

# On-Board Type Coils / Chip Inductors



## SMD Type Power Inductors TP Series

### TP Series

Unshielded Power Inductors.



#### ■ Features

1. Surface mount inductor with high current rating.
2. Low resistance to keep power loss minimum.
3. The products contain no lead and also support lead-free soldering.

#### ■ Applications

Excellent for power line DC-DC conversion applications used in hard disk, notebook computers and other electronic equipment.

#### ■ Lead Free Part Numbering

TP 0705 F - 220 M

A B C D E

A : Series  
 B : Dimension A x C  
 C : Lead Free Code  
 D : Inductance 220=22uH  
 E : Inductance Tolerance K=±10% M=±20%

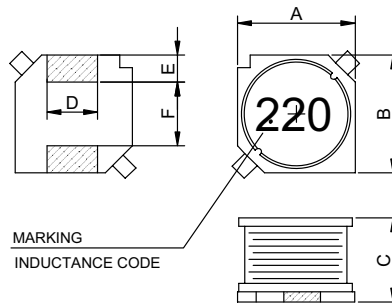
#### ● 特徵

1. 表面黏著型式且具高額定電流之電感。
2. 低電阻使功率損失降至最低。
3. 產品無鉛適合無鉛錫。

#### ● 應用

適合於硬式磁碟機、筆記型電腦和其他電子設備中電源線路上直流對直流整流的應用。

#### ■ Dimensions



Series	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)
TP 0603	6.0±0.3	6.0±0.3	2.9±0.3	2.0±0.2	1.5±0.2	3.0±0.2
TP 0604	6.0±0.3	6.0±0.3	3.9±0.3	2.0±0.2	1.5±0.2	3.0±0.2
TP 0605	6.0±0.3	6.0±0.3	4.9±0.3	2.0±0.2	1.5±0.2	3.0±0.2
TP 0703	7.0±0.3	7.0±0.3	3.0±0.3	2.0±0.2	1.5±0.2	4.0±0.2
TP 0705	7.0±0.3	7.0±0.3	4.6±0.3	2.0±0.2	1.5±0.2	4.0±0.2
TP 1003	10±0.3	10±0.3	3.0±0.3	2.4±0.2	2.0±0.2	6.0±0.2
TP 1004	10±0.3	10±0.3	4.6±0.3	2.4±0.2	2.0±0.2	6.0±0.2

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■ TP 0603 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0603-1R2M	1.2±20%	1V/100K	0.025	2.80
TP 0603-1R5M	1.5±20%	1V/100K	0.028	2.60
TP 0603-2R2M	2.2±20%	1V/100K	0.030	2.30
TP 0603-3R3M	3.3±20%	1V/100K	0.055	2.00
TP 0603-4R7M	4.7±20%	1V/100K	0.065	1.85
TP 0603-6R8M	6.8±20%	1V/100K	0.090	1.65
TP 0603-100M	10±20%	1V/100K	0.115	1.45
TP 0603-120M	12±20%	1V/100K	0.150	1.20
TP 0603-150M	15±20%	1V/100K	0.180	1.15
TP 0603-180M	18±20%	1V/100K	0.230	1.05
TP 0603-220M	22±20%	1V/100K	0.250	1.00
TP 0603-270M	27±20%	1V/100K	0.350	0.95
TP 0603-330K	33±10%	1V/100K	0.380	0.90
TP 0603-390K	39±10%	1V/100K	0.410	0.80
TP 0603-470K	47±10%	1V/100K	0.430	0.75
TP 0603-560K	56±10%	1V/100K	0.620	0.70
TP 0603-680K	68±10%	1V/100K	0.710	0.60
TP 0603-820K	82±10%	1V/100K	0.730	0.50
TP 0603-101K	100±10%	1V/100K	1.050	0.48
TP 0603-121K	120±10%	1V/100K	1.180	0.45
TP 0603-151K	150±10%	1V/100K	1.800	0.40
TP 0603-181K	180±10%	1V/100K	1.950	0.35
TP 0603-221K	220±10%	1V/100K	2.960	0.30
TP 0603-271K	270±10%	1V/100K	3.450	0.28
TP 0603-331K	330±10%	1V/100K	3.800	0.26
TP 0603-391K	390±10%	1V/100K	4.000	0.24
TP 0603-471K	470±10%	1V/100K	4.400	0.22
TP 0603-561K	560±10%	1V/100K	6.200	0.20
TP 0603-681K	680±10%	1V/100K	6.800	0.18
TP 0603-821K	820±10%	1V/100K	12.00	0.16
TP 0603-102K	1000±10%	1V/100K	13.50	0.14

■ TP 0604 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0604-1R2M	1.2±20%	1V/100K	0.025	3.00
TP 0604-1R8M	1.8±20%	1V/100K	0.030	2.85
TP 0604-2R2M	2.2±20%	1V/100K	0.035	2.65
TP 0604-3R3M	3.3±20%	1V/100K	0.040	2.35
TP 0604-4R7M	4.7±20%	1V/100K	0.045	2.15
TP 0604-6R8M	6.8±20%	1V/100K	0.060	1.85
TP 0604-100M	10±20%	1V/100K	0.085	1.60
TP 0604-120M	12±20%	1V/100K	0.090	1.50
TP 0604-150M	15±20%	1V/100K	0.110	1.45
TP 0604-180M	18±20%	1V/100K	0.120	1.30
TP 0604-220M	22±20%	1V/100K	0.160	1.25
TP 0604-270M	27±20%	1V/100K	0.190	1.10
TP 0604-330K	33±10%	1V/100K	0.280	1.00
TP 0604-390K	39±10%	1V/100K	0.300	0.90
TP 0604-470K	47±10%	1V/100K	0.330	0.85

Note:1.Inductance measured by LCR Meter HP 4294/HP4291  
2.DCR measured by Milliohm meter CH502AC

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#### ■ TP 0604 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0604-560K	56±10%	1V/100K	0.410	0.80
TP 0604-680K	68±10%	1V/100K	0.450	0.70
TP 0604-820K	82±10%	1V/100K	0.600	0.60
TP 0604-101K	100±10%	1V/100K	0.660	0.55
TP 0604-121K	120±10%	1V/100K	0.720	0.50
TP 0604-151K	150±10%	1V/100K	1.050	0.45
TP 0604-181K	180±10%	1V/100K	1.150	0.40
TP 0604-221K	220±10%	1V/100K	1.250	0.35
TP 0604-271K	270±10%	1V/100K	1.800	0.30
TP 0604-331K	330±10%	1V/100K	1.950	0.28
TP 0604-391K	390±10%	1V/100K	2.780	0.25
TP 0604-471K	470±10%	1V/100K	2.980	0.23
TP 0604-561K	560±10%	1V/100K	3.300	0.21
TP 0604-681K	680±10%	1V/100K	5.100	0.20
TP 0604-821K	820±10%	1V/100K	5.400	0.18
TP 0604-102K	1000±10%	1V/100K	6.000	0.16

#### ■ TP 0605 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0605-1R2M	1.2±20%	1V/100K	0.028	3.50
TP 0605-1R5M	1.5±20%	1V/100K	0.030	3.00
TP 0605-2R2M	2.2±20%	1V/100K	0.035	2.70
TP 0605-3R3M	3.3±20%	1V/100K	0.042	2.50
TP 0605-4R7M	4.7±20%	1V/100K	0.050	2.20
TP 0605-6R8M	6.8±20%	1V/100K	0.060	2.00
TP 0605-100M	10±20%	1V/100K	0.070	1.80
TP 0605-120M	12±20%	1V/100K	0.080	1.60
TP 0605-150M	15±20%	1V/100K	0.090	1.50
TP 0605-180M	18±20%	1V/100K	0.095	1.30
TP 0605-220M	22±20%	1V/100K	0.110	1.20
TP 0605-270M	27±20%	1V/100K	0.130	1.10
TP 0605-330K	33±10%	1V/100K	0.180	1.00
TP 0605-390K	39±10%	1V/100K	0.210	0.90
TP 0605-470K	47±10%	1V/100K	0.220	0.80
TP 0605-560K	56±10%	1V/100K	0.250	0.75
TP 0605-680K	68±10%	1V/100K	0.300	0.70
TP 0605-820K	82±10%	1V/100K	0.390	0.60
TP 0605-101K	100±10%	1V/100K	0.430	0.55
TP 0605-121K	120±10%	1V/100K	0.500	0.50
TP 0605-151K	150±10%	1V/100K	0.620	0.45
TP 0605-181K	180±10%	1V/100K	0.690	0.40
TP 0605-221K	220±10%	1V/100K	0.890	0.38
TP 0605-271K	270±10%	1V/100K	1.000	0.35
TP 0605-331K	330±10%	1V/100K	1.400	0.32
TP 0605-391K	390±10%	1V/100K	1.500	0.30
TP 0605-471K	470±10%	1V/100K	2.000	0.28
TP 0605-561K	560±10%	1V/100K	2.300	0.25
TP 0605-681K	680±10%	1V/100K	3.200	0.20
TP 0605-821K	820±10%	1V/100K	3.500	0.18
TP 0605-102K	1000±10%	1V/100K	4.100	0.16

Note:1.Inductance measured by LCR Meter HP 4294/HP4291

2.DCR measured by Milliohm meter CH502AC

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■ TP 0703 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0703-1R0M	1.0±20%	1V/100K	0.020	3.20
TP 0703-1R5M	1.5±20%	1V/100K	0.025	2.80
TP 0703-2R2M	2.2±20%	1V/100K	0.035	2.50
TP 0703-3R3M	3.3±20%	1V/100K	0.040	2.20
TP 0703-4R7M	4.7±20%	1V/100K	0.045	2.00
TP 0703-6R8M	6.8±20%	1V/100K	0.060	1.60
TP 0703-100M	10±20%	1V/100K	0.080	1.40
TP 0703-120M	12±20%	1V/100K	0.085	1.30
TP 0703-150L	15±15%	1V/100K	0.110	1.10
TP 0703-180L	18±15%	1V/100K	0.130	1.05
TP 0703-220L	22±15%	1V/100K	0.150	1.00
TP 0703-270L	27±15%	1V/100K	0.190	0.95
TP 0703-330L	33±15%	1V/100K	0.210	0.85
TP 0703-390L	39±15%	1V/100K	0.270	0.75
TP 0703-470L	47±15%	1V/100K	0.310	0.70
TP 0703-560K	56±10%	1V/100K	0.390	0.65
TP 0703-680K	68±10%	1V/100K	0.430	0.60
TP 0703-820K	82±10%	1V/100K	0.490	0.50
TP 0703-101K	100±10%	1V/100K	0.650	0.45
TP 0703-121K	120±10%	1V/100K	0.700	0.40
TP 0703-151K	150±10%	1V/100K	0.850	0.35
TP 0703-181K	180±10%	1V/100K	1.100	0.33
TP 0703-221K	220±10%	1V/100K	1.250	0.30
TP 0703-271K	270±10%	1V/100K	1.450	0.28
TP 0703-331K	330±10%	1V/100K	2.000	0.25
TP 0703-391K	390±10%	1V/100K	2.250	0.23
TP 0703-471K	470±10%	1V/100K	2.600	0.22
TP 0703-561K	560±10%	1V/100K	3.700	0.20
TP 0703-681K	680±10%	1V/100K	4.300	0.18
TP 0703-821K	820±10%	1V/100K	4.900	0.16
TP 0703-102K	1000±10%	1V/100K	5.600	0.15

