

Full-Wave Rectifier

MAXIMUM RATINGS (Design-Maximum Values)

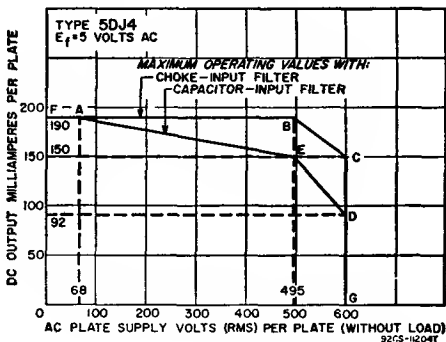
Peak Inverse Plate Voltage	1700	volts
Peak Plate Current (Per Plate)	1	ampere
Hot-Switching Transient Plate Current (Per Plate)	5	amperes
AC Plate-Supply Voltage (Per Plate, rms, without load)	See Rating Chart	
Average Output Current (Per Plate)	See Rating Chart	

TYPICAL OPERATION

Filter Input	Capacitor		Choke	
AC Plate-to-Plate Supply Voltage (rms, without load)	600	900	1100	volts
Filter-Input Capacitor	40	40	—	μ F
Filter-Input Choke	—	—	10	henries
Effective Plate-Supply Impedance per Plate	21	67	—	ohms
DC Output Voltage at Input to Filter (Approx.)	290	460	420	volts
Average Output Current	300	275	275	mA

• When capacitor values greater than 40 μ F are used, the effective plate-supply impedance should be increased so that the maximum rating for peak plate current is not exceeded.

RATING CHART



5EA8

Refer to type 6EA8.

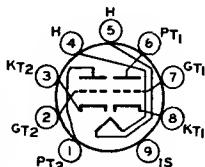
5ES8

5ES8/

YCC189

VARIABLE-MU TWIN TRIODE

Miniature type used as cascode-type amplifier in tuners of television receivers. Outlines section, 6B; requires miniature 9-contact socket. Heater: volts (ac/dc), 5.6; amperes, 0.45.



9AJ

Class A₁ Amplifier (Each Unit)

CHARACTERISTICS

Plate Voltage	90	90	90	volts
Grid Voltage	-1.4	-5	-9	volts
Plate Resistance	2500	—	—	ohms
Transconductance	12500	625	125	μ mhos
Plate Current	15	—	—	mA

Cascode-Type Amplifier (Each Unit)

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage with plate current of 0 mA	550	volts
Plate Voltage	130	volts
Grid Voltage, Negative-bias value	50	volts
Cathode Current	22	mA
Plate Dissipation	1.8	watts
Heater-Cathode Voltage:		
Grounded-cathode section ^A	80	volts
Grounded-grid section (cathode positive) ^B	180*	volts

MAXIMUM CIRCUIT VALUES

Grid-Circuit Resistance:

Grounded-cathode section	1	megohm
Grounded-grid section	0.5	megohm

* The dc component must not exceed 130 volts.

† Pins 6, 7, and 8.

• Pins 1, 2, and 3.

Refer to type 6EU8.

5EU8

Refer to type 6EW6.

5EW6

Refer to type 6FG7.

5FG7

Refer to type 6FV8A.

5FV8

Refer to type 6GH8A.

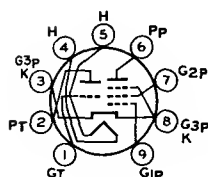
5GH8A

Refer to type 6GJ7/ECF801.

5GJ7

Refer to type 6GM6.

5GM6



9GF

**MEDIUM-MU TRIODE—
SHARP-CUTOFF PENTODE**

5GS7

Miniature type used as frequency changer in vhf television tuners. Outlines section, 6B; requires miniature 9-contact socket. Heater: volts, 5.4; amperes 0.45; maximum heater-cathode volts, ± 100 .

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

	Triode Unit	Pentode Unit	
Plate Voltage	125	250	volts
Grid-No.2 Input	—	150	volts
Cathode Current	15	18	mA
Plate Dissipation	1.5	2	watts
Grid-No. 2 Input	—	0.5	watt

CHARACTERISTICS

Plate Voltage	100	170	volts
Grid-No.2 Voltage	—	150	volts
Grid-No.1 (Control-Grid) Voltage	—3	—1.2	volts
Plate Resistance	—	0.35 min	megohm
Transconductance	5500	12000	megohm
Plate Current	14	10	mA
Grid-No.2 Current	—	3.3	mA
Amplification Factor	17	—	

MAXIMUM CIRCUIT VALUES

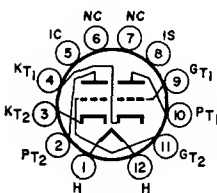
	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance	0.5	—	megohm
For fixed-bias operation	—	0.25	megohm
For automatic-bias operation	—	0.5	megohm

Refer to chart at end of section.

5GX6

Refer to chart at end of section.

5GX7



12FQ

DUAL TRIODE

5HA7

4HA7

Duodecar type used as a sync clipper and agc amplifier in television receivers. Outlines section, 8A; requires duodecar 12-contact socket. Type 4HA7 is identical with type 5HA7 except for the heater ratings.

Heater Voltage (ac/dc)	4HA7	5HA7	volts
Heater Current	4.2	5.6	ampere
	0.6	0.45	