

**FEATURES :**

- 4:1Wide Input Voltages Range
- High Efficiency up to 92%
- Regulated Output Types
- 1" X 1" DIL Package
- Operating Temperature:-40°C TO +80°C
- Industry Standard Pinout

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Input Voltage Range	Nominal Input Voltage	Output Voltage Range	Output Current	Efficiency
	Vdc	Vdc	Vdc	(mA)	%TYP
96DW-24S03R6NL	9-36	24	3.3	7000	86
96DW-24S05R6NL	9-36		5	6000	88
96DW-24S12R6NL	9-36		12	2500	89
96DW-24S15R6NL	9-36		15	2000	89
96DW-24S24R6NL	9-36		24	1250	90
96DW-48S03R6NL	18-75	48	3.3	7000	87
96DW-48S05R6NL	18-75		5	6000	89
96DW-48S12R6NL	18-75		12	2500	90
96DW-48S15R6NL	18-75		15	2000	91
96DW-48S24R6NL	18-75		24	1250	92
96DW-24D12R6NL	9-36	24	±12	±1250	89
96DW-24D15R6NL	9-36		±15	±1000	91
96DW-24D24R6NL	9-36		±24	±625	91
96DW-48D12R6NL	18-75	48	±12	±1250	91
96DW-48D15R6NL	18-75		±15	±1000	92
96DW-48D24R6NL	18-75		±24	±625	92

**Input Specifications**

Parameters	Conditions	Min	Typ	Max	Units
<b>Voltage Types</b>				4:1	
<b>Input current at no load (Nominal input voltage)</b>	24V models		10		mA
	48V models		10		
<b>Surge Voltage (1 sec. max.)</b>	24V models			50	Vdc
	48V models			100	

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DC-DC Converter

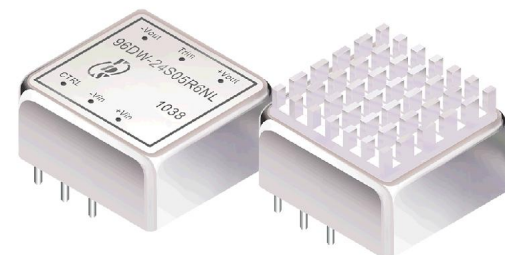
**96DW-R6 SERIES**

30Watt 1.5KV Isolated

4 : 1 Input Voltage Range

Single & Dual Output

1" x 1"



**Part Number**

96DW - 48 S 05 R 6 NL  
 A B C D E F G

- A: Series
- B: Input Voltage
- C: Single Output(S)or Dual Output(D)
- D: Output Voltage
- E: Regulated(R)
- F: Package
- G: RoHS Version

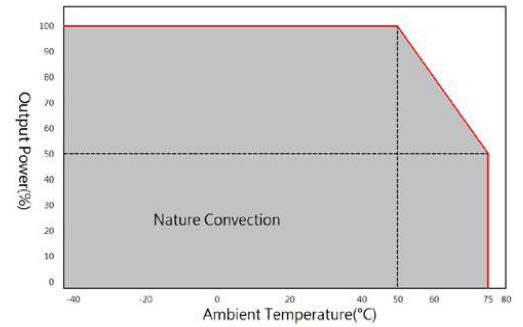
**Output Specifications**

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±2	%
Short Circuit Protection	Continuous ,Auto-Recovery				
Output Power Protection	Continuous ,Auto-Recovery	110		170	%
Over Voltage Protection	3.3Vdc	3.7		5.4	Vdc
	5Vdc	5.6		7.0	
	12Vdc	13.5		19.6	
Line Regulation	15Vdc	18.3		22.0	
	24Vdc	29.1		32.5	
Line Regulation	Nominal Input Voltage			±0.5	%
Load Regulation	Single			±0.5	%
	Dual (Balance load)			±1.0	%
Cross Regulation	Dual(25% to 100% load)			±5.0	%
Ripple & Noise	BW=DC To 20MHz				
	Single :				
	3.3V & 5V with 22uF				
	12V & 15V with 2*22uF				
	24V with 2*6.8uF			100	mVp-p
Dual : ( at each output)	±12V&±15V with10uF				
	±24V with 4.7uF				
Start up time	Nominal Input Voltage			30	ms
Transient response setting time	25% load step change		350		us

