CDMA Power Management Unit

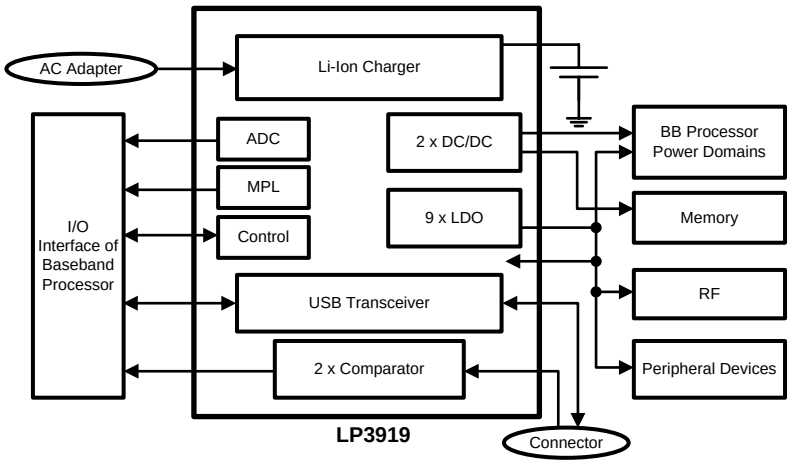
Check for Samples: LP3919

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



PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of the Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

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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.

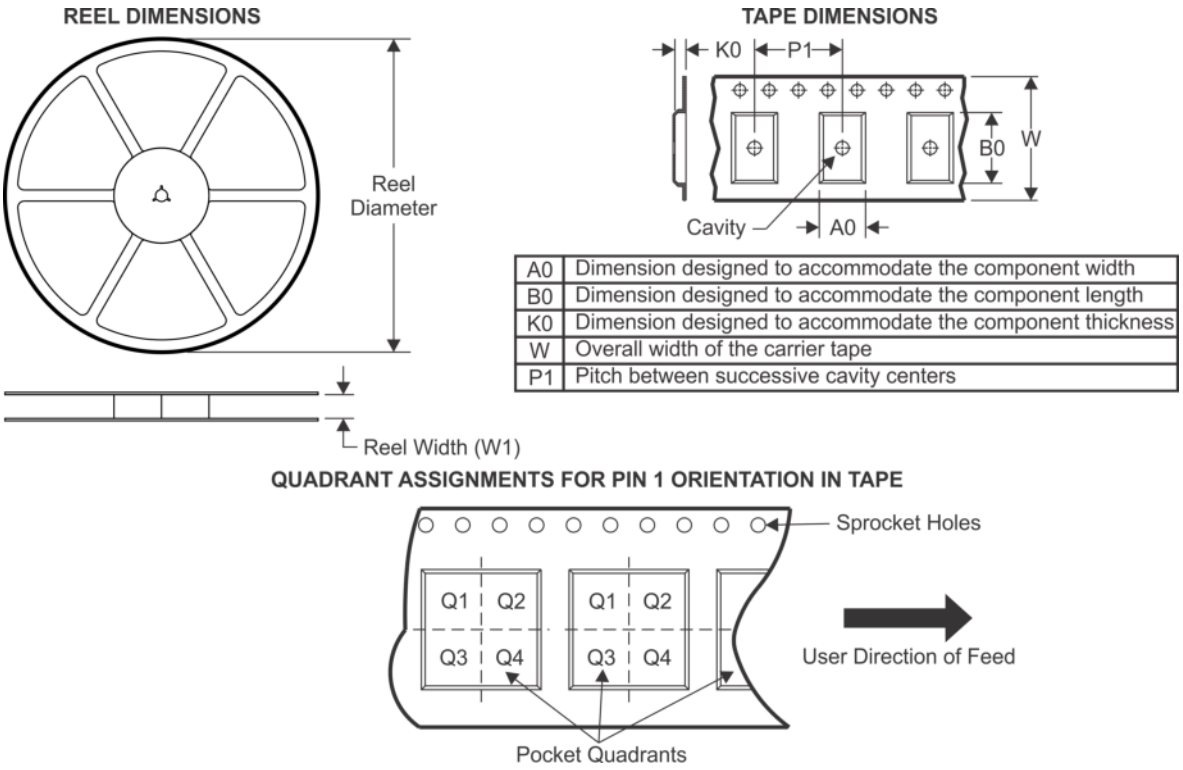
(4) Only one of markings shown within the brackets will appear on the physical device.

