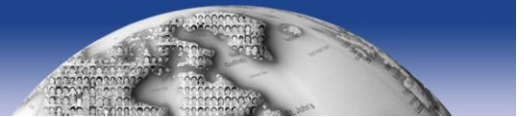




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SMTDR SERIES

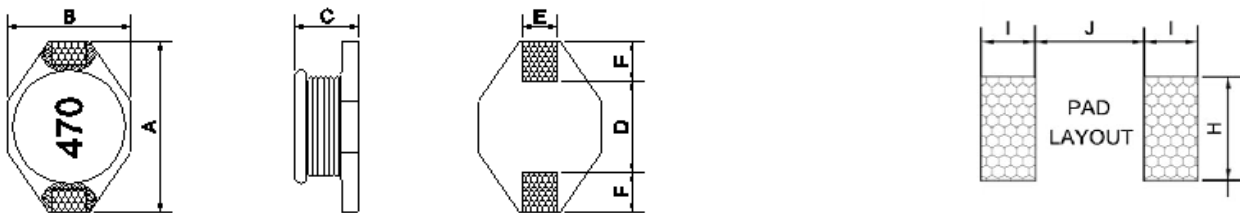
UNSHIELDED SMT POWER INDUCTORS

Applications :

- . Portable telephones
- . Personable computers
- . DC/DC converters, etc
- . Other various electronic appliances



Shape and Dimensions (Dimensions are in mm) :



Item	A Max.	B Max.	C Max.	D
SMTDR0402	6.60	4.45	2.92	4.32
SMTDR0802	12.95	9.40	3.50	7.62
SMTDR0804	12.95	9.40	5.21	7.62
SMTDR0810	12.95	9.40	11.43	7.62
SMTDR1206	18.54	15.24	7.11	12.7

Item	E	F	H	I	J
SMTDR0402	1.27	1.02	3.56	1.4	4.06
SMTDR0802	2.54	2.54	2.79	2.92	7.37
SMTDR0804	2.54	2.54	2.79	2.92	7.37
SMTDR0810	2.54	2.54	2.79	2.92	7.37
SMTDR1206	2.54	2.54	2.79	2.92	12.45

Features :

- . High power, High saturation ,Low resistance
- . Ideal inductors for DC-DC conversion in notebook Computer, PDAs, Step-up or Step-down converters , Flash memory programmers, etc.
- . SMTDR0402 used ceramic base with gold-plating
- . the others used LCP plastic base

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 : -40°C to 105°C.

Measuring Frequency :

- . SMTDR0402/0802/0804/0810/1206
- . 1.0~1000 uH @100KHZ 0.1V

Product Identification :

SMT DR0804 - 470 M

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

(1)Type : Surface Mountable Type .

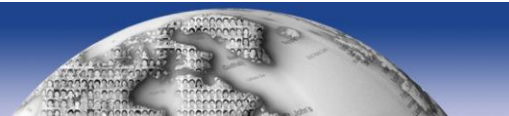
(2)Style : DR Core OD=8.5mm H=4.0mm .

(3)Inductance : **470** for **47** uH.

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

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°C.

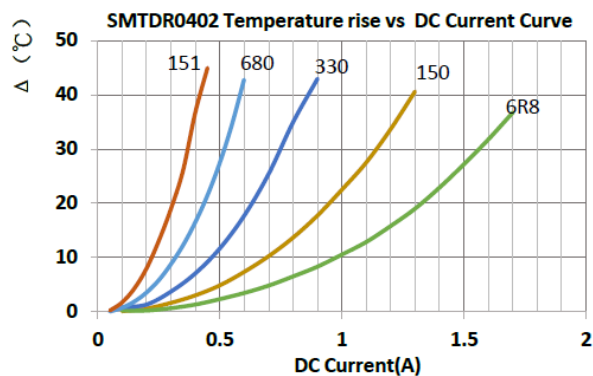
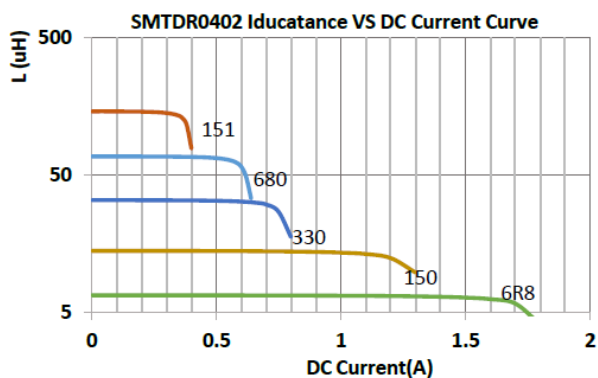


