

### 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.

Magnetic shielded products are available for each series for the consideration of against radiation.

### 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.

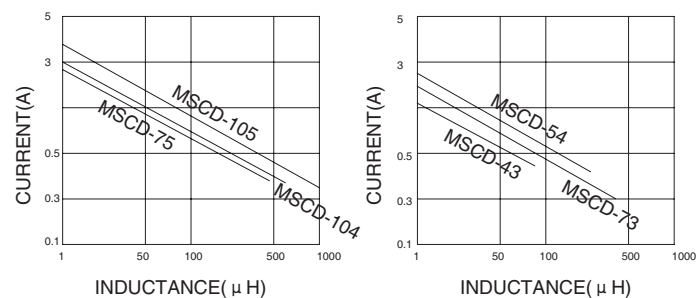
### PRODUCT IDENTIFICATION

①      ②      ③      ④      ⑤

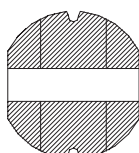
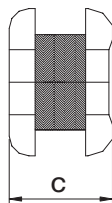
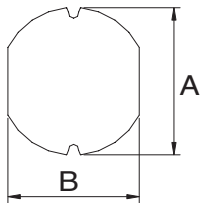
MSCD - 43 - 100 M □ □

- 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
MSCD-0311 (1.0 μ H~330 μ H)	3.3±0.3	3.0±0.3	1.1±0.3
MSCD-0315 (1.0 μ H~1000 μ H)	3.3±0.3	3.0±0.3	1.5±0.3
MSCD-32 (1.0 μ H~1000 μ H)	3.3±0.3	3.0±0.3	2.1±0.3
MSCD-43 (1 μ H~68 μ H)	4.5±0.3	4.0±0.3	3.2±0.3
MSCD-0519 (2.2 μ H~1000 μ H)	4.9±0.3	4.6±0.3	1.9±0.3
MSCD-52 (1.0 μ H~1000 μ H)	5.8±0.3	5.2±0.3	2.5±0.3
MSCD-53 (1.0 μ H~1000 μ H)	5.8±0.3	5.2±0.3	3.0±0.3
MSCD-54 (10 μ H~220 μ H)	5.8±0.3	5.2±0.3	4.5±0.3
MSCD-73 (10 μ H~330 μ H)	7.8±0.3	7.2±0.3	3.5±0.5
MSCD-75 (10 μ H~470 μ H)	7.8±0.3	7.0±0.3	5.0±0.5
MSCD-104 (10 μ H~560 μ H)	10±0.3	9.0±0.3	4.0±0.5
MSCD-105 (10 μ H~820 μ H)	10±0.3	9.0±0.3	5.4±0.4
MSCD-106 (10 μ H~4000 μ H)	10±0.3	9.0±0.3	7.5Max.
MSCD-108 (10 μ H~1000 μ H)	10±0.3	9.0±0.3	8.5Max.

# MSCD SERIES

SMD Power Inductors

## ■ PRODUCT SPECIFICATIONS

Part No.	Inductance ( $\mu$ H)	Test Frequency	DC Resistance( $\Omega$ )Max.														
			0311	0315	32	43	0519	52	53	54	73	75	104	105	106	108	
1R0	1.0	7.96MHz	0.085	0.062	0.07	0.049		0.03	0.03	0.028							
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	0.062	0.06	0.03	0.042						
2R7	2.7					0.14	0.079	0.070	0.07	0.04	0.044						
3R3	3.3			0.22	0.14	0.17	0.086	0.082	0.08	0.05	0.045						
3R9	3.9					0.19	0.094	0.140	0.09	0.06	0.047						
4R7	4.7			0.31	0.18	0.21	0.109	0.172	0.14	0.07	0.048						
5R6	5.6			0.32	0.26	0.22	0.126		0.15	0.08	0.050						
6R8	6.8			0.33	0.27	0.25	0.132	0.18	0.16	0.09	0.060						
8R2	8.2		0.48	0.36	0.28	0.147		0.17	0.10	0.090							
100	10	2.52MHz	0.52	0.39	0.32	0.182	0.26	0.18	0.12	0.100	0.080	0.070	0.053	0.060	0.06	0.036	
120	12			0.65	0.45	0.35	0.210		0.20	0.13	0.120	0.090	0.080	0.061	0.070	0.07	0.038
150	15			0.85	0.75	0.40	0.235		0.22	0.15	0.140	0.104	0.090	0.070	0.080	0.08	0.04
180	18			1.0	0.76	0.48	0.338		0.25	0.18	0.150	0.111	0.100	0.081	0.090	0.09	0.05
220	22			1.20	0.92	0.58	0.378	0.40	0.35	0.22	0.180	0.129	0.110	0.088	0.100	0.10	0.06
270	27				1.12	0.65	0.522		0.45	0.26	0.200	0.153	0.120	0.100	0.110	0.11	0.07
330	33			1.98	1.43	0.80	0.540	0.52	0.50	0.33	0.230	0.170	0.130	0.120	0.120	0.12	0.08
390	39					0.90	0.587		0.69	0.42	0.320	0.217	0.160	0.151	0.140	0.14	0.09
470	47			2.60	1.69	1.19	0.844	0.74	0.72	0.50	0.370	0.252	0.180	0.170	0.170	0.17	0.11
560	56			3.20	1.92	1.27	0.937		0.84	0.55	0.420	0.282	0.240	0.199	0.190	0.19	0.12
680	68		3.70	2.86	1.73	1.117		0.90	0.65	0.460	0.332	0.280	0.233	0.220	0.22	0.15	
820	82			3.25	1.99	1.20	1.49	0.95	0.80	0.600	0.406	0.370	0.252	0.250	0.25	0.19	
101	100	1KHz	6.60	4.55	2.52	1.44	1.55	1.30	0.90	0.700	0.481	0.430	0.344	0.350	0.35	0.23	
121	120				4.55	2.90	1.60		1.38	1.00	0.930	0.536	0.470	0.396	0.400	0.40	0.32
151	150					3.36	1.80	2.47	1.81	1.30	1.100	0.755	0.640	0.544	0.470	0.47	0.37
181	180				7.15	3.68	2.18		1.95	1.50	1.38	1.022	0.710	0.621	0.630	0.63	0.42
221	220				8.32	5.30	2.57		2.10	2.00	1.570	1.200	0.960	0.721	0.730	0.73	0.44
271	270				12.61		3.52		2.42	2.50	1.85	1.306	1.110	0.949	0.970	0.97	0.55
331	330			13.62	14.56	9.24	5.00	4.90	3.82	3.20	2.00	1.495	1.260	1.100	1.150	1.15	0.60
391	390				16.12	10.14	6.00		4.68	3.50	2.60	2.70	1.770	1.245	1.300	1.30	0.67
471	470				18.20	11.48	7.00	7.50	5.10	4.20	3.00	3.00	1.960	1.526	1.480	1.48	0.88
561	560				20.80	19.49		11.03	6.00	4.50				1.904	1.900	1.90	1.04
681	680			23.40	22.00		12.32	7.60	6.50					2.250	2.45	1.18	
821	820			40.30	23.98			9.12	7.50					2.550	2.55	1.38	
102	1000			44..20	28.80		17.07	9.87	8.00						3.00	1.74	

