

Features

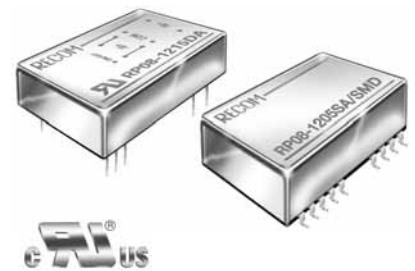
Regulated Converters

- 2:1 Wide Input Voltage Range
- 8 Watts Regulated Output Power
- 1.6kVDC Isolation
- Low Profile, 10.2 mm Height
- Over Current Protection
- Five-Sided Shield
- No Derating to 71°C
- Non-Conductive Black Plastic
- UL 1950 Component Recognized
- Standard DIP24 and SMD-Pinning
- 2 Year Warranty
- Efficiency to 85%

POWERLINE DC/DC-Converter

RP08- S_DA Series

8 Watt DIP24 & SMD, Single & Dual Output



Selection Guide 5V, 12V, 24V and 48V Input Types

Part Number	Input Range	Output Voltage	Output Current	Input ⁽⁴⁾ Current	Efficiency ⁽⁵⁾	Capacitive ⁽⁶⁾ Load max.
DIP24 (SMD)	VDC	VDC	mA	mA	%	μF
RP08-123.3SA**	9-18	3.3	2000	724	80	3300
RP08-1205SA**	9-18	5	1500	801	82	1600
RP08-1212SA**	9-18	12	666	833	84	350
RP08-1215SA**	9-18	15	533	843	83	240
RP08-243.3SA**	18-36	3.3	2000	362	80	3300
RP08-2405SA**	18-36	5	1500	396	83	1600
RP08-2412SA**	18-36	12	666	416	84	350
RP08-2415SA**	18-36	15	533	416	84	240
RP08-483.3SA**	36-75	3.3	2000	181	80	3300
RP08-4805SA**	36-75	5	1500	198	83	1600
RP08-4812SA**	36-75	12	666	208	84	350
RP08-4815SA**	36-75	15	533	208	84	240
RP08-1205DA**	9-18	±5	±800	843	83	±1000
RP08-1212DA**	9-18	±12	±333	833	84	±160
RP08-1215DA**	9-18	±15	±267	834	84	±100
RP08-2405DA**	18-36	±5	±800	427	82	±1000
RP08-2412DA**	18-36	±12	±333	422	83	±160
RP08-2415DA**	18-36	±15	±267	411	85	±100
RP08-4805DA**	36-75	±5	±800	211	83	±1000
RP08-4812DA**	36-75	±12	±333	206	85	±160
RP08-4815DA**	36-75	±15	±267	206	85	±100

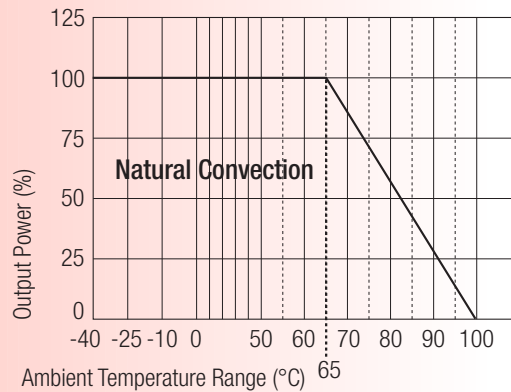
** add Suffix SMD for SMD package

Description

The A-Series of DC/DC Converters are fully certified to EN 60950: 2000. This makes them ideal for all Telecom and safety applications where approved isolation is required. They also meet UL 1950 and CSA 950 standards.

Derating-Graph (Ambient Temperature)

RP08-4805SA



Derating graphs are valid only for the shown part numbers. If you need detailed derating-information about a part-number not shown here please contact our technical customer service at info@recom-development.at

Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	12V nominal input	9-18VDC
	24V nominal input	18-36VDC
	48V nominal input	36-75VDC
Input Filter		Pi Type
Input Surge Voltage (100 ms max.)	12V Input	36VDC
	24V Input	50VDC
	48V Input	100VDC
Input Reflected Ripple (nominal Vin and full load)		20mAp-p
Start Up Time (nominal Vin and constant resistor load)		600ms typ.
Remote ON/OFF (see note 8)	DC-DC ON	Open or 3.5V < Vr < 12V
	DC-DC OFF	Short or 0V < Vr < 1.2V
Remote OFF input current	Nominal input	2.5mA
Output Power		8W max.
Output Voltage Accuracy (full Load and nominal Vin)		±2%
Minimum Load (see Note 1)		10% of FL
Line Regulation (LL-HL at full load)		±0.2%
Load Regulation (25% to 100% FL)	Single	±0.5%
	Dual	±1%
Cross Regulation (asymmetrical load 25%/100% FL)		±5%
Ripple and Noise (20MHz bandwith)		50mVp-p
Temperature Coefficient		±0.02%/°C, max.
Transient Response (25% load step change)		200µS

