Data Sheet

Customer:	
Product:	**SMD Power Inductor – SDIA Series**
Sizes.:	**0310/0312/0315/0410/0412/0415/0418/0420/0430/0520/ 0540/0620/0628/0645/0840/0865**
Issued Date:	**27-Nov-23**
Edition:	**REV.C6**

RoHS Compliant

HONG KONG HELISTO INDUSTRIAL LIMITED
香港海利斯特实业有限公司

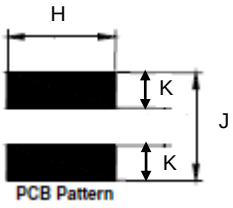
SHENZHEN HELISTO TECHNOLOGYCOLTD
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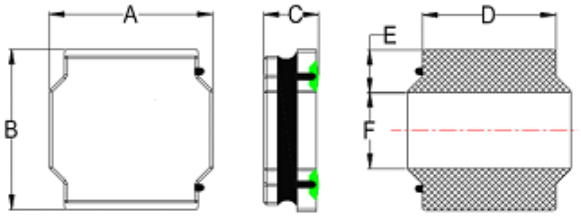
Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
27-Nov-23	27-Nov-23	27-Nov-23	27-Nov-23	
Kris Chen	*Ben Chang*	*Ben Chang*		

SMD Power Inductor

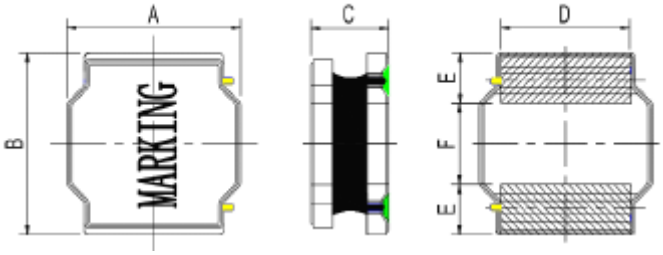




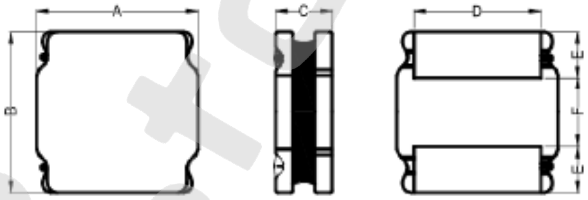
SDIA0310



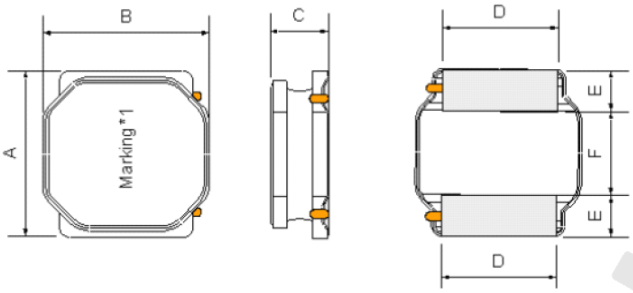
SDIA0418 / 0420 / 0520



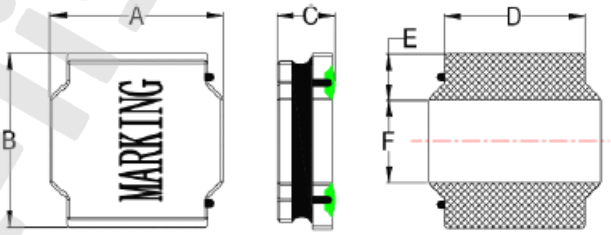
SDIA0312 / 0315



SDIA0410 / 0412 / 0415 / 0540 / 0645



SDIA 0430 / 0620 / 0628 / 0840 / 0865



Dimensions

Unit: mm

Type	A	B	C	D	E	F	H	J	K
SDIA0310	3.0±0.2	3.0±0.2	1.0 max	2.5±0.2	0.75±0.2	1.5±0.2	2.7	3.0	0.8
SDIA0312	3.0±0.2	3.0±0.2	1.2 max	2.5±0.2	0.75±0.2	1.5±0.2	2.7	3.0	0.8
SDIA0315	3.0±0.2	3.0±0.2	1.5 max	2.5±0.2	0.75±0.2	1.5±0.2	2.7	3.0	0.8
SDIA0410	4.0±0.2	4.0±0.2	1.0 max	3.3±0.2	0.95±0.2	2.1±0.2	3.7	4.0	1.2
SDIA0412	4.0±0.2	4.0±0.2	1.2 max	3.3±0.2	0.95±0.2	2.1±0.2	3.7	4.0	1.2
SDIA0415	4.0±0.2	4.0±0.2	1.65 max	3.3±0.2	0.95±0.2	2.1±0.2	3.7	4.0	1.2
SDIA0418	4.0±0.2	4.0±0.2	1.85 max	3.3±0.2	0.95±0.2	2.1±0.2	3.7	4.0	1.2
SDIA0420	4.0±0.2	4.0±0.2	2.0 max	3.3±0.2	0.95±0.2	2.1±0.2	3.7	4.0	1.2
SDIA0430	4.0±0.2	4.0±0.2	3.0 max	3.3±0.2	0.95±0.2	2.1±0.2	3.7	4.0	1.2
SDIA0520	5.0±0.2	5.0±0.2	2.0 max	4.0±0.2	1.25±0.2	2.5±0.2	4.7	5.0	1.5
SDIA0540	5.0±0.2	5.0±0.2	4.0 max	4.0±0.2	1.25±0.2	2.5±0.2	4.7	5.0	1.5
SDIA0620	6.0±0.3	6.0±0.3	2.0 max	4.9±0.2	1.55±0.3	2.9±0.3	5.7	6.3	1.6
SDIA0628	6.0±0.3	6.0±0.3	2.8 max	4.9±0.2	1.7±0.3	2.9±0.3	5.7	6.3	1.6
SDIA0645	6.0±0.3	6.0±0.3	4.5 max	4.9±0.2	1.55±0.2	2.9±0.3	5.7	6.3	1.6
SDIA0840	8.0±0.3	8.0±0.3	4.2 max	6.3±0.3	2.0±0.3	4.0±0.3	7.5	8.2	2.2
SDIA0865	8.0±0.3	8.0±0.3	6.8 max	2.45 ref	6.3 ref	3.1 ref	6.6	8.35	2.8

SMD Power Inductor

■Features

- Small and Low profile inductor
- It corresponds to high current
