

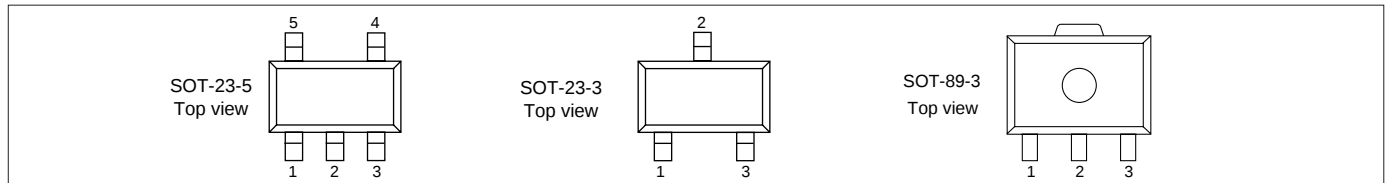
SMALL-PACKAGE PWM CONTROL STEP-UP SWITCHING REGULATOR

S-8323/8327 Series

Consisting of a reference voltage source, an oscillation circuit, a power MOSFET and an error amplifier, this series of devices offer high efficiency over a wide range because the control circuit has the ability to change the duty ratio between 0% and 83% according to the load.

A step-up switching regulator can be constructed by externally connecting only a coil, a capacitor and a diode to the S-8323 Series. These features, along with its small package and low current consumptions, make the S-8323 Series ideal as a power supply for portable equipment requiring low noise. For applications requiring a high output current, the S-8327 Series is also available with an external transistor. For making an external coil smaller, high frequency type (250kHz) is also available.

PIN CONFIGURATIONS



S-8323AXXMC/S-8327BXXMC/S-8323HXXMC/S-8327HXXMC
SOT-23-5

Pin No.	Pin Name	Functions
1	ON / OFF	Shutdown pin "H" : normal operation (stepping up operation) "L" : stop stepping up (whole circuit stop)
2	V _{OUT}	Output voltage pin and power supply pin
3	-	N.C. (Non Connection)
4	V _{SS}	GND pin
5	CONT	External inductor connection pin (for S-8323 Series)
	EXT	External transistor connection pin (for S-8327 Series)

FEATURES

- Low voltage operation : 0.9V(I_{out}=1mA)
: 1.4V(H,J Series)
- Low current consumption
Operation : 17.2μA typ.(V_{olt}=3V, 50kHz)
: 59.4μA typ.(S-8327H33)
Shutdown : 0.5μA max.
- Duty ratio : Built-in PWM controlled circuit
- External components : Coil, Diode, Capacitors
- Output voltage : accurate to ±2.4%
- Oscillation frequency : 30kHz, 50kHz, 100kHz, 250kHz
- Built-in soft start function
- Shutdown function
- Large output currents can be obtained with an external transistor (S-8327 Series)
- Small Package : SOT-23-5, SOT-23-3, SOT-89-3
- Step-down and inverting type can be also made.

APPLICATIONS

- Power supplies for portable equipment such as pagers, handy calculators, and remote controllers
- Constant voltage power supplies for cameras, video equipment, and communications equipment
- Power supply for microcomputers

S-8323DXXMC/S-8327EXXMC/S-8323JXXMC/S-8327JXXMC
SOT-23-5

Pin No.	Pin name	Functions
1	V _{OUT}	Output voltage pin
2	V _{DD}	Power supply pin
3	-	N.C. (Non Connection)
4	V _{SS}	GND pin
5	CONT	External inductor connection pin (for S-8323 Series)
	EXT	External transistor connection pin (for S-8327 Series)

S-8323AXXMA/S-8323AXXUA/S-8323CXXMA
S-8327BXXMA/S-8327BXXUA
SOT-23-3, SOT-89-3

Pin No.	Pin Name	Functions
1	V _{SS}	GND pin
2	V _{OUT}	Output voltage pin and power supply pin
3	CONT	External inductor connection pin (for S-8323 Series)
	EXT	External transistor connection pin (for S-8327 Series)

