

JW5305/JW5305F

18V/5A

Sync. Step-Down Converter

DESCRIPTION

The JW[®]5305 and JW[®]5305F are monolithic buck switching regulators based on I2 architecture for fast transient response. Operating with an input range of 4.5V~18V, JW5305 and JW5305F deliver 5A of continuous output current with two integrated N-Channel MOSFETs. The internal synchronous power switches provide high efficiency without the use of an external Schottky diode.

JW5305 and JW5305F guarantee robustness with output short protection, thermal protection, current run-away protection, and input under voltage lockout.

JW5305 and JW5305F are available in ESOP8 package, which provide a compact solution with minimal external components.

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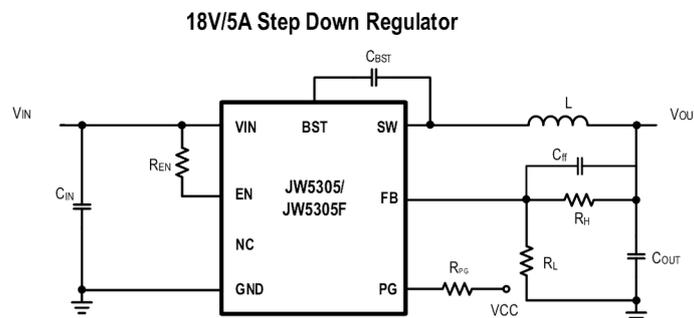
FEATURES

- 4.5V to 18V operating input range
- 5A output current
- 580kHz switching frequency
- 1% feedback voltage accuracy
- Internal soft-start
- Power good indicator
- PFM operation at light load (JW5305)
- FCCM operation at light load (JW5305F)
- Output short protection
- Thermal protection
- Available in ESOP8 package

APPLICATIONS

- Distributed Power Systems
- Networking Systems
- FPGA, DSP, ASIC Power Supplies
- Green Electronics/ Appliances
- Notebook Computers

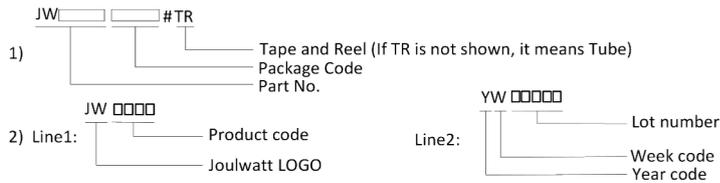
TYPICAL APPLICATION



ORDER INFORMATION

DEVICE ¹⁾	PACKAGE	TOP MARKING ²⁾	ENVIRONMENTAL ³⁾
JW5305ESOP#TR	ESOP8	JW5305 YW□□□□□	Green
JW5305FESOP#TR	ESOP8	JW5305F YW□□□□□	Green

Notes :



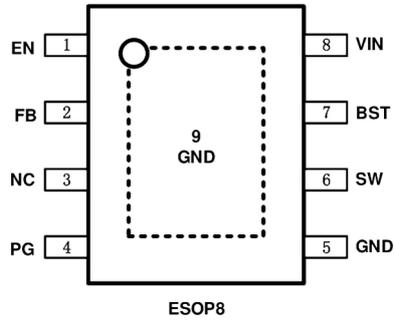
3) All Joulwatt products are packaged with Pb-free and Halogen-free materials and compliant to RoHS standards.

DEVICE INFORMATION

DEVICE	Operation Mode at light load	Package	MSL	STATUS
JW5305ESOP#TR	PFM	ESOP8	MSL3	Available
JW5305FESOP#TR	FCCM	ESOP8	MSL3	Available

PIN CONFIGURATION

TOP VIEW



For MT-Systems Use Only

PIN DESCRIPTION

Pin ESOP8	Name	Description
1	EN	Drive EN pin high to turn on the regulator and low to turn off the regulator.
2	FB	Output feedback pin. FB senses the output voltage and is regulated by the control loop to 0.765V. Connect a resistive divider at FB.
3	NC	
4	PG	Power good monitor output. This is an open-drain output so a resistor should be connected at this pin to the V _{OUT} node or other power rail.
5	GND	Power ground pin
6	SW	SW is the switching node that supplies power to the output. Connect the output LC filter from SW to the output load.
7	BST	Connect a 0.1uF capacitor between BST and SW pin to supply current for the top switch driver.
8	VIN	Input voltage pin. VIN supplies power to the IC. Connect a 4.5V to 18V supply to VIN and bypass VIN to GND with a suitably large capacitor to eliminate noise on the input to the IC.
9	GND	Power ground pin

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