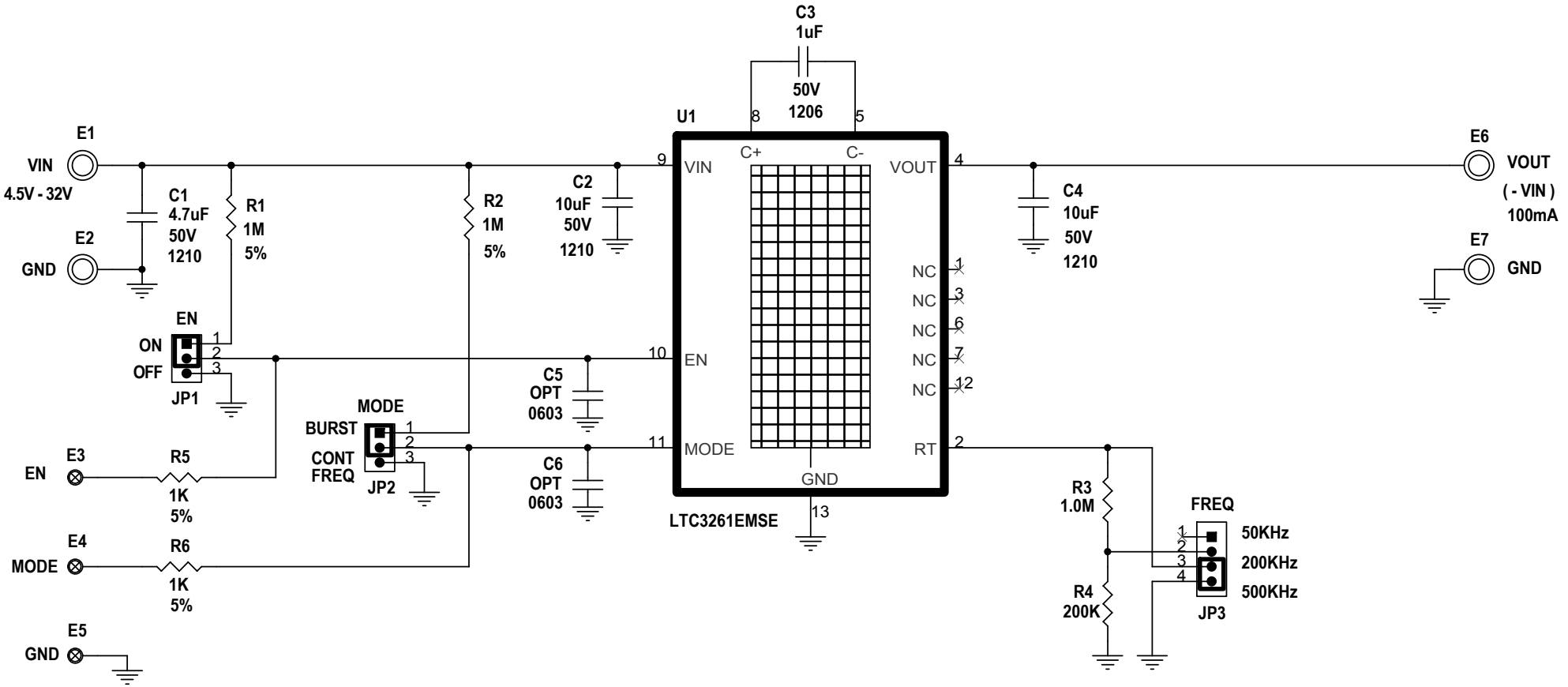
REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
—	1	PRODUCTION FAB	M. MERCHANT	03-12-12



NOTE: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS ARE 0402, 1%, 1/16W
2. INSTALL SHUNTS AS SHOWN.

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.

APPROVALS	
PCB DES.	NC
APP ENG.	MARTY M.

SCALE = NONE

LINEAR TECHNOLOGY
1630 McCarthy Blvd.
Milpitas, CA 95035
Phone: (408)432-1900 www.linear.com
Fax: (408)434-0507
LTC Confidential-For Customer Use Only

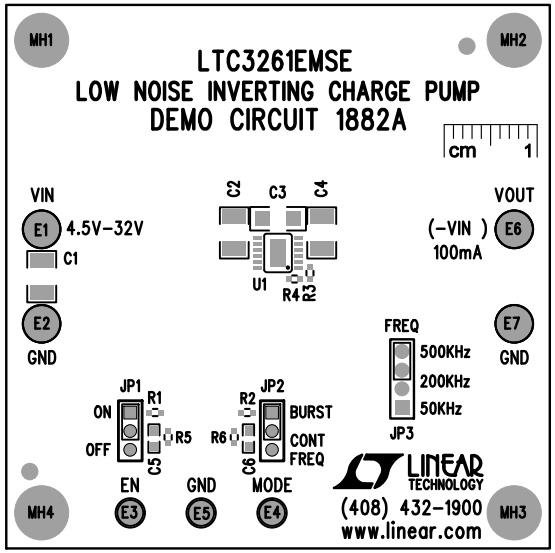
TITLE: SCHEMATIC

LOW NOISE INVERTING CHARGE PUMP

SIZE	IC NO.	REV.
N/A	LTC3261EMSE DEMO CIRCUIT 1882A	1

DATE: 03-12-12

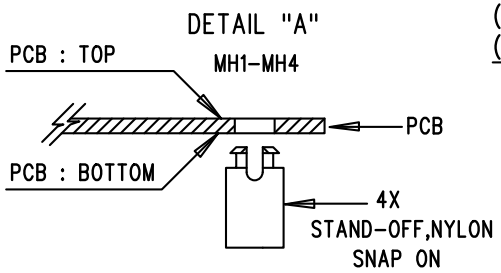
REVISION HISTORY				
ECO	REV	DESCRIPTION	APPR	DATE
–	1	PRODUCTION FAB	MARTY M.	03–12–12

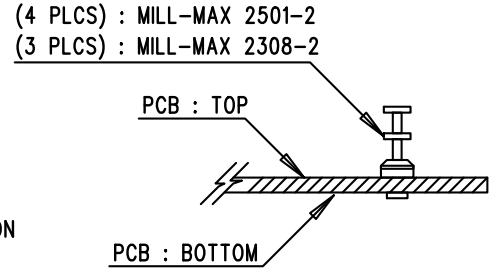


← SEE DETAIL "A"

NOTES: UNLESS OTHERWISE SPECIFIED

1. WORKMANSHIP SHALL BE IN ACCORDANCE WITH IPC–A–610.
2. ASSEMBLY PROCESS SHALL INCLUDE: REFLOW SOLDER TOP SIDE SMD. MAXIMUM SOLDER TEMPERATURE IS 240 DEGREES CELCIUS.
3. PARTS TO OMIT WILL BE SPECIFIED ON THE BILL OF MATERIALS
   LOCATIONS OF OMITTED PARTS SHALL BE FREE OF SOLDER.
   MASK THE SOLDER STENCIL WHERE SMT PARTS ARE OMITTED.
4. INSTALL SHUNTS AS SHOWN ON ASSY DRAWING.
5. DEPANELIZE BOARDS AFTER ASSEMBLY AND ROUTE–OUT THE BREAKOUT TABS ON FOUR SIDES OF THE BOARD EDGE.
7. INSTALL TURRETS AND 4 STAND–OFFS AT FOUR CORNERS AS SHOWN BELOW:





APPROVALS	
PCB DES.	NC
APP ENG.	MARTY M.
SCALE = NONE	

LINEAR TECHNOLOGY

1630 MCCARTHY BLVD
MILPITAS, CA 95035
PH: (408)432–1900
www.Linear.com
LTC CONFIDENTIAL–
FOR CUSTOMER USE ONLY

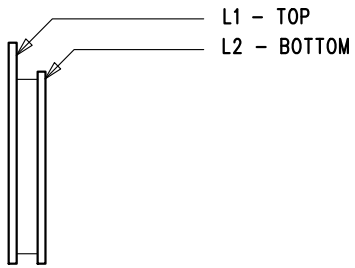
TITLE: TOP ASSEMBLY DRAWING:
LOW NOISE INVERTING CHARGE PUMP

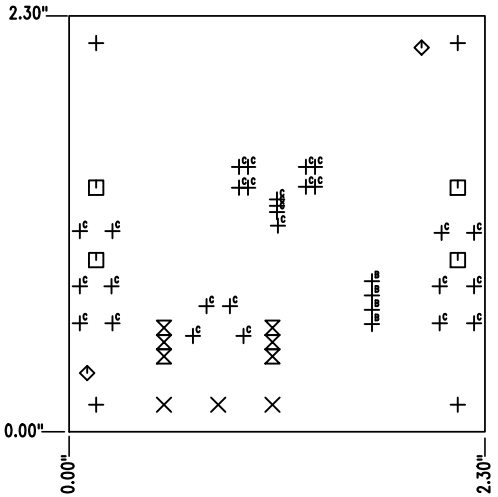
SIZE	IC NO.	REV.
N/A	LTC3261EMSE DEMO CIRCUIT 1882A	1

FILENAME: DC1882A–1.PCB SHT 1 of 2

REVISION HISTORY				
ECO	REV	DESCRIPTION	APPR	DATE
–	1	PRODUCTION FAB	MARTY M.	03-12-12

LAYER STRUCTURE

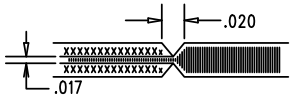




SIZE	QTY	SYM	PLATED	TOL
0.19	4	+	YES	+/- .003"
0.063	3	X	YES	+/- .003"
0.094	4	□	YES	+/- .003"
0.07	2	◇	NO	+/- .003"
0.035	6	⧖	YES	+/- .003"
0.04	4	+B	YES	+/- .003"
0.015	28	+C	YES	+/- .003"

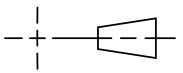
NOTES: UNLESS OTHERWISE SPECIFIED

1. FAB PER IPC-A-600.
2. MATERIAL: -LEAD FREE ASSEMBLY COMPLIANT, ISOLA FR-370HR OR EQUIVALENT.
   -FINISHED THICKNESS TO BE 0.062" +/- .005"
   -TOTAL OF 2 LAYERS WITH 2 OZ. CU ON THE ALL LAYERS
   -FLAMMABILITY RATING: 94 V-O MINIMUM.
3. SIZE: CUT TO DIMENSIONS AND TOLERANCES SHOWN.
   0.00 ARE PRIMARY DATUMS.
4. DRILLING: -DRILL HOLES PER SCHEDULE. PLATE THROUGH HOLES WITH COPPER, 0.001" THICK MIN.
   -ALL HOLE SIZES ARE SPECIFIED AFTER PLATING.
   -HOLE LOCATION TOLERANCES ARE +/-0.003" IN RELATION TO CENTER
5. FINISH: -SMOBC USING LPI BOTH SIDES, COLOR GREEN.
   -GOLD IMMERSION BOTH SIDES.
   (LEAD FREE SOLDER CAN BE USED FOR PROTOTYPE)
   -FOR SILKSCREEN: BOTH SIDES USE WHITE NON-CONDUCTIVE INK.
6. DO NOT ALTER ARTWORK e.g. TO ADD LOGO OR DATE CODE.
   PAD SIZE CAN BE MODIFIED TO MEET END FINISH.
7. PCBS ARE TO BE RoHS COMPLIANT.
8. DO NOT ALTER SOLDER MASK MAINTAIN .0018" OVERSIZE ON SMT PADS. A .005" WEBBING IS REQUIRED BETWEEN SMD PADS.
9. SCORING FOR PANELIZED PCB: "PRODUCTION FAB ONLY"



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON ANGLE ±1
0.XX" = ±0.01"
0.XXX" = ±0.005"
INTERPRET DIM AND TOL PER ASME Y14.5M-1994

THIRD ANGLE PROJECTION



DO NOT SCALE DRAWING

APPROVALS	
PCB DES.	NC
APP ENG.	MARTY M.

SCALE: NONE

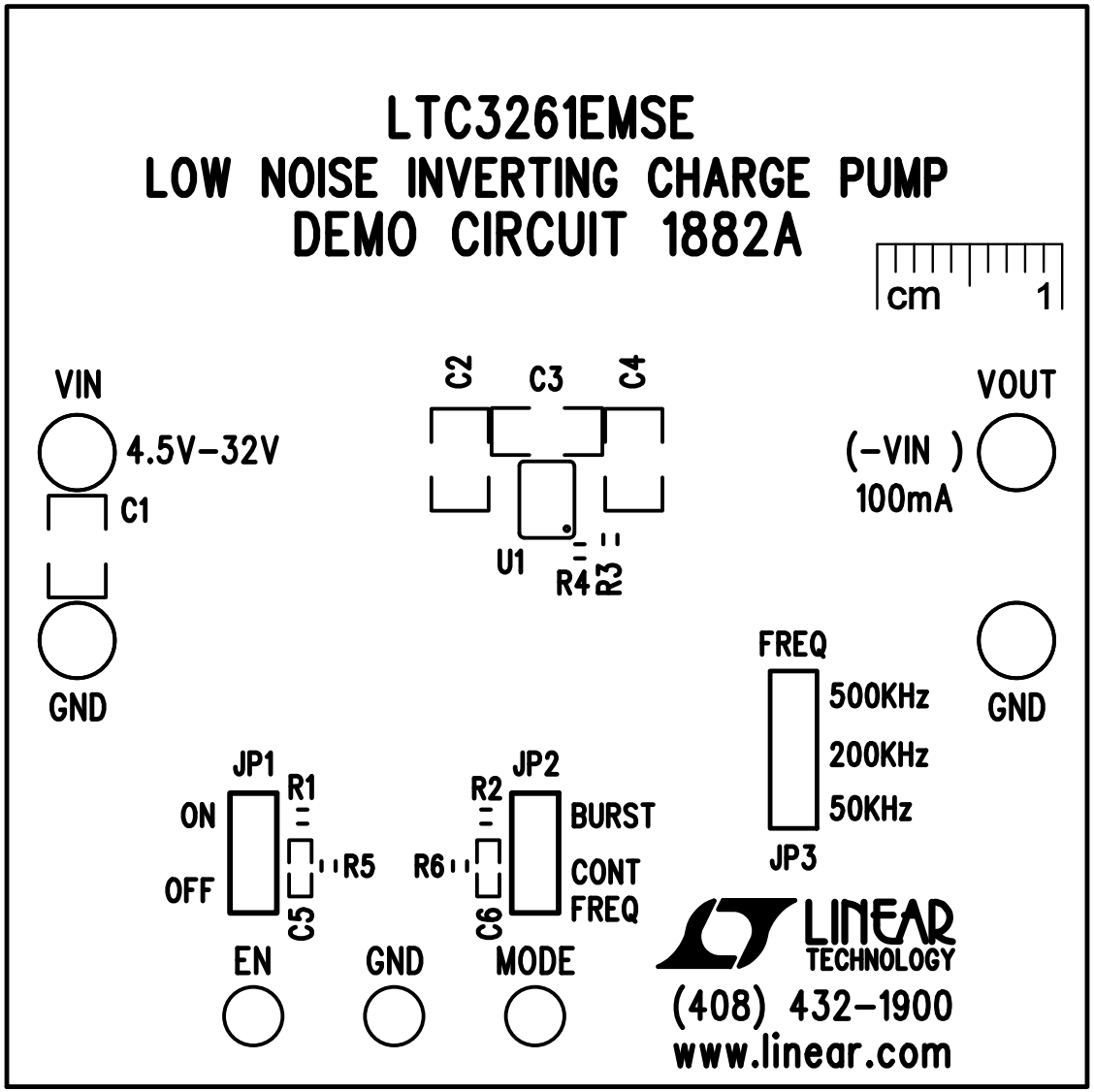
LINEAR TECHNOLOGY
1630 MCCARTHY BLVD
MILPITAS, CA 95035
PH: (408)432-1900
www.Linear.com

