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TRIODE-HEPTODE CONVERTER

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage. 6.3[□] ac or dc volts

Current. 0.3^{□□} amp

Direct Interelectrode Capacitances:[○]

Heptode Grid No.1 to Heptode Plate . . . 0.03 max. $\mu\mu\text{f}$

Heptode Grid No.1 to Triode Plate. . . . 0.1 max. $\mu\mu\text{f}$

Heptode Grid No.1 to Triode Grid & Heptode Grid No.3. . . . 0.3 max. $\mu\mu\text{f}$

Triode Grid & Heptode Grid No.3 to Triode Plate 0.9 . . $\mu\mu\text{f}$

Heptode Grid No.1 to All Other Electrodes (RF Input). 4.6 . . $\mu\mu\text{f}$

Heptode Plate to All Other Electrodes (Mixer Output) 3.2 . . $\mu\mu\text{f}$

Triode Grid & Heptode Grid No.3 to All Other Electrodes Except Triode Plate (Oscillator Input) 7.5 . . $\mu\mu\text{f}$

Triode Plate to All Other Electrodes Except Triode Grid & Heptode Grid No.3 (Oscillator Output). 7.5 . . $\mu\mu\text{f}$

[○] With external shield connected to cathode.

Mechanical:

Mounting Position. Any

Maximum Overall Length 2-25/32"

Maximum Seated Length. 2-1/4"

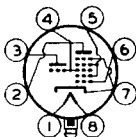
Maximum Diameter 1-3/16"

Bulb T-9

Base Lock-in 8-Pin

Basing Designation for BOTTOM VIEW 8BL

- Pin 1 - Heater
- Pin 2 - Heptode Plate
- Pin 3 - Triode Plate
- Pin 4 - Triode Grid, Heptode Grid No.3
- Pin 5 - Heptode Grids No.2 & No.4
- Pin 6 - Heptode Grid No.1
- Pin 7 - Cathode, Heptode Grid No.5, Internal Shield
- Pin 8 - Heater Plug - Base Shell



CONVERTER

Maximum Ratings, Design-Center Values:

HEPTODE PLATE VOLTAGE. 300 max. volts

HEPTODE GRIDS-No.2 & No.4 (SCREEN) VOLTAGE 100 max. volts

[□] Nominal voltage = 7.0 volts.

^{□□} Nominal current = 0.32 ampere.

← Indicates a change.

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HEPTODE GRIDS—No.2 & No.4 SUPPLY VOLTAGE		300 max.	volts
HEPTODE GRID—No.1 (CONTROL- GRID) VOLTAGE:			
Positive bias value.		0 max.	volts
HEPTODE PLATE DISSIPATION.		0.5 max.	watt
HEPTODE GRIDS—No.2 & No.4 DISSIPATION.		0.3 max.	watt
TRIODE PLATE VOLTAGE		150 max.	volts
TRIODE PLATE-SUPPLY VOLTAGE.		300 max.	volts
TRIODE PLATE DISSIPATION		1.25 max.	watts
TOTAL CATHODE CURRENT.		14 max.	ma
→ PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.		90 max.	volts
Heater positive with respect to cathode.		90 max.	volts
→ Typical Operation:			
Heptode Plate Voltage.	100	250	volts
Heptode Grids—No.2 & No.4 Voltage.	100	100	volts
Heptode Grid—No.1 Voltage.	-3	-3	volts
Triode (Oscillator) Plate-Supply Volt.	100	250 [†]	volts
Triode Grid & Heptode Grid—No.3 Resistor	50000	50000	ohms
Heptode Plate Resistance	0.5	1.5	megohms
Heptode Plate Current.	1.5	1.4	ma
Heptode Grids—No.2 & No.4 Current.	2.6	2.8	ma
Triode Plate Current	3.2	5	ma
Triode Grid & Heptode Grid—No.3 Current.	0.3	0.4	ma
Conversion Conductance	280	290	μmhos
Conversion Conductance (Approx.) for heptode grid—No.1 bias of -20 volts	2	2	μmhos
Total Cathode Current.	7.7	9.6	ma

[†] Applied through a 20000-ohm dropping resistor, properly bypassed.

NOTE: The transconductance of the triode section, not oscillating, is approximately 1400 μmhos under the following conditions; triode plate voltage = 150; triode-grid & heptode grid—No.3 volts = -3. Under the same conditions, triode plate current is 6.6 ma., triode plate resistance is 10700 ohms, and amplification factor is 15.

→ indicates a change.

DEC. 30, 1947

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA