FEATURES :

- 7PIN SIP Package
- High Efficiency up to 81%
- Reinforced insulation
- The patient leakage current: Max 2μA
- Unregulated Output Types
- Internal SMD Construction
- Industry Standard Pinout
- Operating Temperature:-40℃ to +85℃
- Design refer to EN60601-1, ANSI/AAMI ES60601-1

12D1M series meet reinforced insulation requirements.
They are specially designed for applications where require compact size, high isolation, low isolation capacitor and low leakage current power.
They are widely used in medical, electricity, IGBT driver and so on.
They are suitable for:
1. Where the voltage of the input power supply is stable
(Voltage variation: ±10% Vin)
2. Where isolation is necessary between input and output (isolation voltage ≤4200VAC or 6000VDC)
3. Where do not has high requirement of line regulation and the ripple & noise of the output voltage
Such as: Medical collection and isolation, High voltage collection circuit, IGBT-driven circuits, etc.

Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency	Max. Capacitive Load(Note)
	Vdc	mA	%Min/Typ	uF
12D1M-05S05N	5	200	74/78	1000
12D1M-05S12N	12	84	72/76	470
12D1M-05S15N	15	67	72/76	470
12D1M-12S05N	5	200	73/77	1000
12D1M-12S12N	12	84	77/81	470
12D1M-12S15N	15	67	77/81	470
12D1M-24S05N	5	200	72/76	1000
12D1M-24S12N	12	84	74/78	470
12D1M-24S15N	15	67	74/78	470
12D1M-05D05N	±5	±100	74/78	470
12D1M-05D09N	±9	±56	76/80	470
12D1M-05D12N	±12	±42	70/74	220
12D1M-05D15N	±15	±34	72/76	220
12D1M-12D05N	±5	±100	73/77	470
12D1M-12D09N	±9	±56	76/80	470
12D1M-12D12N	±12	±42	69/73	220
12D1M-12D15N	±15	±34	71/75	220
12D1M-24D05N	±5	±100	71/75	470
12D1M-24D09N	±9	±56	75/79	470
12D1M-24D12N	±12	±42	72/76	220
12D1M-24D15N	±15	±34	72/76	220

Note: The capacitive loads of positive and negative outputs are identical.

YUAN DEAN SCIENTIFIC

DC-DC Converter

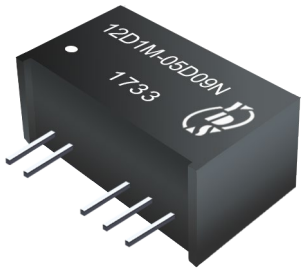
12D1M SERIES

1Watt

4.2KVac or 6KVdc Isolated

Single & Dual Output

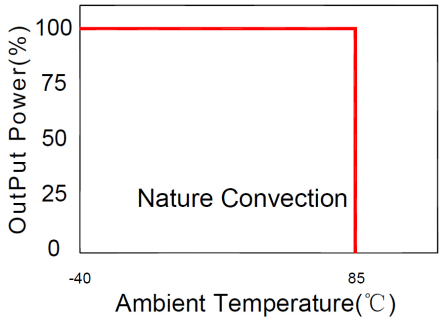
SIP7



ROHS COMPLIANT

3 YEARS WARRANTY

Temperature Derating Graph



www.yds.com.tw
TEL：886-6-3842899 FAX：886-6-3843288
E-MAIL：ydsweb@yds.com.tw
Rev:1 2018/10/01

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Types	Vo, Io Nom			±10	%
Filter	Capacitor				

Output Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	100% full load			±5	%
Line Regulation	For 1.0% OF Vin		1.2		%
Load Regulation	5V (10% To 100% F.L)			20	%
Load Regulation	9V(10% To 100% F.L)			15	%
Load Regulation	12V (10% To 100% F.L)			15	%
Load Regulation	15V(10% To 100% F.L)			15	%
Ripple & Noise	20MHz bandwidth		70	120	mVp-p
Output Short Circuit	(NOTE)			3	S

Note:
Supply voltage must be discontinued at the end of short circuit duration which less than 3s.

