MSCDRI-DB318 SERIES

SMD Power Inductors

FEATURES

1.8mm Max. height and 4.0mm Max. square.
Magnetically shielded and low DC resistance.
Ideal for DC-DC converter choke coil for portable equipments

APPLICATIONS

Power supply for VTRs.
OA equipment.
LCD televisions.
Notebook PCs.
Portable communication equipment.
DC / DC converters, etc.

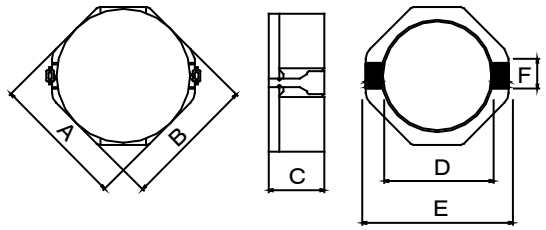
PRODUCT IDENTIFICATION

❶ ❷ ❸❹ ❺

MSCDRI - DB318 - 100M □□

❶ Product Code
❷ Dimensions Code
❸ Inductance Code
❹ Tolerance Code
❺ Pattern Code

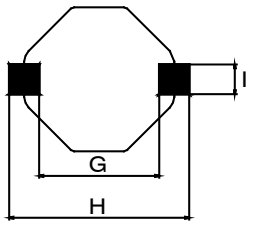
PRODUCT SERIES



NOTES: DIMENSION IN mm

Part No.	A	B	C	D	E	F
MSCDRI-DB318	3.8±0.2	3.8±0.2	1.8Max.	2.7	4.5	1.0

LAND PATTERN



NOTES: DIMENSION IN mm

Part No.	G	H	I
MSCDRI-DB318	2.2	5.1	1.5

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μH)	DC Resistance(Ω)	Permissible DC Current(A)Max.		
		Max.	**10%**	**30%**	**40℃**
3R3	3.3	0.07	0.94	1.20	1.64
3R9	3.9	0.09	0.86	1.10	1.37
4R7	4.7	0.10	0.85	1.07	1.29
5R6	5.6	0.12	0.81	1.02	1.23
6R8	6.8	0.13	0.69	0.89	1.10
8R2	8.2	0.16	0.59	0.75	1.05
100	10	0.18	0.58	0.74	0.99
120	12	0.23	0.55	0.70	0.78
150	15	0.26	0.48	0.61	0.74
180	18	0.33	0.42	0.53	0.63
220	22	0.44	0.39	0.51	0.53

1. TEST FREQ. (L): @100KHz/250mV
2. TOLERANCE OF INDUCTANCE: 1～8.2μH±30%(N)　10～22μH±20%(M)
3. The max. permissible DC current is the DC current applied which causes 10% or 30% reduction of its initial inductance value, or the coil temperature to rise by 40℃, whichever is lower.

MSCDRI-SD SERIES

SMD Power Inductors

FEATURES

Compact and thin.
Large permissible D.C. current and low D.C. resistance

APPLICATIONS

Digital Still Cameras, Portable DVD players, and PDAs
GPS systems

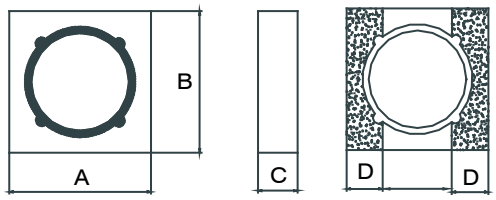
PRODUCT IDENTIFICATION

❶ ❷ ❸❹ ❺

MSCDRI - SD10 - 100M □□

❶ Product Code
❷ Dimensions Code
❸ Inductance Code
❹ Tolerance Code
❺ Pattern Code

