

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 3010 SERIES

Part No.	Inductance (uH)	Test Freq.	Tolerance	DCResistance (mΩ)		Rated DC current (A)	
				Max.	Typ.	Idc1	Idc2
TPI3010CT 1R0 □-□□	1.0	100 KHz, 1V	N	63	50	2.30	2.30
TPI3010CT 1R2 □-□□	1.2	100 KHz, 1V	N	81	62	1.90	2.10
TPI3010CT 1R5 □-□□	1.5	100 KHz, 1V	N	91	70	1.65	2.00
TPI3010CT 2R2 □-□□	2.2	100 KHz, 1V	M	96	80	1.30	1.90
TPI3010CT 3R3 □-□□	3.3	100 KHz, 1V	M	156	130	1.05	1.80
TPI3010CT 4R7 □-□□	4.7	100 KHz, 1V	M	210	175	0.85	1.70
TPI3010CT 6R8 □-□□	6.8	100 KHz, 1V	M	312	260	0.70	1.30
TPI3010CT 100 □-□□	10	100 KHz, 1V	M	420	350	0.60	0.90
TPI3010CT 150 □-□□	15	100 KHz, 1V	M	612	510	0.50	0.80
TPI3010CT 220 □-□□	22	100 KHz, 1V	M	936	780	0.40	0.70
TPI3010CT 330 □-□□	33	100 KHz, 1V	M	1320	1100	0.32	0.50
TPI3010CT 470 □-□□	47	100 KHz, 1V	M	1920	1600	0.28	0.35
TPI3010CT 101 □-□□	100	100 KHz, 1V	M	6000	5000	0.15	0.18

TPI 3012 SERIES

Part No.	Inductance (uH)	Test Freq.	Tolerance	DCResistance (mΩ)		Rated DC current (A)	
				Max.	Typ.	Idc1	Idc2
TPI3012CT 1R0 □-□□	1.0	100 KHz, 1V	N	54	45	1.90	1.71
TPI3012CT 1R5 □-□□	1.5	100 KHz, 1V	N	66	55	1.50	1.60
TPI3012CT 2R2 □-□□	2.2	100 KHz, 1V	M	72	60	1.25	1.37
TPI3012CT 2R7 □-□□	2.7	100 KHz, 1V	M	108	90	1.20	1.30
TPI3012CT 3R3 □-□□	3.3	100 KHz, 1V	M	108	90	1.05	1.21
TPI3012CT 4R7 □-□□	4.7	100 KHz, 1V	M	180	150	0.90	1.06
TPI3012CT 6R8 □-□□	6.8	100 KHz, 1V	M	228	190	0.70	0.89
TPI3012CT 100 □-□□	10	100 KHz, 1V	M	324	270	0.60	0.72
TPI3012CT 150 □-□□	15	100 KHz, 1V	M	540	450	0.50	0.57
TPI3012CT 220 □-□□	22	100 KHz, 1V	M	660	550	0.40	0.50
TPI3012CT 330 □-□□	33	100 KHz, 1V	M	1080	900	0.30	0.41
TPI3012CT 470 □-□□	47	100 KHz, 1V	M	1500	1250	0.23	0.35

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 3015 SERIES

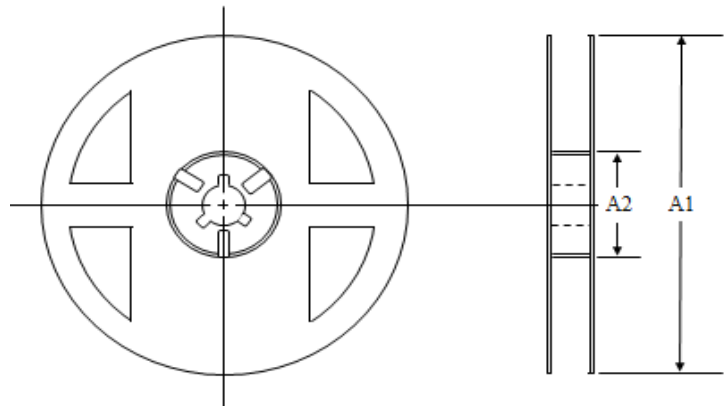
Part No.	Inductance (uH)	Test Freq.	Tolerance	DCResistance (mΩ)		Rated DC current (A)	
				Max.	Typ.	Idc1	Idc2
TPI3015CT 1R0 □-□□	1.0	100 KHz, 1V	N	36	28	2.30	2.30
TPI3015CT 1R5 □-□□	1.5	100 KHz, 1V	N	48	37	2.10	2.10
TPI3015CT 2R2 □-□□	2.2	100 KHz, 1V	M	70	58	1.62	2.00
TPI3015CT 2R7 □-□□	2.7	100 KHz, 1V	M	72	60	1.50	1.95
TPI3015CT 3R3 □-□□	3.3	100 KHz, 1V	M	90	75	1.35	1.80
TPI3015CT 4R7 □-□□	4.7	100 KHz, 1V	M	120	100	1.20	1.60
TPI3015CT 5R6 □-□□	5.6	100 KHz, 1V	M	144	120	1.00	1.40
TPI3015CT 6R8 □-□□	6.8	100 KHz, 1V	M	180	150	0.97	1.30
TPI3015CT 100 □-□□	10	100 KHz, 1V	M	264	220	0.80	1.10
TPI3015CT 150 □-□□	15	100 KHz, 1V	M	360	300	0.65	1.00
TPI3015CT 180 □-□□	18	100 KHz, 1V	M	492	410	0.57	0.90
TPI3015CT 220 □-□□	22	100 KHz, 1V	M	570	475	0.55	0.80
TPI3015CT 330 □-□□	33	100 KHz, 1V	M	780	650	0.45	0.70
TPI3015CT 390 □-□□	39	100 KHz, 1V	M	1020	850	0.40	0.50
TPI3015CT 470 □-□□	47	100 KHz, 1V	M	1320	1100	0.35	0.45
TPI3015CT 680 □-□□	68	100 KHz, 1V	M	2040	1700	0.30	0.35
TPI3015CT 820 □-□□	82	100 KHz, 1V	M	2280	1900	0.27	0.32
TPI3015CT 101 □-□□	100	100 KHz, 1V	M	2520	2100	0.25	0.30

1. Inductance is measured in HP-4285A Precision LCR Meter.
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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

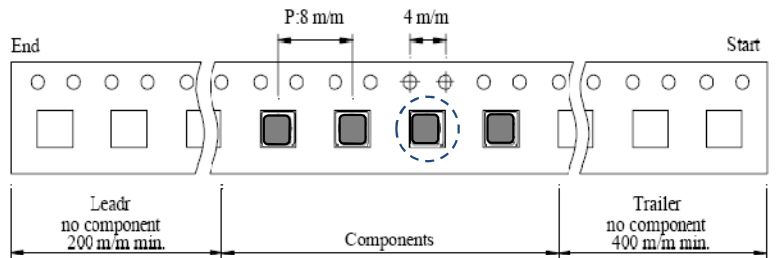
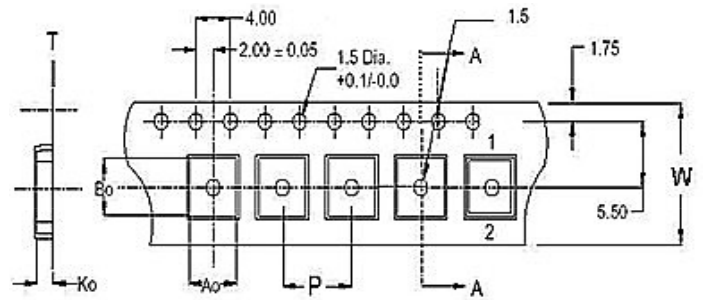
Packing Quantity

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

