

NOCAP™ Advanced Semiconductor Headline Amplifier

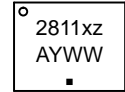
NCP2811

Ω

MARKING DIAGRAMS



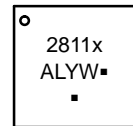
12 PIN CSP
 FC SUFFIX
 CASE 499AZ



- x = A for NCP2811A
 = B for NCP2811B
- z = C for backside laminate
- A = Assembly Location
- Y = Year
- WW = Work Week
- = Pb-Free Package



WQFN12
 MT SUFFIX
 CASE 510AH



(Note: Microdot may be in either location)

Features

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-
-

Typical Applications

-



TSSOP-14
 DTB SUFFIX
 CASE 948G

ORDERING INFORMATION

See detailed ordering and shipping information on page 12 of this data sheet.

NOTE: Some of the devices on this data sheet have been DISCONTINUED. Please refer to the table on page 12.

NCP2811

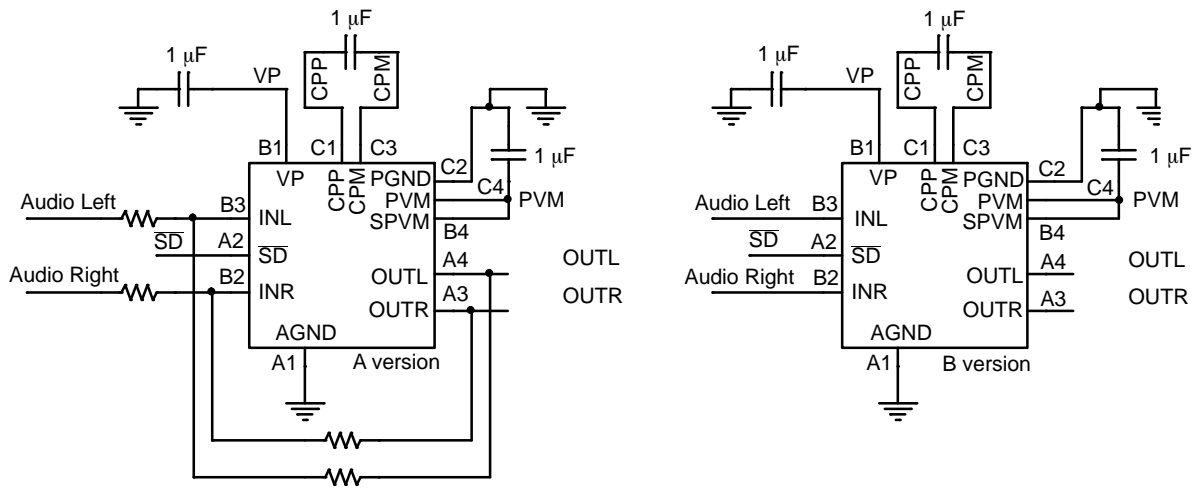


Figure 1. Application Schematics

NCP2811

Table 3. ELECTRICAL CHARACTERISTICS Min & Max Limits apply for T_A between -40°C to $+85^{\circ}\text{C}$ and T_J up to $+125^{\circ}\text{C}$ for V_{IN} between 2.7 V to 5.0 V (Unless otherwise noted). Typical values are referenced to $T_A = +25^{\circ}\text{C}$ and $V_{IN} = 3.6\text{ V}$.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_P	Operational Power Supply		2.7		5.0	V

