

OSN10W SERIES

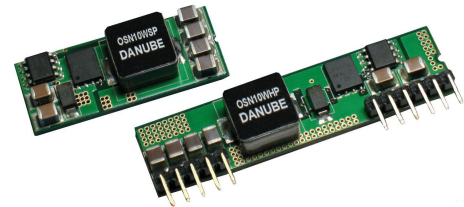
Single Output 10Amp

Non-Isolated DC-DC CONVERTER

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FEATURES

- 0.75~5.0VOUT / 10AMP
- SIP,SMD PACKAGE
- 8.3-14V INPUT VOLTAGE
- HIGH EFFICIENCY
- RoHS COMPLIANT
- COST-EFFECTIVE OPEN FRAME DESIGN
- 2 YEARS WARRANTY



OUTPUT SPECIFICATIONS

Voltage Set-point Accuracy ¹	±2% max.
Ripple & Noise(20MHz BW)	100mVp-p max.
Line Regulation ²	±0.3% Typ.
Load Regulation ³	±0.4% Typ.
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Over Load Protection	180%Typ.
Capacitive Load	8000uF max.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Ambient ⁴	-40 °C to +85°C
Storage Temperature	-55° C to +125° C

INPUT SPECIFICATIONS

Input Voltage Range	8.3-14V
Remote ON/OFF Control	Table 1
Input Filter Type	Capacitive

GENERAL SPECIFICATIONS

Efficiency	79% min.
Switching Frequency	300KHz Typ.
Isolation voltage	Non-isolation
Weight	OSN10WH 6.5g Typ.
	OSN10WS 6.0g Typ.
SIP Package	OSN10WH 50.8mm*13.0mm*6.0mm
SMD Package	OSN10WS 33.0mm*13.5mm*7.6mm
MTBF ⁵	>670000 Hours

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.

⁵ MIL-HDBK-217F @Ta=25 °C , Ground Benign.

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2011/07/05

● SELECTION GUIDE(1)

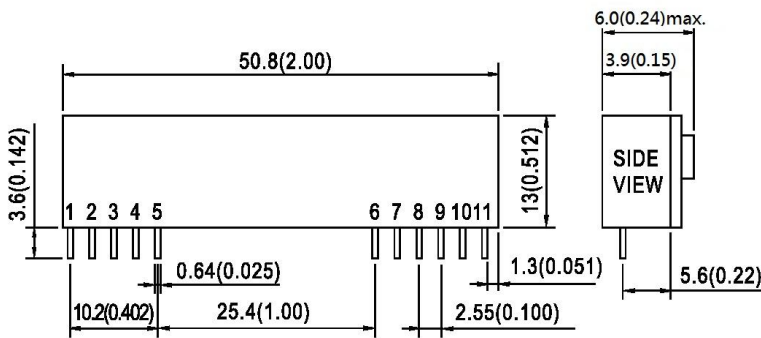
10Amp SIP PACKAGES

Specifications typical at $T_a=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	INPUT ⁶ CURRENT(mA)		Efficiency (%) ⁷
				FULL LOAD	NO LOAD	
OSN10WHN ⁸	$V_o(\text{set}) \leq 3.63$ $V_{in} = 8.3-14$	0.75	10	762	35	82
		1.2	10	1149	40	87
		1.5	10	1404	45	89
		1.8	10	1666	45	90
		2.0	10	1832	50	91
OSN10WHP ⁹	$V_o(\text{set}) > 3.63$ $V_{in} = 8.3-13.2$	2.5	10	2264	55	92
		3.3	10	2956	65	93
		5.0	10	4386	85	95

● MECHANICAL DIMENSIONS

OSN10WH PACKAGE



All dimensions are in millimeters [inches]

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

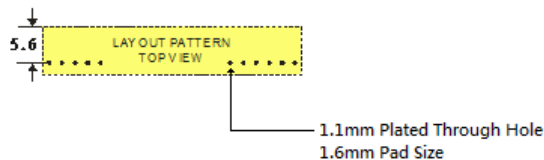
NOTE : Pin Size is Tolerance $0.64\Phi \pm 0.10\text{mm}$

All Dimensions In mm(Inches)

Tolerance .X or .XX= $\pm 0.5\text{mm}$

● RECOMMENDED FOOTPRINT DETAILS

OSN10WH PACKAGE



⁶ NOMINAL INPUT VOLTAGE.

⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

⁸ OSN10WHN ON/OFF Logic - Negative Logic.

⁹ OSN10WHP ON/OFF Logic - Positive Logic.

