

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 ~ +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	Output Voltage	Output Current	Efficiency
DIP 8	(2kV)	(VDC)	(VDC)	(mA)	(%)
RN-xx3.3S	(H)	3.3, 5, 9, 12, 15, 24	3.3	378	70
RN-xx05S	(H)	3.3, 5, 9, 12, 15, 24	5	250	70-72
RN-xx07S	(H)	3.3, 5, 9, 12, 15, 24	7	180	72-75
RN-xx09S	(H)	3.3, 5, 9, 12, 15, 24	9	140	75-80
RN-xx12S	(H)	3.3, 5, 9, 12, 15, 24	12	104	79-82
RN-xx15S	(H)	3.3, 5, 9, 12, 15, 24	15	84	80-84
RN-xx24S	(H)	3.3, 5, 9, 12, 15, 24	24	52	80-85

xx = Input Voltage

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

Specifications (Core Operating Area)

Input Voltage Range			±10%
Output Voltage Accuracy			±5%
Line Voltage Regulation			1.2%/1% of Vin max.
Load Voltage Regulation (10% to 100% full load)	3.3V output types		20% max.
	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% (10% min. recommended)
Isolation Voltage	(tested for 1 second)		1.000VDC min.
Rated Working Voltage	(long term isolation)		see Application Notes
Isolation Voltage	H-Suffix (tested for 1 second)		2.000VDC min.
Rated Working Voltage	H-Suffix (long term isolation)		see Application Notes
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	MSL Level 1		95% RH
Package Weight			1.9g
Packing Quantity			39 pcs per Tube
MTBF (+25°C)	} Detailed information page 266	using MIL-HDBK 217F	955 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F	132 x 10 ³ hours

ECONOLINE

DC/DC-Converter

RECOM

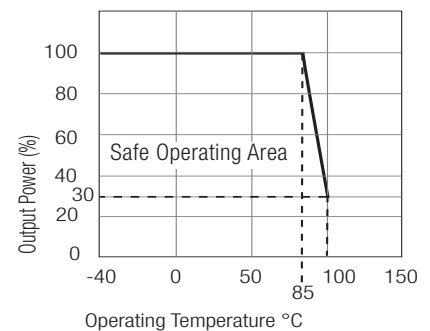
1.25 Watt DIP8 Single Output



EN-60950-1 Certified

RN

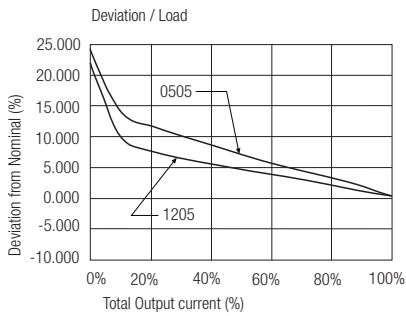
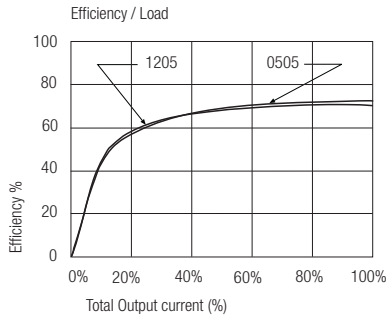
Derating-Graph (Ambient Temperature)



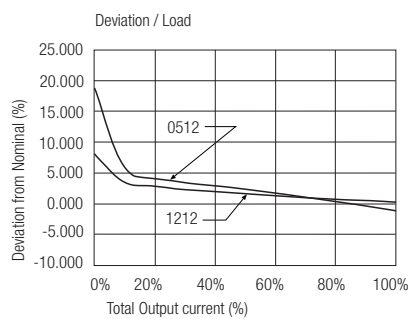
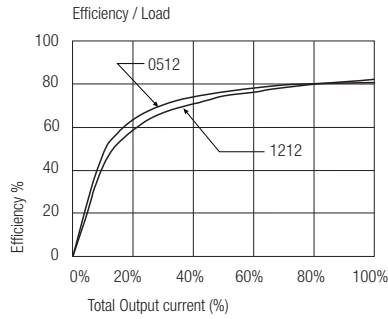
Refer to Application Notes

Typical Characteristics

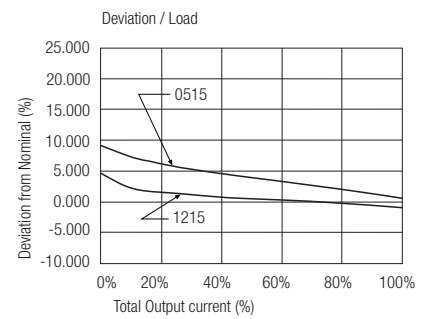
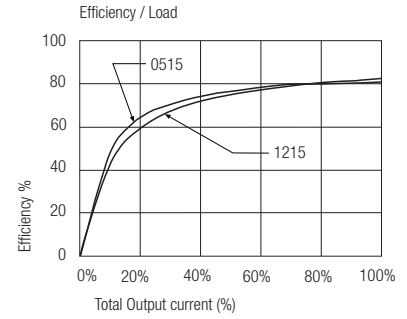
RN-xx05S



RN-xx12S



RN-xx15S

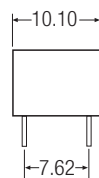
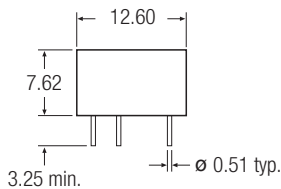


Certifications

EN General Safety Report: LVD-2K052220 EN60950-1:2001

Package Style and Pinning (mm)

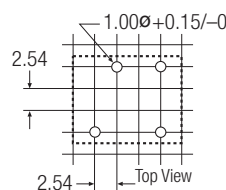
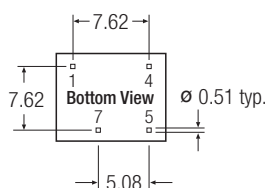
8 PIN DIP Package



3rd angle projection



Recommended Footprint Details



Pin Connections

Pin # Single

1	-Vin
4	+Vin
5	+Vout
7	-Vout

XX.X ± 0.5 mm
XX.XX ± 0.25 mm