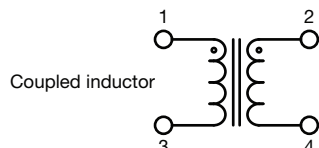


## Coupled Ferrite Power Inductors, Dual-Winding



### FEATURES

- 12.5 mm x 12.5 mm x 6.0 mm SMD package
- Highly coupled windings enable parallel, series and 1:1 transformer applications
- Magnetically shielded ferrite construction
- Inductance range: 0.5  $\mu$ H to 1000  $\mu$ H
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### APPLICATIONS

- SEPIC converters
- Common mode applications
- LED lighting
- Flyback 1:1 transformer

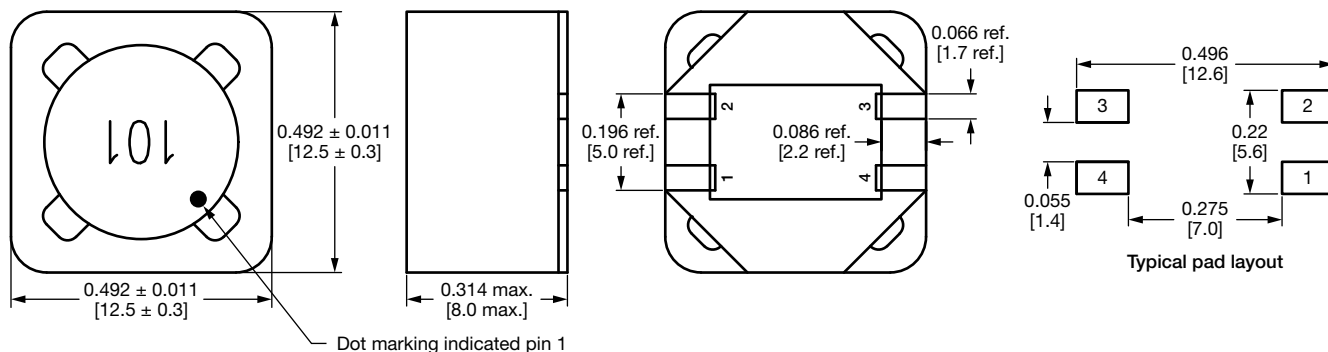
### LINKS TO ADDITIONAL RESOURCES



STANDARD ELECTRICAL SPECIFICATIONS								
PART NUMBER	$L_0$ INDUCTANCE AT 0 A ( $\mu$ H)	DCR MAX. ( $\Omega$ )	HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>	$L_0$ INDUCTANCE AT 0 A, REF. ( $\mu$ H)	DCR MAX. ( $\Omega$ )	HEAT RATING CURRENT DC TYP. (A) <sup>(1)</sup>	SATURATION CURRENT DC TYP. (A) <sup>(2)</sup>
	PARALLEL				SERIES			
IFCL5050HZERR50N	0.5	0.0058	13.5	35.0	1.900	0.0260	6.7	18.0
IFCL5050HZER1R0N	1	0.0085	10.0	24.0	3.284	0.0374	5.0	12.0
IFCL5050HZER1R5N	1.5	0.0106	8.5	19.0	5.428	0.0450	4.3	9.2
IFCL5050HZER2R2N	2.2	0.0127	8.3	16.0	8.108	0.0522	4.2	7.6
IFCL5050HZER3R3N	3.3	0.0138	8.3	14.0	11.320	0.0570	4.1	7.2
IFCL5050HZER4R5N	4.5	0.0169	6.5	11.8	17.520	0.0697	3.3	5.9
IFCL5050HZER6R8N	6.8	0.0206	5.5	9.7	29.550	0.0899	2.8	4.7
IFCL5050HZER8R2N	8.2	0.0223	5.5	8.5	35.440	0.0949	2.7	4.2
IFCL5050HZER100M	10	0.0238	5.2	7.5	41.880	0.1016	2.6	3.8
IFCL5050HZER150M	15	0.0301	4.3	6.0	56.360	0.1258	2.2	3.0
IFCL5050HZER220M	22	0.0391	4.0	5.3	91.720	0.1570	2.0	2.6
IFCL5050HZER330M	33	0.0600	3.2	4.2	135.700	0.2410	1.6	2.1
IFCL5050HZER470M	47	0.0719	3.0	3.5	188.200	0.2880	1.5	1.8
IFCL5050HZER680M	68	0.1050	2.4	3.0	265.900	0.4210	1.2	1.5
IFCL5050HZER820M	82	0.1430	2.0	2.8	319.000	0.5730	1.0	1.4
IFCL5050HZER101M	100	0.1630	2.1	2.5	397.200	0.6530	0.9	1.3
IFCL5050HZER151M	150	0.2470	1.6	2.1	579.600	0.9890	0.8	1.1
IFCL5050HZER221M	220	0.3760	1.3	1.6	886.000	1.5000	0.6	0.8
IFCL5050HZER331M	330	0.5740	1.0	1.4	1294.000	2.3000	0.5	0.7
IFCL5050HZER471M	470	0.8610	0.9	1.2	1868.000	3.4400	0.4	0.6
IFCL5050HZER681M	680	1.0800	0.8	0.9	2707.000	4.3200	0.4	0.4
IFCL5050HZER821M	820	1.4700	0.7	0.8	3272.000	5.8800	0.3	0.4
IFCL5050HZER102M	1000	1.6600	0.6	0.7	4637.333	6.6400	0.3	0.3