● SELECTION GUIDE(2)

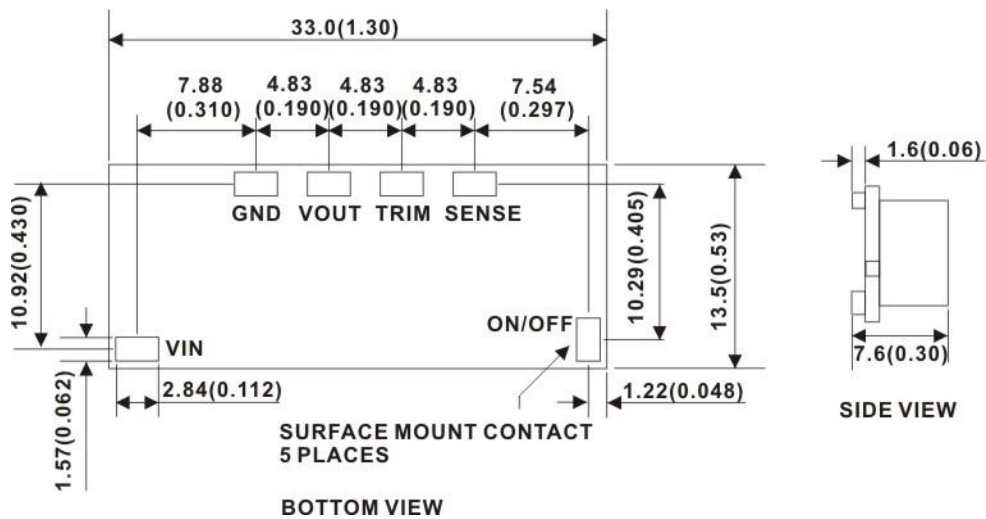
10Amp SMD PACKAGES

Specifications typical at $T_a=25^\circ\text{C}$, nominal input voltage, rated output current unless otherwise specified.

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	INPUT ¹⁰ CURRENT(mA)		Efficiency (%) ¹¹	
				FULL LOAD	NO LOAD		
OSN10WSN ¹²	$V_o(\text{set}) \leq 3.63$	0.75	10	762	35	82	
		1.2	10	1149	40	87	
		1.5	10	1404	45	89	
		$V_{in} = 8.3-14$	1.8	10	1666	45	90
		$V_o(\text{set}) > 3.63$	2.0	10	1832	50	91
OSN10WSP ¹³	$V_{in} = 8.3-13.2$	2.5	10	2264	55	92	
		3.3	10	2956	65	93	
		5.0	10	4386	85	95	

● MECHANICAL DIMENSIONS

OSN10WS PACKAGE



All dimensions are in millimeters [inches]

NOTE :

All Dimensions In mm(Inches)

Tolerance : X.X±0.5(X.XX±0.02)

X.XX±0.25(X.XXX±0.01)

Pin pitch tolerance ±0.25(±0.01)

Pin dimension tolerance ±0.1(±0.004)

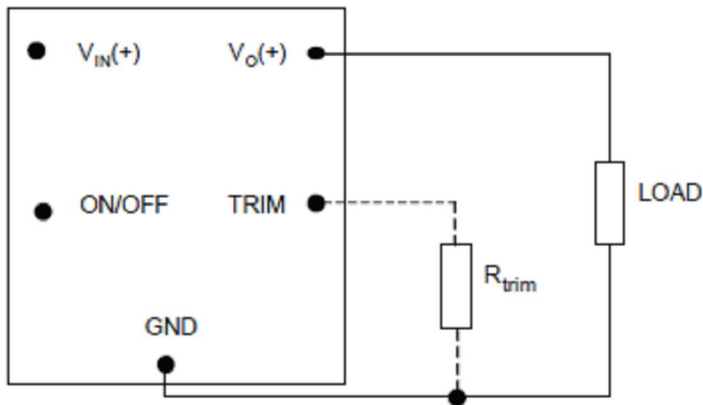
¹⁰ NOMINAL INPUT VOLTAGE.

¹¹ NOMINAL INPUT VOLTAGE, FULL LOAD.

¹² OSN10WSN ON/OFF Logic - Negative Logic.

¹³ OSN10WSP ON/OFF Logic - Positive Logic.

