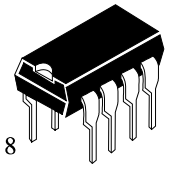
DUAL OPERATIONAL AMPLIFIER

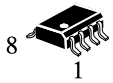
IL4560

GENERAL DESCRIPTION

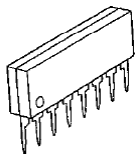
The IL4560 integrated circuit is a high-gain, wide bandwidth, dual operational amplifier capable of driving 20 V peak-to-peak into 400 Ω loads. The IL4560 combines many of the features of the IL4558 as well as providing the capability of wider bandwidth, and higher slew rate make the IL4560 ideal for active filters, data and telecommunications, and many instrumentation applications.



N SUFFIX
PLASTIC



D SUFFIX
SOIC



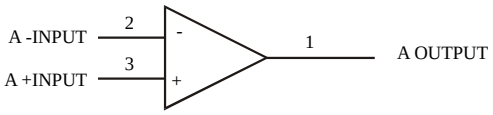
ORDERING INFORMATION

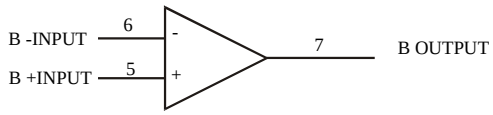
IL4560N Plastic
IL4560D SOIC
IL4560S SIP-8
T_A = -25° to 75° C
for all packages.

FEATURES

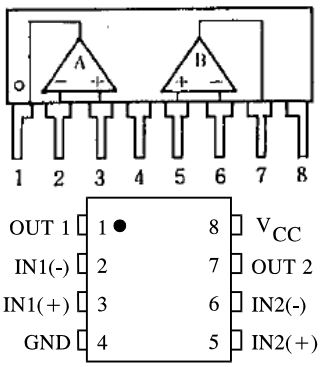
- Operating Voltage (±4 V ~ ±18 V)
- Wide Gain Bandwidth Product (10 MHz typ.)
- Slew Rate (4 V/μs typ.)
- Bipolar Technology

BLOCK DIAGRAM

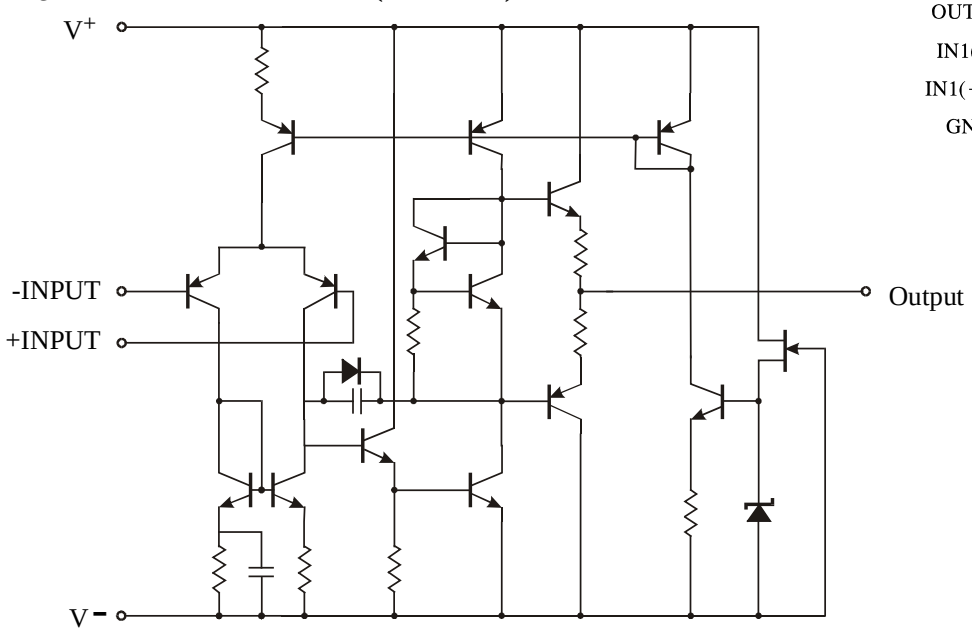




PIN ASSIGNMENT



EQUIVALENT CIRCUIT (1/2 Show)



