

## High Frequency, Surface Mount Inductors


**RoHS**  
COMPLIANT

### FEATURES

- High self-resonant frequency values
- High Q values at higher frequencies
- Wirewound construction
- Compatible with vapor phase and infrared reflow soldering
- Tape and reel packaging for automatic handling, 2000/reel
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 3.3 nH to 47 000 nH

**Inductance and Tolerance:** 0.3 nH for 3.3 nH  
± 5 % for 6.8 nH to 47 000 nH

**Operating Temperature:** -40 °C to +125 °C

**Core Material:** Ceramic from 3.3 nH to 1000 nH  
Ferrite from 1200 nH to 47 000 nH

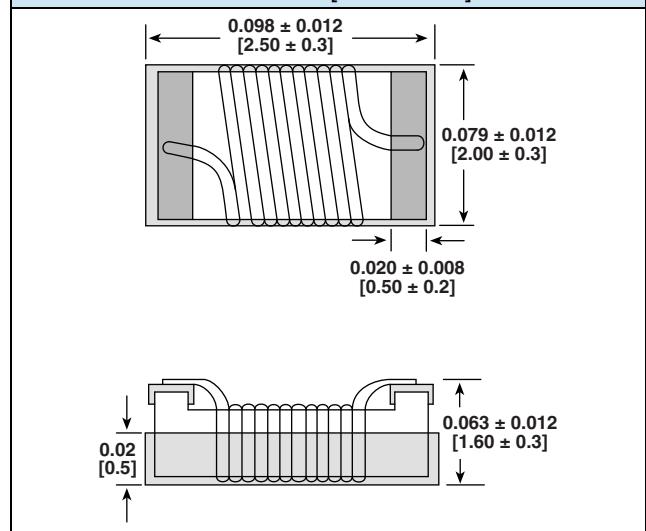
### TEST EQUIPMENT

- Inductance and Q measured on HP4286A
- SRF measured on HP8753D

### STANDARD ELECTRICAL SPECIFICATIONS

IND. (nH)	TOL.	TEST FREQ. (MHz)		Q MIN.	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA)
		L	Q				
3.3	0.3 nH	100	1000	50	6000	0.06	1000
6.8	5 %	100	1000	50	5500	0.06	1000
8.2	5 %	100	1000	50	5500	0.06	1000
10	5 %	100	1000	50	4300	0.08	1000
12	5 %	100	500	60	3600	0.08	1000
15	5 %	100	500	60	2700	0.08	1000
18	5 %	100	350	60	2700	0.10	1000
22	5 %	100	350	60	2500	0.10	1000
27	5 %	100	350	60	1800	0.10	1000
33	5 %	100	350	60	1700	0.10	1000
39	5 %	100	350	60	1500	0.10	1000
47	5 %	100	350	60	1500	0.10	1000
56	5 %	100	350	60	1350	0.12	1000
68	5 %	100	350	60	1300	0.15	1000
82	5 %	100	350	60	1100	0.18	1000
100	5 %	100	350	60	1100	0.18	1000
120	5 %	25	100	45	950	0.20	800
150	5 %	25	100	45	880	0.22	800
180	5 %	25	100	45	800	0.33	800
220	5 %	25	100	45	730	0.45	800
270	5 %	25	100	45	650	0.75	600
330	5 %	25	100	45	570	0.90	500
390	5 %	25	100	45	530	1.06	470
470	5 %	25	100	45	480	1.17	420
560	5 %	25	100	45	430	1.50	310
680	5 %	25	100	45	380	2.06	230
750	5 %	25	100	45	360	2.20	200
820	5 %	25	100	45	350	2.30	180
910	5 %	25	100	45	330	3.18	150
1000	5 %	25	50	35	310	3.30	120
1200	5 %	7.96	7.96	20	280	1.30	230
1500	5 %	7.96	7.96	20	250	1.65	220
1800	5 %	7.96	7.96	20	200	2.20	210
2200	5 %	7.96	7.96	20	160	2.35	200
2700	5 %	7.96	7.96	20	130	2.60	195
3300	5 %	7.96	7.96	20	80	2.85	185
3900	5 %	7.96	7.96	20	50	4.00	180
4700	5 %	7.96	7.96	20	45	4.30	175
5600	5 %	7.96	7.96	20	42	2.60	170
6800	5 %	7.96	7.96	20	39	2.80	165
8200	5 %	7.96	7.96	20	36	3.05	160
10 000	5 %	2.52	2.52	15	33	3.50	150
12 000	5 %	2.52	2.52	15	30	3.60	140
15 000	5 %	2.52	2.52	15	26	4.00	130
18 000	5 %	2.52	2.52	15	24	4.50	120
22 000	5 %	2.52	2.52	15	22	5.00	110
27 000	5 %	2.52	2.52	15	21	6.00	95
33 000	5 %	2.52	2.52	15	20	6.50	85
39 000	5 %	2.52	2.52	15	18	8.50	60
47 000	5 %	2.52	2.52	15	17	14.00	45

