4E27A/5-125B
POWER PENTODE

GENERAL DATA

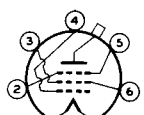
Electrical:

Filament, Thoriated Tungsten:		
Voltage	5.0	ac or dc volts
Current	7.5	amp
Transconductance (Approx.) For plate volts = 2500, grid-No.3 volts = 0, grid-No.2 volts = 500, and plate ma. = 50	2150	μmhos
Mu-Factor, Grid No.2 to Grid No.1	5	
Direct Interelectrode Capacitances:		
Grid No.1 to Plate*	0.08	μμf
Input	10.5	μμf
Output	4.7	μμf

Mechanical:

Mounting Position	Vertical, base down
Overall Length	5-15/16" ± 1/4"
Seated Length	5-3/8" ± 1/4"
Maximum Diameter	2-3/4"
Plate Terminal	See Outline Drawing
Base	Ventilated Medium-Metal-Shell Giant 7-Pin
Basing Designation for BOTTOM VIEW	7BM

Pin 1 - Filament
Pin 2 - Grid No.3
Pin 3 - Grid No.2
Pin 4 - Grid No.1
Pin 5 - Same as Pin 2



Pin 6 - Same as Pin 3
Pin 7 - Filament
Bulb Terminal - Plate

Seal Temperature (Plate and stem)	225 max.	°C
Bulb Temperature (At hottest point)	250 max.	°C

Components:

Socket	Johnson No.122-237, or equivalent
Heat-Radiating Plate Connector (Supplied with tube)	Eimac HR-5

AF POWER AMPLIFIER & MODULATOR--Class B

Maximum CCS° Ratings, *Absolute Values*:

Values are per tube

DC PLATE VOLTAGE	4000 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	750 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-500 max.	volts
DC PLATE CURRENT	200 max.	ma
PLATE DISSIPATION	125 max.	watts
GRID-No.3 (SUPPRESSOR) DISSIPATION	20 max.	watts

* with no external shielding and base shell connected to ground.

°: See next page.

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GRID-No.2 DISSIPATION.	20 max.	watts
GRID-No.1 DISSIPATION.	5 max.	watts

PLATE-MODULATED RF POWER AMPLIFIER--Class C Telephony

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

Maximum CCS° Ratings, *Absolute Values*:

DC PLATE VOLTAGE	3200 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE.	750 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE. . . .	-500 max.	volts
DC PLATE CURRENT	160 max.	ma
PLATE DISSIPATION.	85 max.	watts
GRID-No.3 (SUPPRESSOR) DISSIPATION	20 max.	watts
GRID-No.2 DISSIPATION.	20 max.	watts
GRID-No.1 DISSIPATION.	5 max.	watts

→ **Typical Operation with Grid No.3 Grounded and Grid-No.2 Volts = 500:**

DC Plate Voltage	2000	2500	volts
DC Grid-No.2 Voltage	500	500	volts
DC Grid-No.1 Voltage	-200	-200	volts
Peak AF Grid-No.2 Voltage.	350	350	volts
Peak RF Grid-No.1 Voltage.	270	270	volts
DC Plate Current	150	152	ma
DC Grid-No.2 Current	17	17	ma
DC Grid-No.1 Current (Approx.) . . .	7	7	ma
Driving Power (Approx.).	2	2	watts
Power Output (Approx.)	220	295	watts

RF POWER AMPLIFIER & OSCILLATOR--Class C Telegraphy□ and RF POWER AMPLIFIER--Class C FM Telephony

Maximum CCS° Ratings, *Absolute Values*:

DC PLATE VOLTAGE	4000 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE.	750 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE. . . .	-500 max.	volts
DC PLATE CURRENT	200 max.	ma
PLATE DISSIPATION.	125 max.	watts
GRID-No.3 (SUPPRESSOR) DISSIPATION	20 max.	watts
GRID-No.2 DISSIPATION.	20 max.	watts
GRID-No.1 DISSIPATION.	5 max.	watts

Typical Operation with Grid No.3 Grounded and Grid-No.2 Volts = 500:

DC Plate Voltage	1000	2000	3000	volts
DC Grid-No.2 Voltage	500	500	500	volts
DC Grid-No.1 Voltage	-120	-150	-200	volts
Peak RF Grid-No.1 Voltage. . .	170	240	270	volts
DC Plate Current	145	200	167	ma

