

**FEATURES :**

- 1" X 1" DIL Package
- 4:1Wide Input Voltages Range
- Regulated Output Types
- High Efficiency Up To 92%
- Customized Solutions Available
- Remote Control: On/Off
- Operating Temperature From -40°C To +75°C (77°C with HS)
- 3 Years Warranty
- UL/cUL/IEC 60950-1 , 62368-1 Approved (5V/12V Single Output Only)
- EMC Standard of EMI EN55032:2012+AC:2013 (Class B) Approved
- EMC Standard of EMS EN55024:2010 Approved

YUAN DEAN SCIENTIFIC



DC-DC Converter

96DW-R6 SERIES

30Watt 1.5KV Isolated

4 : 1 Input Voltage Range

Single & Dual Output

1" x 1"



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

Part Number	Input Voltage		Output Voltage		Output Current (mA)	Efficiency %TYP
	Vdc	No Load (mA Typ)	Full Load (mA Typ)	Vdc		
96DW-24S03R6NL	9-36	10	1119	3.3	7000	86
96DW-24S05R6NL	9-36	10	1420	5	6000	88
96DW-24S12R6NL	9-36	10	1404	12	2500	89
96DW-24S15R6NL	9-36	10	1404	15	2000	89
96DW-24S24R6NL	9-36	10	1389	24	1250	90
96DW-48S03R6NL	18-75	7	553	3.3	7000	87
96DW-48S05R6NL	18-75	7	702	5	6000	89
96DW-48S12R6NL	18-75	7	694	12	2500	90
96DW-48S15R6NL	18-75	7	687	15	2000	91
96DW-48S24R6NL	18-75	7	679	24	1250	92



**Input Specifications**

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types				4:1	
Surge Voltage (1 sec. max.)	24V models			50	Vdc
	48V models			100	

**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

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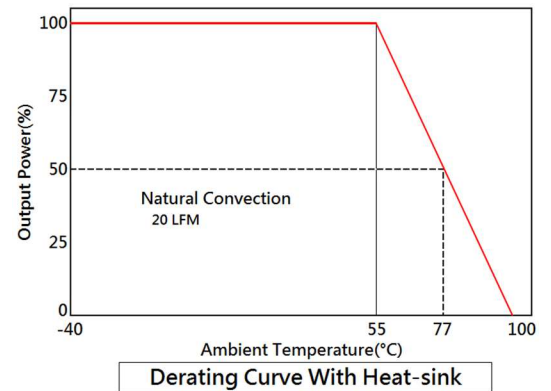
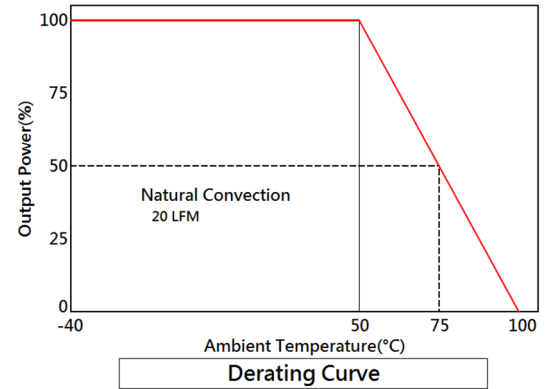
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**Output Specifications**

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	
	15Vdc	18.3		22.0	
Line Regulation	24Vdc	29.1		32.5	
	Nominal Input Voltage			±0.5	
Load Regulation	Single			±0.5	%
Ripple & Noise	BW=DC To 20MHz				100 mVp-p
	Single :				
	3.3V & 5V with 22uF				
	12V & 15V with 2*22uF				
Start up time	24V with 2*6.8uF				
	Nominal Input Voltage			30	
Transient response setting time	25% load step change		350		us

