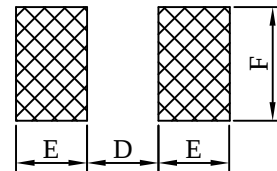
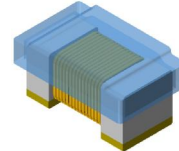
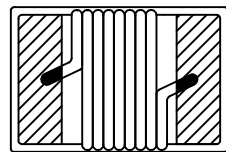
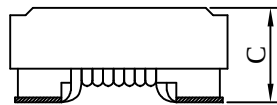
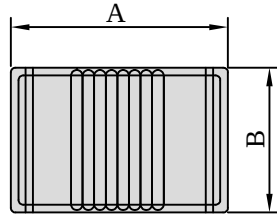


SPECIFICATION

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.		ESW0603□□□□L□-□□□		
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I . Configuration and dimensions :



(PCB Pattern)

Unit : mm

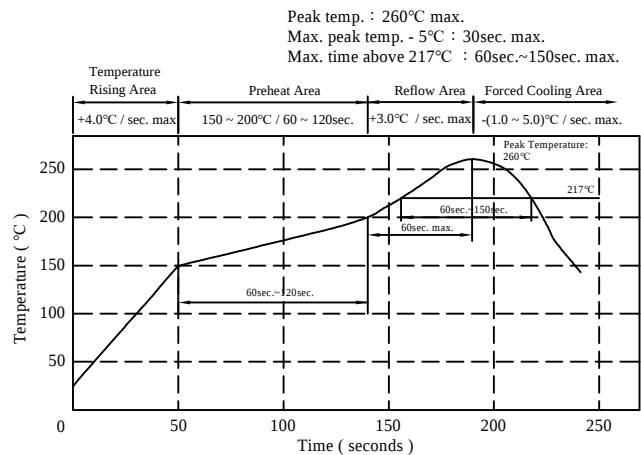
A	B	C	D	E	F
1.80 max.	1.12 max.	0.95 max.	0.64 typ.	0.64 typ.	1.02 typ.

II . Description :

- a . Body : Ceramic
- b . Enamelled copper wire : H class
- c . Product weight : 3 mg (ref.)
- d . Moisture sensitivity Level 1
- e . Products comply with RoHS' requirements
- f . Halogen free
- g . Recommended products should be used within 12 months from the date of delivery

III . General specification :

- a . Operating temp. : -40°C----+85°C
(Temp. rise included)
- b . Resistance to solder heat : 260°C.10 sec.



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SPECIFICATION

REF. :

PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.		ESW0603□□□□L□-□□□			
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IV . Electrical characteristics :

DWG No.	Inductance (nH)	Tolerance	Q min.	Test Freq. (Hz) L&Q	SRF (MHz) min.	RDC (Ω) max.	IDC (mA) max.
ESW06031N5□L□-□□□	1.5	S,K,M	24	250M	12500	0.030	700
ESW06031N6□L□-□□□	1.6	S,K,M	24	250M	12500	0.030	700
ESW06031N8□L□-□□□	1.8	S,K,M	16	250M	12500	0.045	700
ESW06032N0□L□-□□□	2.0	S,K,M	12	250M	12500	0.250	700
ESW06032N2□L□-□□□	2.2	S,J,K,M	12	100M	12500	0.250	700
ESW06032N7□L□-□□□	2.7	S,J,K,M	22	250M	5900	0.045	700
ESW06033N3□L□-□□□	3.3	S,J,K,M	22	250M	5900	0.045	700
ESW06033N6□L□-□□□	3.6	S,J,K,M	22	250M	5900	0.063	700
ESW06033N9□L□-□□□	3.9	S,J,K,M	22	250M	6900	0.080	700
ESW06034N3□L□-□□□	4.3	S,J,K,M	22	250M	5900	0.063	700
ESW06034N7□L□-□□□	4.7	S,J,K,M	20	250M	5800	0.116	700
ESW06035N1□L□-□□□	5.1	J,K,M	20	250M	5700	0.140	700
ESW06035N6□L□-□□□	5.6	J,K,M	26	250M	4760	0.075	700
ESW06036N2□L□-□□□	6.2	J,K,M	20	250M	5700	0.140	700
ESW06036N3□L□-□□□	6.3	J,K,M	20	250M	5700	0.140	700
ESW06036N8□L□-□□□	6.8	J,K,M	27	250M	5800	0.110	700
ESW06037N5□L□-□□□	7.5	J,K,M	28	250M	4800	0.106	700
ESW06038N0□L□-□□□	8.0	J,K,M	28	250M	4700	0.109	700
ESW06038N2□L□-□□□	8.2	J,K,M	30	250M	4200	0.115	700
ESW06038N7□L□-□□□	8.7	J,K,M	28	250M	4600	0.109	700
ESW06039N1□L□-□□□	9.1	J,K,M	28	250M	5400	0.125	700
ESW06039N5□L□-□□□	9.5	J,K,M	28	250M	5400	0.125	700
ESW060310N□L□-□□□	10.0	G,J,K,M	31	250M	4800	0.130	700
ESW060311N□L□-□□□	11.0	G,J,K,M	30	250M	4000	0.130	700
ESW060312N□L□-□□□	12.0	G,J,K,M	35	250M	4000	0.130	700
ESW060313N□L□-□□□	13.0	G,J,K,M	35	250M	4000	0.130	700
ESW060315N□L□-□□□	15.0	G,J,K,M	35	250M	4000	0.170	700
ESW060316N□L□-□□□	16.0	G,J,K,M	34	250M	3300	0.170	700
ESW060318N□L□-□□□	18.0	G,J,K,M	35	250M	3100	0.170	700
ESW060320N□L□-□□□	20.0	G,J,K,M	36	250M	3000	0.180	700
ESW060322N□L□-□□□	22.0	G,J,K,M	38	250M	3000	0.190	700
ESW060323N□L□-□□□	23.0	G,J,K,M	38	250M	3000	0.190	700
ESW060324N□L□-□□□	24.0	G,J,K,M	36	250M	2650	0.135	700
ESW060327N□L□-□□□	27.0	G,J,K,M	40	250M	2800	0.220	600
ESW060330N□L□-□□□	30.0	G,J,K,M	37	250M	2250	0.220	600
ESW060333N□L□-□□□	33.0	G,J,K,M	40	250M	2300	0.220	600
ESW060336N□L□-□□□	36.0	G,J,K,M	37	250M	2080	0.250	600
ESW060339N□L□-□□□	39.0	G,J,K,M	40	250M	2200	0.250	600
ESW060343N□L□-□□□	43.0	G,J,K,M	38	250M	2000	0.280	600

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SPECIFICATION

REF. :

