

Differential mode filter inductor

FEATURES



- Strong low-frequency suppression capability
- High reliability
- Good temperature characteristic

The filter is suitable for applications that are sensitive to noise, such as analog circuits, and the EMC level can be significantly improved by adding FD2D-xx-xxx to the input end of the power module.

Selection Guide

Model	*Inductance (uH)	Current (A)(max)	DCR(mΩ) (max)	Weight (g) (typ)	Saturation Current	Size(mm) (L x W x H)	Product Chart
FD2D-20-301	300	2.0	160	22	L(3A)/L(0A)>80%	28.00 x 28.00 x 13.50 See Figure 1	Reference Diagram①
FD2D-20-202	2000	2.0	400	53	L(2A)/L(0A)>80%	32.00 x 32.00 x 18.50 See Figure 2	Reference Diagram①
FD2D-40-202	2000	4.0	230	79	L(4A)/L(0A)>50%	40.00 x 40.00 x 20.00 See Figure 3	Reference Diagram①
FD2D-60-431	430	6.0	130	47	L(3A)/L(0A)>80%	31.70 x 31.70 x 18.00 See Figure4	Reference Diagram②
FD2D-90-881	880	9.0	150	126	L(4A)/L(0A)>80%	42.00 x 42.00 x 33.00 See Figure5	Reference Diagram③
FD2D-A2-441	440	12.0	40	138	L(5A)/L(0A)>80%	40.50 x 40.50 x 32.00 See Figure6	Reference Diagram③

Note:1.The inductance values are tested under the conditions of T=25°C

2.When using the FD2D-90-881 and FD2D-A2-441 products, it is recommended to add some silicone rubber for fixation.

General Specifications

Item	Test Conditions	Applicable Model	Min.	Typ.	Max.	Unit
Operating Temperature *		FD2D-60-431	-40	--	+125	°C
		Others	-40	--	+105	
Storage Temperature		FD2D-60-431	-10	--	+40	
		Others	-40	--	+105	
Welding Temperature**	Wave soldering, maximum 10 seconds		+255	+260	+265	
	Manual soldering, with the solder joint 1.5mm away from the shell, for 10 seconds.		--	--	+300	
Storage Humidity	Non-condensing	FD2D-60-431	+30	--	+80	%RH
		Others	5	--	95	
Inductance Error Range	fo=10KHz, Uo=0.1V,T=25°C	FD2D-60-431	-18	--	+18	%
		FD2D-90-881	--	15	--	
		FD2D-A2-441	--	35	--	
Vibration			10~55Hz, 10g, X,Y,Z direction ,2mm			

