

10/2

HALF-WAVE MERCURY-VAPOR RECTIFIER

Filament*	Coated	
Voltage	5.0	a-c volts
Current	10	amp.
Maximum Overall Length		8-1/2"
Maximum Diameter		2-5/16*
Bulb		T-18
Сар		Medium Metal
Base#		Jumbo 4-Large Pin

MAXIMUM RATINGS

Peak Inverse Voltage:
Supply Freq. Cond. Mercury Temp. Range

7500	max.	volts
5.0	max.	amp.
1.25	max.	amp.
15	approx	.volts
	5.0 1.25	7500 max. 5.0 max. 1.25 max. 15 approx

* The filament of the 872 should be allowed to come up to operating temperature before plate voltage is applied. For average conditions the delay is approximately 30 seconds.

Base shell is not connected within base to either filament lead.

For shielding and r-f filter circuits, refer to Type 871. The table below classifies suitable rectifier circuits for the 872 and shows their safe maximum input and maximum output operating conditions. The values are based on sine-wave input and the use of a suitable choke preceding any condenser in the filter circuit.

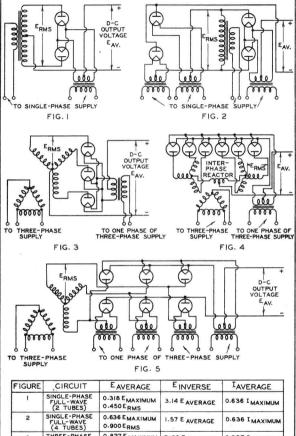
For Circuits, refer to 928-4315 on next page.

CIRCUIT	MAXIMUM A-C INPUT VOLITS (RMS)	APPROX. D-C OUTPUT VOLTS TO FILTER	MAXIMUM D-C LOAD CURRENT amperes
SINGLE-PHASE FULL-WAVE (2 tubes) FIG.1	2650 per tube	2300	2.5
SINGLE-PHASE FULL-WAVE (4 tubes) FIG.2	5300 total	4750	2.5
THREE-PHASE HALF-WAVE FIG. 3	3050 per leg	3500	3.75
THREE-PHASE DOUBLE-Y PARALLEL FIG.4	3050 per leg	4500	7.5
THREE-PHASE FULL-WAVE FIG.5	3050 per leg	7000	3.75

OUTLINE DIMENSIONS, TUBE SYMBOL, and SOCKET CONNECTIONS for the 872 are the same as for the 872-A.



CIRCUITS FOR HOT-CATHODE MERCURY-VAPOR



THREE-PHASE HALF-WAVE 0.827 E MAXIMUM 3 2.09 E AVERAGE 0.827 I MAXIMUM 1.170 E RMS THREE-PHASE 0.827 E MAXIMUM 4 2.09 E AVERAGE 1.91 I MAXIMUM DOUBLE -Y 1.170 E RMS 1.65 E MAXIMUM THREE-PHASE 1.045E AVERAGE 0.955 I MAXIMUM 5 FULL-WAVE 2.34E RMS

CONDITIONS ASSUMED:

(1) SINE-WAVE SUPPLY (2) BALANCED PHASE VOLTAGES (3) ZERO TUBE DROP

(4) PURE RESISTANCE LOAD (5) NO FILTER USED





HALF-WAVE MERCURY-VAPOR RECTIFIER

Filament*	Coated	
Voltage	5.0	a-c volts
Current	10	amp.
Maximum Overall Length		8-1/2"
Maximum Diameter		2-5/16"
Bulb		T-18
Cap		Medium Metal
Bose#		Jumbo 4-Large Pin

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reak inverse voi	rage:			
Supply Freq.	Ambient Temp. Range			
Up to 150 ~	0° - 50°C	7500	max.	volts
Peak Plate Curre	nt	5.0	max.	amp.
Average Plate Cu	rrent { Averaged over } period of 15 sec. }	1.25	max.	amp.
Tube Voltage Dro		15	approx	.volts

- * The filament of the 872 should be allowed to come up to operating temperature before plate voltage is applied. For average conditions the delay is approximately 30 seconds.
- # Base shell is not connected within base to either filament lead.

For shielding and r-f filter circuits, refer to Type 871.

The table below classifies suitable rectifier circuits for the 872 and shows their safe maximum input and maximum output operating conditions. The values are based on sine—wave input and the use of a suitable choke preceding any condenser in the filter circuit.

For Circuits, refer to 92S-4315 on next page.

CIRCUIT	MAXIMUM A-C INPUT VOLUTS (RMS)	APPROX. D-C OUTPUT VOLTS TO FILTER	MAXIMUM D-C LOAI CURRENT amperes
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OUTLINE DIMENSIONS, TUBE SYMBOL, and SOCKET CONNECTIONS for the 872 are the same as for the 872-A.



CIRCUITS FOR HOT-CATHODE MERCURY-VAPOR RECTIFIER TUBES

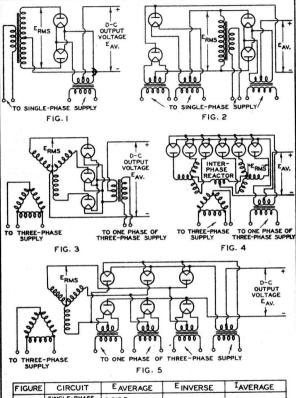


FIGURE	CIRCUIT	EAVERAGE	E INVERSE	IAVERAGE
1	SINGLE-PHASE FULL-WAVE (2 TUBES)	0.318 E _{MAXIMUM} 0.450 E _{RMS}	3.14 E AVERAGE	0.636 I MAXIMUM
2	SINGLE-PHASE FULL-WAVE (4 TUBES)	0.636 EMAXIMUM 0.900 ERMS	1.57 E AVERAGE	0.636 I MAXIMUM
3	THREE-PHASE HALF-WAVE	0.827 E MAXIMUM 1.170 E RMS	2.09 E AVERAGE	0.827 I MAXIMUM
4	THREE-PHASE DOUBLE-Y PARALLEL	0.827 E MAXIMUM	2.09 E AVERAGE	1.91 I MAXIMUM
5	THREE-PHASE FULL-WAVE	1.65 E MAXIMUM 2.34 ERMS	1.045E AVERAGE	0.955 I MAXIMUM

CONDITIONS ASSUMED :-

(1) SINE-WAVE SUPPLY (2) BALANCED PHASE VOLTAGES (3) ZERO TUBE DROP (4) PURE RESISTANCE LOAD (5) NO FILTER USED



18/2

10 approx.volts

HALF-WAVE MERCURY-VAPOR RECTIFIER

Filament*	Coated	
Voltage	5.0	a-c volts
Current	6.75*	amp.
Maximum Overall Length		8-1/2"
Maximum Diameter		2-5/16"
Bulb		T-18
Сар		Medium Metal
Base#		Jumbo 4-Large Pin

MAYIMIM DATINGS

CONTIAN MUNICAN		
oltage:		
Condensed Mercury Temp.	Range	
20°-70°C	5000 max.	volts
20°-60°C	10000 max.	volts
ent	5.0 max.	amp.
Current Averaged over	1.25 max.	amp.
	Condensed Mercury Temp. 20°-70°C 20°-60°C ent	Condensed Mercury Temp. Range 20°-70°C 20°-60°C 10000 max. ent 5.0 max.

- *The filament transformer should be designed for 10 amperes per tube. The filament should be allowed to come up to operating temperature before plate voltage is applied. For average conditions the delay is approximately 30 seconds.
- #Base shell is not connected within base to either filament lead.

For shielding and r-f filter circuits, refer to Type 871.

Tube Voltage Drop

NOTE: The 872-A differs from the 872 in that the filament of the 872-A is partially shielded from the plate.

The table below classifies suitable rectifier circuits for the 872-A and shows their safe maximum input and maximum output operating conditions for a peak inverse voltage of 1CCCO volts. The values are based on sine-wave input and the use of a suitable choke preceding any condenser in the filter circuit. If the 872-A is to be used under temperature conditions such that the peak inverse voltage is limited to 5CCO volts, the a-c input voltage and d-c output voltage values in the table should be multiplied by a factor of 0.5 to give the maximum values for the 5CCO-volt conditions.

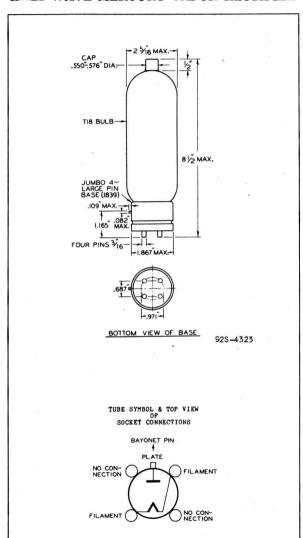
For Circuits,	refer to 925-43	15 (page backing	Type 872)
CIRCUIT	MAXIMUM A-C INPUT VOLTS D (RMS)	APPROX. D-C OUTPUT VOLTS TO FILTER	MAXIMUM D-C LOAD CURRENT amperes
SINGLE-PHASE FULL-WAVE (2 tubes) FIG.1	3535 per tube	3180	2.5
SINGLE-PHASE FULL-WAVE (4 tubes) FIG. 2	7070 total	6360	2.5
THREE-PHASE HALF-WAVE FIG. 3	4080 per leg	4780	3.75
THREE-PHASE DOUBLE-Y PARALLEL FIG. 4	4080 per leg	4780	7.5
THREE-PHASE FULL-WAVE FIG. 5	4080 per leg	9570	3.75

D For maximum peak inverse voltage of 10000 volts.



872-1

HALF-WAVE MERCURY-VAPOR RECTIFIER





HALF-WAVE MERCURY-VAPOR RECTIFIER

Filament*	Coated	
Voltage	5.0	a-c volt
Current	6.75*	amp.
Maximum Overall Length	i.	8-1/2"
Maximum Diameter		2-5/16
Bulb		T-18
Сар		Medium Meta
Basa #		Tumbo 4-Large Pi

Peak Inverse Voltage:

Supply Freq.	Ambient Temp. Range			
Up to 150 ~	15° - 60°C	5000	max.	volts
Up to 150 ~	15° - 50°C	10000	max.	volts
Peak Plate Curre	nt	5.0	max.	amp.
Average Plate Cu	rent { Averaged over }	1.25		amp.
Tube Voltage Dro		10	approx	.volts

The filament transformer should be designed for 10 amperes per tube. The filament should be allowed to come up to operating temperature before plate voltage is applied. For average conditions the delay is approximately 30 seconds. *The filament transformer

Base shell is not connected within base to either filament lead.

For shielding and r-f filter circuits, refer to Type 871.

NOTE: The 872-A differs from the 872 in that the filament of the 872-A is partially shielded from the plate.

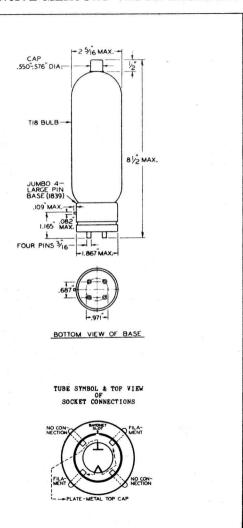
The table below classifies suitable rectifier circuits for the 872-A and shows their safe maximum input and maximum output operating conditions for a peak inverse voltage of 10000 volts. The values are based on sine-wave input and the use of a suitable choke preceding any condenser in the filter circuit. If the 872-A is to be used under temperature conditions such that the peak inverse voltage is limited to 5000 volts, the a-c input voltage and d-c output voltage values in the table should be multiplied by a factor of 0.5 to give the maximum values for the 5000-volt conditions.