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DWG No.	Inductance (nH)	Tolerance	Q min.	Test Freq. (Hz) L&Q	SRF (MHz) min.	RDC (Ω) max.	IDC (mA) max.
ESW060347N□L□-□□□	47.0	G,J,K,M	38	200M	2000	0.280	600
ESW060351N□L□-□□□	51.0	G,J,K,M	35	200M	1900	0.270	600
ESW060356N□L□-□□□	56.0	G,J,K,M	38	200M	1900	0.310	600
ESW060360N□L□-□□□	60.0	G,J,K,M	37	200M	1800	0.330	600
ESW060362N□L□-□□□	62.0	G,J,K,M	37	200M	1800	0.330	600
ESW060368N□L□-□□□	68.0	G,J,K,M	37	200M	1700	0.340	600
ESW060372N□L□-□□□	72.0	G,J,K,M	34	150M	1700	0.490	400
ESW060375N□L□-□□□	75.0	G,J,K,M	28	150M	1700	0.520	400
ESW060382N□L□-□□□	82.0	G,J,K,M	34	150M	1700	0.540	400
ESW060385N□L□-□□□	85.0	G,J,K,M	34	150M	1700	0.580	400
ESW060391N□L□-□□□	91.0	G,J,K,M	28	150M	1600	0.580	400
ESW0603R10□L□-□□□	100.0	G,J,K,M	34	150M	1400	0.580	400
ESW0603R11□L□-□□□	110.0	G,J,K,M	32	150M	1350	0.610	300
ESW0603R12□L□-□□□	120.0	G,J,K,M	32	150M	1300	0.650	300
ESW0603R13□L□-□□□	130.0	G,J,K,M	32	150M	1150	0.920	290
ESW0603R15□L□-□□□	150.0	G,J,K,M	28	150M	990	0.920	280
ESW0603R16□L□-□□□	160.0	G,J,K,M	28	150M	990	1.250	280
ESW0603R18□L□-□□□	180.0	G,J,K,M	25	100M	990	1.250	240
ESW0603R20□L□-□□□	200.0	G,J,K,M	25	100M	900	1.980	200
ESW0603R22□L□-□□□	220.0	G,J,K,M	25	100M	900	2.100	200
ESW0603R24□L□-□□□	240.0	G,J,K,M	25	100M	900	2.200	200
ESW0603R25□L□-□□□	250.0	G,J,K,M	25	100M	882	2.550	120
ESW0603R27□L□-□□□	270.0	G,J,K,M	26	100M	830	2.160	170
ESW0603R29□L□-□□□	290.0	G,J,K,M	25	100M	800	3.200	100
ESW0603R30□L□-□□□	300.0	G,J,K,M	25	100M	790	2.500	100
ESW0603R33□L□-□□□	330.0	G,J,K,M	25	100M	790	3.890	100
ESW0603R39□L□-□□□	390.0	G,J,K,M	25	100M	780	4.350	100
ESW0603R47□L□-□□□	470.0	G,J,K,M	25	100M	700	4.500	100
ESW0603R56□L□-□□□	560.0	G,J,K,M	23	100M	460	5.000	90

- 1). Electrical specifications at 25°C
- 2). IDC base on temp. rise 40°C max.
- 3). Tolerance : S(±0.3) 、 G(±2%) 、 J(±5%) 、 K(±10%) 、 M(±20%)

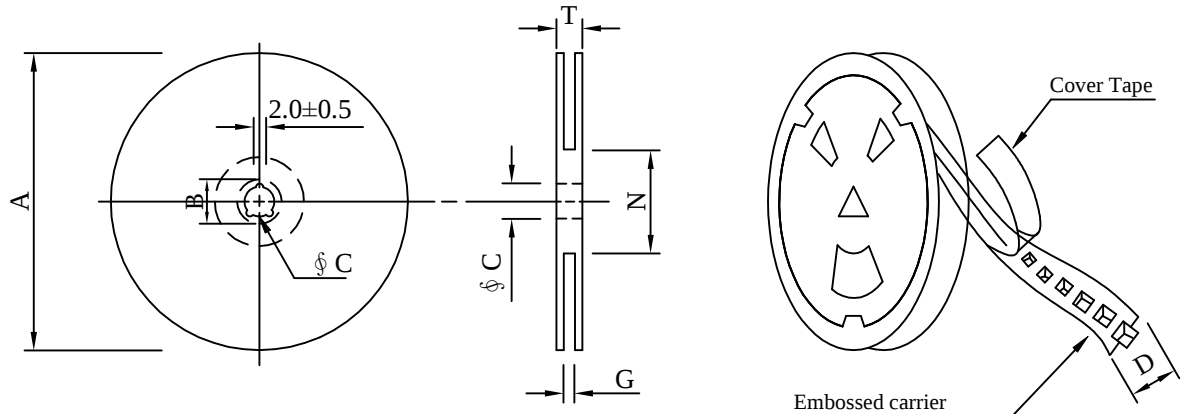
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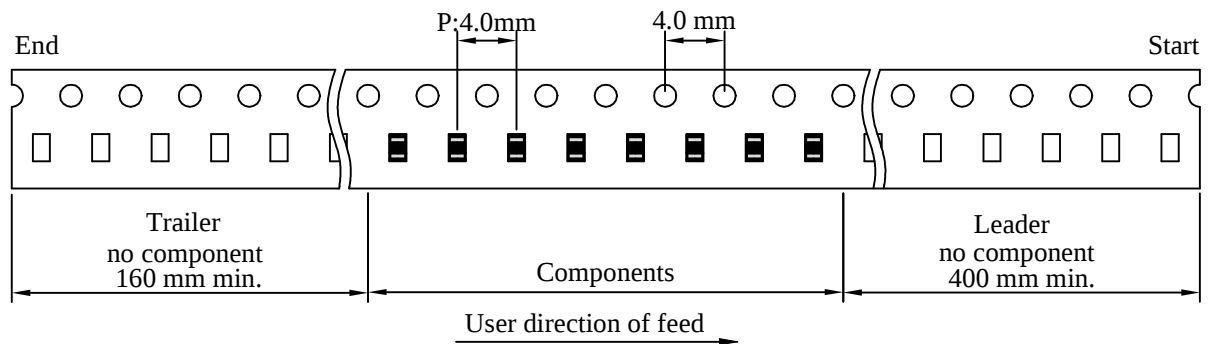
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V . Packaging information :

