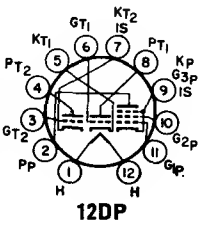
Direct Interelectrode Capacitances:	Unit No.1	Unit No.2	
Plate to All Other Electrodes (except grid No.1)	7	11	pF
Grid No.1 to All Other Electrodes (except plate)	12	10	pF
Plate to Grid No.1	0.105	0.140	pF
Grid No.1 to Heater	—	0.140	pF
Plate of Unit No.1 to Plate of Unit No. 2	0.150 max		pF
Grid No.1 of Unit No.1 to Grid No.1 of Unit No. 2	0.010 max		pF
Plate of Unit No.1 to Grid No.1 of Unit No.2	0.100 max		pF
Plate of Unit No.2 to Grid No.1 of Unit No.1	0.005 max		pF

Class A_1 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	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	—2.1	volts
Mu Factor, Grid No.1 to Grid No.2	38	38	
Internal Resistance	0.032	0.16	megohm
Transconductance	22000	8500	μmhos
Plate Current	30	10	mA
Grid-No.2 Current	7.2	3	mA
MAXIMUM CIRCUIT VALUES			
Grid-No.1-Circuit Resistance	1	1	megohm

6AF11
15AF11

DUAL TRIODE—SHARP-CUTOFF PENTODE



12DP

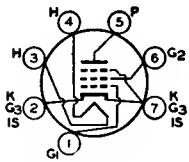
Duodecar type used in television receiver applications. The high-mu triode unit is used for agc keyer service, the medium-mu triode unit for sync separator service, and the pentode unit for video amplifier service. Outlines section, 8C; requires duodecar 12-contact socket. Type 15AF11 is identical with type 6AF11 except for heater ratings.

	6AF11	15AF11	
Heater Voltage (ac/dc)	6.3	14.7	volts
Heater Current	1.05	0.45	amperes
Heater Warm-up Time (Average)	—	11	seconds
Heater-Cathode Voltage:			
Peak value	±200 max	±200 max	volts
Average value	100 max	100 max	volts

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Maximum Values)	Triode Unit No.1	Triode Unit No.2	Pentode Unit	
Plate Voltage	330	330	330	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	—	330	volts
Grid-No.2 Voltage	—	—	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	0	volts
Plate Dissipation	1.1	2	5	watts
Grid-No.2 Input:				
For grid-No.2 voltages up to 165 volts	—	—	1.25	watts
For grid-No.2 voltages between 165 and 330 volts	—	—	See curve page 98	
CHARACTERISTICS				
Plate Supply Voltage	200	200	250	volts
Grid-No.2 Supply Voltage	—	—	150	volts
Grid-No.1 Voltage	—2	—	—	volts
Cathode-Bias Resistor	—	220	100	ohms
Amplification Factor	68	41	—	
Plate Resistance (Approx.)	12400	9400	68000	ohms
Transconductance	5500	4400	11000	μmhos
Plate Current	7	9.2	24	mA

	Triode Unit No.1	Triode Unit No.2	Pentode Unit	
Grid-No.2 Current	—	—	4.8	mA
Grid-No.1 Voltage (Approx.) for plate current of 100 μA	—	—6.5	—10	volts
MAXIMUM CIRCUIT VALUES				
Grid-No.1-Circuit Resistance:				
For fixed-bias operation	0.5	0.5	0.25	megohm
For cathode-bias operation	1	1	1	megohm



7BD

SHARP-CUTOFF PENTODE 6AG5

Miniature type used in compact radio equipment as an rf or if amplifier up to 400 MHz. **Outlines section, 5C;** requires miniature 7-contact socket. For typical operation as a resistance-coupled amplifier, refer to **Resistance-Coupled Amplifier section.**

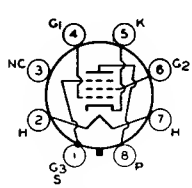
Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.3	ampere
Direct Interelectrode Capacitances:		
Pentode Unit:		
Grid No.1 to Plate	0.030 max	pF
Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	6.5	pF
Plate to Cathode, Heater, Grid No.2, Grid No.3, and Internal Shield	1.8	pF
Triode Unit:		
Grid No.1 to Plate and Grid No.2	2.5	pF
Grid No.1 to Cathode, Heater, Grid No.3, and Internal Shield	3.6	pF
Grid No.2 to Cathode, Heater, Grid No.3, and Internal Shield	3	pF
Plate to Cathode, Heater, Grid No.3, and Internal Shield	3	pF

Class A_1 Amplifier

MAXIMUM RATINGS (Design-Center Values)	Triode Connection*	Pentode Connection	
Plate Voltage	300	300	volts
Grid-No.2 (Screen-Grid) Supply Voltage	—	800	volts
Grid-No.2 Voltage	—	See curve page 98	
Grid-No.1 (Control-Grid) Voltage, Positive-bias value	0	0	volts
Plate Dissipation	2.5	2	watts
Grid-No.2 Input:			
For grid-No.2 voltages up to 150 volts	—	0.5	watt
For grid No.2 voltages between 150 and 300 volts	—	See curve page 98	

CHARACTERISTICS						
Plate Supply Voltage	180	250	100	125	250	volts
Grid-No.2 Supply Voltage	—	—	100	125	150	volts
Cathode-Bias Resistor	330	820	180	100	180	ohms
Amplification Factor	45	42	—	—	—	
Plate Resistance (Approx.)	0.008	0.01	0.6	0.5	0.8	megohm
Transconductance	5700	3800	4500	5100	5000	μmhos
Plate Current	7	5.5	4.5	7.2	6.5	mA
Grid-No.2 Current	—	—	1.4	2.1	2	mA
Grid-No.1 Voltage (Approx.) for plate current of 10 μA	—	—	—5	—6	—8	volts

* Grid No.2 connected to plate.



8Y

POWER PENTODE 6AG7

Metal type used in output stage of video amplifier of color and black-and-white television receivers. **Outlines section, 2B;** requires octal socket.

Heater Voltage (ac/dc)	6.3	volts
Heater Current	0.65	ampere