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CIRCUIT	MAXIMUM A-C INPUT VOLITS D (RMS)	APPROX. D-C OUTPUT VOLTS TO FILTER	MAXIMUM D-C LOAI CURRENT amperes
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THREE-PHASE FULL-WAVE FIG.5	4080 per leg	9570	3.75

For maximum peak inverse voltage of 10000 volts.

HALF-WAVE MERCURY-VAPOR RECTIFIER





volts

ma.

HALF-WAVE HIGH-VACUUM RECTIFIER

FOR USE W	ITH CATHODE-	RAT TUBES	
Filament Voltage Current	Tungsten 2.5 5.0		a-c volts
Overall Length Maximum Diameter Bulb Cap Base		Medium Met	' to 7-5/8" 1-13/16" T-14 al Skirted
Operating Conditions: Filament Voltage A-C Plate Voltage (RM	1S)	2.5 7100 max.	a-c volts

The 878 is for use in suitable rectifying devices to supply the d-c voltage requirements of cathode-ray tubes.

Peak Inverse Voltage

D-C Output Current (Continuous)

20000 max.

5 max.

It is important that the filament transformer secondary be insulated to withstand the maximum peak inverse voltage encountered in the installation.

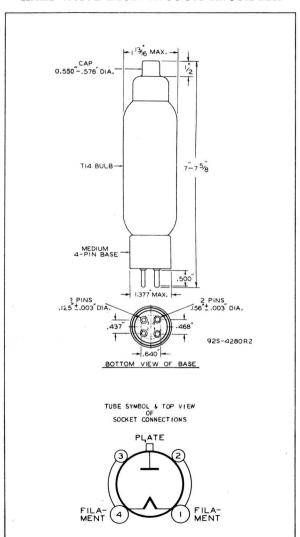
The maximum peak plate current of the 878 is limited by the available emission from the filament. In normal operation, the peak current is practically independent of the size of input filter condenser and is approximately 20 milliamperes.

Filter requirements are ordinarily met by the use of a 0.5 to 2.0 μ f condenser shunted across the bleeder circuit. The shunt condenser should have a rating sufficient to withstand the instantaneous peak value of the a-c input voltage. If this filtering is inadequate for a definite application, a two-section filter is recommended.

In a voltage-doubler circuit, two 878's may be operated to deliver approximately twice the voltage obtainable from a half-wave rectifier circuit for the same a-c input voltage. However, a separate filament-supply winding is required for each tube.



HALF-WAVE HIGH-VACUUM RECTIFIER







volts

volts

ma.

ma.

2650 max. 7500 max.

100 max.

7.5 max.

HALF-WAVE HIGH-VACUUM RECTIFIER

Coated Filament a-c volts 2.5 Vol tage 1.75 amo. Current 4-9/32" to 4-17/32" Overall Length 1-9/16" Maximum Diameter ST-12 Bulb Small Metal Cap Small 4-Pin Base Operating Conditions: 2.5 a-c volts Filament Voltage

The 879 is for use in suitable rectifying devices to supply the d-c voltage requirements of cathode-ray tubes.

A-C Plate Voltage (RMS)

D-C Output Current (Continuous)

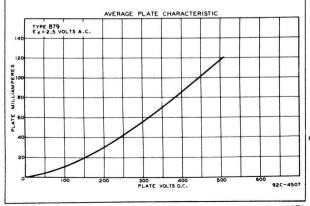
Peak Inverse Voltage

Peak Plate Current

It is important that the filament transformer secondary be insulated to withstand the maximum peak inverse voltage encountered in the installation.

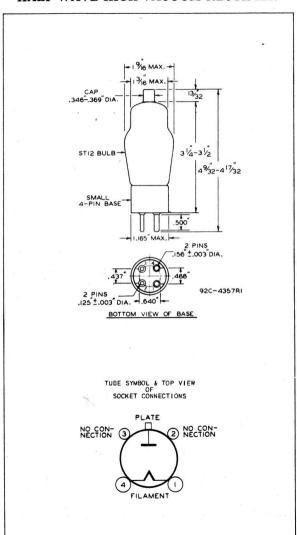
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In a voltage-doubler circuit, two 879's may be operated to deliver approximately twice the voltage obtainable from a half-wave rectifier circuit for the same a—c input voltage. However, a separate filament—supply winding is required for each tube.





HALF-WAVE HIGH-VACUUM RECTIFIER



R-F POWER AMPLIFIER, OSCILLATOR

(WATER & FORCED-AIR COOLED) Filament Tungsten a-c or d-c volts Voltage 11 24 amp. Current -10 Amplification Factor Direct Interelectrode Capacitances (approx.) :: Grid to Plate μμf 6.9 μμ f Grid to Filament 2.5 Plate to Filament 2.7 uuf Maximum Overall Length 7-3/8" 2-1/16" Maximum Radius Water Jacket Integral part of tube

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

This tube can often be operated with reduced filament voltage as explained on sheet TYPES OF CATHODES in front of book.

R-F POWER AMPLIFIER - Class B Telephony

Carrier conditions per tube for use with a max. modulation fact. of 1.0 3000 max. volts D-C. Plate Voltace 200 max. ma. D-C Plate Current 600 max. watts Plate Input 600 max. Plate Dissipation watts Typical Operation: a-c volts 11 Filament Voltage 11 2500 volts D-C Plate Voltage 3000 -250volts -300D-C Grid Voltage volts Peak R-F Grid Voltage 290 320 D-C Plate Current
D-C Grid Current ** 200 200 ma. 2 1 approx.ma. Driving Power ** o 50 approx.watts 45 165 200 approx.watts Power Output

PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony Corrier conditions per tube for use with a max. modulation fact. of 1.0

2000 max. volts D-C Plate Voltage volts -500 max. D-C Grid Voltage D-C Plate Current 200 max. ma. 75 max. D-C Grid Current ma. 400 max. watts Plate Input 400 max. watts Plate Dissipation Typical Operation: a-c volts 11 11 Filament Voltage

1500

2000

D-C Grid Voltage -450 -500 volts
Peak R-F Grid Voltage 800 850 volts
D-C Plate Current 200 200 ma.

- O At crest of a-f cycle with modulation factor of 1.0.
- ** See next page.

D-C Plate Voltage

with grid shield and water jacket.

volts



R-F POWER AMPLIFIER, OSCILLATOR

(continued	from preceding page)		
D-C Grid Current **	50	50	approx.ma.
Driving Power **	35	40	approx.watts
Power Öutput	200	300	approx.watts

R-F POWER AMPLIFIER & (OSCILLATO	OR - Cla	ss C	Telegrap	oh y
Key-down conditions	per tub	e without	modu	lation #	
D-C Plate Voltage			3000	max.	volts
D-C Grid Voltage			-500	max.	volts
D-C Plate Current				max.	ma.
D-C Grid Current				max.	ma.
Plate Input					watts
Plate Dissipation			1000	max.	watts
Typical Operation:					
Filament Voltage	11	11	11		volts
D-C Plate Voltage	2000	2500	3000		volts
D-C Grid Voltage	-4 00	-4 50	- 500		volts
Peak R-F Grid Voltage	825	875	925		volts
D-C Plate Current	400	400	400		ma.
D-C Grid Current **	45	45		approx.	
Driving Power **	35	35		approx.	
Power Output	450	625	800	approx.	watts

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

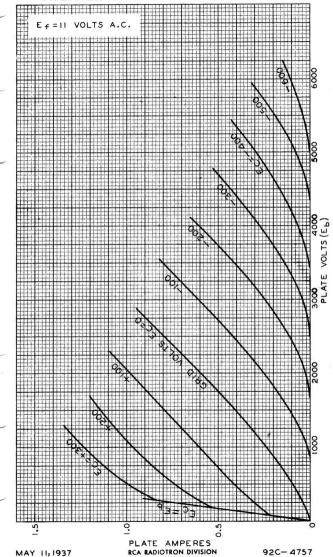
92C-4763 under Type 888 and sheet TRANS. TUBE RATINGS vs FREQUENCY.

> OUTLINE DIMENSIONS, TUBE SYMBOL, and MOUNTING for the 887 are the same as for the 888.

Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed II5% of the carrier conditions. For use of the 887 at the higher frequencies, refer to curve



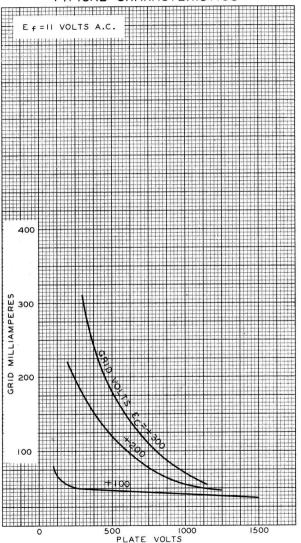
AVERAGE PLATE CHARACTERISTICS







TYPICAL CHARACTERISTICS





R-F POWER AMPLIFIER, OSCILLATOR

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(WATER	& FORCED-A	IR COOLED)			
Filament	Tungsten				
Voltage	11	a-c	or	d-c	volts
Current	24				amp.
Amplification Factor	30				
Direct Interelectrode Ca	pacitances	(approx) ♣:			No. 1
Grid to Plate	7.8				μμf
Grid to Filament	2.8				μμf
Plate to Filament	2.5				μμf
Maximum Overall Length					7-3/8"
Maximum Radius					-1/16"
Water Jacket		Integral	pai	rt o	f tube

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

This tube can often be operated with reduced filament voltage as explained on sheet TYPES OF CATHODES in front of book.

R-F POWER AMPLIFIER - Class B Telephony

Carrier conditions per tube for	use with a max.	modulatio	on fact. of	1.0
D-C Plate Voltage		3000	max. v	olts
D-C Plate Current		200	max. m	a.
Plate Input		600	max. w	atts
Plate Dissipation		600	max. w	atts
Typical Operation:				
Filament Voltage	11	11	a-c v	
D-C Plate Voltage	2500	3000		olts
D-C Grid Voltage	-80	-100		olts
Peak R-F Grid Voltage	200	220		olts
D-C Plate Current	200	200	m	ia.
D-C Grid Current **	15		approx.m	
Driving Power ** 0	45		approx.w	
Power Output	165	200	approx.w	atts

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

	Carrier conditions per tube for use with	a max. 1	nodulatio	n fact.	of 1.0
	D-C Plate Voltage		2000	max.	volts
١	D-C Grid Voltage		-500	max.	volts
1	D-C Plate Current		200	max.	ma.
	D-C Grid Current		100	max.	ma.
	Plate Input		400	max.	watts
	Plate Dissipation		400	max.	watts
ı	Typical Operation:				20
ì	Filament Voltage	11	11	a-c	volts
i	D-C Plate Voltage	1500	2000		volts
ì	D-C Grid Voltage	-300	-350		volts
1	Peak R-F Grid Voltage	600	650		volts
	D-C Plate Current	200	200		ma.
ì	O of a faucle with modulation	factor	of LO.		

