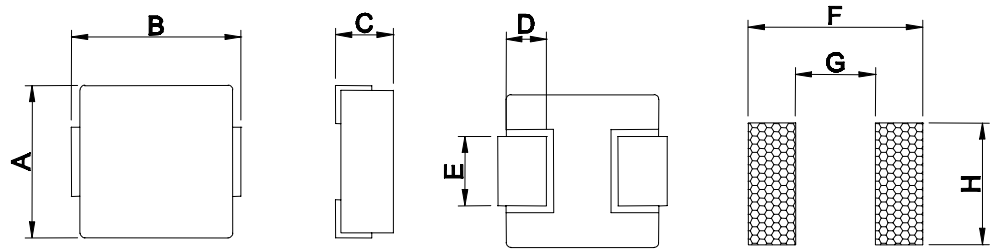


SMD Flat Wire Coils – SDB Series



Features

- Large current adaptable
- Footprint compatible with most standard
- Lower temperature rise at large current
- Low profile, low DCR
- Available on tape and reel for auto surface mounting

Dimensions

Unit: mm

Type	A	B	C	D	E	F	G	H
SDB0530	4.9±0.2	5.8±0.2	2.8±0.2	1.0±0.3	1.5±0.3	7.0	3.0	2.5
SDB0620	6.6±0.2	7.2±0.3	2.2±0.2	1.6±0.3	3.0±0.3	8.4	3.7	3.5
SDB0630	6.6±0.2	7.2±0.3	2.8±0.2	1.6±0.3	3.0±0.3	8.4	3.7	3.5
SDB1040	10.0±0.3	11.1±0.35	3.8±0.2	2.0±0.5	3.0±0.5	13.6	5.4	4.1
SDB1350	12.8±0.2	13.45±0.35	4.8±0.2	2.2±0.5	3.8±0.5	14.5	8.0	5.0

Applications

- Laptop / Desktop / Notebook Computers
- Terminals / Portable Servers / Workstation
- DC/DC Converter in Distributed Power Systems or VRM Applications
- Thin Type On-board Power Supply Module for Exchanger

Inductance and rated current ranges

- SDB0530 0.68μH~4.7μH @ Saturation DC Current: 14~5A
- SDB0620 0.10μH~6.8μH @ Saturation DC Current: 70~6A
- SDB0630 0.10μH~10μH @ Saturation DC Current: 60~7A
- SDB1040 0.22μH~47μH @ Saturation DC Current: 50~2.0A
- SDB1350 0.36μH~2.2μH @ Saturation DC Current: 75~32A

Characteristics

- Typical Saturation DC Current would cause I_o to drop approximately 30% (Typical)
- Typical Heat Rating DC Current would cause an approximately ΔT of 40°C
- All test data is referred to 25°C ambient
- Electrical specifications at 25°C
- Operating temperature rang: -55°C~+125°C
- The part temperature(ambient + temp rise)should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.
- The rated current as listed is either the saturation current or the heating current depending on with value is lower.

Product Identification

SDB	0630	M	T	100
Product Type	Dimensions (AxC)	Inductor Tolerance	Packaging Style	Inductance
	0530: 4.9x2.8 0620: 6.6x2.2 0630: 6.6x2.8 1040: 10.0x3.80 1350: 12.8x4.8	M: ±20%	T: Tape and Reel	R47: 0.47μH 1R0: 1.0μH 100: 10μH

■ Electrical Characteristics

SDB0530 Type

Codes	Inductance L0 @0A (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current	Saturation Current
				Typical	Max.	IDC (A)	I sat (A)
						Typical	Typical
R68	0.68	M	100KHz, 0.1V	11.0	12.0	8.5	14.0
1R0	1.0	M	100KHz, 0.1V	13.0	14.0	7.0	11.0
1R2	1.2	M	100KHz, 0.1V	15.0	16.0	6.5	11.0
1R5	1.5	M	100KHz, 0.1V	20.0	25.0	6.0	10.0
2R2	2.2	M	100KHz, 0.1V	29.0	35.0	5.5	9.0
3R3	3.3	M	100KHz, 0.1V	32.0	38.0	5.0	7.0
4R7	4.7	M	100KHz, 0.1V	50.0	60.0	4.0	5.0

SDB0620Type

Codes	Inductance L0 @0A (uH)	Tolerance	Test Condition	DCR (mΩ)		Heat Rating Current	Saturation Current
				Typical	Max.	IDC (A)	I sat (A)
						Typical	Typical
R10	0.10	M	100KHz, 0.1V	1.5	1.7	30.0	70.0
R20	0.20	M	100KHz, 0.1V	2.2	2.8	25.0	50.0
R22	0.22	M	100KHz, 0.1V	2.6	3.2	21.0	34.0
R47	0.47	M	100KHz, 0.1V	4.9	5.5	15.0	22.0
R56	0.56	M	100KHz, 0.1V	5.9	6.5	13.0	20.0
R81	0.81	M	100KHz, 0.1V	8.3	9.5	11.0	14.0
1R0	1.0	M	100KHz, 0.1V	11.2	13.5	9.0	16.0
1R5	1.5	M	100KHz, 0.1V	17.0	20.0	9.0	15.0
2R2	2.2	M	100KHz, 0.1V	23.0	28.0	7.0	14.0
3R3	3.3	M	100KHz, 0.1V	31.0	39.0	5.5	13.0
4R7	4.7	M	100KHz, 0.1V	41.0	50.0	5.0	10.0
6R8	6.8	M	100KHz, 0.1V	57.0	70.0	4.0	6.0

