

3. SDB Series (Shielded Type)

Applications

- Watches, Toys Camera, Electronic Thermometers.
- Portable communication equipment.
- DC/DC converters, etc.
- Power supply for VTRs.
- Other various electronic appliances.



Features

- Compact, low profile with low Rdc and large current.
- With magnetic shielded against radiation.
- Flat bottom surface allows reliable mounting onto the board.
- Available on tape and reel for auto surface mounting.

Inductance and Rated Current ranges

Part Series	Inductances range	Rated Current range
* SDB2512	0.24~10 μ H	4.100~1.000A (Irms) ; 6.800~1.300A (Isat)
* SDB2512S	0.24~33 μ H	4.100~0.470A (Irms) ; 5.500~0.450A (Isat)

(Dimension data (Refer to Fig. 1))

Part Series	Inductances range	Rated Current range
* SDB3010	1.0~47 μ H	1.525~0.270A (Irms) ; 1.700~0.240A (Isat)
* SDB3015	1.0~100 μ H	2.100~0.250A (Irms) ; 2.100~0.230A (Isat)

(Dimension data (Refer to Fig. 2))

Part Series	Inductances range	Rated Current range
* SDB4018R	0.82~220 μ H	4.000~0.280A (Irms) ; 4.200~0.300A (Isat)
* SDB4025R	1.00~220 μ H	3.000~0.200A (Irms) ; 3.000~0.200A (Isat)
* SDB5020R	1.00~33 μ H	3.600~0.900A (Irms) ; 4.000~0.800A (Isat)
* SDB5040R	1.50~47 μ H	3.600~0.900A (Irms) ; 6.000~1.100A (Isat)
* SDB6028R	0.90~100 μ H	4.600~0.660A (Irms) ; 6.700~0.650A (Isat)
* SDB6045R	1.00~220 μ H	6.500~0.500A (Irms) ; 9.400~0.600A (Isat)

(Dimension data (Refer to Fig. 3))

Part Series	Inductances range	Rated Current range
* SDB5D28	1.00~100 μ H	2.900~0.400A
* SDB1003	0.56~1000 μ H	6.200~0.230A
* SDB1004	0.56~1000 μ H	10.000~0.320A

(Dimension data (Refer to Fig. 4))

3. SDB Series (Shielded Type)

Characteristics

Operating temperature range:

-40 ~+125 : (including self-temperature rise)

SDB2512, SDB2512S, SDB3010, SDB3015,

-25 ~+120 : (including self generated heat)

SDB4018R, SDB4025R, SDB5020R

-40 ~+125 :

SDB5040R, SDB6028R, SDB6045R, SDB5D28, SDB1003, SDB1004

Rated DC current (I_{rms}): Base on the temperature rise T=40 Typ.

Rated DC current (I_{sat}): Base on the L/L_{0A} = 30% Typ. (SDB5D28, SDB1003, SDB1004 (Base on the L/L_{0A} = 35% Typ.))

Test equipment:

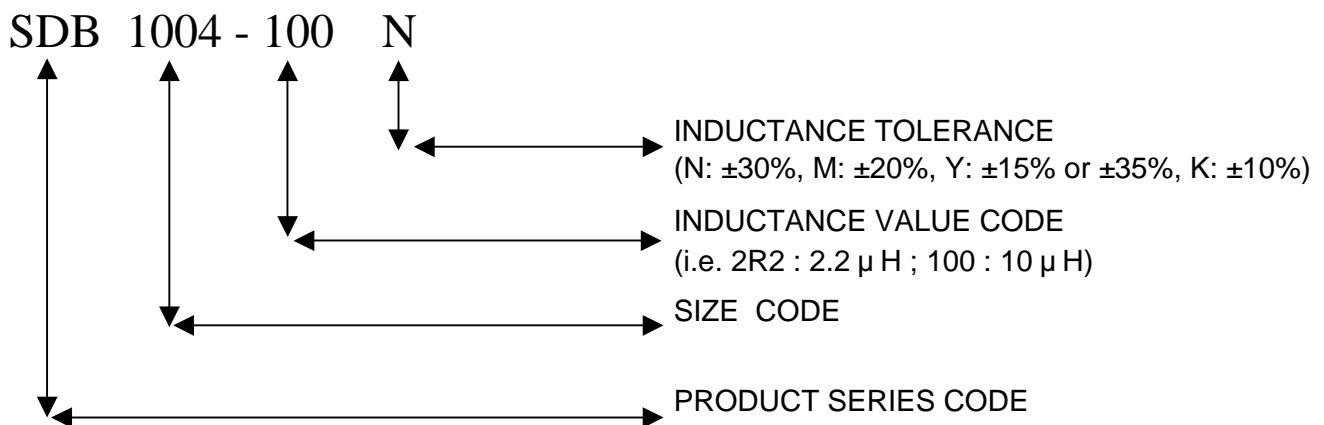
L/Q: HP4285A, HP4286A, HP4284A LCR meter, ZM2355 LCR Meter or equivalent.

