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REVISION HISTORY

REV	ECN	DESCRIPTION	BY	DATE	APR. DATE
A		Production release	EO	3/7/13	JL 3/7/13
A1		REVISED MECHANICAL SPEC.	TN	1/18/18	JL 1/18/18

T520-2

Features

Applies to high Q below 40 MHz, for utilization of band transformer range within 200-400 MHz

Electrical Specifications

Item	Unit/Symbol	Condition	Value	Tol.
A _L	nH/N ²	Typ.	20	± 5%
L _c	cm	N/A	33.10	Typ.
A _v	cm ²	N/A	5.240	Typ.
V _e	cm ³	N/A	173.000	Typ.
Approx. Material Density	g/cm ³	N/A	5.0	Typ.
Permeability	μ ₀	N/A	10	± 5%
Temperature Stability	+ppm/°C	N/A	95	Typ.

Resonant Circuit (---) and Broadband Frequency Range (+++)

Range (MHz)	2-50 KHz	50-250 KHz	250-500 KHz	500KHz-2MHz	2-10 MHz	10-40 MHz	40-150 MHz	150-250 MHz	250-500 MHz	500 MHz to 1GHz
Mix	2-50 KHz	50-250 KHz	250-500 KHz	500KHz-2MHz	2-10 MHz	10-40 MHz	40-150 MHz	150-250 MHz	250-500 MHz	500 MHz to 1GHz
42	0.3-80									
3	0.02-1							+++++		
8	0.02-1							+++++		
1	0.15-3							+++++		
15	0.15-3							+++++		
2	0.25-10							+++++		
7	1-25							+++++		
4	3-40							+++++		
6	3-40							+++++		
10	15-100							+++++		
17	20-200							+++++		
12	30-250							+++++		
0	50-350							+++++		

$$\text{Temperature Rise : } \Delta T(^{\circ}\text{C}) = \left[\frac{\text{Total Power Dissipation (milliwatts)}}{\text{Surface Area (cm}^2\text{)}} \right]^{0.833}$$

$$\text{Required turns} = \left[\frac{\text{desired L (nH)}}{A_L \left(\frac{\text{nH}}{\text{N}^2} \right)} \right]^{\frac{1}{2}}$$

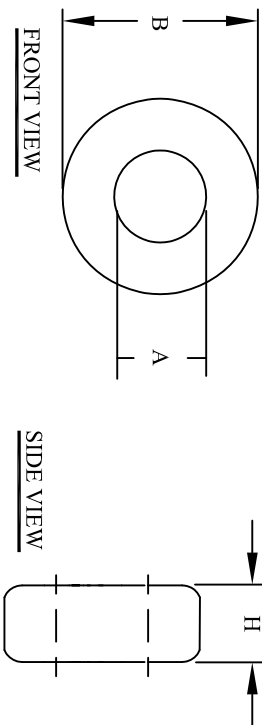
$$\text{Peak AC Flux Density: } B_{pk} = \frac{E_{avg} \cdot 10^8}{4ANf}$$

$$\text{Magnetizing Force: } H = \frac{0.4\pi NI}{\ell}$$

- L = inductance
- nH = nanohenries
- H = oersteds (Oe)
- N = Number of turns
- I = Current (amperes)
- ℓ = Mean Magnetic Path (cm)
- A = Cross-sectional area (cm²)
- f = Frequency (hertz)
- B_{pk} = Gauss (G)

For additional detail, specifications and charts see:

http://www.bytemark.com/products/IPCores_index.html



	Case Dimensional Tolerances		
	in	tol	mm
B (Outer Diameter)	5.200	0.030	132.00
A (Inner Diameter)	3.080	0.030	78.20
H (Height)	0.800	0.030	20.30
Weight	865.00 g		

UNLESS OTHERWISE SPECIFIED
 DIMENSIONING AND TOLERANCE PER ANSI Y14.5M
 ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS].
 TOLERANCE INCHES: ±.005
 TOLERANCE METRICS: ±.127
 ANGLE PROJECTION: DO NOT SCALE DRAWING

CODE IDENT	MFG. P/N	DESCRIPTION	ITEM NO.
AUTOCAD SOLIDWORKS SIGN	X	PARTS LIST	
DATE	DATE		
3/7/13	3/7/13		
ENGR. JL	3/7/13	Iron Powder Core: Material Mix 2 (Carbonyl E), Red/Clear	
APPR. JL	3/7/13		
SIZE B	DWG. NO. T520-2		REV A1
SCALE N/A			
	SHEET 1	OF 1	