



3S8EW_1.5RP Series

3W - Single Output - Wide Input - Isolated & Regulated DC-DC Converter

DC-DC Converter

3 Watt

- ⊕ 2:1 wide input voltage range
- ⊕ 1.5KVDC isolation
- ⊕ Short circuit protection (SCP) with current foldback
- ⊕ Regulated output types
- ⊕ Efficiency up to 85%
- ⊕ Internal SMD construction
- ⊕ Operating temperature: -40°C to +85°C
- ⊕ RoHS compliance
- ⊕ Industry standard pinout

The 3S8EW_1.5RP Series series are isolated 3W DC-DC products with 2:1 input voltage and conventional voltage output. The product has a relatively compact SIP plastic package, and features high efficiency, operating temperature of -40°C~+85°C. The smaller size and fine cost design make the converter an ideal solution in communication, instruments, and industrial electronics applications.

These products apply to:

- 1) Where the voltage of the input power supply is wide range (voltage range≤2:1)
- 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, automatic recovery
Cooling:	Free air convection
Operation temperature range:	-40°C~+85°C
Storage temperature range:	-40°C ~+100°C
Lead temperature range:	250±10°C / 5sec. MAX
Storage humidity range:	< 95%
Case material:	Plastic [UL94-V0]
MTBF (MIL-HDBK-217F@25°C):	>1,500,000 hours
Weight:	4.5g
Dimensions:	21.8x9.2x11.1mm

Input specifications

Item	Test condition	Min	Typ	Max	Units
Input filter	Filter capacitor				
Remote control	Turn On Turn Off	0 ~ 0.8Vdc 2.5 ~ 12Vdc			

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Tested for 1 minute, leakage current less than 1 mA	1500			VDC
Isolation resistance	Test at 500VDC	1000			MΩ

Output specifications

Item	Test condition	Min	Typ	Max	Units
Voltage tolerance	100% full load			±3	%
Line regulation	Regulated			±0.5	%
Load regulation	Regulated • 24V • Others			±0.5 ±0.8	% %
Temperature coefficient	100% load		±0.02	±0.03	%/°C
Ripple&Noise*	20MHz bandwidth • 3.3V-9V/24V types • 12-15V types			100 1% of Vout	mVp-p mVp-p
Transient response setting time	50% load step change		350		μs
Switching frequency	Full load, nominal input		100		KHz

Example:

3S8EW_1205S1.5RP

3= 3Watt; S8= SIP8; E= Cost effective; W= wide input; 9-18Vin; 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 test methods are based on our corporate standards.
3. All characteristics are for listed models, and non-standard models may perform differently. Please contact our technical support for more details.
4. Please contact our technical support for any specific requirement.
5. Specifications of this product are subject to changes without prior notice.

