2E26

V-H-F BEAM POWER AMPLIFIER

GENERAL DATA

Electrical:

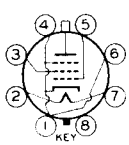
Heater, for Unipotential Cathode:		
Voltage	6.3	ac or dc volts
Current	0.8	amp.
Transconductance for plate current of 20 ma.	3500	µmhos
Grid-Screen Mu-Factor	6.5	
Direct Interelectrode Capacitances:°		
Grid to plate	0.20 max.	µµf
Input	13	µµf
Output	7	µµf

° With no external shielding, and with base sleeve connected to ground.

Mechanical:

Mounting Position	Any
Overall Length	3-1/2" ± 5/32"
Seated Length	2-15/16" ± 5/32"
Maximum Diameter	1-5/16"
Bulb	T-9
Cap	Small
Base	Small-Wafer Octal 8-Pin with Sleeve No. R-6159
Basing Designation for BOTTOM VIEW	7CK

Pin 1 - Cathode, Grid No.3, Int. Shield
Pin 2 - Heater
Pin 3 - Grid No.2
Pin 4 - Cathode, Grid No.3, Int. Shield



Pin 5 - Grid No.1
Pin 6 - Cathode, Grid No.3, Int. Shield
Pin 7 - Heater
Pin 8 - Base Sleeve
Cap - Plate

AF POWER AMPLIFIER & MODULATOR - Class A_1

Maximum Ratings, *Absolute Values*:

	CCS▲	
DC PLATE VOLTAGE	300 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	200 max.	volts
PLATE DISSIPATION	10 max.	watts
GRID-No.2 INPUT	2.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Typical Operation:

DC Plate Voltage	250	volts
DC Grid-No.2 Voltage	160	volts
DC Grid-No.1 (Control-Grid) Voltage	-14	volts ←
Peak AF Grid-No.1 Voltage	14	volts ←
Zero-Signal DC Plate Current	35	ma.

▲ See next page. ← Indicates a change.

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Max.-Signal DC Plate Current	42	ma.
Zero-Signal DC Grid-No.2 Current	7	ma.
Max.-Signal DC Grid-No.2 Current	10	ma.
Load Resistance	5500	ohms
Total Harmonic Distortion	10	%
Power Output	5.3	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	30000 max.	ohms

PUSH-PULL AF POWER AMPLIFIER & MODULATOR - Class AB_2*

Maximum Ratings, *Absolute Values*:

	CCS▲	ICAS▲▲	
DC PLATE VOLTAGE	400 max.	500 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	200 max.	200 max.	volts
→ MAX.-SIG. DC PLATE CURRENT**	75 max.	75 max.	ma.
→ MAX.-SIG. PLATE INPUT**	30 max.	37.5 max.	watts
→ MAX.-SIG. GRID-No.2 INPUT**	2.5 max.	2.5 max.	watts
→ PLATE DISSIPATION**	10 max.	12.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	100 max.	100 max.	volts
Heater positive with respect to cathode	100 max.	100 max.	volts

Typical Operation:

Values are for 2 tubes

DC Plate Voltage	400	500	volts
DC Grid-No.2 Voltage†‡	125	125	volts
DC Grid-No.1 Voltage (Fixed Bias)	-15	-15	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	60	60	volts
Zero-Signal DC Plate Current	20	22	ma.
Max.-Signal DC Plate Current	150	150	ma.
Max.-Signal DC Grid-No.2 Current	32	32	ma.
Effective Load Resistance, (Plate-to-Plate)	6200	8000	ohms
Max.-Signal Driving Power, (Approx.)◆	0.36	0.36	watt
Max.-Signal Power Output (Approx.)	42	54	watts

* Subscript 2 indicates that grid current flows during some part of input cycle.

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

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

‡ In applications requiring the use of screen voltages above 135 volts, provision should be made for the adjustment of grid-No.1 bias for each tube separately. The necessity for this adjustment at the lower screen voltages depends on the distortion requirements and on whether the plate dissipation rating is exceeded at zero-signal plate current.

