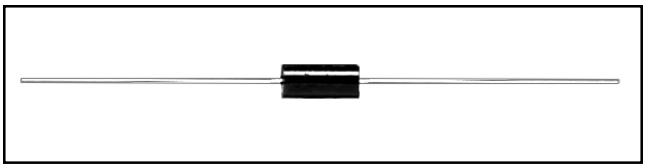
Models IM-4x-ER and IM-6x-ER

Vishay Dale

Inductors

Military/Established Reliability
MIL-C-39010 Qualified, M39010/04/05/06/07



ELECTRICAL SPECIFICATIONS

Inductance Tolerance: ± 5%, ± 10%, ± 20% for .15µH to .47µH. ± 5%, ± 10% for .51µH and up.

Dielectric Strength: 1000V RMS at sea level.

Operating Temperature: - 55°C to + 125°C, phenolic core. - 55°C to + 105°C, iron core.

Self-Resonant Frequency: Measured per MIL-C-39010.

Maximum Current: Based on 35°C rise at + 90°C ambient for phenolic core. 15°C rise for iron core.

MECHANICAL SPECIFICATIONS

Terminal Strength: Meets 5 pound pull test; three 360° rotations in alternate directions per MIL-C-39010.

FEATURES

- MIL-C-39010/04 (Phenolic Core).
- MIL-C-39010/05 (Iron Core).
- MIL-C-39010/06 (Phenolic Core).
- MIL-C-39010/07 (Iron Core).

DENSITY SPECIFICATIONS

Weight: IM-4A-ER and IM-4B-ER = .90 gram maximum. IM-6A-ER and IM-6B-ER = .95 gram maximum.

ENVIRONMENTAL SPECIFICATIONS

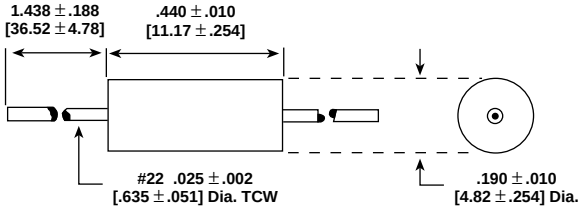
Moisture: Meets requirements of MIL-C-39010 (latest revision).

Vibration: High frequency, 10Hz to 2000Hz @ 20 G ± 10% maximum for 12 logarithmic swings each of 20 minute duration repeated for each of three mutually perpendicular planes.

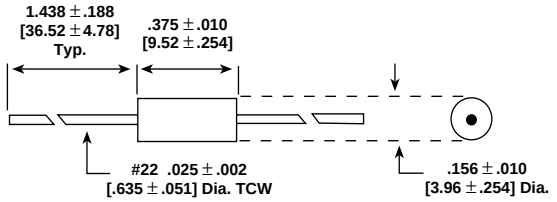
Shock: 100 G, 6 MS.

DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]

IM-6x-ER



IM-4x-ER



STANDARD ELECTRICAL SPECIFICATIONS

MODEL	MIL-C-39010 TYPE	DASH † NUMBER	IND. (µH)	TOLERANCE	Q MIN.	TEST FREQ. (MHz)	SELF-RESONANT FREQ. MIN. (MHz)	DCR + 25°C MAX. (Ohms)	RATED DC * CURRENT (mA)
IM-6A-ER	M39010/04	BR15**	.15	± 5%, ± 10%, ± 20%	55	25	510	.030	2900
IM-6A-ER	M39010/04	BR16**	.16	± 5%	50	25	415	.035	2700
IM-6A-ER	M39010/04	BR18**	.18	± 5%, ± 10%	50	25	415	.035	2700
IM-6A-ER	M39010/04	BR20**	.20	± 5%	50	25	415	.035	2700
IM-6A-ER	M39010/04	BR22**	.22	± 5%, ± 10%, ± 20%	50	25	415	.035	2700
IM-6A-ER	M39010/04	BR24**	.24	± 5%	50	25	350	.065	2000
IM-6A-ER	M39010/04	BR27**	.27	± 5%, ± 10%	50	25	350	.065	2000
IM-6A-ER	M39010/04	BR30**	.30	± 5%	50	25	350	.065	2000
IM-6A-ER	M39010/04	BR33**	.33	± 5%, ± 10%, ± 20%	50	25	350	.065	2000
IM-6A-ER	M39010/04	BR36**	.36	± 5%	50	25	300	.085	1700
IM-6A-ER	M39010/04	BR39**	.39	± 5%, ± 10%	50	25	300	.085	1700
IM-6A-ER	M39010/04	BR43**	.43	± 5%	50	25	300	.085	1700
IM-6A-ER	M39010/04	BR47**	.47	± 5%, ± 10%, ± 20%	50	25	300	.085	1700
IM-6A-ER	M39010/04	BR51**	.51	± 5%	50	25	270	.125	1450
IM-6A-ER	M39010/04	BR56**	.56	± 5%, ± 10%	50	25	270	.125	1450

