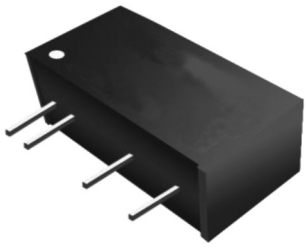
Isolated DC DC Converter

RoHS Compliant



Features

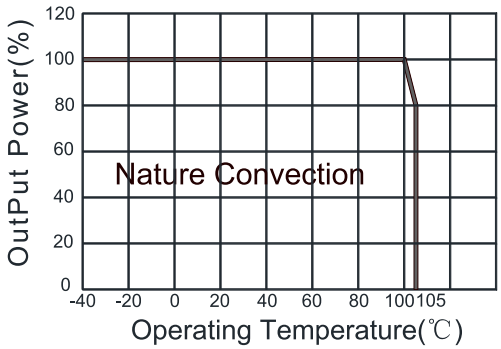
- 7PIN SIP Package
- No-load input current as low as 5mA
- Continuous short-circuit protection
- High Efficiency up to 87%
- Unregulated Output Types
- 1.5KV DC ~ 6KV DC Isolation
- Operating Temperature:-40°C to +105°C
- Industry Standard Pinout

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.
MP12DC-05S05NP	5	200	82	2400

Temperature Derating Graph



Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Range	3.3V Input Models	2.97	3.3	3.63	V DC
	5V Input Models	4.5	5	5.5	
	9V Input Models	8.1	9	9.9	
	12V Input Models	9.6	12	14.4	
	15V Input Models	12	15	18	
	24V Input Models	19.2	24	28.8	
Filter	Capacitor				

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	20	%
Load Regulation	3.3V (10% to 100% F.L)		15	15	
	5V (10% to 100% F.L)		10	10	
	9V (10% to 100% F.L)		8	10	
	12V (10% to 100% F.L)		7	10	
	15V (10% to 100% F.L)		6	10	
	24V (10% to 100% F.L)		5	75	
Ripple & Noise	BW=DC to 20MHz @Vo:3.3V, 5V, 9V, 12V,15V		30	100	mVp-p
	BW=DC To 20MHz @ Vo:24V		50	100	

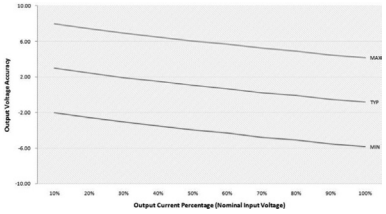
General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500V DC	1000	-	-	MΩ
Isolation Capacitance	Input-output,100KHz/0.1V	-	20	-	pF
Switching Frequency	Full load,nominal input @3.3V, 5V Vin	-	215/370	-	KHz
	Full load,nominal input @other Vin		250	+105	
Operating Temperature		-40	-	+125	°C
Storage Temperature		-55	-	95	
Humidity	Non Condensing	-	-	-	%
Cooling	Free air Convection	-	-	-	-
Case material	DAP				
MTBF	MIL-HDBK-217F@25°C	3500000		-	Hours
Weight		-	2.1	-	g
Dimensions		-	19.5 × 6 × 10	-	mm

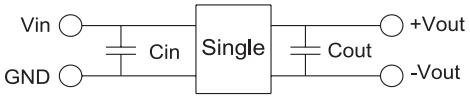
Electromagnetic Compatibility (EMC)

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

Tolerance Envelope Graph

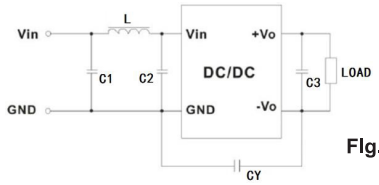


Recommended Test Circuit

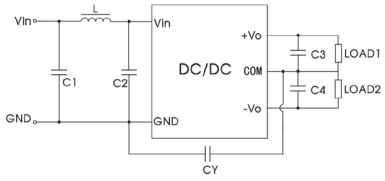


Vout	Cin	Single Vout	Cout
5V DC	4.7μF/25V	5V DC	10μF/16V

EMC (CLASS B) compliance circuit

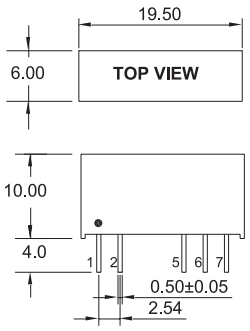


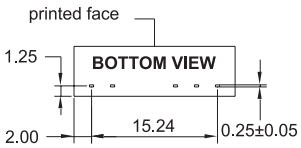
Flg.1



EMC recommended circuit value table		
EMI	C1	4.7μF /50V
	C2	4.7μF /50V
	CY	1nF/4kV
	C3, C4	Recommended Test Circuit
	L	6.8μH

Markings and Dimensions





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

Part Number Table

Description	Part Number
DC to DC Converter, Isolated, 1W, 200mA, 5Vin, 5Vout	MP12DC-05S05NP

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