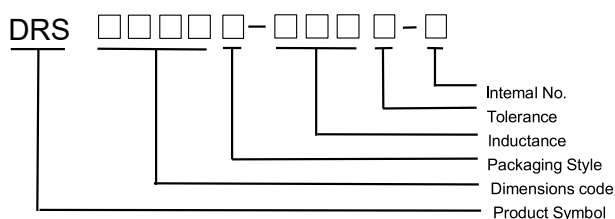


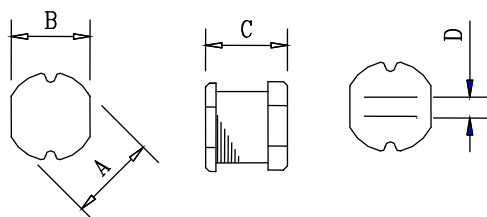


PRODUCT IDENTIFICATION

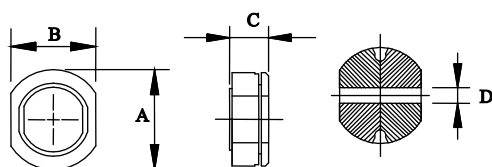


SHAPES & DIMENSIONS

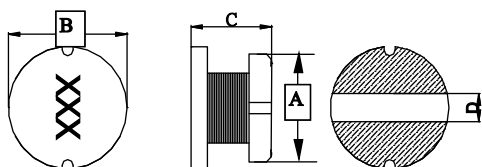
DRS 03011 ~ 1006



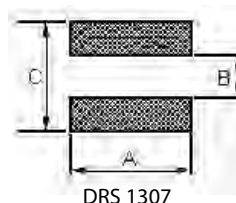
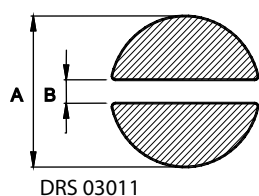
DRSR105B



DRS 1307



SUGGESTED PAD LAYOUT



FEATURES

- High saturation, open type, wire wound power inductor
- RoHS compliant
- Suitable for large currents
- Ideal for a variety of DC/DC converter inductor applications
- Available on tape and reel for auto surface mounting

APPLICATIONS

- Power supply for VTRs
- LED lighting and controls
- LCD televisions
- Notebook PCs
- Portable communication equipment
- DC/DC converters

PACKAGING TYPE: Tape & Reel

Dimensions in mm

TYPE	A	B	C	D
DRS 03011	3.5 ± 0.3	3.0 ± 0.3	1.1 ± 0.3	1.0 TYP
DRS 03015	3.3 ± 0.3	3.0 ± 0.3	1.5 ± 0.3	1.0 TYP
DRS 03021	3.3 ± 0.3	3.0 ± 0.3	2.1 ± 0.3	1.0 TYP
DRS 0403	4.5 ± 0.3	4.0 ± 0.3	3.2 ± 0.3	1.2 TYP
DRS 0501	5.8 ± 0.3	5.2 ± 0.3	2.2 ± 0	2.0 TYP
DRS 0502	5.8 ± 0.3	5.2 ± 0.3	2.5 ± 0.3	2.0 TYP
DRS 0503	5.8 ± 0.3	5.2 ± 0.3	3 ± 0.3	2.0 TYP
DRS 0504	5.8 ± 0.3	5.2 ± 0.3	4.5 ± 0.4	1.3 TYP
DRS 0506	5.8 ± 0.3	5.2 ± 0.3	6.0 ± 0.4	1.3 TYP
DRS 0703	7.8 ± 0.3	7.0 ± 0.3	3.5 ± 0.3	2.1 TYP
DRS 0705	7.8 ± 0.3	7.0 ± 0.3	5.0 ± 0.3	2.1 TYP
DRS 0706	7.8 ± 0.3	7.0 ± 0.3	6.0 ± 0.3	2.1 TYP
DRS 1004	10.0 ± 0.3	9.0 ± 0.3	4.0 ± 0.5	2.1 TYP
DRS 1005	10.0 ± 0.4	9.0 ± 0.4	5.4 ± 0.4	2.1 TYP
DRS 1006	10.0 ± 0.4	9.0 ± 0.4	6.5 ± 0.4	2.1 TYP
DRSR 105B	10.0 ± 0.4	9.0 ± 0.4	5.0 ± 0.5	2.4 TYP
DRS 1307	13.0 ± 0.5	13.0 ± 0.5	7.0 ± 0.3	5 TYP

