

Inductors, Miniature, Shielded, Axial Leaded



ELECTRICAL SPECIFICATIONS

Inductance Tolerance: $\pm 10\%$ on Q-meter for 0.10 μH to 22 μH $\pm 5\%$ on 1KC bridge for 27 μH to 1000 μH
 $\pm 10\%$ on 1KC bridge for 1200 μH to 56 000 μH

Dielectric Strength: 700 V_{RMS} at sea level

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

Self-Resonant Frequency: Minimum SRF measured with full length leads on grid-dip meter

Q: Measured on a Q-meter

Maximum Current: Based on temperature rise not to exceed 40 °C at + 85 °C ambient

FEATURES

- Miniature shielded inductor
- High inductance-to-size ratio
- Inductance range is 0.10 μH to 56 000 μH
- Encapsulated non-flammable shielded unit
- 0.164" [4.17 mm] diameter by 0.450" [11.43 mm] long envelope
- Offers extremely high inductance for density packaging
- Compliant to RoHS Directive 2002/95/EC



RoHS
COMPLIANT

MECHANICAL SPECIFICATIONS

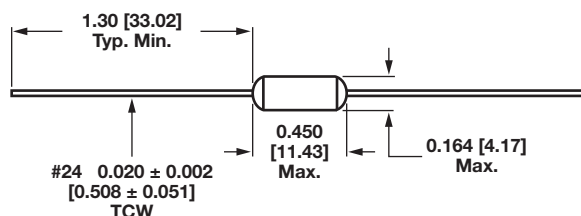
Terminal Strength: Meets 5 lb pull test

DENSITY SPECIFICATIONS

Weight: 0.75 g maximum

Shielding: Less than 3 % coupling with two units mounted side by side at 1000 cycles

DIMENSIONS in inches [millimeters]



STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. (μH)	TOL. (%)	Q MIN.	TEST FREQUENCY Q (MHz)	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA)	INCREMENTAL CURRENT (mA) ⁽¹⁾	
IMS-5WD-40	0.10	± 10	55	25	400	0.020	4000	4000	PHENOLIC
IMS-5WD-40	0.12	± 10	55	25	400	0.029	3350	3350	
IMS-5WD-40	0.15	± 10	55	25	400	0.032	3000	3000	
IMS-5WD-40	0.18	± 10	50	25	366	0.040	2850	2850	
IMS-5WD-40	0.22	± 10	56	25	331	0.045	2700	2700	
IMS-5WD-40	0.27	± 10	50	25	298	0.08	2000	2000	
IMS-5WD-40	0.33	± 10	48	25	270	0.09	1900	1900	
IMS-5WD-40	0.39	± 10	48	25	248	0.16	1420	1420	
IMS-5WD-40	0.47	± 10	48	25	226	0.17	1400	1400	
IMS-5WD-40	0.56	± 10	45	25	206	0.36	960	960	
IMS-5WD-40	0.68	± 10	45	25	188	0.37	940	940	IRON
IMS-5WD-40	0.82	± 10	41	25	171	0.46	870	870	
IMS-5WD-40	1.0	± 10	42	7.9	131	0.062	2300	2300	
IMS-5WD-40	1.2	± 10	43	7.9	120	0.067	2200	2200	
IMS-5WD-40	1.5	± 10	41	7.9	108	0.16	1420	1420	
IMS-5WD-40	1.8	± 10	42	7.9	99	0.17	1370	1370	
IMS-5WD-40	2.2	± 10	42	7.9	90	0.19	1300	1300	
IMS-5WD-40	2.7	± 10	41	7.9	86	0.20	1270	1270	
IMS-5WD-40	3.3	± 10	40	7.9	73	0.31	1030	1030	

Note

⁽¹⁾ Incremental current: The DC current required to cause a 5 % reduction in the nominal inductance value

