



5763

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VHF BEAM POWER AMPLIFIER

9-PIN MINIATURE TYPE

GENERAL DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage. 6.0 ac or dc volts

Current. 0.75 amp

Transconductance for plate

current of 45 ma. 7000 μ hos

Mu-Factor, Grid No.2

to Grid No.1 16

Direct Interelectrode Capacitances:⁰Grid No.1 to Plate. 0.3 max. μ fInput 9.5 μ fOutput. 4.5 μ f⁰ with no external shield.**Mechanical:**

Mounting Position. Any

Maximum Overall Length 2-5/8"

Maximum Seated Length. 2-3/8"

Length, Base Seat to Bulb Top (excluding tip). 2" $\pm$ 3/32"

Maximum Diameter 7/8"

Bulb T-6-1/2

Base Small-Button Noval 9-Pin

Basing Designation for BOTTOM VIEW 9K

Pin 1-Plate

Pin 2-No

Connection

Pin 3-Grid No.3

Pin 4-Heater



Pin 5-Heater

Pin 6-Grid No.2

Pin 7-Cathode

Pin 8-Grid No.1

Pin 9-Grid No.1

RF POWER AMPLIFIER & OSCILLATOR-Class C Telephony⁰⁰

and

RF POWER AMPLIFIER-Class C FM Telephony**Maximum CCS[•] Ratings, Absolute Values:**

DC PLATE VOLTAGE 300 max. volts

DC GRID-No.3 (SUPPRESSOR) VOLTAGE. 0 max. volts

DC GRID-No.2 (SCREEN) VOLTAGE. 250 max. volts

DC GRID-No.1 (CONTROL-GRID) VOLTAGE. -125 max. volts

DC PLATE CURRENT 50 max. ma

DC GRID-No.2 CURRENT 15 max. ma

DC GRID-No.1 CURRENT 5 max. ma

PLATE INPUT. 15 max. watts

GRID-No.2 INPUT. 2 max. watts

PLATE DISSIPATION. 12 max. watts

• ⁰⁰: See next page.

MAY 20, 1949

TUBE DEPARTMENT

TENTATIVE DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



VHF BEAM POWER AMPLIFIER

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 100 max. volts

Heater positive with respect to cathode. 100 max. volts

BULB TEMPERATURE AT HOTTEST POINT

ON BULB SURFACE 250 max. °C

Typical Operation at 50 Mc:

DC Plate Voltage 300 volts

Grid No.3. Connected to cathode at socket

DC Grid-No.2 Voltage 250 volts

DC Grid-No.1 Voltage* { -60 volts
22000 ohms

Peak RF Grid-No.1 Voltage. 80 volts

DC Plate Current 50 ma

DC Grid-No.2 Current 5 ma

DC Grid-No.1 Current (Approx.) 3 ma

Driving Power (Approx.) 0.35 watt

Power Output (Approx.)^o. 8 watts

FREQUENCY MULTIPLIER

Maximum CCS* Ratings, Absolute Values:

DC PLATE VOLTAGE 300 max. volts

DC GRID-No.3 (SUPPRESSOR) VOLTAGE. 0 max. volts

DC GRID-No.2 (SCREEN) VOLTAGE. 250 max. volts

DC GRID-No.1 (CONTROL-GRID) VOLTAGE. -125 max. volts

DC PLATE CURRENT 50 max. ma

DC GRID-No.2 CURRENT 15 max. ma

DC GRID-No.1 CURRENT 5 max. ma

PLATE INPUT. 15 max. watts

GRID-No.2 INPUT. 2 max. watts

PLATE DISSIPATION. 12 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 100 max. volts

Heater positive with respect to cathode. 100 max. volts

BULB TEMPERATURE AT HOTTEST POINT

ON BULB SURFACE 250 max. °C

Typical Operation:

	<u>Doubler</u> <u>to 175 Mc</u>	<u>Tripler</u> <u>to 175 Mc</u>	
DC Plate Voltage	300	300	volts
Grid No.3.	Connected to cathode at socket		
DC Grid-No.2 Voltage	*	*	volts

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

^o Useful power output is approximately 7 watts.

