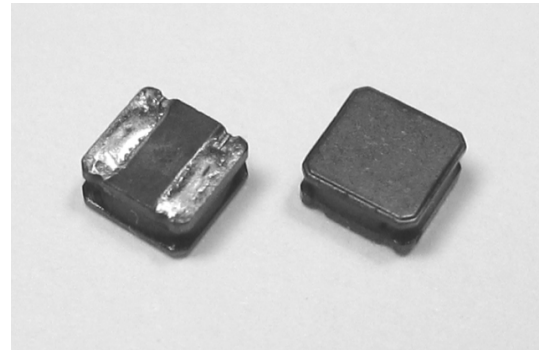


## 3. SDB Series (Shielded Type)

### 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 $\mu$ H	4.100~1.000A (Irms) ; 6.800~1.300A (Isat)
* SDB2512S	0.24~33 $\mu$ 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 $\mu$ H	1.525~0.270A (Irms) ; 1.700~0.240A (Isat)
* SDB3015	1.0~100 $\mu$ 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 $\mu$ H	4.000~0.280A (Irms) ; 4.200~0.300A (Isat)
* SDB4025R	1.00~220 $\mu$ H	3.000~0.200A (Irms) ; 3.000~0.200A (Isat)
* SDB5020R	1.00~33 $\mu$ H	3.600~0.900A (Irms) ; 4.000~0.800A (Isat)
* SDB5040R	1.50~47 $\mu$ H	3.600~0.900A (Irms) ; 6.000~1.100A (Isat)
* SDB6028R	0.90~100 $\mu$ H	4.600~0.660A (Irms) ; 6.700~0.650A (Isat)
* SDB6045R	1.00~220 $\mu$ 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 $\mu$ H	2.900~0.400A
* SDB1003	0.56~1000 $\mu$ H	6.200~0.230A
* SDB1004	0.56~1000 $\mu$ 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<sub>rms</sub>): Base on the temperature rise T=40 Typ.

Rated DC current (I<sub>sat</sub>): Base on the L/L<sub>0A</sub> = 30% Typ. (SDB5D28, SDB1003, SDB1004 (Base on the L/L<sub>0A</sub> = 35% Typ.))

Test equipment:

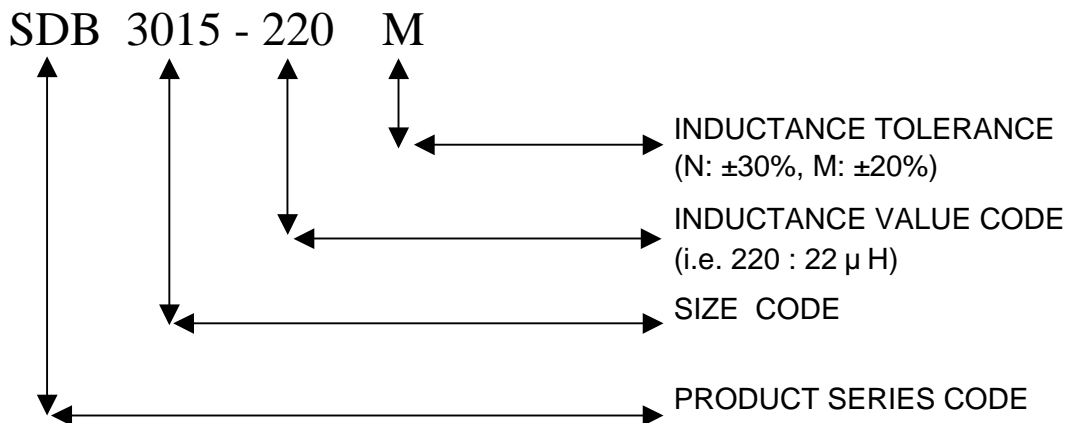
L/Q: HP4285A, HP4286A, HP4284A LCR meter, ZM2355 LCR Meter or equivalent.

