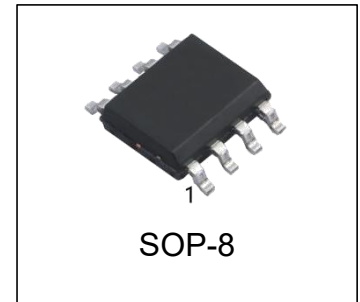


Dual General-Purpose Operational Amplifier

Features

- Internal Frequency Compensation
- Continuous Short-Circuit Protection
- Wide Common-Mode Voltage Ranges
- Wide Differential Voltage Ranges
- High DC voltage gain (about 100 dB)
- Unit gain bandwidth (about 3.5 MHz)
- Low Input Bias
- Low Input Offset Voltage and Current



Ordering Information

DEVICE	Package Type	MARKING	Packing	Packing Qty
NJM4558LM/TR	SOP-8	4558L	REEL	4000pcs/reel

Description

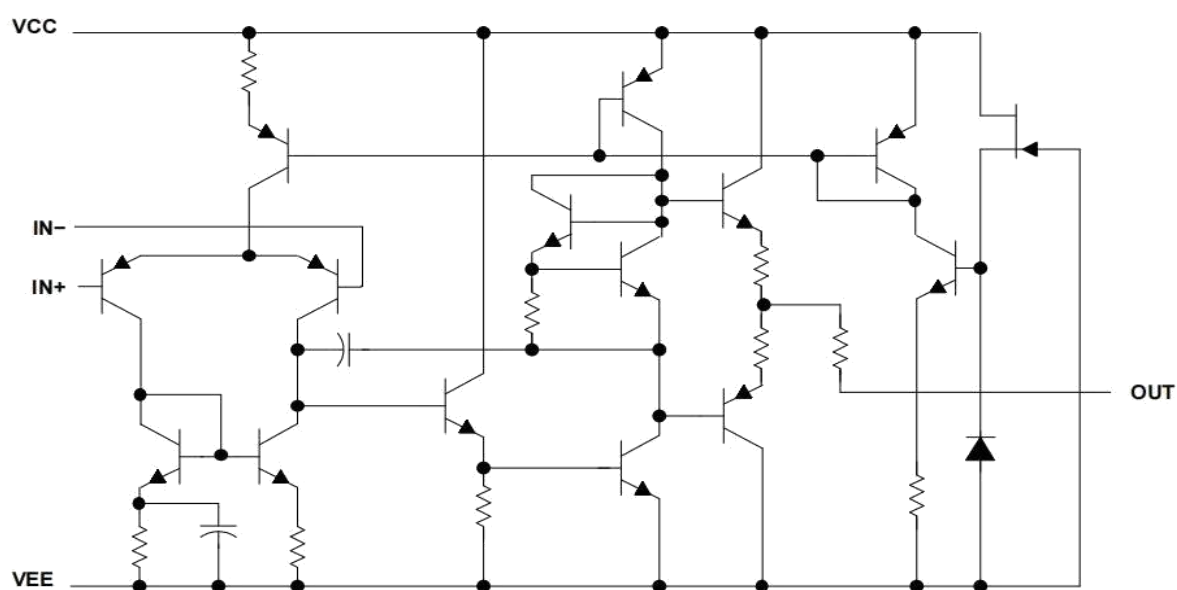
The NJM4558L device is a dual general-purpose operational amplifier.

The high common-mode input voltage range and the absence of latch-up make this amplifier ideal for voltage-follower applications. The device is short-circuit protected, and the internal frequency compensation ensures stability without external components.

