FEATURES :

- 7PIN SIP Package
- No-load input current as low as 5mA
- Continuous short-circuit protection
- High Efficiency up to 89%
- Unregulated Output Types
- 6.4KVDC Isolation
- Operating Temperature:-40℃ to +105℃
- Industry Standard Pinout
- Design refer to IEC62368, UL62368, EN62368

YUAN DEAN SCIENTIFIC

DC-DC Converter

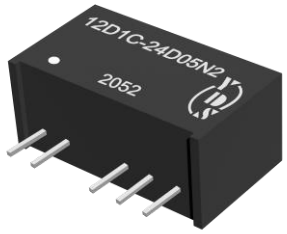
12D1C-2W SERIES

2 Watt

6400Vdc Isolated

Single & Dual Output

SIP7



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

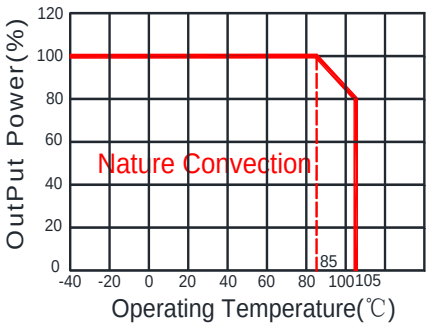
Part Number	Output Voltage	Output Current	Efficiency	Capacitive Load(μF)
	Vdc	mA	%TYP	Max.
12D1C-05S05N2	5	400	84	2400
12D1C-05S09N2	9	223	85	820
12D1C-05S12N2	12	167	85	470
12D1C-05S15N2	15	133	86	220
12D1C-05S24N2	24	84	87	100
12D1C-05D05N2	±5	±200	82	±1200
12D1C-05D09N2	±9	±112	85	±330
12D1C-05D12N2	±12	±84	85	±330
12D1C-05D15N2	±15	±67	87	±220
12D1C-05D24N2	±24	±42	88	±47
12D1C-XXS05N2	5	400	85	2400
12D1C-XXS09N2	9	223	87	820
12D1C-XXS12N2	12	167	87	470
12D1C-XXS15N2	15	133	88	220
12D1C-XXS24N2	24	84	89	100
12D1C-XXD05N2	±5	±200	82	±1200
12D1C-XXD09N2	±9	±112	85	±330
12D1C-XXD12N2	±12	±84	87	±330
12D1C-XXD15N2	±15	±67	88	±100
12D1C-XXD24N2	±24	±42	89	±47

Note:
"XX" Is Input Voltage : 12=12Vdc,15=15Vdc, 24=24Vdc e.g, 12D1C-12S05N2,12D1C-15S12N2, 12D1C-24S15N2

ROHS COMPLIANT

3 YEARS WARRANTY

Temperature Derating



www.yds.com.tw
TEL：886-6-3842899 FAX：886-6-3843288
E-MAIL：ydsweb@yds.com.tw
Rev: 0 2024/05/29

Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Tolerance	Vo, Io Nom		±10		%
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		%
Load Regulation	5V (10% To 100% F.L)		8	15	%
	9V (10% To 100% F.L)		6	10	%
	12V (10% To 100% F.L)		5	10	%
	15V (10% To 100% F.L)		4	10	%
	24V (10% To 100% F.L)		3	10	%
Ripple & Noise	BW=DC To 20MHz		75	150	mVp-p

General Specifications

Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V		20		pF
Switching Frequency	Full load, nominal input @5V Vin		215		KHz
	Full load, nominal input @other Vin		250		KHz
Operating Temperature		-40		+105	℃
Storage Temperature		-55		+125	℃
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25℃	3500000			Hours
Weight			4		g
Dimensions			19.5x9.8x12.5		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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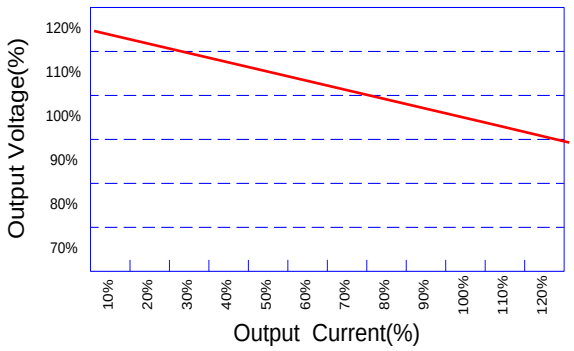
Tolerance Envelope Graph