•, •, •: See next page.



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VHF BEAM POWER AMPLIFIER

	<u>Doubler</u> <u>to 175 Mc</u>	<u>Tripler</u> <u>to 175 Mc</u>	
DC Grid-No.1 Voltage [®]	{ -75 75000	-100 100000	volts ohms
Peak RF Grid-No.1 Voltage.	95	120	volts
DC Plate Current	40	35	ma
DC Grid-No.2 Current	4	5	ma
DC Grid-No.1 Current (Approx.) . .	1	1	ma
Driving Power (Approx.).	0.6	0.6	watt
Power Output (Approx.) [*]	3.6	2.8	watts

Maximum Circuit Values (for maximum rated conditions):

Grid-No.1-Circuit Resistance 0.1 max. megohm

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	<u>Note</u>	<u>Min.</u>	<u>Max.</u>	
Heater Current	1	0.69	0.81	amp
Grid No.1-Plate Capacitance♦	-	-	0.3	μμf
Input Capacitance♦	-	8.0	11.0	μμf
Output Capacitance♦	-	3.8	5.2	μμf

♦ with no external shield.

Note 1: With 6 volts ac on heater.

• Continuous Commercial Service.

® Obtained from a fixed supply, or by a grid-No.1 resistor of value shown.

Useful power output is approximately 2.1 watts for doubler service and 1.3 watts for tripler service.

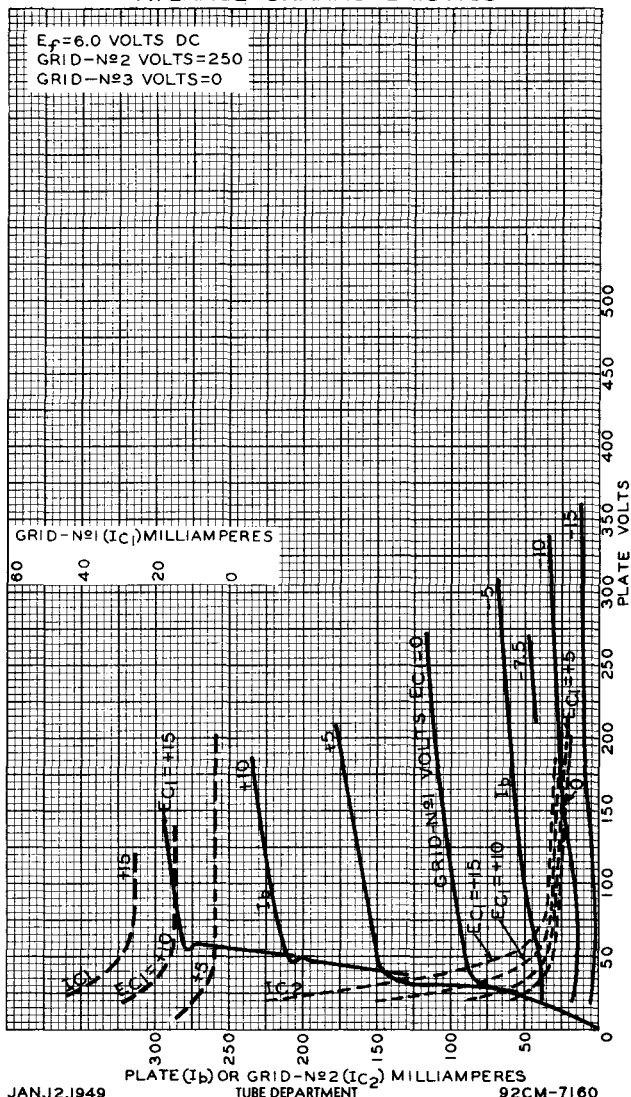
* Obtained from plate supply voltage of 300 volts through a series resistor of 12500 ohms.

