

# 6BM8/ECL82

## High-Mu Triode—Power Pentode

### Electrical:

#### Heater Characteristics and Ratings:

Voltage (AC or DC) . . . . .	6.3 ± 0.6	volts
Current at heater volts = 6.3 . . . . .	0.780	amp
Peak heater-cathode voltage. . . . .	100	volts

#### Direct Interelectrode Capacitances:

##### Triode Unit:

Grid to plate. . . . .	4.0	pf
Input: $G_T$ to ( $K_T$ , H). . . . .	2.7	pf
Output: $P_T$ to ( $K_T$ , H) . . . . .	4.0	pf
Grid to heater . . . . .	0.1 max.	pf

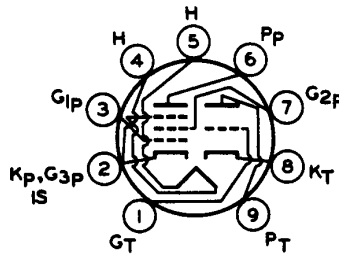
##### Pentode Unit:

Grid No.1 to plate . . . . .	0.3 max.	pf
Input: $G_{1P}$ to ( $K_P + G_{3P} + I_S$ , $G_{2P}$ , H) . . . . .	9.3	pf
Output: $P_P$ to ( $K_P + G_{3P} + I_S$ , $G_{2P}$ , H) . . . . .	8.0	pf
Grid-No.1 to heater. . . . .	0.3 max.	pf
Triode plate to pentode grid No.1. . . . .	0.02 max.	pf
Triode grid to pentode plate . . . . .	0.02 max.	pf
Triode grid to pentode grid No.1 . . . . .	0.025 max.	pf
Triode plate to pentode plate. . . . .	0.25 max.	pf

### Mechanical:

Operating Position . . . . .	Any
Type of Cathodes . . . . .	Coated Unipotential
Maximum Overall Length . . . . .	3-1/16"
Maximum Seated Length. . . . .	2-13/16"
Length, Base Seat to Bulb Top (Excluding tip). . . . .	2-7/16" ± 3/32"
Diameter . . . . .	0.750" to 0.875"
Dimensional Outline (JEDEC No.6-4) . . . . .	See <i>General Section</i>
Bulb . . . . .	T6-1/2
Base . . . . .	Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW . . . . .	9EX

- Pin 1—Triode Grid
- Pin 2—Pentode Cathode,  
Grid No.3, Internal  
Shield
- Pin 3—Pentode Grid No.1
- Pin 4—Heater
- Pin 5—Heater
- Pin 6—Pentode Plate
- Pin 7—Pentode  
Grid No.2
- Pin 8—Triode Cathode
- Pin 9—Triode Plate



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## CLASS A<sub>1</sub> AMPLIFIER

### Characteristics:

	Triode Unit	Pentode Unit	
Plate Voltage. . . . .	100	200	volts
Grid-No.2 Voltage. . . . .	-	200	volts
Grid-No.1 Voltage. . . . .	0	-16	volts
Grid-No.1 Voltage (RMS). . . . .	-	6.6	volts
Amplification Factor . . . . .	70	9.5 <sup>a</sup>	
Plate Resistance (Approx.) . . . . .	-	20000	ohms
Transconductance . . . . .	2500	6400	μmhos
Plate Current. . . . .	3.5	35 <sup>b</sup>	ma
Zero-Signal Grid-No.2 Current. . . . .	-	7	ma
Load Resistance. . . . .	-	5600	ohms
Total Harmonic Distortion. . . . .	-	10	%
Max.-Signal Power Output . . . . .	-	3.5	watts

### Maximum Ratings, Design-Center Values:

Plate Supply Voltage . . . . .	550	900	volts
Plate Voltage. . . . .	300	600	volts
Grid-No.2 Supply Voltage . . . . .	-	550	volts
Grid-No.2 Voltage. . . . .	-	300	volts
Grid-No.2 Input. . . . .	-	1.8	watts
Plate Dissipation. . . . .	1	<sup>c</sup>	watts
Average Cathode Current. . . . .	15	50	ma

### Maximum Circuit Values:

#### Grid-No.1-Circuit Resistance:

For fixed-bias operation . . . . .	1	1	megohm
For cathode-bias operation . . . . .	2	2	megohms
Between heater and cathode . . . . .	0.02	0.02	megohm

<sup>a</sup> Grid No.2 to grid No.1.

<sup>b</sup> Zero-signal plate current.

<sup>c</sup> At plate voltage less than 250 volts, maximum plate dissipation is 7 watts;  
at plate voltage greater than 250 volts, maximum plate dissipation is 5 watts.

