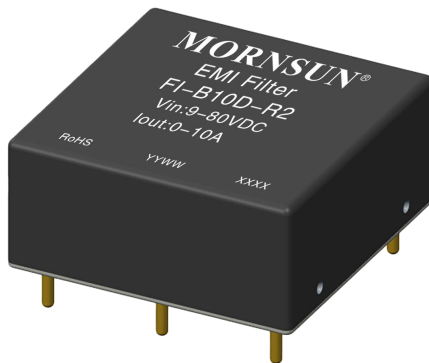


### EMC Filter



RoHS



This product is suitable for analog circuits and other noisy sensitive occasions, EMC auxiliary module installed in the input end of the DC/DC power module can significantly improve the EN55032 EN50155 standards of EMC performance. The maximum input voltage of the mornsun power supply should not be greater than the maximum operating voltage of the filter, and the maximum input current should be less than the maximum operating current of the filter.

### FEATURES

- Ultra wide input voltage range: 9 - 80VDC
- Compact size: 25.4\*25.4\*11.5mm<sup>3</sup>
- Operating ambient temperature range: -40°C to +105°C
- EMC standards compliance : IEC/EN61000-4、CISPR32/EN55032、EN50155
- Compliance with safety standards: IEC62368

### Selection Guide

Certification	Model	Operating Voltage(VDC)		Operating Current(A)			Surge Performance
		Typ. (Range)	Max*	Typ.	Max	Transient**	
-	FI-B10T-R2	24/48 (9-80)	80	-	10	14	Line - Line ±2kV Line - PE ±2kV

Note: 1.\* The input voltage must not exceed this value, otherwise permanent and unrecoverable damage may be caused;

2. \*\* Transient current operating conditions: Temperature 55°C, wind speed 3m/s, duration 10s

### General Specifications

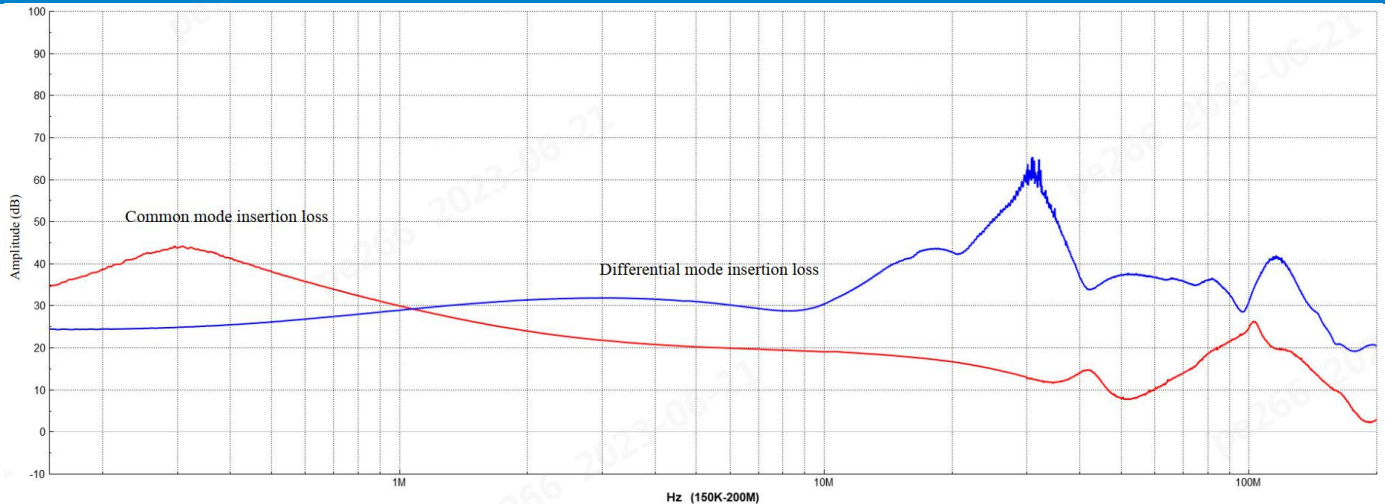
Item	Test Conditions	Min.	Typ.	Max.	Unit	
Operating Temperature		-40	--	+105	°C	
Storage Temperature		-55	--	+125		
Storage Humidity	Non-condensing	5	--	95	%RH	
Isolation Voltage	+Vin-PE -Vin-PE	Electric strength test for 1min., leakage current <0.5mA		1500	--	VDC
Surge Voltage	Three shocks			100		
MTBF	MIL-HDBK-217F@25°C	1000	--	--	K hours	
Shock and Vibration Test		IEC 61373 Car 1 B Class				
Altitude*	86-106kPa	≤5000m				
Insertion loss (CM/DM)	150kHz~1MHz	--	20	-	dB	
	1MHz~10MHz	--	20	--	dB	
	10MHz~30MHz	--	15	--	dB	

