



DEMOBOARD USERMANUAL



ON Semiconductor

NCP2811

Revision 2.1

Date: 02/01/2010

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REVISION HISTORY

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ALL	Document Creation	OM	1.0	04/03/2009
12	Add test sheet	OM	1.1	04/08/2009
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	Update resistor value	OM	2.1	02/01/2010



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I INTRODUCTION

I.1 GOAL OF DOCUMENT

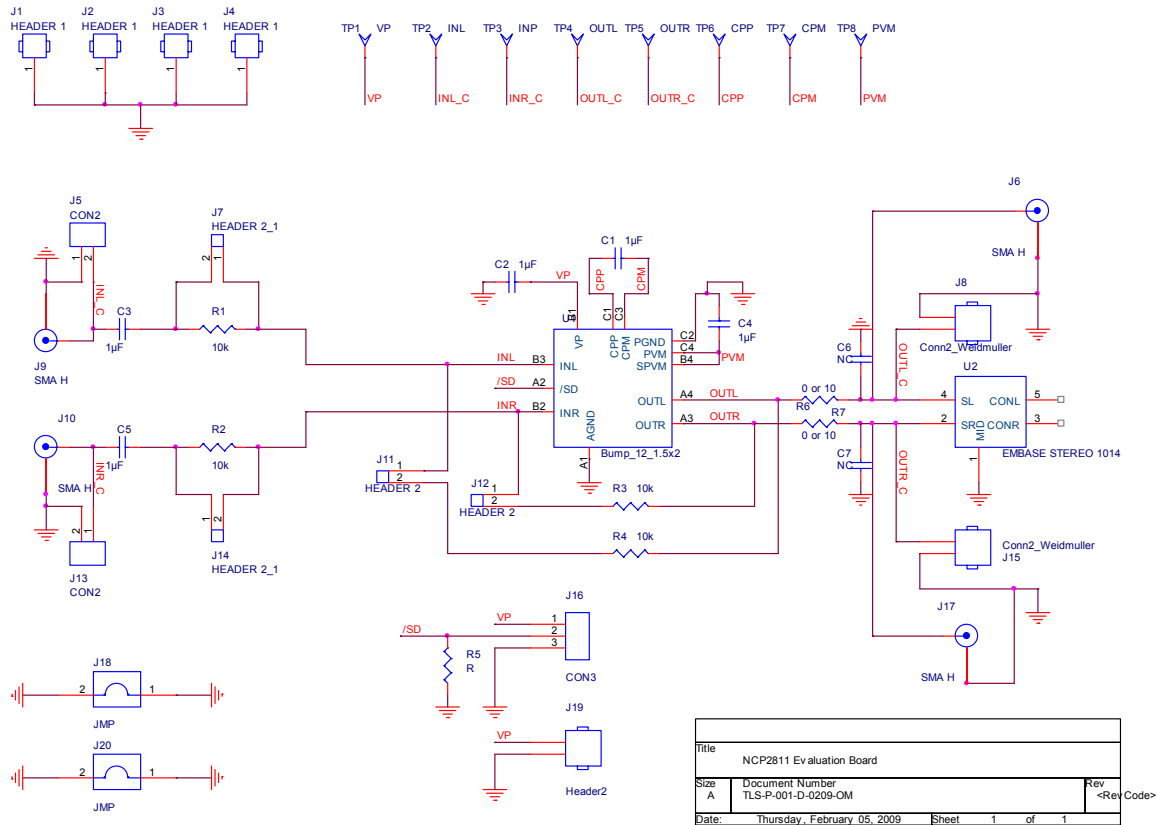
- The purpose of the document is to explain how to use the NCP2991 demobard usermanual.

