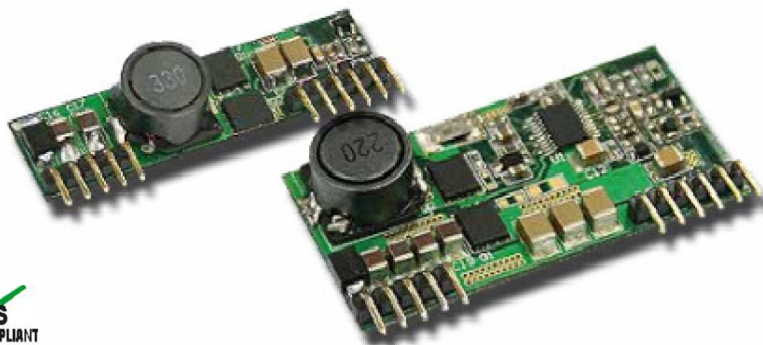


# DC-DC Converter UNIT

## OSNxxW SERIES

### FEATURES

- 5-24V out / 2-4 Amp SIP Package
- 20-53V,30-53V InputVoltage
- High efficiency 97%
- Cost efficient open frame design
- 2 YEARS WARRANTY
- RoHS compliant
- Single output
- Non isolation
- Different output voltage



### OUTPUT SPECIFICATIONS

Voltage Set point Accuracy	+/-2% max
Ripple & Noise (20MHz BW) <sup>1</sup>	5V 100mVp-p max 12V-24V 1%Vp-p max
Line Regulation <sup>2</sup>	+/-0.5% max
Load Regulation <sup>3</sup>	+/-0.5% max
Temperature Coefficient	+/-0.5% max
Short Circuit Protection	Continuous
Over Load Protection	120%-220% Typ

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +70 °C
Storage Temperature	-55 °C to +125 °C
Humidity	95% max

### INPUT SPECIFICATIONS

Input Voltage Range	20-53V, 30-53V
Input Filter	Capacitive
Remote On/Off Control	Table 1
Protection	Fuse Recommended

### GENERAL SPECIFICATIONS

Efficiency	90% min
Switching Frequency	250KHz Typ
Isolation voltage	Non-isolation
Weight OSN02W-xxSxxRx	7,5 g Typ
Weight OSN04W-xxSxxRx	12.0g Typ
SIP Package	
OSN02W-xxSxxRx	50.8mm*13.0mm*10.7mm
OSN04W-xxSxxRx	50.8mm*26.0mm*10.7mm

**ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD , AND 25 °C UNLESS OTHERWISE NOTED.**

[1] The value includes the deviation from output voltage setting point, line and load.

[2] High Line to Low Line.

[3] Load Regulation is for output load current change from 10% to 100% Load

[4] Refer to the Derating Chart.

### Power Systems – The Power Solution

Web: [www.Power-Systems.de](http://www.Power-Systems.de)  
 Email: [Info@Power-Systems.de](mailto:Info@Power-Systems.de)

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# DC-DC Converter UNIT

## OSNxxW SERIES

### ●SELECTION GUIDE 2Amp SIP Packages

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	INPUT <sup>[5]</sup> CURRENT(mA)		EFF (%) <sup>[6]</sup>	Package
				FULL LOAD	NO LOAD		
OSN02W-24S05	20-53	5	2.5A	580	15	91	A
OSN02W-24S12	20-53	12	2.5A	1320	14	96	A
OSN02W-24S15	20-53	15	2A	1300	15	96	A
OSN02W-48S24	30-53	24	1.25A	700	30	94	A

Note: Other input to output voltages may be available. Please contact factory.

Note 1: External with input capacitors = 22uF/100V (CHEMICON KMF series)

Note 2: External with output capacitor = 100uF/25V (CHEMICON KY series)

### ●SELECTION GUIDE 4Amp SIP Packages

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	INPUT <sup>[7]</sup> CURRENT(mA)		EFF (%) <sup>[8]</sup>	Package
				FULL LOAD	NO LOAD		
OSN04W-24S05	20-53	5	4A	935	15	90	B
OSN04W-24S12	20-53	12	4A	2110	20	95	B
OSN04W-24S15	20-53	15	4A	2590	20	96	B
OSN04W-48S24	30-53	24	2.5A	1320	30	95	B

Note: Other input to output voltages may be available. Please contact factory.

Note 1: External with input capacitors = 22uF/100V (CHEMICON KMF series)

Note 2: External with output capacitor = 100uF/25V (CHEMICON KY series)

[5] Nominal Input voltage.

[6] Nominal Input voltage, full load.

[7] Nominal Input voltage.

[8] Nominal Input voltage, full load.