### Notes

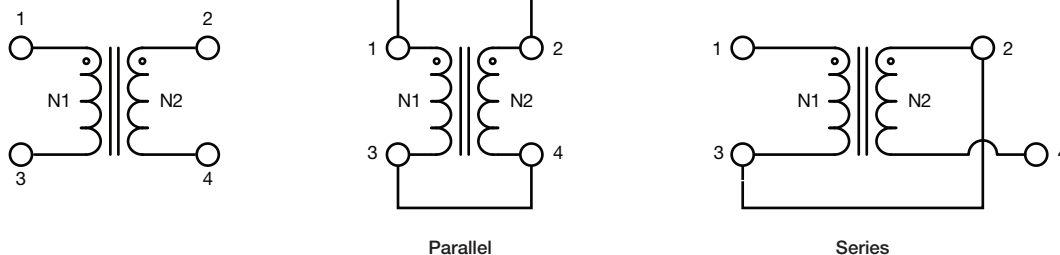
- All test data is referenced to 25 °C ambient
- Test condition: 100 kHz, 0.25 V
- Operating temperature range -40 °C to +125 °C (includes temperature rise due to self-heating)
- Storage temperature: -40 °C to +125 °C
- Resistance to solder heat: 260 °C peak for 10 s max.
- Winding to winding isolation voltage (1 to 2): 200 V<sub>AC</sub>, 3 mA, 1 s
- (1) DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- (2) DC current (A) that will cause  $L_0$  to drop approximately 30 %

**DIMENSIONS** in inches [millimeters]

**DESCRIPTION**

<b>IFCL-5050HZ</b>	<b>6.8 <math>\mu</math>H</b>	<b><math>\pm 30\%</math></b>	<b>ER</b>	<b>e3</b>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

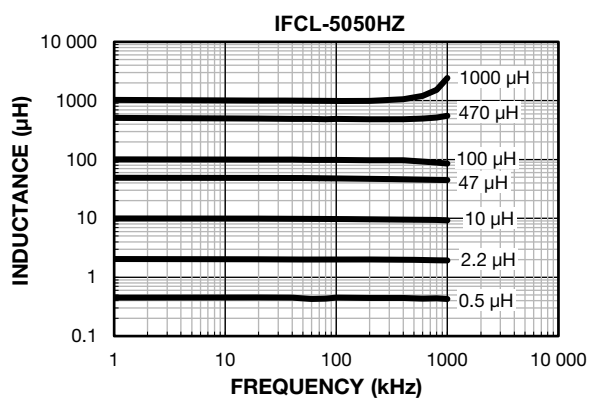
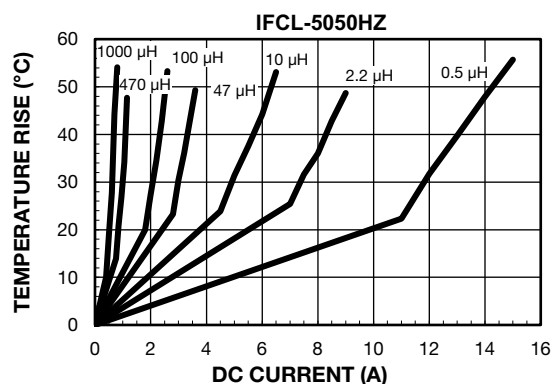
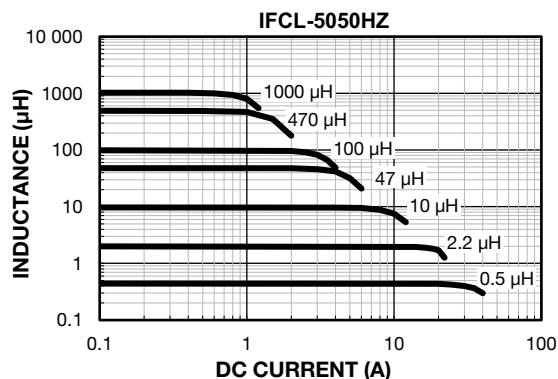
**GLOBAL PART NUMBER**

<b>I F C L</b>	<b>5 0 5 0 H Z</b>	<b>E R</b>	<b>6 R 8</b>	<b>N</b>
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE
		ER = tape and reel	6R8 = 6.8 $\mu$ H	M = $\pm 20\%$ N = $\pm 30\%$

**SCHEMATICS**




PERFORMANCE GRAPHS - PARALLEL





## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.