

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Pentode Unit	
Plate Voltage	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	300	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	

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance:		
For fixed-bias operation	0.25	megohm
For cathode-bias operation	1	megohm

CHARACTERISTICS

	Triode Unit	Pentode Unit	
Plate Voltage	125	125	volts
Grid-No.2 Voltage	—	125	volts
Grid-No.1 Voltage	—1	—1	volt
Amplification Factor	45	—	
Plate Resistance (Approx.)	5600	200000	ohms
Transconductance	8000	6500	μ mhos
Plate Current	12	12	mA
Grid-No.2 Current	—	4	mA
Grid-No.1 Voltage (Approx.) for plate current of 20 μ A	—7.5	—9	volts

Vertical-Deflection Oscillator—Triode Unit

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

MAXIMUM RATINGS (Design-Maximum Values)

DC Plate Voltage	330	volts
Peak Negative-Pulse Grid Voltage	250	volts
Peak Cathode Current	70	mA
Average Cathode Current	20	mA
Plate Dissipation	2	watts

MAXIMUM CIRCUIT VALUE

Grid-Circuit Resistance, for cathode-bias operation	3	megohms
---	---	---------

6FW5

BEAM POWER TUBE

Glass octal type used as horizontal-deflection amplifier in television receivers. Outlines section, 19B; requires octal socket. Heater: volts (ac/dc), 6.3; amperes, 1.2; maximum heater-cathode volts, ± 200 peak, 100 average.

Horizontal-Deflection Amplifier

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

MAXIMUM RATINGS (Design-Maximum Values)

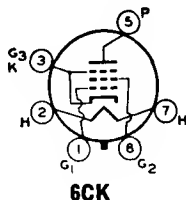
DC Plate Voltage	770	volts
Peak Positive-Pulse Plate Voltage#	6500	volts
DC Grid-No.2 (Screen-Grid) Voltage	220	volts
Peak Negative-Pulse Grid-No.1 Voltage	330	volts
DC Grid-No.1 (Control-Grid) Voltage	—55	volts
Peak Cathode Current	610	mA
Average Cathode Current	175	mA
Plate Dissipation*	18	watts
Grid-No.2 Input	3.6	watts
Bulb Temperature (At hottest point)	220	$^{\circ}$ C

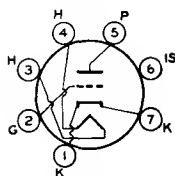
MAXIMUM CIRCUIT VALUE

Grid-No.1-Circuit Resistance	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.





7FP

HIGH-MU TRIODE

6FY5/ EC97

Miniature type with frame grid used for rf-amplifier applications in vhf tuners of television receivers. Outlines section, 5C; requires miniature 7-contact socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.2	ampere
Peak Heater-Cathode Voltage	±100 max	volts

Direct Interelectrode Capacitances:

	Unshielded	Shielded	
Grid to Plate	0.50	0.48	pF
Grid to Cathode, Heater, and Internal Shield	4.75	4.75	pF
Plate to Cathode, Heater, and Internal Shield	3.3	4.3	pF
Grid to Heater	0.28 max	0.28 max	pF
Plate to Cathode	0.25	0.21	pF
Cathode to Grid	3.2	3.2	pF
Heater to Cathode	2.5	2.5	pF

Class A₁ Amplifier

MAXIMUM RATINGS (Absolute-Maximum Values)

Plate Supply Voltage	550	volts
Plate Voltage	200	volts
Grid Voltage, Negative-bias value	50	volts
Cathode Current	20	mA
Plate Dissipation	2.2	watts

CHARACTERISTICS

Plate Voltage	135	135	135	135	volts
Grid Voltage	—1	—3.1	—5	—4.5	volts
Transconductance	13000	625	125	—	μmhos
Amplification Factor	70	—	—	—	
Plate Current	11	—	—	0.1	mA

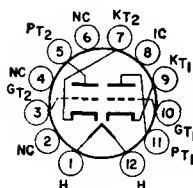
MAXIMUM CIRCUIT VALUES

Cathode-Heater Circuit Resistance	0.02	megohm
Grid-Circuit Resistance	1	megohm

DUAL TRIODE

6FY7

11FY7, 15FY7



12EO

Duodecar type used as combined vertical-deflection oscillator and vertical-deflection amplifier in television receivers. Triode unit No.1 is used as an oscillator, and triode unit No.2 is used as an amplifier. Outlines section, 8D; requires duodecar 12-contact socket. Types 11FY7 and 15FY7 are identical with type 6FY7 except for heater ratings.

	6FY7	11FY7	15FY7	
Heater Voltage (ac/dc)	6.3	11	14.7	volts
Heater Current	1.05	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

Class A₁ Amplifier

CHARACTERISTICS

	Unit No.1	Unit No.2	
Plate Voltage	250	150	volts
Grid Voltage	—3	—17.5	volts
Amplification Factor	65	6	
Plate Resistance (Approx.)	40500	920	ohms
Transconductance	1600	6500	μmhos
Plate Current	1.4	35	mA
Grid Voltage (Approx.) for plate current of 30 μA	—5.5	—	volts
Grid Voltage (Approx.) for plate current of 50 μA	—	—36	volts
Plate Current (Approx.) for grid voltage of —25 volts	—	6	mA