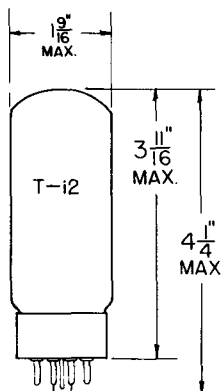


## TUNG-SOL

## PENTODE



GLASS BULB

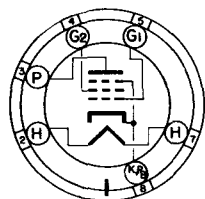
COATED UNIPOTENTIAL CATHODE

HEATER

6.3 VOLTS 0.9 AMP.

AC OR DC

ANY MOUNTING POSITION



BOTTOM VIEW

SHORT MEDIUM SHELL  
6 PIN OCTALSHORT MEDIUM SHELL  
7 PIN OCTALMEDIUM SHELL  
7 PIN OCTAL

7AC

THE 6L6GC IS A BEAM-POWER PENTODE PRIMARILY DESIGNED FOR USE IN AUDIO-FREQUENCY POWER AMPLIFIER APPLICATIONS. THE 6L6GC HAS THE SAME CHARACTERISTICS AS THE 6L6GB. HOWEVER, THE HIGHER POWER RATINGS OF THE 6L6GC ARE ADVANTAGEOUS WHERE GREATER POWER-HANDLING CAPABILITY IS REQUIRED.

## DIRECT INTERELECTRODE CAPACITANCES -approx.

WITHOUT EXTERNAL SHIELD

|                  |     |               |
|------------------|-----|---------------|
| GRID #1 TO PLATE | 0.6 | $\mu\text{f}$ |
| INPUT            | 10  | $\mu\text{f}$ |
| OUTPUT           | 6.5 | $\mu\text{f}$ |

## RATINGS

INTERPRETED ACCORDING TO DESIGN MAXIMUM SYSTEM

|                                         | TRIODE <sup>B</sup><br>CONNECTION | PENTODE<br>CONNECTION |       |
|-----------------------------------------|-----------------------------------|-----------------------|-------|
| HEATER VOLTAGE                          | 6.3                               | 6.3                   | VOLTS |
| MAXIMUM PLATE VOLTAGE                   | 450                               | 500                   | VOLTS |
| MAXIMUM SCREEN VOLTAGE                  |                                   | 450 <sup>A</sup>      |       |
| MAXIMUM PLATE DISSIPATION               | 30                                | 30                    | WATTS |
| MAXIMUM SCREEN DISSIPATION              |                                   | 5.0                   | WATTS |
| MAXIMUM HEATER-CATHODE VOLTAGE:         |                                   |                       |       |
| HEATER POSITIVE WITH RESPECT TO CATHODE | 200                               | 200                   | VOLTS |
| HEATER NEGATIVE WITH RESPECT TO CATHODE | 200                               | 200                   | VOLTS |
| MAXIMUM GRID #1 CIRCUIT RESISTANCE:     |                                   |                       |       |
| WITH FIXED BIAS                         | 0.1                               | 0.1                   | MEG.  |
| WITH CATHODE BIAS                       | 0.5                               | 0.5                   | MEG.  |

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

CLASS A<sub>1</sub> AMPLIFIER - TRIODE CONNECTION<sup>B</sup>

|                                    |      |         |
|------------------------------------|------|---------|
| HEATER VOLTAGE                     | 6.3  | VOLTS   |
| HEATER CURRENT                     | 0.9  | AMP.    |
| PLATE VOLTAGE                      | 250  | VOLTS   |
| GRID #1 VOLTAGE                    | -20  | VOLTS   |
| PEAK AF GRID #1 VOLTAGE            | 20   | VOLTS   |
| AMPLIFICATION FACTOR               | 8    |         |
| PLATE RESISTANCE, APPROX.          | 1700 | OHMS    |
| TRANSCONDUCTANCE                   | 4700 | μMHOS   |
| ZERO-SIGNAL PLATE CURRENT          | 40   | MA.     |
| MAXIMUM-SIGNAL PLATE CURRENT       | 44   | MA.     |
| LOAD RESISTANCE                    | 5000 | OHMS    |
| TOTAL HARMONIC DISTORTION, APPROX. | 5    | PERCENT |
| MAXIMUM-SIGNAL POWER OUTPUT        | 1.4  | WATTS   |

CLASS A<sub>1</sub> AMPLIFIER - PENTODE CONNECTION

|                                    |       |       |       |         |
|------------------------------------|-------|-------|-------|---------|
| PLATE VOLTAGE                      | 250   | 300   | 350   | VOLTS   |
| SCREEN VOLTAGE                     | 250   | 200   | 250   | VOLTS   |
| GRID #1 VOLTAGE                    | -14   | -12.5 | -18   | VOLTS   |
| PEAK AF GRID #1 VOLTAGE            | 14    | 12.5  | 18    | VOLTS   |
| PLATE RESISTANCE, APPROX.          | 22500 | 35000 | 33000 | OHMS    |
| TRANSCONDUCTANCE                   | 6000  | 5300  | 5200  | μMHOS   |
| ZERO-SIGNAL PLATE CURRENT          | 72    | 48    | 54    | MA.     |
| MAXIMUM-SIGNAL PLATE CURRENT       | 79    | 55    | 66    | MA.     |
| ZERO-SIGNAL SCREEN CURRENT         | 5.0   | 2.5   | 2.5   | MA.     |
| MAXIMUM-SIGNAL SCREEN CURRENT      | 7.3   | 4.7   | 7.0   | MA.     |
| LOAD RESISTANCE                    | 2500  | 4500  | 4200  | OHMS    |
| TOTAL HARMONIC DISTORTION, APPROX. | 10    | 11    | 15    | PERCENT |
| MAXIMUM-SIGNAL POWER OUTPUT        | 6.5   | 6.5   | 10.8  | WATTS   |

