

## HIGH PERVEANCE TRIODE - SHARP CUTOFF PENTODE TYPE 7734

The 7734 is a 9-pin miniature high perveance triode and sharp cutoff pentode type designed for service in electronically regulated power supplies. The triode unit is used as a series regulating tube which is controlled by the pentode unit acting as a d-c amplifier. Heater-cathode leakage and hum are controlled in pentode unit.

### ELECTRICAL:

Cathodes . . . . .	Coated Unipotential
Heater:	
Voltage . . . . .	6.3 Volts
Current . . . . .	0.90 Ampere
Direct Interelectrode Capacitances (Unshielded)	
Triode Unit:	
Grid to Plate . . . . .	7.5 $\mu\mu\text{f}$
Input . . . . .	5.5 $\mu\mu\text{f}$
Output . . . . .	1.3 $\mu\mu\text{f}$
Pentode Unit:	
Grid 1 to Plate . . . . .	0.2 $\mu\mu\text{f}$
Input . . . . .	8.0 $\mu\mu\text{f}$
Output . . . . .	2.4 $\mu\mu\text{f}$

### MAXIMUM RATINGS

Design Maximum Values	Pentode Triode		
	Unit	Unit	
Plate Voltage . . . . .	330	275	max. Volts
Grid 2 Supply Voltage . . . . .	275	--	max. Volts
Grid 2 Voltage . . . . .	See Grid 2 Input Rating Curve		
Plate Dissipation . . . . .	1.0	7.0	max. Watts
Grid 2 Dissipation . . . . .	0.5	--	max. Watts
Cathode Current:			
Average . . . . .	--	50	max. Ma.
Peak . . . . .	--	175	max. Ma.
Heater Cathode Voltage:			
Heater Negative with Respect to Cathode . . . . .	300	300	max. Volts
Heater Positive with Respect to Cathode . . . . .	100	100	max. Volts

### MECHANICAL:

Bulb . . . . .	T-6½
Base . . . . .	9-Pin Miniature (JEDEC E9-1)
Outline . . . . .	6-3
Basing . . . . .	9LC
Mounting Position . . . . .	Any

### AVERAGE CHARACTERISTICS

	Pentode	Triode	
Plate Voltage . . . . .	150	150	Volts
Grid 2 Voltage . . . . .	150	--	Volts
Grid 1 Voltage . . . . .	-2	-21	Volts
Plate Resistance . . . . .	34000	1,080	Ohms
Transconductance . . . . .	3200	5000	$\mu\text{mhos}$
Amplification Factor . . . . .	--	5.4	
Grid 1 Cutoff Voltage . . . . .	-8 $\phi$	-42 $\phi$	Volts
Plate Current . . . . .	5.5	35	Ma.
Grid 2 Current . . . . .	1.7	--	Ma.

### LIMITING CIRCUIT VALUES

Grid Circuit Resistance:			
Self Bias . . . . .	2.2	2.2	max. Megohms

### Zero Bias Characteristic (Triode Unit)

Plate Voltage . . . . .	50	Volts
Grid Voltage . . . . .	0	Volts
Plate Current . . . . .	70	Ma.

### Plate Resistance Characteristic (Pentode Unit)

Plate Voltage . . . . .	100	Volts
Grid 2 Voltage . . . . .	50	Volts
Plate Current . . . . .	100	$\mu\text{amperes}$
Plate Resistance . . . . .	>7	Megohms

\* For plate current of 50 microamperes.  
 † For plate current of 500 microamperes.

### Equivalent Noise and Hum (Pentode Section)

Referenced to the grid. Conditions as follows:

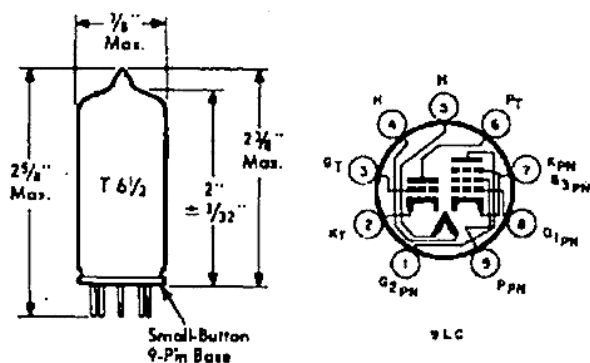
Plate and Screen Grid Supply Voltage	225	V.D.C.
Plate Load Resistor	250,000	ohms
Screen Grid Series Resistor	1,000,000	ohms
Cathode Resistor	5,100	ohms
Heater voltage	6.3	V.A.C.

Heater Transformer Center Tap Tied to Ground.

Measured with an amplifier having bandwidth of 25 to 10,000 cps.

Average with grid resistor 1 megohm and 2000  $\mu\text{f}$  cathode by-pass capacitor: 15  $\mu$  volts rms.

Average with grid resistor 1 megohm and cathode resistor unby-passed: 80  $\mu$  volts rms.



### Receiving Tube Section

WESTINGHOUSE ELECTRIC CORPORATION, ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK