



Part Number: **T16-45D**

Revision 20190524 - Generated 2019-May-30



OD	(nom. - bare core) (max. - after coating)	4.06 mm 4.32 mm	0.160 in 0.170 in
ID	(nom. - bare core) (min. - after coating)	1.98 mm 1.73 mm	0.078 in 0.068 in
Ht	(nom. - bare core) (max. - after coating)	3.05 mm 3.30 mm	0.120 in 0.130 in
Mass	(approximate)	0.20 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0300 cm ²	
	L _e - Eff. Mag. Path Length	0.930 cm	
	V _e - Eff. Core Volume	0.0282 cm ³	
	WA - Min. Eff. Window Area	0.0234 cm ²	
	sa - Surface Area	0.885 cm ²	
	mlt - mean length per turn	1.01 cm	
Inductance	μ _i (reference)	100	
	A _L value (nominal)	34 nH/N ²	
	Test Winding	N=40, #36 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.005 V	
A _L tolerance	±10%		
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=1.20E+09, b=1.30E+08, c=2.40E+06, d=1.20E-13		
	B _{pk}	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	61 mW/cm ³	
Core Loss (maximum)	71 mW/cm ³		
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.00E-02, b=2.44E-05, c=1.61, d=0.00		
	H _{DC}	50 Oe	
	Percent Initial Perm(nom.)	43.3%	
Percent Initial Perm(min.)	36.3%		
Coating/Pkg	Coating Type:	Parylene C	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	100,000 Pcs/Box	

Winding Table	Wire Size	AWG	28	30	32	34	36	38	40	42	44	#N/A	#N/A
		mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	#N/A	#N/A
	Single Layer	Turns	10	13	17	22	28	36	45	57	72	#N/A	#N/A
		Rdc(Ω)	21.4 m	44.3 m	92.1 m	189.5 m	383.5 m	784.2 m	1.6	3.1	6.3	#N/A	#N/A
Full Winding	Turns	10	15	23	36	56	86	133	206	319	#N/A	#N/A	
	Rdc(Ω)	21.4 m	51.1 m	124.5 m	310.0 m	767.0 m	1.9	4.6	11.3	28.0	#N/A	#N/A	

