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R-F POWER AMPLIFIER, CLASS B MODULATOR

Filament	Thoriated Tungsten	
Voltage	6.3	a-c or d-c volts
Current	2.5	amp.
Amplification Factor	20	
Direct Interelectrode Capacitances:		
Grid to Plate	6.7	μμf
Grid to Filament	5.7	μμf
Plate to Filament	0.9	μμf
Maximum Overall Length		6-9/16"
Maximum Diameter		2-7/16"
Bulb		ST-19
Cap		Medium Metal
Base		Medium 4-Pin Ceramic, Bayonet
RCA Socket		Type UR-542-A

MAXIMUM CCS and ICAS RATINGS with TYPICAL OPERATING CONDITIONS

CCS = Continuous Commercial Service
ICAS = Intermittent Commercial and Amateur Service

A-F POWER AMPLIFIER & MODULATOR - Class B

	CCS		ICAS	
D-C Plate Voltage	750 max.		1000 max.	volts
Max.-Signal D-C Plate Current*	100 max.		100 max.	ma.
Max.-Signal Plate Input*	75 max.		100 max.	watts
Plate Dissipation*	25 max.		30 max.	watts
Typical Operation: *Unless otherwise specified, values are for 2 tubes*				
D-C Plate Voltage	500	750	1000	volts
D-C Grid Voltage □	-10	-25	-40	volts
Peak A-F Grid-to-Grid Volt.	170	200	230	volts
Zero-Sig. D-C Plate Cur.	40	35	30	ma.
Max.-Sig. D-C Plate Cur.	200	200	200	ma.
Load Res. (Per tube)	1300	2100	3000	ohms
Effective Load Res. (plate to plate)	5200	8400	12000	ohms
Max.-Sig. Driving Power (Approx.)	3.5	4	4.2	watts
Max.-Sig. Power Output (Approx.)	60	100	145	watts

* Averaged over any audio-frequency cycle of sine-wave form.

R-F POWER AMPLIFIER - Class B Telephony

Carrier Conditions per tube for use with a max. modulation fact. of 1.0

	CCS		ICAS	
D-C Plate Voltage	750 max.		1000 max.	volts
D-C Plate Current	50 max.		50 max.	ma.
Plate Input	37.5 max.		45 max.	watts
Plate Dissipation	25 max.		30 max.	watts
Typical Operation:				
D-C Plate Voltage	500	750	1000	volts
D-C Grid Voltage □	-25	-40	-50	volts
Peak R-F Grid Voltage	50	60	62	volts
D-C Plate Current	50	50	45	ma.

□ With a-c filament supply.

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R-F POWER AMPLIFIER, CLASS B MODULATOR

(continued from preceding page)

	CCS		ICAS	
D-C Grid Current (Approx.)**	2	1.5	0.5	ma.
Driving Power (Approx.)**°	1.8	1.4	1.7	watts
Power Output (Approx.)	7.5	12.5	16	watts

° At crest of a-f cycle with modulation factor of 1.0

PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

Carrier conditions per tube for use with a max. modulation fact. of 1.0

	CCS		ICAS	
D-C Plate Voltage	600 max.		750 max.	volts
D-C Grid Voltage	-200 max.		-200 max.	volts
D-C Plate Current	83 max.		100 max.	ma.
D-C Grid Current	25 max.		25 max.	ma.
Plate Input	50 max.		75 max.	watts
Plate Dissipation	17.5 max.		25 max.	watts
Typical Operation:				
D-C Plate Voltage	500	600	750	volts
D-C Grid Voltage § □	-125	-125	-125	volts
	5000	5000	6250	ohms
Peak R-F Grid Voltage	200	200	215	volts
D-C Plate Current	83	83	100	ma.
D-C Grid Current (Approx.)**	25	25	20	ma.
Driving Power (Approx.)**	5	5	4	watts
Power Output (Approx.)	30	38	55	watts

§ Obtained by grid resistor of value shown or by partial self-bias methods.

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation#

	CCS		ICAS	
D-C Plate Voltage	750 max.		1000 max.	volts
D-C Grid Voltage	-200 max.		-200 max.	volts
D-C Plate Current	100 max.		100 max.	ma.
D-C Grid Current	25 max.		25 max.	ma.
Plate Input	75 max.		100 max.	watts
Plate Dissipation	25 max.		30 max.	watts
Typical Operation:				
D-C Plate Voltage	500	750	1000	volts
D-C Grid Voltage * □	-70	-85	-90	volts
	4100	5000	4500	ohms
	600	730	750	ohms
Peak R-F Grid Voltage	140	160	172	volts
D-C Plate Current	100	100	100	ma.
D-C Grid Current (Approx.)**	17	17	20	ma.
Driving Power (Approx.)**	2.2	2.5	3.1	watts
Power Output (Approx.)	33	55	75	watts

* Obtained by grid resistor (4100, 5500, 4500), by cathode resistor (600, 730, 750) or from fixed-bias source. When the 1623 is used in the final amplifier or a preceding stage of a transmitter designed for break-in operation and oscillator keying, a small amount of fixed bias must be used to maintain the plate current at a safe value. With plate voltage of 1000 volts, a fixed bias of at least -35 volts should be used.

\# Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

** Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.

□ With a-c filament supply.

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RCA MANUFACTURING COMPANY, INC.

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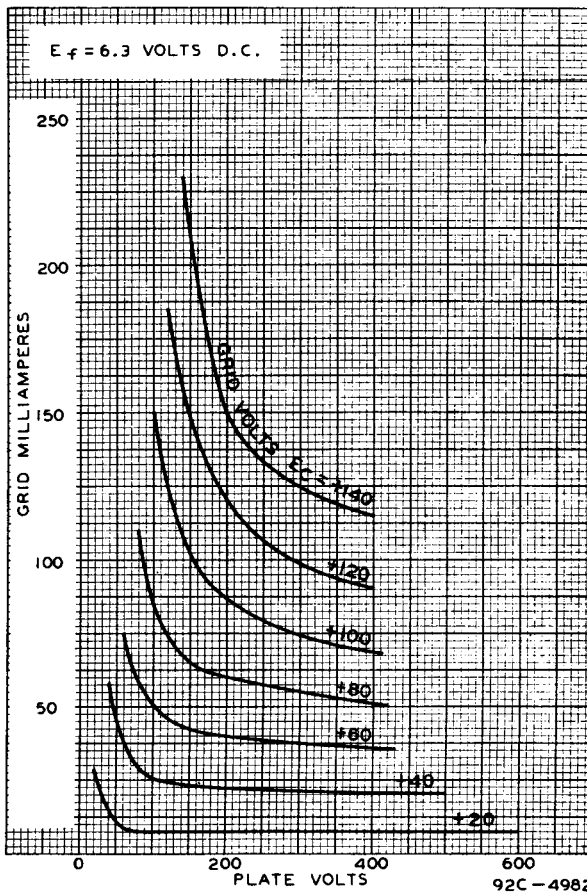
R-F POWER AMPLIFIER, CLASS B MODULATOR

(continued from preceding page)

Data on operating frequencies for the 1623 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY.

OUTLINE DIMENSIONS, TUBE SYMBOL, and SOCKET CONNECTIONS for the 1623 are the same as for the 809.

TYPICAL CHARACTERISTICS



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AVERAGE PLATE CHARACTERISTICS