

5. SPU Series (Shielded Type)

Applications

- Hand Phone of new generation.
- Personal computers.
- Portable telephones.
- Other various electronic appliances.



Features

- Small size with the electrode attached to the ferrite RI core directly.
- Magnetically shielded construction.
- Excellent property with high saturation for surface mounting.
- Ideal inductor for DC-DC conversion in notebook computer, Step-up or Step-down converters, etc.

Inductance and Rated Current ranges

Part Series	Inductances range	Rated Current range
* SPU3009	1.3~22μH	1.00~0.22A (Irms) ; 1.10~0.25A (Isat)
* SPU3011	1.5~10μH	1.10~0.40A (Irms) ; 1.00~0.35A (Isat)
* SPU3014	1.2~22μH	1.85~0.32A (Irms) ; 1.90~0.36A (Isat)
* SPU3017	2.2~47μH	1.70~0.36A (Irms) ; 0.98~0.21A (Isat)
* SPU3018	1.5~15μH	1.65~0.50A (Irms) ; 1.85~0.56A (Isat)
* SPU3028	10~100μH	0.72~0.19A (Irms) ; 0.86~0.21A (Isat)

(Dimension data (Refer to Fig. 1))

Part Series	Inductances range	Rated Current range
* SPU5011	1.5~100μH	1.80~0.20A (Irms) ; 1.50~0.18A (Isat)
* SPU5016	1.8~100μH	1.75~0.30A (Irms) ; 1.70~0.27A (Isat)
* SPU5018	1.0~100μH	2.80~0.32A (Irms) ; 2.85~0.31A (Isat)
* SPU5028	1.2~100μH	3.50~0.47A (Irms) ; 3.40~0.42A (Isat)

(Dimension data (Refer to Fig. 2))

Part Series	Inductances range	Rated Current range
* SPU8030	3.3~100μH	5.00~0.85A (Irms) ; 4.60~0.75A (Isat)
* SPU8040	3.3~150μH	6.00~0.90A (Irms) ; 5.00~0.77A (Isat)
* SPU8045	3.5~100μH	5.00~1.00A (Irms) ; 5.00~0.92A (Isat)
* SPU8058	3.9~100μH	6.50~1.70A (Irms) ; 4.50~0.90A (Isat)
* SPU1030	3.5~150μH	5.00~0.85A (Irms) ; 5.20~0.84A (Isat)
* SPU1040	3.8~330μH	6.60~0.62A (Irms) ; 5.80~0.60A (Isat)
* SPU1050	4.7~1000μH	5.20~0.47A (Irms) ; 5.10~0.40A (Isat)
* SPU1065	2.8~100μH	6.50~1.80A (Irms) ; 7.50~1.40A (Isat)

(Dimension data (Refer to Fig. 3))

5. SPU Series (Shielded Type)

Inductance and Rated Current ranges (Cont'd)

Part Series	Inductances range	Rated Current range
* SPU0830	1.0~100 μ H	6.50~0.75A
* SPU0840	1.8~100 μ H	7.00~1.05A
* SPU0845	1.0~100 μ H	9.00~1.30A

(Dimension data (Refer to Fig. 4))

Part Series	Inductances range	Rated Current range
* SPU0301	1.00~820 μ H	1.60~0.06A
* SPU0302	0.47~2200 μ H	1.84~0.035A
* SPU0303	1.00~6800 μ H	1.90~0.017A
* SPU0502	0.47~6800 μ H	2.33~0.03A
* SPU0503	0.47~2500 μ H	4.82~0.045A
* SPU0603	1.00~27000 μ H	4.70~0.026A

(Dimension data (Refer to Fig. 5))

Test equipment:

L: HP4284A LCR meter @100KHz 0.1V

DCR Resistance: Milli-ohm meter or equivalent.

Operating temperature range:

-40 ~+105 :

SPU3009, SPU3011, SPU3014, SPU3017, SPU3018, SPU3028, SPU5011, SPU5016, SPU5018, SPU5028
SPU8030, SPU8040, SPU8045, SPU8058, SPU1030, SPU1040, SPU1050, SPU1065

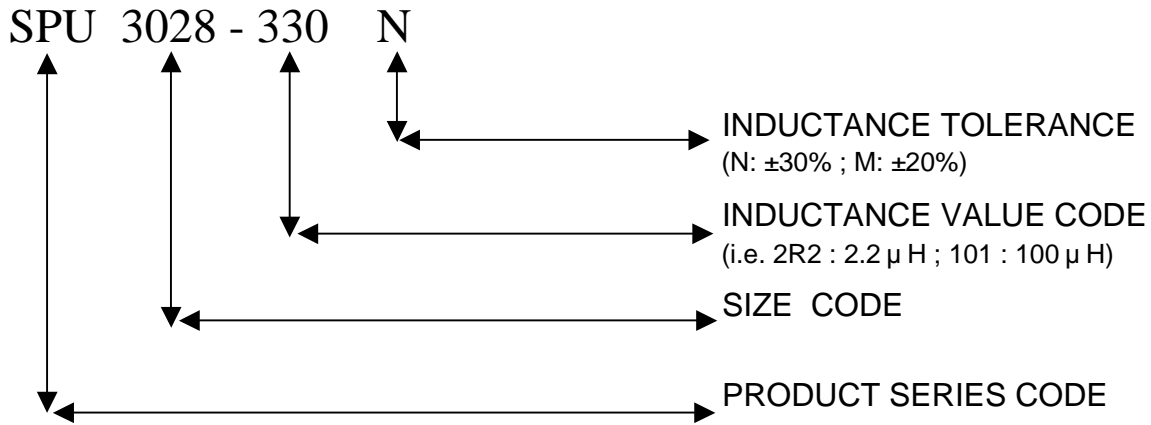
-40 ~+85 :

SPU0830, SPU0840, SPU0845

SPU0301, SPU0302, SPU0303, SPU0502, SPU0503, SPU0603

5. SPU Series (Shielded Type)

Part Numbering System



Dimensions (mm)

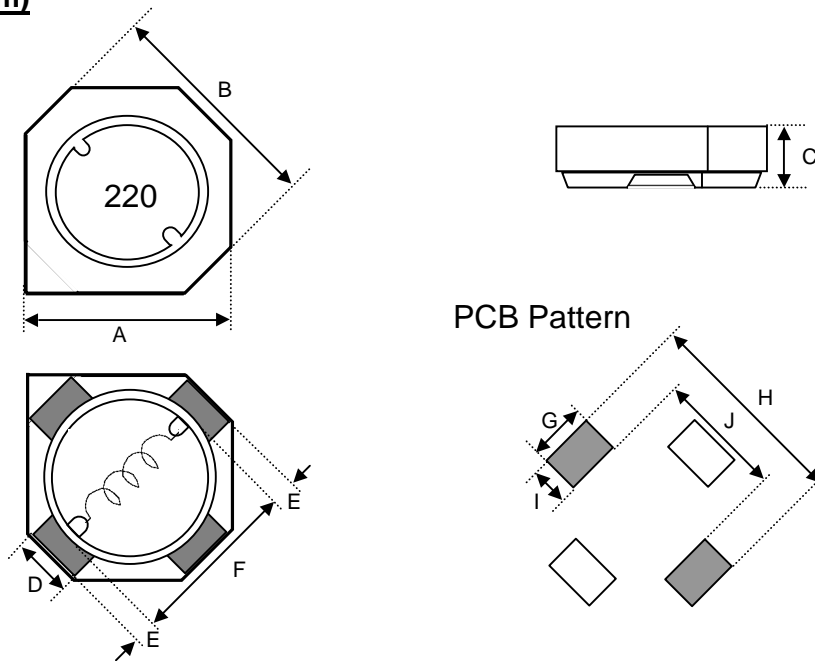


Fig. 1

Codes	A	B	C	D (typ.)	E (typ.)	F (typ.)	G (ref.)	H (ref.)	I (ref.)	J (ref.)
SPU3009*	3.30 \pm 0.20	3.50 \pm 0.20	0.95 \pm 0.10	1.10	0.50	2.30	1.30	4.20	1.20	1.80
SPU3011*	3.30 \pm 0.20	3.50 \pm 0.20	1.10 \pm 0.10	1.10	0.50	2.30	1.30	4.20	1.20	1.80
SPU3014	3.30 \pm 0.20	3.50 \pm 0.20	1.40 \pm 0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80
SPU3017	3.30 \pm 0.20	3.50 \pm 0.20	1.80 \pm 0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80
SPU3018	3.30 \pm 0.20	3.50 \pm 0.20	1.80 \pm 0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80
SPU3028	3.30 \pm 0.20	3.50 \pm 0.20	2.80 \pm 0.20	1.10	0.50	2.30	1.30	4.20	1.20	1.80

* Component Marking:

SPU3009: "A"- 1.3 μ H, "B"- 2.2 μ H, "C"- 3.3 μ H, "D"- 4.7 μ H, "E"- 6.8 μ H, "F"- 10 μ H, "G"- 22 μ H

SPU3011: "A"- 1.5 μ H, "B"- 2.2 μ H, "C"- 3.3 μ H, "D"- 4.7 μ H, "E"- 6.8 μ H, "F"- 10 μ H

5. SPU Series (Shielded Type)**Electrical Characteristics****SPU 3009 / 3011 / 3014 TYPE**

Inductance value code	L (μH)	DC Resistance (mΩ) Max.			Rated DC current (mA) Max.					
					I rms			I sat		
		3009	3011	3014	3009	3011	3014	3009	3011	3014
1R2N	1.2	-	-	55	-	-	1850	-	-	1900
1R3N	1.3	115	-	-	1000	-	-	1100	-	-
1R5N	1.5	-	72	63	-	1100	1550	-	1000	1600
2R0N	2.0	-	-	95	-	-	1100	-	-	1300
2R2N	2.2	145	105	-	800	920	-	850	900	-
3R0N	3.0	-	-	135	-	-	1000	-	-	1100
3R3N	3.3	225	155	-	650	840	-	720	780	-
4R7N	4.7	290	230	165	480	630	820	500	620	920
6R8N	6.8	500	300	230	400	500	700	430	460	780
100N	10	760	420	290	280	400	640	350	350	660
150N	15	-	-	550	-	-	400	-	-	460
220N	22	1600	-	875	220	-	320	250	-	360

1. Test Frequency: 100KHz 0.1V

2a). Irms: base on temp. rise 40°C Typ.

2b). Isat: base on L/L0A = 35% Typ.

SPU 3017 / 3018 / 3028 TYPE

Inductance value code	L (μH)	DC Resistance (mΩ) Max.			Rated DC current (mA) Max.					
					I rms			I sat		
		3017	3018	3028	3017	3018	3028	3017	3018	3028
1R5N	1.5	-	58	-	-	1650	-	-	1850	-
2R0N	2.0	-	65	-	-	1450	-	-	1600	-
2R2N	2.2	45	-	-	1700	-	-	980	-	-
3R0N	3.0	-	98	-	-	1300	-	-	1450	-
3R3N	3.3	70	-	-	1450	-	-	800	-	-
4R7N	4.7	87	135	-	1100	1000	-	630	1250	-
6R8N	6.8	105	205	-	1000	800	-	530	850	-
100N	10	150	360	200	850	650	720	470	700	860
150N	15	220	450	290	680	500	660	350	560	720
220N	22	320	-	335	600	-	600	300	-	620
330N	33	550	-	560	470	-	470	250	-	480
470N	47	670	-	1000	360	-	320	210	-	380
680N	68	-	-	1750	-	-	240	-	-	280
101N	100	-	-	2750	-	-	190	-	-	210

1. Test Frequency: 100KHz 0.1V

2a). Irms: base on temp. rise 40°C Typ. (SPU3017: 30°C Typ.)

2b). Isat: base on L/L0A = 35% Typ.