861

SCREEN GRID R-F POWER AMPLIFIER

Filament	Thoriated Tungsten	
Voltage	11	a-c or d-c volts
Current	10	amp.
Amplification Factor	300 approx.	
Transconductance for plate current of 130 ma.	2100	μmhos
Direct Interelectrode Capacitances (approx.):		
Grid to Plate	0.10* maximum	μμf
Input	14.5	μμf
Output	10.5	μμf
Overall Length		17-3/32" ± 1/8"
Maximum Radius		6-5/8"
Bulb		GT-56 with arm
Cap (opposite filament base)		No.3909
Cap (on side of bulb)		No.3910
Base		No.3503
RCA End-Mountings		Types UT-1085, UT-1086 ←

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

R-F POWER AMPLIFIER - Class B Telephony

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

D-C Plate Voltage			3500 max.	volts
D-C Screen Voltage			750 max.	volts ←
D-C Plate Current			250 max.	ma.
Plate Input			600 max.	watts
Screen Input			35 max.	watts
Plate Dissipation			400 max.	watts
Typical Operation:				
D-C Plate Voltage	2500	3000	3500	volts
D-C Screen Voltage □	500	500	500	volts
D-C Grid Voltage	-60	-60	-60	volts
Peak R-F Grid Voltage	250	245	215	volts
D-C Plate Current	190	175	150	ma.
D-C Grid Current **	4	4	4	approx.ma.
Driving Power ° **	20	15	15	approx.watts
Power Output	140	160	175	approx.watts

□ Use of a series resistor is not recommended.
° 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 factor of 1.0

D-C Plate Voltage	3000 max.	volts
D-C Screen Voltage	750 max.	volts ←
D-C Grid Voltage	-1000 max.	volts
D-C Plate Current	300 max.	ma.
D-C Grid Current	75 max.	ma.
Plate Input	650 max.	watts
Screen Input	30 max.	watts
Plate Dissipation	270 max.	watts

* With external shielding.
** See next page.

← Indicates a change.

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SCREEN GRID R-F POWER AMPLIFIER

(continued from preceding page)

Typical Operation:				
D-C Plate Voltage	2000	2500	3000	volts
D-C Screen Voltage△	30000	50000	70000	ohms
	425	400	375	volts
→ D-C Grid Voltage ¶	3900	3800	3600	ohms
	-250	-225	-200	volts
Peak R-F Grid Voltage	675	625	575	volts
D-C Plate Current	250	220	200	ma.
D-C Grid Current **	65	60	55	approx.ma.
Driving Power **	45	40	35	approx.watts
Power Output	285	340	400	approx.watts

△ Obtained from modulated fixed supply or modulated plate-voltage supply through resistor.
¶ Obtained by grid-leak resistor or partial self-bias methods.

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation #

D-C Plate Voltage			3500 max.	volts
→ D-C Screen Voltage			750 max.	volts
D-C Grid Voltage			-1000 max.	volts
D-C Plate Current			350 max.	ma.
D-C Grid Current			75 max.	ma.
Plate Input			1200 max.	watts
Screen Input			35 max.	watts
Plate Dissipation			400 max.	watts
Typical Operation:				
D-C Plate Voltage	2000	3000	3500	volts
D-C Screen Voltage □	500	500	500	volts
→ D-C Grid Voltage ●	6300	6300	6300	ohms
	-250	-250	-250	volts
Peak R-F Grid Voltage	725	725	725	volts
D-C Plate Current	300	300	300	ma.
D-C Screen Current	60	50	40	ma.
D-C Grid Current **	40	40	40	approx.ma.
Driving Power **	30	30	30	approx.watts
Power Output	400	600	700	approx.watts

● Obtained by grid-leak resistor or other fixed- or self-bias method.
□ Use of series resistor is not recommended.
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.

For use of the 861 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

← Indicates a change.

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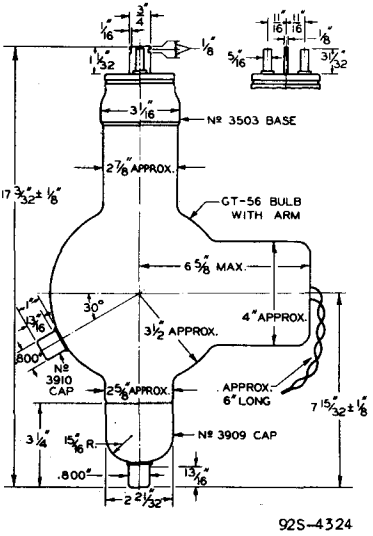
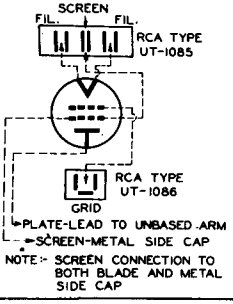
SCREEN GRID R-F POWER AMPLIFIER



TUBE SYMBOL & CONNECTIONS TO END-MOUNTINGS



NOTE:- SCREEN CONNECTION TO BOTH BLADE AND METAL SIDE CAP

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AVERAGE PLATE CHARACTERISTICS