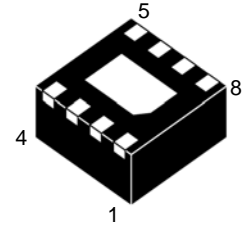


DUAL OPERATIONAL AMPLIFIER

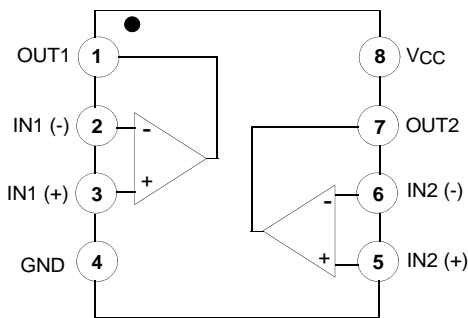
Features

- In the Linear Mode the Input Common Mode Voltage Range Includes Ground.
- Two Internally Compensated OP Amps are in Single Package.
- Low Power Dissipation and Power Drain Suitable for Battery Operation.
- Differential Input Voltage Range Equal to the Power Supply Voltage.
- Wide Power Supply Voltage Range and Signal Power Supply
: Single Supply $3V_{DC}$ to $36V_{DC}$ Dual Supplies $\pm 1.5V_{DC}$ to $\pm 18V_{DC}$
- Large Output Voltage Swing : $0V_{DC}$ to $V_{CC}-1.5V_{DC}$
- Low Input Biasing Current : $I_1 = 45nA_{DC}$ (Typ.)



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Pin Connection (Top View)



Maximum Ratings ($T_a=25^{\circ}C$ unless otherwise noted)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	36, ± 18	V
Differential Input Voltage	DV_{IN}	± 32	V
Input Voltage	V_{IN}	-0.3 ~ 36	V
Thermal resistance junction to ambient	R_{thja}	57	$^{\circ}C/W$
Operating Temperature	T_{opr}	-40 ~ 125	$^{\circ}C$
Storage Temperature	T_{stg}	-65 ~ 150	$^{\circ}C$
HBM: human body model	V_{ESD}	300	V
MM: machine model		200	V
CDM: charged device model		1.5	kV