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TAPE AND REEL INFORMATION

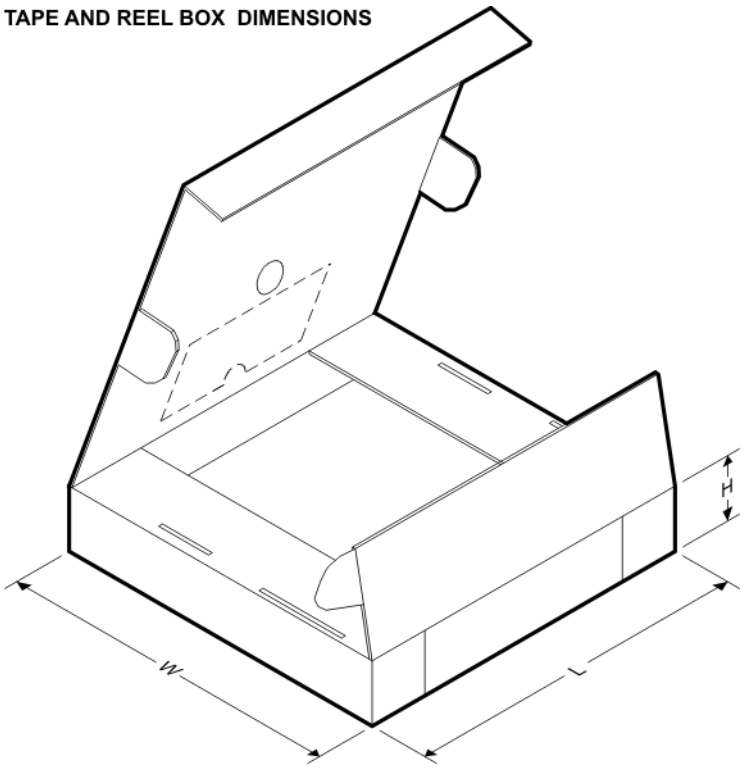


A0	Dimension designed to accommodate the component width
B0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

*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

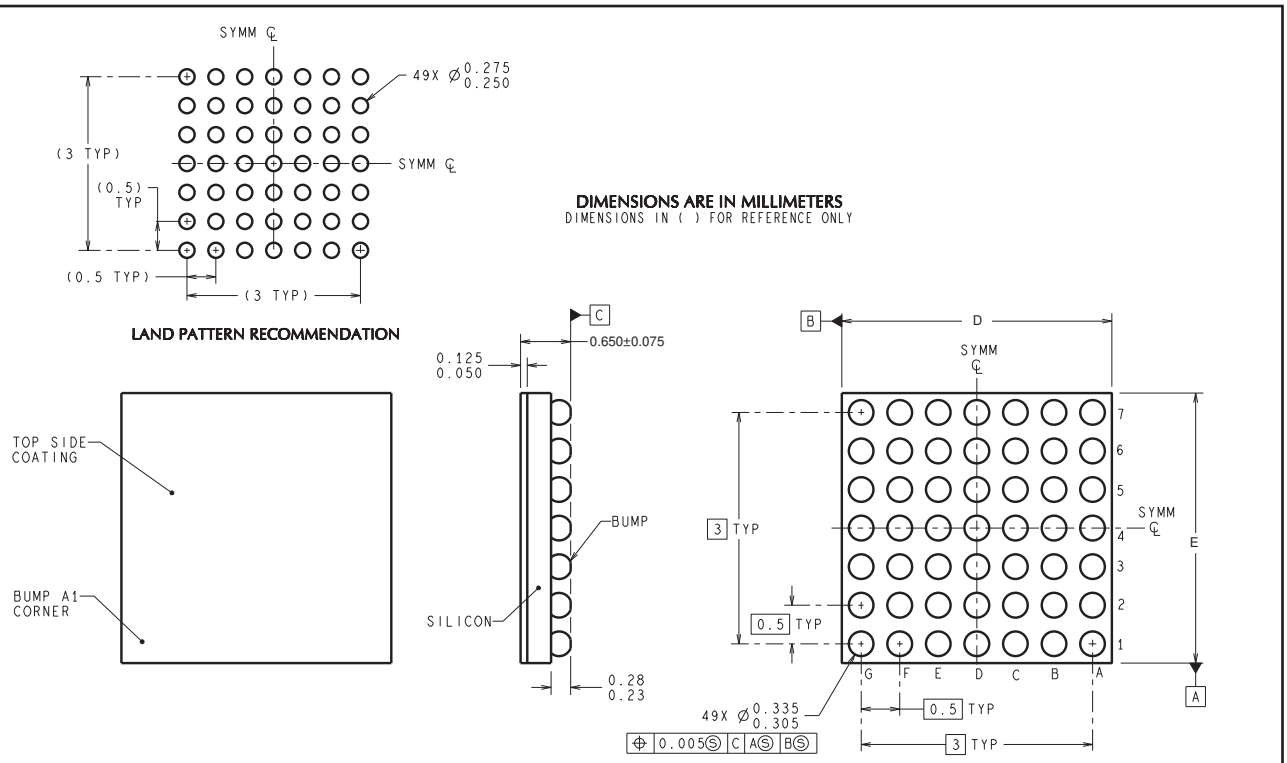
TAPE AND REEL BOX DIMENSIONS



*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



D: Max = 3.49 mm, Min = 3.43 mm

E: Max = 3.49 mm, Min = 3.43 mm

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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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