Type SMTDR
(1 ~ 1000)µH

 # High power, high saturation
 # Low cost, unshielded
 # dc ~ dc converters
 # RoHS Compliant

Case Dimensions (mm)	A	B	C	H	I	J
SMTDR31	3.5±0.3	3.0±0.3	1.1±0.2	3.5	1.6	0.8
SMTDR32	3.5±0.3	3.0±0.3	2.0±0.3	3.5	1.6	0.8
SMTDR43	4.5±0.3	4.0±0.3	3.2±0.3	4.5	1.75	1.5
SMTDR52	5.8±0.3	5.2±0.3	2.5±0.3	5.5	2.15	1.7
SMTDR53	5.8±0.3	5.2±0.3	3.0±0.3	5.5	2.15	1.7
SMTDR54	5.8±0.3	5.2±0.3	4.0±0.35	5.5	2.15	1.7
SMTDR73	7.8±0.3	7.0±0.3	3.5±0.5	7.5	3.0	2.0
SMTDR75	7.8±0.3	7.0±0.3	5.0±0.5	7.5	3.0	2.0
SMTDR104	10.0±0.3	9.0±0.3	4.0±0.5	9.5	3.75	2.5
SMTDR105	10.0±0.3	9.0±0.3	5.4±0.4	9.5	3.75	2.5
SMTDR107	10.0±0.3	9.0±0.3	7.5max.	9.5	3.75	2.5
SMTDR137	13.0 ±0.5	13.0±0.3	7.0±0.3	14.0	4.75	4.5

Ordering information:

SMT DR105 – 331 K
(1) (2) (3) (4)

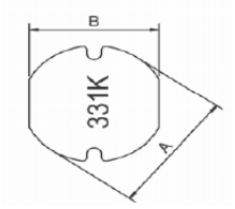
(1) **Type**: **S**urface **M**ountable **T**ype

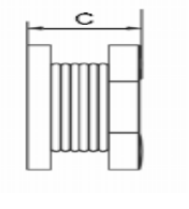
(2) **Style**: **DR** Core : **OD**=10mm, **HT**=5.4mm

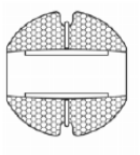
(3) **Inductance** : **331** for **330**µH

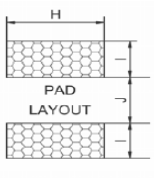
4) **Inductance tolerance:** **"M"**: ±20%; **"L"**: ±15%; **"K"**: ±10%

SMTDR drawing: (mm)









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TFC Part No.	Inductance L (µH)	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**	**0.75**
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

TFC Part No.	Inductance L (µH)	DC resistance (Ω) max.					Rated DC current (A) max.				
		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**	**0.32**	**0.182**	**0.20**	**0.13**	**0.10**	**0.90**	**1.04**	**1.30**	**1.80**	**1.44**
120	12.0	0.35	0.210	0.23	0.16	0.12	0.85	0.97	1.10	1.75	1.40
150	15.0	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
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	0.260	
471	470			6.70	4.90				0.15	0.200	

Measuring Frequency :
1.0~8.2µH @ 7.96MHz 0.25V; 10~82µH @ 2.52MHz 0.25V; 100~470µH @ 1kHz 0.25V
Tolerance of Inductance :
SMTDR32 1.0~18µH (M) ± 20%; 22~330µH (K) ± 10%. *SMTDR43 1.0~27µH (M) ± 20%; 33~68µH (K) ± 10%.*
SMTDR52 1.2~18µH (M) ± 20%; 22~470µH (K) ± 10%. *SMTDR53 1.0~18µH (M) ± 20%; 22~470µH (K) ±10%.*
SMTDR54 10~27µH (M) ± 20%; 33~220µH (K) ± 10%.

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TFC Part No.	L (µH)	DC resistance (Ω) Max.				Rated DC current (A) max.			
		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	0.104	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				

Measuring Frequency :
10~82µH @ 2.52MHz 0.25V; 100~330µH @ 1kHz 0.25V
Tolerance of Inductance :
SMTDR73 10~470µH (K) ± 10%; 56~330µH (K) ± 10%.
SMTDR75 10~470µH (K) ± 10%.
SMTDR104 10~47µH (M) ± 20%; 56~560µH (K) ± 10%.
SMTDR105 10~39µH (M) ± 20%; 47~820µH (K) ± 10%.

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TFC 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

TFC Part No	Inductance L (uH)	Test Freq (0.1V)	DCR (mΩ) Max .	I sat (A) Max .	I rms (A) Max
SMTDR137-1R5M	1.5	100 KHz	5.0	22.0	9.50
SMTDR137-2R2M	2.2	100 KHz	8.0	20.0	9.00
SMTDR137-2R7M	2.7	100 KHz	8.0	18.0	8.20
SMTDR137-3R3M	3.3	100 KHz	8.7	17.0	7.50
SMTDR137-4R7M	4.7	100 KHz	11.8	15.0	7.00
SMTDR137-5R6M	5.6	100 KHz	15.0	13.0	6.50
SMTDR137-6R8M	6.8	100 KHz	17.0	11.5	6.00
SMTDR137-8R2M	8.2	100 KHz	19.0	10.8	5.80
SMTDR137-100M	**10.0**	**100 KHz**	**23.0**	**10.2**	**5.60**
SMTDR137-120M	12.0	100 KHz	30.0	9.00	4.80
SMTDR137-150M	15.0	100 KHz	34.0	8.00	4.50
SMTDR137-180M	18.0	100 KHz	40.0	7.50	4.20
SMTDR137-220M	22.0	100 KHz	52.0	7.00	3.60
SMTDR137-270M	27.0	100 KHz	60.0	6.00	3.30
SMTDR137-330K	33.0	100 KHz	70.0	5.50	3.10
SMTDR137-390K	39.0	100 KHz	75.0	5.10	2.90
SMTDR137-470K	47.0	100 KHz	82.0	4.70	2.70
SMTDR137-560K	56.0	100 KHz	112.0	4.30	2.50
SMTDR137-680K	68.0	100 KHz	135.0	4.00	2.30
SMTDR137-820K	82.0	100 KHz	140.0	3.70	2.10
SMTDR137-101K	**100.0**	**100 KHz**	**180.0**	**3.20**	**1.90**
SMTDR137-121K	120.0	100 KHz	230.0	3.0	1.80
SMTDR137-151K	150.0	100 KHz	260.0	2.70	1.60
SMTDR137-181K	180.0	100 KHz	350.0	2.40	1.50
SMTDR137-221K	220.0	100 KHz	380.0	2.20	1.30
SMTDR137-271K	270.0	100 KHz	480.0	1.90	1.20
SMTDR137-331K	330.0	100 KHz	520.0	1.70	1.10
SMTDR137-391K	390.0	100 KHz	650.0	1.60	1.00
SMTDR137-471K	470.0	100 KHz	800.0	1.50	0.90
SMTDR137-561K	560.0	100 KHz	1100.0	1.30	0.85
SMTDR137-681K	680.0	100 KHz	1150.0	1.20	0.80
SMTDR137-821K	820.0	100 KHz	1600.0	1.10	0.75
SMTDR137-102K	1000.0	100 KHz	1700.0	1.00	0.65

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Electrical specification

Inductance range

SMTDR31	2.2 ~ 27.0µH	1.2 ~ 0.36A	SMTDR73	10 ~ 330µH	1.44 ~ 0.28A
SMTDR32	1.0 ~ 330µH	2.2 ~ 0.09A	SMTDR75	10 ~ 470µH	2.30 ~ 0.34A
SMTDR43	1.0 ~ 68µH	2.56 ~ 0.37A	SMTDR104	10 ~ 560µH	2.38 ~ 0.32A
SMTDR52	1.2 ~ 470µH	4.2 ~ 0.15A	SMTDR105	10 ~ 820µH	2.60 ~ 0.24A
SMTDR53	1.0 ~ 470µH	4.5 ~ 0.20A	SMTDR107	10 ~ 820uH	5.0 ~ 057A
SMTDR54	10 ~ 220µH	1.44 ~ 0.35A	SMTDR137	1.5 ~ 1000uH	9.5 ~ 0.65A

Rated DC Current

** Saturation Current (Isat): The current when the, inductance becomes 10% lower than its initial, value. (Ta=20℃).*

**Temperature Rise Current (Irms): The current when, temperature of coil increases up to max, ⊿T=40℃. (Ta=20℃).*

Operating temperature

-30˚C to 105˚C

Test equipment and set up

L : measured at 0Adc on an HP 4284A LCR or equivalent.
DCR measured on a Chroma 16502 micro-ohmmeter or equivalent
Electrical specifications at 25C.

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