

## DEFINITION OF TERMINOLOGY

### ■ AMBIENT TEMPERATURE(環境溫度)

The temperature of still air immediately surrounding a component or circuit. A typical method to measure ambient temperature is to record the temperature that is approximately 1/2 inch from the body of the component or circuit.

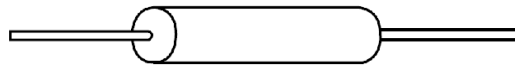
直接接觸元件或電路之靜止空氣的溫度，一般量測環境溫度的方法是量取離元件或電路約1/2吋之處的環境。

### ■ AXIAL INDUCTOR(軸向電感)

An inductor constructed on a core with concentric leads on opposite ends of the core. Axial inductors are available for both power applications and RF applications, and are available in many core materials including the basic phenolic, ferrite and powdered iron types. Both rod and bobbin shapes are utilized. Axial inductors are very suitable for tape and reel packaging for auto placement. (Also see Inductor.)

建構在一個兩端之軸心位置上有金屬導線之磁體的電感，軸向電感使用於電源及RF的應用，且有多種材質可供選擇，如石碳酸樹脂，鐵氧磁體及粉狀鐵等，外形有棒狀及線軸狀，軸向電感很適合帶裝方式以供自動安插。

**Axial Leaded Inductor**

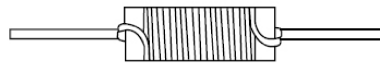


### ■ BOBBIN CORE(線軸鐵芯)

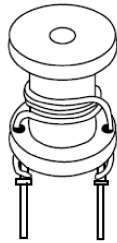
A core with the shape of a bobbin or spool which contains flanges. Bobbin cores are available with and without leads and in the axial and radial form. (Also see Axial Inductor and Radial Inductor)

含有輪緣且形狀如線軸或線板的鐵芯，線軸鐵芯分有導線及無導線兩種，亦都有軸向及徑向的形式，(亦參閱軸向電感及徑向電感)

**Bobbins**



**Axial Leaded**



**Radial leaded**



**Radial Leadless**

### ■ CERAMIC CORES(陶瓷鐵芯)

Ceramic is one of the common materials used for inductor cores. Its main purpose is to provide a form for the coil. In some designs it also provides the structure to hold the terminals in place. Ceramic has a very low thermal coefficient of expansion. This allows for relatively high inductance stability over the operating temperature ranges. Ceramic has no magnetic properties. Thus, there is no increase in permeability due to the core material. Ceramic core inductors are often referred to as "air core" inductors. Ceramic core inductors are most often used in high frequency applications where low inductance values, very low core losses and high Q values are required.

陶瓷是一種常被用於電感芯的材料，他的主要功能是提供線圈一個架構，有時亦會被設計成具有固定端的結構，陶瓷具有非常低的熱膨脹係數，這使得在操作溫度的範圍內，電感有較好的感值穩定性。陶瓷並不具磁性，因此並不會增加導磁率，故陶瓷鐵芯常被稱為“空氣芯”，陶瓷芯的電感常被用於需要低感值低鐵損及高品質係數的高頻應用。

### ■ CLOSED MAGNETIC PATH(封閉的磁路)

Magnetic core shapes designed to contain all of the magnetic flux generated from an excited winding(s). Inductors made with these core types are considered to be shielded inductors. Shielding, however, is a matter of degree. Common core shapes that are considered to have closed magnetic paths are toroids, E-cores and most pot cores. Shielded bobbins also offer a high degree of shielding and may be considered to have closed magnetic path for most practical purposes. Common core shapes that are considered to have open magnetic flux paths are rod cores and unshielded bobbin cores. (also see Shielded Inductor.)

具有能完全包容所有由繞線電感所產生之磁通量的磁性鐵芯形狀皆可被認為是具遮蔽的電感，然而遮蔽只是程度上的不同，一般上，環形鐵芯，E形鐵芯及大部分之POT形鐵芯都被認為是具有封閉磁路的鐵芯形狀，遮蔽的線軸亦能提供高程度的遮蔽，在大部分實際的應用上亦被視為具有封閉磁路，一般被認為有開放磁路的鐵芯形狀有棒形鐵芯及未遮蔽之線軸鐵芯。(亦參閱遮蔽式電感)

### ■ COILS(線圈)

Another common name for inductors. (See Inductor.)

為電感常用的另一名稱(參閱電感)