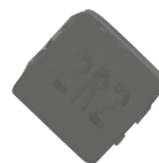


SMD POWER INDUCTOR

Molding power inductor



StricTron

Strictron Electronics Limited

S02-CSU07-01

**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

The molding inductor comprises a base body and a winding body, the winding body is embedded into the metal powder and then die cast them as a entity. The pins, which are directly formed on the surface of the base body, are the lead-out pins of the coil.

With good material characteristics and the special design, this type of inductor can work under a high current load for a long time. And due to the more stable structure and the lower internal resistance, it works more efficient.

Advantages of modling inductor:

- Low loss, low impedance, of the lowest DC resistance among same-size inductor categories.
- Small volume, high installation density, suitable for reflow soldering SMT process.
- High rated current, good temperature rise current and saturation current characteristics at high temperature.
- Widely used in power lines of electronic equipments, and the application frequency can reach 5MHz.
- Closed magnetic circuit, excellent ability of anti-EMI, very low buzz.
- Firm structure, high product precision, excellent anti-rust ability

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
Absolute voltage	DC 30V max.



SMD power inductor



Part number naming rules

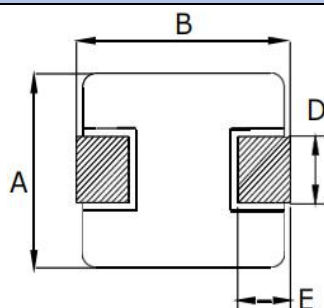
CS*	U	0630	T	-	220	M
Category	Series	Size code	Tape&reel		Inductance	Tolerance
					①	±20%

Postscript ①: Inductance			
R68	0.68μH	4R7	4.7μH
220	22μH	101	100μH

Dimensions and drawings

Unit: mm					
Size code	A	B	C	D	E
0420	4.2±0.3	4.4±0.4	2.0 max.	2.0±0.3	0.8±0.3
0530	5.2±0.2	5.4±0.4	3.0 max.	2.2±0.3	1.2±0.2
0630	6.6±0.2	7.0±0.3	3.0 max.	3.0±0.3	1.6±0.3
0650	6.6±0.2	7.0±0.3	5.0 max.	3.0±0.3	1.6±0.3
1040	10.0±0.3	11.0±0.5	4.0 max.	3.0±0.5	2.0±0.5
1050	10.0±0.3	11.5 max.	5.0 max.	3.0±0.5	2.0±0.5
1250	12.6±0.3	13.5±0.4	5.0 max.	5.0±0.3	2.0±0.5
1260	12.6±0.3	13.5±0.4	6.0 max.	5.0±0.3	2.0±0.5
Drawings					

Front view



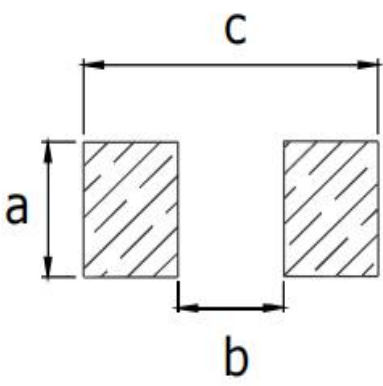
Side view



SMD power inductor



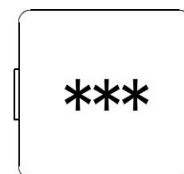
Recommended land pattern

Unit: mm				
Size code	a typ.	b typ.	c typ.	
0420	2.5	2.2	5.2	
0530	2.5	2.2	6.0	
0630	3.5	3.7	8.4	
0650	3.5	3.7	8.4	
1040	4.1	5.4	13.6	
1050	4.1	5.4	13.6	
1250	5.5	8.0	14.5	
1260	5.5	8.0	14.5	

Appearance and mark

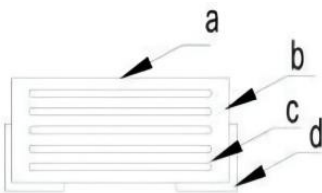
The inductor body is marked with 3 characters on the top side, which indicates the inductance value.

As shown in the right illustration.



Refer to **Postscript** ① of **Part number naming rules** in page 2 to know details.

