

NJM4560

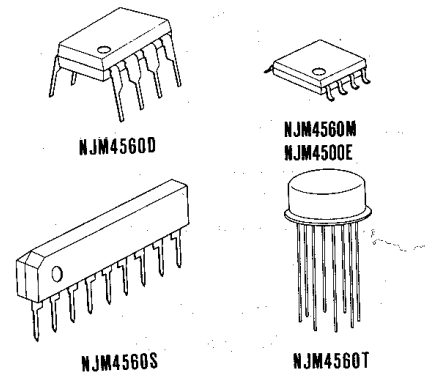
The 4560 integrated circuit is a high-gain, wide-bandwidth, dual operational amplifier capable of driving 20V peak-to-peak into 400Ω loads. The 4560 combines many of the features of the 4558 as well as providing the capability of wider bandwidth, and higher slew rate make the 4560 ideal for active filters, data and telecommunications, and many instrumentation applications. The availability of the 4560 in the surface mounted micro-package allows the 4560 to be used in critical applications requiring very high packing densities.

■ Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	V ⁺ /V ⁻	±18V
Differential Input Voltage	V _{ID}	±30V
Input Voltage (note)	V _I	±15V
Power Dissipation	P _D (D,S,T-Type)	500mW
	(M,E-Type)	300mW
Operating Temperature Range	T _{opr}	-20~+75°C
Storage Temperature Range	T _{stg}	-40~+125°C

(note) For supply voltage less than ±15V, the absolute maximum input voltage is equal to the supply voltage.

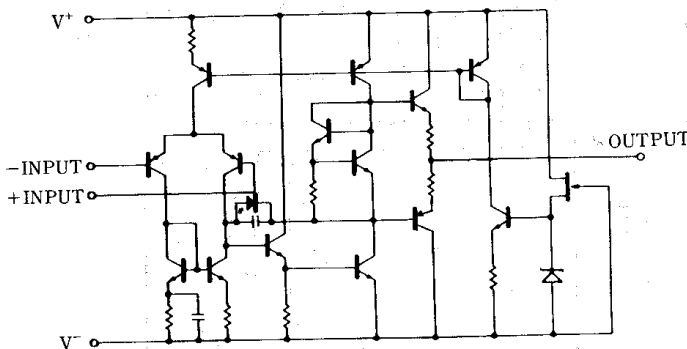
■ Package Outline



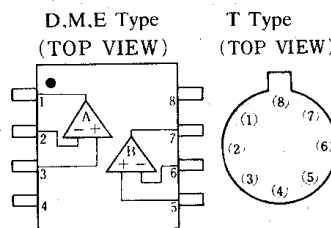
■ Electrical Characteristics (Ta=25°C, V⁺=15V, V⁻=-15V)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Offset Voltage	V _{IO}	R _S ≤ 10kΩ	—	0.5	6	mV
Input Offset Current	I _{IO}		—	10	200	nA
Input Bias Current	I _{IB}		—	40	500	nA
Input Resistance	R _{IN}		0.3	5	—	MΩ
Large Signal Voltage Gain	A _V	R _L ≥ 2kΩ, V _O = ±10V	20	100	—	× 10 ³
Maximum Output Voltage	V _{OM}	R _L ≥ 2kΩ	±12	±14	—	V
Maximum Output Voltage	V _{OM}	I _O = 25mA	±10	±11.5	—	V
Input Common Mode Voltage Range	V _{ICM}		±12	±14	—	V
Common Mode Rejection Ratio	CMR	R _S ≤ 10kΩ	70	90	—	dB
Supply Voltage Rejection Ratio	SVR	R _S ≤ 10kΩ	—	30	150	μV/V
Power Dissipation	P _D		—	105	170	mW
Slew Rate	SR	R _L ≥ 2kΩ	—	4	—	V/μs
Unity Gain Bandwidth	f _T		—	10	—	MHz

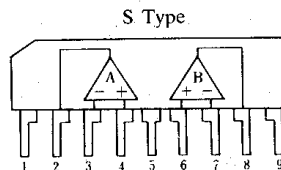
■ Equivalent Circuit (1/2 Shown)



■ Connection Diagram



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



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