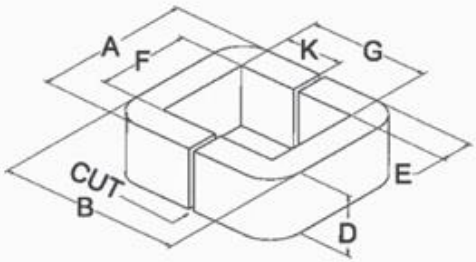
Dimensional Tolerances for Cut C-Cores, Cut E-Cores & Toroids

C-Cores

- Custom sizes
- Custom shapes
- Multiple Cuts
- Special air gap cuts
- Tighter tolerances
- Low noise applications
- Diamond-lapped mating surfaces
- Special edge chamfering
- Special high temperature heat stabilization processes
- Epoxy coating
- Special edge chamfering
- Epoxy coating
- Special stack resistance requirements
- Special part marking
- Custom assemblies
- Custom grinding & machining
- Small Planar-type geometries
- Call for more details about these other possibilities



Dimensional Tolerances for Cut C-Cores per EIA Standard RS-217

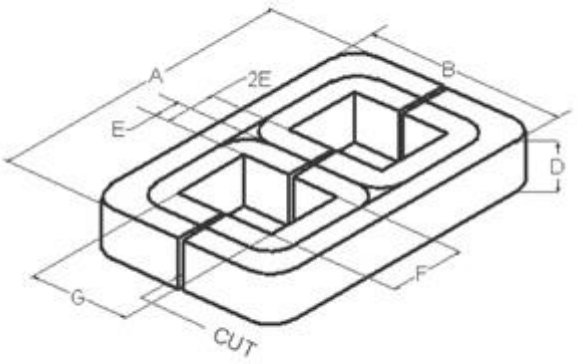
Core Dimension	Material Thickness (inch)	Allowable Tolerances (inches)
A = Outside Core Width	All	+0.031 max when A ≤ 1.500 +0.047 max when 1.500 < A ≤ 2.500 +0.062 max when 2.500 < A ≤ 3.500 +0.094 max when A > 3.500
B = Outside Core Height	0.0005, 0.001, 0.002	+0.062 max when B ≤ 2.000 +0.188 max when 2.000 < B ≤ 4.000 +0.375 max when B > 4.00
	0.004 through 0.014	+0.062 max when B < 3.000 +0.156 max when 3.000 ≤ B ≤ 4.000 +0.188 max when 4.000 < B ≤ 6.000 +0.375 max when 6.000 < B ≤ 12.000

		+0.438 max when B > 12.000
D = Core Strip Width	All *	+0.031, -0 when D ≤ 1.000 +0.047, -0 when 1.000 < D ≤ 2.812 +0.062, -0 when D > 2.812 *+0.094, -0 when E > 2.500*
E = Core Leg Buildup	0.0005 through 0.004 0.007 through 0.014	±0.016 when E ≤ 0.250 +0.031, -0.016 when 0.250 < E ≤ 1.000 ±0.031 when E > 1.000 ±0.016 when E < 0.250 +0.031, -0.016 when 0.250 ≤ E < 0.562 ±0.031 when E ≥ 0.562
F = Inside Window Width	All	-0.016 minimum
G = Inside Window Height	All	-0.016 minimum
K = Cut Dimension	All	G÷2 if G < 3.750, ± 0.062 1.687 if G ≥ 3.750, ±0.062
R = Inside Window Corner Radius (Reference Only)	0.0005 through 0.004 0.007 through 0.014 All All	0.031 when F & G ≤ 2.000 0.062 when F & G ≤ 2.000 0.125 when F or G > 2.000 and F & G ≤ 5.000 0.156 when F > 5.000
Maximum Core Tilt	All	0.031 when B < 3.500 0.062 when B ≥ 3.500
A & B dimensions are held to a maximum tolerance only, negative tolerances are controlled by the F, G, & E dimensions. F & G dimensions are held to a minimum tolerance only, positive tolerances are controlled by the A, B & E dimensions. * Nanocrystalline tolerance on the D dimension is ± the stated positive tolerance to accommodate material shrinkage during the annealing process. Other tolerances may be different depending on core geometry. Contact our engineering department for more details.		

We will gladly manufacture cores to your specific dimensional and physical requirements such as: non-standard mechanical tolerances, multiple cuts, or diamond lapped for lowest possible excitation and/or acoustical noise.