PUSH-PULL CLASS A<sub>1</sub> AMPLIFIER - VALUES FOR TWO TUBES

|                                               |      |       |         |
|-----------------------------------------------|------|-------|---------|
| PLATE VOLTAGE                                 | 250  | 270   | VOLTS   |
| SCREEN VOLTAGE                                | 250  | 270   | VOLTS   |
| GRID #1 VOLTAGE                               | -16  | -17.5 | VOLTS   |
| PEAK AF GRID TO GRID VOLTAGE                  | 32   | 35    | VOLTS   |
| ZERO-SIGNAL PLATE CURRENT                     | 120  | 134   | MA.     |
| MAXIMUM SIGNAL PLATE CURRENT                  | 140  | 155   | MA.     |
| ZERO-SIGNAL SCREEN CURRENT                    | 10   | 11    | MA.     |
| MAXIMUM-SIGNAL SCREEN CURRENT                 | 16   | 17    | MA.     |
| EFFECTIVE LOAD RESISTANCE, PLATE - TO - PLATE | 5000 | 5000  | OHMS    |
| TOTAL HARMONIC DISTORTION                     | 2    | 2     | PERCENT |
| MAXIMUM SIGNAL POWER OUTPUT                   | 14.5 | 17.5  | WATTS   |

PUSH-PULL CLASS AB<sub>1</sub> AMPLIFIER - VALUES FOR TWO TUBES

|                              |       |       |     |       |
|------------------------------|-------|-------|-----|-------|
| PLATE VOLTAGE                | 360   | 360   | 450 | VOLTS |
| SCREEN VOLTAGE               |       | 270   | 400 | VOLTS |
| GRID #1 VOLTAGE              | -22.5 | -22.5 | -37 | VOLTS |
| PEAK AF GRID-TO-GRID VOLTAGE | 45    | 45    | 70  | VOLTS |

CONTINUED ON FOLLOWING PAGE

## TUNG-SOL

CONTINUED FROM PRECEDING PAGE

## TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS -cont'd.

PUSH PULL CLASS AB<sub>1</sub> AMPLIFIER -VALUES FOR TWO TUBES  
CONTINUED

|                                           |      |      |      |         |
|-------------------------------------------|------|------|------|---------|
| ZERO-SIGNAL PLATE CURRENT                 | 88   | 88   | 116  | MA.     |
| MAXIMUM-SIGNAL PLATE CURRENT              | 132  | 140  | 210  | MA.     |
| ZERO-SIGNAL SCREEN CURRENT                | 5.0  | 5.0  | 5.6  | MA.     |
| MAXIMUM-SIGNAL SCREEN CURRENT             | 15   | 11   | 22   | MA.     |
| EFFECTIVE LOAD RESISTANCE, PLATE-TO-PLATE | 6600 | 3800 | 5600 | OHMS    |
| TOTAL HARMONIC DISTORTION                 | 2    | 2    | 1.8  | PERCENT |
| MAXIMUM-SIGNAL POWER OUTPUT               | 26.5 | 18   | 55   | WATTS   |

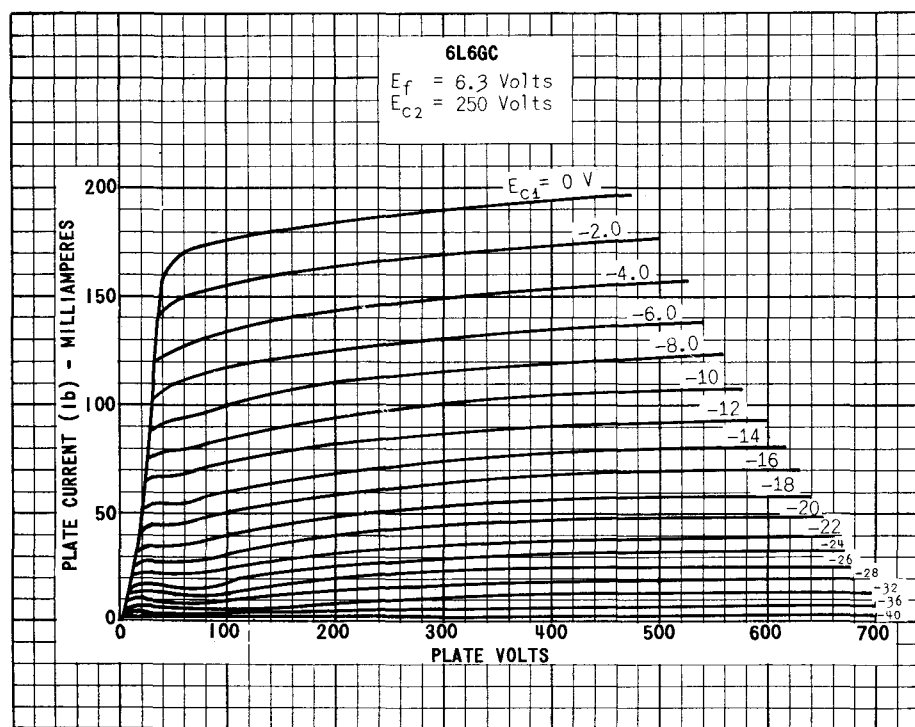
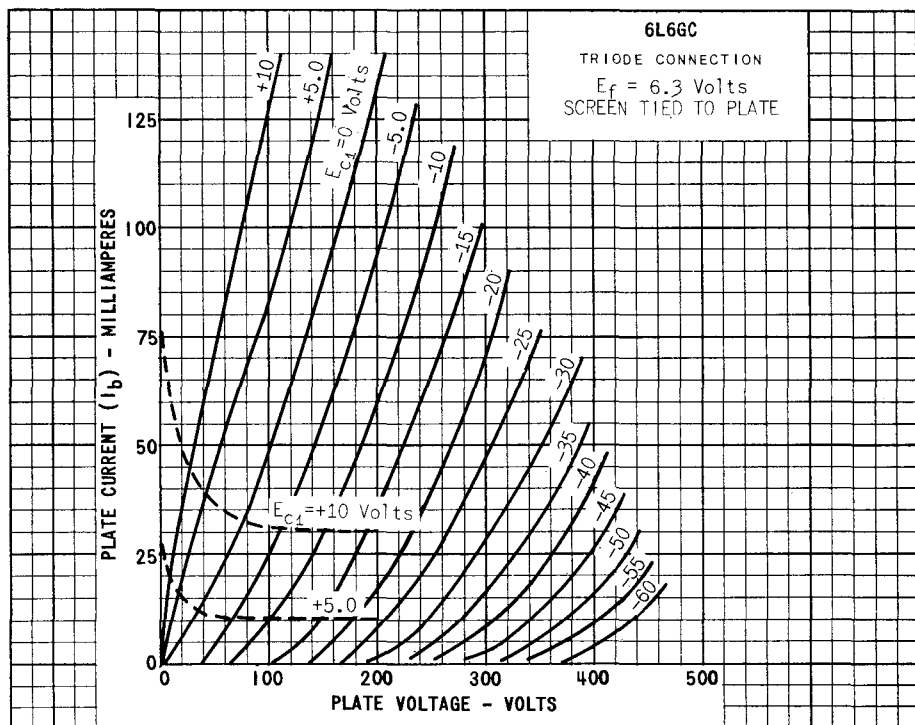
PUSH-PULL CLASS AB<sub>2</sub> AMPLIFIER -VALUES FOR TWO TUBES

