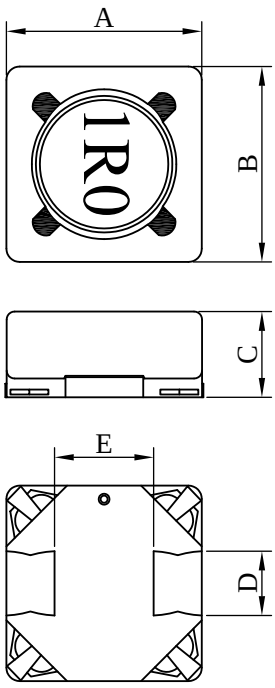
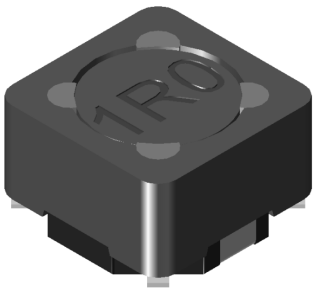
SPECIFICATION FOR APPROVAL

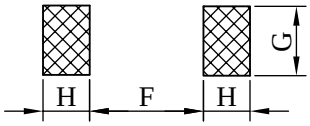
REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	BS0704□□□□F□-□□□		
		REV.	20170317-D	PAGE	1

Ⅰ．Configuration and dimensions：







（PCB Pattern）

Unit：m/m

A	B	C	D	E	F	G	H
7.30 ±0.2	7.30 ±0.2	4.50 ±0.2	2.00 typ.	4.60 typ.	4.80 ref.	2.40 ref.	1.50 ref.

Ⅱ．Description：

a．Ferrite drum core construction.

b．Magnetically shielded.

c．Enamelled copper wire：H class

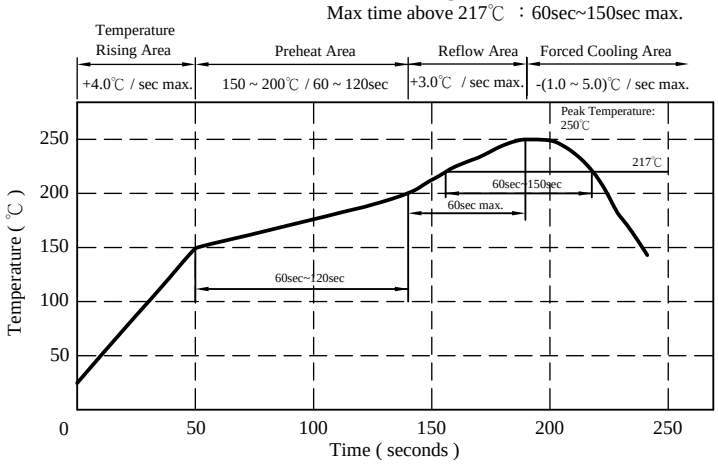
d．Product weight： 0.880g（ref.）

e．Moisture sensitivity Level 1

f．Products comply with RoHS' requirements

g．Halogen free available

Peak Temp：250℃ max.
Max. Peak Temp - 5℃：30sec max.
Max time above 217℃ ：60sec~150sec max.



Ⅲ．General specification：

a．Storage temp.：-40℃ ----+125℃

b．Operating temp.：-40℃----+125℃

(Temp. rise included.)

c．Ressistance to solder heat：250℃．10 secs.

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SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	BS0704□□□□F□-□□□		
		REV.	20170317-D	PAGE	2