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AVERAGE CHARACTERISTICS



JAN. 12, 1949

TUBE DEPARTMENT

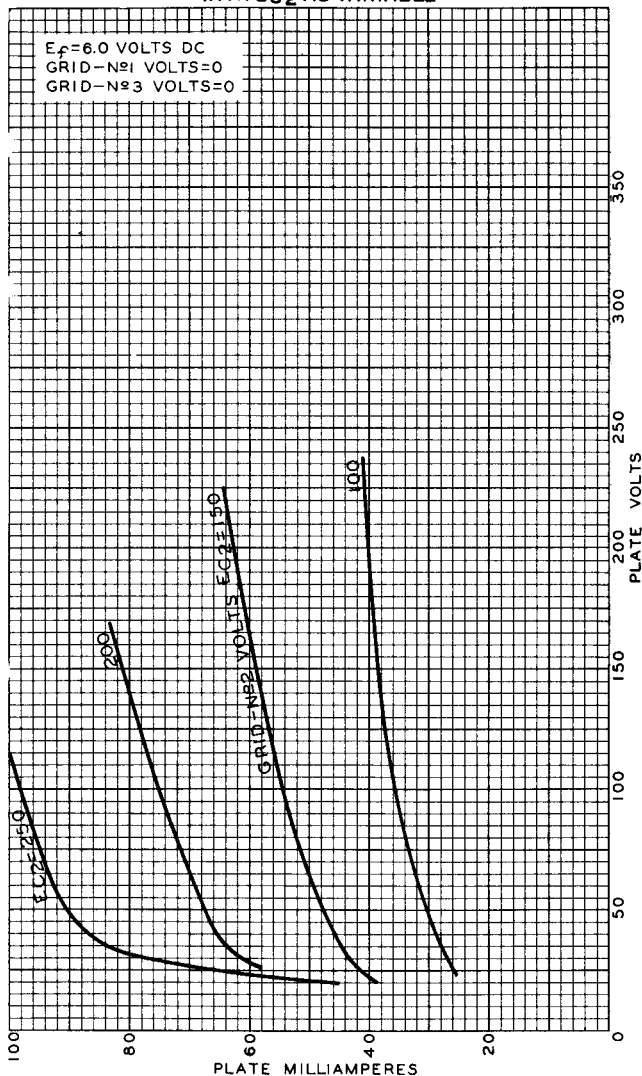
92CM-7160

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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AVERAGE PLATE CHARACTERISTICS
WITH EC_2 AS VARIABLE

JAN. 10, 1949

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-7159



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VHF BEAM POWER TUBE

9-PIN MINIATURE TYPE

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GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage	6.0 $\pm$ 10%	ac or dc volts
Current	0.75	amp

Transconductance for plate

current of 45 ma.	7000	μ mhos
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Mu-Factor, Grid No.2

to Grid No.1 16

Direct Interelectrode Capacitances:^o

Grid No.1 to Plate	0.3 max.	μ mf
Input	9.5	μ mf
Output	4.5	μ mf

^o With no external shield.

Mechanical:

Mounting Position Any

Maximum Overall Length 2-5/8"

Maximum Seated Length 2-3/8"

Length, Base Seat to Bulb Top (excluding tip) 2" $\pm$ 3/32"

Maximum Diameter 7/8"

Bulb T-6-1/2

Base Small-Button Noval 9-Pin (JETEC No.E9-1)

Basing Designation for BOTTOM VIEW 9K

Pin 1-Plate

Pin 2-No

Connection

Pin 3-Grid No.3

Pin 4-Heater



Pin 5-Heater

Pin 6-Grid No.2

Pin 7-Cathode

Pin 8-Grid No.1

Pin 9-Grid No.1

PLATE-MODULATED RF POWER AMPLIFIER--Class C Telephony

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

CCS[•]ICAS^{••}

Maximum Ratings, Absolute Values:

