



1S6W_1.5RP series

1W - Single/Dual Output DC-DC converter - Isolated & Regulated

DC-DC Converter

1 Watt

- ⊕ 2:1 input voltages range
- ⊕ SIP6 package
- ⊕ Up to 81% efficiency
- ⊕ Regulated output types
- ⊕ Internal SMD construction

- ⊕ No external components required
- ⊕ Operating temperature: -40°C to +85°C
- ⊕ Industry standard pinout

Introducing our new compact and powerful 1S6W_1.5RP series. Designed for reliability and performance, the 1S6W_1.5RP series delivers regulated output in a space-saving SIP6 package. With a wide 2:1 input voltage range, up to 81% efficiency, and internal SMD construction, these converters require no external components and ensure seamless integration into your design. Operating reliably from -40°C to +85°C with an industry-standard pinout, they are the ideal choice for efficient and compact power solutions.



Common specifications

Short circuit protection	Continuous with auto recovery
Switching frequency	200 kHz (Full load, nominal input)
Operating temperature	-40°C - +85°C (with derating)
Humidity	95% (non condensing)
Cooling	Free air convection
Case material	DAP
MTBF (MIL-HDBK-217F@25°C)	1,500,000 hours
Weight	3.0 (typ.)
Dimensions	17.0 x 7.62 x 11.0 mm

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage range	Vo, Io Nom			2:1	
Filter	Capacitor				

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage tolerance	100% full load			±2	%
Line regulation			±0.2		%
Load regulation	Single 0% to 100% load Dual 0% to 100% load Dual 5% to 100% load		±1.0 ±2.0 ±1.0		%
Ripple & noise	Single BW = DC To 20MHz Dual BW = DC To 20MHz			100 150	mVp-p

Isolation specifications

Item	Operating Conditions	Min	Typ	Max	Units
Isolation resistance	500VDC	1000			MΩ

Example:

1S6W_2405S1.5RP

1 = 1Watt; S6 = SIP; W = Wide input; 24 = 24Vin; 05 = 5Vout; S = Single Output; 1.5 = 1500VDC isolation; R = Regulated Output; P = Short circuit protection.

Product Selection Guide

Approval	Model	Output Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%) Typ.	Capacitive Load (μF) Max.
	1S6W_0505S1.5RP	4.5-9	5	200	76	1680
	1S6W_0512S1.5RP	4.5-9	12	84	79	820
	1S6W_0515S1.5RP	4.5-9	15	67	80	680
	1S6W_0524S1.5RP	4.5-9	24	42	80	470
	1S6W_1205S1.5RP	9-18	5	200	78	1680
	1S6W_1212S1.5RP	9-18	12	84	80	820
	1S6W_1215S1.5RP	9-18	15	67	81	680
	1S6W_1224S1.5RP	9-18	24	42	80	470
	1S6W_2405S1.5RP	18-36	5	200	78	1680
	1S6W_2412S1.5RP	18-36	12	84	80	820
	1S6W_2415S1.5RP	18-36	15	67	80	680
	1S6W_2424S1.5RP	18-36	24	42	81	470
	1S6W_4805S1.5RP	36-75	5	200	76	1680
	1S6W_4812S1.5RP	36-75	12	84	78	820
	1S6W_4815S1.5RP	36-75	15	67	78	680
	1S6W_4824S1.5RP	36-75	24	42	77	470