- Shield structure magnetically
- Strong structure against a shock-proof

■Applications

- LCD Display etc.
- For Small DC to DC Converters
- PDA.

■Characteristics

- Saturation Current(I sat): The current when the inductance becomes 30% lower than its initial value.
- Temperature Rise Current(I rms): The actual current when temperature of coil becomes △T=40℃.
- Operating temperature range: -40～125°C
- Storage Temperature: 5~25℃; Humidity: 25~80%RH

■Inductance and rated current ranges

SDIA0310	1.0～47μH	1.40～0.22A
SDIA0312	1.0～47μH	1.87～0.27A
SDIA0315	1.0～47μH	2.10～0.32A
SDIA0410	1.0～22μH	2.00～0.45A
SDIA0412	1.0～47μH	2.61～0.30A
SDIA0415	1.0～22μH	2.50～0.68A
SDIA0418	1.0～100μH	4.00～0.40A
SDIA0420	1.0～47μH	4.78～0.74A
SDIA0430	1.0～100μH	5.26～0.60A
SDIA0520	1.0～47μH	4.33～0.81A
SDIA0540	1.0～100μH	7.35～0.75A
SDIA0620	1.0～47μH	4.30～1.00A
SDIA0628	1.0～100μH	6.70～0.65A
SDIA0645	2.2～220μH	6.00～0.80A
SDIA0840	1.4～680μH	10.00～0.30A
SDIA0865	4.7～6800μH	8.50～0.24A

- Test equipment:
  L: HP4284A LCR meter
  DCR: Milli-ohm meter
- Electrical specifications at 25°C

■Product Identification

SDIA	0312	M	T	470
Product Type	Dimensions (AxC)	Inductor Tolerance	Packaging Style	Inductance
	0310: 3.0x1.0 0312: 3.0x1.2 0315: 3.0x1.5 0410: 4.0x1.0 0412: 4.0x1.2 0415: 4.0x1.65 0418: 4.0x1.85 0420: 4.0x2.0 0430: 4.0x3.0 0520: 5.0x2.0 0540: 5.0x4.0 0620: 6.0x2.0 0628: 6.0x2.8 0645: 6.0x4.5 0840: 8.0x4.2 0865: 8.5x6.8	M: ±20% N: ±30%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

■Electrical Characteristics

SDIA0310 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%.	Isat (A) max.	Irms (A) max.
SDIA0310□T1R0	1.0	N	100KHz, 0.25V	0.065	1.40	1.45
SDIA0310□T1R5	1.5	N	100KHz, 0.25V	0.080	1.27	1.30
SDIA0310□T2R2	2.2	N	100KHz, 0.25V	0.110	1.15	1.09
SDIA0310□T3R3	3.3	N	100KHz, 0.25V	0.145	0.97	0.96
SDIA0310□T4R7	4.7	M , N	100KHz, 0.25V	0.225	0.75	0.77
SDIA0310□T6R8	6.8	M , N	100KHz, 0.25V	0.305	0.55	0.66
SDIA0310□T100	10	M , N	1KHz, 0.25V	0.400	0.55	0.58
SDIA0310□T150	15	M , N	1KHz, 0.25V	0.610	0.42	0.47
SDIA0310□T220	22	M , N	1KHz, 0.25V	0.930	0.35	0.38
SDIA0310□T330	33	M , N	1KHz, 0.25V	1.550	0.29	0.30
SDIA0310□T470	47	M , N	1KHz, 0.25V	1.950	0.22	0.26

