

eala

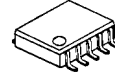
Sound Enhancement Audio Processor for Compression Audio

■ GENERAL DESCRIPTION

The NJM2707 is a sound enhancement audio processor designed for compression audio. It includes mode control switch (Sound enhancement mode / Bypass mode).

The NJM2707 performs low noise and low distortion characteristics, and is suitable for car audio & home audio applications.

■ PACKAGE OUTLINE

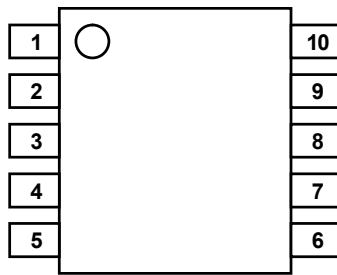


NJM2707RB2

■ FEATURES

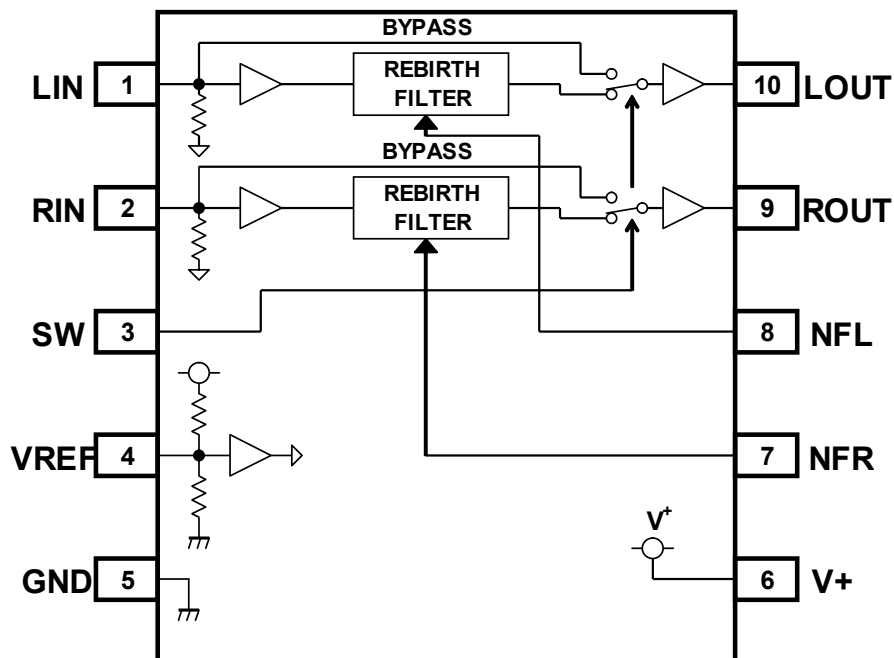
- Operating Voltage +1.8 to +13 V
- Low Operating Circuit 0.75 mA typ.(at Sound enhancement mode VR: Max.)
- Low output noise -100dBV typ.(at Sound enhancement mode VR: Max.)
- Low THD 0.01% typ.
- Variable Surround Effect by external resistor
- Internal Mode Control Switch
- Bipolar Technology
- Package Outline TVSP10

■ PIN CONFIGURATION



1. LIN
2. RIN
3. S W
4. VR EF
5. GND
6. V+
7. NFR
8. NFL
9. ROUT
10. LOU

■ BLOCK DIAGRAM (TVSP10)



NJM2707

■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Power Supply Voltage	V ₊	14	V
Power Dissipation	P _D	410 NOTE: EIA/JEDEC STANDARD Test board (76.2x114.3x1.6mm, 2layer, FR-4) mounting	mW
Operating Temperature Range	Topr	-40 ~ +85	°C
Storage Temperature Range	Tstg	-40 ~ +125	°C

■ OPERATING VOLTAGE

PARAMETER S	YMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V ₊		1.8	9.0	13	V

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V⁺=9V, unless otherwise specified)

PARAMETER S	YMBOL	TEST CONDITION	TEST CONDITION				MIN.	TYP.	MAX.	UNIT	
			INPUT		OUTPUT	Mode					V _R
			L	R							
Supply Current	I _{CC}	No Signal	0	0	-	Bypass	-	0.75	1.3	mA	
			0	0	-	eala Rebirth	MAX	-0.	75		1.3
Reference Voltage	V _{REF}	No Signal	0	0	-	-	-	3.65	4.15	4.65	V

■ AC CHARACTERISTICS (Ta=25°C, V⁺=9V, V_{in}= 1.5Vrms, f=1kHz, R_L=10kΩ, unless otherwise specified)

