

FEATURES

These power inductors have low DC resistance and large permissible DC current with high reliability.

These power inductors can be directly mounted with special treated electrodes.

Tape and reel packages are available for auto mounting machine.

APPLICATIONS

For the smoothing circuit of DC-DC converter, as a choke coil or chopper coil.

Suitable for use in power lines of camcorder, LCD set, OA equipment, notebook computer, PDA, and small size communication equipment.

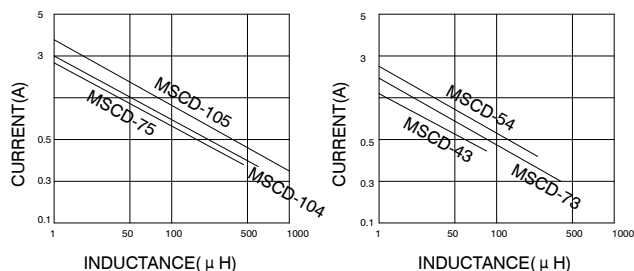
PRODUCT IDENTIFICATION

① ② ③ ④ ⑤

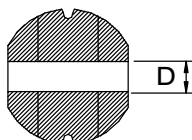
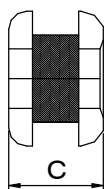
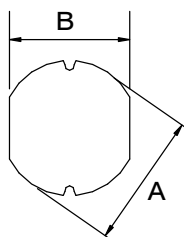
MSCD - 43 - 100 M □ □

- ① Product Code
- ② Dimensions
- ③ Inductance Code
- ④ Tolerance Code
- ⑤ Pattern Code

Typical Electrical Characteristics



PRODUCT SERIES



TYPE	DIMENSIONS (m/m)			
	A	B	C	D
MSCD-0311	3.5±0.3	3.0±0.3	1.1±0.3	1.2
MSCD-0315	3.5±0.3	3.0±0.3	1.5±0.3	1.2
MSCD-32	3.3±0.3	3.0±0.3	2.1±0.3	1.0
MSCD-43	4.5±0.3	4.0±0.3	3.2±0.3	1.5
MSCD-0518	4.9±0.3	4.6±0.3	1.8±0.3	2.0
MSCD-52	5.8±0.3	5.2±0.3	2.5±0.3	2.0
MSCD-53	5.8±0.3	5.2±0.3	3.0±0.3	2.0
MSCD-54	5.8±0.3	5.2±0.3	4.5±0.3	2.0
MSCD-73	7.8±0.3	7.2±0.3	3.5±0.5	2.6
MSCD-75	7.8±0.3	7.0±0.3	5.0±0.5	2.6
MSCD-104	10±0.3	9.0±0.3	4.0±0.5	3.2
MSCD-105	10±0.3	9.0±0.3	5.4±0.4	3.2
MSCD-106	10±0.3	9.0±0.3	7.5Max.	3.2
MSCD-108	10±0.3	9.0±0.3	8.5Max.	3.2

