Product Introduction

Token (TPSRH) shielded large current inductor family series is a strong choice for Power saving.

Features :

- Magnerically shielded construction.
- Excellent solderabillity and high heat resistance.
- Various high power inductors are superior to be high Saturation for surface mounting.

Applications :

- Power supply for VCRS; OA equipment Digital camera, LCD television set notebook PC, portable communication Equipments, DC/DC converters, etc.

Token four pin terminals flexible design Surface Mount Wirewound Inductor constructs with four terminal pin type which gives a flexible design as inductors or transformers (SEPIC, ZETA circuit, etc). Provide wide inductance range from 2.5μH to 1000.0μH in parallel connection, low direct current resistance (DCR) down to 0.018Ω, and large current up to 14.9A. These devices are directly connected electrode on ferrite core with excellent property and high saturation for surface mounting.

Token enhances surface mount inductor (TPSRH) family series covering complete footprint with profile from 4.8 mm to 8.5 mm, inductance from 1.00 μH to 1000.00 μH, low DCR, and Rated Current uo to 10.0A.

Token (TPSRH74B/125B/127B) with wire wound and magnetically shielded construction offers a variety of characteristics and high performace. Customers can select the optimum characteristics by choosing from footprint, DCR, and a wide range of inductance values and tolerances with some types offering magnetic shielding.

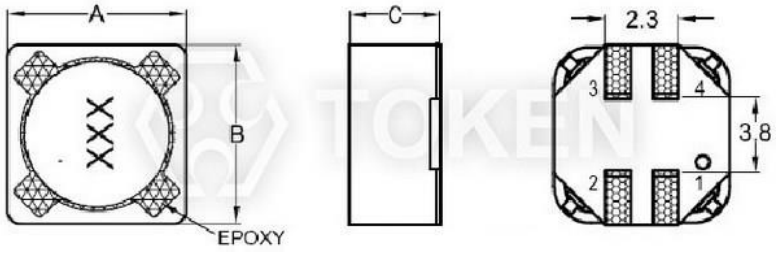
The series is lead-free and RoHS compliant. Application of specific designs also available including different inductance and frequency specifications adjusted to requirements. Please contact our sales or link to Token official website “SMD Power Inductors” for more information.

Dimensions

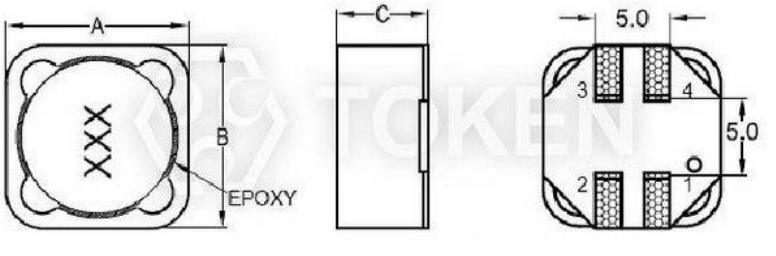
Dimensions & Configurations (Unit: mm) (TPSRH-74B/125B/127B)

Type	A Max.	B Max.	C Max.	I	J	H	K
TPSRH74B	7.3±0.3	7.3±0.3	4.8	1.1	0.8	2.1	7.5
TPSRH125B	12.0±0.3	12.0±0.3	6.5	2.0	1.5	4.0	12.5
TPSRH127B	12.0±0.3	12.0±0.3	8.5	2.0	1.5	4.0	12.5

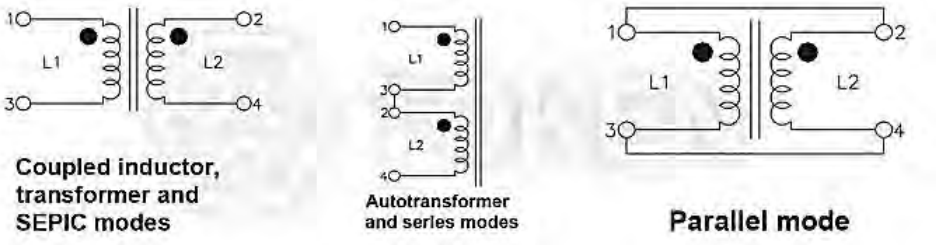
TPSRH74B



TPSRH125B
TPSRH127B



Electrical Schematic



- **Note: Design as Customer's Requested Specifications.**

TPSRH74B

Winding Schematics (TPSRH74B)

