FEATURES :

- 7PIN SIP Package
- No-load input current as low as 5mA
- Continuous short-circuit protection
- High Efficiency up to 87%
- Unregulated Output Types
- 1.5KVDC ~ 6KVDC Isolation
- Operating Temperature:-40℃ to +105℃
- Industry Standard Pinout
- UL/cUL/IEC/EN 62368-1 approved, CB-Report

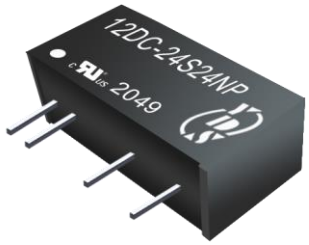
Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency	Capacitive Load(μF)
	Vdc	mA	%TYP	Max.
12DC-YYS03NP(H3)	3.3	303	76	2400
12DC-YYS05NP(H3)	5	200	82	2400
12DC-YYS09NP(H3)	9	112	83	1000
12DC-YYS12NP(H3)	12	84	84	470
12DC-YYS15NP(H3)	15	67	84	330
12DC-YYS24NP(H3)	24	42	85	100
12DC-YYD03NP(H3)	±3.3	±151	76	±1200
12DC-YYD05NP(H3)	±5	±100	82	±1200
12DC-YYD09NP(H3)	±9	±56	83	±470
12DC-YYD12NP(H3)	±12	±42	84	±220
12DC-YYD15NP(H3)	±15	±34	84	±220
12DC-YYD24NP(H3)	±24	±21	85	±47
12DC-XXS03NP(H3)	3.3	303	78	2400
12DC-XXS05NP(H3)	5	200	82	2400
12DC-XXS09NP(H3)	9	112	85	1000
12DC-XXS12NP(H3)	12	84	85	680
12DC-XXS15NP(H3)	15	67	87	330
12DC-XXS24NP(H3)	24	42	85	220
12DC-XXD03NP(H3)	±3.3	±151	78	±1200
12DC-XXD05NP(H3)	±5	±100	82	±1200
12DC-XXD09NP(H3)	±9	±56	85	±680
12DC-XXD12NP(H3)	±12	±42	85	±330
12DC-XXD15NP(H3)	±15	±34	87	±220
12DC-XXD24NP(H3)	±24	±21	85	±100

Note:
1. No suffix is standard isolation (1.5KVDC) e.g, 12DC-05S05NP,
*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. "YY" is input voltage : 03=3.3Vdc,05=5Vdc, 09=9Vdc
e.g, 12DC-03S05NP, 12DC-05S12NPH3, 12DC-09S15NP
3. "XX" is input voltage : 12=12Vdc,15=15Vdc, 24=24Vdc
e.g, 12DC-12S05NP, 12DC-15S12NPH3, 12DC-24S15NP

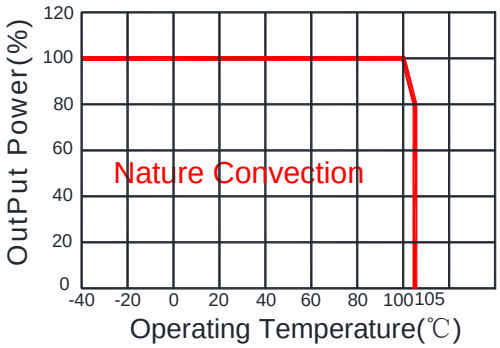
YUAN DEAN SCIENTIFIC

DC-DC Converter
12DC SERIES
1Watt
1.5~6KV Isolated
Single & Dual Output
SIP7



CB Scheme c UL us ROHS COMPLIANT 3 YEARS WARRANTY

Temperature Derating Graph



Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Range	Vo,Io Nom @Vin:3.3V,5V,9V		±10		%
	Vo,Io Nom@ Vin:12V,15V,24V		±20		%
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)		10	15	%
	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	10	%
Ripple & Noise	BW=DC To 20MHz @Vo:3.3V,5V,9V,12V,15V		30	75	mVp-p
	BW=DC To 20MHz @ Vo:24V		50	100	mVp-p

