

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:			
For fixed-bias operation	2.2	2.2	megohms
For cathode-bias operation	2.2	2.2	megohms

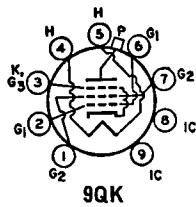
Refer to chart at end of section.

6GJ5

BEAM POWER TUBE

6GJ5A

12GJ5A, 17GJ5A



Novar type used in high-efficiency horizontal-deflection section, 18A; requires novar 9-contact socket. For curve of average characteristics see type 6GW6. Types 12GJ5A and 17GJ5A are identical with type 6GJ5A except for heater ratings.

Heater Voltage (ac/dc)	6GJ5A	12GJ5A	17GJ5A	
	6.3	12.6	16.8	volts
Heater Current	1.2	0.6	0.45	amperes
Heater Warm-up Time (Average)	—	11	11	seconds
Heater-Cathode Voltage:				
Peak value	±200 max	±200 max	±200 max	volts
Average value	100 max	100 max	100 max	volts
Direct Interelectrode Capacitances (Approx.):				
Grid No.1 to Plate			0.26	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3			15	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3			6.5	pF

Class A₁ Amplifier

CHARACTERISTICS

	Triode Connection		Pentode Connection		
Plate Voltage	150	60	250	150	volts
Grid-No.2 Voltage	150	150	150	150	volts
Grid-No.1 Voltage	-22.5	0	-22.5	-22.5	volts
Mu-Factor, Grid No.2 to Grid No.1	4.4	—	—	—	
Plate Resistance (Approx.)	—	—	15000	—	ohms
Transconductance	—	—	7100	—	μmhos
Plate Current	—	390 [■]	70	—	mA
Grid-No.2 Current	—	32 [■]	2.1	—	mA
Grid-No.1 Voltage for plate current of 1 mA	—	—	-42	—	volts

■ This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

Horizontal-Deflection Amplifier

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

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Supply Voltage	770	volts
Peak Positive-Pulse Plate Voltage#	6500	volts
Peak Negative-Pulse Plate Voltage	1500	volts

DC Grid-No.2 Voltage	220	volts
DC Grid-No.1 Voltage	-55	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
Peak Cathode Current	550	mA
Average Cathode Current	175	mA
Plate Dissipation*	17.5	watts
Grid-No.2 Input	3.5	watts
Bulb Temperature (at hottest point)	249	°C

MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance:

For grid-resistor-bias operation* 1 megohm

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

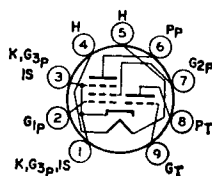
* A bias resistor or other means is required to protect the tube in absence of excitation.

6GJ7

Refer to chart at end of section.

**6GJ7/
ECF801**4GJ7/XCF801
5GJ7/LCF801
8GJ7/PCF801**MEDIUM-MU TRIODE—
SHARP-CUTOFF PENTODE**

Miniature types used as combined oscillator and mixer tubes in color and black-and-white television receivers utilizing an intermediate frequency in the order of 40 MHz. Outlines section, 6J; requires miniature 9-contact socket. Types 4GJ7/XCF801, 5GJ7/LCF801, and 8GJ7/PCF801 are identical with type 6GJ7/ECF801 ratings.

**9QA**

except for heater

Heater Voltage (ac/dc)	4GJ7/ XCF801	5GJ7/ LCF801	6GJ7/ ECF801	8GJ7/ PCF801	
Heater Current	4.1	5.6	6.3	8	volts
Peak Heater-Cathode Voltage ^Δ	0.6	0.45	0.41	0.3	ampere
	±110 max	±110 max	±100 max	±110 max	volts

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

	Triode Unit	Pentode Unit	
Plate-Supply Voltage	600	600	volts
DC Plate Voltage	140	275	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	600	volts
DC Grid-No.2 Voltage	—	275	volts
DC Grid-No.1 (Control-Grid) Voltage	—	-50	volts
Cathode Current	22	20	mA
Plate Dissipation	1.8	2.4	watts
Grid-No.2 Input*	—	0.55	watt

CHARACTERISTICS

DC Plate Voltage	100	170	volts
DC Grid-No.2 Voltage	—	120	volts
DC Grid-No.1 Voltage	-3	-1.2	volts
Amplification Factor	20	55*	
Plate Resistance (Approx.)	—	0.35	megohm
Transconductance	9000	11000	μmhos
Plate Current	15	10	mA
Grid-No.2 Current	—	3	mA
Grid-No.1 Voltage for grid-No.1 current of 0.3 μA	-1.3 max	-1.3 max	volts
Grid-No.1-Circuit Resistance:			
For fixed-bias operation	0.5	1	megohm
For cathode-bias operation	0.5	2.2	megohms

^Δ The hum should be minimized in intercarrier applications by limiting the heater-cathode voltage to 100 volts rms, and in AM receivers to 50 volts rms.

* Grid No.2 to grid No.1, approximate value.

• When control-grid bias is between -1.5 and -2 volts, screen-grid dissipation is limited to 0.50 watt. When this bias is greater than -2 volts, maximum screen-grid dissipation is 0.36 watt.

6GJ8

Refer to chart at end of section.