

TRIODE HEXODE

ECH35

Triode hexode for use as frequency changer in A.C. mains-operated receivers. The hexode section is designed for A.V.C.

HEATER

| | | |
|-------|-----|---|
| V_h | 6.3 | V |
| I_h | 0.3 | A |

CAPACITANCES

| | | | |
|--------|-------------|---------|------------|
| | c_{gt-g1} | < 0.3 | $\mu\mu F$ |
| Hexode | c_{g1-k} | 5.0 | $\mu\mu F$ |
| | c_{a-k} | 10.0 | $\mu\mu F$ |
| | c_{a-g1} | < 0.003 | $\mu\mu F$ |
| Triode | c_{g-k} | 9.0 | $\mu\mu F$ |
| | c_{a-k} | 3.0 | $\mu\mu F$ |
| | c_{a-g1} | 1.6 | $\mu\mu F$ |

OPERATING CONDITIONS - HEXODE SECTION

(a) With fixed screen grid voltage

| | | | | |
|-------------|-----|-------|--------|-----------|
| V_a | | | 250 | V |
| V_{g2+g4} | | | 100 | V |
| R_k | | | 215 | ohms |
| R_{g3} | | | 50,000 | ohms |
| I_{g3} | | | 200 | μA |
| V_{g1} | -2 | -17 | -23 | V |
| I_a | 3 | - | - | mA |
| I_{g2+g4} | 3 | - | - | mA |
| g_c | 650 | 6.5 | 1.5 | $\mu A/V$ |
| r_a | 1.3 | > 5.0 | > 6.0 | M.ohms |

(b) With screen grid fed by a potentiometer (See diagram overleaf)

| | | | | |
|-------------|-----|-------|--------|-----------|
| $V_a = V_b$ | | | 250 | V |
| $R1$ | | | 24,000 | ohms |
| $R2$ | | | 33,000 | ohms |
| R_k | | | 215 | ohms |
| R_{g3} | | | 50,000 | ohms |
| I_{g3} | | | 200 | μA |
| V_{g1} | -2 | -23.5 | -31 | V |
| V_{g2+g4} | 100 | - | 145 | V |
| I_a | 3 | - | - | mA |
| I_{g2+g4} | 3 | - | - | mA |
| g_c | 650 | 6.5 | 1.5 | $\mu A/V$ |
| r_a | 1.3 | > 3.0 | > 4.0 | M.ohms |



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OPERATING CONDITIONS - TRIODE SECTION

| | | | |
|--|-----|--------|---------|
| V_b | 100 | 250 | V |
| R_a | - | 45,000 | ohms |
| I_a ($R_{gt} = 50,000$ ohms, $I_{gt} = 200$ μ A) | 3.3 | 3.3 | μ A |
| I_a ($V_{gt} = 0$ V) | 10 | 4.5 | μ A |
| g_m ($V_{gt} = 0$ V, $V_{osc} = 0$ V) | 2.8 | 2.2 | mA/V |
| μ ($V_{gt} = 0$ V, $V_{osc} = 0$ V) | 24 | 24 | |

LIMITING VALUES - HEXODE SECTION

| | | |
|--|--------|------|
| $V_{a(b)}$ max. | 550 | V |
| V_a max. | 300 | V |
| w_a max. | 1.2 | W |
| V_{g2+g4} (b) max | 550 | V |
| V_{g2+g4} max. ($I_a = 4.5$ mA) | 125 | V |
| V_{g2+g4} max. ($I_a = < 0.5$ mA) | 200 | V |
| w_{g2+g4} max. | 0.6 | W |
| V_{g1} max. ($I_{g1} = +0.3$ μ A) | -1.3 | V |
| V_{g3} max. ($I_{g3} = +0.3$ μ A) | -1.3 | V |
| I_k max. | 15 | mA |
| R_{g1-k} max. | 3 | Mohm |
| R_{h-k} max. | 20,000 | ohms |
| V_{h-k} | 100 | V |
| R_{g3-k} | 0.1 | Mohm |