General Specifications

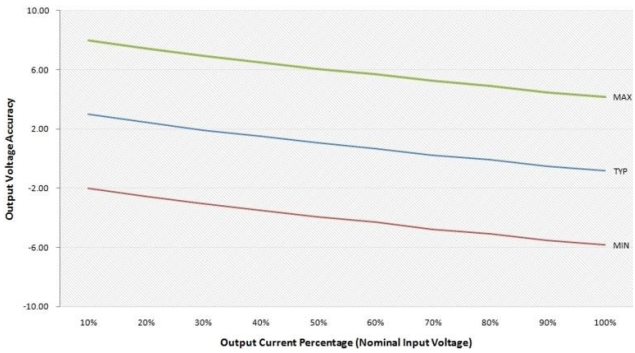
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	Input-output,100KHz/0.1V		20		pF
Switching Frequency	Full load, nominal input @3.3V, 5V Vin		215/370		KHz
	Full load, nominal input @other Vin		250		KHz
Operation Temperature		-40		+105	℃
Storage Temperature		-55		+125	℃
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25℃	3500000			Hours
Weight			2.1		g
Dimensions			19.5x6.0x10.0		mm

Part Number

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

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

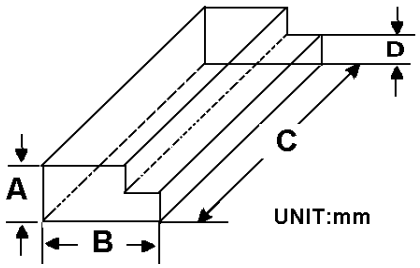
Tolerance Envelope Graph



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

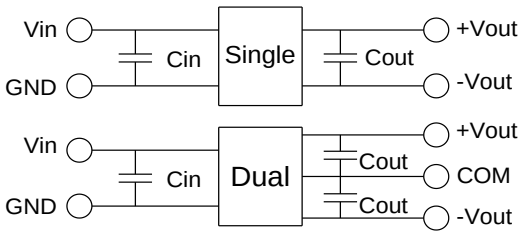
Packaging



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

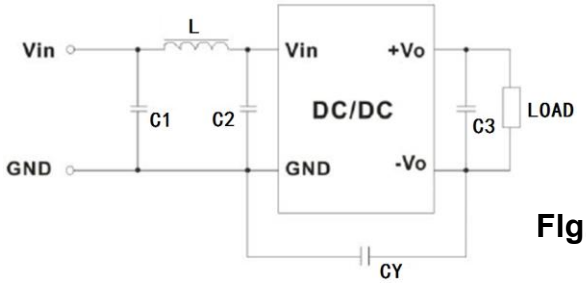
Size(mm)			
A	B	C	D
9.5	16.5	522	5.0

Recommended Test Circuit

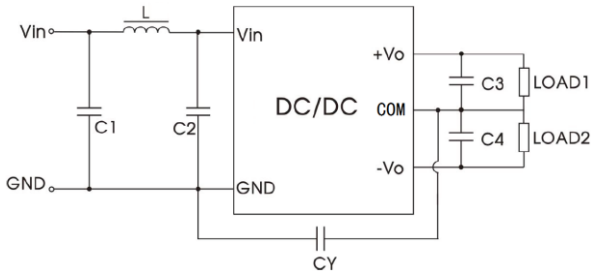


Vin	Cin	Single Vout	Cout	Dual Vout	Cout
3.3Vdc	4.7μF/25V	3.3Vdc	10μF/16V	±3.3Vdc	±4.7μF/16V
5Vdc	4.7μF/25V	5Vdc	10μF/16V	±5Vdc	±4.7μF/16V
9Vdc	4.7μF/25V	9Vdc	2.2μF/16V	±9Vdc	±1μF/16V
12Vdc	2.2μF/25V	12Vdc	2.2μF/25V	±12Vdc	±1μF/25V
15Vdc	2.2μF/25V	15Vdc	1μF/25V	±15Vdc	±1μF/25V
24Vdc	1μF/50V	24Vdc	1μF/50V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

EMC (CLASS B) compliance circuit

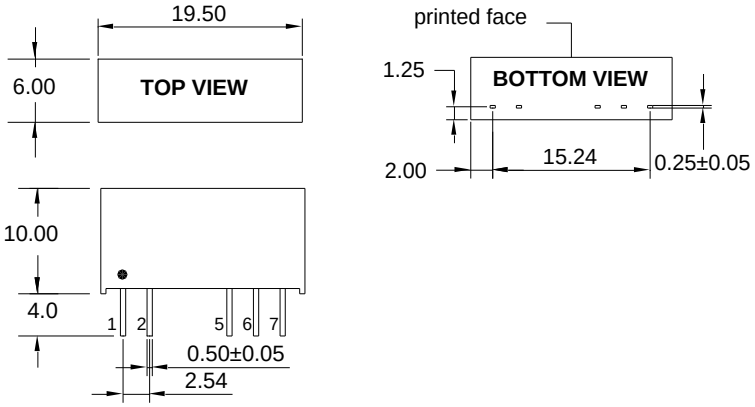


Flg.1



EMC recommended circuit value table		
EMI	C1	4.7μF /50V
	C2	4.7μF /50V
	CY	1nF/4kV
	C3,C4	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

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℃ to +105℃
- Industry standard pinout
- Design refer to IEC62368, UL62368, EN62368

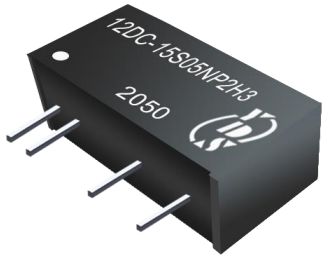
Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

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
12DC-XXD05NP2(H3)	±5	±200	82	±1200
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-24S15N2PH6

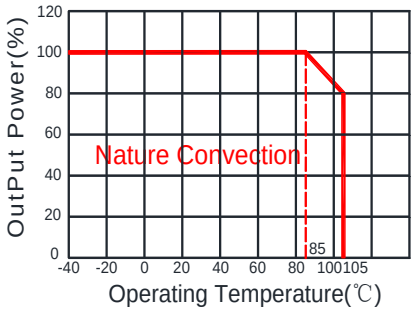
YUAN DEAN SCIENTIFIC

DC-DC Converter
12DC-2W SERIES
2Watt
1.5~6KV Isolated
Single & Dual Output
SIP7



RoHS COMPLIANT 3 YEARS WARRANTY

Temperature Derating Graph



Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Range	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	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

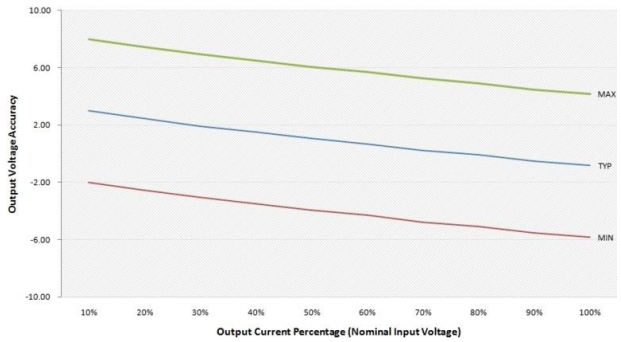
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V		20		pF
Switching Frequency	Full load, nominal input @5V Vin		215		KHz
	Full load, nominal input @other Vin		250		KHz
Operation Temperature		-40		+105	℃
Storage Temperature		-55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

