

Features

Unregulated Converters

- Safety standards and approvals: EN 60950 certified, rated for 250VAC (LVD test report)
- UL-60950-1 / CSA C22.2 certified
- 6kVDC Isolation
- UL94V-0 Package Material
- Optional Continuous Short Circuit Protected
- Fully Encapsulated
- Efficiency to 82%

Selection Guide

Part Number	Input Voltage (VDC)	Rated Output Voltage (VDC)	Output Current Full Load (mA)
DIP24 (SMD) Miniature	(VDC)	(VDC)	(mA)
RV-xx3.3S	3.3, 5, 9, 12, 15, 24	3.3	600
RV-xx05S	3.3, 5, 9, 12, 15, 24	5	400
RV-xx09S	3.3, 5, 9, 12, 15, 24	9	222
RV-xx12S	3.3, 5, 9, 12, 15, 24	12	167
RV-xx15S	3.3, 5, 9, 12, 15, 24	15	133
RV-xx24S	3.3, 5, 9, 12, 15, 24	24	83
RV-xx3.3D	3.3, 5, 12, 15, 24	±3.3	±300
RV-xx05D	3.3, 5, 12, 15, 24	±5	±200
RV-xx09D	3.3, 5, 12, 15, 24	±9	±111
RV-xx12D	3.3, 5, 12, 15, 24	±12	±83
RV-xx15D	3.3, 5, 12, 15, 24	±15	±67
RV-xx24D	3.3, 5, 12, 15, 24	±24	±42

xx = Input Voltage

* add Suffix "P" for Continuous Short Circuit Protection, e.g. RV-0505S/P, RV-0505D/P

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)	200mVp-p max.		
Operating Frequency	20kHz min. / 50kHz typ. / 85kHz max.		
Efficiency at Full Load	70% min. / 75% typ.		
No Load Power Consumption	282mW min. / 338mW typ. / 430mW max.		
Isolation Voltage (tested for 1 second)	6000VDC min.		
Rated Working Voltage (long term isolation)	see Application Notes		
Isolation Capacitance	2pF min. / 12pF max.		
Isolation Resistance	15 GΩ min.		
Short Circuit Protection P-Suffix	1 Second 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	9g		
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1154 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F	168 x 10 ³ hours

ECONOLINE

DC/DC-Converter

RV Series

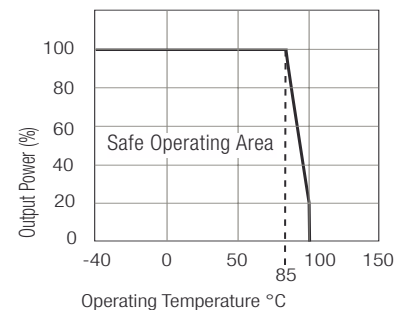
2 Watt DIP24 Miniature Single & Dual Output



EN-60950-1 Certified
UL-60950-1 Certified
EN-60601-1 Certified

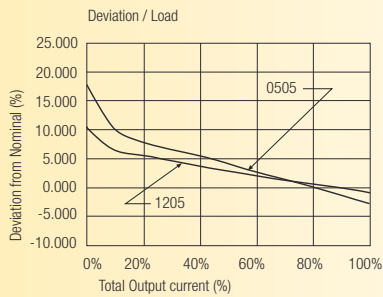
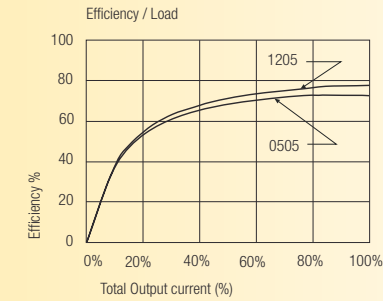


Derating-Graph (Ambient Temperature)

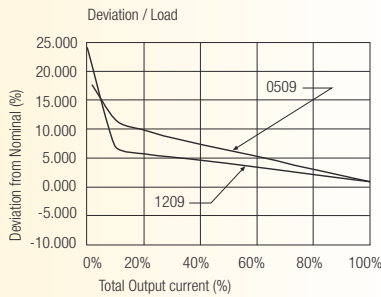
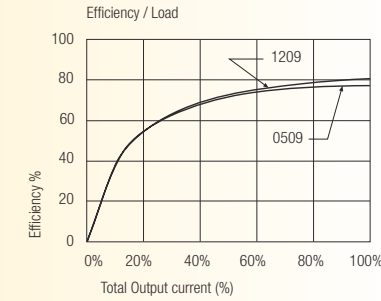


Typical Characteristics

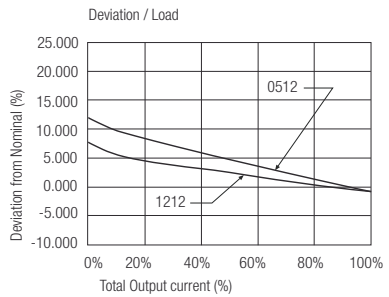
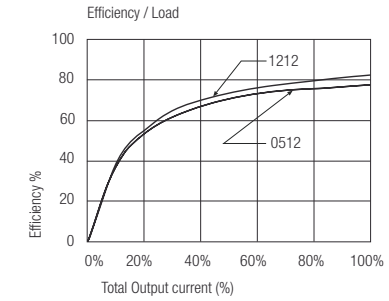
RV-xx05S