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

See next page.

With grid shield and water jacket.





R-F POWER AMPLIFIER, OSCILLATOR

(continued	from	preceding page)		
D-C Grid Current **		80		approx.ma.
Driving Power **		40	40	approx.watts
Power Output		200	300	approx.watts

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

		0.11		9	,
Key-down conditions	per tube	without	modu	lation #	
D-C Plate Voltage			3000	max.	volts
D-C Grid Voltage			-500	max.	volts
D-C Plate Current			400	max.	ma.
D-C Grid Current			100	max.	ma.
Plate Input			1200	max.	watts
Plate Dissipation			1000	max.	watts
Typical Operation:					
Filament Voltage	11	11	11	a-c	volts
D-C Plate Voltage	2000	2500	3000		volts
D-C Grid Voltage	-265	-280	-300		volts
Peak R-F Grid Voltage	625	640	650		volts
D-C Plate Current	400	400	400		ma.
D-C Grid Current **	80	80	80	approx	.ma.
Driving Power **	45	45	45	approx.	.watts
Power Output	450	625	800	approx	.watts
196777					

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

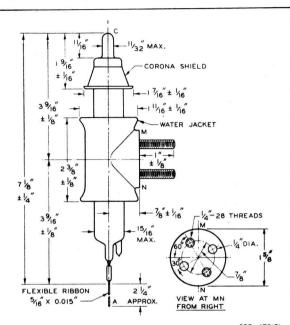
For use of the 888 at the higher frequencies, refer to curve 92C-4763 under this type and sheet TRANS. TUBE RATINGS vs FREQUENCY.

^{*}Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.



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R-F POWER AMPLIFIER, OSCILLATOR



92C-4761RI

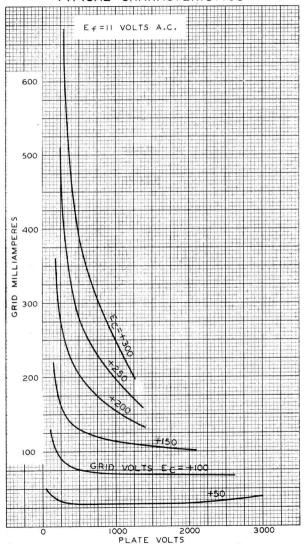
TUBE SYMBOL AND TERMINAL CONNECTIONS



A-FILAMENT C-GRID PLATE CONNECTION TO WATER-JACKET MOUNTING

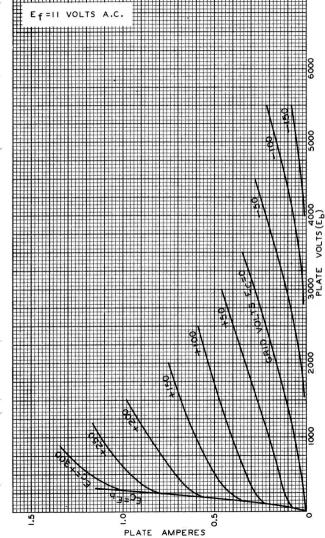


TYPICAL CHARACTERISTICS





AVERAGE PLATE CHARACTERISTICS



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RCA RADIOTRON DIVISION

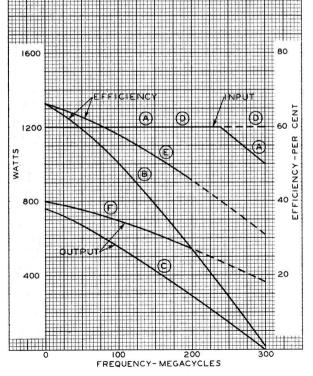
92C-4759

1889



TYPES: 887, 888 FREQUENCY PERFORMANCE CHARACTERISTICS UNMODULATED CLASS C AMPLIFIER & OSCILLATOR

CURVE	DESCRIPTION
Α	OSCILLATOR INPUT
В	OSCILLATOR EFFICIENCY
С	OSCILLATOR OUTPUT = TUBE OUTPUT
	MINUS GRID DRIVING POWER
D	POWER AMPLIFIER INPUT
E	POWER AMPLIFIER EFFICIENCY
F	POWER AMPLIFIER OUTPUT = TUBE OUTPUT





R-F POWER AMPLIFIER, MODULATOR

(WATER COOLED)

Two wait Twas

Filament Tungsten, Two-unit Type Excitation 1φ A.C., 2φ A.C., or D.C.			
Voltage 11			volts
Current per unit 60			amp.
Amplification Factor 8			
Direct Interelectrode Capacitances (approx.):		
Grid to Plate 27			μμf
Grid to Filament 18			μμf μμf
11420 201114			20-5/8"
Maximum Overall Length			6-1/2"
Maximum Radius			No. 3232
Base			No. 3950
Cap Water Jacket			-1285-A
MAXIMUM RATINGS and TYPICAL OPERATING			
This tube can often be operated with reduced			
as explained on sheet TYPES OF CATHODES in	1 Sro	nt of	book.
I .			
A-F POWER AMPLIFIER & MODULATOR -	Clas	s A	1
	2000	max.	volts
D-C Plate Voltage 1	2000	max.	kw
D-C Plate Voltage 1 Plate Input Plate Dissipation	2000	max.	
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation:	2000 7.5 7.5	max. max.	kw kw
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION	2000 7.5 7.5	max. max. max.	kw kw 9RI
D-C Plate Voltage Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage	2000 7.5 7.5 7.5 8000	max. max. max.	kw kw 9RI volts
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage D-C Grid Voltage **	2000 7.5 7.5 7.5 8000 -730	max. max. max.	kw kw 9RI volts
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage D-C Grid Voltage ** Peak A-F Grid Voltage	2000 7.5 7.5 7.5 8000	max. max. max.	kw kw 9RI volts volts volts
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage D-C Grid Voltage ** Peak A-F Grid Voltage D-C Plate Current	2000 7.5 7.5 8000 -730 800	max. max. max.	kw kw 9RI volts
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage D-C Grid Voltage ** Peak A-F Grid Voltage D-C Plate Current	2000 7.5 7.5 8000 -730 800 0.9	max. max. max.	kw kw 9RI volts volts volts amp.
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage #* Peak A-F Grid Voltage D-C Plate Current Load Resistance	2000 7.5 7.5 8000 -730 800 0.9 5200 2	max. max. max.	kw kw 9RI volts volts volts amp. ohms
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage D-C Grid Voltage ** Peak A-F Grid Voltage D-C Plate Current Load Resistance U.P.O. (5% second harmonic) A-F POWER AMPLIFIER & MODULATOR - D-C Plate Voltage	2000 7.5 7.5 8000 -730 800 0.9 5200 2 Clas	max. max. max.	kw kw 9RI volts volts volts amp. ohms
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage ** Peak A-F Grid Voltage D-C Plate Current Load Resistance U.P.O. (5% second harmonic) A-F POWER AMPLIFIER & MODULATOR - D-C Plate Voltage 1 MaxSignal D-C Plate Current	2000 7.5 7.5 8000 -730 800 0.9 5200 2 Clas 5000 2.0	max. max. max. 2C-462 s B max. max.	kw kw 9RI volts volts amp. ohms kw volts amp.
D-C Plate Voltage 1 Plate Input Plate Dissipation Typical Operation: Filament Voltage - See FILAMENT CONNECTION D-C Plate Voltage D-C Grid Voltage ** Peak A-F Grid Voltage D-C Plate Current Load Resistance U.P.O. (5% second harmonic) A-F POWER AMPLIFIER & MODULATOR - D-C Plate Voltage	2000 7.5 7.5 8000 -730 800 0.9 5200 2 Class 5000 2.0	max. max. max. 2C-462	kw kw 9RI volts volts volts amp. ohms kw

Typical Operation - 2 tubes: Unless otherwise specified, values are for 2 tubes.

Filament Voltage - See FILAMENT CONNECTIONS 92C-4629RI 12500 volts D-C Plate Voltage 6000 10000 D-C Grid Voltage ** -700 -1200-1560volts

volts Peak A-F Grid-to-Grid Volt. . 2400 3600 4160 0.5 0.5 0.4 amp. Zero-Sig. D-C Plate Cur. Max .- Sig. D-C Plate Cur. amp. 2.3 3.2 2.8 2500 ohms Load Resistance (per tube) 1250 1600 Effective Load Resistance 5000 6400 10000 ohms

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

(plate to plate)

Plate Dissipation

5 max.

kw

^{★★} with a-c filament supply. ← Indicates a change



R-F POWER AMPLIFIER, MODULATOR

(continued from pred	eding pag	ge)		
MaxSignal Driving Power 260	324	350	approx.	watte
MaxSignal Power Output 8	20		approx.	
(Si				NW.
R-F POWER AMPLIFIER - C	lass B	lelepho	ny	
Carrier conditions per tube for use with	h a max.	modulat i	on fact.	of 1.0
D-C Plate Voltage		15000	max.	volts
D-C Plate Current		1.0	max.	amp.
R-F Grid Current			max.	amp.
Plate Input			max.	kw
Plate Dissipation		6	max.	kw
Typical Operation:			res ess	
Filament Voltage - See FILAMENT			2C-4629	
D-C Plate Voltage 6000	10000	14000		volts
D-C Grid Voltage -700	-1230	-1750		volts
Peak R-F Grid Voltage 700	930	1100		volts
D-C Plate Current 0.7	0.8	0.56		amp.
Driving Power 0 00 82	0		approx.	
Power Output 1	2		approx.	KW
• At crest of a-f cycle with modulation				
PLATE-MODULATED R-F POWER AMPLI	FIER - C	lass C	Telepho	ny
Carrier conditions per tube for use with				
D-C Plate Voltage		8000	max.	volts
D-C Grid Voltage		-3000		volts
D-C Plate Current			max.	amp.
D-C Grid Current		0.15		amp.
R-F Grid Current		24	max.	amp.
Plate Input		8	max.	kw
Plate Dissipation		4	max.	kw
Typical Operation:				
Filament Voltage - See FILAMENT	CONNECT	ICNS 9	2C-4629	RI
D-C Plate Voltage	6000	8000		volts
D-C Grid Voltage	-2000	-2400		volts
Peak R-F Grid Voltage	2650	3100		volts
D-C Plate Current	0.75	0.78		amp.
D-C Grid Current ∞	0.1		approx.	
Driving Power ^{oo}	260		approx.	
Power Output	3.5	5	approx.	kw
R-F POWER AMPLIFIER & OSCILLATO				ıy
Key-down conditions per tube	without	modula	tion **	
D-C Plate Voltage		12000		volts
D-C Grid Voltage		-3000	max.	volts
D-C Plate Current		2.0		amp.
D-C Grid Current		0.15		amp.
R-F Grid Current		-		amp.
Plate Input				kw
Modulation essentially negative may the audio-frequency envelope does not	be used i	f the po	sitive p	eak of
ditions.				
 With d-c filament supply. Subject to wide variations as explain 	ed on she	et TRANS	TUBE RA	TINGS
Indicates a change	ee on ane	er inano.	TOOL AA	
, , , , , , , , , , , , , , , , , , ,				



100

R-F POWER AMPLIFIER, MODULATOR

(continued fro	om preceding	page)		
Plate Dissipation		6	max.	kw
Typical Operation:				
Filament Voltage - See FIL	AMENT CONNE	CTIONS	92C-4629	9
D-C Plate Voltage	800			volts
D-C Grid Voltage	-180	0 -2000		volts
Peak R-F Grid Voltage	250	0 2900		volts
D-C Plate Current	1.	1 1.45		amp.
D-C Grid Current OO	0.0	6 0.105	approx.	amp.
Driving Power OO	15		approx.	
Power Output	6.	5 10	approx	. kw

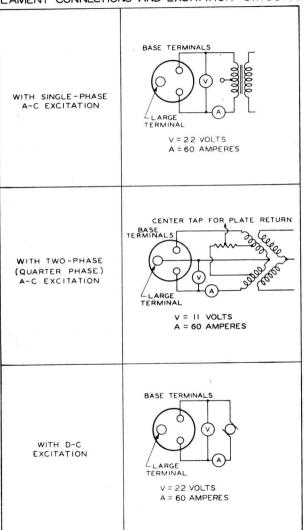
CO Subject to wide variations as explained on sheet TRANS. TUBE RATINGS. For use of the 891 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

THE FILAMENT EMISSION CHARACTERISTIC FOR THE 891 IS THE SAME AS FOR TYPE 207. THE FILAMENT CHARACTERISTIC IS GIVEN UNDER TYPE 892. FOR CHARACTERISTIC CURVES, REFER TO TYPE 848.



