



6K8  
6K8-G  
6K8-GT



# 6K8, 6K8-G, 6K8-GT

## TRIODE-HEXODE CONVERTER

Heater  $\blacksquare$  Coated Unipotential Cathode  
 Voltage 6.3 a-c or d-c volts  
 Current 0.3 amp.

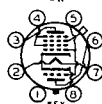
Direct Interelectrode Capacitances:

	6K8 $\circ$	6K8-G $\Delta$	6K8-GT $\Delta$
Hexode Grid #3 to Hexode Plate	0.03	0.08	0.08 max. $\mu$ f
Hexode Grid #3 to Triode Plate	0.02	0.05	0.05 max. $\mu$ f
Hexode Grid #3 to Triode Grid & Hexode Grid #1	0.2	0.2	0.2 max. $\mu$ f
Triode Grid & Hexode Grid #1 to Triode Plate	1.1	1.8	1.8 $\mu$ f
Triode Grid & Hexode Grid #1 to Hexode Plate	0.1	0.15	0.15 max. $\mu$ f
Hexode Grid #3 to All Other Electrodes (R-F Input)	6.6	4.6	4.6 $\mu$ f
Triode Plate to All Other Electrodes Except Triode Grid & Hexode Grid #1 (Osc. Output)	3.2	3.4	3.4 $\mu$ f
Triode Grid & Hexode Grid #1 to All Other Electrodes Except Triode Plate (Osc. Input)	6.0	6.5	6.5 $\mu$ f
Hexode Plate to All Other Electrodes (Mixer Output)	3.5	4.8	4.8 $\mu$ f
Overall Length	{ 3-1/8" max.	{ 4-7/32" to 4-15/32" max.	{ 3-9/16" max.
Seated Height	{ 2-9/16" max.	{ 3-21/32" to 3-29/32" max.	{ 3" max.
Maximum Diameter	1-5/16"	1-9/16"	1-5/16"
Bulb Cap	Metal Shell, MF-8 Miniature	ST-12 Skirted Min.	T-9 Skirted Min.
Base	{ Small Wafer Octal 8-Pin	{ Sm. Shell Oct. 8-Pin	{ Sm. Wafer Oct. 8-Pin, Sleeve

Basing Designation

- Pin 1 { 6K8, Shell
- Pin 1 { 6K8-G, No Con.
- Pin 1 { 6K8-GT, Sleeve
- Pin 2 - Heater
- Pin 3 - Hexode Plate
- Pin 4 - Hexode Grids #2 & #4

8K



- G-8K Pin 5 - Hexode Grid #1 & Triode Grid
- GT-8K Pin 6 - Triode Plate
- Pin 7 - Heater
- Pin 8 - Cathode
- Cap - Hexode Grid #3

Mounting Position

BOTTOM

VIEW

### CONVERTER SERVICE

Hexode Plate Voltage		300 max. volts
Hexode Screen (Grids #2 & #4) Voltage		150 max. volts
Hexode Screen Supply Voltage		300 max. volts
Hexode Control-Grid (Grid #3) Voltage		0 min. volts
Triode Plate Voltage		125 max. volts
Hexode Plate Dissipation		0.75 max. watt
Hexode Screen Dissipation		0.7 max. watt
Triode Plate Dissipation		0.75 max. watt
Total Cathode Current		16 max. ma.
Typical Operation:		
Hexode Plate Voltage	100	250 volts
Hexode Screen Voltage	100	100 volts
Hexode Control-Grid Voltage	-3	-3 volts
Triode Plate Voltage	100	100 volts
Triode Grid Resistor	50000	50000 ohms
Hexode Plate Resistance (approx.)	0.4	0.6 megohm
Conversion Transconductance	325	350 $\mu$ hos
Conversion Transcond. with Hexode Grid #3 Bias of -30 volts (approx.)		
Hexode Plate Current	2	2 ma.
Hexode Screen Current	2.3	2.5 ma.
Hexode Screen Current	6.2	6.0 ma.
Triode Plate Current	3.8	3.8 ma.
Triode Grid & Hexode Grid #1 Current	0.15	0.15 ma.
Total Cathode Current	12.5	12.5 ma.

NOTE: The transconductance of the triode section, not oscillating, is approximately 3000  $\mu$ hos when the triode plate volts=100 and the triode grid volts = 0.

$\blacksquare$  In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

$\Delta$  With close-fitting shield connected to cathode.

$\circ$  With shell connected to cathode.

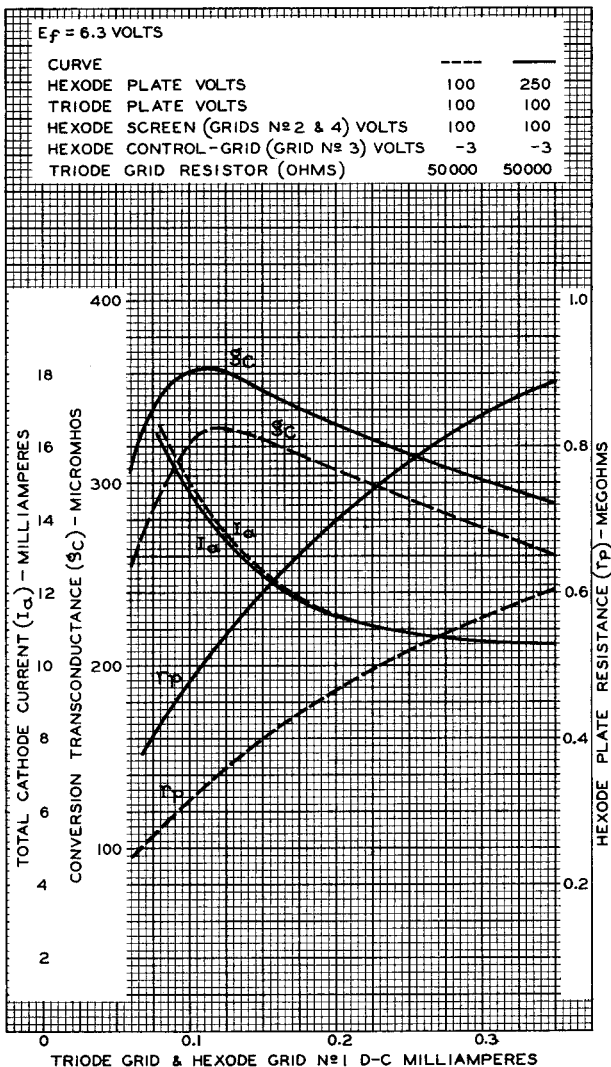
$\leftarrow$  Indicates a change.

6K8



6K8

## OPERATION CHARACTERISTICS



APRIL 8, 1938

RCA RADOTRON DIVISION  
RCA MANUFACTURING COMPANY, INC.

92C-4866R1