

SMD POWER INDUCTOR

Magnetic resin shielded power inductor



StricTron

Strictron Electronics Limited

S02-CSR07-01



SMD power inductor



General notices

- The described product is designed for general use only, using in safety-critical, high-reliability or particular applications shall be pre-evaluated by customer.
- Strictron products are unilaterally subject to Strictron standards and are also compliant with common industry standards, demand or expectation from customer side is not warranted.
- Independent reliability of the described product is ensured by Strictron, risks or losses arising during or after particularly or unnormally applying the product, as well as arising from the finished module or product installed the described products, are always beyond the responsibility of Strictron.
- Please conduct validation and verification in actual condition of mounting and operating environment before widely use the described product in mass production.

Product introduction

Magnetic resin shielded inductor is produced under complete automation, designed with closed magnetic circuit, it has characteristics of low magnetic leakage and high anti-EMI ability. Shielded with magnetic resin, the buzz is reduced to a large degree. Rated current of this kind of inductor is around 20%-30% higher than it of ordinary inductors of similar sizes.

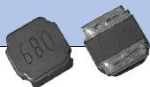
Regarding practical application, metalizing electrodes directly on the ferrite core ensures a high machnical quality and durability. Besides, magnetic resin-shielded inductor is power efficient, and the miniature size greatly saves PCB area and space.

It's generally applied to LED lighting, mobile phone, flat panel TV, blue-ray DVD, set top box, notebook and desktop computer, server, graphics card, navigation system, multimedia equipment, etc.

Premise conditions

Test condition	@100 kHz/1V, temperature 20°C
Operating temperature	-40°C to +125°C
Irms	DC current causing a temperature rise of around 40°C
Isat	DC current cuasing an inductance drop of around 30%
Rated current	Whichever is lower between Irms and Isat

SMD power inductor

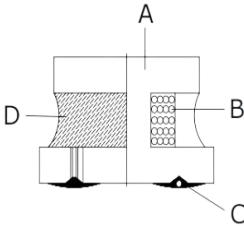


Part number naming rules

CS*	R	5020	T	-	6R8	M
Category	Series	Size code	Tape&reel		Inductance	Tolerance
					①	②

Postscript ①: Inductance code				Postscript ②: Inductance tolerance		
R56	6R8	220	151	K	M	N
0.56μH	6.8μH	22μH	150μH	10%	20%	30%

Structure profile

Item	Part	Material		Sketch
A	Core	Ferrite		
B	Wire	Polyurethane copper wire		
C	Terminal	Tinned copper		
D	Shield	Epoxy resin		



SMD power inductor

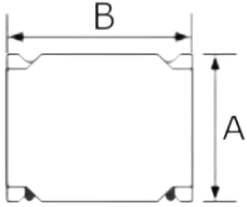
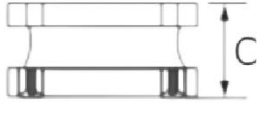
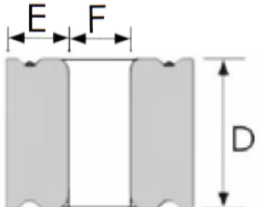
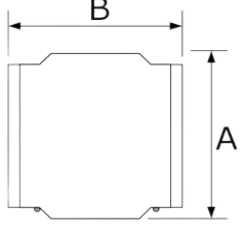
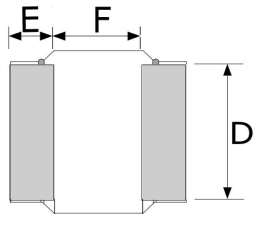
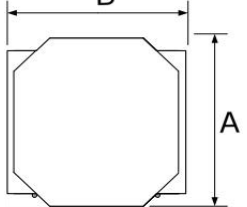
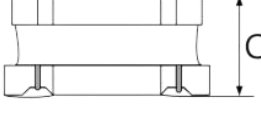
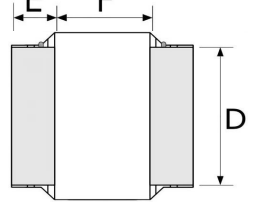


Dimensions and drawings

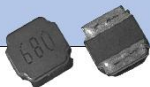
Unit: mm

Size code	A	B	C	D	E	F
2512	2.0±0.2	2.5±0.2	1.2±0.15	2.0±0.2	0.85±0.2	0.8±0.4
3015	3.0±0.2	3.0±0.2	1.5 max.	2.5±0.2	0.80±0.2	1.4±0.4
4018	4.0±0.2	4.0±0.2	1.8 max.	3.3±0.2	1.00±0.2	2.0±0.4
4030	4.0±0.2	4.0±0.2	3.0 max.	3.3±0.2	1.00±0.2	2.0±0.4
5020	5.0±0.3	5.0±0.3	2.0 max.	4.0±0.2	1.25±0.2	2.5±0.4
5040	5.0±0.3	5.0±0.3	4.0 max.	4.0±0.2	1.25±0.2	2.5±0.4
6045	6.0±0.3	6.0±0.3	4.5 max.	5.0±0.4	1.60±0.3	2.8±0.6
8040	8.0±0.3	8.0±0.3	4.0±0.3	6.2±0.4	2.00±0.4	4.0±0.8
8065	8.0±0.3	8.0±0.3	6.5±0.5	6.2±0.4	2.00±0.4	4.0±0.8

Drawings

2512	Top 	Side 	Bottom 
3015 4018 4030 6045 8040	Top 	Side 	Bottom 
5020 5040 8065	Top 	Side 	Bottom 

SMD power inductor



Recommended land pattern

Unit: mm

Size code	a typ.	b typ.	c typ.	Schematic
2512	2.0	0.8	2.5	
3015	2.7	1.5	3.1	
4018	3.7	1.9	4.1	
4030	3.7	1.9	4.1	
5020	4.2	2.3	5.1	
5040	4.2	2.3	5.1	
6045	5.7	2.8	6.2	
8040	7.5	3.8	8.2	
8065	7.5	3.8	8.2	



SMD power inductor



Product parameter lineup

Size **2512**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR2512T-R47N	0.47	0.061	160	3.82	2.15
CSR2512T-R68N	0.68	0.074	140	3.28	1.95
CSR2512T-1R0N	1.0	0.090	110	2.59	1.93
CSR2512T-1R5M	1.5	0.147	97	2.24	1.40
CSR2512T-2R2M	2.2	0.216	69	1.85	1.15
CSR2512T-3R3M	3.3	0.264	62	1.61	1.04
CSR2512T-4R7M	4.7	0.377	47	1.12	0.84
CSR2512T-5R6M	5.6	0.538	38	1.11	0.73
CSR2512T-6R2M	6.2	0.542	38	1.03	0.73
CSR2512T-6R8M	6.8	0.581	38	0.98	0.69
CSR2512T-7R5M	7.5	0.611	35	0.97	0.68
CSR2512T-8R2M	8.2	0.658	36	0.98	0.65
CSR2512T-9R1M	9.1	0.690	34	0.91	0.62
CSR2512T-100M	10	0.690	34	0.79	0.62
CSR2512T-120M	12	1.075	28	0.78	0.51
CSR2512T-150M	15	1.591	25	0.68	0.42
CSR2512T-220M	22	1.976	20	0.53	0.38



