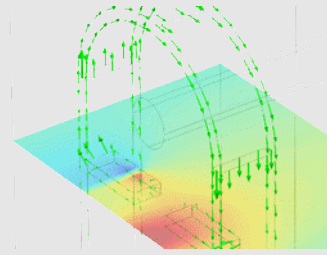


Laminated Cores

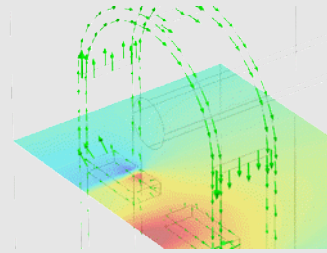


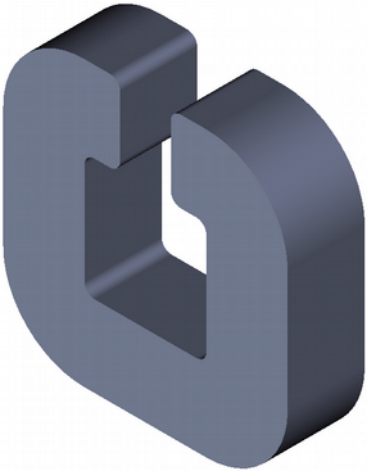

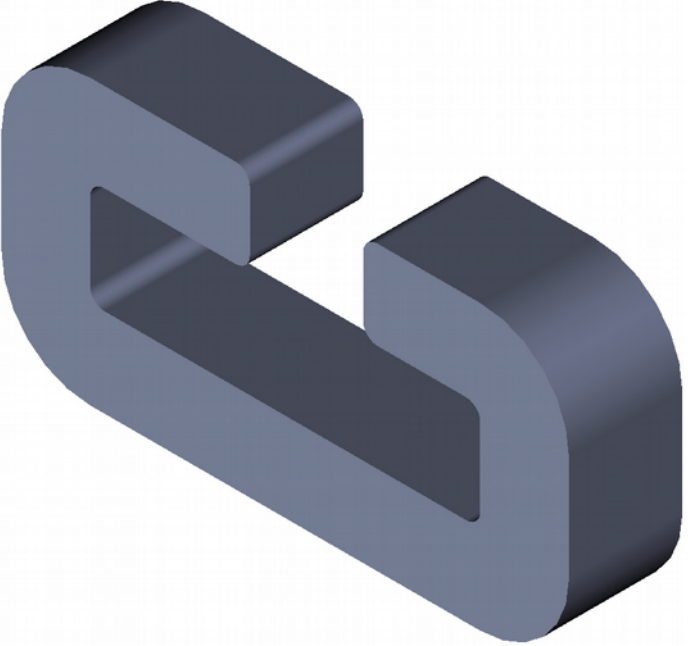
“Laminated Cores for Contactless Current Sensing”

