

Core Selector Charts

The core selector charts are a quick guide to finding the optimum permeability and smallest core size for DC bias applications.

These charts are based on a permeability reduction (and therefore inductance) of not more than 50% with DC bias; typical winding factors of 40% for toroids, 60% for E cores and U cores, and 75% for EQ cores (helical coil assumed); and an AC current that is small relative to the DC current. These charts are based on the nominal core inductance and a current density 400-1000 A/cm²:

Kool M μ	400 A/cm ²
Kool M μ MAX	600 A/cm ²
Kool M μ Hf	400 A/cm ²
Kool M μ Ultra	400 A/cm ²
XFlux	600 A/cm ²
XFlux Ultra	600 A/cm ²
High Flux	600 A/cm ²
Edge	600 A/cm ²
MPP	400 A/cm ²
Kool M μ E/U Cores	400 A/cm ²
Kool M μ MAX E/U Cores	400 A/cm ²
Kool M μ MAX High Performance E/U Cores	400 A/cm ²
Kool M μ Hf E/U Cores	400 A/cm ²
Kool M μ EQ/LP Cores	800 A/cm ²
Kool M μ MAX EQ/LP Cores	800 A/cm ²
XFlux EQ/LP Cores	1000 A/cm ²
High Flux EQ/LP Cores	1000 A/cm ²

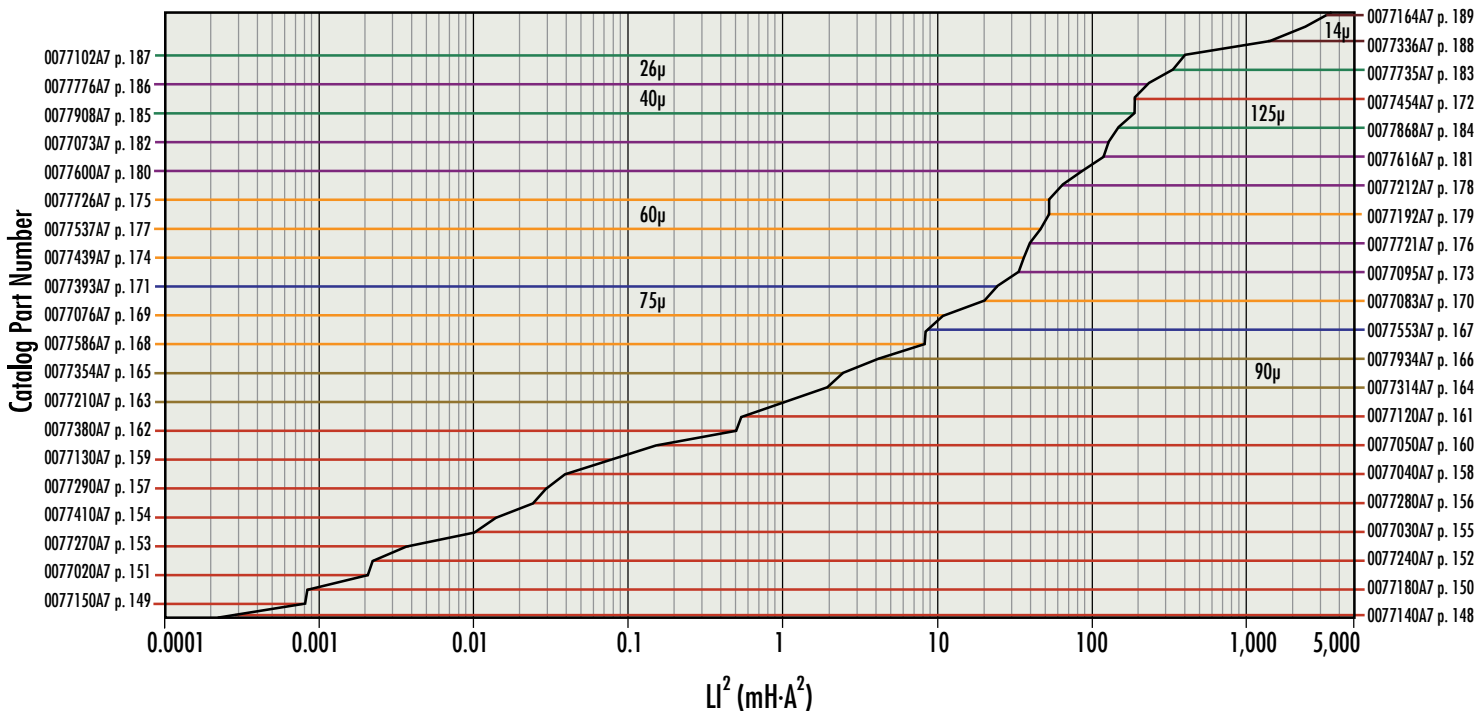
If a core is being selected for use with a large AC current relative to any DC current, such as a flyback inductor or buck/boost inductor, frequently a larger core will be needed to limit the core losses due to AC flux. In other words, the design becomes loss-limited rather than bias-limited.

For additional power handling capability, stacking of cores will yield a proportional increase in power handling. For example, double stacking of the C055908A2 core will result in doubled power handling capability to about 400 mH·A².

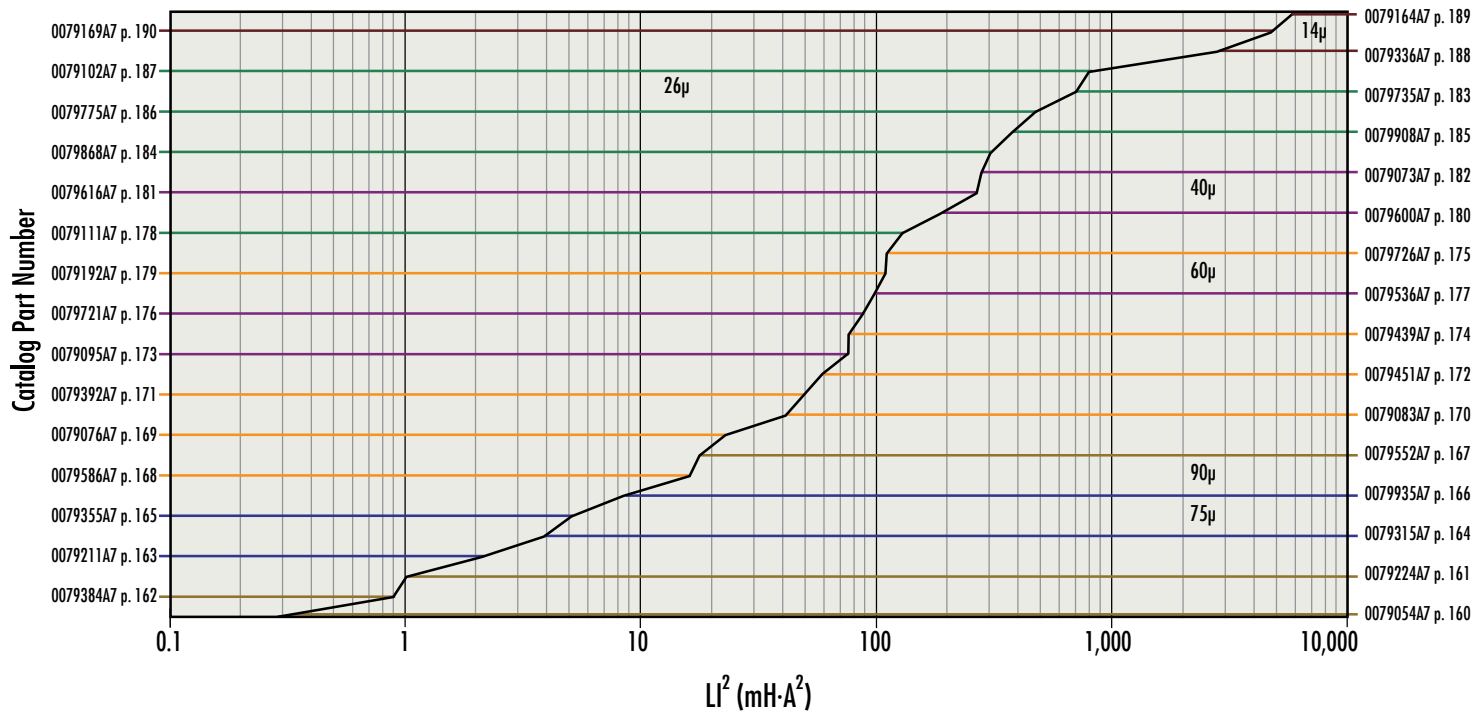
Cores with increased heights are easily ordered. Contact Magnetics for more information.

