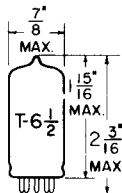


## TUNG-SOL

## TRIODE PENTODE



GLASS BULB

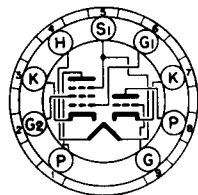
UNIPOTENTIAL CATHODES

HEATER

6.3 VOLTS 0.45 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

SMALL-BUTTON NOVAL  
9 PIN BASE

9ED

THE 6AZ8 IS A MEDIUM MU TRIODE AND A SEMI-REMOTE CUTOFF PENTODE IN THE 9-PIN MINIATURE CONSTRUCTION. IT IS INTENDED FOR GENERAL PURPOSE APPLICATIONS IN BOTH MONOCHROME AND COLOR TELEVISION RECEIVERS. THE PENTODE UNIT HAS HIGH TRANSCONDUCTANCE AND A SEMI REMOTE CUTOFF CHARACTERISTIC WHICH MINIMIZES CROSS-MODULATION EFFECTS AND OVERLOAD DISTORTION IN PICTURE IF STAGES. IT MAY BE USED AS AN INTERMEDIATE FREQUENCY AMPLIFIER, VIDEO AMPLIFIER, AGC AMPLIFIER, AND AS A REACTANCE TUBE. THE TRIODE UNIT, WHICH HAS A RELATIVELY HIGH ZERO-BIAS PLATE CURRENT, IS WELL SUITED FOR USE IN LOW-FREQUENCY OSCILLATOR SYNC-SEPARATOR, SYNC-CLIPPER, AND PHASE SPLITTER CIRCUITS.

## DIRECT INTERELECTRODE CAPACITANCES

WITHOUT EXTERNAL SHIELD

## TRIODE UNIT:

GRID #1 TO PLATE	1.7	$\mu\text{f}$
GRID TO HEATER & INTERNAL SHIELD, & CATHODE	2	$\mu\text{f}$
PLATE TO HEATER & INTERNAL SHIELD, & CATHODE	1.7	$\mu\text{f}$

## PENTODE UNIT:

GRID #1 TO PLATE (MAX.)	0.02	$\mu\text{f}$
GRID #1 TO HEATER & INTERNAL SHIELD & GRID #3, GRID #2, AND CATHODE	6.5	$\mu\text{f}$
PLATE TO HEATER & INTERNAL SHIELD & GRID #3, GRID #2, AND CATHODE	2.2	$\mu\text{f}$
TRIODE GRID TO PENTODE PLATE (MAX.)	0.027	$\mu\text{f}$
PENTODE GRID #1 TO TRIODE PLATE (MAX.)	0.020	$\mu\text{f}$
PENTODE PLATE TO TRIODE PLATE (MAX.)	0.045	$\mu\text{f}$

## RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM  
CLASS A<sub>1</sub> AMPLIFIER

	TRIODE UNIT	PENTODE UNIT	
HEATER VOLTAGE		6.3	VOLTS
MAXIMUM PLATE VOLTAGE	300	300	VOLTS
MAXIMUM GRID #2 SUPPLY VOLTAGE	---	300	VOLTS
MAXIMUM GRID #2 (SCREEN) VOLTAGE	---	SEE RATING CHART	
MAXIMUM GRID #1 (CONTROL-GRID) VOLTAGE:			
POSITIVE BIAS VALUE	0	0	VOLTS
MAXIMUM PLATE DISSIPATION	2.6 ←	2	WATTS

← INDICATES A CHANGE.

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

**RATINGS - CONT'D.**  
 INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM  
 CLASS A<sub>1</sub> AMPLIFIER

	TRIODE UNIT	PENTODE UNIT	
MAXIMUM GRID #2 INPUT:			
FOR GRID #2 VOLTAGES UP TO 150 VOLTS	---	0.5	WATT
FOR GRID #2 VOLTAGES BETWEEN 150 & 300 VOLTS	---	SEE RATING CHART	
MAXIMUM PEAK HEATER-CATHODE VOLTAGE:			
HEATER NEGATIVE WITH RESPECT TO CATHODE	200	A	VOLTS
HEATER POSITIVE WITH RESPECT TO CATHODE	200 <sup>B</sup>	A	VOLTS

