

SMTDRH SERIES

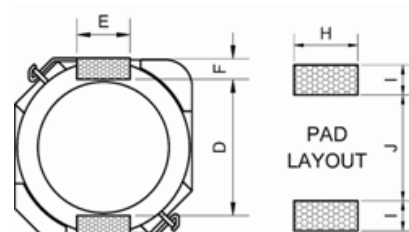
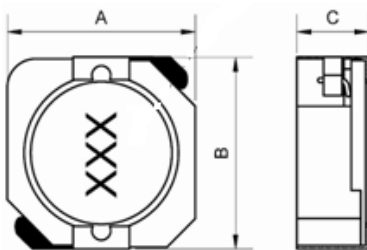
UNSHIELDED SMT POWER INDUCTORS

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 Max.	B Max.	C Max.
SMTDRH5D28R	6.2	6.3	3.0
SMTDRH103R	10.3	10.4	3.0
SMTDRH104R	10.3	10.4	4.0
SMTDRH105R	10.3	10.4	5.0

Item	D	E	F	H	I	J
SMTDRH5D28R	4.7	2.0	0.6	2.6	1.0	4.6
SMTDRH103R	7.7	3.0	1.2	3.6	1.7	7.3
SMTDRH104R	7.7	3.0	1.2	3.6	1.7	7.3
SMTDRH105R	7.7	3.0	1.2	3.6	1.7	7.3

Features :

- Directly connected electrode on ferrite core.
- Ideal inductors for DC-DC conversion.
- High power, High saturation inductors.
- With magnetic shield against radiation.
- Available on tape and reel for auto surface mounting.

Product Identification :

SMT DRH104R - 470 N

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

- (1) Type : **Surface Mountable Type**.
- (2) Style : **DR** Core with **RI** shield , **104R** is size.
- (3) Inductance : Example : **470** for **47** uH.
- (4) Inductance tolerance : **N** : $\pm 30\%$.

Characteristics :

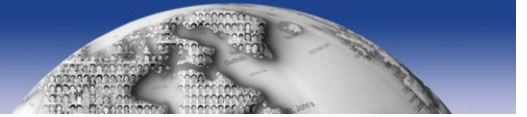
- Saturation Current(Isat):The current when the inductance becomes 30% lower than its initial value.(Ta=20°C)
- Temperature Rise Current(Irms):The current when temperature of coil increases up to max $\Delta T=40^\circ\text{C}$.(Ta=20°C)
- Operating temperature : -40°C to 125°C.

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.

Measuring Frequency :

- SMTDRH5D28R /103R/104R/105R
- 0.8~1000uH @100KHZ 0.1V

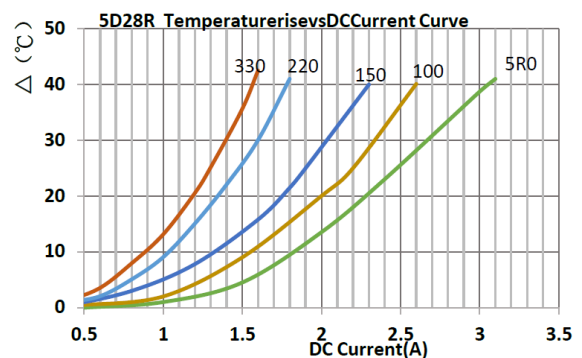
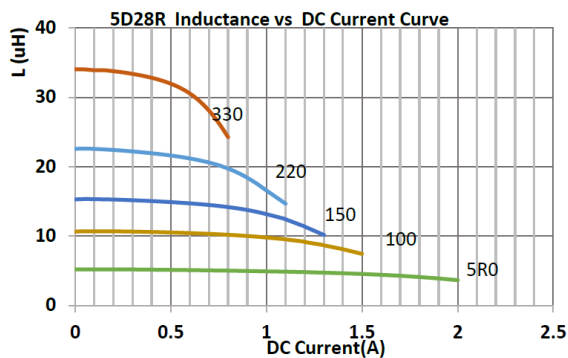


