Coating Inductors (SPS/SPH/SPN Series)

■Feature

1. Small and low profile inductor
2. It corresponds to high current
3. Simple and original magnetic shield structure

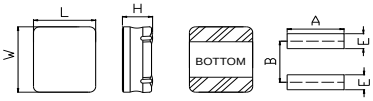
■Application

For small DC/DC converter (HDD, DVC, DSC, LCD display, notebook, tablet, Bluetooth earphone, cellular phones)

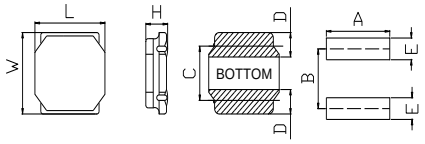
■Product Range

DARFON Item	Dimensions (mm)	Height (mm) max	Inductance range (0.1uH 1uH 10uH 100uH 1mH)
SPS2016	2.0*1.6	1.0	0.24uH – 10uH
SPS2520	2.5*2.0	1.0~1.2	0.24uH – 10uH
SPS3030	3.0*3.0	1.0~1.2	0.30uH – 10uH
SPS4040	4.0*4.0	1.0~1.2	0.33uH – 10uH
SPH2020	2.0*2.0	1.2	0.47uH – 4.7uH
SPH2520	2.5*2.0	1.0~1.2	0.24uH – 22uH
SPH3030	3.0*3.0	1.0~1.5	0.47uH – 22uH
SPH4040	4.0*4.0	1.0~1.8	1.00uH – 33uH
SPH5050	5.0*5.0	2.0~4.0	0.47uH – 47uH
SPH6060	6.0*6.0	1.2~4.5	0.80uH – 100uH
SPH8080	8.0*8.0	4.0	0.90uH – 22uH
SPN2016	2.0*1.6	1.0	0.24uH – 10uH
SPN2520	2.5*2.0	1.0~1.2	0.47uH – 10uH
SPN3030	3.0*3.0	1.0~1.5	1.00uH – 47uH
SPN4040	4.0*4.0	1.0~1.8	1.00uH – 220uH
SPN5050	5.0*5.0	1.0~4.0	0.47uH – 47uH
SPN6060	6.0*6.0	1.0~4.5	0.80uH – 100uH
SPN8080	8.0*8.0	3.0~4.0	0.90uH – 100uH

■Standard External Dimensions



Series	L (mm)	W (mm)	H (mm)	Recommended Land Patterns A (mm)	B (mm)	E (mm)	Package Reel	Amount(pcs)
SPS2016□□□□PCA	2.0±0.2	1.6±0.2	1.0max	1.7	1.7	0.6	7”	3,000
SPN2016□□□□PSA	2.0±0.2	1.6±0.2	1.0max	1.7	1.7	0.6	7”	2,000
SPS2520□□□□PCA	2.5±0.2	2.0±0.2	1.0max	2.1	1.8	0.85	7"	3,000
SPH2520□□□□PS8	2.5±0.2	2.0±0.2	0.8max	2.1	1.8	0.85	7"	2,000
SPN(H)2520□□□□PSA	2.5±0.2	2.0±0.2	1.0max	2.1	1.8	0.85	7"	2,000
SPS2520□□□□PCC	2.5±0.2	2.0±0.2	1.2max	2.1	1.8	0.85	7"	3,000
SPN(H)2520□□□□PSC	2.5±0.2	2.0±0.2	1.2max	2.1	1.8	0.85	7"	2,000



Series	L (mm)	W (mm)	H (mm)	C (mm)	D (mm)	Recommended Land Patterns			Packge	
						A (mm)	B (mm)	E (mm)	Reel	Amount(pcs)
SPH2020□□□□PCC	2.0±0.15	2.0±0.15	1.2max	1.25±0.2	0.5±0.2	2.0	1.35	0.65	7”	2,500
SPS3030□□□□PCA	3.0±0.1	3.0±0.1	1.0max	1.9±0.2	0.9±0.2	2.7	2.2	0.8	7"	2,000
SPN(H)3030□□□□PTA	3.0±0.1	3.0±0.1	1.0max	1.9±0.2	0.9±0.2	2.7	2.2	0.8	7"	2,000
SPS3030□□□□PCC	3.0±0.1	3.0±0.1	1.2max	1.9±0.2	0.9±0.2	2.7	2.2	0.8	7"	2,000
SPN(H)3030□□□□PTC	3.0±0.1	3.0±0.1	1.2max	1.9±0.2	0.9±0.2	2.7	2.2	0.8	7"	2,000
SPN(H)3030□□□□PTE	3.0±0.1	3.0±0.1	1.5max	1.9±0.2	0.9±02	2.7	2.2	0.8	7"	2,000
SPS4040□□□□PCA	4.0±0.2	4.0±0.2	1.0max	2.5±0.2	1.1±0.2	3.7	2.8	1.2	7"	1,000
SPN(H)4040□□□□ETA	4.0±0.2	4.0±0.2	1.0max	2.5±0.2	1.1±0.2	3.7	2.8	1.2	13"	5,000
SPS4040□□□□PCC	4.0±0.2	4.0±0.2	1.2max	2.5±0.2	1.1±02	3.7	2.8	1.2	7"	1,000
SPN(H)4040□□□□ETC	4.0±0.2	4.0±0.2	1.2max	2.5±0.2	1.1±02	3.7	2.8	1.2	13"	4,500
SPN(H)4040□□□□ETG	4.0±0.2	4.0±0.2	1.8max	2.5±0.2	1.1±02	3.7	2.8	1.2	13"	3,500
SPH4040□□□□ESH	4.0±0.2	4.0±0.2	2.0max	2.5±0.2	1.1±02	3.7	2.8	1.2	13"	3,500
SPN5050□□□□PTA	4.9±0.2	4.9±0.2	1.0max	3.3±0.2	1.4±0.2	4.0	3.6	1.5	7"	1,000
SPN5050□□□□PTC	4.9±0.2	4.9±0.2	1.2max	3.3±0.2	1.4±0.2	4.0	3.6	1.5	7"	1,000
SPN5050□□□□PTD	4.9±0.2	4.9±0.2	1.4max	3.3±0.2	1.4±0.2	4.0	3.6	1.5	7"	1,000
SPN(H)5050□□□□PTH	4.9±0.2	4.9±0.2	2.0max	3.3±0.2	1.4±0.2	4.	3.6	1.5	7"	800
SPN5050□□□□ETI	4.9±0.2	4.9±0.2	2.5max	3.3±0.2	1.4±0.2	4.0	3.6	1.5	13"	2,500
SPN5050□□□□PTL	4.9±0.2	4.9±0.2	3.1max	3.3±0.2	1.2±0.2	4.0	3.6	1.5	7"	500
SPN(H)5050□□□□ETN	4.9±0.1	4.9±0.1	4.1max	3.3±0.2	1.4±0.2	4.0	3.6	1.5	13	1,500
SPN6060□□□□PTA	6.0±0.2	6.0±0.2	1.0max	4.0±0.2	1.65±0.2	5.7	4.7	1.6	7”	1,000
SPN(H)6060□□□□PTC	6.0±0.2	6.0±0.2	1.2max	4.0±0.2	1.65±0.2	5.7	4.7	1.6	7”	1,000
SPN6060□□□□PTD	6.0±0.2	6.0±0.2	1.4max	4.0±0.2	1.65±0.2	5.7	4.7	1.6	7”	1,000
SPN(H)6060□□□□ETH	6.0±0.2	6.0±0.2	2.0max	4.0±0.2	1.65±0.2	5.7	4.7	1.6	13”	2,500
SPN(H)6060□□□□ETK	6.0±0.2	6.0±0.2	2.8max	4.0±0.2	1.65±0.2	5.7	4.7	1.6	13”	2,000
SPN(H)6060□□□□ETP	6.0±0.2	6.0±0.2	4.5max	4.0±0.2	1.65±0.2	5.7	4.7	1.6	13”	1,500
SPN8080□□□□ETL	8.0±0.2	8.0±0.2	3.0max	5.62±0.3	1.6±0.3	7.5	5.6	1.8	13”	1,000
SPN(H)8080□□□□ETN	8.0±0.2	8.0±0.2	4.2max	5.62±0.3	1.6±0.3	7.5	5.6	1.8	13”	1,000