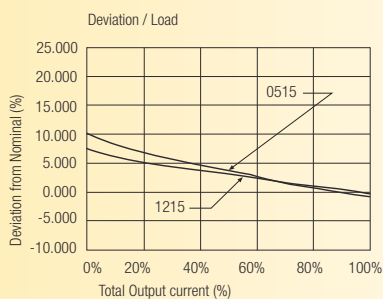
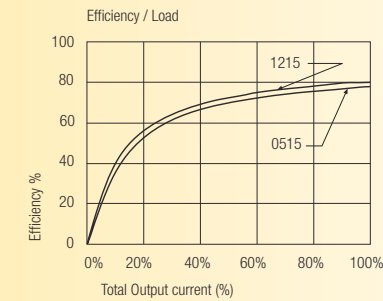
RV-xx09S



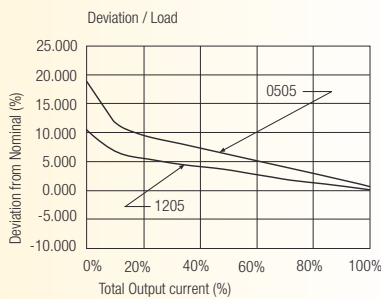
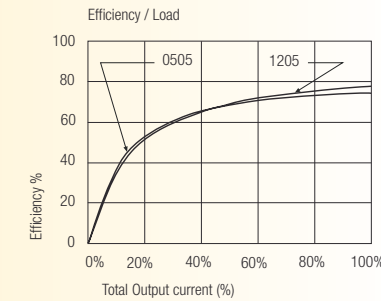
RV-xx12S



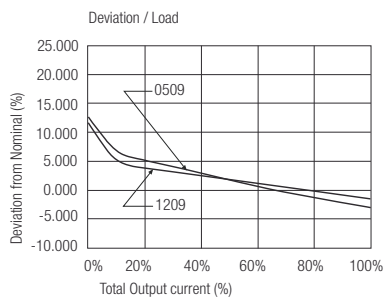
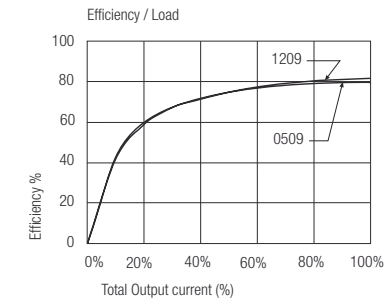
RV-xx15S



RV-xx05D

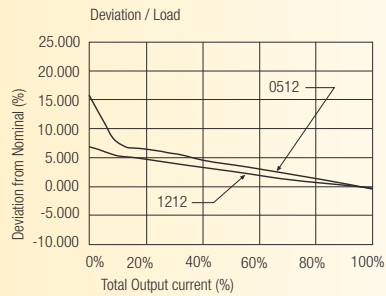
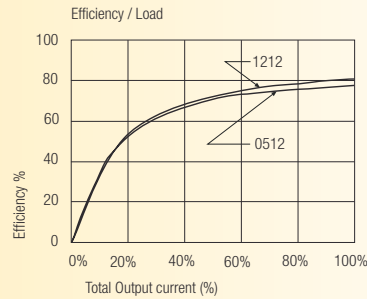


RV-xx09D

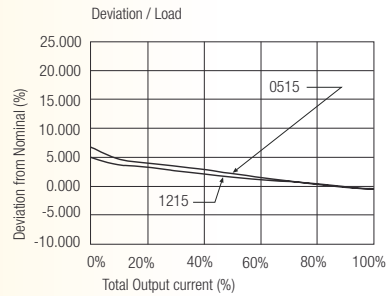
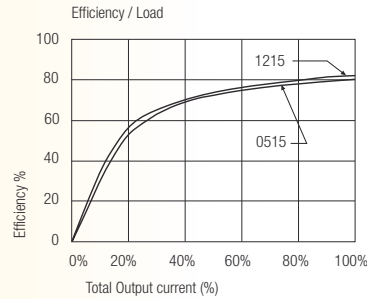


Typical Characteristics

RV-xx12D

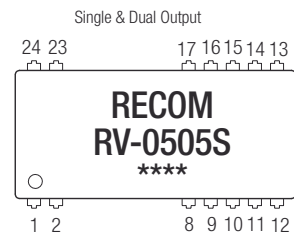
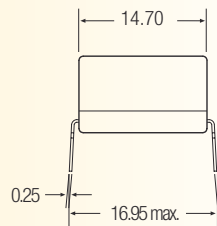
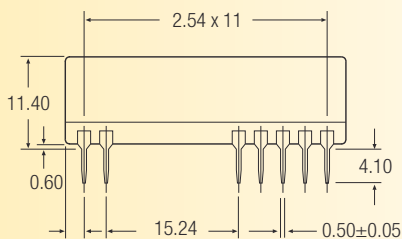


RV-xx15D

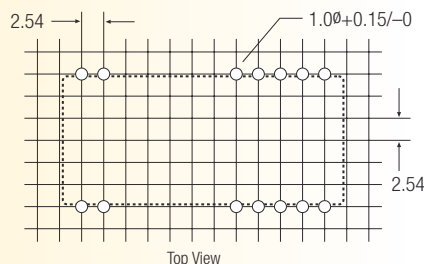
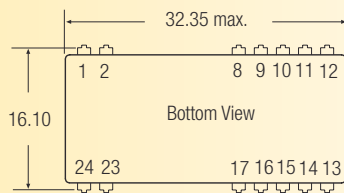


Package Style and Pinning (mm)

24 PIN DIP Miniature Package Style



Recommended Footprint Details



Pin Connections		Pin Connections	
Pin #	Single	Pin #	Dual
1	+Vin	1	+Vin
2	-Vin	2	-Vin
8, 9, 11, 14	NC	8, 17	-Vout
10, 15	-Vout	9, 11, 14, 16, 23, 24	NC
12 & 13	+Vout	10 & 15	Com
16, 17, 23, 24	NC	12, 13	+Vout
NC = No Connection		NC = No Connection	

XX.X ± 0.5 mm
XX.XX ± 0.25 mm