

## FERRONICS INC. QUICK REFERENCE DESIGN GUIDE

### V MATERIAL (15,000 ui)

- A Manganese-Zinc ferrite characterized by higher initial permeability with very low losses over the effective frequency range. Highly suitable for Pulse Transformers and Filter applications where high inductance and smaller sizes are needed. Recommended for 10G applications.

### T MATERIAL (10,000 ui)

- A Manganese-Zinc ferrite characterized by high temperature stability suitable for wideband, filter, and Pulse applications.

### L MATERIAL (9,000 ui MINIMUM)

- A Manganese-Zinc ferrite recommended for telecommunications designs and applications where extreme temperatures are of concern. Less stress sensitive than comparable materials on the market during winding and potting, L material is guaranteed to have a 9,000ui minimum at room temperature and 5,000ui minimum at -40C and 85C.

### BE MATERIAL (5,000 ui)

- A Manganese-Zinc ferrite designed for telecommunications, automotive and industrial designs where environmental considerations are of concern. BE material is designed to provide high inductance under DC Bias conditions across the temperature range of -40C to 85C. Also recommended for POE+ applications.

### G MATERIAL (1,500ui)

- A Nickel-Zinc ferrite with high permeability for wide band applications, G material allows for reduced core size and is ideal for the frequency range of 5-400MHz.

### J MATERIAL (850ui)

- A Nickel-Zinc ferrite used at high frequencies where high resistivity provides low eddy current losses. Well suited for Pulse and wide band transformers and inductors operating above 500MHz, and in particular wide band devices above 5MHz. J material is commonly used for EMI/RFI Noise Suppression and as a CMC in conjunction with our Mn-Zn transformer cores.

### K MATERIAL (125ui)

- A Cobalt-Nickel-Zinc ferrite suited for high frequency applications where low losses above 2MHz are required. Used in RF Technology as cores for RF Transformers, CMC's, and Noise suppression



## 弗洛尼克斯公司材料设计参考速导

### V 材料 (磁导率 15,000)

这是一种锰锌铁氧体材料，在有效的频率范围内具有很高的起始磁导率及很低的损耗。适合于要求高电感及小尺寸的脉冲变压器和滤波器的设计制造。我们还推荐它应用于 10 G 上。

### T 材料 (磁导率 10,000)

这是一种锰锌铁氧体材料，具有很强的温度稳定性。适合于宽带、滤波和脉冲器件的设计制造。

### L 材料 (磁导率不低于 9,000)

这是一种锰锌铁氧体材料，我们推荐它使用于有苛刻温度要求的通讯元器件的设计制造上。这种材料比市场上的同类材料更具抗应力能力，给我们的客户在绕线及制模生产步骤中带来很大裨益。L 材料在室温下至少具有磁导率 9,000，在  $-40^{\circ}\text{C}$  和  $85^{\circ}\text{C}$  至少具有磁导率 5,000。

### BE 材料 (磁导率 5,000)

这是一种锰锌铁氧体材料，专为通讯、汽车及其他工业而设计，因为业者要求产品在苛刻的条件下工作。BE 材料设计能在  $-40^{\circ}\text{C}$  至  $85^{\circ}\text{C}$  范围内及在有直流偏流的条件下提供满足工业标准的电感值。我们也推荐它应用于 POE+ 的元器件上。

### G 材料 (磁导率 1,500)

这是一种镍锌铁氧体材料，具有高磁导率，用于宽带技术中。G 材料能减小磁芯的尺寸，适合工作在 5-400MHz 频率范围内。

### J 材料 (磁导率 850)

这是一种镍锌铁氧体材料，适合用于高频，其高电阻率提供了很低的 eddy 电流损耗。它适用于脉冲及宽带变压器和工作在 500 MHz 以上的电感器上，特别是用于频率在 5 MHz 以上的宽带器件上。J 材料也在 EMI/RFI 技术上被普遍地用来抑制噪声，它还常与锰锌变压器芯子配合用于共模扼流。

### K 材料 (磁导率 125)

这是一种钴镍锌铁氧体材料，适合用于高频，例如元器件要求在 2 MHz 以上具备很低的损耗。它常用于 RF 技术上的变压器及共模扼流器中，也常用来抑制噪声。