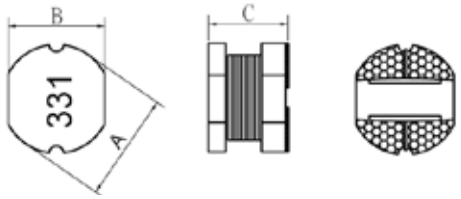
SMTDR SERIES

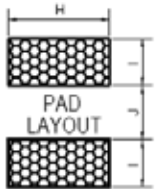
UNSHIELDED SMT POWER INDUCTORS

Applications :

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

Shape and Dimensions (Dimensions are in mm) :





Item	A	B	C
SMTDR31	3.5±0.3	3.0±0.3	1.1±0.3
SMTDR32	3.5±0.3	3.0±0.3	2.0±0.3
SMTDR43	4.5±0.3	4.0±0.3	3.2±0.3
SMTDR52	5.8±0.3	5.2±0.3	2.5±0.3
SMTDR53	5.8±0.3	5.2±0.3	3.0±0.3
SMTDR54	5.8±0.3	5.2±0.3	4.5±0.35
SMTDR73	7.8±0.3	7.0±0.3	3.5±0.5
SMTDR75	7.8±0.3	7.0±0.3	5.0±0.5
SMTDR104	10.0±0.3	9.0±0.3	4.0±0.5
SMTDR105	10.0±0.3	9.0±0.3	5.4±0.4
SMTDR107	10.0±0.3	9.0±0.3	7.5 Max.

Item	H	I	J
SMTDR31	3.5	1.6	0.8
SMTDR32	3.5	1.6	0.8
SMTDR43	4.5	1.75	1.5
SMTDR52	5.5	2.15	1.7
SMTDR53	5.5	2.15	1.7
SMTDR54	5.5	2.15	1.7
SMTDR73	7.5	3.0	2.0
SMTDR75	7.5	3.0	2.0
SMTDR104	9.5	3.75	2.5
SMTDR105	9.5	3.75	2.5
SMTDR107	9.5	3.75	2.5

Features :

· Silver Plated Type, Low cost designed.
· High power, High saturation inductors.
· Ideal inductors for DC-DC conversion.
· Available on tape and reel for auto surface mounting.

Product identification :

SMT DR105 - 331 K

(1) (2) (3) (4)

(1)Type : **S**urface **M**ountable **T**ype .

(2)Style : **DR** Core : **OD**=10mm, **HT**=5.4mm.

(3)Inductance : **331** for **330** uH.

(4)Inductance tolerance : "**M**": ±20%; "**L**": ±15%; "**K**": ±10%

Characteristics :

· Rated Current: It is either the inductance is 10% lower than its initial value in DC. saturation characteristics or temperature raise becomes △T=40℃ (Ta=20℃), whichever is lower.
· Operating temperature : -30℃ to 105℃.

Test equipments :

· Inductance measured at 0Adc on HP 4284A LCR meter or equivalent.
· DCR measured on Chroma 16502 micro-ohmmeter or equivalent.
· Electrical specifications at 25℃.

● SMTDR31 series

Part No.	Inductance L (uH)	Test Freq. (0.1V)	DCR (Ω) Max.	Rated Current (A) Max.
SMTDR31-2R2M	2.2	100 KHz	0.24	1.20
SMTDR31-3R3M	3.3	100 KHz	0.27	1.08
SMTDR31-4R7M	4.7	100 KHz	0.30	1.00
SMTDR31-6R8M	6.8	100 KHz	0.47	0.80
SMTDR31-8R2M	8.2	100 KHz	0.52	0.76
SMTDR31-100M	10.0	100 KHz	0.55	0.70
SMTDR31-120M	12.0	100 KHz	0.75	0.60
SMTDR31-150M	15.0	100 KHz	0.91	0.50
SMTDR31-220M	22.0	100 KHz	1.20	0.40
SMTDR31-270M	27.0	100 KHz	1.50	0.36

