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## F-193-J

### Features

MnZn ferrite material for common mode chokes, power transformers, power inductors, broadband transformers, noise filter and etc.

#### Electrical Specifications

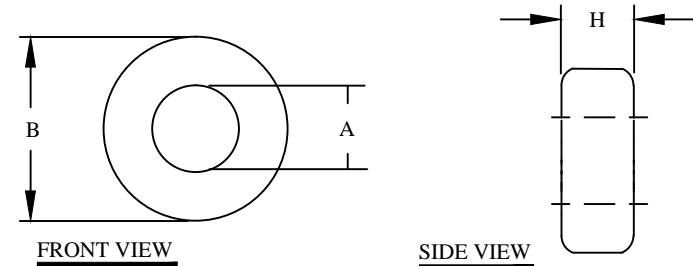
Item	Unit/Symbol	Condition	Value	Tol.
$A_L$	mH/1000	@ 5 gauss in a de-gaussed state	6065	± 20%
$L_e$	cm	N/A	12.3	± 10%
$A_e$	cm <sup>2</sup>	N/A	1.19	± 10%
$V_e$	cm <sup>3</sup>	N/A	14.7	± 10%
Density	g/cm <sup>3</sup>	N/A	4.8	Typ.
Permeability	$\mu_0$	Typical	5000	± 20%
Coercivity	$O_e$ , A/m	Typical	0.1, 8	Typ.
Flux Density	Gauss, B	Typical	4300	Typ.
	Gauss, H	@ 1194 A/m, 15 oe mT	430	Typ.
Curie temperature	°C	$T_c$	> 140	Typ.
Resistivity	$\Omega$ cm, $\rho$	Typical	1	Typ.
Relative Loss Factor	$10^{-6}$	$\tan\delta / \mu$	< 20	Typ.
	kHz	@ Frequency	100	Typ.
Max. Usable freq.	MHz	50% roll-off	< 1	Typ.
Remanence	G, mT	Typical	1000, 100	Typ.
Disaccommodation Factor	$10^{-6}$	Typical	< 3	Typ.

#### Power Loss ( $P_L$ ), Sine Wave, in mW/cm<sup>3</sup> (typical)

Condition		@ 25 °C		@ 60 °C		@ 100 °C	@ 120 °C
I	25 kHz	N/A	200 mT	N/A	2000 G	N/A	N/A
II	100 kHz	N/A	100 mT	N/A	1000 G	N/A	N/A
III	500 kHz	N/A	50 mT	N/A	500 G	N/A	N/A
IV	700 kHz	N/A	50 mT	N/A	500 G	N/A	N/A

#### REVISION HISTORY

REV	ECN	DESCRIPTION	SIGN & DATE			
			BY	DATE	AP.	DATE
A		Production release	EO	2/13/13	JL	2/13/13



#### Case Dimensional Tolerances

	in	tol.	mm	tol.
B (Outer Diameter)	1.932	1.962 Max	49.10	49.84 Max
A (Inner Diameter)	1.252	1.222 Min	31.80	31.03 Min
H (Height)	0.625	0.640 Max	15.90	16.26 Max
Weight	74.60 g			

**For additional detail, specifications and charts see:**

<http://www.bytemark.com/>

CODE IDENT	MFG. P/N	DESCRIPTION	ITEM NO.
<b>PARTS LIST</b>			
AUTOCAD	X	<b>www.coilws.com</b> www.cwsbytemark.com CWSBYTEMARK 353 West Grove Ave. Orange, CA. 92865	<b>Ferrite Toroid Core</b> <b>MnZn Material J, uncoated</b> <b>F-193-J</b>
SOLIDWORKS			
DRAWN	EO 2/13/13		
CHECKED	JL 2/13/13		
ENGR.	JL 2/13/13	SIZE DWG. NO.	REV
APPR.	JL 2/13/13	B	A
SCALE		N/A	SHEET 1 OF 1

UNLESS OTHERWISE SPECIFIED  
 DIMENSIONING AND TOLERANCE PER ANSI Y14.5M  
 ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS].  
 TOLERANCE INCHES:  
 .XXX=±.005 .XX=±.015  $\angle$ =±0°30'  
 TOLERANCE METRICS:  
 .XXX=±.127 .XX=±.38  $\angle$ =±0°30'  
 ANGLE PROJECTION  $\angle$   
 DO NOT SCALE DRAWING