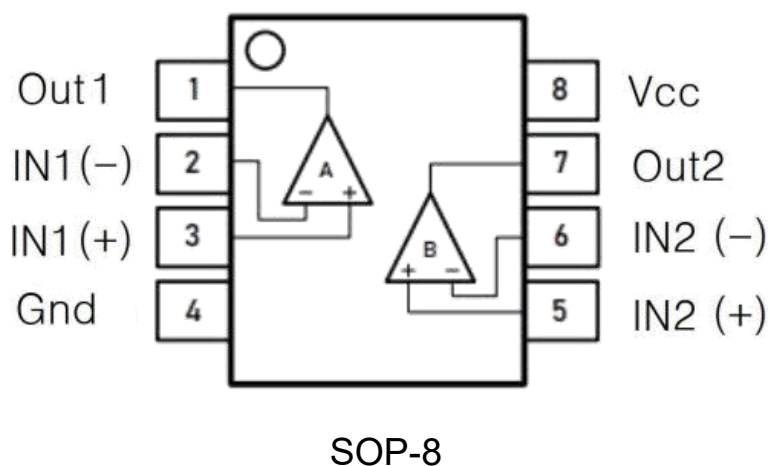
Applications

- Active filter
- Compensation amplifier
- Audio preamplifier
- Electronic instrumentation

Schematic(Each amplifier)



Pin Configuration



Absolute Maximum Ratings

Over operating free-air temperature range (unless otherwise noted) ⁽¹⁾

PARAMETER	MIN	MAX	UNIT
Total Supply Voltage		±22	V
Differential Input Voltage		±20	V
Maximum Junction Temperature	-40	+150	°C
Operating Temperature Range	-20	+85	°C
Storage Temperature Range	-65	+150	°C
Lead Temperature (Soldering, 10 seconds)	-	+260	°C

Note: Stress greater than those listed under Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions outside those indicated in the operational sections of this specification are not implied. Exposure to absolute maximum rating conditions for extended periods may affect reliability.