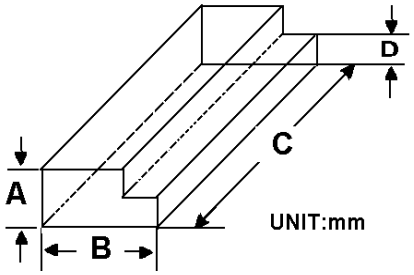
Tolerance Envelope Graph



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

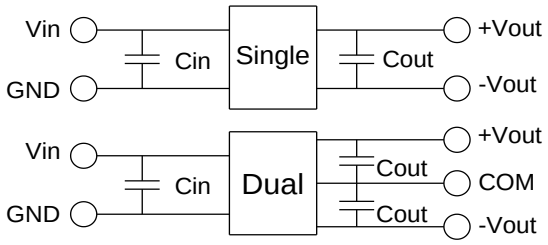
Packaging



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

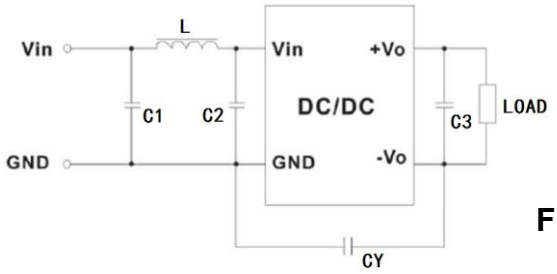
Size(mm)			
A	B	C	D
9.5	16.5	522	5.0

Recommended Test Circuit



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

EMC (CLASS B) compliance circuit



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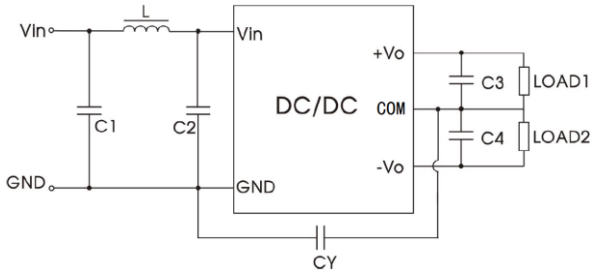
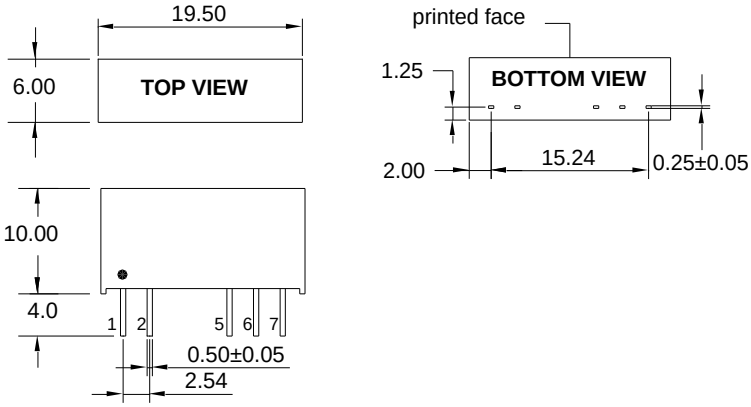


EMC recommended circuit value table		
EMI	C1	4.7μF /50V
	C2	4.7μF /50V
	CY	1nF/4kV
	C3	Recommended Test Circuit
	L	6.8μH

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

FEATURES :

- 7PIN SIP Package
- No-load input current as low as 8mA
- Continuous short-circuit protection
- High Efficiency up to 88%
- Unregulated Output Types
- 1.5KVDC ~ 6KVDC Isolation
- Operating Temperature:-40℃ to +85℃
- Industry Standard Pinout
- Design refer to IEC62368, UL62368, EN62368

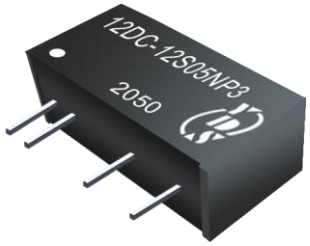
Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified

Part Number	Output Voltage	Output Current	Efficiency	Capacitive Load(μF)
	Vdc	mA	%TYP	Max.
12DC-12S05NP3(H3)	5	600	85	1000
12DC-12S12NP3(H3)	12	250	87	220
12DC-12S15NP3(H3)	15	200	88	220
12DC-12S24NP3(H3)	24	125	88	47
12DC-12D05NP3(H3)	±5	±300	86	±560
12DC-12D12NP3(H3)	±12	±125	86	±100
12DC-12D15NP3(H3)	±15	±100	88	±100
12DC-12D24NP3(H3)	±24	±63	88	±22
12DC-15S05NP3(H3)	5	600	85	1000
12DC-15S12NP3(H3)	12	250	87	220
12DC-15S15NP3(H3)	15	200	88	220
12DC-15S24NP3(H3)	24	125	88	47
12DC-15D05NP3(H3)	±5	±300	86	±560
12DC-15D12NP3(H3)	±12	±125	86	±100
12DC-15D15NP3(H3)	±15	±100	88	±100
12DC-15D24NP3(H3)	±24	±63	88	±22
12DC-24S05NP3(H3)	5	600	85	1000
12DC-24S12NP3(H3)	12	250	87	220
12DC-24S15NP3(H3)	15	200	88	220
12DC-24S24NP3(H3)	24	125	88	47
12DC-24D05NP3(H3)	±5	±300	86	±560
12DC-24D12NP3(H3)	±12	±125	86	±100
12DC-24D15NP3(H3)	±15	±100	88	±100
12DC-24D24NP3(H3)	±24	±63	88	±22

Note:
1:No suffix is standard isolation (1.5KVDC) e.g, 12DC-12S05NP3 ,
*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,
e.g, 12DC-12S05NP3H3, 12DC-24D24NP3H6.

YUAN DEAN SCIENTIFIC

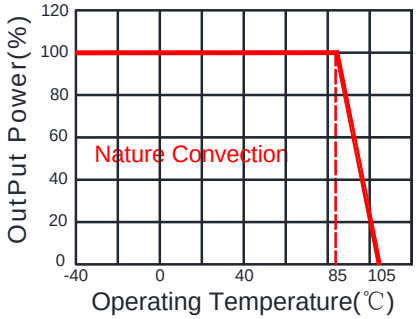
DC-DC Converter
12DC-3W SERIES
3Watt
1.5~6KV Isolated
Single & Dual Output
SIP7



ROHS COMPLIANT

3 YEARS WARRANTY

Temperature Derating Graph



Input Specifications

Parameters	Conditions	Min	Typ	Max	Units
Voltage Range	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)		9	15	%
	12V (10% To 100% F.L)		7	10	%
	15V (10% To 100% F.L)		6	10	%
	24V (10% To 100% F.L)		5	10	%
Ripple & Noise	BW=DC To 20MHz		100	150	mVp-p

