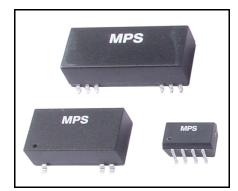
3W, Wide Input Range SMD, Single & Dual Output DC/DC Converters





Key Features

- Efficiency up to 83%
- 1500VDC Isolation
- MTBF > 1,000,000 Hours
- 2:1 Wide Input Range
- UL1950 Safety Approval
- · Short Circuit Protection
- Temperature Performance -40°C to +71°C
- · Industry Standard Pinout
- UL 94V-0 Package Material
- · Internal SMD Construction

Selection	n Guide				
Model Number	Input Voltage	Output Voltage	Output Current	Efficiency	Reflected Ripple Current
	VDC	VDC	mA	% Typ.	mA Typ.
DDC1021		3.3	700	75	
DDC1022		5	600	79	1
DDC1023	12	12	250	82	1
DDC1024	(9 – 18)	15	200	82	25
DDC1025	(3 – 10)	±5	±300	78	
DDC1026		±12	±125	81	
DDC1027		±15	±100	81	
DDC1031		3.3	700	76	
DDC1032		5	600	80	
DDC1033	24	12	250	83	
DDC1034	(18 – 36)	15	200	83	15
DDC1035	(10 00)	±5	±300	79	
DDC1036		±12	±125	82	
DDC1037		±15	±100	82	
DDC1041		3.3	700	76	
DDC1042		5	600	80	
DDC1043	48	12	250	83	
DDC1044	48 (36 – 75)	15	200	83	10
DDC1045	(00 - 10)	±5	±300	79	
DDC1046		±12	±125	82]
DDC1047		±15	±100	82	

MPS Industries DDC1000 3W DC/DC's are in "gull-wing" SMT package and meet 245°C/10sec in solder-reflow for lead free process.

The series consists of 21 models that operate over input voltage ranges of 9-18VDC, 18-36VDC and 36-75VDC which provide precisely regulated output voltages of 3.3V, 5V, 12V, 15V, ±5V, ±12V and ±15VDC.

The -40°C to +71°C operating temperature range makes it ideal for data communication equipment, mobile battery driven equipment, distributed power systems, telecommunication equipment, mixed analog/digital subsystems, process/machine control equipment, computer peripheral systems, and industrial robot systems.

The modules have a maximum power rating of 3W and a typical full-load efficiency of 83%, continuous short circuit, 50mV output ripple, built-in filtering for both input and output minimize the need for external filtering.

| 17.82 [0.702] | 15 14 13 | 38 (80 0) 1 0 0 1 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 12 | 12 3 | 10 11 1

Pin Connections					
Pin	Singles	Duals			
1	-Vin	-Vin			
2	-Vin	-Vin			
3	NC	NC			
10	NC	Common			
11	NC	NC			
12	NC	-Vout			
13	+Vout	+Vout			
14	NC	NC			
15	-Vout	Common			
22	NC	NC			
23	+Vin	+Vin			
24	+Vin	+Vin			
NC: No Connection					

Case Size – 32.3x14.8x10.2mm (1.27x0.58x0.40inch) Case Material – Non-Conductive Black Plastic Weight –

Tolerance	Millimeters	Inches
	X.X±0.25	X.XX±0.01
	X.XX±0.13	X.XXX±0.005
Pin	±0.05	±0.002

8.8g (0.31Oz)

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 E-mail: sales@mpsind.com

DDC1000 SERIES

3W, Wide Input Range SMD, Single & Dual Output DC/DC Converters



Absolute Maximum Ratings					
Para	Parameter		Max.	Units	
Input Surge Voltage (1000mS)	12VDC Input Models	-0.7	25	VDC	
	24VDC Input Models	-0.7	50	VDC	
	48VDC Input Models	-0.7	100	VDC	
Lead Temperature (1.5mm from case for 10sec.)			260	°C	
Internal Power Dissipation			2500	mW	

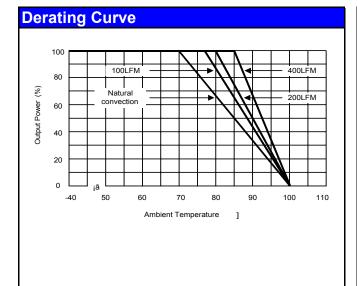
Exceeding the unit absolute maximum ratings could cause damage	
These are not continuous operating ratings.	

Environmental Characteristics					
Parameter	Conditions	Min.	Max.	Units	
Operating Temperature	Ambient	-40	71	°C	
Operating Temperature	Case	-40	90	°C	
Storage Temperature		-40	125	°C	
Humidity			95	%	
Cooling	Free-Air Convection				

General Characteristics					
Parameter	Conditions	Min.	Тур.	Max.	Units
Isolation Voltage	60 Seconds	1500			VDC
Isolation Resistance	500VDC	1000			МΩ
Isolation Capacitance	100kHz, 1V		65	100	pF
Switching Frequency			300		kHz
MTBF	MIL-HDBK-217F @25°C Ground Benign	1			MHrs

Output Characteristics					
Parameter	Conditions	Min.	Тур.	Max.	Units
Line Regulation	Vin = Min. to Max.		±0.1	±0.3	%
Load Regulation	Io = 10% to 100%		±0.3	±1.0	%
Ripple & Noise	20MHz BW		50	75	mV P-P
Short Circuit	Continuous				

Maximum Capacitive Load						
Models by Output Voltage	Singles	Duals	Units			
(Each Output on Duals)	4700	180	uF			



Notes:

- Specifications typical at Ta=+25°C, resistive load, nominal input voltage, rated output current unless otherwise noted.
- Transient recovery time is measured to within 1% error band for a load step change of 75% to 100%.
- 3. These power converters require a minimum output load to maintain specified regulation.
- Operation under no-load conditions will not damage these modules; however, they may not meet all specifications listed.
- All DC/DC converters should be externally fused at the front end for protection.
- Other input and output voltage may be available, please contact factory.
- 7. All specifications subject to change without notice.
- 8. For detailed data sheet, please contact MPS directly.

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