Overview of Available Products

Sep/2017
P. Krummenacher

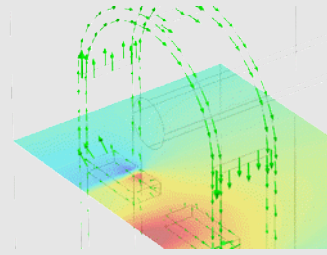
Laminated Core Summary



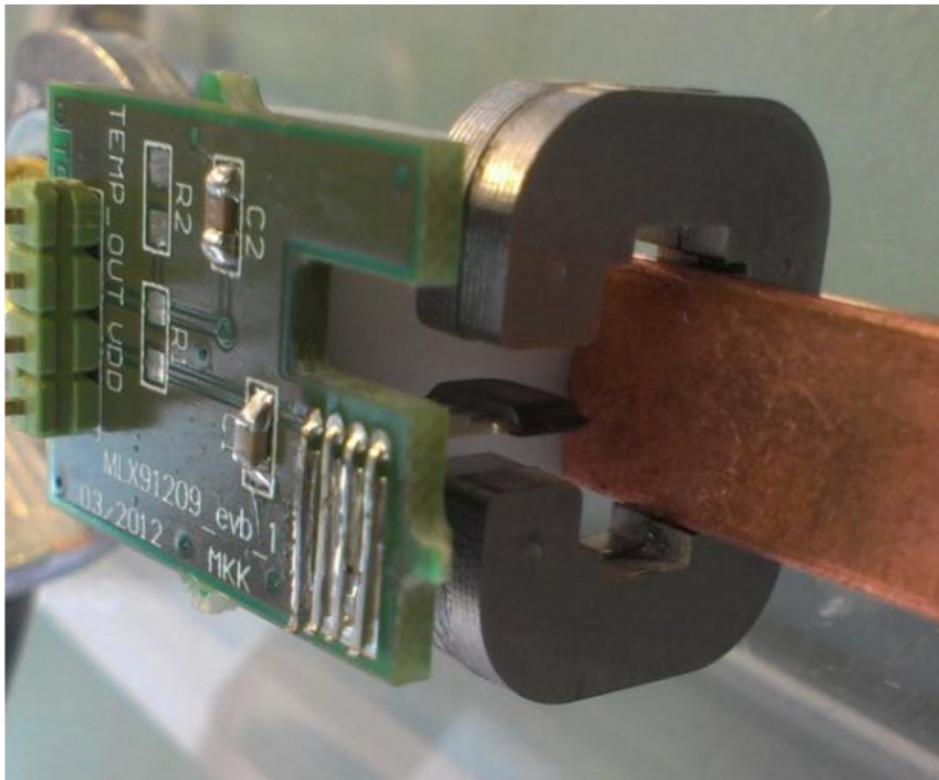
C2.5-4-3.8	C5-4.5-4.5	C8-6.25-8
$\pm 400A$	$\pm 700A$	$\pm 1200A$
		
