Size: 0.50in x 0.40in x 0.31in (12.7mm x 10.2mm x 8.0mm)

FEATURES

- Standard DIP-8 Package
- I/O Isolation 3000VDC
- 3.3VDC, 5VDC, and 12VDC Input Voltages Available
- Single and Dual Outputs Available
- High Efficiency
- Over Load and Short Circuit Protection
- UL/cUL 60950-1, IEC/EB 60950-1, UL/cUL 62368-1, and IEC/EN 62368 Pending Safety Approvals

DESCRIPTION

The DCMFPU01H series of DC DC converters offers 1 watt of output power in a compact 0.50” x 0.40” x 0.31” standard DIP-8 package. This series consists of both single and dual output models with 3.3VDC, 5VDC, and 12VDC input voltages available. Each model in this series has I/O isolation of 3000VDC, high efficiency, as well as over load and short circuit protection. This series also has UL/cUL 60950-1, IEC/EB 60950-1, UL/cUL 62368-1, and IEC/EN 62368 pending safety approvals. Please call factory for order details.

MODEL SELECTION TABLE

Single Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Input Current		Output Power	Load Regulation (Max.)	Efficiency (@Max.Load)
			Min Load	Max Load	@No Load	@Max. Load			
DCMFPU01-033S033H	3.3VDC (2.97~3.63)	3.3VDC	6mA	300mA	45mA	400mA	1W	15%	75%
DCMFPU01-033S05H		5VDC	4mA	200mA		384mA		12%	79%
DCMFPU01-033S12H		12VDC	1.68mA	84mA		382mA		12%	80%
DCMFPU01-033S15H		15VDC	1.34mA	67mA		376mA		10%	81%
DCMFPU01-05033H	5VDC (4.5~5.5)	3.3VDC	6mA	300mA	30mA	257mA	1W	12%	77%
DCMFPU01-05S05H		5VDC	4mA	200mA		250mA		11%	80%
DCMFPU01-05S12H		12VDC	1.68mA	84mA		246mA		9%	82%
DCMFPU01-05S15H		15VDC	1.34mA	67mA		242mA		8%	83%
DCMFPU01-12S033H	12VDC (10.8~13.2)	3.3VDC	6mA	300mA	17mA	107mA	1W	8%	77%
DCMFPU01-12S05H		5VDC	4mA	200mA		105mA		8%	79%
DCMFPU01-12S12H		12VDC	1.68mA	84mA		104mA		8%	81%
DCMFPU01-12S15H		15VDC	1.34mA	67mA		102mA		7%	82%

MODEL SELECTION TABLE

Dual Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Input Current		Output Power	Load Regulation (Max.)	Efficiency (@Max.Load)
			Min Load	Max Load	@No Load	@Max. Load			
DCMFPU01-033D05H	3.3VDC (2.97~3.63)	±5VDC	±2mA	±100mA	45mA	389mA	1W	12%	78%
DCMFPU01-033D12H		±12VDC	±0.84mA	±42mA		382mA		12%	80%
DCMFPU01-033D15H		±15VDC	±0.66mA	±33mA		370mA		10%	81%
DCMFPU01-05D05H	5VDC (4.5~5.5)	±5VDC	±2mA	±100mA	30mA	250mA	1W	11%	80%
DCMFPU01-05D12H		±12VDC	±0.84mA	±42mA		243mA		9%	83%
DCMFPU01-05D15H		±15VDC	±0.66mA	±33mA		239mA		8%	83%
DCMFPU01-12D05H	12VDC (10.8~13.2)	±5VDC	±2mA	±100mA	17mA	104mA	1W	7%	80%
DCMFPU01-12D12H		±12VDC	±0.84mA	±42mA		102mA		7%	82%
DCMFPU01-12D15H		±15VDC	±0.66mA	±33mA		101mA		7%	82%

