

POWERLINE - DC/DC-Converter

H-Series, 100 Watt (Dual Isolated Outputs)



RECOM

Features

- Independently Regul. 5V & 3.3V, 5V & 2.5V, or 3.3V & 2.5V Outp.
- 36–75 VDC Input (48V Nominal)
- 100W Continuous Output Power
- Efficiency up to 84% (Typ.)
- Remote On/Off Control
- Built-in EMI Suppression Filter
- Fixed Operating Frequency
- Under-Voltage Lockout
- Over-Voltage Shutdown
- Short Circuit Protection
- 1500 VDC I/O Isolation



Selection Guide 48V Input Types

Part Number	Output	Voltage (VDC)	Output Max. (A)	Current Max. (A)	Output Voltage Tolerance	Ripple & Noise (mVp-p)	Line Regulation	Load Regulation
RP100-483305DS	V1	5	1	20	±1.0%	100	±0.2%	±0.5%
	V2	3.3	0	25	±1.5%	100	±0.2%	±0.5%
RP100-482505DS	V1	5	1	20	±1.0%	100	±0.2%	±0.5%
	V2	2.5	0	25	±1.5%	100	±0.2%	±0.5%
RP100-482533DS	V1	3.3	1	20	±1.0%	100	±0.2%	±0.5%
	V2	2.5VDC	0	25	±1.5%	100	±0.2%	±0.5%

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

Input Voltage Range	36-75VDC (48V nom.)
Input/Output Isolation	1500 VDC, I/O, 1 Min.
Continuous Output Power	100W max.
Base-Plate Temperature	+100 max.: internal thermal shutdown circuit., automatic recovery
Output Voltage Adjustment	Outputs V1 & V2 each adjustable by ±10%
Short Circuit Protection	Automatic recovery
Under-Voltage Protection	Lockout activated at 34V–35.5V input, automatic recovery. With 2V-3V hysteresis (typ.)
Over-Voltage Protection	5V output – shutdown at 6.5V, typ.; 3.3V output – shutdown at 3.9V typ.; 2.5V output – shutdown at 3.2V, typ. Reset at Vin = 0V
Transient Response	200µs recovery after half-load to full load step. Change to within 1% of the regulation band with no more than 5% deviation
Frequency of Operation	300kHz, fixed
Efficiency (at nominal input voltage, full load)	84% typ.
Remote Shutdown	CMOS and open-collector TTL compatible: ON = 2.4V to Vin max.; Off = 0.8V or less
Ripple and Noise (20MHz BW)	See table above
Line Regulation, HL-LL	±0.2%
Load regulation (100% to 10% full load)	±0.5%
Temperature Coefficient	±0.02%/°C
Transient Response Recovery Time (25% load step change)	500µs
Transient Voltage Peak Deviation	300mV, max.
Switching Frequency	300kHz, typ.
Operating Temperature Range	-40°C to +100°C (base plate)
Temperature Coefficient (over operating temperature range)	±0.02%
Case Temperature	100°C
Case Material	Aluminium base plate
Dimensions	57.91 x 60.96 x 12.70 mm

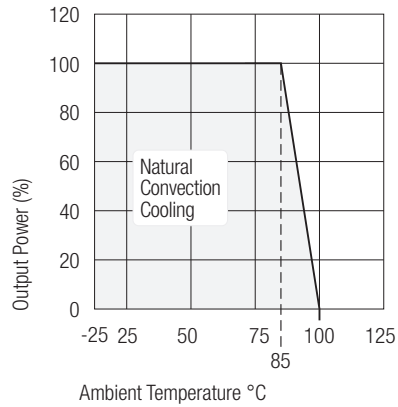
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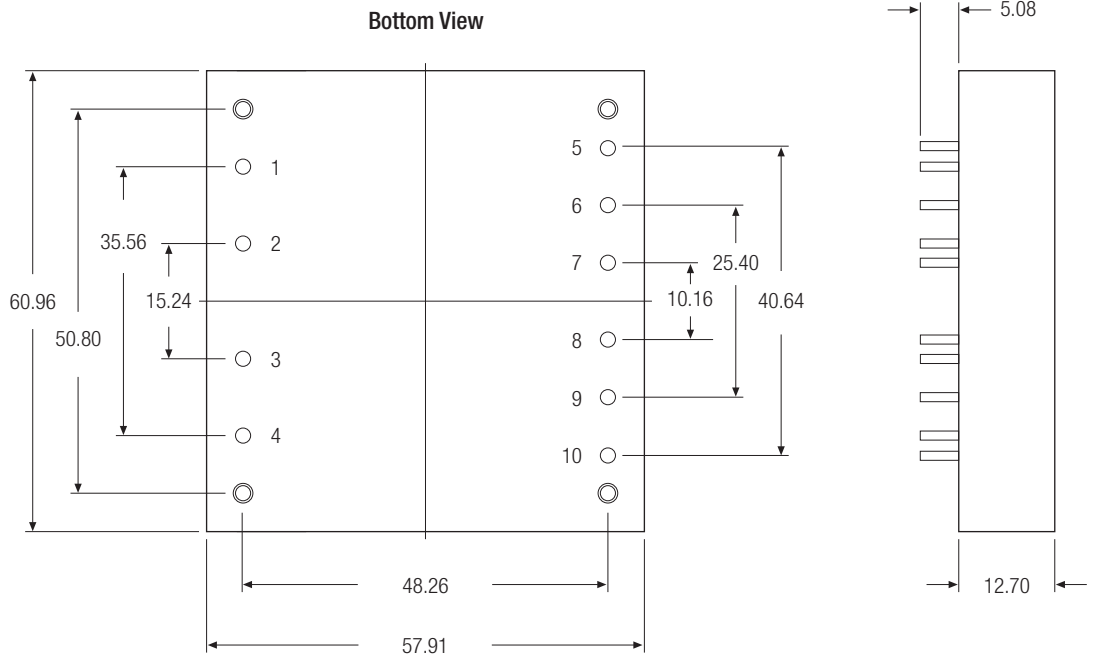


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Derating Graph



Package Style and Pinning (mm)



Pin Connections

Pin #	Function	Dia.
1	-Vin	1 mm
2	Case	1 mm
3	Remote ON/OFF	1 mm
4	+Vin	1 mm
5	V2 out	2 mm
6	V2 return	2 mm
7	V2 adjust.	1 mm
8	V1 out	2 mm
9	V1 return	2 mm
10	V1 adjust.	1 mm

Pin Pitch Tolerance ± 0.5 mm