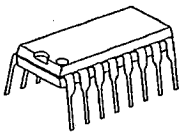
DUAL BOOST AMPLIFIER for CAR AUDIO

■ GENERAL DESCRIPTION

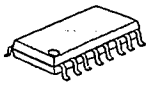
The NJM2160A is a dual boost amplifier designed for car audio system. It swings 14V peak-to-peak output voltage at 9V. It consists of two channel non-inverting amplifier with the gain of 8dB.

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

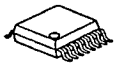
■ PACKAGE OUTLINE



NJM2160AD



NJM2160AM

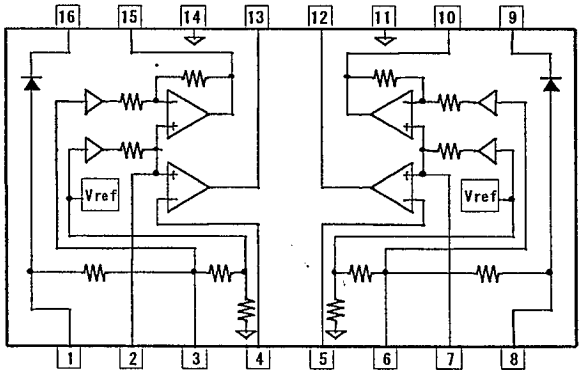


NJM2160AV

■ FEATURES

●Operating Voltage	(+6—+12V)
●Operating Current	(6mA typ.)
●Boost Output Function	(V_O=14Vpp, @V^+=9V)
●Supply Voltage Rejection Ratio	(50dB typ.)
●Total Harmonic Distortion	(0.003% typ.)
●Noise Output Voltage	(6μVrms typ.)
●Bipolar Technology	
●Package Outline	DIP16, DMP16, SSOP16

■ PIN CONFIGURATION



NJM2160AD
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

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■ ABSOLUTE MAXIMUM RANGES (Ta=25°C)

PARAMETER	SYMBOL	RANGE	UNIT
Supply Voltage	V^+	+15	V
Output Current	I_O	20	mA
Power Dissipation	P_D	(D-Type) 700 (M, V-Type) 300	mW
Operating Temperature	T_{opr}	−40～+85	°C
Storage Temperature	T_{stg}	−40～+125	°C

■ ELECTRICAL CHARACTERISTIC (V^+=9V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MAX.	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 CHARACTERSITIC (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

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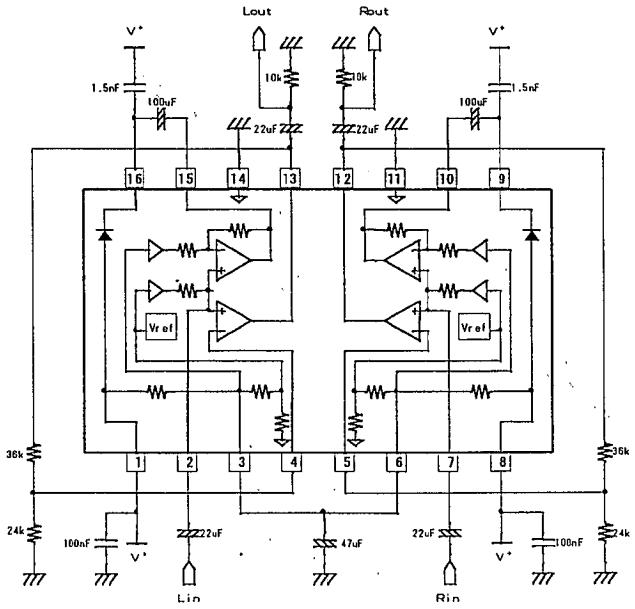
■ PIN INFORMATION

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



MEMO

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