



# SMD Power Inductors

## Large Current Power Inductor - TCPA Series / 大电流功率电感

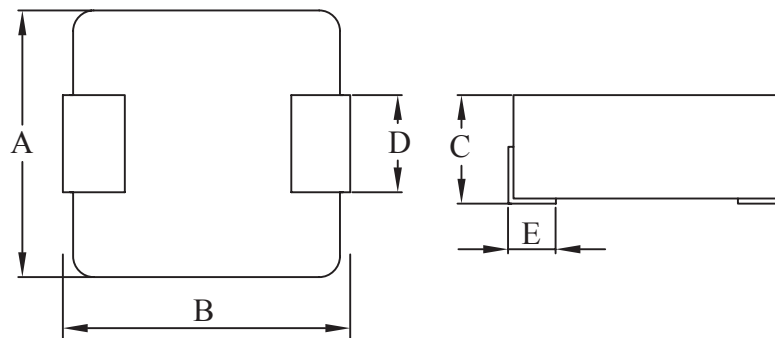
### ► Features

- SMT Power Inductor
- Low Profile: 4.0mm ~ 6.5mm
- For Large Current Use: 10 ~ 60 amp
- Low DCR
- High Frequency (up to 1MHz)

### ► Applications

- Laptop Computer / Notebook Computer
- Graphic Card/ VGA Module
- DC/DC converter or VRM applications
- Thin type on-board power supply module for exchanger
- Inductor for general purpose use

### ► TCPA Configurations & Dimensions (unit: mm)



Type	A	B	C	D	E
TCPA1265	12.8 ± 0.5	13.5 ± 1.0	6.5 max.	3.8 ref.	2.5 ref.
TCPA1250	12.8 ± 0.5	13.5 ± 1.0	5.0 max.	3.8 ref.	2.5 ref.
TCPA1240	12.8 ± 0.5	13.5 ± 1.0	4.0 max.	3.8 ref.	2.5 ref.
TCPA1040	10.5 ± 0.5	11.5 ± 1.0	4.0 max.	2.5 ref.	2.3 ref.
TCPA1040A	10.5 ± 0.5	11.5 ± 1.0	4.0 max.	2.5 ref.	2.3 ref.



# SMD Power Inductors

## ► Electrical Characteristics for TCPA1265 Series

Part Number	L0 Inductance (μH) ±20% @0A	DCR (mΩ)		Heat Rating Current I <sub>dc</sub> (Amp) ypical	Saturation Current I <sub>sat</sub> (Amp) Typical
		(Typical)	(Max)		
TCPA-1265-R10M	0.10	0.47	0.55	60	80
TCPA-1265-R15M	0.15	0.53	0.65	55	80
TCPA-1265-R22M	0.22	0.63	0.75	53	80
TCPA-1265-R30M	0.30	0.70	0.85	48	70
TCPA-1265-R33M	0.33	0.83	0.95	46	65
TCPA-1265-R40M	0.40	0.90	1.10	44	60
TCPA-1265-R47M	0.47	1.00	1.30	41	63
TCPA-1265-R56M	0.56	1.20	1.50	37	60
TCPA-1265-R68M	0.68	1.40	1.70	35	60
TCPA-1265-R82M	0.82	1.60	2.10	33	48
TCPA-1265-1R0M	1.0	1.70	2.10	32	46
TCPA-1265-1R2M	1.2	2.10	2.60	30	45
TCPA-1265-1R5M	1.5	2.50	3.10	27	40
TCPA-1265-1R8M	1.8	2.80	3.40	24	36
TCPA-1265-2R2M	2.2	3.80	4.80	22	36
TCPA-1265-3R3M	3.3	5.70	7.10	18	27

Note: All test Data is referenced to 25°C ambient.

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.

Typical Saturation DC Current would cause L<sub>0</sub> to drop approximately 20%.

Operating Temperature Range: -25°C to +125°C.

## ► Electrical Characteristics for TCPA1250 Series

Part Number	L0 Inductance (μH) ±20% @0A	DCR (mΩ)		Heat Rating Current I <sub>dc</sub> (Amp) Typical	Saturation Current I <sub>sat</sub> (Amp) Typical
		(Typical)	(Max)		
TCPA-1250-R10M	0.10	0.53	0.70	55	80
TCPA-1250-R22M	0.22	0.64	0.90	51	80
TCPA-1250-R33M	0.33	0.85	1.20	42	80
TCPA-1250-R47M	0.47	1.10	1.40	38	65
TCPA-1250-R56M	0.56	1.30	1.60	36	55
TCPA-1250-R68M	0.68	1.50	1.80	34	51
TCPA-1250-R82M	0.82	2.00	2.40	31	50
TCPA-1250-1R0M	1.0	2.10	2.65	29	50
TCPA-1250-1R2M	1.2	2.10	2.65	29	30
TCPA-1250-1R5M	1.5	3.60	4.30	23	43
TCPA-1250-1R8M	1.8	4.20	5.10	19	38
TCPA-1250-2R0M	2.0	4.60	5.80	20	32
TCPA-1250-2R2M	2.2	4.60	5.80	20	30
TCPA-1250-2R7M	2.7	4.60	5.80	20	20

Note: All test Data is referenced to 25°C ambient.

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.

Typical Saturation DC Current would cause L<sub>0</sub> to drop approximately 20%.

Operating Temperature Range: -25°C to +125°C.





# SMD Power Inductors

## ► Electrical Characteristics for TCPA1240 Series

Part Number	L0 Inductance (μH) ±20% @0A	DCR (mΩ)		Heat Rating Current I <sub>dc</sub> (Amp) Typical	Saturation Current I <sub>sat</sub> (Amp) Typical
		(Typical)	(Max)		
TCPA-1240-R10M	0.10	0.90	1.10	43	75
TCPA-1240-R22M	0.22	1.20	1.40	41	70
TCPA-1240-R33M	0.33	1.30	1.50	38	60
TCPA-1240-R47M	0.47	1.40	1.90	32	55
TCPA-1240-R60M	0.60	2.00	2.30	30	50
TCPA-1240-R68M	0.68	2.10	2.50	28	46
TCPA-1240-R82M	0.82	2.70	3.10	25	44
TCPA-1240-0R9M	0.9	3.00	3.50	24	40
TCPA-1240-1R0M	1.0	3.00	3.70	24	38
TCPA-1240-1R2M	1.2	3.00	3.70	20	25
TCPA-1240-1R5M	1.5	5.50	6.00	19	30
TCPA-1240-1R8M	1.8	6.40	7.60	16	26
TCPA-1240-2R2M	2.2	6.40	7.60	16	22
TCPA-1240-3R3M	3.3	7.50	8.40	14	20
TCPA-1240-4R7M	4.7	10.50	12.00	11	15

Note: All test Data is referenced to 25°C ambient.

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.

Typical Saturation DC Current would cause L<sub>0</sub> to drop approximately 20%.

Operating Temperature Range: -25°C to +125°C.

## ► Electrical Characteristics for TCPA1040A Series

Part Number	L0 Inductance (μH) ±20% @0A	DCR (mΩ)		Heat Rating Current I <sub>dc</sub> (Amp) Typical	Saturation Current I <sub>sat</sub> (Amp) Typical
		(Typical)	(Max)		
TCPA-1040-R19M	0.19	0.50	0.70	44	44
TCPA-1040-R24M	0.24	0.80	0.90	38	38
TCPA-1040-R36M	0.36	0.90	1.10	35	35
TCPA-1040-R47M	0.47	1.20	1.40	32	32
TCPA-1040-R56M	0.56	1.40	1.60	30	30
TCPA-1040-R78M	0.78	1.60	1.80	25	25
TCPA-1040-R82M	0.82	2.30	2.60	25	20
TCPA-1040-R88M	0.88	2.30	2.60	25	20
TCPA-1040-1R0M	1.0	2.20	2.60	20	20
TCPA-1040-1R5M	1.5	4.50	5.00	15	20
TCPA-1040-1R8M	1.8	4.50	5.00	15	15
TCPA-1040-2R0M	2.2	5.20	5.80	14	14
TCPA-1040-2R2M	2.2	5.50	6.30	14	16
TCPA-1040-2R5M	2.5	5.50	6.30	14	14
TCPA-1040-3R3M	3.3	9.00	11.00	10	12

Note: All test Data is referenced to 25°C ambient.

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.

Typical Saturation DC Current would cause L<sub>0</sub> to drop approximately 20%.

Operating Temperature Range: -25°C to +125°C.



# SMD Power Inductors

## ► Electrical Characteristics for TCPA1040A Series

Part Number	L0 Inductance (μH) ±20% @0A	DCR (mΩ)		Heat Rating Current Idc (Amp) Typical	Saturation Current Isat (Amp) Typical
		(Typical)	(Max)		
TCPA-1040A-R19M	0.19	0.70	0.80	38	60
TCPA-1040A-R22M	0.22	0.60	0.80	38	50
TCPA-1040A-R36M	0.36	1.10	1.20	30	50
TCPA-1040A-R47M	0.47	1.50	1.70	28	45
TCPA-1040A-R56M	0.56	1.60	1.70	25	40
TCPA-1040A-R68M	0.68	1.60	1.80	25	30
TCPA-1040A-1R0M	1.0	2.80	3.20	21	30
TCPA-1040A-1R5M	1.5	4.50	5.00	15	20
TCPA-1040A-2R5M	2.5	8.50	9.50	13	18

Note: All test Data is referenced to 25°C ambient.

Typical Heat Rating DC Current would cause an approximately ΔT of 40°C.

Typical Saturation DC Current would cause Lo to drop approximately 20%.

Operating Temperature Range: -25°C to +125°C.

## ► How to Order

TCPA	1265	-	R10	M
①	②		③	④

① Large Current Power Inductor : TCPA

② Size : 1265,1250,1240,1040A

③ Inductance

Code	Inductance
R10	0.10μH
1R0	1.00μH

④ Tolerance

Code	Tolerance
M	20%