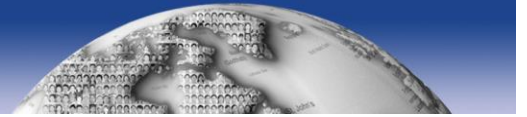
● SMTDR0402 series

Part NO.	L(μH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR0402-1R0M	1.0	30m	17m	3.65	4.55	2.80	3.40
SMTDR0402-1R5M	1.5	40m	22m	2.85	3.55	2.20	3.00
SMTDR0402-2R2M	2.2	50m	29m	2.25	2.80	1.98	2.45
SMTDR0402-3R3M	3.3	80m	53m	1.95	2.40	1.90	2.30
👍 SMTDR0402-4R7M	4.7	90m	<u>60m</u>	1.70	<u>2.10</u>	1.78	<u>2.20</u>
👍 SMTDR0402-6R8M	6.8	130m	<u>82m</u>	1.35	<u>1.65</u>	1.48	<u>1.78</u>
SMTDR0402-100M	10	0.16	0.12	1.20	1.45	1.28	1.52
SMTDR0402-150M	15	0.23	0.17	0.95	1.18	1.08	1.30
SMTDR0402-220K	22	0.37	0.25	0.78	0.98	0.82	1.00
SMTDR0402-330K	33	0.51	0.38	0.57	0.71	0.70	0.88
👍 SMTDR0402-470K	47	0.64	<u>0.51</u>	0.53	<u>0.66</u>	0.55	<u>0.68</u>
👍 SMTDR0402-680K	68	0.86	<u>0.72</u>	0.46	<u>0.58</u>	0.48	<u>0.58</u>
SMTDR0402-101K	100	1.27	1.08	0.34	0.42	0.44	0.50
SMTDR0402-151K	150	2.00	1.73	0.29	0.36	0.34	0.41
SMTDR0402-221K	220	3.11	2.77	0.22	0.28	0.25	0.31
👍 SMTDR0402-331K	330	3.80	<u>3.53</u>	0.19	<u>0.24</u>	0.24	<u>0.28</u>
SMTDR0402-471K	470	6.20	5.70	0.18	0.22	0.19	0.24
SMTDR0402-681K	680	9.20	8.00	0.14	0.17	0.17	0.20
SMTDR0402-102K	1000	13.8	12.0	0.11	0.14	0.14	0.17

👍 : The figures underlined mean the electrical characteristics are beyond competitors. Others, same as standards.

Typical Performance curves:



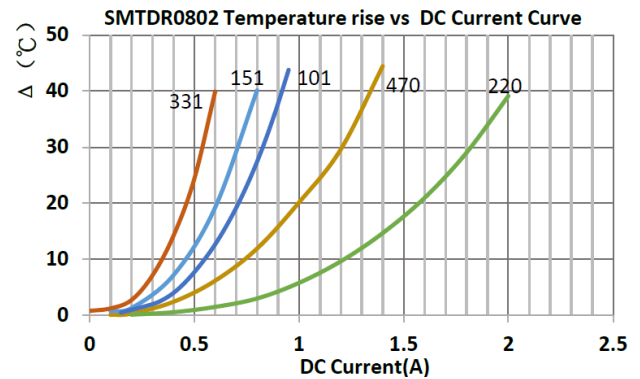
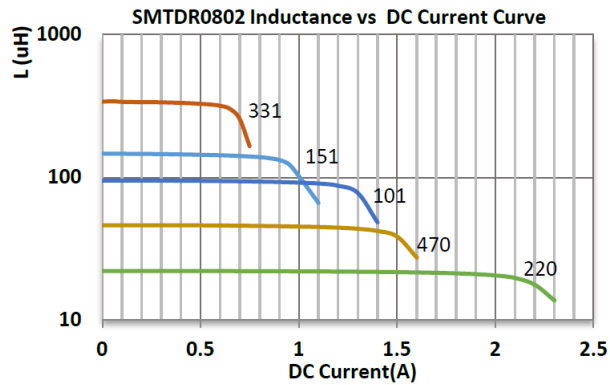


