



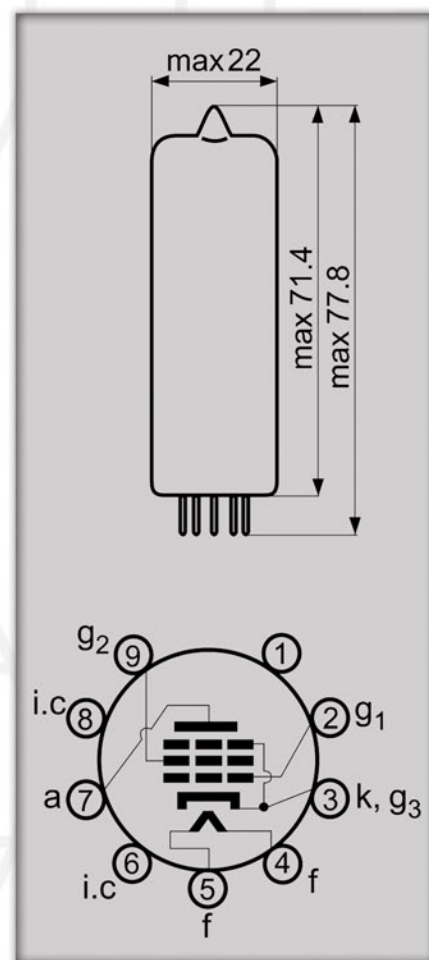
# TELEFUNKEN

## Elektroakustik

### EL84-TK TUBE DATA SHEET



Mechanical			
Type	R.F. Output Pentode		
Base	Noval		
Number of Pins	9-Pin		
Heater Requirements - Indirect by A.C. or D.C.			
Parameter	Symbol	Value	Unit
Heater Voltage	$V_f$	6.3	V
Heater Current	$I_f$	760	mA
Direct Interelectrode Capacitances			
Grid #1 to Cathode	$C_{g1k}$	10	pF
Plate to all except Grid #1	$C_a$	5.1	pF
Grid #1 to Plate	$C_{g1a}$	0.6	pF
Grid #1 to Heater	$C_{g1f}$	0.15	pF
Maximum Ratings - Design Maximum Values			
Plate Voltage	$V_a$	300	V
Plate Dissipation	$P_a$	12	W
Grid #2 Voltage	$V_{g2}$	300	V
Grid #2 Dissipation	$P_{g2}$	2	W
Grid #1 Voltage	$V_{g1}$	-100	V
Cathode Current	$I_k$	65	mA
Grid #1 Resistor (automatic bias)	$R_{g1}$	1	MΩ
Grid #1 Resistor (fixed bias)	$R_{g1}$	0.3	MΩ
Cathode to Heater Voltage	$V_{kf}$	100	V
Typical Operation and Characteristics - Class A <sub>1</sub> Amplifier, Pentode Connection			
Plate Voltage	$V_a$	250	V
Grid #2 Voltage	$V_{g2}$	250	V
Grid #1 Voltage	$V_{g1}$	-7.3	V
Cathode Resistor	$R_k$	135	Ω
Plate Resistor	$R_a$	5.2	kΩ
Plate Current	$I_a$	48	mA
Grid #2 Current	$I_{g2}$	5.5	mA
Transconductance	$g_m$	11.3	mA/V
Amplification Factor	$\mu_{g1g2}$	19	
Internal Plate Resistance (approx.)	$r_a$	40	kΩ
Grid #1 Driving Voltage (when $P_o = 50$ mW)	$V_{g1(P_o=50mW)}$	0.3	V
Grid #1 Driving Voltage (when $P_o = 6$ W)	$V_{g1(P_o=6W)}$	4.3	V
Output Power (at 10% THD with fixed grid bias)	$P_{O(10\% THD)}$	5.7	W
Output Power (when $I_{g1} = 0.3$ μA)	$P_o$	6	W



