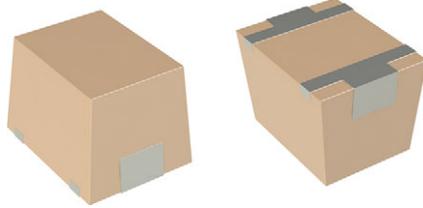




Wirewound, Surface-Mount, Molded RF Inductors



FEATURES

- Molded construction provides superior strength and moisture resistance
- RF inductors for high frequency filtering and impedance matching
- Size: 4.5 mm x 3.2 mm x 3.2 mm
- Non-RoHS terminations available (see package code options below)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

LINKS TO ADDITIONAL RESOURCES



TEST EQUIPMENT

- H/P 4342A Q meter with Vishay Dale test fixture or equivalent
- H/P 4191A RF impedance analyzer (for SRF measurements)
- Wheatstone bridge

ELECTRICAL SPECIFICATIONS

Inductance range: 0.010 μ H to 1000 μ H

Special tolerances available upon request

Operating temperature: -55 °C to +125 °C

Coilform material: non-magnetic for 0.010 μ H to 0.82 μ H; powdered iron for 1.0 μ H to 120 μ H; ferrite for 150 μ H to 1000 μ H

STANDARD ELECTRICAL SPECIFICATIONS							
PART NUMBER	IND. (μ H)	TOL.	TEST FREQ. (MHz)	Q MIN.	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽¹⁾
			L & Q				
IMC1812ES10NM	0.010	\pm 20 %	50.0	50	1000	0.20	450
IMC1812ES12NM	0.012	\pm 20 %	50.0	50	1000	0.20	450
IMC1812ES18NM	0.018	\pm 20 %	50.0	50	1000	0.20	450
IMC1812ES22NM	0.022	\pm 20 %	50.0	50	1000	0.20	450
IMC1812ES27NM	0.027	\pm 20 %	50.0	50	1000	0.20	450
IMC1812ES33NM	0.033	\pm 20 %	50.0	50	1000	0.30	450
IMC1812ES39NM	0.039	\pm 20 %	50.0	50	1000	0.30	450
IMC1812ES47NM	0.047	\pm 20 %	50.0	50	1000	0.30	450
IMC1812ES56NM	0.056	\pm 20 %	50.0	40	900	0.35	450
IMC1812ES68NM	0.068	\pm 20 %	50.0	40	800	0.35	450
IMC1812ES82NM	0.082	\pm 20 %	50.0	40	700	0.40	450
IMC1812ESR10M	0.10	\pm 20 %	25.2	30	650	0.32	450
IMC1812ESR12M	0.12	\pm 20 %	25.2	30	600	0.30	450
IMC1812ESR15M	0.15	\pm 20 %	25.2	30	500	0.30	450
IMC1812ESR18M	0.18	\pm 20 %	25.2	30	400	0.35	450
IMC1812ESR22M	0.22	\pm 20 %	25.2	30	350	0.40	450
IMC1812ESR27M	0.27	\pm 20 %	25.2	30	300	0.45	450
IMC1812ESR33M	0.33	\pm 20 %	25.2	30	250	0.55	430
IMC1812ESR39M	0.39	\pm 20 %	25.2	30	220	0.70	380
IMC1812ESR47K	0.47	\pm 10 %	25.2	30	190	0.80	355
IMC1812ESR56K	0.56	\pm 10 %	25.2	30	170	1.20	285
IMC1812ESR68K	0.68	\pm 10 %	25.2	30	150	1.40	270
IMC1812ESR82K	0.82	\pm 10 %	25.2	30	140	1.60	250
IMC1812ES1R0K	1.0	\pm 10 %	7.96	50	100	0.50	450
IMC1812ES1R2K	1.2	\pm 10 %	7.96	50	80.0	0.55	430
IMC1812ES1R5K	1.5	\pm 10 %	7.96	50	70.0	0.60	410
IMC1812ES1R8K	1.8	\pm 10 %	7.96	50	60.0	0.65	390



STANDARD ELECTRICAL SPECIFICATIONS							
PART NUMBER	IND. (μH)	TOL.	TEST FREQ. (MHz)	Q MIN.	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA) ⁽¹⁾
			L & Q				
IMC1812ES2R2K	2.2	± 10 %	7.96	50	55.0	0.70	380
IMC1812ES2R7K	2.7	± 10 %	7.96	50	50.0	0.75	370
IMC1812ES3R3K	3.3	± 10 %	7.96	50	45.0	0.80	355
IMC1812ES3R9K	3.9	± 10 %	7.96	50	40.0	0.90	330
IMC1812ES4R7K	4.7	± 10 %	7.96	50	35.0	1.00	315
IMC1812ES5R6K	5.6	± 10 %	7.96	50	33.0	1.10	300
IMC1812ES6R8K	6.8	± 10 %	7.96	50	27.0	1.20	285
IMC1812ES8R2K	8.2	± 10 %	7.96	50	25.0	1.40	270
IMC1812ES100K	10.0	± 10 %	2.52	50	20.0	1.60	250
IMC1812ES120K	12.0	± 10 %	2.52	50	18.0	2.00	225
IMC1812ES150K	15.0	± 10 %	2.52	50	17.0	2.50	200
IMC1812ES180K	18.0	± 10 %	2.52	50	15.0	2.80	190
IMC1812ES220K	22.0	± 10 %	2.52	50	13.0	3.20	180
IMC1812ES270K	27.0	± 10 %	2.52	50	12.0	3.60	170
IMC1812ES330K	33.0	± 10 %	2.52	50	11.0	4.00	160
IMC1812ES390K	39.0	± 10 %	2.52	50	11.0	4.50	150
IMC1812ES470K	47.0	± 10 %	2.52	50	10.0	5.00	140
IMC1812ES560K	56.0	± 10 %	2.52	50	9.0	5.50	135
IMC1812ES680K	68.0	± 10 %	2.52	50	9.0	6.00	130
IMC1812ES820K	82.0	± 10 %	2.52	50	8.0	7.00	120
IMC1812ES101K	100.0	± 10 %	0.79	40	8.0	8.00	110
IMC1812ES121K	120.0	± 10 %	0.79	40	6.0	8.00	110
IMC1812ES151K	150.0	± 10 %	0.79	40	5.0	9.00	105
IMC1812ES181K	180.0	± 10 %	0.79	40	5.0	9.50	102
IMC1812ES221K	220.0	± 10 %	0.79	40	4.0	10.0	100
IMC1812ES271K	270.0	± 10 %	0.79	40	4.0	12.0	92
IMC1812ES331K	330.0	± 10 %	0.79	40	3.5	14.0	85
IMC1812ES391K	390.0	± 10 %	0.79	40	3.0	16.0	80
IMC1812ES471K	470.0	± 10 %	0.79	40	3.0	26.0	62
IMC1812ES561K	560.0	± 10 %	0.79	30	3.0	30.0	50
IMC1812ES681K	680.0	± 10 %	0.79	30	3.0	30.0	50
IMC1812ES821K	820.0	± 10 %	0.79	30	2.5	35.0	30
IMC1812ES102K	1000.0	± 10 %	0.25	30	2.5	40.0	30

Note

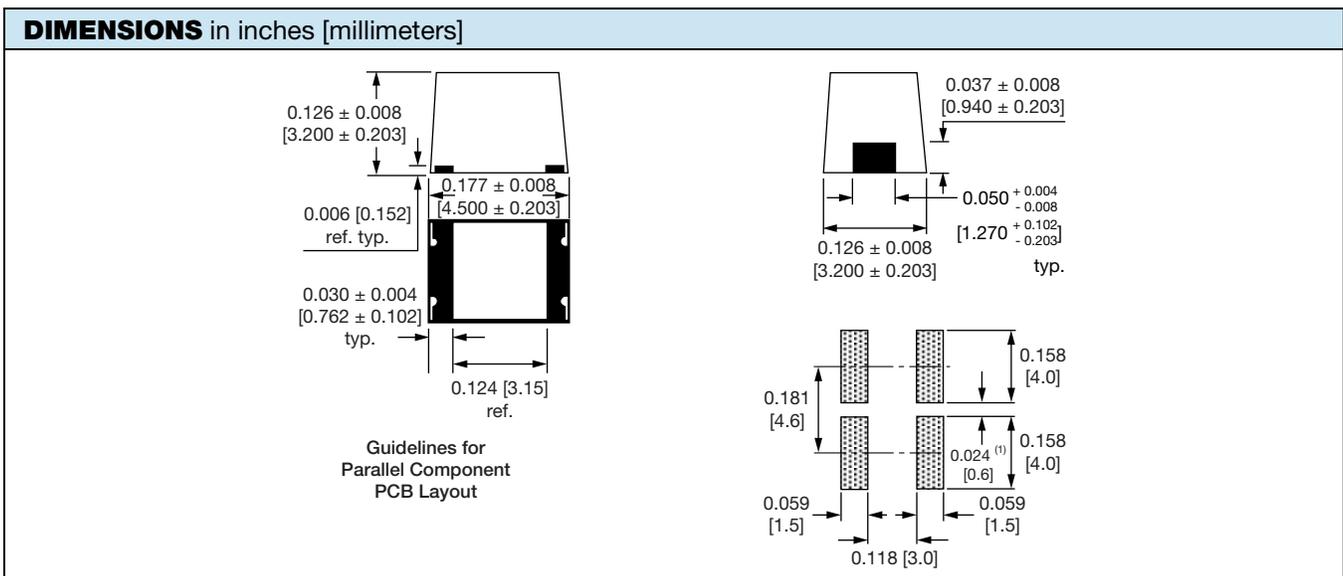
(1) Rated DC current based on the maximum temperature rise, not to exceed 40 °C at +85 °C ambient

PART MARKING
- DALE
- Inductance code
- Date code

DESCRIPTION			
IMC-1812	10 μH	$\pm 10\%$	ES
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE

GLOBAL PART NUMBER				
I M C PRODUCT FAMILY	1 8 1 2 SIZE	E S PACKAGE CODE ES = tape and reel	1 0 0 INDUCTANCE VALUE 100 = 10 μ H	K INDUCTANCE TOLERANCE M = $\pm 20\%$ K = $\pm 10\%$ J = $\pm 5\%$ H = $\pm 3\%$

PACKAGE CODE & TERMINATION OPTIONS
ES = RoHS compliant with tape and reel packaging (2000 pcs on 13-inch reel)
ER = RoHS compliant with tape and reel packaging (500 pcs on 7-inch reel)
EB = RoHS compliant with bulk packaging (500 pcs/bulk)
RQ = non-RoHS tin-lead with tape and reel packaging (2000 pcs on 13-inch reel)
RV = non-RoHS tin-lead with tape and reel packaging (500 pcs on 7-inch reel)
BN = non-RoHS tin-lead with bulk packaging (500 pcs/bulk)



Note
 (1) Recommended minimum spacing between components



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.