



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Features

## Unregulated Converters

- Custom Solutions Available
- 1kVDC & 2kVDC Isolation
- No Extern. Components Required
- UL94V-0 Package Material
- No Heatsink Required
- Efficiency to 85%

### Description

The RN series of compact 1.25W single output converters are especially useful when more than 1W of power is required, but there are space restrictions than make a 2W converter unsuitable. The converter series feature an industrial ambient temperature operating range of -40°C to +85°C without derating and up to 100°C ambient temperature with derating. Options include 1kVDC or 2kVDC isolation and continuous short circuit protection (P).

### Selection Guide

Part Number	Input Voltage (2kV) (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load <sup>(1)</sup>	
RN-xx3.3S	(H)	3.3, 5, 9, 12, 15, 24	3.3	378	70	2200µF
RN-xx05S	(H)	3.3, 5, 9, 12, 15, 24	5	250	70-72	1000µF
RN-xx07S	(H)	3.3, 5, 9, 12, 15, 24	7	180	72-75	1000µF
RN-xx09S	(H)	3.3, 5, 9, 12, 15, 24	9	140	75-80	1000µF
RN-xx12S	(H)	3.3, 5, 9, 12, 15, 24	12	104	79-82	470µF
RN-xx15S	(H)	3.3, 5, 9, 12, 15, 24	15	84	80-84	470µF
RN-xx24S	(H)	3.3, 5, 9, 12, 15, 24	24	52	80-85	220µF

x = Input Voltage (other input and output voltage combinations available on request)

\* add Suffix "P" for Continuous Short Circuit Protection, e.g. RN-0505S/P, RN-0505S/HP

### Specifications (Core Operating Area)

Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2% typ. / 1.4% max.
Load Voltage Regulation	3.3V output types	20% max.
(10% to 100% full load)	5V output type	15% max.
	9V, 12V, 15V, 24V output types	10% max.
Output Ripple and Noise (20MHz limited)		75mVp-p max.
Operating Frequency		50kHz min. / 100kHz typ. / 105kHz max.
Efficiency at Full Load		70% min. / 75% typ.
Minimum Load = 0%	Specifications valid for 10% minimum load only.	
Isolation Voltage	(tested for 1 second)	1000VDC
	(rated for 1 minute**)	500VAC / 60Hz
Isolation Voltage	H-Suffix (tested for 1 second)	2000VDC
	H-Suffix (rated for 1 minute**)	1000VAC / 60Hz
Isolation Capacitance		30pF min. / 95pF max.
Isolation Resistance		10 GΩ min.
Short Circuit Protection		1 Second
Operating Temperature Range (free air convection)		-40°C to +85°C (see Graph)
Storage Temperature Range		-55°C to +125°C
Relative Humidity		95% RH
Package Weight	1.9g	
Packing Quantity		39 pcs per Tube
MTBF (+25°C)	Detailed information page 266	using MIL-HDBK 217F
(+85°C)		using MIL-HDBK 217F

