

# ETERNA (TM) CASTELLATED MOTE WITH MMCX CONNECTOR

## Content:

1. Title Page
2. Eterna Mote-on-Chip
3. Castellations
4. Battery Holder and Accelerometer Options

## Notes:

1. Assembly Options:
  - 1.a) X1 & X5: installed crystals (32kHz and 20 MHz resp.)
  - 1.b) R12 TCK termination not installed
  - 1.c) Battery holder not installed
  - 1.d) Accelerometer not installed

## 2. Associated Documents



**PCB FAB**  
600-0176 REV3



**BOM**  
700-0218 REV2



**ASY DWG**  
705-0176 REV3

## Revision History:

Rev	Description	ECO	Author
01	Initial release Based on 700-0176 rev4 using LTC5800IWR-IPRB	1216	CN
02	Change 32kHz & 20MHz XTAL	1394	RMP



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

### 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 IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.

APPROVALS

DRAWN:

CHECKED:

APPROVED:

ENGINEER:

DESIGNER:



**Linear Technology Corporation**

1630 McCarthy Blvd.  
Milpitas, CA 95035

Phone: (408)432-1900  
Fax: (408)434-0507

TITLE:

**LTP5902IPC-IPRB**

**PCA SCH, ETERNA IP CAST. 100-MOTE MNGR,CANADIAN**

SIZE  
**A**

DWG NO.