airgap 2.5mm	airgap 5mm	airgap 8mm

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Application Example

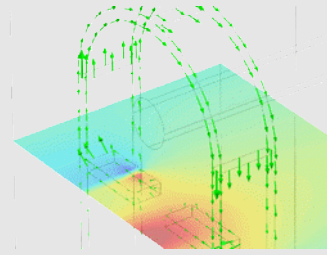


- Contactless Current Measurement
 - + Hall Sensor: Melexis MLX91209

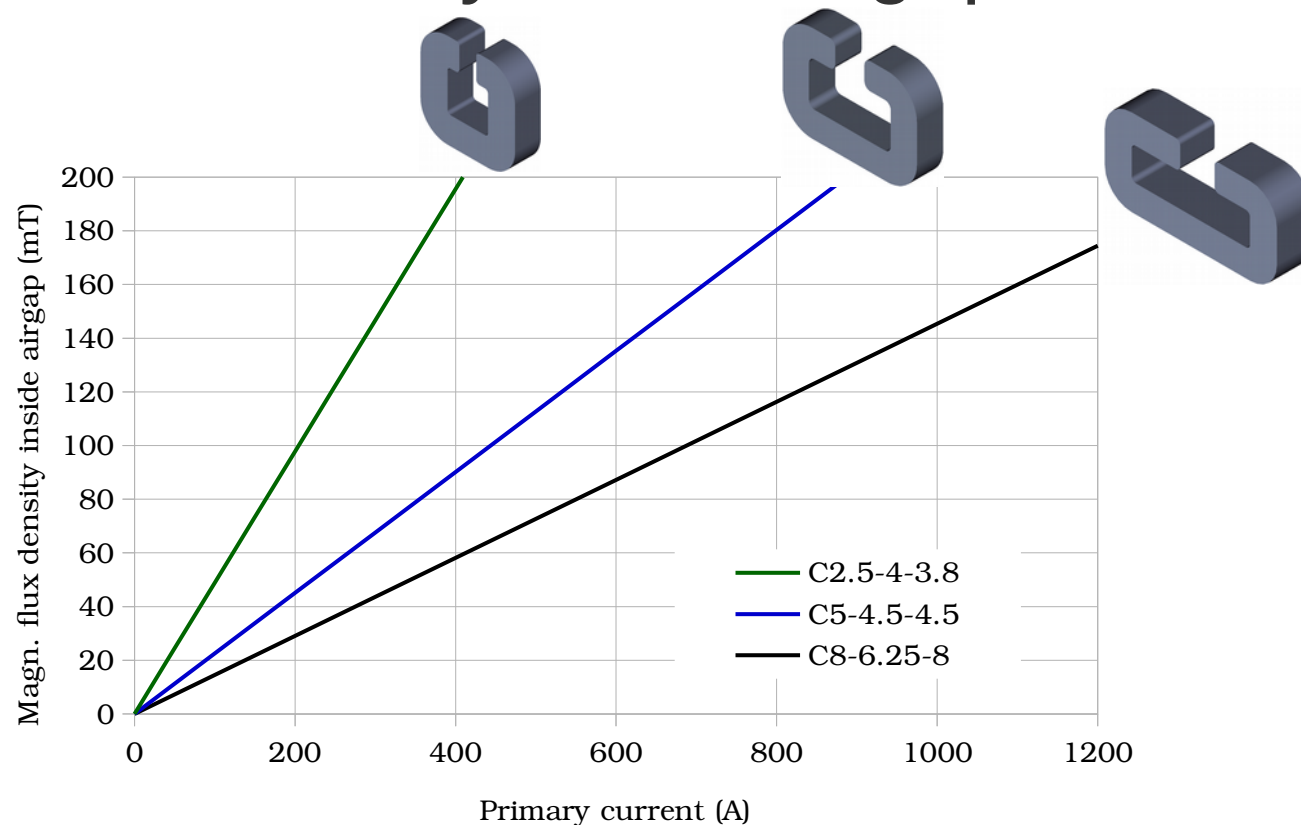