■ TP 0705 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0705-1R0M	1.0±20%	1V/100K	0.023	3.50
TP 0705-1R5M	1.5±20%	1V/100K	0.028	3.20
TP 0705-2R2M	2.2±20%	1V/100K	0.033	3.30
TP 0705-3R3M	3.3±20%	1V/100K	0.040	2.70
TP 0705-4R7M	4.7±20%	1V/100K	0.050	2.50
TP 0705-6R8M	6.8±20%	1V/100K	0.060	2.20
TP 0705-100M	10±20%	1V/100K	0.075	2.00
TP 0705-120M	12±20%	1V/100K	0.085	1.90
TP 0705-150L	15±15%	1V/100K	0.090	1.50
TP 0705-180L	18±15%	1V/100K	0.100	1.40
TP 0705-220L	22±15%	1V/100K	0.120	1.30
TP 0705-270L	27±15%	1V/100K	0.150	1.20
TP 0705-330L	33±15%	1V/100K	0.180	1.10
TP 0705-390L	39±15%	1V/100K	0.190	1.00
TP 0705-470L	47±15%	1V/100K	0.220	0.90

Note:1.Inductance measured by LCR Meter HP 4294/HP4291

2.DCR measured by Milliohm meter CH502AC

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#### ■ TP 0705 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 0705-560K	56 $\pm$ 10%	1V/100K	0.25	0.85
TP 0705-680K	68 $\pm$ 10%	1V/100K	0.270	0.80
TP 0705-820K	82 $\pm$ 10%	1V/100K	0.380	0.70
TP 0705-101K	100 $\pm$ 10%	1V/100K	0.420	0.65
TP 0705-121K	120 $\pm$ 10%	1V/100K	0.520	0.60
TP 0705-151K	150 $\pm$ 10%	1V/100K	0.580	0.50
TP 0705-181K	180 $\pm$ 10%	1V/100K	0.650	0.45
TP 0705-221K	220 $\pm$ 10%	1V/100K	0.880	0.40
TP 0705-271K	270 $\pm$ 10%	1V/100K	0.990	0.35
TP 0705-331K	330 $\pm$ 10%	1V/100K	1.100	0.32
TP 0705-391K	390 $\pm$ 10%	1V/100K	1.400	0.30
TP 0705-471K	470 $\pm$ 10%	1V/100K	1.900	0.28
TP 0705-561K	560 $\pm$ 10%	1V/100K	2.200	0.25
TP 0705-681K	680 $\pm$ 10%	1V/100K	2.500	0.22
TP 0705-821K	820 $\pm$ 10%	1V/100K	2.900	0.20
TP 0705-102K	1000 $\pm$ 10%	1V/100K	4.000	0.18

#### ■ TP 1003 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 1003-1R8M	1.8 $\pm$ 20%	1V/100K	0.027	4.00
TP 1003-2R7M	2.7 $\pm$ 20%	1V/100K	0.030	3.65
TP 1003-3R9M	3.9 $\pm$ 20%	1V/100K	0.035	3.15
TP 1003-4R7M	4.7 $\pm$ 20%	1V/100K	0.040	3.00
TP 1003-6R8M	6.8 $\pm$ 20%	1V/100K	0.050	2.35
TP 1003-100M	10 $\pm$ 20%	1V/100K	0.060	2.20
TP 1003-120M	12 $\pm$ 20%	1V/100K	0.080	2.00
TP 1003-150M	15 $\pm$ 20%	1V/100K	0.100	1.75
TP 1003-180L	18 $\pm$ 15%	1V/100K	0.110	1.70
TP 1003-220L	22 $\pm$ 15%	1V/100K	0.140	1.60
TP 1003-270L	27 $\pm$ 15%	1V/100K	0.160	1.40
TP 1003-330L	33 $\pm$ 15%	1V/100K	0.210	1.20
TP 1003-390L	39 $\pm$ 15%	1V/100K	0.235	1.10
TP 1003-470L	47 $\pm$ 15%	1V/100K	0.280	1.00
TP 1003-560L	56 $\pm$ 15%	1V/100K	0.320	0.90
TP 1003-680L	68 $\pm$ 15%	1V/100K	0.370	0.85
TP 1003-820L	82 $\pm$ 15%	1V/100K	0.430	0.74
TP 1003-101K	100 $\pm$ 10%	1V/100K	0.560	0.70
TP 1003-121K	120 $\pm$ 10%	1V/100K	0.640	0.60
TP 1003-151K	150 $\pm$ 10%	1V/100K	0.730	0.55
TP 1003-181K	180 $\pm$ 10%	1V/100K	0.960	0.50
TP 1003-221K	220 $\pm$ 10%	1V/100K	1.100	0.48
TP 1003-271K	270 $\pm$ 10%	1V/100K	1.240	0.45
TP 1003-331K	330 $\pm$ 10%	1V/100K	1.640	0.38
TP 1003-391K	390 $\pm$ 10%	1V/100K	1.790	0.35
TP 1003-471K	470 $\pm$ 10%	1V/100K	2.050	0.30
TP 1003-561K	560 $\pm$ 10%	1V/100K	2.890	0.29
TP 1003-681K	680 $\pm$ 10%	1V/100K	3.240	0.27
TP 1003-821K	820 $\pm$ 10%	1V/100K	3.700	0.25
TP 1003-102K	1000 $\pm$ 10%	1V/100K	7.000	0.24

Note:1. Inductance measured by LCR Meter HP 4294/HP4291

2. DCR measured by Milliohm meter CH502AC

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■ TP 1004 Series

Part Number	Inductance (uH)	Test Frequency (Hz)	DCR ( $\Omega$ ) max.	IDC (A)max.
TP 1004-1R8M	1.8±20%	1V/100K	0.023	5.50
TP 1004-2R7M	2.7±20%	1V/100K	0.025	5.00
TP 1004-3R9M	3.9±20%	1V/100K	0.030	4.50
TP 1004-4R7M	4.7±20%	1V/100K	0.035	4.00
TP 1004-6R8M	6.8±20%	1V/100K	0.040	3.80
TP 1004-100M	10±20%	1V/100K	0.050	3.30
TP 1004-120M	12±20%	1V/100K	0.055	3.20
TP 1004-150M	15±20%	1V/100K	0.065	3.00
TP 1004-180L	18±15%	1V/100K	0.070	2.70
TP 1004-220L	22±15%	1V/100K	0.080	2.60
TP 1004-270L	27±15%	1V/100K	0.090	2.40
TP 1004-330L	33±15%	1V/100K	0.110	2.00
TP 1004-390L	39±15%	1V/100K	0.120	1.90
TP 1004-470L	47±15%	1V/100K	0.130	1.80
TP 1004-560L	56±15%	1V/100K	0.180	1.60
TP 1004-680L	68±15%	1V/100K	0.210	1.40
TP 1004-820L	82±15%	1V/100K	0.240	1.30
TP 1004-101K	100±10%	1V/100K	0.290	1.20
TP 1004-121K	120±10%	1V/100K	0.340	1.10
TP 1004-151K	150±10%	1V/100K	0.470	1.00
TP 1004-181K	180±10%	1V/100K	0.530	0.90
TP 1004-221K	220±10%	1V/100K	0.730	0.80
TP 1004-271K	270±10%	1V/100K	0.830	0.70
TP 1004-331K	330±10%	1V/100K	0.990	0.65
TP 1004-391K	390±10%	1V/100K	1.100	0.60
TP 1004-471K	470±10%	1V/100K	1.250	0.55
TP 1004-561K	560±10%	1V/100K	1.600	0.50
TP 1004-681K	680±10%	1V/100K	1.800	0.45
TP 1004-821K	820±10%	1V/100K	2.060	0.40
TP 1004-102K	1000±10%	1V/100K	2.800	0.38

Note:1.Inductance measured by LCR Meter HP 4294/HP4291

2.DCR measured by Milliohm meter CH502AC