Core Selector Charts

Kool M μ [®] Toroids

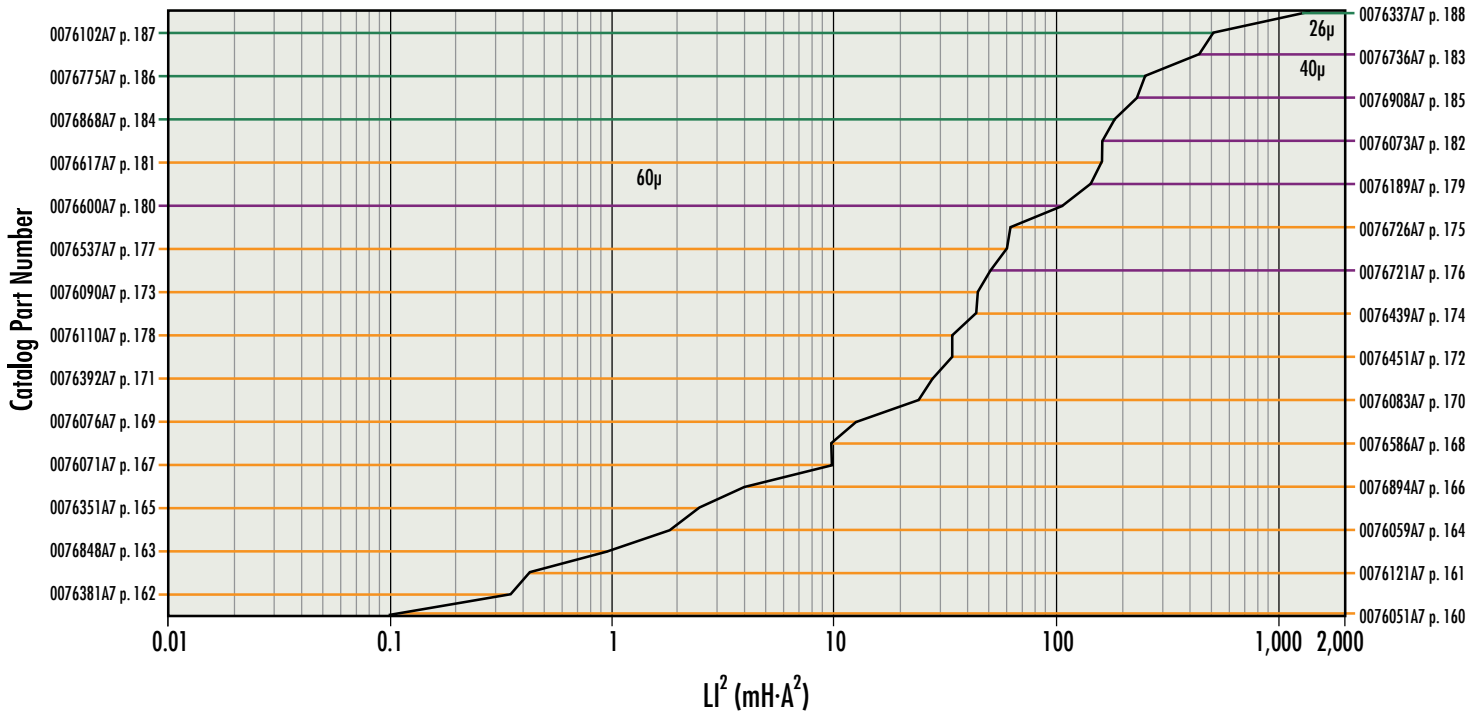


Kool M μ [®] MAX Toroids

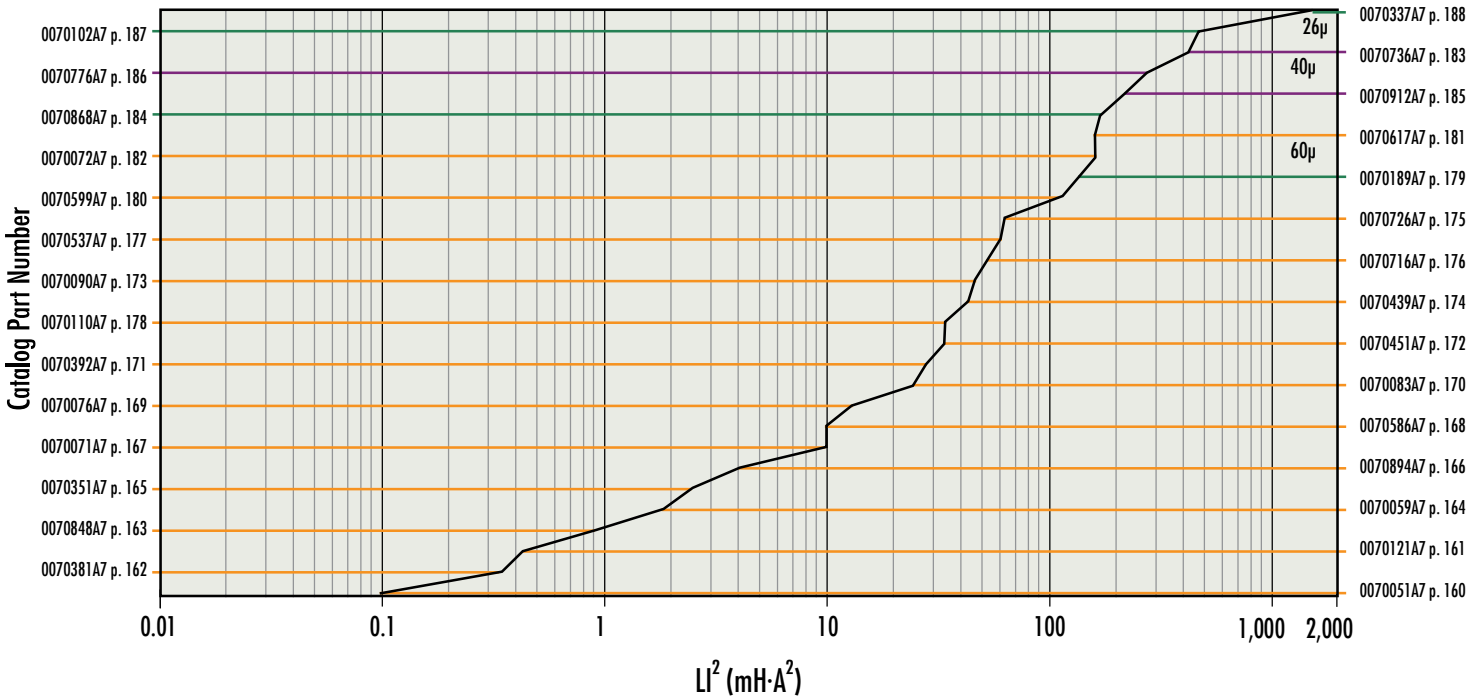


Core Selector Charts

Kool M μ [®] Hf Toroids

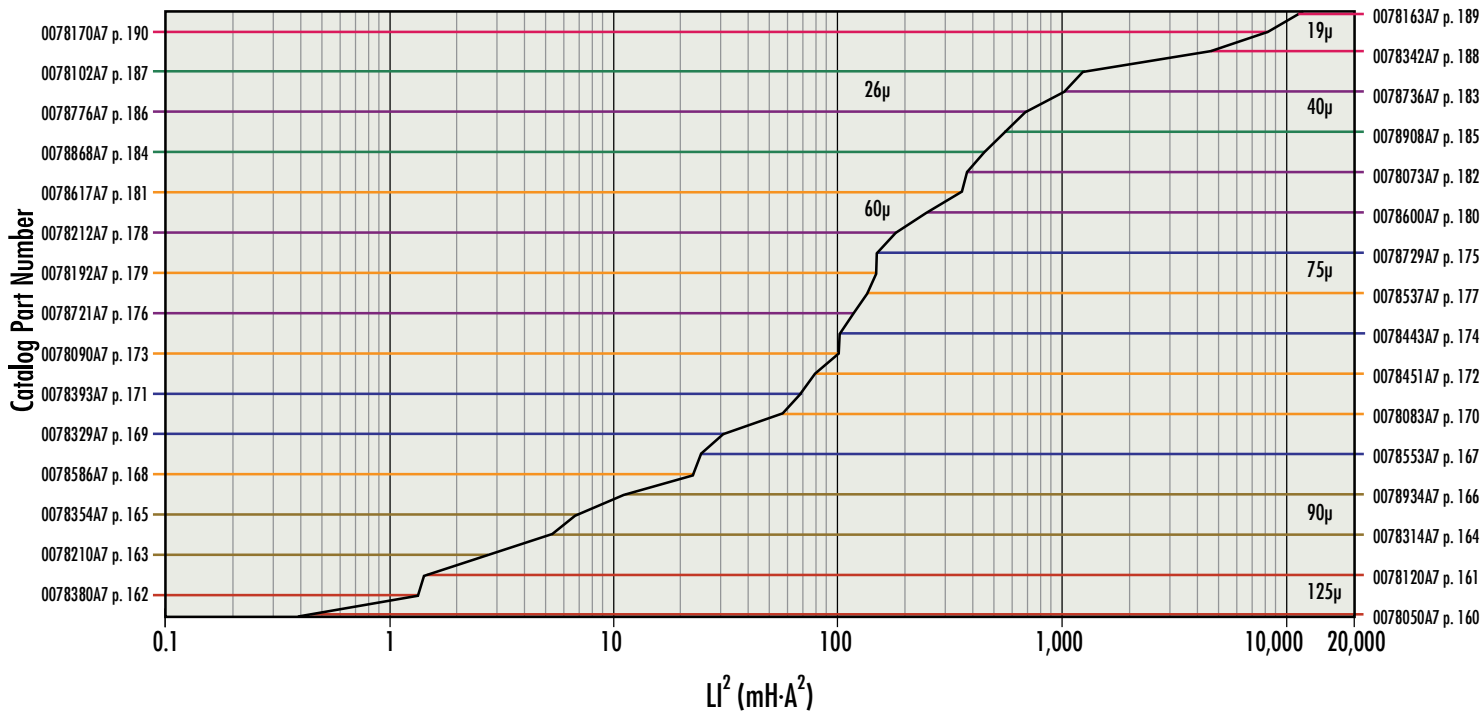


Kool M μ [®] Ultra Toroids

