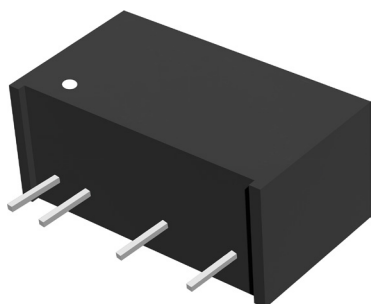


Isolated DC DC Converter **multicomp**^{PRO}



Features

- 7PIN SIP package
- Continuous short-circuit protection
- The leakage current < 1.5μA
- Isolation capacitance as low as 4pF
- Creepage & clearance distance > 5mm
- High efficiency up to 84%
- Unregulated output types
- 5000V AC or 6000V DC isolation
- Operating temperature:-40°C to +105°C
- Industry standard pinout
- UL/cUL/IEC/EN 62368-1 approved, CB-Report
- UL/cUL/IEC/EN 60601-1 approved, CB-Report
- EMC Standard of EMI EN55032:2015 Approved
- EMC Standard of EMS EN55035:2017 Approved
- Medical EMC Standard of EMI EN 60601-1-2:2014+A1:2020 Approved.
- Medical EMC Standard of EMS EN 60601-1-2:2015+A1:2021 Approved

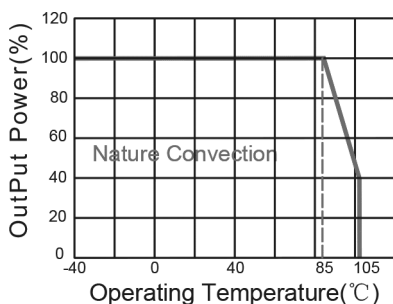
**RoHS
Compliant**

Specification Table

Typical @ T_A=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency	Capacitive Load μF
	V DC	mA	%TYP	max
MP017006	5	400	80	1000
MP017008	12	167	84	470

Temperature Derating



Dimensions : Millimetres

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	V _o , I _o Nom		±10		%
Filter	Capacitor				

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Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% Full Load			±5	%
Short Circuit Protection	Continuous				
Line Regulation	For 1.0% of Vin		1.2		%
Load Regulation	5V (10% to 100% F.L)			20	
	Other output (10% to 100% F.L)			15	
Ripple & Noise	BW=DC To 20MHz@Vo:5V		100		mVp-p
	BW=DC To 20MHz@ Other		80		

General Specifications

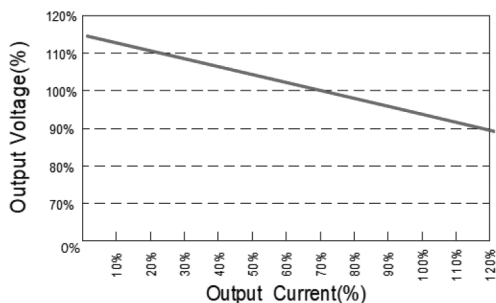
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500V DC	1000			MΩ
Switching Frequency	Full load, nominal input @5V Vin		215		KHz
	Full load, nominal input @other Vin		250		
Operating Temperature		-40		+105	°C
Patient Leakage Current	250V AC, 50/60Hz			1.5	μA
Isolation Capacitance	Input output, 100KHz/0.1V		4		pF
Storage Temperature		-55		+125	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL HDBK 217F@25°C		6800000		Hours
Weight			4		g
Dimensions			19.5 × 9.8 × 12.5		mm

Electromagnetic Compatibility (EMC)

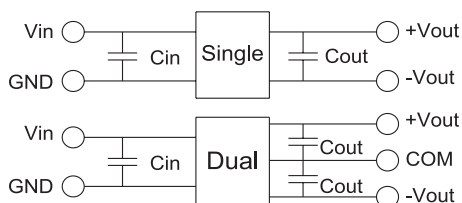
EMI	CE	CISPR32/EN55032 CLASS B (see Fig. 1 for recommended circuit)
	RE	CISPR32/EN55032 CLASS B (see Fig. 1 for recommended circuit)
EMS	ESD	IEC/EN61000 4 2 Air ±8kV, Contact ±6kV perf. Criteria B

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Tolerance Envelope Graph



Recommended Test Circuit



Vout	Cin	Single Vout	Cout	Dual Vout	Cout
5V DC	4.7μF/25V	5V DC	10μF/16V	±5V DC	±4.7μF/16V
12V DC	2.2μF/25V	9V DC	2.2μF/16V	±9V DC	±1μF/16V
15V DC	2.2μF/25V	12V DC	2.2μF/25V	±12V DC	±1μF/25V
24V DC	1μF/50V	15V DC	1μF/25V	±15V DC	±1μF/25V
--	--	24V DC	1μF/50V	±24V DC	±1μF/50V

EMC (CLASS B) Compliance Circuit

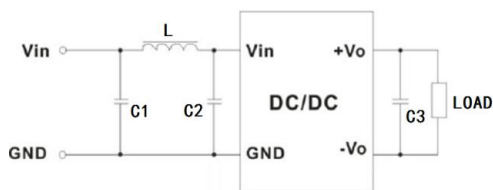
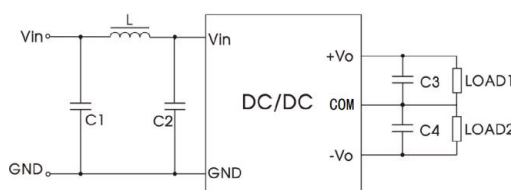


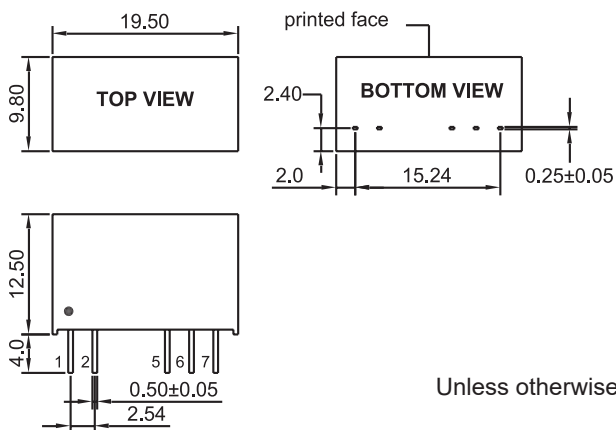
Fig.1



EMC recommended circuit value table		
EMI	C1	22μF /50V
	C2	22μF /50V
	C3, C4	Recommended Test Circuit
	L	22μH

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Markings and Dimensions



Unless otherwise specified, all tolerances are ±0.25

PIN Connection

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

Part Number Table

Description	Part Number
DC to DC Converter, Isolated, 2W, 400mA, 5V	MP017006
DC to DC Converter, Isolated, 2W, 167mA, 12V	MP017008

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