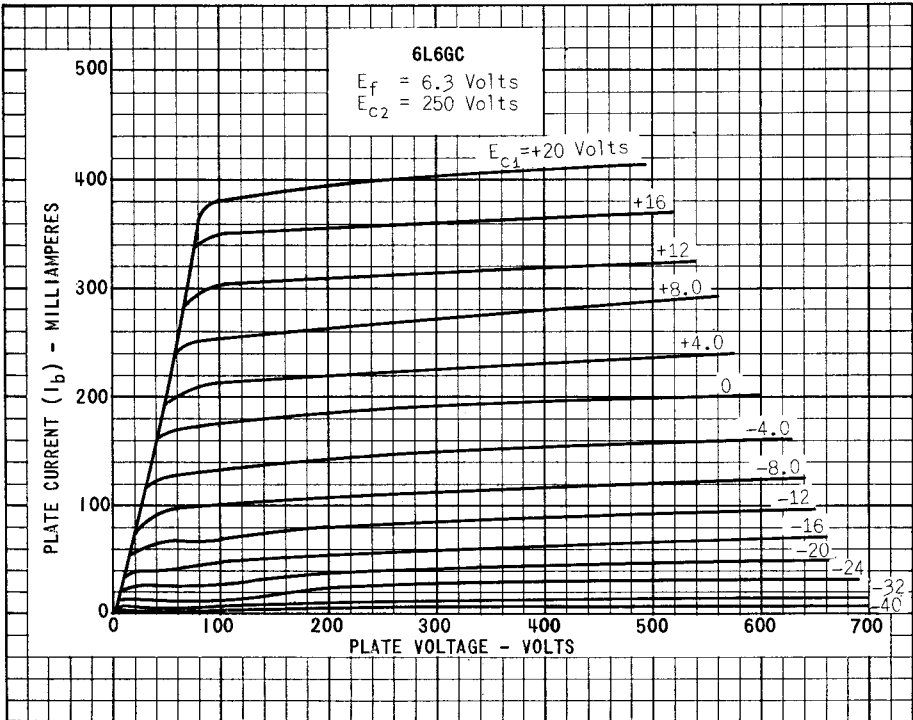
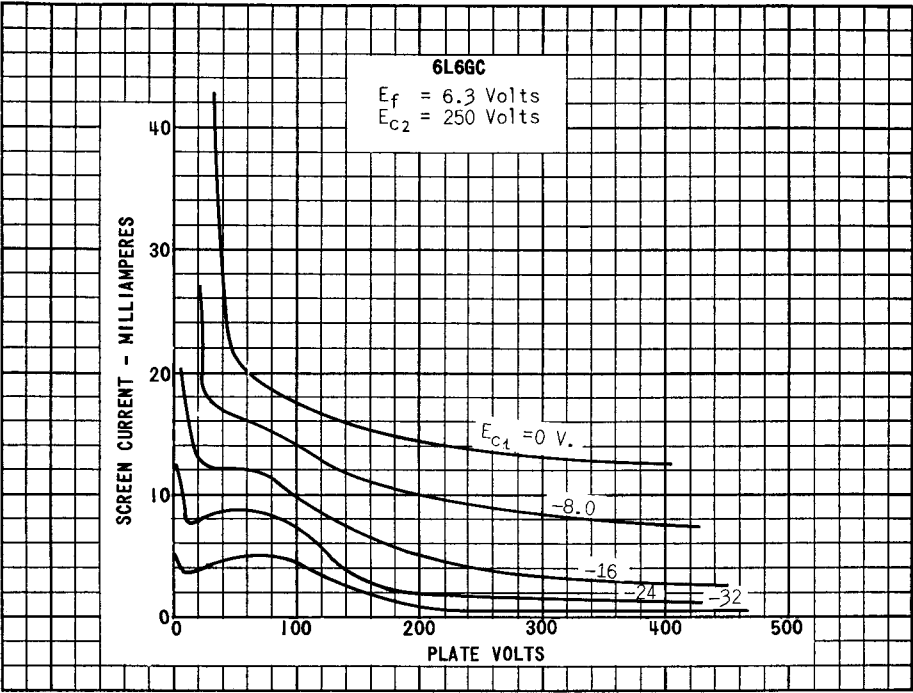
|                                           |      |       |         |
|-------------------------------------------|------|-------|---------|
| PLATE VOLTAGE                             | 360  | 360   | VOLTS   |
| SCREEN VOLTAGE                            | 225  | 270   | VOLTS   |
| GRID #1 VOLTAGE                           | -18  | -22.5 | VOLTS   |
| PEAK AF GRID-TO-GRID VOLTAGE              | 52   | 72    | VOLTS   |
| ZERO-SIGNAL PLATE CURRENT                 | 78   | 88    | MA.     |
| MAXIMUM-SIGNAL PLATE CURRENT              | 142  | 205   | MA.     |
| ZERO-SIGNAL SCREEN CURRENT                | 3.5  | 5.0   | MA.     |
| MAXIMUM-SIGNAL SCREEN CURRENT             | 11   | 16    | MA.     |
| EFFECTIVE LOAD RESISTANCE, PLATE-TO-PLATE | 6000 | 3800  | OHMS    |
| TOTAL HARMONIC DISTORTION                 | 2    | 2     | PERCENT |
| MAXIMUM-SIGNAL POWER OUTPUT               | 31   | 47    | WATTS   |