TYPICAL OPERATING CHARACTERISTICS

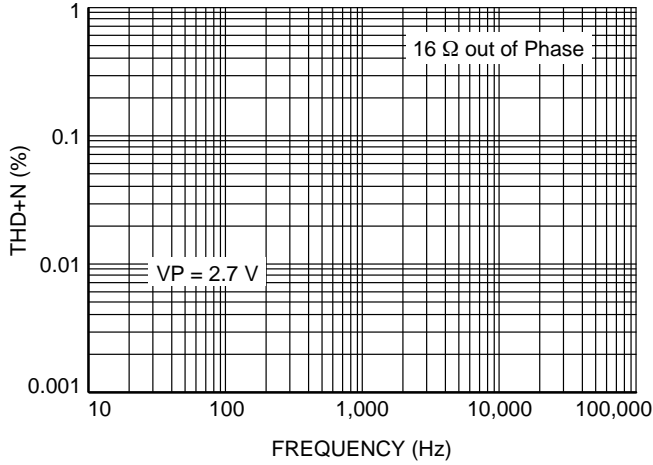


Figure 17. THD vs. Frequency LEFT
@ Pout = 32 mW

Figure 18. THD vs. Frequency RIGHT
@ Pout = 32 mW

Figure 19. THD vs. Frequency LEFT
@ Pout = 32 mW

Figure 20. THD vs. Frequency RIGHT
@ Pout = 32 mW

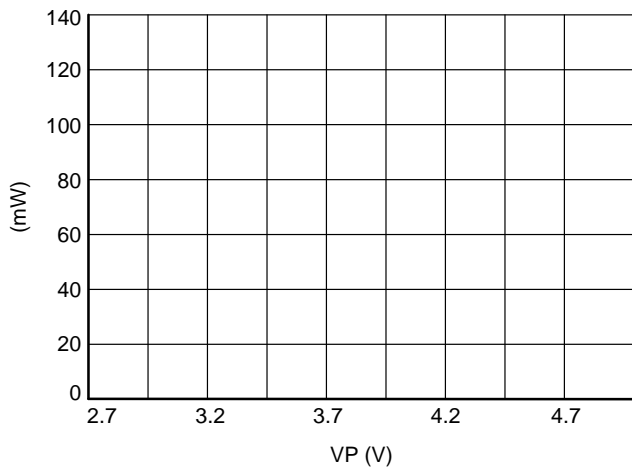


Figure 21. Maximum Output Power LEFT vs. VP (THD+N < 1%)

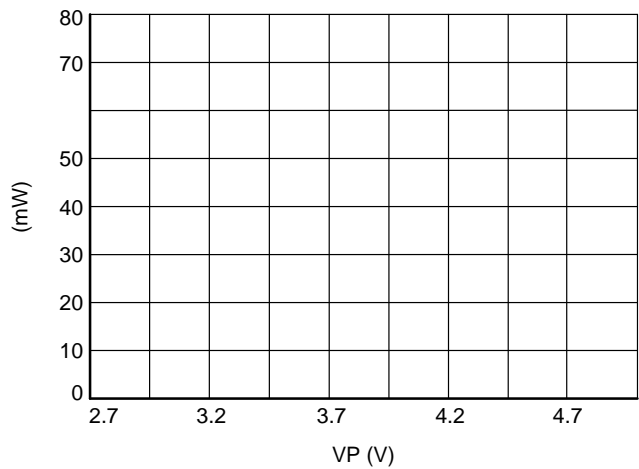


Figure 22. Maximum Output Power LEFT vs. VP (THD+N < 0.1%)

NCP2811

TYPICAL OPERATING CHARACTERISTICS

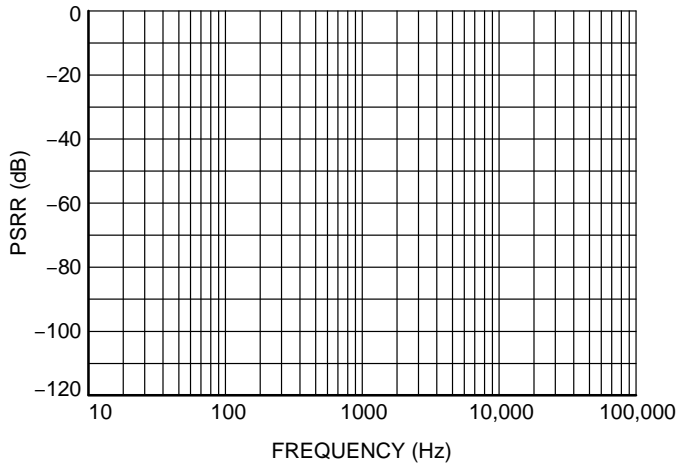


Figure 23. PSRR at $V_p = 3.6\text{ V}$

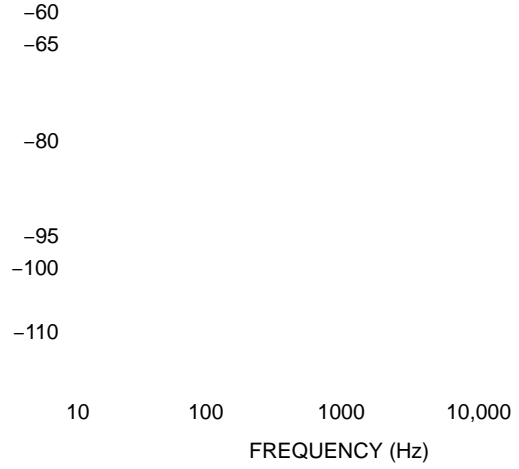


Figure 24. Crosstalk vs. Frequency
@ $V_p = 3.6\text{ V}$

NCP2811

DETAIL OPERATING DESCRIPTION

Detailed Descriptions

Ω

$$F_c = \frac{1}{2\pi R_{in} C_{in}}$$

Charge Pump Capacitor Selection

NOCAP™
™

μ

Current Limit Protection Circuit

Table 4.