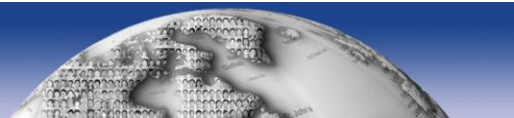
● SMTDRH5D28R series

Part NO.	L(μH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDRH5D28R-2R5N	2.5	17.6m	14m	2.30	2.70	4.00	5.00
SMTDRH5D28R-3R3N	3.3	20.3m	16m	1.96	2.30	3.20	4.10
SMTDRH5D28R-4R0N	4.0	27.0m	20m	1.87	2.20	2.80	3.70
SMTDRH5D28R-5R0N	5.0	31.1m	25m	1.70	2.00	2.40	3.10
SMTDRH5D28R-6R0N	6.0	41.9m	28m	1.53	1.80	2.35	3.05
SMTDRH5D28R-8R0N	8.0	49.9m	37m	1.23	1.45	2.30	3.00
👍 SMTDRH5D28R-100N	10	54.0m	<u>47m</u>	1.19	1.40	2.20	<u>2.60</u>
👍 SMTDRH5D28R-120N	12	71.6m	<u>51m</u>	1.02	1.20	1.95	<u>2.40</u>
👍 SMTDRH5D28R-150N	15	82.4m	<u>66m</u>	0.98	1.15	1.90	<u>2.30</u>
👍 SMTDRH5D28R-180N	18	101.5m	<u>84m</u>	0.81	0.95	1.45	<u>1.85</u>
👍 SMTDRH5D28R-220N	22	119.0m	<u>95m</u>	0.77	0.90	1.40	<u>1.80</u>
👍 SMTDRH5D28R-270N	27	146.0m	<u>120m</u>	0.72	0.85	1.35	<u>1.60</u>
👍 SMTDRH5D28R-330N	33	182.5m	<u>140m</u>	0.68	0.80	1.30	<u>1.55</u>
👍 SMTDRH5D28R-390N	39	209.5m	<u>180m</u>	0.60	0.70	1.25	<u>1.45</u>
👍 SMTDRH5D28R-470N	47	229.5m	<u>200m</u>	0.55	0.65	1.20	<u>1.40</u>
SMTDRH5D28R-560N	56	305.0m	240m	0.53	0.62	1.10	1.30
SMTDRH5D28R-680N	68	351.0m	290m	0.51	0.60	0.98	1.25
SMTDRH5D28R-820N	82	418.5m	330m	0.47	0.55	0.95	1.20
SMTDRH5D28R-101N	100	610.0m	490m	0.43	0.50	0.70	0.90

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

Typical Performance curves:



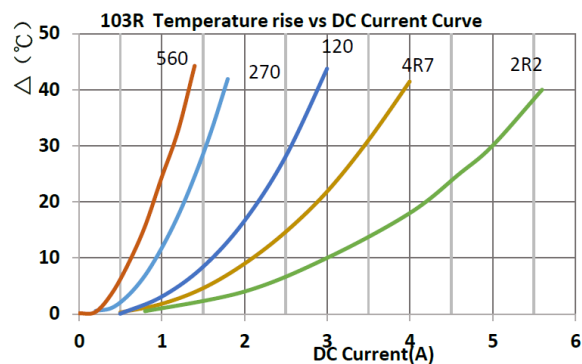
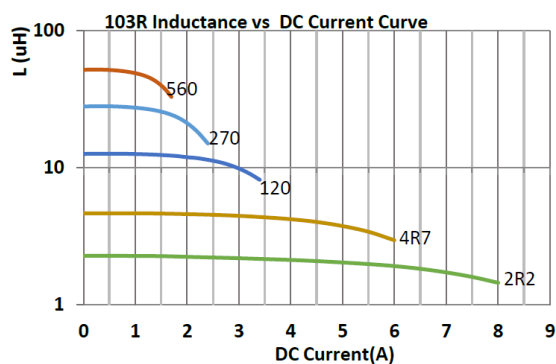


