

SERIES:

MGDH1

COEV

MAGNETICS

tyco

Electronics

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Watertown, SD 57201

Toll free: 888-978-2638

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BABT

certified

ISO 9001

Low Profile, High Current Power Inductors

C

A

B

B

Suggested Land Pattern

1st significant digit

3rd significant digit

2nd significant digit

Suffix Code

W

H

L

Parts will be marked with Significant Digit Dots OR Suffix code

Series Number	Maximum Dimensions				Reference Dimensions		
	Units	L	W	H	A	B	C
MGDH1	inches	0.362"	0.252"	0.197"	0.160"	0.075"	0.200"
	[mm]	[9.19]	[6.40]	[5.00]	[4.06]	[1.91]	[5.08]

Features:

- High energy storage and low resistance
- Reliable surface mounting, flat top for pick and place.
- Smaller real estate than other common inductors.
- Robust temperature deflection to prevent damage during solder reflow.
- Tape and Reel mechanical specifications available upon request.
- Operating Temperature -40°C to +85°C.
- Highly resistive core for EMI suppression applications.
- Lead Free RoHS compliant.

Notes:

- Inductance measured at 100kHz and 250mVrms.
- Isat is a maximum applied AC + DC current.
- Isat current is applied to produce a typical 35% drop in nominal inductance.
- Tolerance suffix of M = ±20%.
- DCR is a maximum at 20°C.

RoHS Compliant

Terminal Plating is Hot-dipped SnAgCu

260°C Maximum reflow temperature per J-STD020

Schematic Diagram

1

2

Inductor 1

Inductor 2

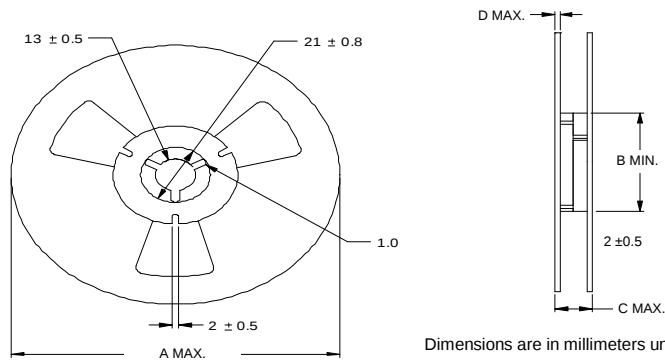
Contact CoEv for additional inductance values

Specifications subject to change

MGDH1

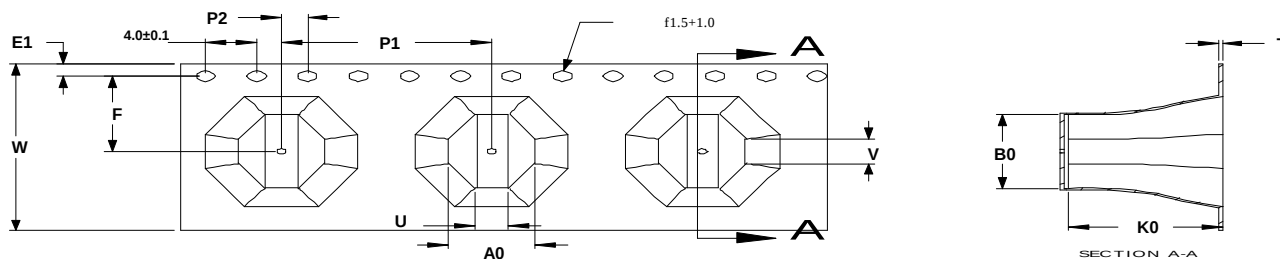
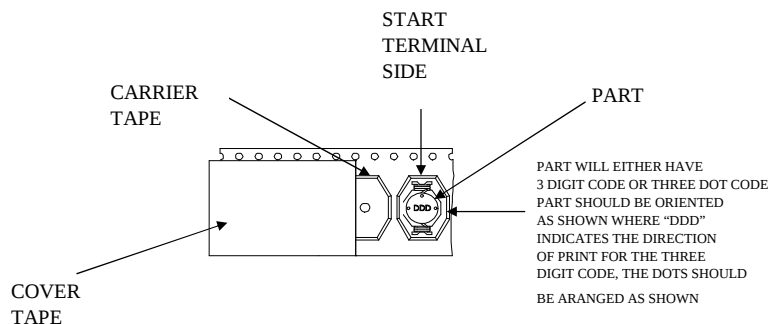
Lead free Part Number	L μ H	DCR ² W	I _{SAT} ³ A	I _{RMS} ⁵	Tolerance Suffix ⁶
MGDH1-00001	0.33	0.010	7.7	6.00	M
	0.56				
	0.68				
	0.78				
	1.0				
MGDH1-00002	1.2	0.017	5.3	4.40	M
	1.5				
MGDH1-00003	2.2	0.035	3.5	3.10	M
	2.7				
	3.3				
	3.9				
MGDH1-00004	4.7	0.054	2.6	2.20	M
	6.0				
	6.8				
	7.8				
MGDH1-00005	10	0.111	1.90	1.50	M
MGDH1-00006	15	0.170	1.50	1.20	M
MGDH1-00007	22	0.250	1.20	1.00	M
MGDH1-00008	33	0.370	0.99	0.82	M
MGDH1-00009	47	0.470	0.87	0.72	M
	68				
	100				