DCR: Milli-ohm meter, CH16502, DU5011 milli ohm meter, HP4338B milli ohm meter, HIOKI 3540 or equivalent.

SRF: HP4291B, HP4287A or equivalent.

Electrical specification at 25 .

Part Numbering System



3. SDB Series (Shielded Type)

Dimensions (mm)

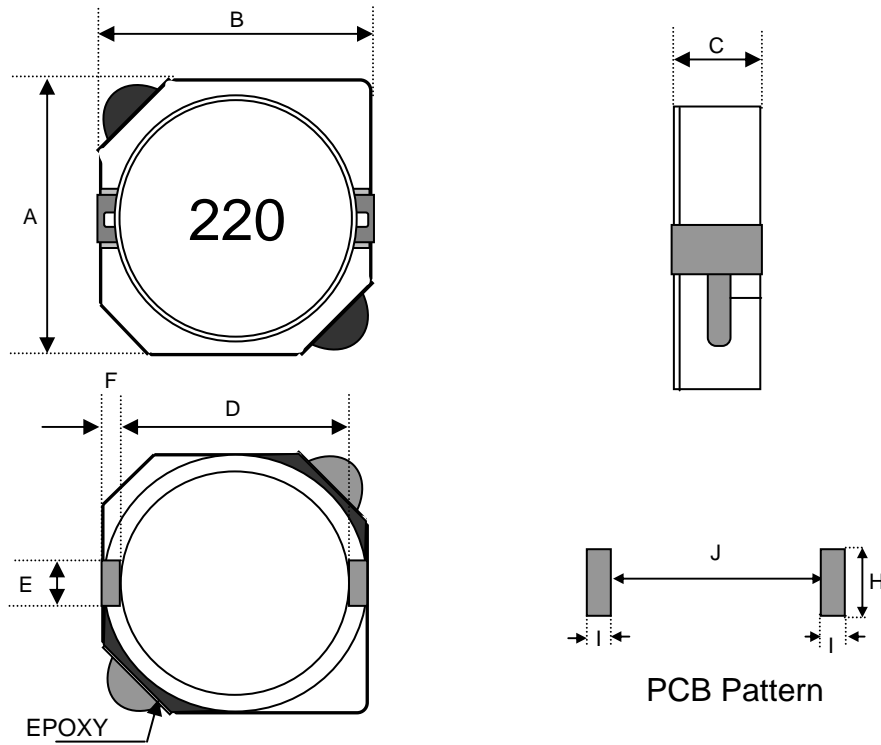


Fig. 4

Series	A (max)	B (max)	C (max)	D	E	F	H	I	J
SDB5D28	6.2	6.3	3.0	4.7	2.0	0.6	2.6	1.0	4.6
SDB1003	10.3	10.4	3.1	7.7	3.0	1.2	3.2	1.6	7.3
SDB1004	10.3	10.4	4.0	7.7	3.0	1.2	3.2	1.6	7.3