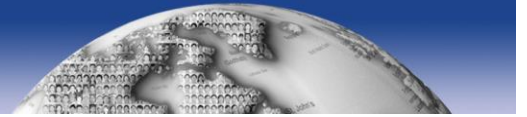
● SMTDRH103R series

Part NO.	L(μH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDRH103R-R80N	0.8	5.7m	5.3m	9.60	12.0	6.00	7.00
👍 SMTDRH103R-1R5N	1.5	11m	<u>8.2m</u>	7.55	9.40	4.90	<u>6.00</u>
👍 SMTDRH103R-2R2N	2.2	17m	<u>11m</u>	5.95	7.40	5.00	<u>5.60</u>
👍 SMTDRH103R-3R3N	3.3	21m	<u>15m</u>	5.25	6.55	4.20	<u>5.40</u>
👍 SMTDRH103R-4R7N	4.7	30m	<u>23m</u>	4.50	5.60	3.30	3.90
SMTDRH103R-6R8N	6.8	35m	31m	3.85	4.80	3.00	<u>3.60</u>
SMTDRH103R-8R2N	8.2	50m	39m	3.30	4.10	2.60	<u>3.40</u>
👍 SMTDRH103R-100N	10	58m	<u>44m</u>	2.90	3.60	2.50	<u>3.20</u>
SMTDRH103R-120N	12	72m	59m	2.80	3.50	2.40	2.90
👍 SMTDRH103R-150N	15	87m	<u>65m</u>	2.75	3.40	2.26	<u>2.75</u>
SMTDRH103R-180N	18	116m	82m	2.42	3.02	2.00	2.20
👍 SMTDRH103R-220N	22	143m	<u>89m</u>	2.25	2.79	1.60	<u>2.00</u>
👍 SMTDRH103R-270N	27	0.17	<u>0.13</u>	1.65	2.07	1.40	1.78
SMTDRH103R-330N	33	0.20	0.15	1.62	2.02	1.35	1.70
SMTDRH103R-390N	39	0.27	0.21	1.45	1.82	1.10	1.39
SMTDRH103R-470N	47	0.30	0.22	1.44	1.80	1.09	1.33
SMTDRH103R-560N	56	0.33	0.25	1.30	1.60	1.00	1.32
SMTDRH103R-680N	68	0.43	0.34	1.15	1.44	0.90	1.11
👍 SMTDRH103R-820N	82	0.49	<u>0.37</u>	1.11	1.39	0.85	<u>1.05</u>
SMTDRH103R-101N	100	0.68	0.53	0.98	1.22	0.73	<u>0.91</u>
👍 SMTDRH103R-121N	120	0.75	0.59	0.90	1.10	0.72	<u>0.88</u>
SMTDRH103R-151N	150	0.87	0.73	0.78	0.98	0.68	0.82
👍 SMTDRH103R-221N	220	1.20	<u>0.83</u>	0.56	0.70	0.64	0.78
👍 SMTDRH103R-331N	330	1.60	<u>1.24</u>	0.48	0.60	0.60	0.70

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Typical Performance curves:



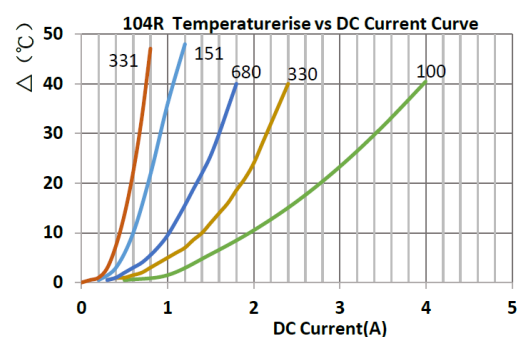
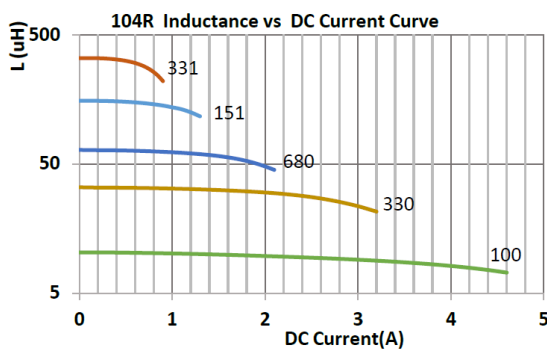


