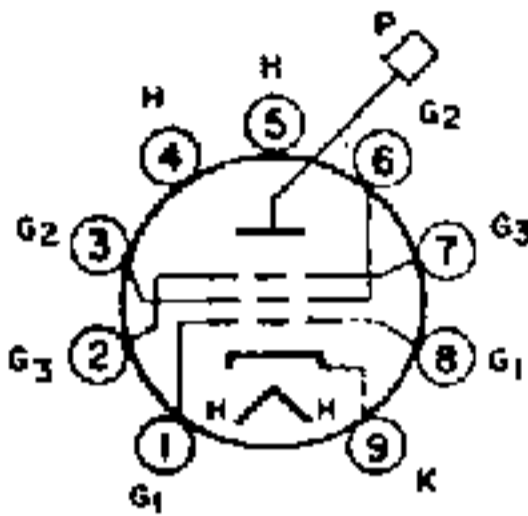


# Amperex Tube Type 6KG6/EL509

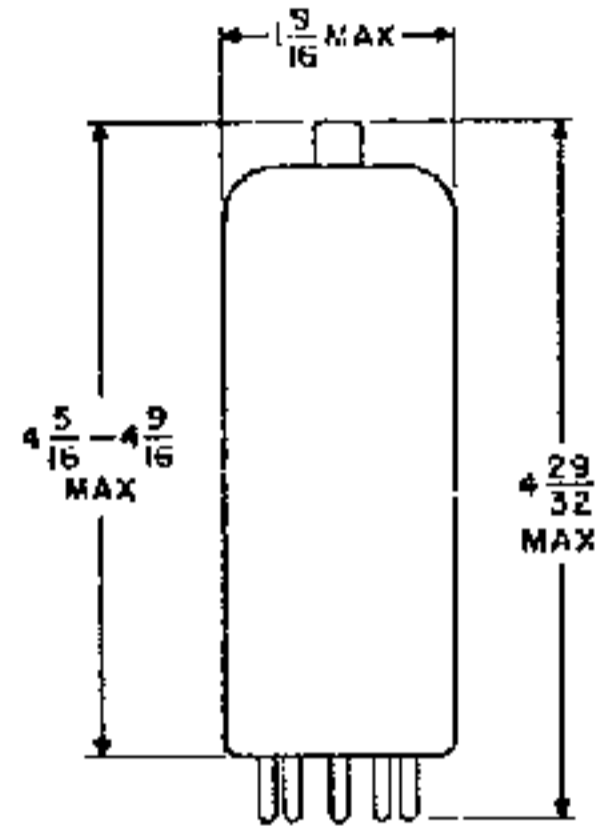
Except for filament voltage and current,  
equivalent to type 40KG6/PL519.

The 6KG6A is an output pentode designed for use in horizontal deflection  
circuits of color television receivers.



## PIN CONNECTIONS

- 1- GRID NO.1
- 2- GRID NO.3
- 3- GRID NO.2
- 4- HEATER
- 5- HEATER
- 6- GRID NO.2
- 7- GRID NO.3
- 8- GRID NO.1
- 9- CATHODE
- P- CAP-PLATE



## GENERAL CHARACTERISTICS

### MECHANICAL <sup>1)</sup>

Base  
Dimensions

magnoval  
see outline drawing

### ELECTRICAL

Heating  
Heater Voltage  
Heater Current

AC or DC, parallel supply  
6.3 volts  
2 amps

### Interelectrode Capacitances

Plate to Grid No. 1  
Input  
Output

2.5 pf    3.0 pf (max.)  
37 pf  
18.5 pf

### TYPICAL CHARACTERISTICS (measured under pulse conditions)

	Min.	Max.	During flyback	
Plate Voltage	50	160	7000	volts
Beam Plate Voltage	0	0	0	volts
Grid No. 2 Voltage	175	160	175	volts
Grid No. 1 Voltage	-10	0	-185	volts
Plate Current	800	1400	<0.05	mA
Grid No. 2 Current	70	45	-	mA

1) This tube must be supported at top.

