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# TOKEN

## (TCRC)

# Power Choke Coil Inductors

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## ▶ Product Introduction

**Power Choke Coil Inductors limit the alternating current through the chokes.**

### Features :

- Ultra low cost.
- Shielded construction.
- High current rating up to DC 33 Amp.
- High frequency range up to 1.0MHz.
- Very low DC resistance.
- All lead-free.(RoHS).

### Applications :

- Motherboards for laptop and desktop computers.
- DC/DC converter in distributed power systems or VRM Applications. Inductor for general purpose use.

Choke coils, also known as: Choke, differential mode inductors, is used to limit the alternating current through the coil, high-frequency and low frequency choke coils.

Token (TCRC) series structure with open magnetic circuit design and protect by UL or PVC Heat-shrinkable tube. The (TCRC) features with small size, high Q value, low cost, high self-resonance frequency, high availability of a large induced current, small magnetic flux leakage and so on.

The power choke (TCRC) is ideal for notebook computers, inkjet printers, photocopying machines, display monitors, mobile phones, broadband modems, game consoles, color TV, VCR, camera, microwave ovens, lighting equipment, automotive electronics products.

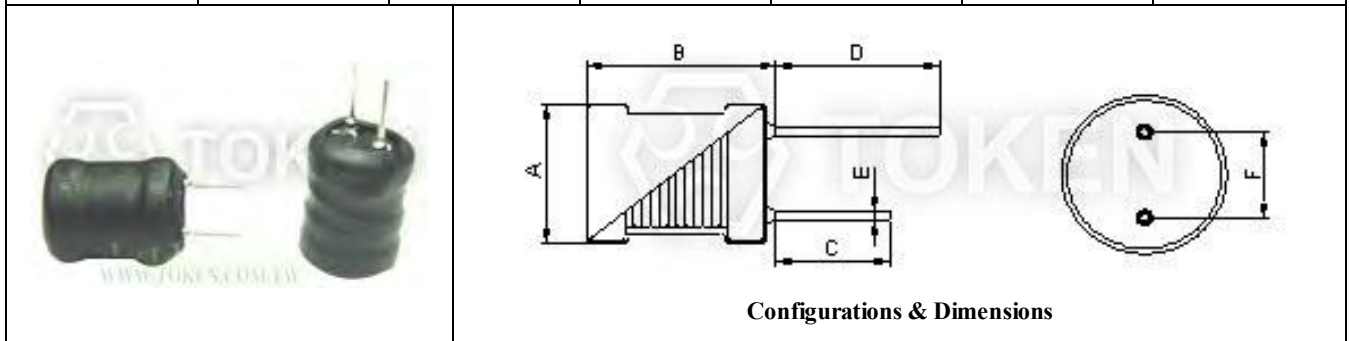
Token will also produce devices outside these specifications to meet specific customer requirements, please contact our sales or link to Token official website "[Through Hole Inductors](http://www.token.com.tw)" for more information.



► **Configurations & Dimensions**

**Configurations & Dimensions (Unit: mm) (TCRC)**

Part NO	A±1.0	B±1.0	C	D(Ref)	E(Ref)	F(Ref)
TCRC0304	3.5	6.0	12	15	0.5	1.3
TCRC0406	4.5	7.0	12	15	0.6	2.0
TCRC0507	5.5	9.0	12	15	0.6	2.5
TCRC0608	6.5	10.0	12	15	0.6	3.0
TCRC0810	8.5	12.0	12	15	0.6	5.0
TCRC0912	9.5	14.0	12	15	0.6	5.0



● Note: Design as Customer's Requested Specifications.

