

DESCRIPTION

Demonstration circuit 921 is a micropower synchronous buck-boost converter based on the LTC3532 monolithic buck-boost regulator. The DC921 has an input voltage range of 2.4 V to 5.5V and an output of 3.3V @ 300mA. The converter can work under manual or programmable automatic burst mode, providing high conversion efficiency over a wide range of load currents. The LTC3532 comes in a 10 lead 3x3 DFN package. These features make the DC921 demo board

an ideal circuit for use in Li-Ion battery-powered, hand-held applications.

NOTE: Some of the optional components should be stuffed for $V_{in} > 4.5V$ as discussed in the Datasheet.

Design files for this circuit board are available. Call the LTC factory.

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QUICK START PROCEDURE

Refer to Figure 1 for proper measurement equipment setup and follow the procedure below:

1. Start with Load set to 0A.

2. Set Power Supply anywhere between 2.4V to 5.5V.

3. The Load can be set from 0 – 300mA.

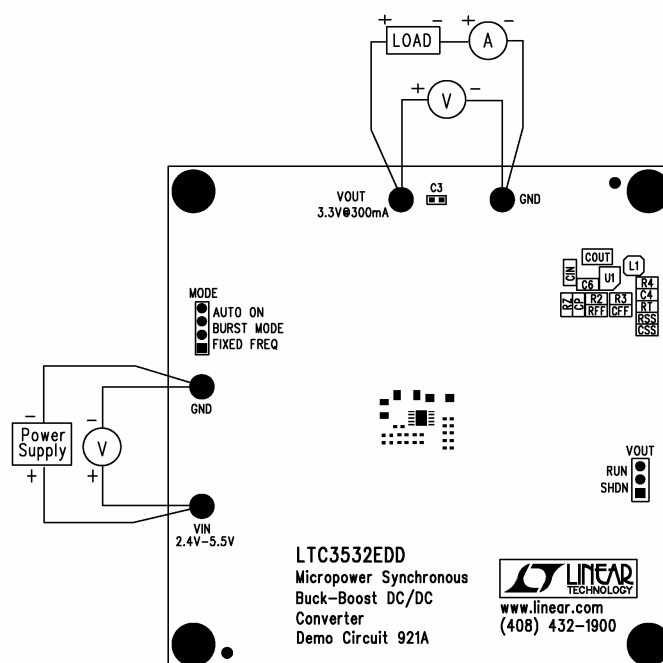
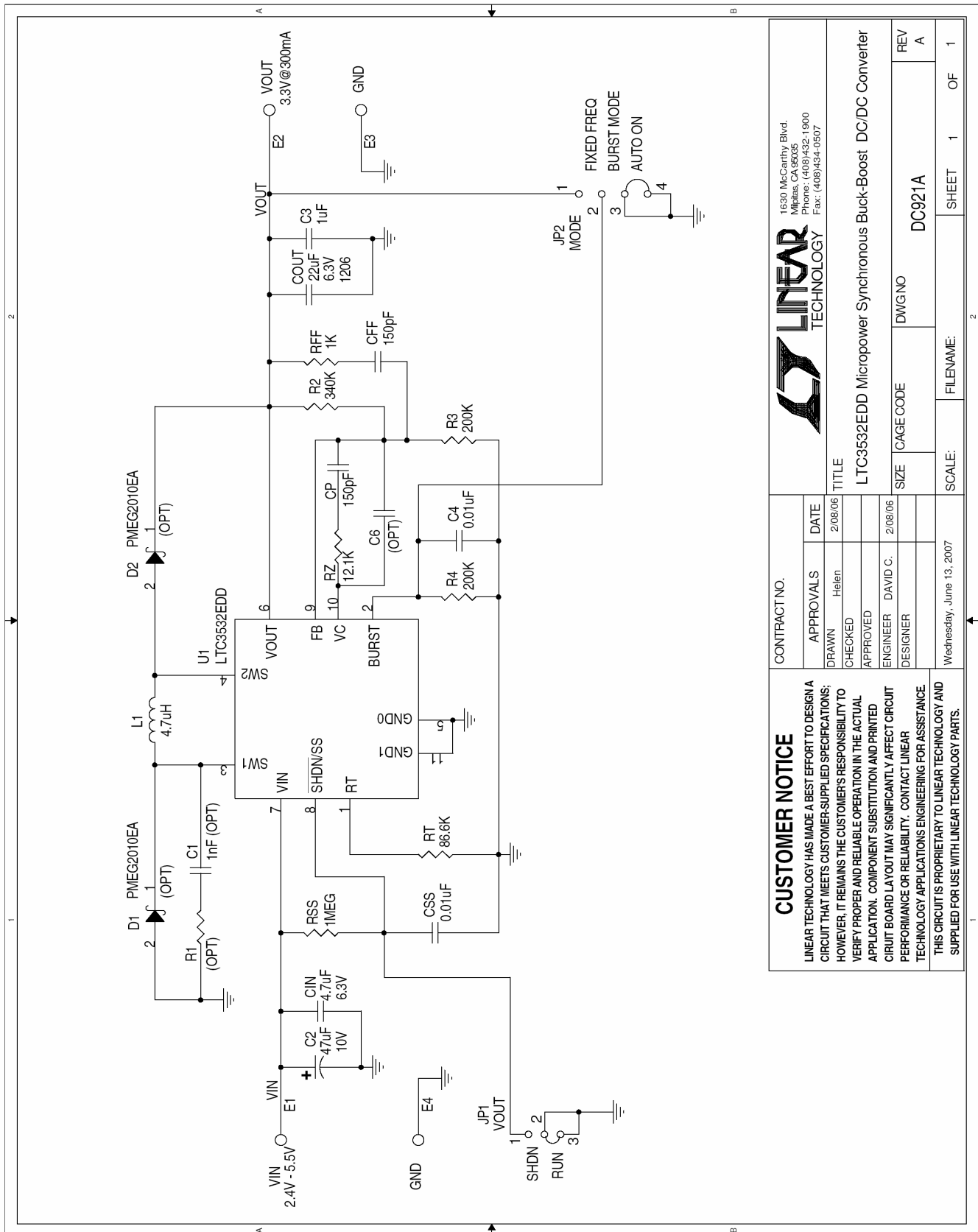