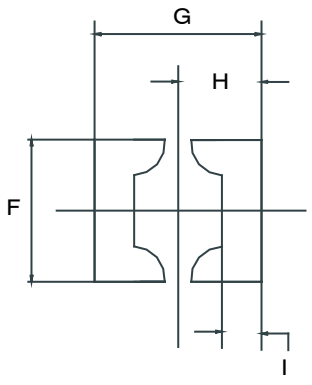
PRODUCT SERIES



NOTES: DIMENSION IN mm

PART NO.	A	B	C	D	E
MSCDRI-SD10	5.2 Max.	5.2 Max.	1.0 Max.	1.5 Typ.	2.0 Typ.
MSCDRI-SD12	5.2 Max.	5.2 Max.	1.2 Max.	1.5 Typ.	2.0 Typ.
MSCDRI-SD18	5.2 Max.	5.2 Max.	1.8 Max.	1.5 Typ.	2.0 Typ.
MSCDRI-SD20	5.2 Max.	5.2 Max.	2.0 Max.	1.5 Typ.	2.0 Typ.
MSCDRI-SD25	5.2 Max.	5.2 Max.	2.5 Max.	1.5 Typ.	2.0 Typ.

LAND PATTERN



NOTES: DIMENSION IN mm

PART NO.	F	G	H	I
MSCDRI-SD10	5.15	5.95	2.975	1.00
MSCDRI-SD12	5.15	5.95	2.975	1.00
MSCDRI-SD18	5.15	5.95	2.975	1.00
MSCDRI-SD20	5.15	5.95	2.975	1.00
MSCDRI-SD25	5.15	5.95	2.975	1.00

PRODUCT SPECIFICATIONS

Part No.	Inductance (μH)	DC Resistance(Ω)Typ.					Permissible DC Irms(A)Max.					Permissible DC Current(A)Max.				
		SD10	SD12	SD18	SD20	SD25	SD10	SD12	SD18	SD20	SD25	SD10	SD12	SD18	SD20	SD25
R47	0.47	0.0249	0.0246	0.0201	0.0200	0.0177	2.59	3.19	3.58	3.59	3.88	3.54	3.86	4.63	4.00	6.00
R82	0.82			0.0247		0.0208			3.24		3.58			3.60		4.67
1R0	1.00	0.0448					1.93					2.25				
1R2	1.20		0.0366	0.0294	0.0275	0.0240		2.62	2.97	3.07	3.33		2.45	2.95	2.55	3.81
1R5	1.50	0.0653	0.0521	0.0345	0.0312	0.0274	1.60	2.19	2.73	2.88	3.12	1.91	2.08	2.49	2.15	3.23
2R2	2.20	0.0912	0.0747	0.0398	0.0429	0.0311	1.35	1.83	2.55	2.45	2.93	1.65	1.80	2.16	1.87	2.80
3R3	3.30	0.1078	0.1043	0.0605	0.0547	0.0384	1.24	1.55	2.07	2.17	2.64	1.31	1.42	1.71	1.47	2.21
4R7	4.70	0.1535	0.1177	0.0824	0.0612	0.0467	1.04	1.46	1.77	2.05	2.39	1.08	1.29	1.54	1.33	1.83
6R2	6.20	0.1870	0.1699	0.1000	0.0720		0.94	1.21	1.61	1.89		0.92	1.08	1.30	1.12	
6R8	6.80					0.0556					2.19					1.56
8R2	8.20	0.2607	0.2399	0.1351	0.1000	0.0724	0.80	1.02	1.38	1.61	1.92	0.80	0.931	1.12	0.966	1.45
100	10	0.2888	0.2844	0.1584	0.1100	0.0824	0.76	0.938	1.28	1.53	1.80	0.752	0.818	0.982	0.903	1.27
150	15	0.4429	0.4089	0.2278	0.1655	0.0956	0.613	0.782	1.06	1.25	1.67	0.605	0.692	0.831	0.718	1.08
220	22	0.6718	0.6338	0.3366	0.2053	0.1478	0.498	0.628	0.876	1.12	1.34	0.506	0.574	0.689	0.596	0.857
330	33	0.9807	0.9289	0.5057	0.3100	0.2149	0.412	0.519	0.715	0.913	1.11	0.420	0.474	0.568	0.491	0.711
470	47	1.47	1.37	0.7732	0.4650	0.3156	0.337	0.428	0.578	0.745	0.919	0.349	0.391	0.470	0.406	0.592
680	68	1.84	2.16	0.9798	0.6947	0.4850	0.301	0.341	0.514	0.610	0.741	0.285	0.325	0.390	0.337	0.482
820	82	2.50	2.36	1.30	0.7785	0.5242	0.258	0.326	0.446	0.576	0.713	0.261	0.297	0.356	0.308	0.441
101	100	3.29	2.64	1.47	1.06	0.5937	0.225	0.308	0.419	0.495	0.670	0.236	0.273	0.321	0.283	0.398
151	150	4.15	3.96	2.18	1.37	0.8723	0.200	0.251	0.345	0.435	0.553	0.195	0.220	0.263	0.228	0.328
221	220	6.41	4.76	2.95	2.04	1.34	0.161	0.229	0.296	0.356	0.446	0.160	0.181	0.217	0.188	0.268
331	330	9.83	7.25	4.20	2.99	2.07	0.130	0.186	0.248	0.294	0.359	0.131	0.148	0.177	0.155	0.219
471	470	12.10	8.95	6.39	3.74	3.10	0.117	0.167	0.201	0.263	0.239	0.110	0.126	0.148	0.129	0.184
681	680		11.30	9.28	5.56	3.88		0.149	0.167	0.216	0.262		0.104	0.124	0.107	0.154
821	820		14.93	12.35	6.22	5.04		0.129	0.145	0.204	0.230		0.095	0.113	0.098	0.139
102	1000		17.20	14.01	8.73	5.70		0.121	0.136	0.172	0.216		0.086	0.102	0.088	0.126