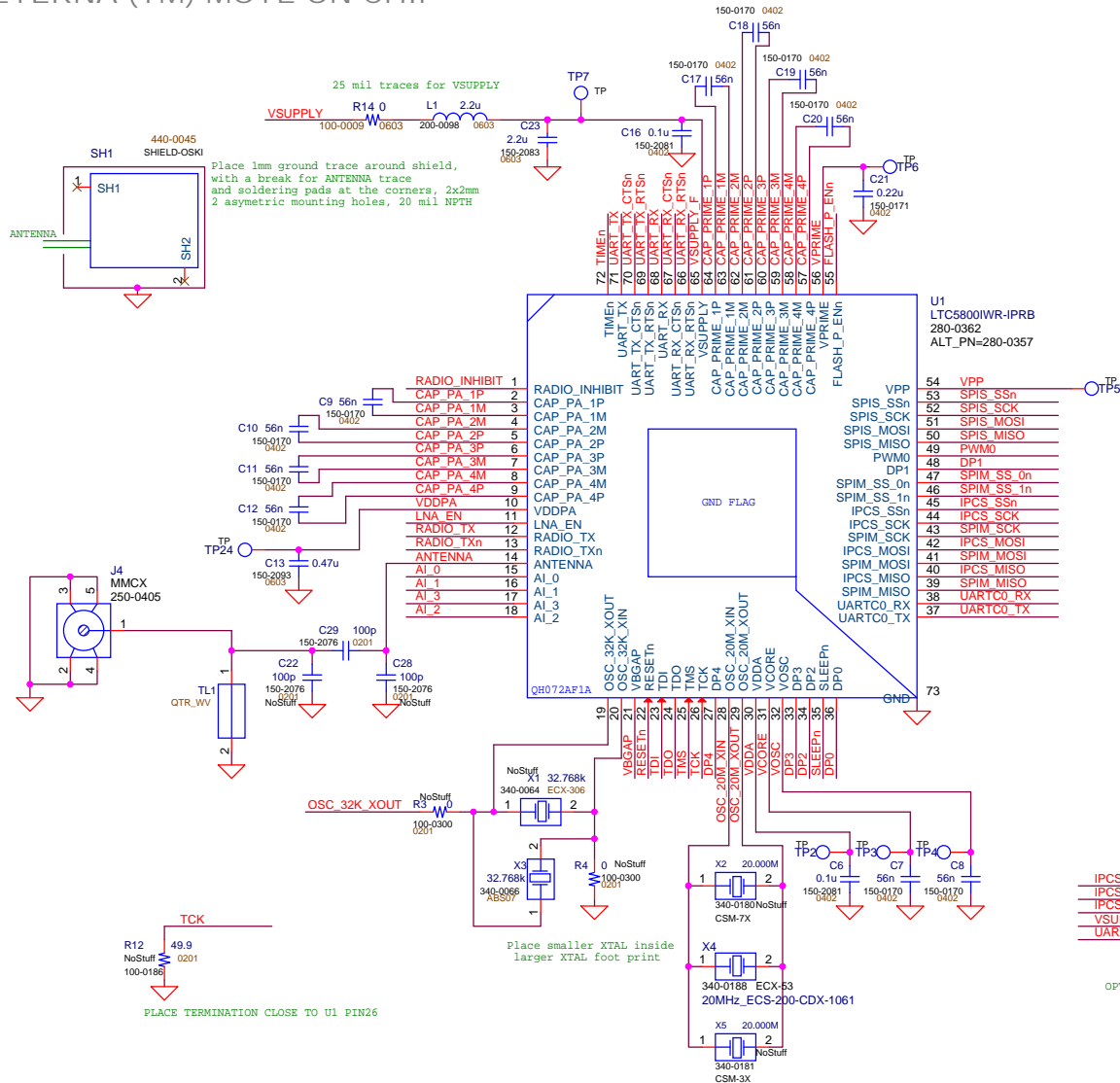
**710-0218**

REV  
**02**

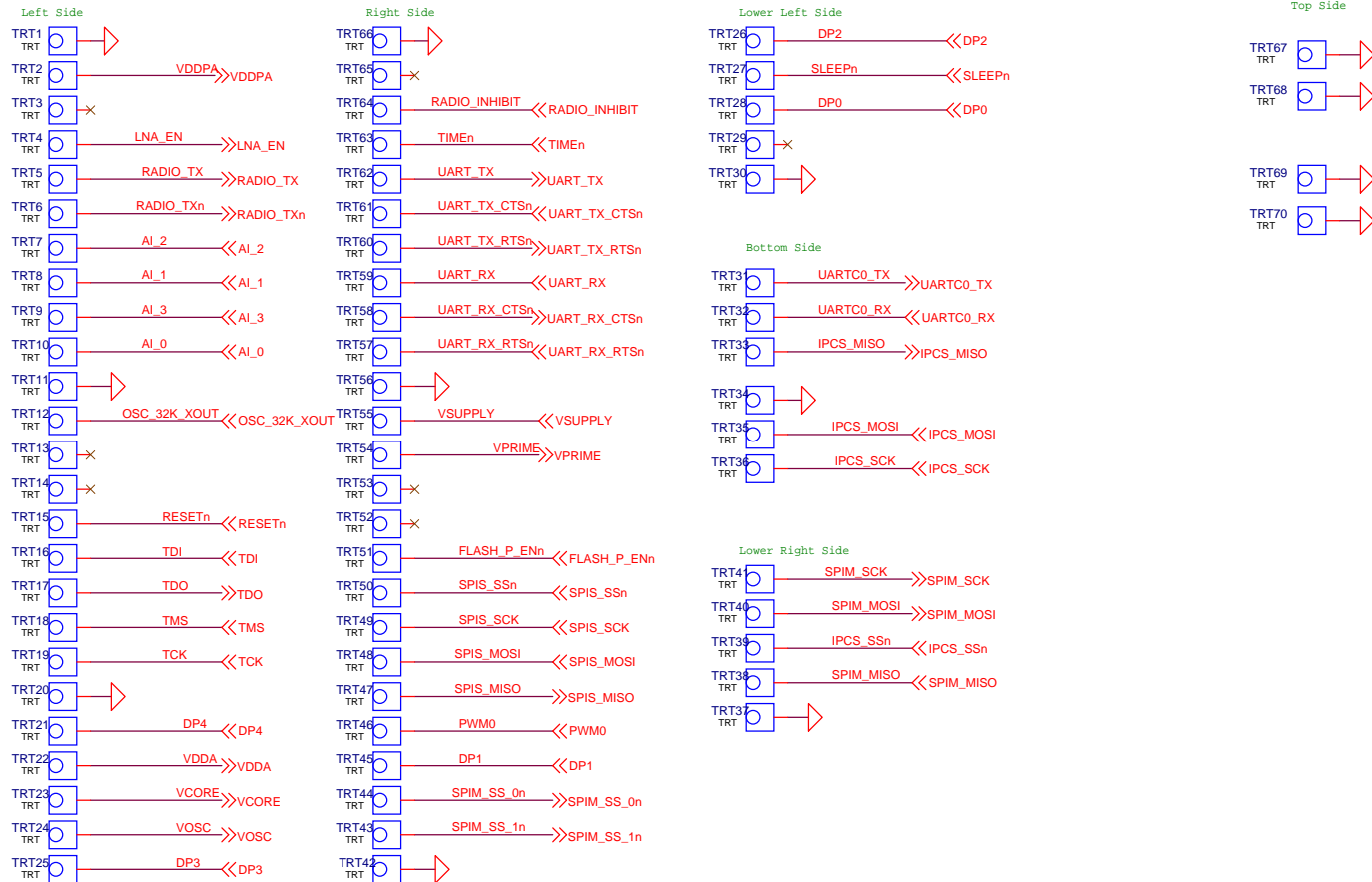
DATE: **Wednesday, July 29, 2015**

SHEET **1** OF **4**

# ETERNA (TM) MOTE-ON-CHIP



# CASTELLATIONS



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

### 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 IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.  
APPROVALS  
DRAWN:  
CHECKED:  
APPROVED:  
ENGINEER:  
DESIGNER:

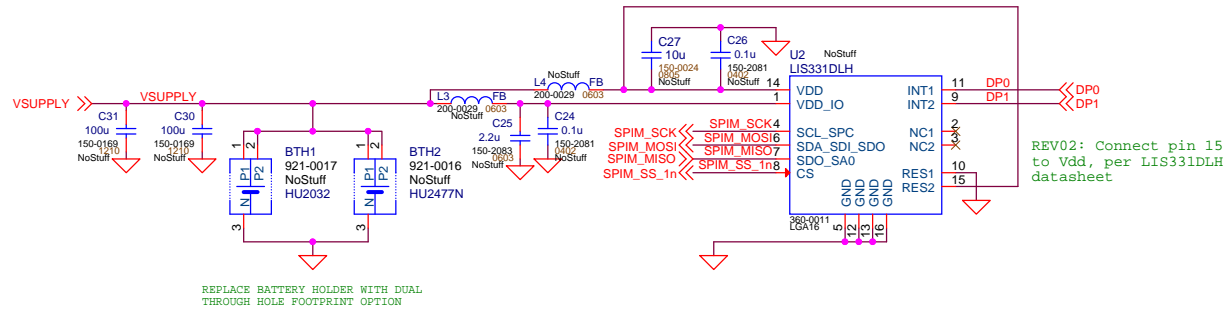
**dust networks™** Linear Technology Corporation  
1630 McCarthy Blvd. Milpitas, CA 95035  
Phone: (408)432-1900  
Fax: (408)434-0507

TITLE: LTP5902IPC-IPRB  
PCA SCH, ETERNA IP CAST. 100-MOTE MNGR,CANADIAN

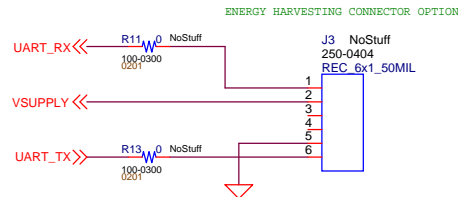
SIZE A DWG NO. 710-0218 REV 02

DATE: Wednesday, July 29, 2015 SHEET 3 OF 4

# BATTERY HOLDER & ACCELEROMETER OPTIONS



REV02: Connect pin 15 to Vdd, per LIS331DLH datasheet



J3 SHROUD SHALL PROTRUDE FROM EDGE OF BOARD OPPOSITE TO CHIP ANTENNA.  
PLACE R11 and R13 NEAR U1 TO MINIMIZE UART\_RX AND UART\_TX NET LENGTH.



LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY

### 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 IS SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

CONTRACT NO.  
APPROVALS  
DRAWN:  
CHECKED:  
APPROVED:  
ENGINEER:  
DESIGNER:

**dust networks™** Linear Technology Corporation  
1630 McCarthy Blvd. Milpitas, CA 95035  
Phone: (408)432-1900  
Fax: (408)434-0507

TITLE: LTP5902IPC-IPRB  
PCA SCH, ETERNA IP CAST. 100-MOTE MNGR,CANADIAN

SIZE A DWG NO. 710-0218 REV 02

DATE: Wednesday, July 29, 2015 SHEET 4 OF 4