Structure profile

Item	Part	Material	Sketch
a	Marking	Ink (gernally black)	
b	Core	Alloy powder	
c	Wire	Polyurethane copper wire	
d	Terminal	Tinned copper	

SMD power inductor

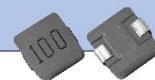
Product parameter lineup

Size **0420**

Part code	Inductance (μ H) $\pm$ 20%	DCR (m Ω) max.	Irms (A) typ.	Isat (A) typ.
CSU0420T-R10M	0.10	5	13.0	22.0
CSU0420T-R22M	0.22	7	9.5	12.5
CSU0420T-R33M	0.33	11	10.0	12.0
CSU0420T-R47M	0.47	15	7.5	9.5
CSU0420T-R56M	0.56	16	7.0	9.0
CSU0420T-R68M	0.68	18	7.0	8.0
CSU0420T-1R0M	1.0	27	6.0	7.0
CSU0420T-1R2M	1.2	28	6.0	6.5
CSU0420T-1R5M	1.5	46	5.0	5.5
CSU0420T-2R2M	2.2	58	4.5	5.0
CSU0420T-3R3M	3.3	87	3.3	3.5
CSU0420T-4R7M	4.7	105	2.8	3.0
CSU0420T-6R8M	6.8	175	2.4	2.5
CSU0420T-100M	10	285	1.6	2.0
CSU0420T-220M	22	370	1.2	1.4



SMD power inductor



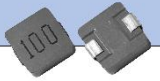
Product parameter lineup

Size **0530**

Part code	Inductance (μH) $\pm 20\%$	DCR ($\text{m}\Omega$) max.	Irms (A) typ.	Isat (A) typ.
CSU0530T-R10M	0.10	3	25.0	30.0
CSU0530T-R20M	0.20	4	14.0	20.0
CSU0530T-R33M	0.33	5.5	14.0	18.0
CSU0530T-R47M	0.47	9	11.0	15.0
CSU0530T-R68M	0.68	12	9.0	11.5
CSU0530T-R82M	0.82	10.5	10.5	10.5
CSU0530T-1R0M	1.0	14	8.5	10.0
CSU0530T-1R2M	1.2	16	8.5	9.5
CSU0530T-1R5M	1.5	25	8.2	9.0
CSU0530T-2R2M	2.2	30	7.0	7.0
CSU0530T-3R3M	3.3	38	5.5	6.0
CSU0530T-4R7M	4.7	60	4.5	4.6
CSU0530T-6R8M	6.8	90	3.5	3.6
CSU0530T-100M	10	130	3.2	3.5
CSU0530T-150M	15	175	1.8	2.2



SMD power inductor



Product parameter lineup

Size **0630**

Part code	Inductance (μH) $\pm 20\%$	DCR ($\text{m}\Omega$) max.	Irms (A) typ.	Isat (A) typ.
CSU0630T-R10M	0.10	2	32.5	60.0
CSU0630T-R22M	0.22	3	24.0	34.0
CSU0630T-R33M	0.33	3.5	21.0	25.0
CSU0630T-R47M	0.47	4.5	18.0	20.0
CSU0630T-R56M	0.56	5	16.5	18.0
CSU0630T-R68M	0.68	5.5	16.0	17.0
CSU0630T-R82M	0.82	6	14.0	16.0
CSU0630T-1R0M	1.0	8	12.0	15.0
CSU0630T-1R5M	1.5	12.5	12.0	12.0
CSU0630T-1R8M	1.8	13	9.3	11.8
CSU0630T-2R2M	2.2	15	9.5	10.0
CSU0630T-3R3M	3.3	22	8.5	9.5
CSU0630T-4R7M	4.7	33	6.0	9.0
CSU0630T-5R6M	5.6	42	5.5	6.5
CSU0630T-6R8M	6.8	48	5.0	6.0
CSU0630T-8R2M	8.2	60	5.0	5.5
CSU0630T-100M	10	68	4.5	5.5
CSU0630T-150M	15	120	3.0	4.0
CSU0630T-220M	22	170	2.5	3.0
CSU0630T-330M	33	270	2.0	2.5
CSU0630T-470M	47	395	1.5	2.0

SMD power inductor

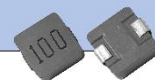
Product parameter lineup

Size **0650**

Part code	Inductance (μ H) $\pm$ 20%	DCR (m Ω) max.	Irms (A) typ.	Isat (A) typ.
CSU0650T-R47M	0.47	4	20.0	21.0
CSU0650T-R68M	0.68	5	16.5	18.0
CSU0650T-1R0M	1.0	6.8	12.0	16.0
CSU0650T-1R5M	1.5	10	9.5	13.0
CSU0650T-2R2M	2.2	12.5	9.0	11.0
CSU0650T-3R3M	3.3	22	8.5	10.0
CSU0650T-4R7M	4.7	30	6.0	8.0
CSU0650T-6R8M	6.8	41	5.8	6.3
CSU0650T-8R2M	8.2	48	5.5	5.5
CSU0650T-100M	10	60	4.5	5.3
CSU0650T-150M	15	90	3.1	4.0
CSU0650T-220M	22	145	2.6	3.5
CSU0650T-330M	33	190	2.3	3.0
CSU0650T-470M	47	245	2.0	2.6



SMD power inductor



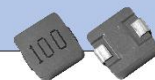
Product parameter lineup

Size **1040**

Part code	Inductance (μH) $\pm 20\%$	DCR ($\text{m}\Omega$) max.	I _{rms} (A) typ.	I _{sat} (A) typ.
CSU1040T-R15M	0.15	0.8	45.0	75.0
CSU1040T-R22M	0.22	1	35.0	60.0
CSU1040T-R36M	0.36	1.2	30.0	45.0
CSU1040T-R47M	0.47	1.8	30.0	40.0
CSU1040T-R56M	0.56	2	25.0	33.0
CSU1040T-R68M	0.68	2.5	23.0	30.0
CSU1040T-R80M	0.80	3	23.0	29.0
CSU1040T-1R0M	1.0	4	19.0	28.0
CSU1040T-1R5M	1.5	5	16.0	24.0
CSU1040T-2R2M	2.2	7	12.0	16.5
CSU1040T-3R3M	3.3	12.5	11.0	16.0
CSU1040T-4R7M	4.7	20	9.0	13.0
CSU1040T-6R8M	6.8	25	8.5	12.0
CSU1040T-8R2M	8.2	28	8.0	9.0
CSU1040T-100M	10	30	7.8	8.5
CSU1040T-150M	15	45	6.5	7.0
CSU1040T-220M	22	66	5.0	5.5
CSU1040T-330M	33	92	4.4	4.8
CSU1040T-470M	47	145	3.3	3.5
CSU1040T-680M	68	198	2.5	3.0
CSU1040T-820M	82	290	2.3	2.8
CSU1040T-101M	100	350	2.0	2.3



SMD power inductor



Product parameter lineup

Size **1050**

Part code	Inductance (μH) $\pm 20\%$	DCR ($\text{m}\Omega$) max.	Irms (A) typ.	Isat (A) typ.
CSU1050T-R22M	0.22	1.1	37.0	65.0
CSU1050T-R68M	0.68	2.3	23.0	37.0
CSU1050T-1R0M	1.0	3	23.0	30.0
CSU1050T-1R5M	1.5	4	21.0	25.0
CSU1050T-2R2M	2.2	6	15.0	19.0
CSU1050T-3R3M	3.3	10	13.0	16.0
CSU1050T-4R7M	4.7	15	11.0	15.0
CSU1050T-5R6M	5.6	17	9.5	14.0
CSU1050T-6R8M	6.8	20	9.0	14.0
CSU1050T-100M	10	28	8.0	10.0
CSU1050T-150M	15	42	6.5	7.5
CSU1050T-220M	22	50	5.5	6.0
CSU1050T-330M	33	86	4.8	5.2
CSU1050T-470M	47	132	3.7	4.5
CSU1050T-680M	68	185	2.7	3.2
CSU1050T-820M	82	280	2.0	3.5
CSU1050T-101M	100	296	2.1	2.8

SMD power inductor

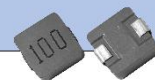
Product parameter lineup

Size **1250**

Part code	Inductance (μH) $\pm 20\%$	DCR ($\text{m}\Omega$) max.	Irms (A) typ.	Isat (A) typ.
CSU1250T-3R3M	3.3	8	14.0	22.0
CSU1250T-4R7M	4.7	11	13.0	20.0
CSU1250T-6R8M	6.8	18	12.0	16.0
CSU1250T-100M	10	22	9.0	12.0
CSU1250T-150M	15	30	8.0	10.0
CSU1250T-220M	22	58	4.5	6.5
CSU1250T-330M	33	90	3.5	6.0
CSU1250T-470M	47	135	3.0	5.0



SMD power inductor



Product parameter lineup

Size **1260**

Part code	Inductance (μH) $\pm 20\%$	DCR ($\text{m}\Omega$) max.	Irms (A) typ.	Isat (A) typ.
CSU1260T-3R3M	3.3	7	17.0	25.0
CSU1260T-4R7M	4.7	9	15.0	24.0
CSU1260T-5R6M	5.6	11.5	13.0	22.5
CSU1260T-6R8M	6.8	14	12.0	19.0
CSU1260T-8R2M	8.2	16	11.0	13.5
CSU1260T-100M	10	21	10.0	12.5
CSU1260T-120M	12	23	9.0	10.0
CSU1260T-150M	15	30	8.5	9.0
CSU1260T-180M	18	35	7.5	8.0
CSU1260T-220M	22	41	7.0	7.5
CSU1260T-270M	27	56	6.0	6.5
CSU1260T-330M	33	75	5.5	6.0
CSU1260T-470M	47	90	5.0	5.5
CSU1260T-680M	68	150	4.0	4.5
CSU1260T-101M	100	200	3.0	3.5
CSU1260T-121M	120	240	2.0	3.2
CSU1260T-151M	150	355	1.5	2.7