SERIES:

MGDS2

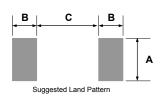


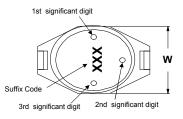
tyco Electronics

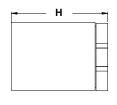
3003 9th Avenue SW PO Box 50 Watertown, SD 57201 Toll free: 888-978-2638 Ph: 605-886-3326 Fax: 605-886-8995

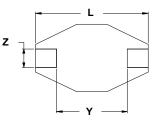


## Shielded, Low Profile, High Current Power Inductors









MGDS2

Parts will be marked with Significant Digit Dots OR Suffix code

Series		Max	imum Dimens	sions		Refe	rence Dimens	sions	
Number	Units	L	W	Н	Y	Z	Α	В	С
MGDS2	inches	0.421"	0.323"	0.146"	0.236"	0.079"	0.087"	0.094"	0.224"
1110202	[ mm ]	[ 10.70 ]	[ 8.20 ]	[ 3.70 ]	[ 6.00 ]	[ 2.00 ]	[ 2.20 ]	[ 2.40 ]	[ 5.70 ]

- Features:

  High energy storage and low resistance
- Reliable surface mounting, flat top for pick
- 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.

- Notes:

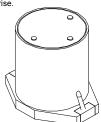
   Inductance measured at 100kHz and 250mVrms.
- Isat is a maximum applied AC + DC current.
- Isat current is applied to produce a typical 10%
- drop in nominal inductance.

  Irms current is applied to produce a typical 40°C temperature rise.

  Tolerance suffix of M = ±20%.

- DCR is a maximum at 20°C.

  Irms is applied current to produce a typical 40° temp. rise.

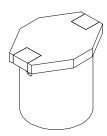






Terminal Plating is Gold Flash over Ni 260°C Maximum reflow temperature per J-STD020

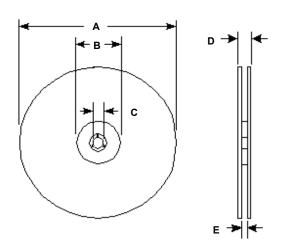




		MGDUZ				
Lead Free	L	DCR	I <sub>SAT</sub>	I <sub>RMS</sub>	Tolerance	
Part Number	μH	Ω	Α	Α	Suffix	
MGDS2-00001	5.0	0.080	1.70	1.70	M	
MGDS2-00002	7.5	0.100	1.40	1.40	М	
MGDS2-00003	10	0.165	1.20	1.20	M	
MGDS2-00004	12	0.172	1.10	1.10	М	
MGDS2-00005	15	0.181	1.00	1.00	М	
MGDS2-00006	18	0.190	0.90	0.90	M	
MGDS2-00007	22	0.250	0.80	0.80	M	
MGDS2-00008	27	0.270	0.70	0.70	M	
MGDS2-00009	33	0.300	0.65	0.65	M	
MGDS2-00010	39	0.380	0.60	0.60	M	
MGDS2-00011	47	0.580	0.55	0.55	М	
MGDS2-00012	56	0.620	0.50	0.50	M	
MGDS2-00013	68	0.920	0.45	0.45	M	
MGDS2-00014	82	0.980	0.40	0.40	M	

Specifications subject to change

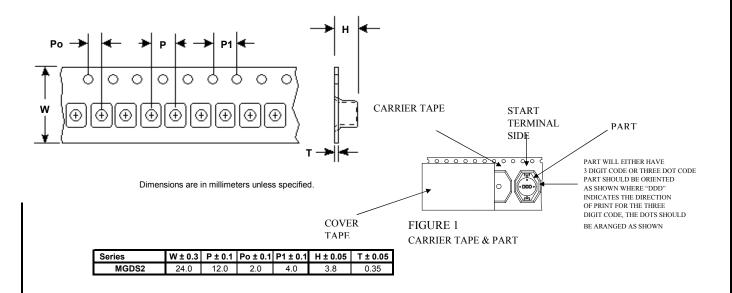
Call Toll Free: 888-978-2638 Website: www.tycopowercomponents.com



Dimensions are in millimeters unless specified.

Series	Reel dimensions					Reel	Carton (Box)	Packaging	
Number	Units	A MAX	B MIN	C ±0.5	D MAX	E MAX	Qty	Qty.	Specification
MGDS2	in.	14.17"	3.94"	0.51"	1.20"	1.08"	1000	5000	90-0062
WIGDGZ	[mm]	[ 360 ]	[ 100.0 ]	[ 13.0 ]	[ 30.40 ]	[ 27.40 ]	1000	5000	30-0002

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



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Customer Packaging Specifications For Print Distribution to Customers	MGDS2	A0	
1 of 1 fill Distribution to oustomers	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.	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		
Range	-40°C to +85°C	
Operating	-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	Dip pads in RMA flux, 63/37 solder (Sn/Pb) at 232°C for 5 seconds
Component Adhesion	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.
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For Print Distribution to Customers	For	Print	t Distri	bution 1	to Cust	tomers
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Series	Revision			
MGDS2	A0			
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