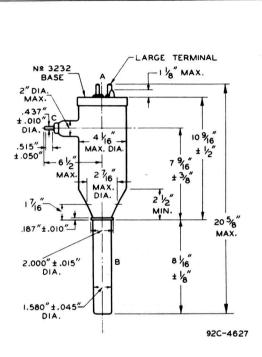


FILAMENT CONNECTIONS AND EXCITATION CIRCUITS





R-F POWER AMPLIFIER, MODULATOR



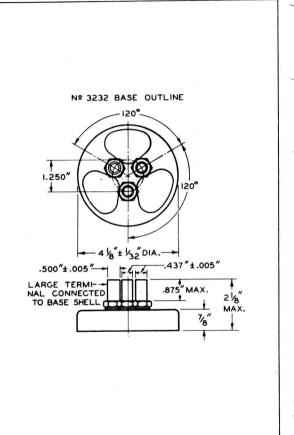
TUBE SYMBOL AND TERMINAL CONNECTIONS



A - FILAMENT B - PLATE C - GRID



R-F POWER AMPLIFIER, MODULATOR







C-F POWER AMP	WATER COOLED	MODULATOR
	ngsten, Two-unit Type A.C., 2¢ A.C. or D.C. 11 60 50	volts amp.
Direct Interelectrode Grid to Plate Grid to Filament Plate to Filament	(E)(T)	μμf μμf μμf
Maximum Overall Lengt Maximum Radius Base Cap Water Jacket	h	20–5/8" 6–1/2" No.3232 No.3950 UT–1285A
ARREST CARREST ALE	and TYPICAL OPERATIN	

This tube can often be operated with reduced filament voltage as explained on sheet TYPES OF CATHODES in front of book.

A-F POWER AMPLIFIER & MODULATOR - Class B					
D-C Plate Voltage			15000	max.	volts
MaxSignal D-C Plate Current	t *		2.0	max.	amp.
MaxSignal Plate Input *			20	max.	kw
Plate Dissipation *			7.5	max.	kw
Typical Operation - 2 tubes:					
Unless otherwise specif					
Filament Voltage - See FIL	AME NT			2C-4629	9
D-C Plate Voltage	6000		12500		volts
D-C Grid Voltage #	-10	-120	-200		volts
Peak A-F Grid-to-Grid Volt.			1530		volts
Zero-Sig. D-C Plate Cur.	0.5	0.5	0.4		amp.
MaxSig. D-C Plate Cur.	2.5	3.2	2.8		amp.
Load Resistance (per tube)	1050	1600	2500		ohms
Effective Load Resistance					- k 1
(plate to plate)	4200	64 00	10000		ohms
MaxSignal Driving Power	415	525		approx.	
MaxSignal Power Output	8	20	22	approx	. kw

R-F POWER AMPLIFIER - Class B Telephony

Carrier conditions per tube for use with	h a max.	modulation jact	. 07 1.0
D-C Plate Voltage		15000 max.	volts
D-C Plate Current		1.0 max.	amp.
D-C Plate Current R-F Grid Current		24 max.	amp.
Plate Input		15 max.	kw
Plate Dissipation		10 max.	kw
Typical Operation:	CONNE	TIONS 920-46	29

Filament Voltage - See FILAMEN 6000 10000 14000 D-C Plate Voltage

Averaged over any audio-frequency cycle.

with d-c filament supply.





R-F POWER AMPLIFIER. CLASS B MODULATOR (continued from preceding page)

D-C Grid Voltage # -10 -135 -220 vol Peak R-F Grid Voltage 0 600 940 1020 vol D-C Plate Current 0.67 0.93 0.95 amp Driving Power 0 65 50 30 approx.wat Power Output 1 2.5 4 approx.kw At crest of a-f cycle with modulation factor of 1.0.	ts •
PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony	
Carrier conditions per tube for use with a max. modulation fact. of 1	2000
D-C Plate Voltage 10000 max. vol	5.5
D-C dira vortage	
D-C Plate Current 1.0 max. amp D-C Grid Current 0.25 max. amp	
R-F Grid Current 24 max. amp	
Plate Input 10 max. kw	•
Plate Dissipation 6.6 max. kw	
Typical Operation:	
Filament Voltage - See FILAMENT CONNECTIONS 92C-4629	
D-C Plate Voltage 6000 8000 10000 vol	200
D-C Grid Voltage -1000 -1300 -1600 vol	
Peak R-F Grid Voltage 1675 2000 2400 vol	
D-C Plate Current 0.77 0.75 0.72 amp	
D-C Grid Current OO 0.185 0.175 0.115 approx.amp	
J. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	13
Power Output 3.5 5 6 approx.kw R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy	
Key-down conditions per tube without modulation **	
D-C Plate Voltage 15000 max. vol	
D-C Grid Voltage -3000 max. vol	
D-C Plate Current 2.0 max. amp	
D-C Grid Current 0.25 max. amp R-F Grid Current 30 max. amp	
Plate Input 30 max. kw	•
Plate Dissipation 10 max. kw	
Typical Operation:	
Filament Voltage - See FILAMENT CONNECTIONS 920-4629	
D-C Plate Voltage 8000 10000 12000 vol	
D-C Grid Voltage -1000 -1300 -1600 vol	
Peak R-F Grid Voltage 1800 2300 2800 vol	
D-C Plate Current 1.1 1.4 1.64 amp	
D=C Grid Current 0.10 0.10 0.10 approximate	
Driving Power	
Power Output 6.5 10 14 approx.wat	- 3
# With d-c filament supply.	
#Modulation essentially negative may be used if the positive peak the audio-frequency envelope does not exceed il5季 of the carrier co ditions.	n-
Subject to wide variations as explained on sheet TRANS. TUBE RATING	5.

(continued on next page)



10%

R-F POWER AMPLIFIER, CLASS B MODULATOR

(continued from preceding page)

For use of the 892 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs FREQUENCY.

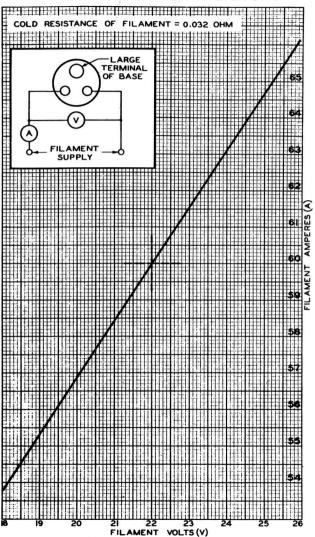
OUTLINE DIMENSIONS, TUBE SYMBOL, and TERMINAL CONNECTIONS for the 892 are the same as for the 891.

THE FILAMENT EMISSION CHARACTERISTIC FOR THE 892 IS THE SAME AS FOR THE 207. FILAMENT CONNECTIONS ARE SHOWN IN 92C-4629 UNDER TYPE 891. FOR CHARACTERISTIC CURVES, REFER TO TYPE 863.





AVERAGE FILAMENT CHARACTERISTIC

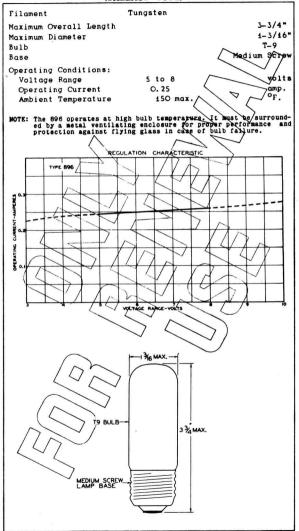


JUNE 16, 1936



CURRENT REGULATOR

(BALLAST TUBE)





OSCILLATOR, R-F POWER AMPLIFIER, CLASS B MODULATOR

(WATER & FORCED-AIR COOLED)

(WATER & FORGED-ATR COOLE			
Filament Multistrand Tungsten	5.0		
Excitation 1, 3, or 6 \phi A.C.	D.C.		
Voltage per strand 17.3	16.5		volts
Current per terminal 71.5	70)	amp.
Amplification Factor 44			
Direct Interelectrode Capacitances (approx	.):		
Grid to Plate 75 Grid to Filament 52 Plate to Filament 2	,		uuf uuf
Plate to Filament 2			μμf
Maximum Overall Length			60-3/8"
Maximum Radius			10"
Base (with nozzle for air-cooling of filament sea	1)		No.6628
Water Jacket			UT-1289
A-F POWER AMPLIFIER & MODULATOR -	- Clas	s B	
D-C I late Voltage	15000		volts
Max-Signal D-C Plate Current (per tube)*		max.	amp.
Max-Signal Plate Input (per tube)*		max.	kw
Plate Dissipation (per tube)*	50	max.	kw
Typical Operation (2 tubes):	1000 1	70: \	
Filament Voltage - See FILAMENT CONNECTIONS	12 000	000)	volts
D—C Flate Voltage D—C Grid Voltage O		appr	ox.volts
Peak A-F Grid Voltage			ox.volts
Zero-Signal D-C Plate Cur. (per tube)	1.0		amp.
Max-Signal D-C Plate Cur. (per tube)	6.5		amp.
Max-Signal Plate Input (per tube)	78		kw
Load Resistance (per tube)	500		ohms
Effective Load Res. (plate to plate)	2000		ohms
Max-Signal Driving Power			ox.watts ox.kw
Max-Signal Power Output (2 tubes) * Averaged over any audio-frequency cycle.	90	appi	OX • NW
R-F POWER AMPLIFIER - Class B To	alanha	nv	
Carrier Conditions per tube; for use with a Module			up to 1.0
D-C Plate Voltage	20000		volts
D_C Plate Current		max.	amp.
R-F Grid Current		max.	amp. kw
Plate Input		max.	kw
Plate Dissipation Typical Operation:	7.0	maze.	15055
Filament Voltage - See FILAMENT CONNECTION	s (92C-	4388)	
D-C Plate Voltage 12000 15000	18000		volts
D_C Grid Voltage 0 -100 -175			ox.volts
Peak R-F Grid Voltage** 1050 1300			ox.volts
D_C Plate Current 2.8 3.5	4.2		amp.
Driving Power # ** 0.5 0.75			ox.kw ox.kw
rower output	25	appr	OA • NW
 With a-c filament excitation. ** At crest of a-f cycle with Modulation Factor of \$ See next page. (continued on next page) 	1.0.		
/ See next page. (continued on next page)			