■ STANDARD SPECIFICATIONS

Stamp	Inductance (μ H)	D.C.R (Ω) Max															
		DRS 03011	DRS 03015	DRS 03021	DRS 0403	DRS 0501	DRS 0502	DRS 0503	DRS 0504	DRS 0506	DRS 0703	DRS 0705	DRS 0706	DRS 1004	DRS 1005	DRS 1006	DRSR 105B
1R0	1.0	0.084		0.07	0.033	0.034	0.03	0.03									
1R2	1.2							0.03									
1R4	1.4			0.09	0.038	0.048	0.04					0.02					
1R5	1.5	0.126						0.03									
1R8	1.8			0.11	0.042	0.062	0.05	0.03				0.02					
2R2	2.2	0.18	0.10 $\pm$ 30%	0.13	0.047	0.064	0.06	0.03									
2R7	2.7			0.14	0.052	0.078	0.07	0.04				0.02					
3R3	3.3	0.27		0.17	0.058	0.097	0.08	0.05									
3R9	3.9	0.32		0.19	0.076	0.105	0.09	0.06				0.03					
4R7	4.7	0.33	0.15 $\pm$ 30%	0.21	0.094	0.134	0.14	0.07				0.04			0.040		
5R6	5.6	0.48		0.22	0.101	0.170	0.15	0.08				0.04					
6R8	6.8	0.56		0.25	0.117	0.187	0.16	0.09				0.04			0.037		
8R2	8.2	0.62		0.28	0.132	0.225	0.17	0.10				0.05					
100	10	0.90	0.30 $\pm$ 30%	0.32	0.182	0.255	0.18	0.12	0.10		0.08	0.07		0.05	0.060		0.06
120	12	1.00		0.35	0.210	0.292	0.20	0.13	0.12		0.09	0.08		0.06	0.070		0.07
150	15	1.10	0.58 $\pm$ 30%	0.40	0.235	0.360	0.22	0.15	0.14		0.10	0.09	0.08	0.07	0.080		0.07
180	18	1.24		0.48	0.338	0.430	0.25	0.22	0.15		0.11	0.10		0.08	0.090		0.08
220	22	1.40	0.71 $\pm$ 30%	0.58	0.378	0.492	0.35	0.22	0.18	0.165	0.13	0.11		0.09	0.100		0.08
270	27	2.18		0.65	0.522	0.603	0.45	0.26	0.20		0.15	0.12		0.10	0.110		0.10
330	33	2.54	1.10 $\pm$ 30%	0.80	0.540	0.796	0.56	0.33	0.23		0.17	0.13	0.14	0.12	0.120		0.11
390	39	2.80		0.90	0.587	0.897	0.69	0.42	0.32		0.22	0.16		0.15	0.140		0.12
470	47	3.10	1.30 $\pm$ 30%	1.19	0.844	1.020	0.72	0.50	0.37		0.25	0.18		0.17	0.170		0.14
500	50	3.20		1.22		1.040											
560	56	3.50		1.27	0.937	1.164	0.84	0.55	0.42		0.28	0.24		0.20	0.190		0.19
680	68	5.80	2.20 $\pm$ 30%	1.73	1.117	1.220	0.90	0.65	0.46		0.33	0.28		0.22	0.220		0.21
750	75	6.10		1.90		1.340											
820	82	6.60		1.99		1.570	1.20	0.80	0.60		0.41	0.37		0.30	0.25		0.28
101	100		3.50 $\pm$ 30%	2.52	2.000	1.800	1.30	0.90	0.70		0.48	0.43		0.34	0.35		0.34
121	120			2.90		2.000	1.38	1.00	0.93		0.54	0.47		0.40	0.40		0.37
151	150			3.36		2.80	1.81	1.30	1.10		0.75	0.64		0.54	0.47		0.51
181	180			5.10		3.15	1.95	1.50	1.38		1.02	0.71		0.62	0.63		0.57
221	220			5.80		4.40	3.00	2.00	1.57		1.20	0.96		0.72	0.73		0.78
271	270			7.80		6.40	3.20	2.50	1.85		1.31	1.11		0.95	0.97		0.87
301	300			8.10		6.75											
331	330			9.24		7.20	3.82	3.20	2.00		1.50	1.26		1.10	1.15		1.20
391	390			10.14		8.40	4.68	3.50	2.60			1.77		1.24	1.30		1.34
461	460			11.15		12.0											
471	470			11.48		12.4	5.10	4.20	3.00			1.96		1.53	1.48		1.50
561	560			19.49		13.0	8.50	4.50	4.19					1.90	1.90		
681	680			22.00		17.0	10.0	6.50	4.44						2.25		
821	820			23.98		19.5	12.0	7.50	5.12						2.55		
102	1000			28.80		24.0	18.0	8.00	10.00								
122	1200		38 $\pm$ 30%														
152	1500		55 $\pm$ 30%														
602	6000															14	
822	8200															50	

