA
Maximum-Signal Grid-No.2 Current (Approx.)	7.5	11	mA
Plate Resistance (Approx.)	16000	15000	ohms
Transconductance	8100	9200	μ mhos
Load Resistance	3500	4500	ohms
Total Harmonic Distortion	5	6	per cent
Maximum-Signal Power Output	1.1	1.5	watts

MAXIMUM CIRCUIT VALUES

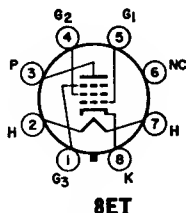
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

6CA7

Refer to chart at end of section.

**6CA7/
EL34****POWER PENTODE**

Glass octal types used in the output stage of audio-frequency amplifiers. Maximum dimensions: over-all length, $4\frac{7}{16}$ inches; seated height, $3\frac{3}{8}$ inches; diameter, $1\frac{1}{2}$ inches. Tube requires octal socket.



Heater Voltage (ac/dc)	6.3	volts
Heater Current	1.5	amperes
Peak Heater-Cathode Voltage	± 200 max	volts