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Symbol	Parameter	Ratings	Unit
V^+/V^-	Supply Voltage	±18	V
V_{ID}	Differential Input Voltage	30	V
V_{IC}	Input Voltage	±15*	V
Topr	Operation Temperature Range	-25 ~ +75	°C
Tstg	Storage Temperature Range	-60 ~ +125	°C
P_D	Power Dissipation		mW
	DIP-8	500	
	SOP-8	300	
	SIP-8	800	

* For supply voltage less then ±15 V, the absolute maximum input voltage is equal to the supply voltage.
** Stresses beyond those listed under “absolute maximum ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under “recommended operating conditions” is not implied.
Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

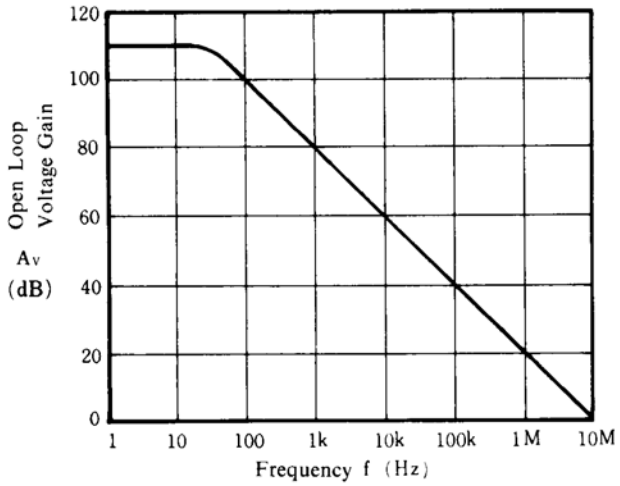
ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Condition	Min	Max	Unit
V_{IO}	Input Offset Voltage	$R_S \leq 10$ kΩ	-	6	mV
I_{IO}	Input Offset Current		-	200	nA
I_B	Input Bias Current		-	500	nA
R_{IN}	Input Resistance		0.3	-	MΩ
A_V	Large Signal Voltage Gain	$R_L \geq 2$ kΩ, V_O = ±10 V	86	-	dB
V_{OM1}	Maximum Output Voltage Swing 1	$R_L \geq 2$ kΩ	±12	-	V
V_{OM2}	Maximum Output Voltage Swing 2	I_O = 25 mA	±10	-	V
V_{ICM}	Input Common Mode Voltage Range		±12	-	V
CMR	Common Mode Rejection Ratio	$R_S \leq 10$ kΩ	70	-	dB
SVR	Supply Voltage Rejection Ratio	$R_S \leq 10$ kΩ	76.5	-	dB
I_{CC}	Operating Current		-	5.7	mA
SR	Slew Rate	$R_L \geq 2$ kΩ	3	5	V/μs

■ TYPICAL CHARACTERISTICS

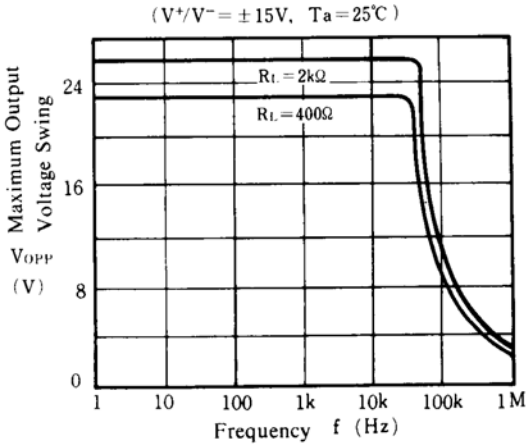
Open Loop Voltage Gain vs. Frequency

(V^+/V^- = ±15V, R_L = 2kΩ, Ta = 25℃)