TRANSFER CHARACTERISTICS

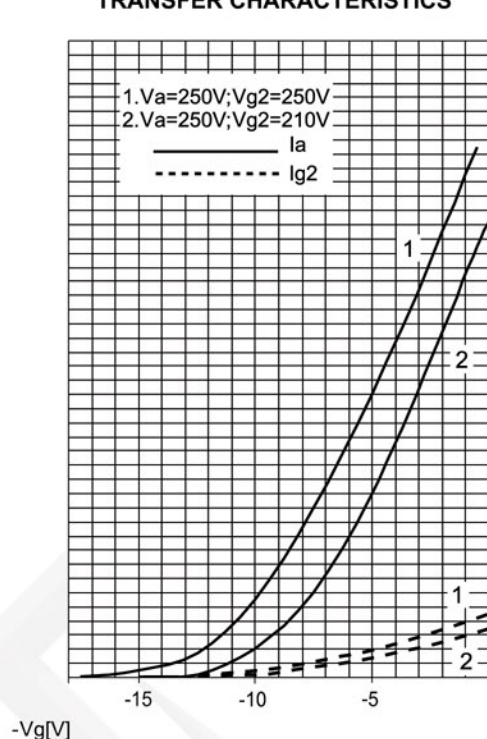
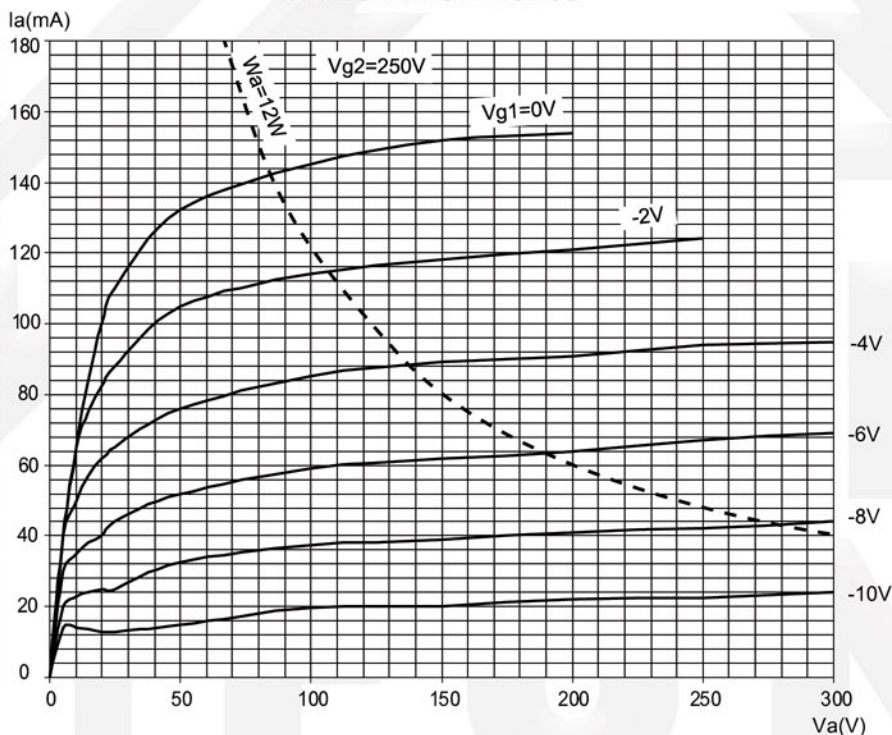


PLATE CHARACTERISTICS



## EL84 HISTORY

The TELEFUNKEN EL84-TK is a perfect replacement for any EL84 / 6BQ5 tube offering a reliable and great sound. It is a thermionic valve of the power pentode type.

Originally designed for the output stages of audio frequency amplifiers, the EL84 can deliver up to 17 watts. Although it is physically smaller than most common output tubes, this pentode tube can really deliver. In many ways it is similar to the EL34 but without the output "horse power".

The EL84, like its EL34 cousin, are found in many British amplifiers, particularly those from VOX. When overdriven, the EL84 power tubes in these amplifiers produce a distinctive chiming and articulate sound when compared to 6L6 tubes more commonly used in American amplifiers.

## BLACK DIAMOND SERIES VACUUM TUBES

TELEFUNKEN vacuum tubes have been the benchmark of excellence in all audio applications, both production and reproduction, for many decades. Today, this rich history continues with the introduction of new production tubes from TELEFUNKEN Elektroakustik, in partnership with JJ Tubes from the Carpathian Mountains of Cadca in Slovakia.

Each tube is meticulously measured for all critical parameters of performance including transconductance, gain, noise, and microphonics. All TELEFUNKEN branded tubes are hand picked to be the best examples of Eastern European construction in the proud tradition with which the name TELEFUNKEN Elektroakustik has become synonymous.

In addition to the rigorous testing procedure, all new production TELEFUNKEN tubes are cryogenically treated to ensure durability, and subjected to an extended burn-in period to ensure superior stability. The tubes are re-measured subsequent to burn-in, and again before final packaging, in order to guarantee that only the best, lowest noise tubes are offered.