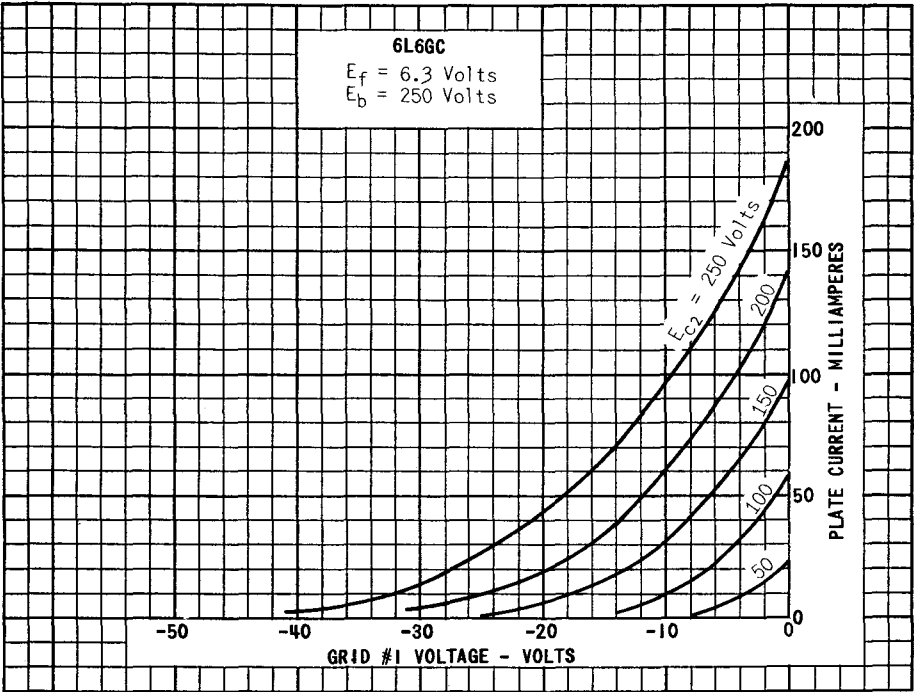
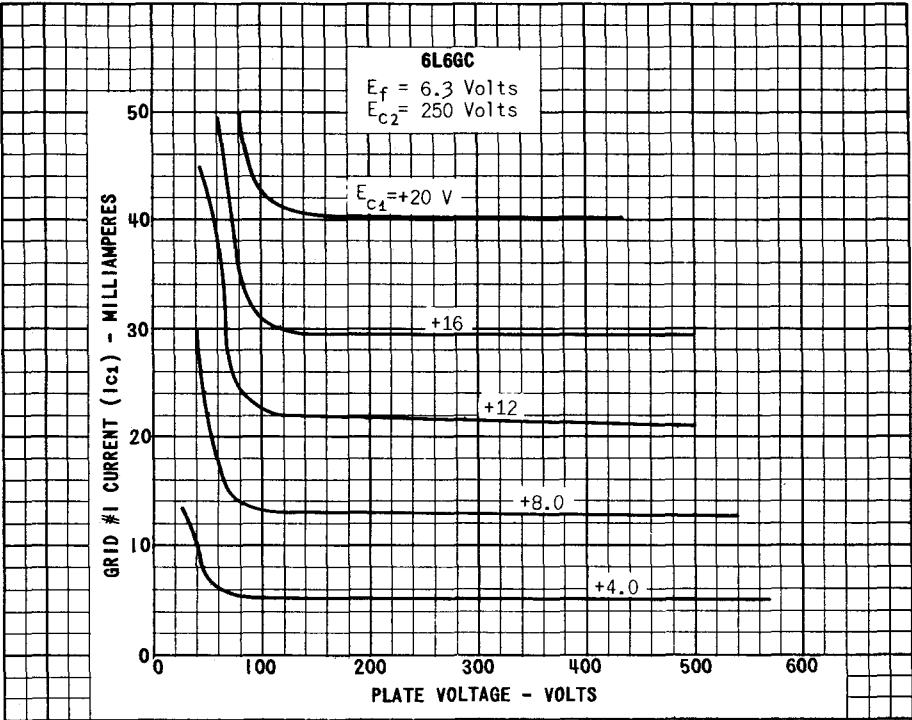
DESIGN-MAXIMUM RATINGS ARE LIMITING VALUES OF OPERATING AND ENVIRONMENTAL CONDITIONS APPLICABLE TO A BOGEY TUBE OF A SPECIFIED TYPE AS DEFINED BY ITS PUBLISHED DATA, AND SHOULD NOT BE EXCEEDED UNDER THE WORST PROBABLE CONDITIONS. THE TUBE MANUFACTURER CHOOSES THESE VALUES TO PROVIDE ACCEPTABLE SERVICEABILITY OF THE TUBE TAKING RESPONSIBILITY FOR THE EFFECTS OF CHANGES IN OPERATING CONDITIONS DUE TO VARIATIONS IN TUBE CHARACTERISTICS. THE EQUIPMENT MANUFACTURER SHOULD DESIGN SO THAT INITIALLY AND THROUGHOUT LIFE NO DESIGN-MAXIMUM VALUE FOR THE INTENDED SERVICE IS EXCEEDED WITH A BOGEY TUBE UNDER THE WORST PROBABLE OPERATING CONDITIONS WITH RESPECT TO SUPPLY-VOLTAGE VARIATION, EQUIPMENT COMPONENT VARIATION, EQUIPMENT CONTROL ADJUSTMENT, LOAD VARIATION, SIGNAL VARIATION, AND ENVIRONMENTAL CONDITIONS.

