



807

807

BEAM POWER TUBE*Useful at Frequencies up to 125 Mc***GENERAL DATA****Electrical:**

Heater, for Unipotential Cathode:

Voltage 6.3 $\pm$ 0.6 ac or dc volts

Current 0.9 amp

Transconductance (Approx.)

for plate volts = 250,

grid-No.2 volts = 250,

grid-No.1 volts = -14 6000 μ hos

Mu-Factor, Grid No.2 to

Grid No.1 for plate volts =

250, grid-No.2 volts = 250,

and grid-No.1 volts = -20 8

Direct Interelectrode Capacitances:

Grid No.1 to plate⁰ 0.2 max. μ fGrid No.1 to cathode &
grid No.3, grid No.2,
and heater 12 μ fPlate to cathode & grid
No.3, grid No.2,
and heater 7 μ f**Mechanical:**

Mounting Position Any

Maximum Overall Length 5-3/4"

Seated Length 4-31/32" $\pm$ 5/32"

Maximum Diameter 2-1/16"

Weight (Approx.) 3 oz

Bulb ST-16

Cap. Small (JETEC No.C1-1)

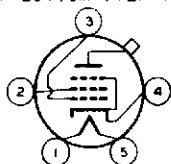
Base Medium-Micanol-Shell Small 5-Pin (JETEC No.A5-11)

Basing Designation for BOTTOM VIEW 5AW

Pin 1-Heater

Pin 2-Grid No.2

Pin 3-Grid No.1



Pin 4-Cathode,

Grid No.3

Pin 5-Heater

Cap-Plate

AF POWER AMPLIFIER & MODULATOR - Class AB₁*Triode Connection--Grid No.2 Connected to Plate***Maximum Ratings, Absolute Values:**

	CCS ⁰	ICAS ⁰⁰	
DC PLATE VOLTAGE	400 max.	400 max.	volts
MAX.-SIGNAL DC PLATE CURRENT [*]	125 max.	125 max.	ma
MAX.-SIGNAL DC PLATE PLUS GRID-No.2 INPUT [*]	50 max.	50 max.	watts
PLATE DISSIPATION PLUS GRID-No.2 INPUT [*]	25 max.	30 max.	watts

⁰ with external shield JETEC No.312.

♦, •, ••, •••: See next page.

←Indicates a change.



BEAM POWER TUBE

	CCS [•]	ICAS ^{••}	
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	135 max.	135 max.	volts
Heater positive with respect to cathode	135 max.	135 max.	volts

Typical Operation:[•]	CCS [•]	ICAS ^{••}	
<i>Values are for 2 tubes</i>			
DC Plate Voltage	400	400	volts
DC Grid-No.1 (Control-Grid) Voltage	-45	-45	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage ^{••}	90	90	volts
Zero-Signal DC Plate Current	64	64	ma
Max.-Signal DC Plate Current	140	140	ma
Effective Load Resistance (Plate to Plate)	3000	3000	ohms
Max.-Signal Driving Power (Approx.)	0	0	watts
Max.-Signal Power Output (Approx.)	15	15	watts

Maximum Circuit Values (CCS or ICAS):

Grid-No.1-Circuit Resistance:^{••}			
With fixed bias		0.1 max.	megohm
With cathode bias		0.5 max.	megohm

AF POWER AMPLIFIER & MODULATOR - Class AB₁

Maximum Ratings, Absolute Values:

	CCS [•]	ICAS ^{••}	
DC PLATE VOLTAGE	600 max.	750 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	300 max.	300 max.	volts
MAX.-SIGNAL DC PLATE CURRENT*	120 max.	120 max.	ma
MAX.-SIGNAL DC PLATE INPUT*	60 max.	90 max.	watts
MAX.-SIGNAL GRID-No.2 INPUT*	3.5 max.	3.5 max.	watts
PLATE DISSIPATION*	25 max.	30 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	135 max.	135 max.	volts
Heater positive with respect to cathode	135 max.	135 max.	volts

[•] Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.

[•] In class AB₁ service, the normal design limitation is the requirement that grid-No.1 current should not flow. For this reason, the typical operating values shown for both CCS and ICAS conditions are the same.

^{••} The driver stage should be capable of supplying the No.1 grids of the class AB₁ stage with the specified driving voltage at low distortion.

[•], ^{••}, *, ^{••}: See next page.

→ indicates a change.



807

807

BEAM POWER TUBE

Typical Operation:	CCS*			ICAS**	
	Values are for 2 tubes				
DC Plate Voltage	400	500	600	750	volts
DC Grid-No.2 Voltage** .	300	300	300	300	volts
DC Grid-No.1 (Control- Grid) Voltage:					
From fixed-bias source	-30	-32	-34	-35	volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage. . .	60	64	68	70	volts
Zero-Signal DC Plate Current.	56	44	36	30	ma
Max.-Signal DC Plate Current.	143	141	139	139	ma
Zero-Signal DC Grid-No.2 Current. . .	2	1	0.6	0.5	ma
Max.-Signal DC Grid-No.2 Current. . .	16	15	15	16	ma
Effective Load Resistance (Plate to plate) . . .	6800	8200	10000	12000	ohms
Max.-Signal Driving Power (Approx.)	0	0	0	0*	watts
Max.-Signal Power Output (Approx.) . . .	36	46	56	72	watts

Maximum Circuit Values (CCS or ICAS):

Grid-No.1-Circuit Resistance: ⁰⁰

With fixed bias. 0.1 max. megohm

With cathode bias. Not recommended

AF POWER AMPLIFIER & MODULATOR - Class AB₂[#]

Maximum Ratings, Absolute Values:

	CCS*	ICAS**
DC PLATE VOLTAGE	600 max.	750 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE.	300 max.	300 max. volts
MAX.-SIGNAL DC PLATE CURRENT*.	120 max.	120 max. ma
MAX.-SIGNAL PLATE INPUT* . . .	60 max.	90 max. watts
MAX.-SIGNAL GRID-No.2 INPUT* .	3.5 max.	3.5 max. watts
PLATE DISSIPATION*	25 max.	30 max. watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	135 max.	135 max. volts
Heater positive with respect to cathode	135 max.	135 max. volts

* Subscript 2 indicates that the grid-No.1 current flows during some part of the input cycle.

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

•, ••, **, ⁰⁰: See next page.

← indicates a change.

Typical Operation:	CCS*			ICAS**	
Values are for 2 tubes					
DC Plate Voltage	400	500	600	750	volts
DC Grid-No.2 Voltage** .	300	300	300	300	volts
DC Grid-No.1 (Control- Grid) Voltage:					
From fixed-bias source	-28	-30	-32	-35	volts
Peak AF Grid-No.1-to- Grid-No.1 Voltage. . .	80	86	90	96	volts
Zero-Signal DC Plate Current.	72	60	48	30	ma
Max.-Signal DC Plate Current.	240	240	200	240	ma
Zero-Signal DC Grid-No.2 Current. . .	2	0.9	0.7	0.5	ma
Max.-Signal DC Grid-No.2 Current. . .	20	20	18	20	ma
Effective Load Resistance (Plate to plate) . . .	3700	4600	6900	7300	ohms
Max.-Signal Driving Power (Approx.)♦♦. . .	0.2	0.2	0.1	0.2	watt
Max.-Signal Power Output (Approx.)▲. . .	55	75	80	120	watts

Maximum Circuit Values (CCS or ICAS):					
Grid-No.1-Circuit Resistance:°°					
With fixed bias.				30000 max.	ohms
With cathode bias.				Not recommended	

RF POWER AMPLIFIER-Class B Telephony

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

Maximum Ratings, Absolute Values:

	CCS*	ICAS**
DC PLATE VOLTAGE	600 max.	750 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE	300 max.	300 max. volts
DC PLATE CURRENT	80 max.	90 max. ma
PLATE INPUT.	37.5 max.	45 max. watts
GRID-No.2 INPUT.	2.5 max.	2.5 max. watts

** Preferably obtained from a separate source, or from the plate-voltage supply with a voltage divider. .

♦♦ Driver stage should be capable of supplying the specified driving power at low distortion to the No.1 grids of the class AB₂ stage. The effective resistance per grid-No.1 circuit of the class AB₂ stage should be kept below 500 ohms and the effective impedance should not exceed 700 ohms at the highest response frequency.

▲ With zero-impedance driver and perfect regulation, plate-circuit distortion does not exceed 2%. In practice, the regulation of the plate-voltage, grid-No.2 voltage, and grid-No.1 voltage should not be greater than 5%, 5%, and 3%, respectively.

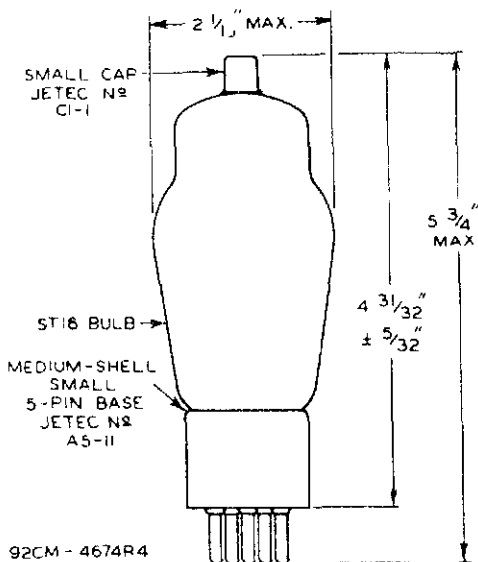
•, ••, °°: See next page. → Indicates a change.



807

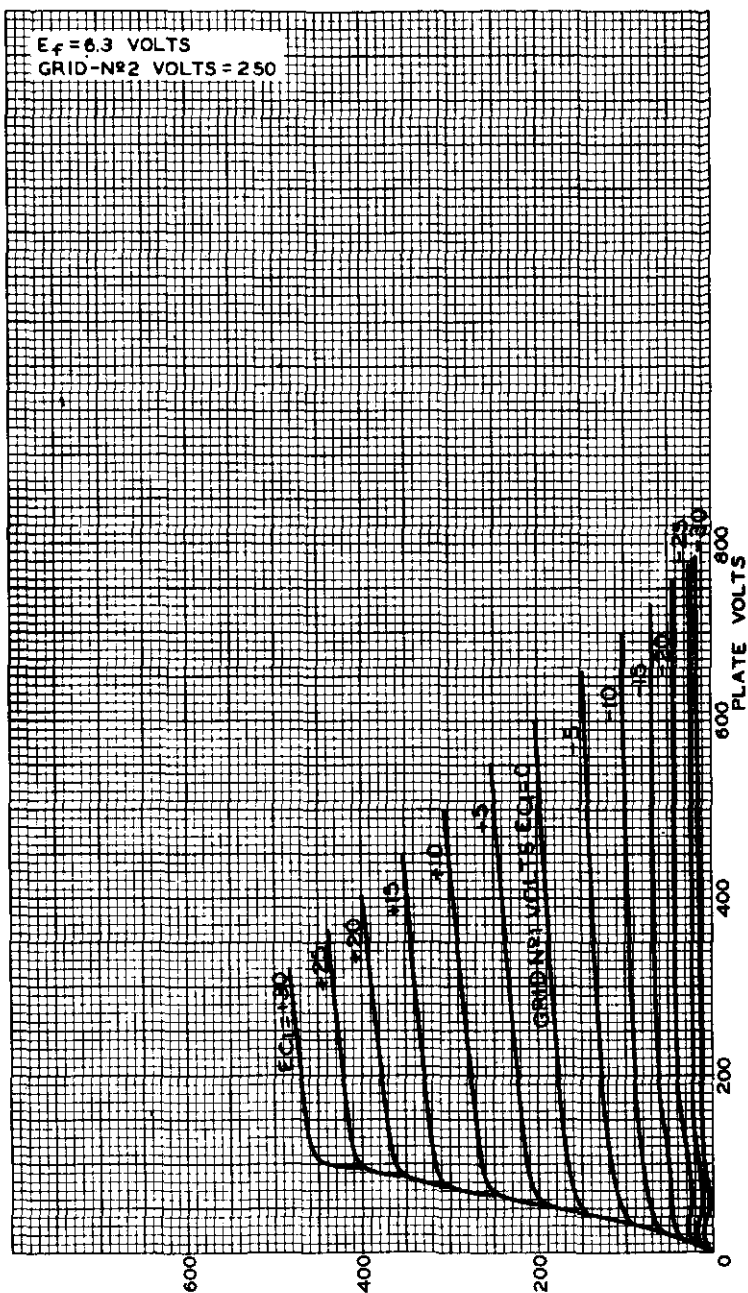
807

BEAM POWER TUBE





AVERAGE PLATE CHARACTERISTICS

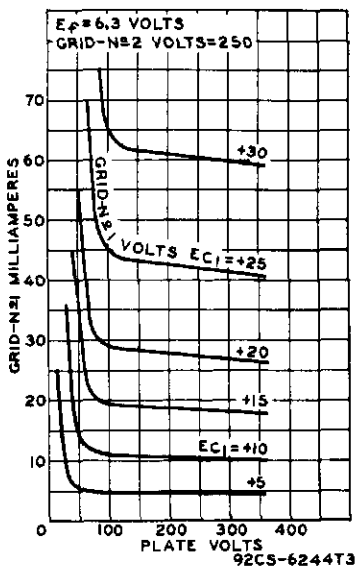
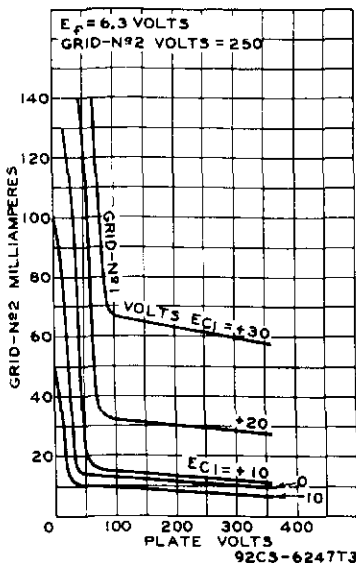