■ **PRODUCT SPECIFICATIONS**

Part No.	Inductance ( $\mu$ H)	Test Frequency	Permissible DC Current(A)Max.													
			0311	0315	32	43	0519	52	53	54	73	75	104	105	106	108
1R0	1.0	7.96MHz	1.50	1.60	2.08	2.56		4.50	4.50	3.00						
1R4	1.4				1.86	2.52		4.00	4.10	2.80						
1R8	1.8				1.80	1.95		3.30	3.70	2.60						
2R2	2.2		1.00	1.20	1.39	1.75	1.80	2.94	3.50	2.30						
2R7	2.7				1.32	1.58	1.60	2.50	3.20	2.10						
3R3	3.3		0.87	0.90	1.25	1.44	1.50	2.35	2.80	2.00						
3R9	3.9				1.20	1.33	1.40	2.20	2.60	1.95						
4R7	4.7		0.65	0.65	1.03	1.15	1.30	2.00	2.50	1.90						
5R6	5.6		0.60	0.60	0.91	1.10		1.80	2.40	1.80						
6R8	6.8		0.55	0.55	0.85	1.08	1.10	1.70	2.20	1.60						
8R2	8.2	0.52	0.50	0.82	1.05		1.40	2.00	1.50							
100	10	2.52MHz	0.45	0.45	0.74	1.04	0.90	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	0.52	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	0.44	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	0.27	0.50	0.65	0.58	0.54	0.78	0.85	1.00	1.50	1.60	
101	100	1KHz	0.10	0.125	0.20	0.28	0.28	0.40	0.60	0.52	0.51	0.72	0.74	0.94	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	0.25	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		0.084	0.100	0.12	0.12	0.15	0.18	0.28	0.26	0.28	0.40	0.42	0.52	0.80	0.90
391	390			0.090	0.09	0.11		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	0.132	0.15	0.20	0.12	0.25	0.34	0.35	0.42	0.65	0.70
561	560			0.084	0.08		0.108	0.14	0.19				0.32	0.33	0.60	0.65
681	680		0.075	0.07		0.102	0.13	0.18					0.28	0.50	0.60	
821	820		0.065	0.06			0.07	0.15					0.24	0.48	0.50	
102	1000		0.060	0.05		0.084	0.05	0.13						0.46	0.48	

## MSCD SERIES

### SMD Power Inductors

#### ■ TOLERANCE OF INDUCTANCE

Tolerance	MSCD-0311	MSCD-0315	MSCD-32	MSCD-43	MSCD-0519
10% (K)	100 ~ 270 $\mu$ H	100 ~ 1000 $\mu$ H	100 ~ 1000 $\mu$ H	33 ~ 470 $\mu$ H	100 ~ 1000 $\mu$ H
15% (L)					
20% (M)	1.0 ~ 82 $\mu$ H	1.0 ~ 82 $\mu$ H	1.0 ~ 82 $\mu$ H	1.0 ~ 27 $\mu$ H	2.2 ~ 82 $\mu$ H

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

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