▶ TCRC

**Electrical Characteristics (TCRC)**

MARKING	Inductance (μH)	TCRC0304		TCRC0406		TCRC0507		TCRC0608		TCRC0810		TCRC0912	
		DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)
1R0	1.0	0.10	1000	0.10	1400	0.014	3500			0.02	3400		
1R2	1.2	0.10	1000	0.12	1200					0.02	3400		
1R5	1.5	0.10	900	0.15	1200	0.02	3000			0.02	3400		
1R8	1.8	0.10	800	0.17	1100					0.03	3300		
2R2	2.2	0.10	700	0.20	1100	0.02	2500			0.03	3000		
2R7	2.7	0.20	700	0.20	1300					0.04	3000		
3R3	3.3	0.20	650	0.22	1300	0.03	2000			0.04	3000		
3R9	3.9	0.20	500	0.24	1300					0.05	2900		
4R7	4.7	0.30	450	0.26	800	0.04	1700			0.05	2900		
5R6	5.6	0.30	400	0.28	800					0.06	2600		
6R8	6.8	0.30	350	0.30	800	0.06	1300			0.06	2500		
8R2	8.2	0.40	350	0.35	800					0.06	2000		
100	10	0.50	300	0.46	700	0.08	1000	0.09	1300	0.10	1600	0.04	2800
120	12	0.60	300	0.48	600	0.10	950	0.10	1100	0.10	1400	0.04	2700
150	15	0.60	300	0.55	600	0.11	900	0.11	1050	0.10	1300	0.05	2300
180	18	0.70	290	0.65	500	0.11	800	0.12	1000	0.11	1200	0.06	2100
220	22	0.80	270	0.72	500	0.12	700	0.12	960	0.13	1100	0.07	2000
270	27	0.90	270	0.78	400	0.14	600	0.17	920	0.14	1000	0.10	1700
330	33	2.00	260	0.87	400	0.16	550	0.19	880	0.16	900	0.12	1500
390	39	2.00	250	0.90	400	0.18	500	0.22	860	0.16	800	0.12	1400
470	47	3.00	180	0.98	400	0.20	500	0.23	830	0.16	700	0.13	1300
560	56	3.00	170	1.50	320	0.22	450	0.29	810	0.22	700	0.14	1200
680	68	3.00	170	1.90	300	0.30	450	0.37	750	0.23	600	0.15	1000
820	82	4.00	160	2.50	300	0.34	400	0.39	740	0.27	500	0.16	900
101	100	4.00	150	3.00	200	0.36	400	0.44	710	0.29	400	0.25	700
121	120	4.00	150	3.80	200	0.44	350	0.64	680	0.33	400	0.28	700
151	150	5.00	130	4.50	200	0.52	300	0.73	600	0.46	350	0.32	700
181	180	5.00	130	5.00	200	0.65	300	0.83	540	0.51	350	0.47	600
221	220	8.00	100	5.80	200	0.75	250	0.92	450	0.62	300	0.53	500
271	270	9.00	90	6.50	150	0.10	240	1.3	420	0.65	250	0.60	450
331	330	10.0	90	7.00	150	1.3	200	1.5	400	0.79	250	0.85	400
391	390	10.0	80	7.70	150	1.4	180	1.8	370	0.91	200	0.95	350
471	470	11.0	80	8.00	120	1.6	160	2.3	340	1.2	180	1.1	350
561	560	15.0	70	8.50	120	2.0	160	3.0	280	1.2	160	1.2	300
681	680	23.0	50	9.50	120	2.3	140	3.25	250	1.5	140	1.3	250
821	820	26.0	50	15	100	2.7	130	4.16	230	1.7	140	1.4	200
102	1000	29.00	50	17	100	3.1	120	4.55	210	2.0	120	2.0	200
122	1200	33.0	40	20	80	4.6	110	5.20	200	2.3	100	2.3	180
152	1500	37.0	40	22	80	5.3	100	7.54	180	2.9	80	2.9	150
182	1800	41.0	40	25	70	6.2	90	7.54	160	3.5	80	3.3	120

MARKING	Inductance (μH)	TCRC0304		TCRC0406		TCRC0507		TCRC0608		TCRC0810		TCRC0912	
		DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)	DCR (Ω) Max	Isat (mA)
222	2200	46.0	30	26	60	6.8	80	8.32	150	4.2	70	4.5	110
272	2700	51.0	30	46	40	10	60	9.62	130	5.1	60	5.5	90
332	3300			50	30	12	60	10.92	130	6.1	60	5.7	80
392	3900			54	30	13	55	16.12	100	7.8	50	6.5	80
472	4700			60	30	15	55	17.81	85	11	50	7.2	60
562	5600			65	30	22	50	20.0	70	11	45	9.5	50
682	6800			72	30	25	45	27.3	65	14	45	11	50
822	8200			80	20	28	45	31.2	60	15	40	13	50
103	10000			95	10	35	35	39.0	58	20	35	16	40
123	12000					45	30	42.9	56	24	35	18	40
153	15000					52	30	65.0	53	28	35	21	40
183	18000					58	30	72.8	50	42	30	23	40
223	22000					80	20	82.55	46	43	30	33	35
273	27000					90	20	95.42	42	55	25	37	35
333	33000					135	15	135.2	38	65	25	42	35
393	39000					150	15	154.7	37	87	25	45	30
473	47000					170	15	172.9	35	98	25	52	30

Note:

- Test Freq.: 1KHz / 0.25V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop = 10% typ. at IDC.



## Order Codes

### Order Codes (TCRC)

TCRC	U		0304		-	1R0		M	
Part Number	Tube		Size			Inductance		Tolerance	
TCRC	U	UL	0304	3.5×6.0mm		1R0	1.00μH	J	5%
	P	PVC	0406	4.5×7.0mm		100	10.00μH	K	10%
	None	No Tube	0507	5.5×9.0mm		101	100.00μH	L	15%
			0608	6.5×10.0mm		102	1000.00μH	M	20%
			0810	8.5×12.0mm				N	30%
			0912	9.0×14.0mm				Y	min

## General Information

### Leading-Edge Technology

Token Electronics brand passive component specializes in standard and custom solutions offering the latest in state-of-the-art low profile high power density inductor components. Token provides cost-effective, comprehensive solutions that meet the evolving needs of technology-driven markets. In working closely with the industry leaders in chipset and core development, we remain at the forefront of innovation and new technology to deliver the optimal mix of packaging, high efficiency and unbeatable reliability. Our designs utilize high frequency, low core loss materials, new and custom core shapes in combination with innovative construction and packaging to provide designers with the highest performance parts available on the market.

### Find Inductor Solutions Faster

**Find Your Inductor** - [rfq@token.com.tw](mailto:rfq@token.com.tw)

Only timely and accurate information can help manage the changing needs of your customers. The Token Inductor Finder puts you only a click away from all of the inductor information you need.

**Find Your Solution** - [rfq@token.com.tw](mailto:rfq@token.com.tw)

Selecting the correct inductor solution will not only save you time, but it will give you a competitive edge. At Token, we are committed to helping you find the most efficient alternative for your power design. Our inductor and power supply design experts can help you make that selection.

Please forward us:

- A brief description of your particular application's requirements.
- Details of an existing solution that you'd like to replace, enhance or find an alternative.
- Inquiries for feasibility to tailor a power transformer or inductor to your specific application.

We can also help you with any additional technical information you might need relating to any of our products.

**Ask Us Today**

