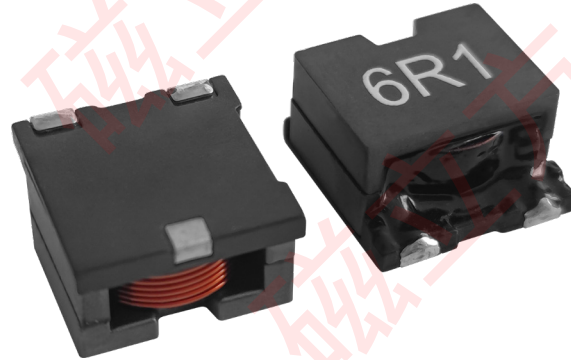


SB SERIES

Product description:

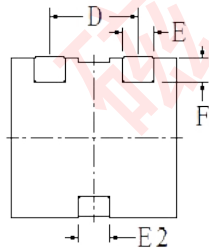
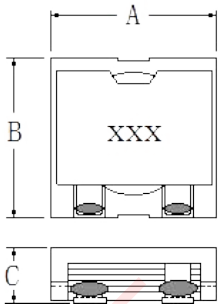
- High current, low loss of iron powder core.
- Low profile for machine placement.
- Minimize electromagnetic interference.
- Suppress common mode noise.
- Prevent EMI effect via precise impedance.
- Custom design available.



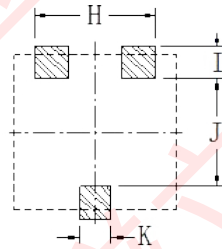
Explanation of part numbers:



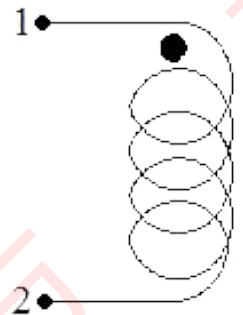
Boundary dimension:



Recommended Land Pattern:



Schematic:



(unit: mm)

Series Name	A	B	C	D	E	E2	F	H	I	J	K
SB0450M	10.4Max	10.6Max	5.5Max	5.5±0.5	2.5Ref	1.5Ref	2.0Ref	8.2Ref	2.5Ref	5.8Ref	2.4Ref
SB0555M	13.1Max	13.5Max	5.8Max	7.0±0.5	2.5Ref	2.5Ref	2.0Ref	9.8Ref	2.5Ref	8.0Ref	3.0Ref
SB0590M	13.1Max	13.5Max	9.0Max	7.0±0.5	2.5Ref	2.5Ref	2.0Ref	9.8Ref	2.5Ref	8.0Ref	3.0Ref
SB5680M	14.9Max	15.4Max	8.2Max	9.0±0.5	2.8Ref	2.5Ref	1.8Ref	13.0Ref	2.7Ref	10.0Ref	3.5Ref
SB5612M	14.9Max	15.4Max	12.2Max	9.0±0.5	2.8Ref	2.5Ref	1.8Ref	13.0Ref	2.7Ref	10.0Ref	3.5Ref
SB6510M	17.3Max	18.8Max		10.9±0.5	2.6±0.3	3.0±0.3	3.0±0.5	15.0Ref	4.5Ref	10.9Ref	4.3Ref
SB7510M	19.9Max	18.5Max		13.1±0.5	2.5±0.3	3.0±0.3	3.0±0.5	17.0Ref	4.5Ref	10.7Ref	4.3Ref

Electrical characteristics:

