

Miniwatt

DK 40

OCTODE for use as frequency changer in battery receivers

OCTODE pour l'utilisation comme changeuse de fréquence dans des appareils batterie

OKTODE zur Verwendung als Mischröhre in Batteriegeräten

Heating: direct by battery current, rectified A.C. or D.C.; series or parallel supply

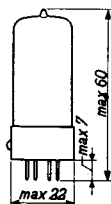
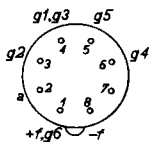
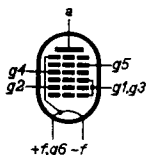
Chauffage: direct par courant batterie, C.A.redressé ou C.C.;

Heizung: alimentation en série ou en parallèle
direkt durch Batteriestrom, gleichgerichteten Wechselstrom oder Gleichstrom;
Serien- oder Parallelspeisung

Parallel supply Vf = 1,4 V
Alimentation en parallèle If = 50 mA
Parallelspeisung

Series supply Vf = 1,35 V
Alimentation en série
Serienspeisung

Dimensions in mm
Dimensions en mm
Abmessungen in mm



Capacitances
Capacités
Kapazitäten

Ca = 11,1 pF
Cg4 = 7,1 pF
Cag4 < 0,125 pF
Cg1+g3 = 6,0 pF
Cg2 = 5,3 pF
Cg2g4 = 1,0 pF
C(g1+g3)g4 = 1,1 pF

OCTODE for use as frequency changer in battery receivers

OCTODE pour utilisation en changeuse de fréquence dans des appareils-batterie

OKTODE zur Verwendung als Mischröhre in Batteriegeräten

Heating : direct by D.C.
series or parallel supply

Chauffage: direct par C.C.
alimentation en série ou en parallèle

Heizung : direkt durch Gleichstrom
Serien-oder Parallelspeisung

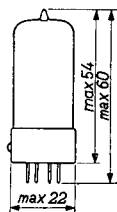
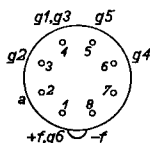
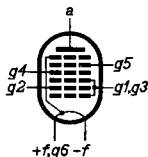
Parallel supply
Alimentation en parallèle
Parallelspeisung

$V_f = 1,4 \text{ V}$
 $I_f = 50 \text{ mA}$

Series supply
Alimentation en série
Serienspeisung

$V_f = 1,3 \text{ V}$

Dimensions in mm
Dimensions en mm
Abmessungen in mm



Base, culot, Sockel: Rimlock

Capacitances
Capacités
Kapazitäten

$C_a = 9,6 \text{ pF}$
 $C_{g4} = 6,9 \text{ pF}$
 $C_{ag4} < 0,16 \text{ pF}$
 $C_{g1+g3} = 5,6 \text{ pF}$
 $C_{g2} = 5,0 \text{ pF}$
 $C_{g2g4} = 0,9 \text{ pF}$
 $C_{(g1+g3)g4} = 1,1 \text{ pF}$

Operating characteristics
 Caractéristiques d'utilisation
 Betriebsdaten

| | | | | | | |
|--------|---|------|------|------|-------|------------------|
| Va=Vb | = | 67,5 | | 90 | | V |
| Rg5 | = | 0 | | 90 | | kΩ |
| Rg2 | = | 0 | | 8,5 | | kΩ |
| Rg1+g3 | = | 35 | | 35 | | kΩ |
| Vosc | = | 8 | | 8 | | V _{eff} |
| Vg4 | = | 0 | -9,5 | 0 | -12,5 | V |
| Vg5 | = | 67,5 | 67,5 | 67,5 | 90 | V |
| Vg2 | = | 67,5 | - | 67,5 | - | V |
| Ia | = | 1,0 | - | 1,0 | - | mA |
| Ig5 | = | 0,25 | - | 0,25 | - | mA |
| Ig2 | = | 2,6 | - | 2,6 | - | mA |
| Sc | = | 425 | 4,2 | 425 | 4,2 | μA/V |
| Ri | = | 0,9 | >10 | 1,0 | >10 | MΩ |
| Req | = | 67 | - | 67 | - | kΩ |