● SMTDR series

Part No.	L	DC resistance (Ω) Max.					Rated current (Amp) Max.				
	(uH)	DR32	DR43	DR52	DR53	DR54	DR32	DR43	DR52	DR53	DR54
1R0	1.0	0.045	0.0487		0.03		2.20	2.56		4.50	
1R2	1.2	0.050		0.050	0.03		2.10		4.20	4.20	
1R4	1.4		0.0562					2.52			
1R5	1.5	0.055		0.060	0.03		1.70		4.00	4.10	
1R8	1.8	0.070	0.0637	0.065	0.03		1.65	1.95	3.70	3.70	
2R2	2.2	0.085	0.0712	0.07	0.03		1.60	1.75	3.50	3.50	
2R7	2.7	0.100	0.0787	0.08	0.04		1.40	1.58	3.20	3.20	
3R3	3.3	0.120	0.0862	0.10	0.05		1.04	1.44	2.70	2.80	
3R9	3.9	0.125	0.0937	0.12	0.06		1.00	1.33	2.40	2.60	
4R7	4.7	0.135	0.1087	0.14	0.07		1.00	1.15	2.00	2.50	
5R6	5.6	0.145	0.1257	0.15	0.08		0.95	0.99	1.80	2.40	
6R8	6.8	0.20	0.1312	0.16	0.09		0.95	0.95	1.50	2.20	
8R2	8.2	0.25	0.1462	0.17	0.10		0.92	0.84	1.40	2.00	
100	10	0.32	0.182	0.20	0.13	0.10	0.90	1.04	1.30	1.80	1.44
120	12	0.35	0.210	0.23	0.16	0.12	0.85	0.97	1.10	1.75	1.40
150	15	0.46	0.235	0.25	0.19	0.14	0.75	0.85	1.05	1.70	1.30
180	18	0.52	0.338	0.30	0.21	0.15	0.70	0.74	1.00	1.60	1.23
220	22	0.65	0.378	0.35	0.28	0.18	0.60	0.68	0.90	1.50	1.11
270	27	0.75	0.522	0.40	0.32	0.20	0.55	0.62	0.85	1.40	0.97
330	33	0.92	0.540	0.50	0.38	0.23	0.50	0.56	0.75	1.10	0.88
390	39	1.12	0.587	0.55	0.42	0.32	0.48	0.52	0.70	1.00	0.80
470	47	1.27	0.844	0.65	0.52	0.37	0.45	0.44	0.60	0.90	0.72
560	56	1.50	0.937	0.75	0.56	0.42	0.30	0.42	0.55	0.85	0.68
680	68	2.00	1.117	0.95	0.68	0.46	0.26	0.37	0.50	0.80	0.61
820	82	2.15		1.20	0.82	0.60	0.23		0.45	0.65	0.58
101	100	2.80		1.40	1.10	0.70	0.20		0.40	0.60	0.52
121	120	3.40		1.75	1.20	0.93	0.18		0.35	0.58	0.48
151	150	4.20		2.00	1.50	1.10	0.16		0.25	0.43	0.40
181	180	4.50		2.60	1.80	1.38	0.15		0.22	0.41	0.38
221	220	5.70		3.00	2.00	1.57	0.14		0.20	0.38	0.35

● SMTDR series

Part No.	L	DC resistance (Ω) Max.					Rated current (Amp) Max.				
	(uH)	DR32	DR43	DR52	DR53	DR54	DR32	DR43	DR52	DR53	DR54
271	270	8.50		3.70	2.90		0.10		0.18	0.35	
331	330	9.50		4.30	3.30		0.09		0.17	0.28	
391	390			6.00	3.70				0.16	0.26	
471	470			6.70	4.90				0.15	0.20	

Measuring Frequency :

1.0~8.2uH @ 7.96MHz 0.25V; 10~82uH @ 2.52MHz 0.25V; 100~470uH @ 1kHz 0.25V

Tolerance of Inductance :

SMTDR32 1.0~18uH (M) ± 20%; 22~330uH (K) ± 10%. SMTDR43 1.0~27uH (M) ± 20%; 33~68uH (K) ± 10%.
SMTDR52 1.2~18uH (M) ± 20%; 22~470uH (K) ± 10%. SMTDR53 1.0~18uH (M) ± 20%; 22~470uH (K) ±10%.
SMTDR54 10~27uH (M) ± 20%; 33~220uH (K) ± 10%.

