

**DSPI100-50-SERIES-A**

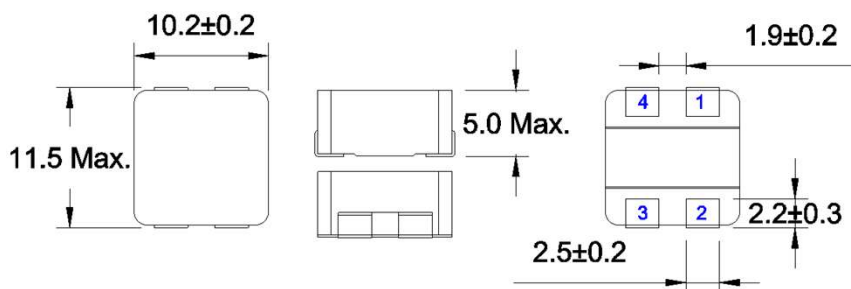
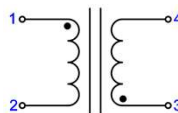
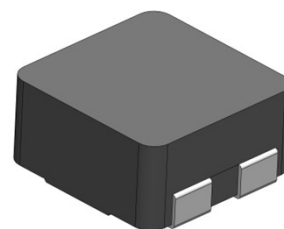
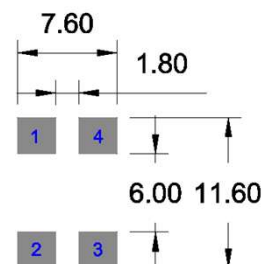
2023.03.29 R0

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.		
DSPI100-50-3R3M-A	3.3±20%	18.3	22.0	32.0	7.0
DSPI100-50-4R7M-A	4.7±20%	27.0	32.0	30.0	6.0
DSPI100-50-150M-A	15.0±20%	82.0	95.0	13.0	3.0
DSPI100-50-220M-A	22.0±20%	102.0	115.0	10.0	2.5

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 $I_1^2 + I_2^2 = \text{Heating Rating Current}^2$

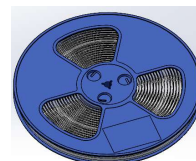
1. Measured using a Agilent 4284A with Agilent 42841A bias current source and Agilent 42842B test fixture at 100kHz, 1.0V
2. DC resistance : Reference ambient temperature 25°C (Measured using a HIOKI 3540mΩ Hi-tester)
3. Saturation Current : Maximum allowable DC current is that which causes a 30% inductance 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 : 800 PCS >



< 1 BOX : 3,200 PCS >



< 1 PALLET : 153,600 PCS >

