



# SMD Power Inductors

## Unshielded Power Inductors - TC32/43/52/53/54/73/75/104/105 Series / 开放式功率电感

### ► Unshielded Inductor Features

Open Magnetic circuit construction

Compact and thin

The electrode with ferrite core directly, Good for high mounting density.

### ► Applications

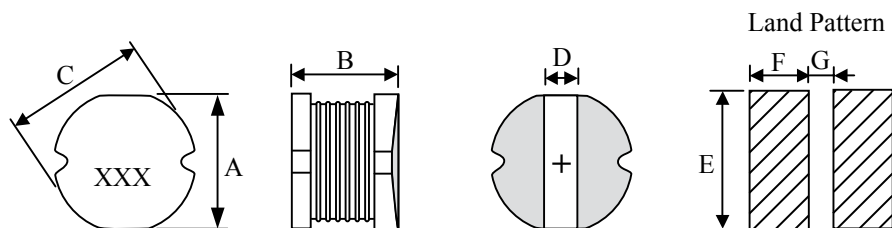
VTR, OA equipment, LCD television set, Notebook, portable communication equipments, DC/DC converters, etc..

### ► Unshielded Inductor Dimensions & Configurations (Unit In mm)

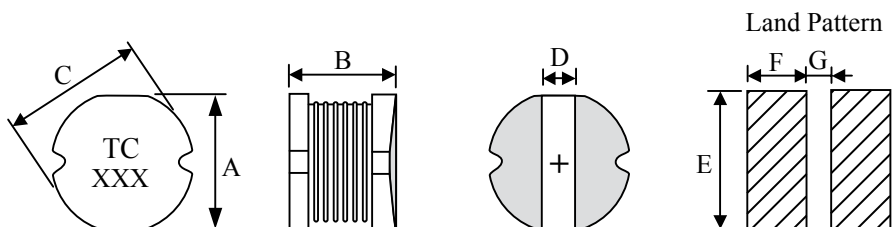
Type	A ± 0.3	B	ΦC ± 0.3	D Typ.	E	F	G
TC32	3.0	2.3(max)	3.5	1.2	3.5	1.60	0.8
TC43	4.0	3.2 ± 0.3	4.5	1.5	4.5	2.10	0.8
TC52	5.2	2.5 ± 0.3	5.8	2.0	5.5	2.25	1.5
TC53	5.2	3.0 ± 0.3	5.8	2.0	5.5	2.25	1.5
TC54	5.2	4.5 ± 0.3	5.8	2.0	5.5	2.25	1.5
TC73	7.0	3.5 ± 0.3	7.8	2.5	7.5	3.05	1.9
TC75	7.0	5.0 ± 0.3	7.8	2.5	7.5	3.05	1.9
TC104	9.0	4.0 ± 0.3	10.0	2.9	9.5	3.65	2.5
TC105	9.0	5.4 ± 0.3	10.0	2.9	9.5	3.65	2.5

Note: Design as Customer's Requested Specifications.

TC32 / TC43



TC52 / TC53 / TC54 / TC73 / TC75 / TC104 / TC105





# SMD Power Inductors

## ► Electrical Characteristics for TC32 Series Unshielded Inductor

Part Number	Inductance( $\mu$ H)	Test Freq.(KHz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC32 - 1R0M	1.00	100	0.045	2.20
TC32 - 1R2M	1.20	100	0.050	2.10
TC32 - 1R5M	1.50	100	0.055	1.70
TC32 - 1R8M	1.80	100	0.070	1.65
TC32 - 2R2M	2.20	100	0.085	1.60
TC32 - 2R7M	2.70	100	0.100	1.40
TC32 - 3R3M	3.30	100	0.120	1.05
TC32 - 3R9M	3.90	100	0.125	1.00
TC32 - 4R7M	4.70	100	0.135	1.00
TC32 - 5R6M	5.60	100	0.145	0.95
TC32 - 6R8M	6.80	100	0.200	0.95
TC32 - 8R2M	8.20	100	0.250	0.92
TC32 - 100K	10.00	100	0.320	0.90
TC32 - 120K	12.00	100	0.350	0.85
TC32 - 150K	15.00	100	0.460	0.75
TC32 - 180K	18.00	100	0.520	0.70
TC32 - 220K	22.00	100	0.650	0.60
TC32 - 270K	27.00	100	0.750	0.55
TC32 - 330K	33.00	100	0.920	0.50
TC32 - 390K	39.00	100	1.000	0.48
TC32 - 470K	47.00	100	1.150	0.45
TC32 - 560K	56.00	100	1.500	0.30
TC32 - 680K	68.00	100	2.000	0.26
TC32 - 820K	82.00	100	2.150	0.23
TC32 - 101K	100.00	100	2.500	0.20
TC32 - 121K	120.00	100	3.400	0.18
TC32 - 151K	150.00	100	4.200	0.16
TC32 - 181K	180.00	100	4.500	0.15
TC32 - 221K	220.00	100	5.100	0.14
TC32 - 271K	270.00	100	8.500	0.10
TC32 - 331K	330.00	100	9.500	0.09

