



## SMTDR SERIES

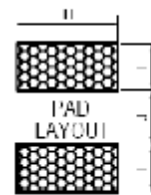
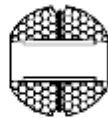
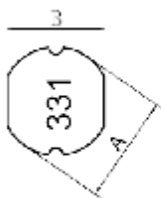
UNSHIELDED SMT POWER INDUCTORS

### 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.

### Characteristics :

- Rated Current: It is either the inductance is 10% lower than its initial value in DC. saturation characteristics or temperature raise becomes  $\Delta T=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ ), whichever is lower.
- Operating temperature :  $-30^{\circ}\text{C}$  to  $105^{\circ}\text{C}$ .

### Product identification :

**SMT DR105 - 331 K**

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

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

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

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

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

### 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  $25^{\circ}\text{C}$ .


**I 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

**I SMTDR series**

Part No.	L (uH)	DC resistance (Ω) Max.					Rated current (Amp) 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	0.32	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



## I SMTDR series

Part No.	L ( $\mu$ H)	DC resistance ( $\Omega$ ) Max.					Rated current (Amp) Max.				
		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	0.260	
471	470			6.70	4.90				0.15	0.200	

### 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)  $\pm$  20%; 22~330uH (K)  $\pm$  10%. SMTDR43 1.0~27uH (M)  $\pm$  20%; 33~68uH (K)  $\pm$  10%.

SMTDR52 1.2~18uH (M)  $\pm$  20%; 22~470uH (K)  $\pm$  10%. SMTDR53 1.0~18uH (M)  $\pm$  20%; 22~470uH (K)  $\pm$  10%.

SMTDR54 10~27uH (M)  $\pm$  20%; 33~220uH (K)  $\pm$  10%.

## I SMTDR series

Part No.	L ( $\mu$ H)	DC resistance ( $\Omega$ ) Max.				Rated current (Amp) 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	0.111	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)  $\pm$  10%; 56~330uH (K)  $\pm$  10%.

SMTDR75 10~470uH (K)  $\pm$  10%.

SMTDR104 10~47uH (M)  $\pm$  20%; 56~560uH (K)  $\pm$  10%.

SMTDR105 10~39uH (M)  $\pm$  20%; 47~820uH (K)  $\pm$  10%.


**I SMTDR 107 series**

<b>Part No.</b>	<b>Inductance L (uH)</b>	<b>Test Freq. (0.25V)</b>	<b>DCR (mΩ) Max.</b>	<b>I sat (A) Max.</b>	<b>I rms (A) Max.</b>
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



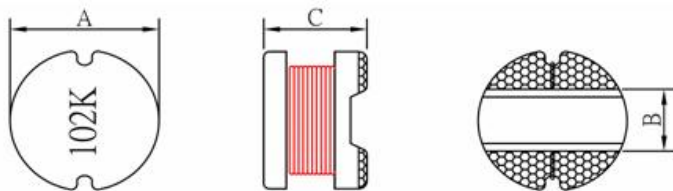
## SMTDR137 SERIES

### UNSHIELDED SMT POWER INDUCTORS

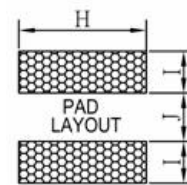
#### Applications :

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

#### Shape and Dimensions



Item	A	B	C
SMTDR137	13.0±0.5	4.5	7.0±0.3



Item	H	I	J
SMTDR137	14.0	4.75	4.5

#### Features :

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

#### Characteristics :

- Saturation Current (Isat): The current when the inductance becomes 10% lower than its initial value. (Ta=20°C).
- Temperature Rise Current (Irms): The current when temperature of coil increases up to max  $\Delta T=40^\circ\text{C}$ . (Ta=20°C).
- Operating temperature : -30 °C to 105 °C.

#### Product Identification :

**SMT DR137 - 471 K**

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

(1)Type : Surface Mountable Type .

(2)Style : DR Core : OD=13.0mm, HT=7.0mm.

(3)Inductance : 471 for 470 uH.

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

#### Test equipments :

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



## I SMTDR 137 series

Part No.	Inductance L ( $\mu$ H)	Test Freq. (0.1V)	DCR (m $\Omega$ ) 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

\* Due to the limited space, the catalogue shows the typical specifications only. For more specific details ( characteristics graph, reliability, and others), kindly invite you to access 3L official website [www.3lcoil.com](http://www.3lcoil.com) for better known.