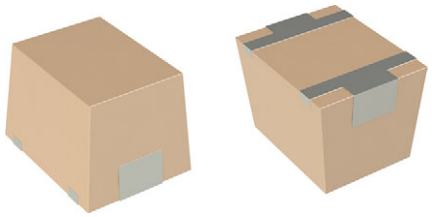
Wirewound, Surface-Mount, Molded RF Inductors



LINKS TO ADDITIONAL RESOURCES

Product Page

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

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

Pb-free

RoHS COMPLIANT

ELECTRICAL SPECIFICATIONS

Inductance range: 0.010 µH to 1000 µH

Special tolerances available upon request

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

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

STANDARD ELECTRICAL SPECIFICATIONS

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

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	IND. (µH)	TOL.	TEST FREQ. (MHz) L & Q	Q MIN.	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA) (1)
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	± 10 %	ES
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE

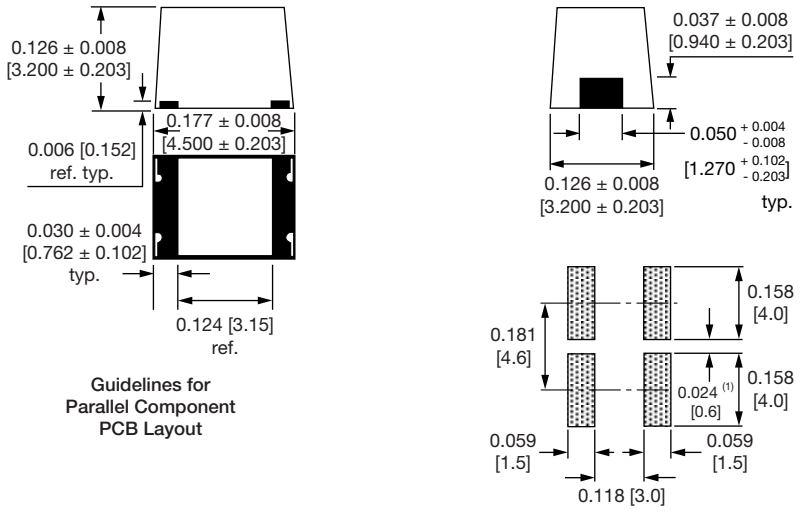
GLOBAL PART NUMBER

I M C	1 8 1 2	E S	1 0 0	K
PRODUCT FAMILY	SIZE	PACKAGE CODE	INDUCTANCE VALUE	INDUCTANCE TOLERANCE
		ES = tape and reel	**100** = 10 µH	**M** = ± 20 % **K** = ± 10 % **J** = ± 5 % **H** = ± 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)

DIMENSIONS in inches [millimeters]



Guidelines for
Parallel Component
PCB Layout

Note

(1) Recommended minimum spacing between components

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