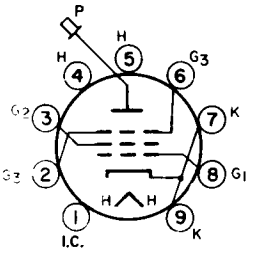
AMPEREX TUBE TYPE 8608

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.

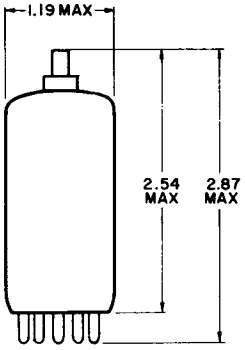


MAGNOVAL
E9-23

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



T-9 BULB

GENERAL CHARACTERISTICS

MECHANICAL

Bulb	See outline drawing
Base	Magnoval, E9-23
Dimensions	See outline drawing

ELECTRICAL

Heating	Indirect, parallel supply, AC or DC
Heater Voltage, E_f	6.3 volts ± 5%
Heater Current, I_f	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

	Symbol	Values
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[1]
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[2]
Screen Grid Voltage	140 volts[2]
Suppressor Grid Voltage	0 volts
Control Grid Voltage	+12 volts[2]
Cathode Resistor	270 ohms
Plate Current	50 ma
Screen Grid Current	5.5 ma
Transconductance	45000 μmhos

Typical Characteristics

	Pentode	Triode[3]
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 μmhos
Plate Resistance, r_p	20000	- ohms
Amplification Factor ($\mu_{g2\,g1}$) or MU Factor	30	-
Amplification Factor	-	30
Input Resistance (at 100 mc)	350	- ohms

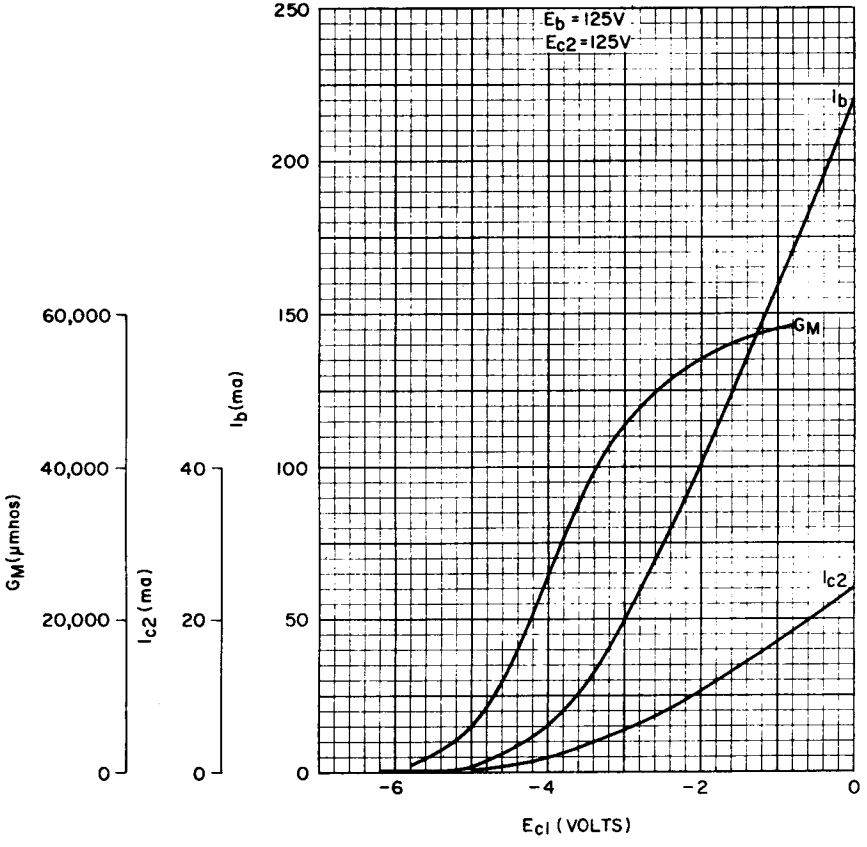
Input Damping (f=100 mc; G_m = 45000 μmhos)

Transit Time	230 μamps/volt
Cathode Lead Inductance	4170 μamps/volt
Total	4400 μamps/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.

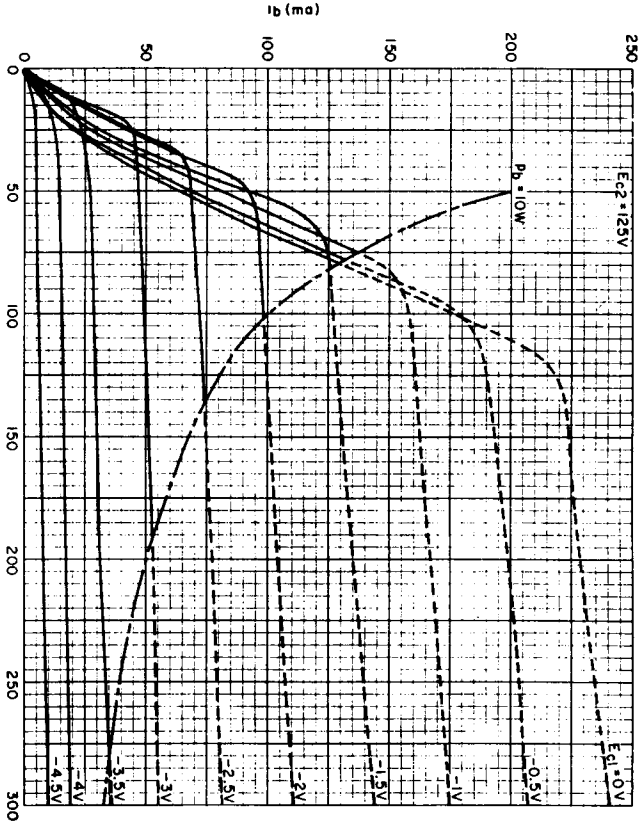
2. With respect to ground

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