AUDIO LINE AMPLIFIER with MUTE FUNCTION

■ GENERAL DESCRIPTION

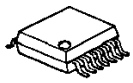
The **NJM2790** is a low voltage audio line amplifier designed for audio items.

Internal closed loop voltage gain is suitable for amplifier of small line signal in digital audio items. It includes mute circuit which realizes very low turn-noise at power on/off.

The **NJM2790** is 6.5dB closed loop voltage gain, another version of 3.5dB is the **NJM2174**.

It is suitable for digital audio items with line out.

■ PACKAGE OUTLINE

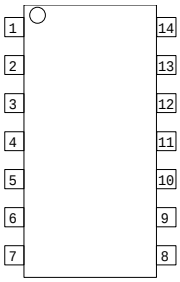


NJM2790V

■ FEARTURES

● Operating Voltage	4.5 to 5.5V
● Operating Current	2.5mA typ. at V^+=5V
● Maximum Output Voltage	4dBV typ. at THD=0.1%
● Closed Loop Voltage Gain	3.5dB typ. at f=1kHz
	2.5dB typ. at f=100kHz
● Mute Function	-85dB typ.
● Supply Voltage Rejection Ratio	60dB typ.
● Bipolar Technology	
● Package Outline	SSOP14

■ PIN CONFIGURATION

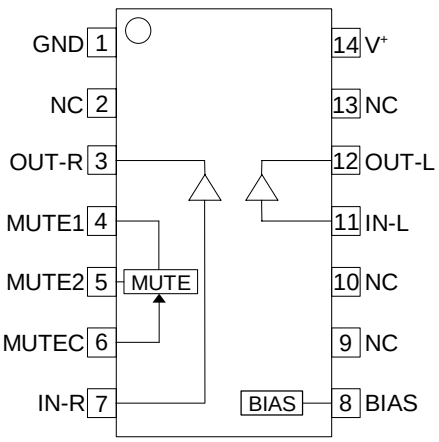


NJM2790V

PIN FUNCTION

1. GND	8. BIAS
2. NC	9. NC
3. OUT-R	10. NC
4. MUTE 1	11. IN-L
5. MUTE 2	12. OUT-L
6. MUTE C	13. NC
7. IN-R	14. V^+

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

RARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	7	V
Power Dissipation	P_D	300	mW
Operating Temperature Range	Topr	-20 to +75	°C
Storage Temperature Range	Tstg	-40 to +125	°C

