

Features

Unregulated Converters

Rev.0

- Pot-Core Transformer - separated windings
- High 5.2kVDC Isolation in compact size
- Optional Continuous Short Circuit Protected
- Pin Compatible with RH & RK Series
- Approved for Medical Applications
- UL and EN Safety Approvals
- Efficiency to 82 %

Description

RP series converters have very high isolation, making them suitable for IGBT driver and medical applications.

Selection Guide

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

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

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

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

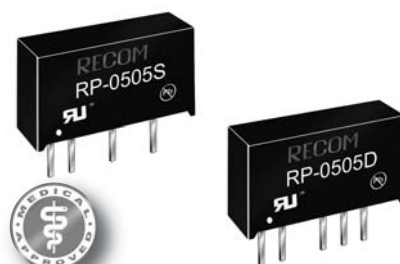
Input Voltage Range	±10%	
Output Voltage Accuracy	±5%	
Line Voltage Regulation	1.2%/1% of V_{in} typ.	
Load Voltage Regulation (10% to 100% full load)	3.3V output types 5V output type 9V, 12V, 15V, 24V output types	20% max. 15% max. 10% max.
Output Ripple and Noise (20MHz limited)	100mVp-p max.	
Operating Frequency	57kHz min. / 100kHz typ. / 105kHz max.	
Efficiency at Full Load	70% min. / 80% typ.	
No Load Power Consumption	120mW min. / 156mW typ. / 460mW max.	
Maximum Capacitive Load	33µF / ±10µF	
Isolation Voltage (tested for 1 second)	5200VDC min.	
Rated Working Voltage (long term isolation)	see Application Notes	
Isolation Capacitance	4pF min. / 10pF max.	
Isolation Resistance	20 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	2.4g	
MTBF (+25°C)	Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F 928 x 10 ³ hours
(+85°C)		using MIL-HDBK 217F 150 x 10 ³ hours

ECONOLINE

DC/DC-Converter

RP Series

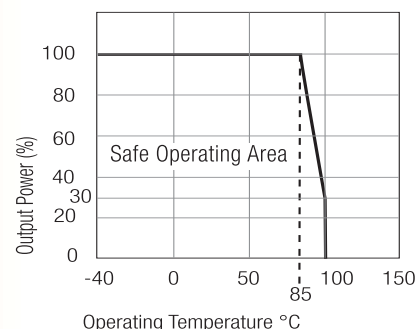
1 Watt SIP 7 Single & Dual Output



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

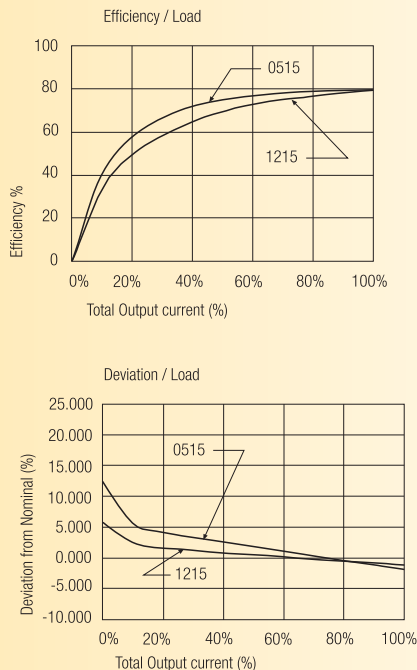
RECOM

Derating-Graph (Ambient Temperature)

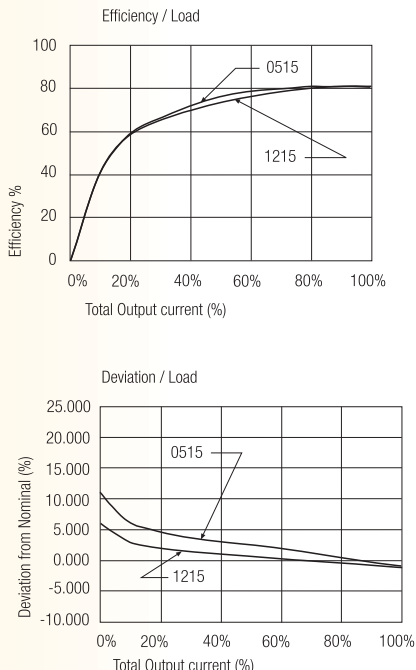


Typical Characteristics

RP-xx15S

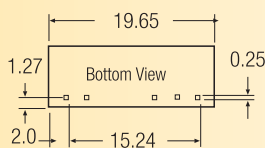
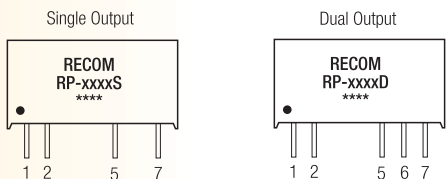
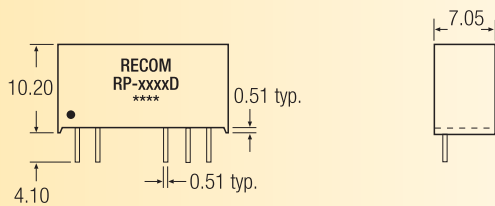


RP-xx15D

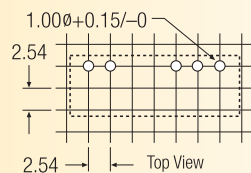


Package Style and Pinning (mm)

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