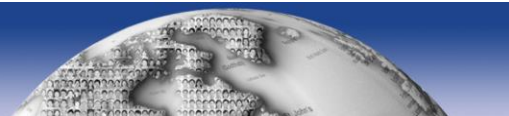
● SMTDRH104R series

Part NO.	L(μH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
👍 SMTDRH104R-1R5N	1.5	8.1m	<u>5.6m</u>	11.30	14.10	6.70	8.40
SMTDRH104R-2R5N	2.5	<u>10m</u>	7.8m	8.35	10.40	6.00	7.50
SMTDRH104R-3R8N	3.8	13m	11m	6.25	7.80	5.40	6.60
SMTDRH104R-5R2N	5.2	22m	16m	5.45	6.80	4.50	5.50
SMTDRH104R-7R0N	7.0	27m	21m	4.80	6.00	3.80	4.80
SMTDRH104R-100N	10.0	35m	27m	3.70	4.60	3.20	4.00
👍 SMTDRH104R-120N	12.0	<u>42m</u>	<u>32m</u>	3.50	4.30	3.10	3.80
SMTDRH104R-150N	15.0	50m	42m	3.40	4.00	2.50	3.10
👍 SMTDRH104R-180N	18.0	<u>62m</u>	<u>46m</u>	3.10	3.85	2.40	3.00
SMTDRH104R-220N	22.0	73m	60m	2.80	3.50	2.30	2.80
SMTDRH104R-270N	27.0	<u>86m</u>	68m	2.50	3.15	2.20	2.70
SMTDRH104R-330N	33.0	110m	87m	2.40	3.00	2.00	2.40
SMTDRH104R-390N	39.0	<u>115m</u>	104m	2.10	2.55	1.90	2.30
SMTDRH104R-470N	47.0	128m	110m	1.90	2.38	1.80	2.20
👍 SMTDRH104R-560N	56.0	<u>180m</u>	<u>130m</u>	1.80	2.25	1.65	<u>2.00</u>
SMTDRH104R-680N	68.0	213m	160m	1.70	2.10	1.50	1.80
👍 SMTDRH104R-820N	82.0	<u>245m</u>	<u>200m</u>	1.40	1.71	1.40	<u>1.70</u>
SMTDRH104R-101N	100.0	304m	230m	1.30	1.58	1.30	1.60
👍 SMTDRH104R-121N	120.0	380m	<u>260m</u>	1.20	1.50	1.15	<u>1.40</u>
SMTDRH104R-151N	150.0	506m	420m	1.11	1.39	0.85	1.05
SMTDRH104R-181N	180.0	640m	540m	0.95	1.18	0.82	1.00
SMTDRH104R-221N	220.0	756m	580m	0.92	1.15	0.78	0.92
SMTDRH104R-271N	270.0	853m	730m	0.74	0.93	0.72	0.85
SMTDRH104R-331N	331.0	1.09	0.96	0.70	0.88	0.65	0.75
SMTDRH104R-391N	390.0	1.15	1.03	0.69	0.86	0.56	0.68

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Typical Performance curves:



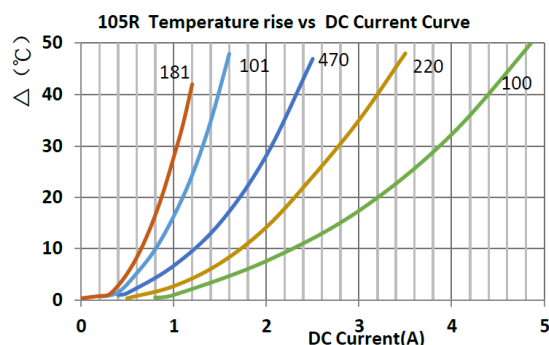
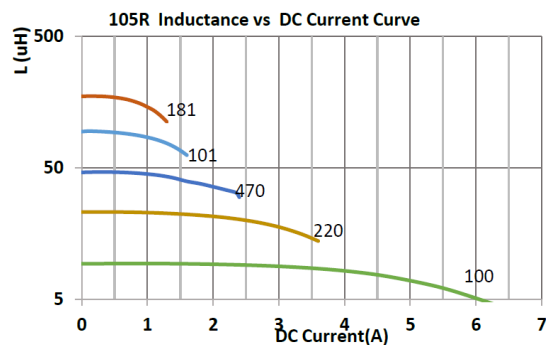