SMD power inductor



Product parameter lineup

Size **3015**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR3015T-1R0N	1.0	0.039	150	2.32	2.35
CSR3015T-1R5N	1.5	0.065	100	2.30	1.70
CSR3015T-2R2N	2.2	0.078	86	1.60	1.60
CSR3015T-3R3M	3.3	0.104	68	1.32	1.36
CSR3015T-4R7M	4.7	0.163	46	1.10	1.09
CSR3015T-5R1M	5.1	0.173	49	1.00	1.05
CSR3015T-6R8M	6.8	0.260	39	0.85	0.85
CSR3015T-100M	10	0.325	41	0.72	0.77
CSR3015T-150M	15	0.455	30	0.66	0.65
CSR3015T-180M	18	0.559	23	0.56	0.59
CSR3015T-220M	22	0.598	23	0.52	0.57
CSR3015T-270M	27	0.949	22	0.48	0.45
CSR3015T-330M	33	1.066	20	0.44	0.43
CSR3015T-390M	39	1.294	14	0.41	0.39
CSR3015T-470M	47	1.625	14	0.35	0.35
CSR3015T-560M	56	1.664	13	0.33	0.34
CSR3015T-620M	62	2.093	13	0.30	0.30
CSR3015T-680M	68	3.510	11	0.28	0.23
CSR3015T-101M	100	4.043	7.2	0.23	0.21
CSR3015T-151M	150	4.940	4.5	0.18	0.19



SMD power inductor



Product parameter lineup

Size **4018**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR4018T-R47N	0.47	0.018	155	4.30	4.00
CSR4018T-R68N	0.68	0.026	128	4.90	3.30
CSR4018T-1R0N	1.0	0.033	80	4.80	2.00
CSR4018T-1R5N	1.5	0.039	65	3.35	1.80
CSR4018T-1R8N	1.8	0.044	54	3.00	2.00
CSR4018T-2R2M	2.2	0.059	52	2.70	1.65
CSR4018T-3R3M	3.3	0.091	44	2.45	1.23
CSR4018T-4R7M	4.7	0.117	34	1.70	1.20
CSR4018T-6R8M	6.8	0.143	29	1.45	1.06
CSR4018T-100M	10	0.234	24	1.30	0.84
CSR4018T-150M	15	0.325	19	0.94	0.65
CSR4018T-220M	22	0.468	16	0.80	0.59
CSR4018T-330M	33	0.689	12	0.56	0.49
CSR4018T-470M	47	0.845	10	0.57	0.42
CSR4018T-680M	68	1.300	8.3	0.47	0.32
CSR4018T-101M	100	2.275	6.5	0.40	0.25
CSR4018T-151M	150	3.250	5.5	0.31	0.22
CSR4018T-221M	220	5.200	4	0.27	0.17



SMD power inductor



Product parameter lineup

Size **4030**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR4030T-R68N	0.68	0.013	130	6.80	4.56
CSR4030T-1R0N	1.0	0.018	70	5.26	4.15
CSR4030T-1R2N	1.2	0.020	80	5.80	3.82
CSR4030T-1R5N	1.5	0.026	62	4.84	3.34
CSR4030T-1R8N	1.8	0.033	60	4.50	3.20
CSR4030T-2R2N	2.2	0.039	52	4.90	2.95
CSR4030T-3R3M	3.3	0.052	38	3.30	2.40
CSR4030T-4R7M	4.7	0.078	31	2.90	2.00
CSR4030T-5R6M	5.6	0.085	30	2.60	1.95
CSR4030T-6R8M	6.8	0.117	24	2.75	1.60
CSR4030T-7R5M	7.5	0.111	26	2.20	1.65
CSR4030T-8R2M	8.2	0.117	26	2.10	1.60
CSR4030T-100M	10	0.130	21	1.95	1.50
CSR4030T-120M	12	0.176	18	1.70	1.30
CSR4030T-150M	15	0.247	16	1.65	1.11
CSR4030T-180M	18	0.260	10	1.40	1.10
CSR4030T-220M	22	0.293	10	1.30	1.00
CSR4030T-330M	33	0.429	10	1.10	0.84
CSR4030T-390M	39	0.566	10	1.03	0.73
CSR4030T-470M	47	0.579	8.4	0.95	0.72
CSR4030T-560M	56	0.722	8.4	0.85	0.65
CSR4030T-620M	62	0.760	7	0.80	0.63

SMD power inductor

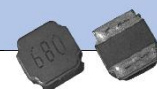


Product parameter lineup

Size **4030**[illegible]