† The complete Dash Number will include two additional letters (indicated by **). The first additional letter (J = 5%, K= 10%, L = 20%) will indicate the inductance tolerance and the second additional letter will indicate the failure rate symbol (e.g., M, P, R, S) and will be added to the end of the Dash Number. *The Rated DC Current is based on + 90°C ambient temperature with a 15°C rise.

NOTE: Listing of Military Standard does not imply qualification. Contact factory for latest government QPL information.

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	MIL-C-39010 TYPE	DASH † NUMBER	IND. (μH)	TOLERANCE	Q MIN.	TEST FREQ. (MHz)	SELF-RESONANT FREQ. MIN. (MHz)	DCR + 25°C MAX. (Ohms)	RATED DC* CURRENT (mA)
IM-6A-ER	M39010/04	BR62**	.62	± 5%	45	25	250	.150	1300
IM-6A-ER	M39010/04	BR68**	.68	± 5%, ± 10%	45	25	250	.150	1300
IM-6A-ER	M39010/04	BR75**	.75	± 5%	40	25	210	.205	1100
IM-6A-ER	M39010/04	BR82**	.82	± 5%, ± 10%	40	25	210	.205	1100
IM-6A-ER	M39010/04	BR91**	.91	± 5%	40	25	200	.290	930
IM-6A-ER	M39010/04	B1R0**	1.00	± 5%, ± 10%	40	25	200	.290	930
IM-6A-ER	M39010/04	B1R1**	1.10	± 5%	30	7.9	180	.400	785
IM-6A-ER	M39010/04	B1R2**	1.20	± 5%, ± 10%	30	7.9	180	.400	785
IM-6A-ER	M39010/04	B1R3**	1.30	± 5%	30	7.9	170	.485	720
IM-6A-ER	M39010/04	B1R5**	1.50	± 5%, ± 10%	30	7.9	170	.485	720
IM-6A-ER	M39010/04	B1R6**	1.60	± 5%	30	7.9	150	.740	580
IM-6A-ER	M39010/04	B1R8**	1.80	± 5%, ± 10%	30	7.9	150	.740	580
IM-6A-ER	M39010/04	B2R0**	2.00	± 5%	30	7.9	140	.970	505
IM-6A-ER	M39010/04	B2R2**	2.20	± 5%, ± 10%	30	7.9	140	.970	505
IM-6A-ER	M39010/04	B2R4**	2.40	± 5%	30	7.9	120	1.20	460
IM-6A-ER	M39010/04	B2R7**	2.70	± 5%, ± 10%	30	7.9	120	1.20	460
IM-6B-ER	M39010/05	A3R0**	3.00	± 5%	30	7.9	70	.140	945
IM-6B-ER	M39010/05	A3R3**	3.30	± 5%, ± 10%	30	7.9	70	.140	945
IM-6B-ER	M39010/05	A3R6**	3.60	± 5%	30	7.9	65	.155	870
IM-6B-ER	M39010/05	A3R9**	3.90	± 5%, ± 10%	30	7.9	65	.155	870