807

807

AVERAGE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS

$E_f = 6.3$ VOLTS
GRID-No 2 VOLTS = 300

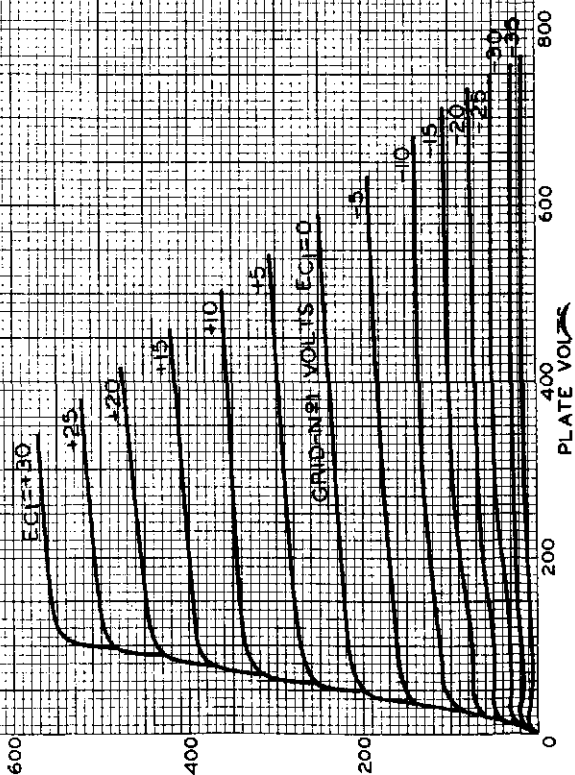


PLATE MILLIAMPERES
ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-4682R3

E_f = 6.3 VOLTS
GRID №2 CONNECTED TO PLATE.

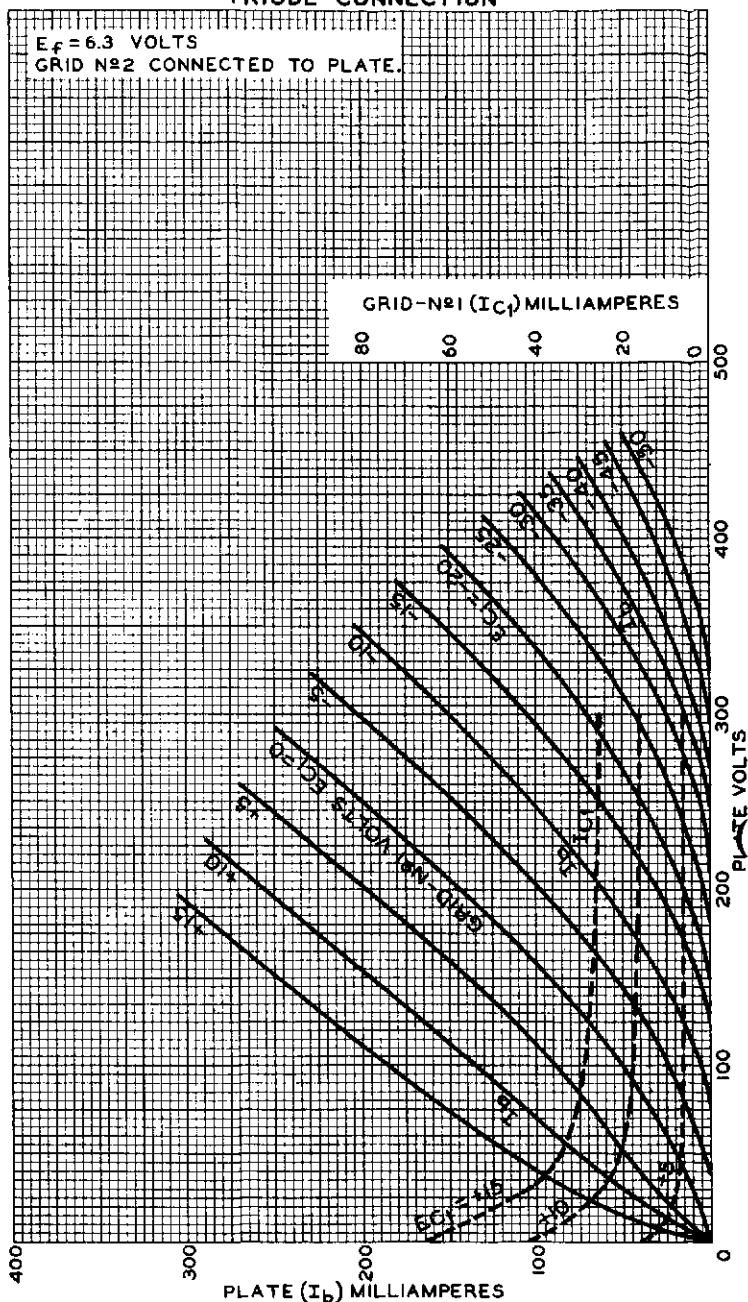


PLATE (I_b) MILLIAMPERES

ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

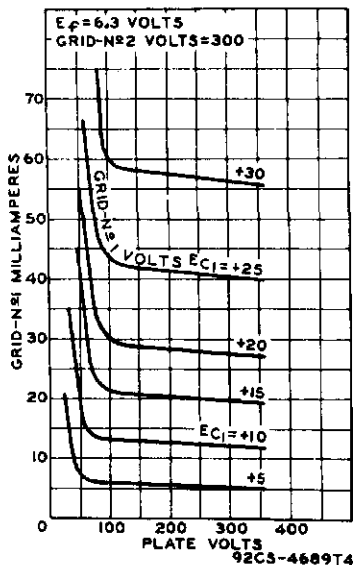
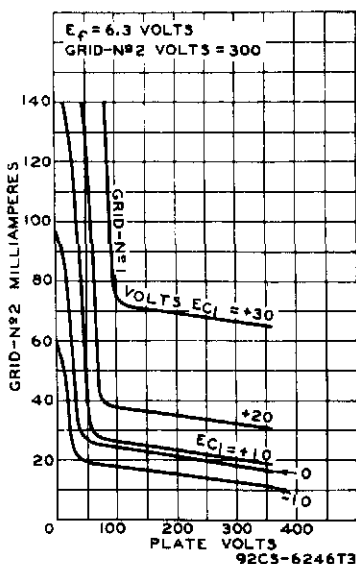
92CM-7116R1



807

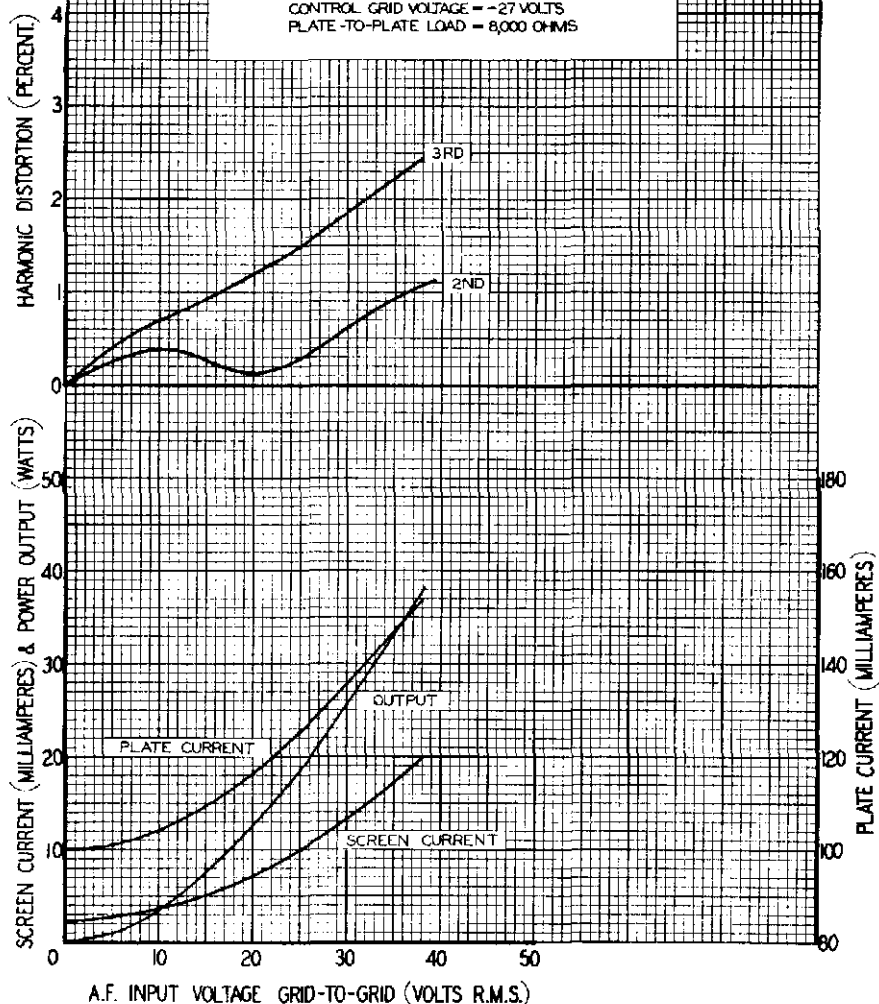
807

AVERAGE CHARACTERISTICS



VALVE TYPE 807
 PUSH-PULL CLASS "AB₁" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE - 500 VOLTS
 SCREEN VOLTAGE - 300 VOLTS
 CONTROL GRID VOLTAGE - -27 VOLTS
 PLATE-TO-PLATE LOAD - 8,000 OHMS



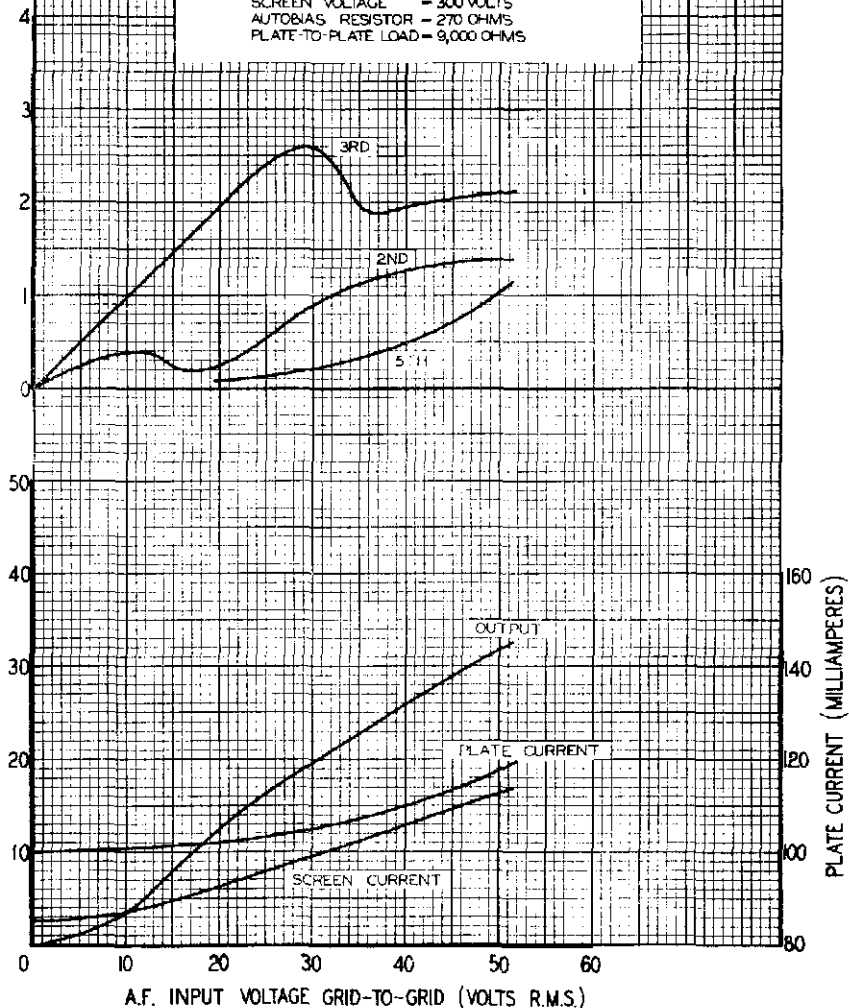
VALVE TYPE 807
 PUSH-PULL CLASS "AB₁" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 500 VOLTS
 SCREEN VOLTAGE = 300 VOLTS
 AUTOBIAS RESISTOR = 270 OHMS
 PLATE-TO-PLATE LOAD = 9,000 OHMS

HARMONIC DISTORTION (PERCENT.)

