



THE DATASHEET OF LP3919RL-C/NOPB

CDMA Power Management Unit

Check for Samples: [LP3919](#)

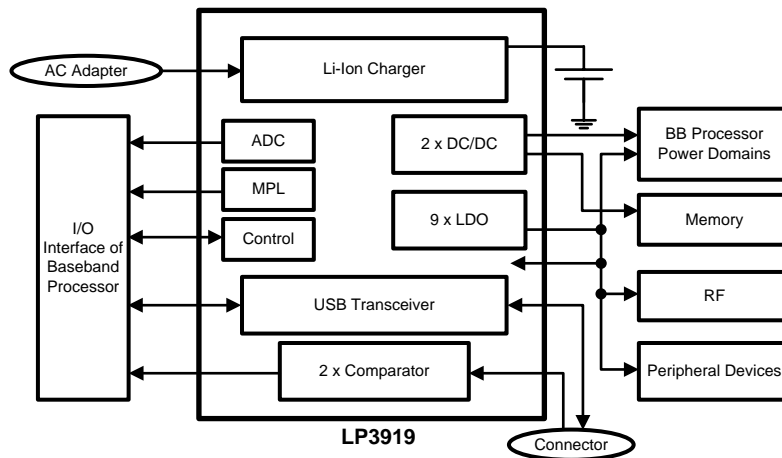
DESCRIPTION

The LP3919 is a complete Power Management Unit (PMU) designed for CDMA cellular phones. The LP3919 PMU contains a Li-Ion battery charger, low-noise low-dropout voltage regulators, buck regulators, a USB Transceiver, comparators and a high-speed serial interface to program on/off conditions and output voltages of individual regulators, and to read status information of the PMU.



These devices have limited built-in ESD protection. The leads should be shorted together or the device placed in conductive foam during storage or handling to prevent electrostatic damage to the MOS gates.

System Diagram



PACKAGING INFORMATION

| Orderable Device | Status (1) | Package Type | Package Drawing | Pins | Package Qty | Eco Plan (2) | Lead/Ball Finish | MSL Peak Temp (3) | Op Temp (°C) | Top-Side Markings (4) | Samples |
|------------------|---------------|--------------|--------------------|------|-------------|----------------------------|------------------|----------------------|--------------|--------------------------|-------------------------|
| LP3919RL-A/NOPB | ACTIVE | DSBGA | YPG | 49 | 250 | Green (RoHS & no Sb/Br) | SNAG | Level-1-260C-UNLIM | | V02 | Samples |
| LP3919RL-B/NOPB | ACTIVE | DSBGA | YPG | 49 | 250 | Green (RoHS & no Sb/Br) | SNAG | Level-1-260C-UNLIM | | V09 | Samples |
| LP3919RL-C/NOPB | ACTIVE | DSBGA | YPG | 49 | 250 | Green (RoHS & no Sb/Br) | SNAG | Level-1-260C-UNLIM | | V10 | Samples |
| LP3919RLX-A/NOPB | ACTIVE | DSBGA | YPG | 49 | 1000 | Green (RoHS & no Sb/Br) | SNAG | Level-1-260C-UNLIM | | V02 | Samples |
| LP3919RLX-B/NOPB | ACTIVE | DSBGA | YPG | 49 | 1000 | Green (RoHS & no Sb/Br) | SNAG | Level-1-260C-UNLIM | | V09 | Samples |
| LP3919RLX-C/NOPB | ACTIVE | DSBGA | YPG | 49 | 1000 | Green (RoHS & no Sb/Br) | SNAG | Level-1-260C-UNLIM | | V10 | Samples |

(1) The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) Only one of markings shown within the brackets will appear on the physical device.

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TAPE AND REEL INFORMATION


*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Reel Diameter (mm) | Reel Width W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P1 (mm) | W (mm) | Pin1 Quadrant |
|------------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| LP3919RL-A/NOPB | DSBGA | YPG | 49 | 250 | 178.0 | 12.4 | 3.63 | 3.63 | 0.76 | 8.0 | 12.0 | Q1 |
| LP3919RL-B/NOPB | DSBGA | YPG | 49 | 250 | 178.0 | 12.4 | 3.63 | 3.63 | 0.76 | 8.0 | 12.0 | Q1 |
| LP3919RL-C/NOPB | DSBGA | YPG | 49 | 250 | 178.0 | 12.4 | 3.63 | 3.63 | 0.76 | 8.0 | 12.0 | Q1 |
| LP3919RLX-A/NOPB | DSBGA | YPG | 49 | 1000 | 178.0 | 12.4 | 3.63 | 3.63 | 0.76 | 8.0 | 12.0 | Q1 |
| LP3919RLX-B/NOPB | DSBGA | YPG | 49 | 1000 | 178.0 | 12.4 | 3.63 | 3.63 | 0.76 | 8.0 | 12.0 | Q1 |
| LP3919RLX-C/NOPB | DSBGA | YPG | 49 | 1000 | 178.0 | 12.4 | 3.63 | 3.63 | 0.76 | 8.0 | 12.0 | Q1 |

