



Inductors, Miniature, Shielded, Axial Leaded



ELECTRICAL SPECIFICATIONS

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

Dielectric Strength: $700\ \text{V}_{\text{RMS}}$ at sea level

Operating Temperature: $-55\ ^\circ\text{C}$ to $+125\ ^\circ\text{C}$

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 $40\ ^\circ\text{C}$ at $+85\ ^\circ\text{C}$ ambient

FEATURES

- Miniature shielded inductor
- High inductance-to-size ratio
- Inductance range is $0.10\ \mu\text{H}$ to $56\ 000\ \mu\text{H}$
- Encapsulated non-flammable shielded unit
- $0.164"$ [$4.17\ \text{mm}$] diameter by $0.450"$ [$11.43\ \text{mm}$] long envelope
- Offers extremely high inductance for density packaging
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

MECHANICAL SPECIFICATIONS

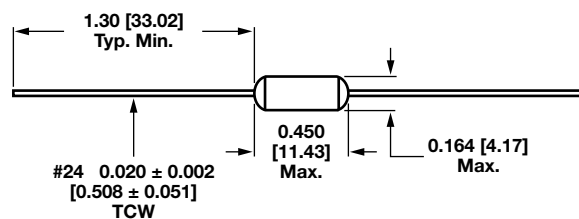
Terminal Strength: Meets 5 lb pull test

DENSITY SPECIFICATIONS

Weight: $0.75\ \text{g}$ 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	



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