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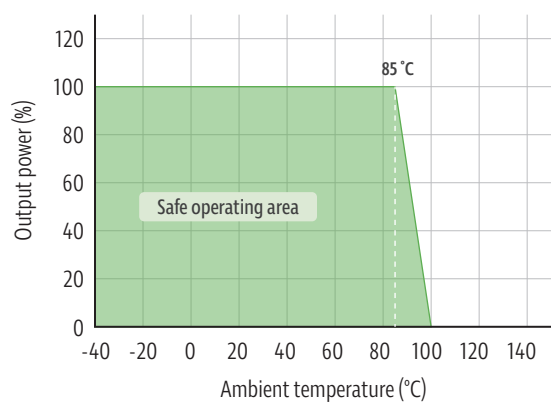
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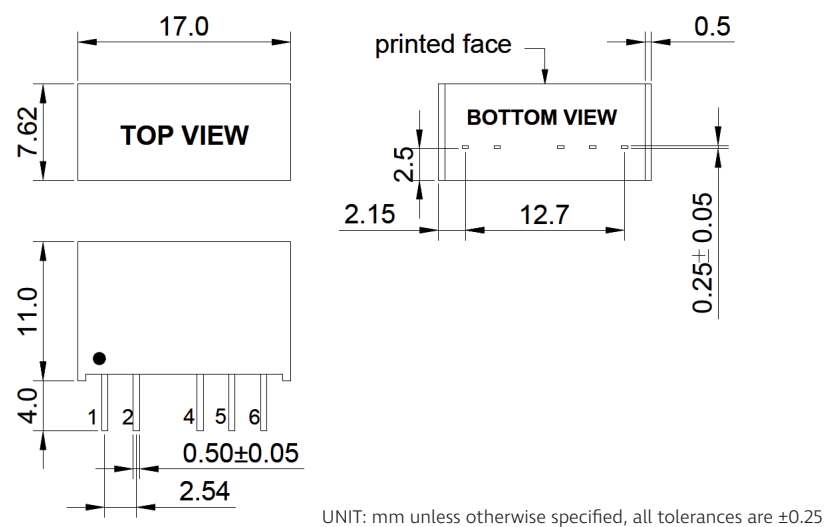
Approval	Model	Output Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%) Typ.	Capacitive Load (μF) Max.
	1S6W_0512D1.5RP	4.5-9	±12	±42	77	±470
	1S6W_0515D1.5RP	4.5-9	±15	±34	79	±330
	1S6W_1212D1.5RP	9-18	±12	±42	79	±470
	1S6W_1215D1.5RP	9-18	±15	±34	80	±330
	1S6W_2412D1.5RP	18-36	±12	±42	80	±470
	1S6W_2415D1.5RP	18-36	±15	±34	79	±330
	1S6W_4812D1.5RP	36-75	±12	±42	77	±470
	1S6W_4815D1.5RP	36-75	±15	±34	77	±330

Product characteristic curve

Temperature derating graph



Mechanical dimensions



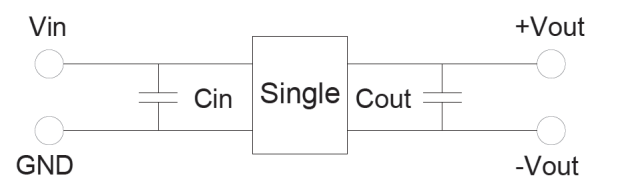
UNIT: mm unless otherwise specified, all tolerances are ±0.25

PIN	1	2	4	5	6
Single	-Vin	+Vin	+Vout	NIO PIN	-Vout
Dual	-Vin	+Vin	+Vout	Common	-Vout

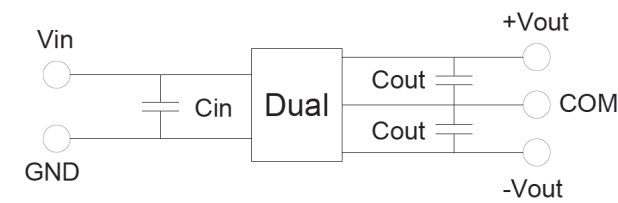
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Design and application circuit recommended



5V: Cin	10uF, 25V	5V: Cout	100uF, 25V
12V: Cin	10uF, 50V	12V: Cout	100uF, 25V
24V: Cin	10uF, 100V	15V: Cout	100uF, 50V
48V: Cin	10uF, 100V	24V: Cout	10uF, 100V



5V: Cin	10uF, 25V	12V: Cout	100uF, 25V
12V: Cin	10uF, 50V	15V: Cout	100uF, 50V
24V: Cin	10uF, 100V		
48V: Cin	10uF, 100V		