TITLE: FABRICATION DRAWING:

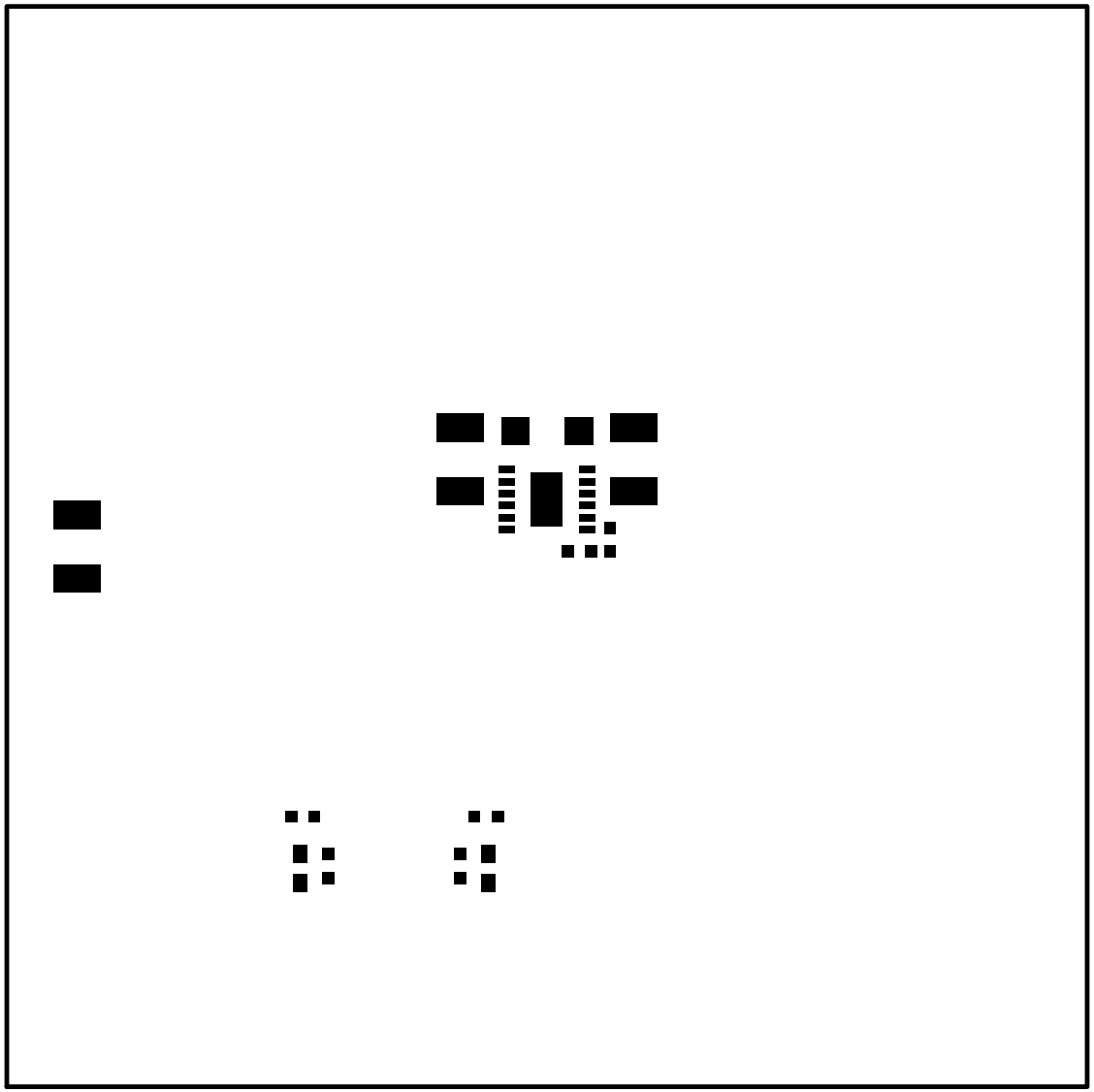
LOW NOISE INVERTING CHARGE PUMP

SIZE	IC NO.	REV.
N/A	LTC3261EMSE DEMO CIRCUIT 1882A	1

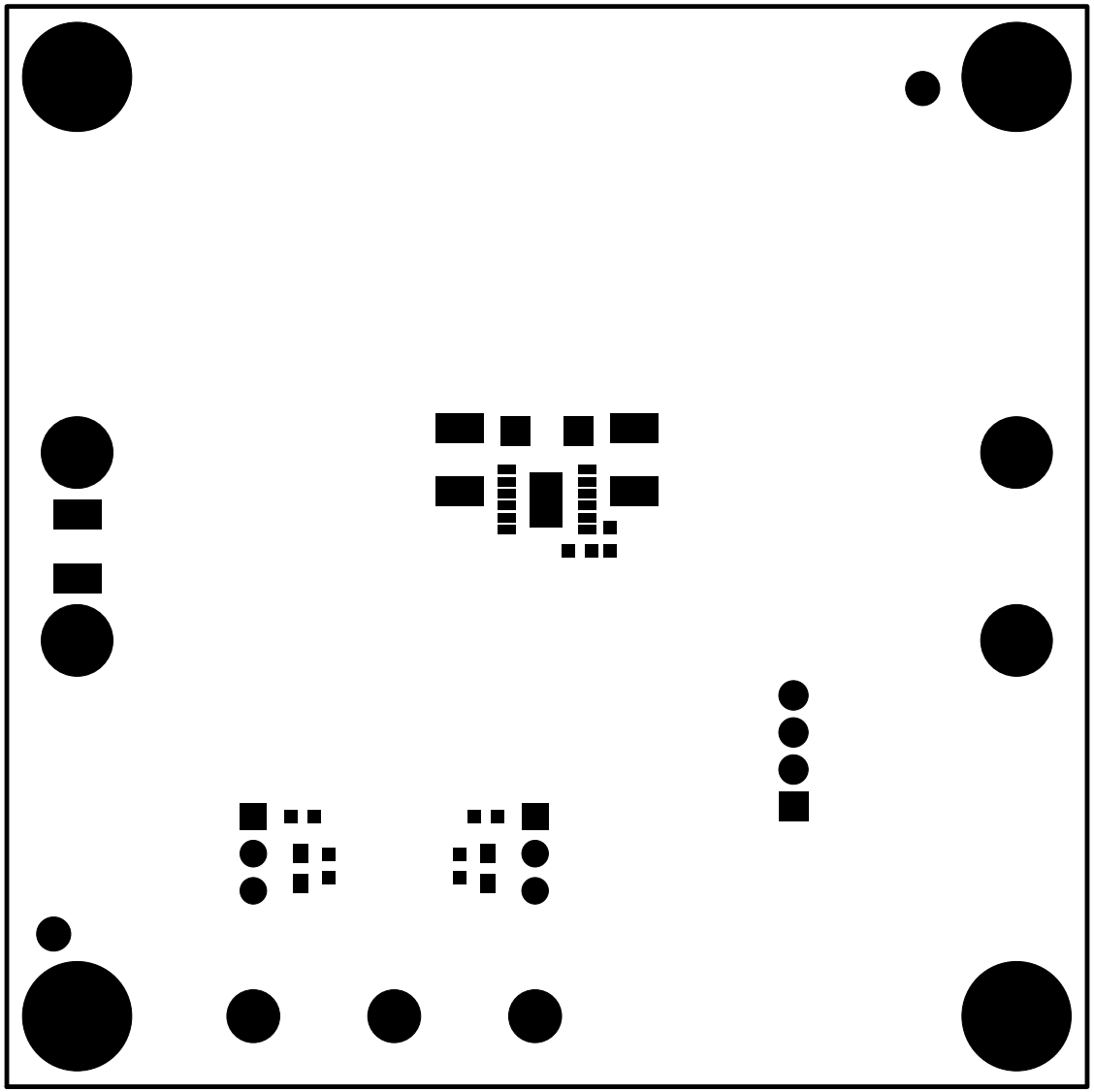
