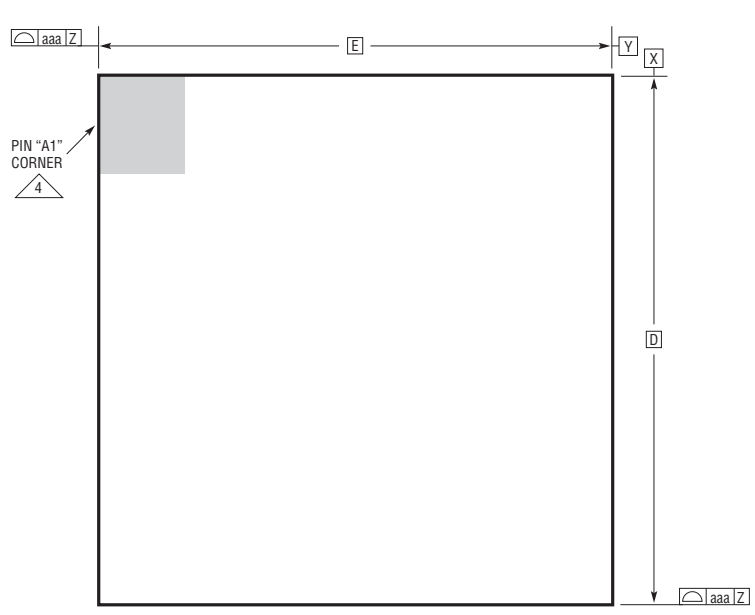
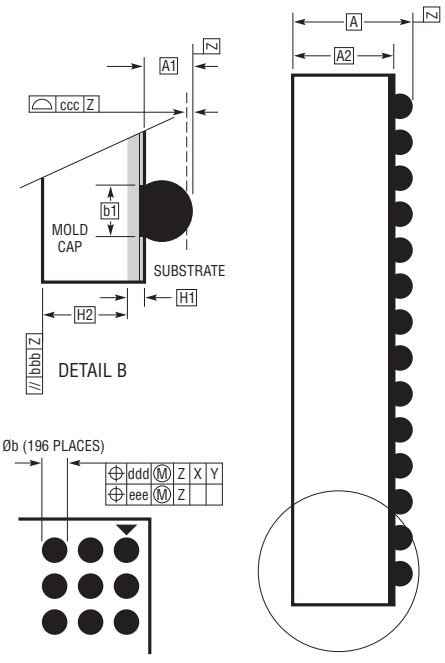


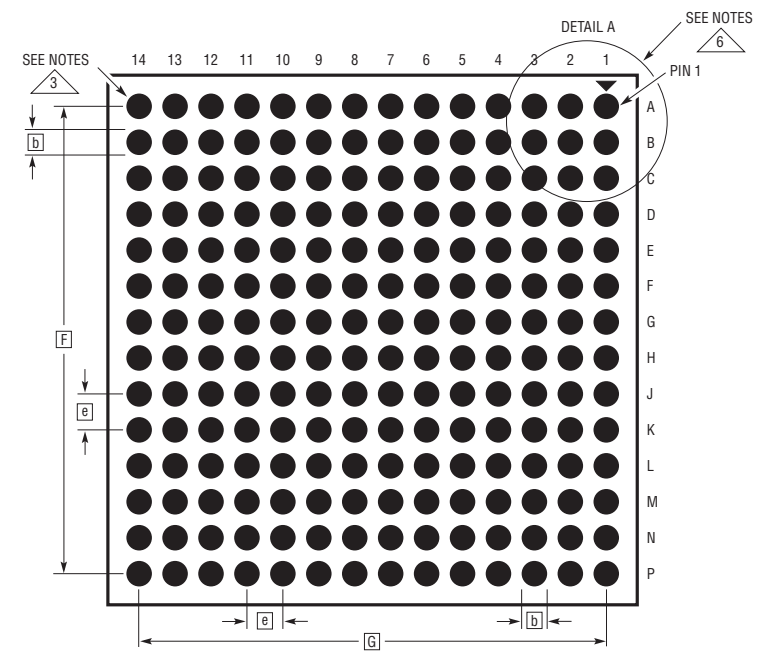
BGA Package
196-Lead (15mm × 15mm × 3.32mm)
 (Reference LTC DWG# 05-08-1970 Rev A)