▲,▲▲,◆: See next page. → Indicates a change.

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V-H-F BEAM POWER AMPLIFIER

PLATE-MODULATED RF POWER AMPLIFIER – Class C Telephony

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

Maximum Ratings, ***Absolute Values:***

	CCS▲	ICAS▲▲	
DC PLATE VOLTAGE	400 max.	500 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	200 max.	200 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-175 max.	-175 max.	volts
DC PLATE CURRENT	60 max.	60 max.	ma.
DC GRID-No.1 CURRENT	3.5 max.	3.5 max.	ma.
PLATE INPUT	20 max.	27 max.	watts
GRID-No.2 INPUT	1.7 max.	2.3 max.	watts
PLATE DISSIPATION	6.7 max.	9 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	100 max.	100 max.	volts
Heater positive with respect to cathode	100 max.	100 max.	volts

Typical Operation:

DC Plate Voltage	400	500	volts
DC Grid-No.2 Voltage #	160	180	volts
	32000	35500	ohms
DC Grid-No.1 Voltage⊕	-50	-50	volts
	20000	20000	ohms
Peak RF Grid-No.1 Voltage	60	60	volts
DC Plate Current	50	54	ma.
DC Grid-No.2 Current	7.5	9	ma.
DC Grid-No.1 Current (Approx.)	2.5	2.5	ma.
Driving Power (Approx.)	0.15	0.15	watt
Power Output (Approx.)	13.5	18	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance⊕⊕	30000 max.	30000 max.	ohms

RF POWER AMPLIFIER & OSCILLATOR – Class C Telegraphy

*Key-down conditions per tube without modulation***

Maximum Ratings, ***Absolute Values:***

	CCS▲	ICAS▲▲	
DC PLATE VOLTAGE	500 max.	600 max.	volts
DC GRID-No.2 (SCREEN) VOLTAGE	200 max.	200 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-175 max.	-175 max.	volts
DC PLATE CURRENT	75 max.	85 max.	ma. ←
DC GRID-No.1 CURRENT	3.5 max.	3.5 max.	ma.
PLATE INPUT	30 max.	40 max.	watts

\# Obtained preferably from a separate source modulated with the plate supply, or from the modulated plate-supply through a series resistor of the value shown.

▲, ▲▲, ◆, ##, ⊕, ⊕⊕: See next page. ← Indicates a change.

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GRID-No.2 INPUT	2.5 max.	2.5 max.	watts
PLATE DISSIPATION	10 max.	13.5 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	100 max.	100 max.	volts
Heater positive with respect to cathode	100 max.	100 max.	volts

Typical CCS Operation:

	Up to 125 Mc		*At 160 Mc*	
DC Plate Voltage	400	500	300	volts
DC Grid-No.2 Voltage□	190	185	170	volts
	19000	28500	21500	ohms
DC Grid-No.1 Voltage♦	-30	-40	-75	volts
	10000	13500	30000	ohms
Peak RF Grid-No.1 Voltage	41	50	85	volts
DC Plate Current	75	60	75	ma.
DC Grid-No.2 Current	11	11	6	ma.
DC Grid-No.1 Current (Approx.)	3	3	2.5	ma.
Driving Power (Approx.)	0.12	0.15	1.5	watts
Power Output (Approx.)	20	20	13	watts

Typical ICAS Operation:

	Up to 125 Mc	*At 160 Mc*	
DC Plate Voltage	600	350	volts
DC Grid-No.2 Voltage□	185	200	volts
	41500	21500	ohms
DC Grid-No.1 Voltage♦	-45	-90	volts
	15000	30000	ohms
Peak RF Grid-No.1 Voltage	57	105	volts
DC Plate Current	66	85	ma.
DC Grid-No.2 Current	10	7	ma.
DC Grid-No.1 Current (Approx.)	3	3	ma.
→ Driving Power (Approx.)	0.17	2	watts
Power Output (Approx.)	27	16.5	watts

Maximum Circuit Values, for both CCS & ICAS Operation:

Grid-No.1-Circuit Resistance⊕⊕	30000 max.	ohms

▲ Continuous Commercial Service.