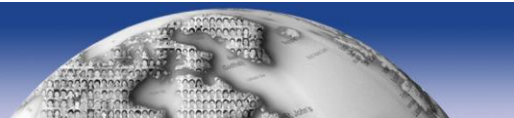
● SMTDR0802 series

Part NO.	L(uH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
👍 SMTDR0802-100M	10	<u>68m</u>	<u>55m</u>	<u>2.65</u>	<u>3.30</u>	<u>2.45</u>	<u>2.95</u>
👍 SMTDR0802-150M	15	<u>100m</u>	<u>80m</u>	<u>2.10</u>	<u>2.60</u>	<u>2.00</u>	<u>2.50</u>
SMTDR0802-220M	22	187m	150m	1.65	2.05	1.70	2.00
👍 SMTDR0802-330M	33	<u>0.21</u>	<u>0.17</u>	<u>1.40</u>	<u>1.70</u>	<u>1.45</u>	<u>1.75</u>
SMTDR0802-470M	47	0.33	0.26	1.15	1.40	1.10	1.35
SMTDR0802-680M	68	0.53	0.42	1.05	1.30	0.88	1.02
SMTDR0802-101M	100	0.73	0.58	0.97	1.21	0.78	0.92
SMTDR0802-151M	150	0.95	0.76	0.75	0.90	0.65	0.80
👍 SMTDR0802-221M	220	<u>1.51</u>	<u>1.21</u>	<u>0.56</u>	<u>0.70</u>	<u>0.53</u>	<u>0.65</u>
SMTDR0802-331M	330	2.06	1.65	0.50	0.62	0.50	0.60
SMTDR0802-471M	470	3.44	2.75	0.33	0.41	0.36	0.44
SMTDR0802-681M	680	4.80	3.84	0.30	0.38	0.28	0.34
SMTDR0802-102M	1000	6.58	5.26	0.25	0.31	0.26	0.31

👍 : The figures underlined mean the electrical characteristics are beyond competitors. Others, same as standards.

Typical Performance curves:



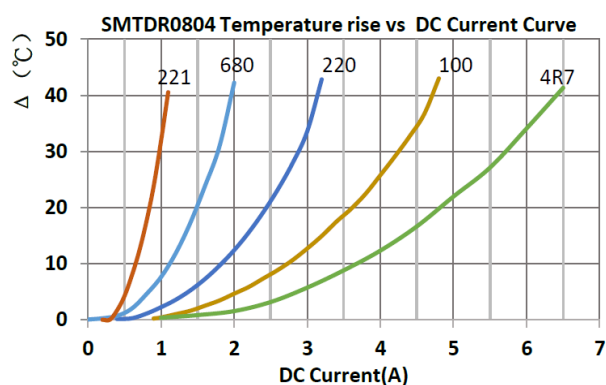
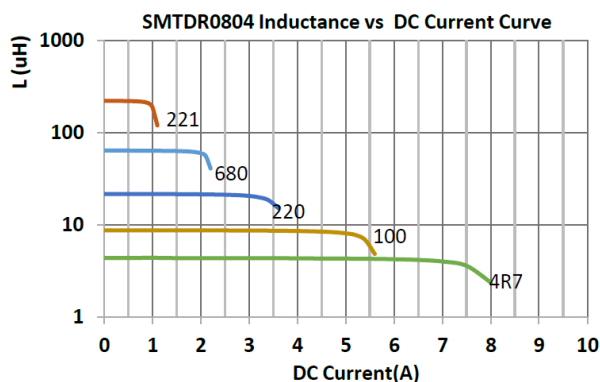


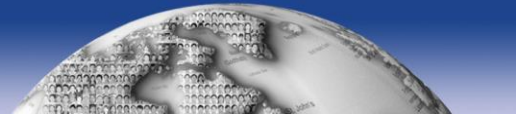
● SMTDR0804 series

Part NO.	L(uH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR0804-1R0M	1.0	9m	4.5m	12.0	15.0	8.80	10.5
SMTDR0804-1R5M	1.5	10m	5.1m	9.76	12.2	8.00	9.50
SMTDR0804-2R2M	2.2	12m	7.7m	8.08	10.1	7.20	8.90
SMTDR0804-3R3M	3.3	15m	8.8m	6.98	8.70	6.60	8.20
SMTDR0804-4R7M	4.7	18m	13m	5.68	7.10	5.30	6.40
SMTDR0804-6R8M	6.8	27m	19m	5.12	6.40	4.57	5.60
👍 SMTDR0804-100M	10	<u>38m</u>	<u>25m</u>	<u>4.08</u>	<u>5.10</u>	<u>4.00</u>	<u>4.70</u>
👍 SMTDR0804-150M	15	<u>46m</u>	<u>37m</u>	<u>3.12</u>	<u>3.90</u>	<u>3.20</u>	<u>3.90</u>
SMTDR0804-220M	22	85m	55m	2.56	3.20	2.70	3.10
👍 SMTDR0804-330M	33	<u>100m</u>	<u>83m</u>	<u>2.32</u>	<u>2.90</u>	<u>2.30</u>	<u>2.80</u>
SMTDR0804-470M	47	0.14	0.11	1.68	2.10	2.10	2.40
SMTDR0804-680M	68	0.20	0.17	1.62	2.02	1.62	1.98
SMTDR0804-101M	100	0.28	0.25	1.13	1.41	1.30	1.58
SMTDR0804-151M	150	0.40	0.37	0.98	1.22	1.07	1.28
👍 SMTDR0804-221M	220	<u>0.61</u>	<u>0.55</u>	<u>0.78</u>	<u>0.97</u>	<u>0.92</u>	<u>1.10</u>
SMTDR0804-331M	330	1.02	0.83	0.70	0.87	0.75	0.90
SMTDR0804-471M	470	1.27	1.09	0.56	0.70	0.62	0.73
SMTDR0804-681M	680	2.02	1.64	0.48	0.60	0.48	0.57
SMTDR0804-102M	1000	3.00	2.50	0.38	0.48	0.45	0.55

👍 : The figures underlined mean the electrical characteristics are beyond competitors. Others, same as standards.

