



Typical Features	
◆	Wide input voltage range (4:1), output power 10W
◆	Transfer efficiency up to 88%
◆	With remote control shutdown function
◆	Continuous short circuit protection, Self-furbish
◆	Power-on and power-off without overshoot
◆	Isolation voltage 1500VDC
◆	Operating Temperature range: -40°C~+85°C
◆	Plastic housing, meet UL94-V0 requirements



**Application Filed**

Widely used in instrumentation, communications, pure digital circuits, general low-frequency analog circuits, relay drive circuits, data exchange circuits and other fields.

**Typical Product List**

Part no.	Input voltage Range (VDC)		Input voltage /Current (Vo/Io)		Input Current (mA) Nominal Voltage		Max. Capacitive Load	Ripple & Noise	Efficiency (%)@output full load, input nominal	
	Nominal	Range	Voltage (VDC)	Current (mA) MAX/Min	Full load typ	No load typ			uF	mVp-p
DD10-18S3V3E3C2	24	9-36	3.3	2400/0	392	33	1200	100	84	86
DD10-18S05E3C2	24	9-36	5	2000/0	479	33	1000	100	85	87
*DD10-18S12E3C2	24	9-36	12	833/0	479	10	470	100	85	87
*DD10-18S15E3C2	24	9-36	15	667/0	479	10	330	100	85	87
*DD10-18S24E3C2	24	9-36	24	416/0	483	10	100	100	86	88
*DD10-36S3V3E3C2	48	18-75	3.3	2400/0	194	33	1200	100	84	86
*DD10-36S05E3C2	48	18-75	5	2000/0	245	33	1000	100	85	87
*DD10-36S12E3C2	48	18-75	12	833/0	245	10	470	100	85	87
*DD10-36S15E3C2	48	18-75	15	667/0	245	10	330	100	85	87
*DD10-36S24E3C2	48	18-75	24	416/0	241	10	100	100	86	88

Note 1: “\*” indicates the model under development;  
 Note 2: The maximum capacitive load refers to the capacitance capacity of the output that is allowed to be connected when the power supply is started at full load. Beyond this capacity, the power supply may not be able to start;  
 Note 3: C is with control pin, N is without control pin;  
 Note 4: Due to limited space, the above is only a partial product list. If you need products other than the list, please contact our sales department.

**Input Specifications**

Item	Working Conditions	Min	Typical	Max	Unit
Starting Voltage	9-36 Input	---	---	9	VDC
	18-75 Input	---	---	18	

Input Under-voltage Protection	9-36 Input	---	7	---	VDC
	18-75 Input	---	13	---	
Standby Power Consumption	0.25W (TYP)				
Input Filter	Π filter				
CTRL	Module is turned on CTRL is left floating or connected to high level (3.3VDC-12VDC)				
	Module shutdown CTRL connected to low level (0-1.2VDC)				
	Input current at shutdown			2mA (TYP)	

### Output Specification

Output Voltage Accuracy	Full voltage range	+Vo	≤±2.0%
Voltage Regulation	Nominal load, full voltage range	+Vo	≤±0.5%
Load Regulation	10% ~ 100% nominal load	+Vo	≤±1%
Ripple & Noise*	Nominal Load, Nominal Voltage		≤100mVp-p (20MHz bandwidth)
Temperature Drift Coefficient	100% Full load		±0.03%/°C
Dynamic Response	25% nominal load step	ΔVo/Δt	±5.0%/0.5ms(Typ.)
Output short circuit protection	Continuous, Self-recovery		
Output overload protection	120%~220% Io		
Output overvoltage protection	110%~160% Vo		
Startup delay time	Typ:10ms		
Output startup overshoot voltage	≤10%Vo		

Note: Ripple & noise test adopts twisted pair method, see Design and Application Circuit Reference for details.

### General Specification

Switching Frequency	Typical	330KHz (Typ.)
Operating Temperature	Refer to temperature	-40°C ~ +85°C
Storage Temperature	-	-55°C ~ +125°C
Max Case Temperature	Within Temperature Derating Curve	+105°C
Relative Humidity	No condensing	5%~95%
Case Material	-	Aluminum metal casing
Pin Soldering Temperature	The solder joint is 1.5mm away from the shell, 10 seconds	300°C MAX
Isolation Voltage	Input to Output	1500Vdc ≤ 0.5mA / 1min
Insulation Resistance	Input to Output, insulation voltage	500VDC ≥1000MΩ
Isolation Capacitance	Input to Output, 100kHz/0.1V	2000pF (Typ.)
Minimum time between failures	MIL-HDBK-217F 25°C	2X10 <sup>5</sup> Hrs
Product Weight	-	12g (Typ.)