▲▲ Intermittent Commercial and Amateur Service.

♦ Driver stage should be capable of supplying the No.1 grids of the class AB_2 stage with the specified driving power at low distortion. The effective resistance per No.1 grid circuit of the class AB_2 stage should be kept below 500 ohms and the effective impedance at the highest desired response frequency should not exceed 700 ohms.

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

⊕ Obtained from grid resistor of value shown, or by partial self-bias methods.

⊕⊕, □, ♦: See next page. → Indicates a change.

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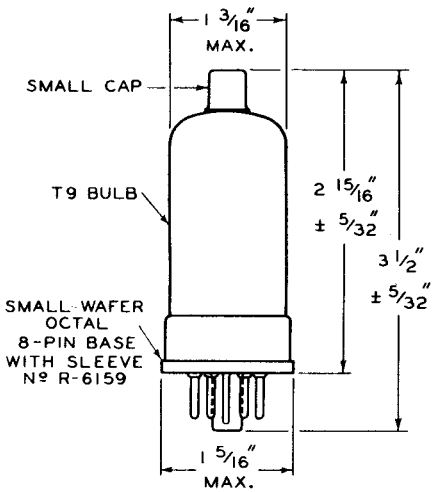
⊕⊕ Any additional bias required must be supplied by a cathode resistor or a fixed supply.

□ Obtained preferably from a separate source, or from the plate-voltage supply with a voltage divider, or through a series resistor of the value shown. The grid-No.2 voltage must not exceed 600 volts under key-up conditions.

♦ Obtained from fixed supply or by grid-No.1 resistor of value shown.

Data on operating frequencies for the 2E26 are given on the sheet TRANS. TUBE RATINGS vs FREQUENCY.



92CS-6607

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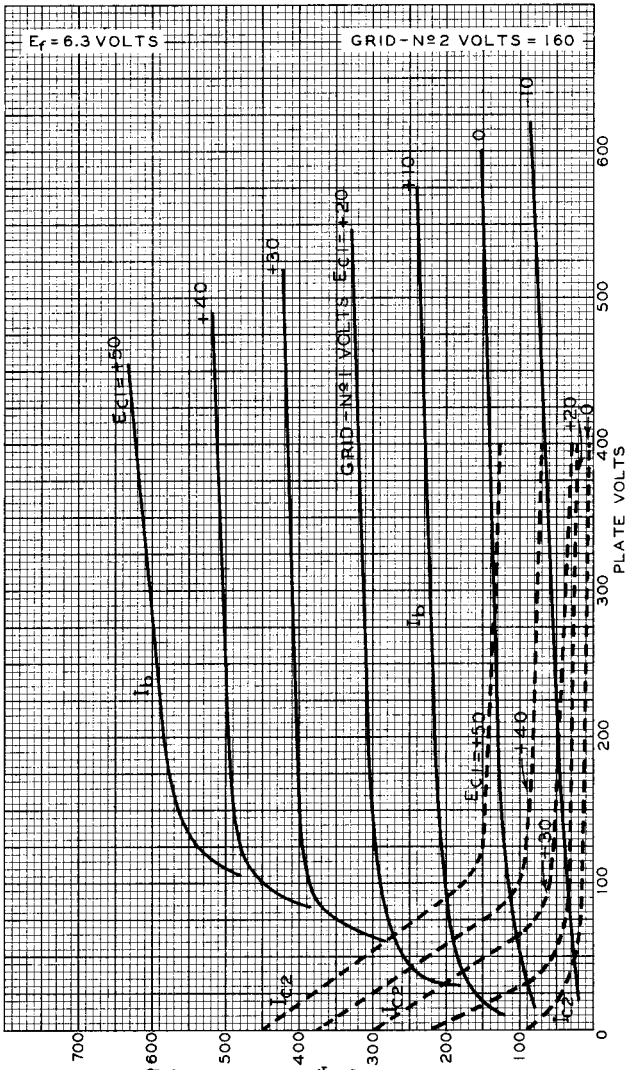
AVERAGE PLATE CHARACTERISTICS