FILENAME: DC1882A-1.PCB | SHT 1 of 1



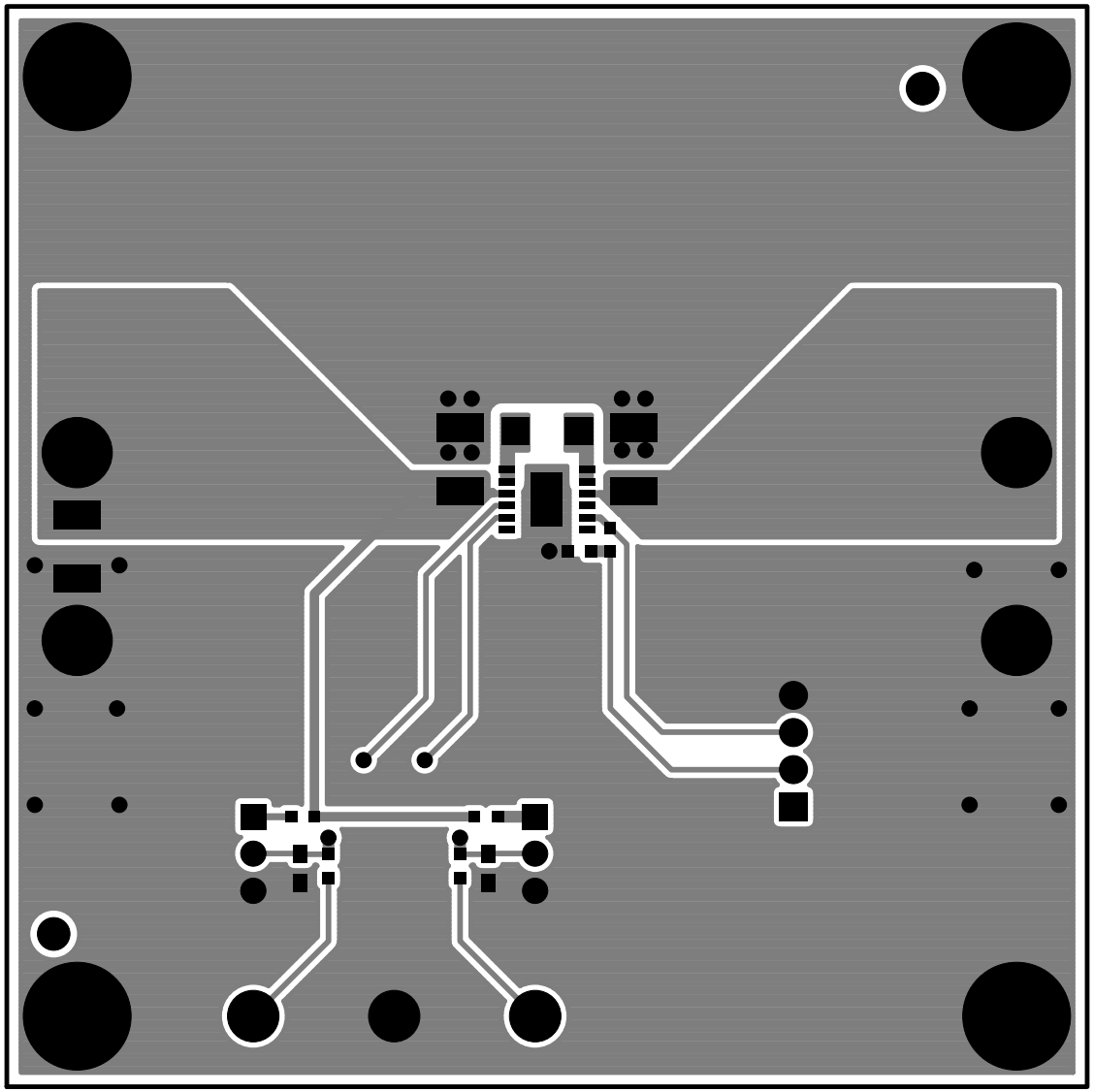
SILKSCREEN TOP
LINEAR TECH CORP.
DEMO CIRCUIT 1882A–1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03–12–12



