



**Part Number:** **T50-14**

Revision 20190524 - Generated 2019-May-30



<b>OD</b>	(nom. - bare core) (max. - after coating)	12.70 mm 13.21 mm	0.500 in 0.520 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	7.70 mm 7.19 mm	0.303 in 0.283 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	4.83 mm 5.33 mm	0.190 in 0.210 in
<b>Mass</b>	(approximate)	1.9 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.112 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	3.19 cm	
	V <sub>e</sub> - Eff. Core Volume	0.358 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	0.406 cm <sup>2</sup>	
	sa - Surface Area	6.44 cm <sup>2</sup>	
	mlt - mean length per turn	2.03 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	14	
	A <sub>L</sub> value (nominal)	5.9 nH/N <sup>2</sup>	
	Test Winding	N=100, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.050 V	
	A <sub>L</sub> tolerance	±10%	
<b>Core Loss</b>	Core Loss(mW/cm <sup>3</sup> )= $\frac{f}{\frac{a}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}}} + d \cdot Bpk^2 \cdot f^2$		
	where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and: a=4.00E+09, b=3.00E+08, c=2.70E+06, d=1.92E-15		
	Bpk	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	18 mW/cm <sup>3</sup>	
	Core Loss (maximum)	21 mW/cm <sup>3</sup>	
<b>DC Saturation</b>	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.00E-02, b=3.90E-07, c=1.46, d=0.00		
	H <sub>DC</sub>	200 Oe	
	Percent Initial Perm(nom.)	91.8%	
	Percent Initial Perm(min.)	89.6%	
<b>Coating/Pkg</b>	Coating Type:	Black/Red Epoxy Paint	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	6,000 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	AWG	16	18	20	22	24	26	28	30	32	34	36
		mm	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
	<b>Single Layer</b>	Turns	12	15	20	25	32	41	51	64	81	101	127
		Rdc(Ω)	3.2 m	6.4 m	13.5 m	26.8 m	54.6 m	111.3 m	220.2 m	439.4 m	884.5 m	1.8	3.5
<b>Full Winding</b>	Turns	12	19	29	45	70	108	168	259	401	621	962	
	Rdc(Ω)	3.2 m	8.1 m	19.6 m	48.3 m	119.5 m	293.2 m	725.3 m	1.8	4.4	10.8	26.6	