Primary current	$\pm 500 \text{ A}$
Hall sensor output	$\pm 2 \text{ V}$
Sensitivity	4 mV/A

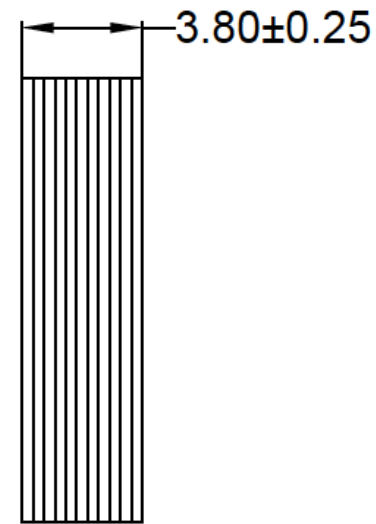
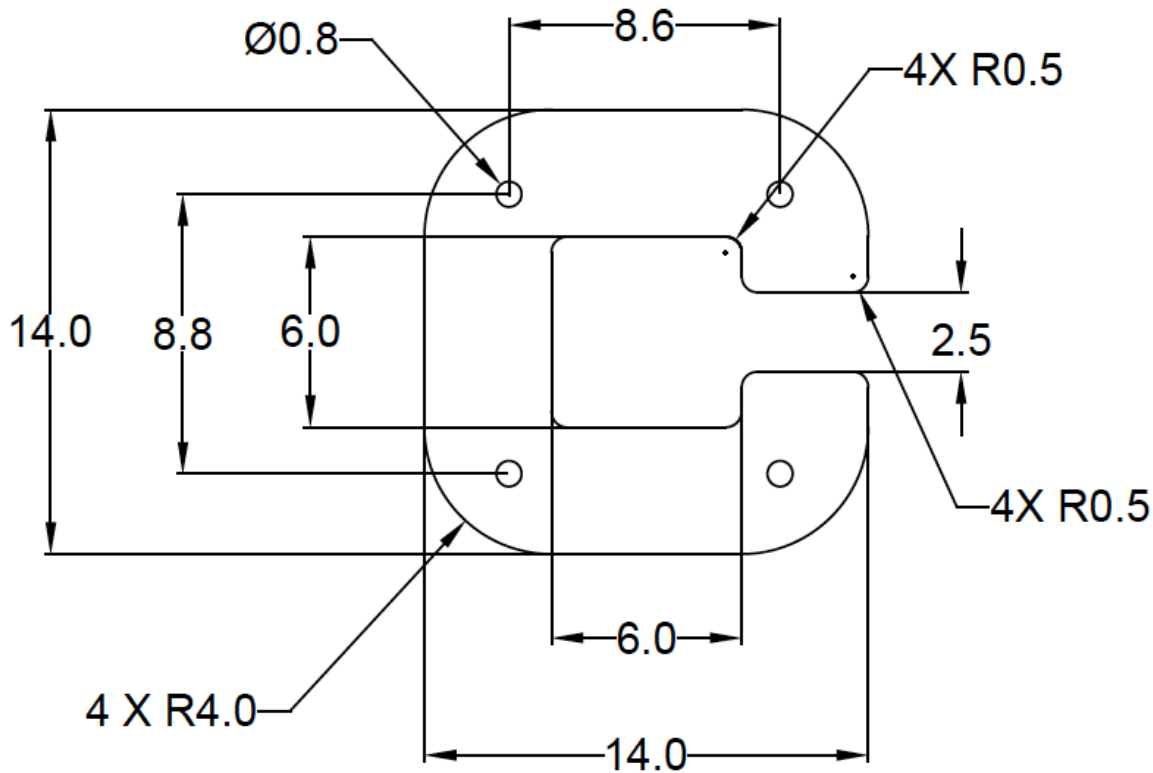
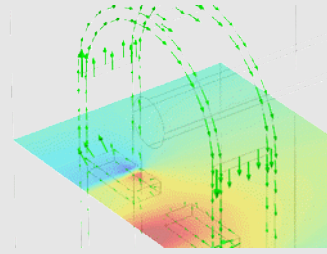
Magnetic Field Inside Airgap