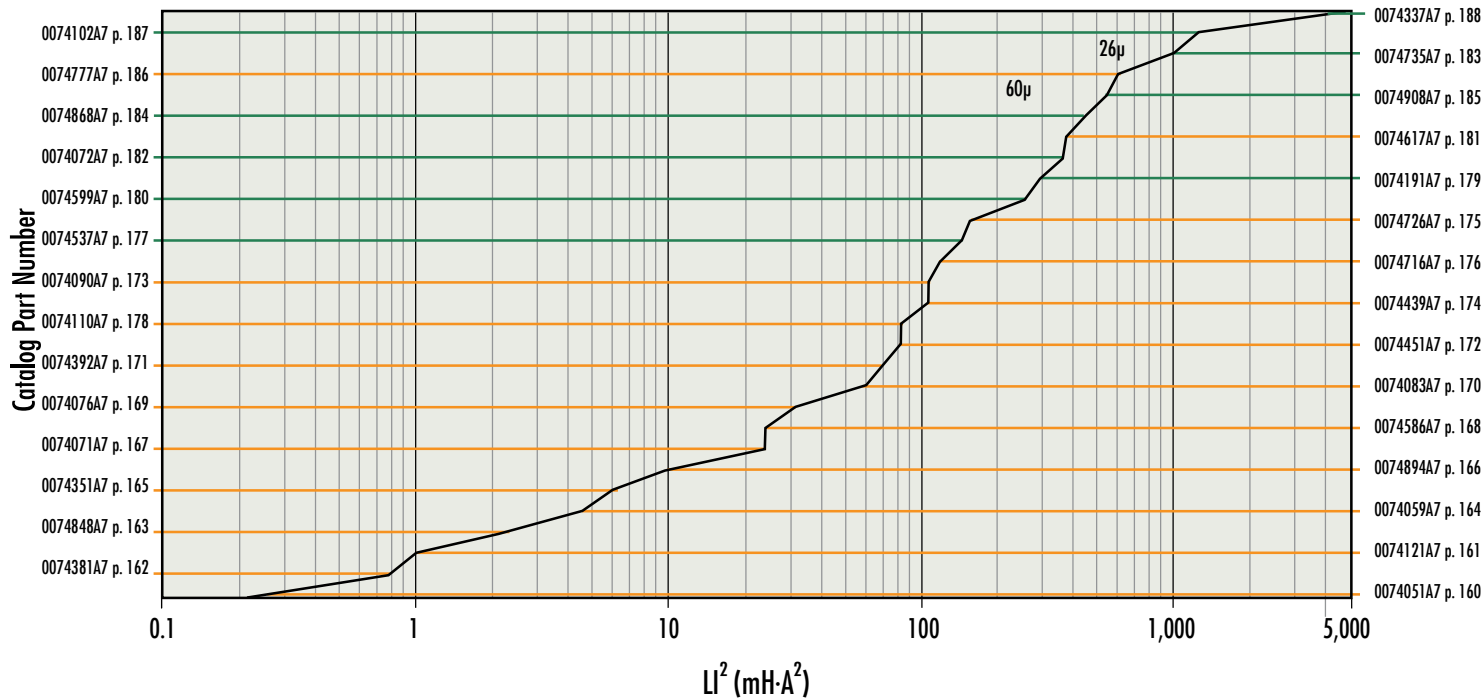


Core Selector Charts

XFlux[®] Toroids

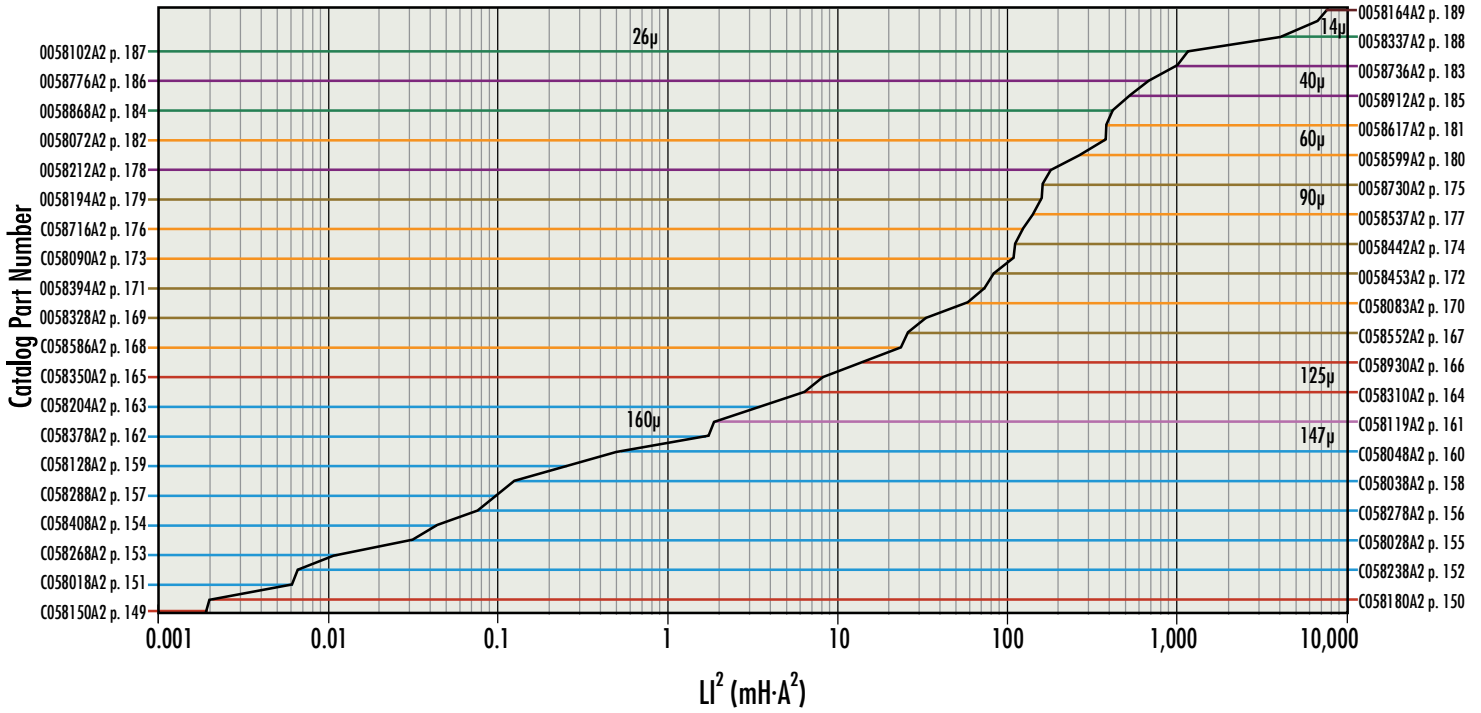


XFlux[®] Ultra Toroids

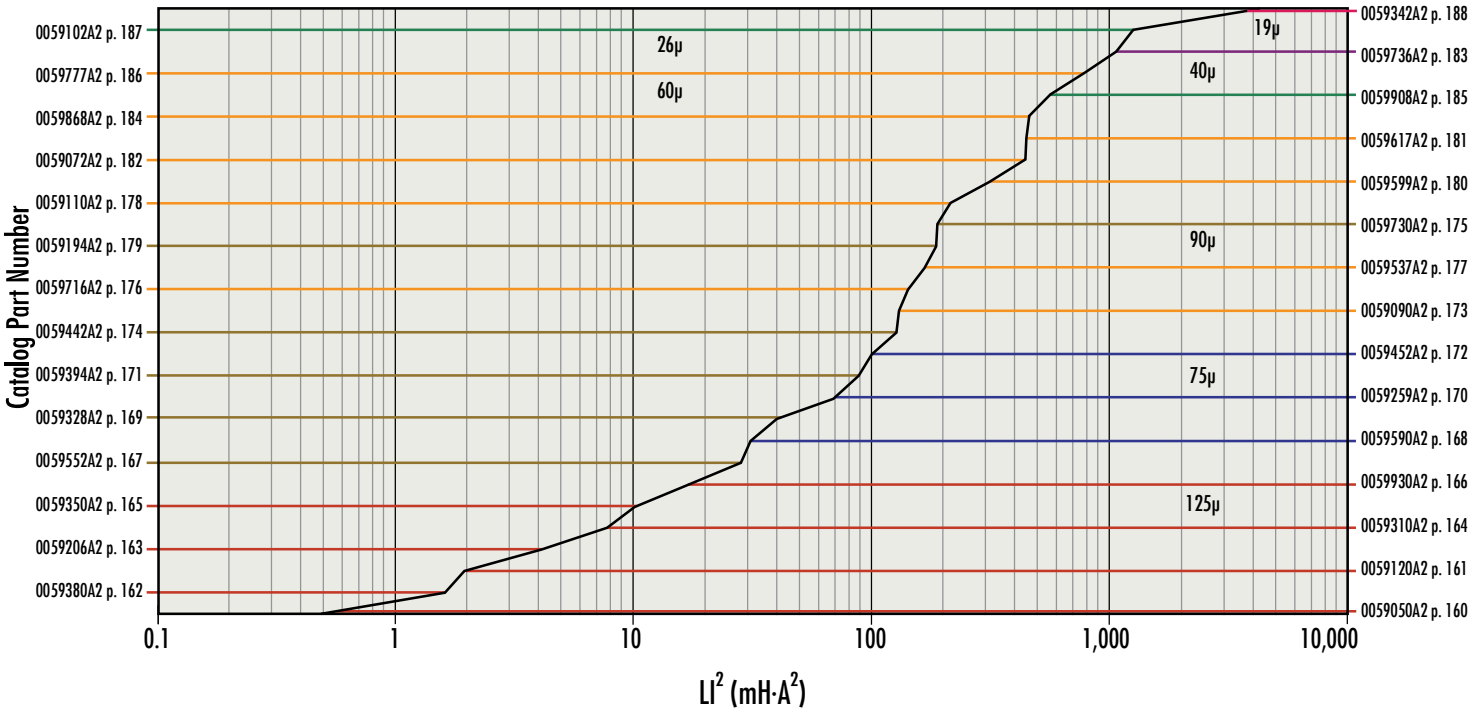


Core Selector Charts

High Flux Toroids

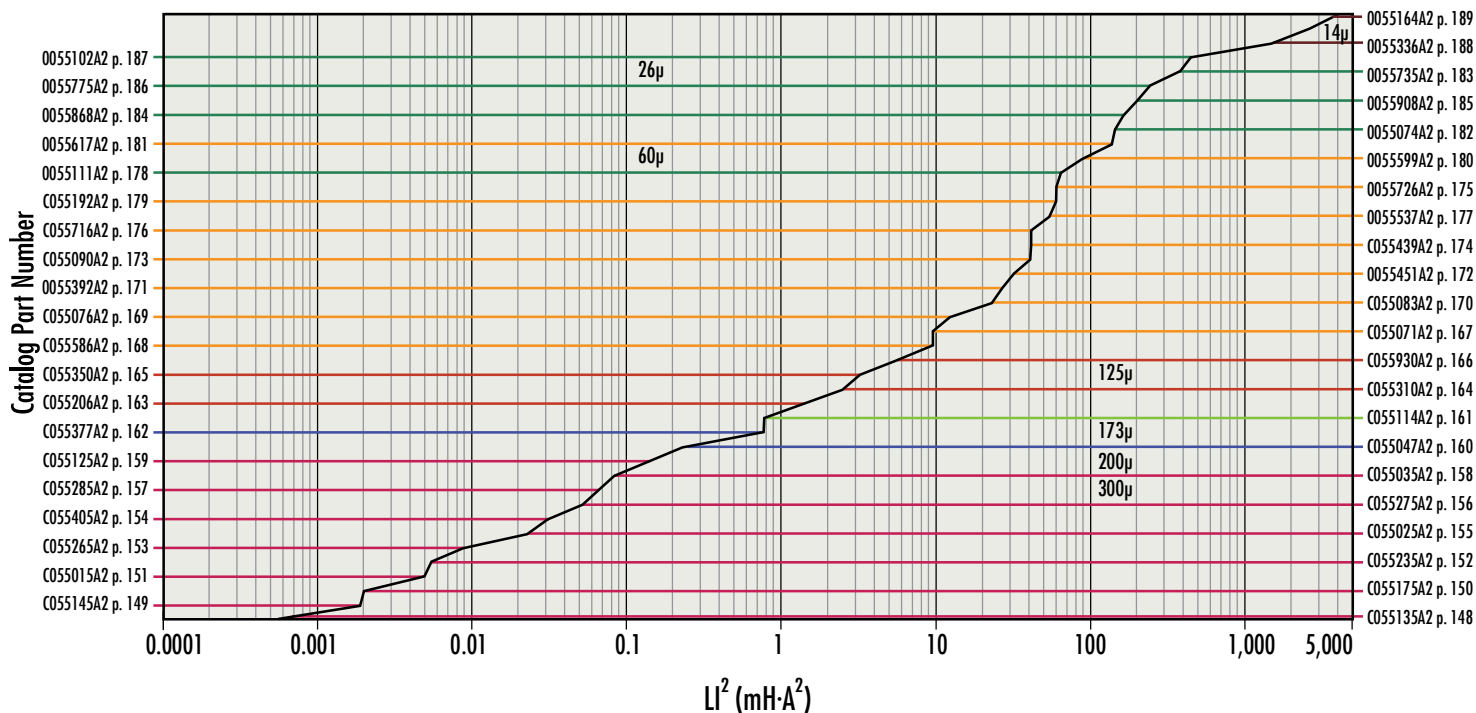


Edge® Toroids

