

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.

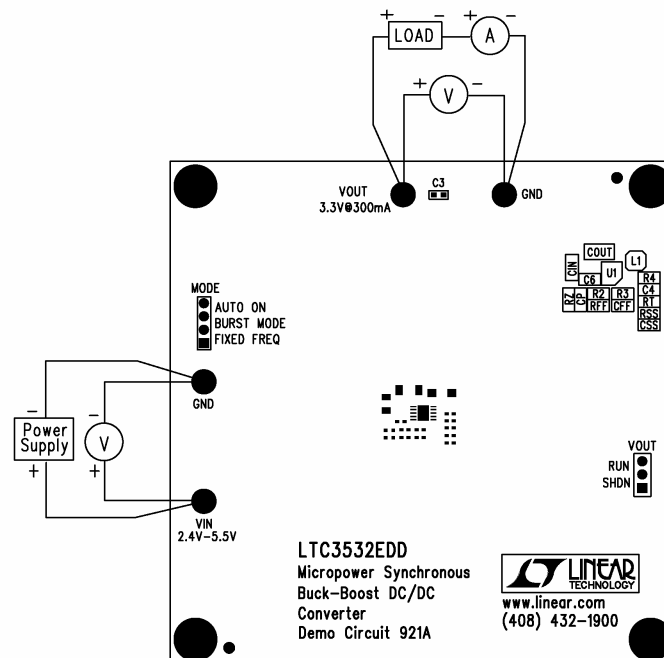
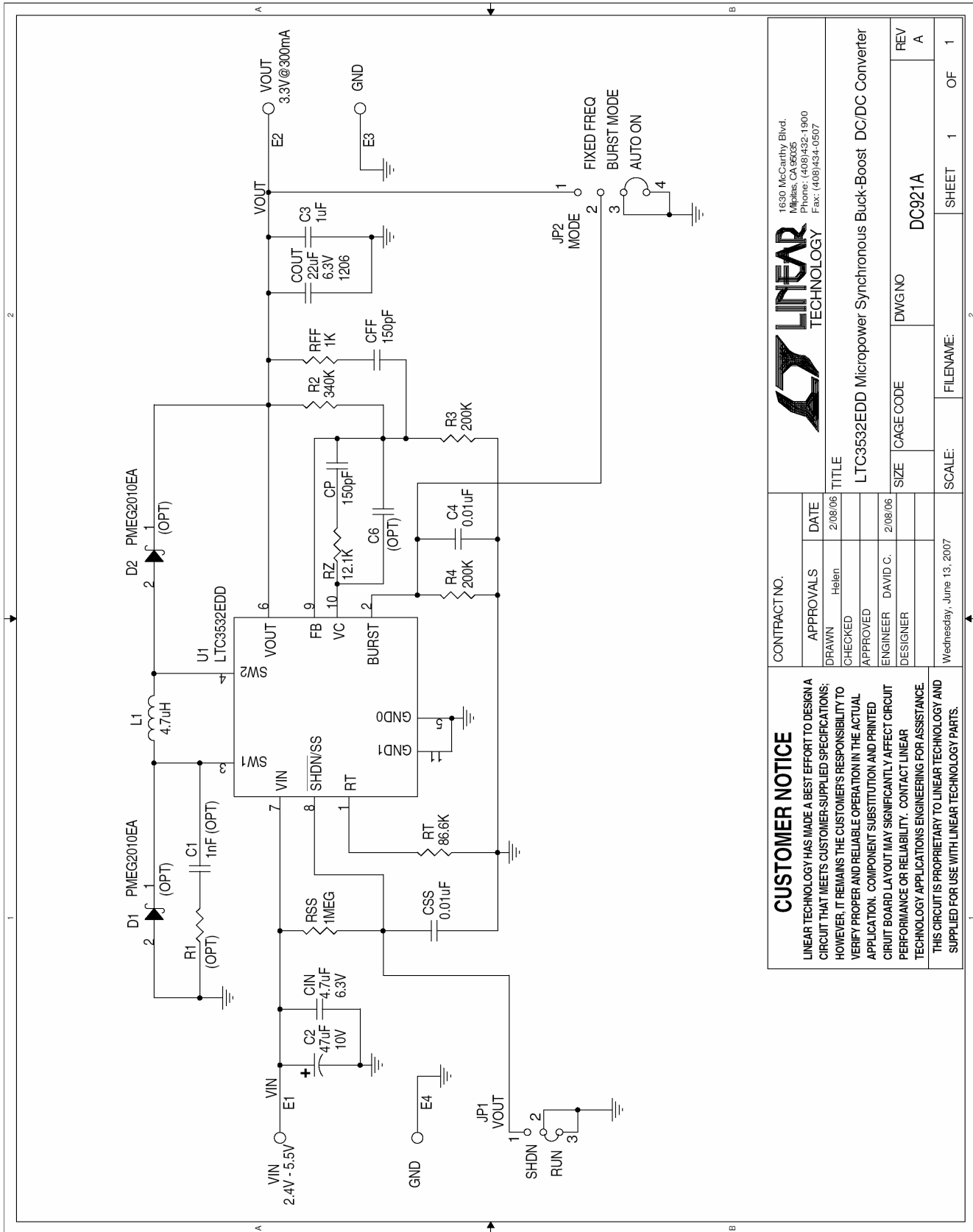


Figure 1. Proper Measurement Equipment Setup

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



		1650 McCarthy Blvd. Milpitas, CA 95035-1900 Phone: (408) 993-1900 Fax: (408) 964-0507	
		CONTRACT NO.	DATE
CUSTOMER NOTICE LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE. THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.		APPROVALS DRAWN Helen CHECKED APPROVED ENGINEER DAVID C. DESIGNER	2/08/06 2/08/06
TITLE LTC3532EDD Micropower Synchronous Buck-Boost DC/DC Converter		SIZE CAGE CODE DWGNO DC921A	SCALE: FILENAME:
Wednesday, June 13, 2007		SHEET 1 OF 1	REV A

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	COU1	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)

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