- Conversion from primary input current to magnetic flux density inside airgap



C2.5-4-3.8 Core Geometry*



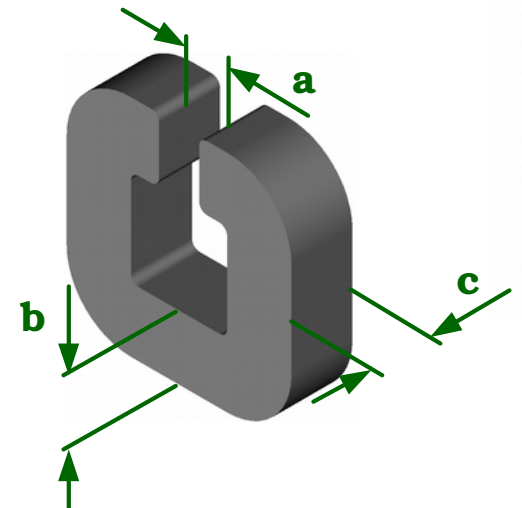
(*) Core geometry

Ca-b-c

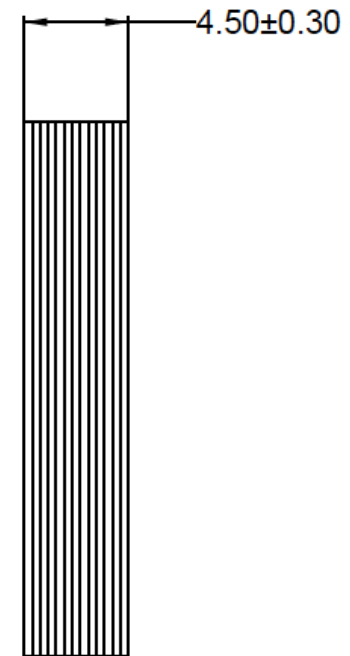
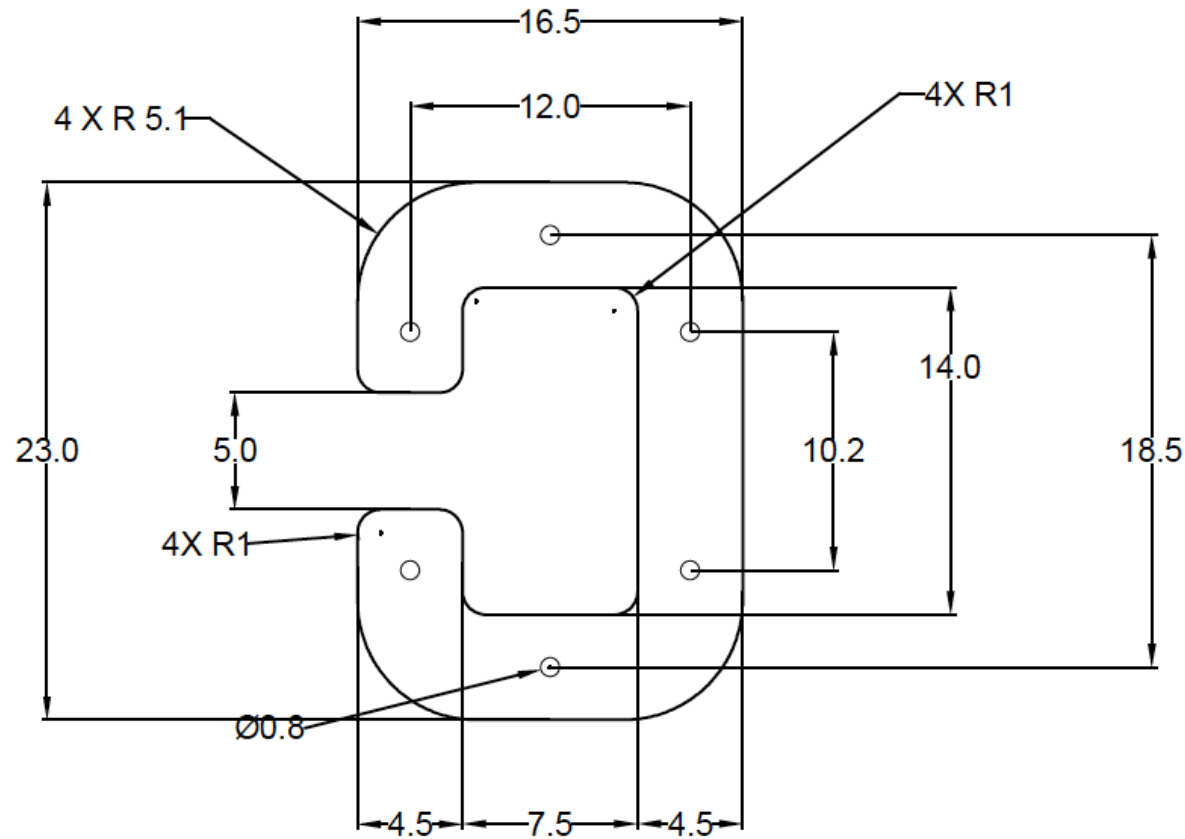
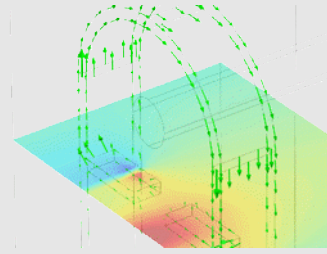
a: airgap