SDIA0312 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%.	Isat (A) max.	Irms (A) max.
SDIA0312□T1R0	1.0	N	100KHz, 0.25V	0.040	1.87	2.20
SDIA0312□T1R5	1.5	N	100KHz, 0.25V	0.045	1.62	2.01
SDIA0312□T2R2	2.2	N	100KHz, 0.25V	0.075	1.20	1.55
SDIA0312□T3R3	3.3	M , N	100KHz, 0.25V	0.100	1.05	1.36
SDIA0312□T4R7	4.7	M , N	100KHz, 0.25V	0.120	0.90	1.24
SDIA0312□T6R8	6.8	M , N	100KHz, 0.25V	0.190	0.75	0.98
SDIA0312□T100	10	M , N	1KHz, 0.25V	0.265	0.60	0.83
SDIA0312□T150	15	M , N	1KHz, 0.25V	0.360	0.45	0.73
SDIA0312□T220	22	M , N	1KHz, 0.25V	0.645	0.42	0.53
SDIA0312□T330	33	M , N	1KHz, 0.25V	0.875	0.36	0.46
SDIA0312□T470	47	M , N	1KHz, 0.25V	1.450	0.27	0.35

SDIA0315 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0315□T1R0	1.0	N	100KHz, 0.25V	0.037	2.10	1.90
SDIA0315□T1R5	1.5	N	100KHz, 0.25V	0.050	1.80	1.70
SDIA0315□T2R2	2.2	M, N	100KHz, 0.25V	0.060	1.60	1.45
SDIA0315□T3R3	3.3	M , N	100KHz, 0.25V	0.080	1.32	1.20
SDIA0315□T4R7	4.7	M , N	100KHz, 0.25V	0.125	1.10	1.08
SDIA0315□T6R8	6.8	M , N	100KHz, 0.25V	0.200	0.87	0.85
SDIA0315□T100	10	M , N	1KHz, 0.25V	0.250	0.72	0.70
SDIA0315□T100-2	10	M	100KHz, 0.25V	0.230	0.72	-
SDIA0315□T150	15	M , N	1KHz, 0.25V	0.350	0.65	0.64
SDIA0315□T220	22	M , N	1KHz, 0.25V	0.460	0.52	0.57
SDIA0315□T330	33	M , N	1KHz, 0.25V	0.780	0.42	0.35
SDIA0315□T470	47	M , N	1KHz, 0.25V	1.200	0.32	0.30

Note: SDIA0315□T100-2 The current when the inductance becomes 35% lower than its initial value.

■Electrical Characteristics

SDIA0410 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%.	Isat (A) max.	Irms (A) max.
SDIA0410□T1R0	1.0	N	100KHz, 0.25V	0.056	2.00	1.90
SDIA0410□T1R5	1.5	N	100KHz, 0.25V	0.070	1.68	1.70
SDIA0410□T2R2	2.2	M , N	100KHz, 0.25V	0.085	1.20	1.50
SDIA0410□T3R3	3.3	M , N	100KHz, 0.25V	0.100	1.10	1.40
SDIA0410□T4R7	4.7	M , N	100KHz, 0.25V	0.140	0.95	1.20
SDIA0410□T6R8	6.8	M , N	100KHz, 0.25V	0.200	0.80	1.00
SDIA0410□T100	10	M , N	1KHz, 0.25V	0.300	0.62	0.75
SDIA0410□T220	22	M , N	1KHz, 0.25V	0.570	0.45	0.50

SDIA0412 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%.	Isat (A) max.	Irms (A) max.
SDIA0412□T1R0	1.0	N	100KHz, 0.25V	0.050	2.61	1.65
SDIA0412□T1R5	1.5	N	100KHz, 0.25V	0.065	2.10	1.46
SDIA0412□T2R2	2.2	M , N	100KHz, 0.25V	0.080	1.76	1.32
SDIA0412□T3R3	3.3	M , N	100KHz, 0.25V	0.110	1.72	1.12
SDIA0412□T4R7	4.7	M , N	100KHz, 0.25V	0.125	1.15	1.05
SDIA0412□T6R8	6.8	M , N	100KHz, 0.25V	0.198	0.85	0.84
SDIA0412□T100	10	M , N	1KHz, 0.25V	0.265	0.80	0.77
SDIA0412□T150	15	M , N	1KHz, 0.25V	0.340	0.56	0.64
SDIA0412□T220	22	M , N	1KHz, 0.25V	0.587	0.46	0.49
SDIA0412□T470-1	47	M	100KHz, 1V	1.104±20%	0.30	-

SDIA0415 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%.	Isat (A) max.	Irms (A) max.
SDIA0415□T1R0	1.0	N	100KHz, 0.25V	0.035	2.50	1.80
SDIA0415□T1R5	1.5	N	100KHz, 0.25V	0.040	2.20	1.60
SDIA0415□T2R2	2.2	M , N	100KHz, 0.25V	0.053	2.00	1.40
SDIA0415□T3R3	3.3	M , N	100KHz, 0.25V	0.075	1.80	1.20
SDIA0415□T4R7	4.7	M , N	100KHz, 0.25V	0.100	1.35	0.95
SDIA0415□T6R8	6.8	M , N	100KHz, 0.25V	0.135	1.20	0.80
SDIA0415□T100	10	M , N	1KHz, 0.25V	0.200	1.00	0.65
SDIA0415□T150	15	M , N	1KHz, 0.25V	0.300	0.85	0.50
SDIA0415□T220	22	M , N	1KHz, 0.25V	0.400	0.68	0.40

SDIA0418 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0418□T1R0	1.0	N	100KHz, 0.25V	0.023	4.00	2.00
SDIA0418□T1R5	1.5	N	100KHz, 0.25V	0.033	3.35	1.80
SDIA0418□T2R2	2.2	M , N	100KHz, 0.25V	0.042	3.00	1.75
SDIA0418□T3R3	3.3	M , N	100KHz, 0.25V	0.070	2.45	1.23
SDIA0418□T4R7	4.7	M , N	100KHz, 0.25V	0.090	2.00	1.20
SDIA0418□T5R6	5.6	M , N	100KHz, 0.25V	0.103	1.60	1.15
SDIA0418□T6R8	6.8	M , N	100KHz, 0.25V	0.124	1.60	1.06
SDIA0418□T100	10	M , N	1KHz, 0.25V	0.200	1.30	0.90
SDIA0418□T150	15	M , N	1KHz, 0.25V	0.268	1.10	0.65
SDIA0418□T220	22	M , N	1KHz, 0.25V	0.390	0.80	0.59
SDIA0418□T330	33	M , N	1KHz, 0.25V	0.560	0.65	0.55
SDIA0418□T470	47	M , N	1KHz, 0.25V	0.850	0.60	0.42
SDIA0418□T680	68	M , N	1KHz, 0.25V	1.000	0.52	0.32
SDIA0418□T101	100	M , N	1KHz, 0.25V	1.500	0.40	0.25
SDIA0418□T101-1	100	M	100KHz, 1V	1.750	0.40	-

Note: SDIA0418□T101-1 The current when the inductance becomes 35% lower than its initial value.

■Electrical Characteristics

SDIA0420 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0420□T1R0	1.0	N	100KHz, 0.25V	0.029	4.78	2.15
SDIA0420□T1R5	1.5	N	100KHz, 0.25V	0.035	4.45	1.98
SDIA0420□T2R2	2.2	M , N	100KHz, 0.25V	0.040	3.40	1.85
SDIA0420□T3R3	3.3	M , N	100KHz, 0.25V	0.070	3.20	1.40
SDIA0420□T4R7	4.7	M , N	100KHz, 0.25V	0.075	2.35	1.34
SDIA0420□T6R8	6.8	M , N	100KHz, 0.25V	0.125	2.20	1.04
SDIA0420□T100	10	M , N	1KHz, 0.25V	0.165	1.60	0.90
SDIA0420□T150	15	M , N	1KHz, 0.25V	0.230	1.35	0.77
SDIA0420□T220	22	M , N	1KHz, 0.25V	0.350	1.05	0.62
SDIA0420□T330	33	M , N	1KHz, 0.25V	0.550	0.85	0.49
SDIA0420□T470	47	M , N	1KHz, 0.25V	0.710	0.74	0.44

SDIA0430 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0430□T1R0	1.0	N	100KHz, 0.25V	0.014	5.26	4.15
SDIA0430□T1R5	1.5	N	100KHz, 0.25V	0.020	4.84	3.34
SDIA0430□T2R2	2.2	M , N	100KHz, 0.25V	0.030	4.50	2.95
SDIA0430□T3R3	3.3	N	100KHz, 0.25V	0.040	3.30	2.40
SDIA0430□T4R7	4.7	N	100KHz, 0.25V	0.060	2.90	2.00
SDIA0430□T6R8	6.8	M , N	100KHz, 0.25V	0.090	2.75	1.60
SDIA0430□T100	10	M , N	1KHz, 0.25V	0.100	1.95	1.50
SDIA0430□T150	15	M , N	1KHz, 0.25V	0.190	1.65	1.11
SDIA0430□T220	22	M ,N	1KHz, 0.25V	0.225	1.30	1.00
SDIA0430□T330	33	M ,N	1KHz, 0.25V	0.330	1.10	0.84
SDIA0430□T470	47	M ,N	1KHz, 0.25V	0.445	0.95	0.72
SDIA0430□T680	68	M ,N	1KHz, 0.25V	0.868	0.72	0.52
SDIA0430□T820	82	M ,N	1KHz, 0.25V	1.060	0.66	0.47
SDIA0430□T101	100	M ,N	1KHz, 0.25V	1.150	0.60	0.45