SCREEN CURRENT (MILLIAMPERES) & POWER OUTPUT (WATTS)

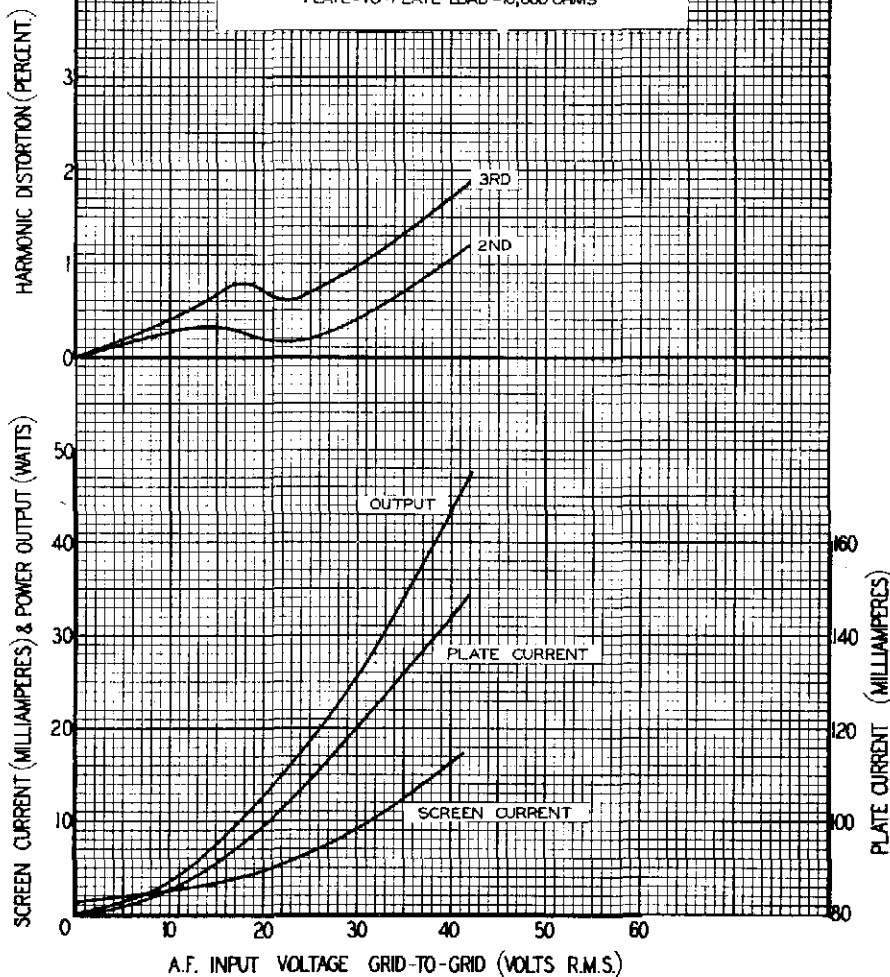
PLATE CURRENT (MILLIAMPERES)



A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)

VALVE TYPE 807
 PUSH-PULL CLASS 'AB₁' AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 600 VOLTS
 SCREEN VOLTAGE = 300 VOLTS
 CONTROL GRID VOLTAGE = -29.5 VOLTS
 PLATE-TO-PLATE LOAD = 10,000 OHMS



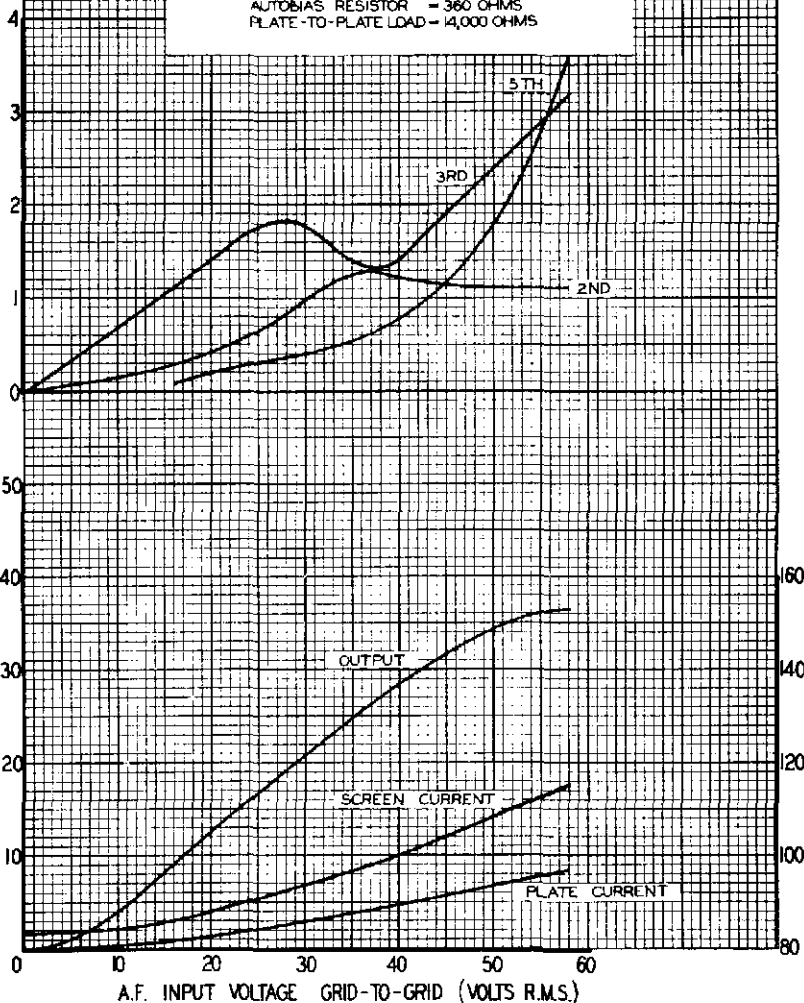
VALVE TYPE 807
 PUSH-PULL CLASS "AB₁" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 600 VOLTS
 SCREEN VOLTAGE = 300 VOLTS
 AUTOBIAS RESISTOR = 360 OHMS
 PLATE-TO-PLATE LOAD = 14,000 OHMS

HARMONIC DISTORTION (PERCENT.)

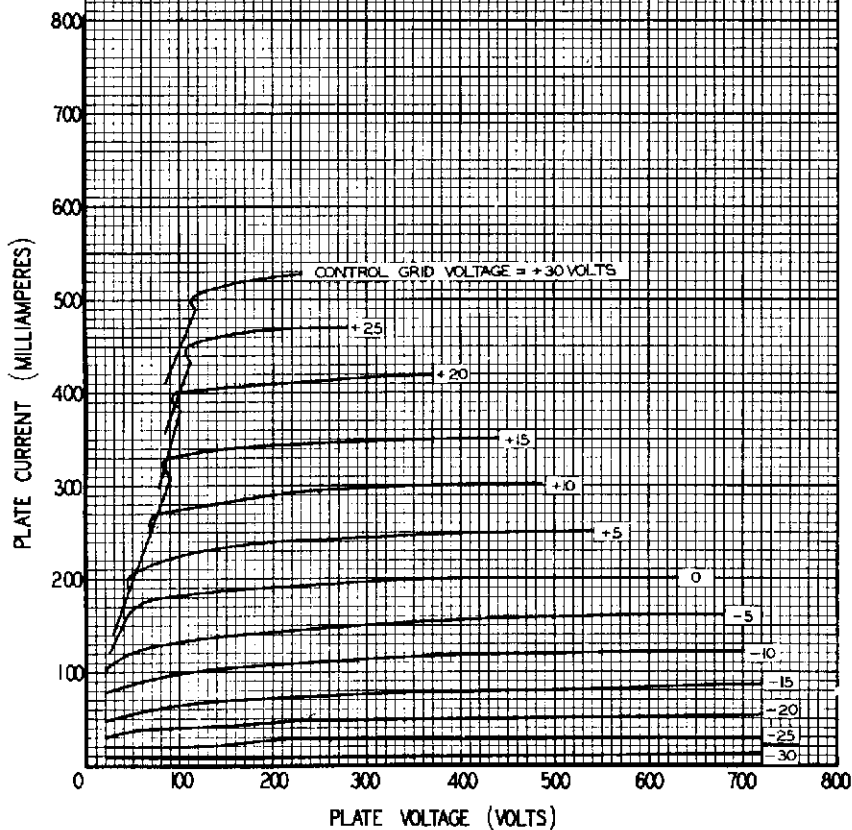
SCREEN CURRENT (MILLIAMPERES) & POWER OUTPUT (WATTS)

PLATE CURRENT (MILLIAMPERES)



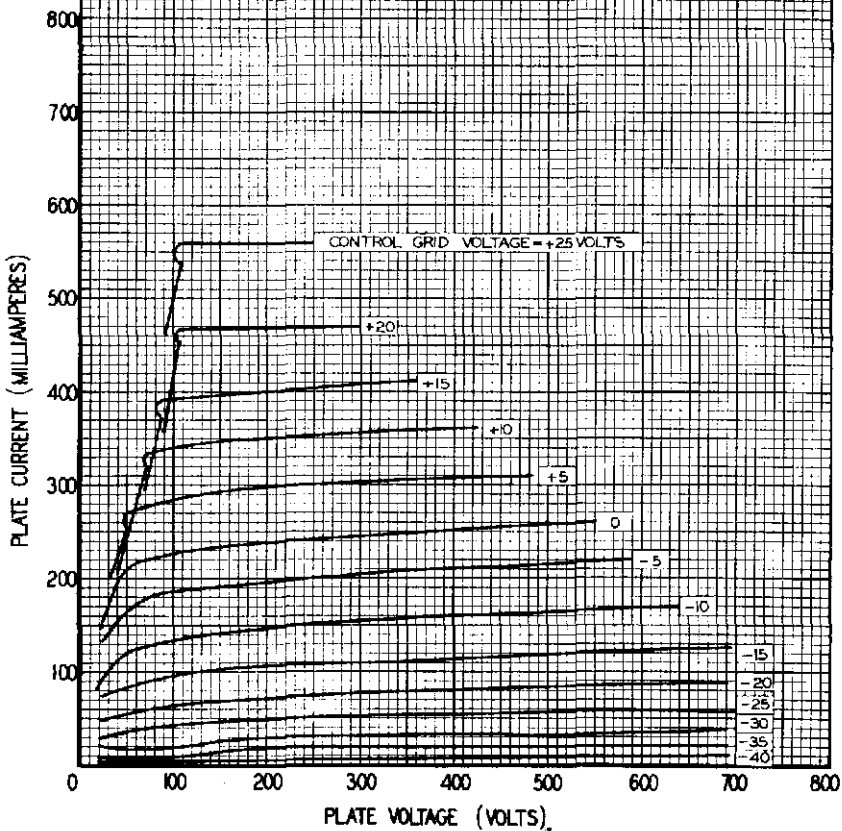
A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)