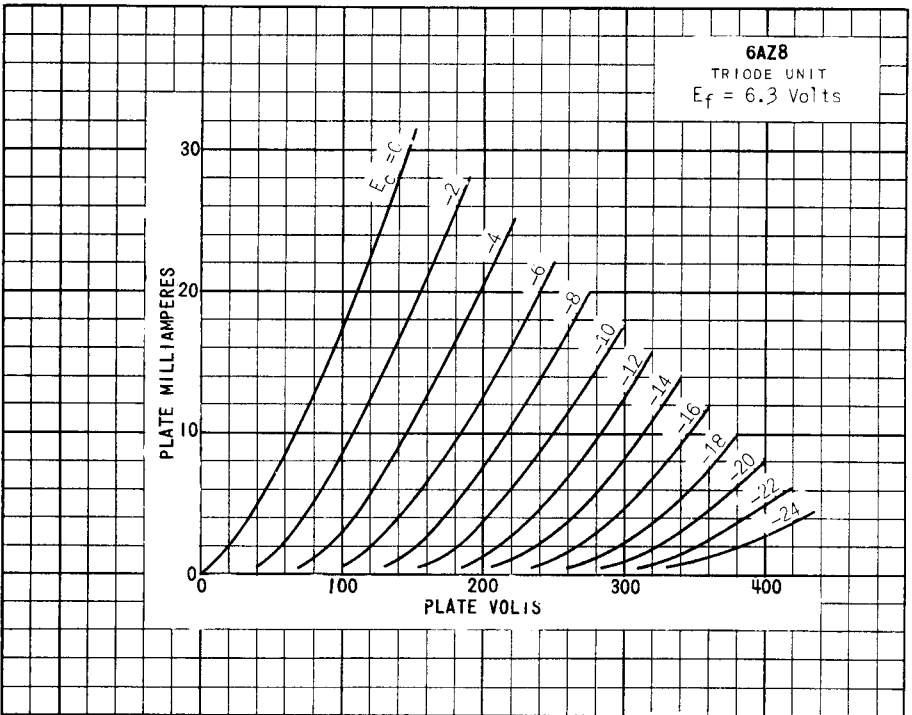
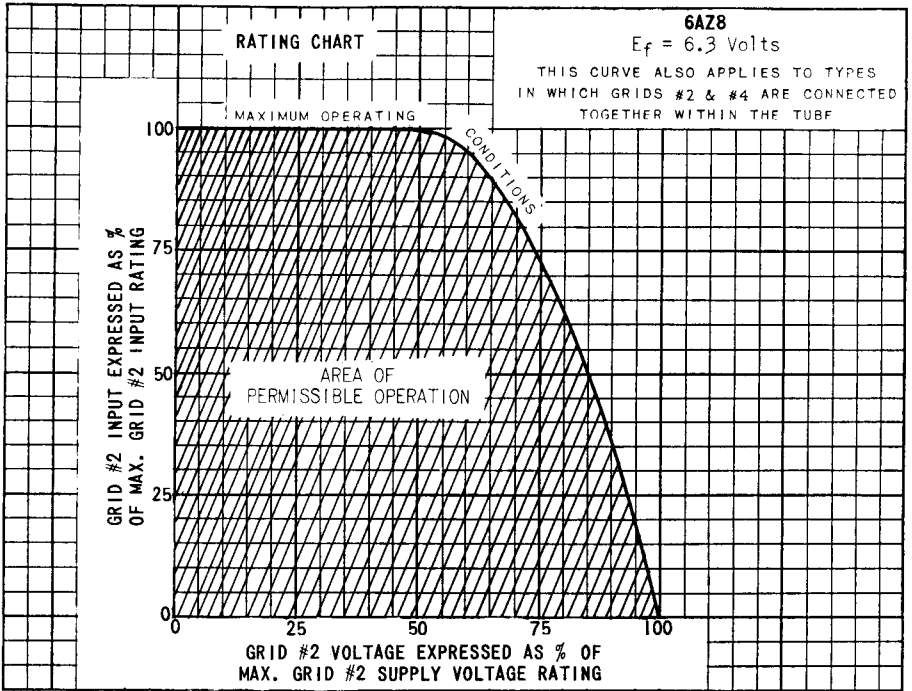
**TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS**  
 CLASS A<sub>1</sub> AMPLIFIER

