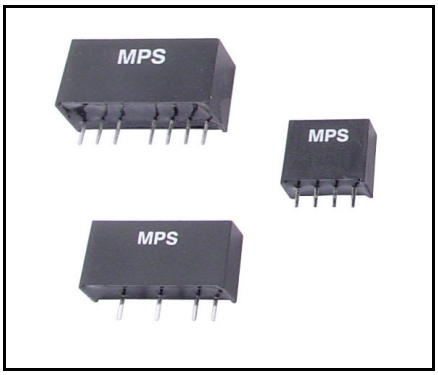
ADC100 SERIES

1W, Miniature SIP, Single & Dual Output DC/DC Converters



Key Features

- Efficiency up to 81%
- 1000VDC Isolation
- MTBF > 2,000,000 Hours
- Low Cost
- Input 5, 12, 15 and 24VDC
- Output 3.3, 5, 9, 12, 15, ±5, ±9, ±12 and ±15VDC
- Temperature Performance -40°C to +85°C
- UL 94V-0 Package Material
- Internal SMD Construction
- Industry Standard Pinout

Selection Guide

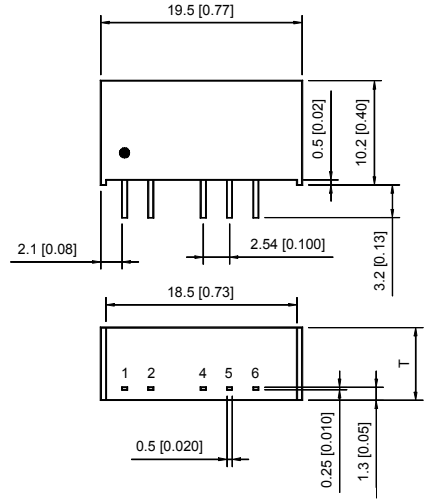
Model Number	Input Voltage	Output Voltage	Output Current	Efficiency	Load Regulation
	VDC	VDC	mA	% Typ.	% Max.
ADC101	5 (4.5 – 5.5)	3.3	260	73	10
ADC102		5	200	71	10
ADC103		9	110	76	8
ADC104		12	84	78	7
ADC105		15	67	78	7
ADC106		±5	±100	72	10
ADC107		±9	±56	77	8
ADC108		±12	±42	78	7
ADC109		±15	±34	79	7
ADC111	12 (10.8 – 13.2)	3.3	260	74	8
ADC112		5	200	73	8
ADC113		9	110	78	5
ADC114		12	84	80	5
ADC115		15	67	80	5
ADC116		±5	±100	74	8
ADC117		±9	±56	79	5
ADC118		±12	±42	81	5
ADC119		±15	±34	81	5
ADC121	24 (21.6 – 26.4)	3.3	260	73	8
ADC122		5	200	71	8
ADC123		9	110	76	5
ADC124		12	84	78	5
ADC125		15	67	79	5
ADC126		±5	±100	72	8
ADC127		±9	±56	76	5
ADC128		±12	±42	79	5
ADC129		±15	±34	80	5
ADC151	15 (13.5 – 16.5)	5	200	72	8
ADC152		12	84	79	5
ADC153		15	67	79	5
ADC154		±5	±100	72	8
ADC155		±12	±42	80	5
ADC156		±15	±34	80	5

MPS Industries ADC100 1W DC/DC's are specially designed to provide the optimum cost/ benefit power solution in a miniature SIP package.

The series consists of 33 models with input voltages of 5V, 12V, 15V and 24VDC which offers standard output voltages of 3.3V, 5V, 9V, 12V, 15V, ±5V, ±9V, ±12V and ±15VDC for a wide choice.

The ADC100 series is an excellent selection for a variety of applications including distributed power systems, mixed analog/digital subsystems, portable test equipments, local power networks and battery backed systems.

Mechanical Dimensions



T= 6.1 (0.24) for 5V & 12V Input Models

T= 7.1 (0.28) for 15V & 24V Input Models

Pin Connections

Pin	Singles	Duals
1	+Vin	+Vin
2	-Vin	-Vin
4	-Vout	-Vout
5	No Pin	Common
6	+Vout	+Vout

Case Size –
5V & 12V Input – 19.5x6.1x10.2mm (0.77x0.24x0.40inch)
15V & 24V Input –19.5x7.1x10.2mm (0.77x0.28x0.40inch)
Case Material –
Non-Conductive Black Plastic
Weight –
5V & 12V Input – 2.2g (0.08Oz)
15V & 24V Input– 2.6g (0.09Oz)

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

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ADC100 SERIES

1W, Miniature SIP, Single & Dual Output DC/DC Converters

Absolute Maximum Ratings

Parameter		Min.	Max.	Units
Input Surge Voltage (1000mS)	5VDC Input Models	-0.7	9	VDC
	12VDC Input Models	-0.7	18	VDC
	15VDC Input Models	-0.7	18	VDC
	24VDC Input Models	-0.7	30	VDC
Lead Temperature (1.5mm from case for 10sec.)		---	260	°C
Internal Power Dissipation		---	450	mW

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

General Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	60 Seconds	1000	---	---	VDC
Isolation Resistance	500VDC	1000	---	---	MΩ
Isolation Capacitance	100kHz, 1V	---	60	100	pF
Switching Frequency		70	100	120	kHz
MTBF	MIL-HDBK-217F @25°C Ground Benign	2	---	---	MHrs

Environmental Characteristics

Parameter	Conditions	Min.	Max.	Units
Operating Temperature	Ambient	-40	85	°C
Operating Temperature	Case	-40	90	°C
Storage Temperature		-40	125	°C
Humidity		---	95	%
Cooling	Free-Air Convection			

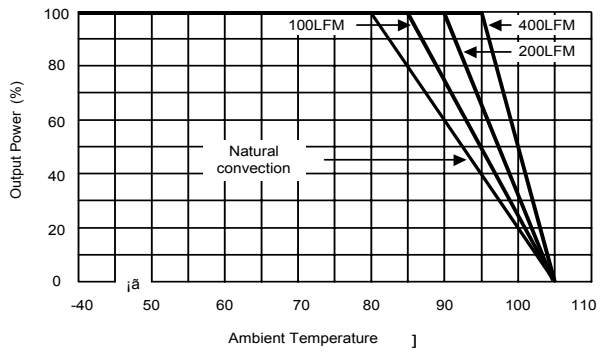
Output Characteristics

Parameter	Conditions	Min.	Typ.	Max.	Units
Line Regulation	For Vin Change of 1%	---	±1.2	±1.5	%
Load Regulation	Io = 20% to 100%	See Selection Guide			%
Ripple & Noise	20MHz BW	---	50	75	mV P-P
Short Circuit	0.5 Second Max.				

Maximum Capacitive Load

Models by Output Voltage (Each Output on Duals)	Singles	Duals	Units
	220	100	uF

Derating Curve



Notes:

1. Specifications typical at Ta=+25°C, resistive load, nominal input voltage, rated output current unless otherwise noted.
2. These power converters require a minimum output load to maintain specified regulation.
3. Operation under no-load conditions will not damage these modules; however, they may not meet all specifications listed.
4. All DC/DC converters should be externally fused at the front end for protection.
5. Other input and output voltage may be available, please contact factory.
6. All specifications subject to change without notice.
7. For detailed data sheet, please visit our website.

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