| | | | | | | |
|--------|---|------|-------|------|-------|------------------|
| Va=Vb | = | 120 | | 135 | | V |
| Rg5 | = | 210 | | 270 | | kΩ |
| Rg2 | = | 20 | | 26 | | kΩ |
| Rg1+g3 | = | 35 | | 35 | | kΩ |
| Vosc | = | 8 | | 8 | | V _{eff} |
| Vg4 | = | 0 | -16,5 | 0 | -18,5 | V |
| Vg5 | = | 67,5 | 120 | 67,5 | 135 | V |
| Vg2 | = | 67,5 | - | 67,5 | - | V |
| Ia | = | 1,0 | - | 1,0 | - | mA |
| Ig5 | = | 0,25 | - | 0,25 | - | mA |
| Ig2 | = | 2,6 | - | 2,6 | - | mA |
| Sc | = | 425 | 4,2 | 425 | 4,2 | μA/V |
| Ri | = | 1,0 | >10 | 1,0 | >10 | MΩ |

Operating characteristics
 Caractéristiques d'utilisation
 Betriebsdaten

| | | | | | |
|-------------|---|--------|------|-----------|--------------------------|
| $V_a=V_b$ | = | 67,5 | | 90 | V |
| R_{g5} | = | 0 | | 90 | k Ω |
| R_{g2} | = | 0 | | 8,5 | k Ω |
| R_{g1+g3} | = | 35 | | 35 | k Ω ¹⁾ |
| V_{osc} | = | 8 | | 8 | V_{eff} |
| V_{g4} | = | 0 -9,5 | | 0 -12,5 V | |
| V_{g5} | = | 67,5 | 67,5 | 67,5 | 90 V |
| V_{g2} | = | 67,5 | - | 67,5 | - V |
| I_a | = | 1,0 | - | 1,0 | - mA |
| I_{g5} | = | 0,25 | - | 0,25 | - mA |
| I_{g2} | = | 2,6 | - | 2,6 | - mA |
| S_c | = | 425 | 4,2 | 425 | 4,3 μ A/V |
| R_i | = | 0,9 | >10 | 1,0 | >10 M Ω |
| R_{eq} | = | 67 | - | 67 | - k Ω |

| | | | | | |
|-------------|---|---------|-----|-----------|--------------------------|
| $V_a=V_b$ | = | 120 | | 135 | V |
| R_{g5} | = | 210 | | 270 | k Ω |
| R_{g2} | = | 20 | | 26 | k Ω |
| R_{g1+g3} | = | 35 | | 35 | k Ω ¹⁾ |
| V_{osc} | = | 8 | | 8 | V_{eff} |
| V_{g4} | = | 0 -16,5 | | 0 -18,5 V | |
| V_{g5} | = | 67,5 | 120 | 67,5 | 135 V |
| V_{g2} | = | 67,5 | - | 67,5 | - V |
| I_a | = | 1,0 | - | 1,0 | - mA |
| I_{g5} | = | 0,25 | - | 0,25 | - mA |
| I_{g2} | = | 2,6 | - | 2,6 | - mA |
| S_c | = | 425 | 4,2 | 425 | 4,2 μ A/V |
| R_i | = | 1,0 | >10 | 1,0 | >10 M Ω |

- ¹⁾ R_{g1+g3} connected to +f (pin 1)
 R_{g1+g3} connectée à +f (broche 1)
 R_{g1+g3} verbunden mit +f (Stift 1)

Operating characteristics with current saving circuit (not suitable for the short wave range)
 Caractéristiques d'utilisation en montage économisateur (ne convient pas pour ondes courtes)
 Betriebsdaten in Stromsparschaltung (für Kurzwellen ungeeignet)

| | | | |
|----------|------|------|------------------|
| Va=Vb = | 67,5 | | V |
| Rg5 = | 0 | | kΩ |
| Rg2 = | 15 | | kΩ |
| Rg1+g3 = | 35 | | kΩ |
| Vosc = | 8 | | V _{eff} |
| Vg4 = | 0 | -9,5 | V |
| Vg5 = | 67,5 | 67,5 | V |
| Vg2 = | 45 | - | V |
| Ia = | 0,85 | - | mA |
| Ig5 = | 0,19 | - | mA |
| Ig2 = | 1,5 | - | mA |
| Sc = | 370 | 3,7 | μA/V |
| Ri = | 1,0 | >10 | MΩ |