LIMITING VALUES - TRIODE SYSTEM

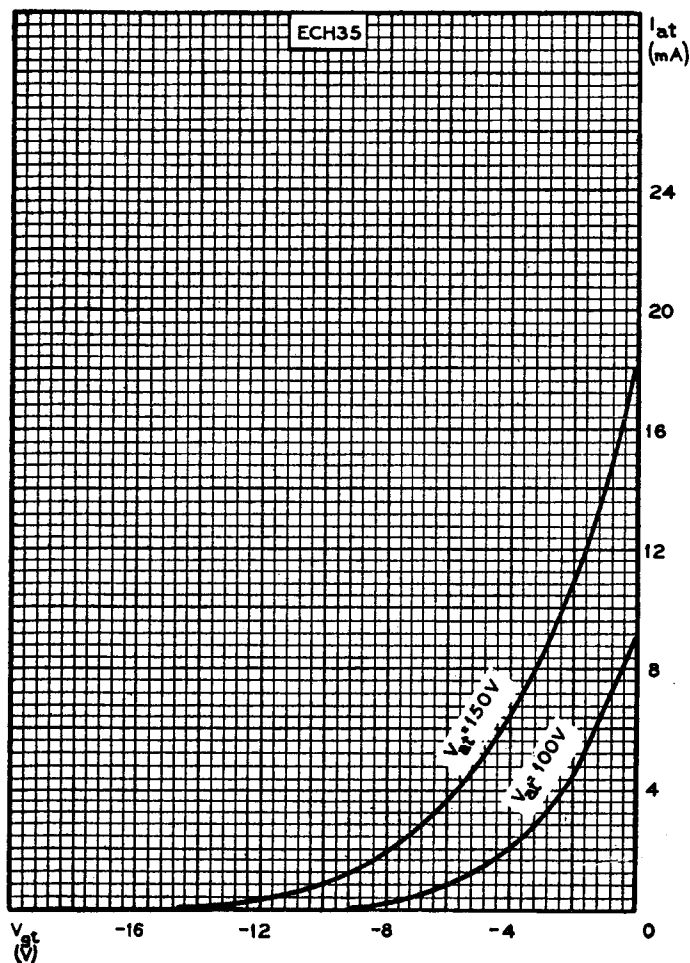
| | | |
|--|---------|------|
| $V_{a(b)}$ max. | 550 | V |
| V_a max. | 100 | V |
| w_a max. | 1.5 | W |
| V_{gt} max. ($I_{g1} = +0.3$ μ A) | -1.3 | V |
| R_{gt} max. | 100,000 | ohms |



