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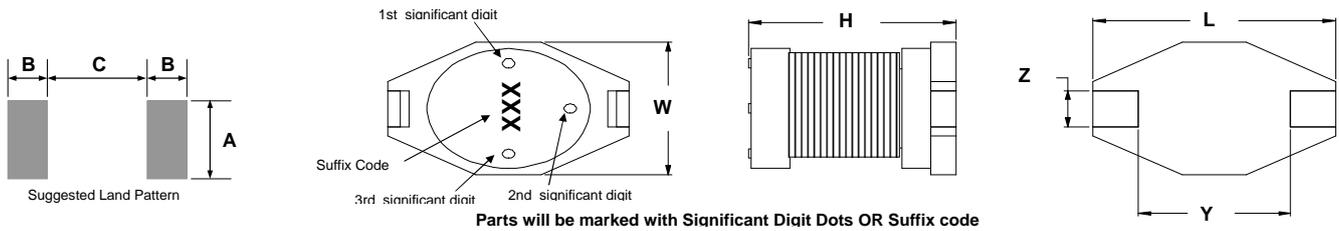
[TE Connectivity](#)
[MGDU2-00001](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

SERIES:		3003 9th Avenue SW PO Box 50 Watertown, SD 57201 Toll free: 888-978-2638 Ph: 605-886-3326 Fax: 605-886-8995	
MGDU2			

Low Profile, High Current Power Inductors



Series Number	Maximum Dimensions				Reference Dimensions				
	Units	L	W	H	Y	Z	A	B	C
MGDU2	inches	0.510"	0.370"	0.130"	0.300"	0.100"	0.110"	0.115"	0.290"
	[mm]	[12.95]	[9.40]	[3.30]	[7.62]	[2.54]	[2.79]	[2.92]	[7.37]

Features:

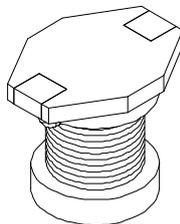
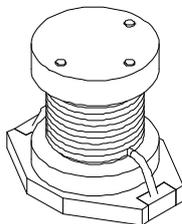
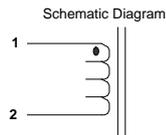
- High energy storage and low resistance
- Ideal for DC-DC step-up or step-down conversion.
- Reliable surface mounting, flat top for pick and place mounting
- Robust temperature deflection to prevent damage during solder reflow.
- Operating Temperature -40°C to +85°C.



Terminal Plating is Gold Flash over Ni
 260°C Maximum reflow temperature per J-STD020

Notes:

- Inductance measured at 100kHz, 100mVrms at 20°C.
- DCR (DC resistance) are maximum @ 20°C.
- Irms is the current applied to produce a typical 30°C temperature rise from nominal inductance.
- Isat is a maximum applied AC + DC current.
- Isat is the current applied to produce a typical 10% drop in nominal inductance
- Tolerance suffix of M = ±20%.

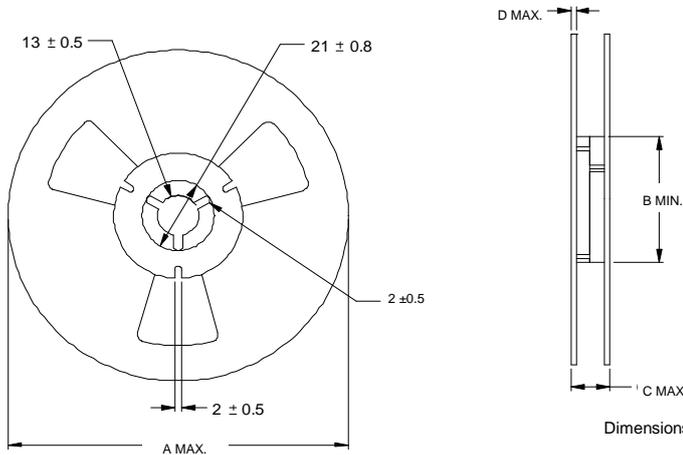


Contact CoEv for additional inductance values

Lead Free Part Number	L μH	MGDU2				Tolerance Suffix
		DCR W	ISAT A	IRMS A		
	1.0					
	1.5					
	2.2					
	3.3					
	4.7					
	5.6					
	6.8					
	8.0					
MGDU2-00001	10	0.110	2.40	2.00	M	
MGDU2-00002	15	0.150	2.00	1.50	M	
MGDU2-00003	22	0.230	1.60	1.30	M	
MGDU2-00004	33	0.300	1.40	1.10	M	
MGDU2-00005	47	0.390	1.00	0.80	M	
MGDU2-00006	68	0.660	0.90	0.70	M	
MGDU2-00007	100	0.840	0.70	0.60	M	
MGDU2-00008	150	1.200	0.60	0.50	M	
MGDU2-00009	220	1.900	0.50	0.40	M	
MGDU2-00010	330	2.700	0.40	0.30	M	
MGDU2-00011	470	4.000	0.30	0.20	M	
MGDU2-00012	680	5.300	0.20	0.10	M	
MGDU2-00013	1000	8.400	0.10	0.05	M	

Specifications subject to change

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



Dimensions are in millimeters unless specified.