E-Cores

- Custom sizes
- Custom shapes
- Multiple Cuts
- Special air gap cuts
- Tighter tolerances
- Low noise applications
- Diamond-lapped mating surfaces
- Special edge chamfering
- Special high temperature heat stabilization processes
- Epoxy coating
- Special edge chamfering
- Epoxy coating
- Special stack resistance requirements
- Special part marking
- Custom assemblies
- Custom grinding & machining
- Small Planar-type geometries
- Call for more details about these other possibilities



Dimensional Tolerances for Cut E-Cores

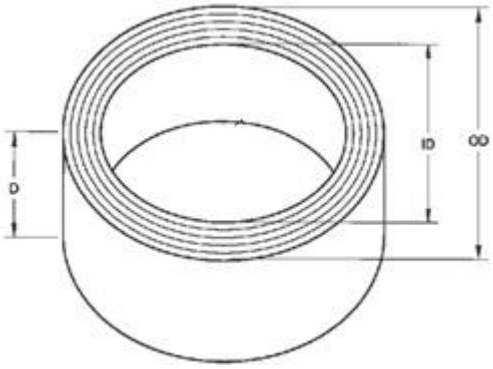
Core Dimension	Material Thickness (inch)	Allowable Tolerances (inches)
A = Outside Core Width	0.01 through 0.004	+0.094 max when A ≤ 5.000 +0.188 max when 5.000 < A ≤ 10.000 +0.312 max when A > 10.000
	0.007 through 0.014	+0.125 max when A ≤ 5.000 +0.250 max when 5.000 < A ≤ 10.000 +0.375 max when A > 10.000
B = Outside Core Height	0.001, 0.002, 0.004	+0.094 max when B ≤ 5.000 +0.156 max when 5.000 < B ≤ 10.000 +0.250 max when B > 10.000
	0.007 through 0.014	+0.125 max when B ≤ 5.000 +0.188 max when 5.000 < B ≤ 10.000 +0.312 max when B > 10.000
D = Core Strip Width	All *	+0.031, -0 when D < 1.000 +0.047, -0 when 1.000 ≤ D < 2.000 +0.062, -0 when D ≥ 2.000 +0.156, -0 when 2E > 2.000
2E = Core Leg Buildup	All	±0.031 when 2E ≤ 1.000 +0.062, -0.031 when 1.000 < 2E ≤ 2k ±0.062 when 2E > 2.000

F = Inside Window Width	All	-0.016 minimum
G = Inside Window Height	All	-0.016 minimum
K = Cut Dimension	All	G ÷ 2.000, ± 0.062
R = Inside Window Corner Radius (Reference Only)	0.0005 through 0.004 0.007 through 0.014 All All	0.031 when F & G ≤ 2.000 0.062 when F & G ≤ 2.000 0.125 when F or G > 2.000 and F & G ≤ 5.000 0.156 when F > 5.000
Maximum Tilt	All	0.031 when F < 2.500 0.062 when F ≥ 2.500

A&B dimensions are held to a maximum tolerance only, negative tolerances are controlled by the F, G, & 2E dimensions. F&G dimensions are held to a minimum tolerance only, positive tolerances are controlled by the A, B & 2E dimensions.
* Nanocrystalline tolerance on the D dimension is ± the stated positive tolerance to accommodate material shrinkage during the annealing process. Other tolerances may be different depending on core geometry.
Contact our engineering department for more details.

Toroids

- Customizable to meet your needs
- Cut in half
- Diamond lapped if cut in half
- Epoxy coated
- Matched sets
- Gapped to meet your inductance requirements
- Air gapped for Hall sensors
- Chamfered or radiused ID & OD
- Special stack resistance requirements
- Nylon & Aluminum cased
- Multiple Cuts
- Call for more details about these and other possibilities



Dimensional Tolerances for Toroids

Core Dimension	Material Thickness (inch)	Allowable Tolerances (inches)
OD = Outside Core Width or Diameter	All	+0.031, -0.016 when OD ≤ 1.500 ±0.031 when 1.500 < OD ≤ 2.500 +0.062, -0.031 when 2.500 < OD ≤ 3.500 ±0.062 when 3.500 < OD ≤ 12.000

		+0.125, -0.062 when 12.000 < OD ≤ 24.000 ±0.125 when OD > 24.000
ID = Inside Core Width or Diameter	All	±0.016 when ID ≤ 2.500 +0.031, -0.016 when 2.500 < ID ≤ 3.500 ±0.031 when 3.500 < ID ≤ 12.000 +0.062, -0.031 when 12.000 < ID ≤ 24.000 ±0.062 when ID > 24.000
D = Core Strip Width	All *	+0.031, -0 when D ≤ 1.000 +0.047, -0 when 1.000 < D ≤ 2.812 +0.062, -0 when D > 2.812
E = Core Leg Buildup	All	±0.016 when E ≤ 0.250 +0.031, -0.016 when 0.250 < E ≤ 1.000 ±0.031 when E > 1.000

For unimpregnated cores, measurements will be made with core shaped into the most favorable position because these cores are often flexible.
For epoxy coated (cased or encapsulated) cores add .0.040" to the maximum "OD" and "D" dimensions, subtract 0.040" from the minimum "ID" dimension. "E" dimension tolerance applies before coating only.
* Nanocrystalline tolerance on the D dimension is ± the stated positive tolerance to accommodate material shrinkage during the annealing process. Other tolerances may be different depending on core geometry.
Contact our engineering department for more details.