

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

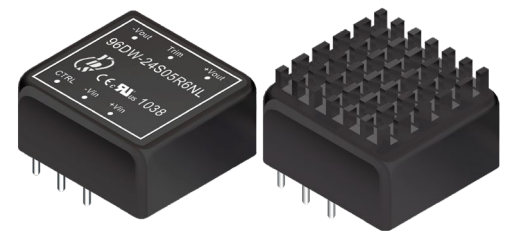
4 : 1 Input Voltage Range

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	Input Voltage (mA Typ)		Output Voltage	Output Current	Efficiency
	Vdc	No Load	Full Load	Vdc	(mA)	%TYP
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	
Remote ON/OFF	Positive logic	DC-DC ON	Open or 3 ~ 15VDC		
		DC-DC OFF	Short or 0 ~ 1.2VDC		
	Input current of Ctrl pin		-0.5 ~ +1.0 mA		
	Remote off input current		2.0 mA TYP		

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



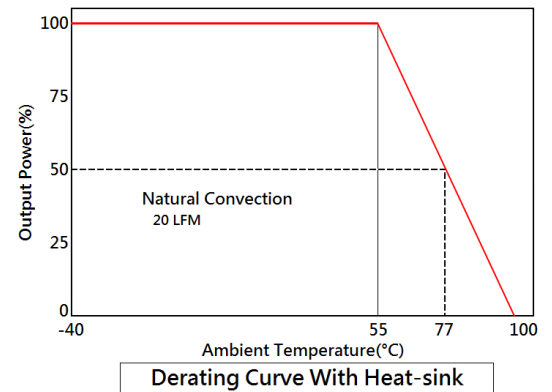
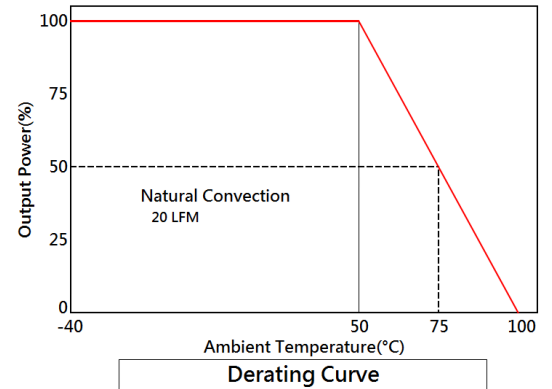
Output Specifications

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

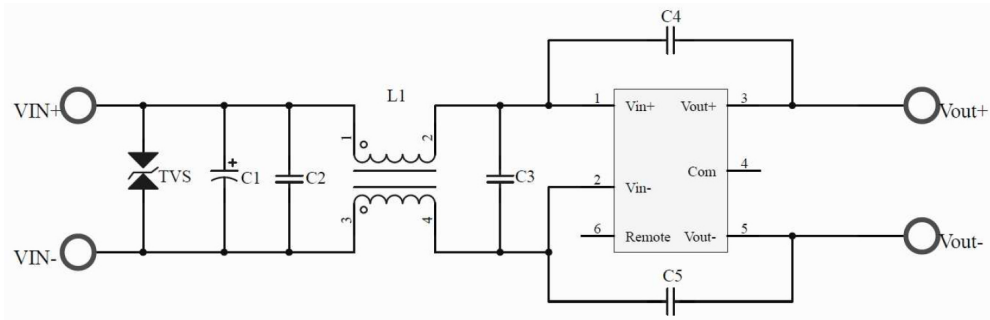
General Specifications

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	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

Temperature Derating Graph @20LFM

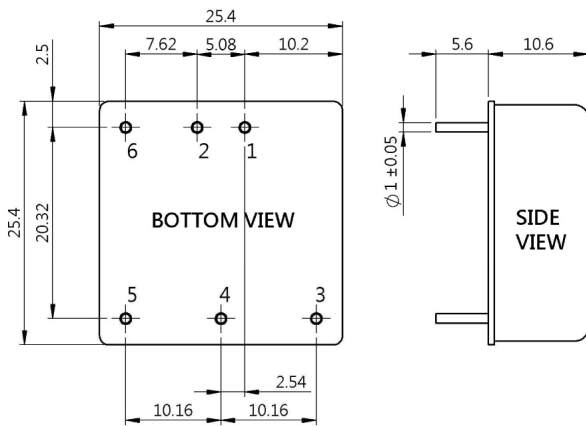


Recommended Test Circuit Meets EN55024 Criterion A and EN55032 Class B

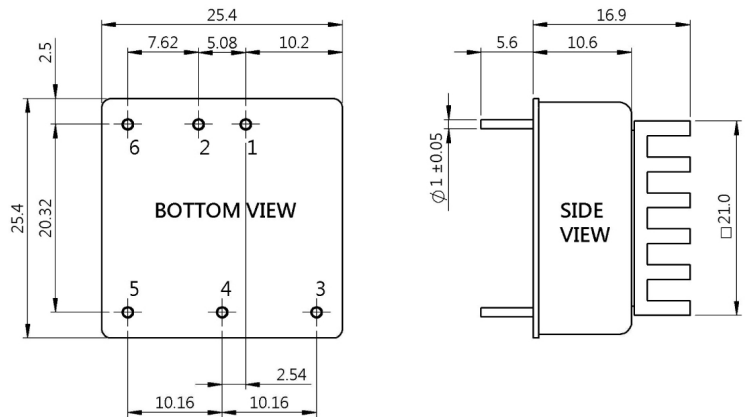


24V C1 220uF/100V&C2&C3 4.7uF/50V C4&C5 2200pF/2kV L1 0.94mH TVS 3.0SMCJ58AG
 48V C1 220uF/100V&C2&C3 4.7uF/100V C4&C5 3200pF/2kV L1 6.20mH TVS 3.0SMCJ120AG

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