

**FEATURES :**

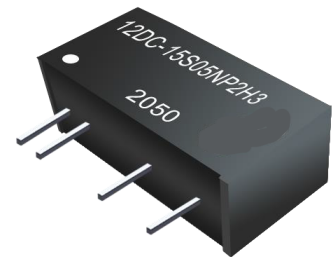
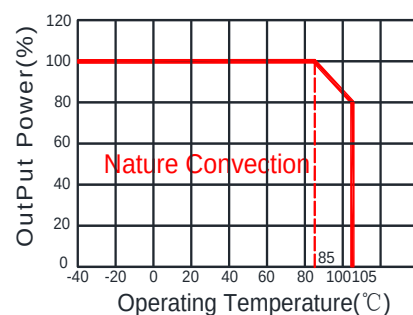
- 7PIN SIP package
- No-load input current as low as 5mA
- Continuous short-circuit protection
- High efficiency up to 89%
- Unregulated output types
- 1.5KVDC ~ 6KVDC isolation
- Operating temperature:-40°C to +105°C
- Industry standard pinout
- Design refer to IEC62368, UL62368, EN62368

Volgen**DC-DC Converter
12DC-2W SERIES****2Watt****1.5~6KV 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.
12DC-05S03NP2 ^(H3)	3.3	600	78	2400
12DC-05S05NP2 ^(H3)	5	400	84	2400
12DC-05S09NP2 ^(H3)	9	223	85	820
12DC-05S12NP2 ^(H3)	12	167	85	470
12DC-05S15NP2 ^(H3)	15	133	86	220
12DC-05S24NP2 ^(H3)	24	84	87	100
12DC-05D03NP2 ^(H3)	±3.3	±300	78	±1200
12DC-05D05NP2 ^(H3)	±5	±200	82	±1200
12DC-05D09NP2 ^(H3)	±9	±112	85	±330
12DC-05D12NP2 ^(H3)	±12	±84	85	±330
12DC-05D15NP2 ^(H3)	±15	±67	87	±220
12DC-05D24NP2 ^(H3)	±24	±42	88	±47
12DC-XXS03NP2 ^(H3)	3.3	600	80	2400
12DC-XXS05NP2 ^(H3)	5	400	85	2400
12DC-XXS09NP2 ^(H3)	9	223	87	820
12DC-XXS12NP2 ^(H3)	12	167	87	470
12DC-XXS15NP2 ^(H3)	15	133	88	220
12DC-XXS24NP2 ^(H3)	24	84	89	100
12DC-XXD03NP2 ^(H3)	±3.3	±300	80	±1200
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12DC-XXD09NP2 ^(H3)	±9	±112	85	±330
12DC-XXD12NP2 ^(H3)	±12	±84	87	±330
12DC-XXD15NP2 ^(H3)	±15	±67	88	±100
12DC-XXD24NP2 ^(H3)	±24	±42	89	±47

Note:

1:No suffix is standard isolation (1.5KVDC) e.g, 12DC-05S05NP2 ,
 *add suffix "H3" for 3KVDC isolation, *add suffix "H4" for 4KVDC isolation,
 *add suffix "H5" for 5.2KVDC isolation, *add suffix "H6" for 6KVDC isolation,
 2:"XX" is input Voltage : 12=12Vdc, 15=15Vdc, 24=24Vdc
 e.g, 12DC-12S05NP2, 12DC-15S12NP2H3, 12DC-24S15NP2H6

**Temperature Derating Graph****CONTACT US**

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Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Range	Vo,lo 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	3.3V (10% To 100% F.L)		15	20	%
	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

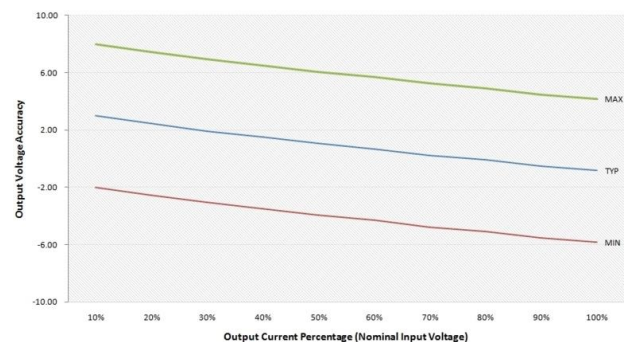
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V		20		pF
Switching Frequency	Full load, nominal input @5V Vin		215		KHz
	Full load, nominal input @other Vin		250		KHz
Operation Temperature		-40		+105	°C
Storage Temperature		-55		+125	°C
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25°C	3500000			Hours
Weight			2.1		g
Dimensions			19.5x6.0x10.0		mm

