

Size: 0.77in x 0.39in x 0.49in
(19.5mm x 9.80mm x 12.50mm)

FEATURES

- Wide Input Voltage Range
- 7PIN SIP Package
- Reinforced Insulation
- Unregulated Outputs
- Internal SMD Construction
- Short Circuit Protection
- High Efficiency
- Industry Standard Pin Out
- RoHS Compliant
- Design Refers to EN60601-1, ANSI/AAMI ES60601-1

APPLICATIONS

- Medical Collection & Isolation
- High Voltage Collection Circuit
- IGBT Driven Circuits

DESCRIPTION

The DCMH2 series of medical high isolation DC/DC converters offers 2 watts of output power in a very compact 7-pin SIP package. This series consists of unregulated single and dual output models with a wide input voltage range. Features of this series include reinforced insulation, internal SMD construction, high efficiency, and short circuit protection. This series design refers to EN60601-1, ANSI/AAMI ES60601-1 and is RoHS compliant.

MODEL SELECTION TABLE

Single Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current	Efficiency		Max. Capacitive Load	Max. Ripple & Noise	Output Power
				Min.	Typ.			
DCMH2-05S05	5VDC (4.5~5.5VDC)	5VDC	400mA	73%	77%	1000µF	150mVp-p	2W
DCMH2-05S12		12VDC	167mA	75%	79%	470µF		
DCMH2-05S15		15VDC	133mA	75%	79%	470µF		
DCMH2-12S05	12VDC (10.8~13.2VDC)	5VDC	400mA	73%	77%	1000µF	150mVp-p	2W
DCMH2-12S12		12VDC	167mA	76%	80%	470µF		
DCMH2-12S15		15VDC	133mA	78%	82%	470µF		
DCMH2-24S05	24VDC (21.6~26.4VDC)	5VDC	400mA	75%	79%	1000µF	150mVp-p	2W
DCMH2-24S12		12VDC	167mA	78%	82%	470µF		
DCMH2-24S15		15VDC	133mA	80%	84%	470µF		

MODEL SELECTION TABLE

Dual Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current	Efficiency		Max. Capacitive Load ⁽¹⁾	Max. Ripple & Noise	Output Power
				Min.	Typ.			
DCMH2-05D05	5VDC (4.5~5.5VDC)	±5VDC	±200mA	74%	78%	470µF	150mVp-p	2W
DCMH2-05D09		±9VDC	±111mA	74%	78%	470µF		
DCMH2-05D12		±12VDC	±84mA	74%	78%	220µF		
DCMH2-05D15		±15VDC	±67mA	76%	80%	220µF		
DCMH2-12D05	12VDC (10.8~13.2VDC)	±5VDC	±200mA	74%	78%	470µF	150mVp-p	2W
DCMH2-12D09		±9VDC	±111mA	78%	82%	470µF		
DCMH2-12D12		±12VDC	±84mA	78%	82%	220µF		
DCMH2-12D15		±15VDC	±67mA	76%	80%	220µF		
DCMH2-24D05	24VDC (21.6~26.4VDC)	±5VDC	±200mA	75%	79%	470µF	150mVp-p	2W
DCMH2-24D09		±9VDC	±111mA	77%	81%	470µF		
DCMH2-24D12		±12VDC	±84mA	78%	82%	220µF		
DCMH2-24D15		±15VDC	±67mA	77%	81%	220µF		

SPECIFICATIONS

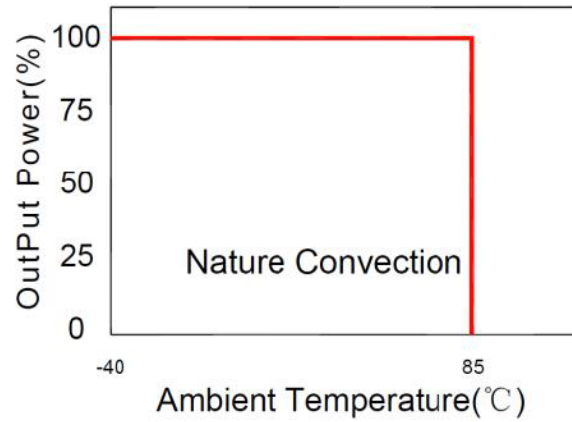
All specifications are based on 25°C, Nominal Input Voltage, and Rated Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Voltage Types	Vo, Io Nom			±10	%
Input Filter		Capacitor			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Tolerance	100% Full Load			±5	%
Line Regulation	For 1.0% of Vin		1.2		%
Load Regulation	10% to 100% FL	9V, 12V, & 15V Outputs		15	%
		5V Output		20	
Output Power		See Table			
Output Current		See Table			
Maximum Capacitive Load		See Table			
Ripple & Noise	20MHz Bandwidth		100	150	mVp-p
PROTECTION					
Short Circuit Protection	Supply voltage must be discontinued at the end of short circuit duration.			3	S
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature		-40		+85	°C
Storage Temperature		-55		+125	°C
Humidity	Non-Condensing			95	%
MTBF	MIL-HDBK-217F @25°C	3,500,000			Hours
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Switching Frequency	Full Load, Nominal Input		100		KHz
Isolation Voltage	Between Input and Output		≤4200		VAC
			6000		VDC
Isolation Resistance	500VDC	1000			MΩ
Isolation Capacitance	Input-Output, 100KHz/0.1V		5		pF
Patient Leakage Current				2	μA
PHYSICAL SPECIFICATIONS					
Weight		0.14oz (4.0g)			
Dimensions (L x W x H)		0.77in x 0.39in x 0.49in (19.5mm x 9.80mm x 12.50mm)			
Case Material		DAP			
Cooling		Free Air Convection			
Transformer Creepage			5		mm
Transformer Clearance			5		mm
PCB Creepage & Clearance			5.5		mm
SAFETY CHARACTERISTICS					
Safety Approvals		Design Refers to			EN60601-1 ANSI/AAMI ES60601-1

