



**Part Number:** **T27-10**

Revision 20190524 - Generated 2019-May-30



<b>OD</b>	(nom. - bare core) (max. - after coating)	7.11 mm 7.49 mm	0.280 in 0.295 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	3.84 mm 3.45 mm	0.151 in 0.136 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	3.25 mm 3.76 mm	0.128 in 0.148 in
<b>Mass</b>	(approximate)	0.39 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.0470 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	1.71 cm	
	V <sub>e</sub> - Eff. Core Volume	0.0800 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	0.0937 cm <sup>2</sup>	
	sa - Surface Area	2.21 cm <sup>2</sup>	
<b>Inductance</b>	μ <sub>i</sub> (reference)	6	
	A <sub>L</sub> value (nominal)	2.2 nH/N <sup>2</sup>	
	Test Winding	N=50, #34 AWG	
	Frequency	1 MHz	
	Voltage on Agilent 4284A	1.0 V	
<b>Core Loss &amp; Q</b>	A <sub>L</sub> tolerance	±5%	
	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=8.00E-16		
<b>DC Saturation</b>	Q test winding	N=20, #27 AWG	
	Q frequency	20 MHz	
	Q min on HP4342A	133	
<b>Coating/Pkg</b>	Coating Type:	Black/Clear Epoxy Paint	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	30,000 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	AWG	22	24	26	28	30	32	34	36	38	40	42
		mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
	<b>Single Layer</b>	Turns	11	14	18	23	30	37	47	59	75	94	117
		Rdc(Ω)	7.7 m	15.7 m	32.0 m	65.0 m	134.9 m	264.6 m	534.6 m	1.1	2.2	4.3	8.5
<b>Full Winding</b>	Turns	10	16	25	39	60	93	143	222	344	532	823	
	Rdc(Ω)	7.0 m	17.9 m	44.4 m	110.3 m	269.8 m	665.1 m	1.6	4.0	9.9	24.3	59.9	