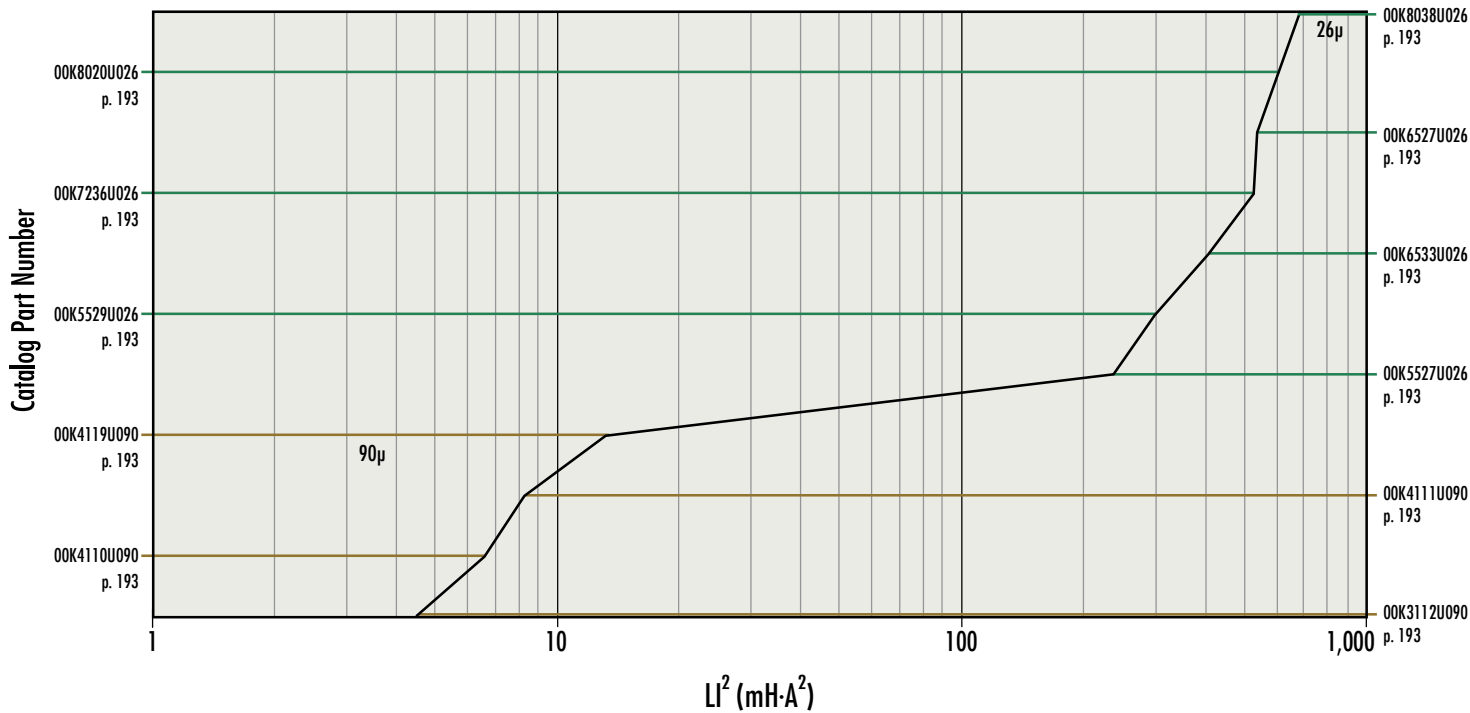


Core Selector Charts

MPP Toroids

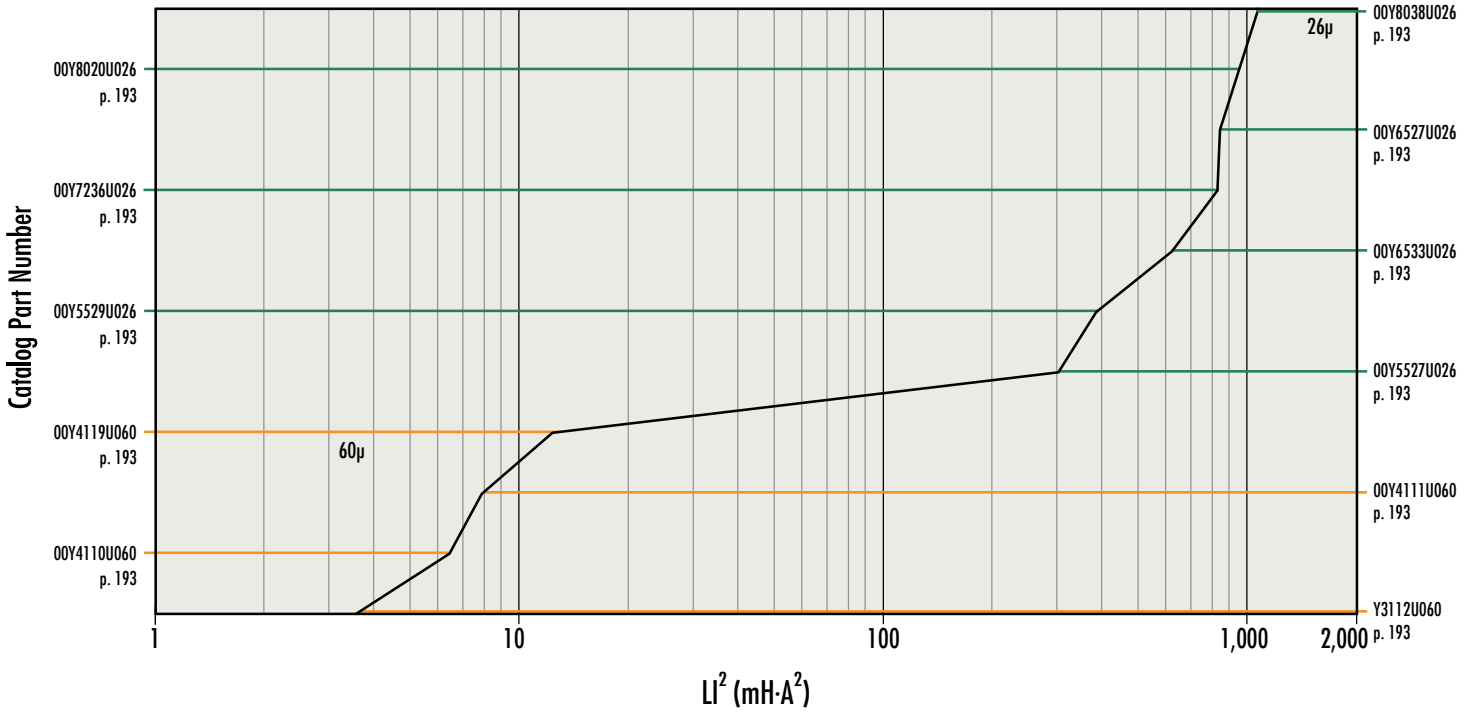


Kool M μ ® U Cores

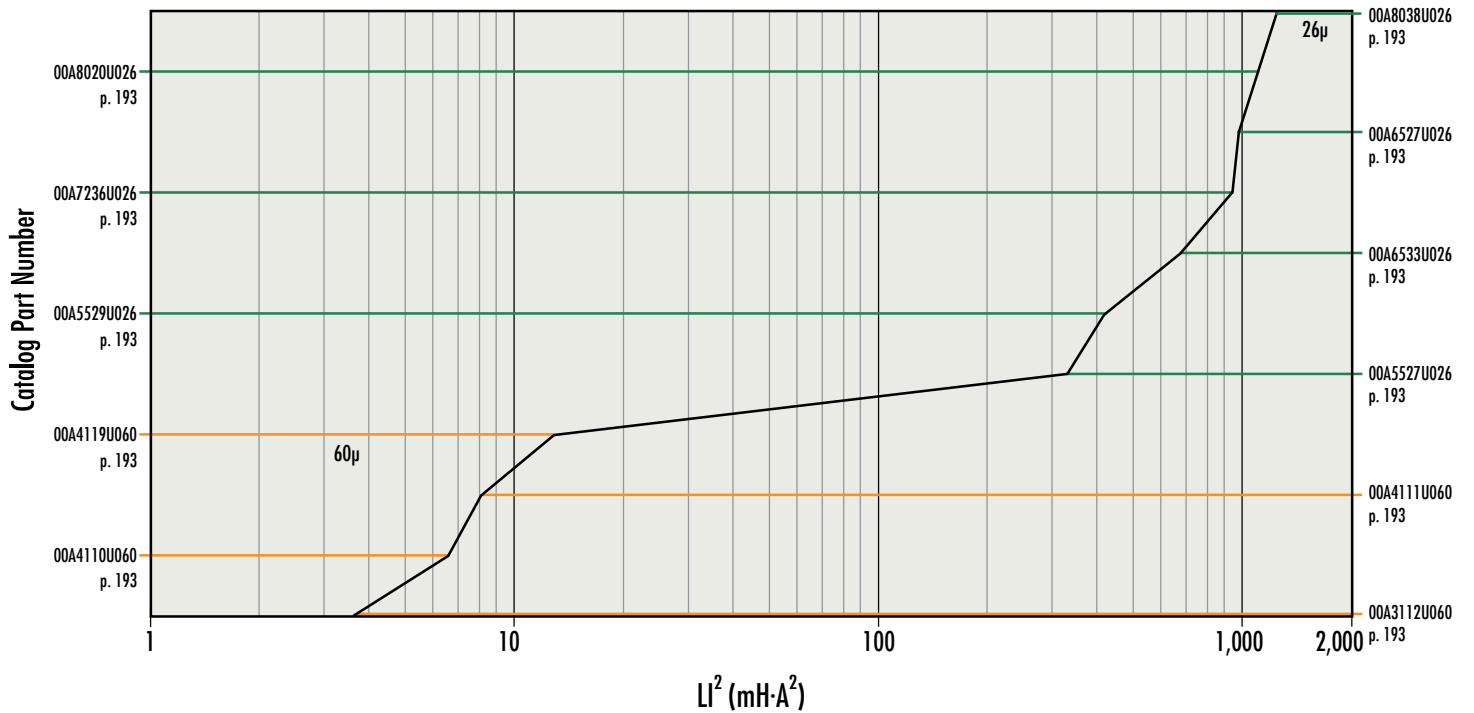


Core Selector Charts

Kool M μ [®] MAX U Cores

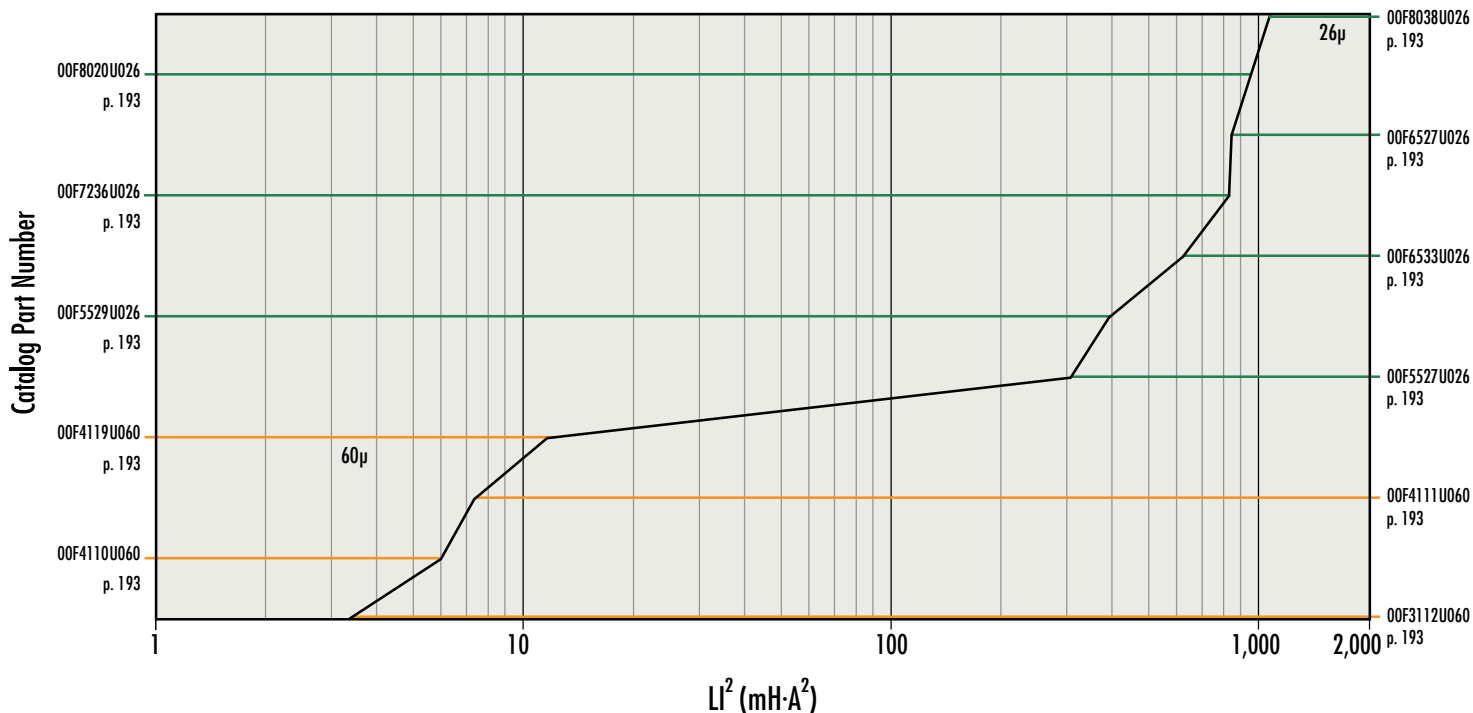


Kool M μ [®] MAX High Performance U Cores