■Part Numbers & Characteristic (SPS Series for Metal Coating)

•SPS2016

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Typ.	Isat(A) Typ.	
SPS2016R24MPCA	1.0mm	0.24	± 20%	28	34	4.50	4.00	1MHz,1V
SPS2016R33MPCA		0.33	± 20%	33	40	3.80	3.40	1MHz,1V
SPS2016R47MPCA		0.47	± 20%	40	48	3.60	3.40	1MHz,1V
SPS2016R68MPCA		0.68	± 20%	47	56	2.85	2.60	1MHz,1V
SPS20161R0MPCA		1.0	± 20%	63	75	2.70	2.50	1MHz,1V
SPS20161R5MPCA		1.5	± 20%	100	120	2.25	2.15	1MHz,1V
SPS20162R2MPCA		2.2	± 20%	135	160	1.75	1.60	1MHz,1V
SPS20163R3MPCA		3.3	± 20%	193	230	1.70	1.50	1MHz,1V
SPS20164R7MPCA		4.7	± 20%	280	340	1.30	1.25	1MHz,1V
SPS20166R8MPCA		6.8	± 20%	450	540	1.02	0.97	1MHz,1V
SPS2016100MPCA		10	± 20%	570	685	0.95	0.90	1MHz,1V
SPS2016R47MPRA	1.0mm	0.47	± 20%	32	41	3.50	4.20	1MHz,1V

All test data are referenced to 25℃ ambient.

※Isat: DC current(A) that will cause inductance to drop approximately 30%.

※Idc: DC current(A) that will cause an approximate ΔT of 40℃.

•SPS2520

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Typ.	Isat(A) Typ.	
SPS2520R33MPCA	1.0mm	0.33	± 20%	30	36	4.10	7.30	1MHz,1V
SPS2520R47MPCA		0.47	± 20%	37	44.5	3.60	6.60	1MHz,1V
SPS2520R68MPCA		0.68	± 20%	52	62	3.10	4.40	1MHz,1V
SPS25201R0MPCA		1.0	± 20%	67	80	2.95	4.10	1MHz,1V
SPS25201R5MPCA		1.5	± 20%	88	106	2.25	3.45	1MHz,1V
SPS25202R2MPCA		2.2	± 20%	124	150	1.85	3.20	1MHz,1V
SPS25203R3MPCA		3.3	± 20%	185	222	1.45	2.50	1MHz,1V
SPS25204R7MPCA		4.7	± 20%	240	290	1.30	2.15	1MHz,1V
SPS25206R8MPCA		6.8	± 20%	360	435	1.15	1.70	1MHz,1V
SPS2520100MPCA		10	± 20%	440	530	0.96	1.55	1MHz,1V
SPS2520R24MPCC	1.2mm	0.24	± 20%	18.5	22.2	4.80	7.10	1MHz,1V
SPS2520R33MPCC		0.33	± 20%	25.0	30.0	4.70	7.00	1MHz,1V
SPS2520R47MPCC		0.47	± 20%	28.5	34.5	4.60	5.50	1MHz,1V
SPS2520R68MPCC		0.68	± 20%	33.5	40.2	3.90	4.00	1MHz,1V
SPS25201R0MPCC		1.0	± 20%	46.5	55.5	3.50	3.70	1MHz,1V
SPS25201R5MPCC		1.5	± 20%	66.5	80.0	3.00	2.90	1MHz,1V
SPS25202R2MPCC		2.2	± 20%	93.0	111.0	2.60	2.50	1MHz,1V
SPS25203R3MPCC		3.3	± 20%	128.0	154.0	2.20	1.90	1MHz,1V
SPS25204R7MPCC		4.7	± 20%	190.0	230.0	1.85	1.60	1MHz,1V
SPS25206R8MPCC		6.8	± 20%	220.0	265.0	1.60	1.35	1MHz,1V
SPS2520100MPCC		10	± 20%	345.0	415.0	1.30	1.20	1MHz,1V

•SPS3030

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Typ.	Isat(A) Typ.	
SPS3030R47MPCA	1.0mm	0.47	± 20%	34	39	4.00	6.50	1MHz,1V
SPS30301R0MPCA		1.0	± 20%	74	86	2.80	5.20	1MHz,1V
SPS30301R5MPCA		1.5	± 20%	87	100	2.40	3.50	1MHz,1V
SPS30302R2MPCA		2.2	± 20%	125	144	2.20	3.00	1MHz,1V
SPS30303R3MPCA		3.3	± 20%	230	265	1.45	2.40	1MHz,1V
SPS30304R7MPCA		4.7	± 20%	315	362	1.30	2.00	1MHz,1V
SPS30306R8MPCA		6.8	± 20%	380	437	1.15	1.70	1MHz,1V
SPS3030100MPCA		10	± 20%	500	575	1.00	1.30	1MHz,1V
SPS3030R30MPCC	1.2mm	0.30	± 20%	17	20	6.40	9.20	1MHz,1V
SPS3030R47MPCC		0.47	± 20%	23	27	5.50	7.50	1MHz,1V
SPS30301R0MPCC		1.0	± 20%	43	50	3.90	5.10	1MHz,1V
SPS30301R5MPCC		1.5	± 20%	64	74	3.00	4.10	1MHz,1V
SPS30302R2MPCC		2.2	± 20%	97	112	2.20	3.60	1MHz,1V
SPS30303R3MPCC		3.3	± 20%	150	173	1.90	2.70	1MHz,1V
SPS30304R7MPCC		4.7	± 20%	228	263	1.50	2.30	1MHz,1V

•SPS4040

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Typ.	Isat(A) Typ.	
SPS4040R33MPCA	1.0mm	0.33	± 20%	15.5	19	5.80	8.70	1MHz,1V
SPS4040R47MPCA		0.47	± 20%	20	24	5.50	7.90	1MHz,1V
SPS4040R68MPCA		0.68	± 20%	28	34	3.90	6.30	1MHz,1V
SPS40401R0MPCA		1.0	± 20%	45	54	3.50	5.70	1MHz,1V
SPS40401R5MPCA		1.5	± 20%	62	74.5	3.10	4.20	1MHz,1V
SPS40402R2MPCA		2.2	± 20%	90	108	2.70	3.60	1MHz,1V
SPS40403R3MPCA		3.3	± 20%	145	174	2.00	2.80	1MHz,1V
SPS40404R7MPCA		4.7	± 20%	175	205	1.90	2.45	1MHz,1V
SPS40406R8MPCA		6.8	± 20%	230	280	1.55	2.00	1MHz,1V
SPS4040100MPCA		10	± 20%	325	390	1.30	1.70	1MHz,1V
SPS4040R33MPCC	1.2mm	0.33	± 20%	13	17	7.00	10.80	1MHz,1V
SPS4040R47MPCC		0.47	± 20%	16	19	5.60	10.00	1MHz,1V
SPS40401R0MPCC		1.0	± 20%	29	35	4.50	6.20	1MHz,1V
SPS40401R5MPCC		1.5	± 20%	45	54	3.60	5.60	1MHz,1V
SPS40402R2MPCC		2.2	± 20%	65	78	3.20	4.60	1MHz,1V
SPS40403R3MPCC		3.3	± 20%	103	125	2.60	4.00	1MHz,1V
SPS40404R7MPCC		4.7	± 20%	125	145	2.25	3,10	1MHz,1V
SPS40406R8MPCC		6.8	± 20%	190	220	1.85	2.50	1MHz,1V
SPS4040100MPCC		10	± 20%	250	300	1.65	2.00	1MHz,1V
SPS4040R24MPSD	1.4mm	0.24	± 20%	9	11	8.30	14.50	1MHz,1V
SPS4040R47NPCH	2.0mm	0.47	± 30%	10	12	8.10	15.00	1MHz,1V
SPS4040R68MPCH		0.68	± 20%	14	16	6.00	12.10	1MHz,1V
SPS40401R0MPCH		1.0	± 20%	24	28	5.10	9.90	1MHz,1V
SPS40401R5MPCH		1.5	± 20%	29	35	4.70	9.10	1MHz,1V
SPS40402R2MPCH		2.2	± 20%	39	47	4.00	7.50	1MHz,1V
SPS40403R3MPCH		3.3	± 20%	66	75	3.40	6.30	1MHz,1V
SPS40404R7MPCH		4.7	± 20%	90	104	2.80	5.00	1MHz,1V
SPS40406R8MPCH		6.8	± 20%	130	155	2.30	4.00	1MHz,1V
SPS4040100MPCH		10	± 20%	160	188	1.90	3.10	1MHz,1V

All test data are referenced to 25℃ ambient.

※Isat: DC current(A) that will cause inductance to drop approximately 30%.

※Idc: DC current(A) that will cause an approximate ΔT of 40℃.

■Part Numbers & Characteristic (SPH Series for Ferrite Coating High Current)

•SPH2020

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Typ.	
SPH2020R47MPCC	1.2mm	0.47	± 20%	40	46	2.3	4.8	1MHz,1V
SPH2020R68MPCC		0.68	± 20%	50	58	2	4.1	1MHz,1V
SPH20201R0MPCC		1	± 20%	56	64	1.9	3	1MHz,1V
SPH20201R5MPCC		1.5	± 20%	75	86	1.65	2.55	1MHz,1V
SPH20202R2MPCC		2.2	± 20%	95	109	1.45	2	1MHz,1V
SPH20203R3MPCC		3.3	± 20%	155	178	1.15	1.75	1MHz,1V
SPH20204R7MPCC		4.7	± 20%	210	242	0.95	1.5	1MHz,1V

•SPH2520

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Typ.	
SPH2520R47NPS8	0.8mm	0.47	± 30%	116	140	1.2	1.8	1MHz,1V
SPH252010RNPS8		1	± 30%	182	219	0.97	1.35	1MHz,1V
SPH25201R5NPS8		1.5	± 30%	206	248	0.91	1.1	1MHz,1V
SPH25202R2MPS8		2.2	± 20%	241	290	0.84	0.86	1MHz,1V
SPH25203R3MPS8		3.3	± 20%	346	416	0.7	0.82	1MHz,1V
SPH25204R7MPS8		4.7	± 20%	483	580	0.59	0.68	1MHz,1V
SPH25206R8MPS8		6.8	± 20%	681	818	0.5	0.55	1MHz,1V
SPH2520100MPS8		10	± 20%	1026	1232	0.41	0.48	1MHz,1V
SPH2520R50NPSA	1.0mm	0.5	± 30%	32	38	2.67	3	1MHz,1V
SPH2520R68NPSA		0.68	± 30%	49	59	2.4	2.43	1MHz,1V
SPH25201R0NPSA		1	± 30%	68	82	1.98	2.2	1MHz,1V
SPH25201R5MPSA		1.5	± 20%	95	114	1.65	1.58	1MHz,1V
SPH25202R2MPSA		2.2	± 20%	136	163	1.4	1.39	1MHz,1V
SPH25203R3MPSA		3.3	± 20%	207	248	1.15	1.17	1MHz,1V
SPH25204R7MPSA		4.7	± 20%	269	323	0.99	1.08	1MHz,1V
SPH25206R8MPSA		6.8	± 20%	404	485	0.81	0.77	1MHz,1V
SPH2520100MPSA		10	± 20%	508	610	0.72	0.65	1MHz,1V
SPH2520R24NPSC	1.2mm	0.24	± 30%	26	31	4.5	4.5	1MHz,1V
SPH2520R47NPSC		0.47	± 30%	29	35	3.7	3.5	1MHz,1V
SPH2520R50NPSC		0.5	± 30%	32	38	3.6	3.4	1MHz,1V
SPH2520R68NPSC		0.68	± 30%	54	65	3.24	3.4	1MHz,1V
SPH25201R0NPSC		1	± 30%	43	52	2.6	2.45	1MHz,1V
SPH25201R5MPSC		1.5	± 20%	72	86	2.2	2.07	1MHz,1V
SPH25202R2MPSC		2.2	± 20%	90	108	1.85	1.95	1MHz,1V
SPH25203R3MPSC		3.3	± 20%	155	186	1.45	1.6	1MHz,1V
SPH25204R7MPSC		4.7	± 20%	212	254	1.2	1.4	1MHz,1V
SPH25206R8MPSC		6.8	± 20%	370	444	1	1.04	1MHz,1V
SPH2520100MPSC		10	± 20%	750	900	0.75	0.77	1MHz,1V
SPH2520220MPSC		22	± 20%	1050	1260	0.5	0.5	1MHz,1V
SPH2520100MPRC		10	± 20%	-	480	0.75	0.77	100KHz,1V

All test data are referenced to 25℃ ambient.

※Isat :DC current(A) that will cause inductance to drop approximately 30%

※Idc: DC current(A) that will cause an approximate ΔT of 20℃ (at 25℃ ambient)

(note: SPH2520□□□□PSA SPH2520□□□□PSC SPH2520□□□□PRC specifications are defined an approximately ΔT of 40℃)

•SPH3030

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance(mΩ)		Heat Rating Current	Saturation Current	Measuring Condition
				(mΩ)		DC Amp.	DC Amps.	
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH30301R2NPTA	1.0mm	1.2	± 30%	65	78	1.48	1.7	100KHz,1V
SPH30301R5NPTA		1.5	± 30%	75	90	1.37	1.44	100KHz,1V
SPH30302R2MPTA		2.2	± 20%	83	100	1.3	1.3	100KHz,1V
SPH30303R3MPTA		3.3	± 20%	130	156	1.03	1	100KHz,1V
SPH30304R7MPTA		4.7	± 20%	170	204	0.9	0.85	100KHz,1V
SPH30306R8MPTA		6.8	± 20%	250	300	0.74	0.7	100KHz,1V
SPH3030100MPTA		10	± 20%	350	420	0.62	0.6	100KHz,1V
SPH3030150MPTA		15	± 20%	550	660	0.48	0.45	100KHz,1V
SPH3030220MPTA		22	± 20%	770	924	0.41	0.38	100KHz,1V
SPH3030R47NPTC	1.2mm	0.47	± 30%	33	40	1.9	2.6	100KHz,1V
SPH30301R0NPTC		1	± 30%	48	58	1.71	2.2	100KHz,1V
SPH30301R5NPTC		1.5	± 30%	55	66	1.6	1.7	100KHz,1V
SPH30302R2MPTC		2.2	± 20%	75	90	1.37	1.5	100KHz,1V
SPH30303R3MPTC		3.3	± 20%	100	120	1.21	1.2	100KHz,1V
SPH30304R7MPTC		4.7	± 20%	130	156	1.06	1	100KHz,1V
SPH30306R8MPTC		6.8	± 20%	190	228	0.89	0.85	100KHz,1V
SPH3030100MPTC		10	± 20%	270	324	0.72	0.73	100KHz,1V
SPH3030150MPTC		15	± 20%	450	540	0.57	0.53	100KHz,1V
SPH3030220MPTC		22	± 20%	630	756	0.5	0.5	100KHz,1V
SPH30301R0NPTE	1.5mm	1	± 30%	30	36	2.1	2.1	100KHz,1V
SPH30301R5NPTE		1.5	± 30%	38	46	1.82	1.8	100KHz,1V
SPH30302R2MPTE		2.2	± 20%	58	70	1.5	1.48	100KHz,1V
SPH30303R3MPTE		3.3	± 20%	78	94	1.23	1.21	100KHz,1V
SPH30304R7MPTE		4.7	± 20%	120	144	1.04	1.02	100KHz,1V
SPH30306R8MPTE		6.8	± 20%	160	192	0.88	0.87	100KHz,1V
SPH3030100MPTE		10	± 20%	220	264	0.71	0.7	100KHz,1V
SPH3030220MPTE		22	± 20%	520	624	0.47	0.47	100KHz,1V

•SPH4040

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance		Heat Rating Current	Saturation Current	Measuring Condition
				(mΩ)		DC Amp.	DC Amps.	
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH40401R0NETA	1.0mm	1	± 30%	56	67	1.9	2	100KHz,1V
SPH40402R2META		2.2	± 20%	85	102	1.5	1.2	100KHz,1V
SPH40403R3META		3.3	± 20%	100	120	1.4	1.1	100KHz,1V
SPH40404R7META		4.7	± 20%	140	168	1.2	0.95	100KHz,1V
SPH40406R8META		6.8	± 20%	200	240	1	0.8	100KHz,1V
SPH4040100META		10	± 20%	300	360	0.75	0.62	100KHz,1V
SPH4040150META		15	± 20%	430	516	0.6	0.54	100KHz,1V
SPH4040220META		22	± 20%	570	684	0.5	0.45	100KHz,1V
SPH40401R0NETC	1.2mm	1	± 30%	42	50	2.2	2.8	100KHz,1V
SPH40402R2METC		2.2	± 20%	60	72	1.9	1.65	100KHz,1V
SPH40403R3METC		3.3	± 20%	70	84	1.7	1.4	100KHz,1V
SPH40404R7METC		4.7	± 20%	95	114	1.5	1.2	100KHz,1V
SPH40406R8METC		6.8	± 20%	125	150	1.3	0.9	100KHz,1V
SPH4040100METC		10	± 20%	170	204	1.1	0.8	100KHz,1V
SPH4040150METC		15	± 20%	260	312	0.75	0.65	100KHz,1V
SPH4040220METC		22	± 20%	400	480	0.62	0.5	100KHz,1V
SPH40401R0NETG	1.8mm	1	± 30%	27	32	3.2	4	100KHz,1V
SPH40401R5NESG		1.5	± 30%	40	48	2.64	3.3	100KHz,1V
SPH40402R2METG		2.2	± 20%	42	50	2.2	3	100KHz,1V
SPH40403R3METG		3.3	± 20%	55	66	2	2.3	100KHz,1V
SPH40404R7METG		4.7	± 20%	70	84	1.7	2	100KHz,1V
SPH40406R8METG		6.8	± 20%	98	118	1.45	1.6	100KHz,1V
SPH4040100METG		10	± 20%	150	180	1.2	1.3	100KHz,1V

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH4040150METG	1.8mm	15	± 20%	210	252	0.85	1.1	100KHz,1V
SPH4040220METG		22	± 20%	290	348	0.72	0.9	100KHz,1V
SPH4040330METG		33	± 20%	460	552	0.55	0.7	100KHz,1V
SPH4040470METG		47	± 20%	650	780	0.44	0.6	100KHz,1V
SPH4040680METG		68	± 20%	1000	1200	0.32	0.52	100KHz,1V
SPH4040101METG		100	± 20%	1450	1740	0.28	0.42	100KHz,1V
SPH4040151METG		150	± 20%	2300	2760	0.22	0.34	100KHz,1V
SPH4040221METG		220	± 20%	3800	4560	0.17	0.275	100KHz,1V
SPH4040220MESH	2.0mm	22	± 20%	380	410	1.3	1.2	100KHz,1V

※Isat :DC current that will cause inductance to drop approximately 30%

※Idc: DC current that will cause an approximate ΔT of 20℃(at 25℃ambient)

•SPH5050

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH5050R47NPTH	2.0mm	0.47	± 30%	12	14	5	6.1	100KHz,1V
SPH50501R0NPTH		1	± 30%	21	25	3.6	4	100KHz,1V
SPH50501R5NPTH		1.5	± 30%	26	31	3.2	3.35	100KHz,1V
SPH50502R2NPTH		2.2	± 30%	35	42	2.9	2.9	100KHz,1V
SPH50503R3NPTH		3.3	± 30%	48	58	2.4	2.4	100KHz,1V
SPH50504R7MPTH		4.7	± 20%	60	72	2	2	100KHz,1V
SPH50506R8MPTH		6.8	± 20%	90	108	1.65	1.6	100KHz,1V
SPH5050100MPTH		10	± 20%	120	144	1.45	1.3	100KHz,1V
SPH5050150MPTH		15	± 20%	165	198	1.2	1.1	100KHz,1V
SPH5050220MPTH		22	± 20%	260	312	1	0.9	100KHz,1V
SPH50501R5NETN	4.0mm	1.5	± 30%	17	22	4.5	6.4	100KHz,1V
SPH50502R2NETN		2.2	± 30%	22	29	3.7	5	100KHz,1V
SPH50503R3NETN		3.3	± 30%	27	35	3.3	4	100KHz,1V
SPH50504R7NETN		4.7	± 30%	29	38	3.1	3.3	100KHz,1V
SPH50506R8METN		6.8	± 20%	49	64	2.4	2.8	100KHz,1V
SPH5050100METN		10	± 20%	56	73	2.1	2.3	100KHz,1V
SPH5050150METN		15	± 20%	80	104	1.8	2	100KHz,1V
SPH5050220METN		22	± 20%	126	164	1.4	1.5	100KHz,1V
SPH5050330METN		33	± 20%	180	234	1.2	1.3	100KHz,1V
SPH5050470METN		47	± 20%	310	403	0.9	1.1	100KHz,1V

•SPH6060

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH60601R0NPTC	1.2mm	1	± 30%	50	60	2.4	3	100KHz,1V
SPH60601R5NPTC		1.5	± 30%	67	80	2.1	2.6	100KHz,1V
SPH60602R5NPTC		2.5	± 30%	90	108	1.8	2.1	100KHz,1V
SPH60603R3NPTC		3.3	± 30%	105	126	1.7	1.8	100KHz,1V
SPH60604R7MPTC		4.7	± 20%	125	150	1.55	1.6	100KHz,1V
SPH60605R3MPTC		5.3	± 20%	125	150	1.55	1.5	100KHz,1V
SPH60606R8MPTC		6.8	± 20%	165	198	1.35	1.3	100KHz,1V
SPH6060100MPTC		10	± 20%	200	240	1.2	1	100KHz,1V
SPH6060150MPTC		15	± 20%	295	354	0.8	0.8	100KHz,1V
SPH6060220MPTC		22	± 20%	465	558	0.65	0.76	100KHz,1V
SPH6060330MPTC		33	± 20%	580	696	0.55	0.59	100KHz,1V
SPH6060470MPTC		47	± 20%	965	1158	0.46	0.52	100KHz,1V
SPH6060680MPTC		68	± 20%	1160	1392	0.41	0.44	100KHz,1V
SPH6060101MPTC		100	± 20%	1670	2004	0.32	0.35	100KHz,1V

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH60600R8NETH	2.0mm	0.8	± 30%	20	24	4.1	6.4	100KHz,1V
SPH60601R5NETH		1.5	± 30%	26	31	3.6	4.3	100KHz,1V
SPH60602R2NETH		2.2	± 30%	34	41	2.9	3.2	100KHz,1V
SPH60603R3NETH		3.3	± 30%	40	48	2.75	2.8	100KHz,1V
SPH60604R7NETH		4.7	± 30%	58	70	2.15	2.4	100KHz,1V
SPH60606R8NETH		6.8	± 30%	85	102	1.8	2	100KHz,1V
SPH6060100METH		10	± 20%	125	150	1.5	1.9	100KHz,1V
SPH6060220METH		22	± 20%	290	348	0.95	1.25	100KHz,1V
SPH60600R9NETK	2.8mm	0.9	± 30%	13	17	4.6	6.7	100KHz,1V
SPH60601R5NETK		1.5	± 30%	16	21	4.2	5.1	100KHz,1V
SPH60602R2NETK		2.2	± 30%	20	26	3.7	4.2	100KHz,1V
SPH60603R0NETK		3	± 30%	23	30	3.4	3.6	100KHz,1V
SPH60604R7METK		4.7	± 20%	31	40	3	2.7	100KHz,1V
SPH60606R0METK		6	± 20%	40	52	2.5	2.5	100KHz,1V
SPH6060100METK		10	± 20%	65	85	1.9	1.9	100KHz,1V
SPH6060150METK		15	± 20%	95	124	1.8	1.6	100KHz,1V
SPH6060220METK		22	± 20%	135	176	1.4	1.3	100KHz,1V
SPH6060330METK		33	± 20%	220	286	1.1	1.1	100KHz,1V
SPH6060470METK		47	± 20%	300	390	0.92	1	100KHz,1V
SPH6060680METK		68	± 20%	420	546	0.77	0.8	100KHz,1V
SPH6060101METK		100	± 20%	600	780	0.66	0.65	100KHz,1V
SPH60601R0NETP	**4.5mm**	1	± 30%	14	18	4.5	9.8	100KHz,1V
SPH60601R3NETP		1.3	± 30%	16	21	4.2	8.2	100KHz,1V
SPH60601R8NETP		1.8	± 30%	19	25	3.9	7.2	100KHz,1V
SPH60602R3NETP		2.3	± 30%	22	29	3.6	6.4	100KHz,1V
SPH60603R0NETP		3	± 30%	24	31	3.3	5.6	100KHz,1V
SPH60604R5METP		4.5	± 20%	30	39	3.1	4.4	100KHz,1V
SPH60606R3METP		6.3	± 20%	36	47	3	3.6	100KHz,1V
SPH6060100METP		10	± 20%	46	60	2.4	3.1	100KHz,1V
SPH6060150METP		15	± 20%	70	91	1.9	2.5	100KHz,1V
SPH6060220METP		22	± 20%	107	139	1.6	2	100KHz,1V
SPH6060330METP		33	± 20%	141	183	1.4	1.65	100KHz,1V
SPH6060470METP		47	± 20%	211	274	1.15	1.4	100KHz,1V
SPH6060680METP		68	± 20%	304	395	0.95	1.1	100KHz,1V
SPH6060101METP		100	± 20%	466	606	0.75	0.9	100KHz,1V

