

Svetlana EF86

High-Performance Audio Small-Signal Pentode



The Svetlana EF86 is a glass envelope miniature pentode intended for high-quality audio preamplifier service. Close manufacturing specification tolerances and improved processing provide improved reliability and superior sonic performance. The Svetlana EF86 is manufactured in the Svetlana factory in Russia, and is designed to be a direct replacement for any EF86 or 6267 type.

The Svetlana EF86 features:

- Low microphonics and low heater hum induction - suitable for input stages in high-gain microphone preamps, phono preamps or as a gain stage in condenser microphones
- Electrostatic shield is built-in, covers entire inner structure—no external shield required
- Low distortion in pentode or triode connection
- Extended processing and aging for stability and reliability
- Comprehensive static and audio amplifier testing before and after aging

General Characteristics

Electrical

	<i>min.</i>	<i>typ.</i>	<i>max.</i>	
Heater Voltage (AC or DC)	5.7	6.3	6.9	V
Heater Current (typical)		0.2		A
Cathode:	<i>oxide-coated, unipotential</i>			
Cathode-to-heater potential			± 100	V

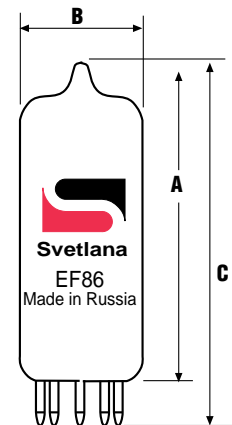
Mechanical

Operating position:	<i>Any</i>			
Base	<i>9-pin miniature noval</i>			
Basing diagram	<i>JEDEC 9CQ</i>			
Socket	<i>Svetlana SK9A or equivalent</i>			
Cooling	<i>Radiation and convection</i>			
Envelope temperature (max)		200		C
Nominal dimensions:				
Diameter		22 mm	(0.867 in)	
Base to top		46.5 mm	(1.836 in)	
Overall height		55.5 mm	(2.180 in)	
Net weight			13 gm	

Maximum Ratings

DC plate voltage V_p	300	V
Screen grid voltage V_{g2}	200	V
Plate dissipation	1	W
Screen grid dissipation	0.2	W
Cathode current	6.0	mA

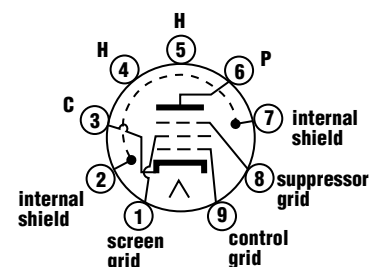
Svetlana EF86 Outline drawing



Dimensional Data

Dim.	Millimeters	Inches
A	46.5	1.835
C	55.5	2.180
B	22	0.867

Base pin connections bottom view



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www.svetlana.com

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Typical operation, Class A Connection, Small-signal amplifier

	pentode	triode	
DC plate Voltage	250	250	V
Screen grid voltage	140		V
Cathode bias resistor	1k	3.9k	ohms
Zero-signal plate current	3	0.65	mA
Zero-signal screen grid current	0.6		mA
Plate resistance (approx)	2.5 megohms	65k	ohms
Load resistance	220k	220k	ohms
Total harmonic distortion	5	3.5	%
Maximum voltage output	50	39	v _{rms}

