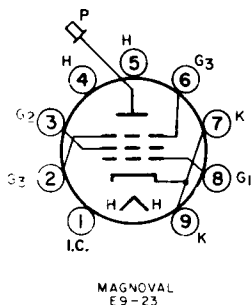


AMPEREX TUBE TYPE 8608

TENTATIVE DATA

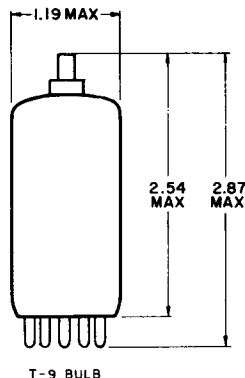
The 8608 is a Premium Quality power pentode having 10 watts of plate dissipation and a transconductance of 45,000 micromhos at 50 ma. It is particularly suited for use as a wideband video amplifier in applications requiring low output capacitance.

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

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 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 μ mhos

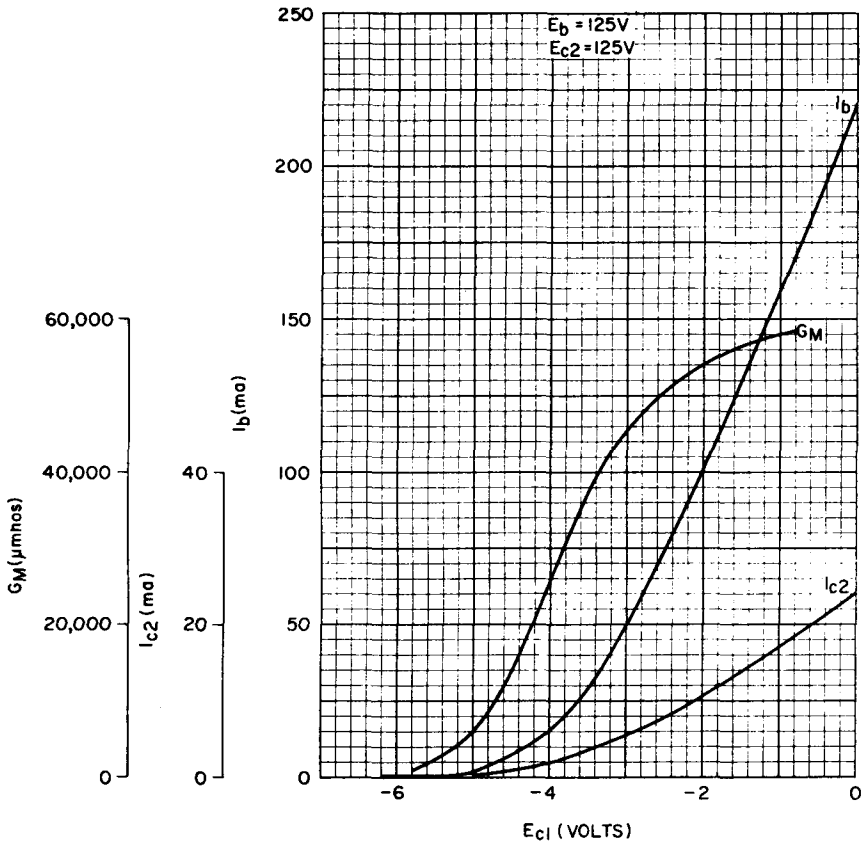
Typical Characteristics

	<u>Pentode</u>	<u>Triode</u> 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 μ 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; $G_m = 45000$ μ mhos)

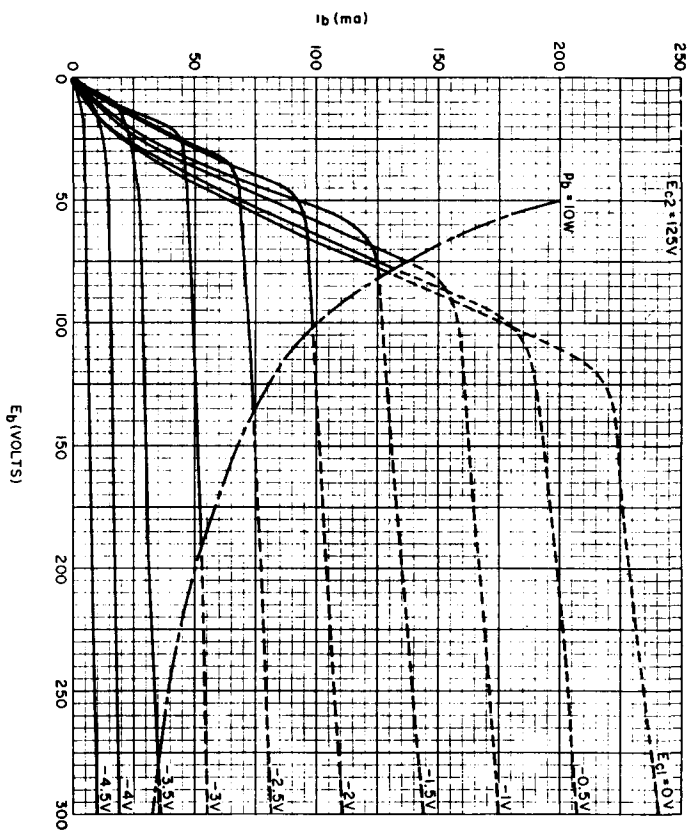
Transit Time	230 μ amps/volt
Cathode Lead Inductance	4170 μ amps/volt
Total	4400 μ amps/volt

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