

RSM3215 2.4V to 4V, 3A Buck CoolModule™

Features

High-Performance Power Conversion

- 2.4V to 4V Input Voltage Range
- Up to 3A Output Current
- 1% Output Voltage Accuracy
- 2MHz Switching Frequency
- Adjustable Output with 0.6V Feedback Reference
- Fixed 1.2V, 1.8V, 2.5V, or 3.3V Output Options

Advanced Control & Operating Modes

- Constant-On-Time (COT) Control for Fast Transient Response
- Automatic PFM/PWM Mode for Improved Light-Load Efficiency
- Forced PWM Mode for Fixed-Frequency Operation

Integrated Monitoring & Protection

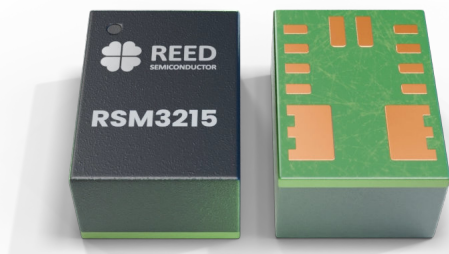
- Power-Good Output
- Output Discharge Function
- Overcurrent and Short-Circuit Protection

Integrated Inductor & Compact Packaging

- Integrated Inductor
- Compact 2.5mm × 3.5mm × 1.6mm, 16-pin LGA package
- RoHS compliant and Green

Applications

- Optical Transceiver Modules
- Smartphones & Mobile Devices
- Wearable Electronics
- Camera Modules
- Industrial IoT (IIoT) & Smart Sensors
- Narrowband IoT (NB-IoT) Devices



Description

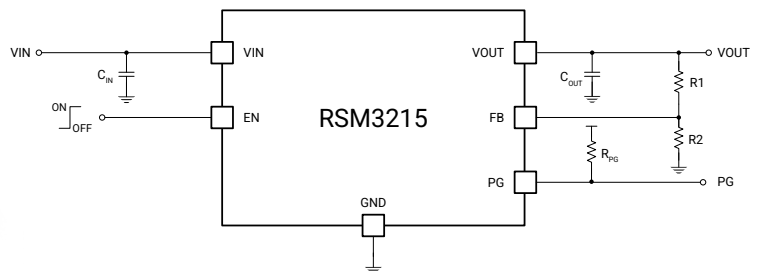
The RSM3215 is a compact, high-efficiency 3A synchronous buck CoolModule™ with an integrated inductor, designed for space-constrained point-of-load (PoL) applications. Operating from a 2.4V to 4V input supply, the device combines power conversion and magnetic integration in a compact 2.5mm × 3.5mm × 1.6mm, 16-pin LGA package.

The RSM3215 employs Constant-On-Time (COT) control for fast transient response and supports selectable PFM/PWM or forced PWM operation. Automatic transitions between PFM and PWM improve light-load efficiency, while forced PWM mode maintains 2MHz switching operation.

The RSM3215 is available with an adjustable output using a 0.6V feedback reference or four fixed-output options: 1.2V, 1.8V, 2.5V, and 3.3V. Fixed-output variants eliminate the need for an external feedback resistor divider. Integrated power-good monitoring, output discharge, and overcurrent and short-circuit protection further simplify system design.

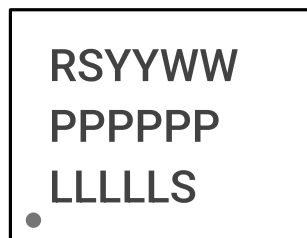
PART NUMBER	PACKAGE	SIZE (mm)
RSM3215	LGA-16	2.5 × 3.5 × 1.6

Typical Application Schematic



Ordering Information

PART NUMBER	PACKAGE	SIZE (mm)	MSL RATING	SHIPPING METHOD	PACKAGE MARKING
RSM3215	LGA-16	2.5 × 3.5 × 1.6	Level - 3	3000u Tape & Reel	TND

Top Marking

Line 1

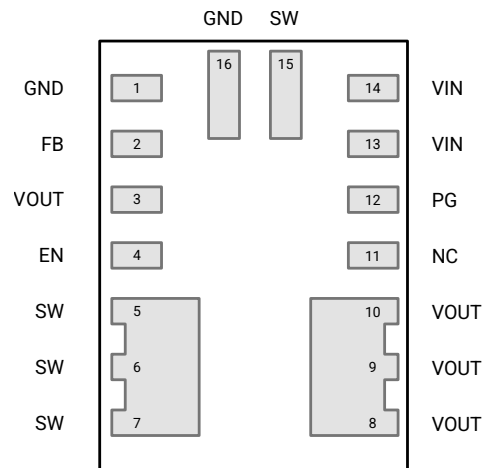
- RS: Prefix of Reed Semiconductor (RS is replaced by RE for engineering lots)
- YY: Year code
- WW: Week code