Ⅳ．Electrical characteristics：

DWG No.	Inductance (uH)	Test Freq. (Hz) / 1V	RDC (Ω) max.	Irms (A)	Isat (A)
BS07041R0MF□-□□□	1.0±20%	1k	0.013	5.00	5.60
BS07042R2MF□-□□□	2.2±20%	1k	0.018	4.20	5.00
BS07043R3MF□-□□□	3.3±20%	1k	0.022	3.80	4.40
BS07044R7MF□-□□□	4.7±20%	1k	0.028	3.60	4.00
BS07045R6MF□-□□□	5.6±20%	1k	0.032	3.00	3.40
BS07046R8MF□-□□□	6.8±20%	1k	0.040	2.80	3.20
BS0704100MF□-□□□	10.0±20%	1k	0.052	2.10	2.50
BS0704120MF□-□□□	12.0±20%	1k	0.062	2.00	2.30
BS0704150MF□-□□□	15.0±20%	1k	0.075	1.90	2.10
BS0704180MF□-□□□	18.0±20%	1k	0.090	1.80	1.95
BS0704220MF□-□□□	22.0±20%	1k	0.096	1.65	1.75
BS0704270MF□-□□□	27.0±20%	1k	0.130	1.45	1.62
BS0704330MF□-□□□	33.0±20%	1k	0.150	1.35	1.45
BS0704390MF□-□□□	39.0±20%	1k	0.190	1.17	1.30
BS0704470MF□-□□□	47.0±20%	1k	0.210	1.05	1.20
BS0704560MF□-□□□	56.0±20%	1k	0.240	0.95	1.10
BS0704680MF□-□□□	68.0±20%	1k	0.300	0.86	0.96
BS0704820MF□-□□□	82.0±20%	1k	0.400	0.78	0.90
BS0704101MF□-□□□	100.0±20%	1k	0.450	0.70	0.78
BS0704121MF□-□□□	120.0±20%	1k	0.550	0.60	0.70
BS0704151MF□-□□□	150.0±20%	1k	0.760	0.48	0.58
BS0704181MF□-□□□	180.0±20%	1k	0.820	0.46	0.54
BS0704221MF□-□□□	220.0±20%	1k	0.950	0.42	0.50
BS0704271MF□-□□□	270.0±20%	1k	1.200	0.38	0.46
BS0704331MF□-□□□	330.0±20%	1k	1.500	0.34	0.40
BS0704391MF□-□□□	390.0±20%	1k	1.850	0.32	0.36
BS0704471MF□-□□□	470.0±20%	1k	2.200	0.29	0.34
BS0704561MF□-□□□	560.0±20%	1k	2.600	0.26	0.30
BS0704681MF□-□□□	680.0±20%	1k	2.800	0.24	0.28
BS0704821MF□-□□□	820.0±20%	1k	3.500	0.22	0.26
BS0704102MF□-□□□	1000.0±20%	1k	4.100	0.20	0.24

1). □：Packaging information：□ Code

2)."-□□□ "：Reference code

3). Electrical specifications at 25℃

4). L Test Freq.：1kHz / 1V

5). Irms base on Temp. rise 40℃ max.

6). Isat base on △L/L0A=25% max.

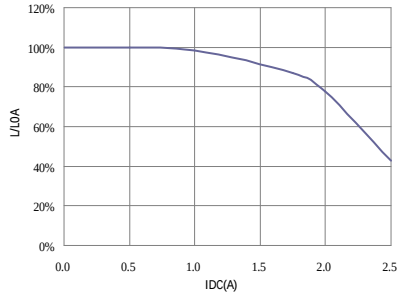
SPECIFICATION FOR APPROVAL

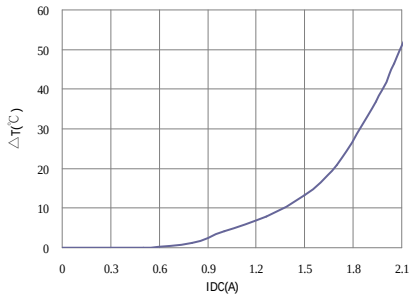
REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	BS0704□□□□F□-□□□		
		REV.	20170317-D	PAGE	3