PASTEMASK TOP
LINEAR TECH CORP.
DEMO CIRCUIT 1882A-1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03-12-12

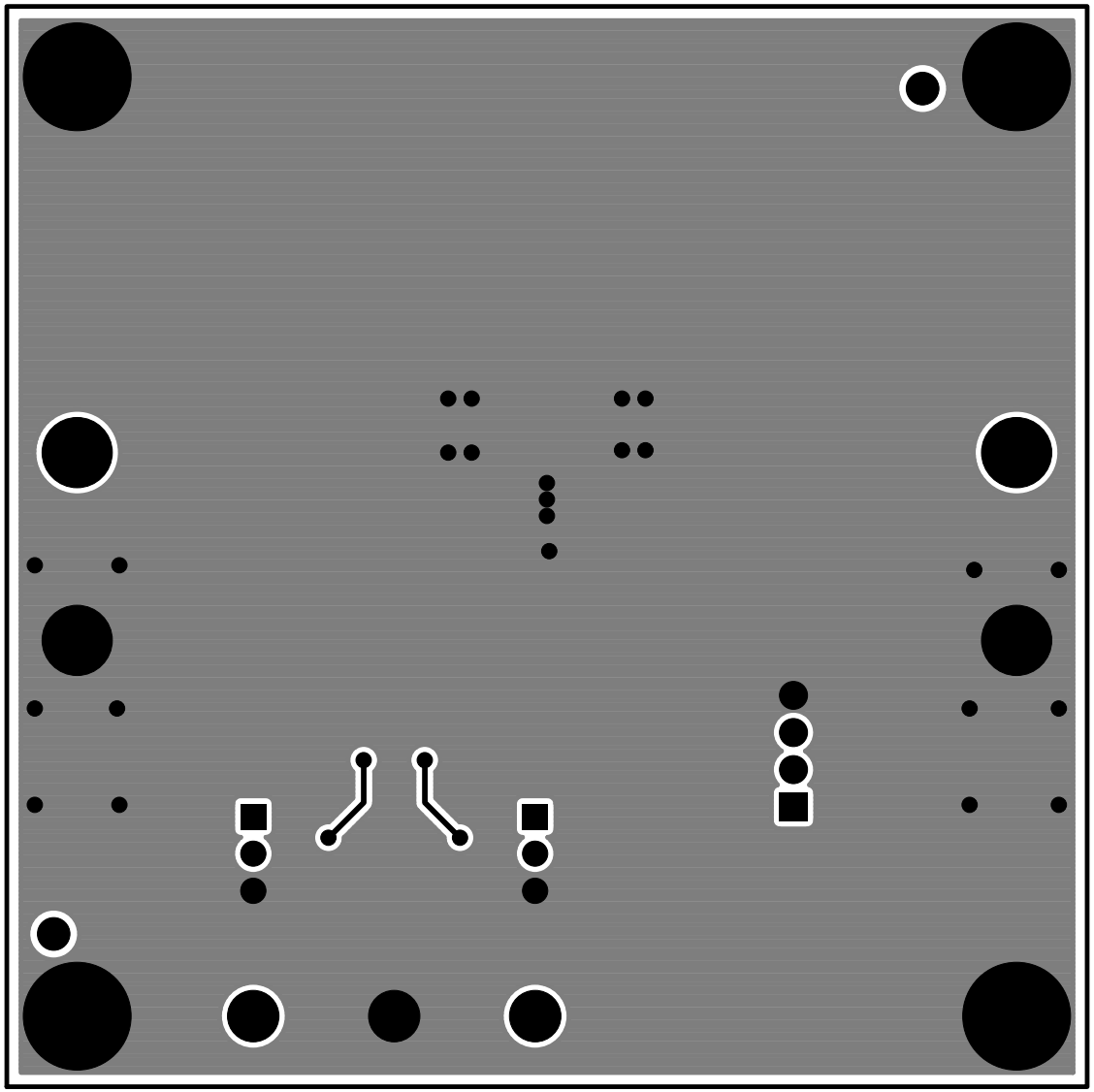


SOLDERMASK TOP
LINEAR TECH CORP.
