GAPTEC®
GREEN TECHNOLOGY

6S8W4_1.5RP Series

6W - Dual/Single Output - Wide Input - Isolated & Regulated DC-DC Converter

DC-DC Converter 6 Watt

- Ultra wide 4:1 input voltage range
- Very high efficiency up to 88%
- 6W single and dual outputs
- I/O isolation 1.5KVDC
- Industry standard pinout
- Operating temperature range: -40°C to +85°C
- Continuous Short Circuit Protection (SCP)
- Internal SMD construction

The 6S8W4_1.5RP series are specially designed for applications where a wide range input voltage power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:
1) Where the voltage of the input power supply is wide range (voltage range≤4:1)
2) Where isolation is necessary between input and output (isolation voltage≤1500VDC)
3) Where the regulation of the output voltage and the output ripple noise are demanded

Common specifications	
Short circuit protection:	Continuous, auto-recovery
Cooling:	Free air convection
Operating case temperature:	+110°C MAX
Operating temperature:	-40°C~+85°C
Storage temperature:	-55°C ~+125°C
Storage humidity:	< 95%, non-condensing
Lead temperature:	300°C MAX, 1.5mm from case for 10 sec
Temperature coefficient:	0.02 %/°C TYP
Temperature rise at full load:	30°C TYP
Case material:	Non-conductive black plastic [UL94-V0]
MTBF (MIL-HDBK 217F @ 25°C):	1500000 hours
Weight:	4.5g
Dimensions:	21.8x9.2x11.1mm

Output specifications					
Item	Test condition	Min	Typ	Max	Units
Voltage tolerance	100% full load			±2	%
Line regulation	Vin=min to max,full load			±0.5	%
Load regulation	• Single output • Dual output			±0.5 ±5	% %
Switching frequency	Full load, nominal input		500		KHz
Ripple & Noise	20MHz Bandwidth • 3V-10V output • >10V output			100 1% of Vout	mVp-p mVp-p
Transient response setting time	50% load step change		350		µs

Input specifications					
Item	Test condition	Min	Typ	Max	Units
Input filter	Capacitor				
Input current	no load (nominal input voltage range) • 24V • 48V		 30 15		 mA mA

Isolation specifications					
Item	Test condition	Min	Typ	Max	Units
Isolation voltage			1500		VDC
Isolation resistance	500VDC	1000			MΩ

Example:
6S8W4_2405S1.5RP
6= 6Watt; S8= SIP8; W4= wide input (4:1); 9-36Vin; 5Vout;
S= Single Output; 1.5= 1500VDC; R= Regulated Output
P= Short Circuit Protection

Note:
1. All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
2. In this datasheet, all the test methods of indications are based on corporate standards.

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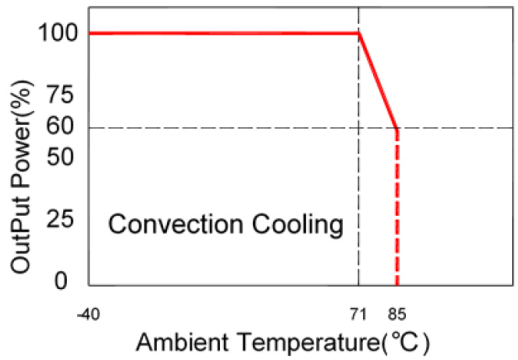
DC-DC Converter

Part Number	Input Voltage [V]	Output Voltage [VDC]	Output Current [mA, max]	Efficiency [%, typ]
6S8W4_xx03S1.5RP	9-36, 18-72	3.3	1500	81
6S8W4_xx05S1.5RP	9-36, 18-72	5	1200	84
6S8W4_xx09S1.5RP	9-36, 18-72	9	666	86
6S8W4_xx12S1.5RP	9-36, 18-72	12	500	87
6S8W4_xx15S1.5RP	9-36, 18-72	15	400	87-88
6S8W4_xx15S1.5RP	9-36, 18-72	24	250	87
6S8W4_xx05D1.5RP	9-36, 18-72	±5	±600	84
6S8W4_xx12D1.5RP	9-36, 18-72	±12	±250	87
6S8W4_xx15D1.5RP	9-36, 18-72	±15	±200	87

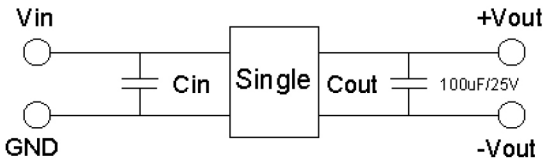
- xx=Input Voltage
  Vin=9-36V, xx=24
  Vin=18-72V, xx=48

Typical characteristics

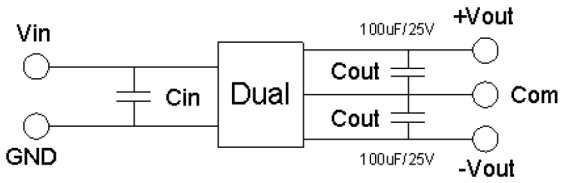
Temperature derating graph



Recommended test circuit



24V&48V:Cin 10uF,100V



24V & 48V :Cin 10uF,100V

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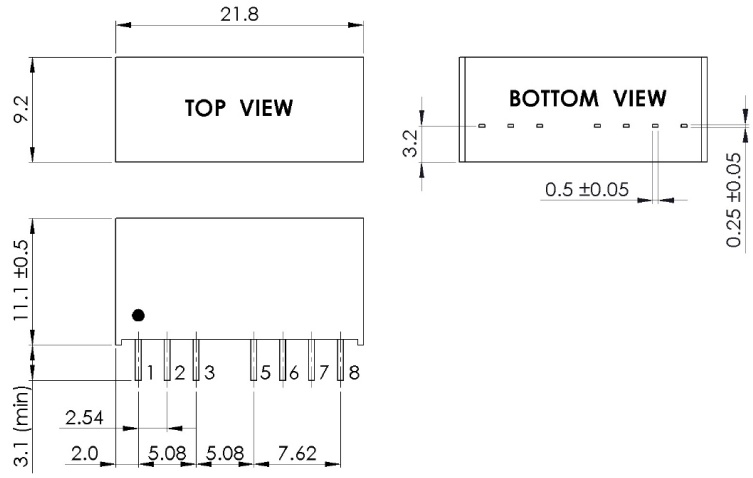
Mechanical dimensions



UNIT : mm tolerances are XX.X±0.5 ,XX.XX±0.25, the tolerance of Pin size is ±0.05

Pin	1	2	3	5	6	7	8
Single	-Vin	+Vin	Ctrl	NC	+Vout	-Vout	NC
Dual	-Vin	+Vin	Ctrl	NC	+Vout	COM	-Vout