EQ Shape Cores

Magnetics introduces EQ shape powder cores for telecom rectifiers and Hybrid, Plug-In Hybrid, and Electric Vehicle on-board chargers.

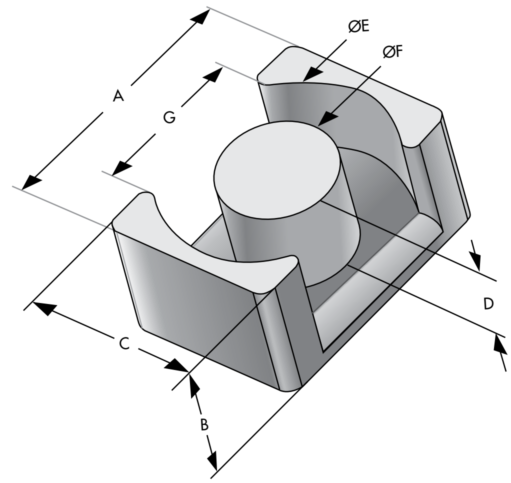
EQ shape cores are a cross between E cores and pot cores. Similar to pot cores, the round center post of EQ cores offers minimal winding resistance, ideal for heavy gauge wire, while its planar shape facilitates low profile, compact design. In comparison to E cores and other non-planar cores, EQ powder cores offer better space utilization, shielding and improved thermal performance.

Custom heights are available upon request. Contact Magnetics with custom designs.

CORE IDENTIFICATION

EQ X 26 19 E060 L101

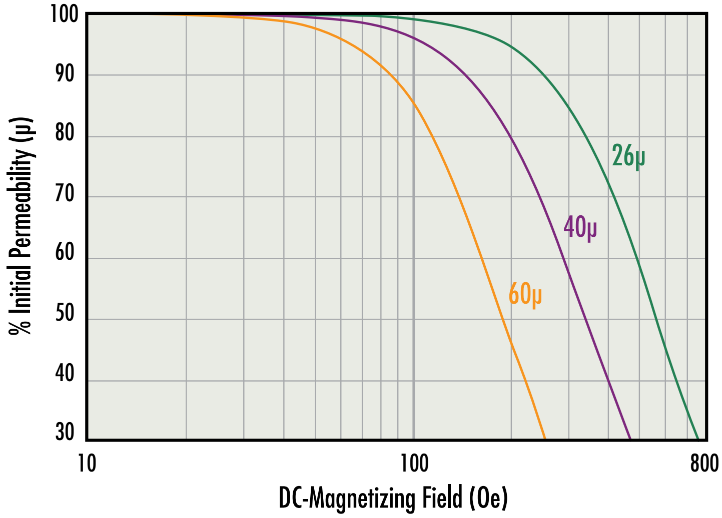
- L101 — Height – B dim., e.g. 101 for 10.1
- E060 — Permeability Code, e.g. 060 for 60µ
- 19 — Width – C dim.
- 26 — Length – A dim.
- X — Material Code, e.g. K=Kool Mµ, X=XFlux, H=High Flux
- EQ — EQ Shape



Part No.*	Dimensions (mm)							Path Length (mm)	Cross Section (mm^2)	A_L Value nH/T^2		
	A	B	C	D	E	F	G	L_e	A_e	26µ	40µ	60µ
EQH2619EXXXL070	26.5	7.0	19.0	3.7	22.6	12.0	15.0	42.3	119.8	93	142	213
EQH2619EXXXL088		8.8		5.5				49.5		79	122	183
EQH2619EXXXL101		10.1		6.8				54.7		72	110	165
EQH2619EXXXL124		12.4		9.1				63.9		61	94	141
EQH3222EXXXL152	32.0	15.2	22.0	11.5	27.6	13.5	20.4	79.9	152.3	62	96	144
EQH3222EXXXL101		10.1		6.4				59.5		84	129	194
EQH3626EXXXL174	36.0	17.4	26.0	13.4	32.0	14.4	22.3	94.7	180.8	62	96	144
EQH4128EXXXL199	41.5	19.9	28.0	15.4	36.5	14.9	26.6	94.7	180.8	57	87	131