DEMO CIRCUIT 1882A-1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03-12-12



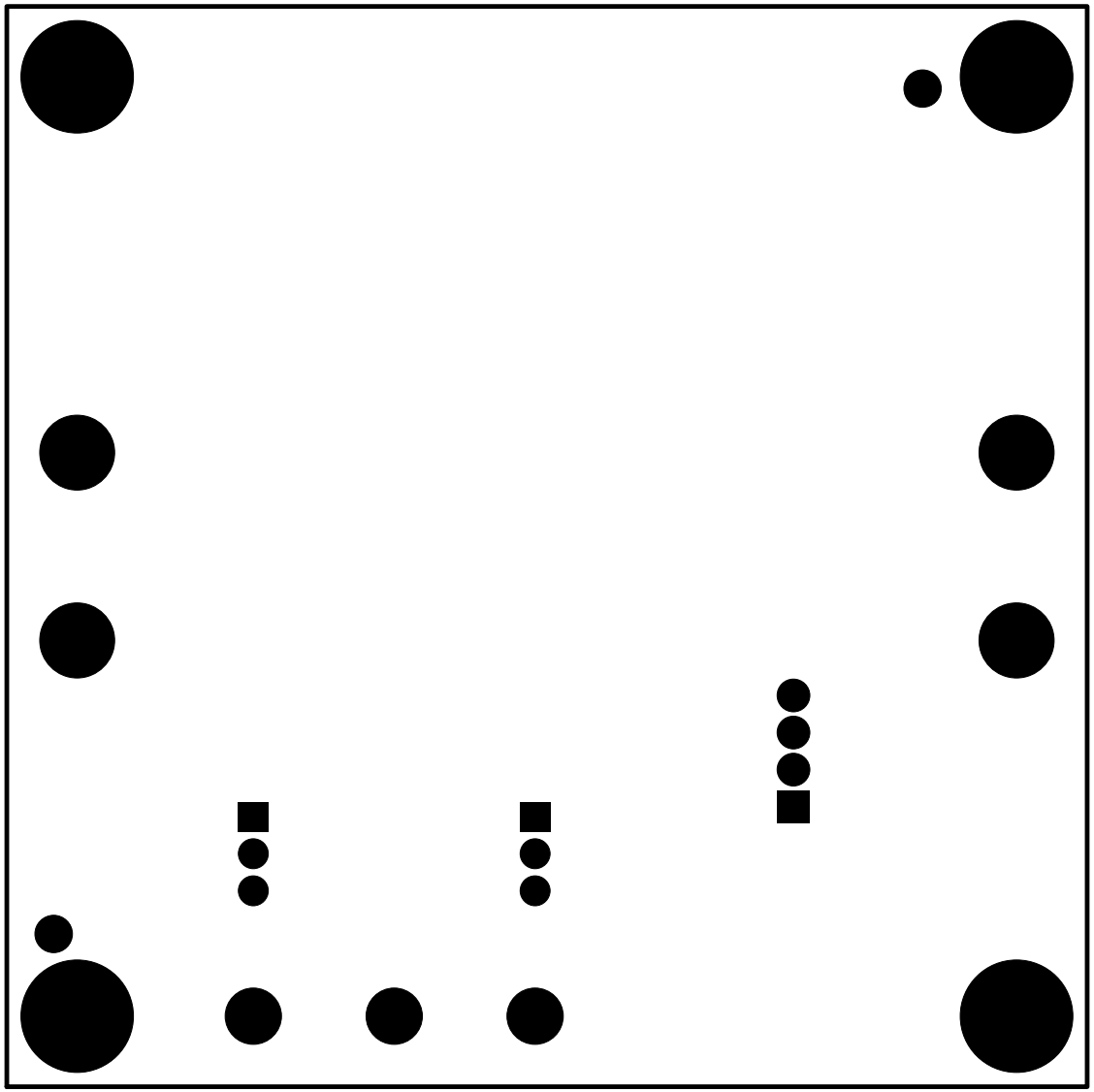
LAYER1-TOP
LINEAR TECH CORP.
DEMO CIRCUIT 1882A-1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03-12-12