### Certifications

EN General Safety Report: SPCLVD1109103 EN60950-1:2006 + A12:2011

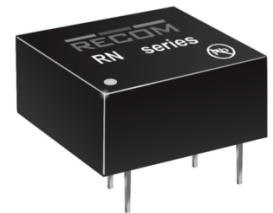
# ECONOLINE

## DC/DC-Converter

with 3 year Warranty

# RECOM

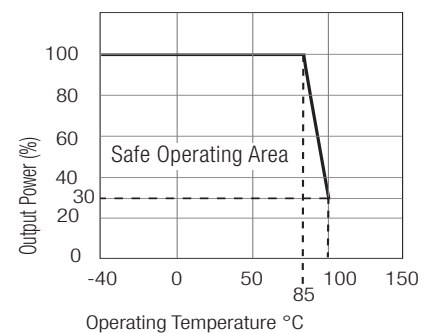
## 1.25 Watt DIP8 Single Output



EN-60950-1 Certified

# RN

## Derating-Graph (Ambient Temperature)

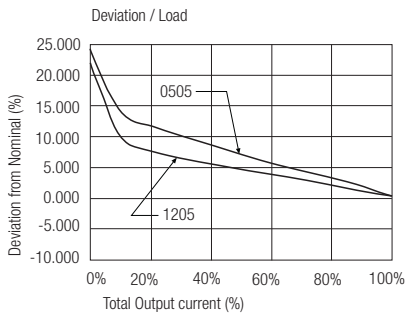
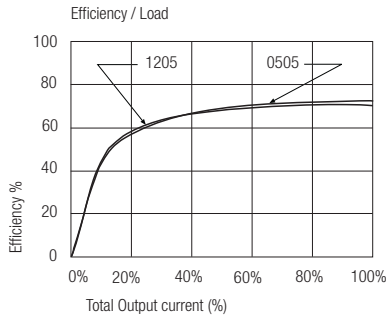


\*\*Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to our Application Notes.

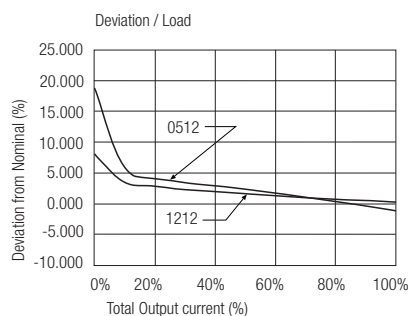
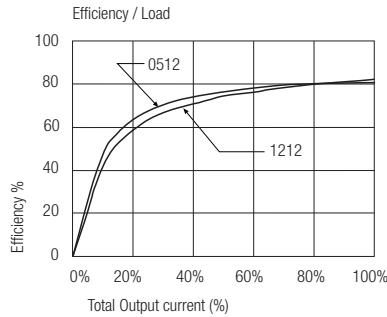
Refer to Application Notes

**Typical Characteristics**

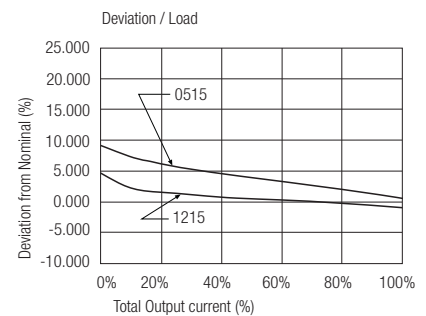
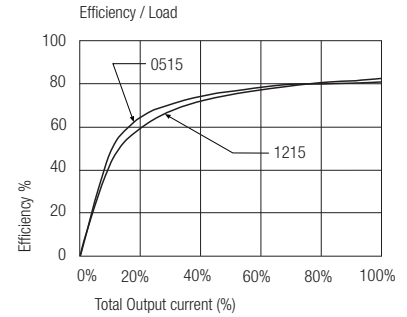
**RN-xx05S**



**RN-xx12S**



**RN-xx15S**



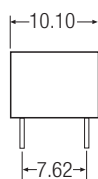
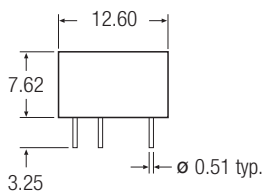
**Notes**

Note 1 Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter.

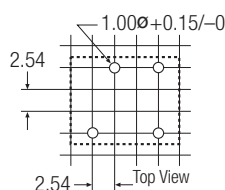
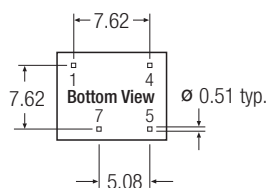
**RN**

**Package Style and Pinning (mm)**

**DIP8 Package**



**Recommended Footprint Details**



**Pin Connections**

Pin #	Single
1	-Vin
4	+Vin
5	+Vout
7	-Vout
XX.X	$\pm 0.5$ mm
XX.XX	$\pm 0.25$ mm