

## Features

## Unregulated Converters

Rev.0

- EN 60950 certified, rated for 250VAC
- UL-60950-1 / CSA C22.2 certified
- 5.2kVDC Isolation for 1 Minute
- Optional Continuous Short Circuit Protected
- 2 Chamber Transformer System
- UL94V-0 Package Material
- Efficiency to 80 %

## Description

The RxxPxxS\_D Series of DC/DC Converters are fully certified to EN 60950/ UL-60950-1 and CSA C22.2. This makes them ideal for all telecom and safety applications where approved isolation is required.

## Selection Guide

Part Number SIP 7	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RxxP3.3S	5, 9, 12, 15, 24	3.3	303	70
RxxP05S	5, 9, 12, 15, 24	5	200	70-75
RxxP09S	5, 9, 12, 15, 24	9	111	70-75
RxxP12S	5, 9, 12, 15, 24	12	84	70-75
RxxP15S	5, 9, 12, 15, 24	15	66	75-80
RxxP3.3D	5, 9, 12, 15, 24	±3.3	±151	70
RxxP05D	5, 9, 12, 15, 24	±5	±100	70-75
RxxP09D	5, 9, 12, 15, 24	±9	±55	70-75
RxxP12D	5, 9, 12, 15, 24	±12	±41	70-75
RxxP15D	5, 9, 12, 15, 24	±15	±33	75-80

xx = Input Voltage. Other input and output voltage combinations available on request.

\* add Suffix "P" for Continuous Short Circuit Protection, e.g. R05P05S/P, R05P05D/P

## Specifications (measured at $T_A = 25^\circ\text{C}$ , nominal input voltage, full load and after warm-up)

Input Voltage Range		±10%	
Output Voltage Accuracy		±5%	
Line Voltage Regulation		1.2%/1% of $V_{in}$ typ.	
Load Voltage Regulation (10% to 100% full load)	3.3, 5V output types other output types	15% max. 10% max.	
Output Ripple and Noise (20MHz BW)		200mVp-p max.	
Operating Frequency		20kHz min. / 50kHz typ. / 85kHz max.	
Efficiency at Full Load		65% min. / 75% typ.	
No Load Power Consumption		148mW min. / 220mW typ. / 355mW max.	
Maximum Capacitive Load		33µF / ±10µF	
Isolation Voltage	(tested for 1 minute)	5200VDC min.	
Rated Working Voltage	(long term isolation)	see Application Notes	
Isolation Capacitance		4pF min. / 10pF max.	
Isolation Resistance		15 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		4.3g	
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	2974 x 10 <sup>3</sup> hours
(+85°C)		using MIL-HDBK 217F	728 x 10 <sup>3</sup> hours