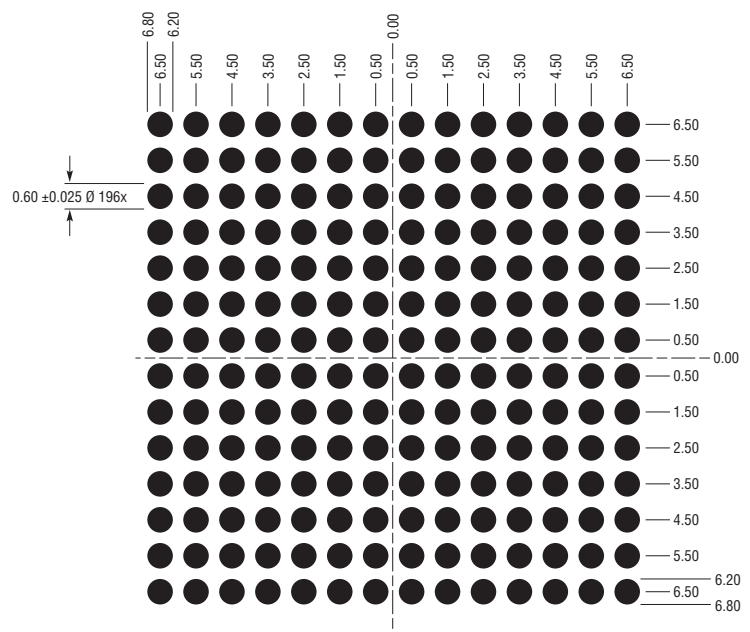
PACKAGE TOP VIEW



DETAIL B
PACKAGE SIDE VIEW



PACKAGE BOTTOM VIEW



SUGGESTED PCB LAYOUT
TOP VIEW

| DIMENSIONS | | | | |
|------------|------|------|------|----------------|
| SYMBOL | MIN | NOM | MAX | NOTES |
| A | 3.07 | 3.32 | 3.57 | |
| A1 | 0.40 | 0.50 | 0.60 | BALL HT |
| A2 | 2.67 | 2.82 | 2.97 | |
| b | 0.50 | 0.60 | 0.70 | BALL DIMENSION |
| b1 | 0.47 | 0.50 | 0.53 | PAD DIMENSION |
| D | | 15.0 | | |
| E | | 15.0 | | |
| e | | 1.0 | | |
| F | | 13.0 | | |
| G | | 13.0 | | |
| H1 | 0.22 | 0.32 | 0.42 | SUBSTRATE THK |
| H2 | 2.45 | 2.50 | 2.55 | MOLD CAP HT |
| aaa | | | 0.15 | |
| bbb | | | 0.10 | |
| ccc | | | 0.15 | |
| ddd | | | 0.15 | |
| eee | | | 0.08 | |

TOTAL NUMBER OF BALLS: 196

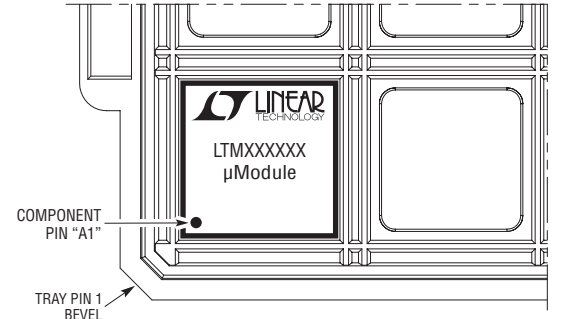
NOTES:
 1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994

2. ALL DIMENSIONS ARE IN MILLIMETERS

3 BALL DESIGNATION PER JESD MS-028 AND JEP95
 4 DETAILS OF PIN #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE PIN #1 IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE

5. PRIMARY DATUM -Z- IS SEATING PLANE

6 PACKAGE ROW AND COLUMN LABELING MAY VARY AMONG µModule PRODUCTS. REVIEW EACH PACKAGE LAYOUT CAREFULLY



PACKAGE IN TRAY LOADING ORIENTATION