

POWERLINE - DC/DC-Converter

G-Ser., 3W, DIP24, Regul. & Wide Input Range (Single & Dual Output)



RECOM

Features

- 3 Watts in DIP-24 Package
- International Safety Standard Approvals
- 4.5-6V, 9-18V, 18-36 and 36-75V Input
- No Derating to 71°C
- Typical Efficiency up to 80%
- Regulated Outputs
- Wide Input Voltage Range
- Over Current Protection, Continuous
- Pi Input Filter
- Low Profile, 10.2 mm Height
- MTBF 1.09 x 10⁶ Hours
- 2 Year Warranty
- Standard and SMD-Pinning
- UL 1950 E 196683 Recognized



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

Part Number	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Max. Capacitive Load (µF)
RP03-053.3SG	4.5-6.0	3.3	600	61	2200
RP03-0505SG	4.5-6.0	5	600	70	1000
RP03-0512SG	4.5-6.0	12	250	75	170
RP03-0515SG	4.5-6.0	15	200	75	110
RP03-0505DG	4.5-6.0	±5	±300	70	±500
RP03-0512DG	4.5-6.0	±12	±125	75	±96
RP03-0515DG	4.5-6.0	±15	±100	75	±47
RP03-123.3SG	9-18	3.3	600	65	2200
RP03-1205SG	9-18	5	600	74	1000
RP03-1212SG	9-18	12	250	79	170
RP03-1215SG	9-18	15	200	79	110
RP03-1205DG	9-18	±5	±300	74	±500
RP03-1212DG	9-18	±12	±125	79	±96
RP03-1215DG	9-18	±15	±100	79	±47
RP03-243.3SG	18-36	3.3	600	66	2200
RP03-2405SG	18-36	5	600	74	1000
RP03-2412SG	18-36	12	250	80	170
RP03-2415SG	18-36	15	200	80	110
RP03-2405DG	18-36	±5	±300	74	±500
RP03-2412DG	18-36	±12	±125	80	±96
RP03-2415DG	18-36	±15	±100	80	±47
RP03-483.3SG	36-75	3.3	600	68	2200
RP03-4805SG	36-75	5	600	75	1000
RP03-4812SG	36-75	12	250	80	170
RP03-4815SG	36-75	15	200	80	110
RP03-4805DG	36-75	±5	±300	75	±500
RP03-4812DG	36-75	±12	±125	80	±96
RP03-4815DG	36-75	±15	±100	80	±47

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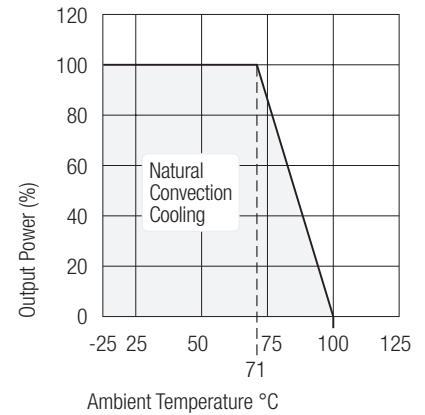
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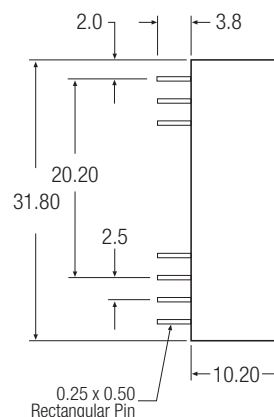
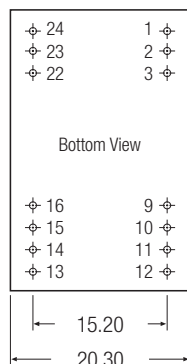
Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range	5V types nominal	4.5-6V
	12V types nominal	9-18V
	24V types nominal	18-36V
	48V types nominal	36-75V
Input Filter	Pi Type	
Voltage Accuracy	±2%	
Voltage Balance, Dual Outputs	±2%	
Ripple and Noise (20MHz BW)	3.3V/5V	75mA
		±1%/V _{p-p} of V _{out} max.
Line Regulation	±0.5%	
Load Regulation (FL-1/4FL)	Single Output	±0.2%
	Dual Output	±2%
Temperature Coefficient	±0.02%/°C	
Switching Frequency	100kHz min.	
Isolation Voltage	I/O	1600VDC min.
	O/O (only DS) Suffix "DS" RP03-*DS*	500VDC min.
	"H" Models	3000VDC min.
Isolation Resistance	10 ⁹ Ω min.	
Operating Temperature Range	-25°C to +71°C	
Storage Temperature Range	-55°C to +105°C	
Case Temperature	100°C max.	
Cooling	Free-air Convection	
Case Material	Non-Conductive Black Plastic	
Dimensions	DIP24	31.8 x 20.3 x 10.2 mm
	SMD	32.0 x 20.3 x 10.9 mm
MTBF (MIL-HDBK-217F TA = 25°C full load)	1.09 x 10 ⁶ Hours	



Package Style and Pinning (mm)

DIP24 Package Style



Pin Connections

Pin #	Single	Dual
1	No Pin	No Pin
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Common
10	NC	NC
11	NC	-Vout
12	No Pin	No Pin
13	No Pin	No Pin
14	+Vout	+Vout
15	NC	NC
16	-Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin
24	No Pin	No Pin

NC = No Connection

Pin Pitch Tolerance ±0.35 mm

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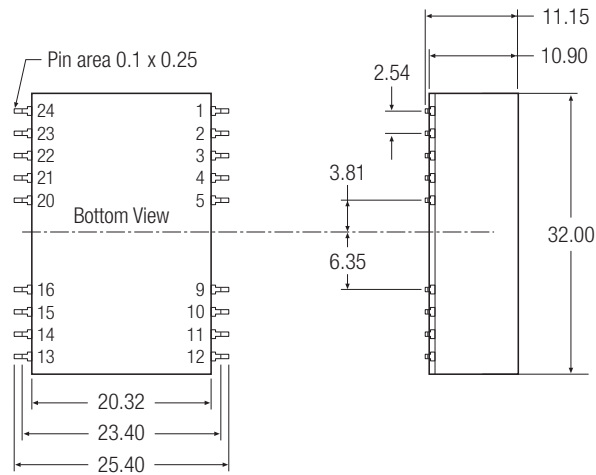
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Package Style and Pinning (mm)

SMD Package Style



Pin Connections

Pin #	Single	Dual
1	NC	NC
2	-Vin	-Vin
3	-Vin	-Vin
4 & 5	NC	NC
9	NC	Common
10	NC	NC
11	NC	-Vout
12 & 13	NC	NC
14	+Vout	+Vout
15	NC	NC
16	-Vout	Common
20 & 21	NC	NC
22	+Vin	+Vin
23	+Vin	+Vin
24	NC	NC

NC = No Connection

Pin Pitch Tolerance ± 0.35 mm