POWERLINE - DC/DC-Converter

E-Series, 5 Watt, 1.6 kV Isolation, Regulated & Wide Input Range (Single & Dual Output)

RECOM

Features

- 2:1 Input Range
- Include 3.3VDC Output
- Short Circuit Protection With Autorecovery
- Efficiency up to 80%
- Six-Sided Shield
- 300kHz Switching Frequency
- Operating Temperature Range –25°C to +71°C
- Low Profile, 9.5mm Height
- Pi Input Filter
- MTBF 1.186 x 10^6 Hours
- 2 Year Warranty
- 1600 VDC Isolation Voltage
- Option to „M1“ Operating Temperature -40°C to +85°C
- International Safety Standard Approvals
- UL 1950 Component Recognised



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

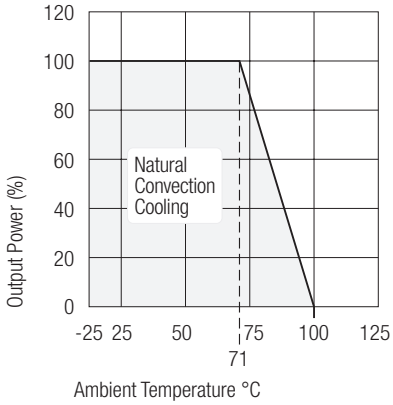
Part Number	Input Range	Output Voltage	Output Current	Efficiency (%)
RP05-1233SE	9-18 VDC	3.3 VDC	1000 mA	73
RP05-1205SE	9-18 VDC	5 VDC	1000 mA	73
RP05-1212SE	9-18 VDC	12 VDC	470 mA	80
RP05-1215SE	9-18 VDC	15 VDC	400 mA	80
RP05-1205DE	9-18 VDC	±5 VDC	±500 mA	74
RP05-1212DE	9-18 VDC	±12 VDC	±230 mA	80
RP05-1215DE	9-18 VDC	±15 VDC	±190 mA	80
RP05-2433SE	18-36 VDC	3.3 VDC	1000 mA	74
RP05-2405SE	18-36 VDC	5 VDC	1000 mA	74
RP05-2412SE	18-36 VDC	12 VDC	470 mA	82
RP05-2415SE	18-36 VDC	15 VDC	400 mA	82
RP05-2405DE	18-36 VDC	±5 VDC	±500 mA	74
RP05-2412DE	18-36 VDC	±12 VDC	±230 mA	82
RP05-2415DE	18-36 VDC	±15 VDC	±190 mA	82
RP05-4833SE	36-75 VDC	3.3 VDC	1000 mA	75
RP05-4805SE	36-75 VDC	5 VDC	1000 mA	75
RP05-4812SE	36-75 VDC	12 VDC	470 mA	81
RP05-4815SE	36-75 VDC	15 VDC	400 mA	81
RP05-4805DE	36-75 VDC	±5 VDC	±500 mA	74
RP05-4812DE	36-75 VDC	±12 VDC	±230 mA	81
RP05-4815DE	36-75 VDC	±15 VDC	±190 mA	81

Maximum Capacitive Load

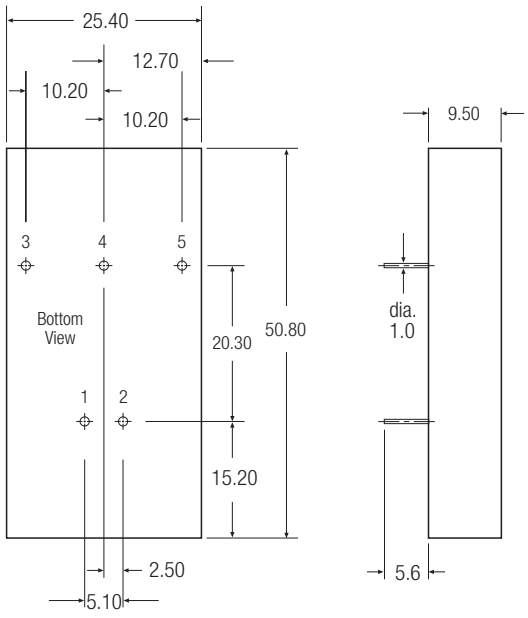
RP05-xxS33	3700µF
RP05-xxS05	1700µF
RP05-xxS12	290µF
RP05-xxS15	188µF
RP05-xxD05	±850µF
RP05-xxD12	±140µF

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

Input Voltage Range	12V types nominal 24V types nominal 48V types nominal	9-18V 18-36V 36-75V
Input Filter		Pi Type
Voltage Accuracy		Single Output ±2% Dual Output ±2%
Volatge Balance, Dual Outputs		±1.0%
Ripple and Noise, 20MHz BW		75mVp-p 10mV RMS
Line Regulation, HL-LL		±0.2%
Load Regulation, FL-1/4FL		Single Output ±0.2% Dual Output ±1%
Temperature Coefficient		±0.02%/°C
Short Circuit Protection		Indefinite
Transient Response Recovery Time, Single, 25% Load Step Change		200µsec
Dual, FL-1/2FL±1%Error Band		200µsec
Switching Frequency		300kHz, typ.
Isolation Voltage		1600VDC
Isolation Resistance		10^9 Ω
Operating Temperature Range		-25°C to +71°C
Alternative Operating Temperature Suffix "M1"		-40°C to +85°C
Storage Temperature Range		-55°C to +125°C
Cooling		Free-air Convection
EMI/RFI		Six-sided Continuos Shield
Case Material		Nickel-Coated Copper with Non-Conductive Base
Dimensions		50.8 x 25.4 x 9.5 mm
MTBF (MIL-HDBK-217F TA = 25°C full load)		1.186 x 10^6 Hours



Package Style and Pinning (mm)



Pin Connections

Pin #	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	No Pin	Common
5	-Vout	-Vout

Pin Pitch Tolerance ±0.5 mm

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Datasheets for electronics components.