SimpleLink™ Wi-Fi® CC3000 Module from Texas Instruments

FEATURES

- **Wireless Network Processor**
  - **IEEE 802.11 b/g**
  - **Embedded IPv4 TCP/IP Stack**
- **Best-in-class Radio Performance:**
  - **Tx Power: +18dBm at 11Mbps, CCK**
  - **Rx Sensitivity: –86dBm, 8% PER, 11Mbps**
- **Works with low MIPS, Low Cost Microcontrollers with Compact Memory Footprint:**
  - **2KBytes Flash**
  - **250Bytes RAM**
- **FCC, IC and CE Certified with Chip Antenna**
- **HW Design Files and Design Guide Available from TI**
- **Integrated Crystal and Power Management**
- **Small Form Factor 16.3mm x 13.5mm x 2mm**
- **Operating Temperature Range: –20°C to 70°C**
- **Based in TI's 7th Generation of Proven Wi-Fi Solutions**
- **Complete Platform Solution Including User and Porting Guides, API Guide, Sample Applications, and Support Community**

APPLICATIONS

- **Home Automation**
- **Home Security**
- **Connected Appliances**
- **Smart Energy**
- **M2M Communication**

DESCRIPTION

The CC3000 is a self-contained wireless network processor that simplifies the process of implementing Internet connectivity. SimpleLink™ Wi-Fi minimizes host microcontroller (MCU) software requirements making it the ideal solution for embedded applications using any low-cost and low-power MCU.

The CC3000 is provided as a module by TI to reduce development time, lower manufacturing costs, save board space, ease certification and minimize RF expertise required. Additionally, it is provided as a complete platform solution including software drivers, sample applications, API guide, user documentation and a world-class support community.

More information on TI's wireless platform solutions for Wi-Fi can be found on TI's Wireless Connectivity Wiki (www.ti.com/connectivitywiki).

PRODUCT PREVIEW

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
CC3000MOD	NRND			46		TBD	Call TI	Call TI	-20 to 70		
CC3000MODR	NRND			46		TBD	Call TI	Call TI	-20 to 70		
CC3000YFVR	LIFEBUY	DSBGA	YFV	126	2500	Green (RoHS & no Sb/Br)	SNAGCU	Level-1-260C-UNLIM		CC3000	

(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) **RoHS:** TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".
RoHS Exempt: TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.
Green: TI defines "Green" to mean the content of Chlorine (Cl) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of <=1000ppm threshold. Antimony trioxide based flame retardants must also meet the <=1000ppm threshold requirement.

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

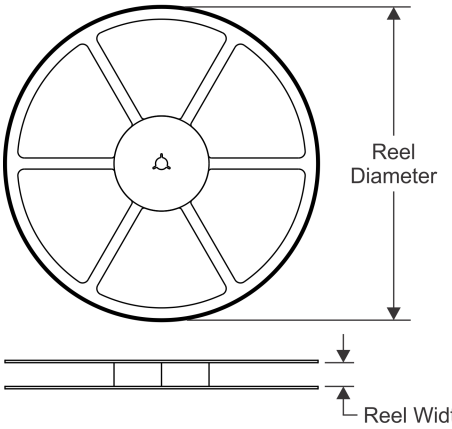
(4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

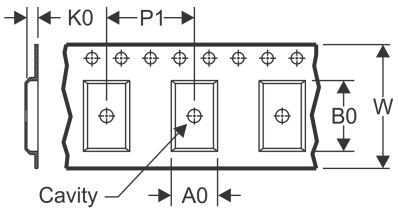
(6) Lead/Ball Finish - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.

TAPE AND REEL INFORMATION

REEL DIMENSIONS

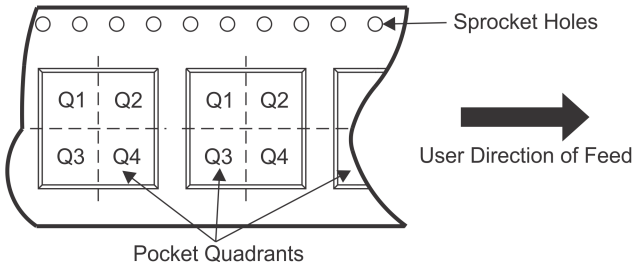


TAPE DIMENSIONS



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

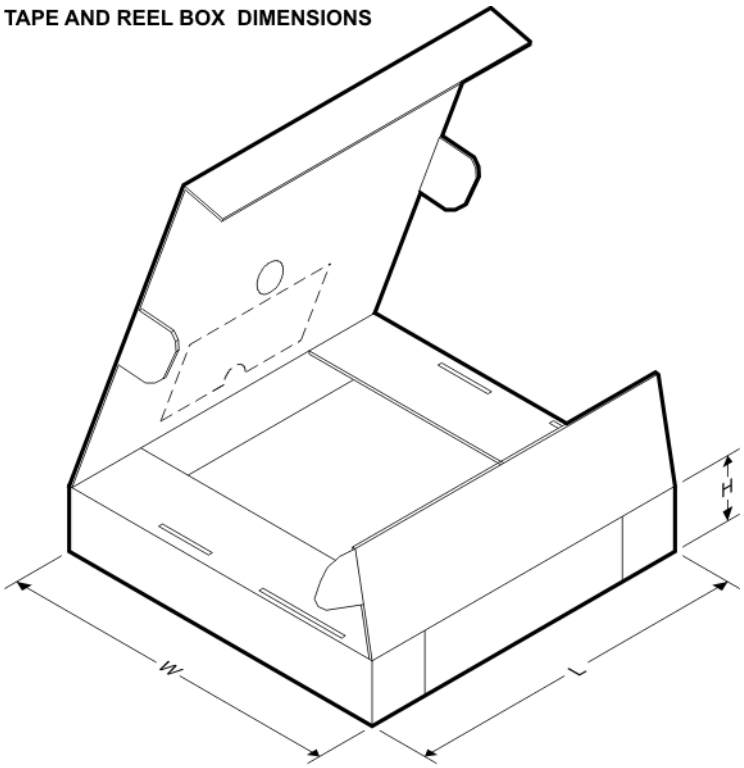
QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*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
CC3000YFVR	DSBGA	YFV	126	2500	330.0	12.4	4.7	5.16	0.7	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)
CC3000YFVR	DSBGA	YFV	126	2500	367.0	367.0	35.0

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