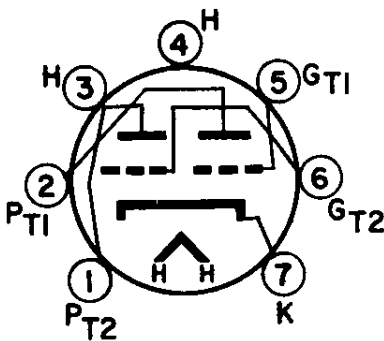


# AMPEREX TUBE TYPE E92CC

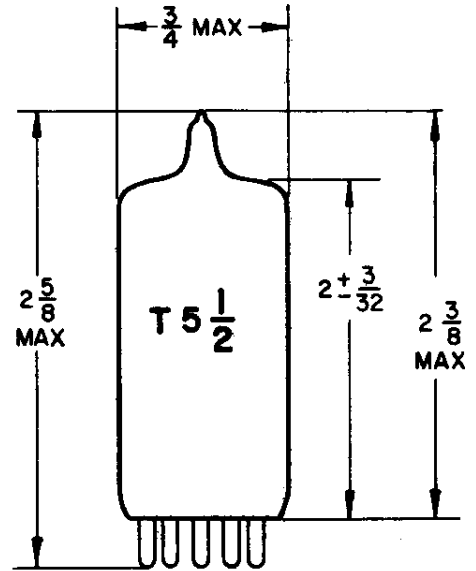
The Amperex E92CC is a reliable miniature twin triode designed for use in computer circuits which are not critical as to hum, microphonics and noise. Operation of the tube for long periods of time under cut-off conditions will not cause deterioration of the emission surface.

The E92CC is one of the Amperex "Premium Quality, 10,000 Hour" tubes.



## PIN CONNECTIONS

- 1- PLATE, TRIODE NO. 2
- 2- PLATE, TRIODE NO. 1
- 3- HEATER
- 4- HEATER
- 5- GRID, TRIODE NO. 1
- 6- GRID, TRIODE NO. 2
- 7- CATHODE