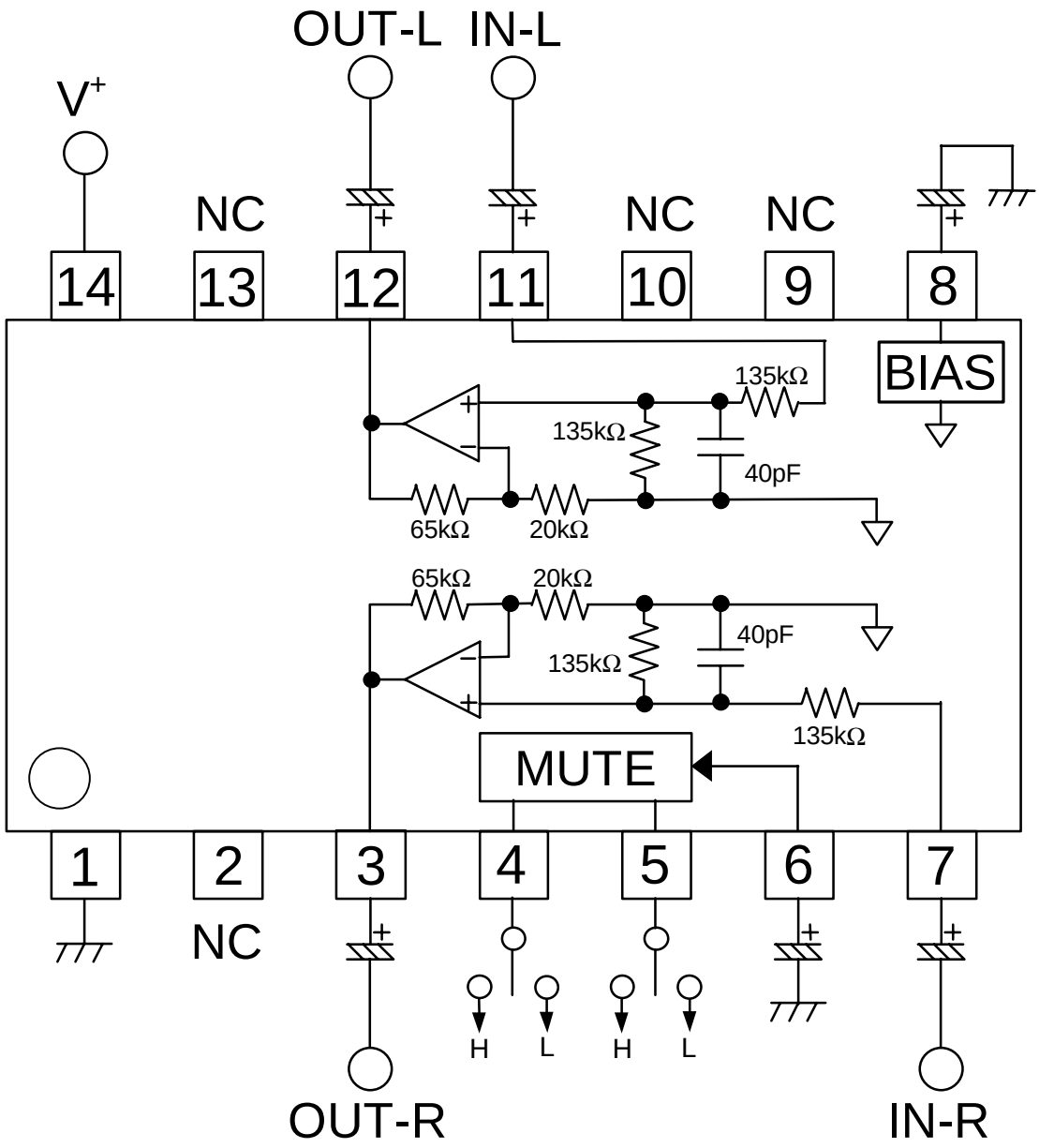
■ ELECTRICAL CHARACTERISTICS (V^+=5V, V_{IN}=-3dBV, R_L=47kΩ, f=1kHz, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage Range	V^+		4.5	5.0	5.5	V
Operating Current	I_{CC}	No signal	-	2.5	4.5	mA
Reference Voltage	V_{REF}	No signal	2.0	2.3	2.6	V
Closed Loop Voltage Gain1	G_V1		5.5	6.5	7.5	dB
Closed Loop Voltage Gain2	G_V2	f=100kHz	-4.0	-0.5	-5.0	dB
Channel Gain Balance	ΔG_V		-0.5	0	0.5	dB
Maximum Output Voltage	V_{OM}	THD=0.1%	3 (1.41)	4 (1.6)	-	dBV (Vrms)
Total Harmonic Distortion	THD		-	0.005	0.01	%
Output Noise Voltage	V_{NO}	Rg=0Ω, A-Weighted	-	-92 (25)	-85 (56)	dBV (μVrms)
Mute Level	MUTE	V_O/V_{IN}	-	-85	-70	dB
Channel Separation	CS		70	90	-	dB
Supply Voltage Rejection Ratio	SVR	V_{RP}=-20dBV, Rg=0Ω	35	50	-	dB
High Level Input Voltage	V_{IH}		2.0	-	V^+	V
Low Level Input Voltage	V_{IL}		0	-	0.3	V

■ CONTROL TERMNAL

MUTE1(4pin)	MUTE2(5pin)	STATUS
L	L	IC output no signal.
L	H	IC output no signal.
H	L	IC set up 6.5dB typ. voltage gain.
H	H	IC output no signal.

■ TYPCAL APPLICATION



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