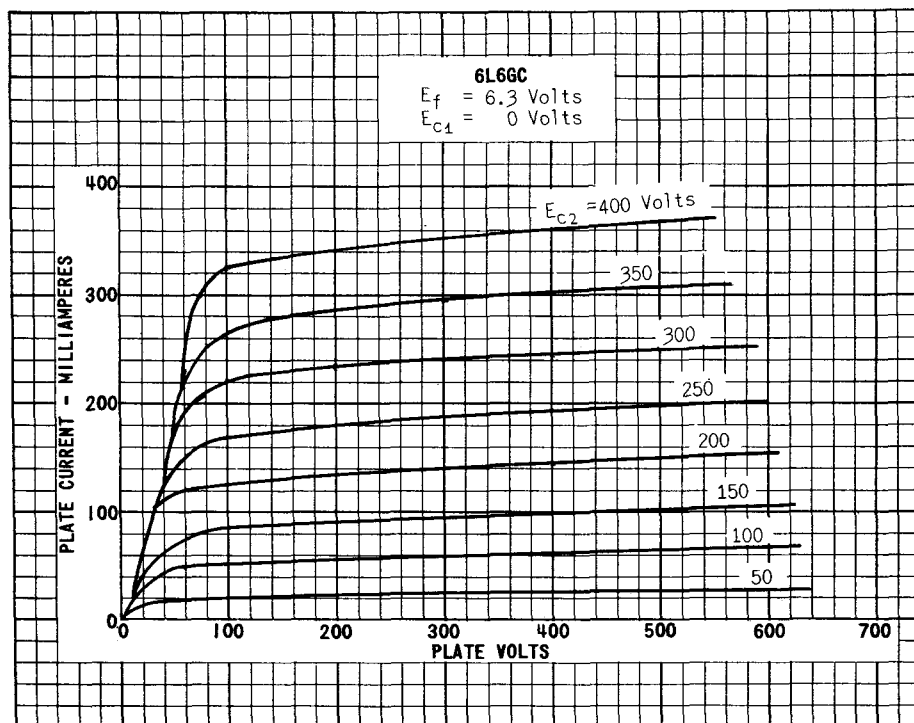
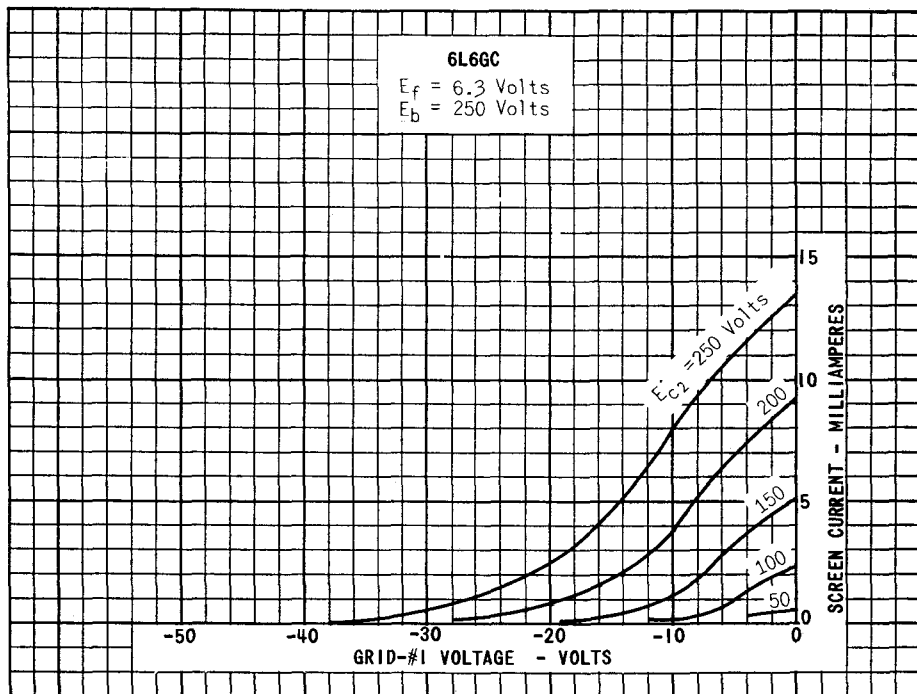
A. THE MAXIMUM SCREEN VOLTAGE RATING IS 500 VOLTS IN PUSH-PULL CIRCUITS WHERE THE SCREEN OF EACH TUBE IS CONNECTED TO A TAP ON THE PLATE WINDING OF THE OUTPUT TRANSFORMER.

