

FERRITES

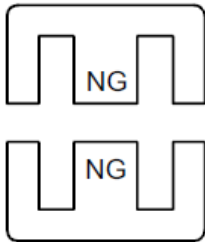


General Technical Terms & Conditions:

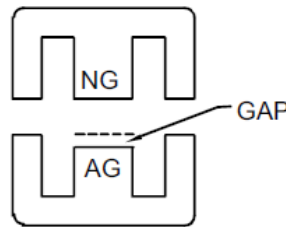
1. Appearance & Shape: To be free of any defects such as flow, burrs, unevenness etc., as per the IEC standards IEC – 60424

2. Inductance Measurement Procedure and Nomenclature for Cores in Pair

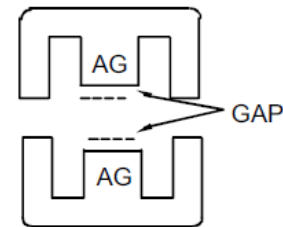
- For Cores without Air Gap (OL Cores) the inductance is measured with two Un-Gapped cores in a set.
- For cores with Air Gap the inductance is measured as below mentioned procedure:
S: One Gapped core + One Un-gapped core (Asymmetrical Gap)
D: One Gapped core + One Gapped core (Symmetrical Gap)
T: One Gapped core + One Un-gapped core (Applicable for AL cores only)



Normal Pairing



Single Sided Gap (S, T)



Double Sided Gap (D)

3. Delivery procedure for the cores in Pair:

- All Un-gapped cores are delivered in case of without air gap (OL Cores)
- S: 50% Gapped cores and 50% Un-gapped cores
- D: 100% Symmetrically Gapped cores
- T: 100% Gapped cores (Un-gapped cores has to be ordered and delivered separately)

4. A_L Value Measurement Methods:

- **$L_0 = \text{Zero}$**

A_L value is measured by deducting self-inductance of coil. Usually coil is wound by $N=100$ turns.

Inductance of coil is measured without ferrite core = L_0

Inductance of coil is measured with ferrite core = L_f

A_L value is calculated: $A_L = (L_f - L_0)/N^2$

Clamping Pressure: 4 Pounds per Square Inch

Common A_L Test Conditions: 1 kHz/1mT/ $N=100/25^\circ\text{C}/L_0 = 0$

- **CFR Standard FBW (Full Bobbin Winding)**

A_L value is measured including self-inductance of coil. Coil is wound by $N=100$ turns, whole space of bobbin have to be filling by winding.

Inductance of coil is measured with ferrite core = L_f

A_L value is calculated: $A_L = L_f/N^2$

Clamping Pressure: 4 Pounds per Square Inch

Common A_L Test Conditions: 1 kHz/1mT/ $N=100/25^\circ\text{C}$ / FBW

- **CD (Customer Design - Customized)**

A_L value is measured according FBW method, but for measurement is used specific coil provided by a customer. These ferrites are made as special customer design.

Clamping Pressure: 4 Pounds per Square Inch

Common A_L Test Conditions: 1 kHz/1mT/ $N=100/25^\circ\text{C}$ / CD

5. A_L Value Testing Conditions for Ring Cores: 10 kHz/150mV/ $N=1/L_0 = 0/25^\circ\text{C}$

6. Dielectric Breakdown Standards for Epoxy Coated Cores

Ring Core	Dielectric Strength
OD less than equal to 10 mm	1.0 kV AC
OD greater than equal to 12 mm and less than equal to 20 mm	1.5 kV AC
OD greater than 20 mm	2.0 kV AC

Note: Our Epoxy Coating is UL Approved, and UL File number can be provided on request

General Terminology:

Symbol	Meaning	Unit
μ_e	Effective Permeability	
μ_{iac}	Initial Permeability	
A_e	Effective Area	mm^2
A_L	Inductance Factor: $A_L = L/N^2$	nH
L_e	Effective Length	mm
OD	Outer Diameter of a ring core	mm
P_V	Power Loss	W/Set
V_e	Effective Volume	mm^3