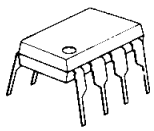
NJM3415

The NJM3415 integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 70mA.

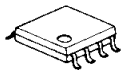
■ Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	V^+ (V^+/V^-)	15V (or ±7.5V)
Differential Input Voltage	V_{ID}	15V
Input Voltage	V_I	−0.3～+15V
Power Dissipation	P_D (D-Type)	500mW
	(M-Type)	300mW
	(L-Type)	800mW
Operating Temperature Range	T_{opr}	−20～+75°C
Storage Temperature Range	T_{stg}	−40～+125°C

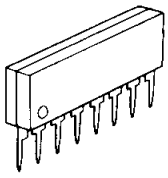
■ Package Outline



NJM3415D



NJM3415M

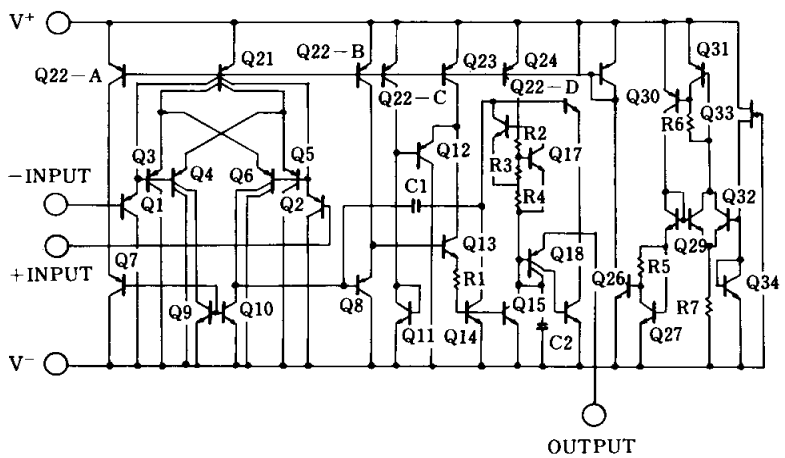


NJM3415L

■ Electrical Characteristics (Ta=25°C, V^+=8.6V)

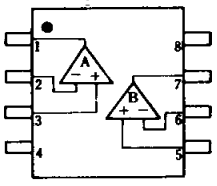
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Offset Voltage	V_{IO}	R_S=0Ω	—	2	5	mV
Input Offset Current	I_{IO}		—	±30	±100	nA
Input Bias Current	I_B		—	100	500	nA
Large Signal Voltage Gain	A_V	R_L=2kΩ	88	100	—	dB
Input Common Mode Voltage Range	V_{ICM}		V^+−2	—	—	V
Maximum Output Voltage Swing 1	V_{OM1}	R_L≧2kΩ, V^+=5V	3.5	—	—	V
Maximum Output Voltage Swing 2	V_{OM2}	I_O=70mA, V^+=5V	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=∞	4.5	5.5	7.0	mA
Slew Rate	SR		—	1.0	—	V/μS
Unity Gain Bandwidth	GB		—	1.3	—	MHz
Operating Voltage Range	V^+		—	—	10	V

■ Equivalent Circuit (½ Shown)



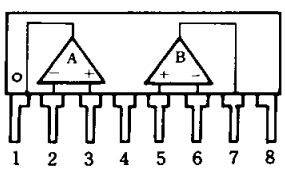
■ Connection Diagrams

D,M-Type
(Top View)



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

L-Type



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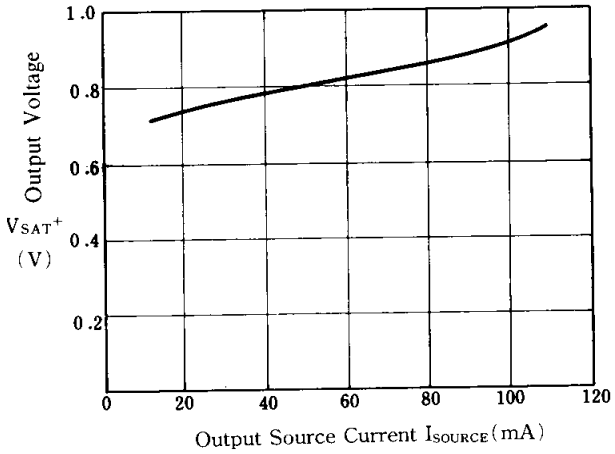
■ Typical Characteristics

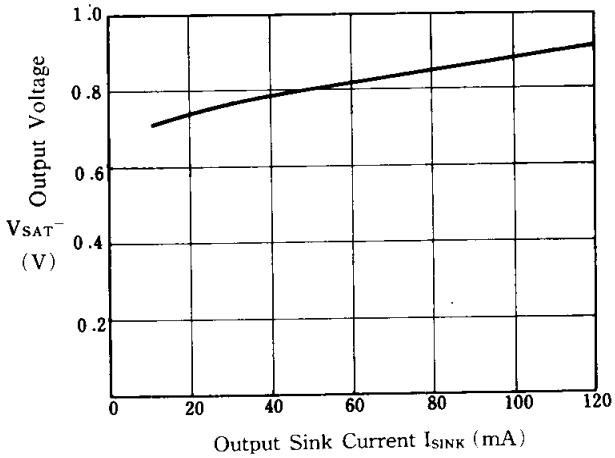
Vsat⁺ vs. Output Source Current

($V^+ = +5$ V, Ta = 25℃)



Vsat⁻ vs. Output Sink Current

($V^+ = +5$ V, Ta = 25℃)



Supply Current vs. Supply Voltage

(Ta = 25℃)