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KT90



KT90 is a beam-power pentode primarily designed for use in audio frequency power amplifier applications. Anode dissipation rate is 50W, which provides for push-pull amplifiers utilization up to 110W output per pair, with 550V on the anode. Up to 160W per pair may be achieved with anode voltage of 750V and screen grid voltage of 600V.

KT90 is recommended as a replacement for 6550, 6550A and KT88.



Key Benefits

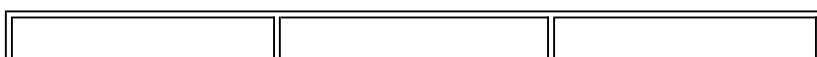
- power output
- vastly increased anode and screen grid maximum voltages
- low distortion
- extended tube life

General Characteristics

Heater voltage AC or DC	6,3 ± 0,6 V
Heater Current	1,6 A
Direct interelectrode capacitances	
G ₁ to A	1,8 pF
G ₁ to (H+C+G ₂ +BF+A)	29,0 pF

A to (H+C+G ₂ +BF+G ₁)	10,0 pF	
Mounting position	any	
Envelope	glass	
Base	universal octal 8-pin	

PIN No.	Connection	
1	-	
2	Heater	
3	Anode	
4	Grid No. 2 (screen)	
5	Grid No. 1	
6	-	
7	Heater	
8	Cathode & Beam Former	



Maximum ratings (absolute)	Pentode Connection	Triode Connection
U_A	750 V	600 V
U_{G2}	650 V	-
$U_A - U_{G2}$	650 V	600 V
$-U_{G1}$	200 V	200 V
P_A (dissipation)	50 W	50 W
P_{G2}	8 W	-
P_{A+G2}	54 W	-
I_C	230 mA	230 mA
U_{C-f} (total DC)	300 V	300 V

Characteristics using 250V "B+" as a guide

Average characteristics, pentode connection		
U_A	250 V	400 V
U_{G2}	250 V	300 V
$-U_{G1}$	14 V	27 V
I_A	145 mA	90 mA
I_{G2}	8 mA	4,7 mA
$-U_{G1}$ ($I_A=1$ mA approx.)	36 V	42 V
g_m	14 mA/V	8,8 mA/V
R_i (approx.)	11 kOhm	25 kOhm
Average characteristics, triode connection		
U_A, U_{G2}	250 V	
$-U_{G1}$	14 V	
I_{A+G2}	153 mA	
I_{G2}	8 mA	
g_m	15 mA/V	
R_i (approx.)	650 Ohm	
Amplification factor	9	

See [some graphs ...](#)

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