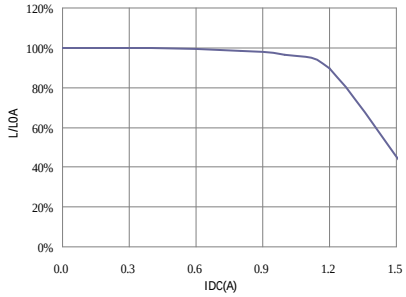
V . Curve：

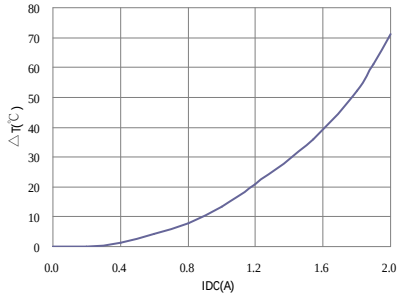
BS0704220MF□



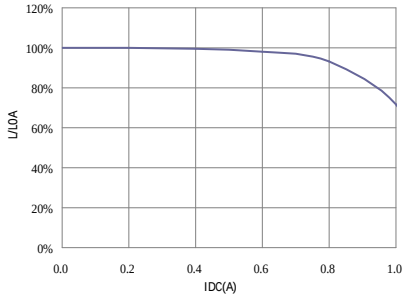


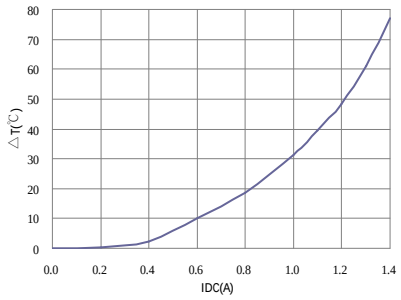
BS0704470MF□



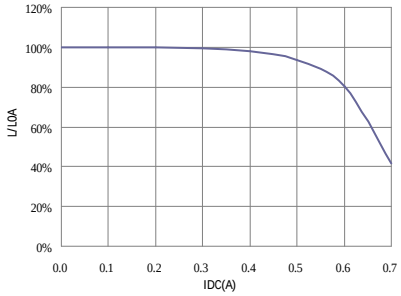


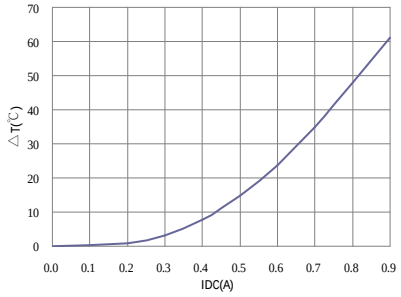
BS0704101MF□





BS0704221MF□





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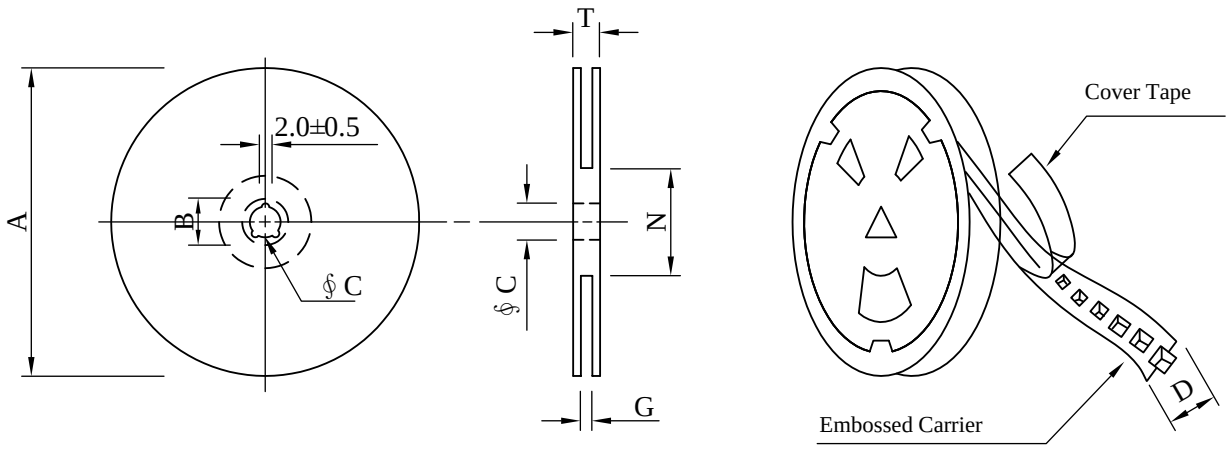
SPECIFICATION FOR APPROVAL

REF. :