# 6KG6A

## LIMITING VALUES

	<u>Design Center</u>	<u>Design Max.</u>	
Plate Voltage at Zero Current	max. 700	max. 990	Volts
Peak Positive Plate Voltage	max. 7000	max. 8000	volts 1)
Plate Dissipation	max. 30	max. 40	Watts
Beam Plate Voltage	max. 50	max. 50	Volts
Grid No. 2 Voltage at Zero Current	max. 700	max. 770	Volts
Grid No. 2 Voltage	max. 250	max. 275	Volts
Grid No. 2 Dissipation	max. 7	max. 9	Watts 2)
Cathode to Heater Voltage	max. 250	max. 275	Volts
Beam Plates Circuit Resistor	max. 10000	max. 10000	Ohms 3)
Peak Negative Grid No. 1 Voltage	-	max. 550	volts 4)
Bulb Temperatures	-	max. 300° C	
Grid No. 1 Circuit Resistance	-	-	Ohms 5)

### Remarks:

- 1) Max. pulse duration is 22% of a cycle, max. 18 micro seconds.
- 2) To prevent an excessive value of  $P_{g2}$  the minimum  $R_{c2}$  values are given in Fig. 1
- 3) With  $R_{c3}$  10,000 ohms, capacitive decoupling of grid No. 3 is not required.
- 4) Abs. max. value
- 5) Circuit design has to be such that negative control grid currents up to 5 micro-amperes do not have any detrimental effect upon tube adjustment or circuit performance.  
Care should be taken, that with 5 micro-amperes grid current the limiting values for  $I_k$ ,  $P_p$  and  $P_{c2}$  are not exceeded.