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μH)	Test Frequency	DC Resistance (Ω) Max.														
			0311	0315	32	43	0518	52	53	54	73	75	104	105	106	108	
1R0	1.0	100KHz	0.085	0.062	0.07	0.049		0.03	0.03	0.028		0.020					
1R2	1.2		0.095			0.052											
1R4	1.4				0.09	0.056		0.04	0.03	0.029							
1R8	1.8				0.11	0.064		0.05	0.03	0.030							
2R2	2.2			0.20	0.13	0.13	0.071	0.050	0.06	0.03	0.042		0.022				
2R7	2.7				0.14	0.079	0.060	0.07	0.04	0.044							
3R3	3.3			0.22	0.14	0.17	0.086	0.069	0.08	0.05	0.045		0.024				
3R9	3.9				0.19	0.094	0.071	0.09	0.06	0.047							
4R7	4.7			0.31	0.18	0.21	0.109	0.086	0.14	0.07	0.048		0.030				
5R6	5.6			0.32	0.26	0.22	0.126		0.15	0.08	0.05		0.035				
6R8	6.8			0.33	0.27	0.25	0.132	0.12	0.16	0.09	0.06						
8R2	8.2			0.48	0.36	0.28	0.147		0.17	0.10	0.09						
100	10			0.52	0.39	0.32	0.182	0.19	0.18	0.12	0.10	0.080	0.07	0.053	0.06	0.06	0.036
120	12			0.65	0.45	0.35	0.210		0.20	0.13	0.12	0.090	0.08	0.061	0.07	0.07	0.038
150	15			0.85	0.75	0.40	0.235		0.22	0.15	0.14	0.104	0.09	0.070	0.08	0.08	0.04
180	18			1.0	0.76	0.48	0.338		0.25	0.18	0.15	0.111	0.10	0.081	0.09	0.09	0.05
220	22			1.20	0.92	0.58	0.378	0.34	0.35	0.22	0.18	0.129	0.11	0.088	0.10	0.10	0.06
270	27				1.12	0.65	0.522		0.45	0.26	0.20	0.153	0.12	0.100	0.11	0.11	0.07
330	33			1.98	1.43	0.80	0.540	0.53	0.50	0.33	0.23	0.170	0.13	0.120	0.12	0.12	0.08
390	39					0.90	0.587		0.69	0.42	0.32	0.217	0.16	0.151	0.14	0.14	0.09
470	47			2.60	1.69	1.19	0.844	0.74	0.72	0.50	0.37	0.252	0.18	0.170	0.17	0.17	0.11
560	56			3.20	1.92	1.27	0.937		0.84	0.55	0.42	0.282	0.24	0.199	0.19	0.19	0.12
680	68			3.70	2.86	1.73	1.117		0.90	0.65	0.46	0.332	0.28	0.233	0.22	0.22	0.15
820	82				3.25	1.99	1.20	1.28	0.95	0.80	0.60	0.406	0.37	0.252	0.25	0.25	0.19
101	100			6.60	4.55	2.52	1.44	1.62	1.30	0.90	0.70	0.481	0.43	0.344	0.35	0.35	0.23
121	120				4.55	2.90	1.60		1.38	1.00	0.93	0.536	0.47	0.396	0.40	0.40	0.32
151	150					3.36	1.80	2.43	1.81	1.30	1.10	0.755	0.64	0.544	0.47	0.47	0.37
181	180				7.15	3.68	2.18		1.95	1.50	1.38	1.022	0.71	0.621	0.63	0.63	0.42
221	220				8.32	5.64	2.57		2.10	2.00	1.57	1.200	0.96	0.721	0.73	0.73	0.44
271	270				12.61		3.52		2.42	2.50	1.85	1.306	1.11	0.949	0.97	0.97	0.55
331	330			14.56	9.24	5.00	5.00	3.82	3.20	2.00	1.495	1.26	1.100	1.15	1.15	0.60	
391	390			16.12	10.14	6.00		4.68	3.50	2.60	2.70	1.77	1.245	1.30	1.30	0.67	
471	470			18.20	11.48	7.00	7.90	5.10	4.20	3.00	3.00	1.96	1.526	1.48	1.48	0.88	
561	560				19.49		8.80	6.00	4.50				1.904	1.90	1.90	1.04	
681	680				22.00		11.90	7.60	6.50					2.25	2.45	1.18	
821	820				23.98			9.12	7.50					2.55	2.55	1.38	
102	1000				28.80		15.80	9.87	8.00						3.00	1.74	