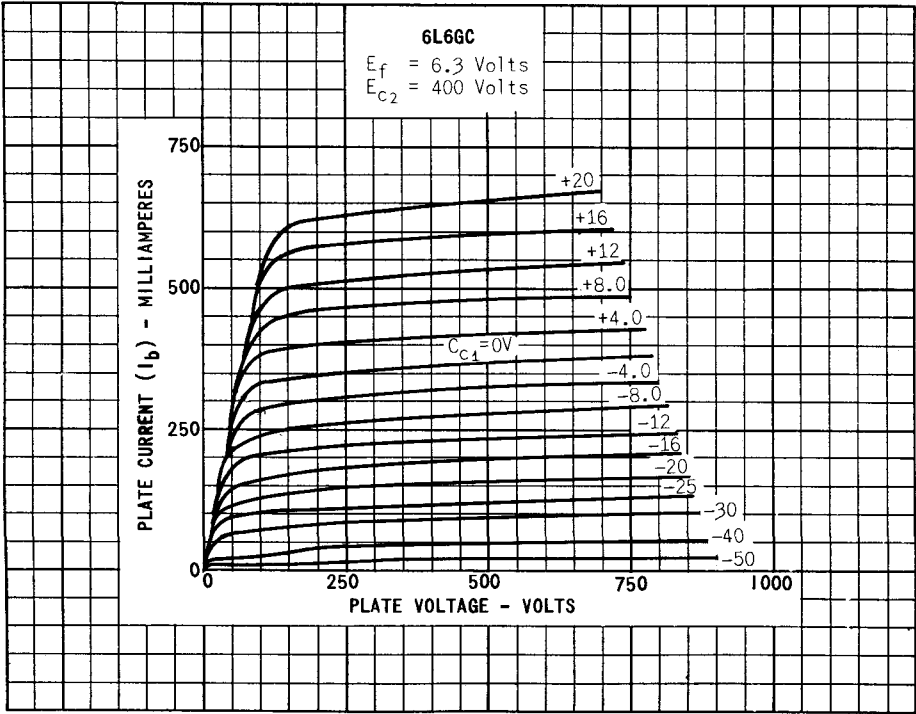
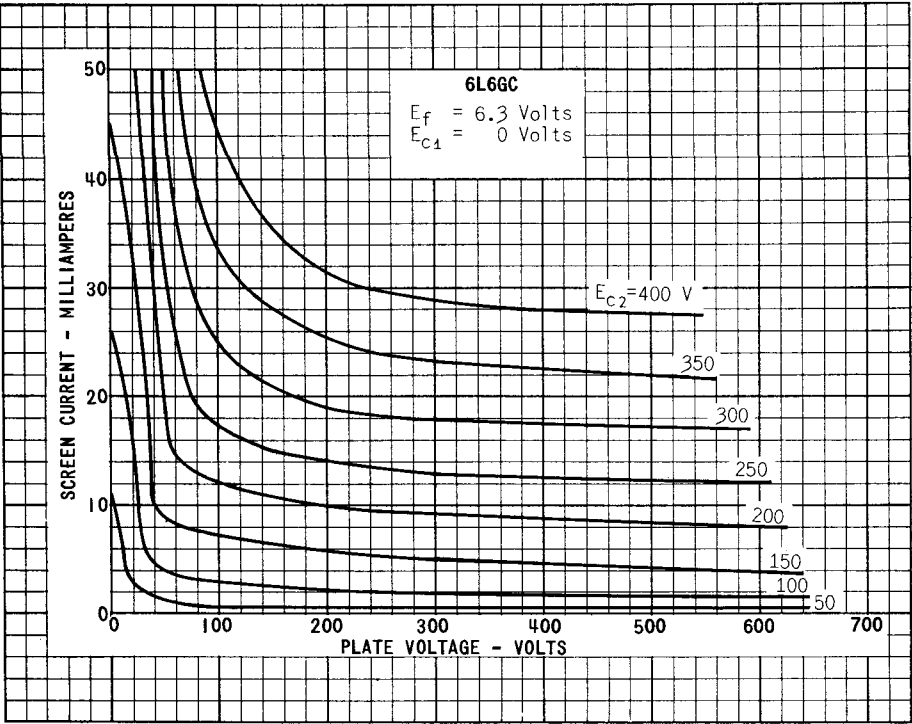
B. WITH SCREEN CONNECTED TO PLATE.