•SPH8080

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPH80800R9NETN	**4.0mm**	0.9	± 30%	6	8	7.8	13	100KHz,1V
SPH80801R4NETN		1.4	± 30%	7	9	7	10	100KHz,1V
SPH80802R0NETN		2	± 30%	9	12	6.3	8.1	100KHz,1V
SPH80803R6NETN		3.6	± 30%	15	20	4.9	6.4	100KHz,1V
SPH80804R7NETN		4.7	± 30%	18	23	4.1	5.4	100KHz,1V
SPH80806R8NETN		6.8	± 30%	25	33	3.7	4.4	100KHz,1V
SPH8080100METN		10	± 20%	34	44	3.1	3.8	100KHz,1V
SPH8080150METN		15	± 20%	50	65	2.4	2.9	100KHz,1V
SPH8080220METN		22	± 20%	66	86	2.2	2.4	100KHz,1V
SPH8080101METN		100	± 20%	28	34	1.1	1.0	100KHz,1V

All test data are referenced to 25℃ ambient.

※Isat :DC current(A) that will cause inductance to drop approximately 30%

※Idc: DC current(A) that will cause an approximate ΔT of 20℃ (at 25℃ ambient)

■Part Numbers & Characteristic (SPN Series for Ferrite Coating)

•SPN2016

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Typ.	
SPN2016R24NPSA	1.0mm	0.24	± 30%	26	31	3.7	4	1MHz,1V
SPN2016R47NPSA		0.47	± 30%	49	59	2.6	2.56	1MHz,1V
SPN20161R0NPSA		1	± 30%	96	115	1.6	1.69	1MHz,1V
SPN20161R5NPSA		1.5	± 30%	143	172	1.4	1.46	1MHz,1V
SPN20161R8NPSA		1.8	± 30%	175	210	1.35	1.35	1MHz,1V
SPN20162R2MPSA		2.2	± 20%	196	235	1.3	1.26	1MHz,1V
SPN20163R3MPSA		3.3	± 20%	247	296	1.05	0.9	1MHz,1V
SPN20164R7MPSA		4.7	± 20%	370	444	0.9	0.76	1MHz,1V
SPN20166R8MPSA		6.8	± 20%	664	797	0.6	0.72	1MHz,1V
SPN2016100MPSA		10	± 20%	1108	1330	0.45	0.55	1MHz,1V

•SPN2520

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Typ.	
SPN2520R47NPSA	1.0mm	0.47	± 30%	38	46	2.65	2.5	1MHz,1V
SPN2520R68NPSA		0.68	± 30%	52	62	2.2	2.05	1MHz,1V
SPN25201R0NPSA		1	± 30%	70	84	1.9	1.75	1MHz,1V
SPN25201R5MPSA		1.5	± 20%	107	128	1.5	1.45	1MHz,1V
SPN25202R2MPSA		2.2	± 20%	158	190	1.2	1.2	1MHz,1V
SPN25203R3MPSA		3.3	± 20%	229	275	1	0.94	1MHz,1V
SPN25204R7MPSA		4.7	± 20%	332	398	0.82	0.8	1MHz,1V
SPN25206R8MPSA		6.8	± 20%	443	532	0.71	0.68	1MHz,1V
SPN2520100MPSA		10	± 20%	712	854	0.55	0.56	1MHz,1V
SPN2520R47NPSC	1.2mm	0.47	± 30%	47	56	2.4	2.75	1MHz,1V
SPN25201R0NPSC		1	± 30%	73	88	2.15	2.2	1MHz,1V
SPN25201R5MPSC		1.5	± 20%	105	126	1.65	1.8	1MHz,1V
SPN25202R2MPSC		2.2	± 20%	129	155	1.55	1.55	1MHz,1V
SPN25203R3MPSC		3.3	± 20%	227	272	1.15	1.25	1MHz,1V
SPN25204R7MPSC		4.7	± 20%	338	406	1.08	1.05	1MHz,1V
SPN25206R8MPSC		6.8	± 20%	510	612	0.78	0.85	1MHz,1V
SPN2520100MPSC		10	± 20%	630	756	0.72	0.73	1MHz,1V

•SPN3030

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN30301R0NPTA	1.0mm	1	± 30%	65	78	1.4	1.3	100KHz,1V
SPN30301R5NPTA		1.5	± 30%	80	96	1.3	1.2	100KHz,1V
SPN30302R2MPTA		2.2	± 20%	95	114	1.1	1.1	100KHz,1V
SPN30303R3MPTA		3.3	± 20%	140	168	0.94	0.87	100KHz,1V
SPN30304R7MPTA		4.7	± 20%	190	228	0.78	0.75	100KHz,1V
SPN30306R8MPTA		6.8	± 20%	300	360	0.63	0.61	100KHz,1V
SPN3030100MPTA		10	± 20%	450	540	0.51	0.5	100KHz,1V
SPN3030150MPTA		15	± 20%	740	888	0.4	0.4	100KHz,1V
SPN3030220MPTA		22	± 20%	1030	1236	0.35	0.35	100KHz,1V
SPN3030330MPTA		33	± 20%	1550	1860	0.28	0.26	100KHz,1V
SPN3030470MPTA		47	± 20%	2050	2460	0.24	0.22	100KHz,1V
SPN30301R0NPTE	1.5mm	1	± 30%	30	36	2.1	2.1	100KHz,1V
SPN30301R5NPTE		1.5	± 30%	40	48	1.82	1.8	100KHz,1V
SPN30302R2MPTE		2.2	± 20%	60	72	1.5	1.48	100KHz,1V
SPN30303R3MPTE		3.3	± 20%	80	96	1.23	1.21	100KHz,1V
SPN30304R7MPTE		4.7	± 20%	120	144	1.04	1.02	100KHz,1V
SPN30306R8MPTE		6.8	± 20%	160	192	0.88	0.87	100KHz,1V
SPN3030100MPTE		10	± 20%	230	276	0.71	0.7	100KHz,1V
SPN3030150MPTE		15	± 20%	360	432	0.56	0.56	100KHz,1V
SPN3030220MPTE		22	± 20%	520	624	0.47	0.47	100KHz,1V
SPN3030330MPTE		33	± 20%	840	1008	0.37	0.39	100KHz,1V
SPN3030470MPTE		47	± 20%	1340	1608	0.3	0.32	100KHz,1V

※ (note: SPN2016□□□□PSA SPN2520□□□□PSA specifications is defined an approximately ΔT of 40℃)

