



6N7, 6N7-GT/G

CLASS B TWIN AMPLIFIER

6N7
6N7-GT/G

Heater	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.8	amp.
	<u>6N7</u>	<u>6N7-GT/G</u>
Maximum Overall Length	3-1/4"	3-5/16"
Maximum Seated Height	2-11/16"	2-2/4"
Maximum Diameter	1-5/16"	1-5/16"
Bulb	Metal Shell, MT-8	T-9
Base	{ Small Wafer Octal 8-Pin	{ Intermed. Sh. Octal 8-Pin
Basing Designation	8B	G-8B
Pin 1- { 6N7, Shell 6N7-GT/G, No Conn.		Pin 5-Grid (Triode T ₁)
Pin 2-Heater		Pin 6-Plate (triode T ₁)
Pin 3-Plate (Triode T ₂)		Pin 7-Heater
Pin 4-Grid (Triode T ₂)		Pin 8-Cathode
Mounting Position	BOTTOM VIEW	Any

For convenience, one triode unit is identified as T₁; the other as T₂.

Maximum Ratings Are Design-Center Values

CLASS B POWER AMPLIFIER

Plate Voltage	300 max. volts	
Peak Plate Current (per plate)	125 max. ma.	
Average Plate Dissipation (per plate)	5.5 max. watts	
Typical Operation:		
<i>Unless otherwise specified, values are for the two units</i>		
Plate-Supply Impedance	0	1000 [□] ohms
Effective Grid-Circuit Impedance (per unit)	0	516 ^{□□} ohms
Plate Voltage	300	300 volts
Grid Voltage	0	0 volts
Peak A-F Grid-to-Grid Voltage*	58	82 volts
Zero-Sig. D-C Plate Cur.	35	35 ma.
Max.-Sig. D-C Plate Cur.	70	70 ma.
Peak Grid Cur. (per unit)	20	22 ma.
Effective Load Res. (plate to plate)	8000	8000 ohms
Total Harmonic Distortion	4	8 %
Third Harmonic Distortion	3.5	7.5 %
Fifth Harmonic Distortion	1.5	2.5 %
Max.-Sig. Power Output	10	10 watts

□ practical design value.
 □□ At 400 cycles for class B stage in which the effective resistance per grid circuit is 500 ohms, and the leakage reactance of the coupling transformer is 50 millihenries. The driver stage should be capable of supplying the grids of the class B stage with the specified values at low distortion.
 * Includes peak voltage drop through the grid circuit impedance.
 ▲ For power output shown.

Two 6N7's or 6N7-G's can be operated in a class B output stage with the two triode units of each tube connected in parallel to give a power output of 20 watts (approx.) under conditions of 300 volts on the plates and a 5000-ohm plate-to-plate load.

■ See next page. ← Indicates a change.

June 1, 1942

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

DATA

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6N7-GT/G



6N7, 6N7-GT/G

CLASS B TWIN AMPLIFIER

(continued from preceding page)

CLASS A₁ AMPLIFIER - As Driver

Both grids connected together at socket; likewise, both plates.

Plate Voltage 300 max. volts
Plate Dissipation (per plate) 1.0 max. watt

Typical Operation:

Plate	250	294	volts
Grid [▲]	-5	-6	volts
Amp. Fact.	35	35	
Plate Res.	11300	11000	ohms
Transcond.	3100	3200	μmhos
Plate Cur.	6	7	ma.

Plate Load—depends largely on the design factors of the class B amplifier. In general, the load will be between 20000 and 40000 ohms.

Power Output—under max. voltage conditions, upwards of 400 mw. can be obtained.

- In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.
- ▲ The d-c resistance in the grid circuit of the 6N7 or 6N7-GT/G as a class A₁ amplifier may be as high as 0.5 megohm with cathode bias. With fixed bias, the resistance should not exceed 0.1 megohm.

For additional curves, see Types 6A6 and 53; for data, see RESISTANCE-COUPLED AMPLIFIER CHART.

← Indicates a change.