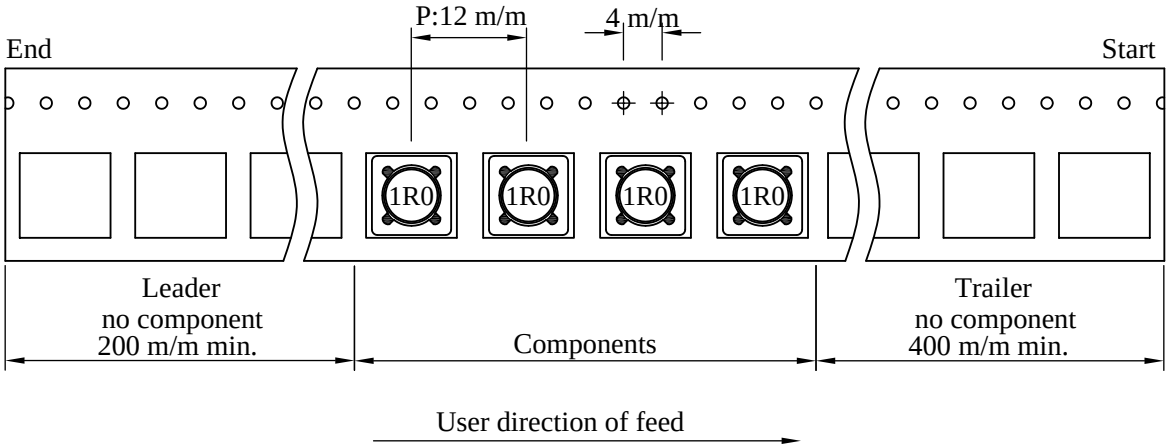
PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	BS0704□□□□F□-□□□		
		REV.	20170317-D	PAGE	4

Ⅵ．Packaging information：

(1) Configuration



※Carrier Tape Width : D



(2) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
13 - 16	330	21±0.8	13±0.5	16	18^{+0}	50^{-0}	22.4

(3) Q'TY & G.W. Per package

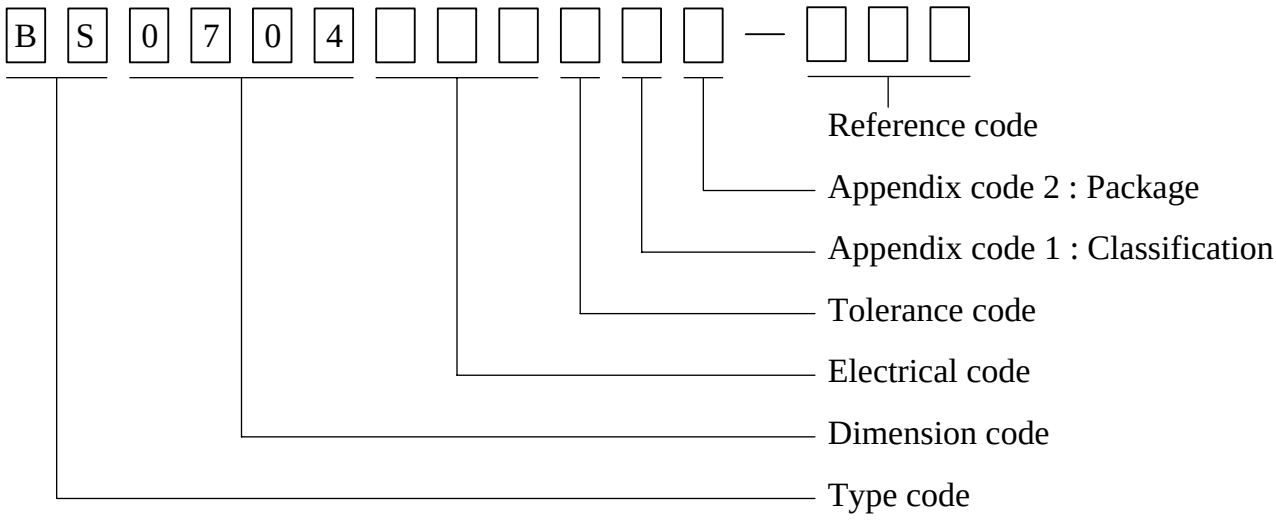
Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (g)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B	1,000	825	13 - 16	6,000	11.6	38 x 37 x 22

SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	BS0704□□□□F□-□□□		
		REV.	20170317-D	PAGE	5

Ⅶ．Drawing number expression：



Appendix code 1：Product Classification

Appendix code 2：Package Information

Code	Inner package	Cover tape	Carrier tape	Bag	Package Q'TY	Remark
B	T /R (Reel package)	UCT	Antistatic	Antistatic	1,000 pcs	

SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	BS0704□□□□F□-□□□		
		REV.	20170317-D	PAGE	6

Ⅷ．Reliability test：

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125±2℃ 2.Time:96±2 hours.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
2.Temperature Cycling	JESD22-A 104	1.Temperature: -40℃ ~ +125℃ 2.Number of cycle:100 cycles 3.Dwell time:30 minutes	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
3.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature：85±2 ℃ 2.Humidity: 85% RH. 3.Time:96±2 Hours	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
4.Operational Life	JESD22-A 108	1.Temperature: 125℃(Temp. rise included) 2.Time:96±2 hours. 3.Rated current	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
5.External Visual	JESD22-B 101 & MIL-STD-883 Method 2009	Inspect product constructions, marking and workmanship.	1.No pollution on the surface of products. 2.Clear marking. 3.No crack.
6.Physical Dimensions	JESD22-B 100	Verify physical dimensions to the applicable product detail specification.	Per product specification standard
7.Resistance to solvents	MIL-STD-202 Method 215	Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles.	1.No body change in apperarance. 2.No marking blurred. 3.Inductance shall not change more than ±20%.
8.Vibration Test	MIL-STD-202 Method 204	1.Frequency and Amplitued : 10-2000-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210 & J-STD020D.1	1.Highest temperature：250±5℃. 2.Time（temp.≧ 217℃）：60~150 Seconds. 3.IR reflow times：3 times.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
10.Saturation Current	JIS C 6436 & User SPEC.	1.Applied rated current for 5 seconds. 2.Saturation current	Inductance shall not drop more than 25% max.
11.Over load	JIS C 6436 & User SPEC.	1.Applied one and half rated current for a period of 5 minutes. 2.Rated current	No electrical or mechanical damage
12.Temperature Rise Current	JIS C 6436 & User SPEC.	1.Applied rated current for 10 minutes. 2.Temperature measure by digital surface thermometer. 3.Irms current	Surface temperature rise is less than 40℃ max.
13.Solderability Test	J-STD-002 & JESD22-B 102	1.Baking in pre-testing： 150±5℃ / 16Hours±30 min. 2.Peak temperature：240±5℃ 3.Time（temp.≧217℃）：60~150 seconds. 4.IR reflow times：1 time.	More than 95% soldering coverage min on terminations.
14.Electrical Characteriazation	MIL-STD-202 Method 304 & User SPEC.	1.Operating temperature：-40℃~125℃ 2.Room temperature：25℃.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
15.Drop	CNS-C6354 & GB/T 2423.8	1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m 2.Drop total time：6 times (Every side of sample drop 2 times)	1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage.
16.Terminal Strength Test	IEC 60068-2-21	1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60±1 seconds.	After test, inductors shall be no mechanical damage.

SPECIFICATION FOR APPROVAL

REF. :

Ⅸ．Change history：

DATE/REV.	DISCRIPTION	DRAWN	CHECKED	APPROVED
20100112-A	Modify the enamelled copper wire： from F class change to H class	Miz Hsieh	Nick Chen	Nick Chen
20130401-B	1. Modify the operature temperature： From -40℃~+105℃ change to -40℃~+125℃ (Temp. rise inculded) 2. Modify the specification form 3. Remove Dimensions E'			
20130827-C	Add the current curve			
20170317-D	1. Modify the Reliability test and the Package weight 2. Add Change history and Drawing number expression 3. Change the current curve format	Miz Hsieh	Nick Chen	Nick Chen