NOV. 15, 1945 TUBE DEPARTMENT 92CM-6631

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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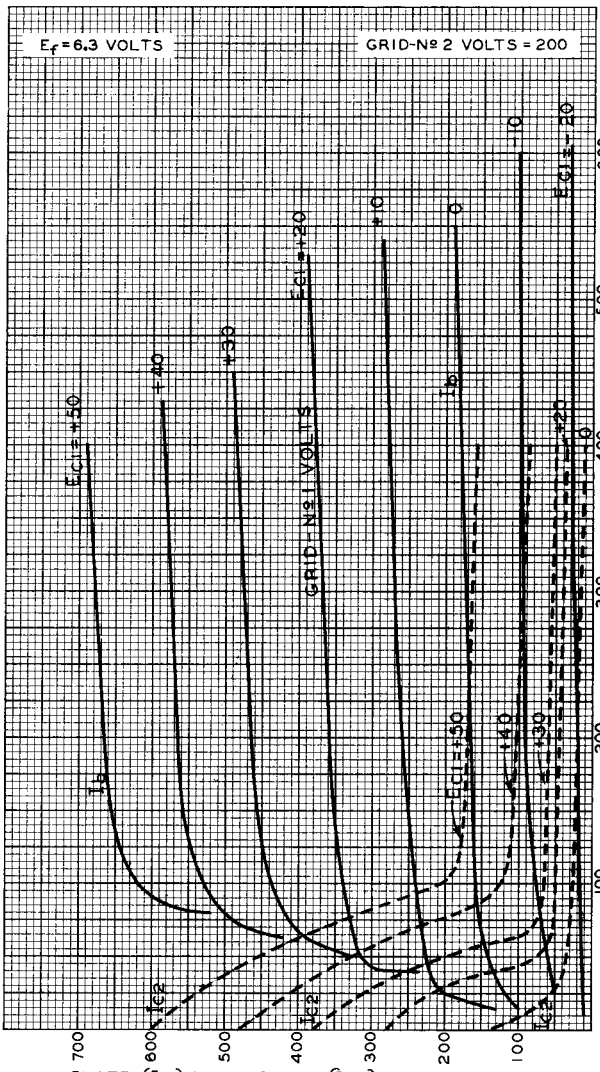
AVERAGE PLATE CHARACTERISTICS



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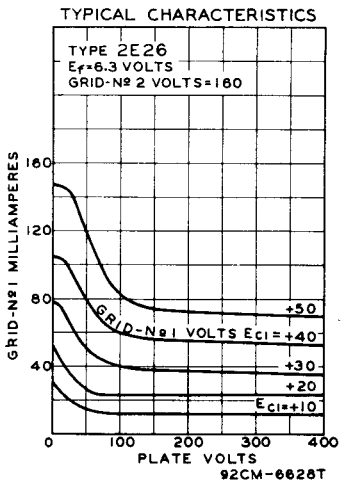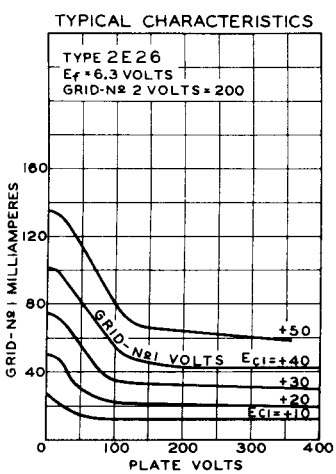
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