1882A-1.pcb - Fri Mar 16 10:09:25 2012



LAYER 2- BOTTOM
LINEAR TECH CORP.
DEMO CIRCUIT 1882A-1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03-12-12

1882A-1.pcb - Fri Mar 16 10:09:58 2012



SOLDERMASK BOTTOM
LINEAR TECH CORP.
DEMO CIRCUIT 1882A-1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03-12-12

SILKSCREEN BOTTOM
LINEAR TECH CORP.
DEMO CIRCUIT 1882A-1 * LTC3261EMSE
LOW NOISE INVERTING CHARGE PUMP
DATE: 03-12-12

Linear Technology Corporation

LTC3261EMSE
ENGR: M. Merchant
Low Noise Inverting Charge Pump

BILL OF MATERIALS

DEMO BD. #1882A-1
QTY- 200
4/12/2012

Item	*Qty*	*Reference*	*Part Description*	*Manufacturer / Part #*	*Kit Qty*	*Pkg Qty*	*Balance*
				NUMBER OF BOARDS =	***225***		
1	1	C1	CAP CER 4.7uF 50V X7R 10% 1210	MURATA, GRM32ER71H475KA88L	225		
2	2	C2,C4	CAP CER 10UF 50V X7S 10% 1210	TDK, C3225X7S1H106K	450		
3	1	C3	CAP CER 1uF 50V X5R 10% 1206	MURATA, GRM31CR61H105K	225		
4	0	C5,C6 (OPT)	CAP, 0603 SMD	OPT			
5	2	R1,R2	RES, 1M OHM 1/16W 5% 0402 SMD	VISHAY, CRCW04021M00JNED	450		
6	1	R3	RES, 1.0M OHM 1/16W 1% 0402 SMD	VISHAY, CRCW04021M00FKED	225		
7	1	R4	RES 200K OHM 1/16W 1% 0402 SMD	VISHAY, CRCW0402200KFKED	225		
8	2	R5,R6	RES 1.0K OHM 1/10W 5% 0402 SMD	VISHAY, CRCW04021K00JNED			
9	3	JP1-JP2	HEADER, 3 PIN 1 ROW .079CC	SAMTEC, TMM-103-02-L-S	675		-675
10	1	JP3	HEADER, 4 PIN 1 ROW .079CC	SAMTEC, TMM-104-02-L-S	225		
11	3	JP1-JP3	SHUNT, 2MM	SAMTEC, 2SN-KB-G	675		-675
12	4	E1,E2,E6,E7	TP, TURRET, 0.094", PBF	MILL-MAX, 2501-2-00-80-00-00-07-0	900		
13	3	E3,E4,E5	TURRET, 0.061 DIA	MILL-MAX, 2308-2-00-80-00-00-07-0	675		-675
14	1	U1	LOW NOISE INVERTING CHARGE PUMP	LINEAR TECH., LTC3261EMSE#PBF	225		
15	4	MH1-MH4	STAND-OFF, NYLON 0.375" TALL	KEYSTONE, 8832 (SNAP ON)	900		
16	1		FAB,PRINTED CIRCUIT BOARD	DEMO CIRCUIT 1882A-1	225		
17	1		TOP STENCIL	STENCIL, DC1882A-1	1		
							TOTAL

Linear Technology Corporation

LTC3261EMSE

BILL OF MATERIALS
DEMO BD. #1882A

Item	*Qty*	*Reference*	*Part Description*	*Manufacturer / Part #*
		REQUIRED CIRCUIT COMPONENTS:		
1	2	C2,C4	CAP CER 10UF 50V X7S 10% 1210	TDK, C3225X7S1H106K
2	1	C3	CAP CER 1uF 50V X5R 10% 1206	MURATA, GRM31CR61H105K
5	1	U1	LOW NOISE INVERTING CHARGE PUMP	LINEAR TECH., LTC3261EMSE#PBF
		ADDITIONAL DEMO BOARD CIRCUIT COMPONENTS:		
1	1	C1	CAP CER 4.7uF 50V X7R 10% 1210	MURATA, GRM32ER71H475KA88L
3	2	R1,R2	RES 1M OHM 1/16W 5% 0402 SMD	VISHAY, CRCW04021M00JNED
4	2	R3	RES 1.0M OHM 1/16W 1% 0402 SMD	VISHAY, CRCW04021M00FKED
5	1	R4	RES 200K OHM 1/10W 1% 0402 SMD	VISHAY, CRCW0402200KFKED
		HARDWARE-FOR DEMO BOARD ONLY:		
1	3	JP1-JP2	HEADER, 3 PIN 1 ROW .079CC	SAMTEC, TMM-103-02-L-S
2	1	JP3	HEADER, 4 PIN 1 ROW .079CC	SAMTEC, TMM-104-02-L-S
3	3	JP1-JP3	SHUNT, 2MM	SAMTEC, 2SN-KB-G
4	4	E1,E2,E6,E7	TP, TURRET, 0.094", PBF	MILL-MAX, 2501-2-00-80-00-00-07-0
5	3	E3,E4,E5	TURRET, 0.061 DIA	MILL-MAX, 2308-2-00-80-00-00-07-0

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA

DEMO 1882A
LTC3261EMSE
LOW NOISE INVERTING
CHARGE PUMP
VIN = 4.5V – 32V
VOUT = -VIN, 100mA