

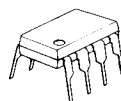
NJM3414

The NJM3414 integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 70mA.

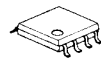
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Supply Voltage	V^+ (V^+/V^-)	15V (or $\pm 7.5\text{V}$)
Differential Input Voltage	V_{ID}	15V
Input Voltage	V_i	$-0.3 \sim +15\text{V}$
Power Dissipation	P_D (D-Type)	500mW
	(M-Type)	300mW
	(L-Type)	800mW
Operating Temperature Range	T_{opr}	$-20 \sim +75^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-40 \sim +125^\circ\text{C}$

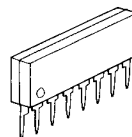
Package Outline



NJM3414D



NJM3414M

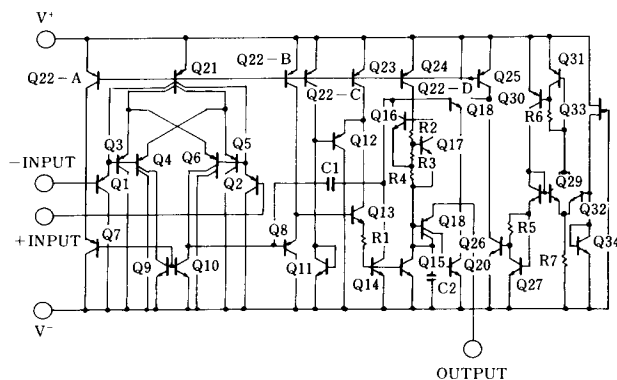


NJM3414L

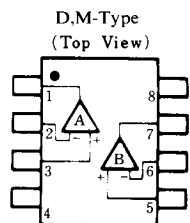
Electrical Characteristics ($T_a = 25^\circ\text{C}$, $V^+ = 8.6\text{V}$)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Offset Voltage	V_{IO}	$R_s = 0\Omega$	—	2	5	mV
Input Offset Current	I_{IO}		—	± 30	± 100	nA
Input Bias Current	I_B		—	100	500	nA
Large Signal Voltage Gain	A_v	$R_L = 2k\Omega$	88	100	—	dB
Input Common Voltage Range	V_{ICM}		$V^+ - 2$	—	—	V
Maximum Output Voltage Swing 1	V_{OM1}	$R_L \geq 2k\Omega$, $V^+ = 5\text{V}$	3.5	—	—	V
Maximum Output Voltage Swing 2	V_{OM2}	$I_O = 70\text{mA}$, $V^+ = 5\text{V}$	3.2	—	—	V
Common Mode Rejection Ratio	CMR		80	90	—	dB
Supply Voltage Rejection Ratio	SVR		80	90	—	dB
Supply Current	I_{CC}	$R_L = \infty$	—	4	5	mA
Slew Rate	SR		—	1.0	—	V/ μs
Unity Gain Bandwidth	GB		—	1.3	—	MHz
Operating Voltage Range	V^+		—	—	10	V

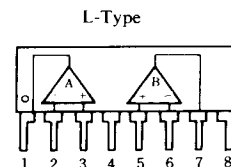
Equivalent Circuit ($1/2$ Shown)



Connection Diagrams

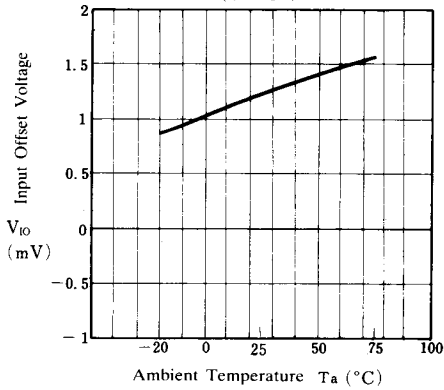


- PIN FUNCTION**
1. A OUTPUT
 2. A-INPUT
 3. A+INPUT
 4. GND
 5. B+INPUT
 6. B-INPUT
 7. B OUTPUT
 8. V^+

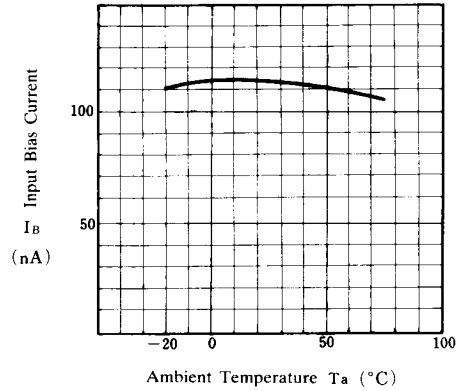


■ Typical Characteristics

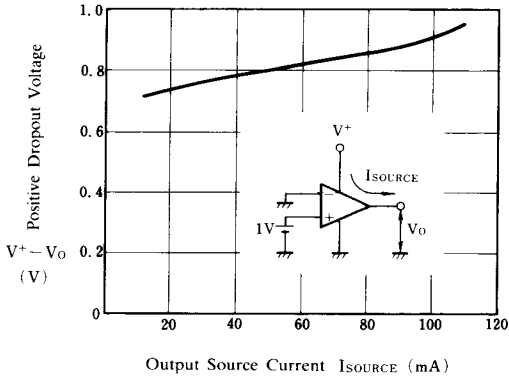
**Input Offset Voltage
vs.
Ambient Temperature**
($V^+ = 5V$)



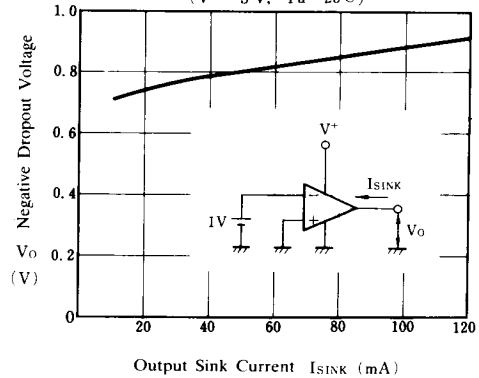
**Input Bias Current
vs.
Ambient Temperature**
($V^+ = 5V$)



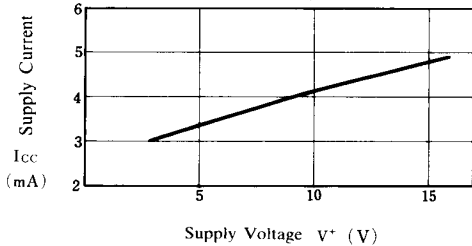
Output Source Current vs. V_{sat}^+
($V^+ = 5V$, $T_a = 25^\circ C$)



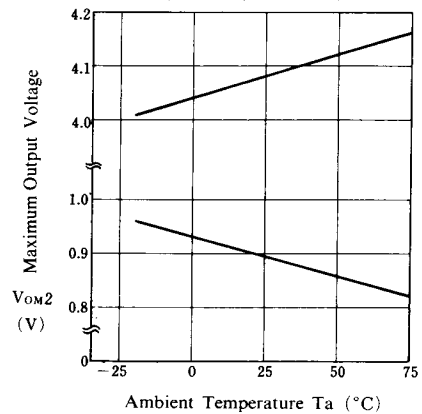
Output Sink Current vs. V_{sat}
($V^+ = 5V$, $T_a = 25^\circ C$)



Supply Voltage vs. Quiescent Current
($T_a = 25^\circ C$)



Maximum Output Voltage
($V^+ = 5V$, $I_O = 70mA$)



■ Typical Characteristics