VALVE TYPE 807
PLATE CURRENT VERSUS PLATE VOLTAGE
SCREEN VOLTAGE = 250 VOLTS

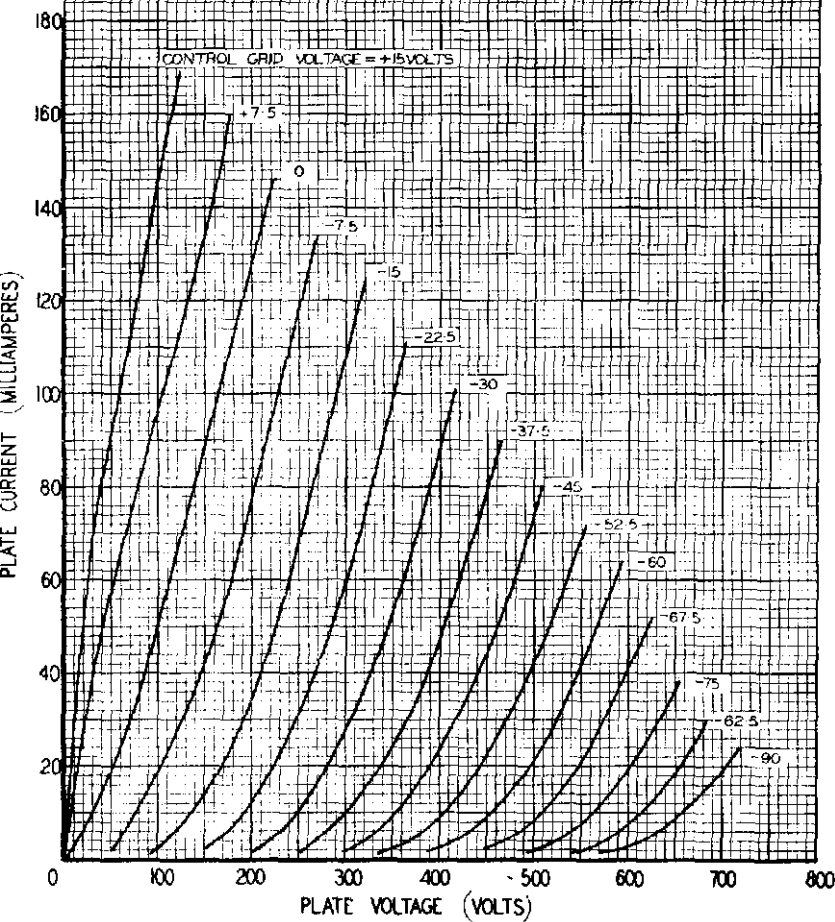


VALVE TYPE 807
PLATE CURRENT VERSUS PLATE VOLTAGE

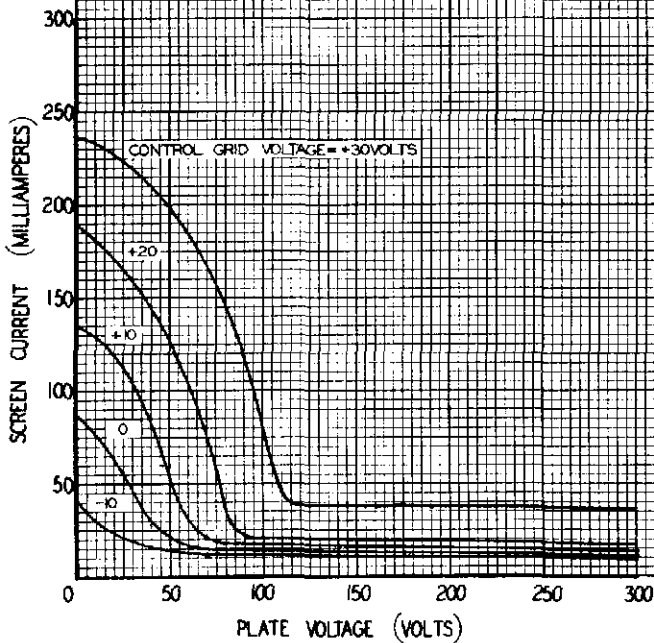
SCREEN VOLTAGE = 300 VOLTS



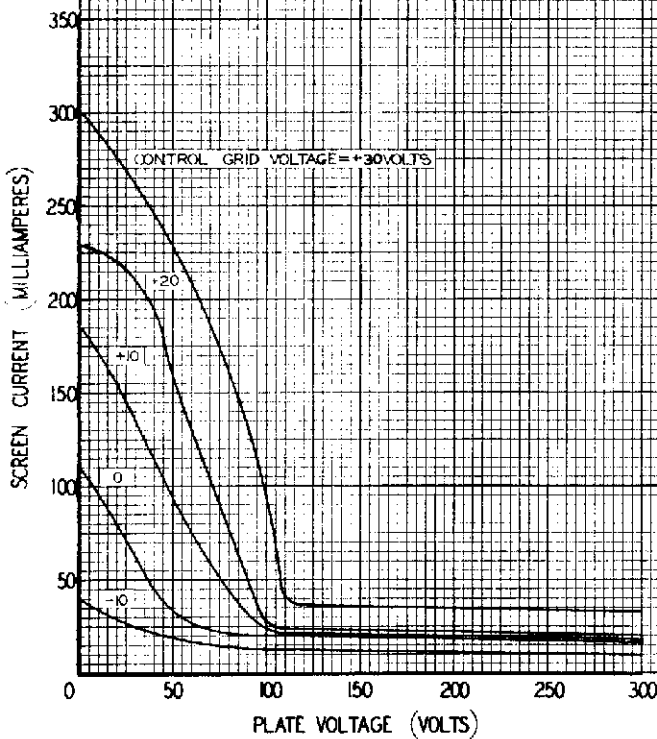
VALVE TYPE 807
TRIODE CONNECTION
PLATE CURRENT VERSUS PLATE VOLTAGE



VALVE TYPE 807
SCREEN CURRENT VERSUS PLATE VOLTAGE
SCREEN VOLTAGE = 250 VOLTS

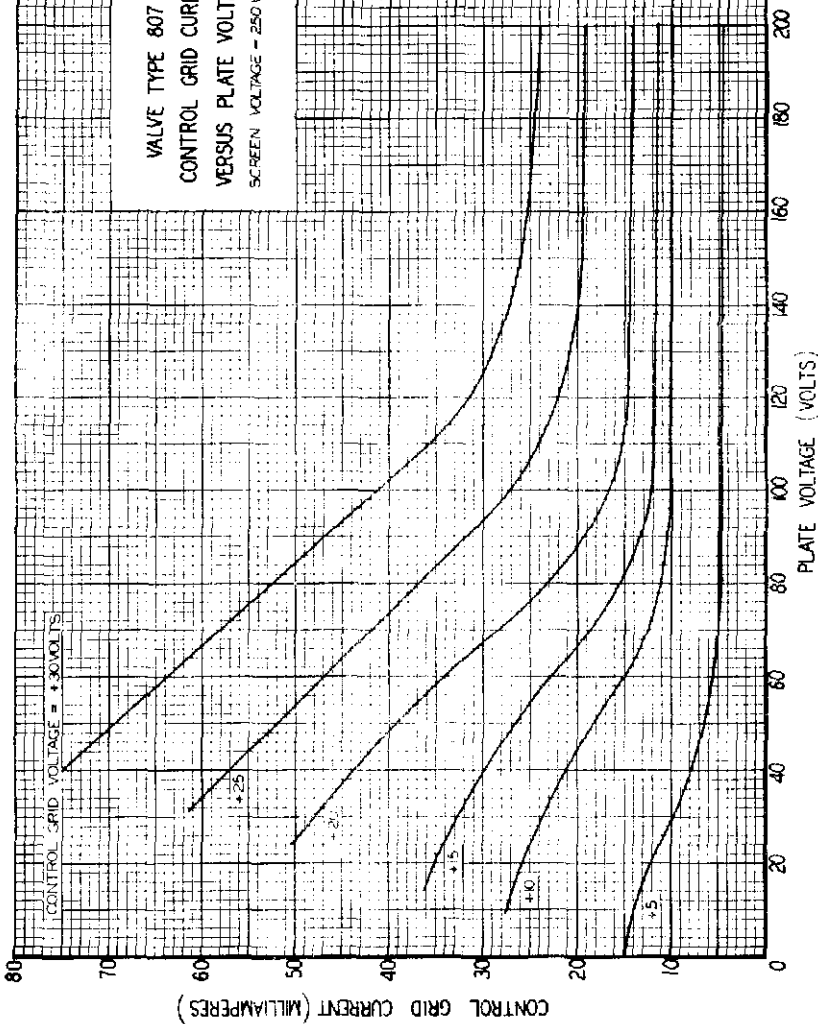


VALVE TYPE 807
SCREEN CURRENT VERSUS PLATE VOLTAGE
SCREEN VOLTAGE = 300 VOLTS



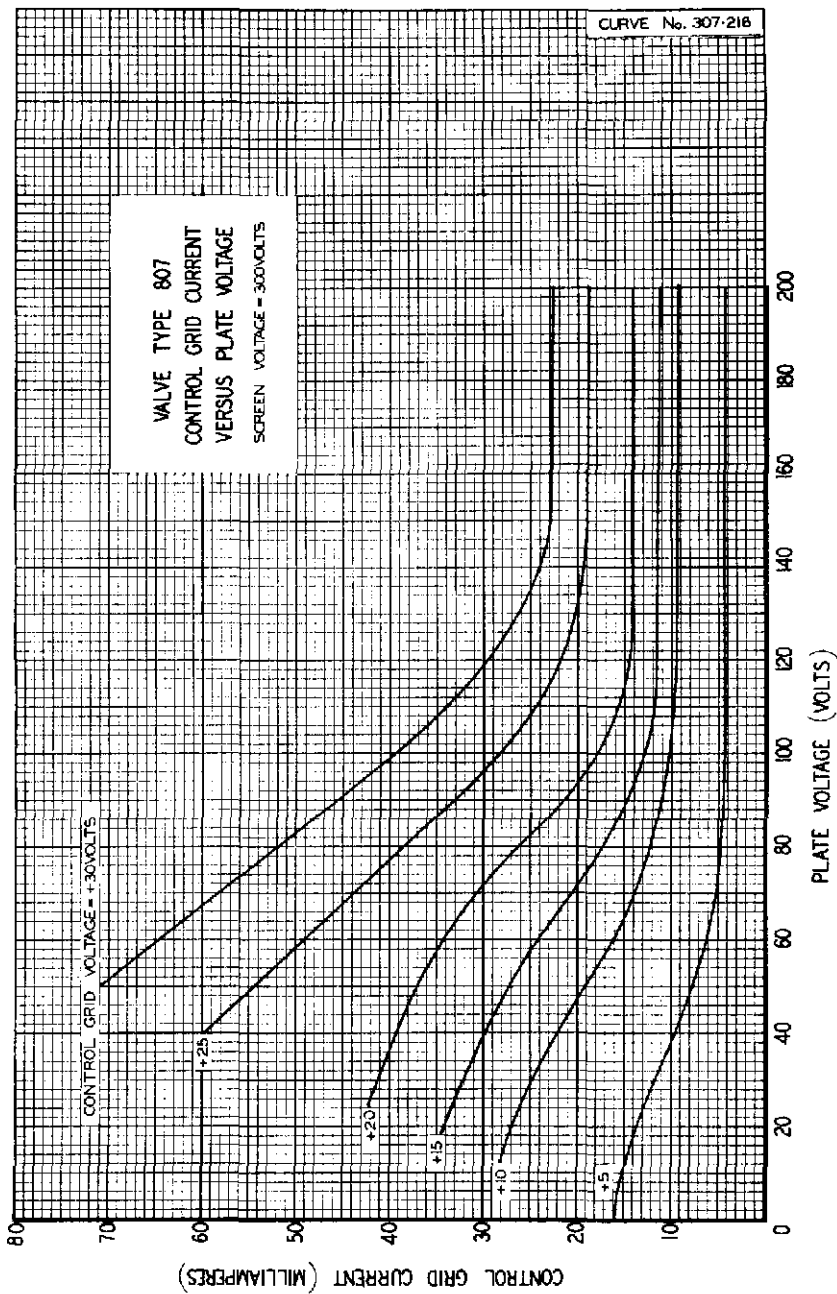
VALVE TYPE 807
CONTROL GRID CURRENT
VERSUS PLATE VOLTAGE
SCREEN VOLTAGE - 250 VOLTS

CONTROL GRID VOLTAGE = +30 VOLTS



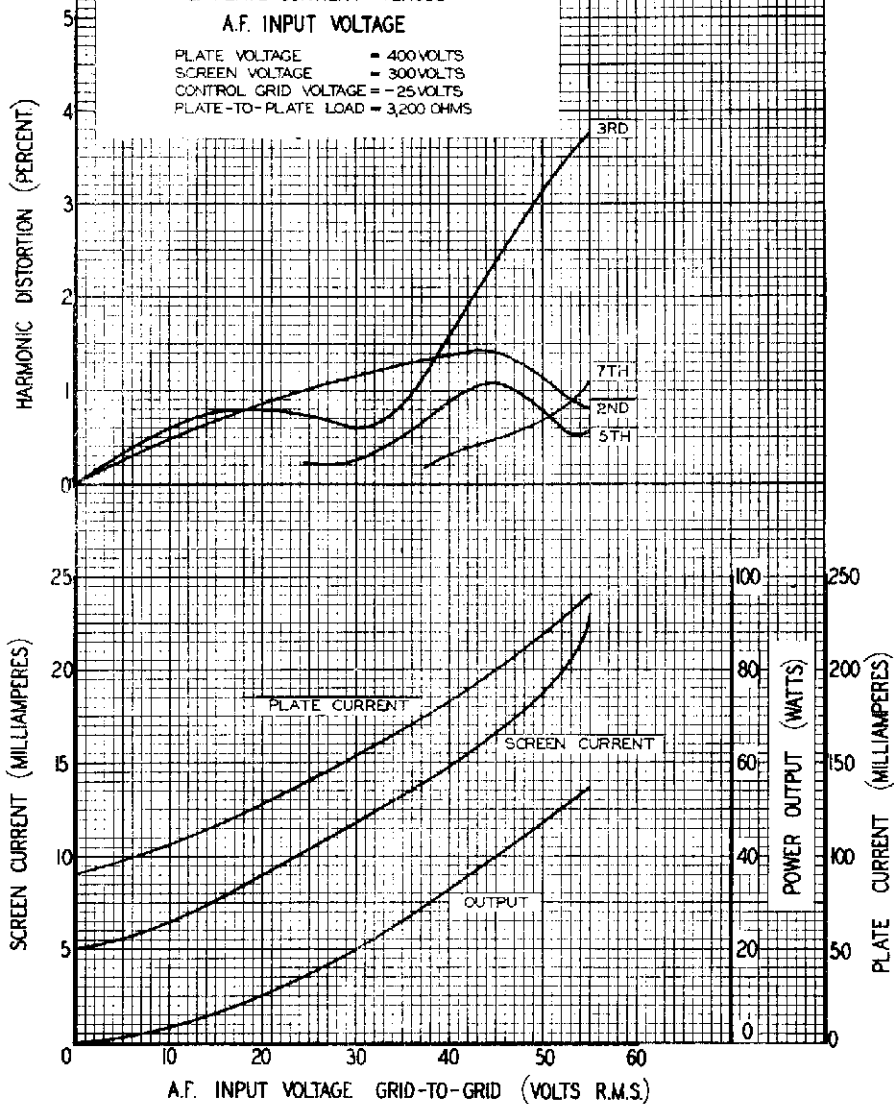
VALVE TYPE 807
CONTROL GRID CURRENT
VERSUS PLATE VOLTAGE
SCREEN VOLTAGE = 300 VOLTS

