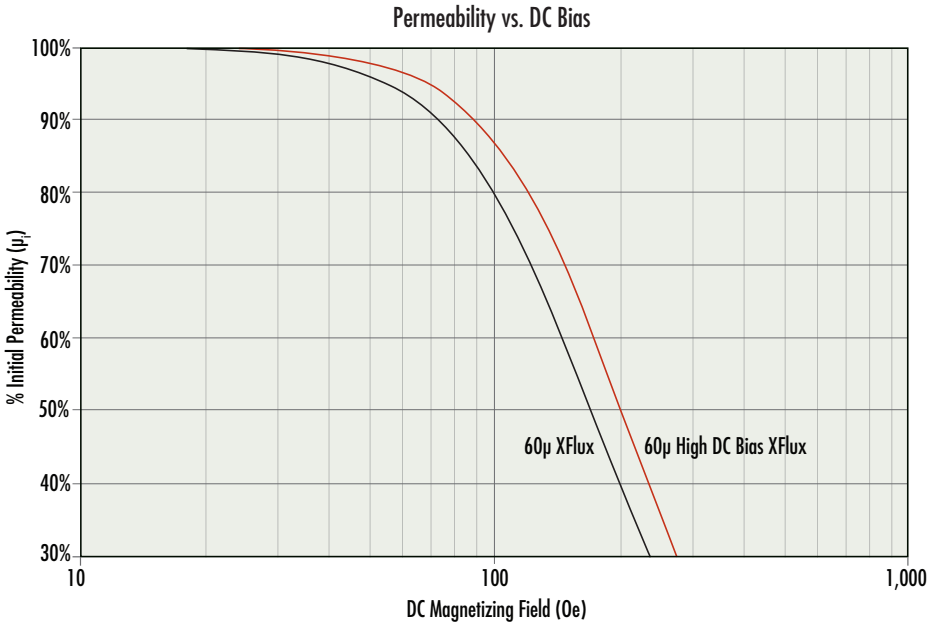
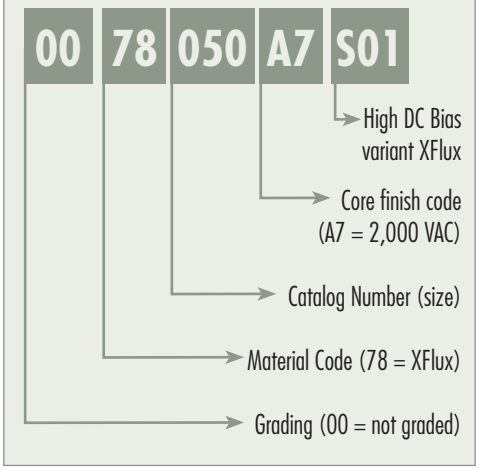
High DC Bias XFlux® Cores

High DC Bias XFlux® cores offer the same high saturation found in standard silicon-iron XFlux while providing up to 20% improvement in DC bias.

High DC Bias XFlux allows for smaller core size for use in space-conscious inductor designs. Use of copper wire is minimized by maintaining inductance using less turns, resulting in lower copper losses and savings in overall component costs.



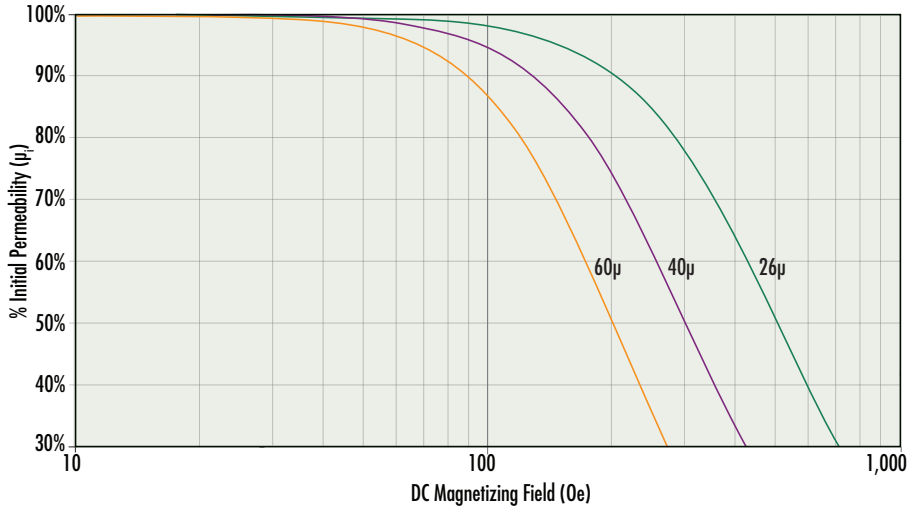
HOW TO ORDER



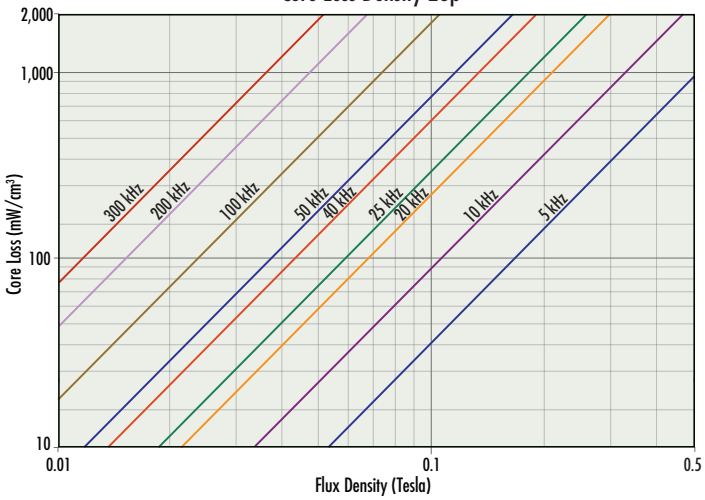
Material	Perm vs. DC Bias (Oe)		Core Loss (mW/cm³)
	80%	50%	$W_{1000\ G,\ 50\ kHz}$
26μ High DCB XFlux	285	505	725
26μ XFlux	270	450	600
60μ High DCB XFlux	120	200	625
60μ XFlux	100	170	575