IM-6B-ER	M39010/05	A4R3**	4.30	± 5%	30	7.9	60	.210	745
IM-6B-ER	M39010/05	A4R7**	4.70	± 5%, ± 10%	30	7.9	60	.210	745
IM-6B-ER	M39010/05	A5R1**	5.10	± 5%	30	7.9	50	.280	645
IM-6B-ER	M39010/05	A5R6**	5.60	± 5%, ± 10%	30	7.9	50	.280	645
IM-6B-ER	M39010/05	A6R2**	6.20	± 5%	30	7.9	50	.375	560
IM-6B-ER	M39010/05	A6R8**	6.80	± 5%, ± 10%	30	7.9	50	.375	560
IM-6B-ER	M39010/05	A7R5**	7.50	± 5%	30	7.9	48	.440	520
IM-6B-ER	M39010/05	A8R2**	8.20	± 5%, ± 10%	30	7.9	48	.440	520
IM-6B-ER	M39010/05	A9R1**	9.10	± 5%	30	7.9	42	.605	440
IM-6B-ER	M39010/05	A100**	10	± 5%, ± 10%	30	7.9	42	.605	440
IM-6B-ER	M39010/05	A110**	11	± 5%	30	2.5	36	1.05	335
IM-6B-ER	M39010/05	A120**	12	± 5%, ± 10%	50	2.5	36	1.05	335
IM-6B-ER	M39010/05	A130**	13	± 5%	50	2.5	30	1.20	310
IM-6B-ER	M39010/05	A150**	15	± 5%, ± 10%	55	2.5	30	1.20	310
IM-6B-ER	M39010/05	A160**	16	± 5%	55	2.5	30	1.95	245
IM-6B-ER	M39010/05	A180**	18	± 5%, ± 10%	60	2.5	30	1.95	245
IM-6B-ER	M39010/05	A200**	20	± 5%	60	2.5	24	2.20	230
IM-6B-ER	M39010/05	A220**	22	± 5%, ± 10%	60	2.5	24	2.20	230
IM-6B-ER	M39010/05	A240**	24	± 5%	60	2.5	22	2.75	205
IM-6B-ER	M39010/05	A270**	27	± 5%, ± 10%	65	2.5	22	2.75	205
IM-4A-ER	M39010/06	BR15**	.15	± 5%, ± 10%, ± 20%	50	25	525	.030	2450
IM-4A-ER	M39010/06	BR16**	.16	± 5%	50	25	460	.055	1810
IM-4A-ER	M39010/06	BR18**	.18	± 5%, ± 10%	50	25	460	.055	1810
IM-4A-ER	M39010/06	BR20**	.20	± 5%	50	25	460	.055	1810
IM-4A-ER	M39010/06	BR22**	.22	± 5%, ± 10%, ± 20%	50	25	460	.055	1810
IM-4A-ER	M39010/06	BR24**	.24	± 5%	45	25	360	.090	1400
IM-4A-ER	M39010/06	BR27**	.27	± 5%, ± 10%	45	25	360	.090	1400
IM-4A-ER	M39010/06	BR30**	.30	± 5%	45	25	360	.090	1400
IM-4A-ER	M39010/06	BR33**	.33	± 5%, ± 10%, ± 20%	45	25	360	.090	1400
IM-4A-ER	M39010/06	BR36**	.36	± 5%	45	25	310	.12	1225
IM-4A-ER	M39010/06	BR39**	.39	± 5%, ± 10%	45	25	310	.12	1225
IM-4A-ER	M39010/06	BR43**	.43	± 5%	45	25	310	.12	1225
IM-4A-ER	M39010/06	BR47**	.47	± 5%, ± 10%, ± 20%	45	25	310	.12	1225

