

12AT7 (ECC81) - test protocol

17.06.2021 12:51:46



Vorgaben/Pre-settings:

heater voltage: 12.6 V, heater current: 0.15 A, heater type: indirekt

Ergebnisse/Results:

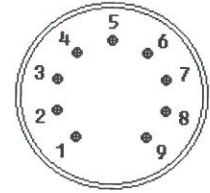
653



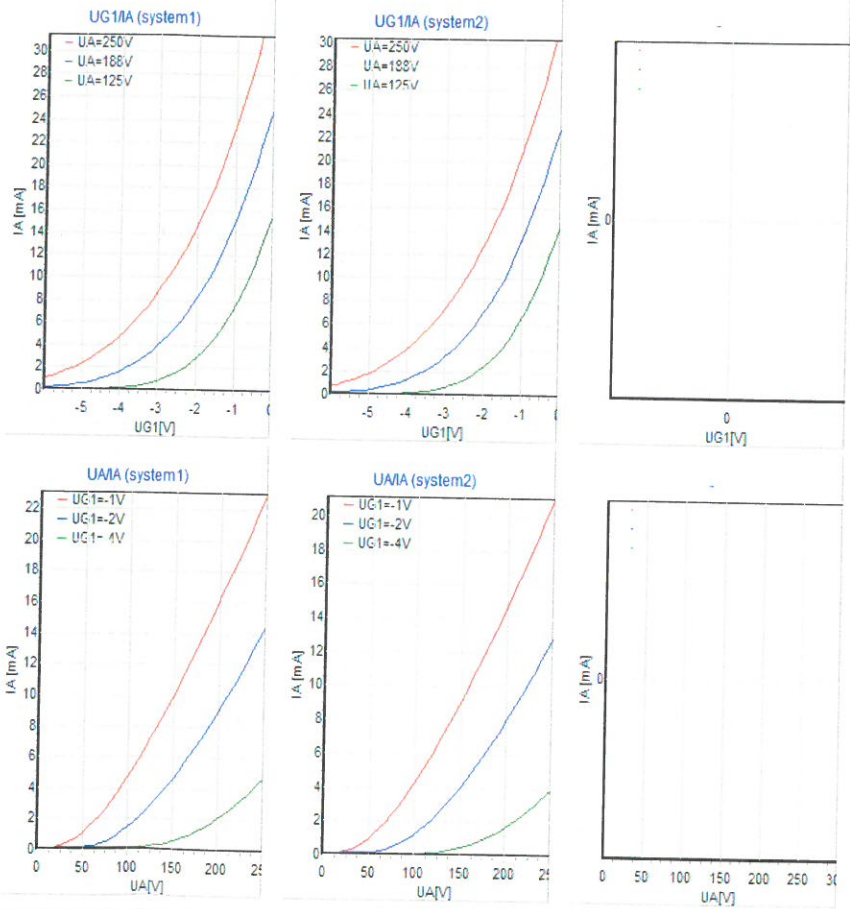
| system | 1 | 2 | 3 |
|---------------------------|--------|--------|-------|
| type of tube system | Triode | Triode | - |
| pinout | | | |
| Pin 1 | | A | |
| Pin 2 | | G1 | |
| Pin 3 | | K | |
| Pin 4 | F1 | F1 | |
| Pin 5 | F2 | F2 | |
| Pin 6 | A | | |
| Pin 7 | G1 | | |
| Pin 8 | K | | |
| Pin 9 | FM | FM | |
| Pin 10 or ext. connector | | | |
| absolute maximum ratings: | | | |
| UA [V] | 300.0 | 300.0 | 0.0 |
| UG2 [V] | 0 | 0 | 0 |
| IK [mA] | 15.000 | 15.000 | 0.000 |
| NA [W] | 2.500 | 2.500 | 0.000 |
| NG2 [W] | 0.000 | 0.000 | 0.000 |
| typical ratings: | | | |
| UA [V] | 250.0 | 250.0 | 0.0 |
| UG1 [V] | -2.00 | -2.00 | 0.00 |
| UG2 [V] | 0.0 | 0.0 | 0.0 |
| UG3 [V] | 0.0 | 0.0 | 0.0 |
| IA [mA] | 10.000 | 10.000 | 0.000 |
| IG2 [mA] | 0.000 | 0.000 | 0.000 |
| S [mA/V] | 5.50 | 5.50 | 0.00 |
| μ | 60.0 | 60.0 | 0.0 |
| D [%] | 1.6 | 1.6 | 0.0 |
| Ri [kOhm] | 11.0 | 11.0 | 0.0 |
| Data for curves: | | | |
| Grid1 curves: | UG1/IA | UG1/IA | |
| 1: UA [V] | 250 | 250 | |
| 1: UG1 [V] starting at | -6 | -6 | |
| 1: UG2 [V] | 0 | 0 | |
| 1: UG3 [V] | 0 | 0 | |
| 2: UA [V] | 188 | 188 | |
| 2: UG1 [V] starting at | -6 | -6 | |
| 2: UG2 [V] | 0 | 0 | |
| 2: UG3 [V] | 0 | 0 | |
| 3: UA [V] | 125 | 125 | |
| 2: UG1 [V] starting at | -6 | -6 | |
| 3: UG2 [V] | 0 | 0 | |
| 3: UG3 [V] | 0 | 0 | |
| Plate-Screen curves | UA/IA | UA/IA | |
| 1: UA [V] up to | 250 | 250 | |
| 1: UG1 [V] | -1 | -1 | |
| 1: UG2 [V] up to | 0 | 0 | |
| 1: UG3 [V] | 0 | 0 | |
| 2: UA [V] up to | 250 | 250 | |
| 2: UG1 [V] | -2 | -2 | |
| 2: UG2 [V] up to | 0 | 0 | |
| 2: UG3 [V] | 0 | 0 | |
| 3: UA [V] up to | 250 | 250 | |
| 3: UG1 [V] | -4 | -4 | |
| 3: UG2 [V] up to | 0 | 0 | |
| 3: UG3 [V] | 0 | 0 | |
| f(UaPentode) start at[V] | | | |
| AC-simulation, +V | 0 | 0 | 0 |