$$\% \text{ Initial Permeability} = \frac{1}{a + bH^c}$$

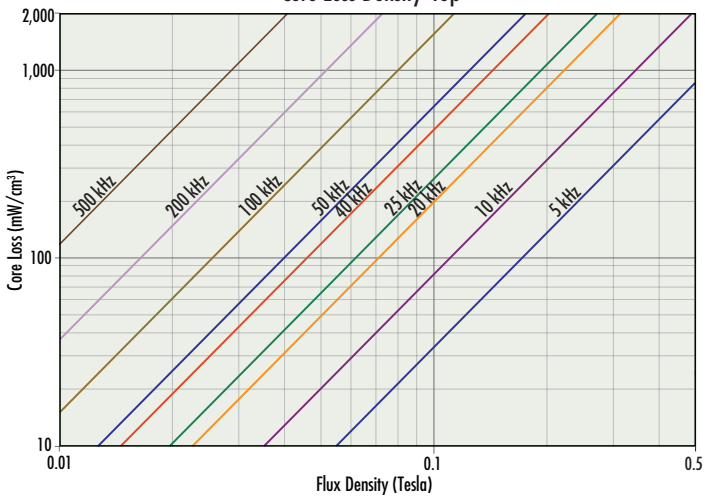
Perm	a	b	c
26	0.01	2.81E-09	2.423
40	0.01	4.25E-09	2.572
60	0.01	5.69E-09	2.714



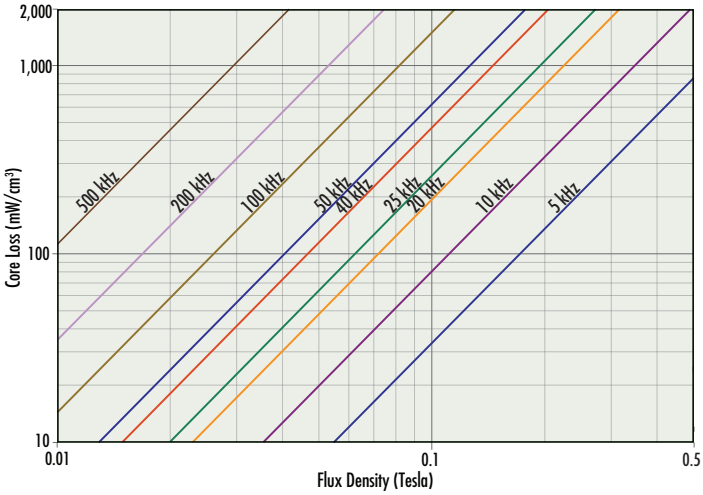
Core Loss Density 26µ



Core Loss Density 40µ



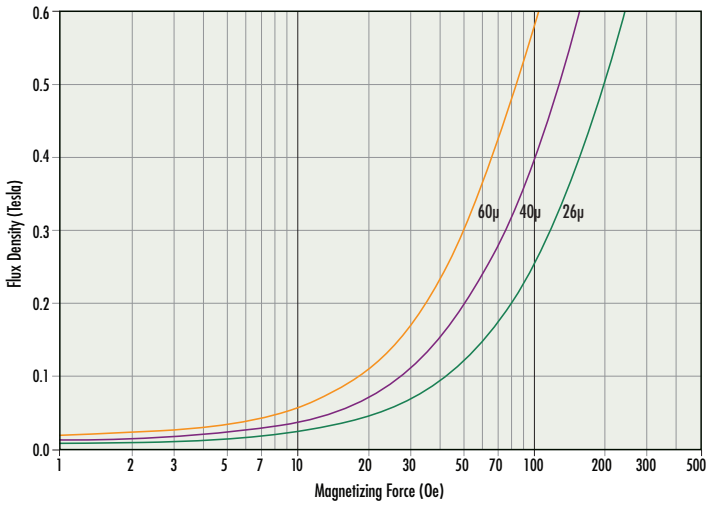
Core Loss Density 60µ



Core Loss Density $P = a(B^b)(f^c)$

Perm	a	b	c
26µ	443.53	2.015	1.312
40µ	442.15	2.015	1.283
60µ	447.34	2.015	1.272

DC Magnetization



$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

Perm	a	b	c	d	e	x
26µ	6.175E-02	1.035E-02	1.920E-04	4.322E-02	1.167E-04	1.778
40µ	6.362E-02	1.000E-02	2.079E-04	3.212E-02	1.276E-04	1.648
60µ	6.481E-02	1.000E-02	2.277E-04	2.431E-02	1.361E-04	1.496

MAGNETICS®

HEADQUARTERS
110 Delta Drive
Pittsburgh, PA 15238
(p) **1.412.696.1333**
1.800.245.3984
magnetics@spang.com
www.mag-inc.com

MAGNETICS INTERNATIONAL
13/F 1-3 Chatham Road South
Tsim Sha Tsui, Kowloon, Hong Kong
(p) **+852.2731.9700**
+86.139.1147.1417
asiasales@spang.com
www.mag-inc.com