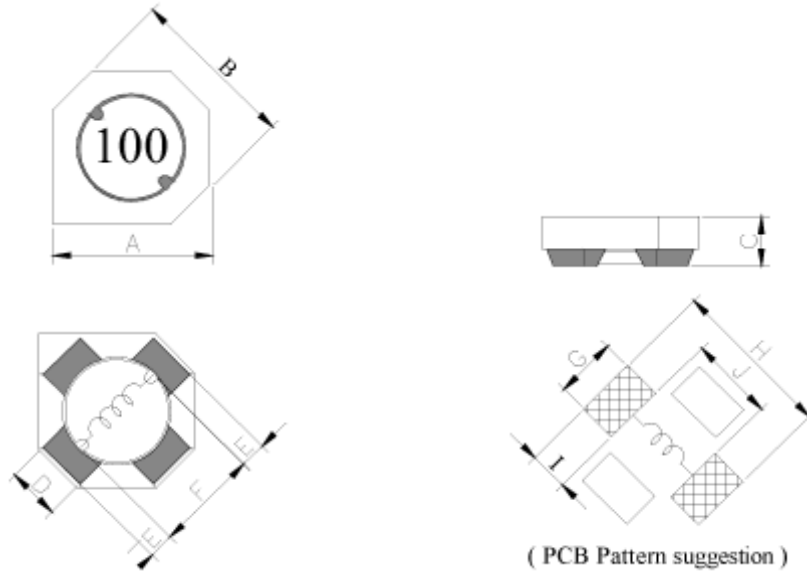


## 1. Configuration & Dimensions



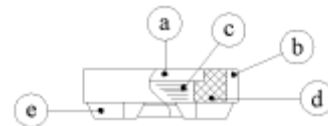
Series	Dimensions [mm]									
	A	B	C	D(typ.)	E(typ.)	F(typ.)	G(ref.)	H(ref.)	I(ref.)	J(ref.)
PSU3014	3.30±0.20	3.50±0.20	1.40±0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80
PSU3017	3.30±0.20	3.50±0.20	1.80±0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80
PSU3028	3.30±0.20	3.50±0.20	2.80±0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80
PSU4018	4.30±0.20	4.50±0.20	1.80±0.30	1.50	0.50	3.30	1.70	5.30	1.00	3.30

## 2. Schematic Diagram



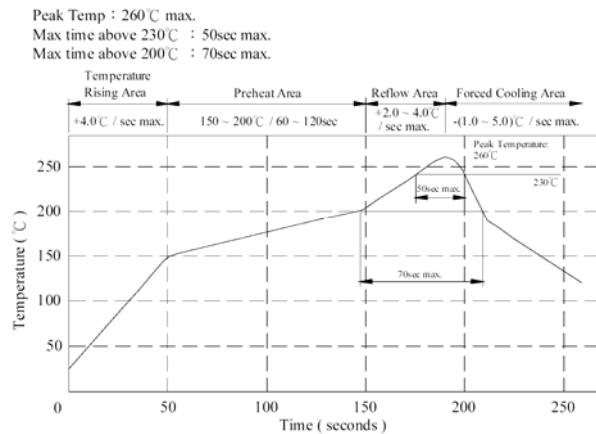
## 3. Materials

- a.- Core : Ferrite DR core
- b.- Core : Ferrite RI core
- c.- Wire : Enamelled copper wire (classF&H)
- d.- Terminal : Ag / Ni / Sn
- e.- Adhesive : Epoxy resin
- f.- Remark : Products comply with RoHS requirements



## 4. General Specification

- a.- Temp. rise  $\left\{ \begin{array}{l} 40^{\circ}\text{C typ. (PSU3014, PSU3028)} \\ 30^{\circ}\text{C typ. (PSU3017, PSU4018)} \end{array} \right.$
- b.- Rated current : Base on temp. rise  
&  $\Delta L/L0A = 35\%$  typ.
- 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

### PSU3014 (1.2 $\mu\text{H}$ – 22 $\mu\text{H}$ )

DWG No.	Inductance ( $\mu\text{H}$ )	Q ref.	Test Freq.		SRF (MHz) typ.	RDC (m $\Omega$ )		I <sub>rms</sub> (mA) typ.	I <sub>sat</sub> (mA) typ.
			L (KHz)	Q (MHz)		typ.	max.		
PSU3014 – 1R2N	1.2 $\pm$ 30%	12	100	7.96	150	38	55	1850	1900
PSU3014 – 1R5N	1.5 $\pm$ 30%	12	100	7.96	120	51	63	1550	1600
PSU3014 – 2R0N	2.0 $\pm$ 30%	10	100	7.96	110	75	95	1100	1300
PSU3014 – 3R0N	3.0 $\pm$ 30%	12	100	7.96	80	95	135	1000	1100
PSU3014 – 4R7N	4.7 $\pm$ 30%	15	100	7.96	70	130	165	820	920
PSU3014 – 6R8N	6.8 $\pm$ 30%	10	100	7.96	50	180	230	700	780
PSU3014 – 100N	10.0 $\pm$ 30%	30	100	2.52	40	235	290	640	660
PSU3014 – 150N	15.0 $\pm$ 30%	35	100	2.52	30	440	550	400	460
PSU3014 – 220N	22.0 $\pm$ 30%	35	100	2.52	25	700	875	320	360

### PSU3017 (2.2µH - 47µH)

DWG No.	Inductance (µH)	Q ref.	Test Freq. L (KHz)	SRF (MHz) typ.	RDC (mΩ)		I <sub>rms</sub> (mA) typ.	I <sub>sat</sub> (mA) typ.
					typ.	max.		
PSU3017 - 2R2N	2.2±30%	8	100	100	35	45	1700	980
PSU3017 - 3R3N	3.3±30%	8	100	80	55	70	1450	800
PSU3017 - 4R7N	4.7±30%	10	100	60	68	87	1100	630
PSU3017 - 6R8N	6.8±30%	10	100	50	85	105	1000	530
PSU3017 - 100N	10.0±30%	15	100	40	120	150	850	470
PSU3017 - 150N	15.0±30%	20	100	35	175	220	680	350
PSU3017 - 220N	22.0±30%	20	100	30	250	320	600	300
PSU3017 - 330N	33.0±30%	20	100	20	430	550	470	250
PSU3017 - 470N	47.0±30%	18	100	18	540	670	360	210

### PSU3028 (2.2µH - 47µH)

DWG No.	Inductance (µH)	Q ref.	Test Freq. L (KHz)	SRF (MHz) typ.	RDC (mΩ)		I <sub>rms</sub> (mA) typ.	I <sub>sat</sub> (mA) typ.
					typ.	max.		
PSU3028 - 100Y	10.0±30%	20.0	100	35	160	200	720	860
PSU3028 - 150Y	15.0±30%	18.0	100	25	230	290	660	720
PSU3028 - 220Y	22.0±30%	22.0	100	15	270	335	600	620
PSU3028 - 330Y	33.0±30%	33.0	100	10	450	560	470	480
PSU3028 - 470Y	47.0±30%	47.0	100	8	815	1000	320	380
PSU3028 - 680Y	68.0±30%	68.0	100	7	1400	1750	240	280
PSU3028 - 101Y	100.0±30%	100.0	100	5	2200	2750	190	210

### PSU4018 (1µH - 100µH)

DWG No.	Inductance (µH)	Q ref.	Test Freq.		SRF (MHz) typ.	RDC (mΩ)		I <sub>rms</sub> (mA) typ.	I <sub>sat</sub> (mA) typ.
			L (KHz)	Q (MHz)		typ.	max.		
PSU4018 - 1R0N	1.0±30%	10	100	7.96	120	30	40	2700	2200
PSU4018 - 3R0N	3.0±30%	10	100	7.96	80	45	60	2050	1500
PSU4018 - 4R7N	4.7±30%	10	100	7.96	60	58	78	1800	1300
PSU4018 - 6R8N	6.8±30%	10	100	7.96	45	80	105	1500	1050
PSU4018 - 100N	10.0±30%	20	100	2.52	30	117	160	1200	800
PSU4018 - 150N	15.0±30%	24	100	2.52	26	175	240	900	600
PSU4018 - 220N	22.0±30%	26	100	2.52	20	255	350	800	500
PSU4018 - 330N	33.0±30%	22	100	2.52	18	310	400	650	450

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

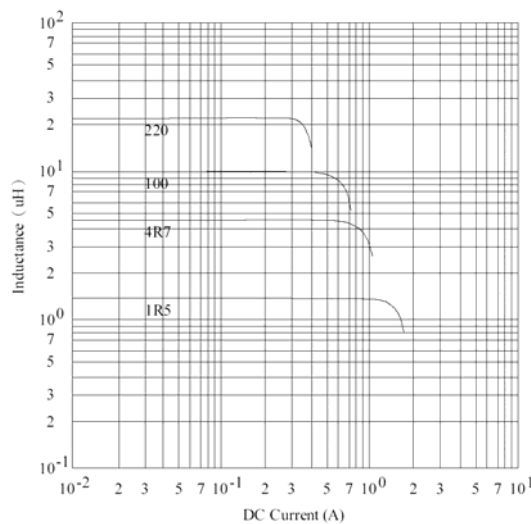
PSU4018 - 470N	47.0±30%	24	100	2.52	14	510	660	550	400
PSU4018 - 680N	68.0±30%	22	100	2.52	10	750	980	480	330
PSU4018 - 101N	100.0±30%	60	100	0.796	6	1170	1500	320	255

[Inductance tested at 0.1V] [I<sub>rms</sub> base on temp. rise: 40°C (PSU3014, PSU3028), 30°C (PSU3017, PSU4018)] [I<sub>sat</sub> base on ΔL/L0A=35%]

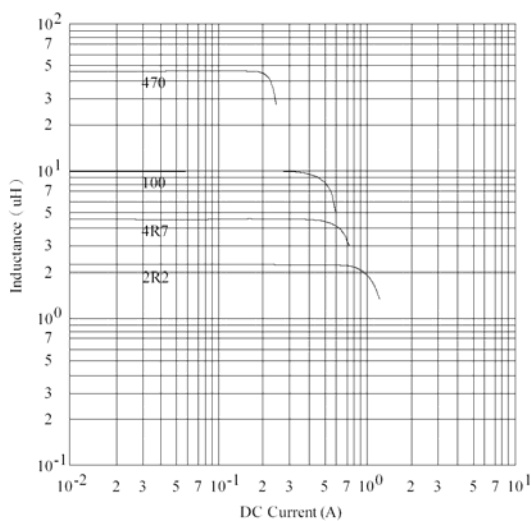
## 6. Curve

### Inductance VS. DC Current Curve

#### PSU3014

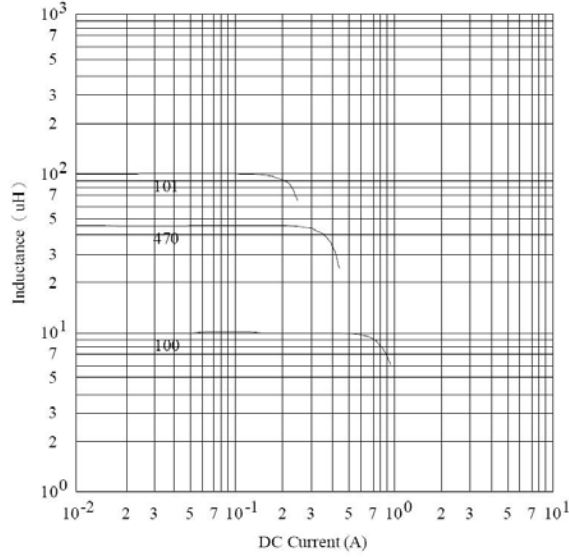


#### PSU3017



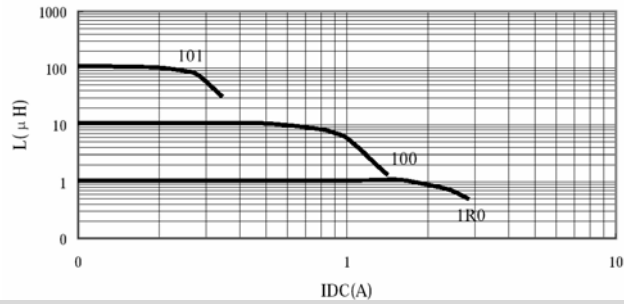
C/Severo Ochoa 33 - Parque Tecnológico de Andalucía. 29590 Campanillas .Málaga (Spain) **Phone** +34 951 231 320 **Fax** +34 951 231 321  
E-mail: [mar.villarrubia@grupopremo.com](mailto:mar.villarrubia@grupopremo.com) Web <http://www.grupopremo.com>

**PSU3028**

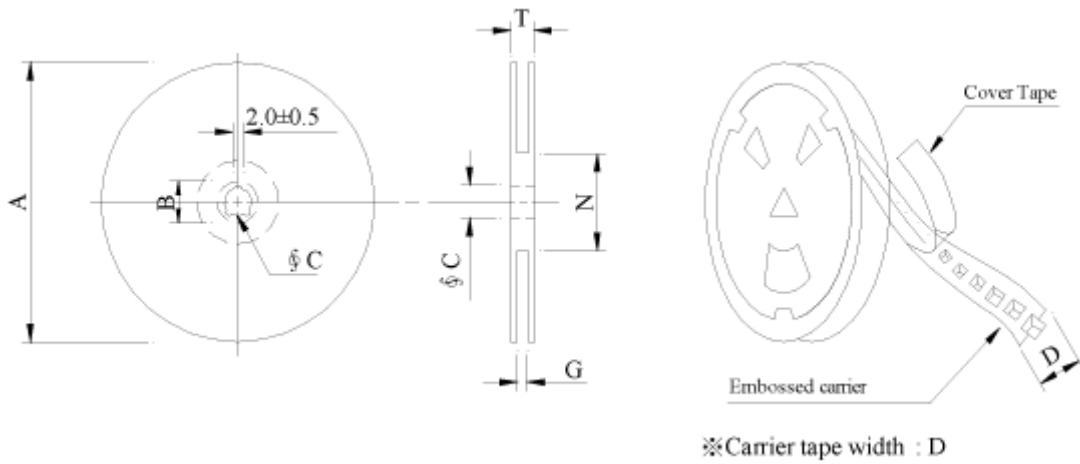


**Inductance VS. IDC**

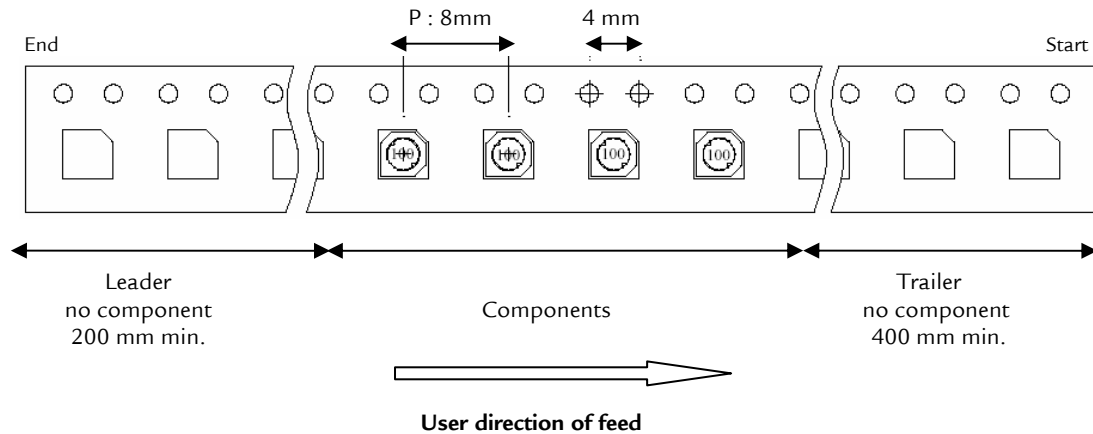
**PSU4018**



**7. Packaging Information**



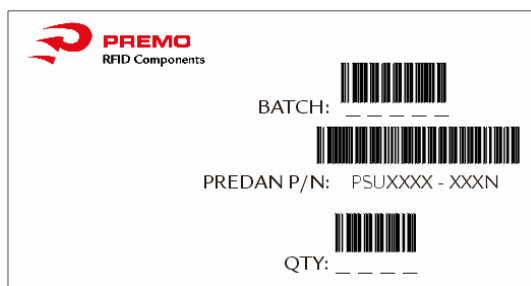
C/Severo Ochoa 33 - Parque Tecnológico de Andalucía. 29590 Campanillas .Málaga (Spain) Phone +34 951 231 320 Fax +34 951 231 321  
E-mail: [mar.villarrubia@grupopremo.com](mailto:mar.villarrubia@grupopremo.com) Web <http://www.grupopremo.com>



Style	Dimensions [mm]						
	A	B	C	D	G	N	T
07 - 12	178	21±0.8	13	12	14 <sup>+0</sup>	50 <sup>0</sup>	16.5
13 - 12	330	21±0.8	13±0.5	12	14 <sup>+0</sup>	50 <sup>0</sup>	18.4

Series	Inner : Reel			Outer : Carton		
	Q'TY(pcs)	G.W.(gw)	Style	Q'TY(pcs)	G.W.(Kg)	Size(cm)
PSU3014	1,200	150	07 - 12	48,000	8.50	42 x 41 x 24
PSU3017	800	100	07 - 12	32,000	7.00	42 x 41 x 24
PSU3028	600	125	07 - 12	24,000	7.50	42 x 41 x 24
PSU3028	2,000	420	13 - 12	16,000	6.50	40 x 40 x 24
PSU4018	1,000	180	07 - 12	40,000	8.00	42 x 41 x 24

## 8. Labelling



## 9. Reliability Test

Test item	Specification	Test condition
Solderability	More than 95% of the terminal electrode shall be covered with fresh solder	Preheat : 155 °C / 4 hours Solder : Sn96.5 / Ag3 / Cu0.5 or equivalent Solder temp. : 235±5°C Flux : Rosin Dip time : 5±0.5 seconds
Thermal shock test (Temp. cycle)	Inductance shall not change more than ±30%	$\frac{\text{Room temp.}}{15 \text{ minutes}} \longrightarrow \frac{-40^{\circ}\text{C}}{30 \text{ minutes}}$ $\frac{\text{Room temp.}}{15 \text{ minutes}} \longrightarrow \frac{+105^{\circ}\text{C}}{30 \text{ minutes}}$ Total : 50 cycles
Humidity Resistance test		Temperature : 40±2°C Humidity : 90 ~ 95% Time : 1000 hours
High temp. Resistance test		Temperature : 105±5°C Applied current : Per specifications Time : 96 hours

## 10. Edition Control

Edition	Date	Change description	Made by
1 <sup>st</sup>	31/08/06	Update Specification	Pablo Pozo
2 <sup>nd</sup>	04/08/08	New family PSU3028	MM.Villarrubia