

8170/4CX5000A

Beam Power Tube

FORCED-AIR COOLED

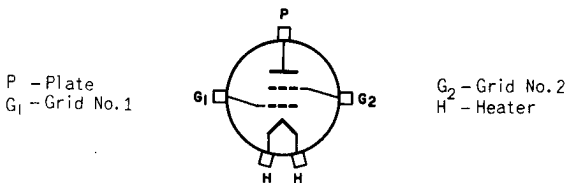
GENERAL DATA

Electrical:

	Min.	Av.	Max.	
Filament, Thoriated Tungsten:				
Voltage (AC or DC)	-	7.5 ± 5%	-	volts
Current at 7.5 volts.	73	-	78	amp
Mu-Factor, Grid No.2 to				
Grid No.1	-	4.5	-	
Direct Interelectrode Capacitances (Approx.):				
Grid No.1 to plate.	-	-	1	pf
Grid No.1 to filament and grid No.2	108	-	122	pf
Plate to filament and grid No.2.	18	-	23	pf

Mechanical:

Operating position.	Vertical, base up or down
Maximum Overall Length.	9.125"
Maximum Diameter.	4.938"
Weight (Approx.).	9.5 lbs
Terminal Diagram (See <i>Dimensional Outline</i>):	



Thermal:

Seal Temperatures	250 max.	°C
Plate Core Temperature.	250 max.	°C
Incoming Air Temperature.	50 max.	°C
Air Flow, with Eimac Air-System Socket SK-300A and Air Chimney SK-306:		

For frequencies up to 30 Mc

Plate dissipation	3000	5000	6000	watts
Minimum air flow.	105	190	230	cfm
Static pressure	0.7	1.5	2.0	in. of water

Components:

Socket.	Eimac SK-300A Air-System Socket, or equivalent
Chimney	Eimac SK-306, or equivalent



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AF POWER AMPLIFIER & MODULATOR — Class AB₁^a and LINEAR RF POWER AMPLIFIER Single-Sideband Suppressed-Carrier Service

For frequencies up to 30 Mc

Maximum CCS^b Ratings, Absolute-Maximum Values:

DC Plate Voltage.	7500 max.	volts
DC Grid-No.2 Voltage.	1500 max.	volts
DC Plate Current.	4 max.	amp
Grid-No.2 Input	250 max.	watts
Grid-No.1 Input	75 max.	watts
Plate Dissipation	6000 max.	watts

RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy^c and RF POWER AMPLIFIER — Class C Telephony

Maximum CCS Ratings, Absolute-Maximum Values:

	<i>Up to 30 Mc</i>	<i>Up to 110 Mc</i>	
DC Plate Voltage.	7500 max.	6500 max.	volts
DC Grid-No.2 Voltage.	1500 max.	1500 max.	volts
DC Plate Current.	3 max.	2.6 max.	amp
DC Grid-No.2 Input.	250 max.	250 max.	watts
DC Grid-No.1 Input.	75 max.	75 max.	watts
Plate Dissipation	5000 max.	5000 max.	watts

PLATE-MODULATED RF POWER AMPLIFIER — Class C Telephony

*Carrier Conditions per tube for use with
a maximum modulation factor of 1*

Maximum CCS Ratings, Absolute-Maximum Values:

At frequencies up to 30 Mc

DC Plate Voltage.	5000 max.	volts
DC Grid-No.2 Voltage.	1000 max.	volts
DC Plate Current.	2.5 max.	amp
Grid-No.2 Input	250 max.	watts
Grid-No.1 Input	75 max.	watts
Plate Dissipation	3500 max.	watts

^a Subscript 1 indicates that grid-No.1 current does not flow during any part of the input cycle.

^b Continuous Commercial Service.

^c 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 per cent of the carrier conditions.



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