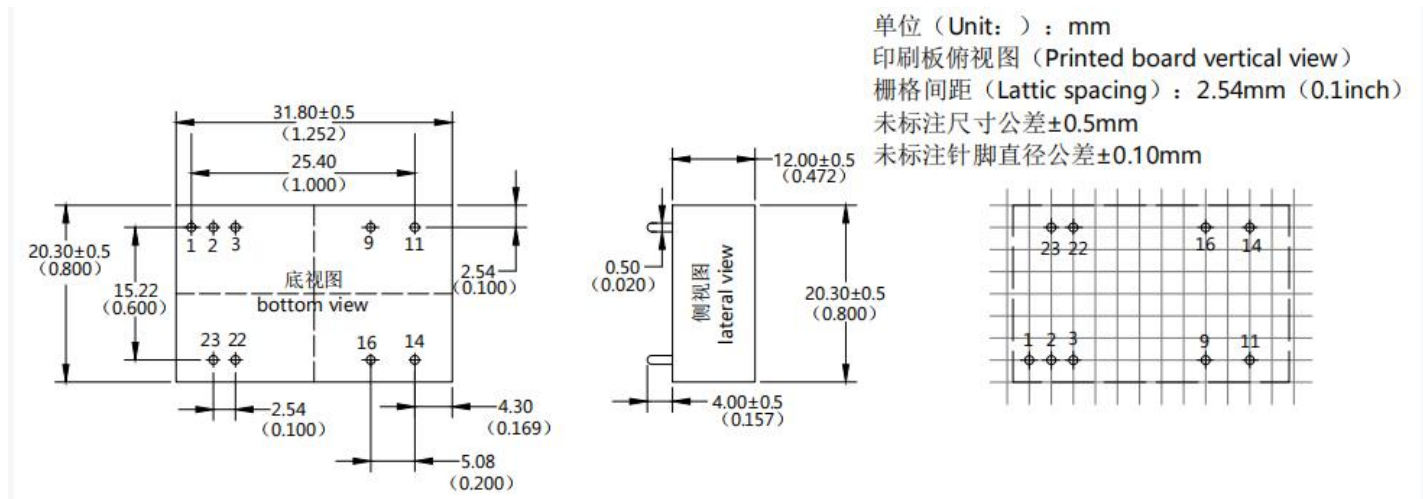
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**EMC Characteristics**

Total Items		Sub Items	Test Standard	Class
EMC	EMI	CE	CISPR22/EN55032	CLASS B (see recommended circuit photo②)
		RE	CISPR22/EN55032	CLASS B (see recommended circuit photo②)
	EMS	RS	IEC/EN61000-4-3	10V/m Perf.Criteria B (see recommended circuit photo②)
		CS	IEC/EN61000-4-6	3Vr.m.s Perf.Criteria B (see recommended circuit photo②)
		ESD	IEC/EN61000-4-2	Contact ±4KV Perf.Criteria B
		Surge	IEC/EN61000-4-5	±2KV Perf.Criteria B (see recommended circuit photo①)
		EFT	IEC/EN61000-4-4	±2KV Perf.Criteria B (see recommended circuit photo①)
		Voltage dips, dips and short interruptions immunity	IEC/EN61000-4-11	0%~70% Perf.Criteria B

**Packing Dimension**



封装代号	L x W x H	
E3	31.80 × 20.30 × 12.00mm	1.252 × 0.800 × 0.472inch

**Pin-out**

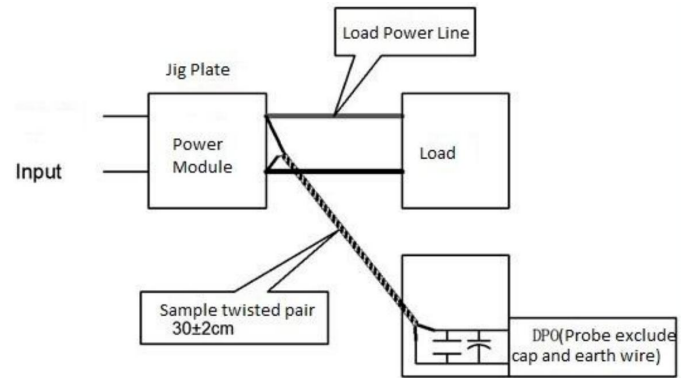
Pin function	1	2	3	9	11	14	16	22	23
DD6-XXSXXE3C2	Ctrl	-Vin	-Vin	NP	NC	+Vo	GND	+Vin	+Vin
	Control terminal	Input ground	Input ground	No pin	No function	positive output	output ground	positive input	positive input
DD6-XXSXXE3N2	NP	-Vin	-Vin	NP	NC	+Vo	GND	+Vin	+Vin
	No pin	Input ground	Input ground	No pin	No function	positive output	output ground	positive input	positive input



