

# POWERLINE - DC/DC-Converter

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

# RECOM

## Features

- 3 Watts in DIP-24 Package
- Include 3.3VDC Output
- 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 10<sup>6</sup> Hours
- 2 Year Warranty
- Standard and SMT-Pinning
- Non-Conductive Black Plastic
- International Safety Standard Approvals
- UL 1950 Component Recognised



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

Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP03-0533SE	4.5-6.0 VDC	3.3 VDC	600 mA	61
RP03-0505SE	4.5-6.0 VDC	5 VDC	600 mA	70
RP03-0512SE	4.5-6.0 VDC	12 VDC	250 mA	75
RP03-0515SE	4.5-6.0 VDC	15 VDC	200 mA	75
RP03-0505DE/DS	4.5-6.0 VDC	±5 VDC	±300 mA	70
RP03-0512DE/DS	4.5-6.0 VDC	±12 VDC	±125 mA	75
RP03-0515DE/DS	4.5-6.0 VDC	±15 VDC	±100 mA	75
RP03-1233SE	9-18 VDC	3.3 VDC	600 mA	65
RP03-1205SE	9-18 VDC	5 VDC	600 mA	74
RP03-1212SE	9-18 VDC	12 VDC	250 mA	79
RP03-1215SE	9-18 VDC	15 VDC	200 mA	79
RP03-1205DE/DS	9-18 VDC	±5 VDC	±300 mA	74
RP03-1212DE/DS	9-18 VDC	±12 VDC	±125 mA	79
RP03-1215DE/DS	9-18 VDC	±15 VDC	±100 mA	79
RP03-2433SE	18-36 VDC	3.3 VDC	600 mA	66
RP03-2405SE	18-36 VDC	5 VDC	600 mA	74
RP03-2412SE	18-36 VDC	12 VDC	250 mA	80
RP03-2415SE	18-36 VDC	15 VDC	200 mA	80
RP03-2405DE/DS	18-36 VDC	±5 VDC	±300 mA	74
RP03-2412DE/DS	18-36 VDC	±12 VDC	±125 mA	80
RP03-2415DE/DS	18-36 VDC	±15 VDC	±100 mA	80
RP03-4833SE	36-75 VDC	3.3 VDC	600 mA	68
RP03-4805SE	36-75 VDC	5 VDC	600 mA	75
RP03-4812SE	36-75 VDC	12 VDC	250 mA	80
RP03-4815SE	36-75 VDC	15 VDC	200 mA	80
RP03-4805DE/DS	36-75 VDC	±5 VDC	±300 mA	75
RP03-4812DE/DS	36-75 VDC	±12 VDC	±125 mA	80
RP03-4815DE/DS	36-75 VDC	±15 VDC	±100 mA	80

## Maximum Capacitive Load

RP03-xx05SE	1000µF
RP03-xx12SE	220µF
RP03-xx15SE	150µF
RP03-xx05DE/DS	±470µF
RP03-xx12DE/DS	±100µF
RP03-xx15DE/DS	±68µF

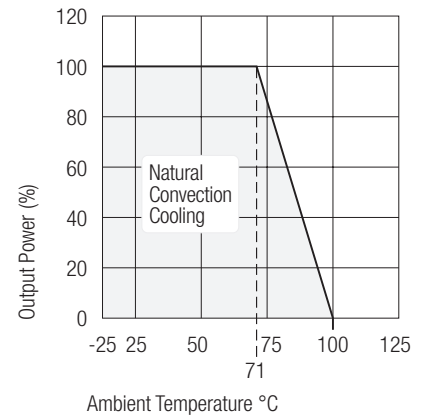
# POWERLINE - DC/DC-Converter

E-Series, 3 Watt, DIP 24, Regulated & Wide Input Range (Single & Dual Output)

# RECOM

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

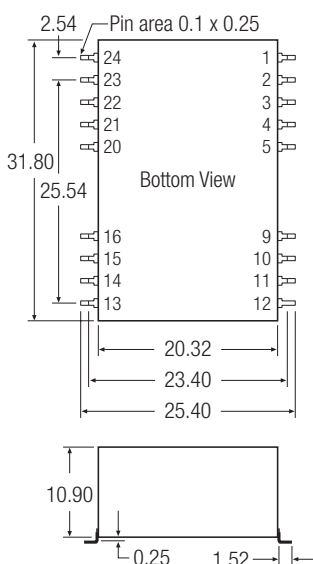
Input Voltage Range	5V types nominal 12V types nominal 24V types nominal 48V types nominal	4.5-6V 9-18V 18-36V 36-75V
Input Filter		Pi Type
Voltage Accuracy		±2%
Voltage Balance, Dual Outputs		±2%
Ripple and Noise, 20MHz BW		±1%/P-P of Vout max.
Line Regulation		Single Output±0.5% Dual Output±0.5%
Load Regulation, FL-1/4FL		Single Output±0.2% Dual Output±2%
Temperature Coefficient		±0.02%/°C
Over Current Protection		Continuous
Switching Frequency		100kHz, min.
Isolation Voltage, I/O		1600VDC
	„H“ Models	3000VDC
Isolation Voltage, O/O (only DS) Suffix "DS" RP03-*DS*		500VDC
Isolation Resistance		10 <sup>9</sup> 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
Case Material		Non-Conductive Black Plastic
Dimensions		31.8 x 20.3 x 10.2 mm
(MIL-HDBK-217F TA = 25°C full load)		1.09 x 10 <sup>6</sup> Hours



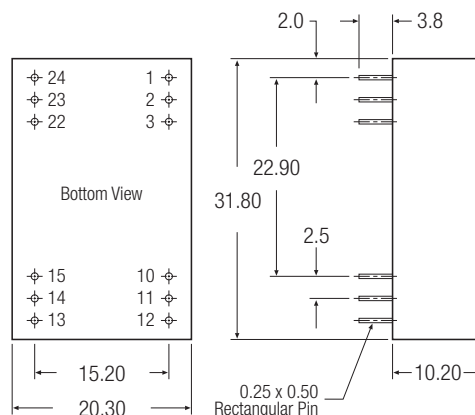
## Package Style and Pinning (mm)

### 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	Dual Separate
1	+ V in	+ V in	+ V in
2	NC	- V out	- V1 out
3	NC	Common	+ V1 out
10	- V out	Common	- V2 out
11	+ V out	+ V out	+ V2 out
12	- V in	- V in	- V in
13	- V in	- V in	- V in
14	+ V out	+ V out	+ V2 out
15	- V out	Common	- V2 out
22	NC	Common	+ V1 out
23	NC	- V out	- V1 out
24	+ V in	+ V in	+ V in

NC = No Connection