SDB0630 Type

Codes	Inductance L0 @0A (μ H)	Tolerance	Test Condition	DCR (m Ω)		Heat Rating Current	Saturation Current
				Typical	Max.	IDC (A)	I sat (A)
						Typical	Typical
R10	0.10	M	100KHz, 0.1V	1.5	1.7	32.5	60.0
R15	0.15	M	100KHz, 0.1V	1.9	2.5	30.0	45.0
R20	0.20	M	100KHz, 0.1V	2.4	3.0	24.0	41.0
R22	0.22	M	100KHz, 0.1V	2.5	2.8	23.0	40.0
R33	0.33	M	100KHz, 0.1V	3.5	3.9	20.0	30.0
R36	0.36	M	100KHz, 0.1V	2.6	3.9	20.0	26.0
R47	0.47	M	100KHz, 0.1V	4.0	4.2	17.5	26.0
R56	0.56	M	100KHz, 0.1V	4.7	5.0	16.5	25.5
R68	0.68	M	100KHz, 0.1V	5.0	5.5	15.5	25.0
R82	0.82	M	100KHz, 0.1V	6.7	8.0	13.0	24.0
1R0	1.0	M	100KHz, 0.1V	9.0	10	11.0	22.0
1R5	1.5	M	100KHz, 0.1V	14	15	9.0	18.0
2R2	2.2	M	100KHz, 0.1V	18	20	8.0	14.0
2R5	2.5	M	100KHz, 0.1V	20	22	7.0	14.0
3R3	3.3	M	100KHz, 0.1V	28	30	6.0	13.5
4R7	4.7	M	100KHz, 0.1V	37	40	5.5	10.0
5R6	5.6	M	100KHz, 0.1V	39	42	5.5	6.0
6R8	6.8	M	100KHz, 0.1V	54	60	4.5	8.0
7R5	7.5	M	100KHz, 0.1V	54	60	4.2	7.8
8R2	8.2	M	100KHz, 0.1V	64	68	4.0	7.5
100	10	M	100KHz, 0.1V	102	105	3.0	7.0

■ Electrical Characteristics

SDB1040 Type

Codes	Inductance L0 @0A (μ H)	Tolerance	Test Condition	DCR (m Ω)		Heat Rating Current	Saturation Current
				Typical	Max.	IDC (A)	I sat (A)
						Typical	Typical
R22	0.22	M	100KHz, 0.1V	1.1	1.5	32.0	50.0
R36	0.36	M	100KHz, 0.1V	1.5	1.7	31.5	50.0
R47	0.47	M	100KHz, 0.1V	1.5	1.9	27.5	49.0
R56	0.56	M	100KHz, 0.1V	1.9	2.3	27.5	49.0
R68	0.68	M	100KHz, 0.1V	2.0	2.5	23.0	40.0
R88	0.88	M	100KHz, 0.1V	2.7	3.0	20.0	38.0
1R0	1.0	M	100KHz, 0.1V	3.7	4.1	17.5	36.0
1R5	1.5	M	100KHz, 0.1V	5.3	6.0	15.0	27.5
1R8	1.8	M	100KHz, 0.1V	7.0	8.2	15.0	27.5
2R2	2.2	M	100KHz, 0.1V	8.2	9.0	12.0	25.6
3R3	3.3	M	100KHz, 0.1V	10.8	11.8	10.0	18.6
4R7	4.7	M	100KHz, 0.1V	15.0	16.5	9.5	17.0
5R6	5.6	M	100KHz, 0.1V	17.6	19.3	8.5	16.0
6R8	6.8	M	100KHz, 0.1V	17.5	25.0	8.0	14.0
8R2	8.2	M	100KHz, 0.1V	21.2	26.3	8.0	13.5
100	10	M	100KHz, 0.1V	33.2	36.5	6.8	12.0
150	15	M	100KHz, 0.1V	51.0	65.0	3.5	7.0
220	22	M	100KHz, 0.1V	90.0	120.0	2.0	3.0
330	33	M	100KHz, 0.1V	155.0	200.0	1.8	2.8
470	47	M	100KHz, 0.1V	170.0	210.0	1.2	2.0

SDB1350 Type

Codes	Inductance L0 @0A (μ H)	Tolerance	Test Condition	DCR (m Ω)		Heat Rating Current	Saturation Current
				Typical	Max.	IDC (A)	I sat (A)
						Typical	Typical
R36	0.36	M	100KHz, 0.1V	0.77	1.1	41.0	75.0
R47	0.47	M	100KHz, 0.1V	1.10	1.3	38.0	65.0
R68	0.68	M	100KHz, 0.1V	1.50	1.7	34.0	54.0
1R0	1.0	M	100KHz, 0.1V	2.10	2.5	29.0	50.0
1R5	1.5	M	100KHz, 0.1V	3.40	4.1	23.0	48.0
1R8	1.8	M	100KHz, 0.1V	4.20	4.9	19.0	40.0
2R2	2.2	M	100KHz, 0.1V	4.60	5.5	20.0	32.0