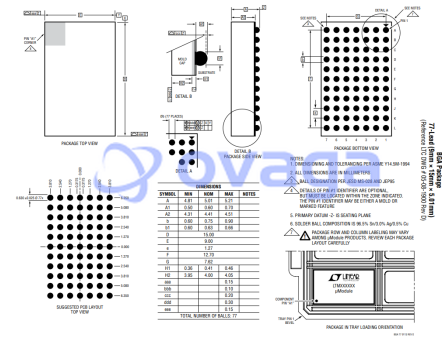


Conv DC-DC 4V to 14V Step Down Quad-Out 0.6V to 5.5V 4A/4A/4A/4A uModule
77Pin BGA Tray

| | |
|---------------|----------------------|
| Manufacturers | Analog Devices, Inc |
| Package/Case | BGA-77 |
| Product Type | Power Management ICs |
| RoHS | Green |
| Lifecycle | |



Images are for reference only

Please submit RFQ for LTM4644MPY#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours. [RFQ](#)

General Description

The LTM4644/LTM4644-1 is a quad DC/DC step-down μ Module (micromodule) regulator with 4A per output. Outputs can be paralleled in an array for up to 16A capability. Included in the package are the switching controllers, power FETs, inductors and support components. Operating over an input voltage range of 4V to 14V or 2.375V to 14V with an external bias supply, the LTM4644/LTM4644-1 supports an output voltage range of 0.6V to 5.5V. Its high efficiency design delivers 4A continuous (5A peak) output current per channel. Only bulk input and output capacitors are needed.

Features

Quad Output Step-Down μ Module[®] Regulator with 4A per Output

Wide Input Voltage Range: 4V to 14V

2.375V to 14V with External Bias

0.6V to 5.5V Output Voltage

4A DC, 5A Peak Output Current Each Channel

Up to 5.5W Power Dissipation

Current Mode Control, Fast Transient Response

Parallelable for Higher Output Current

Output Voltage Tracking

Internal Temperature Sensing Diode Output

External Frequency Synchronization

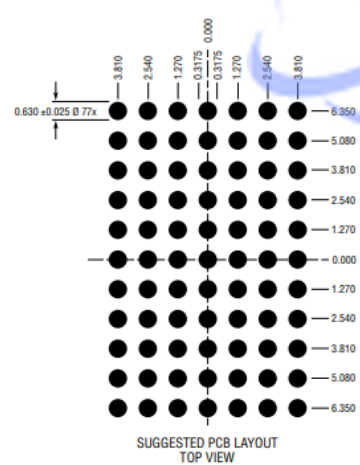
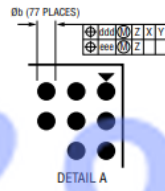
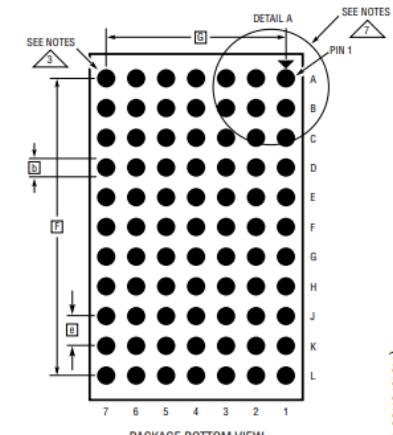
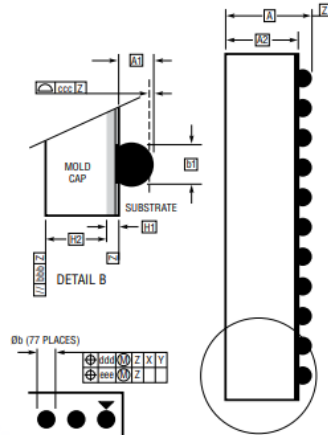
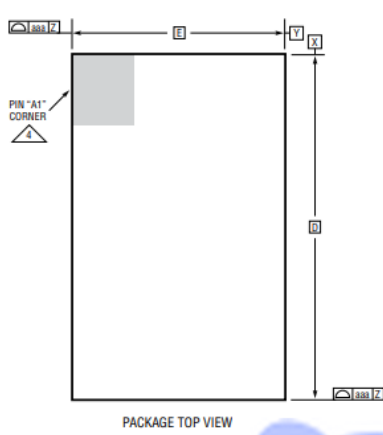
Overvoltage, Current and Temperature Protection

9mm \times 15mm \times 5.01mm BGA Package

Application

Multirail Point of Load Regulation

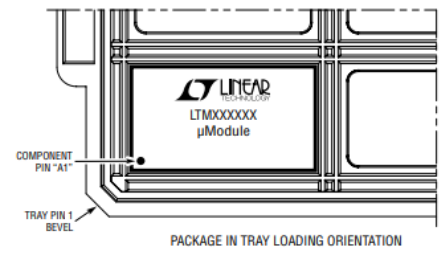
FPGAs, DSPs and ASICs Applications



| DIMENSIONS | | | | |
|------------|------|-------|------|-------|
| SYMBOL | MIN | NOM | MAX | NOTES |
| A | 4.81 | 5.01 | 5.21 | |
| A1 | 0.50 | 0.60 | 0.70 | |
| A2 | 4.31 | 4.41 | 4.51 | |
| b | 0.60 | 0.75 | 0.90 | |
| b1 | 0.60 | 0.63 | 0.66 | |
| D | | 15.00 | | |
| E | | 9.00 | | |
| e | | 1.27 | | |
| F | | 12.70 | | |
| G | | 7.62 | | |
| H1 | 0.36 | 0.41 | 0.46 | |
| H2 | 3.95 | 4.00 | 4.05 | |
| aaa | | | 0.15 | |
| bbb | | | 0.10 | |
| ccc | | | 0.20 | |
| ddd | | | 0.30 | |
| eee | | | 0.15 | |

