



● **FEATURE**

1. Low core loss for high frequency power application
2. Large terminal surface

● **APPLICATION**

1. Portable communication equipment, notebook computer



● **ORDERING INFORMATION**

**WSS1203**

PN

**-1R3**

Inductance

**I**

M: ±20%

● **SHAPE AND DIMENSION PATTERNS(mm)**

● **SCHEMATICS AND LAND**

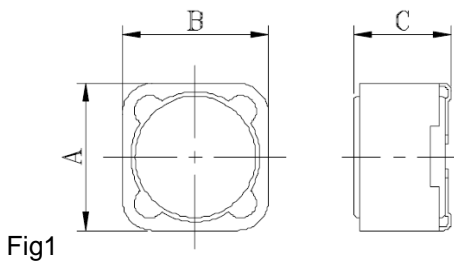


Fig1

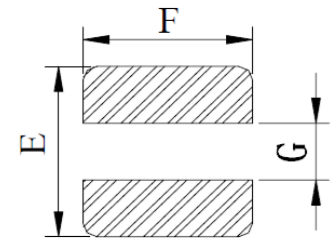
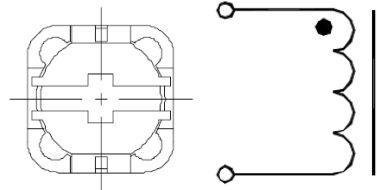
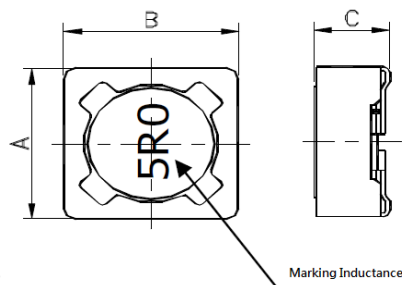
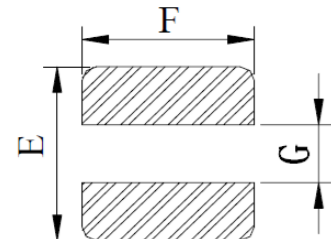
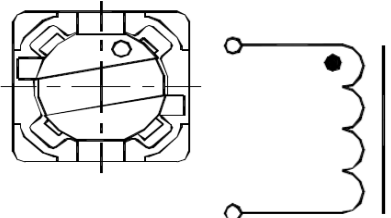


Fig2



Marking Inductance



● **SPECIFICATION**

Dimension in mm

TYPE	A	B	C	E	F	G	Fig
WSS1203	12.0±0.30	12.0±0.30	3.90Max	12.80	5.40	7.00	1
WSS1204	12.0±0.30	12.0±0.30	5.00Max	12.80	5.40	7.00	1
WSS1205	12.0±0.30	12.0±0.30	6.00Max	12.80	5.40	7.00	1
WSS1207	12.0±0.30	12.0±0.30	8.00Max	12.80	5.40	7.00	1
WSS0603	6.60±0.30	6.20±0.30	3.00Max	8.00	1.50	4.80	2
WSS0605	6.60±0.30	6.20±0.30	5.00Max	8.00	1.50	4.80	2
WSS0703	7.30±0.20	7.30±0.20	3.50Max	8.00	2.20	4.80	2
WSS0704	7.30±0.20	7.30±0.20	4.50Max	8.00	2.20	4.80	2

Note1. Measurement frequency of Inductance value : 1.0uH~7.6uH at 7.96MHz, 0.1V, 10uH~1.0mH at 1kHz, 0.1V  
WSS1207:1.2uH~7.6uH at 100kHz, 0.1V

Note2. Measurement ambient temperature of L, DCR and IDC : at 25°C

Note3. The rated current indicates the current when the inductance decreases to 75% over of it's nominal value or D.C. current when the temperature rising Δt=30°C lower, whichever is lower

Note4. Inductance tolerance: M: ±20%



●ELECTRICAL CHARACTERISTICS

PART NUMBER	Inductance (uH)	D.C.R.(ΩMax)/Rated D.C. Current(A)			
		WSS1203	WSS1204	WSS1205	WSS1207
1R3	1.3			0.012 / 8.00	
2R1	2.1			0.014 / 7.00	
2R2	2.2	0.015 / 7.00			
3R1	3.1			0.017 / 6.00	
3R3	3.3		0.015 / 5.20		
3R9	3.9		0.015 / 6.50		
4R4	4.4			0.020 / 5.00	
4R7	4.7		0.018 / 5.70		0.016 / 6.80
5R6	5.6	0.037 / 5.00			
6R8	6.8		0.023 / 4.90	0.022 / 4.30	
7R5	7.5			0.024 / 4.20	
100	10	0.060 / 3.60	0.028 / 4.50	0.025 / 4.00	0.022 / 5.40
120	12		0.038 / 4.00	0.027 / 3.50	0.025 / 4.90
150	15	0.077 / 3.00	0.050 / 3.20	0.030 / 3.30	0.027 / 4.50
180	18		0.057 / 3.10	0.034 / 3.00	0.040 / 3.90
220	22	0.102 / 2.50	0.066 / 2.90	0.036 / 2.80	0.044 / 3.60
270	27		0.080 / 2.80	0.051 / 2.30	0.046 / 3.40
330	33		0.097 / 2.70	0.057 / 2.10	0.065 / 3.00
390	39		0.132 / 2.10	0.068 / 2.00	0.073 / 2.75
470	47		0.150 / 1.90	0.075 / 1.80	0.100 / 2.50
560	56		0.190 / 1.80	0.110 / 1.70	0.110 / 2.35
680	68		0.220 / 1.50	0.120 / 1.50	0.140 / 2.10
820	82		0.260 / 1.30	0.140 / 1.40	0.160 / 1.95
101	100		0.308 / 1.20	0.160 / 1.30	0.220 / 1.70
121	120		0.380 / 1.10	0.170 / 1.10	0.250 / 1.60
151	150		0.530 / 0.95	0.230 / 1.00	0.280 / 1.42
181	180		0.620 / 0.85	0.290 / 0.90	0.350 / 1.30
221	220		0.700 / 0.80	0.400 / 0.80	0.390 / 1.16
271	270		0.876 / 0.60	0.460 / 0.75	0.560 / 1.06
331	330		0.990 / 0.50	0.510 / 0.68	0.640 / 0.95
391	390			0.690 / 0.65	0.700 / 0.88
471	470			0.770 / 0.58	0.980 / 0.79
561	560			0.860 / 0.54	1.070 / 0.73
681	680			1.200 / 0.48	1.460 / 0.67
821	820			1.340 / 0.43	1.640 / 0.60
102	1000			1.530 / 0.40	1.820 / 0.55

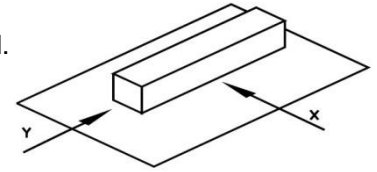


PART NUMBER	Inductance (uH)	D.C.R.(ΩMax)/Rated D.C. Current(A)			
		WSS0603	WSS0605	WSS0703	WSS0704
2R2	2.2			0.025 / 4.32	0.020 / 5.00
3R3	3.3	0.07 / 1.80			0.045 / 3.50
3R9	3.9				
4R2	4.2				
4R7	4.7	0.09 / 1.50		0.055 / 2.00	0.051 / 3.00
5R6	5.6				
6R0	6.0			0.063 / 1.80	
6R8	6.8				
7R0	7.0				
8R2	8.2				
100	10	0.15 / 1.10	0.12 / 1.35	0.072 / 1.68	0.049 / 1.84
120	12	0.20 / 1.00	0.13 / 1.22	0.098 / 1.52	0.058 / 1.71
150	15	0.23 / 0.90	0.18 / 1.11	0.130 / 1.33	0.081 / 1.47
180	18	0.27 / 0.80	0.24 / 1.02	0.140 / 1.20	0.091 / 1.31
220	22	0.34 / 0.74	0.27 / 0.91	0.190 / 1.07	0.110 / 1.23
270	27	0.38 / 0.66	0.30 / 0.82	0.210 / 0.96	0.150 / 1.12
330	33	0.45 / 0.59	0.33 / 0.74	0.240 / 0.91	0.170 / 0.96
390	39	0.49 / 0.54	0.37 / 0.69	0.320 / 0.77	0.230 / 0.91
470	47	0.69 / 0.50	0.52 / 0.62	0.360 / 0.46	0.260 / 0.88
560	56	0.78 / 0.46	0.56 / 0.58	0.470 / 0.68	0.350 / 0.75
680	68	1.07 / 0.42	0.63 / 0.51	0.520 / 0.61	0.380 / 0.69
820	82	1.21 / 0.38	0.71 / 0.46	0.690 / 0.57	0.430 / 0.61
101	100	1.39 / 0.34	1.03 / 0.42	0.790 / 0.50	0.610 / 0.60
121	120	1.90 / 0.31	1.15 / 0.38	0.890 / 0.49	0.660 / 0.52
151	150	2.18 / 0.28	1.68 / 0.35	1.270 / 0.43	0.880 / 0.46
181	180	2.77 / 0.26	1.87 / 0.32	1.450 / 0.39	0.980 / 0.42
221	220	3.12 / 0.23	2.08 / 0.29	1.650 / 0.35	1.170 / 0.36
271	270	4.38 / 0.22	2.37 / 0.26	2.310 / 0.32	1.640 / 0.34
331	330	4.94 / 0.19	2.67 / 0.23	2.620 / 0.28	1.860 / 0.32
391	390		2.94 / 0.22	2.940 / 0.26	2.850 / 0.29
471	470		3.93 / 0.20	4.180 / 0.24	3.010 / 0.26
561	560		5.43 / 0.18	4.670 / 0.22	3.620 / 0.23
681	680		7.32 / 0.17	5.730 / 0.19	4.630 / 0.22
821	820		8.24 / 0.15	6.540 / 0.18	5.200 / 0.20
102	1000		9.26 / 0.14	9.440 / 0.16	6.000 / 0.18

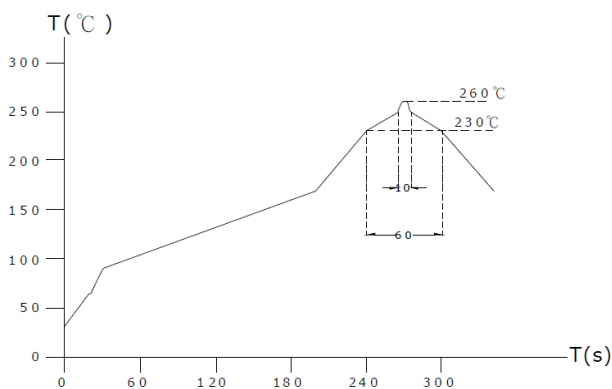


●GENERAL CHARACTERISTICS

1. Operating temperature range: -40 TO + 85°C (Includes temperature when the coil is heated)
2. External appearance: On visual inspection, the coil has external defects.
3. Terminal strength: After soldering. Between copper plate and terminals of coil.  
Push in two directions of X.Y withstanding at below conditions.  
Terminal should not peel off. (refer to figure at right) 0.5kg
4. Insulating resistance: Over 100MΩ at 100V D.C. between coil and core.
5. Dielectric strength: No dielectric breakdown at 100V D.C. for 1 minute between coil and core.
6. Temperature characteristics: Inductance coefficient  $(0\sim 2,000)\times 10^{-6}/^{\circ}\text{C}$  (-25~+80°C).
7. Humidity characteristics(Moisture Resistance): Inductance deviation within  $\pm 5\%$ , after 96 hours in 90~95% relative humidity at  $40 \pm 2^{\circ}\text{C}$  and 1 hour drying under normal condition.
8. Vibration resistance: Inductance deviation within  $\pm 5\%$ , after vibration for 1 hour. In each of three orientations at sweep vibration (10~55~10 Hz) with 1.5mm P-P amplitudes.
9. Shock resistance: Inductance deviation within  $\pm 5\%$ , after being dropped once with 981m/s<sup>2</sup> (100G) shock attitude upon a rubber block method shock testing machine, in three different orientations.
10. Resistance to Soldering Heat: 260°C, 10 seconds.
11. Storage environment  
Storage condition:  
Temperature Range: 10°C ~ 35°C (Generally: 21°C ~ 31°C)  
Humidity Range: 50% ~ 80% RH (Generally: 65% ~ 75%)  
Transportation condition:  
Temperature Range: -35°C ~ 85°C, Humidity Range: 50% ~ 95% RH
12. Use components within 6 months. If 6 months or more have elapsed, check solderability before use.
13. Reflow profile recommend:



Lead - free heat endurance test



Lead-free the recommended reflow condition