Recommended Operating Conditions

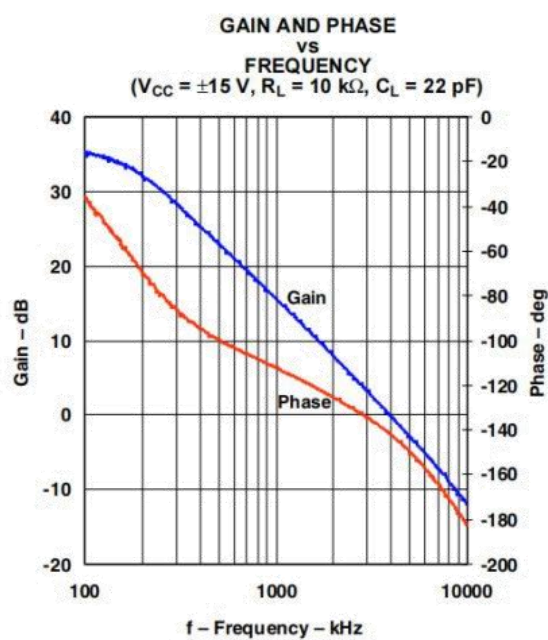
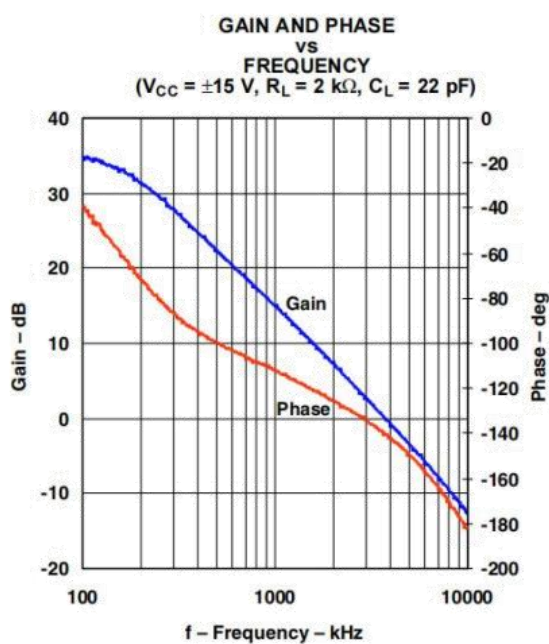
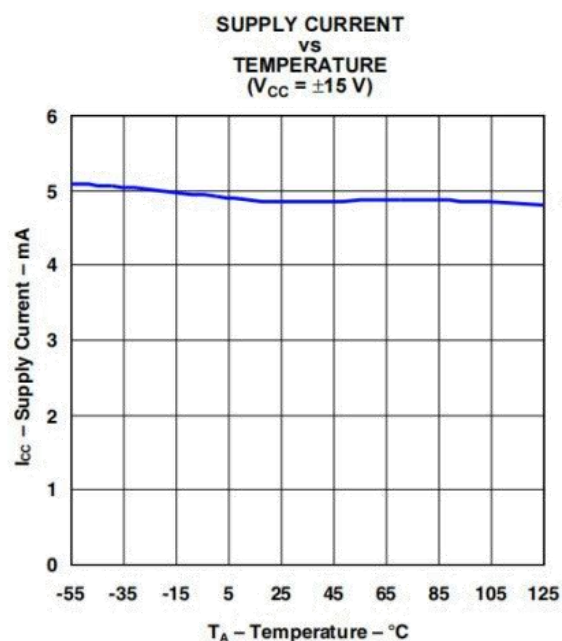
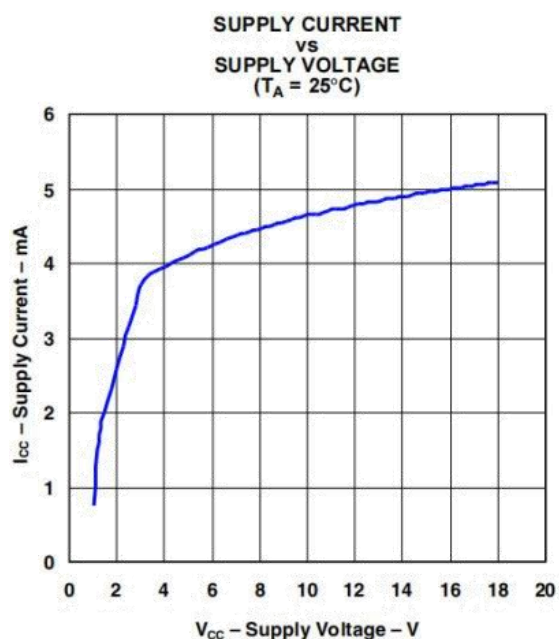
PARAMETER		MIN	NOM	MAX	UNIT
Supply Voltage, $V_s = (V_+) - (V_-)$	Signal-supply	5		36	V
	Dual-supply	±2.5		±18	V
Operating Temperature Range		-20		+85	°C