CONTROL GRID VOLTAGE = +30 VOLTS



VALVE TYPE 807
 PUSH-PULL CLASS "AB₂" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 400 VOLTS
 SCREEN VOLTAGE = 300 VOLTS
 CONTROL GRID VOLTAGE = -25 VOLTS
 PLATE-TO-PLATE LOAD = 3,200 OHMS



VALVE TYPE 807
 PUSH-PULL CLASS "AB₂" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

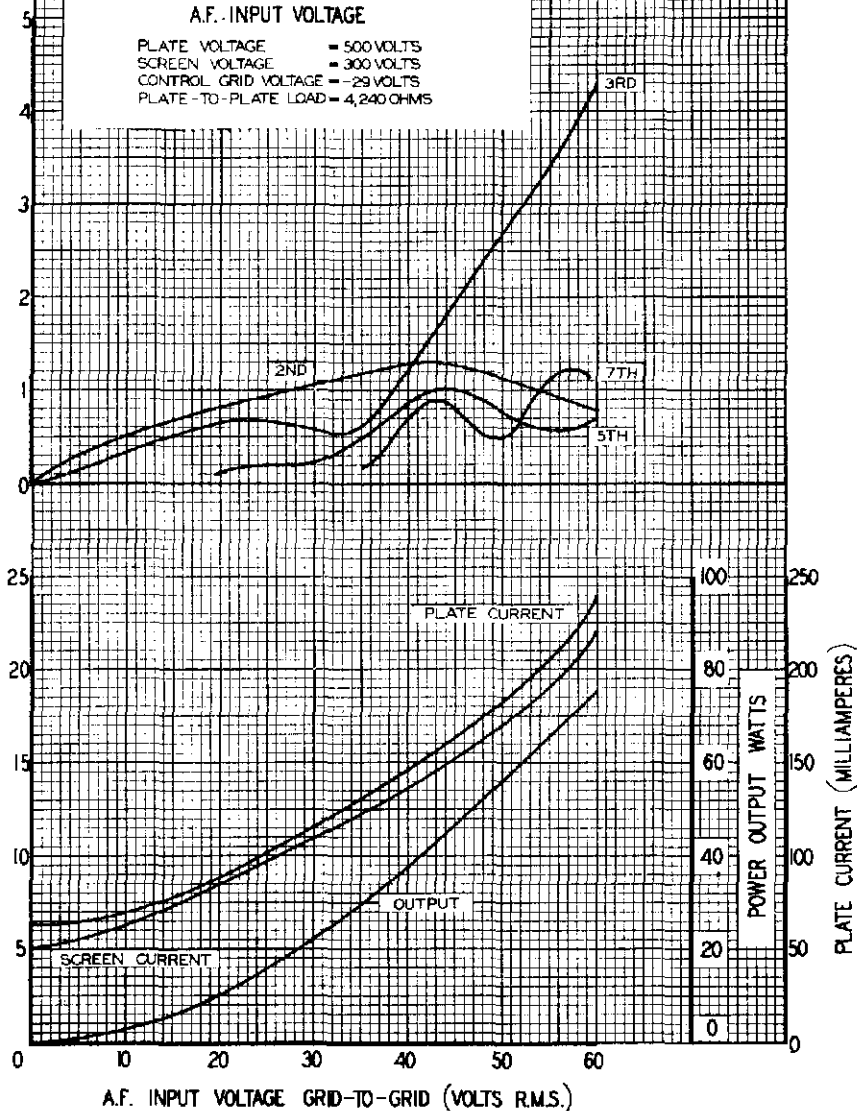
PLATE VOLTAGE = 500 VOLTS
 SCREEN VOLTAGE = 300 VOLTS
 CONTROL GRID VOLTAGE = -29 VOLTS
 PLATE-TO-PLATE LOAD = 4,240 OHMS

HARMONIC DISTORTION (PERCENT)

SCREEN CURRENT (MILLIAMPERES)

POWER OUTPUT WATTS

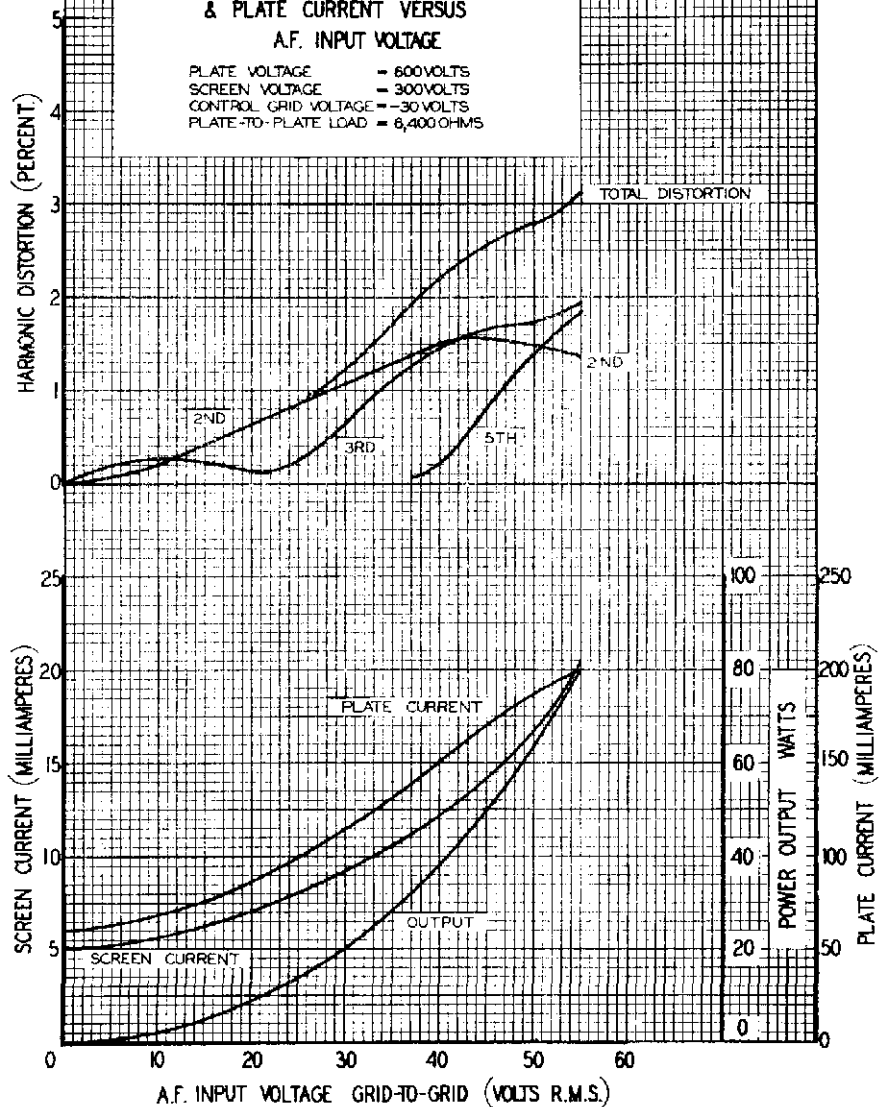
PLATE CURRENT (MILLIAMPERES)



A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)

VALVE TYPE 807
 PUSH-PULL CLASS "AB₂" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 600 VOLTS
 SCREEN VOLTAGE = 300 VOLTS
 CONTROL GRID VOLTAGE = -30 VOLTS
 PLATE-TO-PLATE LOAD = 6,400 OHMS



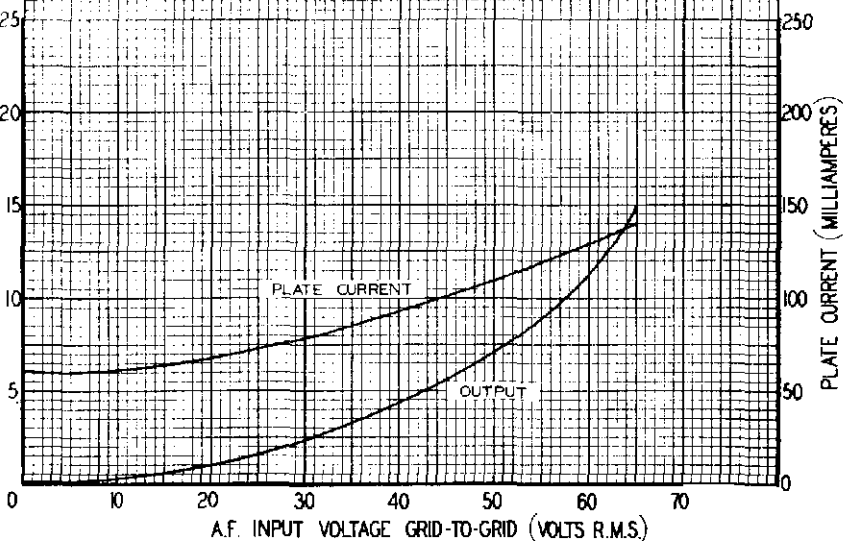
VALVE TYPE 807
TRIODE CONNECTION
PUSH-PULL CLASS "AB," AMPLIFIER
POWER OUTPUT, DISTORTION & PLATE CURRENT
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 400 VOLTS
CONTROL GRID VOLTAGE = -45 VOLTS
PLATE-TO-PLATE LOAD = 3,000 OHMS

HARMONIC DISTORTION (PERCENT)

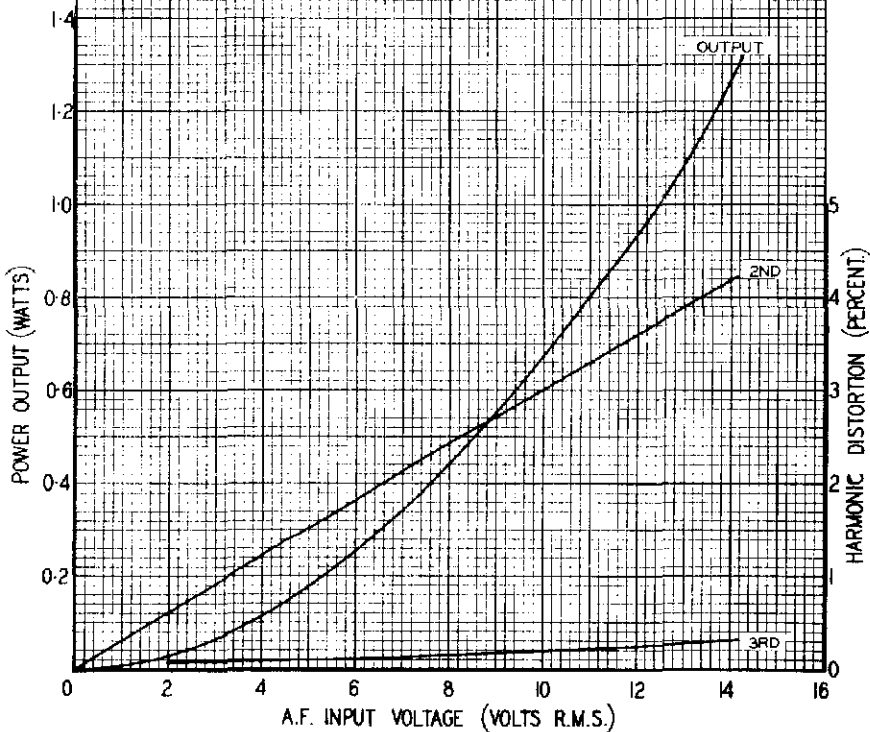


POWER OUTPUT (WATTS)