\*Note: \* The product is used above the altitude of 2000m, to ensure that the surface temperature of the product is below 95°C

### Physical Characteristics

Case Material	Aluminium alloy
Dimension	25.40 mm x 25.40mm x 11.50mm
Weight	13.5g(Typ.)
Cooling Method	Free air convection

### Insertion Loss Specifications

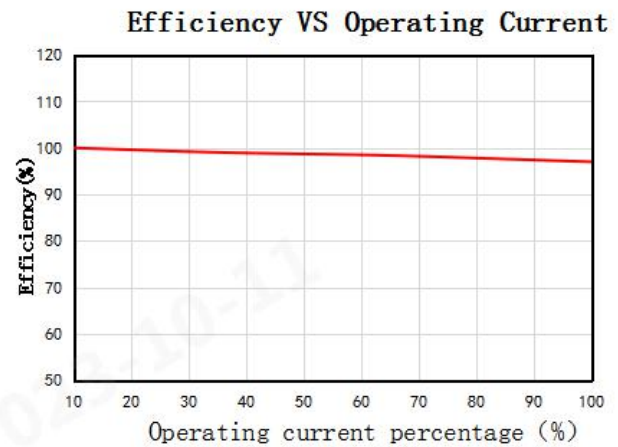
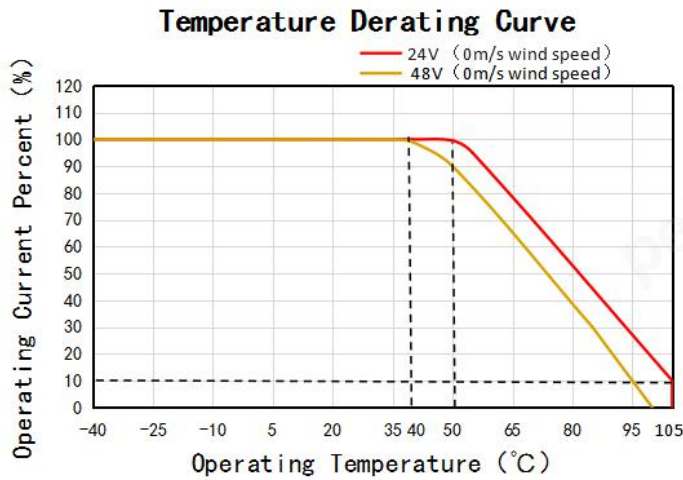


### EMC Characteristics

EMI	CE	CISPR32/EN55032	Class B	
EMS	ESD	IEC/EN61000-4-2	Contact ±6kV	perf. Criteria A
	EFT	IEC/EN61000-4-4	±2KV 100KHz	perf. Criteria A
	Surge	IEC/EN61000-4-5	Line - Line ±2kV	perf. Criteria A
			Line - PE ±2kV	Matching URB24_LD-60WR3
	CS	IEC/EN61000-4-6	0.15MHz-80MHz 10V r.m.s	perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m	perf. Criteria A

Note: Matching FI-B10D-R2 to the front end of the URB24\_LD-60WR3、VCB48\_EBO-300W(F/H)R3-N DC/DC power supply can make the power module meet above EMC characteristics.

Product Typical Curve



Note: This product is suitable for applications using natural air cooling; for applications in closed environment please consult factory or one of our FAE.