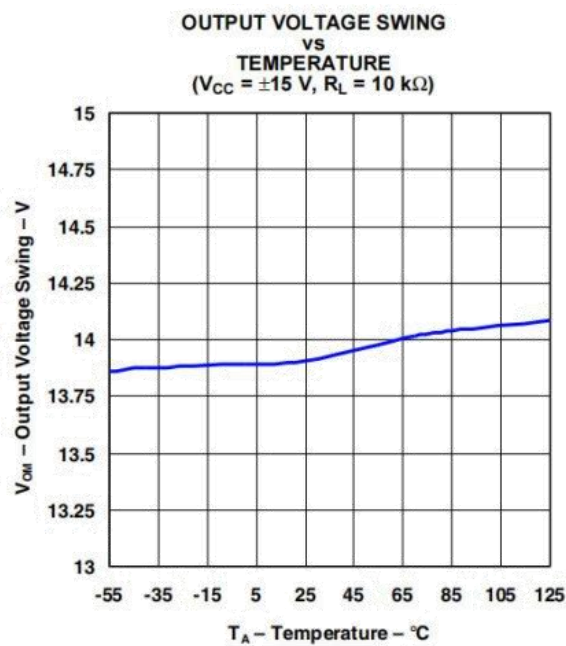
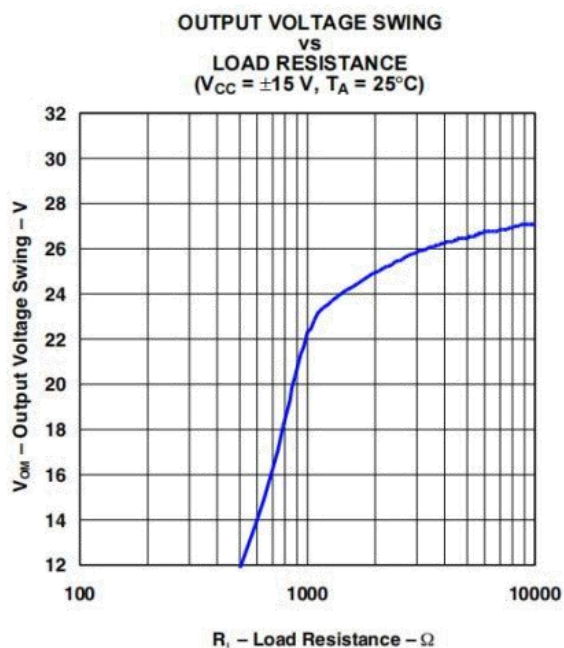
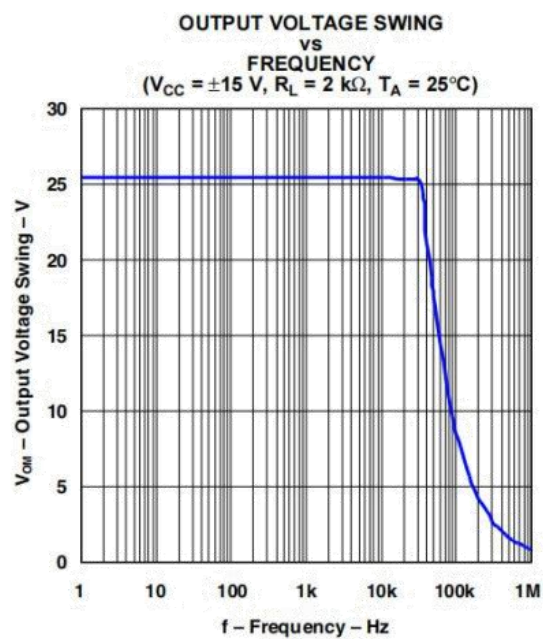
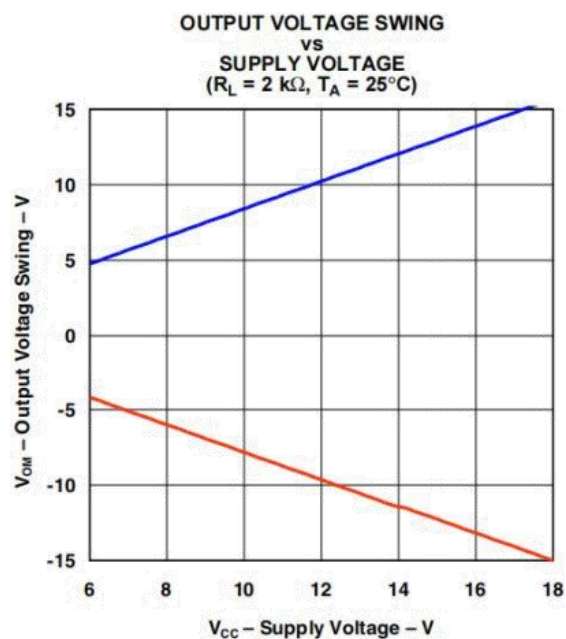
Electrical Characteristics

