LP2980, LP2981, LP2982, LP2985 Micro SMD Demo Boards

National Semiconductor
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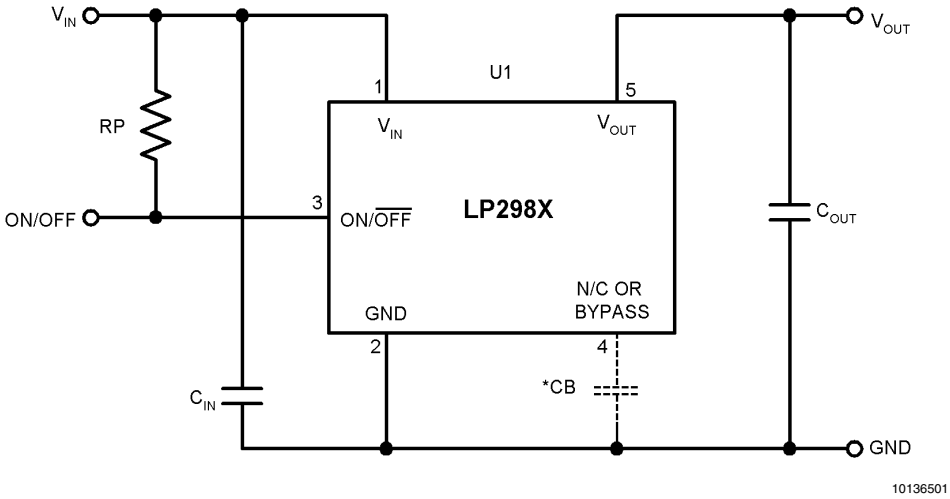
Abstract

This document describes the characteristics of the demo board designed for use with the micro SMD versions of National's LP298X low dropout regulators.

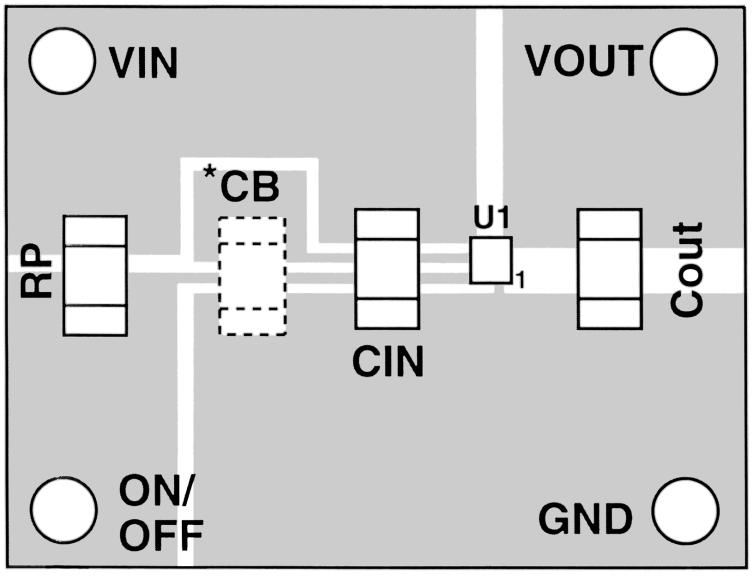
The components of each demo board vary by device type and voltage option. Lists of materials are provided which specify the correct external components to be used with each NSC part type.

It should be noted that the noise bypass capacitor is only used on the LP2982 and LP2985. Demo boards for other parts types will not have a component installed at this location.

Care must be taken so that the input voltage is not raised above 10V, since a 10V ceramic capacitor is called out for use at the C_{IN} location.



Schematic Diagram



*Used only On Low-Noise parts LP2982 and LP2985

Demo Board (Top View)

List of Materials

COMPONENTS COMMON TO ALL BOARD ASSEMBLIES

Quantity	Description	Ref Designator
1	LP298X Micro SMD PCB Etch 001	
1	Ceramic Cap, 1 µF, 10V X7R (1206)	C_{IN}
4	Terminal, Uninsulated 0.094' IPI Cambion P/N 160-1026-02-01-00	V_{IN}, V_{OUT}, GND, ON/OFF
1	Resistor, 10K, ⅛W %5 (1206)	RP

COMPONENTS WHICH VARY BY PART TYPE AND/OR VOLTAGE OPTION

LP2980-4.5 Through LP2980-5.0

Quantity	Description	Ref Designator
1	LP2980-X.X Micro SMD Device	U1
1	Tantalum Cap, 2.2 µF, 10V	C_{OUT}
1	Not Used	CB

LP2980-3.1 Through LP2980-4.4

Quantity	Description	Ref Designator
1	LP2980-X.X Micro SMD Device	U1
1	Tantalum Cap, 4.7 µF, 6V	C_{OUT}
1	Not Used	CB

LP2980-1.5 Through LP2980-3.0

Quantity	Description	Ref Designator
1	LP2980-X.X Micro SMD Device	U1
1	Tantalum Cap, 10 µF, 6V	C_{OUT}
1	Not Used	CB

LP2981-4.5 Through LP2981-5.0

Quantity	Description	Ref Designator
1	LP2981-X.X Micro SMD Device	U1
1	Tantalum Cap, 2.2 µF, 10V	C_{OUT}
1	Not Used	CB

LP2981-3.1 Through LP2981-4.4

Quantity	Description	Ref Designator
1	LP2981-X.X Micro SMD Device	U1
1	Tantalum Cap, 4.7 µF, 6V	C_{OUT}
1	Not Used	CB

LP2981-1.5 Through LP2981-3.0

Quantity	Description	Ref Designator
1	LP2981-X.X Micro SMD Device	U1
1	Tantalum Cap, 10 µF, 6V	C_{OUT}
1	Not Used	CB

LP2982-4.5 Through LP2982-5.0

Quantity	Description	Ref Designator
1	LP2982-X.X Micro SMD Device	U1

List of Materials (Continued)

LP2982-4.5 Through LP2982-5.0 (Continued)

Quantity	Description	Ref Designator
1	Tantalum Cap, 2.2 µF, 10V	C_{OUT}
1	Ceramic Cap, .01 µF, X7R or COG	CB

LP2982-3.1 Through LP2982-4.4

Quantity	Description	Ref Designator
1	LP2982-X.X Micro SMD Device	U1
1	Tantalum Cap, 4.7 µF, 6V	C_{OUT}
1	Ceramic Cap, .01 µF, X7R or COG	CB

LP2982-1.5 Through LP2982-3.0

Quantity	Description	Ref Designator
1	LP2982-X.X Micro SMD Device	U1
1	Tantalum Cap, 10 µF, 6V	C_{OUT}
1	Ceramic Cap, .01 µF, X7R or COG	CB

LP2985-4.5 Through LP2985-5.0

Quantity	Description	Ref Designator
1	LP2985-X.X Micro SMD Device	U1
1	Tantalum Cap, 2.2 µF, 10V	C_{OUT}
1	Ceramic Cap, .01 µF, X7R or COG	CB

LP2985-3.1 Through LP2985-4.4

Quantity	Description	Ref Designator
1	LP2985-X.X Micro SMD Device	U1
1	Tantalum Cap, 4.7 µF, 6V	C_{OUT}
1	Ceramic Cap, .01 µF, X7R or COG	CB

LP2985-1.5 Through LP2985-3.0

Quantity	Description	Ref Designator
1	LP2985-X.X Micro SMD Device	U1
1	Tantalum Cap, 10 µF, 6V	C_{OUT}
1	Ceramic Cap, .01 µF, X7R or COG	CB

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