## GENERAL CHARACTERISTICS

### MECHANICAL

- Cathode
- Outline
- Bulb
- Base
- Bulb temperature

coated, unipotential  
 T 5 1/2  
 5-3  
 E 7-1  
 170°C max

### ELECTRICAL

- Heater voltage
- Heater current

6.3 volts  
 400 mA

### Direct Interelectrode Capacitances

#### Triode No. 1

- Input
- Output
- Plate to grid

3.1  $\mu\text{f}$   
 0.38  $\mu\text{f}$   
 2.1  $\mu\text{f}$

#### Triode No. 2

- Input
- Output
- Plate to grid

3.1  $\mu\text{f}$   
 0.32  $\mu\text{f}$   
 2.2  $\mu\text{f}$

#### Between sections

- Grid to grid
- Plate to plate

0.29  $\mu\text{f}$  max  
 2.0  $\mu\text{f}$  max

# E92CC

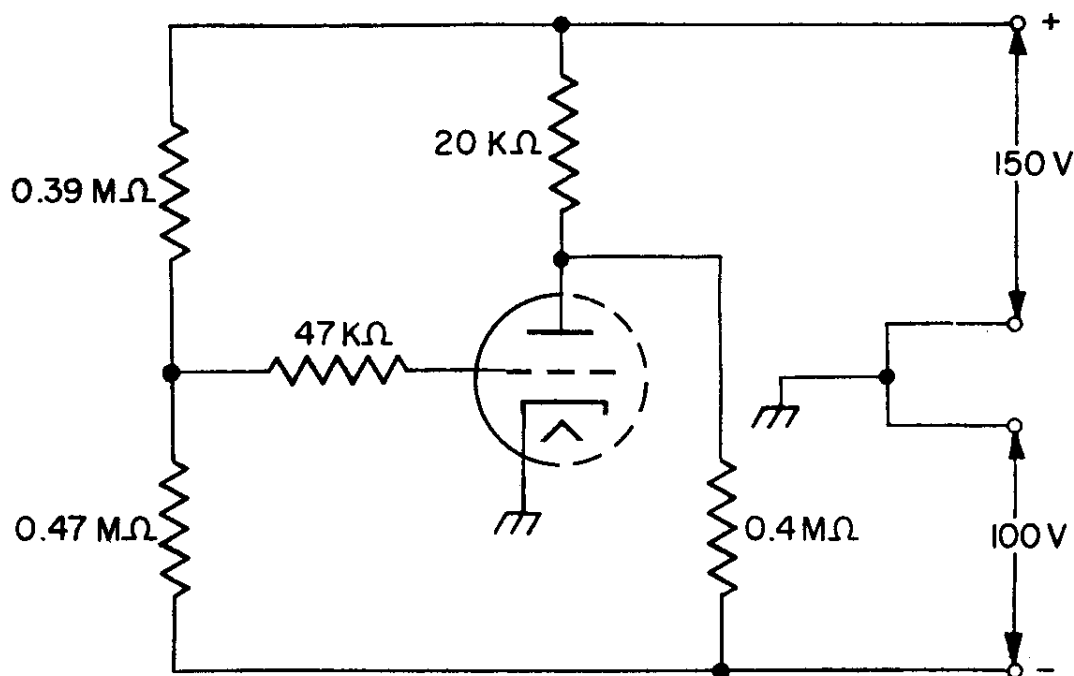
## Maximum Ratings, Absolute Values

Plate supply voltage	600 volts max
Plate voltage	300 volts max
Negative grid voltage	100 volts max
Peak Negative grid voltage	200 volts max
Grid voltage	.5 volts max
Cathode to heater voltage	100 volts max
Cathode current	15 mA max
Peak cathode current	75 mA max
Grid current	250 $\mu$ A max
Peak grid current	1000 $\mu$ A max
Plate dissipation	2 watts max
Grid resistor (automatic bias)	1 megohm max
Grid resistor (fixed bias)	0.5 megohm max
Bulb temperature	170°C max

## Typical Operation, (Each Section)

Plate voltage	150 volts
Plate current	8.5 mA
Negative grid voltage	1.75 volts
Transconductance	6000 micromhos
Amplification Factor	45

### Computer Service



CIRCUIT FOR COMPUTER SERVICE

Plate current	0.1 mA max
Cut-off balance ( $E_{C1} - E_{C2}$ )	2 volts

## Characteristic Range Values for Equipment Design

	<u>Initial Life</u>		<u>End of Life</u> <sup>1</sup>	
	Min	Max	Min	Max
Heater current ( $E_h = 6.3\text{ V}$ )	380	420	380	420 mA
Plate current ( $E_b = 150\text{ V}, E_c = -1.7\text{ V}$ )	4.5	12.5	-	- mA
Plate current ( $E_{bb} = 150\text{ V}, E_c = -10\text{ V}$ $R_p = 20\text{ k}\Omega, R_g = 47\text{ k}\Omega$ )	-	0.1	-	0.1 mA
Negative grid current ( $E_b = 150\text{ V}, E_c = -1.7\text{ V}$ )	-	0.2	-	1 $\mu\text{A}$
Cut-off balance ( $E_{c1} - E_{c2}$ ) ( $E_{bb} = E_{bb}' = 150\text{ V}, R_q = R_q' = 47\text{ k}\Omega,$ $R_p = R_p' = 20\text{ k}\Omega, I_a = I_a' = 0.1\text{ mA}$ )	-	2	-	2 volts
Cathode to Heater current (cathode positive, $R_{\text{series}} = 1\text{ meg},$ $V_{hk} = 100\text{ V}$ )	-	15	-	30 $\mu\text{A}$
Plate resistor current (see Fig. 1)	5.1	5.9	4.75	- mA
Transconductance ( $E_b = 150\text{ V}, R_k = 200\ \Omega$ )	4500	7500	-	- micromhos
Insulation Resistance (between two arbitrary electrodes)	20	-	20	- megohms

### Direct Interelectrode Capacitances

	Min	Max
<u>Triode No. 1</u>		
Input	2.2	4.0 $\mu\text{mf}$
Output	0.28	0.48 $\mu\text{mf}$
Plate to grid	1.7	2.5 $\mu\text{mf}$
<u>Triode No. 2</u>		
Input	2.2	4.0 $\mu\text{mf}$
Output	0.22	0.42 $\mu\text{mf}$
Plate to grid	1.8	2.6 $\mu\text{mf}$
<u>Between Sections</u>		
Grid to grid	-	0.29 $\mu\text{mf}$
Plate to plate	-	2.0 $\mu\text{mf}$

<sup>1</sup> Conditions of life test (see Figure 1)

Heater voltage	6.3 volts	Heater-cathode voltage	
Plate supply voltage	165 volts	(cathode negative)	100 volts
Plate voltage	100 volts	Input voltage at frequency ca. 300 c/s	

