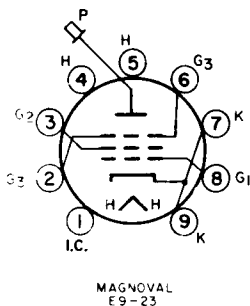


# AMPEREX TUBE TYPE 8608

## TENTATIVE DATA

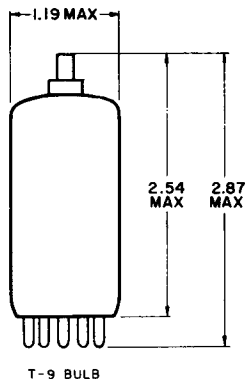
The 8608 is a Premium Quality power pentode having 10 watts of plate dissipation and a transconductance of 45,000 micromhos at 50 ma. It is particularly suited for use as a wideband video amplifier in applications requiring low output capacitance.

The 8608 is constructed in a magnoval envelope with double frame grids affording high gain and high dissipation with excellent uniformity.



### PIN CONNECTIONS

1. INTERNAL CONNECTION
  2. GRID NO.3
  3. GRID NO.2
  4. HEATER
  5. HEATER
  6. GRID NO.3
  7. CATHODE
  8. GRID NO.1
  9. CATHODE
- P. PLATE CAP



## GENERAL CHARACTERISTICS

### MECHANICAL

Bulb  
Base  
Dimensions

See outline drawing  
Magnoval, E9-23  
See outline drawing

### ELECTRICAL

Heating  
Heater Voltage,  $E_f$   
Heater Current,  $I_f$

Indirect, parallel supply, AC or DC  
6.3 volts  $\pm$  5%  
600 ma

### Interelectrode Capacitances

	Without External Shield	
Output, $C_{out}$	3.2	pf
Input, $C_{in}$	18	pf
Input with Cathode Current = 55.5 ma	28	pf
Plate to Control Grid, $C_{pg}$ (Avg.)	.110	pf
Plate to Control Grid, $C_{pg}$ (Max.)	.150	pf
Plate to Cathode, $C_{pk}$	0.125	pf
Control Grid to Heater, $C_{g1h}$ (Avg.)	0.06	pf
Plate to Heater, $C_{ph}$ (Avg.)	0.087	pf
Cathode to Heater, $C_{kh}$ (Avg.)	5.5	pf

# 8608

## Maximum Ratings, Absolute Values

	<u>Symbol</u>	<u>Values</u>
Plate Voltage, Zero Plate Current	$E_{bb}$	300 volts
Plate Voltage	$E_b$	150 volts
Plate Dissipation	$P_p$	10 watts
Screen Grid Voltage, Zero Screen Grid Current		300 volts
Screen Grid Voltage	$E_{c2}$	150 volts
Screen Grid Dissipation	$P_{g2}$	1.5 watts
Control Grid Voltage (Negative)	$E_{c1}$	-55 volts
Control Grid Voltage (Positive)	$E_{c1}$	0 volts
Cathode Current	$I_k$	75 ma <sup>1</sup>
Control Grid Circuit Resistance	$R_g$	125 kohms
Voltage Between Heater and Cathode	$E_{hk}$	180 volts
Bulb Temperature		200 °C

## Operating Conditions

Plate Voltage	140 volts <sup>2</sup>
Screen Grid Voltage	140 volts <sup>2</sup>
Suppressor Grid Voltage	0 volts
Control Grid Voltage	+12 volts <sup>2</sup>
Cathode Resistor	270 ohms
Plate Current	50 ma
Screen Grid Current	5.5 ma
Transconductance	45000 $\mu$ mhos