TOTAL NUMBER OF BALLS: 77

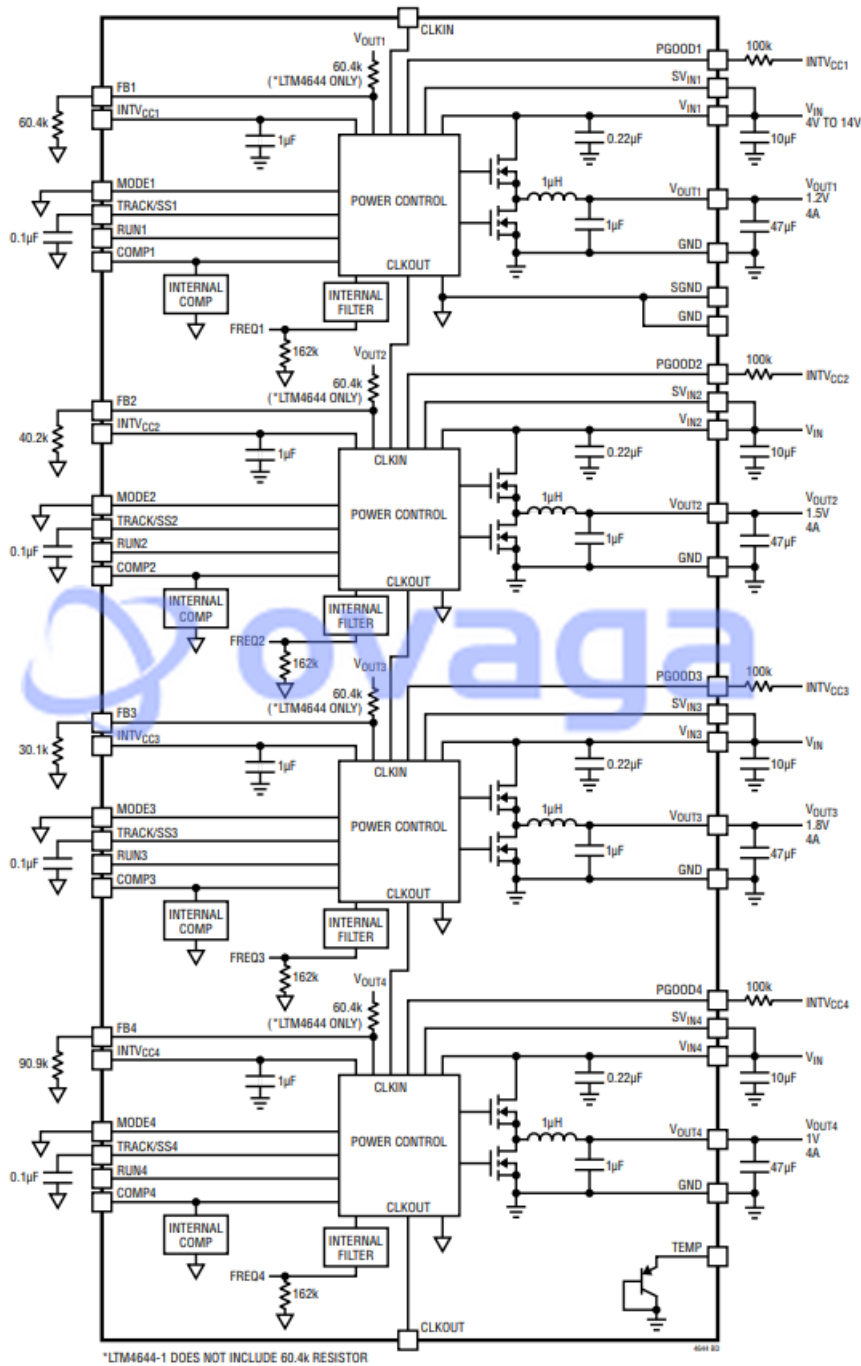
- NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994
 2. ALL DIMENSIONS ARE IN MILLIMETERS
 3. BALL DESIGNATION PER JEDEC MS-028 AND JEP95
 4. DETAILS OF PIN #1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED. THE PIN #1 IDENTIFIER MAY BE EITHER A MOLD OR MARKED FEATURE
 5. PRIMARY DATUM -Z- IS SEATING PLANE
 6. SOLDER BALL COMPOSITION IS 96.5% Sn/3.0% Ag/0.5% Cu
 7. PACKAGE ROW AND COLUMN LABELING MAY VARY AMONG μ Module PRODUCTS. REVIEW EACH PACKAGE LAYOUT CAREFULLY



BGA Package
77-Lead (9mm x 15mm x 5.01mm)
 (Reference LTC DWG # 05-08-1900 Rev D)

BGA 77 0113 REV D

BLOCK DIAGRAM



Related Products



[LT3763EFE](#)

Analog Devices, Inc
TSSOP28



[LT1038CK](#)

Analog Devices, Inc
TO-3



[LTC4417IUF](#)

Analog Devices, Inc
QFN-24



[LTC3440EMS](#)

Analog Devices, Inc
MSOP10



[LTC1966CMS8#PBF](#)

Analog Devices, Inc
MSOP-8P



[LTC2990IMS#PBF](#)

Analog Devices, Inc
10MSOP



[LTM8045EY#PBF](#)

Analog Devices, Inc
BGA40



[LT4295IUFD#PBF](#)

Analog Devices, Inc
28-WFQFN