PART NO	1eads connected in parallel					1eads connected in series				
	L (µH)	DCR (OHM) Max.	Isat (A) 30%drop typ	SRF MHz	Irms (A)	L (µH)	DCR (OHM) Max.	Isat (A) 30%drop typ	SRF MHz	Irms (A)
TPSRH74B-2R5	2.5	0.018	6.30	55.0	4.33	10.0	0.072	3.15	17.60	2.17
TPSRH74B-3R3	3.3	0.022	5.40	43.0	4.09	13.2	0.088	2.70	12.90	2.05
TPSRH74B-4R7	4.7	0.026	4.60	35.0	3.48	18.8	0.102	2.30	9.80	1.74
TPSRH74B-5R6	5.6	0.032	4.20	32.0	3.14	22.4	0.126	2.10	8.48	1.57
TPSRH74B-6R8	6.8	0.035	3.90	30.0	2.97	27.2	0.140	1.95	7.92	1.49
TPSRH74B-8R2	8.2	0.043	3.50	27.0	2.87	32.8	0.172	1.75	7.10	1.44
TPSRH74B-100	10	0.050	3.00	22.0	2.49	40	0.20	1.50	5.75	1.24
TPSRH74B-120	12	0.060	2.70	20.0	2.28	48	0.24	1.35	5.18	1.14
TPSRH74B-150	15	0.070	2.40	18.0	2.18	60	0.28	1.20	4.59	1.09
TPSRH74B-180	18	0.085	2.30	15.0	1.91	72	0.34	1.15	3.80	0.95
TPSRH74B-220	22	0.110	2.10	13.5	1.68	88	0.44	1.05	3.38	0.84
TPSRH74B-270	27	0.125	1.90	12.0	1.57	108	0.50	0.95	2.98	0.79
TPSRH74B-330	33	0.150	1.70	11.0	1.51	132	0.60	0.85	2.68	0.76
TPSRH74B-390	39	0.190	1.50	10.0	1.27	156	0.76	0.75	2.40	0.64
TPSRH74B-470	47	0.21	1.40	9.50	1.22	188	0.84	0.70	2.23	0.61
TPSRH74B-560	56	0.27	1.30	8.70	1.16	224	1.08	0.65	2.16	0.58
TPSRH74B-680	68	0.32	1.20	7.30	1.02	272	1.28	0.60	1.73	0.51
TPSRH74B-820	82	0.36	1.10	6.20	0.95	328	1.44	0.55	1.35	0.49
TPSRH74B-101	100	0.45	0.98	5.50	0.89	400	1.80	0.49	1.18	0.45
TPSRH74B-121	120	0.56	0.90	4.50	0.78	480	2.24	0.45	1.10	0.39
TPSRH74B-151	150	0.675	0.80	4.00	0.68	600	2.70	0.40	0.82	0.34
TPSRH74B-181	180	0.83	0.73	3.80	0.61	720	3.32	0.36	0.72	0.32
TPSRH74B-221	220	1.10	0.66	3.50	0.59	880	4.40	0.33	0.63	0.30
TPSRH74B-271	270	1.30	0.60	3.30	0.51	1080	5.20	0.30	0.58	0.25
TPSRH74B-331	330	1.60	0.54	3.00	0.48	1320	6.40	0.27	0.53	0.24
TPSRH74B-391	390	2.10	0.50	2.80	0.45	1560	8.40	0.25	0.48	0.23
TPSRH74B-471	470	2.35	0.46	2.60	0.40	1880	9.40	0.23	0.42	0.20
TPSRH74B-561	560	2.65	0.42	2.50	0.37	2240	10.6	0.21	0.39	0.19
TPSRH74B-681	680	3.50	0.38	2.30	0.35	2720	14.0	0.19	0.34	0.18
TPSRH74B-821	820	3.90	0.35	2.20	0.30	3280	15.6	0.175	0.32	0.15
TPSRH74B-102	1000	5.40	0.31	2.00	0.28	4000	21.6	0.155	0.28	0.144

Remark:

- **DCR is for both windings . DC current at which the inductance drops 30% (typ) from its value without current . Inductance tolerance: 4.7µH～100µH tolerance can be done "M" 120µH～1000µH tolerance can be done "K" .**

Note:

- **Inductance shown for coupled inductor and for two inductors connected in parallel .**
- **Inductance is measured at 100KHz.0.1Vrms.0Adc on an Agilent/HP 4284ALC meter or equivalent .**
- **DCR is for both windings when connected in parallel.DCR for each winding is twice the Value .**
- **SRF measured using Agilent/HP E4991A or equivalent .**
- **Current that causes a 40°C temperature rise from 25°C ambient .**

TPSRH125B

Winding Schematics (TPSRH125B)

PART NO	1eads connected in parallel					1eads connected in series				
	L (µH)	DCR (OHM) Max.	Isat (A) 30%drop typ	SRF MHz	Irms (A)	L (µH)	DCR (OHM) Max.	Isat (A) 30%drop typ	SRF MHz	Irms (A)
TPSRH125B-4R7	4.7	0.018	10.30	32.0	7.2	18.8	0.072	5.15	12.00	3.4
TPSRH125B-5R6	5.6	0.020	9.66	31.0	7.0	22.4	0.080	4.83	10.30	3.3
TPSRH125B-6R8	6.8	0.024	9.21	28.0	6.6	27.2	0.095	4.61	8.40	3.2
TPSRH125B-8R2	8.2	0.026	8.55	25.0	6.4	32.8	0.104	4.28	7.10	3.1
TPSRH125B-100	10	0.030	7.40	22.0	5.40	40.0	0.120	3.70	6.00	2.8
TPSRH125B-120	12	0.037	6.86	21.0	5.2	48.0	0.147	3.43	5.80	2.7
TPSRH125B-150	15	0.042	6.09	17.6	4.6	60	0.170	3.05	5.50	2.5
TPSRH125B-180	18	0.048	5.30	17.0	4.4	72	0.194	2.65	5.00	2.2
TPSRH125B-220	22	0.058	5.01	15.0	4.2	88	0.232	2.51	4.10	2.1
TPSRH125B-270	27	0.062	4.66	13.6	3.7	108	0.248	2.33	3.50	1.9
TPSRH125B-330	33	0.067	4.22	12.7	3.6	132	0.268	2.11	3.10	1.6
TPSRH125B-390	39	0.071	3.80	11.7	3.2	156	0.284	1.90	2.80	1.5
TPSRH125B-470	47	0.087	3.25	8.7	2.9	188	0.348	1.63	2.00	1.4
TPSRH125B-560	56	0.099	3.07	7.6	2.7	224	0.396	1.54	2.00	1.3
TPSRH125B-680	68	0.108	2.83	6.1	2.5	272	0.432	1.42	1.80	1.2
TPSRH125B-820	82	0.137	2.55	5.3	2.3	328	0.548	1.28	1.60	1.1
TPSRH125B-101	100	0.161	2.20	5.0	1.9	400	0.642	1.10	1.40	1.0
TPSRH125B-121	120	0.209	2.05	4.4	1.8	480	0.834	1.03	1.20	0.8
TPSRH125B-151	150	0.238	1.82	4.0	1.7	600	0.952	0.91	1.10	0.78
TPSRH125B-181	180	0.268	1.60	3.6	1.6	720	1.072	0.80	0.81	0.75
TPSRH125B-221	220	0.346	1.51	3.2	1.5	880	1.382	0.76	0.74	0.71
TPSRH125B-271	270	0.403	1.41	2.8	1.4	1080	1.61	0.71	0.63	0.65
TPSRH125B-331	330	0.545	1.28	2.5	1.2	1320	2.18	0.64	0.60	0.56
TPSRH125B-391	390	0.600	1.16	2.3	1.0	1560	2.40	0.58	0.52	0.50
TPSRH125B-471	470	0.795	1.00	2.1	0.86	1880	3.18	0.50	0.43	0.41
TPSRH125B-561	560	0.905	0.95	2.0	0.80	2240	3.62	0.48	0.36	0.38
TPSRH125B-681	680	1.030	0.88	1.8	0.74	2720	4.12	0.44	0.32	0.35
TPSRH125B-821	820	1.325	0.79	1.5	0.67	3280	5.30	0.40	0.27	0.32
TPSRH125B-102	1000	1.530	0.69	1.20	0.50	4000	6.12	0.35	0.23	0.29

Remark:

- DCR is for both windings . DC current at which the inductance drops 30% (typ) from its value without current . Inductance tolerance: 4.7µH～100µH tolerance can be done “M” 120µH～1000µH tolerance can be done “K” .

Note:

- Inductance shown for coupled inductor and for two inductors connected in parallel .
- Inductance is measured at 100KHz.0.1Vrms.0Adc on an Agilent/HP 4284ALC meter or equivalent .
- DCR is for both windings when connected in parallel.DCR for each winding is twice the Value .
- SRF measured using Agilent/HP E4991A or equivalent .
- Current that causes a 40°C temperature rise from 25°C ambient .