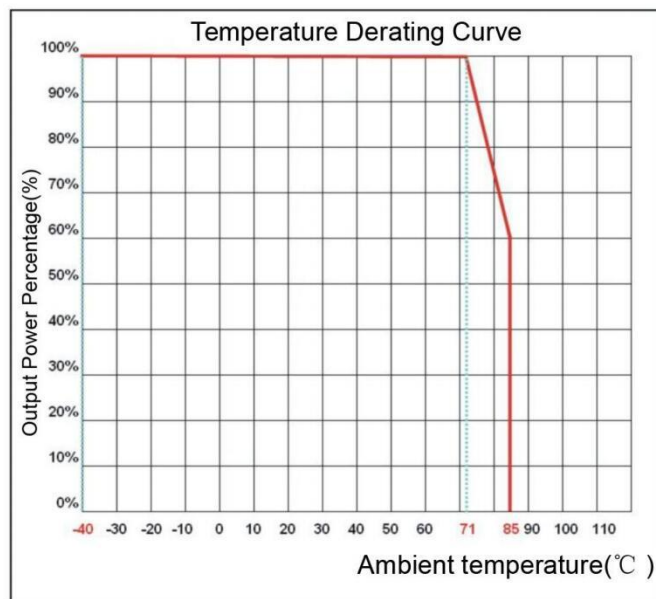
**Ripple & Noise Test: (Twisted Pair Method 20MHZ bandwidth)**

Test Method:

1、 12# twisted pair to connect, Oscilloscope bandwidth set as 20MHz, 100M bandwidth probe, terminated with 0.1uF polypropylene capacitor and 10uF high frequency low resistance electrolytic capacitor in parallel, oscilloscope set as Sample pattern  
2、 Input terminal connect to power supply, output terminal connect to electronic load through jig plate, Use 30cm±2cm sampling line, Power line selected from corresponding diameter wire with insulation according to the flow of output current.