SDIA0520 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0520□T1R0	1.0	N	100KHz, 0.25V	0.020	4.33	4.30
SDIA0520□T1R5	1.5	N	100KHz, 0.25V	0.026	4.10	3.20
SDIA0520□T2R2	2.2	M , N	100KHz, 0.25V	0.038	3.85	2.90
SDIA0520□T3R3	3.3	M , N	100KHz, 0.25V	0.046	3.25	2.50
SDIA0520□T4R7	4.7	M , N	100KHz, 0.25V	0.065	2.40	2.20
SDIA0520□T6R8	6.8	M , N	100KHz, 0.25V	0.092	2.10	1.80
SDIA0520□T8R2	8.2	M , N	100KHz, 0.25V	0.100	1.90	1.68
SDIA0520□T100	10	M , N	1KHz, 0.25V	0.125	1.80	1.45
SDIA0520□T150	15	M , N	1KHz, 0.25V	0.180	1.44	1.25
SDIA0520□T220	22	M , N	1KHz, 0.25V	0.250	1.18	1.10
SDIA0520□T330	33	M , N	1KHz, 0.25V	0.370	0.97	0.93
SDIA0520□T470	47	M , N	1KHz, 0.25V	0.560	0.81	0.77

■Electrical Characteristics

SDIA0540 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0540□T1R0	1.0	N	100KHz, 0.25V	0.012	7.35	4.90
SDIA0540□T1R5	1.5	N	100KHz, 0.25V	0.015	6.40	4.30
SDIA0540□T2R2	2.2	M, N	100KHz, 0.25V	0.019	5.00	3.80
SDIA0540□T3R3	3.3	M, N	100KHz, 0.25V	0.024	4.00	3.40
SDIA0540□T4R7	4.7	M , N	100KHz, 0.25V	0.030	3.50	3.00
SDIA0540□T6R8	6.8	M , N	100KHz, 0.25V	0.043	2.90	2.50
SDIA0540□T100	10	M , N	1KHz, 0.25V	0.064	2.35	2.10
SDIA0540□T150	15	M , N	1KHz, 0.25V	0.086	2.00	2.00
SDIA0540□T220	22	M , N	1KHz, 0.25V	0.129	1.60	1.50
SDIA0540□T330	33	M , N	1KHz, 0.25V	0.188	1.30	1.20
SDIA0540□T470	47	M , N	1KHz, 0.25V	0.272	1.10	1.00
SDIA0540□T680	68	M , N	1KHz, 0.25V	0.400	0.90	0.80
SDIA0540□T101	100	M , N	1KHz, 0.25V	0.560	0.75	0.70
SDIA0540□T101-1	100	M, N	100KHz, 0.25V	0.560	0.75	-

Note: SDIA0540□T101-1 The current when the inductance becomes 35% lower than its initial value.

SDIA0620 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0620□T1R0	1.0	N	100KHz, 0.25V	0.020	4.30	3.50
SDIA0620□T1R5	1.5	N	100KHz, 0.25V	0.025	4.25	3.20
SDIA0620□T2R2	2.2	N	100KHz, 0.25V	0.035	3.75	2.75
SDIA0620□T3R3	3.3	N	100KHz, 0.25V	0.045	3.15	2.60
SDIA0620□T4R7	4.7	N	100KHz, 0.25V	0.058	3.00	2.00
SDIA0620□T5R6	5.6	M , N	100KHz, 0.25V	0.070	2.40	1.90
SDIA0620□T6R8	6.8	M , N	100KHz, 0.25V	0.085	2.20	1.80
SDIA0620□T100	10	M , N	1KHz, 0.25V	0.120	1.75	1.40
SDIA0620□T150	15	M , N	1KHz, 0.25V	0.160	1.50	1.20
SDIA0620□T220	22	M , N	1KHz, 0.25V	0.240	1.25	1.08
SDIA0620□T330	33	M , N	1KHz, 0.25V	0.400	1.10	0.84
SDIA0620□T470	47	M , N	1KHz, 0.25V	0.500	1.00	0.80