† The complete Dash Number will include two additional letters (indicated by **). The first additional letter will indicate the inductance tolerance and the second additional letter will indicate the failure rate symbol (e.g., M, P, R, S) and will be added to the end of the Dash Number. *The Rated DC Current is based on + 90°C ambient temperature with a 15°C rise.

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STANDARD ELECTRICAL SPECIFICATIONS

MODEL	MIL-C-39010 TYPE	DASH † NUMBER	IND. (μH)	TOLERANCE	Q MIN.	TEST FREQ. (MHz)	SELF-RESONANT FREQ. MIN. (MHz)	DCR + 25°C MAX. (Ohms)	RATED DC* CURRENT (mA)
IM-4A-ER	M39010/06	BR51**	.51	± 5%	45	25	280	.135	1150
IM-4A-ER	M39010/06	BR56**	.56	± 5%, ± 10%	50	25	280	.135	1150
IM-4A-ER	M39010/06	BR62**	.62	± 5%	50	25	250	.150	1100
IM-4A-ER	M39010/06	BR68**	.68	± 5%, ± 10%	50	25	250	.150	1100
IM-4A-ER	M39010/06	BR75**	.75	± 5%	50	25	220	.220	900
IM-4A-ER	M39010/06	BR82**	.82	± 5%, ± 10%	50	25	220	.220	900
IM-4A-ER	M39010/06	BR91**	.91	± 5%	50	25	200	.290	785
IM-4A-ER	M39010/06	B1R0**	1.0	± 5%, ± 10%	50	25	200	.290	785
IM-4A-ER	M39010/06	B1R1**	1.1	± 5%	33	7.9	180	.420	650
IM-4A-ER	M39010/06	B1R2**	1.2	± 5%, ± 10%	33	7.9	180	.420	650
IM-4A-ER	M39010/06	B1R3**	1.3	± 5%	33	7.9	160	.500	600
IM-4A-ER	M39010/06	B1R5**	1.5	± 5%, ± 10%	33	7.9	160	.500	600
IM-4A-ER	M39010/06	B1R6**	1.6	± 5%	33	7.9	150	.650	525
IM-4A-ER	M39010/06	B1R8**	1.8	± 5%, ± 10%	33	7.9	150	.650	525
IM-4A-ER	M39010/06	B2R0**	2.0	± 5%	33	7.9	135	.950	435
IM-4A-ER	M39010/06	B2R2**	2.2	± 5%, ± 10%	33	7.9	135	.950	435
IM-4A-ER	M39010/06	B2R4**	2.4	± 5%	33	7.9	120	1.20	385
IM-4A-ER	M39010/06	B2R7**	2.7	± 5%, ± 10%	33	7.9	120	1.20	385
IM-4A-ER	M39010/06	B3R0**	3.0	± 5%	33	7.9	110	2.00	300
IM-4A-ER	M39010/06	B3R3**	3.3	± 5%, ± 10%	33	7.9	110	2.00	300
IM-4A-ER	M39010/06	B3R6**	3.6	± 5%	33	7.9	100	2.30	280
IM-4A-ER	M39010/06	B3R9**	3.9	± 5%, ± 10%	33	7.9	100	2.30	280
IM-4A-ER	M39010/06	B4R3**	4.3	± 5%	33	7.9	90	2.60	260
IM-4A-ER	M39010/06	B4R7**	4.7	± 5%, ± 10%	33	7.9	90	2.60	260
IM-4B-ER	M39010/07	A5R1**	5.1	± 5%	45	7.9	60	.32	495
IM-4B-ER	M39010/07	A5R6**	5.6	± 5%, ± 10%	45	7.9	60	.32	495
IM-4B-ER	M39010/07	A6R2**	6.2	± 5%	45	7.9	55	.50	395
IM-4B-ER	M39010/07	A6R8**	6.8	± 5%, ± 10%	50	7.9	55	.50	395
IM-4B-ER	M39010/07	A7R5**	7.5	± 5%	50	7.9	50	.60	360
IM-4B-ER	M39010/07	A8R2**	8.2	± 5%, ± 10%	50	7.9	50	.60	360
IM-4B-ER	M39010/07	A9R1**	9.1	± 5%	50	7.9	45	.90	290
IM-4B-ER	M39010/07	A100**	10	± 5%, ± 10%	55	7.9	45	.90	290
IM-4B-ER	M39010/07	A110**	11	± 5%	55	2.5	42	1.10	265
IM-4B-ER	M39010/07	A120**	12	± 5%, ± 10%	65	2.5	42	1.10	265
IM-4B-ER	M39010/07	A130**	13	± 5%	65	2.5	40	1.40	240
IM-4B-ER	M39010/07	A150**	15	± 5%, ± 10%	65	2.5	40	1.40	240
IM-4B-ER	M39010/07	A160**	16	± 5%	65	2.5	34	2.25	185
IM-4B-ER	M39010/07	A180**	18	± 5%, ± 10%	75	2.5	34	2.25	185
IM-4B-ER	M39010/07	A200**	20	± 5%	75	2.5	30	2.50	175
IM-4B-ER	M39010/07	A220**	22	± 5%, ± 10%	75	2.5	30	2.50	175
IM-4B-ER	M39010/07	A240**	24	± 5%	60	2.5	25	2.60	170
IM-4B-ER	M39010/07	A270**	27	± 5%, ± 10%	60	2.5	25	2.60	170
IM-4B-ER	M39010/07	A300**	30	± 5%	60	2.5	19	3.00	165
IM-4B-ER	M39010/07	A330**	33	± 5%, ± 10%	65	2.5	19	3.00	165

† The complete Dash Number will include two additional letters (indicated by **). The first additional letter will indicate the inductance tolerance and the second additional letter will indicate the failure rate symbol (e.g., M, P, R, S) and will be added to the end of the Dash Number. *The Rated DC Current is based on + 90°C ambient temperature with a + 15°C rise.

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PART MARKING

— Military part number

— Manufacturer's source code

— "JAN" marking, date code and lot symbol

HOW TO ORDER - MILITARY PART NUMBER

M39010	04	B	1R0	K	R
MIL. SPEC. NO. INDICATING MIL-C-39010	MIL. SPEC. SHEET NO.	TEMPERATURE CLASS	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	FAILURE RATE LEVEL