**Product characteristic curve**

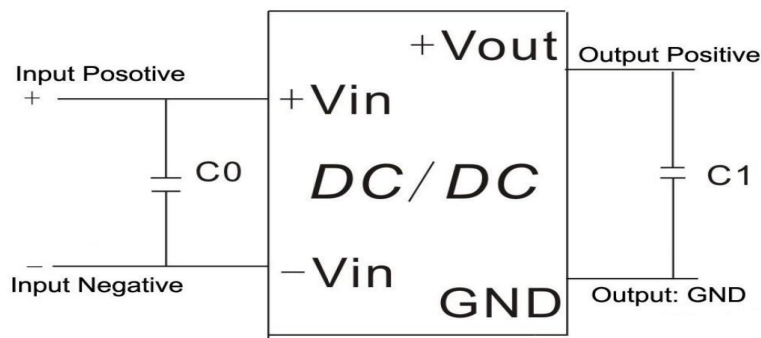


**Design and Application Reference**

**Recommended circuit**

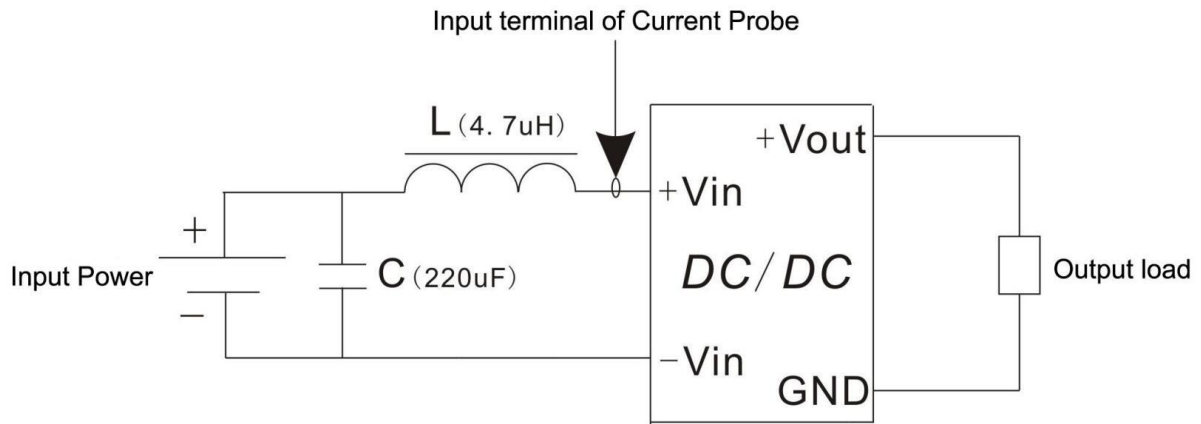
1、 DC/DC test circuit:

Normal recommended capacitors: C0: 47-100uF; C1; 100uF.

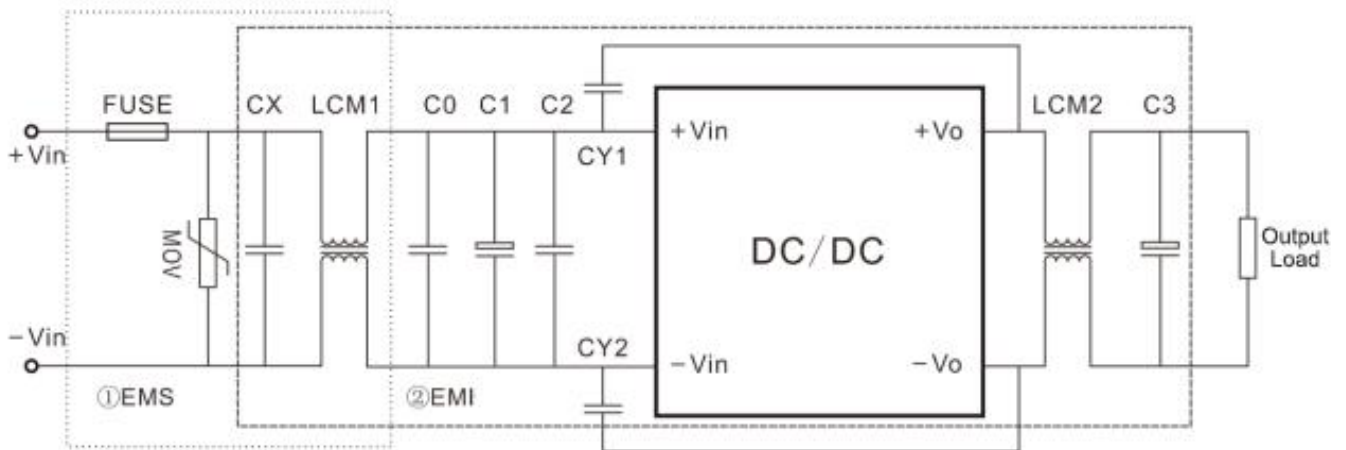


2、 Input reflecting ripple current test circuit:

Capacitor C choose low ESR ones, withstand voltage value should be bigger than max input voltage;



3、 EMC External Recommended Circuit:



Recommended Spec:

Device code	Spec.
FUSE	Access the corresponding fuse according to customer needs
MOV	14D470K
CX	470uF/50V
C0,C1,C2,C3	10uF/50V
LCM1	5mH
LCM2	30uH
CY1,CY2	1nF/2000V

**Note:**

1. The product should be used within the specification range, otherwise it will cause permanent damage to the product;
2. If the product works below the minimum required load, the product performance cannot be guaranteed to meet all the performance indicators in this manual;
3. If the product works beyond the product load range, it cannot be guaranteed that the product performance meets all the performance indicators in this manual;
4. Unless otherwise specified, the above data are measured at  $T_a=25^{\circ}\text{C}$ , humidity <75%, input nominal voltage and output rated load (pure resistive load);
5. All the above index test methods are based on the company's standards;
6. The above are the performance indicators of the product models listed in this manual. Some indicators of non-standard models will exceed the above requirements. For details, please contact our technical staff directly;
7. Our company can provide product customization;
8. Product specifications are subject to change without notice. Please pay attention to the latest manual published on our official website.