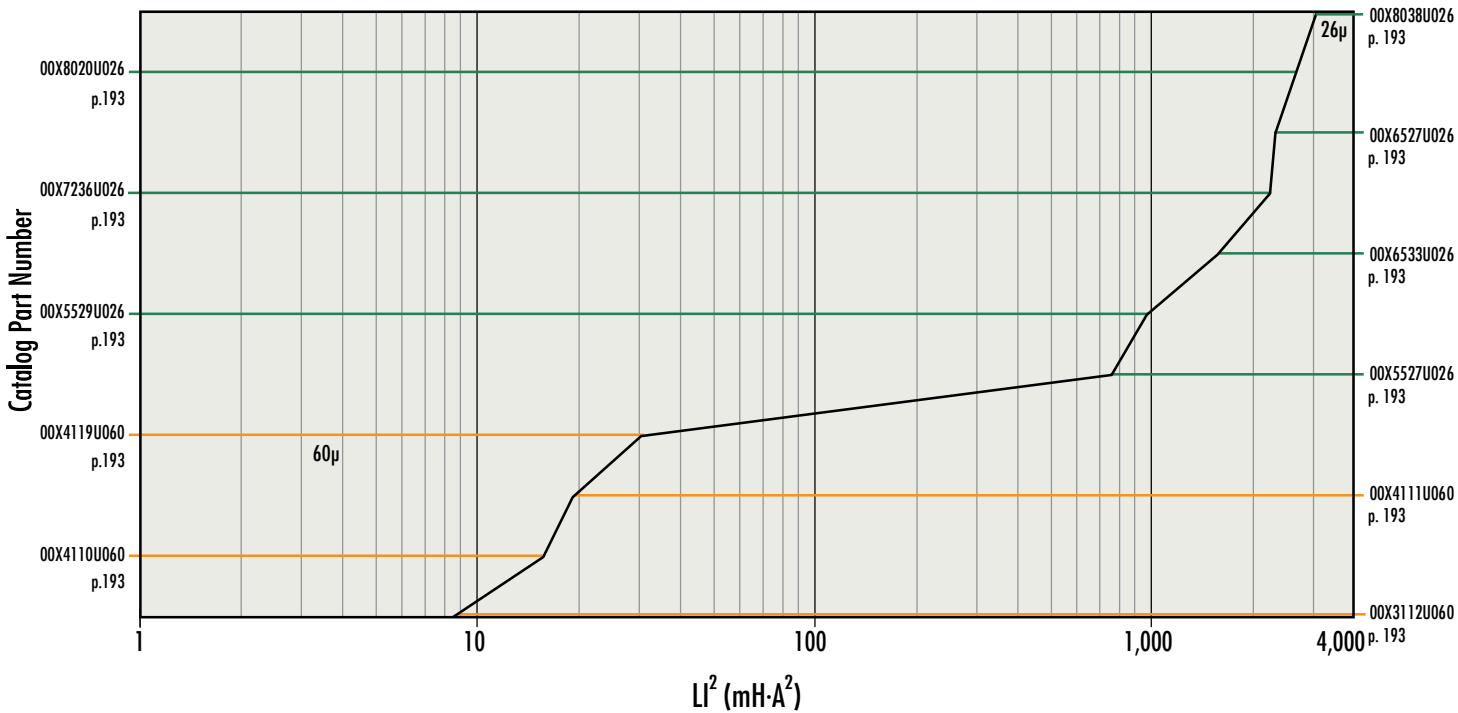


Core Selector Charts

Kool M μ [®] Hf U Cores

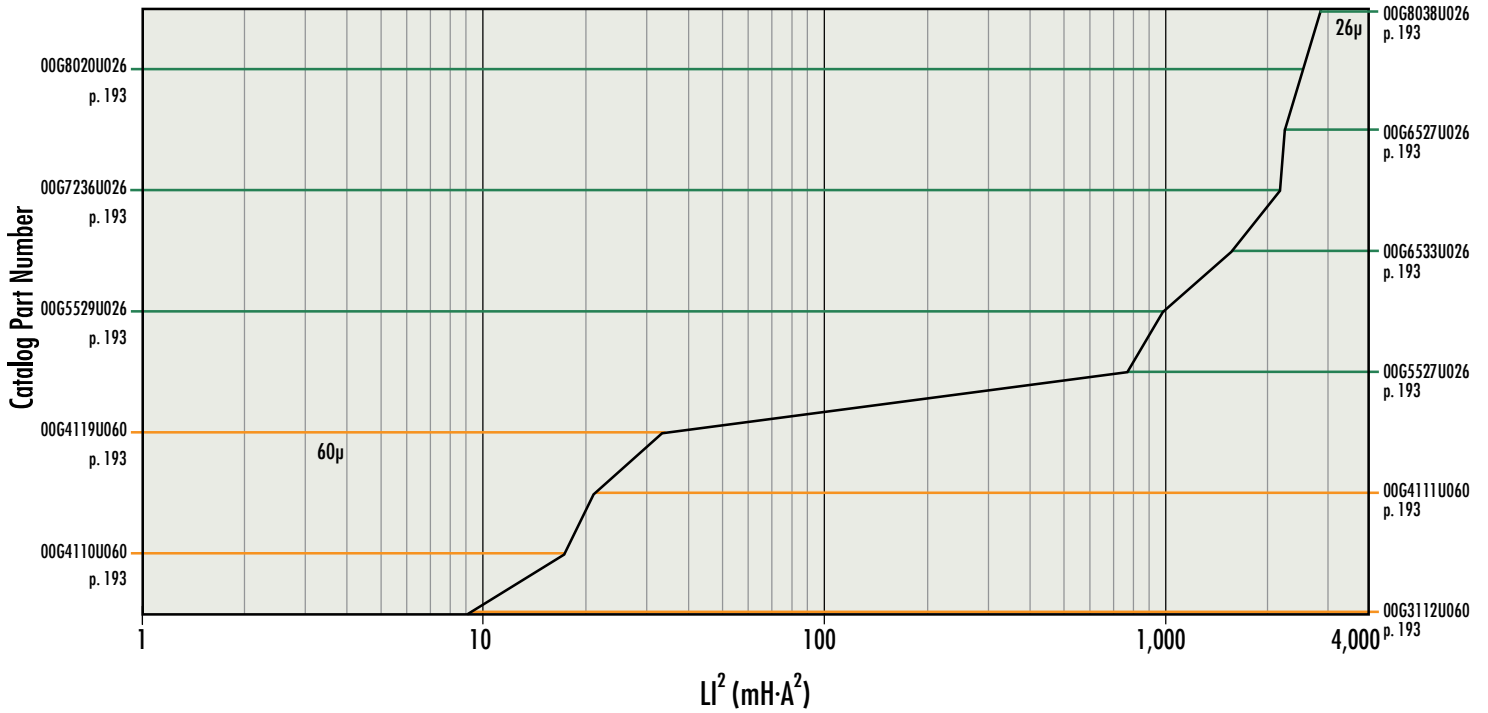


XFlux[®] U Cores

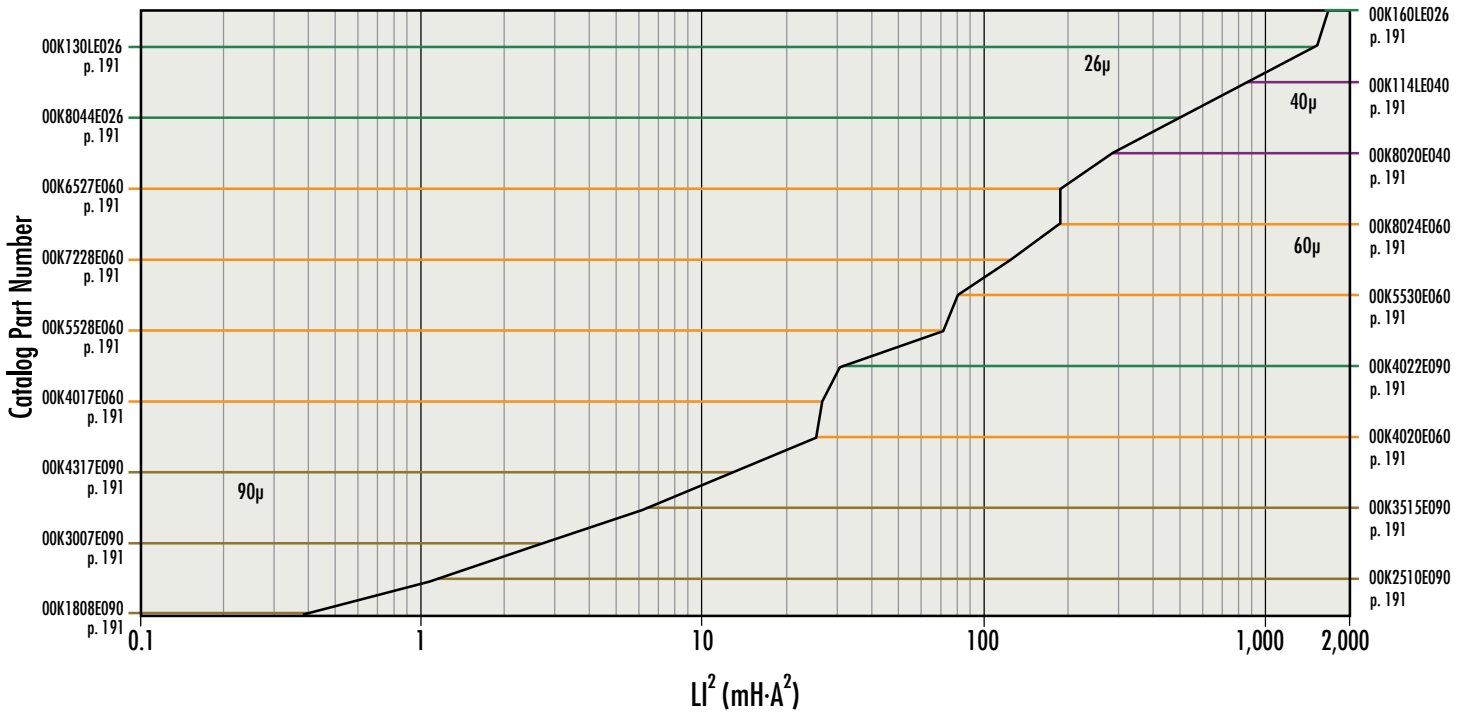


Core Selector Charts

Edge® U Cores

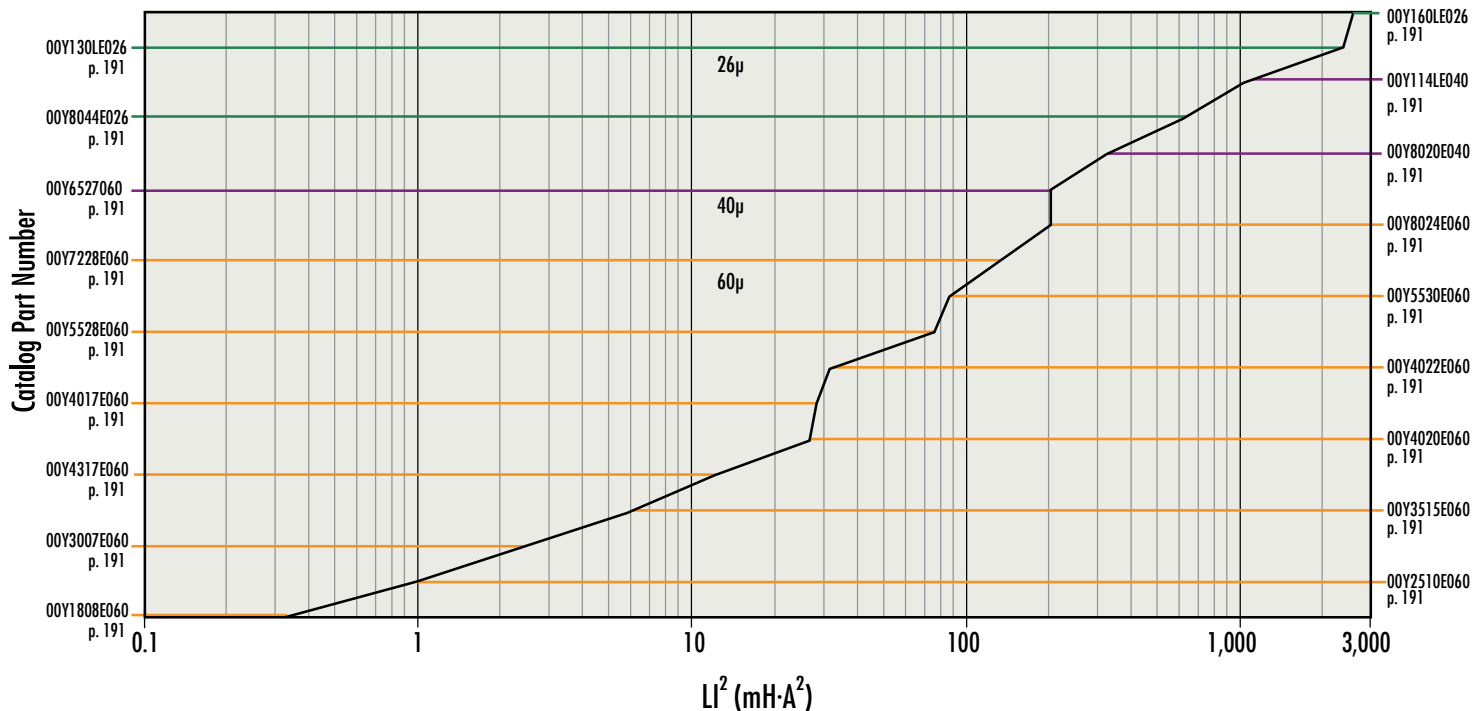