Typical Performance curves:

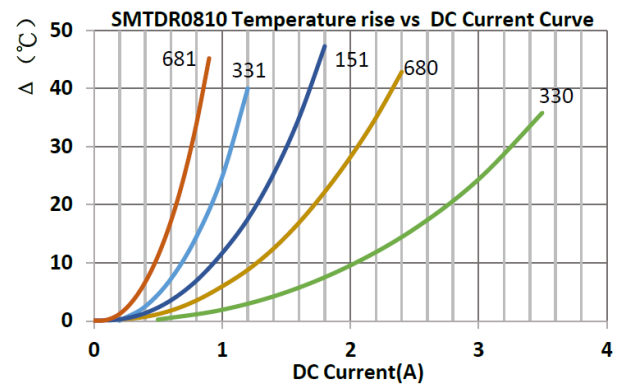
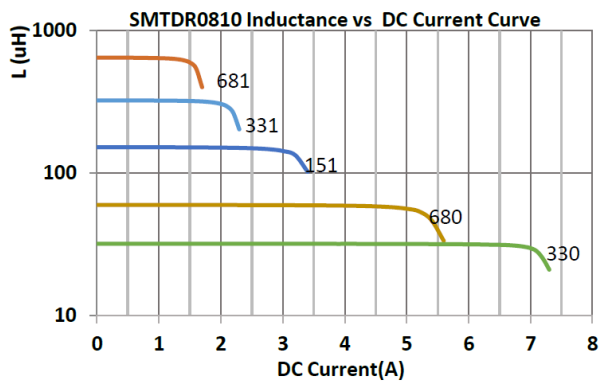


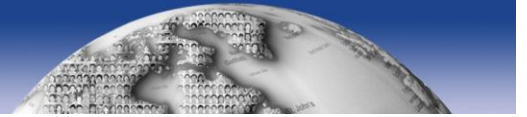


● **SMTDR0810 series**

Part NO.	L(uH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR0810-100M	10	40m	21m	10.4	13.0	4.50	5.30
SMTDR0810-150M	15	50m	30m	8.00	10.0	3.80	4.30
SMTDR0810-220M	22	66m	45m	7.20	9.0	3.30	3.80
SMTDR0810-330M	33	80m	57m	5.76	7.2	3.10	3.70
SMTDR0810-470M	47	110m	86m	4.80	6.0	2.60	3.20
SMTDR0810-680M	68	0.17	0.12	4.16	5.2	1.90	2.38
SMTDR0810-101M	100	0.22	0.16	3.44	4.3	1.70	2.10
SMTDR0810-151M	150	0.34	0.25	2.48	3.1	1.40	1.70
SMTDR0810-221M	220	0.44	0.37	2.24	2.8	1.18	1.40
SMTDR0810-331M	330	0.70	0.54	1.68	2.1	1.00	1.20
SMTDR0810-471M	470	0.95	0.75	1.44	1.8	0.88	1.00
SMTDR0810-681M	680	1.20	0.95	1.20	1.5	0.70	0.85
SMTDR0810-102M	1000	2.00	1.53	1.00	1.25	0.48	0.60

Typical Performance curves:



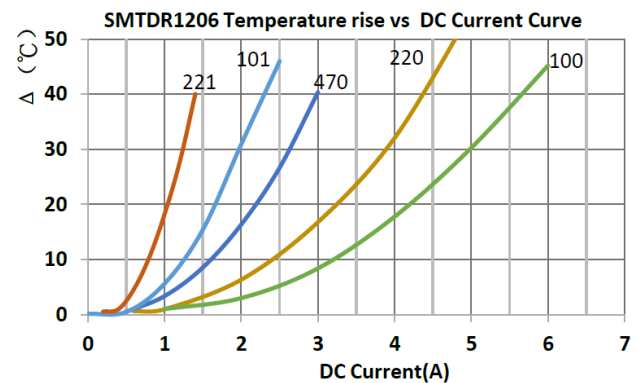
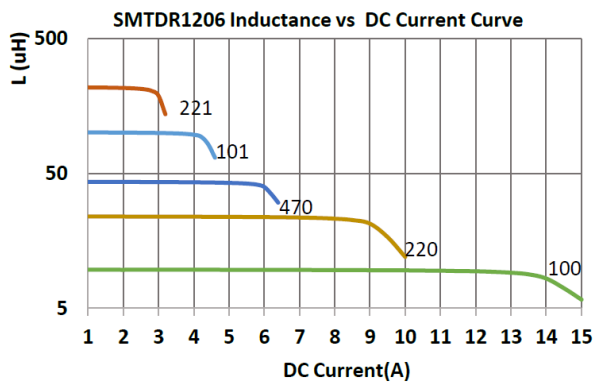