1. TEST FREQ. (L):@ 100KHz/0.25V,
2. TOLERANCE OF INDUCTANCE: 0.47～8.2μH±30%(N)　10～1000μH±20%(M)
3. Irms Current for an approximate △T of 40℃ without core loss. Lt is recommended that the temperature of the part not exceed 125℃.
4. Peak current for approximate 30% roll off at 20℃.

MSCDRI-AB SERIES

SMD Power Inductors

FEATURES

To be high saturation for surface mounting.Low DC resistance for large currents.
High magnetic shield construction should actualize high resolution for EMC protection.
The products do not contain lead and support lead-free soldering.

APPLICATIONS

Ideal for a variety of DC/DC converter inductor applications.
Portable communication equipment.
Computer Peripherals
Cable / ADSL Moderns

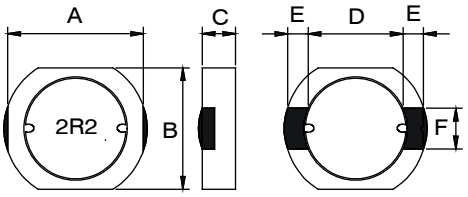
PRODUCT IDENTIFICATION

❶ ❷ ❸❹ ❺

MSCDRI - 7030AB - 100M □□

❶ Product Code
❷ Dimensions Code
❸ Inductance Code
❹ Tolerance Code
❺ Pattern Code

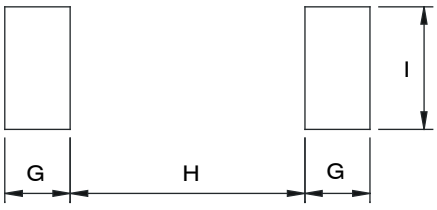
PRODUCT SERIES



Dimension in mm

Part No.	A	B	C	D	E	F
MSCDRI-7030AB	7.2±0.5	7.2±0.5	3.0Max.	5.4Typ.	1.0Typ.	2.5Typ.
MSCDRI-7035AB	7.2±0.5	7.20±0.5	3.5Max.	5.4Typ.	1.0Typ.	2.5Typ.
MSCDRI-7040AB	7.2±0.5	7.20±0.5	4.0Max.	5.4Typ.	1.0Typ.	2.5Typ.
MSCDRI-7045AB	7.2±0.5	7.20±0.5	4.5Max.	5.4Typ.	1.0Typ.	2.5Typ.
MSCDRI-7050AB	7.2±0.5	7.20±0.5	5.0Max.	5.4Typ.	1.0Typ.	2.5Typ.
MSCDRI-7060AB	7.2±0.5	7.20±0.5	6.0Max.	5.4Typ.	1.0Typ.	2.5Typ.

