

PRODUCT DESCRIPTION

The УД87 features the highest precision performance of any op amp currently available. Offset voltage of the УР1101УД87 is only 20 μV max at room temperature. The ultralow offset voltage УР1101УД87 combines with its exceptional offset voltage drift of 0.3 $\mu\text{V}/^\circ\text{C}$ max to eliminate the need for external VOS adjustment and increases system accuracy over temperature.

The УР1101УД87's open-loop gain of $8 \cdot 10^6$ is maintained over the full $\pm 18\text{ V}$ output range. Maximum supply current of 1.0 mA are just a few examples of the excellent performance of this operational amplifier. The УР1101УД87's combination of outstanding specifications ensures accurate performance in high closed-loop gain applications

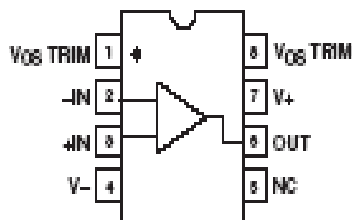
This low noise bipolar input op amp is also a cost effective alternative to chopper-stabilized amplifiers. The УР1101УД87 provides chopper-type performance without the usual problems of high noise, low frequency chopper spikes, large physical size, limited common-mode input voltage range, and bulky external storage capacitors.

The УР1101УД87 is offered in the -40°C to $+85^\circ\text{C}$ extended industrial temperature ranges, and have tow package types: plastic DIP-8 or SO8 (for surface mount).

ABSOLUTE MAXIMUM RATINGS

Supply Voltage	$\pm 2 - \pm 18\text{ V}$
Internal Power Dissipation	500 mW
Differential Input Voltage	$\pm V_{\text{SUPPLY}}$
Input Voltage	$\pm 22\text{ V}$
Short-Circuit Output Duration Time	∞
Storage Temperature Range	-65°C to $+125^\circ\text{C}$
Operating Temperature Range	-40°C to $+85^\circ\text{C}$
Lead Temperature Range (Soldering, 60 sec)	300°C
Junction Temperature (TJ)	-65°C to $+150^\circ\text{C}$

DIP package PINOUT



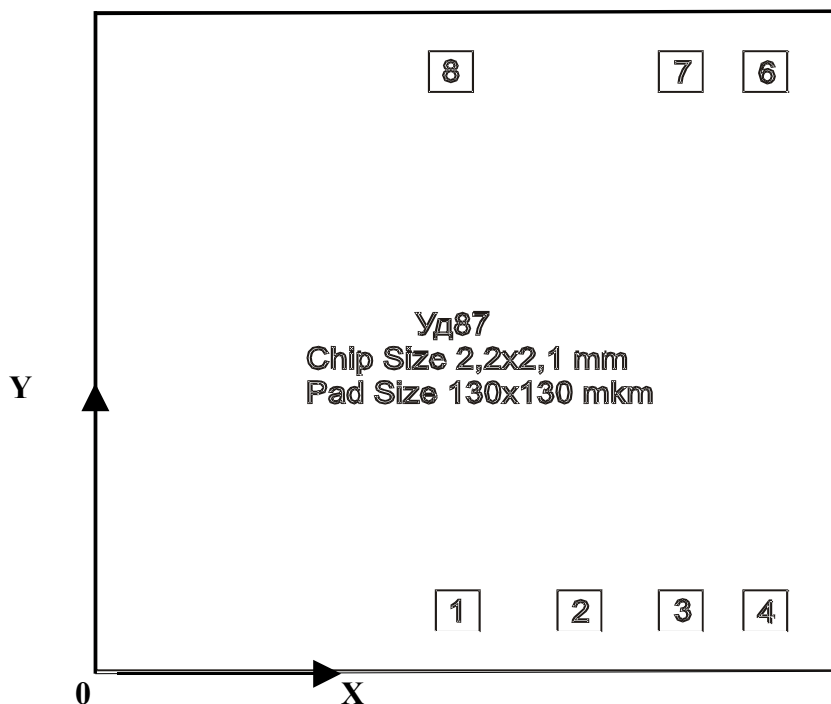
ELECTRICAL CHARACTERISTICS

($V_{\text{supply}} = \pm 15\text{V}$, $T_A = 25^\circ\text{C}$, unless otherwise noted)

PARAMETER, UNIT	УД77А		УД77		УД77В	
	MIN	MAX	MIN	MAX	MIN	MAX
Input offset voltage, μV		± 10		± 25		± 60
Input offset voltage drift vs. Temperature, $\mu\text{V}/^\circ\text{C}$		0,1		0,3		1,2
Input current, nA		$\pm 1,5$		$\pm 2,0$		$\pm 2,8$
Input currents difference, nA		1,0		1,5		2,8
Open-loop voltage gain	5×10^6		5×10^6		2×10^6	
Supply current, mA		2.0		2.0		2.0
Output voltage swing, $R_L = 1 \text{ k}\Omega$	± 12.0		± 12.0		± 12.0	
Output voltage swing, $R_L = 2 \text{ k}\Omega$	± 12.5		± 12.5		± 12.5	
Common-mode rejection ratio, dB	130		130		115	
Power supply rejection ratio, dB	120		115		110	
Input voltage, V	± 13.0		± 13.0		± 13.0	
Unity-Gain Bandwidth, MHz	0.6		0.6		0.6	
Slew rate, V/μ	0.25		0.25		0.25	

Specifications subject to change without notice.

Pad Location



Pad N	DIP-8 N	SO-8 N	ADC PIN	Coordinates, μm	
				x	y
1	1	1	U_{OS} TRIM	1005	125
2	2	2	-IN	1365	125
3	3	3	+IN	1665	125
4	4	4	U ₋	1915	125
6	6	6	OUT	1915	1845
7	7	7	U ₊	1665	1845
8	8	8	U_{OS} TRIM	985	1845