b: thickness

c: length

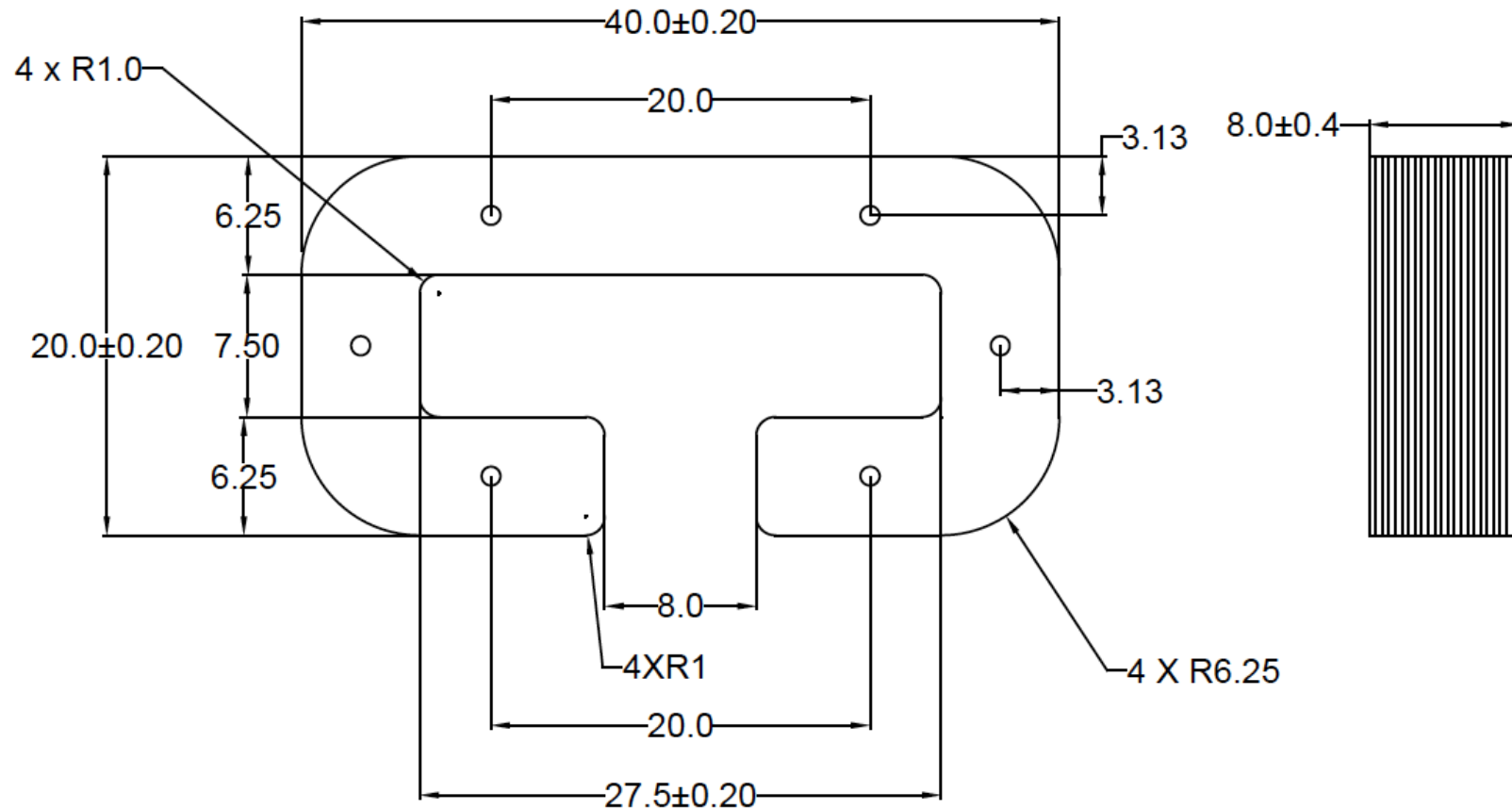
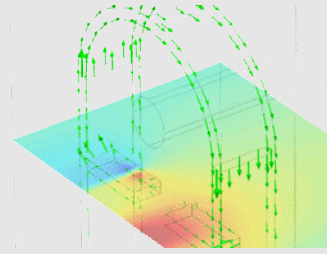


C5-4.5-4.5 Core Geometry

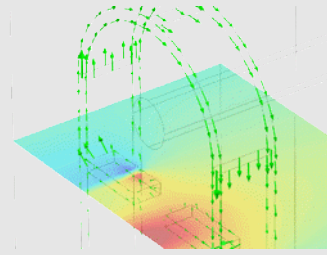


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C8-6.25-8 Core Geometry

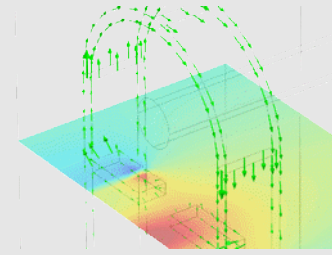


Conclusions



- Laminated cores for contactless current measurement up to $\pm 1200\text{A}$
- High speed applications thanks to laminated design
- Inherent shielding prevents cross-talk and provides strayfield immunity

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Thank you
for choosing **maglab**

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