General Specifications

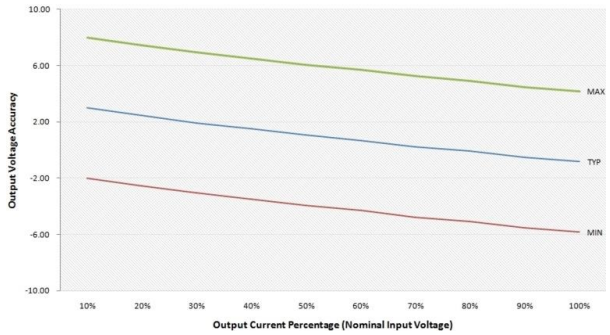
Parameters	Conditions	Min	Typ	Max	Units
Isolation Resistance	500Vdc	1000			MΩ
Isolation Capacitance	Input-output, 100KHz/0.1V		20		pF
Switching Frequency	Full load, nominal input		250		KHz
Operation Temperature		-40		+85	℃
Storage Temperature		-55		+125	℃
Humidity	Non Condensing			95	%
Cooling	Free air Convection				
Case material	DAP				
MTBF	MIL-HDBK-217F@25℃	3500000			Hours
Weight			2.7		g
Dimensions			19.5x7.1x10.0 mm		mm

Part Number

12DC - 15 S 24 N P 3 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

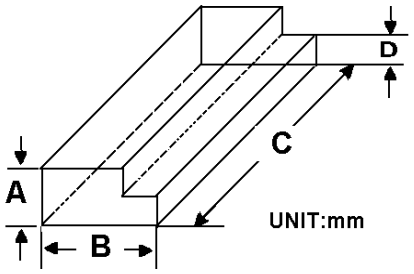
Tolerance Envelope Graph



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

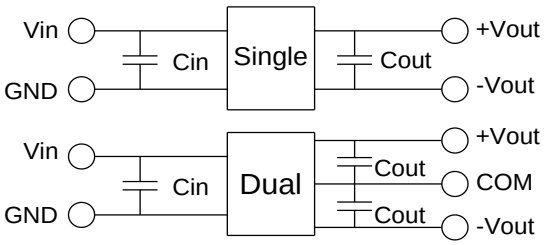
Packaging



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

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

Recommended Test Circuit



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

EMC (CLASS B) compliance circuit

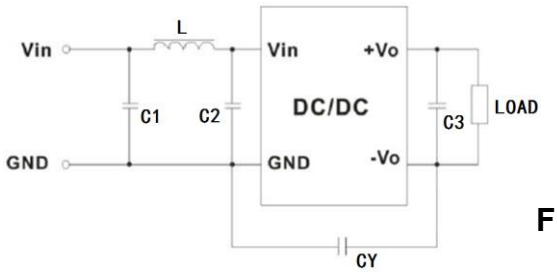
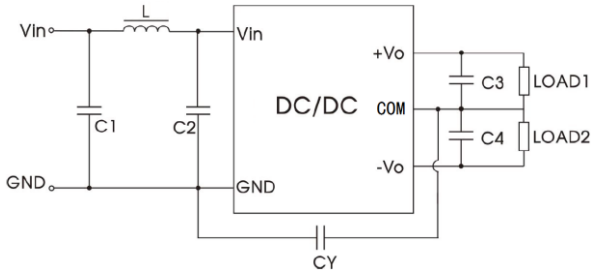
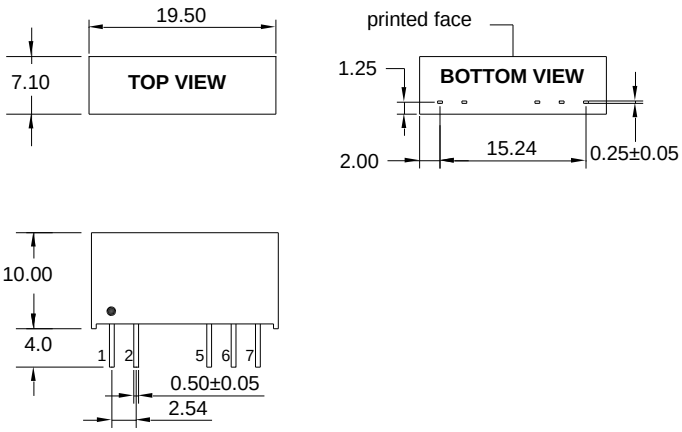


Fig.1



EMC recommended circuit value table		
EMI	C1	10μF /50V
	C2	10μF /50V
	CY	1nF/4kV
	C3,C4	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