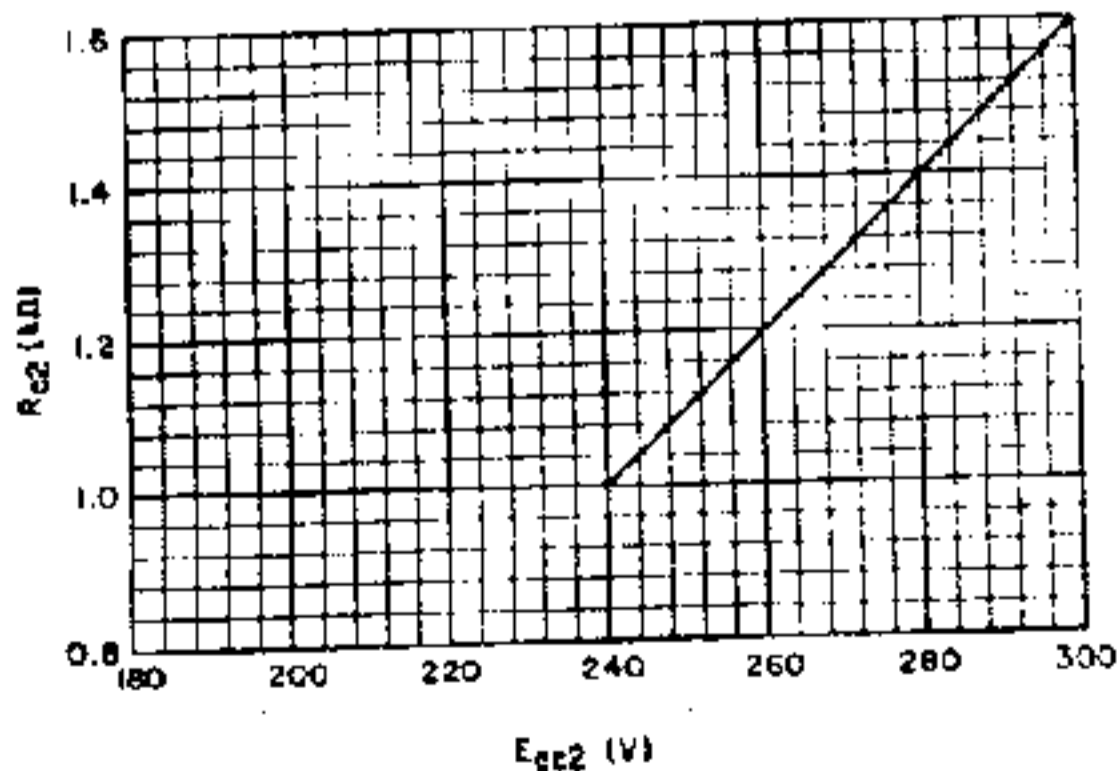


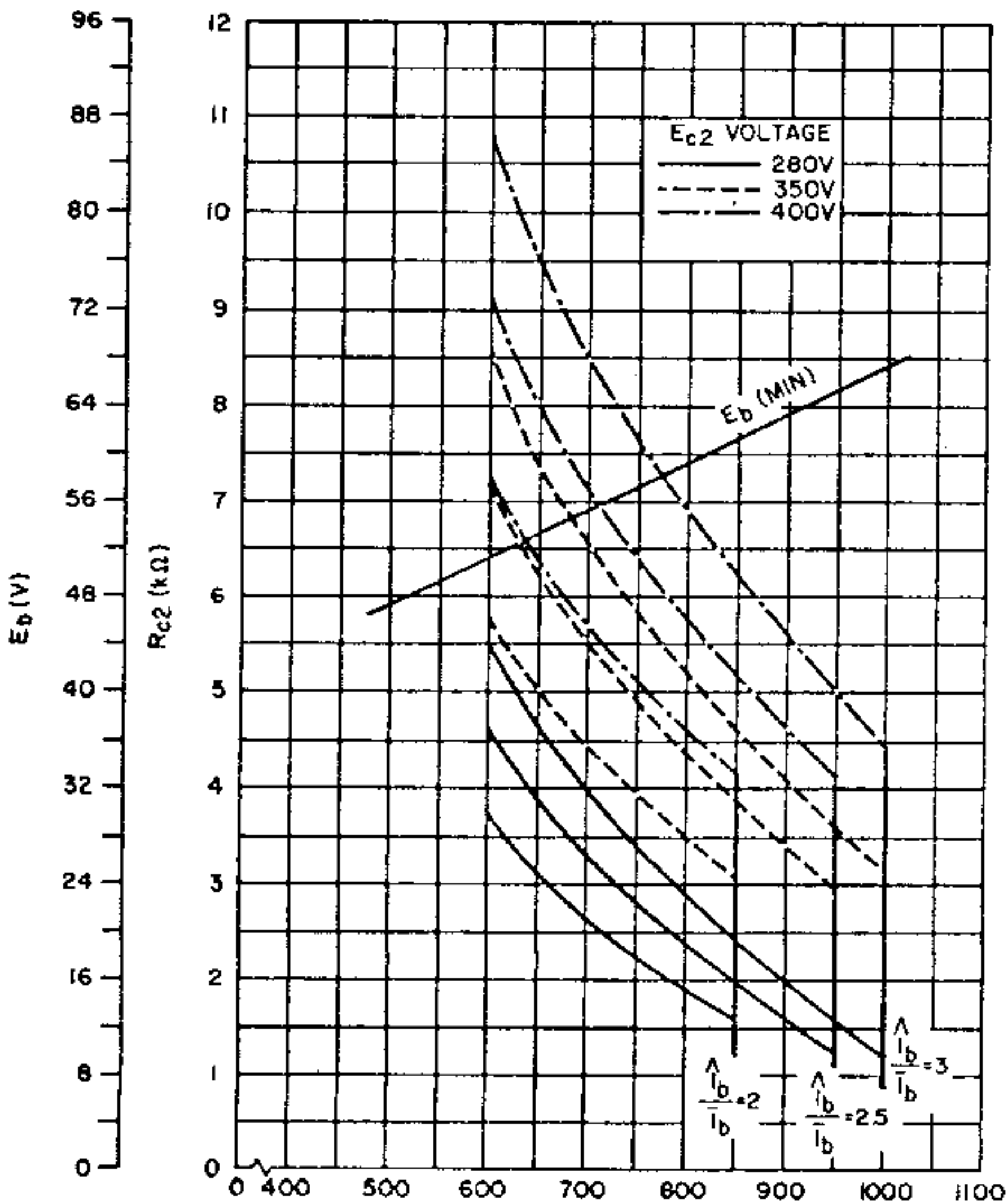
Figure 1

# 6KG6A

## OPERATING CHARACTERISTICS

### Stabilized circuits (D.C. Feedback)

Supply voltage: Refer to Figure 2, minimum plate voltage and maximum screen grid series resistance, when the tube is used in a line output stage. The curves refer to nominal line voltage, provided specified values of  $E_b$  are increased by 10% of the plate supply voltage. The specified values of  $I_b$  will be available throughout the life of the tube at supply voltages 10% below nominal. Barkhausen interference and loss of stability can be prevented by ensuring the plate voltage is above the specified minimum  $E_b$ , during the scanning period. When optimum suppression of Barkhausen oscillations and/or snivets is required, Grid No. 3 may be connected to a positive voltage of approximate 20 volts.