June 1, 1942

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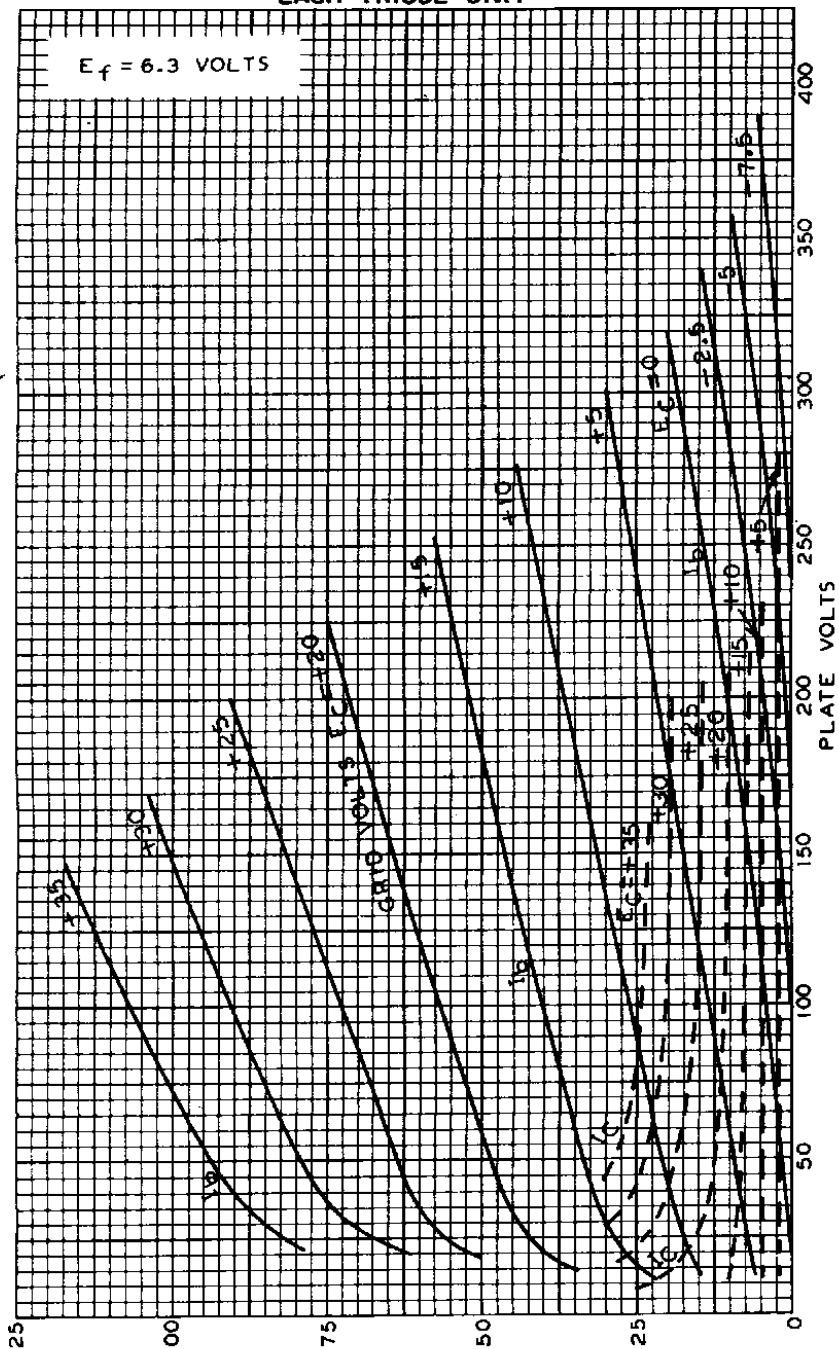
DATA