DC PLATE VOLTAGE	250 max.	300 max.	volts
DC GRID-No.3 (SUPPRESSOR)			
VOLTAGE	0 max.	0 max.	volts
DC GRID-No.2 (SCREEN)			
VOLTAGE	250 max.	250 max.	volts
DC GRID-No.1 (CONTROL-			
GRID) VOLTAGE	-125 max.	-125 max.	volts
DC PLATE CURRENT	40 max.	50 max.	ma
DC GRID-No.2 CURRENT	15 max.	15 max.	ma
DC GRID-No.1 CURRENT	5 max.	5 max.	ma
PLATE INPUT	10 max.	15 max.	watts
GRID-No.2 INPUT	1.5 max.	1.5 max.	watts
PLATE DISSIPATION	8 max.	12 max.	watts

•,••: See next page.

MAY 3, 1954

TUBE DIVISION

DATA 1

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY



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VHF BEAM POWER TUBE

	CCS*	ICAS**
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
BULB TEMPERATURE (At hottest point on bulb surface) .	250 max.	250 max. °C

Typical Operation up to 30 Mc:

DC Plate Voltage	250	300	
Grid No.3	Connected to cathode at socket		
DC Grid-No.2 Voltage* . . .	250	250	volts
DC Grid-No.1 Voltage* . . .	-39	-42.5	volts
From a grid resistor of . . .	39000	18000	ohms
Peak RF Grid-No.1 Voltage .	46.5	53.5	volts
DC Plate Current	40	50	ma
DC Grid-No.2 Current	5.6	6	ma
DC Grid-No.1 Current (Approx.) . . .	1	2.4	ma
Driving Power (Approx.) . .	0.05	0.15	watt
Useful Power Output (Approx.)	6.4 [■]	10 [■]	watts

Maximum Circuit Values (CCS or ICAS Conditions):

Grid-No.1-Circuit Resistance	0.1 max.	megohm
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RF POWER AMPLIFIER & OSCILLATOR--Class C Telegraphy[□]
and
RF POWER AMPLIFIER--Class C FM Telephony

	CCS*	ICAS**
Maximum Ratings, Absolute Values:		
DC PLATE VOLTAGE	300 max.	350 max. volts
DC GRID-No.3 (SUPPRESSOR) VOLTAGE	0 max.	0 max. volts
DC GRID-No.2 (SCREEN) VOLTAGE	250 max.	250 max. volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-125 max.	-125 max. volts
DC PLATE CURRENT	50 max.	50 max. ma
DC GRID-No.2 CURRENT	15 max.	15 max. ma
DC GRID-No.1 CURRENT	5 max.	5 max. ma
PLATE INPUT	15 max.	17 max. watts

● obtained preferably from a separate source modulated with the plate supply, or from the modulated plate supply through a series resistor.

* obtained from grid-no.1 resistor or from a combination of grid-no.1 resistor with either fixed supply or cathode resistor.

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

●, ●●, ■: See next page.