•SPN4040

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN40401R0NETA	1.0mm	1	± 30%	100	120	1.05	1.8	100KHz,1V
SPN40402R2NETA		2.2	± 30%	150	180	0.89	1.15	100KHz,1V
SPN40403R3META		3.3	± 20%	180	216	0.82	1.1	100KHz,1V
SPN40404R7META		4.7	± 20%	210	252	0.75	0.9	100KHz,1V
SPN40406R8META		6.8	± 20%	300	360	0.62	0.74	100KHz,1V
SPN4040100META		10	± 20%	380	456	0.6	0.56	100KHz,1V
SPN4040150META		15	± 20%	510	612	0.51	0.47	100KHz,1V
SPN4040220META		22	± 20%	870	1044	0.4	0.36	100KHz,1V
SPN4040330META		33	± 20%	1540	1848	0.3	0.28	100KHz,1V
SPN4040470META		47	± 20%	1810	2172	0.28	0.24	100KHz,1V
SPN40401R0NETC	1.2mm	1	± 30%	60	72	1.5	2.5	100KHz,1V
SPN40402R2METC		2.2	± 20%	90	108	1.2	1.65	100KHz,1V
SPN40403R3METC		3.3	± 20%	130	156	0.98	1.2	100KHz,1V
SPN40404R7METC		4.7	± 20%	140	168	0.96	1.05	100KHz,1V
SPN40406R8METC		6.8	± 20%	180	216	0.84	0.9	100KHz,1V
SPN4040100METC		10	± 20%	240	288	0.77	0.74	100KHz,1V
SPN4040150METC		15	± 20%	400	480	0.6	0.56	100KHz,1V
SPN4040220METC		22	± 20%	480	576	0.54	0.51	100KHz,1V
SPN4040330METC		33	± 20%	810	972	0.42	0.4	100KHz,1V
SPN4040470METC		47	± 20%	1000	1200	0.37	0.35	100KHz,1V
SPN40401R0NETG	1.8mm	1	± 30%	30	36	1.83	4	100KHz,1V
SPN40402R2METG		2.2	± 20%	60	72	1.44	2.7	100KHz,1V
SPN40403R3METG		3.3	± 20%	70	84	1.23	2	100KHz,1V
SPN40404R7METG		4.7	± 20%	90	108	1.2	1.7	100KHz,1V
SPN40406R8METG		6.8	± 20%	110	132	1.06	1.45	100KHz,1V
SPN4040100METG		10	± 20%	180	216	0.84	1.2	100KHz,1V
SPN4040150METG		15	± 20%	250	300	0.65	0.94	100KHz,1V
SPN4040220METG		22	± 20%	360	432	0.59	0.8	100KHz,1V
SPN4040330METG		33	± 20%	530	636	0.49	0.65	100KHz,1V
SPN4040470METG		47	± 20%	650	780	0.42	0.57	100KHz,1V
SPN4040680METG		68	± 20%	1000	1200	0.32	0.47	100KHz,1V
SPN4040101METG		100	± 20%	1500	1800	0.27	0.4	100KHz,1V
SPN4040151METG		150	± 20%	2500	3000	0.22	0.31	100KHz,1V
SPN4040221METG		220	± 20%	4000	4800	0.17	0.27	100KHz,1V

•SPN5050

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN50501R0NPTA	1.0mm	1	± 30%	70	84	1.75	2.35	100KHz,1V
SPN50502R2NPTA		2.2	± 30%	105	126	1.4	1.5	100KHz,1V
SPN50503R3MPTA		3.3	± 20%	125	150	1.25	1.4	100KHz,1V
SPN50504R7MPTA		4.7	± 20%	145	174	1.15	1.2	100KHz,1V
SPN50506R8MPTA		6.8	± 20%	185	222	1	1	100KHz,1V
SPN5050100MPTA		10	± 20%	250	300	0.9	0.85	100KHz,1V
SPN5050150MPTA		15	± 20%	400	480	0.65	0.68	100KHz,1V
SPN5050220MPTA		22	± 20%	600	720	0.45	0.55	100KHz,1V
SPN50501R0NPTC	1.2mm	1	± 30%	53	64	2.3	4.5	100KHz,1V
SPN50501R5NPTC		1.5	± 30%	70	84	2.2	3.8	100KHz,1V
SPN50502R2MPTC		2.2	± 20%	85	102	2	3.1	100KHz,1V
SPN50503R3MPTC		3.3	± 20%	160	192	1.45	2.4	100KHz,1V
SPN50504R7MPTC		4.7	± 20%	180	216	1.4	2.2	100KHz,1V
SPN50506R8MPTC		6.8	± 20%	260	312	1.1	1.7	100KHz,1V
SPN5050100MPTC		10	± 20%	420	504	0.85	1.4	100KHz,1V
SPN5050150MPTC		15	± 20%	670	804	0.64	1.2	100KHz,1V

※Isat :DC current(A) that will cause inductance to drop approximately 30% (referenced to 25℃ ambient.)

※Idc: DC current(A) that will cause an approximate ΔT of 20℃ (at 25℃ ambient)

•SPN5050

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN5050R47NPTD	1.4mm	0.47	± 30%	25	30	3.3	5.8	100KHz,1V
SPN50501R2NPTD		1.2	± 30%	45	54	2.4	3.8	100KHz,1V
SPN50502R2NPTD		2.2	± 30%	65	78	2	2.8	100KHz,1V
SPN50503R3NPTD		3.3	± 30%	80	96	1.7	2.35	100KHz,1V
SPN50504R7NPTD		4.7	± 30%	100	120	1.4	2.05	100KHz,1V
SPN50506R8MPTD		6.8	± 20%	150	180	1.2	1.6	100KHz,1V
SPN5050100MPTD		10	± 20%	200	240	1.05	1.4	100KHz,1V
SPN5050150MPTD		15	± 20%	320	384	0.65	1.1	100KHz,1V
SPN5050220MPTD		22	± 20%	450	540	0.55	0.9	100KHz,1V
SPN5050R47NPTH	2.0mm	0.47	± 30%	12	14	5	6.1	100KHz,1V
SPN50501R0NPTH		1	± 30%	21	25	3.6	4	100KHz,1V
SPN50501R5NPTH		1.5	± 30%	26	31	3.2	3.35	100KHz,1V
SPN50502R2NPTH		2.2	± 30%	35	42	2.9	2.9	100KHz,1V
SPN50503R3NPTH		3.3	± 30%	48	58	2.4	2.4	100KHz,1V
SPN50504R7MPTH		4.7	± 20%	60	72	2	2	100KHz,1V
SPN50506R8MPTH		6.8	± 20%	90	108	1.65	1.6	100KHz,1V
SPN5050100MPTH		10	± 20%	120	144	1.45	1.3	100KHz,1V
SPN5050150MPTH		15	± 20%	165	198	1.2	1.1	100KHz,1V
SPN5050220MPTH		22	± 20%	260	312	1	0.9	100KHz,1V
SPN50501R0NETI	2.4mm	1	± 30%	16	19	4.4	5.8	100KHz,1V
SPN50501R5NETI		1.5	± 30%	22	26	3.6	5.2	100KHz,1V
SPN50502R2NETI		2.2	± 30%	29	35	3.1	4.1	100KHz,1V
SPN50503R3NETI		3.3	± 30%	43	52	2.4	3.1	100KHz,1V
SPN50504R7METI		4.7	± 20%	55	66	2	2.7	100KHz,1V
SPN50506R8METI		6.8	± 20%	80	96	1.6	2.2	100KHz,1V
SPN5050100METI		10	± 20%	125	150	1.2	1.7	100KHz,1V
SPN5050150METI		15	± 20%	170	204	1	1.4	100KHz,1V
SPN5050220METI		22	± 20%	230	276	0.82	1.2	100KHz,1V
SPN5050330METI		33	± 20%	370	444	0.63	1	100KHz,1V
SPN5050R47NPTL	3.0mm	0.47	± 30%	10	13	5	9	100KHz,1V
SPN50501R0NPTL		1	± 30%	15	20	4	6.6	100KHz,1V
SPN50502R2NPTL		2.2	± 30%	23	30	3.5	4.2	100KHz,1V
SPN50503R3MPTL		3.3	± 20%	30	39	3	3.6	100KHz,1V
SPN50504R7MPTL		4.7	± 20%	35	46	2.6	3.1	100KHz,1V
SPN50506R8MPTL		6.8	± 20%	52	68	2.3	2.5	100KHz,1V
SPN5050100MPTL		10	± 20%	70	91	1.7	2.1	100KHz,1V
SPN5050150MPTL		15	± 20%	125	163	1.4	1.6	100KHz,1V
SPN5050220MPTL		22	± 20%	180	234	1.05	1.4	100KHz,1V
SPN5050330MPTL		33	± 20%	225	293	0.8	1.15	100KHz,1V
SPN5050470MPTL		47	± 20%	325	423	0.7	0.95	100KHz,1V
SPN50501R5NETN	4.0mm	1.5	± 30%	20	26	3.6	6	100KHz,1V
SPN50502R2NETN		2.2	± 30%	22	29	3.5	4.6	100KHz,1V
SPN50503R3NETN		3.3	± 30%	27	35	3.3	3.8	100KHz,1V
SPN50504R7NETN		4.7	± 30%	29	38	3.1	3.3	100KHz,1V
SPN50506R8METN		6.8	± 20%	49	64	2.3	2.6	100KHz,1V
SPN5050100METN		10	± 20%	56	73	2.1	2.3	100KHz,1V
SPN5050150METN		15	± 20%	80	104	1.8	2	100KHz,1V
SPN5050220METN		22	± 20%	126	164	1.4	1.6	100KHz,1V
SPN5050330METN		33	± 20%	180	234	1.2	1.3	100KHz,1V
SPN5050470METN		47	± 20%	310	403	0.9	1.1	100KHz,1V

