25F5A

Beam Power Tube

7-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

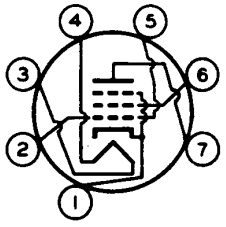
Heater Characteristics and Ratings *(Design-Maximum Values)*:			
Current	0.150 ± 0.010		amp
Voltage (AC or DC) at heater amperes = 0.150	25.0		volts
Warm-up time (Average)	17		sec
Peak heater-cathode voltage:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200[a]	max.	volts
Direct Interelectrode Capacitances (Approx.):[b]			
Grid No.1 to plate	0.44		pf
Grid No.1 to cathode & grid No.3, grid No.2, and heater	12.0		pf
Plate to cathode & grid No.3, grid No.2, and heater	8.0		pf

Characteristics, Class A_1 Amplifier:

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-7.5	volts
Plate Resistance (Approx.)	13000	ohms
Transconductance	6400	μmhos
Plate Current	43	ma
Grid-No.2 Current	3.8	ma

Mechanical:

Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	2-5/8"
Maximum Seated Length	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip)	2" ± 3/32"
Diameter	0.650" to 0.750"
Bulb	T5-1/2
Base	Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW	7CV



Pin 1 - Cathode, Grid No.3
Pin 2 - Grid No.1
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Grid No.1
Pin 6 - Grid No.2
Pin 7 - Plate

25F5A

AF POWER AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	150 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	130 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.2 INPUT	1.1 max.	watts
PLATE DISSIPATION	5.5 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface)	220 max.	°C

Typical Operation:

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-7.5	volts
Peak AF Grid-No.1 Voltage	7.5	volts
Zero-Signal Plate Current	43	ma
Max.-Signal Plate Current	45	ma
Zero-Signal Grid-No.2 Current	3.8	ma
Max.-Signal Grid-No.2 Current	7.3	ma
Effective Load Resistance	2500	ohms
Total Harmonic Distortion	7	%
Maximum-Signal Power Output	1.5	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation.	0.1 max.	megohm
For cathode-bias operation.	0.5 max.	megohm

PUSH-PULL AF POWER AMPLIFIER — Class A_1

Maximum Ratings, *Design-Maximum Values:*

PLATE VOLTAGE	150 max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE	130 max.	volts
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.2 INPUT	1.1 max.	watts
PLATE DISSIPATION	5.5 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface)	220 max.	°C

Typical Operation:

Values are for two tubes

Plate Voltage	110	volts
Grid-No.2 Voltage	110	volts
Grid-No.1 Voltage	-8	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage.	14.4	volts
Zero-Signal Plate Current	82	ma
Max.-Signal Plate Current	88	ma
Zero-Signal Grid-No.2 Current	7.2	ma
Max.-Signal Grid-No.2 Current	12.5	ma
Effective Load Resistance (Plate-to-plate)	4500	ohms

Total Harmonic Distortion	2.6	%
Maximum-Signal Power Output	2.9	watts

Maximum Circuit Values:

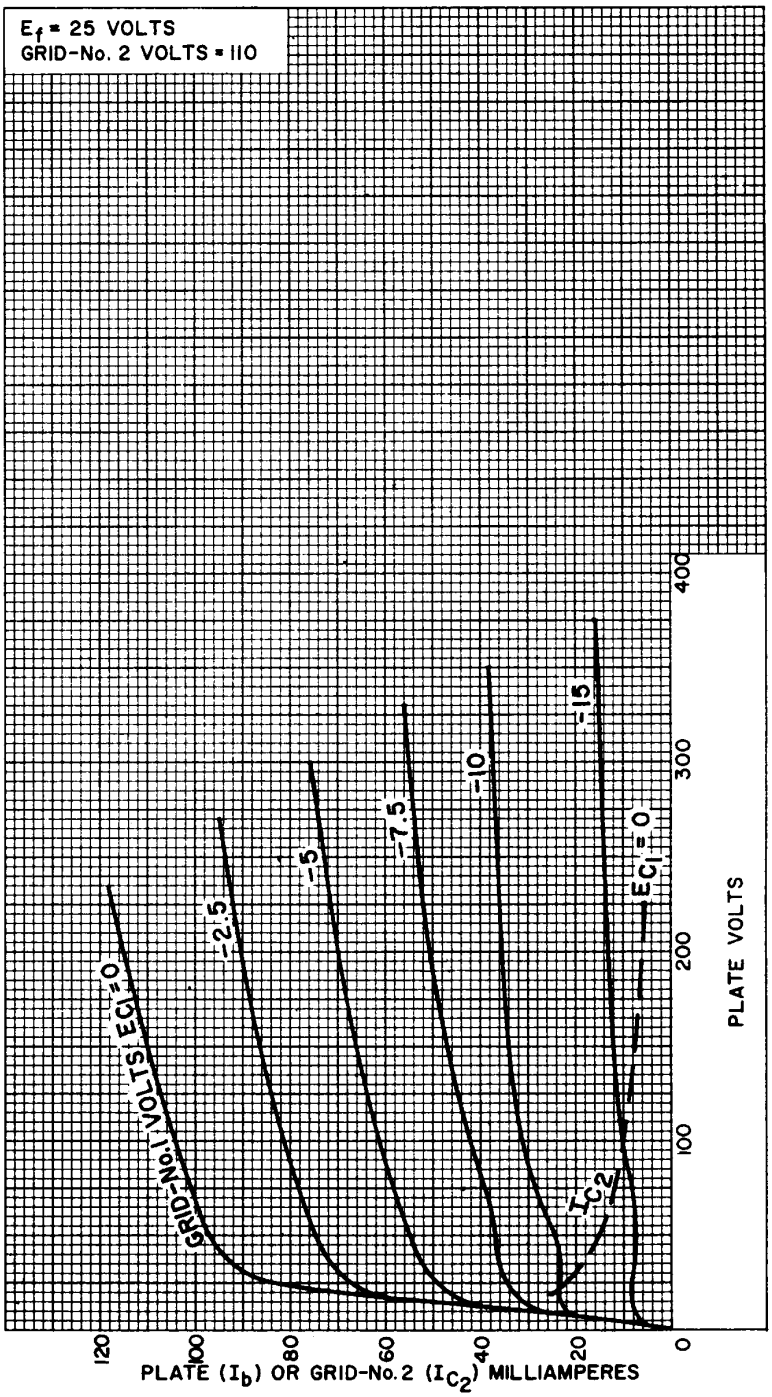
Grid-No.1-Circuit Resistance:

For fixed-bias operation.	0.1 max.	megohm
For cathode-bias operation.	0.5 max.	megohm

[a] The dc component must not exceed 100 volts.
[b] Without external shield.

25F5A

AVERAGE CHARACTERISTICS



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OPERATION CHARACTERISTICS