



**Part Number: MS-157090-2**

Revision 2021-Dec-01 - Generated 2021-Dec-01



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

<b>OD</b>	(nom. - bare core) (max.)	39.88 mm 40.69 mm	1.570 in 1.602 in
<b>ID</b>	(nom. - bare core) (min.)	24.13 mm 23.32 mm	0.950 in 0.918 in
<b>HT</b>	(nom. - bare core) (max.)	14.48 mm 15.37 mm	0.570 in 0.605 in
<b>Mass</b>	(approximate)	62 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	1.07 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	9.85 cm	
	V <sub>e</sub> - Eff. Core Volume	10.5 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	4.27 cm <sup>2</sup>	
	sa - Surface Area	60.2 cm <sup>2</sup>	
	mlt - mean length per turn	5.98 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	90	
	A <sub>L</sub> value (nominal)	121 nH/N <sup>2</sup>	
	Test Winding	N=70, #20 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.33 V	
	AL tolerance	±8%	
<b>Core Loss</b>	Core Loss(mW/cm <sup>3</sup> ): $\frac{a}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}} + d \cdot Bpk^2 \cdot f^2$		
	where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and: a=7.890E+09, b=7.111E+08, c=8.980E+06, d=2.846E-14		
	B <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	323 mW/cm <sup>3</sup>	
	Core Loss (maximum)	372 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=3.994E-06, c=1.883, d=0.000		
	H <sub>DC</sub>	50 Oe	
	Percent Initial Perm(nom.)	61.3%	
	Percent Initial Perm(min.)	52.9%	
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	216 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	17	22	28	35	45	56	70	88	111	138	173
		Rdc(Ω)	2.1 m	4.3 m	8.7 m	17.3 m	35.4 m	70.0 m	139.2 m	278.3 m	558.3 m	1.1	2.2
<b>Full Winding</b>	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764	
	Rdc(Ω)	2.7 m	6.8 m	16.8 m	41.0 m	100.6 m	248.8 m	610.5 m	1.5	3.7	9.1	22.4	

