



## 6S8W\_1.5RP series

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

## DC-DC Converter

6 Watt

- ⊕ Wide input voltage range (2:1)
- ⊕ High efficiency up to 86%
- ⊕ Isolation voltage: 1500VDC
- ⊕ Short circuit protection (SCP)
- ⊕ Operating temperature range: -40°C to +85°C
- ⊕ Internal SMD construction
- ⊕ International standard pin-out

Introducing our latest 6S8W\_1.5RP series, designed to deliver outstanding performance and reliability. With a wide input voltage range of 2:1, this device ensures versatility and adaptability for various applications. Achieving high efficiency of up to 86%, it minimizes energy loss while maintaining optimal functionality. The isolation voltage of 1.5kVDC provides robust protection and reliability in critical environments.

Our power supply is equipped with short circuit protection (SCP) for enhanced safety, ensuring continuous and secure operation. It operates efficiently within a temperature range of -40°C to +85°C, making it suitable for extreme conditions. The internal SMD construction guarantees durability and longevity, while the international standard pin-out simplifies integration into your existing systems. This power supply is the ideal choice for those seeking high performance, reliability, and efficiency in a compact package.



Common specifications	
Short circuit protection:	Continuous, automatic recovery
Cooling:	Free air convection
Operation temperature range:	-40°C~+85°C (with derating)
Storage temperature range:	-55°C ~+125°C
Storage humidity range:	95% RH (non condensing)
Vibration:	10-150Hz, 5G, 0.75mm. along X, Y and Z
Switching Frequency:	Single: 400kHz (typ.) Dual: 500kHz (typ.)
Case material:	DAP
Cooling:	Natural convection (20LMF)
MTBF (MIL-HDBK 217F @25°C):	1500k hours
Weight:	4.5g
Dimensions:	21.8 x 9.2 x 11.1 mm

Output specifications						
Item	Test condition	Min	Typ	Max	Units	
Voltage tolerance	100% (full load)			±2	%	
Line regulation		-0.5		±0.5	%	
Load regulation (Balanced load)	• Single output • Dual output	-0.5		+0.5 +1.0	%	
Transient response setting time	25% load step change		250		us	
Short Circuit Protection	Continuous, Auto-recovery					
Ripple & Noise 20MHz Bandwidth	• output 3V-10V • output >10V			100 1% of Vout	mVp-p mVp-p	

### Example:

#### 6S8W\_1205S1.5RP

6 = 6Watt; S8 = SIP8; W = Wide input (2:1); 12 = 9-18Vin; 5 = 5Vout; S = Single Output; 1.6 = 1600VDC isolation; R = Regulated Output; P = Short Circuit Protection

### Note:

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

Input specifications						
Parameters	Conditions	Min	Typ	Max	Units	
Voltage types	Vo, Io, Nom			2:1		
Filter	Capacitor					
CTRL	Module on Module off	Ctrl pin open Ctrl pin 2.5 ~ 12VDC				

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

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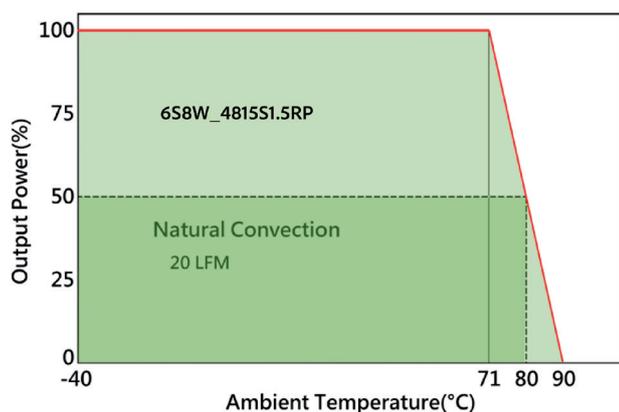
### Product Selection Guide