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

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POWER PENTODE

DC Grid-No.2 Current	17	23	12	ma
DC Grid-No.1 Current (Approx.)	6	11	7	ma
Driving Power (Approx.). . . .	1	2.6	1.9	watts
Power Output (Approx.)	90	275	375	watts

Typical Operation with Grid No.3 Grounded and Grid-No.2 Volts = 750:

DC Plate Voltage	1000	2000	3000	volts
DC Grid-No.2 Voltage	750	750	750	volts
DC Grid-No.1 Voltage	-170	-200	-250	volts
Peak RF Grid-No.1 Voltage. . .	205	257	290	volts
DC Plate Current	160	200	167	ma
DC Grid-No.2 Current	21	22	9	ma
DC Grid-No.1 Current (Approx.)	3	6	3	ma
Driving Power (Approx.). . . .	0.6	1.5	0.9	watts
Power Output (Approx.)	115	300	375	watts

Typical Operation with Grid-No.3 Volts = 60 and Grid-No.2 Volts = 500:

DC Plate Voltage	1000	2000	3000	volts
DC Grid-No.3 Voltage	60	60	60	volts
DC Grid-No.2 Voltage	500	500	500	volts
DC Grid-No.1 Voltage	-120	-150	-200	volts
Peak RF Grid-No.1 Voltage. . .	170	222	260	volts
DC Plate Current	167	200	167	ma
DC Grid-No.3 Current	6	4	3	ma
DC Grid-No.2 Current	11	11	5	ma
DC Grid-No.1 Current (Approx.)	6	8	6	ma
Driving Power (Approx.). . . .	1	1.8	1.6	watts
Power Output (Approx.)	120	300	375	watts

[0] Continuous Commercial Service.

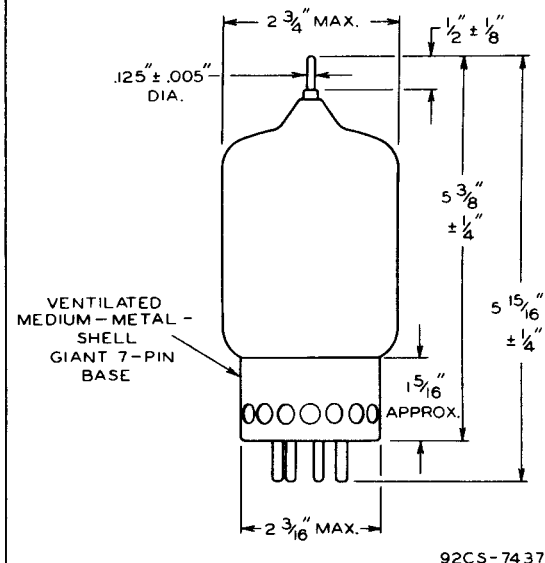
[□] Key-down conditions per tube without amplitude modulation. Amplitude modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

The 4E27A/5-125B may be operated with maximum rated plate voltage and plate input at frequencies up to 75 megacycles per second

4E27A

4E27A/5-125B

POWER PENTODE



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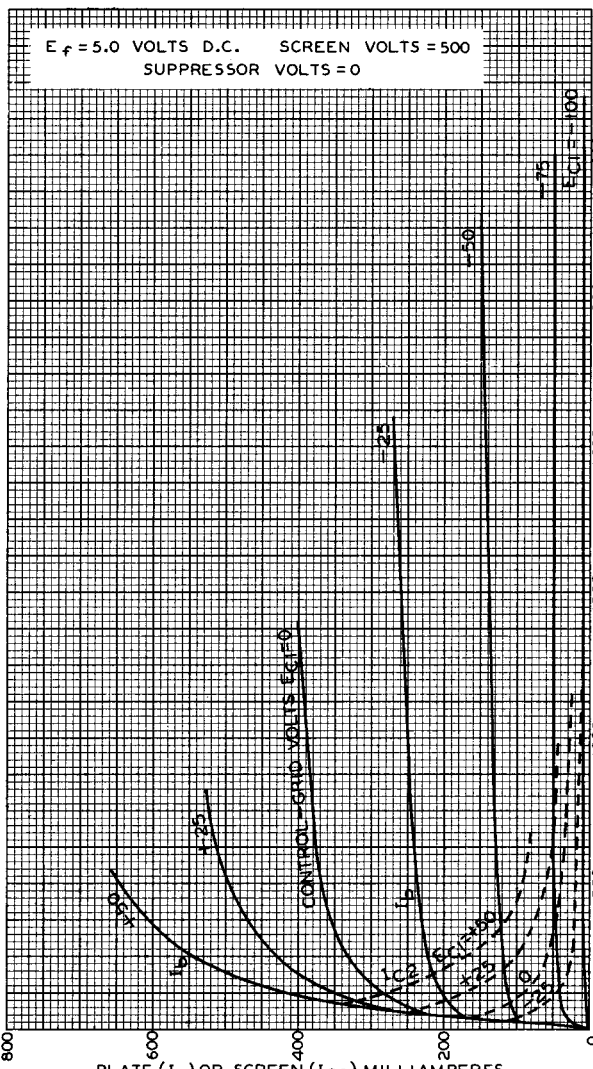
AVERAGE PLATE CHARACTERISTICS