SDIA0628 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0628□T1R0	1.0	N	100KHz, 0.25V	0.012	6.70	5.20
SDIA0628□T1R5	1.5	N	100KHz, 0.25V	0.016	6.00	4.50
SDIA0628□T2R2	2.2	N	100KHz, 0.25V	0.020	5.10	3.80
SDIA0628□T3R3	3.3	N	100KHz, 0.25V	0.025	3.63	3.20
SDIA0628□T4R7	4.7	N	100KHz, 0.25V	0.033	3.00	2.70
SDIA0628□T6R8	6.8	M , N	100KHz, 0.25V	0.056	2.60	2.20
SDIA0628□T6R8-1	6.8	M	1KHz, 0.25V	0.047	2.60	-
SDIA0628□T100	10	M , N	1KHz, 0.25V	0.078	2.05	1.80
SDIA0628□T150	15	M , N	1KHz, 0.25V	0.125	1.75	1.70
SDIA0628□T180	18	M , N	1KHz, 0.25V	0.130	1.55	1.50
SDIA0628□T220	22	M , N	1KHz, 0.25V	0.140	1.45	1.40
SDIA0628□T270	27	M , N	1KHz, 0.25V	0.180	1.40	1.20
SDIA0628□T330	33	M , N	1KHz, 0.25V	0.220	1.36	1.10
SDIA0628□T470	47	M , N	1KHz, 0.25V	0.280	1.15	1.00
SDIA0628□T680	68	M , N	1KHz, 0.25V	0.450	0.95	0.80
SDIA0628□T820	82	M , N	1KHz, 0.25V	0.550	0.80	0.70
SDIA0628□T101	100	M , N	1KHz, 0.25V	0.670	0.65	0.60

■Electrical Characteristics

SDIA0645 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0645□T2R2	2.2	M, N	100KHz, 0.25V	0.021	6.00	4.00
SDIA0645□T3R3	3.3	M, N	100KHz, 0.25V	0.023	5.20	3.00
SDIA0645□T4R7	4.7	M, N	100KHz, 0.25V	0.026	4.00	3.00
SDIA0645□T4R7-1	4.7	M, N	100KHz, 0.25V	0.025	5.20	-
SDIA0645□T6R8	6.8	M, N	100KHz, 0.25V	0.040	3.80	3.00
SDIA0645□T100	10	M, N	1KHz, 0.25V	0.046	3.10	2.50
SDIA0645□T150	15	M, N	1KHz, 0.25V	0.070	2.50	2.00
SDIA0645□T220	22	M, N	1KHz, 0.25V	0.107	2.00	1.80
SDIA0645□T330	33	M, N	1KHz, 0.25V	0.141	1.65	1.45
SDIA0645□T470	47	M, N	1KHz, 0.25V	0.211	1.40	1.25
SDIA0645□T560	56	M, N	1KHz, 0.25V	0.221	1.30	1.05
SDIA0645□T680	68	M, N	1KHz, 0.25V	0.304	1.10	0.90
SDIA0645□T101	100	M, N	1KHz, 0.25V	0.466	0.90	0.70
SDIA0645□T151	150	M, N	1KHz, 0.25V	0.600	0.60	0.50
SDIA0645□T151-1	150	M	100KHz, 1V	0.580	0.90	-
SDIA0645□T221	220	M , N	1KHz, 0.25V	1.100	0.80	0.45

Note: SDIA0645□T4R7-1/SDIA0645□T151-1 The current when the inductance becomes 35% lower than its initial value.

SDIA0840 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±30%	Isat (A) max.	Irms (A) max.
SDIA0840□T1R4	1.4	N	100KHz, 0.25V	0.007	10.00	-
SDIA0840□T2R2	2.2	M , N	100KHz, 0.25V	0.012	8.10	5.15
SDIA0840□T3R3	3.3	M , N	100KHz, 0.25V	0.017	6.50	4.40
SDIA0840□T4R7	4.7	M , N	100KHz, 0.25V	0.020	5.90	4.10
SDIA0840□T5R6	5.6	M , N	100KHz, 0.25V	0.024	5.50	3.85
SDIA0840□T6R8	6.8	M , N	100KHz, 0.25V	0.028	4.55	3.60
SDIA0840□T100	10	M , N	1KHz, 0.25V	0.034	3.80	3.30
SDIA0840□T100-1	10	M	100KHz, 1V	0.034	3.80	-
SDIA0840□T150	15	M , N	1KHz, 0.25V	0.056	2.95	2.60
SDIA0840□T220	22	M , N	1KHz, 0.25V	0.074	2.40	2.10
SDIA0840□T330	33	M , N	1KHz, 0.25V	0.100	2.05	1.80
SDIA0840□T330-1	33	M	100KHz, 0.5V	0.100	2.05	-
SDIA0840□T390	39	M , N	1KHz, 0.25V	0.107	1.95	-
SDIA0840□T470	47	M , N	1KHz, 0.25V	0.158	1.75	1.55
SDIA0840□T560	56	M , N	1KHz, 0.25V	0.148	1.55	-
SDIA0840□T680	68	M , N	1KHz, 0.25V	0.196	1.45	1.25
SDIA0840□T101	100	M , N	1KHz, 0.25V	0.295	1.15	1.00
SDIA0840□T151	150	M , N	1KHz, 0.25V	0.470	1.10	0.85
SDIA0840□T221	220	M , N	1KHz, 0.25V	0.660	0.85	0.80
SDIA0840□T221-1	220	M	1KHz, 0.25V	0.599	0.80	-
SDIA0840□T221-2	220	M	1KHz, 0.25V	0.660	1.00	-
SDIA0840□T331	330	M , N	1KHz, 0.25V	0.970	0.68	0.64
SDIA0840□T471	470	M , N	1KHz, 0.25V	1.400	0.60	0.50
SDIA0840□T681	680	M, N	1KHz, 0.25V	2.200	0.30	-