Design Reference

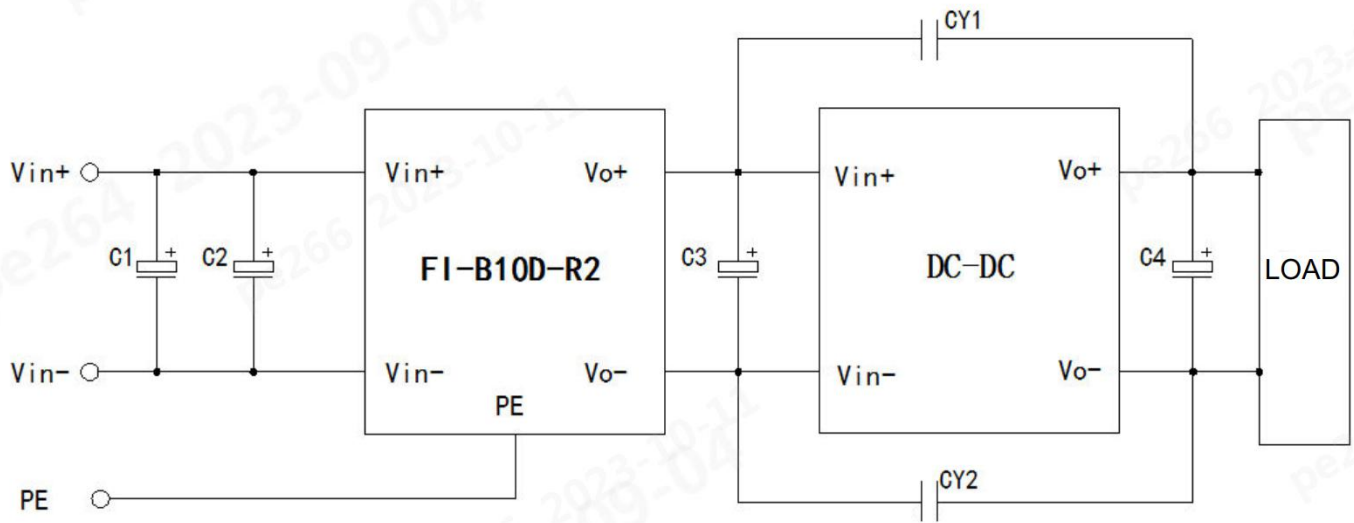


Fig.1

Table 1-①: Recommended device parameter table for URB24\_LD-60WR3

Components	Value
C1、C2	680uF/50V
C3	330uF/63V
C4	100uF/50V
CY1、CY2	Y1/102M

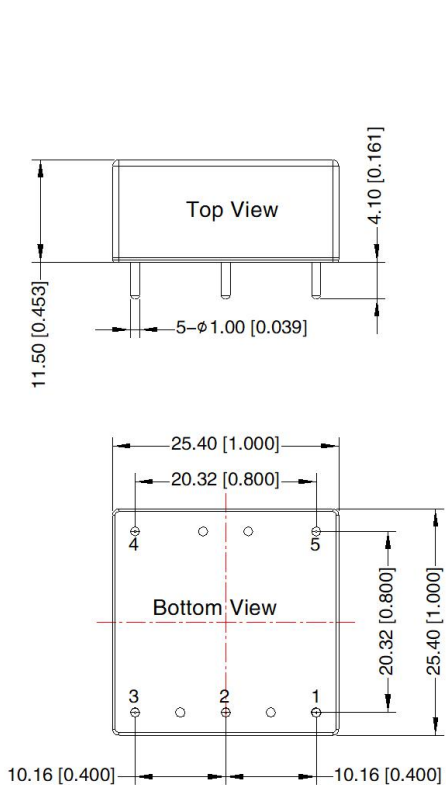
Notes: 1.The PE lines connect or not connect.  
 2. The filter can not use air switch and does not support natural plug and unplug.

Table 1-②: Recommended device parameter table for VCB48\_EBO-300W(F/H)R3-N

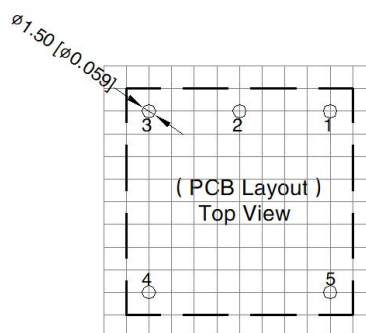
Components	Value
C1、C2	680uF/100V
C3	330uF/100V
C4	470uF/50V
CY1、CY2	Y1/332M

Notes: 1.The PE lines connect or not connect.  
2. The filter can not use air switch and does not support natural plug and unplug.

Dimensions and Recommended Layout



THIRD ANGLE PROJECTION



Note: Grid 2.54\*2.54mm

Pin-Out	
Pin	Function
1	+Vin
2	PE
3	-Vin
4	-Vo
5	+Vo

Note:  
Unit: mm[inch]  
Pin1/2/3/4/5: φ1.0mm  
Tolerance of Pin: ± 0.10[± 0.004]  
General tolerances: ± 0.50[± 0.020]

- Note:
- For additional information on Product Packaging please refer to [www.mornsun-power.com](http://www.mornsun-power.com). Packaging bag number: 58210003.
  - Unless otherwise specified, data in this datasheet should be tested under the conditions of Ta=25°C, humidity<75%RH with nominal input voltage and rated load;

3. All index testing methods in this datasheet are based on our company corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. Products are related to laws and regulations: see "Features" and "EMC";
6. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

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