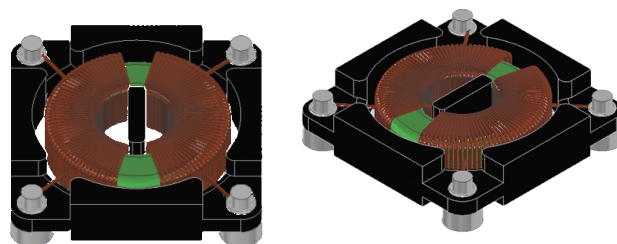


特点

Characteristics

- 圆环式、体积小、个头微小
Circular, small size, low posture
- 高频共模噪声抑制
Suppression of high frequency common-mode noise
- 优异的机械性能
Excellent mechanical properties
- 工作温度:工业级: -40°C~85°C 国军标级: -55°C~125°C
Operating temperature: industrial-grade: -40°C~85°C
National military standard: -55°C~125°C



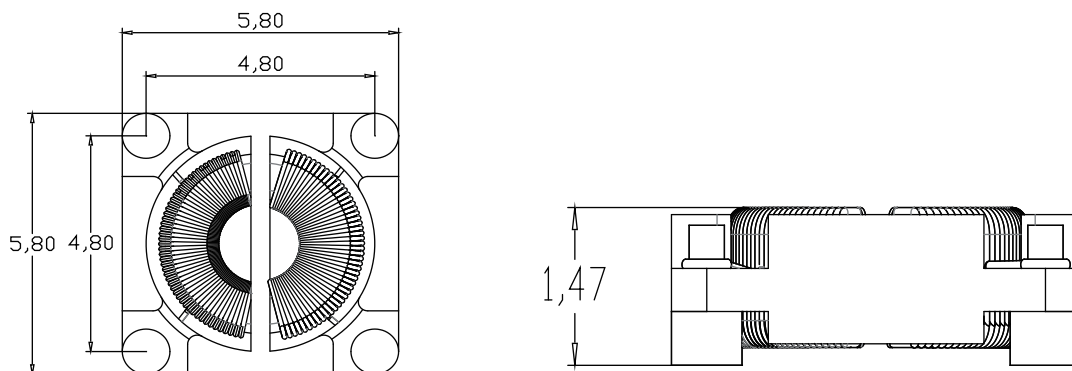
系列产品参数

Series product parameters

序号	产品型号	电感量 (uH) 100KHz/0.1mA	漏感 (nH) 100KHz/5mA	直流电阻 (Ω)	最大额定电 流 (mA)	介质耐压 (VDC/2S)	电感量公差
1	RDJLD5848C050NT	5	40	0.06	1200	1000	±30%
2	RDJLD5848C060NT	6	250	0.02	2000	1000	±30%
3	RDJLD5848C110NT	11	50	0.08	800	1000	±30%
4	RDJLD5848C250NT	25	60	0.11	800	1000	±30%
5	RDJLD5848C250NT	25	1400	0.11	800	1000	±30%
6	RDJLD5848C510NT	51	70	0.14	800	1000	±30%
7	RDJLD5848C510NT	51	2300	0.14	800	1000	±30%
8	RDJLD5848C101NT	100	100	0.18	500	1000	±30%
9	RDJLD5848C471NT	470	100	0.17	700	1000	-0.6
10	RDJLD5848C102NT	1000	70	0.2	700	1000	-0.6
11	RDJLD5848C222NT	2200	120	0.4	500	1000	-0.6
12	RDJLD5848C472NT	4700	250	0.55	400	1000	-0.6

封装图

Package drawing



■ 产品特性

Product characteristics

共模电感器的主要作用是抑制共模电磁干扰信号，提高电路的稳定性和信号传输质量。

The main function of a common mode inductor is to suppress common mode electromagnetic interference signals, improve circuit stability and signal transmission quality.

1.抑制电磁干扰 Suppression of electromagnetic interference

共模电感能够有效地减少外界电磁波对电路的干扰以及电路对外界的电磁辐射，确保数据传输的完整性和设备运行的稳定性。它特别在开关电源领域中体现其重要性，能有效抑制因开关工作产生的高频噪音，防止其通过电源线扩散到其他设备上。

Common mode inductance can effectively reduce the interference of external electromagnetic waves on the circuit and the electromagnetic radiation of the circuit to the outside world, ensuring the integrity of data transmission and the stability of equipment operation. It is particularly important in the field of switching power supplies, as it can effectively suppress high-frequency noise generated by switch operation and prevent it from spreading to other devices through power lines

2.双向滤波器 Bidirectional filter

共模电感本质上是一个双向滤波器，一方面需要滤除信号线上的共模电磁干扰，另一方面需要抑制自身发射的电磁干扰，以免影响同一区域内其他电子设备的正常工作电磁环境。

The common mode inductor is essentially a bidirectional filter. On the one hand, it needs to filter out common mode electromagnetic interference on the signal line, and on the other hand, it needs to suppress the electromagnetic interference emitted by itself to avoid affecting the normal working electromagnetic environment of other electronic devices in the same area.

3.工作原理 Working principle

共模电感通过铁氧体磁芯上的两个尺寸和匝数相同的线圈对称绕制来实现对共模信号的大电感量，而对差模信号则几乎不起作用。这种设计使得共模电流在流过时，磁环中的磁通相互叠加，从而具有相当大的电感量，对共模电流起到抑制作用。

The common mode inductor achieves a large inductance to the common mode signal by symmetrically winding two coils with the same size and number of turns on the ferrite core, while it has almost no effect on the differential mode signal. This design allows the magnetic flux in the magnetic ring to overlap with each other when the common mode current flows through, resulting in a significant inductance that suppresses the common mode current.

综上所述，共模电感器通过其独特的设计和工作原理，在电子电路中扮演着关键角色，保护电路免受共模电磁干扰的影响，同时维持电路的稳定运行和信号的清晰传输。

In summary, common mode inductors play a crucial role in electronic circuits through their unique design and working principles, protecting the circuit from common mode electromagnetic interference while maintaining stable operation and clear signal transmission.