	TRIODE UNIT	PENTODE UNIT	
HEATER VOLTAGE		6.3	VOLTS
HEATER CURRENT		0.45	AMP.
PLATE SUPPLY VOLTAGE	200	200	VOLTS
GRID #2 SUPPLY VOLTAGE	---	150	VOLTS
GRID #1 VOLTAGE	-6	---	VOLTS
CATHODE-BIAS RESISTOR	---	180	OHMS
AMPLIFICATION FACTOR	19	---	
PLATE RESISTANCE (APPROX.)	5 750	300 000	OHMS
TRANSCONDUCTANCE	3 300	6 000	μMHOS
GRID #1 VOLTAGE (APPROX.) FOR PLATE CURRENT OF 10 μAMP	-19	---	VOLTS
GRID #1 VOLTAGE (APPROX.) FOR TRANSCONDUCTANCE OF 100 μMHOS	---	-12.5	VOLTS
PLATE CURRENT	13	9.5	MA.
GRID #2 CURRENT	---	3	MA.
GRID #1 CIRCUIT RESISTANCE (MAX.) <sup>C</sup> FOR CATHODE-BIAS OPERATION	1.0	1.0	MEGOHM
FOR FIXED-BIAS OPERATION	0.5	0.25	MEGOHM

<sup>A</sup> THE HEATER-CATHODE VOLTAGE SHOULD NOT EXCEED THE VALUE OF THE OPERATING CATHODE BIAS BECAUSE THE VOLTAGE BETWEEN THE HEATER AND CATHODE IS ALSO APPLIED BETWEEN THE CATHODE AND GRID #3. THE NET RESULT IS TO MAKE GRID #3 NEGATIVE WITH RESPECT TO CATHODE WITH POSSIBLE CHANGE IN TUBE CHARACTERISTICS.

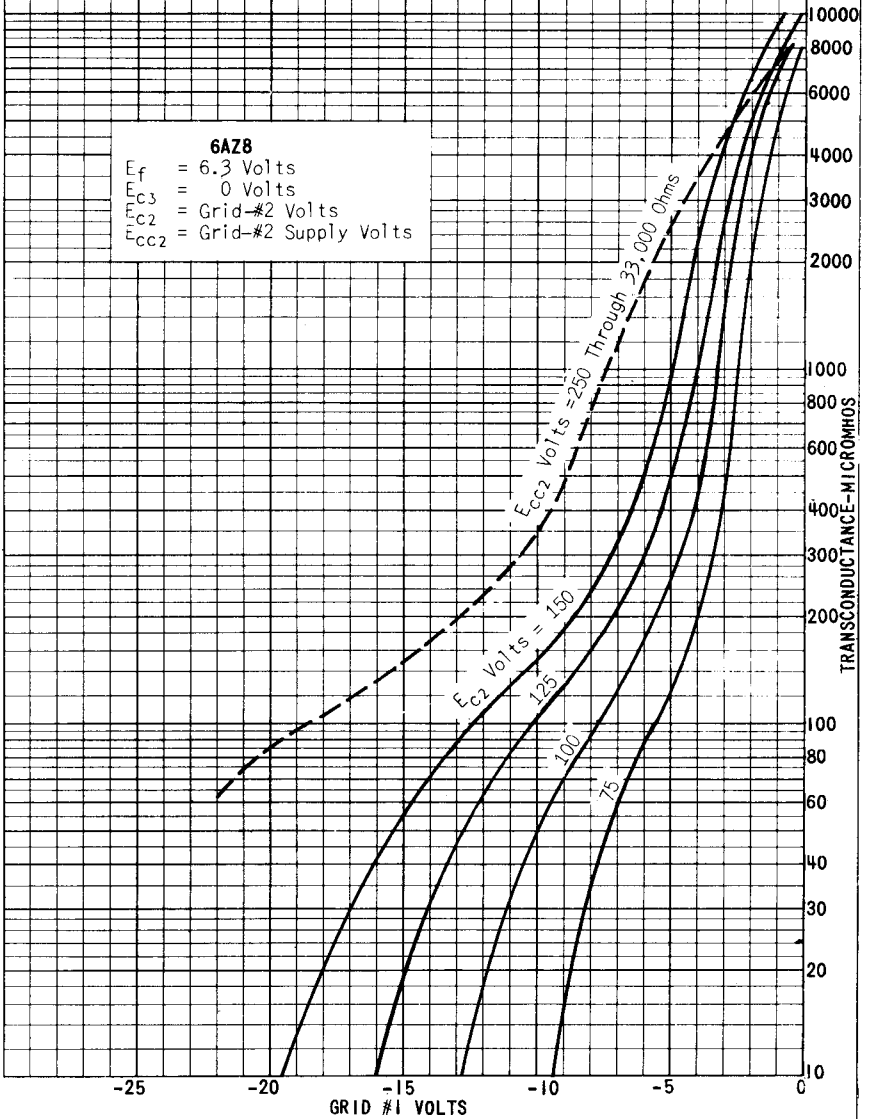
<sup>B</sup> THE DC COMPONENT MUST NOT EXCEED 100 VOLTS.