Series Number	Reel dimensions					Reel Qty	Carton (Box) Qty.	Packaging Specification
	Units	A	B	C	D			
	in.	14.17"	3.94"	0.88"	0.094"			
[mm]	[360]	[100.0]	[22.4]	[2.40]				

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

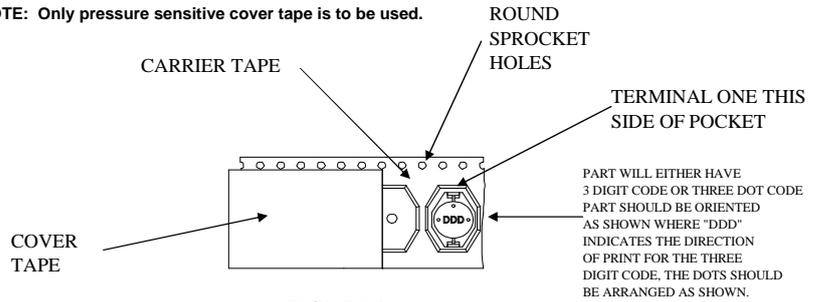
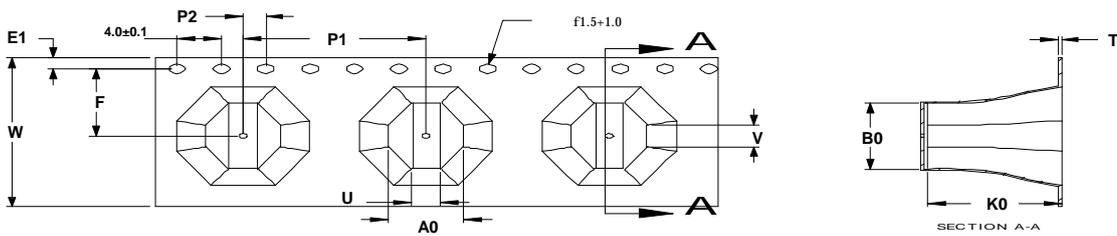


FIGURE 1
CARRIER TAPE AND PART



Series	A0 ± 0.1	U ± 0.1	V ± 0.1	P1 ± 0.1	P2 ± 0.1	W ± 0.3	F ± 0.1	E1 MIN.	B0 ± 0.1	K0 ± 0.05	T ± 0.05
MGDU2	9.50	3.90	4.00	12.00	2.00	24.00	11.50	1.75	13.10	3.10	0.35



Customer Packaging Specifications
For Print Distribution to Customers

Series	Revision
MGDU2	A0
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Item	Specification	Test Method/Condition				
Environmental						
Static Humidity	After exposure part remains within specified electrical parameters for L, Q and DCR.	Expose parts to an environment of +50°C with 90 to 95% R.H. for 100 hours. After exposure, allow parts to dry for 2 hours before measurements are taken.				
Storage Life	After exposure part remains within specified electrical parameters for L, Q and DCR.	Subject parts to an environment of +50°C 90 to 100% R.H. for 46 to 50 hours. After exposure, allow parts to dry for 2 hours before measurements are taken.				
Moisture Resistance	After exposure, part shall not have a shorted or open winding.	Per MIL-STD 202 Method 106, ten 24 hour cycles at +25°C to +65°C at 80 to 95% R.H. During any of the first 9 cycles, inductors are revolved from the chamber and exposed to -10°C for 3 hours. Allow parts to dry for 2 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 -45°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.	Inductors shall be randomly vibrated per NAVMAT P9492 profile. Samples shall be subjected to 0.04G/Hz for a minimum of 15 minutes per axis, for each of the three axes.				
Mechanical Shock	After exposure part remains within specified electrical parameters for L, Q and DCR.	Test per MIL-STD 202 method 213 test condition A, test mounted samples 3 axes, 6 times, totaling 18 shocks. (50Gs, 11ms, half-sine).				
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)	4 pounds	Apply and measure force with a digital force gauge set.				
Resistance to Solvent	No sign of degradation in appearance or marking detail.	Withstands 6 minutes of alcohol. Withstands 3 minutes forced spray Freon TMS				
Load Life	After exposure, part shall not have a shorted or open winding.	Parts to be stored at 110°C for 1000 hours with rated current applied. Parts to be tested at: start, 500 and 1000 hours. Allow 2 hours at room temperature before testing.				
						
For Print Distribution to Customers		<table border="1"> <tr> <th>Series</th> <th>Revision</th> </tr> <tr> <td style="text-align: center;">MGDU2</td> <td style="text-align: center;">A0</td> </tr> </table>	Series	Revision	MGDU2	A0
		Series	Revision			
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