SMD power inductor



Product parameter lineup

Size **5020**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR5020T-R56N	0.56	0.022	137	8.50	3.80
CSR5020T-R68N	0.68	0.022	120	5.50	4.00
CSR5020T-1R0N	1.0	0.026	114	4.10	3.80
CSR5020T-1R5N	1.5	0.034	68	4.10	3.20
CSR5020T-2R2N	2.2	0.042	57	3.20	2.90
CSR5020T-3R3N	3.3	0.056	46	2.55	2.50
CSR5020T-4R7M	4.7	0.074	37	2.50	2.20
CSR5020T-5R6M	5.6	0.083	32	2.30	2.05
CSR5020T-6R8M	6.8	0.108	30	2.05	1.80
CSR5020T-8R2M	8.2	0.127	26	1.85	1.65
CSR5020T-100M	10	0.143	24	1.70	1.55
CSR5020T-150M	15	0.215	20	1.35	1.25
CSR5020T-180M	18	0.260	16	1.25	1.15
CSR5020T-220M	22	0.294	14	1.15	1.10
CSR5020T-330M	33	0.507	10	0.92	0.90
CSR5020T-470M	47	0.680	7	0.77	0.77
CSR5020T-560M	56	0.819	6	0.77	0.70
CSR5020T-680M	68	0.962	6	0.65	0.64
CSR5020T-820M	82	1.158	6	0.65	0.50
CSR5020T-101M	100	1.430	6	0.53	0.53
CSR5020T-121M	120	1.755	6	0.42	0.40
CSR5020T-201M	200	2.600	4.5	0.30	0.40



SMD power inductor

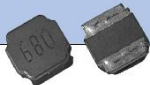


Product parameter lineup

Size **5040**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR5040T-R22M	0.22	0.008	289	18.00	6.50
CSR5040T-R47M	0.47	0.009	171	10.00	6.60
CSR5040T-1R0N	1.0	0.016	117	7.35	4.90
CSR5040T-1R5N	1.5	0.020	86	6.30	4.30
CSR5040T-1R8M	1.8	0.021	55	5.50	4.15
CSR5040T-2R2N	2.2	0.025	50	4.90	3.80
CSR5040T-2R7N	2.7	0.029	37	4.30	3.60
CSR5040T-3R0N	3.0	0.029	37	4.15	3.60
CSR5040T-3R3N	3.3	0.031	32	3.95	3.40
CSR5040T-3R6M	3.6	0.031	30	3.80	3.30
CSR5040T-4R7N	4.7	0.039	28	3.50	3.00
CSR5040T-5R6M	5.6	0.046	27	3.00	2.80
CSR5040T-6R8M	6.8	0.056	21	2.90	2.50
CSR5040T-8R2M	8.2	0.062	20	2.70	2.30
CSR5040T-100M	10	0.083	18	2.35	2.10
CSR5040T-120M	12	0.100	14	2.20	2.00
CSR5040T-150M	15	0.112	13	2.00	2.00
CSR5040T-180M	18	0.155	12	1.70	1.45
CSR5040T-220M	22	0.168	11	1.60	1.50
CSR5040T-270M	27	0.244	9.8	1.52	1.10
CSR5040T-330M	33	0.244	9	1.30	1.20
CSR5040T-470M	47	0.354	7	1.10	1.00

SMD power inductor



Product parameter lineup

Size 5040

Part code	Inductance (μH)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR5040T-510M	51	0.494	6	1.00	1.00
CSR5040T-560M	56	0.494	6	1.05	0.80
CSR5040T-680M	68	0.520	6	0.90	0.80
CSR5040T-750M	75	0.585	6	0.85	0.72
CSR5040T-101M	100	0.728	5	0.75	0.70
CSR5040T-151M	150	0.975	3.7	0.65	0.60
CSR5040T-221M	220	1.820	3	0.48	0.40
CSR5040T-301M	300	2.600	2.7	0.50	0.35
CSR5040T-331M	330	2.730	2.7	0.42	0.40
CSR5040T-471M	470	3.900	2.7	0.37	0.35
CSR5040T-561M	560	4.920	1.5	0.31	0.31
CSR5040T-681M	680	5.070	1.6	0.30	0.25