3. SDB Series (Shielded Type)

Electrical Characteristics

SDB 5D28 / 1003 / 1004 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance (mΩ) Max.			Rated DC Current (A) Max.		
			5D28	1003	1004	5D28	1003	1004
R56	0.56	N	-	20.0	8.0	-	6.20	10.00
1R0	1.0	N	15.0	20.0	8.0	2.90	6.20	10.00
1R2	1.2	N	-	20.0	8.0	-	6.20	10.00
1R3	1.3	N	-	20.0	8.0	-	6.20	10.00
1R5	1.5	N	16.0	20.0	8.0	2.80	6.20	10.00
1R8	1.8	N	-	23.0	10.0	-	5.60	9.50
2R2	2.2	N	17.0	23.0	11.0	2.70	5.60	8.00
2R5	2.5	N	17.6	23.0	12.0	2.60	5.60	7.50
2R7	2.7	N	-	23.0	12.0	-	5.60	7.50
3R3	3.3	N	20.3	29.0	13.0	2.30	5.00	6.50
3R8	3.8	N	-	29.0	17.0	-	5.00	6.00
4R0	4.0	N	27.0	33.0	-	2.10	4.80	-
4R7	4.7	N	29.0	35.0	21.0	2.00	4.83	5.70
5R0	5.0	N	31.1	35.0	22.0	1.85	4.83	5.60
5R2	5.2	N	-	43.0	22.0	-	4.83	5.50
5R6	5.6	M,N	-	-	25.0	-	-	5.20
6R0	6.0	M,N	41.9	-	-	1.70	-	-
6R8	6.8	M,N	-	-	26.0	-	-	4.90
7R0	7.0	M,N	-	-	27.0	-	-	4.80
8R0	8.0	M,N	49.9	-	-	1.50	-	-
8R2	8.2	M,N	-	50.0	33.0	-	3.54	4.60
100	10	M,N	54.0	58.0	35.0	1.30	2.70	4.40
120	12	M,N	71.6	72.0	46.0	1.20	2.25	3.92
150	15	M,N	82.4	86.0	50.0	1.10	2.22	3.60
180	18	M,N	101.5	116.0	70.0	1.05	1.90	3.00
220	22	M,N	119.0	145.0	73.0	0.95	1.78	2.90
270	27	M,N	146.0	176.0	83.0	0.85	1.63	2.80
330	33	M,N	182.5	213.0	93.0	0.76	1.46	2.30
390	39	M,N	209.5	270.0	120.0	0.68	1.32	2.20
470	47	M,N	229.5	299.0	128.0	0.60	1.18	2.10
560	56	M,N	305.0	335.0	171.0	0.55	1.10	1.80
680	68	M,N	351.0	451.0	213.0	0.48	1.04	1.50
820	82	M,N	418.5	513.0	250.0	0.45	0.94	1.40
101	100	M,N	520.0	700.0	304.0	0.40	0.84	1.35
121	120	M,N	-	765.0	400.0	-	0.76	1.20
151	150	M,N	-	876.0	506.0	-	0.70	1.15
181	180	M,N	-	1000.0	631.0	-	0.60	1.03
221	220	M,N	-	1050.0	756.0	-	0.58	0.92
271	270	M,N	-	1500.0	853.0	-	0.56	0.84
331	330	M,N	-	1800.0	1090.0	-	0.52	0.70
391	390	M,N	-	2000.0	1450.0	-	0.50	0.62
471	470	M,N	-	2170.0	1520.0	-	0.48	0.54
561	560	M,N	-	2750.0	2500.0	-	0.35	0.50
681	680	M,N	-	3200.0	2800.0	-	0.29	0.45
821	820	M,N	-	3800.0	3000.0	-	0.28	0.40
102	1000	M,N	-	5000.0	3250.0	-	0.23	0.32

Notes:

1. Test Frequency : 100 KHz, 0.1V
2. Test equipment :
L/Q : HP4284A LCR meter
DCR: Milli-ohm meter.
3. Rated DC current: The current when the inductance decreases to 65% of its initial value or the actual current when the temperature of coil increases to T=40 .
4. Operating temperature range : -40 ~+125