Kool Mµ® E Cores

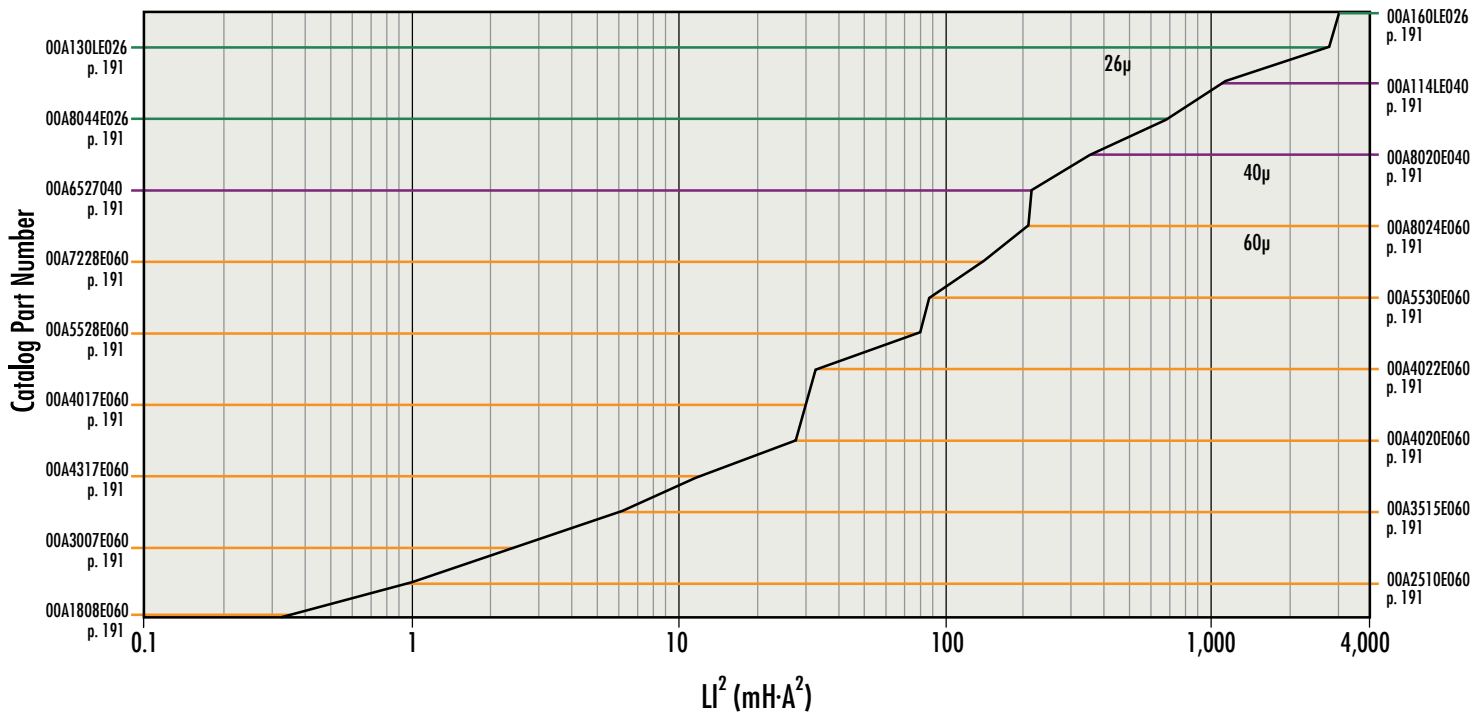


Core Selector Charts

Kool M μ [®] MAX E Cores

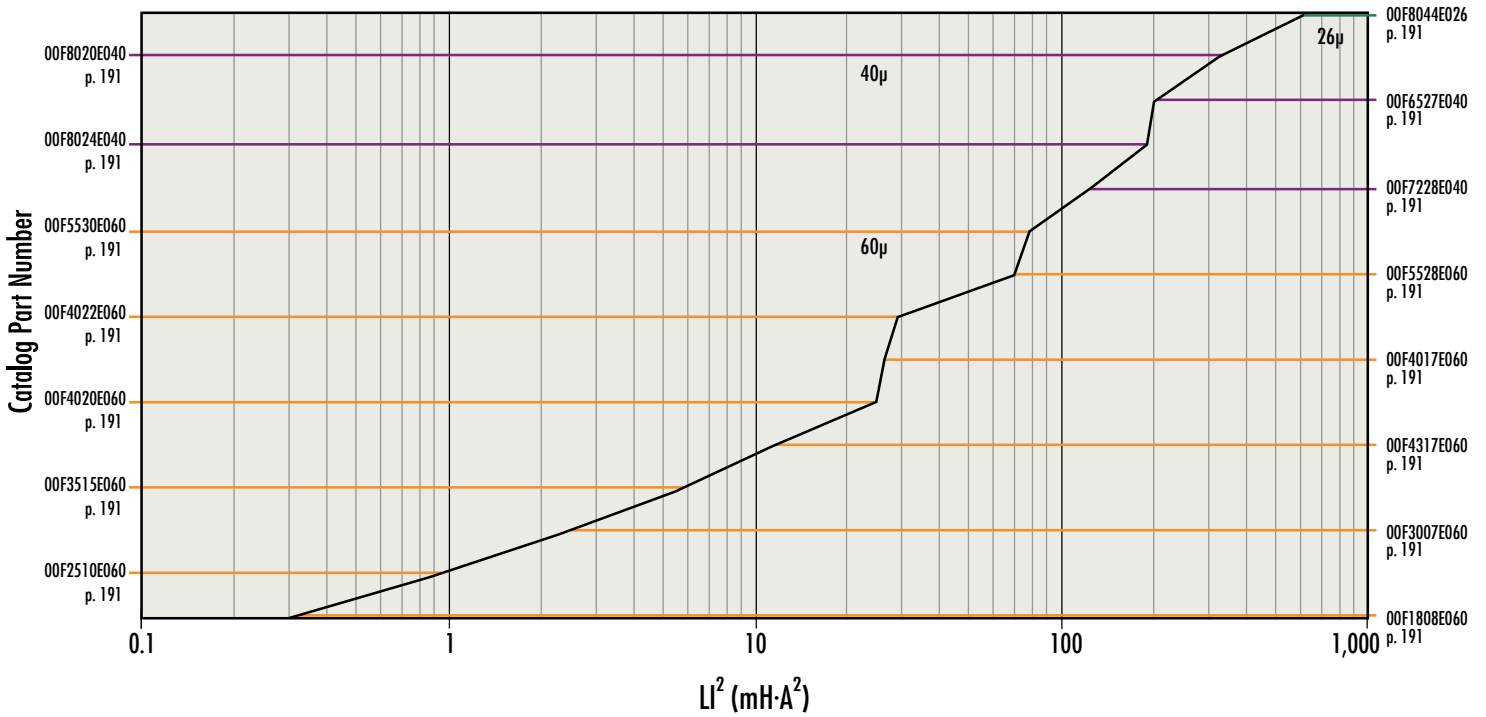


Kool M μ [®] MAX High Performance E Cores

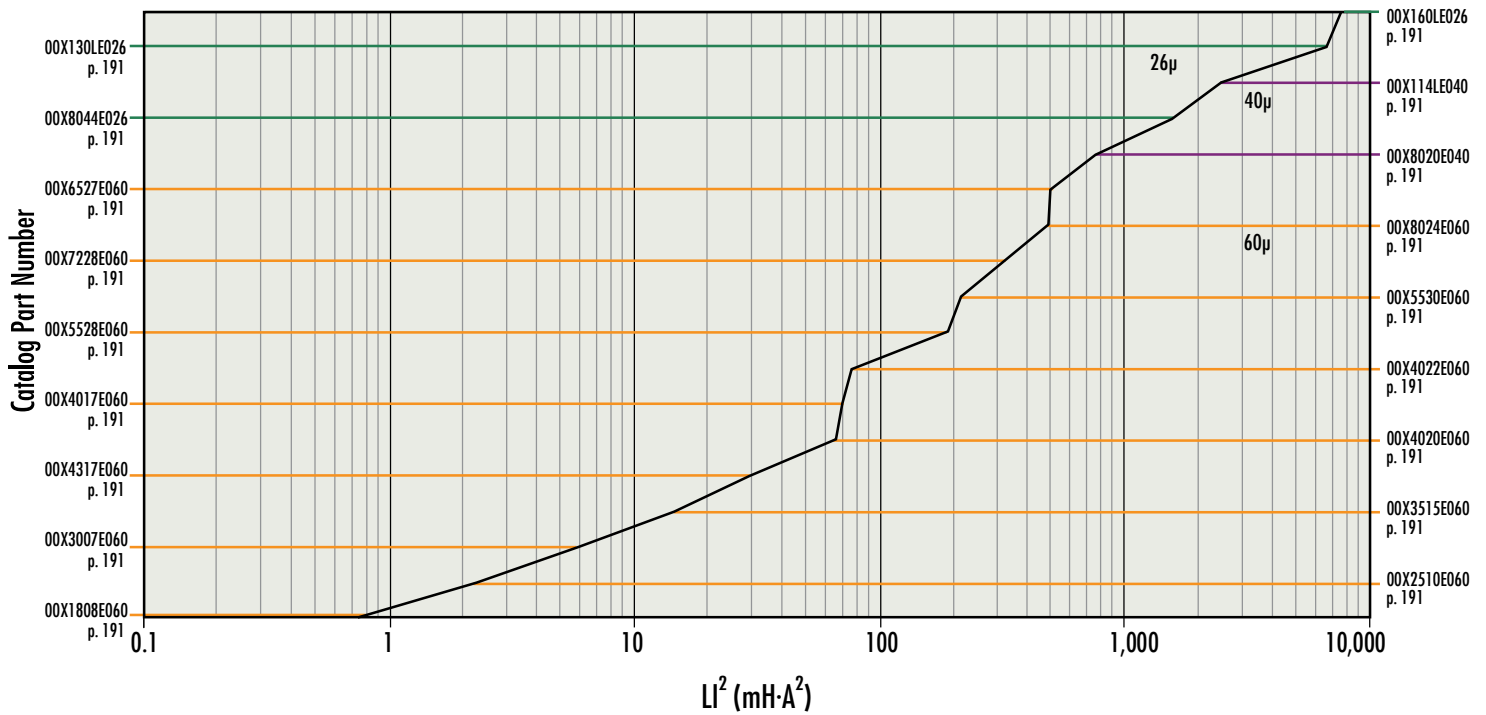


Core Selector Charts

Kool M μ [®] Hf E Cores