Value	Reference	Package	Manufacturer
1 μF	C1005X5R0J105K	0402	TDK
1 μF	GRM155R60J105K19	0402	Murata

Thermal Overload Protection

○

○

Under Voltage Lockout

Power Supply Decoupling Capacitor (C1)

Pop and Click Suppression Circuitry

μ

Shutdown Function

Gain Setting Resistor Selection (R_{in} & R_f, A version only)

Ω

Output Resistor for Capacitive Drive Capability

Ω

$$A_v = -\frac{R_f}{R_{in}}$$

Input Capacitor Selection

Layout Recommendation

NCP2811

Table 5. ORDERING INFORMATION

Device	Package	Shipping†
NCP2811ADTBR2G	TSSOP-14 (Pb-Free)	2500/Tape & Reel

DISCONTINUED (Note 9)

NCP2811BDTBR2G	TSSOP-14 (Pb-Free)	2500/Tape & Reel
NCP2811AFCT1G	Flip-Chip 12 (Pb-Free)	3000/Tape & Reel
NCP2811BFCT1G	Flip-Chip 12 (Pb-Free)	3000/Tape & Reel
NCP2811BFCCT1G	Flip-Chip 12 (Backside Laminate Coating) (Pb-Free)	3000/Tape & Reel
NCP2811AMTTXG	WQFN12 (Pb-Free)	3000/Tape & Reel
NCP2811BMTTXG	WQFN12 (Pb-Free)	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

9. **DISCONTINUED:** These devices are not recommended for new design. Please contact your **onsemi** representative for information. The most current information on these devices may be available on www.onsemi.com.

WLCSP12 2.00x1.50x0.596

⊂|0.

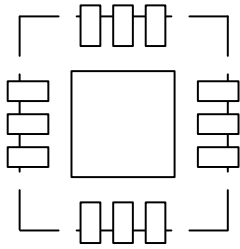
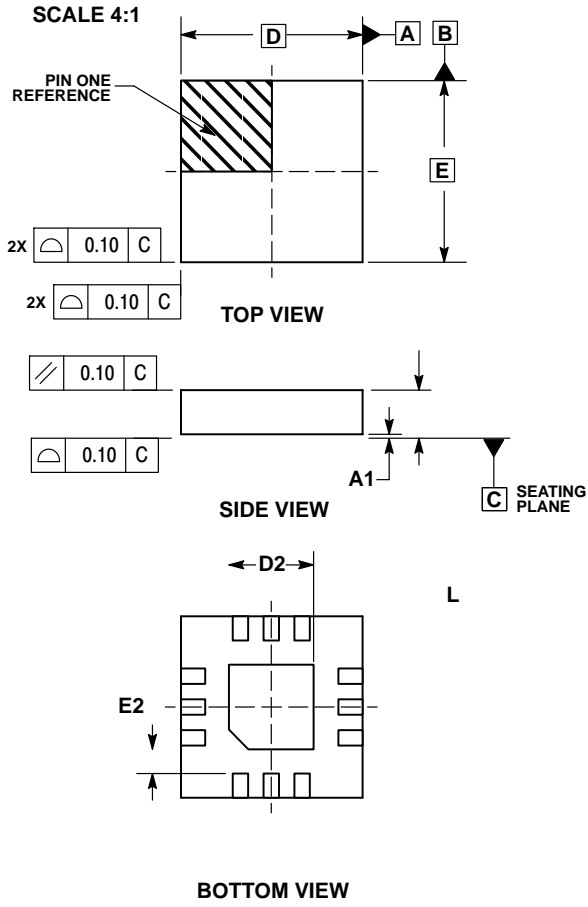
← → ⊞

TOP VIEW

SIDE VIEW

⊞

WQFN12 3x3, 0.5P



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