SMD power inductor



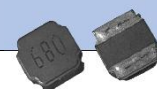
Product parameter lineup

Size **6045**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	I _{rms} (A)	I _{sat} (A)
CSR6045T-R47N	0.47	0.008	155	15.00	6.50
CSR6045T-R56N	0.56	0.008	142	14.00	6.50
CSR6045T-R68N	0.68	0.008	99	11.00	5.70
CSR6045T-R82N	0.82	0.010	140	10.35	5.90
CSR6045T-1R0N	1.0	0.014	100	9.85	5.14
CSR6045T-1R2N	1.2	0.013	100	8.35	5.40
CSR6045T-1R5N	1.5	0.016	65	8.80	4.95
CSR6045T-1R8N	1.8	0.016	74	7.60	4.95
CSR6045T-2R2N	2.2	0.018	52	6.75	4.60
CSR6045T-3R0N	3.0	0.026	35	5.60	3.80
CSR6045T-3R3N	3.3	0.027	32	5.90	3.70
CSR6045T-3R6N	3.6	0.027	28	5.25	3.70
CSR6045T-4R7M	4.7	0.034	24	4.97	3.30
CSR6045T-5R6M	5.6	0.038	23	4.15	3.15
CSR6045T-6R2M	6.2	0.040	26	4.43	3.00
CSR6045T-6R8M	6.8	0.040	20	3.90	3.00
CSR6045T-7R5M	7.5	0.044	18	3.50	2.90
CSR6045T-8R2M	8.2	0.056	21	3.90	2.60
CSR6045T-9R1M	9.1	0.056	17	3.35	2.60
CSR6045T-100M	10	0.062	15	3.20	2.45
CSR6045T-120M	12	0.075	13	2.80	2.20
CSR6045T-150M	15	0.088	12	2.50	2.05



SMD power inductor



Product parameter lineup

Size **6045**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR6045T-180M	18	0.105	10	2.20	1.85
CSR6045T-220M	22	0.116	10	2.05	1.80
CSR6045T-270M	27	0.133	9.2	1.90	1.65
CSR6045T-300M	30	0.172	7.8	1.70	1.50
CSR6045T-330M	33	0.178	7.8	1.65	1.45
CSR6045T-390M	39	0.234	7.8	1.50	1.25
CSR6045T-470M	47	0.260	6.4	1.40	1.20
CSR6045T-510M	51	0.269	6.4	1.35	1.15
CSR6045T-560M	56	0.287	6.4	1.30	1.10
CSR6045T-620M	62	0.306	6.4	1.25	1.10
CSR6045T-680M	68	0.376	6.4	1.20	1.00
CSR6045T-750M	75	0.397	5	1.15	0.95
CSR6045T-820M	82	0.443	4.9	1.05	0.90
CSR6045T-910M	91	0.467	4.9	1.00	0.85
CSR6045T-101M	100	0.563	4.2	0.95	0.80
CSR6045T-121M	120	0.629	4.2	0.85	0.77
CSR6045T-151M	150	0.754	4.2	0.80	0.70
CSR6045T-221M	220	1.084	3.5	0.70	0.59
CSR6045T-331M	330	1.651	2.8	0.57	0.57
CSR6045T-471M	470	2.340	2	0.50	0.42
CSR6045T-681M	680	3.250	1.7	0.42	0.33



SMD power inductor



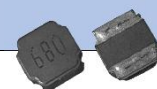
Product parameter lineup

Size **8040**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR8040T-R82N	0.82	0.010	94	13.80	6.30
CSR8040T-1R0N	1.0	0.010	89	9.85	6.30
CSR8040T-1R2N	1.2	0.013	59	10.00	5.65
CSR8040T-1R5N	1.5	0.013	67	8.15	5.65
CSR8040T-2R0N	2.0	0.016	43	9.25	5.15
CSR8040T-2R2N	2.2	0.016	41	7.10	5.15
CSR8040T-3R0N	3.0	0.018	32	6.10	4.70
CSR8040T-3R3N	3.3	0.022	27	6.50	4.40
CSR8040T-3R6N	3.6	0.022	30	7.52	4.35
CSR8040T-3R9N	3.9	0.022	26	5.75	4.35
CSR8040T-4R7N	4.7	0.025	24	5.90	4.10
CSR8040T-5R1N	5.1	0.025	22	4.70	4.05
CSR8040T-5R6N	5.6	0.027	24	6.00	3.85
CSR8040T-6R2N	6.2	0.027	20	4.45	3.85
CSR8040T-6R8M	6.8	0.031	20	4.55	3.60
CSR8040T-8R2M	8.2	0.034	17	4.20	3.45
CSR8040T-100M	10	0.038	15	3.60	3.30
CSR8040T-120M	12	0.053	13	3.50	2.80
CSR8040T-150M	15	0.061	12	2.95	2.60
CSR8040T-180M	18	0.069	11	2.70	2.40
CSR8040T-220M	22	0.090	9.5	2.40	2.10
CSR8040T-270M	27	0.101	9.2	2.15	2.00



SMD power inductor



Product parameter lineup

Size **8040**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR8040T-330M	33	0.126	7.8	2.05	1.80
CSR8040T-360M	36	0.133	7.8	2.00	1.75
CSR8040T-390M	39	0.139	7.8	1.95	1.70
CSR8040T-430M	43	0.147	7.8	1.90	1.65
CSR8040T-470M	47	0.177	6.4	1.75	1.55
CSR8040T-510M	51	0.185	6.4	1.70	1.50
CSR8040T-560M	56	0.192	6.4	1.55	1.45
CSR8040T-620M	62	0.237	6.4	1.50	1.30
CSR8040T-680M	68	0.255	4.9	1.45	1.25
CSR8040T-750M	75	0.274	4.9	1.35	1.20
CSR8040T-820M	82	0.293	5.9	1.30	1.15
CSR8040T-910M	91	0.354	4.9	1.20	1.05
CSR8040T-101M	100	0.377	4.2	1.15	1.00
CSR8040T-121M	120	0.434	3.5	1.05	0.95
CSR8040T-151M	150	0.533	3.5	1.10	0.85
CSR8040T-181M	180	0.676	3.5	0.95	0.83
CSR8040T-221M	220	0.779	3.5	0.85	0.80
CSR8040T-331M	330	1.156	2.8	0.68	0.64
CSR8040T-471M	470	1.625	2.1	0.60	0.50



SMD power inductor



Product parameter lineup

Size **8065**

Part code	Inductance (μ H)	DCR (Ω) max.	SRF (MHz) min.	Irms (A)	Isat (A)
CSR8065T-R68M	0.68	0.008	100	24.00	7.50
CSR8065T-1R0M	1.0	0.011	96	20.00	7.00
CSR8065T-2R2M	2.2	0.016	45	13.80	5.20
CSR8065T-3R3M	3.3	0.018	27	9.50	5.10
CSR8065T-4R7M	4.7	0.022	18	8.50	4.70
CSR8065T-5R6M	5.6	0.026	17	8.00	4.50
CSR8065T-6R8M	6.8	0.026	16	7.50	4.50
CSR8065T-8R2M	8.2	0.031	15	7.00	4.20
CSR8065T-100M	10	0.044	13	8.00	3.20
CSR8065T-150M	15	0.053	10	5.70	3.25
CSR8065T-220M	22	0.072	8	4.30	2.70
CSR8065T-470M	47	0.152	7	3.40	1.85
CSR8065T-560M	56	0.198	6	3.20	1.35
CSR8065T-680M	68	0.218	5	2.70	1.55
CSR8065T-101M	100	0.280	3.1	2.00	1.35
CSR8065T-151M	150	0.440	2.5	1.60	0.95
CSR8065T-221M	220	0.656	2	1.20	0.80
CSR8065T-331M	330	0.840	1.7	1.00	0.75
CSR8065T-471M	470	1.560	1.4	1.00	0.55
CSR8065T-681M	680	1.944	1	0.85	0.52