● SMTDR series

Part No.	L	DC resistance (Ω) Max.				Rated current (Amp) Max.			
	(μH)	DR73	DR75	DR104	DR105	DR73	DR75	DR104	DR105
100	10	0.0803	0.07	0.053	0.06	1.44	2.30	2.38	2.60
120	12	0.0897	0.08	0.061	0.07	1.39	2.00	2.13	2.45
150	15	0.104	0.09	0.070	0.08	1.24	1.80	1.87	2.27
180	18	0.111	0.10	0.081	0.09	1.12	1.60	1.73	2.15
220	22	0.129	0.11	0.088	0.10	1.07	1.50	1.60	1.95
270	27	0.153	0.12	0.100	0.11	0.94	1.30	1.44	1.76
330	33	0.170	0.13	0.120	0.12	0.85	1.20	1.26	1.50
390	39	0.217	0.16	0.151	0.14	0.74	1.10	1.20	1.37
470	47	0.252	0.18	0.170	0.17	0.68	1.10	1.10	1.28
560	56	0.282	0.24	0.199	0.19	0.64	0.94	1.01	1.17
680	68	0.332	0.28	0.223	0.22	0.59	0.85	0.91	1.11
820	82	0.406	0.37	0.252	0.25	0.54	0.78	0.85	1.00
101	100	0.481	0.43	0.344	0.35	0.51	0.72	0.74	0.97
121	120	0.536	0.47	0.396	0.40	0.49	0.66	0.69	0.89
151	150	0.755	0.64	0.544	0.47	0.40	0.58	0.61	0.78
181	180	1.022	0.71	0.621	0.63	0.36	0.51	0.56	0.72
221	220	1.200	0.96	0.721	0.73	0.31	0.49	0.53	0.66
271	270	1.306	1.11	0.949	0.97	0.29	0.42	0.45	0.57
331	330	1.495	1.26	1.100	1.15	0.28	0.40	0.42	0.52
391	390		1.77	1.245	1.30		0.36	0.38	0.48
471	470		1.96	1.526	1.48		0.34	0.35	0.42
561	560			1.904	1.90			0.32	0.33
681	680				2.25				0.28
821	820				2.55				0.24

Measuring Frequency :

10~82uH @ 2.52MHz 0.25V; 100~330uH @ 1kHz 0.25V

Tolerance of Inductance :

SMTDR73 10~470uH (K) ± 10%; 56~330uH (K) ±10%.
SMTDR75 10~470uH (K) ± 10%.
SMTDR104 10~47uH (M) ± 20%; 56~560uH (K) ± 10%.
SMTDR105 10~39uH (M) ± 20%; 47~820uH (K) ± 10%.

● SMTDR 107 series

Part No.	Inductance L (uH)	Test Freq. (0.25V)	DCR (mΩ) Max.	I sat (A) Max.	I rms (A) Max.
SMTDR107-100M	10.0	2.52MHz	34	8.0	5.0
SMTDR107-120M	12.0	2.52MHz	37	7.5	4.0
SMTDR107-150M	15.0	2.52MHz	46	6.5	3.5
SMTDR107-180M	18.0	2.52MHz	52	6.2	3.2
SMTDR107-220M	22.0	2.52MHz	66	5.6	3.0
SMTDR107-270M	27.0	2.52 MHz	78	5.1	2.8
SMTDR107-330M	33.0	2.52MHz	89	4.7	2.7
SMTDR107-390M	39.0	2.52MHz	116	4.4	2.4
SMTDR107-470M	47.0	2.52MHz	124	3.9	2.2
SMTDR107-560M	56.0	2.52MHz	153	3.5	2.0
SMTDR107-680M	68.0	2.52 MHz	185	3.3	1.6
SMTDR107-820M	82.0	2.52MHz	207	3.0	1.5
SMTDR107-101K	100.0	1 KHz	272	2.7	1.45
SMTDR107-121K	120.0	1 KHz	299	2.5	1.4
SMTDR107-151K	150.0	1 KHz	381	2.3	1.3
SMTDR107-181K	180.0	1 KHz	431	2.1	1.25
SMTDR107-221K	220.0	1 KHz	549	1.8	1.1
SMTDR107-271K	270.0	1 KHz	621	1.7	1.05
SMTDR107-331K	330.0	1 KHz	815	1.5	0.9
SMTDR107-391K	390.0	1 KHz	906	1.4	0.85
SMTDR107-561K	560.0	1 KHz	1295	1.1	0.7
SMTDR107-681K	680.0	1 KHz	1662	1.0	0.61
SMTDR107-821K	820.0	1 KHz	1924	0.9	0.57

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