SPECIFICATIONS

All specifications are based on 25°C, Nominal Input Voltage, Resistive Load, 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						
Input Voltage Range	3.3V Input Models		2.97	3.3	3.63	VDC
	5V Input Models		4.5	5	5.5	
	12V Input Models		10.8	12	13.2	
Input Surge Voltage (1 sec. max)	3.3V Input Models		-0.7		6	VDC
	5V Input Models		-0.7		9	
	12V Input Models		-0.7		18	
Input Filter	All Models		Internal Capacitor			
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy					±3.0	%Vnom.
Line Regulation	For Vin Change of 1%			±1.2	±1.5	%
Load Regulation	Io-10% to 100%		See Table			
Voltage Balance	Dual Output, Balanced Loads			±0.1	±1.0	%
Output Power			See Table			
Output Current			See Table			
Maximum Capacitive Load	Single Output Models			220		µF
	Dual Output Models			100		
Ripple & Noise (20MHz bandwidth)	0-20 MHz bandwidth				100	mVp-p
Temperature Coefficient				±0.01	±0.02	%/ºC
PROTECTION						
Short Circuit Protection	Continuous, Automatic Recovery					
Over Load Protection	Normal Vin at 25ºC			160		%
ENVIRONMENTAL SPECIFICATIONS						
Operating Ambient Temperature	Natural Convection		-40		+90	ºC
Case Temperature					+95	ºC
Storage Temperature Range			-50		+125	ºC
Humidity	Non-Condensing				95	%RH
Cooling			Natural Convection			
Lead Temperature	1.5mm from case for 10 sec.				260	ºC
MTBF (Calculated)	MIL-HDBK-217F@25ºC, Ground Benign		3,589,000			Hours
GENERAL SPECIFICATIONS						
Efficiency			See Table			
Switching Frequency			50	80	110	KHz
Isolation Voltage	60 Seconds		3000			VDC
Isolation Resistance	500VDC		10			GΩ
Isolation Capacitance	100KHz, 1V			20		pF
PHYSICAL SPECIFICATIONS						
Weight			0.069oz(1.95g)			
Dimensions (L x W x H)			0.50in x 0.40in x 0.31in (12.7mm x 10.2mm x 8.0mm)			
Case Material			Non-Conductive Black Plastic (Flammability to UL 94V-0 rated)			
Pin Material			Tinned Copper			
SAFETY CHARACHTERISTICS						
Safety Approvals (Pending)	UL/cUL 60950-1 recognition (UL certificate), IEC/EN 60950-1 (CB report) UL/cUL 62368-1 recognition (UL certificate), IEC/EN 62368-1 (CB report)					
EMI[4]	Conduction	EN55032, EN55022, FCC part 15	Class A			
EMS	EN55024					
	ESD	EN61000-4-2 Air ±8kV, Contact ±6kV	A			
	Radiated Immunity	EN61000-4-3 10V/m	A			
	Fast Transient[5]	EN61000-4-4 ±2kV	A			
	Surge[5]	EN61000-4-5 ±1kV	A			
	Conducted Immunity	EN61000-4-6 10Vrms	A			
	PFMF	EN61000-4-8 3A/m	A			

