



DSPI100-90-SERIES-A

2023.03.29 R0

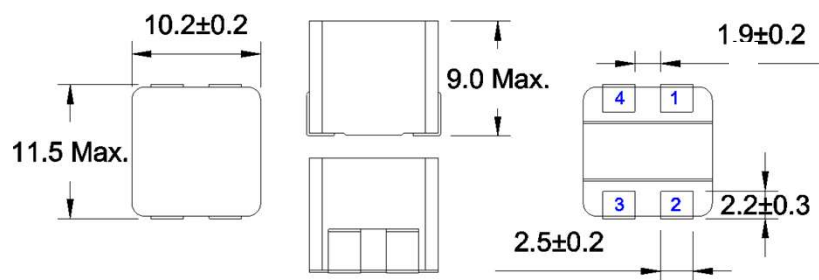
Applications

- DC/DC converters, especially for SEPIC topology
- Common mode choke
- 1:1 transformer
- LED lighting

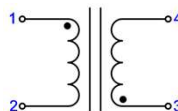
Environmental data

- Operating temperature range : -55°C ~ +155°C(component)
- Storage conditions (packaged) : -25°C ~ +40°C, ≤75% RH
- Complies with AEC-Q200 standard

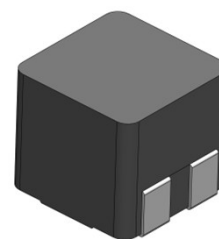
Dimensions [Unit : mm]



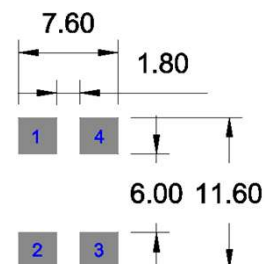
Schematic



Picture



Land Pattern [Unit : mm]



Specifications

Part No.	Inductance(uH) ¹ L(1-2), L(3-4)	DCR (mΩ) ² R(1-2), R(3-4)		Saturation Current(A) ³ TYP.	Heating Rating Current(A) ⁴ TYP.
		TYP.	MAX.		
DSPI100-90-1R0M-A	1.0±20%	4.6	5.6	43.5	17.0
DSPI100-90-1R5M-A	1.5±20%	8.7	9.4	34.0	12.5
DSPI100-90-2R2M-A	2.2±20%	10.6	12.5	29.5	11.5
DSPI100-90-3R3M-A	3.3±20%	23.3	26.0	28.2	7.5
DSPI100-90-4R7M-A	4.7±20%	36.2	40.0	24.2	7.0
DSPI100-90-6R8M-A	6.8±20%	46.1	51.5	21.2	6.5

Comment

A-a. Inductance is per winding.

A-b. When leads are connected in parallel, inductance is the same value.

A-c. When leads are connected in series, inductance is four times the value.

B-a. DCR is for each winding.

B-b. When leads are connected in parallel, DCR is half the value. When leads are connected in series, DCR is twice the value.

C-a. Saturation current is the current flowing through one winding.

C-b. When leads are connected in parallel, Saturation current is the same.

C-c. When leads are connected in series, Saturation current is half the value.

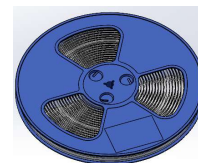
D-a. Heating Rating Current is the total current through both windings.

D-b. I_1 and I_2 can be calculated like this $I_1^2 + I_2^2 = \text{Heating Rating Current}^2$

1. Measured using a Agilent 4284A with Agilent 42841A bias current source and Agilent 42842B test fixture at 100KHz, 1.0V
2. DC resistance : Reference ambient temperature 25°C (Measured using a HIOKI 3540mΩ Hi-tester)
3. Saturation Current : Maximum allowable DC current is that which causes a 30% inductance reduction from the initial value.
(Reference ambient temperature 25°C)
4. Heating Rating Current : DC current for an approximate temperature rise of 40°C without core loss.
(Reference ambient temperature 25°C)
Temperature rise is highly dependent on many factors including P.C.B land pattern, trace size, and proximity to other components.
Therefore temperature rise should be verified in application conditions.

Packing(Quantity)

< 1 REEL : 300 PCS >



< 1 BOX : 1,200 PCS >



< 1 PALLET : 57,600 PCS >





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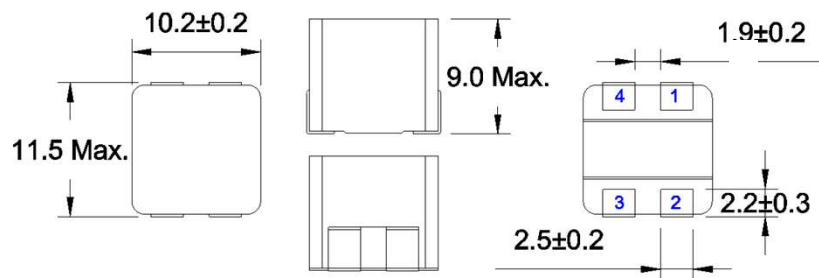
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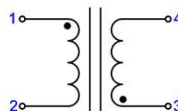
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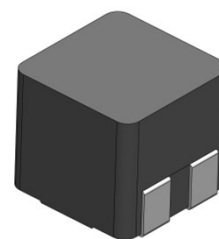
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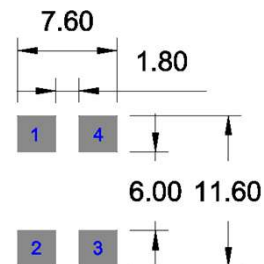
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		TYP.	MAX.		
DSPI100-90-8R2M-A	8.2±20%	56.3	63.0	18.5	6.0
DSPI100-90-100M-A	10.0±20%	62.5	69.0	17.0	5.5
DSPI100-90-150M-A	15.0±20%	73.0	87.0	22.0	5.0
DSPI100-90-220M-A	22.0±20%	91.0	106.0	18.0	4.0
DSPI100-90-330M-A	33.0±20%	121.5	145.0	10.0	3.5
DSPI100-90-470M-A	47.0±20%	218.0	240.0	6.0	2.3

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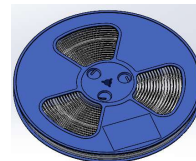
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