Line 2

- P P P P P: Truncated part number

Line 3

- L L L L L: Lot code
- S: Assembly site code

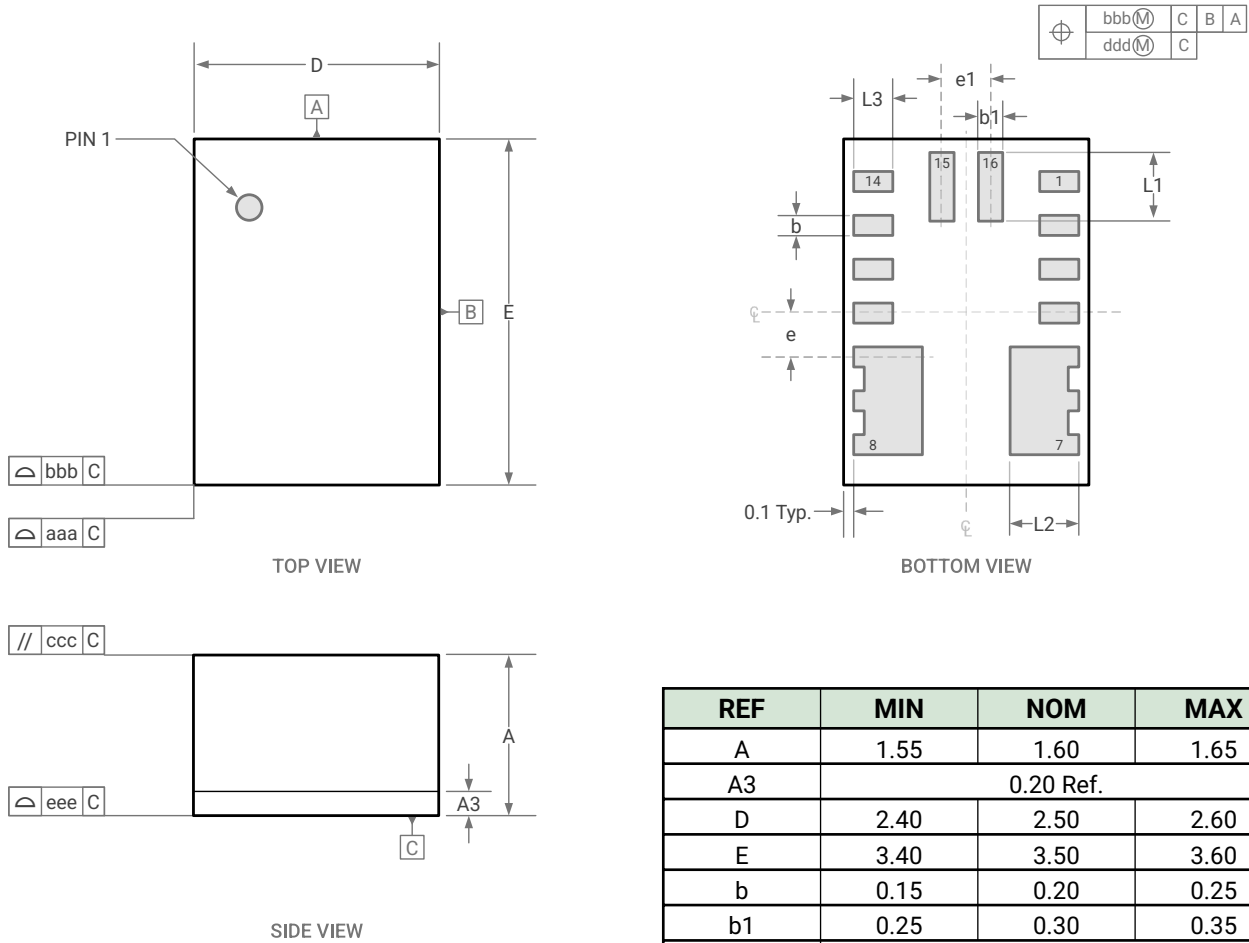
Package Reference**LGA-16 (2.5mm × 3.5mm × 1.6mm)**

Pin Descriptions

PIN	NAME	TYPE	DESCRIPTION
1, 16	GND	G	Ground. Connect to the ground terminals of the input and output capacitors using short, low-impedance connections.
2	FB	I	Output voltage feedback. For direct output sensing, connect to the output capacitor using a short trace. For adjustable output operation, connect to VOUT through a resistor divider.
3, 8–10	VOUT	P	Regulated output voltage.
4	EN	I	Enable input. Drive high to enable the device or low to disable it. An internal pulldown resistor is disconnected once the device is enabled and the output is regulated. The pulldown reconnects when a low level is detected.
5–7, 15	SW	P	Internal switching-node pads. Leave unconnected.
11	NC	—	No internal connection.
12	PG	O	Open-drain power-good output. Connect to VIN or another suitable pull-up voltage through a 1kΩ to 100kΩ resistor.
13, 14	VIN	P	Input supply voltage. Place a 4.7μF or larger ceramic bypass capacitor close to the VIN pins.