Test condition: at 25°C 100KHz/0.1V

PART No.	L(0A)($\mu\text{H}\pm 20\%$)	I _{rms} (A)Type.	I _{sat} (A)Type.	DCR(m Ω)Type.	DCR(m Ω)Max.
SB0450M-R80M	0.8	16.3	25.6	4.3	5
SB0450M-1R0M	1	16.3	17.5	4.3	5
SB0450M-1R3M	1.3	16.3	17.2	4.3	5
SB0450M-1R5M	1.5	16.3	14.5	4.3	5
SB0450M-2R2M	2.2	16.3	10	4.3	5
SB0450M-1R2M	1.2	15	21.3	5.9	7
SB0450M-1R8M	1.8	15	14.3	5.9	7
SB0450M-3R2M	3.2	15	8.5	5.9	7
SB0450M-2R5M	2.5	12	12.1	6.4	8.5
SB0450M-4R3M	4.3	12	7	6.4	8.5
SB0450M-2R0M	2	11.5	16.2	8.3	10
SB0450M-4R0M	4	11.5	8.8	8.3	10
SB0450M-5R7M	5.7	11.5	6	8.3	10
SB0555M-R33M	0.33	18	43	0.8	1
SB0555M-R65M	0.65	16	28	2.1	2.5
SB0555M-1R0M	1	13	33.5	2.7	3
SB0555M-1R8M	1.8	13	20	2.7	3
SB0555M-2R7M	2.7	13	14	2.7	3
SB0555M-3R3M	3.3	9.4	14	5.9	6.5
SB0555M-4R0M	4	9.4	13	5.9	6.5
SB0555M-4R7M	4.7	9.4	12	5.9	6.5
SB0555M-6R0M	6	9.4	9.5	5.9	6.5
SB0555M-8R0M	8	7.6	9	9.5	11
SB0555M-100M	10	7.2	7.5	9.5	11
SB0590M-100M	10	9.2	13.16	13.7	15
SB0590M-150M	15	9.2	8.6	13.7	15
SB0590M-220M	22	7.7	7.36	21	23.1
SB0590M-330M	33	7.7	4.76	21	23.1
SB0590M-470M	47	7.7	3.2	21	23.1
SB05680M-R40N	0.4 \pm 30%	23	66	1	1.2
SB05680M-R90M	0.9	21.5	45	1.2	1.5
SB05680M-1R5M	1.5	20	34	1.7	2
SB05680M-2R4M	2.4	17.5	28	2.7	3.2
SB05680M-3R4M	3.4	16	23	4.1	5
SB05680M-4R7M	4.7	12.5	19	5	6
SB05680M-6R1M	6.1	11	18.5	6.5	7.8
SB05680M-7R7M	7.7	10	15.5	8.2	9.9
SB05680M-9R5M	9.5	8.5	14	11.1	13.3
SB05680M-100M	10	10	11.5	8.2	9.9
SB05680M-120M	12	8.5	10	11.1	13.3
SB05680M-470M	47	2.5	3	22.3	27

Electrical characteristics:

Test condition: at 25 °C 100KHz/0.1V

PART No.	L(0A)(μ H \pm 20%)	I _{rms} (A)Type.	I _{sat} (A)Type.	DCR(m Ω)Type.	DCR(m Ω)Max.
SB05612M-4R7M	4.7	13	18.4	3.7	4.5
SB05612M-6R1M	6.1	12.5	16.4	4.5	5.4
SB05612M-7R7M	7.7	10.3	14.8	6.3	7.6
SB05612M-100M	10	9.6	13.1	7	8.4
SB05612M-120M	12	9	11.8	8.7	9.8
SB05612M-140M	14	8.3	10.9	9.4	11.3
SB05612M-220ML	22	8.3	6.4	9.4	11.3
SB05612M-150M	15	8	9.5	9.5	11.4
SB05612M-220M	22	7	8	11	13.2
SB05612M-330M	33	6	6.5	17	20.4
SB05612M-470M	47	3.5	5	25	30

Electrical characteristics:

