

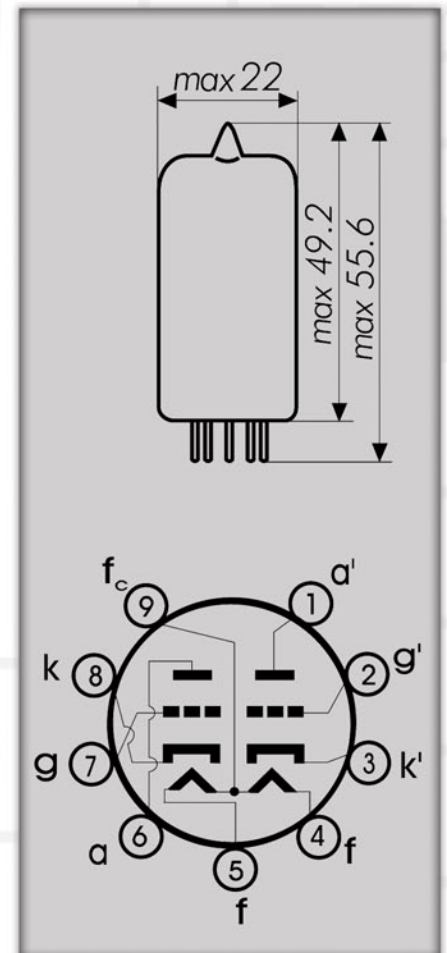


TELEFUNKEN

Elektroakustik

ECC83-TK TUBE DATA SHEET

Mechanical			
Type	R.F. Dual Triode		
Base	Noval		
Number of Pins	9-Pin		
Heater Requirements - Indirect by A.C. or D.C.			
Parallel Configuration - Pins 9-(4+5)			
Parameter	Symbol	Value	Unit
Heater Voltage	V_f	6.3	V
Heater Current	I_f	300	mA
Series Configuration - Pins 4-5			
Heater Voltage	V_f	12.6	V
Heater Current	I_f	150	mA
Direct Interelectrode Capacitances (per triode)			
Grid to Cathode and Heater	C_g	1.6	pF
Plate to Cathode and Heater	C_a	0.33	pF
Grid to Plate	C_{ga}	1.7	pF
Maximum Ratings - Design Maximum Values			
Plate Voltage	V_a	300	V
Plate Dissipation	P_a	1	W
Cathode Current	I_k	8	mA
Grid Voltage	V_g	-50	V
Grid Resistor (self bias)	R_g	2.2	MΩ
Cathode to Heater Voltage	V_{kf}	180	V
Cathode to Heater Resistance	R_{kf}	150	kΩ
Typical Operation and Characteristics - Class A ₁ Amplifier			
Plate Voltage	V_a	250	V
Grid Voltage	V_g	-2	V
Plate Current	I_a	1.2	mA
Transconductance	g_m	1.6	mA/V
Internal Plate Resistance (approx.)	r_a	62.5	kΩ
Amplification Factor	μ	100	



TRANSFER CHARACTERISTICS

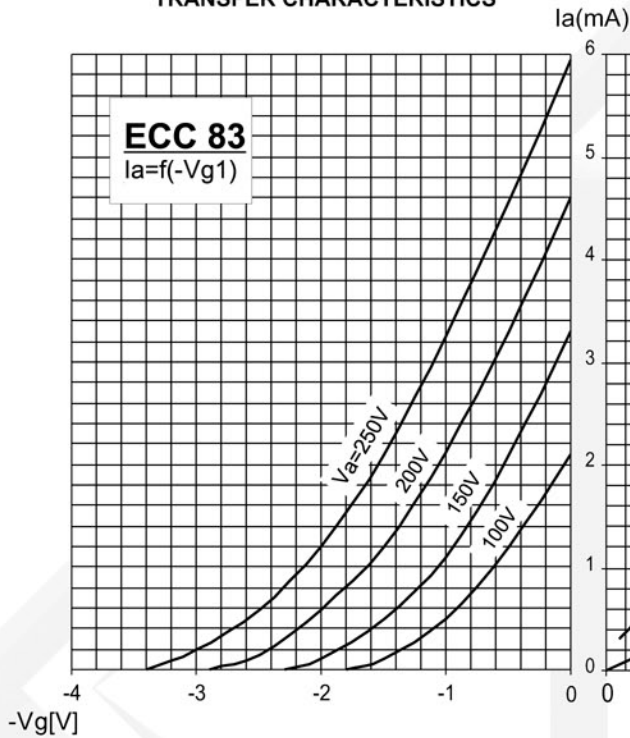
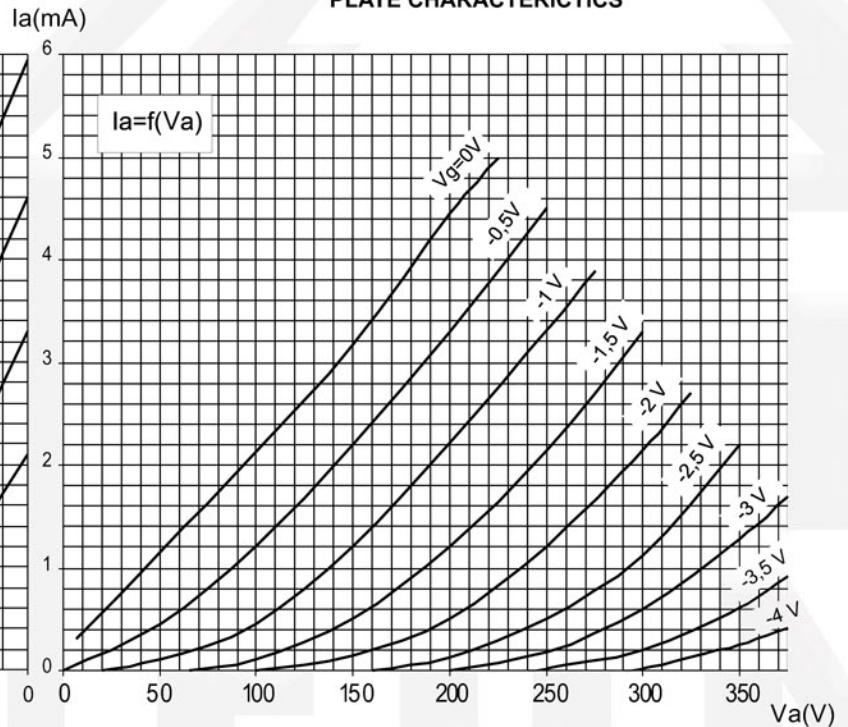


PLATE CHARACTERISTICS



ECC83 HISTORY

The TELEFUNKEN ECC83-TK is a well-balanced tube suited for all types of music and playing styles. Designed to allow for cleaner headroom than higher gain 12AX7s when pushed into overdrive, it offers distortion with strongly defined lows, a rich mid range and clean, smooth highs.

Developed by RCA and released in September of 1947, the 12AX7 is a high gain / low noise tube that is the most popular tube used in input / inter-stage audio amplifiers. The dual triode design makes the 12AX7 compact, relatively inexpensive, and produces a high quality full frequency response.

12AX7's are known for their rich even order harmonic distortion when driven into overdrive. Even order harmonics fit into the western musical scale and are more pleasing to the ear than the harsh odd order harmonic distortion created by transistors. The 12AX7 is also known as the ECC83, which was the European designation found on tubes from Phillips / Mullard.

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.