MAR. 26, 1945 RCA VICTOR DIVISION 92CM-6261RI
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

4E27

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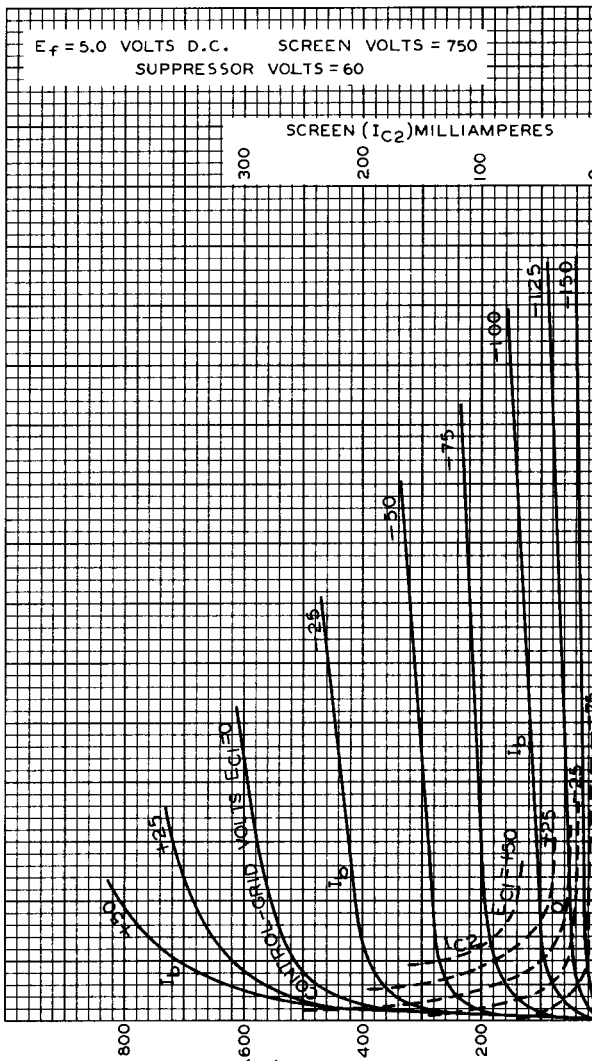
AVERAGE PLATE CHARACTERISTICS



JAN. 22, 1945

RCA VICTOR DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6259RI

RCA

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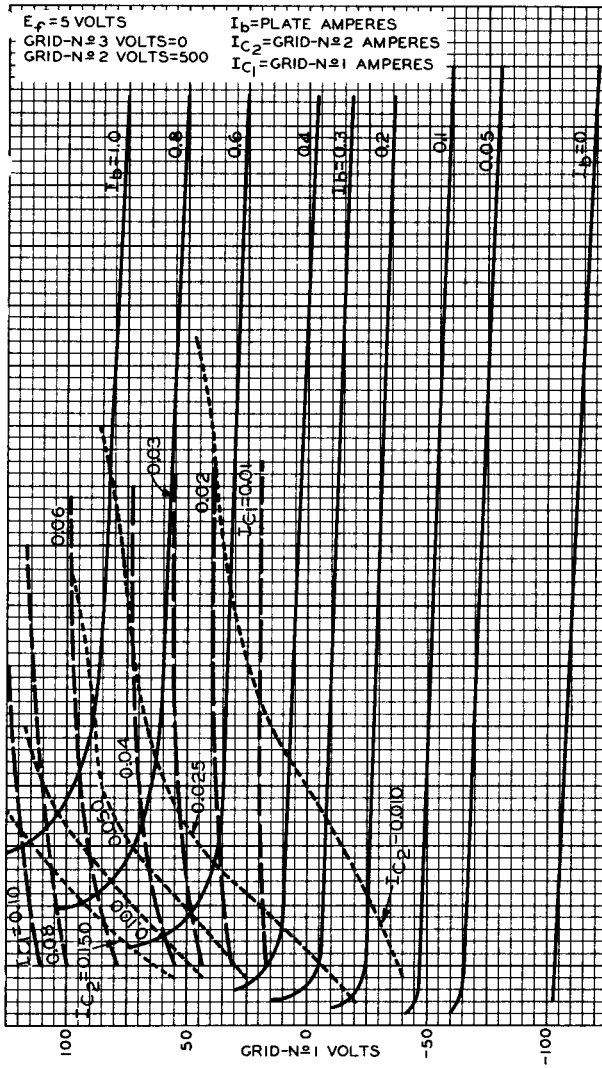
AVERAGE CONSTANT-CURRENT CHARACTERISTICS