Call Toll Free: 888-978-2638 Website: www.tycopowercomponents.com



Series Number	Reel dimensions				Reel Qty	Carton (Box) Qty.	Packaging Specification
	Units	A	B	C			
	in.	14.17"	3.94"	0.882"			
MGDH1	[mm]	[360]	[100.0]	[22.4]	1000	6000	90-0061

PACKAGING NOTE: Only pressure sensitive cover tape is to be used.



Series	A0 ± 0.1	U ± 0.1	V ± 0.1	P1 ± 0.1	P2 ± 0.1	W ± 0.3	F ± 0.1	E1 ± 0.1	B0 ± 0.1	K0 ± 0.05	T ± 0.05
MGDH1	6.65	4.70	2.90	12.00	2.00	16.00	7.50	1.75	9.45	4.70	0.35



Customer Packaging Specifications
For Print Distribution to Customers

Series	Revision
MGDH1	A0
Sheet 2 of 7	

Item	Specification	Test Method/Condition				
Environmental						
Static Humidity	After exposure part remains within specified electrical parameters for L, Q and DCR.	Precondition at 25°C for 60 minutes. Expose parts to an environment of +40°C with 90 to 95% R.H. for 240 hours.				
	After exposure part remains within specified electrical parameters for L, Q and DCR.	Subject parts to an environment of 85°C 85% R.H. for 168 hours. After exposure allow parts to dry for 4 hours before measurements are taken.				
Temperature Cycle	After exposure part remains within specified electrical parameters for L, Q and DCR.	10 cycles (Air to Air) 1 cycle shall consist of: 30 minutes exposure to +85°C 30 minutes exposure to -40°C Allow 20 minutes transition between extremes.				
Temperature Shock	After exposure part remains within specified electrical parameters for L, Q and DCR.	10 cycles (Air to Air) 1 cycle shall consist of: 30 minutes exposure to -55°C 30 minutes exposure to +125°C 15 seconds maximum transition between temperatures				
General						
Storage Temperature Range	-40°C to +85°C					
Operating Temperature Range	-40°C to +85°C					
Flammability	IEC 695-2-2	Withstands needle-flame test				
Other						
Vibration	After exposure part remains within specified electrical parameters for L, Q and DCR.	1 cycle of 30 minutes of the following: 5 - 7 Hz constant displacement of 0.75 inches, 5 minutes 7 - 30 Hz constant acceleration of 1.5 Gs, 10 minutes 31 - 50 Hz constant displacement of 0.33 inches, 5 minutes 50 - 500 Hz constant acceleration of 1.2 Gs, 10 minutes				
Mechanical Shock	After exposure part remains within specified electrical parameters for L, Q and DCR.	MGDH1 Series - 2000 Gs per axis, 2 directions MGDH2 Series - 2000 Gs per axis, 2 directions MGDH3 Series - 2000 Gs per axis, 2 directions				
Solderability	Wetting shall cover 90% minimum of each termination	Dip pads in RMA flux, 63/37 solder (Sn/Pb) at 232°C for 5 seconds ±2 seconds.				
Component Adhesion (Push Test)	Component shall withstand 6 lb. push force minimum without delaminating from mounting surface.	Apply and measure force with a digital force gauge set.				
Resistance to Solvent		Withstands 6 minutes of alcohol. Withstands 3 minutes forced spray Freon TMS				
Chemical						
Ionic Contamination	Conductivity: pH: Chlorides: Sodium: Potassium:	11 µOhms/cm maximum 5.5 to 9 65 ppm maximum 20 ppm maximum 10 ppm maximum				
For Print Distribution to Customers		Pb RoHS Compliant				
		<table><tr><th>Series</th><th>Revision</th></tr><tr><td>MGDH1</td><td>A0</td></tr></table>	Series	Revision	MGDH1	A0
		Series	Revision			
MGDH1	A0					
Sheet 3 of 7						