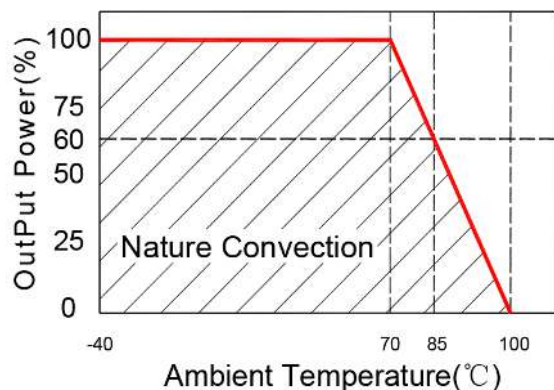
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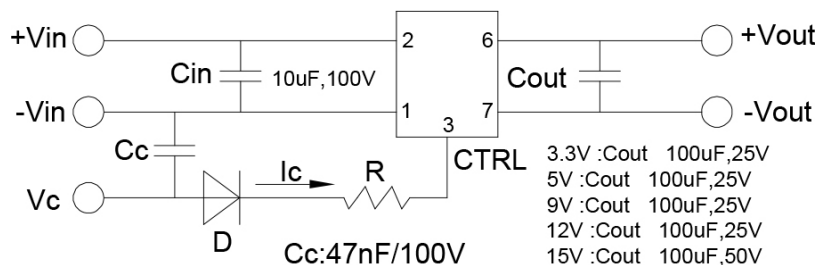
Part Number	Input Voltage [VDC]		Output Voltage [VDC]	Output Current [mA; max]	Efficiency [%; Typ.]
	Nominal	Range			
3S8EW_1203S1.5RP	12	9-18	3.3	909	70
3S8EW_1205S1.5RP	12	9-18	5	600	70
3S8EW_1209S1.5RP	12	9-18	9	333	75
3S8EW_1212S1.5RP	12	9-18	12	250	78
3S8EW_1215S1.5RP	12	9-18	15	200	80
3S8EW_2403S1.5RP	24	18-36	3.3	700	68
3S8EW_2405S1.5RP	24	18-36	5	600	70
3S8EW_2409S1.5RP	24	18-36	9	333	75
3S8EW_2412S1.5RP	24	18-36	12	250	78
3S8EW_2415S1.5RP	24	18-36	15	200	80
3S8EW_2424S1.5RP	24	18-36	24	125	85
3S8EW_4803S1.5RP	48	36-72	3.3	700	68
3S8EW_4805S1.5RP	48	36-72	5	600	70
3S8EW_4809S1.5RP	48	36-72	9	600	75
3S8EW_4812S1.5RP	48	36-72	12	250	78
3S8EW_4815S1.5RP	48	36-72	15	200	80

Typical characteristics

Temperature derating graph



Recommended test circuit

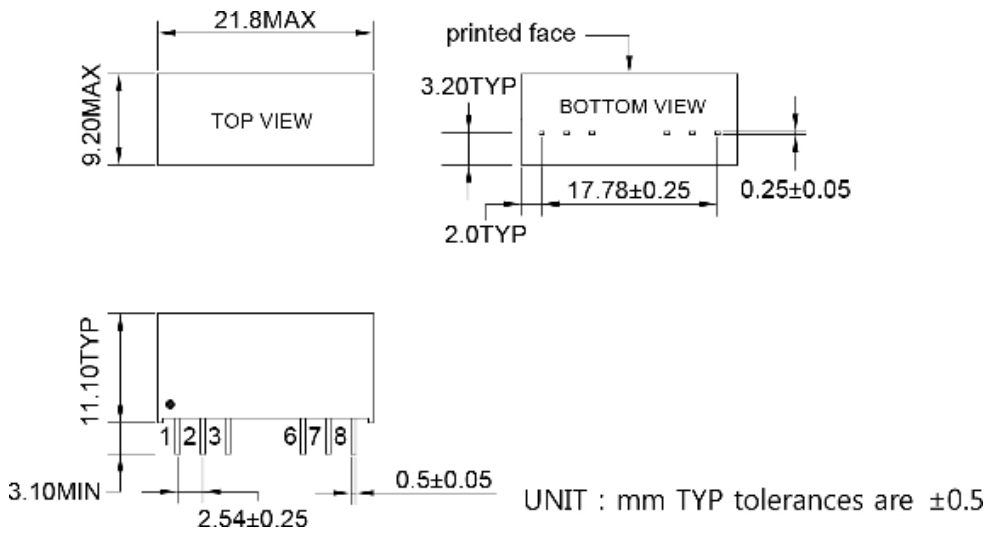


1. When open or high impedance, the converter works well; when this pin is 'high', the converter shut down. It should be note that the input current should be between 5-10mA, exceeding the maximum 20mA will cause permanent damage to the converter.
2. To make sure the product work at perfect operation status with full loading external capacitor is necessary and it is recommended to use high frequency low resistance electrolytic capacitor.

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Mechanical dimensions



Pin	Single
1	-Vin
2	+Vin
3	Ctrl-Control input can (can be left open)
6	+Vout
7	-Vout
8	NC