



## APPLICATION DATA

### PUSH-PULL RF POWER AMPLIFIER AND OSCILLATOR, CLASS C TELEGRAPHY

*(One valve, unmodulated, key down conditions)*

*Maximum permissible ratings (a)*

|          |      |    |  |
|----------|------|----|--|
| $V_a$    | 750  | V  |  |
| $V_{g2}$ | 225  | V  |  |
| $V_{g1}$ | -175 | V  |  |
| $I_a$    | 240  | mA |  |
| $I_{g1}$ | 15   | mA |  |
| $P_{in}$ | 120  | W  |  |
| $p_{g2}$ | 7    | W  |  |
| $p_a$    | 40   | W  |  |

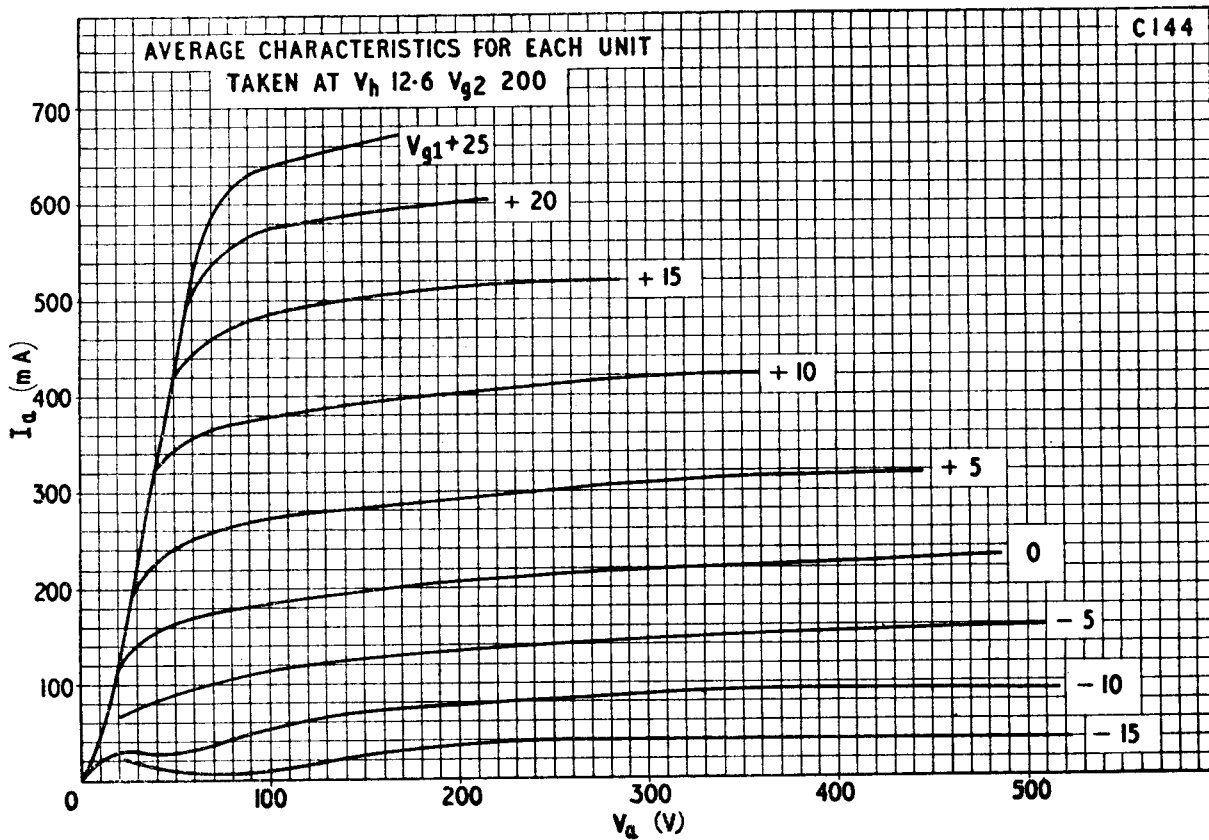
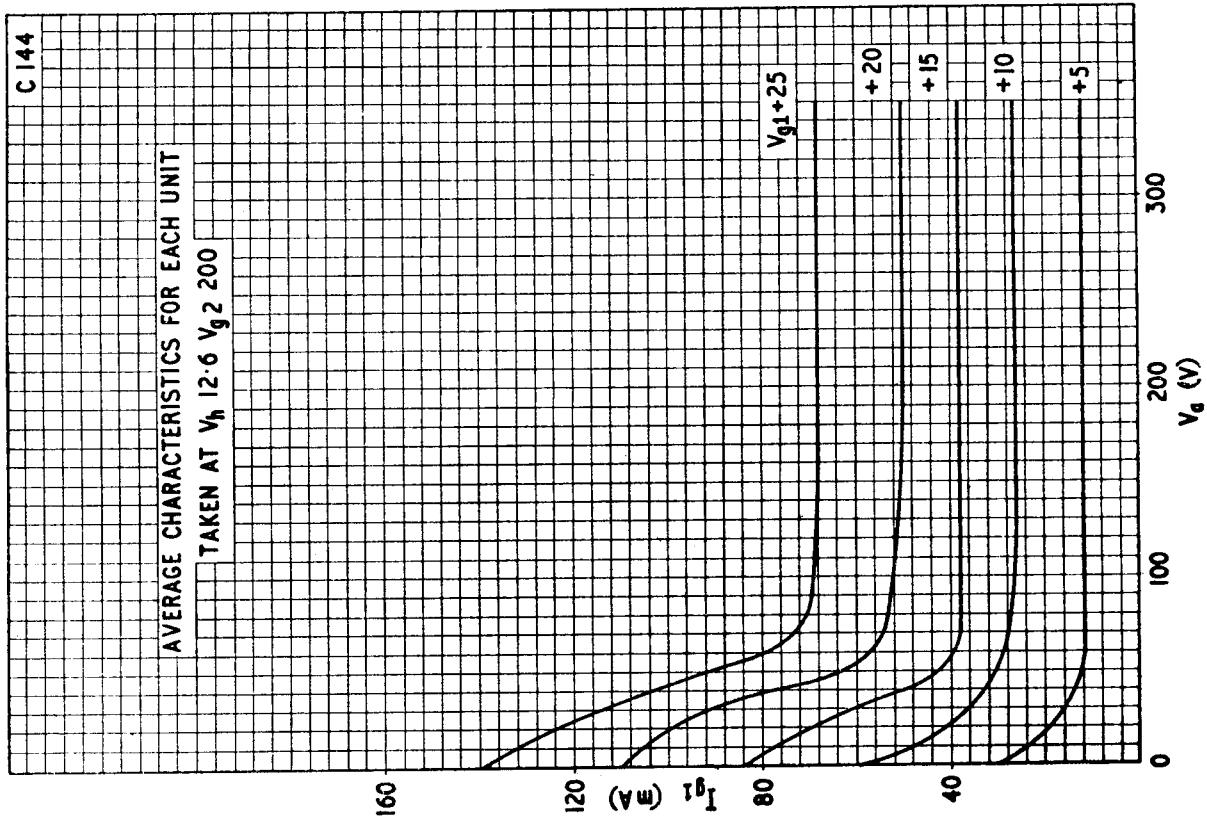
#### Typical Operation