Figure 1. Proper Measurement Equipment Setup

QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 921

MICROPOWER SYNCHRONOUS BUCK-BOOST CONVERTER



QUICK START GUIDE FOR DEMONSTRATION CIRCUIT 921 MICROPOWER SYNCHRONOUS BUCK-BOOST CONVERTER

Item	Qty	Reference	Part Description	Manufacturer / Part #
REQUIRED CIRCUIT COMPONENTS:				
1	2	CFF,CP	CAP., COG, 150pF, 50V, 10%, 0402	AVX, 04025A151KAT2A
2	1	CIN	CAP., X5R, 4.7uF, 6.3V, 20%, 0805	AVX, 08056D475MAT2A
3	1	COUT	CAP., X5R, 22uF, 6.3V, 10%, 1206	AVX, 12066D106226KAT2A
4	2	C4,CSS	CAP., X5R, 0.01uF, 6.3V, 20% 0402	AVX, 04026D103MAT2A
5	1	C2	CAP., TANT, 47uF, 10V, 20%, 3528	AVX, TAJB476M010
6	1	C3	CAP., X5R, 1uF, 6.3V, 20%, 0603	AVX, 06036D105MAT2A
7	1	L1	INDUCTOR, 4.7UH	SUMIDA, CDRH2D18/HP-4R7NC
8	1	RFF	RES., CHIP, 1K, 1/16W, 5%, 0402	AAC, CR05-102JM
9	1	RSS	RES., CHIP, 1MEG, 1/16W, 5%, 0402	AAC, CR05-105JM
10	1	RT	RES., CHIP, 86.6K, 1/16W, 1%, 0402	AAC, CR05-8662FM
11	1	RZ	RES., CHIP, 12.1K, 1/16W, 1%, 0402	AAC, CR05-1212FM
12	1	R2	RES., CHIP, 340K, 1/16W, 1%, 0402	AAC, CR05-3403FM
13	2	R3,R4	RES., CHIP, 200K, 1/16W, 1%, 0402	AAC, CR05-2003FM
14	1	U1	LTC3532EDD 10PIN DFN	LINEAR TECH., LTC3532EDD
ADDITIONAL DEMO BOARD CIRCUIT COMPONENTS:				
1	0	C1 (OPT)	CAP., 1nF, 0402	
2	0	C6 (OPT)	CAP., 0402	
3	0	D1,D2(OPT)	SCHOTTKY DIODE 1A/20V, SOD323	PHILIPS, PMEG2010EA
4	0	R1 (OPT)	RES., CHIP, 0402	
HARDWARE-FOR DEMO BOARD ONLY:				
1	4	E1,E2,E3,E4	TESTPOINT, TURRET, .095"	MILL-MAX, 2501-2
2	1	JP1	0.079 SINGLE ROW HEADER, 3 PIN	COMM CON, 2802S-03-G2
3	1	JP2	0.079 SINGLE ROW HEADER, 4 PIN	SAMTEC, TMM-104-02-L-S
4	2	JP1,JP2	SHUNT, .079" CENTER	SAMTEC, 2SN-BK-G
5	4	(STAND-OFF)	STAND-OFF, NYLON 0.25" tall	KEYSTONE, 8831 (SNAP ON)