| system | 1 | 2 | 3 |
|-----------------------------------|--------|--------|---|
| type of tube system | Triode | Triode | |
| nominal plate current [mA] | 10 | 10 | |
| measured plate current [mA] | 15.047 | 13.037 | |
| = percent of nominal | 150 | 130 | |
| Nominal screen grid current [mA] | | | |
| measured screen current [mA] | | | |
| = percent of nominal | | | |
| transconductance [mA/V] | 7.25 | 6.59 | |
| at grid voltage change (dUG1) [V] | 0.6 | 0.6 | |
| plate current [mA] at + 1/2 dUG1 | 17.334 | 15.212 | |
| plate current [mA] at - 1/2 dUG1 | 12.984 | 11.259 | |
| μ | 58.6 | 62.3 | |
| D of plate in % (D = 1/ μ) | 1.7 | 1.6 | |
| measured plate current [mA] | 12.132 | 10.662 | |
| at plate voltage | 224.77 | 224.85 | |
| D G2 [%] | | | |
| measured plate current [mA] | | | |
| at screen voltage | | | |
| Ri [kOhm] | 8.6 | 9.7 | |
| Ig [μ A] | 0.0362 | 0.035 | |

base: Noval B9A



8 x 36° 1.02 ϕ
PC ϕ : 11.9 mm [B9A]



selected heating version: intern DC
measured heater voltage: 12.61 V
measured heater current: 143.99 mA (Ph=1.816 W)
Aufheizzeit: 81 s

test cathode isolation = o.k.
test cathode isolation = o.k.

Ig (system:1/2/3)[μ A]: 0.0362 / 0.035 / 0
faktor vakuum: 0.00000240
Plate current variation: 2.1 [%], IgR: 13.479 mA, Ig|R: 13.202 mA

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= CV10662, CV8154, 7728, QA2406, A2900, QB309, B739, E2157, CV455, B309, B152, 12AT7, 6060, 6679, ECC81WA