

RADIOTRON

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POWER AMPLIFIER PENTODE

Heater	Coated Unipotential Cathode		
Voltage	6.3	a-c or d-c volts	
Current	0.7	amp.	
Maximum Overall Length			4-11/16"
Maximum Seated Height			4-1/16"
Maximum Diameter			1-13/16"
Bulb			ST-14
Base		Medium	6-Pin
Pin 1-Heater		Pin 4-Grid	
Pin 2-Plate		Pin 5-Cathode	
Pin 3-Screen		Pin 6-Heater	



BOTTOM VIEW (6B)

For additional data and curves, refer to type 6F6-G.

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POWER AMPLIFIER TRIODE

Filament	Coated		
Voltage	2.5	a-c or d-c volts	
Current	1.5	amp.	
Direct Interelectrode Capacitances:			
Grid to Plate	7.0	μF	
Grid to Filament	4.0	μF	
Plate to Filament	3.0	μF	
Maximum Overall Length			4-11/16"
Maximum Seated Height			4-1/16"
Maximum Diameter			1-13/16"
Bulb			ST-14
Base		Medium	4-Pin
Pin 1-Filament		Pin 3-Grid	
Pin 2-Plate		Pin 4-Filament	
Mounting Position		Vertical, Base Down	



BOTTOM VIEW (4D)

SINGLE VALVE AMPLIFIER-Class A1

Plate Voltage				300 max. volts
Plate Dissipation				10 max. watts
Typical Operation:				
Filament Voltage	2.5	2.5	2.5	a-c volts
Zero-Sig. Plate Voltage	180	250	275	volts
Zero-Sig. Grid Volts*	-31.5	-50	-56	volts
Cath. Bias Res.	1020	1470	1550	ohms
Zero-Sig. Plate Cur.	31	34	36	mA.
Amplification Factor	3.5	3.5	3.5	
Plate Resistance	1650	1810	1700	ohms
Transconductance	2125	2175	2050	μmhos
Load Resistance	2700	3900	4600	ohms
Dominant Harmonic	2nd.	2nd.	2nd.	
Total Harm. Dist.	5	5	5	%
Max. Sig. Pwr. Output	.825	1.6	2.0	watts

PUSH-PULL AMPLIFIER-Class A1

Plate Voltage	300 max. volts
Plate Dissipation (per valve)	10 max. watts

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POWER AMPLIFIER TRIODE

Typical Operation:

Filament Voltage	2.5	2.5	2.5	a-c volts
Zero-Sig. Plate Voltage	180	250	275	volts
Zero-Sig. Grid Volts*	-31.5	-50	-56	volts
Zero-Sig. Cath. Bias Res.**	510	735	775	ohms
Zero-Sig. Plate Cur.**	62	68	72	mA.
Load Resistance (P-P)	3200	4200	3900	ohms
Dominant Harmonic	3rd.	3rd.	3rd.	
Total Harm. Dist.	2	1	1	approx. %
Max. Sig. Pwr. Output**	1.85	4.6	5.5	watts

PUSH-PULL AMPLIFIER-Class AB1

Plate Voltage				300 max. volts
Plate Dissipation (per valve)				10 max. watts

Typical Operation. Fixed Bias:

Filament Voltage	2.5	2.5	2.5	a-c volts
Plate Voltage	250	275	300	volts
Grid Voltage*	-56.5	-69.5	-71.5	volts
Peak A-F Volts (G-G)	110	136	140	volts
Zero-Sig. Plate Cur.**	38	28	40	mA.
Max.-Sig. Plate Cur.**	68	82	81.2	mA.
Plate Supply Res.	0	0	0	ohms
Load Resistance (P-P)	3900	4000	3850	ohms
Dominant Harmonic	3rd.	3rd.	3rd.	
Total Harm. Dist.	2	2	1	approx. %
Max. Sig. Pwr. Output**	4.85	6.0	7.5	watts

Typical Operation. Self Bias:

Filament	2.5	2.5	2.5	a-c volts
Plate Voltage	250	275	300	volts
Cathode Resistor**	830	850	1000	ohms
Peak A-F Volts (G-G)*	110	136	140	volts
Zero-Sig. Plate Cur.**	61	67	64.5	mA.
Max.-Sig. Plate Cur.**	68	82	72	mA.
Plate Supply Res.	0	0	0	ohms
Load Res. (P-P)	3900	4000	5000	ohms
Dominant Harmonic	3rd.	3rd.	3rd.	
Total Harm. Dist.	2	2	1	approx. %
Max. Sig. Pwr. Output**	4.85	6.0	7.4	watts

PUSH-PULL AMPLIFIER-Class AB2

Plate Voltage				300 max. volts
Plate Dissipation (per valve)				10 max. watts

Typical Operation. Fixed Bias:

Filament Voltage	2.5	2.5	2.5	a-c volts
Plate Voltage	275	275	275	volts
Grid Voltage*	-56	-68	-76	volts
Peak A-F Volts (G-G)	183	195	239	volts
Peak Grid Current	5.3	6.73	8.36	mA.
D-C Grid Current**	2.5	2.74	4.0	mA.
Grid Input Peak Pwr.	486	656	1000	mW.
Plate Supply Res.	0	0	0	ohms
Zero-Sig. Plate Cur.**	72	28	10	mA.
Max.-Sig. Plate Cur.**	133	138	136	mA.
Load Res. (P-P)	3900	3200	3490	ohms
Total Harm. Dist.	5	5	5	%
Max. Sig. Pwr. Output**	17	18.2	19.1	watts

Typical Operation. Self Bias:

Filament Voltage	2.5	2.5	2.5	a-c volts
Plate Voltage	275	275	275	volts
Cathode Resistor**	775	775	775	ohms
Zero-Sig. Grid Volts*	-56	-56	-56	volts
Max.-Sig. Grid Volts	-68	-69.5	-75.5	volts

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POWER AMPLIFIER TRIODE

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SHEET 2

Peak A-F Volts (G-G)	186.6	210	221.8	volts
Peak Grid Current	5.02	10.8	7.4	mA.
D-C Grid Current ^{††}	2.66	4.0	3.92	mA.
Grid Input Peak Pwr.	464 [•]	1110 ^Δ	820	mW.
Plate Supply Res.	1000	1000	0	ohms
Zero-Sig. Plate Cur. ^{††}	72	72	72	mA.
Max.-Sig. Plate Cur. ^{††}	84	86	94	mA.
Max.-Sig. Plate Volts	250	246	256	volts
Load Res. (P-P)	5520	5810	5420	ohms
Total Harm Dist.	5	5	5	%
Max. Sig. Pwr. Output ^{††}	11.2	12.7	13.2	watts

^Δ Grid volts measured from mid-point of a-c operated filament

[◊] Horizontal operation permitted if plane of filament is vertical.

[•] A grid return circuit having low d-c resistance is desirable. With self-bias the d-c resistance should not exceed 1.0 megohm; with fixed bias it should not exceed 0.1 megohm.

^{††} For both valves.

[•] A suitable driver would be type 6J7-G, 6C6 or 57 (triode connected), plate voltage 250 volts, grid voltage -8.0 volts with a transformer having a ratio of 1.15:1 primary to half-secondary, primary resistance 1350 ohms, half secondary resistance 925 ohms and core loss not greater than 10%. Cathode loading of the driver is desirable.

^Δ A suitable driver stage would consist of two type 6J7-G, 6C6 or 57 (triode connected) in push-pull, plate voltage 250 volts, grid voltage -8.0 volts, with a transformer having a ratio of 2.04:1 total primary to half secondary, total primary resistance 2480 ohms, half secondary resistance 820 ohms and core loss not greater than 10%. Cathode loading of the driver is desirable.

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AVERAGE PLATE CHARACTERISTICS