● SMTDR1206 series

Part NO.	L(μ H)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR1206-1R0M	1.0	9m	8m	20.0	39.0	9.00	11.8
SMTDR1206-2R2M	2.2	14m	11m	16.0	25.4	7.80	9.50
SMTDR1206-3R3M	3.3	18m	13m	14.0	21.8	7.50	9.20
SMTDR1206-5R6M	5.6	20m	16m	12.0	16.0	6.20	7.40
👍 SMTDR1206-100M	10	31m	<u>20m</u>	10.0	<u>13.8</u>	4.60	<u>5.60</u>
👍 SMTDR1206-150M	15	36m	<u>26m</u>	8.00	<u>11.9</u>	4.30	<u>5.00</u>
👍 SMTDR1206-220M	22	47m	<u>38m</u>	7.00	<u>8.9</u>	3.50	<u>4.40</u>
👍 SMTDR1206-330M	33	66m	<u>52m</u>	5.50	<u>7.8</u>	2.60	<u>3.40</u>
👍 SMTDR1206-470M	47	86m	<u>75m</u>	4.50	<u>6.0</u>	2.40	<u>3.00</u>
SMTDR1206-680M	68	0.13	99m	3.50	5.6	2.20	2.60
SMTDR1206-101M	100	0.19	0.15	3.00	4.3	1.80	2.20
SMTDR1206-151M	150	0.25	0.22	2.60	3.8	1.30	1.61
SMTDR1206-221M	220	0.38	0.34	2.40	2.8	1.10	1.40
SMTDR1206-331M	330	0.56	0.53	1.90	2.2	0.90	1.15
SMTDR1206-471M	470	0.85	0.70	1.40	1.8	0.79	0.95
SMTDR1206-681M	680	1.10	1.02	1.20	1.5	0.62	0.79
SMTDR1206-102M	1000	1.80	1.45	1.00	1.25	0.51	0.62

👍 : The figures underlined mean the electrical characteristics are beyond competitors. Others, same as standards.

Typical Performance curves:



* 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 for better known.



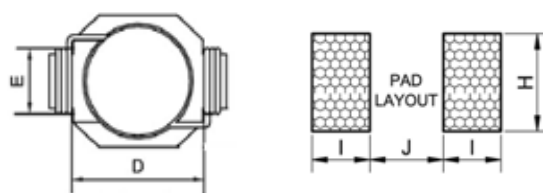
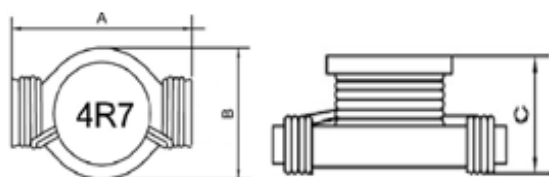
SMTDR SERIES

UNSHIELDED SMT POWER INDUCTORS

Applications :

- Power supply for VTRs. LCD televisions.
- Personable computers, Other various electronic appliances.
- DC/DC converters, etc

Shape and Dimensions (Dimensions are in mm) :



Item	A Max.	B Max.	C Max.
SMTDR0402HC	7.5	5.2	3.2
SMTDR0504HC	9.0	6.1	5.0
SMTDR0904HC	13.2	9.9	6.0
SMTDR1105HC	19.4	13.3	6.8
SMTDR1306HC	22.5	15.3	8.0

Item	D	E	H	I	J
SMTDR0402HC	4.6	2.5	4.0	2.0	4.0
SMTDR0504HC	5.8	3.0	5.0	2.0	5.0
SMTDR0904HC	9.5	4.5	6.5	2.3	9.0
SMTDR1105HC	12.7	6.6	8.0	3.8	11.7
SMTDR1306HC	14.6	7.7	10.0	4.3	13.5

Features :

- Miniature surface mount designed
- High power, High saturation inductors
- very low resistance, Maximum power density
- Ideal inductors for DC-DC conversion
- Available on tape and reel for auto surface mounting.
- Maximum power density.

Characteristics :

- Saturation Current(Isat):The current when the inductance becomes 30% (0402HC is 10%) lower than its initial value.(Ta=20°C)
- Temperature Rise Current(Irms):The current when the temperature of coil increases up to max $\Delta T=40^{\circ}\text{C}$.(Ta=20°C)
- Operating temperature : -30°C to 105°C.

Measuring Frequency :

- SMTDR0402HC/0504HC/0904HC/1105HC/1306HC
0.47~100uH@100KHz 0.25V

Product Identification :

SMT DR0105 HC - 4R7 M

(1) (2) (3) (4) (5)

(1)Type : **Surface Mountable Type.**

(2)Style : **DR** Core : **OD**=11.0mm **HT**=5.0mm.

(3)HC : **High Current.**

(4)Inductance : **4R7** for **4.7** uH.