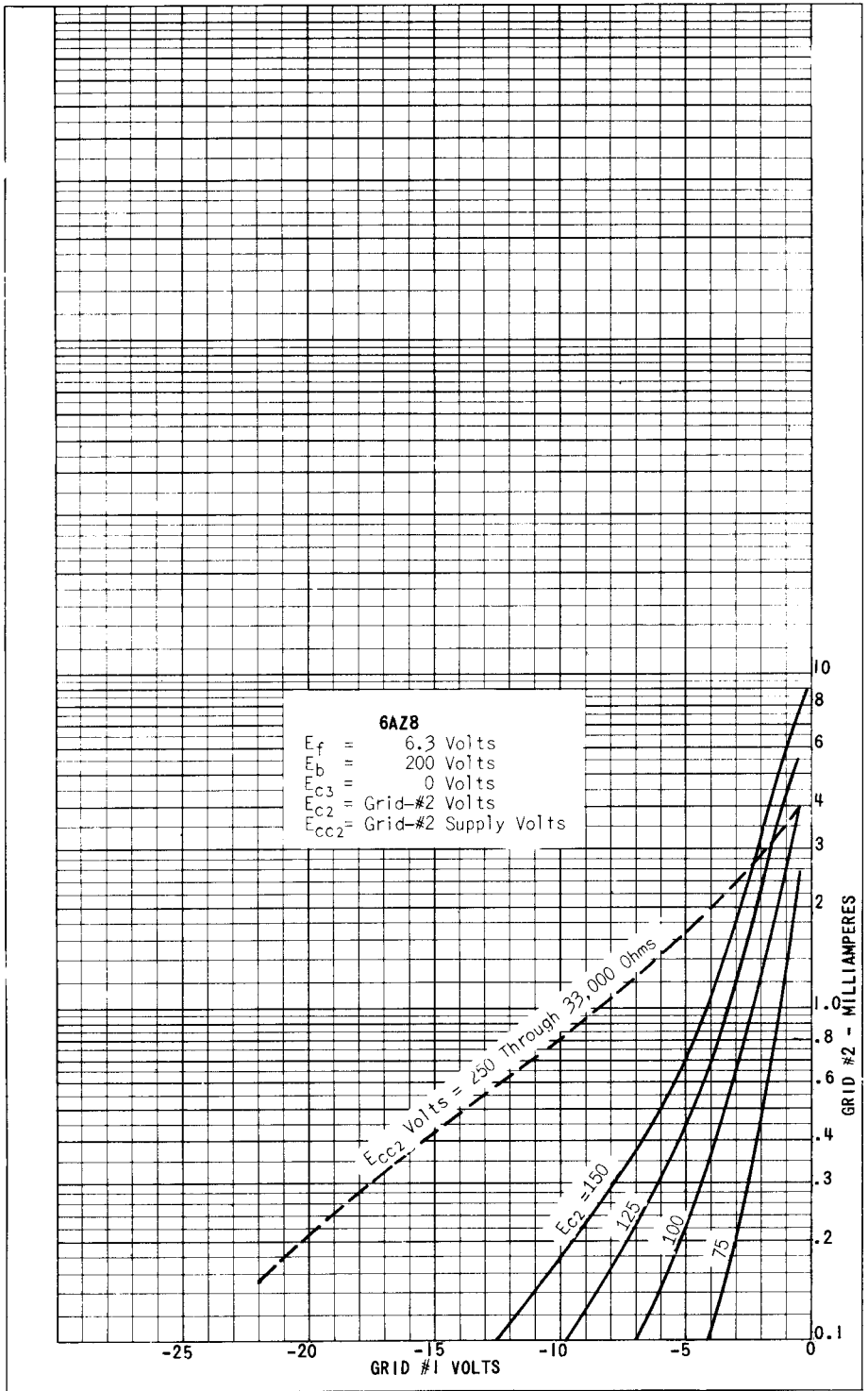
<sup>C</sup> IF EITHER UNIT IS OPERATED AT MAXIMUM RATED CONDITIONS, GRID #1 CIRCUIT RESISTANCES FOR BOTH UNITS SHOULD NOT EXCEED THE STATED VALUES.



