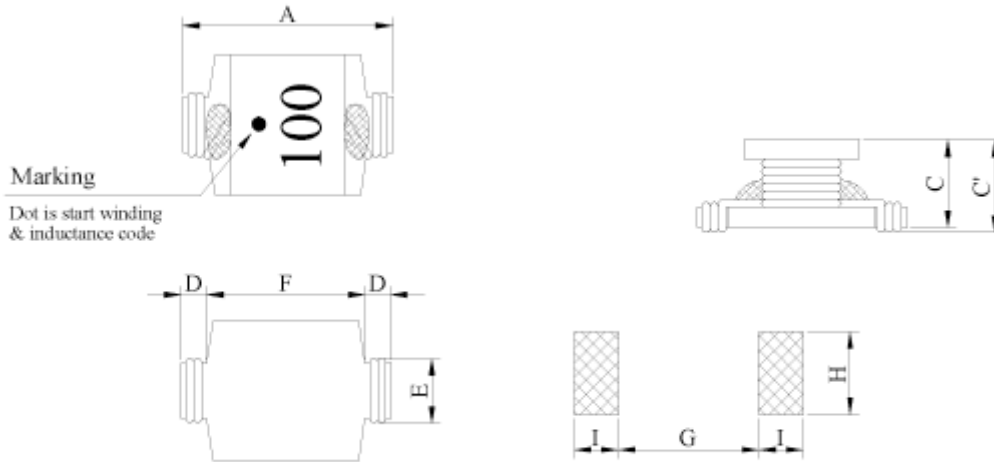


## 1. Configuration & Dimensions



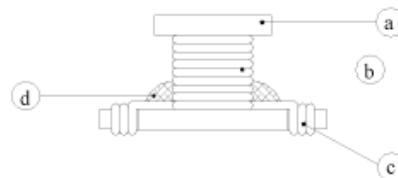
Series	Dimensions [mm]									
	A	B	C	C'	D(ref.)	E(ref.)	F(ref.)	G(ref.)	H(ref.)	I(ref.)
PSQ0703	6.50±0.3	4.50±0.2	2.50±0.2	2.70±0.3	0.80	2.40	4.90	4.00	3.20	1.50
PSQ0805	8.80±0.3	6.00±0.3	4.50±0.3	5.00±0.7	1.40	3.40	6.00	5.00	4.00	2.00

## 2. Schematic Diagram



## 3. Materials

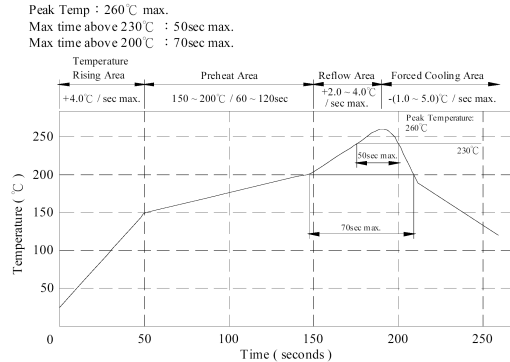
- a.- Core : Ferrite DQ core
- b.- Wire : Enamelled copper wire (class F)
- c.- Terminal : Cu / Sn
- d.- Adhesive : Epoxy resin
- e.- Remark : Lead content 200ppm max. include ferrite



## 4. General Specification

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E-mail: [mar.villarrubia@grupopremo.com](mailto:mar.villarrubia@grupopremo.com) Web <http://www.grupopremo.com>

- a.- Temp. rise  $\left\{ \begin{array}{l} 20^{\circ}\text{C max. (PSQ0703)} \\ 40^{\circ}\text{C max. (PSQ0805)} \end{array} \right.$
- b.- Rated current  $\left\{ \begin{array}{l} \text{Current cause inductance drop within 10\%} \\ \text{Base on temp. rise \& } \Delta L/\text{LOA} = 30\% \text{ typ.} \end{array} \right.$
- c.- Storage temp. :  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- d.- Operating temp. :  $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$
- e.- Resistance to solder heat :  $260^{\circ}\text{C}$ . 10 secs



## 5. Electrical Characteristics

### PSQ0703 ( $1\mu\text{H} - 1000\mu\text{H}$ )

DWG No.	Inductance ( $\mu\text{H}$ )	Q ref.	Test Freq.		SRF (MHz) nom.	RDC ( $\Omega$ ) max.	I <sub>rms1</sub> (mA) $\Delta T=20^{\circ}\text{C}$ max.	I <sub>rms2</sub> (mA) $\Delta T=40^{\circ}\text{C}$ max.
			L (KHz)	Q (MHz)				
PSQ0703 - 1R0M	1.0 $\pm$ 20%	25	100	7.96	160.0	0.042	2200	3200
PSQ0703 - 1R2M	1.2 $\pm$ 20%	25	100	7.96	145.0	0.047	2000	3000
PSQ0703 - 1R8M	1.8 $\pm$ 20%	25	100	7.96	105.0	0.052	1900	2700
PSQ0703 - 2R2M	2.2 $\pm$ 20%	24	100	7.96	95.0	0.060	1800	2600
PSQ0703 - 2R7M	2.7 $\pm$ 20%	23	100	7.96	80.0	0.065	1700	2500
PSQ0703 - 3R3M	3.3 $\pm$ 20%	23	100	7.96	65.0	0.075	1650	2350
PSQ0703 - 3R9M	3.9 $\pm$ 20%	22	100	7.96	70.0	0.080	1580	2250
PSQ0703 - 4R7M	4.7 $\pm$ 20%	20	100	7.96	60.0	0.100	1500	2100
PSQ0703 - 5R6M	5.6 $\pm$ 20%	20	100	7.96	56.0	0.105	1400	2000
PSQ0703 - 6R8M	6.8 $\pm$ 20%	20	100	7.96	45.0	0.115	1300	1900
PSQ0703 - 8R2M	8.2 $\pm$ 20%	20	100	7.96	40.0	0.150	1100	1500
PSQ0703 - 100K	10.0 $\pm$ 10%	23	100	2.52	36.0	0.170	1000	1400
PSQ0703 - 120K	12.0 $\pm$ 10%	20	100	2.52	36.0	0.180	900	1300
PSQ0703 - 150K	15.0 $\pm$ 10%	23	100	2.52	30.0	0.240	750	1120
PSQ0703 - 180K	18.0 $\pm$ 10%	20	100	2.52	30.0	0.280	700	1050
PSQ0703 - 220K	22.0 $\pm$ 10%	20	100	2.52	26.0	0.300	650	950
PSQ0703 - 270K	27.0 $\pm$ 10%	20	100	2.52	20.0	0.400	600	880
PSQ0703 - 330K	33.0 $\pm$ 10%	17	100	2.52	20.0	0.450	560	820
PSQ0703 - 390K	39.0 $\pm$ 10%	18	100	2.52	18.0	0.550	500	730
PSQ0703 - 470K	47.0 $\pm$ 10%	20	100	2.52	15.0	0.720	400	640
PSQ0703 - 560K	56.0 $\pm$ 10%	20	100	2.52	13.0	0.800	390	600
PSQ0703 - 680K	68.0 $\pm$ 10%	18	100	2.52	13.0	0.900	380	560
PSQ0703 - 820K	82.0 $\pm$ 10%	18	100	2.52	12.0	1.180	330	470
PSQ0703 - 101K	100.0 $\pm$ 10%	33	100	0.796	11.0	1.560	270	400
PSQ0703 - 121K	120.0 $\pm$ 10%	32	100	0.796	10.0	1.750	260	365

PSQ0703 - 151K	150.0±10%	30	100	0.796	9.0	2.000	250	340
PSQ0703 - 181K	180.0±10%	33	100	0.796	7.0	2.700	190	300
PSQ0703 - 221K	220.0±10%	31	100	0.796	7.0	3.000	180	280
PSQ0703 - 271K	270.0±10%	30	100	0.796	7.0	3.600	170	250
PSQ0703 - 331K	330.0±10%	33	100	0.796	6.0	4.800	160	220
PSQ0703 - 391K	390.0±10%	36	100	0.796	5.5	6.200	140	190
PSQ0703 - 471K	470.0±10%	33	100	0.796	5.0	7.000	130	180
PSQ0703 - 561K	560.0±10%	36	100	0.252	4.2	9.200	110	155
PSQ0703 - 681K	680.0±10%	32	100	0.796	4.0	10.500	100	145
PSQ0703 - 821K	820.0±10%	32	100	0.796	3.6	12.000	90	135
PSQ0703 - 102K	1000±10%	30	100	0.252	3.2	14.200	80	125

### PSQ0805 (0.56µH - 47µH)

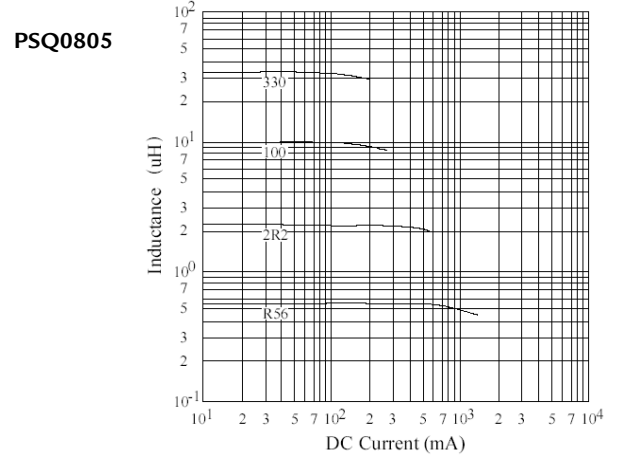
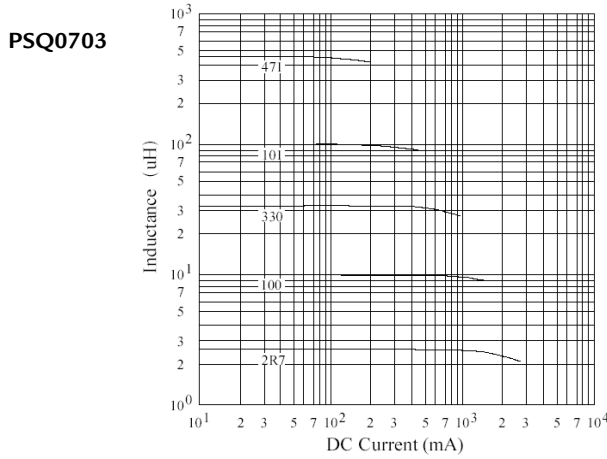
DWG No.	Inductance (µH)	SRF (MHz) nom.	RDC (mΩ) max.	I <sub>rms</sub> (A) ΔT=40°C max.	I <sub>sat</sub> (A) typ.
PSQ0805 - R56M	0.56±20%	200.0	4.50	9.00	12.0
PSQ0805 - 1R2M	1.20±20%	100.0	8.20	6.00	8.80
PSQ0805 - 2R2M	2.20±20%	75.0	16.00	4.50	6.50
PSQ0805 - 4R7M	4.70±20%	35.0	35.00	3.00	4.20
PSQ0805 - 100M	10.00±20%	26.0	60.00	2.40	3.00
PSQ0805 - 150M	15.00±20%	19.0	90.00	2.00	2.40
PSQ0805 - 220M	22.00±20%	15.0	160.00	1.60	2.00
PSQ0805 - 330M	33.00±20%	10.0	185.00	1.20	1.60
PSQ0805 - 470M	47.00±20%	8.0	260.00	1.00	1.30

[Inductance tested at: 0.1V (PSQ0703), 0.25V (PSQ0805)] [I<sub>sat</sub> base on ΔL/L0A = 30% (PSQ0805)]

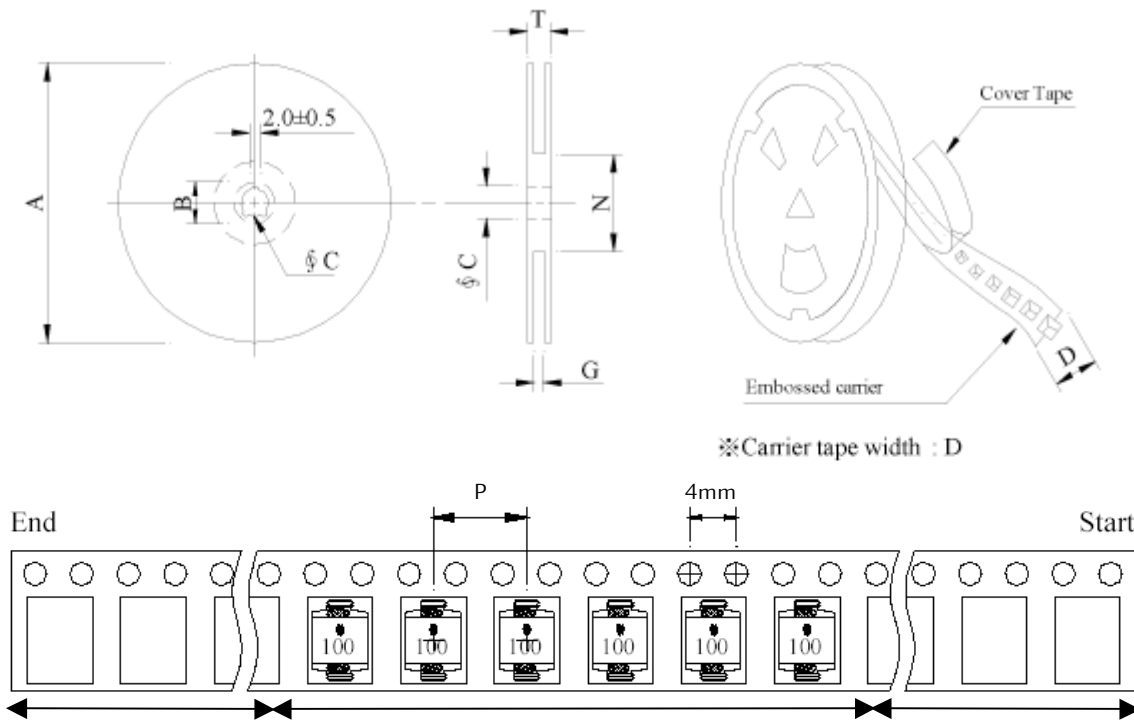
## 6. Curve

### Inductance VS. DC Current Curve

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## 7. Packaging Information



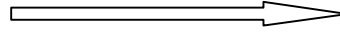
4

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Leader  
no component  
160 mm min.

Components

Trailer  
no component  
400 mm min.



User direction of feed

(PSQ0703 → P = 8mm) (PSQ0805 → P = 12mm)

### PSQ0703

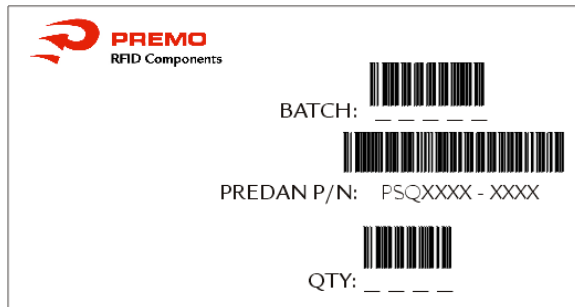
Style	Dimensions [mm]						
	A	B	C	D	G	N	T
07 - 12	178	21±0.8	13±0.5	12	14 <sup>+0</sup>	50 <sup>-0</sup>	18.4
13 - 12	330	21±0.8	13±0.5	12	14 <sup>+0</sup>	50 <sup>-0</sup>	18.4

### PSQ0805

Style	Dimensions [mm]						
	A	B	C	D	G	N	T
13 - 16	330	21±0.8	13±0.5	16	18 <sup>+0</sup>	50 <sup>-0</sup>	22.4

Series	Inner : Reel			Outer : Carton		
	Q'TY(pcs)	G.W.(gw)	Style	Q'TY(pcs)	G.W.(Kg)	Size(cm)
PSQ0703	500	350	07 - 12	20,000	10.5	42 x 41 x 24
PSQ0703	2,000	1,300	13 - 12	16,000	13.0	40 x 40 x 24
PSQ0805	1,000	1,000	13 - 16	6,000	7.5	40 x 40 x 24

## 8. Labelling



## 9. Reliability Test

Test item	Specification	Test condition
Solderability	More than 90% of the terminal electrode shall be covered with fresh solder	Preheat : 150±25% for 60 seconds Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 235±5°C Flux : Rosin Dip time : 4±1 seconds

Thermal shock test (Temp. cycle)	Inductance shall not change more than $\pm 10\%$	$\frac{\text{Room temp.}}{15 \text{ minutes}} \longrightarrow \frac{-25 \pm 2^\circ\text{C}}{30 \text{ minutes}}$ $\frac{\text{Room temp.}}{15 \text{ minutes}} \longrightarrow \frac{85 \pm 2^\circ\text{C}}{30 \text{ minutes}}$ Total : 50 cycles
Humidity Resistance test		Temperature : $40 \pm 2^\circ\text{C}$ Humidity : 90 ~ 95% Applied current : Per specifications Time : 500 hours
High temp. Resistance test		Temperature : $105 \pm 2^\circ\text{C}$ Applied current : Per specifications Time : 500 hours

## 10. Edition Control

Edition	Date	Change description	Made by
1 <sup>st</sup>	31/08/06	Update Specification	Pablo Pozo