Typical characteristics of the oscillator section (filament, g1 and g2) (g1 and g3 connected to +f)
 Caractéristiques typiques de la partie oscillatrice (filament, g1 et g2) (g1 et g3 connectées à +f)
 Kenndaten des Oszillatorsteiles (Heizfaden, g1 und g2) (g1 und g3 verbunden mit +f)

| | | | |
|---------|------|------|------|
| Va = | 67,5 | 67,5 | V |
| Vg5 = | 67,5 | 67,5 | V |
| Vg4 = | 0 | 0 | V |
| Vg2 = | 67,5 | 45 | V |
| Ig2 = | 2,9 | 1,3 | mA |
| Sg2g1 = | 1,2 | 0,9 | mA/V |
| μg2g1 = | 14 | 14 | |

Current saving circuit
 Montage économisateur ²⁾
 Stromsparschaltung

| | | | | |
|-------------|---|------|------|--------------------------|
| $V_a = V_b$ | = | 67,5 | | V |
| R_{g5} | = | 0 | | k Ω |
| R_{g2} | = | 15 | | k Ω |
| R_{g1+g3} | = | 35 | | k Ω ¹⁾ |
| V_{osc} | = | 8 | | V _{eff} |
| V_{g4} | = | 0 | -9,5 | V |
| V_{g5} | = | 67,5 | 67,5 | V |
| V_{g2} | = | 45 | - | V |
| I_a | = | 0,85 | - | mA |
| I_{g5} | = | 0,19 | - | mA |
| I_{g2} | = | 1,5 | - | mA |
| S_c | = | 370 | 3,7 | μ A/V |
| R_i | = | 1,0 | >10 | M Ω |

Typical characteristics of the oscillator section
 (filament, g1 and g2) (g1 connected to +f)
 Caractéristiques types de la partie oscillatrice
 (filament, g1 et g2) (g1 connectée à +f)
 Kenndaten des Oszillatorsteiles (Heizfaden, g1 und
 g2) (g1 verbunden mit +f)

| | | | | |
|--------------|---|------|------|------|
| V_a | = | 67,5 | 67,5 | V |
| V_{g5} | = | 67,5 | 67,5 | V |
| V_{g4} | = | 0 | 0 | V |
| V_{g2} | = | 67,5 | 45 | V |
| I_{g2} | = | 2,9 | 1,3 | mA |
| S_{g2g1} | = | 1,2 | 0,9 | mA/V |
| μ_{g2g1} | = | 14 | 14 | |

²⁾ Not suitable for the short-wave range
 Ne convient pas pour ondes courtes
 Ungeeignet für Kurzwellen

Limiting values
Caractéristiques limites
Grenzdaten

| | | |
|--------------------------|--------|---------------|
| Va | = max. | 135 V |
| Wa | = max. | 0,2 W |
| Vg5 | = max. | 135 V |
| Wg5 | = max. | 0,02 W |
| Vg2 | = max. | 100 V |
| Wg2 | = max. | 0,2 W |
| Ik | = max. | 5 mA |
| Vg4 (Ig4 = +0,3 μ A) | = max. | +0,2 V |
| Rg4 | = max. | 3 M Ω |
| Rg1+g3 | = max. | 35 k Ω |

Limiting values
Caractéristiques limites
Grenzdaten

| | | |
|----------------------------------|--------|---------------|
| V_a | = max. | 135 V |
| W_a | = max. | 0,2 W |
| V_{g5} | = max. | 135 V |
| W_{g5} | = max. | 0,02 W |
| V_{g2} | = max. | 100 V |
| W_{g2} | = max. | 0,2 W |
| I_k | = max. | 5 mA |
| V_{g4} ($I_{g4}=+0,3 \mu A$) | = max. | +0,75 V |
| R_{g4} | = max. | 3 M Ω |
| R_{g1+g3} | = max. | 35 k Ω |

PHILIPS

*Electronic
Tube*

HANDBOOK

| page | DK40 sheet | date |
|-------------|-----------------------|-------------|
| 1 | 1 | 1949.06.06 |
| 2 | 1 | 1953.10.10 |
| 3 | 2 | 1949.06.06 |
| 4 | 2 | 1953.10.10 |
| 5 | 3 | 1949.06.06 |
| 6 | 3 | 1953.10.10 |
| 7 | 4 | 1949.06.06 |
| 8 | 4 | 1953.10.10 |
| 9 | FP | 2000.09.14 |