● EXTERNAL RESISTOR VALUES FOR PROGRAMMING OUTPUT VOLTAGE

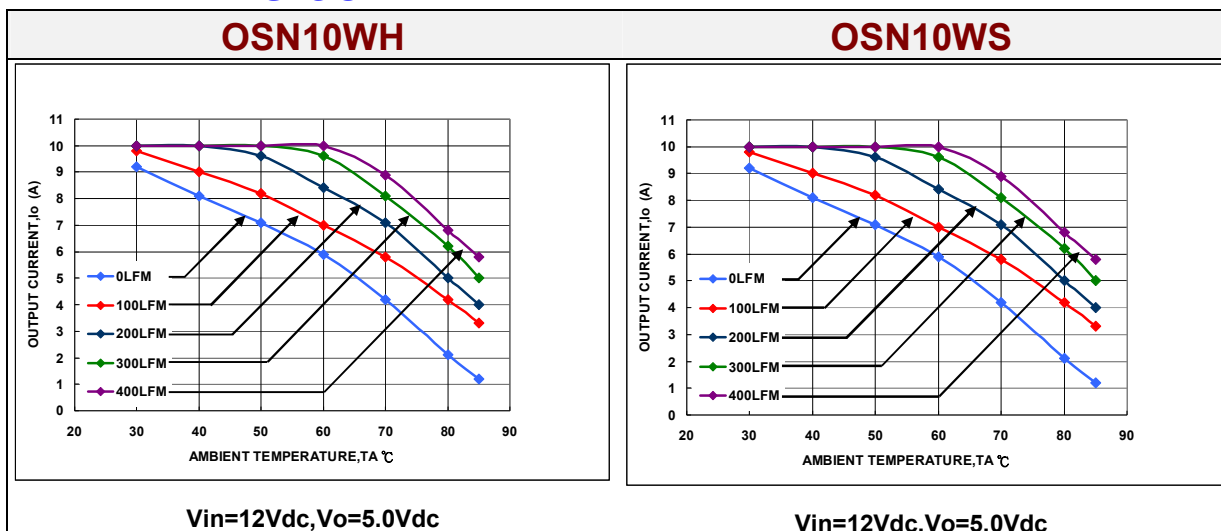


Vout	Rtrim(K ohm)
0.7525	Open
1.2	22.46
1.5	13.05
1.8	9.024
2.0	7.417
2.5	5.009
3.3	3.122
5.0	1.472

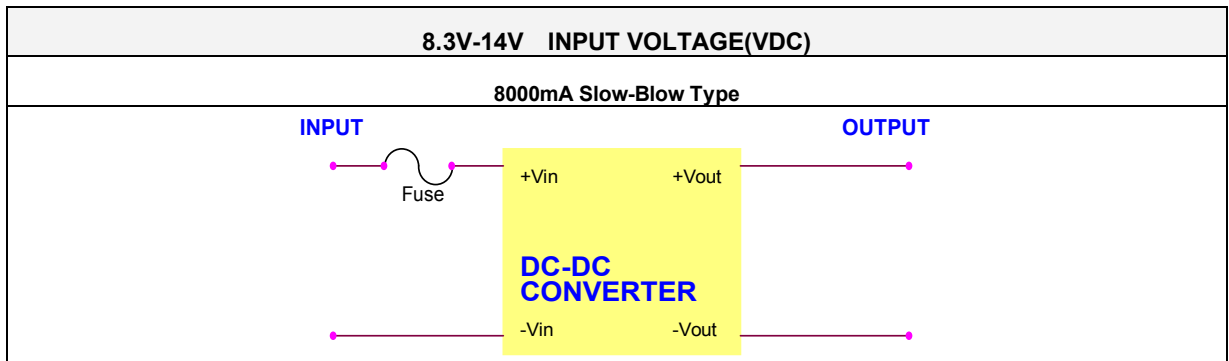
● Table1 (Remote On/Off Control)

Remote On/Off Control Voltage		
Negative logic(standard)	ON = $0V < V_r < 0.3V$ OFF = $2.5V < V_r < V_{in(max)}$	$I_{IN}=10\mu A, max$ $I_{IN}=1mA, max$
Positive logic(option)	ON = $(V_{in}-4) < V_r < V_{in(max)}$ OFF = $0V < V_r < 0.3V$	$I_{IN}=10\mu A, max$ $I_{IN}=1mA, max$
Remote off state input current	Nominal V_{in}	2.0mA ,typ
Input current of Remote control pin		10 μA ~1.0mA

● DERATING CURVE



● INPUT FUSE SELECTION GUIDE



Note: Certain applications may require the installation of external fuse in front of the input.

FOR MORE INFORMATION CALL:

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Home Page

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