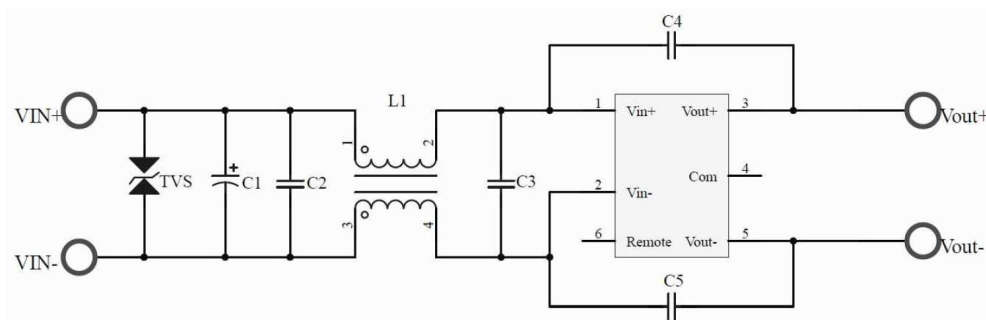
**Temperature Derating Graph @20LFM**



**General Specifications**

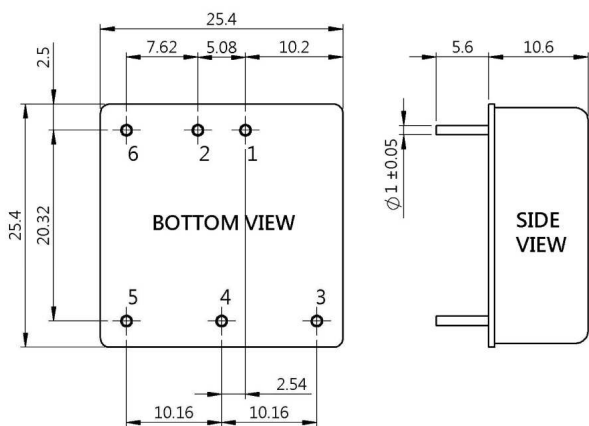
Parameters	Conditions	Min	Typ	Max	Units
Isolation Voltage	Input To Output	1500			Vdc
	Input(Output) To Case	1000			
Isolation Resistance	500Vdc	1000			MΩ
Switching Frequency	3.3 & 5.0 Vout models:	245	275	305	KHz
	other models:	300	330	360	
Operating Temperature	Without Heatsink	-40		75	°C
	With Heatsink	-40		77	
Case Temperature				105	°C
Humidity	Non Condensing	5		95	%
Cooling	Natural Convection (20LFM)				
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

Recommended Test Circuit Meets EN55024 Criterion A and EN55032 Class B

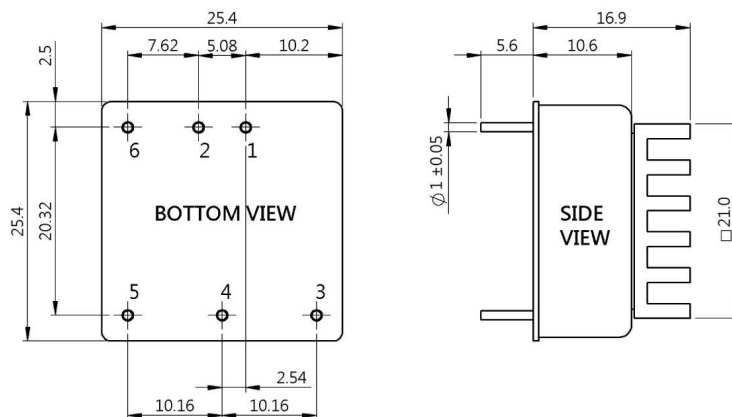


24V C1 220uF/100V&C2&C3 4.7uF/50V C4&C5 2200pF/2kV L1 0.94mH TVS 3.0SMCJ58AG  
 48V C1 220uF/100V&C2&C3 4.7uF/100V C4&C5 3200pF/2kV L1 6.20mH TVS 3.0SMCJ120AG

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