## ECONOLINE

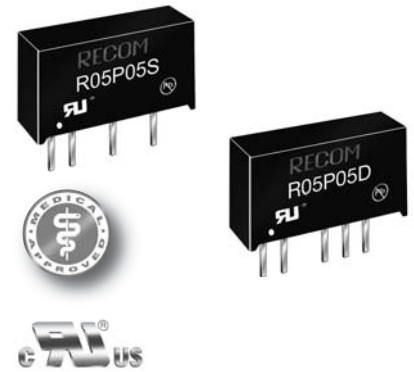
DC/DC-Converter

# RxxPxxS\_D Series

1 Watt

SIP 7

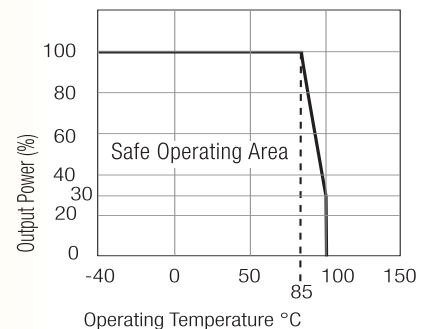
Single & Dual  
Output



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

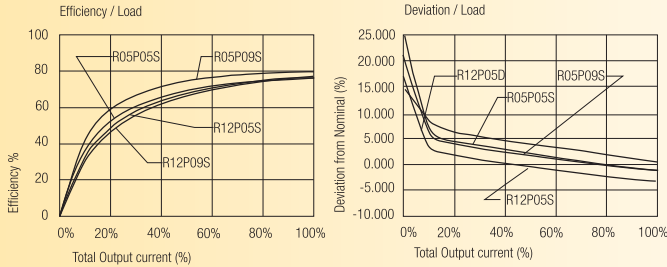
**RECOM**

## Derating-Graph (Ambient Temperature)

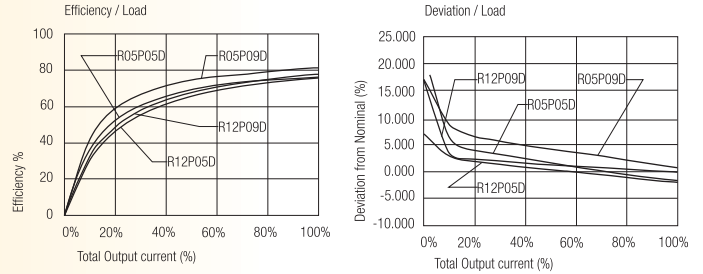


Typical Characteristics, Tolerance Envelope

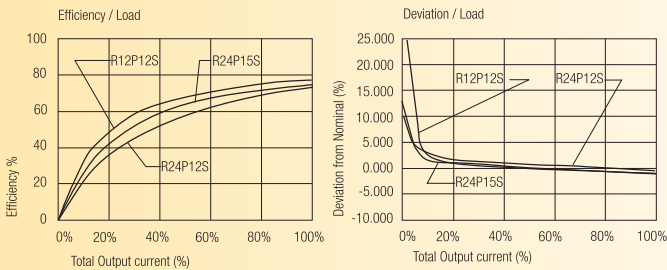
## RxxP05/09S



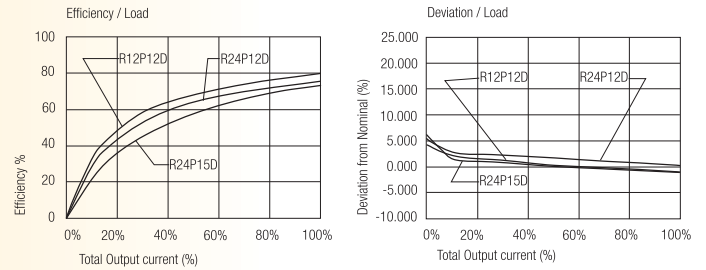
## RxxP05/09D



## RxxP12/15S

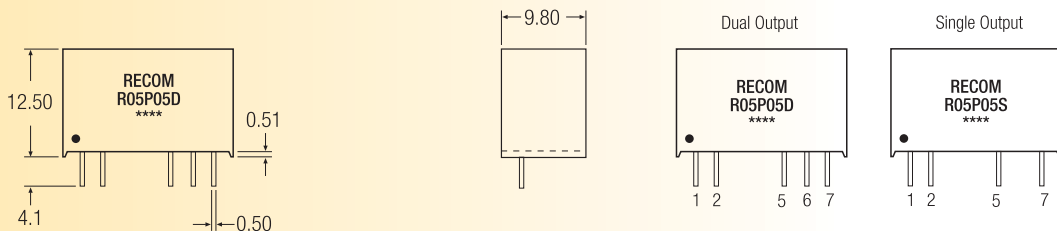


## RxxP12/15D

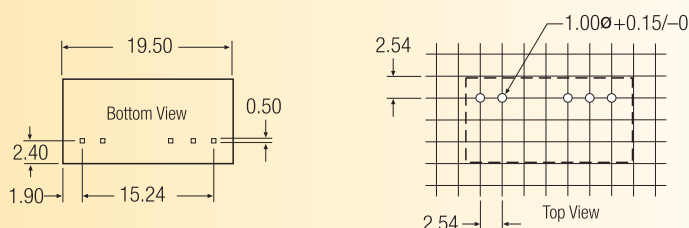


Package Style and Pinning (mm)

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