

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

Plate Voltage	150	volts
Grid-No.2 (Screen-Grid) Voltage	130	volts
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	volts
Plate Dissipation	7	watts
Grid-No.2 Input	1.4	watts
Bulb Temperature (At hottest point)	220	°C

TYPICAL OPERATION

Plate Voltage	120	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-8	volts
Peak AF Grid-No.1 Voltage	8	volts
Zero-Signal Plate Current	49	mA
Maximum-Signal Plate Current	50	mA
Zero-Signal Grid-No.2 Current	4	mA
Maximum-Signal Grid-No.2 Current	8.5	mA
Plate Resistance (Approx.)	10000	ohms
Transconductance	7500	μmhos
Load Resistance	2500	ohms
Total Harmonic Distortion	10	per cent
Maximum-Signal Power Output	2.3	watts

MAXIMUM CIRCUIT VALUES

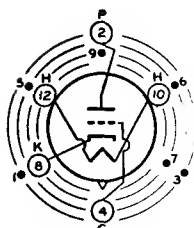
Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.1	megohm
For cathode-bias operation	0.5	megohm

For replacement use type 6BQ6GTB/6CU6.

6CU6

Refer to chart at end of section.

6CU8



INDEX=LARGE LUG
●=PIN CUT OFF
12AQ

HIGH-MU TRIODE

6CW4

2CW4, 13CW4

Nuvistor type used as a grounded-cathode, neutralized rf amplifier in vhf tuners of color and black-and-white television and FM receivers. Outlines section, 1; requires nuvistor socket. Types 2CW4 and 13CW4 are identical with type 6CW4 except for heater ratings.

	2CW4	6CW4	13CW4	
Heater Voltage (ac/dc)	2.1	6.3	13.5	volts
Heater Current	0.45	0.135	0.06	ampere
Heater Warm-up Time (Average)	8	—	—	seconds
Peak Heater-Cathode Voltage	±100 max	±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

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MAXIMUM RATINGS (Design-Maximum Values)

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

CHARACTERISTICS AND TYPICAL OPERATION

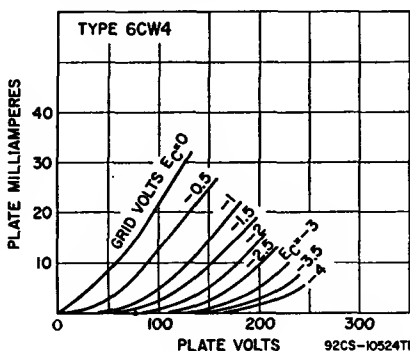
	Characteristics	Typical Operation	
Plate Supply Voltage	110	70	volts
Grid Supply Voltage	0	0	volts
Cathode-Bias Resistor	130	—	ohms
Grid Resistor	—	47000	ohms
Amplification Factor	65	68	
Plate Resistance (Approx.)	6600	5440	ohms
Transconductance	9800	12500	μ mhos
Plate Current	7	7.2	mA
Grid Voltage (Approx.) for plate current of 10 μ A ..	—4	—	volts

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:*		
For fixed-bias operation	0.5	megohm
For cathode-bias operation	2.2	megohms

* A plate supply voltage of 300 volts may be used provided a sufficiently large resistor is used in the plate circuit to limit the plate dissipation to 1.5 watts under any condition of operation.

* For operation at metal-shell temperatures up to 135° C.



6CW5

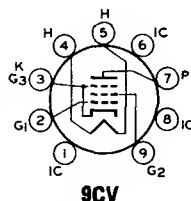
Refer to chart at end of section.

6CW5/
EL86

8CW5/XL86,
10CW5/LL86,
15CW5/PL84

POWER PENTODE

Miniature type used for vertical-deflection amplifier service in color and black-and-white television receivers. Outlines section, 6G; requires miniature 9-contact socket. Types 8CW5/XL86, 10CW5/LL86, and 15CW5/PL84 are identical with type 6CW5/EL86 except for heater ratings.



	6CW5/ EL86	8CW5/ XL86	10CW5/ LL86	15CW5/ PL84	
Heater Voltage (ac/dc)	6.3	8	10.6	15	volts
Heater Current	0.76	0.6	0.45	0.3	ampere
Heater Warm-up Time	—	—	11	—	seconds
Heater-Cathode Voltage:					
Peak value	±330 max	±330 max	±330 max	±330 max	volts
Average value	±220 max	±220 max	±220 max	±220 max	volts
Direct Interelectrode Capacitances:					
Grid No.1 to Plate				0.6	pF
Grid No.1 to Heater				0.25 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3				13	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3				6.8	pF