

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	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)
SIP 7				
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		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		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

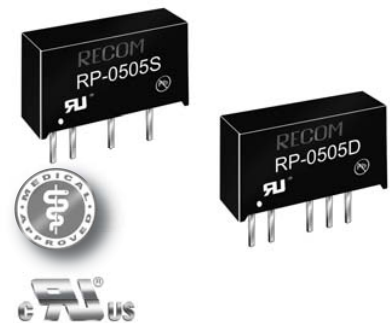
DC/DC-Converter

RP Series

1 Watt

SIP 7

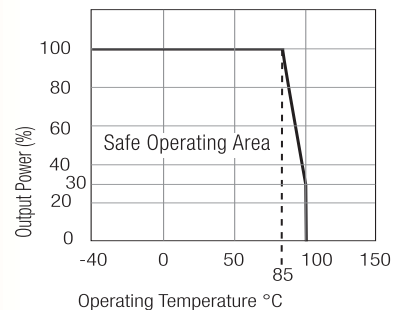
Single & Dual Output



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

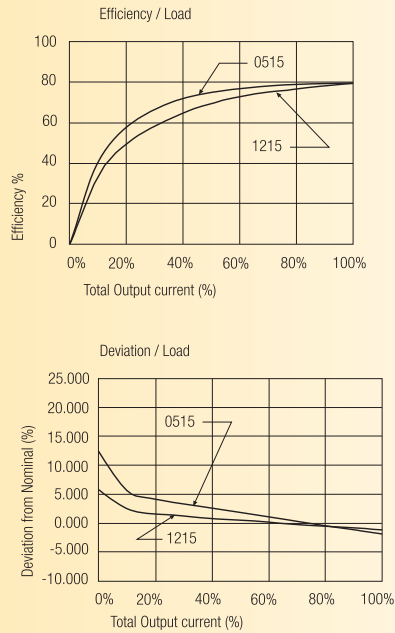
RECOM

Derating-Graph (Ambient Temperature)

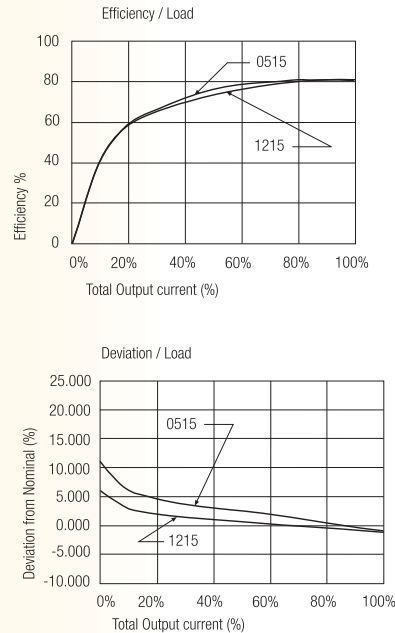


Typical Characteristics

RP-xx15S

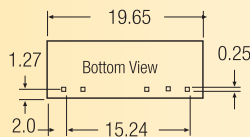
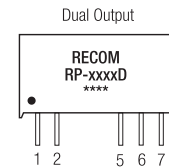
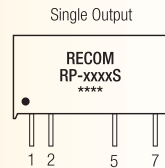
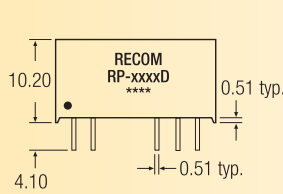


RP-xx15D

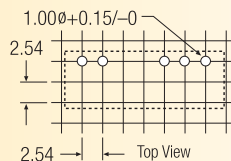


Package Style and Pinning (mm)

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