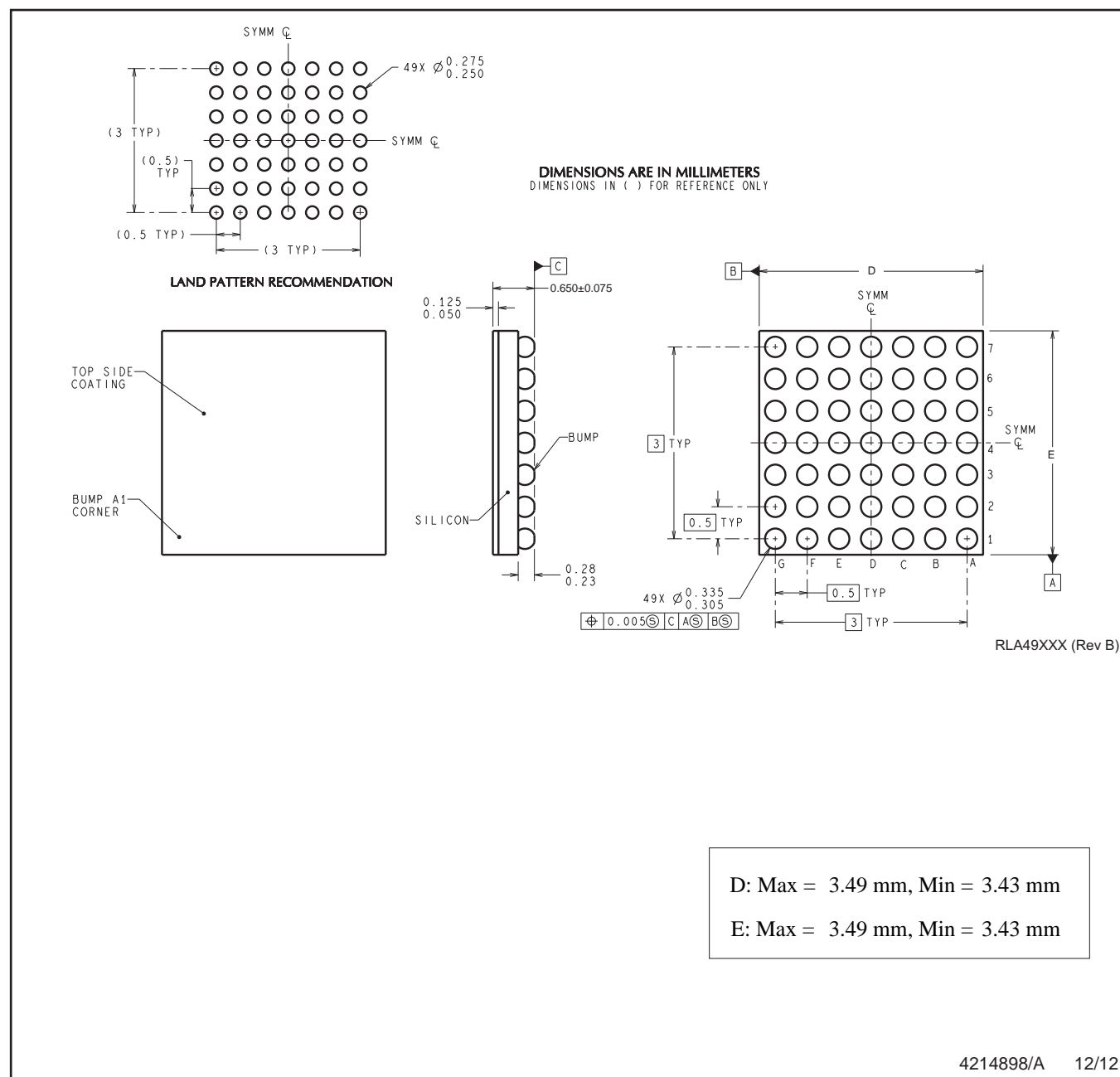
TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Length (mm) | Width (mm) | Height (mm) |
|------------------|--------------|-----------------|------|------|-------------|------------|-------------|
| LP3919RL-A/NOPB | DSBGA | YPG | 49 | 250 | 210.0 | 185.0 | 35.0 |
| LP3919RL-B/NOPB | DSBGA | YPG | 49 | 250 | 210.0 | 185.0 | 35.0 |
| LP3919RL-C/NOPB | DSBGA | YPG | 49 | 250 | 210.0 | 185.0 | 35.0 |
| LP3919RLX-A/NOPB | DSBGA | YPG | 49 | 1000 | 210.0 | 185.0 | 35.0 |
| LP3919RLX-B/NOPB | DSBGA | YPG | 49 | 1000 | 210.0 | 185.0 | 35.0 |
| LP3919RLX-C/NOPB | DSBGA | YPG | 49 | 1000 | 210.0 | 185.0 | 35.0 |

YPG0049



NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
B. This drawing is subject to change without notice.

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