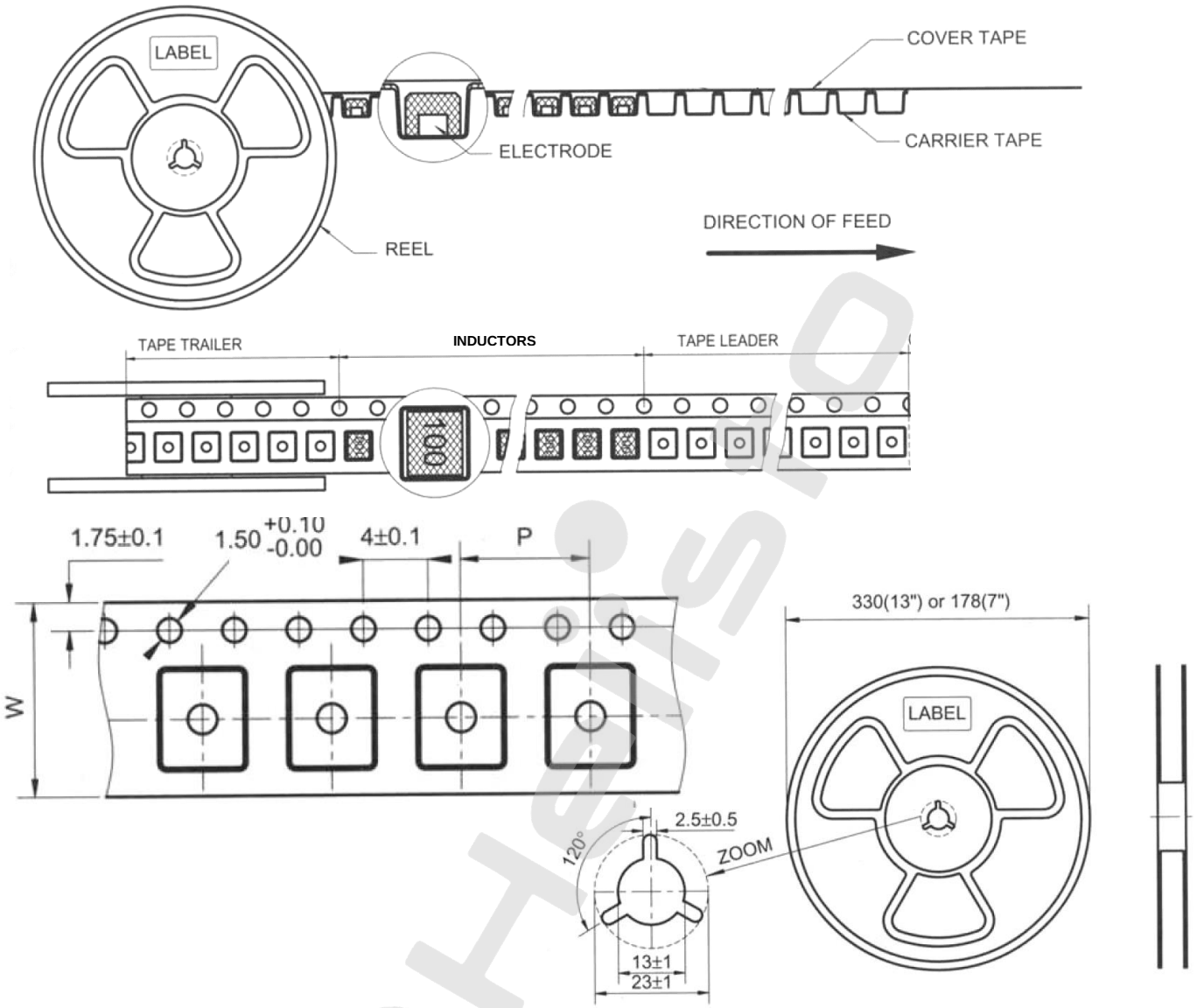
Note: SDIA0840□T100-1 The current when the inductance becomes 35% lower than its initial value.

