ROHM

BD9B300MUV EVALUATION BOARD
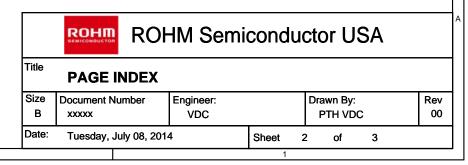
Revision History
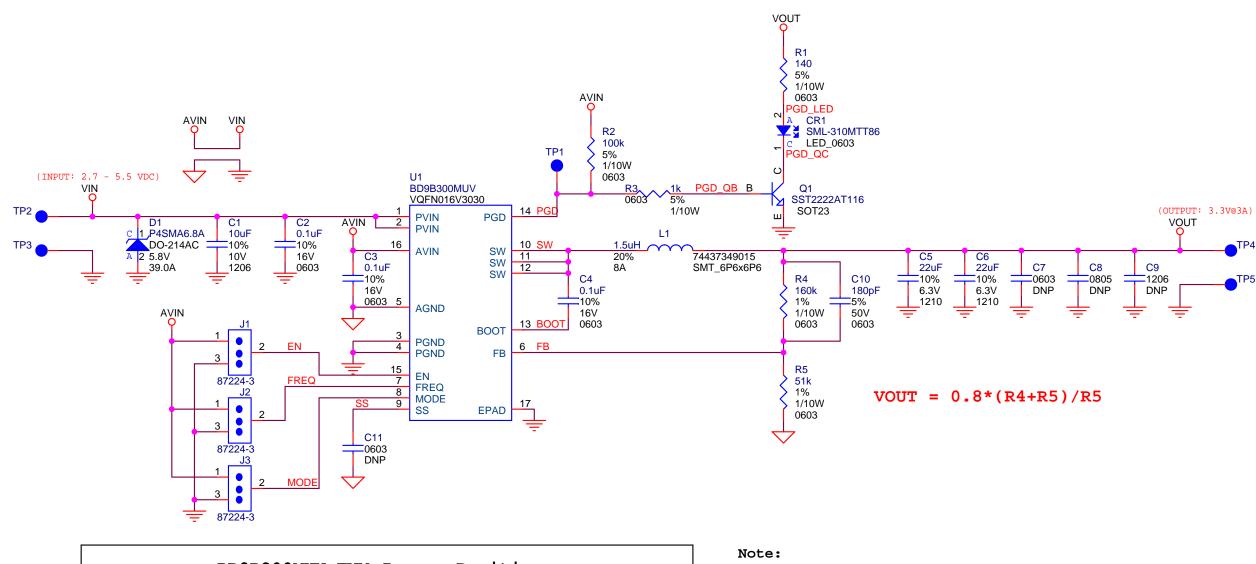
(preliminary)

REVISION	DATE	COMMENT
Rev 00	2014-06-20	Initial release

ROHM Semiconductor USA

Title				
TITLE & REVISION HISTORY				
Size B	Document Number xxxxx	Engineer: VDC	Drawn By: PTH VDC	Rev 00
Date: Tuesday, July 08, 2014			Sheet 1 of 3	

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BD9B300MUV EVM Schematic

U1
BD9B300MUV
VQFN016V3030

VOUT

R1 140 5% 1/10W 0603

PGD_LED

CR1 SML-310MTT86 LED_0603

PGD_QC

R2 100k 5% 1/10W 0603

TP1

R3 0603

1k 5% 1/10W

PGD_QB

Q1 SST2222AT116 SOT23

AVIN   VIN

(INPUT: 2.7 – 5.5 VDC)

VIN

TP2

TP3

D1 P4SMA6.8A DO-214AC 5.8V 39.0A

C1 10uF 10% 10V 1206

C2 0.1uF 10% 16V 0603

AVIN

C3 0.1uF 10% 16V 0603

1	PVIN	PGD	14
2	PVIN		
16	AVIN	SW	10
		SW	11
		SW	12
5	AGND		
3	PGND	BOOT	13
4	PGND	FB	6
15	EN		
7	FREQ		
8	MODE		
9	SS	EPAD	17

L1 1.5uH 74437349015 SMT_6P6x6P6

C4 0.1uF 10% 16V 0603

R4 160k 1% 1/10W 0603

C10 180pF 5% 50V 0603

BOOT

FB

EN

FREQ

MODE

SS

C11 0603 DNP

R5 51k 1% 1/10W 0603

VOUT = 0.8*(R4+R5)/R5

(OUTPUT: 3.3V@3A)
VOUT

TP4

TP5

C5 22uF 10% 6.3V 1210

C6 22uF 10% 6.3V 1210

C7 0603 DNP

C8 0805 DNP

C9 1206 DNP

AVIN

J1

1
3
2   EN
87224-3

J2

1
3
2   FREQ
87224-3

J3

1
3
2   MODE
87224-3

BD9B300MUV EVM Jumper Positions

Reference Designator	Position	Description
J1	2 – 1	Enable U1
	2 – 3	Disable U1
J2	2 – 1	Set switching frequency of U1 is 1.0MHz
	2 – 3	Set switching frequency of U1 is 2.0MHz
J3	2 – 1	Set operation mode of U1 is fixed frequency PWM mode
	2 – 3	Set operation mode of U1 is automatically switched between the Deep-SLLM control and fixed frequency PWM mode

Note:
1. $0.8V =< VOUT =< 0.8*VIN$