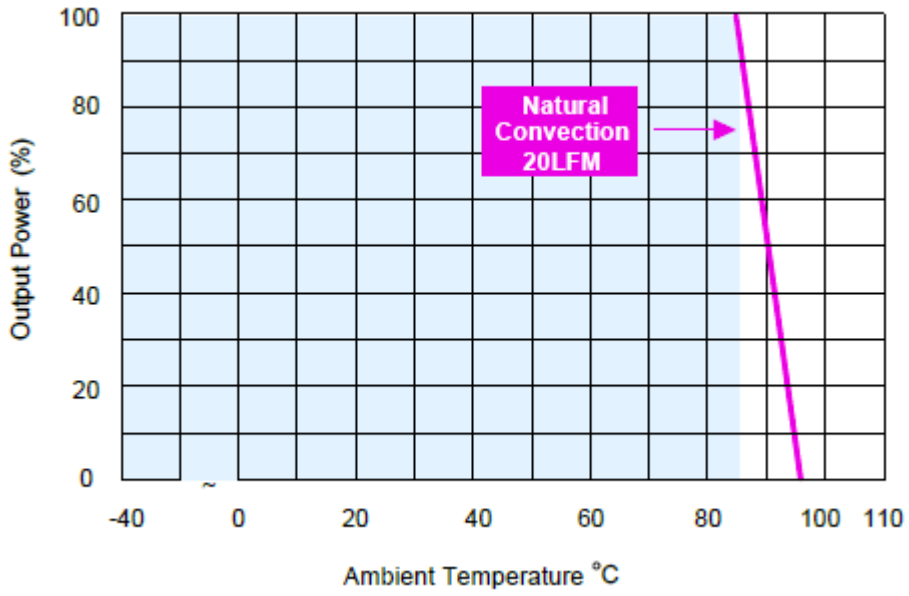
NOTES

1. These power converters require a minimum output loading to maintain specified regulation, operation under no-load conditions will not damage these modules; however they may not meet all specifications listed.
2. We recommend protecting the converter by a fast blow fuse in the input supply line.
3. Other input and output voltages may be available, please contact factory.
4. To meet EN55022 Class A an external filter is necessary, please contact factory.
5. To meet EN61000-4-4 & EN61000-4-5 an external capacitor across the input pins is required. Suggested capacitor 680µF/50V KY Al-E Cap.
6. Natural Convection is about 20LFM but is not equal to still air (0 LFM)

**Due to advances in technology, specifications subject to change without notice.*

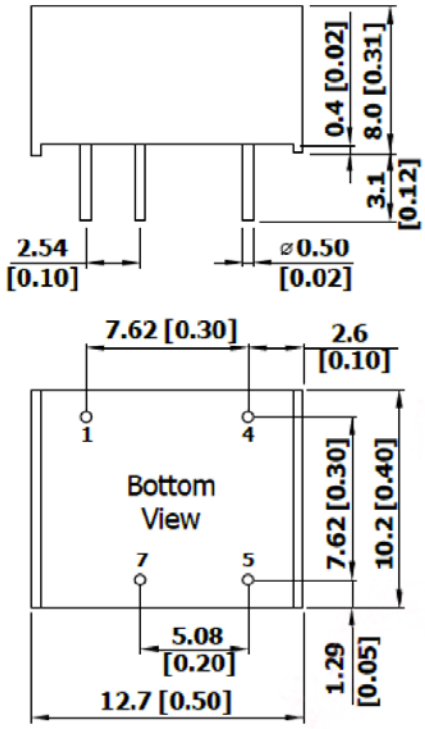
DERATING CURVES

Power Derating Curve

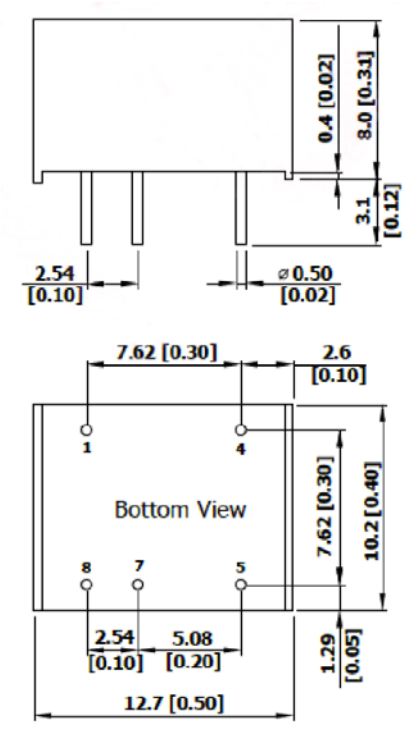


MECHANICAL DRAWINGS

Single Output



Dual Output



PIN CONNECTIONS

Pin	Single Output	Dual Output
1	-Vin	-Vin
4	+Vin	+Vin
5	+Vout	+Vout
7	-Vout	Common
8	No Pin	-Vout

All dimensions in mm (inches)
Tolerance: x.x±0.5 (x.xx±0.02)
x.xx±0.25 (x.xxx±0.01)
Pins: ±0.05 (±0.002)

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 ISO9001-2008 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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