### DIMENSIONS in inches [millimeters]

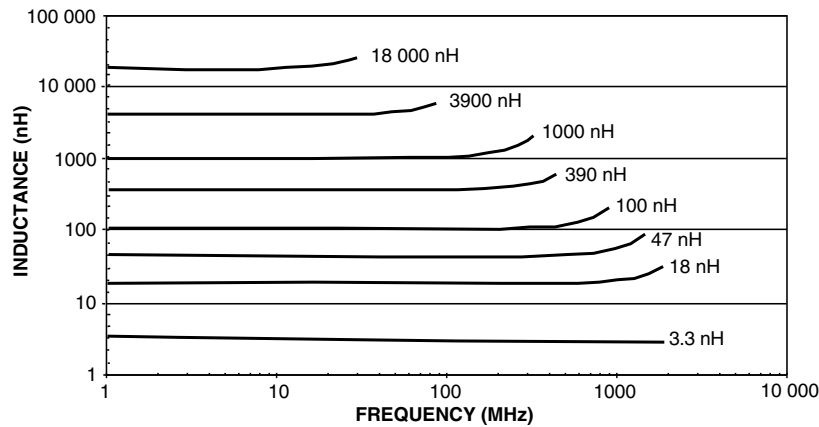
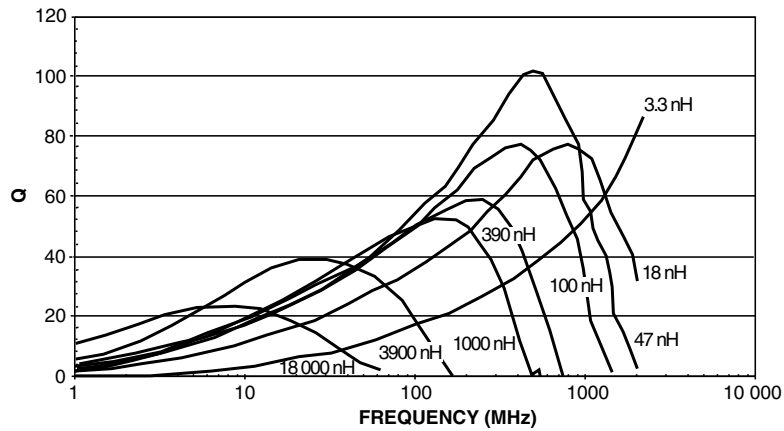
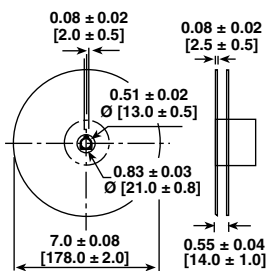
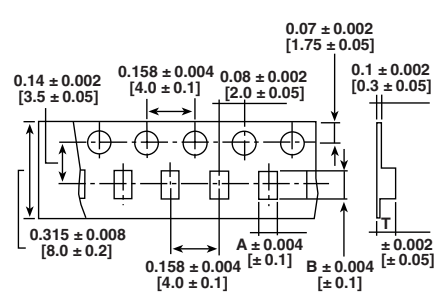
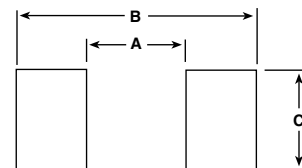


DESCRIPTION				
IMC-1008	10 nH	± 5 %	ER	e4 <sup>(1)</sup>
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

#### Note

<sup>(1)</sup> For parts within 3.3 nH to 910 nH please use e4 for JEDEC lead (Pb)-free standard. For parts within 1000 nH to 47 000 nH please use e3 for JEDEC lead (Pb)-free standard.

GLOBAL PART NUMBER				
I	M	C	1	0
PRODUCT FAMILY			SIZE	
	E	R	1	0
	PACKAGE CODE		INDUCTANCE VALUE	J
				TOL.

**PERFORMANCE GRAPHS IMC-1008**

**TAPE AND REEL SPECIFICATIONS in inches [millimeters]**
**REEL DIMENSIONS**

**TAPE DIMENSIONS**

**RECOMMENDED PATTERN**


MODEL	UNITS PER REEL	MODEL	A	B	T	MODEL	A	B	C
IMC-1008	2000	IMC-1008	0.087 [2.20]	0.110 [2.80]	0.071 [1.80]	IMC-1008	0.047 [1.20]	0.150 [3.80]	0.100 [2.54]



## **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.