Test Freq.(L): DRS03011: (100KHz/0.25V) DRS03015:(100KHz/0.25V)
 DRS03021/0403/0501/0 502/ 0503: 1.0 ~ 8.2 μ H(100KHz/0.25V), 10 ~ 82 μ H (100KHz/0.25V), 100 ~ 1000 μ H (1KHz/0.25V).
 DRS0504/0506/0703/0705/0706/1004: 1.0 ~ 8.2 μ H(100KHz/0.25V), 10 ~ 82 μ H (100KHz/0.25V), 100 ~ 1000 μ H (1KHz/0.25V).
 DRS1005/1006: 1.0 ~ 8.2 μ H(100KHz/0.25V), 10 ~ 82 μ H (100KHz/0.25V), 100 ~ 1000 μ H (1KHz/0.25V).
 DRSR105B: 10~88 μ H(100KHz/0.25 V); 100~470 μ H (1KHz/ 0.25V)

Test Instrument: L: HP 4192A; DCR: CH502BC; Rated D.C. Current: HP4284+42841A or CH1061+CH301A

■ STANDARD SPECIFICATIONS (continued)

Stamp	Inductance (μ H)	Isat (A) Max															
		DRS 03011	DRS 03015	DRS 03021	DRS 0403	DRS 0501	DRS 0502	DRS 0503	DRS 0504	DRS 0506	DRS 0703	DRS 0705	DRS 0706	DRS 1004	DRS 1005	DRS 1006	DRSR 105B
1R0	1.0	1.80		2.080	3.80	4.00	4.50	4.50									
1R2	1.2						4.20										
1R4	1.4			1.860	3.30	3.60	4.00					3.70					
1R5	1.5	1.44						4.10									
1R8	1.8			1.800	2.91	3.00	3.30	3.70				3.70					
2R2	2.2	1.26	0.79	1.390	2.60	2.65	2.94	3.50									
2R7	2.7			1.320	2.43	2.20	2.50	3.20				3.70					
3R3	3.3	1.08		1.250	2.15	2.11	2.35	2.80									
3R9	3.9	1.00		1.200	1.98	2.00	2.20	2.60				3.70					
4R7	4.7	0.90	0.65	1.130	1.70	0.80	2.00	2.50				3.50			2.60		
5R6	5.6	0.76		0.910	1.60	1.60	1.80	2.40				3.30					
6R8	6.8	0.68		0.850	1.41	1.50	1.70	2.20				3.10			4.33		
8R2	8.2	0.63		0.820	1.26	1.30	1.40	2.00				2.70					
100	10	0.56	0.45	0.740	1.15	1.10	1.20	1.80	1.44		1.44	2.30		2.38	2.60		2.06
120	12	0.52		0.640	1.05	1.05	1.18	1.75	1.40		1.39	2.00		2.13	2.45		1.94
150	15	0.50	0.30	0.600	0.92	1.00	1.15	1.70	1.30		1.24	1.80	2.8	1.87	2.27		1.72
180	18	0.46		0.540	0.84	0.95	1.10	1.60	1.23		1.12	1.60		1.73	2.15		1.58
220	22	0.36	0.25	0.500	0.76	0.90	1.00	1.50	1.11	1.6	1.07	1.50		1.60	1.95		1.42
270	27	0.30		0.430	0.71	0.77	0.86	1.40	0.97		0.94	1.30		1.44	1.76		1.32
330	33	0.28	0.20	0.400	0.64	0.68	0.76	1.10	0.88		0.85	1.20	2.3	1.26	1.50		1.16
390	39	0.26		0.370	0.59	0.67	0.75	1.00	0.80		0.74	1.10		1.20	1.37		1.10
470	47	0.25	0.17	0.360	0.54	0.66	0.73	0.90	0.72		0.68	1.10		1.10	1.28		1.00
500	50	0.24		0.330		0.61											
560	56	0.23		0.310	0.50	0.50	0.55	0.85	0.68		0.64	0.94		1.01	1.17		0.93
680	68	0.20	0.13	0.300	0.460	0.47	0.52	0.80	0.61		0.59	0.85		0.91	1.11		0.85
750	75	0.18		0.290		0.46											
820	82	0.17		0.280		0.45	0.50	0.65	0.58		0.54	0.78		0.85	1.00		0.79
101	100		0.10	0.250	0.40	0.36	0.40	0.60	0.52		0.51	0.72		0.74	0.97		0.72
121	120			0.200		0.32	0.36	0.58	0.48		0.49	0.66		0.69	0.89		0.63
151	150			0.190		0.270	0.30	0.43	0.40		0.40	0.58		0.61	0.78		0.55
181	180			0.170		0.230	0.26	0.41	0.38		0.36	0.51		0.56	0.72		0.50
221	220			0.160		0.220	0.25	0.38	0.35		0.31	0.49		0.53	0.66		0.47
271	270			0.140		0.190	0.21	0.35	0.29		0.29	0.42		0.45	0.57		0.41
301	300			0.135		0.180											
331	330			0.130		0.16	0.18	0.28	0.28		0.28	0.40		0.42	0.52		0.37
391	390			0.120		0.150	0.16	0.26	0.26			0.36		0.38	0.48		0.35
461	460			0.090		0.140											
471	470			0.084		0.135	0.15	0.20	0.12			0.34		0.35	0.42		0.33
561	560			0.080		0.130	0.14	0.19	0.10					0.32	0.33		
681	680			0.080		0.120	0.13	0.18	0.08						0.28		
821	820			0.070		0.063	0.07	0.15	0.05						0.24		
102	1000			0.060		0.045	0.05	0.13	0.03								
122	1200		0.05														
152	1500		0.03														
602	6000															0.27	
822	8200															0.20	

Tolerance Of Inductors

- DRS03011 1.0 ~ 82 μ H $\pm$ 20%
- DRS03015 2.2 ~ 1500 μ H $\pm$ 20%
- DRS03021 1.0 ~ 1000 μ H $\pm$ 20%
- DRS0403 1.0 ~ 27 μ H $\pm$ 20% 33 ~ 100 μ H $\pm$ 10%
- DRS0501 1.0 ~ 27 μ H $\pm$ 20% 33 ~ 1000 μ H $\pm$ 10%
- DRS0502 1.0 ~ 27 μ H $\pm$ 20% 33 ~ 1000 μ H $\pm$ 10%
- DRS0503 1.0 ~ 27 μ H $\pm$ 20% 33 ~ 1000 μ H $\pm$ 10%
- DRS0504 1.0-2.7 μ H $\pm$ 20% 33~47 μ H $\pm$ 15% 56~1000 μ H $\pm$ 10%
- DRS0506 22 μ H $\pm$ 20%
- DRS0703 10 ~ 27 μ H $\pm$ 20% 33 ~ 330 μ H $\pm$ 10%
- DRS0705 1.4 ~ 27 μ H $\pm$ 20% 33 ~ 470 μ H $\pm$ 10%
- DRS0706 15 μ H $\pm$ 20% 33 μ H $\pm$ 10%
- DRS1004 10 ~ 27 μ H $\pm$ 20% 33 ~ 560 μ H $\pm$ 10%
- DRS1005 4.7 ~ 27 μ H $\pm$ 20% 33 ~ 820 μ H $\pm$ 10%
- DRS1006 4.7 ~ 27 μ H $\pm$ 20% 33 ~ 820 μ H $\pm$ 10%
- DRS1006 6000 μ H ~ 8200 μ H $\pm$ 20%
- DRSR105B 10 ~ 27 μ H $\pm$ 20% 33~82 μ H $\pm$ 15%

Tolerance: K = $\pm$ 10% , M = $\pm$ 20%

※ This indicates the value of current when the inductance is 10% lower than its initial value at D.C superposition or D.C current when at $\Delta t = 40^\circ$ whichever is lower

■ STANDARD SPECIFICATIONS (continued)