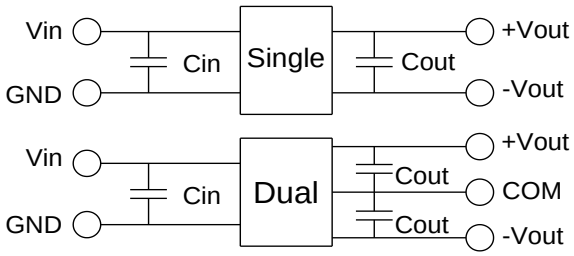


Part Number

12D1C	-	24	S	12	N	2
A		B	C	D	E	F

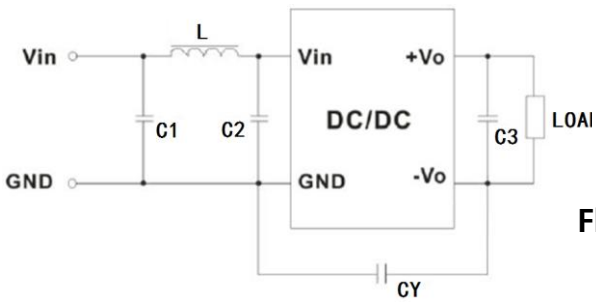
A : Series
B : Input Voltage
C : Single Output
D : Output Voltage
E : Unregulated(N)
F: Output Power

Recommended Test Circuit

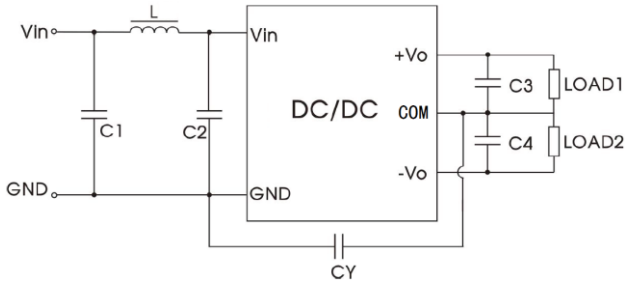


Vin	Cin	Single Vout	Cout	Dual Vout	Cout
5Vdc	4.7μF/25V	5Vdc	10μF/16V	±5Vdc	±4.7μF/16V
12Vdc	2.2μF/25V	9Vdc	2.2μF/16V	±9Vdc	±1μF/16V
15Vdc	2.2μF/25V	12Vdc	2.2μF/25V	±12Vdc	±1μF/25V
24Vdc	1μF/50V	15Vdc	1μF/25V	±15Vdc	±1μF/25V
--	--	24Vdc	1μF/50V	±24Vdc	±1μF/50V

EMC (CLASS B) Compliance Circuit

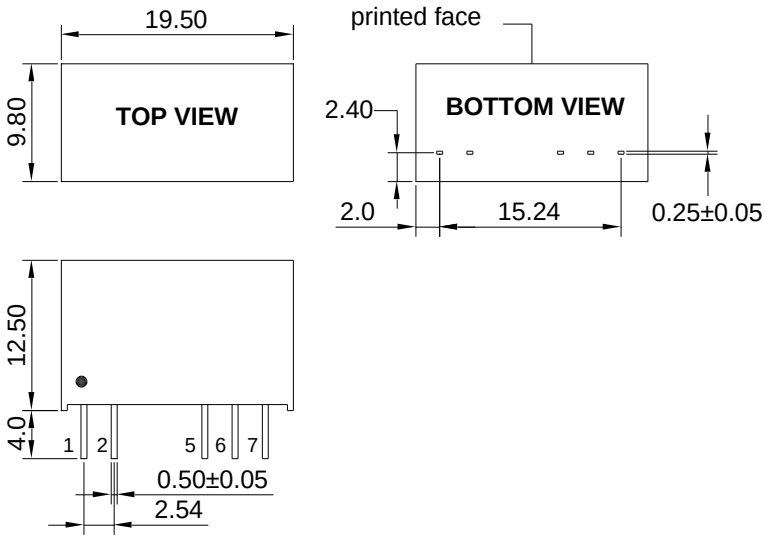


Flg.1



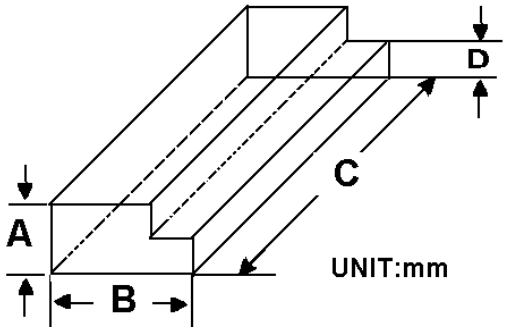
EMC recommended circuit value table		
EMI	C1	4.7μF /50V
	C2	4.7μF /50V
	CY	1nF/4kV
	C3	Recommended Test Circuit
	L	6.8μH

Markings and Dimensions



UNIT: mm Unless otherwise specified, all tolerances are ±0.25

Packaging



TUBE----------25pcs

Size(mm)			
A	B	C	D
12.0	28.55	550	6.0

PIN Connection

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