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Specifications (typical at nominal input and 25°C unless otherwise noted)

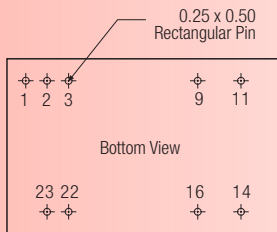
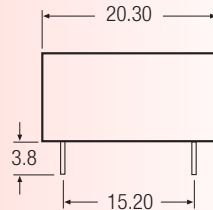
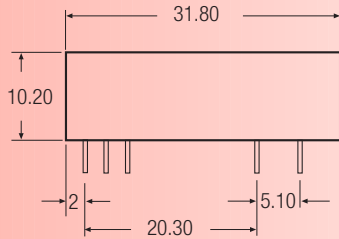
Over Load Protection (% of full load at nominal Vin)		150% typ
Short Circuit Protection		Continuous, automatic recovery
Efficiency		see „Selection Guide“ table
Isolation Voltage	In to out I/O to case I/O to case	1.600VDC min. DIP type 1.600VDC min. SMD type 1.000VDC min.
Isolation Resistance		10 ⁹ Ω min.
Isolation Capacitance		300pF max.
Operating Frequency		100kHz min.
Approved to Safety Standards		UL 1950, EN60950
Operating Temperature Range		-40°C to +85°C(with derating)
Maximum Case Temperature		+100°C
Storage Temperature Range		-55°C to +105°C
Thermal Impedance	Natural convection	20°C/Watt
Thermal Shock		MIL-STD-810D
Vibration		10-55Hz, 2G, 30 Min. along X, Y and Z
Relative Humidity		5% to 95% RH
Case Material		Nickel-Coated copper
Base Material		Non-conductive black plastic
Potting Material		Epoxy (UL94-V0)
Conducted Emissions	EN55022	Level A
Radiated Emissions	EN55022	Level A
ESD	EN61000-4-2	Perf. Criteria 2
Radiated Immunity	EN61000-4-3	Perf. Criteria 2
Fast Transient	EN61000-4-4	Perf. Criteria 2
Surge	EN61000-4-5	Perf. Criteria 2
Conducted Immunity	EN61000-4-6	Perf. Criteria 2
Weight	DIP SMD	16g 18g
Dimensions	DIP SMD	31.8 x 20.3 x 10.2mm 32.0 x 20.3 x 10.9mm
MTBF (see note 2)		3.165 x 10 ⁶ Hours

Notes :

1. The RP08 series requires a minimum of 10% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.
2. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C (Ground fixed and controlled environment).
3. Start up voltage : 10VDC
4. Maximum value at nominal input voltage and full load of standard type.
5. Typical value at nominal input voltage and full load.
6. Test by minimum Vin and constant resistor load.
7. The ON/OFF control pin voltage is referenced to negative input.
8. See application notes for EMI-filtering.

Package Style and Pinning (mm)

DIP24 Package Style



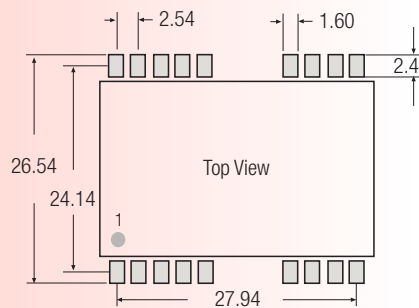
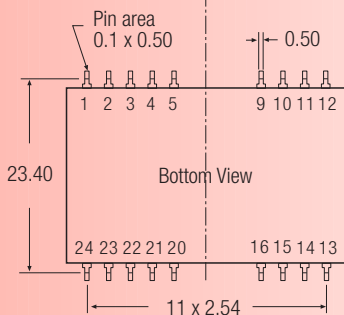
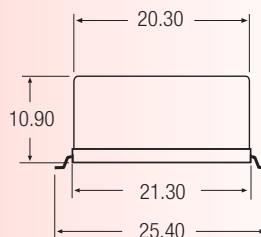
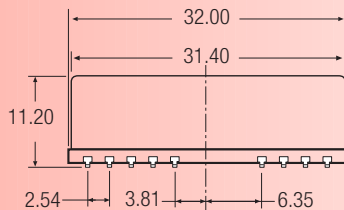
Pin Connections

Pin #	Single	Dual
1	ON/OFF	ON/OFF
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22	+Vin	+Vin
23	+Vin	+Vin

NC = No Connection

Pin Pitch Tolerance ± 0.35 mm

SMD Package Style



SMD Package Style

Same spec. as the original DIP spec. and pin definition, excl. of the SMD type pin.

Pin Connections

Pin #	Single	Dual
1	ON/OFF	ON/OFF
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22	+Vin	+Vin
23	+Vin	+Vin
Others	NC	NC

NC = No Connection

Pin Pitch Tolerance ± 0.35 mm