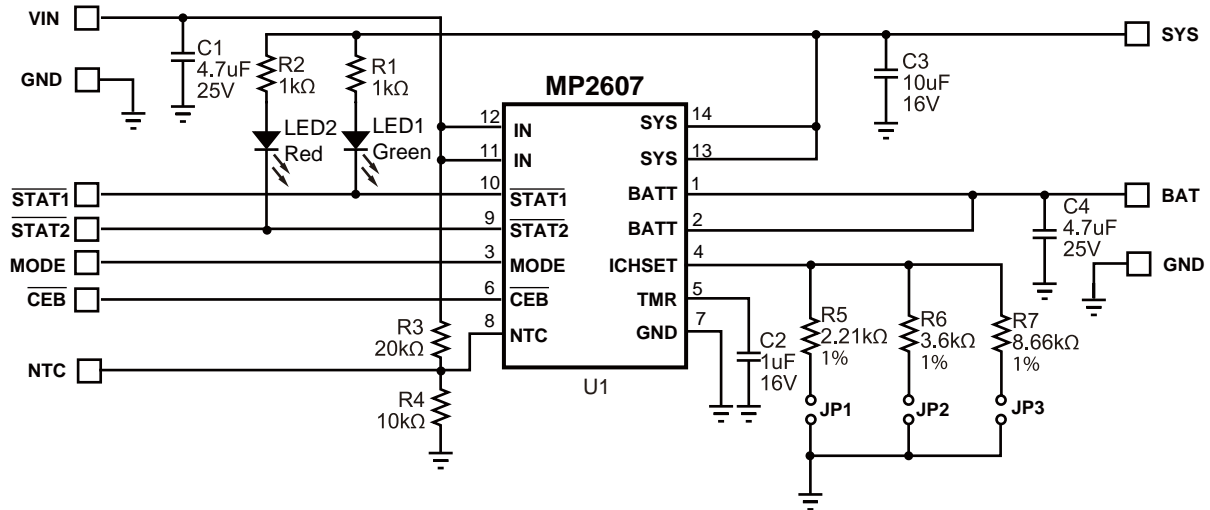




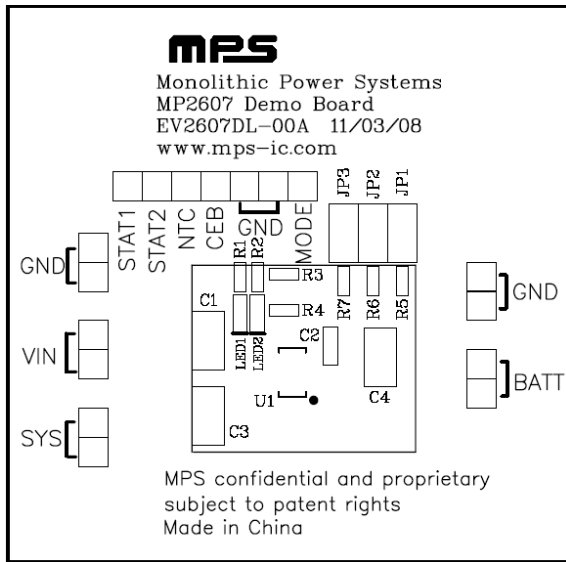
## EVALUATION BOARD SCHEMATIC



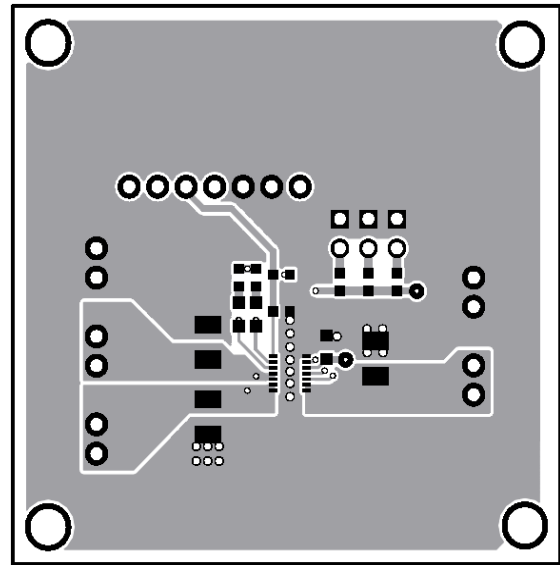
## EV2607DL-00A BILL OF MATERIALS

| Qty | Ref           | Value | Description                    | Package | Manufacturer | Manufacturer P/N |
|-----|---------------|-------|--------------------------------|---------|--------------|------------------|
| 2   | C1, C4        | 4.7uF | Ceramic Cap, 25V, X7R          | 1206    | Murata       | GRM31DR71E475K   |
| 1   | C2            | 1uF   | Ceramic Cap, 16V, X7R          | 0805    | Murata       | GRM21BR71C105K   |
| 1   | C3            | 10uF  | Ceramic Cap, 16V, X7R          | 1210    | Murata       | GRM32DR71C106K   |
| 3   | JP1, JP2, JP3 |       | 2-Pin Connector Header, 0.100" |         | Molex        | 10-89-1601       |
| 1   | LED1          | Green | Led Green, Surface Mount       | 0805    | Panasonic    | LNJ306G5URA      |
| 1   | LED2          | Red   | Led Red, Surface Mount         | 0805    | Panasonic    | LNJ206R5RRX      |
| 2   | R1, R2        | 1K    | Film Res, 5%                   | 0603    | Panasonic    | ERJ-3GEYJ102V    |
| 1   | R3            | 20k   | Film Res, 1%                   | 0603    | Panasonic    | ERJ-3EKF2002V    |
| 1   | R4            | 10k   | Film Res, 1%                   | 0603    | Panasonic    | ERJ-3EKF1002V    |
| 1   | R5            | 2.21K | Film Res, 1%                   | 0603    | Panasonic    | ERJ-3EKF2211V    |
| 1   | R6            | 3.6K  | Film Res, 1%                   | 0603    | Panasonic    | ERJ-3EKF3601V    |
| 1   | R7            | 8.66K | Film Res, 1%                   | 0603    | Panasonic    | ERJ-3EKF8661V    |
| 1   | U1            |       | Linear Charger                 | QFN14   | MPS          | MP2607DL         |

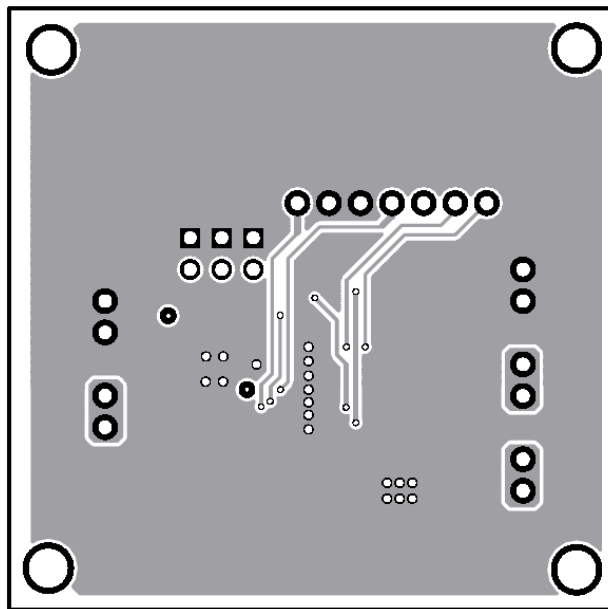