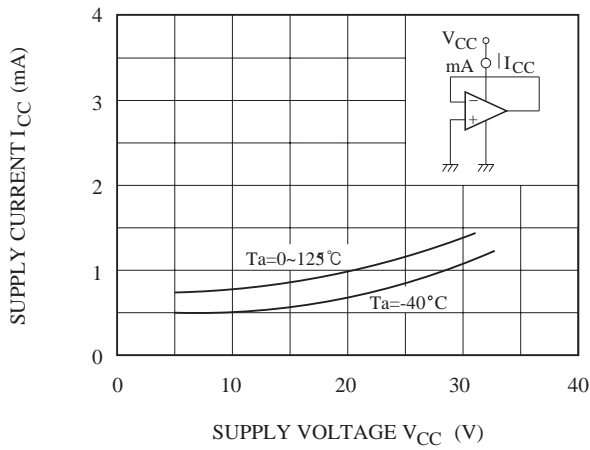


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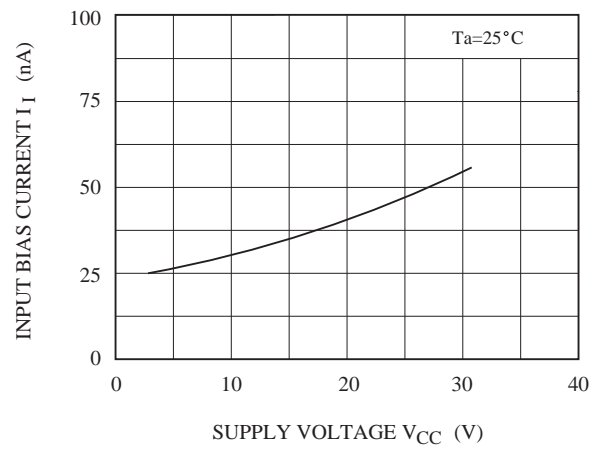
Electrical Characteristics ($V_{CC}=5V$, $V_{EE}=GND$, $T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	$R_g \leq 10k\Omega$	-	-	5	mV
Input Offset Current	I_{IO}	-	-	-	50	nA
Input Bias Current	I_I	-	-	45	210	nA
Common Mode Input Voltage	CMV_{IN}	$V_{CC}=30V$, $V_{EE}=GND$	0	-	28	V
Supply Current	I_{CC} , I_{EE}	$R_L = \infty$, All OP Amps	-	0.7	1.2	mA
Voltage Gain	G_V	$R_L \leq 2k\Omega$	86	-	-	dB
	V_{OP-P}	$R_L=2k\Omega$, $V_{CC}=30V$	26	-	-	V
Common Mode Input Signal Rejection Ratio	CMRR	$V_{CC}=30V$, $R_S = 10k\Omega$	65	-	-	dB
Supply Voltage Rejection Ratio	SVRR	$R_g=10k\Omega$, $V_{CC}=30V$	65	-	-	dB
Source Current	I_{source}	$-IN=0V_{DC}$, $+IN=1V_{DC}$	10	-	-	mA
Sink Current	I_{sink}	$-IN=1V_{DC}$, $+IN=0V_{DC}$	10	-	-	mA