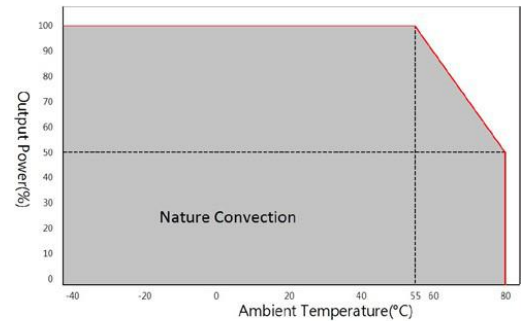
**General Specifications**

Parameters	Conditions	Min	Typ	Max	Units
Isolation Voltage	Input To Output	1500			Vdc
	Input(Output) To Case	1000			
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	Full load, nominal input	275			KHz
Operating Temperature		-40		80	°C
Case Temperature				105	°C
Humidity	Non Condensing	5		95	%
Cooling	Free air Convection				
Case material	Six-side shield case				
MTBF	MIL-HDBK-217F@25°C	1200000			Hours
Weight	without heatsink		22		g
	with heatsink		24.5		
Dimensions		25.4X25.4X10.6			mm

**Temperature Derating Graph**

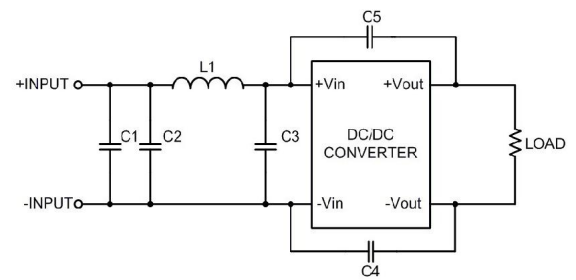


**Derating Curve**



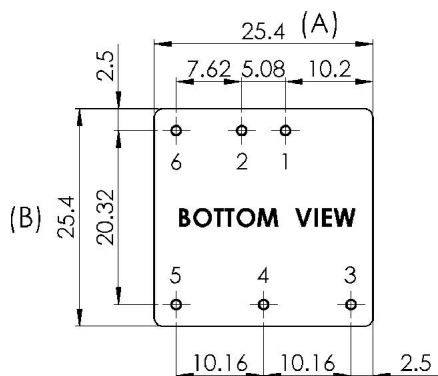
**Derating Curve With Heat-sink**

**Recommended Test Circuit**

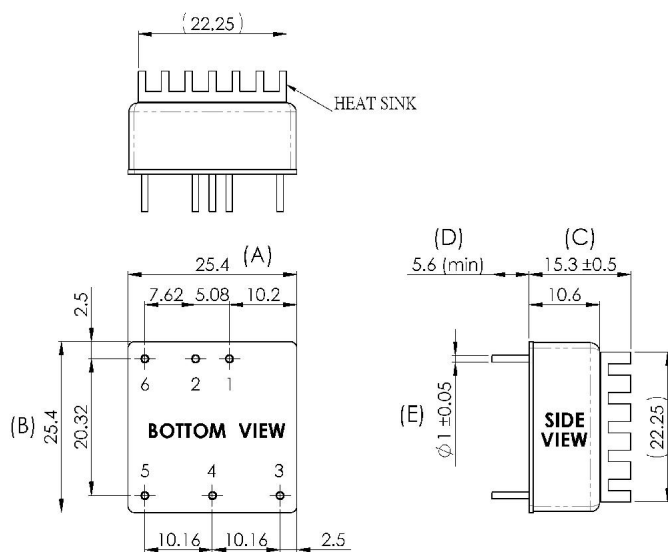


24V C1&C2&C3 4.7uF/50V C4&C5 1000pF/2kV L1 2.2uH  
 48V C1&C2&C3 4.7uF/100V C4&C5 2200pF/2kV L1 10uH

Markings and Dimensions



Unit : mm  
Tolerance : XX.X ± 0.5 , XX.XX ± 0.25



Unit : mm  
Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

PIN Assignment

Pin	1	2	3	4	5	6
Single	+Vin	-Vin	+Vout	Trim	-Vout	Remote ON/OFF
Dual	+Vin	-Vin	+Vout	Com	-Vout	Remote ON/OFF

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