■Electrical Characteristics

SDIA0865 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω)	Isat (A) max.	Irms (A) max.
SDIA0865□T4R7	4.7	M	1KHz, 1V	0.022	8.50	4.70
SDIA0865□T5R6	5.6	M	1KHz, 1V	0.026	8.00	4.50
SDIA0865□T6R8	6.8	M	1KHz, 1V	0.0286	7.50	4.50
SDIA0865□T8R2	8.2	M	1KHz, 1V	0.031	7.00	4.20
SDIA0865□T100	10	M	1KHz, 1V	0.040	6.60	4.00
SDIA0865□T150	15	M	1KHz, 1V	0.062	4.80	3.60
SDIA0865□T220	22	M	1KHz, 1V	0.065	4.30	2.85
SDIA0865□T330	33	M	1KHz, 1V	0.118	3.50	2.30
SDIA0865□T470	47	M	1KHz, 1V	0.156	3.00	2.20
SDIA0865□T680	68	M	1KHz, 1V	0.230	2.70	1.75
SDIA0865□T820	82	M	1KHz, 1V	0.300	2.50	1.40
SDIA0865□T101	100	M	1KHz, 1V	0.390	2.30	1.30
SDIA0865□T151	150	M	1KHz, 1V	0.575	1.80	1.20
SDIA0865□T221	220	M	1KHz, 1V	0.988	1.40	0.90
SDIA0865□T331	330	M	1KHz, 1V	1.320	1.10	0.70
SDIA0865□T431	430	M	1KHz, 1V	1.580	0.95	0.61
SDIA0865□T471	470	M	1KHz, 1V	1.690	0.90	0.55
SDIA0865□T821	820	M	1KHz, 1V	2.000	0.65	0.50
SDIA0865□T102	1000	M	1KHz, 1V	2.820	0.60	0.40
SDIA0865□T152	1500	M	1KHz, 1V	4.380	0.54	0.36
SDIA0865□T302	3000	M	1KHz, 1V	10.800	0.30	0.24
SDIA0865□T472	4700	M	1KHz, 1V	14.580	0.25	0.22
SDIA0865□T682	6800	M	1KHz, 1V	22.400	0.24	0.20

■Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel	
	W	P	7"	13"
SDIA0310	8	4	2000	-
SDIA0312	8	4	2000	-
SDIA0315	8	4	2000	-
SDIA0410	12	8	-	5000
SDIA0412	12	8	-	4500
SDIA0415	12	8	-	3000
SDIA0418	12	8	-	3000
SDIA0420	12	8	-	3000
SDIA0430	12	8	-	2500
SDIA0520	12	8	-	2500
SDIA0540	12	8	-	1500
SDIA0620	12	8	-	2000
SDIA0628	16	8	-	1500
SDIA0645	16	12	-	1000
SDIA0840	16	12	-	1000
SDIA0865	16	12	-	700

■SMT Power Inductor Environmental Specifications

Test Items	Specifications	Test Conditions
Bending Test	Inductance：within±10% of initial value	Apply pressure gradually in the direction of the arrow at a rate of about 0.5mm/s until bent depth reaches 3mm and hold for 30±5s.
Adhesion Strength	Inductance：within±10% of initial value	A static load using a R0.5 pressing tool shall be applied the arrow and to the body of the specimen in the direction of the arrow and shall be hold for 60±5s. Measure after removing pressure.
Vibration Test	Inductance：within±10% of initial value	The specimen shall be subjected to a vibration of 1.5mm amplitude, sweep frequency 10~55Hz (10Hz to 55Hz to 10Hz in a period of one minute) for 1 h in each of 3(X,Y,Z) axes.
Mechanical Shock	Inductance：within±10% of initial value	Peak acceleration: 981 m/S2 Duration of pulse: 6ms 3 times in each of 3(X,Y,Z)axes. The specimen must be fixed on test board. Three successive shock shall be applied in the perpendicular direction of each surface of the specimen.
Free fall test	Inductance：within±10% of initial value	The specimen must be fixed on test board. It must be equipped with instruments of which weight is 500g. Then it shall be fallen freely from 1m height to rigid wood 3 times in each of three axes.
Solderability	Terminal area must have 90% minimum solder coverage.	Dip pads in flux then dip in solder pot at 245±5℃ for 3±0.5 seconds.
Resistance to Soldering Heat	Inductance：within±10% of initial value	Test method: Reflow soldering method Preheat 150~180℃ 90±30s Peak temp 260℃ 10s (230℃min , 30±10s) The specimen shall be subjected to the reflow process under the above condition 2 times. Test board shall be 0.8mm thick. Base material shall be glass epoxy resin. Measurement: The specimen shall be stored at standard atmospheric conditions for 1 h in prior to the measurement.
Dielectric strength	Without damage	100V DC shall be applied for 60s between the terminal and the core.
Insulation resistance	100MΩ or more.	100V DC shall be applied between the terminal and the core.
High temperature Storage test	Inductance：within±10% of initial value	Temperature 85±2℃, Time: 500±12 hours, Tested after 1hour at room temperature.
Low temperature Storage test	Inductance：within±10% of initial value	Temperature -40±3℃, Time: 500±12 hours, Tested after 1hour at room temperature.
Humidity test	Inductance：within±10% of initial value	Temperature 60±2℃, 90~95% relative humidity Time: 500±12 hours Tested after 1hour at room temperature.
Temperature Cycles	Inductance：within±10% of initial value	The specimen shall be measured after to 500 continuous cycles of temperature change of -40℃ for 30 min and 85℃ for 30 min with the transit period of 2min or less. Tested after 1 hour at room temperature.

The condition of reflow (recommendation):

