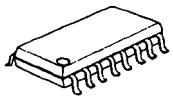
DUAL BOOST AMPLIFIER for CAR AUDIO

■ GENERAL DESCRIPTION

The NJM2160A is a dual boost amplifier designed for car audio system.It swings 14V peak-to-peak output voltage at 9V.It consists of two channel non-inverting amplifier with the gain of 8dB.

It is suitable for car audio system and other boost amplifier system.

■ PACKAGE OUTLINE



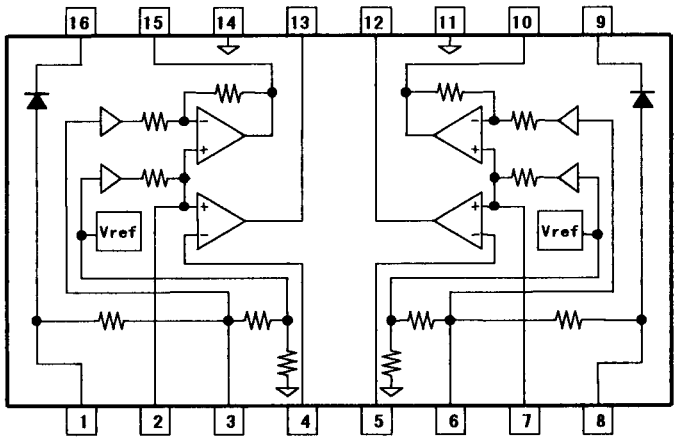
NJM2160AM

NJM2160AV

■ FEATURES

- Operating Voltage (+6V~+12V)
- Operating Current (6mA typ.)
- Boost Output Function (V_O=14V_{PP},@ V^+=9V)
- Supply Voltage Rejection Ratio (50dB typ.)
- Total Harmonic Distortion (0.003% typ.)
- Noise Output Voltage (6μVrms typ.)
- Bipolar Technology
- Package Outline DMP16,SSOP16

■ PIN CONFIGURATION



NJM2160AM
NJM2160AV

PIN FUNCTION

1. V_{CCL}
2. +Lin
3. CRPL
4. –Lin
5. –Rin
6. CRPR
7. +Rin
8. V_{CCR}
9. +CR
10. –CR
11. GNDR
12. Rout
13. Lout
14. GNDL
15. –CL
16. +CL

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25˚C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	+15	V
Output Current	I_O	20	mA
Power Dissipation	P_D	300	mW
Operating Temperature	T_{opr}	-40~+85	˚C
Storage Temperature	T_{stg}	-40~+125	˚C

■ ELECTRICAL CHARACTERISTICS

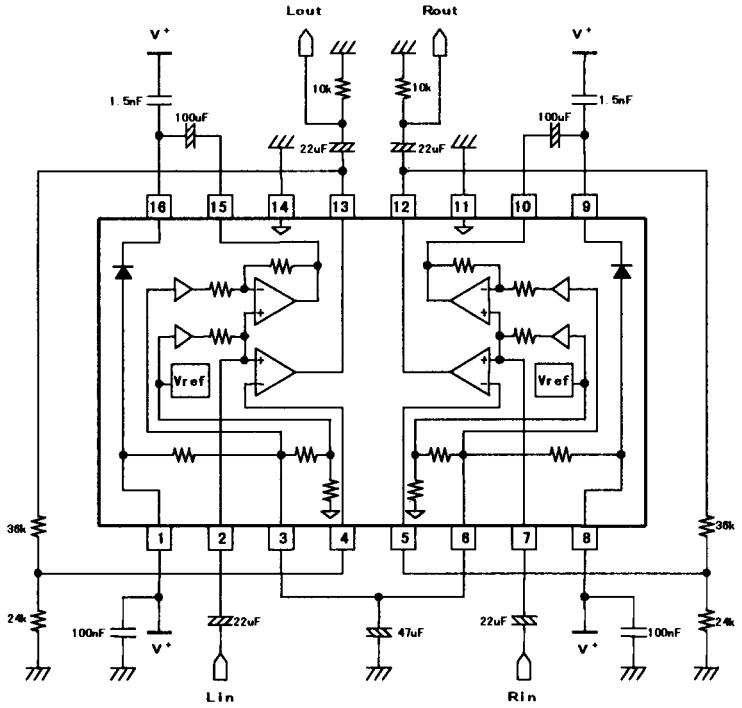
(V^+=9V,Ta=25˚C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
DC CHARACTERISTIC						
Operating Voltage	V^+		6.0	9.0	12.0	V
Operating Current	I_{CC}	No Signal	-	6.0	8.0	mA
Output Voltage	V_{ODC}		-	7.8	-	V
AC CHARACTERISTIC (f=1kHz,R_L=10kΩ)						
Voltage Gain	A_V		7.5	8.0	8.5	dB
Channel Separation	CS	R_S=600Ω,V_O=1Vrms	70	75	-	dB
Channel Balance	BAL		-	-	0.5	dB
Roll-off Low Frequency	f_{RL}	-1dB	-	-	5	Hz
Roll-off High Frequency	f_{RH}	-1dB	20	-	-	kHz
Input Resistance	R_{IN}		22	30	38	kΩ
Output Resistance	R_{OUT}		-	-	10	Ω
Maximum Output Voltage	V_{OM}	THD=0.1%	5.0	5.2	-	Vrms
Noise Output Voltage	Vno	R_S=600Ω,A-Weighting	-	6	10	μV
Total Harmonic Distortion	THD1	f=1kHz,V_O=3Vrms,A-Weighting	-	0.003	0.01	%
	THD2	f=17Hz-20kHz,V_O=3Vrms,A-Weighting	-	0.01	-	%
Supply Voltage Rejection Ratio	SVR1	R_S=600Ω,f=1kHz,V_{RP}=100mVrms	55	-	-	dB
	SVR2	R_S=600Ω,f=20Hz-20kHz,V_{RP}=100mVrms	-	50	-	dB

■ PIN INFORMATION

PIN NUMBER	PIN NAME	PIN FUNCTION
1	V_{CCL}	Power Supply for Left Channel
2	+Lin	+Input of Left Channel
3	CRPL	Capacitance for Left Channel Ripple Rejection
4	-Lin	-Input of Left Channel
5	-Rin	-Input of Right Channel
6	CRPR	Capacitance for Right Channel Ripple Rejection
7	+Rin	+Input of Right Channel
8	V_{CCR}	Power Supply for Right Channel
9	+CR	Capacitance for +Level-shift Right Channel
10	-CR	Capacitance for –Level-shift Right Channel
11	GNDR	Ground for Right Channel
12	Rout	Output of Right Channel
13	Lout	Output of Left Channel
14	GNDL	Ground for Left Channel
15	-CL	Capacitance for –Level-shift Left Channel
16	+CL	Capacitance for +Level-shift Left Channel

■ APPLICATION CIRCUIT



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