Note: Test Freq. at 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC43 Series Unshielded Inductor

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC43 - 1R0M	1.00	7.96 M	0.033	3.80
TC43 - 1R4M	1.40	7.96 M	0.038	3.30
TC43 - 1R8M	1.80	7.96 M	0.042	2.91
TC43 - 2R2M	2.20	7.96 M	0.047	2.60
TC43 - 2R7M	2.70	7.96 M	0.052	2.43
TC43 - 3R3M	3.30	7.96 M	0.058	2.15
TC43 - 3R9M	3.90	7.96 M	0.076	1.98
TC43 - 4R7M	4.70	7.96 M	0.094	1.70
TC43 - 5R6M	5.60	7.96 M	0.101	1.60
TC43 - 6R8M	6.80	7.96 M	0.117	1.41
TC43 - 8R2M	8.20	7.96 M	0.132	1.26
TC43 - 100K	10.00	2.52 M	0.182	1.15
TC43 - 120K	12.00	2.52 M	0.210	1.05
TC43 - 150K	15.00	2.52 M	0.235	0.92
TC43 - 180K	18.00	2.52 M	0.338	0.84
TC43 - 220K	22.00	2.52 M	0.378	0.76
TC43 - 270K	27.00	2.52 M	0.522	0.71
TC43 - 330K	33.00	2.52 M	0.540	0.64
TC43 - 390K	39.00	2.52 M	0.587	0.59
TC43 - 470K	47.00	2.52 M	0.844	0.54
TC43 - 560K	56.00	2.52 M	0.937	0.50
TC43 - 680K	68.00	2.52 M	1.117	0.46
TC43 - 820K	82.00	1 K	1.345	0.45
TC43 - 101K	100.00	1 K	1.520	0.44
TC43 - 121K	120.00	1 K	1.800	0.43
TC43 - 151K	150.00	1 K	2.000	0.42
TC43 - 181K	180.00	1 K	3.200	0.38
TC43 - 221K	220.00	1 K	3.400	0.36
TC43 - 271K	270.00	1 K	3.900	0.34
TC43 - 331K	330.00	1 K	5.300	0.28
TC43 - 391K	390.00	1 K	5.900	0.24
TC43 - 471K	470.00	1 K	6.800	0.21
TC43 - 561K	560.00	1 K	8.500	0.20
TC43 - 681K	680.00	1 K	10.000	0.18
TC43 - 821K	820.00	1 K	13.400	0.15
TC43 - 102K	1000.00	1 K	15.600	0.14

Note: 820 ~ 102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC52 Series Unshielded Inductors

Part Number	Inductance( $\mu$ H)	Test Freq.(KHz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC52 - 1R2M	1.20	100	0.050	4.20
TC52 - 1R5M	1.50	100	0.060	4.00
TC52 - 1R8M	1.80	100	0.065	3.70
TC52 - 2R2M	2.20	100	0.070	3.50
TC52 - 2R7M	2.70	100	0.080	3.20
TC52 - 3R3M	3.30	100	0.100	2.70
TC52 - 3R9M	3.90	100	0.120	2.40
TC52 - 4R7M	4.70	100	0.140	2.00
TC52 - 5R6M	5.60	100	0.150	1.80
TC52 - 6R8M	6.80	100	0.160	1.50
TC52 - 8R2M	8.20	100	0.170	1.40
TC52 - 100K	10.00	100	0.200	1.30
TC52 - 120K	12.00	100	0.230	1.10
TC52 - 150K	15.00	100	0.250	1.05
TC52 - 180K	18.00	100	0.300	1.00
TC52 - 220K	22.00	100	0.350	0.90
TC52 - 270K	27.00	100	0.400	0.85
TC52 - 330K	33.00	100	0.500	0.75
TC52 - 390K	39.00	100	0.550	0.70
TC52 - 470K	47.00	100	0.650	0.60
TC52 - 560K	56.00	100	0.750	0.55
TC52 - 680K	68.00	100	0.950	0.50
TC52 - 820K	82.00	100	1.200	0.45
TC52 - 101K	100.00	100	1.400	0.40
TC52 - 121K	120.00	100	1.750	0.35
TC52 - 151K	150.00	100	2.000	0.25
TC52 - 181K	180.00	100	2.600	0.22
TC52 - 221K	220.00	100	3.000	0.20
TC52 - 271K	270.00	100	3.700	0.18
TC52 - 331K	330.00	100	4.300	0.17
TC52 - 391K	390.00	100	6.000	0.16
TC52 - 471K	470.00	100	6.700	0.15