SMD Power Inductors

■ PRODUCT SPECIFICATIONS

Part No.	Inductance (μH)	Test Frequency	Permissible DC Current(A) Max.													
			0311	0315	32	43	0518	52	53	54	73	75	104	105	106	108
1R0	1.0	100KHz	1.50	1.60	2.08	2.70		4.50	4.50	3.00		6.30				
1R2	1.2		1.45			2.60										
1R4	1.4				1.86	2.50		4.00	4.10	2.80						
1R8	1.8				1.80	2.33		3.30	3.70	2.60						
2R2	2.2		1.00	1.20	1.39	2.25	2.20	2.94	3.50	2.30		5.50				
2R7	2.7				1.32	2.16	1.90	2.50	3.20	2.10						
3R3	3.3		0.87	0.90	1.25	2.00	1.80	2.35	2.80	2.00		3.69				
3R9	3.9				1.20	1.84	1.60	2.20	2.60	1.95						
4R7	4.7		0.65	0.65	1.03	1.62	1.50	2.00	2.50	1.90		3.00				
5R6	5.6		0.60	0.60	0.91	1.48		1.80	2.40	1.80		2.50				
6R8	6.8		0.55	0.55	0.85	1.43	1.20	1.70	2.20	1.60						
8R2	8.2		0.52	0.50	0.82	1.37		1.40	2.00	1.50						
100	10		0.45	0.45	0.74	1.04	0.95	1.20	1.80	1.44	1.44	2.30	2.38	2.60	3.50	4.05
120	12		0.43	0.42	0.64	0.97		1.18	1.75	1.40	1.39	2.00	2.13	2.45	3.40	3.60
150	15		0.42	0.30	0.60	0.85		1.15	1.70	1.30	1.24	1.80	1.87	2.27	3.10	3.34
180	18		0.41	0.29	0.54	0.74		1.10	1.60	1.23	1.12	1.60	1.73	2.15	3.00	3.05
220	22		0.40	0.25	0.50	0.68	0.65	1.00	1.50	1.11	1.07	1.50	1.60	1.95	2.60	2.80
270	27			0.23	0.43	0.62		0.86	1.40	0.97	0.94	1.30	1.44	1.76	2.40	2.50
330	33		0.26	0.20	0.37	0.56	0.57	0.79	1.10	0.88	0.85	1.20	1.26	1.50	2.30	2.40
390	39				0.36	0.52		0.75	1.00	0.80	0.74	1.10	1.20	1.37	2.10	2.22
470	47		0.16	0.17	0.33	0.44	0.46	0.73	0.90	0.72	0.68	1.10	1.10	1.28	1.95	2.00
560	56		0.15	0.150	0.30	0.42		0.55	0.85	0.68	0.64	0.94	1.01	1.17	1.85	1.90
680	68		0.12	0.130	0.29	0.37		0.52	0.80	0.61	0.59	0.85	0.91	1.11	1.65	1.80
820	82			0.128	0.25	0.30	0.34	0.50	0.65	0.58	0.54	0.78	0.85	1.00	1.50	1.60
101	100		0.10	0.125	0.20	0.28	0.31	0.40	0.60	0.52	0.51	0.72	0.74	0.97	1.40	1.50
121	120			0.123	0.19	0.24		0.36	0.58	0.48	0.49	0.66	0.69	0.89	1.30	1.40
151	150				0.17	0.22	0.26	0.30	0.43	0.40	0.40	0.58	0.61	0.78	1.20	1.30
181	180			0.122	0.17	0.21		0.26	0.41	0.38	0.36	0.51	0.56	0.72	1.00	1.20
221	220		0.120	0.14	0.20		0.25	0.38	0.35	0.31	0.49	0.53	0.66	0.95	1.00	
271	270		0.115		0.18		0.21	0.35	0.28	0.29	0.42	0.45	0.57	0.90	0.95	
331	330		0.100	0.12	0.12	0.18	0.18	0.28	0.26	0.28	0.40	0.42	0.52	0.80	0.90	
391	390		0.090	0.09	0.115		0.16	0.26	0.24	0.27	0.36	0.38	0.48	0.75	0.80	
471	470		0.090	0.08	0.11	0.15	0.15	0.20	0.12	0.25	0.34	0.35	0.42	0.65	0.70	
561	560				0.08		0.13	0.14	0.19			0.32	0.33	0.60	0.65	
681	680				0.07		0.12	0.13	0.18					0.28	0.50	0.60
821	820				0.06			0.07	0.15					0.24	0.48	0.50
102	1000				0.05		0.10	0.05	0.13						0.46	0.48

■ TOLERANCE OF INDUCTANCE

Tolerance	MSCD-0311	MSCD-0315	MSCD-32	MSCD-43	MSCD-0519
10% (K)	100 μ H	100 ~ 470 μ H	100 ~ 1000 μ H	33 ~ 470 μ H	100 ~ 1000 μ H
15% (L)					
20% (M)	1.0 ~ 82 μ H	1.0 ~ 82 μ H	1.0 ~ 82 μ H	1.0 ~ 27 μ H	2.2 ~ 82 μ H

Tolerance	MSCD-52	MSCD-53	MSCD-54	MSCD-73	MSCD-75
10% (K)	100 ~ 1000 μ H	100 ~ 1000 μ H	56 ~ 470 μ H	56 ~ 470 μ H	56 ~ 470 μ H
15% (L)	10 ~ 82 μ H	10 ~ 82 μ H	33 ~ 47 μ H		
20% (M)	1.0 ~ 8.2 μ H	1.0 ~ 8.2 μ H	1.0 ~ 27 μ H	10 ~ 47 μ H	1.0 ~ 47 μ H

Tolerance	MSCD-104	MSCD-105	MSCD-106	MSCD-108	
10% (K)	56 ~ 560 μ H	47 ~ 820 μ H	100 ~ 1000 μ H	100 ~ 1000 μ H	
15% (L)					
20% (M)	10 ~ 47 μ H	10 ~ 39 μ H	10 ~ 82 μ H	10 ~ 82 μ H	

The max. permissible DC current is the DC current applied which causes 10% reduction of its initial inductance value, or the coil temperature to rise by 40°C, whichever is lower.