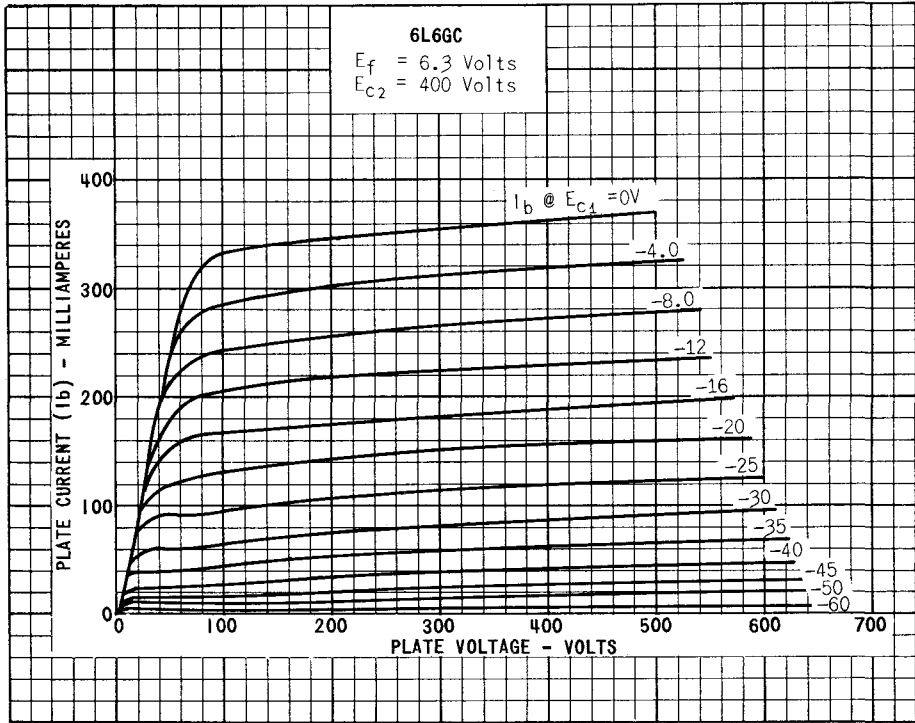
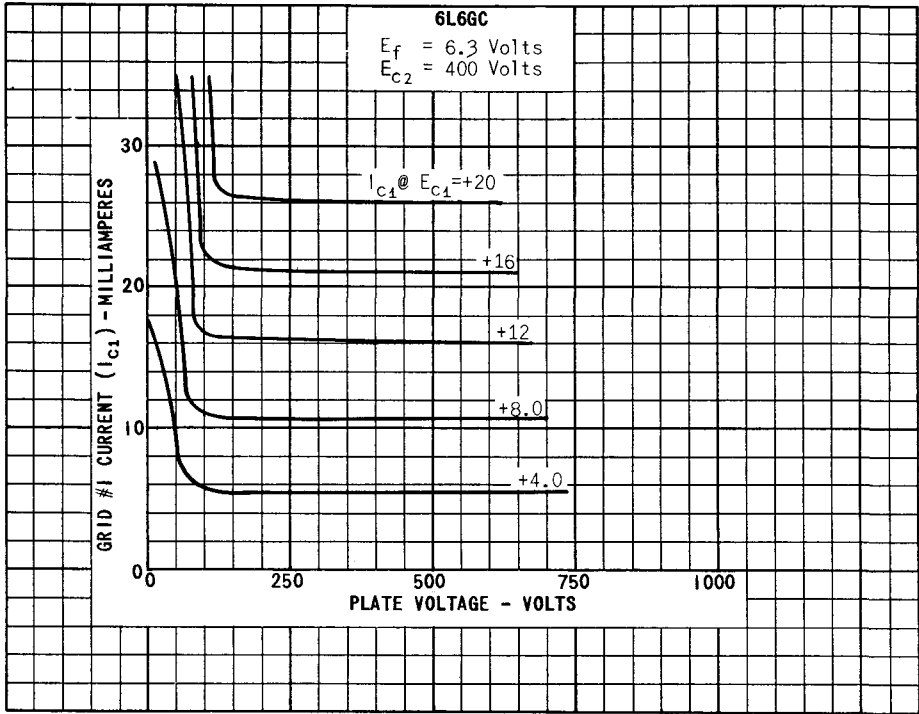




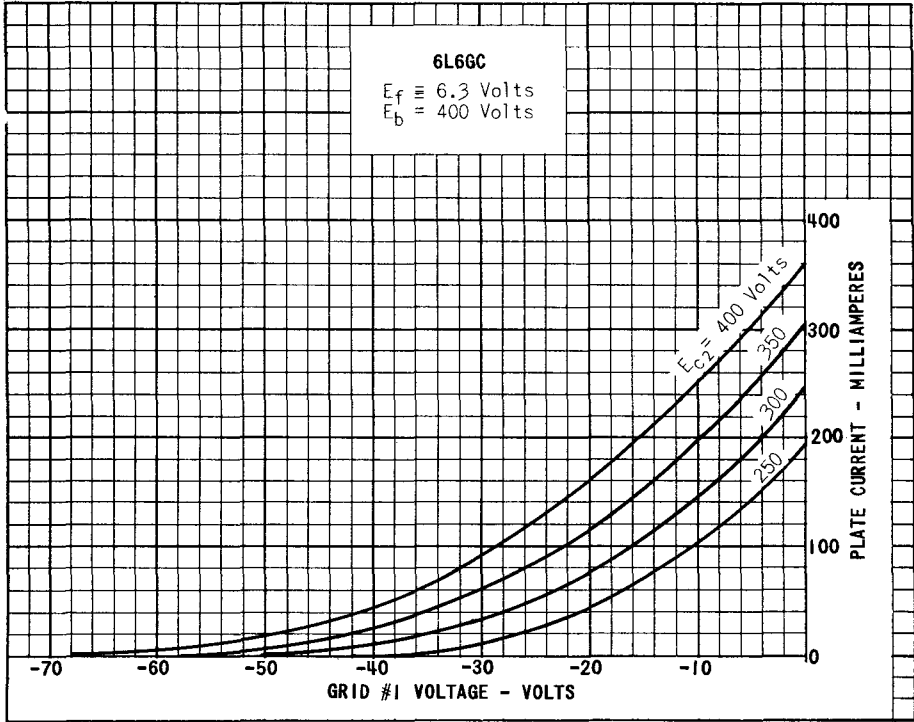
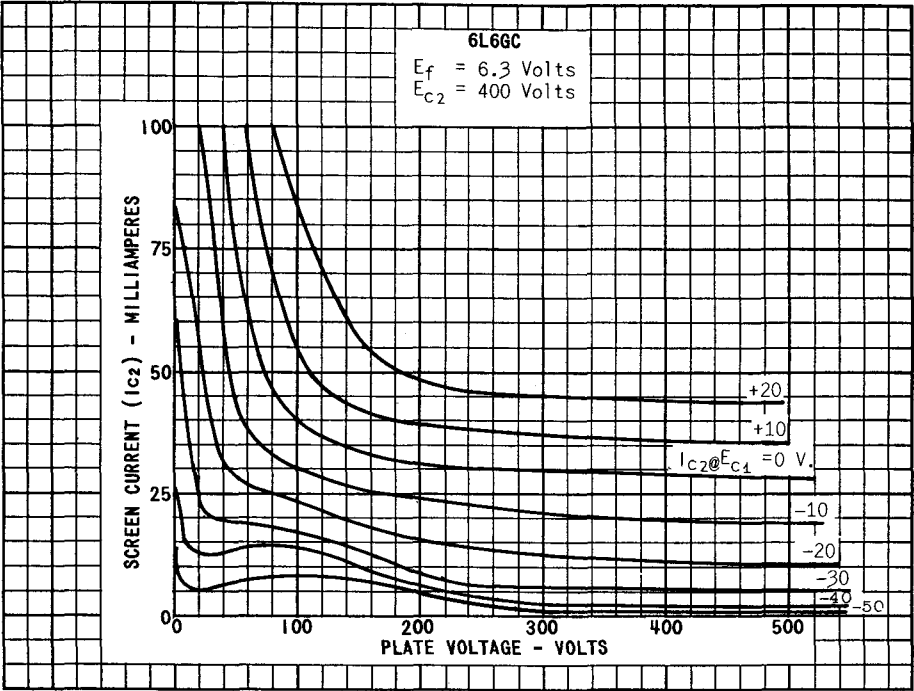


