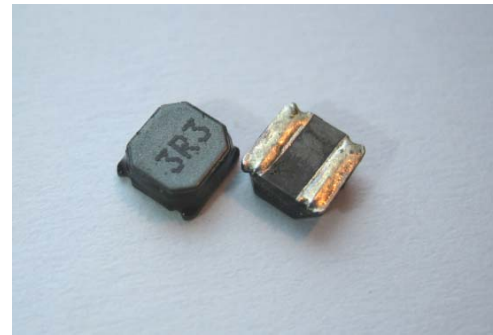


3. SDB Series (Shielded Type)

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:

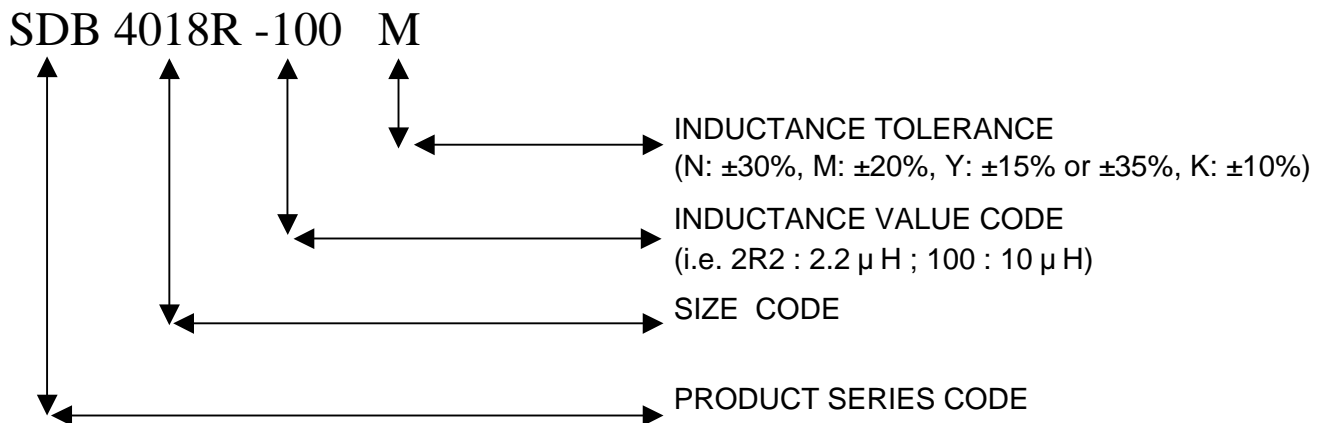
L/Q: HP4285A, HP4286A, HP4284A LCR meter, ZM2355 LCR Meter or equivalent.

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 .

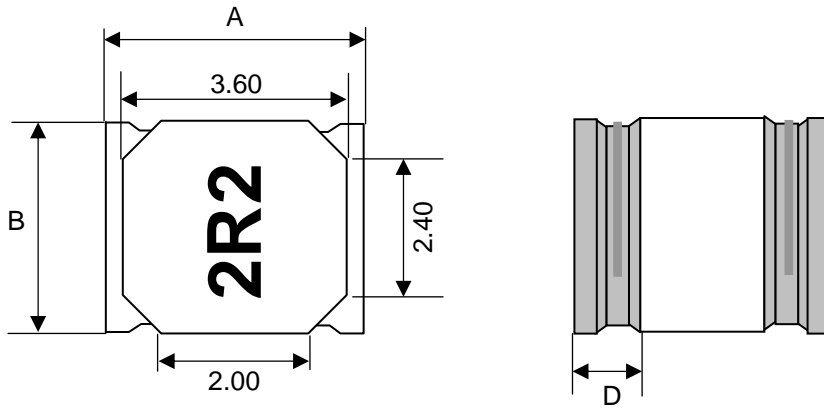
Part Numbering System



3. SDB Series (Shielded Type)

Dimensions (mm)

SDB4018R



- A : 4.00 ± 0.20 mm
- B : 4.00 ± 0.20 mm
- C : 1.88 mm Max. (R82~2R7)
: 1.80 mm Max. (3R3~221)
- D : 1.30 mm typ.

Fig. 3a

3. SDB Series (Shielded Type)

Electrical Characteristics

SDB 4018R TYPE

| Part No. | Inductance (μH) | Test Freq. | DC Resistance (m Ω) | Rated DC current (A) | |
|---------------|-----------------|------------|---------------------|----------------------|-------|
| | | | | I sat | I rms |
| SDB4018R-R82N | 0.82 ± 30% | 100KHz, 1V | 16 ± 30% | 4.20 | 4.00 |
| SDB4018R-1R0N | 1.0 ± 30% | 100KHz, 1V | 19 ± 30% | 4.70 | 3.70 |
| SDB4018R-1R2N | 1.2 ± 30% | 100KHz, 1V | 21 ± 30% | 4.00 | 3.50 |
| SDB4018R-1R5N | 1.5 ± 30% | 100KHz, 1V | 27 ± 30% | 3.50 | 3.10 |
| SDB4018R-2R2M | 2.2 ± 20% | 100KHz, 1V | 37 ± 20% | 3.00 | 2.90 |
| SDB4018R-2R7M | 2.7 ± 20% | 100KHz, 1V | 43 ± 20% | 2.40 | 2.30 |
| SDB4018R-3R3M | 3.3 ± 20% | 100KHz, 1V | 55 ± 20% | 2.30 | 2.20 |
| SDB4018R-4R7M | 4.7 ± 20% | 100KHz, 1V | 70 ± 20% | 2.00 | 1.90 |
| SDB4018R-6R8M | 6.8 ± 20% | 100KHz, 1V | 98 ± 20% | 1.60 | 1.50 |
| SDB4018R-100M | 10.0 ± 20% | 100KHz, 1V | 150 ± 20% | 1.40 | 1.30 |
| SDB4018R-150M | 15.0 ± 20% | 100KHz, 1V | 220 ± 20% | 1.10 | 1.00 |
| SDB4018R-220M | 22.0 ± 20% | 100KHz, 1V | 290 ± 20% | 0.95 | 0.90 |
| SDB4018R-330M | 33.0 ± 20% | 100KHz, 1V | 460 ± 20% | 0.75 | 0.70 |
| SDB4018R-470M | 47.0 ± 20% | 100KHz, 1V | 650 ± 20% | 0.62 | 0.60 |
| SDB4018R-680M | 68.0 ± 20% | 100KHz, 1V | 940 ± 20% | 0.50 | 0.50 |
| SDB4018R-101M | 100.0 ± 20% | 100KHz, 1V | 1330 ± 20% | 0.45 | 0.42 |
| SDB4018R-151M | 150.0 ± 20% | 100KHz, 1V | 2000 ± 20% | 0.35 | 0.32 |
| SDB4018R-221M | 220.0 ± 20% | 100KHz, 1V | 2960 ± 20% | 0.30 | 0.28 |

1. Test Equipment :

L: HP-4285A Precision LCR Meter @100kHz, 1V

DCR: DU-5011 milli ohm meter (or equivalent)

2a). Isat: Based on inductance change (ΔL/Lo : -30%)

2b). Irms: Based on temperature rise (ΔT : 40 Typ.)

3. Operating temperature range : -25 ~+120 (Including self generated heat)