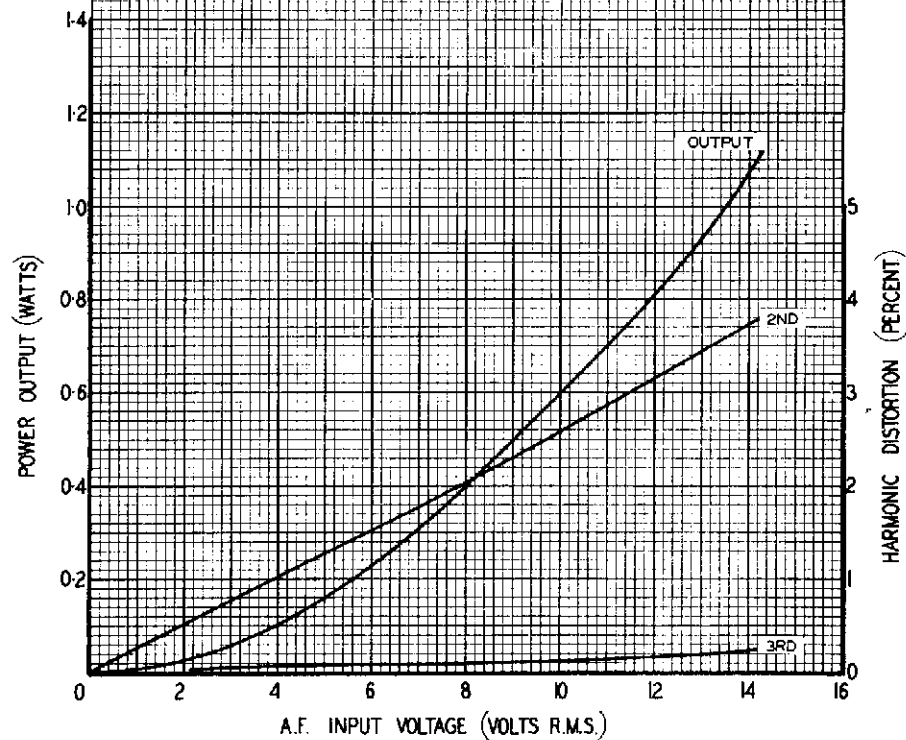
VALVE TYPE 807
TRIODE CONNECTION
CLASS "A" AMPLIFIER
POWER OUTPUT & DISTORTION
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS
CONTROL GRID VOLTAGE = -20 VOLTS
PLATE CURRENT = 40-44 mA
PLATE LOAD = 5,000 OHMS



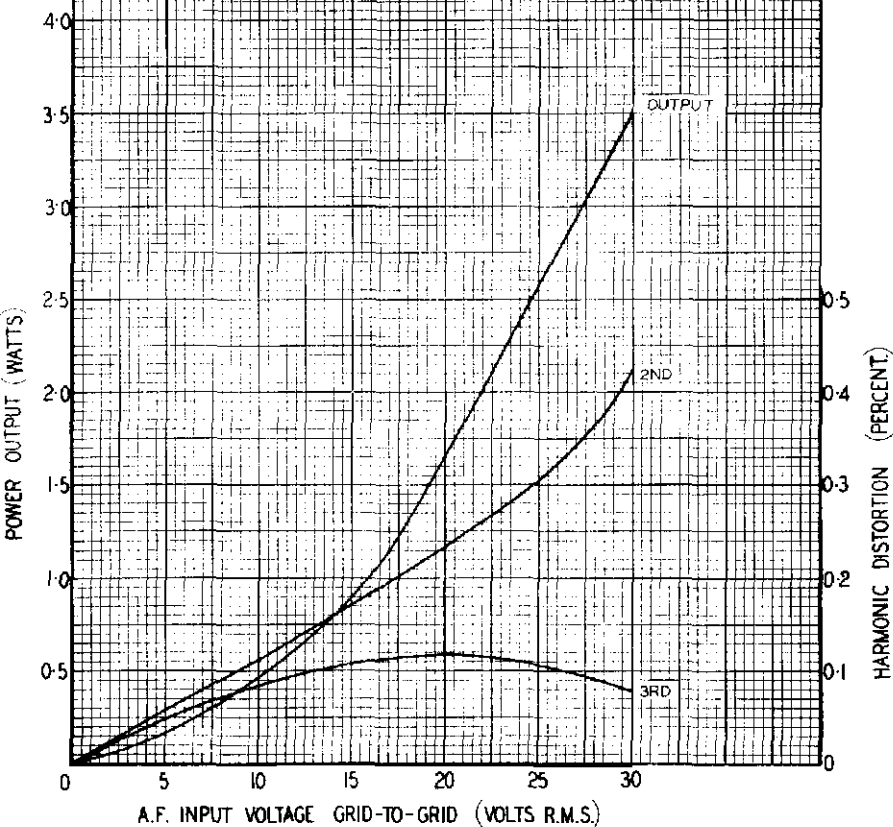
VALVE TYPE 807
TRIODE CONNECTION
CLASS 'A' AMPLIFIER
POWER OUTPUT & DISTORTION
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS
AUTOBIAS RESISTOR = 500 OHMS
PLATE CURRENT = 40-41 mA
PLATE LOAD = 6,000 OHMS



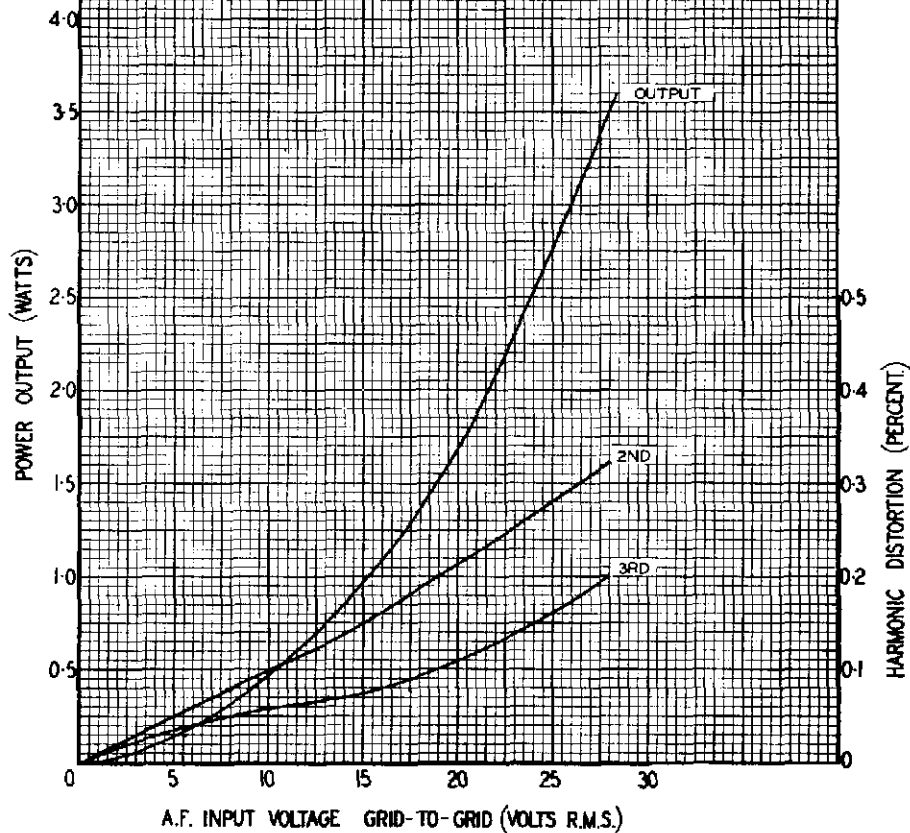
VALVE TYPE 807
TRIODE CONNECTION
PUSH-PULL CLASS "A" AMPLIFIER
POWER OUTPUT & DISTORTION
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS
AUTOBIAS RESISTOR = 250 OHMS
PLATE CURRENT = 80-84 mA
PLATE-TO-PLATE LOAD = 5,000 OHMS

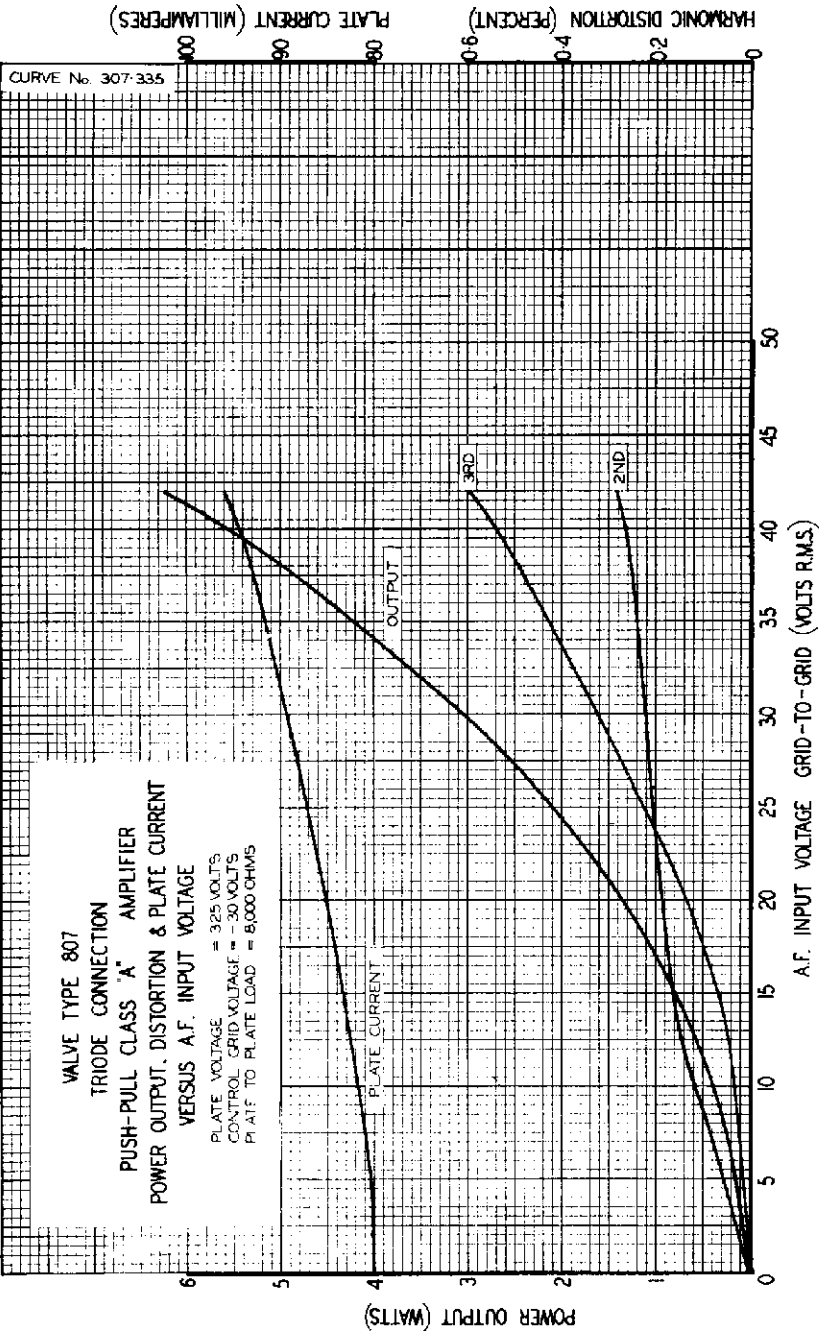


VALVE TYPE 807
TRIODE CONNECTION
PUSH-PULL CLASS "A" AMPLIFIER
POWER OUTPUT & DISTORTION
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE = 250 VOLTS
CONTROL GRID VOLTAGE = -20 VOLTS
PLATE CURRENT = 80-88mA
PLATE-TO-PLATE LOAD = 5,000 OHMS



VALVE TYPE 807
 TRIODE CONNECTION
 PUSH-PULL CLASS 'A' AMPLIFIER
 POWER OUTPUT, DISTORTION & PLATE CURRENT
 VERSUS A.F. INPUT VOLTAGE
 PLATE VOLTAGE = 325 VOLTS
 CONTROL GRID VOLTAGE = -30 VOLTS
 PLATE TO PLATE LOAD = 8,000 OHMS



POWER OUTPUT (WATTS)