SELECTION GUIDE

Product Name	Built in Power transistor	with external power transistor	Switching frequency(kHz)	Shutdown function	V _{DD} /V _{OUT} separate type	Package	Application
S-8323AXXMC	○	-	50	○	-	SOT-23-5	With a shutdown function
S-8323AXXMA	○	-	50	-	-	SOT-23-3	Without shutdown function
S-8323AXXUA	○	-	50	-	-	SOT-89-3	Without shutdown function
S-8323DXXMC	○	-	50	-	○	SOT-23-5	For variable output voltage by step-up DC/DC converter and step-down, inverted output DC/DC converter with an external resistor
S-8323CXXMA	○	-	30	-	-	SOT-23-3	For pagers
S-8327BXXMC	-	○	100	○	-	SOT-23-5	For large load current with shutdown function
S-8327BXXMA	-	○	100	-	-	SOT-23-3	For large load current without shutdown function
S-8327BXXUA	-	○	100	-	-	SOT-89-3	For large load current without shutdown function
S-8327EXXMC	-	○	100	-	○	SOT-23-5	For variable output voltage by step-up DC/DC converter with an external resistor
S-8323HXXMC	○	-	250	○	-	SOT-23-5	For making external parts smaller with a shutdown function
S-8323JXXMC	○	-	250	-	○	SOT-23-5	For variable output voltage by step-up DC/DC converter and step-down, inverted output DC/DC converter with an external resistor
S-8327HXXMC	-	○	250	○	-	SOT-23-5	For large load current without shutdown function
S-8327JXXMC	-	○	250	-	○	SOT-23-5	For variable output voltage by step-up DC/DC converter with an external resistor

PRODUCT LIST

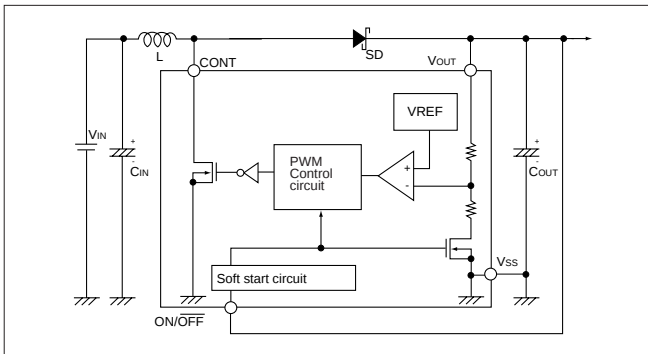
Item Output Voltage (V)	S-8323AXXMC Series	S-8323AXXMA Series	S-8323AXXUA Series	S-8323CXXMA Series	S-8323DXXMC Series	S-8323HXXMC Series	S-8323JXXMC Series
2.0	-	-	-	-	S-8323D20MC-EZA-T2	-	S-8323J20MC-FQA-T2
2.5	S-8323A25MC-ELF-T2	S-8323A25MA-ELF-T2	S-8323A25UA-ELF-T2	S-8323C25MA-ENF-T2	-	-	-
2.7	S-8323A27MC-ELH-T2	S-8323A27MA-ELH-T2	S-8323A27UA-ELH-T2	S-8323C27MA-ENH-T2	-	-	-
3.0	S-8323A30MC-ELK-T2	S-8323A30MA-ELK-T2	S-8323A30UA-ELK-T2	S-8323C30MA-ENK-T2	S-8323D30MC-EZK-T2	-	-
3.3	S-8323A33MC-ELN-T2	S-8323A33MA-ELN-T2	S-8323A33UA-ELN-T2	-	-	-	-
5.0	S-8323A50MC-EME-T2	S-8323A50MA-EME-T2	S-8323A50UA-EME-T2	-	S-8323D50MC-E3E-T2	-	-
5.2	S-8323A52MC-EMG-T2	-	-	-	-	-	-

Item Output Voltage (V)	S-8327BXXMC Series	S-8327BXXMA Series	S-8327BXXUA Series	S-8327EXXMC Series	S-8327HXXMC Series	S-8327JXXMC Series
2.0	-	-	-	S-8327E20MC-EVA-T2	-	-
2.5	S-8327B25MC-ERF-T2	S-8327B25MA-ERF-T2	S-8327B25UA-ERF-T2	-	-	-
2.7	S-8327B27MC-ERH-T2	S-8327B27MA-ERH-T2	S-8327B27UA-ERH-T2	-	-	-
2.8	S-8327B28MC-ERI-T2	-	-	-	-	-
3.0	S-8327B30MC-ERK-T2	S-8327B30MA-ERK-T2	S-8327B30UA-ERK-T2	-	-	-
3.3	S-8327B33MC-ERN-T2	S-8327B33MA-ERN-T2	S-8327B33UA-ERN-T2	-	S-8327H33MC-FWN-T2	-
3.6	S-8327B36MC-ERQ-T2	-	-	-	-	-
5.0	S-8327B50MC-ESE-T2	S-8327B50MA-ESE-T2	S-8327B50UA-ESE-T2	S-8327E50MC-EKE-T2	S-8327H50MC-FXE-T2	-
5.4	S-8327B54MC-ESI-T2	-	-	-	-	-