OSCILLATOR, R-F POWER AMPLIFIER. CLASS B MODULATOR

(continued from preceding page) PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony

Carrier Conditions per tube; for use with a Modulation Factor up to 1.0

D-C Plate Voltage	12000	max.	volts
D-C Grid Voltage	-3000	max.	volts
D-C Plate Current	5.0	max.	amp.
D-C Grid Current	1.25	max.	amp.
R-F Grid Current	48	max.	amp.
Plate Input	60	max.	kw
Plate Dissipation	50	max.	kw
Typical Operation:			
Filament Voltage - See FILAMENT CONNECTIONS	(92C-4	388)	
D-C Plate Voltage	12000		volts
D-C Grid Voltage O	-800	approx	volts
Peak R-F Grid Voltage	2000	approx	.volts
D-C Plate Current	5.0		amp.
D-C Grid Current #	1	approx	.amp.
Driving Power #	2	approx	. kw
Power Output	45	approx.	. kw
R-F POWER AMPLIFIER & OSCILLATOR - Cla	ss C T	elegrap	ihy
Key-down Conditions per tube without	module	ation ##	
D-C Plate Voltage	20000	max.	volts
D-C Grid Voltage	-3000	max.	volts
D-C Plate Current	10	max.	amp.

1.0 max. D-C Grid Current amp. 60 max. amp. R-F Grid Current 200 max. Plate Input kw 100 max. kw Plate Dissipation

Typical Operation:

Filament Voltage - See FILAMENT CONNECTIONS (920-4388) volts 12000 15000 18000 D-C Plate Voltage D-C Grid Voltage o -800 -900 -1000 approx.volts 2550 approx.volts Peak R-F Grid Voltage 2050 2300 7.5 8.33 6.25 amp. D-C Plate Current 0.8 0.9 0.85 amp. D-C Grid Current # 2.4 approx.kw Driving Power #
Power Output 1.6 2.0 75 100 approx.kw

50

With a-c filament excitation.

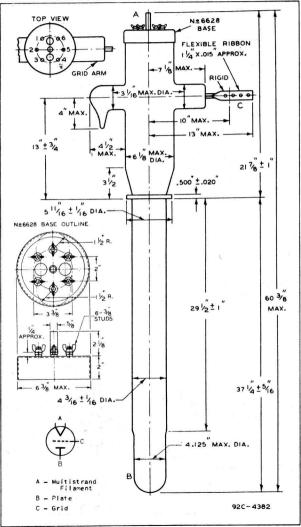
[#] Subject to wide variations depending on the impedance of the load circuit, "igh-impedance load circuits require more grid current and driving power to obtain the desired output. Low-impedance circuits need less grid current and driving power, but sacrifice plate-circuit efficiency. The driving-stage should have a tank circuit with good regulation and should be capable of delivering considerably more than the required driving power.

^{##} Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier con-



898

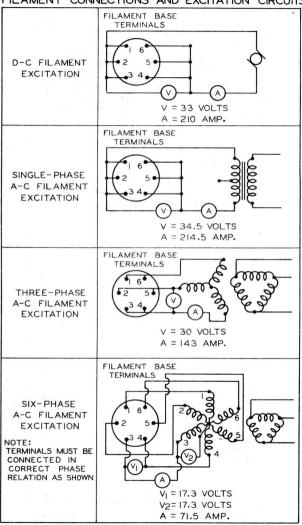
OSCILLATOR, R-F POWER AMPLIFIER CLASS B MODULATOR





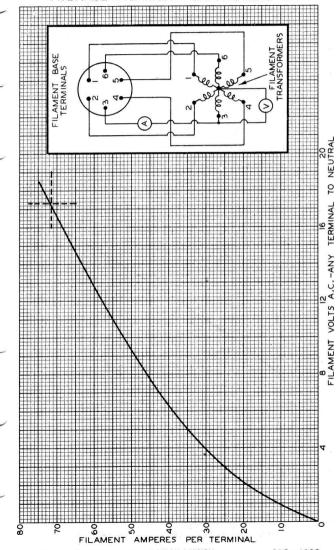


FILAMENT CONNECTIONS AND EXCITATION CIRCUITS



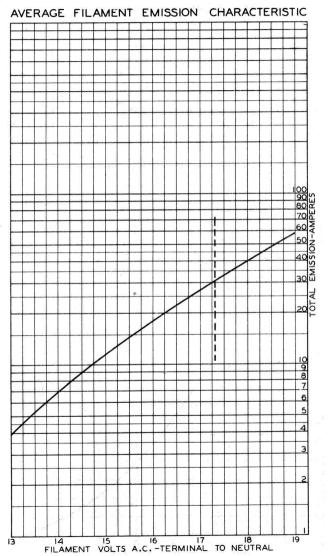


ILAMENT CHARACTERISTIC



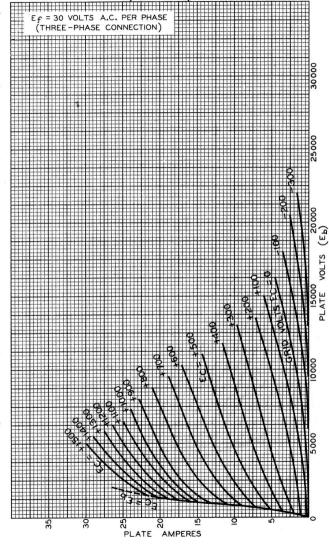






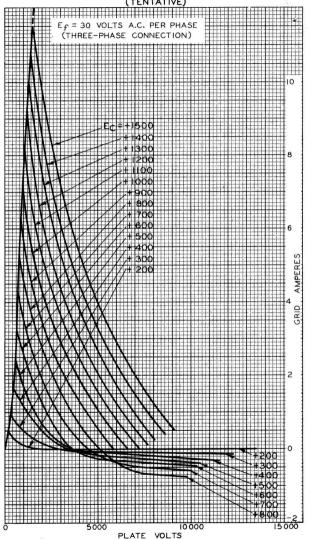


AVERAGE PLATE CHARACTERISTICS (TENTATIVE)



1000

TYPICAL CHARACTERISTICS (TENTATIVE)





AMPLIFIER TRIODE

For applications critical as to microphonics.

Previously designated as RCA-10 Special.

Previously desi	gnated as	RCA-10	Specia	ι.	
Filament Thor	iated Tung	sten		161	
Voltage	7.5	•	a-c	or d-c	volts
Current	1.25				amp.
	8				
Amplification Factor		***************************************			
Direct Interelectrode Cap		(approx	x.):		
Grid to Plate	7				μμf
Grid to Filament	4				μμf
Plate to Filament	3		¥		μµf
Maximum Overall Length				5-	-5/8"
Maximum Diameter					-3/16"
Bulb					S –1 7
Base		M	edium 4	-Pin Ba	ayonet
MAXIMUM RATINGS and	TYPICAL	OPERAT I	NG COND	ITIONS	
A-F POWER AMPLI					
D-C Plate Voltage				max.	volts
Plate Dissipation				max.	watts
Typical Operation:					
Filament Voltage	7.5	7.5	7.5	a-c	volts
D-C Plate Voltage	250	350	425		volts
D-C Grid Voltage	-23.5	-32	-40		volts
Peak A-F Grid Voltage	18.5	27	35		volts
D-C Plate Current	10	16	18		ma.
Plate Resistance	6000	5150	5000		ohms
Mutual Conductance	1330	1550	1600	H I	umhos
Load Resistance	13000	11000	10200		ohms
U.P.O. (5% second harmonic		0.9	1.6		watts
TENERS (BARKE ACCUSE EXPRESSED IN SOCIAL PARTY)		NIII ATOD	Clas	e B	
A-F POWER AMPLI	FIER & MU	JULATUR			
D-C Plate Voltage				max.	volts
Max-Signal D-C Plate Curi	rent *			max.	ma.
Max-Signal Plate Input*				max.	watts
Plate Dissipation*			12	max.	watts
Typical Operation - 2 tub	es:		1,2		
Unless otherwise spe			e for	2 tubes	1 4 -
Filament Voltage	7.5	7.5	7.5	a-c	volts
D-C Plate Voltage	250	350	425		volts
D-C Grid Voltage	-28	-40	-50		volts
Peak A-F Grid-to-Grid	701t. 220	240	260		,,
Zero-Sig. D-C Plate Cui	r. 8	8	110		ma.
Max-Sig. D-C Plate Cur.	. 110	110	2000		ma. ohms
Load Resistance (per to	ube) 1000	1500	2000		Onnis
Effective Load Res. (plate to plate)	4000	6000	8000		ohms
Max-Signal Driving Power		2.3	2.5	approx	.watts
Max-Signal Power Output		20	25	approx	
l	/				
I .					

^{*} Averaged over any audio-frequency cycle.

(continued on next page)

16/2





AMPLIFIER TRIODE

(continued from preceding page)

