



Part Number: **OP-300090-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	77.80 mm	3.063 in
	(max. - after coating)	78.94 mm	3.108 in
ID	(nom. - bare core)	49.23 mm	1.938 in
	(min. - after coating)	47.96 mm	1.888 in
Ht	(nom. - bare core)	12.70 mm	0.500 in
	(max. - after coating)	13.97 mm	0.550 in
Mass	(approximate)	250 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	1.77 cm ²	
	L _e - Eff. Mag. Path Length	19.612 cm	
	V _e - Eff. Core Volume	34.8 cm ³	
	WA - Min. Eff. Window Area	18.1 cm ²	
	sa - Surface Area	184 cm ²	
	mlt - mean length per turn	8.29 cm	
	Inductance	μ _i (reference)	90
	A _L value (nominal)	102 nH/N ²	
	Test Winding	N=120, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.94 V	
	AL tolerance	±8%	
Core Loss	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B _{pk} expressed in gauss, f expressed in hertz, and: a=3.715E+09, b=1.852E+09, c=2.019E+06, d=5.000E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	318 mW/cm ³	
Core Loss (maximum)	365 mW/cm ³		
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.000E-02, b=1.046E-06, c=1.963, d=0.000		
	H _{DC}	50 Oe	
	Percent Initial Perm (nom.)	81.5%	
	Percent Initial Perm (min.)	75.5%	
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	45 Pcs/Box	

Winding Table	Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
	Single Layer	Turns	38	48	60	75	95	118	148	185	230	287	358
		Rdc(Ω)	6.5 m	13.0 m	25.9 m	51.4 m	103.6 m	204.6 m	408.2 m	811.5 m	1.6	3.2	6.3
Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459	
	Rdc(Ω)	16.2 m	39.6 m	97.9 m	240.7 m	592.1 m	1.5	3.6	8.8	21.7	53.5	131.6	

