

## Features

### Unregulated Converters

- Safety standards and approvals: EN 60950 certified, rated for 250VAC (LVD test report)
- UL-60950-1 / CSA C22.2 certified
- 5.2kVDC Isolation
- Power Sharing
- Pin Compatible with RH & RK Series, SIP DC-DC Converters
- UL94V-0 Package Material
- Efficiency to 82%

**ECONOLINE**  
DC/DC-Converter

# RP Series

### Selection Guide

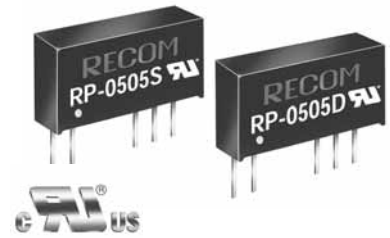
Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
SIP 7	(VDC)	(VDC)	(mA)	(%)
RP-xx3.3S	5, 9, 12, 15, 24	3.3	303	70
RP-xx05S	3.3, 5, 9, 12, 15, 24	5	200	70-72
RP-xx09S	3.3, 5, 9, 12, 15, 24	9	111	75
RP-xx12S	3.3, 5, 9, 12, 15, 24	12	84	75-78
RP-xx15S	3.3, 5, 9, 12, 15, 24	15	66	80
RP-xx24S	3.3, 5, 9, 12, 15, 24	24	42	80
RP-xx3.3D	5, 9, 12, 15, 24	±3.3	±152	70
RP-xx05D	3.3, 5, 9, 12, 15, 24	±5	±100	74-76
RP-xx09D	3.3, 5, 9, 12, 15, 24	±9	±56	75
RP-xx12D	3.3, 5, 9, 12, 15, 24	±12	±42	79-82
RP-xx15D	3.3, 5, 9, 12, 15, 24	±15	±33	80-82
RP-xx24D	3.3, 5, 9, 12, 15, 24	±24	±21	80

xx = Input Voltage

### Specifications (Core Operating Area)

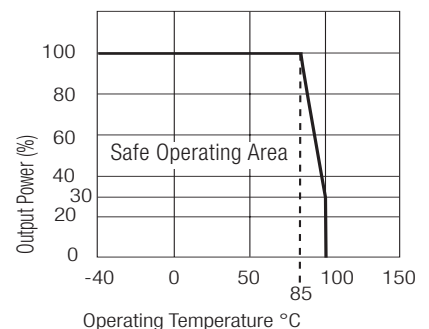
Input Voltage Range		±10%
Output Voltage Accuracy		±5%
Line Voltage Regulation		1.2%/1% of Vin max.
Load Voltage Regulation (10% to 100% full load)	3.3V output types	20% max.
	5V output type	15% max.
	9V, 12V, 15V, 24V output types	10% max.
Output Ripple and Noise (20MHz limited)		100mVp-p max.
Operating Frequency		57kHz min. / 100kHz typ. / 105kHz max.
Efficiency at Full Load		70% min. / 80% typ.
No Load Power Consumption		120mW min. / 156mW typ. / 210mW max.
Isolation Voltage (tested for 1 second)		5.200VDC min.
Rated Working Voltage (long term isolation)		see Application Notes
Isolation Capacitance		4pF min. / 10pF max.
Isolation Resistance		20 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		2.4g
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F
(+85°C)		using MIL-HDBK 217F
		928 x 10 <sup>3</sup> hours
		151 x 10 <sup>3</sup> hours

## 1 Watt SIP 7 Single & Dual Output



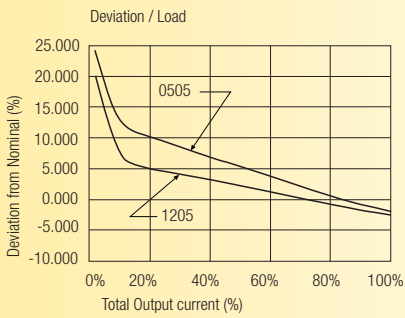
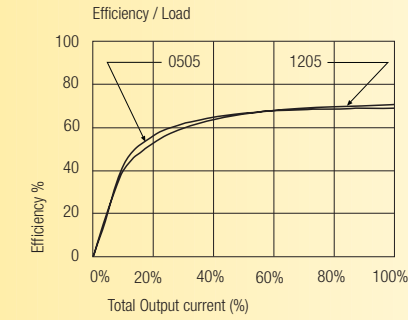
**RECOM**

## Derating-Graph (Ambient Temperature)

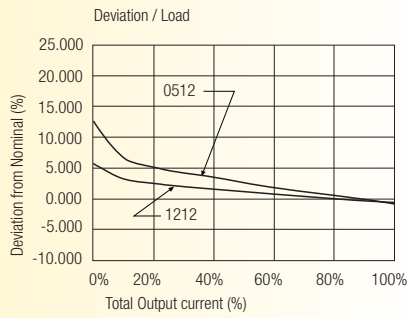
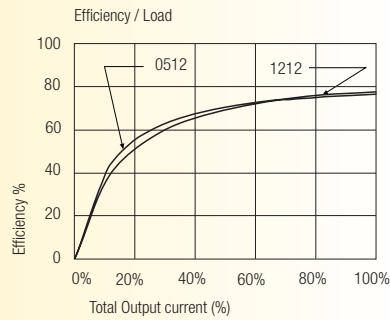


