

6Y5

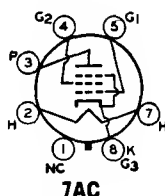
Refer to chart at end of section.

6Y6GA/ 6Y6G

BEAM POWER TUBE

Glass octal type used as output amplifier in radio receivers and in rf-operated, high-voltage power supplies in television equipment. Outlines section, 19B; requires octal socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	1.25	amperes
Peak Heater-Cathode Voltage	±180 max	volts
Direct Interelectrode Capacitances (Approx.):		
Grid No.1 to Plate	0.7	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3	12	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3	7.5	pF



7AC

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Center Values)

Plate Voltage	200	volts
Grid-No.2 (Screen-Grid) Supply Voltage	200	volts
Grid-No.2 Voltage	See curve page 98	
Plate Dissipation	12.5	watts
Grid-No.2 Input:		
For grid-No.2 voltages up to 100 volts	1.75	watts
For grid-No.2 voltages between 100 and 200 volts	See curve page 98	

TYPICAL OPERATION

Plate Voltage	135	200	volts
Grid-No.2 Voltage	135	135	volts
Grid-No.1 (Control-Grid) Voltage	-13.5	-14	volts
Peak AF Grid-No.1 Voltage	13.5	14	volts
Zero-Signal Plate Current	58	61	mA
Maximum-Signal Plate Current	60	66	mA
Zero-Signal Grid-No.2 Current	3.5	2.2	mA
Maximum-Signal Grid-No.2 Current	11.5	9	mA
Plate Resistance (Approx.)	9300	18300	ohms
Transconductance	7000	7100	μmhos
Load Resistance	2000	2600	ohms
Total Harmonic Distortion	10	10	per cent
Maximum-Signal Power Output	3.6	6	watts

MAXIMUM CIRCUIT VALUES

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

6Y7G

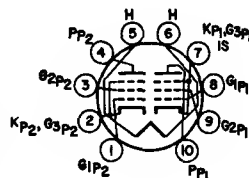
Refer to chart at end of section.

6Y9

11Y9/LFL200

DUAL PENTODE

Miniature type for use in color and black-and-white television receiver applications. Unit No. 1 is used as a video output pentode, and unit No. 2 as a sound if amplifier, agc amplifier, or sync separator. Outlines section, 6L, except has 10-pin base; requires miniature 10-contact socket. Type 11Y9/LFL200 is identical with type 6Y9 except for heater ratings.



10L

Heater Voltage	6Y9 6.3	11Y9/LFL200 11	volts
Heater Current	0.8	0.45	ampere
Peak Heater-Cathode Voltage	±200 max	±200 max	volts
Direct Interelectrode Capacitances:			
Unit No.1:			
Plate to All Other Elements (except grid No.1)		7	pF
Grid No.1 to All Other Elements (except plate)		12	pF
Plate to Grid No.1		95	pF

Unit No.2:

Plate to All Other Elements (except grid No.1)	11	pF
Grid No.1 to All Other Elements (except plate)	10	pF
Plate to Grid No.1	140	fF
Grid No.1 to Heater	<100	fF
Plate to Plate	<150	fF
Grid to Grid	<10	fF
Plate (Unit No.1) to Grid No.1 (Unit No.2)	<100	fF
Plate (Unit No.2) to Grid No.1 (Unit No.2)	<5	fF

Class A₁ Amplifier

MAXIMUM RATINGS (Design-Maximum Values)

	Unit No.1	Unit No.2	
Plate Supply Voltage	550	550	volts
Plate Voltage	250	250	volts
Grid-No.2 (Screen-Grid) Supply Voltage	550	550	volts
Grid-No.2 Voltage	250	250	volts
Cathode Current	60	15	mA
Plate Dissipation	5	1.5	watts
Grid-No.2 Input	2.5	0.5	watts

CHARACTERISTICS

Plate Voltage	170	150	volts
Grid-No.2 Voltage	170	150	volts
Grid-No.1 (Control-Grid) Voltage	-2.6	-2.3	volts
Mu Factor, Grid-No.1 to Grid-No.2	38	35	
Internal Resistance	40	160	kohms
Transconductance	21000	8500	μmhos
Plate Current	30	10	mA
Grid-No.2 Current	6.5	3	mA

MAXIMUM CIRCUIT VALUES

Grid-No.1-Circuit Resistance	1	1	megohm
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Refer to chart at end of section.

6Z5

Refer to chart at end of section.

6Z7G

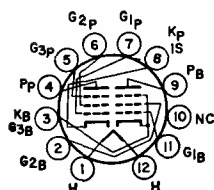
6Z10

PENTODE—
BEAM POWER TUBE

6Z10/6J10

13Z10, 13Z10/13J10

Duodecar types used as a combined limiter, discriminator, and audio power-output tube in FM radio and television receivers. Outlines section, 8C; require duodecar 12-contact socket. Types 13Z10 and 13J10 are identical with type 6Z10 except for heater ratings.



12BT

	6Z10 6Z10/6J10	13Z10 13Z10/13J10	
Heater Voltage (ac/dc)	6.3	13.2	volts
Heater Current	0.95	0.45	ampere
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts
Direct Inter-electrode Capacitances:			
Pentode Unit:			
Grid No.1 to Grid No.3		0.009	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, Plate, and Internal Shield		4.4	pF
Grid No.3 to Cathode, Heater, Grid No.1, Grid No.2, Plate, and Internal Shield		3.2	pF
Beam Power Unit:			
Grid No.1 to Plate		0.22	pF
Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3		11	pF
Plate to Cathode, Heater, Grid No.2, and Grid No.3		7.5	pF

Pentode Unit As Class A₁ Amplifier

CHARACTERISTICS

Plate Voltage	135	135	135	volts
Grid-No.3 (Suppressor-Grid) Voltage	4	4	0	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	280	280	volts