VALVE TYPE 807
TRIODE CONNECTION
PUSH-PULL CLASS "A" AMPLIFIER
POWER OUTPUT & DISTORTION
VERSUS A.F. INPUT VOLTAGE

PLATE VOLTAGE - 325 VOLTS
AUTOBIAS RESISTOR - 375 OHMS
PLATE CURRENT - 80-84 mA
PLATE TO-PLATE LOAD - 8,000 OHMS

CURVE No. 307-338

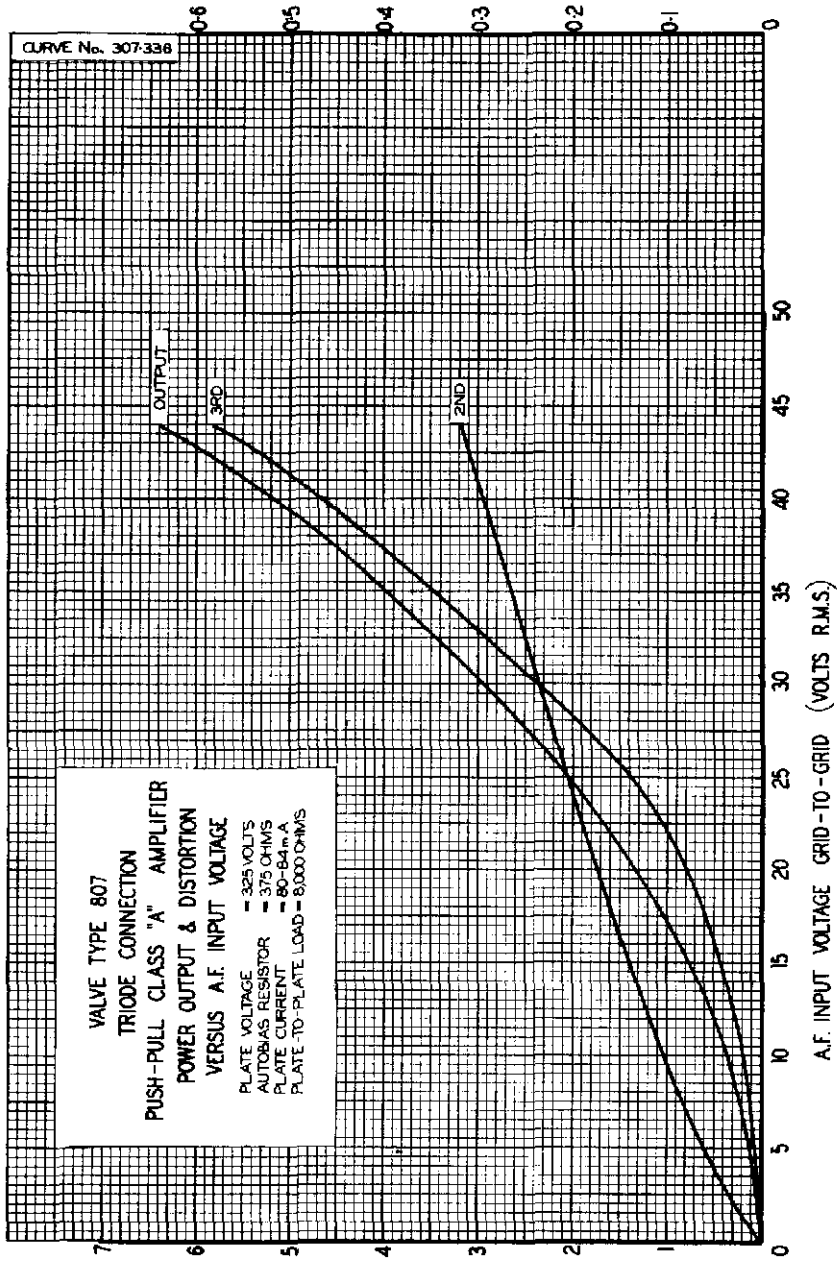
HARMONIC DISTORTION (PERCENT)

A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS R.M.S.)

OUTPUT

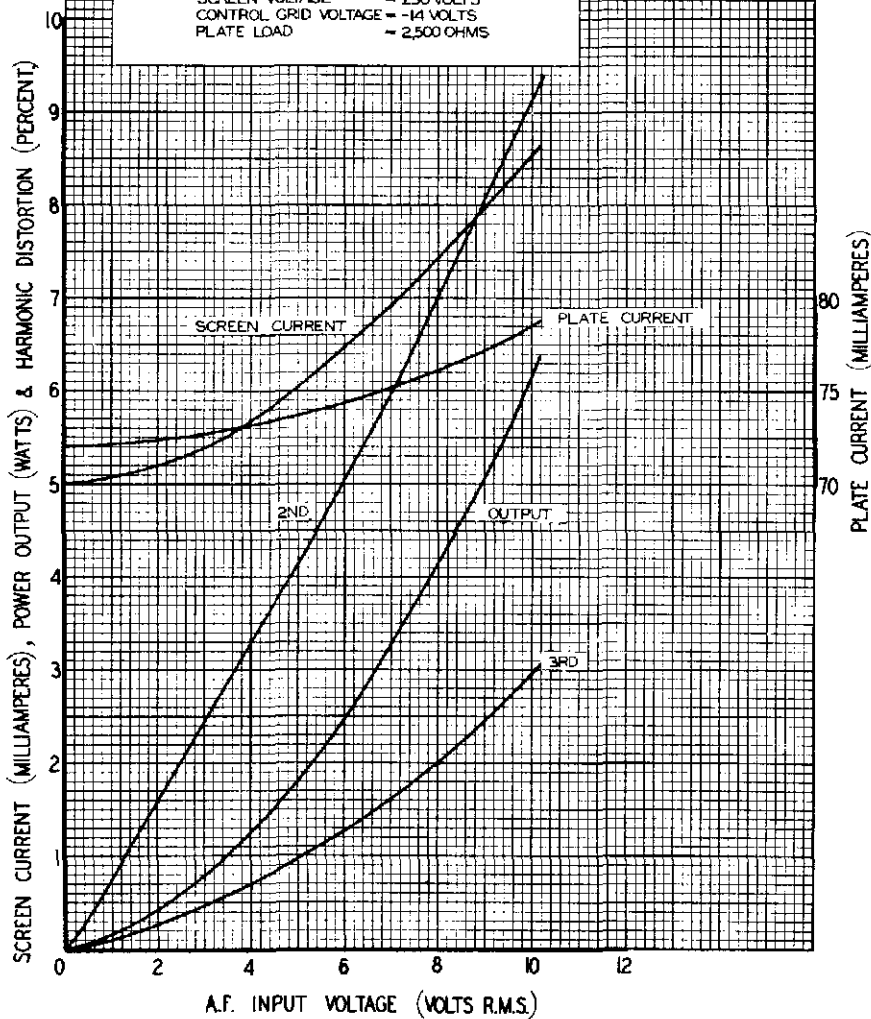
3RD

2ND



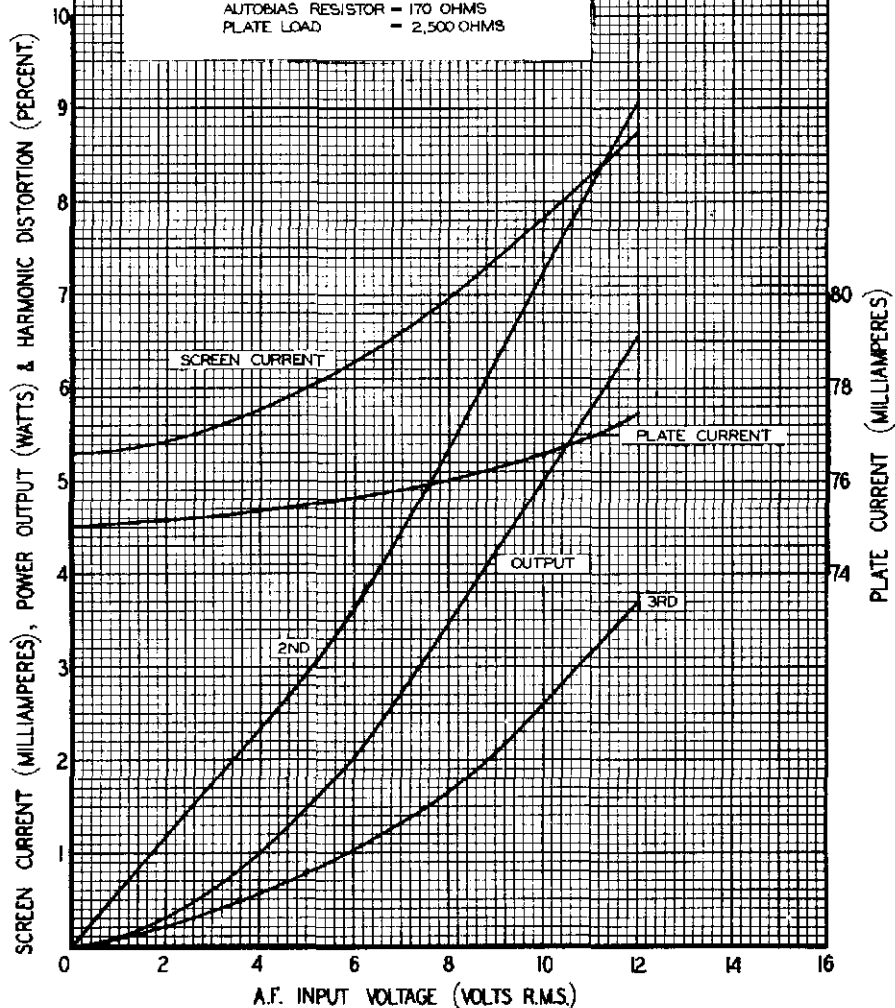
VALVE TYPE 807
 CLASS "A" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE - 250 VOLTS
 SCREEN VOLTAGE - 250 VOLTS
 CONTROL GRID VOLTAGE - -14 VOLTS
 PLATE LOAD - 2,500 OHMS



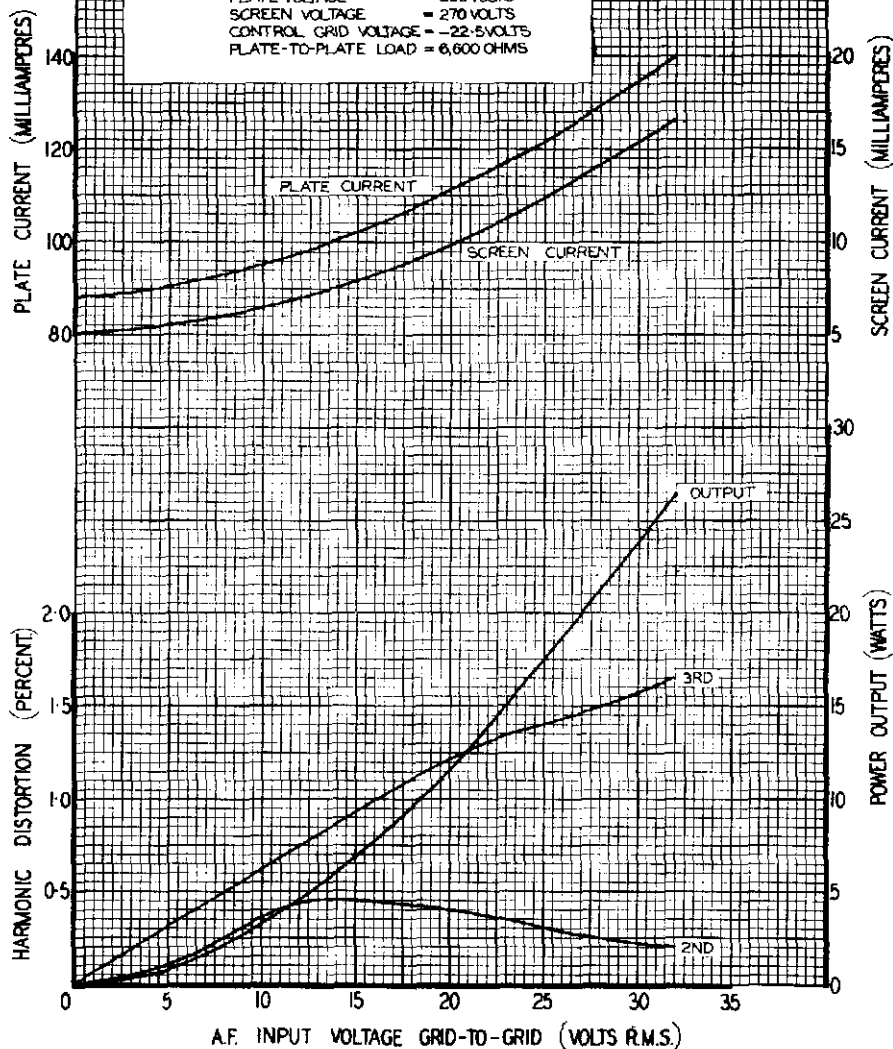
VALVE TYPE 807
CLASS "A" AMPLIFIER
POWER OUTPUT, DISTORTION, SCREEN CURRENT
& PLATE CURRENT VERSUS
A.F. INPUT VOLTAGE

PLATE VOLTAGE — 250 VOLTS
SCREEN VOLTAGE — 250 VOLTS
AUTOBIAS RESISTOR — 170 OHMS
PLATE LOAD — 2,500 OHMS



VALVE TYPE 807
 PUSH-PULL CLASS "AB₁" AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 360 VOLTS
 SCREEN VOLTAGE = 270 VOLTS
 CONTROL GRID VOLTAGE = -22.5 VOLTS
 PLATE-TO-PLATE LOAD = 8,600 OHMS



