

Features

Unregulated Converters

- EN 60950 certified, rated for 250VAC
- UL-60950-1 / CSA C22.2 certified
- 5.2kVDC Isolation for 1 Minute
- Optional Continuous Short Circuit Protected
- Wide Operating Temperature Range at full 2 Watts Load, -40°C to +85°C
- Twin Chamber Transformer System
- UL94V-0 Package Material
- Efficiency to 80%

Selection Guide

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
RxxP23.3S	5, 9, 12, 15, 24	3.3	600	70
RxxP205S	5, 9, 12, 15, 24	5	400	70-75
RxxP209S	5, 9, 12, 15, 24	9	222	70-75
RxxP212S	5, 9, 12, 15, 24	12	167	70-75
RxxP215S	5, 9, 12, 15, 24	15	132	75-80
RxxP23.3D	5, 9, 12, 15, 24	±3.3	±300	70
RxxP205D	5, 9, 12, 15, 24	±5	±200	70-75
RxxP209D	5, 9, 12, 15, 24	±9	±111	70-75
RxxP212D	5, 9, 12, 15, 24	±12	±85	70-75
RxxP215D	5, 9, 12, 15, 24	±15	±66	75-80

xx = Input Voltage

* add Suffix "P" for Continuous Short Circuit Protection, e.g. R05P205S/P, R05P205D/P

Description

The RxxP2xxS_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.

Specifications

(measured at $T_A = 25^\circ\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

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. / 80% max.
No Load Power Consumption		148mW min. / 220mW typ. / 355mW max.
Isolation Voltage (tested for 1 minute)		5200VDC min.
Rated Working Voltage (long term isolation)		see Application Notes
Isolation Capacitance		1.5pF min. / 10pF 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		4.3g

continued on next page

ECONOLINE

DC/DC-Converter

RxxP2xx S_D Series

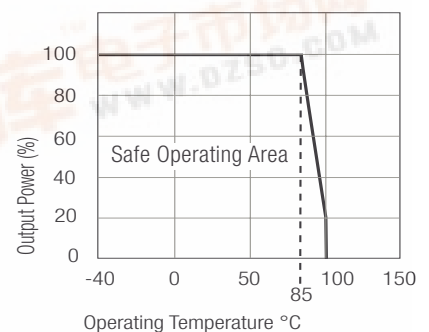
2 Watt SIP 7 Single & Dual Output



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

RECOM

Derating-Graph (Ambient Temperature)

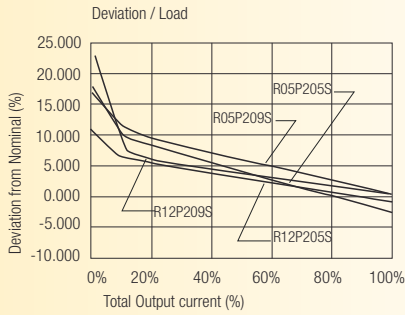
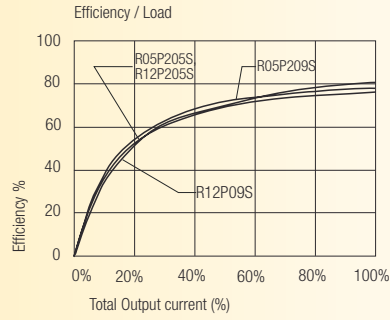


Specifications (measured at $T_A = 25^\circ\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