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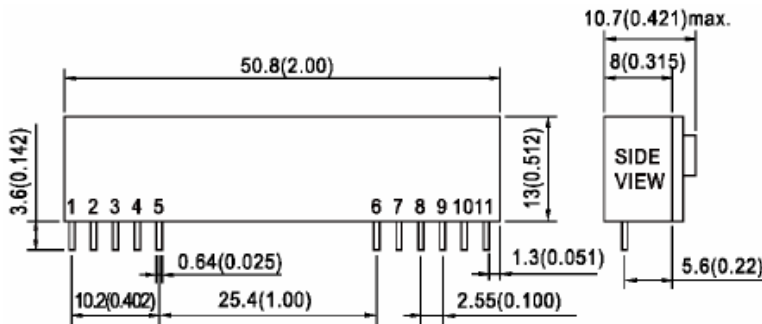
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# DC-DC Converter UNIT

## OSNxxW SERIES

### MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

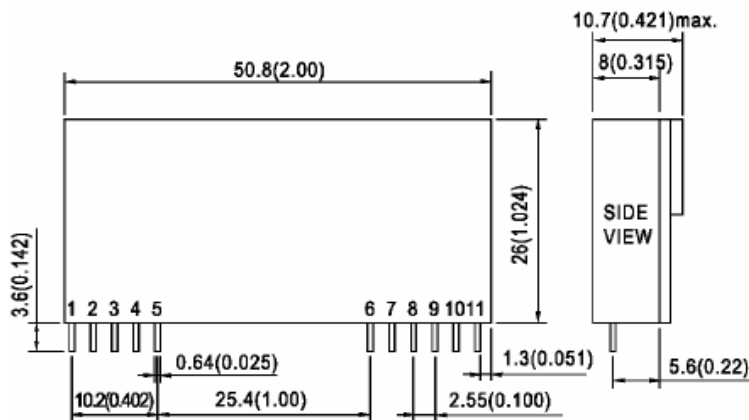
#### OSN02W-xxSxxRx SERIES PACKAGE "A"



All dimensions are in millimeters [inches]

PIN	Single
1,2,3,4	+Vout
5,6	Common
7,8	+Vin
9,10	NC
11	On/Off Control

#### OSN04W-xxSxxRx SERIES PACKAGE "B"



All dimensions are in millimeters [inches]

Pin	Single
1,2,3,4	+Vout
5,6	Common
7,8	+Vin
9,10	NC
11	On/Off Control

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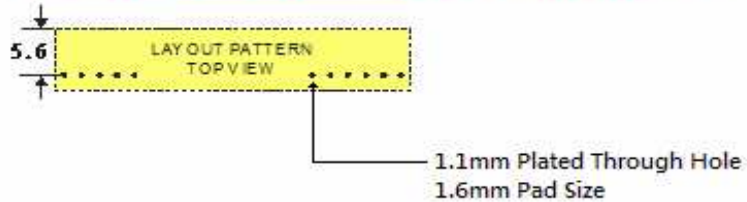
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# DC-DC Converter UNIT

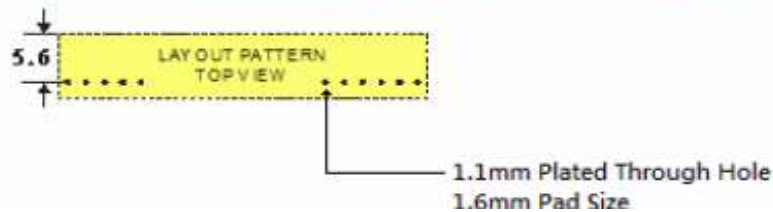
## OSNxxW SERIES

### RECOMMEND FOOTPRINT DETAILS

#### OSN02W-xxSxxRx SERIES PACKAGE "A"



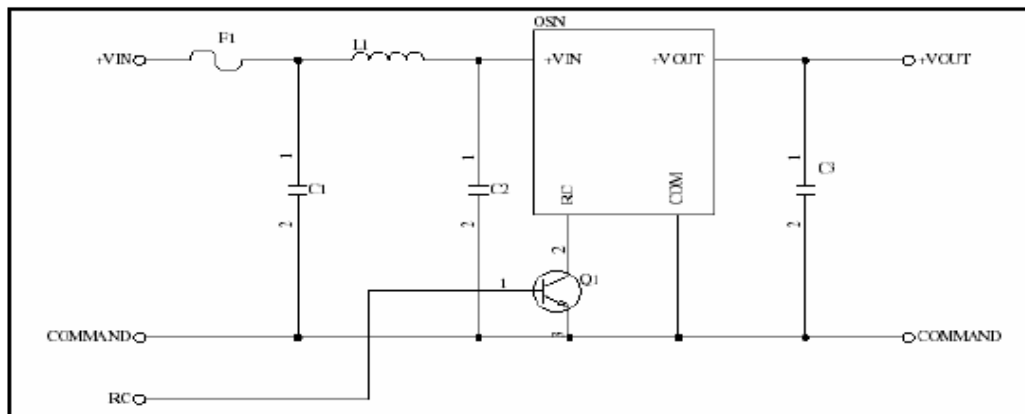
#### OSN04W-xxSxxRx SERIES PACKAGE "B"