(1) Configuration



※Carrier tape width : D



(2) Dimensions

Unit:mm

Style	A	B	C	D	G	N	T
07 - 08	178	21	13	8	8.4	60	12.4

(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	4,000	100	07 - 08	200,000	6.50	42 x 41 x 24

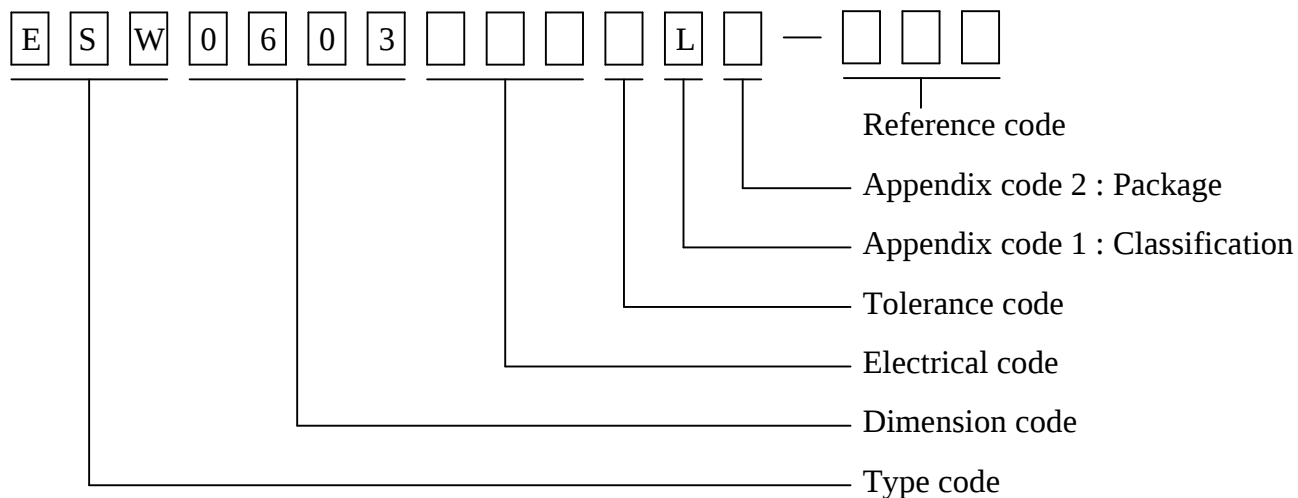
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REF. :

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VI . 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)	NA	NA	NA	4,000 pcs	

