

IL9002/IL9002A OPERATIONAL AMPLIFIER

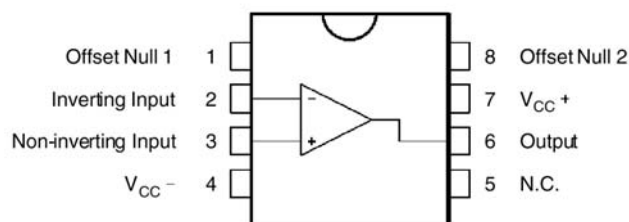
Microcircuit IL9002, IL9002A is essentially the precision operational amplifier with the small bias voltage and the high voltage gain coefficient.

Microcircuit ensures the high values of the parameter stability on time and temperature in the range from minus 10 to plus 70°C.

As per the structure and the performed functions, the developed microcircuit IL9002N, IL9002AN complies with the analogue OP-07 by Precision Monolithic.

FEATURES:

EXTREMELY LOW OFFSET : 250 μ V MAX
LOW INPUT BIAS CURRENT : 14nA
LOW V_{io} DRIFT : 0.5mV/°C
SUPPLY VOLTAGE RANGE : $\pm 13V$ to $\pm 18V$



Symbol	Parameter	Value	Unit
V _{cc}	Supply Voltage	± 15	V
V _d	Differential Input Voltage	± 5	V
V _i	Input Voltage	± 10	V
T _{oper}	Operating Temperature	-10 to +70	°C

Pin – pade description

Pin #	Symbol	Purpose	Pade #	Pade position (to left lower corner) mm		Pade size, mm
				X	Y	
01	OFFSET 1	Balance input 1	1	0.828	0.080	0.130 x 0.130
02	IN-	Inverse input	2	1.048	0.080	0.130 x 0.130
03	IN+	Non-inverse input	3	1.985	0.080	0.130 x 0.130
04	V _{cc-}	Supply pin from the negative supply source	4	1.985	0.355	0.130 x 0.130
05	NC	Vacant pin				
06	OUT	Output	5	1.985	1.650	0.130 x 0.130
07	V _{cc+}	Supply pin from the positive supply source	6	1.266	1.650	0.130 x 0.130
08	OFFSET 2	Balance input 2	7	1.046	1.650	0.130 x 0.130
			8	0.874	1.623	0.090 x 0.090
			9	0.704	1.623	0.090 x 0.090
			10	0.520	1.623	0.090 x 0.090
			11	0.336	1.623	0.090 x 0.090
			12	0.152	1.623	0.090 x 0.090



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BELMICROSYSTEMS

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ELECTRICAL CHARACTERISTICS

Parameter description, Unit of measurement	Symbol	Norm				Measurement Mode		Temperature °C
		IL9002		IL9002A		U _{CC} , V	R _L , kOhm	
		Min	Max	Min	Max			
Maximum output voltage, V	U _{Omax}	±12	-	±12	-	±15	2.0	
		±10.5		±10.5		±13.5		
		±1.3		±1.3		±3		
Input voltage of zero bias, mV	U _{IO}	-	±25	-	±75	±15	25±5	
			±55		±105	±16.5		
			±120		±120	±3		
Bias input current, nA	I _{IB}	-	±2	-	±3	±15	25±5	
			±2.5		±4	±16.5		
			±10		±10	±3		
Difference of input currents, nA	I _{IO}	-	±2	-	±2.8	±15	25±5	
			±2.5		±3.5	±16.5		
			±10		±10	±3		
Consumption current, mA	I _{CC}	-	4.0	-	4.0	±15	25±5	
			4.5		4.5	±16.5		
			4.0		4.0	±3		
Voltage gain coefficient, V/mV	A _V	300	-	200	-	±15	25±5	
		100		100		±3		
Maximum synphase input voltage, V	U _{ICmax}	±13	-	±13	-	±15	2.0	
		±1		±1		±3		
Attenuation coefficient of synphase input voltages, dB	K _{CMR}	110	-	110	-	±15	25±5	
		100		100		±3		
Coefficient of power supply sources unstability influence on zero bias voltage, dB	K _{SVR}	100	-	100	-	±15	25±5	
		85		85		±3		



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Application