R—F POWER AMPLIFIER — Class B Telephony Carrier conditions per tube for use with a max. modulation fact. of 1.0 D—C Plate Voltage D—C Plate Voltage D—C Plate Current 45 max. ma. R—F Grid Current 18 max. watts 15 max. watts 16 max. watts 17 max. watts 18 max. watts 19 max. max. modulation factor of 1.0 P—C Plate Current 10 max. max. modulation fact. of 1.0 P—C Plate Voltage D—C Plate Current 15 max. watts 15 max. amp. 17 max. watts 18 max. watts 19 max. volts 15 max. amp. 17 max. watts 18 max. watts 19 max. volts 15 max. amp. 17 max. watts 18 max. watts 19 max. volts 15 max. amp.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
D-C Plate Voltage D-C Plate Current R-F Grid Current R-F Grid Current Plate Input Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Plate Voltage D-C Plate Current Peak R-F Grid Voltage D-C Plate Current D-C Grid Current D-C Grid Current Power Output D-C Residency D-C Plate Voltage Peak R-F Grid Voltage D-C Plate Current D-C Grid Current Simax. watts D-C Flate Voltage D-C Flate Voltage D-C Flate Voltage D-C Flate Current D-C Grid Voltage D-C Grid Voltage D-C Grid Voltage D-C Grid Voltage D-	R-F POWER AMPLIFIER - Class B Telephony									
D-C Plate Current 45 max. ma. R-F Grid Current 18 max. watts Plate Input 18 max. watts Plate Input 15 max. watts Plate Dissipation 15 max. watts Plate Dissipation 15 max. watts Plate Dissipation 15 max. watts D-C Plate Voltage 350 450 volts D-C Grid Voltage -40 -53 volts Peak R-F Grid Voltage 75 85 volts D-C Plate Current 40 40 ma. D-C Grid Current 40 40 ma. approx.ma. D-C Grid Current 3 4.5 approx.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 D-C Plate Voltage 350 max. volts D-C Plate Current 15 max. ma. R-F Grid Current 15 max. ma. T.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts D-C Plate Voltage 250 350 volts D-C Plate Voltage 250 350 volts D-C Plate Current 45 45 ma. D-C Grid Voltage 250 350 volts D-C Plate Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Plate Voltage 350 A50 volts Power Output 5.5 8 approx. matts Power Output 5.5 8 approx. matts Power Output 5.5 8 approx. matts Power D-C Plate Voltage 7.5 7.5 a-c volts D-C Plate Voltage	Carrier conditions per tube for use u	rith a max. modu	lati	on fact.	of 1.0					
D-C Plate Current 45 max. ma. R-F Grid Current 18 max. watts Plate Input 18 max. watts Plate Input 15 max. watts Plate Dissipation 15 max. watts Plate Dissipation 15 max. watts Plate Dissipation 15 max. watts D-C Plate Voltage 350 450 volts D-C Grid Voltage -40 -53 volts Peak R-F Grid Voltage 75 85 volts D-C Plate Current 40 40 ma. D-C Grid Current 40 40 ma. approx.ma. D-C Grid Current 3 4.5 approx.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 D-C Plate Voltage 350 max. volts D-C Plate Current 15 max. ma. R-F Grid Current 15 max. ma. T.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts D-C Plate Voltage 250 350 volts D-C Plate Voltage 250 350 volts D-C Plate Current 45 45 ma. D-C Grid Voltage 250 350 volts D-C Plate Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Plate Voltage 350 A50 volts Power Output 5.5 8 approx. matts Power Output 5.5 8 approx. matts Power Output 5.5 8 approx. matts Power D-C Plate Voltage 7.5 7.5 a-c volts D-C Plate Voltage	D-C Plate Voltage		450	max.	volts					
R-F Grid Current Plate Input Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage Peak R-F Grid Voltage Power Output Plate Doublage D-C Grid Current Priving Power Plate Voltage D-C Plate Voltage Peak R-F Grid Voltage Power Output Plate Input Plate Doublage D-C Plate Current Plate Input Plate Input Plate Input Plate Input Peak R-F Grid Voltage D-C Plate Current Plate Input Plate Current Plate Input Plate Current Plate Input Plate Current Peak R-F Grid Voltage D-C Plate Current Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Current Peak R-F Grid Voltage D-C Plate Current D-C Grid Voltage D-C Plate Voltage D-C Flate Voltage D-C Plate Voltage D-C Flate Voltage D-C Plate Voltage D-C Flate Current D-C Grid Voltage D-C Flate Voltage D-C Plate Current D-C Grid Current D-C Grid Current Somax Bapprox.ma. D-C Plate Voltage D-C Plate Vol					0.00					
Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Plate Current D-C Grid Current D-C Gr										
Plate Dissipation 15 max. watts										
Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Grid Voltage D-C Plate Current D-C Plate Current D-C Grid Current D-C Plate Voltage D-C Plate Current D-C Grid Voltage D-C Plate Voltage D-C Plate Voltage D-C Plate Current D-C Grid Current D-C Flate Voltage D-C Flate Voltage D-C Flate Voltage D-C Grid V										
Filament Voltage 350 450 volts D-C Plate Voltage 40 -53 volts Peak R-F Grid Voltage 75 85 volts D-C Grid Current 40 40 ma. D-C Plate Current 40 40 ma. D-C Grid Current 1 1 approx.ma. Power Output 3 4.5 approx.watts Power Output 3 4.5 approx.watts Power Output 5.5 max. ma. PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony Carrier conditions per tube for use witn a max. modulation fact. of 1.0 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. R-F Grid Current 15 max. ma. R-F Grid Current 4 max. amp. Plate Input 17.5 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Grid Voltage 950 volts D-C Plate Voltage 950 volts D-C Plate Current 45 45 ma. D-C Grid Current 45 45 ma. D-C Plate Current 5.5 max. watts Power Output 5.5 8 approx.ma. Power Output 5.5 8 approx.ma. Power Output 5.5 8 approx.watts Power Output 5.5 8 appr			10	max.	watts					
D-C Plate Voltage	Filament Voltage	7.5	7.5	a-c	volts					
D-C Grid Voltage 75 85 volts Peak R-F Grid Voltage 75 85 volts D-C Plate Current 40 40 ma. D-C Grid Current** 1 1 approx.ma. Driving Power ** 2 2.3 approx.watts Power Output 3 4.5 approx.watts **O 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 witn a max. modulation fact. of 1.0 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 4 max. amp. Plate Input 17.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts D-C Plate Voltage 7.5 7.5 a-c volts D-C Plate Voltage 250 350 volts D-C Grid Voltage -95 -135 volts D-C Plate Current 45 ma. D-C Grid Current 5.5 max. approx.ma. Driving Power ** 3 3.5 approx.ma. D-C Grid Current 5.5 max. approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy **Mey-down conditions per tube without modulation ** D-C Plate Current 5 max. ma. R-F Grid Current 5 max. ma. R-F Grid Current 5 max. amp. Plate Input 27 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 7.5 7.5 a				a-c						
Peak R-F Grid Voltage D-C Plate Current D-C Grid Current** Driving Power 0 ** Driving Power 0 ** PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony Carrier conditions per tube for use with a max. modulation fact. of 1.0 D-C Plate Voltage D-C Grid Current D-C Grid Voltage D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Flate Voltage D-C Flate Current D-C Grid Curren										
D-C Plate Current ** 1 1 approx.ma. Driving Power 0 ** 2 2.3 approx.watts Power Output 3 4.5 approx.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 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. R-F Grid Current 15 max. ma. R-F Grid Current 4 max. amp. Plate Dissipation 10 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Grid Voltage 95 -135 volts D-C Grid Voltage 95 -135 volts D-C Plate Current 45 45 D-C Plate Current 45 45 D-C Plate Current 45 45 D-C Grid Current 5.5 8 approx.ma. Driving Power ** 3 3.5 approx.mat. Driving Power ** 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy **Key-down conditions per tube without modulation ** D-C Plate Current 5 max. amp. Plate Input 27 max. watts Plate Dissipation 15 max. amp. Plate Input 27 max. watts Plate Dissipation 5 max. amp. Plate Dissipation 5 max. amp. Plate Dissipation 5 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 7.5 7.5 a-c volts					100000000000000000000000000000000000000					
D-C Grid Current ** 1 1 approx.ma. Driving Power 0 ** 2 2.3 approx.watts Power Output 3 4.5 approx.watts **A t 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 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 4 max. amp. Plate Input 17.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts D-C Plate Voltage 250 350 volts D-C Plate Current 45 45 ma. D-C Plate Current 45 45 ma. D-C Plate Current 45 45 ma. D-C Plate Current 50 max. ma. **Power Output 5.5 ** approx.ma. **Power Output 5.5 ** approx.watts			200		12/20/20/20/20					
Driving Power 0 *** Power Output 3 4.5 approx.watts O 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 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. R-F Grid Current 4 max. amp. Plate Input 17.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 250 350 volts D-C Grid Voltage -95 -135 volts Peak R-F Grid Voltage 196 235 volts D-C Plate Current 45 55 ma. D-C Grid Current 45 55 ma. D-C Grid Current 45 55 ma. D-C Grid Current 5.5 8 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy **Rey-down conditions per tube without modulation ** D-C Plate Current 5 max. ma. R-F Grid Current 15 max. amp. Plate Input 27 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 7.5 7.5 a-c volts D-C Grid Voltage 9.0 -115 volts Peak R-F Grid Voltage 9.0 -115 volts	D.C. Crid Current **			200504						
Power Output A t 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 D-C Plate Voltage D-C Plate Current D-C Grid Current Plate Input D-C Grid Current D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Flate Current D-C Grid Current D-C Grid Current A max. amp. Plate Input D-C Grid Voltage D-C Flate Voltage D-C Flate Voltage D-C Flate Voltage D-C Plate Current D-C Grid Current R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Rey-down conditions per tube without modulation # D-C Plate Current D-C Grid Curren	Deivice Deven 0 **									
O 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 D-C Plate Voltage D-C Plate Current 15 max. ma. R-F Grid Current 17.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation 10 max. watts Plate Voltage 250 350 volts D-C Plate Voltage 250 350 volts Peak R-F Grid Voltage 250 350 volts Peak R-F Grid Voltage 195 235 volts Peak R-F Grid Voltage 196 235 volts D-C Plate Current 45 45 ma. D-C Plate Current 45 45 ma. Driving Power** 3 3.5 approx.mat Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy **Key-down conditions per tube without modulation ** D-C Plate Current D-C Grid Current 15 max. ma. R-F Grid Current 15 max. ma. R-F Grid Current 15 max. watts Plate Dissipation 15 max. watts Plate Dissipation Typical Operation: Filament Voltage D-C Plate Volt		_								
PLATE-MODULATED R-F POWER AMPLIFIER - Class C Telephony Carrier conditions per tube for use with a max. modulation fact. of 1.0 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 4 max. amp. Plate Input 17.5 max. watts Plate Dissipation 10 max. watts Plate Dissipation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 250 350 volts D-C Grid Voltage 250 350 volts D-C Grid Voltage 196 235 volts D-C Plate Current 45 45 max. D-C Plate Current 45 45 max. D-C Grid Current** 15 15 approx.ma. Driving Power ** 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation * D-C Plate Current 5 max. R-F Grid Current 15 max. R-F Grid Current 5 max. R-F Grid Current 5 max. R-F Grid Current 5 max. R-F Grid Current 15 max. R-F Grid Current 5 max. R-F Grid Current 5 max. R-F Grid Current 15 max. R-F Grid Current 7.5 7.5 a-c volts D-C Plate Dissipation 7.5 7.5 a-c volts D-C Plate Voltage 7.5 7.5 a-c volts			4.5	approx.	watts					
Carrier conditions per tube for use with a max. modulation fact. of 1.0 D-C Plate Voltage 350 max. volts D-C Plate Current 50 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 4 4 max. amp. Plate Input 17.5 max. watts Plate Dissipation 10 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 250 350 volts D-C Plate Voltage 250 350 volts D-C Grid Voltage 195 235 volts D-C Plate Current 45 45 ma. D-C Plate Current 45 45 ma. D-C Plate Current 51 15 approx.ma. Driving Power 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation # D-C Plate Voltage 450 max. volts D-C Plate Current 55 max. ma. R-F Grid Current 55 max. amp. Plate Input 27 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Plate Voltage 350 450 volts D-C Plate Voltage -90 -115 volts Peak R-F Grid Voltage -90 -115 volts										
D-C Plate Voltage D-C Plate Current D-C Grid Current D-C Bate Units D-C Plate Voltage D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Grid Current D-C Grid Voltage										
D-C Plate Current D-C Grid Current 15 max. ma. Plate Input Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Current Tybrian Power Power Output R-F POWER AMPLIFIER & OSCILLATOR - Class D-C Plate Current D-C Grid Current D-C Plate Current D-C Plate Voltage D-C Plate Voltage D-C Plate Spation Typical Operation: R-F POWER AMPLIFIER & OSCILLATOR - Class D-C Plate Current D-C Grid Current D-C Grid Current D-C Plate Current D-C Plate Voltage D-C Plate Current D-C Plate Current D-C Plate Spation D-C Grid Current D-C Grid Voltage	Carrier conditions per tube for use u	vitn a max. modi	lati	on fact.	of 1.0					
D-C Grid Current 15 max. ma.			350	max.	volts					
R-F Grid Current Plate Input 17.5 max. watts Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Flate Current D-C Grid Current** D-C Grid Current** Driving Power *** Power Output R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Rey-down conditions per tube without modulation * D-C Plate Current D-C Grid Current D-C Flate Voltage D-C Plate Current D-C Grid Current Telegraphy Rey-down conditions per tube without modulation * D-C Grid Current Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Flate Voltage D-C Grid Voltage	D-C Plate Current		50	max.	ma.					
Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Current S-5.5 Bapprox.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Mey-down conditions per tube without modulation # D-C Plate Voltage D-C Plate Current D-C Grid Current D-C Grid Current S-F Grid Current D-C Grid Current D-C Grid Current S-F Grid Current D-C Grid Current D-C Grid Current S-F Grid Current D-C Grid Current S-F Grid Current Typical Operation: Filament Voltage D-C Plate Voltage D-C Plate Voltage D-C Grid Voltage	D-C Grid Current		15	max.	ma.					
Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Current S-5.5 Bapprox.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Mey-down conditions per tube without modulation # D-C Plate Voltage D-C Plate Current D-C Grid Current D-C Grid Current S-F Grid Current D-C Grid Current D-C Grid Current S-F Grid Current D-C Grid Current D-C Grid Current S-F Grid Current D-C Grid Current S-F Grid Current Typical Operation: Filament Voltage D-C Plate Voltage D-C Plate Voltage D-C Grid Voltage	R-F Grid Current		4	max.	amp.					
Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Voltage D-C Grid Voltage D-C Grid Voltage D-C Plate Current D-C Grid Current** Driving Power ** Driving Power ** Driving Power ** Driving Power Output R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Rey-down conditions per tube without modulation * D-C Plate Voltage D-C Plate Current D-C Grid Voltage	Plate Input	1	7.5	max.	watts					
Typical Operation: Filament Voltage	Plate Dissipation		10	max.	watts					
Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 250 350 volts Peak R-F Grid Voltage 195 235 volts Peak R-F Grid Voltage 196 235 volts D-C Plate Current 45 45 ma. D-C Grid Current 15 15 approx.ma. Driving Power ** 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation * D-C Plate Voltage 450 max. volts C-C Plate Current 60 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 15 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Plate Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts					1					
D-C Plate Voltage 250 350 volts D-C Grid Voltage -95 -135 volts Peak R-F Grid Voltage 195 235 volts D-C Plate Current 45 45 ma. D-C Grid Current ** 15 15 approx.ma. Driving Power *** 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation * D-C Plate Voltage 450 max. volts D-C Plate Current 60 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 5 max. amp. Plate Input 27 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts		7.5	7.5	a-c	volts					
D-C Grid Voltage		250	350							
Peak R-F Grid Voltage D-C Plate Current D-C Grid Current** Driving Power *** Power Output S-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy **Key-down conditions per tube without modulation ** D-C Plate Voltage D-C Plate Current D-C Grid Current R-F Grid Current S-F Grid Current Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Plate Voltage D-C Plate Dissipation Typical Operation: Filament Voltage D-C Grid Voltage Peak R-F Grid Voltage Peak R-F Grid Voltage Peak R-F Grid Voltage D-C State Voltage D-C Grid Voltage Peak R-F Grid Voltage Peak R-F Grid Voltage Peak R-F Grid Voltage Pool Tissup Volts Peak R-F Grid Voltage Pool Tissup Volts		-95 -	135		volts					
D-C Plate Current D-C Grid Current D-C Plate Current D-C Plate Current D-C Plate Voltage D-C Plate Current D-C Grid Current D		195	235		volts					
D-C Grid Current ** 15 15 approx.ma. Driving Power ** 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation * D-C Plate Voltage 450 max. volts D-C Plate Current 60 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 5 max. amp. Plate Input 27 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts					ma.					
Driving Power *** 3 3.5 approx.watts Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation * D-C Plate Voltage 450 max. volts D-C Plate Current 60 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 5 max. amp. Plate Input 27 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts	D-C Grid Current **			approx.						
Power Output 5.5 8 approx.watts R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Rey-down conditions per tube without modulation # D-C Plate Voltage 450 max. volts D-C Plate Current 60 max. ma. R-F Grid Current 15 max. ma. R-F Grid Current 5 max. amp. Plate Input 27 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts	Driving Power **	17.5								
R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy Key-down conditions per tube without modulation * D-C Plate Voltage 450 max. volts D-C Plate Current 60 max. ma. D-C Grid Current 15 max. ma. R-F Grid Current 5 max. amp. Plate Input 27 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts	Power Output									
Rey-down conditions per tube without modulation \$ D-C Plate Voltage	Constitution of the Consti									
D-C Plate Voltage					ily					
D-C Plate Current D-C Grid Current R-F Grid Current R-F Grid Current Plate Input Plate Dissipation Typical Operation: Filament Voltage D-C Plate Voltage D-C Grid Voltage Peak R-F Grid Voltage D-C Grid Voltage Peak R-F Grid Voltage										
D-C Grid Current	D-C Flate Voltage				.0100101000					
R-F Grid Current 5 max. amp. Plate Input 27 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volta					3000000					
Plate Input 27 max. watts Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts					200000000000000000000000000000000000000					
Plate Dissipation 15 max. watts Typical Operation: Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts					100000000000000000000000000000000000000					
Typical Operation: 7.5 7.5 a-c volts Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts										
Filament Voltage 7.5 7.5 a-c volts D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts			15	max.	watts					
D-C Plate Voltage 350 450 volts D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts										
D-C Grid Voltage -90 -115 volts Peak R-F Grid Voltage 190 215 volts	Filament Voltage			a-c						
Peak R-F Grid Voltage 190 215 volts										
Peak R-F Grid Voltage 190 215 volts	D-C Grid Voltage				volts					
	Peak R-F Grid Voltage	190	215		volts					
		next page)								