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC53 Series Unshielded Inductors

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC53 - 1R0M	1.00	7.96 M	0.030	4.50
TC53 - 1R2M	1.20	7.96 M	0.030	4.20
TC53 - 1R5M	1.50	7.96 M	0.030	4.10
TC53 - 1R8M	1.80	7.96 M	0.030	3.70
TC53 - 2R2M	2.20	7.96 M	0.030	3.50
TC53 - 2R7M	2.70	7.96 M	0.040	3.20
TC53 - 3R3M	3.30	7.96 M	0.050	2.80
TC53 - 3R9M	3.90	7.96 M	0.060	2.60
TC53 - 4R7M	4.70	7.96 M	0.070	2.50
TC53 - 5R6M	5.60	7.96 M	0.080	2.40
TC53 - 6R8M	6.80	7.96 M	0.090	2.20
TC53 - 8R2M	8.20	7.96 M	0.100	2.00
TC53 - 100K	10.00	2.52 M	0.120	1.80
TC53 - 120K	12.00	2.52 M	0.130	1.75
TC53 - 150K	15.00	2.52 M	0.150	1.70
TC53 - 180K	18.00	2.52 M	0.180	1.60
TC53 - 220K	22.00	2.52 M	0.220	1.50
TC53 - 270K	27.00	2.52 M	0.240	1.40
TC53 - 330K	33.00	2.52 M	0.300	1.10
TC53 - 390K	39.00	2.52 M	0.400	1.00
TC53 - 470K	47.00	2.52 M	0.430	0.90
TC53 - 560K	56.00	2.52 M	0.500	0.85
TC53 - 680K	68.00	2.52 M	0.600	0.80
TC53 - 820K	82.00	2.52 M	0.800	0.65
TC53 - 101K	100.00	1 K	0.900	0.60
TC53 - 121K	120.00	1 K	1.000	0.58
TC53 - 151K	150.00	1 K	1.300	0.43
TC53 - 181K	180.00	1 K	1.500	0.41
TC53 - 221K	220.00	1 K	2.000	0.38
TC53 - 271K	270.00	1 K	2.500	0.35
TC53 - 331K	330.00	1 K	3.200	0.28
TC53 - 391K	390.00	1 K	3.500	0.26
TC53 - 471K	470.00	1 K	4.200	0.20
TC53 - 561K	560.00	1 K	4.500	0.19
TC53 - 681K	680.00	1 K	6.000	0.18
TC53 - 821K	820.00	1 K	6.500	0.15
TC53 - 102K	1000.00	1 K	8.000	0.13

Note: 101~102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC54 Series Unshielded Inductors