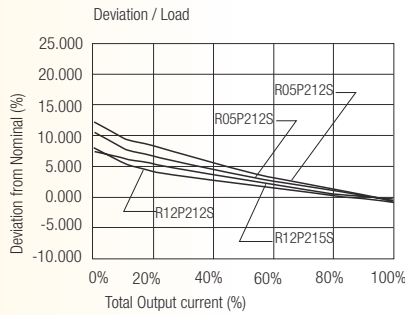
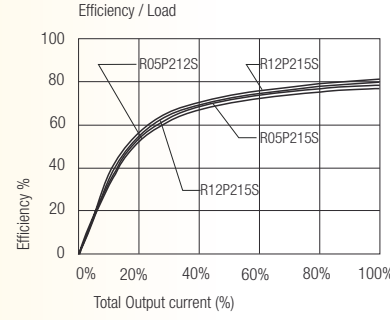
MTBF (+25°C)	using MIL-HDBK 217F	Single types	2113 x 10 ³ hours
	Detailed Information see Application Notes chapter "MTBF"		Dual types
(+85°C)	using MIL-HDBK 217F	Single types	299 x 10 ³ hours
			Dual types

Typical Characteristics, Tolerance Envelope

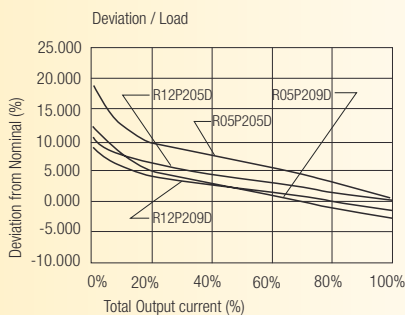
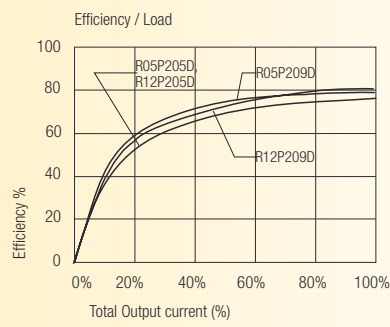
RxxP205/09S



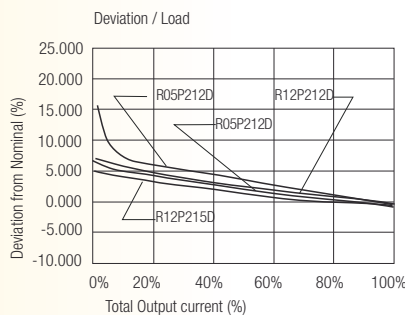
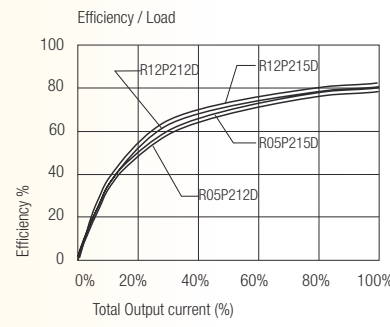
RxxP212/15S



RxxP205/09D

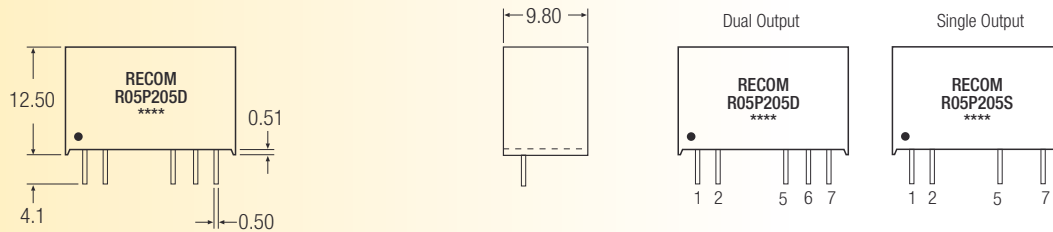


RxxP212/15D

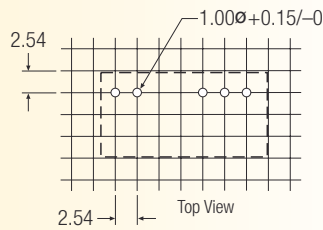
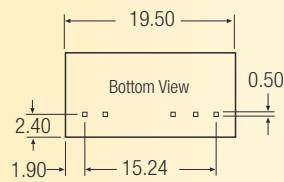


Package Style and Pinning (mm)

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