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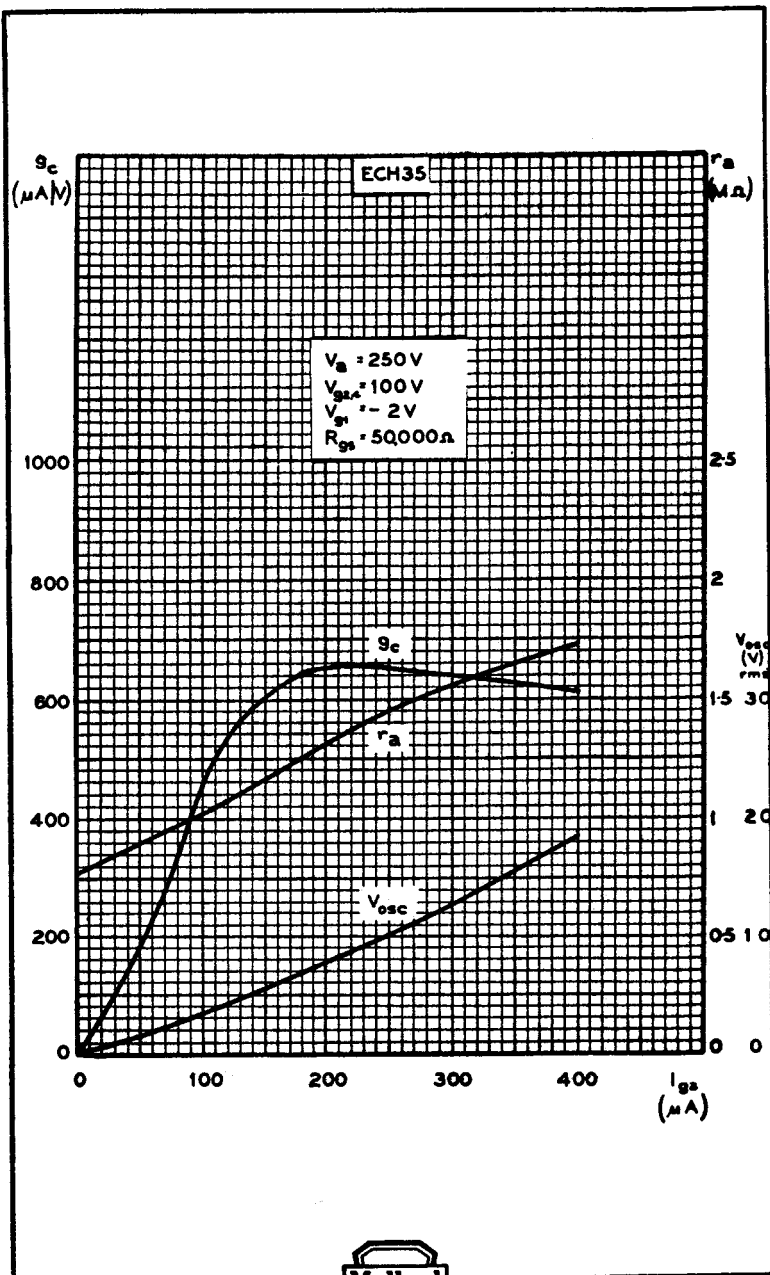
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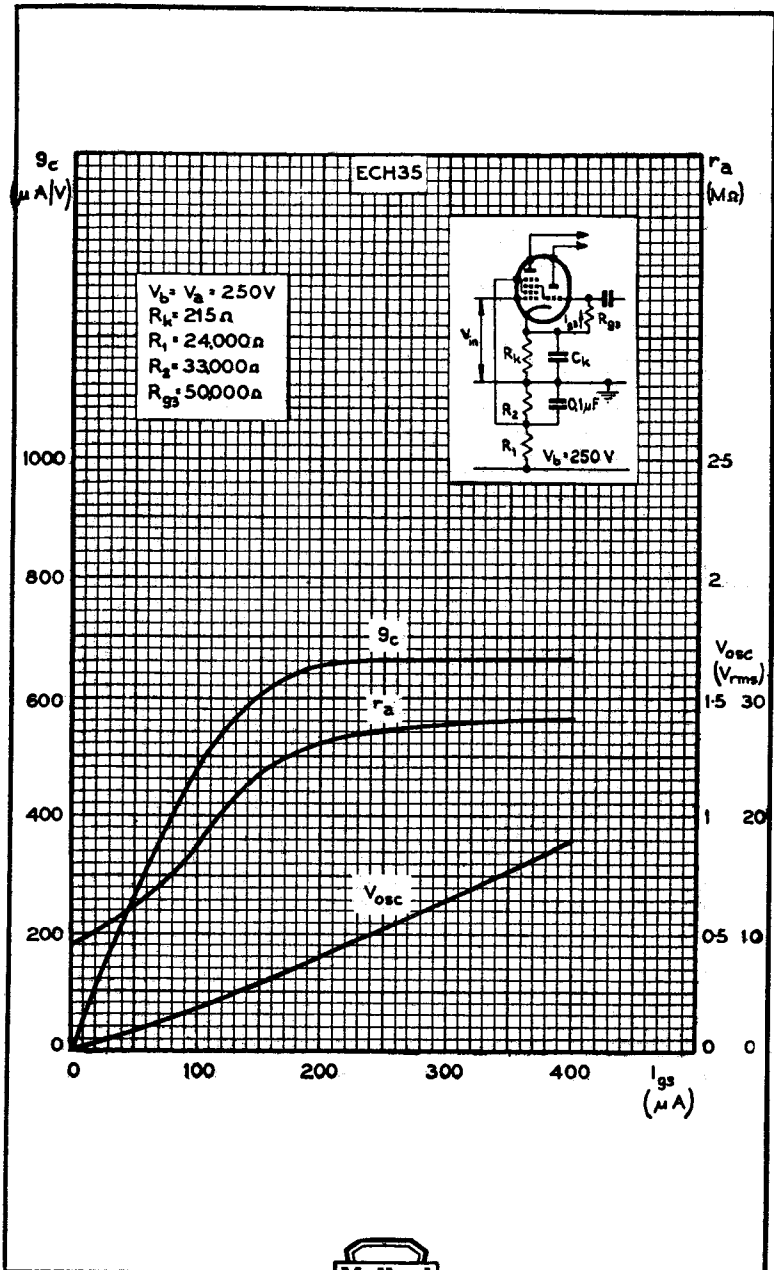
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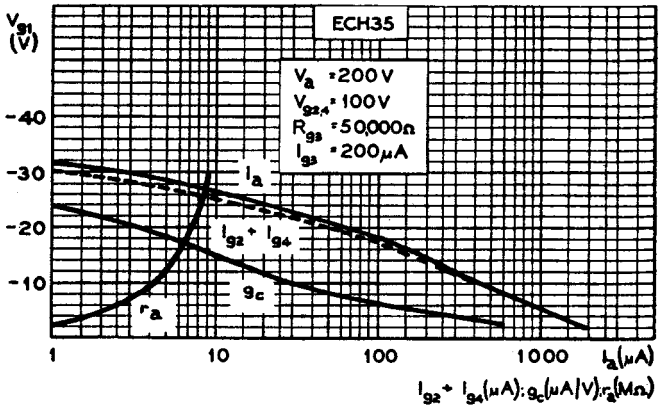
