LPB AM TRANSMITTER ELLIPTIC RF OUTPUT FILTER CONSTRUCTION ON L4 & L5 FOR AM-5, AM TX 2-20 AM -30 /60 /100 WATT UNITS !

NOTE: Some toroids might be color coated by EIA standard and other will have the gray / black color to them depend on the company(s) who construct them.

NOTE: If the toroids cores are in a gray / black color they are not moisture protected !

NOTE: It is recommended that going to use your am transmitter in a moist area please have toroids core coated for protection !

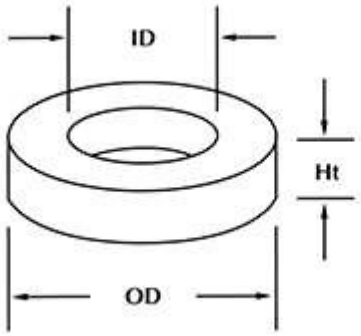
NOTE: Information on toroid cores can be found in ARRL Handbook 1998 pages 24.5, 24.6 and 24.7.

NOTE: The Toroid Core For L4 & L5.
T94-2 Toroid core
FREQUENCY USE: 500 Khz to 30 Mhz
EIA COLOR CODE: Red E Core
MATERIAL: Carbonyl E

DIMENSIONS	
OD= 0.94”	Outside Dimention
ID = 0.56”	Inside Dimention
H = 0.31”	Height
U= 10	

Physical Dimensions

COLOR CODE
- 1 Blue/Clear
- 2 Red/Clear
- 3 Gray/Clear
- 6 Yellow/Clear
- 7 White/Clear
- 10 Black/Clear
- 12 Green/White
- 15 Red/White
- 17 Blue/Yellow
- 0 Tan



TYPICAL PART NO.
T 25 - 10
OD in 100th Inches
Micrometals Mix No.
Letter Indicates Alternate Height

OD = .942 in / 23.9 mm +/- 0.02 in
ID = .560 in / 14.2 mm +/- 0.02 in
Ht = .312 in / 7.92 mm +/- 0.025 in

A_L=8.4 +/- 5 % uH=(A_L*Turns^2)/1000

Temperature Stability (ppm /°C) = 95

Color Code = Red / Clear

Optimum Resonant Circuit Range
for highest Q and lowest core loss
250 KHz - 10 MHz

Orders and Pricing
www.kitsandparts.com

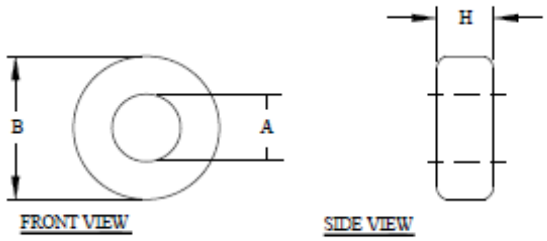
CN20-12-08G

REVISION HISTORY						
REV	ECN	DESCRIPTION	SIGN & DATE			
			BY	DATE	AP.	DATE
A		Production release	EO	1/21/13	JL	1/21/13

Features:

High Permeability (30-80K), high impendance Z and high insertion attenuation
Suppresses the asymmetrical EMI currents
High saturation Flux density can reduce over voltage peaks
High Curie Temperature and excellent temperature characteristics

Electrical Specifications				
Item	Units	Condition	Value	Tol.
A_L	nH/N^2	@ 1kHz, 200mV	75360	± 25%
A_L	nH/N^2	@ 10kHz	64560	± 25%
A_L	nH/N^2	@ 100kHz	13720	± 25%
Permeability	μ_0	@ 10 kHz	70000	± 25%
A_e	cm^2	N/A	0.32	± 10%
L_e	cm	N/A	5.0	± 10%
Saturation Current	mA	@ 10 kHz	10	± 20
Saturation Flux Density	T	N/A	1.2	Max.
Curie temperature	°C	N/A	580	Nom.



For additional detail, specifications and charts see:

http://www.bytemark.com/products/comp_nanoc_cmchoke.html
http://www.bytemark.com/products/Nanocrystalline_cores.html

Dimensional Tolerances				
	in	tol.	mm	tol.
Core				
B (Outer Diameter)	0.79	±0.40	20	±1
H (Height)	0.31	±0.40	8	±1
A (Inner Diameter)	0.47	±0.40	12	±1
Case				
B (Outer Diameter)	0.89	±0.40	23	±1
H (Height)	0.40	±0.40	10	±1
A (Inner Diameter)	0.39	±0.40	10	±1
Weight 11.00 g				

CODE IDENT	MFG. P/N	DESCRIPTION	ITEM NO.
PARTS LIST			

AUTOCAD	X	www.cwsbytemark.com	CWSBYTEMARK 353 West Grove Ave. Orange, CA. 92865
SOLIDWORKS			
SIGN	DATE		
DRAWN EO	1/21/13	TITLE: Nanocrystalline Core	
CHKD JL	1/21/13		
ENGR. JL	1/21/13		
APPR. JL	1/21/13	SIZE B / DWG. NO. CN20-12-08G / REV A	
UNLESS OTHERWISE SPECIFIED		SCALE N/A	SHEET 1 OF 1
DIMENSIONING AND TOLERANCE PER ANSI Y14.5M			
ALL DIMENSIONS ARE IN INCHES AND [MILLIMETERS]			
TOLERANCE INCHES: .XX=±.030 .XXX=±.010 <.XXX=±.005			
TOLERANCE METRICS: XX=±.127 .XXX=±.38 <.XXX=±.13			
ANGLE PROJECTION			
DO NOT SCALE DRAWING			

Where to Purchase and see Toroid Core http://www.cwsbytemark.com

NOTE: Wire material 18 Awg Insulated solid copper wire on all models !

Low Band 530 khz to 830 khz	Mid Band 840 khz to 1270 khz	High Band 1280 khz to 1700 khz
L4 = 32 Turns 18 awg 9.3uh	L4 = 23 Turns 18 awg 6.1uh	L4 = 21 Turns 18 awg 5.5uh
L5 = 24 Turns 18 awg 5.8uh	L5 = 18 Turns 18 awg 3.8uh	L5 = 18 turns 18 awg 4.0uh

INFORMATION FURNISHED BY

"RFB of K-Rocks"

Version: 1 August 31, 2014 Compiled By Jeff Morrison