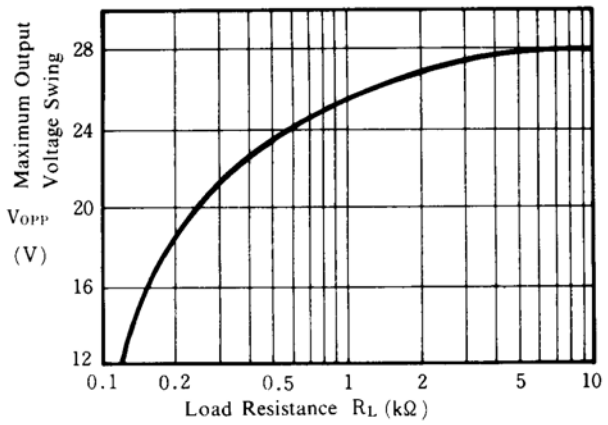
Maximum Output Voltage Swing vs. Frequency

(V^+/V^- = ±15V, Ta = 25℃)



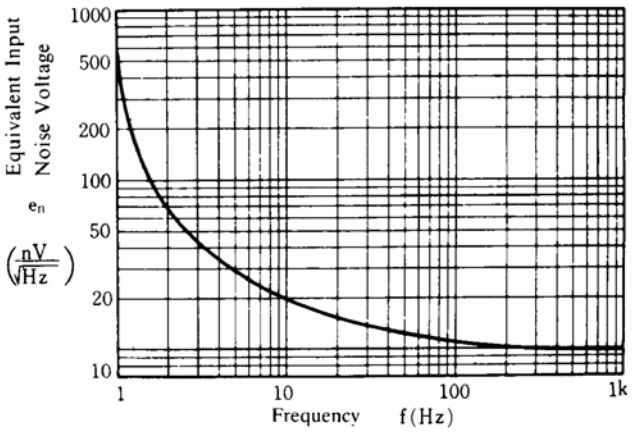
Maximum Output Voltage Swing vs. Load Resistance

(V^+/V^- = ±15V, Ta = 25℃)



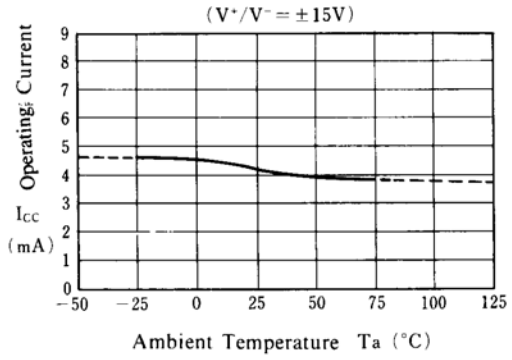
Equivalent Input Noise Voltage vs. Frequency

(V^+/V^- = ±15V, Rs = 50Ω, Av = 60dB, Ta = 25℃)



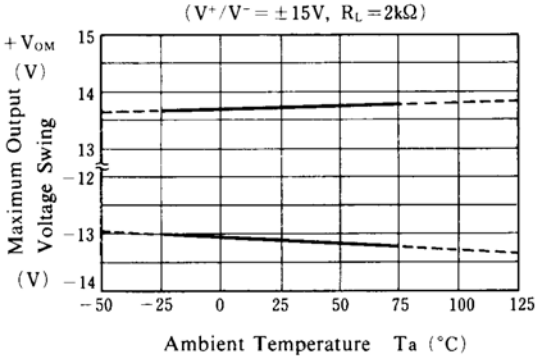
Operating Current vs. Temperature

(V^+/V^- = ±15V)



