

Features

Unregulated Converters

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

ECONOLINE

DC/DC-Converter

RN Series

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

Specifications (Core Operating Area)

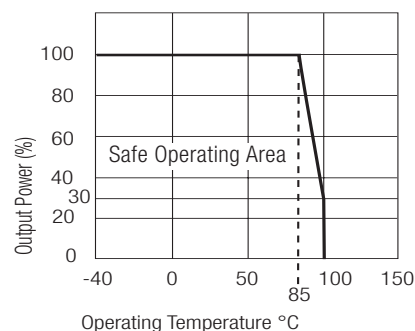
Input Voltage Range			±10%
Output Voltage Accuracy			±5%
Line Voltage Regulation			1.2%/1% of Vin max.
Load Voltage Regulation (10% to 100% full load)	3.3V output types		20% max.
	5V output type		15% max.
	9V, 12V, 15V, 24V output types		10% max.
Output Ripple and Noise (20MHz limited)			75mVp-p max.
Operating Frequency			50kHz min. / 100kHz typ. / 105kHz max.
Efficiency at Full Load			70% min. / 75% typ.
No Load Power Consumption			106mW min. / 153mW typ. / 210mW max.
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
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

1.25 Watt DIP8 Single Output



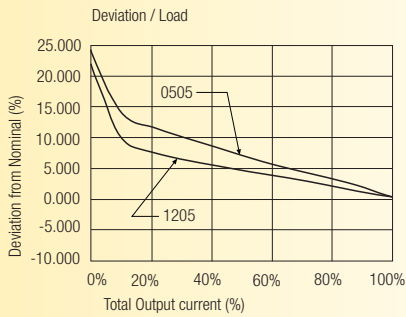
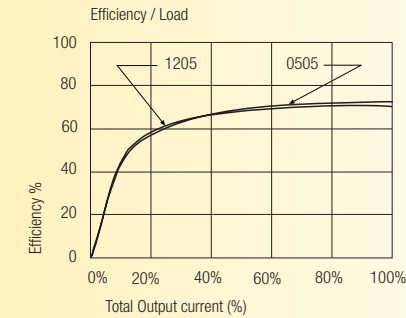
RECOM

Derating-Graph (Ambient Temperature)

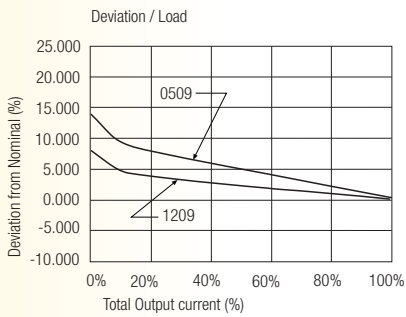
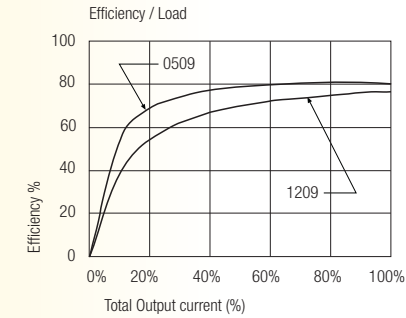


Typical Characteristics

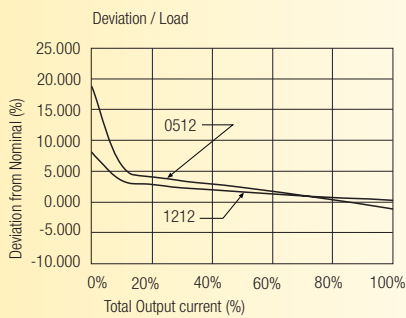
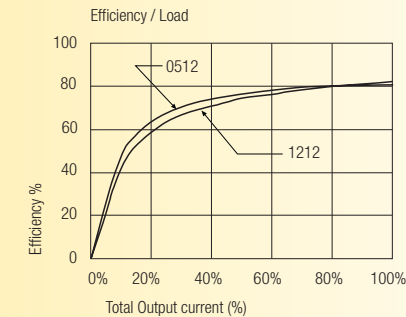
RN-xx05S



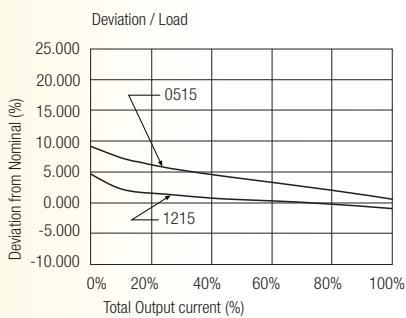
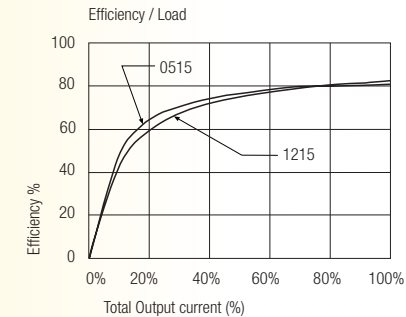
RN-xx09S



RN-xx12S

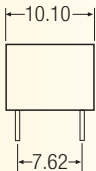
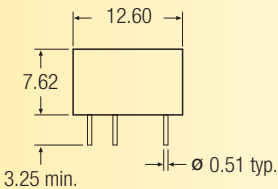


RN-xx15S

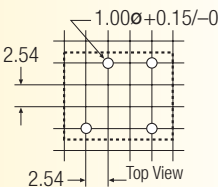
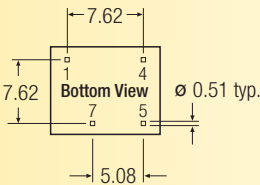


Package Style and Pinning (mm)

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	