Type: I = Input, O = Output, I/O = Bidirectional, P = Power, G = Ground, — = No Connect.

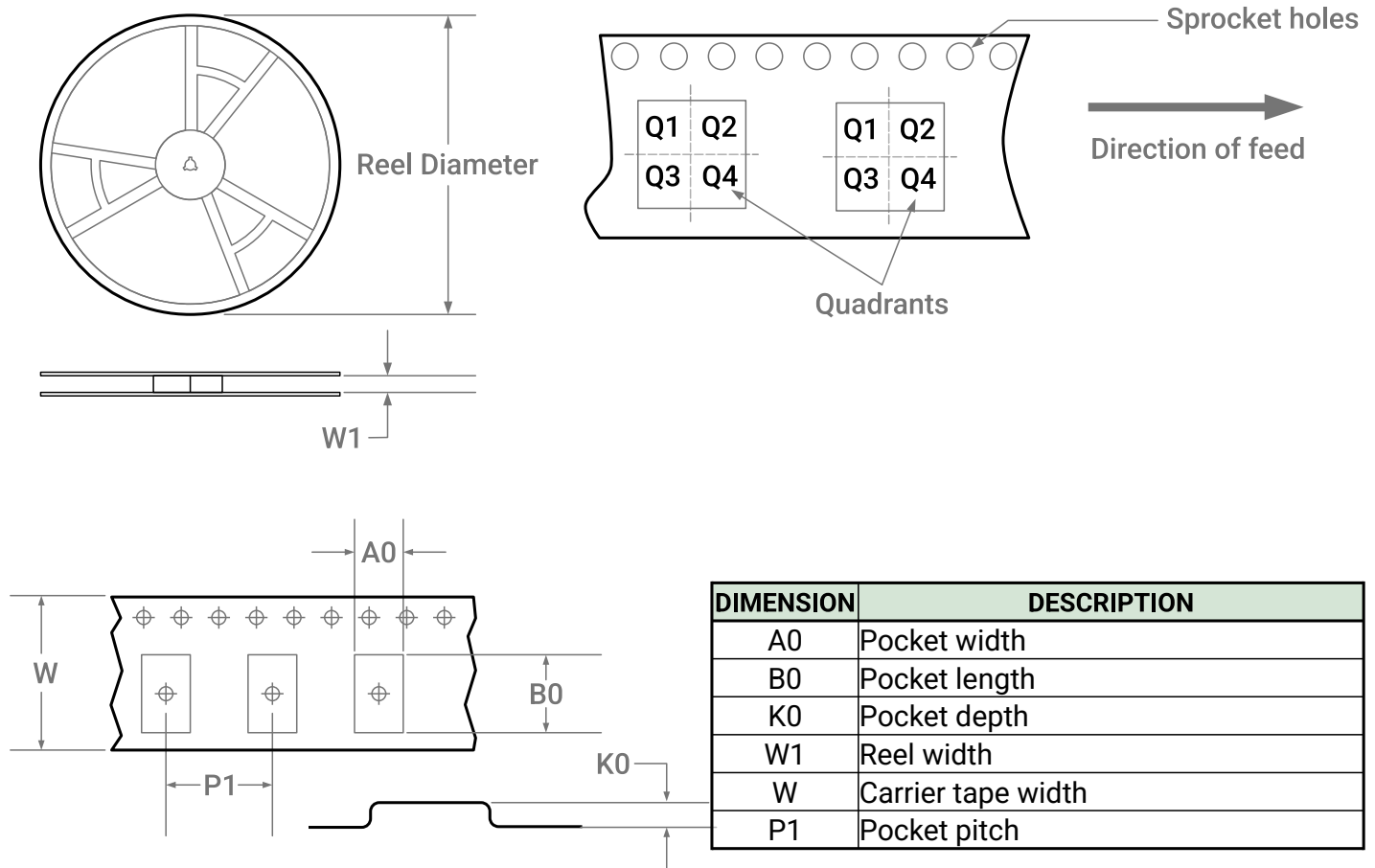
Package Dimensions



Notes

1. All dimensions are in millimeters.
2. Dimensions and tolerance per JEDEC MO-200
3. Drawings are not to scale

Tape and Reel Information

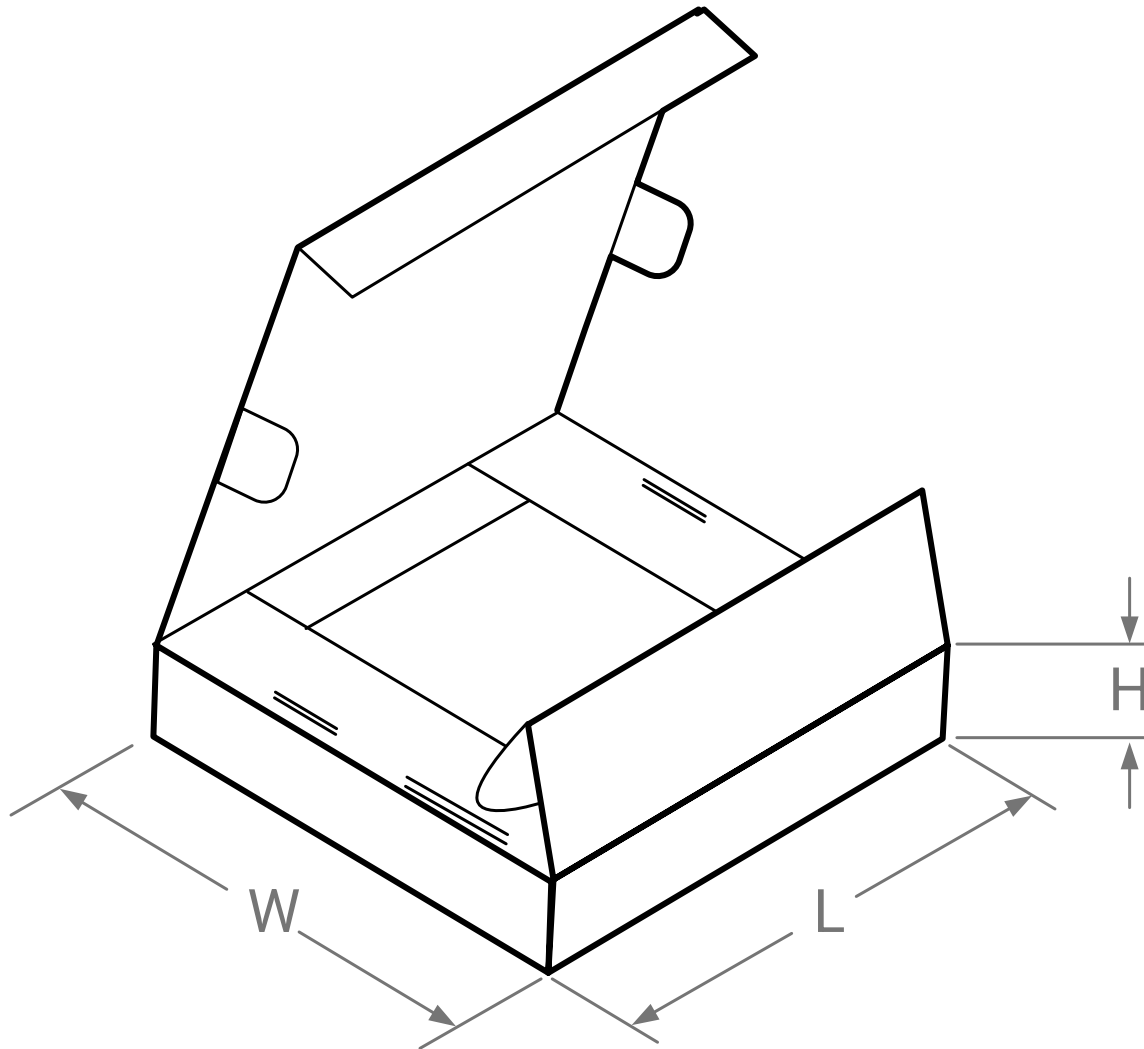


PACKAGE SIZE	REEL DIAMETER	W1	A0	B0	K0	P1	W	QUADRANT
2.5 × 3.5	330	12.8	2.8	3.8	1.75	8.0	12.0	Q1

Note:

1. All dimensions are nominal
2. All dimensions are in millimeters (mm)

Pizza Box Dimensions



PACKAGE SIZE	UNITS / BOX	LENGTH	WIDTH	HEIGHT
2.5 × 3.5	3000	337	342	55

Notes:

1. All measurements are in millimeters;
2. All measurements are nominal.