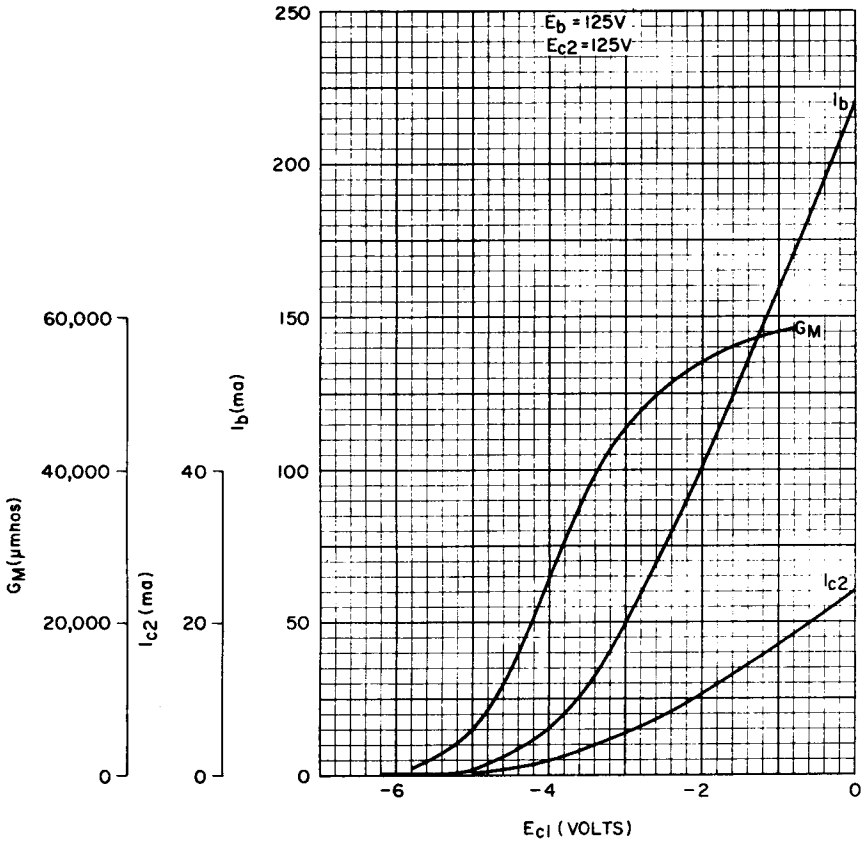
## Typical Characteristics

	<u>Pentode</u>	<u>Triode</u> <sup>3</sup>
Plate Voltage	125	125 volts
Screen Grid Voltage	125	- volts
Suppressor Grid Voltage	0	0 volts
Control Grid Voltage	-3	-3 volts
Plate Current	50	55.5 ma
Screen Grid Current	5.5	- ma
Transconductance	45000	50000 $\mu$ mhos
Plate Resistance, $r_p$	20000	- ohms
Amplification Factor ( $\mu g_2 g_1$ ) or MU Factor	30	-
Amplification Factor	-	30
Input Resistance (at 100 mc)	350	- ohms

## Input Damping ( $f=100$ mc; $G_m = 45000$ $\mu$ mhos)

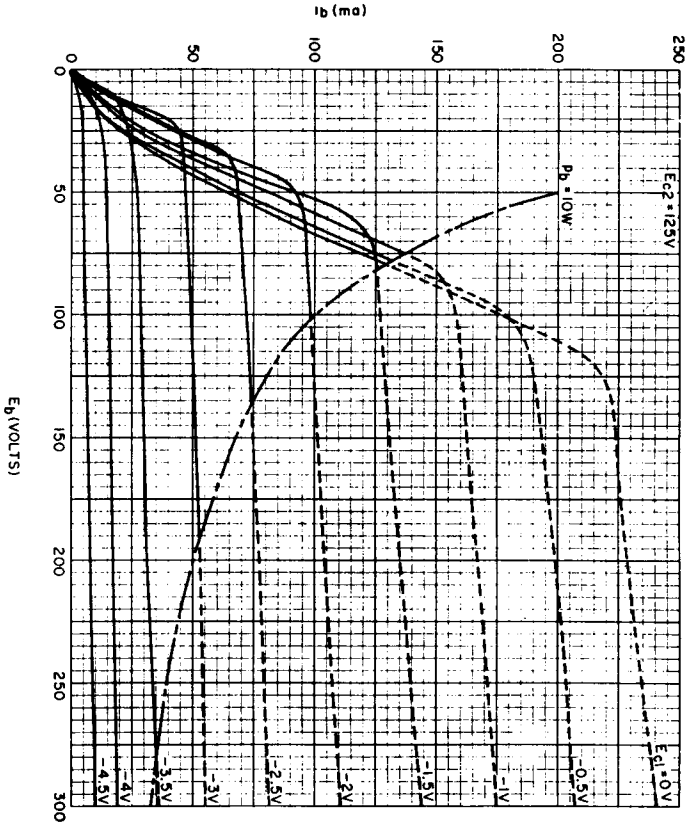
Transit Time	230 $\mu$ amps/volt
Cathode Lead Inductance	4170 $\mu$ amps/volt
Total	4400 $\mu$ amps/volt

1. In applications where a long life is not required, the cathode current can equal 100 ma and the bulb temperature can be increased to 220° C.
2. With respect to ground
3. Plate connected to screen grid



TYPICAL CURRENT CHARACTERISTICS AS A FUNCTION OF CONTROL GRID VOLTAGE (PENTODE CONNECTED)

FIGURE 1



TYPICAL PLATE CHARACTERISTICS  
FIGURE 2