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC54 - 1R0M	1.00	7.96 M	0.015	5.90
TC54 - 1R2M	1.20	7.96 M	0.020	5.20
TC54 - 1R5M	1.50	7.96 M	0.025	4.70
TC54 - 1R8M	1.80	7.96 M	0.030	4.00
TC54 - 2R2M	2.20	7.96 M	0.035	3.80
TC54 - 2R7M	2.70	7.96 M	0.040	3.40
TC54 - 3R3M	3.30	7.96 M	0.045	3.30
TC54 - 3R9M	3.90	7.96 M	0.050	2.90
TC54 - 4R7M	4.70	7.96 M	0.060	2.80
TC54 - 5R6M	5.60	7.96 M	0.070	2.40
TC54 - 6R8M	6.80	7.96 M	0.080	2.10
TC54 - 8R2M	8.20	7.96 M	0.090	2.00
TC54 - 100K	10.00	2.52 M	0.100	1.44
TC54 - 120K	12.00	2.52 M	0.120	1.40
TC54 - 150K	15.00	2.52 M	0.140	1.30
TC54 - 180K	18.00	2.52 M	0.150	1.23
TC54 - 220K	22.00	2.52 M	0.180	1.11
TC54 - 270K	27.00	2.52 M	0.200	0.97
TC54 - 330K	33.00	2.52 M	0.230	0.88
TC54 - 390K	39.00	2.52 M	0.320	0.80
TC54 - 470K	47.00	2.52 M	0.370	0.72
TC54 - 560K	56.00	2.52 M	0.420	0.68
TC54 - 680K	68.00	2.52 M	0.460	0.61
TC54 - 820K	82.00	2.52 M	0.600	0.58
TC54 - 101K	100.00	1 K	0.700	0.52
TC54 - 121K	120.00	1 K	0.930	0.48
TC54 - 151K	150.00	1 K	1.100	0.40
TC54 - 181K	180.00	1 K	1.380	0.38
TC54 - 221K	220.00	1 K	1.570	0.35
TC54 - 271K	270.00	1 K	1.650	0.32
TC54 - 331K	330.00	1 K	1.700	0.28
TC54 - 391K	390.00	1 K	1.800	0.26
TC54 - 471K	470.00	1 K	2.300	0.23
TC54 - 561K	560.00	1 K	2.500	0.20
TC54 - 681K	680.00	1 K	3.000	0.19
TC54 - 821K	820.00	1 K	4.500	0.16
TC54 - 102K	1000.00	1 K	4.800	0.14

Note: 101~102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC73 Series Unshielded Inductors

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC73 - 100K	10.00	2.52 M	0.080	1.44
TC73 - 120K	12.00	2.52 M	0.090	1.39
TC73 - 150K	15.00	2.52 M	0.100	1.24
TC73 - 180K	18.00	2.52 M	0.110	1.12
TC73 - 220K	22.00	2.52 M	0.130	1.07
TC73 - 270K	27.00	2.52 M	0.150	0.94
TC73 - 330K	33.00	2.52 M	0.170	0.85
TC73 - 390K	39.00	2.52 M	0.220	0.74
TC73 - 470K	47.00	2.52 M	0.250	0.68
TC73 - 560K	56.00	2.52 M	0.280	0.64
TC73 - 680K	68.00	2.52 M	0.330	0.59
TC73 - 820K	82.00	2.52 M	0.410	0.54
TC73 - 101K	100.00	1 K	0.480	0.51
TC73 - 121K	120.00	1 K	0.540	0.49
TC73 - 151K	150.00	1 K	0.750	0.40
TC73 - 181K	180.00	1 K	1.020	0.36
TC73 - 221K	220.00	1 K	1.200	0.31
TC73 - 271K	270.00	1 K	1.310	0.29
TC73 - 331K	330.00	1 K	1.500	0.28
TC73 - 391K	390.00	1 K	1.800	0.26
TC73 - 471K	470.00	1 K	1.950	0.23
TC73 - 561K	560.00	1 K	2.300	0.21
TC73 - 681K	680.00	1 K	2.700	0.13
TC73 - 821K	820.00	1 K	3.200	0.11
TC73 - 102K	1000.00	1 K	3.800	0.08

Note: 101~102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC75 Series Unshielded Inductor

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC75 - 100K	10.00	2.52 M	0.070	2.30
TC75 - 120K	12.00	2.52 M	0.080	2.00
TC75 - 150K	15.00	2.52 M	0.090	1.80
TC75 - 180K	18.00	2.52 M	0.100	1.60
TC75 - 220K	22.00	2.52 M	0.110	1.50
TC75 - 270K	27.00	2.52 M	0.120	1.30
TC75 - 330K	33.00	2.52 M	0.130	1.20
TC75 - 390K	39.00	2.52 M	0.160	1.10
TC75 - 470K	47.00	2.52 M	0.180	1.10
TC75 - 560K	56.00	2.52 M	0.240	0.94
TC75 - 680K	68.00	2.52 M	0.280	0.85
TC75 - 820K	82.00	2.52 M	0.370	0.78
TC75 - 101K	100.00	1 K	0.430	0.72
TC75 - 121K	120.00	1 K	0.470	0.66
TC75 - 151K	150.00	1 K	0.640	0.58
TC75 - 181K	180.00	1 K	0.710	0.51
TC75 - 221K	220.00	1 K	0.960	0.49
TC75 - 271K	270.00	1 K	1.110	0.42
TC75 - 331K	330.00	1 K	1.260	0.40
TC75 - 391K	390.00	1 K	1.770	0.36
TC75 - 471K	470.00	1 K	1.960	0.34
TC75 - 561K	560.00	1 K	2.000	0.33
TC75 - 681K	680.00	1 K	2.200	0.32
TC75 - 821K	820.00	1 K	2.900	0.25
TC75 - 102K	1000.00	1 K	3.900	0.20

Note: 101~102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.





# SMD Power Inductors

## ► Electrical Characteristics for TC104 Series Unshielded Inductor

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC104 - 100K	10.00	2.52 M	0.053	2.38
TC104 - 120K	12.00	2.52 M	0.061	2.13
TC104 - 150K	15.00	2.52 M	0.070	1.87
TC104 - 180K	18.00	2.52 M	0.081	1.73
TC104 - 220K	22.00	2.52 M	0.088	1.60
TC104 - 270K	27.00	2.52 M	0.100	1.44
TC104 - 330K	33.00	2.52 M	0.120	1.26
TC104 - 390K	39.00	2.52 M	0.151	1.20
TC104 - 470K	47.00	2.52 M	0.170	1.10
TC104 - 560K	56.00	2.52 M	0.199	1.01
TC104 - 680K	68.00	2.52 M	0.223	0.91
TC104 - 820K	82.00	2.52 M	0.252	0.85
TC104 - 101K	100.00	1 K	0.344	0.74
TC104 - 121K	120.00	1 K	0.396	0.69
TC104 - 151K	150.00	1 K	0.544	0.61
TC104 - 181K	180.00	1 K	0.621	0.56
TC104 - 221K	220.00	1 K	0.721	0.53
TC104 - 271K	270.00	1 K	0.949	0.45
TC104 - 331K	330.00	1 K	1.100	0.42
TC104 - 391K	390.00	1 K	1.245	0.38
TC104 - 471K	470.00	1 K	1.526	0.35
TC104 - 561K	560.00	1 K	1.904	0.32
TC104 - 681K	680.00	1 K	2.200	0.31
TC104 - 821K	820.00	1 K	2.700	0.30
TC104 - 102K	1000.00	1 K	3.500	0.29

Note: 101~102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.



# SMD Power Inductors

## ► Electrical Characteristics for TC105 Series Unshielded Inductor

Part Number	Inductance( $\mu$ H)	Test Freq.(Hz)	DCR ( $\Omega$ )(max)	IDC (A)(max)
TC105 - 100K	10.00	2.52 M	0.060	2.60
TC105 - 120K	12.00	2.52 M	0.070	2.45
TC105 - 150K	15.00	2.52 M	0.080	2.27
TC105 - 180K	18.00	2.52 M	0.090	2.15
TC105 - 220K	22.00	2.52 M	0.100	1.95
TC105 - 270K	27.00	2.52 M	0.110	1.76
TC105 - 330K	33.00	2.52 M	0.120	1.50
TC105 - 390K	39.00	2.52 M	0.140	1.37
TC105 - 470K	47.00	2.52 M	0.170	1.28
TC105 - 560K	56.00	2.52 M	0.190	1.17
TC105 - 680K	68.00	2.52 M	0.220	1.11
TC105 - 820K	82.00	2.52 M	0.250	1.00
TC105 - 101K	100.00	1 K	0.350	0.97
TC105 - 121K	120.00	1 K	0.400	0.89
TC105 - 151K	150.00	1 K	0.470	0.78
TC105 - 181K	180.00	1 K	0.630	0.72
TC105 - 221K	220.00	1 K	0.730	0.66
TC105 - 271K	270.00	1 K	0.970	0.57
TC105 - 331K	330.00	1 K	1.150	0.52
TC105 - 391K	390.00	1 K	1.300	0.48
TC105 - 471K	470.00	1 K	1.480	0.42
TC105 - 561K	560.00	1 K	1.900	0.33
TC105 - 681K	680.00	1 K	2.250	0.28
TC105 - 821K	820.00	1 K	2.550	0.24
TC105 - 102K	1000.00	1 K	3.000	0.20

Note: 101~102 Test Freq.: 1KHz / 0.25V

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

## ► How to Order

TC32	-	1R0	M
①		②	③

① SMT Unshielded Power Inductors:TC32, TC43, TC52, TC53, TC54, TC73, TC75, TC104, TC105

② Inductance

Code	Inductance
1R0	1.00 $\mu$ H
100	10.00 $\mu$ H
101	100.00 $\mu$ H
102	1000.00 $\mu$ H

③ Tolerance

Code	Tolerance
K	10%
L	15%
M	20%
N	30%