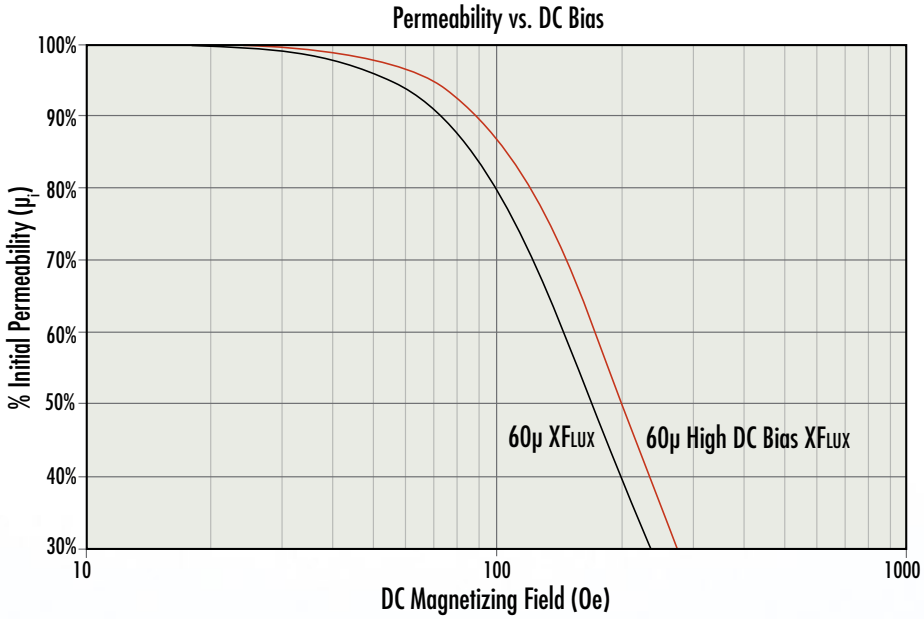
High DC Bias XFLUX® Cores

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.

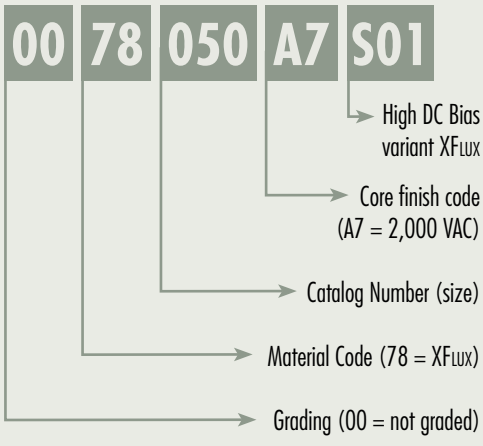
High DC Bias XFLUX allows for smaller core size for use in space-conscious inductor designs. Use of copper wire is minimized by maintaining inductance using less turns, resulting in lower copper losses and savings in overall component costs.



Perm	Perm vs. DC Bias (Oe)		Core Loss (mW/cm³)
26μ	**80%**	**50%**	$W_{1000\ G,\ 50\ kHz}$
High DCB XFLUX	285	505	725
XFLUX	270	450	600

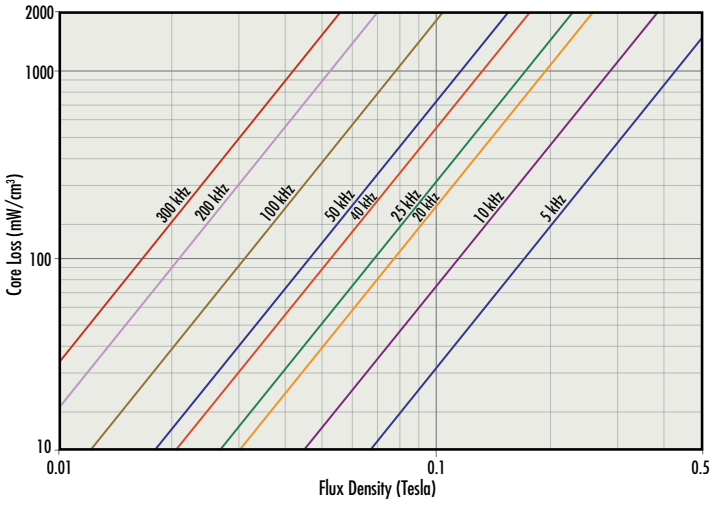
Perm	Perm vs. DC Bias (Oe)		Core Loss (mW/cm³)
60μ	**80%**	**50%**	$W_{1000\ G,\ 50\ kHz}$
High DCB XFLUX	120	200	625
XFLUX	100	170	575

