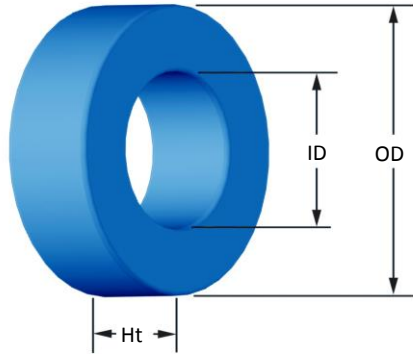




**Part Number:** **MP-306125-2**

Revision 20191114 - Generated 2019-Nov-14



(If coated, Max./Min. includes coating)

<b>OD</b>	(nom. - bare core) (max.)	77.80 mm 78.94 mm	3.063 in 3.108 in
<b>ID</b>	(nom. - bare core) (min.)	39.34 mm 38.34 mm	1.549 in 1.509 in
<b>HT</b>	(nom. - bare core) (max.)	25.85 mm 26.85 mm	1.018 in 1.057 in
<b>Mass</b>	(approximate)	630 grams	
<b>Magnetic Dimensions</b>	$A_e$ - Eff. Mag. Cross Section	4.78 cm <sup>2</sup>	
	$L_e$ - Eff. Mag. Path Length	17 cm	
	$V_e$ - Eff. Core Volume	81.5 cm <sup>3</sup>	
	$W_A$ - Min. Eff. Window Area	11.5 cm <sup>2</sup>	
	$s_a$ - Surface Area	211 cm <sup>2</sup>	
	$mlt$ - mean length per turn	11.3 cm	
<b>Inductance</b>	$\mu_i$ (reference)	125	
	$A_L$ value (nominal)	425 nH/N <sup>2</sup>	
	Test Winding	N=120, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	2.5 V	
	AL tolerance	±8%	
<b>Core Loss</b>	Core Loss(mW/cm <sup>3</sup> ): $\frac{f}{Bpk^3} + \frac{f}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}} + d \cdot Bpk^2 \cdot f^2$		
	where $B_{pk}$ expressed in gauss, $f$ expressed in hertz, and: $a=2.193E+10$ , $b=1.308E+09$ , $c=9.301E+06$ , $d=3.087E-14$		
	$B_{pk}$	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	249 mW/cm <sup>3</sup>	
	Core Loss (maximum)	286 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: $a=1.000E-02$ , $b=7.875E-06$ , $c=1.874$ , $d=0.000$		
	$H_{DC}$	40 Oe	
	Percent Initial Perm.(nom.)	55.8%	
	Percent Initial Perm.(min.)	47.3%	
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	18 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	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
	<b>Single Layer</b>	Turns	30	38	47	60	75	94	118	147	184	229	286
		Rdc(Ω)	7.0 m	14.1 m	27.7 m	56.3 m	111.9 m	223.1 m	445.5 m	882.6 m	1.8	3.5	6.9
<b>Full Winding</b>	Turns	60	94	145	224	347	537	831	1,286	1,990	3,080	4,767	
	Rdc(Ω)	14.0 m	34.9 m	85.6 m	210.2 m	517.9 m	1.3	3.1	7.7	19.0	46.8	115.1	