**Typical Characteristics**

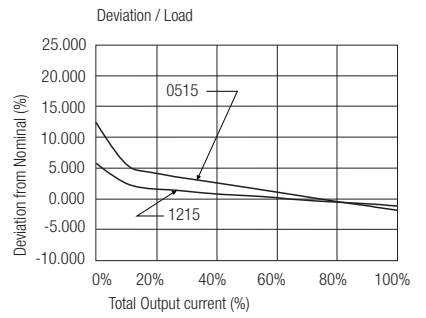
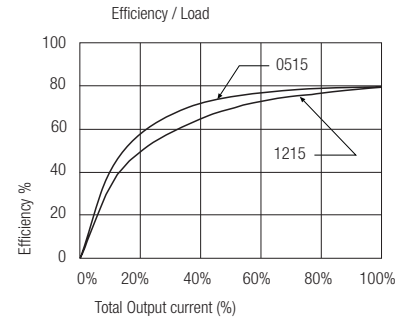
**RP-xx05S**



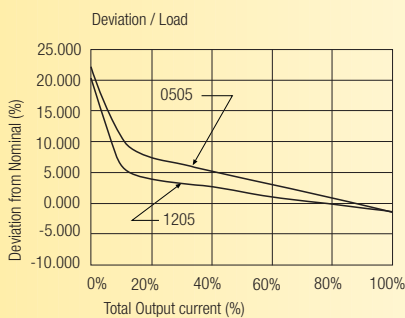
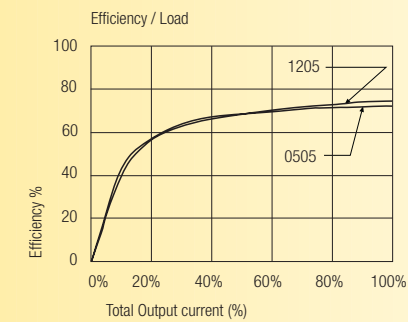
**RP-xx12S**



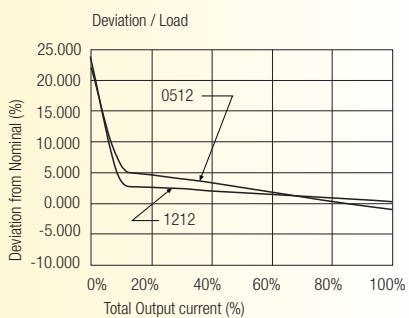
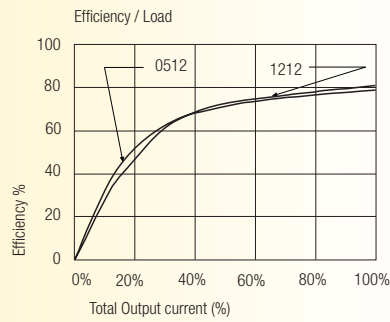
**RP-xx15S**



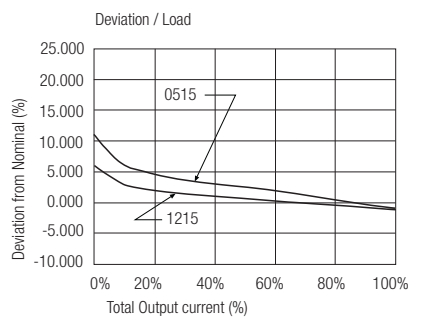
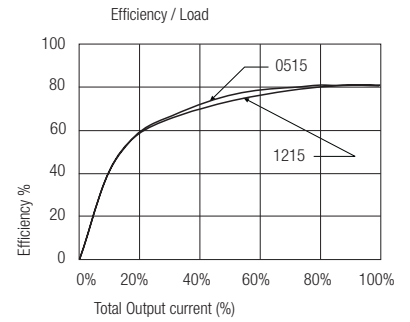
**RP-xx05D**



**RP-xx12D**

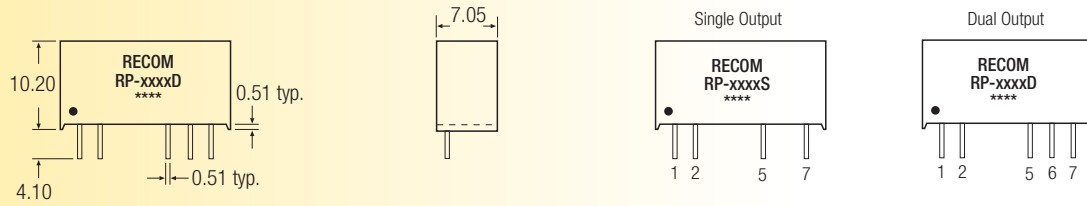


**RP-xx15D**

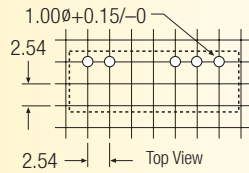
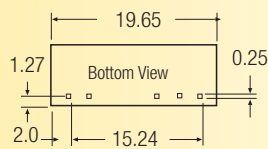


**Package Style and Pinning (mm)**

**7 PIN SIP Package**



**Recommended Footprint Details**



**Pin Connections**

Pin #	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	No Pin	Com
7	+Vout	+Vout
XX.X ± 0.5 mm		
XX.XX ± 0.25 mm		