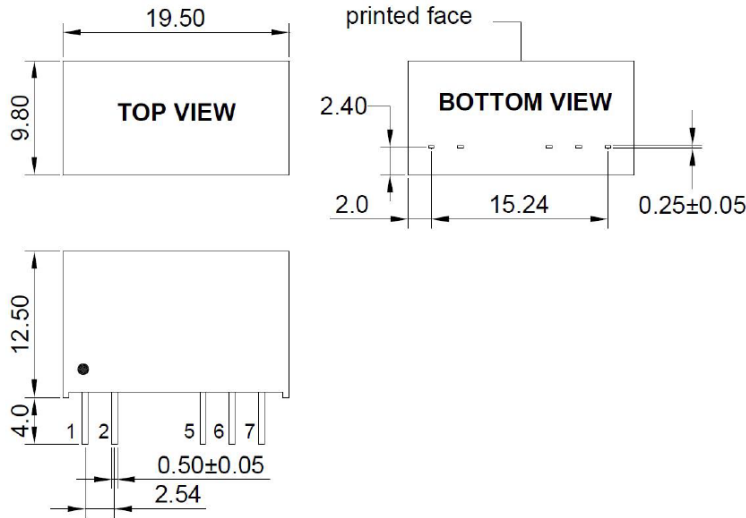
NOTES

- Capacitive loads of positive and negative outputs are identical.
- *Due to advances in technology, specifications subject to change without notice.

DERATING CURVES



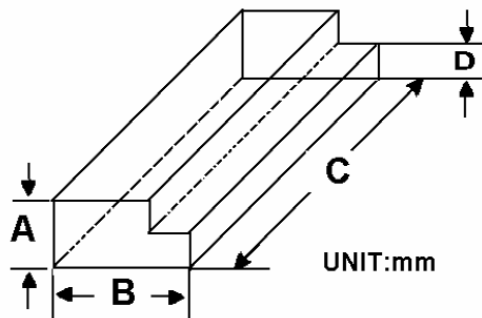
MECHANICAL DRAWINGS



Pin	PIN Connection	
	Single	Dual
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
6	No Pin	Com
7	+Vout	+Vout

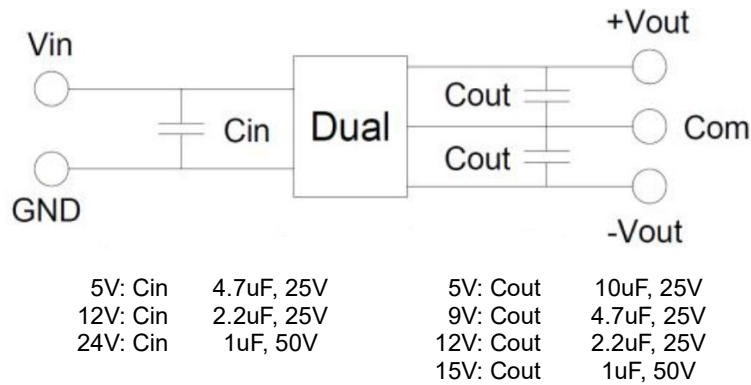
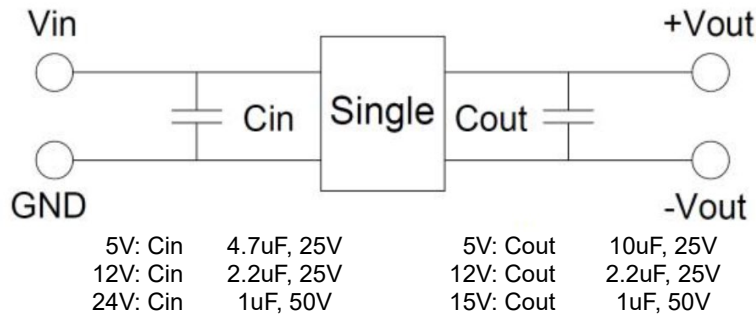
Note:
Unit: mm unless otherwise specified
All tolerances are ±0.25

Packaging



Size (mm)			
A	B	C	D
12.0	28.55	55.0	6.00

RECOMMENDED TEST CIRCUIT



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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