All test data are referenced to 25℃ ambient.

※Isat :DC current(A) that will cause inductance to drop approximately 30%

※Idc: DC current(A) that will cause an approximate ΔT of 20℃ (at 25℃ ambient)

•SPN6060

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN60601R5MPTA	1.0mm	1.5	± 20%	90	108	1.9	2.4	100KHz,1V
SPN60602R2MPTA		2.2	± 20%	110	132	1.7	1.9	100KHz,1V
SPN60603R3MPTA		3.3	± 20%	135	162	1.5	1.6	100KHz,1V
SPN60604R7MPTA		4.7	± 20%	165	198	1.4	1.3	100KHz,1V
SPN60606R8MPTA		6.8	± 20%	220	264	1.2	1.2	100KHz,1V
SPN6060100MPTA		10	± 20%	270	324	1.1	1	100KHz,1V
SPN6060220MPTA		22	± 20%	580	696	0.7	0.65	100KHz,1V
SPN60602R5NPTC	1.2mm	2.5	± 30%	90	108	1.73	2.1	100KHz,1V
SPN60604R0NPTC		4	± 30%	105	126	1.57	1.8	100KHz,1V
SPN60605R3MPTC		5.3	± 20%	125	150	1.4	1.5	100KHz,1V
SPN60606R8MPTC		6.8	± 20%	165	198	1.18	1.3	100KHz,1V
SPN6060100MPTC		10	± 20%	235	282	1	1	100KHz,1V
SPN6060150MPTC		15	± 20%	330	396	0.79	0.8	100KHz,1V
SPN6060220MPTC		22	± 20%	530	636	0.63	0.76	100KHz,1V
SPN6060330MPTC		33	± 20%	700	840	0.53	0.59	100KHz,1V
SPN6060470MPTC		47	± 20%	1050	1260	0.46	0.52	100KHz,1V
SPN6060680MPTC		68	± 20%	1350	1620	0.41	0.44	100KHz,1V
SPN6060101MPTC		100	± 20%	2180	2616	0.32	0.35	100KHz,1V
SPN60601R2NPTD	1.4mm	1.2	± 30%	42	50	2.75	4	100KHz,1V
SPN60602R2NPTD		2.2	± 30%	55	66	2.3	3	100KHz,1V
SPN60603R3NPTD		3.3	± 30%	75	90	2	2.5	100KHz,1V
SPN60604R7MPTD		4.7	± 20%	90	108	1.9	2	100KHz,1V
SPN60606R8MPTD		6.8	± 20%	115	138	1.65	1.7	100KHz,1V
SPN6060100MPTD		10	± 20%	140	168	1.4	1.4	100KHz,1V
SPN6060150MPTD		15	± 20%	210	252	1.2	1.15	100KHz,1V
SPN6060220MPTD		22	± 20%	300	360	1	0.95	100KHz,1V
SPN60600R8NETH	2.0mm	0.8	± 30%	20	24	3.8	5.5	100KHz,1V
SPN60601R5NETH		1.5	± 30%	26	31	3.2	4	100KHz,1V
SPN60602R2NETH		2.2	± 30%	34	41	2.7	3.2	100KHz,1V
SPN60603R3NETH		3.3	± 30%	40	48	2.6	2.8	100KHz,1V
SPN60604R7NETH		4.7	± 30%	58	70	2	2.4	100KHz,1V
SPN60606R8NETH		6.8	± 30%	85	102	1.8	2	100KHz,1V
SPN6060100METH		10	± 20%	125	150	1.4	1.7	100KHz,1V
SPN6060220METH		22	± 20%	290	348	0.95	1.05	100KHz,1V
SPN60600R9NETK	2.8mm	0.9	± 30%	13	17	4.6	6.6	100KHz,1V
SPN60601R5NETK		1.5	± 30%	16	21	4.2	5	100KHz,1V
SPN60602R2NETK		2.2	± 30%	20	26	3.7	4.2	100KHz,1V
SPN60603R0NETK		3	± 30%	23	30	3.4	3.6	100KHz,1V
SPN60604R7METK		4.7	± 20%	31	40	3	2.7	100KHz,1V
SPN60606R0METK		6	± 20%	40	52	2.5	2.5	100KHz,1V
SPN6060100METK		10	± 20%	65	85	1.9	1.9	100KHz,1V
SPN6060150METK		15	± 20%	95	124	1.8	1.6	100KHz,1V
SPN6060220METK		22	± 20%	135	176	1.4	1.3	100KHz,1V
SPN6060330METK		33	± 20%	220	286	1.1	1.1	100KHz,1V
SPN6060470METK		47	± 20%	300	390	0.92	0.95	100KHz,1V
SPN6060680METK		68	± 20%	420	546	0.77	0.76	100KHz,1V
SPN6060101METK		100	± 20%	600	780	0.66	0.62	100KHz,1V

DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN60601R0NETP	4.5mm	1	± 30%	14	18	4.2	8.5	100KHz,1V
SPN60601R3NETP		1.3	± 30%	16	21	4	8	100KHz,1V
SPN60601R8NETP		1.8	± 30%	18	23	3.7	7	100KHz,1V
SPN60602R3NETP		2.3	± 30%	21	27	3.5	6	100KHz,1V
SPN60603R0NETP		3	± 30%	24	31	3.2	5	100KHz,1V
SPN60604R5METP		4.5	± 20%	31	40	3	4	100KHz,1V
SPN60606R3METP		6.3	± 20%	38	49	2.8	3.8	100KHz,1V
SPN6060100METP		10	± 20%	47	61	2.5	3	100KHz,1V
SPN6060150METP		15	± 20%	77	100	1.9	2.3	100KHz,1V
SPN6060220METP		22	± 20%	115	150	1.5	1.9	100KHz,1V
SPN6060330METP		33	± 20%	145	189	1.4	1.5	100KHz,1V
SPN6060470METP		47	± 20%	220	286	1.1	1.3	100KHz,1V
SPN6060680METP		68	± 20%	330	429	0.9	1	100KHz,1V
SPN6060101METP		100	± 20%	500	650	0.7	0.8	100KHz,1V

All test data are referenced to 25℃ ambient.