● SMTDRH105R series

Part NO.	L(μH)	DCR(Ω)		I sat (A)		I rms (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
SMTDRH105R-R80N	0.8	4.3m	3.7m	16.0	20.0	7.00	9.00
SMTDRH105R-1R5N	1.5	5.8m	4.8m	11.6	14.5	6.50	8.00
SMTDRH105R-2R2N	2.2	7.2m	6.8m	10.3	12.9	5.80	7.00
👍 SMTDRH105R-3R3N	3.3	10m	<u>7.8m</u>	7.60	9.50	5.40	6.50
SMTDRH105R-4R7N	4.7	12m	11m	7.40	9.20	5.20	6.30
SMTDRH105R-6R8N	6.8	18m	15m	5.60	7.00	5.00	6.05
SMTDRH105R-8R2N	8.2	20m	17m	4.45	5.56	3.60	4.60
SMTDRH105R-100N	10	26m	22m	4.10	5.10	3.50	4.40
SMTDRH105R-120N	12	32m	25m	3.95	4.90	3.20	4.00
SMTDRH105R-150N	15	40m	30m	3.36	4.20	2.90	3.60
SMTDRH105R-180N	18	46m	36m	2.96	3.70	2.80	3.40
👍 SMTDRH105R-220N	22	59m	<u>45m</u>	2.65	3.30	2.60	3.20
👍 SMTDRH105R-270N	27	65m	<u>49m</u>	2.56	3.20	2.50	3.10
SMTDRH105R-330N	33	81m	63m	2.20	2.70	2.10	2.60
SMTDRH105R-390N	39	103m	85m	1.98	2.48	2.00	2.50
SMTDRH105R-470N	47	122m	105m	1.90	2.35	1.90	2.30
SMTDRH105R-560N	56	145m	115m	1.85	2.30	1.78	2.10
👍 SMTDRH105R-680N	68	0.19	<u>0.14</u>	1.61	<u>2.02</u>	1.58	<u>1.90</u>
👍 SMTDRH105R-820N	82	0.22	<u>0.16</u>	1.45	<u>1.80</u>	1.30	1.62
SMTDRH105R-101N	100	0.25	0.21	1.21	1.52	1.20	1.50
SMTDRH105R-121N	120	0.30	0.24	1.12	1.40	1.15	1.45
SMTDRH105R-151N	150	0.35	0.27	1.05	1.32	1.10	1.38
SMTDRH105R-181N	180	0.39	0.35	0.97	1.21	0.98	1.20
SMTDRH105R-221N	220	0.48	0.41	0.86	1.08	0.89	1.10
SMTDRH105R-271N	270	0.63	0.53	0.70	0.88	0.80	0.98
👍 SMTDRH105R-331N	330	0.78	<u>0.62</u>	0.68	0.85	0.72	0.90
SMTDRH105R-391N	390	0.96	0.81	0.62	0.78	0.61	0.78
SMTDRH105R-471N	470	1.22	1.13	0.57	0.71	0.58	0.72
SMTDRH105R-561N	560	1.35	1.21	0.52	0.65	0.55	0.68
SMTDRH105R-681N	680	1.52	1.35	0.47	0.59	0.52	0.62
SMTDRH105R-821N	820	1.69	1.49	0.41	0.51	0.49	0.60
SMTDRH105R-102N	1000	1.946	1.92	0.39	0.49	0.43	0.52

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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.