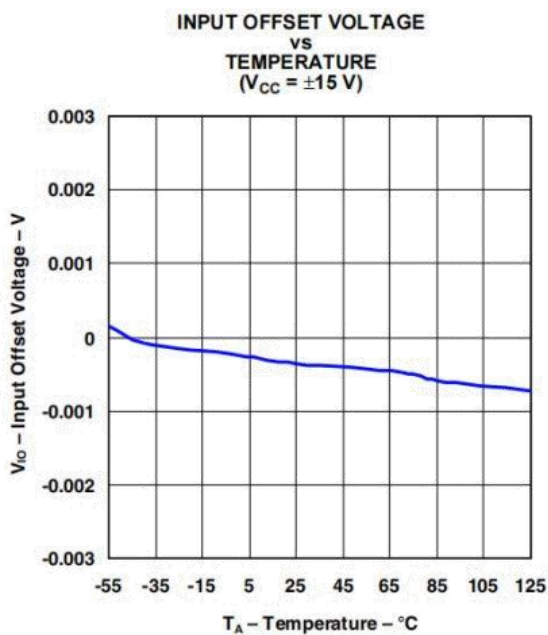
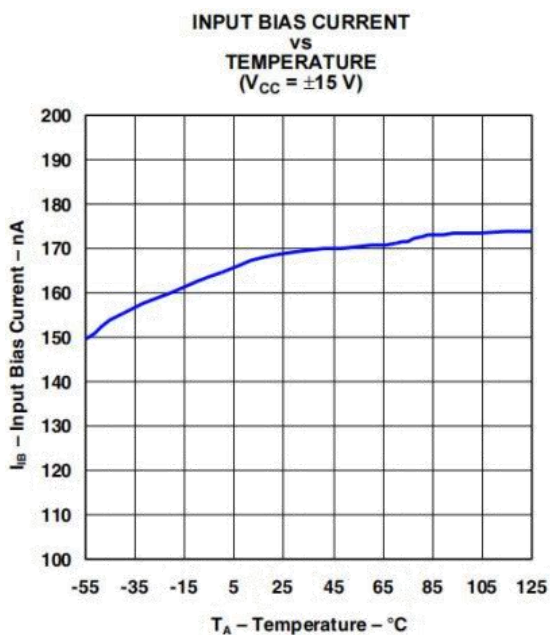
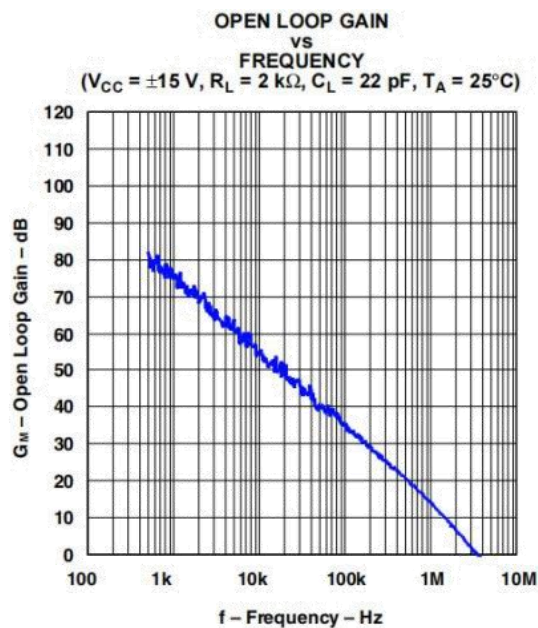
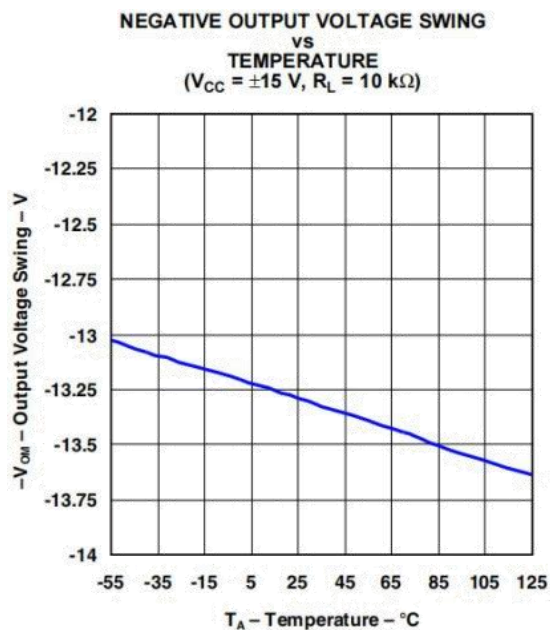
(VCC = +15 V, VEE = -15 V, TA = 25°C, unless otherwise noted)