LAND PATTERNS



Dimension in mm

Part No.	G	H	I
MSCDRI-7030AB	1.5	5.4	2.8
MSCDRI-7035AB	1.5	5.4	2.8
MSCDRI-7040AB	1.5	5.4	2.8
MSCDRI-7045AB	1.5	5.4	2.8
MSCDRI-7050AB	1.5	5.4	2.8
MSCDRI-7060AB	1.5	5.4	2.8

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μH)	DC Resistance(Ω)±20%						Permissible DC Current(A)Max.					
		7030AB	7035AB	7040AB	7045AB	7050AB	7060AB	7030AB	7035AB	7040AB	7045AB	7050AB	7060AB
1R0	1.0	9.27m	6.69m	5.35m				6.50	7.50	7.30			
2R0	2.0		10.13m	8.00m			8.60m		5.50	6.50			6.60
2R2	2.2	19.2m		8.00m	8.63m	9.46m		4.57		6.50	6.50	6.00	
2R7	2.7	20.5m						4.40					
3R3	3.3	22.5m	16.52m	11.22m	10.24m	12.45m	12.2m	4.10	4.80	5.40	5.50	5.80	5.35
4R0	4.0					14.73m						5.20	
4R7	4.7	30.0m	26.75m	14.1m	14.50m	15.10m	16.8m	3.30	3.40	4.60	5.00	5.00	4.70
5R2	5.2						18.3m						4.55
5R6	5.6			16.0m						4.10			
6R2	6.2		36.33m			16.84m	21.0m		3.20			4.70	4.30
6R8	6.8	40m		22.2m	19.20m			3.10		3.50	4.00		
8R0	8.0	52m						2.55					
8R2	8.2			30.0m						3.00			
100	10	70m	48.10m	34.6m	28.94m	31.04m	26.9m	2.00	2.60	2.80	3.50	3.40	3.70
150	15		75.13m	47.0m	37.47m	50.30m	32.6m		2.00	2.30	2.90	2.70	3.30
180	18			57.5m						2.25			
220	22		0.101	58.0m	54.32m	66.76m	50.8m		1.65	2.20	2.40	2.20	2.60
330	33		0.140	95.0m	82.48m	87.60m	92.5m		1.35	1.80	2.00	2.00	2.00
470	47		0.180	0.165	0.110	0.132	0.15		1.15	1.30	1.60	1.65	1.45
680	68		0.292		0.165	0.202	0.29		0.90		1.40	1.30	1.00
820	82		0.450	0.312	0.203	0.262	0.41		0.80	0.85	1.20	1.05	0.85
101	100		0.500	0.400	0.241	0.295	0.51		0.75	0.82	1.05	1.00	0.80
121	120		0.570	0.469	0.324	0.349	0.56		0.65	0.75	0.95	0.95	0.75
151	150		0.710	0.665	0.399	0.399	0.65		0.60	0.65	0.85	0.90	0.72
181	180		0.760		0.514	0.488	0.71		0.58		0.72	0.80	0.68
221	220		0.880		0.576	0.556	0.77		0.55		0.70	0.75	0.55

1. TEST FREQ.(L) : @100KHz/100mV
2. TOLERANCE OF INDUCTANCE: 1.2~8.2μH±30%(N), 10~220μH±20%(M)
3. The max. permissible DC current is the DC current applied which causes 30% reduction of its initial inductance value, or the coil temperature to rise by 40℃, whichever is lower.