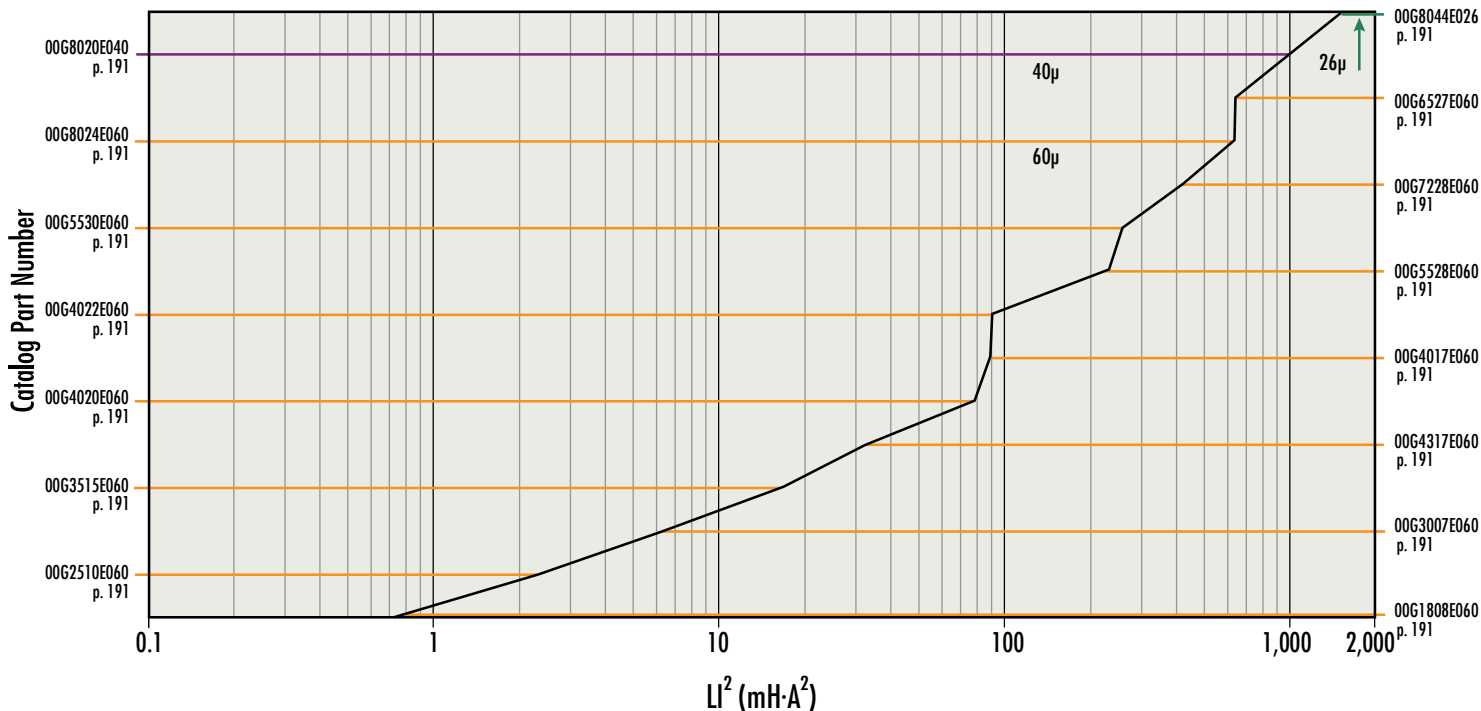


XFlux[®] E Cores

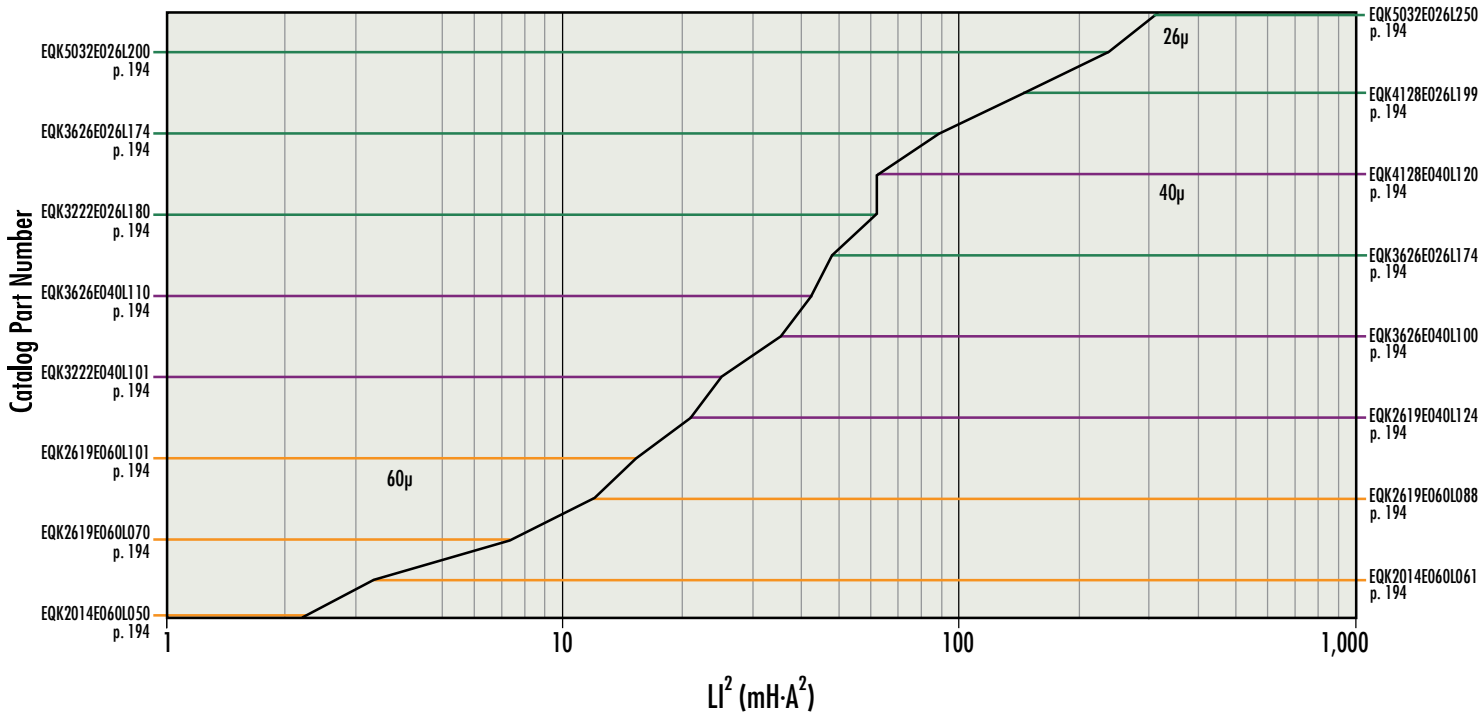


Core Selector Charts

Edge® E Cores

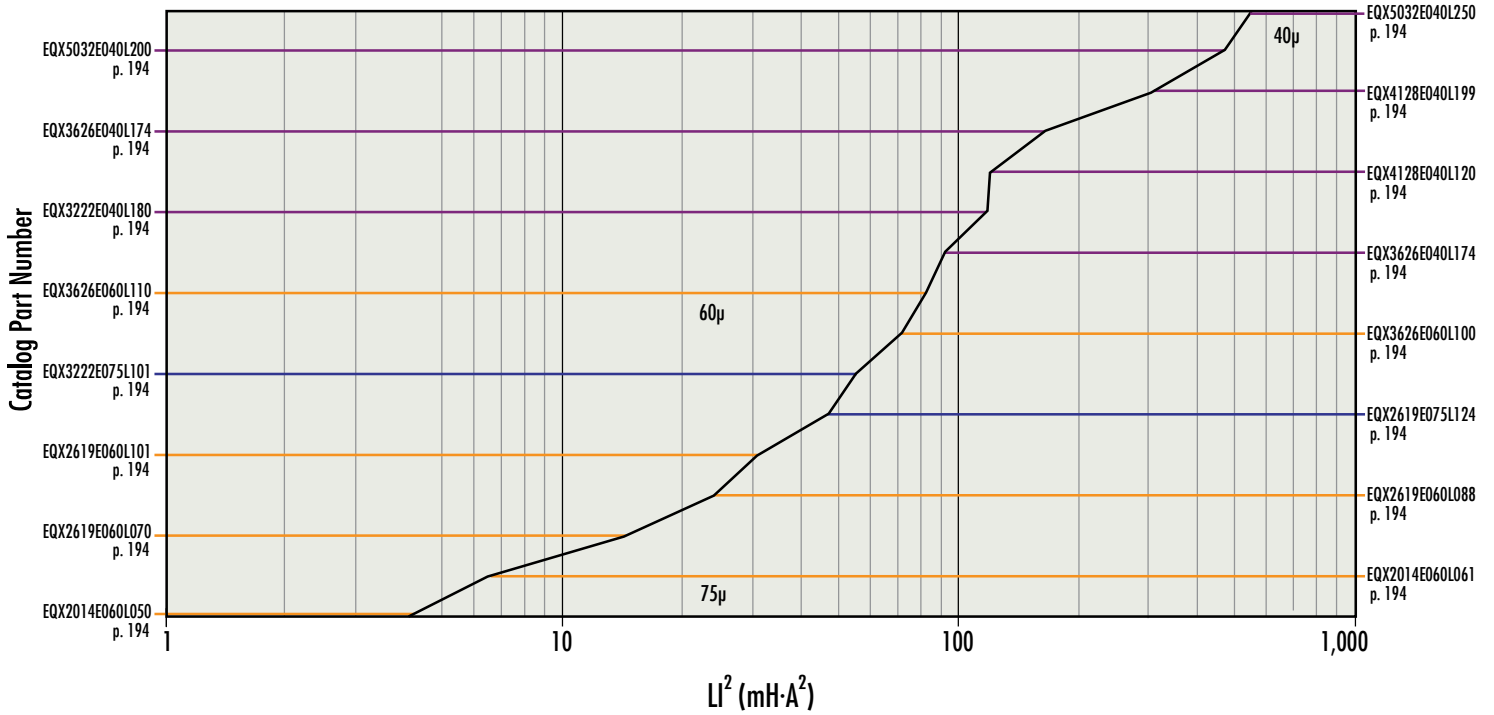


Kool Mµ® EQ Cores

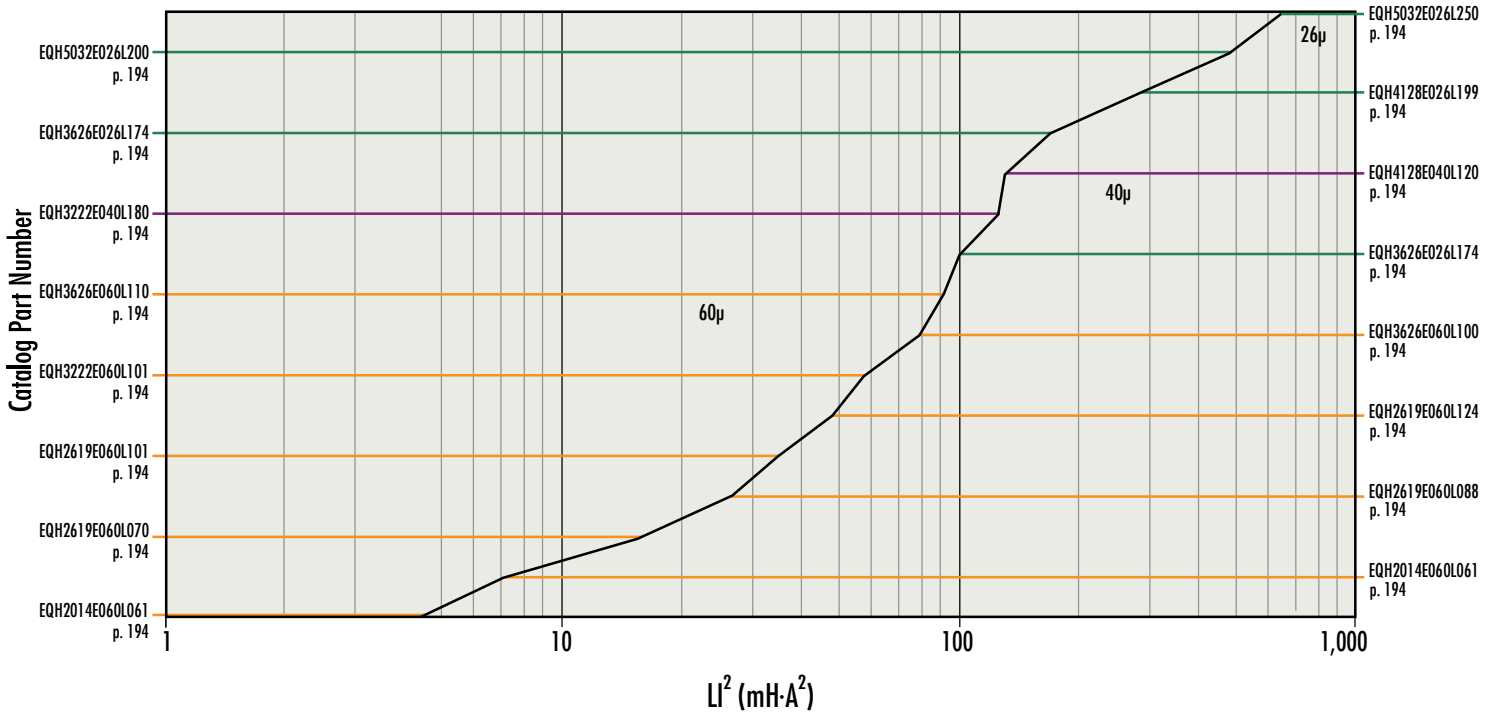


Core Selector Charts

XFlux[®] EQ Cores