General Specifications

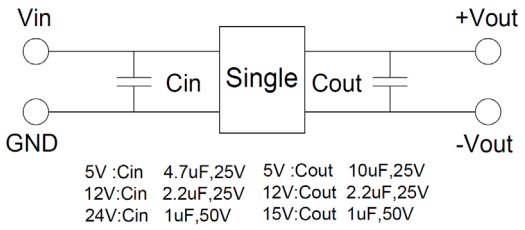
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V		5		pF
Switching Frequency	Full load, nominal input		100		KHz
Operating Temperature		-40		+85	℃
Storage Temperature		-55		+125	℃
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Transformer Creepage		5			mm
Transformer Clearance		5			mm
PCB Creepage & Clearance		5.5			mm
Case material	DAP				
MTBF	MIL-HDBK-217F@25℃	3500000			Hours
Weight			4.0		g
Dimensions			19.5x9.8x12.5		mm

Part Number

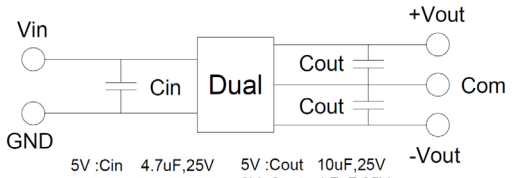
12D1M - 05 S 05 N
A B C D E

A: Series
B: Input Voltage
C: Single Output
D: Output Voltage
E: Unregulated (N)

Recommended Test Circuit

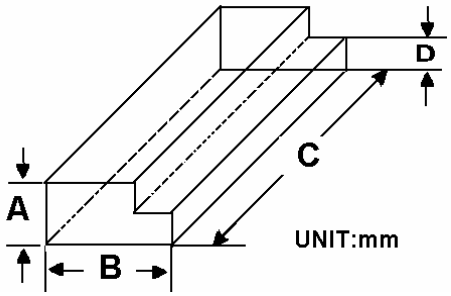


5V :Cin 4.7uF,25V 5V :Cout 10uF,25V
12V:Cin 2.2uF,25V 12V:Cout 2.2uF,25V
24V:Cin 1uF,50V 15V:Cout 1uF,50V



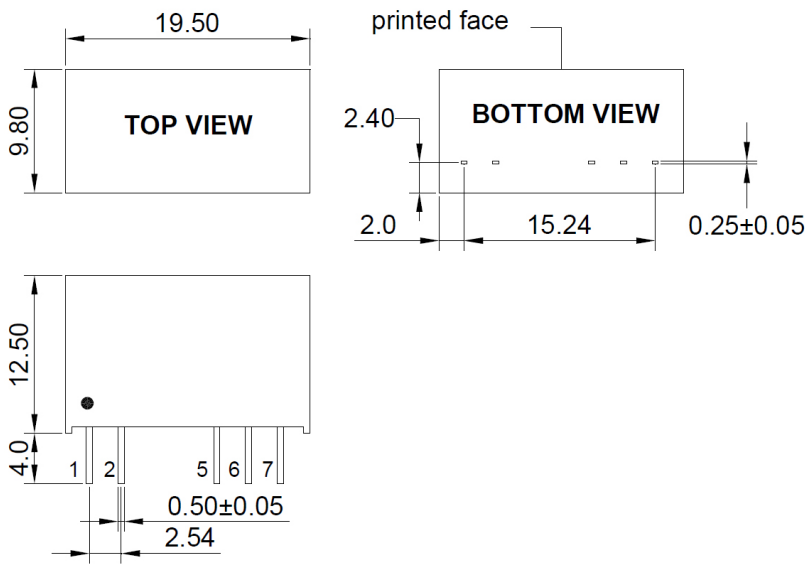
5V :Cin 4.7uF,25V 5V :Cout 10uF,25V
12V:Cin 2.2uF,25V 9V :Cout 4.7uF,25V
24V:Cin 1uF,50V 12V:Cout 2.2uF,25V
15V:Cout 1uF,50V

Packaging



Size(mm)			
A	B	C	D
12.0	28.55	550	6.00

Markings and Dimensions



UNIT: mm 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