# 6KG6A

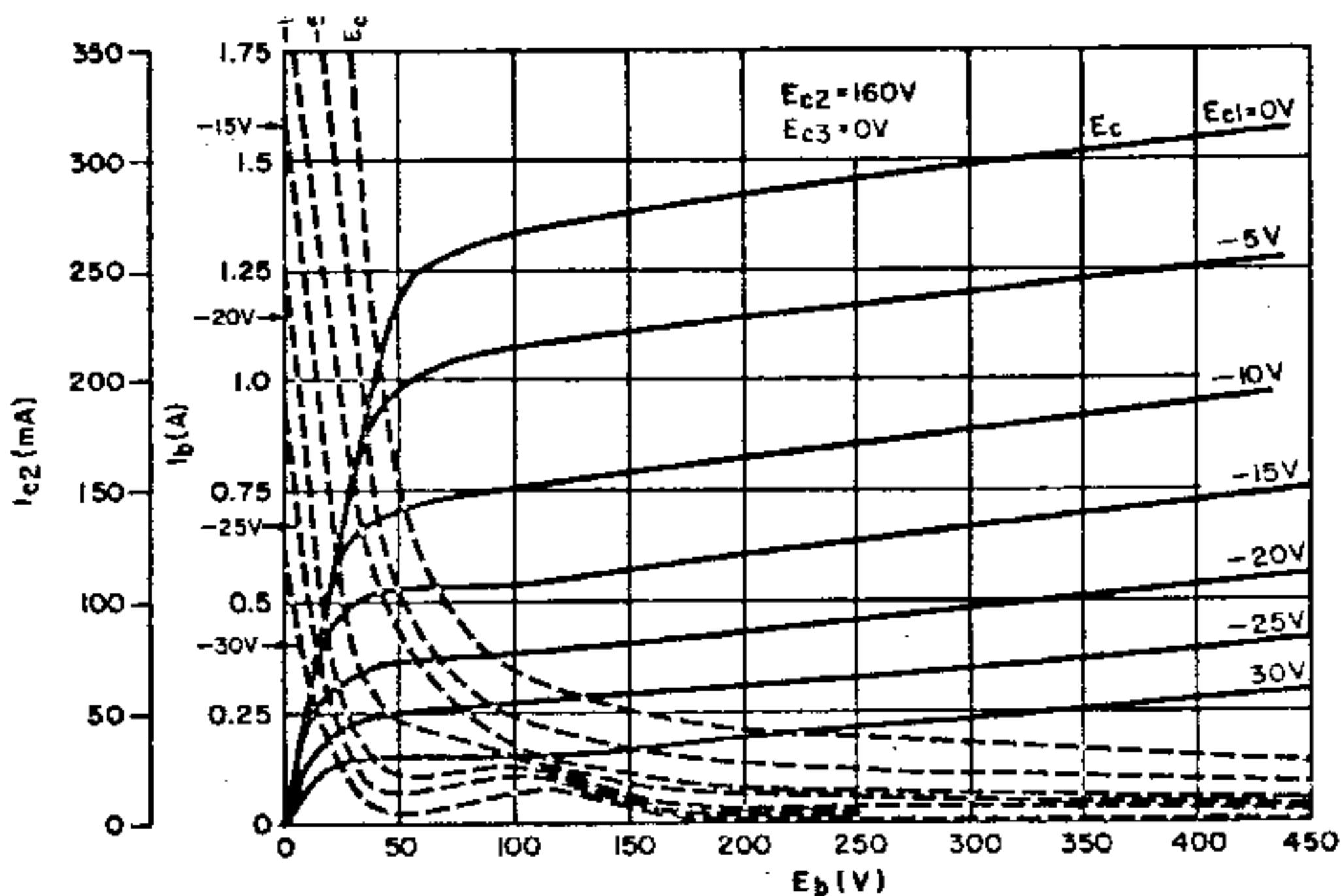


Plate Characteristics