PARAMETER S	YMBOL	TEST CONDITION	TEST CONDITION				MIN.	TYP.	MAX.	UNIT		
			INPUT		OUTPUT	Mode					V _R	
			L	R								
Maximum Input Voltage	V _{IM}	f=1kHz THD=1%	V _{IN}	-	L	Bypass	-2.	2	3.0	-	Vrms	
			-V _{IN}	IN	R							
		f=1kHz THD=1%	V _{IN}	-	L	eala Rebirth	MAX	1.5	2.	7		-
			-V _{IN}	IN	R							
		f=10kHz THD=1%	V _{IN}	-	L	Bypass	-2.	2	3.0	-		-
			-V _{IN}	IN	R							
		f=10kHz THD=1%	V _{IN}	-	L	eala Rebirth	MAX	1.0	1.	6		-
			-V _{IN}	IN	R							
Output Noise	V _{NO}	Rg=0Ω A-Weighted	0	0	L	Bypass	--		-112 (2.5)	-106 (5.0)	dBV (μVrms)	
			0	0	R							
		Rg=0Ω A-Weighted	0	0	L	eala Rebirth	MAX	-	-100 (10)	-94 (20)		
			0	0	R							
Total Harmonic Distortion	THD+N	V _{IN} =1.5Vrms f=1kHz	V _{IN}	-	L	Bypass	--		0.002	0.01	%	
			-V _{IN}	IN	R							
		V _{IN} =0.75Vrms f=10kHz	V _{IN}	-	L	eala Rebirth	MAX	-0.	1	-		
			-V _{IN}	IN	R							
Bypass Gain	G _{VBYP}	V _{IN} =1.5Vrms f=1kHz	V _{IN}	-	L	Bypass	-1.	0	0.0	1.	0	dB
			-V _{IN}	IN	R							

PARAMETER S	YMBOL	TEST CONDITION	TEST CONDITION				MIN	TYP	MAX	UNIT	
			INPUT		OUTPUT	Mode					V _R
			L	R							
eala Rebirth Gain	G _{eala}	V _{IN} =0.75Vrms f=10kHz	V _{IN}	-	L	eala Rebirth	MAX	3.0	5.0	7.0	dB
			- V	IN	R						

■ **CONTROL CHARACTERISTICS** (T_a=25°C, V⁺=9V, unless otherwise specified)

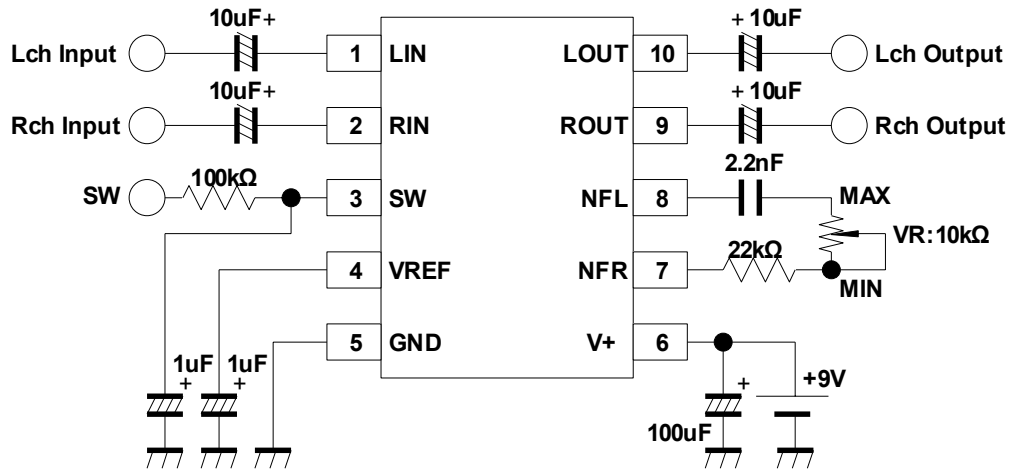
PARAMETER S	YMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Mode Select Control Voltage	V _{MODE}	V _{IN} =High Level	1.2	-	V ⁺	V
		V _{IN} =Low Level	0.0	-	0.3	V

■ **SWITCH FUNCTION**

MODE S	W	NOTES
Bypass	L, Open	Input Through
eala Rebirth	H	eala Rebirth (Stereo Input)

NJM2707

■ APPLICATION CIRCUIT



■ TERMINAL DESCRIPTION

(Ta=25°C, V⁺=9V)

PIN No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	Voltage
1 2	LIN RIN	Lch Input Rch Input		4.15V
3	MODE SW	Mode Control Switch		0V
4	VREF	Reference Voltage		4.15V

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■ TERMINAL DESCRIPTION

(Ta=25°C, V⁺=9V)

PIN No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	Voltage
6	V+	Power Supply		V+
7 8	NFR NFL	Rch Filter Terminal Lch Filter Terminal		4.15V
9 10	ROUT LOUT	Rch Output Lch Output		4.15V

[CAUTION]

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