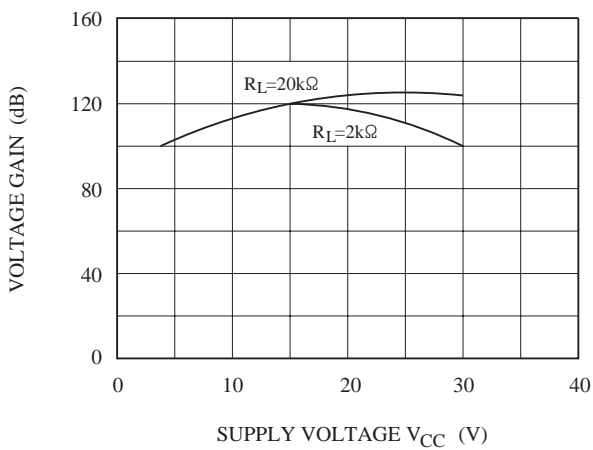
$V_{CC} - I_{CC}$



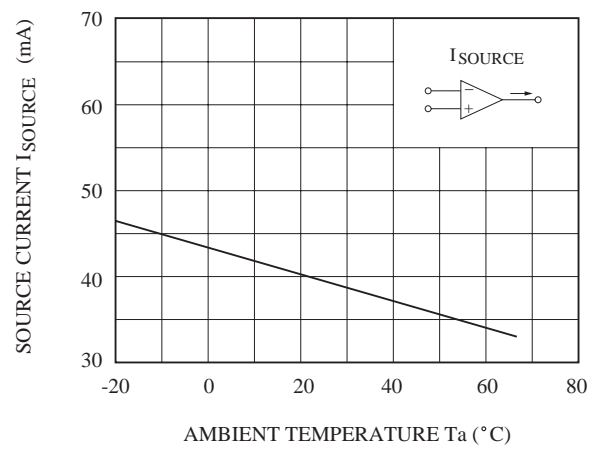
$V_{CC} - I_I$



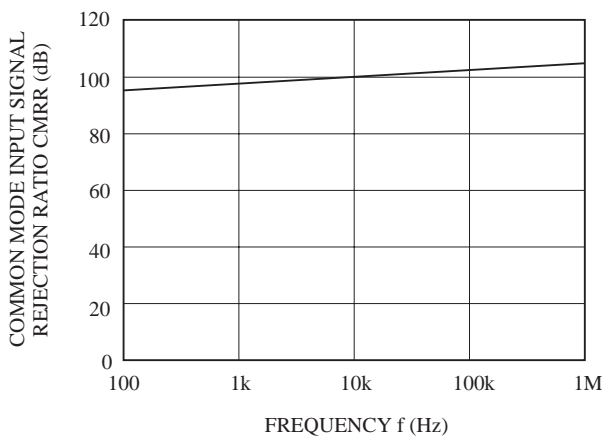
$V_{CC} - G_V$



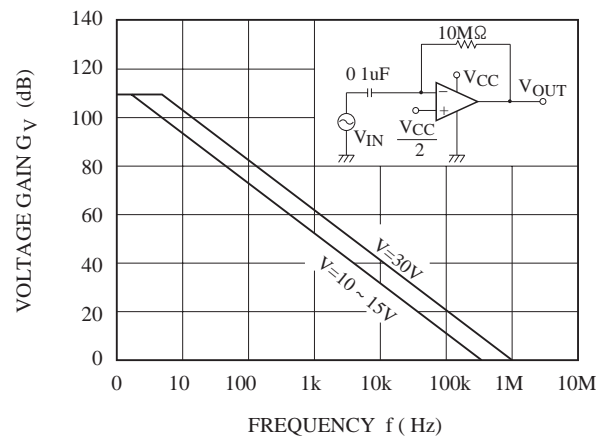
$I_{SOURCE} - T_a$

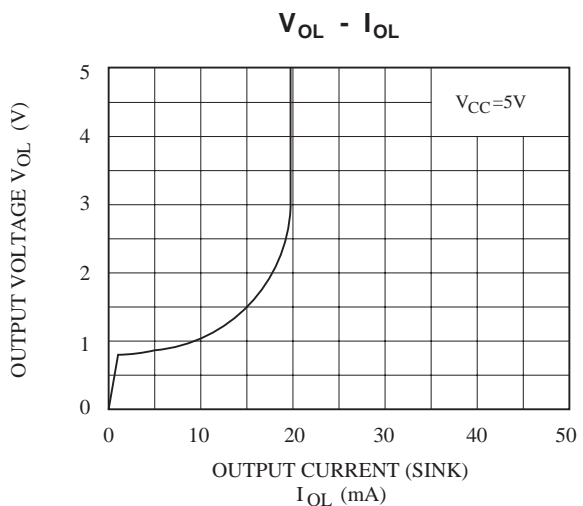
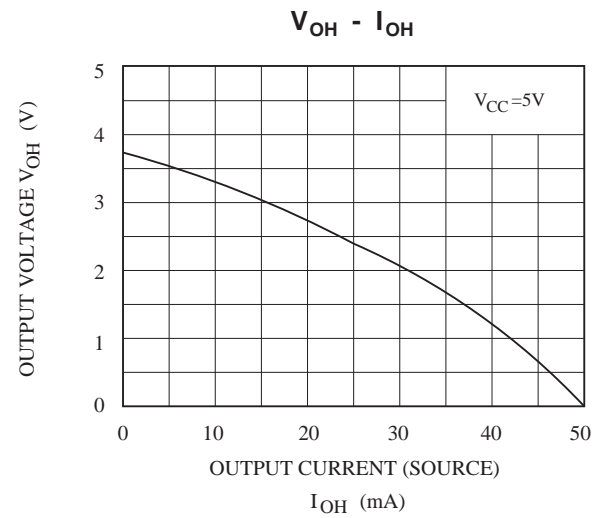
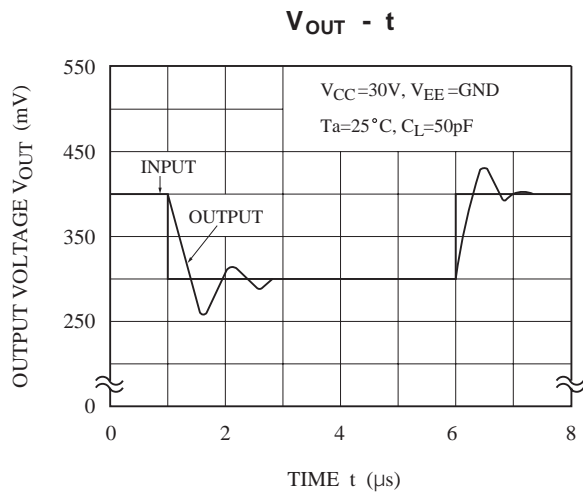
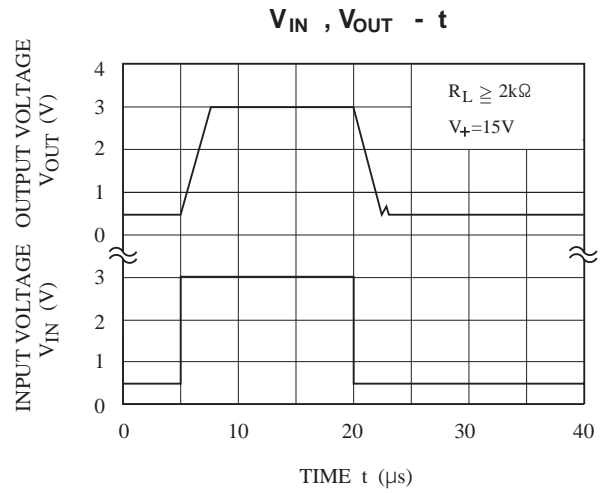
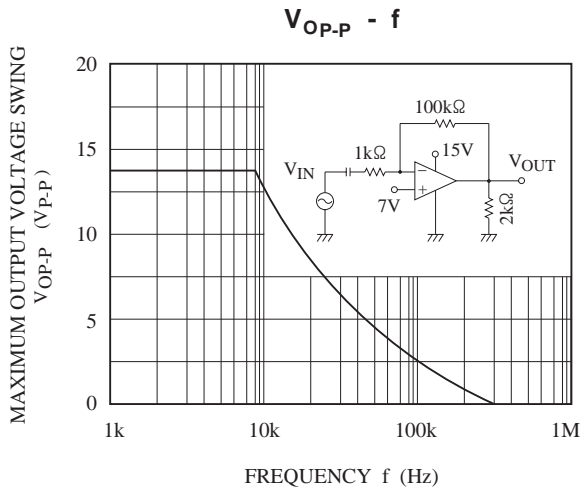