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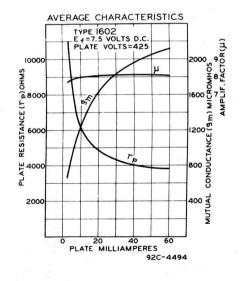
AMPLIFIER TRIODE

(continued from p	receding page		
D-C Plate Current	55	55	ma.
D-C Grid Current **	15	15	ma.
Driving Power**	3 3	3.3	approx.watts
Power Output	9	13	approx.watts

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

For use of the 1602 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS vs Frequency.

OUTLINE DIMENSIONS, TUBE SYMBOL, and SOCKET CONNECTIONS for the 1602 are the same as for the 841.

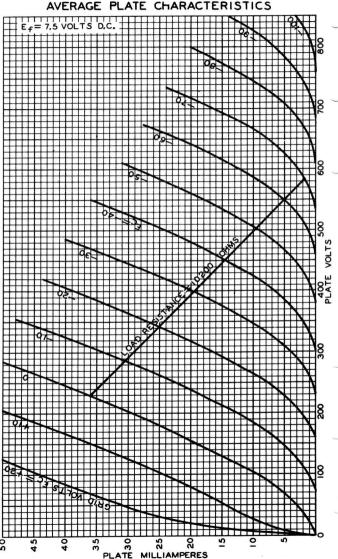


^{**} Subject to wide variations as explained on sheet TRANS. TUBE RATINGS.





AVERAGE PLATE CHARACTERISTICS



OCT.10,1935

RCA RADIOTRON DIVISION RCA MANUFACTURING COMPANY, INC.

92C-4493



R-F POWER AMPLIFIER, OSCILLATOR, CLASS B MODULATOR

Filament	Coated				
Voltage	2.5	a-c	or	d-c	volts
Current	2.5				amp.
Amplification Factor	20				
Direct Interelectrode	Capacitances:				_
Grid to Plate	9				μμf
Grid to Filament	8.5				μμf
Plate to Filament	3				μμf ST-16
Bulb				-201	
Base	Medium 4-Pir	n Cera	ami	c, B	ayonet

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

	A-F POWER AMPLIFIER &	MODULAT	OR - Class	В
	D-C Plate Voltage		425	max. volts
ı	MaxSignal D-C Plate Current *		95	max. ma.
ı	MaxSignal Plate Input *		40	max. watts
I	Plate Dissipation *		20	max. watts
	Typical Operation - 2 tubes:			
ı	Unless otherwise specified,	values	are for	2 tubes.
ı	Filament Voltage	2.5	2.5	a-c volts
	D-C Plate Voltage	350	425	volts
ı	D-C Grid Voltage	-10	-1 5	volts
	Peak A-F Grid-to-Grid Voltage	60	65	volts
١	Zero-Signal D-C Plate Cur.	30	36	ma.
ı	MaxSignal D-C Plate Cur.	190	190	ma.
I	Load Resistance (per tube)	950	1200	ohms
l	Effective Load Res.			
ı	(plate to plate)	3800	4800	ohms
1	MaxSignal Driving Power	2.2	2.2	approx.watts
1	MaxSignal Power Output	38		approx.watts
	4			Charles .

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

P_E POWER AMPLIFIER - Class R Telephony

Carrier conditions per tube for	or use with a max.	modulation fact	. of 1.0
D-C Plate Voltage		425 max.	volts
D-C Plate Current		70 max.	ma.
Plate Input		30 max.	watts
Plate Dissipation		20 max.	watts
Typical Operation:			
Filament Voltage	2.5	2.5 a-	c volts
D-C Plate Voltage	350	425	vol ts
D-C Grid Voltage	-10	-15	volts
Peak R-F Grid Voltage	35	40	volts
D-C Plate Current	70	70	ma.
D-C Grid Current **	4	4 appro	
Driving Power ** 0	2	2 appro	x.watts
Power Output	7	10 appro	x.watts
44			

See next page.

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



R-F POWER AMPLIFIER, OSCILLATOR, CLASS B MODULATOR

(continued from preceding page)

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

Carrier conditions per tube for	use with a max.	modulati	on fact.	of 1.0
D-C Plate Voltage			max:	volts
D-C Grid Voltage		-200	max.	volts
D-C Plate Current		85	max.	ma.
D-C Grid Current		25	max.	ma.
Plate Input		30	max.	watts
Plate Dissipation		13.5	max.	watts
Typical Operation:				903.07
Filament Voltage	2.5	2.5	a-c	volts
D-C Plate Voltage	325	350		volts
D-C Grid Voltage	-80	-80		volts
Peak R-F Grid Voltage	150	165		volts
D-C Plate Current	85	85		ma.
D-C Grid Current **	20	20	approx	
Driving Power **	2.7	3	approx	
Power Output	16	18	approx	.watts

R-F POWER AMPLIFIER & OSCILLATOR - Class C Telegraphy

Key-down conditions per tube without modulation

D-C Plate Voltage		425	max.	volts
D-C Grid Voltage		-200	max.	volts
D-C Plate Current		95	max.	ma.
D-C Grid Current		25	max.	ma.
Plate Input		40	max.	watts
Plate Dissipation		20	max.	watts
Typical Operation:				
Filament Voltage	2.5	2.5	a-0	volts
D-C Plate Voltage	350	425		volts
D-C Grid Voltage	-85	-90		volts
Peak R-F Grid Voltage	150	155		volts
D-C Plate Current	95	95		ma.
D-C Grid Current **	20	20	approx	x.ma.
Driving Power **	3	3		x.watts
Power Output	20	27	approx	x.watts

[#] Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed II5% of the carrier conditions.