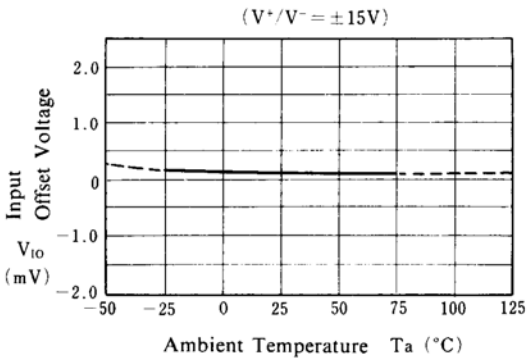
Maximum Output Voltage Swing vs. Temperature

(V^+/V^- = ±15V, R_L = 2kΩ)

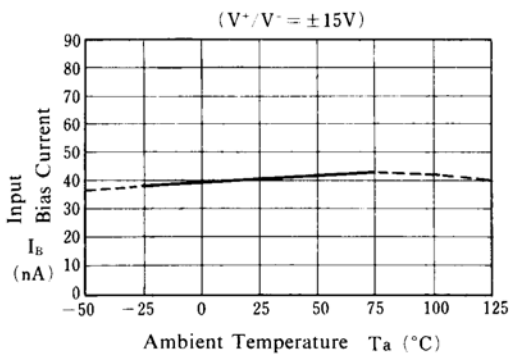


■ TYPICAL CHARACTERISTICS

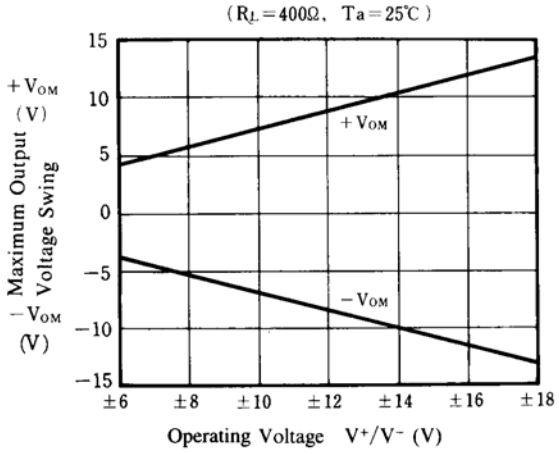
Input Offset Voltage vs. Temperature



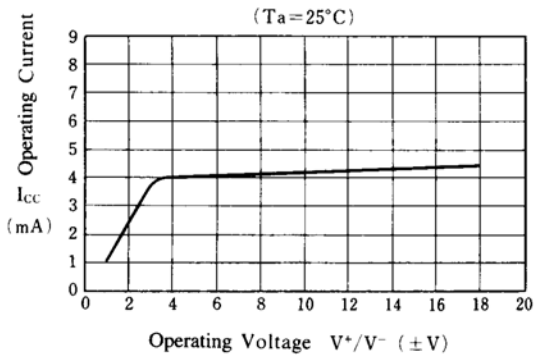
Input Bias Current vs. Temperature



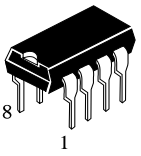
Maximum Output Voltage Swing vs. Supply Voltage

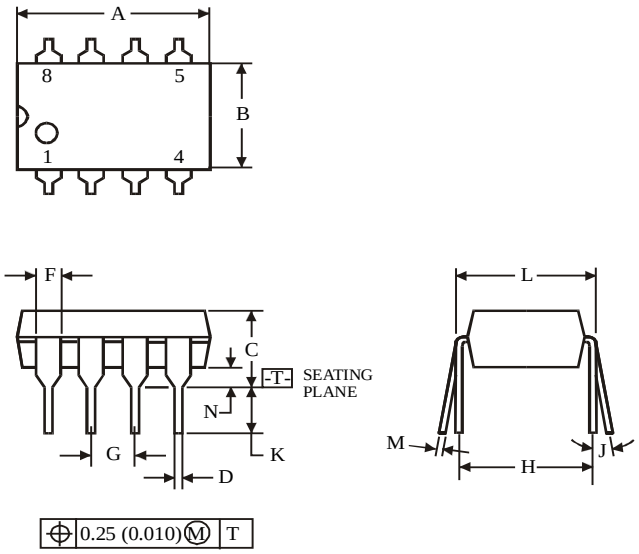


Operating Current vs. Operating Voltage



N SUFFIX PLASTIC DIP
(MS – 001BA)