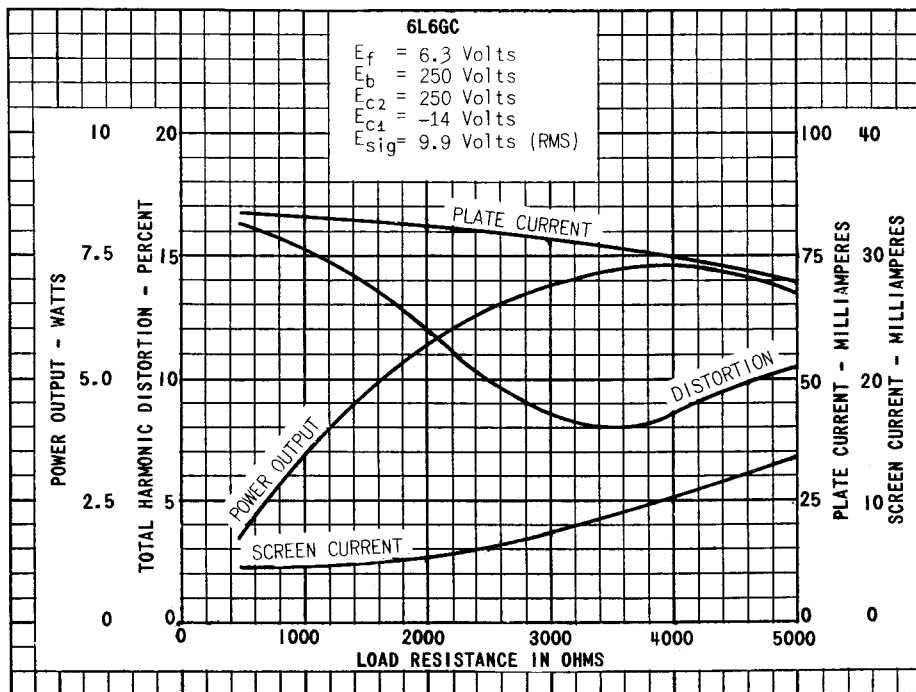
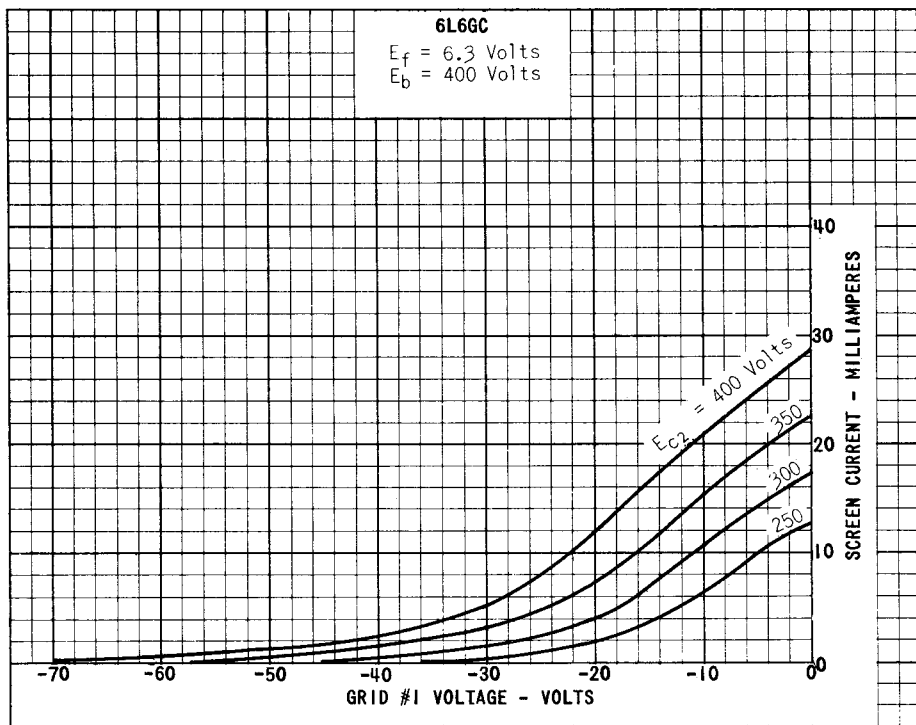






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6L6GC