### TABLE 1

Remote On/Off Control Voltage	
Output Power on	3.3~12Vdc or open circuit
Output Power off	0~0.4Vdc or short circuit pin 11 and 5,6

### TECHNICAL NOTES



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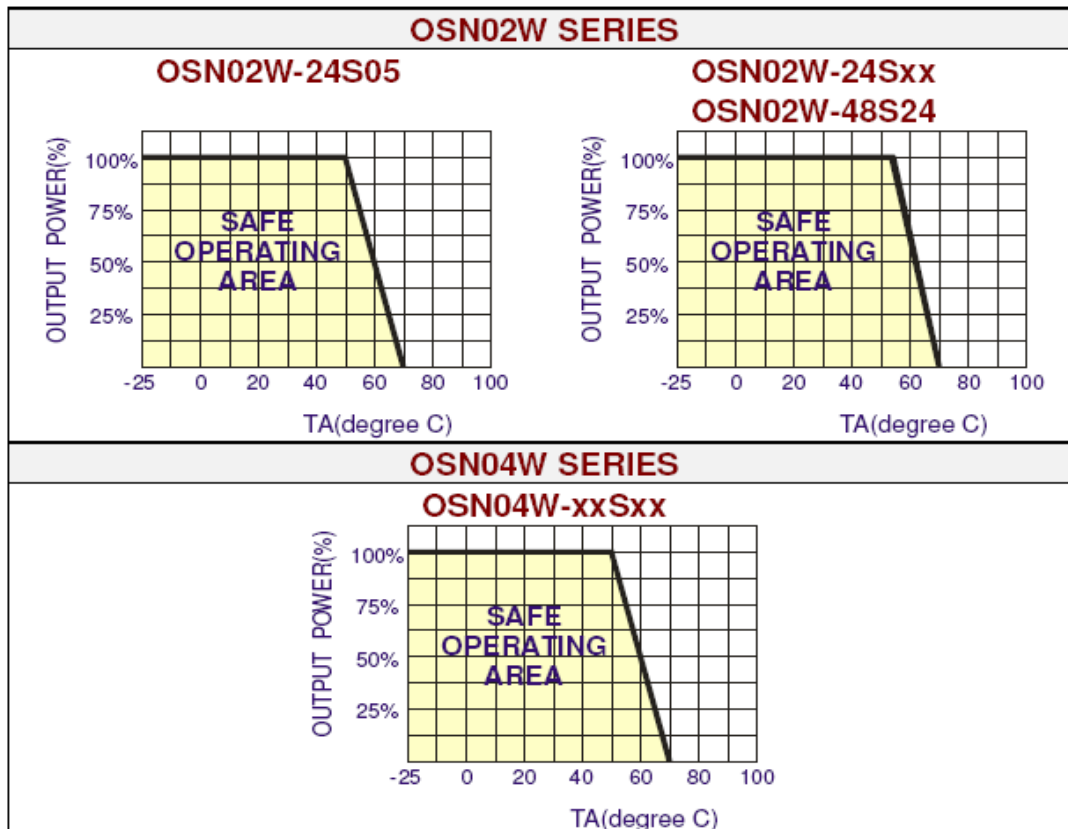
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# DC-DC Converter UNIT

## OSNxxW SERIES

	OSN02W-xxSxx	OSN04W-xxSxx
<b>F1</b>	3000mA Slow-Blow Type	5000mA Slow-Blow Type
<b>L1</b>	SCD0503 2.2 uH	SCD0503 1.0 uH
<b>C1</b>	22uF/100V (CHEMICON KMF series)	22uF/100V (CHEMICON KMF series)
<b>C2</b>	22uF/100V (CHEMICON KMF series)	22uF/100V (CHEMICON KMF series)
<b>C3</b>	100uF/25V (CHEMICON KY series)	100uF/25V (CHEMICON KY series)
<b>Q1</b>	On/Off pin open: Logic High = DC/DC converter on On/Off pin <0.4V: Logic Low = DC/DC converter off	On/Off pin open: Logic High = DC/DC converter on On/Off pin <0.4V: Logic Low = DC/DC converter off

### ● DERATING CURVE



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