## PRINTED CIRCUIT BOARD LAYOUT



**Figure 1—Top Silk Layer**



**Figure 2—Top Layer**



**Figure 3—Bottom Layer**

## QUICK START GUIDE

The BATT output voltage on this board is preset to 4.2V (for a single cell battery). The SYS output voltage is regulated to 4.9V internally for AC Adapter Input. The board layout accommodates most commonly used capacitors.

The LEDs are fault and charge indicators. The states of LED1 and LED2 under different operation are as follow:

| Charger Status  | LED1 | LED2 |
|---|------|------|
| Charging  | On   | On   |
| End of Charge   | On   | Off  |
| Charge Suspended (due to battery supplement mode or NTC out of range) | Off  | On   |
| Fault/disable (due to timer-out, internal thermal shutdown)           | Off  | Off  |

Attach the input to the IN pin, Set the charge current  $I_{CHG}$  using the jumpers JP1, JP2 and JP3 per the following table:

| JP1 | JP2 | JP3 | $I_{CHG}$ |
|-----|-----|-----|-----------|
| X   |     | X   | 1250mA    |
| X   |     |     | 1000mA    |
|     | X   | X   | 900mA     |
|     | X   |     | 650mA     |
|     |     | X   | 250mA     |

where “X” indicates a connection.

1. Attach the positive and negative ends of the load to the SYS and GND pins, respectively.
2. Attach the positive and negative ends of the battery to the BATT and GND pins, respectively.
3. Attach the input voltage ( $V_{IN}=5V$ ) and the input ground to the VIN and GND pins, respectively.
4. Set  $V_{CEB}$  lower than 0.4V to enable the device and higher than 1.5V to disable it.
5. Set Mode=1 to choose AC adapter input and Vin supplies the current for the system and charging the battery.
6. Set Mode=0 to choose USB input, and the input current limit is set internally. Increase the system load up to 1A, during which period, the charge current decreased first, and then supply the system load (supplement mode).

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