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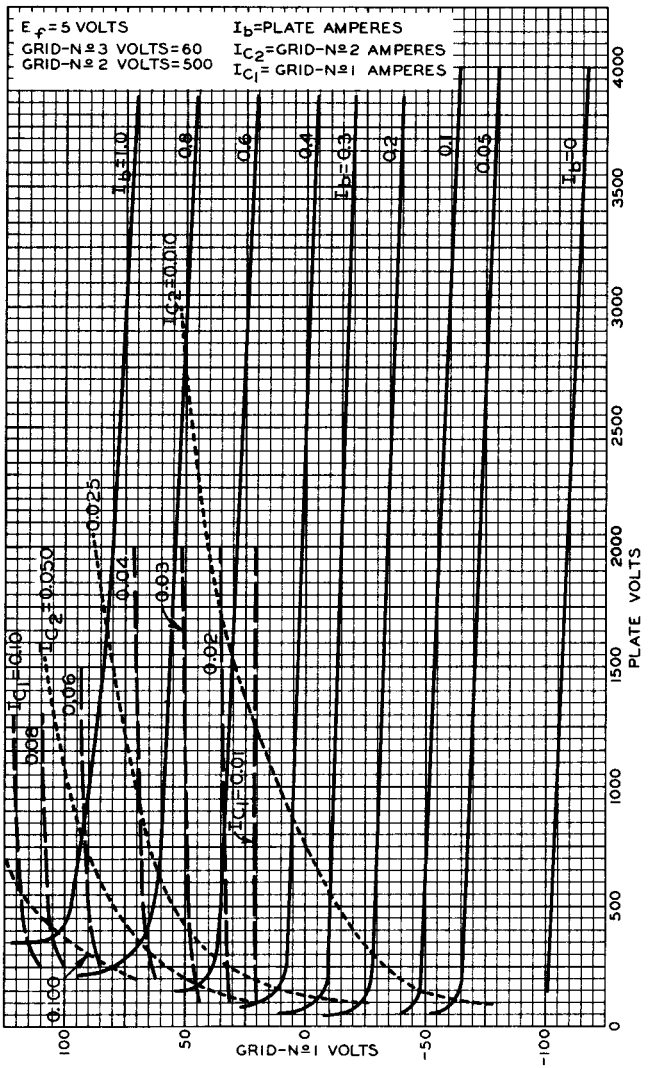
4E27A

AVERAGE CONSTANT-CURRENT CHARACTERISTICS



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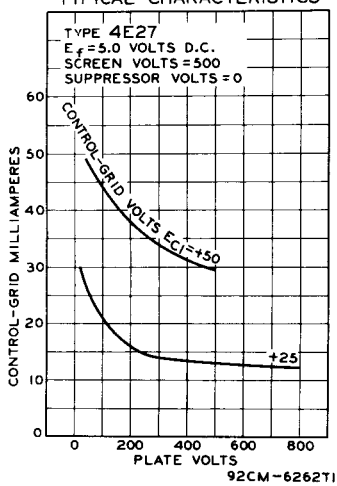
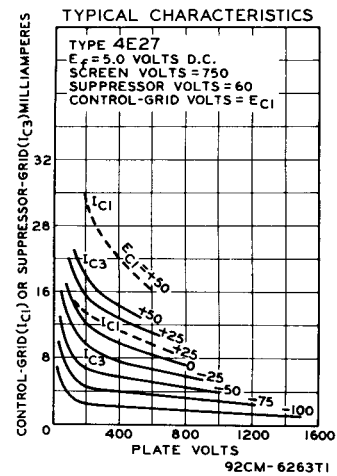
TRANSMITTING BEAM POWER AMPLIFIER





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