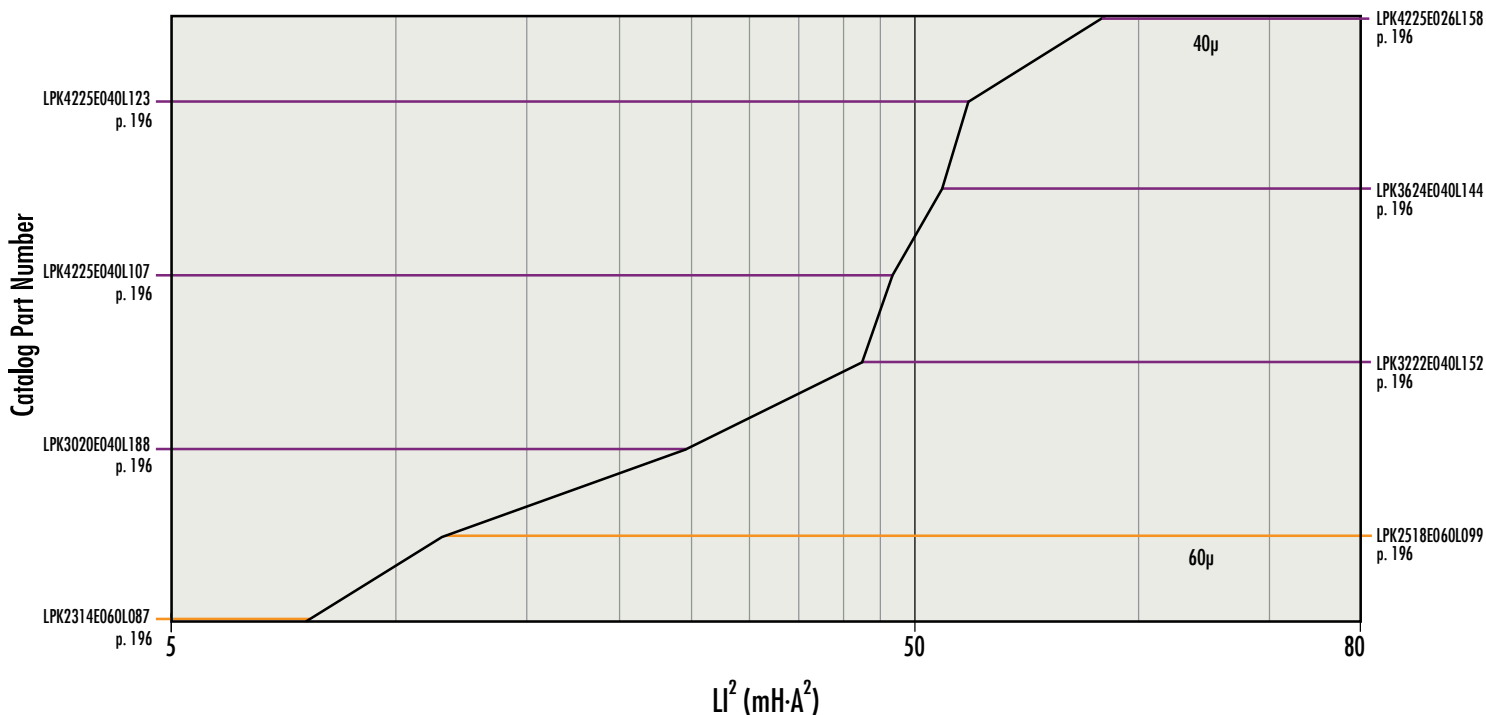


High Flux EQ Cores

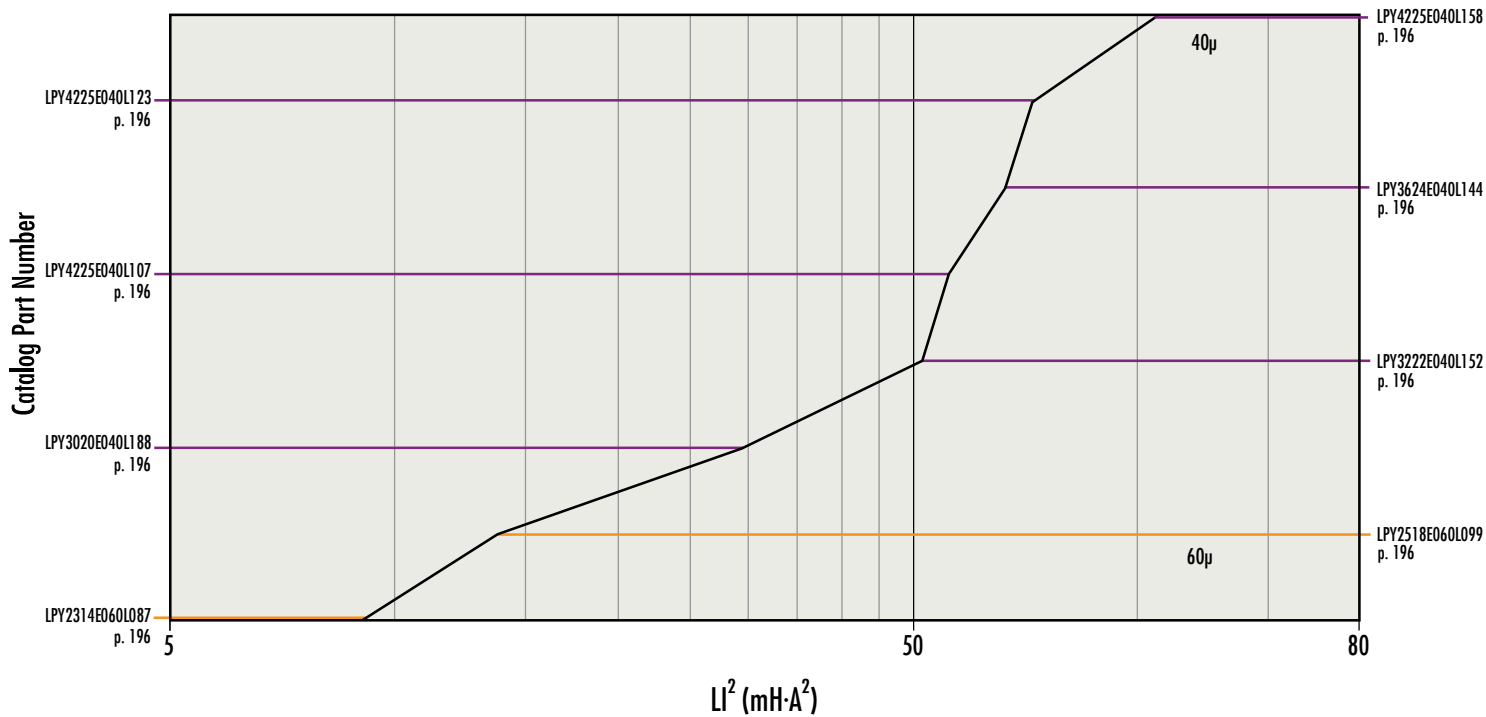


Core Selector Charts

Kool M μ [®] LP Cores

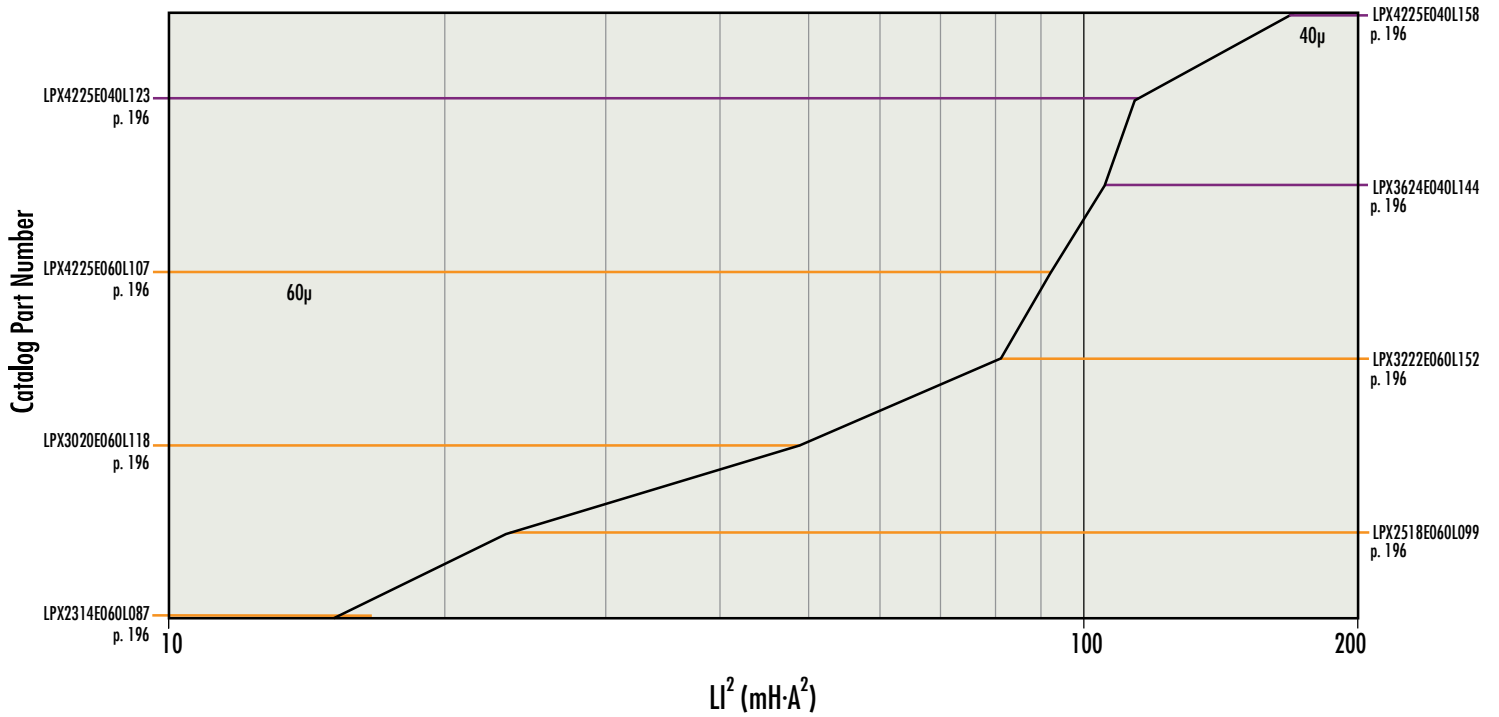


Kool M μ [®] MAX LP Cores



Core Selector Charts

XFlux[®] LP Cores



High Flux[®] LP Cores