6N7

6N7

AVERAGE PLATE CHARACTERISTICS EACH TRIODE UNIT

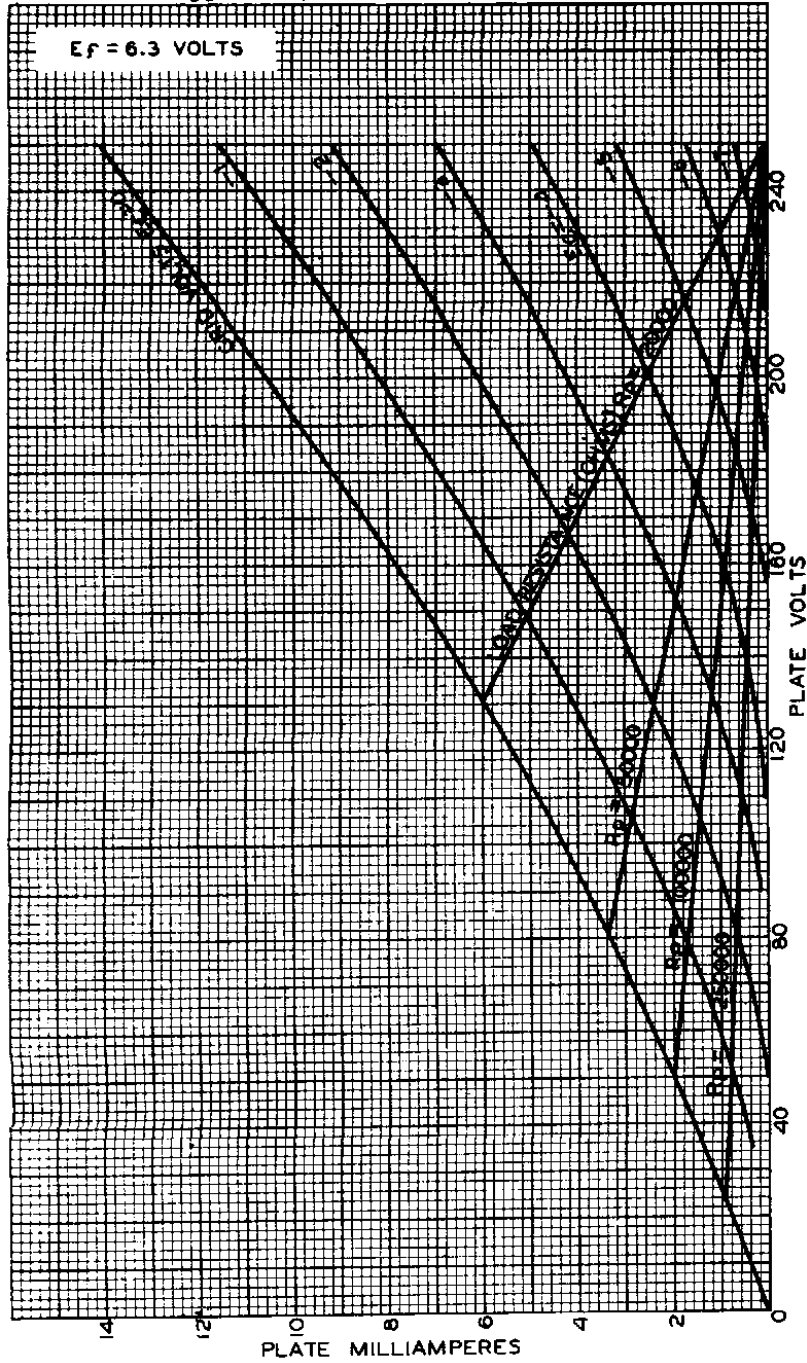


DEC. 18, 1939
RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.
92C-4611

6A6



AVERAGE PLATE CHARACTERISTICS CLASS A OPERATION - EACH TRIODE UNIT



FEB. 5, 1935

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4375



RESISTANCE-COUPLED AMPLIFIER CHARTS (Continued)

<div style="display: flex; justify-content: space-between; align-items: center;"> 6 See Circuit Diagram 4 </div>									
E _{bb}	R _p	R _g	R _{g2}	R _k	C _{g2}	C _k	C	E _o	V.G.
90	0.1	0.1	—	1900*	—	—	0.025	13	16
		0.25	—	2250*	—	—	0.01	19	19
		0.5	—	2500*	—	—	0.006	20	20
	0.25	0.25	—	4050*	—	—	0.01	16	20
		0.5	—	4950*	—	—	0.006	20	22
		1.0	—	5400*	—	—	0.003	24	23
	0.5	0.5	—	7000*	—	—	0.006	18	22
		1.0	—	8500*	—	—	0.003	23	23
		2.0	—	9650*	—	—	0.0015	26	23
180	0.1	0.1	—	1300*	—	—	0.03	35	19
		0.25	—	1700*	—	—	0.015	46	21
		0.5	—	1950*	—	—	0.007	50	22
	0.25	0.25	—	2950*	—	—	0.015	40	23
		0.5	—	3800*	—	—	0.007	50	24
		1.0	—	4300*	—	—	0.0035	57	24
	0.5	0.5	—	5250*	—	—	0.007	44	24
		1.0	—	6600*	—	—	0.0035	54	25
		2.0	—	7650*	—	—	0.002	61	25
300	0.1	0.1	—	1150*	—	—	0.03	60	20
		0.25	—	1500*	—	—	0.015	83	22
		0.5	—	1750*	—	—	0.007	86	23
	0.25	0.25	—	2650*	—	—	0.015	75	23
		0.5	—	3400*	—	—	0.0055	87	24
		1.0	—	4000*	—	—	0.003	100	24
	0.5	0.5	—	4850*	—	—	0.0055	76	23
		1.0	—	6100*	—	—	0.003	94	24
		2.0	—	7150*	—	—	0.0015	104	24

*Values shown are for phase-inverter service.

6N7, 6N7-GT, 6A6, 53