Part Number	Inductance (μ H)	Tolerance ($\pm$ %)	Q Ref	Q Frequency (Hz)	SRF (MHz) Typ	DC Resistance (m Ω) Typ	I _{rms} (A) Max	I _{sat} (A) Typ
DRS1307T-1R5 □-N	1.5	20	20	7.96 / 0.1V	65	5.0	9.50	20.0
DRS1307T-2R2 □-N	2.2	20	22	7.96 / 0.1V	50	6.0	9.00	19.0
DRS1307T-2R7 □-N	2.7	20	24	7.96 / 0.1V	40	8.0	8.20	18.0
DRS1307T-3R3 □-N	3.3	20	26	7.96 / 0.1V	38	8.7	7.50	17.0
DRS1307T-4R7 □-N	4.7	20	25	7.96 / 0.1V	36	10	7.00	14.0
DRS1307T-5R6 □-N	5.6	20	24	7.96 / 0.1V	28	15	6.50	12.0
DRS1307T-6R8 □-N	6.8	20	24	7.96 / 0.1V	26	17	6.00	10.5
DRS1307T-8R2 □-N	8.2	20	24	7.96 / 0.1V	24	19	5.80	9.8
DRS1307T-100 □-N	10	20	22	2.52 / 0.1V	22	21	5.60	9.2
DRS1307T-120 □-N	12	20	25	2.52 / 0.1V	20	30	4.80	8.0
DRS1307T-150 □-N	15	20	28	2.52 / 0.1V	17	34	4.50	7.5
DRS1307T-180 □-N	18	20	28	2.52 / 0.1V	16	36	4.20	7.0
DRS1307T-220 □-N	22	20	40	2.52 / 0.1V	15	47	3.60	6.5
DRS1307T-270 □-N	27	20	35	2.52 / 0.1V	11	60	3.30	5.5
DRS1307T-330 □-N	33	20 / 10	35	2.52 / 0.1V	10	65	3.10	5.0
DRS1307T-390 □-N	39	20 / 10	28	2.52 / 0.1V	9.0	75	2.90	4.6
DRS1307T-470 □-N	47	20 / 10	24	2.52 / 0.1V	7.5	82	2.70	4.2
DRS1307T-560 □-N	56	20 / 10	22	2.52 / 0.1V	7.2	95	2.50	3.8
DRS1307T-680 □-N	68	20 / 10	24	2.52 / 0.1V	7.0	120	2.30	3.5
DRS1307T-820 □-N	82	20 / 10	18	2.52 / 0.1V	6.0	140	2.10	3.2
DRS1307T-101 □-N	100	20 / 10	25	0.796 / 0.1V	5.8	180	1.90	3.0
DRS1307T-121 □-N	120	20 / 10	20	0.796 / 0.1V	5.5	210	1.80	2.8
DRS1307T-151 □-N	150	20 / 10	20	0.796 / 0.1V	4.5	250	1.60	2.6
DRS1307T-181 □-N	180	20 / 10	18	0.796 / 0.1V	4.0	280	1.50	2.3
DRS1307T-221 □-N	220	20 / 10	15	0.796 / 0.1V	3.8	360	1.30	2.1
DRS1307T-271 □-N	270	20 / 10	15	0.796 / 0.1V	3.5	410	1.20	1.8
DRS1307T-331 □-N	330	20 / 10	15	0.796 / 0.1V	3.2	520	1.10	1.6
DRS1307T-391 □-N	390	20 / 10	12	0.796 / 0.1V	2.5	600	1.00	1.5
DRS1307T-471 □-N	470	20 / 10	12	0.796 / 0.1V	2.2	720	0.90	1.4
DRS1307T-561 □-N	560	20 / 10	10	0.796 / 0.1V	2.0	880	0.85	1.3
DRS1307T-681 □-N	680	20 / 10	10	0.796 / 0.1V	1.6	1000	0.80	1.2
DRS1307T-821 □-N	820	20 / 10	10	0.796 / 0.1V	1.5	1300	0.75	1.1
DRS1307T-102 □-N	1000	20 / 10	10	0.252 / 0.1V	1.4	1600	0.65	1.0

- When ordering, please specify tolerance and packaging codes.
- Inductance tested at 0.1 Vrms, 100KHz.
- Tolerance: K = $\pm 10\%$, M = $\pm 20\%$
- Inductance drop = 10%. Typ at I_{sat}
- $\Delta T = 40^\circ\text{C}$ rise typ at I_{rms}.
- Test Instrument: L / Q : HP 4192A
SRF: HP4286A
RDC: CH502BC
Isat: HP4284+42841A