CMRR - f

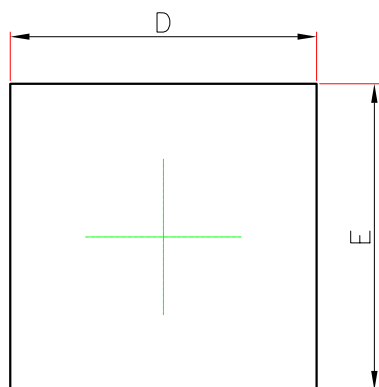


$G_V - f$

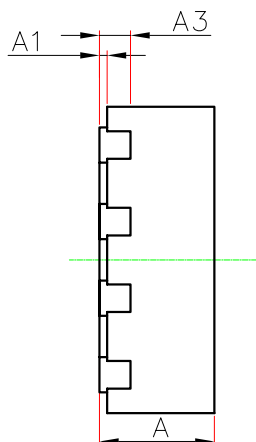




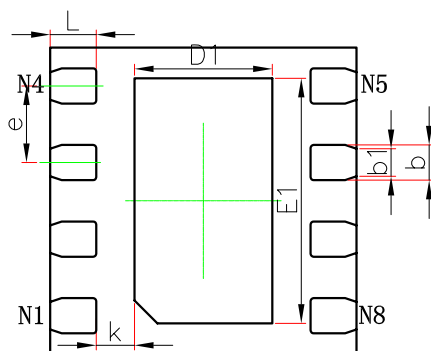
DFN22-8L PACKAGE OUTLINE DIMENSIONS



TOP VIEW



SIDE VIEW



BOTTOM VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.900	2.100	0.075	0.083
E	1.900	2.100	0.075	0.083
D1	0.800	1.000	0.031	0.039
E1	1.500	1.700	0.059	0.067
k	0.250 REF.		0.010REF.	
b	0.200	0.300	0.008	0.012
b1	0.180REF.		0.007REF.	
e	0.500BSC.		0.020BSC.	
L	0.224	0.376	0.009	0.015