※Isat :DC current(A) that will cause inductance to drop approximately 30%

※Idc: DC current(A) that will cause an approximate ΔT of 20℃ (at 25℃ ambient)

•SPN8080

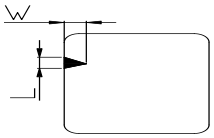
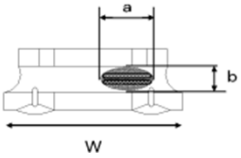
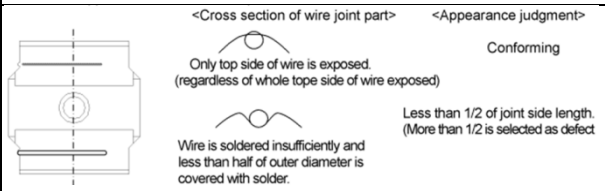
DARFON P/N	Thickness	Inductance (uH)	Tolerance	DC Resistance (mΩ)		Heat Rating Current DC Amp.	Saturation Current DC Amps.	Measuring Condition
				Typ.	Max.	Idc(A) Max.	Isat(A) Max.	
SPN80801R0NETL	3.0mm	1	± 30%	9	12	6.2	7.8	100KHz,1V
SPN80801R5NETL		1.5	± 30%	12	16	5.3	6.2	100KHz,1V
SPN80802R2NETL		2.2	± 30%	15	20	4.8	4.9	100KHz,1V
SPN80803R3METL		3.3	± 20%	19	25	4.3	4.2	100KHz,1V
SPN80804R7METL		4.7	± 20%	22	29	4	3.6	100KHz,1V
SPN80806R8METL		6.8	± 20%	29	38	3.4	3	100KHz,1V
SPN8080100METL		10	± 20%	33	43	3	2.4	100KHz,1V
SPN8080150METL		15	± 20%	60	78	2.2	2	100KHz,1V
SPN8080220METL		22	± 20%	70	91	1.9	1.75	100KHz,1V
SPN8080330METL		33	± 20%	120	156	1.5	1.3	100KHz,1V
SPN8080470METL		47	± 20%	170	221	1.3	1.1	100KHz,1V
SPN80800R9NETN	4.0mm	0.9	± 30%	6	8	7.8	11	100KHz,1V
SPN80801R4NETN		1.4	± 30%	7	9	7	9	100KHz,1V
SPN80802R0NETN		2	± 30%	9	12	6.3	7.4	100KHz,1V
SPN80803R6NETN		3.6	± 30%	15	20	4.9	5.3	100KHz,1V
SPN80804R7NETN		4.7	± 30%	18	23	4.1	4.7	100KHz,1V
SPN80806R8NETN		6.8	± 30%	25	33	3.7	4	100KHz,1V
SPN8080100METN		10	± 20%	34	44	3.1	3.4	100KHz,1V
SPN8080150METN		15	± 20%	50	65	2.4	2.7	100KHz,1V
SPN8080220METN		22	± 20%	66	86	2.2	2.2	100KHz,1V
SPN8080330METN		33	± 20%	100	130	1.7	1.9	100KHz,1V
SPN8080470METN		47	± 20%	150	195	1.4	1.5	100KHz,1V
SPN8080680METN		68	± 20%	230	299	1.1	1.2	100KHz,1V
SPN8080101METN		100	± 20%	290	377	1	1	100KHz,1V

All test data are referenced to 25℃ ambient.

※Isat :DC current(A) that will cause inductance to drop approximately 30%

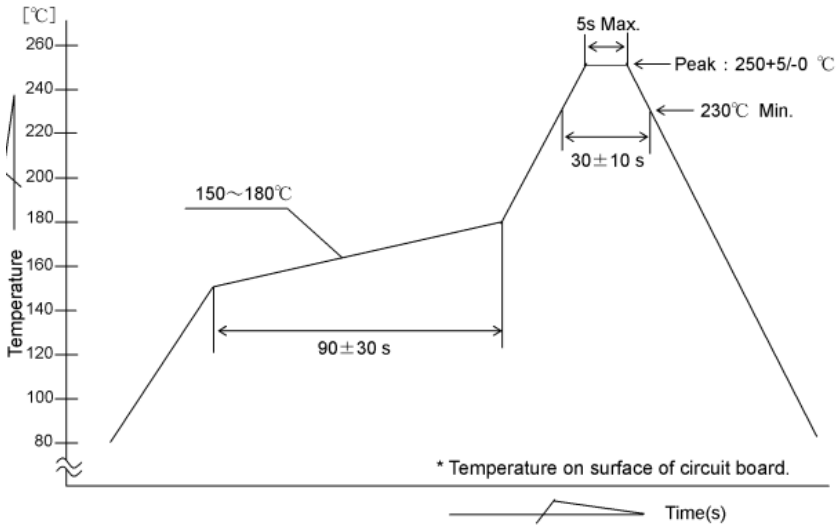
※Idc: DC current(A) that will cause an approximate ΔT of 20℃ (at 25℃ ambient)

Testing Condition & Requirements

No.	Item	Specification Description	Test Method
1.	**Product temperature range**	Operation temp.:-40℃ ~ +125℃(Including self-generated heat) Storage temp.: -40℃ ~ +85℃	---
2.	**Appearance**	No defects or abnormalities.	Visual inspection
2.1	**Core chipping**	The appearance standard of the chipping size in top side, of bottom side ferrite core is following dimension. L : As the specification W: As the specification	Using calipers 
2.2	**Void appearance tolerance limitation**	Size of voids occurring to coating resin is specified as following. 1. Width direction (dimension a) : acceptable when a ≦w/2 nonconforming when a > w/2 2. Length direction (dimension b) : it is not specified. 3. When total area of voids(including one exposing coil) occurring to each sides is not greater than 50% of coating resin area that is acceptable	Using calipers 
2.3	**Electrode appearance criterion for exposed wire**		Visual inspection
3.	**Solder ability**	The surface of terminal immersed shall be minimum of 90% covered with a new coating of solder	Solder heat proof : 1. Preheating : 160±10℃ 90s 2. Retention time: 245±5℃ for 3 ± 1 sec
4.	**Vibration**	Inductance change : within ± 10% without mechanical damage such as break	1. Vibration frequency : (10Hz to 55Hz to 10Hz) in 60 sec. as a period 2. Vibration time : period cycled for 2 hr in each of 3 mutual perpendicular directions 3. Amplitude: 1.5mm max.
5.	**Terminal strength**	No detachment of terminal pin and no breakage of wire	Add static load 4.9N(500gf) to inductor through hole of test board for 10 ± 2 sec
6.	**Thermal shock**	Inductance change : within ± 10% without mechanical damage such as break	1. Repeat 100 cycles as follow : (-40℃ ± 2℃ , 30±3 minutes) → (room temperature , 5 minutes) → (+125℃ ± 2℃ , 30±3 minutes) → (room temperature , 5 minutes) 2. Recovery : 48+4/-0 hours of recovery under the standard condition after the test.
7.	**High temperature resistance**	Inductance change : within ± 10% without mechanical damage such as break	1. Environment condition : 85℃±2℃ 2. Applied current : rated current 3. Duration : 500 +4/-0 hours

No.	Item	Specification Description	Test Method
8.	**Humidity resistance**	Inductance change : within ± 10% without mechanical damage such as break	1. Environment condition : 60℃±2℃ 2. Humidity : 90~95% 3. Applied current : rated current 4. Duration : 500 +4/-0 hours
9.	**Low temperature storage**	Inductance change : within ± 10% without mechanical damage such as break	Store temperature : -40℃ ± 2℃ for total 500 +4/-0 hours
10.	**High temperature storage**	Inductance change : within ± 10% without mechanical damage such as break	Store temperature : +125℃ ± 2℃ for total 500 +4/-0 hours
11	**Inductance**	a. Temperature: 25+/- 3℃ b. Relative Humidity: 45 to 75%RH c. Measuring equipment: Current measure :Chroma 3302 + Chroma 1320	Within specified tolerance.
12	**DC Resistance**	Measuring instrument: Chroma A165022	In accordance with electrical specification.

Reflow Profile Chart (Reference)



The products may be exposed to reflow soldering process of above profile up to two times.

IPC/JEDEC J-STD-20 MSL Classifications

Level	Floor Life		Soak Requirements			
			Standard		Accelerated	
	Time	Cond degC/RH%	Time (hrs)	Cond degC/RH%	Time (hrs)	Cond degC/RH%
2	1 year	≦30/60%	168+5/-0	85/60	n/a	n/a

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