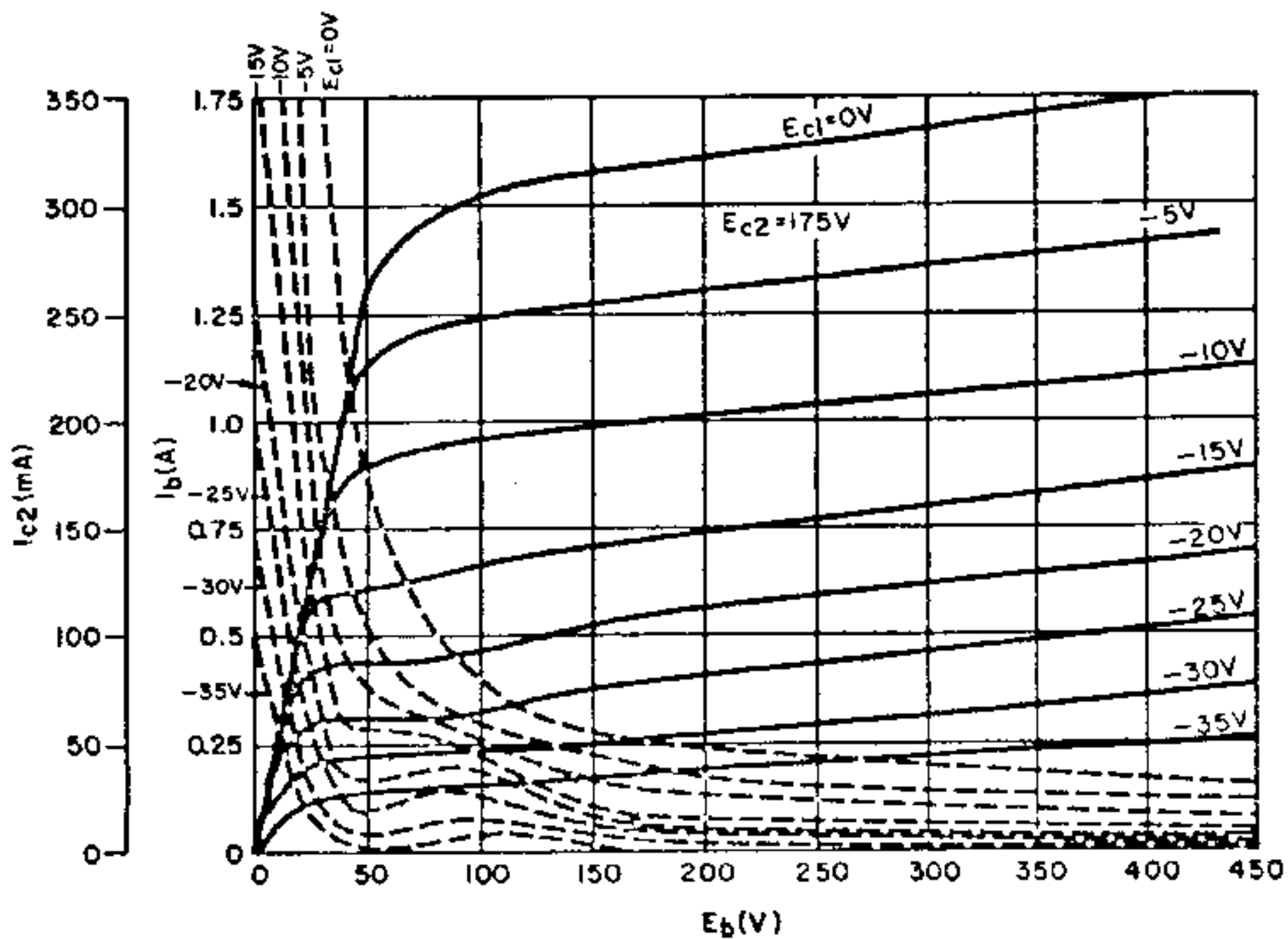


Plate Characteristics

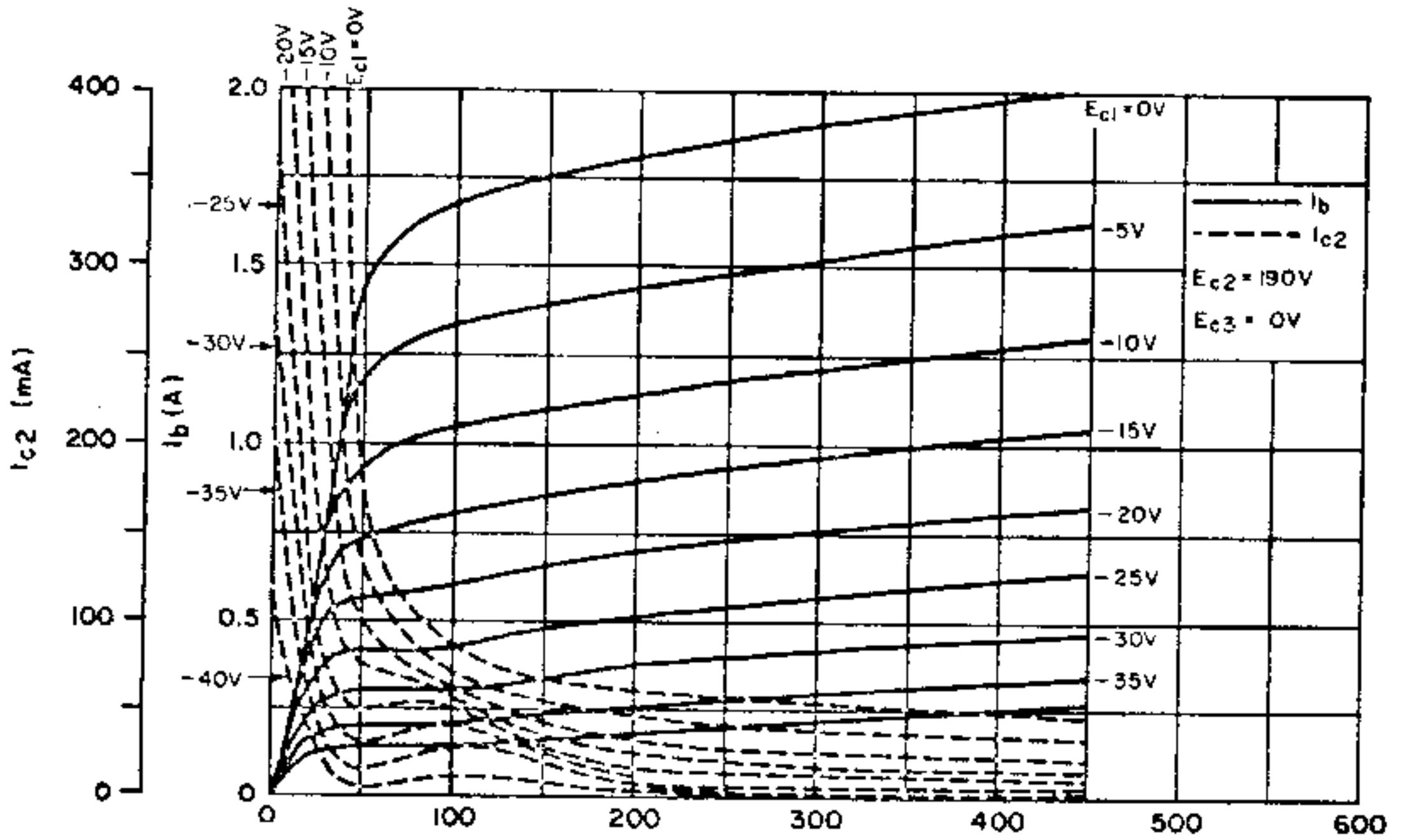