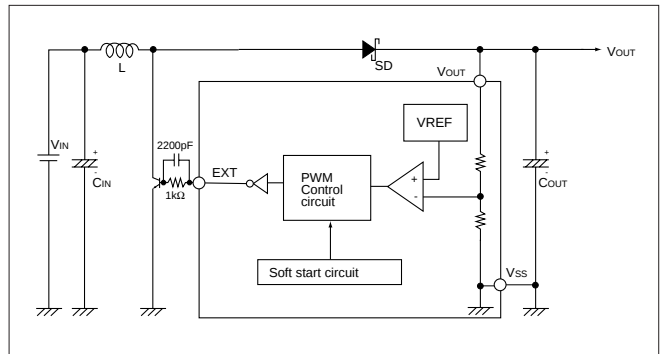
Please ask an SII representative if you need another output voltage product.

BLOCK DIAGRAM

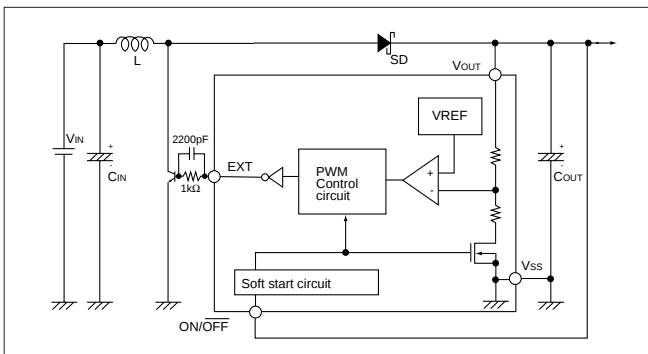
(1) S-8323AXXMC, S-8323HXXMC



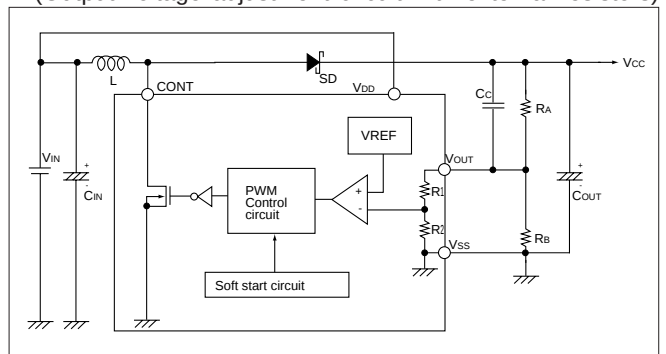
(4) S-8327BXXMA, S-8327BXXUA



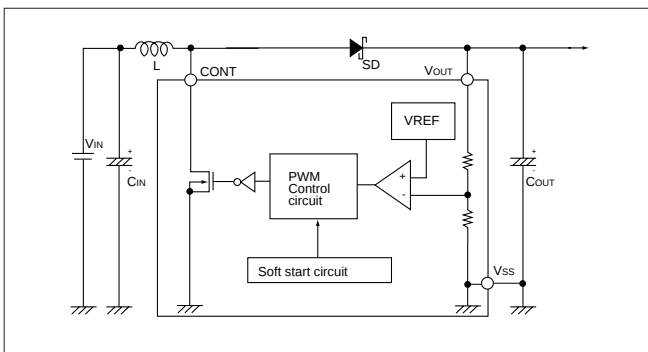
(2) S-8327BXXMC, S-8327HXXMC



(5) S-8323DXXMC, S-8323JXXMC
(Output voltage adjustment circuit with external resistors)



(3) S-8323AXXMA, S-8323AXXUA, S-8323CXXMA



(6) S-8327EXXMC, S-8327JXXMC
(Output voltage adjustment circuit with external resistors)

