

2. SPU Series (Shielded Type)

Applications

- Hand Phone of new generation.
- Personal computers.
- 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
* SPU3017	2.2~47 μ H	1.70~0.36A (I _{rms}) ; 0.98~0.21A (I _{sat})
* SPU3018	1.5~15 μ H	1.65~0.50A (I _{rms}) ; 1.85~0.56A (I _{sat})
* SPU3028	10~100 μ H	1.20~0.25A (I _{rms}) ; 0.86~0.25A (I _{sat})

(Dimension data (Refer to Fig. 1))

Part Series	Inductances range	Rated Current range
* SPU5011	1.5~100 μ H	1.80~0.20A (I _{rms}) ; 1.50~0.18A (I _{sat})
* SPU5016	1.8~100 μ H	1.75~0.30A (I _{rms}) ; 1.70~0.27A (I _{sat})
* SPU5018	1.0~100 μ H	2.80~0.32A (I _{rms}) ; 2.85~0.31A (I _{sat})
* SPU5028	1.2~100 μ H	3.50~0.47A (I _{rms}) ; 3.40~0.42A (I _{sat})

(Dimension data (Refer to Fig. 2))

Part Series	Inductances range	Rated Current range
* SPU1030	3.5~150 μ H	5.00~0.85A (I _{rms}) ; 5.20~0.84A (I _{sat})
* SPU1040	3.8~330 μ H	6.60~0.62A (I _{rms}) ; 5.80~0.60A (I _{sat})
* SPU1050	4.7~1000 μ H	5.20~0.47A (I _{rms}) ; 5.10~0.40A (I _{sat})
* SPU1065	2.8~100 μ H	6.50~1.80A (I _{rms}) ; 7.50~1.40A (I _{sat})

(Dimension data (Refer to Fig. 3))

Part Series	Inductances range	Rated Current range
* SPU0302	0.47~1800 μ H	1.84~0.036A
* SPU0303	1.00~3300 μ H	1.90~0.026A
* SPU0502	0.47~820 μ H	2.33~0.120A
* SPU0503	0.47~2500 μ H	4.82~0.045A
* SPU0603	0.82~3300 μ H	4.80~0.078A

(Dimension data (Refer to Fig. 4))

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Inductance and Rated Current ranges (Cont'd)

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

(Dimension data (Refer to Fig. 5))

Characteristics

Rated DC Current : The current when the inductance becomes 35% lower than its initial value.
(For SPU0302, 0303, 0502, 0503, 0603 series : the inductance becomes 30% lower than its initial value.)

Test equipment:

L: HP4284A LCR meter @100KHz 0.1V

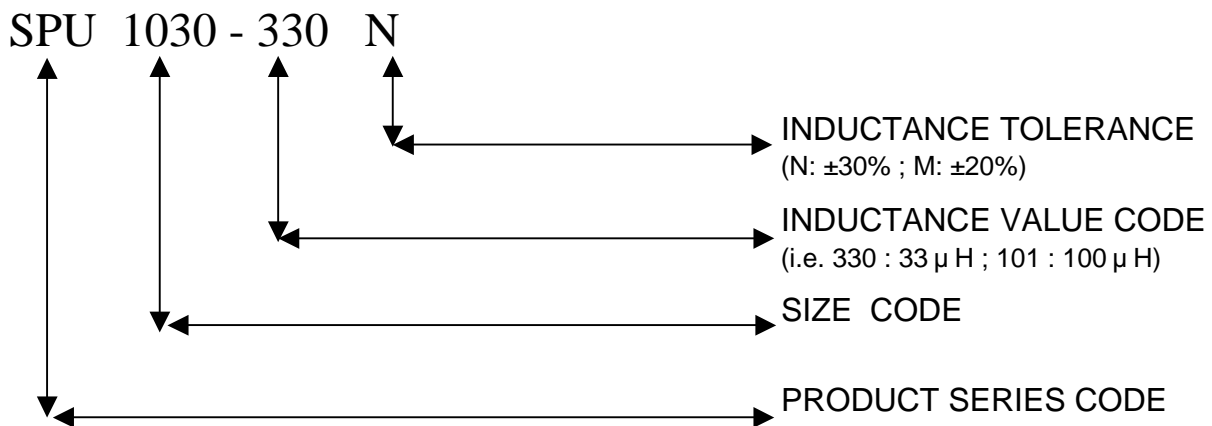
DCR Resistance: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

Operating temperature range:

-40 ~+125 :

Part Numbering System



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Dimensions (mm)

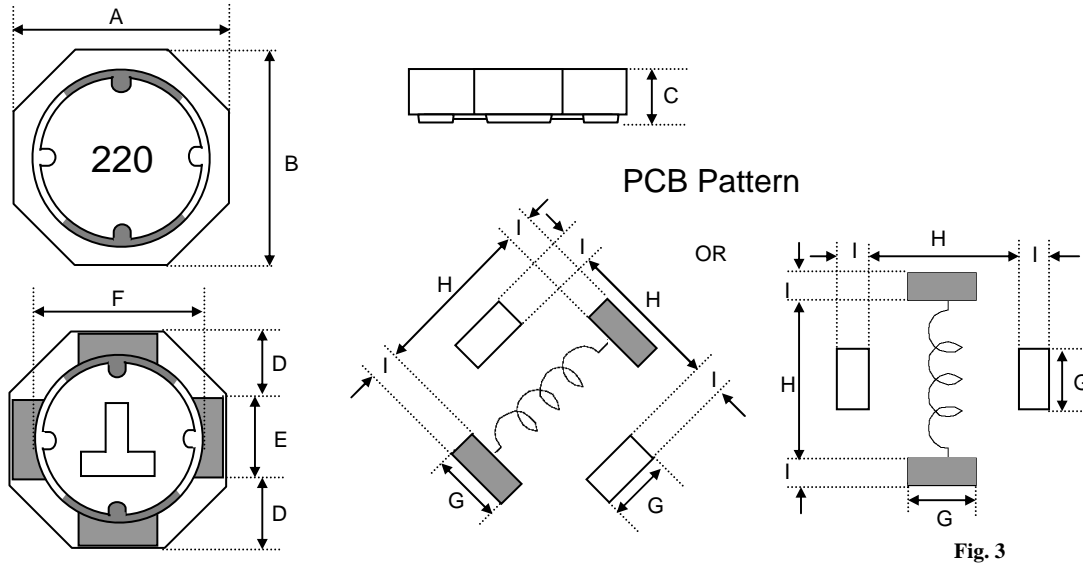


Fig. 3

Codes	A	B	C	D (typ.)	E (typ.)	F (typ.)	G (ref.)	H (ref.)	I (ref.)
SPU1030	10.00±0.30	10.00±0.30	2.80±0.30	3.00	4.00	8.20	4.20	8.20	1.40
SPU1040	10.00±0.30	10.00±0.30	3.80±0.30	3.00	4.00	8.20	4.20	8.20	1.40
SPU1050	10.00±0.30	10.00±0.30	4.80±0.30	3.00	4.00	8.20	4.20	8.20	1.40
SPU1065	10.00±0.30	10.00±0.30	6.60±0.30	3.00	4.00	8.20	4.20	8.20	1.40

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Electrical Characteristics

SPU 1030 / 1040 / 1050 / 1065 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance (mΩ) Max.				Rated DC current (A) Max.							
							I rms				I sat			
			1030	1040	1050	1065	1030	1040	1050	1065	1030	1040	1050	1065
2R8	2.8	N	-	-	-	19.0	-	-	-	6.50	-	-	-	7.50
3R5	3.5	N	27.0	-	-	-	5.00	-	-	-	5.20	-	-	-
3R8	3.8	N	-	18.0	-	-	-	6.60	-	-	-	5.80	-	-
4R2	4.2	N	-	-	-	23.0	-	-	-	5.60	-	-	-	7.00
4R7	4.7	N	32.5	-	19.0	-	4.20	-	5.20	-	4.40	-	5.10	-
5R0	5.0	N	-	23.0	-	-	-	5.20	-	-	-	4.70	-	-
6R2	6.2	N	42.0	28.0	-	-	3.80	4.70	-	-	3.90	4.30	-	-
6R5	6.5	N	-	-	-	35.0	-	-	-	5.00	-	-	-	5.30
100	10.0	N	58.0	42.0	34.0	41.0	3.00	4.40	4.40	4.90	3.10	3.80	3.80	4.00
150	15.0	N	95.0	78.0	-	-	2.60	2.90	-	-	2.55	2.80	-	-
220	22.0	N	145.0	98.0	76.0	73.0	2.00	2.55	2.90	3.80	2.10	2.48	2.70	2.80
330	33.0	N	195.0	140.0	90.0	120.0	1.70	2.05	2.70	2.70	1.74	2.00	2.10	2.40
470	47.0	N	270.0	220.0	130.0	210.0	1.40	1.62	2.10	2.10	1.35	1.56	1.80	2.10
680	68.0	N	370.0	320.0	186.0	250.0	1.20	1.45	1.75	1.85	1.22	1.40	1.45	1.75
101	100.0	N	520.0	415.0	260.0	290.0	1.10	1.18	1.50	1.80	1.02	1.14	1.25	1.40
151	150.0	N	840.0	-	430.0	-	0.85	-	1.15	-	0.84	-	1.05	-
221	220.0	N	-	950.0	610.0	-	-	0.78	0.95	-	-	0.72	0.88	-
331	330.0	N	-	1350.0	900.0	-	-	0.62	0.84	-	-	0.60	0.70	-
471	470.0	N	-	-	1350.0	-	-	-	0.65	-	-	-	0.55	-
681	680.0	N	-	-	1760.0	-	-	-	0.56	-	-	-	0.48	-
102	1000.0	N	-	-	2760.0	-	-	-	0.47	-	-	-	0.40	-

- 1. Test Frequency: 100KHz 0.1V
- 2a). Irms: base on temp. rise 40 Typ.
- 2b). Isat: base on L/LOA = 35% Typ.