

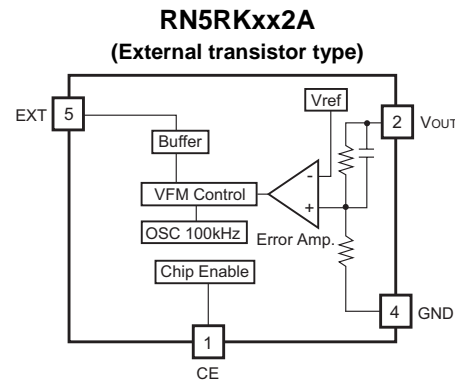
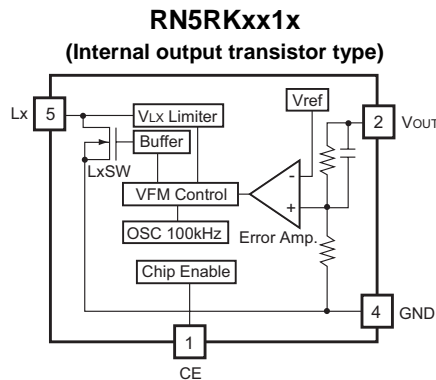
8V Input VFM Step-up DC/DC Converter

The RN5RK Series are low supply current, CMOS-based VFM step-up DC/DC converters. By simply using an inductor, a diode, and a capacitor as external components, a high-efficiency step-up DC/DC converter can be easily configured. RN5RK comes in two versions: xx1 version with an internal output transistor and xx2 version with an external transistor.

FEATURES

- Supply Current (I_{DD1}) Typ. 35 μ A (RN5RK301x, at continuous oscillation)
- Supply Current (I_{DD2}) Typ. 2 μ A ($V_{OUT} = \text{SET } V_{OUT} + 0.5\text{V}$)
- Standby Current ($I_{standby}$) Max. 0.5 μ A (In standby)
- Input Voltage Range (V_{IN}) Max. 8.0V
- Start-up Voltage (V_{start}) Max. 0.9V (xx1 Version)
Max. 0.8V (xx2 Version)
- Output Voltage Range (V_{OUT}) 2.0V to 5.5V (internally fixed)
- Output Voltage Accuracy $\pm 2.5\%$
- Oscillator Frequency (f_{osc}) 100kHz
- Oscillator Duty Cycle (Duty) ... 77% (A Version)
55% (B Version)
- Efficiency Typ. 85% (RN5RK301B,
 $V_{IN} = 2.0\text{V}$, $I_{OUT} = 10\text{mA}$)
- Package SOT-23-5

BLOCK DIAGRAMS

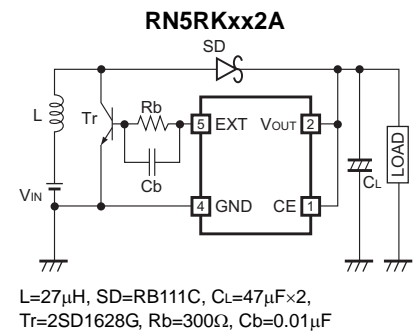
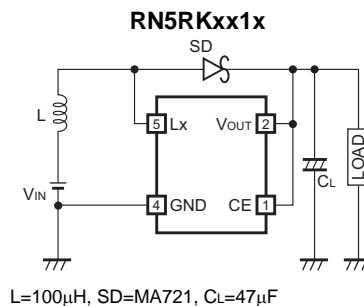


SELECTION GUIDE

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	SOT-23-5	3,000 pcs	RN5RKxx*\$-TR-FE

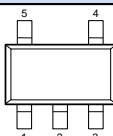
- xx : Specify the output voltage within the range of 2.0V (20) to 5.5V (55) in 0.1V steps.
- * : Select from (1) internal output transistor type or (2) external transistor type.
- \$: Select from (A) duty cycle of 77% or (B) duty cycle of 55%.
- (The RN5RKxx2B-TR-F does not exist.)

TYPICAL APPLICATIONS



PACKAGE (Top View)

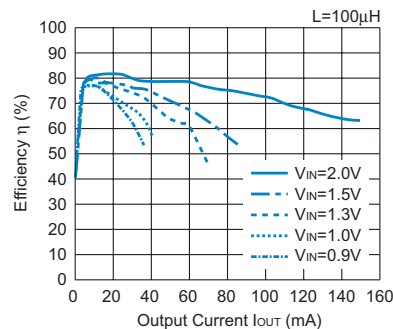
SOT-23-5



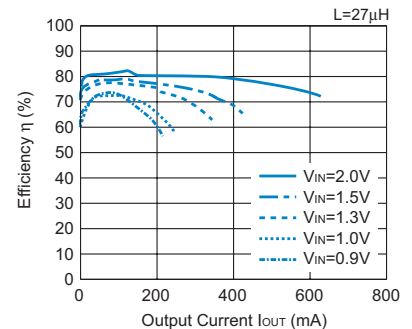
1	CE
2	VOUT
3	NC
4	GND
5	Lx or EXT

TYPICAL CHARACTERISTICS

RN5RK301x Efficiency vs. Output Current



RN5RK302A Efficiency vs. Output Current



APPLICATIONS

- Power source for battery-powered equipment
- Power source for hand-held communication equipment, cameras, and VCRs
- Power source for equipment that requires a voltage higher than battery voltage



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Ricoh continually strives to promote customer satisfaction, and shares the achievements of its management quality improvement program with people and society.



■ Ricoh awarded ISO 14001 certification.

The Ricoh Group was awarded ISO 14001 certification, which is an international standard for environmental management systems, at both its domestic and overseas production facilities. Our current aim is to obtain ISO 14001 certification for all of our business offices.

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Ricoh completed the organization of the Lead-free production for all of our products. After Apr. 1, 2006, we will ship out the lead free products only. Thus, all products that will be shipped from now on comply with RoHS Directive.