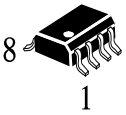


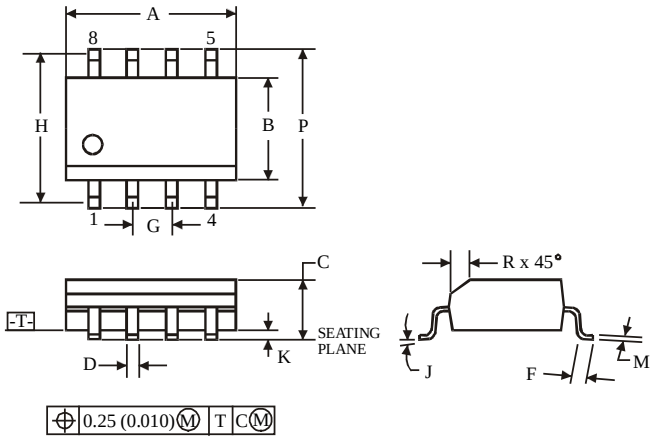
	Dimension, mm	
Symbol	**MIN**	**MAX**
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

NOTES:

1. Dimensions “A”, “B” do not include mold flash or protrusions.
   Maximum mold flash or protrusions 0.25 mm (0.010) per side.

D SUFFIX SOIC
(MS - 012AA)



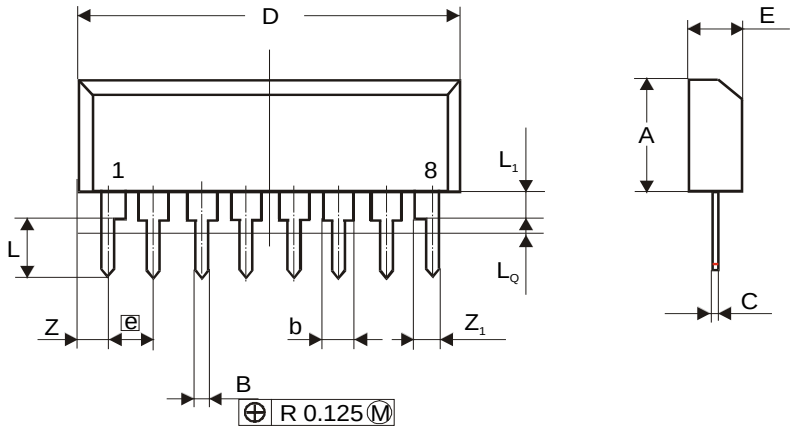


	Dimension, mm	
Symbol	**MIN**	**MAX**
A	4.8	5
B	3.8	4
C	1.35	1.75
D	0.33	0.51
F	0.4	1.27
G	1.27	
H	5.72	
J	0°	8°
K	0.1	0.25
M	0.19	0.25
P	5.8	6.2
R	0.25	0.5

NOTES:

1. Dimensions A and B do not include mold flash or protrusion.
2. Maximum mold flash or protrusion 0.15 mm (0.006) per side
   for A; for B – 0.25 mm (0.010) per side.

8-Pin Plastic Single-in-Line (SIP)



Dimension	mm	
	min	max
A	6.24	6.60
B	0.40	0.54
b	1.15	1.40
C	0.23	0.35
D	19.68	20.20
E	2.675	2.925
e	2.54	
L	2.95	3.25
L_1	1.61	1.97
L_Q		0.70
Z		1.21
Z_1		1.40

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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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