(5)Inductance tolerance : **M** : $\pm 20\%$.**N**:+40% -20%.

Test equipments :

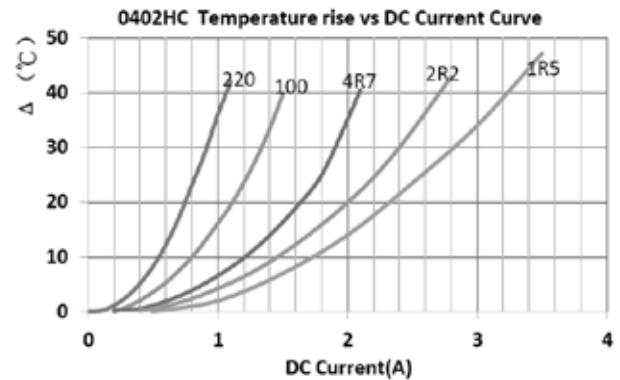
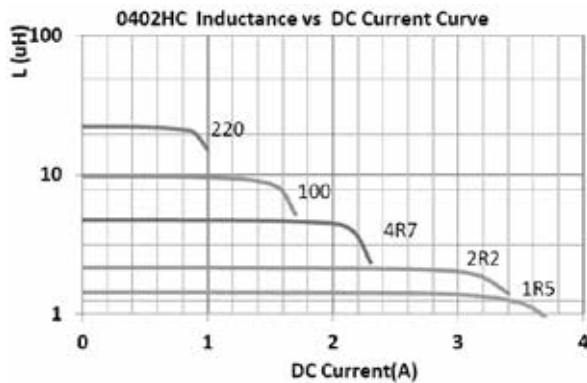
- Inductance measured at 0Adc on HP 4284A LCR meter or equivalent.
- DCR measured on Chroma 16502 micro-ohmmeter or equivalent.
- Electrical specifications at 25°C



● **SMTDR0402HC series**

Part NO.	L(uH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR0402HC-R47N	0.47	17m	14m	3.70	6.5	3.50	4.50
SMTDR0402HC-1R0M	1.0	35m	21m	2.90	3.8	2.80	3.50
SMTDR0402HC-1R5M	1.5	50m	29m	2.60	3.3	2.52	3.20
SMTDR0402HC-2R2M	2.2	70m	35m	2.30	3.1	2.20	2.70
SMTDR0402HC-3R3M	3.3	80m	58m	2.00	2.2	1.90	2.30
SMTDR0402HC-4R7M	4.7	90m	69m	1.50	2.1	1.80	2.10
SMTDR0402HC-6R8M	6.8	130m	91m	1.20	1.65	1.48	1.80
SMTDR0402HC-100M	10	160m	0.12	1.10	1.42	1.22	1.50
SMTDR0402HC-150M	15	230m	0.17	0.90	1.05	1.08	1.35
SMTDR0402HC-220M	22	370m	0.27	0.70	0.89	0.82	1.10

Typical Performance curves:

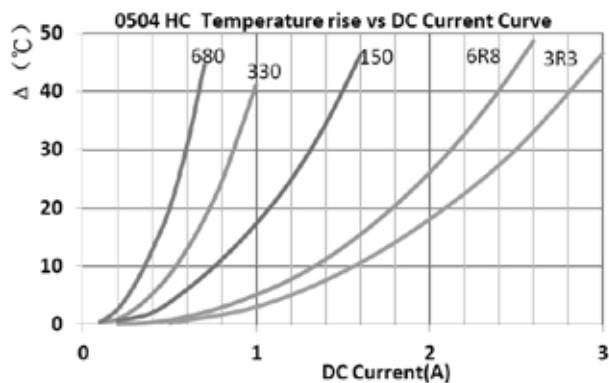
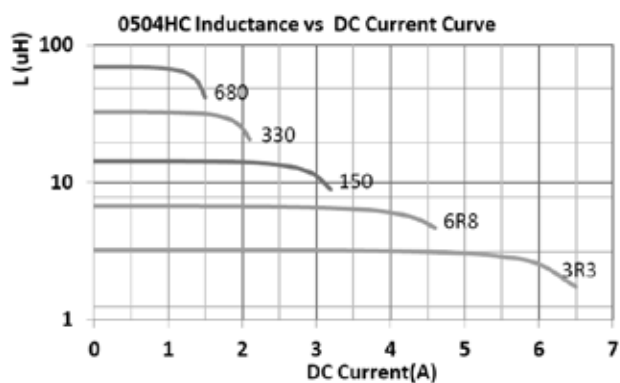