→ Indicates a change



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VHF BEAM POWER TUBE

	CCS*	ICAS**	
GRID-No.2 INPUT	2 max.	2 max.	watts
PLATE DISSIPATION	12 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
BULB TEMPERATURE (At hottest point on bulb surface). .	250 max.	250 max.	°C
Typical Operation up to 30 Mc:			
DC Plate Voltage	300	350	volts
Grid No.3	Connected to cathode at socket		
DC Grid-No.2 Voltage	250	250	volts
DC Grid-No.1 Voltage*	-28.5	-28.5	volts
From a grid resistor of . .	18000	18000	ohms
Peak RF Grid-No.1 Voltage . .	37.5	37	volts
DC Plate Current	50	48.5	ma
DC Grid-No.2 Current	6.6	6.2	ma
DC Grid-No.1 Current (Approx.)	1.6	1.6	ma
Driving Power (Approx.) . . .	0.1	0.1	watt
Useful Power Output (Approx.)	10.3 [•]	12 [•]	watts ←
Typical Operation at 50 Mc:			
DC Plate Voltage	300	-	volts
Grid No.3	Connected to cathode at socket		
DC Grid-No.2 Voltage	250	-	volts
DC Grid-No.1 Voltage*	-60	-	volts
From a grid resistor of . .	22000	-	ohms
Peak RF Grid-No.1 Voltage . .	80	-	volts
DC Plate Current	50	-	ma
DC Grid-No.2 Current	5	-	ma
DC Grid-No.1 Current (Approx.)	3	-	ma
Driving Power (Approx.) . . .	0.35	-	watt
Useful Power Output (Approx.)	7 [•]	-	watts ←
Maximum Circuit Values (CCS or ICAS Conditions):			
Grid-No.1-Circuit Resistance	0.1 max.		megohm
FREQUENCY MULTIPLIER			
Maximum CCS* Ratings, Absolute Values:			
DC PLATE VOLTAGE	300 max.		volts
DC GRID-No.3 (SUPPRESSOR) VOLTAGE	0 max.		volts
DC GRID-No.2 (SCREEN) VOLTAGE	250 max.		volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-125 max.		volts
DC PLATE CURRENT	50 max.		ma
* Continuous Commercial Service.			
** Intermittent Commercial and Amateur Service.			
•, •: See next page.			

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VHF BEAM POWER TUBE

DC GRID-No.2 CURRENT	15 max.	ma
DC GRID-No.1 CURRENT	5 max.	ma
PLATE INPUT	15 max.	watts
GRID-No.2 INPUT	2 max.	watts
PLATE DISSIPATION	12 max.	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode .	100 max.	volts
Heater positive with respect to cathode .	100 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	250 max.	°C

Typical Operation:

	Doubler to 175 Mc	Tripler to 175 Mc	
DC Plate Voltage	300	300	volts
Grid No.3	Connected to cathode at socket		
DC Grid-No.2 Voltage	*	*	volts
DC Grid-No.1 Voltage*	-75	-100	volts
From grid resistor of	75000	100000	ohms
Peak RF Grid-No.1 Voltage	95	120	volts
DC Plate Current	40	35	ma
DC Grid-No.2 Current	4	5	ma
DC Grid-No.1 Current (Approx.)	1	1	ma
Driving Power (Approx.)	0.6	0.6	watt
Useful Power Output (Approx.)	2.1 [■]	1.3 [■]	watts

Maximum Circuit Values (For maximum rated conditions):

→ Grid-No.1-Circuit Resistance	0.1 max.	megohm
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CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	Note	Min.	Max.	
Heater Current	1	0.69	0.81	amp
Grid No.1-Plate Capacitance	2	-	0.3	μμf
Input Capacitance	2	8.0	11.0	μμf
Output Capacitance	2	3.8	5.2	μμf
Transconductance	1,3	5100	8900	μmhos
Plate Current	1,3	33	57	ma
Grid-No.2 Current	1,3	-	10	ma
Reverse Grid-No.1 Current	1,4	-	2	μamp

NOTE 1: With 6 volts ac or dc on heater.

NOTE 2: With no external shield.

NOTE 3: With dc plate voltage of 250 volts, dc grid-No.2 voltage of 250 volts, and dc grid-No.1 voltage of -7.5 volts.

NOTE 4: With dc plate voltage of 250 volts, dc grid-No.2 voltage of 250 volts, dc grid-No.1 voltage of -7.5 volts, and grid-No.1-circuit resistance of 0.1 megohm.

● Obtained from a fixed supply, or by a grid-No.1 resistor of value shown.

■ This value of useful power is measured at load of output circuit.

Data on Operating Frequencies for the 5763 are given
on the sheet TRANS. TUBE RATINGS vs FREQUENCY

→ Indicates a change

MAY 3, 1954

TUBE DIVISION

DATA 2

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY