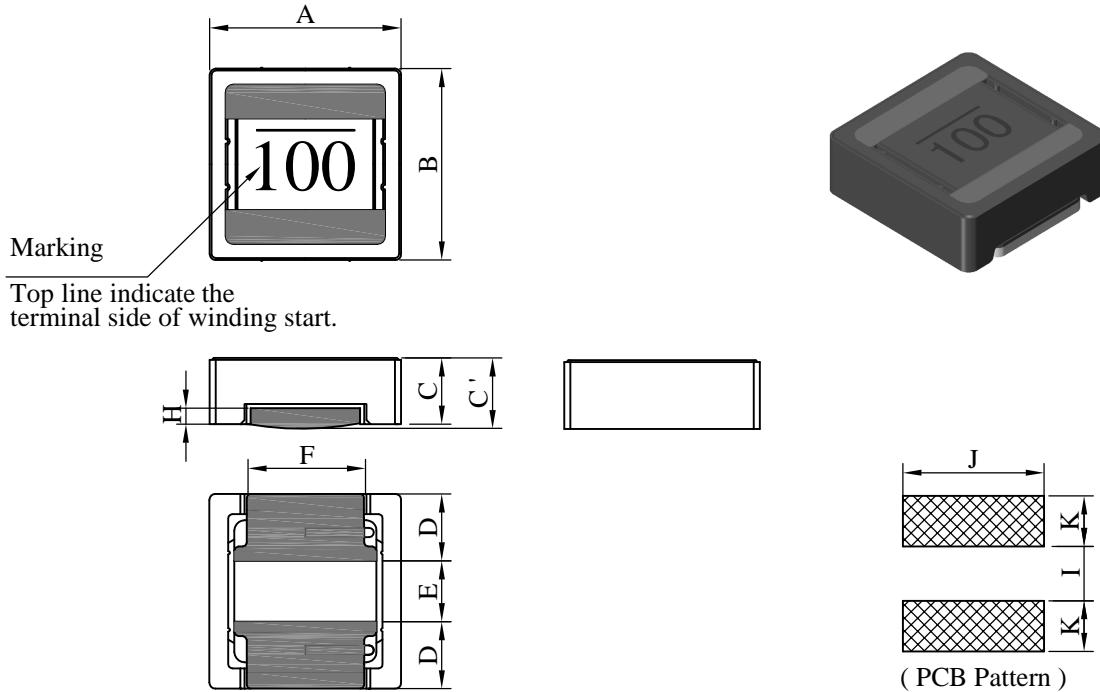


SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	QS6822□□□□L□-□□□		
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I . Configuration and dimensions :



Unit : mm

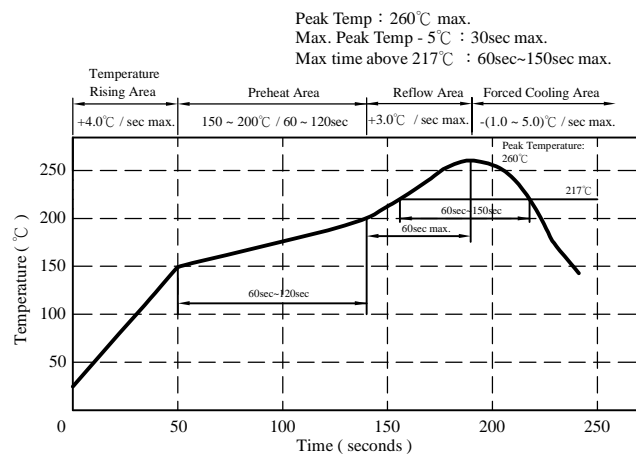
A	B	C	C'	D	E	F	H	I	J	K
6.80 ±0.30	6.80 ±0.30	2.30 ±0.20	2.70 max.	2.10 typ.	2.60 typ.	4.25 ±0.20	0.30 min.	2.20 ref.	5.45 ref.	2.50 ref.

II . Description :

- a . Ferrite drum core construction
- b . Magnetically shielded
- c . Enamelled copper wire : H class
- d . Product weight : 0.40g (ref.)
- e . Moisture sensitivity Level 1
- f . Products comply with RoHS' requirements
- g . Halogen free

III . General specification :

- a . Storage temp. : -40°C ----+125°C
- b . Operating temp. : -40°C ----+125°C
(Temp. rise included)
- c . Resistance to solder heat : 260°C .10 secs.



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SPECIFICATION FOR APPROVAL

REF. :

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IV . Electrical characteristics :

DWG No.	Inductance (μ H)	SRF (MHz) typ.	RDC (m Ω)		Isat (A) typ.	Irms1 (A) typ.	Irms2 (A) typ.
			typ.	max.			
QS68221R0YL□-□□□	1.0 \pm 30%	109.0	15.0	19.0	4.40	4.20	5.80
QS68221R5YL□-□□□	1.5 \pm 30%	77.0	17.0	22.0	3.50	3.70	5.00
QS68222R2YL□-□□□	2.2 \pm 30%	72.0	21.0	27.0	2.70	3.40	4.80
QS68223R3YL□-□□□	3.3 \pm 30%	62.0	25.0	33.0	2.40	3.00	4.30
QS68225R0YL□-□□□	5.0 \pm 30%	48.0	38.0	50.0	2.00	2.60	3.60
QS68226R2YL□-□□□	6.2 \pm 30%	42.0	44.0	57.0	1.70	2.40	3.40
QS68227R5YL□-□□□	7.5 \pm 30%	36.0	49.0	64.0	1.55	2.30	3.20
QS6822100ML□-□□□	10.0 \pm 20%	33.0	68.0	88.0	1.35	2.00	2.70
QS6822120ML□-□□□	12.0 \pm 20%	32.0	70.0	90.0	1.25	1.90	2.65
QS6822150ML□-□□□	15.0 \pm 20%	23.0	84.0	110.0	1.10	1.70	2.45
QS6822180ML□-□□□	18.0 \pm 20%	22.0	100.0	130.0	1.00	1.60	2.25
QS6822220ML□-□□□	22.0 \pm 20%	21.0	126.0	165.0	0.95	1.40	2.00
QS6822270ML□-□□□	27.0 \pm 20%	19.0	167.0	220.0	0.80	1.25	1.75
QS6822330ML□-□□□	33.0 \pm 20%	18.0	200.0	235.0	0.75	1.10	1.60
QS6822390ML□-□□□	39.0 \pm 20%	15.0	232.0	285.0	0.64	1.05	1.50
QS6822470ML□-□□□	47.0 \pm 20%	14.0	283.0	345.0	0.60	0.95	1.35
QS6822560ML□-□□□	56.0 \pm 20%	13.0	314.0	390.0	0.56	0.85	1.20
QS6822680ML□-□□□	68.0 \pm 20%	12.0	391.0	480.0	0.52	0.80	1.15
QS6822820ML□-□□□	82.0 \pm 20%	10.0	437.0	540.0	0.45	0.77	1.10
QS6822101ML□-□□□	100.0 \pm 20%	9.5	560.0	680.0	0.42	0.67	0.95
QS6822121ML□-□□□	120.0 \pm 20%	8.0	628.0	760.0	0.39	0.58	0.82
QS6822151ML□-□□□	150.0 \pm 20%	7.5	945.0	1100.0	0.34	0.52	0.73
QS6822181ML□-□□□	180.0 \pm 20%	7.0	1026.0	1200.0	0.31	0.48	0.68
QS6822221ML□-□□□	220.0 \pm 20%	5.5	1170.0	1380.0	0.28	0.46	0.65
QS6822271ML□-□□□	270.0 \pm 20%	5.2	1510.0	1770.0	0.24	0.40	0.55
QS6822331ML□-□□□	330.0 \pm 20%	5.0	1676.0	2000.0	0.23	0.36	0.51
QS6822391ML□-□□□	390.0 \pm 20%	4.8	2178.0	2600.0	0.21	0.32	0.46
QS6822471ML□-□□□	470.0 \pm 20%	4.0	2693.0	3200.0	0.19	0.30	0.42
QS6822561ML□-□□□	560.0 \pm 20%	3.8	3019.0	3580.0	0.18	0.27	0.39
QS6822681ML□-□□□	680.0 \pm 20%	3.2	3599.0	4300.0	0.16	0.26	0.36
QS6822821ML□-□□□	820.0 \pm 20%	3.0	4639.0	5500.0	0.14	0.23	0.32
QS6822102ML□-□□□	1000.0 \pm 20%	2.6	5742.0	6850.0	0.13	0.20	0.28

- 1). Electrical specifications at 25°C
- 2). Inductance Test condition : 100kHz /0.1V
- 3). Isat base on Δ L / L0A=35% typ.(Approximately transient current)
- 4). Irms1 base on Temp. rise 20°C typ.
- 5). Irms2 base on Temp. rise 40°C typ.

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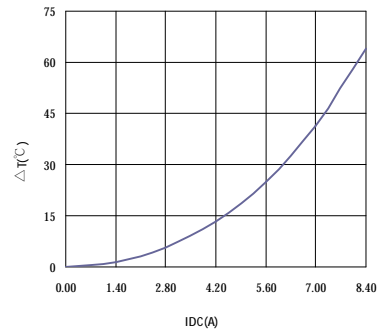
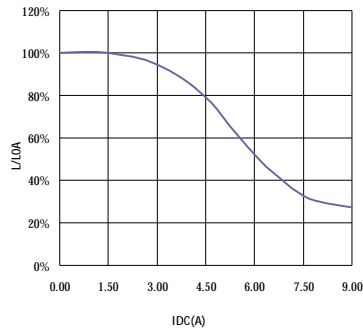
SPECIFICATION FOR APPROVAL

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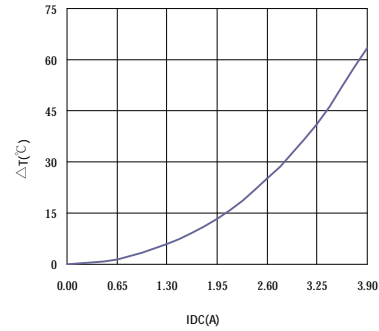
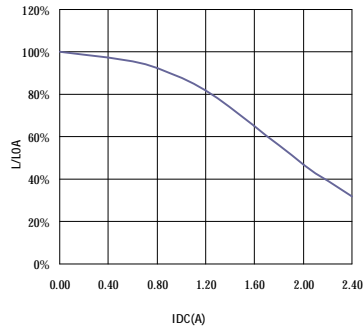
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V . Curve :

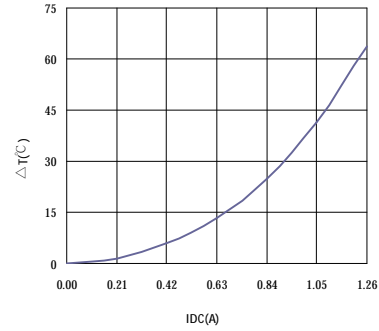
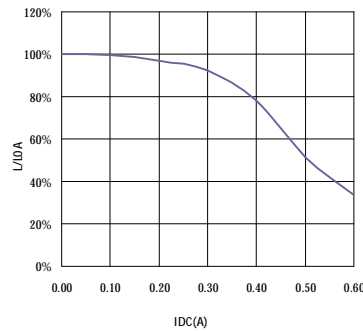
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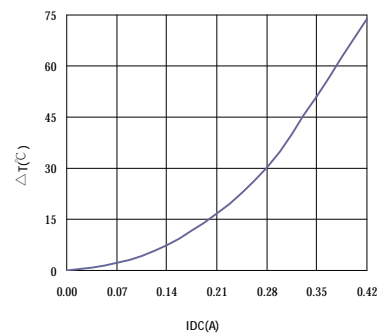
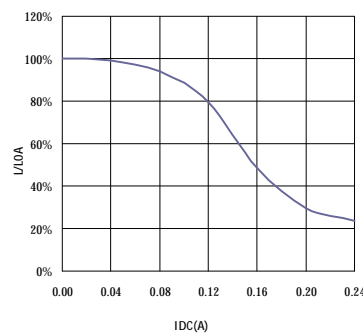
QS6822100ML□



QS6822101ML□



QS6822102ML□



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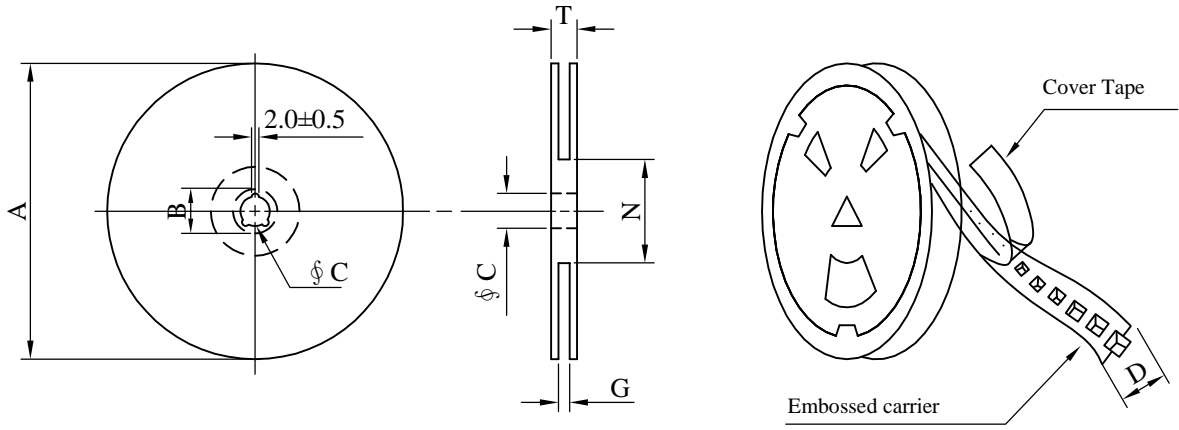
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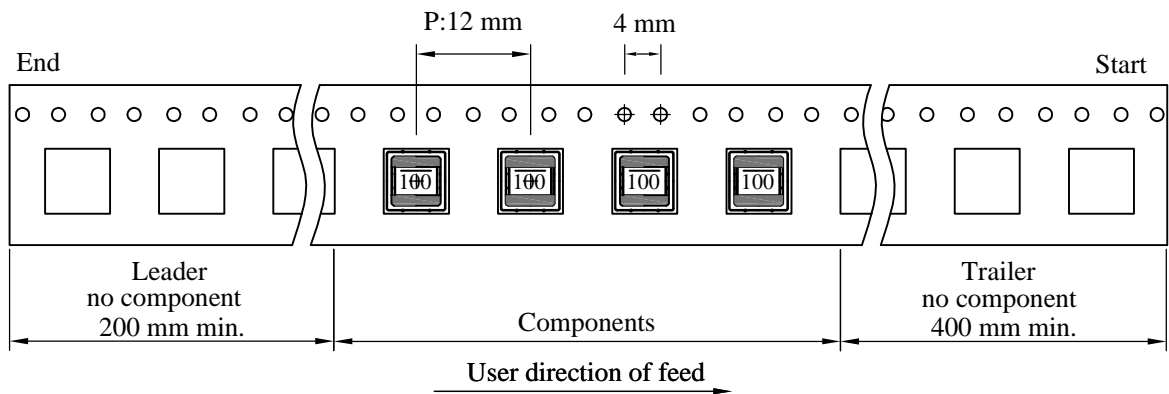
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VI . Packaging information :

(1) Configuration



※Carrier tape width : D



(2) Dimensions

Unit:mm

Style	A	B	C	D	G	N	T
07 - 16	178	21±0.8	13	16	18 ⁺⁰	50 ⁻⁰	20.5
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	500	330	07 - 16	15,000	11.2	42 x 41 x 24
C	1,500	1,060	13 - 16	9,000	7.70	38 x 37 x 22

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VIII . Reliability test :

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125±2°C 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°C ~ +125°C 2.Number of cycle:100 cycle 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 °C 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°C (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 appearance. 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 : 260±5°C. 2.Time (temp. ≥ 217°C) : 60~150 Second. 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 35% typ.
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°C typ.
13.Solderability Test	J-STD-002 & JESD22-B 102	1.Baking in pre-testing : 150±5°C / 16Hours±30 min. 2.Peak temperature : 240±5°C 3.Time (temp. ≥ 217°C) : 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°C~125°C 2.Room temperature : 25°C .	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 the height of 1m 2.Drop total times : 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.

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