Part Number	Input Voltage [VDC]		Output Voltage [VDC]	Output Current [mA, max.]	Efficiency [%, typ.]
	Nominal	Range			
6S8W_1203S1.5RP	12	9-18	3.3	1500	81
6S8W_1205S1.5RP	12	9-18	5	1200	83
6S8W_1212S1.5RP	12	9-18	12	500	85
6S8W_1215S1.5RP	12	9-18	15	400	85
6S8W_1224S1.5RP	12	9-18	24	250	84
6S8W_2403S1.5RP	24	18-36	3.3	1500	81
6S8W_2405S1.5RP	24	18-36	5	1200	83
6S8W_2412S1.5RP	24	18-36	12	500	85
6S8W_2415S1.5RP	24	18-36	15	400	86
6S8W_2424S1.5RP	24	18-36	24	250	85
6S8W_4803S1.5RP	48	36-72	3.3	1500	81
6S8W_4805S1.5RP	48	36-72	5	1200	82
6S8W_4812S1.5RP	48	36-72	12	500	85
6S8W_4815S1.5RP	48	36-72	15	400	86
6S8W_4824S1.5RP	48	36-72	24	250	84

Part Number	Input Voltage [VDC]		Output Voltage [VDC]	Output Current [mA, max.]	Efficiency [%, typ.]
	Nominal	Range			
6S8W_1212D1.5RP	12	9-18	±12	±250	83
6S8W_1215D1.5RP	12	9-18	±15	±200	84
6S8W_2412D1.5RP	24	18-36	±12	±250	84
6S8W_2415D1.5RP	24	18-36	±15	±200	84
6S8W_4812D1.5RP	48	36-72	±12	±250	84
6S8W_4815D1.5RP	48	36-72	±15	±200	85

### Typical characteristics

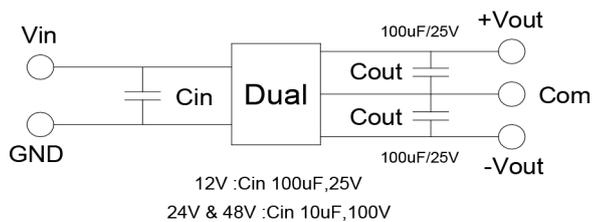
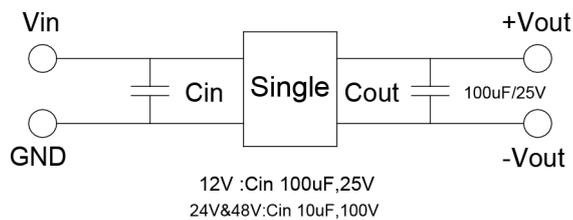
Temperature derating graph



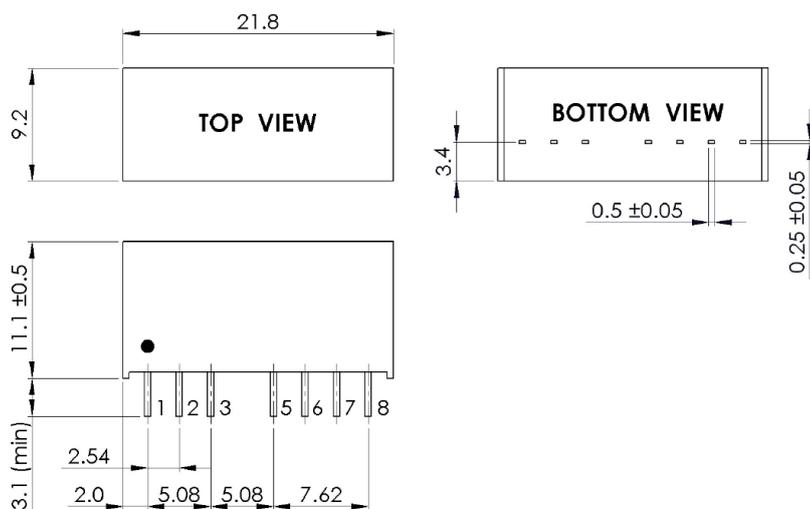
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### Recommended test circuit



### Mechanical dimensions



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

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