Part Number

12DC - 15 S 05 N P 2 H3
A B C D E F G H

A:Series
B:Input Voltage
C:Single(S)/Dual(D)Output
D:Output Voltage
E:Unregulated(N)
F:Protection
G:Output Power
H:Isolation Voltage

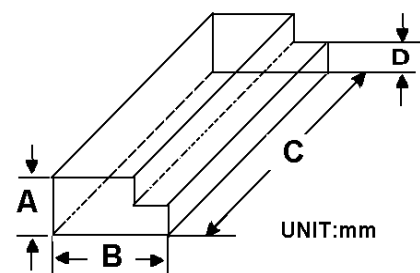
Tolerance Envelope Graph



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

Packaging



TUBE-----25pcs

Size(mm)			
A	B	C	D
9.5	16.5	522	5.0

CONTACT US

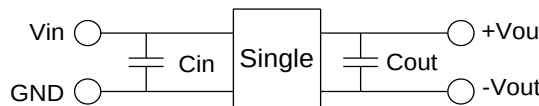
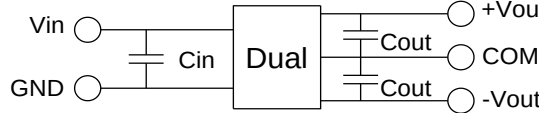
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Recommended Test Circuit

		Vin	Cin	Single Vout	Cout	Dual Vout	Cout
	Vin	5Vdc	4.7μF/25V	3.3Vdc	10μF/16V	±3.3Vdc	±4.7μF/16V
	GND	12Vdc	2.2μF/25V	5Vdc	10μF/16V	±5Vdc	±4.7μF/16V
		15Vdc	2.2μF/25V	9Vdc	2.2μF/16V	±9Vdc	±1μF/16V
	Vin	24Vdc	1μF/50V	12Vdc	2.2μF/25V	±12Vdc	±1μF/25V
	GND	--	--	15Vdc	1μF/25V	±15Vdc	±1μF/25V
		--	--	24Vdc	1μF/50V	±24Vdc	±1μF/50V

EMC (CLASS B) compliance circuit

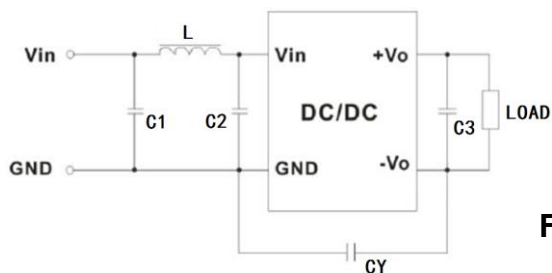
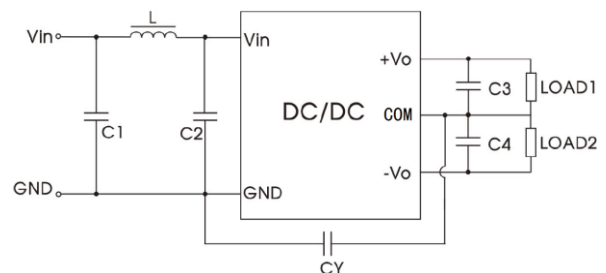


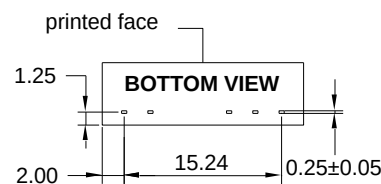
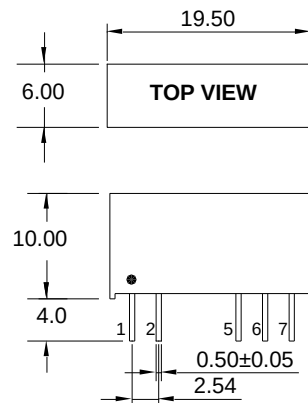
Fig.1



EMC recommended circuit value table

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

PIN Connection

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

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