● SMTDR0504HC series

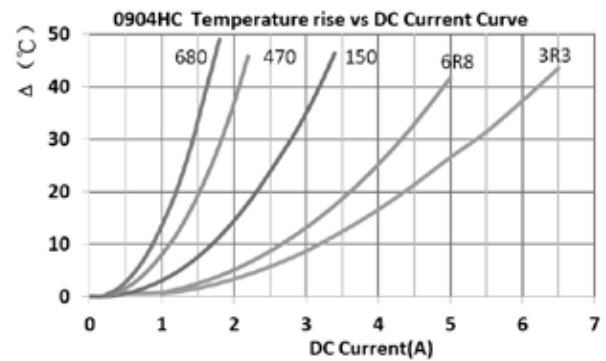
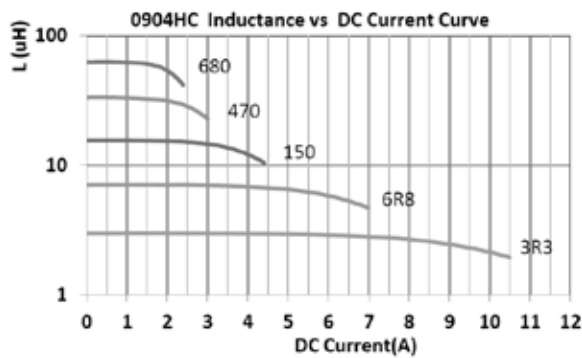
Part NO.	L(μ H)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR0504HC-R47M	0.47	10m	5.9m	13.7	17.1	5.60	6.60
SMTDR0504HC-1R0M	1.0	18m	8.7m	9.7	12.1	4.50	5.60
SMTDR0504HC-1R5M	1.5	20m	13m	7.9	9.80	3.50	4.40
SMTDR0504HC-2R2M	2.2	37m	15m	6.9	8.60	2.80	3.60
SMTDR0504HC-3R3M	3.3	43m	37m	5.0	6.20	2.30	2.80
SMTDR0504HC-4R7M	4.7	55m	47m	4.0	4.90	2.10	2.60
SMTDR0504HC-6R8M	6.8	90m	57m	3.7	4.60	1.95	2.40
SMTDR0504HC-100M	10	110m	79m	3.0	3.70	1.50	1.82
SMTDR0504HC-150M	15	175m	120m	2.6	3.20	1.20	1.50
SMTDR0504HC-220M	22	255m	200m	1.9	2.38	1.00	1.22
SMTDR0504HC-330M	33	367m	250m	1.7	2.05	0.80	1.00
SMTDR0504HC-470M	47	474m	360m	1.4	1.76	0.77	0.90
SMTDR0504HC-680M	68	750m	570m	1.2	1.48	0.56	0.66
SMTDR0504HC-101M	100	1110m	840m	1.0	1.18	0.42	0.49

Typical Performance curves:




● SMTDR0904HC series

Part NO.	L(uH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR0904HC-R47N	0.47	5m	3m	18.4	23.0	10.0	13.0
SMTDR0904HC-1R0M	1.0	7m	4m	15.0	18.8	8.90	10.9
SMTDR0904HC-1R5M	1.5	9m	7m	10.5	13.0	6.90	8.50
SMTDR0904HC-2R2M	2.2	11m	8m	9.20	11.5	6.50	7.90
SMTDR0904HC-3R3M	3.3	13m	9m	8.00	10.0	4.90	6.40
SMTDR0904HC-4R7M	4.7	17m	14m	6.40	8.00	4.40	5.50
SMTDR0904HC-6R8M	6.8	21m	19m	5.44	6.80	4.00	5.00
SMTDR0904HC-100M	10	28m	25m	4.64	5.80	3.00	4.00
SMTDR0904HC-150M	15	50m	44m	3.44	4.30	2.60	3.20
SMTDR0904HC-220M	22	62m	55m	3.20	4.00	2.30	2.90
SMTDR0904HC-330M	33	92m	85m	2.32	2.90	2.00	2.50
SMTDR0904HC-470M	47	139m	120m	2.04	2.55	1.65	2.05
SMTDR0904HC-680M	68	210m	170m	1.89	2.36	1.30	1.61
SMTDR0904HC-101M	100	271m	250m	1.52	1.90	1.15	1.40

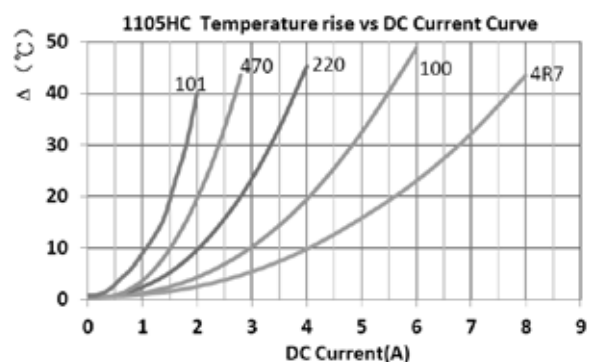
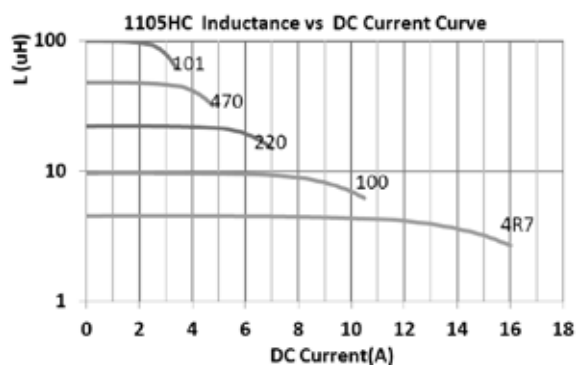
Typical Performance curves:




● SMTDR1105HC series

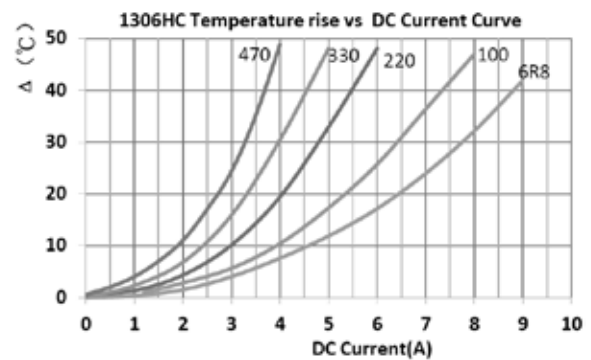
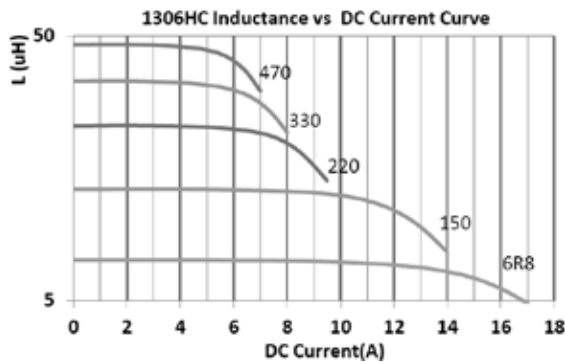
Part NO.	L(μ H)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR1105HC-R47N	0.47	3m	2m	38.0	47.5	11.0	15.0
SMTDR1105HC-1R0M	1.0	4m	3m	23.5	29.0	10.0	13.0
SMTDR1105HC-1R5M	1.5	6m	5m	19.0	23.5	9.00	11.0
SMTDR1105HC-2R2M	2.2	8m	6m	16.5	20.5	8.00	10.0
SMTDR1105HC-3R3M	3.3	9m	8m	12.9	16.1	7.00	9.00
SMTDR1105HC-4R7M	4.7	15m	12m	12.0	15.0	6.20	7.80
SMTDR1105HC-6R8M	6.8	19m	15m	9.70	12.1	5.00	6.20
SMTDR1105HC-100M	10	27m	22m	8.10	10.1	4.60	5.50
SMTDR1105HC-150M	15	32m	28m	6.50	8.2	3.70	4.60
SMTDR1105HC-220M	22	50m	45m	5.50	6.8	3.20	3.70
SMTDR1105HC-330M	33	69m	58m	4.50	5.7	2.80	3.50
SMTDR1105HC-470M	47	109m	87m	3.70	4.6	2.20	2.70
SMTDR1105HC-680M	68	156m	130m	3.05	3.8	1.80	2.25
SMTDR1105HC-101M	100	206m	180m	2.65	3.3	1.60	2.00

Typical Performance curves:




● SMTDR1306HC series

Part NO.	L(μ H)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDR1306HC-R47	0.47	2m	1.5m	51.7	60.8	17.0	21.0
SMTDR1306HC-1R0	1.0	3m	2.5m	37.8	42.0	15.0	18.1
SMTDR1306HC-1R5	1.5	4m	3.3m	28.9	33.0	11.0	15.0
SMTDR1306HC-2R2	2.2	5.5m	4.6m	23.7	29.0	8.50	13.0
SMTDR1306HC-3R3	3.3	6.0m	5.4m	20.2	24.5	9.50	11.6
SMTDR1306HC-4R7	4.7	10m	7.7m	15.6	21.5	8.00	10.0
SMTDR1306HC-6R8	6.8	15m	11m	14.1	18.0	7.10	8.90
SMTDR1306HC-100	10	20m	15m	11.5	14.2	6.00	7.30
SMTDR1306HC-150	15	30m	22m	9.1	13.1	5.00	6.00
SMTDR1306HC-220	22	40m	33m	7.6	9.00	4.50	5.50
SMTDR1306HC-330	33	60m	48m	6.1	7.60	3.50	4.50
SMTDR1306HC-470	47	74m	65m	5.2	6.80	3.00	3.70
SMTDR1306HC-680	68	120m	90m	4.3	5.80	2.70	3.50
SMTDR1306HC-101	100	170m	150m	3.6	4.50	2.20	2.60

Typical Performance curves:


* 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 for better known.