Data Sheet

Customer:	
Product:	**Shielded SMD Power Inductor – SDAL Series**
Sizes.:	**0530 / 0630 / 0660 / 1010 / 1510**
Issued Date:	**15-Apr-25**
Edition:	**REV.A3**

RoHS Compliant

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

SHENZHEN HELISTO TECHNOLOGYCOLTD
深圳市海利斯特科技有限公司

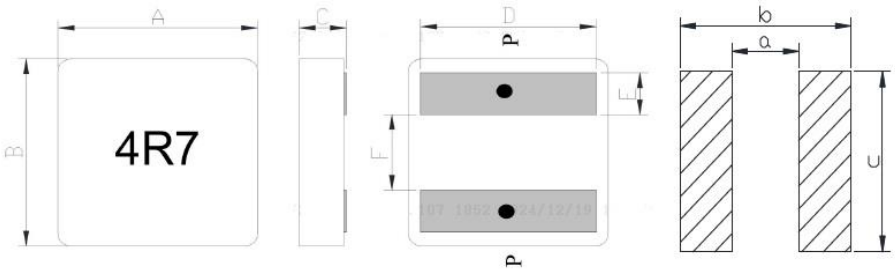
ADD:5/F., A Block, Hongdu Industrial Park, Fanshen Road, 45 Area, Baoan, Shenzhen, China
TEL:+86-755-29741555 29749555
FAX:+86-755-29742111
E-mail:donnyhai@helisto.com
www.Helisto.com

Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
15-Apr-25	15-Apr-25	15-Apr-25	15-Apr-25	
Mandy Chang	*Ben Chang*	*Ben Chang*		

Shielded SMD Power Inductor

Shielded SMD Power Inductor





DCR is measured at P points

Dimensions

Type	A mm	B mm	C mm	D mm	E mm	F mm	a mm	b mm	c mm
SDAL0530	5.20±0.20	5.30±0.20	3.10 max	4.30±0.40	1.10±0.30	2.30±0.30	2.00 typ	4.50 typ	4.70 typ
SDAL0630	6.60±0.20	6.40±0.20	3.00 max	5.30±0.40	1.40±0.30	2.60±0.35	2.50 typ	5.60 typ	5.60 typ
SDAL0660	6.60±0.20	6.40±0.20	6.10 max	5.30±0.40	1.40±0.30	2.60±0.35	2.50 typ	5.60 typ	5.60 typ
SDAL1010	11.30±0.50	10.0±0.50	10.00 max	8.00±0.40	2.20±0.30	4.50±0.50	4.30 typ	9.00 typ	9.00 typ
SDAL1510	16.50±0.30	15.50±0.30	10.00 max	13.20±0.50	3.20±0.30	7.00±0.50	6.00 typ	15.00 typ	15.00 typ

Features

- Low profile and low DCR
- Magnetically Shielded construction, low EMI
- Frequency range up to 5MHz
- Minimized acoustic noise and minimized leakage flux noise
- High current carrying capacity, Low core loss
- Flat wire: high utilization of winding space delivers low DC resistance
- Halogen Free & ROHS compliant

Applications

- DC/DC converter for CPU in Notebook / PC /PDA
- VRM for server
- DC switching power supply circuit
- ensures stable power in SSD module

Characteristics

- All test data referenced to 25°C ambient.
- Rated current: Isat or Irms, whichever is smaller
- Isat: DC current at which the inductance drops approximate 30% typ from its value without current
- Irms: DC current that causes the temperature rise (△T =40°C) from 30°C ambient
- Absolute maximum voltage 30VDC
- Operating temperature range: -55°C ~+125°C
- Storage Temperature: 5℃～40℃ ; Humidity: 10%～75%
- Shelf life: 1 years Max

Inductance and rated current ranges

- SDAL0530 0.16~4.70μH 31.0~6.7A
- SDAL0630 0.18~3.30μH 39.0~12.2A
- SDAL0660 4.70~33.0μH 10.5~3.7A
- SDAL1010 0.22~15.0μH 98.8~15.5A
- SDAL1510 4.70~33.0μH 39.0~16.7A
- Test equipment:
  L: Wayne kerr 3260B LCR meter with Wayne kerr 3265B bias current source
  DCR: Milli-ohm meter

Product Identification

SDAL	0660	M	T	100
Product Type	Dimensions (BxC)	Inductor Tolerance	Packaging Style	Inductance
	0530: 5.3×3.1 0630: 6.4×3.0 0660: 6.4×6.6 1010: 10.0×10.0 1510: 15.5×10.0	M: ±20%	T: Tape and Reel	R22: 0.22μH 1R0: 1.0μH 100: 10μH