EMC Filter Inductor

FD2D-xx-xxx

Warranty

Ambient temperature: <40°C

3 years

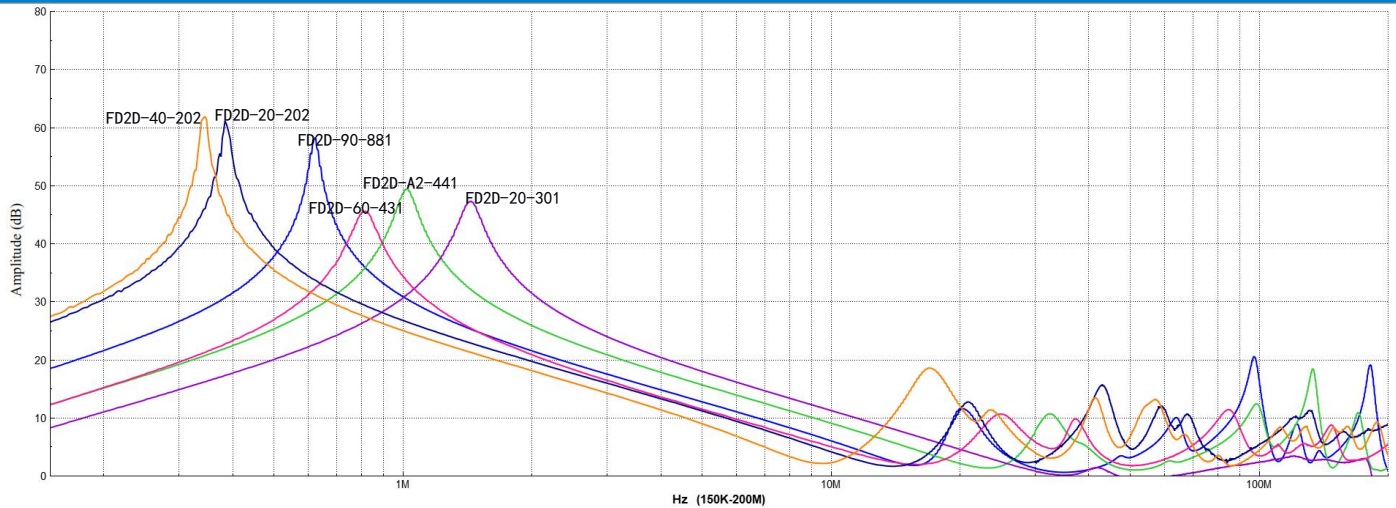
Note: *1.Operating Temperature range includes inductor self heating.

**2.The soldering temperature resistance of the pins is not the actual set temperature of the soldering iron, but the temperature required for a good solder joint. The actual set temperature by the customer needs to be comprehensively set based on the thickness of the PCB, the size of the copper cladding, the power of the soldering iron, and the selection of the soldering iron tip.

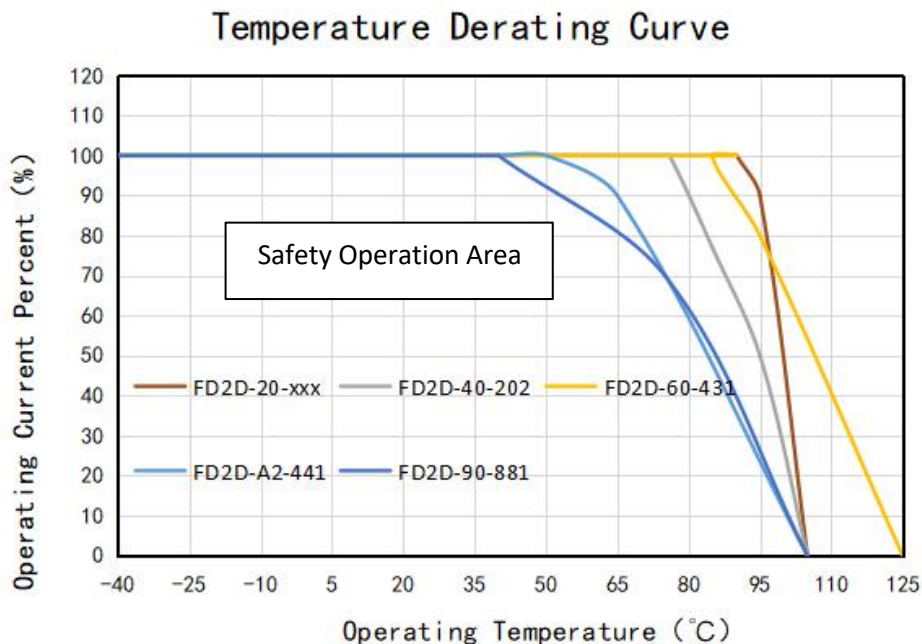
Schematic Diagram



Insertion Loss Curve (Reference Value)



Temperature Derating Curve(Reference Value)



Note: This product is suitable for use in a safe working area. If used in a non-safe working area, it is recommended to adopt forced air cooling or other heat dissipation measures.