VALVE TYPE 807

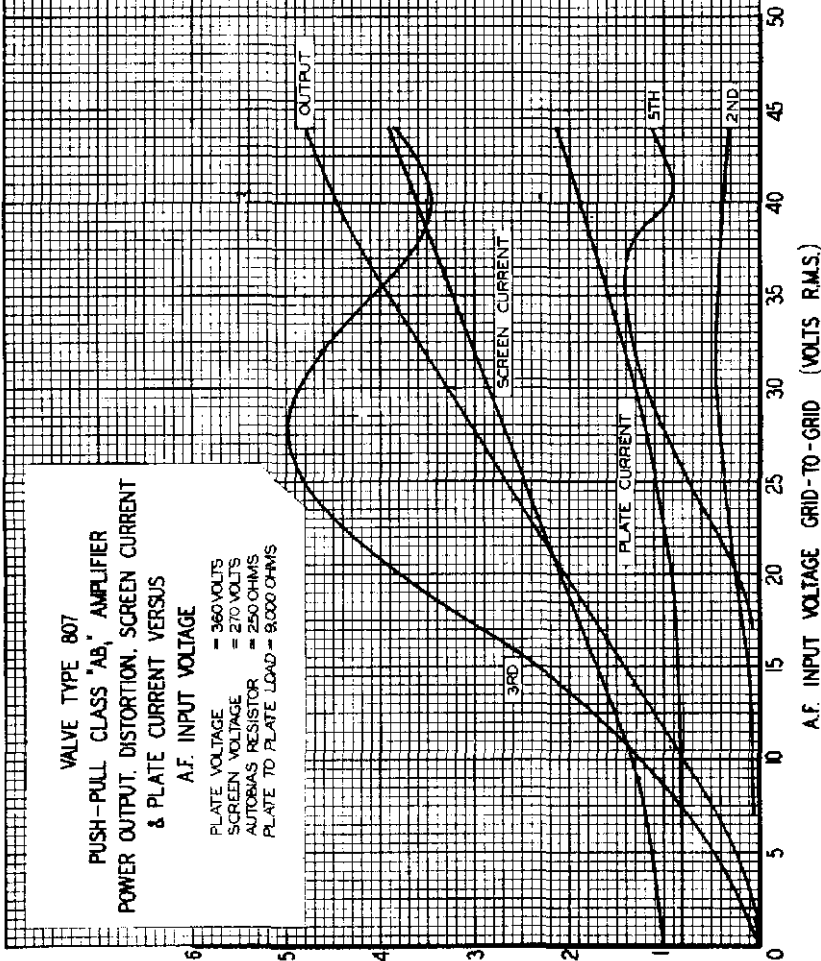
PUSH-PULL CLASS "AB₁" AMPLIFIER

POWER OUTPUT, DISTORTION, SCREEN CURRENT
& PLATE CURRENT VERSUS

A.F. INPUT VOLTAGE

- PLATE VOLTAGE = 360 VOLTS
- SCREEN VOLTAGE = 270 VOLTS
- AUTOBIAS RESISTOR = 250 OHMS
- PLATE TO PLATE LOAD = 9,000 OHMS

HARMONIC DISTORTION (PERCENT.)



CURVE No. 307-340

PLATE CURRENT MILLIAMPERES

80 90 100 110

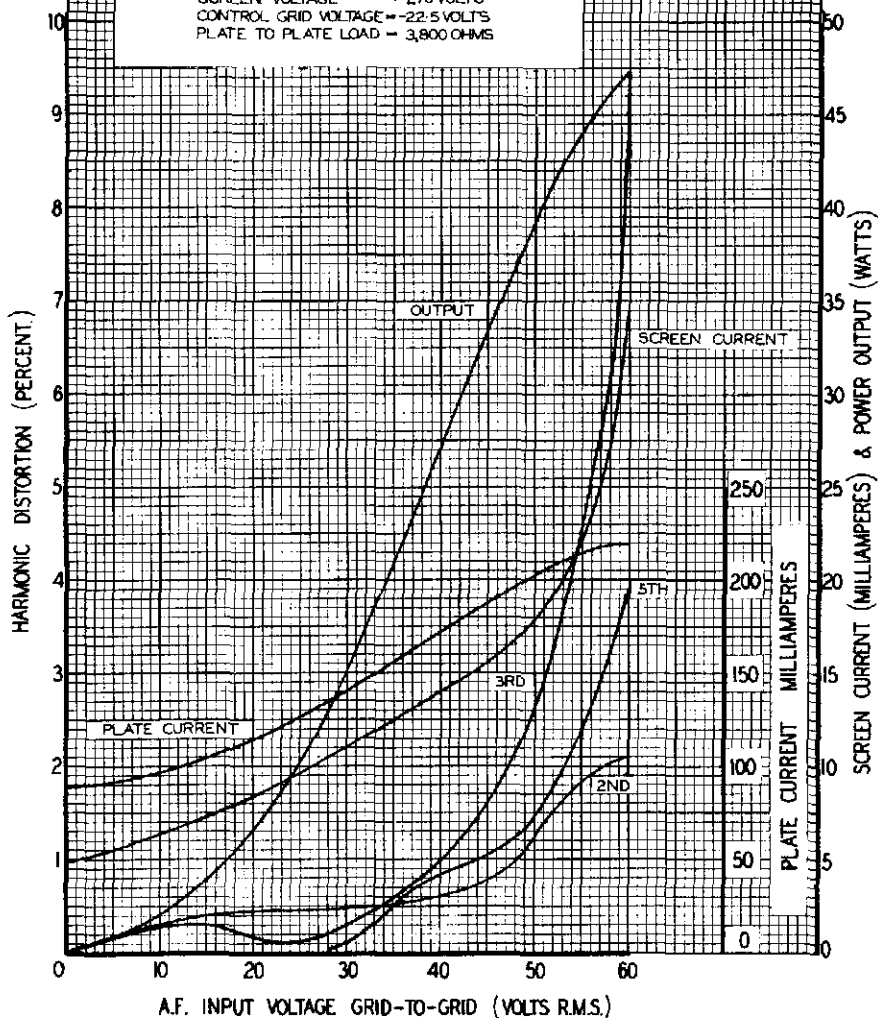
SCREEN CURRENT (MILLIAMPERES) & POWER OUTPUT (WATTS)

0 5 10 15 20 25 30

A.F. INPUT VOLTAGE GRID-TO-GRID (VOLTS RMS.)

VALVE TYPE 807
 PUSH-PULL CLASS AB_2 AMPLIFIER
 POWER OUTPUT, DISTORTION, SCREEN CURRENT
 & PLATE CURRENT VERSUS
 A.F. INPUT VOLTAGE

PLATE VOLTAGE = 360 VOLTS
 SCREEN VOLTAGE = 270 VOLTS
 CONTROL GRID VOLTAGE = -22.5 VOLTS
 PLATE TO PLATE LOAD = 3,800 OHMS



MILITARY SPECIFICATION SHEET
ELECTRON TUBES, TRANSMITTING
TYPES 807 AND 1625 1

The complete requirements for procuring the electron tubes described herein shall consist of this document and the latest issue of MIL-E-1.

This specification is mandatory for use by all Departments and Agencies of the Department of Defense.

DESCRIPTION: Amplifier, beam power, F1 = 60 MHz, F2 = 125 MHz

Outline --- 16-2 (EIA)

Base

807 --- A5-11 (low-loss phenolic)
1625 --- A7-13 (low-loss phenolic)

Cap --- C1-1

Envelope --- ST16

Cathode --- Coated unipotential

Base connections:

Pin No. Element	1	2	3	4	5	6	7	Cap
807	h	g2	g1	k, g3 (Note 2)	h	---	---	a
1625	h	nc	g2	g1	nc	k, g3 (Note 2)	h	a

ABSOLUTE-MAXIMUM RATINGS:

Parameter: Unit:	Ef V	Eb Vdc	Ec1 Vdc	Ec2 Vdc	Ib mA	Ic1 mA	Pg2 W	Pp W	Pi W	^(C) Ehk v	Modu- lation ---	Alt ft
Type 807												
Class B AF:	$6.3 \pm 10\%$	600	---	300	120	---	3.5	25	60	135	---	10,000
Class B RF:	$6.3 \pm 10\%$	600	---	300	80	---	2.5	25	37.5	135	---	10,000
Class C Telep:	$6.3 \pm 10\%$	475	-200	300	83	5	2.5	16.5	40	135	Anode	10,000
Class C Teleg:	$6.3 \pm 10\%$	600	-200	300	100	5	3.5	25	60	135	---	10,000

TEST CONDITIONS: 6.3 600 -29 300 --- --- --- --- --- --- --- ---

Parameter: Unit:	Ef V	Eb Vdc	Ec1 Vdc	Ec2 Vdc	Ib mA	Ic1 mA	Pg2 W	Pp W	Pi W	^(C) Ehk v	Modu- lation ---	Alt ft
Type 1625												
Class B AF:	$12.6 \pm 10\%$	600	---	300	120	---	3.5	25	60	135	---	10,000
Class B RF:	$12.6 \pm 10\%$	600	---	300	80	---	2.5	25	37.5	135	---	10,000
Class C Telep:	$12.6 \pm 10\%$	475	-200	300	83	5	2.5	16.5	40	135	Anode	10,000
Class C Teleg:	$12.6 \pm 10\%$	600	-200	300	100	5	3.5	25	60	135	---	10,000

TEST CONDITIONS: 12.6 Vdc 600 -29 300 --- --- --- --- --- --- --- ---

GENERAL:

Qualification - Required

1/ See note 1

^(C) denotes changes

807, 1625

METHOD	REQUIREMENT OR TEST	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OR CODE	SYMBOL	LIMITS		UNIT
						MIN	MAX	
	<u>Qualification inspection</u>							
1236	Power oscillation (2)	Power oscillation (1): F = 60 MHz	---	---	Po	28	---	W
	<u>Quality conformance inspection, part 1</u>		(C)					
1231	Emission	Eb = Ec1 = Ec2 = 50 Vdc (see note 3)	0.65	II	Is	300	---	mAdc
1236	Power oscillation (1)	Ec2 = 200 Vdc; Rg = 10,000 ohms; Ic1 = 6 mAdc; Ib = 100 mAdc; F = 15 MHz	0.65	II	Po	33	---	W
1256	Electrode current (1) (anode)		0.65	II	Ib	24	48	mAdc
1266	Total grid current	See note 3	0.65	II	Ic	---	-4.0	μAdc
(C) 1201	Short and discontinuity detection		0.4	II	---	---	---	---
	<u>Quality conformance inspection, part 2</u>							
1031	Low frequency vibration	Eb = 250 Vdc; Ec2 = 100 Vdc; Ec1 = -10 Vdc; Rp = 2,000 ohms	---	---	Fp	---	500	mVac
1036	Bump	Hammer angle = 20°	---	---	---	---	---	---
1301	Heater current Type 807		---	---	II	810	990	mA
	Type 1625		---	---	II	405	495	mA
(C) 1336	Heater-cathode leakage		---	---	Ihk	---	100	μAdc
(C) 1256	Electrode current (2) (anode)	Ec1 = -100 Vdc	---	---	Ib	---	0.5	mAdc
(C) 1256	Electrode current (screen)		---	---	Ic2	0	4.0	mAdc
1266	Primary grid emission Type 807	Ec2 = 175 Vac (approx); Eb = Ec2 = 0; Ec1 = 0 to 6 Vdc; Pg2 = 5 W (see note 4)	---	---	Ic2	---	-750	μAdc
1306	Transconductance Type 1625	Eb = Ec2 = 250 Vdc; Ec1 = -14 Vdc	---	---	Sm	5,100	6,900	μmhos
1236	Internal insulation		---	---	---	---	---	---
1331	Direct-interelectrode capacitance	Shield No. 312 Without shield Without shield	---	---	Cgp Cis Cout	---	0.2 10.0 8.7	pF pF pF
(C) 1216	Base material insulating quality		---	---	---	---	---	---

METHOD	REQUIREMENT OF TEST	CONDITIONS	AQL (PERCENT DEFECTIVE)	INSPECTION LEVEL OF DEFECTS	SYMBOL	LIMITS		UNIT
						MIN	MAX	
	<u>Quality conformance inspection, part 2</u> -Continued							
(C) 1101	Secureness of base, cap. or insert		---	---	---	---	---	---
(C) 1105	Permanence of marking		---	---	---	---	---	---
	<u>Quality conformance inspection, part 3</u>							
---	Life-test provisions	Group B: Ehk - 135 V	---	---	---	---	---	---
---	Life-test end points (500 hours)	Total grid current and Power oscillation (1)	---	---	Ic1 Po	0 27	-4.0 ---	μ Ade W

NOTES:

1. Tube type 5933 has been deleted from this tube specification sheet. For replacement purposes use tube type 5933WA. MIL-E-1-652.
2. The beam forming plate lead and the cathode lead shall be individually passed through the glass stem of the tube and shall be electrically connected together only at the base pin.
3. This test to be performed at the conclusion of the holding period.
4. A protective resistor of 15,000 ohms shall be placed in series with the primary emission current meter. Grid No. 2 input power shall be calculated as 2.4C times the product of the rectified current and rectified voltage. Test duration shall be sufficient to obtain a stabilized negative Ic2 value.

Custodians:

Army - EL
Navy - EC
Air Force - 80

Preparing activity: Navy - EC

Agent: DSA - ES

(Project 5960-2425-52)

Review activities:

Army - EL
Navy -
Air Force - 11, 80
DSA - ES

User activities:

Army - MU, WC
Navy - AS, OS, MC, CG, SH
Air Force - 19