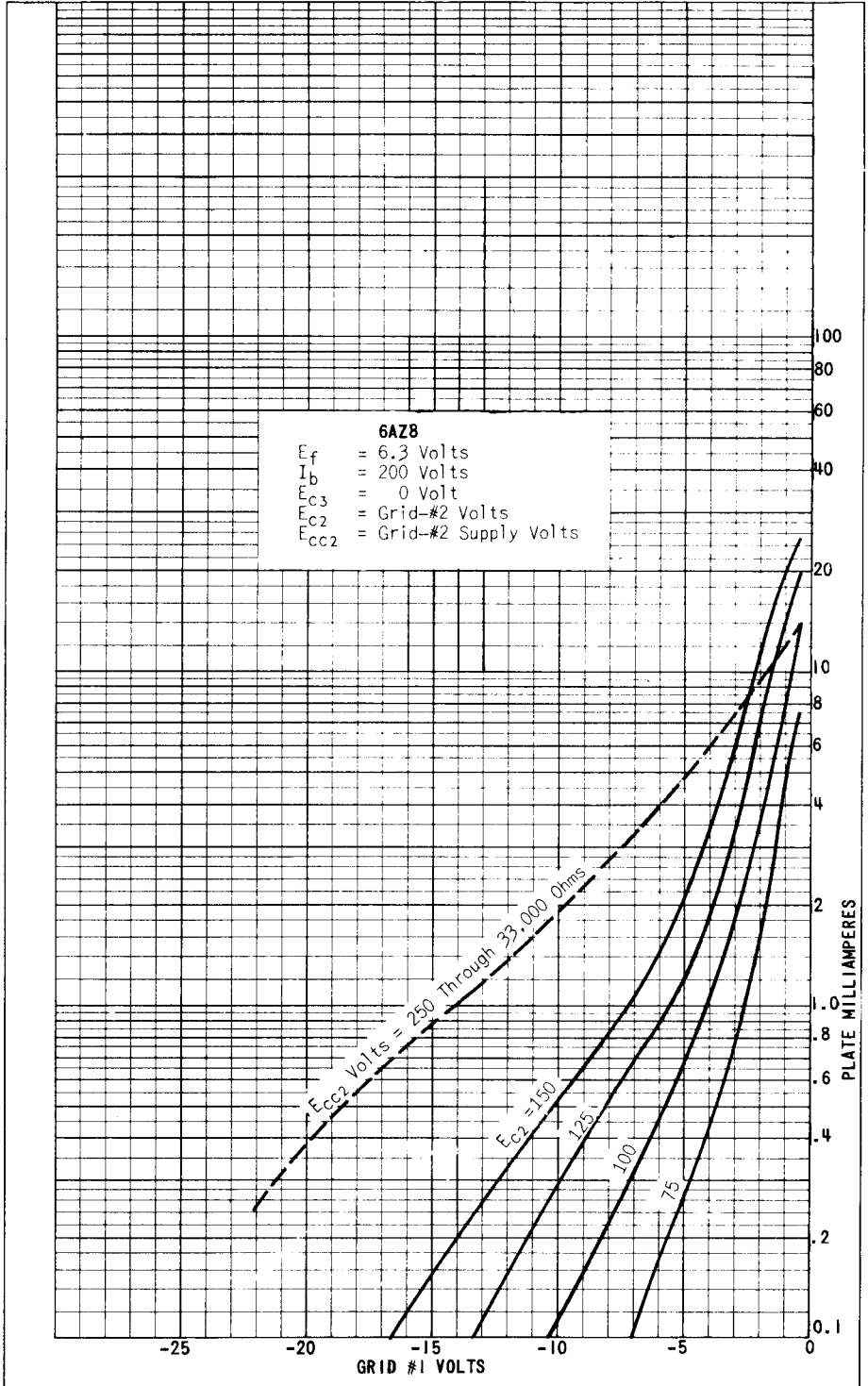
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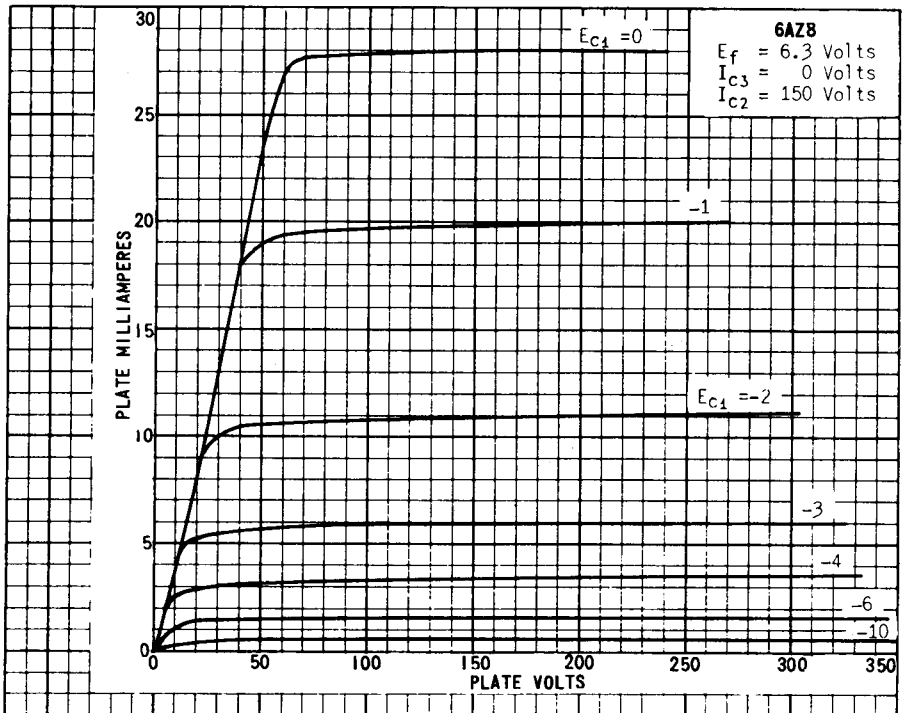
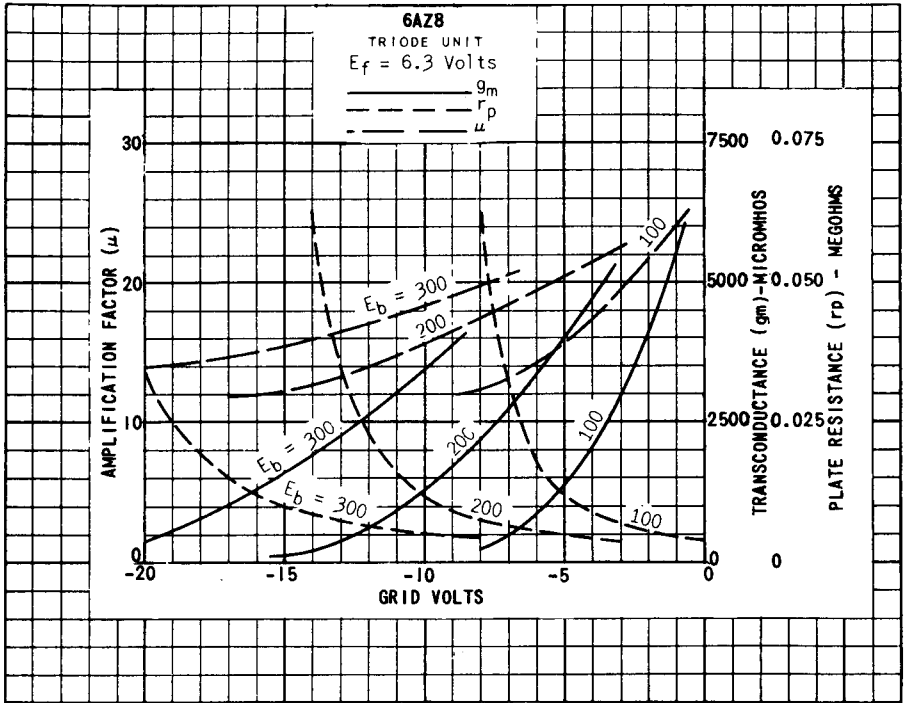
**6AZ8**  
 $E_f = 6.3$  Volts  
 $E_{c3} = 0$  Volts  
 $E_{c2} = \text{Grid-}\#2 \text{ Volts}$   
 $E_{cc2} = \text{Grid-}\#2 \text{ Supply Volts}$





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