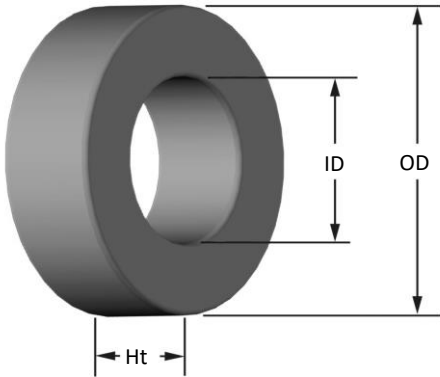




**Part Number:** **T12-8/90**  
Revision 20200518 - Generated 2020-May-18



<b>OD</b>	(nom. - bare core)	3.18 mm	0.125 in
	(max. - after coating)	3.30 mm	0.130 in
<b>ID</b>	(nom. - bare core)	1.57 mm	0.062 in
	(min. - after coating)	1.45 mm	0.057 in
<b>Ht</b>	(nom. - bare core)	1.27 mm	0.050 in
	(max. - after coating)	1.40 mm	0.055 in
<b>Mass</b>	(approximate)	0.05 grams	
<b>Magnetic Dimensions</b>	$A_e$ - Eff. Mag. Cross Section	0.0100 cm <sup>2</sup>	
	$L_e$ - Eff. Mag. Path Length	0.750 cm	
	$V_e$ - Eff. Core Volume	0.00770	
	$W_A$ - Min. Eff. Window Area	0.0165 cm <sup>2</sup>	
	$s_a$ - Surface Area	0.395 cm <sup>2</sup>	
	mlt - mean length per turn	0.537 cm	
<b>Inductance</b>	$\mu$ (reference)	35	
	$A_L$ value (nominal)	6 nH/N <sup>2</sup>	
	Test Winding	N=25, #36 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.001 V	
	$A_L$ tolerance	±10%	
<b>Core Loss</b>	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where $B_{pk}$ expressed in gauss, $f$ expressed in hertz, and: $a=1.90E+09$ , $b=2.00E+08$ , $c=9.00E+05$ , $d=5.00E-15$		
	$B_{pk}$	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	32 mW/cm <sup>3</sup>	
Core Loss (maximum)	36 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: $a=1.00E-02$ , $b=3.49E-06$ , $c=1.43$ , $d=0.00$		
	$H_{DC}$	200 Oe	
	Percent Initial Perm(nom.)	60.1%	
Percent Initial Perm(min.)	53.7%		
<b>Coating/Plg</b>	Coating Type:	Parylene C over Yellow/Red	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	250,000 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	AWG	30	32	34	36	38	40	42	44	#N/A	#N/A	#N/A
		mm	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	#N/A	#N/A	#N/A
	<b>Single Layer</b>	Turns	11	14	18	23	30	38	47	60	#N/A	#N/A	#N/A
		Rdc(Ω)	20.0 m	40.5 m	82.8 m	168.3 m	349.0 m	703.1 m	1.4	2.8	#N/A	#N/A	#N/A
<b>Full Winding</b>	Turns	11	16	25	39	60	93	145	224	#N/A	#N/A	#N/A	
	Rdc(Ω)	20.0 m	46.3 m	115.0 m	285.3 m	698.0 m	1.7	4.3	10.5	#N/A	#N/A	#N/A	