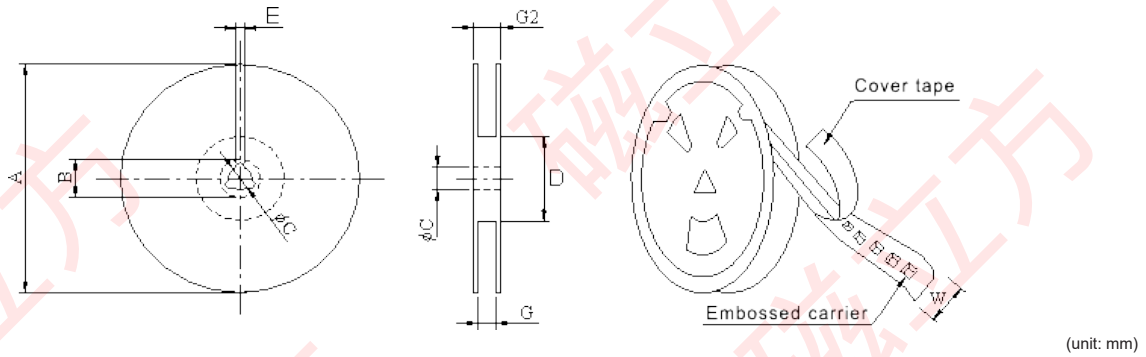
Test condition: at 25 °C 100KHz/0.1V

PART No.	C (mm) Height Max	L(0A)(μ H \pm 20%)	I _{rms} (A)Type.	I _{sat} (A)Type.	DCR(m Ω)Type.	DCR(m Ω)Max.
SB6580M-1R0M	8.0	1	36	34	1.05	1.15
SB6585M-1R5M	8.7	1.5	30	37	1.5	1.6
SB6595M-2R2M	9.6	2.2	26.8	34	1.95	2.1
SB6510M-3R3M	10.3	3.3	25	28	2.4	2.6
SB6510M-4R7M	10.3	4.7	25	18.6	2.4	2.6
SB6585M-6R8M	8.7	6.8	14.4	15.5	6.35	6.8
SB6585M-100M	8.7	10	13	12.2	7.35	7.9
SB6595M-150M	9.6	15	11.7	12.6	10.35	11.1
SB6510M-200M	10.3	20	10	11.3	12.35	13.25
SB6511M-300M	11.3	30	8.5	9.2	15.35	16.5
SB7580M-1R0M	8.0	1	36.3	46.6	0.95	1.09
SB7590M-1R5M	9.0	1.5	30.2	48.1	1.35	1.55
SB7595M-2R2M	9.6	2.2	27.2	43.6	1.8	2.07
SB7510M-3R3M	10.6	3.3	25.1	35.1	2.25	2.59
SB7510M-4R7M	10.6	4.7	25.1	25.5	2.25	2.59
SB7580M-6R8M	8.0	6.8	12.7	21.3	7.6	8.74
SB7580M-100M	8.0	10	11.7	15.8	8.8	10.12
SB7590M-150M	9.0	15	10.7	14.7	11	12.65
SB7595M-200M	9.6	20	9.5	13.5	13.5	15.53
SB7510M-300M	10.6	30	8.6	11.5	17	19.55

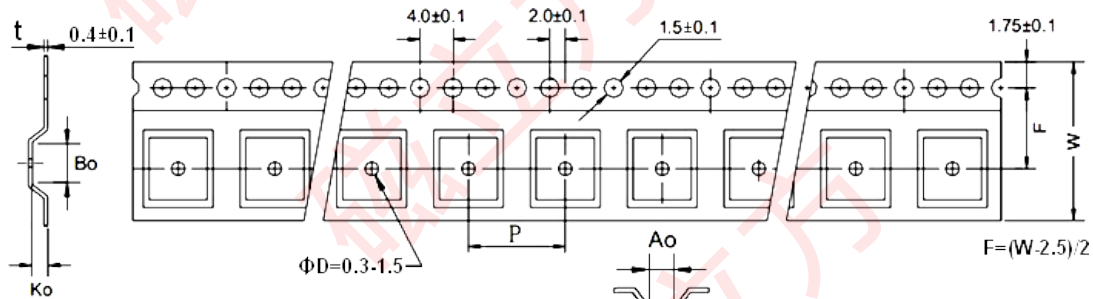
NOTE:

- All test data is referenced to 25 °C ambient.
- I_{rms}: DC current(A) that will cause an approximate Δ T of 40 °C .
- I_{sat}: DC current(A) that will cause L_o to drop approximate 30%.
- Operating temperature range is -25 °C to 125 °C .
- The part temperature(ambient and temp rise) should not exceed 125 °C under worse 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.

Packing Information:



Series	TYPE	A(Ref.)	B(Ref.)	C(Ref.)	D(Ref.)	E(Ref.)	G(Ref.)	G2(Ref.)
SB0450M	13**24mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	24.5±0.5	29±0.5
SB0555M	13**24mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	24.5±0.5	29±0.5
SB0590M	13**24mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	24.5±0.5	29±0.5
SB5680M	13**24mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	24.5±0.5	29±0.5
SB5612M	13**24mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	24.5±0.5	29±0.5
SB6510M	13**32mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	32.5	36.5
SB7510M	13**32.4mm	330±1	20±0.8	13±0.5	100±1	2.0±0.5	32.9	36.9



Series	QTY (Pcs/Reel)	Ao	Bo	Ko	W	P
SB0450M	700 Ref.	11.0	10.8	5.6	24	16
SB0555M	500 Ref.	13.8	13.5	5.8	24	20
SB0590M	300 Ref.	13.8	13.5	9.2	24	20
SB5680M	350 Ref.	15.4	15.6	8.2	24	20
SB5612M	250 Ref.	15.4	15.6	12.2	24	20
SB6580M	200 Ref.	19.0	17.5	10.5	32	28
SB6585M	200 Ref.	19.0	17.5	10.5	32	28
SB6595M	200 Ref.	19.0	17.5	10.5	32	28
SB6510M	200 Ref.	19.0	17.5	10.5	32	28
SB6511M	180 Ref.	19.0	17.5	11.5	32	28
SB7580M	200 Ref.	19.0	20.4	9.8	32	28
SB7590M	200 Ref.	19.0	20.4	9.8	32	28
SB7595M	200 Ref.	19.0	20.4	9.8	32	28
SB7510M	180 Ref.	19.0	20.4	10.8	32	28

Typical Pulling Force: 10~130grams