■Electrical Characteristics

SDAL0530 type

Part No.	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ)		Isat (A) typ.	Irms (A) typ.
				Typ.	Max.		
SDAL0530MTR16	0.16	±20%	100KHz, 1V	2.15	2.36	31.00	22.20
SDAL0530MTR33	0.33	±20%	100KHz, 1V	3.20	3.52	26.00	19.20
SDAL0530MTR60	0.60	±20%	100KHz, 1V	4.11	4.52	19.80	17.70
SDAL0530MTR80	0.80	±20%	100KHz, 1V	5.14	5.65	18.50	13.00
SDAL0530MT1R0	1.0	±20%	100KHz, 1V	8.50	9.40	14.00	11.10
SDAL0530MT1R2	1.2	±20%	100KHz, 1V	11.40	12.40	12.50	10.40
SDAL0530MT2R2	2.2	±20%	100KHz, 1V	13.20	14.50	9.20	9.70
SDAL0530MT3R3	3.3	±20%	100KHz, 1V	21.20	23.30	8.70	8.10
SDAL0530MT4R7	4.7	±20%	100KHz, 1V	36.00	40.00	6.70	5.90

SDAL0630 type

Part No.	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ)		Isat (A) typ.	Irms (A) typ.
				Typ.	Max.		
SDAL0630MTR18	0.18	±20%	100KHz, 1V	1.59	1.75	39.00	32.00
SDAL0630MTR33	0.33	±20%	100KHz, 1V	2.30	2.53	30.00	25.00
SDAL0630MTR56	0.56	±20%	100KHz, 1V	3.01	3.31	29.00	22.00
SDAL0630MT1R0	1.0	±20%	100KHz, 1V	5.62	6.18	23.00	18.00
SDAL0630MT1R2	1.2	±20%	100KHz, 1V	6.82	7.50	22.00	16.00
SDAL0630MT1R8	1.8	±20%	100KHz, 1V	9.57	10.52	18.20	14.00
SDAL0630MT2R2	2.2	±20%	100KHz, 1V	12.70	13.97	15.90	10.00
SDAL0630MT3R3	3.3	±20%	100KHz, 1V	19.92	20.81	12.20	8.00

SDAL0660 type

Part No.	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ)		Isat (A) typ.	Irms (A) typ.
				Typ.	Max.		
SDAL0660MT4R7	4.7	±20%	100KHz, 1V	13.10	14.40	10.50	11.00
SDAL0660MT5R6	5.6	±20%	100KHz, 1V	14.46	15.90	9.90	10.00
SDAL0660MT6R8	6.8	±20%	100KHz, 1V	18.90	20.80	9.20	9.00
SDAL0660MT8R2	8.2	±20%	100KHz, 1V	24.00	26.40	8.40	8.00
SDAL0660MT100	10	±20%	100KHz, 1V	27.00	29.82	7.60	7.00
SDAL0660MT150	15	±20%	100KHz, 1V	39.77	43.75	5.80	6.00
SDAL0660MT220	22	±20%	100KHz, 1V	55.12	60.63	5.60	5.00
SDAL0660MT330	33	±20%	100KHz, 1V	95.68	105.00	3.70	3.60

Shielded SMD Power Inductor

SDAL1010 type

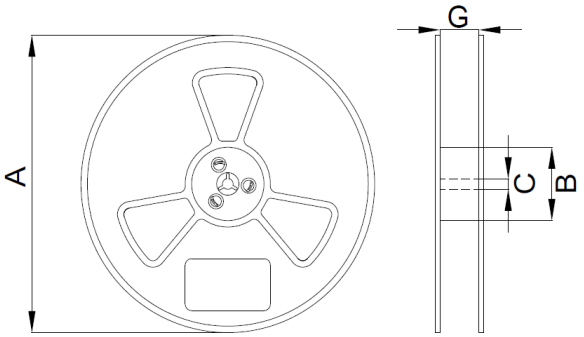
Part No.	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ)		Isat (A) typ.	Irms (A) typ.
				Typ.	Max.		
SDAL1010MTR22	0.22	±20%	100KHz, 1V	0.45	0.50	98.80	55.50
SDAL1010MTR45	0.45	±20%	100KHz, 1V	0.65	0.72	70.50	53.00
SDAL1010MTR68	0.68	±20%	100KHz, 1V	0.87	0.96	62.00	48.00
SDAL1010MT1R0	1.0	±20%	100KHz, 1V	1.00	1.10	55.00	43.50
SDAL1010MT1R5	1.5	±20%	100KHz, 1V	1.60	1.76	36.60	40.50
SDAL1010MT2R2	2.2	±20%	100KHz, 1V	2.55	2.80	34.00	32.00
SDAL1010MT3R3	3.3	±20%	100KHz, 1V	3.70	4.10	27.40	25.00
SDAL1010MT4R7	4.7	±20%	100KHz, 1V	5.20	5.70	25.40	24.00
SDAL1010MT5R6	5.6	±20%	100KHz, 1V	6.30	6.93	23.60	21.20
SDAL1010MT6R8	6.8	±20%	100KHz, 1V	8.10	8.90	21.80	18.50
SDAL1010MT8R2	8.2	±20%	100KHz, 1V	11.70	12.90	18.30	17.10
SDAL1010MT100	10	±20%	100KHz, 1V	13.40	14.75	17.50	15.50
SDAL1010MT150	15	±20%	100KHz, 1V	16.90	18.60	15.50	13.80