For use of the 1608 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS VS FREQUENCY.

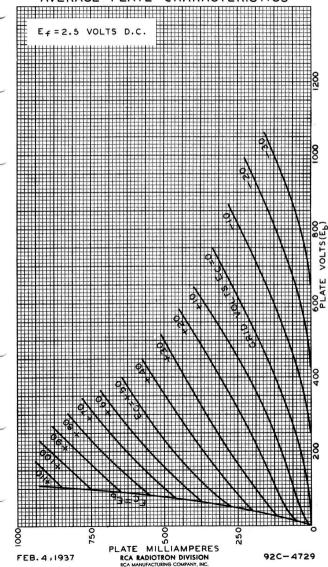
> OUTLINE DIMENSIONS, TUBE SYMBOL, and SOCKET CONNECTIONS for the 1608 are the same as for the 801.

^{**} Subject to considerable variation as explained on sheet TRANS. TUBE RATINGS.



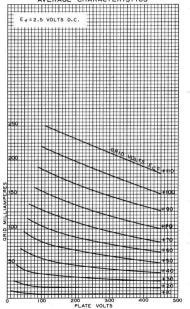
600

AVERAGE PLATE CHARACTERISTICS





AVERAGE CHARACTERISTICS



1608



CRYSTAL-OSCILLATOR PENTODE

Filament	Coated	127
Voltage	2.5	a-c or d-c volts
Current	1.75	amp.
Transconductance		
for plate current of 31 ma.	2500	µmhos
Direct Interelectrode Capa	acitances:	
Grid to Plate	1.2	μμf
Input	8.6	μμf
Output	13	μμ f
Maximum Overall Length		5-3/8"
Maximum Diameter		2-1/16"
Bulb		ST -1 6
Base		Medium 5-Pir

MAXIMUM RATINGS and TYPICAL OPERATING CONDITIONS

R-F POWER AMPLIFIER & OSC	ILLATOR - Clas	s C Te	elegrapi	<u>1y</u>
Key-down conditions per	tube without	modul	ation #	
D-C Plate Voltage		400	max.	volts
D-C Screen Voltage (Grid #2)		200	max.	volts
D-C Grid Voltage (Grid #1)		-100	max.	volts
D-C Plate Current		30	max.	ma.
D-C Grid Current		3	max.	ma.
Plate Input		-	max.	watts
Screen Input		2	max.	watts
Plate Dissipation		6	max.	watts
Typical Operation:				
Filament Voltage	2.5	2.5		volts
D-C Plate Voltage	300	400		volts
D-C Screen Voltage	125	150		volts
D-C Grid Voltage	-60▲	-504		volts
Peak R-F Grid Voltage	110	75		volts
D-C Plate Current	30	22.5		ma.
D-C Screen Current	13	7		ma.
D-C Grid Current	2.5		approx	
Driving Power	0.25		approx	
Power Output	5	5	approx	.watts

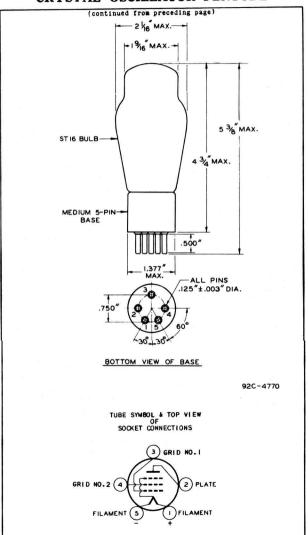
Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed H5% of the carrier conditions.

For use of the 1610 at the higher frequencies, refer to sheet TRANS. TUBE RATINGS VS FREQUENCY.

Bias may also be obtained with 30000-ohm grid resistor.



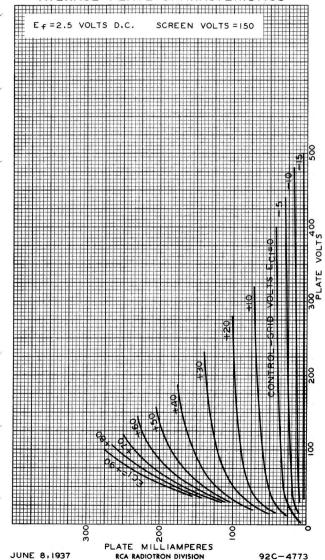
CRYSTAL-OSCILLATOR PENTODE





60

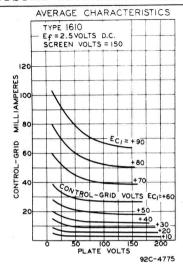
AVERAGE PLATE CHARACTERISTICS



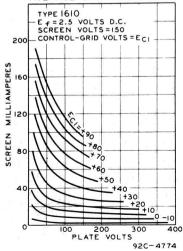


1610

CRYSTAL-OSCILLATOR PENTODE

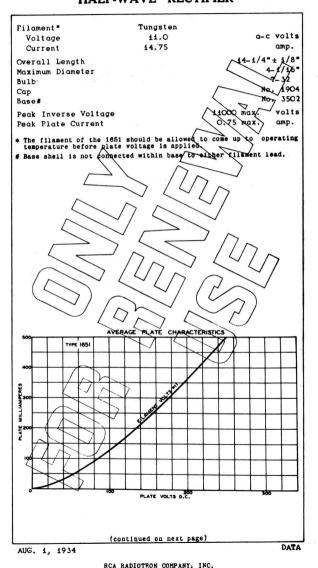








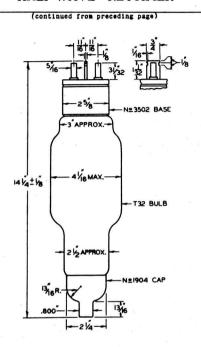
HALF-WAVE RECTIFIER



83



HALF-WAVE RECTIFIER



TUBE SYMBOL & CONNECTIONS TO END-MOUNTINGS



JUNE 20, 1930 (8-34)

DATA



OSCILLATOR, R-F POWER AMPLIFIER

(WATER COOLED)

	WATER COU	LED)			
Filament	Tungster	ı			
Voltage	14.5		a-c	or d-	volts
Current	52				amp.
Amplification Factor	14				
Direct Interelectrode	Capacitanc	es (app	rox.):		
Grid to Plate	27		μμ	f	
Grid to Filament	18		μμ	f	
Plate to Filament	2		μμ	f	
Maximum Overall Length					20-1/4"
Maximum Radius					6-1/2"
Bulb				r-32 w	ith arm
Base				N	3906
Water Jacket			A P	45 - 1	UT-1285
			. W 100	N S I S	
R-F POWER AMPL	IFIER - C1	ass B (Telepho	ony)	
Carrier Conditions; for	use with a h	loculatio	n Factor	r up to	1.0
D-C Plate Voltage				max.	volts
D-C Plate Current			0.625		amp.
Plate Dissipation			1. 55555	max.	watts
R-F Grid Current			5.0	max.	amp.
Typical Operation:				3	
Filament Voltage	14.5	14.5	14.5	Q-0	volts
D-C Plate Voltage	5000	6000	7500		volts
Grid Voltage	-400	-475		appro	.volts
D-C Plate Current	0.45	0.5	0.625		amp.
Peak Power Output	3000	4000	6000	appro	k.watts
Carrier Power Output	750	1000	1500	appro	x.watts
PLATE-MODULATED R-F PO	WER AMPLIF	IER - C	lass C	(Tele)	phony)
Carrier Conditions; for	use with a h	lodulatio	n Factor	r up to	1.0
D-C Plate Voltage			6000	max.	volts
D-C Plate Current			0.625	max.	amp.
Plate Dissipation			500C	max.	watts
R-F Grid Current			3.0	max.	amp.
D-C Grid Current			0.075	max.	amp.
Typical Operation:					
Filament Voltage		14.5	14.5	a-0	volts
D-C Plate Voltage		5400	6000		volts
Grid Voltage		-1000	-1150	approx	.volts
D-C Plate Current		0.625	0.625	-	amp.
Power Output		2750	2500	арргоз	.watts
R-F POWER AMPLIFIER &			ss C (relegro	iphy)
· K	еу-доші Сопа	1110115			

(continued on next page)

D-C Plate Voltage

D-C Plate Current

Plate Dissipation

volts

amp.

watts

7500 max.

1.25 max.

5000 max.



OSCILLATOR, R-F POWER AMPLIFIER

continued from preceding page)

amp.
amp.
c volts
volts
x.volts
amp.
x.watts

NOTE: Regardless of the type of service in which the 1652 is used, the maximum ratings apply only for single-tube operation at frequencies below 3 megacycles (wavelengths above 100 meters). For operation at higher frequencies, refer to TRANS-MITTING TUBE RATINGS VS. OPERATING PREQUENCY.

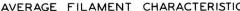
D. C. C. CETTON PARTONING TO L. C.

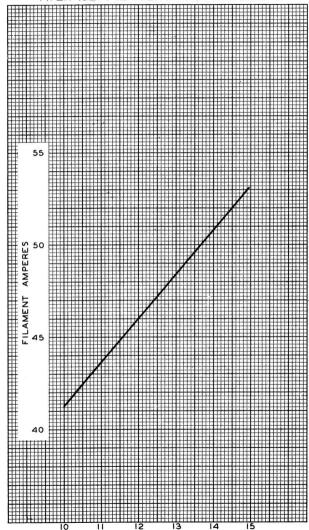
9500 mask, composition of the control of the contro

when two or more 1652's are operated in parallel, the plate voltage and output should be reduced. The amount of reduction depends on the number of tubes paralleled as well as the type of circuit and service contemplated.

OUTLINE DIMENSIONS, TUBE SYMBOL, and TERMINAL CONNECTIONS for the 1652 are the same as for the 207.



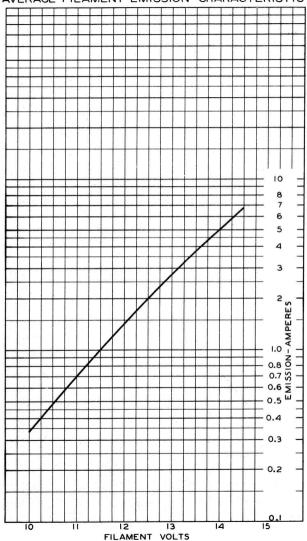












JAN. 4, 1932

RCA RADIOTRON DIVISION RCA MANUFACTURING COMPANY, INC. 92C-4506



AVERAGE PLATE CHARACTERISTICS