PARAMETER	SYMBOL	CONDITIONS	NJM4558L			
			MIN	TYP	MAX	UNIT
Power supply current	I _{CC}	R _L =∞	-	3	5.5	mA
Input offset voltage	V _{IO}	R _S <10kΩ	-	±2	±5	mV
Input offset current	I _{IO}	V _{cm} =0V	-	±30	±200	nA
Input bias current	I _{BIAS}	V _{cm} =0V	-	±50	±250	nA
Input Common Mode Voltage	V _{ICM}		-	12	13	V
Output Voltage Swing	V _{OM}	R _L =10k	12	14	-	V
		R _L =2k	10	13	-	V
Output short-circuit current	I _{SC}	V _O = 0V	±40	±60	±80	mA
Large Signal Voltage Gain	G _v	V _o (p-p) =±10V,R _L <2kΩ	80	100	-	dB
Common Mode Rejection Ratio	CMRR	R _S <10kΩ	70	90	-	dB
Power supply Rejection Ratio	PSRR	R _S <10kΩ	65	90	-	dB
Gain-Bandwidth Product	GBWP		-	3.5	-	MHz
Slew Rate	SR		-	1.7	-	V/us

Typical Characteristics

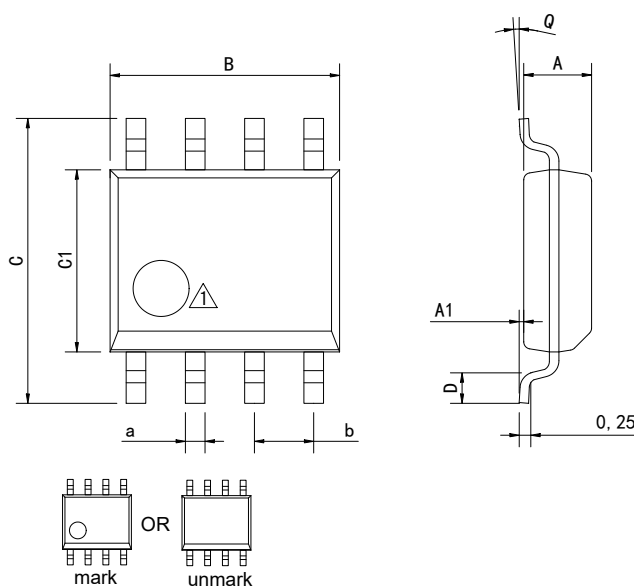






Physical Dimensions

SOP-8



Dimensions In Millimeters(SOP-8)									
Symbol:	A	A1	B	C	C1	D	Q	a	b
Min:	1.35	0.05	4.90	5.80	3.80	0.40	0°	0.35	1.27 BSC
Max:	1.55	0.20	5.10	6.20	4.00	0.80	8°	0.45	

C

Revision History

REVISION NUMBER	DATE	REVISION	PAGE
V1.0	2019-4	New	1-10
V1.1	2025-8	Document Reformatting	1-10

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