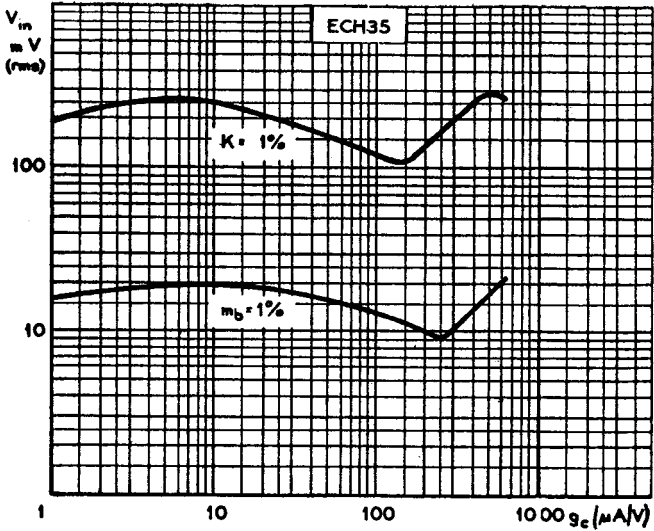
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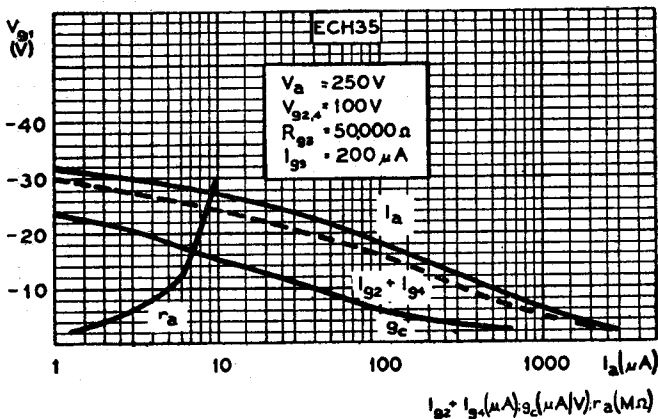
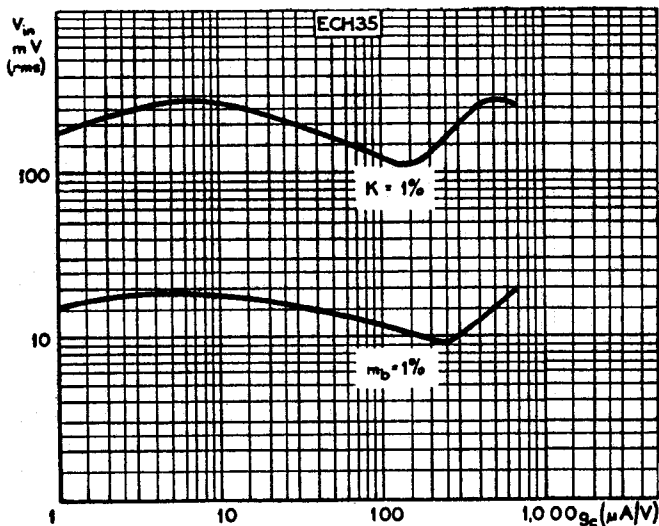
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