S = 1:10

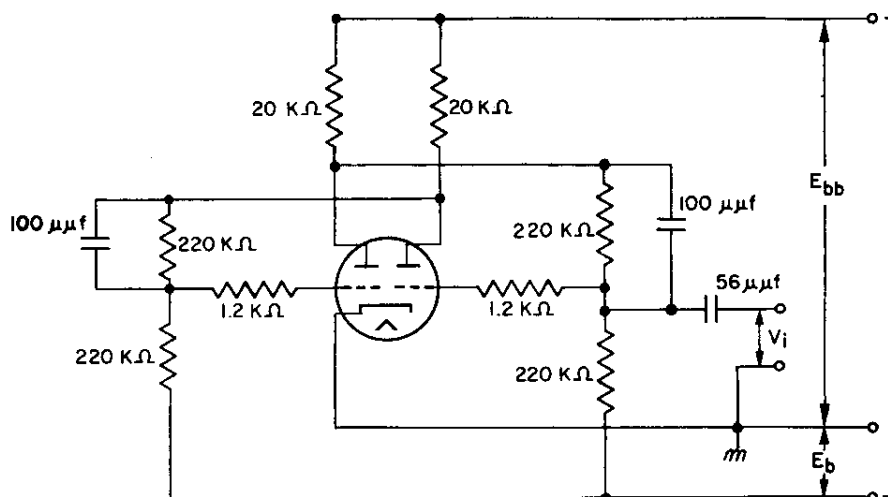
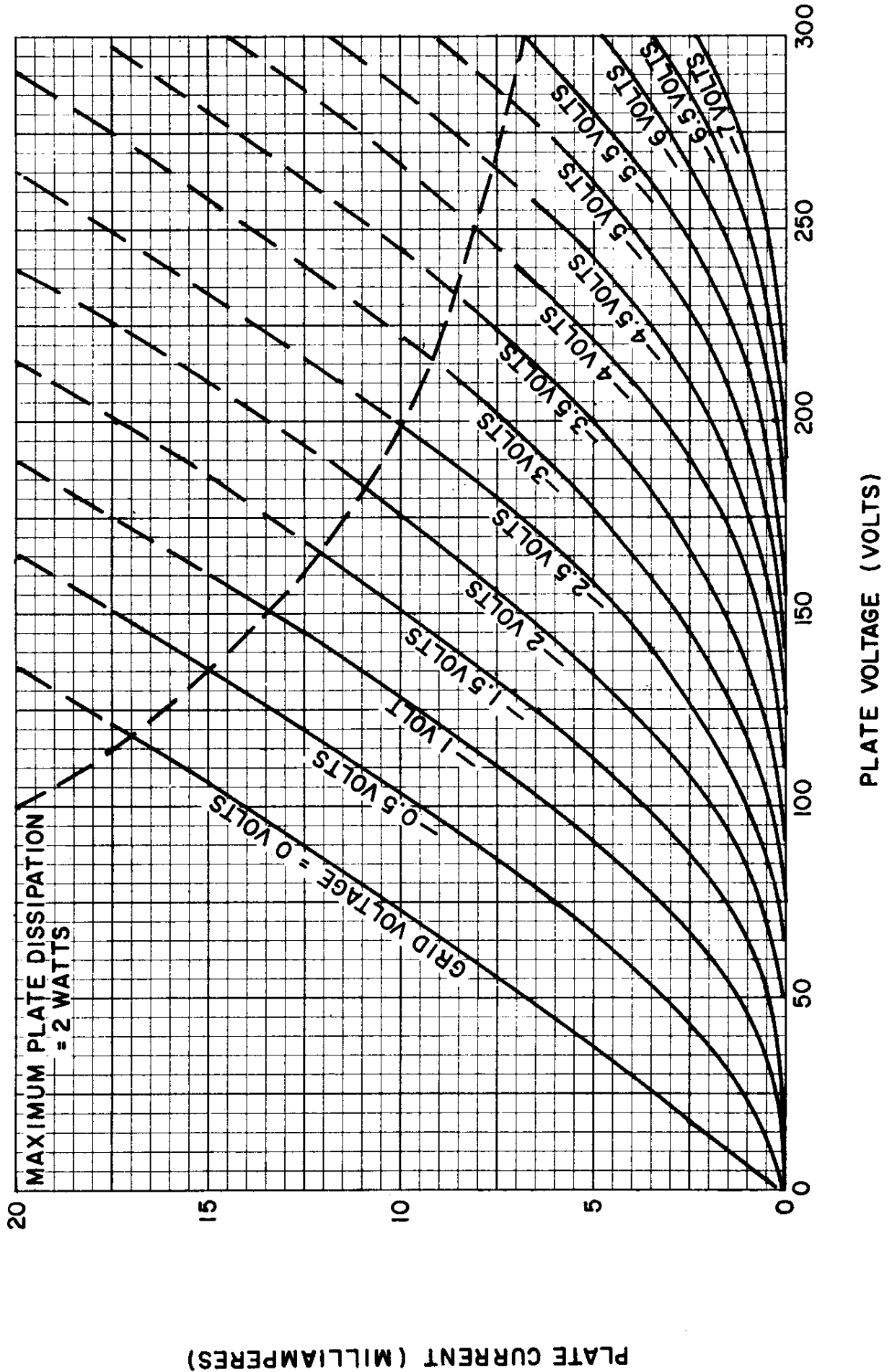


FIG. 1

# E92CC

## PLATE CURRENT CHARACTERISTICS



## TRANSFER CHARACTERISTICS

