

10W DC-DC Converter P10D-Series



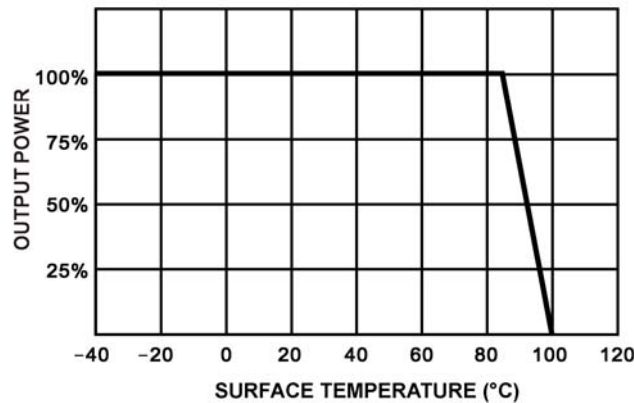
- Wide 4:1 input range
- Efficiency up to 85 %
- 1500 V_{DC} isolation
- Continuous short circuit protection
- Standard package 2" x 1" x 0.4"
- MTBF 1.12 M hours
- Wide Operating Temperature Range -40...+85°C



Model selection guide

Typ	Input nominal voltage [V _{DC}]	Input quiescent current [mA]	Output voltage [V _{DC}]	Output current [mA]	Efficiency typ. [%]	capacitive load [μF]
Single output						
P10D243R3S	9...36	25	3.3	2000	79	3300
P10D2405S	9...36	25	5.0	2000	82	3300
P10D2412S	9...36	25	12.0	833	85	680
P10D2415S	9...36	25	15.0	666	85	470
P10D483R3S	18...72	20	3.3	2000	78	3300
P10D4805S	18...72	20	5.0	2000	83	3300
P10D4812S	18...72	20	12.0	833	85	680
P10D4815S	18...72	20	15.0	666	85	470
Dual output						
P10D2405D	9...36	25	±5.0	±1000	82	2 x 2200
P10D2412D	9...36	25	±12.0	±416	85	2 x 470
P10D2415D	9...36	25	±15.0	±333	85	2 x 330
P10D4805D	18...72	20	±5.0	±1000	82	2 x 2200
P10D4812D	18...72	20	±12.0	±416	85	2 x 470
P10D4815D	18...72	20	±15.0	±333	85	2 x 330

Derating Curve



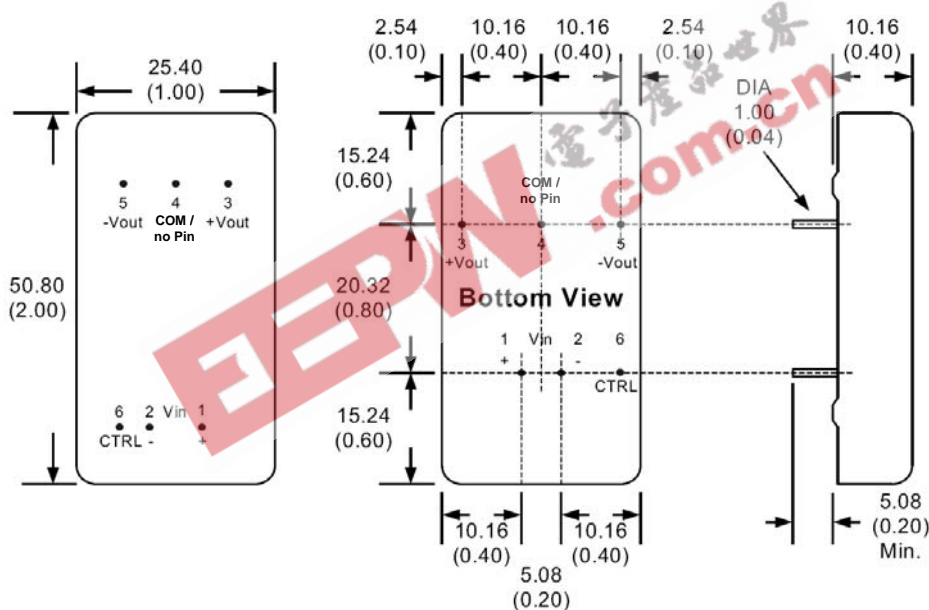
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Specifications

Input	
Voltage range	24 V _{DC} , 9...36 V _{DC} 48 V _{DC} , 18...72 V _{DC}
Filter	Capacitors
Isolation Voltage:	
Input to Output	1,5 kV _{DC} for 1 min., test 1s
Input/Output to Case	1000 V _{DC} for 1 min.
Resistance	10 ⁹ Ω
Capacitance	1200 pF, typ.
Output	
Voltage accuracy	± 1%
Load voltage regulation	± 0.5%, at 10..100% load
Line voltage regulation	± 0.5%, max.
Over current protection	140% of max. I _{out}
Short circuit protection	Continuous
Short circuit restart	Automatic
Ripple and noise (at 20 MHz BW)	75 mVp-p, max.
Temperature coefficient	± 0.02% / °C

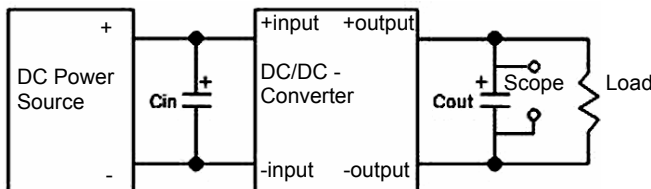
General	
Switching frequency	200 kHz, typ.
Safety standard in accordance with	IEC60950-1 : 2001
Environmental	
Operating temperature (ambient)	-40 °C...+85 °C
Case temperature	100 °C, max.
Storage temperature	-40 °C...+125 °C
Derating	None required
Humidity	Up to 95%, non-condensing
Cooling	Free-air convection
Physical	
Dimensions	50.80 x 25.40 x 10.16 mm
Weight	30.0 g
Case material	Nickel-coated copper
Potting material	Epoxy (UL94V-0 rated)
Pin material	Brass solder coated
Soldering temperature	260°C for 10s
1.5mm distance from case	

Dimensions



Notes : All dimensions are typical in millimeters (inches).
Tolerance x.xx = ±0.25 (±0.01)

Output ripple and noise reduction



To reduce ripple and noise, it is recommended to use 4.7µF capacitors to the output

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