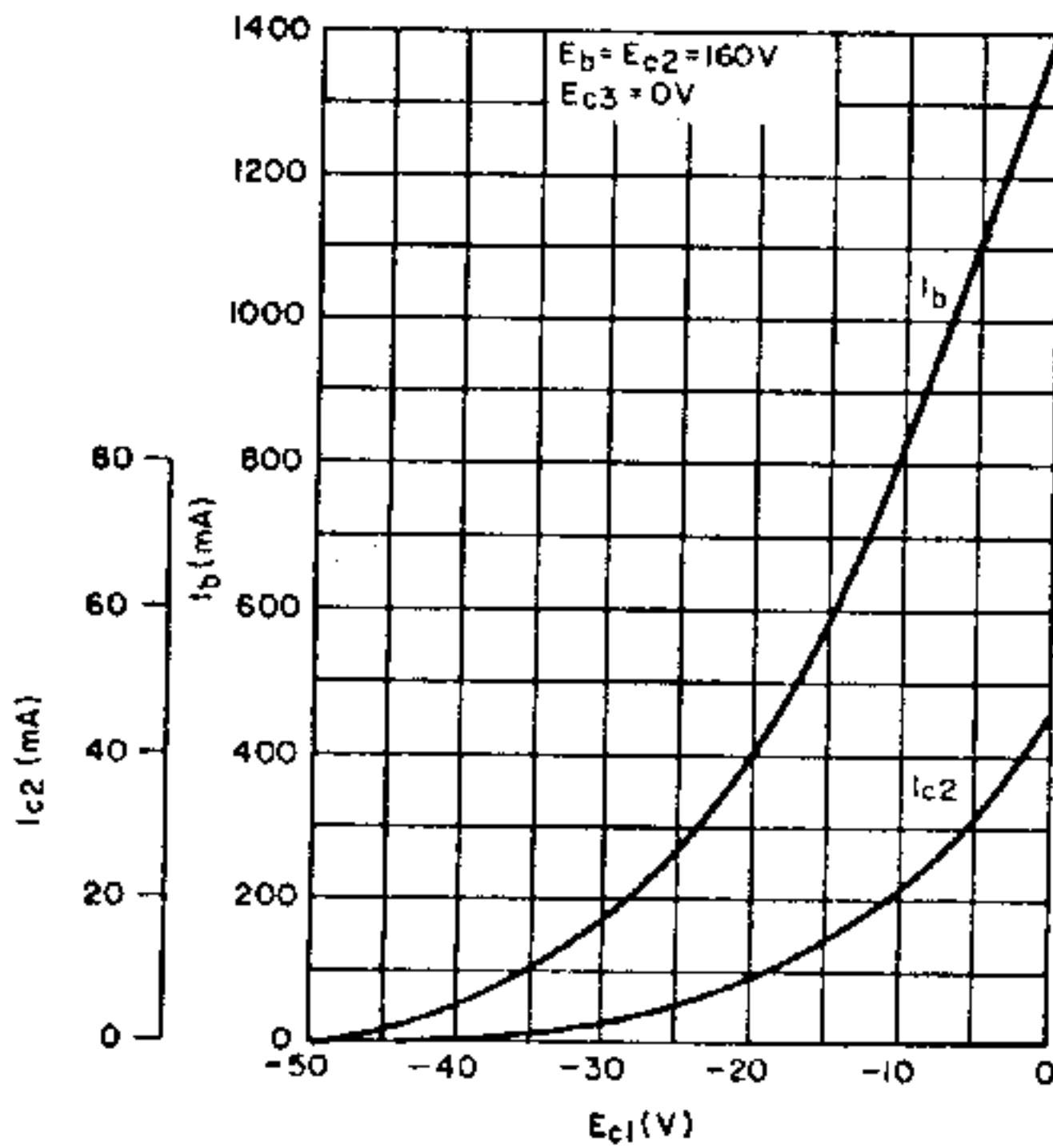


Plate Characteristics



Transfer Characteristics