

ECL 82

6 BM 8

Triode-Pentode

Triode als Oszillator
und NF-Verstärker,
Pentode als Endröhre
für die Vertikalablenkung
und NF-Endverstärker

Triode-Pentode

Oscillator, AF Amplifier
Pentode:
Vertical-Deflection,
AF Power Amplifier

↓ Fortsetzung

Allgemeine Daten General Data

Heizung
Heating
 $U_f = 6,3 \text{ V}$
 $I_f = 0,78 \text{ A}$
indirekt
indirect

Kapazitäten Capacitances

Pentode
 $C_{eing} = 9,3 \text{ pF}$
 $C_{ausg} \approx 8,0 \text{ pF}$
 $C_{g1} < 0,3 \text{ pF}$
 $C_{g1f} < 0,3 \text{ pF}$

Kenn- und Betriebsdaten Characteristics and Typical Operation

Kenndaten Characteristics

Pentode
 $U_a = 200 \text{ V}$
 $U_{g2} = 200 \text{ V}$
 $U_{g1} = -16 \text{ V}$
 $I_a = 35 \text{ mA}$
 $I_{g2} = 7,0 \text{ mA}$
 $S = 6,4 \text{ mA/V}$
 $R_t = 20 \text{ k}\Omega$
 $\mu_{g2g1} = 9,5$

Triode
 $U_a = 100 \text{ V}$
 $U_{g1} = 0 \text{ V}$
 $I_a = 3,5 \text{ mA}$
 $S = 2,5 \text{ mA/V}$
 $\mu = 70$

Betriebsdaten Typical Operation

| Pentode | | | |
|----------|---------|-------|----------|
| U_a | = 170 | 200 | 200 V |
| U_{g2} | = 170 | 170 | 200 V |
| U_{g1} | = -11,5 | -12,5 | -16 V |
| I_a | = 41 | 35 | 35 mA |
| I_{g2} | = 8,0 | 6,5 | 7,0 mA |
| S | = 7,5 | 6,8 | 6,4 mA/V |

Grenzdaten Maximum Ratings

Pentode

$U_a \text{ kalt} = 900 \text{ V}$
 $U_a = 300 \text{ V}$
 $U_a \text{ sp} = 2,5 \text{ kV}^1$
 $-U_a \text{ sp} = 500 \text{ V}$
 $Q_a (U_a < 250 \text{ V}) = 7 \text{ W}$
 $Q_a (U_a > 250 \text{ V}) = 5 \text{ W}$
 $U_{g2 \text{ kalt}} = 550 \text{ V}$
 $U_{g2} = 250 \text{ V}$
 $Q_{g2} = 1,8 \text{ W}$
 $I_k = 50 \text{ mA}$
 $R_{g1} = 2 \text{ M}\Omega^2$
 $R_{g1} = 1 \text{ M}\Omega^3$
 $U_{fk} = 200 \text{ V}$
 $R_{fk} = 20 \text{ k}\Omega$

Triode

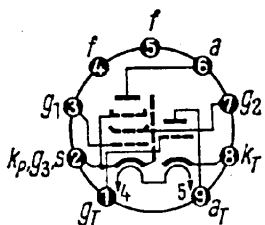
$U_a \text{ kalt} = 550 \text{ V}$
 $U_a = 250 \text{ V}$
 $U_a \text{ sp} = 600 \text{ V}^1$
 $Q_a = 0,5 \text{ W}$

Rundfunk- und Fernsehverstärkerröhren, Gleichrichterröhren

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noval ECL 82

$C_{eing} = 3,0 \text{ pF}$
 $C_{ausg} = 4,3 \text{ pF}$
 $C_{ag} = 4,5 \text{ pF}$
 $C_{gf} < 0,1 \text{ pF}$



Noval

Kolben Nr. 11
Bulb No. 11

Triode

| | | | | |
|---|--------|------|-----|------------------|
| R_t | = 16 | 20,5 | 20 | $\text{k}\Omega$ |
| μ_{g2g1} | = 9,5 | 9,5 | 9,5 | |
| R_a | = 3,9 | 5,6 | 5,6 | $\text{k}\Omega$ |
| N_{\sim} ($k = 10\%$) | = 3,3 | 3,4 | 3,5 | W |
| $U_{g1\sim}$ ($k = 10\%$) | = 6,0 | 5,8 | 6,6 | V_{eff} |
| $U_{g1\sim}$ ($N_{\sim} = 50 \text{ mA}$) | = 0,59 | 0,56 | 0,6 | V_{eff} |

Triode

NF-Verstärker

AF Amplifier

| | | | | |
|------------|--------|------|------|----------------------|
| U_b | = 200 | 200 | 200 | 200 V |
| R_k | = 1,5 | 2,0 | 0 | 0 $\text{k}\Omega$ |
| R_g | = 3 | 3 | 22 | 22 $\text{M}\Omega$ |
| R_a | = 100 | 220 | 100 | 220 $\text{k}\Omega$ |
| I_a | = 0,84 | 0,52 | 1,05 | 0,61 mA |
| V | = 47 | 52 | 50 | 55 |
| U_{\sim} | = 30 | 26 | 24 | 25 V_{eff} |
| k | = 2,3 | 1,6 | 1,5 | 1,4 % |
| $R_{g'}$ | = 680 | 680 | 680 | 680 $\text{k}\Omega$ |

| | |
|-------------------------------|-------------------------|
| I_k | = 15 mA |
| $I_k \text{ sp}$ | = 250 mA^1 |
| R_{g1} | = 3 $\text{M}\Omega^2$ |
| R_{g1} | = 1 $\text{M}\Omega^3$ |
| R_{g1} | = 20 $\text{M}\Omega^4$ |
| U_{fk} | = 200 V |
| R_{fk} | = 20 $\text{k}\Omega$ |
| Z_g ($f = 50 \text{ Hz}$) | = 500 $\text{k}\Omega$ |

¹ Impulsdauer
max. 4% einer Periode,
 $t_{\text{max}} = 0,8 \text{ ms}$
Pulse time
max. 4% per cycle
 $t_{\text{max}} = 0,8 \text{ ms}$

² Automatische
Gittervorspannung
Automatic bias

³ Feste Gittervorspannung
Fixed grid bias

⁴ selbstanlaufend
 U_{g1} only produced
by R_{g1}

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