

TSP TYPE

SMD POWER INDUCTOR

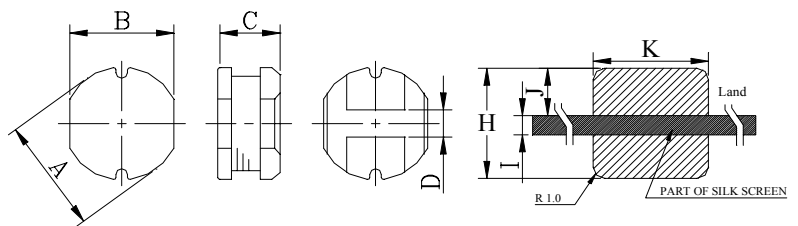


FEATURE:

- Excellent solderability and high heat resistance.
- High current capacity.
- Ferrite bobbin core and compact size.
- Low core loss for high frequency power application.
- Large terminal surface for good PCB bonding.

SHAPES&DIMENSION:

Unit:mm

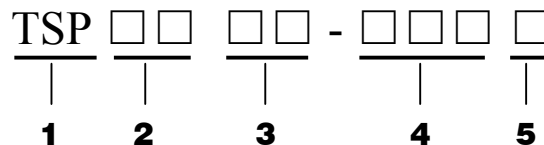


APPLICATION

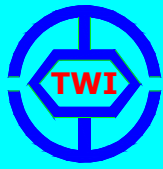
- DC/DC converter
- Camcorder
- LCD TV
- MP3-player
- Digital camera
- G.P.S
- Portable CDR-W
- PDA(desktop)

Part No.	A	B	C	D	H	I	J	K
TSP 0302	$\Phi 3.50 \pm 0.20$	3.10 ± 0.20	2.20 ± 0.20	1.0	3.6	1.2	1.2	3.5
TSP 0403	$\Phi 4.50 \pm 0.30$	4.00 ± 0.30	3.20 ± 0.30	1.3	5.0	1.5	1.5	4.5
TSP 0502	$\Phi 5.80 \pm 0.30$	5.20 ± 0.30	2.00 ± 0.20	1.3	6.0	1.7	2.15	5.5
TSP 0504	$\Phi 5.80 \pm 0.30$	5.20 ± 0.30	4.50 ± 0.35	1.3	6.0	1.7	2.15	5.5
TSP 0703	$\Phi 7.80 \pm 0.30$	7.00 ± 0.30	3.50 ± 0.50	2.1	8.0	2.0	3.0	7.5
TSP 0705	$\Phi 7.80 \pm 0.30$	7.00 ± 0.30	5.00 ± 0.50	2.1	8.0	2.0	3.0	7.5
TSP 1004	$\Phi 10.0 \pm 0.30$	9.00 ± 0.30	4.00 ± 0.50	2.1	10.0	2.5	3.75	9.5
TSP 1005	$\Phi 10.0 \pm 0.40$	9.00 ± 0.40	5.40 ± 0.40	2.1	10.0	2.5	3.75	9.5
TSP 1006	$\Phi 11.0 \text{MAX}$	10.0MAX	7.5MAX	2.1	10.0	2.5	3.75	9.5
TSP 1008	$\Phi 11.0 \text{MAX}$	10.0MAX	8.5MAX	2.1	10.0	2.5	3.75	9.5

PART NUMBERING SYSTEM:



- 1) PRODUCT SYMBOL
- 2) OUTSIDE DIA :m/m
- 3) BODY HEIGHT :m/m
- 4) INDUCTANCE : μH
- 5) TOLERANCE :K 10%, L 15%, M 20%

**TSP TYPE****SMD POWER INDUCTOR****STANDARD SPECIFICATION**

Part Inductance		DCR(Ω)Max.										Rated D.C. Current(A)Max.										
No.	L(μH)	TSP 0302	TSP 0403	TSP 0502	TSP 0504	TSP 0703	TSP 0705	TSP 1004	TSP 1005	TSP 1006	TSP 1008	TSP 0302	TSP 0403	TSP 0502	TSP 0504	TSP 0703	TSP 0705	TSP 1004	TSP 1005	TSP 1006	TSP 1008	
1R0	1.0		0.049			0.023						2.56			3.47							
1R4	1.4		0.057									2.52										
1R8	1.8		0.064									1.95										
2R2	2.2		0.072			0.034						1.75			3.18							
2R7	2.7		0.079									1.58										
3R3	3.3	0.131	0.087	0.088		0.036						1.50	1.44	2.40		2.89						
3R9	3.9		0.094									1.33										
4R7	4.7	0.158	0.109	0.130		0.048						1.30	1.15	2.10		2.60						
5R6	5.6		0.126			0.054						0.99			2.31							
6R8	6.8	0.188	0.132	0.166		0.060						1.10	0.95	1.70		2.02						
8R2	8.2		0.147			0.071						0.84			1.73							
100	10	0.341	0.182	0.223	0.100	0.081	0.070	0.053	0.060	0.060	0.036	1.00	1.04	1.35	1.44	1.44	2.30	2.38	2.60	3.50	4.05	
120	12		0.210		0.120	0.090	0.080	0.061	0.070	0.070	0.038	0.97		1.40	1.39	2.00	2.13	2.45	3.40	3.60		
150	15	0.460	0.235	0.335	0.140	0.104	0.090	0.070	0.080	0.080	0.040	0.90	0.85	0.90	1.30	1.24	1.80	1.87	2.27	3.10	3.34	
180	18		0.338		0.150	0.111	0.100	0.081	0.090	0.090	0.050	0.74		1.23	1.12	1.60	1.73	2.15	3.00	3.05		
220	22	0.685	0.378	0.499	0.180	0.129	0.110	0.088	0.100	0.100	0.060	0.75	0.68	0.75	1.11	1.07	1.50	1.60	1.95	2.60	2.80	
270	27	0.912	0.522	0.564	0.200	0.153	0.120	0.100	0.110	0.110	0.070	0.70	0.62	0.62	0.97	0.94	1.30	1.44	1.76	2.40	2.50	
330	33	0.951	0.540	0.659	0.230	0.170	0.130	0.120	0.120	0.120	0.080	0.60	0.56	0.56	0.88	0.85	1.20	1.26	1.50	2.30	2.40	
390	39		0.587		0.320	0.217	0.160	0.151	0.140	0.140	0.090	0.52		0.80	0.74	1.10	1.20	1.37	2.10	2.20		
470	47	1.582	0.844	0.920	0.370	0.252	0.180	0.170	0.170	0.170	0.110	0.45	0.44	0.48	0.72	0.68	1.10	1.10	1.28	1.95	2.00	
560	56		0.937		0.420	0.282	0.240	0.199	0.190	0.190	0.120	0.42		0.68	0.64	0.94	1.01	1.17	1.85	1.90		
680	68	2.033	1.117	1.264	0.460	0.332	0.280	0.223	0.220	0.220	0.150	0.30	0.37	0.37	0.61	0.59	0.85	0.91	1.11	1.65	1.80	
820	82	2.319		1.469	0.600	0.406	0.370	0.252	0.250	0.250	0.190	0.20		0.27	0.58	0.54	0.78	0.85	1.00	1.50	1.60	
101	100	2.558		1.697	0.700	0.481	0.430	0.344	0.350	0.350	0.230	0.10		0.20	0.52	0.51	0.72	0.74	0.97	1.40	1.50	
121	120				0.930	0.536	0.470	0.396	0.400	0.400	0.320				0.48	0.49	0.66	0.69	0.89	1.30	1.40	
151	150	4.303		2.912	1.100	0.755	0.640	0.544	0.470	0.470	0.370	0.08		0.17	0.40	0.40	0.58	0.61	0.78	1.20	1.30	
181	180				1.380	1.022	0.710	0.621	0.630	0.630	0.420				0.38	0.36	0.51	0.56	0.72	1.00	1.20	
221	220	6.669		4.706	1.570	1.200	0.960	0.721	0.730	0.730	0.440	0.07		0.15	0.35	0.31	0.49	0.53	0.66	0.95	1.00	
271	270					1.306	1.110	0.949	0.970	0.970	0.550					0.29	0.42	0.45	0.57	0.90	0.95	
331	330	8.684		7.306		1.495	1.260	1.100	1.150	1.150	0.600	0.06		0.10		0.28	0.40	0.42	0.52	0.80	0.90	
391	390						1.770	1.245	1.300	1.300	0.670						0.36	0.38	0.48	0.75	0.80	
471	470	13.091		9.282			1.960	1.526	1.480	1.480	0.880	0.06		0.10			0.34	0.35	0.42	0.65	0.70	
561	560							1.904	1.900	1.900	1.040							0.32	0.33	0.60	0.65	
681	680	17.095		14.04					2.250	2.250	1.180	0.06		0.10					0.28	0.50	0.60	
821	820								2.550	2.550	1.380								0.24	0.48	0.50	
102	1000									3.000	1.740									0.46	0.48	

1.Test Freq.(L)

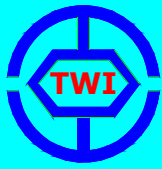
1.0~8.2μH(7.96MHz/0.25V);10~82μH(2.52MHz/0.25V);100~1000μH(1KHz/0.25V);TSP1006,1008(1KHz/0.25V)

2.Tolerance of Inductance

- TSP 0302 3.3~680μH±20%(M)
- TSP 0403 1.0~27μH±20%(M)33~680μH±10%(K)
- TSP 0502 3.3~27μH±20%(M)33~680μH±10%(K)
- TSP 0504 10.0~27μH±20%(M)33~47μH±15%(L)47~220μH±10%(K)
- TSP 0703 1.0~47μH±20%(M)47~330μH±10%(K)
- TSP 0705 1.0~470μH±20%(M)
- TSP 1004 10.0~47μH±20%(M)56~560μH±10%(K)
- TSP 1005 10.0~39μH±20%(M)47~820μH±10%(K)
- TSP 1006 10.0~82μH±20%(M)100~1000μH±10%(K)
- TSP 1008 10.0~82μH±20%(M)100~1000μH±10%(K)

3.Operating temperature-30°C to +100°C.

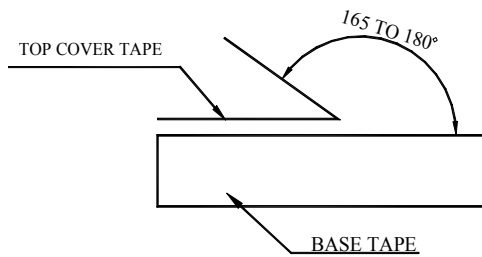
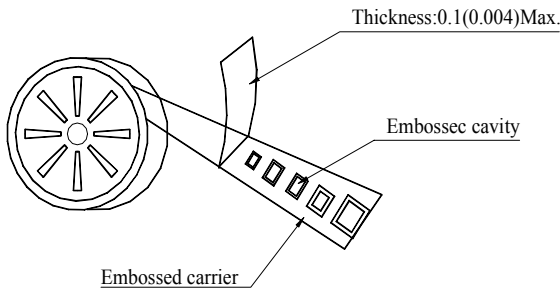
4.Current to cause maximum 10% of inductance drop, or 40°C temperature rise.



TSP TYPE

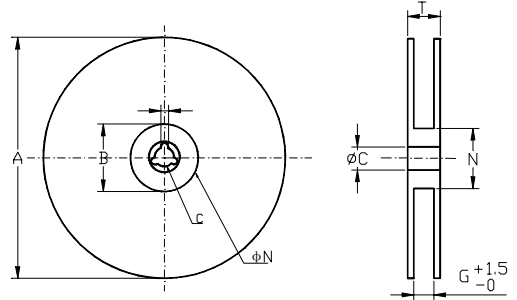
SMD POWER INDUCTOR

PACKAGING FOR SMC



The force for tearing off cover tape is 10 to 60 grams in the arrow direction.

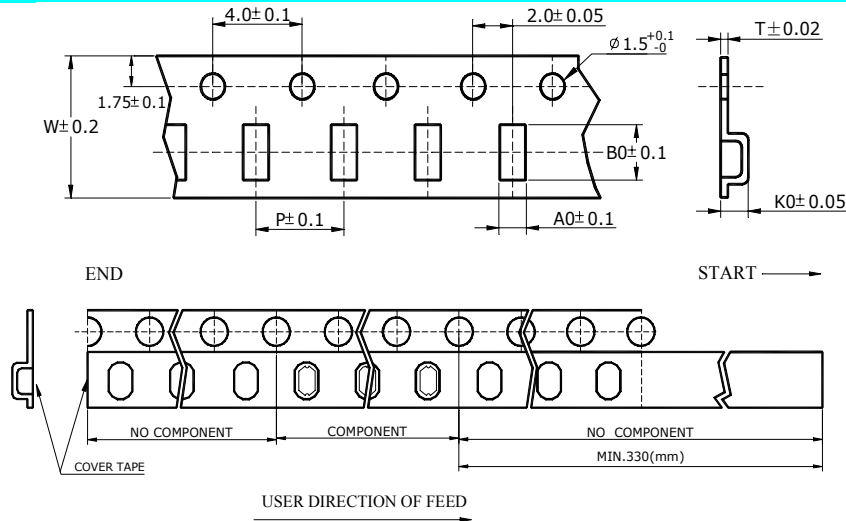
CARRIER TAPE REELS



MATERIAL: PAPER/PLASTIC Dimension in mm

TYPE	A	B	C	G	N	T
8mm	178	21.0±0.8	13.0±0.2	8.4	55	12.4
12mm	178	21.0±0.8	13.0±0.2	12.4	55	16.4
16mm	178	21.0±0.8	13.0±0.2	16.4	55	20.4
24mm	178	21.0±0.8	13.0±0.2	24.4	100	28.4
12mm	330	21.0±0.8	13.0±0.2	12.4	100	16.4
16mm	330	21.0±0.8	13.0±0.2	16.4	100	20.4
24mm	330	21.0±0.8	13.0±0.2	24.4	100	28.4
24mm	330	21.0±0.8	13.0±0.2	24.4	75	28.4
32mm	330	21.0±0.8	13.0±0.2	32.4	75	36.4

TAPE DIMENSION/PACKAGING



TYPE	A0	B0	K0	W	P	T	CHIPS/REEL
TSP0302	2.95	3.20	2.70	12.00	8.00	0.30	3000
TSP0403	4.40	5.05	3.60	12.00	8.00	0.30	1500
TSP0502	5.60	6.20	2.80	12.00	8.00	0.40	1500
TSP0504	5.50	6.10	5.00	16.00	12.00	0.30	1000
TSP0703	7.20	8.00	3.80	16.00	12.00	0.30	1000
TSP0705	7.20	8.10	5.50	16.00	12.00	0.40	1000
TSP1004	9.40	10.40	4.50	24.00	12.00	0.40	1000
TSP1005	9.50	10.40	5.80	24.00	16.00	0.40	500
TSP1006	9.50	10.50	7.20	24.00	16.00	0.40	500
TSP1008	9.60	10.50	8.70	24.00	20.00	0.40	400

Dimension in mm