HOW TO ORDER



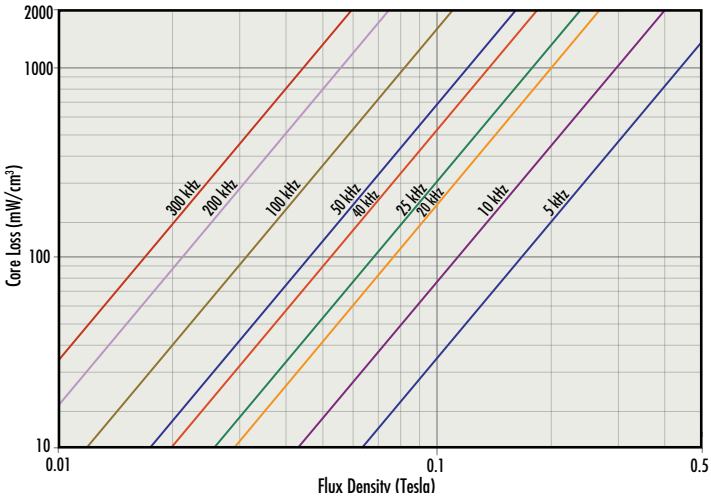
Core Loss Density Toroids 26µ

$P = a(B^b)(f^c)$		
a	b	c
845.36	2.477	1.41



Core Loss Density Toroids 40µ, 60µ

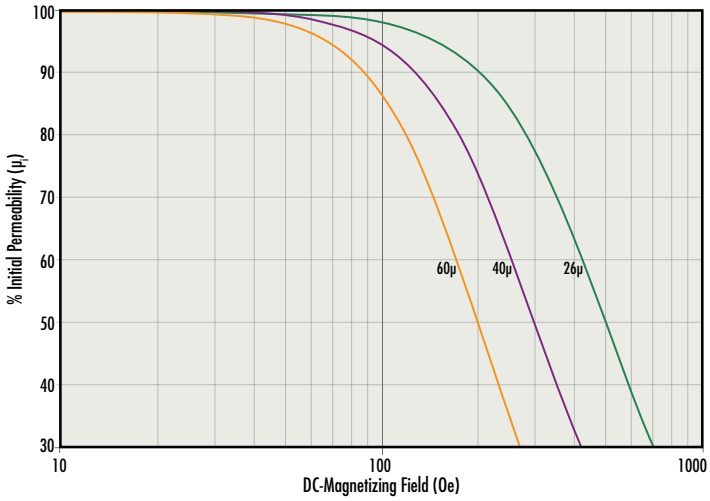
$P = a(B^b)(f^c)$		
a	b	c
842.18	2.388	1.33



Permeability vs. DC Bias

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

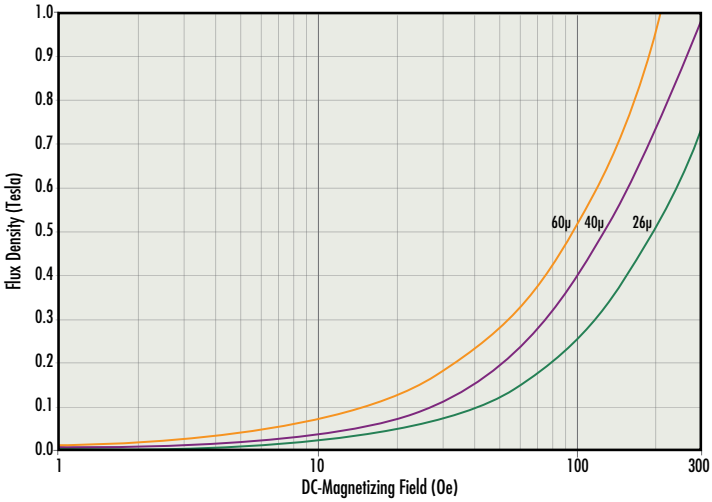
	a	b	c
26	0.01	2.81E-09	2.423
40	0.01	4.25E-09	2.572
60	0.01	5.69E-09	2.714



DC Magnetization

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2}\right]^x \quad \text{Units: B in Tesla, H in Oe}$$

Perm	a	b	c	d	e	x
26µ	4.54E-02	1.85E-02	5.34E-04	1.13E-01	3.26E-04	1.78E+00
40µ	7.30E-02	1.83E-02	6.42E-04	8.64E-02	4.15E-04	1.82E+00
60µ	2.31E-03	4.33E-03	6.82E-06	9.42E-04	6.58E-07	8.52E-01



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