

# LOW PROFILE POWER INDUCTOR TPI SERIES

## INTRODUCTION

The TPI series are characterized by low profile, and high current power inductor used in cellular phone, HDD, DVC, DSC, PDA, LCD display, and other electronic equipment. Several dimensions are available.

## FEATURES

- \* Small and low profile inductor.
- \* High current performance.
- \* High magnetic shield construction should actualize high resolution.
- \* Available for automatic mounting in tape and real package.

## PART NUMBER

**TPI 3015 C T 1R0 N -□□**

**1** Product Name      **1**    **2**    **3**    **4**    **5**    **6**    Internal Code

**2** Shape and Dimension

Size	A (inch) mm	B (inch) mm	C (inch) mm
TPI2410	(0.095 ± 0.004) 2.40 ± 0.10	(0.095 ± 0.004) 2.40 ± 0.10	(0.039) 1.00
TPI2510	(0.099 ± 0.004) 2.50 ± 0.10	(0.079 ± 0.004) 2.00 ± 0.10	(0.039) 1.00
TPI2512	(0.099 ± 0.004) 2.50 ± 0.10	(0.079 ± 0.004) 2.00 ± 0.10	(0.047) 1.20
TPI2515	(0.099 ± 0.004) 2.50 ± 0.10	(0.079 ± 0.004) 2.00 ± 0.10	(0.059) 1.50
TPI3010	(0.118 ± 0.004) 3.00 ± 0.10	(0.118 ± 0.004) 3.00 ± 0.10	(0.039) 1.00
TPI3012	(0.118 ± 0.004) 3.00 ± 0.10	(0.118 ± 0.004) 3.00 ± 0.10	(0.047) 1.20
TPI3015	(0.118 ± 0.004) 3.00 ± 0.10	(0.118 ± 0.004) 3.00 ± 0.10	(0.059) 1.50
TPI4018	(0.157 ± 0.008) 4.00 ± 0.20	(0.157 ± 0.008) 4.00 ± 0.20	(0.071) 1.80
TPI4025	(0.157 ± 0.008) 4.00 ± 0.20	(0.157 ± 0.008) 4.00 ± 0.20	(0.098) 2.50
TPI5020	(0.197 ± 0.008) 5.00 ± 0.20	(0.197 ± 0.008) 5.00 ± 0.20	(0.079) 2.00
TPI5040	(0.197 ± 0.008) 5.00 ± 0.20	(0.197 ± 0.008) 5.00 ± 0.20	(0.157) 4.00
TPI6020	(0.236 ± 0.008) 6.00 ± 0.20	(0.236 ± 0.008) 6.00 ± 0.20	(0.079) 2.00
TPI6028	(0.236 ± 0.008) 6.00 ± 0.20	(0.236 ± 0.008) 6.00 ± 0.20	(0.110) 2.80
TPI6045	(0.236 ± 0.008) 6.00 ± 0.20	(0.236 ± 0.008) 6.00 ± 0.20	(0.177) 4.50

**3** Coating Type

**4** Taping

**5** Inductance

1R0 = 1.0uH

100 = 10uH

**6** Tolerance

M = ± 20%

N = ± 30%

**TPI 6020 SERIES**

Part No.	Inductance (uH)	Test Freq.	Tolerance	DCResistance (mΩ)		Rated DC current (A)	
				Max.	Typ.	Idc1	Idc2
TPI6020CT R50 □-□□	0.5	100 KHz, 1V	N	12	9	7.00	5.20
TPI6020CT R80 □-□□	0.8	100 KHz, 1V	N	16	12	6.00	4.10
TPI6020CT 1R5 □-□□	1.5	100 KHz, 1V	N	22	17	4.00	3.60
TPI6020CT 2R2 □-□□	2.2	100 KHz, 1V	N	31	24	3.50	2.90
TPI6020CT 3R3 □-□□	3.3	100 KHz, 1V	N	39	30	2.80	2.80
TPI6020CT 4R7 □-□□	4.7	100 KHz, 1V	M	52	43	2.40	2.20
TPI6020CT 5R6 □-□□	5.6	100 KHz, 1V	M	66	55	2.20	2.00
TPI6020CT 6R8 □-□□	6.8	100 KHz, 1V	M	72	60	2.00	1.80
TPI6020CT 100 □-□□	10	100 KHz, 1V	M	108	90	1.90	1.50
TPI6020CT 150 □-□□	15	100 KHz, 1V	M	144	120	1.30	1.20
TPI6020CT 220 □-□□	22	100 KHz, 1V	M	204	170	1.10	1.00
TPI6020CT 330 □-□□	33	100 KHz, 1V	M	372	310	0.90	0.90
TPI6020CT 470 □-□□	47	100 KHz, 1V	M	444	370	0.80	0.80

**TPI 6028 SERIES**

Part No.	Inductance (uH)	Test Freq.	Tolerance	DCResistance (mΩ)		Rated DC current (A)	
				Max.	Typ.	Idc1	Idc2
TPI6028CT R90 □-□□	0.9	100 KHz, 1V	N	17	13	6.70	4.60
TPI6028CT 1R5 □-□□	1.5	100 KHz, 1V	N	21	16	5.10	4.20
TPI6028CT 2R2 □-□□	2.2	100 KHz, 1V	N	26	20	4.20	3.70
TPI6028CT 3R0 □-□□	3.0	100 KHz, 1V	N	30	23	3.60	3.40
TPI6028CT 3R3 □-□□	3.3	100 KHz, 1V	M	34	28	3.50	3.40
TPI6028CT 3R9 □-□□	3.9	100 KHz, 1V	M	37	31	2.70	3.00
TPI6028CT 4R7 □-□□	4.7	100 KHz, 1V	M	37	31	2.70	3.00
TPI6028CT 6R0 □-□□	6.0	100 KHz, 1V	M	48	40	2.50	2.50
TPI6028CT 6R2 □-□□	6.2	100 KHz, 1V	M	62	52	2.20	2.20
TPI6028CT 6R8 □-□□	6.8	100 KHz, 1V	M	62	52	2.20	2.20
TPI6028CT 100 □-□□	10	100 KHz, 1V	M	78	65	1.90	1.90
TPI6028CT 150 □-□□	15	100 KHz, 1V	M	114	95	1.60	1.80
TPI6028CT 220 □-□□	22	100 KHz, 1V	M	162	135	1.30	1.40
TPI6028CT 330 □-□□	33	100 KHz, 1V	M	264	220	1.10	1.10
TPI6028CT 470 □-□□	47	100 KHz, 1V	M	360	300	1.00	0.92
TPI6028CT 680 □-□□	68	100 KHz, 1V	M	504	420	0.80	0.77
TPI6028CT 101 □-□□	100	100 KHz, 1V	M	720	600	0.65	0.66

1. Inductance is measured in HP-4285A Precision LCR Meter.
2. RDC is measured in HP 4338B mill ohm meter.(or equivalent).
3. Tolerance : M =20% , N=30% (Table shows stock tolerances in □).
4. Idc1 : Based on inductance change ( $\Delta L/L_0 : \leq -30\%$ )
5. Idc2 : Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$ )

**TPI 6045 SERIES**

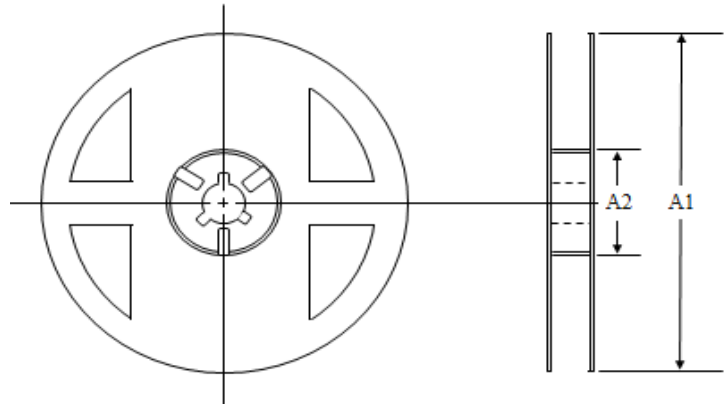
Part No.	Inductance (uH)	Test Freq.	Tolerance	DCResistance (mΩ)		Rated DC current (A)	
				Max.	Typ.	Idc1	Idc2
TPI6045CT 1R0 □-□□	1.0	100 KHz, 1V	N	13	10	8.60	6.50
TPI6045CT 1R3 □-□□	1.3	100 KHz, 1V	N	14	11	8.00	6.00
TPI6045CT 1R8 □-□□	1.8	100 KHz, 1V	N	16	12	7.00	5.30
TPI6045CT 2R2 □-□□	2.2	100 KHz, 1V	N	17	13	6.10	5.00
TPI6045CT 3R0 □-□□	3.0	100 KHz, 1V	N	22	17	5.00	4.80
TPI6045CT 3R3 □-□□	3.3	100 KHz, 1V	N	22	17	4.50	4.50
TPI6045CT 4R5 □-□□	4.5	100 KHz, 1V	N	30	23	4.30	3.80
TPI6045CT 4R7 □-□□	4.7	100 KHz, 1V	N	30	23	4.00	3.70
TPI6045CT 5R6 □-□□	5.6	100 KHz, 1V	N	34	26	3.80	3.60
TPI6045CT 6R3 □-□□	6.3	100 KHz, 1V	N	34	26	3.80	3.60
TPI6045CT 6R8 □-□□	6.8	100 KHz, 1V	N	44	34	3.60	3.50
TPI6045CT 8R2 □-□□	8.2	100 KHz, 1V	N	53	41	3.20	3.10
TPI6045CT 100 □-□□	10	100 KHz, 1V	M	54	45	3.10	3.00
TPI6045CT 150 □-□□	15	100 KHz, 1V	M	96	80	2.30	2.30
TPI6045CT 220 □-□□	22	100 KHz, 1V	M	134	112	1.90	1.90
TPI6045CT 330 □-□□	33	100 KHz, 1V	M	204	170	1.50	1.50
TPI6045CT 470 □-□□	47	100 KHz, 1V	M	252	210	1.30	1.30
TPI6045CT 560 □-□□	56	100 KHz, 1V	M	324	270	1.20	1.20
TPI6045CT 680 □-□□	68	100 KHz, 1V	M	390	325	1.00	1.00
TPI6045CT 101 □-□□	100	100 KHz, 1V	M	552	460	0.90	0.90
TPI6045CT 221 □-□□	220	100 KHz, 1V	M	1104	920	0.55	0.50

1. Inductance is measured in HP-4285A Precision LCR Meter.
2. RDC is measured in HP 4338B mill ohm meter.(or equivalent).
3. Tolerance : M =20% , N=30% (Table shows stock tolerances in □).
4. Idc1 : Based on inductance change ( $\Delta L/L_0 : \leq -30\%$ )
5. Idc2 : Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$ )

# PACKAGING INFORMATION

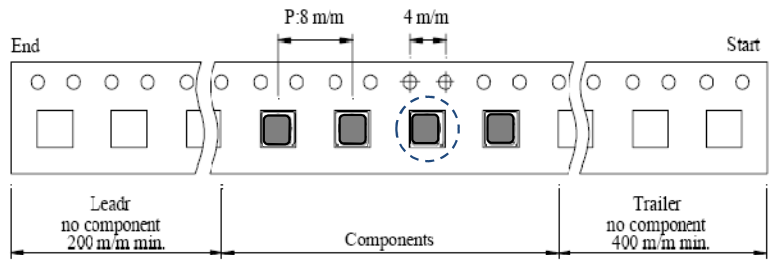
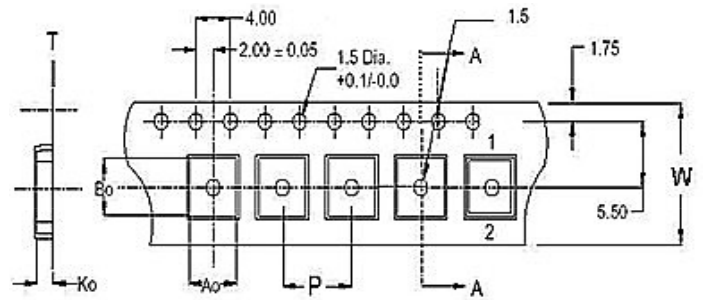
## Packing Quantity

TYPE	PCS / REEL	REEL"	A1	A2
TPI2410	2000	7"	178	60
TPI2510	2000	7"	178	60
TPI2512	2000	7"	178	60
TPI2515	2000	7"	178	60
TPI3010	2000	7"	178	60
TPI3012	2000	7"	178	60
TPI3015	2000	7"	178	60
TPI4018	3000	13"	330	99
TPI4025	3000	13"	330	99
TPI5020	2000	13"	330	99
TPI5040	1000	13"	330	99
TPI6020	2000	13"	330	99
TPI6028	1000	13"	330	99
TPI6045	1000	13"	330	99



## Dimension (unit:m/m)

TYPE	Chip Cavity		Insert Pitch	Tape Thickness		Tape Width
	Ao	Bo		Ko	T	
TPI2410	2.65	2.65	4	1.25	0.25	8
TPI2510	2.23	2.73	4	1.30	0.25	8
TPI2512	2.23	2.73	4	1.50	0.25	8
TPI2515	2.23	2.73	4	1.80	0.25	8
TPI3010	3.25	3.25	4	1.25	0.25	8
TPI3012	3.25	3.25	4	1.45	0.25	8
TPI3015	3.25	3.25	4	1.75	0.25	8
TPI4018	4.30	4.30	8	2.05	0.30	12
TPI4025	4.30	4.30	8	2.75	0.30	12
TPI5020	5.40	5.40	8	2.25	0.35	12
TPI5040	5.40	5.40	8	4.25	0.35	12
TPI6020	6.40	6.40	8	2.25	0.35	12
TPI6028	6.40	6.40	8	3.05	0.35	12
TPI6045	6.40	6.40	12	4.75	0.35	16



## Recommended Footprint (unit:m/m)

TYPE	A	B	C
TPI2410	2.15	2.00	0.70
TPI2510	2.50	2.00	0.80
TPI2512	2.50	2.00	0.80
TPI2515	2.50	2.00	0.80
TPI3010	3.00	2.70	0.80
TPI3012	3.00	2.70	0.80
TPI3015	3.00	2.70	0.80
TPI4018	4.55	3.60	1.50
TPI4025	4.55	3.60	1.50
TPI5020	5.10	4.00	1.50
TPI5040	5.10	4.00	1.50
TPI6020	6.30	5.70	1.60
TPI6028	6.30	5.70	1.60
TPI6045	6.30	5.70	1.60

