

Features

Unregulated Converters

- Custom Solutions Available
- 1kVDC & 2kVDC Isolation
- No External Components Required
- Optional Continuous Short Circuit Protected
- UL94V-0 Package Material
- No Heatsink Required
- Efficiency to 85%

ECONOLINE

DC/DC-Converter

RN Series

1.25 Watt

DIP8

Single Output

Selection Guide

Part Number		Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	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-0505S/P, RN-0505S/HP



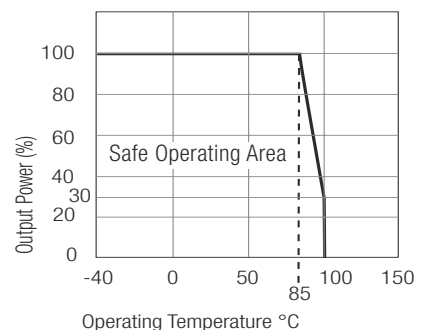
EN-60950-1 Certified

Specifications (Core Operating Area)

Input Voltage Range		±10%	
Output Voltage Accuracy		±5%	
Line Voltage Regulation		1.2%/1% of Vin typ.	
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.	
No Load Power Consumption		106mW min. / 153mW typ. / 210mW max.	
Isolation Voltage	(tested for 1 second)	1000VDC min.	
Rated Working Voltage	(long term isolation)	see Application Notes	
Isolation Voltage	H-Suffix (tested for 1 second)	2000VDC 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	
P-Suffix		Continuous	
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	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	955 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F	132 x 10 ³ hours

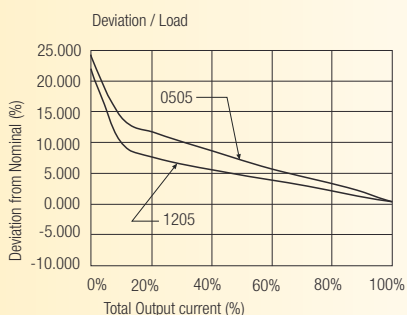
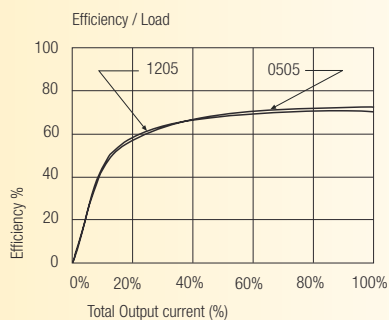


Derating-Graph (Ambient Temperature)

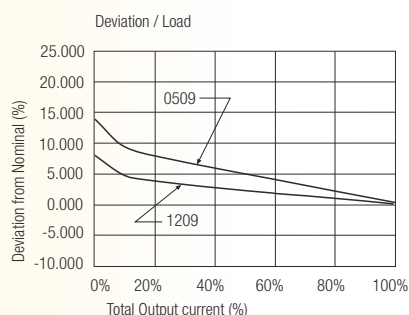
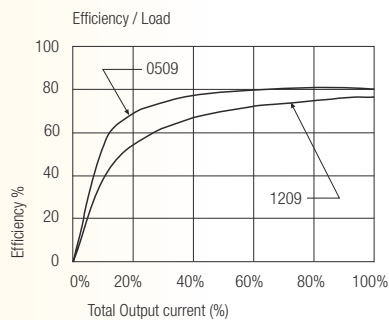


Typical Characteristics

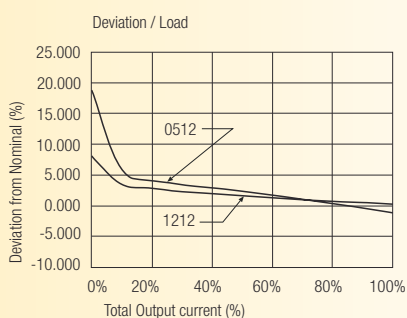
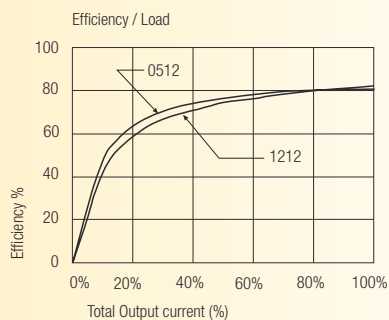
RN-xx05S



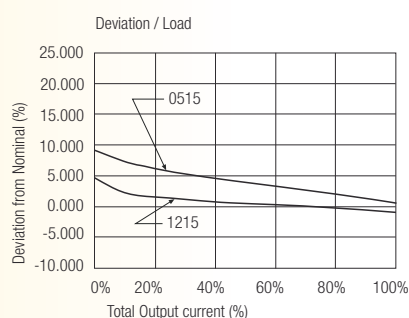
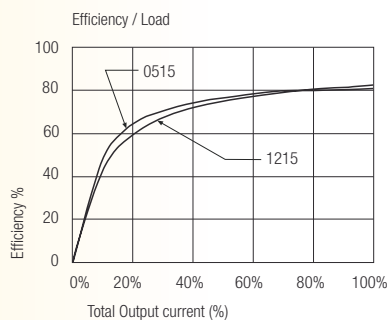
RN-xx09S



RN-xx12S

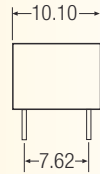
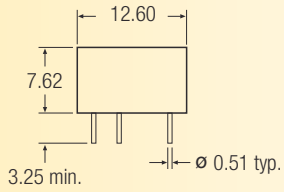


RN-xx15S

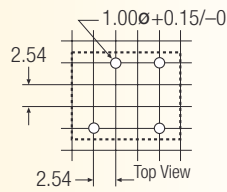
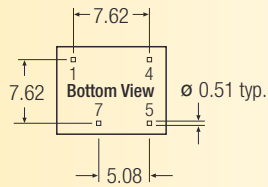


Package Style and Pinning (mm)

8 PIN DIP Package



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