FD2D-20-301 Schematic Diagram Of Pin Mark

THIRD ANGLE PROJECTION

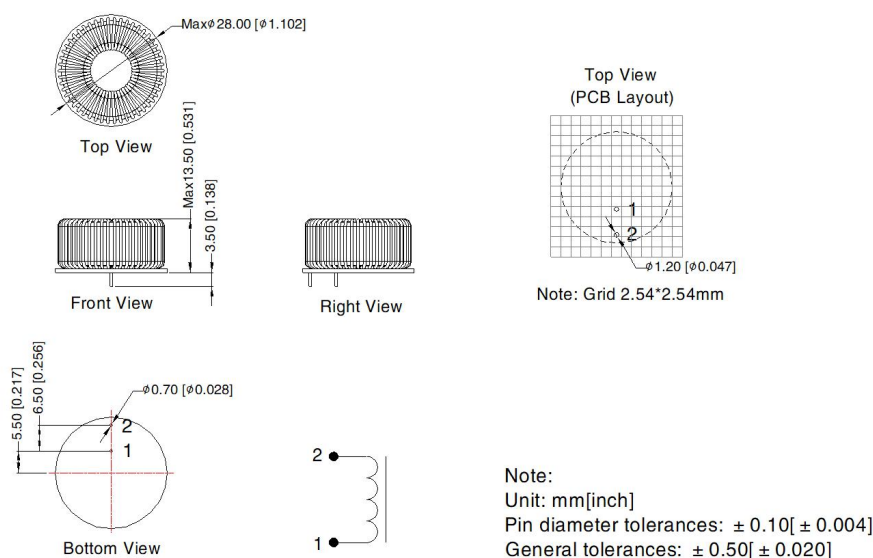



Fig.1

FD2D-20-202 Schematic Diagram Of Pin Mark

THIRD ANGLE PROJECTION 

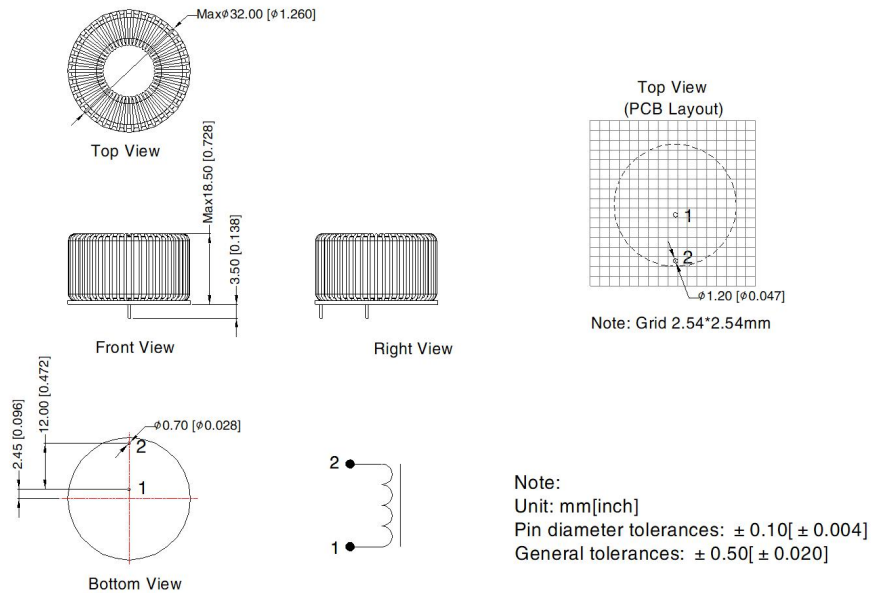



Fig.2

FD2D-40-202 Schematic Diagram Of Pin Mark

THIRD ANGLE PROJECTION 

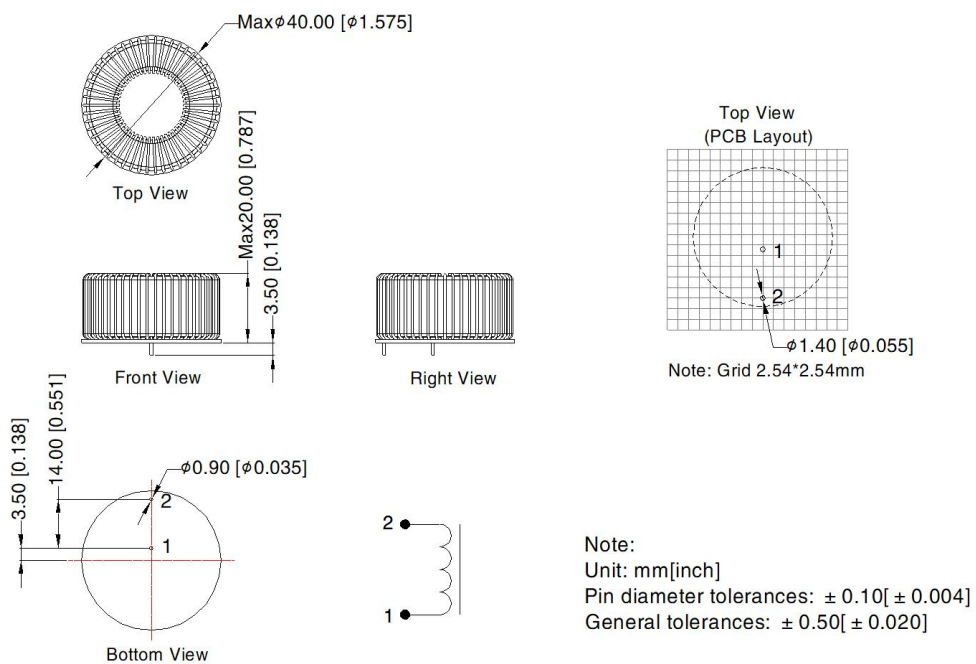


Fig.3

FD2D-60-431 Schematic Diagram Of Pin Mark

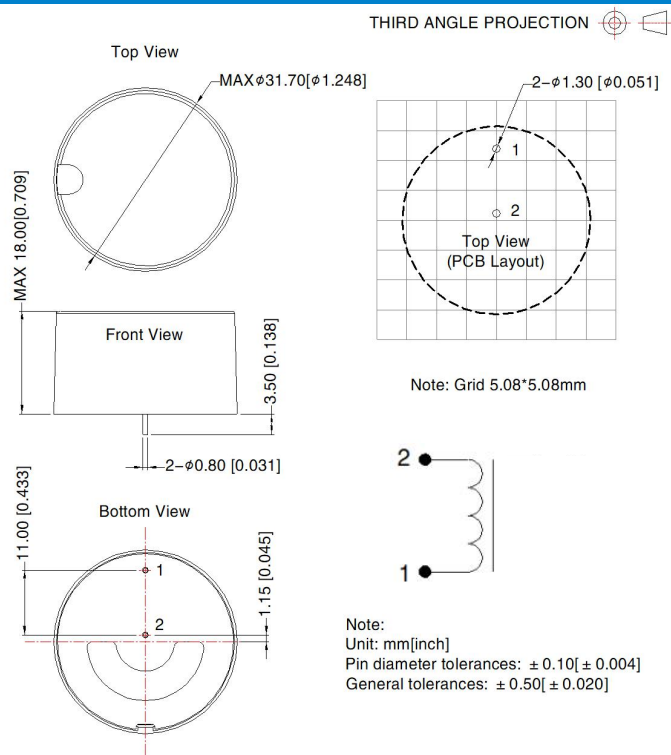


Fig.4

FD2D-90-881 Schematic Diagram Of Pin Mark

