



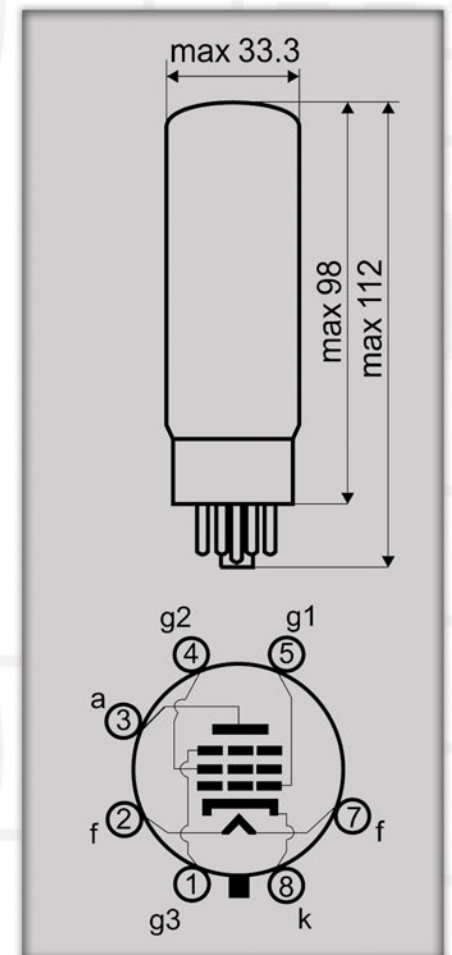
# TELEFUNKEN

## Elektroakustik

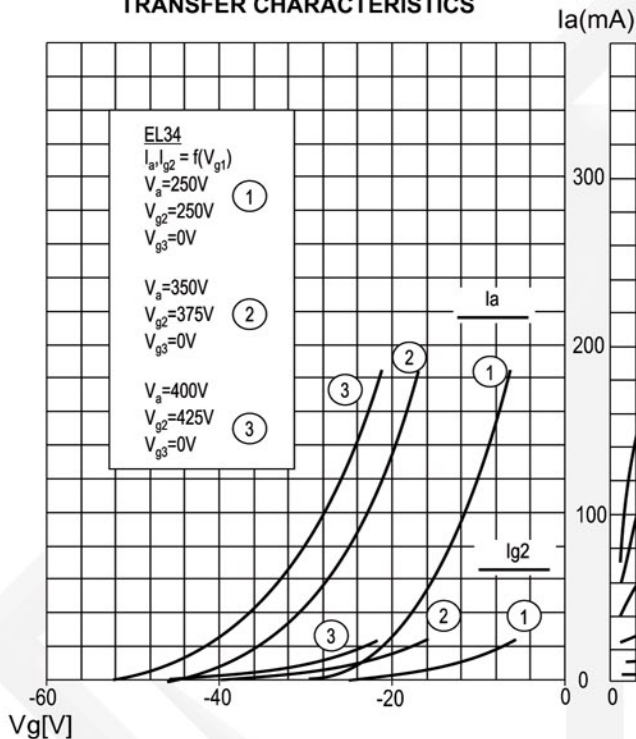
### EL34-TK TUBE DATA SHEET



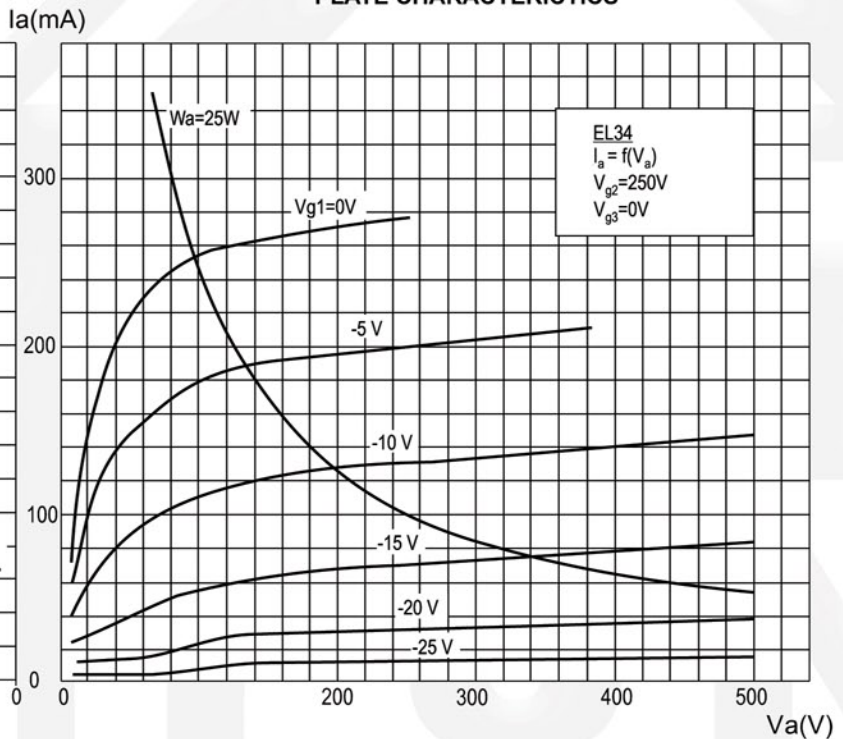
Mechanical			
Type	A.F. Output Pentode		
Base	Octal		
Number of Pins	7-Pin		
Heater Requirements - Indirect by A.C. or D.C.			
Parameter	Symbol	Value	Unit
Heater Voltage	$V_f$	6.3	V
Heater Current	$I_f$	1.5	A
Direct Interelectrode Capacitances			
Grid #1 to all except Plate	$C_{g1}$	15.5	pF
Plate to all except Grid #1	$C_a$	10	pF
Plate to Grid #1	$C_{ag1}$	1.3	pF
Maximum Ratings - Design Maximum Values			
Plate Voltage in Cold Condition	$V_{a0}$	2000	V
Plate Voltage	$V_a$	800	V
Plate Dissipation	$P_a$	25	W
Grid #2 Voltage in Cold Condition	$V_{g20}$	800	V
Grid #2 Voltage	$V_{g2}$	450	V
Grid #2 Dissipation	$P_{g2}$	8	W
Cathode Current	$I_k$	150	mA
Cathode to Heater Voltage	$V_{kf}$	100	V
Cathode to Heater Resistance	$R_{kf}$	20	k $\Omega$
Typical Operation and Characteristics - Class A <sub>1</sub> Amplifier, Pentode Connection			
Plate Voltage	$V_a$	250	V
Grid #3 Voltage	$V_{g3}$	0	V
Grid #2 Voltage	$V_{g2}$	265	V
Grid #1 Voltage	$V_{g1}$	-10V to -13.5V	V
Plate Current	$I_a$	100	mA
Grid #2 Current	$I_{g2}$	14.9	mA
Transconductance	$g_m$	11	mA/V
Internal Plate Resistance (approx.)	$r_a$	15	k $\Omega$
Amplification Factor	$\mu_{g1g2}$	11	
Plate Current at Cutoff ( $V_{g1} = -30V$ )	$I_{a(Vg1=-30V)}$	< 7	mA



**TRANSFER CHARACTERISTICS**



**PLATE CHARACTERISTICS**



## EL34 HISTORY

The TELEFUNKEN EL34-TK has been designed to handle a slightly higher grid voltage than the traditional EL34. Offering a tight low end and smooth mids, it will bring new life to guitar and hi-fi amplifiers while retaining the historic tone TELEFUNKEN tubes have always been known for.

The EL34 is smaller in diameter and taller than the 6L6 and is capable of a higher plate voltage; factors that help give the EL34 its unique output stage properties. The EL34 is a high output pentode tube as opposed to other output tubes like the 6L6 and the 6550, which are beam tetrode tubes.

Mullard, which was a subsidiary of Phillips, originally released the EL34 in 1953. EL34's are most commonly used in pairs in a Class AB1 push-pull configuration. This EL34 is found in many amplifiers that offer the "British tone", like Marshall and Hi-Watt, where the 6L6 is more commonly found in American made amps like those from Fender and Mesa Boogie.

## 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.