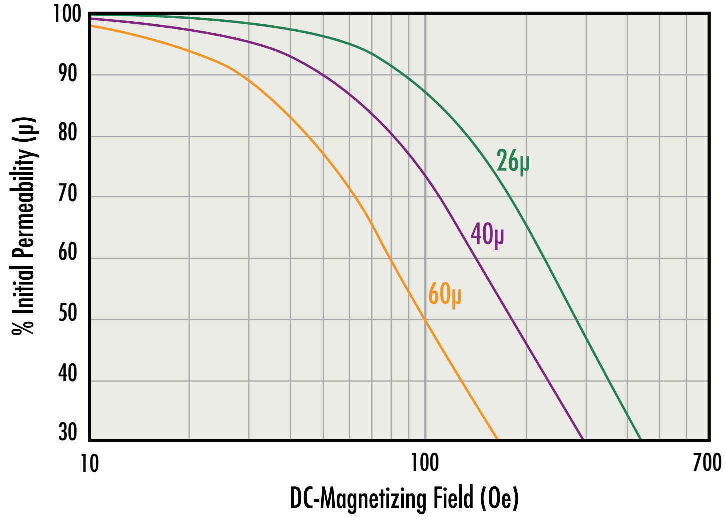
*Also available in Kool Mµ® (EQK) and XFlux® (EQX)

XFlux Permeability vs. DC Bias



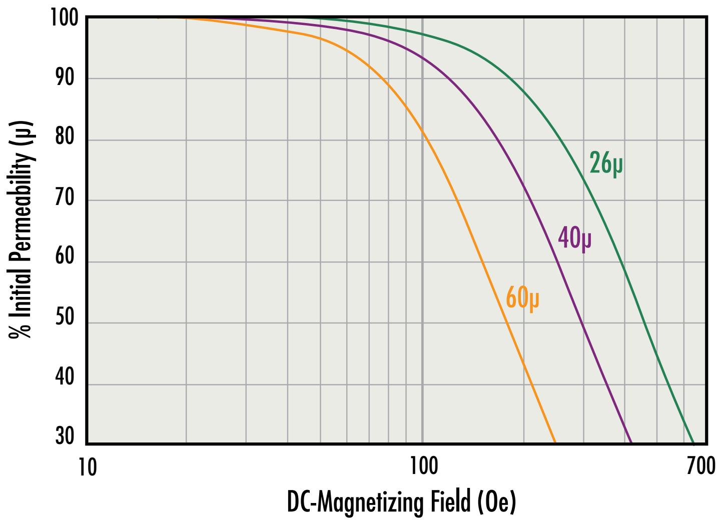
% Initial Permeability = $\frac{1}{(a+bH^c)}$	Perm.	a	b	c
	26	0.01	2.317E-10	2.778
	40	0.01	2.434E-09	2.613
	60	0.01	5.108E-09	2.761

Kool Mμ Permeability vs. DC Bias



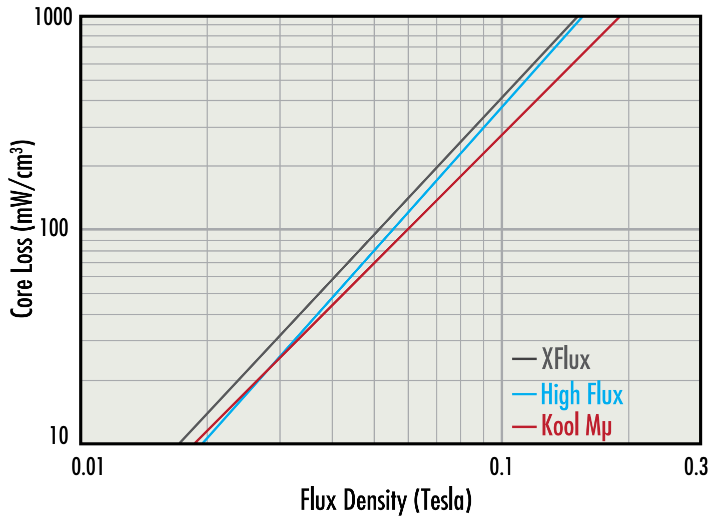
% Initial Permeability = $\frac{1}{(a+bH^c)}$	Perm.	a	b	c
	26	0.01	2.237E-07	1.900
	40	0.01	1.395E-06	1.710
	60	0.01	3.371E-06	1.736

High Flux Permeability vs. DC Bias



% Initial Permeability = $\frac{1}{(a+bH^c)}$	Perm.	a	b	c
	26	0.01	3.389E-09	2.430
	40	0.01	8.995E-09	2.441
	60	0.01	1.583E-08	2.572

Core Loss Density - 60μ, 50 kHz



$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)		a	b	c
	High Flux	121.00	2.09	1.49
	Kool Mμ	300.14	1.95	1.12
	XFlux	356.67	2.12	1.28

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