SDAL1510 type

Part No.	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ)		Isat (A) typ.	Irms (A) typ.
				Typ.	Max.		
SDAL1510MT4R7	4.7	±20%	100KHz, 1V	3.35	3.80	39.00	29.00
SDAL1510MT6R8	6.8	±20%	100KHz, 1V	4.17	4.60	36.00	26.00
SDAL1510MT8R2	8.2	±20%	100KHz, 1V	6.00	7.50	30.00	24.00
SDAL1510MT100	10	±20%	100KHz, 1V	6.80	9.00	26.30	22.00
SDAL1510MT150	15	±20%	100KHz, 1V	9.17	12.40	23.00	18.00
SDAL1510MT220	22	±20%	100KHz, 1V	14.50	16.00	18.70	14.00
SDAL1510MT330	33	±20%	100KHz, 1V	18.70	20.00	16.70	12.00

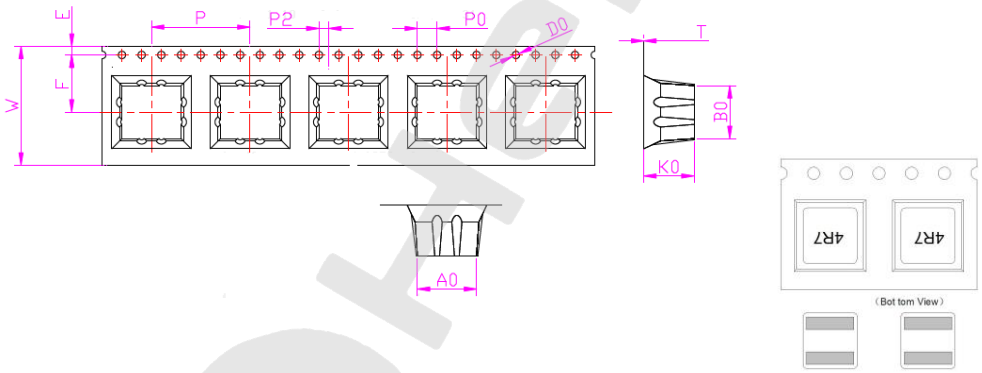
■Packaging

Reel Specifications & Packaging Quantity



Type	Packaging Quantity	Tape Width	Reel Diameter	A (mm)	B (mm)	C (mm)	G (mm)
SDAL0530	2000	12mm	13 inch	330.0±1.0	100.0±1.0	13.2±0.5	12.5±0.2
SDAL0630	1000	16mm	13 inch	330.0±1.0	100.0±1.0	13.2±0.5	16.5±0.2
SDAL0660	750	16mm	13 inch	330.0±1.0	100.0±1.0	13.2±0.5	16.5±0.2
SDAL1010	300	24mm	13 inch	330.0±1.0	100.0±1.0	13.2±0.5	24.5±0.2
SDAL1510	150	32mm	13 inch	330.0±1.0	100.0±1.0	13.2±0.5	32.5±0.2

Embossed Plastic Tape Specifications



Unit: mm

Type	A0 typ.	B0 typ.	W	K0	P	F	E	D0	P0	P2	T
SDAL0530	6.00	5.70	12.00±0.30	3.50±0.10	8.00±0.10	5.50±0.10	1.75±0.10	-	4.00±0.10	2.00±0.10	0.35±0.05
SDAL0630	7.00	6.80	16.00±0.30	3.30±0.10	12.00±0.30	7.50±0.10	1.75±0.10	1.50 typ	4.00±0.10	2.00±0.10	0.30 typ
SDAL0660	7.00	6.80	16.0±0.3	6.30±0.30	12.00±0.30	7.50±0.10	1.75±0.10	-	4.00±0.10	2.00±0.10	0.40 typ
SDAL1010	11.80	10.50	24.0±0.3	10.40±0.3	16.00±0.30	11.5±0.10	1.75±0.10	1.50±0.1	4.00±0.10	2.00±0.10	0.50 typ
SDAL1510	17.00	16.00	32.00±0.30	10.50±0.30	24.0±0.30	14.20±0.10	1.75±0.10	1.50 typ	4.00±0.10	2.00±0.10	0.45 typ

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version A3	Apr 15 ,2025		-Add Storage conditions and Shelf life.