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PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.		ESW0603□□□□L□-□□□		
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VII . Reliability test :						
Item	Reference documents	Test Condition		Test Specification		
1.High Temperature Exposure	IES 68-2-2	1.Temperature:85±3℃ 2.Time:96 hours.		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
2.Low Temperature Exposure	IES 68-2-1	1.Temperature: -40±3℃ 2.Time:96 hours.		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
3.Temperature Cycling	IEC 68-2-14	1.Temperature: -40℃ ~ +85℃ 2.Number of cycle:100 cycle 3.Dwell time:30 minutes		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
4.Biased Humidity Test	IEC 68-2-3	1.Temperature : 60±3 ℃ 2.Humidity: 90%~95% RH. 3.Time:96 Hours		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
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.No crack.		
6.Physical Dimensions	JESD22-B 100	Verify physical dimensions to the applicable product detail specification.		Per product specification standard		
7.Vibration Test	IEC 68-2-6	1.Frequency :10-55-10 Hz 2.Amplitude : 1.5 mm 3.Direction : X , Y , Z 4.Duration : 2HRS/X,Y,Z		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
8.Resistance To Soldering Heat Test	IEC 68-2-20	1.Highest temperature : 260 ℃ 2.Time (temp.≥ 217℃) : 60~150 Second. 3.Reflow times : 2 times.		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
9.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		
10.Solderability Test	IEC 68-2-20	1.Baking in pre-testing : 150±5℃ / 16Hours±30 min. 2. Dip pads in flux then dip in solder pot at 245℃±5℃ for 3±0.5 seconds.		More than 95% soldering coverage min on terminations.		
11.Electrical Characteriazation	MIL-STD-202 Method 304 & User SPEC.	1.Operating temperature : -40℃~85℃ 2.Room temperature : 25℃.		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
12.Drop	IEC 68-2-32	1.Products shall be mounted on SPEC. PCB and dropped down from a height of 100 cm 2.Drop total time : 6 time (Every side of sample drop 2 time)		1.No mechanical or electrical damage. 2.ΔL/L≤10% ΔQ/Q≤10%		
13.Board Flex	IEC 68-2-21	1.Amount of deflection : 2 mm 2.Direction for test : Bottom of PCB 3.Holding time : 60 sec.		After test, inductors shall be no mechanical damage.		
14.Terminal Strength Test	IEC 68-2-21	1.Apply push force to samples mounted on PCB. 2.Force of 1.3kg for 30±1 seconds.		After test, inductors shall be no mechanical damage.		

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PROD. NAME	Wound Chip Inductor	ABC'S DWG NO.		ESW0603□□□□L□-□□□	
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VIII . Safety notes :

1. The risks of using the product are highly relevant to the field of application and need to be evaluated by both user and manufacturer. If the product is used for a purpose that directly affects personal safety or will cause significant impact or loss to the society , please be sure to contact us first for confirmation.
產品使用的風險與應用領域有高度相關，若您應用於直接影響人身安全系統或對社會會造成重大影響與損失之相關用途，請務必優先與我們聯繫確認。
2. The storage period is less than 12 months. Ensure to follow the storage conditions (Temperature: 5 to 30°C, Humidity: 10 to 60% RH or less). If the storage time is exceeded the limit, the electrodes might be deteriorate of terminal soldering.
儲存期不超過12個月，務必遵守儲存條件（溫度：5至30°C，濕度：10至60%RH以下）。如果超過了儲存時間，端子電極可能會氧化而影響焊接。
3. Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
不要在有氣體腐蝕等條件的地方使用或存放（鹽，酸，鹼等）。
4. Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
安裝時的焊接條件應在規格範圍內。如果超過要求，可能會發生短路，性能下降或壽命縮短。
5. When using, it should try to avoid excessive mechanical impact on the product, such as collision / drop ... and other reasons.
使用時，應盡量避免產品受到過度機械衝擊，如碰撞/掉落...等原因。
6. When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
將已安裝新片的電路板組裝到裝置時，請注意應盡量避免電路板受到組裝變形...等，導致產品受到應力。
7. Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
產品會因通電而自我發熱(溫度上升)，因此在熱影響設計方面，需保留適當公差。
8. Do not expose the products to magnets or magnetic fields.
請勿將產品暴露於磁鐵或是磁場中。
9. If you would like to use this products to performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property, or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.
如果您希望將此產品用於性能和/或質量要求更嚴格的安全性或可靠性，或其失敗、故障或麻煩可能對社會、個人或財產造成嚴重損害，或者您有特殊情況要求超出目錄中規定的範圍或條件，請與我們聯繫。