|       |     |     |    |
|-------|-----|-----|----|
| $V_a$ | 500 | 750 | V  |
| $I_a$ | 240 | 160 | mA |

|                |                        |           |        |          |
|----------------|------------------------|-----------|--------|----------|
| $V_{g2}$       |                        | 200       | 200    | V        |
|                | from a fixed supply of |           |        |          |
|                | via $R_{g1}$           | 9,300     | 18,300 | $\Omega$ |
| $I_{g2}$       |                        | 32        | 30     | mA       |
| $V_{g1}$       |                        |           |        |          |
|                | from a fixed supply of | -45       | -55    | V        |
|                | via $R_k$              | 160       | 270    | $\Omega$ |
|                | via $R_{g1}$           | (b) 3,750 | 4,600  | $\Omega$ |
| $I_{g1}$       | (c)                    | 12        | 12     | mA       |
| $v_{g1'-g1''}$ | (pk)                   | 124       | 140    | V        |
| $P_{dr}$       | (c)                    | 0.7       | 0.8    | W        |
| $P_{out}$      | (c)                    | 83        | 87     | W        |

### NOTES

- (a) Modulation essentially negative may be used if the positive peak of the audio frequency envelope does not exceed 115% of the carrier conditions.
- (b) The grid circuit resistance should never exceed 15,000  $\Omega$  (total) per valve, or 30,000  $\Omega$  per unit. If additional bias is necessary, a cathode resistor or a fixed supply should be used.
- (c) Subject to wide variation. The figures given are approximate only.





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