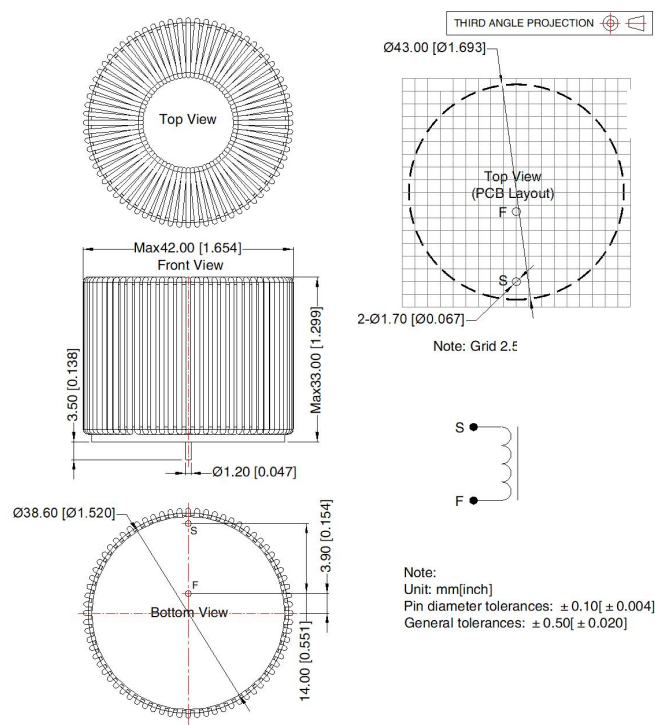


Fig.5

FD2D-A2-441 Schematic Diagram Of Pin Mark

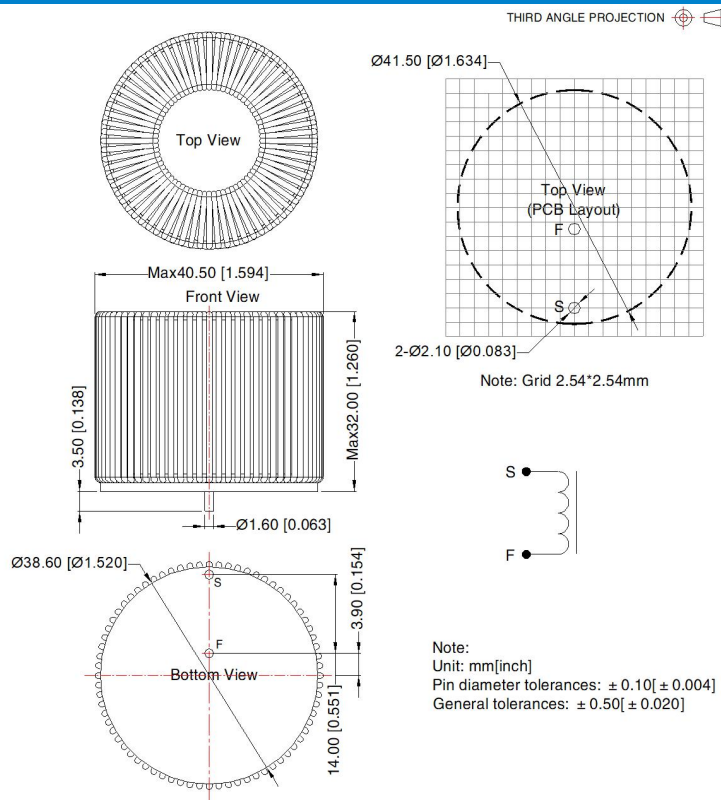


Fig.6

Note:

- For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58210365(FD2D-20-301);58240100(FD2D-20-202); 58240094(FD2D-40-202);58200055(FD2D-60-431); 58210475(FD2D-A2-441、FD2D-90-881);
- Unless otherwise specified, data in this data sheet should be tested under the conditions of $T_a=25^{\circ}\text{C}$, humidity<75%RH;
- All index testing methods in this datasheet are based on company corporate standards;
- The performance indexes of the product models listed in this manual are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technicians for specific information;
- We can provide product customization service, please contact our technicians directly for specific information;
- Products are related to laws and regulations: see "Features" ;
- 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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