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)**

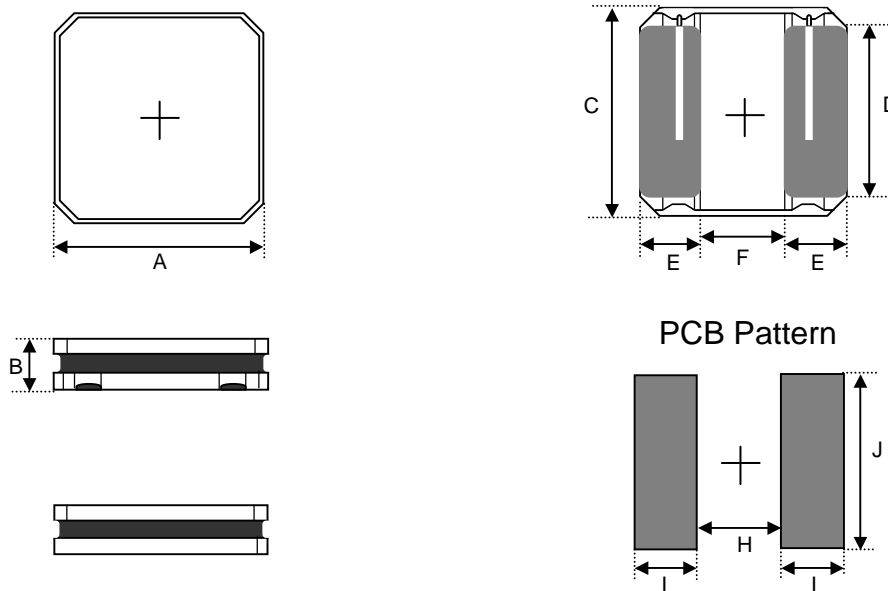


Fig. 2

Series	A	B (max.)	C	D (max.)	E	F	H	I	J
SDB3010	3.00±0.10	1.00	3.00±0.10	2.90	0.90±0.20	1.20±0.20	1.20	1.00	2.80
SDB3015	3.00±0.10	1.50	3.00±0.10	2.90	0.90±0.20	1.20±0.20	1.20	1.00	2.80

**Construction & Material:**

1. Core: Ferrite core
2. Wire: H Class Enameled copper wire
3. Terminal: Ni / Cu / Ag alloy with Sn
4. Coating: Magnetic epoxy resin

## 3. SDB Series (Shielded Type)

### Electrical Characteristics

#### SDB 3010 / 3015 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance ( )				SRF (MHz)		I <sub>rms</sub> (A)				I <sub>sat</sub> (A)			
			3010		3015		Min.		3010		3015		3010		3015	
			Typ.	Max.	Typ.	Max.	3010	3015	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
1R0	1.0	M	0.065	0.078	0.040	0.048	180	145	1.700	1.525	2.350	2.100	1.950	1.700	2.350	2.100
1R5	1.5	M	0.080	0.096	0.055	0.066	140	130	1.650	1.470	2.100	1.900	1.600	1.400	2.000	1.800
2R2	2.2	M	0.095	0.114	0.060	0.072	100	90	1.450	1.270	1.800	1.600	1.450	1.250	1.650	1.480
3R3	3.3	M	0.160	0.192	0.093	0.112	80	75	1.300	1.130	1.600	1.450	1.050	0.900	1.400	1.210
4R7	4.7	M	0.190	0.228	0.113	0.136	60	65	1.100	0.925	1.400	1.250	0.950	0.850	1.200	1.080
5R6	5.6	M	0.285	0.342	-	-	55	-	0.950	0.820	-	-	0.820	0.720	-	-
6R8	6.8	M	0.300	0.360	0.176	0.211	50	50	0.850	0.710	1.100	0.900	0.760	0.660	1.050	0.900
100	10	M	0.450	0.540	0.234	0.276	45	45	0.720	0.630	1.000	0.870	0.610	0.530	0.880	0.750
150	15	M	0.740	0.888	0.352	0.422	35	33	0.560	0.475	0.800	0.650	0.480	0.420	0.680	0.580
220	22	M	0.980	1.176	0.510	0.622	25	28	0.500	0.430	0.600	0.550	0.420	0.360	0.580	0.470
330	33	M	1.550	1.860	0.799	0.959	24	22	0.415	0.345	0.500	0.450	0.340	0.280	0.460	0.390
470	47	M	2.000	2.400	1.172	1.406	19	18	0.320	0.270	0.400	0.400	0.270	0.240	0.380	0.320
101	100	M	-	-	2.433	2.920	-	11	-	-	0.290	0.250	-	-	0.270	0.230

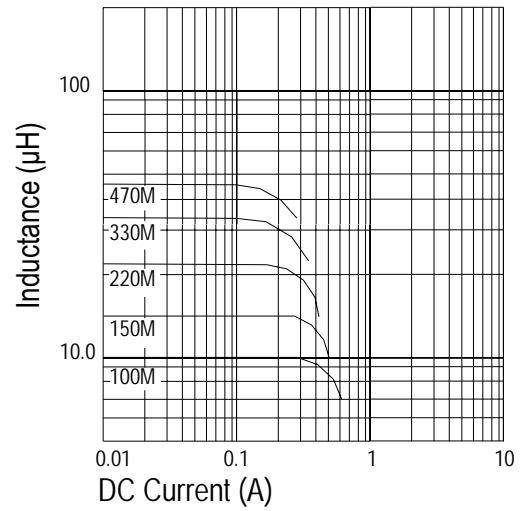
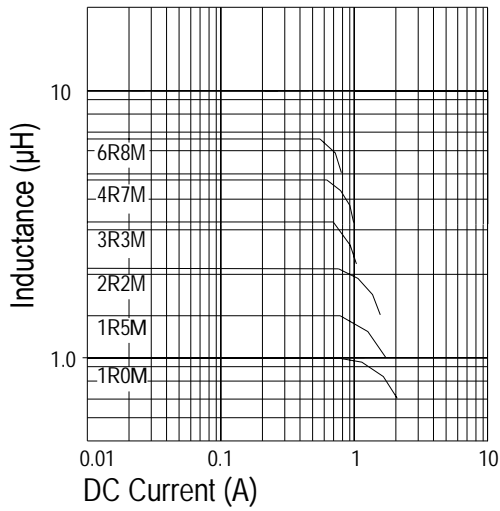
#### Notes:

1. Test Frequency : 1MHz / 0.1V
2. Test equipment :  
L/Q : HP-4286A  
SRF : HP-4291B, HP4287A  
DC Resistance : HP-4286A, CH16502
- 3a). I<sub>rms</sub>: base on temp. rise 40 Typ.
- 3b). I<sub>sat</sub>: base on L/LOA = 30% Typ.
4. Operating temperature range : -40 ~+125 (Including self-temperature rise)

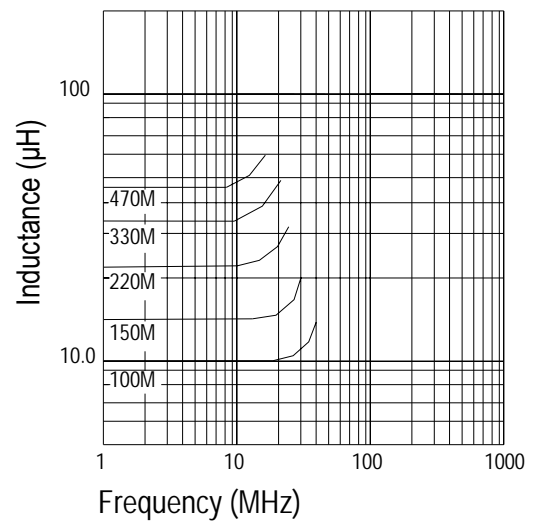
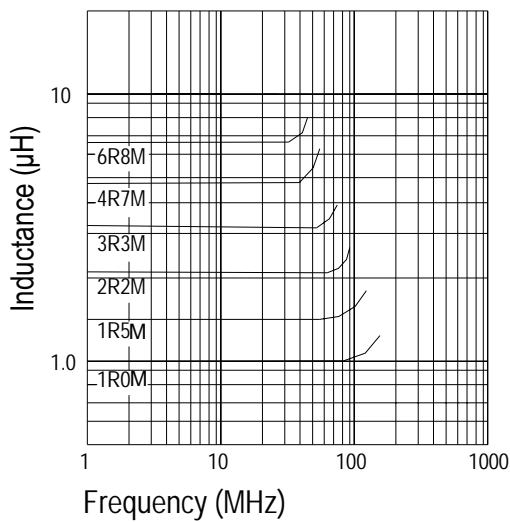
3. SDB Series (Shielded Type)

Rating Curves (SDB3010)

L vs Current



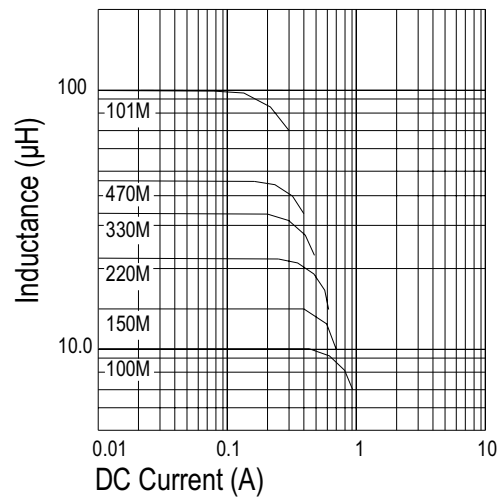
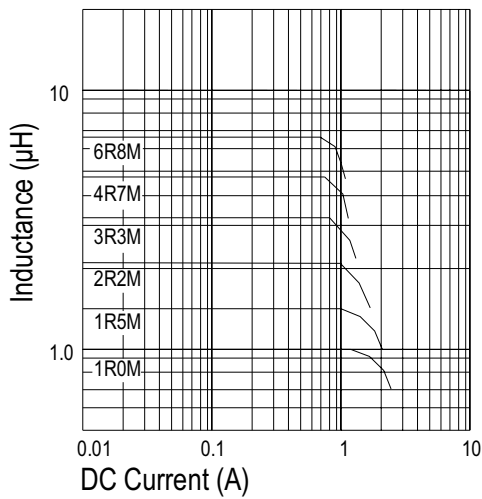
L vs Frequency



3. SDB Series (Shielded Type)

Rating Curves (SDB3015)

L vs Current



L vs Frequency

