

POWERLINE - DC/DC-Converter

C-Series, 3 Watt, DIP24, Regulated & Wide Input Range (Single & Dual Output)

RECOM

Features

- 3 Watts in DIP24 Package
- 9-18V, 18-36V, and 36-75V Input
- Typical Efficiency up to 80%
- Regulated Outputs
- Over Current Protection, Continuous
- Low Profile, 10.2 mm Height
- No Derating to 71°C
- MTBF1.179 x 10⁶ Hours
- No other Components required
- Five-Sided EMI Shield
- 2 Year Warranty
- Standard and SMT-Pinning
- International Safety Standard Approvals
- UL 1950 E 196683 Recognized



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

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP03-1205SC	9-18 VDC	5 VDC	500 mA	76
RP03-1212SC	9-18 VDC	12 VDC	250 mA	81
RP03-1215SC	9-18 VDC	15 VDC	200 mA	80
RP03-1205DC	9-18 VDC	±5 VDC	±250 mA	77
RP03-1212DC	9-18 VDC	±12 VDC	±125 mA	80
RP03-1215DC	9-18 VDC	±15 VDC	±100 mA	81
RP03-2405SC	18-36 VDC	5 VDC	500 mA	74
RP03-2412SC	18-36 VDC	12 VDC	250 mA	79
RP03-2415SC	18-36 VDC	15 VDC	200 mA	79
RP03-2405DC	18-36 VDC	±5 VDC	±250 mA	74
RP03-2412DC	18-36 VDC	±12 VDC	±125 mA	77
RP03-2415DC	18-36 VDC	±15 VDC	±100 mA	79
RP03-4805SC	36-75 VDC	5 VDC	500 mA	76
RP03-4812SC	36-75 VDC	12 VDC	250 mA	81
RP03-4815SC	36-75 VDC	15 VDC	200 mA	82
RP03-4805DC	36-75 VDC	±5 VDC	±250 mA	74
RP03-4812DC	36-75 VDC	±12 VDC	±125 mA	79
RP03-4815DC	36-75 VDC	±15 VDC	±100 mA	79

Maximum Capacitive Load

RP03-xx05SC	1000µF
RP03-xx12SC	220µF
RP03-xx15SC	150µF
RP03-xx05DC	±470µF
RP03-xx12DC	±100µF
RP03-xx15DC	±68µF

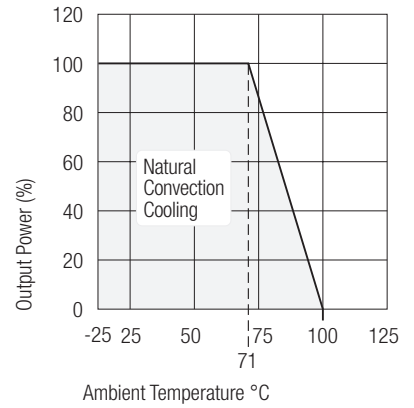
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Specifications (typical at nominal input and 25°C unless otherwise noted)

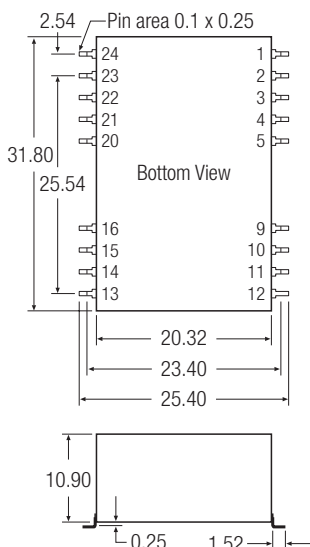
Input Voltage Range	12V types nominal	9-18V
	24V types nominal	18-36V
	48V types nominal	36-75V
Input Filter	Pi Type	
Voltage Accuracy	±2%	
Voltage Balance, Dual Outputs	±2%	
Ripple and Noise, 20MHz BW	50mVp-p	
Line Regulation	Single Output	±0.2%
	Dual Output	±0.2%
Load Regulation, FL-1/4FL	Single Output	±0.2%
	Dual Output	±1%
Temperature Coefficient	±0.02%/°C	
Over Current Protection	Continuous	
Switching Frequency	300kHz typ.	
Isolation Voltage	500VDC	
Isolation Resistance	10 ⁹ Ω	
Isolation Capacitance	300pF max.	
Operating Temperature Range	-25°C to +71°C	
Storage Temperature Range	-55°C to +125°C	
Cooling	Free-air Convection	
EMI/RFI	Five-sided Shield	
Case Material	Nickel-Coated Copper with Non-Conductive Base	
Dimensions	31.8 x 20.3 x 10.2 mm	
MTBF (MIL-HDBK-217F TA = 25°C full load)	1.179 x 10 ⁶ Hours	



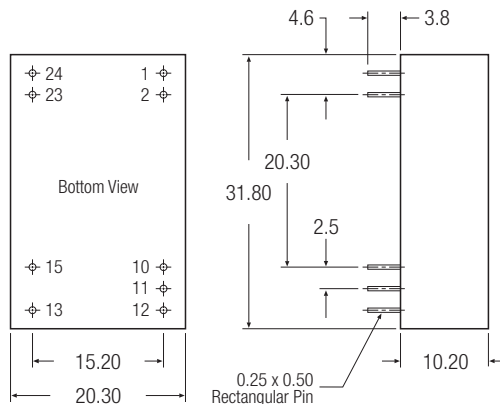
Package Style and Pinning (mm)

SMD Package Style

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



DIP24 Package Style



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	+Vin	+Vin
10	NC	Common
11	NC	Common
12	-Vout	NC
13	+Vout	-Vout
15	NC	+Vout
23	-Vin	-Vin
24	-Vin	-Vin

NC = No Connection

Pin Pitch Tolerance ±0.35 mm