TPSRH127B

Winding Schematics (TPSRH127B)

PART NO	1eads connected in parallel					1eads connected in series				
	L (µH)	DCR (OHM) Max.	Isat (A) 30%drop typ	SRF MHz	Irms (A)	L (µH)	DCR (OHM) Max.	Isat (A) 30%drop typ	SRF MHz	Irms (A)
TPSRH127B-4R7	4.7	0.019	14.90	32.0	7.4	18.8	0.076	7.70	12.0	3.6
TPSRH127B-5R6	5.6	0.023	13.40	25.0	7.2	22.4	0.092	6.60	10.4	3.5
TPSRH127B-6R8	6.8	0.024	13.10	24.0	6.9	27.2	0.096	6.40	9.5	3.4
TPSRH127B-8R2	8.2	0.025	10.80	18.0	6.6	32.8	0.100	5.60	7.2	3.3
TPSRH127B-100	10	0.029	10.50	16.5	6.2	40.0	0.116	5.40	6.6	3.2
TPSRH127B-150	15	0.036	9.10	11.8	5.8	60	0.144	4.30	5.0	2.7
TPSRH127B-180	18	0.040	8.00	10.5	5.5	72	0.158	3.90	3.8	2.5
TPSRH127B-220	22	0.048	6.80	9.0	5.2	88	0.190	3.50	3.4	2.2
TPSRH127B-270	27	0.060	6.50	8.4	4.7	108	0.240	.3.40	3.2	2.0
TPSRH127B-330	33	0.075	5.60	7.6	4.2	132	0.300	3.10	3.0	1.4
TPSRH127B-390	39	0.080	5.50	6.5	3.6	156	0.320	2.80	2.6	1.6
TPSRH127B-470	47	0.090	5.20	6.0	3.0	188	0.360	2.60	2.1	1.5
TPSRH127B-560	23	0.095	4.50	5.6	2.8	224	0.380	2.4	2.0	1.4
TPSRH127B-680	68	0.105	4.10	5.0	2.6	272	0.420	2.10	1.6	1.3
TPSRH127B-820	82	0.140	3.80	4.1	2.3	328	0.560	1.90	1.3	1.2
TPSRH127B-101	100	0.150	3.40	3.6	2.0	400	0.600	1.70	1.1	1.1
TPSRH127B-121	120	0.205	3.20	3.2	1.9	480	0.820	1.60	1.0	1.0
TPSRH127B-151	150	0.230	2.80	3.0	1.8	600	0.92	1.40	0.82	0.89
TPSRH127B-181	180	0.255	2.50	2.7	1.7	720	1.020	1.30	0.70	0.84
TPSRH127B-221	220	0.345	2.30	2.5	1.6	880	1.380	1.10	0.64	0.75
TPSRH127B-271	270	0.450	2.10	2.1	1.5	1080	1.80	1.00	0.55	0.71
TPSRH127B-331	330	0.510	1.90	2.0	1.3	1320	2.04	0.92	0.47	0.62
TPSRH127B-391	390	0.560	1.70	1.8	1.1	1560	2.24	0.84	0.41	0.53
TPSRH127B-471	470	0.765	1.60	1.6	0.87	1880	3.06	0.80	0.36	0.43
TPSRH127B-561	560	0.845	1.50	1.5	0.83	2240	3.38	0.73	0.31	0.40
TPSRH127B-681	680	1.145	1.30	1.4	0.76	2720	4.58	0.63	0.30	0.36
TPSRH127B-821	820	1.275	1.20	1.3	0.69	3280	5.10	0.58	0.24	0.33
TPSRH127B-102	1000	1.415	1.10	1.1	0.60	4000	5.66	0.56	0.20	0.30

Remark:

- DCR is for both windings . DC current at which the inductance drops 30% (typ) from its value without current . Inductance tolerance: 4.7µH～100µH tolerance can be done “M” 120µH～1000µH tolerance can be done “K” .

Note:

- Inductance shown for coupled inductor and for two inductors connected in parallel .
- Inductance is measured at 100KHz.0.1Vrms.0Adc on an Agilent/HP 4284ALC meter or equivalent .
- DCR is for both windings when connected in parallel.DCR for each winding is twice the Value .
- SRF measured using Agilent/HP E4991A or equivalent .
- Current that causes a 40°C temperature rise from 25°C ambient .

Order Codes

Order Codes (TPSRH-74B/125B/127B)

TPSRH74B	-	6R8	N

Part Number
TPSRH74B
TPSRH125B
TPSRH127B

Inductance	
2R5	2.50μH
100	10.00μH
101	100.00μH
102	1000.00μH

Tolerance	
J	±5%
K	±10%
L	±15%
M	±20%
P	±25%
N	±30%