I.2 APPLICABLE & REFERENCE DOCUMENTS

- NCP2811/D: NCP2811 Datasheet



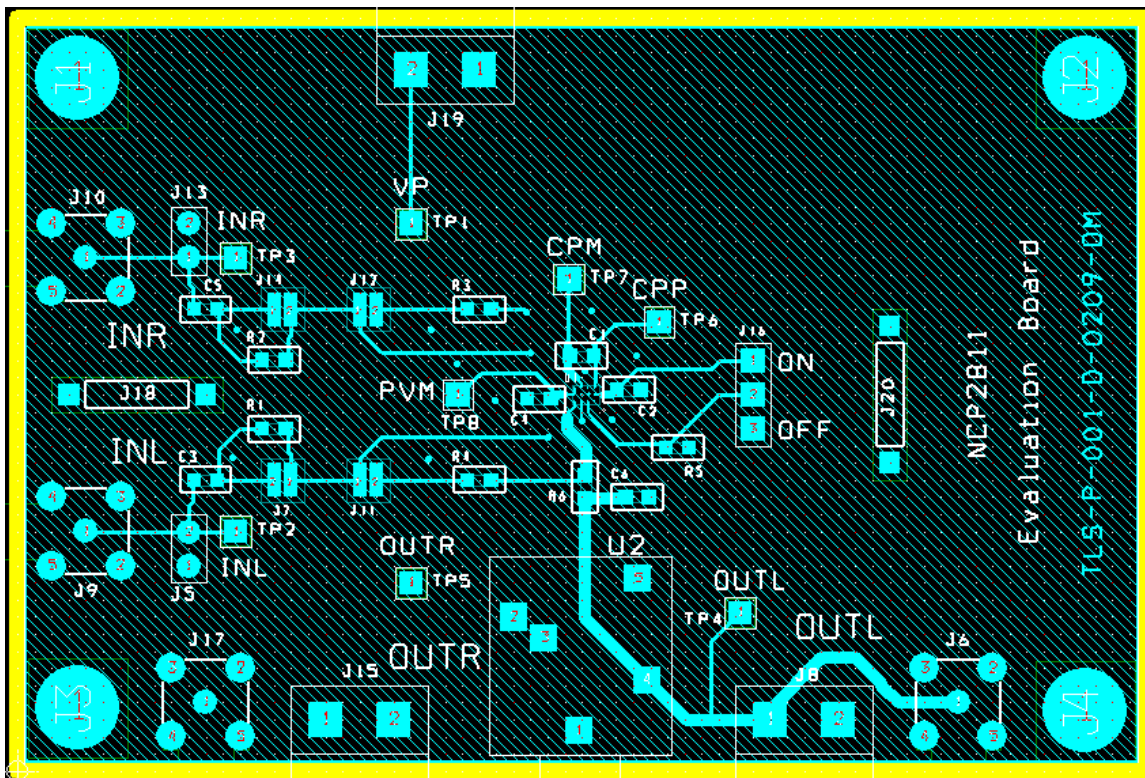
II DEMOBOARD SCHEMATIC



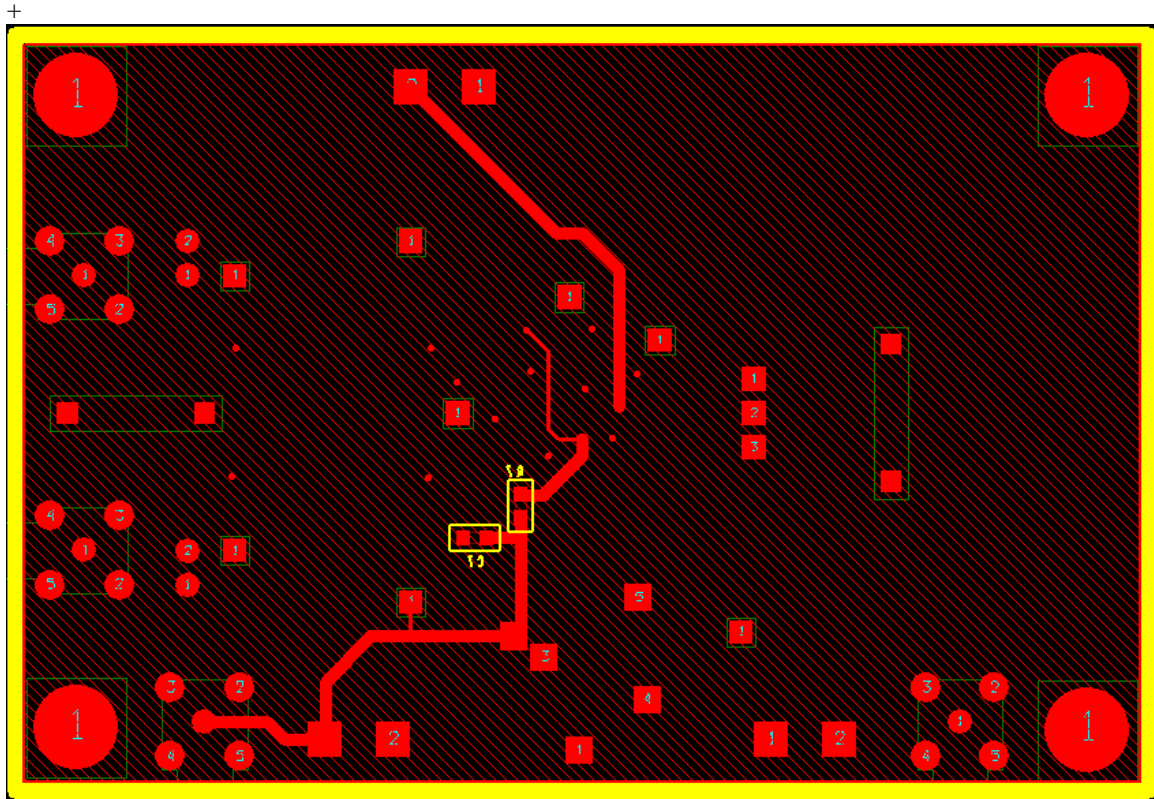
Title		
NCP2811 Evaluation Board		
Size	Document Number	Rev
A	TLS-P-001-D-0209-OM	<Rev Code>
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III DEMOBOARD LAYOUT



Top View



Bottom View

**IV BILL OF MATERIAL**

Item	Part description	Ref.	PCB Footprint	Manufacturer	Manufacturer Reference
1	NCP2811 Audio Amplifier	-	-	ON Semiconductor	NCP2811
2	SMD Resistor 10K Ω	R1, R2, R3, R4	0603	Panasonic	ERJ-3GEY103V
3	Ceramic Capacitor 1 μ F 6.3V X5R	C1, C2, C3, C4, C5	0603	Murata	GRM185R60J105KA01
4	Stereo Connector	U2		CUI Inc	SJ1-3515N
5	Jumper Header Vertical Mount, 2 positions, 100mils	J16	100 mils	Tyco Electronics / AMP	5-826629-0
6	I/O Connector, 2 positions	J8, J19, J15	200 mils	Phoenix Contact	1757242
7	Jumper Connector	J18, J20	400 mils	Harwin	D3082-B01
8	Not Mounted	R5, J9, J10, J6, J17, C6, C7			
9	Shorted	R6, R7	0603		



V NCP2811A OR NCP2811B CONFIGURATION

V.1 NCP2811A

Connect J11, J12. Put 10kohms on R1, R2, R3, R4. Disconnect J7, J14.

V.2 NCP2811B

Connect J7, J14. Disconnect J11, J12, R1, R2, R3, R4.



VI TEST PROCEDURE

Output Power :

- 1- Set $V_p = 3.6$ V to power supply connector (J16).
- 2- Set a 16Ω load (resistance) on the output connectors (J8 and J17).
- 3- With the function generator, set a single ended signal at 1 kHz and 0.5 Vrms input signal on the left and right inputs. Apply this signal J5 and J13 connectors.
 - a. On the NCP2811A, as $R1 = R2 = R3 = R4 = 10k$, OUTL_C and OUTR_C will see 0.5 Vrms. Place an oscilloscope probe on each output. You should get 0.5Vrms output signal with a “perfect sine wave”. That is to say no clipping at the minima and maxima of the sine wave.
 - b. On the NCP2811B, the gain is internally set to -1.5 V/V, OUTL_C and OUTR_C will see 0.75 Vrms. Place an oscilloscope probe on each output. You should get 0.75Vrms output signal with a “perfect sine wave”. That is to say no clipping at the minima and maxima of the sine wave

Quiescent current :

Check the quiescent current. Place a 16Ω load on each output (J8, J17), no input signal. V_p set to 3.6V and J6 closed. You should measure around 6 mA.



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REV 2.1

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