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	IND. (μ H)	TOL. (%)	Q MIN.	TEST FREQUENCY Q (MHz)	SRF MIN. (MHz)	DCR MAX. (Ω)	RATED DC CURRENT (mA)	INCREMENTAL CURRENT (mA) ⁽¹⁾	
IMS-5WD-40	3.9	± 10	40	7.9	68	0.33	1000	1000	IRON
IMS-5WD-40	4.7	± 10	40	7.9	61	0.58	750	750	
IMS-5WD-40	5.6	± 10	40	7.9	56	0.64	710	710	
IMS-5WD-40	6.8	± 10	40	7.9	51	0.68	680	680	
IMS-5WD-40	8.2	± 10	45	2.5	46	1.3	500	500	
IMS-5WD-40	10	± 10	46	2.5	42	1.4	480	480	
IMS-5WD-40	12	± 10	47	2.5	38	1.5	460	460	
IMS-5WD-40	15	± 10	47	2.5	34	1.7	440	440	
IMS-5WD-40	18	± 10	45	2.5	43	0.88	610	235	FERRITE
IMS-5WD-40	22	± 10	47	2.5	38	0.95	590	220	
IMS-5WD-40	27	± 10	42	2.5	35	1.15	530	200	
IMS-5WD-40	33	± 10	43	2.5	32	1.2	520	193	
IMS-5WD-40	39	± 10	45	2.5	30	1.6	450	183	
IMS-5WD-40	47	± 10	46	2.5	26	1.8	420	177	
IMS-5WD-40	56	± 10	40	2.5	24	2.2	390	170	
IMS-5WD-40	68	± 10	40	2.5	22	2.3	375	165	
IMS-5WD-40	82	± 10	42	0.79	14	2.4	360	160	
IMS-5WD-40	100	± 10	63	0.79	12	2.6	345	157	
IMS-5WD-40	120	± 10	62	0.79	11	2.9	330	145	
IMS-5WD-40	150	± 10	63	0.79	10	3.3	315	126	
IMS-5WD-40	180	± 10	60	0.79	9.2	3.6	300	110	
IMS-5WD-40	220	± 10	57	0.79	8.8	4.1	280	105	
IMS-5WD-40	270	± 10	52	0.79	8.0	4.8	260	91	
IMS-5WD-40	330	± 10	50	0.79	7.2	5.6	240	87	
IMS-5WD-40	390	± 10	43	0.79	6.8	6.2	230	72	
IMS-5WD-40	470	± 10	66	0.79	6.4	10.0	180	67	
IMS-5WD-40	560	± 10	64	0.79	6.0	11.5	170	65	
IMS-5WD-40	680	± 10	71	0.79	5.2	12.0	160	60	
IMS-5WD-40	820	± 10	67	0.79	4.8	13.8	150	55	
IMS-5WD-40	1000	± 10	62	0.250	4.5	16.0	140	52	
IMS-5WD-40	1200	± 10	52	0.250	1.2	18.2	135	50	
IMS-5WD-40	1500	± 10	51	0.250	1.2	23.7	118	48	
IMS-5WD-40	1800	± 10	51	0.250	1.1	30.2	105	42	
IMS-5WD-40	2200	± 10	50	0.250	1.0	33.7	99	37	
IMS-5WD-40	2700	± 10	51	0.250	0.94	43.1	87	33	
IMS-5WD-40	3300	± 10	52	0.250	0.84	48.7	82	30	
IMS-5WD-40	3900	± 10	48	0.250	0.77	62.7	72	29	
IMS-5WD-40	4700	± 10	48	0.250	0.67	70.5	68	28	
IMS-5WD-40	5600	± 10	48	0.250	0.65	104	56	24	
IMS-5WD-40	6800	± 10	45	0.250	0.59	118	53	20	
IMS-5WD-40	8200	± 10	38	0.250	0.46	146	47	18	
IMS-5WD-40	10 000	± 10	36	0.079	0.38	76.6	66	15	
IMS-5WD-40	12 000	± 10	36	0.079	0.30	109	55	14	
IMS-5WD-40	15 000	± 10	38	0.079	0.26	119	52	13	
IMS-5WD-40	18 000	± 10	38	0.079	0.24	138	49	13	
IMS-5WD-40	22 000	± 10	32	0.079	0.23	219	39	12	
IMS-5WD-40	27 000	± 10	32	0.079	0.22	259	35	12	
IMS-5WD-40	33 000	± 10	32	0.079	0.20	296	33	11	
IMS-5WD-40	39 000	± 10	30	0.079	0.17	395	29	10	
IMS-5WD-40	47 000	± 10	25	0.079	0.16	452	27	9	
IMS-5WD-40	56 000	± 10	25	0.079	0.15	499	26	8	

Note

⁽¹⁾ Incremental current: The DC current required to cause a 5 % reduction in the nominal inductance value

**MARKING**

- Model
- Inductance value
- Tolerance
- Date code

ORDERING INFORMATION

IMS-5WD-40	0.10 μ H	10 %	ER	e2
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	M	S	0	5	W	D	E	R	R	1	0	K	4	0
MODEL							PACKAGE CODE		INDUCTANCE VALUE			INDUCTANCE TOLERANCE	SERIES	



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.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. 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.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.